

ALTRA INDUSTRIAL MOTION

# Energy Efficient Geared Motors

## AC Variable Speed

### Catalogue Edition 08/2021 EN



 **Bauer Gear Motor**<sup>®</sup>  
*Altra Industrial Motion*





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# Energy Efficient Geared Motors

## Bauer Gear Motor - profile

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### Innovation since 1927

During its 90-year history, Bauer Gear Motor has developed to become the preferred international provider of high-quality and extremely reliable geared motors. A great deal of knowledge has been accrued over the decades, and this has continually been built upon and shared. Bauer has pioneered many new geared motor solutions and will continue to do so in the future. Our engineers develop technically-advanced solutions that feature energy-efficient motors paired with optimal gearboxes so that we can offer our customers the lowest possible operating costs. It is not without reason that the Bauer brand has become world famous; this is because our geared motor solutions are the driving power in drive technology.



### Competent and customer-focused

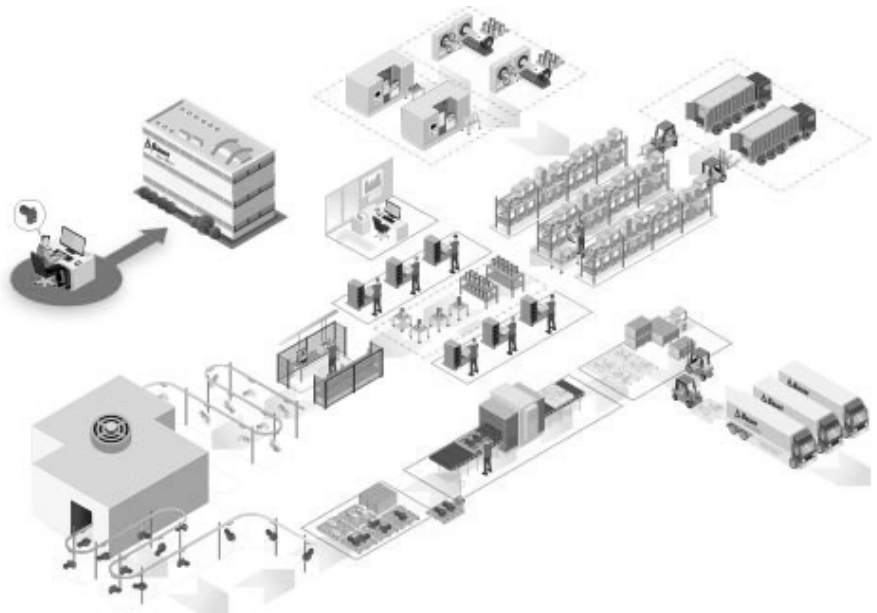
We see ourselves as an integral part of our customers' value chain and we will work with you to increase productivity. With our global sales and expertise, we are there to support you side by side- right from the design of your drive. Our employees will ensure that you have the optimum geared motor solution for your application.

Our quick response time to requests ensures that you receive the required offer within 24 hours. After your order has arrived, we check your order details and you will receive a confirmation of the order within 24 hours. This means that you will have the details for your own production planning process by the following day.

As we concentrate our production in regional factories, we are also able to deliver customised solutions from the factory reliably and directly, with an extremely short delivery period.

# Energy Efficient Geared Motors

## Bauer Gear Motor - profile



### Closer to the customer's needs thanks to greater flexibility

Orders are processed immediately and passed on to our production team. By reducing set-up times, we are able to start producing the order specific parts right away. This is synchronised with assembly, ensuring that the parts are available according to just-in-time principles.

The entire manufacturing processes starting from the production of the motor, the mechanical geared motor parts and the electrical components, are perfectly coordinated to ensure greater process reliability and availability. This means that a high delivery reliability of over 95% can be achieved, while maintaining Bauer's high quality.

### The product range



# Energy Efficient Geared Motors

## Bauer Gear Motor - profile

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### Helical Geared Motors

- Power range from 0.03 kW to 75 kW
- 13 gear sizes for torques ranging from 20 Nm to 18500 Nm
- New attachment possibilities with low design height
- High efficiency through 2-stage base design
- High protection rating of IP65 as standard

### Shaft Mounted Geared Motors

- Power range from 0.03 kW to 75 kW
- 10 gear sizes for torques ranging from 90 Nm to 18500 Nm
- Gearbox housing with integral torque arm
- High efficiency through 2-stage base design
- High protection rating of IP65 as standard

### Bevel Geared Motors

- Power range from 0.03 kW to 75 kW
- 10 gearbox sizes for torques ranging from 80 Nm to 18500 Nm
- Right angle with universal, space-saving mounting options
- High efficiency through 2-stage base design
- High protection rating of IP65 as standard

### Worm Geared Motors

- Power range from 0.03 kW to 5.5 kW
- 8 gearbox sizes for torques ranging from 25 Nm to 1000 Nm
- Hollow shaft version available from 25 Nm
- Heavy duty worm gearing for a long service life
- High protection rating of IP65 as standard

### Monorail Geared Motor Drives

- Torque rating from 30 Nm to 680 Nm
- Radial force up to 25,000 N
- Gearboxes with a wide range of mounting options
- High protection rating of IP65 as standard
- Improved efficiency
- low energy consumption - ideal for travel drives
- Reverse motion of gearbox possible with released brake

### AsepticDRIVE

- Motor without cooling ribs and fan
- Available with helical, shaft-mounted, bevel and worm gearboxes
- Motor winding with thermistors and ISO class F as standard
- IP67 and IP69K protection ratings with alkali and acid-resistant coating as standard.
- Motor connection through standard, round stainless steel connector

### CleanDRIVE

- Motor without cooling ribs and fan
- Available with helical, shaft-mounted, bevel and worm gearboxes
- Motor winding with thermistors and ISO class F as standard
- Motor connection through a standard terminal box or stainless steel cable gland



# Energy Efficient Geared Motors

## Bauer Gear Motor - profile

### HiflexDRIVE

#### BK04 gearbox

- Torque 80 Nm
- Gear reductions 7.25 – 63.33

#### BK08 gearbox

- Torque 200 Nm
- Gear reductions 4.44 - 102.5

#### BK17 gearbox

- Torque 330 Nm
- Gear reductions 4.54 - 108.6

#### Motors

- Output power 0.12 kW ... 3.0 kW
- Efficiency classes no rating and IE1 to IE4
- Enclosure IP65 (standard)  
IP67 / IP69K (optional)

### Energy-efficient motor solutions

#### Mains Supply

- IE1 asynchronous technology 0.12 kW – 45 kW
- IE2 asynchronous technology 0.12 kW – 45 kW
- IE3 asynchronous technology 0.12 kW – 45 kW
- IE4 asynchronous technology 0.55 kW – 4 kW

#### Inverter Duty

- IE3 PMSM-technology 1.5 kW – 15 kW
- IE4 PMSM-technology 0.55 kW – 11 kW

### Energy-efficient motor solutions for explosion hazard areas

The S series in permanent magnet synchronous motors (PMSMs) offers variable-speed geared motors in efficiency class IE4 for use in explosion hazard areas<sup>[1]</sup>.

- Design torque  $M_N$ : 5 Nm – 48 Nm
- Rated power  $P_N$ : 0.75 kW – 15 kW
- Increased safety for zone 1 II 2 G Ex e IIC T1 - T3 Gb
- Dust explosion protection – Zone 21 II 2 D Ex tb IIIC T 160°C ... 120° Db

<sup>[1]</sup> Individual motor designs can show lower efficiency classes than IE4 at rated torque.

### EtaK2.0 Decentral Solutions

- PMSM enabled
- Integrated safety technology and field bus communication according to specific needs
- Modular structure minimises spare parts stock
- Energy savings of up to 30 % possible under partial load conditions
- Suited to extremely harsh environments thanks to IP65 enclosure rating
- 200 % overload current (3 s)
- Sensorless vector control
- CANopen, Profibus, Profinet, EtherCAT, EtherNet/IP and AS-Interface
- STO safety function

# Energy Efficient Geared Motors

## Bauer Gear Motor - profile

---

### Customised geared motor solutions for all applications

- Special applications
- Special adaptations
- Special environments
- Series production

Based on our modular, geared motor programme, we offer specific solutions for applications in all key markets such as, for example, food & beverage, energy, wastewater, concrete, metals and material handling in applications such as washdown conveyor systems, rolling mills, monorail systems and overhead conveyors, sludge thickeners, cranes, fans and blowers and turbines. Our aim is to provide our customers with products tailored to their needs. At the same time, we take care to ensure that a geared motor solution will prove to be especially profitable throughout its entire life cycle.

We already equip our geared motors with highly efficient permanent magnet motors to achieve low life cycle costs because low energy consumption will be particularly important in the future. We are very confident that we are once again pioneers in this sector

Learn more about Bauer Gear Motor, its products and philosophy at [www.bauergears.com](http://www.bauergears.com).

# Energy Efficient Geared Motors

## AC Variable Speed



### General

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# Energy Efficient Geared Motors

## AC Variable Speed

---

1

## Advantages of Bauer-Geared Motors

### Bauer Gearmotors

- Low operating costs due to a high total efficiency
- 2-stage gearbox concept gives a longer lifetime due to a reduced number of moving parts
- Lower servicing costs due to a modular system
- No additional protective measures (e.g. dusty environment) through the IP65 enclosure as standard
- The electrical design of the motor is aligned to the gearbox
- Quick reaction time in emergency situations (Breakdowns etc.) through Fast Assembly Delivery (within 24 hours)

### Bauer Gearboxes

- Easy access to the fixation points reduces assembly times and installation costs
- Low servicing costs as the lubrication change results in normal duty with a lubrication temperature of approx. 80 °C first after 15 000 operating hours when using CLP 220 or 25 000 operating hours when using PGLP 220 / PGLP 460.
- 2-stage gearbox concept reduces the spare part stocking
- A variety of attachment possibilities (Foot, Flange, Solid and Hollow shafts, Torque arms)
- Sealed housing design reduces the risk of oil leakage and increases the oil lifetime
- The large housing volume allows usage in very harsh environments

### Bauer Motors

- Low operating costs due to high motor efficiencies (IE1, IE2, IE3 and IE4 as Standard)
- All efficiency classes in the same motor frame size. No motor size change.
- Low installation costs through CAGE CLAMP® instead of the classical terminal block connection
- A variety of additional designs (connectors, brakes, backstops, rain covers, forced cooling, encoders etc.)
- Cost reduction of connection cabling and avoidance of additional protective elements (chokes, filters etc.), through built-on inverters (ETA-K2.0)
- Ideal for frequency inverter duty through insulation class F as standard

### Bauer Brakes

- Low servicing costs through long lifetime of the brake discs (without adjustment)
- Brake-Motor correlation tailor made to the application by virtue of on average three brake sizes per motor size
- A variety of designs (lockable and non-lockable hand release, microswitch, heaters)
- Robust design for heavy duty applications
- Enclosure IP65 as Standard
- Very high wear resistance



# Energy Efficient Geared Motors

## AC Variable Speed

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# Energy Efficient Geared Motors

## AC Variable Speed



### Product Description

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# Energy Efficient Geared Motors

## AC Variable Speed

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2

# Product Description

## Selection of geared motors

2

<b>Installed positions of geared motors</b>	Bauer geared motors can be supplied for any type of fitting position. Vertical installation positions (motor-down) place a particularly severe strain on the shaft seal. It is advisable to avoid this arrangement especially at high motor speeds (e.g. above 1800 r/min) and continuous operation
<b>Notes on safety</b>	See the notes on safety regarding installation in Operating Instructions.
<b>Guards for rotating parts</b>	<p>The shrink disk (SSV) guards required under the German law relating to technical materials (Law Concerning Industrial Equipment - Equipment safety law GPSG) or by the Accident Prevention Regulations (UVV) are not included in the standard scope of supply because they are fitted by the customer in most cases, or the risk of accident can be eliminated by suitable installation.</p> <p>See the Operating Instruction.</p>
<b>Touch protection</b>	The fan hoods, via the externally mounted fan wheels, of the entire B2000 motor series fulfil the protection against contact with the standard finger (Ø12 mm).
<b>Operating noise</b>	<p>The typical operating noise levels of BAUER geared motors are within the limits stipulated by VDI directive 2159 for gears and EN 60034-9, Table 2 for motors.</p> <p>For physical reasons, low-ratio, high-speed gears produce more noise than medium- and high-ratio gears operating at low speeds.</p>
<b>Painting and corrosion protection</b>	<p>BAUER geared motors are spray-painted in RAL 7031 to DIN 1843 as standard. Other RAL colours are available at extra cost.</p> <p>The output shafts are shipped in protective sleeves or with a protective coating to prevent corrosion.</p> <p>The prerequisite for achieving a long protection period is the right choice of coating. The coating system from Bauer Gear Motor GmbH, based on DIN EN 12944-5, offers suitable and long-lasting corrosion protection for all areas of application.</p>

Category	Loads	Examples of indoor areas	Examples of outdoor areas	Possible IP-Protection class
Standard	Insignificant	Insulated and heated buildings with neutral atmosphere	—	IP54 IP65
C1	Insignificant	Insulated and heated buildings with neutral atmosphere	—	IP54 IP65
C2	Low	Uninsulated and unheated buildings where condensation can occur, e.g. warehouses, sports halls	Atmosphere with low corrosive load, mostly rural areas	IP54 IP65
C3	Moderate	Production rooms with high relative humidity and some air pollution, e.g. facilities for food production, laundries, breweries, dairies	Urban and industrial atmosphere, moderate pollution by sulphur dioxide. Moderate coastal area with low salt pollution	IP65 IP66
C4	Strong	chemical plants, swimming pools, objects above sea water	Industrial and coastal areas with moderate salt exposure	IP65 IP66
C5-I	Very strong (industry)	areas with almost constant condensation and heavy contamination	Industrial areas with high relative humidity and aggressive atmosphere	IP66
C5-M	Very strong (sea)	areas with almost constant condensation and heavy contamination	Coastal and offshore areas with high salt pollution, buildings with almost constant condensation and heavy air pollution	IP66
IM2	Sea or brackish water	IP68 Underwater Drives	Port areas, lock gates, moles, offshore installations	IP68
Aseptics (proprietary development of Bauer)	Very strong	For indoor and outdoor use with very high environmental pollution and in hygiene-sensitive areas, in each case with high-pressure cleaning with chemical cleaning agents		IP67/IP69K

Duration of protection according to DIN EN ISO 12944-5: medium (M) 5 to 15 years

# Product Description

## Modular system overview

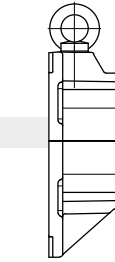
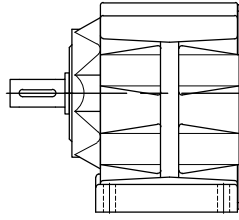
Gear design

Motor terminal box design

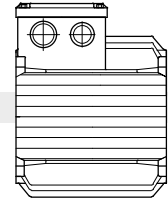
2

### BG

Helical gear



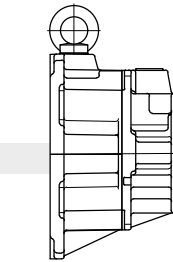
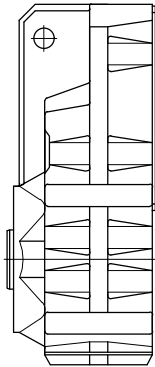
System cover



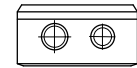
Motor with cast-on terminal box (KAG)

### BF

Shaft-mounted gear



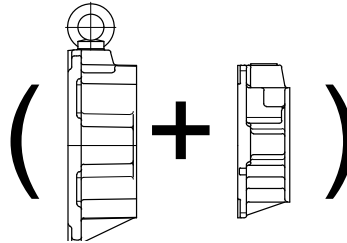
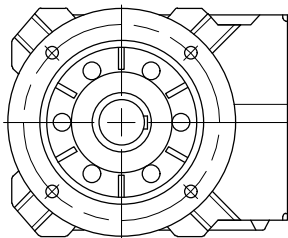
Pre-stage



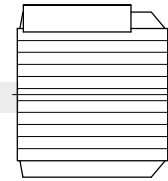
Motor with screwed-on terminal box (TB)

### BK

Bevel gear



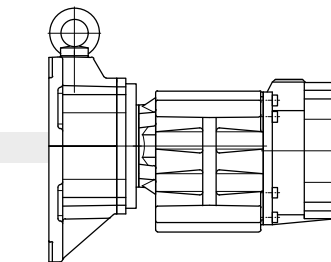
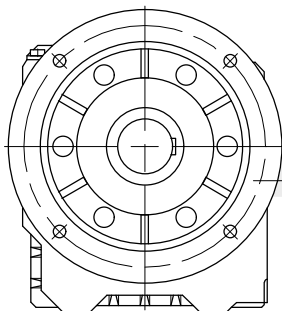
Pre-stage + System cover



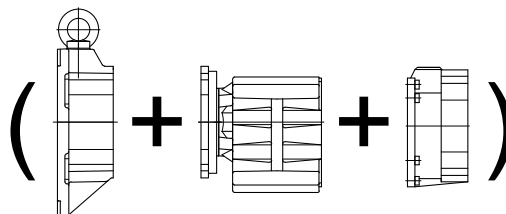
Motor with ETA-K-Converter

### BS

Worm gear



Intermediate gear



(System cover + Intermediate gear + System cover)



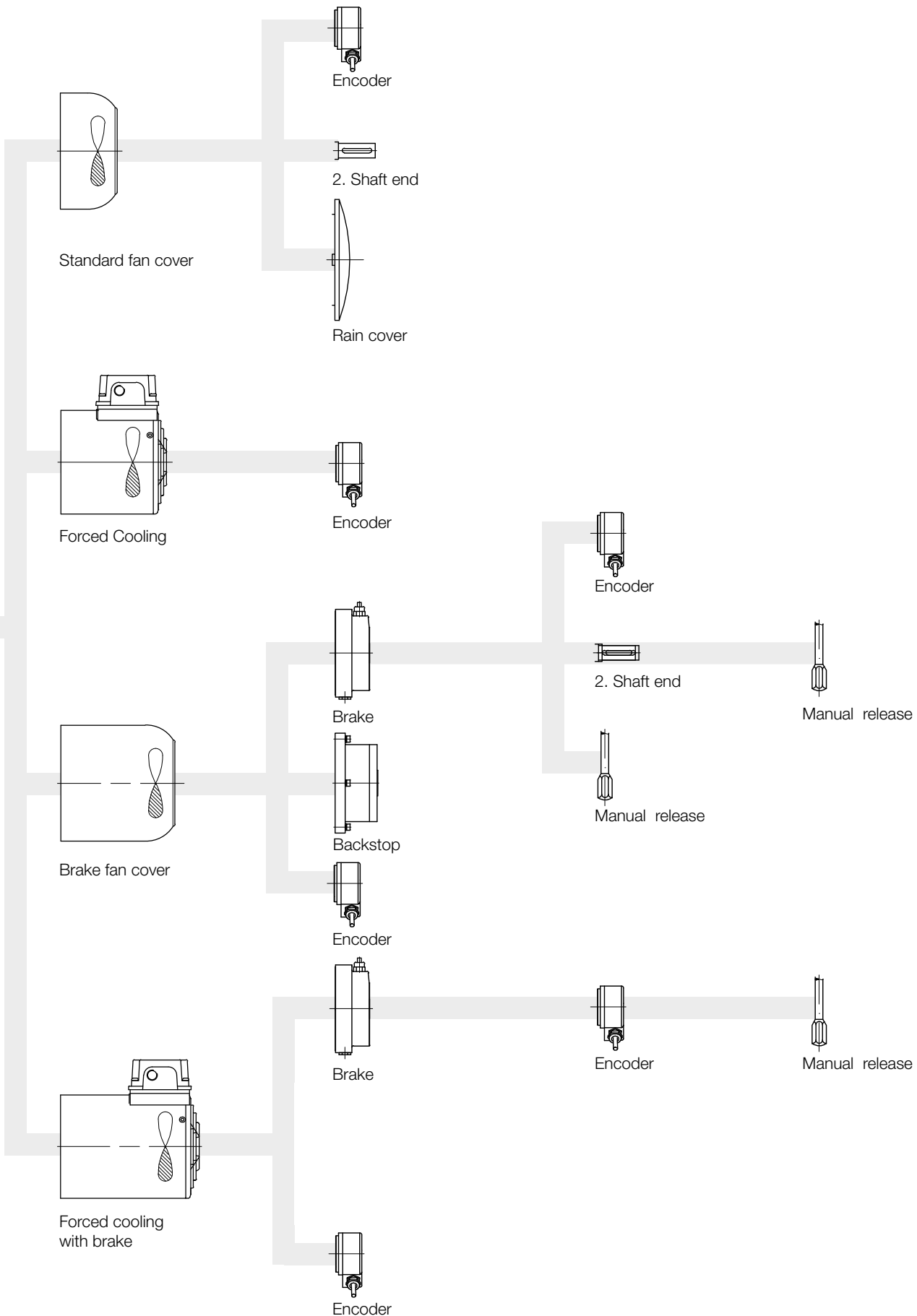
# Product Description

## Modular system overview

### Covers B-Side

### Extensions Standard Motor

### Extensions Motor with Brake



# Energy Efficient Geared Motors

## AC Variable Speed

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# Energy Efficient Geared Motors

## AC Variable Speed

# 3

<b>Bauer</b>		D-73734 Esslingen Made in Germany	
3-Mot.-No E	11242943 - 1	A/	18829641
Type		BF80Z-44/S09SA4-TF/C2-SP	
PMSM 2p=4		U-VSD 380...500V 50/60 Hz	IE4-89,2%
F155 °C		50 Hz	
Y	1,5 kW	$n_1$ 1500	$v_{max}$ 1,3
		$v_{min}$	$M_2$ 1200 Nm
Hz	kW	A	$n_1$ [1/min]
			$M_2$ [Nm]
5	0,13	2,6	150
			$v_1$ [1/min]
16,66	0,52	3,1	500
			$v_2$ [1/min]
33,33	1,05	3,1	1000
			$v_3$ [1/min]
50	1,5	2,9	1500
			$v_4$ [1/min]
60	1,9	3,1	1800
			$v_5$ [1/min]
IM H4/V2	15°	IP65	21/1,2 L CPL 220
PTC		±20...40 °C	S1
			H124
UL/Lu E4.1/1000.0 mH	Ru SL4.950 D	Ks 208 V/1000 min <sup>-1</sup>	kt 3,20 Nm/A
IE4 acc. IEC 60034-30-2 TS:2/1813/CD			339,9 kg
			EN 60034 SCHB

### Type Designations

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<b>BG-series helical-geared motor</b> .....	<b>28</b>
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# Energy Efficient Geared Motors

## AC Variable Speed

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3

# Type Designations

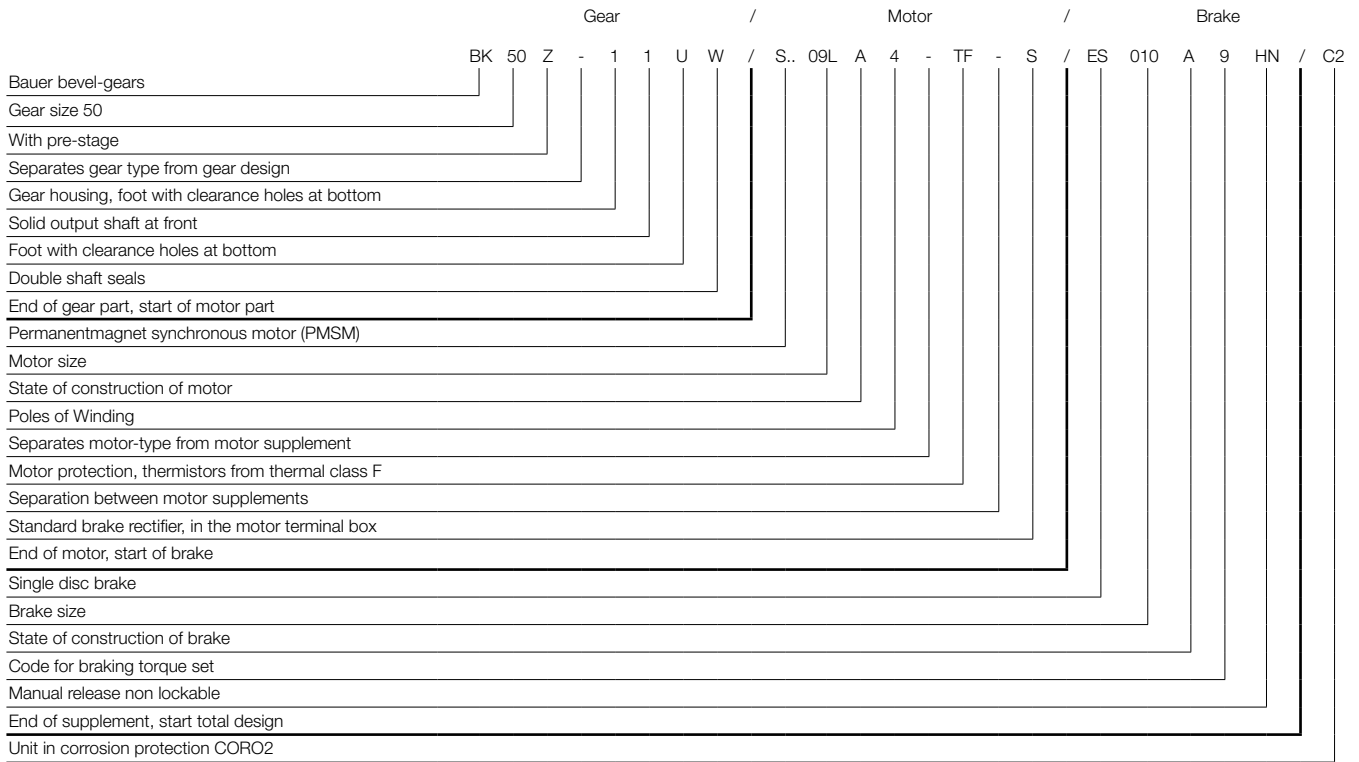
## Significance of type designation

### Example: Bauer bevel-geared motor with brake and standard add-ons

#### Significance of type designation

The type designation of a BAUER geared motor is a code designating all the features in the drive configuration.

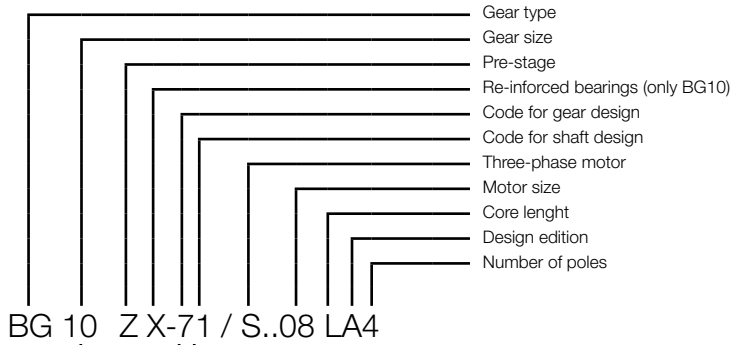
The build-up of the type designation is explained with the help of the following example of a bevel geared motor with brake and series options.



# Type Designations

## BG-series helical-geared motor

3



BG 10 Z X-71 / S..08 LA4

Z- . . . . . Gear with pre-stage  
 G- . . . . . Tandem gear

1 . . . . . Foot with clearance holes

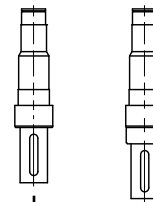
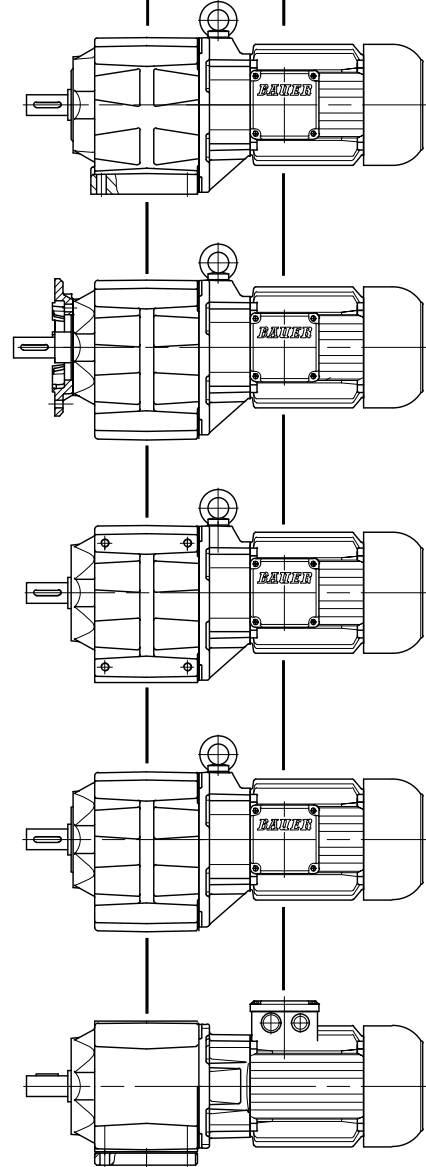
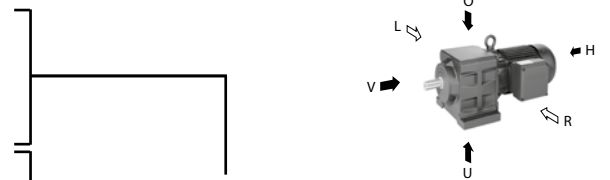
2 . . . . . Small A-flange with clearance holes  
 3 . . . . . Standard A-flange with clearance holes  
 4 . . . . . Large A-flange with clearance holes

6 . L . . . . . Foot with tapped holes, left  
 6 . R . . . . . Foot with tapped holes, right  
 6 . LR . . . . . Foot with tapped holes, left and right

7 . . . . . C-flange with threaded holes  
 8 . . . . . Completely machined

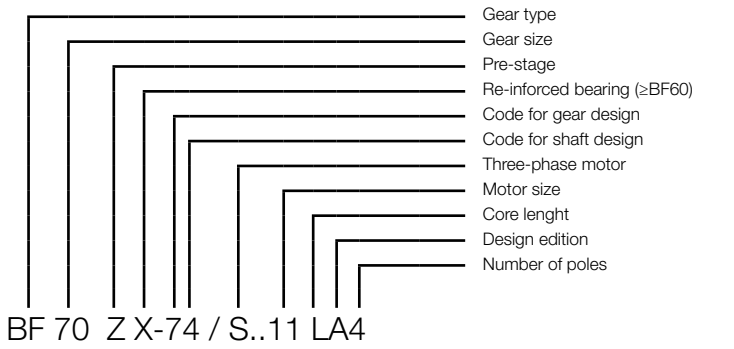
9 . L . . . . . Foot plate, left  
 9 . R . . . . . Footplate, right  
 9 . LR . . . . . Footplate, left and right

. 1 Solid shaft on gear side V  
 . 7 Solid shaft on gear side V for flange as from BG10  
 .. W Double shaft seals



# Type Designations

## BF-series shaft-mounted geared motor



- Gear type
- Gear size
- Pre-stage
- Re-inforced bearing (≥BF60)
- Code for gear design
- Three-phase motor
- Motor size
- Core length
- Design edition
- Number of poles

- Z-.. — Gear with pre-stage
- X-.. — Gear with re-inforced bearing
- G-.. — Tandem gear

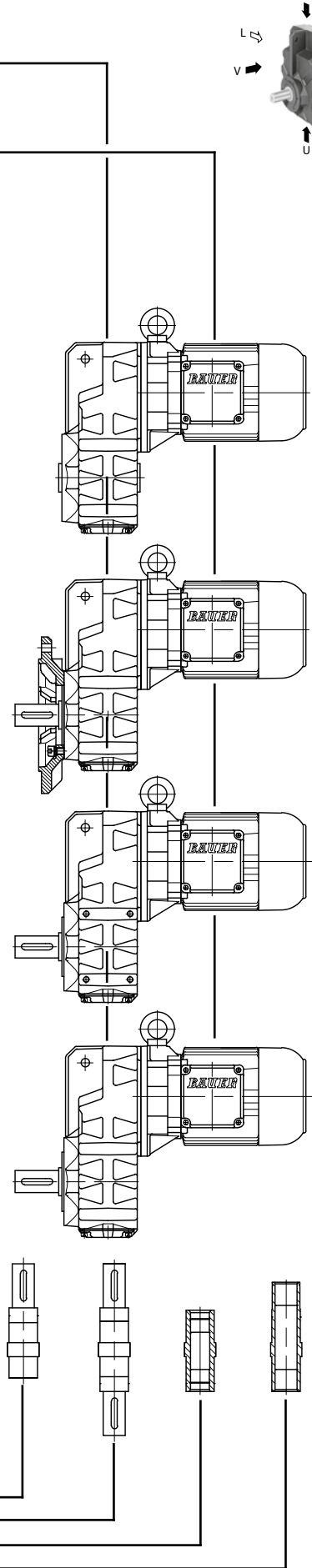
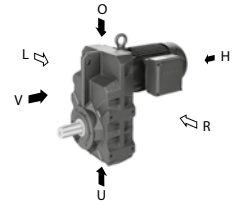
- 0. — Cast-in torque arm

- 2. — Small A-flange with clearance holes
- 3. — Standard A-flange with clearance holes
- 4. — Large A-flange with clearance holes

- 1. LR — Foot with clearance holes left and right
- 6. L — Foot with threaded holes, left
- 6. R — Foot with threaded holes, right
- 6. LR — Foot with threaded holes, left and right

- 7. — C-flange with threaded holes
- 8. — Completely machined

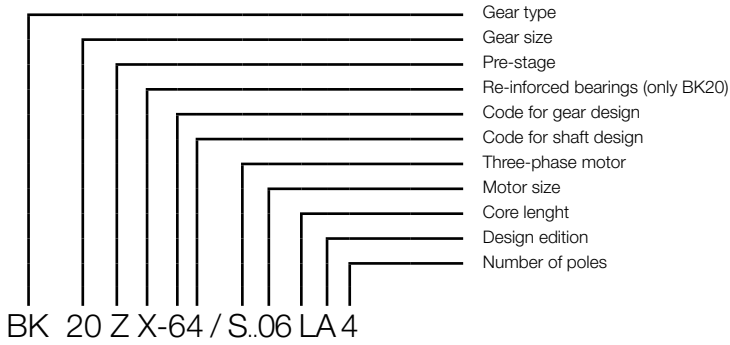
- .0 — Splined shaft acc. DIN 5480
- .1 — Solid shaft on gear side V
- .2 — Solid shaft on gear side H
- .3 — Solid shaft on gear side V und H
- .4 — Hollow shaft with keyway
- .5 — Hollow shaft for shrink disc SSV on gear side H
- .. W — Double shaft seals
- .. A — Cover for shrink disc SSV



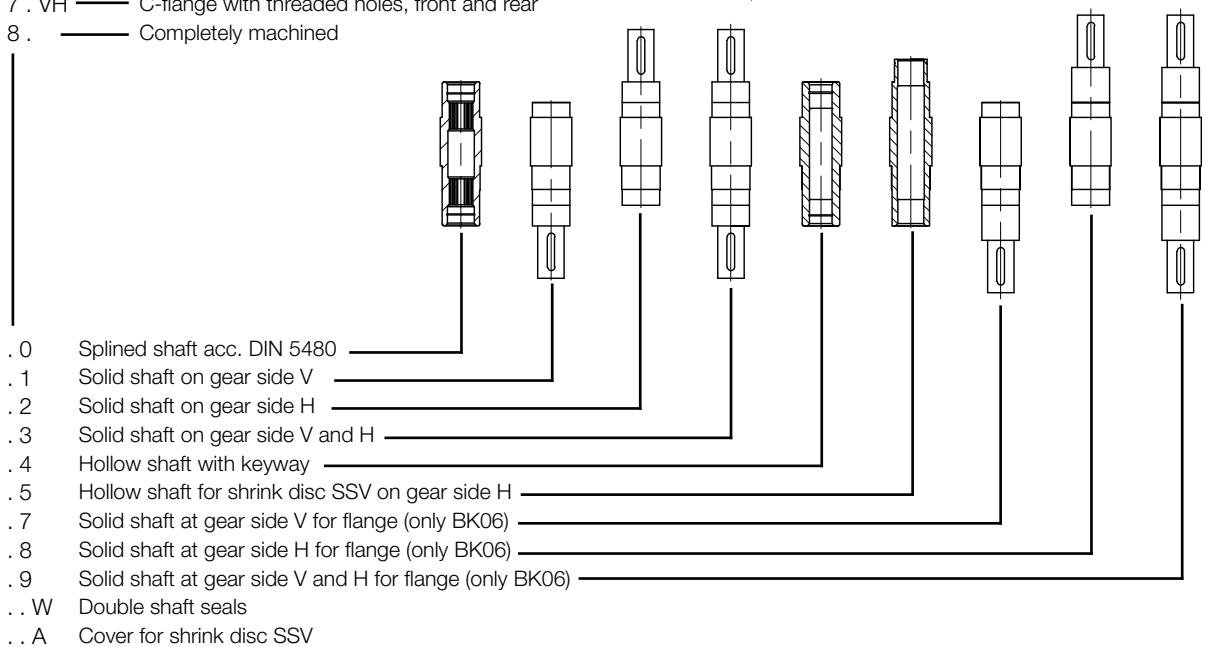
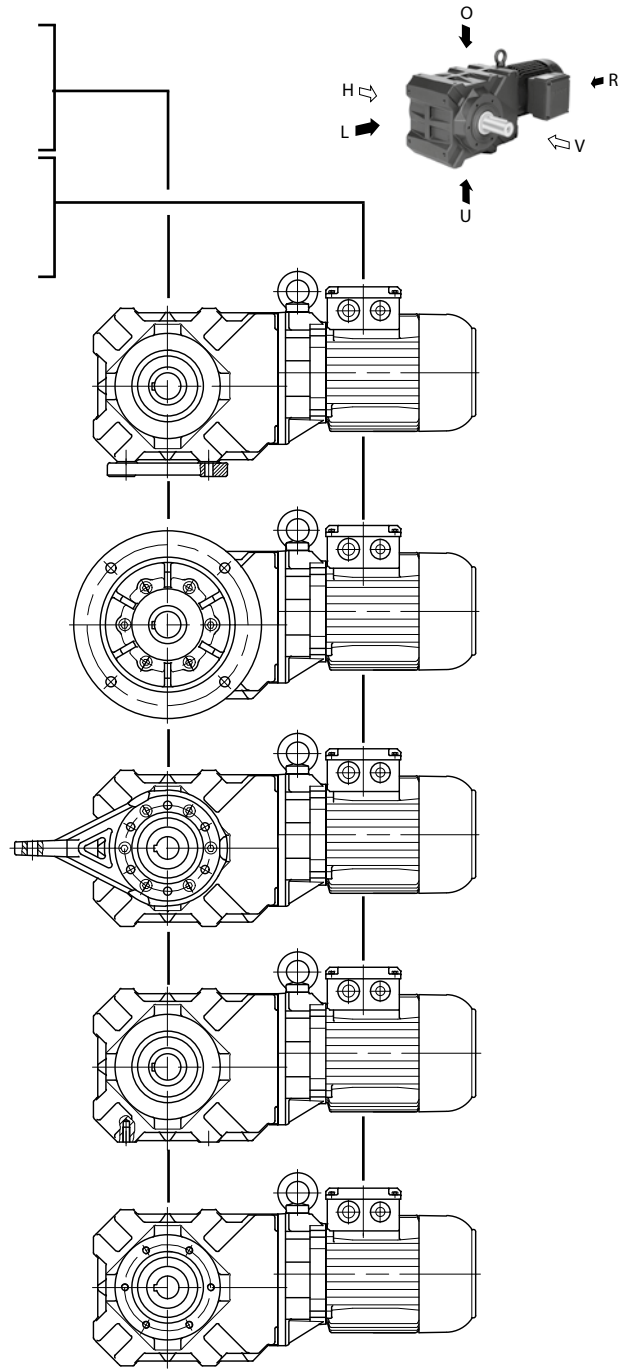
# Type Designations

## BK-series bevel-gear motor

3



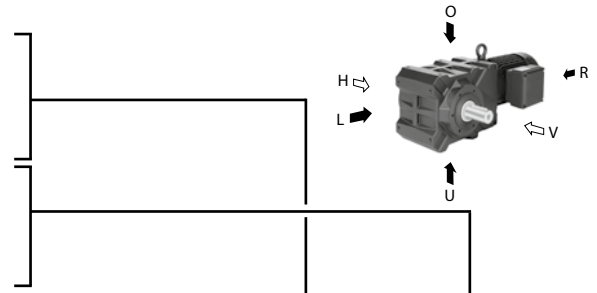
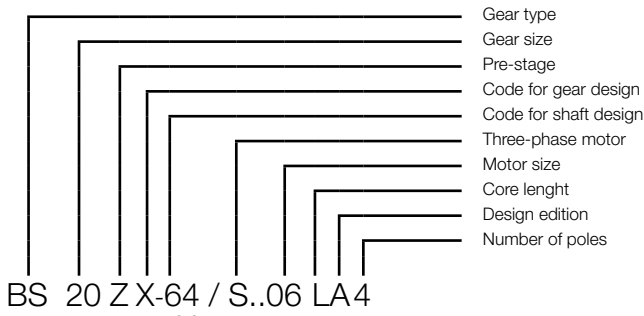
- 1 . U — Foot with clearance holes, bottom
- 1 . L — Foot with clearance holes, left
- 1 . O — Foot with clearance holes, top
- 2 . V — small A-flange with clearance holes , front
- 3 . V — Standard A-flange with clearance holes, front
- 4 . V — large A-flange with clearance holes, front
- . . H — A-flange, rear
- . . VH — A-flange, front and rear
- 5 . V — Torque arm at front
- 5 . VL — Torque arm, front to left
- 5 . VO — Torque arm, front to top
- 5 . VU — Torque arm, front to bottom
- 5 . HL — Torque arm, rear to left
- 5 . HO — Torque arm, rear to top
- 5 . HU — Torque arm, rear to bottom
- 6 . U — Foot with threaded holes, bottom
- 6 . L — Foot with threaded holes, left
- 6 . O — Foot with threaded holes, top
- 7 . V — C-flange with threaded holes, front
- 7 . H — C-flange with threaded holes, rear
- 7 . VH — C-flange with threaded holes, front and rear
- 8 . — Completely machined



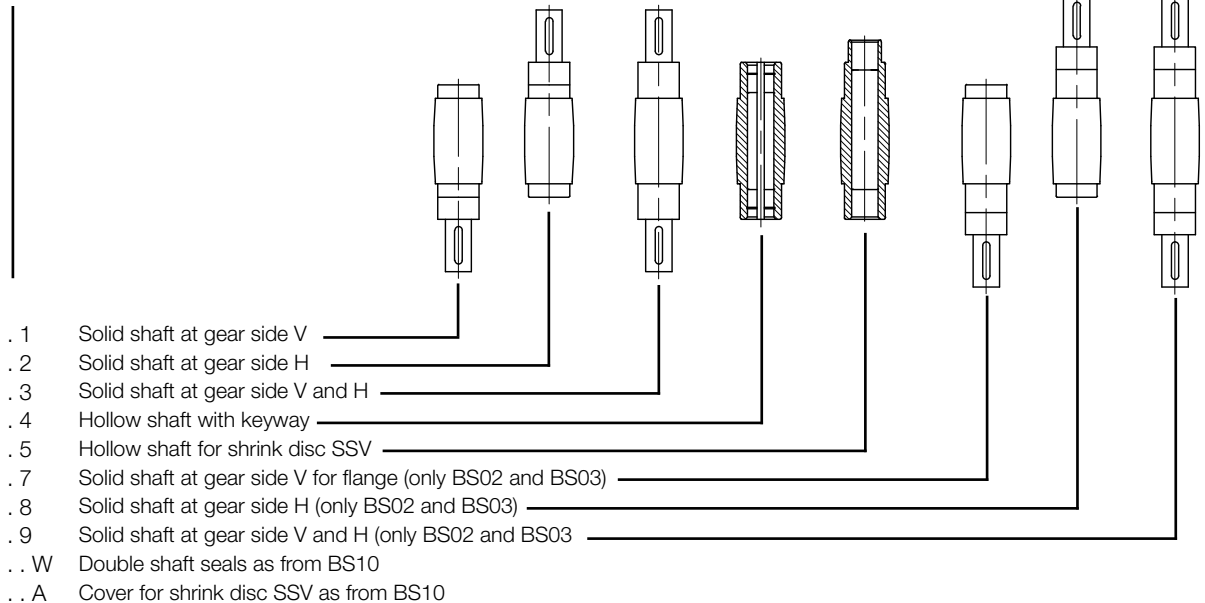
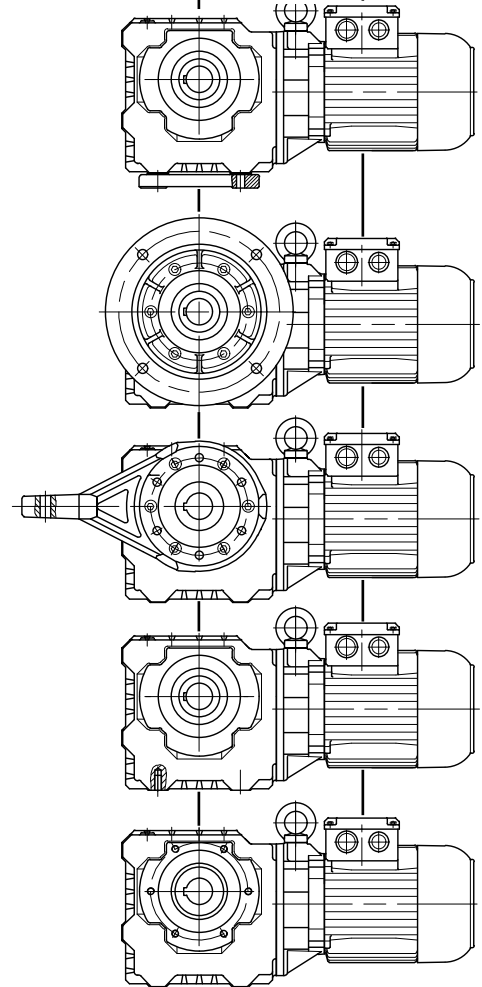


# Type Designations

## BS-series worm-geared motor



- 1 . U — Foot with clearance holes, bottom
- 1 . L — Foot with clearance holes, left
- 1 . O — Foot with clearance holes, top
- 2 . V — small A-flange with clearance holes , front
- 3 . V — Standard A-flange with clearance holes, front
- 4 . V — large A-flange with clearance holes, front
- .. H — A-flange, rear
- .. VH — A-flange, front and rear
- 5 . V — Torque arm at front
- 5 . VL — Torque arm, front to left
- 5 . VO — Torque arm, front to top
- 5 . VU — Torque arm, front to bottom
- 5 . HL — Torque arm, rear to left
- 5 . HO — Torque arm, rear to top
- 5 . HU — Torque arm, rear to bottom
- 6 . U — Foot with threaded holes, bottom
- 6 . L — Foot with threaded holes, left
- 6 . O — Foot with threaded holes, top
- 7 . V — C-flange with threaded holes, front
- 7 . H — C-flange with threaded holes, rear
- 7 . VH — C-flange with threaded holes, front and rear
- 8 . — Completely machined

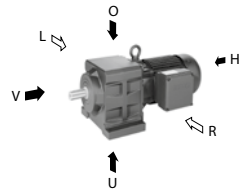


# Type Designations

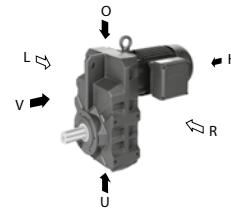
## Versions and options

### BG and BF series

BG series: type B3



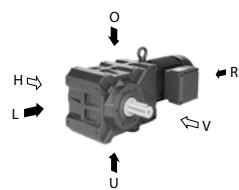
BF series: type H4



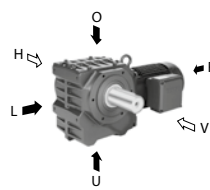
- V = Front  
The side of the gear unit facing away from the motor or the source of motive power
- H = Rear  
The side of the gear unit facing toward the motor or the source of motive power
- L = Left  
The left side of the gear unit as viewed from the output shaft side of type B3 for the BG series or type H4 for the BF series
- R = Right  
The right side of the gear unit as viewed from the output shaft side of type B3 for the BG series or type H4 for the BF series

### BK and BS series

BK series: type H1



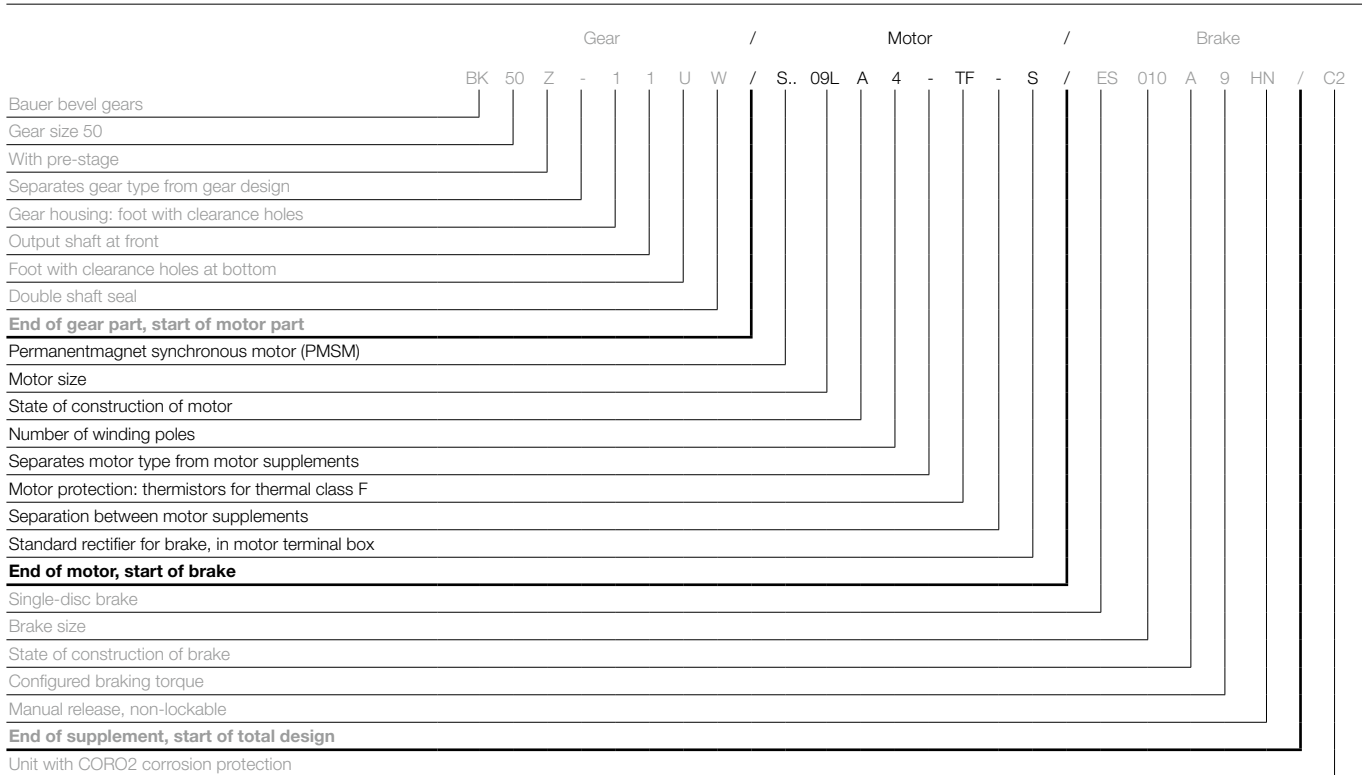
BS series: type H1



- V = Front  
The side of the gear unit facing toward the viewer looking toward the type H1 unit
- H = Rear  
The side of the gear unit facing away from the viewer looking toward the type H1 unit
- L = Left  
The left side of the gear unit as viewed from the output shaft side of type H1, or the torque brace oriented to the left
- O = Top  
The top side of the gear unit as viewed from the output shaft side of type H1, or the torque brace oriented upwards
- U = Bottom  
The bottom side of the gear unit as viewed from the output shaft side of type H1, or the torque brace oriented downwards

# Type Designations

## Motor



<b>Permanentmagnet synchronous motor (PMSM)</b>	S	=	Permanentmagnet synchronous motor (PMSM)
	. A	=	Aseptic motor (germ-free drive)
	. N	=	Motor without gear unit; foot-mount version
	. NF	=	Motor without gear unit; flange-mount version
	. U	=	Unventilated (no forced ventilation)
<b>Motor protection</b>	TB	=	Thermistor 140°
	TF	=	Thermistor 160°
	TH	=	Thermistor 180°
	TEB	=	Thermistor warning/shutdown 120°/140°
	TBF	=	Thermistor warning/shutdown 140°/160°
	TFH	=	Thermistor warning/shutdown 160°/180°
	TOB	=	Thermostatic switch, NC 140°
	TOF	=	Thermostatic switch, NC 160°
	TOH	=	Thermostatic switch, NC 180°
	TSB	=	Thermostatic switch, NO 125°
	TSF	=	Thermostatic switch, NO 160°
	TSH	=	Thermostatic switch, NO 180°
	TX	=	Other
<b>Brake rectifier in motor terminal box</b>	S	=	Standard rectifier SG
	E	=	Special rectifier ESG
	M	=	Special rectifier MSG
<b>Plug connector</b>	ST	=	Harting (other)
<b>Heavy-duty fan</b>	SL		
<b>Protective cover</b>	D		
<b>CleanDrive</b>	CD	=	Aseptic drive with cable

# Type Designations

## Supplement types

	Gear	/	Motor	/	Brake
Bauer bevel gears	BK				
Gear size 50	50				
With pre-stage	Z				
Separates gear type from gear design	-				
Gear housing: foot with clearance holes	1				
Output shaft at front	1				
Foot with clearance holes at bottom	U				
Double shaft seal	W				
<b>End of gear part, start of motor part</b>	/				
Permanentmagnet synchronous motor (PMSM)	S..				
Motor size	09L				
State of construction of motor	A				
Number of winding poles	4				
Separates motor type from motor supplements	-				
Motor protection: thermistors for thermal class F	TF				
Separation between motor supplements	-				
Standard rectifier for brake, in motor terminal box	S				
<b>End of motor, start of brake</b>	/				
Single-disc brake	ES				
Brake size	010				
State of construction of brake	A				
Configured braking torque	9				
Manual release, non-lockable	HN				
<b>End of supplement, start of total design</b>	/				
Unit with CORO2 corrosion protection	C2				

### Brake

E	=	Single-disc brake
ES	=	Single-disc holding brake
EH	=	Single-disc holding brake in heavy duty
ZS	=	Two-disc holding brake
ESX	=	Single-disc service brake
EHX	=	Single-disc service brake in heavy duty version
ZSX	=	Two-disc service brake
... 010	=	Brake size
... .. A	=	Construction state
... .. 9	=	Code for configured braking torque
... .. . HN	=	Manual release (not lockable)
... .. . HA	=	Manual release (lockable)

### Digital and analogue encoder

G

### Second shaft end

ZW

=

With key

ZV

=

With square shaft

### Forced ventilation

FV

### Overall design

UL

=

US version

C1

=

Coro1 corrosion protection

C2

=

Coro2 corrosion protection

C3

=

Coro3 corrosion protection

C4

=

Coro4 corrosion protection

C5I

=

Coro5 corrosion protection

C5M

=

Coro5 corrosion protection

IM2

=

Protection against sea or brackish water

SP

=

Non-catalogue version



# 4

## Gear Motor Selection

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# Energy Efficient Geared Motors

## AC Variable Speed

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4

# Gear Motor Selection

## Selection of geared motors

RFQ data Order 

Bauer Gear Motor GmbH

Order / RFQ no.: \_\_\_\_\_

Fax: +49 (0)711 3518 381

Contact data: \_\_\_\_\_

E-Mail: info@bauergears.com

Application: \_\_\_\_\_

(e.g. traction drive, hoist/lift drive, roller conveyor, feedscrew, etc.)

## Gearbox type

BG BF BK BS Hiflex 

Housing material

 Standard Stainless steel

## Number of items \_\_\_\_\_

Efficiency class

not IE  IE1  IE2  IE3  IE4  IE5 

Type \_\_\_\_\_

Power \_\_\_\_\_ kW

Output shaft speeds \_\_\_\_\_ 1/min

Torque \_\_\_\_\_ Nm

Service factor  $f_B =$  \_\_\_\_\_

Mounting arrangement/

Type of installation \_\_\_\_\_

Terminal box position \_\_\_\_\_

RAL 7031 or special RAL shade \_\_\_\_\_

Corrosion prevention

**Standard**

or

Coro1 / Coro2 / Coro3 / Coro4 / Coro5I / Coro5M / IM2 \_\_\_\_\_

Rated voltage \_\_\_\_\_ V

type of business \_\_\_\_\_

Frequency \_\_\_\_\_ Hz

Thermistors Thermostats 

Ambient temperature \_\_\_\_\_ °C

Altitude [m] \_\_\_\_\_

Ambient conditions &amp; installation site \_\_\_\_\_

Transmission component (direct, chain, gearwheel, belt, etc.) \_\_\_\_\_

Radial force on output shaft \_\_\_\_\_ N at a distance x from the shaft junction \_\_\_\_\_ mm

Axial force on output shaft \_\_\_\_\_ N

Operation on field-oriented converter suitable for operation of permanent magnet excited synchronous motors

speeds of \_\_\_\_\_ 1/min to \_\_\_\_\_ 1/min

Integrated frequency converter Cabinet-mounted frequency converter 

Gear unit design

 Foot with clearance holes A-Flange with clearance holes  $D =$  \_\_\_\_\_ mm C-Flange with tapped holes Torque restraining arms with rubber buffers in L/T/B direction \_\_\_\_\_ Foot with tapped holes on L/R/LR/T/B side \_\_\_\_\_

Output shaft

 Solid shaft on F/B/FB end \_\_\_\_\_ Hollow shaft Hollow shaft for shrink-on diskMotor-mounted components  brake

Type \_\_\_\_\_ Braking torque = \_\_\_\_\_ Nm

Supply voltage = \_\_\_\_\_ VAC \_\_\_\_\_ Hz or \_\_\_\_\_ V DC

manual release yes  no Microswitch Function monitoring Wear monitoring  Encoderincremental absolute 

Pulse count \_\_\_\_\_

Output signal

HTL TTL  Forced ventilation Output shaft reverse rotation block (clockwise / anti-clockwise) \_\_\_\_\_

Special design features \_\_\_\_\_

# Gear Motor Selection

## Drive configuration

### Drive configuration - General

Motions are necessary in production plants and equipment for the manufacture of goods and products. Geared motors are used to implement these motions in stationary production equipment. The objective of drive configuration is to obtain the optimal motor for each type of motion.

Motions in machines and equipment vary considerably. Experienced design engineers reduce the necessary motions to a few standard types:

These are:

- continuous linear motion
- reciprocating linear motion
- horizontal linear motion
- vertical or oblique linear motion for lifting and lowering loads
- continuous rotary motion and reciprocating rotary motion

All motions can be divided into:

- an acceleration phase
- a constant-velocity phase
- a braking (deceleration) phase

These motion phases must be examined separately when sizing a drive, in order to determine the phase with the highest load. After the maximum load has been determined, the drive system can be selected.

See our separate "Design Guide" publication for assistance with various use cases.

### Required data for drive configuration

In addition to the data on (Specification of geared motors), the following data is necessary for drive configuration:

Designation	Description	Unit
$t_d$	Operating time per day	[h]
$t_a$	Deceleration time	[s]
$n_2$	Output speed	[rpm]
$n$	Rated rotor shaft speed	[rpm]
$J$	Moment of inertia	[kgm <sup>2</sup> ]
$J_{ext}$	External moment of inertia	[kgm <sup>2</sup> ]
$J_{ext}$	External moment of inertia referred to the rotor shaft	[kgm <sup>2</sup> ]
$J_{rot}$	Rotor moment of inertia	[kgm <sup>2</sup> ]
$F$	Force	[N]
$m$	Mass	[kg]
$v$	Velocity	[m/s]
$a$	Acceleration	[m/s <sup>2</sup> ]
$g$	Earth gravitational constant	[m/s <sup>2</sup> ]
$P_{dyn}$	Dynamic power	[kW]
$P_s$	Static power	[kW]
$P$	Power	[kW]
$M_2$	Output torque	[Nm]
$M_N$	Rated torque at rotor shaft	[Nm]
$M_a$	Deceleration torque	[Nm]
$M_L$	Braking or driving load torque	[Nm]
$M_{grenz}$	Specific limiting torque of gearbox at gear ratio $i$	[Nm]
$M_{Br}$	Rated braking torque	[Nm]
$i$	Gear reduction ratio	
$FI$	Inertia ratio	



# Gear Motor Selection

## Drive configuration

4

### Drive configuration process

#### Motor configuration

#### Determining the motor power

The required power can generally be calculated as follows:

$$P = \frac{F \times v}{\eta}$$

As previously described, all motions are divided into an acceleration phase (dynamic power), a constant-velocity phase (static power), and a braking (deceleration) phase.

Depending on the type of motion, the force F necessary to overcome all opposing forces such as rolling friction, linear friction, gravitational force, acceleration and so on arising from the drive train has a strong influence on the required power and must be determined explicitly for each use case.

#### Determining the required torque

After the motor power has been determined, the required gearbox output torque can be calculated with:

$$M_2 = \frac{P \times 9550}{n_2}$$

#### Determining the gear reduction ratio

The gear reduction ratio is the ratio of the rated speed of the motor (see the motor data in Section 13) to the desired output speed of the geared motor.

$$i = \frac{n}{n_2}$$

#### Gearbox size selection

#### Determining the factor of inertia

The inertia ratio is the ratio of the sum of the moments of inertia of all masses driven by the motor and converted to the motor speed, including the moment of inertia of the motor rotor, to the moment of inertia of the rotor:

$$FI = \frac{J_{\text{ext}'} + J_{\text{rot}}}{J_{\text{rot}}} \quad \text{where} \quad J_{\text{ext}'} = \frac{J_{\text{ext}}}{i^2}$$

# Gear Motor Selection

## Drive configuration

### Determining the shock load

The shock load (see Sections 6, 7, 8 and 9) is determined from the inertia factor, the type of transmission component and the relative moment of acceleration.

### Determining the minimum service factor $f_{Bmin}$

Based on the operating time per day, the cycle rate and the ascertained shock load, the service factor  $f_{Bmin}$  can be taken from the tables in Sections 6, 7, 8 and 9.

Based on this minimum service factor  $f_{Bmin}$ , select a geared motor from the tables that has a higher service factor as well as the required output speed, output torque and motor power.

Note: The service factor relates solely to the required torque for static operation needed by the application, which should be covered by the output torque of the selected geared motor. The dynamic portion is not taken into consideration here.

The actual service factor of the geared motor with regard to required torque for static operation can therefore be calculated as follows:

$$f_B = \frac{M_{gr}}{M_{2erf}}$$

The final step is to specify the accessory options for the geared motor.

### Brake specification

Essentially it is necessary to determine, based on the amount of friction energy to be dissipated by the brake, whether the brake is a holding brake or a service brake.

See Section 14 for the definitions of holding brakes and service brakes.

Once all the necessary data and requirements are known, the required braking torque can be calculated as follows:

$$M_{br} = M_a \pm M_L$$

$$M_a = \frac{J \times n}{9,55 \times t_a}$$

If the specific application data is not known, for horizontally driven equipment we recommend selecting a braking torque that is 1.0 to 1.5 times the rated torque of the motor.

In the case of applications with significant external moments of inertia (FI greater than 2) and with operating cycles per hour, the brake size must always be selected on the basis of the thermally allowable braking energy. See Section 14 for detailed information on brake configuration.

In the case of lifting equipment, for safety reasons a braking torque twice as large as the rated torque of the motor should always be selected.

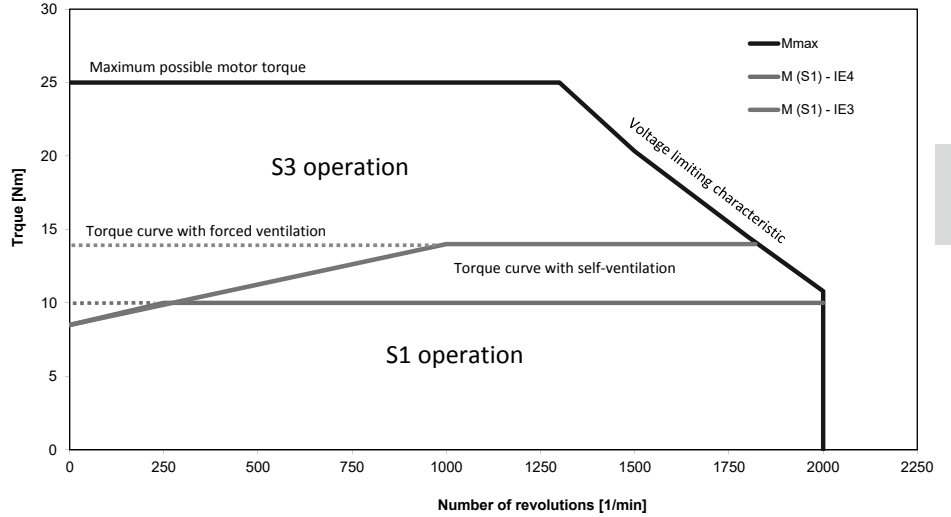
# Gear Motor Selection

## Motor configuration

### Torque-speed characteristic

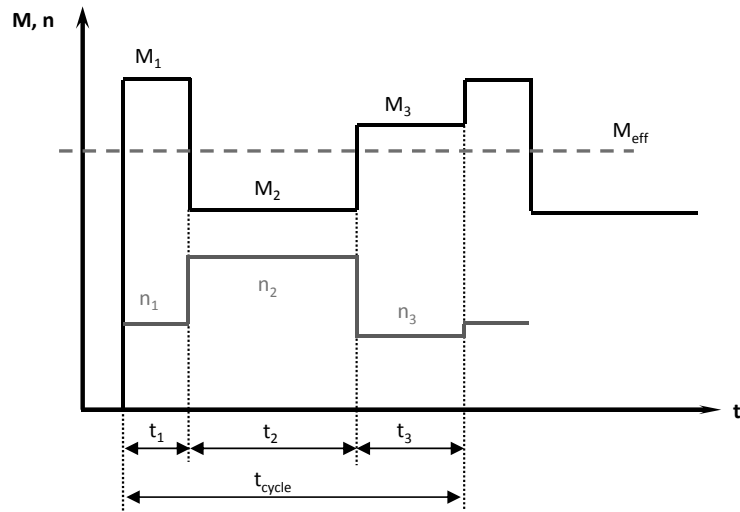
The torque versus speed curve shows the operating characteristics of the PMSM. The reference points shown schematically on the torque versus speed curve are significant criteria for motor selection.

**Torque vs. Speed Curve**



4

The motor is determined by the effective motor torque and the average motor speed. Both values  $M_{eff}$  and  $n_{eff}$  must be below the S1 limit characteristic curve of the motor to be selected.



# Gear Motor Selection

## Motor configuration

4

### Effective torque

$$M_{\text{eff}} = \sqrt{\frac{M_1^2 \cdot t_1 + M_2^2 \cdot t_2 + M_3^2 \cdot t_3 + \dots + M_n^2 \cdot t_n}{t_1 + t_2 + t_3 + \dots + t_n}}$$

### Effective rpm

$$n_{\text{eff}} = \frac{n_1 \cdot t_1 + n_2 \cdot t_2 + n_3 \cdot t_3 + \dots + n_n \cdot t_n}{t_1 + t_2 + t_3 + \dots + t_n}$$

### Acceleration

#### Dynamic power

The dynamic power is the power that accelerates the entire system (load, transmission components, gears and motor)

$$P_{\text{dyn}} = \frac{m \times a \times v}{\eta}$$

$P_{\text{dyn}}$	Dynamic power [W]
$m$	Mass [kg]
$a$	Acceleration [m/s <sup>2</sup> ]
$v$	Speed [m/s]
$\eta$	Level of efficiency

Dynamic load torque

$$M_{\text{dyn}_1} = m \cdot a \cdot \frac{1}{\eta} \cdot \frac{D}{2} \cdot \frac{1}{i}$$

$D$	Impeller diameter
$i$	Gear reduction ratio

### Constant speed

#### Static performance

The static power takes into account all forces that occur in the unaccelerated state. These include: rolling friction, frictional forces, lifting capacity on slopes and wind force.

$$P_s = \frac{F_f \times v}{\eta}$$

$P_s$	Static power [W]
$F_f$	Driving resistance [N]

#### Static load torque (simplified)

$$M_{\text{statt}} = m \cdot g \cdot \frac{1}{\eta} \cdot \frac{D}{2} \cdot \frac{1}{i}$$

$g$	Acceleration due to gravity
-----	-----------------------------

# Gear Motor Selection

## Motor configuration

4

### Deceleration

#### Deceleration torque

$$M_{dyn2} = m \cdot (-a) \cdot \eta_L \cdot \frac{D}{2} \cdot \frac{1}{i}$$

$$M_{VER} = M_{stat} + M_{dyn2}$$

$M_{Verz}$  Deceleration torque

#### Load torques in the driving cycle

Acceleration phase

$$M_{Motor} = M_{stat} + M_{dyn1}$$

Constant speed

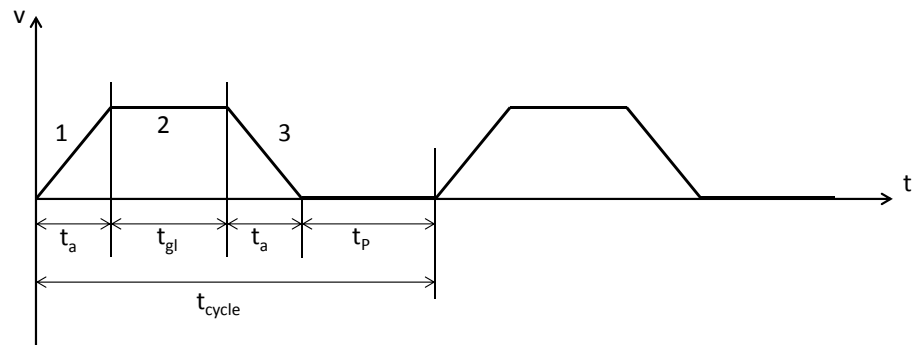
$$M_{Motor} = M_{stat}$$

Braking phase

$$M_{Motor} = M_{stat} + M_{dyn2}$$

#### Motor selection

Example:



Required dynamic torque on the motor (acceleration):	M1	=	20Nm
Required static torque on the motor:	M2	=	8,0Nm
Deceleration torque:	M3	=	10Nm
Acceleration time/deceleration time	t <sub>a</sub>	=	0,5s
Duration constant travel	t <sub>gl</sub>	=	5s
Cycle time	t <sub>Zykl</sub>	=	10s
Motor speed for constant travel	n	=	1450 1/min

#### Effective motor torque and moderate motor speed

$$M_{eff} = \sqrt{\frac{M_1^2 \cdot t_a + M_2^2 \cdot t_{gl} + M_3^2 \cdot t_a}{t_{Zykl}}} = 7,55 \text{ Nm}$$

$$n_{eff} = \frac{n \cdot t_a + n \cdot t_{gl} + n \cdot t_a}{t_{Zykl}} = \frac{n \cdot (2 \cdot t_a + t_{gl})}{t_{Zykl}} = 870 \text{ min}^{-1}$$

# Gear Motor Selection

## Motor configuration

The following motor is selected:

Type: SSE08LA4  
 Rated power  $P_n = 1,55 \text{ kW}$   
 Rated torque  $M_n = 10 \text{ m}$   
 Rated speed  $n_n = 1500 \text{ min}^{-1}$

With proper utilisation of the gears by doubling the reduction and increasing the revs of the motor to  $3000 \text{ min}^{-1}$ , the torque requirement for the motor can be halved, and this makes it possible to decrease the size of the motor.

Instead of the S08LA4, the following motor could be selected in this case:

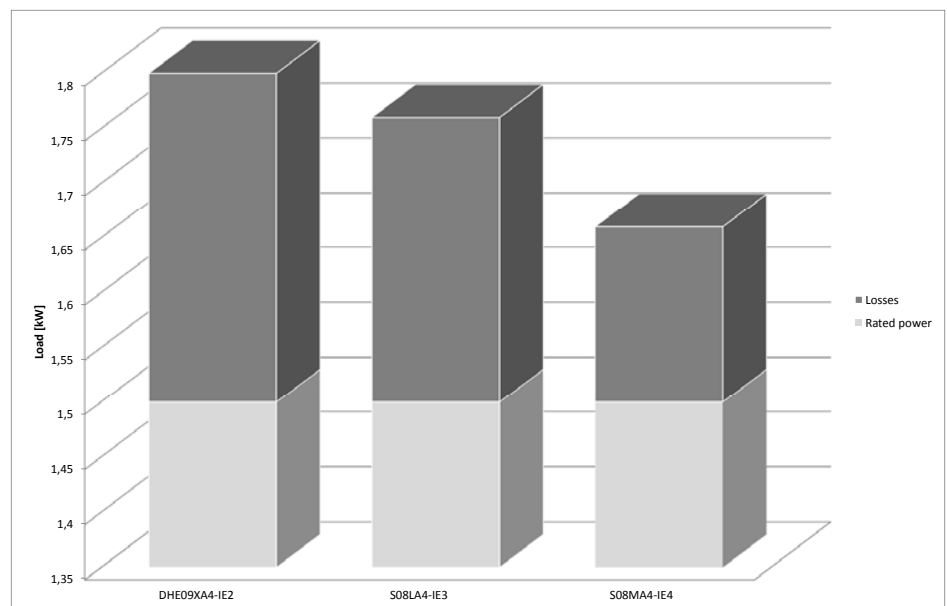
Type: S5E08MA4  
 Rated power  $P_n = 1,55 \text{ kW}$   
 Rated torque  $M_n = 5 \text{ Nm}$   
 Rated speed  $n_n = 3000 \text{ min}^{-1}$

This increases the efficiency of the motor on the one hand, while also reducing the package length. The result is a cheaper drive with increased energy savings.

The diagram below shows the potential energy savings of using the different IE efficiency motors.

With the utilisation of the gears and the **use** of the **S08MA4 IE4** motor, **compared** with the **IE3 S08LA4** the **power loss can be reduced by 36.24%** and **by 45.58%** compared with the **IE2 DHE09XA4**.

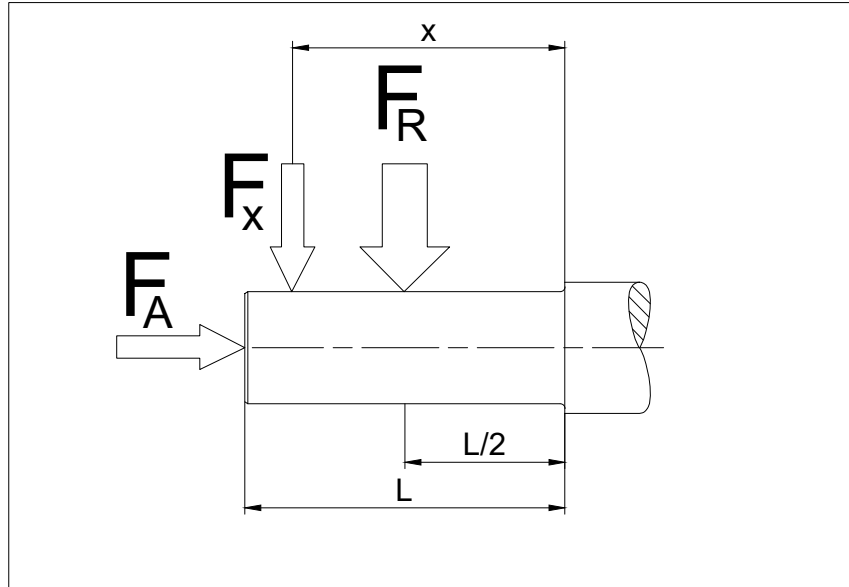
With 8 hours of operation, 5 days a week and 50 weeks of the year, this results in an **energy saving** of **187.37 kW/h** compared with the **IE3 S08LA4** and **276.14 kW/h** compared with the **IE2 DHE09XA4**.



## Radial and axial forces on the output shaft

For each geared motor with a solid shaft, the allowable radial force  $F_{R(N,V)}$  referred to the centre of the output shaft,  $x = l/2$ , is listed in the selection tables. The listed data applies to both foot-mounted and flange-mounted versions. If the force application point  $F_x$  is off centre, the allowable radial force must be recalculated taking into account the bearing lifetime and the shaft strength.

### Maximum allowable radial force at force application point X



4

$F_{R(N,V)}$	Allowable radial force ( $x = l/2$ ) according to the selection tables [N]
X	Distance from shaft junction to the force application point [mm]
$F_A$	Axial force [N]

To evaluate the radial force present at the force application point X, the allowable radial forces at position X must be determined with respect to the load limits of the bearings and the shaft strength.

If the calculated allowable radial forces at the force application point X are greater than the radial force that is present, the gearbox may be selected for the application.

If the calculated values are not sufficient or the force application point X is not within the stub shaft length l, please consult us.

### Bearing load limit

$$F_{XL1} = F_q \times \frac{0,5 + b}{\left(\frac{X}{l} + b\right)}$$

$$F_{XL2} = F_q \times \frac{0,5 + a}{\left(\frac{X}{l} + a\right)}$$

# Gear Motor Selection

## Radial and axial forces on the output shaft

### Shaft strength

$$F_{xw1} = F_{qmax} \times \frac{0,5}{\left(\frac{X}{l}\right)}$$

$$F_{xw2} = F_{qmax} \times \frac{0,5 + c}{\left(\frac{X}{l} + c\right)}$$

Thereby are:

For the selected gear ratio and bearing type (normal or reinforced),  $F_q$  is the allowable perpendicular force  $F_{RN}$  or  $F_{RV}$  from the geared motor selection tables.

$F_{qmax}$  is the maximum allowable perpendicular force for the selected gearbox size as listed in the geared motor selection tables, independent of the bearing type (normal or reinforced).

The factors a, b and c for the individual gearbox types are listed in the following tables.

### Helical gear unit BG series

Frame size	Bearings	Output shaft code	l	a	b	c
BG04	Normal	-.1	24	0,5625	1,5	-
BG05	Normal	-.1	28	0,5893	1,3929	-
BG06	Normal	-.1	30	0,6667	1,4167	-
BG10	Normal	-.1	40	0,7125	1,6750	-
		-.7		1,1000	2,0625	-
BG20	Normal	-.1	50	0,6100	2,2500	-
		-.7		0,9400	2,5800	-
BG30	Normal	-.1	60	0,5917	2,1750	-
		-.7		0,9417	2,5250	-
BG40	Normal	-.1	60	0,6917	2,3667	-
		-.7		1,0083	2,6833	-
BG50	Normal	-.1	80	0,5625	2,0000	-
		-.7		0,8563	2,2938	-
BG60	Normal	-.1	100	0,5300	2,0200	-
		-.7		0,7650	2,2550	-
BG70	Normal	-.1	120	0,4750	1,7292	-
		-.7		0,7292	1,9833	-
BG80	Normal	-.1	140	0,4286	1,7000	-
		-.7		0,6000	1,8714	-
BG90	Normal	-.1	200	0,3675	1,5300	-
		-.7		0,5825	1,7450	-
BG100	Normal	-.1	220	0,3477	1,4341	-
		-.7		0,5386	1,625	-



# Gear Motor Selection

## Radial and axial forces on the output shaft

### Shaft-mounted gear unit BF series

Frame size	Bearings	Output shaft code	l	a	b	c
BF06	Normal	-.1	50	0,4500	1,4100	-
BF10	Normal	-.1	60	0,5083	1,4833	-
		-.2		0,6500	1,6250	-
BF20	Normal	-.1	70	0,4286	1,3571	-
		-.2		0,5571	1,4857	-
BF30	Normal	-.1	80	0,3875	1,2563	-
		-.2		0,5688	1,4375	-
BF40	Normal	-.1	100	0,4050	1,2250	-
		-.2		0,5250	1,3450	-
BF50	Normal	-.1	120	0,3125	1,0625	-
		-.2		0,3959	1,1458	-
BF60	Normal	-.1	140	0,3286	1,0821	-
		-.2		0,4036	1,1571	-
	Reinforced	-.1		-	-	0,2750
		-.2		-	-	0,3643
BF70	Normal	-.1	180	0,2722	1,0566	-
		-.2		0,3056	1,0889	-
	Reinforced	-.1		-	-	0,2194
		-.2		-	-	0,2639
BF80	Normal	-.1	220	0,2878	1,3536	-
		-.2		0,2873	1,3518	-
	Reinforced	-.1	-	-	0,2364	
		-.2	-	-	0,2268	

4

# Gear Motor Selection

## Radial and axial forces on the output shaft

### Bevel gear unit BK series

Frame size	Bearings	Output shaft code	l	a	b	c
BK06	Normal	-.1	40	0.4375	1.9875	-
		-.2		0.4375	1.9875	-
		-.7		0.9125	2.4625	-
		-.8		0.9125	2.4625	-
BK10	Normal	-.1	60	0.5917	2.2417	-
		-.2		0.5917	2.2417	-
BK20	Normal	-.1	70	0.5071	2.2357	-
		-.2		0.5071	2.2357	-
	Reinforced	-.1		-	-	0.3929
		-.2		-	-	0.3929
BK30	Normal	-.1	80	0.5250	2.2750	-
		-.2		0.5250	2.2750	-
	Reinforced	-.1		-	-	0.4125
		-.2		-	-	0.4125
BK40	Normal	-.1	100	0.4300	2.1700	-
		-.2		0.4300	2.1700	-
	Reinforced	-.1		-	-	0.3400
		-.2		-	-	0.3400
BK50	Normal	-.1	120	0.4083	1.9417	-
		-.2		0.4083	1.417	-
	Reinforced	-.1		-	-	0.3250
		-.2		-	-	0.3250
BK60	Normal	-.1	140	0.3536	1.8036	-
		-.2		0.3536	1.0836	-
	Reinforced	-.1		-	-	0.3121
		-.2		-	-	0.2979
BK70	Normal	-.1	180	0.2861	1.6694	-
		-.2		0.2861	1.6694	-
	Reinforced	-.1		-	-	0.2428
		-.2		-	-	0.2317
BK80	Normal	-.1	220	0.2818	1.5545	-
		-.2		0.2818	1.5545	-
	Reinforced	-.1		-	-	0.2305
		-.2		-	-	0.2214
BK90	Normal	-.1	220	0.2519	1.6096	-
		-.2		0.2519	1.6096	-
	Reinforced	-.1		-	-	0.1989
		-.2		-	-	0.1912

### Worm gear unit BS series

Frame size	Bearings	Output shaft code	l	a	b	c
BS02	Normal	-.1	30	0.6	2.1	-
		-.2		-	-	-
		-.7		1.3333	2.8333	-
		-.8		-	-	-
BS03	Normal	-.1	40	0.4375	1.9875	-
		-.2		-	-	-
		-.7		0.9125	2.4625	-
		-.8		-	-	-
BS04	Normal	-.1	40	0.5375	1.7875	-
		-.2		-	-	-
BS06	Normal	-.1	50	0.4800	1.9400	-
		-.2		-	-	-
BS10	Normal	-.1	60	0.5917	2.3083	-
		-.2		-	-	-
BS20	Normal	-.1	70	0.5500	2.4357	-
		-.2		-	-	-
BS30	Normal	-.1	80	0.5312	2.4313	-
		-.2		-	-	-
BS40	Normal	-.1	120	0.4292	1.7042	-
		-.2		-	-	-

# Gear Motor Selection

## Radial and axial forces on the output shaft

### Transmission components

If a transmission component is used (gearwheels, chainwheels, V-belt, etc.), the resulting radial forces can be determined as follows.

$$F_R = \frac{2000 \times M}{D_T} \times f_z \leq F_{R(N,V)}$$

$F_R$	Radial force [N]
$M$	Torque [Nm]
$D_T$	Pitch radius of the transmission component [mm]
$f_z$	Safety factor

A safety factor  $f_z$  depending on the type of transmission component attached to the output shaft must be included when determining the value of the radial force  $F_R$  that is present.

4

### Factor $f_z$ for the type of transmission component

Transmission component	Safety factor $f_z$	Note
Gearwheel	1	= > 17 teeth
Gearwheel	1,15	< 17 teeth
Chainwheel	1	= > 17 teeth
Chainwheel	1,25	< 17 teeth
Toothed rack	1,15	< 17 teeth (pinion)
V-belt	2.....2,5	From tensioning force
Flat belt	2...3	From tensioning force
Friction wheel	3...4	

### Axial force

The following specification applies to the allowable axial force  $F_A$  on the output shaft (either tension or compression) for all Bauer geared motors and for foot, flange or hollow-shaft versions:

$$F_A = 0,5 \times F_{R(N,V)}$$

Please consult us in case of larger axial forces.

# Gear Motor Selection

## Shock loads of machinery

Shock loads for various types of machinery are listed in standards and guidelines as well as industry-specific documents and manufacturer's documents. If for example a crusher or a press is listed here with an shock load class of III, this is justified. On the other hand, under favourable conditions a belt conveyor could have an shock load class of I, but this could quickly change to III with on/off operation, high speed and overdrive due to a loose chain.

Consequently, the classifications in the following table should by no means be taken blindly. They provide a rough point of reference, but the ultimate classification of the shock load should always take into account the factors specified by Bauer, in particular the inertia ratio, the cycle rate and the transmission component(s).

Drive	Shock load		
<b>Construction machinery</b>			
Construction lifts		II	
Concrete mixers		II	
Road construction machinery		II	
<b>Chemical industry</b>			
Cooling drums		II	
Mixers		II	
Stirrers (light media)	I		
Stirrers (viscous media)		II	
Drying drums		II	
Centrifuges (light)	I		
Centrifuges (heavy)		II	
<b>Transport and conveying systems</b>			
Hauling winches		II	
Conveying machines			III
Apron conveyors		II	
Belt conveyors (bulk material)	I		
Belt conveyors (piece goods)		II	
Bucket belt conveyors		II	
Chain conveyors		II	
Circular conveyors		II	
Freight lifts		II	
Flour bucket conveyors	I		
Passenger lifts		II	
Flat belts		II	
Screw conveyors		II	
Gravel bucket conveyors		II	
Inclined lifts			III
Steel belt conveyors		II	
Chain conveyors		II	
<b>Blowers and fans</b>			
Roots blowers		II	
Blowers (axial and radial)	I		
Cooling tower fans		II	
Suction blowers		II	

Drive	Shock load		
<b>Rubber</b>			
Extruders			III
Calenders		II	
Kneaders			III
Mixers		II	
Rolling mills			III
<b>Timber processing and woodworking</b>			
Debarking drums			III
Planers		II	
Woodworking machinery	I		
Saw frames			III
<b>Crane systems</b>			
Luffing mechanisms	I		
Traversing mechanisms			III
Hoisting mechanisms	I		
Slewing mechanisms		II	
Jib mechanisms		II	
<b>Plastics</b>			
Extruders		II	
Calenders		II	
Mixers		II	
Grinders and pulverisers		II	
<b>Metalworking</b>			
Plate bending machines		II	
Plate straightening machines			III
Hammers			III
Planers			III
Presses			III
Shears		II	
Forging presses			III
Punches			III
Countershafts and driveshafts	I		
Machine tools (principal)		II	
Machine tools (ancillary)	I		

# Gear Motor Selection

## Shock loads of machinery

Drive	Shock load		
<b>Food processing</b>			
Filling machines	I		
Kneading machines		II	
Mashing machines		II	
Packaging machines	I		
Sugar cane cutters		II	
Sugar cane mills			III
Sugar beet cutters		II	
Sugar beet washers		II	
<b>Paper</b>			
Couching			III
Smoothing rolls			III
Hollander		II	
Pulp grinder			III
Calender		II	
Wet presses			III
Shredders			III
Suction presses			III
Suction rolls			III
Drying rolls			III
<b>Stone and soil</b>			
Crushers			III
Rotary kilns			III
Hammer mills			III
Tube mills			III
Beating mills			III
Tile and block presses			III
<b>Fabrics</b>			
Winders		II	
Printing and dyeing machines		II	
Tanning vats		II	
Shredders		II	
Looms		II	

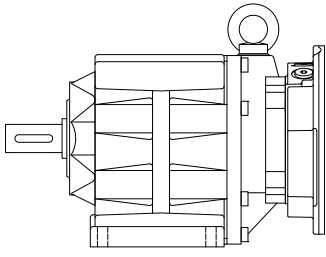
Drive	Shock load		
<b>Rolling mills</b>			
Plate shears			III
Plate turners		II	
Billet presses			III
Billet and slab lines			III
Billet conveyors			III
Wire drawing machines		II	
Descaling machines			III
Sheet metal mills			III
Plate mills			III
Winders (strip and wire)		II	
Cold rolling mills			III
Chain transports		II	
Billet shears			III
Cooling beds		II	
Cross transports		II	
Roller tables (light)		II	
Roller tables (heavy)			III
Roll straighteners		II	
Tube welders			III
Trimming shears		II	
Cropping shears			III
Continuous casting machines			III
Roll adjustment devices		II	
Manipulators			III
<b>Laundry</b>			
Drum dryers		II	
Washing machines		II	
<b>Water treatment</b>			
Centrifugal aerators		II	
Archimedes screw		II	

# Energy Efficient Geared Motors

## AC Variable Speed

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5



## Gearboxes & Lubrication

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# Energy Efficient Geared Motors

## AC Variable Speed

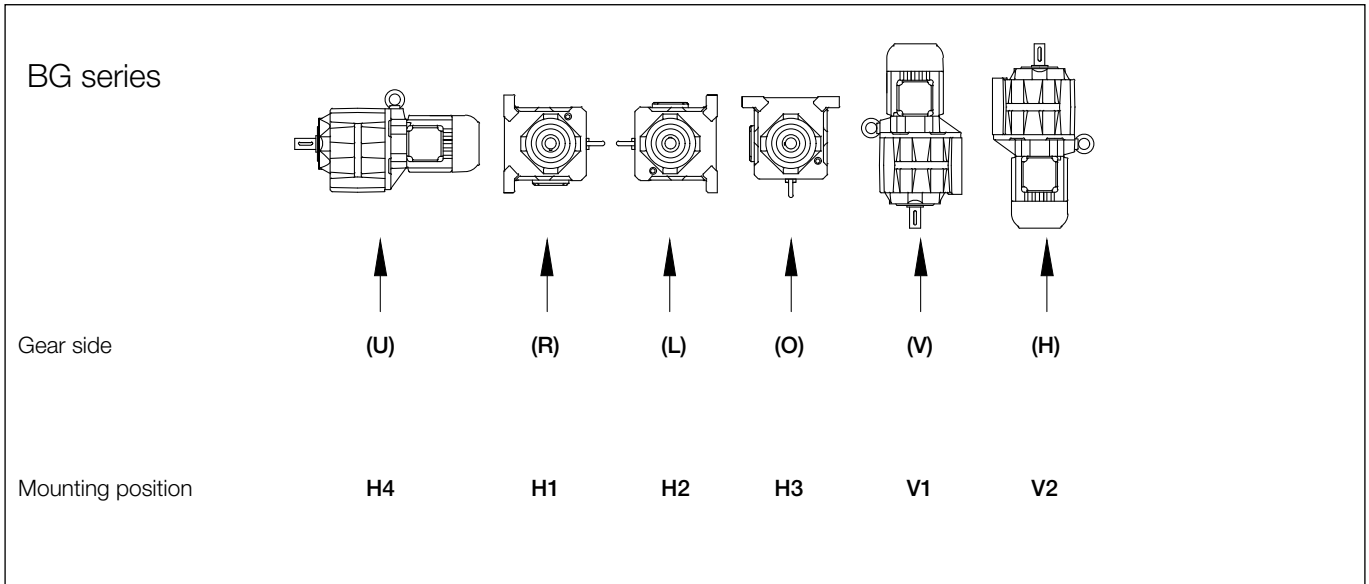
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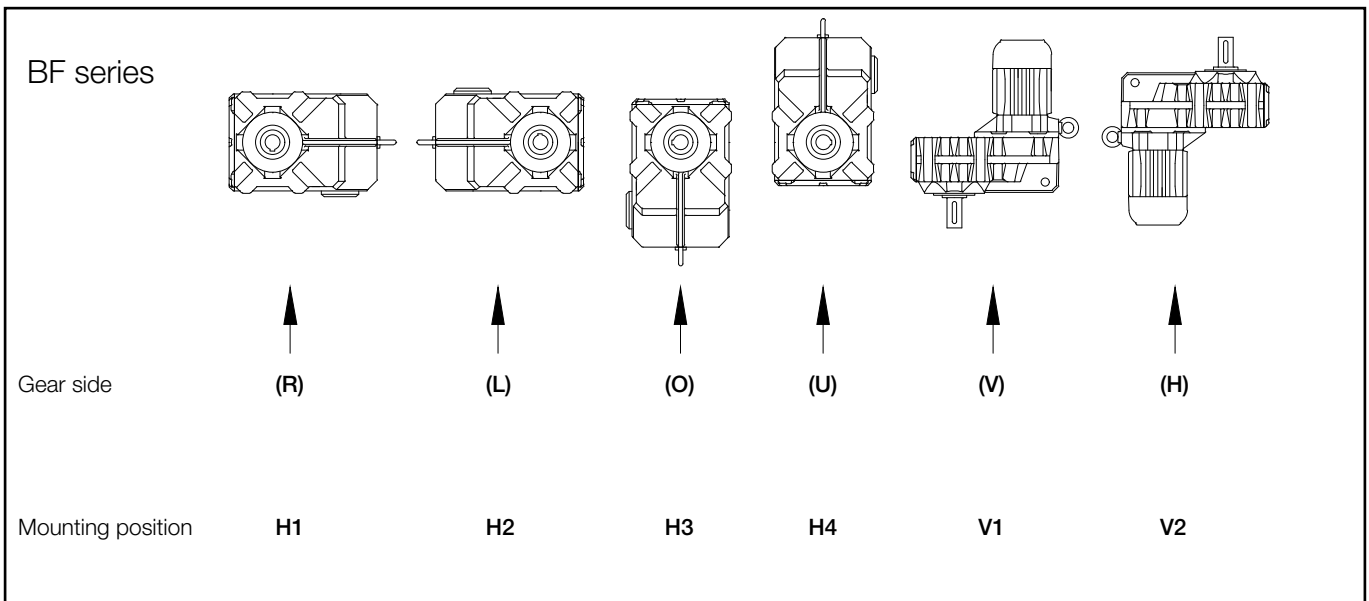


# Gearboxes & Lubrication

## Standard mounting positions



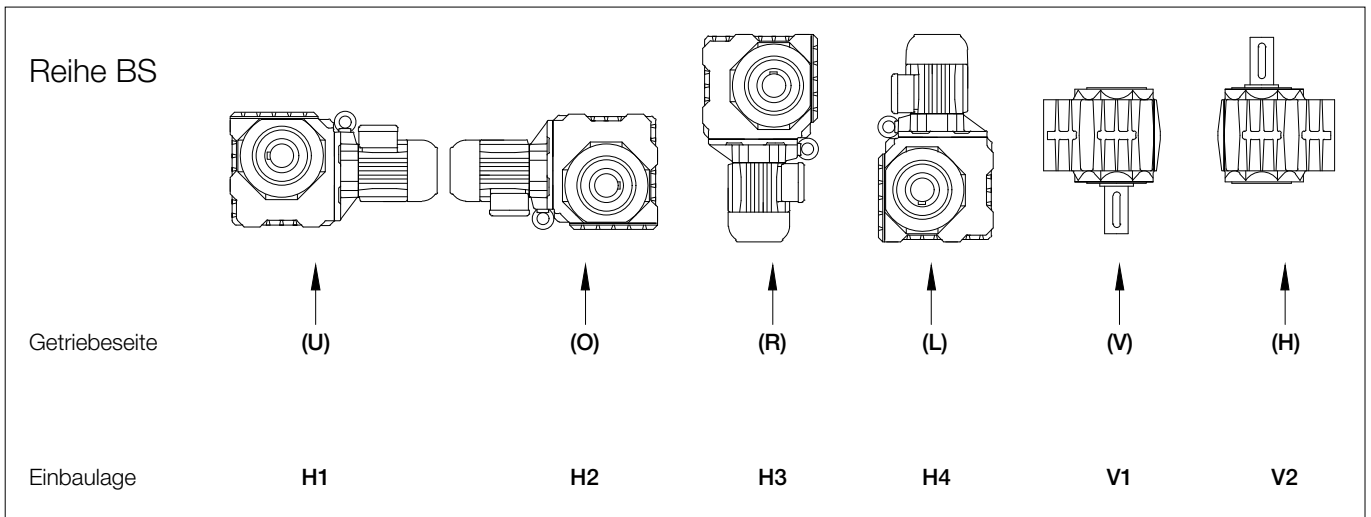
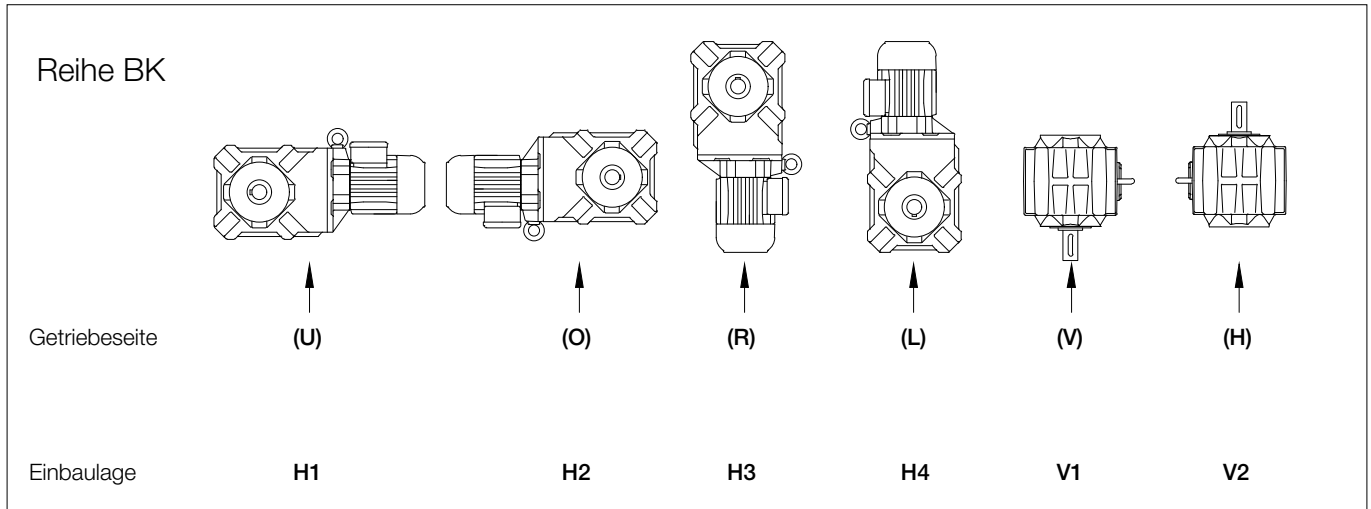
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# Gearboxes & Lubrication

## Standard mounting positions

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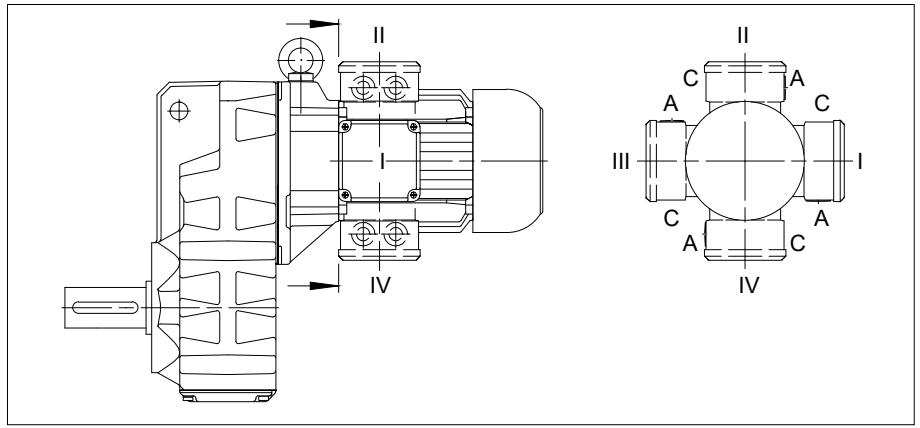
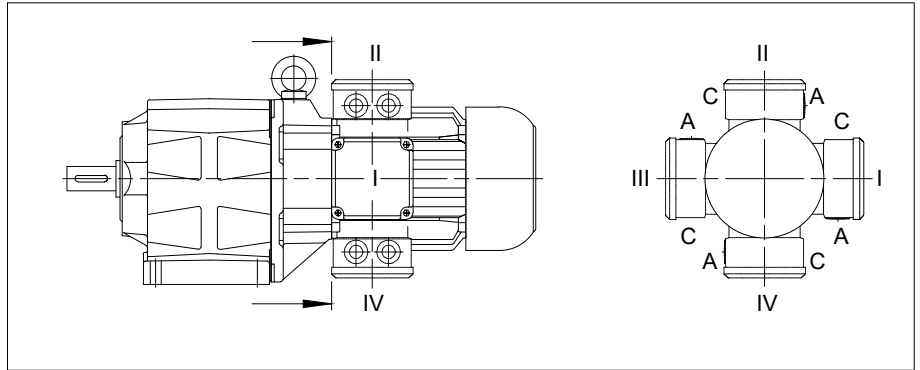


# Gearboxes & Lubrication

## Position of the terminal box

### Position of the terminal box and the cable entry points (BG and BF)

The standard position of the terminal box for helical-gear and shaft-mounted geared motors is position I. Cables may be introduced from side A or C.



Turning or rotating the gearbox in space in the different mounting positions according to DIN 42950 does not influence the marking as shown. The details of the terminal box always show the position of the terminal box and the cable entry in relation to the gearbox and not in space. The mounting according to DIN 42950 is to be given separately.

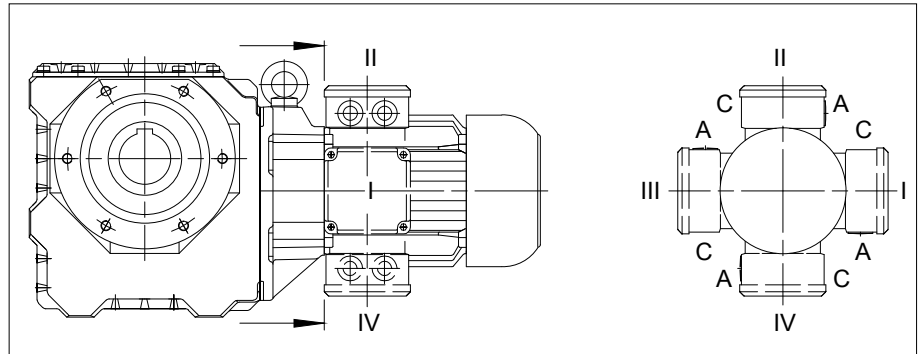
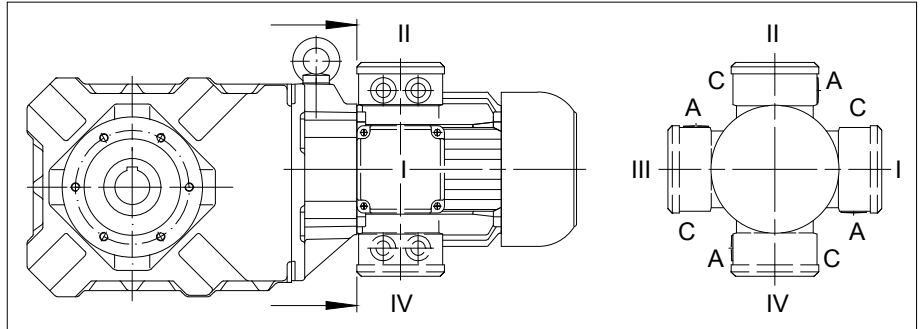
# Gearboxes & Lubrication

## Position of the terminal box

### Position of the terminal box and the cable entry points (BK and BS)

The standard position of the terminal box for bevel-gear and worm-gear motors is position II.

Cable entry through side A or side C is possible



Turning or rotating the gearbox in space in the different mounting positions according to DIN 42950 does not influence the marking as shown. The details of the terminal box always show the position of the terminal box and the cable entry in relation to the gearbox and not in space. The mounting according to DIN 42950 is to be given separately.

**Radial and axial forces at the output shaft**

The output shafts and output-shaft bearings are matched to the motor torques. It is advisable to locate the drive-transmission element's point of application as close as possible to the shaft collar to ensure that the load imposed by external radial forces is not unnecessarily high. Permissible values for radial forces referred to the output shaft centreline are listed in the selection tables. Please consult us if your application involves extra-high axial loading.

**Dimensions and fits of output shafts and keyways**

Output shaft and second shaft stub, keyway and key are in compliance with the DIN standards and ISO fits listed below:

**Solid shaft**

Shaft diameter	to D = 50 mm in ISO k6 (DIN 748 Page1) as of D = 50 mm in ISO m6 (DIN 748 Page 1)
Keyway	ISO P9 (DIN 6885 Page 1)
Key, height	ISO h9 (DIN 6885 Page 1 and DIN 6880)
Bore - customer	ISO H7

**Hollow shaft with keyway**

Bore diameter	ISO H7 (DIN 748)
Keyway	ISO JS9 (DIN 6885 Page 1)
Key, height	ISO h9 (DIN 6885 Page 1 and DIN 6880)
Customer shaft	ISO h6

**Hollow shaft for shrink-on disc coupling (SSV)**

Outside diameter	ISO f7
Inside diameter	ISO H7
Customer shaft	ISO h6

**Installing transmission elements****Note:**

Gearboxes using torque reaction by means of a flange (Code 2.; 3; 4.; 7.; 8.) or torque arm (Code 5.), must have the side for the torque reaction the same as where the radial force on the output shaft occurs (see rubber buffers for torque arms)! Please consult the factory for other designs.

**Gear with solid shaft**

Always exercise meticulous care when fitting transmission elements onto output shafts and, whenever possible, use the DIN 332 tapped bore provided for this purpose. Fitting is usually easier if the transmission element can be heated to approximately 100° C for installation. Dimension the locating bore to ISO H7.

Gears with solid shaft at each end (gear code -.3/): alignment of the two keys is subject to the DIN 7168 tolerances, the degree of accuracy is "fine".

**Gear with hollow shaft**

Hollow shafts usually engage solid shafts of the driven machinery. The gear unit must be mounted such as to be free of constraint and be fixed axially (e.g. by means of assembly help acc. following description "notes for installing shaft mount gears with hollow shaft and keyway"). Special contract provision must be made if the hollow shaft has to guide the solid shaft or, for any other reason, close out-of-round tolerance referenced to a point on the gear housing (such as a flange, for instance) is required.

**Shrink disc coupling**

A shrink disc coupling (SSV) can transmit high torque from the non-grooved hub to the smooth shaft. The SSV is easily secured and released, using commercially available bolts. SSVs are the ideal supplement for shaft mount gears. The maximum transmittable torque for the selected shrink discs when fitted and mounted according to instructions is above the breakaway torque of the respective motors classified as standard (for classification of shrink disc sizes see chapter 11, 12, 13 "Additional dimensional drawings for Shrink disc coupling")

# Gearboxes & Lubrication

## Gearboxes

### Torque restraint

Shaft-mounted geared motors require a suitable torque restraint to resist the reaction torque. Shaft-mounted gears have cast torque arms as standard. Bevel gears and worm gears are available with bolt-on torque arms on request. The torque arm is screwed onto the front "V" on the side of the gear unit. It is always important to ensure that the torque arm does not create excessive constraining forces due to the driven shaft running untrue, for example. Excessive play can result in excessive shock torques in switching or reversing operations. Consequently, we recommend the use of pre-tensioned rubber damping elements. These rubber buffers are part of the scope of supply for designs with a torque arm (see chapter 11, 12., 13 dimensional drawings "Rubber buffer for torque restraint")

### Notes for installing shaft mount gears with hollow shaft and keyway

#### (1) Attaching the hollow shaft to the customer shaft

Threaded bolt (d) is screwed into the end thread of the shaft to be driven. By tightening the nut, apply force to thrust plate (b) and locating ring (c) to draw the gear unit onto the shaft.

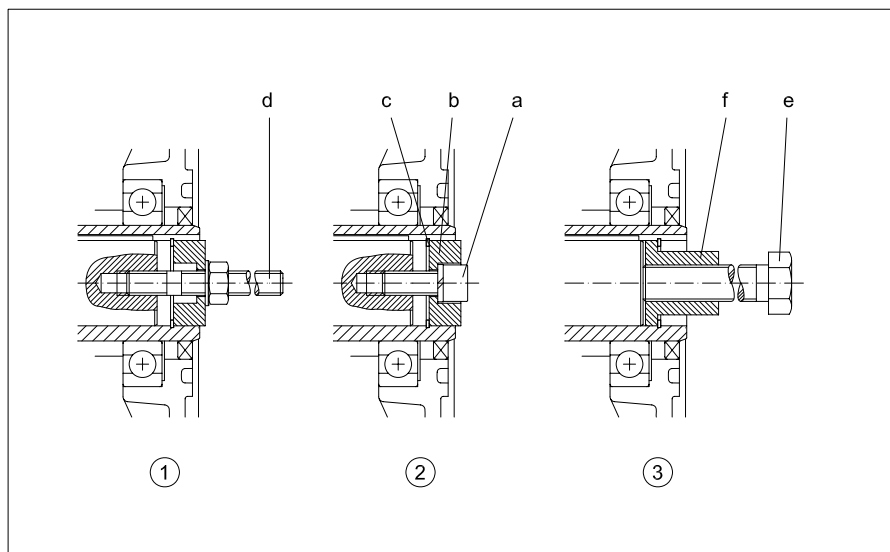
#### (2) Axial fastening

Pressure piece (b) is rotated and fitted against retaining ring (c) using fixing screw (a).

#### (3) Removing

Extractor (f) is fitted between the end face of the shaft and retainer ring (c). Tighten press-off screw (e) against the end of the shaft and pull the gear unit off the shaft.

Manufacturing drawings for the required parts are available on request. These parts are not included in the scope of supply.



Detailed information on shaft-mounted gear units, bevel-gear units and worm-gear units is available (see chapter 11, 12., 13 dimensional drawings "Tools for fitting shaft-mounted gear with hollow shaft and keyway").

### Gear ventilation

The lifetime of the gearbox lubricant increases the better it is protected from negative environmental influences. Should the oil level or the gearbox ratio cause a very high lubricant temperature, the gearbox will be supplied as standard with a breather plug. Either on request or for corresponding high ambient temperatures, all gearboxes from size 10 can be supplied with a breather plug.

For the position of the threaded plugs see chapter 5 threaded plugs.

### Output shaft seals









All size 10 and larger gears are available with double seals for the output shaft on request and at extra cost. Double seals are particularly effective if the output shaft points down and as protection against external influences

## Lubricants

## Lubricants

The drives are shipped ready-filled with gear lubricant. Lubricated in this way, the gear units are suitable for ambient temperatures in the range -20 °C to + 40 °C. The quantity of lubricant is optimised for the desired installed position as is stated on the nameplate. The type of lubricant is stated in the Operating Instructions. Lubricants for other temperature ranges or special applications available on request.

Wear-protective EP gear oils as indicated in the following table have proven particularly effective:

Manufacturer	Lubricant type					
	Mineral Oil	Synthetic Oil			USDA H1 Oil	
	ISO VG 220	ISO VG 68		ISO VG 220	ISO VG 460	ISO VG 220
	Standard oil for gearboxes in the series <b>BF06-BF90</b> <b>BG04-BG100</b> <b>BK60-BK90</b>	Low temperature oil for gearboxes in the series <b>BF06-BF90</b> <b>BG04-BG100</b>	<b>BK06-BK90</b> <b>BM09-BM40</b> <b>BS02-BS40</b>	Standard oil for gearboxes in the series <b>BS02-BS10</b> <b>BK06-BK10</b> <b>BM09-BM40</b> High temperature oil for gearboxes in the series <b>BS02-BS10</b> <b>BK06-BK10</b> <b>BF06-BF90</b> <b>BG04-BG100</b> <b>BK60-BK90</b> <b>BM09-BM10</b>	Standard oil for gearboxes in the series <b>BS20-BS40</b> <b>BK17-BK50</b> <b>BM20-BM40</b> High temperature oil for gearboxes <b>BS20-BS40</b> <b>BK17-BK50</b> <b>BM20-BM40</b>	Food and Beverage Industry Oil for gearboxes in the series <b>BF06-BF90</b> <b>BG04-BG100</b> <b>BK06-BK90</b> <b>BM09-BM40</b> <b>BS02-BS40</b>
<b>AGIP</b> 	BLASIA 220 [13 02 08]	—	—	BLASIA S 220 [13 02 06]	BLASIA S 460 [13 02 06]	—
<b>BECHER RHUS</b> 	STAROIL G 220 [13 02 08]	—	BERUSYNTH EP 68 [13 02 06]	BERUSYNTH EP 220 [13 02 06]	BERUSYNTH EP 460 [13 02 06]	BERUSYNTH EP 220 H1 [13 02 06]
<b>CASTROL</b> 	ALPHA EP 220 [13 02 08] ALPHA SP 220 [13 02 08] OPTIGEAR EP 220 [13 02 08] OPTIGEAR 1100/220 [13 02 08]	Alphasyn T68 [13 02 06]	—	ALPHASYN PG 220 [13 02 06] OPTIGEAR 800/220 [13 02 06] OPTIGEAR 1300/220 [13 02 06] ALPHASYN GS 220 [13 02 06]	ALPHASYN PG 460 [13 02 06] OPTIGEAR 800/460 [13 02 06] OPTIGEAR 1300/460 [13 02 06] ALPHASYN GS 460 [13 02 06]	OPTILEB GT 220 (CLP-HC) [13 02 06] OPTILEB GT 1800/220 (CLP-PG) [13 02 08]
<b>CHEVRON</b>	Meropa 220 [13 02 08] GEARTEX EP-A SAE 85W-90 [13 02 06]	—	Meropa Synlu- be WS 68 [13 02 06]	Meropa Synlube WS 220 [13 02 06]	Meropa Synlube WS 460 [13 02 06]	Chevron lubricating oils FM 220 (USA) [13 02 06]
<b>FUCHS</b> 	RENOLIN CLP 220 [13 02 08] RENOLIN CLPF 220 SUPER [13 02 08] RENOLIN CLP 220 PLUS [13 02 08]	RENOLIN UNI- SYN CLP 68 [13 02 06]	RENOLIN PG 68 [13 02 06]	RENOLIN PG 220 [13 02 06]	RENOLIN PG 460 [13 02 06]	CASSIDA FLUID GL 220 [13 02 06]
<b>KLÜBER</b> 	KLÜBEROIL GEM 1-220 N [13 02 08]	—	KLÜBER- SYNTH GH 6-80 [13 02 06]	KLÜBERSYNTH GH 6-220 [13 02 06]	KLÜBERSYNTH GH 6-460 [13 02 06]	KLÜBEROIL 4UH1-220 N [13 02 06] KLÜBERSYNTH UH1 6-220 [13 02 06]
<b>MOBIL</b> 	MOBILGEAR 600 XP 220 [13 02 08]	MOBIL SHC 626 [13 02 06]	—	MOBIL SHC Gear 220 [13 02 06] MOBIL SHC 630 [13 02 06]	MOBIL SHC Gear460 [13 02 06] MOBIL SHC 634 [13 02 06]	MOBIL SHC CIBUS 220 [13 02 06]
<b>OEST</b> 	Gearol 220 [13 02 06]	—	—	—	—	—
<b>SHELL</b>	OMALA S2 GX220 [13 02 08]	—	—	OMALA S4 WE 220 [13 02 06]	OMALA S4 WE 460 [13 02 06]	—
<b>TOTAL</b> 	CARTER EP 220 [13 02 08] CARTER XEP 220 [13 02 06]	—	—	CARTER SY 220 [13 02 06]	CARTER SY 460 [13 02 06]	NEVASTANE SL220 [13 02 06] NEVASTANE EP 220 [13 02 06] NEVASTANE SY 220 [13 02 06]
<b>WINTERSHALL</b>	SRS ERSOLAN 220 [13 02 08]	—	—	—	—	—

[...] European Waste Catalogue Code (Decision 2001/118/CE)

# Gearboxes & Lubrication

## Lubricants

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**Important:**

Synthetic gear oils of a Polyglykol base (e.g. PGLP...) must be disposed of separately to mineral oil as **Special Waste** .

So long as the ambient temperature does not fall below – 20 °C the international definition of the viscosity class at 40 °C according to ISO 3448 and DIN 51519 ISO the viscosity class VG220 (SAE90) is recommended according, in North America AGMA 5EP.

For lower temperatures it is recommended to use oils of a lower nominal viscosity with a corresponding better starting characteristic, for instance a PGLP with a nominal viscosity VG68 (SAE80) or AGMA 2EP respectively. These types of oil can already be necessary at a temperature around the freezing point, if the break away torque of a drive is reduced by some smooth starting device or if the motor has a relatively low power

**Lubricant quantities****5**

The preferred quantity of lubricant for the planned type of installation is stated on the motor's rating plate (symbol "oil can"). When topping up care should be taken to ensure that, depending on the fitting position, gearwheels and rolling contact bearings positioned at the top are also properly oiled. In special versions the oil level mark should be noted. Information about the quantity of lubricant required for other types of installation can be obtained from the factory



## Lubricant quantities, BG-series gears

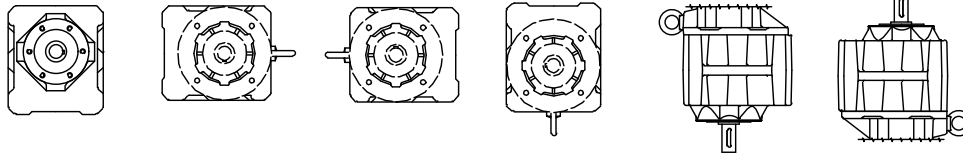
## Gear-housing with flange or foot

Flange (Code-2./Code-3./Code-4./Code-7.)

Foot with threaded holes (Code -6.)

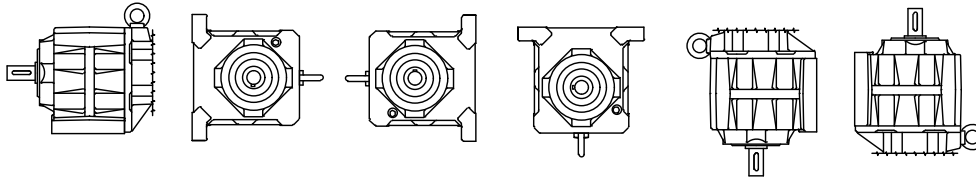
Foot with clearance holes (Code-9.)

Completely machined (Code -8.)



## Foot housing

cast foot with clearance holes (Code -1.)



Gearbox type		H4	H1	H2	H3	V1	V2
BG04	*	0,03	0,03	0,03	0,03	0,05	0,05
	**	0,05	0,05	0,05	0,05	0,1	0,05
BG05	*	0,05	0,05	0,05	0,05	0,08	0,08
	**	0,08	0,08	0,08	0,08	0,16	0,8
BG06	*	0,08	0,08	0,08	0,08	0,15	0,15
	**	0,12	0,12	0,12	0,12	0,24	0,15
BG10	*	0,65	0,65	0,65	0,85	1,05	0,85
	**	0,45	0,45	0,45	0,6	0,75	0,6
BG15	**	0,4	0,4	0,4	0,35	0,62	0,55
BG20	*	0,8	0,8	0,8	1,1	1,4	1,1
	**	0,6	0,6	0,6	1,0	1,15	0,9
BG30	*	1,0	1,0	1,0	1,7	2,4	1,6
	**	1,0	1,0	1,0	1,7	2,3	1,7
BG40	*	1,7	1,7	1,7	2,5	3,5	2,1
	**	1,7	1,7	1,7	2,5	3,5	2,1
BG50	*	3,0	3,0	3,0	4,5	5,5	3,3
	**	3,0	3,0	3,0	4,5	5,5	3,3
BG60	*	5,5	5,5	5,5	7,0	10,9	6,4
	**	5,5	5,5	5,5	7,0	10,9	6,4
BG70		6,5	6,5	6,5	8,0	13,5	9,0
BG80		11,0	11,0	11,0	11,0	22,5	15,0
BG90		19,0	19,0	19,0	19,0	40,0	26,0
BG100		35,0	35,0	55,0	50,0	66,0	50,0

\* Flange Housing

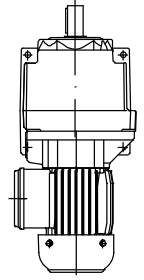
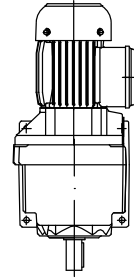
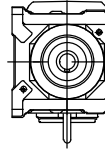
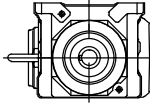
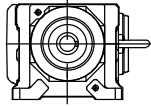
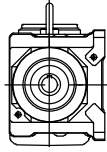
\*\* Foot Housing

Lubrication quantity in litre

# Gearboxes & Lubrication

## Lubricants

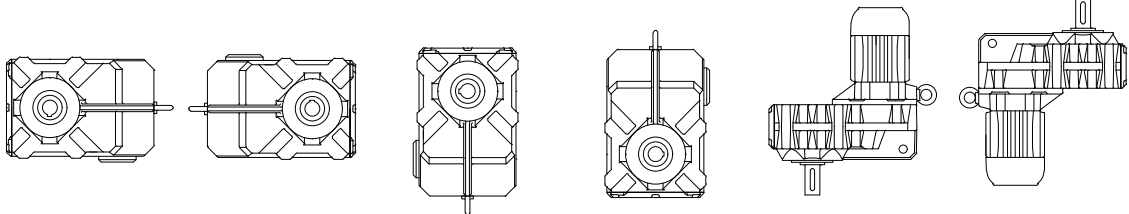
### Lubricant quantities, BG20-01R



5

Gearbox type	H4	H1	H2	H3	V1	V2
BG20R	0,8	1,0	0,8	1,4	1,65	1,0
Lubrication quantity in litre						

## Lubricant quantities, BF-series gears

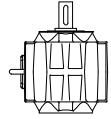
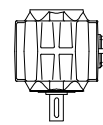
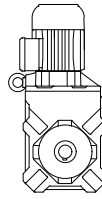
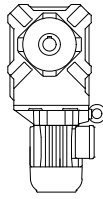
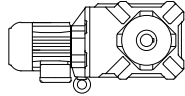
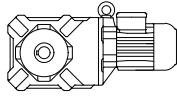


Gear type	H1	H2	H3	H4	V1	V2
BF06	0,25	0,25	0,25	0,37	0,35	0,3
BF10	0,85	0,85	0,85	1,1	1,45	1,5
BF20	1,3	1,3	1,3	1,7	2,2	2,25
BF30	1,7	1,7	1,7	2,2	3,2	3,0
BF40	2,7	2,7	2,7	3,5	4,9	4,8
BF50	3,8	3,8	3,8	5,0	6,7	6,7
BF60	6,7	6,7	6,7	9,0	12,3	12,0
BF70	12,2	12,2	12,2	16,0	24,2	21,8
BF80	17,0	17,0	17,0	21,0	32,2	27,5
BF90	32,0	32,0	32,0	41,0	62,0	53,0
Lubrication quantity in litre						

# Gearboxes & Lubrication

## Lubricants

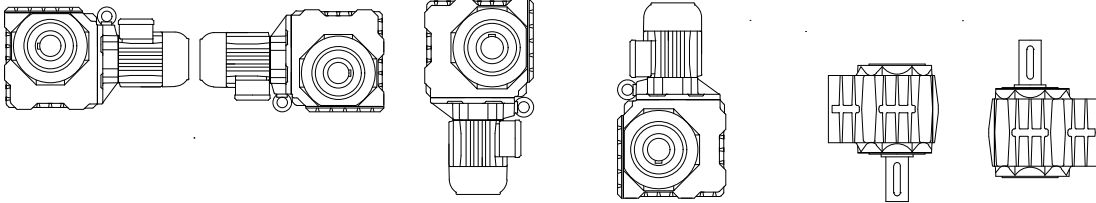
### Lubricant quantities, BK-series gears



Gear type	H1	H2	H3	H4	V1	V2
BK06	0,15	0,23	0,29	0,31	0,18	0,23
BK10	0,83	0,83	0,92	1,75	0,92	0,92
BK17	1,0	1,7	1,8	2,6	1,3	1,8
BK20	1,5	1,5	1,6	2,9	1,65	1,65
BK30	2,2	2,2	2,3	4,4	2,4	2,4
BK40	3,5	3,5	3,5	7,0	3,7	3,7
BK50	5,8	5,8	5,8	11,5	6,0	6,0
BK60	6,0	8,7	6,9	12,0	8,6	8,6
BK70	10,2	15,0	11,5	20,5	13,5	14,5
BK80	18,0	25,5	19,0	37,0	23,5	25,5
BK90	33,0	48,0	36,0	69,0	45,0	48,0
Lubrication quantity in litre						

5

## Lubricant quantities, BS-series gears

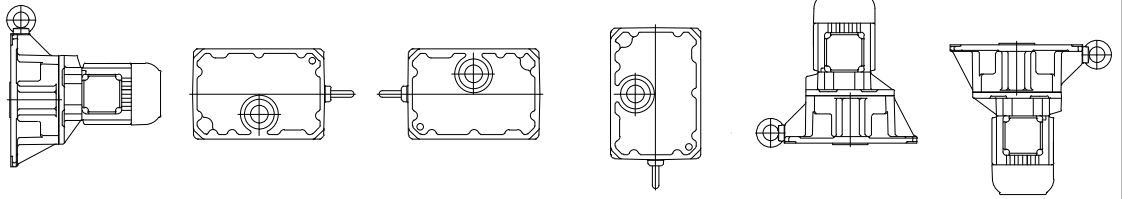


Gear type	H1	H2	H3	H4	V1	V2
BS02	0,06	0,06	0,06	0,06	0,06	0,06
BS03	0,17	0,17	0,17	0,17	0,17	0,17
BS04	0,11	0,17	0,11	0,2	0,11	0,11
BS06	0,24	0,36	0,24	0,45	0,24	0,24
BS10	0,9	1,3	0,9	1,6	0,9	0,9
BS20	1,5	2,1	1,5	2,7	1,5	1,5
BS30	2,2	3,0	2,2	3,8	2,2	2,2
BS40	3,5	4,7	3,5	6,0	3,5	3,5
Lubrication quantity in litre						

# Gearboxes & Lubrication

## Lubricants

### Lubricant quantities, pre-stage gears (Z)



	H4	H1	H2	H3	V1	V2
BF	H4	H1	H2	H3	V1	V2
BG						
BK	H1	V1	V2	H2	H4	H3
BS						
Gear type						
BF10Z BF10Z BK10Z BS10Z	0,10	0,05	0,12	0,07	0,16	0,07
BG20Z BF20Z BK20Z BS20Z	0,15	0,07	0,19	0,17	0,27	0,10
BG30Z BF30Z BK30Z BS30Z BM30Z BM30Z	0,2*	0,10	0,35	0,22	0,35	0,19
BG40Z BF40Z BK40Z BS40Z BM40Z	0,32*	0,17	0,50	0,37	0,6	0,32
BG50Z BF50Z BK50Z	0,5	0,3	0,92	0,7	1,15	0,5
BG60Z BF60Z BK60Z	0,9	0,5	1,55	1,1	2,0	0,7
BG70Z BF70Z BK70Z BS70Z	1,2	0,6	1,8	1,6	2,4	1,4
BG80Z BF80Z BK80Z BS80Z	3,1	1,3	4,0	2,6	5,2	2,0
BG90Z BK90Z	4,2	1,5	5,4	3,5	7,7	3,0

\*: with BM30Z/BM40Z the pre-stage lubricant is filled via the main gearbox.

Lubrication quantity in litre

5

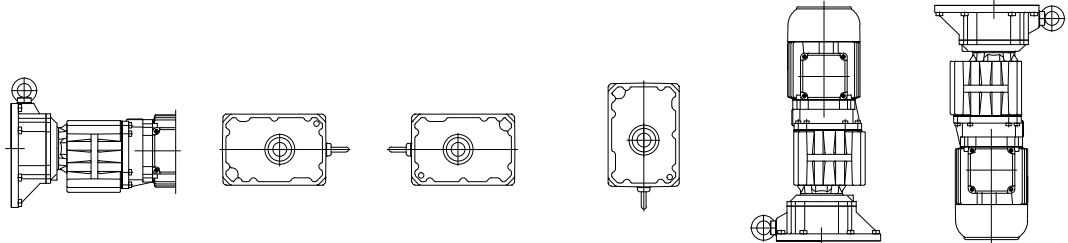
## Lubrication quantity for intermediate gear

## Definition of the terminal box position

Terminal box position for intermediate gear is similar to the main gearbox that means

Main gearbox BG, BF terminal box pos. I -&gt; intermediate gearbox terminal box pos. I

Main gearbox BK, BS terminal box pos. II -&gt; intermediate gearbox terminal box pos. II

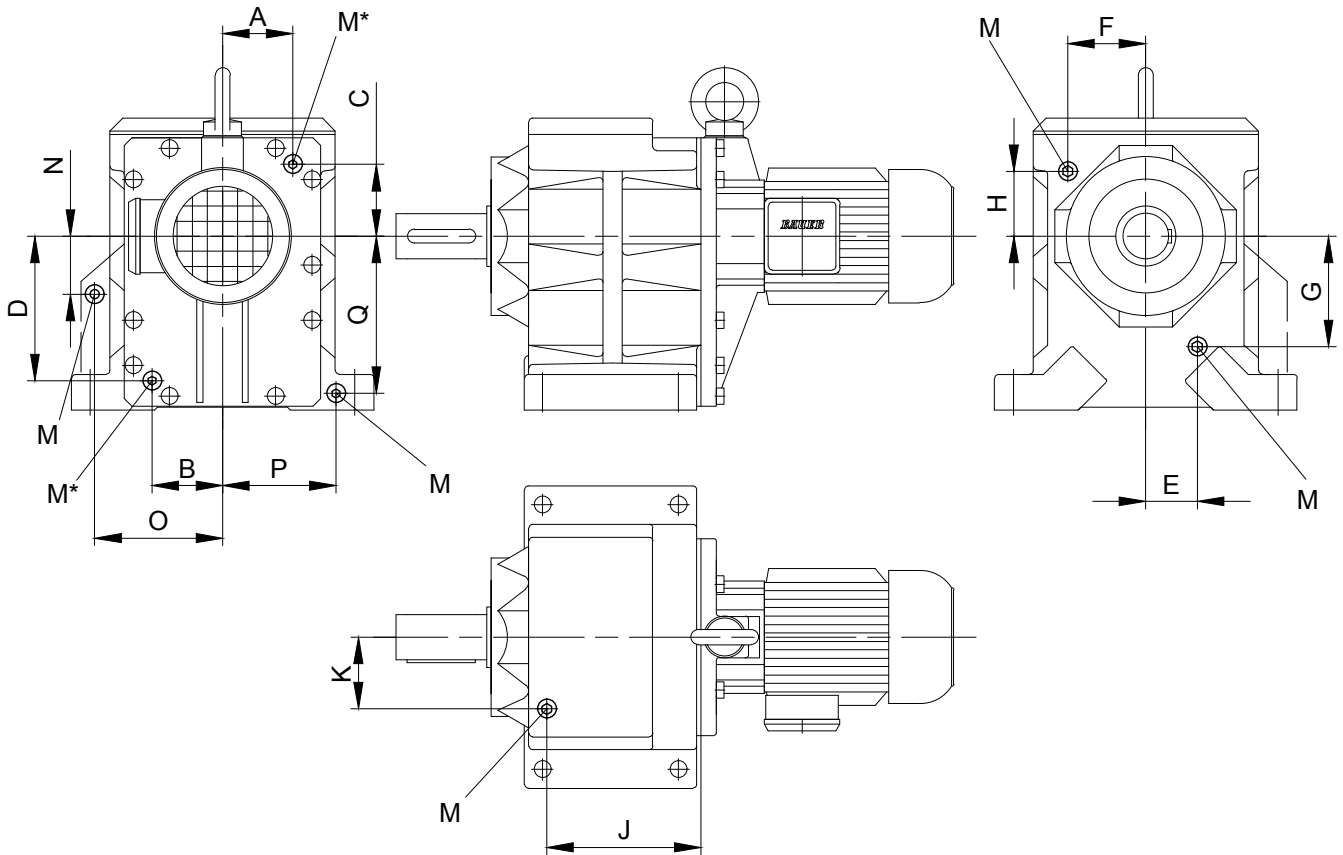


Mounting position of main gearbox	BF	H4	H1	H2	H3	V1	V2
	BG						
	BK	H1	V1	V2	H2	H4	H3
	BS						
Type designation of double gearbox combination							
BG06G04 BK06G04	BS06G04	0,03	0,03	0,03	0,03	0,05	0,05
BG10G06 BK10G06	BF10G06 BS10G06	0,08	0,08	0,08	0,08	0,15	0,15
BG20G06 BK20G06	BF20G06 BS20G06	0,08	0,08	0,08	0,08	0,15	0,15
BG30G06 BK30G06	BF30G06 BS30G06	0,08	0,08	0,08	0,08	0,15	0,15
BG40G10 BK40G10	BF40G10 BS40G10	0,65	0,65	0,65	0,85	1,05	0,85
BG50G10 BK50G10	BF50G10	0,65	0,65	0,65	0,85	1,05	0,85
BG60G20 BK60G20	BF60G20	0,8	0,8	0,8	1,1	1,4	1,1
BG70G20 BK70G20	BF70G20	0,8	0,8	0,8	1,1	1,4	1,1
BG80G40 BK80G40	BF80G40	1,7	1,7	1,7	2,5	3,3	2,1
BG90G50 BK90G50	BF90G50 BG100G50	3,0	3,0	3,0	4,5	5,5	3,3
Lubrication quantity in litre							

# Gearboxes & Lubrication

## Threaded plugs

### Position of threaded plugs -BG-series gears



Typ		A	B	C	D	E	F	G	H	J	K	N	O	P	Q	M
BG10	Foot housing	see position of the oil drain and filler plugs on the system cover	Tab.I-Tab.III size B.10			33	42	48	41,5	-	-	-	-	-	-	M10x1
BG10	Flange housing		Tab.I-Tab.III size B.10			27	-	73	-	-	-	-	-	-	-	M10x1
BG15	Foot housing		Tab.I-Tab.III size B.10			-	-	-	-	-	-	-	-	-	-	-
BG20	Foot housing		Tab.I-Tab.III size B.20			-	47	-	52,5	-	-	-	-	-	-	M10x1
BG20	Flange housing		Tab.I-Tab.III size B.20			-	28	-	68	-	-	-	-	-	-	-
BG30	Foot housing		Tab.I-Tab.III size B.30			-	54	-	58	-	-	-	-	-	-	M10x1
BG30	Flange housing		Tab.I-Tab.III size B.30			-	58	-	48	-	-	-	-	-	-	M10x1
BG40	Foot housing		Tab.I-Tab.III size B.40			-	75	-	48	-	-	-	-	-	-	M14x1,5
BG40	Flange housing		Tab.I-Tab.III size B.40			-	75	-	48	-	-	-	-	-	-	M14x1,5
BG50	Foot housing		Tab.I-Tab.III size B.50			-	53	-	100	-	-	-	-	-	-	M14x1,5
BG50	Flange housing		Tab.I-Tab.III size B.50			-	53	-	100	-	-	-	-	-	-	M14x1,5
BG60	Foot housing		Tab.I-Tab.III size B.60			-	70	-	119	-	-	-	-	-	-	M20x1,5
BG60	Flange housing		Tab.I-Tab.III size B.60			-	70	-	119	-	-	-	-	-	-	M20x1,5
BG70			Tab.I-Tab.III size B.70			-	103	-	86	204	95	-	-	-	-	M20x1,5
BG80			Tab.I-Tab.III size B.80			-	133	-	110	237	111	-	-	-	-	M20x1,5
BG90			Tab.I-Tab.III size B.90			-	165	-	124	297	140	-	-	-	-	M24x1,5
BG100		Tab.I-Tab.III size B.80			-	202	-	128	420	165	135	263	202	293	M24x1,5	

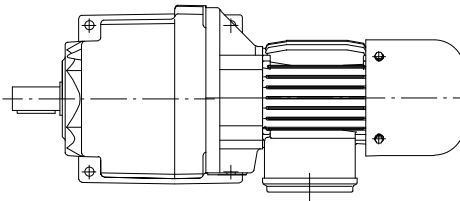
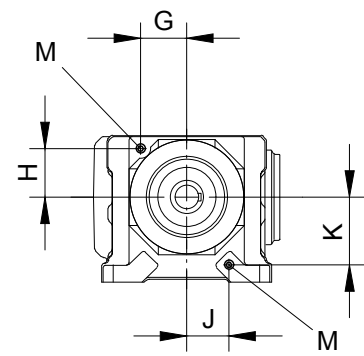
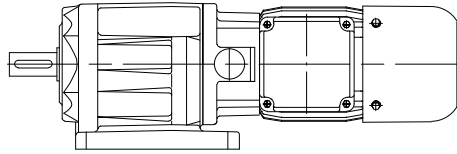
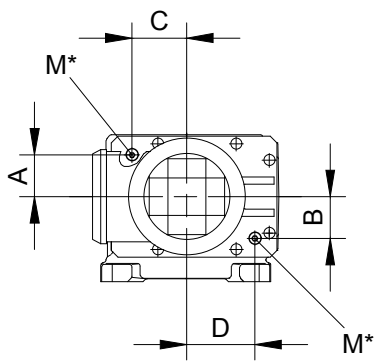
M = Plug according to DIN 908  
Dimensions in millimetres (mm)

M\* = Size and position of the drain plug see page 76.

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## Threaded plugs

Position of threaded plugs  
-BG-20-01R

5

Type	A	B	C	D	G	H	J	K	M
BG20-01R Roller table	see position of the oil drain and filler plugs on the system cover Tab.I-Tab.III size B20				48,5	51,5	45	71,5	M10x1
M = Plug according to DIN 908 Dimensions in millimetres (mm)									

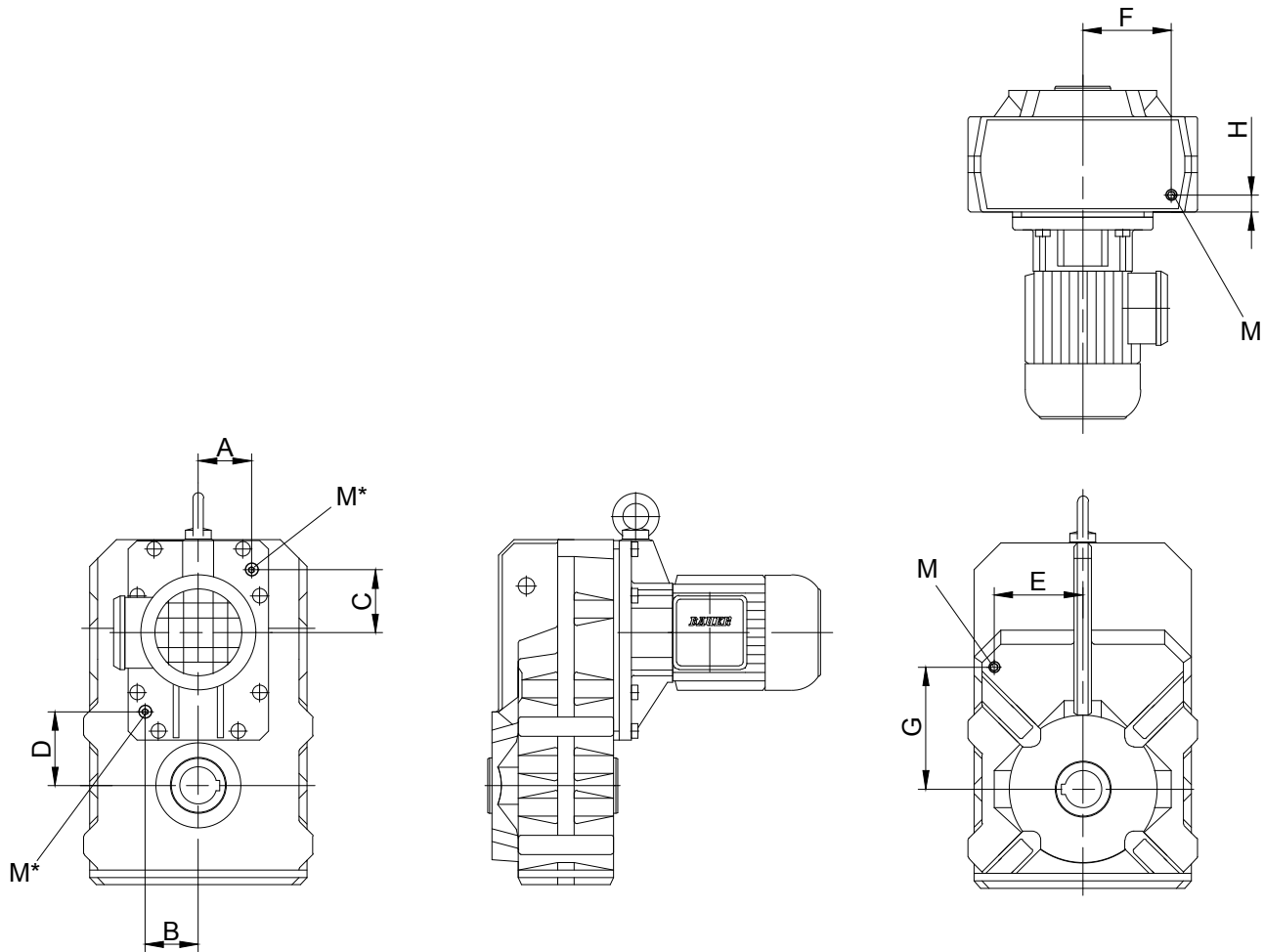
M\* = Size and position of the drain plug see page 76.

# Gearboxes & Lubrication

## Threaded plugs

### Position of threaded plugs -BF-series gears

5



Type	A	B	C	D	E	F	G	H	M
BF06	see position of the oil drain and filler plugs on the system cover	on request							
BF10		Tab.I-Tab.III size	B.10	64	65	97	28	M10x1	
BF20		Tab.I-Tab.III size	B.20	77	70	115	30,5	M10x1	
BF30		Tab.I-Tab.III size	B.30	88	82	125	36,5	M10x1	
BF40		Tab.I-Tab.III size	B.40	100	86	141	33	M14x1,5	
BF50		Tab.I-Tab.III size	B.50	120	105	165	42,3	M14x1,5	
BF60		Tab.I-Tab.III size	B.60	140	145	200	50,5	M20x1,5	
BF70		Tab.I-Tab.III size	B.70	165	177	235	52,5	M20x1,5	
BF80		Tab.I-Tab.III size	B.70	145	148	255	123	M20x1,5	
BF90		Tab.I-Tab.III size	B.80	155	176	347,5	260	M24x1,5	

M = Plug according to DIN 908  
Dimensions in millimetres (mm)

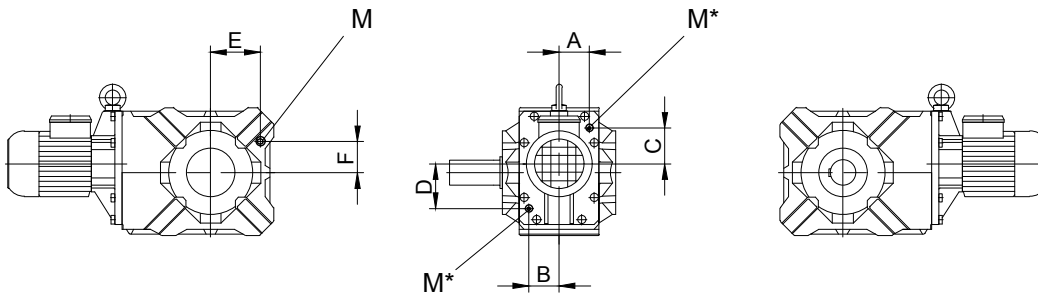
M\* = Size and position of the drain plug see page 76.

## Threaded plugs

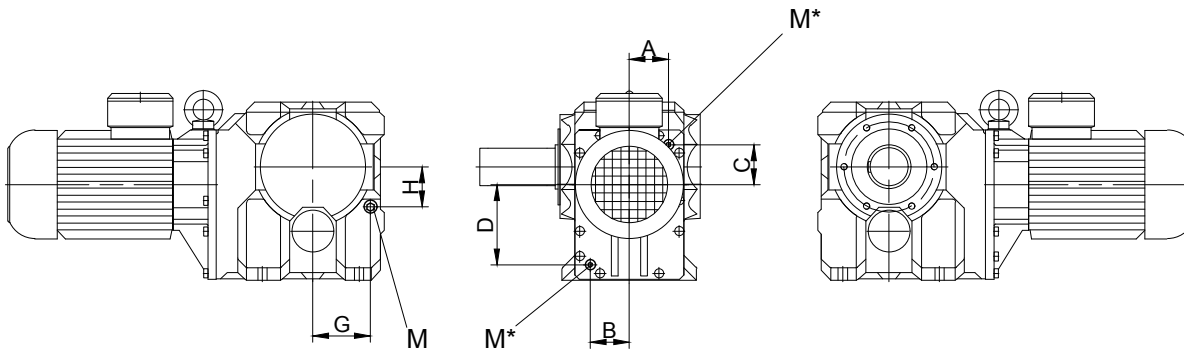
## Position of threaded plugs

## -BK-series gears

BK10 - BK50



BK60 - BK90



Type	A	B	C	D	E	F	G	H	M
BK06	see position of the oil drain and filler plugs on the system cover	on request							
BK10		Tab.I-Tab.III size B.10		62	32,5	-	-		M10x1
BK20		Tab.I-Tab.III size B.20		73,5	37,5	-	-		M10x1
BK30		Tab.I-Tab.III size B.30		80	43	-	-		M10x1
BK40		Tab.I-Tab.III size B.40		88	49	-	-		M14x1,5
BK50		Tab.I-Tab.III size B.50		118	74	-	-		M14x1,5
BK60		Tab.I-Tab.III size B.60		-	-	93	87		M20x1,5
BK70		Tab.I-Tab.III size B.70		-	-	137	95		M20x1,5
BK80		Tab.I-Tab.III size B.80		-	-	150	117		M20x1,5
BK90		Tab.I-Tab.III size B.90		-	-	208	135		M24x1,5

M = Plug according to DIN 908  
Dimensions in millimetres (mm)

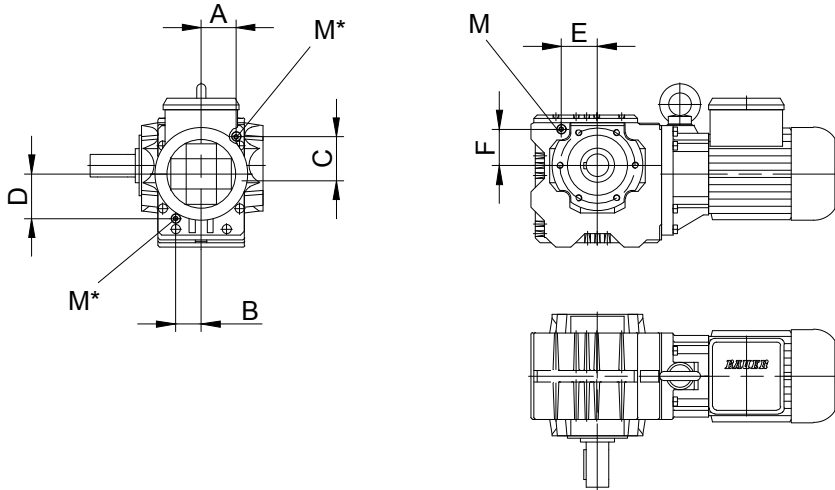
M\* = Size and position of the drain plug see page 76.

# Gearboxes & Lubrication

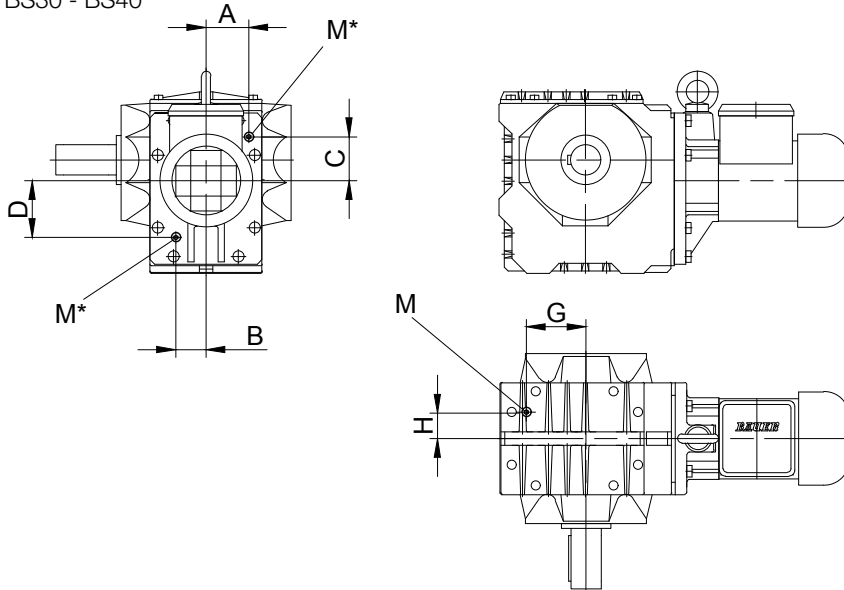
## Threaded plugs

### Position of threaded plugs -BS-series gears

BS10 - BS20



BS30 - BS40

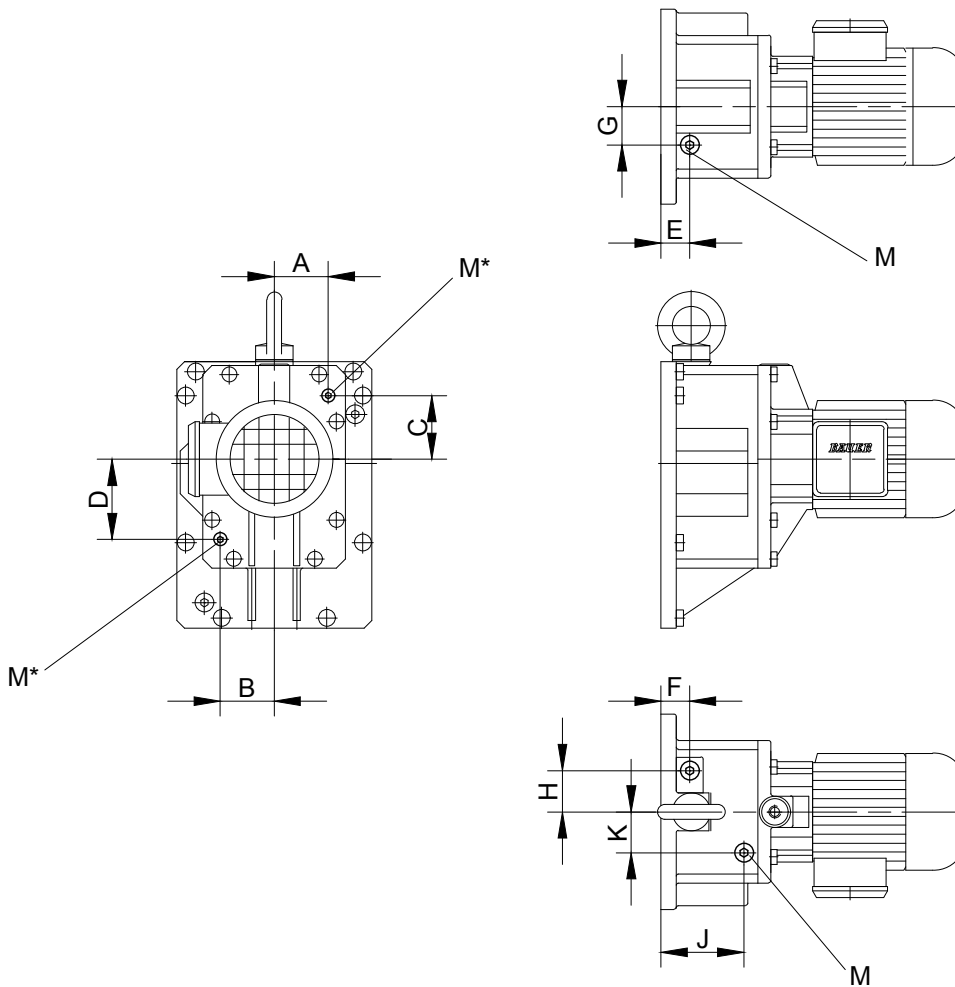


Type	A	B	C	D	E	F	G	H	M
BS10	see position of the oil drain and filler plugs on the system cover	Tab.I-Tab.III size B.10			48	50	-	-	M10x1
BS20		Tab.I-Tab.III size B.20			59	63	-	-	M10x1
BS30		Tab.I-Tab.III size B.30			-	-	79	35	M10x1
BS40		Tab.I-Tab.III size B.40			-	-	93,5	41,5	M14x1,5

M = Plug according to DIN 908  
Dimensions in millimetres (mm)

M\* = Size and position of the drain plug see page 76.

## Threaded plugs

Position of threaded plugs  
-pre-stage gears (Z)

Gear	A	B	C	D	E	F	G	H	J	K	M	
BG10(Z);BK10(Z)	-	-	-	-	25	-	17,5	-	44	25	M10x1	
BF10(Z);BS10(Z)	-	-	-	-	49	-	28,5	-	23,5	28	M10x1	
BG20(Z);BK20(Z)	see position of the oil drain and filter plugs on the system cover	Tab.I and Tab.III size B10	-	-	-	24	-	30	-	-	M10x1	
BF20(Z);BS20(Z)			-	-	-	27,5	-	36,5	-	-	M14x1,5	
BG30(Z);BK30(Z)		Tab.I and Tab.III size B20	-	-	-	-	-	-	29	43	M14x1,5	
BF30(Z);BS30(Z)			-	-	-	33	-	48	-	-	M20x1,5	
BG40(Z);BK40(Z)		Tab.I and Tab.III size B30	-	-	-	-	-	-	55	-	M20x1,5	
BF40(Z);BS40(Z)			-	-	-	38	-	55	-	-	M20x1,5	
BG50(Z);BK50(Z)		Tab.I and Tab.III size B40	-	-	-	-	-	-	-	-	M20x1,5	
BF50(Z)			-	-	-	45	-	-	-	-	M20x1,5	
BG60(Z);BK60(Z)		Tab.I and Tab.III size B50	-	-	-	-	-	-	-	-	M24x1,5	
BF60(Z)			-	-	-	-	-	-	-	-	M24x1,5	
BG70(Z);BK70(Z)		Tab.I and Tab.III size B60	-	-	-	-	-	-	-	-	M24x1,5	
BF70(Z);BF80(Z)			-	-	-	-	-	-	-	-	M24x1,5	
BG80(Z);BK80(Z)		Tab.I and Tab.III size B70	-	-	-	-	-	-	-	-	M24x1,5	
BF90(Z);BG100(Z)			-	-	-	-	-	-	-	-	M24x1,5	
BG90(Z);BK90(Z)		-	-	-	-	-	-	-	-	-	-	M24x1,5

M = Plug according to DIN 908  
Dimensions in millimetres (mm)

M\* = Size and position of the drain plug see page 76.

# Gearboxes & Lubrication

## Threaded plugs

### Position of threaded plugs

#### -in the System Cover Design with Standard Geared Motor

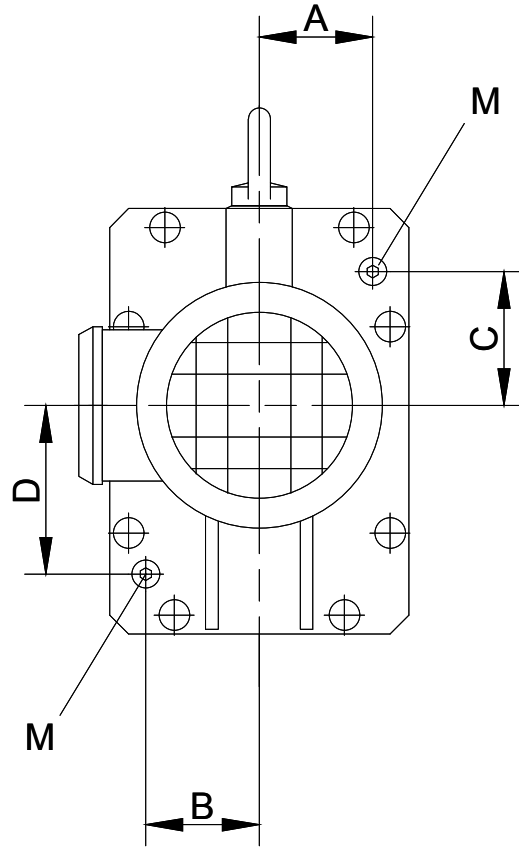
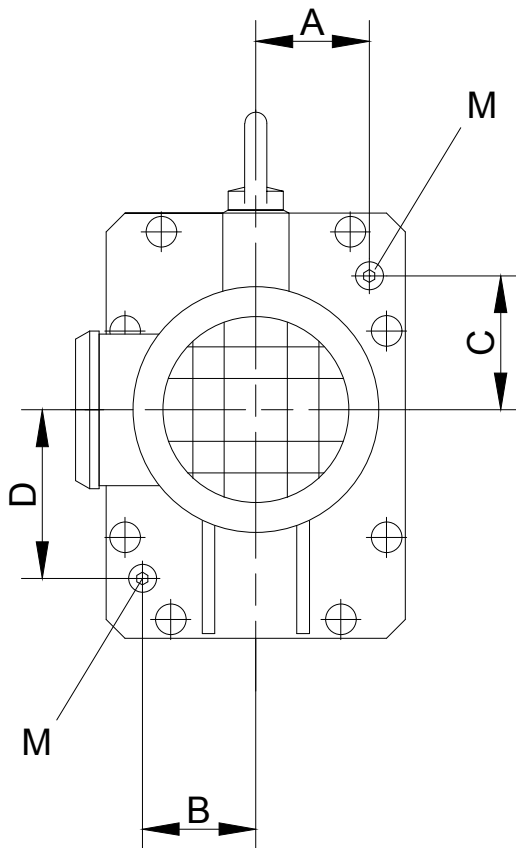


Table I: Design with Standard Geared Motor

Gear	Size	A	B	C	D	M
BG10(Z); BK10(Z); BF10(Z);BS10(Z)	D05-D..09	36	34	43,5	59	M10x1
BG15	D05-D..09	36	34	43,5	59	M10x1
BG20(Z); BK20(Z); BF20(Z);BS20(Z)	D05-D..09	44	44	58	72,5	M10x1
BG30(Z); BK30(Z); BF30(Z);BS30(Z)	D05-D..09	56,5	40	58,2	75	M10x1
BG40(Z); BK40(Z); BF40(Z);BS40(Z)	D..08-D..11	66	71	71	94	M14x1,5
BG50(Z); BK50(Z); BF50(Z);	D..08-D..11	72	74	85	109	M14x1,5
BG60(Z); BK60(Z); BF60(Z);	D..13-D..16	78	74	82	109	M14x1,5
BG60(Z); BK60(Z); BF60(Z);	D..09-D..13	84	81	120	155	M20x1,5
BG70(Z); BK70(Z); BF70(Z);BF80(Z)	D..16	86	81	120	155	M20x1,5
BG70(Z); BK70(Z); BF70(Z);BF80(Z)	D..09-D..18	95	85	97	193	M20x1,5
BG80(Z); BK80(Z); BF90(Z);BG100(Z)	D..11-D..18	118	118	110	245	M20x1,5
BG90(Z); BK90(Z);	D..13-D..18	145	145	116	294	M24x1,5

M = Plug according to DIN 908  
Dimensions in millimetres (mm)

Position of the drain plugs for BG, BK, BS and BF gear ranges and pre-stages.

**Position of threaded plugs****-in the System Cover Design with foreign motor or gear design with input shaft**

5

Table II: Design with foreign motor or gear design with input shaft

Gear	A	B	C	D	M
BG10(Z); BK10(Z); BF10(Z);BS10(Z)	1,34	1,34	1,59	2,24	M10x1
BG15	1,34	1,34	1,59	2,24	M10x1
BG20(Z); BK20(Z); BF20(Z);BS20(Z)	1,73	1,73	2,24	2,83	M10x1
BG30(Z); BK30(Z); BF30(Z);BS30(Z)	2,30	1,61	2,27	3,03	M10x1
BG40(Z); BK40(Z); BF40(Z);BS40(Z)	2,72	2,87	2,76	3,82	M14x1,5
BG50(Z); BK50(Z); BF50(Z);	2,95	2,95	3,23	4,33	M14x1,5
BG60(Z); BK60(Z); BF60(Z);	3,31	3,19	4,69	6,10	M20x1,5
BG70(Z); BK70(Z); BF70(Z);BF80(Z)	3,78	3,74	3,78	7,60	M20x1,5
BG80(Z); BK80(Z); BF90(Z);BG100(Z)	4,65	4,65	4,33	9,65	M20x1,5
BG90(Z); BK90(Z);	5,71	5,71	4,57	11,57	M24x1,5
M = Plug according to DIN 908 Dimensions in millimetres (mm)					

Position of the drain plugs for BG, BK, BS and BF gear ranges and pre-stages.

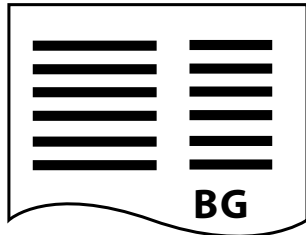
# Gearboxes & Lubrication

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5



6



## BG-series helical-gear motors - Selection

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# Energy Efficient Geared Motors

## AC Variable Speed

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6

# BG-series helical-geared motors

## Description of helical-geared units

### Sizes

Bauer BG-series helical-geared motors are available in 13 standard sizes with torques from 20 Nm to 18,500 Nm. Higher torques are available on request. The geared unit is accommodated in a sturdy cast housing.

### Bauer service factors ( $f_B$ ) for helical-geared motors

Of the numerous factors influencing the total loading of a geared unit, the most important include:

- Mean torque (rated torque)
- Daily operating hours
- Severity of torque peaks (shock classification)
- Frequency of torque peaks (switching duty)

These factors can be represented in a simplified and practical manner by *service factors*. The tables and explanations below aim to provide an objective description of the *shock classification*, rather than a classification of the driven machinery. Experience has shown that, in addition to the torque shocks caused by the driven machinery ( $M_x/M_N$ ), above all the power transmission components (clutches, chains etc.) plus the mass ratios play a decisive role in this.

See Bauer special imprint SD32 for more information (available on request).

### Continuous operation without switching frequency $Z \leq 1/h$

#### Factor $f_1$ for shock classification and operating time

Shock classification	Operating hours per day $t_d$	>4 h	>8 h	>16 h
		$\leq 8$ h	$\leq 16$ h	$\leq 24$ h
I		0,8	1,0	1,2
II		1,05	1,25	1,45
III		1,45	1,55	1,7

### Switching duty

#### Factor $f_2$ for shock classification and switching frequency

Switching frequency in single-shift operation  $t_d \leq 8$  h/d

Shock classification	$1 < Z \leq 100$	$100 < Z \leq 1000$	$1000 < Z$
I	0,95	1,1	1,15
II	1,2	1,35	1,4
III	1,55	1,6	1,6

Switching frequency in multiple-shift operation  $t_d > 8$  h/d

Shock classification	$1 < Z \leq 100$	$100 < Z \leq 1000$	$1000 < Z$
I	1,3	1,45	1,5
II	1,5	1,6	1,65
III	1,75	1,8	1,8

### Bauer service factor

Bauer service factor  $f_B = f_1$  or  $f_B = f_2$

For example: Shock classification II for  $Z = 100$  switching operations per hour and multiple-shift operation yields a service factor  $f_B = f_2 = 1.5$

# BG-series helical-geared motors

## Description of helical-geared units

### Explanation of shock classification

#### Shock classification I:

Uniform without shock loads. All the following requirements must be satisfied:

- $FI \leq 1.3$
- $M_x/M_N \leq 1.0$
- Shock-absorbing power transmission components (e.g. highly resilient, zero-play coupling,  $\varphi N \geq 5^\circ$ )

#### Shock classification II:

Moderate shock loads. At least one of the following conditions applies:

- $1.3 < FI \leq 4$
- $1 < M_x/M_N \leq 1.6$
- Shock-neutral power transmission components (e.g. gear wheels, zero-play rigid coupling or resilient coupling with  $\varphi N < 5^\circ$ )

#### Shock classification III:

Heavy shock loads. At least one of the following conditions applies:

- $FI > 4$
- $1.6 < M_x/M_N \leq 2.0$
- Shock-amplifying power transmission components (e.g. coupling with play or chain drive)

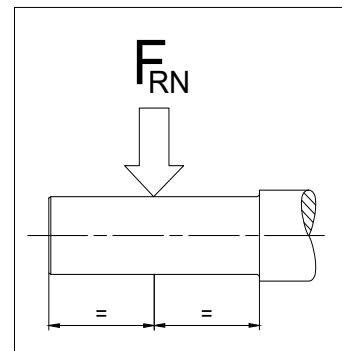
### Key to abbreviations

Z	Switching duty number of switching operations per hour
$t_d$	Daily operating time in hours (h/d)
FI	Factor of inertia $FI = (J_{ext} + J_{rot})/J_{rot}$
$J_{ext}$	Mass moment of inertia of the machine to be driven, in relation to the motor's rotor shaft ( $\text{kgm}^2$ )
$J_{rot}$	Mass moment of inertia of the motor rotor ( $\text{kgm}^2$ )
$M_x$	Highest impact torque above the static torque which can occur during normal operation or in emergency situations
$M_N$	Required static load torque for the application
$M_x/M_N$	Relative torque - Factor
$\varphi_N$	Torsional offset of the resilient coupling under rated torque

### Selection tables, helical-geared motors

#### Key to abbreviations

P	Rated output Power
$n_2$	Rated speed of the output shaft
i	Gear reduction ratio
$M_2$	Rated torque at the output shaft
$f_B$	Bauer service factor
$F_{RN}$	Maximum permissible radial force with a standard solid shaft (Code -.1 and -.7)
$F_{RV}$	Maximum permissible radial force with reinforced bearings in each case with standard solid shaft (Code -.1 and -.7)



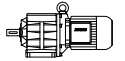
Use the selection tables to determine the size of geared motor required. The codes clearly define the Type of gear (see chapter 10 "dimensional drawings, helical-geared motors").

#### Motor power overload protection

Motor-power ratings, particularly in conjunction with four-stage and multi-stage gear units, are more than ample in some instances. Consequently, and in much the same way as with low-power motors, rated current is not a measure of gear loading and cannot be used to protect the gear unit against overloading. It is advisable to provide gears at risk from excessive load or blockage with a protective mechanism (e. g., slip clutch, slip hub, shear pin or an alternative).

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

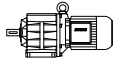
 **$M_N = 0.76 \text{ Nm}$  ( $P_N = 0.12 \text{ kW}$ )**


$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE-	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
0.76	590	1.9	2.1	2.51	IE4	BG04-../S4E04SA4-1	59	199	395	590	710	1.9	1.9	1.9	1.9	1.9	4.4	340	-
0.76	410	2.75	1.8	3.65	IE4	BG04-../S4E04SA4-1	41	136	270	410	490	2.75	2.75	2.75	2.75	2.75	4.4	390	-
0.76	340	3.3	2.1	4.39	IE4	BG04-../S4E04SA4-1	34	113	225	340	410	3.3	3.3	3.3	3.3	3.3	4.4	380	-
0.76	275	4.05	2.2	5.36	IE4	BG04-../S4E04SA4-1	27.5	93	186	275	335	4.05	4.05	4.05	4.05	4.05	4.4	380	-
0.76	240	4.65	2.3	6.18	IE4	BG04-../S4E04SA4-1	24	80	161	240	290	4.65	4.65	4.65	4.65	4.65	4.4	415	-
0.76	220	5	2	6.67	IE4	BG04-../S4E04SA4-1	22	74	149	220	265	5	5	5	5	5	4.4	410	-
0.76	220	5.1	2.1	6.8	IE4	BG04-../S4E04SA4-1	22	73	147	220	260	5.1	5.1	5.1	5.1	5.1	4.4	420	-
0.76	174	6.5	1.7	8.58	IE4	BG04-../S4E04SA4-1	17	58	116	174	205	6.5	6.5	6.5	6.5	6.5	4.4	410	-
0.76	166	6.8	1.8	9	IE4	BG04-../S4E04SA4-1	16.5	55	111	166	200	6.8	6.8	6.8	6.8	6.8	4.4	470	-
0.76	151	7.5	1.7	9.9	IE4	BG04-../S4E04SA4-1	15	50	101	151	181	7.5	7.5	7.5	7.5	7.5	4.4	480	-
0.76	138	8.2	1.7	10.82	IE4	BG04-../S4E04SA4-1	13.5	46	92	138	166	8.2	8.2	8.2	8.2	8.2	4.4	480	-
0.76	126	9	1.7	11.9	IE4	BG04-../S4E04SA4-1	12.5	42	84	126	151	9	9	9	9	9	4.4	490	-
0.76	119	9.5	1.6	12.55	IE4	BG04-../S4E04SA4-1	11.5	39.5	79	119	143	9.5	9.5	9.5	9.5	9.5	4.4	490	-
0.76	113	10	1.6	13.2	IE4	BG04-../S4E04SA4-1	11	37.5	75	113	136	10	10	10	10	10	4.4	500	-
0.76	103	11	1.5	14.52	IE4	BG04-../S4E04SA4-1	10	34	68	103	123	11	11	11	11	11	4.4	510	-
0.76	91	12.4	1.4	16.44	IE4	BG04-../S4E04SA4-1	9.1	30	60	91	109	12.4	12.4	12.4	12.4	12.4	4.4	530	-
0.76	82	13.7	1.3	18.08	IE4	BG04-../S4E04SA4-1	8.2	27.5	55	82	99	13.7	13.7	13.7	13.7	13.7	4.4	540	-
0.76	71	16	1.2	21.12	IE4	BG04-../S4E04SA4-1	7.1	23.5	47	71	85	16	16	16	16	16	4.4	560	-
0.76	64	17.6	1.1	23.23	IE4	BG04-../S4E04SA4-1	6.4	21.5	43	64	77	17.6	17.6	17.6	17.6	17.6	4.4	600	-
0.76	61	18.5	1.1	24.45	IE4	BG04-../S4E04SA4-1	6.1	20	40.5	61	73	18.5	18.5	18.5	18.5	18.5	4.4	610	-
0.76	55	20	0.98	26.89	IE4	BG04-../S4E04SA4-1	5.5	18.5	37	55	66	20	20	20	20	20	4.4	650	-
0.76	48.5	23	0.85	30.91	IE4	BG04-../S4E04SA4-1	4.8	16	32	48.5	58	23	23	23	23	23	4.4	690	-
0.76	192	5.9	3	7.8	IE4	BG05-../S4E04SA4-1	19	64	128	192	230	5.9	5.9	5.9	5.9	5.9	5.1	530	-
0.76	184	6.1	2.9	8.15	IE4	BG05-../S4E04SA4-1	18	61	122	184	220	6.1	6.1	6.1	6.1	6.1	5.1	510	-
0.76	176	6.4	2.9	8.51	IE4	BG05-../S4E04SA4-1	17.5	58	117	176	210	6.4	6.4	6.4	6.4	6.4	5.1	550	-
0.76	144	7.9	2.4	10.4	IE4	BG05-../S4E04SA4-1	14	48	96	144	173	7.9	7.9	7.9	7.9	7.9	5.1	510	-
0.76	141	8	2.5	10.59	IE4	BG05-../S4E04SA4-1	14	47	94	141	169	8	8	8	8	8	5.1	590	-
0.76	129	8.7	2.4	11.55	IE4	BG05-../S4E04SA4-1	12.5	43	86	129	155	8.7	8.7	8.7	8.7	8.7	5.1	600	-
0.76	124	9.1	2.3	12.05	IE4	BG05-../S4E04SA4-1	12	41	82	124	149	9.1	9.1	9.1	9.1	9.1	5.1	510	-
0.76	119	9.5	2.3	12.6	IE4	BG05-../S4E04SA4-1	11.5	39.5	79	119	142	9.5	9.5	9.5	9.5	9.5	5.1	610	-
0.76	109	10.4	2.2	13.75	IE4	BG05-../S4E04SA4-1	10.5	36	72	109	130	10.4	10.4	10.4	10.4	10.4	5.1	630	-
0.76	98	11.5	2.1	15.23	IE4	BG05-../S4E04SA4-1	9.8	32.5	65	98	118	11.5	11.5	11.5	11.5	11.5	5.1	640	-
0.76	90	12.6	2	16.62	IE4	BG05-../S4E04SA4-1	9	30	60	90	108	12.6	12.6	12.6	12.6	12.6	5.1	660	-
0.76	79	14.3	1.8	18.82	IE4	BG05-../S4E04SA4-1	7.9	26.5	53	79	95	14.3	14.3	14.3	14.3	14.3	5.1	680	-
0.76	73	15.6	1.7	20.53	IE4	BG05-../S4E04SA4-1	7.3	24	48.5	73	87	15.6	15.6	15.6	15.6	15.6	5.1	700	-
0.76	62	18.2	1.5	24	IE4	BG05-../S4E04SA4-1	6.2	20.5	41.5	62	75	18.2	18.2	18.2	18.2	18.2	5.1	740	-
0.76	57	19.8	1.5	26.18	IE4	BG05-../S4E04SA4-1	5.7	19	38	57	68	19.8	19.8	19.8	19.8	19.8	5.1	760	-
0.76	53	21	1.4	27.82	IE4	BG05-../S4E04SA4-1	5.3	17.5	35.5	53	64	21	21	21	21	21	5.1	770	-
0.76	49	23	1.3	30.35	IE4	BG05-../S4E04SA4-1	4.9	16	32.5	49	59	23	23	23	23	23	5.1	760	-
0.76	42.5	26.5	1.1	35	IE4	BG05-../S4E04SA4-1	4.2	14	28.5	42.5	51	26.5	26.5	26.5	26.5	26.5	5.1	810	-
0.76	39	29	1	38.18	IE4	BG05-../S4E04SA4-1	3.9	13	26	39	47	29	29	29	29	29	5.1	850	-
0.76	37.5	30	0.99	39.94	IE4	BG05-../S4E04SA4-1	3.7	12.5	25	37.5	45	30	30	30	30	30	5.1	860	-
0.76	34	33	0.91	43.57	IE4	BG05-../S4E04SA4-1	3.4	11	22.5	34	41	33	33	33	33	33	5.1	900	-
0.76	31.5	35.5	0.84	47	IE4	BG05-../S4E04SA4-1	3.1	10.5	21	31.5	38	35.5	35.5	35.5	35.5	35.5	5.1	930	-
0.76	101	11.2	3	14.78	IE4	BG06-../S4E04SA4-1	10	33.5	67	101	121	11.2	11.2	11.2	11.2	11.2	6.1	730	-
0.76	92	12.2	2.9	16.13	IE4	BG06-../S4E04SA4-1	9.2	30.5	61	92	111	12.2	12.2	12.2	12.2	12.2	6.1	740	-
0.76	86	13.2	2.9	17.4	IE4	BG06-../S4E04SA4-1	8.6	28.5	57	86	103	13.2	13.2	13.2	13.2	13.2	6.1	760	-
0.76	79	14.4	2.8	18.98	IE4	BG06-../S4E04SA4-1	7.9	26	52	79	94	14.4	14.4	14.4	14.4	14.4	6.1	770	-
0.76	72	15.8	2.5	20.82	IE4	BG06-../S4E04SA4-1	7.2	24	48	72	86	15.8	15.8	15.8	15.8	15.8	6.1	800	-
0.76	66	17.2	2.5	22.71	IE4	BG06-../S4E04SA4-1	6.6	22	44	66	79	17.2	17.2	17.2	17.2	17.2	6.1	810	-
0.76	58	19.3	2.3	25.48	IE4	BG06-../S4E04SA4-1	5.8	19.5	39	58	70	19.3	19.3	19.3	19.3	19.3	6.1	850	-
0.76	53	21	2.1	27.8	IE4	BG06-../S4E04SA4-1	5.3	17.5	35.5	53	64	21	21	21	21	21	6.1	840	-
0.76	46.5	24	1.8	32.22	IE4	BG06-../S4E04SA4-1	4.6	15.5	31	46.5	55	24	24	24	24	24	6.1	890	-
0.76	42.5	26.5	1.7	35.15	IE4	BG06-../S4E04SA4-1	4.2	14	28	42.5	51	26.5	26.5	26.5	26.5	26.5	6.1	880	-
0.76	40.5	28	1.6	36.91	IE4	BG06-../S4E04SA4-1	4	13.5	27	40.5	48.5	28	28	28	28	28	6.1	890	-
0.76	37	30.5	1.5	40.26	IE4	BG06-../S4E04SA4-1	3.7	12	24.5	37	44.5	30.5	30.5	30.5	30.5	30.5	6.1	890	-
0.76	32	35	1.3	46.19	IE4	BG06-../S4E04SA4-1	3.2	10.5	21.5	32	38.5	35	35	35	35	35	6.1	890	-
0.76	29.5	38	1.2	50.38	IE4	BG06-../S4E04SA4-1	2.9	9.9	19.5	29.5	35.5	38	38	38	38	38	6.1	940	-
0.76	28.5	39.5	1.1	52.56	IE4	BG06-../S4E04SA4-1	2.8	9.5	19	28.5	34	39.5	39.5	39.5	39.5	39.5	6.1	950	-
0.76	26	43.5	1	57.34	IE4	BG06-../S4E04SA4-1	2.6	8.7	17	26	31	43.5	43.5	43.5	43.5	43.5	6.1	1000	-
0.76	24.5	46.5	0.97	61.22	IE4	BG06-../S4E04SA4-1	2.4	8.1	16	24.5	29	46.5	46.5	46.5	46.5	46.5	6.1	1020	-
0.76	22	50	0.89	66.79	IE4	BG06-../S4E04SA4-1	2.2	7.4	14.5	22	26.5	50	50	50	50	50	6.1	1070	-
0.76	22	51	2	67.54	IE4	BG10Z-../S4E04SA4-1	2.2	7.4	14.5	22	26.5	51	51	51	51	51	11	2000	2800
0.76	19	58	2	77.4	IE4	BG10Z-../S4E04SA4-1	1.9	6.4	12.5	19	23	58	58	58	58	58	11	2000	2800
0.76	17	65	1.8	85.76	IE4	BG10Z-../S4E04SA4-1	1.7	5.8	11.5	17	20.5	65	65	65	65	65	11	2000	2800
0.76	16	70	1.7	92.19	IE4	BG10Z-../S4E04SA4-1	1.6	5.4	10.5	16	19.5	70	70	70	70	70	11	2000	2800
0.76	14.5	77	1.5	102.1	IE4	BG10Z-../S4E04SA4-1	1.4	4.8	9.7	14.5	17.5	77	77	77	77	77	11	2000	2800
0.76	13.5	83	1.4	109.8	IE4	BG10Z-../S4E04SA4-1	1.3	4											

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

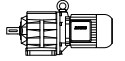
### $M_N = 0.76 \text{ Nm}$ ( $P_N = 0.12 \text{ kW}$ )



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
0.76	13	85	2.3	112.8	IE4	BG20Z-../S4E04SA4-1	1.3	4.4	8.8	13	15.5	85	85	85	85	85	13	5000	-
0.76	11.5	95	2.1	125.3	IE4	BG20Z-../S4E04SA4-1	1.1	3.9	7.9	11.5	14	95	95	95	95	95	13	5000	-
0.76	10.5	107	1.9	141.3	IE4	BG20Z-../S4E04SA4-1	1	3.5	7	10.5	12.5	107	107	107	107	107	13	5000	-
0.76	9.5	119	1.7	157	IE4	BG20Z-../S4E04SA4-1	0.95	3.1	6.3	9.5	11	119	119	119	119	119	13	5000	-
0.76	9.2	123	1.6	162.2	IE4	BG20Z-../S4E04SA4-1	0.9	3	6.1	9.2	11	123	123	123	123	123	13	5000	-
0.76	8.3	136	1.5	180.1	IE4	BG20Z-../S4E04SA4-1	0.8	2.7	5.5	8.3	9.9	136	136	136	136	136	13	5000	-
0.76	7.5	151	1.3	199.9	IE4	BG20Z-../S4E04SA4-1	0.75	2.5	5	7.5	9	151	151	151	151	151	13	5000	-
0.76	6.7	168	1.2	222.1	IE4	BG20Z-../S4E04SA4-1	0.65	2.2	4.5	6.7	8.1	168	168	168	168	168	13	5000	-
0.76	6	188	1.2	248	IE4	BG20G06-../S4E04SA4-1	0.6	2	4	6	7.2	188	188	188	188	188	17	5000	2100
0.76	5	225	0.97	297.9	IE4	BG20G06-../S4E04SA4-1	0.5	1.6	3.3	5	6	225	225	225	225	225	17	5000	2100
0.76	4.2	265	0.82	352.1	IE4	BG20G06-../S4E04SA4-1	0.42	1.4	2.8	4.2	5.1	265	265	265	265	265	17	5000	2100
0.76	5.8	193	1.7	254.9	IE4	BG30G06-../S4E04SA4-1	0.55	1.9	3.9	5.8	7	193	193	193	193	193	21	6000	-
0.76	4.8	230	1.4	306.2	IE4	BG30G06-../S4E04SA4-1	0.48	1.6	3.2	4.8	5.8	230	230	230	230	230	21	6000	-
0.76	4.3	260	1.2	346.8	IE4	BG30G06-../S4E04SA4-1	0.43	1.4	2.8	4.3	5.1	260	260	260	260	260	21	6000	-
0.76	3.7	305	1.1	401.9	IE4	BG30G06-../S4E04SA4-1	0.37	1.2	2.4	3.7	4.4	305	305	305	305	305	21	6000	-
0.76	3.1	355	0.9	472.8	IE4	BG30G06-../S4E04SA4-1	0.31	1	2.1	3.1	3.8	355	355	355	355	355	21	6000	-

6

### $M_N = 1 \text{ Nm}$ ( $P_N = 0.157 \text{ kW}$ )

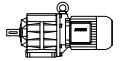


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1	590	2.5	1.6	2.51	IE2	BG04-../SHE04SA4-1	59	199	395	590	710	1.9	2.1	2.5	2.5	2.5	4.4	340	-
1	410	3.65	1.4	3.65	IE2	BG04-../SHE04SA4-1	41	136	270	410	490	2.75	3.1	3.65	3.65	3.65	4.4	390	-
1	340	4.35	1.6	4.39	IE2	BG04-../SHE04SA4-1	34	113	225	340	410	3.3	3.7	4.35	4.35	4.35	4.4	380	-
1	275	5.3	1.7	5.36	IE2	BG04-../SHE04SA4-1	27.5	93	186	275	335	4.05	4.55	5.3	5.3	5.3	4.4	380	-
1	240	6.1	1.8	6.18	IE2	BG04-../SHE04SA4-1	24	80	161	240	290	4.65	5.2	6.1	6.1	6.1	4.4	415	-
1	220	6.6	1.5	6.67	IE2	BG04-../SHE04SA4-1	22	74	149	220	265	5	5.6	6.6	6.6	6.6	4.4	410	-
1	220	6.8	1.6	6.8	IE2	BG04-../SHE04SA4-1	22	73	147	220	260	5.1	5.7	6.8	6.8	6.8	4.4	420	-
1	174	8.5	1.3	8.58	IE2	BG04-../SHE04SA4-1	17	58	116	174	205	6.5	7.2	8.5	8.5	8.5	4.4	410	-
1	166	9	1.3	9	IE2	BG04-../SHE04SA4-1	16.5	55	111	166	200	6.8	7.6	9	9	9	4.4	470	-
1	151	9.9	1.3	9.9	IE2	BG04-../SHE04SA4-1	15	50	101	151	181	7.5	8.4	9.9	9.9	9.9	4.4	480	-
1	138	10.8	1.3	10.82	IE2	BG04-../SHE04SA4-1	13.5	46	92	138	166	8.2	9.1	10.8	10.8	10.8	4.4	480	-
1	126	11.9	1.3	11.9	IE2	BG04-../SHE04SA4-1	12.5	42	84	126	151	9	10.1	11.9	11.9	11.9	4.4	490	-
1	119	12.5	1.2	12.55	IE2	BG04-../SHE04SA4-1	11.5	39.5	79	119	143	9.5	10.6	12.5	12.5	12.5	4.4	490	-
1	113	13.1	1.2	13.2	IE2	BG04-../SHE04SA4-1	11	37.5	75	113	136	10	11.2	13.1	13.1	13.1	4.4	500	-
1	103	14.5	1.2	14.52	IE2	BG04-../SHE04SA4-1	10	34	68	103	123	11	12.3	14.5	14.5	14.5	4.4	510	-
1	91	16.4	1.1	16.44	IE2	BG04-../SHE04SA4-1	9.1	30	60	91	109	12.4	13.9	16.4	16.4	16.4	4.4	530	-
1	82	18	1	18.08	IE2	BG04-../SHE04SA4-1	8.2	27.5	55	82	99	13.7	15.3	18	18	18	4.4	540	-
1	71	21	0.9	21.12	IE2	BG04-../SHE04SA4-1	7.1	23.5	47	71	85	16	17.9	21	21	21	4.4	560	-
1	64	23	0.86	23.23	IE2	BG04-../SHE04SA4-1	6.4	21.5	43	64	77	17.6	19.7	23	23	23	4.4	600	-
1	61	24	0.82	24.45	IE2	BG04-../SHE04SA4-1	6.1	20	40.5	61	73	18.5	20.5	24	24	24	4.4	610	-
1	440	3.35	3	3.38	IE2	BG05-../SHE04SA4-1	44	147	295	440	530	2.55	2.85	3.35	3.35	3.35	5.1	460	-
1	325	4.55	2.6	4.59	IE2	BG05-../SHE04SA4-1	32.5	108	215	325	390	3.45	3.9	4.55	4.55	4.55	5.1	490	-
1	270	5.4	2.6	5.46	IE2	BG05-../SHE04SA4-1	27	91	183	270	325	4.1	4.6	5.4	5.4	5.4	5.1	490	-
1	245	6	2.8	6.09	IE2	BG05-../SHE04SA4-1	24.5	82	164	245	295	4.6	5.1	6	6	6	5.1	480	-
1	225	6.5	2.4	6.6	IE2	BG05-../SHE04SA4-1	22.5	75	151	225	270	5	5.6	6.5	6.5	6.5	5.1	510	-
1	225	6.6	2.6	6.64	IE2	BG05-../SHE04SA4-1	22.5	75	150	225	270	5	5.6	6.6	6.6	6.6	5.1	500	-
1	192	7.8	2.3	7.8	IE2	BG05-../SHE04SA4-1	19	64	128	192	230	5.9	6.6	7.8	7.8	7.8	5.1	530	-
1	184	8.1	2.2	8.15	IE2	BG05-../SHE04SA4-1	18	61	122	184	220	6.1	6.9	8.1	8.1	8.1	5.1	510	-
1	176	8.5	2.2	8.51	IE2	BG05-../SHE04SA4-1	17.5	58	117	176	210	6.4	7.2	8.5	8.5	8.5	5.1	550	-
1	144	10.4	1.8	10.4	IE2	BG05-../SHE04SA4-1	14	48	96	144	173	7.9	8.8	10.4	10.4	10.4	5.1	510	-
1	141	10.5	1.9	10.59	IE2	BG05-../SHE04SA4-1	14	47	94	141	169	8	9	10.5	10.5	10.5	5.1	590	-
1	129	11.5	1.8	11.55	IE2	BG05-../SHE04SA4-1	12.5	43	86	129	155	8.7	9.8	11.5	11.5	11.5	5.1	600	-
1	124	12	1.7	12.05	IE2	BG05-../SHE04SA4-1	12	41	82	124	149	9.1	10.2	12	12	12	5.1	510	-
1	119	12.5	1.7	12.6	IE2	BG05-../SHE04SA4-1	11.5	39.5	79	119	142	9.5	10.7	12.5	12.5	12.5	5.1	610	-
1	109	13.7	1.7	13.75	IE2	BG05-../SHE04SA4-1	10.5	36	72	109	130	10.4	11.6	13.7	13.7	13.7	5.1	630	-
1	98	15.2	1.6	15.23	IE2	BG05-../SHE04SA4-1	9.8	32.5	65	98	118	11.5	12.9	15.2	15.2	15.2	5.1	640	-
1	90	16.6	1.5	16.62	IE2	BG05-../SHE04SA4-1	9	30	60	90	108	12.6	14.1	16.6	16.6	16.6	5.1	660	-
1	79	18.8	1.4	18.82	IE2	BG05-../SHE04SA4-1	7.9	26.5	53	79	95	14.3	15.9	18.8	18.8	18.8	5.1	680	-
1	73	20.5	1.3	20.53	IE2	BG05-../SHE04SA4-1	7.3	24	48.5	73	87	15.6	17.4	20.5	20.5	20.5	5.1	700	-
1	62	24	1.2	24	IE2	BG05-../SHE04SA4-1	6.2	20.5	41.5	62	75	18.2	20	24	24	24	5.1	740	-
1	57	26	1.1	26.18	IE2	BG05-../SHE04SA4-1	5.7	19	38	57	68	19.8	22	26	26	26	5.1	760	-
1	53	27.5	1.1	27.82	IE2	BG05-../SHE04SA4-1	5.3	17.5	35.5	53									

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

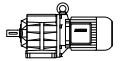
### $M_N = 1 \text{ Nm}$ ( $P_N = 0.157 \text{ kW}$ )



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1	46.5	32	1.4	32.22	IE2	BG06-../SHE04SA4-1	4.6	15.5	31	46.5	55	24	27	32	32	32	6.1	890	-
1	42.5	35	1.3	35.15	IE2	BG06-../SHE04SA4-1	4.2	14	28	42.5	51	26.5	29.5	35	35	35	6.1	880	-
1	40.5	36.5	1.2	36.91	IE2	BG06-../SHE04SA4-1	4	13.5	27	40.5	48.5	28	31	36.5	36.5	36.5	6.1	890	-
1	37	40	1.1	40.26	IE2	BG06-../SHE04SA4-1	3.7	12	24.5	37	44.5	30.5	34	40	40	40	6.1	890	-
1	32	46	0.97	46.19	IE2	BG06-../SHE04SA4-1	3.2	10.5	21.5	32	38.5	35	39	46	46	46	6.1	890	-
1	29.5	50	0.89	50.38	IE2	BG06-../SHE04SA4-1	2.9	9.9	19.5	29.5	35.5	38	42.5	50	50	50	6.1	940	-
1	28.5	52	0.86	52.56	IE2	BG06-../SHE04SA4-1	2.8	9.5	19	28.5	34	39.5	44.5	52	52	52	6.1	950	-
1	22	67	1.5	67.54	IE2	BG10Z-../SHE04SA4-1	2.2	7.4	14.5	22	26.5	51	57	67	67	67	11	2000	2800
1	19	77	1.6	77.4	IE2	BG10Z-../SHE04SA4-1	1.9	6.4	12.5	19	23	58	65	77	77	77	11	2000	2800
1	17	85	1.4	85.76	IE2	BG10Z-../SHE04SA4-1	1.7	5.8	11.5	17	20.5	65	72	85	85	85	11	2000	2800
1	16	92	1.3	92.19	IE2	BG10Z-../SHE04SA4-1	1.6	5.4	10.5	16	19.5	70	78	92	92	92	11	2000	2800
1	14.5	102	1.2	102.1	IE2	BG10Z-../SHE04SA4-1	1.4	4.8	9.7	14.5	17.5	77	86	102	102	102	11	2000	2800
1	13.5	109	1.1	109.8	IE2	BG10Z-../SHE04SA4-1	1.3	4.5	9.1	13.5	16	83	93	109	109	109	11	2000	2800
1	12	121	0.99	121.7	IE2	BG10Z-../SHE04SA4-1	1.2	4.1	8.2	12	14.5	92	103	121	121	121	11	2000	2800
1	11	131	0.91	131.8	IE2	BG10Z-../SHE04SA4-1	1.1	3.7	7.5	11	13.5	100	112	131	131	131	11	2000	2800
1	10	146	0.82	146	IE2	BG10Z-../SHE04SA4-1	1	3.4	6.8	10	12	110	124	146	146	146	11	2000	2800
1	9.9	150	0.87	150.1	IE2	BG10G06-../SHE04SA4-1	0.95	3.3	6.6	9.9	11.5	114	127	150	150	150	14	2000	2800
1	25.5	58	2.9	58.58	IE2	BG20Z-../SHE04SA4-1	2.5	8.5	17	25.5	30.5	44.5	49.5	58	58	58	13	5000	-
1	22	67	3	67.53	IE2	BG20Z-../SHE04SA4-1	2.2	7.4	14.5	22	26.5	51	57	67	67	67	13	5000	-
1	20	75	2.7	75	IE2	BG20Z-../SHE04SA4-1	2	6.6	13	20	24	57	63	75	75	75	13	5000	-
1	19	78	2.5	78.6	IE2	BG20Z-../SHE04SA4-1	1.9	6.3	12.5	19	22.5	59	66	78	78	78	13	5000	-
1	17	87	2.3	87.3	IE2	BG20Z-../SHE04SA4-1	1.7	5.7	11	17	20.5	66	74	87	87	87	13	5000	-
1	15.5	94	2.1	94.27	IE2	BG20Z-../SHE04SA4-1	1.5	5.3	10.5	15.5	19	71	80	94	94	94	13	5000	-
1	14	104	1.9	104.7	IE2	BG20Z-../SHE04SA4-1	1.4	4.7	9.5	14	17	79	88	104	104	104	13	5000	-
1	13	112	1.8	112.8	IE2	BG20Z-../SHE04SA4-1	1.3	4.4	8.8	13	15.5	85	95	112	112	112	13	5000	-
1	11.5	125	1.6	125.3	IE2	BG20Z-../SHE04SA4-1	1.1	3.9	7.9	11.5	14	95	106	125	125	125	13	5000	-
1	10.5	141	1.4	141.3	IE2	BG20Z-../SHE04SA4-1	1	3.5	7	10.5	12.5	107	120	141	141	141	13	5000	-
1	9.5	157	1.3	157	IE2	BG20Z-../SHE04SA4-1	0.95	3.1	6.3	9.5	11	119	133	157	157	157	13	5000	-
1	9.2	162	1.2	162.2	IE2	BG20Z-../SHE04SA4-1	0.9	3	6.1	9.2	11	123	137	162	162	162	13	5000	-
1	8.3	180	1.1	180.1	IE2	BG20Z-../SHE04SA4-1	0.8	2.7	5.5	8.3	9.9	136	153	180	180	180	13	5000	-
1	7.5	199	1	199.9	IE2	BG20Z-../SHE04SA4-1	0.75	2.5	5	7.5	9	151	169	199	199	199	13	5000	-
1	6.7	220	0.9	222.1	IE2	BG20Z-../SHE04SA4-1	0.65	2.2	4.5	6.7	8.1	168	188	220	220	220	13	5000	-
1	6	245	0.89	248	IE2	BG20G06-../SHE04SA4-1	0.6	2	4	6	7.2	188	210	245	245	245	17	5000	2100
1	5.8	250	1.3	254.9	IE2	BG30G06-../SHE04SA4-1	0.55	1.9	3.9	5.8	7	193	215	250	250	250	21	6000	-
1	4.8	305	1.1	306.2	IE2	BG30G06-../SHE04SA4-1	0.48	1.6	3.2	4.8	5.8	230	260	305	305	305	21	6000	-
1	4.3	345	0.94	346.8	IE2	BG30G06-../SHE04SA4-1	0.43	1.4	2.8	4.3	5.1	260	290	345	345	345	21	6000	-
1	3.7	400	0.81	401.9	IE2	BG30G06-../SHE04SA4-1	0.37	1.2	2.4	3.7	4.4	305	340	400	400	400	21	6000	-

6

### $M_N = 1.3 \text{ Nm}$ ( $P_N = 0.2 \text{ kW}$ )

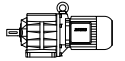


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.3	560	3.4	2.6	2.64	IE5	BG05-../S5E06MA4	56	189	375	560	680	3.4	3.4	3.4	3.4	3.4	8.5	420	-
1.3	440	4.35	2.3	3.38	IE5	BG05-../S5E06MA4	44	147	295	440	530	4.35	4.35	4.35	4.35	4.35	8.5	460	-
1.3	325	5.9	2	4.59	IE5	BG05-../S5E06MA4	32.5	108	215	325	390	5.9	5.9	5.9	5.9	5.9	8.5	490	-
1.3	270	7	2	5.46	IE5	BG05-../S5E06MA4	27	91	183	270	325	7	7	7	7	7	8.5	490	-
1.3	245	7.9	2.1	6.09	IE5	BG05-../S5E06MA4	24.5	82	164	245	295	7.9	7.9	7.9	7.9	7.9	8.5	480	-
1.3	225	8.5	1.9	6.6	IE5	BG05-../S5E06MA4	22.5	75	151	225	270	8.5	8.5	8.5	8.5	8.5	8.5	510	-
1.3	225	8.6	2	6.64	IE5	BG05-../S5E06MA4	22.5	75	150	225	270	8.6	8.6	8.6	8.6	8.6	8.5	500	-
1.3	192	10.1	1.8	7.8	IE5	BG05-../S5E06MA4	19	64	128	192	230	10.1	10.1	10.1	10.1	10.1	8.5	530	-
1.3	184	10.5	1.7	8.15	IE5	BG05-../S5E06MA4	18	61	122	184	220	10.5	10.5	10.5	10.5	10.5	8.5	510	-
1.3	176	11.1	1.7	8.51	IE5	BG05-../S5E06MA4	17.5	58	117	176	210	11	11	11	11	11	8.5	550	-
1.3	144	13.5	1.4	10.4	IE5	BG05-../S5E06MA4	14	48	96	144	173	13.5	13.5	13.5	13.5	13.5	8.5	510	-
1.3	141	13.7	1.5	10.59	IE5	BG05-../S5E06MA4	14	47	94	141	169	13.7	13.7	13.7	13.7	13.7	8.5	590	-
1.3	129	15	1.4	11.55	IE5	BG05-../S5E06MA4	12.5	43	86	129	155	15	15	15	15	15	8.5	600	-
1.3	124	15.6	1.3	12.05	IE5	BG05-../S5E06MA4	12	41	82	124	149	15.6	15.6	15.6	15.6	15.6	8.5	510	-
1.3	119	16.3	1.3	12.6	IE5	BG05-../S5E06MA4	11.5	39.5	79	119	142	16.3	16.3	16.3	16.3	16.3	8.5	610	-
1.3	109	17.8	1.3	13.75	IE5	BG05-../S5E06MA4	10.5	36	72	109	130	17.8	17.8	17.8	17.8	17.8	8.5	630	-
1.3	98	19.7	1.2	15.23	IE5	BG05-../S5E06MA4	9.8	32.5	65	98	118	19.7	19.7	19.7	19.7	19.7	8.5	640	-
1.3	90	21.5	1.2	16.62	IE5	BG05-../S5E06MA4	9	30	60	90	108	21.5	21.5	21.5	21.5	21.5	8.5	660	-
1.3	79	24	1.1	18.82	IE5	BG05-../S5E06MA4	7.9	26.5	53	79	95	24	24	24	24	24	8.5	680	-
1.3	73	26.5	1	20.53	IE5	BG05-../S5E06MA4	7.3	24	48.5	73	87	26.5	26.5	26.5	26.5	26.5	8.5	700	-
1.3	62	31	0.9	24	IE5	BG05-../S5E06MA4	6.2	20.5	41.5	62	75	31	31	31	31	31	8.5	740	-
1.3	57	34	0.85	26.18	IE5	BG05-../S5E06MA4	5.7	19	38	57	68	34	34	34	34	34	8.5	760	-
1.3	53	36	0.83	27.82	IE5	BG05-../S5E06MA4	5.3	17.5	35.5	53	64	36	36	36	36	36	8.5	770	-
1.3	210	9.1	2.9	7.01	IE5	BG06-../S5E06MA4	21	71	142	210	255	9.1	9.1	9.1	9.1	9.1	9.5	580	-
1.3	178	10.9	2.6	8.39	IE5	BG06-../S5E06MA4	17.5	59	119	178	210	10.9	10.9	10.9	10.9	10.9	9.5	600	-
1.3	159	12.1	2.5	9.38	IE5	BG06-../S5E06MA4	15.5	53	106	159	191	12.1	12.1	12.1	12.1	12.1	9.5	640	-
1.3	146	13.3	2.3	10.24	IE5	BG06-../S5E06MA4	14.5	48.5	97	146	175	13.3	13.3	13.3	13.3	13.3	9.5	640	-
1.3	132	14.6	2.2	11.28	IE5	BG06-../S5E06MA4	13	44	88	132	159	14.6	14.6	14.6	14.6	14.6	9.5	670	-
1.3	121	15.9</																	



# BG-series helical-gear motors

## Selection helical-gear motors - $n_1 = 1500 \frac{1}{\text{min}}$

**M<sub>N</sub> = 1.3 Nm (P<sub>N</sub> = 0.2 kW)**

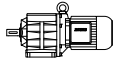
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	200	1000	1500	1800	150	500	1000	1500	1800			
1.3	72	27	1.5	20.82	IE5	BG06-../S5E06MA4	7.2	24	48	72	86	27	27	27	27	27	9.5	800	-
1.3	66	29.5	1.5	22.71	IE5	BG06-../S5E06MA4	6.6	22	44	66	79	29.5	29.5	29.5	29.5	29.5	9.5	810	-
1.3	58	33	1.4	25.48	IE5	BG06-../S5E06MA4	5.8	19.5	39	58	70	33	33	33	33	33	9.5	850	-
1.3	53	36	1.2	27.8	IE5	BG06-../S5E06MA4	5.3	17.5	35.5	53	64	36	36	36	36	36	9.5	840	-
1.3	46.5	41.5	1.1	32.22	IE5	BG06-../S5E06MA4	4.6	15.5	31	46.5	55	41.5	41.5	41.5	41.5	41.5	9.5	890	-
1.3	42.5	45.5	0.98	35.15	IE5	BG06-../S5E06MA4	4.2	14	28	42.5	51	45.5	45.5	45.5	45.5	45.5	9.5	880	-
1.3	40.5	47.5	0.94	36.91	IE5	BG06-../S5E06MA4	4	13.5	27	40.5	48.5	47.5	47.5	47.5	47.5	47.5	9.5	890	-
1.3	37	52	0.86	40.26	IE5	BG06-../S5E06MA4	3.7	12	24.5	37	44.5	52	52	52	52	52	9.5	890	-
1.3	47.5	40.5	2.9	31.52	IE5	BG10-../S5E06MA4	4.7	15.5	31.5	47.5	57	40.5	40.5	40.5	40.5	40.5	13	1600	2200
1.3	42.5	45	2.6	34.92	IE5	BG10-../S5E06MA4	4.2	14	28.5	42.5	51	45	45	45	45	45	13	1690	2350
1.3	37.5	51	2.3	39.7	IE5	BG10-../S5E06MA4	3.7	12.5	25	37.5	45	51	51	51	51	51	13	1780	2450
1.3	34	57	2.1	43.99	IE5	BG10-../S5E06MA4	3.4	11	22.5	34	40.5	57	57	57	57	57	13	1880	2600
1.3	32	60	2	46.55	IE5	BG10-../S5E06MA4	3.2	10.5	21	32	38.5	60	60	60	60	60	13	1920	2650
1.3	29	67	1.8	51.57	IE5	BG10-../S5E06MA4	2.9	9.6	19	29	34.5	67	67	67	67	67	13	2000	2800
1.3	26	74	1.6	57.48	IE5	BG10-../S5E06MA4	2.6	8.6	17	26	31	74	74	74	74	74	13	2000	2800
1.3	23.5	82	1.4	63.69	IE5	BG10-../S5E06MA4	2.3	7.8	15.5	23.5	28	82	82	82	82	82	13	2000	2800
1.3	22.5	85	1.4	66	IE5	BG10-../S5E06MA4	2.2	7.5	15	22.5	27	85	85	85	85	85	13	2000	2800
1.3	20.5	95	1.3	73.13	IE5	BG10-../S5E06MA4	2	6.8	13.5	20.5	24.5	95	95	95	95	95	13	2000	2800
1.3	22	87	1.2	67.54	IE5	BG10Z-../S5E06MA4	2.2	7.4	14.5	22	26.5	87	87	87	87	87	14	2000	2800
1.3	19	100	1.2	77.4	IE5	BG10Z-../S5E06MA4	1.9	6.4	12.5	19	23	100	100	100	100	100	14	2000	2800
1.3	17	111	1.1	85.76	IE5	BG10Z-../S5E06MA4	1.7	5.8	11.5	17	20.5	111	111	111	111	111	14	2000	2800
1.3	16	119	1	92.19	IE5	BG10Z-../S5E06MA4	1.6	5.4	10.5	16	19.5	119	119	119	119	119	14	2000	2800
1.3	14.5	132	0.9	102.1	IE5	BG10Z-../S5E06MA4	1.4	4.8	9.7	14.5	17.5	132	132	132	132	132	14	2000	2800
1.3	13.5	142	0.84	109.8	IE5	BG10Z-../S5E06MA4	1.3	4.5	9.1	13.5	16	142	142	142	142	142	14	2000	2800
1.3	39.5	49	3	37.9	IE5	BG15-../S5E06MA4	3.9	13	26	39.5	47	49	49	49	49	49	13	3000	6000
1.3	28	69	2.9	53.22	IE5	BG20-../S5E06MA4	2.8	9.3	18.5	28	33.5	69	69	69	69	69	16	4950	-
1.3	25	76	2.6	59.07	IE5	BG20-../S5E06MA4	2.5	8.4	16.5	25	30	76	76	76	76	76	16	5000	-
1.3	22.5	85	2.3	65.62	IE5	BG20-../S5E06MA4	2.2	7.6	15	22.5	27	85	85	85	85	85	16	5000	-
1.3	25.5	76	2.3	58.58	IE5	BG20Z-../S5E06MA4	2.5	8.5	17	25.5	30.5	76	76	76	76	76	16	5000	-
1.3	22	87	2.3	67.53	IE5	BG20Z-../S5E06MA4	2.2	7.4	14.5	22	26.5	87	87	87	87	87	16	5000	-
1.3	20	97	2.1	75	IE5	BG20Z-../S5E06MA4	2	6.6	13	20	24	97	97	97	97	97	16	5000	-
1.3	19	102	2	78.6	IE5	BG20Z-../S5E06MA4	1.9	6.3	12.5	19	22.5	102	102	102	102	102	16	5000	-
1.3	17	113	1.8	87.3	IE5	BG20Z-../S5E06MA4	1.7	5.7	11	17	20.5	113	113	113	113	113	16	5000	-
1.3	15.5	122	1.6	94.27	IE5	BG20Z-../S5E06MA4	1.5	5.3	10.5	15.5	19	122	122	122	122	122	16	5000	-
1.3	14	136	1.5	104.7	IE5	BG20Z-../S5E06MA4	1.4	4.7	9.5	14	17	136	136	136	136	136	16	5000	-
1.3	13	146	1.4	112.8	IE5	BG20Z-../S5E06MA4	1.3	4.4	8.8	13	15.5	146	146	146	146	146	16	5000	-
1.3	11.5	162	1.2	125.3	IE5	BG20Z-../S5E06MA4	1.1	3.9	7.9	11.5	14	162	162	162	162	162	16	5000	-
1.3	10.5	183	1.1	141.3	IE5	BG20Z-../S5E06MA4	1	3.5	7	10.5	12.5	183	183	183	183	183	16	5000	-
1.3	9.5	200	0.98	157	IE5	BG20Z-../S5E06MA4	0.95	3.1	6.3	9.5	11	200	200	200	200	200	16	5000	-
1.3	9.2	210	0.95	162.2	IE5	BG20Z-../S5E06MA4	0.9	3	6.1	9.2	11	210	210	210	210	210	16	5000	-
1.3	8.3	230	0.85	180.1	IE5	BG20Z-../S5E06MA4	0.8	2.7	5.5	8.3	9.9	230	230	230	230	230	16	5000	-
1.3	18	106	2.8	81.55	IE5	BG30Z-../S5E06MA4	1.8	6.1	12	18	22	106	106	106	106	106	22	6000	-
1.3	17	111	2.7	86.13	IE5	BG30Z-../S5E06MA4	1.7	5.8	11.5	17	20.5	111	111	111	111	111	22	6000	-
1.3	15.5	124	2.4	95.55	IE5	BG30Z-../S5E06MA4	1.5	5.2	10	15.5	18.5	124	124	124	124	124	22	6000	-
1.3	13.5	142	2.1	109.6	IE5	BG30Z-../S5E06MA4	1.3	4.5	9.1	13.5	16	142	142	142	142	142	22	6000	-
1.3	12	158	1.9	121.6	IE5	BG30Z-../S5E06MA4	1.2	4.1	8.2	12	14.5	158	158	158	158	158	22	6000	-
1.3	11.5	167	1.8	128.5	IE5	BG30Z-../S5E06MA4	1.1	3.8	7.7	11.5	14	167	167	167	167	167	22	6000	-
1.3	10.5	185	1.6	142.5	IE5	BG30Z-../S5E06MA4	1	3.5	7	10.5	12.5	185	185	185	185	185	22	6000	-
1.3	9.9	196	1.5	151.5	IE5	BG30Z-../S5E06MA4	0.95	3.3	6.6	9.9	11.5	196	196	196	196	196	22	6000	-
1.3	8.9	215	1.4	168.1	IE5	BG30Z-../S5E06MA4	0.85	2.9	5.9	8.9	10.5	215	215	215	215	215	22	6000	-
1.3	8.2	235	1.3	182.9	IE5	BG30Z-../S5E06MA4	0.8	2.7	5.4	8.2	9.8	235	235	235	235	235	22	6000	-
1.3	7.3	260	1.1	202.9	IE5	BG30Z-../S5E06MA4	0.7	2.4	4.9	7.3	8.8	260	260	260	260	260	22	6000	-
1.3	6.6	290	1	225.9	IE5	BG30Z-../S5E06MA4	0.65	2.2	4.4	6.6	7.9	290	290	290	290	290	22	6000	-
1.3	5.9	325	0.92	250.6	IE5	BG30Z-../S5E06MA4	0.55	1.9	3.9	5.9	7.1	325	325	325	325	325	22	6000	-
1.3	5.7	340	0.88	261.9	IE5	BG30Z-../S5E06MA4	0.55	1.9	3.8	5.7	6.8	340	340	340	340	340	22	6000	-
1.3	5.8	330	0.98	254.9	IE5	BG30G06-../S5E06MA4	0.55	1.9	3.9	5.8	7	330	330	330	330	330	25	6000	-
1.3	4.8	395	0.82	306.2	IE5	BG30G06-../S5E06MA4	0.48	1.6	3.2	4.8	5.8	395	395	395	395	395	25	6000	-
1.3	13.5	139	3	107.5	IE5	BG40Z-../S5E06MA4	1.3	4.6	9.3	13.5	16.5	139	139	139	139	139	38	7000	-
1.3	12	157	2.7	121.3	IE5	BG40Z-../S5E06MA4	1.2	4.1	8.2	12	14.5	157	157	157	157	157	38	7000	-
1.3	11	174	2.4	134.6	IE5	BG40Z-../S5E06MA4	1.1	3.7	7.4	11	13	174	174	174	174	174	38	7000	-
1.3	10.5	183	2.3	141.4	IE5	BG40Z-../S5E06MA4	1	3.5	7	10.5	12.5	183	183	183	183	183	38	7000	-
1.3	9.5	200	2.1	156.9	IE5	BG40Z-../S5E06MA4	0.95	3.1	6.3	9.5	11	200	200	200	200	200	38	7000	-
1.3	9	215	2	166.1	IE5	BG40Z-../S5E06MA4	0.9	3	6	9	10.5	215	215	215	215	215	38	7000	-
1.3	8.1	235	1.8	184.4	IE5	BG40Z-../S5E06MA4	0.8	2.7	5.4	8.1	9.7	235	235	235	235	235	38	7000	-
1.3	7.5	255	1.6	199.9	IE5	BG40Z-../S5E06MA4	0.75	2.5	5	7.5	9	255	255	255	255	255	38	7000	-
1.3	6.7	285	1.5	221.9	IE5	BG40Z-../S5E06MA4	0.65	2.2	4.5	6.7	8.1	285	285	285	285	285	38	7000	-
1.3	6	320	1.3	246.5	IE5	BG40Z-../S5E06MA4	0.6	2	4	6	7.3	320	320	320	320	320	38	7000	-
1.3	5.4	355	1.2	273.6	IE5	BG40Z-../S5E06MA4	0.5	1.8	3.6	5.4	6.5	355	355	355	355	355	38	7000	-
1.3	5.1	375	1.2	2															



# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

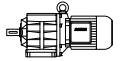
### $M_N = 1.3 \text{ Nm}$ ( $P_N = 0.2 \text{ kW}$ )



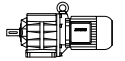
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.3	4.2	455	1.5	351.7	IE5	BG50G10-../S5E06MA4	0.42	1.4	2.8	4.2	5.1	455	455	455	455	455	51	10000	-
1.3	3.3	580	1.2	446.5	IE5	BG50G10-../S5E06MA4	0.33	1.1	2.2	3.3	4	580	580	580	580	580	51	10000	-
1.3	2.8	690	1	531.5	IE5	BG50G10-../S5E06MA4	0.28	0.9	1.8	2.8	3.3	690	690	690	690	690	51	10000	-
1.3	2.4	800	0.85	621.3	IE5	BG50G10-../S5E06MA4	0.24	0.8	1.6	2.4	2.8	800	800	800	800	800	51	10000	-
1.3	4.4	430	3	334.3	IE5	BG60G20-../S5E06MA4	0.44	1.4	2.9	4.4	5.3	430	430	430	430	430	100	16000	-
1.3	4	480	2.7	370.5	IE5	BG60G20-../S5E06MA4	0.4	1.3	2.6	4	4.8	480	480	480	480	480	100	16000	-
1.3	3.4	560	2.3	437.3	IE5	BG60G20-../S5E06MA4	0.34	1.1	2.2	3.4	4.1	560	560	560	560	560	100	16000	-
1.3	2.9	650	2	504.9	IE5	BG60G20-../S5E06MA4	0.29	0.95	1.9	2.9	3.5	650	650	650	650	650	100	16000	-
1.3	2.6	720	1.8	559.5	IE5	BG60G20-../S5E06MA4	0.26	0.85	1.7	2.6	3.2	720	720	720	720	720	100	16000	-
1.3	2.3	840	1.5	651.3	IE5	BG60G20-../S5E06MA4	0.23	0.75	1.5	2.3	2.7	840	840	840	840	840	100	16000	-
1.3	1.8	1040	1.2	804.5	IE5	BG60G20-../S5E06MA4	0.18	0.6	1.2	1.8	2.2	1040	1040	1040	1040	1040	100	16000	-
1.3	1.6	1150	1.1	891.5	IE5	BG60G20-../S5E06MA4	0.16	0.55	1.1	1.6	2	1150	1150	1150	1150	1150	100	16000	-
1.3	1.4	1360	0.95	1051	IE5	BG60G20-../S5E06MA4	0.14	0.47	0.95	1.4	1.7	1360	1360	1360	1360	1360	100	16000	-
1.3	1.2	1510	0.86	1168	IE5	BG60G20-../S5E06MA4	0.12	0.42	0.85	1.2	1.5	1510	1510	1510	1510	1510	100	16000	-
1.3	2.2	860	2.9	665.8	IE5	BG70G20-../S5E06MA4	0.22	0.75	1.5	2.2	2.7	860	860	860	860	860	130	20000	-
1.3	1.8	1020	2.4	790.2	IE5	BG70G20-../S5E06MA4	0.18	0.6	1.2	1.8	2.2	1020	1020	1020	1020	1020	130	20000	-
1.3	1.7	1140	2.2	877.6	IE5	BG70G20-../S5E06MA4	0.17	0.55	1.1	1.7	2	1140	1140	1140	1140	1140	130	20000	-
1.3	1.4	1340	1.9	1035	IE5	BG70G20-../S5E06MA4	0.14	0.48	0.95	1.4	1.7	1340	1340	1340	1340	1340	130	20000	-
1.3	1.2	1550	1.6	1193	IE5	BG70G20-../S5E06MA4	0.12	0.41	0.8	1.2	1.5	1550	1550	1550	1550	1550	130	20000	-
1.3	1	1800	1.4	1389	IE5	BG70G20-../S5E06MA4	0.1	0.35	0.7	1	1.2	1800	1800	1800	1800	1800	130	20000	-
1.3	0.95	2000	1.2	1543	IE5	BG70G20-../S5E06MA4	0.10	0.32	0.6	0.95	1.1	2000	2000	2000	2000	2000	130	20000	-
1.3	0.9	2150	1.2	1666	IE5	BG70G20-../S5E06MA4	0.09	0.3	0.6	0.9	1	2150	2150	2150	2150	2150	130	20000	-
1.3	0.75	2550	0.96	1994	IE5	BG70G20-../S5E06MA4	0.08	0.25	0.5	0.75	0.9	2550	2550	2550	2550	2550	130	20000	-
1.3	0.65	2850	0.87	2215	IE5	BG70G20-../S5E06MA4	0.07	0.22	0.45	0.65	0.8	2850	2850	2850	2850	2850	130	20000	-

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### $M_N = 1.6 \text{ Nm}$ ( $P_N = 0.25 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.6	560	4.2	2.1	2.64	IE4	BG05-../S4E06MA4	56	189	375	560	680	4.2	4.2	4.2	4.2	4.2	8.5	420	-
1.6	440	5.4	1.8	3.38	IE4	BG05-../S4E06MA4	44	147	295	440	530	5.4	5.4	5.4	5.4	5.4	8.5	460	-
1.6	325	7.3	1.6	4.59	IE4	BG05-../S4E06MA4	32.5	108	215	325	390	7.3	7.3	7.3	7.3	7.3	8.5	490	-
1.6	270	8.7	1.6	5.46	IE4	BG05-../S4E06MA4	27	91	183	270	325	8.7	8.7	8.7	8.7	8.7	8.5	490	-
1.6	245	9.7	1.7	6.09	IE4	BG05-../S4E06MA4	24.5	82	164	245	295	9.7	9.7	9.7	9.7	9.7	8.5	480	-
1.6	225	10.5	1.5	6.6	IE4	BG05-../S4E06MA4	22.5	75	151	225	270	10.5	10.5	10.5	10.5	10.5	8.5	510	-
1.6	225	10.6	1.6	6.64	IE4	BG05-../S4E06MA4	22.5	75	150	225	270	10.6	10.6	10.6	10.6	10.6	8.5	500	-
1.6	192	12.4	1.4	7.8	IE4	BG05-../S4E06MA4	19	64	128	192	230	12.4	12.4	12.4	12.4	12.4	8.5	530	-
1.6	184	13	1.4	8.15	IE4	BG05-../S4E06MA4	18	61	122	184	220	13	13	13	13	13	8.5	510	-
1.6	176	13.6	1.4	8.51	IE4	BG05-../S4E06MA4	17.5	58	117	176	210	13.6	13.6	13.6	13.6	13.6	8.5	550	-
1.6	144	16.6	1.1	10.4	IE4	BG05-../S4E06MA4	14	48	96	144	173	16.6	16.6	16.6	16.6	16.6	8.5	510	-
1.6	141	16.9	1.2	10.59	IE4	BG05-../S4E06MA4	14	47	94	141	169	16.9	16.9	16.9	16.9	16.9	8.5	590	-
1.6	129	18.4	1.1	11.55	IE4	BG05-../S4E06MA4	12.5	43	86	129	155	18.4	18.4	18.4	18.4	18.4	8.5	600	-
1.6	124	19.2	1.1	12.05	IE4	BG05-../S4E06MA4	12	41	82	124	149	19.2	19.2	19.2	19.2	19.2	8.5	510	-
1.6	119	20	1.1	12.6	IE4	BG05-../S4E06MA4	11.5	39.5	79	119	142	20	20	20	20	20	8.5	610	-
1.6	109	22	1	13.75	IE4	BG05-../S4E06MA4	10.5	36	72	109	130	22	22	22	22	22	8.5	630	-
1.6	98	24	0.98	15.23	IE4	BG05-../S4E06MA4	9.8	32.5	65	98	118	24	24	24	24	24	8.5	640	-
1.6	90	26.5	0.94	16.62	IE4	BG05-../S4E06MA4	9	30	60	90	108	26.5	26.5	26.5	26.5	26.5	8.5	660	-
1.6	79	30	0.86	18.82	IE4	BG05-../S4E06MA4	7.9	26.5	53	79	95	30	30	30	30	30	8.5	680	-
1.6	73	32.5	0.82	20.53	IE4	BG05-../S4E06MA4	7.3	24	48.5	73	87	32.5	32.5	32.5	32.5	32.5	8.5	700	-
1.6	330	7.2	3	4.54	IE4	BG06-../S4E06MA4	33	110	220	330	395	7.2	7.2	7.2	7.2	7.2	9.5	530	-
1.6	250	9.5	2.5	5.96	IE4	BG06-../S4E06MA4	25	83	167	250	300	9.5	9.5	9.5	9.5	9.5	9.5	570	-
1.6	210	11.2	2.3	7.01	IE4	BG06-../S4E06MA4	21	71	142	210	255	11.2	11.2	11.2	11.2	11.2	9.5	580	-
1.6	178	13.4	2.1	8.39	IE4	BG06-../S4E06MA4	17.5	59	119	178	210	13.4	13.4	13.4	13.4	13.4	9.5	600	-
1.6	159	15	2	9.38	IE4	BG06-../S4E06MA4	15.5	53	106	159	191	15	15	15	15	15	9.5	640	-
1.6	146	16.3	1.9	10.24	IE4	BG06-../S4E06MA4	14.5	48.5	97	146	175	16.3	16.3	16.3	16.3	16.3	9.5	640	-
1.6	132	18	1.8	11.28	IE4	BG06-../S4E06MA4	13	44	88	132	159	18	18	18	18	18	9.5	670	-
1.6	121	19.6	1.7	12.3	IE4	BG06-../S4E06MA4	12	40.5	81	121	146	19.6	19.6	19.6	19.6	19.6	9.5	670	-
1.6	115	20.5	1.6	12.98	IE4	BG06-../S4E06MA4	11.5	38.5	77	115	138	20.5	20.5	20.5	20.5	20.5	9.5	600	-
1.6	101	23.5	1.4	14.78	IE4	BG06-../S4E06MA4	10	33.5	67	101	121	23.5	23.5	23.5	23.5	23.5	9.5	730	-
1.6	92	25.5	1.4	16.13	IE4	BG06-../S4E06MA4	9.2	30.5	61	92	111	25.5	25.5	25.5	25.5	25.5	9.5	740	-
1.6	86	27.5	1.4	17.4	IE4	BG06-../S4E06MA4	8.6	28.5	57	86	103	27.5	27.5	27.5	27.5	27.5	9.5	760	-
1.6	79	30	1.3	18.98	IE4	BG06-../S4E06MA4	7.9	26	52	79	94	30	30	30	30	30	9.5	770	-
1.6	72	33	1.2	20.82	IE4	BG06-../S4E06MA4	7.2	24	48	72	86	33	33	33	33	33	9.5	800	-
1.6	66	36	1.2	22.71	IE4	BG06-../S4E06MA4	6.6	22	44	66	79	36	36	36	36	36	9.5	810	-
1.6	58	40.5	1.1	25.48	IE4	BG06-../S4E06MA4	5.8	19.5	39	58	70	40.5	40.5	40.5	40.5	40.5	9.5	850	-
1.6	53	44	1	27.8	IE4	BG06-../S4E06MA4	5.3	17.5	35.5	53	64	44	44	44	44	44	9.5	840	-
1.6	46.5	51	0.87	32.22	IE4	BG06-../S4E06MA4	4.6	15.5	31	46.5	55	51	51	51	51	51	9.5	890	-
1.6	42.5	56	0.8	35.15	IE4	BG06-../S4E06MA4	4.2	14	28	42.5	51	56	56	56	56	56	9.5	880	-</

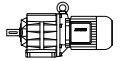
**BG-series helical-geared motors****Selection helical-geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 1.6 \text{ Nm}$  ( $P_N = 0.25 \text{ kW}$ )**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.6	26	91	1.3	57.48	IE4	BG10-../S4E06MA4	2.6	8.6	17	26	31	91	91	91	91	13	2000	2800	
1.6	23.5	101	1.2	63.69	IE4	BG10-../S4E06MA4	2.3	7.8	15.5	23.5	28	101	101	101	101	13	2000	2800	
1.6	22.5	105	1.1	66	IE4	BG10-../S4E06MA4	2.2	7.5	15	22.5	27	105	105	105	105	13	2000	2800	
1.6	20.5	117	1	73.13	IE4	BG10-../S4E06MA4	2	6.8	13.5	20.5	24.5	117	117	117	117	13	2000	2800	
1.6	22	108	0.95	67.54	IE4	BG10Z-../S4E06MA4	2.2	7.4	14.5	22	26.5	108	108	108	108	14	2000	2800	
1.6	19	123	0.97	77.4	IE4	BG10Z-../S4E06MA4	1.9	6.4	12.5	19	23	123	123	123	123	14	2000	2800	
1.6	17	137	0.87	85.76	IE4	BG10Z-../S4E06MA4	1.7	5.8	11.5	17	20.5	137	137	137	137	14	2000	2800	
1.6	16	147	0.81	92.19	IE4	BG10Z-../S4E06MA4	1.6	5.4	10.5	16	19.5	147	147	147	147	14	2000	2800	
1.6	43.5	54	2.7	34.2	IE4	BG15-../S4E06MA4	4.3	14.5	29	43.5	52	54	54	54	54	13	3000	6000	
1.6	39.5	60	2.5	37.9	IE4	BG15-../S4E06MA4	3.9	13	26	39.5	47	60	60	60	60	13	3000	6000	
1.6	35.5	66	3	41.76	IE4	BG20-../S4E06MA4	3.5	11.5	23.5	35.5	43	66	66	66	66	16	4500	-	
1.6	32	74	2.7	46.38	IE4	BG20-../S4E06MA4	3.2	10.5	21.5	32	38.5	74	74	74	74	16	4700	-	
1.6	31	76	2.6	47.92	IE4	BG20-../S4E06MA4	3.1	10	20.5	31	37.5	76	76	76	76	16	4750	-	
1.6	28	85	2.3	53.22	IE4	BG20-../S4E06MA4	2.8	9.3	18.5	28	33.5	85	85	85	85	16	4950	-	
1.6	25	94	2.1	59.07	IE4	BG20-../S4E06MA4	2.5	8.4	16.5	25	30	94	94	94	94	16	5000	-	
1.6	22.5	104	1.9	65.62	IE4	BG20-../S4E06MA4	2.2	7.6	15	22.5	27	104	104	104	104	16	5000	-	
1.6	25.5	93	1.8	58.58	IE4	BG20Z-../S4E06MA4	2.5	8.5	17	25.5	30.5	93	93	93	93	16	5000	-	
1.6	22	108	1.9	67.53	IE4	BG20Z-../S4E06MA4	2.2	7.4	14.5	22	26.5	108	108	108	108	16	5000	-	
1.6	20	120	1.7	75	IE4	BG20Z-../S4E06MA4	2	6.6	13	20	24	120	120	120	120	16	5000	-	
1.6	19	125	1.6	78.6	IE4	BG20Z-../S4E06MA4	1.9	6.3	12.5	19	22.5	125	125	125	125	16	5000	-	
1.6	17	139	1.4	87.3	IE4	BG20Z-../S4E06MA4	1.7	5.7	11	17	20.5	139	139	139	139	16	5000	-	
1.6	15.5	150	1.3	94.27	IE4	BG20Z-../S4E06MA4	1.5	5.3	10.5	15.5	19	150	150	150	150	16	5000	-	
1.6	14	167	1.2	104.7	IE4	BG20Z-../S4E06MA4	1.4	4.7	9.5	14	17	167	167	167	167	16	5000	-	
1.6	13	180	1.1	112.8	IE4	BG20Z-../S4E06MA4	1.3	4.4	8.8	13	15.5	180	180	180	180	16	5000	-	
1.6	11.5	200	1	125.3	IE4	BG20Z-../S4E06MA4	1.1	3.9	7.9	11.5	14	200	200	200	200	16	5000	-	
1.6	10.5	225	0.88	141.3	IE4	BG20Z-../S4E06MA4	1	3.5	7	10.5	12.5	225	225	225	225	16	5000	-	
1.6	9.5	250	0.8	157	IE4	BG20Z-../S4E06MA4	0.95	3.1	6.3	9.5	11	250	250	250	250	16	5000	-	
1.6	22	107	2.8	67.44	IE4	BG30-../S4E06MA4	2.2	7.4	14.5	22	26.5	107	107	107	107	20	6000	-	
1.6	22.5	105	2.5	65.79	IE4	BG30Z-../S4E06MA4	2.2	7.5	15	22.5	27	105	105	105	105	22	6000	-	
1.6	20	117	2.6	73.51	IE4	BG30Z-../S4E06MA4	2	6.8	13.5	20	24	117	117	117	117	22	6000	-	
1.6	18	130	2.3	81.55	IE4	BG30Z-../S4E06MA4	1.8	6.1	12	18	22	130	130	130	130	22	6000	-	
1.6	17	137	2.2	86.13	IE4	BG30Z-../S4E06MA4	1.7	5.8	11.5	17	20.5	137	137	137	137	22	6000	-	
1.6	15.5	152	2	95.55	IE4	BG30Z-../S4E06MA4	1.5	5.2	10	15.5	18.5	152	152	152	152	22	6000	-	
1.6	13.5	175	1.7	109.6	IE4	BG30Z-../S4E06MA4	1.3	4.5	9.1	13.5	16	175	175	175	175	22	6000	-	
1.6	12	194	1.5	121.6	IE4	BG30Z-../S4E06MA4	1.2	4.1	8.2	12	14.5	194	194	194	194	22	6000	-	
1.6	11.5	205	1.5	128.5	IE4	BG30Z-../S4E06MA4	1.1	3.8	7.7	11.5	14	205	205	205	205	22	6000	-	
1.6	10.5	225	1.3	142.5	IE4	BG30Z-../S4E06MA4	1	3.5	7	10.5	12.5	225	225	225	225	22	6000	-	
1.6	9.9	240	1.2	151.5	IE4	BG30Z-../S4E06MA4	0.95	3.3	6.6	9.9	11.5	240	240	240	240	22	6000	-	
1.6	8.9	265	1.1	168.1	IE4	BG30Z-../S4E06MA4	0.85	2.9	5.9	8.9	10.5	265	265	265	265	22	6000	-	
1.6	8.2	290	1	182.9	IE4	BG30Z-../S4E06MA4	0.8	2.7	5.4	8.2	9.8	290	290	290	290	22	6000	-	
1.6	7.3	320	0.92	202.9	IE4	BG30Z-../S4E06MA4	0.7	2.4	4.9	7.3	8.8	320	320	320	320	22	6000	-	
1.6	6.6	360	0.83	225.9	IE4	BG30Z-../S4E06MA4	0.65	2.2	4.4	6.6	7.9	360	360	360	360	22	6000	-	
1.6	5.8	405	0.8	254.9	IE4	BG30G06-../S4E06MA4	0.55	1.9	3.9	5.8	7	405	405	405	405	25	6000	-	
1.6	16	145	2.9	91.02	IE4	BG40Z-../S4E06MA4	1.6	5.4	10.5	16	19.5	145	145	145	145	38	7000	-	
1.6	15	154	2.7	96.86	IE4	BG40Z-../S4E06MA4	1.5	5.1	10	15	18.5	154	154	154	154	38	7000	-	
1.6	13.5	172	2.5	107.5	IE4	BG40Z-../S4E06MA4	1.3	4.6	9.3	13.5	16.5	172	172	172	172	38	7000	-	
1.6	12	194	2.2	121.3	IE4	BG40Z-../S4E06MA4	1.2	4.1	8.2	12	14.5	194	194	194	194	38	7000	-	
1.6	11	215	2	134.6	IE4	BG40Z-../S4E06MA4	1.1	3.7	7.4	11	13	215	215	215	215	38	7000	-	
1.6	10.5	225	1.9	141.4	IE4	BG40Z-../S4E06MA4	1	3.5	7	10.5	12.5	225	225	225	225	38	7000	-	
1.6	9.5	250	1.7	156.9	IE4	BG40Z-../S4E06MA4	0.95	3.1	6.3	9.5	11	250	250	250	250	38	7000	-	
1.6	9	265	1.6	166.1	IE4	BG40Z-../S4E06MA4	0.9	3	6	9	10.5	265	265	265	265	38	7000	-	
1.6	8.1	295	1.4	184.4	IE4	BG40Z-../S4E06MA4	0.8	2.7	5.4	8.1	9.7	295	295	295	295	38	7000	-	
1.6	7.5	315	1.3	199.9	IE4	BG40Z-../S4E06MA4	0.75	2.5	5	7.5	9	315	315	315	315	38	7000	-	
1.6	6.7	355	1.2	221.9	IE4	BG40Z-../S4E06MA4	0.65	2.2	4.5	6.7	8.1	355	355	355	355	38	7000	-	
1.6	6	390	1.1	246.5	IE4	BG40Z-../S4E06MA4	0.6	2	4	6	7.3	390	390	390	390	38	7000	-	
1.6	5.4	435	0.97	273.6	IE4	BG40Z-../S4E06MA4	0.5	1.8	3.6	5.4	6.5	435	435	435	435	38	7000	-	
1.6	5.1	460	1	288.6	IE4	BG40G10-../S4E06MA4	0.5	1.7	3.4	5.1	6.2	460	460	460	460	43	7000	-	
1.6	4.2	560	0.82	353.5	IE4	BG40G10-../S4E06MA4	0.42	1.4	2.8	4.2	5	560	560	560	560	43	7000	-	
1.6	10	225	2.8	142.9	IE4	BG50Z-../S4E06MA4	1	3.4	6.9	10	12.5	225	225	225	225	47	10000	-	
1.6	9	260	2.4	164.9	IE4	BG50Z-../S4E06MA4	0.9	3	6	9	10.5	260	260	260	260	47	10000	-	
1.6	8.2	290	2.2	182.8	IE4	BG50Z-../S4E06MA4	0.8	2.7	5.4	8.2	9.8	290	290	290	290	47	10000	-	
1.6	7.3	325	1.9	204.7	IE4	BG50Z-../S4E06MA4	0.7	2.4	4.8	7.3	8.7	325	325	325	325	47	10000	-	
1.6	6.6	360	1.7	226.9	IE4	BG50Z-../S4E06MA4	0.65	2.2	4.4	6.6	7.9	360	360	360	360	47	10000	-	
1.6	5.8	410	1.5	258.6	IE4	BG50Z-../S4E06MA4	0.55	1.9	3.8	5.8	6.9	410	410	410	410	47	10000	-	
1.6	5.2	455	1.4	286.7	IE4	BG50Z-../S4E06MA4	0.5	1.7	3.4	5.2	6.2	455	455	455	455	47	10000	-	
1.6	5.2	455	1.5	287.1	IE4	BG50G10-../S4E06MA4	0.5	1.7	3.4	5.2	6.2	455	455	455	455	51	10000	-	
1.6	4.2	560	1.2	351.7	IE4	BG50G10-../S4E06MA4	0.42	1.4	2.8	4.2	5.1	560	560	560	560	51	10000	-	
1.6	3.3	710	0.97	446.5	IE4	BG50G10-../S4E06MA4	0.33	1.1	2.2	3.3	4	710	710	710	710	51	10000	-	
1.6	2.8	850	0.81	531.5	IE4	BG50G10-../S4E06MA4	0.28	0.9	1.8	2.8	3.3	850	850	850	850	51	10000	-	
1.6	5.4	440	2.9	276.2	IE4	BG60G20-../S4E06MA4	0.5	1.8	3.6	5.4	6.5	440	440	440	440	100	16000	-	
1.6	4.9	485	2.7	306.1	IE4	BG60G20-../S4E06MA4	0.49	1.6	3.2	4.9	5.8	485	485	485	485	100	1		

# BG-series helical-geared motors

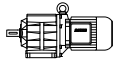
## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

### $M_N = 1.6 \text{ Nm}$ ( $P_N = 0.25 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.6	1.6	1420	0.91	891.5	IE4	BG60G20-../S4E06MA4	0.16	0.55	1.1	1.6	2	1420	1420	1420	1420	1420	100	16000	-
1.6	2.5	920	2.7	577.3	IE4	BG70G20-../S4E06MA4	0.25	0.85	1.7	2.5	3.1	920	920	920	920	920	130	20000	-
1.6	2.2	1060	2.3	665.8	IE4	BG70G20-../S4E06MA4	0.22	0.75	1.5	2.2	2.7	1060	1060	1060	1060	1060	130	20000	-
1.6	1.8	1260	2	790.2	IE4	BG70G20-../S4E06MA4	0.18	0.6	1.2	1.8	2.2	1260	1260	1260	1260	1260	130	20000	-
1.6	1.7	1400	1.8	877.6	IE4	BG70G20-../S4E06MA4	0.17	0.55	1.1	1.7	2	1400	1400	1400	1400	1400	130	20000	-
1.6	1.4	1650	1.5	1035	IE4	BG70G20-../S4E06MA4	0.14	0.48	0.95	1.4	1.7	1650	1650	1650	1650	1650	130	20000	-
1.6	1.2	1900	1.3	1193	IE4	BG70G20-../S4E06MA4	0.12	0.41	0.8	1.2	1.5	1900	1900	1900	1900	1900	130	20000	-
1.6	1	2200	1.1	1389	IE4	BG70G20-../S4E06MA4	0.1	0.35	0.7	1	1.2	2200	2200	2200	2200	2200	130	20000	-
1.6	0.95	2450	1	1543	IE4	BG70G20-../S4E06MA4	0.10	0.32	0.6	0.95	1.1	2450	2450	2450	2450	2450	130	20000	-
1.6	0.9	2650	0.94	1666	IE4	BG70G20-../S4E06MA4	0.09	0.3	0.6	0.9	1	2650	2650	2650	2650	2650	130	20000	-

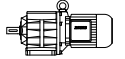
### $M_N = 2.4 \text{ Nm}$ ( $P_N = 0.37 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	560	6.3	1.4	2.64	IE4	BG05-../S4E06LA4	56	189	375	560	680	6.3	6.3	6.3	6.3	6.3	8.5	420	-
2.4	560	6.3	1.4	2.64	IE1	BG05-../SSE06MA4	56	189	375	560	680	4.75	5.2	5.8	6.3	6.3	8.5	420	-
2.4	440	8.1	1.2	3.38	IE4	BG05-../S4E06LA4	44	147	295	440	530	8.1	8.1	8.1	8.1	8.1	8.5	460	-
2.4	440	8.1	1.2	3.38	IE1	BG05-../SSE06MA4	44	147	295	440	530	6	6.7	7.4	8.1	8.1	8.5	460	-
2.4	325	11	1.1	4.59	IE4	BG05-../S4E06LA4	32.5	108	215	325	390	11	11	11	11	11	8.5	490	-
2.4	325	11	1.1	4.59	IE1	BG05-../SSE06MA4	32.5	108	215	325	390	8.2	9.1	10	11	11	8.5	490	-
2.4	270	13.1	1.1	5.46	IE1	BG05-../SSE06MA4	27	91	183	270	325	9.8	10.9	12	13.1	13.1	8.5	490	-
2.4	270	13.1	1.1	5.46	IE4	BG05-../S4E06LA4	27	91	183	270	325	13.1	13.1	13.1	13.1	13.1	8.5	490	-
2.4	245	14.6	1.2	6.09	IE4	BG05-../S4E06LA4	24.5	82	164	245	295	14.6	14.6	14.6	14.6	14.6	8.5	480	-
2.4	245	14.6	1.2	6.09	IE1	BG05-../SSE06MA4	24.5	82	164	245	295	10.9	12.1	13.3	14.6	14.6	8.5	480	-
2.4	225	15.8	1	6.6	IE4	BG05-../S4E06LA4	22.5	75	151	225	270	15.8	15.8	15.8	15.8	15.8	8.5	510	-
2.4	225	15.8	1	6.64	IE1	BG05-../SSE06MA4	22.5	75	150	225	270	11.9	13.2	14.6	15.9	15.9	8.5	500	-
2.4	225	15.8	1	6.64	IE4	BG05-../S4E06LA4	22.5	75	150	225	270	15.9	15.9	15.9	15.9	15.9	8.5	500	-
2.4	225	15.8	1	6.6	IE1	BG05-../SSE06MA4	22.5	75	151	225	270	11.8	13.1	14.5	15.8	15.8	8.5	510	-
2.4	192	18.7	0.96	7.8	IE4	BG05-../S4E06LA4	19	64	128	192	230	18.7	18.7	18.7	18.7	18.7	8.5	530	-
2.4	192	18.7	0.96	7.8	IE1	BG05-../SSE06MA4	19	64	128	192	230	14	15.6	17.1	18.7	18.7	8.5	530	-
2.4	184	19.5	0.92	8.15	IE4	BG05-../S4E06LA4	18	61	122	184	220	19.5	19.5	19.5	19.5	19.5	8.5	510	-
2.4	184	19.5	0.92	8.15	IE1	BG05-../SSE06MA4	18	61	122	184	220	14.6	16.3	17.9	19.5	19.5	8.5	510	-
2.4	176	20	0.93	8.51	IE4	BG05-../S4E06LA4	17.5	58	117	176	210	20	20	20	20	20	8.5	550	-
2.4	176	20	0.93	8.51	IE1	BG05-../SSE06MA4	17.5	58	117	176	210	15.3	17	18.7	20	20	8.5	550	-
2.4	395	9	2.2	3.78	IE4	BG06-../S4E06LA4	39.5	132	260	395	475	9	9	9	9	9	9.5	520	-
2.4	395	9	2.2	3.78	IE1	BG06-../SSE06MA4	39.5	132	260	395	475	6.8	7.5	8.3	9	9	9.5	520	-
2.4	330	10.8	2	4.54	IE1	BG06-../SSE06MA4	33	110	220	330	395	8.1	9	9.9	10.8	10.8	9.5	530	-
2.4	330	10.8	2	4.54	IE4	BG06-../S4E06LA4	33	110	220	330	395	10.8	10.8	10.8	10.8	10.8	9.5	530	-
2.4	250	14.3	1.7	5.96	IE1	BG06-../SSE06MA4	25	83	167	250	300	10.7	11.9	13.1	14.3	14.3	9.5	570	-
2.4	250	14.3	1.7	5.96	IE4	BG06-../S4E06LA4	25	83	167	250	300	14.3	14.3	14.3	14.3	14.3	9.5	570	-
2.4	210	16.8	1.5	7.01	IE1	BG06-../SSE06MA4	21	71	142	210	255	12.6	14	15.4	16.8	16.8	9.5	580	-
2.4	210	16.8	1.5	7.01	IE4	BG06-../S4E06LA4	21	71	142	210	255	16.8	16.8	16.8	16.8	16.8	9.5	580	-
2.4	178	20	1.4	8.39	IE4	BG06-../S4E06LA4	17.5	59	119	178	210	20	20	20	20	20	9.5	600	-
2.4	178	20	1.4	8.39	IE1	BG06-../SSE06MA4	17.5	59	119	178	210	15.1	16.7	18.4	20	20	9.5	600	-
2.4	159	22.5	1.3	9.38	IE1	BG06-../SSE06MA4	15.5	53	106	159	191	16.8	18.7	20.5	22.5	22.5	9.5	640	-
2.4	159	22.5	1.3	9.38	IE4	BG06-../S4E06LA4	15.5	53	106	159	191	22.5	22.5	22.5	22.5	22.5	9.5	640	-
2.4	146	24.5	1.3	10.24	IE1	BG06-../SSE06MA4	14.5	48.5	97	146	175	18.4	20	22.5	24.5	24.5	9.5	640	-
2.4	146	24.5	1.3	10.24	IE4	BG06-../S4E06LA4	14.5	48.5	97	146	175	24.5	24.5	24.5	24.5	24.5	9.5	640	-
2.4	132	27	1.2	11.28	IE4	BG06-../S4E06LA4	13	44	88	132	159	27	27	27	27	27	9.5	670	-
2.4	132	27	1.2	11.28	IE1	BG06-../SSE06MA4	13	44	88	132	159	20	22.5	24.5	27	27	9.5	670	-
2.4	121	29.5	1.1	12.3	IE4	BG06-../S4E06LA4	12	40.5	81	121	146	29.5	29.5	29.5	29.5	29.5	9.5	670	-
2.4	121	29.5	1.1	12.3	IE1	BG06-../SSE06MA4	12	40.5	81	121	146	22	24.5	27	29.5	29.5	9.5	670	-
2.4	115	31	1.1	12.98	IE4	BG06-../S4E06LA4	11.5	38.5	77	115	138	31	31	31	31	31	9.5	600	-
2.4	115	31	1.1	12.98	IE1	BG06-../SSE06MA4	11.5	38.5	77	115	138	23	25.5	28.5	31	31	9.5	600	-
2.4	101	35	0.96	14.78	IE4	BG06-../S4E06LA4	10	33.5	67	101	121	35	35	35	35	35	9.5	730	-
2.4	101	35	0.96	14.78	IE1	BG06-../SSE06MA4	10	33.5	67	101	121	26.5	29.5	32.5	35	35	9.5	730	-
2.4	92	38.5	0.9	16.13	IE1	BG06-../SSE06MA4	9.2	30.5	61	92	111	29	32	35	38.5	38.5	9.5	740	-
2.4	92	38.5	0.9	16.13	IE4	BG06-../S4E06LA4	9.2	30.5	61	92	111	38.5	38.5	38.5	38.5	38.5	9.5	740	-
2.4	86	41.5	0.91	17.4	IE4	BG06-../S4E06LA4	8.6	28.5	57	86	103	41.5	41.5	41.5	41.5	41.5	9.5	760	-
2.4	86	41.5	0.91	17.4	IE1	BG06-../SSE06MA4	8.6	28.5	57	86	103	31	34.5	38	41.5	41.5	9.5	760	-
2.4	79	45.5	0.88	18.98	IE4	BG06-../S4E06LA4	7.9												

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

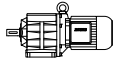
**M<sub>N</sub> = 2.4 Nm (P<sub>N</sub> = 0.37 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	51	69	1.7	29.09	IE1	BG10-../SSE06MA4	5.1	17	34	51	61	52	58	63	69	69	13	1540	2150
2.4	51	69	1.7	29.09	IE4	BG10-../S4E06LA4	5.1	17	34	51	61	69	69	69	69	69	13	1540	2150
2.4	47.5	75	1.6	31.52	IE4	BG10-../S4E06LA4	4.7	15.5	31.5	47.5	57	75	75	75	75	75	13	1600	2200
2.4	47.5	75	1.6	31.52	IE1	BG10-../SSE06MA4	4.7	15.5	31.5	47.5	57	56	63	69	75	75	13	1600	2200
2.4	42.5	83	1.4	34.92	IE4	BG10-../S4E06LA4	4.2	14	28.5	42.5	51	83	83	83	83	83	13	1690	2350
2.4	42.5	83	1.4	34.92	IE1	BG10-../SSE06MA4	4.2	14	28.5	42.5	51	62	69	76	83	83	13	1690	2350
2.4	37.5	95	1.3	39.7	IE1	BG10-../SSE06MA4	3.7	12.5	25	37.5	45	71	79	87	95	95	13	1780	2450
2.4	37.5	95	1.3	39.7	IE4	BG10-../S4E06LA4	3.7	12.5	25	37.5	45	95	95	95	95	95	13	1780	2450
2.4	34	105	1.1	43.99	IE1	BG10-../SSE06MA4	3.4	11	22.5	34	40.5	79	87	96	105	105	13	1880	2600
2.4	34	105	1.1	43.99	IE4	BG10-../S4E06LA4	3.4	11	22.5	34	40.5	105	105	105	105	105	13	1880	2600
2.4	32	111	1.1	46.55	IE4	BG10-../S4E06LA4	3.2	10.5	21	32	38.5	111	111	111	111	111	13	1920	2650
2.4	32	111	1.1	46.55	IE1	BG10-../SSE06MA4	3.2	10.5	21	32	38.5	83	93	102	111	111	13	1920	2650
2.4	29	123	0.97	51.57	IE4	BG10-../S4E06LA4	2.9	9.6	19	29	34.5	123	123	123	123	123	13	2000	2800
2.4	29	123	0.97	51.57	IE1	BG10-../SSE06MA4	2.9	9.6	19	29	34.5	92	103	113	123	123	13	2000	2800
2.4	26	137	0.87	57.48	IE4	BG10-../S4E06LA4	2.6	8.6	17	26	31	137	137	137	137	137	13	2000	2800
2.4	26	137	0.87	57.48	IE1	BG10-../SSE06MA4	2.6	8.6	17	26	31	103	114	126	137	137	13	2000	2800
2.4	55	64	2.3	27.08	IE1	BG15-../SSE06MA4	5.5	18	36.5	55	66	48.5	54	59	64	64	13	3000	6000
2.4	55	64	2.3	27.08	IE4	BG15-../S4E06LA4	5.5	18	36.5	55	66	64	64	64	64	64	13	3000	6000
2.4	49.5	72	2.1	30.08	IE4	BG15-../S4E06LA4	4.9	16.5	33	49.5	59	72	72	72	72	72	13	3000	6000
2.4	49.5	72	2.1	30.08	IE1	BG15-../SSE06MA4	4.9	16.5	33	49.5	59	54	60	66	72	72	13	3000	6000
2.4	43.5	82	1.8	34.2	IE1	BG15-../SSE06MA4	4.3	14.5	29	43.5	52	61	68	75	82	82	13	3000	6000
2.4	43.5	82	1.8	34.2	IE4	BG15-../S4E06LA4	4.3	14.5	29	43.5	52	82	82	82	82	82	13	3000	6000
2.4	39.5	90	1.6	37.9	IE1	BG15-../SSE06MA4	3.9	13	26	39.5	47	68	75	83	90	90	13	3000	6000
2.4	39.5	90	1.6	37.9	IE4	BG15-../S4E06LA4	3.9	13	26	39.5	47	90	90	90	90	90	13	3000	6000
2.4	53	66	3	27.85	IE1	BG20-../SSE06MA4	5.3	17.5	35.5	53	64	50	55	61	66	66	16	3800	-
2.4	53	66	3	27.85	IE4	BG20-../S4E06LA4	5.3	17.5	35.5	53	64	66	66	66	66	66	16	3800	-
2.4	48	74	2.7	30.94	IE1	BG20-../SSE06MA4	4.8	16	32	48	58	55	61	68	74	74	16	4000	-
2.4	48	74	2.7	30.94	IE4	BG20-../S4E06LA4	4.8	16	32	48	58	74	74	74	74	74	16	4000	-
2.4	45	79	2.5	33.33	IE4	BG20-../S4E06LA4	4.5	15	30	45	54	79	79	79	79	79	16	4100	-
2.4	45	79	2.5	33.33	IE1	BG20-../SSE06MA4	4.5	15	30	45	54	59	66	73	79	79	16	4100	-
2.4	40.5	88	2.3	37.02	IE4	BG20-../S4E06LA4	4	13.5	27	40.5	48.5	88	88	88	88	88	16	4300	-
2.4	40.5	88	2.3	37.02	IE1	BG20-../SSE06MA4	4	13.5	27	40.5	48.5	66	74	81	88	88	16	4300	-
2.4	35.5	100	2	41.76	IE1	BG20-../SSE06MA4	3.5	11.5	23.5	35.5	43	75	83	91	100	100	16	4500	-
2.4	35.5	100	2	41.76	IE4	BG20-../S4E06LA4	3.5	11.5	23.5	35.5	43	100	100	100	100	100	16	4500	-
2.4	32	111	1.8	46.38	IE4	BG20-../S4E06LA4	3.2	10.5	21.5	32	38.5	111	111	111	111	111	16	4700	-
2.4	32	111	1.8	46.38	IE1	BG20-../SSE06MA4	3.2	10.5	21.5	32	38.5	83	92	102	111	111	16	4700	-
2.4	31	115	1.7	47.92	IE1	BG20-../SSE06MA4	3.1	10	20.5	31	37.5	86	95	105	115	115	16	4750	-
2.4	31	115	1.7	47.92	IE4	BG20-../S4E06LA4	3.1	10	20.5	31	37.5	115	115	115	115	115	16	4750	-
2.4	28	127	1.6	53.22	IE1	BG20-../SSE06MA4	2.8	9.3	18.5	28	33.5	95	106	117	127	127	16	4950	-
2.4	28	127	1.6	53.22	IE4	BG20-../S4E06LA4	2.8	9.3	18.5	28	33.5	127	127	127	127	127	16	4950	-
2.4	25	141	1.4	59.07	IE4	BG20-../S4E06LA4	2.5	8.4	16.5	25	30	141	141	141	141	141	16	5000	-
2.4	25	141	1.4	59.07	IE1	BG20-../SSE06MA4	2.5	8.4	16.5	25	30	106	118	129	141	141	16	5000	-
2.4	22.5	157	1.3	65.62	IE1	BG20-../SSE06MA4	2.2	7.6	15	22.5	27	118	131	144	157	157	16	5000	-
2.4	22.5	157	1.3	65.62	IE4	BG20-../S4E06LA4	2.2	7.6	15	22.5	27	157	157	157	157	157	16	5000	-
2.4	25.5	140	1.2	58.58	IE4	BG20Z-../S4E06LA4	2.5	8.5	17	25.5	30.5	140	140	140	140	140	16	5000	-
2.4	25.5	140	1.2	58.58	IE1	BG20Z-../SSE06MA4	2.5	8.5	17	25.5	30.5	105	117	128	140	140	16	5000	-
2.4	22	162	1.2	67.53	IE4	BG20Z-../S4E06LA4	2.2	7.4	14.5	22	26.5	162	162	162	162	162	16	5000	-
2.4	22	162	1.2	67.53	IE1	BG20Z-../SSE06MA4	2.2	7.4	14.5	22	26.5	121	135	148	162	162	16	5000	-
2.4	20	180	1.1	75	IE4	BG20Z-../S4E06LA4	2	6.6	13	20	24	180	180	180	180	180	16	5000	-
2.4	20	180	1.1	75	IE1	BG20Z-../SSE06MA4	2	6.6	13	20	24	135	150	165	180	180	16	5000	-
2.4	19	188	1.1	78.6	IE4	BG20Z-../S4E06LA4	1.9	6.3	12.5	19	22.5	188	188	188	188	188	16	5000	-
2.4	19	188	1.1	78.6	IE1	BG20Z-../SSE06MA4	1.9	6.3	12.5	19	22.5	141	157	172	188	188	16	5000	-
2.4	17	205	0.95	87.3	IE1	BG20Z-../SSE06MA4	1.7	5.7	11	17	20.5	157	174	192	205	205	16	5000	-
2.4	17	205	0.95	87.3	IE4	BG20Z-../S4E06LA4	1.7	5.7	11	17	20.5	205	205	205	205	205	16	5000	-
2.4	15.5	225	0.88	94.27	IE4	BG20Z-../S4E06LA4	1.5	5.3	10.5	15.5	19	225	225	225	225	225	16	5000	-
2.4	15.5	225	0.88	94.27	IE1	BG20Z-../SSE06MA4	1.5	5.3	10.5	15.5	19	169	188	205	225	225	16	5000	-
2.4	14	250	0.8	104.7	IE1	BG20Z-../SSE06MA4	1.4	4.7	9.5	14	17	188	205	230	250	250	16	5000	-
2.4	14	250	0.8	104.7	IE4	BG20Z-../S4E06LA4	1.4	4.7	9.5	14	17	250	250	250	250	250	16	5000	-
2.4	35	101	2.9	42.46	IE1	BG30-../SSE06MA4	3.5	11.5	23.5	35	42	76	84	93	101	101	20	5900	-
2.4	35	101	2.9	42.46	IE4	BG30-../S4E06LA4	3.5	11.5	23.5	35	42	101	101	101	101	101	20	5900	-
2.4	31.5	113	2.7	47.11	IE4	BG30-../S4E06LA4	3.1	10.5	21	31.5	38	113	113	113	113	113	20	6000	-
2.4	31.5	113	2.7	47.11	IE1	BG30-../SSE06MA4	3.1	10.5	21	31.5	38	84	94	103	113	113	20	6000	-
2.4	28.5	125	2.4	52.44	IE1	BG30-../SSE06MA4	2.8	9.5	19	28.5	34	94	104	115	125	125	20	6000	-
2.4	28.5	125	2.4	52.44	IE4	BG30-../S4E06LA4	2.8	9.5	19	28.5	34	125	125	125	125	125	20	6000	-
2.4	25.5	139	2.1	58.18	IE1	BG30-../SSE06MA4	2.5	8.5	17	25.5	30.5	104	116	127	139	139	20	6000	-
2.4	25.5	139	2.1	58.18	IE4	BG30-../S4E06LA4	2.5	8.5	17	25.5	30.5	139	139	139	139	139	20	6000	-
2.4	24.5	145	2.1	60.79	IE4	BG30-../S4E06LA4	2.4	8.2	16	24.5	29.5	145	145	145	145	145	20	6000	-
2.4	24.5	145	2.1	60.79	IE1	BG30-../SSE06MA4	2.4	8.2	16	24.5	29.5	109	121	133	145	145	20	6000	-
2.4	22	161	1.9	67.44	IE4	BG30-../S4E06LA4	2.2	7.4	14.5	22	26.5	161	161						



# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

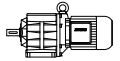
 **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.37 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	12	290	1	121.6	IE1	BG30Z-../SSE06MA4	1.2	4.1	8.2	12	14.5	215	240	265	290	290	22	6000	-
2.4	12	290	1	121.6	IE4	BG30Z-../S4E06LA4	1.2	4.1	8.2	12	14.5	290	290	290	290	290	22	6000	-
2.4	11.5	305	0.97	128.5	IE4	BG30Z-../S4E06LA4	1.1	3.8	7.7	11.5	14	305	305	305	305	305	22	6000	-
2.4	11.5	305	0.97	128.5	IE1	BG30Z-../SSE06MA4	1.1	3.8	7.7	11.5	14	230	255	280	305	305	22	6000	-
2.4	10.5	340	0.88	142.5	IE1	BG30Z-../SSE06MA4	1	3.5	7	10.5	12.5	255	285	310	340	340	22	6000	-
2.4	10.5	340	0.88	142.5	IE4	BG30Z-../S4E06LA4	1	3.5	7	10.5	12.5	340	340	340	340	340	22	6000	-
2.4	9.9	360	0.83	151.5	IE4	BG30Z-../S4E06LA4	0.95	3.3	6.6	9.9	11.5	360	360	360	360	360	22	6000	-
2.4	9.9	360	0.83	151.5	IE1	BG30Z-../SSE06MA4	0.95	3.3	6.6	9.9	11.5	270	300	330	360	360	22	6000	-
2.4	22	162	2.6	67.74	IE1	BG40Z-../SSE06MA4	2.2	7.3	14.5	22	26.5	121	135	149	162	162	38	7000	-
2.4	22	162	2.6	67.74	IE4	BG40Z-../S4E06LA4	2.2	7.3	14.5	22	26.5	162	162	162	162	162	38	7000	-
2.4	19.5	180	2.4	75.19	IE1	BG40Z-../SSE06MA4	1.9	6.6	13	19.5	23.5	135	150	165	180	180	38	7000	-
2.4	19.5	180	2.4	75.19	IE4	BG40Z-../S4E06LA4	1.9	6.6	13	19.5	23.5	180	180	180	180	180	38	7000	-
2.4	18	196	2.2	82	IE1	BG40Z-../SSE06MA4	1.8	6	12	18	21.5	147	164	180	196	196	38	7000	-
2.4	18	196	2.2	82	IE4	BG40Z-../S4E06LA4	1.8	6	12	18	21.5	196	196	196	196	196	38	7000	-
2.4	16	215	1.9	91.02	IE4	BG40Z-../S4E06LA4	1.6	5.4	10.5	16	19.5	215	215	215	215	215	38	7000	-
2.4	16	215	1.9	91.02	IE1	BG40Z-../SSE06MA4	1.6	5.4	10.5	16	19.5	163	182	200	215	215	38	7000	-
2.4	15	230	1.8	96.86	IE1	BG40Z-../SSE06MA4	1.5	5.1	10	15	18.5	174	193	210	230	230	38	7000	-
2.4	15	230	1.8	96.86	IE4	BG40Z-../S4E06LA4	1.5	5.1	10	15	18.5	230	230	230	230	230	38	7000	-
2.4	13.5	255	1.6	107.5	IE4	BG40Z-../S4E06LA4	1.3	4.6	9.3	13.5	16.5	255	255	255	255	255	38	7000	-
2.4	13.5	255	1.6	107.5	IE1	BG40Z-../SSE06MA4	1.3	4.6	9.3	13.5	16.5	193	215	235	255	255	38	7000	-
2.4	12	290	1.5	121.3	IE4	BG40Z-../S4E06LA4	1.2	4.1	8.2	12	14.5	290	290	290	290	290	38	7000	-
2.4	12	290	1.5	121.3	IE1	BG40Z-../SSE06MA4	1.2	4.1	8.2	12	14.5	215	240	265	290	290	38	7000	-
2.4	11	320	1.3	134.6	IE1	BG40Z-../SSE06MA4	1.1	3.7	7.4	11	13	240	265	295	320	320	38	7000	-
2.4	11	320	1.3	134.6	IE4	BG40Z-../S4E06LA4	1.1	3.7	7.4	11	13	320	320	320	320	320	38	7000	-
2.4	10.5	335	1.3	141.4	IE1	BG40Z-../SSE06MA4	1	3.5	7	10.5	12.5	250	280	310	335	335	38	7000	-
2.4	10.5	335	1.3	141.4	IE4	BG40Z-../S4E06LA4	1	3.5	7	10.5	12.5	335	335	335	335	335	38	7000	-
2.4	9.5	375	1.1	156.9	IE1	BG40Z-../SSE06MA4	0.95	3.1	6.3	9.5	11	280	310	345	375	375	38	7000	-
2.4	9.5	375	1.1	156.9	IE4	BG40Z-../S4E06LA4	0.95	3.1	6.3	9.5	11	375	375	375	375	375	38	7000	-
2.4	9	395	1.1	166.1	IE1	BG40Z-../SSE06MA4	0.9	3	6	9	10.5	295	330	365	395	395	38	7000	-
2.4	9	395	1.1	166.1	IE4	BG40Z-../S4E06LA4	0.9	3	6	9	10.5	395	395	395	395	395	38	7000	-
2.4	8.1	440	0.96	184.4	IE4	BG40Z-../S4E06LA4	0.8	2.7	5.4	8.1	9.7	440	440	440	440	440	38	7000	-
2.4	8.1	440	0.96	184.4	IE1	BG40Z-../SSE06MA4	0.8	2.7	5.4	8.1	9.7	330	365	405	440	440	38	7000	-
2.4	7.5	475	0.89	199.9	IE1	BG40Z-../SSE06MA4	0.75	2.5	5	7.5	9	355	395	435	475	475	38	7000	-
2.4	7.5	475	0.89	199.9	IE4	BG40Z-../S4E06LA4	0.75	2.5	5	7.5	9	475	475	475	475	475	38	7000	-
2.4	6.7	530	0.8	221.9	IE1	BG40Z-../SSE06MA4	0.65	2.2	4.5	6.7	8.1	395	440	485	530	530	38	7000	-
2.4	6.7	530	0.8	221.9	IE4	BG40Z-../S4E06LA4	0.65	2.2	4.5	6.7	8.1	530	530	530	530	530	38	7000	-
2.4	15.5	225	2.7	95.58	IE4	BG50Z-../S4E06LA4	1.5	5.2	10	15.5	18.5	225	225	225	225	225	47	10000	-
2.4	15.5	225	2.7	95.58	IE1	BG50Z-../SSE06MA4	1.5	5.2	10	15.5	18.5	172	191	210	225	225	47	10000	-
2.4	14	250	2.5	106	IE1	BG50Z-../SSE06MA4	1.4	4.7	9.4	14	16.5	190	210	230	250	250	47	10000	-
2.4	14	250	2.5	106	IE4	BG50Z-../S4E06LA4	1.4	4.7	9.4	14	16.5	250	250	250	250	250	47	10000	-
2.4	11.5	305	2	128.9	IE4	BG50Z-../S4E06LA4	1.1	3.8	7.7	11.5	13.5	305	305	305	305	305	47	10000	-
2.4	11.5	305	2	128.9	IE1	BG50Z-../SSE06MA4	1.1	3.8	7.7	11.5	13.5	230	255	280	305	305	47	10000	-
2.4	10	340	1.8	142.9	IE1	BG50Z-../SSE06MA4	1	3.4	6.9	10	12.5	255	285	310	340	340	47	10000	-
2.4	10	340	1.8	142.9	IE4	BG50Z-../S4E06LA4	1	3.4	6.9	10	12.5	340	340	340	340	340	47	10000	-
2.4	9	395	1.6	164.9	IE4	BG50Z-../S4E06LA4	0.9	3	6	9	10.5	395	395	395	395	395	47	10000	-
2.4	9	395	1.6	164.9	IE1	BG50Z-../SSE06MA4	0.9	3	6	9	10.5	295	325	360	395	395	47	10000	-
2.4	8.2	435	1.4	182.8	IE4	BG50Z-../S4E06LA4	0.8	2.7	5.4	8.2	9.8	435	435	435	435	435	47	10000	-
2.4	8.2	435	1.4	182.8	IE1	BG50Z-../SSE06MA4	0.8	2.7	5.4	8.2	9.8	325	365	400	435	435	47	10000	-
2.4	7.3	490	1.3	204.7	IE4	BG50Z-../S4E06LA4	0.7	2.4	4.8	7.3	8.7	490	490	490	490	490	47	10000	-
2.4	7.3	490	1.3	204.7	IE1	BG50Z-../SSE06MA4	0.7	2.4	4.8	7.3	8.7	365	405	450	490	490	47	10000	-
2.4	6.6	540	1.2	226.9	IE4	BG50Z-../S4E06LA4	0.65	2.2	4.4	6.6	7.9	540	540	540	540	540	47	10000	-
2.4	6.6	540	1.2	226.9	IE1	BG50Z-../SSE06MA4	0.65	2.2	4.4	6.6	7.9	405	450	495	540	540	47	10000	-
2.4	5.8	620	1	258.6	IE1	BG50Z-../SSE06MA4	0.55	1.9	3.8	5.8	6.9	465	510	560	620	620	47	10000	-
2.4	5.8	620	1	258.6	IE4	BG50Z-../S4E06LA4	0.55	1.9	3.8	5.8	6.9	620	620	620	620	620	47	10000	-
2.4	5.2	680	0.92	286.7	IE1	BG50Z-../SSE06MA4	0.5	1.7	3.4	5.2	6.2	510	570	630	680	680	47	10000	-
2.4	5.2	680	0.92	286.7	IE4	BG50Z-../S4E06LA4	0.5	1.7	3.4	5.2	6.2	680	680	680	680	680	47	10000	-
2.4	5.2	680	1	287.1	IE1	BG50G10-../SSE06MA4	0.5	1.7	3.4	5.2	6.2	510	570	630	680	680	51	10000	-
2.4	5.2	680	1	287.1	IE4	BG50G10-../S4E06LA4	0.5	1.7	3.4	5.2	6.2	680	680	680	680	680	51	10000	-
2.4	4.2	840	0.82	351.7	IE1	BG50G10-../SSE06MA4	0.42	1.4	2.8	4.2	5.1	630	700	770	840	840	51	10000	-
2.4	4.2	840	0.82	351.7	IE4	BG50G10-../S4E06LA4	0.42	1.4	2.8	4.2	5.1	840	840	840	840	840	51	10000	-
2.4	5.4	660	2	276.2	IE4	BG60G20-../S4E06LA4	0.5	1.8	3.6	5.4	6.5	660	660	660	660	660	100	16000	-
2.4	5.4	660	2	276.2	IE1	BG60G20-../SSE06MA4	0.5	1.8	3.6	5.4	6.5	495	550	600	660	660	100	16000	-
2.4	4.9	730	1.8	306.1	IE4	BG60G20-../S4E06LA4	0.49	1.6	3.2	4.9	5.8	730	730	730	730	730	100	16000	-
2.4	4.9	730	1.8	306.1	IE1	BG60G20-../SSE06MA4	0.49	1.6	3.2	4.9	5.8	550	610	670	730	730	100	16000	-
2.4	4.4	800	1.6	334.3	IE4	BG60G20-../S4E06LA4	0.44	1.4	2.9	4.4	5.3	800	800	800	800	800	100	16000	-
2.4	4.4	800	1.6	334.3	IE1	BG60G20-../SSE06MA4	0.44	1.4	2.9	4.4	5.3	600	660	730	800	800	100	16000	-
2.4	4	880	1.5	370.5	IE4	BG60G20-../S4E06LA4	0.4	1.3	2.6	4	4.8	880	880	880	880	880	100	16000	-
2.4	4	880	1.5	370.5	IE1	BG60G20-../SSE06MA4	0.4	1.3	2.6	4	4.8	660	740	810	880				

# BG-series helical-geared motors

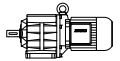
## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

**$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.37 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	3	1190	2.1	495.9	IE1	BG70G20-../SSE06MA4	0.3	1	2	3	3.6	890	990	1090	1190	1190	130	20000	-
2.4	2.5	1380	1.8	577.3	IE1	BG70G20-../SSE06MA4	0.25	0.85	1.7	2.5	3.1	1030	1150	1270	1380	1380	130	20000	-
2.4	2.5	1380	1.8	577.3	IE4	BG70G20-../S4E06LA4	0.25	0.85	1.7	2.5	3.1	1380	1380	1380	1380	1380	130	20000	-
2.4	2.2	1590	1.6	665.8	IE4	BG70G20-../S4E06LA4	0.22	0.75	1.5	2.2	2.7	1590	1590	1590	1590	1590	130	20000	-
2.4	2.2	1590	1.6	665.8	IE1	BG70G20-../SSE06MA4	0.22	0.75	1.5	2.2	2.7	1190	1330	1460	1590	1590	130	20000	-
2.4	1.8	1890	1.3	790.2	IE1	BG70G20-../SSE06MA4	0.18	0.6	1.2	1.8	2.2	1420	1580	1730	1890	1890	130	20000	-
2.4	1.8	1890	1.3	790.2	IE4	BG70G20-../S4E06LA4	0.18	0.6	1.2	1.8	2.2	1890	1890	1890	1890	1890	130	20000	-
2.4	1.7	2100	1.2	877.6	IE4	BG70G20-../S4E06LA4	0.17	0.55	1.1	1.7	2	2100	2100	2100	2100	2100	130	20000	-
2.4	1.7	2100	1.2	877.6	IE1	BG70G20-../SSE06MA4	0.17	0.55	1.1	1.7	2	1570	1750	1930	2100	2100	130	20000	-
2.4	1.4	2450	1	1035	IE1	BG70G20-../SSE06MA4	0.14	0.48	0.95	1.4	1.7	1860	2050	2250	2450	2450	130	20000	-
2.4	1.4	2450	1	1035	IE4	BG70G20-../S4E06LA4	0.14	0.48	0.95	1.4	1.7	2450	2450	2450	2450	2450	130	20000	-
2.4	1.2	2850	0.87	1193	IE4	BG70G20-../S4E06LA4	0.12	0.41	0.8	1.2	1.5	2850	2850	2850	2850	2850	130	20000	-
2.4	1.2	2850	0.87	1193	IE1	BG70G20-../SSE06MA4	0.12	0.41	0.8	1.2	1.5	2100	2350	2600	2850	2850	130	20000	-

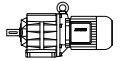
**$M_N = 2.6 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.6	560	6.8	1.3	2.64	IE4	BG05-../S4E06LA4	56	189	375	560	680	6.6	6.8	6.8	6.8	6.8	8.5	420	-
2.6	440	8.7	1.1	3.38	IE4	BG05-../S4E06LA4	44	147	295	440	530	8.4	8.7	8.7	8.7	8.7	8.5	460	-
2.6	325	11.9	1	4.59	IE4	BG05-../S4E06LA4	32.5	108	215	325	390	11.4	11.9	11.9	11.9	11.9	8.5	490	-
2.6	270	14.1	0.99	5.46	IE4	BG05-../S4E06LA4	27	91	183	270	325	13.6	14.1	14.1	14.1	14.1	8.5	490	-
2.6	245	15.8	1.1	6.09	IE4	BG05-../S4E06LA4	24.5	82	164	245	295	15.2	15.8	15.8	15.8	15.8	8.5	480	-
2.6	225	17.1	0.93	6.6	IE4	BG05-../S4E06LA4	22.5	75	151	225	270	16.5	17.1	17.1	17.1	17.1	8.5	510	-
2.6	225	17.2	0.98	6.64	IE4	BG05-../S4E06LA4	22.5	75	150	225	270	16.5	17.2	17.2	17.2	17.2	8.5	500	-
2.6	192	20	0.89	7.8	IE4	BG05-../S4E06LA4	19	64	128	192	230	19.5	20	20	20	20	8.5	530	-
2.6	184	21	0.85	8.15	IE4	BG05-../S4E06LA4	18	61	122	184	220	20	21	21	21	21	8.5	510	-
2.6	176	22	0.86	8.51	IE4	BG05-../S4E06LA4	17.5	58	117	176	210	21	22	22	22	22	8.5	550	-
2.6	395	9.8	2	3.78	IE4	BG06-../S4E06LA4	39.5	132	260	395	475	9.4	9.8	9.8	9.8	9.8	9.5	520	-
2.6	330	11.8	1.9	4.54	IE4	BG06-../S4E06LA4	33	110	220	330	395	11.3	11.8	11.8	11.8	11.8	9.5	530	-
2.6	250	15.4	1.5	5.96	IE4	BG06-../S4E06LA4	25	83	167	250	300	14.9	15.4	15.4	15.4	15.4	9.5	570	-
2.6	210	18.2	1.4	7.01	IE4	BG06-../S4E06LA4	21	71	142	210	255	17.5	18.2	18.2	18.2	18.2	9.5	580	-
2.6	178	21.5	1.3	8.39	IE4	BG06-../S4E06LA4	17.5	59	119	178	210	20.5	21.5	21.5	21.5	21.5	9.5	600	-
2.6	159	24	1.2	9.38	IE4	BG06-../S4E06LA4	15.5	53	106	159	191	23	24	24	24	24	9.5	640	-
2.6	146	26.5	1.2	10.24	IE4	BG06-../S4E06LA4	14.5	48.5	97	146	175	25.5	26.5	26.5	26.5	26.5	9.5	640	-
2.6	132	29	1.1	11.28	IE4	BG06-../S4E06LA4	13	44	88	132	159	28	29	29	29	29	9.5	670	-
2.6	121	31.5	1	12.3	IE4	BG06-../S4E06LA4	12	40.5	81	121	146	30.5	31.5	31.5	31.5	31.5	9.5	670	-
2.6	115	33.5	0.98	12.98	IE4	BG06-../S4E06LA4	11.5	38.5	77	115	138	32	33.5	33.5	33.5	33.5	9.5	600	-
2.6	101	38	0.88	14.78	IE4	BG06-../S4E06LA4	10	33.5	67	101	121	36.5	38	38	38	38	9.5	730	-
2.6	92	41.5	0.83	16.13	IE4	BG06-../S4E06LA4	9.2	30.5	61	92	111	40	41.5	41.5	41.5	41.5	9.5	740	-
2.6	86	45	0.84	17.4	IE4	BG06-../S4E06LA4	8.6	28.5	57	86	103	43.5	45	45	45	45	9.5	760	-
2.6	79	49	0.81	18.98	IE4	BG06-../S4E06LA4	7.9	26	52	79	94	47	49	49	49	49	9.5	770	-
2.6	102	37.5	3	14.58	IE4	BG10-../S4E06LA4	10	34	68	102	123	36	37.5	37.5	37.5	37.5	13	1100	1540
2.6	92	41.5	2.8	16.15	IE4	BG10-../S4E06LA4	9.2	30.5	61	92	111	40	41.5	41.5	41.5	41.5	13	1140	1590
2.6	81	48	2.5	18.51	IE4	BG10-../S4E06LA4	8.1	27	54	81	97	46	48	48	48	48	13	1210	1690
2.6	73	53	2.3	20.51	IE4	BG10-../S4E06LA4	7.3	24	48.5	73	87	51	53	53	53	53	13	1290	1800
2.6	68	57	2.1	22.04	IE4	BG10-../S4E06LA4	6.8	22.5	45	68	81	55	57	57	57	57	13	1330	1860
2.6	61	63	1.9	24.42	IE4	BG10-../S4E06LA4	6.1	20	40.5	61	73	61	63	63	63	63	13	1410	1970
2.6	57	68	1.8	26.26	IE4	BG10-../S4E06LA4	5.7	19	38	57	68	65	68	68	68	68	13	1460	2000
2.6	51	75	1.6	29.09	IE4	BG10-../S4E06LA4	5.1	17	34	51	61	72	75	75	75	75	13	1540	2150
2.6	47.5	81	1.5	31.52	IE4	BG10-../S4E06LA4	4.7	15.5	31.5	47.5	57	78	81	81	81	81	13	1600	2200
2.6	42.5	90	1.3	34.92	IE4	BG10-../S4E06LA4	4.2	14	28.5	42.5	51	87	90	90	90	90	13	1690	2350
2.6	37.5	103	1.2	39.7	IE4	BG10-../S4E06LA4	3.7	12.5	25	37.5	45	99	103	103	103	103	13	1780	2450
2.6	34	114	1	43.99	IE4	BG10-../S4E06LA4	3.4	11	22.5	34	40.5	109	114	114	114	114	13	1880	2600
2.6	32	121	0.99	46.55	IE4	BG10-../S4E06LA4	3.2	10.5	21	32	38.5	116	121	121	121	121	13	1920	2650
2.6	29	134	0.89	51.57	IE4	BG10-../S4E06LA4	2.9	9.6	19	29	34.5	128	134	134	134	134	13	2000	2800
2.6	26	149	0.8	57.48	IE4	BG10-../S4E06LA4	2.6	8.6	17	26	31	143	149	149	149	149	13	2000	2800
2.6	55	70	2.1	27.08	IE4	BG15-../S4E06LA4	5.5	18	36.5	55	66	67	70	70	70	70	13	3000	6000
2.6	49.5	78	1.9	30.08	IE4	BG15-../S4E06LA4	4.9	16.5	33	49.5	59	75	78	78	78	78	13	3000	6000
2.6	43.5	88	1.7	34.2	IE4	BG15-../S4E06LA4	4.3	14.5	29	43.5	52	85	88	88	88	88	13	3000	6000
2.6	39.5	98	1.5	37.9	IE4	BG15-../S4E06LA4	3.9	13	26	39.5	47	94	98	98	98	98	13	3000	6000
2.6	58	67	3	25.79	IE4	BG20-../S4E06LA4	5.8	19	38.5	58	69	64	67	67	67	67	16	3700	-
2.6	53	72	2.8	27.85	IE4	BG20-../S4E06LA4	5.3	17.5	35.5	53	64	69	72	72	72	72	16	3800	-
2.6	48	80	2.5	30.94	IE4	BG20-../S4E06LA4	4.8	16	32	48	58	77	80	80	80	80	16	4000	-
2.6	45	86	2.3	33.33	IE4	BG20-../S4E06LA4	4.5	15	30	45	54	83	86	86	86	86	16	4100	-
2.6	40.5	96	2.1	37.02	IE4	BG20-../S4E06LA4	4	13.5	27	40.5	48.5	92	96	96	96	96	16	4300	-
2.6	35.5	108	1.8	41.76	IE4	BG20-../S4E06LA4	3.5	11.5	23.5	35.5	43	104	108	108	108	108	16	4500	-
2.6	32	120	1.7	46.38	IE4	BG20-../S4E06LA4	3.2	10.5	21.5	32	38.5	115	120	120	120	120	16	4700	-
2.6	31	124	1.6	47.92	IE4	BG20-../S4E06LA4	3.1												

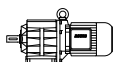
# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 2.6 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.6	19	200	0.98	78.6	IE4	BG20Z-../S4E06LA4	1.9	6.3	12.5	19	22.5	196	200	200	200	200	16	5000	-
2.6	17	225	0.88	87.3	IE4	BG20Z-../S4E06LA4	1.7	5.7	11	17	20.5	215	225	225	225	225	16	5000	-
2.6	15.5	245	0.82	94.27	IE4	BG20Z-../S4E06LA4	1.5	5.3	10.5	15.5	19	235	245	245	245	245	16	5000	-
2.6	38	101	3	39.02	IE4	BG30-../S4E06LA4	3.8	12.5	25.5	38	46	97	101	101	101	101	20	5800	-
2.6	35	110	2.7	42.46	IE4	BG30-../S4E06LA4	3.5	11.5	23.5	35	42	106	110	110	110	110	20	5900	-
2.6	31.5	122	2.4	47.11	IE4	BG30-../S4E06LA4	3.1	10.5	21	31.5	38	117	122	122	122	122	20	6000	-
2.6	28.5	136	2.2	52.44	IE4	BG30-../S4E06LA4	2.8	9.5	19	28.5	34	131	136	136	136	136	20	6000	-
2.6	25.5	151	2	58.18	IE4	BG30-../S4E06LA4	2.5	8.5	17	25.5	30.5	145	151	151	151	151	20	6000	-
2.6	24.5	158	1.9	60.79	IE4	BG30-../S4E06LA4	2.4	8.2	16	24.5	29.5	151	158	158	158	158	20	6000	-
2.6	22	175	1.7	67.44	IE4	BG30-../S4E06LA4	2.2	7.4	14.5	22	26.5	168	175	175	175	175	20	6000	-
2.6	22.5	171	1.5	65.79	IE4	BG30Z-../S4E06LA4	2.2	7.5	15	22.5	27	164	171	171	171	171	22	6000	-
2.6	20	191	1.6	73.51	IE4	BG30Z-../S4E06LA4	2	6.8	13.5	20	24	183	191	191	191	191	22	6000	-
2.6	18	210	1.4	81.55	IE4	BG30Z-../S4E06LA4	1.8	6.1	12	18	22	200	210	210	210	210	22	6000	-
2.6	17	220	1.3	86.13	IE4	BG30Z-../S4E06LA4	1.7	5.8	11.5	17	20.5	215	220	220	220	220	22	6000	-
2.6	15.5	245	1.2	95.55	IE4	BG30Z-../S4E06LA4	1.5	5.2	10	15.5	18.5	235	245	245	245	245	22	6000	-
2.6	13.5	280	1.1	109.6	IE4	BG30Z-../S4E06LA4	1.3	4.5	9.1	13.5	16	270	280	280	280	280	22	6000	-
2.6	12	315	0.95	121.6	IE4	BG30Z-../S4E06LA4	1.2	4.1	8.2	12	14.5	300	315	315	315	315	22	6000	-
2.6	11.5	330	0.9	128.5	IE4	BG30Z-../S4E06LA4	1.1	3.8	7.7	11.5	14	320	330	330	330	330	22	6000	-
2.6	10.5	370	0.81	142.5	IE4	BG30Z-../S4E06LA4	1	3.5	7	10.5	12.5	355	370	370	370	370	22	6000	-
2.6	22	176	2.4	67.74	IE4	BG40Z-../S4E06LA4	2.2	7.3	14.5	22	26.5	169	176	176	176	176	38	7000	-
2.6	19.5	195	2.2	75.19	IE4	BG40Z-../S4E06LA4	1.9	6.6	13	19.5	23.5	187	195	195	195	195	38	7000	-
2.6	18	210	2	82	IE4	BG40Z-../S4E06LA4	1.8	6	12	18	21.5	205	210	210	210	38	7000	-	
2.6	16	235	1.8	91.02	IE4	BG40Z-../S4E06LA4	1.6	5.4	10.5	16	19.5	225	235	235	235	38	7000	-	
2.6	15	250	1.7	96.86	IE4	BG40Z-../S4E06LA4	1.5	5.1	10	15	18.5	240	250	250	250	38	7000	-	
2.6	13.5	275	1.5	107.5	IE4	BG40Z-../S4E06LA4	1.3	4.6	9.3	13.5	16.5	265	275	275	275	38	7000	-	
2.6	12	315	1.3	121.3	IE4	BG40Z-../S4E06LA4	1.2	4.1	8.2	12	14.5	300	315	315	315	38	7000	-	
2.6	11	345	1.2	134.6	IE4	BG40Z-../S4E06LA4	1.1	3.7	7.4	11	13	335	345	345	345	38	7000	-	
2.6	10.5	365	1.2	141.4	IE4	BG40Z-../S4E06LA4	1	3.5	7	10.5	12.5	350	365	365	365	38	7000	-	
2.6	9.5	405	1	156.9	IE4	BG40Z-../S4E06LA4	0.95	3.1	6.3	9.5	11	390	405	405	405	38	7000	-	
2.6	9	430	0.98	166.1	IE4	BG40Z-../S4E06LA4	0.9	3	6	9	10.5	415	430	430	430	38	7000	-	
2.6	8.1	475	0.89	184.4	IE4	BG40Z-../S4E06LA4	0.8	2.7	5.4	8.1	9.7	460	475	475	475	38	7000	-	
2.6	7.5	510	0.82	199.9	IE4	BG40Z-../S4E06LA4	0.75	2.5	5	7.5	9	495	510	510	510	38	7000	-	
2.6	18.5	205	3	79.78	IE4	BG50Z-../S4E06LA4	1.8	6.2	12.5	18.5	22.5	199	205	205	205	205	47	10000	-
2.6	15.5	245	2.5	95.58	IE4	BG50Z-../S4E06LA4	1.5	5.2	10	15.5	18.5	235	245	245	245	245	47	10000	-
2.6	14	275	2.3	106	IE4	BG50Z-../S4E06LA4	1.4	4.7	9.4	14	16.5	265	275	275	275	275	47	10000	-
2.6	11.5	335	1.9	128.9	IE4	BG50Z-../S4E06LA4	1.1	3.8	7.7	11.5	13.5	320	335	335	335	47	10000	-	
2.6	10	370	1.7	142.9	IE4	BG50Z-../S4E06LA4	1	3.4	6.9	10	12.5	355	370	370	370	47	10000	-	
2.6	9	425	1.5	164.9	IE4	BG50Z-../S4E06LA4	0.9	3	6	9	10.5	410	425	425	425	47	10000	-	
2.6	8.2	475	1.3	182.8	IE4	BG50Z-../S4E06LA4	0.8	2.7	5.4	8.2	9.8	455	475	475	475	47	10000	-	
2.6	7.3	530	1.2	204.7	IE4	BG50Z-../S4E06LA4	0.7	2.4	4.8	7.3	8.7	510	530	530	530	47	10000	-	
2.6	6.6	580	1.1	226.9	IE4	BG50Z-../S4E06LA4	0.65	2.2	4.4	6.6	7.9	560	580	580	580	47	10000	-	
2.6	5.8	670	0.94	258.6	IE4	BG50Z-../S4E06LA4	0.55	1.9	3.8	5.8	6.9	640	670	670	670	47	10000	-	
2.6	5.2	740	0.85	286.7	IE4	BG50Z-../S4E06LA4	0.5	1.7	3.4	5.2	6.2	710	740	740	740	47	10000	-	
2.6	5.2	740	0.92	287.1	IE4	BG50G10-../S4E06LA4	0.5	1.7	3.4	5.2	6.2	710	740	740	740	51	10000	-	
2.6	5.4	710	1.8	276.2	IE4	BG60G20-../S4E06LA4	0.5	1.8	3.6	5.4	6.5	690	710	710	710	100	16000	-	
2.6	4.9	790	1.6	306.1	IE4	BG60G20-../S4E06LA4	0.49	1.6	3.2	4.9	5.8	760	790	790	790	100	16000	-	
2.6	4.4	860	1.5	334.3	IE4	BG60G20-../S4E06LA4	0.44	1.4	2.9	4.4	5.3	830	860	860	860	100	16000	-	
2.6	4	960	1.3	370.5	IE4	BG60G20-../S4E06LA4	0.4	1.3	2.6	4	4.8	920	960	960	960	100	16000	-	
2.6	3.4	1130	1.1	437.3	IE4	BG60G20-../S4E06LA4	0.34	1.1	2.2	3.4	4.1	1090	1130	1130	1130	100	16000	-	
2.6	2.9	1310	0.99	504.9	IE4	BG60G20-../S4E06LA4	0.29	0.95	1.9	2.9	3.5	1260	1310	1310	1310	100	16000	-	
2.6	2.6	1450	0.89	559.5	IE4	BG60G20-../S4E06LA4	0.26	0.85	1.7	2.6	3.2	1390	1450	1450	1450	100	16000	-	
2.6	4.5	850	2.9	328.4	IE4	BG70G20-../S4E06LA4	0.45	1.5	3	4.5	5.4	820	850	850	850	130	20000	-	
2.6	3.8	1000	2.5	387.6	IE4	BG70G20-../S4E06LA4	0.38	1.2	2.5	3.8	4.6	960	1000	1000	1000	130	20000	-	
2.6	3.5	1080	2.3	417.8	IE4	BG70G20-../S4E06LA4	0.35	1.1	2.3	3.5	4.3	1040	1080	1080	1080	130	20000	-	
2.6	3	1280	1.9	495.9	IE4	BG70G20-../S4E06LA4	0.3	1	2	3	3.6	1230	1280	1280	1280	130	20000	-	
2.6	2.5	1500	1.7	577.3	IE4	BG70G20-../S4E06LA4	0.25	0.85	1.7	2.5	3.1	1440	1500	1500	1500	130	20000	-	
2.6	2.2	1730	1.4	665.8	IE4	BG70G20-../S4E06LA4	0.22	0.75	1.5	2.2	2.7	1660	1730	1730	1730	130	20000	-	
2.6	1.8	2050	1.2	790.2	IE4	BG70G20-../S4E06LA4	0.18	0.6	1.2	1.8	2.2	1970	2050	2050	2050	130	20000	-	
2.6	1.7	2250	1.1	877.6	IE4	BG70G20-../S4E06LA4	0.17	0.55	1.1	1.7	2	2150	2250	2250	2250	130	20000	-	
2.6	1.4	2650	0.93	1035	IE4	BG70G20-../S4E06LA4	0.14	0.48	0.95	1.4	1.7	2550	2650	2650	2650	130	20000	-	
2.6	1.2	3100	0.81	1193	IE4	BG70G20-../S4E06LA4	0.12	0.41	0.8	1.2	1.5	2950	3100	3100	3100	130	20000	-	

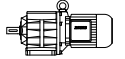
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 **$M_N = 3.5 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
3.5	560	9.2	0.97	2.64	IE1	BG05-../SSE06LA4	56	189	375	560	680	6.6	7.6	9.2	9.2	9.2	8.5	420	-
3.5	440	11.8	0.85	3.38	IE1	BG05-../SSE06LA4	44	147	295	440	530	8.4	9.8	11.8	11.8	11.8	8.5	460	-
3.5	245	21	0.8	6.09	IE1	BG05-../SSE06LA4	24.5	82	164	245	295	15.2	17.6	21	21	21	8.5	480	-
3.5	395	13.2	1.5	3.78	IE1	BG06-../SSE06LA4	39.5	132	260	395	475	9.4	10.9	13.2	13.2	13.2	9.5	520	-
3.5	330	15.																	

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

**M<sub>N</sub> = 3.5 Nm (P<sub>N</sub> = 0.55 kW)**

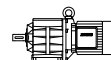
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>	
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]								
							150	500	1000	1500	1800	150	500	1000	1500	1800				[kg]
3.5	159	32.5	0.91	9.38	IE1	BG06-../SSE06LA4	15.5	53	106	159	191	23	27	32.5	32.5	32.5	32.5	9.5	640	-
3.5	146	35.5	0.86	10.24	IE1	BG06-../SSE06LA4	14.5	48.5	97	146	175	25.5	29.5	35.5	35.5	35.5	35.5	9.5	640	-
3.5	132	39	0.81	11.28	IE1	BG06-../SSE06LA4	13	44	88	132	159	28	32.5	39	39	39	39	9.5	670	-
3.5	125	41.5	2.5	11.92	IE1	BG10-../SSE06LA4	12.5	41.5	83	125	151	29.5	34.5	41.5	41.5	41.5	41.5	13	1030	1440
3.5	113	46	2.4	13.21	IE1	BG10-../SSE06LA4	11	37.5	75	113	136	33	38	46	46	46	46	13	1070	1490
3.5	102	51	2.2	14.58	IE1	BG10-../SSE06LA4	10	34	68	102	123	36	42	51	51	51	51	13	1100	1540
3.5	92	56	2.1	16.15	IE1	BG10-../SSE06LA4	9.2	30.5	61	92	111	40	46.5	56	56	56	56	13	1140	1590
3.5	81	64	1.9	18.51	IE1	BG10-../SSE06LA4	8.1	27	54	81	97	46	53	64	64	64	64	13	1210	1690
3.5	73	71	1.7	20.51	IE1	BG10-../SSE06LA4	7.3	24	48.5	73	87	51	59	71	71	71	71	13	1290	1800
3.5	68	77	1.6	22.04	IE1	BG10-../SSE06LA4	6.8	22.5	45	68	81	55	63	77	77	77	77	13	1330	1860
3.5	61	85	1.4	24.42	IE1	BG10-../SSE06LA4	6.1	20	40.5	61	73	61	70	85	85	85	85	13	1410	1970
3.5	57	91	1.3	26.26	IE1	BG10-../SSE06LA4	5.7	19	38	57	68	65	76	91	91	91	91	13	1460	2000
3.5	51	101	1.2	29.09	IE1	BG10-../SSE06LA4	5.1	17	34	51	61	72	84	101	101	101	101	13	1540	2150
3.5	47.5	110	1.1	31.52	IE1	BG10-../SSE06LA4	4.7	15.5	31.5	47.5	57	78	91	110	110	110	110	13	1600	2200
3.5	42.5	122	0.98	34.92	IE1	BG10-../SSE06LA4	4.2	14	28.5	42.5	51	87	101	122	122	122	122	13	1690	2350
3.5	37.5	138	0.86	39.7	IE1	BG10-../SSE06LA4	3.7	12.5	25	37.5	45	99	115	138	138	138	138	13	1780	2450
3.5	55	94	1.6	27.08	IE1	BG15-../SSE06LA4	5.5	18	36.5	55	66	67	78	94	94	94	94	13	3000	6000
3.5	49.5	105	1.4	30.08	IE1	BG15-../SSE06LA4	4.9	16.5	33	49.5	59	75	87	105	105	105	105	13	3000	6000
3.5	43.5	119	1.3	34.2	IE1	BG15-../SSE06LA4	4.3	14.5	29	43.5	52	85	99	119	119	119	119	13	3000	6000
3.5	39.5	132	1.1	37.9	IE1	BG15-../SSE06LA4	3.9	13	26	39.5	47	94	109	132	132	132	13	3000	6000	
3.5	86	60	3	17.31	IE1	BG20-../SSE06LA4	8.6	28.5	57	86	103	43	50	60	60	60	60	16	3200	-
3.5	75	69	2.8	19.95	IE1	BG20-../SSE06LA4	7.5	25	50	75	90	49.5	57	69	69	69	69	16	3350	-
3.5	67	77	2.6	22.16	IE1	BG20-../SSE06LA4	6.7	22.5	45	67	81	55	64	77	77	77	77	16	3500	-
3.5	64	81	2.5	23.22	IE1	BG20-../SSE06LA4	6.4	21.5	43	64	77	58	67	81	81	81	81	16	3550	-
3.5	58	90	2.2	25.79	IE1	BG20-../SSE06LA4	5.8	19	38.5	58	69	64	74	90	90	90	90	16	3700	-
3.5	53	97	2.1	27.85	IE1	BG20-../SSE06LA4	5.3	17.5	35.5	53	64	69	80	97	97	97	97	16	3800	-
3.5	48	108	1.8	30.94	IE1	BG20-../SSE06LA4	4.8	16	32	48	58	77	89	108	108	108	108	16	4000	-
3.5	45	116	1.7	33.33	IE1	BG20-../SSE06LA4	4.5	15	30	45	54	83	96	116	116	116	116	16	4100	-
3.5	40.5	129	1.5	37.02	IE1	BG20-../SSE06LA4	4	13.5	27	40.5	48.5	92	107	129	129	129	129	16	4300	-
3.5	35.5	146	1.4	41.76	IE1	BG20-../SSE06LA4	3.5	11.5	23.5	35.5	43	104	121	146	146	146	146	16	4500	-
3.5	32	162	1.2	46.38	IE1	BG20-../SSE06LA4	3.2	10.5	21.5	32	38.5	115	134	162	162	162	162	16	4700	-
3.5	31	167	1.2	47.92	IE1	BG20-../SSE06LA4	3.1	10	20.5	31	37.5	119	138	167	167	167	167	16	4750	-
3.5	28	186	1.1	53.22	IE1	BG20-../SSE06LA4	2.8	9.3	18.5	28	33.5	133	154	186	186	186	186	16	4950	-
3.5	25	205	0.97	59.07	IE1	BG20-../SSE06LA4	2.5	8.4	16.5	25	30	147	171	205	205	205	205	16	5000	-
3.5	22.5	225	0.87	65.62	IE1	BG20-../SSE06LA4	2.2	7.6	15	22.5	27	164	190	225	225	225	225	16	5000	-
3.5	25.5	205	0.84	58.58	IE1	BG20Z-../SSE06LA4	2.5	8.5	17	25.5	30.5	146	169	205	205	205	205	16	5000	-
3.5	22	235	0.85	67.53	IE1	BG20Z-../SSE06LA4	2.2	7.4	14.5	22	26.5	168	195	235	235	235	235	16	5000	-
3.5	53	98	3	28.24	IE1	BG30-../SSE06LA4	5.3	17.5	35	53	63	70	81	98	98	98	98	20	5100	-
3.5	50	104	2.9	29.83	IE1	BG30-../SSE06LA4	5	16.5	33.5	50	60	74	86	104	104	104	104	20	5200	-
3.5	45	115	2.6	33.09	IE1	BG30-../SSE06LA4	4.5	15	30	45	54	82	95	115	115	115	115	20	5400	-
3.5	42.5	123	2.4	35.17	IE1	BG30-../SSE06LA4	4.2	14	28	42.5	51	87	101	123	123	123	123	20	5500	-
3.5	38	136	2.2	39.02	IE1	BG30-../SSE06LA4	3.8	12.5	25.5	38	46	97	113	136	136	136	136	20	5800	-
3.5	35	148	2	42.46	IE1	BG30-../SSE06LA4	3.5	11.5	23.5	35	42	106	123	148	148	148	148	20	5900	-
3.5	31.5	164	1.8	47.11	IE1	BG30-../SSE06LA4	3.1	10.5	21	31.5	38	117	136	164	164	164	164	20	6000	-
3.5	28.5	183	1.6	52.44	IE1	BG30-../SSE06LA4	2.8	9.5	19	28.5	34	131	152	183	183	183	183	20	6000	-
3.5	25.5	200	1.5	58.18	IE1	BG30-../SSE06LA4	2.5	8.5	17	25.5	30.5	145	168	200	200	200	200	20	6000	-
3.5	24.5	210	1.4	60.79	IE1	BG30-../SSE06LA4	2.4	8.2	16	24.5	29.5	151	176	210	210	210	210	20	6000	-
3.5	22	235	1.3	67.44	IE1	BG30-../SSE06LA4	2.2	7.4	14.5	22	26.5	168	195	235	235	235	235	20	6000	-
3.5	22.5	230	1.2	65.79	IE1	BG30Z-../SSE06LA4	2.2	7.5	15	22.5	27	164	190	230	230	230	230	22	6000	-
3.5	20	255	1.2	73.51	IE1	BG30Z-../SSE06LA4	2	6.8	13.5	20	24	183	210	255	255	255	255	22	6000	-
3.5	18	285	1.1	81.55	IE1	BG30Z-../SSE06LA4	1.8	6.1	12	18	22	200	235	285	285	285	285	22	6000	-
3.5	17	300	1	86.13	IE1	BG30Z-../SSE06LA4	1.7	5.8	11.5	17	20.5	215	245	300	300	300	300	22	6000	-
3.5	15.5	330	0.9	95.55	IE1	BG30Z-../SSE06LA4	1.5	5.2	10	15.5	18.5	235	275	330	330	330	330	22	6000	-
3.5	22	235	1.8	67.74	IE1	BG40Z-../SSE06LA4	2.2	7.3	14.5	22	26.5	169	196	235	235	235	235	38	7000	-
3.5	19.5	260	1.6	75.19	IE1	BG40Z-../SSE06LA4	1.9	6.6	13	19.5	23.5	187	215	260	260	260	260	38	7000	-
3.5	18	285	1.5	82	IE1	BG40Z-../SSE06LA4	1.8	6	12	18	21.5	205	235	285	285	285	285	38	7000	-
3.5	16	315	1.3	91.02	IE1	BG40Z-../SSE06LA4	1.6	5.4	10.5	16	19.5	225	260	315	315	315	315	38	7000	-
3.5	15	335	1.3	96.86	IE1	BG40Z-../SSE06LA4	1.5	5.1	10	15	18.5	240	280	335	335	335	335	38	7000	-
3.5	13.5	375	1.1	107.5	IE1	BG40Z-../SSE06LA4	1.3	4.6	9.3	13.5	16.5	265	310	375	375	375	375	38	7000	-
3.5	12	420	1	121.3	IE1	BG40Z-../SSE06LA4	1.2	4.1	8.2	12	14.5	300	350	420	420	420	420	38	7000	-
3.5	11	470	0.9	134.6	IE1	BG40Z-../SSE06LA4	1.1	3.7	7.4	11	13	335	390	470	470	470	470	38	7000	-
3.5	10.5	490	0.86	141.4	IE1	BG40Z-../SSE06LA4	1	3.5	7	10.5	12.5	350	410	490	490	490	490	38	7000	-
3.5	20.5	250	2.5	71.97	IE1	BG50Z-../SSE06LA4	2	6.9	13.5	20.5	25	179	205	250	250	250	250	47	10000	-
3.5	18.5	275	2.3	79.78	IE1	BG50Z-../SSE06LA4	1.8	6.2	12.5	18.5	22.5	199	230	275	275	275	275	47	10000	-
3.5	15.5	330	1.9	95.58	IE1	BG50Z-../SSE06LA4	1.5	5.2	10	15.5	18.5	235	275	330	330	330	330	47	10000	-
3.5	14	370	1.7	106	IE1	BG50Z-../SSE06LA4	1.4	4.7	9.4	14	16.5	265	305	370	370	370	37			



# BG-series helical-geared motors

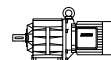
## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

### $M_N = 3.5 \text{ Nm}$ ( $P_N = 0.55 \text{ kW}$ )



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
3.5	5.4	960	2.6	276.7	IE1	BG70G20-../SSE06LA4	0.5	1.8	3.6	5.4	6.5	690	800	960	960	960	130	20000	-
3.5	4.5	1140	2.2	328.4	IE1	BG70G20-../SSE06LA4	0.45	1.5	3	4.5	5.4	820	950	1140	1140	1140	130	20000	-
3.5	3.8	1350	1.8	387.6	IE1	BG70G20-../SSE06LA4	0.38	1.2	2.5	3.8	4.6	960	1120	1350	1350	1350	130	20000	-
3.5	3.5	1460	1.7	417.8	IE1	BG70G20-../SSE06LA4	0.35	1.1	2.3	3.5	4.3	1040	1210	1460	1460	1460	130	20000	-
3.5	3	1730	1.4	495.9	IE1	BG70G20-../SSE06LA4	0.3	1	2	3	3.6	1230	1430	1730	1730	1730	130	20000	-
3.5	2.5	2000	1.2	577.3	IE1	BG70G20-../SSE06LA4	0.25	0.85	1.7	2.5	3.1	1440	1670	2000	2000	2000	130	20000	-
3.5	2.2	2300	1.1	665.8	IE1	BG70G20-../SSE06LA4	0.22	0.75	1.5	2.2	2.7	1660	1930	2300	2300	2300	130	20000	-
3.5	1.8	2750	0.9	790.2	IE1	BG70G20-../SSE06LA4	0.18	0.6	1.2	1.8	2.2	1970	2250	2750	2750	2750	130	20000	-
3.5	1.7	3050	0.81	877.6	IE1	BG70G20-../SSE06LA4	0.17	0.55	1.1	1.7	2	2150	2500	3050	3050	3050	130	20000	-

### $M_N = 5 \text{ Nm}$ ( $P_N = 0.78 \text{ kW}$ )

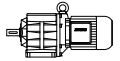


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
5	530	14.1	1.3	2.82	IE4	BG06-../S4E08MA4	53	177	350	530	630	14.1	14.1	14.1	14.1	14.1	16	470	-
5	395	18.8	1.1	3.78	IE4	BG06-../S4E08MA4	39.5	132	260	395	475	18.8	18.8	18.8	18.8	18.8	16	520	-
5	330	22.5	0.97	4.54	IE4	BG06-../S4E08MA4	33	110	220	330	395	22.5	22.5	22.5	22.5	22.5	16	530	-
5	250	29.5	0.81	5.96	IE4	BG06-../S4E08MA4	25	83	167	250	300	29.5	29.5	29.5	29.5	29.5	16	570	-
5	280	26.5	2.8	5.34	IE4	BG10-../S4E08MA4	28	93	187	280	335	26.5	26.5	26.5	26.5	26.5	16	620	910
5	220	33.5	2.4	6.78	IE4	BG10-../S4E08MA4	22	73	147	220	265	33.5	33.5	33.5	33.5	33.5	16	660	920
5	215	34	2.6	6.89	IE4	BG10-../S4E08MA4	21.5	72	145	215	260	34	34	34	34	34	16	850	1200
5	196	38	2.3	7.63	IE4	BG10-../S4E08MA4	19.5	65	131	196	235	38	38	38	38	38	16	900	1250
5	185	40	2.2	8.07	IE4	BG10-../S4E08MA4	18.5	61	123	185	220	40	40	40	40	40	16	660	920
5	160	46.5	2.1	9.33	IE4	BG10-../S4E08MA4	16	53	107	160	192	46.5	46.5	46.5	46.5	46.5	16	950	1330
5	145	51	1.9	10.34	IE4	BG10-../S4E08MA4	14.5	48	96	145	174	51	51	51	51	51	16	1000	1400
5	125	59	1.8	11.92	IE4	BG10-../S4E08MA4	12.5	41.5	83	125	151	59	59	59	59	59	16	1030	1440
5	113	66	1.7	13.21	IE4	BG10-../S4E08MA4	11	37.5	75	113	136	66	66	66	66	66	16	1070	1490
5	102	72	1.6	14.58	IE4	BG10-../S4E08MA4	10	34	68	102	123	72	72	72	72	72	16	1100	1540
5	92	80	1.4	16.15	IE4	BG10-../S4E08MA4	9.2	30.5	61	92	111	80	80	80	80	80	16	1140	1590
5	81	92	1.3	18.51	IE4	BG10-../S4E08MA4	8.1	27	54	81	97	92	92	92	92	92	16	1210	1690
5	73	102	1.2	20.51	IE4	BG10-../S4E08MA4	7.3	24	48.5	73	87	102	102	102	102	102	16	1290	1800
5	68	110	1.1	22.04	IE4	BG10-../S4E08MA4	6.8	22.5	45	68	81	110	110	110	110	110	16	1330	1860
5	61	122	0.98	24.42	IE4	BG10-../S4E08MA4	6.1	20	40.5	61	73	122	122	122	122	122	16	1410	1970
5	57	131	0.91	26.26	IE4	BG10-../S4E08MA4	5.7	19	38	57	68	131	131	131	131	131	16	1460	2000
5	51	145	0.83	29.09	IE4	BG10-../S4E08MA4	5.1	17	34	51	61	145	145	145	145	145	16	1540	2150
5	55	135	1.1	27.08	IE4	BG15-../S4E08MA4	5.5	18	36.5	55	66	135	135	135	135	135	16	3000	6000
5	49.5	150	1	30.08	IE4	BG15-../S4E08MA4	4.9	16.5	33	49.5	59	150	150	150	150	150	16	3000	6000
5	43.5	171	0.88	34.2	IE4	BG15-../S4E08MA4	4.3	14.5	29	43.5	52	171	171	171	171	171	16	3000	6000
5	180	41	2.9	8.29	IE4	BG20-../S4E08MA4	18	60	120	180	215	41	41	41	41	41	19	2250	-
5	155	48	2.5	9.65	IE4	BG20-../S4E08MA4	15.5	51	103	155	186	48	48	48	48	48	19	2250	-
5	142	52	2.9	10.54	IE4	BG20-../S4E08MA4	14	47	94	142	170	52	52	52	52	52	19	2700	-
5	128	58	2.7	11.71	IE4	BG20-../S4E08MA4	12.5	42.5	85	128	153	58	58	58	58	58	19	2800	-
5	113	66	2.5	13.21	IE4	BG20-../S4E08MA4	11	37.5	75	113	136	66	66	66	66	66	19	2900	-
5	102	73	2.3	14.67	IE4	BG20-../S4E08MA4	10	34	68	102	122	73	73	73	73	73	19	3050	-
5	96	77	2.3	15.58	IE4	BG20-../S4E08MA4	9.6	32	64	96	115	77	77	77	77	77	19	3100	-
5	86	86	2.1	17.31	IE4	BG20-../S4E08MA4	8.6	28.5	57	86	103	86	86	86	86	86	19	3200	-
5	75	99	2	19.95	IE4	BG20-../S4E08MA4	7.5	25	50	75	90	99	99	99	99	99	19	3350	-
5	67	110	1.8	22.16	IE4	BG20-../S4E08MA4	6.7	22.5	45	67	81	110	110	110	110	110	19	3500	-
5	64	116	1.7	23.22	IE4	BG20-../S4E08MA4	6.4	21.5	43	64	77	116	116	116	116	116	19	3550	-
5	58	128	1.6	25.79	IE4	BG20-../S4E08MA4	5.8	19	38.5	58	69	128	128	128	128	128	19	3700	-
5	53	139	1.4	27.85	IE4	BG20-../S4E08MA4	5.3	17.5	35.5	53	64	139	139	139	139	139	19	3800	-
5	48	154	1.3	30.94	IE4	BG20-../S4E08MA4	4.8	16	32	48	58	154	154	154	154	154	19	4000	-
5	45	166	1.2	33.33	IE4	BG20-../S4E08MA4	4.5	15	30	45	54	166	166	166	166	166	19	4100	-
5	40.5	185	1.1	37.02	IE4	BG20-../S4E08MA4	4	13.5	27	40.5	48.5	185	185	185	185	185	19	4300	-
5	35.5	205	0.96	41.76	IE4	BG20-../S4E08MA4	3.5	11.5	23.5	35.5	43	205	205	205	205	205	19	4500	-
5	32	230	0.86	46.38	IE4	BG20-../S4E08MA4	3.2	10.5	21.5	32	38.5	230	230	230	230	230	19	4700	-
5	31	235	0.83	47.92	IE4	BG20-../S4E08MA4	3.1	10	20.5	31	37.5	235	235	235	235	235	19	4750	-
5	75	99	3	19.99	IE4	BG30-../S4E08MA4	7.5	25	50	75	90	99	99	99	99	99	23	4200	-
5	67	110	2.7	22.18	IE4	BG30-../S4E08MA4	6.7	22.5	45	67	81	110	110	110	110	110	23	4600	-
5	58	127	2.4	25.45	IE4	BG30-../S4E08MA4	5.8	19.5	39	58	70	127	127	127	127	127	23	4850	-
5	53	141	2.1	28.24	IE4	BG30-../S4E08MA4	5.3	17.5	35	53	63	141	141	141	141	141	23	5100	-
5	50	149	2	29.83	IE4	BG30-../S4E08MA4	5	16.5	33.5	50	60	149	149	149	149	149	23	5200	-
5	45	165	1.8	33.09	IE4	BG30-../S4E08MA4	4.5	15	30	45	54	165	165	165	165	165	23	5400	-
5	42.5	175	1.7	35.17	IE4	BG30-../S4E08MA4	4.2	14	28	42.5	51	175	175	175	175	175	23	5500	-
5	38	195	1.5	39.02	IE4	BG30-../S4E08MA4	3.8	12.5	25.5	38	46	195	195	195	195	195	23	5800	-
5	35	210	1.4	42.46	IE4	BG30-../S4E08MA4	3.5	11.5	23.5	35	42	210	210	210	210	210	23	5900	-
5	31.5	235	1.3	47.11	IE4	BG30-../S4E08MA4	3.1	10.5	21	31.5	38	235	235	235	235	235	23	6000	-
5	28.5	260	1.1	52.44	IE4	BG30-../S4E08MA4	2.8	9.5	19	28.5	34	260	260	260	260	260	23	6000	-
5	25.5	290	1	58.18	IE4	BG30-../S4E08MA4	2.5	8.5	17	25.5	30.5	290	290	290	290	290	23	6000	-
5	24.5	300	0.99	60.79	IE4	BG30-../S4E08MA4	2.4	8.2	16	24.5	29.5	300	300	300	300	300	23	6000	-
5	22	335	0.89	67.44	IE4	BG30-../S4E08MA4	2.2	7.4	14.5	22	26.5	335	335	335	335	335	23		

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

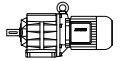
**$M_N = 5 \text{ Nm}$  ( $P_N = 0.78 \text{ kW}$ )**



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Typ	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
5	43.5	171	2.5	34.2	IE4	BG40-../S4E08MA4	4.3	14.5	29	43.5	52	171	171	171	171	38	7000	-	
5	39.5	189	2.2	37.96	IE4	BG40-../S4E08MA4	3.9	13	26	39.5	47	189	189	189	189	38	7000	-	
5	37	200	2.1	40.19	IE4	BG40-../S4E08MA4	3.7	12	24.5	37	44.5	200	200	200	200	38	7000	-	
5	33.5	220	1.9	44.62	IE4	BG40-../S4E08MA4	3.3	11	22	33.5	40	220	220	220	220	38	7000	-	
5	31	240	1.8	48.36	IE4	BG40-../S4E08MA4	3.1	10	20.5	31	37	240	240	240	240	38	7000	-	
5	27.5	265	1.6	53.69	IE4	BG40-../S4E08MA4	2.7	9.3	18.5	27.5	33.5	265	265	265	265	38	7000	-	
5	25	295	1.4	59.64	IE4	BG40-../S4E08MA4	2.5	8.3	16.5	25	30	295	295	295	295	38	7000	-	
5	22.5	330	1.3	66.2	IE4	BG40-../S4E08MA4	2.2	7.5	15	22.5	27	330	330	330	330	38	7000	-	
5	22	335	1.3	67.74	IE4	BG40Z-../S4E08MA4	2.2	7.3	14.5	22	26.5	335	335	335	335	42	7000	-	
5	19.5	375	1.1	75.19	IE4	BG40Z-../S4E08MA4	1.9	6.6	13	19.5	23.5	375	375	375	375	42	7000	-	
5	18	410	1	82	IE4	BG40Z-../S4E08MA4	1.8	6	12	18	21.5	410	410	410	410	42	7000	-	
5	16	455	0.93	91.02	IE4	BG40Z-../S4E08MA4	1.6	5.4	10.5	16	19.5	455	455	455	455	42	7000	-	
5	15	480	0.88	96.86	IE4	BG40Z-../S4E08MA4	1.5	5.1	10	15	18.5	480	480	480	480	42	7000	-	
5	35.5	210	3	42	IE4	BG50-../S4E08MA4	3.5	11.5	23.5	35.5	42.5	210	210	210	210	46	10000	-	
5	31.5	235	2.7	47.02	IE4	BG50-../S4E08MA4	3.1	10.5	21	31.5	38	235	235	235	235	46	10000	-	
5	28.5	260	2.4	52.12	IE4	BG50-../S4E08MA4	2.8	9.5	19	28.5	34.5	260	260	260	260	46	10000	-	
5	25	295	2.1	59.42	IE4	BG50-../S4E08MA4	2.5	8.4	16.5	25	30	295	295	295	295	46	10000	-	
5	22.5	325	1.9	65.86	IE4	BG50-../S4E08MA4	2.2	7.5	15	22.5	27	325	325	325	325	46	10000	-	
5	20.5	355	1.8	71.97	IE4	BG50Z-../S4E08MA4	2	6.9	13.5	20.5	25	355	355	355	355	51	10000	-	
5	18.5	395	1.6	79.78	IE4	BG50Z-../S4E08MA4	1.8	6.2	12.5	18.5	22.5	395	395	395	395	51	10000	-	
5	15.5	475	1.3	95.58	IE4	BG50Z-../S4E08MA4	1.5	5.2	10	15.5	18.5	475	475	475	475	51	10000	-	
5	14	530	1.2	106	IE4	BG50Z-../S4E08MA4	1.4	4.7	9.4	14	16.5	530	530	530	530	51	10000	-	
5	11.5	640	0.98	128.9	IE4	BG50Z-../S4E08MA4	1.1	3.8	7.7	11.5	13.5	640	640	640	640	51	10000	-	
5	10	710	0.88	142.9	IE4	BG50Z-../S4E08MA4	1	3.4	6.9	10	12.5	710	710	710	710	51	10000	-	
5	16	455	2.6	91.09	IE4	BG60Z-../S4E08MA4	1.6	5.4	10.5	16	19.5	455	455	455	455	96	16000	-	
5	14.5	500	2.4	101	IE4	BG60Z-../S4E08MA4	1.4	4.9	9.9	14.5	17.5	500	500	500	500	96	16000	-	
5	12.5	590	2	119.2	IE4	BG60Z-../S4E08MA4	1.2	4.1	8.3	12.5	15	590	590	590	590	96	16000	-	
5	11	660	1.8	132.1	IE4	BG60Z-../S4E08MA4	1.1	3.7	7.5	11	13.5	660	660	660	660	96	16000	-	
5	9.4	790	1.5	158	IE4	BG60Z-../S4E08MA4	0.9	3.1	6.3	9.4	11	790	790	790	790	96	16000	-	
5	8.5	870	1.4	175.1	IE4	BG60Z-../S4E08MA4	0.85	2.8	5.7	8.5	10	870	870	870	870	96	16000	-	
5	7.3	1020	1.2	204.6	IE4	BG60Z-../S4E08MA4	0.7	2.4	4.8	7.3	8.7	1020	1020	1020	1020	96	16000	-	
5	6.6	1130	1.1	226.7	IE4	BG60Z-../S4E08MA4	0.65	2.2	4.4	6.6	7.9	1130	1130	1130	1130	96	16000	-	
5	6	1230	0.97	247.7	IE4	BG60Z-../S4E08MA4	0.6	2	4	6	7.2	1230	1230	1230	1230	96	16000	-	
5	5.4	1370	0.87	274.5	IE4	BG60Z-../S4E08MA4	0.5	1.8	3.6	5.4	6.5	1370	1370	1370	1370	96	16000	-	
5	5.4	1380	0.94	276.2	IE4	BG60G20-../S4E08MA4	0.5	1.8	3.6	5.4	6.5	1380	1380	1380	1380	103	16000	-	
5	4.9	1530	0.85	306.1	IE4	BG60G20-../S4E08MA4	0.49	1.6	3.2	4.9	5.8	1530	1530	1530	1530	103	16000	-	
5	9.1	810	2.8	163.8	IE4	BG70Z-../S4E08MA4	0.9	3	6.1	9.1	10.5	810	810	810	810	136	20000	-	
5	7.7	970	2.4	194.4	IE4	BG70Z-../S4E08MA4	0.75	2.5	5.1	7.7	9.2	970	970	970	970	136	20000	-	
5	7.1	1050	2.2	210.5	IE4	BG70Z-../S4E08MA4	0.7	2.3	4.7	7.1	8.5	1050	1050	1050	1050	136	20000	-	
5	6	1240	1.8	249.8	IE4	BG70Z-../S4E08MA4	0.6	2	4	6	7.2	1240	1240	1240	1240	136	20000	-	
5	5.8	1270	2	255.5	IE4	BG70G20-../S4E08MA4	0.55	1.9	3.9	5.8	7	1270	1270	1270	1270	133	20000	-	
5	5.4	1380	1.8	276.7	IE4	BG70G20-../S4E08MA4	0.5	1.8	3.6	5.4	6.5	1380	1380	1380	1380	133	20000	-	
5	4.5	1640	1.5	328.4	IE4	BG70G20-../S4E08MA4	0.45	1.5	3	4.5	5.4	1640	1640	1640	1640	133	20000	-	
5	3.8	1930	1.3	387.6	IE4	BG70G20-../S4E08MA4	0.38	1.2	2.5	3.8	4.6	1930	1930	1930	1930	133	20000	-	
5	3.5	2050	1.2	417.8	IE4	BG70G20-../S4E08MA4	0.35	1.1	2.3	3.5	4.3	2050	2050	2050	2050	133	20000	-	
5	3	2450	1	495.9	IE4	BG70G20-../S4E08MA4	0.3	1	2	3	3.6	2450	2450	2450	2450	133	20000	-	
5	2.5	2850	0.87	577.3	IE4	BG70G20-../S4E08MA4	0.25	0.85	1.7	2.5	3.1	2850	2850	2850	2850	133	20000	-	
5	4.7	1570	2.9	314	IE4	BG80G40-../S4E08MA4	0.47	1.5	3.1	4.7	5.7	1570	1570	1570	1570	215	26000	-	
5	4.1	1800	2.6	360	IE4	BG80G40-../S4E08MA4	0.41	1.3	2.7	4.1	5	1800	1800	1800	1800	215	26000	-	
5	3.7	1990	2.3	399.8	IE4	BG80G40-../S4E08MA4	0.37	1.2	2.5	3.7	4.5	1990	1990	1990	1990	215	26000	-	
5	3.4	2150	2.1	436.2	IE4	BG80G40-../S4E08MA4	0.34	1.1	2.2	3.4	4.1	2150	2150	2150	2150	215	26000	-	
5	3	2400	1.9	484.3	IE4	BG80G40-../S4E08MA4	0.3	1	2	3	3.7	2400	2400	2400	2400	215	26000	-	
5	2.6	2850	1.6	572	IE4	BG80G40-../S4E08MA4	0.26	0.85	1.7	2.6	3.1	2850	2850	2850	2850	215	26000	-	
5	2.2	3250	1.4	657.8	IE4	BG80G40-../S4E08MA4	0.22	0.75	1.5	2.2	2.7	3250	3250	3250	3250	215	26000	-	
5	2	3650	1.3	730.3	IE4	BG80G40-../S4E08MA4	0.2	0.65	1.3	2	2.4	3650	3650	3650	3650	215	26000	-	
5	1.8	4050	1.1	817.4	IE4	BG80G40-../S4E08MA4	0.18	0.6	1.2	1.8	2.2	4050	4050	4050	4050	215	26000	-	
5	1.6	4500	1	907.6	IE4	BG80G40-../S4E08MA4	0.16	0.55	1.1	1.6	1.9	4500	4500	4500	4500	215	26000	-	
5	1.4	5200	0.88	1042	IE4	BG80G40-../S4E08MA4	0.14	0.47	0.95	1.4	1.7	5200	5200	5200	5200	215	26000	-	
5	2.3	3200	2.9	644.7	IE4	BG90G50-../S4E08MA4	0.23	0.75	1.5	2.3	2.7	3200	3200	3200	3200	324	65000	-	
5	2.1	3550	2.6	714.2	IE4	BG90G50-../S4E08MA4	0.21	0.7	1.4	2.1	2.5	3550	3550	3550	3550	324	65000	-	
5	1.6	4400	2.1	883.7	IE4	BG90G50-../S4E08MA4	0.16	0.55	1.1	1.6	2	4400	4400	4400	4400	324	65000	-	
5	1.2	5800	1.6	1174	IE4	BG90G50-../S4E08MA4	0.12	0.42	0.85	1.2	1.5	5800	5800	5800	5800	324	65000	-	
5	1.1	6500	1.4	1301	IE4	BG90G50-../S4E08MA4	0.11	0.38	0.75	1.1	1.3	6500	6500	6500	6500	324	65000	-	
5	0.9	7900	1.2	1583	IE4	BG90G50-../S4E08MA4	0.09	0.31	0.6	0.9	1.1	7900	7900	7900	7900	324	65000	-	
5	0.85	8700	1	1756	IE4	BG90G50-../S4E08MA4	0.09	0.28	0.55	0.85	1	8700	8700	8700	8700	324	65000	-	
5	0.7	10100	0.91	2026	IE4	BG90G50-../S4E08MA4	0.07	0.24	0.49	0.7	0.85	10100	10100	10100	10100	324	65000	-	
5	1	7200	2.6	1444	IE4	BG100G50-../S4E08MA4	0.1	0.34	0.65	1	1.2	7200	7200	7200	7200	512	90000	-	
5	0.85	8300	2.2	1678	IE4	BG100G50-../S4E08MA4	0.09	0.29	0.55	0.85	1	8300	8300	8300	8300	512	90000	-	
5	0.8	9300	2	1867	IE4	BG100G50-../S4E08MA4	0.08	0.26	0.5	0.8	0.95	9300	9300	9300	9300	512	90000	-	
5	0.65	10700	1.7	2154	IE4	BG100G50-../S4E08MA4	0.07	0.23	0.46	0.65									

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

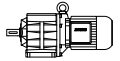
 **$M_N = 7 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
7	530	19.7	0.91	2.82	IE3	BG06-../SPE08LA4	53	177	350	530	630	18.3	19.7	19.7	19.7	19.7	18	470	-
7	435	23.5	2.6	3.42	IE3	BG10-../SPE08LA4	43.5	146	290	435	520	22	23.5	23.5	23.5	23.5	18	630	880
7	340	30.5	2.2	4.36	IE3	BG10-../SPE08LA4	34	114	225	340	410	28	30.5	30.5	30.5	30.5	18	650	910
7	280	37	2	5.34	IE3	BG10-../SPE08LA4	28	93	187	280	335	34.5	37	37	37	37	18	620	910
7	220	47	1.7	6.78	IE3	BG10-../SPE08LA4	22	73	147	220	265	44	47	47	47	47	18	660	920
7	215	48	1.8	6.89	IE3	BG10-../SPE08LA4	21.5	72	145	215	260	44.5	48	48	48	48	18	850	1200
7	196	53	1.7	7.63	IE3	BG10-../SPE08LA4	19.5	65	131	196	235	49.5	53	53	53	53	18	900	1250
7	185	56	1.6	8.07	IE3	BG10-../SPE08LA4	18.5	61	123	185	220	52	56	56	56	56	18	660	920
7	160	65	1.5	9.33	IE3	BG10-../SPE08LA4	16	53	107	160	192	60	65	65	65	65	18	950	1330
7	145	72	1.4	10.34	IE3	BG10-../SPE08LA4	14.5	48	96	145	174	67	72	72	72	72	18	1000	1400
7	125	83	1.3	11.92	IE3	BG10-../SPE08LA4	12.5	41.5	83	125	151	77	83	83	83	83	18	1030	1440
7	113	92	1.2	13.21	IE3	BG10-../SPE08LA4	11	37.5	75	113	136	85	92	92	92	92	18	1070	1490
7	102	102	1.1	14.58	IE3	BG10-../SPE08LA4	10	34	68	102	123	94	102	102	102	102	18	1100	1540
7	92	113	1	16.15	IE3	BG10-../SPE08LA4	9.2	30.5	61	92	111	104	113	113	113	113	18	1140	1590
7	81	129	0.93	18.51	IE3	BG10-../SPE08LA4	8.1	27	54	81	97	120	129	129	129	129	18	1210	1690
7	73	143	0.84	20.51	IE3	BG10-../SPE08LA4	7.3	24	48.5	73	87	133	143	143	143	143	18	1290	1800
7	270	38	3	5.49	IE3	BG20-../SPE08LA4	27	91	182	270	325	35.5	38	38	38	38	20	2100	-
7	245	42	2.9	6.06	IE3	BG20-../SPE08LA4	24.5	82	165	245	295	39	42	42	42	42	20	2250	-
7	230	45	2.7	6.48	IE3	BG20-../SPE08LA4	23	77	154	230	275	42	45	45	45	45	20	2250	-
7	220	47	2.8	6.73	IE3	BG20-../SPE08LA4	22	74	148	220	265	43.5	47	47	47	47	20	2350	2100
7	187	56	2.4	8.02	IE3	BG20-../SPE08LA4	18.5	62	124	187	220	52	56	56	56	56	20	2500	-
7	180	58	2.1	8.29	IE3	BG20-../SPE08LA4	18	60	120	180	215	53	58	58	58	58	20	2250	-
7	168	62	2.3	8.91	IE3	BG20-../SPE08LA4	16.5	56	112	168	200	57	62	62	62	62	20	2600	-
7	155	67	1.8	9.65	IE3	BG20-../SPE08LA4	15.5	51	103	155	186	62	67	67	67	67	20	2250	-
7	142	73	2.1	10.54	IE3	BG20-../SPE08LA4	14	47	94	142	170	68	73	73	73	73	20	2700	-
7	128	81	1.9	11.71	IE3	BG20-../SPE08LA4	12.5	42.5	85	128	153	76	81	81	81	81	20	2800	-
7	113	92	1.8	13.21	IE3	BG20-../SPE08LA4	11	37.5	75	113	136	85	92	92	92	92	20	2900	-
7	102	102	1.7	14.67	IE3	BG20-../SPE08LA4	10	34	68	102	122	95	102	102	102	102	20	3050	-
7	96	109	1.6	15.58	IE3	BG20-../SPE08LA4	9.6	32	64	96	115	101	109	109	109	109	20	3100	-
7	86	121	1.5	17.31	IE3	BG20-../SPE08LA4	8.6	28.5	57	86	103	112	121	121	121	121	20	3200	-
7	75	139	1.4	19.95	IE3	BG20-../SPE08LA4	7.5	25	50	75	90	129	139	139	139	139	20	3350	-
7	67	155	1.3	22.16	IE3	BG20-../SPE08LA4	6.7	22.5	45	67	81	144	155	155	155	155	20	3500	-
7	64	162	1.2	23.22	IE3	BG20-../SPE08LA4	6.4	21.5	43	64	77	150	162	162	162	162	20	3550	-
7	58	180	1.1	25.79	IE3	BG20-../SPE08LA4	5.8	19	38.5	58	69	167	180	180	180	180	20	3700	-
7	53	194	1	27.85	IE3	BG20-../SPE08LA4	5.3	17.5	35.5	53	64	181	194	194	194	194	20	3800	-
7	48	215	0.92	30.94	IE3	BG20-../SPE08LA4	4.8	16	32	48	58	200	215	215	215	215	20	4000	-
7	45	230	0.86	33.33	IE3	BG20-../SPE08LA4	4.5	15	30	45	54	215	230	230	230	230	20	4100	-
7	108	96	3	13.77	IE3	BG30-../SPE08LA4	10.5	36	72	108	130	89	96	96	96	96	25	3150	-
7	98	106	2.8	15.27	IE3	BG30-../SPE08LA4	9.8	32.5	65	98	117	99	106	106	106	106	25	3450	-
7	87	119	2.5	17.06	IE3	BG30-../SPE08LA4	8.7	29	58	87	105	110	119	119	119	119	25	3700	-
7	79	132	2.3	18.93	IE3	BG30-../SPE08LA4	7.9	26	52	79	95	123	132	132	132	132	25	4100	-
7	75	139	2.1	19.99	IE3	BG30-../SPE08LA4	7.5	25	50	75	90	129	139	139	139	139	25	4200	-
7	67	155	1.9	22.18	IE3	BG30-../SPE08LA4	6.7	22.5	45	67	81	144	155	155	155	155	25	4600	-
7	58	178	1.7	25.45	IE3	BG30-../SPE08LA4	5.8	19.5	39	58	70	165	178	178	178	178	25	4850	-
7	53	197	1.5	28.24	IE3	BG30-../SPE08LA4	5.3	17.5	35	53	63	183	197	197	197	197	25	5100	-
7	50	205	1.4	29.83	IE3	BG30-../SPE08LA4	5	16.5	33.5	50	60	193	205	205	205	205	25	5200	-
7	45	230	1.3	33.09	IE3	BG30-../SPE08LA4	4.5	15	30	45	54	215	230	230	230	230	25	5400	-
7	42.5	245	1.2	35.17	IE3	BG30-../SPE08LA4	4.2	14	28	42.5	51	225	245	245	245	245	25	5500	-
7	38	270	1.1	39.02	IE3	BG30-../SPE08LA4	3.8	12.5	25.5	38	46	250	270	270	270	270	25	5800	-
7	35	295	1	42.46	IE3	BG30-../SPE08LA4	3.5	11.5	23.5	35	42	275	295	295	295	295	25	5900	-
7	31.5	325	0.91	47.11	IE3	BG30-../SPE08LA4	3.1	10.5	21	31.5	38	305	325	325	325	325	25	6000	-
7	28.5	365	0.82	52.44	IE3	BG30-../SPE08LA4	2.8	9.5	19	28.5	34	340	365	365	365	365	25	6000	-
7	68	154	2.8	22.02	IE3	BG40-../SPE08LA4	6.8	22.5	45	68	81	143	154	154	154	154	40	6000	-
7	64	164	2.6	23.43	IE3	BG40-../SPE08LA4	6.4	21	42.5	64	76	152	164	164	164	164	40	6200	-
7	57	182	2.3	26.01	IE3	BG40-../SPE08LA4	5.7	19	38	57	69	169	182	182	182	182	40	6500	-
7	51	205	2.1	29.34	IE3	BG40-../SPE08LA4	5.1	17	34	51	61	190	205	205	205	205	40	6800	-
7	46	225	1.9	32.57	IE3	BG40-../SPE08LA4	4.6	15	30.5	46	55	210	225	225	225	225	40	7000	-
7	43.5	235	1.8	34.2	IE3	BG40-../SPE08LA4	4.3	14.5	29	43.5	52	220	235	235	235	235	40	7000	-
7	39.5	265	1.6	37.96	IE3	BG40-../SPE08LA4	3.9	13	26	39.5	47	245	265	265	265	265	40	7000	-
7	37	280	1.5	40.19	IE3	BG40-../SPE08LA4	3.7	12	24.5	37	44.5	260	280	280	280	280	40	7000	-
7	33.5	310	1.4	44.62	IE3	BG40-../SPE08LA4	3.3	11	22	33.5	40	290	310	310	310	310	40	7000	-
7	31	335	1.3	48.36	IE3	BG40-../SPE08LA4	3.1	10	20.5	31	37	310	335	335	335	335	40	7000	-
7	27.5	375	1.1	53.69	IE3	BG40-../SPE08LA4	2.7	9.3	18.5	27.5	33.5	345	375	375	375	375	40	7000	-
7	25	415	1	59.64	IE3	BG40-../SPE08LA4	2.5	8.3	16.5	25	30	385	415	415	415	415	40	7000	-
7	22.5	460	0.92	66.2	IE3	BG40-../SPE08LA4	2.2	7.5	15	22.5	27	430	460	460	460	460	40	7000	-
7	22	470	0.9	67.74	IE3	BG40Z-../SPE08LA4	2.2	7.3	14.5	22	26.5	440	470	470	470	470	43	7000	-
7	19.5	520	0.81	75.19	IE3	BG40Z-../SPE08LA4	1.9	6.6	13	19.5	23.5	485	520	520	520	520	43	7000	-
7	50	205	3	29.62	IE3	BG50-../SPE08LA4	5	16.5	33.5	50	60	192	205	205	205	205	48	8000	-
7	45.5	225	2.7	32.84	IE3	BG50-../SPE08LA4	4.5	15	30	45.5	54	210	225	225	225	225	48	8700	-
7	39.5	265	2.4	37.89	IE3	BG50-../SPE08LA4	3.9	13	26	39.5	47.5	245	265	265	265	265	48	10000	-
7	35.5	290	2.1	42	IE3	BG50-../SPE08LA4													

# BG-series helical-geared motors

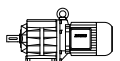
## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

**$M_N = 7 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
7	21.5	475	2.5	68.32	IE3	BG60Z-../SPE08LA4	2.1	7.3	14.5	21.5	26	440	475	475	475	475	97	16000	-
7	19.5	520	2.3	75.71	IE3	BG60Z-../SPE08LA4	1.9	6.6	13	19.5	23.5	490	520	520	520	520	97	16000	-
7	16	630	1.9	91.09	IE3	BG60Z-../SPE08LA4	1.6	5.4	10.5	16	19.5	590	630	630	630	630	97	16000	-
7	14.5	700	1.7	101	IE3	BG60Z-../SPE08LA4	1.4	4.9	9.9	14.5	17.5	650	700	700	700	700	97	16000	-
7	12.5	830	1.4	119.2	IE3	BG60Z-../SPE08LA4	1.2	4.1	8.3	12.5	15	770	830	830	830	830	97	16000	-
7	11	920	1.3	132.1	IE3	BG60Z-../SPE08LA4	1.1	3.7	7.5	11	13.5	850	920	920	920	920	97	16000	-
7	9.4	1100	1.1	158	IE3	BG60Z-../SPE08LA4	0.9	3.1	6.3	9.4	11	1020	1100	1100	1100	1100	97	16000	-
7	8.5	1220	0.98	175.1	IE3	BG60Z-../SPE08LA4	0.85	2.8	5.7	8.5	10	1130	1220	1220	1220	1220	97	16000	-
7	7.3	1430	0.84	204.6	IE3	BG60Z-../SPE08LA4	0.7	2.4	4.8	7.3	8.7	1320	1430	1430	1430	1430	97	16000	-
7	13	790	2.9	113.6	IE3	BG70Z-../SPE08LA4	1.3	4.4	8.8	13	15.5	730	790	790	790	790	137	20000	-
7	12	860	2.6	124	IE3	BG70Z-../SPE08LA4	1.2	4	8	12	14.5	800	860	860	860	860	137	20000	-
7	10	1030	2.2	147.2	IE3	BG70Z-../SPE08LA4	1	3.3	6.7	10	12	950	1030	1030	1030	1030	137	20000	-
7	9.1	1140	2	163.8	IE3	BG70Z-../SPE08LA4	0.9	3	6.1	9.1	10.5	1060	1140	1140	1140	1140	137	20000	-
7	7.7	1360	1.7	194.4	IE3	BG70Z-../SPE08LA4	0.75	2.5	5.1	7.7	9.2	1260	1360	1360	1360	1360	137	20000	-
7	7.1	1470	1.6	210.5	IE3	BG70Z-../SPE08LA4	0.7	2.3	4.7	7.1	8.5	1360	1470	1470	1470	1470	137	20000	-
7	6	1740	1.3	249.8	IE3	BG70Z-../SPE08LA4	0.6	2	4	6	7.2	1620	1740	1740	1740	1740	137	20000	-
7	5.8	1780	1.4	255.5	IE3	BG70G20-../SPE08LA4	0.55	1.9	3.9	5.8	7	1660	1780	1780	1780	1780	135	20000	-
7	5.4	1930	1.3	276.7	IE3	BG70G20-../SPE08LA4	0.5	1.8	3.6	5.4	6.5	1790	1930	1930	1930	1930	135	20000	-
7	4.5	2250	1.1	328.4	IE3	BG70G20-../SPE08LA4	0.45	1.5	3	4.5	5.4	2100	2250	2250	2250	2250	135	20000	-
7	3.8	2700	0.92	387.6	IE3	BG70G20-../SPE08LA4	0.38	1.2	2.5	3.8	4.6	2500	2700	2700	2700	2700	135	20000	-
7	3.5	2900	0.85	417.8	IE3	BG70G20-../SPE08LA4	0.35	1.1	2.3	3.5	4.3	2700	2900	2900	2900	2900	135	20000	-
7	6.6	1590	2.9	227.2	IE3	BG80G40-../SPE08LA4	0.65	2.2	4.4	6.6	7.9	1470	1590	1590	1590	1590	216	26000	-
7	5.9	1760	2.6	252.3	IE3	BG80G40-../SPE08LA4	0.55	1.9	3.9	5.9	7.1	1630	1760	1760	1760	1760	216	26000	-
7	5.3	1970	2.3	282.8	IE3	BG80G40-../SPE08LA4	0.5	1.7	3.5	5.3	6.3	1830	1970	1970	1970	1970	216	26000	-
7	4.7	2150	2.1	314	IE3	BG80G40-../SPE08LA4	0.47	1.5	3.1	4.7	5.7	2000	2150	2150	2150	2150	216	26000	-
7	4.1	2500	1.8	360	IE3	BG80G40-../SPE08LA4	0.41	1.3	2.7	4.1	5	2300	2500	2500	2500	2500	216	26000	-
7	3.7	2750	1.6	399.8	IE3	BG80G40-../SPE08LA4	0.37	1.2	2.5	3.7	4.5	2550	2750	2750	2750	2750	216	26000	-
7	3.4	3050	1.5	436.2	IE3	BG80G40-../SPE08LA4	0.34	1.1	2.2	3.4	4.1	2800	3050	3050	3050	3050	216	26000	-
7	3	3350	1.4	484.3	IE3	BG80G40-../SPE08LA4	0.3	1	2	3	3.7	3100	3350	3350	3350	3350	216	26000	-
7	2.6	4000	1.1	572	IE3	BG80G40-../SPE08LA4	0.26	0.85	1.7	2.6	3.1	3700	4000	4000	4000	4000	216	26000	-
7	2.2	4600	1	657.8	IE3	BG80G40-../SPE08LA4	0.22	0.75	1.5	2.2	2.7	4250	4600	4600	4600	4600	216	26000	-
7	2	5100	0.9	730.3	IE3	BG80G40-../SPE08LA4	0.2	0.65	1.3	2	2.4	4700	5100	5100	5100	5100	216	26000	-
7	1.8	5700	0.8	817.4	IE3	BG80G40-../SPE08LA4	0.18	0.6	1.2	1.8	2.2	5300	5700	5700	5700	5700	216	26000	-
7	3.4	3050	3	435.8	IE3	BG90G50-../SPE08LA4	0.34	1.1	2.2	3.4	4.1	2800	3050	3050	3050	3050	326	65000	-
7	2.9	3500	2.6	504.7	IE3	BG90G50-../SPE08LA4	0.29	0.95	1.9	2.9	3.5	3250	3500	3500	3500	3500	326	65000	-
7	2.5	4100	2.2	588.8	IE3	BG90G50-../SPE08LA4	0.25	0.8	1.6	2.5	3	3800	4100	4100	4100	4100	326	65000	-
7	2.3	4500	2	644.7	IE3	BG90G50-../SPE08LA4	0.23	0.75	1.5	2.3	2.7	4150	4500	4500	4500	4500	326	65000	-
7	2.1	4950	1.8	714.2	IE3	BG90G50-../SPE08LA4	0.21	0.7	1.4	2.1	2.5	4600	4950	4950	4950	4950	326	65000	-
7	1.6	6100	1.5	883.7	IE3	BG90G50-../SPE08LA4	0.16	0.55	1.1	1.6	2	5700	6100	6100	6100	6100	326	65000	-
7	1.2	8200	1.1	1174	IE3	BG90G50-../SPE08LA4	0.12	0.42	0.85	1.2	1.5	7600	8200	8200	8200	8200	326	65000	-
7	1.1	9100	1	1301	IE3	BG90G50-../SPE08LA4	0.11	0.38	0.75	1.1	1.3	8400	9100	9100	9100	9100	326	65000	-
7	0.9	11000	0.83	1583	IE3	BG90G50-../SPE08LA4	0.09	0.31	0.6	0.9	1.1	10200	11000	11000	11000	11000	326	65000	-
7	1.5	6800	2.7	976.1	IE3	BG100G50-../SPE08LA4	0.15	0.5	1	1.5	1.8	6300	6800	6800	6800	6800	513	90000	-
7	1.4	7300	2.5	1043	IE3	BG100G50-../SPE08LA4	0.14	0.47	0.95	1.4	1.7	6700	7300	7300	7300	7300	513	90000	-
7	1.2	8400	2.2	1204	IE3	BG100G50-../SPE08LA4	0.12	0.41	0.8	1.2	1.4	7800	8400	8400	8400	8400	513	90000	-
7	1	10100	1.8	1444	IE3	BG100G50-../SPE08LA4	0.1	0.34	0.65	1	1.2	9300	10100	10100	10100	10100	513	90000	-
7	0.85	11700	1.6	1678	IE3	BG100G50-../SPE08LA4	0.09	0.29	0.55	0.85	1	10900	11700	11700	11700	11700	513	90000	-
7	0.8	13000	1.4	1867	IE3	BG100G50-../SPE08LA4	0.08	0.26	0.5	0.8	0.95	12100	13000	13000	13000	13000	513	90000	-
7	0.65	15000	1.2	2154	IE3	BG100G50-../SPE08LA4	0.07	0.23	0.46	0.65	0.8	14000	15000	15000	15000	15000	513	90000	-
7	0.55	18500	1	2656	IE3	BG100G50-../SPE08LA4	0.06	0.18	0.37	0.55	0.65	17200	18500	18500	18500	18500	513	90000	-
7	0.5	20500	0.9	2952	IE3	BG100G50-../SPE08LA4	0.05	0.16	0.33	0.5	0.6	19100	20500	20500	20500	20500	513	90000	-
7	0.45	23000	0.8	3286	IE3	BG100G50-../SPE08LA4	0.05	0.15	0.3	0.45	0.5	21000	23000	23000	23000	23000	513	90000	-

**$M_N = 10 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

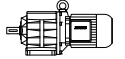


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Typ	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	590	25	2.2	2.52	IE1	BG10-../SSE08LA4	59	198	395	590	710	16.3	20	25	25	25	18	570	790
10	590	25	2.2	2.52	IE4	BG10-../S4E09SA4	59	198	395	590	710	21	25	25	25	25	22	570	790
10	435	34	1.8	3.42	IE1	BG10-../SSE08LA4	43.5	146	290	435	520	22	27	34	34	34	18	630	880
10	435	34	1.8	3.42	IE4	BG10-../S4E09SA4	43.5	146	290	435	520	29	34	34	34	34	22	630	880
10	340	43.5	1.6	4.36	IE4	BG10-../S4E09SA4	34	114	225	340	410	37	43.5	43.5	43.5	43.5	22	650	910
10	340	43.5	1.6	4.36	IE1	BG10-../SSE08LA4	34	114	225	340	410	28	34.5	43.5	43.5	43.5	18	650	910
10	280	53	1.4	5.34	IE4	BG10-../S4E09SA4	28	93	187	280	335	45	53	53	53	53	22	620	910
10	280	53	1.4	5.34	IE1	BG10-../SSE08LA4	28	93	187	280	335	34.5	42.5	53	53	53	18	620	910
10	220	67	1.2	6.78	IE4	BG10-../S4E09SA4	22	73	147	220	265	57	67	67	67	67	22	660	920
10	220	67	1.2	6.78	IE1	BG10-../SSE08LA4	22	73	147	220	265	44	54	67	67	67	18	660	920
10	215	68	1.3	6.89	IE4	BG10-../S4E09SA4	21.5	72</											



# BG-series helical-geared motors

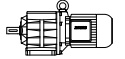
## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 10 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]				Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>	
							at engine speed n <sub>1</sub> [1/min]				at engine speed n <sub>1</sub> [1/min]								
							150	500	1000	1500	1800	150	500	1000	1500				1800
10	145	103	0.96	10.34	IE1	BG10-../SSE08LA4	14.5	48	96	145	174	67	82	103	103	103	18	1000	1400
10	125	119	0.88	11.92	IE1	BG10-../SSE08LA4	12.5	41.5	83	125	151	77	95	119	119	119	18	1030	1440
10	125	119	0.88	11.92	IE4	BG10-../S4E09SA4	12.5	41.5	83	125	151	101	119	119	119	119	22	1030	1440
10	113	132	0.83	13.21	IE1	BG10-../SSE08LA4	11	37.5	75	113	136	85	105	132	132	132	18	1070	1490
10	113	132	0.83	13.21	IE4	BG10-../S4E09SA4	11	37.5	75	113	136	112	132	132	132	132	22	1070	1490
10	450	33	2.8	3.33	IE4	BG20-../S4E09SA4	45	150	300	450	540	28	33	33	33	33	24	1830	-
10	450	33	2.8	3.33	IE1	BG20-../SSE08LA4	45	150	300	450	540	21.5	26.5	33	33	33	20	1830	-
10	340	43.5	2.4	4.38	IE1	BG20-../SSE08LA4	34	114	225	340	410	28	35	43.5	43.5	43.5	20	1990	-
10	340	43.5	2.4	4.38	IE4	BG20-../S4E09SA4	34	114	225	340	410	37	43.5	43.5	43.5	43.5	24	1990	-
10	270	54	2.1	5.49	IE1	BG20-../SSE08LA4	27	91	182	270	325	35.5	43.5	54	54	54	20	2100	-
10	270	54	2.1	5.49	IE4	BG20-../S4E09SA4	27	91	182	270	325	46.5	54	54	54	54	24	2100	-
10	245	60	2.1	6.06	IE4	BG20-../S4E09SA4	24.5	82	165	245	295	51	60	60	60	60	24	2250	-
10	245	60	2.1	6.06	IE1	BG20-../SSE08LA4	24.5	82	165	245	295	39	48	60	60	60	20	2250	-
10	230	64	1.9	6.48	IE4	BG20-../S4E09SA4	23	77	154	230	275	55	64	64	64	64	24	2250	-
10	230	64	1.9	6.48	IE1	BG20-../SSE08LA4	23	77	154	230	275	42	51	64	64	64	20	2250	-
10	220	67	1.9	6.73	IE4	BG20-../S4E09SA4	22	74	148	220	265	57	67	67	67	67	24	2350	2100
10	220	67	1.9	6.73	IE1	BG20-../SSE08LA4	22	74	148	220	265	43.5	53	67	67	67	20	2350	2100
10	187	80	1.7	8.02	IE4	BG20-../S4E09SA4	18.5	62	124	187	220	68	80	80	80	80	24	2500	-
10	187	80	1.7	8.02	IE1	BG20-../SSE08LA4	18.5	62	124	187	220	52	64	80	80	80	20	2500	-
10	180	82	1.5	8.29	IE1	BG20-../SSE08LA4	18	60	120	180	215	53	66	82	82	82	20	2250	-
10	180	82	1.5	8.29	IE4	BG20-../S4E09SA4	18	60	120	180	215	70	82	82	82	82	24	2250	-
10	168	89	1.6	8.91	IE1	BG20-../SSE08LA4	16.5	56	112	168	200	57	71	89	89	89	20	2600	-
10	168	89	1.6	8.91	IE4	BG20-../S4E09SA4	16.5	56	112	168	200	75	89	89	89	89	24	2600	-
10	155	96	1.3	9.65	IE4	BG20-../S4E09SA4	15.5	51	103	155	186	82	96	96	96	96	24	2250	-
10	155	96	1.3	9.65	IE1	BG20-../SSE08LA4	15.5	51	103	155	186	62	77	96	96	96	20	2250	-
10	142	105	1.5	10.54	IE1	BG20-../SSE08LA4	14	47	94	142	170	68	84	105	105	105	20	2700	-
10	142	105	1.5	10.54	IE4	BG20-../S4E09SA4	14	47	94	142	170	89	105	105	105	105	24	2700	-
10	128	117	1.3	11.71	IE1	BG20-../SSE08LA4	12.5	42.5	85	128	153	76	93	117	117	117	20	2800	-
10	128	117	1.3	11.71	IE4	BG20-../S4E09SA4	12.5	42.5	85	128	153	99	117	117	117	117	24	2800	-
10	113	132	1.3	13.21	IE4	BG20-../S4E09SA4	11	37.5	75	113	136	112	132	132	132	132	24	2900	-
10	113	132	1.3	13.21	IE1	BG20-../SSE08LA4	11	37.5	75	113	136	85	105	132	132	132	20	2900	-
10	102	146	1.2	14.67	IE1	BG20-../SSE08LA4	10	34	68	102	122	95	117	146	146	146	20	3050	-
10	102	146	1.2	14.67	IE4	BG20-../S4E09SA4	10	34	68	102	122	124	146	146	146	146	24	3050	-
10	96	155	1.1	15.58	IE4	BG20-../S4E09SA4	9.6	32	64	96	115	132	155	155	155	155	24	3100	-
10	96	155	1.1	15.58	IE1	BG20-../SSE08LA4	9.6	32	64	96	115	101	124	155	155	155	20	3100	-
10	86	173	1.1	17.31	IE4	BG20-../S4E09SA4	8.6	28.5	57	86	103	147	173	173	173	173	24	3200	-
10	86	173	1.1	17.31	IE1	BG20-../SSE08LA4	8.6	28.5	57	86	103	112	138	173	173	173	20	3200	-
10	75	199	0.98	19.95	IE4	BG20-../S4E09SA4	7.5	25	50	75	90	169	199	199	199	199	24	3350	-
10	75	199	0.98	19.95	IE1	BG20-../SSE08LA4	7.5	25	50	75	90	129	159	199	199	199	20	3350	-
10	67	220	0.9	22.16	IE1	BG20-../SSE08LA4	6.7	22.5	45	67	81	144	177	220	220	220	20	3500	-
10	67	220	0.9	22.16	IE4	BG20-../S4E09SA4	6.7	22.5	45	67	81	188	220	220	220	220	24	3500	-
10	64	230	0.86	23.22	IE4	BG20-../S4E09SA4	6.4	21.5	43	64	77	197	230	230	230	230	24	3550	-
10	64	230	0.86	23.22	IE1	BG20-../SSE08LA4	6.4	21.5	43	64	77	150	185	230	230	230	20	3550	-
10	189	79	2.7	7.91	IE4	BG30-../S4E09SA4	18.5	63	126	189	225	67	79	79	79	79	29	1760	-
10	189	79	2.7	7.91	IE1	BG30-../SSE08LA4	18.5	63	126	189	225	51	63	79	79	79	25	1760	-
10	174	86	2.8	8.6	IE4	BG30-../S4E09SA4	17	58	116	174	205	73	86	86	86	86	29	2800	-
10	174	86	2.8	8.6	IE1	BG30-../SSE08LA4	17	58	116	174	205	55	68	86	86	86	25	2800	-
10	157	95	2.6	9.55	IE1	BG30-../SSE08LA4	15.5	52	104	157	188	62	76	95	95	95	25	3000	-
10	157	95	2.6	9.55	IE4	BG30-../S4E09SA4	15.5	52	104	157	188	81	95	95	95	95	29	3000	-
10	140	106	2.5	10.65	IE4	BG30-../S4E09SA4	14	46.5	93	140	169	90	106	106	106	106	29	2950	-
10	140	106	2.5	10.65	IE1	BG30-../SSE08LA4	14	46.5	93	140	169	69	85	106	106	106	25	2950	-
10	126	118	2.3	11.82	IE4	BG30-../S4E09SA4	12.5	42	84	126	152	100	118	118	118	118	29	3200	-
10	126	118	2.3	11.82	IE1	BG30-../SSE08LA4	12.5	42	84	126	152	76	94	118	118	118	25	3200	-
10	108	137	2.1	13.77	IE1	BG30-../SSE08LA4	10.5	36	72	108	130	89	110	137	137	137	25	3150	-
10	108	137	2.1	13.77	IE4	BG30-../S4E09SA4	10.5	36	72	108	130	117	137	137	137	137	29	3150	-
10	98	152	2	15.27	IE4	BG30-../S4E09SA4	9.8	32.5	65	98	117	129	152	152	152	152	29	3450	-
10	98	152	2	15.27	IE1	BG30-../SSE08LA4	9.8	32.5	65	98	117	99	122	152	152	152	25	3450	-
10	87	170	1.8	17.06	IE4	BG30-../S4E09SA4	8.7	29	58	87	105	145	170	170	170	170	29	3700	-
10	87	170	1.8	17.06	IE1	BG30-../SSE08LA4	8.7	29	58	87	105	110	136	170	170	170	25	3700	-
10	79	189	1.6	18.93	IE4	BG30-../S4E09SA4	7.9	26	52	79	95	160	189	189	189	189	29	4100	-
10	79	189	1.6	18.93	IE1	BG30-../SSE08LA4	7.9	26	52	79	95	123	151	189	189	189	25	4100	-
10	75	199	1.5	19.99	IE1	BG30-../SSE08LA4	7.5	25	50	75	90	129	159	199	199	199	25	4200	-
10	75	199	1.5	19.99	IE4	BG30-../S4E09SA4	7.5	25	50	75	90	169	199	199	199	199	29	4200	-
10	67	220	1.4	22.18	IE4	BG30-../S4E09SA4	6.7	22.5	45	67	81	188	220	220	220	220	29	4600	-
10	67	220	1.4	22.18	IE1	BG30-../SSE08LA4	6.7	22.5	45	67	81	144	177	220	220	220	25	4600	-
10	58	250	1.2	25.45	IE1	BG30-../SSE08LA4	5.8	19.5	39	58	70	165	200	250	250	250	25	4850	-
10	58	250	1.2	25.45	IE4	BG30-../S4E09SA4	5.8	19.5	39	58	70	215	250	250	250	250	29	4850	-
10	53	280	1.1	28.24	IE1	BG30-../SSE08LA4	5.3	17.5	35	53	63	183	225	280	280	280	25	5100	-
10	53	280	1.1	28.24	IE4	BG30-../S4E09SA4	5.3	17.5	35	53	63	240	280	280	280	280	29	5100	-
10	50	295	1	29.83	IE1	BG30-../SSE08LA4	5	16.5	33.5	50	60	193	235	295	295	295	25	5200	-
10	50	295	1	29.83	IE4														

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

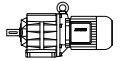
**M<sub>N</sub> = 10 Nm (P<sub>N</sub> = 1.55 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	250	1000	1500	1800	150	500	1000	1500	1800			
10	75	198	2.1	19.84	IE1	BG40-../SSE08LA4	7.5	50	50	75	90	128	158	198	198	198	40	5800	-
10	75	198	2.1	19.84	IE4	BG40-../S4E09SA4	7.5	25	50	75	90	168	198	198	198	198	43	5800	-
10	68	220	1.9	22.02	IE4	BG40-../S4E09SA4	6.8	22.5	45	68	81	187	220	220	220	220	43	6000	-
10	68	220	1.9	22.02	IE1	BG40-../SSE08LA4	6.8	22.5	45	68	81	143	176	220	220	220	40	6000	-
10	64	230	1.8	23.43	IE4	BG40-../S4E09SA4	6.4	21	42.5	64	76	199	230	230	230	230	43	6200	-
10	64	230	1.8	23.43	IE1	BG40-../SSE08LA4	6.4	21	42.5	64	76	152	187	230	230	230	40	6200	-
10	57	260	1.6	26.01	IE4	BG40-../S4E09SA4	5.7	19	38	57	69	220	260	260	260	260	43	6500	-
10	57	260	1.6	26.01	IE1	BG40-../SSE08LA4	5.7	19	38	57	69	169	205	260	260	260	40	6500	-
10	51	290	1.4	29.34	IE4	BG40-../S4E09SA4	5.1	17	34	51	61	245	290	290	290	290	43	6800	-
10	51	290	1.4	29.34	IE1	BG40-../SSE08LA4	5.1	17	34	51	61	190	230	290	290	290	40	6800	-
10	46	325	1.3	32.57	IE4	BG40-../S4E09SA4	4.6	15	30.5	46	55	275	325	325	325	325	43	7000	-
10	46	325	1.3	32.57	IE1	BG40-../SSE08LA4	4.6	15	30.5	46	55	210	260	325	325	325	40	7000	-
10	43.5	340	1.2	34.2	IE4	BG40-../S4E09SA4	4.3	14.5	29	43.5	52	290	340	340	340	340	43	7000	-
10	43.5	340	1.2	34.2	IE1	BG40-../SSE08LA4	4.3	14.5	29	43.5	52	220	270	340	340	340	40	7000	-
10	39.5	375	1.1	37.96	IE4	BG40-../S4E09SA4	3.9	13	26	39.5	47	320	375	375	375	375	43	7000	-
10	39.5	375	1.1	37.96	IE1	BG40-../SSE08LA4	3.9	13	26	39.5	47	245	300	375	375	375	40	7000	-
10	37	400	1.1	40.19	IE1	BG40-../SSE08LA4	3.7	12	24.5	37	44.5	260	320	400	400	400	40	7000	-
10	37	400	1.1	40.19	IE4	BG40-../S4E09SA4	3.7	12	24.5	37	44.5	340	400	400	400	400	43	7000	-
10	33.5	445	0.95	44.62	IE1	BG40-../SSE08LA4	3.3	11	22	33.5	40	290	355	445	445	445	40	7000	-
10	33.5	445	0.95	44.62	IE4	BG40-../S4E09SA4	3.3	11	22	33.5	40	375	445	445	445	445	43	7000	-
10	31	480	0.88	48.36	IE4	BG40-../S4E09SA4	3.1	10	20.5	31	37	410	480	480	480	480	43	7000	-
10	31	480	0.88	48.36	IE1	BG40-../SSE08LA4	3.1	10	20.5	31	37	310	385	480	480	480	40	7000	-
10	68	215	2.9	21.96	IE4	BG50-../S4E09SA4	6.8	22.5	45.5	68	81	186	215	215	215	215	51	8000	-
10	68	215	2.9	21.96	IE1	BG50-../SSE08LA4	6.8	22.5	45.5	68	81	142	175	215	215	215	48	8000	-
10	61	240	2.6	24.34	IE1	BG50-../SSE08LA4	6.1	20.5	41	61	73	158	194	240	240	240	48	8700	-
10	61	240	2.6	24.34	IE4	BG50-../S4E09SA4	6.1	20.5	41	61	73	205	240	240	240	240	51	8700	-
10	50	295	2.1	29.62	IE1	BG50-../SSE08LA4	5	16.5	33.5	50	60	192	235	295	295	295	48	8000	-
10	50	295	2.1	29.62	IE4	BG50-../S4E09SA4	5	16.5	33.5	50	60	250	295	295	295	295	51	8000	-
10	45.5	325	1.9	32.84	IE4	BG50-../S4E09SA4	4.5	15	30	45.5	54	275	325	325	325	325	51	8700	-
10	45.5	325	1.9	32.84	IE1	BG50-../SSE08LA4	4.5	15	30	45.5	54	210	260	325	325	325	48	8700	-
10	39.5	375	1.7	37.89	IE4	BG50-../S4E09SA4	3.9	13	26	39.5	47.5	320	375	375	375	375	51	10000	-
10	39.5	375	1.7	37.89	IE1	BG50-../SSE08LA4	3.9	13	26	39.5	47.5	245	300	375	375	375	48	10000	-
10	35.5	420	1.5	42	IE1	BG50-../SSE08LA4	3.5	11.5	23.5	35.5	42.5	270	335	420	420	420	48	10000	-
10	35.5	420	1.5	42	IE4	BG50-../S4E09SA4	3.5	11.5	23.5	35.5	42.5	355	420	420	420	420	51	10000	-
10	31.5	470	1.3	47.02	IE1	BG50-../SSE08LA4	3.1	10.5	21	31.5	38	305	375	470	470	470	48	10000	-
10	31.5	470	1.3	47.02	IE4	BG50-../S4E09SA4	3.1	10.5	21	31.5	38	395	470	470	470	470	51	10000	-
10	28.5	520	1.2	52.12	IE1	BG50-../SSE08LA4	2.8	9.5	19	28.5	34.5	335	415	520	520	520	48	10000	-
10	28.5	520	1.2	52.12	IE4	BG50-../S4E09SA4	2.8	9.5	19	28.5	34.5	440	520	520	520	520	51	10000	-
10	25	590	1.1	59.42	IE4	BG50-../S4E09SA4	2.5	8.4	16.5	25	30	500	590	590	590	590	51	10000	-
10	25	590	1.1	59.42	IE1	BG50-../SSE08LA4	2.5	8.4	16.5	25	30	385	475	590	590	590	48	10000	-
10	22.5	650	0.96	65.86	IE1	BG50-../SSE08LA4	2.2	7.5	15	22.5	27	425	520	650	650	650	48	10000	-
10	22.5	650	0.96	65.86	IE4	BG50-../S4E09SA4	2.2	7.5	15	22.5	27	550	650	650	650	650	51	10000	-
10	20.5	710	0.88	71.97	IE1	BG50Z-../SSE08LA4	2	6.9	13.5	20.5	25	465	570	710	710	710	52	10000	-
10	20.5	710	0.88	71.97	IE4	BG50Z-../S4E09SA4	2	6.9	13.5	20.5	25	610	710	710	710	710	56	10000	-
10	34.5	430	2.8	43.05	IE4	BG60-../S4E09SA4	3.4	11.5	23	34.5	41.5	365	430	430	430	430	82	16000	-
10	29.5	500	2.4	50.31	IE4	BG60-../S4E09SA4	2.9	9.9	19.5	29.5	35.5	425	500	500	500	500	82	16000	-
10	26.5	550	2.2	55.76	IE4	BG60-../S4E09SA4	2.6	8.9	17.5	26.5	32	470	550	550	550	550	82	16000	-
10	24.5	600	2	60.9	IE4	BG60-../S4E09SA4	2.4	8.2	16	24.5	29.5	510	600	600	600	600	82	16000	-
10	22	670	1.8	67.49	IE4	BG60-../S4E09SA4	2.2	7.4	14.5	22	26.5	570	670	670	670	670	82	16000	-
10	21.5	680	1.8	68.32	IE1	BG60Z-../SSE08LA4	2.1	7.3	14.5	21.5	26	440	540	680	680	680	97	16000	-
10	21.5	680	1.8	68.32	IE4	BG60Z-../S4E09SA4	2.1	7.3	14.5	21.5	26	580	680	680	680	680	101	16000	-
10	19.5	750	1.6	75.71	IE1	BG60Z-../SSE08LA4	1.9	6.6	13	19.5	23.5	490	600	750	750	750	97	16000	-
10	19.5	750	1.6	75.71	IE4	BG60Z-../S4E09SA4	1.9	6.6	13	19.5	23.5	640	750	750	750	750	101	16000	-
10	16	910	1.3	91.09	IE4	BG60Z-../S4E09SA4	1.6	5.4	10.5	16	19.5	770	910	910	910	910	101	16000	-
10	16	910	1.3	91.09	IE1	BG60Z-../SSE08LA4	1.6	5.4	10.5	16	19.5	590	720	910	910	910	97	16000	-
10	14.5	1010	1.2	101	IE1	BG60Z-../SSE08LA4	1.4	4.9	9.9	14.5	17.5	650	800	1010	1010	1010	97	16000	-
10	14.5	1010	1.2	101	IE4	BG60Z-../S4E09SA4	1.4	4.9	9.9	14.5	17.5	850	1010	1010	1010	1010	101	16000	-
10	12.5	1190	1	119.2	IE1	BG60Z-../SSE08LA4	1.2	4.1	8.3	12.5	15	770	950	1190	1190	1190	97	16000	-
10	12.5	1190	1	119.2	IE4	BG60Z-../S4E09SA4	1.2	4.1	8.3	12.5	15	1010	1190	1190	1190	1190	101	16000	-
10	11	1320	0.91	132.1	IE1	BG60Z-../SSE08LA4	1.1	3.7	7.5	11	13.5	850	1050	1320	1320	1320	97	16000	-
10	11	1320	0.91	132.1	IE4	BG60Z-../S4E09SA4	1.1	3.7	7.5	11	13.5	1120	1320	1320	1320	1320	101	16000	-
10	17	870	2.6	87.61	IE1	BG70Z-../SSE08LA4	1.7	5.7	11	17	20.5	560	700	870	870	870	137	20000	-
10	17	870	2.6	87.61	IE4	BG70Z-../S4E09SA4	1.7	5.7	11	17	20.5	740	870	870	870	870	141	20000	-
10	15.5	950	2.4	95.74	IE4	BG70Z-../S4E09SA4	1.5	5.2	10	15.5	18.5	810	950	950	950	950	141	20000	-
10	15.5	950	2.4	95.74	IE1	BG70Z-../SSE08LA4	1.5	5.2	10	15.5	18.5	620	760	950	950	950	137	20000	-
10	13	1130	2	113.6	IE1	BG70Z-../SSE08LA4	1.3	4.4	8.8	13	15.5	730	900	1130	1130	1130	137	20000	-
10	13	1130	2	113.6	IE4	BG70Z-../S4E09SA4	1.3	4.4	8.8	13	15.5	960	1130	1130	1130	1130	141	20000	-
10	12	1240	1.9	124	IE4	BG70Z-../S4E09SA4	1.2	4	8	12	14.5	1050	1240	1240	1240	1240	141	20000	-
10	12	1																	

# BG-series helical-geared motors

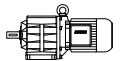
## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

### $M_N = 10 \text{ Nm}$ ( $P_N = 1.55 \text{ kW}$ )

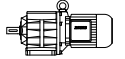


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	5.4	2750	0.9	276.7	IE4	BG70G20-../S4E09SA4	0.5	1.8	3.6	5.4	6.5	2350	2750	2750	2750	2750	138	20000	-
10	5.4	2750	0.9	276.7	IE1	BG70G20-../SSE08LA4	0.5	1.8	3.6	5.4	6.5	1790	2200	2750	2750	2750	135	20000	-
10	10	1450	2.9	145.4	IE4	BG80Z-../S4E09SA4	1	3.4	6.8	10	12	1230	1450	1450	1450	1450	209	26000	-
10	9.2	1610	2.6	161.5	IE4	BG80Z-../S4E09SA4	0.9	3	6.1	9.2	11	1370	1610	1610	1610	1610	209	26000	-
10	8	1860	2.2	186.8	IE4	BG80Z-../S4E09SA4	0.8	2.6	5.3	8	9.6	1580	1860	1860	1860	1860	209	26000	-
10	7.2	2050	2	207.4	IE4	BG80Z-../S4E09SA4	0.7	2.4	4.8	7.2	8.6	1760	2050	2050	2050	2050	209	26000	-
10	6.6	2250	2	227.2	IE4	BG80G40-../S4E09SA4	0.65	2.2	4.4	6.6	7.9	1930	2250	2250	2250	2250	220	26000	-
10	6.6	2250	2	227.2	IE1	BG80G40-../SSE08LA4	0.65	2.2	4.4	6.6	7.9	1470	1810	2250	2250	2250	216	26000	-
10	5.9	2500	1.8	252.3	IE1	BG80G40-../SSE08LA4	0.55	1.9	3.9	5.9	7.1	1630	2000	2500	2500	2500	216	26000	-
10	5.9	2500	1.8	252.3	IE4	BG80G40-../S4E09SA4	0.55	1.9	3.9	5.9	7.1	2100	2500	2500	2500	2500	220	26000	-
10	5.3	2800	1.6	282.8	IE4	BG80G40-../S4E09SA4	0.5	1.7	3.5	5.3	6.3	2400	2800	2800	2800	2800	220	26000	-
10	5.3	2800	1.6	282.8	IE1	BG80G40-../SSE08LA4	0.5	1.7	3.5	5.3	6.3	1830	2250	2800	2800	2800	216	26000	-
10	4.7	3100	1.5	314	IE4	BG80G40-../S4E09SA4	0.47	1.5	3.1	4.7	5.7	2650	3100	3100	3100	3100	220	26000	-
10	4.7	3100	1.5	314	IE1	BG80G40-../SSE08LA4	0.47	1.5	3.1	4.7	5.7	2000	2500	3100	3100	3100	216	26000	-
10	4.1	3600	1.3	360	IE4	BG80G40-../S4E09SA4	0.41	1.3	2.7	4.1	5	3050	3600	3600	3600	3600	220	26000	-
10	4.1	3600	1.3	360	IE1	BG80G40-../SSE08LA4	0.41	1.3	2.7	4.1	5	2300	2850	3600	3600	3600	216	26000	-
10	3.7	3950	1.2	399.8	IE4	BG80G40-../S4E09SA4	0.37	1.2	2.5	3.7	4.5	3350	3950	3950	3950	3950	220	26000	-
10	3.7	3950	1.2	399.8	IE1	BG80G40-../SSE08LA4	0.37	1.2	2.5	3.7	4.5	2550	3150	3950	3950	3950	216	26000	-
10	3.4	4350	1.1	436.2	IE4	BG80G40-../S4E09SA4	0.34	1.1	2.2	3.4	4.1	3700	4350	4350	4350	4350	220	26000	-
10	3.4	4350	1.1	436.2	IE1	BG80G40-../SSE08LA4	0.34	1.1	2.2	3.4	4.1	2800	3450	4350	4350	4350	216	26000	-
10	3	4800	0.95	484.3	IE1	BG80G40-../SSE08LA4	0.3	1	2	3	3.7	3100	3850	4800	4800	4800	216	26000	-
10	3	4800	0.95	484.3	IE4	BG80G40-../S4E09SA4	0.3	1	2	3	3.7	4100	4800	4800	4800	4800	220	26000	-
10	2.6	5700	0.8	572	IE4	BG80G40-../S4E09SA4	0.26	0.85	1.7	2.6	3.1	4850	5700	5700	5700	5700	220	26000	-
10	2.6	5700	0.8	572	IE1	BG80G40-../SSE08LA4	0.26	0.85	1.7	2.6	3.1	3700	4550	5700	5700	5700	216	26000	-
10	4.1	3600	2.6	360.3	IE1	BG90G50-../SSE08LA4	0.41	1.3	2.7	4.1	4.9	2300	2850	3600	3600	3600	326	65000	-
10	4.1	3600	2.6	360.3	IE4	BG90G50-../S4E09SA4	0.41	1.3	2.7	4.1	4.9	3050	3600	3600	3600	3600	330	65000	-
10	3.4	4350	2.1	435.8	IE1	BG90G50-../SSE08LA4	0.34	1.1	2.2	3.4	4.1	2800	3450	4350	4350	4350	326	65000	-
10	3.4	4350	2.1	435.8	IE4	BG90G50-../S4E09SA4	0.34	1.1	2.2	3.4	4.1	3700	4350	4350	4350	4350	330	65000	-
10	2.9	5000	1.8	504.7	IE4	BG90G50-../S4E09SA4	0.29	0.95	1.9	2.9	3.5	4250	5000	5000	5000	5000	330	65000	-
10	2.9	5000	1.8	504.7	IE1	BG90G50-../SSE08LA4	0.29	0.95	1.9	2.9	3.5	3250	4000	5000	5000	5000	326	65000	-
10	2.5	5800	1.6	588.8	IE4	BG90G50-../S4E09SA4	0.25	0.8	1.6	2.5	3	5000	5800	5800	5800	5800	330	65000	-
10	2.5	5800	1.6	588.8	IE1	BG90G50-../SSE08LA4	0.25	0.8	1.6	2.5	3	3800	4700	5800	5800	5800	326	65000	-
10	2.3	6400	1.4	644.7	IE4	BG90G50-../S4E09SA4	0.23	0.75	1.5	2.3	2.7	5400	6400	6400	6400	6400	330	65000	-
10	2.3	6400	1.4	644.7	IE1	BG90G50-../SSE08LA4	0.23	0.75	1.5	2.3	2.7	4150	5100	6400	6400	6400	326	65000	-
10	2.1	7100	1.3	714.2	IE4	BG90G50-../S4E09SA4	0.21	0.7	1.4	2.1	2.5	6000	7100	7100	7100	7100	330	65000	-
10	2.1	7100	1.3	714.2	IE1	BG90G50-../SSE08LA4	0.21	0.7	1.4	2.1	2.5	4600	5700	7100	7100	7100	326	65000	-
10	1.6	8800	1	883.7	IE4	BG90G50-../S4E09SA4	0.16	0.55	1.1	1.6	2	7500	8800	8800	8800	8800	330	65000	-
10	1.6	8800	1	883.7	IE1	BG90G50-../SSE08LA4	0.16	0.55	1.1	1.6	2	5700	7000	8800	8800	8800	326	65000	-
10	2.2	6500	2.8	658.1	IE4	BG100Z-../S4E09SA4	0.22	0.75	1.5	2.2	2.7	5500	6500	6500	6500	6500	518	90000	-
10	1.9	7500	2.4	759	IE4	BG100Z-../S4E09SA4	0.19	0.65	1.3	1.9	2.3	6400	7500	7500	7500	7500	518	90000	-
10	1.7	8400	2.2	845.1	IE4	BG100Z-../S4E09SA4	0.17	0.55	1.1	1.7	2.1	7100	8400	8400	8400	8400	518	90000	-
10	1.5	9700	1.9	976.1	IE1	BG100G50-../SSE08LA4	0.15	0.5	1	1.5	1.8	6300	7800	9700	9700	9700	513	90000	-
10	1.5	9700	1.9	976.1	IE4	BG100G50-../S4E09SA4	0.15	0.5	1	1.5	1.8	8200	9700	9700	9700	9700	517	90000	-
10	1.4	10400	1.8	1043	IE4	BG100G50-../S4E09SA4	0.14	0.47	0.95	1.4	1.7	8800	10400	10400	10400	10400	517	90000	-
10	1.4	10400	1.8	1043	IE1	BG100G50-../SSE08LA4	0.14	0.47	0.95	1.4	1.7	6700	8300	10400	10400	10400	513	90000	-
10	1.2	12000	1.5	1204	IE4	BG100G50-../S4E09SA4	0.12	0.41	0.8	1.2	1.4	10200	12000	12000	12000	12000	517	90000	-
10	1.2	12000	1.5	1204	IE1	BG100G50-../SSE08LA4	0.12	0.41	0.8	1.2	1.4	7800	9600	12000	12000	12000	513	90000	-
10	1	14400	1.3	1444	IE4	BG100G50-../S4E09SA4	0.1	0.34	0.65	1	1.2	12200	14400	14400	14400	14400	517	90000	-
10	1	14400	1.3	1444	IE1	BG100G50-../SSE08LA4	0.1	0.34	0.65	1	1.2	9300	11500	14400	14400	14400	513	90000	-
10	0.85	16700	1.1	1678	IE4	BG100G50-../S4E09SA4	0.09	0.29	0.55	0.85	1	14200	16700	16700	16700	16700	517	90000	-
10	0.85	16700	1.1	1678	IE1	BG100G50-../SSE08LA4	0.09	0.29	0.55	0.85	1	10900	13400	16700	16700	16700	513	90000	-
10	0.8	18600	0.99	1867	IE4	BG100G50-../S4E09SA4	0.08	0.26	0.5	0.8	0.95	15800	18600	18600	18600	18600	517	90000	-
10	0.8	18600	0.99	1867	IE1	BG100G50-../SSE08LA4	0.08	0.26	0.5	0.8	0.95	12100	14900	18600	18600	18600	513	90000	-
10	0.65	21500	0.86	2154	IE1	BG100G50-../SSE08LA4	0.07	0.23	0.46	0.65	0.8	14000	17200	21500	21500	21500	513	90000	-
10	0.65	21500	0.86	2154	IE4	BG100G50-../S4E09SA4	0.07	0.23	0.46	0.65	0.8	18300	21500	21500	21500	21500	517	90000	-

### $M_N = 14 \text{ Nm}$ ( $P_N = 2.2 \text{ kW}$ )

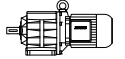


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	590	35	1.6	2.52	IE5	BG10-../S5E09XA4	59	198	395	590	710	32.5	35	35	35	35	30	570	790
14	590	35	1.6	2.52	IE2	BG10-../SHE09SA4	59	198	395	590	710	21	25	35	35	35	22	570	790
14	435	47.5	1.3	3.42	IE2	BG10-../SHE09SA4	43.5	146	290	435	520	29	34	47.5	47.5	47.5	22	630	880
14	435	47.5	1.3	3.42	IE5	BG10-../S5E09XA4	43.5	146	290	435	520	44	47.5	47.5	47.5	47.5	30	630	880
14	340	61	1.1	4.36	IE5	BG10-../S5E09XA4	34	114	225	340	410	56	61	61	61	30	650	910	
14	340	61	1.1	4.36	IE2	BG10-../SHE09SA4	34	114	225	340	410	37	43.5	61	61	22	650	910	
14	280	74	1	5.34	IE5	BG10-../S5E09XA4	28	93	187	280	335								

**BG-series helical-geared motors****Selection helical-geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 14 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	450	46.5	2	3.33	IE5	BG20-../S5E09XA4	45	150	300	450	540	43	46.5	46.5	46.5	46.5	32	1830	-
14	450	46.5	2	3.33	IE2	BG20-../SHE09SA4	45	150	300	450	540	28	33	46.5	46.5	46.5	24	1830	-
14	340	61	1.7	4.38	IE5	BG20-../S5E09XA4	34	114	225	340	410	56	61	61	61	61	32	1990	-
14	340	61	1.7	4.38	IE2	BG20-../SHE09SA4	34	114	225	340	410	37	43.5	61	61	61	24	1990	-
14	270	76	1.5	5.49	IE5	BG20-../S5E09XA4	27	91	182	270	325	71	76	76	76	76	32	2100	-
14	270	76	1.5	5.49	IE2	BG20-../SHE09SA4	27	91	182	270	325	46.5	54	76	76	76	24	2100	-
14	245	84	1.5	6.06	IE5	BG20-../S5E09XA4	24.5	82	165	245	295	78	84	84	84	84	32	2250	-
14	245	84	1.5	6.06	IE2	BG20-../SHE09SA4	24.5	82	165	245	295	51	60	84	84	84	24	2250	-
14	230	90	1.3	6.48	IE5	BG20-../S5E09XA4	23	77	154	230	275	84	90	90	90	90	32	2250	-
14	230	90	1.3	6.48	IE2	BG20-../SHE09SA4	23	77	154	230	275	55	64	90	90	90	24	2250	-
14	220	94	1.4	6.73	IE5	BG20-../S5E09XA4	22	74	148	220	265	87	94	94	94	94	32	2350	2100
14	220	94	1.4	6.73	IE2	BG20-../SHE09SA4	22	74	148	220	265	57	67	94	94	94	24	2350	2100
14	187	112	1.2	8.02	IE5	BG20-../S5E09XA4	18.5	62	124	187	220	104	112	112	112	112	32	2500	-
14	187	112	1.2	8.02	IE2	BG20-../SHE09SA4	18.5	62	124	187	220	68	80	112	112	112	24	2500	-
14	180	116	1.1	8.29	IE5	BG20-../S5E09XA4	18	60	120	180	215	107	116	116	116	116	32	2250	-
14	180	116	1.1	8.29	IE2	BG20-../SHE09SA4	18	60	120	180	215	70	82	116	116	116	24	2250	-
14	168	124	1.1	8.91	IE5	BG20-../S5E09XA4	16.5	56	112	168	200	115	124	124	124	124	32	2600	-
14	168	124	1.1	8.91	IE2	BG20-../SHE09SA4	16.5	56	112	168	200	75	89	124	124	124	24	2600	-
14	155	135	0.9	9.65	IE2	BG20-../SHE09SA4	15.5	51	103	155	186	82	96	135	135	135	24	2250	-
14	155	135	0.9	9.65	IE5	BG20-../S5E09XA4	15.5	51	103	155	186	125	135	135	135	135	32	2250	-
14	142	147	1	10.54	IE2	BG20-../SHE09SA4	14	47	94	142	170	89	105	147	147	147	24	2700	-
14	142	147	1	10.54	IE5	BG20-../S5E09XA4	14	47	94	142	170	137	147	147	147	147	32	2700	-
14	128	163	0.96	11.71	IE2	BG20-../SHE09SA4	12.5	42.5	85	128	153	99	117	163	163	163	24	2800	-
14	128	163	0.96	11.71	IE5	BG20-../S5E09XA4	12.5	42.5	85	128	153	152	163	163	163	163	32	2800	-
14	113	184	0.9	13.21	IE5	BG20-../S5E09XA4	11	37.5	75	113	136	171	184	184	184	184	32	2900	-
14	113	184	0.9	13.21	IE2	BG20-../SHE09SA4	11	37.5	75	113	136	112	132	184	184	184	24	2900	-
14	102	205	0.84	14.67	IE5	BG20-../S5E09XA4	10	34	68	102	122	190	205	205	205	205	32	3050	-
14	102	205	0.84	14.67	IE2	BG20-../SHE09SA4	10	34	68	102	122	124	146	205	205	205	24	3050	-
14	96	215	0.81	15.58	IE5	BG20-../S5E09XA4	9.6	32	64	96	115	200	215	215	215	215	32	3100	-
14	96	215	0.81	15.58	IE2	BG20-../SHE09SA4	9.6	32	64	96	115	132	155	215	215	215	24	3100	-
14	440	47.5	2.9	3.4	IE5	BG30-../S5E09XA4	44	147	290	440	520	44	47.5	47.5	47.5	47.5	37	1580	-
14	440	47.5	2.9	3.4	IE2	BG30-../SHE09SA4	44	147	290	440	520	28.5	34	47.5	47.5	47.5	29	1580	-
14	355	58	2.9	4.21	IE5	BG30-../S5E09XA4	35.5	118	235	355	425	54	58	58	58	58	37	1630	-
14	355	58	2.9	4.21	IE2	BG30-../SHE09SA4	35.5	118	235	355	425	35.5	42	58	58	58	29	1630	-
14	275	76	2.6	5.44	IE2	BG30-../SHE09SA4	27.5	91	183	275	330	46	54	76	76	76	29	1670	-
14	275	76	2.6	5.44	IE5	BG30-../S5E09XA4	27.5	91	183	275	330	70	76	76	76	76	37	1670	-
14	220	94	2.3	6.75	IE5	BG30-../S5E09XA4	22	74	148	220	265	87	94	94	94	94	37	1760	-
14	220	94	2.4	6.76	IE2	BG30-../SHE09SA4	22	73	147	220	265	57	67	94	94	94	29	2550	-
14	220	94	2.4	6.76	IE5	BG30-../S5E09XA4	22	73	147	220	265	87	94	94	94	94	37	2550	-
14	220	94	2.3	6.75	IE2	BG30-../SHE09SA4	22	74	148	220	265	57	67	94	94	94	29	1760	-
14	200	105	2.2	7.5	IE5	BG30-../S5E09XA4	20	66	133	200	240	97	105	105	105	105	37	2750	-
14	200	105	2.2	7.5	IE2	BG30-../SHE09SA4	20	66	133	200	240	63	75	105	105	105	29	2750	-
14	189	110	1.9	7.91	IE5	BG30-../S5E09XA4	18.5	63	126	189	225	102	110	110	110	110	37	1760	-
14	189	110	1.9	7.91	IE2	BG30-../SHE09SA4	18.5	63	126	189	225	67	79	110	110	110	29	1760	-
14	174	120	2	8.6	IE2	BG30-../SHE09SA4	17	58	116	174	205	73	86	120	120	120	29	2800	-
14	174	120	2	8.6	IE5	BG30-../S5E09XA4	17	58	116	174	205	111	120	120	120	120	37	2800	-
14	157	133	1.9	9.55	IE5	BG30-../S5E09XA4	15.5	52	104	157	188	124	133	133	133	133	37	3000	-
14	157	133	1.9	9.55	IE2	BG30-../SHE09SA4	15.5	52	104	157	188	81	95	133	133	133	29	3000	-
14	140	149	1.8	10.65	IE5	BG30-../S5E09XA4	14	46.5	93	140	169	138	149	149	149	149	37	2950	-
14	140	149	1.8	10.65	IE2	BG30-../SHE09SA4	14	46.5	93	140	169	90	106	149	149	149	29	2950	-
14	126	165	1.6	11.82	IE5	BG30-../S5E09XA4	12.5	42	84	126	152	153	165	165	165	165	37	3200	-
14	126	165	1.6	11.82	IE2	BG30-../SHE09SA4	12.5	42	84	126	152	100	118	165	165	165	29	3200	-
14	108	192	1.5	13.77	IE5	BG30-../S5E09XA4	10.5	36	72	108	130	179	192	192	192	192	37	3150	-
14	108	192	1.5	13.77	IE2	BG30-../SHE09SA4	10.5	36	72	108	130	117	137	192	192	192	29	3150	-
14	98	210	1.4	15.27	IE2	BG30-../SHE09SA4	9.8	32.5	65	98	117	129	152	210	210	210	29	3450	-
14	98	210	1.4	15.27	IE5	BG30-../S5E09XA4	9.8	32.5	65	98	117	198	210	210	210	210	37	3450	-
14	87	235	1.3	17.06	IE2	BG30-../SHE09SA4	8.7	29	58	87	105	145	170	235	235	235	29	3700	-
14	87	235	1.3	17.06	IE5	BG30-../S5E09XA4	8.7	29	58	87	105	220	235	235	235	235	37	3700	-
14	79	265	1.1	18.93	IE5	BG30-../S5E09XA4	7.9	26	52	79	95	245	265	265	265	265	37	4100	-
14	79	265	1.1	18.93	IE2	BG30-../SHE09SA4	7.9	26	52	79	95	160	189	265	265	265	29	4100	-
14	75	275	1.1	19.99	IE5	BG30-../S5E09XA4	7.5	25	50	75	90	255	275	275	275	275	37	4200	-
14	75	275	1.1	19.99	IE2	BG30-../SHE09SA4	7.5	25	50	75	90	169	199	275	275	275	29	4200	-
14	67	310	0.97	22.18	IE2	BG30-../SHE09SA4	6.7	22.5	45	67	81	188	220	310	310	310	29	4600	-
14	67	310	0.97	22.18	IE5	BG30-../S5E09XA4	6.7	22.5	45	67	81	285	310	310	310	310	37	4600	-
14	58	355	0.84	25.45	IE5	BG30-../S5E09XA4	5.8	19.5	39	58	70	330	355	355	355	355	37	4850	-
14	58	355	0.84	25.45	IE2	BG30-../SHE09SA4	5.8	19.5	39	58	70	215	250	355	355	355	29	4850	-
14	196	106	2.8	7.62	IE2	BG40-../SHE09SA4	19.5	65	131	196	235	64	76	106	106	106	43	2650	-
14	196	106	2.8	7.62	IE5	BG40-../S5E09XA4	19.5	65	131	196	235	99	106	106	106	106	51	2650	-
14	180	116	2.9	8.31	IE5	BG40-../S5E09XA4	18	60	120	180	215	108	116	116	116	116	51	4100	-
14	180	116	2.9	8.31	IE2	BG40-../SHE09SA4	18	60	120	180	215	70	83	116	116	116	43	4100	-
14	16																		

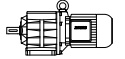


Selection helical-gear motors -  $n_1 = 1500 \frac{1}{\text{min}}$ **M<sub>N</sub> = 14 Nm (P<sub>N</sub> = 2.2 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	91	225	1.9	16.39	IE5	BG40-../S5E09XA4	9.1	30.5	61	91	109	210	225	225	225	225	51	5300	-
14	91	225	1.9	16.39	IE2	BG40-../SHE09SA4	9.1	30.5	61	91	109	139	163	225	225	225	43	5300	-
14	82	250	1.7	18.19	IE5	BG40-../S5E09XA4	8.2	27	54	82	98	235	250	250	250	51	5600	-	
14	82	250	1.7	18.19	IE2	BG40-../SHE09SA4	8.2	27	54	82	98	154	181	250	250	43	5600	-	
14	75	275	1.5	19.84	IE5	BG40-../S5E09XA4	7.5	25	50	75	90	255	275	275	275	51	5800	-	
14	75	275	1.5	19.84	IE2	BG40-../SHE09SA4	7.5	25	50	75	90	168	198	275	275	43	5800	-	
14	68	305	1.4	22.02	IE5	BG40-../S5E09XA4	6.8	22.5	45	68	81	285	305	305	305	51	6000	-	
14	68	305	1.4	22.02	IE2	BG40-../SHE09SA4	6.8	22.5	45	68	81	187	220	305	305	43	6000	-	
14	64	325	1.3	23.43	IE5	BG40-../S5E09XA4	6.4	21	42.5	64	76	300	325	325	325	51	6200	-	
14	64	325	1.3	23.43	IE2	BG40-../SHE09SA4	6.4	21	42.5	64	76	199	230	325	325	43	6200	-	
14	57	360	1.2	26.01	IE5	BG40-../S5E09XA4	5.7	19	38	57	69	335	360	360	360	51	6500	-	
14	57	360	1.2	26.01	IE2	BG40-../SHE09SA4	5.7	19	38	57	69	220	260	360	360	43	6500	-	
14	51	410	1	29.34	IE5	BG40-../S5E09XA4	5.1	17	34	51	61	380	410	410	410	51	6800	-	
14	51	410	1	29.34	IE2	BG40-../SHE09SA4	5.1	17	34	51	61	245	290	410	410	43	6800	-	
14	46	455	0.93	32.57	IE5	BG40-../S5E09XA4	4.6	15	30.5	46	55	420	455	455	455	51	7000	-	
14	46	455	0.93	32.57	IE2	BG40-../SHE09SA4	4.6	15	30.5	46	55	275	325	455	455	43	7000	-	
14	43.5	475	0.89	34.2	IE5	BG40-../S5E09XA4	4.3	14.5	29	43.5	52	440	475	475	475	51	7000	-	
14	43.5	475	0.89	34.2	IE2	BG40-../SHE09SA4	4.3	14.5	29	43.5	52	290	340	475	475	43	7000	-	
14	39.5	530	0.8	37.96	IE5	BG40-../S5E09XA4	3.9	13	26	39.5	47	490	530	530	530	51	7000	-	
14	39.5	530	0.8	37.96	IE2	BG40-../SHE09SA4	3.9	13	26	39.5	47	320	375	530	530	43	7000	-	
14	90	230	2.7	16.53	IE5	BG50-../S5E09XA4	9	30	60	90	108	210	230	230	230	59	6500	-	
14	90	230	2.7	16.53	IE2	BG50-../SHE09SA4	9	30	60	90	108	140	165	230	230	51	6500	-	
14	81	255	2.5	18.33	IE2	BG50-../SHE09SA4	8.1	27	54	81	98	155	183	255	255	51	7200	-	
14	81	255	2.5	18.33	IE5	BG50-../S5E09XA4	8.1	27	54	81	98	235	255	255	255	59	7200	-	
14	68	305	2	21.96	IE5	BG50-../S5E09XA4	6.8	22.5	45.5	68	81	285	305	305	305	59	8000	-	
14	68	305	2	21.96	IE2	BG50-../SHE09SA4	6.8	22.5	45.5	68	81	186	215	305	305	51	8000	-	
14	61	340	1.8	24.34	IE2	BG50-../SHE09SA4	6.1	20.5	41	61	73	205	240	340	340	51	8700	-	
14	61	340	1.8	24.34	IE5	BG50-../S5E09XA4	6.1	20.5	41	61	73	315	340	340	340	59	8700	-	
14	50	410	1.5	29.62	IE2	BG50-../SHE09SA4	5	16.5	33.5	50	60	250	295	410	410	51	8000	-	
14	50	410	1.5	29.62	IE5	BG50-../S5E09XA4	5	16.5	33.5	50	60	385	410	410	410	59	8000	-	
14	45.5	455	1.4	32.84	IE5	BG50-../S5E09XA4	4.5	15	30	45.5	54	425	455	455	455	59	8700	-	
14	45.5	455	1.4	32.84	IE2	BG50-../SHE09SA4	4.5	15	30	45.5	54	275	325	455	455	51	8700	-	
14	39.5	530	1.2	37.89	IE2	BG50-../SHE09SA4	3.9	13	26	39.5	47.5	320	375	530	530	51	10000	-	
14	39.5	530	1.2	37.89	IE5	BG50-../S5E09XA4	3.9	13	26	39.5	47.5	490	530	530	530	59	10000	-	
14	35.5	580	1.1	42	IE2	BG50-../SHE09SA4	3.5	11.5	23.5	35.5	42.5	355	420	580	580	51	10000	-	
14	35.5	580	1.1	42	IE5	BG50-../S5E09XA4	3.5	11.5	23.5	35.5	42.5	540	580	580	580	59	10000	-	
14	31.5	650	0.96	47.02	IE2	BG50-../SHE09SA4	3.1	10.5	21	31.5	38	395	470	650	650	51	10000	-	
14	31.5	650	0.96	47.02	IE5	BG50-../S5E09XA4	3.1	10.5	21	31.5	38	610	650	650	650	59	10000	-	
14	28.5	720	0.86	52.12	IE5	BG50-../S5E09XA4	2.8	9.5	19	28.5	34.5	670	720	720	720	59	10000	-	
14	28.5	720	0.86	52.12	IE2	BG50-../SHE09SA4	2.8	9.5	19	28.5	34.5	440	520	720	720	51	10000	-	
14	51	410	2.9	29.31	IE2	BG60-../SHE09SA4	5.1	17	34	51	61	245	290	410	410	82	14800	-	
14	51	410	2.9	29.31	IE5	BG60-../S5E09XA4	5.1	17	34	51	61	380	410	410	410	90	14800	-	
14	46	450	2.6	32.48	IE5	BG60-../S5E09XA4	4.6	15	30.5	46	55	420	450	450	450	90	15400	-	
14	46	450	2.6	32.48	IE2	BG60-../SHE09SA4	4.6	15	30.5	46	55	275	320	450	450	82	15400	-	
14	38.5	540	2.2	38.85	IE5	BG60-../S5E09XA4	3.8	12.5	25.5	38.5	46	500	540	540	540	90	16000	-	
14	38.5	540	2.2	38.85	IE2	BG60-../SHE09SA4	3.8	12.5	25.5	38.5	46	330	385	540	540	82	16000	-	
14	34.5	600	2	43.05	IE2	BG60-../SHE09SA4	3.4	11.5	23	34.5	41.5	365	430	600	600	82	16000	-	
14	34.5	600	2	43.05	IE5	BG60-../S5E09XA4	3.4	11.5	23	34.5	41.5	550	600	600	600	90	16000	-	
14	29.5	700	1.7	50.31	IE5	BG60-../S5E09XA4	2.9	9.9	19.5	29.5	35.5	650	700	700	700	90	16000	-	
14	29.5	700	1.7	50.31	IE2	BG60-../SHE09SA4	2.9	9.9	19.5	29.5	35.5	425	500	700	700	82	16000	-	
14	26.5	780	1.5	55.76	IE2	BG60-../SHE09SA4	2.6	8.9	17.5	26.5	32	470	550	780	780	82	16000	-	
14	26.5	780	1.5	55.76	IE5	BG60-../S5E09XA4	2.6	8.9	17.5	26.5	32	720	780	780	780	90	16000	-	
14	24.5	850	1.4	60.9	IE2	BG60-../SHE09SA4	2.4	8.2	16	24.5	29.5	510	600	850	850	82	16000	-	
14	24.5	850	1.4	60.9	IE5	BG60-../S5E09XA4	2.4	8.2	16	24.5	29.5	790	850	850	850	90	16000	-	
14	22	940	1.3	67.49	IE5	BG60-../S5E09XA4	2.2	7.4	14.5	22	26.5	870	940	940	940	90	16000	-	
14	22	940	1.3	67.49	IE2	BG60-../SHE09SA4	2.2	7.4	14.5	22	26.5	570	670	940	940	82	16000	-	
14	21.5	950	1.3	68.32	IE2	BG60Z-../SHE09SA4	2.1	7.3	14.5	21.5	26	580	680	950	950	101	16000	-	
14	21.5	950	1.3	68.32	IE5	BG60Z-../S5E09XA4	2.1	7.3	14.5	21.5	26	880	950	950	950	109	16000	-	
14	19.5	1050	1.1	75.71	IE2	BG60Z-../SHE09SA4	1.9	6.6	13	19.5	23.5	640	750	1050	1050	101	16000	-	
14	19.5	1050	1.1	75.71	IE5	BG60Z-../S5E09XA4	1.9	6.6	13	19.5	23.5	980	1050	1050	1050	109	16000	-	
14	16	1270	0.94	91.09	IE5	BG60Z-../S5E09XA4	1.6	5.4	10.5	16	19.5	1180	1270	1270	1270	109	16000	-	
14	16	1270	0.94	91.09	IE2	BG60Z-../SHE09SA4	1.6	5.4	10.5	16	19.5	770	910	1270	1270	101	16000	-	
14	14.5	1410	0.85	101	IE2	BG60Z-../SHE09SA4	1.4	4.9	9.9	14.5	17.5	850	1010	1410	1410	101	16000	-	
14	14.5	1410	0.85	101	IE5	BG60Z-../S5E09XA4	1.4	4.9	9.9	14.5	17.5	1310	1410	1410	1410	109	16000	-	
14	25	830	2.7	59.82	IE5	BG70-../S5E09XA4	2.5	8.3	16.5	25	30	770	830	830	830	128	20000	-	
14	25	830	2.7	59.82	IE2	BG70-../SHE09SA4	2.5	8.3	16.5	25	30	500	590	830	830	120	20000	-	
14	27	760	2.5	54.64	IE5	BG70Z-../S5E09XA4	2.7	9.1	18	27	32.5	710	760	760	760	149	20000	-	
14	27	760	2.5	54.64	IE2	BG70Z-../SHE09SA4	2.7	9.1	18	27	32.5	460	540	760	760	141	20000	-	
14	23	900	2.5	64.85	IE5	BG70Z-../S5E09XA4	2.3	7.7	15	23	27.5	840	900	900	900	149	20000	-	
14	23	900	2.5	64.85	IE2	BG70Z-../SHE09SA4	2.3	7.7	15	23	27.5	550	640	900	900	141	20000	-	
14	20	1030	2.2	73.82	IE5	BG70Z-../S5E09XA4	2	6.7	13.5	20	24	950	1030	1030	1030	149	20000	-	
14	20	1030	2.2	73.82	IE2	BG70Z-../SHE09SA4	2	6.7	13.5	20	24	620	730	1030	1030	141	20000	-	
14																			

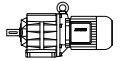
# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 14 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	10	2050	1.1	147.2	IE5	BG70Z-../S5E09XA4	1	3.3	6.7	10	12	1910	2050	2050	2050	2050	149	20000	-
14	9.1	2250	1	163.8	IE5	BG70Z-../S5E09XA4	0.9	3	6.1	9.1	10.5	2100	2250	2250	2250	2250	149	20000	-
14	9.1	2250	1	163.8	IE2	BG70Z-../SHE09SA4	0.9	3	6.1	9.1	10.5	1390	1630	2250	2250	2250	141	20000	-
14	7.7	2700	0.85	194.4	IE5	BG70Z-../S5E09XA4	0.75	2.5	5.1	7.7	9.2	2500	2700	2700	2700	2700	149	20000	-
14	7.7	2700	0.85	194.4	IE2	BG70Z-../SHE09SA4	0.75	2.5	5.1	7.7	9.2	1650	1940	2700	2700	2700	141	20000	-
14	13	1570	2.7	112.4	IE2	BG80Z-../SHE09SA4	1.3	4.4	8.8	13	16	950	1120	1570	1570	1570	209	26000	-
14	13	1570	2.7	112.4	IE5	BG80Z-../S5E09XA4	1.3	4.4	8.8	13	16	1460	1570	1570	1570	1570	217	26000	-
14	12	1740	2.4	124.8	IE5	BG80Z-../S5E09XA4	1.2	4	8	12	14	1620	1740	1740	1740	1740	217	26000	-
14	12	1740	2.4	124.8	IE2	BG80Z-../SHE09SA4	1.2	4	8	12	14	1060	1240	1740	1740	1740	209	26000	-
14	10	2000	2.1	145.4	IE2	BG80Z-../SHE09SA4	1	3.4	6.8	10	12	1230	1450	2000	2000	2000	209	26000	-
14	10	2000	2.1	145.4	IE5	BG80Z-../S5E09XA4	1	3.4	6.8	10	12	1890	2000	2000	2000	2000	217	26000	-
14	9.2	2250	1.9	161.5	IE5	BG80Z-../S5E09XA4	0.9	3	6.1	9.2	11	2050	2250	2250	2250	2250	217	26000	-
14	9.2	2250	1.9	161.5	IE2	BG80Z-../SHE09SA4	0.9	3	6.1	9.2	11	1370	1610	2250	2250	2250	209	26000	-
14	8	2600	1.6	186.8	IE5	BG80Z-../S5E09XA4	0.8	2.6	5.3	8	9.6	2400	2600	2600	2600	2600	217	26000	-
14	8	2600	1.6	186.8	IE2	BG80Z-../SHE09SA4	0.8	2.6	5.3	8	9.6	1580	1860	2600	2600	2600	209	26000	-
14	7.2	2900	1.4	207.4	IE5	BG80Z-../S5E09XA4	0.7	2.4	4.8	7.2	8.6	2650	2900	2900	2900	2900	217	26000	-
14	7.2	2900	1.4	207.4	IE2	BG80Z-../SHE09SA4	0.7	2.4	4.8	7.2	8.6	1760	2050	2900	2900	2900	209	26000	-
14	6.6	3150	1.4	227.2	IE2	BG80G40-../SHE09SA4	0.65	2.2	4.4	6.6	7.9	1930	2250	3150	3150	3150	220	26000	-
14	6.6	3150	1.4	227.2	IE5	BG80G40-../S5E09XA4	0.65	2.2	4.4	6.6	7.9	2950	3150	3150	3150	3150	228	26000	-
14	5.9	3500	1.3	252.3	IE5	BG80G40-../S5E09XA4	0.55	1.9	3.9	5.9	7.1	3250	3500	3500	3500	3500	228	26000	-
14	5.9	3500	1.3	252.3	IE2	BG80G40-../SHE09SA4	0.55	1.9	3.9	5.9	7.1	2100	2500	3500	3500	3500	220	26000	-
14	5.3	3950	1.2	282.8	IE5	BG80G40-../S5E09XA4	0.5	1.7	3.5	5.3	6.3	3650	3950	3950	3950	3950	228	26000	-
14	5.3	3950	1.2	282.8	IE2	BG80G40-../SHE09SA4	0.5	1.7	3.5	5.3	6.3	2400	2800	3950	3950	3950	220	26000	-
14	4.7	4350	1	314	IE2	BG80G40-../SHE09SA4	0.47	1.5	3.1	4.7	5.7	2650	3100	4350	4350	4350	220	26000	-
14	4.7	4350	1	314	IE5	BG80G40-../S5E09XA4	0.47	1.5	3.1	4.7	5.7	4050	4350	4350	4350	4350	228	26000	-
14	4.1	5000	0.91	360	IE5	BG80G40-../S5E09XA4	0.41	1.3	2.7	4.1	5	4650	5000	5000	5000	5000	228	26000	-
14	4.1	5000	0.91	360	IE2	BG80G40-../SHE09SA4	0.41	1.3	2.7	4.1	5	3050	3600	5000	5000	5000	220	26000	-
14	3.7	5500	0.82	399.8	IE5	BG80G40-../S5E09XA4	0.37	1.2	2.5	3.7	4.5	5100	5500	5500	5500	5500	228	26000	-
14	3.7	5500	0.82	399.8	IE2	BG80G40-../SHE09SA4	0.37	1.2	2.5	3.7	4.5	3350	3950	5500	5500	5500	220	26000	-
14	7.2	2900	2.9	208.3	IE5	BG90Z-../S5E09XA4	0.7	2.4	4.8	7.2	8.6	2700	2900	2900	2900	2900	327	65000	-
14	7.2	2900	2.9	208.3	IE2	BG90Z-../SHE09SA4	0.7	2.4	4.8	7.2	8.6	1770	2050	2900	2900	2900	319	65000	-
14	6.5	3150	2.6	228.1	IE5	BG90Z-../S5E09XA4	0.65	2.1	4.3	6.5	7.8	2950	3150	3150	3150	3150	327	65000	-
14	6.5	3150	2.6	228.1	IE2	BG90Z-../SHE09SA4	0.65	2.1	4.3	6.5	7.8	1930	2250	3150	3150	3150	319	65000	-
14	6.8	3050	3	219.9	IE5	BG90G50-../S5E09XA4	0.65	2.2	4.5	6.8	8.1	2850	3050	3050	3050	3050	338	65000	-
14	6.8	3050	3	219.9	IE2	BG90G50-../SHE09SA4	0.65	2.2	4.5	6.8	8.1	1860	2150	3050	3050	3050	330	65000	-
14	5.7	3650	2.5	262.5	IE5	BG90G50-../S5E09XA4	0.55	1.9	3.8	5.7	6.8	3400	3650	3650	3650	3650	338	65000	-
14	5.7	3650	2.5	262.5	IE2	BG90G50-../SHE09SA4	0.55	1.9	3.8	5.7	6.8	2200	2600	3650	3650	3650	330	65000	-
14	5	4150	2.2	298.8	IE5	BG90G50-../S5E09XA4	0.5	1.6	3.3	5	6	3850	4150	4150	4150	4150	338	65000	-
14	5	4150	2.2	298.8	IE2	BG90G50-../SHE09SA4	0.5	1.6	3.3	5	6	2500	2950	4150	4150	4150	330	65000	-
14	4.1	5000	1.8	360.3	IE5	BG90G50-../S5E09XA4	0.41	1.3	2.7	4.1	4.9	4650	5000	5000	5000	5000	338	65000	-
14	4.1	5000	1.8	360.3	IE2	BG90G50-../SHE09SA4	0.41	1.3	2.7	4.1	4.9	3050	3600	5000	5000	5000	330	65000	-
14	3.4	6100	1.5	435.8	IE5	BG90G50-../S5E09XA4	0.34	1.1	2.2	3.4	4.1	5600	6100	6100	6100	6100	338	65000	-
14	3.4	6100	1.5	435.8	IE2	BG90G50-../SHE09SA4	0.34	1.1	2.2	3.4	4.1	3700	4350	6100	6100	6100	330	65000	-
14	2.9	7000	1.3	504.7	IE5	BG90G50-../S5E09XA4	0.29	0.95	1.9	2.9	3.5	6500	7000	7000	7000	7000	338	65000	-
14	2.9	7000	1.3	504.7	IE2	BG90G50-../SHE09SA4	0.29	0.95	1.9	2.9	3.5	4250	5000	7000	7000	7000	330	65000	-
14	2.5	8200	1.1	588.8	IE5	BG90G50-../S5E09XA4	0.25	0.8	1.6	2.5	3	7600	8200	8200	8200	8200	338	65000	-
14	2.5	8200	1.1	588.8	IE2	BG90G50-../SHE09SA4	0.25	0.8	1.6	2.5	3	5000	5800	8200	8200	8200	330	65000	-
14	2.3	9000	1	644.7	IE2	BG90G50-../SHE09SA4	0.23	0.75	1.5	2.3	2.7	5400	6400	9000	9000	9000	330	65000	-
14	2.3	9000	1	644.7	IE5	BG90G50-../S5E09XA4	0.23	0.75	1.5	2.3	2.7	8300	9000	9000	9000	9000	338	65000	-
14	2.1	9900	0.92	714.2	IE5	BG90G50-../S5E09XA4	0.21	0.7	1.4	2.1	2.5	9200	9900	9900	9900	9900	338	65000	-
14	2.1	9900	0.92	714.2	IE2	BG90G50-../SHE09SA4	0.21	0.7	1.4	2.1	2.5	6000	7100	9900	9900	9900	330	65000	-
14	3.2	6300	2.9	456.7	IE5	BG100Z-../S5E09XA4	0.32	1	2.1	3.2	3.9	5900	6300	6300	6300	6300	526	90000	-
14	3.2	6300	2.9	456.7	IE2	BG100Z-../SHE09SA4	0.32	1	2.1	3.2	3.9	3850	4550	6300	6300	6300	518	90000	-
14	2.9	7100	2.6	508.5	IE5	BG100Z-../S5E09XA4	0.29	0.95	1.9	2.9	3.5	6600	7100	7100	7100	7100	526	90000	-
14	2.9	7100	2.6	508.5	IE2	BG100Z-../SHE09SA4	0.29	0.95	1.9	2.9	3.5	4300	5000	7100	7100	7100	518	90000	-
14	2.5	8200	2.2	591.1	IE5	BG100Z-../S5E09XA4	0.25	0.8	1.6	2.5	3	7600	8200	8200	8200	8200	526	90000	-
14	2.5	8200	2.2	591.1	IE2	BG100Z-../SHE09SA4	0.25	0.8	1.6	2.5	3	5000	5900	8200	8200	8200	518	90000	-
14	2.2	9200	2	658.1	IE2	BG100Z-../SHE09SA4	0.22	0.75	1.5	2.2	2.7	5500	6500	9200	9200	9200	518	90000	-
14	2.2	9200	2	658.1	IE5	BG100Z-../S5E09XA4	0.22	0.75	1.5	2.2	2.7	8500	9200	9200	9200	9200	526	90000	-
14	1.9	10600	1.7	759	IE5	BG100Z-../S5E09XA4	0.19	0.65	1.3	1.9	2.3	9800	10600	10600	10600	10600	526	90000	-
14	1.9	10600	1.7	759	IE2	BG100Z-../SHE09SA4	0.19	0.65	1.3	1.9	2.3	6400	7500	10600	10600	10600	518	90000	-
14	1.7	11800	1.6	845.1	IE5	BG100Z-../S5E09XA4	0.17	0.55	1.1	1.7	2.1	10900	11800	11800	11800	11800	526	90000	-
14	1.7	11800	1.6	845.1	IE2	BG100Z-../SHE09SA4	0.17	0.55	1.1	1.7	2.1	7100	8400	11800	11800	11800	518	90000	-
14	1.5	13600	1.4	976.1	IE5	BG100G50-../S5E09XA4	0.15	0.5	1	1.5	1.8	12600	13600	13600	13600	13600	525	90000	-
14	1.5	13600	1.4	976.1	IE2	BG100G50-../SHE09SA4	0.15	0.5	1	1.5	1.8	8200	9700	136					

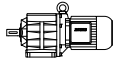
## M<sub>N</sub> = 19 Nm (P<sub>N</sub> = 3 kW)



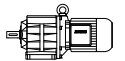
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
19	560	50	2.5	2.67	IE4	BG30-../S4E11SA6	56	187	370	560	670	50	50	50	50	50	46	1450	-
19	440	64	2.2	3.4	IE4	BG30-../S4E11SA6	44	147	290	440	520	64	64	64	64	64	46	1580	-
19	355	79	2.1	4.21	IE4	BG30-../S4E11SA6	35.5	118	235	355	425	79	79	79	79	79	46	1630	-
19	275	103	1.9	5.44	IE4	BG30-../S4E11SA6	27.5	91	183	275	330	103	103	103	103	103	46	1670	-
19	220	128	1.8	6.76	IE4	BG30-../S4E11SA6	22	73	147	220	265	128	128	128	128	128	46	2550	-
19	220	128	1.7	6.75	IE4	BG30-../S4E11SA6	22	74	148	220	265	128	128	128	128	128	46	1760	-
19	200	142	1.6	7.5	IE4	BG30-../S4E11SA6	20	66	133	200	240	142	142	142	142	142	46	2750	-
19	189	150	1.4	7.91	IE4	BG30-../S4E11SA6	18.5	63	126	189	225	150	150	150	150	150	46	1760	-
19	174	163	1.5	8.6	IE4	BG30-../S4E11SA6	17	58	116	174	205	163	163	163	163	163	46	2800	-
19	157	181	1.4	9.55	IE4	BG30-../S4E11SA6	15.5	52	104	157	188	181	181	181	181	181	46	3000	-
19	140	200	1.3	10.65	IE4	BG30-../S4E11SA6	14	46.5	93	140	169	200	200	200	200	200	46	2950	-
19	126	220	1.2	11.82	IE4	BG30-../S4E11SA6	12.5	42	84	126	152	220	220	220	220	220	46	3200	-
19	108	260	1.1	13.77	IE4	BG30-../S4E11SA6	10.5	36	72	108	130	260	260	260	260	260	46	3150	-
19	98	290	1	15.27	IE4	BG30-../S4E11SA6	9.8	32.5	65	98	117	290	290	290	290	290	46	3450	-
19	87	320	0.93	17.06	IE4	BG30-../S4E11SA6	8.7	29	58	87	105	320	320	320	320	320	46	3700	-
19	79	355	0.83	18.93	IE4	BG30-../S4E11SA6	7.9	26	52	79	95	355	355	355	355	355	46	4100	-
19	300	93	2.8	4.94	IE4	BG40-../S4E11SA6	30	101	200	300	360	93	93	93	93	93	65	2450	-
19	235	119	2.5	6.29	IE4	BG40-../S4E11SA6	23.5	79	158	235	285	119	119	119	119	119	65	2600	-
19	230	121	2.6	6.4	IE4	BG40-../S4E11SA6	23	78	156	230	280	121	121	121	121	121	65	3750	-
19	210	135	2.4	7.11	IE4	BG40-../S4E11SA6	21	70	140	210	250	135	135	135	135	135	65	3950	-
19	196	144	2	7.62	IE4	BG40-../S4E11SA6	19.5	65	131	196	235	144	144	144	144	144	65	2650	-
19	180	157	2.2	8.31	IE4	BG40-../S4E11SA6	18	60	120	180	215	157	157	157	157	157	65	4100	-
19	166	171	1.7	9	IE4	BG40-../S4E11SA6	16.5	55	111	166	200	171	171	171	171	171	65	2650	-
19	162	175	2	9.23	IE4	BG40-../S4E11SA6	16	54	108	162	195	175	175	175	175	175	65	4350	-
19	144	196	1.9	10.35	IE4	BG40-../S4E11SA6	14	48	96	144	173	196	196	196	196	196	65	4350	-
19	130	215	1.8	11.49	IE4	BG40-../S4E11SA6	13	43.5	87	130	156	215	215	215	215	215	65	4600	-
19	116	240	1.7	12.86	IE4	BG40-../S4E11SA6	11.5	38.5	77	116	139	240	240	240	240	240	65	4500	-
19	105	270	1.5	14.28	IE4	BG40-../S4E11SA6	10.5	35	70	105	126	270	270	270	270	270	65	4900	-
19	91	310	1.4	16.39	IE4	BG40-../S4E11SA6	9.1	30.5	61	91	109	310	310	310	310	310	65	5300	-
19	82	345	1.2	18.19	IE4	BG40-../S4E11SA6	8.2	27	54	82	98	345	345	345	345	345	65	5600	-
19	75	375	1.1	19.84	IE4	BG40-../S4E11SA6	7.5	25	50	75	90	375	375	375	375	375	65	5800	-
19	68	415	1	22.02	IE4	BG40-../S4E11SA6	6.8	22.5	45	68	81	415	415	415	415	415	65	6000	-
19	64	445	0.95	23.43	IE4	BG40-../S4E11SA6	6.4	21	42.5	64	76	445	445	445	445	445	65	6200	-
19	57	490	0.86	26.01	IE4	BG40-../S4E11SA6	5.7	19	38	57	69	490	490	490	490	490	65	6500	-
19	172	165	3	8.7	IE4	BG50-../S4E11SA6	17	57	114	172	205	165	165	165	165	165	75	5300	-
19	155	183	2.8	9.65	IE4	BG50-../S4E11SA6	15.5	51	103	155	186	183	183	183	183	183	75	5600	-
19	124	225	2.5	12.06	IE4	BG50-../S4E11SA6	12	41	82	124	149	225	225	225	225	225	75	5700	-
19	112	250	2.3	13.36	IE4	BG50-../S4E11SA6	11	37	74	112	134	250	250	250	250	250	75	6100	-
19	90	310	2	16.53	IE4	BG50-../S4E11SA6	9	30	60	90	108	310	310	310	310	310	75	6500	-
19	81	345	1.8	18.33	IE4	BG50-../S4E11SA6	8.1	27	54	81	98	345	345	345	345	345	75	7200	-
19	68	415	1.5	21.96	IE4	BG50-../S4E11SA6	6.8	22.5	45.5	68	81	415	415	415	415	415	75	8000	-
19	61	460	1.4	24.34	IE4	BG50-../S4E11SA6	6.1	20.5	41	61	73	460	460	460	460	460	75	8700	-
19	50	560	1.1	29.62	IE4	BG50-../S4E11SA6	5	16.5	33.5	50	60	560	560	560	560	560	75	8000	-
19	45.5	620	1	32.84	IE4	BG50-../S4E11SA6	4.5	15	30	45.5	54	620	620	620	620	620	75	8700	-
19	39.5	710	0.88	37.89	IE4	BG50-../S4E11SA6	3.9	13	26	39.5	47.5	710	710	710	710	710	75	10000	-
19	66	425	2.8	22.4	IE4	BG60-../S4E11SA6	6.6	22	44.5	66	80	425	425	425	425	425	107	13300	-
19	60	470	2.5	24.82	IE4	BG60-../S4E11SA6	6	20	40	60	72	470	470	470	470	470	107	13800	-
19	51	550	2.2	29.31	IE4	BG60-../S4E11SA6	5.1	17	34	51	61	550	550	550	550	550	107	14800	-
19	46	610	1.9	32.48	IE4	BG60-../S4E11SA6	4.6	15	30.5	46	55	610	610	610	610	610	107	15400	-
19	38.5	730	1.6	38.85	IE4	BG60-../S4E11SA6	3.8	12.5	25.5	38.5	46	730	730	730	730	730	107	16000	-
19	34.5	810	1.5	43.05	IE4	BG60-../S4E11SA6	3.4	11.5	23	34.5	41.5	810	810	810	810	810	107	16000	-
19	29.5	950	1.3	50.31	IE4	BG60-../S4E11SA6	2.9	9.9	19.5	29.5	35.5	950	950	950	950	950	107	16000	-
19	26.5	1050	1.1	55.76	IE4	BG60-../S4E11SA6	2.6	8.9	17.5	26.5	32	1050	1050	1050	1050	1050	107	16000	-
19	24.5	1150	1	60.9	IE4	BG60-../S4E11SA6	2.4	8.2	16	24.5	29.5	1150	1150	1150	1150	1150	107	16000	-
19	22	1280	0.94	67.49	IE4	BG60-../S4E11SA6	2.2	7.4	14.5	22	26.5	1280	1280	1280	1280	1280	107	16000	-
19	21.5	1290	0.92	68.32	IE4	BG60Z-../S4E11SA6	2.1	7.3	14.5	21.5	26	1290	1290	1290	1290	1290	123	16000	-
19	19.5	1430	0.83	75.71	IE4	BG60Z-../S4E11SA6	1.9	6.6	13	19.5	23.5	1430	1430	1430	1430	1430	123	16000	-
19	32	880	2.6	46.54	IE4	BG70-../S4E11SA6	3.2	10.5	21	32	38.5	880	880	880	880	880	138	20000	-
19	29.5	950	2.4	50.4	IE4	BG70-../S4E11SA6	2.9	9.9	19.5	29.5	35.5	950	950	950	950	950	138	20000	-
19	25	1130	2	59.82	IE4	BG70-../S4E11SA6	2.5	8.3	16.5	25	30	1130	1130	1130	1130	1130	138	20000	-
19	27	1030	1.9	54.64	IE4	BG70Z-../S4E11SA6	2.7	9.1	18	27	32.5	1030	1030	1030	1030	1030	164	20000	-
19	23	1230	1.9	64.85	IE4	BG70Z-../S4E11SA6	2.3	7.7	15	23	27.5	1230	1230	1230	1230	1230	164	20000	-
19	20	1400	1.6	73.82	IE4	BG70Z-../S4E11SA6	2	6.7	13.5	20	24	1400	1400	1400	1400	1400	164	20000	-
19	17	1660	1.4	87.61	IE4	BG70Z-../S4E11SA6	1.7	5.7	11	17	20.5	1660	1660	1660	1660	1660	164	20000	-
19	15.5	1810	1.3	95.74	IE4	BG70Z-../S4E11SA6	1.5	5.2	10	15.5	18.5	1810	1810	1810	1810	1810	164	20000	-
19	13	2150	1.1	113.6	IE4	BG70Z-../S4E11SA6	1.3	4.4	8.8	13	15.5	2150	2150	2150	2150	2150	164	20000	-
19	12	2350	0.98	124	IE4	BG70Z-../S4E11SA6	1.2	4	8	12	14.5	2350	2350	2350	2350	2350	164	20000	-
19	10	2750	0.82	147.2	IE4	BG70Z-../S4E11SA6	1	3.3	6.7	10	12	2750	2750	2750	2750	2750	164	20000	-
19	20	1400	3	73.73	IE4	BG80Z-../S4E11SA6	2	6.7	1										

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

**M<sub>N</sub> = 19 Nm (P<sub>N</sub> = 3 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
19	5.3	5300	0.86	282.8	IE4	BG80G40-../S4E11SA6	0.5	1.7	3.5	5.3	6.3	5300	5300	5300	5300	5300	242	26000	-
19	9.2	3050	2.7	163	IE4	BG90Z-../S4E11SA6	0.9	3	6.1	9.2	11	3050	3050	3050	3050	3050	336	65000	-
19	8.4	3350	2.5	178.5	IE4	BG90Z-../S4E11SA6	0.8	2.8	5.6	8.4	10	3350	3350	3350	3350	3350	336	65000	-
19	7.2	3950	2.1	208.3	IE4	BG90Z-../S4E11SA6	0.7	2.4	4.8	7.2	8.6	3950	3950	3950	3950	3950	336	65000	-
19	6.5	4300	1.9	228.1	IE4	BG90Z-../S4E11SA6	0.65	2.1	4.3	6.5	7.8	4300	4300	4300	4300	4300	336	65000	-
19	6.8	4150	2.2	219.9	IE4	BG90G50-../S4E11SA6	0.65	2.2	4.5	6.8	8.1	4150	4150	4150	4150	4150	353	65000	-
19	5.7	4950	1.8	262.5	IE4	BG90G50-../S4E11SA6	0.55	1.9	3.8	5.7	6.8	4950	4950	4950	4950	4950	353	65000	-
19	5	5600	1.6	298.8	IE4	BG90G50-../S4E11SA6	0.5	1.6	3.3	5	6	5600	5600	5600	5600	5600	353	65000	-
19	4.1	6800	1.3	360.3	IE4	BG90G50-../S4E11SA6	0.41	1.3	2.7	4.1	4.9	6800	6800	6800	6800	6800	353	65000	-
19	3.4	8200	1.1	435.8	IE4	BG90G50-../S4E11SA6	0.34	1.1	2.2	3.4	4.1	8200	8200	8200	8200	8200	353	65000	-
19	2.9	9500	0.96	504.7	IE4	BG90G50-../S4E11SA6	0.29	0.95	1.9	2.9	3.5	9500	9500	9500	9500	9500	353	65000	-
19	2.5	11100	0.82	588.8	IE4	BG90G50-../S4E11SA6	0.25	0.8	1.6	2.5	3	11100	11100	11100	11100	11100	353	65000	-
19	4.3	6500	2.8	343.6	IE4	BG100Z-../S4E11SA6	0.43	1.4	2.9	4.3	5.2	6500	6500	6500	6500	6500	543	90000	-
19	3.9	7200	2.5	382.6	IE4	BG100Z-../S4E11SA6	0.39	1.3	2.6	3.9	4.7	7200	7200	7200	7200	7200	543	90000	-
19	3.2	8600	2.1	456.7	IE4	BG100Z-../S4E11SA6	0.32	1	2.1	3.2	3.9	8600	8600	8600	8600	8600	543	90000	-
19	2.9	9600	1.9	508.5	IE4	BG100Z-../S4E11SA6	0.29	0.95	1.9	2.9	3.5	9600	9600	9600	9600	9600	543	90000	-
19	2.5	11200	1.6	591.1	IE4	BG100Z-../S4E11SA6	0.25	0.8	1.6	2.5	3	11200	11200	11200	11200	11200	543	90000	-
19	2.2	12500	1.5	658.1	IE4	BG100Z-../S4E11SA6	0.22	0.75	1.5	2.2	2.7	12500	12500	12500	12500	12500	543	90000	-
19	1.9	14400	1.3	759	IE4	BG100Z-../S4E11SA6	0.19	0.65	1.3	1.9	2.3	14400	14400	14400	14400	14400	543	90000	-
19	1.7	16000	1.2	845.1	IE4	BG100Z-../S4E11SA6	0.17	0.55	1.1	1.7	2.1	16000	16000	16000	16000	16000	543	90000	-
19	1.5	18500	1	976.1	IE4	BG100G50-../S4E11SA6	0.15	0.5	1	1.5	1.8	18500	18500	18500	18500	18500	540	90000	-
19	1.4	19800	0.93	1043	IE4	BG100G50-../S4E11SA6	0.14	0.47	0.95	1.4	1.7	19800	19800	19800	19800	19800	540	90000	-
19	1.2	22500	0.81	1204	IE4	BG100G50-../S4E11SA6	0.12	0.41	0.8	1.2	1.4	22500	22500	22500	22500	22500	540	90000	-

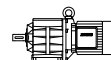
**M<sub>N</sub> = 20 Nm (P<sub>N</sub> = 3.1 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
20	590	50	1.1	2.52	IE3	BG10-../SPE09XA4	59	198	395	590	710	32.5	40	50	50	50	30	570	790
20	435	68	0.91	3.42	IE3	BG10-../SPE09XA4	43.5	146	290	435	520	44	54	68	68	68	30	630	880
20	590	50	1.7	2.52	IE3	BG20-../SPE09XA4	59	198	395	590	710	32.5	40	50	50	50	32	1650	-
20	450	66	1.4	3.33	IE3	BG20-../SPE09XA4	45	150	300	450	540	43	53	66	66	66	32	1830	-
20	340	87	1.2	4.38	IE3	BG20-../SPE09XA4	34	114	225	340	410	56	70	87	87	87	32	1990	-
20	270	109	1	5.49	IE3	BG20-../SPE09XA4	27	91	182	270	325	71	87	109	109	109	32	2100	-
20	245	121	1	6.06	IE3	BG20-../SPE09XA4	24.5	82	165	245	295	78	96	121	121	121	32	2250	-
20	230	129	0.94	6.48	IE3	BG20-../SPE09XA4	23	77	154	230	275	84	103	129	129	129	32	2250	-
20	220	134	0.97	6.73	IE3	BG20-../SPE09XA4	22	74	148	220	265	87	107	134	134	134	32	2350	2100
20	187	160	0.85	8.02	IE3	BG20-../SPE09XA4	18.5	62	124	187	220	104	128	160	160	160	32	2500	-
20	168	178	0.8	8.91	IE3	BG20-../SPE09XA4	16.5	56	112	168	200	115	142	178	178	178	32	2600	-
20	560	53	2.4	2.67	IE3	BG30-../SPE09XA4	56	187	370	560	670	34.5	42.5	53	53	53	37	1450	-
20	440	68	2	3.4	IE3	BG30-../SPE09XA4	44	147	290	440	520	44	54	68	68	68	37	1580	-
20	355	84	2	4.21	IE3	BG30-../SPE09XA4	35.5	118	235	355	425	54	67	84	84	84	37	1630	-
20	275	108	1.8	5.44	IE3	BG30-../SPE09XA4	27.5	91	183	275	330	70	87	108	108	108	37	1670	-
20	220	135	1.7	6.76	IE3	BG30-../SPE09XA4	22	73	147	220	265	87	108	135	135	135	37	2550	-
20	220	135	1.6	6.75	IE3	BG30-../SPE09XA4	22	74	148	220	265	87	108	135	135	135	37	1760	-
20	200	150	1.5	7.5	IE3	BG30-../SPE09XA4	20	66	133	200	240	97	120	150	150	150	37	2750	-
20	189	158	1.4	7.91	IE3	BG30-../SPE09XA4	18.5	63	126	189	225	102	126	158	158	158	37	1760	-
20	174	172	1.4	8.6	IE3	BG30-../SPE09XA4	17	58	116	174	205	111	137	172	172	172	37	2800	-
20	157	191	1.3	9.55	IE3	BG30-../SPE09XA4	15.5	52	104	157	188	124	152	191	191	191	37	3000	-
20	140	210	1.2	10.65	IE3	BG30-../SPE09XA4	14	46.5	93	140	169	138	170	210	210	210	37	2950	-
20	126	235	1.1	11.82	IE3	BG30-../SPE09XA4	12.5	42	84	126	152	153	189	235	235	235	37	3200	-
20	108	275	1.1	13.77	IE3	BG30-../SPE09XA4	10.5	36	72	108	130	179	220	275	275	275	37	3150	-
20	98	305	0.98	15.27	IE3	BG30-../SPE09XA4	9.8	32.5	65	98	117	198	240	305	305	305	37	3450	-
20	87	340	0.88	17.06	IE3	BG30-../SPE09XA4	8.7	29	58	87	105	220	270	340	340	340	37	3700	-
20	375	79	3	3.97	IE3	BG40-../SPE09XA4	37.5	125	250	375	450	51	63	79	79	79	51	2400	-
20	300	98	2.7	4.94	IE3	BG40-../SPE09XA4	30	101	200	300	360	64	79	98	98	98	51	2450	-
20	235	125	2.3	6.29	IE3	BG40-../SPE09XA4	23.5	79	158	235	285	81	100	125	125	125	51	2600	-
20	230	128	2.4	6.4	IE3	BG40-../SPE09XA4	23	78	156	230	280	83	102	128	128	128	51	3750	-
20	210	142	2.3	7.11	IE3	BG40-../SPE09XA4	21	70	140	210	250	92	113	142	142	142	51	3950	-
20	196	152	1.9	7.62	IE3	BG40-../SPE09XA4	19.5	65	131	196	235	99	121	152	152	152	51	2650	-
20	180	166	2	8.31	IE3	BG40-../SPE09XA4	18	60	120	180	215	108	132	166	166	166	51	4100	-
20	166	180	1.6	9	IE3	BG40-../SPE09XA4	16.5	55	111	166	200	117	144	180	180	180	51	2650	-
20	162	184	1.9	9.23	IE3	BG40-../SPE09XA4	16	54	108	162	195	119	147	184	184	184	51	4350	-
20	144	205	1.8	10.35	IE3	BG40-../SPE09XA4	14	48	96	144	173	134	165	205	205	205	51	4350	-
20	130	225	1.7	11.49	IE3	BG40-../SPE09XA4	13	43.5	87	130	156	149	183	225	225	225	51	4600	-
20	116	255	1.6	12.86	IE3	BG40-../SPE09XA4	11.5	38.5	77	116	139	167	205	255	255	255	51	4500	-
20	105	285	1.5	14.28	IE3	BG40-../SPE09XA4	10.5	35	70	105	126	185	225	285	285	285	51	4900	-
20	91	325	1.3	16.39	IE3	BG40-../SPE09XA4	9.1	30.5	61	91	109	210	260	325	325	325	51	5300	-
20	82	360	1.2	18.19	IE3	BG40-../SPE09XA4	8.2	27	54	82	98	235	290	360	360	360	51	5600	-
20	75	395	1.1	19.84	IE3	BG40-../SPE09XA4	7.5	25	50	75	90	255							



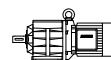
# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 20 \text{ Nm}$  ( $P_N = 3.1 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
20	112	265	2.2	13.36	IE3	BG50-../SPE09XA4	11	37	74	112	134	173	210	265	265	265	59	6100	-
20	90	330	1.9	16.53	IE3	BG50-../SPE09XA4	9	30	60	90	108	210	260	330	330	330	59	6500	-
20	81	365	1.7	18.33	IE3	BG50-../SPE09XA4	8.1	27	54	81	98	235	290	365	365	365	59	7200	-
20	68	435	1.4	21.96	IE3	BG50-../SPE09XA4	6.8	22.5	45.5	68	81	285	350	435	435	435	59	8000	-
20	61	485	1.3	24.34	IE3	BG50-../SPE09XA4	6.1	20.5	41	61	73	315	385	485	485	485	59	8700	-
20	50	590	1.1	29.62	IE3	BG50-../SPE09XA4	5	16.5	33.5	50	60	385	470	590	590	590	59	8000	-
20	45.5	650	0.96	32.84	IE3	BG50-../SPE09XA4	4.5	15	30	45.5	54	425	520	650	650	650	59	8700	-
20	39.5	750	0.83	37.89	IE3	BG50-../SPE09XA4	3.9	13	26	39.5	47.5	490	600	750	750	750	59	10000	-
20	66	445	2.7	22.4	IE3	BG60-../SPE09XA4	6.6	22	44.5	66	80	290	355	445	445	445	90	13300	-
20	60	495	2.4	24.82	IE3	BG60-../SPE09XA4	6	20	40	60	72	320	395	495	495	495	90	13800	-
20	51	580	2	29.31	IE3	BG60-../SPE09XA4	5.1	17	34	51	61	380	465	580	580	580	90	14800	-
20	46	640	1.8	32.48	IE3	BG60-../SPE09XA4	4.6	15	30.5	46	55	420	510	640	640	640	90	15400	-
20	38.5	770	1.5	38.85	IE3	BG60-../SPE09XA4	3.8	12.5	25.5	38.5	46	500	620	770	770	770	90	16000	-
20	34.5	860	1.4	43.05	IE3	BG60-../SPE09XA4	3.4	11.5	23	34.5	41.5	550	680	860	860	860	90	16000	-
20	29.5	1000	1.2	50.31	IE3	BG60-../SPE09XA4	2.9	9.9	19.5	29.5	35.5	650	800	1000	1000	1000	90	16000	-
20	26.5	1110	1.1	55.76	IE3	BG60-../SPE09XA4	2.6	8.9	17.5	26.5	32	720	890	1110	1110	1110	90	16000	-
20	24.5	1210	0.99	60.9	IE3	BG60-../SPE09XA4	2.4	8.2	16	24.5	29.5	790	970	1210	1210	1210	90	16000	-
20	22	1340	0.89	67.49	IE3	BG60-../SPE09XA4	2.2	7.4	14.5	22	26.5	870	1070	1340	1340	1340	90	16000	-
20	21.5	1360	0.88	68.32	IE3	BG60Z-../SPE09XA4	2.1	7.3	14.5	21.5	26	880	1090	1360	1360	1360	109	16000	-
20	38	780	2.9	39.22	IE3	BG70-../SPE09XA4	3.8	12.5	25	38	45.5	500	620	780	780	780	128	19100	-
20	32	930	2.5	46.54	IE3	BG70-../SPE09XA4	3.2	10.5	21	32	38.5	600	740	930	930	930	128	20000	-
20	29.5	1000	2.3	50.4	IE3	BG70-../SPE09XA4	2.9	9.9	19.5	29.5	35.5	650	800	1000	1000	1000	128	20000	-
20	25	1190	1.9	59.82	IE3	BG70-../SPE09XA4	2.5	8.3	16.5	25	30	770	950	1190	1190	1190	128	20000	-
20	27	1090	1.8	54.64	IE3	BG70Z-../SPE09XA4	2.7	9.1	18	27	32.5	710	870	1090	1090	1090	149	20000	-
20	23	1290	1.6	64.85	IE3	BG70Z-../SPE09XA4	2.3	7.7	15	23	27.5	840	1030	1290	1290	1290	149	20000	-
20	20	1470	1.6	73.82	IE3	BG70Z-../SPE09XA4	2	6.7	13.5	20	24	950	1180	1470	1470	1470	149	20000	-
20	17	1750	1.3	87.61	IE3	BG70Z-../SPE09XA4	1.7	5.7	11	17	20.5	1130	1400	1750	1750	1750	149	20000	-
20	15.5	1910	1.2	95.74	IE3	BG70Z-../SPE09XA4	1.5	5.2	10	15.5	18.5	1240	1530	1910	1910	1910	149	20000	-
20	13	2250	1	113.6	IE3	BG70Z-../SPE09XA4	1.3	4.4	8.8	13	15.5	1470	1810	2250	2250	2250	149	20000	-
20	12	2450	0.93	124	IE3	BG70Z-../SPE09XA4	1.2	4	8	12	14.5	1610	1980	2450	2450	2450	149	20000	-
20	20	1470	2.8	73.73	IE3	BG80Z-../SPE09XA4	2	6.7	13.5	20	24	950	1170	1470	1470	1470	217	26000	-
20	17.5	1690	2.5	84.55	IE3	BG80Z-../SPE09XA4	1.7	5.9	11.5	17.5	21	1090	1350	1690	1690	1690	217	26000	-
20	15.5	1870	2.2	93.89	IE3	BG80Z-../SPE09XA4	1.5	5.3	10.5	15.5	19	1220	1500	1870	1870	1870	217	26000	-
20	13	2200	1.9	112.4	IE3	BG80Z-../SPE09XA4	1.3	4.4	8.8	13	16	1460	1790	2200	2200	2200	217	26000	-
20	12	2450	1.7	124.8	IE3	BG80Z-../SPE09XA4	1.2	4	8	12	14	1620	1990	2450	2450	2450	217	26000	-
20	10	2900	1.4	145.4	IE3	BG80Z-../SPE09XA4	1	3.4	6.8	10	12	1890	2300	2900	2900	2900	217	26000	-
20	9.2	3200	1.3	161.5	IE3	BG80Z-../SPE09XA4	0.9	3	6.1	9.2	11	2050	2550	3200	3200	3200	217	26000	-
20	8	3700	1.1	186.8	IE3	BG80Z-../SPE09XA4	0.8	2.6	5.3	8	9.6	2400	2950	3700	3700	3700	217	26000	-
20	7.2	4100	1	207.4	IE3	BG80Z-../SPE09XA4	0.7	2.4	4.8	7.2	8.6	2650	3300	4100	4100	4100	217	26000	-
20	6.6	4500	1	227.2	IE3	BG80G40-../SPE09XA4	0.65	2.2	4.4	6.6	7.9	2950	3600	4500	4500	4500	228	26000	-
20	5.9	5000	0.91	252.3	IE3	BG80G40-../SPE09XA4	0.55	1.9	3.9	5.9	7.1	3250	4000	5000	5000	5000	228	26000	-
20	5.3	5600	0.81	282.8	IE3	BG80G40-../SPE09XA4	0.5	1.7	3.5	5.3	6.3	3650	4500	5600	5600	5600	228	26000	-
20	10.5	2750	3	139.2	IE3	BG90Z-../SPE09XA4	1	3.5	7.1	10.5	12.5	1800	2200	2750	2750	2750	327	65000	-
20	9.2	3250	2.6	163	IE3	BG90Z-../SPE09XA4	0.9	3	6.1	9.2	11	2100	2600	3250	3250	3250	327	65000	-
20	8.4	3550	2.4	178.5	IE3	BG90Z-../SPE09XA4	0.8	2.8	5.6	8.4	10	2300	2850	3550	3550	3550	327	65000	-
20	7.2	4150	2	208.3	IE3	BG90Z-../SPE09XA4	0.7	2.4	4.8	7.2	8.6	2700	3300	4150	4150	4150	327	65000	-
20	6.5	4550	1.8	228.1	IE3	BG90Z-../SPE09XA4	0.65	2.1	4.3	6.5	7.8	2950	3600	4550	4550	4550	327	65000	-
20	6.8	4350	2.1	219.9	IE3	BG90G50-../SPE09XA4	0.65	2.2	4.5	6.8	8.1	2850	3500	4350	4350	4350	338	65000	-
20	5.7	5200	1.8	262.5	IE3	BG90G50-../SPE09XA4	0.55	1.9	3.8	5.7	6.8	3400	4200	5200	5200	5200	338	65000	-
20	5	5900	1.5	298.8	IE3	BG90G50-../SPE09XA4	0.5	1.6	3.3	5	6	3850	4750	5900	5900	5900	338	65000	-
20	4.1	7200	1.3	360.3	IE3	BG90G50-../SPE09XA4	0.41	1.3	2.7	4.1	4.9	4650	5700	7200	7200	7200	338	65000	-
20	3.4	8700	1.1	435.8	IE3	BG90G50-../SPE09XA4	0.34	1.1	2.2	3.4	4.1	5600	6900	8700	8700	8700	338	65000	-
20	2.9	10000	0.91	504.7	IE3	BG90G50-../SPE09XA4	0.29	0.95	1.9	2.9	3.5	6500	8000	10000	10000	10000	338	65000	-
20	4.3	6800	2.7	343.6	IE3	BG100Z-../SPE09XA4	0.43	1.4	2.9	4.3	5.2	4450	5400	6800	6800	6800	526	90000	-
20	3.9	7600	2.4	382.6	IE3	BG100Z-../SPE09XA4	0.39	1.3	2.6	3.9	4.7	4950	6100	7600	7600	7600	526	90000	-
20	3.2	9100	2	456.7	IE3	BG100Z-../SPE09XA4	0.32	1	2.1	3.2	3.9	5900	7300	9100	9100	9100	526	90000	-
20	2.9	10100	1.8	508.5	IE3	BG100Z-../SPE09XA4	0.29	0.95	1.9	2.9	3.5	6600	8100	10100	10100	10100	526	90000	-
20	2.5	11800	1.6	591.1	IE3	BG100Z-../SPE09XA4	0.25	0.8	1.6	2.5	3	7600	9400	11800	11800	11800	526	90000	-
20	2.2	13100	1.4	658.1	IE3	BG100Z-../SPE09XA4	0.22	0.75	1.5	2.2	2.7	8500	10500	13100	13100	13100	526	90000	-
20	1.9	15100	1.2	759	IE3	BG100Z-../SPE09XA4	0.19	0.65	1.3	1.9	2.3	9800	12100	15100	15100	15100	526	90000	-
20	1.7	16900	1.1	845.1	IE3	BG100Z-../SPE09XA4	0.17	0.55	1.1	1.7	2.1	10900	13500	16900	16900	16900	526	90000	-
20	1.5	19500	0.95	976.1	IE3	BG100G50-../SPE09XA4	0.15	0.5	1	1.5	1.8	12600	15600	19500	19500	19500	525	90000	-
20	1.4	20500	0.89	1043	IE3	BG100G50-../SPE09XA4	0.14	0.47	0.95	1.4	1.7	13500	16600	20500	20500	20500	525	90000	-

6

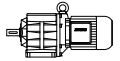
 **$M_N = 25.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	180								

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

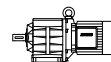
**$M_N = 25.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**



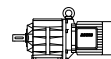
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>	
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]								
							150	500	1000	1500	1800	150	500	1000	1500	1800				
[Nm]	[1/min]	[Nm]	[-]	[:1]											[kg]	[N]	[N]			
25.5	189	200	1.1	7.91	IE3	BG30-../SPE11SA6	18.5	63	126	189	225	150	174	200	200	200	200	46	1760	-
25.5	174	215	1.1	8.6	IE3	BG30-../SPE11SA6	17	58	116	174	205	163	189	215	215	215	215	46	2800	-
25.5	157	240	1	9.55	IE3	BG30-../SPE11SA6	15.5	52	104	157	188	181	210	240	240	240	240	46	3000	-
25.5	140	270	0.98	10.65	IE3	BG30-../SPE11SA6	14	46.5	93	140	169	200	230	270	270	270	270	46	2950	-
25.5	126	300	0.9	11.82	IE3	BG30-../SPE11SA6	12.5	42	84	126	152	220	260	300	300	300	300	46	3200	-
25.5	108	350	0.83	13.77	IE3	BG30-../SPE11SA6	10.5	36	72	108	130	260	300	350	350	350	350	46	3150	-
25.5	470	81	2.7	3.19	IE3	BG40-../SPE11SA6	47	156	310	470	560	60	70	81	81	81	81	65	2350	-
25.5	375	101	2.4	3.97	IE3	BG40-../SPE11SA6	37.5	125	250	375	450	75	87	101	101	101	101	65	2400	-
25.5	300	125	2.1	4.94	IE3	BG40-../SPE11SA6	30	101	200	300	360	93	108	125	125	125	125	65	2450	-
25.5	235	160	1.8	6.29	IE3	BG40-../SPE11SA6	23.5	79	158	235	285	119	138	160	160	160	160	65	2600	-
25.5	230	163	1.9	6.4	IE3	BG40-../SPE11SA6	23	78	156	230	280	121	140	163	163	163	65	3750	-	
25.5	210	181	1.8	7.11	IE3	BG40-../SPE11SA6	21	70	140	210	250	135	156	181	181	181	65	3950	-	
25.5	196	194	1.5	7.62	IE3	BG40-../SPE11SA6	19.5	65	131	196	235	144	167	194	194	194	65	2650	-	
25.5	180	210	1.6	8.31	IE3	BG40-../SPE11SA6	18	60	120	180	215	157	182	210	210	210	65	4100	-	
25.5	166	225	1.3	9	IE3	BG40-../SPE11SA6	16.5	55	111	166	200	171	198	225	225	225	65	2650	-	
25.5	162	235	1.5	9.23	IE3	BG40-../SPE11SA6	16	54	108	162	195	175	200	235	235	235	65	4350	-	
25.5	144	260	1.4	10.35	IE3	BG40-../SPE11SA6	14	48	96	144	173	196	225	260	260	260	65	4350	-	
25.5	130	290	1.3	11.49	IE3	BG40-../SPE11SA6	13	43.5	87	130	156	215	250	290	290	290	65	4600	-	
25.5	116	325	1.3	12.86	IE3	BG40-../SPE11SA6	11.5	38.5	77	116	139	240	280	325	325	325	65	4500	-	
25.5	105	360	1.2	14.28	IE3	BG40-../SPE11SA6	10.5	35	70	105	126	270	310	360	360	360	65	4900	-	
25.5	91	415	1	16.39	IE3	BG40-../SPE11SA6	9.1	30.5	61	91	109	310	360	415	415	415	65	5300	-	
25.5	82	460	0.92	18.19	IE3	BG40-../SPE11SA6	8.2	27	54	82	98	345	400	460	460	460	65	5600	-	
25.5	75	500	0.84	19.84	IE3	BG40-../SPE11SA6	7.5	25	50	75	90	375	435	500	500	500	65	5800	-	
25.5	245	154	2.9	6.07	IE3	BG50-../SPE11SA6	24.5	82	164	245	295	115	133	154	154	154	75	4700	-	
25.5	220	171	2.6	6.74	IE3	BG50-../SPE11SA6	22	74	148	220	265	128	148	171	171	171	75	3750	-	
25.5	172	220	2.3	8.7	IE3	BG50-../SPE11SA6	17	57	114	172	205	165	191	220	220	220	75	5300	-	
25.5	155	245	2.1	9.65	IE3	BG50-../SPE11SA6	15.5	51	103	155	186	183	210	245	245	245	75	5600	-	
25.5	124	305	1.9	12.06	IE3	BG50-../SPE11SA6	12	41	82	124	149	225	265	305	305	305	75	5700	-	
25.5	112	340	1.7	13.36	IE3	BG50-../SPE11SA6	11	37	74	112	134	250	290	340	340	340	75	6100	-	
25.5	90	420	1.5	16.53	IE3	BG50-../SPE11SA6	9	30	60	90	108	310	360	420	420	420	75	6500	-	
25.5	81	465	1.3	18.33	IE3	BG50-../SPE11SA6	8.1	27	54	81	98	345	400	465	465	465	75	7200	-	
25.5	68	550	1.1	21.96	IE3	BG50-../SPE11SA6	6.8	22.5	45	68	81	415	480	550	550	550	75	8000	-	
25.5	61	620	1	24.34	IE3	BG50-../SPE11SA6	6.1	20.5	41	61	73	460	530	620	620	620	75	8700	-	
25.5	50	750	0.83	29.62	IE3	BG50-../SPE11SA6	5	16.5	33.5	50	60	560	650	750	750	750	75	8000	-	
25.5	111	340	3	13.47	IE3	BG60-../SPE11SA6	11	37	74	111	133	255	295	340	340	340	107	11200	-	
25.5	89	425	2.6	16.8	IE3	BG60-../SPE11SA6	8.9	29.5	59	89	107	315	365	425	425	425	107	12000	-	
25.5	80	470	2.4	18.62	IE3	BG60-../SPE11SA6	8	26.5	53	80	96	350	405	470	470	470	107	12400	-	
25.5	66	570	2.1	22.4	IE3	BG60-../SPE11SA6	6.6	22	44.5	66	80	425	490	570	570	570	107	13300	-	
25.5	60	630	1.9	24.82	IE3	BG60-../SPE11SA6	6	20	40	60	72	470	540	630	630	630	107	13800	-	
25.5	51	740	1.6	29.31	IE3	BG60-../SPE11SA6	5.1	17	34	51	61	550	640	740	740	740	107	14800	-	
25.5	46	820	1.4	32.48	IE3	BG60-../SPE11SA6	4.6	15	30.5	46	55	610	710	820	820	820	107	15400	-	
25.5	38.5	990	1.2	38.85	IE3	BG60-../SPE11SA6	3.8	12.5	25.5	38.5	46	730	850	990	990	990	107	16000	-	
25.5	34.5	1090	1.1	43.05	IE3	BG60-../SPE11SA6	3.4	11.5	23	34.5	41.5	810	940	1090	1090	1090	107	16000	-	
25.5	29.5	1280	0.94	50.31	IE3	BG60-../SPE11SA6	2.9	9.9	19.5	29.5	35.5	950	1100	1280	1280	1280	107	16000	-	
25.5	26.5	1420	0.84	55.76	IE3	BG60-../SPE11SA6	2.6	8.9	17.5	26.5	32	1050	1220	1420	1420	1420	107	16000	-	
25.5	50	750	3	29.69	IE3	BG70-../SPE11SA6	5	16.5	33.5	50	60	560	650	750	750	750	138	16900	-	
25.5	42.5	890	2.6	35.24	IE3	BG70-../SPE11SA6	4.2	14	28	42.5	51	660	770	890	890	890	138	18300	-	
25.5	38	1000	2.3	39.22	IE3	BG70-../SPE11SA6	3.8	12.5	25	38	45.5	740	860	1000	1000	1000	138	19100	-	
25.5	32	1180	1.9	46.54	IE3	BG70-../SPE11SA6	3.2	10.5	21	32	38.5	880	1020	1180	1180	1180	138	20000	-	
25.5	29.5	1280	1.8	50.4	IE3	BG70-../SPE11SA6	2.9	9.9	19.5	29.5	35.5	950	1100	1280	1280	1280	138	20000	-	
25.5	25	1520	1.5	59.82	IE3	BG70-../SPE11SA6	2.5	8.3	16.5	25	30	1130	1310	1520	1520	1520	138	20000	-	
25.5	27	1390	1.4	54.64	IE3	BG70Z-../SPE11SA6	2.7	9.1	18	27	32.5	1030	1200	1390	1390	1390	164	20000	-	
25.5	23	1650	1.4	64.85	IE3	BG70Z-../SPE11SA6	2.3	7.7	15	23	27.5	1230	1420	1650	1650	1650	164	20000	-	
25.5	20	1880	1.2	73.82	IE3	BG70Z-../SPE11SA6	2	6.7	13.5	20	24	1400	1620	1880	1880	1880	164	20000	-	
25.5	17	2200	1	87.61	IE3	BG70Z-../SPE11SA6	1.7	5.7	11	17	20.5	1660	1920	2200	2200	2200	164	20000	-	
25.5	15.5	2400	0.94	95.74	IE3	BG70Z-../SPE11SA6	1.5	5.2	10	15.5	18.5	1810	2100	2400	2400	2400	164	20000	-	
25.5	26	1450	2.9	57.24	IE3	BG80-../SPE11SA6	2.6	8.7	17	26	31	1080	1250	1450	1450	1450	192	25400	-	
25.5	23.5	1620	2.6	63.56	IE3	BG80-../SPE11SA6	2.3	7.8	15.5	23.5	28	1200	1390	1620	1620	1620	192	26000	-	
25.5	22.5	1690	2.5	66.4	IE3	BG80Z-../SPE11SA6	2.2	7.5	15	22.5	27	1260	1460	1690	1690	1690	234	26000	-	
2																				

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

 **$M_N = 25.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**


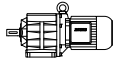
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							25.5	6.4	5900	2.8	232.6	IE3	BG100-../SPE11SA6	0.6	2.1	4.2			
25.5	5.7	6600	2.5	259	IE3	BG100-../SPE11SA6	0.55	1.9	3.8	5.7	6.9	4900	5600	6600	6600	6600	453	90000	-
25.5	5.5	6800	2.7	269.8	IE3	BG100Z-../SPE11SA6	0.55	1.8	3.7	5.5	6.6	5100	5900	6800	6800	6800	543	90000	-
25.5	4.9	7600	2.4	300.4	IE3	BG100Z-../SPE11SA6	0.49	1.6	3.3	4.9	5.9	5700	6600	7600	7600	7600	543	90000	-
25.5	4.3	8700	2.1	343.6	IE3	BG100Z-../SPE11SA6	0.43	1.4	2.9	4.3	5.2	6500	7500	8700	8700	8700	543	90000	-
25.5	3.9	9700	1.9	382.6	IE3	BG100Z-../SPE11SA6	0.39	1.3	2.6	3.9	4.7	7200	8400	9700	9700	9700	543	90000	-
25.5	3.2	11600	1.6	456.7	IE3	BG100Z-../SPE11SA6	0.32	1	2.1	3.2	3.9	8600	10000	11600	11600	11600	543	90000	-
25.5	2.9	12900	1.4	508.5	IE3	BG100Z-../SPE11SA6	0.29	0.95	1.9	2.9	3.5	9600	11100	12900	12900	12900	543	90000	-
25.5	2.5	15000	1.2	591.1	IE3	BG100Z-../SPE11SA6	0.25	0.8	1.6	2.5	3	11200	13000	15000	15000	15000	543	90000	-
25.5	2.2	16700	1.1	658.1	IE3	BG100Z-../SPE11SA6	0.22	0.75	1.5	2.2	2.7	12500	14400	16700	16700	16700	543	90000	-
25.5	1.9	19300	0.96	759	IE3	BG100Z-../SPE11SA6	0.19	0.65	1.3	1.9	2.3	14400	16600	19300	19300	19300	543	90000	-
25.5	1.7	21500	0.86	845.1	IE3	BG100Z-../SPE11SA6	0.17	0.55	1.1	1.7	2.1	16000	18500	21500	21500	21500	543	90000	-

 **$M_N = 26.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**


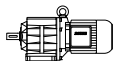
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							26.5	560	70	1.8	2.67	IE5	BG30-../S5E11MA6	56	187	370			
26.5	440	90	1.5	3.4	IE5	BG30-../S5E11MA6	44	147	290	440	520	90	90	90	90	90	46	1580	-
26.5	355	111	1.5	4.21	IE5	BG30-../S5E11MA6	35.5	118	235	355	425	111	111	111	111	111	46	1630	-
26.5	275	144	1.4	5.44	IE5	BG30-../S5E11MA6	27.5	91	183	275	330	144	144	144	144	144	46	1670	-
26.5	220	179	1.3	6.76	IE5	BG30-../S5E11MA6	22	73	147	220	265	179	179	179	179	179	46	2550	-
26.5	220	178	1.2	6.75	IE5	BG30-../S5E11MA6	22	74	148	220	265	178	178	178	178	178	46	1760	-
26.5	200	198	1.2	7.5	IE5	BG30-../S5E11MA6	20	66	133	200	240	198	198	198	198	198	46	2750	-
26.5	189	205	1	7.91	IE5	BG30-../S5E11MA6	18.5	63	126	189	225	205	205	205	205	205	46	1760	-
26.5	174	225	1.1	8.6	IE5	BG30-../S5E11MA6	17	58	116	174	205	225	225	225	225	225	46	2800	-
26.5	157	250	0.99	9.55	IE5	BG30-../S5E11MA6	15.5	52	104	157	188	250	250	250	250	250	46	3000	-
26.5	140	280	0.94	10.65	IE5	BG30-../S5E11MA6	14	46.5	93	140	169	280	280	280	280	280	46	2950	-
26.5	126	310	0.86	11.82	IE5	BG30-../S5E11MA6	12.5	42	84	126	152	310	310	310	310	310	46	3200	-
26.5	470	84	2.6	3.19	IE5	BG40-../S5E11MA6	47	156	310	470	560	84	84	84	84	84	65	2350	-
26.5	375	105	2.3	3.97	IE5	BG40-../S5E11MA6	37.5	125	250	375	450	105	105	105	105	105	65	2400	-
26.5	300	130	2	4.94	IE5	BG40-../S5E11MA6	30	101	200	300	360	130	130	130	130	130	65	2450	-
26.5	235	166	1.8	6.29	IE5	BG40-../S5E11MA6	23.5	79	158	235	285	166	166	166	166	166	65	2600	-
26.5	230	169	1.8	6.4	IE5	BG40-../S5E11MA6	23	78	156	230	280	169	169	169	169	169	65	3750	-
26.5	210	188	1.7	7.11	IE5	BG40-../S5E11MA6	21	70	140	210	250	188	188	188	188	188	65	3950	-
26.5	196	200	1.5	7.62	IE5	BG40-../S5E11MA6	19.5	65	131	196	235	200	200	200	200	200	65	2650	-
26.5	180	220	1.5	8.31	IE5	BG40-../S5E11MA6	18	60	120	180	215	220	220	220	220	220	65	4100	-
26.5	166	235	1.2	9	IE5	BG40-../S5E11MA6	16.5	55	111	166	200	235	235	235	235	235	65	2650	-
26.5	162	240	1.5	9.23	IE5	BG40-../S5E11MA6	16	54	108	162	195	240	240	240	240	240	65	4350	-
26.5	144	270	1.4	10.35	IE5	BG40-../S5E11MA6	14	48	96	144	173	270	270	270	270	270	65	4350	-
26.5	130	300	1.3	11.49	IE5	BG40-../S5E11MA6	13	43.5	87	130	156	300	300	300	300	300	65	4600	-
26.5	116	340	1.2	12.86	IE5	BG40-../S5E11MA6	11.5	38.5	77	116	139	340	340	340	340	340	65	4500	-
26.5	105	375	1.1	14.28	IE5	BG40-../S5E11MA6	10.5	35	70	105	126	375	375	375	375	375	65	4900	-
26.5	91	430	0.98	16.39	IE5	BG40-../S5E11MA6	9.1	30.5	61	91	109	430	430	430	430	430	65	5300	-
26.5	82	480	0.88	18.19	IE5	BG40-../S5E11MA6	8.2	27	54	82	98	480	480	480	480	480	65	5600	-
26.5	75	520	0.81	19.84	IE5	BG40-../S5E11MA6	7.5	25	50	75	90	520	520	520	520	520	65	5800	-
26.5	305	130	3	4.91	IE5	BG50-../S5E11MA6	30.5	101	200	305	365	130	130	130	130	130	75	3500	-
26.5	245	160	2.8	6.07	IE5	BG50-../S5E11MA6	24.5	82	164	245	295	160	160	160	160	160	75	4700	-
26.5	220	178	2.5	6.74	IE5	BG50-../S5E11MA6	22	74	148	220	265	178	178	178	178	178	75	3750	-
26.5	172	230	2.2	8.7	IE5	BG50-../S5E11MA6	17	57	114	172	205	230	230	230	230	230	75	5300	-
26.5	155	255	2	9.65	IE5	BG50-../S5E11MA6	15.5	51	103	155	186	255	255	255	255	255	75	5600	-
26.5	124	315	1.8	12.06	IE5	BG50-../S5E11MA6	12	41	82	124	149	315	315	315	315	315	75	5700	-
26.5	112	350	1.7	13.36	IE5	BG50-../S5E11MA6	11	37	74	112	134	350	350	350	350	350	75	6100	-
26.5	90	435	1.4	16.53	IE5	BG50-../S5E11MA6	9	30	60	90	108	435	435	435	435	435	75	6500	-
26.5	81	485	1.3	18.33	IE5	BG50-../S5E11MA6	8.1	27	54	81	98	485	485	485	485	485	75	7200	-
26.5	68	580	1.1	21.96	IE5	BG50-../S5E11MA6	6.8	22.5	45.5	68	81	580	580	580	580	580	75	8000	-
26.5	61	640	0.98	24.34	IE5	BG50-../S5E11MA6	6.1	20.5	41	61	73	640	640	640	640	640	75	8700	-
26.5	50	780	0.8	29.62	IE5	BG50-../S5E11MA6	5	16.5	33.5	50	60	780	780	780	780	780	75	8000	-
26.5	123	320	3	12.16	IE5	BG60-../S5E11MA6	12	41	82	123	148	320	320	320	320	320	107	10800	-
26.5	111	355	2.9	13.47	IE5	BG60-../S5E11MA6	11	37	74	111	133	355	355	355	355	355	107	11200	-
26.5	89	445	2.5	16.8	IE5	BG60-../S5E11MA6	8.9	29.5	59	89	107	445	445	445	445	445	107	12000	-
26.5	80	490	2.3	18.62	IE5	BG60-../S5E11MA6	8	26.5	53	80	96	490	490	490	490	490	107	12400	-
26.5	66	590	2	22.4	IE5	BG60-../S5E11MA6	6.6	22	44.5	66	80	590	590	590	590	590	107	13300	-
26.5	60	650	1.8	24.82	IE5	BG60-../S5E11MA6	6	20	40	60	72	650	650	650	650	650	107	13800	-
26.5	51	770	1.5	29.31	IE5	BG60-../S5E11MA6	5.1	17	34	51	61	770	770	770	770	770	107	14800	-
26.5	46	860	1.4	32.48	IE5	BG60-../S5E11MA6	4.6	15	30.5	46	55	860	860	860	860	860	107	15400	-
26.5	38.5	1020	1.2	38.85	IE5	BG60-../S5E11MA6	3.8	12.5	25.5	38.5	46	1020	1020	1020	1020	1020	107	16000	-
26.5	34.5	1140	1.1	43.05	IE5	BG60-../S5E11MA6	3.4	11.5	23	34.5	41.5	1140	1140	1140	1140	1140	107	16000	-
26.5	29.5	1330	0.9	50.31	IE5	BG60-../S5E11MA6	2.9	9.9	19.5	29.5	35.5	1330	1330	1330	1330	1330	107	16000	-
26.5	26.5	1470	0.81																

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{min}$

 **$M_N = 26.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Typ	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
26.5	27	1440	1.3	54.64	IE5	BG70Z-../S5E11MA6	2.7	9.1	18	27	32.5	1440	1440	1440	1440	1440	164	20000	-
26.5	23	1710	1.3	64.85	IE5	BG70Z-../S5E11MA6	2.3	7.7	15	23	27.5	1710	1710	1710	1710	1710	164	20000	-
26.5	20	1950	1.2	73.82	IE5	BG70Z-../S5E11MA6	2	6.7	13.5	20	24	1950	1950	1950	1950	1950	164	20000	-
26.5	17	2300	0.99	87.61	IE5	BG70Z-../S5E11MA6	1.7	5.7	11	17	20.5	2300	2300	2300	2300	2300	164	20000	-
26.5	15.5	2500	0.91	95.74	IE5	BG70Z-../S5E11MA6	1.5	5.2	10	15.5	18.5	2500	2500	2500	2500	2500	164	20000	-
26.5	26	1510	2.8	57.24	IE5	BG80-../S5E11MA6	2.6	8.7	17	26	31	1510	1510	1510	1510	1510	192	25400	-
26.5	23.5	1680	2.5	63.56	IE5	BG80-../S5E11MA6	2.3	7.8	15.5	23.5	28	1680	1680	1680	1680	1680	192	26000	-
26.5	22.5	1750	2.4	66.4	IE5	BG80Z-../S5E11MA6	2.2	7.5	15	22.5	27	1750	1750	1750	1750	1750	234	26000	-
26.5	20	1950	2.1	73.73	IE5	BG80Z-../S5E11MA6	2	6.7	13.5	20	24	1950	1950	1950	1950	1950	234	26000	-
26.5	17.5	2200	1.9	84.55	IE5	BG80Z-../S5E11MA6	1.7	5.9	11.5	17.5	21	2200	2200	2200	2200	2200	234	26000	-
26.5	15.5	2450	1.7	93.89	IE5	BG80Z-../S5E11MA6	1.5	5.3	10.5	15.5	19	2450	2450	2450	2450	2450	234	26000	-
26.5	13	2950	1.4	112.4	IE5	BG80Z-../S5E11MA6	1.3	4.4	8.8	13	16	2950	2950	2950	2950	2950	234	26000	-
26.5	12	3300	1.3	124.8	IE5	BG80Z-../S5E11MA6	1.2	4	8	12	14	3300	3300	3300	3300	3300	234	26000	-
26.5	10	3850	1.1	145.4	IE5	BG80Z-../S5E11MA6	1	3.4	6.8	10	12	3850	3850	3850	3850	3850	234	26000	-
26.5	9.2	4250	0.98	161.5	IE5	BG80Z-../S5E11MA6	0.9	3	6.1	9.2	11	4250	4250	4250	4250	4250	234	26000	-
26.5	8	4950	0.85	186.8	IE5	BG80Z-../S5E11MA6	0.8	2.6	5.3	8	9.6	4950	4950	4950	4950	4950	234	26000	-
26.5	14	2800	3	105.7	IE5	BG90Z-../S5E11MA6	1.4	4.7	9.4	14	17	2800	2800	2800	2800	2800	336	65000	-
26.5	11.5	3350	2.5	127.1	IE5	BG90Z-../S5E11MA6	1.1	3.9	7.8	11.5	14	3350	3350	3350	3350	3350	336	65000	-
26.5	10.5	3650	2.3	139.2	IE5	BG90Z-../S5E11MA6	1	3.5	7.1	10.5	12.5	3650	3650	3650	3650	3650	336	65000	-
26.5	9.2	4300	1.9	163	IE5	BG90Z-../S5E11MA6	0.9	3	6.1	9.2	11	4300	4300	4300	4300	4300	336	65000	-
26.5	8.4	4700	1.8	178.5	IE5	BG90Z-../S5E11MA6	0.8	2.8	5.6	8.4	10	4700	4700	4700	4700	4700	336	65000	-
26.5	7.2	5500	1.5	208.3	IE5	BG90Z-../S5E11MA6	0.7	2.4	4.8	7.2	8.6	5500	5500	5500	5500	5500	336	65000	-
26.5	6.5	6000	1.4	228.1	IE5	BG90Z-../S5E11MA6	0.65	2.1	4.3	6.5	7.8	6000	6000	6000	6000	6000	336	65000	-
26.5	6.8	5800	1.6	219.9	IE5	BG90G50-../S5E11MA6	0.65	2.2	4.5	6.8	8.1	5800	5800	5800	5800	5800	353	65000	-
26.5	5.7	6900	1.3	262.5	IE5	BG90G50-../S5E11MA6	0.55	1.9	3.8	5.7	6.8	6900	6900	6900	6900	6900	353	65000	-
26.5	5	7900	1.2	298.8	IE5	BG90G50-../S5E11MA6	0.5	1.6	3.3	5	6	7900	7900	7900	7900	7900	353	65000	-
26.5	4.1	9500	0.96	360.3	IE5	BG90G50-../S5E11MA6	0.41	1.3	2.7	4.1	4.9	9500	9500	9500	9500	9500	353	65000	-
26.5	3.4	11500	0.8	435.8	IE5	BG90G50-../S5E11MA6	0.34	1.1	2.2	3.4	4.1	11500	11500	11500	11500	11500	353	65000	-
26.5	6.4	6100	2.7	232.6	IE5	BG100-../S5E11MA6	0.6	2.1	4.2	6.4	7.7	6100	6100	6100	6100	6100	453	90000	-
26.5	5.7	6800	2.4	259	IE5	BG100-../S5E11MA6	0.55	1.9	3.8	5.7	6.9	6800	6800	6800	6800	6800	453	90000	-
26.5	5.5	7100	2.6	269.8	IE5	BG100Z-../S5E11MA6	0.55	1.8	3.7	5.5	6.6	7100	7100	7100	7100	7100	543	90000	-
26.5	4.9	7900	2.3	300.4	IE5	BG100Z-../S5E11MA6	0.49	1.6	3.3	4.9	5.9	7900	7900	7900	7900	7900	543	90000	-
26.5	4.3	9100	2	343.6	IE5	BG100Z-../S5E11MA6	0.43	1.4	2.9	4.3	5.2	9100	9100	9100	9100	9100	543	90000	-
26.5	3.9	10100	1.8	382.6	IE5	BG100Z-../S5E11MA6	0.39	1.3	2.6	3.9	4.7	10100	10100	10100	10100	10100	543	90000	-
26.5	3.2	12100	1.5	456.7	IE5	BG100Z-../S5E11MA6	0.32	1	2.1	3.2	3.9	12100	12100	12100	12100	12100	543	90000	-
26.5	2.9	13400	1.4	508.5	IE5	BG100Z-../S5E11MA6	0.29	0.95	1.9	2.9	3.5	13400	13400	13400	13400	13400	543	90000	-
26.5	2.5	15600	1.2	591.1	IE5	BG100Z-../S5E11MA6	0.25	0.8	1.6	2.5	3	15600	15600	15600	15600	15600	543	90000	-
26.5	2.2	17400	1.1	658.1	IE5	BG100Z-../S5E11MA6	0.22	0.75	1.5	2.2	2.7	17400	17400	17400	17400	17400	543	90000	-
26.5	1.9	20000	0.92	759	IE5	BG100Z-../S5E11MA6	0.19	0.65	1.3	1.9	2.3	20000	20000	20000	20000	20000	543	90000	-
26.5	1.7	22000	0.83	845.1	IE5	BG100Z-../S5E11MA6	0.17	0.55	1.1	1.7	2.1	22000	22000	22000	22000	22000	543	90000	-

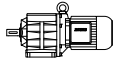
 **$M_N = 35 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]	
							150	500	1000	1500	1800	150	500	1000	1500	1800				
35	560	93	1.4	2.67	IE4	BG30-../S4E11MA6	56	187	370	560	670	70	80	93	93	93	93	46	1450	-
35	560	93	1.4	2.67	IE5	BG30-../S5E11LA6	56	187	370	560	670	93	93	93	93	93	93	58	1450	-
35	440	119	1.2	3.4	IE4	BG30-../S4E11MA6	44	147	290	440	520	90	102	119	119	119	119	46	1580	-
35	440	119	1.2	3.4	IE5	BG30-../S5E11LA6	44	147	290	440	520	119	119	119	119	119	119	58	1580	-
35	355	147	1.2	4.21	IE4	BG30-../S4E11MA6	35.5	118	235	355	425	111	126	147	147	147	147	46	1630	-
35	355	147	1.2	4.21	IE5	BG30-../S5E11LA6	35.5	118	235	355	425	147	147	147	147	147	147	58	1630	-
35	275	190	1.1	5.44	IE5	BG30-../S5E11LA6	27.5	91	183	275	330	190	190	190	190	190	190	58	1670	-
35	275	190	1.1	5.44	IE4	BG30-../S4E11MA6	27.5	91	183	275	330	144	163	190	190	190	190	46	1670	-
35	220	235	0.91	6.75	IE4	BG30-../S4E11MA6	22	74	148	220	265	178	200	235	235	235	235	46	1760	-
35	220	235	0.96	6.76	IE4	BG30-../S4E11MA6	22	73	147	220	265	179	200	235	235	235	235	46	2550	-
35	220	235	0.91	6.75	IE5	BG30-../S5E11LA6	22	74	148	220	265	235	235	235	235	235	235	58	1760	-
35	220	235	0.96	6.76	IE5	BG30-../S5E11LA6	22	73	147	220	265	235	235	235	235	235	235	58	2550	-
35	200	260	0.88	7.5	IE4	BG30-../S4E11MA6	20	66	133	200	240	198	225	260	260	260	260	46	2750	-
35	200	260	0.88	7.5	IE5	BG30-../S5E11LA6	20	66	133	200	240	260	260	260	260	260	260	58	2750	-
35	174	300	0.81	8.6	IE5	BG30-../S5E11LA6	17	58	116	174	205	300	300	300	300	300	300	58	2800	-
35	174	300	0.81	8.6	IE4	BG30-../S4E11MA6	17	58	116	174	205	225	255	300	300	300	300	46	2800	-
35	600	86	2.3	2.46	IE4	BG40-../S4E11MA6	60	200	405	600	730	65	73	86	86	86	86	65	2150	-
35	600	86	2.3	2.46	IE5	BG40-../S5E11LA6	60	200	405	600	730	86	86	86	86	86	86	77	2150	-
35	470	111	2	3.19	IE4	BG40-../S4E11MA6	47	156	310	470	560	84	95	111	111	111	111	65	2350	-
35	470	111	2	3.19	IE5	BG40-../S5E11LA6	47	156	310	470	560	111	111	111	111	111	111	77	2350	-
35	375	138	1.7	3.97	IE5	BG40-../S5E11LA6	37.5	125	250	375	450	138	138	138	138	138	138	77	2400	-
35	375	138	1.7																	

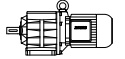


# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

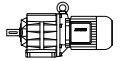
 **$M_N = 35 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	196	265	1.1	7.62	IE4	BG40-../S4E11MA6	19.5	65	131	196	235	200	225	265	265	265	65	2650	-
35	180	290	1.2	8.31	IE4	BG40-../S4E11MA6	18	60	120	180	215	220	245	290	290	290	65	4100	-
35	180	290	1.2	8.31	IE5	BG40-../S5E11LA6	18	60	120	180	215	290	290	290	290	290	77	4100	-
35	166	315	0.94	9	IE5	BG40-../S5E11LA6	16.5	55	111	166	200	315	315	315	315	315	77	2650	-
35	166	315	0.94	9	IE4	BG40-../S4E11MA6	16.5	55	111	166	200	235	270	315	315	315	65	2650	-
35	162	320	1.1	9.23	IE5	BG40-../S5E11LA6	16	54	108	162	195	320	320	320	320	320	77	4350	-
35	162	320	1.1	9.23	IE4	BG40-../S4E11MA6	16	54	108	162	195	240	275	320	320	320	65	4350	-
35	144	360	1	10.35	IE4	BG40-../S4E11MA6	14	48	96	144	173	270	310	360	360	360	65	4350	-
35	144	360	1	10.35	IE5	BG40-../S5E11LA6	14	48	96	144	173	360	360	360	360	360	77	4350	-
35	130	400	0.96	11.49	IE5	BG40-../S5E11LA6	13	43.5	87	130	156	400	400	400	400	400	77	4600	-
35	130	400	0.96	11.49	IE4	BG40-../S4E11MA6	13	43.5	87	130	156	300	340	400	400	400	65	4600	-
35	116	450	0.91	12.86	IE4	BG40-../S4E11MA6	11.5	38.5	77	116	139	340	385	450	450	450	65	4500	-
35	116	450	0.91	12.86	IE5	BG40-../S5E11LA6	11.5	38.5	77	116	139	450	450	450	450	450	77	4500	-
35	105	495	0.84	14.28	IE4	BG40-../S4E11MA6	10.5	35	70	105	126	375	425	495	495	495	65	4900	-
35	105	495	0.84	14.28	IE5	BG40-../S5E11LA6	10.5	35	70	105	126	495	495	495	495	495	77	4900	-
35	420	124	2.8	3.55	IE4	BG50-../S4E11MA6	42	140	280	420	500	94	106	124	124	124	75	3300	-
35	420	124	2.8	3.55	IE5	BG50-../S5E11LA6	42	140	280	420	500	124	124	124	124	124	86	3300	-
35	305	171	2.3	4.91	IE4	BG50-../S4E11MA6	30.5	101	200	305	365	130	147	171	171	171	75	3500	-
35	305	171	2.3	4.91	IE5	BG50-../S5E11LA6	30.5	101	200	305	365	171	171	171	171	171	86	3500	-
35	245	210	2.1	6.07	IE4	BG50-../S4E11MA6	24.5	82	164	245	295	160	182	210	210	210	75	4700	-
35	245	210	2.1	6.07	IE5	BG50-../S5E11LA6	24.5	82	164	245	295	210	210	210	210	210	86	4700	-
35	220	235	1.9	6.74	IE4	BG50-../S4E11MA6	22	74	148	220	265	178	200	235	235	235	75	3750	-
35	220	235	1.9	6.74	IE5	BG50-../S5E11LA6	22	74	148	220	265	235	235	235	235	235	86	3750	-
35	172	300	1.6	8.7	IE5	BG50-../S5E11LA6	17	57	114	172	205	300	300	300	300	300	86	5300	-
35	172	300	1.6	8.7	IE4	BG50-../S4E11MA6	17	57	114	172	205	230	260	300	300	300	75	5300	-
35	155	335	1.5	9.65	IE5	BG50-../S5E11LA6	15.5	51	103	155	186	335	335	335	335	335	86	5600	-
35	155	335	1.5	9.65	IE4	BG50-../S4E11MA6	15.5	51	103	155	186	255	285	335	335	335	75	5600	-
35	124	420	1.4	12.06	IE5	BG50-../S5E11LA6	12	41	82	124	149	420	420	420	420	420	86	5700	-
35	124	420	1.4	12.06	IE4	BG50-../S4E11MA6	12	41	82	124	149	315	360	420	420	420	75	5700	-
35	112	465	1.3	13.36	IE4	BG50-../S4E11MA6	11	37	74	112	134	350	400	465	465	465	75	6100	-
35	112	465	1.3	13.36	IE5	BG50-../S5E11LA6	11	37	74	112	134	465	465	465	465	465	86	6100	-
35	90	570	1.1	16.53	IE4	BG50-../S4E11MA6	9	30	60	90	108	435	495	570	570	570	75	6500	-
35	90	570	1.1	16.53	IE5	BG50-../S5E11LA6	9	30	60	90	108	570	570	570	570	570	86	6500	-
35	81	640	0.98	18.33	IE4	BG50-../S4E11MA6	8.1	27	54	81	98	485	540	640	640	640	75	7200	-
35	81	640	0.98	18.33	IE5	BG50-../S5E11LA6	8.1	27	54	81	98	640	640	640	640	640	86	7200	-
35	68	760	0.82	21.96	IE4	BG50-../S4E11MA6	6.8	22.5	45.5	68	81	580	650	760	760	760	75	8000	-
35	68	760	0.82	21.96	IE5	BG50-../S5E11LA6	6.8	22.5	45.5	68	81	760	760	760	760	760	86	8000	-
35	164	315	2.8	9.13	IE4	BG60-../S4E11MA6	16	54	109	164	197	240	270	315	315	315	107	9800	-
35	164	315	2.8	9.13	IE5	BG60-../S5E11LA6	16	54	109	164	197	315	315	315	315	315	119	9800	-
35	148	350	2.6	10.12	IE4	BG60-../S4E11MA6	14.5	49	98	148	177	265	300	350	350	350	107	10200	-
35	148	350	2.6	10.12	IE5	BG60-../S5E11LA6	14.5	49	98	148	177	350	350	350	350	350	119	10200	-
35	123	425	2.3	12.16	IE5	BG60-../S5E11LA6	12	41	82	123	148	425	425	425	425	425	119	10800	-
35	123	425	2.3	12.16	IE4	BG60-../S4E11MA6	12	41	82	123	148	320	360	425	425	425	107	10800	-
35	111	470	2.2	13.47	IE4	BG60-../S4E11MA6	11	37	74	111	133	355	400	470	470	470	107	11200	-
35	111	470	2.2	13.47	IE5	BG60-../S5E11LA6	11	37	74	111	133	470	470	470	470	470	119	11200	-
35	89	580	1.9	16.8	IE4	BG60-../S4E11MA6	8.9	29.5	59	89	107	445	500	580	580	580	107	12000	-
35	89	580	1.9	16.8	IE5	BG60-../S5E11LA6	8.9	29.5	59	89	107	580	580	580	580	580	119	12000	-
35	80	650	1.7	18.62	IE4	BG60-../S4E11MA6	8	26.5	53	80	96	490	550	650	650	650	107	12400	-
35	80	650	1.7	18.62	IE5	BG60-../S5E11LA6	8	26.5	53	80	96	650	650	650	650	650	119	12400	-
35	66	780	1.5	22.4	IE5	BG60-../S5E11LA6	6.6	22	44.5	66	80	780	780	780	780	780	119	13300	-
35	66	780	1.5	22.4	IE4	BG60-../S4E11MA6	6.6	22	44.5	66	80	590	670	780	780	780	107	13300	-
35	60	860	1.4	24.82	IE4	BG60-../S4E11MA6	6	20	40	60	72	650	740	860	860	860	107	13800	-
35	60	860	1.4	24.82	IE5	BG60-../S5E11LA6	6	20	40	60	72	860	860	860	860	860	119	13800	-
35	51	1020	1.2	29.31	IE4	BG60-../S4E11MA6	5.1	17	34	51	61	770	870	1020	1020	1020	107	14800	-
35	51	1020	1.2	29.31	IE5	BG60-../S5E11LA6	5.1	17	34	51	61	1020	1020	1020	1020	1020	119	14800	-
35	46	1130	1.1	32.48	IE4	BG60-../S4E11MA6	4.6	15	30.5	46	55	860	970	1130	1130	1130	107	15400	-
35	46	1130	1.1	32.48	IE5	BG60-../S5E11LA6	4.6	15	30.5	46	55	1130	1130	1130	1130	1130	119	15400	-
35	38.5	1350	0.88	38.85	IE5	BG60-../S5E11LA6	3.8	12.5	25.5	38.5	46	1350	1350	1350	1350	1350	119	16000	-
35	38.5	1350	0.88	38.85	IE4	BG60-../S4E11MA6	3.8	12.5	25.5	38.5	46	1020	1160	1350	1350	1350	107	16000	-
35	34.5	1500	0.8	43.05	IE4	BG60-../S4E11MA6	3.4	11.5	23	34.5	41.5	1140	1290	1500	1500	1500	107	16000	-
35	34.5	1500	0.8	43.05	IE5	BG60-../S5E11LA6	3.4	11.5	23	34.5	41.5	1500	1500	1500	1500	1500	119	16000	-
35	65	800	2.9	22.92	IE5	BG70-../S5E11LA6	6.5	21.5	43.5	65	78	800	800	800	800	800	149	15100	-
35	65	800	2.9	22.92	IE4	BG70-../S4E11MA6	6.5	21.5	43.5	65	78	600	680	800	800	800	138	15100	-
35	55	950	2.4	27.21	IE5	BG70-../S5E11LA6	5.5	18	36.5	55	66	950	950	950	950	950	149	16400	-
35	55	950	2.4	27.21	IE4	BG70-../S4E11MA6	5.5	18	36.5	55	66	720	810	950	950	950	138	16400	-
35	50	1030	2.2	29.69	IE4	BG70-../S4E11MA6	5	16.5	33.5	50	60	780	890	1030	1030	1030	138	16900	-
35	50	1030	2.2	29.69	IE5	BG70-../S5E11LA6	5	16.5	33.5	50	60	1030	1030	1030	1030	1030	149	16900	-
35	42.5	1230	1.9	35.24	IE5	BG70-../S5E11LA6	4.2	14	28	42.5	51	1230	1230	1230	1230	1230	149	18300	-
35	42.5	1230	1.9	35.24	IE4	BG70-../S4E11MA6	4.2	14	28	42.5	51	930							

**BG-series helical-gear motors****Selection helical-gear motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 35 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	20	2550	0.89	73.82	IE4	BG70Z-../S4E11MA6	2	6.7	13.5	20	24	1950	2200	2550	2550	2550	164	20000	-
35	20	2550	0.89	73.82	IE5	BG70Z-../S5E11LA6	2	6.7	13.5	20	24	2550	2550	2550	2550	2550	176	20000	-
35	34	1530	2.7	43.94	IE4	BG80-../S4E11MA6	3.4	11	22.5	34	40.5	1160	1310	1530	1530	1530	192	22600	-
35	34	1530	2.7	43.94	IE5	BG80-../S5E11LA6	3.4	11	22.5	34	40.5	1530	1530	1530	1530	1530	204	22600	-
35	30.5	1700	2.5	48.8	IE4	BG80-../S4E11MA6	3	10	20	30.5	36.5	1290	1460	1700	1700	1700	192	23800	-
35	30.5	1700	2.5	48.8	IE5	BG80-../S5E11LA6	3	10	20	30.5	36.5	1700	1700	1700	1700	1700	204	23800	-
35	26	2000	2.1	57.24	IE5	BG80-../S5E11LA6	2.6	8.7	17	26	31	2000	2000	2000	2000	2000	204	25400	-
35	26	2000	2.1	57.24	IE4	BG80-../S4E11MA6	2.6	8.7	17	26	31	1510	1710	2000	2000	2000	192	25400	-
35	23.5	2200	1.9	63.56	IE4	BG80Z-../S4E11MA6	2.3	7.8	15.5	23.5	28	1680	1900	2200	2200	2200	192	26000	-
35	23.5	2200	1.9	63.56	IE5	BG80-../S5E11LA6	2.3	7.8	15.5	23.5	28	2200	2200	2200	2200	2200	204	26000	-
35	22.5	2300	1.8	66.4	IE5	BG80Z-../S5E11LA6	2.2	7.5	15	22.5	27	2300	2300	2300	2300	2300	246	26000	-
35	22.5	2300	1.8	66.4	IE4	BG80Z-../S4E11MA6	2.2	7.5	15	22.5	27	1750	1990	2300	2300	2300	234	26000	-
35	20	2550	1.6	73.73	IE4	BG80Z-../S4E11MA6	2	6.7	13.5	20	24	1950	2200	2550	2550	2550	234	26000	-
35	20	2550	1.6	73.73	IE5	BG80Z-../S5E11LA6	2	6.7	13.5	20	24	2550	2550	2550	2550	2550	246	26000	-
35	17.5	2950	1.4	84.55	IE5	BG80Z-../S5E11LA6	1.7	5.9	11.5	17.5	21	2950	2950	2950	2950	2950	246	26000	-
35	17.5	2950	1.4	84.55	IE4	BG80Z-../S4E11MA6	1.7	5.9	11.5	17.5	21	2200	2500	2950	2950	2950	234	26000	-
35	15.5	3250	1.3	93.89	IE4	BG80Z-../S4E11MA6	1.5	5.3	10.5	15.5	19	2450	2800	3250	3250	3250	234	26000	-
35	15.5	3250	1.3	93.89	IE5	BG80Z-../S5E11LA6	1.5	5.3	10.5	15.5	19	3250	3250	3250	3250	3250	246	26000	-
35	13	3900	1.1	112.4	IE5	BG80Z-../S5E11LA6	1.3	4.4	8.8	13	16	3900	3900	3900	3900	3900	246	26000	-
35	13	3900	1.1	112.4	IE4	BG80Z-../S4E11MA6	1.3	4.4	8.8	13	16	2950	3350	3900	3900	3900	234	26000	-
35	12	4350	0.96	124.8	IE5	BG80Z-../S5E11LA6	1.2	4	8	12	14	4350	4350	4350	4350	4350	246	26000	-
35	12	4350	0.96	124.8	IE4	BG80Z-../S4E11MA6	1.2	4	8	12	14	3300	3700	4350	4350	4350	234	26000	-
35	10	5000	0.83	145.4	IE5	BG80Z-../S5E11LA6	1	3.4	6.8	10	12	5000	5000	5000	5000	5000	246	26000	-
35	10	5000	0.83	145.4	IE4	BG80Z-../S4E11MA6	1	3.4	6.8	10	12	3850	4350	5000	5000	5000	234	26000	-
35	17.5	2900	2.9	83.91	IE4	BG90Z-../S4E11MA6	1.7	5.9	11.5	17.5	21	2200	2500	2900	2900	2900	336	65000	-
35	17.5	2900	2.9	83.91	IE5	BG90Z-../S5E11LA6	1.7	5.9	11.5	17.5	21	2900	2900	2900	2900	2900	348	65000	-
35	15.5	3350	2.5	96.53	IE5	BG90Z-../S5E11LA6	1.5	5.1	10	15.5	18.5	3350	3350	3350	3350	3350	348	65000	-
35	15.5	3350	2.5	96.53	IE4	BG90Z-../S4E11MA6	1.5	5.1	10	15.5	18.5	2550	2850	3350	3350	3350	336	65000	-
35	14	3650	2.3	105.7	IE4	BG90Z-../S4E11MA6	1.4	4.7	9.4	14	17	2800	3150	3650	3650	3650	336	65000	-
35	14	3650	2.3	105.7	IE5	BG90Z-../S5E11LA6	1.4	4.7	9.4	14	17	3650	3650	3650	3650	3650	348	65000	-
35	11.5	4400	1.9	127.1	IE4	BG90Z-../S4E11MA6	1.1	3.9	7.8	11.5	14	3350	3800	4400	4400	4400	336	65000	-
35	11.5	4400	1.9	127.1	IE5	BG90Z-../S5E11LA6	1.1	3.9	7.8	11.5	14	4400	4400	4400	4400	4400	348	65000	-
35	10.5	4850	1.7	139.2	IE4	BG90Z-../S4E11MA6	1	3.5	7.1	10.5	12.5	3650	4150	4850	4850	4850	336	65000	-
35	10.5	4850	1.7	139.2	IE5	BG90Z-../S5E11LA6	1	3.5	7.1	10.5	12.5	4850	4850	4850	4850	4850	348	65000	-
35	9.2	5700	1.5	163	IE5	BG90Z-../S5E11LA6	0.9	3	6.1	9.2	11	5700	5700	5700	5700	5700	348	65000	-
35	9.2	5700	1.5	163	IE4	BG90Z-../S4E11MA6	0.9	3	6.1	9.2	11	4300	4850	5700	5700	5700	336	65000	-
35	8.4	6200	1.3	178.5	IE4	BG90Z-../S4E11MA6	0.8	2.8	5.6	8.4	10	4700	5300	6200	6200	6200	336	65000	-
35	8.4	6200	1.3	178.5	IE5	BG90Z-../S5E11LA6	0.8	2.8	5.6	8.4	10	6200	6200	6200	6200	6200	348	65000	-
35	7.2	7200	1.2	208.3	IE4	BG90Z-../S4E11MA6	0.7	2.4	4.8	7.2	8.6	5500	6200	7200	7200	7200	336	65000	-
35	7.2	7200	1.2	208.3	IE5	BG90Z-../S5E11LA6	0.7	2.4	4.8	7.2	8.6	7200	7200	7200	7200	7200	348	65000	-
35	6.5	7900	1.1	228.1	IE4	BG90Z-../S4E11MA6	0.65	2.1	4.3	6.5	7.8	6000	6800	7900	7900	7900	336	65000	-
35	6.5	7900	1.1	228.1	IE5	BG90Z-../S5E11LA6	0.65	2.1	4.3	6.5	7.8	7900	7900	7900	7900	7900	348	65000	-
35	6.8	7600	1.2	219.9	IE4	BG90G50-../S4E11MA6	0.65	2.2	4.5	6.8	8.1	5800	6500	7600	7600	7600	353	65000	-
35	6.8	7600	1.2	219.9	IE5	BG90G50-../S5E11LA6	0.65	2.2	4.5	6.8	8.1	7600	7600	7600	7600	7600	365	65000	-
35	5.7	9100	1	262.5	IE4	BG90G50-../S4E11MA6	0.55	1.9	3.8	5.7	6.8	6900	7800	9100	9100	9100	353	65000	-
35	5.7	9100	1	262.5	IE5	BG90G50-../S5E11LA6	0.55	1.9	3.8	5.7	6.8	9100	9100	9100	9100	9100	365	65000	-
35	5	10400	0.88	298.8	IE4	BG90G50-../S4E11MA6	0.5	1.6	3.3	5	6	7900	8900	10400	10400	10400	353	65000	-
35	5	10400	0.88	298.8	IE5	BG90G50-../S5E11LA6	0.5	1.6	3.3	5	6	10400	10400	10400	10400	10400	365	65000	-
35	8.3	6200	2.7	178.6	IE5	BG100-../S5E11LA6	0.8	2.7	5.5	8.3	10	6200	6200	6200	6200	6200	465	90000	-
35	8.3	6200	2.7	178.6	IE4	BG100-../S4E11MA6	0.8	2.7	5.5	8.3	10	4700	5300	6200	6200	6200	453	90000	-
35	7.5	6900	2.4	198.8	IE5	BG100-../S5E11LA6	0.75	2.5	5	7.5	9	6900	6900	6900	6900	6900	465	90000	-
35	7.5	6900	2.4	198.8	IE4	BG100-../S4E11MA6	0.75	2.5	5	7.5	9	5200	5900	6900	6900	6900	453	90000	-
35	6.4	8100	2.1	232.6	IE4	BG100-../S4E11MA6	0.6	2.1	4.2	6.4	7.7	6100	6900	8100	8100	8100	453	90000	-
35	6.4	8100	2.1	232.6	IE5	BG100-../S5E11LA6	0.6	2.1	4.2	6.4	7.7	8100	8100	8100	8100	8100	465	90000	-
35	5.7	9000	1.9	259	IE4	BG100-../S4E11MA6	0.55	1.9	3.8	5.7	6.9	6800	7700	9000	9000	9000	453	90000	-
35	5.7	9000	1.9	259	IE5	BG100-../S5E11LA6	0.55	1.9	3.8	5.7	6.9	9000	9000	9000	9000	9000	465	90000	-
35	5.5	9400	2	269.8	IE4	BG100Z-../S4E11MA6	0.55	1.8	3.7	5.5	6.6	7100	8000	9400	9400	9400	543	90000	-
35	5.5	9400	2	269.8	IE5	BG100Z-../S5E11LA6	0.55	1.8	3.7	5.5	6.6	9400	9400	9400	9400	9400	555	90000	-
35	4.9	10500	1.8	300.4	IE5	BG100Z-../S5E11LA6	0.49	1.6	3.3	4.9	5.9	10500	10500	10500	10500	10500	555	90000	-
35	4.9	10500	1.8	300.4	IE4	BG100Z-../S4E11MA6	0.49	1.6	3.3	4.9	5.9	7900	9000	10500	10500	10500	543	90000	-
35	4.3	12000	1.5	343.6	IE5	BG100Z-../S5E11LA6	0.43	1.4	2.9	4.3	5.2	12000	12000	12000	12000	12000	555	90000	-
35	4.3	12000	1.5	343.6	IE4	BG100Z-../S4E11MA6	0.43	1.4	2.9	4.3	5.2	9100	10300	12000	12000	12000	543	90000	-
35	3.9	13300	1.4	382.6	IE4	BG100Z-../S4E11MA6	0.39	1.3	2.6	3.9	4.7	10100	11400	13300	13300	13300	543	90000	-
35	3.9	13300	1.4	382.6	IE5	BG100Z-../S5E11LA6	0.39	1.3	2.6	3.9	4.7	13300	13300	13300	13300	13300	555	90000	-
35	3.2	15900	1.2	456.7	IE4	BG100Z-../S4E11MA6	0.32	1	2.1	3.2	3.9	12100	13700	15900	15900	15900	543	900	

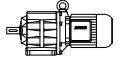
## M<sub>N</sub> = 48 Nm (P<sub>N</sub> = 7.5 kW)



M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
48	560	128	1	2.67	IE3	BG30-../SPE11LA6	56	187	370	560	670	93	106	128	128	128	58	1450	-
48	440	163	0.85	3.4	IE3	BG30-../SPE11LA6	44	147	290	440	520	119	136	163	163	58	1580	-	
48	355	200	0.85	4.21	IE3	BG30-../SPE11LA6	35.5	118	235	355	425	147	168	200	200	58	1630	-	
48	600	118	1.7	2.46	IE3	BG40-../SPE11LA6	60	200	405	600	730	86	98	118	118	77	2150	-	
48	470	153	1.4	3.19	IE3	BG40-../SPE11LA6	47	156	310	470	560	111	127	153	153	77	2350	-	
48	375	190	1.3	3.97	IE3	BG40-../SPE11LA6	37.5	125	250	375	450	138	158	190	190	77	2400	-	
48	300	235	1.1	4.94	IE3	BG40-../SPE11LA6	30	101	200	300	360	172	197	235	235	77	2450	-	
48	235	300	0.98	6.29	IE3	BG40-../SPE11LA6	23.5	79	158	235	285	220	250	300	300	77	2600	-	
48	230	305	1	6.4	IE3	BG40-../SPE11LA6	23	78	156	230	280	220	255	305	305	77	3750	-	
48	210	340	0.95	7.11	IE3	BG40-../SPE11LA6	21	70	140	210	250	245	280	340	340	77	3950	-	
48	196	365	0.81	7.62	IE3	BG40-../SPE11LA6	19.5	65	131	196	235	265	300	365	365	77	2650	-	
48	180	395	0.85	8.31	IE3	BG40-../SPE11LA6	18	60	120	180	215	290	330	395	395	77	4100	-	
48	162	440	0.8	9.23	IE3	BG40-../SPE11LA6	16	54	108	162	195	320	365	440	440	77	4350	-	
48	600	118	2.6	2.47	IE3	BG50-../SPE11LA6	60	200	400	600	720	86	98	118	118	86	2900	-	
48	420	170	2	3.55	IE3	BG50-../SPE11LA6	42	140	280	420	500	124	142	170	170	86	3300	-	
48	305	235	1.7	4.91	IE3	BG50-../SPE11LA6	30.5	101	200	305	365	171	196	235	235	86	3500	-	
48	245	290	1.5	6.07	IE3	BG50-../SPE11LA6	24.5	82	164	245	295	210	240	290	290	86	4700	-	
48	220	320	1.4	6.74	IE3	BG50-../SPE11LA6	22	74	148	220	265	235	265	320	320	86	3750	-	
48	172	415	1.2	8.7	IE3	BG50-../SPE11LA6	17	57	114	172	205	300	345	415	415	86	5300	-	
48	155	460	1.1	9.65	IE3	BG50-../SPE11LA6	15.5	51	103	155	186	335	385	460	460	86	5600	-	
48	124	570	0.98	12.06	IE3	BG50-../SPE11LA6	12	41	82	124	149	420	480	570	570	86	5700	-	
48	112	640	0.92	13.36	IE3	BG50-../SPE11LA6	11	37	74	112	134	465	530	640	640	86	6100	-	
48	300	235	2.8	4.98	IE3	BG60-../SPE11LA6	30	100	200	300	360	174	199	235	235	119	7800	-	
48	240	295	2.6	6.16	IE3	BG60-../SPE11LA6	24	81	162	240	290	215	245	295	295	119	8500	-	
48	215	325	2.4	6.82	IE3	BG60-../SPE11LA6	21.5	73	146	215	260	235	270	325	325	119	8900	-	
48	215	330	2.4	6.88	IE3	BG60-../SPE11LA6	21.5	72	145	215	260	240	275	330	330	119	8600	-	
48	164	435	2	9.13	IE3	BG60-../SPE11LA6	16	54	109	164	197	315	365	435	435	119	9800	-	
48	148	485	1.9	10.12	IE3	BG60-../SPE11LA6	14.5	49	98	148	177	350	400	485	485	119	10200	-	
48	123	580	1.7	12.16	IE3	BG60-../SPE11LA6	12	41	82	123	148	425	485	580	580	119	10800	-	
48	111	640	1.6	13.47	IE3	BG60-../SPE11LA6	11	37	74	111	133	470	530	640	640	119	11200	-	
48	89	800	1.4	16.8	IE3	BG60-../SPE11LA6	8.9	29.5	59	89	107	580	670	800	800	119	12000	-	
48	80	890	1.3	18.62	IE3	BG60-../SPE11LA6	8	26.5	53	80	96	650	740	890	890	119	12400	-	
48	66	1070	1.1	22.4	IE3	BG60-../SPE11LA6	6.6	22	44.5	66	80	780	890	1070	1070	119	13300	-	
48	60	1190	1	24.82	IE3	BG60-../SPE11LA6	6	20	40	60	72	860	990	1190	1190	119	13800	-	
48	51	1400	0.85	29.31	IE3	BG60-../SPE11LA6	5.1	17	34	51	61	1020	1170	1400	1400	119	14800	-	
48	84	840	2.7	17.68	IE3	BG70-../SPE11LA6	8.4	28	56	84	101	610	700	840	840	149	13400	-	
48	71	1000	2.3	20.98	IE3	BG70-../SPE11LA6	7.1	23.5	47.5	71	85	730	830	1000	1000	149	14600	-	
48	65	1100	2.1	22.92	IE3	BG70-../SPE11LA6	6.5	21.5	43.5	65	78	800	910	1100	1100	149	15100	-	
48	55	1300	1.8	27.21	IE3	BG70-../SPE11LA6	5.5	18	36.5	55	66	950	1080	1300	1300	149	16400	-	
48	50	1420	1.6	29.69	IE3	BG70-../SPE11LA6	5	16.5	33.5	50	60	1030	1180	1420	1420	149	16900	-	
48	42.5	1690	1.4	35.24	IE3	BG70-../SPE11LA6	4.2	14	28	42.5	51	1230	1400	1690	1690	149	18300	-	
48	38	1880	1.2	39.22	IE3	BG70-../SPE11LA6	3.8	12.5	25	38	45.5	1370	1560	1880	1880	149	19100	-	
48	32	2200	1	46.54	IE3	BG70-../SPE11LA6	3.2	10.5	21	32	38.5	1620	1860	2200	2200	149	20000	-	
48	29.5	2400	0.95	50.4	IE3	BG70-../SPE11LA6	2.9	9.9	19.5	29.5	35.5	1760	2000	2400	2400	149	20000	-	
48	25	2850	0.8	59.82	IE3	BG70-../SPE11LA6	2.5	8.3	16.5	25	30	2050	2350	2850	2850	149	20000	-	
48	51	1400	3	29.36	IE3	BG80-../SPE11LA6	5.1	17	34	51	61	1020	1170	1400	1400	204	18900	-	
48	43.5	1640	2.6	34.22	IE3	BG80-../SPE11LA6	4.3	14.5	29	43.5	52	1190	1360	1640	1640	204	20200	-	
48	39	1820	2.3	38	IE3	BG80-../SPE11LA6	3.9	13	26	39	47	1330	1520	1820	1820	204	21300	-	
48	34	2100	2	43.94	IE3	BG80-../SPE11LA6	3.4	11	22.5	34	40.5	1530	1750	2100	2100	204	22600	-	
48	30.5	2300	1.8	48.8	IE3	BG80-../SPE11LA6	3	10	20	30.5	36.5	1700	1950	2300	2300	204	23800	-	
48	26	2700	1.5	57.24	IE3	BG80-../SPE11LA6	2.6	8.7	17	26	31	2000	2250	2700	2700	204	25400	-	
48	23.5	3050	1.4	63.56	IE3	BG80-../SPE11LA6	2.3	7.8	15.5	23.5	28	2200	2500	3050	3050	204	26000	-	
48	22.5	3150	1.3	66.4	IE3	BG80Z-../SPE11LA6	2.2	7.5	15	22.5	27	2300	2650	3150	3150	246	26000	-	
48	20	3500	1.2	73.73	IE3	BG80Z-../SPE11LA6	2	6.7	13.5	20	24	2550	2900	3500	3500	246	26000	-	
48	17.5	4050	1	84.55	IE3	BG80Z-../SPE11LA6	1.7	5.9	11.5	17.5	21	2950	3350	4050	4050	246	26000	-	
48	15.5	4500	0.93	93.89	IE3	BG80Z-../SPE11LA6	1.5	5.3	10.5	15.5	19	3250	3750	4500	4500	246	26000	-	
48	26	2700	2.5	57.04	IE3	BG90Z-../SPE11LA6	2.6	8.7	17.5	26	31.5	1990	2250	2700	2700	348	65000	-	
48	24	2950	2.5	62.47	IE3	BG90Z-../SPE11LA6	2.4	8	16	24	28.5	2150	2450	2950	2950	348	65000	-	
48	19.5	3650	2.3	76.61	IE3	BG90Z-../SPE11LA6	1.9	6.5	13	19.5	23	2650	3050	3650	3650	348	65000	-	
48	17.5	4000	2.1	83.91	IE3	BG90Z-../SPE11LA6	1.7	5.9	11.5	17.5	21	2900	3350	4000	4000	348	65000	-	
48	15.5	4600	1.8	96.53	IE3	BG90Z-../SPE11LA6	1.5	5.1	10	15.5	18.5	3350	3850	4600	4600	348	65000	-	
48	14	5000	1.7	105.7	IE3	BG90Z-../SPE11LA6	1.4	4.7	9.4	14	17	3650	4200	5000	5000	348	65000	-	
48	11.5	6100	1.4	127.1	IE3	BG90Z-../SPE11LA6	1.1	3.9	7.8	11.5	14	4400	5000	6100	6100	348	65000	-	
48	10.5	6600	1.3	139.2	IE3	BG90Z-../SPE11LA6	1	3.5	7.1	10.5	12.5	4850	5500	6600	6600	348	65000	-	
48	9.2	7800	1.1	163	IE3	BG90Z-../SPE11LA6	0.9	3	6.1	9.2	11	5700	6500	7800	7800	348	65000	-	
48	8.4	8500	0.98	178.5	IE3	BG90Z-../SPE11LA6	0.8	2.8	5.6	8.4	10	6200	7100	8500	8500	348	65000	-	
48	7.2	9900	0.84	208.3	IE3	BG90Z-../SPE11LA6	0.7	2.4	4.8	7.2	8.6	7200	8300	9900	9900	348	65000	-	
48	6.8	10500	0.87	219.9	IE3	BG90G50-../SPE11LA6	0.65	2.2	4.5	6.8	8.1	7600	8700	10500	10500	365	65000	-	
48	12.5	5700	2.9	119.7	IE3	BG100-../SPE11LA6	1.2	4.1	8.3	12.5	15	4150	4750	5700	5700	465	90000	-	
48	10.5	6600	2.5	139.1	IE3	BG100-../SPE11LA6	1	3.5	7.1	10.5	12.5	4850	5500	6600	6600	465	90000	-	
48	9.6	7400	2.3	154.8	IE3	BG100-../SPE11LA6	0.95	3.2	6.4	9.6	11.5	5400	6100	7400	7400	465			

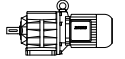
# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 48 \text{ Nm}$  ( $P_N = 7.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
48	4.3	16400	1.1	343.6	IE3	BG100Z-../SPE11LA6	0.43	1.4	2.9	4.3	5.2	12000	13700	16400	16400	16400	555	90000	-
48	3.9	18300	1	382.6	IE3	BG100Z-../SPE11LA6	0.39	1.3	2.6	3.9	4.7	13300	15300	18300	18300	18300	555	90000	-
48	3.2	21500	0.84	456.7	IE3	BG100Z-../SPE11LA6	0.32	1	2.1	3.2	3.9	15900	18200	21500	21500	21500	555	90000	-

### $M_N = 0.65 \text{ Nm}$ ( $P_N = 0.2 \text{ kW}$ )

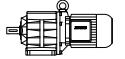


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[1]															
0.65	1190	1.63	2.5	2.51	IE5	BG04-../S5E04SA4-1	59	199	395	1190	1430	1.63	1.63	1.63	1.63	1.63	4.4	340	-
0.65	820	2.35	2.1	3.65	IE5	BG04-../S5E04SA4-1	41	136	270	820	980	2.35	2.35	2.35	2.35	2.35	4.4	390	-
0.65	680	2.85	2.5	4.39	IE5	BG04-../S5E04SA4-1	34	113	225	680	820	2.85	2.85	2.85	2.85	2.85	4.4	380	-
0.65	550	3.45	2.6	5.36	IE5	BG04-../S5E04SA4-1	27.5	93	186	550	670	3.45	3.45	3.45	3.45	3.45	4.4	380	-
0.65	485	4	2.7	6.18	IE5	BG04-../S5E04SA4-1	24	80	161	485	580	4	4	4	4	4	4.4	415	-
0.65	445	4.3	2.3	6.67	IE5	BG04-../S5E04SA4-1	22	74	149	445	530	4.3	4.3	4.3	4.3	4.3	4.4	410	-
0.65	440	4.4	2.5	6.8	IE5	BG04-../S5E04SA4-1	22	73	147	440	520	4.4	4.4	4.4	4.4	4.4	4.4	420	-
0.65	345	5.5	2	8.58	IE5	BG04-../S5E04SA4-1	17	58	116	345	415	5.5	5.5	5.5	5.5	5.5	4.4	410	-
0.65	330	5.8	2.1	9	IE5	BG04-../S5E04SA4-1	16.5	55	111	330	400	5.8	5.8	5.8	5.8	5.8	4.4	470	-
0.65	300	6.4	2	9.9	IE5	BG04-../S5E04SA4-1	15	50	101	300	360	6.4	6.4	6.4	6.4	6.4	4.4	480	-
0.65	275	7	2	10.82	IE5	BG04-../S5E04SA4-1	13.5	46	92	275	330	7	7	7	7	7	4.4	480	-
0.65	250	7.7	1.9	11.9	IE5	BG04-../S5E04SA4-1	12.5	42	84	250	300	7.7	7.7	7.7	7.7	7.7	4.4	490	-
0.65	235	8.1	1.8	12.55	IE5	BG04-../S5E04SA4-1	11.5	39.5	79	235	285	8.1	8.1	8.1	8.1	8.1	4.4	490	-
0.65	225	8.5	1.9	13.2	IE5	BG04-../S5E04SA4-1	11	37.5	75	225	270	8.5	8.5	8.5	8.5	8.5	4.4	500	-
0.65	205	9.4	1.8	14.52	IE5	BG04-../S5E04SA4-1	10	34	68	205	245	9.4	9.4	9.4	9.4	9.4	4.4	510	-
0.65	182	10.6	1.7	16.44	IE5	BG04-../S5E04SA4-1	9.1	30	60	182	215	10.6	10.6	10.6	10.6	10.6	4.4	530	-
0.65	165	11.7	1.5	18.08	IE5	BG04-../S5E04SA4-1	8.2	27.5	55	165	199	11.7	11.7	11.7	11.7	11.7	4.4	540	-
0.65	142	13.7	1.4	21.12	IE5	BG04-../S5E04SA4-1	7.1	23.5	47	142	170	13.7	13.7	13.7	13.7	13.7	4.4	560	-
0.65	129	15	1.3	23.23	IE5	BG04-../S5E04SA4-1	6.4	21.5	43	129	154	15	15	15	15	15	4.4	600	-
0.65	122	15.8	1.3	24.45	IE5	BG04-../S5E04SA4-1	6.1	20	40.5	122	147	15.8	15.8	15.8	15.8	15.8	4.4	610	-
0.65	111	17.4	1.1	26.89	IE5	BG04-../S5E04SA4-1	5.5	18.5	37	111	133	17.4	17.4	17.4	17.4	17.4	4.4	650	-
0.65	97	20	1	30.91	IE5	BG04-../S5E04SA4-1	4.8	16	32	97	116	20	20	20	20	20	4.4	690	-
0.65	88	22	0.9	34	IE5	BG04-../S5E04SA4-1	4.4	14.5	29	88	105	22	22	22	22	22	4.4	720	-
0.65	84	22.5	0.87	35.35	IE5	BG04-../S5E04SA4-1	4.2	14	28	84	101	22.5	22.5	22.5	22.5	22.5	4.4	730	-
0.65	285	6.7	2.8	10.4	IE5	BG05-../S5E04SA4-1	14	48	96	285	345	6.7	6.7	6.7	6.7	6.7	5.1	510	-
0.65	280	6.8	2.9	10.59	IE5	BG05-../S5E04SA4-1	14	47	94	280	335	6.8	6.8	6.8	6.8	6.8	5.1	590	-
0.65	255	7.5	2.8	11.55	IE5	BG05-../S5E04SA4-1	12.5	43	86	255	310	7.5	7.5	7.5	7.5	7.5	5.1	600	-
0.65	245	7.8	2.7	12.05	IE5	BG05-../S5E04SA4-1	12	41	82	245	295	7.8	7.8	7.8	7.8	7.8	5.1	510	-
0.65	235	8.1	2.7	12.6	IE5	BG05-../S5E04SA4-1	11.5	39.5	79	235	285	8.1	8.1	8.1	8.1	8.1	5.1	610	-
0.65	215	8.9	2.6	13.75	IE5	BG05-../S5E04SA4-1	10.5	36	72	215	260	8.9	8.9	8.9	8.9	8.9	5.1	630	-
0.65	196	9.8	2.4	15.23	IE5	BG05-../S5E04SA4-1	9.8	32.5	65	196	235	9.8	9.8	9.8	9.8	9.8	5.1	640	-
0.65	180	10.8	2.3	16.62	IE5	BG05-../S5E04SA4-1	9	30	60	180	215	10.8	10.8	10.8	10.8	10.8	5.1	660	-
0.65	159	12.2	2.1	18.82	IE5	BG05-../S5E04SA4-1	7.9	26.5	53	159	191	12.2	12.2	12.2	12.2	12.2	5.1	680	-
0.65	146	13.3	2	20.53	IE5	BG05-../S5E04SA4-1	7.3	24	48.5	146	175	13.3	13.3	13.3	13.3	13.3	5.1	700	-
0.65	125	15.6	1.8	24	IE5	BG05-../S5E04SA4-1	6.2	20.5	41.5	125	150	15.6	15.6	15.6	15.6	15.6	5.1	740	-
0.65	114	17	1.7	26.18	IE5	BG05-../S5E04SA4-1	5.7	19	38	114	137	17	17	17	17	17	5.1	760	-
0.65	107	18	1.7	27.82	IE5	BG05-../S5E04SA4-1	5.3	17.5	35.5	107	129	18	18	18	18	18	5.1	770	-
0.65	98	19.7	1.5	30.35	IE5	BG05-../S5E04SA4-1	4.9	16	32.5	98	118	19.7	19.7	19.7	19.7	19.7	5.1	760	-
0.65	85	22.5	1.3	35	IE5	BG05-../S5E04SA4-1	4.2	14	28.5	85	102	22.5	22.5	22.5	22.5	22.5	5.1	810	-
0.65	78	24.5	1.2	38.18	IE5	BG05-../S5E04SA4-1	3.9	13	26	78	94	24.5	24.5	24.5	24.5	24.5	5.1	850	-
0.65	75	25.5	1.2	39.94	IE5	BG05-../S5E04SA4-1	3.7	12.5	25	75	90	25.5	25.5	25.5	25.5	25.5	5.1	860	-
0.65	68	28	1.1	43.57	IE5	BG05-../S5E04SA4-1	3.4	11	22.5	68	82	28	28	28	28	28	5.1	900	-
0.65	63	30.5	0.98	47	IE5	BG05-../S5E04SA4-1	3.1	10.5	21	63	76	30.5	30.5	30.5	30.5	30.5	5.1	930	-
0.65	58	33	0.9	51.27	IE5	BG05-../S5E04SA4-1	2.9	9.7	19.5	58	70	33	33	33	33	33	5.1	970	-
0.65	56	34.5	0.86	53.44	IE5	BG05-../S5E04SA4-1	2.8	9.3	18.5	56	67	34.5	34.5	34.5	34.5	34.5	5.1	980	-
0.65	144	13.5	3	20.82	IE5	BG06-../S5E04SA4-1	7.2	24	48	144	172	13.5	13.5	13.5	13.5	13.5	6.1	800	-
0.65	132	14.7	2.9	22.71	IE5	BG06-../S5E04SA4-1	6.6	22	44	132	158	14.7	14.7	14.7	14.7	14.7	6.1	810	-
0.65	117	16.5	2.7	25.48	IE5	BG06-../S5E04SA4-1	5.8	19.5	39	117	141	16.5	16.5	16.5	16.5	16.5	6.1	850	-
0.65	107	18	2.5	27.8	IE5	BG06-../S5E04SA4-1	5.3	17.5	35.5	107	129	18	18	18	18	18	6.1	840	-
0.65	93	20.5	2.1	32.22	IE5	BG06-../S5E04SA4-1	4.6	15.5	31	93	111	20.5	20.5	20.5	20.5	20.5	6.1	890	-
0.65	85	22.5	2	35.15	IE5	BG06-../S5E04SA4-1	4.2	14	28	85	102	22.5	22.5	22.5	22.5	22.5	6.1	880	-
0.65	81	23.5	1.9	36.91	IE5	BG06-../S5E04SA4-1	4	13.5	27	81	97	23.5	23.5	23.5	23.5	23.5	6.1	890	-
0.65	74	26	1.7	40.26	IE5	BG06-../S5E04SA4-1	3.7	12	24.5	74	89	26	26	26	26	26	6.1	890	-
0.65	64	30	1.5	46.19	IE5	BG06-../S5E04SA4-1	3.2	10.5	21.5	64	77	30	30	30	30	30	6.1	890	-
0.65	59	32.5	1.4	50.38	IE5	BG06-../S5E04SA4-1	2.9	9.9	19.5	59	71	32.5	32.5	32.5	32.5	32.5	6.1	940	-
0.65	57	34	1.3	52.56	IE5	BG06-../S5E04SA4-1	2.8	9.5	19	57	68	34	34	34	34	34	6.1	950	-
0.65	52	37	1.2	57.34	IE5	BG06-../S5E04SA4-1	2.6	8.7	17	52	62	37	37	37	37	37	6.1	1000	-
0.65	49	39.5	1.1	61.22	IE5	BG06-../S5E04SA4-1	2.4	8.1	16	49	58	39.5	39.5	39.5	39.5	39.5	6.1	1020	-
0.65	44.5	43	1	66.79	IE5	BG06-../S5E04SA4-1	2.2	7.4	14.5	44.5	53	43	43	43	43	43	6.1	1070	-
0.65	39	49	0.81	75.99	IE5	BG06G04-../S5E04SA4-1	1.9	6.5	13	39	47	49	49	49	49	49	8.4	1070	-
0.65	36	53	0.8	82.89	IE5	BG06G04-../S5E04SA4-1	1.8	6	12	36	43	53	53	53	53	53	8.4	1070	-
0.65	44	43.5	2.3	67.54	IE5	BG10Z-../S5E04SA4-1	2.2	7.4	14.5	44	53	43.5	43.5	43.5	43.5	43.5	11	2000	2800
0.65	38.5	50	2.4	77.4	IE5	BG10Z-../S5E04SA4-1	1.9	6.4	12.5	38.5	46.5	50	50	50	50	50	11	2000	2800
0.65	34.5	55	2.2	85.76	IE5	BG10Z-../S5E04SA4-1	1.7	5.8	11.5	34.5	41.5	55	55	55	55	55	11	2000	2800
0.65	32.5	59	2	92.19	IE5	BG10Z-../S5E04SA4-1	1.6	5.4	10.5	32.5	39	59	59	59	59	59	11	2000	2800
0.65	29	66	1.8	102.1	IE5	BG10Z-../S5E04SA4-1	1.4	4.8	9.7	29	35	66	66	66	66	66	11	2000	2800
0.65	27	71	1.7	109.8	IE5	BG10Z-../S5E04SA4-1	1.3	4.5											



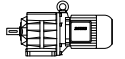
# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

 **$M_N = 0.65 \text{ Nm}$  ( $P_N = 0.2 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.65	23.5	81	2.5	125.3	IE5	BG20Z-../S5E04SA4-1	1.1	3.9	7.9	23.5	28.5	81	81	81	81	13	5000	-	
0.65	21	91	2.2	141.3	IE5	BG20Z-../S5E04SA4-1	1	3.5	7	21	25	91	91	91	91	13	5000	-	
0.65	19	102	2	157	IE5	BG20Z-../S5E04SA4-1	0.95	3.1	6.3	19	22.5	102	102	102	102	13	5000	-	
0.65	18	105	1.9	162.2	IE5	BG20Z-../S5E04SA4-1	0.9	3	6.1	18	22	105	105	105	105	13	5000	-	
0.65	16.5	117	1.7	180.1	IE5	BG20Z-../S5E04SA4-1	0.8	2.7	5.5	16.5	19.5	117	117	117	117	13	5000	-	
0.65	15	129	1.5	199.9	IE5	BG20Z-../S5E04SA4-1	0.75	2.5	5	15	18	129	129	129	129	13	5000	-	
0.65	13.5	144	1.4	222.1	IE5	BG20Z-../S5E04SA4-1	0.65	2.2	4.5	13.5	16	144	144	144	144	13	5000	-	
0.65	12	161	1.4	248	IE5	BG20G06-../S5E04SA4-1	0.6	2	4	12	14.5	161	161	161	161	17	5000	2100	
0.65	10	193	1.1	297.9	IE5	BG20G06-../S5E04SA4-1	0.5	1.6	3.3	10	12	193	193	193	193	17	5000	2100	
0.65	8.5	225	0.96	352.1	IE5	BG20G06-../S5E04SA4-1	0.42	1.4	2.8	8.5	10	225	225	225	225	17	5000	2100	
0.65	7.6	250	0.87	391.1	IE5	BG20G06-../S5E04SA4-1	0.38	1.2	2.5	7.6	9.2	250	250	250	250	17	5000	2100	
0.65	11.5	165	2	254.9	IE5	BG30G06-../S5E04SA4-1	0.55	1.9	3.9	11.5	14	165	165	165	165	21	6000	-	
0.65	9.7	199	1.6	306.2	IE5	BG30G06-../S5E04SA4-1	0.48	1.6	3.2	9.7	11.5	199	199	199	199	21	6000	-	
0.65	8.6	225	1.4	346.8	IE5	BG30G06-../S5E04SA4-1	0.43	1.4	2.8	8.6	10	225	225	225	225	21	6000	-	
0.65	7.4	260	1.2	401.9	IE5	BG30G06-../S5E04SA4-1	0.37	1.2	2.4	7.4	8.9	260	260	260	260	21	6000	-	
0.65	6.3	305	1.1	472.8	IE5	BG30G06-../S5E04SA4-1	0.31	1	2.1	6.3	7.6	305	305	305	305	21	6000	-	
0.65	5.3	365	0.88	565.8	IE5	BG30G06-../S5E04SA4-1	0.26	0.85	1.7	5.3	6.3	365	365	365	365	21	6000	-	

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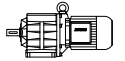
 **$M_N = 0.8 \text{ Nm}$  ( $P_N = 0.25 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.8	1190	2	2	2.51	IE5	BG04-../S5E04SA4-1	59	199	395	1190	1430	1.9	2	2	2	4.4	340	-	
0.8	820	2.9	1.7	3.65	IE5	BG04-../S5E04SA4-1	41	136	270	820	980	2.75	2.9	2.9	2.9	4.4	390	-	
0.8	680	3.5	2	4.39	IE5	BG04-../S5E04SA4-1	34	113	225	680	820	3.3	3.5	3.5	3.5	4.4	380	-	
0.8	550	4.25	2.1	5.36	IE5	BG04-../S5E04SA4-1	27.5	93	186	550	670	4.05	4.25	4.25	4.25	4.4	380	-	
0.8	485	4.9	2.2	6.18	IE5	BG04-../S5E04SA4-1	24	80	161	485	580	4.65	4.9	4.9	4.9	4.4	415	-	
0.8	445	5.3	1.9	6.67	IE5	BG04-../S5E04SA4-1	22	74	149	445	530	5	5.3	5.3	5.3	4.4	410	-	
0.8	440	5.4	2	6.8	IE5	BG04-../S5E04SA4-1	22	73	147	440	520	5.1	5.4	5.4	5.4	4.4	420	-	
0.8	345	6.8	1.6	8.58	IE5	BG04-../S5E04SA4-1	17	58	116	345	415	6.5	6.8	6.8	6.8	4.4	410	-	
0.8	330	7.2	1.7	9	IE5	BG04-../S5E04SA4-1	16.5	55	111	330	400	6.8	7.2	7.2	7.2	4.4	470	-	
0.8	300	7.9	1.6	9.9	IE5	BG04-../S5E04SA4-1	15	50	101	300	360	7.5	7.9	7.9	7.9	4.4	480	-	
0.8	275	8.6	1.6	10.82	IE5	BG04-../S5E04SA4-1	13.5	46	92	275	330	8.2	8.6	8.6	8.6	4.4	480	-	
0.8	250	9.5	1.6	11.9	IE5	BG04-../S5E04SA4-1	12.5	42	84	250	300	9	9.5	9.5	9.5	4.4	490	-	
0.8	235	10	1.5	12.55	IE5	BG04-../S5E04SA4-1	11.5	39.5	79	235	285	9.5	10	10	10	4.4	490	-	
0.8	225	10.5	1.5	13.2	IE5	BG04-../S5E04SA4-1	11	37.5	75	225	270	10	10.5	10.5	10.5	4.4	500	-	
0.8	205	11.6	1.5	14.52	IE5	BG04-../S5E04SA4-1	10	34	68	205	245	11	11.6	11.6	11.6	4.4	510	-	
0.8	182	13.1	1.4	16.44	IE5	BG04-../S5E04SA4-1	9.1	30	60	182	215	12.4	13.1	13.1	13.1	4.4	530	-	
0.8	165	14.4	1.2	18.08	IE5	BG04-../S5E04SA4-1	8.2	27.5	55	165	199	13.7	14.4	14.4	14.4	4.4	540	-	
0.8	142	16.8	1.1	21.12	IE5	BG04-../S5E04SA4-1	7.1	23.5	47	142	170	16	16.8	16.8	16.8	4.4	560	-	
0.8	129	18.5	1.1	23.23	IE5	BG04-../S5E04SA4-1	6.4	21.5	43	129	154	17.6	18.5	18.5	18.5	4.4	600	-	
0.8	122	19.5	1	24.45	IE5	BG04-../S5E04SA4-1	6.1	20	40.5	122	147	18.5	19.5	19.5	19.5	4.4	610	-	
0.8	111	21.5	0.93	26.89	IE5	BG04-../S5E04SA4-1	5.5	18.5	37	111	133	20	21.5	21.5	21.5	4.4	650	-	
0.8	97	24.5	0.81	30.91	IE5	BG04-../S5E04SA4-1	4.8	16	32	97	116	23	24.5	24.5	24.5	4.4	690	-	
0.8	450	5.2	3	6.6	IE5	BG05-../S5E04SA4-1	22.5	75	151	450	540	5	5.2	5.2	5.2	5.1	510	-	
0.8	380	6.2	2.9	7.8	IE5	BG05-../S5E04SA4-1	19	64	128	380	460	5.9	6.2	6.2	6.2	5.1	530	-	
0.8	365	6.5	2.8	8.15	IE5	BG05-../S5E04SA4-1	18	61	122	365	440	6.1	6.5	6.5	6.5	5.1	510	-	
0.8	350	6.8	2.8	8.51	IE5	BG05-../S5E04SA4-1	17.5	58	117	350	420	6.4	6.8	6.8	6.8	5.1	550	-	
0.8	285	8.3	2.3	10.4	IE5	BG05-../S5E04SA4-1	14	48	96	285	345	7.9	8.3	8.3	8.3	5.1	510	-	
0.8	280	8.4	2.4	10.59	IE5	BG05-../S5E04SA4-1	14	47	94	280	335	8	8.4	8.4	8.4	5.1	590	-	
0.8	255	9.2	2.3	11.55	IE5	BG05-../S5E04SA4-1	12.5	43	86	255	310	8.7	9.2	9.2	9.2	5.1	600	-	
0.8	245	9.6	2.2	12.05	IE5	BG05-../S5E04SA4-1	12	41	82	245	295	9.1	9.6	9.6	9.6	5.1	510	-	
0.8	235	10	2.2	12.6	IE5	BG05-../S5E04SA4-1	11.5	39.5	79	235	285	9.5	10	10	10	5.1	610	-	
0.8	215	11	2.1	13.75	IE5	BG05-../S5E04SA4-1	10.5	36	72	215	260	10.4	11	11	11	5.1	630	-	
0.8	196	12.1	2	15.23	IE5	BG05-../S5E04SA4-1	9.8	32.5	65	196	235	11.5	12.1	12.1	12.1	5.1	640	-	
0.8	180	13.2	1.9	16.62	IE5	BG05-../S5E04SA4-1	9	30	60	180	215	12.6	13.2	13.2	13.2	5.1	660	-	
0.8	159	15	1.7	18.82	IE5	BG05-../S5E04SA4-1	7.9	26.5	53	159	191	14.3	15	15	15	5.1	680	-	
0.8	146	16.4	1.6	20.53	IE5	BG05-../S5E04SA4-1	7.3	24	48.5	146	175	15.6	16.4	16.4	16.4	5.1	700	-	
0.8	125	19.2	1.5	24	IE5	BG05-../S5E04SA4-1	6.2	20.5	41.5	125	150	18.2	19.2	19.2	19.2	5.1	740	-	
0.8	114	20.5	1.4	26.18	IE5	BG05-../S5E04SA4-1	5.7	19	38	114	137	19.8	20.5	20.5	20.5	5.1	760	-	
0.8	107	22	1.3	27.82	IE5	BG05-../S5E04SA4-1	5.3	17.5	35.5	107	129	21	22	22	22	5.1	770	-	
0.8	98	24	1.2	30.35	IE5	BG05-../S5E04SA4-1	4.9	16	32.5	98	118	23	24	24	24	5.1	760	-	
0.8	85	28	1.1	35	IE5	BG05-../S5E04SA4-1	4.2	14	28.5	85	102	26.5	28	28	28	5.1	810	-	
0.8	78	30.5	0.98	38.18	IE5	BG05-../S5E04SA4-1	3.9	13	26	78	94	29	30.5	30.5	30.5	5.1	850	-	
0.8	75	31.5	0.94	39.94	IE5	BG05-../S5E04SA4-1	3.7	12.5	25	75	90	30	31.5	31.5	31.5	5.1	860	-	
0.8	68	34.5	0.86	43.57	IE5	BG05-../S5E04SA4-1	3.4	11	22.5	68	82	33	34.5	34.5	34.5	5.1	900	-	
0.8	63	37.5	0.8	47	IE5	BG05-../S5E04SA4-1	3.1	10.5	21	63	76	35.5	37.5	37.5	37.5	5.1	930	-	
0.8	200	11.8	2.9	14.78	IE5	BG06-../S5E04SA4-1	10	33.5	67	200	240	11.2	11.8	11.8	11.8	6.1	730	-	
0.8	185	12.9	2.7	16.13	IE5	BG06-../S5E04SA4-1	9.2	30.5	61	185	220	12.2	12.9	12.9	12.9	6.1	740	-	
0.8	172	13.9	2.7	17.4	IE5	BG06-../S5E04SA4-1	8.6	28.5	57	172	205	13.2	13.9	13.9	13.9	6.1	760	-	
0.8	158	15.1	2.6	18.98	IE5	BG06-../S5E04SA4-1	7.9	26	52	158	189	14.4	15.1	15.1	15.1	6.1	770	-	
0.8	144	16.6	2.4	20.82	IE5	BG06-../S5E04SA4-1	7.2	24	48	144	172	15.8							

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

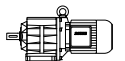
### $M_N = 0.8 \text{ Nm}$ ( $P_N = 0.25 \text{ kW}$ )



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>	
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]								
							150	500	1000	3000	3600	150	500	1000	3000	3600				
0.8	81	29.5	1.5	36.91	IE5	BG06-../S5E04SA4-1	4	13.5	27	81	97	28	29.5	29.5	29.5	29.5	29.5	6.1	890	-
0.8	74	32	1.4	40.26	IE5	BG06-../S5E04SA4-1	3.7	12	24.5	74	89	30.5	32	32	32	32	32	6.1	890	-
0.8	64	36.5	1.2	46.19	IE5	BG06-../S5E04SA4-1	3.2	10.5	21.5	64	77	35	36.5	36.5	36.5	36.5	36.5	6.1	890	-
0.8	59	40	1.1	50.38	IE5	BG06-../S5E04SA4-1	2.9	9.9	19.5	59	71	38	40	40	40	40	40	6.1	940	-
0.8	57	42	1.1	52.56	IE5	BG06-../S5E04SA4-1	2.8	9.5	19	57	68	39.5	42	42	42	42	42	6.1	950	-
0.8	52	45.5	0.98	57.34	IE5	BG06-../S5E04SA4-1	2.6	8.7	17	52	62	43.5	45.5	45.5	45.5	45.5	45.5	6.1	1000	-
0.8	49	48.5	0.92	61.22	IE5	BG06-../S5E04SA4-1	2.4	8.1	16	49	58	46.5	48.5	48.5	48.5	48.5	48.5	6.1	1020	-
0.8	44.5	53	0.84	66.79	IE5	BG06-../S5E04SA4-1	2.2	7.4	14.5	44.5	53	50	53	53	53	53	53	6.1	1070	-
0.8	44	54	1.9	67.54	IE5	BG10Z-../S5E04SA4-1	2.2	7.4	14.5	44	53	51	54	54	54	54	54	11	2000	2800
0.8	38.5	61	1.9	77.4	IE5	BG10Z-../S5E04SA4-1	1.9	6.4	12.5	38.5	46.5	58	61	61	61	61	61	11	2000	2800
0.8	34.5	68	1.7	85.76	IE5	BG10Z-../S5E04SA4-1	1.7	5.8	11.5	34.5	41.5	65	68	68	68	68	68	11	2000	2800
0.8	32.5	73	1.6	92.19	IE5	BG10Z-../S5E04SA4-1	1.6	5.4	10.5	32.5	39	70	73	73	73	73	73	11	2000	2800
0.8	29	81	1.5	102.1	IE5	BG10Z-../S5E04SA4-1	1.4	4.8	9.7	29	35	77	81	81	81	81	81	11	2000	2800
0.8	27	87	1.4	109.8	IE5	BG10Z-../S5E04SA4-1	1.3	4.5	9.1	27	32.5	83	87	87	87	87	87	11	2000	2800
0.8	24.5	97	1.2	121.7	IE5	BG10Z-../S5E04SA4-1	1.2	4.1	8.2	24.5	29.5	92	97	97	97	97	97	11	2000	2800
0.8	22.5	105	1.1	131.8	IE5	BG10Z-../S5E04SA4-1	1.1	3.7	7.5	22.5	27	100	105	105	105	105	105	11	2000	2800
0.8	20.5	116	1	146	IE5	BG10Z-../S5E04SA4-1	1	3.4	6.8	20.5	24.5	110	116	116	116	116	116	11	2000	2800
0.8	18	132	0.9	166	IE5	BG10Z-../S5E04SA4-1	0.9	3	6	18	21.5	126	132	132	132	132	132	11	2000	2800
0.8	16	147	0.82	184	IE5	BG10Z-../S5E04SA4-1	0.8	2.7	5.4	16	19.5	139	147	147	147	147	147	11	2000	2800
0.8	19.5	120	1.1	150.1	IE5	BG10G06-../S5E04SA4-1	0.95	3.3	6.6	19.5	23.5	114	120	120	120	120	120	14	2000	2800
0.8	18	133	0.98	166.3	IE5	BG10G06-../S5E04SA4-1	0.9	3	6	18	21.5	126	133	133	133	133	133	14	2000	2800
0.8	15	155	0.83	194.9	IE5	BG10G06-../S5E04SA4-1	0.75	2.5	5.1	15	18	148	155	155	155	155	155	14	2000	2800
0.8	34	69	2.9	87.3	IE5	BG20Z-../S5E04SA4-1	1.7	5.7	11	34	41	66	69	69	69	69	69	13	5000	-
0.8	31.5	75	2.7	94.27	IE5	BG20Z-../S5E04SA4-1	1.5	5.3	10.5	31.5	38	71	75	75	75	75	75	13	5000	-
0.8	28.5	83	2.4	104.7	IE5	BG20Z-../S5E04SA4-1	1.4	4.7	9.5	28.5	34	79	83	83	83	83	83	13	5000	-
0.8	26.5	90	2.2	112.8	IE5	BG20Z-../S5E04SA4-1	1.3	4.4	8.8	26.5	31.5	85	90	90	90	90	90	13	5000	-
0.8	23.5	100	2	125.3	IE5	BG20Z-../S5E04SA4-1	1.1	3.9	7.9	23.5	28.5	95	100	100	100	100	100	13	5000	-
0.8	21	113	1.8	141.3	IE5	BG20Z-../S5E04SA4-1	1	3.5	7	21	25	107	113	113	113	113	113	13	5000	-
0.8	19	125	1.6	157	IE5	BG20Z-../S5E04SA4-1	0.95	3.1	6.3	19	22.5	119	125	125	125	125	125	13	5000	-
0.8	18	129	1.5	162.2	IE5	BG20Z-../S5E04SA4-1	0.9	3	6.1	18	22	123	129	129	129	129	129	13	5000	-
0.8	16.5	144	1.4	180.1	IE5	BG20Z-../S5E04SA4-1	0.8	2.7	5.5	16.5	19.5	136	144	144	144	144	144	13	5000	-
0.8	15	159	1.3	199.9	IE5	BG20Z-../S5E04SA4-1	0.75	2.5	5	15	18	151	159	159	159	159	159	13	5000	-
0.8	13.5	177	1.1	222.1	IE5	BG20Z-../S5E04SA4-1	0.65	2.2	4.5	13.5	16	168	177	177	177	177	177	13	5000	-
0.8	12	198	1.1	248	IE5	BG20G06-../S5E04SA4-1	0.6	2	4	12	14.5	188	198	198	198	198	198	17	5000	2100
0.8	10	235	0.92	297.9	IE5	BG20G06-../S5E04SA4-1	0.5	1.6	3.3	10	12	225	235	235	235	235	235	17	5000	2100
0.8	11.5	200	1.6	254.9	IE5	BG30G06-../S5E04SA4-1	0.55	1.9	3.9	11.5	14	193	200	200	200	200	21	6000	-	
0.8	9.7	240	1.3	306.2	IE5	BG30G06-../S5E04SA4-1	0.48	1.6	3.2	9.7	11.5	230	240	240	240	240	21	6000	-	
0.8	8.6	275	1.2	346.8	IE5	BG30G06-../S5E04SA4-1	0.43	1.4	2.8	8.6	10	260	275	275	275	275	21	6000	-	
0.8	7.4	320	1	401.9	IE5	BG30G06-../S5E04SA4-1	0.37	1.2	2.4	7.4	8.9	305	320	320	320	320	21	6000	-	
0.8	6.3	375	0.86	472.8	IE5	BG30G06-../S5E04SA4-1	0.31	1	2.1	6.3	7.6	355	375	375	375	375	21	6000	-	

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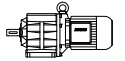
### $M_N = 1 \text{ Nm}$ ( $P_N = 0.315 \text{ kW}$ )



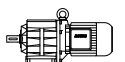
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>	
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]								
							150	500	1000	3000	3600	150	500	1000	3000	3600				
1	1190	2.5	1.6	2.51	IE4	BG04-../S4E04SA4-1	59	199	395	1190	1430	1.9	2.1	2.5	2.5	2.5	2.5	4.4	340	-
1	820	3.65	1.4	3.65	IE4	BG04-../S4E04SA4-1	41	136	270	820	980	2.75	3.1	3.65	3.65	3.65	3.65	4.4	390	-
1	680	4.35	1.6	4.39	IE4	BG04-../S4E04SA4-1	34	113	225	680	820	3.3	3.7	4.35	4.35	4.35	4.35	4.4	380	-
1	550	5.3	1.7	5.36	IE4	BG04-../S4E04SA4-1	27.5	93	186	550	670	4.05	4.55	5.3	5.3	5.3	5.3	4.4	380	-
1	485	6.1	1.8	6.18	IE4	BG04-../S4E04SA4-1	24	80	161	485	580	4.65	5.2	6.1	6.1	6.1	6.1	4.4	415	-
1	445	6.6	1.5	6.67	IE4	BG04-../S4E04SA4-1	22	74	149	445	530	5	5.6	6.6	6.6	6.6	6.6	4.4	410	-
1	440	6.8	1.6	6.8	IE4	BG04-../S4E04SA4-1	22	73	147	440	520	5.1	5.7	6.8	6.8	6.8	6.8	4.4	420	-
1	345	8.5	1.3	8.58	IE4	BG04-../S4E04SA4-1	17	58	116	345	415	6.5	7.2	8.5	8.5	8.5	8.5	4.4	410	-
1	330	9	1.3	9	IE4	BG04-../S4E04SA4-1	16.5	55	111	330	400	6.8	7.6	9	9	9	9	4.4	470	-
1	300	9.9	1.3	9.9	IE4	BG04-../S4E04SA4-1	15	50	101	300	360	7.5	8.4	9.9	9.9	9.9	9.9	4.4	480	-
1	275	10.8	1.3	10.82	IE4	BG04-../S4E04SA4-1	13.5	46	92	275	330	8.2	9.1	10.8	10.8	10.8	10.8	4.4	480	-
1	250	11.9	1.3	11.9	IE4	BG04-../S4E04SA4-1	12.5	42	84	250	300	9	10.1	11.9	11.9	11.9	11.9	4.4	490	-
1	235	12.5	1.2	12.55	IE4	BG04-../S4E04SA4-1	11.5	39.5	79	235	285	9.5	10.6	12.5	12.5	12.5	12.5	4.4	490	-
1	225	13.1	1.2	13.2	IE4	BG04-../S4E04SA4-1	11	37.5	75	225	270	10	11.2	13.1	13.1	13.1	13.1	4.4	500	-
1	205	14.5	1.2	14.52	IE4	BG04-../S4E04SA4-1	10	34	68	205	245	11	12.3	14.5	14.5	14.5	14.5	4.4	510	-
1	182	16.4	1.1	16.44	IE4	BG04-../S4E04SA4-1	9.1	30	60	182	215	12.4	13.9	16.4	16.4	16.4	16.4	4.4	530	-
1	165	18	1	18.08	IE4	BG04-../S4E04SA4-1	8.2	27.5	55	165	199	13.7	15.3	18	18	18	18	4.4	540	-
1	142	21	0.9	21.12	IE4	BG04-../S4E04SA4-1	7.1	23.5	47	142	170	16	17.9	21	21	21	21	4.4	560	-
1	129	23	0.86	23.23	IE4	BG04-../S4E04SA4-1	6.4	21.5	43	129	154	17.6	19.7	23	23	23	23	4.4	600	-
1	122	24	0.82	24.45	IE4	BG04-../S4E04SA4-1	6.1	20	40.5	122	147	18.5	20.5	24	24	24	24	4.4	610	-
1	880	3.35	3	3.38	IE4	BG05-../S4E04SA4-1	44	147	295	880	1060	2.55	2.85	3.35	3.35	3.35	3.35	5.1	460	-
1	650	4.55	2.6	4.59	IE4	BG05-../S4E04SA4-1	32.5	108	215	650	780	3.45	3.9	4.55	4.55	4.5				

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 1 \text{ Nm}$  ( $P_N = 0.315 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1	255	11.5	1.8	11.55	IE4	BG05-../S4E04SA4-1	12.5	43	86	255	310	8.7	9.8	11.5	11.5	11.5	5.1	600	-
1	245	12	1.7	12.05	IE4	BG05-../S4E04SA4-1	12	41	82	245	295	9.1	10.2	12	12	12	5.1	510	-
1	235	12.5	1.7	12.6	IE4	BG05-../S4E04SA4-1	11.5	39.5	79	235	285	9.5	10.7	12.5	12.5	12.5	5.1	610	-
1	215	13.7	1.7	13.75	IE4	BG05-../S4E04SA4-1	10.5	36	72	215	260	10.4	11.6	13.7	13.7	13.7	5.1	630	-
1	196	15.2	1.6	15.23	IE4	BG05-../S4E04SA4-1	9.8	32.5	65	196	235	11.5	12.9	15.2	15.2	15.2	5.1	640	-
1	180	16.6	1.5	16.62	IE4	BG05-../S4E04SA4-1	9	30	60	180	215	12.6	14.1	16.6	16.6	16.6	5.1	660	-
1	159	18.8	1.4	18.82	IE4	BG05-../S4E04SA4-1	7.9	26.5	53	159	191	14.3	15.9	18.8	18.8	18.8	5.1	680	-
1	146	20.5	1.3	20.53	IE4	BG05-../S4E04SA4-1	7.3	24	48.5	146	175	15.6	17.4	20.5	20.5	20.5	5.1	700	-
1	125	24	1.2	24	IE4	BG05-../S4E04SA4-1	6.2	20.5	41.5	125	150	18.2	20	24	24	24	5.1	740	-
1	114	26	1.1	26.18	IE4	BG05-../S4E04SA4-1	5.7	19	38	114	137	19.8	22	26	26	26	5.1	760	-
1	107	27.5	1.1	27.82	IE4	BG05-../S4E04SA4-1	5.3	17.5	35.5	107	129	21	23.5	27.5	27.5	27.5	5.1	770	-
1	98	30	0.99	30.35	IE4	BG05-../S4E04SA4-1	4.9	16	32.5	98	118	23	25.5	30	30	30	5.1	760	-
1	85	35	0.86	35	IE4	BG05-../S4E04SA4-1	4.2	14	28.5	85	102	26.5	29.5	35	35	35	5.1	810	-
1	290	10.2	3	10.24	IE4	BG06-../S4E04SA4-1	14.5	48.5	97	290	350	7.7	8.7	10.2	10.2	10.2	6.1	640	-
1	265	11.2	2.8	11.28	IE4	BG06-../S4E04SA4-1	13	44	88	265	315	8.5	9.5	11.2	11.2	11.2	6.1	670	-
1	240	12.3	2.7	12.3	IE4	BG06-../S4E04SA4-1	12	40.5	81	240	290	9.3	10.4	12.3	12.3	12.3	6.1	670	-
1	230	12.9	2.5	12.98	IE4	BG06-../S4E04SA4-1	11.5	38.5	77	230	275	9.8	11	12.9	12.9	12.9	6.1	600	-
1	200	14.7	2.3	14.78	IE4	BG06-../S4E04SA4-1	10	33.5	67	200	240	11.2	12.5	14.7	14.7	14.7	6.1	730	-
1	185	16.1	2.2	16.13	IE4	BG06-../S4E04SA4-1	9.2	30.5	61	185	220	12.2	13.7	16.1	16.1	16.1	6.1	740	-
1	172	17.3	2.2	17.4	IE4	BG06-../S4E04SA4-1	8.6	28.5	57	172	205	13.2	14.7	17.3	17.3	17.3	6.1	760	-
1	158	18.9	2.1	18.98	IE4	BG06-../S4E04SA4-1	7.9	26	52	158	189	14.4	16.1	18.9	18.9	18.9	6.1	770	-
1	144	20.5	1.9	20.82	IE4	BG06-../S4E04SA4-1	7.2	24	48	144	172	15.8	17.6	20.5	20.5	20.5	6.1	800	-
1	132	22.5	1.9	22.71	IE4	BG06-../S4E04SA4-1	6.6	22	44	132	158	17.2	19.3	22.5	22.5	22.5	6.1	810	-
1	117	25	1.8	25.48	IE4	BG06-../S4E04SA4-1	5.8	19.5	39	117	141	19.3	21.5	25	25	25	6.1	850	-
1	107	27.5	1.6	27.8	IE4	BG06-../S4E04SA4-1	5.3	17.5	35.5	107	129	21	23.5	27.5	27.5	27.5	6.1	840	-
1	93	32	1.4	32.22	IE4	BG06-../S4E04SA4-1	4.6	15.5	31	93	111	24	27	32	32	32	6.1	890	-
1	85	35	1.3	35.15	IE4	BG06-../S4E04SA4-1	4.2	14	28	85	102	26.5	29.5	35	35	35	6.1	880	-
1	81	36.5	1.2	36.91	IE4	BG06-../S4E04SA4-1	4	13.5	27	81	97	28	31	36.5	36.5	36.5	6.1	890	-
1	74	40	1.1	40.26	IE4	BG06-../S4E04SA4-1	3.7	12	24.5	74	89	30.5	34	40	40	40	6.1	890	-
1	64	46	0.97	46.19	IE4	BG06-../S4E04SA4-1	3.2	10.5	21.5	64	77	35	39	46	46	46	6.1	890	-
1	59	50	0.89	50.38	IE4	BG06-../S4E04SA4-1	2.9	9.9	19.5	59	71	38	42.5	50	50	50	6.1	940	-
1	57	52	0.86	52.56	IE4	BG06-../S4E04SA4-1	2.8	9.5	19	57	68	39.5	44.5	52	52	52	6.1	950	-
1	44	67	1.5	67.54	IE4	BG10Z-../S4E04SA4-1	2.2	7.4	14.5	44	53	51	57	67	67	67	11	2000	2800
1	38.5	77	1.6	77.4	IE4	BG10Z-../S4E04SA4-1	1.9	6.4	12.5	38.5	46.5	58	65	77	77	77	11	2000	2800
1	34.5	85	1.4	85.76	IE4	BG10Z-../S4E04SA4-1	1.7	5.8	11.5	34.5	41.5	65	72	85	85	85	11	2000	2800
1	32.5	92	1.3	92.19	IE4	BG10Z-../S4E04SA4-1	1.6	5.4	10.5	32.5	39	70	78	92	92	92	11	2000	2800
1	29	102	1.2	102.1	IE4	BG10Z-../S4E04SA4-1	1.4	4.8	9.7	29	35	77	86	102	102	102	11	2000	2800
1	27	109	1.1	109.8	IE4	BG10Z-../S4E04SA4-1	1.3	4.5	9.1	27	32.5	83	93	109	109	109	11	2000	2800
1	24.5	121	0.99	121.7	IE4	BG10Z-../S4E04SA4-1	1.2	4.1	8.2	24.5	29.5	92	103	121	121	121	11	2000	2800
1	22.5	131	0.91	131.8	IE4	BG10Z-../S4E04SA4-1	1.1	3.7	7.5	22.5	27	100	112	131	131	131	11	2000	2800
1	20.5	146	0.82	146	IE4	BG10Z-../S4E04SA4-1	1	3.4	6.8	20.5	24.5	110	124	146	146	146	11	2000	2800
1	19.5	150	0.87	150.1	IE4	BG10G06-../S4E04SA4-1	0.95	3.3	6.6	19.5	23.5	114	127	150	150	150	14	2000	2800
1	51	58	2.9	58.58	IE4	BG20Z-../S4E04SA4-1	2.5	8.5	17	51	61	44.5	49.5	58	58	58	13	5000	-
1	44	67	3	67.53	IE4	BG20Z-../S4E04SA4-1	2.2	7.4	14.5	44	53	51	57	67	67	67	13	5000	-
1	40	75	2.7	75	IE4	BG20Z-../S4E04SA4-1	2	6.6	13	40	48	57	63	75	75	75	13	5000	-
1	38	78	2.5	78.6	IE4	BG20Z-../S4E04SA4-1	1.9	6.3	12.5	38	45.5	59	66	78	78	78	13	5000	-
1	34	87	2.3	87.3	IE4	BG20Z-../S4E04SA4-1	1.7	5.7	11	34	41	66	74	87	87	87	13	5000	-
1	31.5	94	2.1	94.27	IE4	BG20Z-../S4E04SA4-1	1.5	5.3	10.5	31.5	38	71	80	94	94	94	13	5000	-
1	28.5	104	1.9	104.7	IE4	BG20Z-../S4E04SA4-1	1.4	4.7	9.5	28.5	34	79	88	104	104	104	13	5000	-
1	26.5	112	1.8	112.8	IE4	BG20Z-../S4E04SA4-1	1.3	4.4	8.8	26.5	31.5	85	95	112	112	112	13	5000	-
1	23.5	125	1.6	125.3	IE4	BG20Z-../S4E04SA4-1	1.1	3.9	7.9	23.5	28.5	95	106	125	125	125	13	5000	-
1	21	141	1.4	141.3	IE4	BG20Z-../S4E04SA4-1	1	3.5	7	21	25	107	120	141	141	141	13	5000	-
1	19	157	1.3	157	IE4	BG20Z-../S4E04SA4-1	0.95	3.1	6.3	19	22.5	119	133	157	157	157	13	5000	-
1	18	162	1.2	162.2	IE4	BG20Z-../S4E04SA4-1	0.9	3	6.1	18	22	123	137	162	162	162	13	5000	-
1	16.5	180	1.1	180.1	IE4	BG20Z-../S4E04SA4-1	0.8	2.7	5.5	16.5	19.5	136	153	180	180	180	13	5000	-
1	15	199	1	199.9	IE4	BG20Z-../S4E04SA4-1	0.75	2.5	5	15	18	151	169	199	199	199	13	5000	-
1	13.5	220	0.9	222.1	IE4	BG20Z-../S4E04SA4-1	0.65	2.2	4.5	13.5	16	168	188	220	220	220	13	5000	-
1	12	245	0.89	248	IE4	BG20G06-../S4E04SA4-1	0.6	2	4	12	14.5	188	210	245	245	245	17	5000	2100
1	11.5	250	1.3	254.9	IE4	BG30G06-../S4E04SA4-1	0.55	1.9	3.9	11.5	14	193	215	250	250	250	21	6000	-
1	9.7	305	1.1	306.2	IE4	BG30G06-../S4E04SA4-1	0.48	1.6	3.2	9.7	11.5	230	260	305	305	305	21	6000	-
1	8.6	345	0.94	346.8	IE4	BG30G06-../S4E04SA4-1	0.43	1.4	2.8	8.6	10	260	290	345	345	345	21	6000	-
1	7.4	400	0.81	401.9	IE4	BG30G06-../S4E04SA4-1	0.37	1.2	2.4	7.4	8.9	305	340	400	400	400	21	6000	-

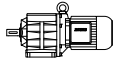
 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.3	1130	3.4	2.6	2.64	IE5	BG05-../S5E06MA4	56	189	375	1130	1360	3.4	3.4	3.4	3.4	3.4	8.5	420	-
1.3	880	4.35	2.3	3.38	IE5	BG05-../S5E06MA4	44	147	295	880	1060	4.35	4.35	4.35	4.35	4.35	8.5	460	-
1.3	650	5.9	2	4.59	IE5	BG05-../S5E06MA4	32.5</												



# BG-series helical-geared motors

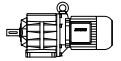
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**


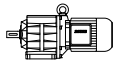
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[1]															
1.3	350	11	1.7	8.51	IE5	BG05-../S5E06MA4	17.5	58	117	350	420	11	11	11	11	11	8.5	550	-
1.3	285	13.5	1.4	10.4	IE5	BG05-../S5E06MA4	14	48	96	285	345	13.5	13.5	13.5	13.5	13.5	8.5	510	-
1.3	280	13.7	1.5	10.59	IE5	BG05-../S5E06MA4	14	47	94	280	335	13.7	13.7	13.7	13.7	13.7	8.5	590	-
1.3	255	15	1.4	11.55	IE5	BG05-../S5E06MA4	12.5	43	86	255	310	15	15	15	15	15	8.5	600	-
1.3	245	15.6	1.3	12.05	IE5	BG05-../S5E06MA4	12	41	82	245	295	15.6	15.6	15.6	15.6	15.6	8.5	510	-
1.3	235	16.3	1.3	12.6	IE5	BG05-../S5E06MA4	11.5	39.5	79	235	285	16.3	16.3	16.3	16.3	16.3	8.5	610	-
1.3	215	17.8	1.3	13.75	IE5	BG05-../S5E06MA4	10.5	36	72	215	260	17.8	17.8	17.8	17.8	17.8	8.5	630	-
1.3	196	19.7	1.2	15.23	IE5	BG05-../S5E06MA4	9.8	32.5	65	196	235	19.7	19.7	19.7	19.7	19.7	8.5	640	-
1.3	180	21.5	1.2	16.62	IE5	BG05-../S5E06MA4	9	30	60	180	215	21.5	21.5	21.5	21.5	21.5	8.5	660	-
1.3	159	24	1.1	18.82	IE5	BG05-../S5E06MA4	7.9	26.5	53	159	191	24	24	24	24	24	8.5	680	-
1.3	146	26.5	1	20.53	IE5	BG05-../S5E06MA4	7.3	24	48.5	146	175	26.5	26.5	26.5	26.5	26.5	8.5	700	-
1.3	125	31	0.9	24	IE5	BG05-../S5E06MA4	6.2	20.5	41.5	125	150	31	31	31	31	31	8.5	740	-
1.3	114	34	0.85	26.18	IE5	BG05-../S5E06MA4	5.7	19	38	114	137	34	34	34	34	34	8.5	760	-
1.3	107	36	0.83	27.82	IE5	BG05-../S5E06MA4	5.3	17.5	35.5	107	129	36	36	36	36	36	8.5	770	-
1.3	425	9.1	2.9	7.01	IE5	BG06-../S5E06MA4	21	71	142	425	510	9.1	9.1	9.1	9.1	9.1	9.5	580	-
1.3	355	10.9	2.6	8.39	IE5	BG06-../S5E06MA4	17.5	59	119	355	425	10.9	10.9	10.9	10.9	10.9	9.5	600	-
1.3	315	12.1	2.5	9.38	IE5	BG06-../S5E06MA4	15.5	53	106	315	380	12.1	12.1	12.1	12.1	12.1	9.5	640	-
1.3	290	13.3	2.3	10.24	IE5	BG06-../S5E06MA4	14.5	48.5	97	290	350	13.3	13.3	13.3	13.3	13.3	9.5	640	-
1.3	265	14.6	2.2	11.28	IE5	BG06-../S5E06MA4	13	44	88	265	315	14.6	14.6	14.6	14.6	14.6	9.5	670	-
1.3	240	15.9	2.1	12.3	IE5	BG06-../S5E06MA4	12	40.5	81	240	290	15.9	15.9	15.9	15.9	15.9	9.5	670	-
1.3	230	16.8	2	12.98	IE5	BG06-../S5E06MA4	11.5	38.5	77	230	275	16.8	16.8	16.8	16.8	16.8	9.5	600	-
1.3	200	19.2	1.8	14.78	IE5	BG06-../S5E06MA4	10	33.5	67	200	240	19.2	19.2	19.2	19.2	19.2	9.5	730	-
1.3	185	20.5	1.7	16.13	IE5	BG06-../S5E06MA4	9.2	30.5	61	185	220	20.5	20.5	20.5	20.5	20.5	9.5	740	-
1.3	172	22.5	1.7	17.4	IE5	BG06-../S5E06MA4	8.6	28.5	57	172	205	22.5	22.5	22.5	22.5	22.5	9.5	760	-
1.3	158	24.5	1.6	18.98	IE5	BG06-../S5E06MA4	7.9	26	52	158	189	24.5	24.5	24.5	24.5	24.5	9.5	770	-
1.3	144	27	1.5	20.82	IE5	BG06-../S5E06MA4	7.2	24	48	144	172	27	27	27	27	27	9.5	800	-
1.3	132	29.5	1.5	22.71	IE5	BG06-../S5E06MA4	6.6	22	44	132	158	29.5	29.5	29.5	29.5	29.5	9.5	810	-
1.3	117	33	1.4	25.48	IE5	BG06-../S5E06MA4	5.8	19.5	39	117	141	33	33	33	33	33	9.5	850	-
1.3	107	36	1.2	27.8	IE5	BG06-../S5E06MA4	5.3	17.5	35.5	107	129	36	36	36	36	36	9.5	840	-
1.3	93	41.5	1.1	32.22	IE5	BG06-../S5E06MA4	4.6	15.5	31	93	111	41.5	41.5	41.5	41.5	41.5	9.5	890	-
1.3	85	45.5	0.98	35.15	IE5	BG06-../S5E06MA4	4.2	14	28	85	102	45.5	45.5	45.5	45.5	45.5	9.5	880	-
1.3	81	47.5	0.94	36.91	IE5	BG06-../S5E06MA4	4	13.5	27	81	97	47.5	47.5	47.5	47.5	47.5	9.5	890	-
1.3	74	52	0.86	40.26	IE5	BG06-../S5E06MA4	3.7	12	24.5	74	89	52	52	52	52	52	9.5	890	-
1.3	95	40.5	2.9	31.52	IE5	BG10-../S5E06MA4	4.7	15.5	31.5	95	114	40.5	40.5	40.5	40.5	40.5	13	1600	2200
1.3	85	45	2.6	34.92	IE5	BG10-../S5E06MA4	4.2	14	28.5	85	103	45	45	45	45	45	13	1690	2350
1.3	75	51	2.3	39.7	IE5	BG10-../S5E06MA4	3.7	12.5	25	75	90	51	51	51	51	51	13	1780	2450
1.3	68	57	2.1	43.99	IE5	BG10-../S5E06MA4	3.4	11	22.5	68	81	57	57	57	57	57	13	1880	2600
1.3	64	60	2	46.55	IE5	BG10-../S5E06MA4	3.2	10.5	21	64	77	60	60	60	60	60	13	1920	2650
1.3	58	67	1.8	51.57	IE5	BG10-../S5E06MA4	2.9	9.6	19	58	69	67	67	67	67	67	13	2000	2800
1.3	52	74	1.6	57.48	IE5	BG10-../S5E06MA4	2.6	8.6	17	52	62	74	74	74	74	74	13	2000	2800
1.3	47	82	1.4	63.69	IE5	BG10-../S5E06MA4	2.3	7.8	15.5	47	56	82	82	82	82	82	13	2000	2800
1.3	45	85	1.4	66	IE5	BG10-../S5E06MA4	2.2	7.5	15	45	54	85	85	85	85	85	13	2000	2800
1.3	41	95	1.3	73.13	IE5	BG10-../S5E06MA4	2	6.8	13.5	41	49	95	95	95	95	95	13	2000	2800
1.3	44	87	1.2	67.54	IE5	BG10Z-../S5E06MA4	2.2	7.4	14.5	44	53	87	87	87	87	87	14	2000	2800
1.3	38.5	100	1.2	77.4	IE5	BG10Z-../S5E06MA4	1.9	6.4	12.5	38.5	46.5	100	100	100	100	100	14	2000	2800
1.3	34.5	111	1.1	85.76	IE5	BG10Z-../S5E06MA4	1.7	5.8	11.5	34.5	41.5	111	111	111	111	111	14	2000	2800
1.3	32.5	119	1	92.19	IE5	BG10Z-../S5E06MA4	1.6	5.4	10.5	32.5	39	119	119	119	119	119	14	2000	2800
1.3	29	132	0.9	102.1	IE5	BG10Z-../S5E06MA4	1.4	4.8	9.7	29	35	132	132	132	132	132	14	2000	2800
1.3	27	142	0.84	109.8	IE5	BG10Z-../S5E06MA4	1.3	4.5	9.1	27	32.5	142	142	142	142	142	14	2000	2800
1.3	79	49	3	37.9	IE5	BG15-../S5E06MA4	3.9	13	26	79	94	49	49	49	49	49	13	3000	6000
1.3	56	69	2.9	53.22	IE5	BG20-../S5E06MA4	2.8	9.3	18.5	56	67	69	69	69	69	69	16	4950	-
1.3	50	76	2.6	59.07	IE5	BG20-../S5E06MA4	2.5	8.4	16.5	50	60	76	76	76	76	76	16	5000	-
1.3	45.5	85	2.3	65.62	IE5	BG20-../S5E06MA4	2.2	7.6	15	45.5	54	85	85	85	85	85	16	5000	-
1.3	51	76	2.3	58.58	IE5	BG20Z-../S5E06MA4	2.5	8.5	17	51	61	76	76	76	76	76	16	5000	-
1.3	44	87	2.3	67.53	IE5	BG20Z-../S5E06MA4	2.2	7.4	14.5	44	53	87	87	87	87	87	16	5000	-
1.3	40	97	2.1	75	IE5	BG20Z-../S5E06MA4	2	6.6	13	40	48	97	97	97	97	97	16	5000	-
1.3	38	102	2	78.6	IE5	BG20Z-../S5E06MA4	1.9	6.3	12.5	38	45.5	102	102	102	102	102	16	5000	-
1.3	34	113	1.8	87.3	IE5	BG20Z-../S5E06MA4	1.7	5.7	11	34	41	113	113	113	113	113	16	5000	-
1.3	31.5	122	1.6	94.27	IE5	BG20Z-../S5E06MA4	1.5	5.3	10.5	31.5	38	122	122	122	122	122	16	5000	-
1.3	28.5	136	1.5	104.7	IE5	BG20Z-../S5E06MA4	1.4	4.7	9.5	28.5	34	136	136	136	136	136	16	5000	-
1.3	26.5	146	1.4	112.8	IE5	BG20Z-../S5E06MA4	1.3	4.4	8.8	26.5	31.5	146	146	146	146	146	16	5000	-
1.3	23.5	162	1.2	125.3	IE5	BG20Z-../S5E06MA4	1.1	3.9	7.9	23.5	28.5	162	162	162	162	162	16	5000	-
1.3	21	183	1.1	141.3	IE5	BG20Z-../S5E06MA4	1	3.5	7	21	25	183	183	183	183	183	16	5000	-
1.3	19	200	0.98	157	IE5	BG20Z-../S5E06MA4	0.95	3.1	6.3	19	22.5	200	200	200	200	200	16	5000	-
1.3	18	210	0.95	162.2	IE5	BG20Z-../S5E06MA4	0.9	3	6.1	18	22	210	210	210	210	210	16	5000	-
1.3	16.5	230	0.85	180.1	IE5	BG20Z-../S5E06MA4	0.8	2.7	5.5	16.5	19.5	230	230	230	230	230	16	5000	-
1.3	36.5	106	2.8	81.55	IE5	BG30Z-../S5E06MA4	1.8	6.1	12	36.5	44	106	106	106	106	106	22	6000	-
1.3	34.5	111	2.7	86.13	IE5	BG30Z-../S5E06MA4	1.7	5.8	11.5	34.5	41.5	111	11						

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

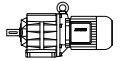
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]			
1.3	11	340	0.88	261.9	IE5	BG30Z-../S5E06MA4	0.55	1.9	3.8	11	13.5	340	340	340	340	340	22	6000	-
1.3	11.5	330	0.98	254.9	IE5	BG30G06-../S5E06MA4	0.55	1.9	3.9	11.5	14	330	330	330	330	330	25	6000	-
1.3	9.7	395	0.82	306.2	IE5	BG30G06-../S5E06MA4	0.48	1.6	3.2	9.7	11.5	395	395	395	395	395	25	6000	-
1.3	27.5	139	3	107.5	IE5	BG40Z-../S5E06MA4	1.3	4.6	9.3	27.5	33	139	139	139	139	139	38	7000	-
1.3	24.5	157	2.7	121.3	IE5	BG40Z-../S5E06MA4	1.2	4.1	8.2	24.5	29.5	157	157	157	157	157	38	7000	-
1.3	22	174	2.4	134.6	IE5	BG40Z-../S5E06MA4	1.1	3.7	7.4	22	26.5	174	174	174	174	174	38	7000	-
1.3	21	183	2.3	141.4	IE5	BG40Z-../S5E06MA4	1	3.5	7	21	25	183	183	183	183	183	38	7000	-
1.3	19	200	2.1	156.9	IE5	BG40Z-../S5E06MA4	0.95	3.1	6.3	19	22.5	200	200	200	200	200	38	7000	-
1.3	18	215	2	166.1	IE5	BG40Z-../S5E06MA4	0.9	3	6	18	21.5	215	215	215	215	215	38	7000	-
1.3	16	235	1.8	184.4	IE5	BG40Z-../S5E06MA4	0.8	2.7	5.4	16	19.5	235	235	235	235	235	38	7000	-
1.3	15	255	1.6	199.9	IE5	BG40Z-../S5E06MA4	0.75	2.5	5	15	18	255	255	255	255	255	38	7000	-
1.3	13.5	285	1.5	221.9	IE5	BG40Z-../S5E06MA4	0.65	2.2	4.5	13.5	16	285	285	285	285	285	38	7000	-
1.3	12	320	1.3	246.5	IE5	BG40Z-../S5E06MA4	0.6	2	4	12	14.5	320	320	320	320	320	38	7000	-
1.3	10.5	355	1.2	273.6	IE5	BG40Z-../S5E06MA4	0.5	1.8	3.6	10.5	13	355	355	355	355	355	38	7000	-
1.3	10	375	1.2	288.6	IE5	BG40G10-../S5E06MA4	0.5	1.7	3.4	10	12	375	375	375	375	375	43	7000	-
1.3	8.4	455	1	353.5	IE5	BG40G10-../S5E06MA4	0.42	1.4	2.8	8.4	10	455	455	455	455	455	43	7000	-
1.3	6.6	580	0.8	448.8	IE5	BG40G10-../S5E06MA4	0.33	1.1	2.2	6.6	8	580	580	580	580	580	43	7000	-
1.3	18	210	2.9	164.9	IE5	BG50Z-../S5E06MA4	0.9	3	6	18	21.5	210	210	210	210	210	47	10000	-
1.3	16	235	2.7	182.8	IE5	BG50Z-../S5E06MA4	0.8	2.7	5.4	16	19.5	235	235	235	235	235	47	10000	-
1.3	14.5	265	2.4	204.7	IE5	BG50Z-../S5E06MA4	0.7	2.4	4.8	14.5	17.5	265	265	265	265	265	47	10000	-
1.3	13	290	2.1	226.9	IE5	BG50Z-../S5E06MA4	0.65	2.2	4.4	13	15.5	290	290	290	290	290	47	10000	-
1.3	11.5	335	1.9	258.6	IE5	BG50Z-../S5E06MA4	0.55	1.9	3.8	11.5	13.5	335	335	335	335	335	47	10000	-
1.3	10	370	1.7	286.7	IE5	BG50Z-../S5E06MA4	0.5	1.7	3.4	10	12.5	370	370	370	370	370	47	10000	-
1.3	10	370	1.8	287.1	IE5	BG50G10-../S5E06MA4	0.5	1.7	3.4	10	12.5	370	370	370	370	370	51	10000	-
1.3	8.5	455	1.5	351.7	IE5	BG50G10-../S5E06MA4	0.42	1.4	2.8	8.5	10	455	455	455	455	455	51	10000	-
1.3	6.7	580	1.2	446.5	IE5	BG50G10-../S5E06MA4	0.33	1.1	2.2	6.7	8	580	580	580	580	580	51	10000	-
1.3	5.6	690	1	531.5	IE5	BG50G10-../S5E06MA4	0.28	0.9	1.8	5.6	6.7	690	690	690	690	690	51	10000	-
1.3	4.8	800	0.85	621.3	IE5	BG50G10-../S5E06MA4	0.24	0.8	1.6	4.8	5.7	800	800	800	800	800	51	10000	-
1.3	8.9	430	3	334.3	IE5	BG60G20-../S5E06MA4	0.44	1.4	2.9	8.9	10.5	430	430	430	430	430	100	16000	-
1.3	8	480	2.7	370.5	IE5	BG60G20-../S5E06MA4	0.4	1.3	2.6	8	9.7	480	480	480	480	480	100	16000	-
1.3	6.8	560	2.3	437.3	IE5	BG60G20-../S5E06MA4	0.34	1.1	2.2	6.8	8.2	560	560	560	560	560	100	16000	-
1.3	5.9	650	2	504.9	IE5	BG60G20-../S5E06MA4	0.29	0.95	1.9	5.9	7.1	650	650	650	650	650	100	16000	-
1.3	5.3	720	1.8	559.5	IE5	BG60G20-../S5E06MA4	0.26	0.85	1.7	5.3	6.4	720	720	720	720	720	100	16000	-
1.3	4.6	840	1.5	651.3	IE5	BG60G20-../S5E06MA4	0.23	0.75	1.5	4.6	5.5	840	840	840	840	840	100	16000	-
1.3	3.7	1040	1.2	804.5	IE5	BG60G20-../S5E06MA4	0.18	0.6	1.2	3.7	4.4	1040	1040	1040	1040	1040	100	16000	-
1.3	3.3	1150	1.1	891.5	IE5	BG60G20-../S5E06MA4	0.16	0.55	1.1	3.3	4	1150	1150	1150	1150	1150	100	16000	-
1.3	2.8	1360	0.95	1051	IE5	BG60G20-../S5E06MA4	0.14	0.47	0.95	2.8	3.4	1360	1360	1360	1360	1360	100	16000	-
1.3	2.5	1510	0.86	1168	IE5	BG60G20-../S5E06MA4	0.12	0.42	0.85	2.5	3	1510	1510	1510	1510	1510	100	16000	-
1.3	4.5	860	2.9	665.8	IE5	BG70G20-../S5E06MA4	0.22	0.75	1.5	4.5	5.4	860	860	860	860	860	130	20000	-
1.3	3.7	1020	2.4	790.2	IE5	BG70G20-../S5E06MA4	0.18	0.6	1.2	3.7	4.5	1020	1020	1020	1020	1020	130	20000	-
1.3	3.4	1140	2.2	877.6	IE5	BG70G20-../S5E06MA4	0.17	0.55	1.1	3.4	4.1	1140	1140	1140	1140	1140	130	20000	-
1.3	2.8	1340	1.9	1035	IE5	BG70G20-../S5E06MA4	0.14	0.48	0.95	2.8	3.4	1340	1340	1340	1340	1340	130	20000	-
1.3	2.5	1550	1.6	1193	IE5	BG70G20-../S5E06MA4	0.12	0.41	0.8	2.5	3	1550	1550	1550	1550	1550	130	20000	-
1.3	2.1	1800	1.4	1389	IE5	BG70G20-../S5E06MA4	0.1	0.35	0.7	2.1	2.5	1800	1800	1800	1800	1800	130	20000	-
1.3	1.9	2000	1.2	1543	IE5	BG70G20-../S5E06MA4	0.10	0.32	0.6	1.9	2.3	2000	2000	2000	2000	2000	130	20000	-
1.3	1.8	2150	1.2	1666	IE5	BG70G20-../S5E06MA4	0.09	0.3	0.6	1.8	2.1	2150	2150	2150	2150	2150	130	20000	-
1.3	1.5	2550	0.96	1994	IE5	BG70G20-../S5E06MA4	0.08	0.25	0.5	1.5	1.8	2550	2550	2550	2550	2550	130	20000	-
1.3	1.3	2850	0.87	2215	IE5	BG70G20-../S5E06MA4	0.07	0.22	0.45	1.3	1.6	2850	2850	2850	2850	2850	130	20000	-

 **$M_N = 1.75 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]			
1.75	1130	4.6	1.9	2.64	IE5	BG05-../S5E06MA4	56	189	375	1130	1360	4.6	4.6	4.6	4.6	4.6	8.5	420	-
1.75	880	5.9	1.7	3.38	IE5	BG05-../S5E06MA4	44	147	295	880	1060	5.9	5.9	5.9	5.9	5.9	8.5	460	-
1.75	650	8	1.5	4.59	IE5	BG05-../S5E06MA4	32.5	108	215	650	780	8	8	8	8	8	8.5	490	-
1.75	540	9.5	1.5	5.46	IE5	BG05-../S5E06MA4	27	91	183	540	650	9.5	9.5	9.5	9.5	9.5	8.5	490	-
1.75	490	10.6	1.6	6.09	IE5	BG05-../S5E06MA4	24.5	82	164	490	590	10.6	10.6	10.6	10.6	10.6	8.5	480	-
1.75	450	11.5	1.4	6.6	IE5	BG05-../S5E06MA4	22.5	75	151	450	540	11.5	11.5	11.5	11.5	11.5	8.5	510	-
1.75	450	11.6	1.5	6.64	IE5	BG05-../S5E06MA4	22.5	75	150	450	540	11.6	11.6	11.6	11.6	11.6	8.5	500	-
1.75	380	13.6	1.3	7.8	IE5	BG05-../S5E06MA4	19	64	128	380	460	13.6	13.6	13.6	13.6	13.6	8.5	530	-
1.75	365	14.2	1.3	8.15	IE5	BG05-../S5E06MA4	18	61	122	365	440	14.2	14.2	14.2	14.2	14.2	8.5	510	-
1.75	350	14.8	1.3	8.51	IE5	BG05-../S5E06MA4	17.5	58	117	350	420	14.8	14.8	14.8	14.8	14.8	8.5	550	-
1.75	285	18.1	1	10.4	IE5	BG05-../S5E06MA4	14	48	96	285	345	18.1	18.1	18.1	18.1	18.1	8.5	510	-
1.75	280	18.5	1.1	10.59	IE5	BG05-../S5E06MA4	14	47	94	280	335	18.5	18.5	18.5	18.5	18.5	8.5	590	-
1.75	255	20	1	11.55	IE5	BG05-../S5E06MA4	12.5	43	86	255	310	20	20	20	20	20	8.5	600	-
1.75	245	21	1	12.05	IE5	BG05-../S5E06MA4	12	41	82	245	295	21	21	21	21	21	8.5	510	-
1.75	235	22	1	12.6	IE5	BG05-../S5E06MA4	11.5												

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

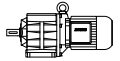
 **$M_N = 1.75 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.75	355	14.6	1.9	8.39	IE5	BG06-../S5E06MA4	17.5	59	119	355	425	14.6	14.6	14.6	14.6	14.6	9.5	600	-
1.75	315	16.4	1.8	9.38	IE5	BG06-../S5E06MA4	15.5	53	106	315	380	16.4	16.4	16.4	16.4	16.4	9.5	640	-
1.75	290	17.9	1.7	10.24	IE5	BG06-../S5E06MA4	14.5	48.5	97	290	350	17.9	17.9	17.9	17.9	17.9	9.5	640	-
1.75	265	19.7	1.6	11.28	IE5	BG06-../S5E06MA4	13	44	88	265	315	19.7	19.7	19.7	19.7	19.7	9.5	670	-
1.75	240	21.5	1.5	12.3	IE5	BG06-../S5E06MA4	12	40.5	81	240	290	21.5	21.5	21.5	21.5	21.5	9.5	670	-
1.75	230	22.5	1.5	12.98	IE5	BG06-../S5E06MA4	11.5	38.5	77	230	275	22.5	22.5	22.5	22.5	22.5	9.5	600	-
1.75	200	25.5	1.3	14.78	IE5	BG06-../S5E06MA4	10	33.5	67	200	240	25.5	25.5	25.5	25.5	25.5	9.5	730	-
1.75	185	28	1.2	16.13	IE5	BG06-../S5E06MA4	9.2	30.5	61	185	220	28	28	28	28	28	9.5	740	-
1.75	172	30	1.2	17.4	IE5	BG06-../S5E06MA4	8.6	28.5	57	172	205	30	30	30	30	30	9.5	760	-
1.75	158	33	1.2	18.98	IE5	BG06-../S5E06MA4	7.9	26	52	158	189	33	33	33	33	33	9.5	770	-
1.75	144	36	1.1	20.82	IE5	BG06-../S5E06MA4	7.2	24	48	144	172	36	36	36	36	36	9.5	800	-
1.75	132	39.5	1	22.71	IE5	BG06-../S5E06MA4	6.6	22	44	132	158	39.5	39.5	39.5	39.5	39.5	9.5	810	-
1.75	117	44.5	1	25.48	IE5	BG06-../S5E06MA4	5.8	19.5	39	117	141	44.5	44.5	44.5	44.5	44.5	9.5	850	-
1.75	107	48.5	0.92	27.8	IE5	BG06-../S5E06MA4	5.3	17.5	35.5	107	129	48.5	48.5	48.5	48.5	48.5	9.5	840	-
1.75	93	56	0.8	32.22	IE5	BG06-../S5E06MA4	4.6	15.5	31	93	111	56	56	56	56	56	9.5	890	-
1.75	122	42.5	2.8	24.42	IE5	BG10-../S5E06MA4	6.1	20	40.5	122	147	42.5	42.5	42.5	42.5	42.5	13	1410	1970
1.75	114	45.5	2.6	26.26	IE5	BG10-../S5E06MA4	5.7	19	38	114	137	45.5	45.5	45.5	45.5	45.5	13	1460	2000
1.75	103	50	2.4	29.09	IE5	BG10-../S5E06MA4	5.1	17	34	103	123	50	50	50	50	50	13	1540	2150
1.75	95	55	2.2	31.52	IE5	BG10-../S5E06MA4	4.7	15.5	31.5	95	114	55	55	55	55	55	13	1600	2200
1.75	85	61	2	34.92	IE5	BG10-../S5E06MA4	4.2	14	28.5	85	103	61	61	61	61	61	13	1690	2350
1.75	75	69	1.7	39.7	IE5	BG10-../S5E06MA4	3.7	12.5	25	75	90	69	69	69	69	69	13	1780	2450
1.75	68	76	1.6	43.99	IE5	BG10-../S5E06MA4	3.4	11	22.5	68	81	76	76	76	76	76	13	1880	2600
1.75	64	81	1.5	46.55	IE5	BG10-../S5E06MA4	3.2	10.5	21	64	77	81	81	81	81	81	13	1920	2650
1.75	58	90	1.3	51.57	IE5	BG10-../S5E06MA4	2.9	9.6	19	58	69	90	90	90	90	90	13	2000	2800
1.75	52	100	1.2	57.48	IE5	BG10-../S5E06MA4	2.6	8.6	17	52	62	100	100	100	100	100	13	2000	2800
1.75	47	111	1.1	63.69	IE5	BG10-../S5E06MA4	2.3	7.8	15.5	47	56	111	111	111	111	111	13	2000	2800
1.75	45	115	1	66	IE5	BG10-../S5E06MA4	2.2	7.5	15	45	54	115	115	115	115	115	13	2000	2800
1.75	41	127	0.94	73.13	IE5	BG10-../S5E06MA4	2	6.8	13.5	41	49	127	127	127	127	127	13	2000	2800
1.75	44	118	0.87	67.54	IE5	BG10Z-../S5E06MA4	2.2	7.4	14.5	44	53	118	118	118	118	118	14	2000	2800
1.75	38.5	135	0.89	77.4	IE5	BG10Z-../S5E06MA4	1.9	6.4	12.5	38.5	46.5	135	135	135	135	135	14	2000	2800
1.75	34.5	150	0.8	85.76	IE5	BG10Z-../S5E06MA4	1.7	5.8	11.5	34.5	41.5	150	150	150	150	150	14	2000	2800
1.75	99	52	2.8	30.08	IE5	BG15-../S5E06MA4	4.9	16.5	33	99	119	52	52	52	52	52	13	3000	6000
1.75	87	59	2.5	34.2	IE5	BG15-../S5E06MA4	4.3	14.5	29	87	105	59	59	59	59	59	13	3000	6000
1.75	79	66	2.3	37.9	IE5	BG15-../S5E06MA4	3.9	13	26	79	94	66	66	66	66	66	13	3000	6000
1.75	71	73	2.7	41.76	IE5	BG20-../S5E06MA4	3.5	11.5	23.5	71	86	73	73	73	73	73	16	4500	-
1.75	64	81	2.5	46.38	IE5	BG20-../S5E06MA4	3.2	10.5	21.5	64	77	81	81	81	81	81	16	4700	-
1.75	62	83	2.4	47.92	IE5	BG20-../S5E06MA4	3.1	10	20.5	62	75	83	83	83	83	83	16	4750	-
1.75	56	93	2.1	53.22	IE5	BG20-../S5E06MA4	2.8	9.3	18.5	56	67	93	93	93	93	93	16	4950	-
1.75	50	103	1.9	59.07	IE5	BG20-../S5E06MA4	2.5	8.4	16.5	50	60	103	103	103	103	103	16	5000	-
1.75	45.5	114	1.7	65.62	IE5	BG20-../S5E06MA4	2.2	7.6	15	45.5	54	114	114	114	114	114	16	5000	-
1.75	51	102	1.7	58.58	IE5	BG20Z-../S5E06MA4	2.5	8.5	17	51	61	102	102	102	102	102	16	5000	-
1.75	44	118	1.7	67.53	IE5	BG20Z-../S5E06MA4	2.2	7.4	14.5	44	53	118	118	118	118	118	16	5000	-
1.75	40	131	1.5	75	IE5	BG20Z-../S5E06MA4	2	6.6	13	40	48	131	131	131	131	131	16	5000	-
1.75	38	137	1.5	78.6	IE5	BG20Z-../S5E06MA4	1.9	6.3	12.5	38	45.5	137	137	137	137	137	16	5000	-
1.75	34	152	1.3	87.3	IE5	BG20Z-../S5E06MA4	1.7	5.7	11	34	41	152	152	152	152	152	16	5000	-
1.75	31.5	164	1.2	94.27	IE5	BG20Z-../S5E06MA4	1.5	5.3	10.5	31.5	38	164	164	164	164	164	16	5000	-
1.75	28.5	183	1.1	104.7	IE5	BG20Z-../S5E06MA4	1.4	4.7	9.5	28.5	34	183	183	183	183	183	16	5000	-
1.75	26.5	197	1	112.8	IE5	BG20Z-../S5E06MA4	1.3	4.4	8.8	26.5	31.5	197	197	197	197	197	16	5000	-
1.75	23.5	215	0.91	125.3	IE5	BG20Z-../S5E06MA4	1.1	3.9	7.9	23.5	28.5	215	215	215	215	215	16	5000	-
1.75	21	245	0.81	141.3	IE5	BG20Z-../S5E06MA4	1	3.5	7	21	25	245	245	245	245	245	16	5000	-
1.75	51	101	2.9	58.18	IE5	BG30-../S5E06MA4	2.5	8.5	17	51	61	101	101	101	101	101	20	6000	-
1.75	49	106	2.8	60.79	IE5	BG30-../S5E06MA4	2.4	8.2	16	49	59	106	106	106	106	106	20	6000	-
1.75	44	118	2.5	67.44	IE5	BG30-../S5E06MA4	2.2	7.4	14.5	44	53	118	118	118	118	118	20	6000	-
1.75	45.5	115	2.3	65.79	IE5	BG30Z-../S5E06MA4	2.2	7.5	15	45.5	54	115	115	115	115	115	22	6000	-
1.75	40.5	128	2.3	73.51	IE5	BG30Z-../S5E06MA4	2	6.8	13.5	40.5	48.5	128	128	128	128	128	22	6000	-
1.75	36.5	142	2.1	81.55	IE5	BG30Z-../S5E06MA4	1.8	6.1	12	36.5	44	142	142	142	142	142	22	6000	-
1.75	34.5	150	2	86.13	IE5	BG30Z-../S5E06MA4	1.7	5.8	11.5	34.5	41.5	150	150	150	150	150	22	6000	-
1.75	31	167	1.8	95.55	IE5	BG30Z-../S5E06MA4	1.5	5.2	10	31	37.5	167	167	167	167	167	22	6000	-
1.75	27	191	1.6	109.6	IE5	BG30Z-../S5E06MA4	1.3	4.5	9.1	27	32.5	191	191	191	191	191	22	6000	-
1.75	24.5	210	1.4	121.6	IE5	BG30Z-../S5E06MA4	1.2	4.1	8.2	24.5	29.5	210	210	210	210	210	22	6000	-
1.75	23	220	1.3	128.5	IE5	BG30Z-../S5E06MA4	1.1	3.8	7.7	23	28	220	220	220	220	220	22	6000	-
1.75	21	245	1.2	142.5	IE5	BG30Z-../S5E06MA4	1	3.5	7	21	25	245	245	245	245	245	22	6000	-
1.75	19.5	265	1.1	151.5	IE5	BG30Z-../S5E06MA4	0.95	3.3	6.6	19.5	23.5	265	265	265	265	265	22	6000	-
1.75	17.5	290	1	168.1	IE5	BG30Z-../S5E06MA4	0.85	2.9	5.9	17.5	21	290	290	290	290	290	22	6000	-
1.75	16	320	0.94	182.9	IE5	BG30Z-../S5E06MA4	0.8	2.7	5.4	16	19.5	320	320	320	320	320	22	6000	-
1.75	14.5	355	0.84	202.9	IE5	BG30Z-../S5E06MA4	0.7	2.4	4.9	14.5	17.5	355	355	355	355	355	22	6000	-
1.75	36.5	143	3	82	IE5	BG40Z-../S5E06MA4	1.8	6	12	36.5	43.5	143	143	143	143	143	38	7000	-
1.75	32.5	159	2.7	91.02	IE5	BG40Z-../S5E06MA4	1.6	5.4	10.5	32.5	39.5	159	159	159</					

# BG-series helical-geared motors

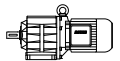
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

**$M_N = 1.75 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.75	10.5	475	0.89	273.6	IE5	BG40Z-../S5E06MA4	0.5	1.8	3.6	10.5	13	475	475	475	475	475	38	7000	-
1.75	10	500	0.92	288.6	IE5	BG40G10-../S5E06MA4	0.5	1.7	3.4	10	12	500	500	500	500	500	43	7000	-
1.75	23	225	2.8	128.9	IE5	BG50Z-../S5E06MA4	1.1	3.8	7.7	23	27.5	225	225	225	225	225	47	10000	-
1.75	20.5	250	2.5	142.9	IE5	BG50Z-../S5E06MA4	1	3.4	6.9	20.5	25	250	250	250	250	250	47	10000	-
1.75	18	285	2.2	164.9	IE5	BG50Z-../S5E06MA4	0.9	3	6	18	21.5	285	285	285	285	285	47	10000	-
1.75	16	315	2	182.8	IE5	BG50Z-../S5E06MA4	0.8	2.7	5.4	16	19.5	315	315	315	315	315	47	10000	-
1.75	14.5	355	1.8	204.7	IE5	BG50Z-../S5E06MA4	0.7	2.4	4.8	14.5	17.5	355	355	355	355	355	47	10000	-
1.75	13	395	1.6	226.9	IE5	BG50Z-../S5E06MA4	0.65	2.2	4.4	13	15.5	395	395	395	395	395	47	10000	-
1.75	11.5	450	1.4	258.6	IE5	BG50Z-../S5E06MA4	0.55	1.9	3.8	11.5	13.5	450	450	450	450	450	47	10000	-
1.75	10	500	1.3	286.7	IE5	BG50Z-../S5E06MA4	0.5	1.7	3.4	10	12.5	500	500	500	500	500	47	10000	-
1.75	10	500	1.4	287.1	IE5	BG50G10-../S5E06MA4	0.5	1.7	3.4	10	12.5	500	500	500	500	500	51	10000	-
1.75	8.5	610	1.1	351.7	IE5	BG50G10-../S5E06MA4	0.42	1.4	2.8	8.5	10	610	610	610	610	610	51	10000	-
1.75	6.7	780	0.88	446.5	IE5	BG50G10-../S5E06MA4	0.33	1.1	2.2	6.7	8	780	780	780	780	780	51	10000	-
1.75	10.5	480	2.7	276.2	IE5	BG60G20-../S5E06MA4	0.5	1.8	3.6	10.5	13	480	480	480	480	480	100	16000	-
1.75	9.8	530	2.4	306.1	IE5	BG60G20-../S5E06MA4	0.49	1.6	3.2	9.8	11.5	530	530	530	530	530	100	16000	-
1.75	8.9	580	2.2	334.3	IE5	BG60G20-../S5E06MA4	0.44	1.4	2.9	8.9	10.5	580	580	580	580	580	100	16000	-
1.75	8	640	2	370.5	IE5	BG60G20-../S5E06MA4	0.4	1.3	2.6	8	9.7	640	640	640	640	640	100	16000	-
1.75	6.8	760	1.7	437.3	IE5	BG60G20-../S5E06MA4	0.34	1.1	2.2	6.8	8.2	760	760	760	760	760	100	16000	-
1.75	5.9	880	1.5	504.9	IE5	BG60G20-../S5E06MA4	0.29	0.95	1.9	5.9	7.1	880	880	880	880	880	100	16000	-
1.75	5.3	970	1.3	559.5	IE5	BG60G20-../S5E06MA4	0.26	0.85	1.7	5.3	6.4	970	970	970	970	970	100	16000	-
1.75	4.6	1130	1.1	651.3	IE5	BG60G20-../S5E06MA4	0.23	0.75	1.5	4.6	5.5	1130	1130	1130	1130	1130	100	16000	-
1.75	3.7	1400	0.92	804.5	IE5	BG60G20-../S5E06MA4	0.18	0.6	1.2	3.7	4.4	1400	1400	1400	1400	1400	100	16000	-
1.75	3.3	1560	0.83	891.5	IE5	BG60G20-../S5E06MA4	0.16	0.55	1.1	3.3	4	1560	1560	1560	1560	1560	100	16000	-
1.75	6	860	2.9	495.9	IE5	BG70G20-../S5E06MA4	0.3	1	2	6	7.2	860	860	860	860	860	130	20000	-
1.75	5.1	1010	2.5	577.3	IE5	BG70G20-../S5E06MA4	0.25	0.85	1.7	5.1	6.2	1010	1010	1010	1010	1010	130	20000	-
1.75	4.5	1160	2.1	665.8	IE5	BG70G20-../S5E06MA4	0.22	0.75	1.5	4.5	5.4	1160	1160	1160	1160	1160	130	20000	-
1.75	3.7	1380	1.8	790.2	IE5	BG70G20-../S5E06MA4	0.18	0.6	1.2	3.7	4.5	1380	1380	1380	1380	1380	130	20000	-
1.75	3.4	1530	1.6	877.6	IE5	BG70G20-../S5E06MA4	0.17	0.55	1.1	3.4	4.1	1530	1530	1530	1530	1530	130	20000	-
1.75	2.8	1810	1.4	1035	IE5	BG70G20-../S5E06MA4	0.14	0.48	0.95	2.8	3.4	1810	1810	1810	1810	1810	130	20000	-
1.75	2.5	2050	1.2	1193	IE5	BG70G20-../S5E06MA4	0.12	0.41	0.8	2.5	3	2050	2050	2050	2050	2050	130	20000	-
1.75	2.1	2400	1	1389	IE5	BG70G20-../S5E06MA4	0.1	0.35	0.7	2.1	2.5	2400	2400	2400	2400	2400	130	20000	-
1.75	1.9	2700	0.93	1543	IE5	BG70G20-../S5E06MA4	0.10	0.32	0.6	1.9	2.3	2700	2700	2700	2700	2700	130	20000	-
1.75	1.8	2900	0.86	1666	IE5	BG70G20-../S5E06MA4	0.09	0.3	0.6	1.8	2.1	2900	2900	2900	2900	2900	130	20000	-

**$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**

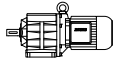


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
2.4	1130	6.3	1.4	2.64	IE5	BG05-../S5E06LA4	56	189	375	1130	1360	6.3	6.3	6.3	6.3	6.3	8.5	420	-
2.4	1130	6.3	1.4	2.64	IE3	BG05-../SPE06MA4	56	189	375	1130	1360	4.75	5.2	5.8	6.3	6.3	8.5	420	-
2.4	880	8.1	1.2	3.38	IE5	BG05-../S5E06LA4	44	147	295	880	1060	8.1	8.1	8.1	8.1	8.1	8.5	460	-
2.4	880	8.1	1.2	3.38	IE3	BG05-../SPE06MA4	44	147	295	880	1060	6	6.7	7.4	8.1	8.1	8.5	460	-
2.4	650	11	1.1	4.59	IE5	BG05-../S5E06LA4	32.5	108	215	650	780	11	11	11	11	11	8.5	490	-
2.4	650	11	1.1	4.59	IE3	BG05-../SPE06MA4	32.5	108	215	650	780	8.2	9.1	10	11	11	8.5	490	-
2.4	540	13.1	1.1	5.46	IE5	BG05-../S5E06LA4	27	91	183	540	650	13.1	13.1	13.1	13.1	13.1	8.5	490	-
2.4	540	13.1	1.1	5.46	IE3	BG05-../SPE06MA4	27	91	183	540	650	9.8	10.9	12	13.1	13.1	8.5	490	-
2.4	490	14.6	1.2	6.09	IE5	BG05-../S5E06LA4	24.5	82	164	490	590	14.6	14.6	14.6	14.6	14.6	8.5	480	-
2.4	490	14.6	1.2	6.09	IE3	BG05-../SPE06MA4	24.5	82	164	490	590	10.9	12.1	13.3	14.6	14.6	8.5	480	-
2.4	450	15.8	1	6.6	IE5	BG05-../S5E06LA4	22.5	75	151	450	540	15.8	15.8	15.8	15.8	15.8	8.5	510	-
2.4	450	15.8	1	6.6	IE3	BG05-../SPE06MA4	22.5	75	151	450	540	11.8	13.1	14.5	15.8	15.8	8.5	510	-
2.4	450	15.9	1.1	6.64	IE5	BG05-../S5E06LA4	22.5	75	150	450	540	15.9	15.9	15.9	15.9	15.9	8.5	500	-
2.4	450	15.8	1	6.6	IE3	BG05-../SPE06MA4	22.5	75	151	450	540	11.9	13.2	14.6	15.9	15.9	8.5	500	-
2.4	380	18.7	0.96	7.8	IE5	BG05-../S5E06LA4	19	64	128	380	460	18.7	18.7	18.7	18.7	18.7	8.5	530	-
2.4	380	18.7	0.96	7.8	IE3	BG05-../SPE06MA4	19	64	128	380	460	14	15.6	17.1	18.7	18.7	8.5	530	-
2.4	365	19.5	0.92	8.15	IE5	BG05-../S5E06LA4	18	61	122	365	440	19.5	19.5	19.5	19.5	19.5	8.5	510	-
2.4	365	19.5	0.92	8.15	IE3	BG05-../SPE06MA4	18	61	122	365	440	14.6	16.3	17.9	19.5	19.5	8.5	510	-
2.4	350	20	0.93	8.51	IE5	BG05-../S5E06LA4	17.5	58	117	350	420	20	20	20	20	20	8.5	550	-
2.4	350	20	0.93	8.51	IE3	BG05-../SPE06MA4	17.5	58	117	350	420	15.3	17	18.7	20	20	8.5	550	-
2.4	790	9	2.2	3.78	IE5	BG06-../S5E06LA4	39.5	132	260	790	950	9	9	9	9	9	9.5	520	-
2.4	790	9	2.2	3.78	IE3	BG06-../SPE06MA4	39.5	132	260	790	950	6.8	7.5	8.3	9	9	9.5	520	-
2.4	660	10.8	2	4.54	IE5	BG06-../S5E06LA4	33	110											

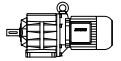


# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
2.4	230	31	1.1	12.98	IE5	BG06-../S5E06LA4	11.5	38.5	77	230	275	31	31	31	31	9.5	600	-	
2.4	230	31	1.1	12.98	IE3	BG06-../SPE06MA4	11.5	38.5	77	230	275	23	25.5	28.5	31	31	9.5	600	-
2.4	200	35	0.96	14.78	IE5	BG06-../S5E06LA4	10	33.5	67	200	240	35	35	35	35	9.5	730	-	
2.4	200	35	0.96	14.78	IE3	BG06-../SPE06MA4	10	33.5	67	200	240	26.5	29.5	32.5	35	35	9.5	730	-
2.4	185	38.5	0.9	16.13	IE5	BG06-../S5E06LA4	9.2	30.5	61	185	220	38.5	38.5	38.5	38.5	9.5	740	-	
2.4	185	38.5	0.9	16.13	IE3	BG06-../SPE06MA4	9.2	30.5	61	185	220	29	32	35	38.5	38.5	9.5	740	-
2.4	172	41.5	0.91	17.4	IE5	BG06-../S5E06LA4	8.6	28.5	57	172	205	41.5	41.5	41.5	41.5	9.5	760	-	
2.4	172	41.5	0.91	17.4	IE3	BG06-../SPE06MA4	8.6	28.5	57	172	205	31	34.5	38	41.5	41.5	9.5	760	-
2.4	158	45.5	0.88	18.98	IE5	BG06-../S5E06LA4	7.9	26	52	158	189	45.5	45.5	45.5	45.5	9.5	770	-	
2.4	158	45.5	0.88	18.98	IE3	BG06-../SPE06MA4	7.9	26	52	158	189	34	37.5	41.5	45.5	45.5	9.5	770	-
2.4	144	49.5	0.8	20.82	IE5	BG06-../S5E06LA4	7.2	24	48	144	172	49.5	49.5	49.5	49.5	9.5	800	-	
2.4	144	49.5	0.8	20.82	IE3	BG06-../SPE06MA4	7.2	24	48	144	172	37	41.5	45.5	49.5	49.5	9.5	800	-
2.4	185	38.5	3	16.15	IE5	BG10-../S5E06LA4	9.2	30.5	61	185	220	38.5	38.5	38.5	38.5	13	1140	1590	
2.4	185	38.5	3	16.15	IE3	BG10-../SPE06MA4	9.2	30.5	61	185	220	29	32	35.5	38.5	38.5	13	1140	1590
2.4	162	44	2.7	18.51	IE5	BG10-../S5E06LA4	8.1	27	54	162	194	44	44	44	44	13	1210	1690	
2.4	162	44	2.7	18.51	IE3	BG10-../SPE06MA4	8.1	27	54	162	194	33	37	40.5	44	44	13	1210	1690
2.4	146	49	2.4	20.51	IE5	BG10-../S5E06LA4	7.3	24	48.5	146	175	49	49	49	49	13	1290	1800	
2.4	146	49	2.4	20.51	IE3	BG10-../SPE06MA4	7.3	24	48.5	146	175	36.5	41	45	49	49	13	1290	1800
2.4	136	52	2.3	22.04	IE5	BG10-../S5E06LA4	6.8	22.5	45	136	163	52	52	52	52	13	1330	1860	
2.4	136	52	2.3	22.04	IE3	BG10-../SPE06MA4	6.8	22.5	45	136	163	39.5	44	48	52	52	13	1330	1860
2.4	122	58	2	24.42	IE5	BG10-../S5E06LA4	6.1	20	40.5	122	147	58	58	58	58	13	1410	1970	
2.4	122	58	2	24.42	IE3	BG10-../SPE06MA4	6.1	20	40.5	122	147	43.5	48.5	53	58	58	13	1410	1970
2.4	114	63	1.9	26.26	IE5	BG10-../S5E06LA4	5.7	19	38	114	137	63	63	63	63	13	1460	2000	
2.4	114	63	1.9	26.26	IE3	BG10-../SPE06MA4	5.7	19	38	114	137	47	52	57	63	63	13	1460	2000
2.4	103	69	1.7	29.09	IE5	BG10-../S5E06LA4	5.1	17	34	103	123	69	69	69	69	13	1540	2150	
2.4	103	69	1.7	29.09	IE3	BG10-../SPE06MA4	5.1	17	34	103	123	52	58	63	69	69	13	1540	2150
2.4	95	75	1.6	31.52	IE5	BG10-../S5E06LA4	4.7	15.5	31.5	95	114	75	75	75	75	13	1600	2200	
2.4	95	75	1.6	31.52	IE3	BG10-../SPE06MA4	4.7	15.5	31.5	95	114	56	63	69	75	75	13	1600	2200
2.4	85	83	1.4	34.92	IE5	BG10-../S5E06LA4	4.2	14	28.5	85	103	83	83	83	83	13	1690	2350	
2.4	85	83	1.4	34.92	IE3	BG10-../SPE06MA4	4.2	14	28.5	85	103	62	69	76	83	83	13	1690	2350
2.4	75	95	1.3	39.7	IE5	BG10-../S5E06LA4	3.7	12.5	25	75	90	95	95	95	95	13	1780	2450	
2.4	75	95	1.3	39.7	IE3	BG10-../SPE06MA4	3.7	12.5	25	75	90	71	79	87	95	95	13	1780	2450
2.4	68	105	1.1	43.99	IE5	BG10-../S5E06LA4	3.4	11	22.5	68	81	105	105	105	105	13	1880	2600	
2.4	68	105	1.1	43.99	IE3	BG10-../SPE06MA4	3.4	11	22.5	68	81	79	87	96	105	105	13	1880	2600
2.4	64	111	1.1	46.55	IE5	BG10-../S5E06LA4	3.2	10.5	21	64	77	111	111	111	111	13	1920	2650	
2.4	64	111	1.1	46.55	IE3	BG10-../SPE06MA4	3.2	10.5	21	64	77	83	93	102	111	111	13	1920	2650
2.4	58	123	0.97	51.57	IE5	BG10-../S5E06LA4	2.9	9.6	19	58	69	123	123	123	123	13	2000	2800	
2.4	58	123	0.97	51.57	IE3	BG10-../SPE06MA4	2.9	9.6	19	58	69	92	103	113	123	123	13	2000	2800
2.4	52	137	0.87	57.48	IE5	BG10-../S5E06LA4	2.6	8.6	17	52	62	137	137	137	137	13	2000	2800	
2.4	52	137	0.87	57.48	IE3	BG10-../SPE06MA4	2.6	8.6	17	52	62	103	114	126	137	137	13	2000	2800
2.4	110	64	2.3	27.08	IE5	BG15-../S5E06LA4	5.5	18	36.5	110	132	64	64	64	64	13	3000	6000	
2.4	110	64	2.3	27.08	IE3	BG15-../SPE06MA4	5.5	18	36.5	110	132	48.5	54	59	64	64	13	3000	6000
2.4	99	72	2.1	30.08	IE5	BG15-../S5E06LA4	4.9	16.5	33	99	119	72	72	72	72	13	3000	6000	
2.4	99	72	2.1	30.08	IE3	BG15-../SPE06MA4	4.9	16.5	33	99	119	54	60	66	72	72	13	3000	6000
2.4	87	82	1.8	34.2	IE5	BG15-../S5E06LA4	4.3	14.5	29	87	105	82	82	82	82	13	3000	6000	
2.4	87	82	1.8	34.2	IE3	BG15-../SPE06MA4	4.3	14.5	29	87	105	61	68	75	82	82	13	3000	6000
2.4	79	90	1.6	37.9	IE5	BG15-../S5E06LA4	3.9	13	26	79	94	90	90	90	90	13	3000	6000	
2.4	79	90	1.6	37.9	IE3	BG15-../SPE06MA4	3.9	13	26	79	94	68	75	83	90	90	13	3000	6000
2.4	107	66	3	27.85	IE5	BG20-../S5E06LA4	5.3	17.5	35.5	107	129	66	66	66	66	16	3800	-	
2.4	107	66	3	27.85	IE3	BG20-../SPE06MA4	5.3	17.5	35.5	107	129	50	55	61	66	66	16	3800	-
2.4	96	74	2.7	30.94	IE5	BG20-../S5E06LA4	4.8	16	32	96	116	74	74	74	74	16	4000	-	
2.4	96	74	2.7	30.94	IE3	BG20-../SPE06MA4	4.8	16	32	96	116	55	61	68	74	74	16	4000	-
2.4	90	79	2.5	33.33	IE5	BG20-../S5E06LA4	4.5	15	30	90	108	79	79	79	79	16	4100	-	
2.4	90	79	2.5	33.33	IE3	BG20-../SPE06MA4	4.5	15	30	90	108	59	66	73	79	79	16	4100	-
2.4	81	88	2.3	37.02	IE5	BG20-../S5E06LA4	4	13.5	27	81	97	88	88	88	88	16	4300	-	
2.4	81	88	2.3	37.02	IE3	BG20-../SPE06MA4	4	13.5	27	81	97	66	74	81	88	88	16	4300	-
2.4	71	100	2	41.76	IE5	BG20-../S5E06LA4	3.5	11.5	23.5	71	86	100	100	100	100	16	4500	-	
2.4	71	100	2	41.76	IE3	BG20-../SPE06MA4	3.5	11.5	23.5	71	86	75	83	91	100	100	16	4500	-
2.4	64	111	1.8	46.38	IE5	BG20-../S5E06LA4	3.2	10.5	21.5	64	77	111	111	111	111	16	4700	-	
2.4	64	111	1.8	46.38	IE3	BG20-../SPE06MA4	3.2	10.5	21.5	64	77	83	92	102	111	111	16	4700	-
2.4	62	115	1.7	47.92	IE5	BG20-../S5E06LA4	3.1	10	20.5	62	75	115	115	115	115	16	4750	-	
2.4	62	115	1.7	47.92	IE3	BG20-../SPE06MA4	3.1	10	20.5	62	75	86	95	105	115	115	16	4750	-
2.4	56	127	1.6	53.22	IE5	BG20-../S5E06LA4	2.8	9.3	18.5	56	67	127	127	127	127	16	4950	-	
2.4	56	127	1.6	53.22	IE3	BG20-../SPE06MA4	2.8	9.3	18.5	56	67	95	106	117	127	127	16	4950	-
2.4	50	141	1.4	59.07	IE5	BG20-../S5E06LA4	2.5	8.4	16.5	50	60	141	141	141	141	16	5000	-	
2.4	50	141	1.4	59.07	IE3	BG20-../SPE06MA4	2.5	8.4	16.5	50	60	106	118	129	141	141	16	5000	-
2.4	45.5	157	1.3	65.62	IE5	BG20-../S5E06LA4	2.2	7.6	15	45.5	54	157	157	157	157	16	5000	-	
2.4	45.5	157	1.3	65.62	IE3	BG20-../SPE06MA4	2.2	7.6	15	45.5	54	118	131	144	157	157	16	5000	-
2.4	51	140	1.2	58.58	IE5	BG20Z-../S5E06LA4	2.5	8.5	17	51	61	140	140	140	140	16	5000	-	
2.4	51	140	1.2	58.58	IE3	BG20Z-../SPE06MA4	2.5	8.5	17	51	61	105	117	128	140	140	16	5000	-
2.4	44	162	1.2	67.53	IE5	BG20Z-../S5E06LA4	2.2	7.4	14.5	44	53	162	1						

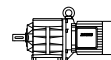
**BG-series helical-geared motors****Selection helical-geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE-	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							[Nm]	[1/min]	[Nm]	[-]	[1]	Classse	150	500	1000	3000			
2.4	28.5	250	0.8	104.7	IE3	BG20Z-../SPE06MA4	1.4	4.7	9.5	28.5	34	188	205	230	250	250	16	5000	-
2.4	70	101	2.9	42.46	IE5	BG30-../S5E06LA4	3.5	11.5	23.5	70	84	101	101	101	101	101	20	5900	-
2.4	70	101	2.9	42.46	IE3	BG30-../SPE06MA4	3.5	11.5	23.5	70	84	76	84	93	101	101	20	5900	-
2.4	63	113	2.7	47.11	IE5	BG30-../S5E06LA4	3.1	10.5	21	63	76	113	113	113	113	113	20	6000	-
2.4	63	113	2.7	47.11	IE3	BG30-../SPE06MA4	3.1	10.5	21	63	76	84	94	103	113	113	20	6000	-
2.4	57	125	2.4	52.44	IE5	BG30-../S5E06LA4	2.8	9.5	19	57	68	125	125	125	125	125	20	6000	-
2.4	57	125	2.4	52.44	IE3	BG30-../SPE06MA4	2.8	9.5	19	57	68	94	104	115	125	125	20	6000	-
2.4	51	139	2.1	58.18	IE5	BG30-../S5E06LA4	2.5	8.5	17	51	61	139	139	139	139	139	20	6000	-
2.4	51	139	2.1	58.18	IE3	BG30-../SPE06MA4	2.5	8.5	17	51	61	104	116	127	139	139	20	6000	-
2.4	49	145	2.1	60.79	IE5	BG30-../S5E06LA4	2.4	8.2	16	49	59	145	145	145	145	145	20	6000	-
2.4	49	145	2.1	60.79	IE3	BG30-../SPE06MA4	2.4	8.2	16	49	59	109	121	133	145	145	20	6000	-
2.4	44	161	1.9	67.44	IE5	BG30-../S5E06LA4	2.2	7.4	14.5	44	53	161	161	161	161	161	20	6000	-
2.4	44	161	1.9	67.44	IE3	BG30-../SPE06MA4	2.2	7.4	14.5	44	53	121	134	148	161	161	20	6000	-
2.4	45.5	157	1.7	65.79	IE5	BG30Z-../S5E06LA4	2.2	7.5	15	45.5	54	157	157	157	157	157	22	6000	-
2.4	45.5	157	1.7	65.79	IE3	BG30Z-../SPE06MA4	2.2	7.5	15	45.5	54	118	131	144	157	157	22	6000	-
2.4	40.5	176	1.7	73.51	IE5	BG30Z-../S5E06LA4	2	6.8	13.5	40.5	48.5	176	176	176	176	176	22	6000	-
2.4	40.5	176	1.7	73.51	IE3	BG30Z-../SPE06MA4	2	6.8	13.5	40.5	48.5	132	147	161	176	176	22	6000	-
2.4	36.5	195	1.5	81.55	IE5	BG30Z-../S5E06LA4	1.8	6.1	12	36.5	44	195	195	195	195	195	22	6000	-
2.4	36.5	195	1.5	81.55	IE3	BG30Z-../SPE06MA4	1.8	6.1	12	36.5	44	146	163	179	195	195	22	6000	-
2.4	34.5	205	1.5	86.13	IE5	BG30Z-../S5E06LA4	1.7	5.8	11.5	34.5	41.5	205	205	205	205	205	22	6000	-
2.4	34.5	205	1.5	86.13	IE3	BG30Z-../SPE06MA4	1.7	5.8	11.5	34.5	41.5	155	172	189	205	205	22	6000	-
2.4	31	225	1.3	95.55	IE5	BG30Z-../S5E06LA4	1.5	5.2	10	31	37.5	225	225	225	225	225	22	6000	-
2.4	31	225	1.3	95.55	IE3	BG30Z-../SPE06MA4	1.5	5.2	10	31	37.5	171	191	210	225	225	22	6000	-
2.4	27	260	1.1	109.6	IE5	BG30Z-../S5E06LA4	1.3	4.5	9.1	27	32.5	260	260	260	260	260	22	6000	-
2.4	27	260	1.1	109.6	IE3	BG30Z-../SPE06MA4	1.3	4.5	9.1	27	32.5	197	215	240	260	260	22	6000	-
2.4	24.5	290	1	121.6	IE5	BG30Z-../S5E06LA4	1.2	4.1	8.2	24.5	29.5	290	290	290	290	290	22	6000	-
2.4	24.5	290	1	121.6	IE3	BG30Z-../SPE06MA4	1.2	4.1	8.2	24.5	29.5	215	240	265	290	290	22	6000	-
2.4	23	305	0.97	128.5	IE5	BG30Z-../S5E06LA4	1.1	3.8	7.7	23	28	305	305	305	305	305	22	6000	-
2.4	23	305	0.97	128.5	IE3	BG30Z-../SPE06MA4	1.1	3.8	7.7	23	28	230	255	280	305	305	22	6000	-
2.4	21	340	0.88	142.5	IE5	BG30Z-../S5E06LA4	1	3.5	7	21	25	340	340	340	340	340	22	6000	-
2.4	21	340	0.88	142.5	IE3	BG30Z-../SPE06MA4	1	3.5	7	21	25	255	285	310	340	340	22	6000	-
2.4	19.5	360	0.83	151.5	IE5	BG30Z-../S5E06LA4	0.95	3.3	6.6	19.5	23.5	360	360	360	360	360	22	6000	-
2.4	19.5	360	0.83	151.5	IE3	BG30Z-../SPE06MA4	0.95	3.3	6.6	19.5	23.5	270	300	330	360	360	22	6000	-
2.4	44	162	2.6	67.74	IE5	BG40Z-../S5E06LA4	2.2	7.3	14.5	44	53	162	162	162	162	162	38	7000	-
2.4	44	162	2.6	67.74	IE3	BG40Z-../SPE06MA4	2.2	7.3	14.5	44	53	121	135	149	162	162	38	7000	-
2.4	39.5	180	2.4	75.19	IE5	BG40Z-../S5E06LA4	1.9	6.6	13	39.5	47.5	180	180	180	180	180	38	7000	-
2.4	39.5	180	2.4	75.19	IE3	BG40Z-../SPE06MA4	1.9	6.6	13	39.5	47.5	135	150	165	180	180	38	7000	-
2.4	36.5	196	2.2	82	IE5	BG40Z-../S5E06LA4	1.8	6	12	36.5	43.5	196	196	196	196	196	38	7000	-
2.4	36.5	196	2.2	82	IE3	BG40Z-../SPE06MA4	1.8	6	12	36.5	43.5	147	164	180	196	196	38	7000	-
2.4	32.5	215	1.9	91.02	IE5	BG40Z-../S5E06LA4	1.6	5.4	10.5	32.5	39.5	215	215	215	215	215	38	7000	-
2.4	32.5	215	1.9	91.02	IE3	BG40Z-../SPE06MA4	1.6	5.4	10.5	32.5	39.5	163	182	200	215	215	38	7000	-
2.4	30.5	230	1.8	96.86	IE5	BG40Z-../S5E06LA4	1.5	5.1	10	30.5	37	230	230	230	230	230	38	7000	-
2.4	30.5	230	1.8	96.86	IE3	BG40Z-../SPE06MA4	1.5	5.1	10	30.5	37	174	193	210	230	230	38	7000	-
2.4	27.5	255	1.6	107.5	IE5	BG40Z-../S5E06LA4	1.3	4.6	9.3	27.5	33	255	255	255	255	255	38	7000	-
2.4	27.5	255	1.6	107.5	IE3	BG40Z-../SPE06MA4	1.3	4.6	9.3	27.5	33	193	215	235	255	255	38	7000	-
2.4	24.5	290	1.5	121.3	IE5	BG40Z-../S5E06LA4	1.2	4.1	8.2	24.5	29.5	290	290	290	290	290	38	7000	-
2.4	24.5	290	1.5	121.3	IE3	BG40Z-../SPE06MA4	1.2	4.1	8.2	24.5	29.5	215	240	265	290	290	38	7000	-
2.4	22	320	1.3	134.6	IE5	BG40Z-../S5E06LA4	1.1	3.7	7.4	22	26.5	320	320	320	320	320	38	7000	-
2.4	22	320	1.3	134.6	IE3	BG40Z-../SPE06MA4	1.1	3.7	7.4	22	26.5	240	265	295	320	320	38	7000	-
2.4	21	335	1.3	141.4	IE5	BG40Z-../S5E06LA4	1	3.5	7	21	25	335	335	335	335	335	38	7000	-
2.4	21	335	1.3	141.4	IE3	BG40Z-../SPE06MA4	1	3.5	7	21	25	250	280	310	335	335	38	7000	-
2.4	19	375	1.1	156.9	IE5	BG40Z-../S5E06LA4	0.95	3.1	6.3	19	22.5	375	375	375	375	375	38	7000	-
2.4	19	375	1.1	156.9	IE3	BG40Z-../SPE06MA4	0.95	3.1	6.3	19	22.5	280	310	345	375	375	38	7000	-
2.4	18	395	1.1	166.1	IE5	BG40Z-../S5E06LA4	0.9	3	6	18	21.5	395	395	395	395	395	38	7000	-
2.4	18	395	1.1	166.1	IE3	BG40Z-../SPE06MA4	0.9	3	6	18	21.5	295	330	365	395	395	38	7000	-
2.4	16	440	0.96	184.4	IE5	BG40Z-../S5E06LA4	0.8	2.7	5.4	16	19.5	440	440	440	440	440	38	7000	-
2.4	16	440	0.96	184.4	IE3	BG40Z-../SPE06MA4	0.8	2.7	5.4	16	19.5	330	365	405	440	440	38	7000	-
2.4	15	475	0.89	199.9	IE5	BG40Z-../S5E06LA4	0.75	2.5	5	15	18	475	475	475	475	475	38	7000	-
2.4	15	475	0.89	199.9	IE3	BG40Z-../SPE06MA4	0.75	2.5	5	15	18	355	395	435	475	475	38	7000	-
2.4	13.5	530	0.8	221.9	IE5	BG40Z-../S5E06LA4	0.65	2.2	4.5	13.5	16	530	530	530	530	530	38	7000	-
2.4	13.5	530	0.8	221.9	IE3	BG40Z-../SPE06MA4	0.65	2.2	4.5	13.5	16	395	440	485	530	530	38	7000	-
2.4	31	225	2.7	95.58	IE5	BG50Z-../S5E06LA4	1.5	5.2	10	31	37.5	225	225	225	225	225	47	10000	-
2.4	31	225	2.7	95.58	IE3	BG50Z-../SPE06MA4	1.5	5.2	10	31	37.5	172	191	210	225	225	47	10000	-
2.4	28	250	2.5	106	IE5	BG50Z-../S5E06LA4	1.4	4.7	9.4	28	33.5	250	250	250	250	250	47	10000	-
2.4	28	250	2.5	106	IE3	BG50Z-../SPE06MA4	1.4	4.7	9.4	28	33.5	190	210	230	250	250	47	10000	-
2.4	23	305	2	128.9	IE5	BG50Z-../S5E06LA4	1.1	3.8	7.7	23	27.5	305	305	305	305	305	47	10000	-
2.4	23	305	2	128.9	IE3	BG50Z-../SPE06MA4	1.1	3.8	7.7	23	27.5	230	255	280	305	305	47	10000	-
2.4	20.5	340	1.8	142.9	IE5	BG50Z-../S5E06LA4	1	3.4	6.9	20.5	25	340	340	340	340	34			

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

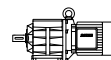
### $M_N = 2.4 \text{ Nm}$ ( $P_N = 0.75 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
2.4	10	680	1	287.1	IE5	BG50G10-../S5E06LA4	0.5	1.7	3.4	10	12.5	680	680	680	680	680	51	10000	-
2.4	10	680	1	287.1	IE3	BG50G10-../SPE06MA4	0.5	1.7	3.4	10	12.5	510	570	630	680	680	51	10000	-
2.4	8.5	840	0.82	351.7	IE5	BG50G10-../S5E06LA4	0.42	1.4	2.8	8.5	10	840	840	840	840	840	51	10000	-
2.4	8.5	840	0.82	351.7	IE3	BG50G10-../SPE06MA4	0.42	1.4	2.8	8.5	10	630	700	770	840	840	51	10000	-
2.4	10.5	660	2	276.2	IE5	BG60G20-../S5E06LA4	0.5	1.8	3.6	10.5	13	660	660	660	660	660	100	16000	-
2.4	10.5	660	2	276.2	IE3	BG60G20-../SPE06MA4	0.5	1.8	3.6	10.5	13	495	550	600	660	660	100	16000	-
2.4	9.8	730	1.8	306.1	IE5	BG60G20-../S5E06LA4	0.49	1.6	3.2	9.8	11.5	730	730	730	730	730	100	16000	-
2.4	9.8	730	1.8	306.1	IE3	BG60G20-../SPE06MA4	0.49	1.6	3.2	9.8	11.5	550	610	670	730	730	100	16000	-
2.4	8.9	800	1.6	334.3	IE5	BG60G20-../S5E06LA4	0.44	1.4	2.9	8.9	10.5	800	800	800	800	800	100	16000	-
2.4	8.9	800	1.6	334.3	IE3	BG60G20-../SPE06MA4	0.44	1.4	2.9	8.9	10.5	600	660	730	800	800	100	16000	-
2.4	8	880	1.5	370.5	IE5	BG60G20-../S5E06LA4	0.4	1.3	2.6	8	9.7	880	880	880	880	880	100	16000	-
2.4	8	880	1.5	370.5	IE3	BG60G20-../SPE06MA4	0.4	1.3	2.6	8	9.7	660	740	810	880	880	100	16000	-
2.4	6.8	1040	1.2	437.3	IE5	BG60G20-../S5E06LA4	0.34	1.1	2.2	6.8	8.2	1040	1040	1040	1040	1040	100	16000	-
2.4	6.8	1040	1.2	437.3	IE3	BG60G20-../SPE06MA4	0.34	1.1	2.2	6.8	8.2	780	870	960	1040	1040	100	16000	-
2.4	5.9	1210	1.1	504.9	IE5	BG60G20-../S5E06LA4	0.29	0.95	1.9	5.9	7.1	1210	1210	1210	1210	1210	100	16000	-
2.4	5.9	1210	1.1	504.9	IE3	BG60G20-../SPE06MA4	0.29	0.95	1.9	5.9	7.1	900	1000	1110	1210	1210	100	16000	-
2.4	5.3	1340	0.97	559.5	IE5	BG60G20-../S5E06LA4	0.26	0.85	1.7	5.3	6.4	1340	1340	1340	1340	1340	100	16000	-
2.4	5.3	1340	0.97	559.5	IE3	BG60G20-../SPE06MA4	0.26	0.85	1.7	5.3	6.4	1000	1110	1230	1340	1340	100	16000	-
2.4	4.6	1560	0.83	651.3	IE5	BG60G20-../S5E06LA4	0.23	0.75	1.5	4.6	5.5	1560	1560	1560	1560	1560	100	16000	-
2.4	4.6	1560	0.83	651.3	IE3	BG60G20-../SPE06MA4	0.23	0.75	1.5	4.6	5.5	1170	1300	1430	1560	1560	100	16000	-
2.4	7.7	930	2.7	387.6	IE5	BG70G20-../S5E06LA4	0.38	1.2	2.5	7.7	9.2	930	930	930	930	930	130	20000	-
2.4	7.7	930	2.7	387.6	IE3	BG70G20-../SPE06MA4	0.38	1.2	2.5	7.7	9.2	690	770	850	930	930	130	20000	-
2.4	7.1	1000	2.5	417.8	IE5	BG70G20-../S5E06LA4	0.35	1.1	2.3	7.1	8.6	1000	1000	1000	1000	1000	130	20000	-
2.4	7.1	1000	2.5	417.8	IE3	BG70G20-../SPE06MA4	0.35	1.1	2.3	7.1	8.6	750	830	910	1000	1000	130	20000	-
2.4	6	1190	2.1	495.9	IE5	BG70G20-../S5E06LA4	0.3	1	2	6	7.2	1190	1190	1190	1190	1190	130	20000	-
2.4	6	1190	2.1	495.9	IE3	BG70G20-../SPE06MA4	0.3	1	2	6	7.2	890	990	1090	1190	1190	130	20000	-
2.4	5.1	1380	1.8	577.3	IE5	BG70G20-../S5E06LA4	0.25	0.85	1.7	5.1	6.2	1380	1380	1380	1380	1380	130	20000	-
2.4	5.1	1380	1.8	577.3	IE3	BG70G20-../SPE06MA4	0.25	0.85	1.7	5.1	6.2	1030	1150	1270	1380	1380	130	20000	-
2.4	4.5	1590	1.6	665.8	IE5	BG70G20-../S5E06LA4	0.22	0.75	1.5	4.5	5.4	1590	1590	1590	1590	1590	130	20000	-
2.4	4.5	1590	1.6	665.8	IE3	BG70G20-../SPE06MA4	0.22	0.75	1.5	4.5	5.4	1190	1330	1460	1590	1590	130	20000	-
2.4	3.7	1890	1.3	790.2	IE5	BG70G20-../S5E06LA4	0.18	0.6	1.2	3.7	4.5	1890	1890	1890	1890	1890	130	20000	-
2.4	3.7	1890	1.3	790.2	IE3	BG70G20-../SPE06MA4	0.18	0.6	1.2	3.7	4.5	1420	1580	1730	1890	1890	130	20000	-
2.4	3.4	2100	1.2	877.6	IE5	BG70G20-../S5E06LA4	0.17	0.55	1.1	3.4	4.1	2100	2100	2100	2100	2100	130	20000	-
2.4	3.4	2100	1.2	877.6	IE3	BG70G20-../SPE06MA4	0.17	0.55	1.1	3.4	4.1	1570	1750	1930	2100	2100	130	20000	-
2.4	2.8	2450	1	1035	IE5	BG70G20-../S5E06LA4	0.14	0.48	0.95	2.8	3.4	2450	2450	2450	2450	2450	130	20000	-
2.4	2.8	2450	1	1035	IE3	BG70G20-../SPE06MA4	0.14	0.48	0.95	2.8	3.4	1860	2050	2250	2450	2450	130	20000	-
2.4	2.5	2850	0.87	1193	IE5	BG70G20-../S5E06LA4	0.12	0.41	0.8	2.5	3	2850	2850	2850	2850	2850	130	20000	-
2.4	2.5	2850	0.87	1193	IE3	BG70G20-../SPE06MA4	0.12	0.41	0.8	2.5	3	2100	2350	2600	2850	2850	130	20000	-

6

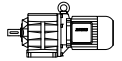
### $M_N = 3.5 \text{ Nm}$ ( $P_N = 1.1 \text{ kW}$ )



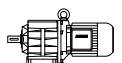
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
3.5	1130	9.2	0.97	2.64	IE4	BG05-../S4E06LA4	56	189	375	1130	1360	6.6	7.6	9.2	9.2	9.2	8.5	420	-
3.5	880	11.8	0.85	3.38	IE4	BG05-../S4E06LA4	44	147	295	880	1060	8.4	9.8	11.8	11.8	11.8	8.5	460	-
3.5	490	21	0.8	6.09	IE4	BG05-../S4E06LA4	24.5	82	164	490	590	15.2	17.6	21	21	21	8.5	480	-
3.5	790	13.2	1.5	3.78	IE4	BG06-../S4E06LA4	39.5	132	260	790	950	9.4	10.9	13.2	13.2	13.2	9.5	520	-
3.5	660	15.8	1.4	4.54	IE4	BG06-../S4E06LA4	33	110	220	660	790	11.3	13.1	15.8	15.8	15.8	9.5	530	-
3.5	500	20.5	1.2	5.96	IE4	BG06-../S4E06LA4	25	83	167	500	600	14.9	17.2	20.5	20.5	20.5	9.5	570	-
3.5	425	24.5	1.1	7.01	IE4	BG06-../S4E06LA4	21	71	142	425	510	17.5	20	24.5	24.5	24.5	9.5	580	-
3.5	355	29	0.95	8.39	IE4	BG06-../S4E06LA4	17.5	59	119	355	425	20.5	24	29	29	29	9.5	600	-
3.5	315	32.5	0.91	9.38	IE4	BG06-../S4E06LA4	15.5	53	106	315	380	23	27	32.5	32.5	32.5	9.5	640	-
3.5	290	35.5	0.86	10.24	IE4	BG06-../S4E06LA4	14.5	48.5	97	290	350	25.5	29.5	35.5	35.5	35.5	9.5	640	-
3.5	265	39	0.81	11.28	IE4	BG06-../S4E06LA4	13	44	88	265	315	28	32.5	39	39	39	9.5	670	-
3.5	250	41.5	2.5	11.92	IE4	BG10-../S4E06LA4	12.5	41.5	83	250	300	29.5	34.5	41.5	41.5	41.5	13	1030	1440
3.5	225	46	2.4	13.21	IE4	BG10-../S4E06LA4	11	37.5	75	225	270	33	38	46	46	46	13	1070	1490
3.5	205	51	2.2	14.58	IE4	BG10-../S4E06LA4	10	34	68	205	245	36	42	51	51	51	13	1100	1540
3.5	185	56	2.1	16.15	IE4	BG10-../S4E06LA4	9.2	30.5	61	185	220	40	46.5	56	56	56	13	1140	1590
3.5	162	64	1.9	18.51	IE4	BG10-../S4E06LA4	8.1	27	54	162	194	46	53	64	64	64	13	1210	1690
3.5	146	71	1.7	20.51	IE4	BG10-../S4E06LA4	7.3	24	48.5	146	175	51	59	71	71	71	13	1290	1800
3.5	136	77	1.6	22.04	IE4	BG10-../S4E06LA4	6.8	22.5	45	136	163	55	63	77	77	77	13	1330	1860
3.5	122	85	1.4	24.42	IE4	BG10-../S4E06LA4	6.1	20	40.5	122	147	61	70	85	85	85	13	1410	1970
3.5	114	91	1.3	26.26	IE4	BG10-../S4E06LA4	5.7	19	38	114	137	65	76	91	91	91	13	1460	2000
3.5	103	101	1.2	29.09	IE4	BG10-../S4E06LA4	5.1	17	34	103	123	72	84	101	101	101	13	1540	2150
3.5	95	110	1.1	31.52	IE4	BG10-../S4E06LA4	4.7	15.5	31.5	95	114	78	91	110	110	110	13	1600	2200
3.5	85	122	0.98	34.92	IE4	BG10-../S4E06LA4	4.2	14	28.5	85	103	87	101	122	122	122	13	1690	2350
3.5	75	138	0.86	39.7	IE4	BG10-../S4E06LA4	3.7	12.5	25	75	90	99	115	138	138	138	13	1780	2450

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 3.5 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
3.5	129	81	2.5	23.22	IE4	BG20-../S4E06LA4	6.4	21.5	43	129	155	58	67	81	81	81	16	3550	-
3.5	116	90	2.2	25.79	IE4	BG20-../S4E06LA4	5.8	19	38.5	116	139	64	74	90	90	90	16	3700	-
3.5	107	97	2.1	27.85	IE4	BG20-../S4E06LA4	5.3	17.5	35.5	107	129	69	80	97	97	16	3800	-	
3.5	96	108	1.8	30.94	IE4	BG20-../S4E06LA4	4.8	16	32	96	116	77	89	108	108	16	4000	-	
3.5	90	116	1.7	33.33	IE4	BG20-../S4E06LA4	4.5	15	30	90	108	83	96	116	116	16	4100	-	
3.5	81	129	1.5	37.02	IE4	BG20-../S4E06LA4	4	13.5	27	81	97	92	107	129	129	16	4300	-	
3.5	71	146	1.4	41.76	IE4	BG20-../S4E06LA4	3.5	11.5	23.5	71	86	104	121	146	146	16	4500	-	
3.5	64	162	1.2	46.38	IE4	BG20-../S4E06LA4	3.2	10.5	21.5	64	77	115	134	162	162	16	4700	-	
3.5	62	167	1.2	47.92	IE4	BG20-../S4E06LA4	3.1	10	20.5	62	75	119	138	167	167	16	4750	-	
3.5	56	186	1.1	53.22	IE4	BG20-../S4E06LA4	2.8	9.3	18.5	56	67	133	154	186	186	16	4950	-	
3.5	50	205	0.97	59.07	IE4	BG20-../S4E06LA4	2.5	8.4	16.5	50	60	147	171	205	205	16	5000	-	
3.5	45.5	225	0.87	65.62	IE4	BG20-../S4E06LA4	2.2	7.6	15	45.5	54	164	190	225	225	16	5000	-	
3.5	51	205	0.84	58.58	IE4	BG20Z-../S4E06LA4	2.5	8.5	17	51	61	146	169	205	205	16	5000	-	
3.5	44	235	0.85	67.53	IE4	BG20Z-../S4E06LA4	2.2	7.4	14.5	44	53	168	195	235	235	16	5000	-	
3.5	106	98	3	28.24	IE4	BG30-../S4E06LA4	5.3	17.5	35	106	127	70	81	98	98	20	5100	-	
3.5	100	104	2.9	29.83	IE4	BG30-../S4E06LA4	5	16.5	33.5	100	120	74	86	104	104	20	5200	-	
3.5	90	115	2.6	33.09	IE4	BG30-../S4E06LA4	4.5	15	30	90	108	82	95	115	115	20	5400	-	
3.5	85	123	2.4	35.17	IE4	BG30-../S4E06LA4	4.2	14	28	85	102	87	101	123	123	20	5500	-	
3.5	76	136	2.2	39.02	IE4	BG30-../S4E06LA4	3.8	12.5	25.5	76	92	97	113	136	136	20	5800	-	
3.5	70	148	2	42.46	IE4	BG30-../S4E06LA4	3.5	11.5	23.5	70	84	106	123	148	148	20	5900	-	
3.5	63	164	1.8	47.11	IE4	BG30-../S4E06LA4	3.1	10.5	21	63	76	117	136	164	164	20	6000	-	
3.5	57	183	1.6	52.44	IE4	BG30-../S4E06LA4	2.8	9.5	19	57	68	131	152	183	183	20	6000	-	
3.5	51	200	1.5	58.18	IE4	BG30-../S4E06LA4	2.5	8.5	17	51	61	145	168	200	200	20	6000	-	
3.5	49	210	1.4	60.79	IE4	BG30-../S4E06LA4	2.4	8.2	16	49	59	151	176	210	210	20	6000	-	
3.5	44	235	1.3	67.44	IE4	BG30-../S4E06LA4	2.2	7.4	14.5	44	53	168	195	235	235	20	6000	-	
3.5	45.5	230	1.2	65.79	IE4	BG30Z-../S4E06LA4	2.2	7.5	15	45.5	54	164	190	230	230	22	6000	-	
3.5	40.5	255	1.2	73.51	IE4	BG30Z-../S4E06LA4	2	6.8	13.5	40.5	48.5	183	210	255	255	22	6000	-	
3.5	36.5	285	1.1	81.55	IE4	BG30Z-../S4E06LA4	1.8	6.1	12	36.5	44	200	235	285	285	22	6000	-	
3.5	34.5	300	1	86.13	IE4	BG30Z-../S4E06LA4	1.7	5.8	11.5	34.5	41.5	215	245	300	300	22	6000	-	
3.5	31	330	0.9	95.55	IE4	BG30Z-../S4E06LA4	1.5	5.2	10	31	37.5	235	275	330	330	22	6000	-	
3.5	44	235	1.8	67.74	IE4	BG40Z-../S4E06LA4	2.2	7.3	14.5	44	53	169	196	235	235	38	7000	-	
3.5	39.5	260	1.6	75.19	IE4	BG40Z-../S4E06LA4	1.9	6.6	13	39.5	47.5	187	215	260	260	38	7000	-	
3.5	36.5	285	1.5	82	IE4	BG40Z-../S4E06LA4	1.8	6	12	36.5	43.5	205	235	285	285	38	7000	-	
3.5	32.5	315	1.3	91.02	IE4	BG40Z-../S4E06LA4	1.6	5.4	10.5	32.5	39.5	225	260	315	315	38	7000	-	
3.5	30.5	335	1.3	96.86	IE4	BG40Z-../S4E06LA4	1.5	5.1	10	30.5	37	240	280	335	335	38	7000	-	
3.5	27.5	375	1.1	107.5	IE4	BG40Z-../S4E06LA4	1.3	4.6	9.3	27.5	33	265	310	375	375	38	7000	-	
3.5	24.5	420	1	121.3	IE4	BG40Z-../S4E06LA4	1.2	4.1	8.2	24.5	29.5	300	350	420	420	38	7000	-	
3.5	22	470	0.9	134.6	IE4	BG40Z-../S4E06LA4	1.1	3.7	7.4	22	26.5	335	390	470	470	38	7000	-	
3.5	21	490	0.86	141.4	IE4	BG40Z-../S4E06LA4	1	3.5	7	21	25	350	410	490	490	38	7000	-	
3.5	41.5	250	2.5	71.97	IE4	BG50Z-../S4E06LA4	2	6.9	13.5	41.5	50	179	205	250	250	47	10000	-	
3.5	37.5	275	2.3	79.78	IE4	BG50Z-../S4E06LA4	1.8	6.2	12.5	37.5	45	199	230	275	275	47	10000	-	
3.5	31	330	1.9	95.58	IE4	BG50Z-../S4E06LA4	1.5	5.2	10	31	37.5	235	275	330	330	47	10000	-	
3.5	28	370	1.7	106	IE4	BG50Z-../S4E06LA4	1.4	4.7	9.4	28	33.5	265	305	370	370	47	10000	-	
3.5	23	450	1.4	128.9	IE4	BG50Z-../S4E06LA4	1.1	3.8	7.7	23	27.5	320	370	450	450	47	10000	-	
3.5	20.5	500	1.3	142.9	IE4	BG50Z-../S4E06LA4	1	3.4	6.9	20.5	25	355	410	500	500	47	10000	-	
3.5	18	570	1.1	164.9	IE4	BG50Z-../S4E06LA4	0.9	3	6	18	21.5	410	475	570	570	47	10000	-	
3.5	16	630	0.98	182.8	IE4	BG50Z-../S4E06LA4	0.8	2.7	5.4	16	19.5	455	530	630	630	47	10000	-	
3.5	14.5	710	0.88	204.7	IE4	BG50Z-../S4E06LA4	0.7	2.4	4.8	14.5	17.5	510	590	710	710	47	10000	-	
3.5	10.5	960	1.3	276.2	IE4	BG60G20-../S4E06LA4	0.5	1.8	3.6	10.5	13	690	800	960	960	100	16000	-	
3.5	9.8	1070	1.2	306.1	IE4	BG60G20-../S4E06LA4	0.49	1.6	3.2	9.8	11.5	760	880	1070	1070	100	16000	-	
3.5	8.9	1170	1.1	334.3	IE4	BG60G20-../S4E06LA4	0.44	1.4	2.9	8.9	10.5	830	960	1170	1170	100	16000	-	
3.5	8	1290	1	370.5	IE4	BG60G20-../S4E06LA4	0.4	1.3	2.6	8	9.7	920	1070	1290	1290	100	16000	-	
3.5	6.8	1530	0.85	437.3	IE4	BG60G20-../S4E06LA4	0.34	1.1	2.2	6.8	8.2	1090	1260	1530	1530	100	16000	-	
3.5	11.5	890	2.8	255.5	IE4	BG70G20-../S4E06LA4	0.55	1.9	3.9	11.5	14	630	740	890	890	130	20000	-	
3.5	10.5	960	2.6	276.7	IE4	BG70G20-../S4E06LA4	0.5	1.8	3.6	10.5	13	690	800	960	960	130	20000	-	
3.5	9.1	1140	2.2	328.4	IE4	BG70G20-../S4E06LA4	0.45	1.5	3	9.1	10.5	820	950	1140	1140	130	20000	-	
3.5	7.7	1350	1.8	387.6	IE4	BG70G20-../S4E06LA4	0.38	1.2	2.5	7.7	9.2	960	1120	1350	1350	130	20000	-	
3.5	7.1	1460	1.7	417.8	IE4	BG70G20-../S4E06LA4	0.35	1.1	2.3	7.1	8.6	1040	1210	1460	1460	130	20000	-	
3.5	6	1730	1.4	495.9	IE4	BG70G20-../S4E06LA4	0.3	1	2	6	7.2	1230	1430	1730	1730	130	20000	-	
3.5	5.1	2000	1.2	577.3	IE4	BG70G20-../S4E06LA4	0.25	0.85	1.7	5.1	6.2	1440	1670	2000	2000	130	20000	-	
3.5	4.5	2300	1.1	665.8	IE4	BG70G20-../S4E06LA4	0.22	0.75	1.5	4.5	5.4	1660	1930	2300	2300	130	20000	-	
3.5	3.7	2750	0.9	790.2	IE4	BG70G20-../S4E06LA4	0.18	0.6	1.2	3.7	4.5	1970	2250	2750	2750	130	20000	-	
3.5	3.4	3050	0.81	877.6	IE4	BG70G20-../S4E06LA4	0.17	0.55	1.1	3.4	4.1	2150	2500	3050	3050	130	20000	-	

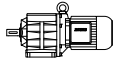
 **$M_N = 5 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
5	1060	14.1	1.3	2.82	IE5	BG06-../S5E08MA4	53	177	350	1060	1270	14.1	14.1	14.1	14.1	16	470	-	
5	790	18.8	1.1	3.78	IE5	BG06-../S5E08MA4	39.5	132	260	790	950	18.8	18.8	18.8	18.8	16	520	-	
5	660	22.5	0.97	4.54	IE5	BG06-../S5E08MA4	33	110	220	660	790	22.5	22.5	22.5	22.5	16	530	-	
5	500	29.5	0.81	5.96	IE5	BG06-../S5E08MA4	25	83	167	500	600								



# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

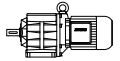
 **$M_N = 5 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[1]															
5	435	34	2.6	6.89	IE5	BG10-../S5E08MA4	21.5	72	145	435	520	34	34	34	34	34	16	850	1200
5	390	38	2.3	7.63	IE5	BG10-../S5E08MA4	19.5	65	131	390	470	38	38	38	38	38	16	900	1250
5	370	40	2.2	8.07	IE5	BG10-../S5E08MA4	18.5	61	123	370	445	40	40	40	40	40	16	660	920
5	320	46.5	2.1	9.33	IE5	BG10-../S5E08MA4	16	53	107	320	385	46.5	46.5	46.5	46.5	46.5	16	950	1330
5	290	51	1.9	10.34	IE5	BG10-../S5E08MA4	14.5	48	96	290	345	51	51	51	51	51	16	1000	1400
5	250	59	1.8	11.92	IE5	BG10-../S5E08MA4	12.5	41.5	83	250	300	59	59	59	59	59	16	1030	1440
5	225	66	1.7	13.21	IE5	BG10-../S5E08MA4	11	37.5	75	225	270	66	66	66	66	66	16	1070	1490
5	205	72	1.6	14.58	IE5	BG10-../S5E08MA4	10	34	68	205	245	72	72	72	72	72	16	1100	1540
5	185	80	1.4	16.15	IE5	BG10-../S5E08MA4	9.2	30.5	61	185	220	80	80	80	80	80	16	1140	1590
5	162	92	1.3	18.51	IE5	BG10-../S5E08MA4	8.1	27	54	162	194	92	92	92	92	92	16	1210	1690
5	146	102	1.2	20.51	IE5	BG10-../S5E08MA4	7.3	24	48.5	146	175	102	102	102	102	102	16	1290	1800
5	136	110	1.1	22.04	IE5	BG10-../S5E08MA4	6.8	22.5	45	136	163	110	110	110	110	110	16	1330	1860
5	122	122	0.98	24.42	IE5	BG10-../S5E08MA4	6.1	20	40.5	122	147	122	122	122	122	122	16	1410	1970
5	114	131	0.91	26.26	IE5	BG10-../S5E08MA4	5.7	19	38	114	137	131	131	131	131	131	16	1460	2000
5	103	145	0.83	29.09	IE5	BG10-../S5E08MA4	5.1	17	34	103	123	145	145	145	145	145	16	1540	2150
5	110	135	1.1	27.08	IE5	BG15-../S5E08MA4	5.5	18	36.5	110	132	135	135	135	135	135	16	3000	6000
5	99	150	1	30.08	IE5	BG15-../S5E08MA4	4.9	16.5	33	99	119	150	150	150	150	150	16	3000	6000
5	87	171	0.88	34.2	IE5	BG15-../S5E08MA4	4.3	14.5	29	87	105	171	171	171	171	171	16	3000	6000
5	360	41	2.9	8.29	IE5	BG20-../S5E08MA4	18	60	120	360	430	41	41	41	41	41	19	2250	-
5	310	48	2.5	9.65	IE5	BG20-../S5E08MA4	15.5	51	103	310	370	48	48	48	48	48	19	2250	-
5	280	52	2.9	10.54	IE5	BG20-../S5E08MA4	14	47	94	280	340	52	52	52	52	52	19	2700	-
5	255	58	2.7	11.71	IE5	BG20-../S5E08MA4	12.5	42.5	85	255	305	58	58	58	58	58	19	2800	-
5	225	66	2.5	13.21	IE5	BG20-../S5E08MA4	11	37.5	75	225	270	66	66	66	66	66	19	2900	-
5	200	73	2.3	14.67	IE5	BG20-../S5E08MA4	10	34	68	200	245	73	73	73	73	73	19	3050	-
5	192	77	2.3	15.58	IE5	BG20-../S5E08MA4	9.6	32	64	192	230	77	77	77	77	77	19	3100	-
5	173	86	2.1	17.31	IE5	BG20-../S5E08MA4	8.6	28.5	57	173	205	86	86	86	86	86	19	3200	-
5	150	99	2	19.95	IE5	BG20-../S5E08MA4	7.5	25	50	150	180	99	99	99	99	99	19	3350	-
5	135	110	1.8	22.16	IE5	BG20-../S5E08MA4	6.7	22.5	45	135	162	110	110	110	110	110	19	3500	-
5	129	116	1.7	23.22	IE5	BG20-../S5E08MA4	6.4	21.5	43	129	155	116	116	116	116	116	19	3550	-
5	116	128	1.6	25.79	IE5	BG20-../S5E08MA4	5.8	19	38.5	116	139	128	128	128	128	128	19	3700	-
5	107	139	1.4	27.85	IE5	BG20-../S5E08MA4	5.3	17.5	35.5	107	129	139	139	139	139	139	19	3800	-
5	96	154	1.3	30.94	IE5	BG20-../S5E08MA4	4.8	16	32	96	116	154	154	154	154	154	19	4000	-
5	90	166	1.2	33.33	IE5	BG20-../S5E08MA4	4.5	15	30	90	108	166	166	166	166	166	19	4100	-
5	81	185	1.1	37.02	IE5	BG20-../S5E08MA4	4	13.5	27	81	97	185	185	185	185	185	19	4300	-
5	71	205	0.96	41.76	IE5	BG20-../S5E08MA4	3.5	11.5	23.5	71	86	205	205	205	205	205	19	4500	-
5	64	230	0.86	46.38	IE5	BG20-../S5E08MA4	3.2	10.5	21.5	64	77	230	230	230	230	230	19	4700	-
5	62	235	0.83	47.92	IE5	BG20-../S5E08MA4	3.1	10	20.5	62	75	235	235	235	235	235	19	4750	-
5	150	99	3	19.99	IE5	BG30-../S5E08MA4	7.5	25	50	150	180	99	99	99	99	99	23	4200	-
5	135	110	2.7	22.18	IE5	BG30-../S5E08MA4	6.7	22.5	45	135	162	110	110	110	110	110	23	4600	-
5	117	127	2.4	25.45	IE5	BG30-../S5E08MA4	5.8	19.5	39	117	141	127	127	127	127	127	23	4850	-
5	106	141	2.1	28.24	IE5	BG30-../S5E08MA4	5.3	17.5	35	106	127	141	141	141	141	141	23	5100	-
5	100	149	2	29.83	IE5	BG30-../S5E08MA4	5	16.5	33.5	100	120	149	149	149	149	149	23	5200	-
5	90	165	1.8	33.09	IE5	BG30-../S5E08MA4	4.5	15	30	90	108	165	165	165	165	165	23	5400	-
5	85	175	1.7	35.17	IE5	BG30-../S5E08MA4	4.2	14	28	85	102	175	175	175	175	175	23	5500	-
5	76	195	1.5	39.02	IE5	BG30-../S5E08MA4	3.8	12.5	25.5	76	92	195	195	195	195	195	23	5800	-
5	70	210	1.4	42.46	IE5	BG30-../S5E08MA4	3.5	11.5	23.5	70	84	210	210	210	210	210	23	5900	-
5	63	235	1.3	47.11	IE5	BG30-../S5E08MA4	3.1	10.5	21	63	76	235	235	235	235	235	23	6000	-
5	57	260	1.1	52.44	IE5	BG30-../S5E08MA4	2.8	9.5	19	57	68	260	260	260	260	260	23	6000	-
5	51	290	1	58.18	IE5	BG30-../S5E08MA4	2.5	8.5	17	51	61	290	290	290	290	290	23	6000	-
5	49	300	0.99	60.79	IE5	BG30-../S5E08MA4	2.4	8.2	16	49	59	300	300	300	300	300	23	6000	-
5	44	335	0.89	67.44	IE5	BG30-../S5E08MA4	2.2	7.4	14.5	44	53	335	335	335	335	335	23	6000	-
5	45.5	325	0.81	65.79	IE5	BG30Z-../S5E08MA4	2.2	7.5	15	45.5	54	325	325	325	325	325	26	6000	-
5	40.5	365	0.82	73.51	IE5	BG30Z-../S5E08MA4	2	6.8	13.5	40.5	48.5	365	365	365	365	365	26	6000	-
5	102	146	2.9	29.34	IE5	BG40-../S5E08MA4	5.1	17	34	102	122	146	146	146	146	146	38	6800	-
5	92	162	2.6	32.57	IE5	BG40-../S5E08MA4	4.6	15	30.5	92	110	162	162	162	162	162	38	7000	-
5	87	171	2.5	34.2	IE5	BG40-../S5E08MA4	4.3	14.5	29	87	105	171	171	171	171	171	38	7000	-
5	79	189	2.2	37.96	IE5	BG40-../S5E08MA4	3.9	13	26	79	94	189	189	189	189	189	38	7000	-
5	74	200	2.1	40.19	IE5	BG40-../S5E08MA4	3.7	12	24.5	74	89	200	200	200	200	200	38	7000	-
5	67	220	1.9	44.62	IE5	BG40-../S5E08MA4	3.3	11	22	67	80	220	220	220	220	220	38	7000	-
5	62	240	1.8	48.36	IE5	BG40-../S5E08MA4	3.1	10	20.5	62	74	240	240	240	240	240	38	7000	-
5	55	265	1.6	53.69	IE5	BG40-../S5E08MA4	2.7	9.3	18.5	55	67	265	265	265	265	265	38	7000	-
5	50	295	1.4	59.64	IE5	BG40-../S5E08MA4	2.5	8.3	16.5	50	60	295	295	295	295	295	38	7000	-
5	45	330	1.3	66.2	IE5	BG40-../S5E08MA4	2.2	7.5	15	45	54	330	330	330	330	330	38	7000	-
5	44	335	1.3	67.74	IE5	BG40Z-../S5E08MA4	2.2	7.3	14.5	44	53	335	335	335	335	335	42	7000	-
5	39.5	375	1.1	75.19	IE5	BG40Z-../S5E08MA4	1.9	6.6	13	39.5	47.5	375	375	375	375	375	42	7000	-
5	36.5	410	1	82	IE5	BG40Z-../S5E08MA4	1.8	6	12	36.5	43.5	410	410	410	410	410	42	7000	-
5	32.5	455	0.93	91.02	IE5	BG40Z-../S5E08MA4	1.6	5.4	10.5	32.5	39.5	455	455	455	455	455	42	7000	-
5	30.5	480	0.88	96.86	IE5	BG40Z-../S5E08MA4	1.5	5.1	10	30.5	37	480	480	480	480	480	42	7000	-
5	71	210	3	42	IE5	BG50-../S5E08MA4	3.5	11.5	23.5	71	85	210	210	210	210	210	46	10000	-
5	63	2																	

# BG-series helical-geared motors

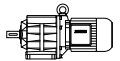
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

**$M_N = 5 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
5	32.5	455	2.6	91.09	IE5	BG60Z-../S5E08MA4	1.6	5.4	10.5	32.5	39.5	455	455	455	455	96	16000	-	
5	29.5	500	2.4	101	IE5	BG60Z-../S5E08MA4	1.4	4.9	9.9	29.5	35.5	500	500	500	500	96	16000	-	
5	25	590	2	119.2	IE5	BG60Z-../S5E08MA4	1.2	4.1	8.3	25	30	590	590	590	590	96	16000	-	
5	22.5	660	1.8	132.1	IE5	BG60Z-../S5E08MA4	1.1	3.7	7.5	22.5	27	660	660	660	660	96	16000	-	
5	18.5	790	1.5	158	IE5	BG60Z-../S5E08MA4	0.9	3.1	6.3	18.5	22.5	790	790	790	790	96	16000	-	
5	17	870	1.4	175.1	IE5	BG60Z-../S5E08MA4	0.85	2.8	5.7	17	20.5	870	870	870	870	96	16000	-	
5	14.5	1020	1.2	204.6	IE5	BG60Z-../S5E08MA4	0.7	2.4	4.8	14.5	17.5	1020	1020	1020	1020	96	16000	-	
5	13	1130	1.1	226.7	IE5	BG60Z-../S5E08MA4	0.65	2.2	4.4	13	15.5	1130	1130	1130	1130	96	16000	-	
5	12	1230	0.97	247.7	IE5	BG60Z-../S5E08MA4	0.6	2	4	12	14.5	1230	1230	1230	1230	96	16000	-	
5	10.5	1370	0.87	274.5	IE5	BG60Z-../S5E08MA4	0.5	1.8	3.6	10.5	13	1370	1370	1370	1370	96	16000	-	
5	10.5	1380	0.94	276.2	IE5	BG60G20-../S5E08MA4	0.5	1.8	3.6	10.5	13	1380	1380	1380	1380	103	16000	-	
5	9.8	1530	0.85	306.1	IE5	BG60G20-../S5E08MA4	0.49	1.6	3.2	9.8	11.5	1530	1530	1530	1530	103	16000	-	
5	18	810	2.8	163.8	IE5	BG70Z-../S5E08MA4	0.9	3	6.1	18	21.5	810	810	810	810	136	20000	-	
5	15	970	2.4	194.4	IE5	BG70Z-../S5E08MA4	0.75	2.5	5.1	15	18.5	970	970	970	970	136	20000	-	
5	14	1050	2.2	210.5	IE5	BG70Z-../S5E08MA4	0.7	2.3	4.7	14	17	1050	1050	1050	1050	136	20000	-	
5	12	1240	1.8	249.8	IE5	BG70Z-../S5E08MA4	0.6	2	4	12	14	1240	1240	1240	1240	136	20000	-	
5	11.5	1270	2	255.5	IE5	BG70G20-../S5E08MA4	0.55	1.9	3.9	11.5	14	1270	1270	1270	1270	133	20000	-	
5	10.5	1380	1.8	276.7	IE5	BG70G20-../S5E08MA4	0.5	1.8	3.6	10.5	13	1380	1380	1380	1380	133	20000	-	
5	9.1	1640	1.5	328.4	IE5	BG70G20-../S5E08MA4	0.45	1.5	3	9.1	10.5	1640	1640	1640	1640	133	20000	-	
5	7.7	1930	1.3	387.6	IE5	BG70G20-../S5E08MA4	0.38	1.2	2.5	7.7	9.2	1930	1930	1930	1930	133	20000	-	
5	7.1	2050	1.2	417.8	IE5	BG70G20-../S5E08MA4	0.35	1.1	2.3	7.1	8.6	2050	2050	2050	2050	133	20000	-	
5	6	2450	1	495.9	IE5	BG70G20-../S5E08MA4	0.3	1	2	6	7.2	2450	2450	2450	2450	133	20000	-	
5	5.1	2850	0.87	577.3	IE5	BG70G20-../S5E08MA4	0.25	0.85	1.7	5.1	6.2	2850	2850	2850	2850	133	20000	-	
5	9.5	1570	2.9	314	IE5	BG80G40-../S5E08MA4	0.47	1.5	3.1	9.5	11	1570	1570	1570	1570	215	26000	-	
5	8.3	1800	2.6	360	IE5	BG80G40-../S5E08MA4	0.41	1.3	2.7	8.3	10	1800	1800	1800	1800	215	26000	-	
5	7.5	1990	2.3	399.8	IE5	BG80G40-../S5E08MA4	0.37	1.2	2.5	7.5	9	1990	1990	1990	1990	215	26000	-	
5	6.8	2150	2.1	436.2	IE5	BG80G40-../S5E08MA4	0.34	1.1	2.2	6.8	8.2	2150	2150	2150	2150	215	26000	-	
5	6.1	2400	1.9	484.3	IE5	BG80G40-../S5E08MA4	0.3	1	2	6.1	7.4	2400	2400	2400	2400	215	26000	-	
5	5.2	2850	1.6	572	IE5	BG80G40-../S5E08MA4	0.26	0.85	1.7	5.2	6.2	2850	2850	2850	2850	215	26000	-	
5	4.5	3250	1.4	657.8	IE5	BG80G40-../S5E08MA4	0.22	0.75	1.5	4.5	5.4	3250	3250	3250	3250	215	26000	-	
5	4.1	3650	1.3	730.3	IE5	BG80G40-../S5E08MA4	0.2	0.65	1.3	4.1	4.9	3650	3650	3650	3650	215	26000	-	
5	3.6	4050	1.1	817.4	IE5	BG80G40-../S5E08MA4	0.18	0.6	1.2	3.6	4.4	4050	4050	4050	4050	215	26000	-	
5	3.3	4500	1	907.6	IE5	BG80G40-../S5E08MA4	0.16	0.55	1.1	3.3	3.9	4500	4500	4500	4500	215	26000	-	
5	2.8	5200	0.88	1042	IE5	BG80G40-../S5E08MA4	0.14	0.47	0.95	2.8	3.4	5200	5200	5200	5200	215	26000	-	
5	4.6	3200	2.9	644.7	IE5	BG90G50-../S5E08MA4	0.23	0.75	1.5	4.6	5.5	3200	3200	3200	3200	324	65000	-	
5	4.2	3550	2.6	714.2	IE5	BG90G50-../S5E08MA4	0.21	0.7	1.4	4.2	5	3550	3550	3550	3550	324	65000	-	
5	3.3	4400	2.1	883.7	IE5	BG90G50-../S5E08MA4	0.16	0.55	1.1	3.3	4	4400	4400	4400	4400	324	65000	-	
5	2.5	5800	1.6	1174	IE5	BG90G50-../S5E08MA4	0.12	0.42	0.85	2.5	3	5800	5800	5800	5800	324	65000	-	
5	2.3	6500	1.4	1301	IE5	BG90G50-../S5E08MA4	0.11	0.38	0.75	2.3	2.7	6500	6500	6500	6500	324	65000	-	
5	1.8	7900	1.2	1583	IE5	BG90G50-../S5E08MA4	0.09	0.31	0.6	1.8	2.2	7900	7900	7900	7900	324	65000	-	
5	1.7	8700	1	1756	IE5	BG90G50-../S5E08MA4	0.09	0.28	0.55	1.7	2	8700	8700	8700	8700	324	65000	-	
5	1.4	10100	0.91	2026	IE5	BG90G50-../S5E08MA4	0.07	0.24	0.49	1.4	1.7	10100	10100	10100	10100	324	65000	-	
5	2	7200	2.6	1444	IE5	BG100G50-../S5E08MA4	0.1	0.34	0.65	2	2.4	7200	7200	7200	7200	512	90000	-	
5	1.7	8300	2.2	1678	IE5	BG100G50-../S5E08MA4	0.09	0.29	0.55	1.7	2.1	8300	8300	8300	8300	512	90000	-	
5	1.6	9300	2	1867	IE5	BG100G50-../S5E08MA4	0.08	0.26	0.5	1.6	1.9	9300	9300	9300	9300	512	90000	-	
5	1.3	10700	1.7	2154	IE5	BG100G50-../S5E08MA4	0.07	0.23	0.46	1.3	1.6	10700	10700	10700	10700	512	90000	-	
5	1.1	13200	1.4	2656	IE5	BG100G50-../S5E08MA4	0.06	0.18	0.37	1.1	1.3	13200	13200	13200	13200	512	90000	-	
5	1	14700	1.3	2952	IE5	BG100G50-../S5E08MA4	0.05	0.16	0.33	1	1.2	14700	14700	14700	14700	512	90000	-	
5	0.9	16400	1.1	3286	IE5	BG100G50-../S5E08MA4	0.05	0.15	0.3	0.9	1	16400	16400	16400	16400	512	90000	-	
5	0.8	18200	1	3644	IE5	BG100G50-../S5E08MA4	0.04	0.13	0.27	0.8	0.95	18200	18200	18200	18200	512	90000	-	
5	0.65	21500	0.85	4366	IE5	BG100G50-../S5E08MA4	0.03	0.11	0.22	0.65	0.8	21500	21500	21500	21500	512	90000	-	

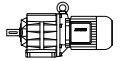
**$M_N = 7 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
7	1060	19.7	0.91	2.82	IE4	BG06-../S4E08MA4	53	177	350	1060	1270	14.1	16.6	19.7	19.7	19.7	16	470	-
7	1060	19.7	0.91	2.82	IE5	BG06-../S5E08LA4	53	177	350	1060	1270	18.3	19.7	19.7	19.7	19.7	18	470	-
7	870	23.5	2.6	3.42	IE4	BG10-../S4E08MA4	43.5	146	290	870	1050	17.1	20	23.5	23.5	23.5	16	630	880
7	870	23.5	2.6	3.42	IE5	BG10-../S5E08LA4	43.5	146	290	870	1050	22	23.5	23.5	23.5	23.5	18	630	880
7	680	30.5	2.2	4.36	IE4	BG10-../S4E08MA4	34	114	225	680	820	21.5	25.5	30.5	30.5	30.5	16	650	910
7	680	30.5	2.2	4.36	IE5	BG10-../S5E08LA4	34	114	225	680	820	28	30.5	30.5	30.5	30.5	18	650	910
7	560	37	2	5.34	IE4	BG10-../S4E08MA4	28	93	187	560	670	26.5	31.5	37	37	37	16	620	910
7	560	37	2	5.34	IE5	BG10-../S5E08LA4	28	93	187	560	670	34.5	37	37	37	37	18	620	910
7	440	47	1.7	6.78	IE4	BG10-../S4E08MA4	22	73	147	440	530	33.5	40	47	47	47	16	660	920
7	440	47	1.7	6.78	IE5	BG10-../S5E08LA4	22	73	147	440	530	44	47	47	47	47	18	660	920
7	435	48	1.8	6.89	IE4	BG10-../S4E08MA4	21.5	72	145	435	520	34	40.5	48	48	48	16	850	1200
7	435	48	1.8	6.89	IE5	BG10-../S5E08LA4	21.5	72	145	435	520	44.5	48	48	48	48	18	850	1200
7	390	53	1.7	7.63	IE4	BG10-../S4E08MA4	19.5	65	131	390	470	38	45	53	53	53	16	900	1250
7	390	53	1.7	7.63	IE5	BG10-../S5E08LA4	19.5	65	131	390	470	49.5	53	53	53	53	18	900	1250
7	370	56	1.6	8.07	IE														

# BG-series helical-geared motors

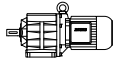
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 7 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
7	290	72	1.4	10.34	IE5	BG10-../S5E08LA4	14.5	48	96	290	345	67	72	72	72	18	1000	1400	
7	250	83	1.3	11.92	IE4	BG10-../S4E08MA4	12.5	41.5	83	250	300	59	70	83	83	16	1030	1440	
7	250	83	1.3	11.92	IE5	BG10-../S5E08LA4	12.5	41.5	83	250	300	77	83	83	83	18	1030	1440	
7	225	92	1.2	13.21	IE4	BG10-../S4E08MA4	11	37.5	75	225	270	66	77	92	92	16	1070	1490	
7	225	92	1.2	13.21	IE5	BG10-../S5E08LA4	11	37.5	75	225	270	85	92	92	92	18	1070	1490	
7	205	102	1.1	14.58	IE4	BG10-../S4E08MA4	10	34	68	205	245	72	86	102	102	16	1100	1540	
7	205	102	1.1	14.58	IE5	BG10-../S5E08LA4	10	34	68	205	245	94	102	102	102	18	1100	1540	
7	185	113	1	16.15	IE4	BG10-../S4E08MA4	9.2	30.5	61	185	220	80	95	113	113	16	1140	1590	
7	185	113	1	16.15	IE5	BG10-../S5E08LA4	9.2	30.5	61	185	220	104	113	113	113	18	1140	1590	
7	162	129	0.93	18.51	IE4	BG10-../S4E08MA4	8.1	27	54	162	194	92	109	129	129	16	1210	1690	
7	162	129	0.93	18.51	IE5	BG10-../S5E08LA4	8.1	27	54	162	194	120	129	129	129	18	1210	1690	
7	146	143	0.84	20.51	IE4	BG10-../S4E08MA4	7.3	24	48.5	146	175	102	121	143	143	16	1290	1800	
7	146	143	0.84	20.51	IE5	BG10-../S5E08LA4	7.3	24	48.5	146	175	133	143	143	143	18	1290	1800	
7	540	38	3	5.49	IE4	BG20-../S4E08MA4	27	91	182	540	650	27	32	38	38	19	2100	-	
7	540	38	3	5.49	IE5	BG20-../S5E08LA4	27	91	182	540	650	35.5	38	38	38	20	2100	-	
7	495	42	2.9	6.06	IE4	BG20-../S4E08MA4	24.5	82	165	495	590	30	35.5	42	42	19	2250	-	
7	495	42	2.9	6.06	IE5	BG20-../S5E08LA4	24.5	82	165	495	590	39	42	42	42	20	2250	-	
7	460	45	2.7	6.48	IE4	BG20-../S4E08MA4	23	77	154	460	550	32	38	45	45	19	2250	-	
7	460	45	2.7	6.48	IE5	BG20-../S5E08LA4	23	77	154	460	550	42	45	45	45	20	2250	-	
7	445	47	2.8	6.73	IE4	BG20-../S4E08MA4	22	74	148	445	530	33.5	39.5	47	47	19	2350	2100	
7	445	47	2.8	6.73	IE5	BG20-../S5E08LA4	22	74	148	445	530	43.5	47	47	47	20	2350	2100	
7	370	56	2.4	8.02	IE4	BG20-../S4E08MA4	18.5	62	124	370	445	40	47	56	56	19	2500	-	
7	370	56	2.4	8.02	IE5	BG20-../S5E08LA4	18.5	62	124	370	445	52	56	56	56	20	2500	-	
7	360	58	2.1	8.29	IE4	BG20-../S4E08MA4	18	60	120	360	430	41	48.5	58	58	19	2250	-	
7	360	58	2.1	8.29	IE5	BG20-../S5E08LA4	18	60	120	360	430	53	58	58	58	20	2250	-	
7	335	62	2.3	8.91	IE4	BG20-../S4E08MA4	16.5	56	112	335	400	44.5	52	62	62	19	2600	-	
7	335	62	2.3	8.91	IE5	BG20-../S5E08LA4	16.5	56	112	335	400	57	62	62	62	20	2600	-	
7	310	67	1.8	9.65	IE4	BG20-../S4E08MA4	15.5	51	103	310	370	48	56	67	67	19	2250	-	
7	310	67	1.8	9.65	IE5	BG20-../S5E08LA4	15.5	51	103	310	370	62	67	67	67	20	2250	-	
7	280	73	2.1	10.54	IE4	BG20-../S4E08MA4	14	47	94	280	340	52	62	73	73	19	2700	-	
7	280	73	2.1	10.54	IE5	BG20-../S5E08LA4	14	47	94	280	340	68	73	73	73	20	2700	-	
7	255	81	1.9	11.71	IE4	BG20-../S4E08MA4	12.5	42.5	85	255	305	58	69	81	81	19	2800	-	
7	255	81	1.9	11.71	IE5	BG20-../S5E08LA4	12.5	42.5	85	255	305	76	81	81	81	20	2800	-	
7	225	92	1.8	13.21	IE4	BG20-../S4E08MA4	11	37.5	75	225	270	66	77	92	92	19	2900	-	
7	225	92	1.8	13.21	IE5	BG20-../S5E08LA4	11	37.5	75	225	270	85	92	92	92	20	2900	-	
7	200	102	1.7	14.67	IE4	BG20-../S4E08MA4	10	34	68	200	245	73	86	102	102	19	3050	-	
7	200	102	1.7	14.67	IE5	BG20-../S5E08LA4	10	34	68	200	245	95	102	102	102	20	3050	-	
7	192	109	1.6	15.58	IE4	BG20-../S4E08MA4	9.6	32	64	192	230	77	91	109	109	19	3100	-	
7	192	109	1.6	15.58	IE5	BG20-../S5E08LA4	9.6	32	64	192	230	101	109	109	109	20	3100	-	
7	173	121	1.5	17.31	IE4	BG20-../S4E08MA4	8.6	28.5	57	173	205	86	102	121	121	19	3200	-	
7	173	121	1.5	17.31	IE5	BG20-../S5E08LA4	8.6	28.5	57	173	205	112	121	121	121	20	3200	-	
7	150	139	1.4	19.95	IE4	BG20-../S4E08MA4	7.5	25	50	150	180	99	117	139	139	19	3350	-	
7	150	139	1.4	19.95	IE5	BG20-../S5E08LA4	7.5	25	50	150	180	129	139	139	139	20	3350	-	
7	135	155	1.3	22.16	IE4	BG20-../S4E08MA4	6.7	22.5	45	135	162	110	130	155	155	19	3500	-	
7	135	155	1.3	22.16	IE5	BG20-../S5E08LA4	6.7	22.5	45	135	162	144	155	155	155	20	3500	-	
7	129	162	1.2	23.22	IE4	BG20-../S4E08MA4	6.4	21.5	43	129	155	116	136	162	162	19	3550	-	
7	129	162	1.2	23.22	IE5	BG20-../S5E08LA4	6.4	21.5	43	129	155	150	162	162	162	20	3550	-	
7	116	180	1.1	25.79	IE4	BG20-../S4E08MA4	5.8	19	38.5	116	139	128	152	180	180	19	3700	-	
7	116	180	1.1	25.79	IE5	BG20-../S5E08LA4	5.8	19	38.5	116	139	167	180	180	180	20	3700	-	
7	107	194	1	27.85	IE4	BG20-../S4E08MA4	5.3	17.5	35.5	107	129	139	164	194	194	19	3800	-	
7	107	194	1	27.85	IE5	BG20-../S5E08LA4	5.3	17.5	35.5	107	129	181	194	194	194	20	3800	-	
7	96	215	0.92	30.94	IE4	BG20-../S4E08MA4	4.8	16	32	96	116	154	182	215	215	19	4000	-	
7	96	215	0.92	30.94	IE5	BG20-../S5E08LA4	4.8	16	32	96	116	200	215	215	215	20	4000	-	
7	90	230	0.86	33.33	IE4	BG20-../S4E08MA4	4.5	15	30	90	108	166	196	230	230	19	4100	-	
7	90	230	0.86	33.33	IE5	BG20-../S5E08LA4	4.5	15	30	90	108	215	230	230	230	20	4100	-	
7	215	96	3	13.77	IE4	BG30-../S4E08MA4	10.5	36	72	215	260	68	81	96	96	23	3150	-	
7	215	96	3	13.77	IE5	BG30-../S5E08LA4	10.5	36	72	215	260	89	96	96	96	25	3150	-	
7	196	106	2.8	15.27	IE4	BG30-../S4E08MA4	9.8	32.5	65	196	235	76	90	106	106	23	3450	-	
7	196	106	2.8	15.27	IE5	BG30-../S5E08LA4	9.8	32.5	65	196	235	99	106	106	106	25	3450	-	
7	175	119	2.5	17.06	IE4	BG30-../S4E08MA4	8.7	29	58	175	210	85	100	119	119	23	3700	-	
7	175	119	2.5	17.06	IE5	BG30-../S5E08LA4	8.7	29	58	175	210	110	119	119	119	25	3700	-	
7	158	132	2.3	18.93	IE4	BG30-../S4E08MA4	7.9	26	52	158	190	94	111	132	132	23	4100	-	
7	158	132	2.3	18.93	IE5	BG30-../S5E08LA4	7.9	26	52	158	190	123	132	132	132	25	4100	-	
7	150	139	2.1	19.99	IE4	BG30-../S4E08MA4	7.5	25	50	150	180	99	117	139	139	23	4200	-	
7	150	139	2.1	19.99	IE5	BG30-../S5E08LA4	7.5	25	50	150	180	129	139	139	139	25	4200	-	
7	135	155	1.9	22.18	IE4	BG30-../S4E08MA4	6.7	22.5	45	135	162	110	130	155	155	23	4600	-	
7	135	155	1.9	22.18	IE5	BG30-../S5E08LA4	6.7	22.5	45	135	162	144	155	155	155	25	4600	-	
7	117	178	1.7	25.45	IE4	BG30-../S4E08MA4	5.8	19.5	39	117	141	127	150	178	178	23	4850	-	
7	117	178	1.7	25.45	IE5	BG30-../S5E08LA4	5.8	19.5	39	117	141	165	178	178	178	25	4850	-	
7	106	197	1.5	28.24	IE4	BG30-../S4E08MA4	5.3	17.5	35	106	127	141	166	197	197	23	5100	-	
7	106	197	1.5	28.24	IE5	BG30-../S5E08LA4	5.3	17.5	35	106	127	183	197	197	197	25	5100	-	
7	100	205	1.4	29.83	IE4	BG30-../S4E08MA4	5	16.5	33.5	100	120	149	175	205	205	23	5200	-	
7	100	205	1.4	29.83	IE5	BG30-../S5E08LA4	5	16.5	33.5	100	120	193	205	205	205	25	5200	-	
7	90	230	1.3	33.09</															

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

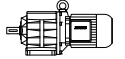
**M<sub>N</sub> = 7 Nm (P<sub>N</sub> = 2.2 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
7	63	325	0.91	47.11	IE5	BG30-../S5E08LA4	3.1	10.5	21	63	76	305	325	325	325	25	6000	-	
7	57	365	0.82	52.44	IE4	BG30-../S4E08MA4	2.8	9.5	19	57	68	260	305	365	365	23	6000	-	
7	57	365	0.82	52.44	IE5	BG30-../S5E08LA4	2.8	9.5	19	57	68	340	365	365	365	25	6000	-	
7	136	154	2.8	22.02	IE4	BG40-../S4E08MA4	6.8	22.5	45	136	163	110	129	154	154	38	6000	-	
7	136	154	2.8	22.02	IE5	BG40-../S5E08LA4	6.8	22.5	45	136	163	143	154	154	154	40	6000	-	
7	128	164	2.6	23.43	IE4	BG40-../S4E08MA4	6.4	21	42.5	128	153	117	138	164	164	38	6200	-	
7	128	164	2.6	23.43	IE5	BG40-../S5E08LA4	6.4	21	42.5	128	153	152	164	164	164	40	6200	-	
7	115	182	2.3	26.01	IE4	BG40-../S4E08MA4	5.7	19	38	115	138	130	153	182	182	38	6500	-	
7	115	182	2.3	26.01	IE5	BG40-../S5E08LA4	5.7	19	38	115	138	169	182	182	182	40	6500	-	
7	102	205	2.1	29.34	IE4	BG40-../S4E08MA4	5.1	17	34	102	122	146	173	205	205	38	6800	-	
7	102	205	2.1	29.34	IE5	BG40-../S5E08LA4	5.1	17	34	102	122	190	205	205	205	40	6800	-	
7	92	225	1.9	32.57	IE4	BG40-../S4E08MA4	4.6	15	30.5	92	110	162	192	225	225	38	7000	-	
7	92	225	1.9	32.57	IE5	BG40-../S5E08LA4	4.6	15	30.5	92	110	210	225	225	225	40	7000	-	
7	87	235	1.8	34.2	IE4	BG40-../S4E08MA4	4.3	14.5	29	87	105	171	200	235	235	38	7000	-	
7	87	235	1.8	34.2	IE5	BG40-../S5E08LA4	4.3	14.5	29	87	105	220	235	235	235	40	7000	-	
7	79	265	1.6	37.96	IE4	BG40-../S4E08MA4	3.9	13	26	79	94	189	220	265	265	38	7000	-	
7	79	265	1.6	37.96	IE5	BG40-../S5E08LA4	3.9	13	26	79	94	245	265	265	265	40	7000	-	
7	74	280	1.5	40.19	IE4	BG40-../S4E08MA4	3.7	12	24.5	74	89	200	235	280	280	38	7000	-	
7	74	280	1.5	40.19	IE5	BG40-../S5E08LA4	3.7	12	24.5	74	89	260	280	280	280	40	7000	-	
7	67	310	1.4	44.62	IE4	BG40-../S4E08MA4	3.3	11	22	67	80	220	260	310	310	38	7000	-	
7	67	310	1.4	44.62	IE5	BG40-../S5E08LA4	3.3	11	22	67	80	290	310	310	310	40	7000	-	
7	62	335	1.3	48.36	IE4	BG40-../S4E08MA4	3.1	10	20.5	62	74	240	285	335	335	38	7000	-	
7	62	335	1.3	48.36	IE5	BG40-../S5E08LA4	3.1	10	20.5	62	74	310	335	335	335	40	7000	-	
7	55	375	1.1	53.69	IE4	BG40-../S4E08MA4	2.7	9.3	18.5	55	67	265	315	375	375	38	7000	-	
7	55	375	1.1	53.69	IE5	BG40-../S5E08LA4	2.7	9.3	18.5	55	67	345	375	375	375	40	7000	-	
7	50	415	1	59.64	IE4	BG40-../S4E08MA4	2.5	8.3	16.5	50	60	295	350	415	415	38	7000	-	
7	50	415	1	59.64	IE5	BG40-../S5E08LA4	2.5	8.3	16.5	50	60	385	415	415	415	40	7000	-	
7	45	460	0.92	66.2	IE4	BG40-../S4E08MA4	2.2	7.5	15	45	54	330	390	460	460	38	7000	-	
7	45	460	0.92	66.2	IE5	BG40-../S5E08LA4	2.2	7.5	15	45	54	430	460	460	460	40	7000	-	
7	44	470	0.9	67.74	IE4	BG40Z-../S4E08MA4	2.2	7.3	14.5	44	53	335	395	470	470	42	7000	-	
7	44	470	0.9	67.74	IE5	BG40Z-../S5E08LA4	2.2	7.3	14.5	44	53	440	470	470	470	43	7000	-	
7	39.5	520	0.81	75.19	IE4	BG40Z-../S4E08MA4	1.9	6.6	13	39.5	47.5	375	440	520	520	42	7000	-	
7	39.5	520	0.81	75.19	IE5	BG40Z-../S5E08LA4	1.9	6.6	13	39.5	47.5	485	520	520	520	43	7000	-	
7	101	205	3	29.62	IE4	BG50-../S4E08MA4	5	16.5	33.5	101	121	148	174	205	205	46	8000	-	
7	101	205	3	29.62	IE5	BG50-../S5E08LA4	5	16.5	33.5	101	121	192	205	205	205	48	8000	-	
7	91	225	2.7	32.84	IE4	BG50-../S4E08MA4	4.5	15	30	91	109	164	193	225	225	46	8700	-	
7	91	225	2.7	32.84	IE5	BG50-../S5E08LA4	4.5	15	30	91	109	210	225	225	225	48	8700	-	
7	79	265	2.4	37.89	IE4	BG50-../S4E08MA4	3.9	13	26	79	95	189	220	265	265	46	10000	-	
7	79	265	2.4	37.89	IE5	BG50-../S5E08LA4	3.9	13	26	79	95	245	265	265	265	48	10000	-	
7	71	290	2.1	42	IE4	BG50-../S4E08MA4	3.5	11.5	23.5	71	85	210	245	290	290	46	10000	-	
7	71	290	2.1	42	IE5	BG50-../S5E08LA4	3.5	11.5	23.5	71	85	270	290	290	290	48	10000	-	
7	63	325	1.9	47.02	IE4	BG50-../S4E08MA4	3.1	10.5	21	63	76	235	275	325	325	46	10000	-	
7	63	325	1.9	47.02	IE5	BG50-../S5E08LA4	3.1	10.5	21	63	76	305	325	325	325	48	10000	-	
7	57	360	1.7	52.12	IE4	BG50-../S4E08MA4	2.8	9.5	19	57	69	260	305	360	360	46	10000	-	
7	57	360	1.7	52.12	IE5	BG50-../S5E08LA4	2.8	9.5	19	57	69	335	360	360	360	48	10000	-	
7	50	415	1.5	59.42	IE4	BG50-../S4E08MA4	2.5	8.4	16.5	50	60	295	350	415	415	46	10000	-	
7	50	415	1.5	59.42	IE5	BG50-../S5E08LA4	2.5	8.4	16.5	50	60	385	415	415	415	48	10000	-	
7	45.5	460	1.4	65.86	IE4	BG50-../S4E08MA4	2.2	7.5	15	45.5	54	325	385	460	460	46	10000	-	
7	45.5	460	1.4	65.86	IE5	BG50-../S5E08LA4	2.2	7.5	15	45.5	54	425	460	460	460	48	10000	-	
7	41.5	500	1.3	71.97	IE4	BG50Z-../S4E08MA4	2	6.9	13.5	41.5	50	355	420	500	500	51	10000	-	
7	41.5	500	1.3	71.97	IE5	BG50Z-../S5E08LA4	2	6.9	13.5	41.5	50	465	500	500	500	52	10000	-	
7	37.5	550	1.1	79.78	IE4	BG50Z-../S4E08MA4	1.8	6.2	12.5	37.5	45	395	470	550	550	51	10000	-	
7	37.5	550	1.1	79.78	IE5	BG50Z-../S5E08LA4	1.8	6.2	12.5	37.5	45	510	550	550	550	52	10000	-	
7	31	660	0.94	95.58	IE4	BG50Z-../S4E08MA4	1.5	5.2	10	31	37.5	475	560	660	660	51	10000	-	
7	31	660	0.94	95.58	IE5	BG50Z-../S5E08LA4	1.5	5.2	10	31	37.5	620	660	660	660	52	10000	-	
7	28	740	0.85	106	IE4	BG50Z-../S4E08MA4	1.4	4.7	9.4	28	33.5	530	620	740	740	51	10000	-	
7	28	740	0.85	106	IE5	BG50Z-../S5E08LA4	1.4	4.7	9.4	28	33.5	680	740	740	740	52	10000	-	
7	43.5	475	2.5	68.32	IE4	BG60Z-../S4E08MA4	2.1	7.3	14.5	43.5	52	340	400	475	475	96	16000	-	
7	43.5	475	2.5	68.32	IE5	BG60Z-../S5E08LA4	2.1	7.3	14.5	43.5	52	440	475	475	475	97	16000	-	
7	39.5	520	2.3	75.71	IE4	BG60Z-../S4E08MA4	1.9	6.6	13	39.5	47.5	375	445	520	520	96	16000	-	
7	39.5	520	2.3	75.71	IE5	BG60Z-../S5E08LA4	1.9	6.6	13	39.5	47.5	490	520	520	520	97	16000	-	
7	32.5	630	1.9	91.09	IE4	BG60Z-../S4E08MA4	1.6	5.4	10.5	32.5	39.5	455	530	630	630	96	16000	-	
7	32.5	630	1.9	91.09	IE5	BG60Z-../S5E08LA4	1.6	5.4	10.5	32.5	39.5	590	630	630	630	97	16000	-	
7	29.5	700	1.7	101	IE4	BG60Z-../S4E08MA4	1.4	4.9	9.9	29.5	35.5	500	590	700	700	96	16000	-	
7	29.5	700	1.7	101	IE5	BG60Z-../S5E08LA4	1.4	4.9	9.9	29.5	35.5	650	700	700	700	97	16000	-	
7	25	830	1.4	119.2	IE4	BG60Z-../S4E08MA4	1.2	4.1	8.3	25	30	590	700	830	830	96	16000	-	
7	25	830	1.4	119.2	IE5	BG60Z-../S5E08LA4	1.2	4.1	8.3	25	30	770	830	830	830	97	16000	-	
7	22.5	920	1.3	132.1	IE4	BG60Z-../S4E08MA4	1.1	3.7	7.5	22.5	27	660	770	920	920	96	16000	-	
7	22.5	920	1.3	132.1	IE5	BG60Z-../S5E08LA4	1.1	3.7	7.5	22.5	27	850	920	920	920	97	16000	-	
7	18.5	1100	1.1	158	IE4	BG60Z-../S4E08MA4	0.9	3.1	6.3	18.5	22.5	790	930	1100	1100	96	16000	-	
7	18.5	1100	1.1	158	IE5	BG60Z-../S5E08LA4	0.9	3.1	6.3	18.5	22.5	1020	1100	1100	1100	97	16000	-	
7	17	1220	0.98	175.1	IE4	BG60Z-../S4E08MA4	0.85	2.8	5.7	17	20.5	870	1030	1220	1220	96	16000	-	
7	17	1220	0.98	175.1	IE5	BG60Z-../S5E08LA4													



# BG-series helical-geared motors

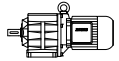
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 7 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	300	1000	3000	3600	150	500	1000	3000	3600			
7	20	1030	2.2	147.2	IE5	BG70Z-../S5E08LA4	1	3.3	6.7	20	24	950	1030	1030	1030	1030	137	20000	-
7	18	1140	2	163.8	IE4	BG70Z-../S4E08MA4	0.9	3	6.1	18	21.5	810	960	1140	1140	1140	136	20000	-
7	18	1140	2	163.8	IE5	BG70Z-../S5E08LA4	0.9	3	6.1	18	21.5	1060	1140	1140	1140	1140	137	20000	-
7	15	1360	1.7	194.4	IE4	BG70Z-../S4E08MA4	0.75	2.5	5.1	15	18.5	970	1140	1360	1360	1360	136	20000	-
7	15	1360	1.7	194.4	IE5	BG70Z-../S5E08LA4	0.75	2.5	5.1	15	18.5	1260	1360	1360	1360	1360	137	20000	-
7	14	1470	1.6	210.5	IE4	BG70Z-../S4E08MA4	0.7	2.3	4.7	14	17	1050	1240	1470	1470	1470	136	20000	-
7	14	1470	1.6	210.5	IE5	BG70Z-../S5E08LA4	0.7	2.3	4.7	14	17	1360	1470	1470	1470	1470	137	20000	-
7	12	1740	1.3	249.8	IE4	BG70Z-../S4E08MA4	0.6	2	4	12	14	1240	1470	1740	1740	1740	136	20000	-
7	12	1740	1.3	249.8	IE5	BG70Z-../S5E08LA4	0.6	2	4	12	14	1620	1740	1740	1740	1740	137	20000	-
7	11.5	1780	1.4	255.5	IE4	BG70G20-../S4E08MA4	0.55	1.9	3.9	11.5	14	1270	1500	1780	1780	1780	133	20000	-
7	11.5	1780	1.4	255.5	IE5	BG70G20-../S5E08LA4	0.55	1.9	3.9	11.5	14	1660	1780	1780	1780	1780	135	20000	-
7	10.5	1930	1.3	276.7	IE4	BG70G20-../S4E08MA4	0.5	1.8	3.6	10.5	13	1380	1630	1930	1930	1930	133	20000	-
7	10.5	1930	1.3	276.7	IE5	BG70G20-../S5E08LA4	0.5	1.8	3.6	10.5	13	1790	1930	1930	1930	1930	135	20000	-
7	9.1	2250	1.1	328.4	IE4	BG70G20-../S4E08MA4	0.45	1.5	3	9.1	10.5	1640	1930	2250	2250	2250	133	20000	-
7	9.1	2250	1.1	328.4	IE5	BG70G20-../S5E08LA4	0.45	1.5	3	9.1	10.5	2100	2250	2250	2250	2250	135	20000	-
7	7.7	2700	0.92	387.6	IE4	BG70G20-../S4E08MA4	0.38	1.2	2.5	7.7	9.2	1930	2250	2700	2700	2700	133	20000	-
7	7.7	2700	0.92	387.6	IE5	BG70G20-../S5E08LA4	0.38	1.2	2.5	7.7	9.2	2500	2700	2700	2700	2700	135	20000	-
7	7.1	2900	0.85	417.8	IE4	BG70G20-../S4E08MA4	0.35	1.1	2.3	7.1	8.6	2050	2450	2900	2900	2900	133	20000	-
7	7.1	2900	0.85	417.8	IE5	BG70G20-../S5E08LA4	0.35	1.1	2.3	7.1	8.6	2700	2900	2900	2900	2900	135	20000	-
7	13	1590	2.9	227.2	IE4	BG80G40-../S4E08MA4	0.65	2.2	4.4	13	15.5	1130	1340	1590	1590	1590	215	26000	-
7	13	1590	2.9	227.2	IE5	BG80G40-../S5E08LA4	0.65	2.2	4.4	13	15.5	1470	1590	1590	1590	1590	216	26000	-
7	11.5	1760	2.6	252.3	IE4	BG80G40-../S4E08MA4	0.55	1.9	3.9	11.5	14	1260	1480	1760	1760	1760	215	26000	-
7	11.5	1760	2.6	252.3	IE5	BG80G40-../S5E08LA4	0.55	1.9	3.9	11.5	14	1630	1760	1760	1760	1760	216	26000	-
7	10.5	1970	2.3	282.8	IE4	BG80G40-../S4E08MA4	0.5	1.7	3.5	10.5	12.5	1410	1660	1970	1970	1970	215	26000	-
7	10.5	1970	2.3	282.8	IE5	BG80G40-../S5E08LA4	0.5	1.7	3.5	10.5	12.5	1830	1970	1970	1970	1970	216	26000	-
7	9.5	2150	2.1	314	IE4	BG80G40-../S4E08MA4	0.47	1.5	3.1	9.5	11	1570	1850	2150	2150	2150	215	26000	-
7	9.5	2150	2.1	314	IE5	BG80G40-../S5E08LA4	0.47	1.5	3.1	9.5	11	2000	2150	2150	2150	2150	216	26000	-
7	8.3	2500	1.8	360	IE4	BG80G40-../S4E08MA4	0.41	1.3	2.7	8.3	10	1800	2100	2500	2500	2500	215	26000	-
7	8.3	2500	1.8	360	IE5	BG80G40-../S5E08LA4	0.41	1.3	2.7	8.3	10	2300	2500	2500	2500	2500	216	26000	-
7	7.5	2750	1.6	399.8	IE4	BG80G40-../S4E08MA4	0.37	1.2	2.5	7.5	9	1990	2350	2750	2750	2750	215	26000	-
7	7.5	2750	1.6	399.8	IE5	BG80G40-../S5E08LA4	0.37	1.2	2.5	7.5	9	2550	2750	2750	2750	2750	216	26000	-
7	6.8	3050	1.5	436.2	IE4	BG80G40-../S4E08MA4	0.34	1.1	2.2	6.8	8.2	2150	2550	3050	3050	3050	215	26000	-
7	6.8	3050	1.5	436.2	IE5	BG80G40-../S5E08LA4	0.34	1.1	2.2	6.8	8.2	2800	3050	3050	3050	3050	216	26000	-
7	6.1	3350	1.4	484.3	IE4	BG80G40-../S4E08MA4	0.3	1	2	6.1	7.4	2400	2850	3350	3350	3350	215	26000	-
7	6.1	3350	1.4	484.3	IE5	BG80G40-../S5E08LA4	0.3	1	2	6.1	7.4	3100	3350	3350	3350	3350	216	26000	-
7	5.2	4000	1.1	572	IE4	BG80G40-../S4E08MA4	0.26	0.85	1.7	5.2	6.2	2850	3350	4000	4000	4000	215	26000	-
7	5.2	4000	1.1	572	IE5	BG80G40-../S5E08LA4	0.26	0.85	1.7	5.2	6.2	3700	4000	4000	4000	4000	216	26000	-
7	4.5	4600	1	657.8	IE4	BG80G40-../S4E08MA4	0.22	0.75	1.5	4.5	5.4	3250	3850	4600	4600	4600	215	26000	-
7	4.5	4600	1	657.8	IE5	BG80G40-../S5E08LA4	0.22	0.75	1.5	4.5	5.4	4250	4600	4600	4600	4600	216	26000	-
7	4.1	5100	0.9	730.3	IE4	BG80G40-../S4E08MA4	0.2	0.65	1.3	4.1	4.9	3650	4300	5100	5100	5100	215	26000	-
7	4.1	5100	0.9	730.3	IE5	BG80G40-../S5E08LA4	0.2	0.65	1.3	4.1	4.9	4700	5100	5100	5100	5100	216	26000	-
7	3.6	5700	0.8	817.4	IE4	BG80G40-../S4E08MA4	0.18	0.6	1.2	3.6	4.4	4050	4800	5700	5700	5700	215	26000	-
7	3.6	5700	0.8	817.4	IE5	BG80G40-../S5E08LA4	0.18	0.6	1.2	3.6	4.4	5300	5700	5700	5700	5700	216	26000	-
7	6.8	3050	3	435.8	IE4	BG90G50-../S4E08MA4	0.34	1.1	2.2	6.8	8.2	2150	2550	3050	3050	3050	324	65000	-
7	6.8	3050	3	435.8	IE5	BG90G50-../S5E08LA4	0.34	1.1	2.2	6.8	8.2	2800	3050	3050	3050	3050	326	65000	-
7	5.9	3500	2.6	504.7	IE4	BG90G50-../S4E08MA4	0.29	0.95	1.9	5.9	7.1	2500	2950	3500	3500	3500	324	65000	-
7	5.9	3500	2.6	504.7	IE5	BG90G50-../S5E08LA4	0.29	0.95	1.9	5.9	7.1	3250	3500	3500	3500	3500	326	65000	-
7	5	4100	2.2	588.8	IE4	BG90G50-../S4E08MA4	0.25	0.8	1.6	5	6.1	2900	3450	4100	4100	4100	324	65000	-
7	5	4100	2.2	588.8	IE5	BG90G50-../S5E08LA4	0.25	0.8	1.6	5	6.1	3800	4100	4100	4100	4100	326	65000	-
7	4.6	4500	2	644.7	IE4	BG90G50-../S4E08MA4	0.23	0.75	1.5	4.6	5.5	3200	3800	4500	4500	4500	324	65000	-
7	4.6	4500	2	644.7	IE5	BG90G50-../S5E08LA4	0.23	0.75	1.5	4.6	5.5	4150	4500	4500	4500	4500	326	65000	-
7	4.2	4950	1.8	714.2	IE4	BG90G50-../S4E08MA4	0.21	0.7	1.4	4.2	5	3550	4200	4950	4950	4950	324	65000	-
7	4.2	4950	1.8	714.2	IE5	BG90G50-../S5E08LA4	0.21	0.7	1.4	4.2	5	4600	4950	4950	4950	4950	326	65000	-
7	3.3	6100	1.5	883.7	IE4	BG90G50-../S4E08MA4	0.16	0.55	1.1	3.3	4	4400	5200	6100	6100	6100	324	65000	-
7	3.3	6100	1.5	883.7	IE5	BG90G50-../S5E08LA4	0.16	0.55	1.1	3.3	4	5700	6100	6100	6100	6100	326	65000	-
7	2.5	8200	1.1	1174	IE4	BG90G50-../S4E08MA4	0.12	0.42	0.85	2.5	3	5800	6900	8200	8200	8200	324	65000	-
7	2.5	8200	1.1	1174	IE5	BG90G50-../S5E08LA4	0.12	0.42	0.85	2.5	3	7600	8200	8200	8200	8200	326	65000	-
7	2.3	9100	1	1301	IE4	BG90G50-../S4E08MA4	0.11	0.38	0.75	2.3	2.7	6500	7600	9100	9100	9100	324	65000	-
7	2.3	9100	1	1301	IE5	BG90G50-../S5E08LA4	0.11	0.38	0.75	2.3	2.7	8400	9100	9100	9100	9100	326	65000	-
7	1.8	11000	0.83	1583	IE4	BG90G50-../S4E08MA4	0.09	0.31	0.6	1.8	2.2	7900	9300	11000	11000	11000	324	65000	-
7	1.8	11000	0.83	1583	IE5	BG90G50-../S5E08LA4	0.09	0.31	0.6	1.8	2.2	10200	11000	11000	11000	11000	326	65000	-
7	3	6800	2.7	976.1	IE4	BG100G50-../S4E08MA4	0.15	0.5	1	3	3.6	4850	5700	6800	6800	6800	512	90000	-
7	3	6800	2.7	976.1	IE5	BG100G50-../S5E08LA4	0.15	0.5	1	3	3.6	6300	6800	6800	6800	6800	513	90000	-
7	2.8	7300	2.5	1043	IE4	BG100G50-../S4E08MA4	0.14	0.47	0.95	2.8	3.4	5200	6100	7300	7300	7300	512	90000	-
7	2.8	7300	2.5	1043	IE5	BG100G50-../S5E08LA4	0.14	0.47	0.95	2.8	3.4	6700	7300	7300	7300</				

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

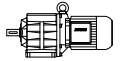
**M<sub>N</sub> = 10 Nm (P<sub>N</sub> = 3.1 kW)**

M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min] at engine speed n <sub>1</sub> [1/min]					Torque range M <sub>2</sub> [Nm] at engine speed n <sub>1</sub> [1/min]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
10	1190	25	2.2	2.52	IE3	BG10-../SPE08LA4	59	198	395	1190	1420	16.3	20	25	25	25	18	570	790
10	870	34	1.8	3.42	IE3	BG10-../SPE08LA4	43.5	146	290	870	1050	22	27	34	34	34	18	630	880
10	680	43.5	1.6	4.36	IE3	BG10-../SPE08LA4	34	114	225	680	820	28	34.5	43.5	43.5	43.5	18	650	910
10	560	53	1.4	5.34	IE3	BG10-../SPE08LA4	28	93	187	560	670	34.5	42.5	53	53	53	18	620	910
10	440	67	1.2	6.78	IE3	BG10-../SPE08LA4	22	73	147	440	530	44	54	67	67	67	18	660	920
10	435	68	1.3	6.89	IE3	BG10-../SPE08LA4	21.5	72	145	435	520	44.5	55	68	68	68	18	850	1200
10	390	76	1.2	7.63	IE3	BG10-../SPE08LA4	19.5	65	131	390	470	49.5	61	76	76	76	18	900	1250
10	370	80	1.1	8.07	IE3	BG10-../SPE08LA4	18.5	61	123	370	445	52	64	80	80	80	18	660	920
10	320	93	1	9.33	IE3	BG10-../SPE08LA4	16	53	107	320	385	60	74	93	93	93	18	950	1330
10	290	103	0.96	10.34	IE3	BG10-../SPE08LA4	14.5	48	96	290	345	67	82	103	103	103	18	1000	1400
10	250	119	0.88	11.92	IE3	BG10-../SPE08LA4	12.5	41.5	83	250	300	77	95	119	119	119	18	1030	1440
10	225	132	0.83	13.21	IE3	BG10-../SPE08LA4	11	37.5	75	225	270	85	105	132	132	132	18	1070	1490
10	900	33	2.8	3.33	IE3	BG20-../SPE08LA4	45	150	300	900	1080	21.5	26.5	33	33	33	20	1830	-
10	680	43.5	2.4	4.38	IE3	BG20-../SPE08LA4	34	114	225	680	820	28	35	43.5	43.5	43.5	20	1990	-
10	540	54	2.1	5.49	IE3	BG20-../SPE08LA4	27	91	182	540	650	35.5	43.5	54	54	54	20	2100	-
10	495	60	2.1	6.06	IE3	BG20-../SPE08LA4	24.5	82	165	495	590	39	48	60	60	60	20	2250	-
10	460	64	1.9	6.48	IE3	BG20-../SPE08LA4	23	77	154	460	550	42	51	64	64	64	20	2250	-
10	445	67	1.9	6.73	IE3	BG20-../SPE08LA4	22	74	148	445	530	43.5	53	67	67	67	20	2350	2100
10	370	80	1.7	8.02	IE3	BG20-../SPE08LA4	18.5	62	124	370	445	52	64	80	80	80	20	2500	-
10	360	82	1.5	8.29	IE3	BG20-../SPE08LA4	18	60	120	360	430	53	66	82	82	82	20	2250	-
10	335	89	1.6	8.91	IE3	BG20-../SPE08LA4	16.5	56	112	335	400	57	71	89	89	89	20	2600	-
10	310	96	1.3	9.65	IE3	BG20-../SPE08LA4	15.5	51	103	310	370	62	77	96	96	96	20	2250	-
10	280	105	1.5	10.54	IE3	BG20-../SPE08LA4	14	47	94	280	340	68	84	105	105	105	20	2700	-
10	255	117	1.3	11.71	IE3	BG20-../SPE08LA4	12.5	42.5	85	255	305	76	93	117	117	117	20	2800	-
10	225	132	1.3	13.21	IE3	BG20-../SPE08LA4	11	37.5	75	225	270	85	105	132	132	132	20	2900	-
10	200	146	1.2	14.67	IE3	BG20-../SPE08LA4	10	34	68	200	245	95	117	146	146	146	20	3050	-
10	192	155	1.1	15.58	IE3	BG20-../SPE08LA4	9.6	32	64	192	230	101	124	155	155	155	20	3100	-
10	173	173	1.1	17.31	IE3	BG20-../SPE08LA4	8.6	28.5	57	173	205	112	138	173	173	173	20	3200	-
10	150	199	0.98	19.95	IE3	BG20-../SPE08LA4	7.5	25	50	150	180	129	159	199	199	199	20	3350	-
10	135	220	0.9	22.16	IE3	BG20-../SPE08LA4	6.7	22.5	45	135	162	144	177	220	220	220	20	3500	-
10	129	230	0.86	23.22	IE3	BG20-../SPE08LA4	6.4	21.5	43	129	155	150	185	230	230	230	20	3550	-
10	375	79	2.7	7.91	IE3	BG30-../SPE08LA4	18.5	63	126	375	455	51	63	79	79	79	25	1760	-
10	345	86	2.8	8.6	IE3	BG30-../SPE08LA4	17	58	116	345	415	55	68	86	86	86	25	2800	-
10	310	95	2.6	9.55	IE3	BG30-../SPE08LA4	15.5	52	104	310	375	62	76	95	95	95	25	3000	-
10	280	106	2.5	10.65	IE3	BG30-../SPE08LA4	14	46.5	93	280	335	69	85	106	106	106	25	2950	-
10	250	118	2.3	11.82	IE3	BG30-../SPE08LA4	12.5	42	84	250	300	76	94	118	118	118	25	3200	-
10	215	137	2.1	13.77	IE3	BG30-../SPE08LA4	10.5	36	72	215	260	89	110	137	137	137	25	3150	-
10	196	152	2	15.27	IE3	BG30-../SPE08LA4	9.8	32.5	65	196	235	99	122	152	152	152	25	3450	-
10	175	170	1.8	17.06	IE3	BG30-../SPE08LA4	8.7	29	58	175	210	110	136	170	170	170	25	3700	-
10	158	189	1.6	18.93	IE3	BG30-../SPE08LA4	7.9	26	52	158	190	123	151	189	189	189	25	4100	-
10	150	199	1.5	19.99	IE3	BG30-../SPE08LA4	7.5	25	50	150	180	129	159	199	199	199	25	4200	-
10	135	220	1.4	22.18	IE3	BG30-../SPE08LA4	6.7	22.5	45	135	162	144	177	220	220	220	25	4600	-
10	117	250	1.2	25.45	IE3	BG30-../SPE08LA4	5.8	19.5	39	117	141	165	200	250	250	250	25	4850	-
10	106	280	1.1	28.24	IE3	BG30-../SPE08LA4	5.3	17.5	35	106	127	183	225	280	280	280	25	5100	-
10	100	295	1	29.83	IE3	BG30-../SPE08LA4	5	16.5	33.5	100	120	193	235	295	295	295	25	5200	-
10	90	330	0.91	33.09	IE3	BG30-../SPE08LA4	4.5	15	30	90	108	215	260	330	330	330	25	5400	-
10	85	350	0.85	35.17	IE3	BG30-../SPE08LA4	4.2	14	28	85	102	225	280	350	350	350	25	5500	-
10	210	142	2.9	14.28	IE3	BG40-../SPE08LA4	10.5	35	70	210	250	92	114	142	142	142	40	4900	-
10	183	163	2.6	16.39	IE3	BG40-../SPE08LA4	9.1	30.5	61	183	215	106	131	163	163	163	40	5300	-
10	164	181	2.3	18.19	IE3	BG40-../SPE08LA4	8.2	27	54	164	197	118	145	181	181	181	40	5600	-
10	151	198	2.1	19.84	IE3	BG40-../SPE08LA4	7.5	25	50	151	181	128	158	198	198	198	40	5800	-
10	136	220	1.9	22.02	IE3	BG40-../SPE08LA4	6.8	22.5	45	136	163	143	176	220	220	220	40	6000	-
10	128	230	1.8	23.43	IE3	BG40-../SPE08LA4	6.4	21	42.5	128	153	152	187	230	230	230	40	6200	-
10	115	260	1.6	26.01	IE3	BG40-../SPE08LA4	5.7	19	38	115	138	169	205	260	260	260	40	6500	-
10	102	290	1.4	29.34	IE3	BG40-../SPE08LA4	5.1	17	34	102	122	190	230	290	290	290	40	6800	-
10	92	325	1.3	32.57	IE3	BG40-../SPE08LA4	4.6	15	30.5	92	110	210	260	325	325	325	40	7000	-
10	87	340	1.2	34.2	IE3	BG40-../SPE08LA4	4.3	14.5	29	87	105	220	270	340	340	340	40	7000	-
10	79	375	1.1	37.96	IE3	BG40-../SPE08LA4	3.9	13	26	79	94	245	300	375	375	375	40	7000	-
10	74	400	1.1	40.19	IE3	BG40-../SPE08LA4	3.7	12	24.5	74	89	260	320	400	400	400	40	7000	-
10	67	445	0.95	44.62	IE3	BG40-../SPE08LA4	3.3	11	22	67	80	290	355	445	445	445	40	7000	-
10	62	480	0.88	48.36	IE3	BG40-../SPE08LA4	3.1	10	20.5	62	74	310	385	480	480	480	40	7000	-
10	136	215	2.9	21.96	IE3	BG50-../SPE08LA4	6.8	22.5	45.5	136	163	142	175	215	215	215	48	8000	-
10	123	240	2.6	24.34	IE3	BG50-../SPE08LA4	6.1	20.5	41	123	147	158	194	240	240	240	48	8700	-
10	101	295	2.1	29.62	IE3	BG50-../SPE08LA4	5	16.5	33.5	101	121	192	235	295	295	295	48	8000	-
10	91	325	1.9	32.84	IE3	BG50-../SPE08LA4	4.5	15	30	91	109	210	260	325	325	325	48	8700	-
10	79	375	1.7	37.89	IE3	BG50-../SPE08LA4	3.9	13	26	79	95	245	300	375	375	375	48	10000	-
10	71	420	1.5	42	IE3	BG50-../SPE08LA4	3.5	11.5	23.5	71	85	270	335	420	420	420	48	10000	-
10	63	470	1.3	47.02	IE3	BG50-../SPE08LA4	3.1	10.5	21	63	76	305	375	470	470	470	48	10000	-
10	57	520	1.2	52.12	IE3	BG50-../SPE08LA4	2.8	9.5	19	57	69	335	415	520	520	520	48	10000	-
10	50	590	1.1	59.42	IE3	BG50-../SPE08LA4	2												

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

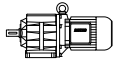
### $M_N = 10 \text{ Nm}$ ( $P_N = 3.1 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
10	31	950	2.4	95.74	IE3	BG70Z-../SPE08LA4	1.5	5.2	10	31	37.5	620	760	950	950	950	137	20000	-
10	26	1130	2	113.6	IE3	BG70Z-../SPE08LA4	1.3	4.4	8.8	26	31.5	730	900	1130	1130	1130	137	20000	-
10	24	1240	1.9	124	IE3	BG70Z-../SPE08LA4	1.2	4	8	24	29	800	990	1240	1240	1240	137	20000	-
10	20	1470	1.6	147.2	IE3	BG70Z-../SPE08LA4	1	3.3	6.7	20	24	950	1170	1470	1470	1470	137	20000	-
10	18	1630	1.4	163.8	IE3	BG70Z-../SPE08LA4	0.9	3	6.1	18	21.5	1060	1310	1630	1630	1630	137	20000	-
10	15	1940	1.2	194.4	IE3	BG70Z-../SPE08LA4	0.75	2.5	5.1	15	18.5	1260	1550	1940	1940	1940	137	20000	-
10	14	2100	1.1	210.5	IE3	BG70Z-../SPE08LA4	0.7	2.3	4.7	14	17	1360	1680	2100	2100	2100	137	20000	-
10	12	2450	0.92	249.8	IE3	BG70Z-../SPE08LA4	0.6	2	4	12	14	1620	1990	2450	2450	2450	137	20000	-
10	11.5	2550	0.98	255.5	IE3	BG70G20-../SPE08LA4	0.55	1.9	3.9	11.5	14	1660	2000	2550	2550	2550	135	20000	-
10	10.5	2750	0.9	276.7	IE3	BG70G20-../SPE08LA4	0.5	1.8	3.6	10.5	13	1790	2200	2750	2750	2750	135	20000	-
10	13	2250	2	227.2	IE3	BG80G40-../SPE08LA4	0.65	2.2	4.4	13	15.5	1470	1810	2250	2250	2250	216	26000	-
10	11.5	2500	1.8	252.3	IE3	BG80G40-../SPE08LA4	0.55	1.9	3.9	11.5	14	1630	2000	2500	2500	2500	216	26000	-
10	10.5	2800	1.6	282.8	IE3	BG80G40-../SPE08LA4	0.5	1.7	3.5	10.5	12.5	1830	2250	2800	2800	2800	216	26000	-
10	9.5	3100	1.5	314	IE3	BG80G40-../SPE08LA4	0.47	1.5	3.1	9.5	11	2000	2500	3100	3100	3100	216	26000	-
10	8.3	3600	1.3	360	IE3	BG80G40-../SPE08LA4	0.41	1.3	2.7	8.3	10	2300	2850	3600	3600	3600	216	26000	-
10	7.5	3950	1.2	399.8	IE3	BG80G40-../SPE08LA4	0.37	1.2	2.5	7.5	9	2550	3150	3950	3950	3950	216	26000	-
10	6.8	4350	1.1	436.2	IE3	BG80G40-../SPE08LA4	0.34	1.1	2.2	6.8	8.2	2800	3450	4350	4350	4350	216	26000	-
10	6.1	4800	0.95	484.3	IE3	BG80G40-../SPE08LA4	0.3	1	2	6.1	7.4	3100	3850	4800	4800	4800	216	26000	-
10	5.2	5700	0.8	572	IE3	BG80G40-../SPE08LA4	0.26	0.85	1.7	5.2	6.2	3700	4550	5700	5700	5700	216	26000	-
10	8.3	3600	2.6	360.3	IE3	BG90G50-../SPE08LA4	0.41	1.3	2.7	8.3	9.9	2300	2850	3600	3600	3600	326	65000	-
10	6.8	4350	2.1	435.8	IE3	BG90G50-../SPE08LA4	0.34	1.1	2.2	6.8	8.2	2800	3450	4350	4350	4350	326	65000	-
10	5.9	5000	1.8	504.7	IE3	BG90G50-../SPE08LA4	0.29	0.95	1.9	5.9	7.1	3250	4000	5000	5000	5000	326	65000	-
10	5	5800	1.6	588.8	IE3	BG90G50-../SPE08LA4	0.25	0.8	1.6	5	6.1	3800	4700	5800	5800	5800	326	65000	-
10	4.6	6400	1.4	644.7	IE3	BG90G50-../SPE08LA4	0.23	0.75	1.5	4.6	5.5	4150	5100	6400	6400	6400	326	65000	-
10	4.2	7100	1.3	714.2	IE3	BG90G50-../SPE08LA4	0.21	0.7	1.4	4.2	5	4600	5700	7100	7100	7100	326	65000	-
10	3.3	8800	1	883.7	IE3	BG90G50-../SPE08LA4	0.16	0.55	1.1	3.3	4	5700	7000	8800	8800	8800	326	65000	-
10	3	9700	1.9	976.1	IE3	BG100G50-../SPE08LA4	0.15	0.5	1	3	3.6	6300	7800	9700	9700	9700	513	90000	-
10	2.8	10400	1.8	1043	IE3	BG100G50-../SPE08LA4	0.14	0.47	0.95	2.8	3.4	6700	8300	10400	10400	10400	513	90000	-
10	2.4	12000	1.5	1204	IE3	BG100G50-../SPE08LA4	0.12	0.41	0.8	2.4	2.9	7800	9600	12000	12000	12000	513	90000	-
10	2	14400	1.3	1444	IE3	BG100G50-../SPE08LA4	0.1	0.34	0.65	2	2.4	9300	11500	14400	14400	14400	513	90000	-
10	1.7	16700	1.1	1678	IE3	BG100G50-../SPE08LA4	0.09	0.29	0.55	1.7	2.1	10900	13400	16700	16700	16700	513	90000	-
10	1.6	18600	0.99	1867	IE3	BG100G50-../SPE08LA4	0.08	0.26	0.5	1.6	1.9	12100	14900	18600	18600	18600	513	90000	-
10	1.3	21500	0.86	2154	IE3	BG100G50-../SPE08LA4	0.07	0.23	0.46	1.3	1.6	14000	17200	21500	21500	21500	513	90000	-

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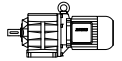
### $M_N = 13 \text{ Nm}$ ( $P_N = 4 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
13	1190	32.5	1.7	2.52	IE4	BG10-../S4E09SA4	59	198	395	1190	1420	21	25	32.5	32.5	32.5	22	570	790
13	870	44	1.4	3.42	IE4	BG10-../S4E09SA4	43.5	146	290	870	1050	29	34	44	44	44	22	630	880
13	680	56	1.2	4.36	IE4	BG10-../S4E09SA4	34	114	225	680	820	37	43.5	56	56	56	22	650	910
13	560	69	1.1	5.34	IE4	BG10-../S4E09SA4	28	93	187	560	670	45	53	69	69	69	22	620	910
13	440	88	0.92	6.78	IE4	BG10-../S4E09SA4	22	73	147	440	530	57	67	88	88	88	22	660	920
13	435	89	0.98	6.89	IE4	BG10-../S4E09SA4	21.5	72	145	435	520	58	68	89	89	89	22	850	1200
13	390	99	0.9	7.63	IE4	BG10-../S4E09SA4	19.5	65	131	390	470	64	76	99	99	99	22	900	1250
13	370	104	0.84	8.07	IE4	BG10-../S4E09SA4	18.5	61	123	370	445	68	80	104	104	104	22	660	920
13	320	121	0.8	9.33	IE4	BG10-../S4E09SA4	16	53	107	320	385	79	93	121	121	121	22	950	1330
13	1190	32.5	2.6	2.52	IE4	BG20-../S4E09SA4	59	198	395	1190	1420	21	25	32.5	32.5	32.5	24	1650	-
13	900	43	2.1	3.33	IE4	BG20-../S4E09SA4	45	150	300	900	1080	28	33	43	43	43	24	1830	-
13	680	56	1.8	4.38	IE4	BG20-../S4E09SA4	34	114	225	680	820	37	43.5	56	56	56	24	1990	-
13	540	71	1.6	5.49	IE4	BG20-../S4E09SA4	27	91	182	540	650	46.5	54	71	71	71	24	2100	-
13	495	78	1.6	6.06	IE4	BG20-../S4E09SA4	24.5	82	165	495	590	51	60	78	78	78	24	2250	-
13	460	84	1.4	6.48	IE4	BG20-../S4E09SA4	23	77	154	460	550	55	64	84	84	84	24	2250	-
13	445	87	1.5	6.73	IE4	BG20-../S4E09SA4	22	74	148	445	530	57	67	87	87	87	24	2350	2100
13	370	104	1.3	8.02	IE4	BG20-../S4E09SA4	18.5	62	124	370	445	68	80	104	104	104	24	2500	-
13	360	107	1.1	8.29	IE4	BG20-../S4E09SA4	18	60	120	360	430	70	82	107	107	107	24	2250	-
13	335	115	1.2	8.91	IE4	BG20-../S4E09SA4	16.5	56	112	335	400	75	89	115	115	115	24	2600	-
13	310	125	0.97	9.65	IE4	BG20-../S4E09SA4	15.5	51	103	310	370	82	96	125	125	125	24	2250	-
13	280	137	1.1	10.54	IE4	BG20-../S4E09SA4	14	47	94	280	340	89	105	137	137	137	24	2700	-
13	255	152	1	11.71	IE4	BG20-../S4E09SA4	12.5	42.5	85	255	305	99	117	152	152	152	24	2800	-
13	225	171	0.97	13.21	IE4	BG20-../S4E09SA4	11	37.5	75	225	270	112	132	171	171	171	24	2900	-
13	200	190	0.9	14.67	IE4	BG20-../S4E09SA4	10	34	68	200	245	124	146	190	190	190	24	3050	-
13	192	200	0.87	15.58	IE4	BG20-../S4E09SA4	9.6	32	64	192	230	132	155	200	200	200	24	3100	-
13	173	225	0.81	17.31	IE4	BG20-../S4E09SA4	8.6	28.5	57	173	205	147	173	225	225	225	24	3200	-
13	550	70	2.8	5.44	IE4	BG30-../S4E09SA4	27.5	91	183	550	660	46	54	70	70	70	29	1670	-
13	440	87	2.5	6.75	IE4	BG30-../S4E09SA4	22	74	148	440	530	57	67	87	87	87	29	1760	-
13	440	87	2.6	6.76	IE4	BG30-../S4E09SA4	22	73	147	440	530	57	67	87	87	87	29	2550	-
13	400	97	2.4	7.5	IE4	BG30-../S4E09SA4	20	66	133	400	480	63	75	97	97	97	29	2750	-
13	375	102	2.1	7.91	IE4	BG30-../S4E09SA4	18.5	63	126	375	455	67	79						

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 13 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

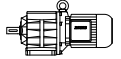
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	200	1000	3000	3600	150	500	1000	3000	3600			
13	175	220	1.4	17.06	IE4	BG30-../S4E09SA4	8.7	29	58	175	210	145	170	220	220	220	29	3700	-
13	158	245	1.2	18.93	IE4	BG30-../S4E09SA4	7.9	26	52	158	190	160	189	245	245	245	29	4100	-
13	150	255	1.2	19.99	IE4	BG30-../S4E09SA4	7.5	25	50	150	180	169	199	255	255	255	29	4200	-
13	135	285	1	22.18	IE4	BG30-../S4E09SA4	6.7	22.5	45	135	162	188	220	285	285	285	29	4600	-
13	117	330	0.91	25.45	IE4	BG30-../S4E09SA4	5.8	19.5	39	117	141	215	250	330	330	330	29	4850	-
13	106	365	0.82	28.24	IE4	BG30-../S4E09SA4	5.3	17.5	35	106	127	240	280	365	365	365	29	5100	-
13	390	99	3	7.62	IE4	BG40-../S4E09SA4	19.5	65	131	390	470	64	76	99	99	99	43	2650	-
13	330	117	2.5	9	IE4	BG40-../S4E09SA4	16.5	55	111	330	400	76	90	117	117	117	43	2650	-
13	325	119	3	9.23	IE4	BG40-../S4E09SA4	16	54	108	325	390	78	92	119	119	119	43	4350	-
13	285	134	2.8	10.35	IE4	BG40-../S4E09SA4	14	48	96	285	345	87	103	134	134	134	43	4350	-
13	260	149	2.6	11.49	IE4	BG40-../S4E09SA4	13	43.5	87	260	310	97	114	149	149	149	43	4600	-
13	230	167	2.5	12.86	IE4	BG40-../S4E09SA4	11.5	38.5	77	230	275	109	128	167	167	167	43	4500	-
13	210	185	2.3	14.28	IE4	BG40-../S4E09SA4	10.5	35	70	210	250	121	142	185	185	185	43	4900	-
13	183	210	2	16.39	IE4	BG40-../S4E09SA4	9.1	30.5	61	183	215	139	163	210	210	210	43	5300	-
13	164	235	1.8	18.19	IE4	BG40-../S4E09SA4	8.2	27	54	164	197	154	181	235	235	235	43	5600	-
13	151	255	1.6	19.84	IE4	BG40-../S4E09SA4	7.5	25	50	151	181	168	198	255	255	255	43	5800	-
13	136	285	1.5	22.02	IE4	BG40-../S4E09SA4	6.8	22.5	45	136	163	187	220	285	285	285	43	6000	-
13	128	300	1.4	23.43	IE4	BG40-../S4E09SA4	6.4	21	42.5	128	153	199	230	300	300	300	43	6200	-
13	115	335	1.3	26.01	IE4	BG40-../S4E09SA4	5.7	19	38	115	138	220	260	335	335	335	43	6500	-
13	102	380	1.1	29.34	IE4	BG40-../S4E09SA4	5.1	17	34	102	122	245	290	380	380	380	43	6800	-
13	92	420	1	32.57	IE4	BG40-../S4E09SA4	4.6	15	30.5	92	110	275	325	420	420	420	43	7000	-
13	87	440	0.96	34.2	IE4	BG40-../S4E09SA4	4.3	14.5	29	87	105	290	340	440	440	440	43	7000	-
13	79	490	0.86	37.96	IE4	BG40-../S4E09SA4	3.9	13	26	79	94	320	375	490	490	490	43	7000	-
13	74	520	0.81	40.19	IE4	BG40-../S4E09SA4	3.7	12	24.5	74	89	340	400	520	520	520	43	7000	-
13	181	210	2.9	16.53	IE4	BG50-../S4E09SA4	9	30	60	181	215	140	165	210	210	210	51	6500	-
13	163	235	2.6	18.33	IE4	BG50-../S4E09SA4	8.1	27	54	163	196	155	183	235	235	235	51	7200	-
13	136	285	2.2	21.96	IE4	BG50-../S4E09SA4	6.8	22.5	45.5	136	163	186	215	285	285	285	51	8000	-
13	123	315	2	24.34	IE4	BG50-../S4E09SA4	6.1	20.5	41	123	147	205	240	315	315	315	51	8700	-
13	101	385	1.6	29.62	IE4	BG50-../S4E09SA4	5	16.5	33.5	101	121	250	295	385	385	385	51	8000	-
13	91	425	1.5	32.84	IE4	BG50-../S4E09SA4	4.5	15	30	91	109	275	325	425	425	425	51	8700	-
13	79	490	1.3	37.89	IE4	BG50-../S4E09SA4	3.9	13	26	79	95	320	375	490	490	490	51	10000	-
13	71	540	1.2	42	IE4	BG50-../S4E09SA4	3.5	11.5	23.5	71	85	355	420	540	540	540	51	10000	-
13	63	610	1	47.02	IE4	BG50-../S4E09SA4	3.1	10.5	21	63	76	395	470	610	610	610	51	10000	-
13	57	670	0.93	52.12	IE4	BG50-../S4E09SA4	2.8	9.5	19	57	69	440	520	670	670	670	51	10000	-
13	50	770	0.82	59.42	IE4	BG50-../S4E09SA4	2.5	8.4	16.5	50	60	500	590	770	770	770	51	10000	-
13	92	420	2.8	32.48	IE4	BG60-../S4E09SA4	4.6	15	30.5	92	110	275	320	420	420	420	82	15400	-
13	77	500	2.4	38.85	IE4	BG60-../S4E09SA4	3.8	12.5	25.5	77	92	330	385	500	500	500	82	16000	-
13	69	550	2.1	43.05	IE4	BG60-../S4E09SA4	3.4	11.5	23	69	83	365	430	550	550	550	82	16000	-
13	59	650	1.8	50.31	IE4	BG60-../S4E09SA4	2.9	9.9	19.5	59	71	425	500	650	650	650	82	16000	-
13	53	720	1.7	55.76	IE4	BG60-../S4E09SA4	2.6	8.9	17.5	53	64	470	550	720	720	720	82	16000	-
13	49	790	1.5	60.9	IE4	BG60-../S4E09SA4	2.4	8.2	16	49	59	510	600	790	790	790	82	16000	-
13	44	870	1.4	67.49	IE4	BG60-../S4E09SA4	2.2	7.4	14.5	44	53	570	670	870	870	870	82	16000	-
13	43.5	880	1.4	68.32	IE4	BG60Z-../S4E09SA4	2.1	7.3	14.5	43.5	52	580	680	880	880	880	101	16000	-
13	39.5	980	1.2	75.71	IE4	BG60Z-../S4E09SA4	1.9	6.6	13	39.5	47.5	640	750	980	980	980	101	16000	-
13	32.5	1180	1	91.09	IE4	BG60Z-../S4E09SA4	1.6	5.4	10.5	32.5	39.5	770	910	1180	1180	1180	101	16000	-
13	29.5	1310	0.91	101	IE4	BG60Z-../S4E09SA4	1.4	4.9	9.9	29.5	35.5	850	1010	1310	1310	1310	101	16000	-
13	50	770	3	59.82	IE4	BG70-../S4E09SA4	2.5	8.3	16.5	50	60	500	590	770	770	770	120	20000	-
13	54	710	2.7	54.64	IE4	BG70Z-../S4E09SA4	2.7	9.1	18	54	65	460	540	710	710	710	141	20000	-
13	46	840	2.7	64.85	IE4	BG70Z-../S4E09SA4	2.3	7.7	15	46	55	550	640	840	840	840	141	20000	-
13	40.5	950	2.4	73.82	IE4	BG70Z-../S4E09SA4	2	6.7	13.5	40.5	48.5	620	730	950	950	950	141	20000	-
13	34	1130	2	87.61	IE4	BG70Z-../S4E09SA4	1.7	5.7	11	34	41	740	870	1130	1130	1130	141	20000	-
13	31	1240	1.8	95.74	IE4	BG70Z-../S4E09SA4	1.5	5.2	10	31	37.5	810	950	1240	1240	1240	141	20000	-
13	26	1470	1.6	113.6	IE4	BG70Z-../S4E09SA4	1.3	4.4	8.8	26	31.5	960	1130	1470	1470	1470	141	20000	-
13	24	1610	1.4	124	IE4	BG70Z-../S4E09SA4	1.2	4	8	24	29	1050	1240	1610	1610	1610	141	20000	-
13	20	1910	1.2	147.2	IE4	BG70Z-../S4E09SA4	1	3.3	6.7	20	24	1250	1470	1910	1910	1910	141	20000	-
13	18	2100	1.1	163.8	IE4	BG70Z-../S4E09SA4	0.9	3	6.1	18	21.5	1390	1630	2100	2100	2100	141	20000	-
13	15	2500	0.91	194.4	IE4	BG70Z-../S4E09SA4	0.75	2.5	5.1	15	18.5	1650	1940	2500	2500	2500	141	20000	-
13	14	2700	0.84	210.5	IE4	BG70Z-../S4E09SA4	0.7	2.3	4.7	14	17	1780	2100	2700	2700	2700	141	20000	-
13	26.5	1460	2.9	112.4	IE4	BG80Z-../S4E09SA4	1.3	4.4	8.8	26.5	32	950	1120	1460	1460	1460	209	26000	-
13	24	1620	2.6	124.8	IE4	BG80Z-../S4E09SA4	1.2	4	8	24	28.5	1060	1240	1620	1620	1620	209	26000	-
13	20.5	1890	2.2	145.4	IE4	BG80Z-../S4E09SA4	1	3.4	6.8	20.5	24.5	1230	1450	1890	1890	1890	209	26000	-
13	18.5	2050	2	161.5	IE4	BG80Z-../S4E09SA4	0.9	3	6.1	18.5	22	1370	1610	2050	2050	2050	209	26000	-
13	16	2400	1.7	186.8	IE4	BG80Z-../S4E09SA4	0.8	2.6	5.3	16	19	1580	1860	2400	2400	2400	209	26000	-
13	14	2650	1.6	207.4	IE4	BG80Z-../S4E09SA4	0.7	2.4	4.8	14	17	1760	2050	2650	2650	2650	209	26000	-
13	13	2950	1.6	227.2	IE4	BG80G40-../S4E09SA4	0.65	2.2	4.4	13	15.5	1930	2250	2950	2950	2950	220	26000	-
13	11.5	3250	1.4	252.3	IE4	BG80G40-../S4E09SA4	0.55	1.9	3.9	11.5	14	2100	2500	3250	3250	3250	220	26000	-
13	10.5	3650	1.3	282.8	IE4	BG80G40-../S4E09SA4	0.5	1.7	3.5	10.5	12.5	2400	2800	3650	3650	3650	220	26000	-
13	9.5	4050	1.1	314	IE4	BG80G40-../S4E09SA4	0.47	1.5	3.1	9.5	11	2650	3100	4050	4050	4050	2		



# BG-series helical-geared motors

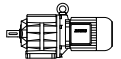
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

### $M_N = 13 \text{ Nm}$ ( $P_N = 4 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							13	4.6	8300	1.1	644.7	IE4	BG90G50-../S4E09SA4	0.23	0.75	1.5			
13	4.2	9200	0.99	714.2	IE4	BG90G50-../S4E09SA4	0.21	0.7	1.4	4.2	5	6000	7100	9200	9200	9200	330	65000	-
13	3.3	11400	0.8	883.7	IE4	BG90G50-../S4E09SA4	0.16	0.55	1.1	3.3	4	7500	8800	11400	11400	11400	330	65000	-
13	5.8	6600	2.8	508.5	IE4	BG100Z-../S4E09SA4	0.29	0.95	1.9	5.8	7	4300	5000	6600	6600	6600	518	90000	-
13	5	7600	2.4	591.1	IE4	BG100Z-../S4E09SA4	0.25	0.8	1.6	5	6	5000	5900	7600	7600	7600	518	90000	-
13	4.5	8500	2.2	658.1	IE4	BG100Z-../S4E09SA4	0.22	0.75	1.5	4.5	5.4	5500	6500	8500	8500	8500	518	90000	-
13	3.9	9800	1.9	759	IE4	BG100Z-../S4E09SA4	0.19	0.65	1.3	3.9	4.7	6400	7500	9800	9800	9800	518	90000	-
13	3.5	10900	1.7	845.1	IE4	BG100Z-../S4E09SA4	0.17	0.55	1.1	3.5	4.2	7100	8400	10900	10900	10900	518	90000	-
13	3	12600	1.5	976.1	IE4	BG100G50-../S4E09SA4	0.15	0.5	1	3	3.6	8200	9700	12600	12600	12600	517	90000	-
13	2.8	13500	1.4	1043	IE4	BG100G50-../S4E09SA4	0.14	0.47	0.95	2.8	3.4	8800	10400	13500	13500	13500	517	90000	-
13	2.4	15600	1.2	1204	IE4	BG100G50-../S4E09SA4	0.12	0.41	0.8	2.4	2.9	10200	12000	15600	15600	15600	517	90000	-
13	2	18700	0.99	1444	IE4	BG100G50-../S4E09SA4	0.1	0.34	0.65	2	2.4	12200	14400	18700	18700	18700	517	90000	-
13	1.7	21500	0.85	1678	IE4	BG100G50-../S4E09SA4	0.09	0.29	0.55	1.7	2.1	14200	16700	21500	21500	21500	517	90000	-

### $M_N = 17.5 \text{ Nm}$ ( $P_N = 5.5 \text{ kW}$ )

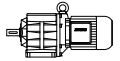


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							17.5	1190	44	1.3	2.52	IE5	BG10-../S5E09XA4	59	198	395			
17.5	870	59	1	3.42	IE5	BG10-../S5E09XA4	43.5	146	290	870	1050	44	54	59	59	59	30	630	880
17.5	680	76	0.89	4.36	IE5	BG10-../S5E09XA4	34	114	225	680	820	56	69	76	76	76	30	650	910
17.5	560	93	0.8	5.34	IE5	BG10-../S5E09XA4	28	93	187	560	670	69	85	93	93	93	30	620	910
17.5	1190	44	1.9	2.52	IE5	BG20-../S5E09XA4	59	198	395	1190	1420	32.5	40	44	44	44	32	1650	-
17.5	900	58	1.6	3.33	IE5	BG20-../S5E09XA4	45	150	300	900	1080	43	53	58	58	58	32	1830	-
17.5	680	76	1.4	4.38	IE5	BG20-../S5E09XA4	34	114	225	680	820	56	70	76	76	76	32	1990	-
17.5	540	96	1.2	5.49	IE5	BG20-../S5E09XA4	27	91	182	540	650	71	87	96	96	96	32	2100	-
17.5	495	106	1.2	6.06	IE5	BG20-../S5E09XA4	24.5	82	165	495	590	78	96	106	106	106	32	2250	-
17.5	460	113	1.1	6.48	IE5	BG20-../S5E09XA4	23	77	154	460	550	84	103	113	113	113	32	2250	-
17.5	445	117	1.1	6.73	IE5	BG20-../S5E09XA4	22	74	148	445	530	87	107	117	117	117	32	2350	2100
17.5	370	140	0.98	8.02	IE5	BG20-../S5E09XA4	18.5	62	124	370	445	104	128	140	140	140	32	2500	-
17.5	360	145	0.84	8.29	IE5	BG20-../S5E09XA4	18	60	120	360	430	107	132	145	145	145	32	2250	-
17.5	335	155	0.92	8.91	IE5	BG20-../S5E09XA4	16.5	56	112	335	400	115	142	155	155	155	32	2600	-
17.5	280	184	0.83	10.54	IE5	BG20-../S5E09XA4	14	47	94	280	340	137	168	184	184	184	32	2700	-
17.5	1120	46.5	2.7	2.67	IE4	BG30-../S4E11SA6	56	187	370	1120	1340	46.5	46.5	46.5	46.5	46.5	46	1450	-
17.5	1120	46.5	2.7	2.67	IE5	BG30-../S5E09XA4	56	187	370	1120	1340	34.5	42.5	46.5	46.5	46.5	37	1450	-
17.5	880	59	2.3	3.4	IE4	BG30-../S4E11SA6	44	147	290	880	1050	59	59	59	59	59	46	1580	-
17.5	880	59	2.3	3.4	IE5	BG30-../S5E09XA4	44	147	290	880	1050	44	54	59	59	59	37	1580	-
17.5	710	73	2.3	4.21	IE4	BG30-../S4E11SA6	35.5	118	235	710	850	73	73	73	73	73	46	1630	-
17.5	710	73	2.3	4.21	IE5	BG30-../S5E09XA4	35.5	118	235	710	850	54	67	73	73	73	37	1630	-
17.5	550	95	2.1	5.44	IE4	BG30-../S4E11SA6	27.5	91	183	550	660	95	95	95	95	95	46	1670	-
17.5	550	95	2.1	5.44	IE5	BG30-../S5E09XA4	27.5	91	183	550	660	70	87	95	95	95	37	1670	-
17.5	440	118	1.8	6.75	IE4	BG30-../S4E11SA6	22	74	148	440	530	118	118	118	118	118	46	1760	-
17.5	440	118	1.9	6.76	IE4	BG30-../S4E11SA6	22	73	147	440	530	118	118	118	118	118	46	2550	-
17.5	440	118	1.8	6.75	IE5	BG30-../S5E09XA4	22	74	148	440	530	87	108	118	118	118	37	1760	-
17.5	440	118	1.9	6.76	IE5	BG30-../S5E09XA4	22	73	147	440	530	87	108	118	118	118	37	2550	-
17.5	400	131	1.8	7.5	IE4	BG30-../S4E11SA6	20	66	133	400	480	131	131	131	131	131	46	2750	-
17.5	400	131	1.8	7.5	IE5	BG30-../S5E09XA4	20	66	133	400	480	97	120	131	131	131	37	2750	-
17.5	375	138	1.6	7.91	IE4	BG30-../S4E11SA6	18.5	63	126	375	455	138	138	138	138	138	46	1760	-
17.5	375	138	1.6	7.91	IE5	BG30-../S5E09XA4	18.5	63	126	375	455	102	126	138	138	138	37	1760	-
17.5	345	150	1.6	8.6	IE4	BG30-../S4E11SA6	17	58	116	345	415	150	150	150	150	150	46	2800	-
17.5	345	150	1.6	8.6	IE5	BG30-../S5E09XA4	17	58	116	345	415	111	137	150	150	150	37	2800	-
17.5	310	167	1.5	9.55	IE4	BG30-../S4E11SA6	15.5	52	104	310	375	167	167	167	167	167	46	3000	-
17.5	310	167	1.5	9.55	IE5	BG30-../S5E09XA4	15.5	52	104	310	375	124	152	167	167	167	37	3000	-
17.5	280	186	1.4	10.65	IE4	BG30-../S4E11SA6	14	46.5	93	280	335	186	186	186	186	186	46	2950	-
17.5	280	186	1.4	10.65	IE5	BG30-../S5E09XA4	14	46.5	93	280	335	138	170	186	186	186	37	2950	-
17.5	250	205	1.3	11.82	IE4	BG30-../S4E11SA6	12.5	42	84	250	300	205	205	205	205	205	46	3200	-
17.5	250	205	1.3	11.82	IE5	BG30-../S5E09XA4	12.5	42	84	250	300	153	189	205	205	205	37	3200	-
17.5	215	240	1.2	13.77	IE4	BG30-../S4E11SA6	10.5	36	72	215	260	240	240	240	240	240	46	3150	-
17.5	215	240	1.2	13.77	IE5	BG30-../S5E09XA4	10.5	36	72	215	260	179	220	240	240	240	37	3150	-
17.5	196	265	1.1	15.27	IE4	BG30-../S4E11SA6	9.8	32.5	65	196	235	265	265	265	265	265	46	3450	-
17.5	196	265	1.1	15.27	IE5	BG30-../S5E09XA4	9.8	32.5	65	196	235	198	240	265	265	265	37	3450	-
17.5	175	295	1	17.06	IE4	BG30-../S4E11SA6	8.7	29	58	175	210	295	295	295	295	295	46	3700	-
17.5																			

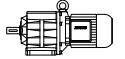
# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

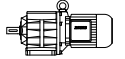
**$M_N = 17.5 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
17.5	360	145	2.3	8.31	IE5	BG40-../S5E09XA4	18	60	120	360	430	108	132	145	145	145	51	4100	-
17.5	330	157	1.9	9	IE4	BG40-../S4E11SA6	16.5	55	111	330	400	157	157	157	157	65	2650	-	
17.5	330	157	1.9	9	IE5	BG40-../S5E09XA4	16.5	55	111	330	400	117	144	157	157	51	2650	-	
17.5	325	161	2.2	9.23	IE4	BG40-../S4E11SA6	16	54	108	325	390	161	161	161	161	65	4350	-	
17.5	325	161	2.2	9.23	IE5	BG40-../S5E09XA4	16	54	108	325	390	119	147	161	161	51	4350	-	
17.5	285	181	2.1	10.35	IE4	BG40-../S4E11SA6	14	48	96	285	345	181	181	181	181	65	4350	-	
17.5	285	181	2.1	10.35	IE5	BG40-../S5E09XA4	14	48	96	285	345	134	165	181	181	51	4350	-	
17.5	260	200	1.9	11.49	IE4	BG40-../S4E11SA6	13	43.5	87	260	310	200	200	200	200	65	4600	-	
17.5	260	200	1.9	11.49	IE5	BG40-../S5E09XA4	13	43.5	87	260	310	149	183	200	200	51	4600	-	
17.5	230	225	1.8	12.86	IE4	BG40-../S4E11SA6	11.5	38.5	77	230	275	225	225	225	225	65	4500	-	
17.5	230	225	1.8	12.86	IE5	BG40-../S5E09XA4	11.5	38.5	77	230	275	167	205	225	225	51	4500	-	
17.5	210	245	1.7	14.28	IE4	BG40-../S4E11SA6	10.5	35	70	210	250	245	245	245	245	65	4900	-	
17.5	210	245	1.7	14.28	IE5	BG40-../S5E09XA4	10.5	35	70	210	250	185	225	245	245	51	4900	-	
17.5	183	285	1.5	16.39	IE4	BG40-../S4E11SA6	9.1	30.5	61	183	215	285	285	285	285	65	5300	-	
17.5	183	285	1.5	16.39	IE5	BG40-../S5E09XA4	9.1	30.5	61	183	215	210	260	285	285	51	5300	-	
17.5	164	315	1.3	18.19	IE4	BG40-../S4E11SA6	8.2	27	54	164	197	315	315	315	315	65	5600	-	
17.5	164	315	1.3	18.19	IE5	BG40-../S5E09XA4	8.2	27	54	164	197	235	290	315	315	51	5600	-	
17.5	151	345	1.2	19.84	IE4	BG40-../S4E11SA6	7.5	25	50	151	181	345	345	345	345	65	5800	-	
17.5	151	345	1.2	19.84	IE5	BG40-../S5E09XA4	7.5	25	50	151	181	255	315	345	345	51	5800	-	
17.5	136	385	1.1	22.02	IE4	BG40-../S4E11SA6	6.8	22.5	45	136	163	385	385	385	385	65	6000	-	
17.5	136	385	1.1	22.02	IE5	BG40-../S5E09XA4	6.8	22.5	45	136	163	285	350	385	385	51	6000	-	
17.5	128	410	1	23.43	IE4	BG40-../S4E11SA6	6.4	21	42.5	128	153	410	410	410	410	65	6200	-	
17.5	128	410	1	23.43	IE5	BG40-../S5E09XA4	6.4	21	42.5	128	153	300	370	410	410	51	6200	-	
17.5	115	455	0.93	26.01	IE4	BG40-../S4E11SA6	5.7	19	38	115	138	455	455	455	455	65	6500	-	
17.5	115	455	0.93	26.01	IE5	BG40-../S5E09XA4	5.7	19	38	115	138	335	415	455	455	51	6500	-	
17.5	102	510	0.83	29.34	IE5	BG40-../S5E09XA4	5.1	17	34	102	122	380	465	510	510	51	6800	-	
17.5	245	210	2.7	12.06	IE4	BG50-../S4E11SA6	12	41	82	245	295	210	210	210	210	75	5700	-	
17.5	245	210	2.7	12.06	IE5	BG50-../S5E09XA4	12	41	82	245	295	156	192	210	210	59	5700	-	
17.5	220	230	2.5	13.36	IE4	BG50-../S4E11SA6	11	37	74	220	265	230	230	230	230	75	6100	-	
17.5	220	230	2.5	13.36	IE5	BG50-../S5E09XA4	11	37	74	220	265	173	210	230	230	59	6100	-	
17.5	181	285	2.2	16.53	IE4	BG50-../S4E11SA6	9	30	60	181	215	285	285	285	285	75	6500	-	
17.5	181	285	2.2	16.53	IE5	BG50-../S5E09XA4	9	30	60	181	215	210	260	285	285	59	6500	-	
17.5	163	320	2	18.33	IE4	BG50-../S4E11SA6	8.1	27	54	163	196	320	320	320	320	75	7200	-	
17.5	163	320	2	18.33	IE5	BG50-../S5E09XA4	8.1	27	54	163	196	235	290	320	320	59	7200	-	
17.5	136	380	1.6	21.96	IE4	BG50-../S4E11SA6	6.8	22.5	45.5	136	163	380	380	380	380	75	8000	-	
17.5	136	380	1.6	21.96	IE5	BG50-../S5E09XA4	6.8	22.5	45.5	136	163	285	350	380	380	59	8000	-	
17.5	123	425	1.5	24.34	IE4	BG50-../S4E11SA6	6.1	20.5	41	123	147	425	425	425	425	75	8700	-	
17.5	123	425	1.5	24.34	IE5	BG50-../S5E09XA4	6.1	20.5	41	123	147	315	385	425	425	59	8700	-	
17.5	101	510	1.2	29.62	IE4	BG50-../S4E11SA6	5	16.5	33.5	101	121	510	510	510	510	75	8000	-	
17.5	101	510	1.2	29.62	IE5	BG50-../S5E09XA4	5	16.5	33.5	101	121	385	470	510	510	59	8000	-	
17.5	91	570	1.1	32.84	IE4	BG50-../S4E11SA6	4.5	15	30	91	109	570	570	570	570	75	8700	-	
17.5	91	570	1.1	32.84	IE5	BG50-../S5E09XA4	4.5	15	30	91	109	425	520	570	570	59	8700	-	
17.5	79	660	0.95	37.89	IE4	BG50-../S4E11SA6	3.9	13	26	79	95	660	660	660	660	75	10000	-	
17.5	79	660	0.95	37.89	IE5	BG50-../S5E09XA4	3.9	13	26	79	95	490	600	660	660	59	10000	-	
17.5	71	730	0.86	42	IE4	BG50-../S4E11SA6	3.5	11.5	23.5	71	85	730	730	730	730	75	10000	-	
17.5	71	730	0.86	42	IE5	BG50-../S5E09XA4	3.5	11.5	23.5	71	85	540	670	730	730	59	10000	-	
17.5	120	430	2.8	24.82	IE4	BG60-../S4E11SA6	6	20	40	120	145	430	430	430	430	107	13800	-	
17.5	120	430	2.8	24.82	IE5	BG60-../S5E09XA4	6	20	40	120	145	320	395	430	430	90	13800	-	
17.5	102	510	2.3	29.31	IE4	BG60-../S4E11SA6	5.1	17	34	102	122	510	510	510	510	107	14800	-	
17.5	102	510	2.3	29.31	IE5	BG60-../S5E09XA4	5.1	17	34	102	122	380	465	510	510	90	14800	-	
17.5	92	560	2.1	32.48	IE4	BG60-../S4E11SA6	4.6	15	30.5	92	110	560	560	560	560	107	15400	-	
17.5	92	560	2.1	32.48	IE5	BG60-../S5E09XA4	4.6	15	30.5	92	110	420	510	560	560	90	15400	-	
17.5	77	670	1.8	38.85	IE4	BG60-../S4E11SA6	3.8	12.5	25.5	77	92	670	670	670	670	107	16000	-	
17.5	77	670	1.8	38.85	IE5	BG60-../S5E09XA4	3.8	12.5	25.5	77	92	500	620	670	670	90	16000	-	
17.5	69	750	1.6	43.05	IE4	BG60-../S4E11SA6	3.4	11.5	23	69	83	750	750	750	750	107	16000	-	
17.5	69	750	1.6	43.05	IE5	BG60-../S5E09XA4	3.4	11.5	23	69	83	550	680	750	750	90	16000	-	
17.5	59	880	1.4	50.31	IE4	BG60-../S4E11SA6	2.9	9.9	19.5	59	71	880	880	880	880	107	16000	-	
17.5	59	880	1.4	50.31	IE5	BG60-../S5E09XA4	2.9	9.9	19.5	59	71	650	800	880	880	90	16000	-	
17.5	53	970	1.2	55.76	IE4	BG60-../S4E11SA6	2.6	8.9	17.5	53	64	970	970	970	970	107	16000	-	
17.5	53	970	1.2	55.76	IE5	BG60-../S5E09XA4	2.6	8.9	17.5	53	64	720	890	970	970	90	16000	-	
17.5	49	1060	1.1	60.9	IE4	BG60-../S4E11SA6	2.4	8.2	16	49	59	1060	1060	1060	1060	107	16000	-	
17.5	49	1060	1.1	60.9	IE5	BG60-../S5E09XA4	2.4	8.2	16	49	59	790	970	1060	1060	90	16000	-	
17.5	44	1180	1	67.49	IE4	BG60-../S4E11SA6	2.2	7.4	14.5	44	53	1180	1180	1180	1180	107	16000	-	
17.5	44	1180	1	67.49	IE5	BG60-../S5E09XA4	2.2	7.4	14.5	44	53	870	1070	1180	1180	90	16000	-	
17.5	43.5	1190	1	68.32	IE4	BG60Z-../S4E11SA6	2.1	7.3	14.5	43.5	52	1190	1190	1190	1190	123	16000	-	
17.5	43.5	1190	1	68.32	IE5	BG60Z-../S5E09XA4	2.1	7.3	14.5	43.5	52	880	1090	1190	1190	109	16000	-	
17.5	39.5	1320	0.91	75.71	IE4	BG60Z-../S4E11SA6	1.9	6.6	13	39.5	47.5	1320	1320	1320	1320	123	16000	-	
17.5	39.5	1320	0.91	75.71	IE5	BG60Z-../S5E09XA4	1.9	6.6	13	39.5	47.5	980	1210	1320	1320	109	16000	-	
17.5	64	810	2.8	46.54	IE4	BG70-../S4E11SA6	3.2	10.5	21	64	77	810	810	810	810	138	20000	-	
17.5	64	810	2.8	46.54	IE5	BG70-../S5E09XA4	3.2	10.5	21	64	77	600	740	810	810	128	20000	-	
17.5	59	880	2.6	50.4	IE4	BG70-../S4E11SA6	2.9	9.9	19.5	59	71	880	880	880	880				

Selection helical-gear motors -  $n_1 = 3000 \frac{1}{\text{min}}$ **M<sub>N</sub> = 17.5 Nm (P<sub>N</sub> = 5.5 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
17.5	34	1530	1.5	87.61	IE5	BG70Z-../S5E09XA4	1.7	5.7	11	34	41	1130	1400	1530	1530	1530	149	20000	-
17.5	31	1670	1.4	95.74	IE4	BG70Z-../S4E11SA6	1.5	5.2	10	31	37.5	1670	1670	1670	1670	1670	164	20000	-
17.5	31	1670	1.4	95.74	IE5	BG70Z-../S5E09XA4	1.5	5.2	10	31	37.5	1240	1530	1670	1670	1670	149	20000	-
17.5	26	1980	1.2	113.6	IE4	BG70Z-../S4E11SA6	1.3	4.4	8.8	26	31.5	1980	1980	1980	1980	1980	164	20000	-
17.5	26	1980	1.2	113.6	IE5	BG70Z-../S5E09XA4	1.3	4.4	8.8	26	31.5	1470	1810	1980	1980	1980	149	20000	-
17.5	24	2150	1.1	124	IE4	BG70Z-../S4E11SA6	1.2	4	8	24	29	2150	2150	2150	2150	2150	164	20000	-
17.5	24	2150	1.1	124	IE5	BG70Z-../S5E09XA4	1.2	4	8	24	29	1610	1980	2150	2150	2150	149	20000	-
17.5	20	2550	0.89	147.2	IE4	BG70Z-../S4E11SA6	1	3.3	6.7	20	24	2550	2550	2550	2550	2550	164	20000	-
17.5	20	2550	0.89	147.2	IE5	BG70Z-../S5E09XA4	1	3.3	6.7	20	24	1910	2350	2550	2550	2550	149	20000	-
17.5	18	2850	0.8	163.8	IE4	BG70Z-../S4E11SA6	0.9	3	6.1	18	21.5	2850	2850	2850	2850	2850	164	20000	-
17.5	18	2850	0.8	163.8	IE5	BG70Z-../S5E09XA4	0.9	3	6.1	18	21.5	2100	2600	2850	2850	2850	149	20000	-
17.5	35	1470	2.8	84.55	IE4	BG80Z-../S4E11SA6	1.7	5.9	11.5	35	42.5	1470	1470	1470	1470	1470	234	26000	-
17.5	35	1470	2.8	84.55	IE5	BG80Z-../S5E09XA4	1.7	5.9	11.5	35	42.5	1090	1350	1470	1470	1470	217	26000	-
17.5	31.5	1640	2.6	93.89	IE4	BG80Z-../S4E11SA6	1.5	5.3	10.5	31.5	38	1640	1640	1640	1640	1640	234	26000	-
17.5	31.5	1640	2.6	93.89	IE5	BG80Z-../S5E09XA4	1.5	5.3	10.5	31.5	38	1220	1500	1640	1640	1640	217	26000	-
17.5	26.5	1960	2.1	112.4	IE4	BG80Z-../S4E11SA6	1.3	4.4	8.8	26.5	32	1960	1960	1960	1960	1960	234	26000	-
17.5	26.5	1960	2.1	112.4	IE5	BG80Z-../S5E09XA4	1.3	4.4	8.8	26.5	32	1460	1790	1960	1960	1960	217	26000	-
17.5	24	2150	1.9	124.8	IE4	BG80Z-../S4E11SA6	1.2	4	8	24	28.5	2150	2150	2150	2150	2150	234	26000	-
17.5	24	2150	1.9	124.8	IE5	BG80Z-../S5E09XA4	1.2	4	8	24	28.5	1620	1990	2150	2150	2150	217	26000	-
17.5	20.5	2500	1.7	145.4	IE4	BG80Z-../S4E11SA6	1	3.4	6.8	20.5	24.5	2500	2500	2500	2500	2500	234	26000	-
17.5	20.5	2500	1.7	145.4	IE5	BG80Z-../S5E09XA4	1	3.4	6.8	20.5	24.5	1890	2300	2500	2500	2500	217	26000	-
17.5	18.5	2800	1.5	161.5	IE4	BG80Z-../S4E11SA6	0.9	3	6.1	18.5	22	2800	2800	2800	2800	2800	234	26000	-
17.5	18.5	2800	1.5	161.5	IE5	BG80Z-../S5E09XA4	0.9	3	6.1	18.5	22	2050	2550	2800	2800	2800	217	26000	-
17.5	16	3250	1.3	186.8	IE4	BG80Z-../S4E11SA6	0.8	2.6	5.3	16	19	3250	3250	3250	3250	3250	234	26000	-
17.5	16	3250	1.3	186.8	IE5	BG80Z-../S5E09XA4	0.8	2.6	5.3	16	19	2400	2950	3250	3250	3250	217	26000	-
17.5	14	3600	1.2	207.4	IE4	BG80Z-../S4E11SA6	0.7	2.4	4.8	14	17	3600	3600	3600	3600	3600	234	26000	-
17.5	14	3600	1.2	207.4	IE5	BG80Z-../S5E09XA4	0.7	2.4	4.8	14	17	2650	3300	3600	3600	3600	217	26000	-
17.5	13	3950	1.2	227.2	IE4	BG80G40-../S4E11SA6	0.65	2.2	4.4	13	15.5	3950	3950	3950	3950	3950	242	26000	-
17.5	13	3950	1.2	227.2	IE5	BG80G40-../S5E09XA4	0.65	2.2	4.4	13	15.5	2950	3600	3950	3950	3950	228	26000	-
17.5	11.5	4400	1	252.3	IE4	BG80G40-../S4E11SA6	0.55	1.9	3.9	11.5	14	4400	4400	4400	4400	4400	242	26000	-
17.5	11.5	4400	1	252.3	IE5	BG80G40-../S5E09XA4	0.55	1.9	3.9	11.5	14	3250	4000	4400	4400	4400	228	26000	-
17.5	10.5	4900	0.93	282.8	IE4	BG80G40-../S4E11SA6	0.5	1.7	3.5	10.5	12.5	4900	4900	4900	4900	4900	242	26000	-
17.5	10.5	4900	0.93	282.8	IE5	BG80G40-../S5E09XA4	0.5	1.7	3.5	10.5	12.5	3650	4500	4900	4900	4900	228	26000	-
17.5	9.5	5400	0.84	314	IE4	BG80G40-../S4E11SA6	0.47	1.5	3.1	9.5	11	5400	5400	5400	5400	5400	242	26000	-
17.5	9.5	5400	0.84	314	IE5	BG80G40-../S5E09XA4	0.47	1.5	3.1	9.5	11	4050	5000	5400	5400	5400	228	26000	-
17.5	18	2850	2.9	163	IE4	BG90Z-../S4E11SA6	0.9	3	6.1	18	22	2850	2850	2850	2850	2850	336	65000	-
17.5	18	2850	2.9	163	IE5	BG90Z-../S5E09XA4	0.9	3	6.1	18	22	2100	2600	2850	2850	2850	327	65000	-
17.5	16.5	3100	2.7	178.5	IE4	BG90Z-../S4E11SA6	0.8	2.8	5.6	16.5	20	3100	3100	3100	3100	3100	336	65000	-
17.5	16.5	3100	2.7	178.5	IE5	BG90Z-../S5E09XA4	0.8	2.8	5.6	16.5	20	2300	2850	3100	3100	3100	327	65000	-
17.5	14	3600	2.3	208.3	IE4	BG90Z-../S4E11SA6	0.7	2.4	4.8	14	17	3600	3600	3600	3600	3600	336	65000	-
17.5	14	3600	2.3	208.3	IE5	BG90Z-../S5E09XA4	0.7	2.4	4.8	14	17	2700	3300	3600	3600	3600	327	65000	-
17.5	13	3950	2.1	228.1	IE4	BG90Z-../S4E11SA6	0.65	2.1	4.3	13	15.5	3950	3950	3950	3950	3950	336	65000	-
17.5	13	3950	2.1	228.1	IE5	BG90Z-../S5E09XA4	0.65	2.1	4.3	13	15.5	2950	3600	3950	3950	3950	327	65000	-
17.5	13.5	3800	2.4	219.9	IE4	BG90G50-../S4E11SA6	0.65	2.2	4.5	13.5	16	3800	3800	3800	3800	3800	353	65000	-
17.5	13.5	3800	2.4	219.9	IE5	BG90G50-../S5E09XA4	0.65	2.2	4.5	13.5	16	2850	3500	3800	3800	3800	338	65000	-
17.5	11	4550	2	262.5	IE4	BG90G50-../S4E11SA6	0.55	1.9	3.8	11	13.5	4550	4550	4550	4550	4550	353	65000	-
17.5	11	4550	2	262.5	IE5	BG90G50-../S5E09XA4	0.55	1.9	3.8	11	13.5	3400	4200	4550	4550	4550	338	65000	-
17.5	10	5200	1.8	298.8	IE4	BG90G50-../S4E11SA6	0.5	1.6	3.3	10	12	5200	5200	5200	5200	5200	353	65000	-
17.5	10	5200	1.8	298.8	IE5	BG90G50-../S5E09XA4	0.5	1.6	3.3	10	12	3850	4750	5200	5200	5200	338	65000	-
17.5	8.3	6300	1.5	360.3	IE4	BG90G50-../S4E11SA6	0.41	1.3	2.7	8.3	9.9	6300	6300	6300	6300	6300	353	65000	-
17.5	8.3	6300	1.5	360.3	IE5	BG90G50-../S5E09XA4	0.41	1.3	2.7	8.3	9.9	4650	5700	6300	6300	6300	338	65000	-
17.5	6.8	7600	1.2	435.8	IE4	BG90G50-../S4E11SA6	0.34	1.1	2.2	6.8	8.2	7600	7600	7600	7600	7600	353	65000	-
17.5	6.8	7600	1.2	435.8	IE5	BG90G50-../S5E09XA4	0.34	1.1	2.2	6.8	8.2	5600	6900	7600	7600	7600	338	65000	-
17.5	5.9	8800	1	504.7	IE4	BG90G50-../S4E11SA6	0.29	0.95	1.9	5.9	7.1	8800	8800	8800	8800	8800	353	65000	-
17.5	5.9	8800	1	504.7	IE5	BG90G50-../S5E09XA4	0.29	0.95	1.9	5.9	7.1	6500	8000	8800	8800	8800	338	65000	-
17.5	5	10300	0.89	588.8	IE4	BG90G50-../S4E11SA6	0.25	0.8	1.6	5	6.1	10300	10300	10300	10300	10300	353	65000	-
17.5	5	10300	0.89	588.8	IE5	BG90G50-../S5E09XA4	0.25	0.8	1.6	5	6.1	7600	9400	10300	10300	10300	338	65000	-
17.5	4.6	11200	0.82	644.7	IE4	BG90G50-../S4E11SA6	0.23	0.75	1.5	4.6	5.5	11200	11200	11200	11200	11200	353	65000	-
17.5	4.6	11200	0.82	644.7	IE5	BG90G50-../S5E09XA4	0.23	0.75	1.5	4.6	5.5	8300	10300	11200	11200	11200	338	65000	-
17.5	7.8	6600	2.8	382.6	IE4	BG100Z-../S4E11SA6	0.39	1.3	2.6	7.8	9.4	6600	6600	6600	6600	6600	543	90000	-
17.5	7.8	6600	2.8	382.6	IE5	BG100Z-../S5E09XA4	0.39	1.3	2.6	7.8	9.4	4950	6100	6600	6600	6600	526	90000	-
17.5	6.5	7900	2.3	456.7	IE4	BG100Z-../S4E11SA6	0.32	1	2.1	6.5	7.8	7900	7900	7900	7900	7900	543	90000	-
17.5	6.5	7900	2.3	456.7	IE5	BG100Z-../S5E09XA4	0.32	1	2.1	6.5	7.8	5900	7300	7900	7900	7900	526	90000	-
17.5	5.8	8800	2.1	508.5	IE4	BG100Z-../S4E11SA6	0.29	0.95	1.9	5.8	7	8800	8800	8800	8800	8800	543	90000	-
17.5	5.8	8800	2.1	508.5	IE5	BG100Z-../S5E09XA4													

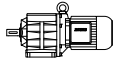
**BG-series helical-geared motors****Selection helical-geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 20 \text{ Nm}$  ( $P_N = 6.3 \text{ kW}$ )**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
20	1190	50	1.1	2.52	IE5	BG10-../S5E09XA4	59	198	395	1190	1420	32.5	40	50	50	44	30	570	790
20	870	68	0.91	3.42	IE5	BG10-../S5E09XA4	43.5	146	290	870	1050	44	54	68	68	59	30	630	880
20	1190	50	1.7	2.52	IE5	BG20-../S5E09XA4	59	198	395	1190	1420	32.5	40	50	50	44	32	1650	-
20	900	66	1.4	3.33	IE5	BG20-../S5E09XA4	45	150	300	900	1080	43	53	66	66	58	32	1830	-
20	680	87	1.2	4.38	IE5	BG20-../S5E09XA4	34	114	225	680	820	56	70	87	87	76	32	1990	-
20	540	109	1	5.49	IE5	BG20-../S5E09XA4	27	91	182	540	650	71	87	109	109	96	32	2100	-
20	495	121	1	6.06	IE5	BG20-../S5E09XA4	24.5	82	165	495	590	78	96	121	121	106	32	2250	-
20	460	129	0.94	6.48	IE5	BG20-../S5E09XA4	23	77	154	460	550	84	103	129	129	113	32	2250	-
20	445	134	0.97	6.73	IE5	BG20-../S5E09XA4	22	74	148	445	530	87	107	134	134	117	32	2350	2100
20	370	160	0.85	8.02	IE5	BG20-../S5E09XA4	18.5	62	124	370	445	104	128	160	160	140	32	2500	-
20	335	178	0.8	8.91	IE5	BG20-../S5E09XA4	16.5	56	112	335	400	115	142	178	178	155	32	2600	-
20	1120	53	2.4	2.67	IE5	BG30-../S5E09XA4	56	187	370	1120	1340	34.5	42.5	53	53	46.5	37	1450	-
20	880	68	2	3.4	IE5	BG30-../S5E09XA4	44	147	290	880	1050	44	54	68	68	59	37	1580	-
20	710	84	2	4.21	IE5	BG30-../S5E09XA4	35.5	118	235	710	850	54	67	84	84	73	37	1630	-
20	550	108	1.8	5.44	IE5	BG30-../S5E09XA4	27.5	91	183	550	660	70	87	108	108	95	37	1670	-
20	440	135	1.6	6.75	IE5	BG30-../S5E09XA4	22	74	148	440	530	87	108	135	135	118	37	1760	-
20	440	135	1.7	6.76	IE5	BG30-../S5E09XA4	22	73	147	440	530	87	108	135	135	118	37	2550	-
20	400	150	1.5	7.5	IE5	BG30-../S5E09XA4	20	66	133	400	480	97	120	150	150	131	37	2750	-
20	375	158	1.4	7.91	IE5	BG30-../S5E09XA4	18.5	63	126	375	455	102	126	158	158	138	37	1760	-
20	345	172	1.4	8.6	IE5	BG30-../S5E09XA4	17	58	116	345	415	111	137	172	172	150	37	2800	-
20	310	191	1.3	9.55	IE5	BG30-../S5E09XA4	15.5	52	104	310	375	124	152	191	191	167	37	3000	-
20	280	210	1.2	10.65	IE5	BG30-../S5E09XA4	14	46.5	93	280	335	138	170	210	210	186	37	2950	-
20	250	235	1.1	11.82	IE5	BG30-../S5E09XA4	12.5	42	84	250	300	153	189	235	235	205	37	3200	-
20	215	275	1.1	13.77	IE5	BG30-../S5E09XA4	10.5	36	72	215	260	179	220	275	275	240	37	3150	-
20	196	305	0.98	15.27	IE5	BG30-../S5E09XA4	9.8	32.5	65	196	235	198	240	305	305	265	37	3450	-
20	175	340	0.88	17.06	IE5	BG30-../S5E09XA4	8.7	29	58	175	210	220	270	340	340	295	37	3700	-
20	750	79	3	3.97	IE5	BG40-../S5E09XA4	37.5	125	250	750	900	51	63	79	79	69	51	2400	-
20	600	98	2.7	4.94	IE5	BG40-../S5E09XA4	30	101	200	600	720	64	79	98	98	86	51	2450	-
20	475	125	2.3	6.29	IE5	BG40-../S5E09XA4	23.5	79	158	475	570	81	100	125	125	110	51	2600	-
20	465	128	2.4	6.4	IE5	BG40-../S5E09XA4	23	78	156	465	560	83	102	128	128	112	51	3750	-
20	420	142	2.3	7.11	IE5	BG40-../S5E09XA4	21	70	140	420	500	92	113	142	142	124	51	3950	-
20	390	152	1.9	7.62	IE5	BG40-../S5E09XA4	19.5	65	131	390	470	99	121	152	152	133	51	2650	-
20	360	166	2	8.31	IE5	BG40-../S5E09XA4	18	60	120	360	430	108	132	166	166	145	51	4100	-
20	330	180	1.6	9	IE5	BG40-../S5E09XA4	16.5	55	111	330	400	117	144	180	180	157	51	2650	-
20	325	184	1.9	9.23	IE5	BG40-../S5E09XA4	16	54	108	325	390	119	147	184	184	161	51	4350	-
20	285	205	1.8	10.35	IE5	BG40-../S5E09XA4	14	48	96	285	345	134	165	205	205	181	51	4350	-
20	260	225	1.7	11.49	IE5	BG40-../S5E09XA4	13	43.5	87	260	310	149	183	225	225	200	51	4600	-
20	230	255	1.6	12.86	IE5	BG40-../S5E09XA4	11.5	38.5	77	230	275	167	205	255	255	225	51	4500	-
20	210	285	1.5	14.28	IE5	BG40-../S5E09XA4	10.5	35	70	210	250	185	225	285	285	245	51	4900	-
20	183	325	1.3	16.39	IE5	BG40-../S5E09XA4	9.1	30.5	61	183	215	210	260	325	325	285	51	5300	-
20	164	360	1.2	18.19	IE5	BG40-../S5E09XA4	8.2	27	54	164	197	235	290	360	360	315	51	5600	-
20	151	395	1.1	19.84	IE5	BG40-../S5E09XA4	7.5	25	50	151	181	255	315	395	395	345	51	5800	-
20	136	440	0.97	22.02	IE5	BG40-../S5E09XA4	6.8	22.5	45	136	163	285	350	440	440	385	51	6000	-
20	128	465	0.91	23.43	IE5	BG40-../S5E09XA4	6.4	21	42.5	128	153	300	370	465	465	410	51	6200	-
20	115	520	0.82	26.01	IE5	BG40-../S5E09XA4	5.7	19	38	115	138	335	415	520	520	455	51	6500	-
20	245	240	2.4	12.06	IE5	BG50-../S5E09XA4	12	41	82	245	295	156	192	240	240	210	59	5700	-
20	220	265	2.2	13.36	IE5	BG50-../S5E09XA4	11	37	74	220	265	173	210	265	265	230	59	6100	-
20	181	330	1.9	16.53	IE5	BG50-../S5E09XA4	9	30	60	181	215	210	260	330	330	285	59	6500	-
20	163	365	1.7	18.33	IE5	BG50-../S5E09XA4	8.1	27	54	163	196	235	290	365	365	320	59	7200	-
20	136	435	1.4	21.96	IE5	BG50-../S5E09XA4	6.8	22.5	45.5	136	163	285	350	435	435	380	59	8000	-
20	123	485	1.3	24.34	IE5	BG50-../S5E09XA4	6.1	20.5	41	123	147	315	385	485	485	425	59	8700	-
20	101	590	1.1	29.62	IE5	BG50-../S5E09XA4	5	16.5	33.5	101	121	385	470	590	590	510	59	8000	-
20	91	650	0.96	32.84	IE5	BG50-../S5E09XA4	4.5	15	30	91	109	425	520	650	650	570	59	8700	-
20	79	750	0.83	37.89	IE5	BG50-../S5E09XA4	3.9	13	26	79	95	490	600	750	750	660	59	10000	-
20	133	445	2.7	22.4	IE5	BG60-../S5E09XA4	6.6	22	44.5	133	160	290	355	445	445	390	90	13300	-
20	120	495	2.4	24.82	IE5	BG60-../S5E09XA4	6	20	40	120	145	320	395	495	495	430	90	13800	-
20	102	580	2	29.31	IE5	BG60-../S5E09XA4	5.1	17	34	102	122	380	465	580	580	510	90	14800	-
20	92	640	1.8	32.48	IE5	BG60-../S5E09XA4	4.6	15	30.5	92	110	420	510	640	640	560	90	15400	-
20	77	770	1.5	38.85	IE5	BG60-../S5E09XA4	3.8	12.5	25.5	77	92	500	620	770	770	670	90	16000	-
20	69	860	1.4	43.05	IE5	BG60-../S5E09XA4	3.4	11.5	23	69	83	550	680	860	860	750	90	16000	-
20	59	1000	1.2	50.31	IE5	BG60-../S5E09XA4	2.9	9.9	19.5	59	71	650	800	1000	1000	880	90	16000	-
20	53	1110	1.1	55.76	IE5	BG6													



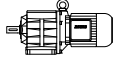
# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

 **$M_N = 20 \text{ Nm}$  ( $P_N = 6.3 \text{ kW}$ )**


$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE-	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							[Nm]	[1/min]	[Nm]	[-]	[:1]	Classe	150	500	1000	3000			
20	35	1690	2.5	84.55	IE5	BG80Z-../S5E09XA4	1.7	5.9	11.5	35	42.5	1090	1350	1690	1690	1470	217	26000	-
20	31.5	1870	2.2	93.89	IE5	BG80Z-../S5E09XA4	1.5	5.3	10.5	31.5	38	1220	1500	1870	1870	1640	217	26000	-
20	26.5	2200	1.9	112.4	IE5	BG80Z-../S5E09XA4	1.3	4.4	8.8	26.5	32	1460	1790	2200	2200	1960	217	26000	-
20	24	2450	1.7	124.8	IE5	BG80Z-../S5E09XA4	1.2	4	8	24	28.5	1620	1990	2450	2450	2150	217	26000	-
20	20.5	2900	1.4	145.4	IE5	BG80Z-../S5E09XA4	1	3.4	6.8	20.5	24.5	1890	2300	2900	2900	2500	217	26000	-
20	18.5	3200	1.3	161.5	IE5	BG80Z-../S5E09XA4	0.9	3	6.1	18.5	22	2050	2550	3200	3200	2800	217	26000	-
20	16	3700	1.1	186.8	IE5	BG80Z-../S5E09XA4	0.8	2.6	5.3	16	19	2400	2950	3700	3700	3250	217	26000	-
20	14	4100	1	207.4	IE5	BG80Z-../S5E09XA4	0.7	2.4	4.8	14	17	2650	3300	4100	4100	3600	217	26000	-
20	13	4500	1	227.2	IE5	BG80G40-../S5E09XA4	0.65	2.2	4.4	13	15.5	2950	3600	4500	4500	3950	228	26000	-
20	11.5	5000	0.91	252.3	IE5	BG80G40-../S5E09XA4	0.55	1.9	3.9	11.5	14	3250	4000	5000	5000	4400	228	26000	-
20	10.5	5600	0.81	282.8	IE5	BG80G40-../S5E09XA4	0.5	1.7	3.5	10.5	12.5	3650	4500	5600	5600	4900	228	26000	-
20	21.5	2750	3	139.2	IE5	BG90Z-../S5E09XA4	1	3.5	7.1	21.5	25.5	1800	2200	2750	2750	2400	327	65000	-
20	18	3250	2.6	163	IE5	BG90Z-../S5E09XA4	0.9	3	6.1	18	22	2100	2600	3250	3250	2850	327	65000	-
20	16.5	3550	2.4	178.5	IE5	BG90Z-../S5E09XA4	0.8	2.8	5.6	16.5	20	2300	2850	3550	3550	3100	327	65000	-
20	14	4150	2	208.3	IE5	BG90Z-../S5E09XA4	0.7	2.4	4.8	14	17	2700	3300	4150	4150	3600	327	65000	-
20	13	4550	1.8	228.1	IE5	BG90Z-../S5E09XA4	0.65	2.1	4.3	13	15.5	2950	3600	4550	4550	3950	327	65000	-
20	13.5	4350	2.1	219.9	IE5	BG90G50-../S5E09XA4	0.65	2.2	4.5	13.5	16	2850	3500	4350	4350	3800	338	65000	-
20	11	5200	1.8	262.5	IE5	BG90G50-../S5E09XA4	0.55	1.9	3.8	11	13.5	3400	4200	5200	5200	4550	338	65000	-
20	10	5900	1.5	298.8	IE5	BG90G50-../S5E09XA4	0.5	1.6	3.3	10	12	3850	4750	5900	5900	5200	338	65000	-
20	8.3	7200	1.3	360.3	IE5	BG90G50-../S5E09XA4	0.41	1.3	2.7	8.3	9.9	4650	5700	7200	7200	6300	338	65000	-
20	6.8	8700	1.1	435.8	IE5	BG90G50-../S5E09XA4	0.34	1.1	2.2	6.8	8.2	5600	6900	8700	8700	7600	338	65000	-
20	5.9	10000	0.91	504.7	IE5	BG90G50-../S5E09XA4	0.29	0.95	1.9	5.9	7.1	6500	8000	10000	10000	8800	338	65000	-
20	8.7	6800	2.7	343.6	IE5	BG100Z-../S5E09XA4	0.43	1.4	2.9	8.7	10	4450	5400	6800	6800	6000	526	90000	-
20	7.8	7600	2.4	382.6	IE5	BG100Z-../S5E09XA4	0.39	1.3	2.6	7.8	9.4	4950	6100	7600	7600	6600	526	90000	-
20	6.5	9100	2	456.7	IE5	BG100Z-../S5E09XA4	0.32	1	2.1	6.5	7.8	5900	7300	9100	9100	7900	526	90000	-
20	5.8	10100	1.8	508.5	IE5	BG100Z-../S5E09XA4	0.29	0.95	1.9	5.8	7	6600	8100	10100	10100	8800	526	90000	-
20	5	11800	1.6	591.1	IE5	BG100Z-../S5E09XA4	0.25	0.8	1.6	5	6	7600	9400	11800	11800	10300	526	90000	-
20	4.5	13100	1.4	658.1	IE5	BG100Z-../S5E09XA4	0.22	0.75	1.5	4.5	5.4	8500	10500	13100	13100	11500	526	90000	-
20	3.9	15100	1.2	759	IE5	BG100Z-../S5E09XA4	0.19	0.65	1.3	3.9	4.7	9800	12100	15100	15100	13200	526	90000	-
20	3.5	16900	1.1	845.1	IE5	BG100Z-../S5E09XA4	0.17	0.55	1.1	3.5	4.2	10900	13500	16900	16900	14700	526	90000	-
20	3	19500	0.95	976.1	IE5	BG100G50-../S5E09XA4	0.15	0.5	1	3	3.6	12600	15600	19500	19500	17000	525	90000	-
20	2.8	20500	0.89	1043	IE5	BG100G50-../S5E09XA4	0.14	0.47	0.95	2.8	3.4	13500	16600	20500	20500	18200	525	90000	-

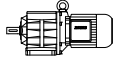
6

 **$M_N = 24 \text{ Nm}$  ( $P_N = 7.5 \text{ kW}$ )**


$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE-	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							[Nm]	[1/min]	[Nm]	[-]	[:1]	Classe	150	500	1000	3000			
24	1120	64	2	2.67	IE4	BG30-../S4E11SA6	56	187	370	1120	1340	50	57	64	64	64	46	1450	-
24	1120	64	2	2.67	IE5	BG30-../S5E11MA6	56	187	370	1120	1340	64	64	64	64	64	46	1450	-
24	880	81	1.7	3.4	IE4	BG30-../S4E11SA6	44	147	290	880	1050	64	73	81	81	81	46	1580	-
24	880	81	1.7	3.4	IE5	BG30-../S5E11MA6	44	147	290	880	1050	81	81	81	81	81	46	1580	-
24	710	101	1.7	4.21	IE4	BG30-../S4E11SA6	35.5	118	235	710	850	79	90	101	101	101	46	1630	-
24	710	101	1.7	4.21	IE5	BG30-../S5E11MA6	35.5	118	235	710	850	101	101	101	101	101	46	1630	-
24	550	130	1.5	5.44	IE4	BG30-../S4E11SA6	27.5	91	183	550	660	103	116	130	130	130	46	1670	-
24	550	130	1.5	5.44	IE5	BG30-../S5E11MA6	27.5	91	183	550	660	130	130	130	130	130	46	1670	-
24	440	162	1.3	6.75	IE4	BG30-../S4E11SA6	22	74	148	440	530	128	145	162	162	162	46	1760	-
24	440	162	1.4	6.76	IE4	BG30-../S4E11SA6	22	73	147	440	530	128	145	162	162	162	46	2550	-
24	440	162	1.3	6.75	IE5	BG30-../S5E11MA6	22	74	148	440	530	162	162	162	162	162	46	1760	-
24	440	162	1.4	6.76	IE5	BG30-../S5E11MA6	22	73	147	440	530	162	162	162	162	162	46	2550	-
24	400	180	1.3	7.5	IE4	BG30-../S4E11SA6	20	66	133	400	480	142	161	180	180	180	46	2750	-
24	400	180	1.3	7.5	IE5	BG30-../S5E11MA6	20	66	133	400	480	180	180	180	180	180	46	2750	-
24	375	189	1.1	7.91	IE4	BG30-../S4E11SA6	18.5	63	126	375	455	150	170	189	189	189	46	1760	-
24	375	189	1.1	7.91	IE5	BG30-../S5E11MA6	18.5	63	126	375	455	189	189	189	189	189	46	1760	-
24	345	205	1.2	8.6	IE4	BG30-../S4E11SA6	17	58	116	345	415	163	184	205	205	205	46	2800	-
24	345	205	1.2	8.6	IE5	BG30-../S5E11MA6	17	58	116	345	415	205	205	205	205	205	46	2800	-
24	310	225	1.1	9.55	IE4	BG30-../S4E11SA6	15.5	52	104	310	375	181	205	225	225	225	46	3000	-
24	310	225	1.1	9.55	IE5	BG30-../S5E11MA6	15.5	52	104	310	375	225	225	225	225	225	46	3000	-
24	280	255	1	10.65	IE4	BG30-../S4E11SA6	14	46.5	93	280	335	200	225	255	255	255	46	2950	-
24	280	255	1	10.65	IE5	BG30-../S5E11MA6	14	46.5	93	280	335	255	255	255	255	255	46	2950	-
24	250	280	0.95	11.82	IE4	BG30-../S4E11SA6	12.5	42	84	250	300	220	250	280	280	280	46	3200	-
24	250	280	0.95	11.82	IE5	BG30-../S5E11MA6	12.5	42	84	250	300	280	280	280	280	280	46	3200	-
24	215	330	0.88	13.77	IE4	BG30-../S4E11SA6	10.5	36	72	215	260	260	295	330	330	330	46	3150	-
24	215	330	0.88	13.77	IE5	BG30-../S5E11MA6	10.5	36	72	215	260	330	330	330	330	330	46	3150	-
24	196	365	0.82	15.27	IE4	BG30-../S4E11SA6	9.8	32.5	65	196	235	290	325	365	365	365	46	3450	-
24	196	365	0.82	15.27	IE5	BG30-../S5E11MA6	9.8	32.5	65	196	235	365	365	365	365	365	46	3450	-
24	940	76	2.9	3.19	IE4	BG40-../S4E11SA6	47	156	310	940	1120	60	68	76	76	76	65	2350	-
24	940	76	2.9	3.19	IE5	BG40-../S5E11MA6	47	156	310	940	1120	76	76	76	76	76	65	2350	-
24	750	95	2.5	3.97	IE4	BG40-../S4E11SA6	37.5	125	250	750	900	75	85	95	95	95	65	2400	-
24	750	95																	

# BG-series helical-geared motors

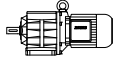
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

**M<sub>N</sub> = 24 Nm (P<sub>N</sub> = 7.5 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>	
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]								
							150	500	1000	3000	3600	150	500	1000	3000	3600				[kg]
24	390	182	1.6	7.62	IE4	BG40-../S4E11SA6	19.5	65	131	390	470	144	163	182	182	182	182	65	2650	-
24	390	182	1.6	7.62	IE5	BG40-../S5E11MA6	19.5	65	131	390	470	182	182	182	182	182	182	65	2650	-
24	360	199	1.7	8.31	IE4	BG40-../S4E11SA6	18	60	120	360	430	157	178	199	199	199	199	65	4100	-
24	360	199	1.7	8.31	IE5	BG40-../S5E11MA6	18	60	120	360	430	199	199	199	199	199	199	65	4100	-
24	330	215	1.4	9	IE4	BG40-../S4E11SA6	16.5	55	111	330	400	171	193	215	215	215	215	65	2650	-
24	330	215	1.4	9	IE5	BG40-../S5E11MA6	16.5	55	111	330	400	215	215	215	215	215	215	65	2650	-
24	325	220	1.6	9.23	IE4	BG40-../S4E11SA6	16	54	108	325	390	175	198	220	220	220	220	65	4350	-
24	325	220	1.6	9.23	IE5	BG40-../S5E11MA6	16	54	108	325	390	220	220	220	220	220	220	65	4350	-
24	285	245	1.5	10.35	IE4	BG40-../S4E11SA6	14	48	96	285	345	196	220	245	245	245	245	65	4350	-
24	285	245	1.5	10.35	IE5	BG40-../S5E11MA6	14	48	96	285	345	245	245	245	245	245	245	65	4350	-
24	260	275	1.4	11.49	IE4	BG40-../S4E11SA6	13	43.5	87	260	310	215	245	275	275	275	275	65	4600	-
24	260	275	1.4	11.49	IE5	BG40-../S5E11MA6	13	43.5	87	260	310	275	275	275	275	275	275	65	4600	-
24	230	305	1.3	12.86	IE4	BG40-../S4E11SA6	11.5	38.5	77	230	275	240	275	305	305	305	305	65	4500	-
24	230	305	1.3	12.86	IE5	BG40-../S5E11MA6	11.5	38.5	77	230	275	305	305	305	305	305	305	65	4500	-
24	210	340	1.2	14.28	IE4	BG40-../S4E11SA6	10.5	35	70	210	250	270	305	340	340	340	340	65	4900	-
24	210	340	1.2	14.28	IE5	BG40-../S5E11MA6	10.5	35	70	210	250	340	340	340	340	340	340	65	4900	-
24	183	390	1.1	16.39	IE4	BG40-../S4E11SA6	9.1	30.5	61	183	215	310	350	390	390	390	390	65	5300	-
24	183	390	1.1	16.39	IE5	BG40-../S5E11MA6	9.1	30.5	61	183	215	390	390	390	390	390	390	65	5300	-
24	164	435	0.97	18.19	IE4	BG40-../S4E11SA6	8.2	27	54	164	197	345	390	435	435	435	435	65	5600	-
24	164	435	0.97	18.19	IE5	BG40-../S5E11MA6	8.2	27	54	164	197	435	435	435	435	435	435	65	5600	-
24	151	475	0.89	19.84	IE4	BG40-../S4E11SA6	7.5	25	50	151	181	375	425	475	475	475	475	65	5800	-
24	151	475	0.89	19.84	IE5	BG40-../S5E11MA6	7.5	25	50	151	181	475	475	475	475	475	475	65	5800	-
24	136	520	0.8	22.02	IE4	BG40-../S4E11SA6	6.8	22.5	45	136	163	415	470	520	520	520	520	65	6000	-
24	136	520	0.8	22.02	IE5	BG40-../S5E11MA6	6.8	22.5	45	136	163	520	520	520	520	520	520	65	6000	-
24	490	145	3	6.07	IE4	BG50-../S4E11SA6	24.5	82	164	490	590	115	130	145	145	145	145	75	4700	-
24	490	145	3	6.07	IE5	BG50-../S5E11MA6	24.5	82	164	490	590	145	145	145	145	145	145	75	4700	-
24	445	161	2.8	6.74	IE4	BG50-../S4E11SA6	22	74	148	445	530	128	144	161	161	161	161	75	3750	-
24	445	161	2.8	6.74	IE5	BG50-../S5E11MA6	22	74	148	445	530	161	161	161	161	161	161	75	3750	-
24	340	205	2.4	8.7	IE4	BG50-../S4E11SA6	17	57	114	340	410	165	187	205	205	205	205	75	5300	-
24	340	205	2.4	8.7	IE5	BG50-../S5E11MA6	17	57	114	340	410	205	205	205	205	205	205	75	5300	-
24	310	230	2.2	9.65	IE4	BG50-../S4E11SA6	15.5	51	103	310	370	183	205	230	230	230	230	75	5600	-
24	310	230	2.2	9.65	IE5	BG50-../S5E11MA6	15.5	51	103	310	370	230	230	230	230	230	230	75	5600	-
24	245	285	2	12.06	IE4	BG50-../S4E11SA6	12	41	82	245	295	225	255	285	285	285	285	75	5700	-
24	245	285	2	12.06	IE5	BG50-../S5E11MA6	12	41	82	245	295	285	285	285	285	285	285	75	5700	-
24	220	320	1.8	13.36	IE4	BG50-../S4E11SA6	11	37	74	220	265	250	285	320	320	320	320	75	6100	-
24	220	320	1.8	13.36	IE5	BG50-../S5E11MA6	11	37	74	220	265	320	320	320	320	320	320	75	6100	-
24	181	395	1.6	16.53	IE4	BG50-../S4E11SA6	9	30	60	181	215	310	355	395	395	395	395	75	6500	-
24	181	395	1.6	16.53	IE5	BG50-../S5E11MA6	9	30	60	181	215	395	395	395	395	395	395	75	6500	-
24	163	435	1.4	18.33	IE4	BG50-../S4E11SA6	8.1	27	54	163	196	345	390	435	435	435	435	75	7200	-
24	163	435	1.4	18.33	IE5	BG50-../S5E11MA6	8.1	27	54	163	196	435	435	435	435	435	435	75	7200	-
24	136	520	1.2	21.96	IE4	BG50-../S4E11SA6	6.8	22.5	45.5	136	163	415	470	520	520	520	520	75	8000	-
24	136	520	1.2	21.96	IE5	BG50-../S5E11MA6	6.8	22.5	45.5	136	163	520	520	520	520	520	520	75	8000	-
24	123	580	1.1	24.34	IE4	BG50-../S4E11SA6	6.1	20.5	41	123	147	460	520	580	580	580	580	75	8700	-
24	123	580	1.1	24.34	IE5	BG50-../S5E11MA6	6.1	20.5	41	123	147	580	580	580	580	580	580	75	8700	-
24	101	710	0.89	29.62	IE4	BG50-../S4E11SA6	5	16.5	33.5	101	121	560	630	710	710	710	710	75	8000	-
24	101	710	0.89	29.62	IE5	BG50-../S5E11MA6	5	16.5	33.5	101	121	710	710	710	710	710	710	75	8000	-
24	91	780	0.8	32.84	IE4	BG50-../S4E11SA6	4.5	15	30	91	109	620	700	780	780	780	780	75	8700	-
24	91	780	0.8	32.84	IE5	BG50-../S5E11MA6	4.5	15	30	91	109	780	780	780	780	780	780	75	8700	-
24	178	400	2.7	16.8	IE4	BG60-../S4E11SA6	8.9	29.5	59	178	210	315	360	400	400	400	400	107	12000	-
24	178	400	2.7	16.8	IE5	BG60-../S5E11MA6	8.9	29.5	59	178	210	400	400	400	400	400	400	107	12000	-
24	161	445	2.6	18.62	IE4	BG60-../S4E11SA6	8	26.5	53	161	193	350	400	445	445	445	445	107	12400	-
24	161	445	2.6	18.62	IE5	BG60-../S5E11MA6	8	26.5	53	161	193	445	445	445	445	445	445	107	12400	-
24	133	530	2.2	22.4	IE4	BG60-../S4E11SA6	6.6	22	44.5	133	160	425	480	530	530	530	530	107	13300	-
24	133	530	2.2	22.4	IE5	BG60-../S5E11MA6	6.6	22	44.5	133	160	530	530	530	530	530	530	107	13300	-
24	120	590	2	24.82	IE4	BG60-../S4E11SA6	6	20	40	120	145	470	530	590	590	590	590	107	13800	-
24	120	590	2	24.82	IE5	BG60-../S5E11MA6	6	20	40	120	145	590	590	590	590	590	590	107	13800	-
24	102	700	1.7	29.31	IE4	BG60-../S4E11SA6	5.1	17	34	102	122	550	630	700	700	700	700	107	14800	-
24	102	700	1.7	29.31	IE5	BG60-../S5E11MA6	5.1	17	34	102	122	700	700	700	700	700	700	107	14800	-
24	92	770	1.5	32.48	IE4	BG60-../S4E11SA6	4.6	15	30.5	92	110	610	690	770	770	770	770	107	15400	-
24	92	770	1.5	32.48	IE5	BG60-../S5E11MA6	4.6	15	30.5	92	110	770	770	770	770	770	770	107	15400	-
24	77	930	1.3	38.85	IE4	BG60-../S4E11SA6	3.8	12.5	25.5	77	92	730	830	930	930	930	930	107	16000	-
24	77	930	1.3	38.85	IE5	BG60-../S5E11MA6	3.8	12.5	25.5	77	92	930	930	930	930	930	930	107	16000	-
24	69	1030	1.2	43.05	IE4	BG60-../S4E11SA6	3.4	11.5	23	69	83	810	920	1030	1030	1030	1030	107	16000	-
24	69	1030	1.2	43.05	IE5	BG60-../S5E11MA6	3.4	11.5	23	69	83	1030	1030	1030	1030	1030	1030	107	16000	-
24	59	1200	0.99	50.31	IE4	BG60-../S4E11SA6	2.9	9.9	19.5	59	71	950	1080	1200	1200	1200	1200	107	16000	-
24	59	1200	0.99	50.31	IE5	BG60-../S5E11MA6	2.9	9.9	19.5	59	71	1200								

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

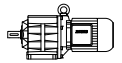
 **$M_N = 24 \text{ Nm}$  ( $P_N = 7.5 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
24	54	1310	1.5	54.64	IE5	BG70Z-../S5E11MA6	2.7	9.1	18	54	65	1310	1310	1310	1310	1310	164	20000	-
24	46	1550	1.5	64.85	IE4	BG70Z-../S4E11SA6	2.3	7.7	15	46	55	1230	1390	1550	1550	1550	164	20000	-
24	46	1550	1.5	64.85	IE5	BG70Z-../S5E11MA6	2.3	7.7	15	46	55	1550	1550	1550	1550	1550	164	20000	-
24	40.5	1770	1.3	73.82	IE4	BG70Z-../S4E11SA6	2	6.7	13.5	40.5	48.5	1400	1580	1770	1770	1770	164	20000	-
24	40.5	1770	1.3	73.82	IE5	BG70Z-../S5E11MA6	2	6.7	13.5	40.5	48.5	1770	1770	1770	1770	1770	164	20000	-
24	34	2100	1.1	87.61	IE4	BG70Z-../S4E11SA6	1.7	5.7	11	34	41	1660	1880	2100	2100	2100	164	20000	-
24	34	2100	1.1	87.61	IE5	BG70Z-../S5E11MA6	1.7	5.7	11	34	41	2100	2100	2100	2100	2100	164	20000	-
24	31	2250	1	95.74	IE4	BG70Z-../S4E11SA6	1.5	5.2	10	31	37.5	1810	2050	2250	2250	2250	164	20000	-
24	31	2250	1	95.74	IE5	BG70Z-../S5E11MA6	1.5	5.2	10	31	37.5	2250	2250	2250	2250	2250	164	20000	-
24	26	2700	0.84	113.6	IE4	BG70Z-../S4E11SA6	1.3	4.4	8.8	26	31.5	2150	2400	2700	2700	2700	164	20000	-
24	26	2700	0.84	113.6	IE5	BG70Z-../S5E11MA6	1.3	4.4	8.8	26	31.5	2700	2700	2700	2700	2700	164	20000	-
24	47	1520	2.8	63.56	IE4	BG80-../S4E11SA6	2.3	7.8	15.5	47	56	1200	1360	1520	1520	1520	192	26000	-
24	47	1520	2.8	63.56	IE5	BG80-../S5E11MA6	2.3	7.8	15.5	47	56	1520	1520	1520	1520	1520	192	26000	-
24	45	1590	2.6	66.4	IE4	BG80Z-../S4E11SA6	2.2	7.5	15	45	54	1260	1420	1590	1590	1590	234	26000	-
24	45	1590	2.6	66.4	IE5	BG80Z-../S5E11MA6	2.2	7.5	15	45	54	1590	1590	1590	1590	1590	234	26000	-
24	40.5	1760	2.4	73.73	IE4	BG80Z-../S4E11SA6	2	6.7	13.5	40.5	48.5	1400	1580	1760	1760	1760	234	26000	-
24	40.5	1760	2.4	73.73	IE5	BG80Z-../S5E11MA6	2	6.7	13.5	40.5	48.5	1760	1760	1760	1760	1760	234	26000	-
24	35	2000	2.1	84.55	IE4	BG80Z-../S4E11SA6	1.7	5.9	11.5	35	42.5	1600	1810	2000	2000	2000	234	26000	-
24	35	2000	2.1	84.55	IE5	BG80Z-../S5E11MA6	1.7	5.9	11.5	35	42.5	2000	2000	2000	2000	2000	234	26000	-
24	31.5	2250	1.9	93.89	IE4	BG80Z-../S4E11SA6	1.5	5.3	10.5	31.5	38	1780	2000	2250	2250	2250	234	26000	-
24	31.5	2250	1.9	93.89	IE5	BG80Z-../S5E11MA6	1.5	5.3	10.5	31.5	38	2250	2250	2250	2250	2250	234	26000	-
24	26.5	2650	1.6	112.4	IE4	BG80Z-../S4E11SA6	1.3	4.4	8.8	26.5	32	2100	2400	2650	2650	2650	234	26000	-
24	26.5	2650	1.6	112.4	IE5	BG80Z-../S5E11MA6	1.3	4.4	8.8	26.5	32	2650	2650	2650	2650	2650	234	26000	-
24	24	2950	1.4	124.8	IE4	BG80Z-../S4E11SA6	1.2	4	8	24	28.5	2350	2650	2950	2950	2950	234	26000	-
24	24	2950	1.4	124.8	IE5	BG80Z-../S5E11MA6	1.2	4	8	24	28.5	2950	2950	2950	2950	2950	234	26000	-
24	20.5	3450	1.2	145.4	IE4	BG80Z-../S4E11SA6	1	3.4	6.8	20.5	24.5	2750	3100	3450	3450	3450	234	26000	-
24	20.5	3450	1.2	145.4	IE5	BG80Z-../S5E11MA6	1	3.4	6.8	20.5	24.5	3450	3450	3450	3450	3450	234	26000	-
24	18.5	3850	1.1	161.5	IE4	BG80Z-../S4E11SA6	0.9	3	6.1	18.5	22	3050	3450	3850	3850	3850	234	26000	-
24	18.5	3850	1.1	161.5	IE5	BG80Z-../S5E11MA6	0.9	3	6.1	18.5	22	3850	3850	3850	3850	3850	234	26000	-
24	16	4450	0.94	186.8	IE4	BG80Z-../S4E11SA6	0.8	2.6	5.3	16	19	3500	4000	4450	4450	4450	234	26000	-
24	16	4450	0.94	186.8	IE5	BG80Z-../S5E11MA6	0.8	2.6	5.3	16	19	4450	4450	4450	4450	4450	234	26000	-
24	14	4950	0.84	207.4	IE4	BG80Z-../S4E11SA6	0.7	2.4	4.8	14	17	3900	4450	4950	4950	4950	234	26000	-
24	14	4950	0.84	207.4	IE5	BG80Z-../S5E11MA6	0.7	2.4	4.8	14	17	4950	4950	4950	4950	4950	234	26000	-
24	13	5400	0.84	227.2	IE4	BG80G40-../S4E11SA6	0.65	2.2	4.4	13	15.5	4300	4850	5400	5400	5400	242	26000	-
24	13	5400	0.84	227.2	IE5	BG80G40-../S5E11MA6	0.65	2.2	4.4	13	15.5	5400	5400	5400	5400	5400	242	26000	-
24	23.5	3050	2.8	127.1	IE4	BG90Z-../S4E11SA6	1.1	3.9	7.8	23.5	28	2400	2700	3050	3050	3050	336	65000	-
24	23.5	3050	2.8	127.1	IE5	BG90Z-../S5E11MA6	1.1	3.9	7.8	23.5	28	3050	3050	3050	3050	3050	336	65000	-
24	21.5	3300	2.5	139.2	IE4	BG90Z-../S4E11SA6	1	3.5	7.1	21.5	25.5	2600	2950	3300	3300	3300	336	65000	-
24	21.5	3300	2.5	139.2	IE5	BG90Z-../S5E11MA6	1	3.5	7.1	21.5	25.5	3300	3300	3300	3300	3300	336	65000	-
24	18	3900	2.1	163	IE4	BG90Z-../S4E11SA6	0.9	3	6.1	18	22	3050	3500	3900	3900	3900	336	65000	-
24	18	3900	2.1	163	IE5	BG90Z-../S5E11MA6	0.9	3	6.1	18	22	3900	3900	3900	3900	3900	336	65000	-
24	16.5	4250	2	178.5	IE4	BG90Z-../S4E11SA6	0.8	2.8	5.6	16.5	20	3350	3800	4250	4250	4250	336	65000	-
24	16.5	4250	2	178.5	IE5	BG90Z-../S5E11MA6	0.8	2.8	5.6	16.5	20	4250	4250	4250	4250	4250	336	65000	-
24	14	4950	1.7	208.3	IE4	BG90Z-../S4E11SA6	0.7	2.4	4.8	14	17	3950	4450	4950	4950	4950	336	65000	-
24	14	4950	1.7	208.3	IE5	BG90Z-../S5E11MA6	0.7	2.4	4.8	14	17	4950	4950	4950	4950	4950	336	65000	-
24	13	5400	1.5	228.1	IE4	BG90Z-../S4E11SA6	0.65	2.1	4.3	13	15.5	4300	4900	5400	5400	5400	336	65000	-
24	13	5400	1.5	228.1	IE5	BG90Z-../S5E11MA6	0.65	2.1	4.3	13	15.5	5400	5400	5400	5400	5400	336	65000	-
24	13.5	5200	1.7	219.9	IE4	BG90G50-../S4E11SA6	0.65	2.2	4.5	13.5	16	4150	4700	5200	5200	5200	353	65000	-
24	13.5	5200	1.7	219.9	IE5	BG90G50-../S5E11MA6	0.65	2.2	4.5	13.5	16	5200	5200	5200	5200	5200	353	65000	-
24	11	6300	1.5	262.5	IE4	BG90G50-../S4E11SA6	0.55	1.9	3.8	11	13.5	4950	5600	6300	6300	6300	353	65000	-
24	11	6300	1.5	262.5	IE5	BG90G50-../S5E11MA6	0.55	1.9	3.8	11	13.5	6300	6300	6300	6300	6300	353	65000	-
24	10	7100	1.3	298.8	IE4	BG90G50-../S4E11SA6	0.5	1.6	3.3	10	12	5600	6400	7100	7100	7100	353	65000	-
24	10	7100	1.3	298.8	IE5	BG90G50-../S5E11MA6	0.5	1.6	3.3	10	12	7100	7100	7100	7100	7100	353	65000	-
24	8.3	8600	1.1	360.3	IE4	BG90G50-../S4E11SA6	0.41	1.3	2.7	8.3	9.9	6800	7700	8600	8600	8600	353	65000	-
24	8.3	8600	1.1	360.3	IE5	BG90G50-../S5E11MA6	0.41	1.3	2.7	8.3	9.9	8600	8600	8600	8600	8600	353	65000	-
24	6.8	10400	0.88	435.8	IE4	BG90G50-../S4E11SA6	0.34	1.1	2.2	6.8	8.2	8200	9300	10400	10400	10400	353	65000	-
24	6.8	10400	0.88	435.8	IE5	BG90G50-../S5E11MA6	0.34	1.1	2.2	6.8	8.2	10400	10400	10400	10400	10400	353	65000	-
24	12.5	5500	3	232.6	IE4	BG100-../S4E11SA6	0.6	2.1	4.2	12.5	15	4400	5000	5500	5500	5500	453	90000	-
24	12.5	5500	3	232.6	IE5	BG100-../S5E11MA6	0.6	2.1	4.2	12.5	15	5500	5500	5500	5500	5500	453	90000	-
24	11.5	6200	2.7	259	IE4	BG100-../S4E11SA6	0.55	1.9	3.8	11.5	13.5	4900	5500	6200	6200	6200	453	90000	-
24	11.5	6200	2.7	259	IE5	BG100-../S5E11MA6	0.55	1.9	3.8	11.5	13.5	6200	6200	6200	6200	6200	453	90000	-
24	11	6400	2.9	269.8	IE4	BG100Z-../S4E11SA6	0.55	1.8	3.7	11	13	5100	5800	6400	6400	6400	543	90000	-
24	11	6400	2.9	269.8	IE5	BG100Z-../S5E11MA6	0.55	1.8	3.7	11	13	6400	6400	6400	6400	6400	543	90000	-
24	9.9	7200	2.6	300.4	IE4	BG100Z-../S4E11SA6	0.49	1.6	3.3	9.9	11.5	5700	6400	7200	7200	7200	543	90000	-
24	9.9	7200	2.6	300.4	IE5	BG100Z-../S5E11MA6	0.49	1.6	3.3	9.9	11.5	7200	7200	7200	7200	7200	543	90000	-
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# BG-series helical-geared motors

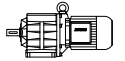
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

**M<sub>N</sub> = 30 Nm (P<sub>N</sub> = 9.5 kW)**

M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
30	1120	80	1.6	2.67	IE5	BG30-../S5E11LA6	56	187	370	1120	1340	80	80	80	80	80	58	1450	-
30	1120	80	1.6	2.67	IE5	BG30-../S5E11MA6	56	187	370	1120	1340	70	80	80	80	80	46	1450	-
30	880	102	1.4	3.4	IE5	BG30-../S5E11LA6	44	147	290	880	1050	102	102	102	102	102	58	1580	-
30	880	102	1.4	3.4	IE5	BG30-../S5E11MA6	44	147	290	880	1050	90	102	102	102	102	46	1580	-
30	710	126	1.4	4.21	IE5	BG30-../S5E11LA6	35.5	118	235	710	850	126	126	126	126	126	58	1630	-
30	710	126	1.4	4.21	IE5	BG30-../S5E11MA6	35.5	118	235	710	850	111	126	126	126	126	46	1630	-
30	550	163	1.2	5.44	IE5	BG30-../S5E11LA6	27.5	91	183	550	660	163	163	163	163	163	58	1670	-
30	550	163	1.2	5.44	IE5	BG30-../S5E11MA6	27.5	91	183	550	660	144	163	163	163	163	46	1670	-
30	440	200	1.1	6.75	IE5	BG30-../S5E11LA6	22	74	148	440	530	200	200	200	200	200	58	1760	-
30	440	200	1.1	6.75	IE5	BG30-../S5E11MA6	22	73	147	440	530	200	200	200	200	200	58	2550	-
30	440	200	1.1	6.75	IE5	BG30-../S5E11MA6	22	74	148	440	530	178	200	200	200	200	46	1760	-
30	440	200	1.1	6.75	IE5	BG30-../S5E11MA6	22	73	147	440	530	179	200	200	200	200	46	2550	-
30	400	225	1	7.5	IE5	BG30-../S5E11LA6	20	66	133	400	480	225	225	225	225	225	58	2750	-
30	400	225	1	7.5	IE5	BG30-../S5E11MA6	20	66	133	400	480	198	225	225	225	225	46	2750	-
30	375	235	0.91	7.91	IE5	BG30-../S5E11LA6	18.5	63	126	375	455	235	235	235	235	235	58	1760	-
30	375	235	0.91	7.91	IE5	BG30-../S5E11MA6	18.5	63	126	375	455	205	235	235	235	235	46	1760	-
30	345	255	0.95	8.6	IE5	BG30-../S5E11LA6	17	58	116	345	415	255	255	255	255	255	58	2800	-
30	345	255	0.95	8.6	IE5	BG30-../S5E11MA6	17	58	116	345	415	225	255	255	255	255	46	2800	-
30	310	285	0.87	9.55	IE5	BG30-../S5E11LA6	15.5	52	104	310	375	285	285	285	285	285	58	3000	-
30	310	285	0.87	9.55	IE5	BG30-../S5E11MA6	15.5	52	104	310	375	250	285	285	285	285	46	3000	-
30	280	315	0.83	10.65	IE5	BG30-../S5E11LA6	14	46.5	93	280	335	315	315	315	315	315	58	2950	-
30	280	315	0.83	10.65	IE5	BG30-../S5E11MA6	14	46.5	93	280	335	280	315	315	315	315	46	2950	-
30	1210	73	2.7	2.46	IE5	BG40-../S5E11LA6	60	200	405	1210	1460	73	73	73	73	73	77	2150	-
30	1210	73	2.7	2.46	IE5	BG40-../S5E11MA6	60	200	405	1210	1460	65	73	73	73	73	65	2150	-
30	940	95	2.3	3.19	IE5	BG40-../S5E11LA6	47	156	310	940	1120	95	95	95	95	95	77	2350	-
30	940	95	2.3	3.19	IE5	BG40-../S5E11MA6	47	156	310	940	1120	84	95	95	95	95	65	2350	-
30	750	119	2	3.97	IE5	BG40-../S5E11LA6	37.5	125	250	750	900	119	119	119	119	119	77	2400	-
30	750	119	2	3.97	IE5	BG40-../S5E11MA6	37.5	125	250	750	900	105	119	119	119	119	65	2400	-
30	600	148	1.8	4.94	IE5	BG40-../S5E11LA6	30	101	200	600	720	148	148	148	148	148	77	2450	-
30	600	148	1.8	4.94	IE5	BG40-../S5E11MA6	30	101	200	600	720	130	148	148	148	148	65	2450	-
30	475	188	1.6	6.29	IE5	BG40-../S5E11LA6	23.5	79	158	475	570	188	188	188	188	188	77	2600	-
30	475	188	1.6	6.29	IE5	BG40-../S5E11MA6	23.5	79	158	475	570	166	188	188	188	188	65	2600	-
30	465	192	1.6	6.4	IE5	BG40-../S5E11LA6	23	78	156	465	560	192	192	192	192	192	77	3750	-
30	465	192	1.6	6.4	IE5	BG40-../S5E11MA6	23	78	156	465	560	169	192	192	192	192	65	3750	-
30	420	210	1.5	7.11	IE5	BG40-../S5E11LA6	21	70	140	420	500	210	210	210	210	210	77	3950	-
30	420	210	1.5	7.11	IE5	BG40-../S5E11MA6	21	70	140	420	500	188	210	210	210	210	65	3950	-
30	390	225	1.3	7.62	IE5	BG40-../S5E11LA6	19.5	65	131	390	470	225	225	225	225	225	77	2650	-
30	390	225	1.3	7.62	IE5	BG40-../S5E11MA6	19.5	65	131	390	470	200	225	225	225	225	65	2650	-
30	360	245	1.4	8.31	IE5	BG40-../S5E11LA6	18	60	120	360	430	245	245	245	245	245	77	4100	-
30	360	245	1.4	8.31	IE5	BG40-../S5E11MA6	18	60	120	360	430	220	245	245	245	245	65	4100	-
30	330	270	1.1	9	IE5	BG40-../S5E11LA6	16.5	55	111	330	400	270	270	270	270	270	77	2650	-
30	330	270	1.1	9	IE5	BG40-../S5E11MA6	16.5	55	111	330	400	235	270	270	270	270	65	2650	-
30	325	275	1.3	9.23	IE5	BG40-../S5E11LA6	16	54	108	325	390	275	275	275	275	275	77	4350	-
30	325	275	1.3	9.23	IE5	BG40-../S5E11MA6	16	54	108	325	390	240	275	275	275	275	65	4350	-
30	285	310	1.2	10.35	IE5	BG40-../S5E11LA6	14	48	96	285	345	310	310	310	310	310	77	4350	-
30	285	310	1.2	10.35	IE5	BG40-../S5E11MA6	14	48	96	285	345	270	310	310	310	310	65	4350	-
30	260	340	1.1	11.49	IE5	BG40-../S5E11LA6	13	43.5	87	260	310	340	340	340	340	340	77	4600	-
30	260	340	1.1	11.49	IE5	BG40-../S5E11MA6	13	43.5	87	260	310	300	340	340	340	340	65	4600	-
30	230	385	1.1	12.86	IE5	BG40-../S5E11LA6	11.5	38.5	77	230	275	385	385	385	385	385	77	4500	-
30	230	385	1.1	12.86	IE5	BG40-../S5E11MA6	11.5	38.5	77	230	275	340	385	385	385	385	65	4500	-
30	210	425	0.98	14.28	IE5	BG40-../S5E11LA6	10.5	35	70	210	250	425	425	425	425	425	77	4900	-
30	210	425	0.98	14.28	IE5	BG40-../S5E11MA6	10.5	35	70	210	250	375	425	425	425	425	65	4900	-
30	183	490	0.86	16.39	IE5	BG40-../S5E11LA6	9.1	30.5	61	183	215	490	490	490	490	490	77	5300	-
30	183	490	0.86	16.39	IE5	BG40-../S5E11MA6	9.1	30.5	61	183	215	430	490	490	490	490	65	5300	-
30	610	147	2.7	4.91	IE5	BG50-../S5E11LA6	30.5	101	200	610	730	147	147	147	147	147	86	3500	-
30	610	147	2.7	4.91	IE5	BG50-../S5E11MA6	30.5	101	200	610	730	130	147	147	147	147	75	3500	-
30	490	182	2.4	6.07	IE5	BG50-../S5E11LA6	24.5	82	164	490	590	182	182	182	182	182	86	4700	-
30	490	182	2.4	6.07	IE5	BG50-../S5E11MA6	24.5	82	164	490	590	160	182	182	182	182	75	4700	-
30	445	200	2.2	6.74	IE5	BG50-../S5E11LA6	22	74	148	445	530	200	200	200	200	200	86	3750	-
30	445	200	2.2	6.74	IE5	BG50-../S5E11MA6	22	74	148	445	530	178	200	200	200	200	75	3750	-
30	340	260	1.9	8.7	IE5	BG50-../S5E11LA6	17	57	114	340	410	260	260	260	260	260	86	5300	-
30	340	260	1.9	8.7	IE5	BG50-../S5E11MA6	17	57	114	340	410	230	260	260	260	260	75	5300	-
30	310	285	1.8	9.65	IE5	BG50-../S5E11LA6	15.5	51	103	310	370	285	285	285	285	285	86	5600	-
30	310	285	1.8	9.65	IE5	BG50-../S5E11MA6	15.5	51	103	310	370	255	285	285	285	285	75	5600	-
30	245	360	1.6	12.06	IE5	BG50-../S5E11LA6	12	41	82	245	295	360	360	360	360	360	86	5700	-
30	245	360	1.6	12.06	IE5	BG50-../S5E11MA6	12	41	82	245	295	315	360	360	360	360	75	5700	-
30	220	400	1.5	13.36	IE5	BG50-../S5E11LA6	11	37	74	220	265	400	400	400	400	400	86	6100	-
30	220	400	1.5	13.36	IE5	BG50-../S5E11MA6	11	37	74	220	265	350	400	400	400	400	75	6100	-
30	181	495	1.3	16.53	IE5	BG50-../S5E11LA6	9	30	60	181	215	495	495	495	495	495	86	6500	-
30	181																		

# BG-series helical-geared motors

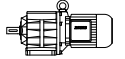
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 30 \text{ Nm}$  ( $P_N = 9.5 \text{ kW}$ )**


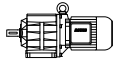
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	300	1000	3000	3600	150	500	1000	3000	3600			
30	220	400	2.5	13.47	IE5	BG60-../S5E11MA6	11	57	74	220	265	355	400	400	400	107	11200	-	
30	178	500	2.2	16.8	IE5	BG60-../S5E11LA6	8.9	29.5	59	178	210	500	500	500	500	119	12000	-	
30	178	500	2.2	16.8	IE5	BG60-../S5E11MA6	8.9	29.5	59	178	210	445	500	500	500	107	12000	-	
30	161	550	2	18.62	IE5	BG60-../S5E11LA6	8	26.5	53	161	193	550	550	550	550	119	12400	-	
30	161	550	2	18.62	IE5	BG60-../S5E11MA6	8	26.5	53	161	193	490	550	550	550	107	12400	-	
30	133	670	1.8	22.4	IE5	BG60-../S5E11LA6	6.6	22	44.5	133	160	670	670	670	670	119	13300	-	
30	133	670	1.8	22.4	IE5	BG60-../S5E11MA6	6.6	22	44.5	133	160	590	670	670	670	107	13300	-	
30	120	740	1.6	24.82	IE5	BG60-../S5E11LA6	6	20	40	120	145	740	740	740	740	119	13800	-	
30	120	740	1.6	24.82	IE5	BG60-../S5E11MA6	6	20	40	120	145	650	740	740	740	107	13800	-	
30	102	870	1.4	29.31	IE5	BG60-../S5E11LA6	5.1	17	34	102	122	870	870	870	870	119	14800	-	
30	102	870	1.4	29.31	IE5	BG60-../S5E11MA6	5.1	17	34	102	122	770	870	870	870	107	14800	-	
30	92	970	1.2	32.48	IE5	BG60-../S5E11LA6	4.6	15	30.5	92	110	970	970	970	970	119	15400	-	
30	92	970	1.2	32.48	IE5	BG60-../S5E11MA6	4.6	15	30.5	92	110	860	970	970	970	107	15400	-	
30	77	1160	1	38.85	IE5	BG60-../S5E11LA6	3.8	12.5	25.5	77	92	1160	1160	1160	1160	119	16000	-	
30	77	1160	1	38.85	IE5	BG60-../S5E11MA6	3.8	12.5	25.5	77	92	1020	1160	1160	1160	107	16000	-	
30	69	1290	0.93	43.05	IE5	BG60-../S5E11LA6	3.4	11.5	23	69	83	1290	1290	1290	1290	119	16000	-	
30	69	1290	0.93	43.05	IE5	BG60-../S5E11MA6	3.4	11.5	23	69	83	1140	1290	1290	1290	107	16000	-	
30	59	1500	0.8	50.31	IE5	BG60-../S5E11LA6	2.9	9.9	19.5	59	71	1500	1500	1500	1500	119	16000	-	
30	59	1500	0.8	50.31	IE5	BG60-../S5E11MA6	2.9	9.9	19.5	59	71	1330	1500	1500	1500	107	16000	-	
30	110	810	2.8	27.21	IE5	BG70-../S5E11LA6	5.5	18	36.5	110	132	810	810	810	810	149	16400	-	
30	110	810	2.8	27.21	IE5	BG70-../S5E11MA6	5.5	18	36.5	110	132	720	810	810	810	138	16400	-	
30	101	890	2.6	29.69	IE5	BG70-../S5E11LA6	5	16.5	33.5	101	121	890	890	890	890	149	16900	-	
30	101	890	2.6	29.69	IE5	BG70-../S5E11MA6	5	16.5	33.5	101	121	780	890	890	890	138	16900	-	
30	85	1050	2.2	35.24	IE5	BG70-../S5E11LA6	4.2	14	28	85	102	1050	1050	1050	1050	149	18300	-	
30	85	1050	2.2	35.24	IE5	BG70-../S5E11MA6	4.2	14	28	85	102	930	1050	1050	1050	138	18300	-	
30	76	1170	2	39.22	IE5	BG70-../S5E11LA6	3.8	12.5	25	76	91	1170	1170	1170	1170	149	19100	-	
30	76	1170	2	39.22	IE5	BG70-../S5E11MA6	3.8	12.5	25	76	91	1030	1170	1170	1170	138	19100	-	
30	64	1390	1.6	46.54	IE5	BG70-../S5E11LA6	3.2	10.5	21	64	77	1390	1390	1390	1390	149	20000	-	
30	64	1390	1.6	46.54	IE5	BG70-../S5E11MA6	3.2	10.5	21	64	77	1230	1390	1390	1390	138	20000	-	
30	59	1510	1.5	50.4	IE5	BG70-../S5E11LA6	2.9	9.9	19.5	59	71	1510	1510	1510	1510	149	20000	-	
30	59	1510	1.5	50.4	IE5	BG70-../S5E11MA6	2.9	9.9	19.5	59	71	1330	1510	1510	1510	138	20000	-	
30	50	1790	1.3	59.82	IE5	BG70-../S5E11LA6	2.5	8.3	16.5	50	60	1790	1790	1790	1790	149	20000	-	
30	50	1790	1.3	59.82	IE5	BG70-../S5E11MA6	2.5	8.3	16.5	50	60	1580	1790	1790	1790	138	20000	-	
30	54	1630	1.2	54.64	IE5	BG70Z-../S5E11LA6	2.7	9.1	18	54	65	1630	1630	1630	1630	176	20000	-	
30	54	1630	1.2	54.64	IE5	BG70Z-../S5E11MA6	2.7	9.1	18	54	65	1440	1630	1630	1630	164	20000	-	
30	46	1940	1.2	64.85	IE5	BG70Z-../S5E11LA6	2.3	7.7	15	46	55	1940	1940	1940	1940	176	20000	-	
30	46	1940	1.2	64.85	IE5	BG70Z-../S5E11MA6	2.3	7.7	15	46	55	1710	1940	1940	1940	164	20000	-	
30	40.5	2200	1	73.82	IE5	BG70Z-../S5E11LA6	2	6.7	13.5	40.5	48.5	2200	2200	2200	2200	176	20000	-	
30	40.5	2200	1	73.82	IE5	BG70Z-../S5E11MA6	2	6.7	13.5	40.5	48.5	1950	2200	2200	2200	164	20000	-	
30	34	2600	0.88	87.61	IE5	BG70Z-../S5E11LA6	1.7	5.7	11	34	41	2600	2600	2600	2600	176	20000	-	
30	34	2600	0.88	87.61	IE5	BG70Z-../S5E11MA6	1.7	5.7	11	34	41	2300	2600	2600	2600	164	20000	-	
30	31	2850	0.8	95.74	IE5	BG70Z-../S5E11LA6	1.5	5.2	10	31	37.5	2850	2850	2850	2850	176	20000	-	
30	31	2850	0.8	95.74	IE5	BG70Z-../S5E11MA6	1.5	5.2	10	31	37.5	2500	2850	2850	2850	164	20000	-	
30	61	1460	2.9	48.8	IE5	BG80-../S5E11LA6	3	10	20	61	73	1460	1460	1460	1460	204	23800	-	
30	61	1460	2.9	48.8	IE5	BG80-../S5E11MA6	3	10	20	61	73	1290	1460	1460	1460	192	23800	-	
30	52	1710	2.4	57.24	IE5	BG80-../S5E11LA6	2.6	8.7	17	52	62	1710	1710	1710	1710	204	25400	-	
30	52	1710	2.4	57.24	IE5	BG80-../S5E11MA6	2.6	8.7	17	52	62	1510	1710	1710	1710	192	25400	-	
30	47	1900	2.2	63.56	IE5	BG80-../S5E11LA6	2.3	7.8	15.5	47	56	1900	1900	1900	1900	204	26000	-	
30	47	1900	2.2	63.56	IE5	BG80-../S5E11MA6	2.3	7.8	15.5	47	56	1680	1900	1900	1900	192	26000	-	
30	45	1990	2.1	66.4	IE5	BG80Z-../S5E11LA6	2.2	7.5	15	45	54	1990	1990	1990	1990	246	26000	-	
30	45	1990	2.1	66.4	IE5	BG80Z-../S5E11MA6	2.2	7.5	15	45	54	1750	1990	1990	1990	234	26000	-	
30	40.5	2200	1.9	73.73	IE5	BG80Z-../S5E11LA6	2	6.7	13.5	40.5	48.5	2200	2200	2200	2200	246	26000	-	
30	40.5	2200	1.9	73.73	IE5	BG80Z-../S5E11MA6	2	6.7	13.5	40.5	48.5	1950	2200	2200	2200	234	26000	-	
30	35	2500	1.7	84.55	IE5	BG80Z-../S5E11LA6	1.7	5.9	11.5	35	42.5	2500	2500	2500	2500	246	26000	-	
30	35	2500	1.7	84.55	IE5	BG80Z-../S5E11MA6	1.7	5.9	11.5	35	42.5	2200	2500	2500	2500	234	26000	-	
30	31.5	2800	1.5	93.89	IE5	BG80Z-../S5E11LA6	1.5	5.3	10.5	31.5	38	2800	2800	2800	2800	246	26000	-	
30	31.5	2800	1.5	93.89	IE5	BG80Z-../S5E11MA6	1.5	5.3	10.5	31.5	38	2450	2800	2800	2800	234	26000	-	
30	26.5	3350	1.2	112.4	IE5	BG80Z-../S5E11LA6	1.3	4.4	8.8	26.5	32	3350	3350	3350	3350	246	26000	-	
30	26.5	3350	1.2	112.4	IE5	BG80Z-../S5E11MA6	1.3	4.4	8.8	26.5	32	2950	3350	3350	3350	234	26000	-	
30	24	3700	1.1	124.8	IE5	BG80Z-../S5E11LA6	1.2	4	8	24	28.5	3700	3700	3700	3700	246	26000	-	
30	24	3700	1.1	124.8	IE5	BG80Z-../S5E11MA6	1.2	4	8	24	28.5	3300	3700	3700	3700	234	26000	-	
30	20.5	4350	0.96	145.4	IE5	BG80Z-../S5E11LA6	1	3.4	6.8	20.5	24.5	4350	4350	4350	4350	246	26000	-	
30	20.5	4350	0.96	145.4	IE5	BG80Z-../S5E11MA6	1	3.4	6.8	20.5	24.5	3850	4350	4350	4350	234	26000	-	
30	18.5	4800	0.87	161.5	IE5	BG80Z-../S5E11LA6	0.9	3	6.1	18.5	22	4800	4800	4800	4800	246	26000	-	
30	18.5	4800	0.87	161.5	IE5	BG80Z-../S5E11MA6	0.9	3	6.1	18.5	22	4250	4800	4800	4800	234	26000	-	
30	31	2850	2.9	96.53	IE5	BG90Z-../S5E11LA6	1.5	5.1	10	31	37	2850	2850	2850	2850	348	65000	-	
30	31	2850	2.9	96.53	IE5	BG90Z-../S5E11MA6	1.5	5.1	10	31	37	2550	2850	2850	2850	336	65000	-	
30	28	3150	2.6	105.7	IE5	BG90Z-../S5E11LA6	1.4	4.7	9.4	28	34	3150	3150	3150	3150	348	65000	-	
30	28	3150	2.6	105.7	IE5	BG90Z-../S5E11MA6	1.4	4.7	9.4	28	34	2800	3150	3150	3150	336	65000	-	
30	23.5	3800	2.2	127.1	IE5	BG90Z-../S5E11LA6	1.1	3.9	7.8	23.5	28	3800	3800	3800	3800	348	65000	-	

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

**M<sub>N</sub> = 30 Nm (P<sub>N</sub> = 9.5 kW)**

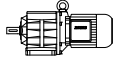
M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
30	13.5	6500	1.4	219.9	IE5	BG90G50-../S5E11LA6	0.65	2.2	4.5	13.5	16	6500	6500	6500	6500	6500	365	65000	-
30	13.5	6500	1.4	219.9	IE5	BG90G50-../S5E11MA6	0.65	2.2	4.5	13.5	16	5800	6500	6500	6500	6500	353	65000	-
30	11	7800	1.2	262.5	IE5	BG90G50-../S5E11LA6	0.55	1.9	3.8	11	13.5	7800	7800	7800	7800	7800	365	65000	-
30	11	7800	1.2	262.5	IE5	BG90G50-../S5E11MA6	0.55	1.9	3.8	11	13.5	6900	7800	7800	7800	7800	353	65000	-
30	10	8900	1	298.8	IE5	BG90G50-../S5E11LA6	0.5	1.6	3.3	10	12	8900	8900	8900	8900	8900	365	65000	-
30	10	8900	1	298.8	IE5	BG90G50-../S5E11MA6	0.5	1.6	3.3	10	12	7900	8900	8900	8900	8900	353	65000	-
30	8.3	10800	0.85	360.3	IE5	BG90G50-../S5E11LA6	0.41	1.3	2.7	8.3	9.9	10800	10800	10800	10800	10800	365	65000	-
30	8.3	10800	0.85	360.3	IE5	BG90G50-../S5E11MA6	0.41	1.3	2.7	8.3	9.9	9500	10800	10800	10800	10800	353	65000	-
30	15	5900	2.8	198.8	IE5	BG100-../S5E11LA6	0.75	2.5	5	15	18	5900	5900	5900	5900	5900	465	90000	-
30	15	5900	2.8	198.8	IE5	BG100-../S5E11MA6	0.75	2.5	5	15	18	5200	5900	5900	5900	5900	453	90000	-
30	12.5	6900	2.4	232.6	IE5	BG100-../S5E11LA6	0.6	2.1	4.2	12.5	15	6900	6900	6900	6900	6900	465	90000	-
30	12.5	6900	2.4	232.6	IE5	BG100-../S5E11MA6	0.6	2.1	4.2	12.5	15	6100	6900	6900	6900	6900	453	90000	-
30	11.5	7700	2.2	259	IE5	BG100-../S5E11LA6	0.55	1.9	3.8	11.5	13.5	7700	7700	7700	7700	7700	465	90000	-
30	11.5	7700	2.2	259	IE5	BG100-../S5E11MA6	0.55	1.9	3.8	11.5	13.5	6800	7700	7700	7700	7700	453	90000	-
30	11	8000	2.3	269.8	IE5	BG100Z-../S5E11LA6	0.55	1.8	3.7	11	13	8000	8000	8000	8000	8000	555	90000	-
30	11	8000	2.3	269.8	IE5	BG100Z-../S5E11MA6	0.55	1.8	3.7	11	13	7100	8000	8000	8000	8000	543	90000	-
30	9.9	9000	2.1	300.4	IE5	BG100Z-../S5E11LA6	0.49	1.6	3.3	9.9	11.5	9000	9000	9000	9000	9000	555	90000	-
30	9.9	9000	2.1	300.4	IE5	BG100Z-../S5E11MA6	0.49	1.6	3.3	9.9	11.5	7900	9000	9000	9000	9000	543	90000	-
30	8.7	10300	1.8	343.6	IE5	BG100Z-../S5E11LA6	0.43	1.4	2.9	8.7	10	10300	10300	10300	10300	10300	555	90000	-
30	8.7	10300	1.8	343.6	IE5	BG100Z-../S5E11MA6	0.43	1.4	2.9	8.7	10	9100	10300	10300	10300	10300	543	90000	-
30	7.8	11400	1.6	382.6	IE5	BG100Z-../S5E11LA6	0.39	1.3	2.6	7.8	9.4	11400	11400	11400	11400	11400	555	90000	-
30	7.8	11400	1.6	382.6	IE5	BG100Z-../S5E11MA6	0.39	1.3	2.6	7.8	9.4	10100	11400	11400	11400	11400	543	90000	-
30	6.5	13700	1.4	456.7	IE5	BG100Z-../S5E11LA6	0.32	1	2.1	6.5	7.8	13700	13700	13700	13700	13700	555	90000	-
30	6.5	13700	1.4	456.7	IE5	BG100Z-../S5E11MA6	0.32	1	2.1	6.5	7.8	12100	13700	13700	13700	13700	543	90000	-
30	5.8	15200	1.2	508.5	IE5	BG100Z-../S5E11LA6	0.29	0.95	1.9	5.8	7	15200	15200	15200	15200	15200	555	90000	-
30	5.8	15200	1.2	508.5	IE5	BG100Z-../S5E11MA6	0.29	0.95	1.9	5.8	7	13400	15200	15200	15200	15200	543	90000	-
30	5	17700	1	591.1	IE5	BG100Z-../S5E11LA6	0.25	0.8	1.6	5	6	17700	17700	17700	17700	17700	555	90000	-
30	5	17700	1	591.1	IE5	BG100Z-../S5E11MA6	0.25	0.8	1.6	5	6	15600	17700	17700	17700	17700	543	90000	-
30	4.5	19700	0.94	658.1	IE5	BG100Z-../S5E11LA6	0.22	0.75	1.5	4.5	5.4	19700	19700	19700	19700	19700	555	90000	-
30	4.5	19700	0.94	658.1	IE5	BG100Z-../S5E11MA6	0.22	0.75	1.5	4.5	5.4	17400	19700	19700	19700	19700	543	90000	-
30	3.9	22500	0.81	759	IE5	BG100Z-../S5E11LA6	0.19	0.65	1.3	3.9	4.7	22500	22500	22500	22500	22500	555	90000	-
30	3.9	22500	0.81	759	IE5	BG100Z-../S5E11MA6	0.19	0.65	1.3	3.9	4.7	20000	22500	22500	22500	22500	543	90000	-

**M<sub>N</sub> = 35 Nm (P<sub>N</sub> = 11 kW)**

M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
35	1120	93	1.4	2.67	IE4	BG30-../S4E11MA6	56	187	370	1120	1340	70	80	93	93	93	46	1450	-
35	1120	93	1.4	2.67	IE5	BG30-../S5E11LA6	56	187	370	1120	1340	93	93	93	93	93	58	1450	-
35	880	119	1.2	3.4	IE4	BG30-../S4E11MA6	44	147	290	880	1050	90	102	119	119	119	46	1580	-
35	880	119	1.2	3.4	IE5	BG30-../S5E11LA6	44	147	290	880	1050	119	119	119	119	119	58	1580	-
35	710	147	1.2	4.21	IE4	BG30-../S4E11MA6	35.5	118	235	710	850	111	126	147	147	147	46	1630	-
35	710	147	1.2	4.21	IE5	BG30-../S5E11LA6	35.5	118	235	710	850	147	147	147	147	147	58	1630	-
35	550	190	1.1	5.44	IE4	BG30-../S4E11MA6	27.5	91	183	550	660	144	163	190	190	190	46	1670	-
35	550	190	1.1	5.44	IE5	BG30-../S5E11LA6	27.5	91	183	550	660	190	190	190	190	190	58	1670	-
35	440	235	0.91	6.75	IE4	BG30-../S4E11MA6	22	74	148	440	530	178	200	235	235	235	46	1760	-
35	440	235	0.96	6.76	IE4	BG30-../S4E11MA6	22	73	147	440	530	179	200	235	235	235	46	2550	-
35	440	235	0.91	6.75	IE5	BG30-../S5E11LA6	22	74	148	440	530	235	235	235	235	235	58	1760	-
35	440	235	0.96	6.76	IE5	BG30-../S5E11LA6	22	73	147	440	530	235	235	235	235	235	58	2550	-
35	400	260	0.88	7.5	IE4	BG30-../S4E11MA6	20	66	133	400	480	198	225	260	260	260	46	2750	-
35	400	260	0.88	7.5	IE5	BG30-../S5E11LA6	20	66	133	400	480	260	260	260	260	260	58	2750	-
35	345	300	0.81	8.6	IE4	BG30-../S4E11MA6	17	58	116	345	415	225	255	300	300	300	46	2800	-
35	345	300	0.81	8.6	IE5	BG30-../S5E11LA6	17	58	116	345	415	300	300	300	300	300	58	2800	-
35	1210	86	2.3	2.46	IE4	BG40-../S4E11MA6	60	200	405	1210	1460	65	73	86	86	86	65	2150	-
35	1210	86	2.3	2.46	IE5	BG40-../S5E11LA6	60	200	405	1210	1460	86	86	86	86	86	77	2150	-
35	940	111	2	3.19	IE4	BG40-../S4E11MA6	47	156	310	940	1120	84	95	111	111	111	65	2350	-
35	940	111	2	3.19	IE5	BG40-../S5E11LA6	47	156	310	940	1120	111	111	111	111	111	77	2350	-
35	750	138	1.7	3.97	IE4	BG40-../S4E11MA6	37.5	125	250	750	900	105	119	138	138	138	65	2400	-
35	750	138	1.7	3.97	IE5	BG40-../S5E11LA6	37.5	125	250	750	900	138	138	138	138	138	77	2400	-
35	600	172	1.5	4.94	IE4	BG40-../S4E11MA6	30	101	200	600	720	130	148	172	172	172	65	2450	-
35	600	172	1.5	4.94	IE5	BG40-../S5E11LA6	30	101	200	600	720	172	172	172	172	172	77	2450	-
35	475	220	1.3	6.29	IE4	BG40-../S4E11MA6	23.5	79	158	475	570	166	188	220	220	220	65	2600	-
35	475	220	1.3	6.29	IE5	BG40-../S5E11LA6	23.5	79	158	475	570	220	220	220	220	220	77	2600	-
35	465	220	1.4	6.4	IE4	BG40-../S4E11MA6	23	78	156	465	560	169	192	220	220	220	65	3750	-
35	465	220	1.4	6.4	IE5	BG40-../S5E11LA6	23	78	156	465	560	220	220	220	220	220	77	3750	-
35	420	245	1.3	7.11	IE4	BG40-../S4E11MA6	21	70	140	420	500	188	210	245	245	245	65	3950	-
35	420	245	1.3	7.11	IE5	BG40-../S5E11LA6	21	70	140	420	500	245	245	245	245	245	77	3950	-
35	390	265	1.1	7.62	IE4	BG40-../S4E11MA6	19.5	65	131	390	470	200	225	265	265	265	65	2650	-
35	390																		

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 35 \text{ Nm}$  ( $P_N = 11 \text{ kW}$ )**


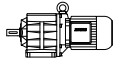
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE-	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>	
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]								
							150	500	1000	3000	3600	150	500	1000	3000	3600				[kg]
[Nm]	[1/min]	[Nm]	[-]	[1]	Classe															
35	260	400	0.96	11.49	IE5	BG40-../S5E11LA6	13	43.5	87	260	310	400	400	400	400	77	4600	-		
35	230	450	0.91	12.86	IE4	BG40-../S4E11MA6	11.5	38.5	77	230	275	340	385	450	450	65	4500	-		
35	230	450	0.91	12.86	IE5	BG40-../S5E11LA6	11.5	38.5	77	230	275	450	450	450	450	77	4500	-		
35	210	495	0.84	14.28	IE4	BG40-../S4E11MA6	10.5	35	70	210	250	375	425	495	495	65	4900	-		
35	210	495	0.84	14.28	IE5	BG40-../S5E11LA6	10.5	35	70	210	250	495	495	495	495	77	4900	-		
35	840	124	2.8	3.55	IE4	BG50-../S4E11MA6	42	140	280	840	1010	94	106	124	124	75	3300	-		
35	840	124	2.8	3.55	IE5	BG50-../S5E11LA6	42	140	280	840	1010	124	124	124	124	86	3300	-		
35	610	171	2.3	4.91	IE4	BG50-../S4E11MA6	30.5	101	200	610	730	130	147	171	171	75	3500	-		
35	610	171	2.3	4.91	IE5	BG50-../S5E11LA6	30.5	101	200	610	730	171	171	171	171	86	3500	-		
35	490	210	2.1	6.07	IE4	BG50-../S4E11MA6	24.5	82	164	490	590	160	182	210	210	75	4700	-		
35	490	210	2.1	6.07	IE5	BG50-../S5E11LA6	24.5	82	164	490	590	210	210	210	210	86	4700	-		
35	445	235	1.9	6.74	IE4	BG50-../S4E11MA6	22	74	148	445	530	178	200	235	235	75	3750	-		
35	445	235	1.9	6.74	IE5	BG50-../S5E11LA6	22	74	148	445	530	235	235	235	235	86	3750	-		
35	340	300	1.6	8.7	IE4	BG50-../S4E11MA6	17	57	114	340	410	230	260	300	300	75	5300	-		
35	340	300	1.6	8.7	IE5	BG50-../S5E11LA6	17	57	114	340	410	300	300	300	300	86	5300	-		
35	310	335	1.5	9.65	IE4	BG50-../S4E11MA6	15.5	51	103	310	370	255	285	335	335	75	5600	-		
35	310	335	1.5	9.65	IE5	BG50-../S5E11LA6	15.5	51	103	310	370	335	335	335	335	86	5600	-		
35	245	420	1.4	12.06	IE4	BG50-../S4E11MA6	12	41	82	245	295	315	360	420	420	75	5700	-		
35	245	420	1.4	12.06	IE5	BG50-../S5E11LA6	12	41	82	245	295	420	420	420	420	86	5700	-		
35	220	465	1.3	13.36	IE4	BG50-../S4E11MA6	11	37	74	220	265	350	400	465	465	75	6100	-		
35	220	465	1.3	13.36	IE5	BG50-../S5E11LA6	11	37	74	220	265	465	465	465	465	86	6100	-		
35	181	570	1.1	16.53	IE4	BG50-../S4E11MA6	9	30	60	181	215	435	495	570	570	75	6500	-		
35	181	570	1.1	16.53	IE5	BG50-../S5E11LA6	9	30	60	181	215	570	570	570	570	86	6500	-		
35	163	640	0.98	18.33	IE4	BG50-../S4E11MA6	8.1	27	54	163	196	485	540	640	640	75	7200	-		
35	163	640	0.98	18.33	IE5	BG50-../S5E11LA6	8.1	27	54	163	196	640	640	640	640	86	7200	-		
35	136	760	0.82	21.96	IE4	BG50-../S4E11MA6	6.8	22.5	45.5	136	163	580	650	760	760	75	8000	-		
35	136	760	0.82	21.96	IE5	BG50-../S5E11LA6	6.8	22.5	45.5	136	163	760	760	760	760	86	8000	-		
35	325	315	2.8	9.13	IE4	BG60-../S4E11MA6	16	54	109	325	390	240	270	315	315	107	9800	-		
35	325	315	2.8	9.13	IE5	BG60-../S5E11LA6	16	54	109	325	390	315	315	315	315	119	9800	-		
35	295	350	2.6	10.12	IE4	BG60-../S4E11MA6	14.5	49	98	295	355	265	300	350	350	107	10200	-		
35	295	350	2.6	10.12	IE5	BG60-../S5E11LA6	14.5	49	98	295	355	350	350	350	350	119	10200	-		
35	245	425	2.3	12.16	IE4	BG60-../S4E11MA6	12	41	82	245	295	320	360	425	425	107	10800	-		
35	245	425	2.3	12.16	IE5	BG60-../S5E11LA6	12	41	82	245	295	425	425	425	425	119	10800	-		
35	220	470	2.2	13.47	IE4	BG60-../S4E11MA6	11	37	74	220	265	355	400	470	470	107	11200	-		
35	220	470	2.2	13.47	IE5	BG60-../S5E11LA6	11	37	74	220	265	470	470	470	470	119	11200	-		
35	178	580	1.9	16.8	IE4	BG60-../S4E11MA6	8.9	29.5	59	178	210	445	500	580	580	107	12000	-		
35	178	580	1.9	16.8	IE5	BG60-../S5E11LA6	8.9	29.5	59	178	210	580	580	580	580	119	12000	-		
35	161	650	1.7	18.62	IE4	BG60-../S4E11MA6	8	26.5	53	161	193	490	550	650	650	107	12400	-		
35	161	650	1.7	18.62	IE5	BG60-../S5E11LA6	8	26.5	53	161	193	650	650	650	650	119	12400	-		
35	133	780	1.5	22.4	IE4	BG60-../S4E11MA6	6.6	22	44.5	133	160	590	670	780	780	107	13300	-		
35	133	780	1.5	22.4	IE5	BG60-../S5E11LA6	6.6	22	44.5	133	160	780	780	780	780	119	13300	-		
35	120	860	1.4	24.82	IE4	BG60-../S4E11MA6	6	20	40	120	145	650	740	860	860	107	13800	-		
35	120	860	1.4	24.82	IE5	BG60-../S5E11LA6	6	20	40	120	145	860	860	860	860	119	13800	-		
35	102	1020	1.2	29.31	IE4	BG60-../S4E11MA6	5.1	17	34	102	122	770	870	1020	1020	107	14800	-		
35	102	1020	1.2	29.31	IE5	BG60-../S5E11LA6	5.1	17	34	102	122	1020	1020	1020	1020	119	14800	-		
35	92	1130	1.1	32.48	IE4	BG60-../S4E11MA6	4.6	15	30.5	92	110	860	970	1130	1130	107	15400	-		
35	92	1130	1.1	32.48	IE5	BG60-../S5E11LA6	4.6	15	30.5	92	110	1130	1130	1130	1130	119	15400	-		
35	77	1350	0.88	38.85	IE4	BG60-../S4E11MA6	3.8	12.5	25.5	77	92	1020	1160	1350	1350	107	16000	-		
35	77	1350	0.88	38.85	IE5	BG60-../S5E11LA6	3.8	12.5	25.5	77	92	1350	1350	1350	1350	119	16000	-		
35	69	1500	0.8	43.05	IE4	BG60-../S4E11MA6	3.4	11.5	23	69	83	1140	1290	1500	1500	107	16000	-		
35	69	1500	0.8	43.05	IE5	BG60-../S5E11LA6	3.4	11.5	23	69	83	1500	1500	1500	1500	119	16000	-		
35	130	800	2.9	22.92	IE4	BG70-../S4E11MA6	6.5	21.5	43.5	130	157	600	680	800	800	138	15100	-		
35	130	800	2.9	22.92	IE5	BG70-../S5E11LA6	6.5	21.5	43.5	130	157	800	800	800	800	149	15100	-		
35	110	950	2.4	27.21	IE4	BG70-../S4E11MA6	5.5	18	36.5	110	132	720	810	950	950	138	16400	-		
35	110	950	2.4	27.21	IE5	BG70-../S5E11LA6	5.5	18	36.5	110	132	950	950	950	950	149	16400	-		
35	101	1030	2.2	29.69	IE4	BG70-../S4E11MA6	5	16.5	33.5	101	121	780	890	1030	1030	138	16900	-		
35	101	1030	2.2	29.69	IE5	BG70-../S5E11LA6	5	16.5	33.5	101	121	1030	1030	1030	1030	149	16900	-		
35	85	1230	1.9	35.24	IE4	BG70-../S4E11MA6	4.2	14	28	85	102	930	1050	1230	1230	138	18300	-		
35	85	1230	1.9	35.24	IE5	BG70-../S5E11LA6	4.2	14	28	85	102	1230	1230	1230	1230	149	18300	-		
35	76	1370	1.7	39.22	IE4	BG70-../S4E11MA6	3.8	12.5	25	76	91	1030	1170	1370	1370	138	19100	-		
35	76	1370	1.7	39.22	IE5	BG70-../S5E11LA6	3.8	12.5	25	76	91	1370	1370	1370	1370	149	19100	-		
35	64	1620	1.4	46.54	IE4	BG70-../S4E11MA6	3.2	10.5	21	64	77	1230	1390	1620	1620	138	20000	-		
35	64	1620	1.4	46.54	IE5	BG70-../S5E11LA6	3.2	10.5	21	64	77	1620	1620	1620	1620	149	20000	-		
35	59	1760	1.3	50.4	IE4	BG70-../S4E11MA6	2.9	9.9	19.5	59	71	1330	1510	1760	1760	138	20000	-		
35	59	1760	1.3	50.4	IE5	BG70-../S5E11LA6	2.9	9.9	19.5	59	71	1760	1760	1760	1760	149	20000	-		
35	50	2050	1.1	59.82	IE4	BG70-../S4E11MA6	2.5	8.3	16.5	50	60	1580	1790	2050	2050	138	20000	-		
35	50	2050	1.1	59.82	IE5	BG70-../S5E11LA6	2.5	8.3	16.5	50	60	2050	2050	2050	2050	149	20000	-		
35	54	1910	1	54.64	IE4	BG70Z-../S4E11MA6	2.7	9.1	18	54	65	1440	1630	1910	1910	164	20000	-		
35	54	1910	1	54.64	IE5	BG70Z-../S5E11LA6	2.7	9.1	18	54	65	1910	1910	1910	1910	176	20000	-		
35	46	2250	1	64.85	IE4	BG70Z-../S4E11MA6	2.3	7.7	15	46	55	1710	1940	2250	2250	164	20000	-		
35	46	2250	1	64.85	IE5	BG70Z-../S5E11LA6	2.3	7.7	15	46	55	2250	2250	2250	2250	1				



# BG-series helical-geared motors

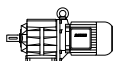
## Selection helical-geared motors - $n_1 = 3000 \frac{1}{min}$

### $M_N = 35 \text{ Nm}$ ( $P_N = 11 \text{ kW}$ )



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
35	47	2200	1.9	63.56	IE5	BG80Z-../S5E11LA6	2.3	7.8	15.5	47	56	2200	2200	2200	2200	204	26000	-	
35	45	2300	1.8	66.4	IE4	BG80Z-../S4E11MA6	2.2	7.5	15	45	54	1750	1990	2300	2300	234	26000	-	
35	45	2300	1.8	66.4	IE5	BG80Z-../S5E11LA6	2.2	7.5	15	45	54	2300	2300	2300	2300	246	26000	-	
35	40.5	2550	1.6	73.73	IE4	BG80Z-../S4E11MA6	2	6.7	13.5	40.5	48.5	1950	2200	2550	2550	234	26000	-	
35	40.5	2550	1.6	73.73	IE5	BG80Z-../S5E11LA6	2	6.7	13.5	40.5	48.5	2550	2550	2550	2550	246	26000	-	
35	35	2950	1.4	84.55	IE4	BG80Z-../S4E11MA6	1.7	5.9	11.5	35	42.5	2200	2500	2950	2950	234	26000	-	
35	35	2950	1.4	84.55	IE5	BG80Z-../S5E11LA6	1.7	5.9	11.5	35	42.5	2950	2950	2950	2950	246	26000	-	
35	31.5	3250	1.3	93.89	IE4	BG80Z-../S4E11MA6	1.5	5.3	10.5	31.5	38	2450	2800	3250	3250	234	26000	-	
35	31.5	3250	1.3	93.89	IE5	BG80Z-../S5E11LA6	1.5	5.3	10.5	31.5	38	3250	3250	3250	3250	246	26000	-	
35	26.5	3900	1.1	112.4	IE4	BG80Z-../S4E11MA6	1.3	4.4	8.8	26.5	32	2950	3350	3900	3900	234	26000	-	
35	26.5	3900	1.1	112.4	IE5	BG80Z-../S5E11LA6	1.3	4.4	8.8	26.5	32	3900	3900	3900	3900	246	26000	-	
35	24	4350	0.96	124.8	IE4	BG80Z-../S4E11MA6	1.2	4	8	24	28.5	3300	3700	4350	4350	234	26000	-	
35	24	4350	0.96	124.8	IE5	BG80Z-../S5E11LA6	1.2	4	8	24	28.5	4350	4350	4350	4350	246	26000	-	
35	20.5	5000	0.83	145.4	IE4	BG80Z-../S4E11MA6	1	3.4	6.8	20.5	24.5	3850	4350	5000	5000	234	26000	-	
35	20.5	5000	0.83	145.4	IE5	BG80Z-../S5E11LA6	1	3.4	6.8	20.5	24.5	5000	5000	5000	5000	246	26000	-	
35	35.5	2900	2.9	83.91	IE4	BG90Z-../S4E11MA6	1.7	5.9	11.5	35.5	42.5	2200	2500	2900	2900	336	65000	-	
35	35.5	2900	2.9	83.91	IE5	BG90Z-../S5E11LA6	1.7	5.9	11.5	35.5	42.5	2900	2900	2900	2900	348	65000	-	
35	31	3350	2.5	96.53	IE4	BG90Z-../S4E11MA6	1.5	5.1	10	31	37	2550	2850	3350	3350	336	65000	-	
35	31	3350	2.5	96.53	IE5	BG90Z-../S5E11LA6	1.5	5.1	10	31	37	3350	3350	3350	3350	348	65000	-	
35	28	3650	2.3	105.7	IE4	BG90Z-../S4E11MA6	1.4	4.7	9.4	28	34	2800	3150	3650	3650	336	65000	-	
35	28	3650	2.3	105.7	IE5	BG90Z-../S5E11LA6	1.4	4.7	9.4	28	34	3650	3650	3650	3650	348	65000	-	
35	23.5	4400	1.9	127.1	IE4	BG90Z-../S4E11MA6	1.1	3.9	7.8	23.5	28	3350	3800	4400	4400	336	65000	-	
35	23.5	4400	1.9	127.1	IE5	BG90Z-../S5E11LA6	1.1	3.9	7.8	23.5	28	4400	4400	4400	4400	348	65000	-	
35	21.5	4850	1.7	139.2	IE4	BG90Z-../S4E11MA6	1	3.5	7.1	21.5	25.5	3650	4150	4850	4850	336	65000	-	
35	21.5	4850	1.7	139.2	IE5	BG90Z-../S5E11LA6	1	3.5	7.1	21.5	25.5	4850	4850	4850	4850	348	65000	-	
35	18	5700	1.5	163	IE4	BG90Z-../S4E11MA6	0.9	3	6.1	18	22	4300	4850	5700	5700	336	65000	-	
35	18	5700	1.5	163	IE5	BG90Z-../S5E11LA6	0.9	3	6.1	18	22	5700	5700	5700	5700	348	65000	-	
35	16.5	6200	1.3	178.5	IE4	BG90Z-../S4E11MA6	0.8	2.8	5.6	16.5	20	4700	5300	6200	6200	336	65000	-	
35	16.5	6200	1.3	178.5	IE5	BG90Z-../S5E11LA6	0.8	2.8	5.6	16.5	20	6200	6200	6200	6200	348	65000	-	
35	14	7200	1.2	208.3	IE4	BG90Z-../S4E11MA6	0.7	2.4	4.8	14	17	5500	6200	7200	7200	336	65000	-	
35	14	7200	1.2	208.3	IE5	BG90Z-../S5E11LA6	0.7	2.4	4.8	14	17	7200	7200	7200	7200	348	65000	-	
35	13	7900	1.1	228.1	IE4	BG90Z-../S4E11MA6	0.65	2.1	4.3	13	15.5	6000	6800	7900	7900	336	65000	-	
35	13	7900	1.1	228.1	IE5	BG90Z-../S5E11LA6	0.65	2.1	4.3	13	15.5	7900	7900	7900	7900	348	65000	-	
35	13.5	7600	1.2	219.9	IE4	BG90G50-../S4E11MA6	0.65	2.2	4.5	13.5	16	5800	6500	7600	7600	353	65000	-	
35	13.5	7600	1.2	219.9	IE5	BG90G50-../S5E11LA6	0.65	2.2	4.5	13.5	16	7600	7600	7600	7600	365	65000	-	
35	11	9100	1	262.5	IE4	BG90G50-../S4E11MA6	0.55	1.9	3.8	11	13.5	6900	7800	9100	9100	353	65000	-	
35	11	9100	1	262.5	IE5	BG90G50-../S5E11LA6	0.55	1.9	3.8	11	13.5	9100	9100	9100	9100	365	65000	-	
35	10	10400	0.88	298.8	IE4	BG90G50-../S4E11MA6	0.5	1.6	3.3	10	12	7900	8900	10400	10400	353	65000	-	
35	10	10400	0.88	298.8	IE5	BG90G50-../S5E11LA6	0.5	1.6	3.3	10	12	10400	10400	10400	10400	365	65000	-	
35	16.5	6200	2.7	178.6	IE4	BG100-../S4E11MA6	0.8	2.7	5.5	16.5	20	4700	5300	6200	6200	453	90000	-	
35	16.5	6200	2.7	178.6	IE5	BG100-../S5E11LA6	0.8	2.7	5.5	16.5	20	6200	6200	6200	6200	465	90000	-	
35	15	6900	2.4	198.8	IE4	BG100-../S4E11MA6	0.75	2.5	5	15	18	5200	5900	6900	6900	453	90000	-	
35	15	6900	2.4	198.8	IE5	BG100-../S5E11LA6	0.75	2.5	5	15	18	6900	6900	6900	6900	465	90000	-	
35	12.5	8100	2.1	232.6	IE4	BG100-../S4E11MA6	0.6	2.1	4.2	12.5	15	6100	6900	8100	8100	453	90000	-	
35	12.5	8100	2.1	232.6	IE5	BG100-../S5E11LA6	0.6	2.1	4.2	12.5	15	8100	8100	8100	8100	465	90000	-	
35	11.5	9000	1.9	259	IE4	BG100-../S4E11MA6	0.55	1.9	3.8	11.5	13.5	6800	7700	9000	9000	453	90000	-	
35	11.5	9000	1.9	259	IE5	BG100-../S5E11LA6	0.55	1.9	3.8	11.5	13.5	9000	9000	9000	9000	465	90000	-	
35	11	9400	2	269.8	IE4	BG100Z-../S4E11MA6	0.55	1.8	3.7	11	13	7100	8000	9400	9400	543	90000	-	
35	11	9400	2	269.8	IE5	BG100Z-../S5E11LA6	0.55	1.8	3.7	11	13	9400	9400	9400	9400	555	90000	-	
35	9.9	10500	1.8	300.4	IE4	BG100Z-../S4E11MA6	0.49	1.6	3.3	9.9	11.5	7900	9000	10500	10500	543	90000	-	
35	9.9	10500	1.8	300.4	IE5	BG100Z-../S5E11LA6	0.49	1.6	3.3	9.9	11.5	10500	10500	10500	10500	555	90000	-	
35	8.7	12000	1.5	343.6	IE4	BG100Z-../S4E11MA6	0.43	1.4	2.9	8.7	10	9100	10300	12000	12000	543	90000	-	
35	8.7	12000	1.5	343.6	IE5	BG100Z-../S5E11LA6	0.43	1.4	2.9	8.7	10	12000	12000	12000	12000	555	90000	-	
35	7.8	13300	1.4	382.6	IE4	BG100Z-../S4E11MA6	0.39	1.3	2.6	7.8	9.4	10100	11400	13300	13300	543	90000	-	
35	7.8	13300	1.4	382.6	IE5	BG100Z-../S5E11LA6	0.39	1.3	2.6	7.8	9.4	13300	13300	13300	13300	555	90000	-	
35	6.5	15900	1.2	456.7	IE4	BG100Z-../S4E11MA6	0.32	1	2.1	6.5	7.8	12100	13700	15900	15900	543	90000	-	
35	6.5	15900	1.2	456.7	IE5	BG100Z-../S5E11LA6	0.32	1	2.1	6.5	7.8	15900	15900	15900	15900	555	90000	-	
35	5.8	17700	1	508.5	IE4	BG100Z-../S4E11MA6	0.29	0.95	1.9	5.8	7	13400	15200	17700	17700	543	90000	-	
35	5.8	17700	1	508.5	IE5	BG100Z-../S5E11LA6	0.29	0.95	1.9	5.8	7	17700	17700	17700	17700	555	90000	-	
35	5	20500	0.89	591.1	IE4	BG100Z-../S4E11MA6	0.25	0.8	1.6	5	6	15600	17700	20500	20500	543	90000	-	
35	5	20500	0.89	591.1	IE5	BG100Z-../S5E11LA6	0.25	0.8	1.6	5	6	20500	20500	20500	20500	555	90000	-	
35	4.5	23000	0.8	658.1	IE4	BG100Z-../S4E11MA6	0.22	0.75	1.5	4.5	5.4	17400	19700	23000	23000	543	90000	-	
35	4.5	23000	0.8	658.1	IE5	BG100Z-../S5E11LA6	0.22	0.75	1.5	4.5	5.4	23000	23000	23000	23000	555	90000	-	

### $M_N = 48 \text{ Nm}$ ( $P_N = 15 \text{ kW}$ )

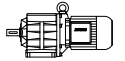


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
48	1120	128	1	2.67	IE5	BG30-../S5E11LA6	56	187	370	1120	1340	93	106	128	128	106	58	1450	-
48	880	163	0.85	3.4	IE5	BG30-../S5E11LA6	44	147	290	880	1050								

# BG-series helical-geared motors

## Selection helical-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 48 \text{ Nm}$ ( $P_N = 15 \text{ kW}$ )



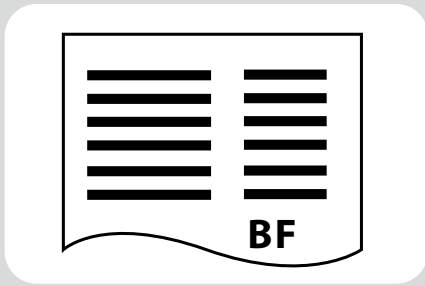
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
48	420	340	0.95	7.11	IE5	BG40-../S5E11LA6	21	70	140	420	500	245	280	340	340	280	77	3950	-
48	390	365	0.81	7.62	IE5	BG40-../S5E11LA6	19.5	65	131	390	470	265	300	365	365	300	77	2650	-
48	360	395	0.85	8.31	IE5	BG40-../S5E11LA6	18	60	120	360	430	290	330	395	395	330	77	4100	-
48	325	440	0.8	9.23	IE5	BG40-../S5E11LA6	16	54	108	325	390	320	365	440	440	365	77	4350	-
48	1210	118	2.6	2.47	IE5	BG50-../S5E11LA6	60	200	400	1210	1450	86	98	118	118	98	86	2900	-
48	840	170	2	3.55	IE5	BG50-../S5E11LA6	42	140	280	840	1010	124	142	170	170	142	86	3300	-
48	610	235	1.7	4.91	IE5	BG50-../S5E11LA6	30.5	101	200	610	730	171	196	235	235	196	86	3500	-
48	490	290	1.5	6.07	IE5	BG50-../S5E11LA6	24.5	82	164	490	590	210	240	290	290	240	86	4700	-
48	445	320	1.4	6.74	IE5	BG50-../S5E11LA6	22	74	148	445	530	235	265	320	320	265	86	3750	-
48	340	415	1.2	8.7	IE5	BG50-../S5E11LA6	17	57	114	340	410	300	345	415	415	345	86	5300	-
48	310	460	1.1	9.65	IE5	BG50-../S5E11LA6	15.5	51	103	310	370	335	385	460	460	385	86	5600	-
48	245	570	0.98	12.06	IE5	BG50-../S5E11LA6	12	41	82	245	295	420	480	570	570	480	86	5700	-
48	220	640	0.92	13.36	IE5	BG50-../S5E11LA6	11	37	74	220	265	465	530	640	640	530	86	6100	-
48	600	235	2.8	4.98	IE5	BG60-../S5E11LA6	30	100	200	600	720	174	199	235	235	199	119	7800	-
48	485	295	2.6	6.16	IE5	BG60-../S5E11LA6	24	81	162	485	580	215	245	295	295	245	119	8500	-
48	435	325	2.4	6.82	IE5	BG60-../S5E11LA6	21.5	73	146	435	520	235	270	325	325	270	119	8900	-
48	435	330	2.4	6.88	IE5	BG60-../S5E11LA6	21.5	72	145	435	520	240	275	330	330	275	119	8600	-
48	325	435	2	9.13	IE5	BG60-../S5E11LA6	16	54	109	325	390	315	365	435	435	365	119	9800	-
48	295	485	1.9	10.12	IE5	BG60-../S5E11LA6	14.5	49	98	295	355	350	400	485	485	400	119	10200	-
48	245	580	1.7	12.16	IE5	BG60-../S5E11LA6	12	41	82	245	295	425	485	580	580	485	119	10800	-
48	220	640	1.6	13.47	IE5	BG60-../S5E11LA6	11	37	74	220	265	470	530	640	640	530	119	11200	-
48	178	800	1.4	16.8	IE5	BG60-../S5E11LA6	8.9	29.5	59	178	210	580	670	800	800	670	119	12000	-
48	161	890	1.3	18.62	IE5	BG60-../S5E11LA6	8	26.5	53	161	193	650	740	890	890	740	119	12400	-
48	133	1070	1.1	22.4	IE5	BG60-../S5E11LA6	6.6	22	44.5	133	160	780	890	1070	1070	890	119	13300	-
48	120	1190	1	24.82	IE5	BG60-../S5E11LA6	6	20	40	120	145	860	990	1190	1190	990	119	13800	-
48	102	1400	0.85	29.31	IE5	BG60-../S5E11LA6	5.1	17	34	102	122	1020	1170	1400	1400	1170	119	14800	-
48	169	840	2.7	17.68	IE5	BG70-../S5E11LA6	8.4	28	56	169	200	610	700	840	840	700	149	13400	-
48	142	1000	2.3	20.98	IE5	BG70-../S5E11LA6	7.1	23.5	47.5	142	171	730	830	1000	1000	830	149	14600	-
48	130	1100	2.1	22.92	IE5	BG70-../S5E11LA6	6.5	21.5	43.5	130	157	800	910	1100	1100	910	149	15100	-
48	110	1300	1.8	27.21	IE5	BG70-../S5E11LA6	5.5	18	36.5	110	132	950	1080	1300	1300	1080	149	16400	-
48	101	1420	1.6	29.69	IE5	BG70-../S5E11LA6	5	16.5	33.5	101	121	1030	1180	1420	1420	1180	149	16900	-
48	85	1690	1.4	35.24	IE5	BG70-../S5E11LA6	4.2	14	28	85	102	1230	1400	1690	1690	1400	149	18300	-
48	76	1880	1.2	39.22	IE5	BG70-../S5E11LA6	3.8	12.5	25	76	91	1370	1560	1880	1880	1560	149	19100	-
48	64	2200	1	46.54	IE5	BG70-../S5E11LA6	3.2	10.5	21	64	77	1620	1860	2200	2200	1860	149	20000	-
48	59	2400	0.95	50.4	IE5	BG70-../S5E11LA6	2.9	9.9	19.5	59	71	1760	2000	2400	2400	2000	149	20000	-
48	50	2850	0.8	59.82	IE5	BG70-../S5E11LA6	2.5	8.3	16.5	50	60	2050	2350	2850	2850	2350	149	20000	-
48	102	1400	3	29.36	IE5	BG80-../S5E11LA6	5.1	17	34	102	122	1020	1170	1400	1400	1170	204	18900	-
48	87	1640	2.6	34.22	IE5	BG80-../S5E11LA6	4.3	14.5	29	87	105	1190	1360	1640	1640	1360	204	20200	-
48	78	1820	2.3	38	IE5	BG80-../S5E11LA6	3.9	13	26	78	94	1330	1520	1820	1820	1520	204	21300	-
48	68	2100	2	43.94	IE5	BG80-../S5E11LA6	3.4	11	22.5	68	81	1530	1750	2100	2100	1750	204	22600	-
48	61	2300	1.8	48.8	IE5	BG80-../S5E11LA6	3	10	20	61	73	1700	1950	2300	2300	1950	204	23800	-
48	52	2700	1.5	57.24	IE5	BG80-../S5E11LA6	2.6	8.7	17	52	62	2000	2250	2700	2700	2250	204	25400	-
48	47	3050	1.4	63.56	IE5	BG80-../S5E11LA6	2.3	7.8	15.5	47	56	2200	2500	3050	3050	2500	204	26000	-
48	45	3150	1.3	66.4	IE5	BG80Z-../S5E11LA6	2.2	7.5	15	45	54	2300	2650	3150	3150	2650	246	26000	-
48	40.5	3500	1.2	73.73	IE5	BG80Z-../S5E11LA6	2	6.7	13.5	40.5	48.5	2550	2900	3500	3500	2900	246	26000	-
48	35	4050	1	84.55	IE5	BG80Z-../S5E11LA6	1.7	5.9	11.5	35	42.5	2950	3350	4050	4050	3350	246	26000	-
48	31.5	4500	0.93	93.89	IE5	BG80Z-../S5E11LA6	1.5	5.3	10.5	31.5	38	3250	3750	4500	4500	3750	246	26000	-
48	52	2700	2.5	57.04	IE5	BG90Z-../S5E11LA6	2.6	8.7	17.5	52	63	1990	2250	2700	2700	2250	348	65000	-
48	48	2950	2.5	62.47	IE5	BG90Z-../S5E11LA6	2.4	8	16	48	57	2150	2450	2950	2950	2450	348	65000	-
48	39	3650	2.3	76.61	IE5	BG90Z-../S5E11LA6	1.9	6.5	13	39	46.5	2650	3050	3650	3650	3050	348	65000	-
48	35.5	4000	2.1	83.91	IE5	BG90Z-../S5E11LA6	1.7	5.9	11.5	35.5	42.5	2900	3350	4000	4000	3350	348	65000	-
48	31	4600	1.8	96.53	IE5	BG90Z-../S5E11LA6	1.5	5.1	10	31	37	3350	3850	4600	4600	3850	348	65000	-
48	28	5000	1.7	105.7	IE5	BG90Z-../S5E11LA6	1.4	4.7	9.4	28	34	3650	4200	5000	5000	4200	348	65000	-
48	23.5	6100	1.4	127.1	IE5	BG90Z-../S5E11LA6	1.1	3.9	7.8	23.5	28	4400	5000	6100	6100	5000	348	65000	-
48	21.5	6600	1.3	139.2	IE5	BG90Z-../S5E11LA6	1	3.5	7.1	21.5	25.5	4850	5500	6600	6600	5500	348	65000	-
48	18	7800	1.1	163	IE5	BG90Z-../S5E11LA6	0.9	3	6.1	18	22	5700	6500	7800	7800	6500	348	65000	-
48	16.5	8500	0.98	178.5	IE5	BG90Z-../S5E11LA6	0.8	2.8	5.6	16.5	20	6200	7100	8500	8500	7100	348	65000	-
48	14	9900	0.84	208.3	IE5	BG90Z-../S5E11LA6	0.7	2.4	4.8	14	17	7200	8300	9900	9900	8300	348	65000	-
48	13.5	10500	0.87	219.9	IE5	BG90G50-../S5E11LA6	0.65	2.2	4.5	13.5	16	7600	8700	10500	10500	8700	365	65000	-
48	25	5700	2.9	119.7	IE5	BG100-../S5E11LA6	1.2	4.1	8.3	25	30	4150	4750	5700	5700	4750	465	90000	-
48	21.5	6600	2.5	139.1	IE5	BG100-../S5E11LA6	1	3.5	7.1	21.5	25.5	4850	5500	6600	6600	5500	465	90000	-
48	19	7400	2.3	154.8	IE5	BG100-../S5E11LA6	0.95	3.2	6.4	19	23	5400	6100	7400	7400	6100	465	90000	-
48	16.5	8500	2	178.6	IE5	BG100-../S5E11LA6	0.8	2.7	5.5	16.5	20	6200	7100	8500	8500	7100	465	90000	-
48	15	9500	1.8	198.8	IE5	BG100-../S5E11LA6	0.75	2.5	5	15	18	6900	7900	9500	9500	7900	465	90000	-
48	12.5	11100	1.5	232.6	IE5	BG100-../S5E11LA6	0.6	2.1	4.2	12.5	15	8100	9300	11100	11100	9300	465	90000	-
48	11.5	12400	1.4	259	IE5	BG100-../S5E11LA6	0.55	1.9	3.8	11.5	13.5	9000	10300	12400	12400	10300	465	90000	-
48	11	12900	1.4	269.8	IE5	BG100Z-../S5E11LA6	0.55	1.8	3.7	11	13	9400	10700	12900	12900	1			

# Energy Efficient Geared Motors

## AC Variable Speed

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## BF-series shaft-mounted geared motors - Selection

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# Energy Efficient Geared Motors

## AC Variable Speed

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# BF-series shaft-mounted geared motors

## Description of shaft-mounted gear units

### Sizes

Bauer BF-series shaft-mounted geared motors are normally supplied in ten frame sizes and with torques of 90 to 18,500 Nm. Higher torques are available on request. The gear unit is accommodated in a sturdy cast housing

### Bauer service factors ( $f_B$ ) for shaft-mounted geared motors

Of the numerous factors influencing the total loading of a gear unit, the most important include:

- Mean torque (rated torque)
- Daily operating hours
- Severity of torque peaks (shock classification)
- Frequency of torque peaks (switching duty)

These factors can be represented in a simplified and practical manner by **service factors**. The tables and explanations below attempt to provide an objective description of the **shock classification**, rather than a classification of the driven machinery. Experience has shown that, in addition to the torque shocks caused by the driven machinery ( $M_x/M_N$ ), above all the power transmission components (clutches, chains etc.) plus the mass ratios play a decisive role in this.

See Bauer special imprint SD32 for more information.

### Continuous operation without switching frequency $Z \leq 1/h$

#### Factor $f_1$ for shock classification and operating time

Shock classification	Operating hours per day $t_d$	>4 h	>8 h	>16 h
		$\leq 8$ h	$\leq 16$ h	$\leq 24$ h
I		0.8	1.0	1.2
II		1.05	1.25	1.45
III		1.45	1.55	1.7

### Switching duty

#### Factor $f_2$ for shock classification and switching frequency

Switching frequency in single- shift operation  $t_d \leq 8$  h/d

Shock classification	$1 < Z \leq 100$	$100 < Z \leq 1000$	$1000 < Z$
I	0.95	1.1	1.15
II	1.2	1.35	1.4
III	1.55	1.6	1.6

Switching frequency in multiple- shift operation  $t_d > 8$  h/d

Shock classification	$1 < Z \leq 100$	$100 < Z \leq 1000$	$1000 < Z$
I	1.3	1.45	1.5
II	1.5	1.6	1.65
III	1,75	1.8	1.8

### Bauer service factor

Bauer Service factor  $f_B = f_1$  or  $f_B = f_2$

For example: Shock classification II for  $Z = 100$  switching operations per hour and multiple-shift operation yields a service factor  $f_B = f_2 = 1.5$

### Explanation of shock classification

#### Shock classification I:

Uniform without shock loads. All the following requirements must be satisfied:

- $Fl \leq 1,3$
- $M_x/M_N \leq 1,0$
- Shock-absorbing power transmission components (e.g. highly resilient, zero-play coupling,  $\phi N \geq 5^\circ$ )

# BF-series shaft-mounted geared motors

## Description of shaft-mounted gear units

### Shock classification II:

Moderate shock loads. At least one of the following conditions applies:

- $1.3 < FI \leq 4$
- $1 < Mx/M_N \leq 1.6$
- Shock-neutral power transmission components (e.g. gear wheels, zero-play rigid coupling or resilient coupling with  $\varphi N < 5^\circ$ )

### Shock classification III:

Heavy shock loads. At least one of the following conditions applies:

- $FI > 4$
- $1.6 < Mx/M_N \leq 2.0$
- Shock-amplifying power transmission components (e.g. coupling with play or chain drive)

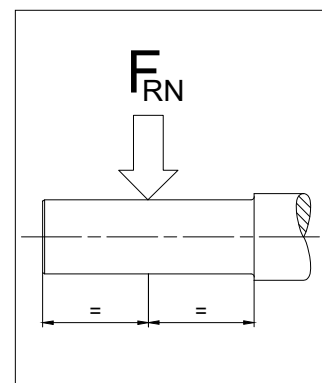
### Key to abbreviations

Z	Switching duty number of switching operations per hour
$t_d$	Daily operating time in hours (h/d)
FI	Factor of inertia $FI = (J_{ext} + J_{rot})/J_{rot}$
$J_{ext}$	Mass moment of inertia of the machine to be driven, in relation to the motor's rotor shaft ( $kgm^2$ )
$J_{rot}$	Mass moment of inertia of the motor rotor ( $kgm^2$ )
Mx	Highest impact torque above the static torque which can occur during normal operation or in emergency situations
$M_N$	Required static load torque for the application
$M_x/M_N$	Relative torque - Factor
$\varphi N$	Torsional offset of the resilient coupling under rated torque

### Selection tables shaft-mounted geared motors

### Key to abbreviations

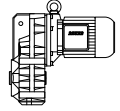
P	Rated output
$n_2$	Rated speed of the output shaft
i	Gear reduction ratio
$M_2$	Rated torque at the output shaft
$f_B$	Bauer service factor
$F_{RN}$	Maximum permissible radial force with normal bearings
$F_{RV}$	Maximum permissible radial force with reinforced bearings in each case with standard solid shaft (Code -.1 und -.2)



Use the selection tables to determine the size of geared motor required. The codes clearly define the Type of gear unit and output shaft (see chapter 11 „dimensional drawings shaft-mounted gear motors“).

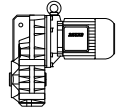
### Motor power overload protection

Motor-power ratings, particularly in conjunction with four-stage and multi-stage gear units, are more than ample in some instances. Consequently, and in much the same way as with low-power motors, rated current is not a measure of gear loading and cannot be used to protect the gear unit against overloading. It is advisable to provide gears at risk from excessive load or blockage with a protective mechanism (e. g., sliding clutch, sliding hub, shear pin or an alternative).

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 0.76 \text{ Nm}$  ( $P_N = 0.12 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
0.76	9.9	114	2.1	151.2	IE4	BF10Z-../S4E04SA4-1	0.95	3.3	6.6	9.9	11.5	114	114	114	114	114	21	6400	-
0.76	9	126	1.9	166.2	IE4	BF10Z-../S4E04SA4-1	0.9	3	6	9	10.5	126	126	126	126	126	21	6400	-
0.76	8.3	136	1.8	180.1	IE4	BF10Z-../S4E04SA4-1	0.8	2.7	5.5	8.3	9.9	136	136	136	136	136	21	6400	-
0.76	7.5	150	1.6	198	IE4	BF10Z-../S4E04SA4-1	0.75	2.5	5	7.5	9	150	150	150	150	150	21	6400	-
0.76	6.9	163	1.5	214.5	IE4	BF10Z-../S4E04SA4-1	0.65	2.3	4.6	6.9	8.3	163	163	163	163	163	21	6400	-
0.76	6.3	179	1.3	235.8	IE4	BF10Z-../S4E04SA4-1	0.6	2.1	4.2	6.3	7.6	179	179	179	179	179	21	6400	-
0.76	5.8	195	1.2	257.4	IE4	BF10Z-../S4E04SA4-1	0.55	1.9	3.8	5.8	6.9	195	195	195	195	195	21	6400	-
0.76	5.2	215	1.1	283.1	IE4	BF10Z-../S4E04SA4-1	0.5	1.7	3.5	5.2	6.3	215	215	215	215	215	21	6400	-
0.76	4.6	245	0.97	324.3	IE4	BF10Z-../S4E04SA4-1	0.46	1.5	3	4.6	5.5	245	245	245	245	245	21	6400	-
0.76	4.2	270	0.89	356.6	IE4	BF10Z-../S4E04SA4-1	0.42	1.4	2.8	4.2	5	270	270	270	270	270	21	6400	-
0.76	3.9	285	0.83	380.2	IE4	BF10Z-../S4E04SA4-1	0.39	1.3	2.6	3.9	4.7	285	285	285	285	285	21	6400	-
0.76	4.6	240	1.1	322.3	IE4	BF10G06-../S4E04SA4-1	0.46	1.5	3.1	4.6	5.5	240	240	240	240	240	25	6400	-
0.76	3.9	285	0.91	377.9	IE4	BF10G06-../S4E04SA4-1	0.39	1.3	2.6	3.9	4.7	285	285	285	285	285	25	6400	-
0.76	3.5	320	0.81	424.5	IE4	BF10G06-../S4E04SA4-1	0.35	1.1	2.3	3.5	4.2	320	320	320	320	320	25	6400	-
0.76	7.6	149	2.8	197.1	IE4	BF20Z-../S4E04SA4-1	0.75	2.5	5	7.6	9.1	149	149	149	149	149	28	7900	-
0.76	6.9	164	2.5	216.9	IE4	BF20Z-../S4E04SA4-1	0.65	2.3	4.6	6.9	8.2	164	164	164	164	164	28	7900	-
0.76	6.3	179	2.3	235.9	IE4	BF20Z-../S4E04SA4-1	0.6	2.1	4.2	6.3	7.6	179	179	179	179	179	28	7900	-
0.76	5.7	197	2.1	259.6	IE4	BF20Z-../S4E04SA4-1	0.55	1.9	3.8	5.7	6.9	197	197	197	197	197	28	7900	-
0.76	5	220	1.9	295.5	IE4	BF20Z-../S4E04SA4-1	0.5	1.6	3.3	5	6	220	220	220	220	220	28	7900	-
0.76	4.6	245	1.7	325.2	IE4	BF20Z-../S4E04SA4-1	0.46	1.5	3	4.6	5.5	245	245	245	245	245	28	7900	-
0.76	4.4	255	1.6	339.1	IE4	BF20Z-../S4E04SA4-1	0.44	1.4	2.9	4.4	5.3	255	255	255	255	255	28	7900	-
0.76	4	280	1.5	373.1	IE4	BF20Z-../S4E04SA4-1	0.4	1.3	2.6	4	4.8	280	280	280	280	280	28	7900	-
0.76	3.5	315	1.3	418.1	IE4	BF20Z-../S4E04SA4-1	0.35	1.1	2.3	3.5	4.3	315	315	315	315	315	28	7900	-
0.76	3.2	345	1.2	460	IE4	BF20Z-../S4E04SA4-1	0.32	1	2.1	3.2	3.9	345	345	345	345	345	28	7900	-
0.76	2.9	390	1.2	513.7	IE4	BF20G06-../S4E04SA4-1	0.29	0.95	1.9	2.9	3.5	390	390	390	390	390	31	7900	-
0.76	2.4	465	0.98	617	IE4	BF20G06-../S4E04SA4-1	0.24	0.8	1.6	2.4	2.9	465	465	465	465	465	31	7900	-
0.76	2	550	0.82	736.1	IE4	BF20G06-../S4E04SA4-1	0.2	0.65	1.3	2	2.4	550	550	550	550	550	31	7900	-
0.76	2.4	470	1.3	622.4	IE4	BF30G06-../S4E04SA4-1	0.24	0.8	1.6	2.4	2.8	470	470	470	470	470	41	7400	-
0.76	2.1	530	1.2	705.1	IE4	BF30G06-../S4E04SA4-1	0.21	0.7	1.4	2.1	2.5	530	530	530	530	530	41	7400	-
0.76	1.8	620	1	817.1	IE4	BF30G06-../S4E04SA4-1	0.18	0.6	1.2	1.8	2.2	620	620	620	620	620	41	7400	-
0.76	1.5	730	0.86	961.1	IE4	BF30G06-../S4E04SA4-1	0.15	0.5	1	1.5	1.8	730	730	730	730	730	41	7400	-

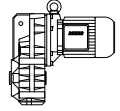
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 **$M_N = 1 \text{ Nm}$  ( $P_N = 0.157 \text{ kW}$ )**

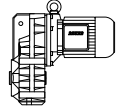
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1	9.9	151	1.6	151.2	IE2	BF10Z-../SHE04SA4-1	0.95	3.3	6.6	9.9	11.5	114	128	151	151	151	21	6400	-
1	9	166	1.4	166.2	IE2	BF10Z-../SHE04SA4-1	0.9	3	6	9	10.5	126	141	166	166	166	21	6400	-
1	8.3	180	1.3	180.1	IE2	BF10Z-../SHE04SA4-1	0.8	2.7	5.5	8.3	9.9	136	153	180	180	180	21	6400	-
1	7.5	198	1.2	198	IE2	BF10Z-../SHE04SA4-1	0.75	2.5	5	7.5	9	150	168	198	198	198	21	6400	-
1	6.9	210	1.1	214.5	IE2	BF10Z-../SHE04SA4-1	0.65	2.3	4.6	6.9	8.3	163	182	210	210	210	21	6400	-
1	6.3	235	1	235.8	IE2	BF10Z-../SHE04SA4-1	0.6	2.1	4.2	6.3	7.6	179	200	235	235	235	21	6400	-
1	5.8	255	0.93	257.4	IE2	BF10Z-../SHE04SA4-1	0.55	1.9	3.8	5.8	6.9	195	215	255	255	255	21	6400	-
1	5.2	280	0.85	283.1	IE2	BF10Z-../SHE04SA4-1	0.5	1.7	3.5	5.2	6.3	215	240	280	280	280	21	6400	-
1	4.6	320	0.81	322.3	IE2	BF10G06-../SHE04SA4-1	0.46	1.5	3.1	4.6	5.5	240	270	320	320	320	25	6400	-
1	10.5	141	3	141.2	IE2	BF20Z-../SHE04SA4-1	1	3.5	7	10.5	12.5	107	120	141	141	141	28	7900	-
1	9.6	155	2.7	155.4	IE2	BF20Z-../SHE04SA4-1	0.95	3.2	6.4	9.6	11.5	118	132	155	155	155	28	7900	-
1	9.1	164	2.6	164.3	IE2	BF20Z-../SHE04SA4-1	0.9	3	6	9.1	10.5	124	139	164	164	164	28	7900	-
1	8.2	180	2.3	180.8	IE2	BF20Z-../SHE04SA4-1	0.8	2.7	5.5	8.2	9.9	137	153	180	180	180	28	7900	-
1	7.6	197	2.1	197.1	IE2	BF20Z-../SHE04SA4-1	0.75	2.5	5	7.6	9.1	149	167	197	197	197	28	7900	-
1	6.9	215	1.9	216.9	IE2	BF20Z-../SHE04SA4-1	0.65	2.3	4.6	6.9	8.2	164	184	215	215	215	28	7900	-
1	6.3	235	1.8	235.9	IE2	BF20Z-../SHE04SA4-1	0.6	2.1	4.2	6.3	7.6	179	200	235	235	235	28	7900	-
1	5.7	255	1.6	259.6	IE2	BF20Z-../SHE04SA4-1	0.55	1.9	3.8	5.7	6.9	197	220	255	255	255	28	7900	-
1	5	295	1.4	295.5	IE2	BF20Z-../SHE04SA4-1	0.5	1.6	3.3	5	6	220	250	295	295	295	28	7900	-
1	4.6	325	1.3	325.2	IE2	BF20Z-../SHE04SA4-1	0.46	1.5	3	4.6	5.5	245	275	325	325	325	28	7900	-
1	4.4	335	1.2	339.1	IE2	BF20Z-../SHE04SA4-1	0.44	1.4	2.9	4.4	5.3	255	285	335	335	335	28	7900	-
1	4	370	1.1	373.1	IE2	BF20Z-../SHE04SA4-1	0.4	1.3	2.6	4	4.8	280	315	370	370	370	28	7900	-
1	3.5	415	1	418.1	IE2	BF20Z-../SHE04SA4-1	0.35	1.1	2.3	3.5	4.3	315	355	415	415	415	28	7900	-
1	3.2	460	0.91	460	IE2	BF20Z-../SHE04SA4-1	0.32	1	2.1	3.2	3.9	345	390	460	460	460	28	7900	-
1	2.9	510	0.9	513.7	IE2	BF20G06-../SHE04SA4-1	0.29	0.95	1.9	2.9	3.5	390	435	510	510	510	31	7900	-
1	2.4	620	1	622.4	IE2	BF30G06-../SHE04SA4-1	0.24	0.8	1.6	2.4	2.8	470	520	620	620	620	41	7400	-
1	2.1	700	0.89	705.1	IE2	BF30G06-../SHE04SA4-1	0.21	0.7	1.4	2.1	2.5	530	590	700	700	700	41	7400	-

# BF-series shaft-mounted geared motors

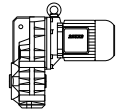
## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.2 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.3	56	34.5	2.7	26.76	IE5	BF06-../S5E06MA4	5.6	18.5	37	56	67	34.5	34.5	34.5	34.5	34.5	12	3000	-
1.3	47.5	40.5	2.3	31.5	IE5	BF06-../S5E06MA4	4.7	15.5	31.5	47.5	57	40.5	40.5	40.5	40.5	40.5	12	3200	-
1.3	39.5	48.5	1.9	37.69	IE5	BF06-../S5E06MA4	3.9	13	26.5	39.5	47.5	48.5	48.5	48.5	48.5	12	3500	-	
1.3	32.5	59	1.6	46.14	IE5	BF06-../S5E06MA4	3.2	10.5	21.5	32.5	39	59	59	59	59	12	3800	-	
1.3	25.5	75	1.3	58.33	IE5	BF06-../S5E06MA4	2.5	8.5	17	25.5	30.5	75	75	75	75	12	4000	-	
1.3	22	86	1.1	66.82	IE5	BF06-../S5E06MA4	2.2	7.4	14.5	22	26.5	86	86	86	86	12	4000	-	
1.3	17.5	108	0.87	83.61	IE5	BF06-../S5E06MA4	1.7	5.9	11.5	17.5	21.5	108	108	108	108	12	4000	-	
1.3	24	80	3	61.55	IE5	BF10-../S5E06MA4	2.4	8.1	16	24	29	80	80	80	80	23	4700	-	
1.3	22	87	2.7	67.69	IE5	BF10-../S5E06MA4	2.2	7.3	14.5	22	26.5	87	87	87	87	23	4900	-	
1.3	19	100	2.4	77.55	IE5	BF10-../S5E06MA4	1.9	6.4	12.5	19	23	100	100	100	100	23	5100	-	
1.3	17.5	110	2.2	85.27	IE5	BF10-../S5E06MA4	1.7	5.8	11.5	17.5	21	110	110	110	110	23	5300	-	
1.3	16	118	2	90.91	IE5	BF10-../S5E06MA4	1.6	5.4	10.5	16	19.5	118	118	118	118	23	5400	-	
1.3	15	129	1.8	99.97	IE5	BF10-../S5E06MA4	1.5	5	10	15	18	129	129	129	129	23	5600	-	
1.3	13	145	1.6	112.3	IE5	BF10-../S5E06MA4	1.3	4.4	8.9	13	16	145	145	145	145	23	5900	-	
1.3	12	160	1.5	123.5	IE5	BF10-../S5E06MA4	1.2	4	8	12	14.5	160	160	160	160	23	6100	-	
1.3	11.5	167	1.4	128.9	IE5	BF10-../S5E06MA4	1.1	3.8	7.7	11.5	13.5	167	167	167	167	23	6200	-	
1.3	10.5	184	1.3	141.8	IE5	BF10-../S5E06MA4	1	3.5	7	10.5	12.5	184	184	184	184	23	6400	-	
1.3	9.9	196	1.2	151.2	IE5	BF10Z-../S5E06MA4	0.95	3.3	6.6	9.9	11.5	196	196	196	196	24	6400	-	
1.3	9	215	1.1	166.2	IE5	BF10Z-../S5E06MA4	0.9	3	6	9	10.5	215	215	215	215	24	6400	-	
1.3	8.3	230	1	180.1	IE5	BF10Z-../S5E06MA4	0.8	2.7	5.5	8.3	9.9	230	230	230	230	24	6400	-	
1.3	7.5	255	0.93	198	IE5	BF10Z-../S5E06MA4	0.75	2.5	5	7.5	9	255	255	255	255	24	6400	-	
1.3	6.9	275	0.86	214.5	IE5	BF10Z-../S5E06MA4	0.65	2.3	4.6	6.9	8.3	275	275	275	275	24	6400	-	
1.3	13.5	143	2.9	110.2	IE5	BF20-../S5E06MA4	1.3	4.5	9	13.5	16	143	143	143	143	30	7300	-	
1.3	12	160	2.6	123.5	IE5	BF20-../S5E06MA4	1.2	4	8	12	14.5	160	160	160	160	30	7600	-	
1.3	11	176	2.4	135.9	IE5	BF20-../S5E06MA4	1.1	3.6	7.3	11	13	176	176	176	176	30	7900	-	
1.3	10.5	183	2.3	141.2	IE5	BF20Z-../S5E06MA4	1	3.5	7	10.5	12.5	183	183	183	183	31	7900	-	
1.3	9.6	200	2.1	155.4	IE5	BF20Z-../S5E06MA4	0.95	3.2	6.4	9.6	11.5	200	200	200	200	31	7900	-	
1.3	9.1	210	2	164.3	IE5	BF20Z-../S5E06MA4	0.9	3	6	9.1	10.5	210	210	210	210	31	7900	-	
1.3	8.2	235	1.8	180.8	IE5	BF20Z-../S5E06MA4	0.8	2.7	5.5	8.2	9.9	235	235	235	235	31	7900	-	
1.3	7.6	255	1.6	197.1	IE5	BF20Z-../S5E06MA4	0.75	2.5	5	7.6	9.1	255	255	255	255	31	7900	-	
1.3	6.9	280	1.5	216.9	IE5	BF20Z-../S5E06MA4	0.65	2.3	4.6	6.9	8.2	280	280	280	280	31	7900	-	
1.3	6.3	305	1.4	235.9	IE5	BF20Z-../S5E06MA4	0.6	2.1	4.2	6.3	7.6	305	305	305	305	31	7900	-	
1.3	5.7	335	1.2	259.6	IE5	BF20Z-../S5E06MA4	0.55	1.9	3.8	5.7	6.9	335	335	335	335	31	7900	-	
1.3	5	380	1.1	295.5	IE5	BF20Z-../S5E06MA4	0.5	1.6	3.3	5	6	380	380	380	380	31	7900	-	
1.3	4.6	420	0.99	325.2	IE5	BF20Z-../S5E06MA4	0.46	1.5	3	4.6	5.5	420	420	420	420	31	7900	-	
1.3	4.4	440	0.95	339.1	IE5	BF20Z-../S5E06MA4	0.44	1.4	2.9	4.4	5.3	440	440	440	440	31	7900	-	
1.3	4	485	0.87	373.1	IE5	BF20Z-../S5E06MA4	0.4	1.3	2.6	4	4.8	485	485	485	485	31	7900	-	
1.3	9	215	2.6	165.8	IE5	BF30Z-../S5E06MA4	0.9	3	6	9	10.5	215	215	215	215	42	7400	-	
1.3	8.4	225	2.5	176.6	IE5	BF30Z-../S5E06MA4	0.8	2.8	5.6	8.4	10	225	225	225	225	42	7400	-	
1.3	7.7	250	2.3	194.3	IE5	BF30Z-../S5E06MA4	0.75	2.5	5.1	7.7	9.2	250	250	250	250	42	7400	-	
1.3	6.6	290	2	224.8	IE5	BF30Z-../S5E06MA4	0.65	2.2	4.4	6.6	8	290	290	290	290	42	7400	-	
1.3	6	320	1.8	247.3	IE5	BF30Z-../S5E06MA4	0.6	2	4	6	7.2	320	320	320	320	42	7400	-	
1.3	5.6	340	1.7	263.5	IE5	BF30Z-../S5E06MA4	0.55	1.8	3.7	5.6	6.8	340	340	340	340	42	7400	-	
1.3	5.1	375	1.5	289.8	IE5	BF30Z-../S5E06MA4	0.5	1.7	3.4	5.1	6.2	375	375	375	375	42	7400	-	
1.3	4.8	400	1.4	310.7	IE5	BF30Z-../S5E06MA4	0.48	1.6	3.2	4.8	5.7	400	400	400	400	42	7400	-	
1.3	4.3	440	1.3	341.8	IE5	BF30Z-../S5E06MA4	0.43	1.4	2.9	4.3	5.2	440	440	440	440	42	7400	-	
1.3	3.9	485	1.2	375.1	IE5	BF30Z-../S5E06MA4	0.39	1.3	2.6	3.9	4.7	485	485	485	485	42	7400	-	
1.3	3.6	530	1.1	412.6	IE5	BF30Z-../S5E06MA4	0.36	1.2	2.4	3.6	4.3	530	530	530	530	42	7400	-	
1.3	3.2	600	0.95	463.3	IE5	BF30Z-../S5E06MA4	0.32	1	2.1	3.2	3.8	600	600	600	600	42	7400	-	
1.3	2.9	660	0.86	509.6	IE5	BF30Z-../S5E06MA4	0.29	0.95	1.9	2.9	3.5	660	660	660	660	42	7400	-	
1.3	2.7	690	0.82	537	IE5	BF30Z-../S5E06MA4	0.27	0.9	1.8	2.7	3.3	690	690	690	690	42	7400	-	
1.3	5.9	325	2.7	253.2	IE5	BF40Z-../S5E06MA4	0.55	1.9	3.9	5.9	7.1	325	325	325	325	53	10600	-	
1.3	5.3	360	2.5	278.5	IE5	BF40Z-../S5E06MA4	0.5	1.7	3.5	5.3	6.4	360	360	360	360	53	10600	-	
1.3	5	380	2.3	295.1	IE5	BF40Z-../S5E06MA4	0.5	1.6	3.3	5	6	380	380	380	380	53	10600	-	
1.3	4.6	420	2.1	324.7	IE5	BF40Z-../S5E06MA4	0.46	1.5	3	4.6	5.5	420	420	420	420	53	10600	-	
1.3	4.3	450	2	346.8	IE5	BF40Z-../S5E06MA4	0.43	1.4	2.8	4.3	5.1	450	450	450	450	53	10600	-	
1.3	3.9	495	1.8	381.5	IE5	BF40Z-../S5E06MA4	0.39	1.3	2.6	3.9	4.7	495	495	495	495	53	10600	-	
1.3	3.5	540	1.7	417.3	IE5	BF40Z-../S5E06MA4	0.35	1.1	2.3	3.5	4.3	540	540	540	540	53	10600	-	
1.3	3.2	590	1.5	459.1	IE5	BF40Z-../S5E06MA4	0.32	1	2.1	3.2	3.9	590	590	590	590	53	10600	-	
1.3	2.9	660	1.3	514.6	IE5	BF40Z-../S5E06MA4	0.29	0.95	1.9	2.9	3.4	660	660	660	660	53	10600	-	
1.3	2.6	730	1.2	566.1	IE5	BF40Z-../S5E06MA4	0.26	0.85	1.7	2.6	3.1	730	730	730	730	53	10600	-	
1.3	2.5	770	1.3	597.3	IE5	BF40G10-../S5E06MA4	0.25	0.8	1.6	2.5	3	770	770	770	770	58	10600	-	
1.3	2	950	1.1	731.6	IE5	BF40G10-../S5E06MA4	0.2	0.65	1.3	2	2.4	950	950	950	950	58	10600	-	
1.3	1.6	1200	0.83	928.9	IE5	BF40G10-../S5E06MA4	0.16	0.5	1	1.6	1.9	1200	1200	1200	1200	58	10600	-	
1.3	4.2	460	2.8	354	IE5	BF50Z-../S5E06MA4	0.42	1.4	2.8	4.2	5	460	460	460	460	82	13600	-	
1.3	3.8	510	2.5	392.8	IE5	BF50Z-../S5E06MA4	0.38	1.2	2.5	3.8	4.5	510	510	510	510	82	13600	-	
1.3	3.4	570	2.3	439.3	IE5	BF50Z-../S5E06MA4	0.34	1.1	2.2	3.4	4	570	570	570	570	82	13600	-	
1.3	3	640	2	496.4	IE5	BF50Z-../S5E06MA4	0.3	1	2	3	3.6	640	640	640	640	82	13600	-	
1.3	2.7	720	1.8	555.2	IE5	BF50Z-../S5E06MA4	0.27	0.9	1.8	2.7	3.2	720	720	720	720	82	13600	-	
1.3	2.6	720	1.9	555.9	IE5	BF50G10-../S5E06MA4	0.26	0.85	1.7	2.6	3.2	720	720	720	720	86	13600	-	
1.3	2.2	880	1.6	680.9	IE5	BF50G10-../S5E06MA4	0.22	0.7	1.4	2.2	2.6	880	880	880	880				

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.2 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.3	1.5	1210	2.1	937.6	IE5	BF60G20-../S5E06MA4	0.15	0.5	1	1.5	1.9	1210	1210	1210	1210	1210	134	15300	43300
1.3	1.2	1570	1.6	1211	IE5	BF60G20-../S5E06MA4	0.12	0.41	0.8	1.2	1.4	1570	1570	1570	1570	1570	134	15300	43300
1.3	1	1940	1.3	1494	IE5	BF60G20-../S5E06MA4	0.1	0.33	0.65	1	1.2	1940	1940	1940	1940	1940	134	15300	43300
1.3	0.9	2150	1.2	1658	IE5	BF60G20-../S5E06MA4	0.09	0.3	0.6	0.9	1	2150	2150	2150	2150	2150	134	15300	43300
1.3	0.75	2500	0.98	1955	IE5	BF60G20-../S5E06MA4	0.075	0.25	0.5	0.75	0.9	2500	2500	2500	2500	2500	134	15300	43300
1.3	0.65	2800	0.89	2172	IE5	BF60G20-../S5E06MA4	0.065	0.23	0.46	0.65	0.8	2800	2800	2800	2800	2800	134	15300	43300
1.3	0.9	2100	2.7	1621	IE5	BF70G20-../S5E06MA4	0.09	0.3	0.6	0.9	1.1	2100	2100	2100	2100	2100	212	16100	47700
1.3	0.75	2450	2.3	1912	IE5	BF70G20-../S5E06MA4	0.075	0.26	0.5	0.75	0.9	2450	2450	2450	2450	2450	212	16100	47700
1.3	0.6	3150	1.8	2448	IE5	BF70G20-../S5E06MA4	0.06	0.2	0.4	0.6	0.7	3150	3150	3150	3150	3150	212	16100	47700
1.3	0.5	3700	1.5	2849	IE5	BF70G20-../S5E06MA4	0.05	0.17	0.35	0.5	0.6	3700	3700	3700	3700	3700	212	16100	47700
1.3	0.43	4400	1.3	3417	IE5	BF70G20-../S5E06MA4	0.043	0.14	0.29	0.43	0.5	4400	4400	4400	4400	4400	212	16100	47700
1.3	0.36	5300	1.1	4090	IE5	BF70G20-../S5E06MA4	0.036	0.12	0.24	0.36	0.44	5300	5300	5300	5300	5300	212	16100	47700
1.3	0.33	5900	0.97	4542	IE5	BF70G20-../S5E06MA4	0.033	0.11	0.22	0.33	0.39	5900	5900	5900	5900	5900	212	16100	47700
1.3	0.29	6600	0.86	5124	IE5	BF70G20-../S5E06MA4	0.029	0.095	0.19	0.29	0.35	6600	6600	6600	6600	6600	212	16100	47700

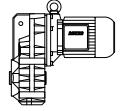
 **$M_N = 1.6 \text{ Nm}$  ( $P_N = 0.25 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.6	73	32.5	2.9	20.42	IE4	BF06-../S4E06MA4	7.3	24	48.5	73	88	32.5	32.5	32.5	32.5	32.5	12	2700	-
1.6	56	42.5	2.2	26.76	IE4	BF06-../S4E06MA4	5.6	18.5	37	56	67	42.5	42.5	42.5	42.5	42.5	12	3000	-
1.6	47.5	50	1.9	31.5	IE4	BF06-../S4E06MA4	4.7	15.5	31.5	47.5	57	50	50	50	50	50	12	3200	-
1.6	39.5	60	1.6	37.69	IE4	BF06-../S4E06MA4	3.9	13	26.5	39.5	47.5	60	60	60	60	60	12	3500	-
1.6	32.5	73	1.3	46.14	IE4	BF06-../S4E06MA4	3.2	10.5	21.5	32.5	39	73	73	73	73	73	12	3800	-
1.6	25.5	93	1	58.33	IE4	BF06-../S4E06MA4	2.5	8.5	17	25.5	30.5	93	93	93	93	93	12	4000	-
1.6	22	106	0.89	66.82	IE4	BF06-../S4E06MA4	2.2	7.4	14.5	22	26.5	106	106	106	106	106	12	4000	-
1.6	29	82	2.9	51.28	IE4	BF10-../S4E06MA4	2.9	9.7	19.5	29	35	82	82	82	82	82	23	4400	-
1.6	26.5	90	2.7	56.39	IE4	BF10-../S4E06MA4	2.6	8.8	17.5	26.5	31.5	90	90	90	90	90	23	4550	-
1.6	24	98	2.4	61.55	IE4	BF10-../S4E06MA4	2.4	8.1	16	24	29	98	98	98	98	98	23	4700	-
1.6	22	108	2.2	67.69	IE4	BF10-../S4E06MA4	2.2	7.3	14.5	22	26.5	108	108	108	108	108	23	4900	-
1.6	19	124	1.9	77.55	IE4	BF10-../S4E06MA4	1.9	6.4	12.5	19	23	124	124	124	124	124	23	5100	-
1.6	17.5	136	1.8	85.27	IE4	BF10-../S4E06MA4	1.7	5.8	11.5	17.5	21	136	136	136	136	136	23	5300	-
1.6	16	145	1.6	90.91	IE4	BF10-../S4E06MA4	1.6	5.4	10.5	16	19.5	145	145	145	145	145	23	5400	-
1.6	15	159	1.5	99.97	IE4	BF10-../S4E06MA4	1.5	5	10	15	18	159	159	159	159	159	23	5600	-
1.6	13	179	1.3	112.3	IE4	BF10-../S4E06MA4	1.3	4.4	8.9	13	16	179	179	179	179	179	23	5900	-
1.6	12	197	1.2	123.5	IE4	BF10-../S4E06MA4	1.2	4	8	12	14.5	197	197	197	197	197	23	6100	-
1.6	11.5	205	1.2	128.9	IE4	BF10-../S4E06MA4	1.1	3.8	7.7	11.5	13.5	205	205	205	205	205	23	6200	-
1.6	10.5	225	1.1	141.8	IE4	BF10-../S4E06MA4	1	3.5	7	10.5	12.5	225	225	225	225	225	23	6400	-
1.6	9.9	240	0.99	151.2	IE4	BF10Z-../S4E06MA4	0.95	3.3	6.6	9.9	11.5	240	240	240	240	240	24	6400	-
1.6	9	265	0.9	166.2	IE4	BF10Z-../S4E06MA4	0.9	3	6	9	10.5	265	265	265	265	265	24	6400	-
1.6	8.3	285	0.83	180.1	IE4	BF10Z-../S4E06MA4	0.8	2.7	5.5	8.3	9.9	285	285	285	285	285	24	6400	-
1.6	17	139	3	87.31	IE4	BF20-../S4E06MA4	1.7	5.7	11	17	20.5	139	139	139	139	139	30	6600	-
1.6	15.5	153	2.7	96.08	IE4	BF20-../S4E06MA4	1.5	5.2	10	15.5	18.5	153	153	153	153	153	30	6900	-
1.6	14.5	160	2.6	100.2	IE4	BF20-../S4E06MA4	1.4	4.9	9.9	14.5	17.5	160	160	160	160	160	30	7000	-
1.6	13.5	176	2.4	110.2	IE4	BF20-../S4E06MA4	1.3	4.5	9	13.5	16	176	176	176	176	176	30	7300	-
1.6	12	197	2.1	123.5	IE4	BF20-../S4E06MA4	1.2	4	8	12	14.5	197	197	197	197	197	30	7600	-
1.6	11	215	1.9	135.9	IE4	BF20-../S4E06MA4	1.1	3.6	7.3	11	13	215	215	215	215	215	30	7900	-
1.6	10.5	225	1.9	141.2	IE4	BF20Z-../S4E06MA4	1	3.5	7	10.5	12.5	225	225	225	225	225	31	7900	-
1.6	9.6	245	1.7	155.4	IE4	BF20Z-../S4E06MA4	0.95	3.2	6.4	9.6	11.5	245	245	245	245	245	31	7900	-
1.6	9.1	260	1.6	164.3	IE4	BF20Z-../S4E06MA4	0.9	3	6	9.1	10.5	260	260	260	260	260	31	7900	-
1.6	8.2	285	1.5	180.8	IE4	BF20Z-../S4E06MA4	0.8	2.7	5.5	8.2	9.9	285	285	285	285	285	31	7900	-
1.6	7.6	315	1.3	197.1	IE4	BF20Z-../S4E06MA4	0.75	2.5	5	7.6	9.1	315	315	315	315	315	31	7900	-
1.6	6.9	345	1.2	216.9	IE4	BF20Z-../S4E06MA4	0.65	2.3	4.6	6.9	8.2	345	345	345	345	345	31	7900	-
1.6	6.3	375	1.1	235.9	IE4	BF20Z-../S4E06MA4	0.6	2.1	4.2	6.3	7.6	375	375	375	375	375	31	7900	-
1.6	5.7	415	1	259.6	IE4	BF20Z-../S4E06MA4	0.55	1.9	3.8	5.7	6.9	415	415	415	415	415	31	7900	-
1.6	5	470	0.89	295.5	IE4	BF20Z-../S4E06MA4	0.5	1.6	3.3	5	6	470	470	470	470	470	31	7900	-
1.6	4.6	520	0.81	325.2	IE4	BF20Z-../S4E06MA4	0.46	1.5	3	4.6	5.5	520	520	520	520	520	31	7900	-
1.6	12.5	189	3	118.3	IE4	BF30-../S4E06MA4	1.2	4.2	8.4	12.5	15	189	189	189	189	189	40	7000	-
1.6	12	199	2.9	124.7	IE4	BF30-../S4E06MA4	1.2	4	8	12	14	199	199	199	199	199	40	7100	-
1.6	10.5	215	2.6	137.1	IE4	BF30-../S4E06MA4	1	3.6	7.2	10.5	13	215	215	215	215	215	40	7400	-
1.6	9.9	240	2.4	150.7	IE4	BF30Z-../S4E06MA4	0.95	3.3	6.6	9.9	11.5	240	240	240	240	240	42	7400	-
1.6	9	265	2.1	165.8	IE4	BF30Z-../S4E06MA4	0.9	3	6	9	10.5	265	265	265	265	265	42	7400	-
1.6	8.4	280	2	176.6	IE4	BF30Z-../S4E06MA4	0.8	2.8	5.6	8.4	10	280	280	280	280	280	42	7400	-
1.6	7.7	310	1.8	194.3	IE4	BF30Z-../S4E06MA4	0.75	2.5	5.1	7.7	9.2	310	310	310	310	310	42	7400	-
1.6	6.6	355	1.6	224.8	IE4	BF30Z-../S4E06MA4	0.65	2.2	4.4	6.6	8	355	355	355	355	355	42	7400	-
1.6	6	395	1.4	247.3	IE4	BF30Z-../S4E06MA4	0.6	2	4	6	7.2	395	395	395	395	395	42	7400	-
1.6	5.6	420	1.4	263.5	IE4	BF30Z-../S4E06MA4	0.55	1.8	3.7	5.6	6.8	420	420	420	420	420	42	7400	-
1.6	5.1	460	1.2	289.8	IE4	BF30Z-../S4E06MA4	0.5	1.7	3.4	5.1	6.2	460	460	460	460	460	42	7400	-
1.6	4.8	495	1.1	310.7	IE4	BF30Z-../S4E06MA4													

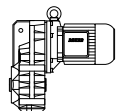


# BF-series shaft-mounted geared motors

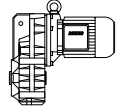
## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 1.6 \text{ Nm}$  ( $P_N = 0.25 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.6	7.9	300	3	188.3	IE4	BF40Z-../S4E06MA4	0.75	2.6	5.3	7.9	9.5	300	300	300	300	300	53	10600	-
1.6	7.4	320	2.8	202.2	IE4	BF40Z-../S4E06MA4	0.7	2.4	4.9	7.4	8.9	320	320	320	320	320	53	10600	-
1.6	6.7	355	2.5	222.4	IE4	BF40Z-../S4E06MA4	0.65	2.2	4.4	6.7	8	355	355	355	355	355	53	10600	-
1.6	5.9	405	2.2	253.2	IE4	BF40Z-../S4E06MA4	0.55	1.9	3.9	5.9	7.1	405	405	405	405	405	53	10600	-
1.6	5.3	445	2	278.5	IE4	BF40Z-../S4E06MA4	0.5	1.7	3.5	5.3	6.4	445	445	445	445	445	53	10600	-
1.6	5	470	1.9	295.1	IE4	BF40Z-../S4E06MA4	0.5	1.6	3.3	5	6	470	470	470	470	470	53	10600	-
1.6	4.6	510	1.7	324.7	IE4	BF40Z-../S4E06MA4	0.46	1.5	3	4.6	5.5	510	510	510	510	510	53	10600	-
1.6	4.3	550	1.6	346.8	IE4	BF40Z-../S4E06MA4	0.43	1.4	2.8	4.3	5.1	550	550	550	550	550	53	10600	-
1.6	3.9	610	1.5	381.5	IE4	BF40Z-../S4E06MA4	0.39	1.3	2.6	3.9	4.7	610	610	610	610	610	53	10600	-
1.6	3.5	660	1.3	417.3	IE4	BF40Z-../S4E06MA4	0.35	1.1	2.3	3.5	4.3	660	660	660	660	660	53	10600	-
1.6	3.2	730	1.2	459.1	IE4	BF40Z-../S4E06MA4	0.32	1	2.1	3.2	3.9	730	730	730	730	730	53	10600	-
1.6	2.9	820	1.1	514.6	IE4	BF40Z-../S4E06MA4	0.29	0.95	1.9	2.9	3.4	820	820	820	820	820	53	10600	-
1.6	2.6	900	0.99	566.1	IE4	BF40Z-../S4E06MA4	0.26	0.85	1.7	2.6	3.1	900	900	900	900	900	53	10600	-
1.6	2.5	950	1	597.3	IE4	BF40G10-../S4E06MA4	0.25	0.8	1.6	2.5	3	950	950	950	950	950	58	10600	-
1.6	2	1170	0.85	731.6	IE4	BF40G10-../S4E06MA4	0.2	0.65	1.3	2	2.4	1170	1170	1170	1170	1170	58	10600	-
1.6	5.4	440	2.9	276.8	IE4	BF50Z-../S4E06MA4	0.5	1.8	3.6	5.4	6.5	440	440	440	440	440	82	13600	-
1.6	4.7	500	2.6	316.6	IE4	BF50Z-../S4E06MA4	0.47	1.5	3.1	4.7	5.6	500	500	500	500	500	82	13600	-
1.6	4.2	560	2.3	354	IE4	BF50Z-../S4E06MA4	0.42	1.4	2.8	4.2	5	560	560	560	560	560	82	13600	-
1.6	3.8	620	2.1	392.8	IE4	BF50Z-../S4E06MA4	0.38	1.2	2.5	3.8	4.5	620	620	620	620	620	82	13600	-
1.6	3.4	700	1.8	439.3	IE4	BF50Z-../S4E06MA4	0.34	1.1	2.2	3.4	4	700	700	700	700	700	82	13600	-
1.6	3	790	1.6	496.4	IE4	BF50Z-../S4E06MA4	0.3	1	2	3	3.6	790	790	790	790	790	82	13600	-
1.6	2.7	880	1.5	555.2	IE4	BF50Z-../S4E06MA4	0.27	0.9	1.8	2.7	3.2	880	880	880	880	880	82	13600	-
1.6	2.6	880	1.6	555.9	IE4	BF50G10-../S4E06MA4	0.26	0.85	1.7	2.6	3.2	880	880	880	880	880	86	13600	-
1.6	2.2	1080	1.3	680.9	IE4	BF50G10-../S4E06MA4	0.22	0.7	1.4	2.2	2.6	1080	1080	1080	1080	1080	86	13600	-
1.6	1.7	1380	1	864.5	IE4	BF50G10-../S4E06MA4	0.17	0.55	1.1	1.7	2	1380	1380	1380	1380	1380	86	13600	-
1.6	1.4	1640	0.85	1029	IE4	BF50G10-../S4E06MA4	0.14	0.48	0.95	1.4	1.7	1640	1640	1640	1640	1640	86	13600	-
1.6	2.6	910	2.7	569.3	IE4	BF60G20-../S4E06MA4	0.26	0.85	1.7	2.6	3.1	910	910	910	910	910	134	15300	43300
1.6	2.1	1100	2.3	689	IE4	BF60G20-../S4E06MA4	0.21	0.7	1.4	2.1	2.6	1100	1100	1100	1100	1100	134	15300	43300
1.6	1.8	1300	1.9	813.2	IE4	BF60G20-../S4E06MA4	0.18	0.6	1.2	1.8	2.2	1300	1300	1300	1300	1300	134	15300	43300
1.6	1.5	1500	1.7	937.6	IE4	BF60G20-../S4E06MA4	0.15	0.5	1	1.5	1.9	1500	1500	1500	1500	1500	134	15300	43300
1.6	1.2	1930	1.3	1211	IE4	BF60G20-../S4E06MA4	0.12	0.41	0.8	1.2	1.4	1930	1930	1930	1930	1930	134	15300	43300
1.6	1	2350	1	1494	IE4	BF60G20-../S4E06MA4	0.1	0.33	0.65	1	1.2	2350	2350	2350	2350	2350	134	15300	43300
1.6	0.9	2650	0.94	1658	IE4	BF60G20-../S4E06MA4	0.09	0.3	0.6	0.9	1	2650	2650	2650	2650	2650	134	15300	43300
1.6	0.75	3100	0.8	1955	IE4	BF60G20-../S4E06MA4	0.075	0.25	0.5	0.75	0.9	3100	3100	3100	3100	3100	134	15300	43300
1.6	1	2200	2.6	1390	IE4	BF70G20-../S4E06MA4	0.1	0.35	0.7	1	1.2	2200	2200	2200	2200	2200	212	16100	47700
1.6	0.9	2550	2.2	1621	IE4	BF70G20-../S4E06MA4	0.09	0.3	0.6	0.9	1.1	2550	2550	2550	2550	2550	212	16100	47700
1.6	0.75	3050	1.9	1912	IE4	BF70G20-../S4E06MA4	0.075	0.26	0.5	0.75	0.9	3050	3050	3050	3050	3050	212	16100	47700
1.6	0.6	3900	1.5	2448	IE4	BF70G20-../S4E06MA4	0.06	0.2	0.4	0.6	0.7	3900	3900	3900	3900	3900	212	16100	47700
1.6	0.5	4550	1.3	2849	IE4	BF70G20-../S4E06MA4	0.05	0.17	0.35	0.5	0.6	4550	4550	4550	4550	4550	212	16100	47700
1.6	0.43	5400	1	3417	IE4	BF70G20-../S4E06MA4	0.043	0.14	0.29	0.43	0.5	5400	5400	5400	5400	5400	212	16100	47700
1.6	0.36	6500	0.87	4090	IE4	BF70G20-../S4E06MA4	0.036	0.12	0.24	0.36	0.44	6500	6500	6500	6500	6500	212	16100	47700

 **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.37 \text{ kW}$ )**

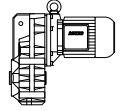
$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	124	28.5	2.6	12.07	IE4	BF06-../S4E06LA4	12	41	82	124	149	28.5	28.5	28.5	28.5	28.5	12	2000	-
2.4	124	28.5	2.6	12.07	IE1	BF06-../SSE06MA4	12	41	82	124	149	21.5	24	26.5	28.5	28.5	12	2000	-
2.4	105	34	2.5	14.21	IE1	BF06-../SSE06MA4	10.5	35	70	105	126	25.5	28	31	34	34	12	2100	-
2.4	105	34	2.5	14.21	IE4	BF06-../S4E06LA4	10.5	35	70	105	126	34	34	34	34	34	12	2100	-
2.4	88	40.5	2.3	16.99	IE4	BF06-../S4E06LA4	8.8	29	58	88	105	40.5	40.5	40.5	40.5	40.5	12	2500	-
2.4	88	40.5	2.3	16.99	IE1	BF06-../SSE06MA4	8.8	29	58	88	105	30.5	33.5	37	40.5	40.5	12	2500	-
2.4	73	49	1.9	20.42	IE4	BF06-../S4E06LA4	7.3	24	48.5	73	88	49	49	49	49	49	12	2700	-
2.4	73	49	1.9	20.42	IE1	BF06-../SSE06MA4	7.3	24	48.5	73	88	36.5	40.5	44.5	49	49	12	2700	-
2.4	56	64	1.5	26.76	IE4	BF06-../S4E06LA4	5.6	18.5	37	56	67	64	64	64	64	64	12	3000	-
2.4	56	64	1.5	26.76	IE1	BF06-../SSE06MA4	5.6	18.5	37	56	67	48	53	58	64	64	12	3000	-
2.4	47.5	75	1.3	31.5	IE1	BF06-../SSE06MA4	4.7	15.5	31.5	47.5	57	56	63	69	75	75	12	3200	-
2.4	47.5	75	1.3	31.5	IE4	BF06-../S4E06LA4	4.7	15.5	31.5	47.5	57	75	75	75	75	75	12	3200	-
2.4	39.5	90	1.1	37.69	IE1	BF06-../SSE06MA4	3.9	13	26.5	39.5	47.5	67	75	82	90	90	12	3500	-
2.4	39.5	90	1.1	37.69	IE4	BF06-../S4E06LA4	3.9	13	26.5	39.5	47.5	90	90	90	90	90	12	3500	-
2.4	32.5	110	0.86	46.14	IE1	BF06-../SSE06MA4	3.2	10.5	21.5	32.5	39	83	92	101	110	110	12	3800	-
2.4	32.5	110	0.86	46.14	IE4	BF06-../S4E06LA4	3.2	10.5	21.5	32.5	39	110	110	110	110	110	12	3800	-
2.4	41	86	2.8	36.15	IE1	BF10-../SSE06MA4	4.1	13.5	27.5	41	49.5	65	72	79	86	86	23	3800	-
2.4	41	86	2.8	36.15	IE4	BF10-../S4E06LA4	4.1	13.5	27.5	41	49.5	86	86	86	86	86	23	3800	-
2.4	37.5	95	2.5	39.75	IE1	BF10-../SSE06MA4	3.7	12.5	25	37.5	45	71	79	87	95	95	23	3950	-
2.4	37.5	95	2.5	39.75	IE4	BF10-../S4E06LA4	3.7	12.5	25	37.5	45	95	95	95	95	95	23	3950	-
2.4	34.5	103	2.3	43.06	IE4	BF10-../S4E06LA4	3.4	11.5	23	34.5	41.5	103	103	103	103	103	23	4100	-
2.4	34.5	103	2.3	43.06	IE1	BF10-../SSE06MA4	3.4	11.5	23	34.5	41.5	77	86	94	103	103	23	4100	-
2.4	31.5	113	2.1	47.35	IE4	BF													

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.37 \text{ kW}$ )**

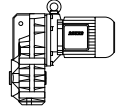
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	29	123	2	51.28	IE1	BF10-../SSE06MA4	2.9	9.7	19.5	29	35	92	102	112	123	123	23	4400	-
2.4	26.5	135	1.8	56.39	IE4	BF10-../S4E06LA4	2.6	8.8	17.5	26.5	31.5	135	135	135	135	135	23	4550	-
2.4	26.5	135	1.8	56.39	IE1	BF10-../SSE06MA4	2.6	8.8	17.5	26.5	31.5	101	112	124	135	135	23	4550	-
2.4	24	147	1.6	61.55	IE4	BF10-../S4E06LA4	2.4	8.1	16	24	29	147	147	147	147	147	23	4700	-
2.4	24	147	1.6	61.55	IE1	BF10-../SSE06MA4	2.4	8.1	16	24	29	110	123	135	147	147	23	4700	-
2.4	22	162	1.5	67.69	IE4	BF10-../S4E06LA4	2.2	7.3	14.5	22	26.5	162	162	162	162	162	23	4900	-
2.4	22	162	1.5	67.69	IE1	BF10-../SSE06MA4	2.2	7.3	14.5	22	26.5	121	135	148	162	162	23	4900	-
2.4	19	186	1.3	77.55	IE1	BF10-../SSE06MA4	1.9	6.4	12.5	19	23	139	155	170	186	186	23	5100	-
2.4	19	186	1.3	77.55	IE4	BF10-../S4E06LA4	1.9	6.4	12.5	19	23	186	186	186	186	186	23	5100	-
2.4	17.5	200	1.2	85.27	IE1	BF10-../SSE06MA4	1.7	5.8	11.5	17.5	21	153	170	187	200	200	23	5300	-
2.4	17.5	200	1.2	85.27	IE4	BF10-../S4E06LA4	1.7	5.8	11.5	17.5	21	200	200	200	200	200	23	5300	-
2.4	16	215	1.1	90.91	IE4	BF10-../S4E06LA4	1.6	5.4	10.5	16	19.5	215	215	215	215	215	23	5400	-
2.4	16	215	1.1	90.91	IE1	BF10-../SSE06MA4	1.6	5.4	10.5	16	19.5	163	181	200	215	215	23	5400	-
2.4	15	235	1	99.97	IE4	BF10-../S4E06LA4	1.5	5	10	15	18	235	235	235	235	235	23	5600	-
2.4	15	235	1	99.97	IE1	BF10-../SSE06MA4	1.5	5	10	15	18	179	199	215	235	235	23	5600	-
2.4	13	265	0.89	112.3	IE4	BF10-../S4E06LA4	1.3	4.4	8.9	13	16	265	265	265	265	265	23	5900	-
2.4	13	265	0.89	112.3	IE1	BF10-../SSE06MA4	1.3	4.4	8.9	13	16	200	220	245	265	265	23	5900	-
2.4	12	295	0.81	123.5	IE1	BF10-../SSE06MA4	1.2	4	8	12	14.5	220	245	270	295	295	23	6100	-
2.4	12	295	0.81	123.5	IE4	BF10-../S4E06LA4	1.2	4	8	12	14.5	295	295	295	295	295	23	6100	-
2.4	25.5	139	3	58.24	IE4	BF20-../S4E06LA4	2.5	8.5	17	25.5	30.5	139	139	139	139	139	30	5600	-
2.4	25.5	139	3	58.24	IE1	BF20-../SSE06MA4	2.5	8.5	17	25.5	30.5	104	116	128	139	139	30	5600	-
2.4	23	153	2.7	64.08	IE4	BF20-../S4E06LA4	2.3	7.8	15.5	23	28	153	153	153	153	153	30	5900	-
2.4	23	153	2.7	64.08	IE1	BF20-../SSE06MA4	2.3	7.8	15.5	23	28	115	128	140	153	153	30	5900	-
2.4	21.5	167	2.5	69.7	IE1	BF20-../SSE06MA4	2.1	7.1	14	21.5	25.5	125	139	153	167	167	30	6100	-
2.4	21.5	167	2.5	69.7	IE4	BF20-../S4E06LA4	2.1	7.1	14	21.5	25.5	167	167	167	167	167	30	6100	-
2.4	19.5	184	2.3	76.69	IE4	BF20-../S4E06LA4	1.9	6.5	13	19.5	23	184	184	184	184	184	30	6300	-
2.4	19.5	184	2.3	76.69	IE1	BF20-../SSE06MA4	1.9	6.5	13	19.5	23	138	153	168	184	184	30	6300	-
2.4	17	205	2	87.31	IE1	BF20-../SSE06MA4	1.7	5.7	11	17	20.5	157	174	192	205	205	30	6600	-
2.4	17	205	2	87.31	IE4	BF20-../S4E06LA4	1.7	5.7	11	17	20.5	205	205	205	205	205	30	6600	-
2.4	15.5	230	1.8	96.08	IE4	BF20-../S4E06LA4	1.5	5.2	10	15.5	18.5	230	230	230	230	230	30	6900	-
2.4	15.5	230	1.8	96.08	IE1	BF20-../SSE06MA4	1.5	5.2	10	15.5	18.5	172	192	210	230	230	30	6900	-
2.4	14.5	240	1.7	100.2	IE4	BF20-../S4E06LA4	1.4	4.9	9.9	14.5	17.5	240	240	240	240	240	30	7000	-
2.4	14.5	240	1.7	100.2	IE1	BF20-../SSE06MA4	1.4	4.9	9.9	14.5	17.5	180	200	220	240	240	30	7000	-
2.4	13.5	260	1.6	110.2	IE4	BF20-../S4E06LA4	1.3	4.5	9	13.5	16	260	260	260	260	260	30	7300	-
2.4	13.5	260	1.6	110.2	IE1	BF20-../SSE06MA4	1.3	4.5	9	13.5	16	198	220	240	260	260	30	7300	-
2.4	12	295	1.4	123.5	IE4	BF20-../S4E06LA4	1.2	4	8	12	14.5	295	295	295	295	295	30	7600	-
2.4	12	295	1.4	123.5	IE1	BF20-../SSE06MA4	1.2	4	8	12	14.5	220	245	270	295	295	30	7600	-
2.4	11	325	1.3	135.9	IE4	BF20-../S4E06LA4	1.1	3.6	7.3	11	13	325	325	325	325	325	30	7900	-
2.4	11	325	1.3	135.9	IE1	BF20-../SSE06MA4	1.1	3.6	7.3	11	13	240	270	295	325	325	30	7900	-
2.4	10.5	335	1.2	141.2	IE1	BF20Z-../SSE06MA4	1	3.5	7	10.5	12.5	250	280	310	335	335	31	7900	-
2.4	10.5	335	1.2	141.2	IE4	BF20Z-../S4E06LA4	1	3.5	7	10.5	12.5	335	335	335	335	335	31	7900	-
2.4	9.6	370	1.1	155.4	IE4	BF20Z-../S4E06LA4	0.95	3.2	6.4	9.6	11.5	370	370	370	370	370	31	7900	-
2.4	9.6	370	1.1	155.4	IE1	BF20Z-../SSE06MA4	0.95	3.2	6.4	9.6	11.5	275	310	340	370	370	31	7900	-
2.4	9.1	390	1.1	164.3	IE1	BF20Z-../SSE06MA4	0.9	3	6	9.1	10.5	295	325	360	390	390	31	7900	-
2.4	9.1	390	1.1	164.3	IE4	BF20Z-../S4E06LA4	0.9	3	6	9.1	10.5	390	390	390	390	390	31	7900	-
2.4	8.2	430	0.97	180.8	IE4	BF20Z-../S4E06LA4	0.8	2.7	5.5	8.2	9.9	430	430	430	430	430	31	7900	-
2.4	8.2	430	0.97	180.8	IE1	BF20Z-../SSE06MA4	0.8	2.7	5.5	8.2	9.9	325	360	395	430	430	31	7900	-
2.4	7.6	470	0.89	197.1	IE4	BF20Z-../S4E06LA4	0.75	2.5	5	7.6	9.1	470	470	470	470	470	31	7900	-
2.4	7.6	470	0.89	197.1	IE1	BF20Z-../SSE06MA4	0.75	2.5	5	7.6	9.1	350	390	430	470	470	31	7900	-
2.4	6.9	520	0.81	216.9	IE1	BF20Z-../SSE06MA4	0.65	2.3	4.6	6.9	8.2	390	430	475	520	520	31	7900	-
2.4	6.9	520	0.81	216.9	IE4	BF20Z-../S4E06LA4	0.65	2.3	4.6	6.9	8.2	520	520	520	520	520	31	7900	-
2.4	18.5	190	3	79.34	IE1	BF30-../SSE06MA4	1.8	6.3	12.5	18.5	22.5	142	158	174	190	190	40	5900	-
2.4	18.5	190	3	79.34	IE4	BF30-../S4E06LA4	1.8	6.3	12.5	18.5	22.5	190	190	190	190	190	40	5900	-
2.4	17	205	2.7	87.08	IE1	BF30-../SSE06MA4	1.7	5.7	11	17	20.5	156	174	191	205	205	40	6200	-
2.4	17	205	2.7	87.08	IE4	BF30-../S4E06LA4	1.7	5.7	11	17	20.5	205	205	205	205	205	40	6200	-
2.4	15.5	225	2.5	95.79	IE1	BF30-../SSE06MA4	1.5	5.2	10	15.5	18.5	172	191	210	225	225	40	6400	-
2.4	15.5	225	2.5	95.79	IE4	BF30-../S4E06LA4	1.5	5.2	10	15.5	18.5	225	225	225	225	225	40	6400	-
2.4	13.5	255	2.2	107.6	IE4	BF30-../S4E06LA4	1.3	4.6	9.2	13.5	16.5	255	255	255	255	255	40	6700	-
2.4	13.5	255	2.2	107.6	IE1	BF30-../SSE06MA4	1.3	4.6	9.2	13.5	16.5	193	215	235	255	255	40	6700	-
2.4	12.5	280	2	118.3	IE1	BF30-../SSE06MA4	1.2	4.2	8.4	12.5	15	210	235	260	280	280	40	7000	-
2.4	12.5	280	2	118.3	IE4	BF30-../S4E06LA4	1.2	4.2	8.4	12.5	15	280	280	280	280	280	40	7000	-
2.4	12	295	1.9	124.7	IE4	BF30-../S4E06LA4	1.2	4	8	12	14	295	295	295	295	295	40	7100	-
2.4	12	295	1.9	124.7	IE1	BF30-../SSE06MA4	1.2	4	8	12	14	220	245	270	295	295	40	7100	-
2.4	10.5	325	1.7	137.1	IE1	BF30-../SSE06MA4	1	3.6	7.2	10.5	13	245	270	300	325	325	40	7400	-
2.4	10.5	325	1.7	137.1	IE4	BF30-../S4E06LA4	1	3.6	7.2	10.5	13	325	325	325	325	325	40	7400	-
2.4	9.9	360	1.6	150.7	IE4	BF30Z-../S4E06LA4	0.95	3.3	6.6	9.9	11.5	360	360	360	360	360	42	7400	-
2.4	9.9	360	1.6	150.7	IE1	BF30Z-../SSE06MA4	0.95	3.3	6.6	9.9	11.5	270	300	330	360	360	42	7400	-
2.4	9	395	1.4	165.8	IE4	BF30Z-../S4E06LA4	0.9	3	6	9	10.5	395	395	395	395	395	42	7400	-
2.4	9	395																	

# BF-series shaft-mounted geared motors

## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.37 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	5.1	690	0.82	289.8	IE4	BF30Z-../S4E06LA4	0.5	1.7	3.4	5.1	6.2	690	690	690	690	690	42	7400	-
2.4	10.5	335	2.7	141.4	IE4	BF40Z-../S4E06LA4	1	3.5	7	10.5	12.5	335	335	335	335	335	53	10600	-
2.4	10.5	335	2.7	141.4	IE1	BF40Z-../SSE06MA4	1	3.5	7	10.5	12.5	250	280	310	335	335	53	10600	-
2.4	9.6	370	2.4	155.6	IE1	BF40Z-../SSE06MA4	0.95	3.2	6.4	9.6	11.5	280	310	340	370	370	53	10600	-
2.4	9.6	370	2.4	155.6	IE4	BF40Z-../S4E06LA4	0.95	3.2	6.4	9.6	11.5	370	370	370	370	370	53	10600	-
2.4	8.7	410	2.2	171.2	IE4	BF40Z-../S4E06LA4	0.85	2.9	5.8	8.7	10.5	410	410	410	410	410	53	10600	-
2.4	8.7	410	2.2	171.2	IE1	BF40Z-../SSE06MA4	0.85	2.9	5.8	8.7	10.5	305	340	375	410	410	53	10600	-
2.4	7.9	450	2	188.3	IE4	BF40Z-../S4E06LA4	0.75	2.6	5.3	7.9	9.5	450	450	450	450	450	53	10600	-
2.4	7.9	450	2	188.3	IE1	BF40Z-../SSE06MA4	0.75	2.6	5.3	7.9	9.5	335	375	410	450	450	53	10600	-
2.4	7.4	485	1.9	202.2	IE4	BF40Z-../S4E06LA4	0.7	2.4	4.9	7.4	8.9	485	485	485	485	485	53	10600	-
2.4	7.4	485	1.9	202.2	IE1	BF40Z-../SSE06MA4	0.7	2.4	4.9	7.4	8.9	360	400	440	485	485	53	10600	-
2.4	6.7	530	1.7	222.4	IE4	BF40Z-../S4E06LA4	0.65	2.2	4.4	6.7	8	530	530	530	530	530	53	10600	-
2.4	6.7	530	1.7	222.4	IE1	BF40Z-../SSE06MA4	0.65	2.2	4.4	6.7	8	400	440	485	530	530	53	10600	-
2.4	5.9	600	1.5	253.2	IE4	BF40Z-../S4E06LA4	0.55	1.9	3.9	5.9	7.1	600	600	600	600	600	53	10600	-
2.4	5.9	600	1.5	253.2	IE1	BF40Z-../SSE06MA4	0.55	1.9	3.9	5.9	7.1	455	500	550	600	600	53	10600	-
2.4	5.3	660	1.3	278.5	IE4	BF40Z-../S4E06LA4	0.5	1.7	3.5	5.3	6.4	660	660	660	660	660	53	10600	-
2.4	5.3	660	1.3	278.5	IE1	BF40Z-../SSE06MA4	0.5	1.7	3.5	5.3	6.4	500	550	610	660	660	53	10600	-
2.4	5	700	1.3	295.1	IE4	BF40Z-../S4E06LA4	0.5	1.6	3.3	5	6	700	700	700	700	700	53	10600	-
2.4	5	700	1.3	295.1	IE1	BF40Z-../SSE06MA4	0.5	1.6	3.3	5	6	530	590	640	700	700	53	10600	-
2.4	4.6	770	1.2	324.7	IE4	BF40Z-../S4E06LA4	0.46	1.5	3	4.6	5.5	770	770	770	770	770	53	10600	-
2.4	4.6	770	1.2	324.7	IE1	BF40Z-../SSE06MA4	0.46	1.5	3	4.6	5.5	580	640	710	770	770	53	10600	-
2.4	4.3	830	1.1	346.8	IE1	BF40Z-../SSE06MA4	0.43	1.4	2.8	4.3	5.1	620	690	760	830	830	53	10600	-
2.4	4.3	830	1.1	346.8	IE4	BF40Z-../S4E06LA4	0.43	1.4	2.8	4.3	5.1	830	830	830	830	830	53	10600	-
2.4	3.9	910	0.98	381.5	IE4	BF40Z-../S4E06LA4	0.39	1.3	2.6	3.9	4.7	910	910	910	910	910	53	10600	-
2.4	3.9	910	0.98	381.5	IE1	BF40Z-../SSE06MA4	0.39	1.3	2.6	3.9	4.7	680	760	830	910	910	53	10600	-
2.4	3.5	1000	0.9	417.3	IE1	BF40Z-../SSE06MA4	0.35	1.1	2.3	3.5	4.3	750	830	910	1000	1000	53	10600	-
2.4	3.5	1000	0.9	417.3	IE4	BF40Z-../S4E06LA4	0.35	1.1	2.3	3.5	4.3	1000	1000	1000	1000	1000	53	10600	-
2.4	3.2	1100	0.82	459.1	IE1	BF40Z-../SSE06MA4	0.32	1	2.1	3.2	3.9	820	910	1010	1100	1100	53	10600	-
2.4	3.2	1100	0.82	459.1	IE4	BF40Z-../S4E06LA4	0.32	1	2.1	3.2	3.9	1100	1100	1100	1100	1100	53	10600	-
2.4	8.1	440	3	183.5	IE4	BF50Z-../S4E06LA4	0.8	2.7	5.4	8.1	9.8	440	440	440	440	440	82	13600	-
2.4	8.1	440	3	183.5	IE1	BF50Z-../SSE06MA4	0.8	2.7	5.4	8.1	9.8	330	365	400	440	440	82	13600	-
2.4	7.3	490	2.6	205.2	IE4	BF50Z-../S4E06LA4	0.7	2.4	4.8	7.3	8.7	490	490	490	490	490	82	13600	-
2.4	7.3	490	2.6	205.2	IE1	BF50Z-../SSE06MA4	0.7	2.4	4.8	7.3	8.7	365	410	450	490	490	82	13600	-
2.4	6	590	2.2	247.5	IE1	BF50Z-../SSE06MA4	0.6	2	4	6	7.2	445	495	540	590	590	82	13600	-
2.4	6	590	2.2	247.5	IE4	BF50Z-../S4E06LA4	0.6	2	4	6	7.2	590	590	590	590	590	82	13600	-
2.4	5.4	660	2	276.8	IE4	BF50Z-../S4E06LA4	0.5	1.8	3.6	5.4	6.5	660	660	660	660	660	82	13600	-
2.4	5.4	660	2	276.8	IE1	BF50Z-../SSE06MA4	0.5	1.8	3.6	5.4	6.5	495	550	600	660	660	82	13600	-
2.4	4.7	750	1.7	316.6	IE4	BF50Z-../S4E06LA4	0.47	1.5	3.1	4.7	5.6	750	750	750	750	750	82	13600	-
2.4	4.7	750	1.7	316.6	IE1	BF50Z-../SSE06MA4	0.47	1.5	3.1	4.7	5.6	560	630	690	750	750	82	13600	-
2.4	4.2	840	1.5	354	IE1	BF50Z-../SSE06MA4	0.42	1.4	2.8	4.2	5	630	700	770	840	840	82	13600	-
2.4	4.2	840	1.5	354	IE4	BF50Z-../S4E06LA4	0.42	1.4	2.8	4.2	5	840	840	840	840	840	82	13600	-
2.4	3.8	940	1.4	392.8	IE1	BF50Z-../SSE06MA4	0.38	1.2	2.5	3.8	4.5	700	780	860	940	940	82	13600	-
2.4	3.8	940	1.4	392.8	IE4	BF50Z-../S4E06LA4	0.38	1.2	2.5	3.8	4.5	940	940	940	940	940	82	13600	-
2.4	3.4	1050	1.2	439.3	IE4	BF50Z-../S4E06LA4	0.34	1.1	2.2	3.4	4	1050	1050	1050	1050	1050	82	13600	-
2.4	3.4	1050	1.2	439.3	IE1	BF50Z-../SSE06MA4	0.34	1.1	2.2	3.4	4	790	870	960	1050	1050	82	13600	-
2.4	3	1190	1.1	496.4	IE1	BF50Z-../SSE06MA4	0.3	1	2	3	3.6	890	990	1090	1190	1190	82	13600	-
2.4	3	1190	1.1	496.4	IE4	BF50Z-../S4E06LA4	0.3	1	2	3	3.6	1190	1190	1190	1190	1190	82	13600	-
2.4	2.7	1330	0.98	555.2	IE4	BF50Z-../S4E06LA4	0.27	0.9	1.8	2.7	3.2	1330	1330	1330	1330	1330	82	13600	-
2.4	2.7	1330	0.98	555.2	IE1	BF50Z-../SSE06MA4	0.27	0.9	1.8	2.7	3.2	990	1110	1220	1330	1330	82	13600	-
2.4	2.6	1330	1	555.9	IE1	BF50G10-../SSE06MA4	0.26	0.85	1.7	2.6	3.2	1000	1110	1220	1330	1330	86	13600	-
2.4	2.6	1330	1	555.9	IE4	BF50G10-../S4E06LA4	0.26	0.85	1.7	2.6	3.2	1330	1330	1330	1330	1330	86	13600	-
2.4	2.2	1630	0.86	680.9	IE4	BF50G10-../S4E06LA4	0.22	0.7	1.4	2.2	2.6	1630	1630	1630	1630	1630	86	13600	-
2.4	2.2	1630	0.86	680.9	IE1	BF50G10-../SSE06MA4	0.22	0.7	1.4	2.2	2.6	1220	1360	1490	1630	1630	86	13600	-
2.4	2.6	1360	1.8	569.3	IE4	BF60G20-../S4E06LA4	0.26	0.85	1.7	2.6	3.1	1360	1360	1360	1360	1360	134	15300	43300
2.4	2.6	1360	1.8	569.3	IE1	BF60G20-../SSE06MA4	0.26	0.85	1.7	2.6	3.1	1020	1130	1250	1360	1360	134	15300	43300
2.4	2.1	1650	1.5	689	IE1	BF60G20-../SSE06MA4	0.21	0.7	1.4	2.1	2.6	1240	1370	1510	1650	1650	134	15300	43300
2.4	2.1	1650	1.5	689	IE4	BF60G20-../S4E06LA4	0.21	0.7	1.4	2.1	2.6	1650	1650	1650	1650	1650	134	15300	43300
2.4	1.8	1950	1.3	813.2	IE1	BF60G20-../SSE06MA4	0.18	0.6	1.2	1.8	2.2	1460	1620	1780	1950	1950	134	15300	43300
2.4	1.8	1950	1.3	813.2	IE4	BF60G20-../S4E06LA4	0.18	0.6	1.2	1.8	2.2	1950	1950	1950	1950	1950	134	15300	43300
2.4																			

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{min}$**  **$M_N = 2.6 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

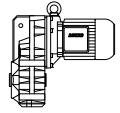
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.6	162	23.5	2.9	9.21	IE4	BF06-../S4E06LA4	16	54	108	162	195	23	23.5	23.5	23.5	23.5	12	1900	-
2.6	124	31	2.4	12.07	IE4	BF06-../S4E06LA4	12	41	82	124	149	30	31	31	31	31	12	2000	-
2.6	105	36.5	2.3	14.21	IE4	BF06-../S4E06LA4	10.5	35	70	105	126	35.5	36.5	36.5	36.5	36.5	12	2100	-
2.6	88	44	2.2	16.99	IE4	BF06-../S4E06LA4	8.8	29	58	88	105	42	44	44	44	44	12	2500	-
2.6	73	53	1.8	20.42	IE4	BF06-../S4E06LA4	7.3	24	48.5	73	88	51	53	53	53	53	12	2700	-
2.6	56	69	1.4	26.76	IE4	BF06-../S4E06LA4	5.6	18.5	37	56	67	66	69	69	69	69	12	3000	-
2.6	47.5	81	1.2	31.5	IE4	BF06-../S4E06LA4	4.7	15.5	31.5	47.5	57	78	81	81	81	81	12	3200	-
2.6	39.5	97	0.97	37.69	IE4	BF06-../S4E06LA4	3.9	13	26.5	39.5	47.5	94	97	97	97	97	12	3500	-
2.6	47.5	81	2.9	31.31	IE4	BF10-../S4E06LA4	4.7	15.5	31.5	47.5	57	78	81	81	81	81	23	3600	-
2.6	41	93	2.6	36.15	IE4	BF10-../S4E06LA4	4.1	13.5	27.5	41	49.5	90	93	93	93	93	23	3800	-
2.6	37.5	103	2.3	39.75	IE4	BF10-../S4E06LA4	3.7	12.5	25	37.5	45	99	103	103	103	103	23	3950	-
2.6	34.5	111	2.1	43.06	IE4	BF10-../S4E06LA4	3.4	11.5	23	34.5	41.5	107	111	111	111	111	23	4100	-
2.6	31.5	123	1.9	47.35	IE4	BF10-../S4E06LA4	3.1	10.5	21	31.5	38	118	123	123	123	123	23	4250	-
2.6	29	133	1.8	51.28	IE4	BF10-../S4E06LA4	2.9	9.7	19.5	29	35	128	133	133	133	133	23	4400	-
2.6	26.5	146	1.6	56.39	IE4	BF10-../S4E06LA4	2.6	8.8	17.5	26.5	31.5	140	146	146	146	146	23	4550	-
2.6	24	160	1.5	61.55	IE4	BF10-../S4E06LA4	2.4	8.1	16	24	29	153	160	160	160	160	23	4700	-
2.6	22	175	1.4	67.69	IE4	BF10-../S4E06LA4	2.2	7.3	14.5	22	26.5	169	175	175	175	175	23	4900	-
2.6	19	200	1.2	77.55	IE4	BF10-../S4E06LA4	1.9	6.4	12.5	19	23	193	200	200	200	200	23	5100	-
2.6	17.5	220	1.1	85.27	IE4	BF10-../S4E06LA4	1.7	5.8	11.5	17.5	21	210	220	220	220	220	23	5300	-
2.6	16	235	1	90.91	IE4	BF10-../S4E06LA4	1.6	5.4	10.5	16	19.5	225	235	235	235	235	23	5400	-
2.6	15	255	0.92	99.97	IE4	BF10-../S4E06LA4	1.5	5	10	15	18	245	255	255	255	255	23	5600	-
2.6	13	290	0.82	112.3	IE4	BF10-../S4E06LA4	1.3	4.4	8.9	13	16	280	290	290	290	290	23	5900	-
2.6	28	138	3	53.43	IE4	BF20-../S4E06LA4	2.8	9.3	18.5	28	33.5	133	138	138	138	138	30	5500	-
2.6	25.5	151	2.8	58.24	IE4	BF20-../S4E06LA4	2.5	8.5	17	25.5	30.5	145	151	151	151	151	30	5600	-
2.6	23	166	2.5	64.08	IE4	BF20-../S4E06LA4	2.3	7.8	15.5	23	28	160	166	166	166	166	30	5900	-
2.6	21.5	181	2.3	69.7	IE4	BF20-../S4E06LA4	2.1	7.1	14	21.5	25.5	174	181	181	181	181	30	6100	-
2.6	19.5	199	2.1	76.69	IE4	BF20-../S4E06LA4	1.9	6.5	13	19.5	23	191	199	199	199	199	30	6300	-
2.6	17	225	1.9	87.31	IE4	BF20-../S4E06LA4	1.7	5.7	11	17	20.5	215	225	225	225	225	30	6600	-
2.6	15.5	245	1.7	96.08	IE4	BF20-../S4E06LA4	1.5	5.2	10	15.5	18.5	240	245	245	245	245	30	6900	-
2.6	14.5	260	1.6	100.2	IE4	BF20-../S4E06LA4	1.4	4.9	9.9	14.5	17.5	250	260	260	260	260	30	7000	-
2.6	13.5	285	1.5	110.2	IE4	BF20-../S4E06LA4	1.3	4.5	9	13.5	16	275	285	285	285	285	30	7300	-
2.6	12	320	1.3	123.5	IE4	BF20-../S4E06LA4	1.2	4	8	12	14.5	305	320	320	320	320	30	7600	-
2.6	11	350	1.2	135.9	IE4	BF20-../S4E06LA4	1.1	3.6	7.3	11	13	335	350	350	350	350	30	7900	-
2.6	10.5	365	1.1	141.2	IE4	BF20Z-../S4E06LA4	1	3.5	7	10.5	12.5	350	365	365	365	365	31	7900	-
2.6	9.6	400	1	155.4	IE4	BF20Z-../S4E06LA4	0.95	3.2	6.4	9.6	11.5	385	400	400	400	400	31	7900	-
2.6	9.1	425	0.98	164.3	IE4	BF20Z-../S4E06LA4	0.9	3	6	9.1	10.5	410	425	425	425	425	31	7900	-
2.6	8.2	470	0.89	180.8	IE4	BF20Z-../S4E06LA4	0.8	2.7	5.5	8.2	9.9	450	470	470	470	470	31	7900	-
2.6	7.6	510	0.82	197.1	IE4	BF20Z-../S4E06LA4	0.75	2.5	5	7.6	9.1	490	510	510	510	510	31	7900	-
2.6	20.5	187	3	72.13	IE4	BF30-../S4E06LA4	2	6.9	13.5	20.5	24.5	180	187	187	187	187	40	5700	-
2.6	18.5	205	2.8	79.34	IE4	BF30-../S4E06LA4	1.8	6.3	12.5	18.5	22.5	198	205	205	205	205	40	5900	-
2.6	17	225	2.5	87.08	IE4	BF30-../S4E06LA4	1.7	5.7	11	17	20.5	215	225	225	225	225	40	6200	-
2.6	15.5	245	2.3	95.79	IE4	BF30-../S4E06LA4	1.5	5.2	10	15.5	18.5	235	245	245	245	245	40	6400	-
2.6	13.5	275	2	107.6	IE4	BF30-../S4E06LA4	1.3	4.6	9.2	13.5	16.5	265	275	275	275	275	40	6700	-
2.6	12.5	305	1.9	118.3	IE4	BF30-../S4E06LA4	1.2	4.2	8.4	12.5	15	295	305	305	305	305	40	7000	-
2.6	12	320	1.8	124.7	IE4	BF30-../S4E06LA4	1.2	4	8	12	14	310	320	320	320	320	40	7100	-
2.6	10.5	355	1.6	137.1	IE4	BF30-../S4E06LA4	1	3.6	7.2	10.5	13	340	355	355	355	355	40	7400	-
2.6	9.9	390	1.5	150.7	IE4	BF30Z-../S4E06LA4	0.95	3.3	6.6	9.9	11.5	375	390	390	390	390	42	7400	-
2.6	9	430	1.3	165.8	IE4	BF30Z-../S4E06LA4	0.9	3	6	9	10.5	410	430	430	430	430	42	7400	-
2.6	8.4	455	1.2	176.6	IE4	BF30Z-../S4E06LA4	0.8	2.8	5.6	8.4	10	440	455	455	455	455	42	7400	-
2.6	7.7	500	1.1	194.3	IE4	BF30Z-../S4E06LA4	0.75	2.5	5.1	7.7	9.2	485	500	500	500	500	42	7400	-
2.6	6.6	580	0.98	224.8	IE4	BF30Z-../S4E06LA4	0.65	2.2	4.4	6.6	8	560	580	580	580	580	42	7400	-
2.6	6	640	0.89	247.3	IE4	BF30Z-../S4E06LA4	0.6	2	4	6	7.2	610	640	640	640	640	42	7400	-
2.6	5.6	680	0.83	263.5	IE4	BF30Z-../S4E06LA4	0.55	1.8	3.7	5.6	6.8	650	680	680	680	680	42	7400	-
2.6	10.5	365	2.4	141.4	IE4	BF40Z-../S4E06LA4	1	3.5	7	10.5	12.5	350	365	365	365	365	53	10600	-
2.6	9.6	400	2.2	155.6	IE4	BF40Z-../S4E06LA4	0.95	3.2	6.4	9.6	11.5	385	400	400	400	400	53	10600	-
2.6	8.7	445	2	171.2	IE4	BF40Z-../S4E06LA4	0.85	2.9	5.8	8.7	10.5	425	445	445	445	445	53	10600	-
2.6	7.9	485	1.8	188.3	IE4	BF40Z-../S4E06LA4	0.75	2.6	5.3	7.9	9.5	470	485	485	485	485	53	10600	-
2.6	7.4	520	1.7	202.2	IE4	BF40Z-../S4E06LA4	0.7	2.4	4.9	7.4	8.9	500	520	520	520	520	53	10600	-
2.6	6.7	570	1.6	222.4	IE4	BF40Z-../S4E06LA4	0.65	2.2	4.4	6.7	8	550	570	570	570	570	53	10600	-
2.6	5.9	650	1.4	253.2	IE4	BF40Z-../S4E06LA4	0.55	1.9	3.9	5.9	7.1	630	650	650	650	650	53	10600	-
2.6	5.3	720	1.2	278.5	IE4	BF40Z-../S4E06LA4	0.5	1.7	3.5	5.3	6.4	690	720	720	720	720	53	10600	-
2.6	5	760	1.2	295.1	IE4	BF40Z-../S4E06LA4	0.5	1.6	3.3	5	6	730	760	760	760	760	53	10600	-
2.6	4.6	840	1.1	324.7	IE4	BF40Z-../S4E06LA4	0.46	1.5	3	4.6	5.5	810	840	840	840	840	53	10600	-
2.6	4.3	900	1	346.8	IE4	BF40Z-../S4E06LA4	0.43	1.4	2.8	4.3	5.1	860	900	900	900	900	53	10600	-
2.6	3.9	990	0.91	381.5	IE4	BF40Z-../S4E06LA4	0.39	1.3	2.6	3.9	4.7	950	990	990	990	990	53	10600	-
2.6	3.5	1080	0.83	417.3	IE4	BF40Z-../S4E06LA4	0.35	1.1	2.3	3.5	4.3	1040	1080	1080	1080	1080	53	10600	-
2.6	8.1	475	2.7	183.5	IE4	BF50Z-../S4E06LA4	0.8	2.7	5.4	8.1	9.8	455	475	475	475	475	82	13600	-
2.6	7.3	530	2.4	205.2	IE4	BF50Z-../S4E06LA4	0.7	2.4	4.8	7.3	8.7	510	530	530	530	530			



# BF-series shaft-mounted geared motors

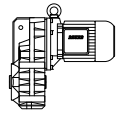
## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{min}$

**$M_N = 2.6 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

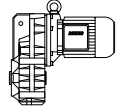


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.6	2.6	1480	1.7	569.3	IE4	BF60G20-../S4E06LA4	0.26	0.85	1.7	2.6	3.1	1420	1480	1480	1480	1480	134	15300	43300
2.6	2.1	1790	1.4	689	IE4	BF60G20-../S4E06LA4	0.21	0.7	1.4	2.1	2.6	1720	1790	1790	1790	1790	134	15300	43300
2.6	1.8	2100	1.2	813.2	IE4	BF60G20-../S4E06LA4	0.18	0.6	1.2	1.8	2.2	2000	2100	2100	2100	2100	134	15300	43300
2.6	1.5	2400	1	937.6	IE4	BF60G20-../S4E06LA4	0.15	0.5	1	1.5	1.9	2300	2400	2400	2400	2400	134	15300	43300
2.6	1.7	2250	2.5	872.1	IE4	BF70G20-../S4E06LA4	0.17	0.55	1.1	1.7	2	2150	2250	2250	2250	2250	212	16100	47700
2.6	1.4	2600	2.2	1017	IE4	BF70G20-../S4E06LA4	0.14	0.49	0.95	1.4	1.7	2500	2600	2600	2600	2600	212	16100	47700
2.6	1	3600	1.6	1390	IE4	BF70G20-../S4E06LA4	0.1	0.35	0.7	1	1.2	3450	3600	3600	3600	3600	212	16100	47700
2.6	0.9	4200	1.4	1621	IE4	BF70G20-../S4E06LA4	0.09	0.3	0.6	0.9	1.1	4050	4200	4200	4200	4200	212	16100	47700
2.6	0.75	4950	1.1	1912	IE4	BF70G20-../S4E06LA4	0.075	0.26	0.5	0.75	0.9	4750	4950	4950	4950	4950	212	16100	47700
2.6	0.6	6300	0.9	2448	IE4	BF70G20-../S4E06LA4	0.06	0.2	0.4	0.6	0.7	6100	6300	6300	6300	6300	212	16100	47700

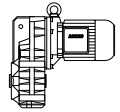
**$M_N = 3.5 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
3.5	195	26.5	2.5	7.66	IE1	BF06-../SSE06LA4	19.5	65	130	195	230	19.1	22	26.5	26.5	26.5	12	1800	-
3.5	162	32	2.2	9.21	IE1	BF06-../SSE06LA4	16	54	108	162	195	23	26.5	32	32	32	12	1900	-
3.5	124	42	1.8	12.07	IE1	BF06-../SSE06LA4	12	41	82	124	149	30	35	42	42	42	12	2000	-
3.5	105	49.5	1.7	14.21	IE1	BF06-../SSE06LA4	10.5	35	70	105	126	35.5	41	49.5	49.5	49.5	12	2100	-
3.5	88	59	1.6	16.99	IE1	BF06-../SSE06LA4	8.8	29	58	88	105	42	49	59	59	59	12	2500	-
3.5	73	71	1.3	20.42	IE1	BF06-../SSE06LA4	7.3	24	48.5	73	88	51	59	71	71	71	12	2700	-
3.5	56	93	1	26.76	IE1	BF06-../SSE06LA4	5.6	18.5	37	56	67	66	77	93	93	93	12	3000	-
3.5	47.5	110	0.86	31.5	IE1	BF06-../SSE06LA4	4.7	15.5	31.5	47.5	57	78	91	110	110	110	12	3200	-
3.5	64	81	2.9	23.28	IE1	BF10-../SSE06LA4	6.4	21	42.5	64	77	58	67	81	81	81	23	3200	-
3.5	58	89	2.7	25.6	IE1	BF10-../SSE06LA4	5.8	19.5	39	58	70	64	74	89	89	89	23	3350	-
3.5	52	99	2.4	28.47	IE1	BF10-../SSE06LA4	5.2	17.5	35	52	63	71	82	99	99	99	23	3450	-
3.5	47.5	109	2.2	31.31	IE1	BF10-../SSE06LA4	4.7	15.5	31.5	47.5	57	78	90	109	109	109	23	3600	-
3.5	41	126	1.9	36.15	IE1	BF10-../SSE06LA4	4.1	13.5	27.5	41	49.5	90	104	126	126	126	23	3800	-
3.5	37.5	139	1.7	39.75	IE1	BF10-../SSE06LA4	3.7	12.5	25	37.5	45	99	115	139	139	139	23	3950	-
3.5	34.5	150	1.6	43.06	IE1	BF10-../SSE06LA4	3.4	11.5	23	34.5	41.5	107	124	150	150	150	23	4100	-
3.5	31.5	165	1.4	47.35	IE1	BF10-../SSE06LA4	3.1	10.5	21	31.5	38	118	137	165	165	165	23	4250	-
3.5	29	179	1.3	51.28	IE1	BF10-../SSE06LA4	2.9	9.7	19.5	29	35	128	148	179	179	179	23	4400	-
3.5	26.5	197	1.2	56.39	IE1	BF10-../SSE06LA4	2.6	8.8	17.5	26.5	31.5	140	163	197	197	197	23	4550	-
3.5	24	215	1.1	61.55	IE1	BF10-../SSE06LA4	2.4	8.1	16	24	29	153	178	215	215	215	23	4700	-
3.5	22	235	1	67.69	IE1	BF10-../SSE06LA4	2.2	7.3	14.5	22	26.5	169	196	235	235	235	23	4900	-
3.5	19	270	0.88	77.55	IE1	BF10-../SSE06LA4	1.9	6.4	12.5	19	23	193	220	270	270	270	23	5100	-
3.5	17.5	295	0.8	85.27	IE1	BF10-../SSE06LA4	1.7	5.8	11.5	17.5	21	210	245	295	295	295	23	5300	-
3.5	35.5	146	2.9	41.72	IE1	BF20-../SSE06LA4	3.5	11.5	23.5	35.5	43	104	120	146	146	146	30	4950	-
3.5	32.5	160	2.6	45.9	IE1	BF20-../SSE06LA4	3.2	10.5	21.5	32.5	39	114	133	160	160	160	30	5100	-
3.5	30.5	169	2.5	48.56	IE1	BF20-../SSE06LA4	3	10	20.5	30.5	37	121	140	169	169	169	30	5200	-
3.5	28	187	2.2	53.43	IE1	BF20-../SSE06LA4	2.8	9.3	18.5	28	33.5	133	154	187	187	187	30	5500	-
3.5	25.5	200	2.1	58.24	IE1	BF20-../SSE06LA4	2.5	8.5	17	25.5	30.5	145	168	200	200	200	30	5600	-
3.5	23	220	1.9	64.08	IE1	BF20-../SSE06LA4	2.3	7.8	15.5	23	28	160	185	220	220	220	30	5900	-
3.5	21.5	240	1.7	69.7	IE1	BF20-../SSE06LA4	2.1	7.1	14	21.5	25.5	174	200	240	240	240	30	6100	-
3.5	19.5	265	1.6	76.69	IE1	BF20-../SSE06LA4	1.9	6.5	13	19.5	23	191	220	265	265	265	30	6300	-
3.5	17	305	1.4	87.31	IE1	BF20-../SSE06LA4	1.7	5.7	11	17	20.5	215	250	305	305	305	30	6600	-
3.5	15.5	335	1.2	96.08	IE1	BF20-../SSE06LA4	1.5	5.2	10	15.5	18.5	240	275	335	335	335	30	6900	-
3.5	14.5	350	1.2	100.2	IE1	BF20-../SSE06LA4	1.4	4.9	9.9	14.5	17.5	250	290	350	350	350	30	7000	-
3.5	13.5	385	1.1	110.2	IE1	BF20-../SSE06LA4	1.3	4.5	9	13.5	16	275	315	385	385	385	30	7300	-
3.5	12	430	0.97	123.5	IE1	BF20-../SSE06LA4	1.2	4	8	12	14.5	305	355	430	430	430	30	7600	-
3.5	11	475	0.88	135.9	IE1	BF20-../SSE06LA4	1.1	3.6	7.3	11	13	335	390	475	475	475	30	7900	-
3.5	10.5	490	0.85	141.2	IE1	BF20Z-../SSE06LA4	1	3.5	7	10.5	12.5	350	405	490	490	490	31	7900	-
3.5	26	200	2.8	57.41	IE1	BF30-../SSE06LA4	2.6	8.7	17	26	31	143	166	200	200	200	40	5200	-
3.5	24.5	210	2.7	61.17	IE1	BF30-../SSE06LA4	2.4	8.1	16	24.5	29	152	177	210	210	210	40	5300	-
3.5	22	235	2.4	67.28	IE1	BF30-../SSE06LA4	2.2	7.4	14.5	22	26.5	168	195	235	235	235	40	5500	-
3.5	20.5	250	2.3	72.13	IE1	BF30-../SSE06LA4	2	6.9	13.5	20.5	24.5	180	205	250	250	250	40	5700	-
3.5	18.5	275	2.1	79.34	IE1	BF30-../SSE06LA4	1.8	6.3	12.5	18.5	22.5	198	230	275	275	275	40	5900	-
3.5	17	300	1.9	87.08	IE1	BF30-../SSE06LA4	1.7	5.7	11	17	20.5	215	250	300	300	300	40	6200	-
3.5	15.5	335	1.7	95.79	IE1	BF30-../SSE06LA4	1.5	5.2	10	15.5	18.5	235	275	335	335	335	40	6400	-
3.5	13.5	375	1.5	107.6	IE1	BF30-../SSE06LA4	1.3	4.6	9.2	13.5	16.5	265	310	375	375	375	40	6700	-
3.5	12.5	410	1.4	118.3	IE1	BF30-../SSE06LA4	1.2	4.2	8.4	12.5	15	295	340	410	410	410	40	7000	-
3.5	12	435	1.3	124.7	IE1	BF30-../SSE06LA4	1.2	4	8	12	14	310	360	435	435	435	40	7100	-
3.5	10.5	475	1.2	137.1	IE1	BF30-../SSE06LA4	1	3.6	7.2	10.5	13	340	395	475	475	475	40	7400	-
3.5	9.9	520	1.1	150.7	IE1	BF30Z-../SSE06LA4	0.95	3.3	6.6	9.9	11.5	375	435	520	520	520	42	7400	-
3.5	9	580	0.98	165.8	IE1	BF30Z-../SSE06LA4	0.9	3	6	9	10.5	410	480	580	580	580	42	7400	-
3.5	8.4	610	0.92	176.6	IE1	BF30Z-../SSE06LA4	0.8	2.8	5.6	8.4	10	440	510	610	610	610	42	7400	-
3.5	7.7	680	0.84	194.3	IE1	BF30Z-../SSE06LA4	0.75	2.5	5.1	7.7	9.2	485	560	680	680	680	42	7400	-
3.5	10.5	490	1.8	141.4	IE1	BF40Z-../SSE06LA4	1	3.5	7	10.5	12.5	350	410	490	490	490	53	10600	-
3.5	9.6	540	1.7	155.6	IE1	BF40Z-../SSE06LA4	0.95	3.2	6.4	9.6	11.5	385	450	540	540	540	53	10600	-
3.5																			

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{min}$**  **$M_N = 3.5 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

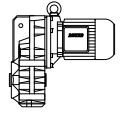
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
3.5	7.4	700	1.3	202.2	IE1	BF40Z-../SSE06LA4	0.7	2.4	4.9	7.4	8.9	500	580	700	700	700	53	10600	-
3.5	6.7	770	1.2	222.4	IE1	BF40Z-../SSE06LA4	0.65	2.2	4.4	6.7	8	550	640	770	770	770	53	10600	-
3.5	5.9	880	1	253.2	IE1	BF40Z-../SSE06LA4	0.55	1.9	3.9	5.9	7.1	630	730	880	880	880	53	10600	-
3.5	5.3	970	0.92	278.5	IE1	BF40Z-../SSE06LA4	0.5	1.7	3.5	5.3	6.4	690	800	970	970	970	53	10600	-
3.5	5	1030	0.87	295.1	IE1	BF40Z-../SSE06LA4	0.5	1.6	3.3	5	6	730	850	1030	1030	1030	53	10600	-
3.5	10.5	480	2.7	138.1	IE1	BF50Z-../SSE06LA4	1	3.6	7.2	10.5	13	345	400	480	480	480	82	13600	-
3.5	9.7	540	2.4	154.5	IE1	BF50Z-../SSE06LA4	0.95	3.2	6.4	9.7	11.5	385	445	540	540	540	82	13600	-
3.5	8.1	640	2	183.5	IE1	BF50Z-../SSE06LA4	0.8	2.7	5.4	8.1	9.8	455	530	640	640	640	82	13600	-
3.5	7.3	710	1.8	205.2	IE1	BF50Z-../SSE06LA4	0.7	2.4	4.8	7.3	8.7	510	590	710	710	710	82	13600	-
3.5	6	860	1.5	247.5	IE1	BF50Z-../SSE06LA4	0.6	2	4	6	7.2	610	710	860	860	860	82	13600	-
3.5	5.4	960	1.3	276.8	IE1	BF50Z-../SSE06LA4	0.5	1.8	3.6	5.4	6.5	690	800	960	960	960	82	13600	-
3.5	4.7	1100	1.2	316.6	IE1	BF50Z-../SSE06LA4	0.47	1.5	3.1	4.7	5.6	790	910	1100	1100	1100	82	13600	-
3.5	4.2	1230	1	354	IE1	BF50Z-../SSE06LA4	0.42	1.4	2.8	4.2	5	880	1020	1230	1230	1230	82	13600	-
3.5	3.8	1370	0.95	392.8	IE1	BF50Z-../SSE06LA4	0.38	1.2	2.5	3.8	4.5	980	1130	1370	1370	1370	82	13600	-
3.5	3.4	1530	0.85	439.3	IE1	BF50Z-../SSE06LA4	0.34	1.1	2.2	3.4	4	1090	1270	1530	1530	1530	82	13600	-
3.5	2.6	1990	1.3	569.3	IE1	BF60G20-../SSE06LA4	0.26	0.85	1.7	2.6	3.1	1420	1650	1990	1990	1990	134	15300	43300
3.5	2.1	2400	1	689	IE1	BF60G20-../SSE06LA4	0.21	0.7	1.4	2.1	2.6	1720	1990	2400	2400	2400	134	15300	43300
3.5	1.8	2800	0.88	813.2	IE1	BF60G20-../SSE06LA4	0.18	0.6	1.2	1.8	2.2	2000	2350	2800	2800	2800	134	15300	43300
3.5	2.5	2000	2.8	577.5	IE1	BF70G20-../SSE06LA4	0.25	0.85	1.7	2.5	3.1	1440	1670	2000	2000	2000	212	16100	47700
3.5	2.2	2350	2.4	673.6	IE1	BF70G20-../SSE06LA4	0.22	0.7	1.4	2.2	2.6	1680	1950	2350	2350	2350	212	16100	47700
3.5	1.7	3050	1.9	872.1	IE1	BF70G20-../SSE06LA4	0.17	0.55	1.1	1.7	2	2150	2500	3050	3050	3050	212	16100	47700
3.5	1.4	3550	1.6	1017	IE1	BF70G20-../SSE06LA4	0.14	0.49	0.95	1.4	1.7	2500	2900	3550	3550	3550	212	16100	47700
3.5	1	4850	1.2	1390	IE1	BF70G20-../SSE06LA4	0.1	0.35	0.7	1	1.2	3450	4000	4850	4850	4850	212	16100	47700
3.5	0.9	5600	1	1621	IE1	BF70G20-../SSE06LA4	0.09	0.3	0.6	0.9	1.1	4050	4700	5600	5600	5600	212	16100	47700
3.5	0.75	6600	0.85	1912	IE1	BF70G20-../SSE06LA4	0.075	0.26	0.5	0.75	0.9	4750	5500	6600	6600	6600	212	16100	47700

 **$M_N = 5 \text{ Nm}$  ( $P_N = 0.78 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
5	260	28.5	2.2	5.72	IE4	BF06-../S4E08MA4	26	87	174	260	310	28.5	28.5	28.5	28.5	28.5	16	1600	-
5	195	38	1.8	7.66	IE4	BF06-../S4E08MA4	19.5	65	130	195	230	38	38	38	38	38	16	1800	-
5	162	46	1.5	9.21	IE4	BF06-../S4E08MA4	16	54	108	162	195	46	46	46	46	46	16	1900	-
5	124	60	1.2	12.07	IE4	BF06-../S4E08MA4	12	41	82	124	149	60	60	60	60	60	16	2000	-
5	105	71	1.2	14.21	IE4	BF06-../S4E08MA4	10.5	35	70	105	126	71	71	71	71	71	16	2100	-
5	88	84	1.1	16.99	IE4	BF06-../S4E08MA4	8.8	29	58	88	105	84	84	84	84	84	16	2500	-
5	73	102	0.93	20.42	IE4	BF06-../S4E08MA4	7.3	24	48.5	73	88	102	102	102	102	102	16	2700	-
5	99	75	2.4	15.04	IE4	BF10-../S4E08MA4	9.9	33	66	99	119	75	75	75	75	75	27	2800	-
5	82	91	2.6	18.23	IE4	BF10-../S4E08MA4	8.2	27	54	82	98	91	91	91	91	91	27	2900	-
5	74	100	2.4	20.05	IE4	BF10-../S4E08MA4	7.4	24.5	49.5	74	89	100	100	100	100	100	27	3000	-
5	64	116	2.1	23.28	IE4	BF10-../S4E08MA4	6.4	21	42.5	64	77	116	116	116	116	116	27	3200	-
5	58	128	1.9	25.6	IE4	BF10-../S4E08MA4	5.8	19.5	39	58	70	128	128	128	128	128	27	3350	-
5	52	142	1.7	28.47	IE4	BF10-../S4E08MA4	5.2	17.5	35	52	63	142	142	142	142	142	27	3450	-
5	47.5	156	1.5	31.31	IE4	BF10-../S4E08MA4	4.7	15.5	31.5	47.5	57	156	156	156	156	156	27	3600	-
5	41	180	1.3	36.15	IE4	BF10-../S4E08MA4	4.1	13.5	27.5	41	49.5	180	180	180	180	180	27	3800	-
5	37.5	198	1.2	39.75	IE4	BF10-../S4E08MA4	3.7	12.5	25	37.5	45	198	198	198	198	198	27	3950	-
5	34.5	215	1.1	43.06	IE4	BF10-../S4E08MA4	3.4	11.5	23	34.5	41.5	215	215	215	215	215	27	4100	-
5	31.5	235	1	47.35	IE4	BF10-../S4E08MA4	3.1	10.5	21	31.5	38	235	235	235	235	235	27	4250	-
5	29	255	0.94	51.28	IE4	BF10-../S4E08MA4	2.9	9.7	19.5	29	35	255	255	255	255	255	27	4400	-
5	26.5	280	0.85	56.39	IE4	BF10-../S4E08MA4	2.6	8.8	17.5	26.5	31.5	280	280	280	280	280	27	4550	-
5	54	138	3	27.62	IE4	BF20-../S4E08MA4	5.4	18	36	54	65	138	138	138	138	138	33	4150	-
5	49	152	2.8	30.4	IE4	BF20-../S4E08MA4	4.9	16	32.5	49	59	152	152	152	152	152	33	4400	-
5	46	162	2.6	32.58	IE4	BF20-../S4E08MA4	4.6	15	30.5	46	55	162	162	162	162	162	33	4450	-
5	41.5	179	2.3	35.85	IE4	BF20-../S4E08MA4	4.1	13.5	27.5	41.5	50	179	179	179	179	179	33	4650	-
5	35.5	205	2	41.72	IE4	BF20-../S4E08MA4	3.5	11.5	23.5	35.5	43	205	205	205	205	205	33	4950	-
5	32.5	225	1.8	45.9	IE4	BF20-../S4E08MA4	3.2	10.5	21.5	32.5	39	225	225	225	225	225	33	5100	-
5	30.5	240	1.7	48.56	IE4	BF20-../S4E08MA4	3	10	20.5	30.5	37	240	240	240	240	240	33	5200	-
5	28	265	1.6	53.43	IE4	BF20-../S4E08MA4	2.8	9.3	18.5	28	33.5	265	265	265	265	265	33	5500	-
5	25.5	290	1.4	58.24	IE4	BF20-../S4E08MA4	2.5	8.5	17	25.5	30.5	290	290	290	290	290	33	5600	-
5	23	320	1.3	64.08	IE4	BF20-../S4E08MA4	2.3	7.8	15.5	23	28	320	320	320	320	320	33	5900	-
5	21.5	345	1.2	69.7	IE4	BF20-../S4E08MA4	2.1	7.1	14	21.5	25.5	345	345	345	345	345	33	6100	-
5	19.5	380	1.1	76.69	IE4	BF20-../S4E08MA4	1.9	6.5	13	19.5	23	380	380	380	380	380	33	6300	-
5	17	435	0.96	87.31	IE4	BF20-../S4E08MA4	1.7	5.7	11	17	20.5	435	435	435	435	435	33	6600	-
5	15.5	480	0.87	96.08	IE4	BF20-../S4E08MA4	1.5	5.2	10	15.5	18.5	480	480	480	480	480	33	6900	-
5	14.5	500	0.84	100.2	IE4	BF20-../S4E08MA4	1.4	4.9	9.9	14.5	17.5	500	500	500	500	500	33	7000	-
5	38.5	192	3	38.49	IE4	BF30-../S4E08MA4	3.8	12.5	25.5	38.5	46.5	192	192	192	192	192	43	4400	-
5	36.5	205	2.8	41.01	IE4	BF30-../S4E08MA4	3.6	12	24	36.5	43.5	205	205	205	205	205	43	4500	-
5	33	225	2.5	45.1	IE4	BF30-../S4E08MA4	3.3	11	22	33	39.5	225	225	225	225	225	43	4700	-
5	28.5	260	2.2	52.2	IE4	BF30-../S4E08MA4	2.8	9.5	19	28.5	34	260	260	260	260	260	43	5000	-
5	26	285	2	57.41	IE4	BF30-../S4E08MA4	2.												

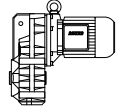
# BF-series shaft-mounted geared motors

## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 5 \text{ Nm}$  ( $P_N = 0.78 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
5	24.5	305	1.9	61.17	IE4	BF30-../S4E08MA4	2.4	8.1	16	24.5	29	305	305	305	305	305	43	5300	-
5	22	335	1.7	67.28	IE4	BF30-../S4E08MA4	2.2	7.4	14.5	22	26.5	335	335	335	335	335	43	5500	-
5	20.5	360	1.6	72.13	IE4	BF30-../S4E08MA4	2	6.9	13.5	20.5	24.5	360	360	360	360	360	43	5700	-
5	18.5	395	1.4	79.34	IE4	BF30-../S4E08MA4	1.8	6.3	12.5	18.5	22.5	395	395	395	395	395	43	5900	-
5	17	435	1.3	87.08	IE4	BF30-../S4E08MA4	1.7	5.7	11	17	20.5	435	435	435	435	435	43	6200	-
5	15.5	475	1.2	95.79	IE4	BF30-../S4E08MA4	1.5	5.2	10	15.5	18.5	475	475	475	475	475	43	6400	-
5	13.5	530	1.1	107.6	IE4	BF30-../S4E08MA4	1.3	4.6	9.2	13.5	16.5	530	530	530	530	530	43	6700	-
5	12.5	590	0.96	118.3	IE4	BF30-../S4E08MA4	1.2	4.2	8.4	12.5	15	590	590	590	590	590	43	7000	-
5	12	620	0.91	124.7	IE4	BF30-../S4E08MA4	1.2	4	8	12	14	620	620	620	620	620	43	7100	-
5	10.5	680	0.83	137.1	IE4	BF30-../S4E08MA4	1	3.6	7.2	10.5	13	680	680	680	680	680	43	7400	-
5	24	305	2.9	61.25	IE4	BF40-../S4E08MA4	2.4	8.1	16	24	29	305	305	305	305	305	53	7600	-
5	22	335	2.7	67.38	IE4	BF40-../S4E08MA4	2.2	7.4	14.5	22	26.5	335	335	335	335	335	53	8000	-
5	21	355	2.5	71.4	IE4	BF40-../S4E08MA4	2.1	7	14	21	25	355	355	355	355	355	53	8100	-
5	19	390	2.3	78.55	IE4	BF40-../S4E08MA4	1.9	6.3	12.5	19	22.5	390	390	390	390	390	53	8500	-
5	17.5	415	2.1	83.91	IE4	BF40-../S4E08MA4	1.7	5.9	11.5	17.5	21	415	415	415	415	415	53	8700	-
5	16	460	1.9	92.31	IE4	BF40-../S4E08MA4	1.6	5.4	10.5	16	19	460	460	460	460	460	53	9100	-
5	14.5	500	1.8	101	IE4	BF40-../S4E08MA4	1.4	4.9	9.9	14.5	17.5	500	500	500	500	500	53	9400	-
5	13.5	550	1.6	111.1	IE4	BF40-../S4E08MA4	1.3	4.5	9	13.5	16	550	550	550	550	550	53	9800	-
5	12	620	1.4	124.5	IE4	BF40-../S4E08MA4	1.2	4	8	12	14	620	620	620	620	620	53	10200	-
5	10.5	680	1.3	137	IE4	BF40-../S4E08MA4	1	3.6	7.2	10.5	13	680	680	680	680	680	53	10600	-
5	10.5	700	1.3	141.4	IE4	BF40Z-../S4E08MA4	1	3.5	7	10.5	12.5	700	700	700	700	700	56	10600	-
5	9.6	770	1.2	155.6	IE4	BF40Z-../S4E08MA4	0.95	3.2	6.4	9.6	11.5	770	770	770	770	770	56	10600	-
5	8.7	850	1.1	171.2	IE4	BF40Z-../S4E08MA4	0.85	2.9	5.8	8.7	10.5	850	850	850	850	850	56	10600	-
5	7.9	940	0.96	188.3	IE4	BF40Z-../S4E08MA4	0.75	2.6	5.3	7.9	9.5	940	940	940	940	940	56	10600	-
5	7.4	1010	0.89	202.2	IE4	BF40Z-../S4E08MA4	0.7	2.4	4.9	7.4	8.9	1010	1010	1010	1010	1010	56	10600	-
5	6.7	1110	0.81	222.4	IE4	BF40Z-../S4E08MA4	0.65	2.2	4.4	6.7	8	1110	1110	1110	1110	1110	56	10600	-
5	16.5	450	2.9	90.24	IE4	BF50-../S4E08MA4	1.6	5.5	11	16.5	19.5	450	450	450	450	450	81	11800	-
5	14.5	500	2.6	100.9	IE4	BF50-../S4E08MA4	1.4	4.9	9.9	14.5	17.5	500	500	500	500	500	81	12300	-
5	13	570	2.3	114	IE4	BF50-../S4E08MA4	1.3	4.3	8.7	13	15.5	570	570	570	570	570	81	12900	-
5	11.5	630	2	127.5	IE4	BF50-../S4E08MA4	1.1	3.9	7.8	11.5	14	630	630	630	630	630	81	13600	-
5	10.5	690	1.9	138.1	IE4	BF50Z-../S4E08MA4	1	3.6	7.2	10.5	13	690	690	690	690	690	86	13600	-
5	9.7	770	1.7	154.5	IE4	BF50Z-../S4E08MA4	0.95	3.2	6.4	9.7	11.5	770	770	770	770	770	86	13600	-
5	8.1	910	1.4	183.5	IE4	BF50Z-../S4E08MA4	0.8	2.7	5.4	8.1	9.8	910	910	910	910	910	86	13600	-
5	7.3	1020	1.3	205.2	IE4	BF50Z-../S4E08MA4	0.7	2.4	4.8	7.3	8.7	1020	1020	1020	1020	1020	86	13600	-
5	6	1230	1.1	247.5	IE4	BF50Z-../S4E08MA4	0.6	2	4	6	7.2	1230	1230	1230	1230	1230	86	13600	-
5	5.4	1380	0.94	276.8	IE4	BF50Z-../S4E08MA4	0.5	1.8	3.6	5.4	6.5	1380	1380	1380	1380	1380	86	13600	-
5	4.7	1580	0.82	316.6	IE4	BF50Z-../S4E08MA4	0.47	1.5	3.1	4.7	5.6	1580	1580	1580	1580	1580	86	13600	-
5	8.8	840	2.7	169.2	IE4	BF60Z-../S4E08MA4	0.85	2.9	5.9	8.8	10.5	840	840	840	840	840	130	15300	43300
5	7.9	930	2.5	187.7	IE4	BF60Z-../S4E08MA4	0.75	2.6	5.3	7.9	9.5	930	930	930	930	930	130	15300	43300
5	6.7	1100	2.1	221.4	IE4	BF60Z-../S4E08MA4	0.65	2.2	4.5	6.7	8.1	1100	1100	1100	1100	1100	130	15300	43300
5	6.1	1220	1.9	245.6	IE4	BF60Z-../S4E08MA4	0.6	2	4	6.1	7.3	1220	1220	1220	1220	1220	130	15300	43300
5	5.1	1460	1.6	293.4	IE4	BF60Z-../S4E08MA4	0.5	1.7	3.4	5.1	6.1	1460	1460	1460	1460	1460	130	15300	43300
5	4.6	1620	1.4	325.6	IE4	BF60Z-../S4E08MA4	0.46	1.5	3	4.6	5.5	1620	1620	1620	1620	1620	130	15300	43300
5	3.9	1900	1.2	380	IE4	BF60Z-../S4E08MA4	0.39	1.3	2.6	3.9	4.7	1900	1900	1900	1900	1900	130	15300	43300
5	3.5	2100	1.1	421.6	IE4	BF60Z-../S4E08MA4	0.35	1.1	2.3	3.5	4.2	2100	2100	2100	2100	2100	130	15300	43300
5	3.2	2250	1	459.9	IE4	BF60Z-../S4E08MA4	0.32	1	2.1	3.2	3.9	2250	2250	2250	2250	2250	130	15300	43300
5	2.9	2550	0.9	510.3	IE4	BF60Z-../S4E08MA4	0.29	0.95	1.9	2.9	3.5	2550	2550	2550	2550	2550	130	15300	43300
5	2.6	2800	0.88	569.3	IE4	BF60G20-../S4E08MA4	0.26	0.85	1.7	2.6	3.1	2800	2800	2800	2800	2800	137	15300	43300
5	4.3	1700	3	341.7	IE4	BF70Z-../S4E08MA4	0.43	1.4	2.9	4.3	5.2	1700	1700	1700	1700	1700	218	16100	47700
5	3.7	1990	2.6	398.7	IE4	BF70Z-../S4E08MA4	0.37	1.2	2.5	3.7	4.5	1990	1990	1990	1990	1990	218	16100	47700
5	3.4	2150	2.4	439.2	IE4	BF70Z-../S4E08MA4	0.34	1.1	2.2	3.4	4	2150	2150	2150	2150	2150	218	16100	47700
5	2.9	2550	2	512.4	IE4	BF70Z-../S4E08MA4	0.29	0.95	1.9	2.9	3.5	2550	2550	2550	2550	2550	218	16100	47700
5	2.8	2600	2.2	524.1	IE4	BF70G20-../S4E08MA4	0.28	0.95	1.9	2.8	3.4	2600	2600	2600	2600	2600	216	16100	47700
5	2.5	2850	2	577.5	IE4	BF70G20-../S4E08MA4	0.25	0.85	1.7	2.5	3.1	2850	2850	2850	2850	2850	216	16100	47700
5	2.2	3350	1.7	673.6	IE4	BF70G20-../S4E08MA4	0.22	0.7	1.4	2.2	2.6	3350	3350	3350	3350	3350	216	16100	47700
5	1.7	4350	1.3	872.1	IE4	BF70G20-../S4E08MA4	0.17	0.55	1.1	1.7	2	4350	4350	4350	4350	4350	216	16100	47700
5	1.4	5000	1.1	1017	IE4	BF70G20-../S4E08MA4	0.14	0.49	0.95	1.4	1.7	5000	5000	5000	5000	5000	216	16100	47700
5	1	6900	0.82	1390	IE4	BF70G20-../S4E08MA4	0.1	0.35	0.7	1	1.2	6900	6900	6900	6900	6900	216	16100	47700
5	1.9	3850	2.7	770.6	IE4	BF80Z-../S4E08MA4	0.19	0.6	1.2	1.9	2.3	3850	3850	3850	3850	3850	334	39600	75000
5	1.7	4350	2.4	874.6	IE4	BF80Z-../S4E08MA4	0.17	0.55	1.1	1.7	2	4350	4350	4350	4350	4350	334	39600	75000
5	1.5	4950	2.1	990.4	IE4	BF80Z-../S4E08MA4	0.15	0.5	1	1.5	1.8	4950	4950	4950	4950	4950	334	39600	75000
5	1.3	5600	1.9	1124	IE4	BF80Z-../S4E08MA4	0.13	0.44	0.85	1.3	1.6	5600	5600	5600	5600	5600	334	39600	75000
5	1.1	6600	1.6	1329	IE4	BF80G40-../S4E08MA4	0.11	0.37	0.75	1.1	1.3	6600	6600	6600	6600	6600	340	39600	75000
5	1	7400	1.4	1491	IE4	BF80G40-../S4E08MA4	0.1	0.33	0.65	1	1.2	7400	7400	7400	7400	7400	340	39600	75000
5	0.85	8400	1.2	1693	IE4	BF80G40-../S4E08MA4	0.085	0.29	0.55	0.85	1	8400	8400	8400	8400	8400	340	39600	75000
5	0.7	10200	1	2051	IE4	BF80G40-../S4E08MA4	0.07	0.24	0.48	0.7	0.85	10200</							

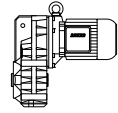


**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 7 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**

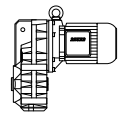
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
7	260	40	1.5	5.72	IE3	BF06-../SPE08LA4	26	87	174	260	310	37	40	40	40	40	17	1600	-
7	195	53	1.3	7.66	IE3	BF06-../SPE08LA4	19.5	65	130	195	230	49.5	53	53	53	53	17	1800	-
7	162	64	1.1	9.21	IE3	BF06-../SPE08LA4	16	54	108	162	195	59	64	64	64	64	17	1900	-
7	124	84	0.89	12.07	IE3	BF06-../SPE08LA4	12	41	82	124	149	78	84	84	84	84	17	2000	-
7	105	99	0.85	14.21	IE3	BF06-../SPE08LA4	10.5	35	70	105	126	92	99	99	99	99	17	2100	-
7	88	118	0.8	16.99	IE3	BF06-../SPE08LA4	8.8	29	58	88	105	110	118	118	118	118	17	2500	-
7	197	53	2.9	7.58	IE3	BF10-../SPE08LA4	19.5	65	131	197	235	49	53	53	53	53	28	2200	-
7	154	67	2.6	9.69	IE3	BF10-../SPE08LA4	15	51	103	154	185	62	67	67	67	67	28	2350	-
7	126	82	2.2	11.84	IE3	BF10-../SPE08LA4	12.5	42	84	126	152	76	82	82	82	82	28	2500	-
7	99	105	1.7	15.04	IE3	BF10-../SPE08LA4	9.9	33	66	99	119	97	105	105	105	105	28	2800	-
7	82	127	1.9	18.23	IE3	BF10-../SPE08LA4	8.2	27	54	82	98	118	127	127	127	127	28	2900	-
7	74	140	1.7	20.05	IE3	BF10-../SPE08LA4	7.4	24.5	49.5	74	89	130	140	140	140	140	28	3000	-
7	64	162	1.5	23.28	IE3	BF10-../SPE08LA4	6.4	21	42.5	64	77	151	162	162	162	162	28	3200	-
7	58	179	1.3	25.6	IE3	BF10-../SPE08LA4	5.8	19.5	39	58	70	166	179	179	179	179	28	3350	-
7	52	199	1.2	28.47	IE3	BF10-../SPE08LA4	5.2	17.5	35	52	63	185	199	199	199	199	28	3450	-
7	47.5	215	1.1	31.31	IE3	BF10-../SPE08LA4	4.7	15.5	31.5	47.5	57	200	215	215	215	215	28	3600	-
7	41	250	0.95	36.15	IE3	BF10-../SPE08LA4	4.1	13.5	27.5	41	49.5	230	250	250	250	250	28	3800	-
7	37.5	275	0.86	39.75	IE3	BF10-../SPE08LA4	3.7	12.5	25	37.5	45	255	275	275	275	275	28	3950	-
7	34.5	300	0.8	43.06	IE3	BF10-../SPE08LA4	3.4	11.5	23	34.5	41.5	275	300	300	300	300	28	4100	-
7	96	108	2.8	15.54	IE3	BF20-../SPE08LA4	9.6	32	64	96	115	101	108	108	108	108	35	3450	-
7	81	129	2.9	18.45	IE3	BF20-../SPE08LA4	8.1	27	54	81	97	119	129	129	129	129	35	3600	-
7	68	154	2.6	22.04	IE3	BF20-../SPE08LA4	6.8	22.5	45	68	81	143	154	154	154	154	35	3800	-
7	61	169	2.4	24.25	IE3	BF20-../SPE08LA4	6.1	20.5	41	61	74	157	169	169	169	169	35	3950	-
7	54	193	2.2	27.62	IE3	BF20-../SPE08LA4	5.4	18	36	54	65	179	193	193	193	193	35	4150	-
7	49	210	2	30.4	IE3	BF20-../SPE08LA4	4.9	16	32.5	49	59	197	210	210	210	210	35	4400	-
7	46	225	1.8	32.58	IE3	BF20-../SPE08LA4	4.6	15	30.5	46	55	210	225	225	225	225	35	4450	-
7	41.5	250	1.7	35.85	IE3	BF20-../SPE08LA4	4.1	13.5	27.5	41.5	50	230	250	250	250	250	35	4650	-
7	35.5	290	1.4	41.72	IE3	BF20-../SPE08LA4	3.5	11.5	23.5	35.5	43	270	290	290	290	290	35	4950	-
7	32.5	320	1.3	45.9	IE3	BF20-../SPE08LA4	3.2	10.5	21.5	32.5	39	295	320	320	320	320	35	5100	-
7	30.5	335	1.2	48.56	IE3	BF20-../SPE08LA4	3	10	20.5	30.5	37	315	335	335	335	335	35	5200	-
7	28	370	1.1	53.43	IE3	BF20-../SPE08LA4	2.8	9.3	18.5	28	33.5	345	370	370	370	370	35	5500	-
7	25.5	405	1	58.24	IE3	BF20-../SPE08LA4	2.5	8.5	17	25.5	30.5	375	405	405	405	405	35	5600	-
7	23	445	0.94	64.08	IE3	BF20-../SPE08LA4	2.3	7.8	15.5	23	28	415	445	445	445	445	35	5900	-
7	21.5	485	0.86	69.7	IE3	BF20-../SPE08LA4	2.1	7.1	14	21.5	25.5	450	485	485	485	485	35	6100	-
7	53	197	2.9	28.23	IE3	BF30-../SPE08LA4	5.3	17.5	35	53	63	183	197	197	197	197	45	3800	-
7	48	215	2.6	31.05	IE3	BF30-../SPE08LA4	4.8	16	32	48	57	200	215	215	215	215	45	4000	-
7	42.5	245	2.3	35	IE3	BF30-../SPE08LA4	4.2	14	28.5	42.5	51	225	245	245	245	245	45	4200	-
7	38.5	265	2.1	38.49	IE3	BF30-../SPE08LA4	3.8	12.5	25.5	38.5	46.5	250	265	265	265	265	45	4400	-
7	36.5	285	2	41.01	IE3	BF30-../SPE08LA4	3.6	12	24	36.5	43.5	265	285	285	285	285	45	4500	-
7	33	315	1.8	45.1	IE3	BF30-../SPE08LA4	3.3	11	22	33	39.5	290	315	315	315	315	45	4700	-
7	28.5	365	1.6	52.2	IE3	BF30-../SPE08LA4	2.8	9.5	19	28.5	34	335	365	365	365	365	45	5000	-
7	26	400	1.4	57.41	IE3	BF30-../SPE08LA4	2.6	8.7	17	26	31	370	400	400	400	400	45	5200	-
7	24.5	425	1.3	61.17	IE3	BF30-../SPE08LA4	2.4	8.1	16	24.5	29	395	425	425	425	425	45	5300	-
7	22	470	1.2	67.28	IE3	BF30-../SPE08LA4	2.2	7.4	14.5	22	26.5	435	470	470	470	470	45	5500	-
7	20.5	500	1.1	72.13	IE3	BF30-../SPE08LA4	2	6.9	13.5	20.5	24.5	465	500	500	500	500	45	5700	-
7	18.5	550	1	79.34	IE3	BF30-../SPE08LA4	1.8	6.3	12.5	18.5	22.5	510	550	550	550	550	45	5900	-
7	17	600	0.94	87.08	IE3	BF30-../SPE08LA4	1.7	5.7	11	17	20.5	560	600	600	600	600	45	6200	-
7	15.5	670	0.85	95.79	IE3	BF30-../SPE08LA4	1.5	5.2	10	15.5	18.5	620	670	670	670	670	45	6400	-
7	32.5	315	2.8	45.56	IE3	BF40-../SPE08LA4	3.2	10.5	21.5	32.5	39.5	295	315	315	315	315	54	6800	-
7	30.5	340	2.6	48.92	IE3	BF40-../SPE08LA4	3	10	20	30.5	36.5	315	340	340	340	340	54	7000	-
7	27.5	375	2.4	53.82	IE3	BF40-../SPE08LA4	2.7	9.2	18.5	27.5	33	345	375	375	375	375	54	7200	-
7	24	425	2.1	61.25	IE3	BF40-../SPE08LA4	2.4	8.1	16	24	29	395	425	425	425	425	54	7600	-
7	22	470	1.9	67.38	IE3	BF40-../SPE08LA4	2.2	7.4	14.5	22	26.5	435	470	470	470	470	54	8000	-
7	21	495	1.8	71.4	IE3	BF40-../SPE08LA4	2.1	7	14	21	25	460	495	495	495	495	54	8100	-
7	19	540	1.6	78.55	IE3	BF40-../SPE08LA4	1.9	6.3	12.5	19	22.5	510	540	540	540	540	54	8500	-
7	17.5	580	1.5	83.91	IE3	BF40-../SPE08LA4	1.7	5.9	11.5	17.5	21	540	580	580	580	580	54	8700	-
7	16	640	1.4	92.31	IE3	BF40-../SPE08LA4	1.6	5.4	10.5	16	19	600	640	640	640	640	54	9100	-
7	14.5	700	1.3	101	IE3	BF40-../SPE08LA4	1.4	4.9	9.9	14.5	17.5	650	700	700	700	700	54	9400	-
7	13.5	770	1.2	111.1	IE3	BF40-../SPE08LA4	1.3	4.5	9	13.5	16	720	770	770	770	770	54	9800	-
7	12	870	1	124.5	IE3	BF40-../SPE08LA4	1.2	4	8	12	14	800	870	870	870	870	54	10200	-
7	10.5	950	0.94	137	IE3	BF40-../SPE08LA4	1	3.6	7.2	10.5	13	890	950	950	950	950	54	10600	-
7	10.5	980	0.91	141.4	IE3	BF40Z../SPE08LA4	1	3.5	7	10.5	12.5	910	980	980	980	980	58	10600	-
7	9.6	1080	0.83	155.6	IE3	BF40Z../SPE08LA4	0.95	3.2	6.4	9.6	11.5	1010	1080	1080	1080	1080	58	10600	-
7	23.5	445	2.9	63.59	IE3	BF50-../SPE08LA4	2.3	7.8	15.5	23.5	28	410	445	445	445	445	83	9800	-
7	20.5	500	2.6	72.72	IE3	BF50-../SPE08LA4	2	6.8	13.5	20.5	24.5	470	500	500	500	500	83	10700	-
7	18	560	2.3	81.33	IE3	BF50-../SPE08LA4	1.8	6.1	12	18	22	520	560	560	560	560	83	11300	-
7	16.5	630	2.1	90.24	IE3	BF50-../SPE08LA4	1.6	5.5	11	16.5	19.5	580	630	630	630	630	83	11800	-
7	14.5	700	1.8	100.9	IE3	BF50-../SPE08LA4	1.4	4.9	9.9	14.5	17.5	650	700	700	700	700	83	12300	-
7	13	790	1.6	114	IE3	BF50-../SPE08LA4	1.3	4.3	8.7	13	15.5	740	790	790	790	790	83	12900	-
7	11.5	89																	

# BF-series shaft-mounted geared motors

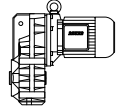
## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 7 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
7	7.9	1310	1.8	187.7	IE3	BF60Z-../SPE08LA4	0.75	2.6	5.3	7.9	9.5	1220	1310	1310	1310	1310	131	15300	43300
7	6.7	1540	1.5	221.4	IE3	BF60Z-../SPE08LA4	0.65	2.2	4.5	6.7	8.1	1430	1540	1540	1540	1540	131	15300	43300
7	6.1	1710	1.3	245.6	IE3	BF60Z-../SPE08LA4	0.6	2	4	6.1	7.3	1590	1710	1710	1710	1710	131	15300	43300
7	5.1	2050	1.1	293.4	IE3	BF60Z-../SPE08LA4	0.5	1.7	3.4	5.1	6.1	1900	2050	2050	2050	2050	131	15300	43300
7	4.6	2250	1	325.6	IE3	BF60Z-../SPE08LA4	0.46	1.5	3	4.6	5.5	2100	2250	2250	2250	2250	131	15300	43300
7	3.9	2650	0.86	380	IE3	BF60Z-../SPE08LA4	0.39	1.3	2.6	3.9	4.7	2450	2650	2650	2650	2650	131	15300	43300
7	5.7	1810	2.9	258.7	IE3	BF70Z-../SPE08LA4	0.55	1.9	3.8	5.7	6.9	1680	1810	1810	1810	1810	220	16100	47700
7	4.9	2100	2.5	301.8	IE3	BF70Z-../SPE08LA4	0.49	1.6	3.3	4.9	5.9	1960	2100	2100	2100	2100	220	16100	47700
7	4.3	2350	2.2	341.7	IE3	BF70Z-../SPE08LA4	0.43	1.4	2.9	4.3	5.2	2200	2350	2350	2350	2350	220	16100	47700
7	3.7	2750	1.9	398.7	IE3	BF70Z-../SPE08LA4	0.37	1.2	2.5	3.7	4.5	2500	2750	2750	2750	2750	220	16100	47700
7	3.4	3050	1.7	439.2	IE3	BF70Z-../SPE08LA4	0.34	1.1	2.2	3.4	4	2850	3050	3050	3050	3050	220	16100	47700
7	2.9	3550	1.4	512.4	IE3	BF70Z-../SPE08LA4	0.29	0.95	1.9	2.9	3.5	3300	3550	3550	3550	3550	220	16100	47700
7	2.8	3650	1.6	524.1	IE3	BF70G20-../SPE08LA4	0.28	0.95	1.9	2.8	3.4	3400	3650	3650	3650	3650	217	16100	47700
7	2.5	4000	1.4	577.5	IE3	BF70G20-../SPE08LA4	0.25	0.85	1.7	2.5	3.1	3750	4000	4000	4000	4000	217	16100	47700
7	2.2	4700	1.2	673.6	IE3	BF70G20-../SPE08LA4	0.22	0.7	1.4	2.2	2.6	4350	4700	4700	4700	4700	217	16100	47700
7	1.7	6100	0.93	872.1	IE3	BF70G20-../SPE08LA4	0.17	0.55	1.1	1.7	2	5600	6100	6100	6100	6100	217	16100	47700
7	1.4	7100	0.8	1017	IE3	BF70G20-../SPE08LA4	0.14	0.49	0.95	1.4	1.7	6600	7100	7100	7100	7100	217	16100	47700
7	2.9	3550	2.9	511.2	IE3	BF80Z-../SPE08LA4	0.29	0.95	1.9	2.9	3.5	3300	3550	3550	3550	3550	336	39600	75000
7	2.5	4050	2.6	583.4	IE3	BF80Z-../SPE08LA4	0.25	0.85	1.7	2.5	3	3750	4050	4050	4050	4050	336	39600	75000
7	2.2	4600	2.3	662.1	IE3	BF80Z-../SPE08LA4	0.22	0.75	1.5	2.2	2.7	4300	4600	4600	4600	4600	336	39600	75000
7	1.9	5300	1.9	770.6	IE3	BF80Z-../SPE08LA4	0.19	0.6	1.2	1.9	2.3	5000	5300	5300	5300	5300	336	39600	75000
7	1.7	6100	1.7	874.6	IE3	BF80Z-../SPE08LA4	0.17	0.55	1.1	1.7	2	5600	6100	6100	6100	6100	336	39600	75000
7	1.5	6900	1.5	990.4	IE3	BF80Z-../SPE08LA4	0.15	0.5	1	1.5	1.8	6400	6900	6900	6900	6900	336	39600	75000
7	1.3	7800	1.3	1124	IE3	BF80Z-../SPE08LA4	0.13	0.44	0.85	1.3	1.6	7300	7800	7800	7800	7800	336	39600	75000
7	1.1	9300	1.1	1329	IE3	BF80G40-../SPE08LA4	0.11	0.37	0.75	1.1	1.3	8600	9300	9300	9300	9300	341	39600	75000
7	1	10400	1	1491	IE3	BF80G40-../SPE08LA4	0.1	0.33	0.65	1	1.2	9600	10400	10400	10400	10400	341	39600	75000
7	0.85	11800	0.89	1693	IE3	BF80G40-../SPE08LA4	0.085	0.29	0.55	0.85	1	11000	11800	11800	11800	11800	341	39600	75000
7	1.5	6800	2.7	976.1	IE3	BF90G50-../SPE08LA4	0.15	0.5	1	1.5	1.8	6300	6800	6800	6800	6800	612	42800	120000
7	1.4	7300	2.5	1043	IE3	BF90G50-../SPE08LA4	0.14	0.47	0.95	1.4	1.7	6700	7300	7300	7300	7300	612	42800	120000
7	1.2	8400	2.2	1204	IE3	BF90G50-../SPE08LA4	0.12	0.41	0.8	1.2	1.4	7800	8400	8400	8400	8400	612	42800	120000
7	1	10100	1.8	1444	IE3	BF90G50-../SPE08LA4	0.1	0.34	0.65	1	1.2	9300	10100	10100	10100	10100	612	42800	120000
7	0.85	11700	1.6	1678	IE3	BF90G50-../SPE08LA4	0.085	0.29	0.55	0.85	1	10900	11700	11700	11700	11700	612	42800	120000
7	0.8	13000	1.4	1867	IE3	BF90G50-../SPE08LA4	0.08	0.26	0.5	0.8	0.95	12100	13000	13000	13000	13000	612	42800	120000
7	0.65	15000	1.2	2154	IE3	BF90G50-../SPE08LA4	0.065	0.23	0.46	0.65	0.8	14000	15000	15000	15000	15000	612	42800	120000
7	0.55	18500	1	2656	IE3	BF90G50-../SPE08LA4	0.055	0.18	0.37	0.55	0.65	17200	18500	18500	18500	18500	612	42800	120000
7	0.5	20500	0.9	2952	IE3	BF90G50-../SPE08LA4	0.05	0.16	0.33	0.5	0.6	19100	20500	20500	20500	20500	612	42800	120000
7	0.45	23000	0.8	3286	IE3	BF90G50-../SPE08LA4	0.045	0.15	0.3	0.45	0.5	21000	23000	23000	23000	23000	612	42800	120000

 **$M_N = 10 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

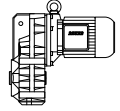
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	260	57	1.1	5.72	IE1	BF06-../SSE08LA4	26	87	174	260	310	37	45.5	57	57	57	17	1600	-
10	195	76	0.89	7.66	IE1	BF06-../SSE08LA4	19.5	65	130	195	230	49.5	61	76	76	76	17	1800	-
10	265	56	2.5	5.6	IE4	BF10-../S4E09SA4	26.5	89	178	265	320	47.5	56	56	56	56	32	1950	-
10	265	56	2.5	5.6	IE1	BF10-../SSE08LA4	26.5	89	178	265	320	36	44.5	56	56	56	28	1950	-
10	197	75	2	7.58	IE4	BF10-../S4E09SA4	19.5	65	131	197	235	64	75	75	75	75	32	2200	-
10	197	75	2	7.58	IE1	BF10-../SSE08LA4	19.5	65	131	197	235	49	60	75	75	75	28	2200	-
10	154	96	1.8	9.69	IE4	BF10-../S4E09SA4	15	51	103	154	185	82	96	96	96	96	32	2350	-
10	154	96	1.8	9.69	IE1	BF10-../SSE08LA4	15	51	103	154	185	62	77	96	96	96	28	2350	-
10	126	118	1.5	11.84	IE4	BF10-../S4E09SA4	12.5	42	84	126	152	100	118	118	118	118	32	2500	-
10	126	118	1.5	11.84	IE1	BF10-../SSE08LA4	12.5	42	84	126	152	76	94	118	118	118	28	2500	-
10	99	150	1.2	15.04	IE1	BF10-../SSE08LA4	9.9	33	66	99	119	97	120	150	150	150	28	2800	-
10	99	150	1.2	15.04	IE4	BF10-../S4E09SA4	9.9	33	66	99	119	127	150	150	150	150	32	2800	-
10	82	182	1.3	18.23	IE4	BF10-../S4E09SA4	8.2	27	54	82	98	154	182	182	182	182	32	2900	-
10	82	182	1.3	18.23	IE1	BF10-../SSE08LA4	8.2	27	54	82	98	118	145	182	182	182	28	2900	-
10	74	200	1.2	20.05	IE4	BF10-../S4E09SA4	7.4	24.5	49.5	74	89	170	200	200	200	200	32	3000	-
10	74	200	1.2	20.05	IE1	BF10-../SSE08LA4	7.4	24.5	49.5	74	89	130	160	200	200	200	28	3000	-
10	64	230	1	23.28	IE4	BF10-../S4E09SA4	6.4	21	42.5	64	77	197	230	230	230	230	32	3200	-
10	64	230	1	23.28	IE1	BF10-../SSE08LA4	6.4	21	42.5	64	77	151	186	230	230	230	28	3200	-
10	58	255	0.94	25.6	IE4	BF10-../S4E09SA4	5.8	19.5	39	58	70	215	255	255	255	255	32	3350	-
10	58	255	0.94	25.6	IE1	BF10-../SSE08LA4	5.8	19.5	39	58	70	166	200	255	255	255	28	3350	-
10	52	280	0.84	28.47	IE4	BF10-../S4E09SA4	5.2	17.5	35	52	63	240	280	280	280	280	32	3450	-
10	52	280	0.84	28.47	IE1	BF10-../SSE08LA4	5.2	17.5	35	52	63	185	225	280	280	280	28	3450	-
10	187	80	2.8	8	IE1	BF20-../SSE08LA4	18.5	62	125	187	225	52	64	80	80	80	35	2850	-
10	187	80	2.8	8	IE4	BF20-../S4E09SA4	18.5	62	125	187	225	68	80	80	80	80	38	2850	-
10	142	105	2.4	10.51	IE4	BF20-../S4E09SA4	14	47.5	95	142	171	89	105	105	105	105	38	3100	-
10	142	105	2.4	10.51	IE1	BF20-../SSE08LA4	14</												

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{min}$**  **$M_N = 10 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	96	155	2	15.54	IE1	BF20-../SSE08LA4	9.6	32	64	96	115	101	124	155	155	155	35	3450	-
10	89	167	2.1	16.77	IE4	BF20-../S4E09SA4	8.9	29.5	59	89	107	142	167	167	167	167	38	3500	-
10	89	167	2.1	16.77	IE1	BF20-../SSE08LA4	8.9	29.5	59	89	107	109	134	167	167	167	35	3500	-
10	81	184	2	18.45	IE1	BF20-../SSE08LA4	8.1	27	54	81	97	119	147	184	184	184	35	3600	-
10	81	184	2	18.45	IE4	BF20-../S4E09SA4	8.1	27	54	81	97	156	184	184	184	184	38	3600	-
10	68	220	1.8	22.04	IE1	BF20-../SSE08LA4	6.8	22.5	45	68	81	143	176	220	220	220	35	3800	-
10	68	220	1.8	22.04	IE4	BF20-../S4E09SA4	6.8	22.5	45	68	81	187	220	220	220	220	38	3800	-
10	61	240	1.6	24.25	IE1	BF20-../SSE08LA4	6.1	20.5	41	61	74	157	194	240	240	240	35	3950	-
10	61	240	1.6	24.25	IE4	BF20-../S4E09SA4	6.1	20.5	41	61	74	205	240	240	240	240	38	3950	-
10	54	275	1.5	27.62	IE1	BF20-../SSE08LA4	5.4	18	36	54	65	179	220	275	275	275	35	4150	-
10	54	275	1.5	27.62	IE4	BF20-../S4E09SA4	5.4	18	36	54	65	230	275	275	275	275	38	4150	-
10	49	300	1.4	30.4	IE1	BF20-../SSE08LA4	4.9	16	32.5	49	59	197	240	300	300	300	35	4400	-
10	49	300	1.4	30.4	IE4	BF20-../S4E09SA4	4.9	16	32.5	49	59	255	300	300	300	300	38	4400	-
10	46	325	1.3	32.58	IE4	BF20-../S4E09SA4	4.6	15	30.5	46	55	275	325	325	325	325	38	4450	-
10	46	325	1.3	32.58	IE1	BF20-../SSE08LA4	4.6	15	30.5	46	55	210	260	325	325	325	35	4450	-
10	41.5	355	1.2	35.85	IE1	BF20-../SSE08LA4	4.1	13.5	27.5	41.5	50	230	285	355	355	355	35	4650	-
10	41.5	355	1.2	35.85	IE4	BF20-../S4E09SA4	4.1	13.5	27.5	41.5	50	300	355	355	355	355	38	4650	-
10	35.5	415	1	41.72	IE4	BF20-../S4E09SA4	3.5	11.5	23.5	35.5	43	350	415	415	415	415	38	4950	-
10	35.5	415	1	41.72	IE1	BF20-../SSE08LA4	3.5	11.5	23.5	35.5	43	270	330	415	415	415	35	4950	-
10	32.5	455	0.92	45.9	IE1	BF20-../SSE08LA4	3.2	10.5	21.5	32.5	39	295	365	455	455	455	35	5100	-
10	32.5	455	0.92	45.9	IE4	BF20-../S4E09SA4	3.2	10.5	21.5	32.5	39	390	455	455	455	455	38	5100	-
10	30.5	485	0.86	48.56	IE1	BF20-../SSE08LA4	3	10	20.5	30.5	37	315	385	485	485	485	35	5200	-
10	30.5	485	0.86	48.56	IE4	BF20-../S4E09SA4	3	10	20.5	30.5	37	410	485	485	485	485	38	5200	-
10	116	129	2.8	12.91	IE1	BF30-../SSE08LA4	11.5	38.5	77	116	139	83	103	129	129	129	45	3050	-
10	116	129	2.8	12.91	IE4	BF30-../S4E09SA4	11.5	38.5	77	116	139	109	129	129	129	129	49	3050	-
10	93	160	2.5	16	IE1	BF30-../SSE08LA4	9.3	31	62	93	112	104	128	160	160	160	45	3250	-
10	93	160	2.5	16	IE4	BF30-../S4E09SA4	9.3	31	62	93	112	136	160	160	160	160	49	3250	-
10	84	176	2.7	17.65	IE1	BF30-../SSE08LA4	8.4	28	56	84	101	114	141	176	176	176	45	3300	-
10	84	176	2.7	17.65	IE4	BF30-../S4E09SA4	8.4	28	56	84	101	150	176	176	176	176	49	3300	-
10	77	194	2.6	19.41	IE1	BF30-../SSE08LA4	7.7	25.5	51	77	92	126	155	194	194	194	45	3400	-
10	77	194	2.6	19.41	IE4	BF30-../S4E09SA4	7.7	25.5	51	77	92	164	194	194	194	194	49	3400	-
10	68	215	2.4	21.85	IE4	BF30-../S4E09SA4	6.8	22.5	45.5	68	82	185	215	215	215	215	49	3500	-
10	68	215	2.4	21.85	IE1	BF30-../SSE08LA4	6.8	22.5	45.5	68	82	142	174	215	215	215	45	3500	-
10	62	240	2.3	24.03	IE4	BF30-../S4E09SA4	6.2	20.5	41.5	62	74	200	240	240	240	240	49	3600	-
10	62	240	2.3	24.03	IE1	BF30-../SSE08LA4	6.2	20.5	41.5	62	74	156	192	240	240	240	45	3600	-
10	53	280	2	28.23	IE4	BF30-../S4E09SA4	5.3	17.5	35	53	63	235	280	280	280	280	49	3800	-
10	53	280	2	28.23	IE1	BF30-../SSE08LA4	5.3	17.5	35	53	63	183	225	280	280	280	45	3800	-
10	48	310	1.8	31.05	IE4	BF30-../S4E09SA4	4.8	16	32	48	57	260	310	310	310	310	49	4000	-
10	48	310	1.8	31.05	IE1	BF30-../SSE08LA4	4.8	16	32	48	57	200	245	310	310	310	45	4000	-
10	42.5	350	1.6	35	IE4	BF30-../S4E09SA4	4.2	14	28.5	42.5	51	295	350	350	350	350	49	4200	-
10	42.5	350	1.6	35	IE1	BF30-../SSE08LA4	4.2	14	28.5	42.5	51	225	280	350	350	350	45	4200	-
10	38.5	380	1.5	38.49	IE4	BF30-../S4E09SA4	3.8	12.5	25.5	38.5	46.5	325	380	380	380	380	49	4400	-
10	38.5	380	1.5	38.49	IE1	BF30-../SSE08LA4	3.8	12.5	25.5	38.5	46.5	250	305	380	380	380	45	4400	-
10	36.5	410	1.4	41.01	IE4	BF30-../S4E09SA4	3.6	12	24	36.5	43.5	345	410	410	410	410	49	4500	-
10	36.5	410	1.4	41.01	IE1	BF30-../SSE08LA4	3.6	12	24	36.5	43.5	265	325	410	410	410	45	4500	-
10	33	450	1.3	45.1	IE4	BF30-../S4E09SA4	3.3	11	22	33	39.5	380	450	450	450	450	49	4700	-
10	33	450	1.3	45.1	IE1	BF30-../SSE08LA4	3.3	11	22	33	39.5	290	360	450	450	450	45	4700	-
10	28.5	520	1.1	52.2	IE1	BF30-../SSE08LA4	2.8	9.5	19	28.5	34	335	415	520	520	520	45	5000	-
10	28.5	520	1.1	52.2	IE4	BF30-../S4E09SA4	2.8	9.5	19	28.5	34	440	520	520	520	520	49	5000	-
10	26	570	0.99	57.41	IE4	BF30-../S4E09SA4	2.6	8.7	17	26	31	485	570	570	570	570	49	5200	-
10	26	570	0.99	57.41	IE1	BF30-../SSE08LA4	2.6	8.7	17	26	31	370	455	570	570	570	45	5200	-
10	24.5	610	0.93	61.17	IE4	BF30-../S4E09SA4	2.4	8.1	16	24.5	29	510	610	610	610	610	49	5300	-
10	24.5	610	0.93	61.17	IE1	BF30-../SSE08LA4	2.4	8.1	16	24.5	29	395	485	610	610	610	45	5300	-
10	22	670	0.85	67.28	IE1	BF30-../SSE08LA4	2.2	7.4	14.5	22	26.5	435	530	670	670	670	45	5500	-
10	22	670	0.85	67.28	IE4	BF30-../S4E09SA4	2.2	7.4	14.5	22	26.5	570	670	670	670	670	49	5500	-
10	55	265	2.9	26.86	IE1	BF40-../SSE08LA4	5.5	18.5	37	55	67	174	210	265	265	265	54	5600	-
10	55	265	2.9	26.86	IE4	BF40-../S4E09SA4	5.5	18.5	37	55	67	225	265	265	265	265	58	5600	-
10	50	295	2.7	29.55	IE4	BF40-../S4E09SA4	5	16.5	33.5	50	60	250	295	295	295	295	58	5800	-
10	50	295	2.7	29.55	IE1	BF40-../SSE08LA4	5	16.5	33.5	50	60	192	235	295	295	295	54	5800	-
10	43.5	340	2.5	34.21	IE4	BF40-../S4E09SA4	4.3	14.5	29	43.5	52	290	340	340	340	340	58	6000	-
10	43.5	340	2.5	34.21	IE1	BF40-../SSE08LA4	4.3	14.5	29	43.5	52	220	270	340	340	340	54	6000	-
10	39.5	375	2.4	37.64	IE1	BF40-../SSE08LA4	3.9	13	26.5	39.5	47.5	240	300	375	375	375	54	6200	-
10	39.5	375	2.4	37.64	IE4	BF40-../S4E09SA4	3.9	13	26.5	39.5	47.5	315	375	375	375	375	58	6200	-
10	36	410	2.2	41.42	IE4	BF40-../S4E09SA4	3.6	12	24	36	43	350	410	410	410	410	58	6500	-
10	36	410	2.2	41.42	IE1	BF40-../SSE08LA4	3.6	12	24	36	43	265	330	410	410	410	54	6500	-
10	32.5	455	2	45.56	IE1	BF40-../SSE08LA4	3.2	10.5	21.5	32.5	39.5	295	360	455	455	455	54	6800	-
10	32.5	455	2	45.56	IE4	BF40-../S4E09SA4	3.2	10.5	21.5	32.5	39.5	385	455	455	455	455	58	6800	-
10	30.5	485	1.8	48.92	IE1	BF40-../SSE08LA4	3	10	20	30.5	36.5	315	390	485	485	485	54	7000	-
10	30.5	485	1.8	48.92	IE4	BF40-../S4E09SA4	3	10	20	30.5	36.5	415	485	485	485	485	58	7000	-

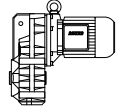
# BF-series shaft-mounted geared motors

## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

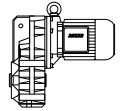
 **$M_N = 10 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	17.5	830	1.1	83.91	IE4	BF40-../S4E09SA4	1.7	5.9	11.5	17.5	21	710	830	830	830	830	58	8700	-
10	16	920	0.97	92.31	IE4	BF40-../S4E09SA4	1.6	5.4	10.5	16	19	780	920	920	920	920	58	9100	-
10	16	920	0.97	92.31	IE1	BF40-../SSE08LA4	1.6	5.4	10.5	16	19	600	730	920	920	920	54	9100	-
10	14.5	1010	0.89	101	IE4	BF40-../S4E09SA4	1.4	4.9	9.9	14.5	17.5	850	1010	1010	1010	1010	58	9400	-
10	14.5	1010	0.89	101	IE1	BF40-../SSE08LA4	1.4	4.9	9.9	14.5	17.5	650	800	1010	1010	1010	54	9400	-
10	13.5	1110	0.81	111.1	IE1	BF40-../SSE08LA4	1.3	4.5	9	13.5	16	720	880	1110	1110	1110	54	9800	-
10	13.5	1110	0.81	111.1	IE4	BF40-../S4E09SA4	1.3	4.5	9	13.5	16	940	1110	1110	1110	1110	58	9800	-
10	31.5	470	2.8	47.14	IE4	BF50-../S4E09SA4	3.1	10.5	21	31.5	38	400	470	470	470	470	86	8900	-
10	31.5	470	2.8	47.14	IE1	BF50-../SSE08LA4	3.1	10.5	21	31.5	38	305	375	470	470	470	83	8900	-
10	26	560	2.3	56.86	IE4	BF50-../S4E09SA4	2.6	8.7	17.5	26	31.5	480	560	560	560	560	86	9300	-
10	26	560	2.3	56.86	IE1	BF50-../SSE08LA4	2.6	8.7	17.5	26	31.5	365	450	560	560	560	83	9300	-
10	23.5	630	2	63.59	IE1	BF50-../SSE08LA4	2.3	7.8	15.5	23.5	28	410	500	630	630	630	83	9800	-
10	23.5	630	2	63.59	IE4	BF50-../S4E09SA4	2.3	7.8	15.5	23.5	28	540	630	630	630	630	86	9800	-
10	20.5	720	1.8	72.72	IE4	BF50-../S4E09SA4	2	6.8	13.5	20.5	24.5	610	720	720	720	720	86	10700	-
10	20.5	720	1.8	72.72	IE1	BF50-../SSE08LA4	2	6.8	13.5	20.5	24.5	470	580	720	720	720	83	10700	-
10	18	810	1.6	81.33	IE4	BF50-../S4E09SA4	1.8	6.1	12	18	22	690	810	810	810	810	86	11300	-
10	18	810	1.6	81.33	IE1	BF50-../SSE08LA4	1.8	6.1	12	18	22	520	650	810	810	810	83	11300	-
10	16.5	900	1.4	90.24	IE1	BF50-../SSE08LA4	1.6	5.5	11	16.5	19.5	580	720	900	900	900	83	11800	-
10	16.5	900	1.4	90.24	IE4	BF50-../S4E09SA4	1.6	5.5	11	16.5	19.5	760	900	900	900	900	86	11800	-
10	14.5	1000	1.3	100.9	IE1	BF50-../SSE08LA4	1.4	4.9	9.9	14.5	17.5	650	800	1000	1000	1000	83	12300	-
10	14.5	1000	1.3	100.9	IE4	BF50-../S4E09SA4	1.4	4.9	9.9	14.5	17.5	850	1000	1000	1000	1000	86	12300	-
10	13	1140	1.1	114	IE1	BF50-../SSE08LA4	1.3	4.3	8.7	13	15.5	740	910	1140	1140	1140	83	12900	-
10	13	1140	1.1	114	IE4	BF50-../S4E09SA4	1.3	4.3	8.7	13	15.5	960	1140	1140	1140	1140	86	12900	-
10	11.5	1270	1	127.5	IE4	BF50-../S4E09SA4	1.1	3.9	7.8	11.5	14	1080	1270	1270	1270	1270	86	13600	-
10	11.5	1270	1	127.5	IE1	BF50-../SSE08LA4	1.1	3.9	7.8	11.5	14	820	1020	1270	1270	1270	83	13600	-
10	10.5	1380	0.94	138.1	IE1	BF50Z-../SSE08LA4	1	3.6	7.2	10.5	13	890	1100	1380	1380	1380	88	13600	-
10	10.5	1380	0.94	138.1	IE4	BF50Z-../S4E09SA4	1	3.6	7.2	10.5	13	1170	1380	1380	1380	1380	91	13600	-
10	9.7	1540	0.84	154.5	IE4	BF50Z-../S4E09SA4	0.95	3.2	6.4	9.7	11.5	1310	1540	1540	1540	1540	91	13600	-
10	9.7	1540	0.84	154.5	IE1	BF50Z-../SSE08LA4	0.95	3.2	6.4	9.7	11.5	1000	1230	1540	1540	1540	88	13600	-
10	18.5	800	2.9	80.05	IE4	BF60-../S4E09SA4	1.8	6.2	12	18.5	22	680	800	800	800	800	116	12600	35600
10	16	930	2.5	93.44	IE4	BF60-../S4E09SA4	1.6	5.3	10.5	16	19	790	930	930	930	930	116	13500	38200
10	14	1030	2.2	103.7	IE4	BF60-../S4E09SA4	1.4	4.8	9.6	14	17	880	1030	1030	1030	1030	116	14100	39900
10	13	1130	2	113.1	IE4	BF60-../S4E09SA4	1.3	4.4	8.8	13	15.5	960	1130	1130	1130	1130	116	14600	41300
10	11.5	1250	1.8	125.5	IE4	BF60-../S4E09SA4	1.1	3.9	7.9	11.5	14	1060	1250	1250	1250	1250	116	15300	43300
10	10.5	1400	1.6	140.8	IE1	BF60Z-../SSE08LA4	1	3.5	7.1	10.5	12.5	910	1120	1400	1400	1400	131	15300	43300
10	10.5	1400	1.6	140.8	IE4	BF60Z-../S4E09SA4	1	3.5	7.1	10.5	12.5	1190	1400	1400	1400	1400	135	15300	43300
10	8.8	1690	1.4	169.2	IE4	BF60Z-../S4E09SA4	0.85	2.9	5.9	8.8	10.5	1430	1690	1690	1690	1690	135	15300	43300
10	8.8	1690	1.4	169.2	IE1	BF60Z-../SSE08LA4	0.85	2.9	5.9	8.8	10.5	1090	1350	1690	1690	1690	131	15300	43300
10	7.9	1870	1.2	187.7	IE1	BF60Z-../SSE08LA4	0.75	2.6	5.3	7.9	9.5	1220	1500	1870	1870	1870	131	15300	43300
10	7.9	1870	1.2	187.7	IE4	BF60Z-../S4E09SA4	0.75	2.6	5.3	7.9	9.5	1590	1870	1870	1870	1870	135	15300	43300
10	6.7	2200	1	221.4	IE1	BF60Z-../SSE08LA4	0.65	2.2	4.5	6.7	8.1	1430	1770	2200	2200	2200	131	15300	43300
10	6.7	2200	1	221.4	IE4	BF60Z-../S4E09SA4	0.65	2.2	4.5	6.7	8.1	1880	2200	2200	2200	2200	135	15300	43300
10	6.1	2450	0.94	245.6	IE1	BF60Z-../SSE08LA4	0.6	2	4	6.1	7.3	1590	1960	2450	2450	2450	131	15300	43300
10	6.1	2450	0.94	245.6	IE4	BF60Z-../S4E09SA4	0.6	2	4	6.1	7.3	2050	2450	2450	2450	2450	135	15300	43300
10	8.3	1790	2.9	179.7	IE4	BF70Z-../S4E09SA4	0.8	2.7	5.5	8.3	10	1520	1790	1790	1790	1790	223	16100	47700
10	8.3	1790	2.9	179.7	IE1	BF70Z-../SSE08LA4	0.8	2.7	5.5	8.3	10	1160	1430	1790	1790	1790	220	16100	47700
10	7.5	1990	2.6	199.7	IE4	BF70Z-../S4E09SA4	0.75	2.5	5	7.5	9	1690	1990	1990	1990	1990	223	16100	47700
10	7.5	1990	2.6	199.7	IE1	BF70Z-../SSE08LA4	0.75	2.5	5	7.5	9	1290	1590	1990	1990	1990	220	16100	47700
10	6.4	2300	2.2	233	IE4	BF70Z-../S4E09SA4	0.6	2.1	4.2	6.4	7.7	1980	2300	2300	2300	2300	223	16100	47700
10	6.4	2300	2.2	233	IE1	BF70Z-../SSE08LA4	0.6	2.1	4.2	6.4	7.7	1510	1860	2300	2300	2300	220	16100	47700
10	5.7	2550	2	258.7	IE1	BF70Z-../SSE08LA4	0.55	1.9	3.8	5.7	6.9	1680	2050	2550	2550	2550	220	16100	47700
10	5.7	2550	2	258.7	IE4	BF70Z-../S4E09SA4	0.55	1.9	3.8	5.7	6.9	2150	2550	2550	2550	2550	223	16100	47700
10	4.9	3000	1.7	301.8	IE1	BF70Z-../SSE08LA4	0.49	1.6	3.3	4.9	5.9	1960	2400	3000	3000	3000	220	16100	47700
10	4.9	3000	1.7	301.8	IE4	BF70Z-../S4E09SA4	0.49	1.6	3.3	4.9	5.9	2550	3000	3000	3000	3000	223	16100	47700
10	4.3	3400	1.5	341.7	IE4	BF70Z-../S4E09SA4	0.43	1.4	2.9	4.3	5.2	2900	3400	3400	3400	3400	223	16100	47700
10	4.3	3400	1.5	341.7	IE1	BF70Z-../SSE08LA4	0.43	1.4	2.9	4.3	5.2	2200	2700	3400	3400	3400	220	16100	47700
10	3.7	3950	1.3	398.7	IE1	BF70Z-../SSE08LA4	0.37	1.2	2.5	3.7	4.5	2550	3150	3950	3950	3950	220	16100	47700
10	3.7	3950	1.3	398.7	IE4	BF70Z-../S4E09SA4	0.37	1.2	2.5	3.7	4.5	3350	3950	3950	3950	3950	223	16100	47700
10	3.4	4350	1.2	439.2	IE1	BF70Z-../SSE08LA4	0.34	1.1	2.2	3.4	4	2850	3500	4350	4350	4350	220	16100	47700
10	3.4	4350	1.2	439.2	IE4	BF70Z-../S4E09SA4	0.34	1.1	2.2	3.4	4	3700	4350	4350	4350	4350	223	16100	47700
10	2.9	5100	1	512.4	IE4	BF70Z-../S4E09SA4	0.29	0.95	1.9	2.9	3.5	4350	5100	5100	5100	5100	223	16100	47700
10	2.9	5100	1	512.4	IE1	BF70Z-../SSE08LA4	0.29	0.95	1.9	2.9	3.5	3300	4050	5100	5100	5100	220	16100	47700
10	2.8	5200	1.1	524.1	IE1	BF70G20-../SSE08LA4	0.28	0.95	1.9	2.8	3.4	3400	4150	5200	5200	5200	217	16100	47700
10	2.8	5200	1.1	524.1	IE4	BF70G20-../S4E09SA4	0.28	0.95	1.9	2.8	3.4	4450	5200	5200	5200	5200	221	16100	47700
10	2.5	5700	0.99	577.5	IE4	BF70G20-../S4E09SA4	0.25	0.85	1.7	2.5	3.1	4900	5700	5700	5700	5700	221	1610	



**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 10 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

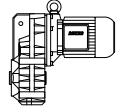
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	2.2	6600	1.6	662.1	IE4	BF80Z-../S4E09SA4	0.22	0.75	1.5	2.2	2.7	5600	6600	6600	6600	6600	340	39600	75000
10	2.2	6600	1.6	662.1	IE1	BF80Z-../SSE08LA4	0.22	0.75	1.5	2.2	2.7	4300	5200	6600	6600	6600	336	39600	75000
10	1.9	7700	1.4	770.6	IE1	BF80Z-../SSE08LA4	0.19	0.6	1.2	1.9	2.3	5000	6100	7700	7700	7700	336	39600	75000
10	1.9	7700	1.4	770.6	IE4	BF80Z-../S4E09SA4	0.19	0.6	1.2	1.9	2.3	6500	7700	7700	7700	7700	340	39600	75000
10	1.7	8700	1.2	874.6	IE4	BF80Z-../S4E09SA4	0.17	0.55	1.1	1.7	2	7400	8700	8700	8700	8700	340	39600	75000
10	1.7	8700	1.2	874.6	IE1	BF80Z-../SSE08LA4	0.17	0.55	1.1	1.7	2	5600	6900	8700	8700	8700	336	39600	75000
10	1.5	9900	1.1	990.4	IE1	BF80Z-../SSE08LA4	0.15	0.5	1	1.5	1.8	6400	7900	9900	9900	9900	336	39600	75000
10	1.5	9900	1.1	990.4	IE4	BF80Z-../S4E09SA4	0.15	0.5	1	1.5	1.8	8400	9900	9900	9900	9900	340	39600	75000
10	1.3	11200	0.93	1124	IE4	BF80Z-../S4E09SA4	0.13	0.44	0.85	1.3	1.6	9500	11200	11200	11200	11200	340	39600	75000
10	1.3	11200	0.93	1124	IE1	BF80Z-../SSE08LA4	0.13	0.44	0.85	1.3	1.6	7300	8900	11200	11200	11200	336	39600	75000
10	2.2	6500	2.8	658.1	IE4	BF90Z-../S4E09SA4	0.22	0.75	1.5	2.2	2.7	5500	6500	6500	6500	6500	604	42800	120000
10	1.9	7500	2.4	759	IE4	BF90Z-../S4E09SA4	0.19	0.65	1.3	1.9	2.3	6400	7500	7500	7500	7500	604	42800	120000
10	1.7	8400	2.2	845.1	IE4	BF90Z-../S4E09SA4	0.17	0.55	1.1	1.7	2.1	7100	8400	8400	8400	8400	604	42800	120000
10	1.5	9700	1.9	976.1	IE1	BF90G50-../SSE08LA4	0.15	0.5	1	1.5	1.8	6300	7800	9700	9700	9700	612	42800	120000
10	1.5	9700	1.9	976.1	IE4	BF90G50-../S4E09SA4	0.15	0.5	1	1.5	1.8	8200	9700	9700	9700	9700	616	42800	120000
10	1.4	10400	1.8	1043	IE4	BF90G50-../S4E09SA4	0.14	0.47	0.95	1.4	1.7	8800	10400	10400	10400	10400	616	42800	120000
10	1.4	10400	1.8	1043	IE1	BF90G50-../SSE08LA4	0.14	0.47	0.95	1.4	1.7	6700	8300	10400	10400	10400	612	42800	120000
10	1.2	12000	1.5	1204	IE1	BF90G50-../SSE08LA4	0.12	0.41	0.8	1.2	1.4	7800	9600	12000	12000	12000	612	42800	120000
10	1.2	12000	1.5	1204	IE4	BF90G50-../S4E09SA4	0.12	0.41	0.8	1.2	1.4	10200	12000	12000	12000	12000	616	42800	120000
10	1	14400	1.3	1444	IE1	BF90G50-../SSE08LA4	0.1	0.34	0.65	1	1.2	9300	11500	14400	14400	14400	612	42800	120000
10	1	14400	1.3	1444	IE4	BF90G50-../S4E09SA4	0.1	0.34	0.65	1	1.2	12200	14400	14400	14400	14400	616	42800	120000
10	0.85	16700	1.1	1678	IE4	BF90G50-../S4E09SA4	0.085	0.29	0.55	0.85	1	14200	16700	16700	16700	16700	616	42800	120000
10	0.85	16700	1.1	1678	IE1	BF90G50-../SSE08LA4	0.085	0.29	0.55	0.85	1	10900	13400	16700	16700	16700	612	42800	120000
10	0.8	18600	0.99	1867	IE1	BF90G50-../SSE08LA4	0.08	0.26	0.5	0.8	0.95	12100	14900	18600	18600	18600	612	42800	120000
10	0.8	18600	0.99	1867	IE4	BF90G50-../S4E09SA4	0.08	0.26	0.5	0.8	0.95	15800	18600	18600	18600	18600	616	42800	120000
10	0.65	21500	0.86	2154	IE4	BF90G50-../S4E09SA4	0.065	0.23	0.46	0.65	0.8	18300	21500	21500	21500	21500	616	42800	120000
10	0.65	21500	0.86	2154	IE1	BF90G50-../SSE08LA4	0.065	0.23	0.46	0.65	0.8	14000	17200	21500	21500	21500	612	42800	120000

 **$M_N = 14 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**

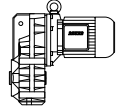
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	265	78	1.8	5.6	IE5	BF10-../S5E09XA4	26.5	89	178	265	320	72	78	78	78	78	40	1950	-
14	265	78	1.8	5.6	IE2	BF10-../SHE09SA4	26.5	89	178	265	320	47.5	56	78	78	78	32	1950	-
14	197	106	1.4	7.58	IE5	BF10-../S5E09XA4	19.5	65	131	197	235	98	106	106	106	106	40	2200	-
14	197	106	1.4	7.58	IE2	BF10-../SHE09SA4	19.5	65	131	197	235	64	75	106	106	106	32	2200	-
14	154	135	1.3	9.69	IE5	BF10-../S5E09XA4	15	51	103	154	185	125	135	135	135	135	40	2350	-
14	154	135	1.3	9.69	IE2	BF10-../SHE09SA4	15	51	103	154	185	82	96	135	135	135	32	2350	-
14	126	165	1.1	11.84	IE5	BF10-../S5E09XA4	12.5	42	84	126	152	153	165	165	165	165	40	2500	-
14	126	165	1.1	11.84	IE2	BF10-../SHE09SA4	12.5	42	84	126	152	100	118	165	165	165	32	2500	-
14	99	210	0.87	15.04	IE5	BF10-../S5E09XA4	9.9	33	66	99	119	195	210	210	210	210	40	2800	-
14	99	210	0.87	15.04	IE2	BF10-../SHE09SA4	9.9	33	66	99	119	127	150	210	210	210	32	2800	-
14	82	255	0.94	18.23	IE5	BF10-../S5E09XA4	8.2	27	54	82	98	235	255	255	255	255	40	2900	-
14	82	255	0.94	18.23	IE2	BF10-../SHE09SA4	8.2	27	54	82	98	154	182	255	255	255	32	2900	-
14	74	280	0.86	20.05	IE2	BF10-../SHE09SA4	7.4	24.5	49.5	74	89	170	200	280	280	280	32	3000	-
14	74	280	0.86	20.05	IE5	BF10-../S5E09XA4	7.4	24.5	49.5	74	89	260	280	280	280	280	40	3000	-
14	245	84	2.4	6.04	IE2	BF20-../SHE09SA4	24.5	82	165	245	295	51	60	84	84	84	38	2550	-
14	245	84	2.4	6.04	IE5	BF20-../S5E09XA4	24.5	82	165	245	295	78	84	84	84	84	46	2550	-
14	187	112	2	8	IE2	BF20-../SHE09SA4	18.5	62	125	187	225	68	80	112	112	112	38	2850	-
14	187	112	2	8	IE5	BF20-../S5E09XA4	18.5	62	125	187	225	104	112	112	112	112	46	2850	-
14	142	147	1.7	10.51	IE2	BF20-../SHE09SA4	14	47.5	95	142	171	89	105	147	147	147	38	3100	-
14	142	147	1.7	10.51	IE5	BF20-../S5E09XA4	14	47.5	95	142	171	136	147	147	147	147	46	3100	-
14	113	184	1.5	13.18	IE5	BF20-../S5E09XA4	11	37.5	75	113	136	171	184	184	184	184	46	3300	-
14	113	184	1.5	13.18	IE2	BF20-../SHE09SA4	11	37.5	75	113	136	112	131	184	184	184	38	3300	-
14	96	215	1.4	15.54	IE2	BF20-../SHE09SA4	9.6	32	64	96	115	132	155	215	215	215	38	3450	-
14	96	215	1.4	15.54	IE5	BF20-../S5E09XA4	9.6	32	64	96	115	200	215	215	215	215	46	3450	-
14	89	230	1.5	16.77	IE5	BF20-../S5E09XA4	8.9	29.5	59	89	107	215	230	230	230	230	46	3500	-
14	89	230	1.5	16.77	IE2	BF20-../SHE09SA4	8.9	29.5	59	89	107	142	167	230	230	230	38	3500	-
14	81	255	1.4	18.45	IE5	BF20-../S5E09XA4	8.1	27	54	81	97	235	255	255	255	255	46	3600	-
14	81	255	1.4	18.45	IE2	BF20-../SHE09SA4	8.1	27	54	81	97	156	184	255	255	255	38	3600	-
14	68	305	1.3	22.04	IE5	BF20-../S5E09XA4	6.8	22.5	45	68	81	285	305	305	305	305	46	3800	-
14	68	305	1.3	22.04	IE2	BF20-../SHE09SA4	6.8	22.5	45	68	81	187	220	305	305	305	38	3800	-
14	61	335	1.2	24.25	IE2	BF20-../SHE09SA4	6.1	20.5	41	61	74	205	240	335	335	335	38	3950	-
14	61	335	1.2	24.25	IE5	BF20-../S5E09XA4	6.1	20.5	41	61	74	315	335	335	335	335	46	3950	-
14	54	385	1.1	27.62	IE5	BF20-../S5E09XA4	5.4	18	36	54	65	355	385	385	385	385	46	4150	-
14	54	385	1.1	27.62	IE2	BF20-../SHE09SA4	5.4	18	36	54	65	230	275	385	385	385	38	4150	-
14	49	425	0.99	30.4	IE5	BF20-../S5E09XA4	4.9	16	32.5	49	59	395	425	425	425	425	46	4400	-
14	49	425	0.99	30.4	IE2	BF20-../SHE09SA4	4.9	16	32.5	49	59	255	300						

# BF-series shaft-mounted geared motors

## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

**M<sub>N</sub> = 14 Nm (P<sub>N</sub> = 2.2 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	235	88	3	6.34	IE5	BF30-../S5E09XA4	23.5	78	157	235	280	82	88	88	88	88	57	2400	-
14	185	112	2.5	8.07	IE2	BF30-../S5E09SA4	18.5	61	123	185	220	68	80	112	112	112	49	2650	-
14	185	112	2.5	8.07	IE5	BF30-../S5E09XA4	18.5	61	123	185	220	104	112	112	112	112	57	2650	-
14	150	139	2.3	9.99	IE5	BF30-../S5E09XA4	15	50	100	150	180	129	139	139	139	139	57	2850	-
14	150	139	2.3	9.99	IE2	BF30-../S5E09SA4	15	50	100	150	180	84	99	139	139	139	49	2850	-
14	116	180	2	12.91	IE2	BF30-../S5E09SA4	11.5	38.5	77	116	139	109	129	180	180	180	49	3050	-
14	116	180	2	12.91	IE5	BF30-../S5E09XA4	11.5	38.5	77	116	139	167	180	180	180	180	57	3050	-
14	93	220	1.8	16	IE5	BF30-../S5E09XA4	9.3	31	62	93	112	205	220	220	220	220	57	3250	-
14	93	220	1.8	16	IE2	BF30-../S5E09SA4	9.3	31	62	93	112	136	160	220	220	220	49	3250	-
14	84	245	1.9	17.65	IE5	BF30-../S5E09XA4	8.4	28	56	84	101	225	245	245	245	245	57	3300	-
14	84	245	1.9	17.65	IE2	BF30-../S5E09SA4	8.4	28	56	84	101	150	176	245	245	245	49	3300	-
14	77	270	1.8	19.41	IE5	BF30-../S5E09XA4	7.7	25.5	51	77	92	250	270	270	270	270	57	3400	-
14	77	270	1.8	19.41	IE2	BF30-../S5E09SA4	7.7	25.5	51	77	92	164	194	270	270	270	49	3400	-
14	68	305	1.7	21.85	IE5	BF30-../S5E09XA4	6.8	22.5	45.5	68	82	280	305	305	305	305	57	3500	-
14	68	305	1.7	21.85	IE2	BF30-../S5E09SA4	6.8	22.5	45.5	68	82	185	215	305	305	305	49	3500	-
14	62	335	1.6	24.03	IE5	BF30-../S5E09XA4	6.2	20.5	41.5	62	74	310	335	335	335	335	57	3600	-
14	62	335	1.6	24.03	IE2	BF30-../S5E09SA4	6.2	20.5	41.5	62	74	200	240	335	335	335	49	3600	-
14	53	395	1.4	28.23	IE2	BF30-../S5E09SA4	5.3	17.5	35	53	63	235	280	395	395	395	49	3800	-
14	53	395	1.4	28.23	IE5	BF30-../S5E09XA4	5.3	17.5	35	53	63	365	395	395	395	395	57	3800	-
14	48	430	1.3	31.05	IE2	BF30-../S5E09SA4	4.8	16	32	48	57	260	310	430	430	430	49	4000	-
14	48	430	1.3	31.05	IE5	BF30-../S5E09XA4	4.8	16	32	48	57	400	430	430	430	430	57	4000	-
14	42.5	490	1.2	35	IE2	BF30-../S5E09SA4	4.2	14	28.5	42.5	51	295	350	490	490	490	49	4200	-
14	42.5	490	1.2	35	IE5	BF30-../S5E09XA4	4.2	14	28.5	42.5	51	455	490	490	490	490	57	4200	-
14	38.5	530	1.1	38.49	IE5	BF30-../S5E09XA4	3.8	12.5	25.5	38.5	46.5	500	530	530	530	530	57	4400	-
14	38.5	530	1.1	38.49	IE2	BF30-../S5E09SA4	3.8	12.5	25.5	38.5	46.5	325	380	530	530	530	49	4400	-
14	36.5	570	0.99	41.01	IE2	BF30-../S5E09SA4	3.6	12	24	36.5	43.5	345	410	570	570	570	49	4500	-
14	36.5	570	0.99	41.01	IE5	BF30-../S5E09XA4	3.6	12	24	36.5	43.5	530	570	570	570	570	57	4500	-
14	33	630	0.9	45.1	IE2	BF30-../S5E09SA4	3.3	11	22	33	39.5	380	450	630	630	630	49	4700	-
14	33	630	0.9	45.1	IE5	BF30-../S5E09XA4	3.3	11	22	33	39.5	580	630	630	630	630	57	4700	-
14	127	165	2.8	11.79	IE5	BF40-../S5E09XA4	12.5	42	84	127	152	165	165	165	165	165	66	4450	-
14	127	165	2.8	11.79	IE2	BF40-../S5E09SA4	12.5	42	84	127	152	100	117	165	165	165	58	4450	-
14	99	210	2.5	15.02	IE5	BF40-../S5E09XA4	9.9	33	66	99	119	195	210	210	210	210	66	4800	-
14	99	210	2.5	15.02	IE2	BF40-../S5E09SA4	9.9	33	66	99	119	127	150	210	210	210	58	4800	-
14	86	240	2.6	17.35	IE2	BF40-../S5E09SA4	8.6	28.5	57	86	103	147	173	240	240	240	58	4950	-
14	86	240	2.6	17.35	IE5	BF40-../S5E09XA4	8.6	28.5	57	86	103	225	240	240	240	240	66	4950	-
14	78	265	2.5	19.09	IE2	BF40-../S5E09SA4	7.8	26	52	78	94	162	190	265	265	265	58	5100	-
14	78	265	2.5	19.09	IE5	BF40-../S5E09XA4	7.8	26	52	78	94	245	265	265	265	265	66	5100	-
14	69	300	2.3	21.6	IE2	BF40-../S5E09SA4	6.9	23	46	69	83	183	215	300	300	300	58	5200	-
14	69	300	2.3	21.6	IE5	BF40-../S5E09XA4	6.9	23	46	69	83	280	300	300	300	300	66	5200	-
14	63	330	2.2	23.77	IE2	BF40-../S5E09SA4	6.3	21	42	63	75	200	235	330	330	330	58	5400	-
14	63	330	2.2	23.77	IE5	BF40-../S5E09XA4	6.3	21	42	63	75	305	330	330	330	330	66	5400	-
14	55	375	2	26.86	IE5	BF40-../S5E09XA4	5.5	18.5	37	55	67	345	375	375	375	375	66	5600	-
14	55	375	2	26.86	IE2	BF40-../S5E09SA4	5.5	18.5	37	55	67	225	265	375	375	375	58	5600	-
14	50	410	1.9	29.55	IE2	BF40-../S5E09SA4	5	16.5	33.5	50	60	250	295	410	410	410	58	5800	-
14	50	410	1.9	29.55	IE5	BF40-../S5E09XA4	5	16.5	33.5	50	60	380	410	410	410	410	66	5800	-
14	43.5	475	1.8	34.21	IE5	BF40-../S5E09XA4	4.3	14.5	29	43.5	52	440	475	475	475	475	66	6000	-
14	43.5	475	1.8	34.21	IE2	BF40-../S5E09SA4	4.3	14.5	29	43.5	52	290	340	475	475	475	58	6000	-
14	39.5	520	1.7	37.64	IE5	BF40-../S5E09XA4	3.9	13	26.5	39.5	47.5	485	520	520	520	520	66	6200	-
14	39.5	520	1.7	37.64	IE2	BF40-../S5E09SA4	3.9	13	26.5	39.5	47.5	315	375	520	520	520	58	6200	-
14	36	570	1.6	41.42	IE5	BF40-../S5E09XA4	3.6	12	24	36	43	530	570	570	570	570	66	6500	-
14	36	570	1.6	41.42	IE2	BF40-../S5E09SA4	3.6	12	24	36	43	350	410	570	570	570	58	6500	-
14	32.5	630	1.4	45.56	IE5	BF40-../S5E09XA4	3.2	10.5	21.5	32.5	39.5	590	630	630	630	630	66	6800	-
14	32.5	630	1.4	45.56	IE2	BF40-../S5E09SA4	3.2	10.5	21.5	32.5	39.5	385	455	630	630	630	58	6800	-
14	30.5	680	1.3	48.92	IE2	BF40-../S5E09SA4	3	10	20	30.5	36.5	415	485	680	680	680	58	7000	-
14	30.5	680	1.3	48.92	IE5	BF40-../S5E09XA4	3	10	20	30.5	36.5	630	680	680	680	680	66	7000	-
14	27.5	750	1.2	53.82	IE5	BF40-../S5E09XA4	2.7	9.2	18.5	27.5	33	690	750	750	750	750	66	7200	-
14	27.5	750	1.2	53.82	IE2	BF40-../S5E09SA4	2.7	9.2	18.5	27.5	33	455	530	750	750	750	58	7200	-
14	24	850	1	61.25	IE5	BF40-../S5E09XA4	2.4	8.1	16	24	29	790	850	850	850	850	66	7600	-
14	24	850	1	61.25	IE2	BF40-../S5E09SA4	2.4	8.1	16	24	29	520	610	850	850	850	58	7600	-
14	22	940	0.95	67.38	IE5	BF40-../S5E09XA4	2.2	7.4	14.5	22	26.5	870	940	940	940	940	66	8000	-
14	22	940	0.95	67.38	IE2	BF40-../S5E09SA4	2.2	7.4	14.5	22	26.5	570	670	940	940	940	58	8000	-
14	21	990	0.9	71.4	IE5	BF40-../S5E09XA4	2.1	7	14	21	25	920	990	990	990	990	66	8100	-
14	21	990	0.9	71.4	IE2	BF40-../S5E09SA4	2.1	7	14	21	25	600	710	990	990	990	58	8100	-
14	19	1090	0.82	78.55	IE5	BF40-../S5E09XA4	1.9	6.3	12.5	19	22.5	1020	1090	1090	1090	1090	66	8500	-
14	19	1090	0.82	78.55	IE2	BF40-../S5E09SA4	1.9	6.3	12.5	19	22.5	660	780	1090	1090	1090	58	8500	-
14	47	440	2.8	31.73	IE2	BF50-../S5E09SA4	4.7	15.5	31.5	47	56	265	315	440	440	440	86	7500	-
14	47	440	2.8	31.73	IE5	BF50-../S5E09XA4	4.7	15.5	31.5	47	56	410	440	440	440	440	94	7500	-
14	42	495	2.6	35.49	IE2	BF50-../S5E09SA4	4.2	14	28	42	50	300	350	495	495	495	86	7800	-
14	42	495	2.6	35.49	IE5	BF50-../S5E09XA4	4.2	14	28	42	50	460	495	495	495	495	94	7800	-

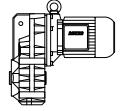
**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{min}$**  **$M_N = 14 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	18	1130	1.1	81.33	IE5	BF50-../S5E09XA4	1.8	6.1	12	18	22	1050	1130	1130	1130	1130	94	11300	-
14	16.5	1260	1	90.24	IE2	BF50-../S5E09SA4	1.6	5.5	11	16.5	19.5	760	900	1260	1260	1260	86	11800	-
14	16.5	1260	1	90.24	IE5	BF50-../S5E09XA4	1.6	5.5	11	16.5	19.5	1170	1260	1260	1260	1260	94	11800	-
14	14.5	1410	0.92	100.9	IE5	BF50-../S5E09XA4	1.4	4.9	9.9	14.5	17.5	1310	1410	1410	1410	1410	94	12300	-
14	14.5	1410	0.92	100.9	IE2	BF50-../S5E09SA4	1.4	4.9	9.9	14.5	17.5	850	1000	1410	1410	1410	86	12300	-
14	13	1590	0.81	114	IE2	BF50-../S5E09SA4	1.3	4.3	8.7	13	15.5	960	1140	1590	1590	1590	86	12900	-
14	13	1590	0.81	114	IE5	BF50-../S5E09XA4	1.3	4.3	8.7	13	15.5	1480	1590	1590	1590	1590	94	12900	-
14	27.5	760	3	54.44	IE5	BF60-../S5E09XA4	2.7	9.1	18	27.5	33	700	760	760	760	760	124	10500	29700
14	27.5	760	3	54.44	IE2	BF60-../S5E09SA4	2.7	9.1	18	27.5	33	460	540	760	760	760	116	10500	29700
14	24.5	840	2.7	60.4	IE5	BF60-../S5E09XA4	2.4	8.2	16.5	24.5	29.5	780	840	840	840	840	124	11100	31400
14	24.5	840	2.7	60.4	IE2	BF60-../S5E09SA4	2.4	8.2	16.5	24.5	29.5	510	600	840	840	840	116	11100	31400
14	20.5	1010	2.3	72.15	IE2	BF60-../S5E09SA4	2	6.9	13.5	20.5	24.5	610	720	1010	1010	1010	116	12000	34000
14	20.5	1010	2.3	72.15	IE5	BF60-../S5E09XA4	2	6.9	13.5	20.5	24.5	930	1010	1010	1010	1010	116	12000	34000
14	18.5	1120	2.1	80.05	IE2	BF60-../S5E09SA4	1.8	6.2	12	18.5	22	680	800	1120	1120	1120	116	12600	35600
14	18.5	1120	2.1	80.05	IE5	BF60-../S5E09XA4	1.8	6.2	12	18.5	22	1040	1120	1120	1120	1120	124	12600	35600
14	16	1300	1.8	93.44	IE5	BF60-../S5E09XA4	1.6	5.3	10.5	16	19	1210	1300	1300	1300	1300	124	13500	38200
14	16	1300	1.8	93.44	IE2	BF60-../S5E09SA4	1.6	5.3	10.5	16	19	790	930	1300	1300	1300	116	13500	38200
14	14	1450	1.6	103.7	IE5	BF60-../S5E09XA4	1.4	4.8	9.6	14	17	1340	1450	1450	1450	1450	124	14100	39900
14	14	1450	1.6	103.7	IE2	BF60-../S5E09SA4	1.4	4.8	9.6	14	17	880	1030	1450	1450	1450	116	14100	39900
14	13	1580	1.5	113.1	IE5	BF60-../S5E09XA4	1.3	4.4	8.8	13	15.5	1470	1580	1580	1580	1580	124	14600	41300
14	13	1580	1.5	113.1	IE2	BF60-../S5E09SA4	1.3	4.4	8.8	13	15.5	960	1130	1580	1580	1580	116	14600	41300
14	11.5	1750	1.3	125.5	IE2	BF60-../S5E09SA4	1.1	3.9	7.9	11.5	14	1060	1250	1750	1750	1750	116	15300	43300
14	11.5	1750	1.3	125.5	IE5	BF60-../S5E09XA4	1.1	3.9	7.9	11.5	14	1630	1750	1750	1750	1750	124	15300	43300
14	10.5	1970	1.2	140.8	IE5	BF60Z-../S5E09XA4	1	3.5	7.1	10.5	12.5	1830	1970	1970	1970	1970	143	15300	43300
14	10.5	1970	1.2	140.8	IE2	BF60Z-../S5E09SA4	1	3.5	7.1	10.5	12.5	1190	1400	1970	1970	1970	135	15300	43300
14	8.8	2350	0.97	169.2	IE2	BF60Z-../S5E09SA4	0.85	2.9	5.9	8.8	10.5	1430	1690	2350	2350	2350	135	15300	43300
14	8.8	2350	0.97	169.2	IE5	BF60Z-../S5E09XA4	0.85	2.9	5.9	8.8	10.5	2150	2350	2350	2350	2350	143	15300	43300
14	7.9	2600	0.88	187.7	IE2	BF60Z-../S5E09SA4	0.75	2.6	5.3	7.9	9.5	1590	1870	2600	2600	2600	135	15300	43300
14	7.9	2600	0.88	187.7	IE5	BF60Z-../S5E09XA4	0.75	2.6	5.3	7.9	9.5	2400	2600	2600	2600	2600	143	15300	43300
14	12	1710	3	122.7	IE2	BF70-../S5E09SA4	1.2	4	8.1	12	14.5	1040	1220	1710	1710	1710	202	16100	47700
14	12	1710	3	122.7	IE5	BF70-../S5E09XA4	1.2	4	8.1	12	14.5	1590	1710	1710	1710	1710	210	16100	47700
14	11	1860	2.8	133	IE5	BF70Z-../S5E09XA4	1.1	3.7	7.5	11	13.5	1720	1860	1860	1860	1860	231	16100	47700
14	11	1860	2.8	133	IE2	BF70Z-../S5E09SA4	1.1	3.7	7.5	11	13.5	1130	1330	1860	1860	1860	223	16100	47700
14	9.7	2150	2.4	154	IE5	BF70Z-../S5E09XA4	0.95	3.2	6.4	9.7	11.5	2000	2150	2150	2150	2150	231	16100	47700
14	9.7	2150	2.4	154	IE2	BF70Z-../S5E09SA4	0.95	3.2	6.4	9.7	11.5	1300	1540	2150	2150	2150	223	16100	47700
14	8.3	2500	2.1	179.7	IE5	BF70Z-../S5E09XA4	0.8	2.7	5.5	8.3	10	2300	2500	2500	2500	2500	231	16100	47700
14	8.3	2500	2.1	179.7	IE2	BF70Z-../S5E09SA4	0.8	2.7	5.5	8.3	10	1520	1790	2500	2500	2500	223	16100	47700
14	7.5	2750	1.9	199.7	IE2	BF70Z-../S5E09SA4	0.75	2.5	5	7.5	9	1690	1990	2750	2750	2750	223	16100	47700
14	7.5	2750	1.9	199.7	IE5	BF70Z-../S5E09XA4	0.75	2.5	5	7.5	9	2550	2750	2750	2750	2750	231	16100	47700
14	6.4	3250	1.6	233	IE5	BF70Z-../S5E09XA4	0.6	2.1	4.2	6.4	7.7	3000	3250	3250	3250	3250	231	16100	47700
14	6.4	3250	1.6	233	IE2	BF70Z-../S5E09SA4	0.6	2.1	4.2	6.4	7.7	1980	2300	3250	3250	3250	223	16100	47700
14	5.7	3600	1.4	258.7	IE5	BF70Z-../S5E09XA4	0.55	1.9	3.8	5.7	6.9	3350	3600	3600	3600	3600	231	16100	47700
14	5.7	3600	1.4	258.7	IE2	BF70Z-../S5E09SA4	0.55	1.9	3.8	5.7	6.9	2150	2550	3600	3600	3600	223	16100	47700
14	4.9	4200	1.2	301.8	IE5	BF70Z-../S5E09XA4	0.49	1.6	3.3	4.9	5.9	3900	4200	4200	4200	4200	231	16100	47700
14	4.9	4200	1.2	301.8	IE2	BF70Z-../S5E09SA4	0.49	1.6	3.3	4.9	5.9	2550	3000	4200	4200	4200	223	16100	47700
14	4.3	4750	1.1	341.7	IE5	BF70Z-../S5E09XA4	0.43	1.4	2.9	4.3	5.2	4400	4750	4750	4750	4750	231	16100	47700
14	4.3	4750	1.1	341.7	IE2	BF70Z-../S5E09SA4	0.43	1.4	2.9	4.3	5.2	2900	3400	4750	4750	4750	223	16100	47700
14	3.7	5500	0.93	398.7	IE5	BF70Z-../S5E09XA4	0.37	1.2	2.5	3.7	4.5	5100	5500	5500	5500	5500	231	16100	47700
14	3.7	5500	0.93	398.7	IE2	BF70Z-../S5E09SA4	0.37	1.2	2.5	3.7	4.5	3350	3950	5500	5500	5500	223	16100	47700
14	3.4	6100	0.85	439.2	IE5	BF70Z-../S5E09XA4	0.34	1.1	2.2	3.4	4	5700	6100	6100	6100	6100	231	16100	47700
14	3.4	6100	0.85	439.2	IE2	BF70Z-../S5E09SA4	0.34	1.1	2.2	3.4	4	3700	4350	6100	6100	6100	223	16100	47700
14	6.3	3300	2.9	237.1	IE5	BF80-../S5E09XA4	0.6	2.1	4.2	6.3	7.5	3050	3300	3300	3300	3300	307	36900	75000
14	6.3	3300	2.9	237.1	IE2	BF80-../S5E09SA4	0.6	2.1	4.2	6.3	7.5	2000	2350	3300	3300	3300	299	36900	75000
14	5.5	3750	2.5	269.1	IE5	BF80-../S5E09XA4	0.55	1.8	3.7	5.5	6.6	3450	3750	3750	3750	3750	307	39600	75000
14	5.5	3750	2.5	269.1	IE2	BF80-../S5E09SA4	0.55	1.8	3.7	5.5	6.6	2250	2650	3750	3750	3750	299	39600	75000
14	5.1	4050	2.6	291.7	IE2	BF80Z-../S5E09SA4	0.5	1.7	3.4	5.1	6.1	2450	2900	4050	4050	4050	340	39600	75000
14	5.1	4050	2.6	291.7	IE5	BF80Z-../S5E09XA4	0.5	1.7	3.4	5.1	6.1	3750	4050	4050	4050	4050	348	39600	75000
14	4.3	4850	2.2	347.3	IE2	BF80Z-../S5E09SA4	0.43	1.4	2.8	4.3	5.1	2950	3450	4850	4850	4850	340	39600	75000
14	4.3	4850	2.2	347.3	IE5	BF80Z-../S5E09XA4	0.43	1.4	2.8	4.3	5.1	4500	4850	4850	4850	4850	348	39600	75000
14	3.8	5500	1.9	394.2	IE5	BF80Z-../S5E09XA4	0.38	1.2	2.5	3.8	4.5	5100	5500	5500	5500	5500	348	39600	75000
14	3.8	5500	1.9	394.2	IE2	BF80Z-../S5E09SA4	0.38	1.2	2.5	3.8	4.5	3350	3900	5500	5500	5500	340	39600	75000
14	3.3	6300	1.7	450.4	IE2	BF80Z-../S5E09SA4	0.33	1.1	2.2	3.3	3.9	3800	4500	6300	6300	6300	340	39600	75000
14	3.3	6300	1.7	450.4	IE5	BF80Z-../S5E09XA4	0.33	1.1	2.2	3.3	3.9	5800	6300	6300	6300	6300	348	39600	75000
14	2.9	7100	1.5	511.2	IE5	BF80Z-../S5E09XA4	0.29	0.95	1.9	2.9	3.5	6600							

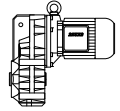


# BF-series shaft-mounted geared motors

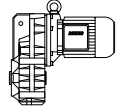
## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 14 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**

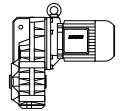
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	2.5	8200	2.2	591.1	IE2	BF90Z-../SHE09SA4	0.25	0.8	1.6	2.5	3	5000	5900	8200	8200	8200	604	42800	120000
14	2.2	9200	2	658.1	IE5	BF90Z-../S5E09XA4	0.22	0.75	1.5	2.2	2.7	8500	9200	9200	9200	9200	612	42800	120000
14	2.2	9200	2	658.1	IE2	BF90Z-../SHE09SA4	0.22	0.75	1.5	2.2	2.7	5500	6500	9200	9200	9200	604	42800	120000
14	1.9	10600	1.7	759	IE5	BF90Z-../S5E09XA4	0.19	0.65	1.3	1.9	2.3	9800	10600	10600	10600	10600	612	42800	120000
14	1.9	10600	1.7	759	IE2	BF90Z-../SHE09SA4	0.19	0.65	1.3	1.9	2.3	6400	7500	10600	10600	10600	604	42800	120000
14	1.7	11800	1.6	845.1	IE5	BF90Z-../S5E09XA4	0.17	0.55	1.1	1.7	2.1	10900	11800	11800	11800	11800	612	42800	120000
14	1.7	11800	1.6	845.1	IE2	BF90Z-../SHE09SA4	0.17	0.55	1.1	1.7	2.1	7100	8400	11800	11800	11800	604	42800	120000
14	1.5	13600	1.4	976.1	IE2	BF90G50-../SHE09SA4	0.15	0.5	1	1.5	1.8	8200	9700	13600	13600	13600	616	42800	120000
14	1.5	13600	1.4	976.1	IE5	BF90G50-../S5E09XA4	0.15	0.5	1	1.5	1.8	12600	13600	13600	13600	13600	624	42800	120000
14	1.4	14600	1.3	1043	IE5	BF90G50-../S5E09XA4	0.14	0.47	0.95	1.4	1.7	13500	14600	14600	14600	14600	624	42800	120000
14	1.4	14600	1.3	1043	IE2	BF90G50-../SHE09SA4	0.14	0.47	0.95	1.4	1.7	8800	10400	14600	14600	14600	616	42800	120000
14	1.2	16800	1.1	1204	IE2	BF90G50-../SHE09SA4	0.12	0.41	0.8	1.2	1.4	10200	12000	16800	16800	16800	616	42800	120000
14	1.2	16800	1.1	1204	IE5	BF90G50-../S5E09XA4	0.12	0.41	0.8	1.2	1.4	15600	16800	16800	16800	16800	624	42800	120000
14	1	20000	0.92	1444	IE2	BF90G50-../SHE09SA4	0.1	0.34	0.65	1	1.2	12200	14400	20000	20000	20000	616	42800	120000
14	1	20000	0.92	1444	IE5	BF90G50-../S5E09XA4	0.1	0.34	0.65	1	1.2	18700	20000	20000	20000	20000	624	42800	120000

 **$M_N = 19 \text{ Nm}$  ( $P_N = 3 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
19	235	120	2.2	6.34	IE4	BF30-../S4E11SA6	23.5	78	157	235	280	120	120	120	120	120	66	2400	-
19	185	153	1.9	8.07	IE4	BF30-../S4E11SA6	18.5	61	123	185	220	153	153	153	153	153	66	2650	-
19	150	189	1.7	9.99	IE4	BF30-../S4E11SA6	15	50	100	150	180	189	189	189	189	189	66	2850	-
19	116	245	1.5	12.91	IE4	BF30-../S4E11SA6	11.5	38.5	77	116	139	245	245	245	245	245	66	3050	-
19	93	300	1.3	16	IE4	BF30-../S4E11SA6	9.3	31	62	93	112	300	300	300	300	300	66	3250	-
19	84	335	1.4	17.65	IE4	BF30-../S4E11SA6	8.4	28	56	84	101	335	335	335	335	335	66	3300	-
19	77	365	1.4	19.41	IE4	BF30-../S4E11SA6	7.7	25.5	51	77	92	365	365	365	365	365	66	3400	-
19	68	415	1.3	21.85	IE4	BF30-../S4E11SA6	6.8	22.5	45.5	68	82	415	415	415	415	415	66	3500	-
19	62	455	1.2	24.03	IE4	BF30-../S4E11SA6	6.2	20.5	41.5	62	74	455	455	455	455	455	66	3600	-
19	53	530	1.1	28.23	IE4	BF30-../S4E11SA6	5.3	17.5	35	53	63	530	530	530	530	530	66	3800	-
19	48	580	0.97	31.05	IE4	BF30-../S4E11SA6	4.8	16	32	48	57	580	580	580	580	580	66	4000	-
19	42.5	660	0.86	35	IE4	BF30-../S4E11SA6	4.2	14	28.5	42.5	51	660	660	660	660	660	66	4200	-
19	255	111	3	5.87	IE4	BF40-../S4E11SA6	25.5	85	170	255	305	111	111	111	111	111	80	3550	-
19	196	144	2.5	7.62	IE4	BF40-../S4E11SA6	19.5	65	131	196	235	144	144	144	144	144	80	3900	-
19	158	180	2.3	9.48	IE4	BF40-../S4E11SA6	15.5	52	105	158	189	180	180	180	180	180	80	4150	-
19	127	220	2.1	11.79	IE4	BF40-../S4E11SA6	12.5	42	84	127	152	220	220	220	220	220	80	4450	-
19	99	285	1.8	15.02	IE4	BF40-../S4E11SA6	9.9	33	66	99	119	285	285	285	285	285	80	4800	-
19	86	325	1.9	17.35	IE4	BF40-../S4E11SA6	8.6	28.5	57	86	103	325	325	325	325	325	80	4950	-
19	78	360	1.8	19.09	IE4	BF40-../S4E11SA6	7.8	26	52	78	94	360	360	360	360	360	80	5100	-
19	69	410	1.7	21.6	IE4	BF40-../S4E11SA6	6.9	23	46	69	83	410	410	410	410	410	80	5200	-
19	63	450	1.6	23.77	IE4	BF40-../S4E11SA6	6.3	21	42	63	75	450	450	450	450	450	80	5400	-
19	55	510	1.5	26.86	IE4	BF40-../S4E11SA6	5.5	18.5	37	55	67	510	510	510	510	510	80	5600	-
19	50	560	1.4	29.55	IE4	BF40-../S4E11SA6	5	16.5	33.5	50	60	560	560	560	560	560	80	5800	-
19	43.5	640	1.3	34.21	IE4	BF40-../S4E11SA6	4.3	14.5	29	43.5	52	640	640	640	640	640	80	6000	-
19	39.5	710	1.2	37.64	IE4	BF40-../S4E11SA6	3.9	13	26.5	39.5	47.5	710	710	710	710	710	80	6200	-
19	36	780	1.1	41.42	IE4	BF40-../S4E11SA6	3.6	12	24	36	43	780	780	780	780	780	80	6500	-
19	32.5	860	1	45.56	IE4	BF40-../S4E11SA6	3.2	10.5	21.5	32.5	39.5	860	860	860	860	860	80	6800	-
19	30.5	920	0.97	48.92	IE4	BF40-../S4E11SA6	3	10	20	30.5	36.5	920	920	920	920	920	80	7000	-
19	27.5	1020	0.88	53.82	IE4	BF40-../S4E11SA6	2.7	9.2	18.5	27.5	33	1020	1020	1020	1020	1020	80	7200	-
19	102	275	2.8	14.65	IE4	BF50-../S4E11SA6	10	34	68	102	122	275	275	275	275	275	110	6100	-
19	89	315	3	16.7	IE4	BF50-../S4E11SA6	8.9	29.5	59	89	107	315	315	315	315	315	110	6200	-
19	80	350	2.8	18.68	IE4	BF50-../S4E11SA6	8	26.5	53	80	96	350	350	350	350	350	110	6400	-
19	64	435	2.5	23.14	IE4	BF50-../S4E11SA6	6.4	21.5	43	64	77	435	435	435	435	435	110	6800	-
19	57	490	2.4	25.88	IE4	BF50-../S4E11SA6	5.7	19	38.5	57	69	490	490	490	490	490	110	7100	-
19	47	600	2.1	31.73	IE4	BF50-../S4E11SA6	4.7	15.5	31.5	47	56	600	600	600	600	600	110	7500	-
19	42	670	1.9	35.49	IE4	BF50-../S4E11SA6	4.2	14	28	42	50	670	670	670	670	670	110	7800	-
19	35.5	800	1.6	42.15	IE4	BF50-../S4E11SA6	3.5	11.5	23.5	35.5	42.5	800	800	800	800	800	110	8500	-
19	31.5	890	1.5	47.14	IE4	BF50-../S4E11SA6	3.1	10.5	21	31.5	38	890	890	890	890	890	110	8900	-
19	26	1080	1.2	56.86	IE4	BF50-../S4E11SA6	2.6	8.7	17.5	26	31.5	1080	1080	1080	1080	1080	110	9300	-
19	23.5	1200	1.1	63.59	IE4	BF50-../S4E11SA6	2.3	7.8	15.5	23.5	28	1200	1200	1200	1200	1200	110	9800	-
19	20.5	1380	0.94	72.72	IE4	BF50-../S4E11SA6	2	6.8	13.5	20.5	24.5	1380	1380	1380	1380	1380	110	10700	-
19	18	1540	0.84	81.33	IE4	BF50-../S4E11SA6	1.8	6.1	12	18	22	1540	1540	1540	1540	1540	110	11300	-
19	43	650	3	34.62	IE4	BF60-../S4E11SA6	4.3	14	28.5	43	51	650	650	650	650	650	141	9100	25700
19	36	790	2.7	41.6	IE4	BF60-../S4E11SA6	3.6	12	24	36	43	790	790	790	790	790	141	9600	27100
19	32	870	2.5	46.16	IE4	BF60-../S4E11SA6	3.2	10.5	21.5	32	38.5	870	870	870	870	870	141	9900	28000
19	27.5	1030	2.2	54.44	IE4	BF60-../S4E11SA6	2.7	9.1	18	27.5	33	1030	1030	1030	1030	1030	141	10500	29700
19	24.5	1140	2	60.4	IE4	BF60-../S4E11SA6	2.4	8.2	16.5	24.5	29.5	1140	1140	1140	1140	1140	141	11100	31400
19	20.5	1370	1.7	72.15	IE4	BF60-../S4E11SA6	2	6.9	13.5	20.5	24.5	1370	1370	1370	1370	1370	141	12000	34000
19	18.5	15																	

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{min}$**  **$M_N = 19 \text{ Nm}$  ( $P_N = 3 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
19	10.5	2650	0.86	140.8	IE4	BF60Z-../S4E11SA6	1	3.5	7.1	10.5	12.5	2650	2650	2650	2650	2650	157	15300	43300
19	15.5	1810	2.9	95.46	IE4	BF70-../S4E11SA6	1.5	5.2	10	15.5	18.5	1810	1810	1810	1810	1810	220	14000	43700
19	14	1990	2.6	105.2	IE4	BF70-../S4E11SA6	1.4	4.7	9.5	14	17	1990	1990	1990	1990	1990	220	14700	45100
19	12	2300	2.2	122.7	IE4	BF70-../S4E11SA6	1.2	4	8.1	12	14.5	2300	2300	2300	2300	2300	220	16100	47700
19	11	2500	2.1	133	IE4	BF70Z-../S4E11SA6	1.1	3.7	7.5	11	13.5	2500	2500	2500	2500	2500	247	16100	47700
19	9.7	2900	1.8	154	IE4	BF70Z-../S4E11SA6	0.95	3.2	6.4	9.7	11.5	2900	2900	2900	2900	2900	247	16100	47700
19	8.3	3400	1.5	179.7	IE4	BF70Z-../S4E11SA6	0.8	2.7	5.5	8.3	10	3400	3400	3400	3400	3400	247	16100	47700
19	7.5	3750	1.4	199.7	IE4	BF70Z-../S4E11SA6	0.75	2.5	5	7.5	9	3750	3750	3750	3750	3750	247	16100	47700
19	6.4	4400	1.2	233	IE4	BF70Z-../S4E11SA6	0.6	2.1	4.2	6.4	7.7	4400	4400	4400	4400	4400	247	16100	47700
19	5.7	4900	1.1	258.7	IE4	BF70Z-../S4E11SA6	0.55	1.9	3.8	5.7	6.9	4900	4900	4900	4900	4900	247	16100	47700
19	4.9	5700	0.91	301.8	IE4	BF70Z-../S4E11SA6	0.49	1.6	3.3	4.9	5.9	5700	5700	5700	5700	5700	247	16100	47700
19	4.3	6400	0.8	341.7	IE4	BF70Z-../S4E11SA6	0.43	1.4	2.9	4.3	5.2	6400	6400	6400	6400	6400	247	16100	47700
19	8.1	3500	2.7	184.5	IE4	BF80-../S4E11SA6	0.8	2.7	5.4	8.1	9.7	3500	3500	3500	3500	3500	316	31800	75000
19	7.1	3950	2.4	209.4	IE4	BF80-../S4E11SA6	0.7	2.3	4.7	7.1	8.5	3950	3950	3950	3950	3950	316	34300	75000
19	6.3	4500	2.1	237.1	IE4	BF80-../S4E11SA6	0.6	2.1	4.2	6.3	7.5	4500	4500	4500	4500	4500	316	36900	75000
19	5.5	5100	1.9	269.1	IE4	BF80-../S4E11SA6	0.55	1.8	3.7	5.5	6.6	5100	5100	5100	5100	5100	316	39600	75000
19	5.1	5500	1.9	291.7	IE4	BF80Z-../S4E11SA6	0.5	1.7	3.4	5.1	6.1	5500	5500	5500	5500	5500	363	39600	75000
19	4.3	6500	1.6	347.3	IE4	BF80Z-../S4E11SA6	0.43	1.4	2.8	4.3	5.1	6500	6500	6500	6500	6500	363	39600	75000
19	3.8	7400	1.4	394.2	IE4	BF80Z-../S4E11SA6	0.38	1.2	2.5	3.8	4.5	7400	7400	7400	7400	7400	363	39600	75000
19	3.3	8500	1.2	450.4	IE4	BF80Z-../S4E11SA6	0.33	1.1	2.2	3.3	3.9	8500	8500	8500	8500	8500	363	39600	75000
19	2.9	9700	1.1	511.2	IE4	BF80Z-../S4E11SA6	0.29	0.95	1.9	2.9	3.5	9700	9700	9700	9700	9700	363	39600	75000
19	2.5	11000	0.95	583.4	IE4	BF80Z-../S4E11SA6	0.25	0.85	1.7	2.5	3	11000	11000	11000	11000	11000	363	39600	75000
19	2.2	12500	0.83	662.1	IE4	BF80Z-../S4E11SA6	0.22	0.75	1.5	2.2	2.7	12500	12500	12500	12500	12500	363	39600	75000
19	4.3	6500	2.8	343.6	IE4	BF90Z-../S4E11SA6	0.43	1.4	2.9	4.3	5.2	6500	6500	6500	6500	6500	629	42800	120000
19	3.9	7200	2.5	382.6	IE4	BF90Z-../S4E11SA6	0.39	1.3	2.6	3.9	4.7	7200	7200	7200	7200	7200	629	42800	120000
19	3.2	8600	2.1	456.7	IE4	BF90Z-../S4E11SA6	0.32	1	2.1	3.2	3.9	8600	8600	8600	8600	8600	629	42800	120000
19	2.9	9600	1.9	508.5	IE4	BF90Z-../S4E11SA6	0.29	0.95	1.9	2.9	3.5	9600	9600	9600	9600	9600	629	42800	120000
19	2.5	11200	1.6	591.1	IE4	BF90Z-../S4E11SA6	0.25	0.8	1.6	2.5	3	11200	11200	11200	11200	11200	629	42800	120000
19	2.2	12500	1.5	658.1	IE4	BF90Z-../S4E11SA6	0.22	0.75	1.5	2.2	2.7	12500	12500	12500	12500	12500	629	42800	120000
19	1.9	14400	1.3	759	IE4	BF90Z-../S4E11SA6	0.19	0.65	1.3	1.9	2.3	14400	14400	14400	14400	14400	629	42800	120000
19	1.7	16000	1.2	845.1	IE4	BF90Z-../S4E11SA6	0.17	0.55	1.1	1.7	2.1	16000	16000	16000	16000	16000	629	42800	120000
19	1.5	18500	1	976.1	IE4	BF90G50-../S4E11SA6	0.15	0.5	1	1.5	1.8	18500	18500	18500	18500	18500	639	42800	120000
19	1.4	19800	0.93	1043	IE4	BF90G50-../S4E11SA6	0.14	0.47	0.95	1.4	1.7	19800	19800	19800	19800	19800	639	42800	120000
19	1.2	22500	0.81	1204	IE4	BF90G50-../S4E11SA6	0.12	0.41	0.8	1.2	1.4	22500	22500	22500	22500	22500	639	42800	120000

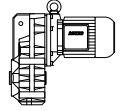
 **$M_N = 20 \text{ Nm}$  ( $P_N = 3.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
20	265	112	1.2	5.6	IE3	BF10-../SPE09XA4	26.5	89	178	265	320	72	89	112	112	112	40	1950	-
20	197	151	1	7.58	IE3	BF10-../SPE09XA4	19.5	65	131	197	235	98	121	151	151	151	40	2200	-
20	154	193	0.91	9.69	IE3	BF10-../SPE09XA4	15	51	103	154	185	125	155	193	193	193	40	2350	-
20	245	120	1.7	6.04	IE3	BF20-../SPE09XA4	24.5	82	165	245	295	78	96	120	120	120	46	2550	-
20	187	160	1.4	8	IE3	BF20-../SPE09XA4	18.5	62	125	187	225	104	128	160	160	160	46	2850	-
20	142	210	1.2	10.51	IE3	BF20-../SPE09XA4	14	47.5	95	142	171	136	168	210	210	210	46	3100	-
20	113	260	1.1	13.18	IE3	BF20-../SPE09XA4	11	37.5	75	113	136	171	210	260	260	260	46	3300	-
20	96	310	0.98	15.54	IE3	BF20-../SPE09XA4	9.6	32	64	96	115	200	245	310	310	310	46	3450	-
20	89	335	1.1	16.77	IE3	BF20-../SPE09XA4	8.9	29.5	59	89	107	215	265	335	335	335	46	3500	-
20	81	365	1	18.45	IE3	BF20-../SPE09XA4	8.1	27	54	81	97	235	295	365	365	365	46	3600	-
20	68	440	0.9	22.04	IE3	BF20-../SPE09XA4	6.8	22.5	45	68	81	285	350	440	440	440	46	3800	-
20	61	485	0.82	24.25	IE3	BF20-../SPE09XA4	6.1	20.5	41	61	74	315	385	485	485	485	46	3950	-
20	235	126	2.1	6.34	IE3	BF30-../SPE09XA4	23.5	78	157	235	280	82	101	126	126	126	57	2400	-
20	185	161	1.8	8.07	IE3	BF30-../SPE09XA4	18.5	61	123	185	220	104	129	161	161	161	57	2650	-
20	150	199	1.6	9.99	IE3	BF30-../SPE09XA4	15	50	100	150	180	129	159	199	199	199	57	2850	-
20	116	255	1.4	12.91	IE3	BF30-../SPE09XA4	11.5	38.5	77	116	139	167	205	255	255	255	57	3050	-
20	93	320	1.3	16	IE3	BF30-../SPE09XA4	9.3	31	62	93	112	205	255	320	320	320	57	3250	-
20	84	350	1.3	17.65	IE3	BF30-../SPE09XA4	8.4	28	56	84	101	225	280	350	350	350	57	3300	-
20	77	385	1.3	19.41	IE3	BF30-../SPE09XA4	7.7	25.5	51	77	92	250	310	385	385	385	57	3400	-
20	68	435	1.2	21.85	IE3	BF30-../SPE09XA4	6.8	22.5	45.5	68	82	280	345	435	435	435	57	3500	-
20	62	480	1.1	24.03	IE3	BF30-../SPE09XA4	6.2	20.5	41.5	62	74	310	380	480	480	480	57	3600	-
20	53	560	1	28.23	IE3	BF30-../SPE09XA4	5.3	17.5	35	53	63	365	450	560	560	560	57	3800	-
20	48	620	0.92	31.05	IE3	BF30-../SPE09XA4	4.8	16	32	48	57	400	495	620	620	620	57	4000	-
20	42.5	700	0.81	35	IE3	BF30-../SPE09XA4	4.2	14	28.5	42.5	51	455	560	700	700	700	57	4200	-
20	255	117	2.9	5.87	IE3	BF40-../SPE09XA4	25.5	85	170	255	305	76	93	117	117	117	66	3550	-
20	196	152	2.4	7.62	IE3	BF40-../SPE09XA4	19.5	65	131	196	235	99	121	152	152	152	66	3900	-
20	158	189	2.2	9.48	IE3	BF40-../SPE09XA4	15.5	52	105	158	189	123	151	189	189	189	66	4150	-
20	127	235	2	11.79	IE3	BF40-../SPE09XA4	12.5	42	84	127	152	153	188	235	235	235	66	4450	-
20	99	300	1.7	15.02	IE3	BF40-../SPE09XA4													

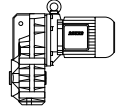
# BF-series shaft-mounted geared motors

## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

**$M_N = 20 \text{ Nm}$  ( $P_N = 3.1 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
20	78	380	1.7	19.09	IE3	BF40-../SPE09XA4	7.8	26	52	78	94	245	305	380	380	380	66	5100	-
20	69	430	1.6	21.6	IE3	BF40-../SPE09XA4	6.9	23	46	69	83	280	345	430	430	430	66	5200	-
20	63	475	1.5	23.77	IE3	BF40-../SPE09XA4	6.3	21	42	63	75	305	380	475	475	475	66	5400	-
20	55	530	1.4	26.86	IE3	BF40-../SPE09XA4	5.5	18.5	37	55	67	345	425	530	530	530	66	5600	-
20	50	590	1.4	29.55	IE3	BF40-../SPE09XA4	5	16.5	33.5	50	60	380	470	590	590	590	66	5800	-
20	43.5	680	1.2	34.21	IE3	BF40-../SPE09XA4	4.3	14.5	29	43.5	52	440	540	680	680	680	66	6000	-
20	39.5	750	1.2	37.64	IE3	BF40-../SPE09XA4	3.9	13	26.5	39.5	47.5	485	600	750	750	750	66	6200	-
20	36	820	1.1	41.42	IE3	BF40-../SPE09XA4	3.6	12	24	36	43	530	660	820	820	820	66	6500	-
20	32.5	910	0.99	45.56	IE3	BF40-../SPE09XA4	3.2	10.5	21.5	32.5	39.5	590	720	910	910	910	66	6800	-
20	30.5	970	0.92	48.92	IE3	BF40-../SPE09XA4	3	10	20	30.5	36.5	630	780	970	970	970	66	7000	-
20	27.5	1070	0.84	53.82	IE3	BF40-../SPE09XA4	2.7	9.2	18.5	27.5	33	690	860	1070	1070	1070	66	7200	-
20	102	290	2.7	14.65	IE3	BF50-../SPE09XA4	10	34	68	102	122	190	230	290	290	290	94	6100	-
20	64	460	2.4	23.14	IE3	BF50-../SPE09XA4	6.4	21.5	43	64	77	300	370	460	460	460	94	6800	-
20	57	510	2.2	25.88	IE3	BF50-../SPE09XA4	5.7	19	38.5	57	69	335	410	510	510	510	94	7100	-
20	47	630	2	31.73	IE3	BF50-../SPE09XA4	4.7	15.5	31.5	47	56	410	500	630	630	630	94	7500	-
20	42	700	1.8	35.49	IE3	BF50-../SPE09XA4	4.2	14	28	42	50	460	560	700	700	700	94	7800	-
20	35.5	840	1.5	42.15	IE3	BF50-../SPE09XA4	3.5	11.5	23.5	35.5	42.5	540	670	840	840	840	94	8500	-
20	31.5	940	1.4	47.14	IE3	BF50-../SPE09XA4	3.1	10.5	21	31.5	38	610	750	940	940	940	94	8900	-
20	26	1130	1.1	56.86	IE3	BF50-../SPE09XA4	2.6	8.7	17.5	26	31.5	730	900	1130	1130	1130	94	9300	-
20	23.5	1270	1	63.59	IE3	BF50-../SPE09XA4	2.3	7.8	15.5	23.5	28	820	1010	1270	1270	1270	94	9800	-
20	20.5	1450	0.89	72.72	IE3	BF50-../SPE09XA4	2	6.8	13.5	20.5	24.5	940	1160	1450	1450	1450	94	10700	-
20	18	1620	0.8	81.33	IE3	BF50-../SPE09XA4	1.8	6.1	12	18	22	1050	1300	1620	1620	1620	94	11300	-
20	48	620	3	31.2	IE3	BF60-../SPE09XA4	4.8	16	32	48	57	405	495	620	620	620	124	8800	24900
20	43	690	2.9	34.62	IE3	BF60-../SPE09XA4	4.3	14	28.5	43	51	450	550	690	690	690	124	9100	25700
20	36	830	2.5	41.6	IE3	BF60-../SPE09XA4	3.6	12	24	36	43	540	660	830	830	830	124	9600	27100
20	32	920	2.4	46.16	IE3	BF60-../SPE09XA4	3.2	10.5	21.5	32	38.5	600	730	920	920	920	124	9900	28000
20	27.5	1080	2.1	54.44	IE3	BF60-../SPE09XA4	2.7	9.1	18	27.5	33	700	870	1080	1080	1080	124	10500	29700
20	24.5	1200	1.9	60.4	IE3	BF60-../SPE09XA4	2.4	8.2	16.5	24.5	29.5	780	960	1200	1200	1200	124	11100	31400
20	20.5	1440	1.6	72.15	IE3	BF60-../SPE09XA4	2	6.9	13.5	20.5	24.5	930	1150	1440	1440	1440	124	12000	34000
20	18.5	1600	1.4	80.05	IE3	BF60-../SPE09XA4	1.8	6.2	12	18.5	22	1040	1280	1600	1600	1600	124	12600	35600
20	16	1860	1.2	93.44	IE3	BF60-../SPE09XA4	1.6	5.3	10.5	16	19	1210	1490	1860	1860	1860	124	13500	38200
20	14	2050	1.1	103.7	IE3	BF60-../SPE09XA4	1.4	4.8	9.6	14	17	1340	1650	2050	2050	2050	124	14100	39900
20	13	2250	1	113.1	IE3	BF60-../SPE09XA4	1.3	4.4	8.8	13	15.5	1470	1800	2250	2250	2250	124	14600	41300
20	11.5	2500	0.92	125.5	IE3	BF60-../SPE09XA4	1.1	3.9	7.9	11.5	14	1630	2000	2500	2500	2500	124	15300	43300
20	10.5	2800	0.82	140.8	IE3	BF60Z-../SPE09XA4	1	3.5	7.1	10.5	12.5	1830	2250	2800	2800	2800	143	15300	43300
20	15.5	1900	2.7	95.46	IE3	BF70-../SPE09XA4	1.5	5.2	10	15.5	18.5	1240	1520	1900	1900	1900	210	14000	43700
20	14	2100	2.5	105.2	IE3	BF70-../SPE09XA4	1.4	4.7	9.5	14	17	1360	1680	2100	2100	2100	210	14700	45100
20	12	2450	2.1	122.7	IE3	BF70-../SPE09XA4	1.2	4	8.1	12	14.5	1590	1960	2450	2450	2450	210	16100	47700
20	11	2650	2	133	IE3	BF70Z-../SPE09XA4	1.1	3.7	7.5	11	13.5	1720	2100	2650	2650	2650	231	16100	47700
20	9.7	3050	1.7	154	IE3	BF70Z-../SPE09XA4	0.95	3.2	6.4	9.7	11.5	2000	2450	3050	3050	3050	231	16100	47700
20	8.3	3550	1.4	179.7	IE3	BF70Z-../SPE09XA4	0.8	2.7	5.5	8.3	10	2300	2850	3550	3550	3550	231	16100	47700
20	7.5	3950	1.3	199.7	IE3	BF70Z-../SPE09XA4	0.75	2.5	5	7.5	9	2550	3150	3950	3950	3950	231	16100	47700
20	6.4	4650	1.1	233	IE3	BF70Z-../SPE09XA4	0.6	2.1	4.2	6.4	7.7	3000	3700	4650	4650	4650	231	16100	47700
20	5.7	5100	1	258.7	IE3	BF70Z-../SPE09XA4	0.55	1.9	3.8	5.7	6.9	3350	4100	5100	5100	5100	231	16100	47700
20	4.9	6000	0.86	301.8	IE3	BF70Z-../SPE09XA4	0.49	1.6	3.3	4.9	5.9	3900	4800	6000	6000	6000	231	16100	47700
20	9.4	3150	3	158.5	IE3	BF80-../SPE09XA4	0.9	3.1	6.3	9.4	11	2050	2500	3150	3150	3150	307	29000	75000
20	8.1	3650	2.6	184.5	IE3	BF80-../SPE09XA4	0.8	2.7	5.4	8.1	9.7	2350	2950	3650	3650	3650	307	31800	75000
20	7.1	4150	2.3	209.4	IE3	BF80-../SPE09XA4	0.7	2.3	4.7	7.1	8.5	2700	3350	4150	4150	4150	307	34300	75000
20	6.3	4700	2	237.1	IE3	BF80-../SPE09XA4	0.6	2.1	4.2	6.3	7.5	3050	3750	4700	4700	4700	307	36900	75000
20	5.5	5300	1.8	269.1	IE3	BF80-../SPE09XA4	0.55	1.8	3.7	5.5	6.6	3450	4300	5300	5300	5300	307	39600	75000
20	5.1	5800	1.8	291.7	IE3	BF80Z-../SPE09XA4	0.5	1.7	3.4	5.1	6.1	3750	4650	5800	5800	5800	348	39600	75000
20	4.3	6900	1.5	347.3	IE3	BF80Z-../SPE09XA4	0.43	1.4	2.8	4.3	5.1	4500	5500	6900	6900	6900	348	39600	75000
20	3.8	7800	1.3	394.2	IE3	BF80Z-../SPE09XA4	0.38	1.2	2.5	3.8	4.5	5100	6300	7800	7800	7800	348	39600	75000
20	3.3	9000	1.2	450.4	IE3	BF80Z-../SPE09XA4	0.33	1.1	2.2	3.3	3.9	5800	7200	9000	9000	9000	348	39600	75000
20	2.9	10200	1	511.2	IE3	BF80Z-../SPE09XA4	0.29	0.95	1.9	2.9	3.5	6600	8100	10200	10200	10200	348	39600	75000
20	2.5	11600	0.9	583.4	IE3	BF80Z-../SPE09XA4	0.25	0.85	1.7	2.5	3	7500	9300	11600	11600	11600	348	39600	75000
20	4.3	6800	2.7	343.6	IE3	BF90Z-../SPE09XA4	0.43	1.4	2.9	4.3	5.2	4450	5400	6800	6800	6800	612	42800	120000
20	3.9	7600	2.4	382.6	IE3	BF90Z-../SPE09XA4	0.39	1.3	2.6	3.9	4.7	4950	6100	7600	7600	7600	612	42800	120000
20	3.2	9100	2	456.7	IE3	BF90Z-../SPE09XA4	0.32	1	2.1	3.2	3.9	5900	7300	9100	9100	9100	612	42800	120000
20	2.9	10100	1.8	508.5	IE3	BF90Z-../SPE09XA4	0.29	0.95	1.9	2.9	3.5	6600	8100	10100	10100	10100	612	42800	120000
20	2.5	11800	1.6	591.1	IE3	BF90Z-../SPE09XA4	0.25	0.8	1.6	2.5	3	7600	9400	11800	11800	11800	612	42800	120000
20	2.2	13100	1.4	658.1	IE3	BF90Z-../SPE09XA4	0.22	0.75	1.5	2.2	2.7	8500	10500	13100	13100	13100	612	42800	120000
20	1.9	15100	1.2	759	IE3	BF90Z-../SPE09XA4	0.19	0.65	1.3	1.9	2.3	9800	12100	15100	15100	15100	612	42800	120000
20	1.7	16900	1.1	845.1	IE3	BF90Z-../SPE09XA4	0.17	0.55	1.1	1.7	2.1	10900	13500	16900	16900	16900	612	42800	120000
20	1.5	19500	0.95	976.1	IE3	BF90G50-../SPE09XA4	0.15	0.5	1	1.5	1.8	12600	15600	19500	19500	19500	624	42800	120000

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 25.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

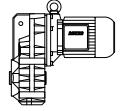
$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
25.5	235	161	1.6	6.34	IE3	BF30-../SPE11SA6	23.5	78	157	235	280	120	139	161	161	66	2400	-	
25.5	185	205	1.4	8.07	IE3	BF30-../SPE11SA6	18.5	61	123	185	220	153	177	205	205	66	2650	-	
25.5	150	250	1.3	9.99	IE3	BF30-../SPE11SA6	15	50	100	150	180	189	215	250	250	66	2850	-	
25.5	116	325	1.1	12.91	IE3	BF30-../SPE11SA6	11.5	38.5	77	116	139	245	280	325	325	66	3050	-	
25.5	93	405	0.99	16	IE3	BF30-../SPE11SA6	9.3	31	62	93	112	300	350	405	405	66	3250	-	
25.5	84	450	1.1	17.65	IE3	BF30-../SPE11SA6	8.4	28	56	84	101	335	385	450	450	66	3300	-	
25.5	77	490	1	19.41	IE3	BF30-../SPE11SA6	7.7	25.5	51	77	92	365	425	490	490	66	3400	-	
25.5	68	550	0.93	21.85	IE3	BF30-../SPE11SA6	6.8	22.5	45.5	68	82	415	480	550	550	66	3500	-	
25.5	62	610	0.9	24.03	IE3	BF30-../SPE11SA6	6.2	20.5	41.5	62	74	455	520	610	610	66	3600	-	
25.5	255	149	2.2	5.87	IE3	BF40-../SPE11SA6	25.5	85	170	255	305	111	129	149	149	80	3550	-	
25.5	196	194	1.9	7.62	IE3	BF40-../SPE11SA6	19.5	65	131	196	235	144	167	194	194	80	3900	-	
25.5	158	240	1.7	9.48	IE3	BF40-../SPE11SA6	15.5	52	105	158	189	180	205	240	240	80	4150	-	
25.5	127	300	1.5	11.79	IE3	BF40-../SPE11SA6	12.5	42	84	127	152	220	255	300	300	80	4450	-	
25.5	99	380	1.4	15.02	IE3	BF40-../SPE11SA6	9.9	33	66	99	119	285	330	380	380	80	4800	-	
25.5	86	440	1.4	17.35	IE3	BF40-../SPE11SA6	8.6	28.5	57	86	103	325	380	440	440	80	4950	-	
25.5	78	485	1.4	19.09	IE3	BF40-../SPE11SA6	7.8	26	52	78	94	360	415	485	485	80	5100	-	
25.5	69	550	1.3	21.6	IE3	BF40-../SPE11SA6	6.9	23	46	69	83	410	475	550	550	80	5200	-	
25.5	63	600	1.2	23.77	IE3	BF40-../SPE11SA6	6.3	21	42	63	75	450	520	600	600	80	5400	-	
25.5	55	680	1.1	26.86	IE3	BF40-../SPE11SA6	5.5	18.5	37	55	67	510	590	680	680	80	5600	-	
25.5	50	750	1.1	29.55	IE3	BF40-../SPE11SA6	5	16.5	33.5	50	60	560	650	750	750	80	5800	-	
25.5	43.5	870	0.97	34.21	IE3	BF40-../SPE11SA6	4.3	14.5	29	43.5	52	640	750	870	870	80	6000	-	
25.5	39.5	950	0.93	37.64	IE3	BF40-../SPE11SA6	3.9	13	26.5	39.5	47.5	710	820	950	950	80	6200	-	
25.5	36	1050	0.85	41.42	IE3	BF40-../SPE11SA6	3.6	12	24	36	43	780	910	1050	1050	80	6500	-	
25.5	194	196	2.8	7.71	IE3	BF50-../SPE11SA6	19	64	129	194	230	146	169	196	196	110	5100	-	
25.5	140	270	2.5	10.68	IE3	BF50-../SPE11SA6	14	46.5	93	140	168	200	230	270	270	110	5600	-	
25.5	102	370	2.1	14.65	IE3	BF50-../SPE11SA6	10	34	68	102	122	275	320	370	370	110	6100	-	
25.5	89	425	2.2	16.7	IE3	BF50-../SPE11SA6	8.9	29.5	59	89	107	315	365	425	425	110	6200	-	
25.5	80	475	2.1	18.68	IE3	BF50-../SPE11SA6	8	26.5	53	80	96	350	410	475	475	110	6400	-	
25.5	64	590	1.9	23.14	IE3	BF50-../SPE11SA6	6.4	21.5	43	64	77	435	500	590	590	110	6800	-	
25.5	57	650	1.8	25.88	IE3	BF50-../SPE11SA6	5.7	19	38.5	57	69	490	560	650	650	110	7100	-	
25.5	47	800	1.6	31.73	IE3	BF50-../SPE11SA6	4.7	15.5	31.5	47	56	600	690	800	800	110	7500	-	
25.5	42	900	1.4	35.49	IE3	BF50-../SPE11SA6	4.2	14	28	42	50	670	780	900	900	110	7800	-	
25.5	35.5	1070	1.2	42.15	IE3	BF50-../SPE11SA6	3.5	11.5	23.5	35.5	42.5	800	920	1070	1070	110	8500	-	
25.5	31.5	1200	1.1	47.14	IE3	BF50-../SPE11SA6	3.1	10.5	21	31.5	38	890	1030	1200	1200	110	8900	-	
25.5	26	1440	0.9	56.86	IE3	BF50-../SPE11SA6	2.6	8.7	17.5	26	31.5	1080	1250	1440	1440	110	9300	-	
25.5	23.5	1620	0.8	63.59	IE3	BF50-../SPE11SA6	2.3	7.8	15.5	23.5	28	1200	1390	1620	1620	110	9800	-	
25.5	66	570	2.9	22.58	IE3	BF60-../SPE11SA6	6.6	22	44	66	79	425	495	570	570	141	8000	22600	
25.5	59	630	2.7	25.05	IE3	BF60-../SPE11SA6	5.9	19.5	39.5	59	71	475	550	630	630	141	8200	23200	
25.5	48	790	2.4	31.2	IE3	BF60-../SPE11SA6	4.8	16	32	48	57	590	680	790	790	141	8800	24900	
25.5	43	880	2.2	34.62	IE3	BF60-../SPE11SA6	4.3	14	28.5	43	51	650	760	880	880	141	9100	25700	
25.5	36	1060	2	41.6	IE3	BF60-../SPE11SA6	3.6	12	24	36	43	790	910	1060	1060	141	9600	27100	
25.5	32	1170	1.9	46.16	IE3	BF60-../SPE11SA6	3.2	10.5	21.5	32	38.5	870	1010	1170	1170	141	9900	28000	
25.5	27.5	1380	1.7	54.44	IE3	BF60-../SPE11SA6	2.7	9.1	18	27.5	33	1030	1190	1380	1380	141	10500	29700	
25.5	24.5	1540	1.5	60.4	IE3	BF60-../SPE11SA6	2.4	8.2	16.5	24.5	29.5	1140	1320	1540	1540	141	11100	31400	
25.5	20.5	1830	1.3	72.15	IE3	BF60-../SPE11SA6	2	6.9	13.5	20.5	24.5	1370	1580	1830	1830	141	12000	34000	
25.5	18.5	2000	1.1	80.05	IE3	BF60-../SPE11SA6	1.8	6.2	12	18.5	22	1520	1760	2000	2000	141	12600	35600	
25.5	16	2350	0.97	93.44	IE3	BF60-../SPE11SA6	1.6	5.3	10.5	16	19	1770	2050	2350	2350	141	13500	38200	
25.5	14	2600	0.87	103.7	IE3	BF60-../SPE11SA6	1.4	4.8	9.6	14	17	1970	2250	2600	2600	141	14100	39900	
25.5	13	2850	0.8	113.1	IE3	BF60-../SPE11SA6	1.3	4.4	8.8	13	15.5	2100	2450	2850	2850	141	14600	41300	
25.5	20.5	1840	2.8	72.26	IE3	BF70-../SPE11SA6	2	6.9	13.5	20.5	24.5	1370	1580	1840	1840	220	12000	39600	
25.5	18	2050	2.5	81.82	IE3	BF70-../SPE11SA6	1.8	6.1	12	18	21.5	1550	1800	2050	2050	220	12800	41300	
25.5	15.5	2400	2.1	95.46	IE3	BF70-../SPE11SA6	1.5	5.2	10	15.5	18.5	1810	2100	2400	2400	220	14000	43700	
25.5	14	2650	1.9	105.2	IE3	BF70-../SPE11SA6	1.4	4.7	9.5	14	17	1990	2300	2650	2650	220	14700	45100	
25.5	12	3100	1.7	122.7	IE3	BF70-../SPE11SA6	1.2	4	8.1	12	14.5	2300	2650	3100	3100	220	16100	47700	
25.5	11	3350	1.5	133	IE3	BF70Z-../SPE11SA6	1.1	3.7	7.5	11	13.5	2500	2900	3350	3350	247	16100	47700	
25.5	9.7	3900	1.3	154	IE3	BF70Z-../SPE11SA6	0.95	3.2	6.4	9.7	11.5	2900	3350	3900	3900	247	16100	47700	
25.5	8.3	4550	1.1	179.7	IE3	BF70Z-../SPE11SA6	0.8	2.7	5.5	8.3	10	3400	3950	4550	4550	247	16100	47700	
25.5	7.5	5000	1	199.7	IE3	BF70Z-../SPE11SA6	0.75	2.5	5	7.5	9	3750	4350	5000	5000	247	16100	47700	
25.5	6.4	5900	0.88	233	IE3	BF70Z-../SPE11SA6	0.6	2.1	4.2	6.4	7.7	4400	5100	5900	5900	247	16100	47700	
25.5	12	3100	3	122.4	IE3	BF80-../SPE11SA6	1.2	4	8.1	12	14.5	2300	2650	3100	3100	316	24500	75000	
25.5	10.5	3550	2.7	139.7	IE3	BF80-../SPE11SA6	1	3.5	7.1	10.5	12.5	2650	3050	3550	3550	316	26700	75000	
25.5	9.4	4000	2.4	158.5	IE3	BF80-../SPE11SA6	0.9	3.1	6.3	9.4	11	3000	3450	4000	4000	316	29000	75000	
25.5	8.1	4700	2	184.5	IE3	BF80-../SPE11SA6	0.8	2.7	5.4	8.1	9.7	3500	4050	4700	4700	316	31800	75000	
25.5	7.1	5300	1.8	209.4	IE3	BF80-../SPE11SA6	0.7	2.3	4.7	7.1	8.5	3950	4600	5300	5300	316	34300	75000	
25.5	6.3	6000	1.6	237.1	IE3	BF80-../SPE11SA6	0.6	2.1	4.2	6.3	7.5	4500	5200	6000	6000	316	36900	75000	
25.5	5.5	6800	1.4	269.1	IE3	BF80-../SPE11SA6	0.55	1.8	3.7	5.5	6.6	5100	5900	6800	6800	316	39600	75000	
25.5	5.1	7400	1.4	291.7	IE3	BF80Z-../SPE11SA6	0.5	1.7	3.4	5.1	6.1	5500	6400	7400	7400	363	39600	75000	
25.5	4.3	8800	1.2	347.3	IE3	BF80Z-../SPE11SA6	0.43	1.4	2.8	4.3	5.1	6500	7600	8800	8800	363	39600	75000	
25.5	3.8	10000	1	394.2	IE3	BF80Z-../SPE11SA6	0.38	1.2	2.5	3.8	4.5	7400	8600	10000	10000	363	39600	75000	
25.5	3.3	11400	0.91	450.4															



# BF-series shaft-mounted geared motors

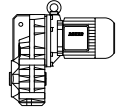
## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{min}$

### $M_N = 25.5 \text{ Nm}$ ( $P_N = 4 \text{ kW}$ )

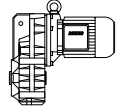


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
25.5	3.9	9700	1.9	382.6	IE3	BF90Z-../SPE11SA6	0.39	1.3	2.6	3.9	4.7	7200	8400	9700	9700	9700	629	42800	120000
25.5	3.2	11600	1.6	456.7	IE3	BF90Z-../SPE11SA6	0.32	1	2.1	3.2	3.9	8600	10000	11600	11600	11600	629	42800	120000
25.5	2.9	12900	1.4	508.5	IE3	BF90Z-../SPE11SA6	0.29	0.95	1.9	2.9	3.5	9600	11100	12900	12900	12900	629	42800	120000
25.5	2.5	15000	1.2	591.1	IE3	BF90Z-../SPE11SA6	0.25	0.8	1.6	2.5	3	11200	13000	15000	15000	15000	629	42800	120000
25.5	2.2	16700	1.1	658.1	IE3	BF90Z-../SPE11SA6	0.22	0.75	1.5	2.2	2.7	12500	14400	16700	16700	16700	629	42800	120000
25.5	1.9	19300	0.96	759	IE3	BF90Z-../SPE11SA6	0.19	0.65	1.3	1.9	2.3	14400	16600	19300	19300	19300	629	42800	120000
25.5	1.7	21500	0.86	845.1	IE3	BF90Z-../SPE11SA6	0.17	0.55	1.1	1.7	2.1	16000	18500	21500	21500	21500	629	42800	120000

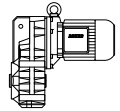
### $M_N = 26.5 \text{ Nm}$ ( $P_N = 4 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
26.5	235	168	1.6	6.34	IE5	BF30-../S5E11MA6	23.5	78	157	235	280	168	168	168	168	66	2400	-	
26.5	185	210	1.3	8.07	IE5	BF30-../S5E11MA6	18.5	61	123	185	220	210	210	210	210	66	2650	-	
26.5	150	260	1.2	9.99	IE5	BF30-../S5E11MA6	15	50	100	150	180	260	260	260	260	66	2850	-	
26.5	116	340	1.1	12.91	IE5	BF30-../S5E11MA6	11.5	38.5	77	116	139	340	340	340	340	66	3050	-	
26.5	93	420	0.96	16	IE5	BF30-../S5E11MA6	9.3	31	62	93	112	420	420	420	420	66	3250	-	
26.5	84	465	1	17.65	IE5	BF30-../S5E11MA6	8.4	28	56	84	101	465	465	465	465	66	3300	-	
26.5	77	510	0.97	19.41	IE5	BF30-../S5E11MA6	7.7	25.5	51	77	92	510	510	510	510	66	3400	-	
26.5	68	570	0.9	21.85	IE5	BF30-../S5E11MA6	6.8	22.5	45.5	68	82	570	570	570	570	66	3500	-	
26.5	62	630	0.86	24.03	IE5	BF30-../S5E11MA6	6.2	20.5	41.5	62	74	630	630	630	630	66	3600	-	
26.5	255	155	2.2	5.87	IE5	BF40-../S5E11MA6	25.5	85	170	255	305	155	155	155	155	80	3550	-	
26.5	196	200	1.8	7.62	IE5	BF40-../S5E11MA6	19.5	65	131	196	235	200	200	200	200	80	3900	-	
26.5	158	250	1.7	9.48	IE5	BF40-../S5E11MA6	15.5	52	105	158	189	250	250	250	250	80	4150	-	
26.5	127	310	1.5	11.79	IE5	BF40-../S5E11MA6	12.5	42	84	127	152	310	310	310	310	80	4450	-	
26.5	99	395	1.3	15.02	IE5	BF40-../S5E11MA6	9.9	33	66	99	119	395	395	395	395	80	4800	-	
26.5	86	455	1.4	17.35	IE5	BF40-../S5E11MA6	8.6	28.5	57	86	103	455	455	455	455	80	4950	-	
26.5	78	500	1.3	19.09	IE5	BF40-../S5E11MA6	7.8	26	52	78	94	500	500	500	500	80	5100	-	
26.5	69	570	1.2	21.6	IE5	BF40-../S5E11MA6	6.9	23	46	69	83	570	570	570	570	80	5200	-	
26.5	63	620	1.2	23.77	IE5	BF40-../S5E11MA6	6.3	21	42	63	75	620	620	620	620	80	5400	-	
26.5	55	710	1.1	26.86	IE5	BF40-../S5E11MA6	5.5	18.5	37	55	67	710	710	710	710	80	5600	-	
26.5	50	780	1	29.55	IE5	BF40-../S5E11MA6	5	16.5	33.5	50	60	780	780	780	780	80	5800	-	
26.5	43.5	900	0.94	34.21	IE5	BF40-../S5E11MA6	4.3	14.5	29	43.5	52	900	900	900	900	80	6000	-	
26.5	39.5	990	0.89	37.64	IE5	BF40-../S5E11MA6	3.9	13	26.5	39.5	47.5	990	990	990	990	80	6200	-	
26.5	36	1090	0.82	41.42	IE5	BF40-../S5E11MA6	3.6	12	24	36	43	1090	1090	1090	1090	80	6500	-	
26.5	194	200	2.7	7.71	IE5	BF50-../S5E11MA6	19	64	129	194	230	200	200	200	200	110	5100	-	
26.5	140	280	2.4	10.68	IE5	BF50-../S5E11MA6	14	46.5	93	140	168	280	280	280	280	110	5600	-	
26.5	102	385	2	14.65	IE5	BF50-../S5E11MA6	10	34	68	102	122	385	385	385	385	110	6100	-	
26.5	89	440	2.1	16.7	IE5	BF50-../S5E11MA6	8.9	29.5	59	89	107	440	440	440	440	110	6200	-	
26.5	80	495	2	18.68	IE5	BF50-../S5E11MA6	8	26.5	53	80	96	495	495	495	495	110	6400	-	
26.5	64	610	1.8	23.14	IE5	BF50-../S5E11MA6	6.4	21.5	43	64	77	610	610	610	610	110	6800	-	
26.5	57	680	1.7	25.88	IE5	BF50-../S5E11MA6	5.7	19	38.5	57	69	680	680	680	680	110	7100	-	
26.5	47	840	1.5	31.73	IE5	BF50-../S5E11MA6	4.7	15.5	31.5	47	56	840	840	840	840	110	7500	-	
26.5	42	940	1.4	35.49	IE5	BF50-../S5E11MA6	4.2	14	28	42	50	940	940	940	940	110	7800	-	
26.5	35.5	1110	1.2	42.15	IE5	BF50-../S5E11MA6	3.5	11.5	23.5	35.5	42.5	1110	1110	1110	1110	110	8500	-	
26.5	31.5	1240	1	47.14	IE5	BF50-../S5E11MA6	3.1	10.5	21	31.5	38	1240	1240	1240	1240	110	8900	-	
26.5	26	1500	0.86	56.86	IE5	BF50-../S5E11MA6	2.6	8.7	17.5	26	31.5	1500	1500	1500	1500	110	9300	-	
26.5	79	495	3	18.81	IE5	BF60-../S5E11MA6	7.9	26.5	53	79	95	495	495	495	495	141	7600	21500	
26.5	66	590	2.8	22.58	IE5	BF60-../S5E11MA6	6.6	22	44	66	79	590	590	590	590	141	8000	22600	
26.5	59	660	2.6	25.05	IE5	BF60-../S5E11MA6	5.9	19.5	39.5	59	71	660	660	660	660	141	8200	23200	
26.5	48	820	2.3	31.2	IE5	BF60-../S5E11MA6	4.8	16	32	48	57	820	820	820	820	141	8800	24900	
26.5	43	910	2.2	34.62	IE5	BF60-../S5E11MA6	4.3	14	28.5	43	51	910	910	910	910	141	9100	25700	
26.5	36	1100	1.9	41.6	IE5	BF60-../S5E11MA6	3.6	12	24	36	43	1100	1100	1100	1100	141	9600	27100	
26.5	32	1220	1.8	46.16	IE5	BF60-../S5E11MA6	3.2	10.5	21.5	32	38.5	1220	1220	1220	1220	141	9900	28000	
26.5	27.5	1440	1.6	54.44	IE5	BF60-../S5E11MA6	2.7	9.1	18	27.5	33	1440	1440	1440	1440	141	10500	29700	
26.5	24.5	1600	1.4	60.4	IE5	BF60-../S5E11MA6	2.4	8.2	16.5	24.5	29.5	1600	1600	1600	1600	141	11100	31400	
26.5	20.5	1910	1.2	72.15	IE5	BF60-../S5E11MA6	2	6.9	13.5	20.5	24.5	1910	1910	1910	1910	141	12000	34000	
26.5	18.5	2100	1.1	80.05	IE5	BF60-../S5E11MA6	1.8	6.2	12	18.5	22	2100	2100	2100	2100	141	12600	35600	
26.5	16	2450	0.93	93.44	IE5	BF60-../S5E11MA6	1.6	5.3	10.5	16	19	2450	2450	2450	2450	141	13500	38200	
26.5	14	2700	0.84	103.7	IE5	BF60-../S5E11MA6	1.4	4.8	9.6	14	17	2700	2700	2700	2700	141	14100	39900	
26.5	20.5	1910	2.7	72.26	IE5	BF70-../S5E11MA6	2	6.9	13.5	20.5	24.5	1910	1910	1910	1910	220	12000	39600	
26.5	18	2150	2.4	81.82	IE5	BF70-../S5E11MA6	1.8	6.1	12	18	21.5	2150	2150	2150	2150	220	12800	41300	
26.5	15.5	2500	2.1	95.46	IE5	BF70-../S5E11MA6	1.5	5.2	10	15.5	18.5	2500	2500	2500	2500	220	14000	43700	
26.5	14	2750	1.9	105.2	IE5	BF70-../S5E11MA6	1.4	4.7	9.5	14	17	2750	2750	2750	2750	220	14700	45100	
26.5	12	3250	1.6	122.7	IE5	BF70-../S5E11MA6	1.2	4	8.1	12	14.5	3250	3250	3250	3250	220	16100	47700	
26.5	11	3500	1.5	133	IE5	BF70Z-../S5E11MA6	1.1	3.7	7.5	11	13.5	3500	3500	3500	3500	247	16100	47700	
26.5	9.7	4050	1.3	154	IE5	BF70Z-../S5E11MA6	0.95	3.2	6.4	9.7	11.5	4050	4050	4050	4050	247	16100	47700	
26.5	8.3	4750	1.1	179.7	IE5	BF70Z-../S5E11MA6	0.8	2.7	5.5	8.3	10	4750	4750	4750	4750	247	16100	47700	
26.5	7.5	5200	0.98	199.7	IE5	BF70Z-../S5E11MA6	0.75	2.5	5	7.5	9	5200	5200	5200	5200	247	16100	47700	
26.5	6.4	6100	0.84	233	IE5	BF70Z-../S5E11MA6	0.6	2.1	4.2	6.4	7.7	6100	6100	6100	6100	247			

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 26.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
26.5	12	3200	2.9	122.4	IE5	BF80-../S5E11MA6	1.2	4	8.1	12	14.5	3200	3200	3200	3200	3200	316	24500	75000
26.5	10.5	3700	2.6	139.7	IE5	BF80-../S5E11MA6	1	3.5	7.1	10.5	12.5	3700	3700	3700	3700	3700	316	26700	75000
26.5	9.4	4200	2.3	158.5	IE5	BF80-../S5E11MA6	0.9	3.1	6.3	9.4	11	4200	4200	4200	4200	4200	316	29000	75000
26.5	8.1	4850	1.9	184.5	IE5	BF80-../S5E11MA6	0.8	2.7	5.4	8.1	9.7	4850	4850	4850	4850	4850	316	31800	75000
26.5	7.1	5500	1.7	209.4	IE5	BF80-../S5E11MA6	0.7	2.3	4.7	7.1	8.5	5500	5500	5500	5500	5500	316	34300	75000
26.5	6.3	6200	1.5	237.1	IE5	BF80-../S5E11MA6	0.6	2.1	4.2	6.3	7.5	6200	6200	6200	6200	6200	316	36900	75000
26.5	5.5	7100	1.3	269.1	IE5	BF80-../S5E11MA6	0.55	1.8	3.7	5.5	6.6	7100	7100	7100	7100	7100	316	39600	75000
26.5	5.1	7700	1.4	291.7	IE5	BF80Z-../S5E11MA6	0.5	1.7	3.4	5.1	6.1	7700	7700	7700	7700	7700	363	39600	75000
26.5	4.3	9200	1.1	347.3	IE5	BF80Z-../S5E11MA6	0.43	1.4	2.8	4.3	5.1	9200	9200	9200	9200	9200	363	39600	75000
26.5	3.8	10400	1	394.2	IE5	BF80Z-../S5E11MA6	0.38	1.2	2.5	3.8	4.5	10400	10400	10400	10400	10400	363	39600	75000
26.5	3.3	11900	0.88	450.4	IE5	BF80Z-../S5E11MA6	0.33	1.1	2.2	3.3	3.9	11900	11900	11900	11900	11900	363	39600	75000
26.5	6.4	6100	2.7	232.6	IE5	BF90-../S5E11MA6	0.6	2.1	4.2	6.4	7.7	6100	6100	6100	6100	6100	569	39900	118300
26.5	5.7	6800	2.4	259	IE5	BF90-../S5E11MA6	0.55	1.9	3.8	5.7	6.9	6800	6800	6800	6800	6800	569	42800	120000
26.5	5.5	7100	2.6	269.8	IE5	BF90Z-../S5E11MA6	0.55	1.8	3.7	5.5	6.6	7100	7100	7100	7100	7100	629	42800	120000
26.5	4.9	7900	2.3	300.4	IE5	BF90Z-../S5E11MA6	0.49	1.6	3.3	4.9	5.9	7900	7900	7900	7900	7900	629	42800	120000
26.5	4.3	9100	2	343.6	IE5	BF90Z-../S5E11MA6	0.43	1.4	2.9	4.3	5.2	9100	9100	9100	9100	9100	629	42800	120000
26.5	3.9	10100	1.8	382.6	IE5	BF90Z-../S5E11MA6	0.39	1.3	2.6	3.9	4.7	10100	10100	10100	10100	10100	629	42800	120000
26.5	3.2	12100	1.5	456.7	IE5	BF90Z-../S5E11MA6	0.32	1	2.1	3.2	3.9	12100	12100	12100	12100	12100	629	42800	120000
26.5	2.9	13400	1.4	508.5	IE5	BF90Z-../S5E11MA6	0.29	0.95	1.9	2.9	3.5	13400	13400	13400	13400	13400	629	42800	120000
26.5	2.5	15600	1.2	591.1	IE5	BF90Z-../S5E11MA6	0.25	0.8	1.6	2.5	3	15600	15600	15600	15600	15600	629	42800	120000
26.5	2.2	17400	1.1	658.1	IE5	BF90Z-../S5E11MA6	0.22	0.75	1.5	2.2	2.7	17400	17400	17400	17400	17400	629	42800	120000
26.5	1.9	20000	0.92	759	IE5	BF90Z-../S5E11MA6	0.19	0.65	1.3	1.9	2.3	20000	20000	20000	20000	20000	629	42800	120000
26.5	1.7	22000	0.83	845.1	IE5	BF90Z-../S5E11MA6	0.17	0.55	1.1	1.7	2.1	22000	22000	22000	22000	22000	629	42800	120000

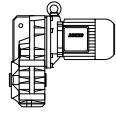
 **$M_N = 35 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	235	220	1.2	6.34	IE5	BF30-../S5E11LA6	23.5	78	157	235	280	220	220	220	220	220	78	2400	-
35	235	220	1.2	6.34	IE4	BF30-../S4E11MA6	23.5	78	157	235	280	168	190	220	220	220	66	2400	-
35	185	280	1	8.07	IE5	BF30-../S5E11LA6	18.5	61	123	185	220	280	280	280	280	280	78	2650	-
35	185	280	1	8.07	IE4	BF30-../S4E11MA6	18.5	61	123	185	220	210	240	280	280	280	66	2650	-
35	150	345	0.92	9.99	IE4	BF30-../S4E11MA6	15	50	100	150	180	260	295	345	345	345	66	2850	-
35	150	345	0.92	9.99	IE5	BF30-../S5E11LA6	15	50	100	150	180	345	345	345	345	345	78	2850	-
35	116	450	0.81	12.91	IE5	BF30-../S5E11LA6	11.5	38.5	77	116	139	450	450	450	450	450	78	3050	-
35	116	450	0.81	12.91	IE4	BF30-../S4E11MA6	11.5	38.5	77	116	139	340	385	450	450	450	66	3050	-
35	255	205	1.6	5.87	IE5	BF40-../S5E11LA6	25.5	85	170	255	305	205	205	205	205	205	92	3550	-
35	255	205	1.6	5.87	IE4	BF40-../S4E11MA6	25.5	85	170	255	305	155	176	205	205	205	80	3550	-
35	196	265	1.4	7.62	IE4	BF40-../S4E11MA6	19.5	65	131	196	235	200	225	265	265	265	80	3900	-
35	196	265	1.4	7.62	IE5	BF40-../S5E11LA6	19.5	65	131	196	235	265	265	265	265	265	92	3900	-
35	158	330	1.3	9.48	IE4	BF40-../S4E11MA6	15.5	52	105	158	189	250	280	330	330	330	80	4150	-
35	158	330	1.3	9.48	IE5	BF40-../S5E11LA6	15.5	52	105	158	189	330	330	330	330	330	92	4150	-
35	127	410	1.1	11.79	IE4	BF40-../S4E11MA6	12.5	42	84	127	152	310	350	410	410	410	80	4450	-
35	127	410	1.1	11.79	IE5	BF40-../S5E11LA6	12.5	42	84	127	152	410	410	410	410	410	92	4450	-
35	99	520	0.99	15.02	IE5	BF40-../S5E11LA6	9.9	33	66	99	119	520	520	520	520	520	92	4800	-
35	99	520	0.99	15.02	IE4	BF40-../S4E11MA6	9.9	33	66	99	119	395	450	520	520	520	80	4800	-
35	86	600	1	17.35	IE4	BF40-../S4E11MA6	8.6	28.5	57	86	103	455	520	600	600	600	80	4950	-
35	86	600	1	17.35	IE5	BF40-../S5E11LA6	8.6	28.5	57	86	103	600	600	600	600	600	92	4950	-
35	78	660	0.99	19.09	IE5	BF40-../S5E11LA6	7.8	26	52	78	94	660	660	660	660	660	92	5100	-
35	78	660	0.99	19.09	IE4	BF40-../S4E11MA6	7.8	26	52	78	94	500	570	660	660	660	80	5100	-
35	69	750	0.93	21.6	IE4	BF40-../S4E11MA6	6.9	23	46	69	83	570	640	750	750	750	80	5200	-
35	69	750	0.93	21.6	IE5	BF40-../S5E11LA6	6.9	23	46	69	83	750	750	750	750	750	92	5200	-
35	63	830	0.88	23.77	IE4	BF40-../S4E11MA6	6.3	21	42	63	75	620	710	830	830	830	80	5400	-
35	63	830	0.88	23.77	IE5	BF40-../S5E11LA6	6.3	21	42	63	75	830	830	830	830	830	92	5400	-
35	55	940	0.82	26.86	IE4	BF40-../S4E11MA6	5.5	18.5	37	55	67	710	800	940	940	940	80	5600	-
35	55	940	0.82	26.86	IE5	BF40-../S5E11LA6	5.5	18.5	37	55	67	940	940	940	940	940	92	5600	-
35	275	188	2.6	5.38	IE4	BF50-../S4E11MA6	27.5	92	185	275	330	142	161	188	188	188	110	4500	-
35	275	188	2.6	5.38	IE5	BF50-../S5E11LA6	27.5	92	185	275	330	188	188	188	188	188	122	4500	-
35	194	265	2.1	7.71	IE4	BF50-../S4E11MA6	19	64	129	194	230	200	230	265	265	265	110	5100	-
35	194	265	2.1	7.71	IE5	BF50-../S5E11LA6	19	64	129	194	230	265	265	265	265	265	122	5100	-
35	140	370	1.8	10.68	IE4	BF50-../S4E11MA6	14	46.5	93	140	168	280	320	370	370	370	110	5600	-
35	140	370	1.8	10.68	IE5	BF50-../S5E11LA6	14	46.5	93	140	168	370	370	370	370	370	122	5600	-
35	102	510	1.5	14.65	IE4	BF50-../S4E11MA6	10	34	68	102	122	385	435	510	510	510	110	6100	-
35	102	510	1.5	14.65	IE5	BF50-../S5E11LA6	10	34	68	102	122	510	510	510	510	510	122	6100	-
35	89	580	1.6	16.7	IE5	BF50-../S5E11LA6	8.9	29.5	59	89	107	580	580	580	580	580	122	6200	-
35	89	580	1.6	16.7	IE4	BF50-../S4E11MA6	8.9	29.5	59	89	107	440	500	580	580	580	110	6200	-
35	80	650	1.5	18.68	IE4	BF50-../S4E11MA6	8	26.5	53	80	96	495	560	650	650	650	110	6400	-
35	80	650	1.5	18.68	IE5	BF50-../S5E11LA6	8	26.5	53	80	96	650	650	650	650	650	122</		

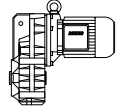


# BF-series shaft-mounted geared motors

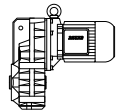
## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{min}$

 **$M_N = 35 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	47	1110	1.1	31.73	IE5	BF50-../S5E11LA6	4.7	15.5	31.5	47	56	1110	1110	1110	1110	1110	122	7500	-
35	47	1110	1.1	31.73	IE4	BF50-../S4E11MA6	4.7	15.5	31.5	47	56	840	950	1110	1110	1110	110	7500	-
35	42	1240	1	35.49	IE4	BF50-../S4E11MA6	4.2	14	28	42	50	940	1060	1240	1240	1240	110	7800	-
35	42	1240	1	35.49	IE5	BF50-../S5E11LA6	4.2	14	28	42	50	1240	1240	1240	1240	1240	122	7800	-
35	35.5	1470	0.88	42.15	IE4	BF50-../S4E11MA6	3.5	11.5	23.5	35.5	42.5	1110	1260	1470	1470	1470	110	8500	-
35	35.5	1470	0.88	42.15	IE5	BF50-../S5E11LA6	3.5	11.5	23.5	35.5	42.5	1470	1470	1470	1470	1470	122	8500	-
35	145	360	2.8	10.31	IE4	BF60-../S4E11MA6	14.5	48	96	145	174	270	305	360	360	360	141	6500	18400
35	145	360	2.8	10.31	IE5	BF60-../S5E11LA6	14.5	48	96	145	174	360	360	360	360	360	153	6500	18400
35	105	495	2.4	14.24	IE5	BF60-../S5E11LA6	10.5	35	70	105	126	495	495	495	495	495	153	7100	20000
35	105	495	2.4	14.24	IE4	BF60-../S4E11MA6	10.5	35	70	105	126	375	425	495	495	495	141	7100	20000
35	88	590	2.4	16.96	IE5	BF60-../S5E11LA6	8.8	29	58	88	106	590	590	590	590	590	153	7300	20600
35	88	590	2.4	16.96	IE4	BF60-../S4E11MA6	8.8	29	58	88	106	445	500	590	590	590	141	7300	20600
35	79	650	2.3	18.81	IE5	BF60-../S5E11LA6	7.9	26.5	53	79	95	650	650	650	650	650	153	7600	21500
35	79	650	2.3	18.81	IE4	BF60-../S4E11MA6	7.9	26.5	53	79	95	495	560	650	650	650	141	7600	21500
35	66	790	2.1	22.58	IE4	BF60-../S4E11MA6	6.6	22	44	66	79	590	670	790	790	790	141	8000	22600
35	66	790	2.1	22.58	IE5	BF60-../S5E11LA6	6.6	22	44	66	79	790	790	790	790	790	153	8000	22600
35	59	870	2	25.05	IE4	BF60-../S4E11MA6	5.9	19.5	39.5	59	71	660	750	870	870	870	141	8200	23200
35	59	870	2	25.05	IE5	BF60-../S5E11LA6	5.9	19.5	39.5	59	71	870	870	870	870	870	153	8200	23200
35	48	1090	1.7	31.2	IE4	BF60-../S4E11MA6	4.8	16	32	48	57	820	930	1090	1090	1090	141	8800	24900
35	48	1090	1.7	31.2	IE5	BF60-../S5E11LA6	4.8	16	32	48	57	1090	1090	1090	1090	1090	153	8800	24900
35	43	1210	1.6	34.62	IE4	BF60-../S4E11MA6	4.3	14	28.5	43	51	910	1030	1210	1210	1210	141	9100	25700
35	43	1210	1.6	34.62	IE5	BF60-../S5E11LA6	4.3	14	28.5	43	51	1210	1210	1210	1210	1210	153	9100	25700
35	36	1450	1.4	41.6	IE5	BF60-../S5E11LA6	3.6	12	24	36	43	1450	1450	1450	1450	1450	153	9600	27100
35	36	1450	1.4	41.6	IE4	BF60-../S4E11MA6	3.6	12	24	36	43	1100	1240	1450	1450	1450	141	9600	27100
35	32	1610	1.4	46.16	IE4	BF60-../S4E11MA6	3.2	10.5	21.5	32	38.5	1220	1380	1610	1610	1610	141	9900	28000
35	32	1610	1.4	46.16	IE5	BF60-../S5E11LA6	3.2	10.5	21.5	32	38.5	1610	1610	1610	1610	1610	153	9900	28000
35	27.5	1900	1.2	54.44	IE4	BF60-../S4E11MA6	2.7	9.1	18	27.5	33	1440	1630	1900	1900	1900	141	10500	29700
35	27.5	1900	1.2	54.44	IE5	BF60-../S5E11LA6	2.7	9.1	18	27.5	33	1900	1900	1900	1900	1900	153	10500	29700
35	24.5	2100	1.1	60.4	IE5	BF60-../S5E11LA6	2.4	8.2	16.5	24.5	29.5	2100	2100	2100	2100	2100	153	11100	31400
35	24.5	2100	1.1	60.4	IE4	BF60-../S4E11MA6	2.4	8.2	16.5	24.5	29.5	1600	1810	2100	2100	2100	141	11100	31400
35	20.5	2500	0.91	72.15	IE4	BF60-../S4E11MA6	2	6.9	13.5	20.5	24.5	1910	2150	2500	2500	2500	141	12000	34000
35	20.5	2500	0.91	72.15	IE5	BF60-../S5E11LA6	2	6.9	13.5	20.5	24.5	2500	2500	2500	2500	2500	153	12000	34000
35	18.5	2800	0.82	80.05	IE4	BF60-../S4E11MA6	1.8	6.2	12	18.5	22	2100	2400	2800	2800	2800	141	12600	35600
35	18.5	2800	0.82	80.05	IE5	BF60-../S5E11LA6	1.8	6.2	12	18.5	22	2800	2800	2800	2800	2800	153	12600	35600
35	26.5	1950	2.7	55.79	IE5	BF70-../S5E11LA6	2.6	8.9	17.5	26.5	32	1950	1950	1950	1950	1950	232	10200	36000
35	26.5	1950	2.7	55.79	IE4	BF70-../S4E11MA6	2.6	8.9	17.5	26.5	32	1470	1670	1950	1950	1950	220	10200	36000
35	24	2150	2.4	61.94	IE5	BF70-../S5E11LA6	2.4	8	16	24	29	2150	2150	2150	2150	2150	232	10800	37400
35	24	2150	2.4	61.94	IE4	BF70-../S4E11MA6	2.4	8	16	24	29	1640	1850	2150	2150	2150	220	10800	37400
35	20.5	2500	2.1	72.26	IE5	BF70-../S5E11LA6	2	6.9	13.5	20.5	24.5	2500	2500	2500	2500	2500	232	12000	39600
35	20.5	2500	2.1	72.26	IE4	BF70-../S4E11MA6	2	6.9	13.5	20.5	24.5	1910	2150	2500	2500	2500	220	12000	39600
35	18	2850	1.8	81.82	IE5	BF70-../S5E11LA6	1.8	6.1	12	18	21.5	2850	2850	2850	2850	2850	232	12800	41300
35	18	2850	1.8	81.82	IE4	BF70-../S4E11MA6	1.8	6.1	12	18	21.5	2150	2450	2850	2850	2850	220	12800	41300
35	15.5	3300	1.6	95.46	IE4	BF70-../S4E11MA6	1.5	5.2	10	15.5	18.5	2500	2850	3300	3300	3300	220	14000	43700
35	15.5	3300	1.6	95.46	IE5	BF70-../S5E11LA6	1.5	5.2	10	15.5	18.5	3300	3300	3300	3300	3300	232	14000	43700
35	14	3650	1.4	105.2	IE4	BF70-../S4E11MA6	1.4	4.7	9.5	14	17	2750	3150	3650	3650	3650	220	14700	45100
35	14	3650	1.4	105.2	IE5	BF70-../S5E11LA6	1.4	4.7	9.5	14	17	3650	3650	3650	3650	3650	232	14700	45100
35	12	4250	1.2	122.7	IE5	BF70-../S5E11LA6	1.2	4	8.1	12	14.5	4250	4250	4250	4250	4250	232	16100	47700
35	12	4250	1.2	122.7	IE4	BF70-../S4E11MA6	1.2	4	8.1	12	14.5	3250	3650	4250	4250	4250	220	16100	47700
35	11	4650	1.1	133	IE4	BF70Z-../S4E11MA6	1.1	3.7	7.5	11	13.5	3500	3950	4650	4650	4650	247	16100	47700
35	11	4650	1.1	133	IE5	BF70Z-../S5E11LA6	1.1	3.7	7.5	11	13.5	4650	4650	4650	4650	4650	258	16100	47700
35	9.7	5300	0.96	154	IE4	BF70Z-../S4E11MA6	0.95	3.2	6.4	9.7	11.5	4050	4600	5300	5300	5300	247	16100	47700
35	9.7	5300	0.96	154	IE5	BF70Z-../S5E11LA6	0.95	3.2	6.4	9.7	11.5	5300	5300	5300	5300	5300	258	16100	47700
35	8.3	6200	0.83	179.7	IE4	BF70Z-../S4E11MA6	0.8	2.7	5.5	8.3	10	4750	5300	6200	6200	6200	247	16100	47700
35	8.3	6200	0.83	179.7	IE5	BF70Z-../S5E11LA6	0.8	2.7	5.5	8.3	10	6200	6200	6200	6200	6200	258	16100	47700
35	15.5	3300	2.9	94.38	IE5	BF80-../S5E11LA6	1.5	5.2	10.5	15.5	19	3300	3300	3300	3300	3300	328	20300	68500
35	15.5	3300	2.9	94.38	IE4	BF80-../S4E11MA6	1.5	5.2	10.5	15.5	19	2500	2800	3300	3300	3300	316	20300	68500
35	13.5	3750	2.5	107.9	IE4	BF80-../S4E11MA6	1.3	4.6	9.2	13.5	16.5	2850	3200	3750	3750	3750	316	22400	72300
35	13.5	3750	2.5	107.9	IE5	BF80-../S5E11LA6	1.3	4.6	9.2	13.5	16.5	3750	3750	3750	3750	3750	328	22400	72300
35	12	4250	2.2	122.4	IE4	BF80-../S4E11MA6	1.2	4	8.1	12	14.5	3200	3650	4250	4250	4250	316	24500	75000
35	12	4250	2.2	122.4	IE5	BF80-../S5E11LA6	1.2	4	8.1	12	14.5	4250	4250	4250	4250	4250	328	24500	75000
35	10.5	4850	1.9	139.7	IE4	BF80-../S4E11MA6	1	3.5	7.1	10.5	12.5	3700	4150	4850	4850	4850	316	26700	75000
35	10.5	4850	1.9	139.7	IE5	BF80-../S5E11LA6	1	3.5	7.1	10.5	12.5	4850	4850	4850	4850	4850	328	26700	75000
35	9.4	5500	1.7	158.5	IE4	BF80-../S4E11MA6	0.9	3.1	6.3	9.4	11	4200	4750	5500	5500	5500	316	29000	75000
35	9.4	5500	1.7	158.5	IE5	BF80-../S5E11LA6	0.9	3.1	6.3	9.4	11	5500	5500	5500	5500	5500	328	29000	75000
35	8.1	6400	1.5	184.5	IE4	BF80-../S4E11MA6	0.8	2											

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 35 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**

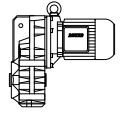
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	7.5	6900	2.4	198.8	IE5	BF90-../S5E11LA6	0.75	2.5	5	7.5	9	6900	6900	6900	6900	6900	581	36000	111300
35	7.5	6900	2.4	198.8	IE4	BF90-../S4E11MA6	0.75	2.5	5	7.5	9	5200	5900	6900	6900	6900	569	36000	111300
35	6.4	8100	2.1	232.6	IE4	BF90-../S4E11MA6	0.6	2.1	4.2	6.4	7.7	6100	6900	8100	8100	8100	569	39900	118300
35	6.4	8100	2.1	232.6	IE5	BF90-../S5E11LA6	0.6	2.1	4.2	6.4	7.7	8100	8100	8100	8100	8100	581	39900	118300
35	5.7	9000	1.9	259	IE5	BF90-../S5E11LA6	0.55	1.9	3.8	5.7	6.9	9000	9000	9000	9000	9000	581	42800	120000
35	5.7	9000	1.9	259	IE4	BF90-../S4E11MA6	0.55	1.9	3.8	5.7	6.9	6800	7700	9000	9000	9000	569	42800	120000
35	5.5	9400	2	269.8	IE4	BF90Z-../S4E11MA6	0.55	1.8	3.7	5.5	6.6	7100	8000	9400	9400	9400	629	42800	120000
35	5.5	9400	2	269.8	IE5	BF90Z-../S5E11LA6	0.55	1.8	3.7	5.5	6.6	9400	9400	9400	9400	9400	641	42800	120000
35	4.9	10500	1.8	300.4	IE5	BF90Z-../S5E11LA6	0.49	1.6	3.3	4.9	5.9	10500	10500	10500	10500	10500	641	42800	120000
35	4.9	10500	1.8	300.4	IE4	BF90Z-../S4E11MA6	0.49	1.6	3.3	4.9	5.9	7900	9000	10500	10500	10500	629	42800	120000
35	4.3	12000	1.5	343.6	IE5	BF90Z-../S5E11LA6	0.43	1.4	2.9	4.3	5.2	12000	12000	12000	12000	12000	641	42800	120000
35	4.3	12000	1.5	343.6	IE4	BF90Z-../S4E11MA6	0.43	1.4	2.9	4.3	5.2	9100	10300	12000	12000	12000	629	42800	120000
35	3.9	13300	1.4	382.6	IE5	BF90Z-../S5E11LA6	0.39	1.3	2.6	3.9	4.7	13300	13300	13300	13300	13300	641	42800	120000
35	3.9	13300	1.4	382.6	IE4	BF90Z-../S4E11MA6	0.39	1.3	2.6	3.9	4.7	10100	11400	13300	13300	13300	629	42800	120000
35	3.2	15900	1.2	456.7	IE5	BF90Z-../S5E11LA6	0.32	1	2.1	3.2	3.9	15900	15900	15900	15900	15900	641	42800	120000
35	3.2	15900	1.2	456.7	IE4	BF90Z-../S4E11MA6	0.32	1	2.1	3.2	3.9	12100	13700	15900	15900	15900	629	42800	120000
35	2.9	17700	1	508.5	IE5	BF90Z-../S5E11LA6	0.29	0.95	1.9	2.9	3.5	17700	17700	17700	17700	17700	641	42800	120000
35	2.9	17700	1	508.5	IE4	BF90Z-../S4E11MA6	0.29	0.95	1.9	2.9	3.5	13400	15200	17700	17700	17700	629	42800	120000
35	2.5	20500	0.89	591.1	IE5	BF90Z-../S5E11LA6	0.25	0.8	1.6	2.5	3	20500	20500	20500	20500	20500	641	42800	120000
35	2.5	20500	0.89	591.1	IE4	BF90Z-../S4E11MA6	0.25	0.8	1.6	2.5	3	15600	17700	20500	20500	20500	629	42800	120000
35	2.2	23000	0.8	658.1	IE4	BF90Z-../S4E11MA6	0.22	0.75	1.5	2.2	2.7	17400	19700	23000	23000	23000	629	42800	120000
35	2.2	23000	0.8	658.1	IE5	BF90Z-../S5E11LA6	0.22	0.75	1.5	2.2	2.7	23000	23000	23000	23000	23000	641	42800	120000

 **$M_N = 48 \text{ Nm}$  ( $P_N = 7.5 \text{ kW}$ )**

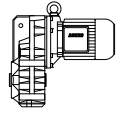
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
48	235	300	0.86	6.34	IE3	BF30-../SPE11LA6	23.5	78	157	235	280	220	250	300	300	300	78	2400	-
48	255	280	1.2	5.87	IE3	BF40-../SPE11LA6	25.5	85	170	255	305	205	230	280	280	280	92	3550	-
48	196	365	1	7.62	IE3	BF40-../SPE11LA6	19.5	65	131	196	235	265	300	365	365	365	92	3900	-
48	158	455	0.91	9.48	IE3	BF40-../SPE11LA6	15.5	52	105	158	189	330	375	455	455	455	92	4150	-
48	127	560	0.82	11.79	IE3	BF40-../SPE11LA6	12.5	42	84	127	152	410	470	560	560	560	92	4450	-
48	275	255	1.9	5.38	IE3	BF50-../SPE11LA6	27.5	92	185	275	330	188	215	255	255	255	122	4500	-
48	194	370	1.5	7.71	IE3	BF50-../SPE11LA6	19	64	129	194	230	265	305	370	370	370	122	5100	-
48	140	510	1.3	10.68	IE3	BF50-../SPE11LA6	14	46.5	93	140	168	370	425	510	510	510	122	5600	-
48	102	700	1.1	14.65	IE3	BF50-../SPE11LA6	10	34	68	102	122	510	580	700	700	700	122	6100	-
48	89	800	1.2	16.7	IE3	BF50-../SPE11LA6	8.9	29.5	59	89	107	580	660	800	800	800	122	6200	-
48	80	890	1.1	18.68	IE3	BF50-../SPE11LA6	8	26.5	53	80	96	650	740	890	890	890	122	6400	-
48	64	1110	0.99	23.14	IE3	BF50-../SPE11LA6	6.4	21.5	43	64	77	800	920	1110	1110	1110	122	6800	-
48	57	1240	0.93	25.88	IE3	BF50-../SPE11LA6	5.7	19	38.5	57	69	900	1030	1240	1240	1240	122	7100	-
48	47	1520	0.83	31.73	IE3	BF50-../SPE11LA6	4.7	15.5	31.5	47	56	1110	1260	1520	1520	1520	122	7500	-
48	285	250	3	5.22	IE3	BF60-../SPE11LA6	28.5	95	191	285	340	182	205	250	250	250	153	5200	14800
48	193	370	2.3	7.74	IE3	BF60-../SPE11LA6	19	64	129	193	230	270	305	370	370	370	153	6000	16900
48	145	490	2	10.31	IE3	BF60-../SPE11LA6	14.5	48	96	145	174	360	410	490	490	490	153	6500	18400
48	105	680	1.7	14.24	IE3	BF60-../SPE11LA6	10.5	35	70	105	126	495	560	680	680	680	153	7100	20000
48	88	810	1.8	16.96	IE3	BF60-../SPE11LA6	8.8	29	58	88	106	590	670	810	810	810	153	7300	20600
48	79	900	1.7	18.81	IE3	BF60-../SPE11LA6	7.9	26.5	53	79	95	650	750	900	900	900	153	7600	21500
48	66	1080	1.5	22.58	IE3	BF60-../SPE11LA6	6.6	22	44	66	79	790	900	1080	1080	1080	153	8000	22600
48	59	1200	1.4	25.05	IE3	BF60-../SPE11LA6	5.9	19.5	39.5	59	71	870	1000	1200	1200	1200	153	8200	23200
48	48	1490	1.3	31.2	IE3	BF60-../SPE11LA6	4.8	16	32	48	57	1090	1240	1490	1490	1490	153	8800	24900
48	43	1660	1.2	34.62	IE3	BF60-../SPE11LA6	4.3	14	28.5	43	51	1210	1380	1660	1660	1660	153	9100	25700
48	36	1990	1.1	41.6	IE3	BF60-../SPE11LA6	3.6	12	24	36	43	1450	1660	1990	1990	1990	153	9600	27100
48	32	2200	0.99	46.16	IE3	BF60-../SPE11LA6	3.2	10.5	21.5	32	38.5	1610	1840	2200	2200	2200	153	9900	28000
48	27.5	2600	0.88	54.44	IE3	BF60-../SPE11LA6	2.7	9.1	18	27.5	33	1900	2150	2600	2600	2600	153	10500	29700
48	40.5	1770	2.9	36.88	IE3	BF70-../SPE11LA6	4	13.5	27	40.5	48.5	1290	1470	1770	1770	1770	232	7900	31100
48	34.5	2050	2.5	43.02	IE3	BF70-../SPE11LA6	3.4	11.5	23	34.5	41.5	1500	1720	2050	2050	2050	232	8700	32800
48	31	2250	2.3	47.82	IE3	BF70-../SPE11LA6	3.1	10	20.5	31	37.5	1670	1910	2250	2250	2250	232	9100	34000
48	26.5	2650	1.9	55.79	IE3	BF70-../SPE11LA6	2.6	8.9	17.5	26.5	32	1950	2200	2650	2650	2650	232	10200	36000
48	24	2950	1.7	61.94	IE3	BF70-../SPE11LA6	2.4	8	16	24	29	2150	2450	2950	2950	2950	232	10800	37400
48	20.5	3450	1.5	72.26	IE3	BF70-../SPE11LA6	2	6.9	13.5	20.5	24.5	2500	2850	3450	3450	3450	232	12000	39600
48	18	3900	1.3	81.82	IE3	BF70-../SPE11LA6	1.8	6.1	12	18	21.5	2850	3250	3900	3900	3900	232	12800	41300
48	15.5	4550	1.1	95.46	IE3	BF70-../SPE11LA6	1.5	5.2	10	15.5	18.5	3300	3800	4550	4550	4550	232	14000	43700
48	14	5000	1	105.2	IE3	BF70-../SPE11LA6	1.4	4.7	9.5	14	17	3650	4200	5000	5000	5000	232	14700	45100
48	12	5800	0.88	122.7	IE3	BF70-../SPE11LA6	1.2	4	8.1	12	14.5	4250	4900	5800	5800	5800	232	16100	47700
48	11	6300	0.81	133	IE3	BF70Z-../SPE11LA6	1.1	3.7	7.5	11	13.5	4650	5300	6300	6300	6300	258	16100	47700
48	21	3350	2.8	69.86	IE3	BF80-../SPE11LA6	2.1	7.1	14	21	25.5	2400	2750	3350	3350	3350	328	15900	60600

# BF-series shaft-mounted geared motors

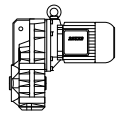
## Selection - shaft-mounted geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

 **$M_N = 48 \text{ Nm}$  ( $P_N = 7.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
48	8.1	8800	1.1	184.5	IE3	BF80-../SPE11LA6	0.8	2.7	5.4	8.1	9.7	6400	7300	8800	8800	8800	328	31800	75000
48	7.1	10000	0.95	209.4	IE3	BF80-../SPE11LA6	0.7	2.3	4.7	7.1	8.5	7300	8300	10000	10000	10000	328	34300	75000
48	6.3	11300	0.83	237.1	IE3	BF80-../SPE11LA6	0.6	2.1	4.2	6.3	7.5	8200	9400	11300	11300	11300	328	36900	75000
48	12.5	5700	2.9	119.7	IE3	BF90-../SPE11LA6	1.2	4.1	8.3	12.5	15	4150	4750	5700	5700	5700	581	24500	90800
48	10.5	6600	2.5	139.1	IE3	BF90-../SPE11LA6	1	3.5	7.1	10.5	12.5	4850	5500	6600	6600	6600	581	27700	96300
48	9.6	7400	2.3	154.8	IE3	BF90-../SPE11LA6	0.95	3.2	6.4	9.6	11.5	5400	6100	7400	7400	7400	581	30100	100800
48	8.3	8500	2	178.6	IE3	BF90-../SPE11LA6	0.8	2.7	5.5	8.3	10	6200	7100	8500	8500	8500	581	33400	106700
48	7.5	9500	1.8	198.8	IE3	BF90-../SPE11LA6	0.75	2.5	5	7.5	9	6900	7900	9500	9500	9500	581	36000	111300
48	6.4	11100	1.5	232.6	IE3	BF90-../SPE11LA6	0.6	2.1	4.2	6.4	7.7	8100	9300	11100	11100	11100	581	39900	118300
48	5.7	12400	1.4	259	IE3	BF90-../SPE11LA6	0.55	1.9	3.8	5.7	6.9	9000	10300	12400	12400	12400	581	42800	120000
48	5.5	12900	1.4	269.8	IE3	BF90Z-../SPE11LA6	0.55	1.8	3.7	5.5	6.6	9400	10700	12900	12900	12900	641	42800	120000
48	4.9	14400	1.3	300.4	IE3	BF90Z-../SPE11LA6	0.49	1.6	3.3	4.9	5.9	10500	12000	14400	14400	14400	641	42800	120000
48	4.3	16400	1.1	343.6	IE3	BF90Z-../SPE11LA6	0.43	1.4	2.9	4.3	5.2	12000	13700	16400	16400	16400	641	42800	120000
48	3.9	18300	1	382.6	IE3	BF90Z-../SPE11LA6	0.39	1.3	2.6	3.9	4.7	13300	15300	18300	18300	18300	641	42800	120000
48	3.2	21500	0.84	456.7	IE3	BF90Z-../SPE11LA6	0.32	1	2.1	3.2	3.9	15900	18200	21500	21500	21500	641	42800	120000

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 0.65 \text{ Nm}$  ( $P_N = 0.2 \text{ kW}$ )**

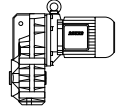
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.65	19.5	98	2.4	151.2	IE5	BF10Z-../S5E04SA4-1	0.95	3.3	6.6	19.5	23.5	98	98	98	98	21	6400	-	
0.65	18	108	2.2	166.2	IE5	BF10Z-../S5E04SA4-1	0.9	3	6	18	21.5	108	108	108	108	21	6400	-	
0.65	16.5	117	2.1	180.1	IE5	BF10Z-../S5E04SA4-1	0.8	2.7	5.5	16.5	19.5	117	117	117	117	21	6400	-	
0.65	15	128	1.9	198	IE5	BF10Z-../S5E04SA4-1	0.75	2.5	5	15	18	128	128	128	128	21	6400	-	
0.65	13.5	139	1.7	214.5	IE5	BF10Z-../S5E04SA4-1	0.65	2.3	4.6	13.5	16.5	139	139	139	139	21	6400	-	
0.65	12.5	153	1.6	235.8	IE5	BF10Z-../S5E04SA4-1	0.6	2.1	4.2	12.5	15	153	153	153	153	21	6400	-	
0.65	11.5	167	1.4	257.4	IE5	BF10Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	167	167	167	167	21	6400	-	
0.65	10.5	184	1.3	283.1	IE5	BF10Z-../S5E04SA4-1	0.5	1.7	3.5	10.5	12.5	184	184	184	184	21	6400	-	
0.65	9.2	210	1.1	324.3	IE5	BF10Z-../S5E04SA4-1	0.46	1.5	3	9.2	11	210	210	210	210	21	6400	-	
0.65	8.4	230	1	356.6	IE5	BF10Z-../S5E04SA4-1	0.42	1.4	2.8	8.4	10	230	230	230	230	21	6400	-	
0.65	7.8	245	0.97	380.2	IE5	BF10Z-../S5E04SA4-1	0.39	1.3	2.6	7.8	9.4	245	245	245	245	21	6400	-	
0.65	7.1	270	0.88	418	IE5	BF10Z-../S5E04SA4-1	0.35	1.1	2.3	7.1	8.6	270	270	270	270	21	6400	-	
0.65	9.3	205	1.2	322.3	IE5	BF10G06-../S5E04SA4-1	0.46	1.5	3.1	9.3	11	205	205	205	205	25	6400	-	
0.65	7.9	245	1.1	377.9	IE5	BF10G06-../S5E04SA4-1	0.39	1.3	2.6	7.9	9.5	245	245	245	245	25	6400	-	
0.65	7	275	0.94	424.5	IE5	BF10G06-../S5E04SA4-1	0.35	1.1	2.3	7	8.4	275	275	275	275	25	6400	-	
0.65	13.5	140	3	216.9	IE5	BF20Z-../S5E04SA4-1	0.65	2.3	4.6	13.5	16.5	140	140	140	140	28	7900	-	
0.65	12.5	153	2.7	235.9	IE5	BF20Z-../S5E04SA4-1	0.6	2.1	4.2	12.5	15	153	153	153	153	28	7900	-	
0.65	11.5	168	2.5	259.6	IE5	BF20Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	168	168	168	168	28	7900	-	
0.65	10	192	2.2	295.5	IE5	BF20Z-../S5E04SA4-1	0.5	1.6	3.3	10	12	192	192	192	192	28	7900	-	
0.65	9.2	210	2	325.2	IE5	BF20Z-../S5E04SA4-1	0.46	1.5	3	9.2	11	210	210	210	210	28	7900	-	
0.65	8.8	220	1.9	339.1	IE5	BF20Z-../S5E04SA4-1	0.44	1.4	2.9	8.8	10.5	220	220	220	220	28	7900	-	
0.65	8	240	1.7	373.1	IE5	BF20Z-../S5E04SA4-1	0.4	1.3	2.6	8	9.6	240	240	240	240	28	7900	-	
0.65	7.1	270	1.5	418.1	IE5	BF20Z-../S5E04SA4-1	0.35	1.1	2.3	7.1	8.6	270	270	270	270	28	7900	-	
0.65	6.5	295	1.4	460	IE5	BF20Z-../S5E04SA4-1	0.32	1	2.1	6.5	7.8	295	295	295	295	28	7900	-	
0.65	5.8	330	1.4	513.7	IE5	BF20G06-../S5E04SA4-1	0.29	0.95	1.9	5.8	7	330	330	330	330	31	7900	-	
0.65	4.8	400	1.1	617	IE5	BF20G06-../S5E04SA4-1	0.24	0.8	1.6	4.8	5.8	400	400	400	400	31	7900	-	
0.65	4	475	0.96	736.1	IE5	BF20G06-../S5E04SA4-1	0.2	0.65	1.3	4	4.8	475	475	475	475	31	7900	-	
0.65	3.7	520	0.87	810	IE5	BF20G06-../S5E04SA4-1	0.18	0.6	1.2	3.7	4.4	520	520	520	520	31	7900	-	
0.65	4.8	400	1.6	622.4	IE5	BF30G06-../S5E04SA4-1	0.24	0.8	1.6	4.8	5.7	400	400	400	400	41	7400	-	
0.65	4.2	455	1.4	705.1	IE5	BF30G06-../S5E04SA4-1	0.21	0.7	1.4	4.2	5.1	455	455	455	455	41	7400	-	
0.65	3.6	530	1.2	817.1	IE5	BF30G06-../S5E04SA4-1	0.18	0.6	1.2	3.6	4.4	530	530	530	530	41	7400	-	
0.65	3.1	620	1	961.1	IE5	BF30G06-../S5E04SA4-1	0.15	0.5	1	3.1	3.7	620	620	620	620	41	7400	-	
0.65	2.6	740	0.84	1150	IE5	BF30G06-../S5E04SA4-1	0.13	0.43	0.85	2.6	3.1	740	740	740	740	41	7400	-	

 **$M_N = 0.8 \text{ Nm}$  ( $P_N = 0.25 \text{ kW}$ )**

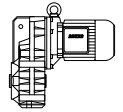
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.8	19.5	120	2	151.2	IE5	BF10Z-../S5E04SA4-1	0.95	3.3	6.6	19.5	23.5	114	120	120	120	21	6400	-	
0.8	18	132	1.8	166.2	IE5	BF10Z-../S5E04SA4-1	0.9	3	6	18	21.5	126	132	132	132	21	6400	-	
0.8	16.5	144	1.7	180.1	IE5	BF10Z-../S5E04SA4-1	0.8	2.7	5.5	16.5	19.5	136	144	144	144	21	6400	-	
0.8	15	158	1.5	198	IE5	BF10Z-../S5E04SA4-1	0.75	2.5	5	15	18	150	158	158	158	21	6400	-	
0.8	13.5	171	1.4	214.5	IE5	BF10Z-../S5E04SA4-1	0.65	2.3	4.6	13.5	16.5	163	171	171	171	21	6400	-	
0.8	12.5	188	1.3	235.8	IE5	BF10Z-../S5E04SA4-1	0.6	2.1	4.2	12.5	15	179	188	188	188	21	6400	-	
0.8	11.5	205	1.2	257.4	IE5	BF10Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	195	205	205	205	21	6400	-	
0.8	10.5	225	1.1	283.1	IE5	BF10Z-../S5E04SA4-1	0.5	1.7	3.5	10.5	12.5	215	225	225	225	21	6400	-	
0.8	9.2	255	0.93	324.3	IE5	BF10Z-../S5E04SA4-1	0.46	1.5	3	9.2	11	245	255	255	255	21	6400	-	
0.8	8.4	285	0.84	356.6	IE5	BF10Z-../S5E04SA4-1	0.42	1.4	2.8	8.4	10	270	285	285	285	21	6400	-	
0.8	9.3	255	1	322.3	IE5	BF10G06-../S5E04SA4-1	0.46	1.5	3.1	9.3	11	240	255	255	255	25	6400	-	
0.8	7.9	300	0.86	377.9	IE5	BF10G06-../S5E04SA4-1	0.39	1.3	2.6	7.9	9.5	285	300	300	300	25	6400	-	
0.8	16.5	144	2.9	180.8	IE5	BF20Z-../S5E04SA4-1	0.8	2.7	5.5	16.5	19.5	137	144	144	144	28	7900	-	
0.8	15	157	2.7	197.1	IE5	BF20Z-../S5E04SA4-1	0.75	2.5	5	15	18	149	157	157	157	28	7900	-	
0.8	13.5	173	2.4	216.9	IE5	BF20Z-../S5E04SA4-1	0.65	2.3	4.6	13.5	16.5	164	173	173	173	28	7900	-	
0.8	12.5	188	2.2	235.9	IE5	BF20Z-../S5E04SA4-1	0.6	2.1	4.2	12.5	15	179	188	188	188	28	7900	-	
0.8	11.5	205	2	259.6	IE5	BF20Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	197	205	205	205	28	7900	-	
0.8	10	235	1.8	295.5	IE5	BF20Z-../S5E04SA4-1	0.5	1.6	3.3	10	12	220	235	235	235	28	7900	-	
0.8	9.2	260	1.6	325.2	IE5	BF20Z-../S5E04SA4-1	0.46	1.5	3	9.2	11	245	260	260	260	28	7900	-	
0.8	8.8	270	1.5	339.1	IE5	BF20Z-../S5E04SA4-1	0.44	1.4	2.9	8.8	10.5	255	270	270	270	28	7900	-	
0.8	8	295	1.4	373.1	IE5	BF20Z-../S5E04SA4-1	0.4	1.3	2.6	8	9.6	280	295	295	295	28	7900	-	
0.8	7.1	330	1.3	418.1	IE5	BF20Z-../S5E04SA4-1	0.35	1.1	2.3	7.1	8.6	315	330	330	330	28	7900	-	
0.8	6.5	365	1.1	460	IE5	BF20Z-../S5E04SA4-1	0.32	1	2.1	6.5	7.8	345	365	365	365	28	7900	-	
0.8	5.8	410	1.1	513.7	IE5	BF20G06-../S5E04SA4-1	0.29	0.95	1.9	5.8	7	390	410	410	410	31	7900	-	
0.8	4.8	490	0.93	617	IE5	BF20G06-../S5E04SA4-1	0.24	0.8	1.6	4.8	5.8	465	490	490	490	31	7900	-	
0.8	4.8	495	1.3	622.4	IE5	BF30G06-../S5E04SA4-1	0.24	0.8	1.6	4.8	5.7	470	495	495	495	41	7400	-	
0.8	4.2	560	1.1	705.1	IE5	BF30G06-../S5E04SA4-1	0.21	0.7	1.4	4.2	5.1	530	560	560	560	41	7400	-	
0.8	3.6	650	0.96	817.1	IE5	BF30G06-../S5E04SA4-1	0.18	0.6	1.2	3.6	4.4	620	650	650	650	41	7400	-	
0.8	3.1	760	0.82	961.1	IE5	BF30G06-../S5E04SA4-1	0.15	0.5	1	3.1	3.7	730	760	760	760	41	7400	-	

# BF-series shaft-mounted geared motors

## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

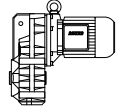
 **$M_N = 1 \text{ Nm}$  ( $P_N = 0.315 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1	19.5	151	1.6	151.2	IE4	BF10Z-../S4E04SA4-1	0.95	3.3	6.6	19.5	23.5	114	128	151	151	21	6400	-	
1	18	166	1.4	166.2	IE4	BF10Z-../S4E04SA4-1	0.9	3	6	18	21.5	126	141	166	166	21	6400	-	
1	16.5	180	1.3	180.1	IE4	BF10Z-../S4E04SA4-1	0.8	2.7	5.5	16.5	19.5	136	153	180	180	21	6400	-	
1	15	198	1.2	198	IE4	BF10Z-../S4E04SA4-1	0.75	2.5	5	15	18	150	168	198	198	21	6400	-	
1	13.5	210	1.1	214.5	IE4	BF10Z-../S4E04SA4-1	0.65	2.3	4.6	13.5	16.5	163	182	210	210	21	6400	-	
1	12.5	235	1	235.8	IE4	BF10Z-../S4E04SA4-1	0.6	2.1	4.2	12.5	15	179	200	235	235	21	6400	-	
1	11.5	255	0.93	257.4	IE4	BF10Z-../S4E04SA4-1	0.55	1.9	3.8	11.5	13.5	195	215	255	255	21	6400	-	
1	10.5	280	0.85	283.1	IE4	BF10Z-../S4E04SA4-1	0.5	1.7	3.5	10.5	12.5	215	240	280	280	21	6400	-	
1	9.3	320	0.81	322.3	IE4	BF10G06-../S4E04SA4-1	0.46	1.5	3.1	9.3	11	240	270	320	320	25	6400	-	
1	21	141	3	141.2	IE4	BF20Z-../S4E04SA4-1	1	3.5	7	21	25	107	120	141	141	28	7900	-	
1	19	155	2.7	155.4	IE4	BF20Z-../S4E04SA4-1	0.95	3.2	6.4	19	23	118	132	155	155	28	7900	-	
1	18	164	2.6	164.3	IE4	BF20Z-../S4E04SA4-1	0.9	3	6	18	21.5	124	139	164	164	28	7900	-	
1	16.5	180	2.3	180.8	IE4	BF20Z-../S4E04SA4-1	0.8	2.7	5.5	16.5	19.5	137	153	180	180	28	7900	-	
1	15	197	2.1	197.1	IE4	BF20Z-../S4E04SA4-1	0.75	2.5	5	15	18	149	167	197	197	28	7900	-	
1	13.5	215	1.9	216.9	IE4	BF20Z-../S4E04SA4-1	0.65	2.3	4.6	13.5	16.5	164	184	215	215	28	7900	-	
1	12.5	235	1.8	235.9	IE4	BF20Z-../S4E04SA4-1	0.6	2.1	4.2	12.5	15	179	200	235	235	28	7900	-	
1	11.5	255	1.6	259.6	IE4	BF20Z-../S4E04SA4-1	0.55	1.9	3.8	11.5	13.5	197	220	255	255	28	7900	-	
1	10	295	1.4	295.5	IE4	BF20Z-../S4E04SA4-1	0.5	1.6	3.3	10	12	220	250	295	295	28	7900	-	
1	9.2	325	1.3	325.2	IE4	BF20Z-../S4E04SA4-1	0.46	1.5	3	9.2	11	245	275	325	325	28	7900	-	
1	8.8	335	1.2	339.1	IE4	BF20Z-../S4E04SA4-1	0.44	1.4	2.9	8.8	10.5	255	285	335	335	28	7900	-	
1	8	370	1.1	373.1	IE4	BF20Z-../S4E04SA4-1	0.4	1.3	2.6	8	9.6	280	315	370	370	28	7900	-	
1	7.1	415	1	418.1	IE4	BF20Z-../S4E04SA4-1	0.35	1.1	2.3	7.1	8.6	315	355	415	415	28	7900	-	
1	6.5	460	0.91	460	IE4	BF20Z-../S4E04SA4-1	0.32	1	2.1	6.5	7.8	345	390	460	460	28	7900	-	
1	5.8	510	0.9	513.7	IE4	BF20G06-../S4E04SA4-1	0.29	0.95	1.9	5.8	7	390	435	510	510	31	7900	-	
1	4.8	620	1	622.4	IE4	BF30G06-../S4E04SA4-1	0.24	0.8	1.6	4.8	5.7	470	520	620	620	41	7400	-	
1	4.2	700	0.89	705.1	IE4	BF30G06-../S4E04SA4-1	0.21	0.7	1.4	4.2	5.1	530	590	700	700	41	7400	-	

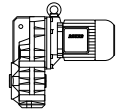
 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.3	112	34.5	2.7	26.76	IE5	BF06-../S5E06MA4	5.6	18.5	37	112	134	34.5	34.5	34.5	34.5	12	3000	-	
1.3	95	40.5	2.3	31.5	IE5	BF06-../S5E06MA4	4.7	15.5	31.5	95	114	40.5	40.5	40.5	40.5	12	3200	-	
1.3	79	48.5	1.9	37.69	IE5	BF06-../S5E06MA4	3.9	13	26.5	79	95	48.5	48.5	48.5	48.5	12	3500	-	
1.3	65	59	1.6	46.14	IE5	BF06-../S5E06MA4	3.2	10.5	21.5	65	78	59	59	59	59	12	3800	-	
1.3	51	75	1.3	58.33	IE5	BF06-../S5E06MA4	2.5	8.5	17	51	61	75	75	75	75	12	4000	-	
1.3	44.5	86	1.1	66.82	IE5	BF06-../S5E06MA4	2.2	7.4	14.5	44.5	53	86	86	86	86	12	4000	-	
1.3	35.5	108	0.87	83.61	IE5	BF06-../S5E06MA4	1.7	5.9	11.5	35.5	43	108	108	108	108	12	4000	-	
1.3	48.5	80	3	61.55	IE5	BF10-../S5E06MA4	2.4	8.1	16	48.5	58	80	80	80	80	23	4700	-	
1.3	44	87	2.7	67.69	IE5	BF10-../S5E06MA4	2.2	7.3	14.5	44	53	87	87	87	87	23	4900	-	
1.3	38.5	100	2.4	77.55	IE5	BF10-../S5E06MA4	1.9	6.4	12.5	38.5	46	100	100	100	100	23	5100	-	
1.3	35	110	2.2	85.27	IE5	BF10-../S5E06MA4	1.7	5.8	11.5	35	42	110	110	110	110	23	5300	-	
1.3	32.5	118	2	90.91	IE5	BF10-../S5E06MA4	1.6	5.4	10.5	32.5	39.5	118	118	118	118	23	5400	-	
1.3	30	129	1.8	99.97	IE5	BF10-../S5E06MA4	1.5	5	10	30	36	129	129	129	129	23	5600	-	
1.3	26.5	145	1.6	112.3	IE5	BF10-../S5E06MA4	1.3	4.4	8.9	26.5	32	145	145	145	145	23	5900	-	
1.3	24	160	1.5	123.5	IE5	BF10-../S5E06MA4	1.2	4	8	24	29	160	160	160	160	23	6100	-	
1.3	23	167	1.4	128.9	IE5	BF10-../S5E06MA4	1.1	3.8	7.7	23	27.5	167	167	167	167	23	6200	-	
1.3	21	184	1.3	141.8	IE5	BF10-../S5E06MA4	1	3.5	7	21	25	184	184	184	184	23	6400	-	
1.3	19.5	196	1.2	151.2	IE5	BF10Z-../S5E06MA4	0.95	3.3	6.6	19.5	23.5	196	196	196	196	24	6400	-	
1.3	18	215	1.1	166.2	IE5	BF10Z-../S5E06MA4	0.9	3	6	18	21.5	215	215	215	215	24	6400	-	
1.3	16.5	230	1	180.1	IE5	BF10Z-../S5E06MA4	0.8	2.7	5.5	16.5	19.5	230	230	230	230	24	6400	-	
1.3	15	255	0.93	198	IE5	BF10Z-../S5E06MA4	0.75	2.5	5	15	18	255	255	255	255	24	6400	-	
1.3	13.5	275	0.86	214.5	IE5	BF10Z-../S5E06MA4	0.65	2.3	4.6	13.5	16.5	275	275	275	275	24	6400	-	
1.3	27	143	2.9	110.2	IE5	BF20-../S5E06MA4	1.3	4.5	9	27	32.5	143	143	143	143	30	7300	-	
1.3	24	160	2.6	123.5	IE5	BF20-../S5E06MA4	1.2	4	8	24	29	160	160	160	160	30	7600	-	
1.3	22	176	2.4	135.9	IE5	BF20-../S5E06MA4	1.1	3.6	7.3	22	26	176	176	176	176	30	7900	-	
1.3	21	183	2.3	141.2	IE5	BF20-../S5E06MA4	1	3.5	7	21	25	183	183	183	183	31	7900	-	
1.3	19	200	2.1	155.4	IE5	BF20Z-../S5E06MA4	0.95	3.2	6.4	19	23	200	200	200	200	31	7900	-	
1.3	18	210	2	164.3	IE5	BF20Z-../S5E06MA4	0.9	3	6	18	21.5	210	210	210	210	31	7900	-	
1.3	16.5	235	1.8	180.8	IE5	BF20Z-../S5E06MA4	0.8	2.7	5.5	16.5	19.5	235	235	235	235	31	7900	-	
1.3	15	255	1.6	197.1	IE5	BF20Z-../S5E06MA4	0.75	2.5	5	15	18	255	255	255	255	31	7900	-	
1.3	13.5	280	1.5	216.9	IE5	BF20Z-../S5E06MA4	0.65	2.3	4.6	13.5	16.5	280	280	280	280	31	7900	-	
1.3	12.5	305	1.4	235.9	IE5	BF20Z-../S5E06MA4	0.6	2.1	4.2	12.5	15	305	305	305	305	31	7900	-	
1.3	11.5	335	1.2	259.6	IE5	BF20Z-../S5E06MA4	0.55	1.9	3.8	11.5	13.5	335	335	335	335	31	7900	-	
1.3	10	380	1.1	295.5	IE5	BF20Z-../S5E06MA4	0.5	1.6	3.3	10	12	380	380	380	380	31	7900	-	
1.3	9.2	420	0.99	325.2	IE5	BF20Z-../S5E06MA4	0.46	1.5	3	9.2	11	420	420	420	420	31	7900	-	
1.3	8.8	440	0.95	339.1	IE5	BF20Z-../S5E06MA4	0.44	1.4	2.9	8.8	10.5	440	440	440	440	31	7900	-	
1.3	8	485	0.87	373.1	IE5	BF20Z-../S5E06MA4	0.4	1.3	2.6	8	9.6	485	485	485	485	31	7900	-	
1.3	19.5	195	2.9	150.7	IE5	BF30Z-../S5E06MA4	0.95	3.3	6.6	19.5	23.5	195	195	195	195	42	7400	-	
1.3	18	215	2.6	165.8	IE5	BF30Z-../S5E06MA4	0.9	3	6	18	21.5	215	215	215	215	42	7400	-	



**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{min}$**  **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.3	16.5	225	2.5	176.6	IE5	BF30Z-../S5E06MA4	0.8	2.8	5.6	16.5	20	225	225	225	225	42	7400	-	
1.3	15	250	2.3	194.3	IE5	BF30Z-../S5E06MA4	0.75	2.5	5.1	15	18.5	250	250	250	250	42	7400	-	
1.3	13	290	2	224.8	IE5	BF30Z-../S5E06MA4	0.65	2.2	4.4	13	16	290	290	290	290	42	7400	-	
1.3	12	320	1.8	247.3	IE5	BF30Z-../S5E06MA4	0.6	2	4	12	14.5	320	320	320	320	42	7400	-	
1.3	11	340	1.7	263.5	IE5	BF30Z-../S5E06MA4	0.55	1.8	3.7	11	13.5	340	340	340	340	42	7400	-	
1.3	10	375	1.5	289.8	IE5	BF30Z-../S5E06MA4	0.5	1.7	3.4	10	12	375	375	375	375	42	7400	-	
1.3	9.6	400	1.4	310.7	IE5	BF30Z-../S5E06MA4	0.48	1.6	3.2	9.6	11.5	400	400	400	400	42	7400	-	
1.3	8.7	440	1.3	341.8	IE5	BF30Z-../S5E06MA4	0.43	1.4	2.9	8.7	10.5	440	440	440	440	42	7400	-	
1.3	7.9	485	1.2	375.1	IE5	BF30Z-../S5E06MA4	0.39	1.3	2.6	7.9	9.5	485	485	485	485	42	7400	-	
1.3	7.2	530	1.1	412.6	IE5	BF30Z-../S5E06MA4	0.36	1.2	2.4	7.2	8.7	530	530	530	530	42	7400	-	
1.3	6.4	600	0.95	463.3	IE5	BF30Z-../S5E06MA4	0.32	1	2.1	6.4	7.7	600	600	600	600	42	7400	-	
1.3	5.8	660	0.86	509.6	IE5	BF30Z-../S5E06MA4	0.29	0.95	1.9	5.8	7	660	660	660	660	42	7400	-	
1.3	5.5	690	0.82	537	IE5	BF30Z-../S5E06MA4	0.27	0.9	1.8	5.5	6.7	690	690	690	690	42	7400	-	
1.3	11.5	325	2.7	253.2	IE5	BF40Z-../S5E06MA4	0.55	1.9	3.9	11.5	14	325	325	325	325	53	10600	-	
1.3	10.5	360	2.5	278.5	IE5	BF40Z-../S5E06MA4	0.5	1.7	3.5	10.5	12.5	360	360	360	360	53	10600	-	
1.3	10	380	2.3	295.1	IE5	BF40Z-../S5E06MA4	0.5	1.6	3.3	10	12	380	380	380	380	53	10600	-	
1.3	9.2	420	2.1	324.7	IE5	BF40Z-../S5E06MA4	0.46	1.5	3	9.2	11	420	420	420	420	53	10600	-	
1.3	8.6	450	2	346.8	IE5	BF40Z-../S5E06MA4	0.43	1.4	2.8	8.6	10	450	450	450	450	53	10600	-	
1.3	7.8	495	1.8	381.5	IE5	BF40Z-../S5E06MA4	0.39	1.3	2.6	7.8	9.4	495	495	495	495	53	10600	-	
1.3	7.1	540	1.7	417.3	IE5	BF40Z-../S5E06MA4	0.35	1.1	2.3	7.1	8.6	540	540	540	540	53	10600	-	
1.3	6.5	590	1.5	459.1	IE5	BF40Z-../S5E06MA4	0.32	1	2.1	6.5	7.8	590	590	590	590	53	10600	-	
1.3	5.8	660	1.3	514.6	IE5	BF40Z-../S5E06MA4	0.29	0.95	1.9	5.8	6.9	660	660	660	660	53	10600	-	
1.3	5.2	730	1.2	566.1	IE5	BF40Z-../S5E06MA4	0.26	0.85	1.7	5.2	6.3	730	730	730	730	53	10600	-	
1.3	5	770	1.3	597.3	IE5	BF40G10-../S5E06MA4	0.25	0.8	1.6	5	6	770	770	770	770	58	10600	-	
1.3	4.1	950	1.1	731.6	IE5	BF40G10-../S5E06MA4	0.2	0.65	1.3	4.1	4.9	950	950	950	950	58	10600	-	
1.3	3.2	1200	0.83	928.9	IE5	BF40G10-../S5E06MA4	0.16	0.5	1	3.2	3.8	1200	1200	1200	1200	58	10600	-	
1.3	8.4	460	2.8	354	IE5	BF50Z-../S5E06MA4	0.42	1.4	2.8	8.4	10	460	460	460	460	82	13600	-	
1.3	7.6	510	2.5	392.8	IE5	BF50Z-../S5E06MA4	0.38	1.2	2.5	7.6	9.1	510	510	510	510	82	13600	-	
1.3	6.8	570	2.3	439.3	IE5	BF50Z-../S5E06MA4	0.34	1.1	2.2	6.8	8.1	570	570	570	570	82	13600	-	
1.3	6	640	2	496.4	IE5	BF50Z-../S5E06MA4	0.3	1	2	6	7.2	640	640	640	640	82	13600	-	
1.3	5.4	720	1.8	555.2	IE5	BF50Z-../S5E06MA4	0.27	0.9	1.8	5.4	6.4	720	720	720	720	82	13600	-	
1.3	5.3	720	1.9	555.9	IE5	BF50G10-../S5E06MA4	0.26	0.85	1.7	5.3	6.4	720	720	720	720	86	13600	-	
1.3	4.4	880	1.6	680.9	IE5	BF50G10-../S5E06MA4	0.22	0.7	1.4	4.4	5.2	880	880	880	880	86	13600	-	
1.3	3.4	1120	1.2	864.5	IE5	BF50G10-../S5E06MA4	0.17	0.55	1.1	3.4	4.1	1120	1120	1120	1120	86	13600	-	
1.3	2.9	1330	1	1029	IE5	BF50G10-../S5E06MA4	0.14	0.48	0.95	2.9	3.4	1330	1330	1330	1330	86	13600	-	
1.3	2.4	1560	0.9	1203	IE5	BF50G10-../S5E06MA4	0.12	0.41	0.8	2.4	2.9	1560	1560	1560	1560	86	13600	-	
1.3	4.3	890	2.8	689	IE5	BF60G20-../S5E06MA4	0.21	0.7	1.4	4.3	5.2	890	890	890	890	134	15300	43300	
1.3	3.6	1050	2.4	813.2	IE5	BF60G20-../S5E06MA4	0.18	0.6	1.2	3.6	4.4	1050	1050	1050	1050	134	15300	43300	
1.3	3.1	1210	2.1	937.6	IE5	BF60G20-../S5E06MA4	0.15	0.5	1	3.1	3.8	1210	1210	1210	1210	134	15300	43300	
1.3	2.4	1570	1.6	1211	IE5	BF60G20-../S5E06MA4	0.12	0.41	0.8	2.4	2.9	1570	1570	1570	1570	134	15300	43300	
1.3	2	1940	1.3	1494	IE5	BF60G20-../S5E06MA4	0.1	0.33	0.65	2	2.4	1940	1940	1940	1940	134	15300	43300	
1.3	1.8	2150	1.2	1658	IE5	BF60G20-../S5E06MA4	0.09	0.3	0.6	1.8	2.1	2150	2150	2150	2150	134	15300	43300	
1.3	1.5	2500	0.98	1955	IE5	BF60G20-../S5E06MA4	0.075	0.25	0.5	1.5	1.8	2500	2500	2500	2500	134	15300	43300	
1.3	1.3	2800	0.89	2172	IE5	BF60G20-../S5E06MA4	0.065	0.23	0.46	1.3	1.6	2800	2800	2800	2800	134	15300	43300	
1.3	1.8	2100	2.7	1621	IE5	BF70G20-../S5E06MA4	0.09	0.3	0.6	1.8	2.2	2100	2100	2100	2100	212	16100	47700	
1.3	1.5	2450	2.3	1912	IE5	BF70G20-../S5E06MA4	0.075	0.26	0.5	1.5	1.8	2450	2450	2450	2450	212	16100	47700	
1.3	1.2	3150	1.8	2448	IE5	BF70G20-../S5E06MA4	0.06	0.2	0.4	1.2	1.4	3150	3150	3150	3150	212	16100	47700	
1.3	1	3700	1.5	2849	IE5	BF70G20-../S5E06MA4	0.05	0.17	0.35	1	1.2	3700	3700	3700	3700	212	16100	47700	
1.3	0.85	4400	1.3	3417	IE5	BF70G20-../S5E06MA4	0.043	0.14	0.29	0.85	1	4400	4400	4400	4400	212	16100	47700	
1.3	0.7	5300	1.1	4090	IE5	BF70G20-../S5E06MA4	0.036	0.12	0.24	0.7	0.85	5300	5300	5300	5300	212	16100	47700	
1.3	0.65	5900	0.97	4542	IE5	BF70G20-../S5E06MA4	0.033	0.11	0.22	0.65	0.75	5900	5900	5900	5900	212	16100	47700	
1.3	0.55	6600	0.86	5124	IE5	BF70G20-../S5E06MA4	0.029	0.095	0.19	0.55	0.7	6600	6600	6600	6600	212	16100	47700	

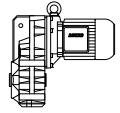
 **$M_N = 1.75 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.75	146	35.5	2.7	20.42	IE5	BF06-../S5E06MA4	7.3	24	48.5	146	176	35.5	35.5	35.5	35.5	12	2700	-	
1.75	112	46.5	2	26.76	IE5	BF06-../S5E06MA4	5.6	18.5	37	112	134	46.5	46.5	46.5	46.5	12	3000	-	
1.75	95	55	1.7	31.5	IE5	BF06-../S5E06MA4	4.7	15.5	31.5	95	114	55	55	55	55	12	3200	-	
1.75	79	65	1.4	37.69	IE5	BF06-../S5E06MA4	3.9	13	26.5	79	95	65	65	65	65	12	3500	-	
1.75	65	80	1.2	46.14	IE5	BF06-../S5E06MA4	3.2	10.5	21.5	65	78	80	80	80	80	12	3800	-	
1.75	51	102	0.93	58.33	IE5	BF06-../S5E06MA4	2.5	8.5	17	51	61	102	102	102	102	12	4000	-	
1.75	44.5	116	0.81	66.82	IE5	BF06-../S5E06MA4	2.2	7.4	14.5	44.5	53	116	116	116	116	12	4000	-	
1.75	63	82	2.9	47.35	IE5	BF10-../S5E06MA4	3.1	10.5	21	63	76	82	82	82	82	23	4250	-	
1.75	58	89	2.7	51.28	IE5	BF10-../S5E06MA4	2.9	9.7	19.5	58	70	89	89	89	89	23	4400	-	
1.75	53	98	2.4	56.39	IE5	BF10-../S5E06MA4	2.6	8.8	17.5	53	63	98	98	98	98	23	4550	-	
1.75	48.5	107	2.2	61.55	IE5	BF10-../S5E06MA4	2.4	8.1	16	48.5	58	107	107	107	107	23	4700	-	
1.75	44	118	2	67.69	IE5	BF10-../S5E06MA4	2.2	7.3	14.5	44	53	118	118	118	118	23	4900	-	
1.75	38.5	135	1.8	77.55	IE5	BF10-../S5E06MA4	1.9	6.4	12.5	38.5	46	135	135	135	135	23	5100	-	

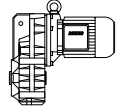


# BF-series shaft-mounted geared motors

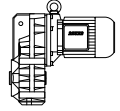
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 1.75 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.75	35	149	1.6	85.27	IE5	BF10-../S5E06MA4	1.7	5.8	11.5	35	42	149	149	149	149	23	5300	-	
1.75	32.5	159	1.5	90.91	IE5	BF10-../S5E06MA4	1.6	5.4	10.5	32.5	39.5	159	159	159	159	23	5400	-	
1.75	30	174	1.4	99.97	IE5	BF10-../S5E06MA4	1.5	5	10	30	36	174	174	174	174	23	5600	-	
1.75	26.5	196	1.2	112.3	IE5	BF10-../S5E06MA4	1.3	4.4	8.9	26.5	32	196	196	196	196	23	5900	-	
1.75	24	215	1.1	123.5	IE5	BF10-../S5E06MA4	1.2	4	8	24	29	215	215	215	215	23	6100	-	
1.75	23	225	1.1	128.9	IE5	BF10-../S5E06MA4	1.1	3.8	7.7	23	27.5	225	225	225	225	23	6200	-	
1.75	21	245	0.97	141.8	IE5	BF10-../S5E06MA4	1	3.5	7	21	25	245	245	245	245	23	6400	-	
1.75	19.5	260	0.91	151.2	IE5	BF10Z-../S5E06MA4	0.95	3.3	6.6	19.5	23.5	260	260	260	260	24	6400	-	
1.75	18	290	0.83	166.2	IE5	BF10Z-../S5E06MA4	0.9	3	6	18	21.5	290	290	290	290	24	6400	-	
1.75	34	152	2.7	87.31	IE5	BF20-../S5E06MA4	1.7	5.7	11	34	41	152	152	152	152	30	6600	-	
1.75	31	168	2.5	96.08	IE5	BF20-../S5E06MA4	1.5	5.2	10	31	37	168	168	168	168	30	6900	-	
1.75	29.5	175	2.4	100.2	IE5	BF20-../S5E06MA4	1.4	4.9	9.9	29.5	35.5	175	175	175	175	30	7000	-	
1.75	27	192	2.2	110.2	IE5	BF20-../S5E06MA4	1.3	4.5	9	27	32.5	192	192	192	192	30	7300	-	
1.75	24	215	1.9	123.5	IE5	BF20-../S5E06MA4	1.2	4	8	24	29	215	215	215	215	30	7600	-	
1.75	22	235	1.8	135.9	IE5	BF20-../S5E06MA4	1.1	3.6	7.3	22	26	235	235	235	235	30	7900	-	
1.75	21	245	1.7	141.2	IE5	BF20Z-../S5E06MA4	1	3.5	7	21	25	245	245	245	245	31	7900	-	
1.75	19	270	1.5	155.4	IE5	BF20Z-../S5E06MA4	0.95	3.2	6.4	19	23	270	270	270	270	31	7900	-	
1.75	18	285	1.5	164.3	IE5	BF20Z-../S5E06MA4	0.9	3	6	18	21.5	285	285	285	285	31	7900	-	
1.75	16.5	315	1.3	180.8	IE5	BF20Z-../S5E06MA4	0.8	2.7	5.5	16.5	19.5	315	315	315	315	31	7900	-	
1.75	15	340	1.2	197.1	IE5	BF20Z-../S5E06MA4	0.75	2.5	5	15	18	340	340	340	340	31	7900	-	
1.75	13.5	375	1.1	216.9	IE5	BF20Z-../S5E06MA4	0.65	2.3	4.6	13.5	16.5	375	375	375	375	31	7900	-	
1.75	12.5	410	1	235.9	IE5	BF20Z-../S5E06MA4	0.6	2.1	4.2	12.5	15	410	410	410	410	31	7900	-	
1.75	11.5	450	0.92	259.6	IE5	BF20Z-../S5E06MA4	0.55	1.9	3.8	11.5	13.5	450	450	450	450	31	7900	-	
1.75	10	510	0.81	295.5	IE5	BF20Z-../S5E06MA4	0.5	1.6	3.3	10	12	510	510	510	510	31	7900	-	
1.75	27.5	188	3	107.6	IE5	BF30-../S5E06MA4	1.3	4.6	9.2	27.5	33	188	188	188	188	40	6700	-	
1.75	25	205	2.8	118.3	IE5	BF30-../S5E06MA4	1.2	4.2	8.4	25	30	205	205	205	205	40	7000	-	
1.75	24	215	2.6	124.7	IE5	BF30-../S5E06MA4	1.2	4	8	24	28.5	215	215	215	215	40	7100	-	
1.75	21.5	235	2.4	137.1	IE5	BF30-../S5E06MA4	1	3.6	7.2	21.5	26	235	235	235	235	40	7400	-	
1.75	19.5	260	2.2	150.7	IE5	BF30Z-../S5E06MA4	0.95	3.3	6.6	19.5	23.5	260	260	260	260	42	7400	-	
1.75	18	290	2	165.8	IE5	BF30Z-../S5E06MA4	0.9	3	6	18	21.5	290	290	290	290	42	7400	-	
1.75	16.5	305	1.8	176.6	IE5	BF30Z-../S5E06MA4	0.8	2.8	5.6	16.5	20	305	305	305	305	42	7400	-	
1.75	15	340	1.7	194.3	IE5	BF30Z-../S5E06MA4	0.75	2.5	5.1	15	18.5	340	340	340	340	42	7400	-	
1.75	13	390	1.4	224.8	IE5	BF30Z-../S5E06MA4	0.65	2.2	4.4	13	16	390	390	390	390	42	7400	-	
1.75	12	430	1.3	247.3	IE5	BF30Z-../S5E06MA4	0.6	2	4	12	14.5	430	430	430	430	42	7400	-	
1.75	11	460	1.2	263.5	IE5	BF30Z-../S5E06MA4	0.55	1.8	3.7	11	13.5	460	460	460	460	42	7400	-	
1.75	10	500	1.1	289.8	IE5	BF30Z-../S5E06MA4	0.5	1.7	3.4	10	12	500	500	500	500	42	7400	-	
1.75	9.6	540	1	310.7	IE5	BF30Z-../S5E06MA4	0.48	1.6	3.2	9.6	11.5	540	540	540	540	42	7400	-	
1.75	8.7	590	0.95	341.8	IE5	BF30Z-../S5E06MA4	0.43	1.4	2.9	8.7	10.5	590	590	590	590	42	7400	-	
1.75	7.9	650	0.87	375.1	IE5	BF30Z-../S5E06MA4	0.39	1.3	2.6	7.9	9.5	650	650	650	650	42	7400	-	
1.75	17.5	295	3	171.2	IE5	BF40Z-../S5E06MA4	0.85	2.9	5.8	17.5	21	295	295	295	295	53	10600	-	
1.75	15.5	325	2.7	188.3	IE5	BF40Z-../S5E06MA4	0.75	2.6	5.3	15.5	19	325	325	325	325	53	10600	-	
1.75	14.5	350	2.5	202.2	IE5	BF40Z-../S5E06MA4	0.7	2.4	4.9	14.5	17.5	350	350	350	350	53	10600	-	
1.75	13	385	2.3	222.4	IE5	BF40Z-../S5E06MA4	0.65	2.2	4.4	13	16	385	385	385	385	53	10600	-	
1.75	11.5	440	2	253.2	IE5	BF40Z-../S5E06MA4	0.55	1.9	3.9	11.5	14	440	440	440	440	53	10600	-	
1.75	10.5	485	1.8	278.5	IE5	BF40Z-../S5E06MA4	0.5	1.7	3.5	10.5	12.5	485	485	485	485	53	10600	-	
1.75	10	510	1.7	295.1	IE5	BF40Z-../S5E06MA4	0.5	1.6	3.3	10	12	510	510	510	510	53	10600	-	
1.75	9.2	560	1.6	324.7	IE5	BF40Z-../S5E06MA4	0.46	1.5	3	9.2	11	560	560	560	560	53	10600	-	
1.75	8.6	600	1.5	346.8	IE5	BF40Z-../S5E06MA4	0.43	1.4	2.8	8.6	10	600	600	600	600	53	10600	-	
1.75	7.8	660	1.3	381.5	IE5	BF40Z-../S5E06MA4	0.39	1.3	2.6	7.8	9.4	660	660	660	660	53	10600	-	
1.75	7.1	730	1.2	417.3	IE5	BF40Z-../S5E06MA4	0.35	1.1	2.3	7.1	8.6	730	730	730	730	53	10600	-	
1.75	6.5	800	1.1	459.1	IE5	BF40Z-../S5E06MA4	0.32	1	2.1	6.5	7.8	800	800	800	800	53	10600	-	
1.75	5.8	900	1	514.6	IE5	BF40Z-../S5E06MA4	0.29	0.95	1.9	5.8	6.9	900	900	900	900	53	10600	-	
1.75	5.2	990	0.91	566.1	IE5	BF40Z-../S5E06MA4	0.26	0.85	1.7	5.2	6.3	990	990	990	990	53	10600	-	
1.75	5	1040	0.96	597.3	IE5	BF40G10-../S5E06MA4	0.25	0.8	1.6	5	6	1040	1040	1040	1040	58	10600	-	
1.75	12	430	3	247.5	IE5	BF50Z-../S5E06MA4	0.6	2	4	12	14.5	430	430	430	430	82	13600	-	
1.75	10.5	480	2.7	276.8	IE5	BF50Z-../S5E06MA4	0.5	1.8	3.6	10.5	13	480	480	480	480	82	13600	-	
1.75	9.4	550	2.3	316.6	IE5	BF50Z-../S5E06MA4	0.47	1.5	3.1	9.4	11	550	550	550	550	82	13600	-	
1.75	8.4	610	2.1	354	IE5	BF50Z-../S5E06MA4	0.42	1.4	2.8	8.4	10	610	610	610	610	82	13600	-	
1.75	7.6	680	1.9	392.8	IE5	BF50Z-../S5E06MA4	0.38	1.2	2.5	7.6	9.1	680	680	680	680	82	13600	-	
1.75	6.8	760	1.7	439.3	IE5	BF50Z-../S5E06MA4	0.34	1.1	2.2	6.8	8.1	760	760	760	760	82	13600	-	
1.75	6	860	1.5	496.4	IE5	BF50Z-../S5E06MA4	0.3	1	2	6	7.2	860	860	860	860	82	13600	-	
1.75	5.4	970	1.3	555.2	IE5	BF50Z-../S5E06MA4	0.27	0.9	1.8	5.4	6.4	970	970	970	970	82	13600	-	
1.75	5.3	970	1.4	555.9	IE5	BF50G10-../S5E06MA4	0.26	0.85	1.7	5.3	6.4	970	970	970	970	86	13600	-	
1.75	4.4	1190	1.2	680.9	IE5	BF50G10-../S5E06MA4	0.22	0.7	1.4	4.4	5.2	1190	1190	1190	1190	86	13600	-	
1.75	3.4	1510	0.93	864.5	IE5	BF50G10-../S5E06MA4	0.17	0.55	1.1	3.4	4.1	1510	1510	1510	1510	86	13600	-	
1.75	5.2	990	2.5	569.3	IE5	BF60G20-../S5E06MA4	0.26	0.85	1.7	5.2	6.3	990	990	990	990	134	15300	43300	
1.75	4.3	1200	2.1	689	IE5	BF60G20-../S5E06MA4	0.21	0.7	1.4	4.3	5.2	1200	1200	1200	1200	134	15300	43300	
1.75	3.6	1420	1.8	813.2	IE5	BF60G20-../S5E06MA4	0.18	0.6	1.2	3.6	4.4	1420	1420	1420	1420	134	15300	43300	
1.75	3.1	1640	1.5	937.6	IE5	BF60G20-../S5E06MA4	0.15	0.5	1	3.1	3.8	1640	1640	1640	1640	134	15300	43300	
1.75	2.4	2100	1.2	1211	IE5	BF60G20-../S5E06MA4	0.12	0.41	0.8	2.4	2.9	2100	2100	2100	2100	134	15300	43300	
1.75	2																		

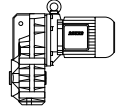
**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 1.75 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]	
							150	500	1000	3000	3600	150	500	1000	3000	3600				
							0.05	0.17	0.35	1	1.2	4950	4950	4950	4950	4950				
1.75	1	4950	1.1	2849	IE5	BF70G20-../S5E06MA4	0.05	0.17	0.35	1	1.2	4950	4950	4950	4950	4950	4950	212	16100	47700
1.75	0.85	5900	0.95	3417	IE5	BF70G20-../S5E06MA4	0.043	0.14	0.29	0.85	1	4950	5900	5900	5900	5900	5900	212	16100	47700
1.75	0.7	7100	0.8	4090	IE5	BF70G20-../S5E06MA4	0.036	0.12	0.24	0.7	0.85	7100	7100	7100	7100	7100	212	16100	47700	

 **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**

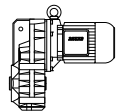
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							12	41	82	245	295	28.5	28.5	28.5	28.5	28.5			
2.4	245	28.5	2.6	12.07	IE5	BF06-../S5E06LA4	12	41	82	245	295	28.5	28.5	28.5	28.5	28.5	12	2000	-
2.4	245	28.5	2.6	12.07	IE3	BF06-../SPE06MA4	12	41	82	245	295	21.5	24	26.5	28.5	28.5	12	2000	-
2.4	210	34	2.5	14.21	IE5	BF06-../S5E06LA4	10.5	35	70	210	250	34	34	34	34	34	12	2100	-
2.4	210	34	2.5	14.21	IE3	BF06-../SPE06MA4	10.5	35	70	210	250	25.5	28	31	34	34	12	2100	-
2.4	176	40.5	2.3	16.99	IE5	BF06-../S5E06LA4	8.8	29	58	176	210	40.5	40.5	40.5	40.5	40.5	12	2500	-
2.4	176	40.5	2.3	16.99	IE3	BF06-../SPE06MA4	8.8	29	58	176	210	30.5	33.5	37	40.5	40.5	12	2500	-
2.4	146	49	1.9	20.42	IE5	BF06-../S5E06LA4	7.3	24	48.5	146	176	49	49	49	49	49	12	2700	-
2.4	146	49	1.9	20.42	IE3	BF06-../SPE06MA4	7.3	24	48.5	146	176	36.5	40.5	44.5	49	49	12	2700	-
2.4	112	64	1.5	26.76	IE5	BF06-../S5E06LA4	5.6	18.5	37	112	134	64	64	64	64	64	12	3000	-
2.4	112	64	1.5	26.76	IE3	BF06-../SPE06MA4	5.6	18.5	37	112	134	48	53	58	64	64	12	3000	-
2.4	95	75	1.3	31.5	IE5	BF06-../S5E06LA4	4.7	15.5	31.5	95	114	75	75	75	75	75	12	3200	-
2.4	95	75	1.3	31.5	IE3	BF06-../SPE06MA4	4.7	15.5	31.5	95	114	56	63	69	75	75	12	3200	-
2.4	79	90	1.1	37.69	IE5	BF06-../S5E06LA4	3.9	13	26.5	79	95	90	90	90	90	90	12	3500	-
2.4	79	90	1.1	37.69	IE3	BF06-../SPE06MA4	3.9	13	26.5	79	95	67	75	82	90	90	12	3500	-
2.4	65	110	0.86	46.14	IE5	BF06-../S5E06LA4	3.2	10.5	21.5	65	78	110	110	110	110	110	12	3800	-
2.4	65	110	0.86	46.14	IE3	BF06-../SPE06MA4	3.2	10.5	21.5	65	78	83	92	101	110	110	12	3800	-
2.4	82	86	2.8	36.15	IE5	BF10-../S5E06LA4	4.1	13.5	27.5	82	99	86	86	86	86	86	23	3800	-
2.4	82	86	2.8	36.15	IE3	BF10-../SPE06MA4	4.1	13.5	27.5	82	99	65	72	79	86	86	23	3800	-
2.4	75	95	2.5	39.75	IE5	BF10-../S5E06LA4	3.7	12.5	25	75	90	95	95	95	95	95	23	3950	-
2.4	75	95	2.5	39.75	IE3	BF10-../SPE06MA4	3.7	12.5	25	75	90	71	79	87	95	95	23	3950	-
2.4	69	103	2.3	43.06	IE5	BF10-../S5E06LA4	3.4	11.5	23	69	83	103	103	103	103	103	23	4100	-
2.4	69	103	2.3	43.06	IE3	BF10-../SPE06MA4	3.4	11.5	23	69	83	77	86	94	103	103	23	4100	-
2.4	63	113	2.1	47.35	IE5	BF10-../S5E06LA4	3.1	10.5	21	63	76	113	113	113	113	113	23	4250	-
2.4	63	113	2.1	47.35	IE3	BF10-../SPE06MA4	3.1	10.5	21	63	76	85	94	104	113	113	23	4250	-
2.4	58	123	2	51.28	IE5	BF10-../S5E06LA4	2.9	9.7	19.5	58	70	123	123	123	123	123	23	4400	-
2.4	58	123	2	51.28	IE3	BF10-../SPE06MA4	2.9	9.7	19.5	58	70	92	102	112	123	123	23	4400	-
2.4	53	135	1.8	56.39	IE5	BF10-../S5E06LA4	2.6	8.8	17.5	53	63	135	135	135	135	135	23	4550	-
2.4	53	135	1.8	56.39	IE3	BF10-../SPE06MA4	2.6	8.8	17.5	53	63	101	112	124	135	135	23	4550	-
2.4	48.5	147	1.6	61.55	IE5	BF10-../S5E06LA4	2.4	8.1	16	48.5	58	147	147	147	147	147	23	4700	-
2.4	48.5	147	1.6	61.55	IE3	BF10-../SPE06MA4	2.4	8.1	16	48.5	58	110	123	135	147	147	23	4700	-
2.4	44	162	1.5	67.69	IE5	BF10-../S5E06LA4	2.2	7.3	14.5	44	53	162	162	162	162	162	23	4900	-
2.4	44	162	1.5	67.69	IE3	BF10-../SPE06MA4	2.2	7.3	14.5	44	53	121	135	148	162	162	23	4900	-
2.4	38.5	186	1.3	77.55	IE5	BF10-../S5E06LA4	1.9	6.4	12.5	38.5	46	186	186	186	186	186	23	5100	-
2.4	38.5	186	1.3	77.55	IE3	BF10-../SPE06MA4	1.9	6.4	12.5	38.5	46	139	155	170	186	186	23	5100	-
2.4	35	200	1.2	85.27	IE5	BF10-../S5E06LA4	1.7	5.8	11.5	35	42	200	200	200	200	200	23	5300	-
2.4	35	200	1.2	85.27	IE3	BF10-../SPE06MA4	1.7	5.8	11.5	35	42	153	170	187	200	200	23	5300	-
2.4	32.5	215	1.1	90.91	IE5	BF10-../S5E06LA4	1.6	5.4	10.5	32.5	39.5	215	215	215	215	215	23	5400	-
2.4	32.5	215	1.1	90.91	IE3	BF10-../SPE06MA4	1.6	5.4	10.5	32.5	39.5	163	181	200	215	215	23	5400	-
2.4	30	235	1	99.97	IE5	BF10-../S5E06LA4	1.5	5	10	30	36	235	235	235	235	235	23	5600	-
2.4	30	235	1	99.97	IE3	BF10-../SPE06MA4	1.5	5	10	30	36	179	199	215	235	235	23	5600	-
2.4	26.5	265	0.89	112.3	IE5	BF10-../S5E06LA4	1.3	4.4	8.9	26.5	32	265	265	265	265	265	23	5900	-
2.4	26.5	265	0.89	112.3	IE3	BF10-../SPE06MA4	1.3	4.4	8.9	26.5	32	200	220	245	265	265	23	5900	-
2.4	24	295	0.81	123.5	IE5	BF10-../S5E06LA4	1.2	4	8	24	29	295	295	295	295	295	23	6100	-
2.4	24	295	0.81	123.5	IE3	BF10-../SPE06MA4	1.2	4	8	24	29	220	245	270	295	295	23	6100	-
2.4	51	139	3	58.24	IE5	BF20-../S5E06LA4	2.5	8.5	17	51	61	139	139	139	139	139	30	5600	-
2.4	51	139	3	58.24	IE3	BF20-../SPE06MA4	2.5	8.5	17	51	61	104	116	128	139	139	30	5600	-
2.4	46.5	153	2.7	64.08	IE5	BF20-../S5E06LA4	2.3	7.8	15.5	46.5	56	153	153	153	153	153	30	5900	-
2.4	46.5	153	2.7	64.08	IE3	BF20-../SPE06MA4	2.3	7.8	15.5	46.5	56	115	128	140	153	153	30	5900	-
2.4	43	167	2.5	69.7	IE5	BF20-../S5E06LA4	2.1	7.1	14	43	51	167	167	167	167	167	30	6100	-
2.4	43	167	2.5	69.7	IE3	BF20-../SPE06MA4	2.1	7.1	14	43	51	125	139	153	167	167	30	6100	-
2.4	39	184	2.3	76.69	IE5	BF20-../S5E06LA4	1.9	6.5	13	39	46.5	184	184	184	184	184	30	6300	-
2.4	39	184	2.3	76.69	IE3	BF20-../SPE06MA4	1.9	6.5	13	39	46.5	138	153	168	184	184	30	6300	-
2.4	34	205	2	87.31	IE5	BF20-../S5E06LA4	1.7	5.7	11	34	41	205	205	205	205	205	30	6600	-
2.4	34	205	2	87.31	IE3	BF20-../SPE06MA4	1.7	5.7	11	34	41	157	174	192	205	205	30	6600	-
2.4	31	230	1.8	96.08	IE5	BF20-../S5E06LA4	1.5	5.2	10	31	37	230	230	230	230	230	30	6900	-
2.4	31	230	1.8	96.08	IE3	BF20-../SPE06MA4	1.5	5.2	10	31	37	172	192	210	230	230	30	6900	-
2.4	29.5	240	1.7	100.2	IE5	BF20-../S5E06LA4	1.4	4.9	9.9	29.5	35.5	240	240	240	240	240	30	7000	-
2.4	29.5	240	1.7	100.2	IE3	BF20-../SPE06MA4	1.4	4.9	9.9	29.5	35.5	180	200	220	240	240	30	7000	-
2.4	27	260	1.6	110.2	IE5	BF20-../S5E06LA4	1.3	4.5	9	27	32.5	260	260	260	260	260	30	7300	-
2.4	27	260	1.6	110.2	IE3	BF20-../SPE06MA4	1.3	4.5	9	27	32.5	198	220	240	260	260	30	7300	-
2.4	24	295	1.4	123.5	IE5	BF20-../S5E06LA4	1.2	4	8	24	29	295	295	295	295	295	30	7600	-



**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
2.4	8.4	840	1.5	354	IE3	BF50Z-../SPE06MA4	0.42	1.4	2.8	8.4	10	630	700	770	840	840	82	13600	-
2.4	7.6	940	1.4	392.8	IE5	BF50Z-../S5E06LA4	0.38	1.2	2.5	7.6	9.1	940	940	940	940	940	82	13600	-
2.4	7.6	940	1.4	392.8	IE3	BF50Z-../SPE06MA4	0.38	1.2	2.5	7.6	9.1	700	780	860	940	940	82	13600	-
2.4	6.8	1050	1.2	439.3	IE5	BF50Z-../S5E06LA4	0.34	1.1	2.2	6.8	8.1	1050	1050	1050	1050	1050	82	13600	-
2.4	6.8	1050	1.2	439.3	IE3	BF50Z-../SPE06MA4	0.34	1.1	2.2	6.8	8.1	790	870	960	1050	1050	82	13600	-
2.4	6	1190	1.1	496.4	IE5	BF50Z-../S5E06LA4	0.3	1	2	6	7.2	1190	1190	1190	1190	1190	82	13600	-
2.4	6	1190	1.1	496.4	IE3	BF50Z-../SPE06MA4	0.3	1	2	6	7.2	890	990	1090	1190	1190	82	13600	-
2.4	5.4	1330	0.98	555.2	IE5	BF50Z-../S5E06LA4	0.27	0.9	1.8	5.4	6.4	1330	1330	1330	1330	1330	82	13600	-
2.4	5.4	1330	0.98	555.2	IE3	BF50Z-../SPE06MA4	0.27	0.9	1.8	5.4	6.4	990	1110	1220	1330	1330	82	13600	-
2.4	5.3	1330	1	555.9	IE5	BF50G10-../S5E06LA4	0.26	0.85	1.7	5.3	6.4	1330	1330	1330	1330	1330	86	13600	-
2.4	5.3	1330	1	555.9	IE3	BF50G10-../SPE06MA4	0.26	0.85	1.7	5.3	6.4	1000	1110	1220	1330	1330	86	13600	-
2.4	4.4	1630	0.86	680.9	IE5	BF50G10-../S5E06LA4	0.22	0.7	1.4	4.4	5.2	1630	1630	1630	1630	1630	86	13600	-
2.4	4.4	1630	0.86	680.9	IE3	BF50G10-../SPE06MA4	0.22	0.7	1.4	4.4	5.2	1220	1360	1490	1630	1630	86	13600	-
2.4	5.2	1360	1.8	569.3	IE5	BF60G20-../S5E06LA4	0.26	0.85	1.7	5.2	6.3	1360	1360	1360	1360	1360	134	15300	43300
2.4	5.2	1360	1.8	569.3	IE3	BF60G20-../SPE06MA4	0.26	0.85	1.7	5.2	6.3	1020	1130	1250	1360	1360	134	15300	43300
2.4	4.3	1650	1.5	689	IE5	BF60G20-../S5E06LA4	0.21	0.7	1.4	4.3	5.2	1650	1650	1650	1650	1650	134	15300	43300
2.4	4.3	1650	1.5	689	IE3	BF60G20-../SPE06MA4	0.21	0.7	1.4	4.3	5.2	1240	1370	1510	1650	1650	134	15300	43300
2.4	3.6	1950	1.3	813.2	IE5	BF60G20-../S5E06LA4	0.18	0.6	1.2	3.6	4.4	1950	1950	1950	1950	1950	134	15300	43300
2.4	3.6	1950	1.3	813.2	IE3	BF60G20-../SPE06MA4	0.18	0.6	1.2	3.6	4.4	1460	1620	1780	1950	1950	134	15300	43300
2.4	3.1	2250	1.1	937.6	IE5	BF60G20-../S5E06LA4	0.15	0.5	1	3.1	3.8	2250	2250	2250	2250	2250	134	15300	43300
2.4	3.1	2250	1.1	937.6	IE3	BF60G20-../SPE06MA4	0.15	0.5	1	3.1	3.8	1680	1870	2050	2250	2250	134	15300	43300
2.4	2.4	2900	0.86	1211	IE5	BF60G20-../S5E06LA4	0.12	0.41	0.8	2.4	2.9	2900	2900	2900	2900	2900	134	15300	43300
2.4	2.4	2900	0.86	1211	IE3	BF60G20-../SPE06MA4	0.12	0.41	0.8	2.4	2.9	2150	2400	2650	2900	2900	134	15300	43300
2.4	3.4	2050	2.7	872.1	IE5	BF70G20-../S5E06LA4	0.17	0.55	1.1	3.4	4.1	2050	2050	2050	2050	2050	212	16100	47700
2.4	3.4	2050	2.7	872.1	IE3	BF70G20-../SPE06MA4	0.17	0.55	1.1	3.4	4.1	1560	1740	1910	2050	2050	212	16100	47700
2.4	2.9	2400	2.3	1017	IE5	BF70G20-../S5E06LA4	0.14	0.49	0.95	2.9	3.5	2400	2400	2400	2400	2400	212	16100	47700
2.4	2.9	2400	2.3	1017	IE3	BF70G20-../SPE06MA4	0.14	0.49	0.95	2.9	3.5	1830	2000	2200	2400	2400	212	16100	47700
2.4	2.1	3300	1.7	1390	IE5	BF70G20-../S5E06LA4	0.1	0.35	0.7	2.1	2.5	3300	3300	3300	3300	3300	212	16100	47700
2.4	2.1	3300	1.7	1390	IE3	BF70G20-../SPE06MA4	0.1	0.35	0.7	2.1	2.5	2500	2750	3050	3300	3300	212	16100	47700
2.4	1.8	3850	1.5	1621	IE5	BF70G20-../S5E06LA4	0.09	0.3	0.6	1.8	2.2	3850	3850	3850	3850	3850	212	16100	47700
2.4	1.8	3850	1.5	1621	IE3	BF70G20-../SPE06MA4	0.09	0.3	0.6	1.8	2.2	2900	3200	3550	3850	3850	212	16100	47700
2.4	1.5	4550	1.2	1912	IE5	BF70G20-../S5E06LA4	0.075	0.26	0.5	1.5	1.8	4550	4550	4550	4550	4550	212	16100	47700
2.4	1.5	4550	1.2	1912	IE3	BF70G20-../SPE06MA4	0.075	0.26	0.5	1.5	1.8	3400	3800	4200	4550	4550	212	16100	47700
2.4	1.2	5800	0.97	2448	IE5	BF70G20-../S5E06LA4	0.06	0.2	0.4	1.2	1.4	5800	5800	5800	5800	5800	212	16100	47700
2.4	1.2	5800	0.97	2448	IE3	BF70G20-../SPE06MA4	0.06	0.2	0.4	1.2	1.4	4400	4850	5300	5800	5800	212	16100	47700
2.4	1	6800	0.83	2849	IE5	BF70G20-../S5E06LA4	0.05	0.17	0.35	1	1.2	6800	6800	6800	6800	6800	212	16100	47700
2.4	1	6800	0.83	2849	IE3	BF70G20-../SPE06MA4	0.05	0.17	0.35	1	1.2	5100	5600	6200	6800	6800	212	16100	47700

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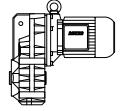
 **$M_N = 3.5 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
3.5	390	26.5	2.5	7.66	IE4	BF06-../S4E06LA4	19.5	65	130	390	465	19.1	22	26.5	26.5	26.5	12	1800	-
3.5	325	32	2.2	9.21	IE4	BF06-../S4E06LA4	16	54	108	325	390	23	26.5	32	32	32	12	1900	-
3.5	245	42	1.8	12.07	IE4	BF06-../S4E06LA4	12	41	82	245	295	30	35	42	42	42	12	2000	-
3.5	210	49.5	1.7	14.21	IE4	BF06-../S4E06LA4	10.5	35	70	210	250	35.5	41	49.5	49.5	49.5	12	2100	-
3.5	176	59	1.6	16.99	IE4	BF06-../S4E06LA4	8.8	29	58	176	210	42	49	59	59	59	12	2500	-
3.5	146	71	1.3	20.42	IE4	BF06-../S4E06LA4	7.3	24	48.5	146	176	51	59	71	71	71	12	2700	-
3.5	112	93	1	26.76	IE4	BF06-../S4E06LA4	5.6	18.5	37	112	134	66	77	93	93	93	12	3000	-
3.5	95	110	0.86	31.5	IE4	BF06-../S4E06LA4	4.7	15.5	31.5	95	114	78	91	110	110	110	12	3200	-
3.5	128	81	2.9	23.28	IE4	BF10-../S4E06LA4	6.4	21	42.5	128	154	58	67	81	81	81	23	3200	-
3.5	117	89	2.7	25.6	IE4	BF10-../S4E06LA4	5.8	19.5	39	117	140	64	74	89	89	89	23	3350	-
3.5	105	99	2.4	28.47	IE4	BF10-../S4E06LA4	5.2	17.5	35	105	126	71	82	99	99	99	23	3450	-
3.5	95	109	2.2	31.31	IE4	BF10-../S4E06LA4	4.7	15.5	31.5	95	114	78	90	109	109	109	23	3600	-
3.5	82	126	1.9	36.15	IE4	BF10-../S4E06LA4	4.1	13.5	27.5	82	99	90	104	126	126	126	23	3800	-
3.5	75	139	1.7	39.75	IE4	BF10-../S4E06LA4	3.7	12.5	25	75	90	99	115	139	139	139	23	3950	-
3.5	69	150	1.6	43.06	IE4	BF10-../S4E06LA4	3.4	11.5	23	69	83	107	124	150	150	150	23	4100	-
3.5	63	165	1.4	47.35	IE4	BF10-../S4E06LA4	3.1	10.5	21	63	76	118	137	165	165	165	23	4250	-
3.5	58	179	1.3	51.28	IE4	BF10-../S4E06LA4	2.9	9.7	19.5	58	70	128	148	179	179	179	23	4400	-
3.5	53	197	1.2	56.39	IE4	BF10-../S4E06LA4	2.6	8.8	17.5	53	63	140	163	197	197	197	23	4550	-
3.5	48.5	215	1.1	61.55	IE4	BF10-../S4E06LA4	2.4	8.1	16	48.5	58	153	178	215	215	215	23	4700	-
3.5	44	235	1	67.69	IE4	BF10-../S4E06LA4	2.2	7.3	14.5	44	53	169	196	235	235	235	23	4900	-
3.5	38.5	270	0.88	77.55	IE4	BF10-../S4E06LA4	1.9	6.4	12.5	38.5	46	193	220	270	270	270	23	5100	-
3.5	35	295	0.8	85.27	IE4	BF10-../S4E06LA4	1.7	5.8	11.5	35	42	210	245	295	295	295	23	5300	-
3.5	71	146	2.9	41.72	IE4	BF20-../S4E06LA4	3.5	11.5	23.5	71	86	104	120	146	146	146	30	4950	-
3.5	65	160	2.6	45.9	IE4	BF20-../S4E06LA4	3.2	10.5	21.5	65	78	114	133	160	160	160	30	5100	-
3.5	61	169	2.5	48.56	IE4	BF20-../S4E06LA4	3	10	20.5	61	74	121	140	169	169	169	30	5200	-
3.5	56	187																	

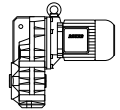


# BF-series shaft-mounted geared motors

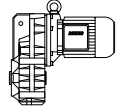
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 3.5 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
3.5	34	305	1.4	87.31	IE4	BF20-../S4E06LA4	1.7	5.7	11	34	41	215	250	305	305	305	30	6600	-
3.5	31	335	1.2	96.08	IE4	BF20-../S4E06LA4	1.5	5.2	10	31	37	240	275	335	335	335	30	6900	-
3.5	29.5	350	1.2	100.2	IE4	BF20-../S4E06LA4	1.4	4.9	9.9	29.5	35.5	250	290	350	350	350	30	7000	-
3.5	27	385	1.1	110.2	IE4	BF20-../S4E06LA4	1.3	4.5	9	27	32.5	275	315	385	385	385	30	7300	-
3.5	24	430	0.97	123.5	IE4	BF20-../S4E06LA4	1.2	4	8	24	29	305	355	430	430	430	30	7600	-
3.5	22	475	0.88	135.9	IE4	BF20-../S4E06LA4	1.1	3.6	7.3	22	26	335	390	475	475	475	30	7900	-
3.5	21	490	0.85	141.2	IE4	BF20Z-../S4E06LA4	1	3.5	7	21	25	350	405	490	490	490	31	7900	-
3.5	52	200	2.8	57.41	IE4	BF30-../S4E06LA4	2.6	8.7	17	52	62	143	166	200	200	200	40	5200	-
3.5	49	210	2.7	61.17	IE4	BF30-../S4E06LA4	2.4	8.1	16	49	58	152	177	210	210	210	40	5300	-
3.5	44.5	235	2.4	67.28	IE4	BF30-../S4E06LA4	2.2	7.4	14.5	44.5	53	168	195	235	235	235	40	5500	-
3.5	41.5	250	2.3	72.13	IE4	BF30-../S4E06LA4	2	6.9	13.5	41.5	49.5	180	205	250	250	250	40	5700	-
3.5	37.5	275	2.1	79.34	IE4	BF30-../S4E06LA4	1.8	6.3	12.5	37.5	45	198	230	275	275	275	40	5900	-
3.5	34	300	1.9	87.08	IE4	BF30-../S4E06LA4	1.7	5.7	11	34	41	215	250	300	300	300	40	6200	-
3.5	31	335	1.7	95.79	IE4	BF30-../S4E06LA4	1.5	5.2	10	31	37.5	235	275	335	335	335	40	6400	-
3.5	27.5	375	1.5	107.6	IE4	BF30-../S4E06LA4	1.3	4.6	9.2	27.5	33	265	310	375	375	375	40	6700	-
3.5	25	410	1.4	118.3	IE4	BF30-../S4E06LA4	1.2	4.2	8.4	25	30	295	340	410	410	410	40	7000	-
3.5	24	435	1.3	124.7	IE4	BF30-../S4E06LA4	1.2	4	8	24	28.5	310	360	435	435	435	40	7100	-
3.5	21.5	475	1.2	137.1	IE4	BF30-../S4E06LA4	1	3.6	7.2	21.5	26	340	395	475	475	475	40	7400	-
3.5	19.5	520	1.1	150.7	IE4	BF30Z-../S4E06LA4	0.95	3.3	6.6	19.5	23.5	375	435	520	520	520	42	7400	-
3.5	18	580	0.98	165.8	IE4	BF30Z-../S4E06LA4	0.9	3	6	18	21.5	410	480	580	580	580	42	7400	-
3.5	16.5	610	0.92	176.6	IE4	BF30Z-../S4E06LA4	0.8	2.8	5.6	16.5	20	440	510	610	610	610	42	7400	-
3.5	15	680	0.84	194.3	IE4	BF30Z-../S4E06LA4	0.75	2.5	5.1	15	18.5	485	560	680	680	680	42	7400	-
3.5	21	490	1.8	141.4	IE4	BF40Z-../S4E06LA4	1	3.5	7	21	25	350	410	490	490	490	53	10600	-
3.5	19	540	1.7	155.6	IE4	BF40Z-../S4E06LA4	0.95	3.2	6.4	19	23	385	450	540	540	540	53	10600	-
3.5	17.5	590	1.5	171.2	IE4	BF40Z-../S4E06LA4	0.85	2.9	5.8	17.5	21	425	495	590	590	590	53	10600	-
3.5	15.5	650	1.4	188.3	IE4	BF40Z-../S4E06LA4	0.75	2.6	5.3	15.5	19	470	540	650	650	650	53	10600	-
3.5	14.5	700	1.3	202.2	IE4	BF40Z-../S4E06LA4	0.7	2.4	4.9	14.5	17.5	500	580	700	700	700	53	10600	-
3.5	13	770	1.2	222.4	IE4	BF40Z-../S4E06LA4	0.65	2.2	4.4	13	16	550	640	770	770	770	53	10600	-
3.5	11.5	880	1	253.2	IE4	BF40Z-../S4E06LA4	0.55	1.9	3.9	11.5	14	630	730	880	880	880	53	10600	-
3.5	10.5	970	0.92	278.5	IE4	BF40Z-../S4E06LA4	0.5	1.7	3.5	10.5	12.5	690	800	970	970	970	53	10600	-
3.5	10	1030	0.87	295.1	IE4	BF40Z-../S4E06LA4	0.5	1.6	3.3	10	12	730	850	1030	1030	1030	53	10600	-
3.5	21.5	480	2.7	138.1	IE4	BF50Z-../S4E06LA4	1	3.6	7.2	21.5	26	345	400	480	480	480	82	13600	-
3.5	19	540	2.4	154.5	IE4	BF50Z-../S4E06LA4	0.95	3.2	6.4	19	23	385	445	540	540	540	82	13600	-
3.5	16	640	2	183.5	IE4	BF50Z-../S4E06LA4	0.8	2.7	5.4	16	19.5	455	530	640	640	640	82	13600	-
3.5	14.5	710	1.8	205.2	IE4	BF50Z-../S4E06LA4	0.7	2.4	4.8	14.5	17.5	510	590	710	710	710	82	13600	-
3.5	12	860	1.5	247.5	IE4	BF50Z-../S4E06LA4	0.6	2	4	12	14.5	610	710	860	860	860	82	13600	-
3.5	10.5	960	1.3	276.8	IE4	BF50Z-../S4E06LA4	0.5	1.8	3.6	10.5	13	690	800	960	960	960	82	13600	-
3.5	9.4	1100	1.2	316.6	IE4	BF50Z-../S4E06LA4	0.47	1.5	3.1	9.4	11	790	910	1100	1100	1100	82	13600	-
3.5	8.4	1230	1	354	IE4	BF50Z-../S4E06LA4	0.42	1.4	2.8	8.4	10	880	1020	1230	1230	1230	82	13600	-
3.5	7.6	1370	0.95	392.8	IE4	BF50Z-../S4E06LA4	0.38	1.2	2.5	7.6	9.1	980	1130	1370	1370	1370	82	13600	-
3.5	6.8	1530	0.85	439.3	IE4	BF50Z-../S4E06LA4	0.34	1.1	2.2	6.8	8.1	1090	1270	1530	1530	1530	82	13600	-
3.5	5.2	1990	1.3	569.3	IE4	BF60G20-../S4E06LA4	0.26	0.85	1.7	5.2	6.3	1420	1650	1990	1990	1990	134	15300	43300
3.5	4.3	2400	1	689	IE4	BF60G20-../S4E06LA4	0.21	0.7	1.4	4.3	5.2	1720	1990	2400	2400	2400	134	15300	43300
3.5	3.6	2800	0.88	813.2	IE4	BF60G20-../S4E06LA4	0.18	0.6	1.2	3.6	4.4	2000	2350	2800	2800	2800	134	15300	43300
3.5	5.1	2000	2.8	577.5	IE4	BF70G20-../S4E06LA4	0.25	0.85	1.7	5.1	6.2	1440	1670	2000	2000	2000	212	16100	47700
3.5	4.4	2350	2.4	673.6	IE4	BF70G20-../S4E06LA4	0.22	0.7	1.4	4.4	5.3	1680	1950	2350	2350	2350	212	16100	47700
3.5	3.4	3050	1.9	872.1	IE4	BF70G20-../S4E06LA4	0.17	0.55	1.1	3.4	4.1	2150	2500	3050	3050	3050	212	16100	47700
3.5	2.9	3550	1.6	1017	IE4	BF70G20-../S4E06LA4	0.14	0.49	0.95	2.9	3.5	2500	2900	3550	3550	3550	212	16100	47700
3.5	2.1	4850	1.2	1390	IE4	BF70G20-../S4E06LA4	0.1	0.35	0.7	2.1	2.5	3450	4000	4850	4850	4850	212	16100	47700
3.5	1.8	5600	1	1621	IE4	BF70G20-../S4E06LA4	0.09	0.3	0.6	1.8	2.2	4050	4700	5600	5600	5600	212	16100	47700
3.5	1.5	6600	0.85	1912	IE4	BF70G20-../S4E06LA4	0.075	0.26	0.5	1.5	1.8	4750	5500	6600	6600	6600	212	16100	47700

 **$M_N = 5 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
5	520	28.5	2.2	5.72	IE5	BF06-../S5E08MA4	26	87	174	520	620	28.5	28.5	28.5	28.5	28.5	16	1600	-
5	390	38	1.8	7.66	IE5	BF06-../S5E08MA4	19.5	65	130	390	465	38	38	38	38	38	16	1800	-
5	325	46	1.5	9.21	IE5	BF06-../S5E08MA4	16	54	108	325	390	46	46	46	46	46	16	1900	-
5	245	60	1.2	12.07	IE5	BF06-../S5E08MA4	12	41	82	245	295	60	60	60	60	60	16	2000	-
5	210	71	1.2	14.21	IE5	BF06-../S5E08MA4	10.5	35	70	210	250	71	71	71	71	71	16	2100	-
5	176	84	1.1	16.99	IE5	BF06-../S5E08MA4	8.8	29	58	176	210	84	84	84	84	84	16	2500	-
5	146	102	0.93	20.42	IE5	BF06-../S5E08MA4	7.3	24	48.5	146	176	102	102	102	102	102	16	2700	-
5	199	75	2.4	15.04	IE5	BF10-../S5E08MA4	9.9	33	66	199	235	75	75	75	75	75	27	2800	-
5	164	91	2.6	18.23	IE5	BF10-../S5E08MA4	8.2	27	54	164	197	91	91	91	91	91	27	2900	-
5	149	100	2.4	20.05	IE5	BF10-../S5E08MA4	7.4	24.5	49.5	149	179	100	100	100	100	100	27	3000	-
5	128	116	2.1	23.28	IE5	BF10-../S5E08MA4	6.4	21	42.5	128	154	116	116	116	116	116	27	3200	-
5	117	128	1.9	25.6	IE5	BF10-../S5E08MA4	5.8	19.5	39	117	140	128	128	128	128	128	27	3350	-
5	105	142	1.7	28.47	IE5	BF10-../S5E08MA4	5.2	17.5	35	105	126	142	142	142	142	142	27	3450	-

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 5 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

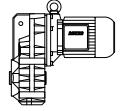
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
5	95	156	1.5	31.31	IE5	BF10-../S5E08MA4	4.7	15.5	31.5	95	114	156	156	156	156	27	3600	-	
5	82	180	1.3	36.15	IE5	BF10-../S5E08MA4	4.1	13.5	27.5	82	99	180	180	180	180	27	3800	-	
5	75	198	1.2	39.75	IE5	BF10-../S5E08MA4	3.7	12.5	25	75	90	198	198	198	198	27	3950	-	
5	69	215	1.1	43.06	IE5	BF10-../S5E08MA4	3.4	11.5	23	69	83	215	215	215	215	27	4100	-	
5	63	235	1	47.35	IE5	BF10-../S5E08MA4	3.1	10.5	21	63	76	235	235	235	235	27	4250	-	
5	58	255	0.94	51.28	IE5	BF10-../S5E08MA4	2.9	9.7	19.5	58	70	255	255	255	255	27	4400	-	
5	53	280	0.85	56.39	IE5	BF10-../S5E08MA4	2.6	8.8	17.5	53	63	280	280	280	280	27	4550	-	
5	108	138	3	27.62	IE5	BF20-../S5E08MA4	5.4	18	36	108	130	138	138	138	138	33	4150	-	
5	98	152	2.8	30.4	IE5	BF20-../S5E08MA4	4.9	16	32.5	98	118	152	152	152	152	33	4400	-	
5	162	162	2.6	32.58	IE5	BF20-../S5E08MA4	4.6	15	30.5	92	110	162	162	162	162	33	4450	-	
5	83	179	2.3	35.85	IE5	BF20-../S5E08MA4	4.1	13.5	27.5	83	100	179	179	179	179	33	4650	-	
5	71	205	2	41.72	IE5	BF20-../S5E08MA4	3.5	11.5	23.5	71	86	205	205	205	205	33	4950	-	
5	65	225	1.8	45.9	IE5	BF20-../S5E08MA4	3.2	10.5	21.5	65	78	225	225	225	225	33	5100	-	
5	61	240	1.7	48.56	IE5	BF20-../S5E08MA4	3	10	20.5	61	74	240	240	240	240	33	5200	-	
5	56	265	1.6	53.43	IE5	BF20-../S5E08MA4	2.8	9.3	18.5	56	67	265	265	265	265	33	5500	-	
5	51	290	1.4	58.24	IE5	BF20-../S5E08MA4	2.5	8.5	17	51	61	290	290	290	290	33	5600	-	
5	46.5	320	1.3	64.08	IE5	BF20-../S5E08MA4	2.3	7.8	15.5	46.5	56	320	320	320	320	33	5900	-	
5	43	345	1.2	69.7	IE5	BF20-../S5E08MA4	2.1	7.1	14	43	51	345	345	345	345	33	6100	-	
5	39	380	1.1	76.69	IE5	BF20-../S5E08MA4	1.9	6.5	13	39	46.5	380	380	380	380	33	6300	-	
5	34	435	0.96	87.31	IE5	BF20-../S5E08MA4	1.7	5.7	11	34	41	435	435	435	435	33	6600	-	
5	31	480	0.87	96.08	IE5	BF20-../S5E08MA4	1.5	5.2	10	31	37	480	480	480	480	33	6900	-	
5	29.5	500	0.84	100.2	IE5	BF20-../S5E08MA4	1.4	4.9	9.9	29.5	35.5	500	500	500	500	33	7000	-	
5	77	192	3	38.49	IE5	BF30-../S5E08MA4	3.8	12.5	25.5	77	93	192	192	192	192	43	4400	-	
5	73	205	2.8	41.01	IE5	BF30-../S5E08MA4	3.6	12	24	73	87	205	205	205	205	43	4500	-	
5	66	225	2.5	45.1	IE5	BF30-../S5E08MA4	3.3	11	22	66	79	225	225	225	225	43	4700	-	
5	57	260	2.2	52.2	IE5	BF30-../S5E08MA4	2.8	9.5	19	57	68	260	260	260	260	43	5000	-	
5	52	285	2	57.41	IE5	BF30-../S5E08MA4	2.6	8.7	17	52	62	285	285	285	285	43	5200	-	
5	49	305	1.9	61.17	IE5	BF30-../S5E08MA4	2.4	8.1	16	49	58	305	305	305	305	43	5300	-	
5	44.5	335	1.7	67.28	IE5	BF30-../S5E08MA4	2.2	7.4	14.5	44.5	53	335	335	335	335	43	5500	-	
5	41.5	360	1.6	72.13	IE5	BF30-../S5E08MA4	2	6.9	13.5	41.5	49.5	360	360	360	360	43	5700	-	
5	37.5	395	1.4	79.34	IE5	BF30-../S5E08MA4	1.8	6.3	12.5	37.5	45	395	395	395	395	43	5900	-	
5	34	435	1.3	87.08	IE5	BF30-../S5E08MA4	1.7	5.7	11	34	41	435	435	435	435	43	6200	-	
5	31	475	1.2	95.79	IE5	BF30-../S5E08MA4	1.5	5.2	10	31	37.5	475	475	475	475	43	6400	-	
5	27.5	530	1.1	107.6	IE5	BF30-../S5E08MA4	1.3	4.6	9.2	27.5	33	530	530	530	530	43	6700	-	
5	25	590	0.96	118.3	IE5	BF30-../S5E08MA4	1.2	4.2	8.4	25	30	590	590	590	590	43	7000	-	
5	24	620	0.91	124.7	IE5	BF30-../S5E08MA4	1.2	4	8	24	28.5	620	620	620	620	43	7100	-	
5	21.5	680	0.83	137.1	IE5	BF30-../S5E08MA4	1	3.6	7.2	21.5	26	680	680	680	680	43	7400	-	
5	48.5	305	2.9	61.25	IE5	BF40-../S5E08MA4	2.4	8.1	16	48.5	58	305	305	305	305	53	7600	-	
5	44.5	335	2.7	67.38	IE5	BF40-../S5E08MA4	2.2	7.4	14.5	44.5	53	335	335	335	335	53	8000	-	
5	42	355	2.5	71.4	IE5	BF40-../S5E08MA4	2.1	7	14	42	50	355	355	355	355	53	8100	-	
5	38	390	2.3	78.55	IE5	BF40-../S5E08MA4	1.9	6.3	12.5	38	45.5	390	390	390	390	53	8500	-	
5	35.5	415	2.1	83.91	IE5	BF40-../S5E08MA4	1.7	5.9	11.5	35.5	42.5	415	415	415	415	53	8700	-	
5	32	460	1.9	92.31	IE5	BF40-../S5E08MA4	1.6	5.4	10.5	32	38.5	460	460	460	460	53	9100	-	
5	29.5	500	1.8	101	IE5	BF40-../S5E08MA4	1.4	4.9	9.9	29.5	35.5	500	500	500	500	53	9400	-	
5	27	550	1.6	111.1	IE5	BF40-../S5E08MA4	1.3	4.5	9	27	32	550	550	550	550	53	9800	-	
5	24	620	1.4	124.5	IE5	BF40-../S5E08MA4	1.2	4	8	24	28.5	620	620	620	620	53	10200	-	
5	21.5	680	1.3	137	IE5	BF40-../S5E08MA4	1	3.6	7.2	21.5	26	680	680	680	680	53	10600	-	
5	21	700	1.3	141.4	IE5	BF40Z-../S5E08MA4	1	3.5	7	21	25	700	700	700	700	56	10600	-	
5	19	770	1.2	155.6	IE5	BF40Z-../S5E08MA4	0.95	3.2	6.4	19	23	770	770	770	770	56	10600	-	
5	17.5	850	1.1	171.2	IE5	BF40Z-../S5E08MA4	0.85	2.9	5.8	17.5	21	850	850	850	850	56	10600	-	
5	15.5	940	0.96	188.3	IE5	BF40Z-../S5E08MA4	0.75	2.6	5.3	15.5	19	940	940	940	940	56	10600	-	
5	14.5	1010	0.89	202.2	IE5	BF40Z-../S5E08MA4	0.7	2.4	4.9	14.5	17.5	1010	1010	1010	1010	56	10600	-	
5	13	1110	0.81	222.4	IE5	BF40Z-../S5E08MA4	0.65	2.2	4.4	13	16	1110	1110	1110	1110	56	10600	-	
5	33	450	2.9	90.24	IE5	BF50-../S5E08MA4	1.6	5.5	11	33	39.5	450	450	450	450	81	11800	-	
5	29.5	500	2.6	100.9	IE5	BF50-../S5E08MA4	1.4	4.9	9.9	29.5	35.5	500	500	500	500	81	12300	-	
5	26	570	2.3	114	IE5	BF50-../S5E08MA4	1.3	4.3	8.7	26	31.5	570	570	570	570	81	12900	-	
5	23.5	630	2	127.5	IE5	BF50-../S5E08MA4	1.1	3.9	7.8	23.5	28	630	630	630	630	81	13600	-	
5	21.5	690	1.9	138.1	IE5	BF50Z-../S5E08MA4	1	3.6	7.2	21.5	26	690	690	690	690	86	13600	-	
5	19	770	1.7	154.5	IE5	BF50Z-../S5E08MA4	0.95	3.2	6.4	19	23	770	770	770	770	86	13600	-	
5	16	910	1.4	183.5	IE5	BF50Z-../S5E08MA4	0.8	2.7	5.4	16	19.5	910	910	910	910	86	13600	-	
5	14.5	1020	1.3	205.2	IE5	BF50Z-../S5E08MA4	0.7	2.4	4.8	14.5	17.5	1020	1020	1020	1020	86	13600	-	
5	12	1230	1.1	247.5	IE5	BF50Z-../S5E08MA4	0.6	2	4	12	14.5	1230	1230	1230	1230	86	13600	-	
5	10.5	1380	0.94	276.8	IE5	BF50Z-../S5E08MA4	0.5	1.8	3.6	10.5	13	1380	1380	1380	1380	86	13600	-	
5	9.4	1580	0.82	316.6	IE5	BF50Z-../S5E08MA4	0.47	1.5	3.1	9.4	11	1580	1580	1580	1580	86	13600	-	
5	17.5	840	2.7	169.2	IE5	BF60Z-../S5E08MA4	0.85	2.9	5.9	17.5	21	840	840	840	840	130	15300	43300	
5	15.5	930	2.5	187.7	IE5	BF60Z-../S5E08MA4	0.75	2.6	5.3	15.5	19	930	930	930	930	130	15300	43300	
5	13.5	1100	2.1	221.4	IE5	BF60Z-../S5E08MA4	0.65	2.2	4.5	13.5	16	1100	1100	1100	1100	130	15300	43300	
5	12	1220	1.9	245.6	IE5	BF60Z-../S5E08MA4	0.6	2	4	12	14.5	1220	1220	1220	1220	130	15300	43300	
5	10	1460	1.6	293.4	IE5	BF60Z-../S5E08MA4	0.5	1.7	3.4	10	12	1460	1460	1460	1460	130	15300	43300	
5	9.2	1620	1.4	325.6	IE5	BF60Z-../S5E08MA4	0.46	1.5	3	9.2	11	1620	1620	1620	1620	130	15300	43300	
5	7.8	1900	1.2	380	IE5	BF60Z-../S5E08MA4	0.39	1.3	2.6	7.8	9.4	1900	1900	1900	1900	130	15300	43300	
5	7.1	2100	1.1	421.6	IE5	BF60Z-../S5E08MA4	0.35	1.1	2.3	7.1									



# BF-series shaft-mounted geared motors

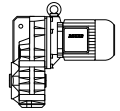
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 5 \text{ Nm}$ ( $P_N = 1.55 \text{ kW}$ )

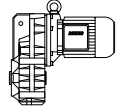


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
5	7.5	1990	2.6	398.7	IE5	BF70Z-../S5E08MA4	0.37	1.2	2.5	7.5	9	1990	1990	1990	1990	1990	218	16100	47700
5	6.8	2150	2.4	439.2	IE5	BF70Z-../S5E08MA4	0.34	1.1	2.2	6.8	8.1	2150	2150	2150	2150	2150	218	16100	47700
5	5.8	2550	2	512.4	IE5	BF70Z-../S5E08MA4	0.29	0.95	1.9	5.8	7	2550	2550	2550	2550	2550	218	16100	47700
5	5.7	2600	2.2	524.1	IE5	BF70G20-../S5E08MA4	0.28	0.95	1.9	5.7	6.8	2600	2600	2600	2600	2600	216	16100	47700
5	5.1	2850	2	577.5	IE5	BF70G20-../S5E08MA4	0.25	0.85	1.7	5.1	6.2	2850	2850	2850	2850	2850	216	16100	47700
5	4.4	3350	1.7	673.6	IE5	BF70G20-../S5E08MA4	0.22	0.7	1.4	4.4	5.3	3350	3350	3350	3350	3350	216	16100	47700
5	3.4	4350	1.3	872.1	IE5	BF70G20-../S5E08MA4	0.17	0.55	1.1	3.4	4.1	4350	4350	4350	4350	4350	216	16100	47700
5	2.9	5000	1.1	1017	IE5	BF70G20-../S5E08MA4	0.14	0.49	0.95	2.9	3.5	5000	5000	5000	5000	5000	216	16100	47700
5	2.1	6900	0.82	1390	IE5	BF70G20-../S5E08MA4	0.1	0.35	0.7	2.1	2.5	6900	6900	6900	6900	6900	216	16100	47700
5	3.8	3850	2.7	770.6	IE5	BF80Z-../S5E08MA4	0.19	0.6	1.2	3.8	4.6	3850	3850	3850	3850	3850	334	39600	75000
5	3.4	4350	2.4	874.6	IE5	BF80Z-../S5E08MA4	0.17	0.55	1.1	3.4	4.1	4350	4350	4350	4350	4350	334	39600	75000
5	3	4950	2.1	990.4	IE5	BF80Z-../S5E08MA4	0.15	0.5	1	3	3.6	4950	4950	4950	4950	4950	334	39600	75000
5	2.6	5600	1.9	1124	IE5	BF80Z-../S5E08MA4	0.13	0.44	0.85	2.6	3.2	5600	5600	5600	5600	5600	334	39600	75000
5	2.2	6600	1.6	1329	IE5	BF80G40-../S5E08MA4	0.11	0.37	0.75	2.2	2.7	6600	6600	6600	6600	6600	340	39600	75000
5	2	7400	1.4	1491	IE5	BF80G40-../S5E08MA4	0.1	0.33	0.65	2	2.4	7400	7400	7400	7400	7400	340	39600	75000
5	1.7	8400	1.2	1693	IE5	BF80G40-../S5E08MA4	0.085	0.29	0.55	1.7	2.1	8400	8400	8400	8400	8400	340	39600	75000
5	1.4	10200	1	2051	IE5	BF80G40-../S5E08MA4	0.07	0.24	0.48	1.4	1.7	10200	10200	10200	10200	10200	340	39600	75000
5	1.2	12100	0.87	2422	IE5	BF80G40-../S5E08MA4	0.06	0.2	0.41	1.2	1.4	12100	12100	12100	12100	12100	340	39600	75000
5	2	7200	2.6	1444	IE5	BF90G50-../S5E08MA4	0.1	0.34	0.65	2	2.4	7200	7200	7200	7200	7200	610	42800	120000
5	1.7	8300	2.2	1678	IE5	BF90G50-../S5E08MA4	0.085	0.29	0.55	1.7	2.1	8300	8300	8300	8300	8300	610	42800	120000
5	1.6	9300	2	1867	IE5	BF90G50-../S5E08MA4	0.08	0.26	0.5	1.6	1.9	9300	9300	9300	9300	9300	610	42800	120000
5	1.3	10700	1.7	2154	IE5	BF90G50-../S5E08MA4	0.065	0.23	0.46	1.3	1.6	10700	10700	10700	10700	10700	610	42800	120000
5	1.1	13200	1.4	2656	IE5	BF90G50-../S5E08MA4	0.055	0.18	0.37	1.1	1.3	13200	13200	13200	13200	13200	610	42800	120000
5	1	14700	1.3	2952	IE5	BF90G50-../S5E08MA4	0.05	0.16	0.33	1	1.2	14700	14700	14700	14700	14700	610	42800	120000
5	0.9	16400	1.1	3286	IE5	BF90G50-../S5E08MA4	0.045	0.15	0.3	0.9	1	16400	16400	16400	16400	16400	610	42800	120000
5	0.8	18200	1	3644	IE5	BF90G50-../S5E08MA4	0.041	0.13	0.27	0.8	0.95	18200	18200	18200	18200	18200	610	42800	120000
5	0.65	21500	0.85	4366	IE5	BF90G50-../S5E08MA4	0.034	0.11	0.22	0.65	0.8	21500	21500	21500	21500	21500	610	42800	120000

### $M_N = 7 \text{ Nm}$ ( $P_N = 2.2 \text{ kW}$ )



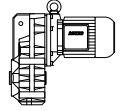
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
7	520	40	1.5	5.72	IE4	BF06-../S4E08MA4	26	87	174	520	620	28.5	33.5	40	40	40	16	1600	-
7	520	40	1.5	5.72	IE5	BF06-../S5E08LA4	26	87	174	520	620	37	40	40	40	40	17	1600	-
7	390	53	1.3	7.66	IE4	BF06-../S4E08MA4	19.5	65	130	390	465	38	45	53	53	53	17	1800	-
7	390	53	1.3	7.66	IE5	BF06-../S5E08LA4	19.5	65	130	390	465	49.5	53	53	53	53	17	1800	-
7	325	64	1.1	9.21	IE4	BF06-../S4E08MA4	16	54	108	325	390	46	54	64	64	64	16	1900	-
7	325	64	1.1	9.21	IE5	BF06-../S5E08LA4	16	54	108	325	390	59	64	64	64	64	17	1900	-
7	245	84	0.89	12.07	IE4	BF06-../S4E08MA4	12	41	82	245	295	60	71	84	84	84	16	2000	-
7	245	84	0.89	12.07	IE5	BF06-../S5E08LA4	12	41	82	245	295	78	84	84	84	84	17	2000	-
7	210	99	0.85	14.21	IE4	BF06-../S4E08MA4	10.5	35	70	210	250	71	83	99	99	99	16	2100	-
7	210	99	0.85	14.21	IE5	BF06-../S5E08LA4	10.5	35	70	210	250	92	99	99	99	99	17	2100	-
7	176	118	0.8	16.99	IE4	BF06-../S4E08MA4	8.8	29	58	176	210	84	100	118	118	118	16	2500	-
7	176	118	0.8	16.99	IE5	BF06-../S5E08LA4	8.8	29	58	176	210	110	118	118	118	118	17	2500	-
7	395	53	2.9	7.58	IE4	BF10-../S4E08MA4	19.5	65	131	395	470	37.5	44.5	53	53	53	27	2200	-
7	395	53	2.9	7.58	IE5	BF10-../S5E08LA4	19.5	65	131	395	470	49	53	53	53	53	28	2200	-
7	305	67	2.6	9.69	IE4	BF10-../S4E08MA4	15	51	103	305	370	48	57	67	67	67	27	2350	-
7	305	67	2.6	9.69	IE5	BF10-../S5E08LA4	15	51	103	305	370	62	67	67	67	67	28	2350	-
7	250	82	2.2	11.84	IE4	BF10-../S4E08MA4	12.5	42	84	250	300	59	69	82	82	82	27	2500	-
7	250	82	2.2	11.84	IE5	BF10-../S5E08LA4	12.5	42	84	250	300	76	82	82	82	82	28	2500	-
7	199	105	1.7	15.04	IE4	BF10-../S4E08MA4	9.9	33	66	199	235	75	88	105	105	105	27	2800	-
7	199	105	1.7	15.04	IE5	BF10-../S5E08LA4	9.9	33	66	199	235	97	105	105	105	105	28	2800	-
7	164	127	1.9	18.23	IE4	BF10-../S4E08MA4	8.2	27	54	164	197	91	107	127	127	127	27	2900	-
7	164	127	1.9	18.23	IE5	BF10-../S5E08LA4	8.2	27	54	164	197	118	127	127	127	127	28	2900	-
7	149	140	1.7	20.05	IE4	BF10-../S4E08MA4	7.4	24.5	49.5	149	179	100	118	140	140	140	27	3000	-
7	149	140	1.7	20.05	IE5	BF10-../S5E08LA4	7.4	24.5	49.5	149	179	130	140	140	140	140	28	3000	-
7	128	162	1.5	23.28	IE4	BF10-../S4E08MA4	6.4	21	42.5	128	154	116	137	162	162	162	27	3200	-
7	128	162	1.5	23.28	IE5	BF10-../S5E08LA4	6.4	21	42.5	128	154	151	162	162	162	162	28	3200	-
7	117	179	1.3	25.6	IE4	BF10-../S4E08MA4	5.8	19.5	39	117	140	128	151	179	179	179	27	3350	-
7	117	179	1.3	25.6	IE5	BF10-../S5E08LA4	5.8	19.5	39	117	140	166	179	179	179	179	28	3350	-
7	105	199	1.2	28.47	IE4	BF10-../S4E08MA4	5.2	17.5	35	105	126	142	167	199	199	199	27	3450	-
7	105	199	1.2	28.47	IE5	BF10-../S5E08LA4	5.2	17.5	35	105	126	185	199	199	199	199	28	3450	-
7	95	215	1.1	31.31	IE4	BF10-../S4E08MA4	4.7	15.5	31.5	95	114	156	184	215	215	215	27	3600	-
7	95	215	1.1	31.31	IE5	BF10-../S5E08LA4	4.7	15.5	31.5	95	114	200	215	215	215	215	28	3600	-
7	82	250	0.95	36.15	IE4	BF10-../S4E08MA4	4.1	13.5	27.5	82	99	180	210	250	250	250	27	3800	-
7	82	250	0.95	36.15	IE5	BF10-../S5E08LA4	4.1	13.5	27.5	82	99	230	250	250	250	250	28	3800	-
7	75	275	0.86	39.75	IE4	BF10-../S4E08MA4	3.7	12.5	25	75	90	198	230	275	275	275	27	3950	-
7	75	275	0.86	39.75	IE5	BF10-../S5E08LA4	3.7	12.5	25	75	90	255	275	275	275	275	28	3950	-
7	69	300	0.8																

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 7 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**

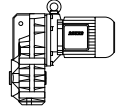
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
7	193	108	2.8	15.54	IE5	BF20-../S5E08LA4	9.6	32	64	193	230	101	108	108	108	108	35	3450	-
7	162	129	2.9	18.45	IE4	BF20-../S4E08MA4	8.1	27	54	162	195	92	108	129	129	129	33	3600	-
7	162	129	2.9	18.45	IE5	BF20-../S5E08LA4	8.1	27	54	162	195	119	129	129	129	129	35	3600	-
7	136	154	2.6	22.04	IE4	BF20-../S4E08MA4	6.8	22.5	45	136	163	110	130	154	154	154	33	3800	-
7	136	154	2.6	22.04	IE5	BF20-../S5E08LA4	6.8	22.5	45	136	163	143	154	154	154	154	35	3800	-
7	123	169	2.4	24.25	IE4	BF20-../S4E08MA4	6.1	20.5	41	123	148	121	143	169	169	169	33	3950	-
7	123	169	2.4	24.25	IE5	BF20-../S5E08LA4	6.1	20.5	41	123	148	157	169	169	169	169	35	3950	-
7	108	193	2.2	27.62	IE4	BF20-../S4E08MA4	5.4	18	36	108	130	138	162	193	193	193	33	4150	-
7	108	193	2.2	27.62	IE5	BF20-../S5E08LA4	5.4	18	36	108	130	179	193	193	193	193	35	4150	-
7	98	210	2	30.4	IE4	BF20-../S4E08MA4	4.9	16	32.5	98	118	152	179	210	210	210	33	4400	-
7	98	210	2	30.4	IE5	BF20-../S5E08LA4	4.9	16	32.5	98	118	197	210	210	210	210	35	4400	-
7	92	225	1.8	32.58	IE4	BF20-../S4E08MA4	4.6	15	30.5	92	110	162	192	225	225	225	33	4450	-
7	92	225	1.8	32.58	IE5	BF20-../S5E08LA4	4.6	15	30.5	92	110	210	225	225	225	225	35	4450	-
7	83	250	1.7	35.85	IE4	BF20-../S4E08MA4	4.1	13.5	27.5	83	100	179	210	250	250	250	33	4650	-
7	83	250	1.7	35.85	IE5	BF20-../S5E08LA4	4.1	13.5	27.5	83	100	230	250	250	250	250	35	4650	-
7	71	290	1.4	41.72	IE4	BF20-../S4E08MA4	3.5	11.5	23.5	71	86	205	245	290	290	290	33	4950	-
7	71	290	1.4	41.72	IE5	BF20-../S5E08LA4	3.5	11.5	23.5	71	86	270	290	290	290	290	35	4950	-
7	65	320	1.3	45.9	IE4	BF20-../S4E08MA4	3.2	10.5	21.5	65	78	225	270	320	320	320	33	5100	-
7	65	320	1.3	45.9	IE5	BF20-../S5E08LA4	3.2	10.5	21.5	65	78	295	320	320	320	320	35	5100	-
7	61	335	1.2	48.56	IE4	BF20-../S4E08MA4	3	10	20.5	61	74	240	285	335	335	335	33	5200	-
7	61	335	1.2	48.56	IE5	BF20-../S5E08LA4	3	10	20.5	61	74	315	335	335	335	335	35	5200	-
7	56	370	1.1	53.43	IE4	BF20-../S4E08MA4	2.8	9.3	18.5	56	67	265	315	370	370	370	33	5500	-
7	56	370	1.1	53.43	IE5	BF20-../S5E08LA4	2.8	9.3	18.5	56	67	345	370	370	370	370	35	5500	-
7	51	405	1	58.24	IE4	BF20-../S4E08MA4	2.5	8.5	17	51	61	290	340	405	405	405	33	5600	-
7	51	405	1	58.24	IE5	BF20-../S5E08LA4	2.5	8.5	17	51	61	375	405	405	405	405	35	5600	-
7	46.5	445	0.94	64.08	IE4	BF20-../S4E08MA4	2.3	7.8	15.5	46.5	56	320	375	445	445	445	33	5900	-
7	46.5	445	0.94	64.08	IE5	BF20-../S5E08LA4	2.3	7.8	15.5	46.5	56	415	445	445	445	445	35	5900	-
7	43	485	0.86	69.7	IE4	BF20-../S4E08MA4	2.1	7.1	14	43	51	345	410	485	485	485	33	6100	-
7	43	485	0.86	69.7	IE5	BF20-../S5E08LA4	2.1	7.1	14	43	51	450	485	485	485	485	35	6100	-
7	106	197	2.9	28.23	IE4	BF30-../S4E08MA4	5.3	17.5	35	106	127	141	166	197	197	197	43	3800	-
7	106	197	2.9	28.23	IE5	BF30-../S5E08LA4	5.3	17.5	35	106	127	183	197	197	197	197	45	3800	-
7	96	215	2.6	31.05	IE4	BF30-../S4E08MA4	4.8	16	32	96	115	155	183	215	215	215	43	4000	-
7	96	215	2.6	31.05	IE5	BF30-../S5E08LA4	4.8	16	32	96	115	200	215	215	215	215	45	4000	-
7	85	245	2.3	35	IE4	BF30-../S4E08MA4	4.2	14	28.5	85	102	175	205	245	245	245	43	4200	-
7	85	245	2.3	35	IE5	BF30-../S5E08LA4	4.2	14	28.5	85	102	225	245	245	245	245	45	4200	-
7	77	265	2.1	38.49	IE4	BF30-../S4E08MA4	3.8	12.5	25.5	77	93	192	225	265	265	265	43	4400	-
7	77	265	2.1	38.49	IE5	BF30-../S5E08LA4	3.8	12.5	25.5	77	93	250	265	265	265	265	45	4400	-
7	73	285	2	41.01	IE4	BF30-../S4E08MA4	3.6	12	24	73	87	205	240	285	285	285	43	4500	-
7	73	285	2	41.01	IE5	BF30-../S5E08LA4	3.6	12	24	73	87	265	285	285	285	285	45	4500	-
7	66	315	1.8	45.1	IE4	BF30-../S4E08MA4	3.3	11	22	66	79	225	265	315	315	315	43	4700	-
7	66	315	1.8	45.1	IE5	BF30-../S5E08LA4	3.3	11	22	66	79	290	315	315	315	315	45	4700	-
7	57	365	1.6	52.2	IE4	BF30-../S4E08MA4	2.8	9.5	19	57	68	260	305	365	365	365	43	5000	-
7	57	365	1.6	52.2	IE5	BF30-../S5E08LA4	2.8	9.5	19	57	68	335	365	365	365	365	45	5000	-
7	52	400	1.4	57.41	IE4	BF30-../S4E08MA4	2.6	8.7	17	52	62	285	335	400	400	400	43	5200	-
7	52	400	1.4	57.41	IE5	BF30-../S5E08LA4	2.6	8.7	17	52	62	370	400	400	400	400	45	5200	-
7	49	425	1.3	61.17	IE4	BF30-../S4E08MA4	2.4	8.1	16	49	58	305	360	425	425	425	43	5300	-
7	49	425	1.3	61.17	IE5	BF30-../S5E08LA4	2.4	8.1	16	49	58	395	425	425	425	425	45	5300	-
7	44.5	470	1.2	67.28	IE4	BF30-../S4E08MA4	2.2	7.4	14.5	44.5	53	335	395	470	470	470	43	5500	-
7	44.5	470	1.2	67.28	IE5	BF30-../S5E08LA4	2.2	7.4	14.5	44.5	53	435	470	470	470	470	45	5500	-
7	41.5	500	1.1	72.13	IE4	BF30-../S4E08MA4	2	6.9	13.5	41.5	49.5	360	425	500	500	500	43	5700	-
7	41.5	500	1.1	72.13	IE5	BF30-../S5E08LA4	2	6.9	13.5	41.5	49.5	465	500	500	500	500	45	5700	-
7	37.5	550	1	79.34	IE4	BF30-../S4E08MA4	1.8	6.3	12.5	37.5	45	395	465	550	550	550	43	5900	-
7	37.5	550	1	79.34	IE5	BF30-../S5E08LA4	1.8	6.3	12.5	37.5	45	510	550	550	550	550	45	5900	-
7	34	600	0.94	87.08	IE4	BF30-../S4E08MA4	1.7	5.7	11	34	41	435	510	600	600	600	43	6200	-
7	34	600	0.94	87.08	IE5	BF30-../S5E08LA4	1.7	5.7	11	34	41	560	600	600	600	600	45	6200	-
7	31	670	0.85	95.79	IE4	BF30-../S4E08MA4	1.5	5.2	10	31	37.5	475	560	670	670	670	43	6400	-
7	31	670	0.85	95.79	IE5	BF30-../S5E08LA4	1.5	5.2	10	31	37.5	620	670	670	670	670	45	6400	-
7	65	315	2.8	45.56	IE4	BF40-../S4E08MA4	3.2	10.5	21.5	65	79	225	265	315	315	315	53	6800	-
7	65	315	2.8	45.56	IE5	BF40-../S5E08LA4	3.2	10.5	21.5	65	79	295	315	315	315	315	54	6800	-
7	61	340	2.6	48.92	IE4	BF40-../S4E08MA4	3	10	20	61	73	240	285	340	340	340	53	7000	-
7	61	340	2.6	48.92	IE5	BF40-../S5E08LA4	3	10	20	61	73	315	340	340	340	340	54	7000	-
7	55	375	2.4	53.82	IE4	BF40-../S4E08MA4	2.7	9.2	18.5	55	66	265	315	375	375	375	53	7200	-
7	55	375	2.4	53.82	IE5	BF40-../S5E08LA4	2.7	9.2	18.5	55	66	345	375	375	375	375	54	7200	-
7	48.5	425	2.1	61.25	IE4	BF40-../S4E08MA4	2.4	8.1	16	48.5	58	305	360	425	425	425	53	7600	-
7	48.5	425	2.1	61.25	IE5	BF40-../S5E08LA4	2.4	8.1	16	48.5	58	395	425	425	425	425	54	7600	-
7	44.5	470	1.9	67.38	IE4	BF40-../S4E08MA4	2.2	7.4	14.5	44.5	53	335	395	470	470	470	53	8000	-
7	44.5	470	1.9	67.38	IE5	BF40-../S5E08LA4	2.2	7.4	14.5	44.5	53	435	470	470	470	470	54	8000	-
7	42	495	1.8	71.4	IE4	BF40-../S4E08MA4	2.1	7	14	42	50	355	420	495	495	495	53	8100	-
7	42	495	1.8	71.4	IE5	BF40-../S5E08LA4	2.1	7	14	42	50	460	495	495	495	495	54	8100	-
7	38	540	1.6	78.55	IE4	BF40-../S4E08MA4	1.9												

# BF-series shaft-mounted geared motors

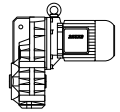
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

**M<sub>N</sub> = 7 Nm (P<sub>N</sub> = 2.2 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[:1]												[kg]	[N]	[N]	
7	24	870	1	124.5	IE5	BF40-../S5E08LA4	1.2	4	8	24	28.5	800	870	870	870	870	54	10200	-
7	21.5	950	0.94	137	IE4	BF40-../S4E08MA4	1	3.6	7.2	21.5	26	680	800	950	950	950	53	10600	-
7	21.5	950	0.94	137	IE5	BF40-../S5E08LA4	1	3.6	7.2	21.5	26	890	950	950	950	950	54	10600	-
7	21	980	0.91	141.4	IE4	BF40Z-../S4E08MA4	1	3.5	7	21	25	700	830	980	980	980	56	10600	-
7	21	980	0.91	141.4	IE5	BF40Z-../S5E08LA4	1	3.5	7	21	25	910	980	980	980	980	58	10600	-
7	19	1080	0.83	155.6	IE4	BF40Z-../S4E08MA4	0.95	3.2	6.4	19	23	770	910	1080	1080	1080	56	10600	-
7	19	1080	0.83	155.6	IE5	BF40Z-../S5E08LA4	0.95	3.2	6.4	19	23	1010	1080	1080	1080	1080	58	10600	-
7	47	445	2.9	63.59	IE4	BF50-../S4E08MA4	2.3	7.8	15.5	47	56	315	375	445	445	445	81	9800	-
7	47	445	2.9	63.59	IE5	BF50-../S5E08LA4	2.3	7.8	15.5	47	56	410	445	445	445	445	83	9800	-
7	41	500	2.6	72.72	IE4	BF50-../S4E08MA4	2	6.8	13.5	41	49.5	360	425	500	500	500	81	10700	-
7	41	500	2.6	72.72	IE5	BF50-../S5E08LA4	2	6.8	13.5	41	49.5	470	500	500	500	500	83	10700	-
7	36.5	560	2.3	81.33	IE4	BF50-../S4E08MA4	1.8	6.1	12	36.5	44	405	475	560	560	560	81	11300	-
7	36.5	560	2.3	81.33	IE5	BF50-../S5E08LA4	1.8	6.1	12	36.5	44	520	560	560	560	560	83	11300	-
7	33	630	2.1	90.24	IE4	BF50-../S4E08MA4	1.6	5.5	11	33	39.5	450	530	630	630	630	81	11800	-
7	33	630	2.1	90.24	IE5	BF50-../S5E08LA4	1.6	5.5	11	33	39.5	580	630	630	630	630	83	11800	-
7	29.5	700	1.8	100.9	IE4	BF50-../S4E08MA4	1.4	4.9	9.9	29.5	35.5	500	590	700	700	700	81	12300	-
7	29.5	700	1.8	100.9	IE5	BF50-../S5E08LA4	1.4	4.9	9.9	29.5	35.5	650	700	700	700	700	83	12300	-
7	26	790	1.6	114	IE4	BF50-../S4E08MA4	1.3	4.3	8.7	26	31.5	570	670	790	790	790	81	12900	-
7	26	790	1.6	114	IE5	BF50-../S5E08LA4	1.3	4.3	8.7	26	31.5	740	790	790	790	790	83	12900	-
7	23.5	890	1.5	127.5	IE4	BF50-../S4E08MA4	1.1	3.9	7.8	23.5	28	630	750	890	890	890	81	13600	-
7	23.5	890	1.5	127.5	IE5	BF50-../S5E08LA4	1.1	3.9	7.8	23.5	28	820	890	890	890	890	83	13600	-
7	21.5	960	1.3	138.1	IE4	BF50Z-../S4E08MA4	1	3.6	7.2	21.5	26	690	810	960	960	960	86	13600	-
7	21.5	960	1.3	138.1	IE5	BF50Z-../S5E08LA4	1	3.6	7.2	21.5	26	890	960	960	960	960	88	13600	-
7	19	1080	1.2	154.5	IE4	BF50Z-../S4E08MA4	0.95	3.2	6.4	19	23	770	910	1080	1080	1080	86	13600	-
7	19	1080	1.2	154.5	IE5	BF50Z-../S5E08LA4	0.95	3.2	6.4	19	23	1000	1080	1080	1080	1080	88	13600	-
7	16	1280	1	183.5	IE4	BF50Z-../S4E08MA4	0.8	2.7	5.4	16	19.5	910	1080	1280	1280	1280	86	13600	-
7	16	1280	1	183.5	IE5	BF50Z-../S5E08LA4	0.8	2.7	5.4	16	19.5	1190	1280	1280	1280	1280	88	13600	-
7	14.5	1430	0.91	205.2	IE4	BF50Z-../S4E08MA4	0.7	2.4	4.8	14.5	17.5	1020	1210	1430	1430	1430	86	13600	-
7	14.5	1430	0.91	205.2	IE5	BF50Z-../S5E08LA4	0.7	2.4	4.8	14.5	17.5	1330	1430	1430	1430	1430	88	13600	-
7	21	980	2.3	140.8	IE4	BF60Z-../S4E08MA4	1	3.5	7.1	21	25.5	700	830	980	980	980	130	15300	43300
7	21	980	2.3	140.8	IE5	BF60Z-../S5E08LA4	1	3.5	7.1	21	25.5	910	980	980	980	980	131	15300	43300
7	17.5	1180	1.9	169.2	IE4	BF60Z-../S4E08MA4	0.85	2.9	5.9	17.5	21	840	990	1180	1180	1180	130	15300	43300
7	17.5	1180	1.9	169.2	IE5	BF60Z-../S5E08LA4	0.85	2.9	5.9	17.5	21	1090	1180	1180	1180	1180	131	15300	43300
7	15.5	1310	1.8	187.7	IE4	BF60Z-../S4E08MA4	0.75	2.6	5.3	15.5	19	930	1100	1310	1310	1310	130	15300	43300
7	15.5	1310	1.8	187.7	IE5	BF60Z-../S5E08LA4	0.75	2.6	5.3	15.5	19	1220	1310	1310	1310	1310	131	15300	43300
7	13.5	1540	1.5	221.4	IE4	BF60Z-../S4E08MA4	0.65	2.2	4.5	13.5	16	1100	1300	1540	1540	1540	130	15300	43300
7	13.5	1540	1.5	221.4	IE5	BF60Z-../S5E08LA4	0.65	2.2	4.5	13.5	16	1430	1540	1540	1540	1540	131	15300	43300
7	12	1710	1.3	245.6	IE4	BF60Z-../S4E08MA4	0.6	2	4	12	14.5	1220	1440	1710	1710	1710	130	15300	43300
7	12	1710	1.3	245.6	IE5	BF60Z-../S5E08LA4	0.6	2	4	12	14.5	1590	1710	1710	1710	1710	131	15300	43300
7	10	2050	1.1	293.4	IE4	BF60Z-../S4E08MA4	0.5	1.7	3.4	10	12	1460	1730	2050	2050	2050	130	15300	43300
7	10	2050	1.1	293.4	IE5	BF60Z-../S5E08LA4	0.5	1.7	3.4	10	12	1900	2050	2050	2050	2050	131	15300	43300
7	9.2	2250	1	325.6	IE4	BF60Z-../S4E08MA4	0.46	1.5	3	9.2	11	1620	1920	2250	2250	2250	130	15300	43300
7	9.2	2250	1	325.6	IE5	BF60Z-../S5E08LA4	0.46	1.5	3	9.2	11	2100	2250	2250	2250	2250	131	15300	43300
7	7.8	2650	0.86	380	IE4	BF60Z-../S4E08MA4	0.39	1.3	2.6	7.8	9.4	1900	2200	2650	2650	2650	130	15300	43300
7	7.8	2650	0.86	380	IE5	BF60Z-../S5E08LA4	0.39	1.3	2.6	7.8	9.4	2450	2650	2650	2650	2650	131	15300	43300
7	11.5	1810	2.9	258.7	IE4	BF70Z-../S4E08MA4	0.55	1.9	3.8	11.5	13.5	1290	1520	1810	1810	1810	218	16100	47700
7	11.5	1810	2.9	258.7	IE5	BF70Z-../S5E08LA4	0.55	1.9	3.8	11.5	13.5	1680	1810	1810	1810	1810	220	16100	47700
7	9.9	2100	2.5	301.8	IE4	BF70Z-../S4E08MA4	0.49	1.6	3.3	9.9	11.5	1500	1780	2100	2100	2100	218	16100	47700
7	9.9	2100	2.5	301.8	IE5	BF70Z-../S5E08LA4	0.49	1.6	3.3	9.9	11.5	1960	2100	2100	2100	2100	220	16100	47700
7	8.7	2350	2.2	341.7	IE4	BF70Z-../S4E08MA4	0.43	1.4	2.9	8.7	10.5	1700	2000	2350	2350	2350	218	16100	47700
7	8.7	2350	2.2	341.7	IE5	BF70Z-../S5E08LA4	0.43	1.4	2.9	8.7	10.5	2200	2350	2350	2350	2350	220	16100	47700
7	7.5	2750	1.9	398.7	IE4	BF70Z-../S4E08MA4	0.37	1.2	2.5	7.5	9	1990	2350	2750	2750	2750	218	16100	47700
7	7.5	2750	1.9	398.7	IE5	BF70Z-../S5E08LA4	0.37	1.2	2.5	7.5	9	2550	2750	2750	2750	2750	220	16100	47700
7	6.8	3050	1.7	439.2	IE4	BF70Z-../S4E08MA4	0.34	1.1	2.2	6.8	8.1	2150	2550	3050	3050	3050	218	16100	47700
7	6.8	3050	1.7	439.2	IE5	BF70Z-../S5E08LA4	0.34	1.1	2.2	6.8	8.1	2850	3050	3050	3050	3050	220	16100	47700
7	5.8	3550	1.4	512.4	IE4	BF70Z-../S4E08MA4	0.29	0.95	1.9	5.8	7	2550	3000	3550	3550	3550	218	16100	47700
7	5.8	3550	1.4	512.4	IE5	BF70Z-../S5E08LA4	0.29	0.95	1.9	5.8	7	3300	3550	3550	3550	3550	220	16100	47700
7	5.7	3650	1.6	524.1	IE4	BF70G20-../S4E08MA4	0.28	0.95	1.9	5.7	6.8	2600	3050	3650	3650	3650	216	16100	47700
7	5.7	3650	1.6	524.1	IE5	BF70G20-../S5E08LA4	0.28	0.95	1.9	5.7	6.8	3400	3650	3650	3650	3650	217	16100	47700
7	5.1	4000	1.4	577.5	IE4	BF70G20-../S4E08MA4	0.25	0.85	1.7	5.1	6.2	2850	3400	4000	4000	4000	216	16100	47700
7	5.1	4000	1.4	577.5	IE5	BF70G20-../S5E08LA4	0.25	0.85	1.7	5.1	6.2	3750	4000	4000	4000	4000	217	16100	47700
7	4.4	4700	1.2	673.6	IE4	BF70G20-../S4E08MA4	0.22	0.7	1.4	4.4	5.3	3350	3950	4700	4700	4700	216	16100	47700
7	4.4	4700	1.2	673.6	IE5	BF70G20-../S5E08LA4	0.22	0.7	1.4	4.4	5.3	4350	4700	4700	4700	4700	217	16100	47700
7	3.4	6100	0.93	872.1	IE4	BF70G20-../S4E08MA4	0.17	0.55	1.1	3.4	4.1	4350	5100	6100	6100	6100	216	16100	47700
7	3.4	6100	0.93	872.1	IE5	BF70G20-../S5E08LA4	0.17	0.55	1.1	3.4	4.1	5600	6100	6100	6100	6100			

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 7 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
7	3	6900	1.5	990.4	IE5	BF80Z-../S5E08LA4	0.15	0.5	1	3	3.6	6400	6900	6900	6900	6900	336	39600	75000
7	2.6	7800	1.3	1124	IE4	BF80Z-../S4E08MA4	0.13	0.44	0.85	2.6	3.2	5600	6600	7800	7800	7800	334	39600	75000
7	2.6	7800	1.3	1124	IE5	BF80Z-../S5E08LA4	0.13	0.44	0.85	2.6	3.2	7300	7800	7800	7800	7800	336	39600	75000
7	2.2	9300	1.1	1329	IE4	BF80G40-../S4E08MA4	0.11	0.37	0.75	2.2	2.7	6600	7800	9300	9300	9300	340	39600	75000
7	2.2	9300	1.1	1329	IE5	BF80G40-../S5E08LA4	0.11	0.37	0.75	2.2	2.7	8600	9300	9300	9300	9300	341	39600	75000
7	2	10400	1	1491	IE4	BF80G40-../S4E08MA4	0.1	0.33	0.65	2	2.4	7400	8700	10400	10400	10400	340	39600	75000
7	2	10400	1	1491	IE5	BF80G40-../S5E08LA4	0.1	0.33	0.65	2	2.4	9600	10400	10400	10400	10400	341	39600	75000
7	1.7	11800	0.89	1693	IE4	BF80G40-../S4E08MA4	0.085	0.29	0.55	1.7	2.1	8400	9900	11800	11800	11800	340	39600	75000
7	1.7	11800	0.89	1693	IE5	BF80G40-../S5E08LA4	0.085	0.29	0.55	1.7	2.1	11000	11800	11800	11800	11800	341	39600	75000
7	3	6800	2.7	976.1	IE4	BF90G50-../S4E08MA4	0.15	0.5	1	3	3.6	4850	5700	6800	6800	6800	610	42800	120000
7	3	6800	2.7	976.1	IE5	BF90G50-../S5E08LA4	0.15	0.5	1	3	3.6	6300	6800	6800	6800	6800	612	42800	120000
7	2.8	7300	2.5	1043	IE4	BF90G50-../S4E08MA4	0.14	0.47	0.95	2.8	3.4	5200	6100	7300	7300	7300	610	42800	120000
7	2.8	7300	2.5	1043	IE5	BF90G50-../S5E08LA4	0.14	0.47	0.95	2.8	3.4	6700	7300	7300	7300	7300	612	42800	120000
7	2.4	8400	2.2	1204	IE4	BF90G50-../S4E08MA4	0.12	0.41	0.8	2.4	2.9	6000	7100	8400	8400	8400	610	42800	120000
7	2.4	8400	2.2	1204	IE5	BF90G50-../S5E08LA4	0.12	0.41	0.8	2.4	2.9	7800	8400	8400	8400	8400	612	42800	120000
7	2	10100	1.8	1444	IE4	BF90G50-../S4E08MA4	0.1	0.34	0.65	2	2.4	7200	8500	10100	10100	10100	610	42800	120000
7	2	10100	1.8	1444	IE5	BF90G50-../S5E08LA4	0.1	0.34	0.65	2	2.4	9300	10100	10100	10100	10100	612	42800	120000
7	1.7	11700	1.6	1678	IE4	BF90G50-../S4E08MA4	0.085	0.29	0.55	1.7	2.1	8300	9900	11700	11700	11700	610	42800	120000
7	1.7	11700	1.6	1678	IE5	BF90G50-../S5E08LA4	0.085	0.29	0.55	1.7	2.1	10900	11700	11700	11700	11700	612	42800	120000
7	1.6	13000	1.4	1867	IE4	BF90G50-../S4E08MA4	0.08	0.26	0.5	1.6	1.9	9300	11000	13000	13000	13000	610	42800	120000
7	1.6	13000	1.4	1867	IE5	BF90G50-../S5E08LA4	0.08	0.26	0.5	1.6	1.9	12100	13000	13000	13000	13000	612	42800	120000
7	1.3	15000	1.2	2154	IE4	BF90G50-../S4E08MA4	0.065	0.23	0.46	1.3	1.6	10700	12700	15000	15000	15000	610	42800	120000
7	1.3	15000	1.2	2154	IE5	BF90G50-../S5E08LA4	0.065	0.23	0.46	1.3	1.6	14000	15000	15000	15000	15000	612	42800	120000
7	1.1	18500	1	2656	IE4	BF90G50-../S4E08MA4	0.055	0.18	0.37	1.1	1.3	13200	15600	18500	18500	18500	610	42800	120000
7	1.1	18500	1	2656	IE5	BF90G50-../S5E08LA4	0.055	0.18	0.37	1.1	1.3	17200	18500	18500	18500	18500	612	42800	120000
7	1	20500	0.9	2952	IE4	BF90G50-../S4E08MA4	0.05	0.16	0.33	1	1.2	14700	17400	20500	20500	20500	610	42800	120000
7	1	20500	0.9	2952	IE5	BF90G50-../S5E08LA4	0.05	0.16	0.33	1	1.2	19100	20500	20500	20500	20500	612	42800	120000
7	0.9	23000	0.8	3286	IE4	BF90G50-../S4E08MA4	0.045	0.15	0.3	0.9	1	16400	19300	23000	23000	23000	610	42800	120000
7	0.9	23000	0.8	3286	IE5	BF90G50-../S5E08LA4	0.045	0.15	0.3	0.9	1	21000	23000	23000	23000	23000	612	42800	120000

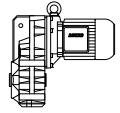
 **$M_N = 10 \text{ Nm}$  ( $P_N = 3.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
10	520	57	1.1	5.72	IE3	BF06-../SPE08LA4	26	87	174	520	620	37	45.5	57	57	57	17	1600	-
10	390	76	0.89	7.66	IE3	BF06-../SPE08LA4	19.5	65	130	390	465	49.5	61	76	76	76	17	1800	-
10	530	56	2.5	5.6	IE3	BF10-../SPE08LA4	26.5	89	178	530	640	36	44.5	56	56	56	28	1950	-
10	395	75	2	7.58	IE3	BF10-../SPE08LA4	19.5	65	131	395	470	49	60	75	75	75	28	2200	-
10	305	96	1.8	9.69	IE3	BF10-../SPE08LA4	15	51	103	305	370	62	77	96	96	96	28	2350	-
10	250	118	1.5	11.84	IE3	BF10-../SPE08LA4	12.5	42	84	250	300	76	94	118	118	118	28	2500	-
10	199	150	1.2	15.04	IE3	BF10-../SPE08LA4	9.9	33	66	199	235	97	120	150	150	150	28	2800	-
10	164	182	1.3	18.23	IE3	BF10-../SPE08LA4	8.2	27	54	164	197	118	145	182	182	182	28	2900	-
10	149	200	1.2	20.05	IE3	BF10-../SPE08LA4	7.4	24.5	49.5	149	179	130	160	200	200	200	28	3000	-
10	128	230	1	23.28	IE3	BF10-../SPE08LA4	6.4	21	42.5	128	154	151	186	230	230	230	28	3200	-
10	117	255	0.94	25.6	IE3	BF10-../SPE08LA4	5.8	19.5	39	117	140	166	200	255	255	255	28	3350	-
10	105	280	0.84	28.47	IE3	BF10-../SPE08LA4	5.2	17.5	35	105	126	185	225	280	280	280	28	3450	-
10	375	80	2.8	8	IE3	BF20-../SPE08LA4	18.5	62	125	375	450	52	64	80	80	80	35	2850	-
10	285	105	2.4	10.51	IE3	BF20-../SPE08LA4	14	47.5	95	285	340	68	84	105	105	105	35	3100	-
10	225	131	2.2	13.18	IE3	BF20-../SPE08LA4	11	37.5	75	225	270	85	105	131	131	131	35	3300	-
10	193	155	2	15.54	IE3	BF20-../SPE08LA4	9.6	32	64	193	230	101	124	155	155	155	35	3450	-
10	178	167	2.1	16.77	IE3	BF20-../SPE08LA4	8.9	29.5	59	178	210	109	134	167	167	167	35	3500	-
10	162	184	2	18.45	IE3	BF20-../SPE08LA4	8.1	27	54	162	195	119	147	184	184	184	35	3600	-
10	136	220	1.8	22.04	IE3	BF20-../SPE08LA4	6.8	22.5	45	136	163	143	176	220	220	220	35	3800	-
10	123	240	1.6	24.25	IE3	BF20-../SPE08LA4	6.1	20.5	41	123	148	157	194	240	240	240	35	3950	-
10	108	275	1.5	27.62	IE3	BF20-../SPE08LA4	5.4	18	36	108	130	179	220	275	275	275	35	4150	-
10	98	300	1.4	30.4	IE3	BF20-../SPE08LA4	4.9	16	32.5	98	118	197	240	300	300	300	35	4400	-
10	92	325	1.3	32.58	IE3	BF20-../SPE08LA4	4.6	15	30.5	92	110	210	260	325	325	325	35	4450	-
10	83	355	1.2	35.85	IE3	BF20-../SPE08LA4	4.1	13.5	27.5	83	100	230	285	355	355	355	35	4650	-
10	71	415	1	41.72	IE3	BF20-../SPE08LA4	3.5	11.5	23.5	71	86	270	330	415	415	415	35	4950	-
10	65	455	0.92	45.9	IE3	BF20-../SPE08LA4	3.2	10.5	21.5	65	78	295	365	455	455	455	35	5100	-
10	61	485	0.86	48.56	IE3	BF20-../SPE08LA4	3	10	20.5	61	74	315	385	485	485	485	35	5200	-
10	230	129	2.8	12.91	IE3	BF30-../SPE08LA4	11.5	38.5	77	230	275	83	103	129	129	129	45	3050	-
10	187	160	2.5	16	IE3	BF30-../SPE08LA4	9.3	31	62	187	225	104	128	160	160	160	45	3250	-
10	169	176	2.7	17.65	IE3	BF30-../SPE08LA4	8.4	28	56	169	200	114	141	176	176	176	45	3300	-
10	154	194	2.6	19.41	IE3	BF30-../SPE08LA4	7.7	25.5	51	154	185	126	155	194	194	194	45	3400	-
10	137	215	2.4	21.85	IE3	BF30-../SPE08LA4	6.8	22.5	45.5	137	164	142	174	215	215	215	45	3500	-
10	124	240	2.3	24.03	IE3	BF30-../SPE08LA4	6.2	20.5	41.5	124	149	156	192	240	240	240	45	3600	-
10	106	280	2	28.23	IE3	BF30-../SPE08LA4	5.3												

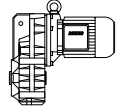


# BF-series shaft-mounted geared motors

## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 10 \text{ Nm}$  ( $P_N = 3.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
10	66	450	1.3	45.1	IE3	BF30-../SPE08LA4	3.3	11	22	66	79	290	360	450	450	450	45	4700	-
10	57	520	1.1	52.2	IE3	BF30-../SPE08LA4	2.8	9.5	19	57	68	335	415	520	520	520	45	5000	-
10	52	570	0.99	57.41	IE3	BF30-../SPE08LA4	2.6	8.7	17	52	62	370	455	570	570	570	45	5200	-
10	49	610	0.93	61.17	IE3	BF30-../SPE08LA4	2.4	8.1	16	49	58	395	485	610	610	610	45	5300	-
10	44.5	670	0.85	67.28	IE3	BF30-../SPE08LA4	2.2	7.4	14.5	44.5	53	435	530	670	670	670	45	5500	-
10	111	265	2.9	26.86	IE3	BF40-../SPE08LA4	5.5	18.5	37	111	134	174	210	265	265	265	54	5600	-
10	101	295	2.7	29.55	IE3	BF40-../SPE08LA4	5	16.5	33.5	101	121	192	235	295	295	295	54	5800	-
10	87	340	2.5	34.21	IE3	BF40-../SPE08LA4	4.3	14.5	29	87	105	220	270	340	340	340	54	6000	-
10	79	375	2.4	37.64	IE3	BF40-../SPE08LA4	3.9	13	26.5	79	95	240	300	375	375	375	54	6200	-
10	72	410	2.2	41.42	IE3	BF40-../SPE08LA4	3.6	12	24	72	86	265	330	410	410	410	54	6500	-
10	65	455	2	45.56	IE3	BF40-../SPE08LA4	3.2	10.5	21.5	65	79	295	360	455	455	455	54	6800	-
10	61	485	1.8	48.92	IE3	BF40-../SPE08LA4	3	10	20	61	73	315	390	485	485	485	54	7000	-
10	55	530	1.7	53.82	IE3	BF40-../SPE08LA4	2.7	9.2	18.5	55	66	345	430	530	530	530	54	7200	-
10	48.5	610	1.5	61.25	IE3	BF40-../SPE08LA4	2.4	8.1	16	48.5	58	395	490	610	610	610	54	7600	-
10	44.5	670	1.3	67.38	IE3	BF40-../SPE08LA4	2.2	7.4	14.5	44.5	53	435	530	670	670	670	54	8000	-
10	42	710	1.3	71.4	IE3	BF40-../SPE08LA4	2.1	7	14	42	50	460	570	710	710	710	54	8100	-
10	38	780	1.1	78.55	IE3	BF40-../SPE08LA4	1.9	6.3	12.5	38	45.5	510	620	780	780	780	54	8500	-
10	35.5	830	1.1	83.91	IE3	BF40-../SPE08LA4	1.7	5.9	11.5	35.5	42.5	540	670	830	830	830	54	8700	-
10	32	920	0.97	92.31	IE3	BF40-../SPE08LA4	1.6	5.4	10.5	32	38.5	600	730	920	920	920	54	9100	-
10	29.5	1010	0.89	101	IE3	BF40-../SPE08LA4	1.4	4.9	9.9	29.5	35.5	650	800	1010	1010	1010	54	9400	-
10	27	1110	0.81	111.1	IE3	BF40-../SPE08LA4	1.3	4.5	9	27	32	720	880	1110	1110	1110	54	9800	-
10	63	470	2.8	47.14	IE3	BF50-../SPE08LA4	3.1	10.5	21	63	76	305	375	470	470	470	83	8900	-
10	52	560	2.3	56.86	IE3	BF50-../SPE08LA4	2.6	8.7	17.5	52	63	365	450	560	560	560	83	9300	-
10	47	630	2	63.59	IE3	BF50-../SPE08LA4	2.3	7.8	15.5	47	56	410	500	630	630	630	83	9800	-
10	41	720	1.8	72.72	IE3	BF50-../SPE08LA4	2	6.8	13.5	41	49.5	470	580	720	720	720	83	10700	-
10	36.5	810	1.6	81.33	IE3	BF50-../SPE08LA4	1.8	6.1	12	36.5	44	520	650	810	810	810	83	11300	-
10	33	900	1.4	90.24	IE3	BF50-../SPE08LA4	1.6	5.5	11	33	39.5	580	720	900	900	900	83	11800	-
10	29.5	1000	1.3	100.9	IE3	BF50-../SPE08LA4	1.4	4.9	9.9	29.5	35.5	650	800	1000	1000	1000	83	12300	-
10	26	1140	1.1	114	IE3	BF50-../SPE08LA4	1.3	4.3	8.7	26	31.5	740	910	1140	1140	1140	83	12900	-
10	23.5	1270	1	127.5	IE3	BF50-../SPE08LA4	1.1	3.9	7.8	23.5	28	820	1020	1270	1270	1270	83	13600	-
10	21.5	1380	0.94	138.1	IE3	BF50Z-../SPE08LA4	1	3.6	7.2	21.5	26	890	1100	1380	1380	1380	88	13600	-
10	19	1540	0.84	154.5	IE3	BF50Z-../SPE08LA4	0.95	3.2	6.4	19	23	1000	1230	1540	1540	1540	88	13600	-
10	21	1400	1.6	140.8	IE3	BF60Z-../SPE08LA4	1	3.5	7.1	21	25.5	910	1120	1400	1400	1400	131	15300	43300
10	17.5	1690	1.4	169.2	IE3	BF60Z-../SPE08LA4	0.85	2.9	5.9	17.5	21	1090	1350	1690	1690	1690	131	15300	43300
10	15.5	1870	1.2	187.7	IE3	BF60Z-../SPE08LA4	0.75	2.6	5.3	15.5	19	1220	1500	1870	1870	1870	131	15300	43300
10	13.5	2200	1	221.4	IE3	BF60Z-../SPE08LA4	0.65	2.2	4.5	13.5	16	1430	1770	2200	2200	2200	131	15300	43300
10	12	2450	0.94	245.6	IE3	BF60Z-../SPE08LA4	0.6	2	4	12	14.5	1590	1960	2450	2450	2450	131	15300	43300
10	16.5	1790	2.9	179.7	IE3	BF70Z-../SPE08LA4	0.8	2.7	5.5	16.5	20	1160	1430	1790	1790	1790	220	16100	47700
10	15	1990	2.6	199.7	IE3	BF70Z-../SPE08LA4	0.75	2.5	5	15	18	1290	1590	1990	1990	1990	220	16100	47700
10	12.5	2300	2.2	233	IE3	BF70Z-../SPE08LA4	0.6	2.1	4.2	12.5	15	1510	1860	2300	2300	2300	220	16100	47700
10	11.5	2550	2	258.7	IE3	BF70Z-../SPE08LA4	0.55	1.9	3.8	11.5	13.5	1680	2050	2550	2550	2550	220	16100	47700
10	9.9	3000	1.7	301.8	IE3	BF70Z-../SPE08LA4	0.49	1.6	3.3	9.9	11.5	1960	2400	3000	3000	3000	220	16100	47700
10	8.7	3400	1.5	341.7	IE3	BF70Z-../SPE08LA4	0.43	1.4	2.9	8.7	10.5	2200	2700	3400	3400	3400	220	16100	47700
10	7.5	3950	1.3	398.7	IE3	BF70Z-../SPE08LA4	0.37	1.2	2.5	7.5	9	2550	3150	3950	3950	3950	220	16100	47700
10	6.8	4350	1.2	439.2	IE3	BF70Z-../SPE08LA4	0.34	1.1	2.2	6.8	8.1	2850	3500	4350	4350	4350	220	16100	47700
10	5.8	5100	1	512.4	IE3	BF70Z-../SPE08LA4	0.29	0.95	1.9	5.8	7	3300	4050	5100	5100	5100	220	16100	47700
10	5.7	5200	1.1	524.1	IE3	BF70G20-../SPE08LA4	0.28	0.95	1.9	5.7	6.8	3400	4150	5200	5200	5200	217	16100	47700
10	5.1	5700	0.99	577.5	IE3	BF70G20-../SPE08LA4	0.25	0.85	1.7	5.1	6.2	3750	4600	5700	5700	5700	217	16100	47700
10	4.4	6700	0.85	673.6	IE3	BF70G20-../SPE08LA4	0.22	0.7	1.4	4.4	5.3	4350	5300	6700	6700	6700	217	16100	47700
10	8.6	3450	3	347.3	IE3	BF80Z-../SPE08LA4	0.43	1.4	2.8	8.6	10	2250	2750	3450	3450	3450	336	39600	75000
10	7.6	3900	2.7	394.2	IE3	BF80Z-../SPE08LA4	0.38	1.2	2.5	7.6	9.1	2550	3150	3900	3900	3900	336	39600	75000
10	6.6	4500	2.3	450.4	IE3	BF80Z-../SPE08LA4	0.33	1.1	2.2	6.6	7.9	2900	3600	4500	4500	4500	336	39600	75000
10	5.8	5100	2.1	511.2	IE3	BF80Z-../SPE08LA4	0.29	0.95	1.9	5.8	7	3300	4050	5100	5100	5100	336	39600	75000
10	5.1	5800	1.8	583.4	IE3	BF80Z-../SPE08LA4	0.25	0.85	1.7	5.1	6.1	3750	4650	5800	5800	5800	336	39600	75000
10	4.5	6600	1.6	662.1	IE3	BF80Z-../SPE08LA4	0.22	0.75	1.5	4.5	5.4	4300	5200	6600	6600	6600	336	39600	75000
10	3.8	7700	1.4	770.6	IE3	BF80Z-../SPE08LA4	0.19	0.6	1.2	3.8	4.6	5000	6100	7700	7700	7700	336	39600	75000
10	3.4	8700	1.2	874.6	IE3	BF80Z-../SPE08LA4	0.17	0.55	1.1	3.4	4.1	5600	6900	8700	8700	8700	336	39600	75000
10	3	9900	1.1	990.4	IE3	BF80Z-../SPE08LA4	0.15	0.5	1	3	3.6	6400	7900	9900	9900	9900	336	39600	75000
10	2.6	11200	0.93	1124	IE3	BF80Z-../SPE08LA4	0.13	0.44	0.85	2.6	3.2	7300	8900	11200	11200	11200	336	39600	75000
10	3	9700	1.9	976.1	IE3	BF90G50-../SPE08LA4	0.15	0.5	1	3	3.6	6300	7800	9700	9700	9700	612	42800	120000
10	2.8	10400	1.8	1043	IE3	BF90G50-../SPE08LA4	0.14	0.47	0.95	2.8	3.4	6700	8300	10400	10400	10400	612	42800	120000
10	2.4	12000	1.5	1204	IE3	BF90G50-../SPE08LA4	0.12	0.41	0.8	2.4	2.9	7800	9600	12000	12000	12000	612	42800	120000
10	2	14400	1.3	1444	IE3	BF90G50-../SPE08LA4	0.1	0.34	0.65	2	2.4	9300	11500	14400	14400	14400	612	42800	120000
10	1.7	16700	1.1	1678	IE3	BF90G50-../SPE08LA4	0.085	0.29	0.55	1.7	2.1	10900	13400	16700	16700	16700	612	42800	120000
10	1.6	18600	0.99	1867	IE3	BF90G50-../SPE08LA4	0.08	0.26	0.5	1.6	1.9	12100	14900	18600	18600	18600	612	42800	120000
10	1.3	21500	0.86	2154	IE3	BF90G50-../SPE08LA4	0.065	0.23											

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 13 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

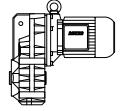
$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[:1]										[kg]	[N]	[N]			
13	530	72	1.9	5.6	IE4	BF10-../S4E09SA4	26.5	89	178	530	640	47.5	56	72	72	72	32	1950	-
13	395	98	1.6	7.58	IE4	BF10-../S4E09SA4	19.5	65	131	395	470	64	75	98	98	98	32	2200	-
13	305	125	1.4	9.69	IE4	BF10-../S4E09SA4	15	51	103	305	370	82	96	125	125	125	32	2350	-
13	250	153	1.2	11.84	IE4	BF10-../S4E09SA4	12.5	42	84	250	300	100	118	153	153	153	32	2500	-
13	199	195	0.94	15.04	IE4	BF10-../S4E09SA4	9.9	33	66	199	235	127	150	195	195	195	32	2800	-
13	164	235	1	18.23	IE4	BF10-../S4E09SA4	8.2	27	54	164	197	154	182	235	235	235	32	2900	-
13	149	260	0.92	20.05	IE4	BF10-../S4E09SA4	7.4	24.5	49.5	149	179	170	200	260	260	260	32	3000	-
13	495	78	2.5	6.04	IE4	BF20-../S4E09SA4	24.5	82	165	495	590	51	60	78	78	78	38	2550	-
13	375	104	2.1	8	IE4	BF20-../S4E09SA4	18.5	62	125	375	450	68	80	104	104	104	38	2850	-
13	285	136	1.9	10.51	IE4	BF20-../S4E09SA4	14	47.5	95	285	340	89	105	136	136	136	38	3100	-
13	225	171	1.7	13.18	IE4	BF20-../S4E09SA4	11	37.5	75	225	270	112	131	171	171	171	38	3300	-
13	193	200	1.5	15.54	IE4	BF20-../S4E09SA4	9.6	32	64	193	230	132	155	200	200	200	38	3450	-
13	178	215	1.7	16.77	IE4	BF20-../S4E09SA4	8.9	29.5	59	178	210	142	167	215	215	215	38	3500	-
13	162	235	1.5	18.45	IE4	BF20-../S4E09SA4	8.1	27	54	162	195	156	184	235	235	235	38	3600	-
13	136	285	1.4	22.04	IE4	BF20-../S4E09SA4	6.8	22.5	45	136	163	187	220	285	285	285	38	3800	-
13	123	315	1.3	24.25	IE4	BF20-../S4E09SA4	6.1	20.5	41	123	148	205	240	315	315	315	38	3950	-
13	108	355	1.2	27.62	IE4	BF20-../S4E09SA4	5.4	18	36	108	130	230	275	355	355	355	38	4150	-
13	98	395	1.1	30.4	IE4	BF20-../S4E09SA4	4.9	16	32.5	98	118	255	300	395	395	395	38	4400	-
13	92	420	0.99	32.58	IE4	BF20-../S4E09SA4	4.6	15	30.5	92	110	275	325	420	420	420	38	4450	-
13	83	465	0.9	35.85	IE4	BF20-../S4E09SA4	4.1	13.5	27.5	83	100	300	355	465	465	465	38	4650	-
13	370	104	2.7	8.07	IE4	BF30-../S4E09SA4	18.5	61	123	370	445	68	80	104	104	104	49	2650	-
13	300	129	2.5	9.99	IE4	BF30-../S4E09SA4	15	50	100	300	360	84	99	129	129	129	49	2850	-
13	230	167	2.2	12.91	IE4	BF30-../S4E09SA4	11.5	38.5	77	230	275	109	129	167	167	167	49	3050	-
13	187	205	1.9	16	IE4	BF30-../S4E09SA4	9.3	31	62	187	225	136	160	205	205	205	49	3250	-
13	169	225	2.1	17.65	IE4	BF30-../S4E09SA4	8.4	28	56	169	200	150	176	225	225	225	49	3300	-
13	154	250	2	19.41	IE4	BF30-../S4E09SA4	7.7	25.5	51	154	185	164	194	250	250	250	49	3400	-
13	137	280	1.8	21.85	IE4	BF30-../S4E09SA4	6.8	22.5	45.5	137	164	185	215	280	280	280	49	3500	-
13	124	310	1.8	24.03	IE4	BF30-../S4E09SA4	6.2	20.5	41.5	124	149	200	240	310	310	310	49	3600	-
13	106	365	1.6	28.23	IE4	BF30-../S4E09SA4	5.3	17.5	35	106	127	235	280	365	365	365	49	3800	-
13	96	400	1.4	31.05	IE4	BF30-../S4E09SA4	4.8	16	32	96	115	260	310	400	400	400	49	4000	-
13	85	455	1.3	35	IE4	BF30-../S4E09SA4	4.2	14	28.5	85	102	295	350	455	455	455	49	4200	-
13	77	500	1.1	38.49	IE4	BF30-../S4E09SA4	3.8	12.5	25.5	77	93	325	380	500	500	500	49	4400	-
13	73	530	1.1	41.01	IE4	BF30-../S4E09SA4	3.6	12	24	73	87	345	410	530	530	530	49	4500	-
13	66	580	0.97	45.1	IE4	BF30-../S4E09SA4	3.3	11	22	66	79	380	450	580	580	580	49	4700	-
13	57	670	0.84	52.2	IE4	BF30-../S4E09SA4	2.8	9.5	19	57	68	440	520	670	670	670	49	5000	-
13	250	153	3	11.79	IE4	BF40-../S4E09SA4	12.5	42	84	250	305	100	117	153	153	153	58	4450	-
13	199	195	2.7	15.02	IE4	BF40-../S4E09SA4	9.9	33	66	199	235	127	150	195	195	195	58	4800	-
13	172	225	2.8	17.35	IE4	BF40-../S4E09SA4	8.6	28.5	57	172	205	147	173	225	225	225	58	4950	-
13	157	245	2.7	19.09	IE4	BF40-../S4E09SA4	7.8	26	52	157	188	162	190	245	245	245	58	5100	-
13	138	280	2.5	21.6	IE4	BF40-../S4E09SA4	6.9	23	46	138	166	183	215	280	280	280	58	5200	-
13	126	305	2.4	23.77	IE4	BF40-../S4E09SA4	6.3	21	42	126	151	200	235	305	305	305	58	5400	-
13	111	345	2.2	26.86	IE4	BF40-../S4E09SA4	5.5	18.5	37	111	134	225	265	345	345	345	58	5600	-
13	101	380	2.1	29.55	IE4	BF40-../S4E09SA4	5	16.5	33.5	101	121	250	295	380	380	380	58	5800	-
13	87	440	1.9	34.21	IE4	BF40-../S4E09SA4	4.3	14.5	29	87	105	290	340	440	440	440	58	6000	-
13	79	485	1.8	37.64	IE4	BF40-../S4E09SA4	3.9	13	26.5	79	95	315	375	485	485	485	58	6200	-
13	72	530	1.7	41.42	IE4	BF40-../S4E09SA4	3.6	12	24	72	86	350	410	530	530	530	58	6500	-
13	65	590	1.5	45.56	IE4	BF40-../S4E09SA4	3.2	10.5	21.5	65	79	385	455	590	590	590	58	6800	-
13	61	630	1.4	48.92	IE4	BF40-../S4E09SA4	3	10	20	61	73	415	485	630	630	630	58	7000	-
13	55	690	1.3	53.82	IE4	BF40-../S4E09SA4	2.7	9.2	18.5	55	66	455	530	690	690	690	58	7200	-
13	48.5	790	1.1	61.25	IE4	BF40-../S4E09SA4	2.4	8.1	16	48.5	58	520	610	790	790	790	58	7600	-
13	44.5	870	1	67.38	IE4	BF40-../S4E09SA4	2.2	7.4	14.5	44.5	53	570	670	870	870	870	58	8000	-
13	42	920	0.97	71.4	IE4	BF40-../S4E09SA4	2.1	7	14	42	50	600	710	920	920	920	58	8100	-
13	38	1020	0.88	78.55	IE4	BF40-../S4E09SA4	1.9	6.3	12.5	38	45.5	660	780	1020	1020	1020	58	8500	-
13	35.5	1090	0.83	83.91	IE4	BF40-../S4E09SA4	1.7	5.9	11.5	35.5	42.5	710	830	1090	1090	1090	58	8700	-
13	84	460	2.8	35.49	IE4	BF50-../S4E09SA4	4.2	14	28	84	101	300	350	460	460	460	86	7800	-
13	71	540	2.4	42.15	IE4	BF50-../S4E09SA4	3.5	11.5	23.5	71	85	355	420	540	540	540	86	8500	-
13	63	610	2.1	47.14	IE4	BF50-../S4E09SA4	3.1	10.5	21	63	76	400	470	610	610	610	86	8900	-
13	52	730	1.8	56.86	IE4	BF50-../S4E09SA4	2.6	8.7	17.5	52	63	480	560	730	730	730	86	9300	-
13	47	820	1.6	63.59	IE4	BF50-../S4E09SA4	2.3	7.8	15.5	47	56	540	630	820	820	820	86	9800	-
13	41	940	1.4	72.72	IE4	BF50-../S4E09SA4	2	6.8	13.5	41	49.5	610	720	940	940	940	86	10700	-
13	36.5	1050	1.2	81.33	IE4	BF50-../S4E09SA4	1.8	6.1	12	36.5	44	690	810	1050	1050	1050	86	11300	-
13	33	1170	1.1	90.24	IE4	BF50-../S4E09SA4	1.6	5.5	11	33	39.5	760	900	1170	1170	1170	86	11800	-
13	29.5	1310	0.99	100.9	IE4	BF50-../S4E09SA4	1.4	4.9	9.9	29.5	35.5	850	1000	1310	1310	1310	86	12300	-
13	26	1480	0.88	114	IE4	BF50-../S4E09SA4	1.3	4.3	8.7	26	31.5	960	1140	1480	1480	1480	86	12900	-
13	49.5	780	2.9	60.4	IE4	BF60-../S4E09SA4	2.4	8.2	16.5	49.5	59	510	600	780	780	780	116	11100	31400
13	41.5	930	2.5	72.15	IE4	BF60-../S4E09SA4	2	6.9	13.5	41.5	49.5	610	720	930	930	930	116	12000	34000
13	37	1040	2.2	80.05	IE4	BF60-../S4E09SA4	1.8	6.2	12	37	44.5	680	800	1040	1040	1040	116	12600	35600
13	32	1210	1.9	93.44	IE4	BF60-../S4E09SA4	1.6	5.3	10.5	32	38.5	790	930	1210	1210	1210	116	13500	38200
13																			



# BF-series shaft-mounted geared motors

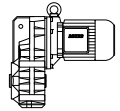
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 13 \text{ Nm}$ ( $P_N = 4 \text{ kW}$ )

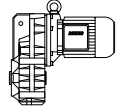


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
13	19	2000	2.6	154	IE4	BF70Z-../S4E09SA4	0.95	3.2	6.4	19	23	1300	1540	2000	2000	223	16100	47700	
13	16.5	2300	2.2	179.7	IE4	BF70Z-../S4E09SA4	0.8	2.7	5.5	16.5	20	1520	1790	2300	2300	223	16100	47700	
13	15	2550	2	199.7	IE4	BF70Z-../S4E09SA4	0.75	2.5	5	15	18	1690	1990	2550	2550	223	16100	47700	
13	12.5	3000	1.7	233	IE4	BF70Z-../S4E09SA4	0.6	2.1	4.2	12.5	15	1980	2300	3000	3000	223	16100	47700	
13	11.5	3350	1.5	258.7	IE4	BF70Z-../S4E09SA4	0.55	1.9	3.8	11.5	13.5	2150	2550	3350	3350	223	16100	47700	
13	9.9	3900	1.3	301.8	IE4	BF70Z-../S4E09SA4	0.49	1.6	3.3	9.9	11.5	2550	3000	3900	3900	223	16100	47700	
13	8.7	4400	1.2	341.7	IE4	BF70Z-../S4E09SA4	0.43	1.4	2.9	8.7	10.5	2900	3400	4400	4400	223	16100	47700	
13	7.5	5100	1	398.7	IE4	BF70Z-../S4E09SA4	0.37	1.2	2.5	7.5	9	3350	3950	5100	5100	223	16100	47700	
13	6.8	5700	0.91	439.2	IE4	BF70Z-../S4E09SA4	0.34	1.1	2.2	6.8	8.1	3700	4350	5700	5700	223	16100	47700	
13	5.7	6800	0.84	524.1	IE4	BF70G20-../S4E09SA4	0.28	0.95	1.9	5.7	6.8	4450	5200	6800	6800	221	16100	47700	
13	11	3450	2.7	269.1	IE4	BF80-../S4E09SA4	0.55	1.8	3.7	11	13	2250	2650	3450	3450	299	39600	75000	
13	10	3750	2.8	291.7	IE4	BF80Z-../S4E09SA4	0.5	1.7	3.4	10	12	2450	2900	3750	3750	340	39600	75000	
13	8.6	4500	2.3	347.3	IE4	BF80Z-../S4E09SA4	0.43	1.4	2.8	8.6	10	2950	3450	4500	4500	340	39600	75000	
13	7.6	5100	2	394.2	IE4	BF80Z-../S4E09SA4	0.38	1.2	2.5	7.6	9.1	3350	3900	5100	5100	340	39600	75000	
13	6.6	5800	1.8	450.4	IE4	BF80Z-../S4E09SA4	0.33	1.1	2.2	6.6	7.9	3800	4500	5800	5800	340	39600	75000	
13	5.8	6600	1.6	511.2	IE4	BF80Z-../S4E09SA4	0.29	0.95	1.9	5.8	7	4300	5100	6600	6600	340	39600	75000	
13	5.1	7500	1.4	583.4	IE4	BF80Z-../S4E09SA4	0.25	0.85	1.7	5.1	6.1	4950	5800	7500	7500	340	39600	75000	
13	4.5	8600	1.2	662.1	IE4	BF80Z-../S4E09SA4	0.22	0.75	1.5	4.5	5.4	5600	6600	8600	8600	340	39600	75000	
13	3.8	10000	1	770.6	IE4	BF80Z-../S4E09SA4	0.19	0.6	1.2	3.8	4.6	6500	7700	10000	10000	340	39600	75000	
13	3.4	11300	0.92	874.6	IE4	BF80Z-../S4E09SA4	0.17	0.55	1.1	3.4	4.1	7400	8700	11300	11300	340	39600	75000	
13	3	12800	0.82	990.4	IE4	BF80Z-../S4E09SA4	0.15	0.5	1	3	3.6	8400	9900	12800	12800	340	39600	75000	
13	5.8	6600	2.8	508.5	IE4	BF90Z-../S4E09SA4	0.29	0.95	1.9	5.8	7	4300	5000	6600	6600	604	42800	120000	
13	5	7600	2.4	591.1	IE4	BF90Z-../S4E09SA4	0.25	0.8	1.6	5	6	5000	5900	7600	7600	604	42800	120000	
13	4.5	8500	2.2	658.1	IE4	BF90Z-../S4E09SA4	0.22	0.75	1.5	4.5	5.4	5500	6500	8500	8500	604	42800	120000	
13	3.9	9800	1.9	759	IE4	BF90Z-../S4E09SA4	0.19	0.65	1.3	3.9	4.7	6400	7500	9800	9800	604	42800	120000	
13	3.5	10900	1.7	845.1	IE4	BF90Z-../S4E09SA4	0.17	0.55	1.1	3.5	4.2	7100	8400	10900	10900	604	42800	120000	
13	3	12600	1.5	976.1	IE4	BF90G50-../S4E09SA4	0.15	0.5	1	3	3.6	8200	9700	12600	12600	616	42800	120000	
13	2.8	13500	1.4	1043	IE4	BF90G50-../S4E09SA4	0.14	0.47	0.95	2.8	3.4	8800	10400	13500	13500	616	42800	120000	
13	2.4	15600	1.2	1204	IE4	BF90G50-../S4E09SA4	0.12	0.41	0.8	2.4	2.9	10200	12000	15600	15600	616	42800	120000	
13	2	18700	0.99	1444	IE4	BF90G50-../S4E09SA4	0.1	0.34	0.65	2	2.4	12200	14400	18700	18700	616	42800	120000	
13	1.7	21500	0.85	1678	IE4	BF90G50-../S4E09SA4	0.085	0.29	0.55	1.7	2.1	14200	16700	21500	21500	616	42800	120000	

### $M_N = 17.5 \text{ Nm}$ ( $P_N = 5.5 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
17.5	530	98	1.4	5.6	IE5	BF10-../S5E09XA4	26.5	89	178	530	640	72	89	98	98	98	40	1950	-
17.5	395	132	1.2	7.58	IE5	BF10-../S5E09XA4	19.5	65	131	395	470	98	121	132	132	132	40	2200	-
17.5	305	169	1	9.69	IE5	BF10-../S5E09XA4	15	51	103	305	370	125	155	169	169	169	40	2350	-
17.5	250	205	0.88	11.84	IE5	BF10-../S5E09XA4	12.5	42	84	250	300	153	189	205	205	205	40	2500	-
17.5	495	105	1.9	6.04	IE5	BF20-../S5E09XA4	24.5	82	165	495	590	78	96	105	105	105	46	2550	-
17.5	375	140	1.6	8	IE5	BF20-../S5E09XA4	18.5	62	125	375	450	104	128	140	140	140	46	2850	-
17.5	285	183	1.4	10.51	IE5	BF20-../S5E09XA4	14	47.5	95	285	340	136	168	183	183	183	46	3100	-
17.5	225	230	1.2	13.18	IE5	BF20-../S5E09XA4	11	37.5	75	225	270	171	210	230	230	230	46	3300	-
17.5	193	270	1.1	15.54	IE5	BF20-../S5E09XA4	9.6	32	64	193	230	200	245	270	270	270	46	3450	-
17.5	178	290	1.2	16.77	IE5	BF20-../S5E09XA4	8.9	29.5	59	178	210	215	265	290	290	290	46	3500	-
17.5	162	320	1.1	18.45	IE5	BF20-../S5E09XA4	8.1	27	54	162	195	235	295	320	320	320	46	3600	-
17.5	136	385	1	22.04	IE5	BF20-../S5E09XA4	6.8	22.5	45	136	163	285	350	385	385	385	46	3800	-
17.5	123	420	0.94	24.25	IE5	BF20-../S5E09XA4	6.1	20.5	41	123	148	315	385	420	420	420	46	3950	-
17.5	108	480	0.87	27.62	IE5	BF20-../S5E09XA4	5.4	18	36	108	130	355	440	480	480	480	46	4150	-
17.5	470	110	2.4	6.34	IE4	BF30-../S4E11SA6	23.5	78	157	470	560	110	110	110	110	110	66	2400	-
17.5	470	110	2.4	6.34	IE5	BF30-../S5E09XA4	23.5	78	157	470	560	82	101	110	110	110	57	2400	-
17.5	370	141	2	8.07	IE4	BF30-../S4E11SA6	18.5	61	123	370	445	141	141	141	141	141	66	2650	-
17.5	370	141	2	8.07	IE5	BF30-../S5E09XA4	18.5	61	123	370	445	104	129	141	141	141	57	2650	-
17.5	300	174	1.8	9.99	IE4	BF30-../S4E11SA6	15	50	100	300	360	174	174	174	174	174	66	2850	-
17.5	300	174	1.8	9.99	IE5	BF30-../S5E09XA4	15	50	100	300	360	129	159	174	174	174	57	2850	-
17.5	230	225	1.6	12.91	IE4	BF30-../S4E11SA6	11.5	38.5	77	230	275	225	225	225	225	225	66	3050	-
17.5	230	225	1.6	12.91	IE5	BF30-../S5E09XA4	11.5	38.5	77	230	275	167	205	225	225	225	57	3050	-
17.5	187	280	1.4	16	IE4	BF30-../S4E11SA6	9.3	31	62	187	225	280	280	280	280	280	66	3250	-
17.5	187	280	1.4	16	IE5	BF30-../S5E09XA4	9.3	31	62	187	225	205	255	280	280	280	57	3250	-
17.5	169	305	1.5	17.65	IE4	BF30-../S4E11SA6	8.4	28	56	169	200	305	305	305	305	305	66	3300	-
17.5	169	305	1.5	17.65	IE5	BF30-../S5E09XA4	8.4	28	56	169	200	225	280	305	305	305	57	3300	-
17.5	154	335	1.5	19.41	IE4	BF30-../S4E11SA6	7.7	25.5	51	154	185	335	335	335	335	335	66	3400	-
17.5	154	335	1.5	19.41	IE5	BF30-../S5E09XA4	7.7	25.5	51	154	185	250	310	335	335	335	57	3400	-
17.5	137	380	1.4	21.85	IE4	BF30-../S4E11SA6	6.8	22.5	45.5	137	164	380	380	380	380	380	66	3500	-
17.5	137	380	1.4	21.85	IE5	BF30-../S5E09XA4	6.8	22.5	45.5	137	164	280	345	380	380	380	57	3500	-
17.5	124	420	1.3	24.03	IE4	BF30-../S4E11SA6	6.2	20.5	41.5	124	149	420	420	420	420	420	66	3600	-
17.5	124	420	1.3	24.03	IE5	BF30-../S5E09XA4	6.2	20.5	41.5	124	149	310	380	420	420	420	57	3600	-
17.5	106	490	1.2	28.23	IE4	BF30-../S4E11SA6	5.3	17.5	35										

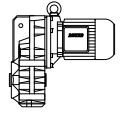
**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 17.5 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**

$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
17.5	85	610	0.93	35	IE4	BF30-../S4E11SA6	4.2	14	28.5	85	102	610	610	610	610	610	66	4200	-
17.5	85	610	0.93	35	IE5	BF30-../S5E09XA4	4.2	14	28.5	85	102	455	560	610	610	610	57	4200	-
17.5	77	670	0.85	38.49	IE4	BF30-../S4E11SA6	3.8	12.5	25.5	77	93	670	670	670	670	670	66	4400	-
17.5	77	670	0.85	38.49	IE5	BF30-../S5E09XA4	3.8	12.5	25.5	77	93	500	610	670	670	670	57	4400	-
17.5	390	133	2.7	7.62	IE4	BF40-../S4E11SA6	19.5	65	131	390	470	133	133	133	133	133	80	3900	-
17.5	390	133	2.7	7.62	IE5	BF40-../S5E09XA4	19.5	65	131	390	470	99	121	133	133	133	66	3900	-
17.5	315	165	2.5	9.48	IE4	BF40-../S4E11SA6	15.5	52	105	315	375	165	165	165	165	165	80	4150	-
17.5	315	165	2.5	9.48	IE5	BF40-../S5E09XA4	15.5	52	105	315	375	123	151	165	165	165	66	4150	-
17.5	250	205	2.3	11.79	IE4	BF40-../S4E11SA6	12.5	42	84	250	305	205	205	205	205	205	80	4450	-
17.5	250	205	2.3	11.79	IE5	BF40-../S5E09XA4	12.5	42	84	250	305	153	188	205	205	205	66	4450	-
17.5	199	260	2	15.02	IE4	BF40-../S4E11SA6	9.9	33	66	199	235	260	260	260	260	260	80	4800	-
17.5	199	260	2	15.02	IE5	BF40-../S5E09XA4	9.9	33	66	199	235	195	240	260	260	260	66	4800	-
17.5	172	300	2.1	17.35	IE4	BF40-../S4E11SA6	8.6	28.5	57	172	205	300	300	300	300	300	80	4950	-
17.5	172	300	2.1	17.35	IE5	BF40-../S5E09XA4	8.6	28.5	57	172	205	225	275	300	300	300	66	4950	-
17.5	157	330	2	19.09	IE4	BF40-../S4E11SA6	7.8	26	52	157	188	330	330	330	330	330	80	5100	-
17.5	157	330	2	19.09	IE5	BF40-../S5E09XA4	7.8	26	52	157	188	245	305	330	330	330	66	5100	-
17.5	138	375	1.9	21.6	IE4	BF40-../S4E11SA6	6.9	23	46	138	166	375	375	375	375	375	80	5200	-
17.5	138	375	1.9	21.6	IE5	BF40-../S5E09XA4	6.9	23	46	138	166	280	345	375	375	375	66	5200	-
17.5	126	415	1.8	23.77	IE4	BF40-../S4E11SA6	6.3	21	42	126	151	415	415	415	415	415	80	5400	-
17.5	126	415	1.8	23.77	IE5	BF40-../S5E09XA4	6.3	21	42	126	151	305	380	415	415	415	66	5400	-
17.5	111	470	1.6	26.86	IE4	BF40-../S4E11SA6	5.5	18.5	37	111	134	470	470	470	470	470	80	5600	-
17.5	111	470	1.6	26.86	IE5	BF40-../S5E09XA4	5.5	18.5	37	111	134	345	425	470	470	470	66	5600	-
17.5	101	510	1.5	29.55	IE4	BF40-../S4E11SA6	5	16.5	33.5	101	121	510	510	510	510	510	80	5800	-
17.5	101	510	1.5	29.55	IE5	BF40-../S5E09XA4	5	16.5	33.5	101	121	380	470	510	510	510	66	5800	-
17.5	87	590	1.4	34.21	IE4	BF40-../S4E11SA6	4.3	14.5	29	87	105	590	590	590	590	590	80	6000	-
17.5	87	590	1.4	34.21	IE5	BF40-../S5E09XA4	4.3	14.5	29	87	105	440	540	590	590	590	66	6000	-
17.5	79	650	1.4	37.64	IE4	BF40-../S4E11SA6	3.9	13	26.5	79	95	650	650	650	650	650	80	6200	-
17.5	79	650	1.4	37.64	IE5	BF40-../S5E09XA4	3.9	13	26.5	79	95	485	600	650	650	650	66	6200	-
17.5	72	720	1.2	41.42	IE4	BF40-../S4E11SA6	3.6	12	24	72	86	720	720	720	720	720	80	6500	-
17.5	72	720	1.2	41.42	IE5	BF40-../S5E09XA4	3.6	12	24	72	86	530	660	720	720	720	66	6500	-
17.5	65	790	1.1	45.56	IE4	BF40-../S4E11SA6	3.2	10.5	21.5	65	79	790	790	790	790	790	80	6800	-
17.5	65	790	1.1	45.56	IE5	BF40-../S5E09XA4	3.2	10.5	21.5	65	79	590	720	790	790	790	66	6800	-
17.5	61	850	1.1	48.92	IE4	BF40-../S4E11SA6	3	10	20	61	73	850	850	850	850	850	80	7000	-
17.5	61	850	1.1	48.92	IE5	BF40-../S5E09XA4	3	10	20	61	73	630	780	850	850	850	66	7000	-
17.5	55	940	0.96	53.82	IE4	BF40-../S4E11SA6	2.7	9.2	18.5	55	66	940	940	940	940	940	80	7200	-
17.5	55	940	0.96	53.82	IE5	BF40-../S5E09XA4	2.7	9.2	18.5	55	66	690	860	940	940	940	66	7200	-
17.5	48.5	1070	0.84	61.25	IE5	BF40-../S5E09XA4	2.4	8.1	16	48.5	58	790	980	1070	1070	1070	66	7600	-
17.5	129	400	2.7	23.14	IE4	BF50-../S4E11SA6	6.4	21.5	43	129	155	400	400	400	400	400	110	6800	-
17.5	129	400	2.7	23.14	IE5	BF50-../S5E09XA4	6.4	21.5	43	129	155	300	370	400	400	400	94	6800	-
17.5	115	450	2.6	25.88	IE4	BF50-../S4E11SA6	5.7	19	38.5	115	139	450	450	450	450	450	110	7100	-
17.5	115	450	2.6	25.88	IE5	BF50-../S5E09XA4	5.7	19	38.5	115	139	335	410	450	450	450	94	7100	-
17.5	94	550	2.3	31.73	IE4	BF50-../S4E11SA6	4.7	15.5	31.5	94	113	550	550	550	550	550	110	7500	-
17.5	94	550	2.3	31.73	IE5	BF50-../S5E09XA4	4.7	15.5	31.5	94	113	410	500	550	550	550	94	7500	-
17.5	84	620	2.1	35.49	IE4	BF50-../S4E11SA6	4.2	14	28	84	101	620	620	620	620	620	110	7800	-
17.5	84	620	2.1	35.49	IE5	BF50-../S5E09XA4	4.2	14	28	84	101	460	560	620	620	620	94	7800	-
17.5	71	730	1.8	42.15	IE4	BF50-../S4E11SA6	3.5	11.5	23.5	71	85	730	730	730	730	730	110	8500	-
17.5	71	730	1.8	42.15	IE5	BF50-../S5E09XA4	3.5	11.5	23.5	71	85	540	670	730	730	730	94	8500	-
17.5	63	820	1.6	47.14	IE4	BF50-../S4E11SA6	3.1	10.5	21	63	76	820	820	820	820	820	110	8900	-
17.5	63	820	1.6	47.14	IE5	BF50-../S5E09XA4	3.1	10.5	21	63	76	610	750	820	820	820	94	8900	-
17.5	52	990	1.3	56.86	IE4	BF50-../S4E11SA6	2.6	8.7	17.5	52	63	990	990	990	990	990	110	9300	-
17.5	52	990	1.3	56.86	IE5	BF50-../S5E09XA4	2.6	8.7	17.5	52	63	730	900	990	990	990	94	9300	-
17.5	47	1110	1.2	63.59	IE4	BF50-../S4E11SA6	2.3	7.8	15.5	47	56	1110	1110	1110	1110	1110	110	9800	-
17.5	47	1110	1.2	63.59	IE5	BF50-../S5E09XA4	2.3	7.8	15.5	47	56	820	1010	1110	1110	1110	94	9800	-
17.5	41	1270	1	72.72	IE4	BF50-../S4E11SA6	2	6.8	13.5	41	49.5	1270	1270	1270	1270	1270	110	10700	-
17.5	41	1270	1	72.72	IE5	BF50-../S5E09XA4	2	6.8	13.5	41	49.5	940	1160	1270	1270	1270	94	10700	-
17.5	36.5	1420	0.91	81.33	IE4	BF50-../S4E11SA6	1.8	6.1	12	36.5	44	1420	1420	1420	1420	1420	110	11300	-
17.5	36.5	1420	0.91	81.33	IE5	BF50-../S5E09XA4	1.8	6.1	12	36.5	44	1050	1300	1420	1420	1420	94	11300	-
17.5	33	1570	0.82	90.24	IE4	BF50-../S4E11SA6	1.6	5.5	11	33	39.5	1570	1570	1570	1570	1570	110	11800	-
17.5	33	1570	0.82	90.24	IE5	BF50-../S5E09XA4	1.6	5.5	11	33	39.5	1170	1440	1570	1570	1570	94	11800	-
17.5	72	720	2.9	41.6	IE4	BF60-../S4E11SA6	3.6	12	24	72	86	720	720	720	720	720	141	9600	27100
17.5	72	720	2.9	41.6	IE5	BF60-../S5E09XA4	3.6	12	24	72	86	540	660	720	720	720	124	9600	27100
17.5	64	800	2.7	46.16	IE4	BF60-../S4E11SA6	3.2	10.5	21.5	64	77	800	800	800	800	800	141	9900	28000
17.5	64	800	2.7	46.16	IE5	BF60-../S5E09XA4	3.2	10.5	21.5	64	77	600	730	800	800	800	124	9900	28000
17.5	55	950	2.4	54.44	IE4	BF60-../S4E11SA6	2.7	9.1	18	55	66	950	950	950	950	950	141	10500	29700
17.5	55	950	2.4	54.44	IE5	BF60-../S5E09XA4	2.7	9.1	18	55	66	700	870	950	950	950	124	10500	29700
17.5	49.5	1050	2.2	60.4	IE4	BF60-../S4E11SA6	2.4	8.2	16.5	49.5	59	1050	1050	1050	1050	1050	141	11100	31400
17.5	49.5	1050	2.2	60.4	IE5	BF60-../S5E09XA4	2.4	8.2	16.5	49.5	59	780	960	1050	1050	1050	124	11100	31400
17.5	41.5	1260	1.8	72.15	IE4	BF60-../S4E11SA6													

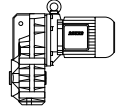
# BF-series shaft-mounted geared motors

## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{min}$

**$M_N = 17.5 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**



$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE-	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[:1]	Classe											[kg]	[N]	[N]	
17.5	21	2450	0.93	140.8	IE4	BF60Z-../S4E11SA6	1	3.5	7.1	21	25.5	2450	2450	2450	2450	2450	157	15300	43300
17.5	21	2450	0.93	140.8	IE5	BF60Z-../S5E09XA4	1	3.5	7.1	21	25.5	1830	2250	2450	2450	2450	143	15300	43300
17.5	28.5	1840	2.8	105.2	IE4	BF70-../S4E11SA6	1.4	4.7	9.5	28.5	34	1840	1840	1840	1840	1840	220	14700	45100
17.5	28.5	1840	2.8	105.2	IE5	BF70-../S5E09XA4	1.4	4.7	9.5	28.5	34	1360	1680	1840	1840	1840	210	14700	45100
17.5	24	2100	2.4	122.7	IE4	BF70-../S4E11SA6	1.2	4	8.1	24	29	2100	2100	2100	2100	2100	220	16100	47700
17.5	24	2100	2.4	122.7	IE5	BF70-../S5E09XA4	1.2	4	8.1	24	29	1590	1960	2100	2100	2100	210	16100	47700
17.5	22.5	2300	2.2	133	IE4	BF70Z-../S4E11SA6	1.1	3.7	7.5	22.5	27	2300	2300	2300	2300	2300	247	16100	47700
17.5	22.5	2300	2.2	133	IE5	BF70Z-../S5E09XA4	1.1	3.7	7.5	22.5	27	1720	2100	2300	2300	2300	231	16100	47700
17.5	19	2650	1.9	154	IE4	BF70Z-../S4E11SA6	0.95	3.2	6.4	19	23	2650	2650	2650	2650	2650	247	16100	47700
17.5	19	2650	1.9	154	IE5	BF70Z-../S5E09XA4	0.95	3.2	6.4	19	23	2000	2450	2650	2650	2650	231	16100	47700
17.5	16.5	3100	1.7	179.7	IE4	BF70Z-../S4E11SA6	0.8	2.7	5.5	16.5	20	3100	3100	3100	3100	3100	247	16100	47700
17.5	16.5	3100	1.7	179.7	IE5	BF70Z-../S5E09XA4	0.8	2.7	5.5	16.5	20	2300	2850	3100	3100	3100	231	16100	47700
17.5	15	3450	1.5	199.7	IE4	BF70Z-../S4E11SA6	0.75	2.5	5	15	18	3450	3450	3450	3450	3450	247	16100	47700
17.5	15	3450	1.5	199.7	IE5	BF70Z-../S5E09XA4	0.75	2.5	5	15	18	2550	3150	3450	3450	3450	231	16100	47700
17.5	12.5	4050	1.3	233	IE4	BF70Z-../S4E11SA6	0.6	2.1	4.2	12.5	15	4050	4050	4050	4050	4050	247	16100	47700
17.5	12.5	4050	1.3	233	IE5	BF70Z-../S5E09XA4	0.6	2.1	4.2	12.5	15	3000	3700	4050	4050	4050	231	16100	47700
17.5	11.5	4500	1.1	258.7	IE4	BF70Z-../S4E11SA6	0.55	1.9	3.8	11.5	13.5	4500	4500	4500	4500	4500	247	16100	47700
17.5	11.5	4500	1.1	258.7	IE5	BF70Z-../S5E09XA4	0.55	1.9	3.8	11.5	13.5	3350	4100	4500	4500	4500	231	16100	47700
17.5	9.9	5200	0.98	301.8	IE4	BF70Z-../S4E11SA6	0.49	1.6	3.3	9.9	11.5	5200	5200	5200	5200	5200	247	16100	47700
17.5	9.9	5200	0.98	301.8	IE5	BF70Z-../S5E09XA4	0.49	1.6	3.3	9.9	11.5	3900	4800	5200	5200	5200	231	16100	47700
17.5	8.7	5900	0.87	341.7	IE4	BF70Z-../S4E11SA6	0.43	1.4	2.9	8.7	10.5	5900	5900	5900	5900	5900	247	16100	47700
17.5	8.7	5900	0.87	341.7	IE5	BF70Z-../S5E09XA4	0.43	1.4	2.9	8.7	10.5	4400	5400	5900	5900	5900	231	16100	47700
17.5	16	3200	2.9	184.5	IE4	BF80-../S4E11SA6	0.8	2.7	5.4	16	19.5	3200	3200	3200	3200	3200	316	31800	75000
17.5	16	3200	2.9	184.5	IE5	BF80-../S5E09XA4	0.8	2.7	5.4	16	19.5	2350	2950	3200	3200	3200	307	31800	75000
17.5	14	3650	2.6	209.4	IE4	BF80-../S4E11SA6	0.7	2.3	4.7	14	17	3650	3650	3650	3650	3650	316	34300	75000
17.5	14	3650	2.6	209.4	IE5	BF80-../S5E09XA4	0.7	2.3	4.7	14	17	2700	3350	3650	3650	3650	307	34300	75000
17.5	12.5	4100	2.3	237.1	IE4	BF80-../S4E11SA6	0.6	2.1	4.2	12.5	15	4100	4100	4100	4100	4100	316	36900	75000
17.5	12.5	4100	2.3	237.1	IE5	BF80-../S5E09XA4	0.6	2.1	4.2	12.5	15	3050	3750	4100	4100	4100	307	36900	75000
17.5	11	4700	2	269.1	IE4	BF80-../S4E11SA6	0.55	1.8	3.7	11	13	4700	4700	4700	4700	4700	316	39600	75000
17.5	11	4700	2	269.1	IE5	BF80-../S5E09XA4	0.55	1.8	3.7	11	13	3450	4300	4700	4700	4700	307	39600	75000
17.5	10	5100	2.1	291.7	IE4	BF80Z-../S4E11SA6	0.5	1.7	3.4	10	12	5100	5100	5100	5100	5100	363	39600	75000
17.5	10	5100	2.1	291.7	IE5	BF80Z-../S5E09XA4	0.5	1.7	3.4	10	12	3750	4650	5100	5100	5100	348	39600	75000
17.5	8.6	6000	1.7	347.3	IE4	BF80Z-../S4E11SA6	0.43	1.4	2.8	8.6	10	6000	6000	6000	6000	6000	363	39600	75000
17.5	8.6	6000	1.7	347.3	IE5	BF80Z-../S5E09XA4	0.43	1.4	2.8	8.6	10	4500	5500	6000	6000	6000	348	39600	75000
17.5	7.6	6800	1.5	394.2	IE4	BF80Z-../S4E11SA6	0.38	1.2	2.5	7.6	9.1	6800	6800	6800	6800	6800	363	39600	75000
17.5	7.6	6800	1.5	394.2	IE5	BF80Z-../S5E09XA4	0.38	1.2	2.5	7.6	9.1	5100	6300	6800	6800	6800	348	39600	75000
17.5	6.6	7800	1.3	450.4	IE4	BF80Z-../S4E11SA6	0.33	1.1	2.2	6.6	7.9	7800	7800	7800	7800	7800	363	39600	75000
17.5	6.6	7800	1.3	450.4	IE5	BF80Z-../S5E09XA4	0.33	1.1	2.2	6.6	7.9	5800	7200	7800	7800	7800	348	39600	75000
17.5	5.8	8900	1.2	511.2	IE4	BF80Z-../S4E11SA6	0.29	0.95	1.9	5.8	7	8900	8900	8900	8900	8900	363	39600	75000
17.5	5.8	8900	1.2	511.2	IE5	BF80Z-../S5E09XA4	0.29	0.95	1.9	5.8	7	6600	8100	8900	8900	8900	348	39600	75000
17.5	5.1	10200	1	583.4	IE4	BF80Z-../S4E11SA6	0.25	0.85	1.7	5.1	6.1	10200	10200	10200	10200	10200	363	39600	75000
17.5	5.1	10200	1	583.4	IE5	BF80Z-../S5E09XA4	0.25	0.85	1.7	5.1	6.1	7500	9300	10200	10200	10200	348	39600	75000
17.5	4.5	11500	0.91	662.1	IE4	BF80Z-../S4E11SA6	0.22	0.75	1.5	4.5	5.4	11500	11500	11500	11500	11500	363	39600	75000
17.5	4.5	11500	0.91	662.1	IE5	BF80Z-../S5E09XA4	0.22	0.75	1.5	4.5	5.4	8600	10500	11500	11500	11500	348	39600	75000
17.5	7.8	6600	2.8	382.6	IE4	BF90Z-../S4E11SA6	0.39	1.3	2.6	7.8	9.4	6600	6600	6600	6600	6600	629	42800	120000
17.5	7.8	6600	2.8	382.6	IE5	BF90Z-../S5E09XA4	0.39	1.3	2.6	7.8	9.4	4950	6100	6600	6600	6600	612	42800	120000
17.5	6.5	7900	2.3	456.7	IE4	BF90Z-../S4E11SA6	0.32	1	2.1	6.5	7.8	7900	7900	7900	7900	7900	629	42800	120000
17.5	6.5	7900	2.3	456.7	IE5	BF90Z-../S5E09XA4	0.32	1	2.1	6.5	7.8	5900	7300	7900	7900	7900	612	42800	120000
17.5	5.8	8800	2.1	508.5	IE4	BF90Z-../S4E11SA6	0.29	0.95	1.9	5.8	7	8800	8800	8800	8800	8800	629	42800	120000
17.5	5.8	8800	2.1	508.5	IE5	BF90Z-../S5E09XA4	0.29	0.95	1.9	5.8	7	6600	8100	8800	8800	8800	612	42800	120000
17.5	5	10300	1.8	591.1	IE4	BF90Z-../S4E11SA6	0.25	0.8	1.6	5	6	10300	10300	10300	10300	10300	629	42800	120000
17.5	5	10300	1.8	591.1	IE5	BF90Z-../S5E09XA4	0.25	0.8	1.6	5	6	7600	9400	10300	10300	10300	612	42800	120000
17.5	4.5	11500	1.6	658.1	IE4	BF90Z-../S4E11SA6	0.22	0.75	1.5	4.5	5.4	11500	11500	11500	11500	11500	629	42800	120000
17.5	4.5	11500	1.6	658.1	IE5	BF90Z-../S5E09XA4	0.22	0.75	1.5	4.5	5.4	8500	10500	11500	11500	11500	612	42800	120000
17.5	3.9	13200	1.4	759	IE4	BF90Z-../S4E11SA6	0.19	0.65	1.3	3.9	4.7	13200	13200	13200	13200	13200	629	42800	120000
17.5	3.9	13200																	

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 20 \text{ Nm}$  ( $P_N = 6.3 \text{ kW}$ )**

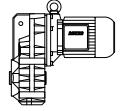
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
20	495	120	1.7	6.04	IE5	BF20-../S5E09XA4	24.5	82	165	495	590	78	96	120	120	105	46	2550	-
20	375	160	1.4	8	IE5	BF20-../S5E09XA4	18.5	62	125	375	450	104	128	160	160	140	46	2850	-
20	285	210	1.2	10.51	IE5	BF20-../S5E09XA4	14	47.5	95	285	340	136	168	210	210	183	46	3100	-
20	225	260	1.1	13.18	IE5	BF20-../S5E09XA4	11	37.5	75	225	270	171	210	260	260	230	46	3300	-
20	193	310	0.98	15.54	IE5	BF20-../S5E09XA4	9.6	32	64	193	230	200	245	310	310	270	46	3450	-
20	178	335	1.1	16.77	IE5	BF20-../S5E09XA4	8.9	29.5	59	178	210	215	265	335	335	290	46	3500	-
20	162	365	1	18.45	IE5	BF20-../S5E09XA4	8.1	27	54	162	195	235	295	365	365	320	46	3600	-
20	136	440	0.9	22.04	IE5	BF20-../S5E09XA4	6.8	22.5	45	136	163	285	350	440	440	385	46	3800	-
20	123	485	0.82	24.25	IE5	BF20-../S5E09XA4	6.1	20.5	41	123	148	315	385	485	485	420	46	3950	-
20	470	126	2.1	6.34	IE5	BF30-../S5E09XA4	23.5	78	157	470	560	82	101	126	126	110	57	2400	-
20	370	161	1.8	8.07	IE5	BF30-../S5E09XA4	18.5	61	123	370	445	104	129	161	161	141	57	2650	-
20	300	199	1.6	9.99	IE5	BF30-../S5E09XA4	15	50	100	300	360	129	159	199	199	174	57	2850	-
20	230	255	1.4	12.91	IE5	BF30-../S5E09XA4	11.5	38.5	77	230	275	167	205	255	255	225	57	3050	-
20	187	320	1.3	16	IE5	BF30-../S5E09XA4	9.3	31	62	187	225	205	255	320	320	280	57	3250	-
20	169	350	1.3	17.65	IE5	BF30-../S5E09XA4	8.4	28	56	169	200	225	280	350	350	305	57	3300	-
20	154	385	1.3	19.41	IE5	BF30-../S5E09XA4	7.7	25.5	51	154	185	250	310	385	385	335	57	3400	-
20	137	435	1.2	21.85	IE5	BF30-../S5E09XA4	6.8	22.5	45.5	137	164	280	345	435	435	380	57	3500	-
20	124	480	1.1	24.03	IE5	BF30-../S5E09XA4	6.2	20.5	41.5	124	149	310	380	480	480	420	57	3600	-
20	106	560	1	28.23	IE5	BF30-../S5E09XA4	5.3	17.5	35	106	127	365	450	560	560	490	57	3800	-
20	96	620	0.92	31.05	IE5	BF30-../S5E09XA4	4.8	16	32	96	115	400	495	620	620	540	57	4000	-
20	85	700	0.81	35	IE5	BF30-../S5E09XA4	4.2	14	28.5	85	102	455	560	700	700	610	57	4200	-
20	510	117	2.9	5.87	IE5	BF40-../S5E09XA4	25.5	85	170	510	610	76	93	117	117	102	66	3550	-
20	390	152	2.4	7.62	IE5	BF40-../S5E09XA4	19.5	65	131	390	470	99	121	152	152	133	66	3900	-
20	315	189	2.2	9.48	IE5	BF40-../S5E09XA4	15.5	52	105	315	375	123	151	189	189	165	66	4150	-
20	250	235	2	11.79	IE5	BF40-../S5E09XA4	12.5	42	84	250	305	153	188	235	235	205	66	4450	-
20	199	300	1.7	15.02	IE5	BF40-../S5E09XA4	9.9	33	66	199	235	195	240	300	300	260	66	4800	-
20	172	345	1.8	17.35	IE5	BF40-../S5E09XA4	8.6	28.5	57	172	205	225	275	345	345	300	66	4950	-
20	157	380	1.7	19.09	IE5	BF40-../S5E09XA4	7.8	26	52	157	188	245	305	380	380	330	66	5100	-
20	138	430	1.6	21.6	IE5	BF40-../S5E09XA4	6.9	23	46	138	166	280	345	430	430	375	66	5200	-
20	126	475	1.5	23.77	IE5	BF40-../S5E09XA4	6.3	21	42	126	151	305	380	475	475	415	66	5400	-
20	111	530	1.4	26.86	IE5	BF40-../S5E09XA4	5.5	18.5	37	111	134	345	425	530	530	470	66	5600	-
20	101	590	1.4	29.55	IE5	BF40-../S5E09XA4	5	16.5	33.5	101	121	380	470	590	590	510	66	5800	-
20	87	680	1.2	34.21	IE5	BF40-../S5E09XA4	4.3	14.5	29	87	105	440	540	680	680	590	66	6000	-
20	79	750	1.2	37.64	IE5	BF40-../S5E09XA4	3.9	13	26.5	79	95	485	600	750	750	650	66	6200	-
20	72	820	1.1	41.42	IE5	BF40-../S5E09XA4	3.6	12	24	72	86	530	660	820	820	720	66	6500	-
20	65	910	0.99	45.56	IE5	BF40-../S5E09XA4	3.2	10.5	21.5	65	79	590	720	910	910	790	66	6800	-
20	61	970	0.92	48.92	IE5	BF40-../S5E09XA4	3	10	20	61	73	630	780	970	970	850	66	7000	-
20	55	1070	0.84	53.82	IE5	BF40-../S5E09XA4	2.7	9.2	18.5	55	66	690	860	1070	1070	940	66	7200	-
20	200	290	2.7	14.65	IE5	BF50-../S5E09XA4	10	34	68	200	245	190	230	290	290	255	94	6100	-
20	129	460	2.4	23.14	IE5	BF50-../S5E09XA4	6.4	21.5	43	129	155	300	370	460	460	400	94	6800	-
20	115	510	2.2	25.88	IE5	BF50-../S5E09XA4	5.7	19	38.5	115	139	335	410	510	510	450	94	7100	-
20	94	630	2	31.73	IE5	BF50-../S5E09XA4	4.7	15.5	31.5	94	113	410	500	630	630	550	94	7500	-
20	84	700	1.8	35.49	IE5	BF50-../S5E09XA4	4.2	14	28	84	101	460	560	700	700	620	94	7800	-
20	71	840	1.5	42.15	IE5	BF50-../S5E09XA4	3.5	11.5	23.5	71	85	540	670	840	840	730	94	8500	-
20	63	940	1.4	47.14	IE5	BF50-../S5E09XA4	3.1	10.5	21	63	76	610	750	940	940	820	94	8900	-
20	52	1130	1.1	56.86	IE5	BF50-../S5E09XA4	2.6	8.7	17.5	52	63	730	900	1130	1130	990	94	9300	-
20	47	1270	1	63.59	IE5	BF50-../S5E09XA4	2.3	7.8	15.5	47	56	820	1010	1270	1270	1110	94	9800	-
20	41	1450	0.89	72.72	IE5	BF50-../S5E09XA4	2	6.8	13.5	41	49.5	940	1160	1450	1450	1270	94	10700	-
20	36.5	1620	0.8	81.33	IE5	BF50-../S5E09XA4	1.8	6.1	12	36.5	44	1050	1300	1620	1620	1420	94	11300	-
20	96	620	3	31.2	IE5	BF60-../S5E09XA4	4.8	16	32	96	115	405	495	620	620	540	124	8800	24900
20	86	690	2.9	34.62	IE5	BF60-../S5E09XA4	4.3	14	28.5	86	103	450	550	690	690	600	124	9100	25700
20	72	830	2.5	41.6	IE5	BF60-../S5E09XA4	3.6	12	24	72	86	540	660	830	830	720	124	9600	27100
20	64	920	2.4	46.16	IE5	BF60-../S5E09XA4	3.2	10.5	21.5	64	77	600	730	920	920	800	124	9900	28000
20	55	1080	2.1	54.44	IE5	BF60-../S5E09XA4	2.7	9.1	18	55	66	700	870	1080	1080	950	124	10500	29700
20	49.5	1200	1.9	60.4	IE5	BF60-../S5E09XA4	2.4	8.2	16.5	49.5	59	780	960	1200	1200	1050	124	11100	31400
20	41.5	1440	1.6	72.15	IE5	BF60-../S5E09XA4	2	6.9	13.5	41.5	49.5	930	1150	1440	1440	1260	124	12000	34000
20	37	1600	1.4	80.05	IE5	BF60-../S5E09XA4	1.8	6.2	12	37	44.5	1040	1280	1600	1600	1400	124	12600	35600
20	32	1860	1.2	93.44	IE5	BF60-../S5E09XA4	1.6	5.3	10.5	32	38.5	1210	1490	1860	1860	1630	124	13500	38200
20	28.5	2050	1.1	103.7	IE5	BF60-../S5E09XA4	1.4	4.8	9.6	28.5	34.5	1340	1650	2050	2050	1810	124	14100	39900
20	26.5	2250	1	113.1	IE5	BF60-../S5E09XA4	1.3	4.4	8.8	26.5	31.5	1470	1800	2250	2250	1970	124	14600	41300
20	23.5	2500	0.92	125.5	IE5	BF60-../S5E09XA4	1.1	3.9	7.9	23.5	28.5	1630	2000	2500	2500	2150	124	15300	43300
20	21	2800	0.82	140.8	IE5	BF60Z-../S5E09XA4	1	3.5	7.1	21	25.5	1830	2250	2800	2800	2450	143	15300	43300
20	31	1900	2.7	95.46	IE5	BF70-../S5E09XA4	1.5	5.2	10	31	37.5	1240	1520	1900	1900	1670	210	14000	43700
20	28.5	2100	2.5	105.2	IE5	BF70-../S5E09XA4	1.4	4.7	9.5	28.5	34	1360	1680	2100	2100	1840	210	14700	45100
20	24	2450	2.1	122.7	IE5	BF70-../S5E09XA4	1.2	4	8.1	24	29	1590	1960	2450	2450	2100	210	16100	47700
20	22.5	2650	2	133	IE5	BF70Z-../S5E09XA4	1.1	3.7	7.5	22.5	27	1720	2100	2650	2650	2300	231	16100	47700
20	19	3050	1.7	154	IE5	BF70Z-../S5E09XA4	0.95	3.2	6.4	19	23	2000	2450	3050	3050	2650	231	16100	47700
20	16.5	3550</																	



# BF-series shaft-mounted geared motors

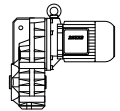
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{min}$

### $M_N = 20 \text{ Nm}$ ( $P_N = 6.3 \text{ kW}$ )

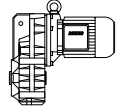


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
20	11	5300	1.8	269.1	IE5	BF80-../S5E09XA4	0.55	1.8	3.7	11	13	3450	4300	5300	5300	4700	307	39600	75000
20	10	5800	1.8	291.7	IE5	BF80Z-../S5E09XA4	0.5	1.7	3.4	10	12	3750	4650	5800	5800	5100	348	39600	75000
20	8.6	6900	1.5	347.3	IE5	BF80Z-../S5E09XA4	0.43	1.4	2.8	8.6	10	4500	5500	6900	6900	6000	348	39600	75000
20	7.6	7800	1.3	394.2	IE5	BF80Z-../S5E09XA4	0.38	1.2	2.5	7.6	9.1	5100	6300	7800	7800	6800	348	39600	75000
20	6.6	9000	1.2	450.4	IE5	BF80Z-../S5E09XA4	0.33	1.1	2.2	6.6	7.9	5800	7200	9000	9000	7800	348	39600	75000
20	5.8	10200	1	511.2	IE5	BF80Z-../S5E09XA4	0.29	0.95	1.9	5.8	7	6600	8100	10200	10200	8900	348	39600	75000
20	5.1	11600	0.9	583.4	IE5	BF80Z-../S5E09XA4	0.25	0.85	1.7	5.1	6.1	7500	9300	11600	11600	10200	348	39600	75000
20	8.7	6800	2.7	343.6	IE5	BF90Z-../S5E09XA4	0.43	1.4	2.9	8.7	10	4450	5400	6800	6800	6000	612	42800	120000
20	7.8	7600	2.4	382.6	IE5	BF90Z-../S5E09XA4	0.39	1.3	2.6	7.8	9.4	4950	6100	7600	7600	6600	612	42800	120000
20	6.5	9100	2	456.7	IE5	BF90Z-../S5E09XA4	0.32	1	2.1	6.5	7.8	5900	7300	9100	9100	7900	612	42800	120000
20	5.8	10100	1.8	508.5	IE5	BF90Z-../S5E09XA4	0.29	0.95	1.9	5.8	7	6600	8100	10100	10100	8800	612	42800	120000
20	5	11800	1.6	591.1	IE5	BF90Z-../S5E09XA4	0.25	0.8	1.6	5	6	7600	9400	11800	11800	10300	612	42800	120000
20	4.5	13100	1.4	658.1	IE5	BF90Z-../S5E09XA4	0.22	0.75	1.5	4.5	5.4	8500	10500	13100	13100	11500	612	42800	120000
20	3.9	15100	1.2	759	IE5	BF90Z-../S5E09XA4	0.19	0.65	1.3	3.9	4.7	9800	12100	15100	15100	13200	612	42800	120000
20	3.5	16900	1.1	845.1	IE5	BF90Z-../S5E09XA4	0.17	0.55	1.1	3.5	4.2	10900	13500	16900	16900	14700	612	42800	120000
20	3	19500	0.95	976.1	IE5	BF90G50-../S5E09XA4	0.15	0.5	1	3	3.6	12600	15600	19500	19500	17000	624	42800	120000
20	2.8	20500	0.89	1043	IE5	BF90G50-../S5E09XA4	0.14	0.47	0.95	2.8	3.4	13500	16600	20500	20500	18200	624	42800	120000

### $M_N = 24 \text{ Nm}$ ( $P_N = 7.5 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
24	470	152	1.7	6.34	IE4	BF30-../S4E11SA6	23.5	78	157	470	560	120	136	152	152	152	66	2400	-
24	470	152	1.7	6.34	IE5	BF30-../S5E11MA6	23.5	78	157	470	560	152	152	152	152	152	66	2400	-
24	370	193	1.5	8.07	IE4	BF30-../S4E11SA6	18.5	61	123	370	445	153	173	193	193	193	66	2650	-
24	370	193	1.5	8.07	IE5	BF30-../S5E11MA6	18.5	61	123	370	445	193	193	193	193	193	66	2650	-
24	300	235	1.3	9.99	IE4	BF30-../S4E11SA6	15	50	100	300	360	189	210	235	235	235	66	2850	-
24	300	235	1.3	9.99	IE5	BF30-../S5E11MA6	15	50	100	300	360	235	235	235	235	235	66	2850	-
24	230	305	1.2	12.91	IE4	BF30-../S4E11SA6	11.5	38.5	77	230	275	245	275	305	305	305	66	3050	-
24	230	305	1.2	12.91	IE5	BF30-../S5E11MA6	11.5	38.5	77	230	275	305	305	305	305	305	66	3050	-
24	187	380	1.1	16	IE4	BF30-../S4E11SA6	9.3	31	62	187	225	300	340	380	380	380	66	3250	-
24	187	380	1.1	16	IE5	BF30-../S5E11MA6	9.3	31	62	187	225	380	380	380	380	380	66	3250	-
24	169	420	1.1	17.65	IE4	BF30-../S4E11SA6	8.4	28	56	169	200	335	375	420	420	420	66	3300	-
24	169	420	1.1	17.65	IE5	BF30-../S5E11MA6	8.4	28	56	169	200	420	420	420	420	420	66	3300	-
24	154	465	1.1	19.41	IE4	BF30-../S4E11SA6	7.7	25.5	51	154	185	365	415	465	465	465	66	3400	-
24	154	465	1.1	19.41	IE5	BF30-../S5E11MA6	7.7	25.5	51	154	185	465	465	465	465	465	66	3400	-
24	137	520	0.99	21.85	IE4	BF30-../S4E11SA6	6.8	22.5	45.5	137	164	415	465	520	520	520	66	3500	-
24	137	520	0.99	21.85	IE5	BF30-../S5E11MA6	6.8	22.5	45.5	137	164	520	520	520	520	520	66	3500	-
24	124	570	0.95	24.03	IE4	BF30-../S4E11SA6	6.2	20.5	41.5	124	149	455	510	570	570	570	66	3600	-
24	124	570	0.95	24.03	IE5	BF30-../S5E11MA6	6.2	20.5	41.5	124	149	570	570	570	570	570	66	3600	-
24	106	670	0.84	28.23	IE4	BF30-../S4E11SA6	5.3	17.5	35	106	127	530	600	670	670	670	66	3800	-
24	106	670	0.84	28.23	IE5	BF30-../S5E11MA6	5.3	17.5	35	106	127	670	670	670	670	670	66	3800	-
24	510	140	2.4	5.87	IE4	BF40-../S4E11SA6	25.5	85	170	510	610	111	126	140	140	140	80	3550	-
24	510	140	2.4	5.87	IE5	BF40-../S5E11MA6	25.5	85	170	510	610	140	140	140	140	140	80	3550	-
24	390	182	2	7.62	IE4	BF40-../S4E11SA6	19.5	65	131	390	470	144	163	182	182	182	80	3900	-
24	390	182	2	7.62	IE5	BF40-../S5E11MA6	19.5	65	131	390	470	182	182	182	182	182	80	3900	-
24	315	225	1.8	9.48	IE4	BF40-../S4E11SA6	15.5	52	105	315	375	180	205	225	225	225	80	4150	-
24	315	225	1.8	9.48	IE5	BF40-../S5E11MA6	15.5	52	105	315	375	225	225	225	225	225	80	4150	-
24	250	280	1.6	11.79	IE4	BF40-../S4E11SA6	12.5	42	84	250	305	220	250	280	280	280	80	4450	-
24	250	280	1.6	11.79	IE5	BF40-../S5E11MA6	12.5	42	84	250	305	280	280	280	280	280	80	4450	-
24	199	360	1.4	15.02	IE4	BF40-../S4E11SA6	9.9	33	66	199	235	285	320	360	360	360	80	4800	-
24	199	360	1.4	15.02	IE5	BF40-../S5E11MA6	9.9	33	66	199	235	360	360	360	360	360	80	4800	-
24	172	415	1.5	17.35	IE4	BF40-../S4E11SA6	8.6	28.5	57	172	205	325	370	415	415	415	80	4950	-
24	172	415	1.5	17.35	IE5	BF40-../S5E11MA6	8.6	28.5	57	172	205	415	415	415	415	415	80	4950	-
24	157	455	1.4	19.09	IE4	BF40-../S4E11SA6	7.8	26	52	157	188	360	410	455	455	455	80	5100	-
24	157	455	1.4	19.09	IE5	BF40-../S5E11MA6	7.8	26	52	157	188	455	455	455	455	455	80	5100	-
24	138	510	1.4	21.6	IE4	BF40-../S4E11SA6	6.9	23	46	138	166	410	460	510	510	510	80	5200	-
24	138	510	1.4	21.6	IE5	BF40-../S5E11MA6	6.9	23	46	138	166	510	510	510	510	510	80	5200	-
24	126	570	1.3	23.77	IE4	BF40-../S4E11SA6	6.3	21	42	126	151	450	510	570	570	570	80	5400	-
24	126	570	1.3	23.77	IE5	BF40-../S5E11MA6	6.3	21	42	126	151	570	570	570	570	570	80	5400	-
24	111	640	1.2	26.86	IE4	BF40-../S4E11SA6	5.5	18.5	37	111	134	510	570	640	640	640	80	5600	-
24	111	640	1.2	26.86	IE5	BF40-../S5E11MA6	5.5	18.5	37	111	134	640	640	640	640	640	80	5600	-
24	101	700	1.1	29.55	IE4	BF40-../S4E11SA6	5	16.5	33.5	101	121	560	630	700	700	700	80	5800	-
24	101	700	1.1	29.55	IE5	BF40-../S5E11MA6	5	16.5	33.5	101	121	700	700	700	700	700	80	5800	-
24	87	820	1	34.21	IE4	BF40-../S4E11SA6	4.3	14.5	29	87	105	640	730	820	820	820	80	6000	-
24	87	820	1	34.21	IE5	BF40-../S5E11MA6	4.3	14.5	29	87	105	820	820	820	820	820	80	6000	-
24	79	900	0.99	37.64	IE4	BF40-../S4E11SA6	3.9	13	26.5	79	95	710	800	900	900	900	80	6200	-
24	79	900	0.99	37.64	IE5	BF40-../S5E11MA6	3.9	13	26.5	79	95	900	900	900	900	900	80	6200	-
24	72	990	0.91	41.42	IE4	BF40-../S4E11SA6	3.6	12	24										

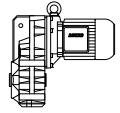
**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{min}$**  **$M_N = 24 \text{ Nm}$  ( $P_N = 7.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]	
							150	500	1000	3000	3600	150	500	1000	3000	3600				
24	385	185	3	7.71	IE4	BF50-../S4E11SA6	19	64	129	385	465	146	165	185	185	185	185	110	5100	-
24	385	185	3	7.71	IE5	BF50-../S5E11MA6	19	64	129	385	465	185	185	185	185	185	185	110	5100	-
24	280	255	2.6	10.68	IE4	BF50-../S4E11SA6	14	46.5	93	280	335	200	225	255	255	255	255	110	5600	-
24	280	255	2.6	10.68	IE5	BF50-../S5E11MA6	14	46.5	93	280	335	255	255	255	255	255	255	110	5600	-
24	200	350	2.2	14.65	IE4	BF50-../S4E11SA6	10	34	68	200	245	275	310	350	350	350	350	110	6100	-
24	200	350	2.2	14.65	IE5	BF50-../S5E11MA6	10	34	68	200	245	350	350	350	350	350	350	110	6100	-
24	179	400	2.4	16.7	IE4	BF50-../S4E11SA6	8.9	29.5	59	179	215	315	355	400	400	400	400	110	6200	-
24	179	400	2.4	16.7	IE5	BF50-../S5E11MA6	8.9	29.5	59	179	215	400	400	400	400	400	400	110	6200	-
24	160	445	2.2	18.68	IE4	BF50-../S4E11SA6	8	26.5	53	160	192	350	400	445	445	445	445	110	6400	-
24	160	445	2.2	18.68	IE5	BF50-../S5E11MA6	8	26.5	53	160	192	445	445	445	445	445	445	110	6400	-
24	129	550	2	23.14	IE4	BF50-../S4E11SA6	6.4	21.5	43	129	155	435	495	550	550	550	550	110	6800	-
24	129	550	2	23.14	IE5	BF50-../S5E11MA6	6.4	21.5	43	129	155	550	550	550	550	550	550	110	6800	-
24	115	620	1.9	25.88	IE4	BF50-../S4E11SA6	5.7	19	38.5	115	139	490	550	620	620	620	620	110	7100	-
24	115	620	1.9	25.88	IE5	BF50-../S5E11MA6	5.7	19	38.5	115	139	620	620	620	620	620	620	110	7100	-
24	94	760	1.7	31.73	IE4	BF50-../S4E11SA6	4.7	15.5	31.5	94	113	600	680	760	760	760	760	110	7500	-
24	94	760	1.7	31.73	IE5	BF50-../S5E11MA6	4.7	15.5	31.5	94	113	760	760	760	760	760	760	110	7500	-
24	84	850	1.5	35.49	IE4	BF50-../S4E11SA6	4.2	14	28	84	101	670	760	850	850	850	850	110	7800	-
24	84	850	1.5	35.49	IE5	BF50-../S5E11MA6	4.2	14	28	84	101	850	850	850	850	850	850	110	7800	-
24	71	1010	1.3	42.15	IE4	BF50-../S4E11SA6	3.5	11.5	23.5	71	85	800	900	1010	1010	1010	1010	110	8500	-
24	71	1010	1.3	42.15	IE5	BF50-../S5E11MA6	3.5	11.5	23.5	71	85	1010	1010	1010	1010	1010	1010	110	8500	-
24	63	1130	1.1	47.14	IE4	BF50-../S4E11SA6	3.1	10.5	21	63	76	890	1010	1130	1130	1130	1130	110	8900	-
24	63	1130	1.1	47.14	IE5	BF50-../S5E11MA6	3.1	10.5	21	63	76	1130	1130	1130	1130	1130	1130	110	8900	-
24	52	1360	0.95	56.86	IE4	BF50-../S4E11SA6	2.6	8.7	17.5	52	63	1080	1220	1360	1360	1360	1360	110	9300	-
24	52	1360	0.95	56.86	IE5	BF50-../S5E11MA6	2.6	8.7	17.5	52	63	1360	1360	1360	1360	1360	1360	110	9300	-
24	47	1520	0.85	63.59	IE4	BF50-../S4E11SA6	2.3	7.8	15.5	47	56	1200	1360	1520	1520	1520	1520	110	9800	-
24	47	1520	0.85	63.59	IE5	BF50-../S5E11MA6	2.3	7.8	15.5	47	56	1520	1520	1520	1520	1520	1520	110	9800	-
24	132	540	3	22.58	IE4	BF60-../S4E11SA6	6.6	22	44	132	159	425	485	540	540	540	540	141	8000	22600
24	132	540	3	22.58	IE5	BF60-../S5E11MA6	6.6	22	44	132	159	540	540	540	540	540	540	141	8000	22600
24	119	600	2.9	25.05	IE4	BF60-../S4E11SA6	5.9	19.5	39.5	119	143	475	530	600	600	600	600	141	8200	23200
24	119	600	2.9	25.05	IE5	BF60-../S5E11MA6	5.9	19.5	39.5	119	143	600	600	600	600	600	600	141	8200	23200
24	96	740	2.5	31.2	IE4	BF60-../S4E11SA6	4.8	16	32	96	115	590	670	740	740	740	740	141	8800	24900
24	96	740	2.5	31.2	IE5	BF60-../S5E11MA6	4.8	16	32	96	115	740	740	740	740	740	740	141	8800	24900
24	86	830	2.4	34.62	IE4	BF60-../S4E11SA6	4.3	14	28.5	86	103	650	740	830	830	830	830	141	9100	25700
24	86	830	2.4	34.62	IE5	BF60-../S5E11MA6	4.3	14	28.5	86	103	830	830	830	830	830	830	141	9100	25700
24	72	990	2.1	41.6	IE4	BF60-../S4E11SA6	3.6	12	24	72	86	790	890	990	990	990	990	141	9600	27100
24	72	990	2.1	41.6	IE5	BF60-../S5E11MA6	3.6	12	24	72	86	990	990	990	990	990	990	141	9600	27100
24	64	1100	2	46.16	IE4	BF60-../S4E11SA6	3.2	10.5	21.5	64	77	870	990	1100	1100	1100	1100	141	9900	28000
24	64	1100	2	46.16	IE5	BF60-../S5E11MA6	3.2	10.5	21.5	64	77	1100	1100	1100	1100	1100	1100	141	9900	28000
24	55	1300	1.8	54.44	IE4	BF60-../S4E11SA6	2.7	9.1	18	55	66	1030	1170	1300	1300	1300	1300	141	10500	29700
24	55	1300	1.8	54.44	IE5	BF60-../S5E11MA6	2.7	9.1	18	55	66	1300	1300	1300	1300	1300	1300	141	10500	29700
24	49.5	1440	1.6	60.4	IE4	BF60-../S4E11SA6	2.4	8.2	16.5	49.5	59	1140	1290	1440	1440	1440	1440	141	11100	31400
24	49.5	1440	1.6	60.4	IE5	BF60-../S5E11MA6	2.4	8.2	16.5	49.5	59	1440	1440	1440	1440	1440	1440	141	11100	31400
24	41.5	1730	1.3	72.15	IE4	BF60-../S4E11SA6	2	6.9	13.5	41.5	49.5	1370	1550	1730	1730	1730	1730	141	12000	34000
24	41.5	1730	1.3	72.15	IE5	BF60-../S5E11MA6	2	6.9	13.5	41.5	49.5	1730	1730	1730	1730	1730	1730	141	12000	34000
24	37	1920	1.2	80.05	IE4	BF60-../S4E11SA6	1.8	6.2	12	37	44.5	1520	1720	1920	1920	1920	1920	141	12600	35600
24	37	1920	1.2	80.05	IE5	BF60-../S5E11MA6	1.8	6.2	12	37	44.5	1920	1920	1920	1920	1920	1920	141	12600	35600
24	32	2200	1	93.44	IE4	BF60-../S4E11SA6	1.6	5.3	10.5	32	38.5	1770	2000	2200	2200	2200	2200	141	13500	38200
24	32	2200	1	93.44	IE5	BF60-../S5E11MA6	1.6	5.3	10.5	32	38.5	2200	2200	2200	2200	2200	2200	141	13500	38200
24	28.5	2450	0.92	103.7	IE4	BF60-../S4E11SA6	1.4	4.8	9.6	28.5	34.5	1970	2200	2450	2450	2450	2450	141	14100	39900
24	28.5	2450	0.92	103.7	IE5	BF60-../S5E11MA6	1.4	4.8	9.6	28.5	34.5	2450	2450	2450	2450	2450	2450	141	14100	39900
24	26.5	2700	0.85	113.1	IE4	BF60-../S4E11SA6	1.3	4.4	8.8	26.5	31.5	2100	2400	2700	2700	2700	2700	141	14600	41300
24	26.5	2700	0.85	113.1	IE5	BF60-../S5E11MA6	1.3	4.4	8.8	26.5	31.5	2700	2700	2700	2700	2700	2700	141	14600	41300
24	41.5	1730	3	72.26	IE4	BF70-../S4E11SA6	2	6.9	13.5	41.5	49.5	1370	1550	1730	1730	1730	1730	220	12000	39600
24	41.5	1730	3	72.26	IE5	BF70-../S5E11MA6	2	6.9	13.5	41.5	49.5	1730	1730	1730	1730	1730	1730	220	12000	39600
24	36.5	1960	2.6	81.82	IE4	BF70-../S4E11SA6	1.8	6.1	12	36.5	43.5	1550	1750	1960	1960	1960	1960	220	12800	41300
24	36.5	1960	2.6	81.82	IE5	BF70-../S5E11MA6	1.8	6.1	12	36.5	43.5	1960	1960	1960	1960	1960	1960	220	12800	41300
24	31	2250	2.3	95.46	IE4	BF70-../S4E11SA6	1.5	5.2	10	31	37.5	1810	2050	2250	2250	2250	2250	220	14000	43700
24	31	2250	2.3	95.46	IE5	BF70-../S5E11MA6	1.5	5.2	10	31	37.5	2250	2250	2250	2250	2250	2250	220	14000	43700
24	28.5	2500	2.1	105.2	IE4	BF70-../S4E11SA6	1.4	4.7	9.5	28.5	34	1990	2250	2500	2500	2500	2500	220	14700	45100
24	28.5	2500	2.1	105.2	IE5	BF70-../S5E11MA6	1.4	4.7	9.5	28.5	34	2500	2500	2500	2500	2500	2500	220	14700	45100
24	24	2900	1.8	122.7	IE4	BF70-../S4E11SA6	1.2	4	8.1	24	29	2300	2600	2900	2900	2900	2900	220	16100	47700
24	24	2900	1.8	122.7	IE5	BF70-../S5E11MA6	1.2	4	8.1	24	29	2900	2900	2900	2900	2900	2900	220	16100	47700
24	22.5	3150	1.6	133	IE4	BF70Z-../S4E11SA6	1.1	3.7												

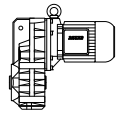


# BF-series shaft-mounted geared motors

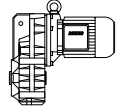
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 24 \text{ Nm}$  ( $P_N = 7.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
24	16	4400	2.1	184.5	IE5	BF80-../S5E11MA6	0.8	2.7	5.4	16	19.5	4400	4400	4400	4400	4400	316	31800	75000
24	14	5000	1.9	209.4	IE4	BF80-../S4E11SA6	0.7	2.3	4.7	14	17	3950	4500	5000	5000	5000	316	34300	75000
24	14	5000	1.9	209.4	IE5	BF80-../S5E11MA6	0.7	2.3	4.7	14	17	5000	5000	5000	5000	5000	316	34300	75000
24	12.5	5600	1.7	237.1	IE4	BF80-../S4E11SA6	0.6	2.1	4.2	12.5	15	4500	5000	5600	5600	5600	316	36900	75000
24	12.5	5600	1.7	237.1	IE5	BF80-../S5E11MA6	0.6	2.1	4.2	12.5	15	5600	5600	5600	5600	5600	316	36900	75000
24	11	6400	1.5	269.1	IE4	BF80-../S4E11SA6	0.55	1.8	3.7	11	13	5100	5700	6400	6400	6400	316	39600	75000
24	11	6400	1.5	269.1	IE5	BF80-../S5E11MA6	0.55	1.8	3.7	11	13	6400	6400	6400	6400	6400	316	39600	75000
24	10	7000	1.5	291.7	IE4	BF80Z-../S4E11SA6	0.5	1.7	3.4	10	12	5500	6200	7000	7000	7000	363	39600	75000
24	10	7000	1.5	291.7	IE5	BF80Z-../S5E11MA6	0.5	1.7	3.4	10	12	7000	7000	7000	7000	7000	363	39600	75000
24	8.6	8300	1.3	347.3	IE4	BF80Z-../S4E11SA6	0.43	1.4	2.8	8.6	10	6500	7400	8300	8300	8300	363	39600	75000
24	8.6	8300	1.3	347.3	IE5	BF80Z-../S5E11MA6	0.43	1.4	2.8	8.6	10	8300	8300	8300	8300	8300	363	39600	75000
24	7.6	9400	1.1	394.2	IE4	BF80Z-../S4E11SA6	0.38	1.2	2.5	7.6	9.1	7400	8400	9400	9400	9400	363	39600	75000
24	7.6	9400	1.1	394.2	IE5	BF80Z-../S5E11MA6	0.38	1.2	2.5	7.6	9.1	9400	9400	9400	9400	9400	363	39600	75000
24	6.6	10800	0.97	450.4	IE4	BF80Z-../S4E11SA6	0.33	1.1	2.2	6.6	7.9	8500	9600	10800	10800	10800	363	39600	75000
24	6.6	10800	0.97	450.4	IE5	BF80Z-../S5E11MA6	0.33	1.1	2.2	6.6	7.9	10800	10800	10800	10800	10800	363	39600	75000
24	5.8	12200	0.86	511.2	IE4	BF80Z-../S4E11SA6	0.29	0.95	1.9	5.8	7	9700	10900	12200	12200	12200	363	39600	75000
24	5.8	12200	0.86	511.2	IE5	BF80Z-../S5E11MA6	0.29	0.95	1.9	5.8	7	12200	12200	12200	12200	12200	363	39600	75000
24	12.5	5500	3	232.6	IE4	BF90-../S4E11SA6	0.6	2.1	4.2	12.5	15	4400	5000	5500	5500	5500	569	39900	118300
24	12.5	5500	3	232.6	IE5	BF90-../S5E11MA6	0.6	2.1	4.2	12.5	15	5500	5500	5500	5500	5500	569	39900	118300
24	11.5	6200	2.7	259	IE4	BF90-../S4E11SA6	0.55	1.9	3.8	11.5	13.5	4900	5500	6200	6200	6200	569	42800	120000
24	11.5	6200	2.7	259	IE5	BF90-../S5E11MA6	0.55	1.9	3.8	11.5	13.5	6200	6200	6200	6200	6200	569	42800	120000
24	11	6400	2.9	269.8	IE4	BF90Z-../S4E11SA6	0.55	1.8	3.7	11	13	5100	5800	6400	6400	6400	629	42800	120000
24	11	6400	2.9	269.8	IE5	BF90Z-../S5E11MA6	0.55	1.8	3.7	11	13	6400	6400	6400	6400	6400	629	42800	120000
24	9.9	7200	2.6	300.4	IE4	BF90Z-../S4E11SA6	0.49	1.6	3.3	9.9	11.5	5700	6400	7200	7200	7200	629	42800	120000
24	9.9	7200	2.6	300.4	IE5	BF90Z-../S5E11MA6	0.49	1.6	3.3	9.9	11.5	7200	7200	7200	7200	7200	629	42800	120000
24	8.7	8200	2.2	343.6	IE4	BF90Z-../S4E11SA6	0.43	1.4	2.9	8.7	10	6500	7300	8200	8200	8200	629	42800	120000
24	8.7	8200	2.2	343.6	IE5	BF90Z-../S5E11MA6	0.43	1.4	2.9	8.7	10	8200	8200	8200	8200	8200	629	42800	120000
24	7.8	9100	2	382.6	IE4	BF90Z-../S4E11SA6	0.39	1.3	2.6	7.8	9.4	7200	8200	9100	9100	9100	629	42800	120000
24	7.8	9100	2	382.6	IE5	BF90Z-../S5E11MA6	0.39	1.3	2.6	7.8	9.4	9100	9100	9100	9100	9100	629	42800	120000
24	6.5	10900	1.7	456.7	IE4	BF90Z-../S4E11SA6	0.32	1	2.1	6.5	7.8	8600	9800	10900	10900	10900	629	42800	120000
24	6.5	10900	1.7	456.7	IE5	BF90Z-../S5E11MA6	0.32	1	2.1	6.5	7.8	10900	10900	10900	10900	10900	629	42800	120000
24	5.8	12200	1.5	508.5	IE4	BF90Z-../S4E11SA6	0.29	0.95	1.9	5.8	7	9600	10900	12200	12200	12200	629	42800	120000
24	5.8	12200	1.5	508.5	IE5	BF90Z-../S5E11MA6	0.29	0.95	1.9	5.8	7	12200	12200	12200	12200	12200	629	42800	120000
24	5	14100	1.3	591.1	IE4	BF90Z-../S4E11SA6	0.25	0.8	1.6	5	6	11200	12700	14100	14100	14100	629	42800	120000
24	5	14100	1.3	591.1	IE5	BF90Z-../S5E11MA6	0.25	0.8	1.6	5	6	14100	14100	14100	14100	14100	629	42800	120000
24	4.5	15700	1.2	658.1	IE4	BF90Z-../S4E11SA6	0.22	0.75	1.5	4.5	5.4	12500	14100	15700	15700	15700	629	42800	120000
24	4.5	15700	1.2	658.1	IE5	BF90Z-../S5E11MA6	0.22	0.75	1.5	4.5	5.4	15700	15700	15700	15700	15700	629	42800	120000
24	3.9	18200	1	759	IE4	BF90Z-../S4E11SA6	0.19	0.65	1.3	3.9	4.7	14400	16300	18200	18200	18200	629	42800	120000
24	3.9	18200	1	759	IE5	BF90Z-../S5E11MA6	0.19	0.65	1.3	3.9	4.7	18200	18200	18200	18200	18200	629	42800	120000
24	3.5	20000	0.91	845.1	IE4	BF90Z-../S4E11SA6	0.17	0.55	1.1	3.5	4.2	16000	18100	20000	20000	20000	629	42800	120000
24	3.5	20000	0.91	845.1	IE5	BF90Z-../S5E11MA6	0.17	0.55	1.1	3.5	4.2	20000	20000	20000	20000	20000	629	42800	120000

 **$M_N = 30 \text{ Nm}$  ( $P_N = 9.5 \text{ kW}$ )**

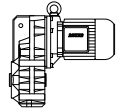
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
30	470	190	1.4	6.34	IE5	BF30-../S5E11LA6	23.5	78	157	470	560	190	190	190	190	190	78	2400	-
30	470	190	1.4	6.34	IE5	BF30-../S5E11MA6	23.5	78	157	470	560	168	190	190	190	190	66	2400	-
30	370	240	1.2	8.07	IE5	BF30-../S5E11LA6	18.5	61	123	370	445	240	240	240	240	240	78	2650	-
30	370	240	1.2	8.07	IE5	BF30-../S5E11MA6	18.5	61	123	370	445	210	240	240	240	240	66	2650	-
30	300	295	1.1	9.99	IE5	BF30-../S5E11LA6	15	50	100	300	360	295	295	295	295	295	78	2850	-
30	300	295	1.1	9.99	IE5	BF30-../S5E11MA6	15	50	100	300	360	260	295	295	295	295	66	2850	-
30	230	385	0.94	12.91	IE5	BF30-../S5E11LA6	11.5	38.5	77	230	275	385	385	385	385	385	78	3050	-
30	230	385	0.94	12.91	IE5	BF30-../S5E11MA6	11.5	38.5	77	230	275	340	385	385	385	385	66	3050	-
30	187	480	0.84	16	IE5	BF30-../S5E11LA6	9.3	31	62	187	225	480	480	480	480	480	78	3250	-
30	187	480	0.84	16	IE5	BF30-../S5E11MA6	9.3	31	62	187	225	420	480	480	480	480	66	3250	-
30	169	520	0.9	17.65	IE5	BF30-../S5E11LA6	8.4	28	56	169	200	520	520	520	520	520	78	3300	-
30	169	520	0.9	17.65	IE5	BF30-../S5E11MA6	8.4	28	56	169	200	465	520	520	520	520	66	3300	-
30	154	580	0.86	19.41	IE5	BF30-../S5E11LA6	7.7	25.5	51	154	185	580	580	580	580	580	78	3400	-
30	154	580	0.86	19.41	IE5	BF30-../S5E11MA6	7.7	25.5	51	154	185	510	580	580	580	580	66	3400	-
30	510	176	1.9	5.87	IE5	BF40-../S5E11LA6	25.5	85	170	510	610	176	176	176	176	176	92	3550	-
30	510	176	1.9	5.87	IE5	BF40-../S5E11MA6	25.5	85	170	510	610	155	176	176	176	176	80	3550	-
30	390	225	1.6	7.62	IE5	BF40-../S5E11LA6	19.5	65	131	390	470	225	225	225	225	225	92	3900	-
30	390	225	1.6	7.62	IE5	BF40-../S5E11MA6	19.5	65	131	390	470	200	225	225	225	225	80	3900	-
30	315	280	1.5	9.48	IE5	BF40-../S5E11LA6	15.5	52	105	315	375	280	280	280	280	280	92	4150	-
30	315	280	1.5	9.48	IE5	BF40-../S5E11MA6	15.5	52	105	315	375								

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{min}$**  **$M_N = 30 \text{ Nm}$  ( $P_N = 9.5 \text{ kW}$ )**

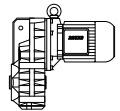
$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[:1]										[kg]	[N]	[N]			
30	157	570	1.2	19.09	IE5	BF40-../S5E11MA6	7.8	26	52	157	188	500	570	570	570	80	5100	-	
30	138	640	1.1	21.6	IE5	BF40-../S5E11LA6	6.9	23	46	138	166	640	640	640	640	80	5200	-	
30	138	640	1.1	21.6	IE5	BF40-../S5E11MA6	6.9	23	46	138	166	570	640	640	640	80	5200	-	
30	126	710	1	23.77	IE5	BF40-../S5E11LA6	6.3	21	42	126	151	710	710	710	710	92	5400	-	
30	126	710	1	23.77	IE5	BF40-../S5E11MA6	6.3	21	42	126	151	620	710	710	710	80	5400	-	
30	111	800	0.96	26.86	IE5	BF40-../S5E11LA6	5.5	18.5	37	111	134	800	800	800	800	92	5600	-	
30	111	800	0.96	26.86	IE5	BF40-../S5E11MA6	5.5	18.5	37	111	134	710	800	800	800	80	5600	-	
30	101	880	0.9	29.55	IE5	BF40-../S5E11LA6	5	16.5	33.5	101	121	880	880	880	880	92	5800	-	
30	101	880	0.9	29.55	IE5	BF40-../S5E11MA6	5	16.5	33.5	101	121	780	880	880	880	80	5800	-	
30	87	1020	0.83	34.21	IE5	BF40-../S5E11LA6	4.3	14.5	29	87	105	1020	1020	1020	1020	92	6000	-	
30	87	1020	0.83	34.21	IE5	BF40-../S5E11MA6	4.3	14.5	29	87	105	900	1020	1020	1020	80	6000	-	
30	385	230	2.4	7.71	IE5	BF50-../S5E11LA6	19	64	129	385	465	230	230	230	230	122	5100	-	
30	385	230	2.4	7.71	IE5	BF50-../S5E11MA6	19	64	129	385	465	200	230	230	230	122	5100	-	
30	280	320	2.1	10.68	IE5	BF50-../S5E11LA6	14	46.5	93	280	335	320	320	320	320	110	5600	-	
30	280	320	2.1	10.68	IE5	BF50-../S5E11MA6	14	46.5	93	280	335	280	320	320	320	110	5600	-	
30	200	435	1.8	14.65	IE5	BF50-../S5E11LA6	10	34	68	200	245	435	435	435	435	122	6100	-	
30	200	435	1.8	14.65	IE5	BF50-../S5E11MA6	10	34	68	200	245	385	435	435	435	110	6100	-	
30	179	500	1.9	16.7	IE5	BF50-../S5E11LA6	8.9	29.5	59	179	215	500	500	500	500	122	6200	-	
30	179	500	1.9	16.7	IE5	BF50-../S5E11MA6	8.9	29.5	59	179	215	440	500	500	500	110	6200	-	
30	160	560	1.8	18.68	IE5	BF50-../S5E11LA6	8	26.5	53	160	192	560	560	560	560	122	6400	-	
30	160	560	1.8	18.68	IE5	BF50-../S5E11MA6	8	26.5	53	160	192	495	560	560	560	110	6400	-	
30	129	690	1.6	23.14	IE5	BF50-../S5E11LA6	6.4	21.5	43	129	155	690	690	690	690	122	6800	-	
30	129	690	1.6	23.14	IE5	BF50-../S5E11MA6	6.4	21.5	43	129	155	610	690	690	690	110	6800	-	
30	115	770	1.5	25.88	IE5	BF50-../S5E11LA6	5.7	19	38.5	115	139	770	770	770	770	122	7100	-	
30	115	770	1.5	25.88	IE5	BF50-../S5E11MA6	5.7	19	38.5	115	139	680	770	770	770	110	7100	-	
30	94	950	1.3	31.73	IE5	BF50-../S5E11LA6	4.7	15.5	31.5	94	113	950	950	950	950	122	7500	-	
30	94	950	1.3	31.73	IE5	BF50-../S5E11MA6	4.7	15.5	31.5	94	113	840	950	950	950	110	7500	-	
30	84	1060	1.2	35.49	IE5	BF50-../S5E11LA6	4.2	14	28	84	101	1060	1060	1060	1060	122	7800	-	
30	84	1060	1.2	35.49	IE5	BF50-../S5E11MA6	4.2	14	28	84	101	940	1060	1060	1060	110	7800	-	
30	71	1260	1	42.15	IE5	BF50-../S5E11LA6	3.5	11.5	23.5	71	85	1260	1260	1260	1260	122	8500	-	
30	71	1260	1	42.15	IE5	BF50-../S5E11MA6	3.5	11.5	23.5	71	85	1110	1260	1260	1260	110	8500	-	
30	63	1410	0.92	47.14	IE5	BF50-../S5E11LA6	3.1	10.5	21	63	76	1410	1410	1410	1410	122	8900	-	
30	63	1410	0.92	47.14	IE5	BF50-../S5E11MA6	3.1	10.5	21	63	76	1240	1410	1410	1410	110	8900	-	
30	210	425	2.8	14.24	IE5	BF60-../S5E11LA6	10.5	35	70	210	250	425	425	425	425	153	7100	20000	
30	210	425	2.8	14.24	IE5	BF60-../S5E11MA6	10.5	35	70	210	250	375	425	425	425	141	7100	20000	
30	176	500	2.8	16.96	IE5	BF60-../S5E11LA6	8.8	29	58	176	210	500	500	500	500	153	7300	20600	
30	176	500	2.8	16.96	IE5	BF60-../S5E11MA6	8.8	29	58	176	210	445	500	500	500	141	7300	20600	
30	159	560	2.7	18.81	IE5	BF60-../S5E11LA6	7.9	26.5	53	159	191	560	560	560	560	153	7600	21500	
30	159	560	2.7	18.81	IE5	BF60-../S5E11MA6	7.9	26.5	53	159	191	495	560	560	560	141	7600	21500	
30	132	670	2.4	22.58	IE5	BF60-../S5E11LA6	6.6	22	44	132	159	670	670	670	670	153	8000	22600	
30	132	670	2.4	22.58	IE5	BF60-../S5E11MA6	6.6	22	44	132	159	590	670	670	670	141	8000	22600	
30	119	750	2.3	25.05	IE5	BF60-../S5E11LA6	5.9	19.5	39.5	119	143	750	750	750	750	153	8200	23200	
30	119	750	2.3	25.05	IE5	BF60-../S5E11MA6	5.9	19.5	39.5	119	143	660	750	750	750	141	8200	23200	
30	96	930	2	31.2	IE5	BF60-../S5E11LA6	4.8	16	32	96	115	930	930	930	930	153	8800	24900	
30	96	930	2	31.2	IE5	BF60-../S5E11MA6	4.8	16	32	96	115	820	930	930	930	141	8800	24900	
30	86	1030	1.9	34.62	IE5	BF60-../S5E11LA6	4.3	14	28.5	86	103	1030	1030	1030	1030	153	9100	25700	
30	86	1030	1.9	34.62	IE5	BF60-../S5E11MA6	4.3	14	28.5	86	103	910	1030	1030	1030	141	9100	25700	
30	72	1240	1.7	41.6	IE5	BF60-../S5E11LA6	3.6	12	24	72	86	1240	1240	1240	1240	153	9600	27100	
30	72	1240	1.7	41.6	IE5	BF60-../S5E11MA6	3.6	12	24	72	86	1100	1240	1240	1240	141	9600	27100	
30	64	1380	1.6	46.16	IE5	BF60-../S5E11LA6	3.2	10.5	21.5	64	77	1380	1380	1380	1380	153	9900	28000	
30	64	1380	1.6	46.16	IE5	BF60-../S5E11MA6	3.2	10.5	21.5	64	77	1220	1380	1380	1380	141	9900	28000	
30	55	1630	1.4	54.44	IE5	BF60-../S5E11LA6	2.7	9.1	18	55	66	1630	1630	1630	1630	153	10500	29700	
30	55	1630	1.4	54.44	IE5	BF60-../S5E11MA6	2.7	9.1	18	55	66	1440	1630	1630	1630	141	10500	29700	
30	49.5	1810	1.3	60.4	IE5	BF60-../S5E11LA6	2.4	8.2	16.5	49.5	59	1810	1810	1810	1810	153	11100	31400	
30	49.5	1810	1.3	60.4	IE5	BF60-../S5E11MA6	2.4	8.2	16.5	49.5	59	1600	1810	1810	1810	141	11100	31400	
30	41.5	2150	1.1	72.15	IE5	BF60-../S5E11LA6	2	6.9	13.5	41.5	49.5	2150	2150	2150	2150	153	12000	34000	
30	41.5	2150	1.1	72.15	IE5	BF60-../S5E11MA6	2	6.9	13.5	41.5	49.5	1910	2150	2150	2150	141	12000	34000	
30	37	2400	0.96	80.05	IE5	BF60-../S5E11LA6	1.8	6.2	12	37	44.5	2400	2400	2400	2400	153	12600	35600	
30	37	2400	0.96	80.05	IE5	BF60-../S5E11MA6	1.8	6.2	12	37	44.5	2100	2400	2400	2400	141	12600	35600	
30	32	2800	0.82	93.44	IE5	BF60-../S5E11LA6	1.6	5.3	10.5	32	38.5	2800	2800	2800	2800	153	13500	38200	
30	32	2800	0.82	93.44	IE5	BF60-../S5E11MA6	1.6	5.3	10.5	32	38.5	2450	2800	2800	2800	141	13500	38200	
30	48	1850	2.8	61.94	IE5	BF70-../S5E11LA6	2.4	8	16	48	58	1850	1850	1850	1850	232	10800	37400	
30	48	1850	2.8	61.94	IE5	BF70-../S5E11MA6	2.4	8	16	48	58	1640	1850	1850	1850	220	10800	37400	
30	41.5	2150	2.4	72.26	IE5	BF70-../S5E11LA6	2	6.9	13.5	41.5	49.5	2150	2150	2150	2150	232	12000	39600	
30	41.5	2150	2.4	72.26	IE5	BF70-../S5E11MA6	2	6.9	13.5	41.5	49.5	1910	2150	2150	2150	220	12000	39600	
30	36.5	2450	2.1	81.82	IE5	BF70-../S5E11LA6	1.8	6.1	12	36.5	43.5	2450	2450	2450	2450	232	12800	41300	
30	36.5	2450	2.1	81.82	IE5	BF70-../S5E11MA6	1.8	6.1	12	36.5	43.5	2150	2450	2450	2450	220	12800	41300	
30	31	2850	1.8	95.46	IE5	BF70-../S5E11LA6	1.5	5.2	10	31	37.5	2850	2850	2850	2850	232	14000	43700	
30	31	2850	1.8	95.46	IE5	BF70-../S5E11MA6	1.5	5.2	10	31	37.5	2500	2850	2850	2850	220	14000	43700	
30	28.5																		

# BF-series shaft-mounted geared motors

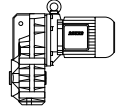
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 30 \text{ Nm}$  ( $P_N = 9.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
30	15	5900	0.87	199.7	IE5	BF70Z-../S5E11LA6	0.75	2.5	5	15	18	5900	5900	5900	5900	5900	258	16100	47700
30	15	5900	0.87	199.7	IE5	BF70Z-../S5E11MA6	0.75	2.5	5	15	18	5200	5900	5900	5900	5900	247	16100	47700
30	27.5	3200	2.9	107.9	IE5	BF80-../S5E11LA6	1.3	4.6	9.2	27.5	33	3200	3200	3200	3200	3200	328	22400	72300
30	27.5	3200	2.9	107.9	IE5	BF80-../S5E11MA6	1.3	4.6	9.2	27.5	33	2850	3200	3200	3200	3200	316	22400	72300
30	24.5	3650	2.6	122.4	IE5	BF80-../S5E11LA6	1.2	4	8.1	24.5	29	3650	3650	3650	3650	3650	328	24500	75000
30	24.5	3650	2.6	122.4	IE5	BF80-../S5E11MA6	1.2	4	8.1	24.5	29	3200	3650	3650	3650	3650	316	24500	75000
30	21	4150	2.3	139.7	IE5	BF80-../S5E11LA6	1	3.5	7.1	21	25.5	4150	4150	4150	4150	4150	328	26700	75000
30	21	4150	2.3	139.7	IE5	BF80-../S5E11MA6	1	3.5	7.1	21	25.5	3700	4150	4150	4150	4150	316	26700	75000
30	18.5	4750	2	158.5	IE5	BF80-../S5E11LA6	0.9	3.1	6.3	18.5	22.5	4750	4750	4750	4750	4750	328	29000	75000
30	18.5	4750	2	158.5	IE5	BF80-../S5E11MA6	0.9	3.1	6.3	18.5	22.5	4200	4750	4750	4750	4750	316	29000	75000
30	16	5500	1.7	184.5	IE5	BF80-../S5E11LA6	0.8	2.7	5.4	16	19.5	5500	5500	5500	5500	5500	328	31800	75000
30	16	5500	1.7	184.5	IE5	BF80-../S5E11MA6	0.8	2.7	5.4	16	19.5	4850	5500	5500	5500	5500	316	31800	75000
30	14	6200	1.5	209.4	IE5	BF80-../S5E11LA6	0.7	2.3	4.7	14	17	6200	6200	6200	6200	6200	328	34300	75000
30	14	6200	1.5	209.4	IE5	BF80-../S5E11MA6	0.7	2.3	4.7	14	17	5500	6200	6200	6200	6200	316	34300	75000
30	12.5	7100	1.3	237.1	IE5	BF80-../S5E11LA6	0.6	2.1	4.2	12.5	15	7100	7100	7100	7100	7100	328	36900	75000
30	12.5	7100	1.3	237.1	IE5	BF80-../S5E11MA6	0.6	2.1	4.2	12.5	15	6200	7100	7100	7100	7100	316	36900	75000
30	11	8000	1.2	269.1	IE5	BF80-../S5E11LA6	0.55	1.8	3.7	11	13	8000	8000	8000	8000	8000	328	39600	75000
30	11	8000	1.2	269.1	IE5	BF80-../S5E11MA6	0.55	1.8	3.7	11	13	7100	8000	8000	8000	8000	316	39600	75000
30	10	8700	1.2	291.7	IE5	BF80Z-../S5E11LA6	0.5	1.7	3.4	10	12	8700	8700	8700	8700	8700	375	39600	75000
30	10	8700	1.2	291.7	IE5	BF80Z-../S5E11MA6	0.5	1.7	3.4	10	12	7700	8700	8700	8700	8700	363	39600	75000
30	8.6	10400	1	347.3	IE5	BF80Z-../S5E11LA6	0.43	1.4	2.8	8.6	10	10400	10400	10400	10400	10400	375	39600	75000
30	8.6	10400	1	347.3	IE5	BF80Z-../S5E11MA6	0.43	1.4	2.8	8.6	10	9200	10400	10400	10400	10400	363	39600	75000
30	7.6	11800	0.89	394.2	IE5	BF80Z-../S5E11LA6	0.38	1.2	2.5	7.6	9.1	11800	11800	11800	11800	11800	375	39600	75000
30	7.6	11800	0.89	394.2	IE5	BF80Z-../S5E11MA6	0.38	1.2	2.5	7.6	9.1	10400	11800	11800	11800	11800	363	39600	75000
30	15	5900	2.8	198.8	IE5	BF90-../S5E11LA6	0.75	2.5	5	15	18	5900	5900	5900	5900	5900	581	36000	111300
30	15	5900	2.8	198.8	IE5	BF90-../S5E11MA6	0.75	2.5	5	15	18	5200	5900	5900	5900	5900	569	36000	111300
30	12.5	6900	2.4	232.6	IE5	BF90-../S5E11LA6	0.6	2.1	4.2	12.5	15	6900	6900	6900	6900	6900	581	39900	118300
30	12.5	6900	2.4	232.6	IE5	BF90-../S5E11MA6	0.6	2.1	4.2	12.5	15	6100	6900	6900	6900	6900	569	39900	118300
30	11.5	7700	2.2	259	IE5	BF90-../S5E11LA6	0.55	1.9	3.8	11.5	13.5	7700	7700	7700	7700	7700	581	42800	120000
30	11.5	7700	2.2	259	IE5	BF90-../S5E11MA6	0.55	1.9	3.8	11.5	13.5	6800	7700	7700	7700	7700	569	42800	120000
30	11	8000	2.3	269.8	IE5	BF90Z-../S5E11LA6	0.55	1.8	3.7	11	13	8000	8000	8000	8000	8000	641	42800	120000
30	11	8000	2.3	269.8	IE5	BF90Z-../S5E11MA6	0.55	1.8	3.7	11	13	7100	8000	8000	8000	8000	629	42800	120000
30	9.9	9000	2.1	300.4	IE5	BF90Z-../S5E11LA6	0.49	1.6	3.3	9.9	11.5	9000	9000	9000	9000	9000	641	42800	120000
30	9.9	9000	2.1	300.4	IE5	BF90Z-../S5E11MA6	0.49	1.6	3.3	9.9	11.5	7900	9000	9000	9000	9000	629	42800	120000
30	8.7	10300	1.8	343.6	IE5	BF90Z-../S5E11LA6	0.43	1.4	2.9	8.7	10	10300	10300	10300	10300	10300	641	42800	120000
30	8.7	10300	1.8	343.6	IE5	BF90Z-../S5E11MA6	0.43	1.4	2.9	8.7	10	9100	10300	10300	10300	10300	629	42800	120000
30	7.8	11400	1.6	382.6	IE5	BF90Z-../S5E11LA6	0.39	1.3	2.6	7.8	9.4	11400	11400	11400	11400	11400	641	42800	120000
30	7.8	11400	1.6	382.6	IE5	BF90Z-../S5E11MA6	0.39	1.3	2.6	7.8	9.4	10100	11400	11400	11400	11400	629	42800	120000
30	6.5	13700	1.4	456.7	IE5	BF90Z-../S5E11LA6	0.32	1	2.1	6.5	7.8	13700	13700	13700	13700	13700	641	42800	120000
30	6.5	13700	1.4	456.7	IE5	BF90Z-../S5E11MA6	0.32	1	2.1	6.5	7.8	12100	13700	13700	13700	13700	629	42800	120000
30	5.8	15200	1.2	508.5	IE5	BF90Z-../S5E11LA6	0.29	0.95	1.9	5.8	7	15200	15200	15200	15200	15200	641	42800	120000
30	5.8	15200	1.2	508.5	IE5	BF90Z-../S5E11MA6	0.29	0.95	1.9	5.8	7	13400	15200	15200	15200	15200	629	42800	120000
30	5	17700	1	591.1	IE5	BF90Z-../S5E11LA6	0.25	0.8	1.6	5	6	17700	17700	17700	17700	17700	641	42800	120000
30	5	17700	1	591.1	IE5	BF90Z-../S5E11MA6	0.25	0.8	1.6	5	6	15600	17700	17700	17700	17700	629	42800	120000
30	4.5	19700	0.94	658.1	IE5	BF90Z-../S5E11LA6	0.22	0.75	1.5	4.5	5.4	19700	19700	19700	19700	19700	641	42800	120000
30	4.5	19700	0.94	658.1	IE5	BF90Z-../S5E11MA6	0.22	0.75	1.5	4.5	5.4	17400	19700	19700	19700	19700	629	42800	120000
30	3.9	22500	0.81	759	IE5	BF90Z-../S5E11LA6	0.19	0.65	1.3	3.9	4.7	22500	22500	22500	22500	22500	641	42800	120000
30	3.9	22500	0.81	759	IE5	BF90Z-../S5E11MA6	0.19	0.65	1.3	3.9	4.7	20000	22500	22500	22500	22500	629	42800	120000

 **$M_N = 35 \text{ Nm}$  ( $P_N = 11 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
35	470	220	1.2	6.34	IE4	BF30-../S4E11MA6	23.5	78	157	470	560	168	190	220	220	220	66	2400	-
35	470	220	1.2	6.34	IE5	BF30-../S5E11LA6	23.5	78	157	470	560	220	220	220	220	220	78	2400	-
35	370	280	1	8.07	IE4	BF30-../S4E11MA6	18.5	61	123	370	445	210	240	280	280	280	66	2650	-
35	370	280	1	8.07	IE5	BF30-../S5E11LA6	18.5	61	123	370	445	280	280	280	280	280	78	2650	-
35	300	345	0.92	9.99	IE4	BF30-../S4E11MA6	15	50	100	300	360	260	295	345	345	345	66	2850	-
35	300	345	0.92	9.99	IE5	BF30-../S5E11LA6	15	50	100	300	360	345	345	345	345	345	78	2850	-
35	230	450	0.81	12.91	IE4	BF30-../S4E11MA6	11.5	38.5	77	230	275	340	385	450	450	450	66	3050	-
35	230	450	0.81	12.91	IE5	BF30-../S5E11LA6	11.5	38.5	77	230	275	450	450	450	450	450	78	3050	-
35	510	205	1.6	5.87	IE4	BF40-../S4E11MA6	25.5	85	170	510	610	155	176	205	205	205	80	3550	-
35	510	205	1.6	5.87	IE5	BF40-../S5E11LA6	25.5	85	170	510	610	205	205	205	205	205	92	3550	-
35	390	265	1.4	7.62	IE4	BF40-../S4E11MA6	19.5	65	131	390	470	200	225	265	265	265	80	3900	-
35	390	265	1.4	7.62	IE5	BF40-../S5E11LA6	19.5	65	131	390	470	265	265	265	265	265	92	3900	-
35	315	330	1.3	9.48	IE4	BF40-../S4E11MA6	15.5	52	105	315	375	250	280	3					

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 35 \text{ Nm}$  ( $P_N = 11 \text{ kW}$ )**

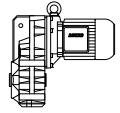
$M_N$	$n_2$	$M_2$	$f_B$	$i$	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$	$F_{RN}$	$F_{RV}$
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[:1]												[kg]	[N]	[N]	
35	172	600	1	17.35	IE5	BF40-../S5E11LA6	8.6	28.5	57	172	205	600	600	600	600	92	4950	-	
35	157	660	0.99	19.09	IE4	BF40-../S4E11MA6	7.8	26	52	157	188	500	570	660	660	80	5100	-	
35	157	660	0.99	19.09	IE5	BF40-../S5E11LA6	7.8	26	52	157	188	660	660	660	660	92	5100	-	
35	138	750	0.93	21.6	IE4	BF40-../S4E11MA6	6.9	23	46	138	166	570	640	750	750	80	5200	-	
35	138	750	0.93	21.6	IE5	BF40-../S5E11LA6	6.9	23	46	138	166	750	750	750	750	92	5200	-	
35	126	830	0.88	23.77	IE4	BF40-../S4E11MA6	6.3	21	42	126	151	620	710	830	830	80	5400	-	
35	126	830	0.88	23.77	IE5	BF40-../S5E11LA6	6.3	21	42	126	151	830	830	830	830	92	5400	-	
35	111	940	0.82	26.86	IE4	BF40-../S4E11MA6	5.5	18.5	37	111	134	710	800	940	940	80	5600	-	
35	111	940	0.82	26.86	IE5	BF40-../S5E11LA6	5.5	18.5	37	111	134	940	940	940	940	92	5600	-	
35	550	188	2.6	5.38	IE4	BF50-../S4E11MA6	27.5	92	185	550	660	142	161	188	188	110	4500	-	
35	550	188	2.6	5.38	IE5	BF50-../S5E11LA6	27.5	92	185	550	660	188	188	188	188	122	4500	-	
35	385	265	2.1	7.71	IE4	BF50-../S4E11MA6	19	64	129	385	465	200	230	265	265	110	5100	-	
35	385	265	2.1	7.71	IE5	BF50-../S5E11LA6	19	64	129	385	465	265	265	265	265	122	5100	-	
35	280	370	1.8	10.68	IE4	BF50-../S4E11MA6	14	46.5	93	280	335	280	320	370	370	110	5600	-	
35	280	370	1.8	10.68	IE5	BF50-../S5E11LA6	14	46.5	93	280	335	370	370	370	370	122	5600	-	
35	200	510	1.5	14.65	IE4	BF50-../S4E11MA6	10	34	68	200	245	385	435	510	510	110	6100	-	
35	200	510	1.5	14.65	IE5	BF50-../S5E11LA6	10	34	68	200	245	510	510	510	510	122	6100	-	
35	179	580	1.6	16.7	IE4	BF50-../S4E11MA6	8.9	29.5	59	179	215	440	500	580	580	110	6200	-	
35	179	580	1.6	16.7	IE5	BF50-../S5E11LA6	8.9	29.5	59	179	215	580	580	580	580	122	6200	-	
35	160	650	1.5	18.68	IE4	BF50-../S4E11MA6	8	26.5	53	160	192	495	560	650	650	110	6400	-	
35	160	650	1.5	18.68	IE5	BF50-../S5E11LA6	8	26.5	53	160	192	650	650	650	650	122	6400	-	
35	129	800	1.4	23.14	IE4	BF50-../S4E11MA6	6.4	21.5	43	129	155	610	690	800	800	110	6800	-	
35	129	800	1.4	23.14	IE5	BF50-../S5E11LA6	6.4	21.5	43	129	155	800	800	800	800	122	6800	-	
35	115	900	1.3	25.88	IE4	BF50-../S4E11MA6	5.7	19	38.5	115	139	680	770	900	900	110	7100	-	
35	115	900	1.3	25.88	IE5	BF50-../S5E11LA6	5.7	19	38.5	115	139	900	900	900	900	122	7100	-	
35	94	1110	1.1	31.73	IE4	BF50-../S4E11MA6	4.7	15.5	31.5	94	113	840	950	1110	1110	110	7500	-	
35	94	1110	1.1	31.73	IE5	BF50-../S5E11LA6	4.7	15.5	31.5	94	113	1110	1110	1110	1110	122	7500	-	
35	84	1240	1	35.49	IE4	BF50-../S4E11MA6	4.2	14	28	84	101	940	1060	1240	1240	110	7800	-	
35	84	1240	1	35.49	IE5	BF50-../S5E11LA6	4.2	14	28	84	101	1240	1240	1240	1240	122	7800	-	
35	71	1470	0.88	42.15	IE4	BF50-../S4E11MA6	3.5	11.5	23.5	71	85	1110	1260	1470	1470	110	8500	-	
35	71	1470	0.88	42.15	IE5	BF50-../S5E11LA6	3.5	11.5	23.5	71	85	1470	1470	1470	1470	122	8500	-	
35	290	360	2.8	10.31	IE4	BF60-../S4E11MA6	14.5	48	96	290	345	270	305	360	360	141	6500	18400	
35	290	360	2.8	10.31	IE5	BF60-../S5E11LA6	14.5	48	96	290	345	360	360	360	360	153	6500	18400	
35	210	495	2.4	14.24	IE4	BF60-../S4E11MA6	10.5	35	70	210	250	375	425	495	495	141	7100	20000	
35	210	495	2.4	14.24	IE5	BF60-../S5E11LA6	10.5	35	70	210	250	495	495	495	495	153	7100	20000	
35	176	590	2.4	16.96	IE4	BF60-../S4E11MA6	8.8	29	58	176	210	445	500	590	590	141	7300	20600	
35	176	590	2.4	16.96	IE5	BF60-../S5E11LA6	8.8	29	58	176	210	590	590	590	590	153	7300	20600	
35	159	650	2.3	18.81	IE4	BF60-../S4E11MA6	7.9	26.5	53	159	191	495	560	650	650	141	7600	21500	
35	159	650	2.3	18.81	IE5	BF60-../S5E11LA6	7.9	26.5	53	159	191	650	650	650	650	153	7600	21500	
35	132	790	2.1	22.58	IE4	BF60-../S4E11MA6	6.6	22	44	132	159	590	670	790	790	141	8000	22600	
35	132	790	2.1	22.58	IE5	BF60-../S5E11LA6	6.6	22	44	132	159	790	790	790	790	153	8000	22600	
35	119	870	2	25.05	IE4	BF60-../S4E11MA6	5.9	19.5	39.5	119	143	660	750	870	870	141	8200	23200	
35	119	870	2	25.05	IE5	BF60-../S5E11LA6	5.9	19.5	39.5	119	143	870	870	870	870	153	8200	23200	
35	96	1090	1.7	31.2	IE4	BF60-../S4E11MA6	4.8	16	32	96	115	820	930	1090	1090	141	8800	24900	
35	96	1090	1.7	31.2	IE5	BF60-../S5E11LA6	4.8	16	32	96	115	1090	1090	1090	1090	153	8800	24900	
35	86	1210	1.6	34.62	IE4	BF60-../S4E11MA6	4.3	14	28.5	86	103	910	1030	1210	1210	141	9100	25700	
35	86	1210	1.6	34.62	IE5	BF60-../S5E11LA6	4.3	14	28.5	86	103	1210	1210	1210	1210	153	9100	25700	
35	72	1450	1.4	41.6	IE4	BF60-../S4E11MA6	3.6	12	24	72	86	1100	1240	1450	1450	141	9600	27100	
35	72	1450	1.4	41.6	IE5	BF60-../S5E11LA6	3.6	12	24	72	86	1450	1450	1450	1450	153	9600	27100	
35	64	1610	1.4	46.16	IE4	BF60-../S4E11MA6	3.2	10.5	21.5	64	77	1220	1380	1610	1610	141	9900	28000	
35	64	1610	1.4	46.16	IE5	BF60-../S5E11LA6	3.2	10.5	21.5	64	77	1610	1610	1610	1610	153	9900	28000	
35	55	1900	1.2	54.44	IE4	BF60-../S4E11MA6	2.7	9.1	18	55	66	1440	1630	1900	1900	141	10500	29700	
35	55	1900	1.2	54.44	IE5	BF60-../S5E11LA6	2.7	9.1	18	55	66	1900	1900	1900	1900	153	10500	29700	
35	49.5	2100	1.1	60.4	IE4	BF60-../S4E11MA6	2.4	8.2	16.5	49.5	59	1600	1810	2100	2100	141	11100	31400	
35	49.5	2100	1.1	60.4	IE5	BF60-../S5E11LA6	2.4	8.2	16.5	49.5	59	2100	2100	2100	2100	153	11100	31400	
35	41.5	2500	0.91	72.15	IE4	BF60-../S4E11MA6	2	6.9	13.5	41.5	49.5	1910	2150	2500	2500	141	12000	34000	
35	41.5	2500	0.91	72.15	IE5	BF60-../S5E11LA6	2	6.9	13.5	41.5	49.5	2500	2500	2500	2500	153	12000	34000	
35	37	2800	0.82	80.05	IE4	BF60-../S4E11MA6	1.8	6.2	12	37	44.5	2100	2400	2800	2800	141	12600	35600	
35	37	2800	0.82	80.05	IE5	BF60-../S5E11LA6	1.8	6.2	12	37	44.5	2800	2800	2800	2800	153	12600	35600	
35	53	1950	2.7	55.79	IE4	BF70-../S4E11MA6	2.6	8.9	17.5	53	64	1470	1670	1950	1950	220	10200	36000	
35	53	1950	2.7	55.79	IE5	BF70-../S5E11LA6	2.6	8.9	17.5	53	64	1950	1950	1950	1950	232	10200	36000	
35	48	2150	2.4	61.94	IE4	BF70-../S4E11MA6	2.4	8	16	48	58	1640	1850	2150	2150	220	10800	37400	
35	48	2150	2.4	61.94	IE5	BF70-../S5E11LA6	2.4	8	16	48	58	2150	2150	2150	2150	232	10800	37400	
35	41.5	2500	2.1	72.26	IE4	BF70-../S4E11MA6	2	6.9	13.5	41.5	49.5	1910	2150	2500	2500	220	12000	39600	
35	41.5	2500	2.1	72.26	IE5	BF70-../S5E11LA6	2	6.9	13.5	41.5	49.5	2500	2500	2500	2500	232	12000	39600	
35	36.5	2850	1.8	81.82	IE4	BF70-../S4E11MA6	1.8	6.1	12	36.5	43.5	2150	2450	2850	2850	220	12800	41300	
35	36.5	2850	1.8	81.82	IE5	BF70-../S5E11LA6	1.8	6.1	12	36.5	43.5	2850	2850	2850	2850	232	12800	41300	
35	31	3300	1.6	95.46	IE4	BF70-../S4E11MA6	1.5	5.2	10	31	37.5	2500	2850	3300	3300	220	14000	43700	
35	31	3300	1.6	95.46	IE5	BF70-../S5E11LA6	1.5	5.2	10	31	37.5	3300	3300	3300	3300	232	14000	43	



# BF-series shaft-mounted geared motors

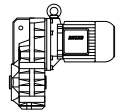
## Selection - shaft-mounted geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 35 \text{ Nm}$ ( $P_N = 11 \text{ kW}$ )

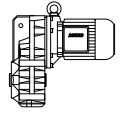


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
35	31.5	3300	2.9	94.38	IE4	BF80-../S4E11MA6	1.5	5.2	10.5	31.5	38	2500	2800	3300	3300	3300	316	20300	68500
35	31.5	3300	2.9	94.38	IE5	BF80-../S5E11LA6	1.5	5.2	10.5	31.5	38	3300	3300	3300	3300	3300	328	20300	68500
35	27.5	3750	2.5	107.9	IE4	BF80-../S4E11MA6	1.3	4.6	9.2	27.5	33	2850	3200	3750	3750	3750	316	22400	72300
35	27.5	3750	2.5	107.9	IE5	BF80-../S5E11LA6	1.3	4.6	9.2	27.5	33	3750	3750	3750	3750	3750	328	22400	72300
35	24.5	4250	2.2	122.4	IE4	BF80-../S4E11MA6	1.2	4	8.1	24.5	29	3200	3650	4250	4250	4250	316	24500	75000
35	24.5	4250	2.2	122.4	IE5	BF80-../S5E11LA6	1.2	4	8.1	24.5	29	4250	4250	4250	4250	4250	328	24500	75000
35	21	4850	1.9	139.7	IE4	BF80-../S4E11MA6	1	3.5	7.1	21	25.5	3700	4150	4850	4850	4850	316	26700	75000
35	21	4850	1.9	139.7	IE5	BF80-../S5E11LA6	1	3.5	7.1	21	25.5	4850	4850	4850	4850	4850	328	26700	75000
35	18.5	5500	1.7	158.5	IE4	BF80-../S4E11MA6	0.9	3.1	6.3	18.5	22.5	4200	4750	5500	5500	5500	316	29000	75000
35	18.5	5500	1.7	158.5	IE5	BF80-../S5E11LA6	0.9	3.1	6.3	18.5	22.5	5500	5500	5500	5500	5500	328	29000	75000
35	16	6400	1.5	184.5	IE4	BF80-../S4E11MA6	0.8	2.7	5.4	16	19.5	4850	5500	6400	6400	6400	316	31800	75000
35	16	6400	1.5	184.5	IE5	BF80-../S5E11LA6	0.8	2.7	5.4	16	19.5	6400	6400	6400	6400	6400	328	31800	75000
35	14	7300	1.3	209.4	IE4	BF80-../S4E11MA6	0.7	2.3	4.7	14	17	5500	6200	7300	7300	7300	316	34300	75000
35	14	7300	1.3	209.4	IE5	BF80-../S5E11LA6	0.7	2.3	4.7	14	17	7300	7300	7300	7300	7300	328	34300	75000
35	12.5	8200	1.1	237.1	IE4	BF80-../S4E11MA6	0.6	2.1	4.2	12.5	15	6200	7100	8200	8200	8200	316	36900	75000
35	12.5	8200	1.1	237.1	IE5	BF80-../S5E11LA6	0.6	2.1	4.2	12.5	15	8200	8200	8200	8200	8200	328	36900	75000
35	11	9400	1	269.1	IE4	BF80-../S4E11MA6	0.55	1.8	3.7	11	13	7100	8000	9400	9400	9400	316	39600	75000
35	11	9400	1	269.1	IE5	BF80-../S5E11LA6	0.55	1.8	3.7	11	13	9400	9400	9400	9400	9400	328	39600	75000
35	10	10200	1	291.7	IE4	BF80Z../S4E11MA6	0.5	1.7	3.4	10	12	7700	8700	10200	10200	10200	363	39600	75000
35	10	10200	1	291.7	IE5	BF80Z../S5E11LA6	0.5	1.7	3.4	10	12	10200	10200	10200	10200	10200	375	39600	75000
35	8.6	12100	0.86	347.3	IE4	BF80Z../S4E11MA6	0.43	1.4	2.8	8.6	10	9200	10400	12100	12100	12100	363	39600	75000
35	8.6	12100	0.86	347.3	IE5	BF80Z../S5E11LA6	0.43	1.4	2.8	8.6	10	12100	12100	12100	12100	12100	375	39600	75000
35	16.5	6200	2.7	178.6	IE4	BF90-../S4E11MA6	0.8	2.7	5.5	16.5	20	4700	5300	6200	6200	6200	569	33400	106700
35	16.5	6200	2.7	178.6	IE5	BF90-../S5E11LA6	0.8	2.7	5.5	16.5	20	6200	6200	6200	6200	6200	581	33400	106700
35	15	6900	2.4	198.8	IE4	BF90-../S4E11MA6	0.75	2.5	5	15	18	5200	5900	6900	6900	6900	569	36000	111300
35	15	6900	2.4	198.8	IE5	BF90-../S5E11LA6	0.75	2.5	5	15	18	6900	6900	6900	6900	6900	581	36000	111300
35	12.5	8100	2.1	232.6	IE4	BF90-../S4E11MA6	0.6	2.1	4.2	12.5	15	6100	6900	8100	8100	8100	569	39900	118300
35	12.5	8100	2.1	232.6	IE5	BF90-../S5E11LA6	0.6	2.1	4.2	12.5	15	8100	8100	8100	8100	8100	581	39900	118300
35	11.5	9000	1.9	259	IE4	BF90-../S4E11MA6	0.55	1.9	3.8	11.5	13.5	6800	7700	9000	9000	9000	569	42800	120000
35	11.5	9000	1.9	259	IE5	BF90-../S5E11LA6	0.55	1.9	3.8	11.5	13.5	9000	9000	9000	9000	9000	581	42800	120000
35	11	9400	2	269.8	IE4	BF90Z../S4E11MA6	0.55	1.8	3.7	11	13	7100	8000	9400	9400	9400	629	42800	120000
35	11	9400	2	269.8	IE5	BF90Z../S5E11LA6	0.55	1.8	3.7	11	13	9400	9400	9400	9400	9400	641	42800	120000
35	9.9	10500	1.8	300.4	IE4	BF90Z../S4E11MA6	0.49	1.6	3.3	9.9	11.5	7900	9000	10500	10500	10500	629	42800	120000
35	9.9	10500	1.8	300.4	IE5	BF90Z../S5E11LA6	0.49	1.6	3.3	9.9	11.5	10500	10500	10500	10500	10500	641	42800	120000
35	8.7	12000	1.5	343.6	IE4	BF90Z../S4E11MA6	0.43	1.4	2.9	8.7	10	9100	10300	12000	12000	12000	629	42800	120000
35	8.7	12000	1.5	343.6	IE5	BF90Z../S5E11LA6	0.43	1.4	2.9	8.7	10	12000	12000	12000	12000	12000	641	42800	120000
35	7.8	13300	1.4	382.6	IE4	BF90Z../S4E11MA6	0.39	1.3	2.6	7.8	9.4	10100	11400	13300	13300	13300	629	42800	120000
35	7.8	13300	1.4	382.6	IE5	BF90Z../S5E11LA6	0.39	1.3	2.6	7.8	9.4	13300	13300	13300	13300	13300	641	42800	120000
35	6.5	15900	1.2	456.7	IE4	BF90Z../S4E11MA6	0.32	1	2.1	6.5	7.8	12100	13700	15900	15900	15900	629	42800	120000
35	6.5	15900	1.2	456.7	IE5	BF90Z../S5E11LA6	0.32	1	2.1	6.5	7.8	15900	15900	15900	15900	15900	641	42800	120000
35	5.8	17700	1	508.5	IE4	BF90Z../S4E11MA6	0.29	0.95	1.9	5.8	7	13400	15200	17700	17700	17700	629	42800	120000
35	5.8	17700	1	508.5	IE5	BF90Z../S5E11LA6	0.29	0.95	1.9	5.8	7	17700	17700	17700	17700	17700	641	42800	120000
35	5	20500	0.89	591.1	IE4	BF90Z../S4E11MA6	0.25	0.8	1.6	5	6	15600	17700	20500	20500	20500	629	42800	120000
35	5	20500	0.89	591.1	IE5	BF90Z../S5E11LA6	0.25	0.8	1.6	5	6	20500	20500	20500	20500	20500	641	42800	120000
35	4.5	23000	0.8	658.1	IE4	BF90Z../S4E11MA6	0.22	0.75	1.5	4.5	5.4	17400	19700	23000	23000	23000	629	42800	120000
35	4.5	23000	0.8	658.1	IE5	BF90Z../S5E11LA6	0.22	0.75	1.5	4.5	5.4	23000	23000	23000	23000	23000	641	42800	120000

### $M_N = 48 \text{ Nm}$ ( $P_N = 15 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
48	470	300	0.86	6.34	IE5	BF30-../S5E11LA6	23.5	78	157	470	560	220	250	300	300	250	78	2400	-
48	510	280	1.2	5.87	IE5	BF40-../S5E11LA6	25.5	85	170	510	610	205	230	280	280	230	92	3550	-
48	390	365	1	7.62	IE5	BF40-../S5E11LA6	19.5	65	131	390	470	265	300	365	365	300	92	3900	-
48	315	455	0.91	9.48	IE5	BF40-../S5E11LA6	15.5	52	105	315	375	330	375	455	455	375	92	4150	-
48	250	560	0.82	11.79	IE5	BF40-../S5E11LA6	12.5	42	84	250	305	410	470	560	560	470	92	4450	-
48	550	255	1.9	5.38	IE5	BF50-../S5E11LA6	27.5	92	185	550	660	188	215	255	255	215	122	4500	-
48	385	370	1.5	7.71	IE5	BF50-../S5E11LA6	19	64	129	385	465	265	305	370	370	305	122	5100	-
48	280	510	1.3	10.68	IE5	BF50-../S5E11LA6	14	46.5	93	280	335	370	425	510	510	425	122	5600	-
48	200	700	1.1	14.65	IE5	BF50-../S5E11LA6	10	34	68	200	245	510	580	700	700	580	122	6100	-
48	179	800	1.2	16.7	IE5	BF50-../S5E11LA6	8.9	29.5	59	179	215	580	660	800	800	660	122	6200	-
48	160	890	1.1	18.68	IE5	BF50-../S5E11LA6	8	26.5	53	160	192	650	740	890	890	740	122	6400	-
48	129	1110	0.99	23.14	IE5	BF50-../S5E11LA6	6.4	21.5	43	129	155	800	920	1110	1110	920	122	6800	-
48	115	1240	0.93	25.88	IE5	BF50-../S5E11LA6	5.7	19	38.5	115	139	900	1030	1240	1240	1030	122	7100	-
48	94	1520	0.83	31.73	IE5	BF50-../S5E11LA6	4.7	15.5	31.5	94	113	1110	1260	1520	1520	1260	122	7500	-
48	570	250	3	5.22	IE5	BF60-../S5E11LA6	28.5	95	191	570	680	182	205	250					

**BF-series shaft-mounted geared motors****Selection - shaft-mounted geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 48 \text{ Nm}$  ( $P_N = 15 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
48	119	1200	1.4	25.05	IE5	BF60-../S5E11LA6	5.9	19.5	39.5	119	143	870	1000	1200	1000	153	8200	23200	
48	96	1490	1.3	31.2	IE5	BF60-../S5E11LA6	4.8	16	32	96	115	1090	1240	1490	1240	153	8800	24900	
48	86	1660	1.2	34.62	IE5	BF60-../S5E11LA6	4.3	14	28.5	86	103	1210	1380	1660	1660	153	9100	25700	
48	72	1990	1.1	41.6	IE5	BF60-../S5E11LA6	3.6	12	24	72	86	1450	1660	1990	1660	153	9600	27100	
48	64	2200	0.99	46.16	IE5	BF60-../S5E11LA6	3.2	10.5	21.5	64	77	1610	1840	2200	1840	153	9900	28000	
48	55	2600	0.88	54.44	IE5	BF60-../S5E11LA6	2.7	9.1	18	55	66	1900	2150	2600	2600	153	10500	29700	
48	81	1770	2.9	36.88	IE5	BF70-../S5E11LA6	4	13.5	27	81	97	1290	1470	1770	1770	232	7900	31100	
48	69	2050	2.5	43.02	IE5	BF70-../S5E11LA6	3.4	11.5	23	69	83	1500	1720	2050	2050	232	8700	32800	
48	62	2250	2.3	47.82	IE5	BF70-../S5E11LA6	3.1	10	20.5	62	75	1670	1910	2250	2250	232	9100	34000	
48	53	2650	1.9	55.79	IE5	BF70-../S5E11LA6	2.6	8.9	17.5	53	64	1950	2200	2650	2650	232	10200	36000	
48	48	2950	1.7	61.94	IE5	BF70-../S5E11LA6	2.4	8	16	48	58	2150	2450	2950	2950	232	10800	37400	
48	41.5	3450	1.5	72.26	IE5	BF70-../S5E11LA6	2	6.9	13.5	41.5	49.5	2500	2850	3450	3450	232	12000	39600	
48	36.5	3900	1.3	81.82	IE5	BF70-../S5E11LA6	1.8	6.1	12	36.5	43.5	2850	3250	3900	3900	232	12800	41300	
48	31	4550	1.1	95.46	IE5	BF70-../S5E11LA6	1.5	5.2	10	31	37.5	3300	3800	4550	4550	232	14000	43700	
48	28.5	5000	1	105.2	IE5	BF70-../S5E11LA6	1.4	4.7	9.5	28.5	34	3650	4200	5000	5000	232	14700	45100	
48	24	5800	0.88	122.7	IE5	BF70-../S5E11LA6	1.2	4	8.1	24	29	4250	4900	5800	5800	232	16100	47700	
48	22.5	6300	0.81	133	IE5	BF70Z-../S5E11LA6	1.1	3.7	7.5	22.5	27	4650	5300	6300	6300	258	16100	47700	
48	42.5	3350	2.8	69.86	IE5	BF80-../S5E11LA6	2.1	7.1	14	42.5	51	2400	2750	3350	3350	328	15900	60600	
48	36	3950	2.4	83.16	IE5	BF80-../S5E11LA6	1.8	6	12	36	43	2900	3300	3950	3950	328	18400	65100	
48	31.5	4500	2.1	94.38	IE5	BF80-../S5E11LA6	1.5	5.2	10.5	31.5	38	3300	3750	4500	4500	328	20300	68500	
48	27.5	5100	1.8	107.9	IE5	BF80-../S5E11LA6	1.3	4.6	9.2	27.5	33	3750	4300	5100	5100	328	22400	72300	
48	24.5	5800	1.6	122.4	IE5	BF80-../S5E11LA6	1.2	4	8.1	24.5	29	4250	4850	5800	5800	328	24500	75000	
48	21	6700	1.4	139.7	IE5	BF80-../S5E11LA6	1	3.5	7.1	21	25.5	4850	5500	6700	6700	328	26700	75000	
48	18.5	7600	1.2	158.5	IE5	BF80-../S5E11LA6	0.9	3.1	6.3	18.5	22.5	5500	6300	7600	7600	328	29000	75000	
48	16	8800	1.1	184.5	IE5	BF80-../S5E11LA6	0.8	2.7	5.4	16	19.5	6400	7300	8800	8800	328	31800	75000	
48	14	10000	0.95	209.4	IE5	BF80-../S5E11LA6	0.7	2.3	4.7	14	17	7300	8300	10000	10000	328	34300	75000	
48	12.5	11300	0.83	237.1	IE5	BF80-../S5E11LA6	0.6	2.1	4.2	12.5	15	8200	9400	11300	11300	328	36900	75000	
48	25	5700	2.9	119.7	IE5	BF90-../S5E11LA6	1.2	4.1	8.3	25	30	4150	4750	5700	5700	581	24500	90800	
48	21.5	6600	2.5	139.1	IE5	BF90-../S5E11LA6	1	3.5	7.1	21.5	25.5	4850	5500	6600	6600	581	27700	96300	
48	19	7400	2.3	154.8	IE5	BF90-../S5E11LA6	0.95	3.2	6.4	19	23	5400	6100	7400	7400	581	30100	100800	
48	16.5	8500	2	178.6	IE5	BF90-../S5E11LA6	0.8	2.7	5.5	16.5	20	6200	7100	8500	8500	581	33400	106700	
48	15	9500	1.8	198.8	IE5	BF90-../S5E11LA6	0.75	2.5	5	15	18	6900	7900	9500	9500	581	36000	111300	
48	12.5	11100	1.5	232.6	IE5	BF90-../S5E11LA6	0.6	2.1	4.2	12.5	15	8100	9300	11100	11100	581	39900	118300	
48	11.5	12400	1.4	259	IE5	BF90-../S5E11LA6	0.55	1.9	3.8	11.5	13.5	9000	10300	12400	12400	581	42800	120000	
48	11	12900	1.4	269.8	IE5	BF90Z-../S5E11LA6	0.55	1.8	3.7	11	13	9400	10700	12900	12900	641	42800	120000	
48	9.9	14400	1.3	300.4	IE5	BF90Z-../S5E11LA6	0.49	1.6	3.3	9.9	11.5	10500	12000	14400	14400	641	42800	120000	
48	8.7	16400	1.1	343.6	IE5	BF90Z-../S5E11LA6	0.43	1.4	2.9	8.7	10	12000	13700	16400	16400	641	42800	120000	
48	7.8	18300	1	382.6	IE5	BF90Z-../S5E11LA6	0.39	1.3	2.6	7.8	9.4	13300	15300	18300	18300	641	42800	120000	
48	6.5	21500	0.84	456.7	IE5	BF90Z-../S5E11LA6	0.32	1	2.1	6.5	7.8	15900	18200	21500	21500	641	42800	120000	

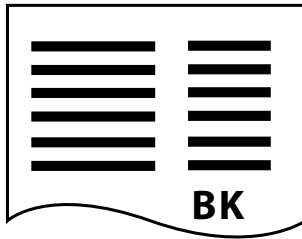


# Energy Efficient Geared Motors

## AC Variable Speed

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## BK-series bevel-gear motors - Selection

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# Energy Efficient Geared Motors

## AC Variable Speed

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# BK-series bevel-gear motors

## Description of bevel-gear units

### Sizes

Bauer BK-series bevel-gear motors are normally supplied in ten frame sizes and with torques of 80 to 18,500 Nm. Higher torques are available on request. The gear unit is accommodated in a sturdy cast housing

### Bauer service factors ( $f_B$ ) for bevel-gear motors

Of the numerous factors influencing the total loading of a gear unit, the most important include:

- Mean torque (rated torque)
- Daily operating hours
- Severity of torque peaks (shock classification)
- Frequency of torque peaks (switching duty)

These factors can be represented in a simplified and practical manner by service factors. The tables and explanations below attempt to provide an objective description of the shock classification, rather than a classification of the driven machinery. Experience has shown that, in addition to the torque shocks caused by the driven machinery ( $M_s/M_N$ ), above all the power transmission components (clutches, chains etc.) plus the mass ratios play a decisive role in this.

See Bauer special imprint SD32 for more information.

### Continuous operation without switching frequency $Z \leq 1/h$

**Factor  $f_1$**  for shock classification and operating time

Shock classification	Operating hours per day $t_d$	>4 h	>8 h	>16 h
		$\leq 8$ h	$\leq 16$ h	$\leq 24$ h
I		0.8	1.0	1.2
II		1.05	1.25	1.45
III		1.45	1.55	1.7

### Switching duty

**Factor  $f_2$**  for shock classification and switching frequency

Switching frequency in single- shift operation  $t_d \leq 8$  h/d

Shock classification	$1 < Z \leq 100$	$100 < Z \leq 1000$	$1000 < Z$
I	0.95	1.1	1.15
II	1.2	1,35	1.4
III	1.55	1.6	1.6

Switching frequency in multiple- shift operation  $t_d > 8$  h/d

Shock classification	$1 < Z \leq 100$	$100 < Z \leq 1000$	$1000 < Z$
I	1.3	1.45	1.5
II	1.5	1.6	1.65
III	1.75	1.8	1.8

### Bauer Service factor

Bauer service factor  $f_B = f_1$  or  $f_B = f_2$

For example: Shock classification II for  $Z = 100$  switching operations per hour and multiple-shift operation yields a service factor  $f_B = f_2 = 1.5$

# BK-series bevel-gear motors

## Description of bevel-gear units

### Explanation of shock classification

#### Shock classification I:

Uniform without shock loads. All the following requirements must be satisfied:

- $FI \leq 1.3$
- $M_x/M_N \leq 1.0$
- Shock-absorbing power transmission components (e.g. highly resilient, zero-play coupling,  $\varphi_N \geq 5^\circ$ )

#### Shock classification II:

Moderate shock loads. At least one of the following conditions applies:

- $1.3 < FI \leq 4$
- $1 < M_x/M_N \leq 1.6$
- Shock-neutral power transmission components (e.g. gear wheels, zero-play rigid coupling or resilient coupling with  $\varphi_N < 5^\circ$ )

#### Shock classification III:

Heavy shock loads. At least one of the following conditions applies:

- $FI > 4$
- $1.6 < M_x/M_N \leq 2.0$
- Shock-amplifying power transmission components (e.g. coupling with play or chain drive)

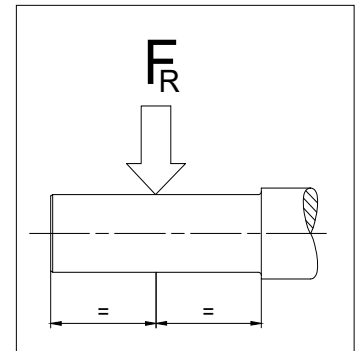
### Key to abbreviations

Z	Switching duty number of switching operations per hour
$t_d$	Daily operating time in hours (h/d)
FI	Factor of inertia $FI = (J_{ext} + J_{rot})/J_{rot}$
$J_{ext}$	Mass moment of inertia of the machine to be driven, in relation to the motor's rotor shaft ( $\text{kgm}^2$ )
$J_{rot}$	Mass moment of inertia of the motor rotor ( $\text{kgm}^2$ )
$M_x$	Highest impact torque above the static torque which can occur during normal operation or in emergency situations
$M_N$	Required static load torque for the application
$M_x/M_N$	Relative torque - Factor
$\varphi_N$	Torsional offset of the resilient coupling under rated torque

### Selection tables, bevel-gear motors

#### Key to abbreviations

P	Rated output
$n_2$	Rated speed of the output shaft
i	Gear reduction ratio
$M_2$	Rated torque at the output shaft
$f_B$	Bauer service factor
$F_{RN}$	Maximum permissible radial force with normal bearings
$F_{RV}$	Maximum permissible radial force with reinforced bearings in each case with standard solid shaft (Code -.1 and -.2)



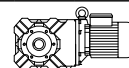
Use the selection tables to determine the size of geared motor required. The codes clearly define the Type of gear unit and output shaft (see chapter 12 "dimensional drawing bevel-gear motors").

#### Motor power overload protection

Motor-power ratings, particularly in conjunction with four-stage and multi-stage gear units, are more than ample in some instances. Consequently, and in much the same way as with low-power motors, rated current is not a measure of gear loading and cannot be used to protect the gear unit against overloading. It is advisable to provide gears at risk from excessive load or blockage with a protective mechanism (e. g., slip clutch, slip hub, shear pin or an alternative).

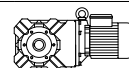
# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

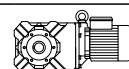
 **$M_N = 0.76 \text{ Nm}$  ( $P_N = 0.12 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
0.76	31	32	2.5	47.78	IE4	BK06-../S4E04SA4-1	3.1	10	20.5	31	37.5	32	32	32	32	32	7.6	1500	-
0.76	27.5	36.5	1.8	54.38	IE4	BK06-../S4E04SA4-1	2.7	9.1	18	27.5	33	36.5	36.5	36.5	36.5	7.6	1600	-	
0.76	23.5	42.5	1.5	63.33	IE4	BK06-../S4E04SA4-1	2.3	7.8	15.5	23.5	28	42.5	42.5	42.5	42.5	7.6	1700	-	
0.76	12	77	1.8	120.3	IE4	BK10Z-../S4E04SA4-1	1.2	4.1	8.3	12	14.5	77	77	77	77	21	7000	-	
0.76	10	91	1.8	143.2	IE4	BK10Z-../S4E04SA4-1	1	3.4	6.9	10	12.5	91	91	91	91	21	7000	-	
0.76	8.7	107	1.9	170.6	IE4	BK10Z-../S4E04SA4-1	0.85	2.9	5.8	8.7	10.5	107	107	107	107	21	7000	-	
0.76	7.3	127	1.6	204.7	IE4	BK10Z-../S4E04SA4-1	0.7	2.4	4.8	7.3	8.7	127	127	127	127	21	7000	-	
0.76	5.8	160	1.2	257.9	IE4	BK10Z-../S4E04SA4-1	0.55	1.9	3.8	5.8	6.9	160	160	160	160	21	7000	-	
0.76	4.9	186	0.99	302.4	IE4	BK10Z-../S4E04SA4-1	0.49	1.6	3.3	4.9	5.9	186	186	186	186	21	7000	-	
0.76	4.3	210	1	343.2	IE4	BK10G06-../S4E04SA4-1	0.43	1.4	2.9	4.3	5.2	210	210	210	210	25	7000	-	
0.76	3.6	250	0.87	410.8	IE4	BK10G06-../S4E04SA4-1	0.36	1.2	2.4	3.6	4.3	250	250	250	250	25	7000	-	
0.76	8.6	109	3	173.4	IE4	BK20Z-../S4E04SA4-1	0.85	2.8	5.7	8.6	10	109	109	109	109	31	8700	9000	
0.76	7.2	129	2.6	207.5	IE4	BK20Z-../S4E04SA4-1	0.7	2.4	4.8	7.2	8.6	129	129	129	129	31	8700	9000	
0.76	5.7	161	2	259.9	IE4	BK20Z-../S4E04SA4-1	0.55	1.9	3.8	5.7	6.9	161	161	161	161	31	8700	9000	
0.76	5	183	1.7	298.2	IE4	BK20Z-../S4E04SA4-1	0.5	1.6	3.3	5	6	183	183	183	183	31	8700	9000	
0.76	4	220	1.3	367.7	IE4	BK20Z-../S4E04SA4-1	0.4	1.3	2.7	4	4.8	220	220	220	220	31	8700	9000	
0.76	4.1	220	1.6	359.1	IE4	BK20G06-../S4E04SA4-1	0.41	1.3	2.7	4.1	5	220	220	220	220	34	8700	9000	
0.76	3.4	260	1.4	429.7	IE4	BK20G06-../S4E04SA4-1	0.34	1.1	2.3	3.4	4.1	260	260	260	260	34	8700	9000	
0.76	3.1	290	1.2	480.4	IE4	BK20G06-../S4E04SA4-1	0.31	1	2	3.1	3.7	290	290	290	290	34	8700	9000	
0.76	2.8	315	1.1	524.5	IE4	BK20G06-../S4E04SA4-1	0.28	0.95	1.9	2.8	3.4	315	315	315	315	34	8700	9000	
0.76	2.3	375	0.95	630	IE4	BK20G06-../S4E04SA4-1	0.23	0.75	1.5	2.3	2.8	375	375	375	375	34	8700	9000	
0.76	1.9	450	0.8	757	IE4	BK20G06-../S4E04SA4-1	0.19	0.65	1.3	1.9	2.3	450	450	450	450	34	8700	9000	
0.76	3.1	285	1.7	471.5	IE4	BK30G06-../S4E04SA4-1	0.31	1	2.1	3.1	3.8	285	285	285	285	40	11200	12000	
0.76	2.6	340	1.4	567	IE4	BK30G06-../S4E04SA4-1	0.26	0.85	1.7	2.6	3.1	340	340	340	340	40	11200	12000	
0.76	2.2	390	1.2	652.5	IE4	BK30G06-../S4E04SA4-1	0.22	0.75	1.5	2.2	2.7	390	390	390	390	40	11200	12000	
0.76	2	440	1.1	743	IE4	BK30G06-../S4E04SA4-1	0.2	0.65	1.3	2	2.4	440	440	440	440	40	11200	12000	
0.76	1.8	480	1	810.9	IE4	BK30G06-../S4E04SA4-1	0.18	0.6	1.2	1.8	2.2	480	480	480	480	40	11200	12000	
0.76	1.5	560	0.87	954.1	IE4	BK30G06-../S4E04SA4-1	0.15	0.5	1	1.5	1.8	560	560	560	560	40	11200	12000	

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 **$M_N = 1 \text{ Nm}$  ( $P_N = 0.157 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1	45	29.5	2.7	33.33	IE2	BK06-../SHE04SA4-1	4.5	15	30	45	54	22.5	25	29.5	29.5	7.6	1320	-	
1	39	34	2.3	38.18	IE2	BK06-../SHE04SA4-1	3.9	13	26	39	47	26	29	34	34	7.6	1380	-	
1	31	42.5	1.9	47.78	IE2	BK06-../SHE04SA4-1	3.1	10	20.5	31	37.5	32	36	42.5	42.5	7.6	1500	-	
1	27.5	48	1.4	54.38	IE2	BK06-../SHE04SA4-1	2.7	9.1	18	27.5	33	36.5	41	48	48	7.6	1600	-	
1	23.5	56	1.1	63.33	IE2	BK06-../SHE04SA4-1	2.3	7.8	15.5	23.5	28	42.5	47.5	56	56	7.6	1700	-	
1	12	102	1.3	120.3	IE2	BK10Z-../SHE04SA4-1	1.2	4.1	8.3	12	14.5	77	86	102	102	21	7000	-	
1	10	120	1.4	143.2	IE2	BK10Z-../SHE04SA4-1	1	3.4	6.9	10	12.5	91	102	120	120	21	7000	-	
1	8.7	141	1.4	170.6	IE2	BK10Z-../SHE04SA4-1	0.85	2.9	5.8	8.7	10.5	107	120	141	141	21	7000	-	
1	7.3	167	1.2	204.7	IE2	BK10Z-../SHE04SA4-1	0.7	2.4	4.8	7.3	8.7	127	142	167	167	21	7000	-	
1	5.8	210	0.95	257.9	IE2	BK10Z-../SHE04SA4-1	0.55	1.9	3.8	5.8	6.9	160	179	210	210	21	7000	-	
1	15	83	2.8	96.99	IE2	BK20Z-../SHE04SA4-1	1.5	5.1	10	15	18.5	63	70	83	83	31	8700	9000	
1	10	121	2.7	144.5	IE2	BK20Z-../SHE04SA4-1	1	3.4	6.9	10	12	92	103	121	121	31	8700	9000	
1	8.6	143	2.3	173.4	IE2	BK20Z-../SHE04SA4-1	0.85	2.8	5.7	8.6	10	109	122	143	143	31	8700	9000	
1	7.2	170	1.9	207.5	IE2	BK20Z-../SHE04SA4-1	0.7	2.4	4.8	7.2	8.6	129	144	170	170	31	8700	9000	
1	5.7	210	1.5	259.9	IE2	BK20Z-../SHE04SA4-1	0.55	1.9	3.8	5.7	6.9	161	181	210	210	31	8700	9000	
1	5	240	1.3	298.2	IE2	BK20Z-../SHE04SA4-1	0.5	1.6	3.3	5	6	183	205	240	240	31	8700	9000	
1	4	290	0.99	367.7	IE2	BK20Z-../SHE04SA4-1	0.4	1.3	2.7	4	4.8	220	250	290	290	31	8700	9000	
1	4.1	290	1.2	359.1	IE2	BK20G06-../SHE04SA4-1	0.41	1.3	2.7	4.1	5	220	245	290	290	34	8700	9000	
1	3.4	345	1	429.7	IE2	BK20G06-../SHE04SA4-1	0.34	1.1	2.3	3.4	4.1	260	290	345	345	34	8700	9000	
1	3.1	385	0.93	480.4	IE2	BK20G06-../SHE04SA4-1	0.31	1	2	3.1	3.7	290	325	385	385	34	8700	9000	
1	2.8	415	0.86	524.5	IE2	BK20G06-../SHE04SA4-1	0.28	0.95	1.9	2.8	3.4	315	355	415	415	34	8700	9000	
1	3.1	375	1.3	471.5	IE2	BK30G06-../SHE04SA4-1	0.31	1	2.1	3.1	3.8	285	320	375	375	40	11200	12000	
1	2.6	450	1.1	567	IE2	BK30G06-../SHE04SA4-1	0.26	0.85	1.7	2.6	3.1	340	380	450	450	40	11200	12000	
1	2.2	510	0.95	652.5	IE2	BK30G06-../SHE04SA4-1	0.22	0.75	1.5	2.2	2.7	390	435	510	510	40	11200	12000	
1	2	580	0.84	743	IE2	BK30G06-../SHE04SA4-1	0.2	0.65	1.3	2	2.4	440	495	580	580	40	11200	12000	

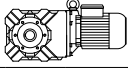
 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.2 \text{ kW}$ )**


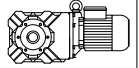
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.3	56	30.5	2.6	26.36	IE5	BK06-../S5E06MA4	5.6	18.5	37.5	56	68	30.5	30.5	30.5	30.5	11	1230	-	
1.3	45	38.5	2.1	33.33	IE5	BK06-../S5E06MA4	4.5	15	30	45	54	38.5	38.5	38.5	38.5	11	1320	-	
1.3	39	44.5	1.8	38.18	IE5	BK06-../S5E06MA4	3.9	13	26	39	47	44.5	44.5	44.5	44.5	11	1380	-	
1.3	31	55	1.4	47.78	IE5	BK06-../S5E06MA4	3.1	10	20.5	31	37.5	55	55	55	55	11	1500	-	
1.3	27.5	62	1.1	54.38	IE5	BK06-../S5E06MA4	2.7	9.1	18	27.5	33	62	62	62	62	11	1600	-	
1.3	23.5	73	0.87	63.33	IE5	BK06-../S5E06MA4	2.3	7.8	15.5	23.5	28	73	73	73	73	11	1700	-	



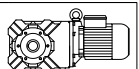
# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

<b>M<sub>N</sub> = 1.3 Nm (P<sub>N</sub> = 0.2 kW)</b>																			
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
[Nm]	[1/min]	[Nm]	[-]	[:1]			150	500	1000	1500	1800	150	500	1000	1500	1800	[kg]	[N]	[N]
1.3	24	71	2.8	61.68	IE5	BK10-../S5E06MA4	2.4	8.1	16	24	29	71	71	71	71	71	23	7000	-
1.3	20.5	82	2.4	72.31	IE5	BK10-../S5E06MA4	2	6.9	13.5	20.5	24.5	82	82	82	82	82	23	7000	-
1.3	16.5	100	1.8	89.3	IE5	BK10-../S5E06MA4	1.6	5.5	11	16.5	20	100	100	100	100	100	23	7000	-
1.3	14.5	113	1.4	102.5	IE5	BK10-../S5E06MA4	1.4	4.8	9.7	14.5	17.5	113	113	113	113	113	23	7000	-
1.3	12	132	1	120.3	IE5	BK10Z-../S5E06MA4	1.2	4.1	8.3	12	14.5	132	132	132	132	132	24	7000	-
1.3	10	156	1	143.2	IE5	BK10Z-../S5E06MA4	1	3.4	6.9	10	12.5	156	156	156	156	156	24	7000	-
1.3	8.7	184	1.1	170.6	IE5	BK10Z-../S5E06MA4	0.85	2.9	5.8	8.7	10.5	184	184	184	184	184	24	7000	-
1.3	7.3	215	0.92	204.7	IE5	BK10Z-../S5E06MA4	0.7	2.4	4.8	7.3	8.7	215	215	215	215	215	24	7000	-
1.3	13.5	121	2.6	108.6	IE5	BK20-../S5E06MA4	1.3	4.6	9.2	13.5	16.5	121	121	121	121	121	33	8700	9000
1.3	15	108	2.1	96.99	IE5	BK20Z-../S5E06MA4	1.5	5.1	10	15	18.5	108	108	108	108	108	34	8700	9000
1.3	12	137	2.4	124.2	IE5	BK20Z-../S5E06MA4	1.2	4	8	12	14	137	137	137	137	137	34	8700	9000
1.3	10	157	2.1	144.5	IE5	BK20Z-../S5E06MA4	1	3.4	6.9	10	12	157	157	157	157	157	34	8700	9000
1.3	8.6	187	1.8	173.4	IE5	BK20Z-../S5E06MA4	0.85	2.8	5.7	8.6	10	187	187	187	187	187	34	8700	9000
1.3	7.2	220	1.5	207.5	IE5	BK20Z-../S5E06MA4	0.7	2.4	4.8	7.2	8.6	220	220	220	220	220	34	8700	9000
1.3	5.7	275	1.2	259.9	IE5	BK20Z-../S5E06MA4	0.55	1.9	3.8	5.7	6.9	275	275	275	275	275	34	8700	9000
1.3	5	310	0.99	298.2	IE5	BK20Z-../S5E06MA4	0.5	1.6	3.3	5	6	310	310	310	310	310	34	8700	9000
1.3	4.1	375	0.95	359.1	IE5	BK20G06-../S5E06MA4	0.41	1.3	2.7	4.1	5	375	375	375	375	375	38	8700	9000
1.3	3.4	445	0.8	429.7	IE5	BK20G06-../S5E06MA4	0.34	1.1	2.3	3.4	4.1	445	445	445	445	445	38	8700	9000
1.3	10	158	2.8	145.1	IE5	BK30Z-../S5E06MA4	1	3.4	6.8	10	12	158	158	158	158	158	41	11200	12000
1.3	8.1	199	2.3	184.8	IE5	BK30Z-../S5E06MA4	0.8	2.7	5.4	8.1	9.7	199	199	199	199	199	41	11200	12000
1.3	6.9	230	1.9	216.5	IE5	BK30Z-../S5E06MA4	0.65	2.3	4.6	6.9	8.3	230	230	230	230	230	41	11200	12000
1.3	5.8	270	1.7	255.3	IE5	BK30Z-../S5E06MA4	0.55	1.9	3.9	5.8	7	270	270	270	270	270	41	11200	12000
1.3	4.8	325	1.2	308.3	IE5	BK30Z-../S5E06MA4	0.48	1.6	3.2	4.8	5.8	325	325	325	325	325	41	11200	12000
1.3	3.9	400	1	380.7	IE5	BK30Z-../S5E06MA4	0.39	1.3	2.6	3.9	4.7	400	400	400	400	400	41	11200	12000
1.3	3.3	455	0.83	441.3	IE5	BK30Z-../S5E06MA4	0.33	1.1	2.2	3.3	4	455	455	455	455	455	41	11200	12000
1.3	3.1	490	1	471.5	IE5	BK30G06-../S5E06MA4	0.31	1	2.1	3.1	3.8	490	490	490	490	490	44	11200	12000
1.3	2.6	580	0.84	567	IE5	BK30G06-../S5E06MA4	0.26	0.85	1.7	2.6	3.1	580	580	580	580	580	44	11200	12000
1.3	6	255	3	246.6	IE5	BK40Z-../S5E06MA4	0.6	2	4	6	7.2	255	255	255	255	255	64	11700	17000
1.3	5.1	305	2.2	289.8	IE5	BK40Z-../S5E06MA4	0.5	1.7	3.4	5.1	6.2	305	305	305	305	305	64	11700	17000
1.3	4.3	365	1.6	348.7	IE5	BK40Z-../S5E06MA4	0.43	1.4	2.8	4.3	5.1	365	365	365	365	365	64	11700	17000
1.3	3.4	445	1.3	430	IE5	BK40Z-../S5E06MA4	0.34	1.1	2.3	3.4	4.1	445	445	445	445	445	64	11700	17000
1.3	3	500	1.7	487.3	IE5	BK40G10-../S5E06MA4	0.3	1	2	3	3.6	500	500	500	500	500	68	11700	17000
1.3	2.7	550	1.5	540	IE5	BK40G10-../S5E06MA4	0.27	0.9	1.8	2.7	3.3	550	550	550	550	550	68	11700	17000
1.3	2.2	670	1.3	660.2	IE5	BK40G10-../S5E06MA4	0.22	0.75	1.5	2.2	2.7	670	670	670	670	670	68	11700	17000
1.3	1.9	770	1.1	756.7	IE5	BK40G10-../S5E06MA4	0.19	0.65	1.3	1.9	2.3	770	770	770	770	770	68	11700	17000
1.3	1.7	850	1	838.4	IE5	BK40G10-../S5E06MA4	0.17	0.55	1.1	1.7	2.1	850	850	850	850	850	68	11700	17000
1.3	1.5	1000	0.84	998.3	IE5	BK40G10-../S5E06MA4	0.15	0.5	1	1.5	1.8	1000	1000	1000	1000	1000	68	11700	17000
1.3	4.5	345	2.9	328.2	IE5	BK50Z-../S5E06MA4	0.45	1.5	3	4.5	5.4	345	345	345	345	345	92	14100	26000
1.3	3.6	430	1.9	414.8	IE5	BK50Z-../S5E06MA4	0.36	1.2	2.4	3.6	4.3	430	430	430	430	430	92	14100	26000
1.3	3.2	485	2.4	465.1	IE5	BK50G10-../S5E06MA4	0.32	1	2.1	3.2	3.8	485	485	485	485	485	96	14100	111000
1.3	2.9	530	2.2	513.4	IE5	BK50G10-../S5E06MA4	0.29	0.95	1.9	2.9	3.5	530	530	530	530	530	96	14100	111000
1.3	2.6	580	2	568.6	IE5	BK50G10-../S5E06MA4	0.26	0.85	1.7	2.6	3.1	580	580	580	580	580	96	14100	111000
1.3	2.3	670	1.7	651.7	IE5	BK50G10-../S5E06MA4	0.23	0.75	1.5	2.3	2.7	670	670	670	670	670	96	14100	111000
1.3	2	730	1.6	722.2	IE5	BK50G10-../S5E06MA4	0.2	0.65	1.3	2	2.4	730	730	730	730	730	96	14100	111000
1.3	1.7	870	1.3	859.8	IE5	BK50G10-../S5E06MA4	0.17	0.55	1.1	1.7	2	870	870	870	870	870	96	14100	111000
1.3	1.4	1030	1.1	1024	IE5	BK50G10-../S5E06MA4	0.14	0.48	0.95	1.4	1.7	1030	1030	1030	1030	1030	96	14100	111000
1.3	1.2	1230	0.93	1230	IE5	BK50G10-../S5E06MA4	0.12	0.4	0.8	1.2	1.4	1230	1230	1230	1230	1230	96	14100	111000
1.3	1	1390	0.83	1398	IE5	BK50G10-../S5E06MA4	0.1	0.35	0.7	1	1.2	1390	1390	1390	1390	1390	96	14100	111000
1.3	1.9	970	2.6	752.1	IE5	BK60G20-../S5E06MA4	0.19	0.65	1.3	1.9	2.3	970	970	970	970	970	123	16600	34000
1.3	1.6	1150	2.2	887.8	IE5	BK60G20-../S5E06MA4	0.16	0.55	1.1	1.6	2	1150	1150	1150	1150	1150	123	16600	34000
1.3	1.4	1320	1.9	1016	IE5	BK60G20-../S5E06MA4	0.14	0.49	0.95	1.4	1.7	1320	1320	1320	1320	1320	123	16600	34000
1.3	1.1	1710	1.5	1322	IE5	BK60G20-../S5E06MA4	0.11	0.37	0.75	1.1	1.3	1710	1710	1710	1710	1710	123	16600	34000
1.3	0.9	2100	1.2	1618	IE5	BK60G20-../S5E06MA4	0.09	0.3	0.6	0.9	1.1	2100	2100	2100	2100	2100	123	16600	34000
1.3	0.8	2350	1.1	1810	IE5	BK60G20-../S5E06MA4	0.08	0.27	0.55	0.8	0.95	2350	2350	2350	2350	2350	123	16600	34000
1.3	0.7	2600	0.96	2010	IE5	BK60G20-../S5E06MA4	0.07	0.24	0.49	0.7	0.85	2600	2600	2600	2600	2600	123	16600	34000
1.3	0.6	3050	0.81	2371	IE5	BK60G20-../S5E06MA4	0.06	0.21	0.42	0.6	0.75	3050	3050	3050	3050	3050	123	16600	34000
1.3	1	1890	3	1457	IE5	BK70G20-../S5E06MA4	0.1	0.34	0.65	1	1.2	1890	1890	1890	1890	1890	201	24100	50000
1.3	0.85	2200	2.6	1696	IE5	BK70G20-../S5E06MA4	0.085	0.29	0.55	0.85	1	2200	2200	2200	2200	2200	201	24100	50000
1.3	0.7	2650	2.1	2040	IE5	BK70G20-../S5E06MA4	0.07	0.24	0.49	0.7	0.85	2650	2650	2650	2650	2650	201	24100	50000
1.3	0.55	3350	1.7	2578	IE5	BK70G20-../S5E06MA4	0.055	0.19	0.38	0.55	0.65	3350	3350	3350	3350	3350	201	24100	50000
1.3	0.49	3950	1.4	3041	IE5	BK70G20-../S5E06MA4	0.049	0.16	0.32	0.49	0.55	3950	3950	3950	3950	3950	201	24100	50000
1.3	0.42	4550	1.3	3505	IE5	BK70G20-../S5E06MA4	0.042	0.14	0.28	0.42	0.5	4550	4550	4550	4550	4550	201	24100	50000
1.3	0.38	5000	1.1	3894	IE5	BK70G20-../S5E06MA4	0.038	0.12	0.25	0.38	0.46	5000	5000	5000	5000	5000	201	24100	50000
1.3	0.33	5800	0.97	4531	IE5	BK70G20-../S5E06MA4	0.033	0.11	0.22	0.33	0.39	5800	5800	5800	5800	5800	201	24100	50000
1.3	0.27	7000	0.81	5436															

Selection - bevel geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$ **M<sub>N</sub> = 1.6 Nm (P<sub>N</sub> = 0.25 kW)**

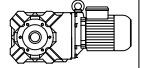
M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min] at engine speed n <sub>1</sub> [1/min]					Torque range M <sub>2</sub> [Nm] at engine speed n <sub>1</sub> [1/min]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.6	31	68	1.2	47.78	IE4	BK06-../S4E06MA4	3.1	10	20.5	31	37.5	68	68	68	68	68	11	1500	-
1.6	27.5	77	0.88	54.38	IE4	BK06-../S4E06MA4	2.7	9.1	18	27.5	33	77	77	77	77	77	11	1600	-
1.6	30.5	69	2.9	48.96	IE4	BK10-../S4E06MA4	3	10	20	30.5	36.5	69	69	69	69	69	23	6400	-
1.6	24	87	2.3	61.68	IE4	BK10-../S4E06MA4	2.4	8.1	16	24	29	87	87	87	87	87	23	7000	-
1.6	20.5	101	2	72.31	IE4	BK10-../S4E06MA4	2	6.9	13.5	20.5	24.5	101	101	101	101	101	23	7000	-
1.6	16.5	124	1.4	89.3	IE4	BK10-../S4E06MA4	1.6	5.5	11	16.5	20	124	124	124	124	124	23	7000	-
1.6	14.5	139	1.1	102.5	IE4	BK10-../S4E06MA4	1.4	4.8	9.7	14.5	17.5	139	139	139	139	139	23	7000	-
1.6	12	163	0.84	120.3	IE4	BK10Z-../S4E06MA4	1.2	4.1	8.3	12	14.5	163	163	163	163	163	24	7000	-
1.6	10	192	0.85	143.2	IE4	BK10Z-../S4E06MA4	1	3.4	6.9	10	12.5	192	192	192	192	192	24	7000	-
1.6	8.7	225	0.88	170.6	IE4	BK10Z-../S4E06MA4	0.85	2.9	5.8	8.7	10.5	225	225	225	225	225	24	7000	-
1.6	17	122	2.7	88.12	IE4	BK20-../S4E06MA4	1.7	5.6	11	17	20	122	122	122	122	122	33	8000	9000
1.6	13.5	149	2.1	108.6	IE4	BK20-../S4E06MA4	1.3	4.6	9.2	13.5	16.5	149	149	149	149	149	33	8700	9000
1.6	15	133	1.7	96.99	IE4	BK20Z-../S4E06MA4	1.5	5.1	10	15	18.5	133	133	133	133	133	34	8700	9000
1.6	12	168	2	124.2	IE4	BK20Z-../S4E06MA4	1.2	4	8	12	14	168	168	168	168	168	34	8700	9000
1.6	10	194	1.7	144.5	IE4	BK20Z-../S4E06MA4	1	3.4	6.9	10	12	194	194	194	194	194	34	8700	9000
1.6	8.6	230	1.4	173.4	IE4	BK20Z-../S4E06MA4	0.85	2.8	5.7	8.6	10	230	230	230	230	230	34	8700	9000
1.6	7.2	270	1.2	207.5	IE4	BK20Z-../S4E06MA4	0.7	2.4	4.8	7.2	8.6	270	270	270	270	270	34	8700	9000
1.6	5.7	340	0.97	259.9	IE4	BK20Z-../S4E06MA4	0.55	1.9	3.8	5.7	6.9	340	340	340	340	340	34	8700	9000
1.6	5	385	0.8	298.2	IE4	BK20Z-../S4E06MA4	0.5	1.6	3.3	5	6	385	385	385	385	385	34	8700	9000
1.6	12	168	2.7	123.9	IE4	BK30Z-../S4E06MA4	1.2	4	8	12	14.5	168	168	168	168	168	41	11200	12000
1.6	10	195	2.3	145.1	IE4	BK30Z-../S4E06MA4	1	3.4	6.8	10	12	195	195	195	195	195	41	11200	12000
1.6	8.1	245	1.8	184.8	IE4	BK30Z-../S4E06MA4	0.8	2.7	5.4	8.1	9.7	245	245	245	245	245	41	11200	12000
1.6	6.9	280	1.6	216.5	IE4	BK30Z-../S4E06MA4	0.65	2.3	4.6	6.9	8.3	280	280	280	280	280	41	11200	12000
1.6	5.8	330	1.3	255.3	IE4	BK30Z-../S4E06MA4	0.55	1.9	3.9	5.8	7	330	330	330	330	330	41	11200	12000
1.6	4.8	400	0.95	308.3	IE4	BK30Z-../S4E06MA4	0.48	1.6	3.2	4.8	5.8	400	400	400	400	400	41	11200	12000
1.6	3.9	490	0.81	380.7	IE4	BK30Z-../S4E06MA4	0.39	1.3	2.6	3.9	4.7	490	490	490	490	490	41	11200	12000
1.6	3.1	600	0.81	471.5	IE4	BK30G06-../S4E06MA4	0.31	1	2.1	3.1	3.8	600	600	600	600	600	44	11200	12000
1.6	7	275	2.8	211.5	IE4	BK40Z-../S4E06MA4	0.7	2.3	4.7	7	8.5	275	275	275	275	275	64	11700	17000
1.6	6	315	2.4	246.6	IE4	BK40Z-../S4E06MA4	0.6	2	4	6	7.2	315	315	315	315	315	64	11700	17000
1.6	5.1	375	1.8	289.8	IE4	BK40Z-../S4E06MA4	0.5	1.7	3.4	5.1	6.2	375	375	375	375	375	64	11700	17000
1.6	4.3	450	1.3	348.7	IE4	BK40Z-../S4E06MA4	0.43	1.4	2.8	4.3	5.1	450	450	450	450	450	64	11700	17000
1.6	3.4	550	1	430	IE4	BK40Z-../S4E06MA4	0.34	1.1	2.3	3.4	4.1	550	550	550	550	550	64	11700	17000
1.6	3	620	1.4	487.3	IE4	BK40G10-../S4E06MA4	0.3	1	2	3	3.6	620	620	620	620	620	68	11700	17000
1.6	2.7	680	1.2	540	IE4	BK40G10-../S4E06MA4	0.27	0.9	1.8	2.7	3.3	680	680	680	680	680	68	11700	17000
1.6	2.2	830	1	660.2	IE4	BK40G10-../S4E06MA4	0.22	0.75	1.5	2.2	2.7	830	830	830	830	830	68	11700	17000
1.6	1.9	950	0.89	756.7	IE4	BK40G10-../S4E06MA4	0.19	0.65	1.3	1.9	2.3	950	950	950	950	950	68	11700	17000
1.6	1.7	1050	0.81	838.4	IE4	BK40G10-../S4E06MA4	0.17	0.55	1.1	1.7	2.1	1050	1050	1050	1050	1050	68	11700	17000
1.6	4.5	425	2.4	328.2	IE4	BK50Z-../S4E06MA4	0.45	1.5	3	4.5	5.4	425	425	425	425	425	92	14100	26000
1.6	3.6	530	1.6	414.8	IE4	BK50Z-../S4E06MA4	0.36	1.2	2.4	3.6	4.3	530	530	530	530	530	92	14100	26000
1.6	3.2	590	1.9	465.1	IE4	BK50G10-../S4E06MA4	0.32	1	2.1	3.2	3.8	590	590	590	590	590	96	14100	111000
1.6	2.9	650	1.8	513.4	IE4	BK50G10-../S4E06MA4	0.29	0.95	1.9	2.9	3.5	650	650	650	650	650	96	14100	111000
1.6	2.6	720	1.6	568.6	IE4	BK50G10-../S4E06MA4	0.26	0.85	1.7	2.6	3.1	720	720	720	720	720	96	14100	111000
1.6	2.3	820	1.4	651.7	IE4	BK50G10-../S4E06MA4	0.23	0.75	1.5	2.3	2.7	820	820	820	820	820	96	14100	111000
1.6	2	910	1.3	722.2	IE4	BK50G10-../S4E06MA4	0.2	0.65	1.3	2	2.4	910	910	910	910	910	96	14100	111000
1.6	1.7	1070	1.1	859.8	IE4	BK50G10-../S4E06MA4	0.17	0.55	1.1	1.7	2	1070	1070	1070	1070	1070	96	14100	111000
1.6	1.4	1270	0.9	1024	IE4	BK50G10-../S4E06MA4	0.14	0.48	0.95	1.4	1.7	1270	1270	1270	1270	1270	96	14100	111000
1.6	2.4	990	2.5	621.5	IE4	BK60G20-../S4E06MA4	0.24	0.8	1.6	2.4	2.8	990	990	990	990	990	123	16600	34000
1.6	1.9	1200	2.1	752.1	IE4	BK60G20-../S4E06MA4	0.19	0.65	1.3	1.9	2.3	1200	1200	1200	1200	1200	123	16600	34000
1.6	1.6	1420	1.8	887.8	IE4	BK60G20-../S4E06MA4	0.16	0.55	1.1	1.6	2	1420	1420	1420	1420	1420	123	16600	34000
1.6	1.4	1620	1.5	1016	IE4	BK60G20-../S4E06MA4	0.14	0.49	0.95	1.4	1.7	1620	1620	1620	1620	1620	123	16600	34000
1.6	1.1	2100	1.2	1322	IE4	BK60G20-../S4E06MA4	0.11	0.37	0.75	1.1	1.3	2100	2100	2100	2100	2100	123	16600	34000
1.6	0.9	2550	0.97	1618	IE4	BK60G20-../S4E06MA4	0.09	0.3	0.6	0.9	1.1	2550	2550	2550	2550	2550	123	16600	34000
1.6	0.8	2850	0.86	1810	IE4	BK60G20-../S4E06MA4	0.08	0.27	0.55	0.8	0.95	2850	2850	2850	2850	2850	123	16600	34000
1.6	1.1	2000	2.8	1280	IE4	BK70G20-../S4E06MA4	0.11	0.39	0.75	1.1	1.4	2000	2000	2000	2000	2000	201	24100	50000
1.6	1	2300	2.4	1457	IE4	BK70G20-../S4E06MA4	0.1	0.34	0.65	1	1.2	2300	2300	2300	2300	2300	201	24100	50000
1.6	0.85	2700	2.1	1696	IE4	BK70G20-../S4E06MA4	0.085	0.29	0.55	0.85	1	2700	2700	2700	2700	2700	201	24100	50000
1.6	0.7	3250	1.7	2040	IE4	BK70G20-../S4E06MA4	0.07	0.24	0.49	0.7	0.85	3250	3250	3250	3250	3250	201	24100	50000
1.6	0.55	4100	1.4	2578	IE4	BK70G20-../S4E06MA4	0.055	0.19	0.38	0.55	0.65	4100	4100	4100	4100	4100	201	24100	50000
1.6	0.49	4850	1.2	3041	IE4	BK70G20-../S4E06MA4	0.049	0.16	0.32	0.49	0.55	4850	4850	4850	4850	4850	201	24100	50000
1.6	0.42	5600	1	3505	IE4	BK70G20-../S4E06MA4	0.042	0.14	0.28	0.42	0.5	5600	5600	5600	5600	5600	201	24100	50000
1.6	0.38	6200	0.91	3894	IE4	BK70G20-../S4E06MA4	0.038	0.12	0.25	0.38	0.46	6200	6200	6200	6200	6200	201	24100	50000

**M<sub>N</sub> = 2.4 Nm (P<sub>N</sub> = 0.37 kW)**

M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min] at engine speed n <sub>1</sub> [1/min]					Torque range M <sub>2</sub> [Nm] at engine speed n <sub>1</sub> [1/min]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	98	33	2.4	15.29	IE4	BK06-../S4E06LA4	9.8	32.5	65	98	11								

# BK-series bevel geared motors

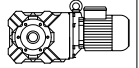
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

**M<sub>N</sub> = 2.4 Nm (P<sub>N</sub> = 0.37 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	56	56	1.4	26.36	IE1	BK06-../SSE06MA4	5.6	18.5	37.5	56	68	42.5	47	52	56	56	11	1230	-
2.4	45	71	1.1	33.33	IE4	BK06-../S4E06LA4	4.5	15	30	45	54	71	71	71	71	11	1320	-	
2.4	45	71	1.1	33.33	IE1	BK06-../SSE06MA4	4.5	15	30	45	54	53	59	65	71	11	1320	-	
2.4	39	82	0.97	38.18	IE4	BK06-../S4E06LA4	3.9	13	26	39	47	82	82	82	82	11	1380	-	
2.4	39	82	0.97	38.18	IE1	BK06-../SSE06MA4	3.9	13	26	39	47	61	68	75	82	11	1380	-	
2.4	43.5	73	2.7	34.25	IE1	BK10-../SSE06MA4	4.3	14.5	29	43.5	52	55	61	67	73	23	5600	-	
2.4	43.5	73	2.7	34.25	IE4	BK10-../S4E06LA4	4.3	14.5	29	43.5	52	73	73	73	73	23	5600	-	
2.4	36.5	88	2.3	40.79	IE1	BK10-../SSE06MA4	3.6	12	24.5	36.5	44	66	73	80	88	23	6000	-	
2.4	36.5	88	2.3	40.79	IE4	BK10-../S4E06LA4	3.6	12	24.5	36.5	44	88	88	88	88	23	6000	-	
2.4	30.5	104	1.9	48.96	IE4	BK10-../S4E06LA4	3	10	20	30.5	36.5	104	104	104	104	23	6400	-	
2.4	30.5	104	1.9	48.96	IE1	BK10-../SSE06MA4	3	10	20	30.5	36.5	78	87	95	104	23	6400	-	
2.4	24	131	1.5	61.68	IE4	BK10-../S4E06LA4	2.4	8.1	16	24	29	131	131	131	131	23	7000	-	
2.4	24	131	1.5	61.68	IE1	BK10-../SSE06MA4	2.4	8.1	16	24	29	98	109	120	131	23	7000	-	
2.4	20.5	152	1.3	72.31	IE1	BK10-../SSE06MA4	2	6.9	13.5	20.5	24.5	114	127	139	152	23	7000	-	
2.4	20.5	152	1.3	72.31	IE4	BK10-../S4E06LA4	2	6.9	13.5	20.5	24.5	152	152	152	152	23	7000	-	
2.4	16.5	186	0.95	89.3	IE4	BK10-../S4E06LA4	1.6	5.5	11	16.5	20	186	186	186	186	23	7000	-	
2.4	16.5	186	0.95	89.3	IE1	BK10-../SSE06MA4	1.6	5.5	11	16.5	20	139	155	170	186	23	7000	-	
2.4	29	109	3	51.22	IE4	BK20-../S4E06LA4	2.9	9.7	19.5	29	35	109	109	109	109	33	6300	9000	
2.4	29	109	3	51.22	IE1	BK20-../SSE06MA4	2.9	9.7	19.5	29	35	82	91	100	109	33	6300	9000	
2.4	24	130	2.5	61.3	IE1	BK20-../SSE06MA4	2.4	8.1	16	24	29	98	109	120	130	33	6500	9000	
2.4	24	130	2.5	61.3	IE4	BK20-../S4E06LA4	2.4	8.1	16	24	29	130	130	130	130	33	6500	9000	
2.4	19.5	162	2	76.79	IE1	BK20-../SSE06MA4	1.9	6.5	13	19.5	23	121	135	148	162	33	7500	9000	
2.4	19.5	162	2	76.79	IE4	BK20-../S4E06LA4	1.9	6.5	13	19.5	23	162	162	162	162	33	7500	9000	
2.4	17	183	1.8	88.12	IE4	BK20-../S4E06LA4	1.7	5.6	11	17	20	183	183	183	183	33	8000	9000	
2.4	17	183	1.8	88.12	IE1	BK20-../SSE06MA4	1.7	5.6	11	17	20	137	153	168	183	33	8000	9000	
2.4	13.5	220	1.4	108.6	IE1	BK20-../SSE06MA4	1.3	4.6	9.2	13.5	16.5	168	186	205	220	33	8700	9000	
2.4	13.5	220	1.4	108.6	IE4	BK20-../S4E06LA4	1.3	4.6	9.2	13.5	16.5	220	220	220	220	33	8700	9000	
2.4	15	200	1.1	96.99	IE1	BK20Z-../SSE06MA4	1.5	5.1	10	15	18.5	150	166	183	200	34	8700	9000	
2.4	15	200	1.1	96.99	IE4	BK20Z-../S4E06LA4	1.5	5.1	10	15	18.5	200	200	200	200	34	8700	9000	
2.4	12	250	1.3	124.2	IE4	BK20Z-../S4E06LA4	1.2	4	8	12	14	250	250	250	250	34	8700	9000	
2.4	12	250	1.3	124.2	IE1	BK20Z-../SSE06MA4	1.2	4	8	12	14	190	210	230	250	34	8700	9000	
2.4	10	290	1.1	144.5	IE1	BK20Z-../SSE06MA4	1	3.4	6.9	10	12	215	240	265	290	34	8700	9000	
2.4	10	290	1.1	144.5	IE4	BK20Z-../S4E06LA4	1	3.4	6.9	10	12	290	290	290	290	34	8700	9000	
2.4	8.6	345	0.96	173.4	IE4	BK20Z-../S4E06LA4	0.85	2.8	5.7	8.6	10	345	345	345	345	34	8700	9000	
2.4	8.6	345	0.96	173.4	IE1	BK20Z-../SSE06MA4	0.85	2.8	5.7	8.6	10	255	285	315	345	34	8700	9000	
2.4	7.2	405	0.81	207.5	IE4	BK20Z-../S4E06LA4	0.7	2.4	4.8	7.2	8.6	405	405	405	405	34	8700	9000	
2.4	7.2	405	0.81	207.5	IE1	BK20Z-../SSE06MA4	0.7	2.4	4.8	7.2	8.6	305	340	370	405	34	8700	9000	
2.4	20.5	149	3	71.56	IE4	BK30-../S4E06LA4	2	6.9	13.5	20.5	25	149	149	149	149	39	9700	12000	
2.4	20.5	149	3	71.56	IE1	BK30-../SSE06MA4	2	6.9	13.5	20.5	25	112	124	136	149	39	9700	12000	
2.4	16.5	182	2.5	88.38	IE4	BK30-../S4E06LA4	1.6	5.6	11	16.5	20	182	182	182	182	39	10600	12000	
2.4	16.5	182	2.5	88.38	IE1	BK30-../SSE06MA4	1.6	5.6	11	16.5	20	136	152	167	182	39	10600	12000	
2.4	14.5	205	2.2	102.4	IE4	BK30-../S4E06LA4	1.4	4.8	9.7	14.5	17.5	205	205	205	205	39	11200	12000	
2.4	14.5	205	2.2	102.4	IE1	BK30-../SSE06MA4	1.4	4.8	9.7	14.5	17.5	156	174	191	205	39	11200	12000	
2.4	12	250	1.8	123.9	IE1	BK30Z-../SSE06MA4	1.2	4	8	12	14.5	189	210	230	250	41	11200	12000	
2.4	12	250	1.8	123.9	IE4	BK30Z-../S4E06LA4	1.2	4	8	12	14.5	250	250	250	250	41	11200	12000	
2.4	10	290	1.5	145.1	IE1	BK30Z-../SSE06MA4	1	3.4	6.8	10	12	215	240	265	290	41	11200	12000	
2.4	10	290	1.5	145.1	IE4	BK30Z-../S4E06LA4	1	3.4	6.8	10	12	290	290	290	290	41	11200	12000	
2.4	8.1	365	1.2	184.8	IE4	BK30Z-../S4E06LA4	0.8	2.7	5.4	8.1	9.7	365	365	365	365	41	11200	12000	
2.4	8.1	365	1.2	184.8	IE1	BK30Z-../SSE06MA4	0.8	2.7	5.4	8.1	9.7	275	305	335	365	41	11200	12000	
2.4	6.9	425	1.1	216.5	IE1	BK30Z-../SSE06MA4	0.65	2.3	4.6	6.9	8.3	315	355	390	425	41	11200	12000	
2.4	6.9	425	1.1	216.5	IE4	BK30Z-../S4E06LA4	0.65	2.3	4.6	6.9	8.3	425	425	425	425	41	11200	12000	
2.4	5.8	500	0.9	255.3	IE4	BK30Z-../S4E06LA4	0.55	1.9	3.9	5.8	7	500	500	500	500	41	11200	12000	
2.4	5.8	500	0.9	255.3	IE1	BK30Z-../SSE06MA4	0.55	1.9	3.9	5.8	7	375	415	460	500	41	11200	12000	
2.4	10	285	2.7	143	IE1	BK40Z-../SSE06MA4	1	3.4	6.9	10	12.5	215	240	260	285	64	11700	17000	
2.4	10	285	2.7	143	IE4	BK40Z-../S4E06LA4	1	3.4	6.9	10	12.5	285	285	285	285	64	11700	17000	
2.4	8.8	335	2.3	169	IE4	BK40Z-../S4E06LA4	0.85	2.9	5.9	8.8	10.5	335	335	335	335	64	11700	17000	
2.4	8.8	335	2.3	169	IE1	BK40Z-../SSE06MA4	0.85	2.9	5.9	8.8	10.5	250	280	305	335	64	11700	17000	
2.4	7	415	1.9	211.5	IE4	BK40Z-../S4E06LA4	0.7	2.3	4.7	7	8.5	415	415	415	415	64	11700	17000	
2.4	7	415	1.9	211.5	IE1	BK40Z-../SSE06MA4	0.7	2.3	4.7	7	8.5	310	345	380	415	64	11700	17000	
2.4	6	475	1.6	246.6	IE4	BK40Z-../S4E06LA4	0.6	2	4	6	7.2	475	475	475	475	64	11700	17000	
2.4	6	475	1.6	246.6	IE1	BK40Z-../SSE06MA4	0.6	2	4	6	7.2	355	395	435	475	64	11700	17000	
2.4	5.1	560	1.2	289.8	IE1	BK40Z-../SSE06MA4	0.5	1.7	3.4	5.1	6.2	420	465	510	560	64	11700	17000	
2.4	5.1	560	1.2	289.8	IE4	BK40Z-../S4E06LA4	0.5	1.7	3.4	5.1	6.2	560	560	560	560	64	11700	17000	
2.4	4.3	670	0.86	348.7	IE4	BK40Z-../S4E06LA4	0.43	1.4	2.8	4.3	5.1	670	670	670	670	64	11700	17000	
2.4	4.3	670	0.86	348.7	IE1	BK40Z-../SSE06MA4	0.43	1.4	2.8	4.3	5.1	500	560	620	670	64	11700	17000	
2.4	3	930	0.91	487.3	IE4	BK40G10-../S4E06LA4	0.3	1	2	3	3.6	930	930	930	930	68	11700	17000	
2.4	3	930	0.91	487.3	IE1	BK40G10-../SSE06MA4	0.3	1	2	3	3.6	700	780	850	930	68	11700	17000	
2.4	2.7	1030	0.82	540	IE4	BK40G10-../S4E06LA4	0.27	0.9	1.8	2.7	3.3	1030	1030	1030	1030	68	11700	17000	
2.4	2.7	1030	0.82	540	IE1	BK40G10-../SSE06MA4	0.27	0.9	1.8	2.7	3.3	770	860	940	1030	68	11700	17000	
2.4	7.2	405	2.6	206.8	IE4	BK50Z-../S4E06LA4	0.7	2.4	4.8	7.2	8.7	405	405	405	405	92	14100	26000	
2.4	7.2	405	2.6	206.8	IE1	BK50Z-../SSE06MA4	0.7	2.4	4.8	7.2	8								

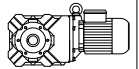
# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

 **$M_N = 2.4 \text{ Nm}$   $P_N = 0.37 \text{ kW}$** 


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	2.9	980	1.2	513.4	IE4	BK50G10-../S4E06LA4	0.29	0.95	1.9	2.9	3.5	980	980	980	980	980	96	14100	111000
2.4	2.9	980	1.2	513.4	IE1	BK50G10-../SSE06MA4	0.29	0.95	1.9	2.9	3.5	730	820	900	980	980	96	14100	111000
2.4	2.6	1080	1.1	568.6	IE1	BK50G10-../SSE06MA4	0.26	0.85	1.7	2.6	3.1	810	900	990	1080	1080	96	14100	111000
2.4	2.6	1080	1.1	568.6	IE4	BK50G10-../S4E06LA4	0.26	0.85	1.7	2.6	3.1	1080	1080	1080	1080	1080	96	14100	111000
2.4	2.3	1230	0.93	651.7	IE4	BK50G10-../S4E06LA4	0.23	0.75	1.5	2.3	2.7	1230	1230	1230	1230	1230	96	14100	111000
2.4	2.3	1230	0.93	651.7	IE1	BK50G10-../SSE06MA4	0.23	0.75	1.5	2.3	2.7	920	1030	1130	1230	1230	96	14100	111000
2.4	2	1360	0.84	722.2	IE1	BK50G10-../SSE06MA4	0.2	0.65	1.3	2	2.4	1020	1130	1250	1360	1360	96	14100	111000
2.4	2	1360	0.84	722.2	IE4	BK50G10-../S4E06LA4	0.2	0.65	1.3	2	2.4	1360	1360	1360	1360	1360	96	14100	111000
2.4	2.4	1490	1.7	621.5	IE4	BK60G20-../S4E06LA4	0.24	0.8	1.6	2.4	2.8	1490	1490	1490	1490	1490	123	16600	34000
2.4	2.4	1490	1.7	621.5	IE1	BK60G20-../SSE06MA4	0.24	0.8	1.6	2.4	2.8	1110	1240	1360	1490	1490	123	16600	34000
2.4	1.9	1800	1.4	752.1	IE1	BK60G20-../SSE06MA4	0.19	0.65	1.3	1.9	2.3	1350	1500	1650	1800	1800	123	16600	34000
2.4	1.9	1800	1.4	752.1	IE4	BK60G20-../S4E06LA4	0.19	0.65	1.3	1.9	2.3	1800	1800	1800	1800	1800	123	16600	34000
2.4	1.6	2100	1.2	887.8	IE1	BK60G20-../SSE06MA4	0.16	0.55	1.1	1.6	2	1590	1770	1950	2100	2100	123	16600	34000
2.4	1.6	2100	1.2	887.8	IE4	BK60G20-../S4E06LA4	0.16	0.55	1.1	1.6	2	2100	2100	2100	2100	2100	123	16600	34000
2.4	1.4	2400	1	1016	IE1	BK60G20-../SSE06MA4	0.14	0.49	0.95	1.4	1.7	1820	2000	2200	2400	2400	123	16600	34000
2.4	1.4	2400	1	1016	IE4	BK60G20-../S4E06LA4	0.14	0.49	0.95	1.4	1.7	2400	2400	2400	2400	2400	123	16600	34000
2.4	1.7	2000	2.8	847.7	IE4	BK70G20-../S4E06LA4	0.17	0.55	1.1	1.7	2.1	2000	2000	2000	2000	2000	201	24100	50000
2.4	1.7	2000	2.8	847.7	IE1	BK70G20-../SSE06MA4	0.17	0.55	1.1	1.7	2.1	1520	1690	1860	2000	2000	201	24100	50000
2.4	1.5	2300	2.5	964.6	IE4	BK70G20-../S4E06LA4	0.15	0.5	1	1.5	1.8	2300	2300	2300	2300	2300	201	24100	50000
2.4	1.5	2300	2.5	964.6	IE1	BK70G20-../SSE06MA4	0.15	0.5	1	1.5	1.8	1730	1920	2100	2300	2300	201	24100	50000
2.4	1.3	2700	2.1	1139	IE1	BK70G20-../SSE06MA4	0.13	0.43	0.85	1.3	1.5	2050	2250	2500	2700	2700	201	24100	50000
2.4	1.3	2700	2.1	1139	IE4	BK70G20-../S4E06LA4	0.13	0.43	0.85	1.3	1.5	2700	2700	2700	2700	2700	201	24100	50000
2.4	1.1	3050	1.9	1280	IE4	BK70G20-../S4E06LA4	0.11	0.39	0.75	1.1	1.4	3050	3050	3050	3050	3050	201	24100	50000
2.4	1.1	3050	1.9	1280	IE1	BK70G20-../SSE06MA4	0.11	0.39	0.75	1.1	1.4	2300	2550	2800	3050	3050	201	24100	50000
2.4	1	3450	1.6	1457	IE4	BK70G20-../S4E06LA4	0.1	0.34	0.65	1	1.2	3450	3450	3450	3450	3450	201	24100	50000
2.4	1	3450	1.6	1457	IE1	BK70G20-../SSE06MA4	0.1	0.34	0.65	1	1.2	2600	2900	3200	3450	3450	201	24100	50000
2.4	0.85	4050	1.4	1696	IE1	BK70G20-../SSE06MA4	0.085	0.29	0.55	0.85	1	3050	3350	3700	4050	4050	201	24100	50000
2.4	0.85	4050	1.4	1696	IE4	BK70G20-../S4E06LA4	0.085	0.29	0.55	0.85	1	4050	4050	4050	4050	4050	201	24100	50000
2.4	0.7	4850	1.2	2040	IE1	BK70G20-../SSE06MA4	0.07	0.24	0.49	0.7	0.85	3650	4050	4450	4850	4850	201	24100	50000
2.4	0.7	4850	1.2	2040	IE4	BK70G20-../S4E06LA4	0.07	0.24	0.49	0.7	0.85	4850	4850	4850	4850	4850	201	24100	50000
2.4	0.55	6100	0.92	2578	IE1	BK70G20-../SSE06MA4	0.055	0.19	0.38	0.55	0.65	4600	5100	5600	6100	6100	201	24100	50000
2.4	0.55	6100	0.92	2578	IE4	BK70G20-../S4E06LA4	0.055	0.19	0.38	0.55	0.65	6100	6100	6100	6100	6100	201	24100	50000

8

 **$M_N = 2.6 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**


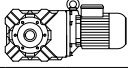
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.6	128	27.5	2.9	11.67	IE4	BK06-../S4E06LA4	12.5	42.5	85	128	154	26.5	27.5	27.5	27.5	11	930	-	
2.6	98	36	2.2	15.29	IE4	BK06-../S4E06LA4	9.8	32.5	65	98	117	34.5	36	36	36	11	1020	-	
2.6	83	42	1.9	18	IE4	BK06-../S4E06LA4	8.3	27.5	55	83	100	40.5	42	42	42	11	1080	-	
2.6	69	50	1.6	21.54	IE4	BK06-../S4E06LA4	6.9	23	46	69	83	48	50	50	50	11	1150	-	
2.6	56	61	1.3	26.36	IE4	BK06-../S4E06LA4	5.6	18.5	37.5	56	68	59	61	61	61	11	1230	-	
2.6	45	77	1	33.33	IE4	BK06-../S4E06LA4	4.5	15	30	45	54	74	77	77	77	11	1320	-	
2.6	39	89	0.9	38.18	IE4	BK06-../S4E06LA4	3.9	13	26	39	47	85	89	89	89	11	1380	-	
2.6	52	67	3	28.76	IE4	BK10-../S4E06LA4	5.2	17	34.5	52	62	64	67	67	67	23	5200	-	
2.6	43.5	80	2.5	34.25	IE4	BK10-../S4E06LA4	4.3	14.5	29	43.5	52	77	80	80	80	23	5600	-	
2.6	36.5	95	2.1	40.79	IE4	BK10-../S4E06LA4	3.6	12	24.5	36.5	44	91	95	95	95	23	6000	-	
2.6	30.5	113	1.8	48.96	IE4	BK10-../S4E06LA4	3	10	20	30.5	36.5	108	113	113	113	23	6400	-	
2.6	24	142	1.4	61.68	IE4	BK10-../S4E06LA4	2.4	8.1	16	24	29	137	142	142	142	23	7000	-	
2.6	20.5	165	1.2	72.31	IE4	BK10-../S4E06LA4	2	6.9	13.5	20.5	24.5	159	165	165	165	23	7000	-	
2.6	16.5	200	0.88	89.3	IE4	BK10-../S4E06LA4	1.6	5.5	11	16.5	20	194	200	200	200	23	7000	-	
2.6	29	118	2.8	51.22	IE4	BK20-../S4E06LA4	2.9	9.7	19.5	29	35	113	118	118	118	33	6300	9000	
2.6	24	141	2.3	61.3	IE4	BK20-../S4E06LA4	2.4	8.1	16	24	29	136	141	141	141	33	6500	9000	
2.6	19.5	175	1.9	76.79	IE4	BK20-../S4E06LA4	1.9	6.5	13	19.5	23	168	175	175	175	33	7500	9000	
2.6	17	199	1.7	88.12	IE4	BK20-../S4E06LA4	1.7	5.6	11	17	20	191	199	199	199	33	8000	9000	
2.6	13.5	240	1.3	108.6	IE4	BK20-../S4E06LA4	1.3	4.6	9.2	13.5	16.5	230	240	240	240	33	8700	9000	
2.6	15	215	1.1	96.99	IE4	BK20Z-../S4E06LA4	1.5	5.1	10	15	18.5	205	215	215	215	34	8700	9000	
2.6	12	270	1.2	124.2	IE4	BK20Z-../S4E06LA4	1.2	4	8	12	14	260	270	270	270	34	8700	9000	
2.6	10	315	1	144.5	IE4	BK20Z-../S4E06LA4	1	3.4	6.9	10	12	300	315	315	315	34	8700	9000	
2.6	8.6	370	0.88	173.4	IE4	BK20Z-../S4E06LA4	0.85	2.8	5.7	8.6	10	355	370	370	370	34	8700	9000	
2.6	20.5	161	2.8	71.56	IE4	BK30-../S4E06LA4	2	6.9	13.5	20.5	25	155	161	161	161	39	9700	12000	
2.6	16.5	197	2.3	88.38	IE4	BK30-../S4E06LA4	1.6	5.6	11	16.5	20	190	197	197	197	39	10600	12000	
2.6	14.5	225	2	102.4	IE4	BK30-../S4E06LA4	1.4	4.8	9.7	14.5	17.5	215	225	225	225	39	11200	12000	
2.6	12	270	1.6	123.9	IE4	BK30Z-../S4E06LA4	1.2	4	8	12	14.5	260	270	270	270	41	11200	12000	
2.6	10	315	1.4	145.1	IE4	BK30Z-../S4E06LA4	1	3.4	6.8	10	12	300	315	315	315	41	11200	12000	
2.6	8.1	395	1.1	184.8	IE4	BK30Z-../S4E06LA4	0.8	2.7	5.4	8.1	9.7	380	395	395	395	41	11200	12000	
2.6	6.9	460	0.97	216.5	IE4	BK30Z-../S4E06LA4	0.65	2.3	4.6	6.9	8.3	440	460	460	460	41	11200	12000	
2.6	5.8	540	0.83	255.3	IE4	BK30Z-../S4E06LA4	0.55	1.9	3.9	5.8	7	520	540	540	540	41	11200		



# BK-series bevel geared motors

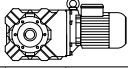
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

**$M_N = 2.6 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							[Nm]	[1/min]	[Nm]	[-]	[:1]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]			
2.6	3	1010	0.84	487.3	IE4	BK40G10-../S4E06LA4	0.3	1	2	3	3.6	970	1010	1010	1010	1010	68	11700	17000
2.6	7.2	440	2.4	206.8	IE4	BK50Z-../S4E06LA4	0.7	2.4	4.8	7.2	8.7	420	440	440	440	440	92	14100	26000
2.6	5.6	550	1.9	264.5	IE4	BK50Z-../S4E06LA4	0.55	1.8	3.7	5.6	6.8	530	550	550	550	550	92	14100	26000
2.6	4.5	690	1.5	328.2	IE4	BK50Z-../S4E06LA4	0.45	1.5	3	4.5	5.4	660	690	690	690	690	92	14100	26000
2.6	3.6	860	0.97	414.8	IE4	BK50Z-../S4E06LA4	0.36	1.2	2.4	3.6	4.3	820	860	860	860	860	92	14100	26000
2.6	3.2	970	1.2	465.1	IE4	BK50G10-../S4E06LA4	0.32	1	2.1	3.2	3.8	930	970	970	970	970	96	14100	111000
2.6	2.9	1060	1.1	513.4	IE4	BK50G10-../S4E06LA4	0.29	0.95	1.9	2.9	3.5	1020	1060	1060	1060	1060	96	14100	111000
2.6	2.6	1170	0.98	568.6	IE4	BK50G10-../S4E06LA4	0.26	0.85	1.7	2.6	3.1	1130	1170	1170	1170	1170	96	14100	111000
2.6	2.3	1340	0.86	651.7	IE4	BK50G10-../S4E06LA4	0.23	0.75	1.5	2.3	2.7	1280	1340	1340	1340	1340	96	14100	111000
2.6	2.4	1610	1.5	621.5	IE4	BK60G20-../S4E06LA4	0.24	0.8	1.6	2.4	2.8	1550	1610	1610	1610	1610	123	16600	34000
2.6	1.9	1950	1.3	752.1	IE4	BK60G20-../S4E06LA4	0.19	0.65	1.3	1.9	2.3	1880	1950	1950	1950	1950	123	16600	34000
2.6	1.6	2300	1.1	887.8	IE4	BK60G20-../S4E06LA4	0.16	0.55	1.1	1.6	2	2200	2300	2300	2300	2300	123	16600	34000
2.6	1.4	2600	0.95	1016	IE4	BK60G20-../S4E06LA4	0.14	0.49	0.95	1.4	1.7	2500	2600	2600	2600	2600	123	16600	34000
2.6	1.7	2200	2.6	847.7	IE4	BK70G20-../S4E06LA4	0.17	0.55	1.1	1.7	2.1	2100	2200	2200	2200	2200	201	24100	50000
2.6	1.5	2500	2.3	964.6	IE4	BK70G20-../S4E06LA4	0.15	0.5	1	1.5	1.8	2400	2500	2500	2500	2500	201	24100	50000
2.6	1.3	2950	1.9	1139	IE4	BK70G20-../S4E06LA4	0.13	0.43	0.85	1.3	1.5	2800	2950	2950	2950	2950	201	24100	50000
2.6	1.1	3300	1.7	1280	IE4	BK70G20-../S4E06LA4	0.11	0.39	0.75	1.1	1.4	3200	3300	3300	3300	3300	201	24100	50000
2.6	1	3750	1.5	1457	IE4	BK70G20-../S4E06LA4	0.1	0.34	0.65	1	1.2	3600	3750	3750	3750	3750	201	24100	50000
2.6	0.85	4400	1.3	1696	IE4	BK70G20-../S4E06LA4	0.085	0.29	0.55	0.85	1	4200	4400	4400	4400	4400	201	24100	50000
2.6	0.7	5300	1.1	2040	IE4	BK70G20-../S4E06LA4	0.07	0.24	0.49	0.7	0.85	5100	5300	5300	5300	5300	201	24100	50000
2.6	0.55	6700	0.85	2578	IE4	BK70G20-../S4E06LA4	0.055	0.19	0.38	0.55	0.65	6400	6700	6700	6700	6700	201	24100	50000

**$M_N = 3.5 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

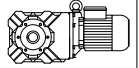


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							[Nm]	[1/min]	[Nm]	[-]	[:1]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]			
3.5	154	31	2.6	9.71	IE1	BK06-../SSE06LA4	15	51	102	154	185	22	25.5	31	31	31	11	880	-
3.5	128	37.5	2.1	11.67	IE1	BK06-../SSE06LA4	12.5	42.5	85	128	154	26.5	31	37.5	37.5	37.5	11	930	-
3.5	98	48.5	1.6	15.29	IE1	BK06-../SSE06LA4	9.8	32.5	65	98	117	34.5	40	48.5	48.5	48.5	11	1020	-
3.5	83	56	1.4	18	IE1	BK06-../SSE06LA4	8.3	27.5	55	83	100	40.5	46.5	56	56	56	11	1080	-
3.5	69	67	1.2	21.54	IE1	BK06-../SSE06LA4	6.9	23	46	69	83	48	56	67	67	67	11	1150	-
3.5	56	83	0.96	26.36	IE1	BK06-../SSE06LA4	5.6	18.5	37.5	56	68	59	68	83	83	83	11	1230	-
3.5	125	38	3	11.93	IE1	BK10-../SSE06LA4	12.5	41.5	83	125	150	27	31.5	38	38	38	23	3100	-
3.5	88	53	2.6	16.92	IE1	BK10-../SSE06LA4	8.8	29.5	59	88	106	38	44	53	53	53	23	3700	-
3.5	66	71	2.8	22.65	IE1	BK10-../SSE06LA4	6.6	22	44	66	79	50	59	71	71	71	23	4650	-
3.5	52	90	2.2	28.76	IE1	BK10-../SSE06LA4	5.2	17	34.5	52	62	64	75	90	90	90	23	5200	-
3.5	43.5	107	1.9	34.25	IE1	BK10-../SSE06LA4	4.3	14.5	29	43.5	52	77	89	107	107	107	23	5600	-
3.5	36.5	128	1.6	40.79	IE1	BK10-../SSE06LA4	3.6	12	24.5	36.5	44	91	106	128	128	128	23	6000	-
3.5	30.5	152	1.3	48.96	IE1	BK10-../SSE06LA4	3	10	20	30.5	36.5	108	126	152	152	152	23	6400	-
3.5	24	192	1	61.68	IE1	BK10-../SSE06LA4	2.4	8.1	16	24	29	137	159	192	192	192	23	7000	-
3.5	20.5	220	0.9	72.31	IE1	BK10-../SSE06LA4	2	6.9	13.5	20.5	24.5	159	184	220	220	220	23	7000	-
3.5	40.5	115	2.9	36.69	IE1	BK20-../SSE06LA4	4	13.5	27	40.5	49	82	95	115	115	115	33	5400	9000
3.5	35	134	2.5	42.7	IE1	BK20-../SSE06LA4	3.5	11.5	23	35	42	96	111	134	134	134	33	5800	9000
3.5	29	159	2.1	51.22	IE1	BK20-../SSE06LA4	2.9	9.7	19.5	29	35	113	132	159	159	159	33	6300	9000
3.5	24	190	1.7	61.3	IE1	BK20-../SSE06LA4	2.4	8.1	16	24	29	136	158	190	190	190	33	6500	9000
3.5	19.5	235	1.4	76.79	IE1	BK20-../SSE06LA4	1.9	6.5	13	19.5	23	168	195	235	235	235	33	7500	9000
3.5	17	265	1.2	88.12	IE1	BK20-../SSE06LA4	1.7	5.6	11	17	20	191	220	265	265	265	33	8000	9000
3.5	13.5	325	0.96	108.6	IE1	BK20-../SSE06LA4	1.3	4.6	9.2	13.5	16.5	230	270	325	325	325	33	8700	9000
3.5	12	365	0.89	124.2	IE1	BK20Z-../SSE06LA4	1.2	4	8	12	14	260	305	365	365	365	34	8700	9000
3.5	29.5	154	2.9	50.27	IE1	BK30-../SSE06LA4	2.9	9.9	19.5	29.5	35.5	110	128	154	154	154	39	8300	12000
3.5	25	182	2.5	59.27	IE1	BK30-../SSE06LA4	2.5	8.4	16.5	25	30	130	151	182	182	182	39	8900	12000
3.5	20.5	215	2.1	71.56	IE1	BK30-../SSE06LA4	2	6.9	13.5	20.5	25	155	180	215	215	215	39	9700	12000
3.5	16.5	265	1.7	88.38	IE1	BK30-../SSE06LA4	1.6	5.6	11	16.5	20	190	220	265	265	265	39	10600	12000
3.5	14.5	300	1.5	102.4	IE1	BK30-../SSE06LA4	1.4	4.8	9.7	14.5	17.5	215	250	300	300	300	39	11200	12000
3.5	12	365	1.2	123.9	IE1	BK30Z-../SSE06LA4	1.2	4	8	12	14.5	260	305	365	365	365	41	11200	12000
3.5	10	425	1.1	145.1	IE1	BK30Z-../SSE06LA4	1	3.4	6.8	10	12	300	350	425	425	425	41	11200	12000
3.5	8.1	530	0.84	184.8	IE1	BK30Z-../SSE06LA4	0.8	2.7	5.4	8.1	9.7	380	440	530	530	530	41	11200	12000
3.5	12.5	350	2.2	118.2	IE1	BK40Z-../SSE06LA4	1.2	4.2	8.4	12.5	15	250	290	350	350	350	64	11700	17000
3.5	10	420	1.9	143	IE1	BK40Z-../SSE06LA4	1	3.4	6.9	10	12.5	300	345	420	420	420	64	11700	17000
3.5	8.8	490	1.6	169	IE1	BK40Z-../SSE06LA4	0.85	2.9	5.9	8.8	10.5	350	405	490	490	490	64	11700	17000
3.5	7	600	1.3	211.5	IE1	BK40Z-../SSE06LA4	0.7	2.3	4.7	7	8.5	430	500	600	600	600	64	11700	17000
3.5	6	690	1.1	246.6	IE1	BK40Z-../SSE06LA4	0.6	2	4	6	7.2	495	570	690	690	690	64	11700	17000
3.5	5.1	820	0.83	289.8	IE1	BK40Z-../SSE06LA4	0.5	1.7	3.4	5.1	6.2	580	680	820	820	820	64	11700	17000
3.5	9.7	445	2.4	153.3	IE1	BK50Z-../SSE06LA4	0.95	3.2	6.5	9.7	11.5	315	365	445	445	445	92	14100	26000
3.5	7.2	590	1.8	206.8	IE1	BK50Z-../SSE06LA4	0.7	2.4	4.8	7.2	8.7	420	490	590	590	590	92	14100	26000
3.5	5.6	740	1.4	264.5	IE1	BK50Z-../SSE06LA4	0.55	1.8	3.7	5.6	6.8	530	620	740	740	740	92	14100	26000
3.5	4.5	930	1.1	328.2	IE1	BK50Z-../SSE06LA4	0.45	1.5	3	4.5	5.4	660	770	930	930	930	92	14100	26000
3.5	3.2	1300	0.88	46															

# BK-series bevel geared motors

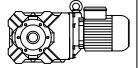
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

### $M_N = 3.5 \text{ Nm}$ ( $P_N = 0.55 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
3.5	1.6	3100	0.8	887.8	IE1	BK60G20-../SSE06LA4	0.16	0.55	1.1	1.6	2	2200	2550	3100	3100	3100	123	16600	34000
3.5	1.7	2950	1.9	847.7	IE1	BK70G20-../SSE06LA4	0.17	0.55	1.1	1.7	2.1	2100	2450	2950	2950	2950	201	24100	50000
3.5	1.5	3350	1.7	964.6	IE1	BK70G20-../SSE06LA4	0.15	0.5	1	1.5	1.8	2400	2750	3350	3350	3350	201	24100	50000
3.5	1.3	3950	1.4	1139	IE1	BK70G20-../SSE06LA4	0.13	0.43	0.85	1.3	1.5	2800	3300	3950	3950	3950	201	24100	50000
3.5	1.1	4450	1.3	1280	IE1	BK70G20-../SSE06LA4	0.11	0.39	0.75	1.1	1.4	3200	3700	4450	4450	4450	201	24100	50000
3.5	1	5000	1.1	1457	IE1	BK70G20-../SSE06LA4	0.1	0.34	0.65	1	1.2	3600	4200	5000	5000	5000	201	24100	50000
3.5	0.85	5900	0.96	1696	IE1	BK70G20-../SSE06LA4	0.085	0.29	0.55	0.85	1	4200	4900	5900	5900	5900	201	24100	50000
3.5	0.7	7100	0.8	2040	IE1	BK70G20-../SSE06LA4	0.07	0.24	0.49	0.7	0.85	5100	5900	7100	7100	7100	201	24100	50000

### $M_N = 5 \text{ Nm}$ ( $P_N = 0.78 \text{ kW}$ )



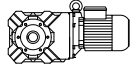
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
5	205	33	2.2	7.25	IE4	BK06-../S4E08MA4	20.5	68	137	205	245	33	33	33	33	33	15	800	-
5	154	44.5	1.8	9.71	IE4	BK06-../S4E08MA4	15	51	102	154	185	44.5	44.5	44.5	44.5	44.5	15	880	-
5	128	53	1.5	11.67	IE4	BK06-../S4E08MA4	12.5	42.5	85	128	154	53	53	53	53	53	15	930	-
5	98	69	1.1	15.29	IE4	BK06-../S4E08MA4	9.8	32.5	65	98	117	69	69	69	69	69	15	1020	-
5	83	81	0.99	18	IE4	BK06-../S4E08MA4	8.3	27.5	55	83	100	81	81	81	81	81	15	1080	-
5	69	96	0.83	21.54	IE4	BK06-../S4E08MA4	6.9	23	46	69	83	96	96	96	96	96	15	1150	-
5	159	43	2.7	9.4	IE4	BK08-../S4E08MA4	15.5	53	106	159	191	43	43	43	43	43	27	2700	-
5	125	54	2.1	11.93	IE4	BK08-../S4E08MA4	12.5	41.5	83	125	150	54	54	54	54	54	27	3100	-
5	88	76	1.8	16.92	IE4	BK08-../S4E08MA4	8.8	29.5	59	88	106	76	76	76	76	76	27	3700	-
5	80	83	2.4	18.52	IE4	BK08-../S4E08MA4	8	26.5	53	80	97	83	83	83	83	83	27	4300	-
5	66	101	2	22.65	IE4	BK08-../S4E08MA4	6.6	22	44	66	79	101	101	101	101	101	27	4650	-
5	52	129	1.5	28.76	IE4	BK08-../S4E08MA4	5.2	17	34.5	52	62	129	129	129	129	129	27	5200	-
5	43.5	154	1.3	34.25	IE4	BK08-../S4E08MA4	4.3	14.5	29	43.5	52	154	154	154	154	154	27	5600	-
5	36.5	183	1.1	40.79	IE4	BK08-../S4E08MA4	3.6	12	24.5	36.5	44	183	183	183	183	183	27	6000	-
5	30.5	215	0.92	48.96	IE4	BK08-../S4E08MA4	3	10	20	30.5	36.5	215	215	215	215	215	27	6400	-
5	159	43	2.7	9.4	IE4	BK10-../S4E08MA4	15.5	53	106	159	191	43	43	43	43	43	27	2700	-
5	125	54	2.1	11.93	IE4	BK10-../S4E08MA4	12.5	41.5	83	125	150	54	54	54	54	54	27	3100	-
5	88	76	1.8	16.92	IE4	BK10-../S4E08MA4	8.8	29.5	59	88	106	76	76	76	76	76	27	3700	-
5	80	83	2.4	18.52	IE4	BK10-../S4E08MA4	8	26.5	53	80	97	83	83	83	83	83	27	4300	-
5	66	101	2	22.65	IE4	BK10-../S4E08MA4	6.6	22	44	66	79	101	101	101	101	101	27	4650	-
5	52	129	1.5	28.76	IE4	BK10-../S4E08MA4	5.2	17	34.5	52	62	129	129	129	129	129	27	5200	-
5	43.5	154	1.3	34.25	IE4	BK10-../S4E08MA4	4.3	14.5	29	43.5	52	154	154	154	154	154	27	5600	-
5	36.5	183	1.1	40.79	IE4	BK10-../S4E08MA4	3.6	12	24.5	36.5	44	183	183	183	183	183	27	6000	-
5	30.5	215	0.92	48.96	IE4	BK10-../S4E08MA4	3	10	20	30.5	36.5	215	215	215	215	215	27	6400	-
5	86	79	2.9	17.42	IE4	BK17-../S4E08MA4	8.6	28.5	57	86	103	79	79	79	79	79	36	3250	9000
5	61	109	3	24.29	IE4	BK17-../S4E08MA4	6.1	20.5	41	61	74	109	109	109	109	109	36	4500	9000
5	52	128	2.6	28.66	IE4	BK17-../S4E08MA4	5.2	17	34.5	52	62	128	128	128	128	128	36	4850	9000
5	40.5	165	2	36.69	IE4	BK17-../S4E08MA4	4	13.5	27	40.5	49	165	165	165	165	165	36	5400	9000
5	35	192	1.7	42.7	IE4	BK17-../S4E08MA4	3.5	11.5	23	35	42	192	192	192	192	192	36	5800	9000
5	29	225	1.4	51.22	IE4	BK17-../S4E08MA4	2.9	9.7	19.5	29	35	225	225	225	225	225	36	6300	9000
5	24	270	1.2	61.3	IE4	BK17-../S4E08MA4	2.4	8.1	16	24	29	270	270	270	270	270	36	6500	9000
5	19.5	335	0.98	76.79	IE4	BK17-../S4E08MA4	1.9	6.5	13	19.5	23	335	335	335	335	335	36	7500	9000
5	17	380	0.86	88.12	IE4	BK17-../S4E08MA4	1.7	5.6	11	17	20	380	380	380	380	380	36	8000	9000
5	86	79	2.9	17.42	IE4	BK20-../S4E08MA4	8.6	28.5	57	86	103	79	79	79	79	79	36	3250	9000
5	61	109	3	24.29	IE4	BK20-../S4E08MA4	6.1	20.5	41	61	74	109	109	109	109	109	36	4500	9000
5	52	128	2.6	28.66	IE4	BK20-../S4E08MA4	5.2	17	34.5	52	62	128	128	128	128	128	36	4850	9000
5	40.5	165	2	36.69	IE4	BK20-../S4E08MA4	4	13.5	27	40.5	49	165	165	165	165	165	36	5400	9000
5	35	192	1.7	42.7	IE4	BK20-../S4E08MA4	3.5	11.5	23	35	42	192	192	192	192	192	36	5800	9000
5	29	225	1.4	51.22	IE4	BK20-../S4E08MA4	2.9	9.7	19.5	29	35	225	225	225	225	225	36	6300	9000
5	24	270	1.2	61.3	IE4	BK20-../S4E08MA4	2.4	8.1	16	24	29	270	270	270	270	270	36	6500	9000
5	19.5	335	0.98	76.79	IE4	BK20-../S4E08MA4	1.9	6.5	13	19.5	23	335	335	335	335	335	36	7500	9000
5	17	380	0.86	88.12	IE4	BK20-../S4E08MA4	1.7	5.6	11	17	20	380	380	380	380	380	36	8000	9000
5	44.5	151	3	33.7	IE4	BK30-../S4E08MA4	4.4	14.5	29.5	44.5	53	151	151	151	151	151	42	7000	12000
5	34.5	190	2.4	42.89	IE4	BK30-../S4E08MA4	3.4	11.5	23	34.5	41.5	190	190	190	190	190	42	7800	12000
5	29.5	220	2	50.27	IE4	BK30-../S4E08MA4	2.9	9.9	19.5	29.5	35.5	220	220	220	220	220	42	8300	12000
5	25	260	1.7	59.27	IE4	BK30-../S4E08MA4	2.5	8.4	16.5	25	30	260	260	260	260	260	42	8900	12000
5	20.5	310	1.4	71.56	IE4	BK30-../S4E08MA4	2	6.9	13.5	20.5	25	310	310	310	310	310	42	9700	12000
5	16.5	380	1.2	88.38	IE4	BK30-../S4E08MA4	1.6	5.6	11	16.5	20	380	380	380	380	380	42	10600	12000
5	14.5	435	1	102.4	IE4	BK30-../S4E08MA4	1.4	4.8	9.7	14.5	17.5	435	435	435	435	435	42	11200	12000
5	12	520	0.85	123.9	IE4	BK30Z-../S4E08MA4	1.2	4	8										



# BK-series bevel geared motors

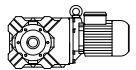
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

**$M_N = 5 \text{ Nm}$  ( $P_N = 0.78 \text{ kW}$ )**

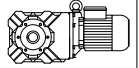


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
5	12.5	490	2.1	115.4	IE4	BK50Z-../S4E08MA4	1.2	4.3	8.6	12.5	15.5	490	490	490	490	490	96	14100	26000
5	9.7	630	1.7	153.3	IE4	BK50Z-../S4E08MA4	0.95	3.2	6.5	9.7	11.5	630	630	630	630	630	96	14100	26000
5	7.2	840	1.2	206.8	IE4	BK50Z-../S4E08MA4	0.7	2.4	4.8	7.2	8.7	840	840	840	840	840	96	14100	26000
5	5.6	1070	0.98	264.5	IE4	BK50Z-../S4E08MA4	0.55	1.8	3.7	5.6	6.8	1070	1070	1070	1070	1070	96	14100	26000
5	9.7	760	3	153.7	IE4	BK60Z-../S4E08MA4	0.95	3.2	6.5	9.7	11.5	760	760	760	760	760	119	16600	34000
5	8.1	910	2.5	183.2	IE4	BK60Z-../S4E08MA4	0.8	2.7	5.4	8.1	9.8	910	910	910	910	910	119	16600	34000
5	7.3	1020	2.2	205	IE4	BK60Z-../S4E08MA4	0.7	2.4	4.8	7.3	8.7	1020	1020	1020	1020	1020	119	16600	34000
5	6.2	1190	1.9	239.7	IE4	BK60Z-../S4E08MA4	0.6	2	4.1	6.2	7.5	1190	1190	1190	1190	1190	119	16600	34000
5	5.5	1340	1.7	268.2	IE4	BK60Z-../S4E08MA4	0.55	1.8	3.7	5.5	6.7	1340	1340	1340	1340	1340	119	16600	34000
5	4.7	1580	1.4	317.7	IE4	BK60Z-../S4E08MA4	0.47	1.5	3.1	4.7	5.6	1580	1580	1580	1580	1580	119	16600	34000
5	4.2	1770	1.3	355.5	IE4	BK60Z-../S4E08MA4	0.42	1.4	2.8	4.2	5	1770	1770	1770	1770	1770	119	16600	34000
5	3.6	2050	1.1	411.5	IE4	BK60Z-../S4E08MA4	0.36	1.2	2.4	3.6	4.3	2050	2050	2050	2050	2050	119	16600	34000
5	3.2	2300	1	460.4	IE4	BK60Z-../S4E08MA4	0.32	1	2.1	3.2	3.9	2300	2300	2300	2300	2300	119	16600	34000
5	3	2450	0.92	498	IE4	BK60Z-../S4E08MA4	0.3	1	2	3	3.6	2450	2450	2450	2450	2450	119	16600	34000
5	2.6	2750	0.83	557.2	IE4	BK60Z-../S4E08MA4	0.26	0.85	1.7	2.6	3.2	2750	2750	2750	2750	2750	119	16600	34000
5	2.4	3100	0.8	621.5	IE4	BK60G20-../S4E08MA4	0.24	0.8	1.6	2.4	2.8	3100	3100	3100	3100	3100	126	16600	34000
5	3.9	1890	2.7	379.9	IE4	BK70Z-../S4E08MA4	0.39	1.3	2.6	3.9	4.7	1890	1890	1890	1890	1890	207	24100	50000
5	3.4	2150	2.4	432.1	IE4	BK70Z-../S4E08MA4	0.34	1.1	2.3	3.4	4.1	2150	2150	2150	2150	2150	207	24100	50000
5	2.9	2500	2.1	501.8	IE4	BK70Z-../S4E08MA4	0.29	0.95	1.9	2.9	3.5	2500	2500	2500	2500	2500	207	24100	50000
5	2.6	2850	1.8	570.8	IE4	BK70Z-../S4E08MA4	0.26	0.85	1.7	2.6	3.1	2850	2850	2850	2850	2850	207	24100	50000
5	2.3	3200	1.6	644.9	IE4	BK70Z-../S4E08MA4	0.23	0.75	1.5	2.3	2.7	3200	3200	3200	3200	3200	207	24100	50000
5	2	3650	1.4	733.6	IE4	BK70Z-../S4E08MA4	0.2	0.65	1.3	2	2.4	3650	3650	3650	3650	3650	207	24100	50000
5	1.7	4200	1.3	847.7	IE4	BK70G20-../S4E08MA4	0.17	0.55	1.1	1.7	2.1	4200	4200	4200	4200	4200	205	24100	50000
5	1.5	4800	1.2	964.6	IE4	BK70G20-../S4E08MA4	0.15	0.5	1	1.5	1.8	4800	4800	4800	4800	4800	205	24100	50000
5	1.3	5600	1	1139	IE4	BK70G20-../S4E08MA4	0.13	0.43	0.85	1.3	1.5	5600	5600	5600	5600	5600	205	24100	50000
5	1.1	6400	0.89	1280	IE4	BK70G20-../S4E08MA4	0.11	0.39	0.75	1.1	1.4	6400	6400	6400	6400	6400	205	24100	50000
5	1.9	3750	3	756.3	IE4	BK80G40-../S4E08MA4	0.19	0.65	1.3	1.9	2.3	3750	3750	3750	3750	3750	347	30000	75000
5	1.7	4200	2.7	847.2	IE4	BK80G40-../S4E08MA4	0.17	0.55	1.1	1.7	2.1	4200	4200	4200	4200	4200	347	30000	75000
5	1.5	4800	2.4	963	IE4	BK80G40-../S4E08MA4	0.15	0.5	1	1.5	1.8	4800	4800	4800	4800	4800	347	30000	75000
5	1.3	5300	2.1	1079	IE4	BK80G40-../S4E08MA4	0.13	0.46	0.9	1.3	1.6	5300	5300	5300	5300	5300	347	30000	75000
5	1.1	6500	1.8	1307	IE4	BK80G40-../S4E08MA4	0.11	0.38	0.75	1.1	1.3	6500	6500	6500	6500	6500	347	30000	75000
5	1	7100	1.6	1425	IE4	BK80G40-../S4E08MA4	0.1	0.35	0.7	1	1.2	7100	7100	7100	7100	7100	347	30000	75000
5	0.9	7900	1.5	1583	IE4	BK80G40-../S4E08MA4	0.09	0.31	0.6	0.9	1.1	7900	7900	7900	7900	7900	347	30000	75000
5	0.8	8800	1.3	1775	IE4	BK80G40-../S4E08MA4	0.08	0.28	0.55	0.8	1	8800	8800	8800	8800	8800	347	30000	75000
5	0.65	11000	1	2205	IE4	BK80G40-../S4E08MA4	0.065	0.22	0.45	0.65	0.8	11000	11000	11000	11000	11000	347	30000	75000
5	0.6	12200	0.94	2449	IE4	BK80G40-../S4E08MA4	0.06	0.2	0.4	0.6	0.7	12200	12200	12200	12200	12200	347	30000	75000
5	0.5	14000	0.82	2811	IE4	BK80G40-../S4E08MA4	0.05	0.17	0.35	0.5	0.6	14000	14000	14000	14000	14000	347	30000	75000
5	1.1	6800	2.7	1363	IE4	BK90G50-../S4E08MA4	0.11	0.36	0.7	1.1	1.3	6800	6800	6800	6800	6800	620	49400	120000
5	0.9	7800	2.3	1579	IE4	BK90G50-../S4E08MA4	0.09	0.31	0.6	0.9	1.1	7800	7800	7800	7800	7800	620	49400	120000
5	0.8	9000	2.1	1803	IE4	BK90G50-../S4E08MA4	0.08	0.27	0.55	0.8	0.95	9000	9000	9000	9000	9000	620	49400	120000
5	0.7	10000	1.8	2016	IE4	BK90G50-../S4E08MA4	0.07	0.24	0.49	0.7	0.85	10000	10000	10000	10000	10000	620	49400	120000
5	0.5	13800	1.3	2764	IE4	BK90G50-../S4E08MA4	0.05	0.18	0.36	0.5	0.65	13800	13800	13800	13800	13800	620	49400	120000
5	0.48	15300	1.2	3065	IE4	BK90G50-../S4E08MA4	0.048	0.16	0.32	0.48	0.55	15300	15300	15300	15300	15300	620	49400	120000
5	0.4	18300	1	3672	IE4	BK90G50-../S4E08MA4	0.04	0.13	0.27	0.4	0.49	18300	18300	18300	18300	18300	620	49400	120000
5	0.36	20000	0.91	4070	IE4	BK90G50-../S4E08MA4	0.036	0.12	0.24	0.36	0.44	20000	20000	20000	20000	20000	620	49400	120000

**$M_N = 7 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
7	205	46.5	1.6	7.25	IE3	BK06-../SPE08LA4	20.5	68	137	205	245	43	46.5	46.5	46.5	46.5	16	800	-
7	154	62	1.3	9.71	IE3	BK06-../SPE08LA4	15	51	102	154	185	58	62	62	62	62	16	880	-
7	128	75	1.1	11.67	IE3	BK06-../SPE08LA4	12.5	42.5	85	128	154	69	75	75	75	75	16	930	-
7	98	97	0.82	15.29	IE3	BK06-../SPE08LA4	9.8	32.5	65	98	117	90	97	97	97	97	16	1020	-
7	245	38.5	2.7	6.02	IE3	BK08-../SPE08LA4	24.5	83	166	245	295	35.5	38.5	38.5	38.5	38.5	28	2100	-
7	195	49	2.3	7.68	IE3	BK08-../SPE08LA4	19.5	65	130	195	230	45.5	49	49	49	49	28	2400	-
7	159	60	1.9	9.4	IE3	BK08-../SPE08LA4	15.5	53	106	159	191	56	60	60	60	60	28	2700	-
7	140	67	2.7	10.7	IE3	BK08-../SPE08LA4	14	46.5	93	140	168	62	67	67	67	67	28	3500	-
7	125	76	1.5	11.93	IE3	BK08-../SPE08LA4	12.5	41.5	83	125	150	71	76	76	76	76	28	3100	-
7	103	91	2.2	14.5	IE3	BK08-../SPE08LA4	10	34	68	103	124	84	91	91	91	91	28	3900	-
7	88	106	1.3	16.92	IE3	BK08-../SPE08LA4	8.8	29.5	59	88	106	98	106	106	106	106	28	3700	-
7	80	116	1.7	18.52	IE3	BK08-../SPE08LA4	8	26.5	53	80	97	108	116	116	116	116	28	4300	-
7	66	142	1.4	22.65	IE3	BK08-../SPE08LA4	6.6	22	44	66	79	132	142	142	142	142	28	4650	-
7	52	181	1.1	28.76	IE3	BK08-../SPE08LA4	5.2	17	34.5	52	62	168	181	181	181	181	28	5200	-
7	43.5	215	0.93	34.25	IE3	BK08-../SPE08LA4	4.3	14.5	29	43.5	52	200	215	215	215	215	28	5600	-
7	245	38.5	2.7	6.02	IE3	BK10-../SPE08LA4	24.5	83	166	245	295	35.5	38.5	38.5					

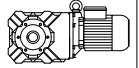
Selection - bevel geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$ **M<sub>N</sub> = 7 Nm (P<sub>N</sub> = 1.1 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
7	52	181	1.1	28.76	IE3	BK10-../SPE08LA4	5.2	17	34.5	52	62	168	181	181	181	181	28	5200	-
7	43.5	215	0.93	34.25	IE3	BK10-../SPE08LA4	4.3	14.5	29	43.5	52	200	215	215	215	215	28	5600	-
7	86	110	2.1	17.42	IE3	BK17-../SPE08LA4	8.6	28.5	57	86	103	103	110	110	110	110	38	3250	9000
7	77	122	2.7	19.39	IE3	BK17-../SPE08LA4	7.7	25.5	51	77	92	113	122	122	122	122	38	4050	9000
7	61	153	2.2	24.29	IE3	BK17-../SPE08LA4	6.1	20.5	41	61	74	142	153	153	153	153	38	4500	9000
7	52	180	1.8	28.66	IE3	BK17-../SPE08LA4	5.2	17	34.5	52	62	167	180	180	180	180	38	4850	9000
7	40.5	230	1.4	36.69	IE3	BK17-../SPE08LA4	4	13.5	27	40.5	49	210	230	230	230	230	38	5400	9000
7	35	265	1.2	42.7	IE3	BK17-../SPE08LA4	3.5	11.5	23	35	42	245	265	265	265	265	38	5800	9000
7	29	315	1	51.22	IE3	BK17-../SPE08LA4	2.9	9.7	19.5	29	35	295	315	315	315	315	38	6300	9000
7	24	380	0.86	61.3	IE3	BK17-../SPE08LA4	2.4	8.1	16	24	29	350	380	380	380	380	38	6500	9000
7	86	110	2.1	17.42	IE3	BK20-../SPE08LA4	8.6	28.5	57	86	103	103	110	110	110	110	38	3250	9000
7	77	122	2.7	19.39	IE3	BK20-../SPE08LA4	7.7	25.5	51	77	92	113	122	122	122	122	38	4050	9000
7	61	153	2.2	24.29	IE3	BK20-../SPE08LA4	6.1	20.5	41	61	74	142	153	153	153	153	38	4500	9000
7	52	180	1.8	28.66	IE3	BK20-../SPE08LA4	5.2	17	34.5	52	62	167	180	180	180	180	38	4850	9000
7	40.5	230	1.4	36.69	IE3	BK20-../SPE08LA4	4	13.5	27	40.5	49	210	230	230	230	230	38	5400	9000
7	35	265	1.2	42.7	IE3	BK20-../SPE08LA4	3.5	11.5	23	35	42	245	265	265	265	265	38	5800	9000
7	29	315	1	51.22	IE3	BK20-../SPE08LA4	2.9	9.7	19.5	29	35	295	315	315	315	315	38	6300	9000
7	24	380	0.86	61.3	IE3	BK20-../SPE08LA4	2.4	8.1	16	24	29	350	380	380	380	380	38	6500	9000
7	71	132	2.4	20.85	IE3	BK30-../SPE08LA4	7.1	23.5	47.5	71	86	123	132	132	132	132	44	5000	12000
7	52	181	2.5	28.76	IE3	BK30-../SPE08LA4	5.2	17	34.5	52	62	168	181	181	181	181	44	6500	12000
7	44.5	210	2.1	33.7	IE3	BK30-../SPE08LA4	4.4	14.5	29.5	44.5	53	197	210	210	210	210	44	7000	12000
7	34.5	265	1.7	42.89	IE3	BK30-../SPE08LA4	3.4	11.5	23	34.5	41.5	245	265	265	265	265	44	7800	12000
7	29.5	305	1.5	50.27	IE3	BK30-../SPE08LA4	2.9	9.9	19.5	29.5	35.5	285	305	305	305	305	44	8300	12000
7	25	365	1.2	59.27	IE3	BK30-../SPE08LA4	2.5	8.4	16.5	25	30	335	365	365	365	365	44	8900	12000
7	20.5	435	1	71.56	IE3	BK30-../SPE08LA4	2	6.9	13.5	20.5	25	400	435	435	435	435	44	9700	12000
7	16.5	530	0.85	88.38	IE3	BK30-../SPE08LA4	1.6	5.6	11	16.5	20	490	530	530	530	530	44	10600	12000
7	36.5	255	3	40.88	IE3	BK40-../SPE08LA4	3.6	12	24	36.5	44	235	255	255	255	255	64	7600	17000
7	29	315	2.5	51.18	IE3	BK40-../SPE08LA4	2.9	9.7	19.5	29	35	290	315	315	315	315	64	8400	17000
7	25	365	2.1	59.66	IE3	BK40-../SPE08LA4	2.5	8.3	16.5	25	30	340	365	365	365	365	64	9100	17000
7	21	425	1.8	70.11	IE3	BK40-../SPE08LA4	2.1	7.1	14	21	25.5	395	425	425	425	425	64	9800	17000
7	17.5	510	1.5	84.36	IE3	BK40-../SPE08LA4	1.7	5.9	11.5	17.5	21	475	510	510	510	510	64	10700	17000
7	14	610	1.3	104	IE3	BK40-../SPE08LA4	1.4	4.8	9.6	14	17	570	610	610	610	610	64	11700	17000
7	12.5	700	1.1	118.2	IE3	BK40Z-../SPE08LA4	1.2	4.2	8.4	12.5	15	650	700	700	700	700	69	11700	17000
7	10	840	0.93	143	IE3	BK40Z-../SPE08LA4	1	3.4	6.9	10	12.5	780	840	840	840	840	69	11700	17000
7	24.5	370	2.8	60.76	IE3	BK50-../SPE08LA4	2.4	8.2	16	24.5	29.5	345	370	370	370	370	93	11400	26000
7	19.5	455	2.3	75.4	IE3	BK50-../SPE08LA4	1.9	6.6	13	19.5	23.5	425	455	455	455	455	93	12600	26000
7	15.5	570	1.8	95.29	IE3	BK50-../SPE08LA4	1.5	5.2	10	15.5	18.5	530	570	570	570	570	93	14100	26000
7	12.5	680	1.5	115.4	IE3	BK50Z-../SPE08LA4	1.2	4.3	8.6	12.5	15.5	630	680	680	680	680	98	14100	26000
7	9.7	890	1.2	153.3	IE3	BK50Z-../SPE08LA4	0.95	3.2	6.5	9.7	11.5	820	890	890	890	890	98	14100	26000
7	7.2	1180	0.88	206.8	IE3	BK50Z-../SPE08LA4	0.7	2.4	4.8	7.2	8.7	1100	1180	1180	1180	1180	98	14100	26000
7	9.7	1070	2.1	153.7	IE3	BK60Z-../SPE08LA4	0.95	3.2	6.5	9.7	11.5	990	1070	1070	1070	1070	120	16600	34000
7	8.1	1280	1.8	183.2	IE3	BK60Z-../SPE08LA4	0.8	2.7	5.4	8.1	9.8	1190	1280	1280	1280	1280	120	16600	34000
7	7.3	1430	1.6	205	IE3	BK60Z-../SPE08LA4	0.7	2.4	4.8	7.3	8.7	1330	1430	1430	1430	1430	120	16600	34000
7	6.2	1670	1.4	239.7	IE3	BK60Z-../SPE08LA4	0.6	2	4.1	6.2	7.5	1550	1670	1670	1670	1670	120	16600	34000
7	5.5	1870	1.2	268.2	IE3	BK60Z-../SPE08LA4	0.55	1.8	3.7	5.5	6.7	1740	1870	1870	1870	1870	120	16600	34000
7	4.7	2200	1	317.7	IE3	BK60Z-../SPE08LA4	0.47	1.5	3.1	4.7	5.6	2050	2200	2200	2200	2200	120	16600	34000
7	4.2	2450	0.92	355.5	IE3	BK60Z-../SPE08LA4	0.42	1.4	2.8	4.2	5	2300	2450	2450	2450	2450	120	16600	34000
7	3.6	2850	0.8	411.5	IE3	BK60Z-../SPE08LA4	0.36	1.2	2.4	3.6	4.3	2650	2850	2850	2850	2850	120	16600	34000
7	5.8	1800	2.9	257.3	IE3	BK70Z-../SPE08LA4	0.55	1.9	3.8	5.8	6.9	1670	1800	1800	1800	1800	208	24100	50000
7	5.1	2050	2.5	293.3	IE3	BK70Z-../SPE08LA4	0.5	1.7	3.4	5.1	6.1	1900	2050	2050	2050	2050	208	24100	50000
7	4.4	2300	2.2	333.6	IE3	BK70Z-../SPE08LA4	0.44	1.4	2.9	4.4	5.3	2150	2300	2300	2300	2300	208	24100	50000
7	3.9	2650	2	379.9	IE3	BK70Z-../SPE08LA4	0.39	1.3	2.6	3.9	4.7	2450	2650	2650	2650	2650	208	24100	50000
7	3.4	3000	1.7	432.1	IE3	BK70Z-../SPE08LA4	0.34	1.1	2.3	3.4	4.1	2800	3000	3000	3000	3000	208	24100	50000
7	2.9	3500	1.5	501.8	IE3	BK70Z-../SPE08LA4	0.29	0.95	1.9	2.9	3.5	3250	3500	3500	3500	3500	208	24100	50000
7	2.6	3950	1.3	570.8	IE3	BK70Z-../SPE08LA4	0.26	0.85	1.7	2.6	3.1	3700	3950	3950	3950	3950	208	24100	50000
7	2.3	4500	1.2	644.9	IE3	BK70Z-../SPE08LA4	0.23	0.75	1.5	2.3	2.7	4150	4500	4500	4500	4500	208	24100	50000
7	2	5100	1	733.6	IE3	BK70Z-../SPE08LA4	0.2	0.65	1.3	2	2.4	4750	5100	5100	5100	5100	208	24100	50000
7	1.7	5900	0.96	847.7	IE3	BK70G20-../SPE08LA4	0.17	0.55	1.1	1.7	2.1	5500	5900	5900	5900	5900	206	24100	50000
7	1.5	6700	0.84	964.6	IE3	BK70G20-../SPE08LA4	0.15	0.5	1	1.5	1.8	6200	6700	6700	6700	6700	206	24100	50000
7	2.4	4250	2.7	607.8	IE3	BK80G40-../SPE08LA4	0.24	0.8	1.6	2.4	2.9	3950	4250	4250	4250	4250	348	30000	75000
7	2.2	4750	2.4	680.9	IE3	BK80G40-../SPE08LA4	0.22	0.7	1.4	2.2	2.6	4400	4750	4750	4750	4750	348	30000	75000
7	1.9	5200	2.2	756.3	IE3	BK80G40-../SPE08LA4	0.19	0.65	1.3	1.9	2.3	4900	5200	5200	5200	5200	348	30000	75000
7	1.7	5900	1.9	847.2	IE3	BK80G40-../SPE08LA4	0.17	0.55	1.1	1.7	2.1	5500	5900	5900	5900	5900	348	30000	75000
7	1.5	6700	1.7	963	IE3	BK80G40-../SPE08LA4	0.15	0.5	1	1.5	1.8	6200	6700	6700	6700	6700	348	30000	75000
7	1.3	7500	1.5	1079	IE3	BK80G40-../SPE08LA4	0.13	0.46	0.9	1.3	1.6	7000	7500	7500	7500	7500	348	30000	75000
7	1.1	9100	1.3	1307	IE3	BK80G40-../SPE08LA4	0.11	0.38	0.75	1.1	1.3	8400	9100	9100	9100	9100	348	30000	75000
7	1	9900	1.2	1425	IE3	BK80G40-../SPE0													

# BK-series bevel geared motors

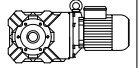
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

### $M_N = 7 \text{ Nm}$ ( $P_N = 1.1 \text{ kW}$ )

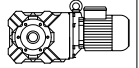


M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min] at engine speed n <sub>1</sub> [1/min]					Torque range M <sub>2</sub> [Nm] at engine speed n <sub>1</sub> [1/min]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
7	0.7	14100	1.3	2016	IE3	BK90G50-../SPE08LA4	0.07	0.24	0.49	0.7	0.85	13100	14100	14100	14100	14100	621	49400	120000
7	0.5	19300	0.96	2764	IE3	BK90G50-../SPE08LA4	0.05	0.18	0.36	0.5	0.65	17900	19300	19300	19300	19300	621	49400	120000
7	0.48	21000	0.86	3065	IE3	BK90G50-../SPE08LA4	0.048	0.16	0.32	0.48	0.55	19900	21000	21000	21000	21000	621	49400	120000

### $M_N = 10 \text{ Nm}$ ( $P_N = 1.55 \text{ kW}$ )



M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min] at engine speed n <sub>1</sub> [1/min]					Torque range M <sub>2</sub> [Nm] at engine speed n <sub>1</sub> [1/min]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	205	66	1.1	7.25	IE1	BK06-../SSE08LA4	20.5	68	137	205	245	43	53	66	66	66	16	800	-
10	154	89	0.9	9.71	IE1	BK06-../SSE08LA4	15	51	102	154	185	58	71	89	89	89	16	880	-
10	335	40.5	2.3	4.44	IE1	BK08-../SSE08LA4	33.5	112	225	335	405	26.5	32.5	40.5	40.5	40.5	28	1900	-
10	245	55	1.9	6.02	IE1	BK08-../SSE08LA4	24.5	83	166	245	295	35.5	44	55	55	55	28	2100	-
10	195	70	1.6	7.68	IE1	BK08-../SSE08LA4	19.5	65	130	195	230	45.5	56	70	70	70	28	2400	-
10	159	86	1.3	9.4	IE1	BK08-../SSE08LA4	15.5	53	106	159	191	56	69	86	86	86	28	2700	-
10	140	96	1.9	10.7	IE1	BK08-../SSE08LA4	14	46.5	93	140	168	62	77	96	96	96	28	3500	-
10	125	109	1	11.93	IE1	BK08-../SSE08LA4	12.5	41.5	83	125	150	71	87	109	109	109	28	3100	-
10	103	130	1.5	14.5	IE1	BK08-../SSE08LA4	10	34	68	103	124	84	104	130	130	130	28	3900	-
10	88	152	0.89	16.92	IE1	BK08-../SSE08LA4	8.8	29.5	59	88	106	98	121	152	152	152	28	3700	-
10	80	166	1.2	18.52	IE1	BK08-../SSE08LA4	8	26.5	53	80	97	108	133	166	166	166	28	4300	-
10	66	200	0.98	22.65	IE1	BK08-../SSE08LA4	6.6	22	44	66	79	132	163	200	200	200	28	4650	-
10	335	40.5	2.3	4.44	IE1	BK10-../SSE08LA4	33.5	112	225	335	405	26.5	32.5	40.5	40.5	40.5	28	1900	-
10	335	40.5	2.3	4.44	IE4	BK10-../S4E09SA4	33.5	112	225	335	405	34.5	40.5	40.5	40.5	40.5	32	1900	-
10	245	55	1.9	6.02	IE4	BK10-../S4E09SA4	24.5	83	166	245	295	47	55	55	55	55	32	2100	-
10	245	55	1.9	6.02	IE1	BK10-../SSE08LA4	24.5	83	166	245	295	35.5	44	55	55	55	28	2100	-
10	195	70	1.6	7.68	IE4	BK10-../S4E09SA4	19.5	65	130	195	230	60	70	70	70	70	32	2400	-
10	195	70	1.6	7.68	IE1	BK10-../SSE08LA4	19.5	65	130	195	230	45.5	56	70	70	70	28	2400	-
10	159	86	1.3	9.4	IE4	BK10-../S4E09SA4	15.5	53	106	159	191	73	86	86	86	86	32	2700	-
10	159	86	1.3	9.4	IE1	BK10-../SSE08LA4	15.5	53	106	159	191	56	69	86	86	86	28	2700	-
10	140	96	1.9	10.7	IE1	BK10-../SSE08LA4	14	46.5	93	140	168	62	77	96	96	96	28	3500	-
10	140	96	1.9	10.7	IE4	BK10-../S4E09SA4	14	46.5	93	140	168	81	96	96	96	96	32	3500	-
10	125	109	1	11.93	IE4	BK10-../S4E09SA4	12.5	41.5	83	125	150	93	109	109	109	109	32	3100	-
10	125	109	1	11.93	IE1	BK10-../SSE08LA4	12.5	41.5	83	125	150	71	87	109	109	109	28	3100	-
10	103	130	1.5	14.5	IE1	BK10-../SSE08LA4	10	34	68	103	124	84	104	130	130	130	28	3900	-
10	103	130	1.5	14.5	IE4	BK10-../S4E09SA4	10	34	68	103	124	110	130	130	130	130	32	3900	-
10	88	152	0.89	16.92	IE4	BK10-../S4E09SA4	8.8	29.5	59	88	106	129	152	152	152	152	32	3700	-
10	88	152	0.89	16.92	IE1	BK10-../SSE08LA4	8.8	29.5	59	88	106	98	121	152	152	152	28	3700	-
10	80	166	1.2	18.52	IE4	BK10-../S4E09SA4	8	26.5	53	80	97	141	166	166	166	166	32	4300	-
10	80	166	1.2	18.52	IE1	BK10-../SSE08LA4	8	26.5	53	80	97	108	133	166	166	166	28	4300	-
10	66	200	0.98	22.65	IE1	BK10-../SSE08LA4	6.6	22	44	66	79	132	163	200	200	200	28	4650	-
10	66	200	0.98	22.65	IE4	BK10-../S4E09SA4	6.6	22	44	66	79	173	200	200	200	200	32	4650	-
10	151	91	2.5	9.91	IE4	BK17-../S4E09SA4	15	50	100	151	181	77	91	91	91	91	42	1910	8300
10	151	91	2.5	9.91	IE1	BK17-../SSE08LA4	15	50	100	151	181	59	72	91	91	91	38	1910	8300
10	134	100	3	11.14	IE4	BK17-../S4E09SA4	13	44.5	89	134	161	85	100	100	100	100	42	3300	8100
10	134	100	3	11.14	IE1	BK17-../SSE08LA4	13	44.5	89	134	161	65	80	100	100	100	38	3300	8100
10	128	107	2.1	11.69	IE1	BK17-../SSE08LA4	12.5	42.5	85	128	153	69	86	107	107	107	38	2400	8800
10	128	107	2.1	11.69	IE4	BK17-../S4E09SA4	12.5	42.5	85	128	153	91	107	107	107	107	42	2400	8800
10	101	132	2.5	14.75	IE4	BK17-../S4E09SA4	10	33.5	67	101	122	112	132	132	132	132	42	3650	9000
10	101	132	2.5	14.75	IE1	BK17-../SSE08LA4	10	33.5	67	101	122	86	106	132	132	132	38	3650	9000
10	86	158	1.5	17.42	IE4	BK17-../S4E09SA4	8.6	28.5	57	86	103	134	158	158	158	158	42	3250	9000
10	86	158	1.5	17.42	IE1	BK17-../SSE08LA4	8.6	28.5	57	86	103	103	126	158	158	158	38	3250	9000
10	77	174	1.9	19.39	IE1	BK17-../SSE08LA4	7.7	25.5	51	77	92	113	139	174	174	174	38	4050	9000
10	77	174	1.9	19.39	IE4	BK17-../S4E09SA4	7.7	25.5	51	77	92	148	174	174	174	174	42	4050	9000
10	61	215	1.5	24.29	IE4	BK17-../S4E09SA4	6.1	20.5	41	61	74	185	215	215	215	215	42	4500	9000
10	61	215	1.5	24.29	IE1	BK17-../SSE08LA4	6.1	20.5	41	61	74	142	174	215	215	215	38	4500	9000
10	52	255	1.3	28.66	IE1	BK17-../SSE08LA4	5.2	17	34.5	52	62	167	205	255	255	255	38	4850	9000
10	52	255	1.3	28.66	IE4	BK17-../S4E09SA4	5.2	17	34.5	52	62	215	255	255	255	255	42	4850	9000
10	40.5	330	1	36.69	IE4	BK17-../S4E09SA4	4	13.5	27	40.5	49	280	330	330	330	330	42	5400	9000
10	40.5	330	1	36.69	IE1	BK17-../SSE08LA4	4	13.5	27	40.5	49	210	260	330	330	330	38	5400	9000
10	35	380	0.86	42.7	IE4	BK17-../S4E09SA4	3.5	11.5	23	35	42	325	380	380	380	380	42	5800	9000
10	35	380	0.86	42.7	IE1	BK17-../SSE08LA4	3.5	11.5	23	35	42	245	305	380	380	380	38	5800	9000
10	151	91	2.5	9.91	IE4	BK20-../S4E09SA4	15	50	100	151	181	77	91	91	91	91	42	1910	8300
10	151	91	2.5	9.91	IE1	BK20-../SSE08LA4	15	50	100	151	181	59	72	91	91	91	38	1910	8300
10	134	100	3	11.14	IE4	BK20-../S4E09SA4	13	44.5	89	134	161	85	100	100	100	100	42	3300	8100
10																			

Selection - bevel geared motors -  $n_1 = 1500 \frac{1}{min}$ **M<sub>N</sub> = 10 Nm (P<sub>N</sub> = 1.55 kW)**

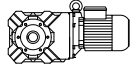
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	40.5	330	1	36.69	IE1	BK20-../SSE08LA4	4	13.5	27	40.5	49	210	260	330	330	330	38	5400	9000
10	40.5	330	1	36.69	IE4	BK20-../S4E09SA4	4	13.5	27	40.5	49	280	330	330	330	330	42	5400	9000
10	35	380	0.86	42.7	IE1	BK20-../SSE08LA4	3.5	11.5	23	35	42	245	305	380	380	380	38	5800	9000
10	35	380	0.86	42.7	IE4	BK20-../S4E09SA4	3.5	11.5	23	35	42	325	380	380	380	380	42	5800	9000
10	125	109	2.9	11.93	IE4	BK30-../S4E09SA4	12.5	41.5	83	125	150	93	109	109	109	109	48	3650	12000
10	125	109	2.9	11.93	IE1	BK30-../SSE08LA4	12.5	41.5	83	125	150	71	87	109	109	109	44	3650	12000
10	107	127	2.5	13.98	IE4	BK30-../S4E09SA4	10.5	35.5	71	107	128	108	127	127	127	127	48	4050	12000
10	107	127	2.5	13.98	IE1	BK30-../SSE08LA4	10.5	35.5	71	107	128	82	101	127	127	127	44	4050	12000
10	83	161	2.8	17.95	IE4	BK30-../S4E09SA4	8.3	27.5	55	83	100	137	161	161	161	161	48	5300	12000
10	83	161	2.8	17.95	IE1	BK30-../SSE08LA4	8.3	27.5	55	83	100	105	129	161	161	161	44	5300	12000
10	71	189	1.7	20.85	IE4	BK30-../S4E09SA4	7.1	23.5	47.5	71	86	161	189	189	189	189	48	5000	12000
10	71	189	1.7	20.85	IE1	BK30-../SSE08LA4	7.1	23.5	47.5	71	86	123	151	189	189	189	44	5000	12000
10	64	205	2.2	23.2	IE4	BK30-../S4E09SA4	6.4	21.5	43	64	77	177	205	205	205	205	48	5900	12000
10	64	205	2.2	23.2	IE1	BK30-../SSE08LA4	6.4	21.5	43	64	77	135	167	205	205	205	44	5900	12000
10	52	255	1.7	28.76	IE1	BK30-../SSE08LA4	5.2	17	34.5	52	62	168	205	255	255	255	44	6500	12000
10	52	255	1.7	28.76	IE4	BK30-../S4E09SA4	5.2	17	34.5	52	62	220	255	255	255	255	48	6500	12000
10	44.5	300	1.5	33.7	IE4	BK30-../S4E09SA4	4.4	14.5	29.5	44.5	53	255	300	300	300	300	48	7000	12000
10	44.5	300	1.5	33.7	IE1	BK30-../SSE08LA4	4.4	14.5	29.5	44.5	53	197	240	300	300	300	44	7000	12000
10	34.5	380	1.2	42.89	IE1	BK30-../SSE08LA4	3.4	11.5	23	34.5	41.5	245	305	380	380	380	44	7800	12000
10	34.5	380	1.2	42.89	IE4	BK30-../S4E09SA4	3.4	11.5	23	34.5	41.5	320	380	380	380	380	48	7800	12000
10	29.5	440	1	50.27	IE4	BK30-../S4E09SA4	2.9	9.9	19.5	29.5	35.5	375	440	440	440	440	48	8300	12000
10	29.5	440	1	50.27	IE1	BK30-../SSE08LA4	2.9	9.9	19.5	29.5	35.5	285	350	440	440	440	44	8300	12000
10	25	520	0.86	59.27	IE1	BK30-../SSE08LA4	2.5	8.4	16.5	25	30	335	415	520	520	520	44	8900	12000
10	25	520	0.86	59.27	IE4	BK30-../S4E09SA4	2.5	8.4	16.5	25	30	440	520	520	520	520	48	8900	12000
10	52	255	3	28.59	IE4	BK40-../S4E09SA4	5.2	17	34.5	52	62	215	255	255	255	255	68	6300	17000
10	52	255	3	28.59	IE1	BK40-../SSE08LA4	5.2	17	34.5	52	62	167	205	255	255	255	64	6300	17000
10	43	310	2.5	34.61	IE4	BK40-../S4E09SA4	4.3	14	28.5	43	52	260	310	310	310	310	68	6900	17000
10	43	310	2.5	34.61	IE1	BK40-../SSE08LA4	4.3	14	28.5	43	52	200	245	310	310	310	64	6900	17000
10	36.5	365	2.1	40.88	IE4	BK40-../S4E09SA4	3.6	12	24	36.5	44	310	365	365	365	365	68	7600	17000
10	36.5	365	2.1	40.88	IE1	BK40-../SSE08LA4	3.6	12	24	36.5	44	235	290	365	365	365	64	7600	17000
10	29	450	1.7	51.18	IE4	BK40-../S4E09SA4	2.9	9.7	19.5	29	35	380	450	450	450	450	68	8400	17000
10	29	450	1.7	51.18	IE1	BK40-../SSE08LA4	2.9	9.7	19.5	29	35	290	360	450	450	450	64	8400	17000
10	25	520	1.5	59.66	IE1	BK40-../SSE08LA4	2.5	8.3	16.5	25	30	340	420	520	520	520	64	9100	17000
10	25	520	1.5	59.66	IE4	BK40-../S4E09SA4	2.5	8.3	16.5	25	30	445	520	520	520	520	68	9100	17000
10	21	600	1.3	70.11	IE4	BK40-../S4E09SA4	2.1	7.1	14	21	25.5	510	600	600	600	600	68	9800	17000
10	21	600	1.3	70.11	IE1	BK40-../SSE08LA4	2.1	7.1	14	21	25.5	395	485	600	600	600	64	9800	17000
10	17.5	730	1.1	84.36	IE4	BK40-../S4E09SA4	1.7	5.9	11.5	17.5	21	620	730	730	730	730	68	10700	17000
10	17.5	730	1.1	84.36	IE1	BK40-../SSE08LA4	1.7	5.9	11.5	17.5	21	475	580	730	730	730	64	10700	17000
10	14	880	0.88	104	IE4	BK40-../S4E09SA4	1.4	4.8	9.6	14	17	750	880	880	880	880	68	11700	17000
10	14	880	0.88	104	IE1	BK40-../SSE08LA4	1.4	4.8	9.6	14	17	570	700	880	880	880	64	11700	17000
10	31.5	420	2.5	47.5	IE1	BK50-../SSE08LA4	3.1	10.5	21	31.5	37.5	270	335	420	420	420	93	10100	25700
10	31.5	420	2.5	47.5	IE4	BK50-../S4E09SA4	3.1	10.5	21	31.5	37.5	355	420	420	420	420	96	10100	25700
10	24.5	530	2	60.76	IE4	BK50-../S4E09SA4	2.4	8.2	16	24.5	29.5	450	530	530	530	530	96	11400	26000
10	24.5	530	2	60.76	IE1	BK50-../SSE08LA4	2.4	8.2	16	24.5	29.5	345	425	530	530	530	93	11400	26000
10	19.5	650	1.6	75.4	IE4	BK50-../S4E09SA4	1.9	6.6	13	19.5	23.5	550	650	650	650	650	96	12600	26000
10	19.5	650	1.6	75.4	IE1	BK50-../SSE08LA4	1.9	6.6	13	19.5	23.5	425	520	650	650	650	93	12600	26000
10	15.5	810	1.3	95.29	IE4	BK50-../S4E09SA4	1.5	5.2	10	15.5	18.5	690	810	810	810	810	96	14100	26000
10	15.5	810	1.3	95.29	IE1	BK50-../SSE08LA4	1.5	5.2	10	15.5	18.5	530	650	810	810	810	93	14100	26000
10	12.5	980	1.1	115.4	IE4	BK50Z-../S4E09SA4	1.2	4.3	8.6	12.5	15.5	830	980	980	980	980	101	14100	26000
10	12.5	980	1.1	115.4	IE1	BK50Z-../SSE08LA4	1.2	4.3	8.6	12.5	15.5	630	780	980	980	980	98	14100	26000
10	9.7	1270	0.83	153.3	IE4	BK60Z-../S4E09SA4	0.95	3.2	6.5	9.7	11.5	1080	1270	1270	1270	1270	101	14100	26000
10	9.7	1270	0.83	153.3	IE1	BK60Z-../SSE08LA4	0.95	3.2	6.5	9.7	11.5	820	1010	1270	1270	1270	98	14100	26000
10	19	780	2.9	78.13	IE4	BK60-../S4E09SA4	1.9	6.3	12.5	19	23	660	780	780	780	780	105	11900	34000
10	17	870	2.6	87.41	IE4	BK60-../S4E09SA4	1.7	5.7	11	17	20.5	740	870	870	870	870	105	12900	34000
10	14.5	1010	2.3	101.2	IE4	BK60-../S4E09SA4	1.4	4.9	9.8	14.5	17.5	860	1010	1010	1010	1010	105	13900	34000
10	13	1130	2	113.2	IE4	BK60-../S4E09SA4	1.3	4.4	8.8	13	15.5	960	1130	1130	1130	1130	105	15000	34000
10	12	1220	1.9	122.5	IE4	BK60-../S4E09SA4	1.2	4	8.1	12	14.5	1040	1220	1220	1220	1220	105	15500	34000
10	10.5	1370	1.7	137	IE4	BK60-../S4E09SA4	1	3.6	7.2	10.5	13	1160	1370	1370	1370	1370	105	16600	34000
10	9.7	1530	1.5	153.7	IE1	BK60Z-../SSE08LA4	0.95	3.2	6.5	9.7	11.5	990	1220	1530	1530	1530	120	16600	34000
10	9.7	1530	1.5	153.7	IE4	BK60Z-../S4E09SA4	0.95	3.2	6.5	9.7	11.5	1300	1530	1530	1530	1530	124	16600	34000
10	8.1	1830	1.3	183.2	IE1	BK60Z-../SSE08LA4	0.8	2.7	5.4	8.1	9.8	1190	1460	1830	1830	1830	120	16600	34000
10	8.1	1830	1.3	183.2	IE4	BK60Z-../S4E09SA4	0.8	2.7	5.4	8.1	9.8	1550	1830	1830	1830	1830	124	16600	34000
10	7.3	2050	1.1	205	IE4	BK60Z-../S4E09SA4	0.7	2.4	4.8	7.3	8.7	1740	2050	2050	2050	2050	124	16600	34000
10	7.3	2050	1.1	205	IE1	BK60Z-../SSE08LA4	0.7	2.4	4.8	7.3	8.7	1330	1640	2050	2050	2050	120	16600	34000
10	6.2	2350	0.96	239.7	IE1	BK60Z-../SSE08LA4	0.6	2	4.1	6.2	7.5	1550	1910	2350	2350	2350	120	16600	34000
10	6.2	2350	0.96	239.7	IE4	BK60Z-../S4E09SA4	0.6	2	4.1	6.2	7.5	2000	2350	2350	2350	2350	124	16600	34000
10	5.5	2650	0.86	268.2	IE4	BK60Z-../S4E09SA4													



# BK-series bevel geared motors

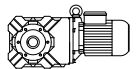
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

**$M_N = 10 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

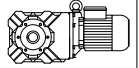


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	3.9	3750	1.4	379.9	IE4	BK70Z-../S4E09SA4	0.39	1.3	2.6	3.9	4.7	3200	3750	3750	3750	3750	212	24100	50000
10	3.9	3750	1.4	379.9	IE1	BK70Z-../SSE08LA4	0.39	1.3	2.6	3.9	4.7	2450	3000	3750	3750	3750	208	24100	50000
10	3.4	4300	1.2	432.1	IE4	BK70Z-../S4E09SA4	0.34	1.1	2.3	3.4	4.1	3650	4300	4300	4300	4300	212	24100	50000
10	3.4	4300	1.2	432.1	IE1	BK70Z-../SSE08LA4	0.34	1.1	2.3	3.4	4.1	2800	3450	4300	4300	4300	208	24100	50000
10	2.9	5000	1	501.8	IE4	BK70Z-../S4E09SA4	0.29	0.95	1.9	2.9	3.5	4250	5000	5000	5000	5000	212	24100	50000
10	2.9	5000	1	501.8	IE1	BK70Z-../SSE08LA4	0.29	0.95	1.9	2.9	3.5	3250	4000	5000	5000	5000	208	24100	50000
10	2.6	5700	0.91	570.8	IE4	BK70Z-../S4E09SA4	0.26	0.85	1.7	2.6	3.1	4850	5700	5700	5700	5700	212	24100	50000
10	2.6	5700	0.91	570.8	IE1	BK70Z-../SSE08LA4	0.26	0.85	1.7	2.6	3.1	3700	4550	5700	5700	5700	208	24100	50000
10	2.3	6400	0.81	644.9	IE4	BK70Z-../S4E09SA4	0.23	0.75	1.5	2.3	2.7	5400	6400	6400	6400	6400	212	24100	50000
10	2.3	6400	0.81	644.9	IE1	BK70Z-../SSE08LA4	0.23	0.75	1.5	2.3	2.7	4150	5100	6400	6400	6400	208	24100	50000
10	3.8	3850	3	389	IE4	BK80Z-../S4E09SA4	0.38	1.2	2.5	3.8	4.6	3300	3850	3850	3850	3850	341	30000	75000
10	3.4	4350	2.6	435.7	IE4	BK80Z-../S4E09SA4	0.34	1.1	2.2	3.4	4.1	3700	4350	4350	4350	4350	341	30000	75000
10	3	4950	2.3	499.5	IE4	BK80Z-../S4E09SA4	0.3	1	2	3	3.6	4200	4950	4950	4950	4950	341	30000	75000
10	2.6	5500	2.1	559.5	IE4	BK80Z-../S4E09SA4	0.26	0.85	1.7	2.6	3.2	4750	5500	5500	5500	5500	341	30000	75000
10	2.4	6000	1.9	607.8	IE4	BK80G40-../S4E09SA4	0.24	0.8	1.6	2.4	2.9	5100	6000	6000	6000	6000	352	30000	75000
10	2.4	6000	1.9	607.8	IE1	BK80G40-../SSE08LA4	0.24	0.8	1.6	2.4	2.9	3950	4850	6000	6000	6000	348	30000	75000
10	2.2	6800	1.7	680.9	IE1	BK80G40-../SSE08LA4	0.22	0.7	1.4	2.2	2.6	4400	5400	6800	6800	6800	348	30000	75000
10	2.2	6800	1.7	680.9	IE4	BK80G40-../S4E09SA4	0.22	0.7	1.4	2.2	2.6	5700	6800	6800	6800	6800	352	30000	75000
10	1.9	7500	1.5	756.3	IE4	BK80G40-../S4E09SA4	0.19	0.65	1.3	1.9	2.3	6400	7500	7500	7500	7500	352	30000	75000
10	1.9	7500	1.5	756.3	IE1	BK80G40-../SSE08LA4	0.19	0.65	1.3	1.9	2.3	4900	6000	7500	7500	7500	348	30000	75000
10	1.7	8400	1.4	847.2	IE1	BK80G40-../SSE08LA4	0.17	0.55	1.1	1.7	2.1	5500	6700	8400	8400	8400	348	30000	75000
10	1.7	8400	1.4	847.2	IE4	BK80G40-../S4E09SA4	0.17	0.55	1.1	1.7	2.1	7200	8400	8400	8400	8400	352	30000	75000
10	1.5	9600	1.2	963	IE4	BK80G40-../S4E09SA4	0.15	0.5	1	1.5	1.8	8100	9600	9600	9600	9600	352	30000	75000
10	1.5	9600	1.2	963	IE1	BK80G40-../SSE08LA4	0.15	0.5	1	1.5	1.8	6200	7700	9600	9600	9600	348	30000	75000
10	1.3	10700	1.1	1079	IE1	BK80G40-../SSE08LA4	0.13	0.46	0.9	1.3	1.6	7000	8600	10700	10700	10700	348	30000	75000
10	1.3	10700	1.1	1079	IE4	BK80G40-../S4E09SA4	0.13	0.46	0.9	1.3	1.6	9100	10700	10700	10700	10700	352	30000	75000
10	1.1	13000	0.88	1307	IE1	BK80G40-../SSE08LA4	0.11	0.38	0.75	1.1	1.3	8400	10400	13000	13000	13000	348	30000	75000
10	1.1	13000	0.88	1307	IE4	BK80G40-../S4E09SA4	0.11	0.38	0.75	1.1	1.3	11100	13000	13000	13000	13000	352	30000	75000
10	1	14200	0.81	1425	IE1	BK80G40-../SSE08LA4	0.1	0.35	0.7	1	1.2	9200	11400	14200	14200	14200	348	30000	75000
10	1	14200	0.81	1425	IE4	BK80G40-../S4E09SA4	0.1	0.35	0.7	1	1.2	12100	14200	14200	14200	14200	352	30000	75000
10	2.3	6300	2.9	637.7	IE4	BK90Z-../S4E09SA4	0.23	0.75	1.5	2.3	2.8	5400	6300	6300	6300	6300	614	49400	120000
10	2.1	7100	2.6	713.5	IE4	BK90Z-../S4E09SA4	0.21	0.7	1.4	2.1	2.5	6000	7100	7100	7100	7100	614	49400	120000
10	1.8	8200	2.3	821	IE4	BK90G50-../S4E09SA4	0.18	0.6	1.2	1.8	2.1	6900	8200	8200	8200	8200	625	49400	120000
10	1.8	8200	2.3	821	IE1	BK90G50-../SSE08LA4	0.18	0.6	1.2	1.8	2.1	5300	6500	8200	8200	8200	621	49400	120000
10	1.7	8800	2.1	882.3	IE4	BK90G50-../S4E09SA4	0.17	0.55	1.1	1.7	2	7400	8800	8800	8800	8800	625	49400	120000
10	1.7	8800	2.1	882.3	IE1	BK90G50-../SSE08LA4	0.17	0.55	1.1	1.7	2	5700	7000	8800	8800	8800	621	49400	120000
10	1.4	10000	1.8	1008	IE1	BK90G50-../SSE08LA4	0.14	0.49	0.95	1.4	1.7	6500	8000	10000	10000	10000	621	49400	120000
10	1.4	10000	1.8	1008	IE4	BK90G50-../S4E09SA4	0.14	0.49	0.95	1.4	1.7	8500	10000	10000	10000	10000	625	49400	120000
10	1.3	11200	1.6	1127	IE4	BK90G50-../S4E09SA4	0.13	0.44	0.85	1.3	1.5	9500	11200	11200	11200	11200	625	49400	120000
10	1.3	11200	1.6	1127	IE1	BK90G50-../SSE08LA4	0.13	0.44	0.85	1.3	1.5	7300	9000	11200	11200	11200	621	49400	120000
10	1.1	13600	1.4	1363	IE1	BK90G50-../SSE08LA4	0.11	0.36	0.7	1.1	1.3	8800	10900	13600	13600	13600	621	49400	120000
10	1.1	13600	1.4	1363	IE4	BK90G50-../S4E09SA4	0.11	0.36	0.7	1.1	1.3	11500	13600	13600	13600	13600	625	49400	120000
10	0.9	15700	1.2	1579	IE1	BK90G50-../SSE08LA4	0.09	0.31	0.6	0.9	1.1	10200	12600	15700	15700	15700	621	49400	120000
10	0.9	15700	1.2	1579	IE4	BK90G50-../S4E09SA4	0.09	0.31	0.6	0.9	1.1	13400	15700	15700	15700	15700	625	49400	120000
10	0.8	18000	1	1803	IE1	BK90G50-../SSE08LA4	0.08	0.27	0.55	0.8	0.95	11700	14400	18000	18000	18000	621	49400	120000
10	0.8	18000	1	1803	IE4	BK90G50-../S4E09SA4	0.08	0.27	0.55	0.8	0.95	15300	18000	18000	18000	18000	625	49400	120000
10	0.7	20000	0.92	2016	IE1	BK90G50-../SSE08LA4	0.07	0.24	0.49	0.7	0.85	13100	16100	20000	20000	20000	621	49400	120000
10	0.7	20000	0.92	2016	IE4	BK90G50-../S4E09SA4	0.07	0.24	0.49	0.7	0.85	17100	20000	20000	20000	20000	625	49400	120000

**$M_N = 14 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	335	57	1.7	4.44	IE2	BK10-../SHE09SA4	33.5	112	225	335	405	34.5	40.5	57	57	57	32	1900	-
14	335	57	1.7	4.44	IE5	BK10-../S5E09XA4	33.5	112	225	335	405	53	57	57	57	57	40	1900	-
14	245	77	1.4	6.02	IE5	BK10-../S5E09XA4	24.5	83	166	245	295	71	77	77	77	77	40	2100	-
14	245	77	1.4	6.02	IE2	BK10-../SHE09SA4	24.5	83	166	245	295	47	55	77	77	77	32	2100	-
14	195	98	1.2	7.68	IE5	BK10-../S5E09XA4	19.5	65	130	195	230	91	98	98	98	98	40	2400	-
14	195	98	1.2	7.68	IE2	BK10-../SHE09SA4	19.5	65	130	195	230	60	70	98	98	98	32	2400	-
14	159	121	0.95	9.4	IE5	BK10-../S5E09XA4	15.5	53	106	159	191	112	121	121	121	121	40	2700	-
14	159	121	0.95	9.4	IE2	BK10-../SHE09SA4	15.5	53	106	159	191	73	86	121	121	121	32	2700	-
14	140	134	1.3	10.7	IE5	BK10-../S5E09XA4	14	46.5	93	140	168	125	134	134	134	134	40	3500	-
14	140	134	1.3	10.7	IE2	BK10-../SHE09SA4	14	46.5	93	140	168	81	96	134	134	134	32	3500	-
14	103	182	1.1	14.5	IE5	BK10-../S5E09XA4	10	34	68	103	124	169	182	182	182	182	40	3900	-
14	103	182	1.1	14.5	IE2	BK10-../SHE09SA4	10	34	68	103									

Selection - bevel geared motors -  $n_1 = 1500 \frac{1}{min}$ **M<sub>N</sub> = 14 Nm (P<sub>N</sub> = 2.2 kW)**

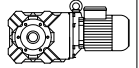
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	101	185	1.8	14.75	IE5	BK17-../S5E09XA4	10	33.5	67	101	122	172	185	185	185	185	50	3650	9000
14	101	185	1.8	14.75	IE2	BK17-../SHE09SA4	10	33.5	67	101	122	112	132	185	185	185	42	3650	9000
14	86	220	1	17.42	IE2	BK17-../SHE09SA4	8.6	28.5	57	86	103	134	158	220	220	220	42	3250	9000
14	86	220	1	17.42	IE5	BK17-../S5E09XA4	8.6	28.5	57	86	103	205	220	220	220	220	50	3250	9000
14	77	240	1.4	19.39	IE5	BK17-../S5E09XA4	7.7	25.5	51	77	92	225	240	240	240	240	50	4050	9000
14	77	240	1.4	19.39	IE2	BK17-../SHE09SA4	7.7	25.5	51	77	92	148	174	240	240	240	42	4050	9000
14	61	305	1.1	24.29	IE2	BK17-../SHE09SA4	6.1	20.5	41	61	74	185	215	305	305	305	42	4500	9000
14	61	305	1.1	24.29	IE5	BK17-../S5E09XA4	6.1	20.5	41	61	74	280	305	305	305	305	50	4500	9000
14	52	360	0.91	28.66	IE2	BK17-../SHE09SA4	5.2	17	34.5	52	62	215	255	360	360	360	42	4850	9000
14	52	360	0.91	28.66	IE5	BK17-../S5E09XA4	5.2	17	34.5	52	62	335	360	360	360	360	50	4850	9000
14	245	77	2.8	6.02	IE2	BK20-../SHE09SA4	24.5	83	166	245	295	47	55	77	77	77	42	580	6800
14	245	77	2.8	6.02	IE5	BK20-../S5E09XA4	24.5	83	166	245	295	71	77	77	77	77	50	580	6800
14	189	101	2.3	7.91	IE2	BK20-../SHE09SA4	18.5	63	126	189	225	61	72	101	101	101	42	1330	7600
14	189	101	2.3	7.91	IE5	BK20-../S5E09XA4	18.5	63	126	189	225	94	101	101	101	101	50	1330	7600
14	151	127	1.8	9.91	IE5	BK20-../S5E09XA4	15	50	100	151	181	118	127	127	127	127	50	1910	8300
14	151	127	1.8	9.91	IE2	BK20-../SHE09SA4	15	50	100	151	181	77	91	127	127	127	42	1910	8300
14	134	140	2.1	11.14	IE5	BK20-../S5E09XA4	13	44.5	89	134	161	130	140	140	140	140	50	3300	8100
14	134	140	2.1	11.14	IE2	BK20-../SHE09SA4	13	44.5	89	134	161	85	100	140	140	140	42	3300	8100
14	128	150	1.5	11.69	IE5	BK20-../S5E09XA4	12.5	42.5	85	128	153	139	150	150	150	150	50	2400	8800
14	128	150	1.5	11.69	IE2	BK20-../SHE09SA4	12.5	42.5	85	128	153	91	107	150	150	150	42	2400	8800
14	101	185	1.8	14.75	IE2	BK20-../SHE09SA4	10	33.5	67	101	122	112	132	185	185	185	42	3650	9000
14	101	185	1.8	14.75	IE5	BK20-../S5E09XA4	10	33.5	67	101	122	172	185	185	185	185	50	3650	9000
14	86	220	1	17.42	IE5	BK20-../S5E09XA4	8.6	28.5	57	86	103	205	220	220	220	220	50	3250	9000
14	86	220	1	17.42	IE2	BK20-../SHE09SA4	8.6	28.5	57	86	103	134	158	220	220	220	42	3250	9000
14	77	240	1.4	19.39	IE2	BK20-../SHE09SA4	7.7	25.5	51	77	92	148	174	240	240	240	42	4050	9000
14	77	240	1.4	19.39	IE5	BK20-../S5E09XA4	7.7	25.5	51	77	92	225	240	240	240	240	50	4050	9000
14	61	305	1.1	24.29	IE5	BK20-../S5E09XA4	6.1	20.5	41	61	74	280	305	305	305	305	50	4500	9000
14	61	305	1.1	24.29	IE2	BK20-../SHE09SA4	6.1	20.5	41	61	74	185	215	305	305	305	42	4500	9000
14	52	360	0.91	28.66	IE2	BK20-../SHE09SA4	5.2	17	34.5	52	62	215	255	360	360	360	42	4850	9000
14	52	360	0.91	28.66	IE5	BK20-../S5E09XA4	5.2	17	34.5	52	62	335	360	360	360	360	50	4850	9000
14	245	77	2.7	6.02	IE5	BK30-../S5E09XA4	24.5	83	166	245	295	71	77	77	77	77	56	1690	9600
14	245	77	2.7	6.02	IE2	BK30-../SHE09SA4	24.5	83	166	245	295	47	55	77	77	77	48	1690	9600
14	200	95	2.8	7.45	IE5	BK30-../S5E09XA4	20	67	134	200	240	89	95	95	95	95	56	2200	10400
14	200	95	2.8	7.45	IE2	BK30-../SHE09SA4	20	67	134	200	240	58	68	95	95	95	48	2200	10400
14	155	124	2.6	9.63	IE5	BK30-../S5E09XA4	15.5	51	103	155	186	115	124	124	124	124	56	3150	11500
14	155	124	2.6	9.63	IE2	BK30-../SHE09SA4	15.5	51	103	155	186	75	88	124	124	124	48	3150	11500
14	131	143	2.9	11.39	IE2	BK30-../SHE09SA4	13	43.5	87	131	158	87	102	143	143	143	48	4150	11000
14	131	143	2.9	11.39	IE5	BK30-../S5E09XA4	13	43.5	87	131	158	133	143	143	143	143	56	4150	11000
14	125	153	2.1	11.93	IE5	BK30-../S5E09XA4	12.5	41.5	83	125	150	142	153	153	153	153	56	3650	12000
14	125	153	2.1	11.93	IE2	BK30-../SHE09SA4	12.5	41.5	83	125	150	93	109	153	153	153	48	3650	12000
14	107	178	1.8	13.98	IE5	BK30-../S5E09XA4	10.5	35.5	71	107	128	165	178	178	178	178	56	4050	12000
14	107	178	1.8	13.98	IE2	BK30-../SHE09SA4	10.5	35.5	71	107	128	108	127	178	178	178	48	4050	12000
14	103	182	2.5	14.5	IE5	BK30-../S5E09XA4	10	34	68	103	124	169	182	182	182	182	56	4900	12000
14	103	182	2.5	14.5	IE2	BK30-../SHE09SA4	10	34	68	103	124	110	130	182	182	182	48	4900	12000
14	83	225	2	17.95	IE2	BK30-../SHE09SA4	8.3	27.5	55	83	100	137	161	225	225	225	48	5300	12000
14	83	225	2	17.95	IE5	BK30-../S5E09XA4	8.3	27.5	55	83	100	210	225	225	225	225	56	5300	12000
14	71	265	1.2	20.85	IE2	BK30-../SHE09SA4	7.1	23.5	47.5	71	86	161	189	265	265	265	48	5000	12000
14	71	265	1.2	20.85	IE5	BK30-../S5E09XA4	7.1	23.5	47.5	71	86	245	265	265	265	265	56	5000	12000
14	64	290	1.5	23.2	IE5	BK30-../S5E09XA4	6.4	21.5	43	64	77	270	290	290	290	290	56	5900	12000
14	64	290	1.5	23.2	IE2	BK30-../SHE09SA4	6.4	21.5	43	64	77	177	205	290	290	290	48	5900	12000
14	52	360	1.2	28.76	IE2	BK30-../SHE09SA4	5.2	17	34.5	52	62	220	255	360	360	360	48	6500	12000
14	52	360	1.2	28.76	IE5	BK30-../S5E09XA4	5.2	17	34.5	52	62	335	360	360	360	360	56	6500	12000
14	44.5	420	1.1	33.7	IE5	BK30-../S5E09XA4	4.4	14.5	29.5	44.5	53	390	420	420	420	420	56	7000	12000
14	44.5	420	1.1	33.7	IE2	BK30-../SHE09SA4	4.4	14.5	29.5	44.5	53	255	300	420	420	420	48	7000	12000
14	34.5	530	0.84	42.89	IE5	BK30-../S5E09XA4	3.4	11.5	23	34.5	41.5	495	530	530	530	530	56	7800	12000
14	34.5	530	0.84	42.89	IE2	BK30-../SHE09SA4	3.4	11.5	23	34.5	41.5	320	380	530	530	530	48	7800	12000
14	66	280	2.8	22.44	IE5	BK40-../S5E09XA4	6.6	22	44.5	66	80	260	280	280	280	280	76	5500	16500
14	66	280	2.8	22.44	IE2	BK40-../SHE09SA4	6.6	22	44.5	66	80	171	200	280	280	280	68	5500	16500
14	52	360	2.2	28.59	IE5	BK40-../S5E09XA4	5.2	17	34.5	52	62	330	360	360	360	360	76	6300	17000
14	52	360	2.2	28.59	IE2	BK40-../SHE09SA4	5.2	17	34.5	52	62	215	255	360	360	360	68	6300	17000
14	43	435	1.8	34.61	IE5	BK40-../S5E09XA4	4.3	14	28.5	43	52	400	435	435	435	435	76	6900	17000
14	43	435	1.8	34.61	IE2	BK40-../SHE09SA4	4.3	14	28.5	43	52	260	310	435	435	435	68	6900	17000
14	36.5	510	1.5	40.88	IE5	BK40-../S5E09XA4	3.6	12	24	36.5	44	475	510	510	510	510	76	7600	17000
14	36.5	510	1.5	40.88	IE2	BK40-../SHE09SA4	3.6	12	24	36.5	44	310	365	510	510	510	68	7600	17000
14	29	630	1.2	51.18	IE5	BK40-../S5E09XA4	2.9	9.7	19.5	29	35	580	630	630	630	630	76	8400	17000
14	29	630	1.2	51.18	IE2	BK40-../SHE09SA4	2.9	9.7	19.5	29	35	380	450	630	630	630	68	8400	17000
14	25	730	1.1	59.66	IE2	BK40-../SHE09SA4	2.5	8.3	16.5	25	30	445	520	730	730	730	68	9100	17000
14	25	730	1.1	59.66	IE5	BK40-../S5E09XA4	2.5	8.3	16.5	25	30	680	730	730	730	730	76	9100	17000
14	21																		



# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

**$M_N = 14 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**



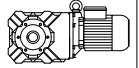
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
14	25	820	2.8	58.95	IE2	BK60-../SHE09SA4	2.5	8.4	16.5	25	30.5	500	580	820	820	820	105	9900	31500
14	25	820	2.8	58.95	IE5	BK60-../S5E09XA4	2.5	8.4	16.5	25	30.5	760	820	820	820	820	113	9900	31500
14	22.5	920	2.5	65.95	IE2	BK60-../SHE09SA4	2.2	7.5	15	22.5	27	560	650	920	920	920	105	10900	33000
14	22.5	920	2.5	65.95	IE5	BK60-../S5E09XA4	2.2	7.5	15	22.5	27	850	920	920	920	920	113	10900	33000
14	19	1090	2.1	78.13	IE5	BK60-../S5E09XA4	1.9	6.3	12.5	19	23	1010	1090	1090	1090	1090	113	11900	34000
14	19	1090	2.1	78.13	IE2	BK60-../SHE09SA4	1.9	6.3	12.5	19	23	660	780	1090	1090	1090	105	11900	34000
14	17	1220	1.9	87.41	IE2	BK60-../SHE09SA4	1.7	5.7	11	17	20.5	740	870	1220	1220	1220	105	12900	34000
14	17	1220	1.9	87.41	IE5	BK60-../S5E09XA4	1.7	5.7	11	17	20.5	1130	1220	1220	1220	1220	113	12900	34000
14	14.5	1410	1.6	101.2	IE5	BK60-../S5E09XA4	1.4	4.9	9.8	14.5	17.5	1310	1410	1410	1410	1410	113	13900	34000
14	14.5	1410	1.6	101.2	IE2	BK60-../SHE09SA4	1.4	4.9	9.8	14.5	17.5	860	1010	1410	1410	1410	105	13900	34000
14	13	1580	1.5	113.2	IE2	BK60-../SHE09SA4	1.3	4.4	8.8	13	15.5	960	1130	1580	1580	1580	105	15000	34000
14	13	1580	1.5	113.2	IE5	BK60-../S5E09XA4	1.3	4.4	8.8	13	15.5	1470	1580	1580	1580	1580	113	15000	34000
14	12	1710	1.3	122.5	IE2	BK60-../SHE09SA4	1.2	4	8.1	12	14.5	1040	1220	1710	1710	1710	105	15500	34000
14	12	1710	1.3	122.5	IE5	BK60-../S5E09XA4	1.2	4	8.1	12	14.5	1590	1710	1710	1710	1710	113	15500	34000
14	10.5	1910	1.2	137	IE5	BK60-../S5E09XA4	1	3.6	7.2	10.5	13	1780	1910	1910	1910	1910	113	16600	34000
14	10.5	1910	1.2	137	IE2	BK60-../SHE09SA4	1	3.6	7.2	10.5	13	1160	1370	1910	1910	1910	105	16600	34000
14	9.7	2150	1.1	153.7	IE2	BK60Z-../SHE09SA4	0.95	3.2	6.5	9.7	11.5	1300	1530	2150	2150	2150	124	16600	34000
14	9.7	2150	1.1	153.7	IE5	BK60Z-../S5E09XA4	0.95	3.2	6.5	9.7	11.5	1990	2150	2150	2150	2150	132	16600	34000
14	8.1	2550	0.9	183.2	IE5	BK60Z-../S5E09XA4	0.8	2.7	5.4	8.1	9.8	2350	2550	2550	2550	2550	132	16600	34000
14	8.1	2550	0.9	183.2	IE2	BK60Z-../SHE09SA4	0.8	2.7	5.4	8.1	9.8	1550	1830	2550	2550	2550	124	16600	34000
14	7.3	2850	0.8	205	IE2	BK60Z-../SHE09SA4	0.7	2.4	4.8	7.3	8.7	1740	2050	2850	2850	2850	124	16600	34000
14	7.3	2850	0.8	205	IE5	BK60Z-../S5E09XA4	0.7	2.4	4.8	7.3	8.7	2650	2850	2850	2850	2850	132	16600	34000
14	10.5	1910	2.7	136.7	IE5	BK70-../S5E09XA4	1	3.6	7.3	10.5	13	1770	1910	1910	1910	1910	199	20700	50000
14	10.5	1910	2.7	136.7	IE2	BK70-../SHE09SA4	1	3.6	7.3	10.5	13	1160	1360	1910	1910	1910	191	20700	50000
14	9.7	2150	2.4	154.4	IE5	BK70-../S5E09XA4	0.95	3.2	6.4	9.7	11.5	2000	2150	2150	2150	2150	199	21900	50000
14	9.7	2150	2.4	154.4	IE2	BK70-../SHE09SA4	0.95	3.2	6.4	9.7	11.5	1310	1540	2150	2150	2150	191	21900	50000
14	8.5	2450	2.1	175.7	IE2	BK70-../SHE09SA4	0.85	2.8	5.6	8.5	10	1490	1750	2450	2450	2450	191	24100	50000
14	8.5	2450	2.1	175.7	IE5	BK70-../S5E09XA4	0.85	2.8	5.6	8.5	10	2250	2450	2450	2450	2450	199	24100	50000
14	7.8	2650	2	190.4	IE2	BK70Z-../SHE09SA4	0.75	2.6	5.2	7.8	9.4	1610	1900	2650	2650	2650	212	24100	50000
14	7.8	2650	2	190.4	IE5	BK70Z-../S5E09XA4	0.75	2.6	5.2	7.8	9.4	2450	2650	2650	2650	2650	220	24100	50000
14	6.6	3150	1.6	226.2	IE5	BK70Z-../S5E09XA4	0.65	2.2	4.4	6.6	7.9	2900	3150	3150	3150	3150	220	24100	50000
14	6.6	3150	1.6	226.2	IE2	BK70Z-../SHE09SA4	0.65	2.2	4.4	6.6	7.9	1920	2250	3150	3150	3150	212	24100	50000
14	5.8	3600	1.4	257.3	IE2	BK70Z-../SHE09SA4	0.55	1.9	3.8	5.8	6.9	2150	2550	3600	3600	3600	212	24100	50000
14	5.8	3600	1.4	257.3	IE5	BK70Z-../S5E09XA4	0.55	1.9	3.8	5.8	6.9	3300	3600	3600	3600	3600	220	24100	50000
14	5.1	4100	1.3	293.3	IE5	BK70Z-../S5E09XA4	0.5	1.7	3.4	5.1	6.1	3800	4100	4100	4100	4100	220	24100	50000
14	5.1	4100	1.3	293.3	IE2	BK70Z-../SHE09SA4	0.5	1.7	3.4	5.1	6.1	2450	2900	4100	4100	4100	212	24100	50000
14	4.4	4650	1.1	333.6	IE5	BK70Z-../S5E09XA4	0.44	1.4	2.9	4.4	5.3	4300	4650	4650	4650	4650	220	24100	50000
14	4.4	4650	1.1	333.6	IE2	BK70Z-../SHE09SA4	0.44	1.4	2.9	4.4	5.3	2800	3300	4650	4650	4650	212	24100	50000
14	3.9	5300	0.98	379.9	IE5	BK70Z-../S5E09XA4	0.39	1.3	2.6	3.9	4.7	4900	5300	5300	5300	5300	220	24100	50000
14	3.9	5300	0.98	379.9	IE2	BK70Z-../SHE09SA4	0.39	1.3	2.6	3.9	4.7	3200	3750	5300	5300	5300	212	24100	50000
14	3.4	6000	0.86	432.1	IE5	BK70Z-../S5E09XA4	0.34	1.1	2.3	3.4	4.1	5600	6000	6000	6000	6000	220	24100	50000
14	3.4	6000	0.86	432.1	IE2	BK70Z-../SHE09SA4	0.34	1.1	2.3	3.4	4.1	3650	4300	6000	6000	6000	212	24100	50000
14	4.9	4200	2.7	300.6	IE2	BK80Z-../SHE09SA4	0.49	1.6	3.3	4.9	5.9	2550	3000	4200	4200	4200	341	30000	75000
14	4.9	4200	2.7	300.6	IE5	BK80Z-../S5E09XA4	0.49	1.6	3.3	4.9	5.9	3900	4200	4200	4200	4200	349	30000	75000
14	4.4	4700	2.4	336.7	IE5	BK80Z-../S5E09XA4	0.44	1.4	2.9	4.4	5.3	4350	4700	4700	4700	4700	349	30000	75000
14	4.4	4700	2.4	336.7	IE2	BK80Z-../SHE09SA4	0.44	1.4	2.9	4.4	5.3	2850	3350	4700	4700	4700	341	30000	75000
14	3.8	5400	2.1	389	IE2	BK80Z-../SHE09SA4	0.38	1.2	2.5	3.8	4.6	3300	3850	5400	5400	5400	341	30000	75000
14	3.8	5400	2.1	389	IE5	BK80Z-../S5E09XA4	0.38	1.2	2.5	3.8	4.6	5000	5400	5400	5400	5400	349	30000	75000
14	3.4	6000	1.9	435.7	IE2	BK80Z-../SHE09SA4	0.34	1.1	2.2	3.4	4.1	3700	4350	6000	6000	6000	341	30000	75000
14	3.4	6000	1.9	435.7	IE5	BK80Z-../S5E09XA4	0.34	1.1	2.2	3.4	4.1	5600	6000	6000	6000	6000	349	30000	75000
14	3	6900	1.6	499.5	IE2	BK80Z-../SHE09SA4	0.3	1	2	3	3.6	4200	4950	6900	6900	6900	341	30000	75000
14	3	6900	1.6	499.5	IE5	BK80Z-../S5E09XA4	0.3	1	2	3	3.6	6400	6900	6900	6900	6900	349	30000	75000
14	2.6	7800	1.5	559.5	IE5	BK80Z-../S5E09XA4	0.26	0.85	1.7	2.6	3.2	7200	7800	7800	7800	7800	349	30000	75000
14	2.6	7800	1.5	559.5	IE2	BK80Z-../SHE09SA4	0.26	0.85	1.7	2.6	3.2	4750	5500	7800	7800	7800	341	30000	75000
14	2.4	8500	1.4	607.8	IE5	BK80G40-../S5E09XA4	0.24	0.8	1.6	2.4	2.9	7900	8500	8500	8500	8500	360	30000	75000
14	2.4	8500	1.4	607.8	IE2	BK80G40-../SHE09SA4	0.24	0.8	1.6	2.4	2.9	5100	6000	8500	8500	8500	352	30000	75000
14	2.2	9500	1.2	680.9	IE2	BK80G40-../SHE09SA4	0.22	0.7	1.4	2.2	2.6	5700	6800	9500	9500	9500	352	30000	75000
14	2.2	9500	1.2	680.9	IE5	BK80G40-../S5E09XA4	0.22	0.7	1.4	2.2	2.6	8800	9500	9500	9500	9500	360	30000	75000
14	1.9	10500	1.1	756.3	IE5	BK80G40-../S5E09XA4	0.19	0.65	1.3	1.9	2.3	9800	10500	10500	10500	10500	360	30000	75000
14	1.9	10500	1.1	756.3	IE2	BK80G40-../SHE09SA4	0.19	0.65	1.3	1.9	2.3	6400	7500	10500	10500	10500	352	30000	75000
14	1.7	11800	0.97	847.2	IE2	BK80G40-../SHE09SA4	0.17	0.55	1.1	1.7	2.1	7200	8400	11800	11800	11800	352	30000	75000
14	1.7	11800	0.97	847.2	IE5	BK80G40-../S5E09XA4	0.17	0.55	1.1	1.7	2.1	11000	11800	11800	11800	11800	360	30000	75000
14	1.5	13400	0.85	963	IE2	BK80G40-../SHE09SA4	0.15	0.5	1	1.5	1.8	8100	9600	13400	13400	13400	352	30000	75000
14	1.5	13400	0.85	963	IE5	BK80G													



# BK-series bevel geared motors

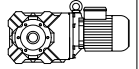
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

### $M_N = 19 \text{ Nm}$ ( $P_N = 3 \text{ kW}$ )

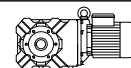


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
19	1.8	15500	1.2	821	IE4	BK90G50-../S4E11SA6	0.18	0.6	1.2	1.8	2.1	15500	15500	15500	15500	15500	648	49400	120000
19	1.7	16700	1.1	882.3	IE4	BK90G50-../S4E11SA6	0.17	0.55	1.1	1.7	2	16700	16700	16700	16700	16700	648	49400	120000
19	1.4	19100	0.97	1008	IE4	BK90G50-../S4E11SA6	0.14	0.49	0.95	1.4	1.7	19100	19100	19100	19100	19100	648	49400	120000
19	1.3	21000	0.86	1127	IE4	BK90G50-../S4E11SA6	0.13	0.44	0.85	1.3	1.5	21000	21000	21000	21000	21000	648	49400	120000

### $M_N = 20 \text{ Nm}$ ( $P_N = 3.1 \text{ kW}$ )

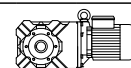


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
20	335	81	1.2	4.44	IE3	BK10-../SPE09XA4	33.5	112	225	335	405	53	65	81	81	81	40	1900	-
20	245	110	0.95	6.02	IE3	BK10-../SPE09XA4	24.5	83	166	245	295	71	88	110	110	110	40	2100	-
20	195	141	0.81	7.68	IE3	BK10-../SPE09XA4	19.5	65	130	195	230	91	113	141	141	141	40	2400	-
20	140	192	0.94	10.7	IE3	BK10-../SPE09XA4	14	46.5	93	140	168	125	154	192	192	192	40	3500	-
20	330	83	2.3	4.54	IE3	BK17-../SPE09XA4	33	110	220	330	395	54	66	83	83	83	50	520	6100
20	245	110	1.9	6.02	IE3	BK17-../SPE09XA4	24.5	83	166	245	295	71	88	110	110	110	50	580	6800
20	189	145	1.6	7.91	IE3	BK17-../SPE09XA4	18.5	63	126	189	225	94	116	145	145	145	50	1330	7600
20	151	182	1.3	9.91	IE3	BK17-../SPE09XA4	15	50	100	151	181	118	145	182	182	182	50	1910	8300
20	134	200	1.5	11.14	IE3	BK17-../SPE09XA4	13	44.5	89	134	161	130	160	200	200	200	50	3300	8100
20	128	215	1.1	11.69	IE3	BK17-../SPE09XA4	12.5	42.5	85	128	153	139	172	215	215	215	50	2400	8800
20	101	265	1.2	14.75	IE3	BK17-../SPE09XA4	10	33.5	67	101	122	172	210	265	265	265	50	3650	9000
20	77	345	0.95	19.39	IE3	BK17-../SPE09XA4	7.7	25.5	51	77	92	225	275	345	345	345	50	4050	9000
20	330	83	2.3	4.54	IE3	BK20-../SPE09XA4	33	110	220	330	395	54	66	83	83	83	50	520	6100
20	245	110	1.9	6.02	IE3	BK20-../SPE09XA4	24.5	83	166	245	295	71	88	110	110	110	50	580	6800
20	189	145	1.6	7.91	IE3	BK20-../SPE09XA4	18.5	63	126	189	225	94	116	145	145	145	50	1330	7600
20	151	182	1.3	9.91	IE3	BK20-../SPE09XA4	15	50	100	151	181	118	145	182	182	182	50	1910	8300
20	134	200	1.5	11.14	IE3	BK20-../SPE09XA4	13	44.5	89	134	161	130	160	200	200	200	50	3300	8100
20	128	215	1.1	11.69	IE3	BK20-../SPE09XA4	12.5	42.5	85	128	153	139	172	215	215	215	50	2400	8800
20	101	265	1.2	14.75	IE3	BK20-../SPE09XA4	10	33.5	67	101	122	172	210	265	265	265	50	3650	9000
20	77	345	0.95	19.39	IE3	BK20-../SPE09XA4	7.7	25.5	51	77	92	225	275	345	345	345	50	4050	9000
20	315	87	2.2	4.73	IE3	BK30-../SPE09XA4	31.5	105	210	315	380	56	69	87	87	87	56	1550	8800
20	245	110	1.9	6.02	IE3	BK30-../SPE09XA4	24.5	83	166	245	295	71	88	110	110	110	56	1690	9600
20	200	137	1.9	7.45	IE3	BK30-../SPE09XA4	20	67	134	200	240	89	109	137	137	137	56	2200	10400
20	155	177	1.8	9.63	IE3	BK30-../SPE09XA4	15.5	51	103	155	186	115	141	177	177	177	56	3150	11500
20	131	205	2	11.39	IE3	BK30-../SPE09XA4	13	43.5	87	131	158	133	164	205	205	205	56	4150	11000
20	125	215	1.5	11.93	IE3	BK30-../SPE09XA4	12.5	41.5	83	125	150	142	175	215	215	215	56	3650	12000
20	107	250	1.3	13.98	IE3	BK30-../SPE09XA4	10.5	35.5	71	107	128	165	200	250	250	250	56	4050	12000
20	103	260	1.7	14.5	IE3	BK30-../SPE09XA4	10	34	68	103	124	169	205	260	260	260	56	4900	12000
20	83	320	1.4	17.95	IE3	BK30-../SPE09XA4	8.3	27.5	55	83	100	210	255	320	320	320	56	5300	12000
20	71	375	0.84	20.85	IE3	BK30-../SPE09XA4	7.1	23.5	47.5	71	86	245	300	375	375	375	56	5000	12000
20	64	415	1.1	23.2	IE3	BK30-../SPE09XA4	6.4	21.5	43	64	77	270	330	415	415	415	56	5900	12000
20	52	510	0.87	28.76	IE3	BK30-../SPE09XA4	5.2	17	34.5	52	62	335	410	510	510	510	56	6500	12000
20	161	171	2.9	9.31	IE3	BK40-../SPE09XA4	16	53	107	161	193	111	137	171	171	171	76	1040	11200
20	126	215	2.2	11.86	IE3	BK40-../SPE09XA4	12.5	42	84	126	151	141	174	215	215	215	76	1770	12200
20	103	260	3	14.5	IE3	BK40-../SPE09XA4	10	34	68	103	124	169	205	260	260	260	76	4500	14300
20	83	320	2.4	18.05	IE3	BK40-../SPE09XA4	8.3	27.5	55	83	99	210	255	320	320	320	76	4900	15300
20	66	400	1.9	22.44	IE3	BK40-../SPE09XA4	6.6	22	44.5	66	80	260	320	400	400	400	76	5500	16500
20	52	510	1.5	28.59	IE3	BK40-../SPE09XA4	5.2	17	34.5	52	62	330	410	510	510	510	76	6300	17000
20	43	620	1.3	34.61	IE3	BK40-../SPE09XA4	4.3	14	28.5	43	52	400	495	620	620	620	76	6900	17000
20	36.5	730	1.1	40.88	IE3	BK40-../SPE09XA4	3.6	12	24	36.5	44	475	580	730	730	730	76	7600	17000
20	29	900	0.87	51.18	IE3	BK40-../SPE09XA4	2.9	9.7	19.5	29	35	580	720	900	900	900	76	8400	17000
20	83	325	2.2	17.92	IE3	BK50-../SPE09XA4	8.3	27.5	55	83	100	210	260	325	325	325	104	4600	16800
20	77	345	3	19.33	IE3	BK50-../SPE09XA4	7.7	25.5	51	77	93	225	275	345	345	345	104	6900	19200
20	56	475	2.2	26.51	IE3	BK50-../SPE09XA4	5.6	18.5	37.5	56	67	310	380	475	475	475	104	7800	21200
20	42.5	630	1.7	35.21	IE3	BK50-../SPE09XA4	4.2	14	28	42.5	51	410	500	630	630	630	104	8700	23100
20	31.5	840	1.2	47.5	IE3	BK50-../SPE09XA4	3.1	10.5	21	31.5	37.5	540	670	840	840	840	104	10100	25700
20	24.5	1060	0.98	60.76	IE3	BK50-../SPE09XA4	2.4	8.2	16	24.5	29.5	690	850	1060	1060	1060	104	11400	26000
20	19.5	1310	0.8	75.4	IE3	BK50-../SPE09XA4	1.9	6.6	13	19.5	23.5	850	1040	1310	1310	1310	104	12600	26000
20	39.5	750	3	37.8	IE3	BK60-../SPE09XA4	3.9	13	26	39.5	47.5	490	600	750	750	750	113	7300	26500
20	33	900	2.6	45.05	IE3	BK60-../SPE09XA4	3.3	11	22	33	39.5	580	720	900	900	900	113	8200	28300
20	29.5	1000	2.3	50.4	IE3	BK60-../SPE09XA4	2.9	9.9	19.5	29.5	35.5	650	800	1000	1000	1000	113	9100	29800
20	25	1170	2	58.95	IE3	BK60-../SPE09XA4	2.5	8.4	16.5	25	30.5	760	940	1170	1170	1170	113	9900	31500
20	22.5	1310	1.7	65.95	IE3	BK60-../SPE09XA4	2.2	7.5	15	22.5	27	850	1050	1310	1310	1310	113	10900	33000
20	19	1560	1.5	78.13	IE3	BK60-../SPE09XA4	1.9	6.3	12.5	19	23	1010	1250	1560	1560	1560	113	11900	34000
20	17	1740	1.3	87.41	IE3	BK60-../SPE09XA4	1.7	5.7	11	17	20.5	1130	1390	1740	1740	1740	113	12900	34000
20	14.5	2000	1.1	101.2	IE3	BK60-../SPE09XA4	1.4	4.9	9.8	14.5	17.5	1310	1610	2000	2000	2000	113	13900	34000
20	13	2250	1	113.2	IE3	BK60-../SPE09XA4	1.3	4.4	8.8	13	15.5	1470	1810	2250	2250	2250	113	15000	34000
20	12	2450	0.94	122.5	IE3	BK60-../SPE09XA4	1.2	4	8.1	12	14.5	1590	1960	2450	2450	2450	113	15500	34000
20	10.5	2700	0.84	137	IE3	BK60-../SPE09XA4	1	3.6	7.2	10.5	13	1780	2150	2700	2700	2700	113	16600	34000
20	16	1810	2.9																

**BK-series bevel geared motors****Selection - bevel geared motors -  $n_1 = 1500 \frac{1}{min}$**  **$M_N = 20 \text{ Nm}$  ( $P_N = 3.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							20	8.5	3500	1.5	175.7	IE3	BK70-../SPE09XA4	0.85	2.8	5.6			
20	7.8	3800	1.4	190.4	IE3	BK70Z-../SPE09XA4	0.75	2.6	5.2	7.8	9.4	2450	3000	3800	3800	3800	220	24100	50000
20	6.6	4500	1.1	226.2	IE3	BK70Z-../SPE09XA4	0.65	2.2	4.4	6.6	7.9	2900	3600	4500	4500	4500	220	24100	50000
20	5.8	5100	1	257.3	IE3	BK70Z-../SPE09XA4	0.55	1.9	3.8	5.8	6.9	3300	4100	5100	5100	5100	220	24100	50000
20	5.1	5800	0.89	293.3	IE3	BK70Z-../SPE09XA4	0.5	1.7	3.4	5.1	6.1	3800	4650	5800	5800	5800	220	24100	50000
20	7.5	3950	2.9	198.9	IE3	BK80Z-../SPE09XA4	0.75	2.5	5	7.5	9	2550	3150	3950	3950	3950	349	30000	75000
20	6.6	4500	2.5	226.1	IE3	BK80Z-../SPE09XA4	0.65	2.2	4.4	6.6	7.9	2900	3600	4500	4500	4500	349	30000	75000
20	5.9	5000	2.3	253.3	IE3	BK80Z-../SPE09XA4	0.55	1.9	3.9	5.9	7.1	3250	4050	5000	5000	5000	349	30000	75000
20	4.9	6000	1.9	300.6	IE3	BK80Z-../SPE09XA4	0.49	1.6	3.3	4.9	5.9	3900	4800	6000	6000	6000	349	30000	75000
20	4.4	6700	1.7	336.7	IE3	BK80Z-../SPE09XA4	0.44	1.4	2.9	4.4	5.3	4350	5300	6700	6700	6700	349	30000	75000
20	3.8	7700	1.5	389	IE3	BK80Z-../SPE09XA4	0.38	1.2	2.5	3.8	4.6	5000	6200	7700	7700	7700	349	30000	75000
20	3.4	8700	1.3	435.7	IE3	BK80Z-../SPE09XA4	0.34	1.1	2.2	3.4	4.1	5600	6900	8700	8700	8700	349	30000	75000
20	3	9900	1.2	499.5	IE3	BK80Z-../SPE09XA4	0.3	1	2	3	3.6	6400	7900	9900	9900	9900	349	30000	75000
20	2.6	11100	1	559.5	IE3	BK80Z-../SPE09XA4	0.26	0.85	1.7	2.6	3.2	7200	8900	11100	11100	11100	349	30000	75000
20	2.4	12100	0.95	607.8	IE3	BK80G40-../SPE09XA4	0.24	0.8	1.6	2.4	2.9	7900	9700	12100	12100	12100	360	30000	75000
20	2.2	13600	0.84	680.9	IE3	BK80G40-../SPE09XA4	0.22	0.7	1.4	2.2	2.6	8800	10800	13600	13600	13600	360	30000	75000
20	4.5	6600	2.8	330.7	IE3	BK90Z-../SPE09XA4	0.45	1.5	3	4.5	5.4	4250	5200	6600	6600	6600	622	49400	120000
20	3.8	7700	2.4	389.1	IE3	BK90Z-../SPE09XA4	0.38	1.2	2.5	3.8	4.6	5000	6200	7700	7700	7700	622	49400	120000
20	3.4	8700	2.1	435.3	IE3	BK90Z-../SPE09XA4	0.34	1.1	2.2	3.4	4.1	5600	6900	8700	8700	8700	622	49400	120000
20	3	9900	1.9	499.2	IE3	BK90Z-../SPE09XA4	0.3	1	2	3	3.6	6400	7900	9900	9900	9900	622	49400	120000
20	2.6	11100	1.7	558.5	IE3	BK90Z-../SPE09XA4	0.26	0.85	1.7	2.6	3.2	7200	8900	11100	11100	11100	622	49400	120000
20	2.3	12700	1.5	637.7	IE3	BK90Z-../SPE09XA4	0.23	0.75	1.5	2.3	2.8	8200	10200	12700	12700	12700	622	49400	120000
20	2.1	14200	1.3	713.5	IE3	BK90Z-../SPE09XA4	0.21	0.7	1.4	2.1	2.5	9200	11400	14200	14200	14200	622	49400	120000
20	1.8	16400	1.1	821	IE3	BK90G50-../SPE09XA4	0.18	0.6	1.2	1.8	2.1	10600	13100	16400	16400	16400	633	49400	120000
20	1.7	17600	1	882.3	IE3	BK90G50-../SPE09XA4	0.17	0.55	1.1	1.7	2	11400	14100	17600	17600	17600	633	49400	120000
20	1.4	20000	0.92	1008	IE3	BK90G50-../SPE09XA4	0.14	0.49	0.95	1.4	1.7	13100	16100	20000	20000	20000	633	49400	120000
20	1.3	22500	0.82	1127	IE3	BK90G50-../SPE09XA4	0.13	0.44	0.85	1.3	1.5	14600	18000	22500	22500	22500	633	49400	120000

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 **$M_N = 25.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

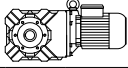
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							25.5	315	110	1.7	4.73	IE3	BK30-../SPE11SA6	31.5	105	210			
25.5	245	141	1.5	6.02	IE3	BK30-../SPE11SA6	24.5	83	166	245	295	105	121	141	141	141	65	1690	9600
25.5	200	174	1.5	7.45	IE3	BK30-../SPE11SA6	20	67	134	200	240	130	150	174	174	174	65	2200	10400
25.5	155	225	1.4	9.63	IE3	BK30-../SPE11SA6	15.5	51	103	155	186	168	194	225	225	225	65	3150	11500
25.5	131	260	1.6	11.39	IE3	BK30-../SPE11SA6	13	43.5	87	131	158	194	225	260	260	260	65	4150	11000
25.5	125	275	1.1	11.93	IE3	BK30-../SPE11SA6	12.5	41.5	83	125	150	205	240	275	275	275	65	3650	12000
25.5	107	320	0.99	13.98	IE3	BK30-../SPE11SA6	10.5	35.5	71	107	128	240	275	320	320	320	65	4050	12000
25.5	103	330	1.4	14.5	IE3	BK30-../SPE11SA6	10	34	68	103	124	245	285	330	330	330	65	4900	12000
25.5	83	410	1.1	17.95	IE3	BK30-../SPE11SA6	8.3	27.5	55	83	100	305	355	410	410	410	65	5300	12000
25.5	64	530	0.85	23.2	IE3	BK30-../SPE11SA6	6.4	21.5	43	64	77	395	455	530	530	530	65	5900	12000
25.5	200	175	2.8	7.49	IE3	BK40-../SPE11SA6	20	66	133	200	240	130	151	175	175	175	90	750	10500
25.5	161	215	2.2	9.31	IE3	BK40-../SPE11SA6	16	53	107	161	193	162	188	215	215	215	90	1040	11200
25.5	134	255	2.8	11.17	IE3	BK40-../SPE11SA6	13	44.5	89	134	161	191	220	255	255	255	90	4100	13100
25.5	126	275	1.8	11.86	IE3	BK40-../SPE11SA6	12.5	42	84	126	151	205	240	275	275	275	90	1770	12200
25.5	103	330	2.3	14.5	IE3	BK40-../SPE11SA6	10	34	68	103	124	245	285	330	330	330	90	4500	14300
25.5	83	410	1.9	18.05	IE3	BK40-../SPE11SA6	8.3	27.5	55	83	99	305	355	410	410	410	90	4900	15300
25.5	66	510	1.5	22.44	IE3	BK40-../SPE11SA6	6.6	22	44.5	66	80	380	440	510	510	510	90	5500	16500
25.5	52	650	1.2	28.59	IE3	BK40-../SPE11SA6	5.2	17	34.5	52	62	485	560	650	650	650	90	6300	17000
25.5	43	790	0.98	34.61	IE3	BK40-../SPE11SA6	4.3	14	28.5	43	52	590	680	790	790	790	90	6900	17000
25.5	36.5	930	0.83	40.88	IE3	BK40-../SPE11SA6	3.6	12	24	36.5	44	690	800	930	930	930	90	7600	17000
25.5	83	415	1.7	17.92	IE3	BK50-../SPE11SA6	8.3	27.5	55	83	100	305	355	415	415	415	120	4600	16800
25.5	77	440	2.4	19.33	IE3	BK50-../SPE11SA6	7.7	25.5	51	77	93	330	380	440	440	440	120	6900	19200
25.5	56	600	1.7	26.51	IE3	BK50-../SPE11SA6	5.6	18.5	37.5	56	67	450	520	600	600	600	120	7800	21200
25.5	42.5	800	1.3	35.21	IE3	BK50-../SPE11SA6	4.2	14	28	42.5	51	600	690	800	800	800	120	8700	23100
25.5	31.5	1070	0.97	47.5	IE3	BK50-../SPE11SA6	3.1	10.5	21	31.5	37.5	800	930	1070	1070	1070	120	10100	25700
25.5	44	860	2.7	33.78	IE3	BK60-../SPE11SA6	4.4	14.5	29.5	44	53	640	740	860	860	860	130	6500	25200
25.5	39.5	960	2.4	37.8	IE3	BK60-../SPE11SA6	3.9	13	26	39.5	47.5	710	830	960	960	960	130	7300	26500
25.5	33	1140	2	45.05	IE3	BK60-../SPE11SA6	3.3	11	22	33	39.5	850	990						



# BK-series bevel geared motors

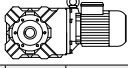
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

**M<sub>N</sub> = 25.5 Nm (P<sub>N</sub> = 4 kW)**



M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
25.5	8.5	4450	1.2	175.7	IE3	BK70-../SPE11SA6	0.85	2.8	5.6	8.5	10	3300	3850	4450	4450	4450	209	24100	50000
25.5	7.8	4850	1.1	190.4	IE3	BK70Z-../SPE11SA6	0.75	2.6	5.2	7.8	9.4	3600	4150	4850	4850	4850	236	24100	50000
25.5	6.6	5700	0.9	226.2	IE3	BK70Z-../SPE11SA6	0.65	2.2	4.4	6.6	7.9	4250	4950	5700	5700	5700	236	24100	50000
25.5	9.7	3900	2.7	153.1	IE3	BK80-../SPE11SA6	0.95	3.2	6.5	9.7	11.5	2900	3350	3900	3900	3900	324	27200	75000
25.5	8.7	4350	2.4	171.5	IE3	BK80-../SPE11SA6	0.85	2.9	5.8	8.7	10	3250	3750	4350	4350	4350	324	30000	75000
25.5	8.4	4500	2.5	177.6	IE3	BK80Z-../SPE11SA6	0.8	2.8	5.6	8.4	10	3350	3900	4500	4500	4500	366	30000	75000
25.5	7.5	5000	2.3	198.9	IE3	BK80Z-../SPE11SA6	0.75	2.5	5	7.5	9	3750	4350	5000	5000	5000	366	30000	75000
25.5	6.6	5700	2	226.1	IE3	BK80Z-../SPE11SA6	0.65	2.2	4.4	6.6	7.9	4250	4950	5700	5700	5700	366	30000	75000
25.5	5.9	6400	1.8	253.3	IE3	BK80Z-../SPE11SA6	0.55	1.9	3.9	5.9	7.1	4800	5500	6400	6400	6400	366	30000	75000
25.5	4.9	7600	1.5	300.6	IE3	BK80Z-../SPE11SA6	0.49	1.6	3.3	4.9	5.9	5700	6600	7600	7600	7600	366	30000	75000
25.5	4.4	8500	1.3	336.7	IE3	BK80Z-../SPE11SA6	0.44	1.4	2.9	4.4	5.3	6300	7400	8500	8500	8500	366	30000	75000
25.5	3.8	9900	1.2	389	IE3	BK80Z-../SPE11SA6	0.38	1.2	2.5	3.8	4.6	7300	8500	9900	9900	9900	366	30000	75000
25.5	3.4	11100	1	435.7	IE3	BK80Z-../SPE11SA6	0.34	1.1	2.2	3.4	4.1	8200	9500	11100	11100	11100	366	30000	75000
25.5	3	12700	0.9	499.5	IE3	BK80Z-../SPE11SA6	0.3	1	2	3	3.6	9400	10900	12700	12700	12700	366	30000	75000
25.5	2.6	14200	0.81	559.5	IE3	BK80Z-../SPE11SA6	0.26	0.85	1.7	2.6	3.2	10600	12300	14200	14200	14200	366	30000	75000
25.5	5.7	6600	2.8	262.5	IE3	BK90Z-../SPE11SA6	0.55	1.9	3.8	5.7	6.8	4950	5700	6600	6600	6600	632	49400	120000
25.5	5	7500	2.5	295.6	IE3	BK90Z-../SPE11SA6	0.5	1.6	3.3	5	6	5600	6500	7500	7500	7500	632	49400	120000
25.5	4.5	8400	2.2	330.7	IE3	BK90Z-../SPE11SA6	0.45	1.5	3	4.5	5.4	6200	7200	8400	8400	8400	632	49400	120000
25.5	3.8	9900	1.9	389.1	IE3	BK90Z-../SPE11SA6	0.38	1.2	2.5	3.8	4.6	7300	8500	9900	9900	9900	632	49400	120000
25.5	3.4	11100	1.7	435.3	IE3	BK90Z-../SPE11SA6	0.34	1.1	2.2	3.4	4.1	8200	9500	11100	11100	11100	632	49400	120000
25.5	3	12700	1.5	499.2	IE3	BK90Z-../SPE11SA6	0.3	1	2	3	3.6	9400	10900	12700	12700	12700	632	49400	120000
25.5	2.6	14200	1.3	558.5	IE3	BK90Z-../SPE11SA6	0.26	0.85	1.7	2.6	3.2	10600	12200	14200	14200	14200	632	49400	120000
25.5	2.3	16200	1.1	637.7	IE3	BK90Z-../SPE11SA6	0.23	0.75	1.5	2.3	2.8	12100	14000	16200	16200	16200	632	49400	120000
25.5	2.1	18100	1	713.5	IE3	BK90Z-../SPE11SA6	0.21	0.7	1.4	2.1	2.5	13500	15600	18100	18100	18100	632	49400	120000
25.5	1.8	20500	0.88	821	IE3	BK90G50-../SPE11SA6	0.18	0.6	1.2	1.8	2.1	15500	18000	20500	20500	20500	648	49400	120000
25.5	1.7	22000	0.82	882.3	IE3	BK90G50-../SPE11SA6	0.17	0.55	1.1	1.7	2	16700	19400	22000	22000	22000	648	49400	120000

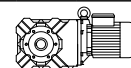
**M<sub>N</sub> = 26.5 Nm (P<sub>N</sub> = 4 kW)**



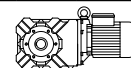
M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
26.5	315	115	1.7	4.73	IE5	BK30-../S5E11MA6	31.5	105	210	315	380	115	115	115	115	115	65	1550	8800
26.5	245	146	1.4	6.02	IE5	BK30-../S5E11MA6	24.5	83	166	245	295	146	146	146	146	146	65	1690	9600
26.5	200	181	1.5	7.45	IE5	BK30-../S5E11MA6	20	67	134	200	240	181	181	181	181	181	65	2200	10400
26.5	155	230	1.4	9.63	IE5	BK30-../S5E11MA6	15.5	51	103	155	186	230	230	230	230	230	65	3150	11500
26.5	131	270	1.5	11.39	IE5	BK30-../S5E11MA6	13	43.5	87	131	158	270	270	270	270	270	65	4150	11000
26.5	125	290	1.1	11.93	IE5	BK30-../S5E11MA6	12.5	41.5	83	125	150	290	290	290	290	290	65	3650	12000
26.5	107	335	0.95	13.98	IE5	BK30-../S5E11MA6	10.5	35.5	71	107	128	335	335	335	335	335	65	4050	12000
26.5	103	345	1.3	14.5	IE5	BK30-../S5E11MA6	10	34	68	103	124	345	345	345	345	345	65	4900	12000
26.5	83	425	1.1	17.95	IE5	BK30-../S5E11MA6	8.3	27.5	55	83	100	425	425	425	425	425	65	5300	12000
26.5	64	550	0.81	23.2	IE5	BK30-../S5E11MA6	6.4	21.5	43	64	77	550	550	550	550	550	65	5900	12000
26.5	200	182	2.7	7.49	IE5	BK40-../S5E11MA6	20	66	133	200	240	182	182	182	182	182	90	750	10500
26.5	161	225	2.2	9.31	IE5	BK40-../S5E11MA6	16	53	107	161	193	225	225	225	225	225	90	1040	11200
26.5	134	265	2.7	11.17	IE5	BK40-../S5E11MA6	13	44.5	89	134	161	265	265	265	265	265	90	4100	13100
26.5	126	285	1.7	11.86	IE5	BK40-../S5E11MA6	12.5	42	84	126	151	285	285	285	285	285	90	1770	12200
26.5	103	345	2.3	14.5	IE5	BK40-../S5E11MA6	10	34	68	103	124	345	345	345	345	345	90	4500	14300
26.5	83	430	1.8	18.05	IE5	BK40-../S5E11MA6	8.3	27.5	55	83	99	430	430	430	430	430	90	4900	15300
26.5	66	530	1.5	22.44	IE5	BK40-../S5E11MA6	6.6	22	44.5	66	80	530	530	530	530	530	90	5500	16500
26.5	52	680	1.1	28.59	IE5	BK40-../S5E11MA6	5.2	17	34.5	52	62	680	680	680	680	680	90	6300	17000
26.5	43	820	0.94	34.61	IE5	BK40-../S5E11MA6	4.3	14	28.5	43	52	820	820	820	820	820	90	6900	17000
26.5	36.5	970	0.8	40.88	IE5	BK40-../S5E11MA6	3.6	12	24	36.5	44	970	970	970	970	970	90	7600	17000
26.5	83	430	1.7	17.92	IE5	BK50-../S5E11MA6	8.3	27.5	55	83	100	430	430	430	430	430	120	4600	16800
26.5	77	460	2.3	19.33	IE5	BK50-../S5E11MA6	7.7	25.5	51	77	93	460	460	460	460	460	120	6900	19200
26.5	56	630	1.7	26.51	IE5	BK50-../S5E11MA6	5.6	18.5	37.5	56	67	630	630	630	630	630	120	7800	21200
26.5	42.5	830	1.3	35.21	IE5	BK50-../S5E11MA6	4.2	14	28	42.5	51	830	830	830	830	830	120	8700	23100
26.5	31.5	1120	0.94	47.5	IE5	BK50-../S5E11MA6	3.1	10.5	21	31.5	37.5	1120	1120	1120	1120	1120	120	10100	25700
26.5	44	890	2.6	33.78	IE5	BK60-../S5E11MA6	4.4	14.5	29.5	44	53	890	890	890	890	890	130	6500	25200
26.5	39.5	1000	2.3	37.8	IE5	BK60-../S5E11MA6	3.9	13	26	39.5	47.5	1000	1000	1000	1000	1000	130	7300	26500
26.5	33	1190	1.9	45.05	IE5	BK60-../S5E11MA6	3.3	11	22	33	39.5	1190	1190	1190	1190	1190	130	8200	28300
26.5	29.5	1330	1.7	50.4	IE5	BK60-../S5E11MA6	2.9	9.9	19.5	29.5	35.5	1330	1330	1330	1330	1330	130	9100	29800
26.5	25	1560	1.5	58.95	IE5	BK60-../S5E11MA6	2.5	8.4	16.5	25	30.5	1560	1560	1560	1560	1560	130	9900	31500
26.5	22.5	1740	1.3	65.95	IE5	BK60-../S5E11MA6	2.2	7.5	15	22.5	27	1740	1740	1740	1740	1740	130	10900	33000
26.5	19	2050	1.1	78.13	IE5	BK60-../S5E11MA6	1.9	6.3	12.5	19	23	2050	2050	2050	2050	2050	130	11900	34000
26.5	17	2300	0.99	87.41	IE5	BK60-../S5E11MA6	1.7	5.7	11	17	20.5	2300	2300	2300	2300	2300	130	12900	34000
26.5	14.5	2650	0.86	101.2	IE5	BK60-../S5E11MA6	1.4	4.9	9.8	14.5	17.5	2650	2650	2650	2650	2650	130	13900	34000
26.5	21	1860	2.8	70.23	IE5	BK70-../S5E11MA6	2.1	7.1	14	21	25.5	1860	1860	1860	1860	1860	209	12500	44800
26.5	18.5	2100																	

# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

 **$M_N = 26.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
26.5	6.6	5900	0.87	226.2	IE5	BK70Z-../S5E11MA6	0.65	2.2	4.4	6.6	7.9	5900	5900	5900	5900	5900	236	24100	50000
26.5	11	3450	3	131.6	IE5	BK80-../S5E11MA6	1.1	3.7	7.5	11	13.5	3450	3450	3450	3450	3450	324	24900	75000
26.5	9.7	4050	2.6	153.1	IE5	BK80-../S5E11MA6	0.95	3.2	6.5	9.7	11.5	4050	4050	4050	4050	4050	324	27200	75000
26.5	8.7	4500	2.3	171.5	IE5	BK80-../S5E11MA6	0.85	2.9	5.8	8.7	10	4500	4500	4500	4500	4500	324	30000	75000
26.5	8.4	4700	2.4	177.6	IE5	BK80Z-../S5E11MA6	0.8	2.8	5.6	8.4	10	4700	4700	4700	4700	4700	366	30000	75000
26.5	7.5	5200	2.2	198.9	IE5	BK80Z-../S5E11MA6	0.75	2.5	5	7.5	9	5200	5200	5200	5200	5200	366	30000	75000
26.5	6.6	5900	1.9	226.1	IE5	BK80Z-../S5E11MA6	0.65	2.2	4.4	6.6	7.9	5900	5900	5900	5900	5900	366	30000	75000
26.5	5.9	6700	1.7	253.3	IE5	BK80Z-../S5E11MA6	0.55	1.9	3.9	5.9	7.1	6700	6700	6700	6700	6700	366	30000	75000
26.5	4.9	7900	1.4	300.6	IE5	BK80Z-../S5E11MA6	0.49	1.6	3.3	4.9	5.9	7900	7900	7900	7900	7900	366	30000	75000
26.5	4.4	8900	1.3	336.7	IE5	BK80Z-../S5E11MA6	0.44	1.4	2.9	4.4	5.3	8900	8900	8900	8900	8900	366	30000	75000
26.5	3.8	10300	1.1	389	IE5	BK80Z-../S5E11MA6	0.38	1.2	2.5	3.8	4.6	10300	10300	10300	10300	10300	366	30000	75000
26.5	3.4	11500	1	435.7	IE5	BK80Z-../S5E11MA6	0.34	1.1	2.2	3.4	4.1	11500	11500	11500	11500	11500	366	30000	75000
26.5	3	13200	0.87	499.5	IE5	BK80Z-../S5E11MA6	0.3	1	2	3	3.6	13200	13200	13200	13200	13200	366	30000	75000
26.5	6.3	6200	3	234.6	IE5	BK90Z-../S5E11MA6	0.6	2.1	4.2	6.3	7.6	6200	6200	6200	6200	6200	632	49400	120000
26.5	5.7	6900	2.7	262.5	IE5	BK90Z-../S5E11MA6	0.55	1.9	3.8	5.7	6.8	6900	6900	6900	6900	6900	632	49400	120000
26.5	5	7800	2.4	295.6	IE5	BK90Z-../S5E11MA6	0.5	1.6	3.3	5	6	7800	7800	7800	7800	7800	632	49400	120000
26.5	4.5	8700	2.1	330.7	IE5	BK90Z-../S5E11MA6	0.45	1.5	3	4.5	5.4	8700	8700	8700	8700	8700	632	49400	120000
26.5	3.8	10300	1.8	389.1	IE5	BK90Z-../S5E11MA6	0.38	1.2	2.5	3.8	4.6	10300	10300	10300	10300	10300	632	49400	120000
26.5	3.4	11500	1.6	435.3	IE5	BK90Z-../S5E11MA6	0.34	1.1	2.2	3.4	4.1	11500	11500	11500	11500	11500	632	49400	120000
26.5	3	13200	1.4	499.2	IE5	BK90Z-../S5E11MA6	0.3	1	2	3	3.6	13200	13200	13200	13200	13200	632	49400	120000
26.5	2.6	14800	1.2	558.5	IE5	BK90Z-../S5E11MA6	0.26	0.85	1.7	2.6	3.2	14800	14800	14800	14800	14800	632	49400	120000
26.5	2.3	16800	1.1	637.7	IE5	BK90Z-../S5E11MA6	0.23	0.75	1.5	2.3	2.8	16800	16800	16800	16800	16800	632	49400	120000
26.5	2.1	18900	0.98	713.5	IE5	BK90Z-../S5E11MA6	0.21	0.7	1.4	2.1	2.5	18900	18900	18900	18900	18900	632	49400	120000
26.5	1.8	21500	0.85	821	IE5	BK90G50-../S5E11MA6	0.18	0.6	1.2	1.8	2.1	21500	21500	21500	21500	21500	648	49400	120000

 **$M_N = 35 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**


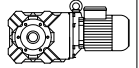
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	315	152	1.3	4.73	IE5	BK30-../S5E11LA6	31.5	105	210	315	380	152	152	152	152	152	76	1550	8800
35	315	152	1.3	4.73	IE4	BK30-../S4E11MA6	31.5	105	210	315	380	115	130	152	152	152	65	1550	8800
35	245	193	1.1	6.02	IE4	BK30-../S4E11MA6	24.5	83	166	245	295	146	166	193	193	193	65	1690	9600
35	245	193	1.1	6.02	IE5	BK30-../S5E11LA6	24.5	83	166	245	295	193	193	193	193	193	76	1690	9600
35	200	235	1.1	7.45	IE4	BK30-../S4E11MA6	20	67	134	200	240	181	205	235	235	235	65	2200	10400
35	200	235	1.1	7.45	IE5	BK30-../S5E11LA6	20	67	134	200	240	235	235	235	235	235	76	2200	10400
35	155	310	1	9.63	IE5	BK30-../S5E11LA6	15.5	51	103	155	186	310	310	310	310	310	76	3150	11500
35	155	310	1	9.63	IE4	BK30-../S4E11MA6	15.5	51	103	155	186	230	265	310	310	310	65	3150	11500
35	131	355	1.2	11.39	IE4	BK30-../S4E11MA6	13	43.5	87	131	158	270	305	355	355	355	65	4150	11000
35	131	355	1.2	11.39	IE5	BK30-../S5E11LA6	13	43.5	87	131	158	355	355	355	355	355	76	4150	11000
35	125	380	0.83	11.93	IE5	BK30-../S5E11LA6	12.5	41.5	83	125	150	380	380	380	380	380	76	3650	12000
35	125	380	0.83	11.93	IE4	BK30-../S4E11MA6	12.5	41.5	83	125	150	290	325	380	380	380	65	3650	12000
35	103	455	0.99	14.5	IE4	BK30-../S4E11MA6	10	34	68	103	124	345	390	455	455	455	65	4900	12000
35	103	455	0.99	14.5	IE5	BK30-../S5E11LA6	10	34	68	103	124	455	455	455	455	455	76	4900	12000
35	83	560	0.8	17.95	IE5	BK30-../S5E11LA6	8.3	27.5	55	83	100	560	560	560	560	560	76	5300	12000
35	83	560	0.8	17.95	IE4	BK30-../S4E11MA6	8.3	27.5	55	83	100	425	480	560	560	560	65	5300	12000
35	320	149	2.9	4.63	IE4	BK40-../S4E11MA6	32	107	215	320	385	112	127	149	149	149	90	430	8900
35	320	149	2.9	4.63	IE5	BK40-../S5E11LA6	32	107	215	320	385	149	149	149	149	149	102	430	8900
35	245	193	2.4	6.02	IE5	BK40-../S5E11LA6	24.5	83	166	245	295	193	193	193	193	193	102	470	9800
35	245	193	2.4	6.02	IE4	BK40-../S4E11MA6	24.5	83	166	245	295	146	166	193	193	193	90	470	9800
35	200	240	2	7.49	IE4	BK40-../S4E11MA6	20	66	133	200	240	182	205	240	240	240	90	750	10500
35	200	240	2	7.49	IE5	BK40-../S5E11LA6	20	66	133	200	240	240	240	240	240	240	102	750	10500
35	161	295	1.6	9.31	IE5	BK40-../S5E11LA6	16	53	107	161	193	295	295	295	295	295	102	1040	11200
35	161	295	1.6	9.31	IE4	BK40-../S4E11MA6	16	53	107	161	193	225	255	295	295	295	90	1040	11200
35	134	350	2	11.17	IE5	BK40-../S5E11LA6	13	44.5	89	134	161	350	350	350	350	350	102	4100	13100
35	134	350	2	11.17	IE4	BK40-../S4E11MA6	13	44.5	89	134	161	265	300	350	350	350	90	4100	13100
35	126	380	1.3	11.86	IE5	BK40-../S5E11LA6	12.5	42	84	126	151	380	380	380	380	380	102	1770	12200
35	126	380	1.3	11.86	IE4	BK40-../S4E11MA6	12.5	42	84	126	151	285	325	380	380	380	90	1770	12200
35	103	455	1.7	14.5	IE5	BK40-../S5E11LA6	10	34	68	103	124	455	455	455	455	455	102	4500	14300
35	103	455	1.7	14.5	IE4	BK40-../S4E11MA6	10	34	68	103	124	345	390	455	455	455	90	4500	14300
35	83	560	1.4	18.05	IE4	BK40-../S4E11MA6	8.3	27.5	55	83	99	430	485	560	560	560	90	4900	15300
35	83	560	1.4	18.05	IE5	BK40-../S5E11LA6	8.3	27.5	55	83	99	560	560	560	560	560	102	4900	15300
35	66	700	1.1	22.44	IE4	BK40-../S4E11MA6	6.6	22	44.5	66	80	530	600	700	700	700	90	5500	16500
35	66	700	1.1	22.44	IE5	BK40-../S5E11LA6	6.6	22	44.5	66	80	700	700	700	700	700	102	5500	16500
35	52	900	0.87	28.59	IE4	BK40-../S4E11MA6	5.2	17	34.5	52	62	680	770	900	900	900	90	6300	17000
35	52	900	0.87	28.59	IE5	BK40-../S5E11LA6	5.2	17	34.5	52	62	900	900	900	900	900	102	6300	17000
35	154	305	3	9.73	IE4	BK50-../S4E11MA6	15	51	102	154	184	230	260	305	305	305	120	5400	15400
35	154	305	3	9.73	IE5	BK50-../S5E11LA6	15												



# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{min}$

**$M_N = 35 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**

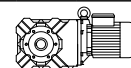


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	56	830	1.3	26.51	IE5	BK50-../S5E11LA6	5.6	18.5	37.5	56	67	830	830	830	830	830	132	7800	21200
35	42.5	1100	0.95	35.21	IE4	BK50-../S4E11MA6	4.2	14	28	42.5	51	830	950	1100	1100	1100	120	8700	23100
35	42.5	1100	0.95	35.21	IE5	BK50-../S5E11LA6	4.2	14	28	42.5	51	1100	1100	1100	1100	1100	132	8700	23100
35	61	850	2.7	24.45	IE4	BK60-../S4E11MA6	6.1	20	40.5	61	73	640	730	850	850	850	130	4850	22000
35	61	850	2.7	24.45	IE5	BK60-../S5E11LA6	6.1	20	40.5	61	73	850	850	850	850	850	142	4850	22000
35	54	950	2.4	27.36	IE5	BK60-../S5E11LA6	5.4	18	36.5	54	65	950	950	950	950	950	142	5600	23200
35	54	950	2.4	27.36	IE4	BK60-../S4E11MA6	5.4	18	36.5	54	65	720	820	950	950	950	130	5600	23200
35	44	1180	1.9	33.78	IE4	BK60-../S4E11MA6	4.4	14.5	29.5	44	53	890	1010	1180	1180	1180	130	6500	25200
35	44	1180	1.9	33.78	IE5	BK60-../S5E11LA6	4.4	14.5	29.5	44	53	1180	1180	1180	1180	1180	142	6500	25200
35	39.5	1320	1.7	37.8	IE5	BK60-../S5E11LA6	3.9	13	26	39.5	47.5	1320	1320	1320	1320	1320	142	7300	26500
35	39.5	1320	1.7	37.8	IE4	BK60-../S4E11MA6	3.9	13	26	39.5	47.5	1000	1130	1320	1320	1320	130	7300	26500
35	33	1570	1.5	45.05	IE4	BK60-../S4E11MA6	3.3	11	22	33	39.5	1190	1350	1570	1570	1570	130	8200	28300
35	33	1570	1.5	45.05	IE5	BK60-../S5E11LA6	3.3	11	22	33	39.5	1570	1570	1570	1570	1570	142	8200	28300
35	29.5	1760	1.3	50.4	IE5	BK60-../S5E11LA6	2.9	9.9	19.5	29.5	35.5	1760	1760	1760	1760	1760	142	9100	29800
35	29.5	1760	1.3	50.4	IE4	BK60-../S4E11MA6	2.9	9.9	19.5	29.5	35.5	1330	1510	1760	1760	1760	130	9100	29800
35	25	2050	1.1	58.95	IE4	BK60-../S4E11MA6	2.5	8.4	16.5	25	30.5	1560	1760	2050	2050	2050	130	9900	31500
35	25	2050	1.1	58.95	IE5	BK60-../S5E11LA6	2.5	8.4	16.5	25	30.5	2050	2050	2050	2050	2050	142	9900	31500
35	22.5	2300	1	65.95	IE4	BK60-../S4E11MA6	2.2	7.5	15	22.5	27	1740	1970	2300	2300	2300	130	10900	33000
35	22.5	2300	1	65.95	IE5	BK60-../S5E11LA6	2.2	7.5	15	22.5	27	2300	2300	2300	2300	2300	142	10900	33000
35	19	2700	0.84	78.13	IE4	BK60-../S4E11MA6	1.9	6.3	12.5	19	23	2050	2300	2700	2700	2700	130	11900	34000
35	19	2700	0.84	78.13	IE5	BK60-../S5E11LA6	1.9	6.3	12.5	19	23	2700	2700	2700	2700	2700	142	11900	34000
35	27.5	1890	2.7	54.15	IE4	BK70-../S4E11MA6	2.7	9.2	18	27.5	33	1430	1620	1890	1890	1890	209	9900	40200
35	27.5	1890	2.7	54.15	IE5	BK70-../S5E11LA6	2.7	9.2	18	27.5	33	1890	1890	1890	1890	1890	221	9900	40200
35	24	2150	2.4	61.6	IE4	BK70-../S4E11MA6	2.4	8.1	16	24	29	1630	1840	2150	2150	2150	209	11500	42800
35	24	2150	2.4	61.6	IE5	BK70-../S5E11LA6	2.4	8.1	16	24	29	2150	2150	2150	2150	2150	221	11500	42800
35	21	2450	2.1	70.23	IE5	BK70-../S5E11LA6	2.1	7.1	14	21	25.5	2450	2450	2450	2450	2450	221	12500	44800
35	21	2450	2.1	70.23	IE4	BK70-../S4E11MA6	2.1	7.1	14	21	25.5	1860	2100	2450	2450	2450	209	12500	44800
35	18.5	2750	1.9	79.89	IE4	BK70-../S4E11MA6	1.8	6.2	12.5	18.5	22.5	2100	2350	2750	2750	2750	209	14300	47600
35	18.5	2750	1.9	79.89	IE5	BK70-../S5E11LA6	1.8	6.2	12.5	18.5	22.5	2750	2750	2750	2750	2750	221	14300	47600
35	16	3150	1.6	90.96	IE4	BK70-../S4E11MA6	1.6	5.4	10.5	16	19.5	2400	2700	3150	3150	3150	209	15300	49900
35	16	3150	1.6	90.96	IE5	BK70-../S5E11LA6	1.6	5.4	10.5	16	19.5	3150	3150	3150	3150	3150	221	15300	49900
35	14	3600	1.4	103.5	IE5	BK70-../S5E11LA6	1.4	4.8	9.6	14	17	3600	3600	3600	3600	3600	221	17200	50000
35	14	3600	1.4	103.5	IE4	BK70-../S4E11MA6	1.4	4.8	9.6	14	17	2700	3100	3600	3600	3600	209	17200	50000
35	12	4200	1.2	120.2	IE5	BK70-../S5E11LA6	1.2	4.1	8.3	12	14.5	4200	4200	4200	4200	4200	221	18600	50000
35	12	4200	1.2	120.2	IE4	BK70-../S4E11MA6	1.2	4.1	8.3	12	14.5	3150	3600	4200	4200	4200	209	18600	50000
35	10.5	4750	1.1	136.7	IE5	BK70-../S5E11LA6	1	3.6	7.3	10.5	13	4750	4750	4750	4750	4750	221	20700	50000
35	10.5	4750	1.1	136.7	IE4	BK70-../S4E11MA6	1	3.6	7.3	10.5	13	3600	4100	4750	4750	4750	209	20700	50000
35	9.7	5400	0.96	154.4	IE4	BK70-../S4E11MA6	0.95	3.2	6.4	9.7	11.5	4050	4600	5400	5400	5400	209	21900	50000
35	9.7	5400	0.96	154.4	IE5	BK70-../S5E11LA6	0.95	3.2	6.4	9.7	11.5	5400	5400	5400	5400	5400	221	21900	50000
35	8.5	6100	0.85	175.7	IE5	BK70-../S5E11LA6	0.85	2.8	5.6	8.5	10	6100	6100	6100	6100	6100	221	24100	50000
35	8.5	6100	0.85	175.7	IE4	BK70-../S4E11MA6	0.85	2.8	5.6	8.5	10	4650	5200	6100	6100	6100	209	24100	50000
35	14.5	3550	2.9	102.5	IE4	BK80-../S4E11MA6	1.4	4.8	9.7	14.5	17.5	2700	3050	3550	3550	3550	324	20500	75000
35	14.5	3550	2.9	102.5	IE5	BK80-../S5E11LA6	1.4	4.8	9.7	14.5	17.5	3550	3550	3550	3550	3550	336	20500	75000
35	12.5	4100	2.6	117.5	IE5	BK80-../S5E11LA6	1.2	4.2	8.5	12.5	15	4100	4100	4100	4100	4100	336	22300	75000
35	12.5	4100	2.6	117.5	IE4	BK80-../S4E11MA6	1.2	4.2	8.5	12.5	15	3100	3500	4100	4100	4100	324	22300	75000
35	11	4600	2.3	131.6	IE4	BK80-../S4E11MA6	1.1	3.7	7.5	11	13.5	3450	3900	4600	4600	4600	324	24900	75000
35	11	4600	2.3	131.6	IE5	BK80-../S5E11LA6	1.1	3.7	7.5	11	13.5	4600	4600	4600	4600	4600	336	24900	75000
35	9.7	5300	2	153.1	IE5	BK80-../S5E11LA6	0.95	3.2	6.5	9.7	11.5	5300	5300	5300	5300	5300	336	27200	75000
35	9.7	5300	2	153.1	IE4	BK80-../S4E11MA6	0.95	3.2	6.5	9.7	11.5	4050	4550	5300	5300	5300	324	27200	75000
35	8.7	6000	1.7	171.5	IE5	BK80-../S5E11LA6	0.85	2.9	5.8	8.7	10	6000	6000	6000	6000	6000	336	30000	75000
35	8.7	6000	1.7	171.5	IE4	BK80-../S4E11MA6	0.85	2.9	5.8	8.7	10	4500	5100	6000	6000	6000	324	30000	75000
35	8.4	6200	1.9	177.6	IE5	BK80Z-../S5E11LA6	0.8	2.8	5.6	8.4	10	6200	6200	6200	6200	6200	378	30000	75000
35	8.4	6200	1.9	177.6	IE4	BK80Z-../S4E11MA6	0.8	2.8	5.6	8.4	10	4700	5300	6200	6200	6200	366	30000	75000
35	7.5	6900	1.7	198.9	IE4	BK80Z-../S4E11MA6	0.75	2.5	5	7.5	9	5200	5900	6900	6900	6900	366	30000	75000
35	7.5	6900	1.7	198.9	IE5	BK80Z-../S5E11LA6	0.75	2.5	5	7.5	9	6900	6900	6900	6900	6900	378	30000	75000
35	6.6	7900	1.5	226.1	IE5	BK80Z-../S5E11LA6	0.65	2.2	4.4	6.6	7.9	7900	7900	7900	7900	7900	378	30000	75000
35	6.6	7900	1.5	226.1	IE4	BK80Z-../S4E11MA6	0.65	2.2	4.4	6.6	7.9	5900	6700	7900	7900	7900	366	30000	75000

# BK-series bevel geared motors

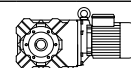
## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

### $M_N = 35 \text{ Nm}$ ( $P_N = 5.5 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	3.4	15200	1.2	435.3	IE5	BK90Z-../S5E11LA6	0.34	1.1	2.2	3.4	4.1	15200	15200	15200	15200	15200	643	49400	120000
35	3	17400	1.1	499.2	IE4	BK90Z-../S4E11MA6	0.3	1	2	3	3.6	13200	14900	17400	17400	17400	632	49400	120000
35	3	17400	1.1	499.2	IE5	BK90Z-../S5E11LA6	0.3	1	2	3	3.6	17400	17400	17400	17400	17400	643	49400	120000
35	2.6	19500	0.95	558.5	IE4	BK90Z-../S4E11MA6	0.26	0.85	1.7	2.6	3.2	14800	16700	19500	19500	19500	632	49400	120000
35	2.6	19500	0.95	558.5	IE5	BK90Z-../S5E11LA6	0.26	0.85	1.7	2.6	3.2	19500	19500	19500	19500	19500	643	49400	120000
35	2.3	22000	0.83	637.7	IE4	BK90Z-../S4E11MA6	0.23	0.75	1.5	2.3	2.8	16800	19100	22000	22000	22000	632	49400	120000
35	2.3	22000	0.83	637.7	IE5	BK90Z-../S5E11LA6	0.23	0.75	1.5	2.3	2.8	22000	22000	22000	22000	22000	643	49400	120000

### $M_N = 48 \text{ Nm}$ ( $P_N = 7.5 \text{ kW}$ )

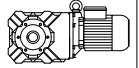


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
48	315	205	0.93	4.73	IE3	BK30-../SPE11LA6	31.5	105	210	315	380	152	174	205	205	205	76	1550	8800
48	200	325	0.81	7.45	IE3	BK30-../SPE11LA6	20	67	134	200	240	235	270	325	325	325	76	2200	10400
48	131	490	0.84	11.39	IE3	BK30-../SPE11LA6	13	43.5	87	131	158	355	410	490	490	490	76	4150	11000
48	320	200	2.1	4.63	IE3	BK40-../SPE11LA6	32	107	215	320	385	149	170	200	200	200	102	430	8900
48	245	265	1.8	6.02	IE3	BK40-../SPE11LA6	24.5	83	166	245	295	193	220	265	265	265	102	470	9800
48	200	330	1.5	7.49	IE3	BK40-../SPE11LA6	20	66	133	200	240	240	275	330	330	330	102	750	10500
48	161	410	1.2	9.31	IE3	BK40-../SPE11LA6	16	53	107	161	193	295	340	410	410	410	102	1040	11200
48	134	480	1.5	11.17	IE3	BK40-../SPE11LA6	13	44.5	89	134	161	350	400	480	480	480	102	4100	13100
48	126	520	0.94	11.86	IE3	BK40-../SPE11LA6	12.5	42	84	126	151	380	435	520	520	520	102	1770	12200
48	103	620	1.2	14.5	IE3	BK40-../SPE11LA6	10	34	68	103	124	455	520	620	620	620	102	4500	14300
48	83	770	1	18.05	IE3	BK40-../SPE11LA6	8.3	27.5	55	83	99	560	640	770	770	770	102	4900	15300
48	66	960	0.8	22.44	IE3	BK40-../SPE11LA6	6.6	22	44.5	66	80	700	800	960	960	960	102	5500	16500
48	205	320	2.5	7.29	IE3	BK50-../SPE11LA6	20.5	68	137	205	245	230	265	320	320	320	132	620	111000
48	154	420	2.2	9.73	IE3	BK50-../SPE11LA6	15	51	102	154	184	305	350	420	420	420	132	5400	15400
48	150	440	1.8	10	IE3	BK50-../SPE11LA6	15	50	100	150	180	320	365	440	440	440	132	1220	13200
48	107	600	1.7	13.95	IE3	BK50-../SPE11LA6	10.5	35.5	71	107	129	435	500	600	600	600	132	6100	17400
48	83	780	0.92	17.92	IE3	BK50-../SPE11LA6	8.3	27.5	55	83	100	570	650	780	780	780	132	4600	16800
48	77	830	1.3	19.33	IE3	BK50-../SPE11LA6	7.7	25.5	51	77	93	600	690	830	830	830	132	6900	19200
48	56	1140	0.92	26.51	IE3	BK50-../SPE11LA6	5.6	18.5	37.5	56	67	830	950	1140	1140	1140	132	7800	21200
48	108	660	3	13.85	IE3	BK60-../SPE11LA6	10.5	36	72	108	129	480	550	660	660	660	142	3850	18000
48	104	690	2.8	14.41	IE3	BK60-../SPE11LA6	10	34.5	69	104	124	500	570	690	690	690	142	3650	18600
48	93	770	2.6	16.05	IE3	BK60-../SPE11LA6	9.3	31	62	93	112	560	640	770	770	770	142	4050	18800
48	81	880	2.4	18.36	IE3	BK60-../SPE11LA6	8.1	27	54	81	98	640	730	880	880	880	142	4000	19900
48	73	980	2.3	20.54	IE3	BK60-../SPE11LA6	7.3	24	48.5	73	87	710	820	980	980	980	142	4400	20600
48	61	1170	2	24.45	IE3	BK60-../SPE11LA6	6.1	20	40.5	61	73	850	970	1170	1170	1170	142	4850	22000
48	54	1310	1.8	27.36	IE3	BK60-../SPE11LA6	5.4	18	36.5	54	65	950	1090	1310	1310	1310	142	5600	23200
48	44	1620	1.4	33.78	IE3	BK60-../SPE11LA6	4.4	14.5	29.5	44	53	1180	1350	1620	1620	1620	142	6500	25200
48	39.5	1810	1.3	37.8	IE3	BK60-../SPE11LA6	3.9	13	26	39.5	47.5	1320	1510	1810	1810	1810	142	7300	26500
48	33	2150	1.1	45.05	IE3	BK60-../SPE11LA6	3.3	11	22	33	39.5	1570	1800	2150	2150	2150	142	8200	28300
48	29.5	2400	0.95	50.4	IE3	BK60-../SPE11LA6	2.9	9.9	19.5	29.5	35.5	1760	2000	2400	2400	2400	142	9100	29800
48	25	2800	0.81	58.95	IE3	BK60-../SPE11LA6	2.5	8.4	16.5	25	30.5	2050	2350	2800	2800	2800	142	9900	31500
48	48.5	1480	3	30.9	IE3	BK70-../SPE11LA6	4.8	16	32	48.5	58	1080	1230	1480	1480	1480	221	7500	33600
48	42.5	1680	2.8	35.15	IE3	BK70-../SPE11LA6	4.2	14	28	42.5	51	1230	1400	1680	1680	1680	221	8000	35000
48	37	1920	2.5	40.08	IE3	BK70-../SPE11LA6	3.7	12	24.5	37	44.5	1400	1600	1920	1920	1920	221	8300	36300
48	32.5	2150	2.3	45.59	IE3	BK70-../SPE11LA6	3.2	10.5	21.5	32.5	39	1590	1820	2150	2150	2150	221	9000	37900
48	27.5	2550	2	54.15	IE3	BK70-../SPE11LA6	2.7	9.2	18	27.5	33	1890	2150	2550	2550	2550	221	9900	40200
48	24	2950	1.8	61.6	IE3	BK70-../SPE11LA6	2.4	8.1	16	24	29	2150	2450	2950	2950	2950	221	11500	42800
48	21	3350	1.5	70.23	IE3	BK70-../SPE11LA6	2.1	7.1	14	21	25.5	2450	2800	3350	3350	3350	221	12500	44800
48	18.5	3800	1.4	79.89	IE3	BK70-../SPE11LA6	1.8	6.2	12.5	18.5	22.5	2750	3150	3800	3800	3800	221	14300	47600
48	16	4350	1.2	90.96	IE3	BK70-../SPE11LA6	1.6	5.4	10.5	16	19.5	3150	3600	4350	4350	4350	221	15300	49900
48	14	4950	1	103.5	IE3	BK70-../SPE11LA6	1.4	4.8	9.6	14	17	3600	4100	4950	4950	4950	221	17200	50000
48	12	5700	0.9	120.2	IE3	BK70-../SPE11LA6	1.2	4.1	8.3	12	14.5	4200	4800	5700	5700	5700	221	18600	50000
48	21	3350	2.8	70.72	IE3	BK80-../SPE11LA6	2.1	7	14	21	25	2450	2800	3350	3350	3350	336	16600	68700
48	18.5	3800	2.6	79.22	IE3	BK80-../SPE11LA6	1.8	6.3	12.5	18.5	22.5	2750	3150	3800	3800	3800	336	17600	71300
48	16	4350	2.3	91.53	IE3	BK80-../SPE11LA6	1.6	5.4	10.5	16	19.5	3200	3650	4350	4350	4350	336	18300	74200
48	14.5	4900	2.1	102.5	IE3	BK80-../SPE11LA6	1.4	4.8	9.7	14.5	17.5	3550	4100	4900	4900	4900	336	20500	75000
48	12.5	5600	1.9	117.5	IE3	BK80-../SPE11LA6	1.2	4.2	8.5	12.5	15	4100	4700	5600	5600	5600	336	22300	75000
48	11	6300	1.7	131.6	IE3	BK80-../SPE11LA6	1.1	3.7	7.5	11	13.5	4600	5200	6300	6300	6300	336	24900	75000
48	9.7	7300	1.4	153.1	IE3	BK80-../SPE11LA6	0.95	3.2	6.5	9.7	11.5	5300	6100	7300	7300	7300	336	27200	75000
48	8.7	8200	1.3	171.5	IE3	BK80-../SPE11LA6	0.85	2.9	5.8	8.7	10	6000	6800	8200	8200	8200	336	30000	75000
48	8.4	8500	1.3	177.6	IE3	BK80Z-../SPE11LA6	0.8	2.8	5.6	8.4	10	6200	7100	8500	8500	8500	378	30000	75000
48	7.5	9500	1.2	198.9	IE3	BK80Z-../SPE11LA6	0.75	2.5	5	7.5	9	6900	7900	9500	9500	9500	378	30000	75000
48	6.6	10800	1.1	226.1	IE3	BK80Z-../SPE11LA6	0.65	2.2	4.4	6.6	7.9	7900	9000	10800	10800	10800	378	30000	75000
48	5.9	12100	0.95	253.3	IE3	BK80Z-../SPE11LA6	0.55	1.9	3.9	5.9	7.1	8800	10100	12100	12100	12100	378	30000	75000
48	4.9	14400	0.8	300.6	IE3	BK80Z-													

# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

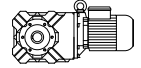
**$M_N = 48 \text{ Nm}$  ( $P_N = 7.5 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
48	3.8	18600	0.99	389.1	IE3	BK90Z-../SPE11LA6	0.38	1.2	2.5	3.8	4.6	13600	15500	18600	18600	18600	643	49400	120000
48	3.4	20500	0.89	435.3	IE3	BK90Z-../SPE11LA6	0.34	1.1	2.2	3.4	4.1	15200	17400	20500	20500	20500	643	49400	120000

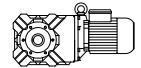
# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 0.65 \text{ Nm}$  ( $P_N = 0.2 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.65	62	27.5	2.9	47.78	IE5	BK06-../S5E04SA4-1	3.1	10	20.5	62	75	27.5	27.5	27.5	27.5	27.5	7.6	1500	-
0.65	55	31	2.2	54.38	IE5	BK06-../S5E04SA4-1	2.7	9.1	18	55	66	31	31	31	31	31	7.6	1600	-
0.65	47	36.5	1.7	63.33	IE5	BK06-../S5E04SA4-1	2.3	7.8	15.5	47	56	36.5	36.5	36.5	36.5	36.5	7.6	1700	-
0.65	24.5	66	2.1	120.3	IE5	BK10Z-../S5E04SA4-1	1.2	4.1	8.3	24.5	29.5	66	66	66	66	66	21	7000	-
0.65	20.5	78	2.1	143.2	IE5	BK10Z-../S5E04SA4-1	1	3.4	6.9	20.5	25	78	78	78	78	78	21	7000	-
0.65	17.5	92	2.2	170.6	IE5	BK10Z-../S5E04SA4-1	0.85	2.9	5.8	17.5	21	92	92	92	92	92	21	7000	-
0.65	14.5	109	1.8	204.7	IE5	BK10Z-../S5E04SA4-1	0.7	2.4	4.8	14.5	17.5	109	109	109	109	109	21	7000	-
0.65	11.5	137	1.5	257.9	IE5	BK10Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	137	137	137	137	137	21	7000	-
0.65	9.9	159	1.2	302.4	IE5	BK10Z-../S5E04SA4-1	0.49	1.6	3.3	9.9	11.5	159	159	159	159	159	21	7000	-
0.65	8	196	0.84	373.4	IE5	BK10Z-../S5E04SA4-1	0.4	1.3	2.6	8	9.6	196	196	196	196	196	21	7000	-
0.65	8.7	181	1.2	343.2	IE5	BK10G06-../S5E04SA4-1	0.43	1.4	2.9	8.7	10	181	181	181	181	181	25	7000	-
0.65	7.3	215	1	410.8	IE5	BK10G06-../S5E04SA4-1	0.36	1.2	2.4	7.3	8.7	215	215	215	215	215	25	7000	-
0.65	6.5	235	0.92	459.2	IE5	BK10G06-../S5E04SA4-1	0.32	1	2.1	6.5	7.8	235	235	235	235	235	25	7000	-
0.65	5.9	260	0.84	501.4	IE5	BK10G06-../S5E04SA4-1	0.29	0.95	1.9	5.9	7.1	260	260	260	260	260	25	7000	-
0.65	14	110	3	207.5	IE5	BK20Z-../S5E04SA4-1	0.7	2.4	4.8	14	17	110	110	110	110	110	31	8700	9000
0.65	11.5	138	2.4	259.9	IE5	BK20Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	138	138	138	138	138	31	8700	9000
0.65	10	157	2	298.2	IE5	BK20Z-../S5E04SA4-1	0.5	1.6	3.3	10	12	157	157	157	157	157	31	8700	9000
0.65	8.1	191	1.5	367.7	IE5	BK20Z-../S5E04SA4-1	0.4	1.3	2.7	8.1	9.7	191	191	191	191	191	31	8700	9000
0.65	8.3	189	1.9	359.1	IE5	BK20G06-../S5E04SA4-1	0.41	1.3	2.7	8.3	10	189	189	189	189	189	34	8700	9000
0.65	6.9	220	1.6	429.7	IE5	BK20G06-../S5E04SA4-1	0.34	1.1	2.3	6.9	8.3	220	220	220	220	220	34	8700	9000
0.65	6.2	250	1.4	480.4	IE5	BK20G06-../S5E04SA4-1	0.31	1	2	6.2	7.4	250	250	250	250	250	34	8700	9000
0.65	5.7	270	1.3	524.5	IE5	BK20G06-../S5E04SA4-1	0.28	0.95	1.9	5.7	6.8	270	270	270	270	270	34	8700	9000
0.65	4.7	320	1.1	630	IE5	BK20G06-../S5E04SA4-1	0.23	0.75	1.5	4.7	5.7	320	320	320	320	320	34	8700	9000
0.65	3.9	385	0.93	757	IE5	BK20G06-../S5E04SA4-1	0.19	0.65	1.3	3.9	4.7	385	385	385	385	385	34	8700	9000
0.65	3.3	450	0.8	891.2	IE5	BK20G06-../S5E04SA4-1	0.16	0.55	1.1	3.3	4	450	450	450	450	450	34	8700	9000
0.65	6.3	245	2	471.5	IE5	BK30G06-../S5E04SA4-1	0.31	1	2.1	6.3	7.6	245	245	245	245	245	40	11200	12000
0.65	5.2	290	1.7	567	IE5	BK30G06-../S5E04SA4-1	0.26	0.85	1.7	5.2	6.3	290	290	290	290	290	40	11200	12000
0.65	4.5	335	1.5	652.5	IE5	BK30G06-../S5E04SA4-1	0.22	0.75	1.5	4.5	5.5	335	335	335	335	335	40	11200	12000
0.65	4	375	1.3	743	IE5	BK30G06-../S5E04SA4-1	0.2	0.65	1.3	4	4.8	375	375	375	375	375	40	11200	12000
0.65	3.6	410	1.2	810.9	IE5	BK30G06-../S5E04SA4-1	0.18	0.6	1.2	3.6	4.4	410	410	410	410	410	40	11200	12000
0.65	3.1	480	1	954.1	IE5	BK30G06-../S5E04SA4-1	0.15	0.5	1	3.1	3.7	480	480	480	480	480	40	11200	12000
0.65	2.6	570	0.85	1142	IE5	BK30G06-../S5E04SA4-1	0.13	0.43	0.85	2.6	3.1	570	570	570	570	570	40	11200	12000

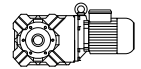
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 **$M_N = 0.8 \text{ Nm}$  ( $P_N = 0.25 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.8	78	27	2.9	38.18	IE5	BK06-../S5E04SA4-1	3.9	13	26	78	94	27	27	27	27	27	7.6	1380	-
0.8	62	34	2.4	47.78	IE5	BK06-../S5E04SA4-1	3.1	10	20.5	62	75	32	34	34	34	34	7.6	1500	-
0.8	55	38.5	1.8	54.38	IE5	BK06-../S5E04SA4-1	2.7	9.1	18	55	66	36.5	38.5	38.5	38.5	38.5	7.6	1600	-
0.8	47	45	1.4	63.33	IE5	BK06-../S5E04SA4-1	2.3	7.8	15.5	47	56	42.5	45	45	45	45	7.6	1700	-
0.8	24.5	81	1.7	120.3	IE5	BK10Z-../S5E04SA4-1	1.2	4.1	8.3	24.5	29.5	77	81	81	81	81	21	7000	-
0.8	20.5	96	1.7	143.2	IE5	BK10Z-../S5E04SA4-1	1	3.4	6.9	20.5	25	91	96	96	96	96	21	7000	-
0.8	17.5	113	1.8	170.6	IE5	BK10Z-../S5E04SA4-1	0.85	2.9	5.8	17.5	21	107	113	113	113	113	21	7000	-
0.8	14.5	134	1.5	204.7	IE5	BK10Z-../S5E04SA4-1	0.7	2.4	4.8	14.5	17.5	127	134	134	134	134	21	7000	-
0.8	11.5	169	1.2	257.9	IE5	BK10Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	160	169	169	169	169	21	7000	-
0.8	9.9	195	0.94	302.4	IE5	BK10Z-../S5E04SA4-1	0.49	1.6	3.3	9.9	11.5	186	195	195	195	195	21	7000	-
0.8	8.7	220	0.98	343.2	IE5	BK10G06-../S5E04SA4-1	0.43	1.4	2.9	8.7	10	210	220	220	220	220	25	7000	-
0.8	7.3	265	0.83	410.8	IE5	BK10G06-../S5E04SA4-1	0.36	1.2	2.4	7.3	8.7	250	265	265	265	265	25	7000	-
0.8	17	115	2.9	173.4	IE5	BK20Z-../S5E04SA4-1	0.85	2.8	5.7	17	20.5	109	115	115	115	115	31	8700	9000
0.8	14	136	2.4	207.5	IE5	BK20Z-../S5E04SA4-1	0.7	2.4	4.8	14	17	129	136	136	136	136	31	8700	9000
0.8	11.5	170	1.9	259.9	IE5	BK20Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	161	170	170	170	170	31	8700	9000
0.8	10	193	1.6	298.2	IE5	BK20Z-../S5E04SA4-1	0.5	1.6	3.3	10	12	183	193	193	193	193	31	8700	9000
0.8	8.1	235	1.2	367.7	IE5	BK20Z-../S5E04SA4-1	0.4	1.3	2.7	8.1	9.7	220	235	235	235	235	31	8700	9000
0.8	8.3	230	1.5	359.1	IE5	BK20G06-../S5E04SA4-1	0.41	1.3	2.7	8.3	10	220	230	230	230	230	34	8700	9000
0.8	6.9	275	1.3	429.7	IE5	BK20G06-../S5E04SA4-1	0.34	1.1	2.3	6.9	8.3	260	275	275	275	275	34	8700	9000
0.8	6.2	305	1.2	480.4	IE5	BK20G06-../S5E04SA4-1	0.31	1	2	6.2	7.4	290	305	305	305	305	34	8700	9000
0.8	5.7	335	1.1	524.5	IE5	BK20G06-../S5E04SA4-1	0.28	0.95	1.9	5.7	6.8	315	335	335	335	335	34	8700	9000
0.8	4.7	395	0.9	630	IE5	BK20G06-../S5E04SA4-1	0.23	0.75	1.5	4.7	5.7	375	395	395	395	395	34	8700	9000
0.8	6.3	300	1.6	471.5	IE5	BK30G06-../S5E04SA4-1	0.31	1	2.1	6.3	7.6	285	300	300	300	300	40	11200	12000
0.8	5.2	360	1.4	567	IE5	BK30G06-../S5E04SA4-1	0.26	0.85	1.7	5.2	6.3	340	360	360	360	360	40	11200	12000
0.8	4.5	410	1.2	652.5	IE5	BK30G06-../S5E04SA4-1	0.22	0.75	1.5	4.5	5.5	390	410	410	410	410	40	11200	12000
0.8	4	465	1	743	IE5	BK30G06-../S5E04SA4-1	0.2	0.65	1.3	4	4.8	440	465	465	465	465	40	11200	12000
0.8	3.6	500	0.96	810.9	IE5	BK30G06-../S5E04SA4-1	0.18	0.6	1.2	3.6	4.4	480	500	500	500	500	40	11200	12000
0.8	3.1	590	0.83	954.1	IE5	BK30G06-../S5E04SA4-1	0.15	0.5	1	3.1	3.7	560	590	590	590	590	40	11200	12000

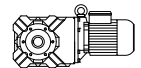
# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 1 \text{ Nm}$  ( $P_N = 0.315 \text{ kW}$ )**

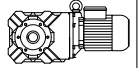
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1	90	29.5	2.7	33.33	IE4	BK06-../S4E04SA4-1	4.5	15	30	90	108	22.5	25	29.5	29.5	29.5	7.6	1320	-
1	78	34	2.3	38.18	IE4	BK06-../S4E04SA4-1	3.9	13	26	78	94	26	29	34	34	34	7.6	1380	-
1	62	42.5	1.9	47.78	IE4	BK06-../S4E04SA4-1	3.1	10	20.5	62	75	32	36	42.5	42.5	7.6	1500	-	
1	55	48	1.4	54.38	IE4	BK06-../S4E04SA4-1	2.7	9.1	18	55	66	36.5	41	48	48	7.6	1600	-	
1	47	56	1.1	63.33	IE4	BK06-../S4E04SA4-1	2.3	7.8	15.5	47	56	42.5	47.5	56	56	7.6	1700	-	
1	24.5	102	1.3	120.3	IE4	BK10Z-../S4E04SA4-1	1.2	4.1	8.3	24.5	29.5	77	86	102	102	21	7000	-	
1	20.5	120	1.4	143.2	IE4	BK10Z-../S4E04SA4-1	1	3.4	6.9	20.5	25	91	102	120	120	21	7000	-	
1	17.5	141	1.4	170.6	IE4	BK10Z-../S4E04SA4-1	0.85	2.9	5.8	17.5	21	107	120	141	141	21	7000	-	
1	14.5	167	1.2	204.7	IE4	BK10Z-../S4E04SA4-1	0.7	2.4	4.8	14.5	17.5	127	142	167	167	21	7000	-	
1	11.5	210	0.95	257.9	IE4	BK10Z-../S4E04SA4-1	0.55	1.9	3.8	11.5	13.5	160	179	210	210	21	7000	-	
1	30.5	83	2.8	96.99	IE4	BK20Z-../S4E04SA4-1	1.5	5.1	10	30.5	37	63	70	83	83	31	8700	9000	
1	20.5	121	2.7	144.5	IE4	BK20Z-../S4E04SA4-1	1	3.4	6.9	20.5	24.5	92	103	121	121	31	8700	9000	
1	17	143	2.3	173.4	IE4	BK20Z-../S4E04SA4-1	0.85	2.8	5.7	17	20.5	109	122	143	143	31	8700	9000	
1	14	170	1.9	207.5	IE4	BK20Z-../S4E04SA4-1	0.7	2.4	4.8	14	17	129	144	170	170	31	8700	9000	
1	11.5	210	1.5	259.9	IE4	BK20Z-../S4E04SA4-1	0.55	1.9	3.8	11.5	13.5	161	181	210	210	31	8700	9000	
1	10	240	1.3	298.2	IE4	BK20Z-../S4E04SA4-1	0.5	1.6	3.3	10	12	183	205	240	240	31	8700	9000	
1	8.1	290	0.99	367.7	IE4	BK20Z-../S4E04SA4-1	0.4	1.3	2.7	8.1	9.7	220	250	290	290	31	8700	9000	
1	8.3	290	1.2	359.1	IE4	BK20G06-../S4E04SA4-1	0.41	1.3	2.7	8.3	10	220	245	290	290	34	8700	9000	
1	6.9	345	1	429.7	IE4	BK20G06-../S4E04SA4-1	0.34	1.1	2.3	6.9	8.3	260	290	345	345	34	8700	9000	
1	6.2	385	0.93	480.4	IE4	BK20G06-../S4E04SA4-1	0.31	1	2	6.2	7.4	290	325	385	385	34	8700	9000	
1	5.7	415	0.86	524.5	IE4	BK20G06-../S4E04SA4-1	0.28	0.95	1.9	5.7	6.8	315	355	415	415	34	8700	9000	
1	6.3	375	1.3	471.5	IE4	BK30G06-../S4E04SA4-1	0.31	1	2.1	6.3	7.6	285	320	375	375	40	11200	12000	
1	5.2	450	1.1	567	IE4	BK30G06-../S4E04SA4-1	0.26	0.85	1.7	5.2	6.3	340	380	450	450	40	11200	12000	
1	4.5	510	0.95	652.5	IE4	BK30G06-../S4E04SA4-1	0.22	0.75	1.5	4.5	5.5	390	435	510	510	40	11200	12000	
1	4	580	0.84	743	IE4	BK30G06-../S4E04SA4-1	0.2	0.65	1.3	4	4.8	440	495	580	580	40	11200	12000	

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 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

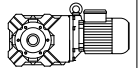
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.3	113	30.5	2.6	26.36	IE5	BK06-../S5E06MA4	5.6	18.5	37.5	113	136	30.5	30.5	30.5	30.5	11	1230	-	
1.3	90	38.5	2.1	33.33	IE5	BK06-../S5E06MA4	4.5	15	30	90	108	38.5	38.5	38.5	38.5	11	1320	-	
1.3	78	44.5	1.8	38.18	IE5	BK06-../S5E06MA4	3.9	13	26	78	94	44.5	44.5	44.5	44.5	11	1380	-	
1.3	62	55	1.4	47.78	IE5	BK06-../S5E06MA4	3.1	10	20.5	62	75	55	55	55	55	11	1500	-	
1.3	55	62	1.1	54.38	IE5	BK06-../S5E06MA4	2.7	9.1	18	55	66	62	62	62	62	11	1600	-	
1.3	47	73	0.87	63.33	IE5	BK06-../S5E06MA4	2.3	7.8	15.5	47	56	73	73	73	73	11	1700	-	
1.3	48.5	71	2.8	61.68	IE5	BK10-../S5E06MA4	2.4	8.1	16	48.5	58	71	71	71	71	23	7000	-	
1.3	41	82	2.4	72.31	IE5	BK10-../S5E06MA4	2	6.9	13.5	41	49.5	82	82	82	82	23	7000	-	
1.3	33.5	100	1.8	89.3	IE5	BK10-../S5E06MA4	1.6	5.5	11	33.5	40	100	100	100	100	23	7000	-	
1.3	29	113	1.4	102.5	IE5	BK10-../S5E06MA4	1.4	4.8	9.7	29	35	113	113	113	113	23	7000	-	
1.3	24.5	132	1	120.3	IE5	BK10Z-../S5E06MA4	1.2	4.1	8.3	24.5	29.5	132	132	132	132	24	7000	-	
1.3	20.5	156	1	143.2	IE5	BK10Z-../S5E06MA4	1	3.4	6.9	20.5	25	156	156	156	156	24	7000	-	
1.3	17.5	184	1.1	170.6	IE5	BK10Z-../S5E06MA4	0.85	2.9	5.8	17.5	21	184	184	184	184	24	7000	-	
1.3	14.5	215	0.92	204.7	IE5	BK10Z-../S5E06MA4	0.7	2.4	4.8	14.5	17.5	215	215	215	215	24	7000	-	
1.3	27.5	121	2.6	108.6	IE5	BK20-../S5E06MA4	1.3	4.6	9.2	27.5	33	121	121	121	121	33	8700	9000	
1.3	30.5	108	2.1	96.99	IE5	BK20Z-../S5E06MA4	1.5	5.1	10	30.5	37	108	108	108	108	34	8700	9000	
1.3	24	137	2.4	124.2	IE5	BK20Z-../S5E06MA4	1.2	4	8	24	28.5	137	137	137	137	34	8700	9000	
1.3	20.5	157	2.1	144.5	IE5	BK20Z-../S5E06MA4	1	3.4	6.9	20.5	24.5	157	157	157	157	34	8700	9000	
1.3	17	187	1.8	173.4	IE5	BK20Z-../S5E06MA4	0.85	2.8	5.7	17	20.5	187	187	187	187	34	8700	9000	
1.3	14	220	1.5	207.5	IE5	BK20Z-../S5E06MA4	0.7	2.4	4.8	14	17	220	220	220	220	34	8700	9000	
1.3	11.5	275	1.2	259.9	IE5	BK20Z-../S5E06MA4	0.55	1.9	3.8	11.5	13.5	275	275	275	275	34	8700	9000	
1.3	10	310	0.99	298.2	IE5	BK20Z-../S5E06MA4	0.5	1.6	3.3	10	12	310	310	310	310	34	8700	9000	
1.3	8.3	375	0.95	359.1	IE5	BK20G06-../S5E06MA4	0.41	1.3	2.7	8.3	10	375	375	375	375	38	8700	9000	
1.3	6.9	445	0.8	429.7	IE5	BK20G06-../S5E06MA4	0.34	1.1	2.3	6.9	8.3	445	445	445	445	38	8700	9000	
1.3	20.5	158	2.8	145.1	IE5	BK30Z-../S5E06MA4	1	3.4	6.8	20.5	24.5	158	158	158	158	41	11200	12000	
1.3	16	199	2.3	184.8	IE5	BK30Z-../S5E06MA4	0.8	2.7	5.4	16	19	199	199	199	199	41	11200	12000	
1.3	13.5	230	1.9	216.5	IE5	BK30Z-../S5E06MA4	0.65	2.3	4.6	13.5	16.5	230	230	230	230	41	11200	12000	
1.3	11.5	270	1.7	255.3	IE5	BK30Z-../S5E06MA4	0.55	1.9	3.9	11.5	14	270	270	270	270	41	11200	12000	
1.3	9.7	325	1.2	308.3	IE5	BK30Z-../S5E06MA4	0.48	1.6	3.2	9.7	11.5	325	325	325	325	41	11200	12000	
1.3	7.8	400	1	380.7	IE5	BK30Z-../S5E06MA4	0.39	1.3	2.6	7.8	9.4	400	400	400	400	41	11200	12000	
1.3	6.7	455	0.83	441.3	IE5	BK30Z-../S5E06MA4	0.33	1.1	2.2	6.7	8.1	455	455	455	455	41	11200	12000	
1.3	6.3	490	1	471.5	IE5	BK30G06-../S5E06MA4	0.31	1	2.1	6.3	7.6	490	490	490	490	44	11200	12000	
1.3	5.2	580	0.84	567	IE5	BK30G06-../S5E06MA4	0.26	0.85	1.7	5.2	6.3	580	580	580	580	44	11200	12000	
1.3	12	255	3	246.6	IE5	BK40Z-../S5E06MA4	0.6	2	4	12	14.5	255	255	255	255	64	11700	17000	
1.3	10	305	2.2	289.8	IE5	BK40Z-../S5E06MA4	0.5	1.7	3.4	10	12	305	305	305	305	64	11700	17000	
1.3	8.6	365	1.6	348.7	IE5	BK40Z-../S5E06MA4	0.43	1.4	2.8	8.6	10	365	365	365	365	64	11700	17000	
1.3	6.9	445	1.3	430	IE5	BK40Z-../S5E06MA4	0.34	1.1	2.3	6.9	8.3	445	445	445	445	64	11700	17000	
1.3	6.1	500	1.7	487.3	IE5	BK40G10-../S5E06MA4	0.3	1	2	6.1	7.3	500	500	500	500	68	11700	17000	
1.3	5.5	550	1.5	540	IE5	BK40G10-../S5E06MA4	0.27	0.9	1.8	5.5	6.6	550	550	550	550	68	11700	17000	
1.3	4.5	670	1.3	660.2	IE5	BK40G10-../S5E06MA4	0.22	0.75	1.5	4.5	5.4	670	670	670	670	68	11700	17000	
1.3	3.9	770	1.1	756.7	IE5	BK40G10-../S5E06MA4	0.19	0.65	1.3										



Selection - bevel geared motors -  $n_1 = 3000 \frac{1}{min}$ **M<sub>N</sub> = 1.3 Nm (P<sub>N</sub> = 0.4 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.3	9.1	345	2.9	328.2	IE5	BK50Z-../S5E06MA4	0.45	1.5	3	9.1	10.5	345	345	345	345	92	14100	26000	
1.3	7.2	430	1.9	414.8	IE5	BK50Z-../S5E06MA4	0.36	1.2	2.4	7.2	8.6	430	430	430	430	92	14100	26000	
1.3	6.4	485	2.4	465.1	IE5	BK50G10-../S5E06MA4	0.32	1	2.1	6.4	7.7	485	485	485	485	96	14100	111000	
1.3	5.8	530	2.2	513.4	IE5	BK50G10-../S5E06MA4	0.29	0.95	1.9	5.8	7	530	530	530	530	96	14100	111000	
1.3	5.2	580	2	568.6	IE5	BK50G10-../S5E06MA4	0.26	0.85	1.7	5.2	6.3	580	580	580	580	96	14100	111000	
1.3	4.6	670	1.7	651.7	IE5	BK50G10-../S5E06MA4	0.23	0.75	1.5	4.6	5.5	670	670	670	670	96	14100	111000	
1.3	4.1	730	1.6	722.2	IE5	BK50G10-../S5E06MA4	0.2	0.65	1.3	4.1	4.9	730	730	730	730	96	14100	111000	
1.3	3.4	870	1.3	859.8	IE5	BK50G10-../S5E06MA4	0.17	0.55	1.1	3.4	4.1	870	870	870	870	96	14100	111000	
1.3	2.9	1030	1.1	1024	IE5	BK50G10-../S5E06MA4	0.14	0.48	0.95	2.9	3.5	1030	1030	1030	1030	96	14100	111000	
1.3	2.4	1230	0.93	1230	IE5	BK50G10-../S5E06MA4	0.12	0.4	0.8	2.4	2.9	1230	1230	1230	1230	96	14100	111000	
1.3	2.1	1390	0.83	1398	IE5	BK50G10-../S5E06MA4	0.1	0.35	0.7	2.1	2.5	1390	1390	1390	1390	96	14100	111000	
1.3	3.9	970	2.6	752.1	IE5	BK60G20-../S5E06MA4	0.19	0.65	1.3	3.9	4.7	970	970	970	970	123	16600	34000	
1.3	3.3	1150	2.2	887.8	IE5	BK60G20-../S5E06MA4	0.16	0.55	1.1	3.3	4	1150	1150	1150	1150	123	16600	34000	
1.3	2.9	1320	1.9	1016	IE5	BK60G20-../S5E06MA4	0.14	0.49	0.95	2.9	3.5	1320	1320	1320	1320	123	16600	34000	
1.3	2.2	1710	1.5	1322	IE5	BK60G20-../S5E06MA4	0.11	0.37	0.75	2.2	2.7	1710	1710	1710	1710	123	16600	34000	
1.3	1.8	2100	1.2	1618	IE5	BK60G20-../S5E06MA4	0.09	0.3	0.6	1.8	2.2	2100	2100	2100	2100	123	16600	34000	
1.3	1.6	2350	1.1	1810	IE5	BK60G20-../S5E06MA4	0.08	0.27	0.55	1.6	1.9	2350	2350	2350	2350	123	16600	34000	
1.3	1.4	2600	0.96	2010	IE5	BK60G20-../S5E06MA4	0.07	0.24	0.49	1.4	1.7	2600	2600	2600	2600	123	16600	34000	
1.3	1.2	3050	0.81	2371	IE5	BK60G20-../S5E06MA4	0.06	0.21	0.42	1.2	1.5	3050	3050	3050	3050	123	16600	34000	
1.3	2	1890	3	1457	IE5	BK70G20-../S5E06MA4	0.1	0.34	0.65	2	2.4	1890	1890	1890	1890	201	24100	50000	
1.3	1.7	2200	2.6	1696	IE5	BK70G20-../S5E06MA4	0.085	0.29	0.55	1.7	2.1	2200	2200	2200	2200	201	24100	50000	
1.3	1.4	2650	2.1	2040	IE5	BK70G20-../S5E06MA4	0.07	0.24	0.49	1.4	1.7	2650	2650	2650	2650	201	24100	50000	
1.3	1.1	3350	1.7	2578	IE5	BK70G20-../S5E06MA4	0.055	0.19	0.38	1.1	1.3	3350	3350	3350	3350	201	24100	50000	
1.3	0.95	3950	1.4	3041	IE5	BK70G20-../S5E06MA4	0.049	0.16	0.32	0.95	1.1	3950	3950	3950	3950	201	24100	50000	
1.3	0.85	4550	1.3	3505	IE5	BK70G20-../S5E06MA4	0.042	0.14	0.28	0.85	1	4550	4550	4550	4550	201	24100	50000	
1.3	0.75	5000	1.1	3894	IE5	BK70G20-../S5E06MA4	0.038	0.12	0.25	0.75	0.9	5000	5000	5000	5000	201	24100	50000	
1.3	0.65	5800	0.97	4531	IE5	BK70G20-../S5E06MA4	0.033	0.11	0.22	0.65	0.75	5800	5800	5800	5800	201	24100	50000	
1.3	0.55	7000	0.81	5436	IE5	BK70G20-../S5E06MA4	0.027	0.09	0.18	0.55	0.65	7000	7000	7000	7000	201	24100	50000	

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**M<sub>N</sub> = 1.75 Nm (P<sub>N</sub> = 0.55 kW)**

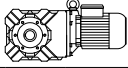
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.75	166	28	2.8	18	IE5	BK06-../S5E06MA4	8.3	27.5	55	166	200	28	28	28	28	11	1080	-	
1.75	139	33.5	2.4	21.54	IE5	BK06-../S5E06MA4	6.9	23	46	139	167	33.5	33.5	33.5	33.5	11	1150	-	
1.75	113	41.5	1.9	26.36	IE5	BK06-../S5E06MA4	5.6	18.5	37.5	113	136	41.5	41.5	41.5	41.5	11	1230	-	
1.75	90	52	1.5	33.33	IE5	BK06-../S5E06MA4	4.5	15	30	90	108	52	52	52	52	11	1320	-	
1.75	78	60	1.3	38.18	IE5	BK06-../S5E06MA4	3.9	13	26	78	94	60	60	60	60	11	1380	-	
1.75	62	74	1.1	47.78	IE5	BK06-../S5E06MA4	3.1	10	20.5	62	75	74	74	74	74	11	1500	-	
1.75	55	84	0.8	54.38	IE5	BK06-../S5E06MA4	2.7	9.1	18	55	66	84	84	84	84	11	1600	-	
1.75	61	76	2.6	48.96	IE5	BK10-../S5E06MA4	3	10	20	61	73	76	76	76	76	23	6400	-	
1.75	48.5	96	2.1	61.68	IE5	BK10-../S5E06MA4	2.4	8.1	16	48.5	58	96	96	96	96	23	7000	-	
1.75	41	111	1.8	72.31	IE5	BK10-../S5E06MA4	2	6.9	13.5	41	49.5	111	111	111	111	23	7000	-	
1.75	33.5	135	1.3	89.3	IE5	BK10-../S5E06MA4	1.6	5.5	11	33.5	40	135	135	135	135	23	7000	-	
1.75	29	152	1	102.5	IE5	BK10-../S5E06MA4	1.4	4.8	9.7	29	35	152	152	152	152	23	7000	-	
1.75	17.5	245	0.81	170.6	IE5	BK10Z-../S5E06MA4	0.85	2.9	5.8	17.5	21	245	245	245	245	24	7000	-	
1.75	39	118	2.8	76.79	IE5	BK20-../S5E06MA4	1.9	6.5	13	39	46.5	118	118	118	118	33	7500	9000	
1.75	34	134	2.5	88.12	IE5	BK20-../S5E06MA4	1.7	5.6	11	34	40.5	134	134	134	134	33	8000	9000	
1.75	27.5	163	1.9	108.6	IE5	BK20-../S5E06MA4	1.3	4.6	9.2	27.5	33	163	163	163	163	33	8700	9000	
1.75	30.5	145	1.6	96.99	IE5	BK20Z-../S5E06MA4	1.5	5.1	10	30.5	37	145	145	145	145	34	8700	9000	
1.75	24	184	1.8	124.2	IE5	BK20Z-../S5E06MA4	1.2	4	8	24	28.5	184	184	184	184	34	8700	9000	
1.75	20.5	210	1.6	144.5	IE5	BK20Z-../S5E06MA4	1	3.4	6.9	20.5	24.5	210	210	210	210	34	8700	9000	
1.75	17	250	1.3	173.4	IE5	BK20Z-../S5E06MA4	0.85	2.8	5.7	17	20.5	250	250	250	250	34	8700	9000	
1.75	14	295	1.1	207.5	IE5	BK20Z-../S5E06MA4	0.7	2.4	4.8	14	17	295	295	295	295	34	8700	9000	
1.75	11.5	370	0.88	259.9	IE5	BK20Z-../S5E06MA4	0.55	1.9	3.8	11.5	13.5	370	370	370	370	34	8700	9000	
1.75	29	152	3	102.4	IE5	BK30-../S5E06MA4	1.4	4.8	9.7	29	35	152	152	152	152	39	11200	12000	
1.75	24	184	2.4	123.9	IE5	BK30Z-../S5E06MA4	1.2	4	8	24	29	184	184	184	184	41	11200	12000	
1.75	20.5	210	2.1	145.1	IE5	BK30Z-../S5E06MA4	1	3.4	6.8	20.5	24.5	210	210	210	210	41	11200	12000	
1.75	16	265	1.7	184.8	IE5	BK30Z-../S5E06MA4	0.8	2.7	5.4	16	19	265	265	265	265	41	11200	12000	
1.75	13.5	310	1.4	216.5	IE5	BK30Z-../S5E06MA4	0.65	2.3	4.6	13.5	16.5	310	310	310	310	41	11200	12000	
1.75	11.5	365	1.2	255.3	IE5	BK30Z-../S5E06MA4	0.55	1.9	3.9	11.5	14	365	365	365	365	41	11200	12000	
1.75	9.7	440	0.87	308.3	IE5	BK30Z-../S5E06MA4	0.48	1.6	3.2	9.7	11.5	440	440	440	440	41	11200	12000	
1.75	14	300	2.6	211.5	IE5	BK40Z-../S5E06MA4	0.7	2.3	4.7	14	17	300	300	300	300	64	11700	17000	
1.75	12	345	2.2	246.6	IE5	BK40Z-../S5E06MA4	0.6	2	4	12	14.5	345	345	345	345	64	11700	17000	
1.75	10	410	1.7	289.8	IE5	BK40Z-../S5E06MA4	0.5	1.7	3.4	10	12	410	410	410	410	64	11700	17000	
1.75	8.6	490	1.2	348.7	IE5	BK40Z-../S5E06MA4	0.43	1.4	2.8	8.6	10	490	490	490	490	64	11700	17000	
1.75	6.9	600	0.95	430	IE5	BK40Z-../S5E06MA4	0.34	1.1	2.3	6.9	8.3	600	600	600	600	64	11700	17000	
1.75	6.1	680	1.2	487.3	IE5	BK40G10-../S5E06MA4	0.3	1	2	6.1	7.3	680	680	680	680	68	11700	17000	
1.75	5.5	750	1.1	540	IE5	BK40G10-../S5E06MA4	0.27	0.9	1.8	5.5	6.6	750	750	750	750	68	11700	17000	
1.75	4.5	910	0.93	660.2	IE5	BK40G10-../S5E06MA4	0.22	0.75	1.5	4.5	5.4	910	910	910	910	68	11700		



# BK-series bevel geared motors

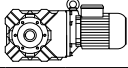
## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

**$M_N = 1.75 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]			
1.75	7.2	580	1.4	414.8	IE5	BK50Z-../S5E06MA4	0.36	1.2	2.4	7.2	8.6	580	580	580	580	92	14100	26000	
1.75	6.4	650	1.8	465.1	IE5	BK50G10-../S5E06MA4	0.32	1	2.1	6.4	7.7	650	650	650	650	96	14100	111000	
1.75	5.8	710	1.6	513.4	IE5	BK50G10-../S5E06MA4	0.29	0.95	1.9	5.8	7	710	710	710	710	96	14100	111000	
1.75	5.2	790	1.5	568.6	IE5	BK50G10-../S5E06MA4	0.26	0.85	1.7	5.2	6.3	790	790	790	790	96	14100	111000	
1.75	4.6	900	1.3	651.7	IE5	BK50G10-../S5E06MA4	0.23	0.75	1.5	4.6	5.5	900	900	900	900	96	14100	111000	
1.75	4.1	990	1.2	722.2	IE5	BK50G10-../S5E06MA4	0.2	0.65	1.3	4.1	4.9	990	990	990	990	96	14100	111000	
1.75	3.4	1170	0.98	859.8	IE5	BK50G10-../S5E06MA4	0.17	0.55	1.1	3.4	4.1	1170	1170	1170	1170	96	14100	111000	
1.75	2.9	1390	0.83	1024	IE5	BK50G10-../S5E06MA4	0.14	0.48	0.95	2.9	3.5	1390	1390	1390	1390	96	14100	111000	
1.75	4.8	1080	2.3	621.5	IE5	BK60G20-../S5E06MA4	0.24	0.8	1.6	4.8	5.7	1080	1080	1080	1080	123	16600	34000	
1.75	3.9	1310	1.9	752.1	IE5	BK60G20-../S5E06MA4	0.19	0.65	1.3	3.9	4.7	1310	1310	1310	1310	123	16600	34000	
1.75	3.3	1550	1.6	887.8	IE5	BK60G20-../S5E06MA4	0.16	0.55	1.1	3.3	4	1550	1550	1550	1550	123	16600	34000	
1.75	2.9	1770	1.4	1016	IE5	BK60G20-../S5E06MA4	0.14	0.49	0.95	2.9	3.5	1770	1770	1770	1770	123	16600	34000	
1.75	2.2	2300	1.1	1322	IE5	BK60G20-../S5E06MA4	0.11	0.37	0.75	2.2	2.7	2300	2300	2300	2300	123	16600	34000	
1.75	1.8	2800	0.88	1618	IE5	BK60G20-../S5E06MA4	0.09	0.3	0.6	1.8	2.2	2800	2800	2800	2800	123	16600	34000	
1.75	2.6	1990	2.9	1139	IE5	BK70G20-../S5E06MA4	0.13	0.43	0.85	2.6	3.1	1990	1990	1990	1990	201	24100	50000	
1.75	2.3	2200	2.5	1280	IE5	BK70G20-../S5E06MA4	0.11	0.39	0.75	2.3	2.8	2200	2200	2200	2200	201	24100	50000	
1.75	2	2500	2.2	1457	IE5	BK70G20-../S5E06MA4	0.1	0.34	0.65	2	2.4	2500	2500	2500	2500	201	24100	50000	
1.75	1.7	2950	1.9	1696	IE5	BK70G20-../S5E06MA4	0.085	0.29	0.55	1.7	2.1	2950	2950	2950	2950	201	24100	50000	
1.75	1.4	3550	1.6	2040	IE5	BK70G20-../S5E06MA4	0.07	0.24	0.49	1.4	1.7	3550	3550	3550	3550	201	24100	50000	
1.75	1.1	4500	1.3	2578	IE5	BK70G20-../S5E06MA4	0.055	0.19	0.38	1.1	1.3	4500	4500	4500	4500	201	24100	50000	
1.75	0.95	5300	1.1	3041	IE5	BK70G20-../S5E06MA4	0.049	0.16	0.32	0.95	1.1	5300	5300	5300	5300	201	24100	50000	
1.75	0.85	6100	0.93	3505	IE5	BK70G20-../S5E06MA4	0.042	0.14	0.28	0.85	1	6100	6100	6100	6100	201	24100	50000	
1.75	0.75	6800	0.84	3894	IE5	BK70G20-../S5E06MA4	0.038	0.12	0.25	0.75	0.9	6800	6800	6800	6800	201	24100	50000	

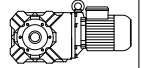
**$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]			
2.4	196	33	2.4	15.29	IE5	BK06-../S5E06LA4	9.8	32.5	65	196	235	33	33	33	33	11	1020	-	
2.4	196	33	2.4	15.29	IE3	BK06-../SPE06MA4	9.8	32.5	65	196	235	25	27.5	30.5	33	33	11	1020	-
2.4	166	38.5	2.1	18	IE5	BK06-../S5E06LA4	8.3	27.5	55	166	200	38.5	38.5	38.5	38.5	11	1080	-	
2.4	166	38.5	2.1	18	IE3	BK06-../SPE06MA4	8.3	27.5	55	166	200	29	32	35.5	38.5	38.5	11	1080	-
2.4	139	46.5	1.7	21.54	IE5	BK06-../S5E06LA4	6.9	23	46	139	167	46.5	46.5	46.5	46.5	11	1150	-	
2.4	139	46.5	1.7	21.54	IE3	BK06-../SPE06MA4	6.9	23	46	139	167	34.5	38.5	42.5	46.5	46.5	11	1150	-
2.4	113	56	1.4	26.36	IE5	BK06-../S5E06LA4	5.6	18.5	37.5	113	136	56	56	56	56	11	1230	-	
2.4	113	56	1.4	26.36	IE3	BK06-../SPE06MA4	5.6	18.5	37.5	113	136	42.5	47	52	56	56	11	1230	-
2.4	90	71	1.1	33.33	IE5	BK06-../S5E06LA4	4.5	15	30	90	108	71	71	71	71	11	1320	-	
2.4	90	71	1.1	33.33	IE3	BK06-../SPE06MA4	4.5	15	30	90	108	53	59	65	71	71	11	1320	-
2.4	78	82	0.97	38.18	IE5	BK06-../S5E06LA4	3.9	13	26	78	94	82	82	82	82	11	1380	-	
2.4	78	82	0.97	38.18	IE3	BK06-../SPE06MA4	3.9	13	26	78	94	61	68	75	82	82	11	1380	-
2.4	87	73	2.7	34.25	IE5	BK10-../S5E06LA4	4.3	14.5	29	87	105	73	73	73	73	23	5600	-	
2.4	87	73	2.7	34.25	IE3	BK10-../SPE06MA4	4.3	14.5	29	87	105	55	61	67	73	73	23	5600	-
2.4	73	88	2.3	40.79	IE5	BK10-../S5E06LA4	3.6	12	24.5	73	88	88	88	88	88	23	6000	-	
2.4	73	88	2.3	40.79	IE3	BK10-../SPE06MA4	3.6	12	24.5	73	88	66	73	80	88	88	23	6000	-
2.4	61	104	1.9	48.96	IE5	BK10-../S5E06LA4	3	10	20	61	73	104	104	104	104	23	6400	-	
2.4	61	104	1.9	48.96	IE3	BK10-../SPE06MA4	3	10	20	61	73	78	87	95	104	104	23	6400	-
2.4	48.5	131	1.5	61.68	IE5	BK10-../S5E06LA4	2.4	8.1	16	48.5	58	131	131	131	131	23	7000	-	
2.4	48.5	131	1.5	61.68	IE3	BK10-../SPE06MA4	2.4	8.1	16	48.5	58	98	109	120	131	131	23	7000	-
2.4	41	152	1.3	72.31	IE5	BK10-../S5E06LA4	2	6.9	13.5	41	49.5	152	152	152	152	23	7000	-	
2.4	41	152	1.3	72.31	IE3	BK10-../SPE06MA4	2	6.9	13.5	41	49.5	114	127	139	152	152	23	7000	-
2.4	33.5	186	0.95	89.3	IE5	BK10-../S5E06LA4	1.6	5.5	11	33.5	40	186	186	186	186	23	7000	-	
2.4	33.5	186	0.95	89.3	IE3	BK10-../SPE06MA4	1.6	5.5	11	33.5	40	139	155	170	186	186	23	7000	-
2.4	58	109	3	51.22	IE5	BK20-../S5E06LA4	2.9	9.7	19.5	58	70	109	109	109	109	33	6300	9000	
2.4	58	109	3	51.22	IE3	BK20-../SPE06MA4	2.9	9.7	19.5	58	70	82	91	100	109	109	33	6300	9000
2.4	48.5	130	2.5	61.3	IE5	BK20-../S5E06LA4	2.4	8.1	16	48.5	58	130	130	130	130	33	6500	9000	
2.4	48.5	130	2.5	61.3	IE3	BK20-../SPE06MA4	2.4	8.1	16	48.5	58	98	109	120	130	130	33	6500	9000
2.4	39	162	2	76.79	IE5	BK20-../S5E06LA4	1.9	6.5	13	39	46.5	162	162	162	162	33	7500	9000	
2.4	39	162	2	76.79	IE3	BK20-../SPE06MA4	1.9	6.5	13	39	46.5	121	135	148	162	162	33	7500	9000
2.4	34	183	1.8	88.12	IE5	BK20-../S5E06LA4	1.7	5.6	11	34	40.5	183	183	183	183	33	8000	9000	
2.4	34	183	1.8	88.12	IE3	BK20-../SPE06MA4	1.7	5.6	11	34	40.5	137	153	168	183	183	33	8000	9000
2.4	27.5	220	1.4	108.6	IE5	BK20-../S5E06LA4	1.3	4.6	9.2	27.5	33	220	220	220	220	33	8700	9000	
2.4	27.5	220	1.4	108.6	IE3	BK20-../SPE06MA4	1.3	4.6	9.2	27.5	33	168	186	205	220	220	33	8700	9000
2.4	30.5	200	1.1	96.99	IE5	BK20Z-../S5E06LA4	1.5	5.1	10	30.5	37	200	200	200	200	34	8700	9000	
2.4	30.5	200	1.1	96.99	IE3	BK20Z-../SPE06MA4	1.5	5.1	10	30.5	37	150	166	183	200	200	34	8700	9000
2.4	24	250	1.3	124.2	IE5	BK20Z-../S5E06LA4	1.2	4	8	24	28.5	250	250	250	250	34	8700	9000	
2.4	24	250	1.3	124.2	IE3	BK20Z-../SPE06MA4	1.2	4	8	24	28.5	190	210	230	250	250	34	8700	9000
2.4	20.5	290	1.1	144.5	IE5	BK20Z-../S5E06LA4	1	3.4	6.9	20.5	24.5	290	290	290	290	34	8700	9000	
2.4	20.5	290	1.1	144.5	IE3	BK20Z-../SPE06MA4	1	3.4	6.9	20.5	24.5	215	240	265	290	290	34	8700	9000
2.4	17	345	0.96	173.4	IE5	BK20Z-../S5E06LA4	0.85	2.8	5.7	17	20.5	345	345	345	345	34	8700	9000	
2.4	17	345	0.96	173.4	IE3	BK20Z-../SPE06MA4	0.85	2.8</											

# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

 **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**


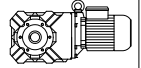
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[:1]															
2.4	33.5	182	2.5	88.38	IE3	BK30-../SPE06MA4	1.6	5.6	11	33.5	40.5	136	152	167	182	182	39	10600	12000
2.4	29	205	2.2	102.4	IE5	BK30-../S5E06LA4	1.4	4.8	9.7	29	35	205	205	205	205	205	39	11200	12000
2.4	29	205	2.2	102.4	IE3	BK30-../SPE06MA4	1.4	4.8	9.7	29	35	156	174	191	205	205	39	11200	12000
2.4	24	250	1.8	123.9	IE5	BK30Z-../S5E06LA4	1.2	4	8	24	29	250	250	250	250	41	11200	12000	
2.4	24	250	1.8	123.9	IE3	BK30Z-../SPE06MA4	1.2	4	8	24	29	189	210	230	250	250	41	11200	12000
2.4	20.5	290	1.5	145.1	IE5	BK30Z-../S5E06LA4	1	3.4	6.8	20.5	24.5	290	290	290	290	41	11200	12000	
2.4	20.5	290	1.5	145.1	IE3	BK30Z-../SPE06MA4	1	3.4	6.8	20.5	24.5	215	240	265	290	290	41	11200	12000
2.4	16	365	1.2	184.8	IE5	BK30Z-../S5E06LA4	0.8	2.7	5.4	16	19	365	365	365	365	365	41	11200	12000
2.4	16	365	1.2	184.8	IE3	BK30Z-../SPE06MA4	0.8	2.7	5.4	16	19	275	305	335	365	365	41	11200	12000
2.4	13.5	425	1.1	216.5	IE5	BK30Z-../S5E06LA4	0.65	2.3	4.6	13.5	16.5	425	425	425	425	425	41	11200	12000
2.4	13.5	425	1.1	216.5	IE3	BK30Z-../SPE06MA4	0.65	2.3	4.6	13.5	16.5	315	355	390	425	425	41	11200	12000
2.4	11.5	500	0.9	255.3	IE5	BK30Z-../S5E06LA4	0.55	1.9	3.9	11.5	14	500	500	500	500	500	41	11200	12000
2.4	11.5	500	0.9	255.3	IE3	BK30Z-../SPE06MA4	0.55	1.9	3.9	11.5	14	375	415	460	500	500	41	11200	12000
2.4	20.5	285	2.7	143	IE5	BK40Z-../S5E06LA4	1	3.4	6.9	20.5	25	285	285	285	285	64	11700	17000	
2.4	20.5	285	2.7	143	IE3	BK40Z-../SPE06MA4	1	3.4	6.9	20.5	25	215	240	260	285	285	64	11700	17000
2.4	17.5	335	2.3	169	IE5	BK40Z-../S5E06LA4	0.85	2.9	5.9	17.5	21	335	335	335	335	335	64	11700	17000
2.4	17.5	335	2.3	169	IE3	BK40Z-../SPE06MA4	0.85	2.9	5.9	17.5	21	250	280	305	335	335	64	11700	17000
2.4	14	415	1.9	211.5	IE5	BK40Z-../S5E06LA4	0.7	2.3	4.7	14	17	415	415	415	415	415	64	11700	17000
2.4	14	415	1.9	211.5	IE3	BK40Z-../SPE06MA4	0.7	2.3	4.7	14	17	310	345	380	415	415	64	11700	17000
2.4	12	475	1.6	246.6	IE5	BK40Z-../S5E06LA4	0.6	2	4	12	14.5	475	475	475	475	475	64	11700	17000
2.4	12	475	1.6	246.6	IE3	BK40Z-../SPE06MA4	0.6	2	4	12	14.5	355	395	435	475	475	64	11700	17000
2.4	10	560	1.2	289.8	IE5	BK40Z-../S5E06LA4	0.5	1.7	3.4	10	12	560	560	560	560	560	64	11700	17000
2.4	10	560	1.2	289.8	IE3	BK40Z-../SPE06MA4	0.5	1.7	3.4	10	12	420	465	510	560	560	64	11700	17000
2.4	8.6	670	0.86	348.7	IE5	BK40Z-../S5E06LA4	0.43	1.4	2.8	8.6	10	670	670	670	670	670	64	11700	17000
2.4	8.6	670	0.86	348.7	IE3	BK40Z-../SPE06MA4	0.43	1.4	2.8	8.6	10	500	560	620	670	670	64	11700	17000
2.4	6.1	930	0.91	487.3	IE5	BK40G10-../S5E06LA4	0.3	1	2	6.1	7.3	930	930	930	930	930	68	11700	17000
2.4	6.1	930	0.91	487.3	IE3	BK40G10-../SPE06MA4	0.3	1	2	6.1	7.3	700	780	850	930	930	68	11700	17000
2.4	5.5	1030	0.82	540	IE5	BK40G10-../S5E06LA4	0.27	0.9	1.8	5.5	6.6	1030	1030	1030	1030	1030	68	11700	17000
2.4	5.5	1030	0.82	540	IE3	BK40G10-../SPE06MA4	0.27	0.9	1.8	5.5	6.6	770	860	940	1030	1030	68	11700	17000
2.4	14.5	405	2.6	206.8	IE5	BK50Z-../S5E06LA4	0.7	2.4	4.8	14.5	17	405	405	405	405	405	92	14100	26000
2.4	14.5	405	2.6	206.8	IE3	BK50Z-../SPE06MA4	0.7	2.4	4.8	14.5	17	305	335	370	405	405	92	14100	26000
2.4	11	510	2	264.5	IE5	BK50Z-../S5E06LA4	0.55	1.8	3.7	11	13.5	510	510	510	510	510	92	14100	26000
2.4	11	510	2	264.5	IE3	BK50Z-../SPE06MA4	0.55	1.8	3.7	11	13.5	385	425	470	510	510	92	14100	26000
2.4	9.1	630	1.6	328.2	IE5	BK50Z-../S5E06LA4	0.45	1.5	3	9.1	10.5	630	630	630	630	630	92	14100	26000
2.4	9.1	630	1.6	328.2	IE3	BK50Z-../SPE06MA4	0.45	1.5	3	9.1	10.5	475	530	580	630	630	92	14100	26000
2.4	7.2	790	1.1	414.8	IE5	BK50Z-../S5E06LA4	0.36	1.2	2.4	7.2	8.6	790	790	790	790	790	92	14100	26000
2.4	7.2	790	1.1	414.8	IE3	BK50Z-../SPE06MA4	0.36	1.2	2.4	7.2	8.6	590	660	730	790	790	92	14100	26000
2.4	6.4	890	1.3	465.1	IE5	BK50G10-../S5E06LA4	0.32	1	2.1	6.4	7.7	890	890	890	890	890	96	14100	111000
2.4	6.4	890	1.3	465.1	IE3	BK50G10-../SPE06MA4	0.32	1	2.1	6.4	7.7	670	740	820	890	890	96	14100	111000
2.4	5.8	980	1.2	513.4	IE5	BK50G10-../S5E06LA4	0.29	0.95	1.9	5.8	7	980	980	980	980	980	96	14100	111000
2.4	5.8	980	1.2	513.4	IE3	BK50G10-../SPE06MA4	0.29	0.95	1.9	5.8	7	730	820	900	980	980	96	14100	111000
2.4	5.2	1080	1.1	568.6	IE5	BK50G10-../S5E06LA4	0.26	0.85	1.7	5.2	6.3	1080	1080	1080	1080	1080	96	14100	111000
2.4	5.2	1080	1.1	568.6	IE3	BK50G10-../SPE06MA4	0.26	0.85	1.7	5.2	6.3	810	900	990	1080	1080	96	14100	111000
2.4	4.6	1230	0.93	651.7	IE5	BK50G10-../S5E06LA4	0.23	0.75	1.5	4.6	5.5	1230	1230	1230	1230	1230	96	14100	111000
2.4	4.6	1230	0.93	651.7	IE3	BK50G10-../SPE06MA4	0.23	0.75	1.5	4.6	5.5	920	1030	1130	1230	1230	96	14100	111000
2.4	4.1	1360	0.84	722.2	IE5	BK50G10-../S5E06LA4	0.2	0.65	1.3	4.1	4.9	1360	1360	1360	1360	1360	96	14100	111000
2.4	4.1	1360	0.84	722.2	IE3	BK50G10-../SPE06MA4	0.2	0.65	1.3	4.1	4.9	1020	1130	1250	1360	1360	96	14100	111000
2.4	4.8	1490	1.7	621.5	IE5	BK60G20-../S5E06LA4	0.24	0.8	1.6	4.8	5.7	1490	1490	1490	1490	1490	123	16600	34000
2.4	4.8	1490	1.7	621.5	IE3	BK60G20-../SPE06MA4	0.24	0.8	1.6	4.8	5.7	1110	1240	1360	1490	1490	123	16600	34000
2.4	3.9	1800	1.4	752.1	IE5	BK60G20-../S5E06LA4	0.19	0.65	1.3	3.9	4.7	1800	1800	1800	1800	1800	123	16600	34000
2.4	3.9	1800	1.4	752.1	IE3	BK60G20-../SPE06MA4	0.19	0.65	1.3	3.9	4.7	1350	1500	1650	1800	1800	123	16600	34000
2.4	3.3	2100	1.2	887.8	IE5	BK60G20-../S5E06LA4	0.16	0.55	1.1	3.3	4	2100	2100	2100	2100	2100	123	16600	34000
2.4	3.3	2100	1.2	887.8	IE3	BK60G20-../SPE06MA4	0.16	0.55	1.1	3.3	4	1590	1770	1950	2100	2100	123	16600	34000
2.4	2.9	2400	1	1016	IE5	BK60G20-../S5E06LA4	0.14	0.49	0.95	2.9	3.5	2400	2400	2400	2400	2400	123	16600	34000
2.4	2.9	2400	1	1016	IE3	BK60G20-../SPE06MA4	0.14	0.49	0.95	2.9	3.5	1820	2000	2200	2400	2400	123	16600	34000
2.4	3.5	2000	2.8	847.7	IE5	BK70G20-../S5E06LA4	0.17	0.55	1.1	3.5	4.2	2000	2000	2000	2000	2000	201	24100	50000
2.4	3.5	2000	2.8	847.7	IE3	BK70G20-../SPE06MA4	0.17	0.55	1.1	3.5	4.2	1520	1690	1860	2000	2000	201	24100	50000
2.4	3.1	2300	2.5	964.6	IE5	BK70G20-../S5E06LA4	0.15	0.5	1	3.1	3.7	2300	2300	2300	2300	2300	201	24100	50000
2.4	3.1	2300	2.5	964.6	IE3	BK70G20-../SPE06MA4	0.15	0.5	1	3.1	3.7	1730	1920	2100	2300	2300	201	24100	50000
2.4	2.6	2700	2.1	1139	IE5	BK70G20-../S5E06LA4	0.13	0.43	0.85	2.6	3.1	2700	2700	2700	2700	2700	201	24100	50000
2.4	2.6	2700	2.1	1139	IE3	BK70G20-../SPE06MA4	0.13	0.43	0.85	2.6	3.1	2050	2250	2500	2700	2700	201	24100	50000
2.4	2.3	3050	1.9	1280	IE5	BK70G20-../S5E06LA4	0.11	0.39	0.75	2.3	2.8	3050	3050	3050	3050	3050	201	24100	50000
2.4	2.3	3050	1.9	1280	IE3	BK70G20-../SPE06MA4	0.11	0.39	0.75	2.3	2.8	2300	2550	2800	3050	3050	201	24100	50000
2.4	2	3450	1.6	1457	IE5	BK70G20-../S5E06LA4	0.1	0.34	0.65	2	2.4	3450	3450	3450	3450	3450	201	24100	50000

# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

<b>M<sub>N</sub> = 3.5 Nm (P<sub>N</sub> = 1.1 kW)</b>																			
M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
3.5	305	31	2.6	9.71	IE4	BK06-../S4E06LA4	15	51	102	305	370	22	25.5	31	31	31	11	880	-
3.5	255	37.5	2.1	11.67	IE4	BK06-../S4E06LA4	12.5	42.5	85	255	305	26.5	31	37.5	37.5	37.5	11	930	-
3.5	196	48.5	1.6	15.29	IE4	BK06-../S4E06LA4	9.8	32.5	65	196	235	34.5	40	48.5	48.5	48.5	11	1020	-
3.5	166	56	1.4	18	IE4	BK06-../S4E06LA4	8.3	27.5	55	166	200	40.5	46.5	56	56	56	11	1080	-
3.5	139	67	1.2	21.54	IE4	BK06-../S4E06LA4	6.9	23	46	139	167	48	56	67	67	67	11	1150	-
3.5	113	83	0.96	26.36	IE4	BK06-../S4E06LA4	5.6	18.5	37.5	113	136	59	68	83	83	83	11	1230	-
3.5	250	38	3	11.93	IE4	BK10-../S4E06LA4	12.5	41.5	83	250	300	27	31.5	38	38	38	23	3100	-
3.5	177	53	2.6	16.92	IE4	BK10-../S4E06LA4	8.8	29.5	59	177	210	38	44	53	53	53	23	3700	-
3.5	132	71	2.8	22.65	IE4	BK10-../S4E06LA4	6.6	22	44	132	158	50	59	71	71	71	23	4650	-
3.5	104	90	2.2	28.76	IE4	BK10-../S4E06LA4	5.2	17	34.5	104	125	64	75	90	90	90	23	5200	-
3.5	87	107	1.9	34.25	IE4	BK10-../S4E06LA4	4.3	14.5	29	87	105	77	89	107	107	107	23	5600	-
3.5	73	128	1.6	40.79	IE4	BK10-../S4E06LA4	3.6	12	24.5	73	88	91	106	128	128	128	23	6000	-
3.5	61	152	1.3	48.96	IE4	BK10-../S4E06LA4	3	10	20	61	73	108	126	152	152	152	23	6400	-
3.5	48.5	192	1	61.68	IE4	BK10-../S4E06LA4	2.4	8.1	16	48.5	58	137	159	192	192	192	23	7000	-
3.5	41	220	0.9	72.31	IE4	BK10-../S4E06LA4	2	6.9	13.5	41	49.5	159	184	220	220	220	23	7000	-
3.5	81	115	2.9	36.69	IE4	BK20-../S4E06LA4	4	13.5	27	81	98	82	95	115	115	115	33	5400	9000
3.5	70	134	2.5	42.7	IE4	BK20-../S4E06LA4	3.5	11.5	23	70	84	96	111	134	134	134	33	5800	9000
3.5	58	159	2.1	51.22	IE4	BK20-../S4E06LA4	2.9	9.7	19.5	58	70	113	132	159	159	159	33	6300	9000
3.5	48.5	190	1.7	61.3	IE4	BK20-../S4E06LA4	2.4	8.1	16	48.5	58	136	158	190	190	190	33	6500	9000
3.5	39	235	1.4	76.79	IE4	BK20-../S4E06LA4	1.9	6.5	13	39	46.5	168	195	235	235	235	33	7500	9000
3.5	34	265	1.2	88.12	IE4	BK20-../S4E06LA4	1.7	5.6	11	34	40.5	191	220	265	265	265	33	8000	9000
3.5	27.5	325	0.96	108.6	IE4	BK20-../S4E06LA4	1.3	4.6	9.2	27.5	33	230	270	325	325	325	33	8700	9000
3.5	24	365	0.89	124.2	IE4	BK20Z-../S4E06LA4	1.2	4	8	24	28.5	260	305	365	365	365	34	8700	9000
3.5	59	154	2.9	50.27	IE4	BK30-../S4E06LA4	2.9	9.9	19.5	59	71	110	128	154	154	154	39	8300	12000
3.5	50	182	2.5	59.27	IE4	BK30-../S4E06LA4	2.5	8.4	16.5	50	60	130	151	182	182	182	39	8900	12000
3.5	41.5	215	2.1	71.56	IE4	BK30-../S4E06LA4	2	6.9	13.5	41.5	50	155	180	215	215	215	39	9700	12000
3.5	33.5	265	1.7	88.38	IE4	BK30-../S4E06LA4	1.6	5.6	11	33.5	40.5	190	220	265	265	265	39	10600	12000
3.5	29	300	1.5	102.4	IE4	BK30-../S4E06LA4	1.4	4.8	9.7	29	35	215	250	300	300	300	39	11200	12000
3.5	24	365	1.2	123.9	IE4	BK30Z-../S4E06LA4	1.2	4	8	24	29	260	305	365	365	365	41	11200	12000
3.5	20.5	425	1.1	145.1	IE4	BK30Z-../S4E06LA4	1	3.4	6.8	20.5	24.5	300	350	425	425	425	41	11200	12000
3.5	16	530	0.84	184.8	IE4	BK30Z-../S4E06LA4	0.8	2.7	5.4	16	19	380	440	530	530	530	41	11200	12000
3.5	25	350	2.2	118.2	IE4	BK40Z-../S4E06LA4	1.2	4.2	8.4	25	30	250	290	350	350	350	64	11700	17000
3.5	20.5	420	1.9	143	IE4	BK40Z-../S4E06LA4	1	3.4	6.9	20.5	25	300	345	420	420	420	64	11700	17000
3.5	17.5	490	1.6	169	IE4	BK40Z-../S4E06LA4	0.85	2.9	5.9	17.5	21	350	405	490	490	490	64	11700	17000
3.5	14	600	1.3	211.5	IE4	BK40Z-../S4E06LA4	0.7	2.3	4.7	14	17	430	500	600	600	600	64	11700	17000
3.5	12	690	1.1	246.6	IE4	BK40Z-../S4E06LA4	0.6	2	4	12	14.5	495	570	690	690	690	64	11700	17000
3.5	10	820	0.83	289.8	IE4	BK40Z-../S4E06LA4	0.5	1.7	3.4	10	12	580	680	820	820	820	64	11700	17000
3.5	19.5	445	2.4	153.3	IE4	BK50Z-../S4E06LA4	0.95	3.2	6.5	19.5	23	315	365	445	445	445	92	14100	26000
3.5	14.5	590	1.8	206.8	IE4	BK50Z-../S4E06LA4	0.7	2.4	4.8	14.5	17	420	490	590	590	590	92	14100	26000
3.5	11	740	1.4	264.5	IE4	BK50Z-../S4E06LA4	0.55	1.8	3.7	11	13.5	530	620	740	740	740	92	14100	26000
3.5	9.1	930	1.1	328.2	IE4	BK50Z-../S4E06LA4	0.45	1.5	3	9.1	10.5	660	770	930	930	930	92	14100	26000
3.5	6.4	1300	0.88	465.1	IE4	BK50G10-../S4E06LA4	0.32	1	2.1	6.4	7.7	930	1080	1300	1300	1300	96	14100	111000
3.5	5.8	1430	0.8	513.4	IE4	BK50G10-../S4E06LA4	0.29	0.95	1.9	5.8	7	1020	1190	1430	1430	1430	96	14100	111000
3.5	4.8	2150	1.1	621.5	IE4	BK60G20-../S4E06LA4	0.24	0.8	1.6	4.8	5.7	1550	1800	2150	2150	2150	123	16600	34000
3.5	3.9	2600	0.95	752.1	IE4	BK60G20-../S4E06LA4	0.19	0.65	1.3	3.9	4.7	1880	2150	2600	2600	2600	123	16600	34000
3.5	3.3	3100	0.8	887.8	IE4	BK60G20-../S4E06LA4	0.16	0.55	1.1	3.3	4	2200	2550	3100	3100	3100	123	16600	34000
3.5	3.5	2950	1.9	847.7	IE4	BK70G20-../S4E06LA4	0.17	0.55	1.1	3.5	4.2	2100	2450	2950	2950	2950	201	24100	50000
3.5	3.1	3350	1.7	964.6	IE4	BK70G20-../S4E06LA4	0.15	0.5	1	3.1	3.7	2400	2750	3350	3350	3350	201	24100	50000
3.5	2.6	3950	1.4	1139	IE4	BK70G20-../S4E06LA4	0.13	0.43	0.85	2.6	3.1	2800	3300	3950	3950	3950	201	24100	50000
3.5	2.3	4450	1.3	1280	IE4	BK70G20-../S4E06LA4	0.11	0.39	0.75	2.3	2.8	3200	3700	4450	4450	4450	201	24100	50000
3.5	2	5000	1.1	1457	IE4	BK70G20-../S4E06LA4	0.1	0.34	0.65	2	2.4	3600	4200	5000	5000	5000	201	24100	50000
3.5	1.7	5900	0.96	1696	IE4	BK70G20-../S4E06LA4	0.085	0.29	0.55	1.7	2.1	4200	4900	5900	5900	5900	201	24100	50000
3.5	1.4	7100	0.8	2040	IE4	BK70G20-../S4E06LA4	0.07	0.24	0.49	1.4	1.7	5100	5900	7100	7100	7100	201	24100	50000

<b>M<sub>N</sub> = 5 Nm (P<sub>N</sub> = 1.55 kW)</b>																			
M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
5	410	33	2.2	7.25	IE5	BK06-../S5E08MA4	20.5	68	137	410	495	33	33	33	33	15	800	-	
5	305	44.5	1.8	9.71	IE5	BK06-../S5E08MA4	15	51	102	305	370	44.5	44.5	44.5	44.5	15	880	-	
5	255	53	1.5	11.67	IE5	BK06-../S5E08MA4	12.5	42.5	85	255	305	53	53	53	53	15	930	-	
5	196	69	1.1	15.29	IE5	BK06-../S5E08MA4	9.8	32.5	65	196	235	69	69	69	69	15	1020	-	
5	166	81	0.99	18	IE5	BK06-../S5E08MA4	8.3	27.5	55	166	200	81	81	81	81	15	1080	-	
5	139	96	0.83	21.54	IE5	BK06-../S5E08MA4	6.9	23	46	139	167	96	96	96	96	15	1150	-	
5	315	43	2.7	9.4	IE5	BK08-../S5E08MA4	15.5	53	106	315	380	43	43	43	43	27	2700	-	
5	250	54	2.1	11.93	IE5	BK08-../S5E08MA4	12.5	41.5	83	250	300	54	54	54	54	27	3100	-	
5	177	76	1.8	16.92	IE5	BK08-../S5E08MA4	8.8	29.5	59	177	210	76	76	76	76	27	3700	-	
5	161	83	2.4	18.52	IE5	BK08-../S5E08MA4	8	26.5	53	161	194	83	83	83	83	27	4300	-	
5	132	101	2	22.65	IE5	BK08-../S5E08MA4	6.6	22	44	132	158	101	101	101	101	27	4650	-	
5	104	129	1.5	28.76	IE5	BK08-../S5E08MA4	5.2	17	34.5	104	125	129	129						

Selection - bevel geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$ **M<sub>N</sub> = 5 Nm (P<sub>N</sub> = 1.55 kW)**

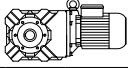
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
5	61	215	0.92	48.96	IE5	BK08-../S5E08MA4	3	10	20	61	73	215	215	215	215	215	27	6400	-
5	315	43	2.7	9.4	IE5	BK10-../S5E08MA4	15.5	53	106	315	380	43	43	43	43	43	27	2700	-
5	250	54	2.1	11.93	IE5	BK10-../S5E08MA4	12.5	41.5	83	250	300	54	54	54	54	54	27	3100	-
5	177	76	1.8	16.92	IE5	BK10-../S5E08MA4	8.8	29.5	59	177	210	76	76	76	76	76	27	3700	-
5	161	83	2.4	18.52	IE5	BK10-../S5E08MA4	8	26.5	53	161	194	83	83	83	83	83	27	4300	-
5	132	101	2	22.65	IE5	BK10-../S5E08MA4	6.6	22	44	132	158	101	101	101	101	101	27	4650	-
5	104	129	1.5	28.76	IE5	BK10-../S5E08MA4	5.2	17	34.5	104	125	129	129	129	129	129	27	5200	-
5	87	154	1.3	34.25	IE5	BK10-../S5E08MA4	4.3	14.5	29	87	105	154	154	154	154	154	27	5600	-
5	73	183	1.1	40.79	IE5	BK10-../S5E08MA4	3.6	12	24.5	73	88	183	183	183	183	183	27	6000	-
5	61	215	0.92	48.96	IE5	BK10-../S5E08MA4	3	10	20	61	73	215	215	215	215	215	27	6400	-
5	172	79	2.9	17.42	IE5	BK17-../S5E08MA4	8.6	28.5	57	172	205	79	79	79	79	79	36	3250	9000
5	123	109	3	24.29	IE5	BK17-../S5E08MA4	6.1	20.5	41	123	148	109	109	109	109	109	36	4500	9000
5	104	128	2.6	28.66	IE5	BK17-../S5E08MA4	5.2	17	34.5	104	125	128	128	128	128	128	36	4850	9000
5	81	165	2	36.69	IE5	BK17-../S5E08MA4	4	13.5	27	81	98	165	165	165	165	165	36	5400	9000
5	70	192	1.7	42.7	IE5	BK17-../S5E08MA4	3.5	11.5	23	70	84	192	192	192	192	192	36	5800	9000
5	58	225	1.4	51.22	IE5	BK17-../S5E08MA4	2.9	9.7	19.5	58	70	225	225	225	225	225	36	6300	9000
5	48.5	270	1.2	61.3	IE5	BK17-../S5E08MA4	2.4	8.1	16	48.5	58	270	270	270	270	270	36	6500	9000
5	39	335	0.98	76.79	IE5	BK17-../S5E08MA4	1.9	6.5	13	39	46.5	335	335	335	335	335	36	7500	9000
5	34	380	0.86	88.12	IE5	BK17-../S5E08MA4	1.7	5.6	11	34	40.5	380	380	380	380	380	36	8000	9000
5	172	79	2.9	17.42	IE5	BK20-../S5E08MA4	8.6	28.5	57	172	205	79	79	79	79	79	36	3250	9000
5	123	109	3	24.29	IE5	BK20-../S5E08MA4	6.1	20.5	41	123	148	109	109	109	109	109	36	4500	9000
5	104	128	2.6	28.66	IE5	BK20-../S5E08MA4	5.2	17	34.5	104	125	128	128	128	128	128	36	4850	9000
5	81	165	2	36.69	IE5	BK20-../S5E08MA4	4	13.5	27	81	98	165	165	165	165	165	36	5400	9000
5	70	192	1.7	42.7	IE5	BK20-../S5E08MA4	3.5	11.5	23	70	84	192	192	192	192	192	36	5800	9000
5	58	225	1.4	51.22	IE5	BK20-../S5E08MA4	2.9	9.7	19.5	58	70	225	225	225	225	225	36	6300	9000
5	48.5	270	1.2	61.3	IE5	BK20-../S5E08MA4	2.4	8.1	16	48.5	58	270	270	270	270	270	36	6500	9000
5	39	335	0.98	76.79	IE5	BK20-../S5E08MA4	1.9	6.5	13	39	46.5	335	335	335	335	335	36	7500	9000
5	34	380	0.86	88.12	IE5	BK20-../S5E08MA4	1.7	5.6	11	34	40.5	380	380	380	380	380	36	8000	9000
5	89	151	3	33.7	IE5	BK30-../S5E08MA4	4.4	14.5	29.5	89	106	151	151	151	151	151	42	7000	12000
5	69	190	2.4	42.89	IE5	BK30-../S5E08MA4	3.4	11.5	23	69	83	190	190	190	190	190	42	7800	12000
5	59	220	2	50.27	IE5	BK30-../S5E08MA4	2.9	9.9	19.5	59	71	220	220	220	220	220	42	8300	12000
5	50	260	1.7	59.27	IE5	BK30-../S5E08MA4	2.5	8.4	16.5	50	60	260	260	260	260	260	42	8900	12000
5	41.5	310	1.4	71.56	IE5	BK30-../S5E08MA4	2	6.9	13.5	41.5	50	310	310	310	310	310	42	9700	12000
5	33.5	380	1.2	88.38	IE5	BK30-../S5E08MA4	1.6	5.6	11	33.5	40.5	380	380	380	380	380	42	10600	12000
5	29	435	1	102.4	IE5	BK30-../S5E08MA4	1.4	4.8	9.7	29	35	435	435	435	435	435	42	11200	12000
5	24	520	0.85	123.9	IE5	BK30Z-../S5E08MA4	1.2	4	8	24	29	520	520	520	520	520	45	11200	12000
5	50	260	3	59.66	IE5	BK40-../S5E08MA4	2.5	8.3	16.5	50	60	260	260	260	260	260	63	9100	17000
5	42.5	300	2.6	70.11	IE5	BK40-../S5E08MA4	2.1	7.1	14	42.5	51	300	300	300	300	300	63	9800	17000
5	35.5	365	2.1	84.36	IE5	BK40-../S5E08MA4	1.7	5.9	11.5	35.5	42.5	365	365	365	365	365	63	10700	17000
5	28.5	440	1.8	104	IE5	BK40-../S5E08MA4	1.4	4.8	9.6	28.5	34.5	440	440	440	440	440	63	11700	17000
5	25	500	1.6	118.2	IE5	BK40Z-../S5E08MA4	1.2	4.2	8.4	25	30	500	500	500	500	500	67	11700	17000
5	20.5	600	1.3	143	IE5	BK40Z-../S5E08MA4	1	3.4	6.9	20.5	25	600	600	600	600	600	67	11700	17000
5	17.5	700	1.1	169	IE5	BK40Z-../S5E08MA4	0.85	2.9	5.9	17.5	21	700	700	700	700	700	67	11700	17000
5	14	860	0.9	211.5	IE5	BK40Z-../S5E08MA4	0.7	2.3	4.7	14	17	860	860	860	860	860	67	11700	17000
5	31	405	2.6	95.29	IE5	BK50-../S5E08MA4	1.5	5.2	10	31	37.5	405	405	405	405	405	91	14100	26000
5	25.5	490	2.1	115.4	IE5	BK50Z-../S5E08MA4	1.2	4.3	8.6	25.5	31	490	490	490	490	490	96	14100	26000
5	19.5	630	1.7	153.3	IE5	BK50Z-../S5E08MA4	0.95	3.2	6.5	19.5	23	630	630	630	630	630	96	14100	26000
5	14.5	840	1.2	206.8	IE5	BK50Z-../S5E08MA4	0.7	2.4	4.8	14.5	17	840	840	840	840	840	96	14100	26000
5	11	1070	0.98	264.5	IE5	BK50Z-../S5E08MA4	0.55	1.8	3.7	11	13.5	1070	1070	1070	1070	1070	96	14100	26000
5	19.5	760	3	153.7	IE5	BK60Z-../S5E08MA4	0.95	3.2	6.5	19.5	23	760	760	760	760	760	119	16600	34000
5	16	910	2.5	183.2	IE5	BK60Z-../S5E08MA4	0.8	2.7	5.4	16	19.5	910	910	910	910	910	119	16600	34000
5	14.5	1020	2.2	205	IE5	BK60Z-../S5E08MA4	0.7	2.4	4.8	14.5	17.5	1020	1020	1020	1020	1020	119	16600	34000
5	12.5	1190	1.9	239.7	IE5	BK60Z-../S5E08MA4	0.6	2	4.1	12.5	15	1190	1190	1190	1190	1190	119	16600	34000
5	11	1340	1.7	268.2	IE5	BK60Z-../S5E08MA4	0.55	1.8	3.7	11	13	1340	1340	1340	1340	1340	119	16600	34000
5	9.4	1580	1.4	317.7	IE5	BK60Z-../S5E08MA4	0.47	1.5	3.1	9.4	11	1580	1580	1580	1580	1580	119	16600	34000
5	8.4	1770	1.3	355.5	IE5	BK60Z-../S5E08MA4	0.42	1.4	2.8	8.4	10	1770	1770	1770	1770	1770	119	16600	34000
5	7.2	2050	1.1	411.5	IE5	BK60Z-../S5E08MA4	0.36	1.2	2.4	7.2	8.7	2050	2050	2050	2050	2050	119	16600	34000
5	6.5	2300	1	460.4	IE5	BK60Z-../S5E08MA4	0.32	1	2.1	6.5	7.8	2300	2300	2300	2300	2300	119	16600	34000
5	6	2450	0.92	498	IE5	BK60Z-../S5E08MA4	0.3	1	2	6	7.2	2450	2450	2450	2450	2450	119	16600	34000
5	5.3	2750	0.83	557.2	IE5	BK60Z-../S5E08MA4	0.26	0.85	1.7	5.3	6.4	2750	2750	2750	2750	2750	119	16600	34000
5	4.8	3100	0.8	621.5	IE5	BK60G20-../S5E08MA4	0.24	0.8	1.6	4.8	5.7	3100	3100	3100	3100	3100	126	16600	34000
5	7.8	1890	2.7	379.9	IE5	BK70Z-../S5E08MA4	0.39	1.3	2.6	7.8	9.4	1890	1890	1890	1890	1890	207	24100	50000
5	6.9	2150	2.4	432.1	IE5	BK70Z-../S5E08MA4	0.34	1.1	2.3	6.9	8.3	2150	2150	2150	2150	2150	207	24100	50000
5	5.9	2500	2.1	501.8	IE5	BK70Z-../S5E08MA4	0.29	0.95	1.9	5.9	7.1	2500	2500	2500	2500	2500	207	24100	50000
5	5.2	2850	1.8	570.8	IE5	BK70Z-../S5E08MA4	0.26	0.85	1.7	5.2	6.3	2850	2850	2850	2850	2850	207	24100	50000
5	4.6	3200	1.6	644.9	IE5	BK70Z-../S5E08MA4	0.23	0.75	1.5	4.6	5.5	3200	3200	3200	3200	3200	207	24100	50000
5	4	3650	1.4	733.6	IE5	BK70Z-../S5E08MA4	0.2	0.65	1.3	4	4.9	3650	3650	3650	3650	3650	207	24100	50000
5	3.5																		



# BK-series bevel geared motors

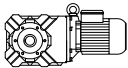
## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

**$M_N = 5 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**

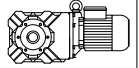


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							0.11	0.38	0.75	2.2	2.7	6500	6500	6500	6500	6500			
5	2.2	6500	1.8	1307	IE5	BK80G40-../S5E08MA4	0.11	0.38	0.75	2.2	2.7	6500	6500	6500	6500	6500	347	30000	75000
5	2.1	7100	1.6	1425	IE5	BK80G40-../S5E08MA4	0.1	0.35	0.7	2.1	2.5	7100	7100	7100	7100	7100	347	30000	75000
5	1.8	7900	1.5	1583	IE5	BK80G40-../S5E08MA4	0.09	0.31	0.6	1.8	2.2	7900	7900	7900	7900	7900	347	30000	75000
5	1.6	8800	1.3	1775	IE5	BK80G40-../S5E08MA4	0.08	0.28	0.55	1.6	2	8800	8800	8800	8800	8800	347	30000	75000
5	1.3	11000	1	2205	IE5	BK80G40-../S5E08MA4	0.065	0.22	0.45	1.3	1.6	11000	11000	11000	11000	11000	347	30000	75000
5	1.2	12200	0.94	2449	IE5	BK80G40-../S5E08MA4	0.06	0.2	0.4	1.2	1.4	12200	12200	12200	12200	12200	347	30000	75000
5	1	14000	0.82	2811	IE5	BK80G40-../S5E08MA4	0.05	0.17	0.35	1	1.2	14000	14000	14000	14000	14000	347	30000	75000
5	2.2	6800	2.7	1363	IE5	BK90G50-../S5E08MA4	0.11	0.36	0.7	2.2	2.6	6800	6800	6800	6800	6800	620	49400	120000
5	1.8	7800	2.3	1579	IE5	BK90G50-../S5E08MA4	0.09	0.31	0.6	1.8	2.2	7800	7800	7800	7800	7800	620	49400	120000
5	1.6	9000	2.1	1803	IE5	BK90G50-../S5E08MA4	0.08	0.27	0.55	1.6	1.9	9000	9000	9000	9000	9000	620	49400	120000
5	1.4	10000	1.8	2016	IE5	BK90G50-../S5E08MA4	0.07	0.24	0.49	1.4	1.7	10000	10000	10000	10000	10000	620	49400	120000
5	1	13800	1.3	2764	IE5	BK90G50-../S5E08MA4	0.05	0.18	0.36	1	1.3	13800	13800	13800	13800	13800	620	49400	120000
5	0.95	15300	1.2	3065	IE5	BK90G50-../S5E08MA4	0.048	0.16	0.32	0.95	1.1	15300	15300	15300	15300	15300	620	49400	120000
5	0.8	18300	1	3672	IE5	BK90G50-../S5E08MA4	0.04	0.13	0.27	0.8	0.95	18300	18300	18300	18300	18300	620	49400	120000
5	0.7	20000	0.91	4070	IE5	BK90G50-../S5E08MA4	0.036	0.12	0.24	0.7	0.85	20000	20000	20000	20000	20000	620	49400	120000

**$M_N = 7 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							20.5	68	137	410	495	33	39	46.5	46.5	46.5			
7	410	46.5	1.6	7.25	IE4	BK06-../S4E08MA4	20.5	68	137	410	495	33	39	46.5	46.5	46.5	15	800	-
7	410	46.5	1.6	7.25	IE5	BK06-../S5E08LA4	20.5	68	137	410	495	43	46.5	46.5	46.5	46.5	16	800	-
7	305	62	1.3	9.71	IE4	BK06-../S4E08MA4	15	51	102	305	370	44.5	52	62	62	62	15	880	-
7	305	62	1.3	9.71	IE5	BK06-../S5E08LA4	15	51	102	305	370	58	62	62	62	62	16	880	-
7	255	75	1.1	11.67	IE4	BK06-../S4E08MA4	12.5	42.5	85	255	305	53	63	75	75	75	15	930	-
7	255	75	1.1	11.67	IE5	BK06-../S5E08LA4	12.5	42.5	85	255	305	69	75	75	75	75	16	930	-
7	196	97	0.82	15.29	IE4	BK06-../S4E08MA4	9.8	32.5	65	196	235	69	82	97	97	97	15	1020	-
7	196	97	0.82	15.29	IE5	BK06-../S5E08LA4	9.8	32.5	65	196	235	90	97	97	97	97	16	1020	-
7	495	38.5	2.7	6.02	IE4	BK08-../S4E08MA4	24.5	83	166	495	590	27.5	32.5	38.5	38.5	38.5	27	2100	-
7	495	38.5	2.7	6.02	IE5	BK08-../S5E08LA4	24.5	83	166	495	590	35.5	38.5	38.5	38.5	38.5	28	2100	-
7	390	49	2.3	7.68	IE4	BK08-../S4E08MA4	19.5	65	130	390	465	35	41.5	49	49	49	27	2400	-
7	390	49	2.3	7.68	IE5	BK08-../S5E08LA4	19.5	65	130	390	465	45.5	49	49	49	49	28	2400	-
7	315	60	1.9	9.4	IE4	BK08-../S4E08MA4	15.5	53	106	315	380	43	51	60	60	60	27	2700	-
7	315	60	1.9	9.4	IE5	BK08-../S5E08LA4	15.5	53	106	315	380	56	60	60	60	60	28	2700	-
7	280	67	2.7	10.7	IE4	BK08-../S4E08MA4	14	46.5	93	280	335	48	56	67	67	67	27	3500	-
7	280	67	2.7	10.7	IE5	BK08-../S5E08LA4	14	46.5	93	280	335	62	67	67	67	67	28	3500	-
7	250	76	1.5	11.93	IE4	BK08-../S4E08MA4	12.5	41.5	83	250	300	54	64	76	76	76	27	3100	-
7	250	76	1.5	11.93	IE5	BK08-../S5E08LA4	12.5	41.5	83	250	300	71	76	76	76	76	28	3100	-
7	205	91	2.2	14.5	IE4	BK08-../S4E08MA4	10	34	68	205	245	65	76	91	91	91	27	3900	-
7	205	91	2.2	14.5	IE5	BK08-../S5E08LA4	10	34	68	205	245	84	91	91	91	91	28	3900	-
7	177	106	1.3	16.92	IE4	BK08-../S4E08MA4	8.8	29.5	59	177	210	76	89	106	106	106	27	3700	-
7	177	106	1.3	16.92	IE5	BK08-../S5E08LA4	8.8	29.5	59	177	210	98	106	106	106	106	28	3700	-
7	161	116	1.7	18.52	IE4	BK08-../S4E08MA4	8	26.5	53	161	194	83	98	116	116	116	27	4300	-
7	161	116	1.7	18.52	IE5	BK08-../S5E08LA4	8	26.5	53	161	194	108	116	116	116	116	28	4300	-
7	132	142	1.4	22.65	IE4	BK08-../S4E08MA4	6.6	22	44	132	158	101	120	142	142	142	27	4650	-
7	132	142	1.4	22.65	IE5	BK08-../S5E08LA4	6.6	22	44	132	158	132	142	142	142	142	28	4650	-
7	104	181	1.1	28.76	IE4	BK08-../S4E08MA4	5.2	17	34.5	104	125	129	152	181	181	181	27	5200	-
7	104	181	1.1	28.76	IE5	BK08-../S5E08LA4	5.2	17	34.5	104	125	168	181	181	181	181	28	5200	-
7	87	215	0.93	34.25	IE4	BK08-../S4E08MA4	4.3	14.5	29	87	105	154	181	215	215	215	27	5600	-
7	87	215	0.93	34.25	IE5	BK08-../S5E08LA4	4.3	14.5	29	87	105	200	215	215	215	215	28	5600	-
7	495	38.5	2.7	6.02	IE4	BK10-../S4E08MA4	24.5	83	166	495	590	27.5	32.5	38.5	38.5	38.5	27	2100	-
7	495	38.5	2.7	6.02	IE5	BK10-../S5E08LA4	24.5	83	166	495	590	35.5	38.5	38.5	38.5	38.5	28	2100	-
7	390	49	2.3	7.68	IE4	BK10-../S4E08MA4	19.5	65	130	390	465	35	41.5	49	49	49	27	2400	-
7	390	49	2.3	7.68	IE5	BK10-../S5E08LA4	19.5	65	130	390	465	45.5	49	49	49	49	28	2400	-
7	315	60	1.9	9.4	IE4	BK10-../S4E08MA4	15.5	53	106	315	380	43	51	60	60	60	27	2700	-
7	315	60	1.9	9.4	IE5	BK10-../S5E08LA4	15.5	53	106	315	380	56	60	60	60	60	28	2700	-
7	280	67	2.7	10.7	IE4	BK10-../S4E08MA4	14	46.5	93	280	335	48	56	67	67	67	27	3500	-
7	280	67	2.7	10.7	IE5	BK10-../S5E08LA4	14	46.5	93	280	335	62	67	67	67	67	28	3500	-
7	250	76	1.5	11.93	IE4	BK10-../S4E08MA4	12.5	41.5	83	250	300	54	64	76	76	76	27	3100	-
7	250	76	1.5	11.93	IE5	BK10-../S5E08LA4	12.5	41.5	83	250	300	71	76	76	76	76	28	3100	-
7	205	91	2.2	14.5	IE4	BK10-../S4E08MA4	10	34	68	205	245	65	76	91	91	91	27	3900	-
7	205	91	2.2	14.5	IE5	BK10-../S5E08LA4	10	34	68	205	245	84	91	91	91	91	28	3900	-
7	177	106	1.3	16.92	IE4	BK10-../S4E08MA4	8.8	29.5	59	177	210	76	89	106	106	106	27	3700	-
7	177	106	1.3	16.92	IE5	BK10-../S5E08LA4	8.8	29.5	59	177	210	98	106	106	106	106	28	3700	-
7	161	116	1.7	18.52	IE4	BK10-../S4E08MA4	8	26.5	53	161	194	83	98	116	116	116	27	4300	-
7	161	116	1.7	18.52	IE5	BK10-../S5E08LA4	8	26.5	53	161	194	108	116	116	116	116	28	4300	-
7	132	142	1.4	22.65	IE4	BK10-../S4E08MA4	6.6	22	44	132	158	101	120	142	142	142	27	4650	-
7	132	142	1.4	22.65	IE5	BK10-../S5E08LA4	6.6	22	44	132	158	132	142	142	142	142	28	4650	-
7	104	181	1.1	28.76	IE4	BK10-../S4E08MA4	5.2	17	34.5	104	125	129	152	181	181	181	27	5200	-
7																			

Selection - bevel geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$ **M<sub>N</sub> = 7 Nm (P<sub>N</sub> = 2.2 kW)**

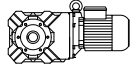
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
7	123	153	2.2	24.29	IE4	BK17-../S4E08MA4	6.1	20.5	41	123	148	109	128	153	153	153	36	4500	9000
7	123	153	2.2	24.29	IE5	BK17-../S5E08LA4	6.1	20.5	41	123	148	142	153	153	153	153	38	4500	9000
7	104	180	1.8	28.66	IE4	BK17-../S4E08MA4	5.2	17	34.5	104	125	128	152	180	180	180	36	4850	9000
7	104	180	1.8	28.66	IE5	BK17-../S5E08LA4	5.2	17	34.5	104	125	167	180	180	180	180	38	4850	9000
7	81	230	1.4	36.69	IE4	BK17-../S4E08MA4	4	13.5	27	81	98	165	194	230	230	230	36	5400	9000
7	81	230	1.4	36.69	IE5	BK17-../S5E08LA4	4	13.5	27	81	98	210	230	230	230	230	38	5400	9000
7	70	265	1.2	42.7	IE4	BK17-../S4E08MA4	3.5	11.5	23	70	84	192	225	265	265	265	36	5800	9000
7	70	265	1.2	42.7	IE5	BK17-../S5E08LA4	3.5	11.5	23	70	84	245	265	265	265	265	38	5800	9000
7	58	315	1	51.22	IE4	BK17-../S4E08MA4	2.9	9.7	19.5	58	70	225	265	315	315	315	36	6300	9000
7	58	315	1	51.22	IE5	BK17-../S5E08LA4	2.9	9.7	19.5	58	70	295	315	315	315	315	38	6300	9000
7	48.5	380	0.86	61.3	IE4	BK17-../S4E08MA4	2.4	8.1	16	48.5	58	270	320	380	380	380	36	6500	9000
7	48.5	380	0.86	61.3	IE5	BK17-../S5E08LA4	2.4	8.1	16	48.5	58	350	380	380	380	380	38	6500	9000
7	172	110	2.1	17.42	IE4	BK20-../S4E08MA4	8.6	28.5	57	172	205	79	93	110	110	110	36	3250	9000
7	172	110	2.1	17.42	IE5	BK20-../S5E08LA4	8.6	28.5	57	172	205	103	110	110	110	110	38	3250	9000
7	154	122	2.7	19.39	IE4	BK20-../S4E08MA4	7.7	25.5	51	154	185	87	102	122	122	122	36	4050	9000
7	154	122	2.7	19.39	IE5	BK20-../S5E08LA4	7.7	25.5	51	154	185	113	122	122	122	122	38	4050	9000
7	123	153	2.2	24.29	IE4	BK20-../S4E08MA4	6.1	20.5	41	123	148	109	128	153	153	153	36	4500	9000
7	123	153	2.2	24.29	IE5	BK20-../S5E08LA4	6.1	20.5	41	123	148	142	153	153	153	153	38	4500	9000
7	104	180	1.8	28.66	IE4	BK20-../S4E08MA4	5.2	17	34.5	104	125	128	152	180	180	180	36	4850	9000
7	104	180	1.8	28.66	IE5	BK20-../S5E08LA4	5.2	17	34.5	104	125	167	180	180	180	180	38	4850	9000
7	81	230	1.4	36.69	IE4	BK20-../S4E08MA4	4	13.5	27	81	98	165	194	230	230	230	36	5400	9000
7	81	230	1.4	36.69	IE5	BK20-../S5E08LA4	4	13.5	27	81	98	210	230	230	230	230	38	5400	9000
7	70	265	1.2	42.7	IE4	BK20-../S4E08MA4	3.5	11.5	23	70	84	192	225	265	265	265	36	5800	9000
7	70	265	1.2	42.7	IE5	BK20-../S5E08LA4	3.5	11.5	23	70	84	245	265	265	265	265	38	5800	9000
7	58	315	1	51.22	IE4	BK20-../S4E08MA4	2.9	9.7	19.5	58	70	225	265	315	315	315	36	6300	9000
7	58	315	1	51.22	IE5	BK20-../S5E08LA4	2.9	9.7	19.5	58	70	295	315	315	315	315	38	6300	9000
7	48.5	380	0.86	61.3	IE4	BK20-../S4E08MA4	2.4	8.1	16	48.5	58	270	320	380	380	380	36	6500	9000
7	48.5	380	0.86	61.3	IE5	BK20-../S5E08LA4	2.4	8.1	16	48.5	58	350	380	380	380	380	38	6500	9000
7	143	132	2.4	20.85	IE4	BK30-../S4E08MA4	7.1	23.5	47.5	143	172	94	111	132	132	132	42	5000	12000
7	143	132	2.4	20.85	IE5	BK30-../S5E08LA4	7.1	23.5	47.5	143	172	123	132	132	132	132	44	5000	12000
7	104	181	2.5	28.76	IE4	BK30-../S4E08MA4	5.2	17	34.5	104	125	129	152	181	181	181	42	6500	12000
7	104	181	2.5	28.76	IE5	BK30-../S5E08LA4	5.2	17	34.5	104	125	168	181	181	181	181	44	6500	12000
7	89	210	2.1	33.7	IE4	BK30-../S4E08MA4	4.4	14.5	29.5	89	106	151	178	210	210	210	42	7000	12000
7	89	210	2.1	33.7	IE5	BK30-../S5E08LA4	4.4	14.5	29.5	89	106	197	210	210	210	210	44	7000	12000
7	69	265	1.7	42.89	IE4	BK30-../S4E08MA4	3.4	11.5	23	69	83	190	225	265	265	265	42	7800	12000
7	69	265	1.7	42.89	IE5	BK30-../S5E08LA4	3.4	11.5	23	69	83	245	265	265	265	265	44	7800	12000
7	59	305	1.5	50.27	IE4	BK30-../S4E08MA4	2.9	9.9	19.5	59	71	220	260	305	305	305	42	8300	12000
7	59	305	1.5	50.27	IE5	BK30-../S5E08LA4	2.9	9.9	19.5	59	71	285	305	305	305	305	44	8300	12000
7	50	365	1.2	59.27	IE4	BK30-../S4E08MA4	2.5	8.4	16.5	50	60	260	305	365	365	365	42	8900	12000
7	50	365	1.2	59.27	IE5	BK30-../S5E08LA4	2.5	8.4	16.5	50	60	335	365	365	365	365	44	8900	12000
7	41.5	435	1	71.56	IE4	BK30-../S4E08MA4	2	6.9	13.5	41.5	50	310	365	435	435	435	42	9700	12000
7	41.5	435	1	71.56	IE5	BK30-../S5E08LA4	2	6.9	13.5	41.5	50	400	435	435	435	435	44	9700	12000
7	33.5	530	0.85	88.38	IE4	BK30-../S4E08MA4	1.6	5.6	11	33.5	40.5	380	445	530	530	530	42	10600	12000
7	33.5	530	0.85	88.38	IE5	BK30-../S5E08LA4	1.6	5.6	11	33.5	40.5	490	530	530	530	530	44	10600	12000
7	73	255	3	40.88	IE4	BK40-../S4E08MA4	3.6	12	24	73	88	183	215	255	255	255	63	7600	17000
7	73	255	3	40.88	IE5	BK40-../S5E08LA4	3.6	12	24	73	88	235	255	255	255	255	64	7600	17000
7	58	315	2.5	51.18	IE4	BK40-../S4E08MA4	2.9	9.7	19.5	58	70	225	265	315	315	315	63	8400	17000
7	58	315	2.5	51.18	IE5	BK40-../S5E08LA4	2.9	9.7	19.5	58	70	290	315	315	315	315	64	8400	17000
7	50	365	2.1	59.66	IE4	BK40-../S4E08MA4	2.5	8.3	16.5	50	60	260	305	365	365	365	63	9100	17000
7	50	365	2.1	59.66	IE5	BK40-../S5E08LA4	2.5	8.3	16.5	50	60	340	365	365	365	365	64	9100	17000
7	42.5	425	1.8	70.11	IE4	BK40-../S4E08MA4	2.1	7.1	14	42.5	51	300	355	425	425	425	63	9800	17000
7	42.5	425	1.8	70.11	IE5	BK40-../S5E08LA4	2.1	7.1	14	42.5	51	395	425	425	425	425	64	9800	17000
7	35.5	510	1.5	84.36	IE4	BK40-../S4E08MA4	1.7	5.9	11.5	35.5	42.5	365	430	510	510	510	63	10700	17000
7	35.5	510	1.5	84.36	IE5	BK40-../S5E08LA4	1.7	5.9	11.5	35.5	42.5	475	510	510	510	510	64	10700	17000
7	28.5	610	1.3	104	IE4	BK40-../S4E08MA4	1.4	4.8	9.6	28.5	34.5	440	520	610	610	610	63	11700	17000
7	28.5	610	1.3	104	IE5	BK40-../S5E08LA4	1.4	4.8	9.6	28.5	34.5	570	610	610	610	610	64	11700	17000
7	25	700	1.1	118.2	IE4	BK40Z-../S4E08MA4	1.2	4.2	8.4	25	30	500	590	700	700	700	67	11700	17000
7	25	700	1.1	118.2	IE5	BK40Z-../S5E08LA4	1.2	4.2	8.4	25	30	650	700	700	700	700	69	11700	17000
7	20.5	840	0.93	143	IE4	BK40Z-../S4E08MA4	1	3.4	6.9	20.5	25	600	700	840	840	840	67	11700	17000
7	20.5	840	0.93	143	IE5	BK40Z-../S5E08LA4	1	3.4	6.9	20.5	25	780	840	840	840	840	69	11700	17000
7	49	370	2.8	60.76	IE4	BK50-../S4E08MA4	2.4	8.2	16	49	59	265	315	370	370	370	91	11400	26000
7	49	370	2.8	60.76	IE5	BK50-../S5E08LA4	2.4	8.2	16	49	59	345	370	370	370	370	93	11400	26000
7	39.5	455	2.3	75.4	IE4	BK50-../S4E08MA4	1.9	6.6	13	39.5	47.5	325	385	455	455	455	91	12600	26000
7	39.5	455	2.3	75.4	IE5	BK50-../S5E08LA4	1.9	6.6	13	39.5	47.5	425	455	455	455	455	93	12600	26000
7	31	570	1.8	95.29	IE4	BK50-../S4E08MA4	1.5	5.2	10	31	37.5	405	480	570	570	570	91	14100	26000
7	31	570	1.8	95.29	IE5	BK50-../S5E08LA4	1.5	5.2	10	31	37.5	530	570	570	570	570	93	14100	26000
7	25.5	680	1.5	115.4	IE4	BK50Z-../S4E08MA4	1.2	4.3	8.6	25.5	31	490	570	680	680	680	96	14100	26000
7	25.5	680	1.5	115.4	IE5	BK50Z-../S5E08LA4	1.2	4.3	8.6	25.5	31	630	680	680					



# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

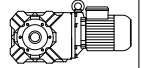
**$M_N = 7 \text{ Nm}$  ( $P_N = 2.2 \text{ kW}$ )**



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[:1]															
7	12.5	1670	1.4	239.7	IE5	BK60Z-../S5E08LA4	0.6	2	4.1	12.5	15	1550	1670	1670	1670	120	16600	34000	
7	11	1870	1.2	268.2	IE4	BK60Z-../S4E08MA4	0.55	1.8	3.7	11	13	1340	1580	1870	1870	119	16600	34000	
7	11	1870	1.2	268.2	IE5	BK60Z-../S5E08LA4	0.55	1.8	3.7	11	13	1740	1870	1870	1870	120	16600	34000	
7	9.4	2200	1	317.7	IE4	BK60Z-../S4E08MA4	0.47	1.5	3.1	9.4	11	1580	1870	2200	2200	119	16600	34000	
7	9.4	2200	1	317.7	IE5	BK60Z-../S5E08LA4	0.47	1.5	3.1	9.4	11	2050	2200	2200	2200	120	16600	34000	
7	8.4	2450	0.92	355.5	IE4	BK60Z-../S4E08MA4	0.42	1.4	2.8	8.4	10	1770	2050	2450	2450	119	16600	34000	
7	8.4	2450	0.92	355.5	IE5	BK60Z-../S5E08LA4	0.42	1.4	2.8	8.4	10	2300	2450	2450	2450	120	16600	34000	
7	7.2	2850	0.8	411.5	IE4	BK60Z-../S4E08MA4	0.36	1.2	2.4	7.2	8.7	2050	2400	2850	2850	119	16600	34000	
7	7.2	2850	0.8	411.5	IE5	BK60Z-../S5E08LA4	0.36	1.2	2.4	7.2	8.7	2650	2850	2850	2850	120	16600	34000	
7	11.5	1800	2.9	257.3	IE4	BK70Z-../S4E08MA4	0.55	1.9	3.8	11.5	13.5	1280	1510	1800	1800	207	24100	50000	
7	11.5	1800	2.9	257.3	IE5	BK70Z-../S5E08LA4	0.55	1.9	3.8	11.5	13.5	1670	1800	1800	1800	208	24100	50000	
7	10	2050	2.5	293.3	IE4	BK70Z-../S4E08MA4	0.5	1.7	3.4	10	12	1460	1730	2050	2050	207	24100	50000	
7	10	2050	2.5	293.3	IE5	BK70Z-../S5E08LA4	0.5	1.7	3.4	10	12	1900	2050	2050	2050	208	24100	50000	
7	8.9	2300	2.2	333.6	IE4	BK70Z-../S4E08MA4	0.44	1.4	2.9	8.9	10.5	1660	1960	2300	2300	207	24100	50000	
7	8.9	2300	2.2	333.6	IE5	BK70Z-../S5E08LA4	0.44	1.4	2.9	8.9	10.5	2150	2300	2300	2300	208	24100	50000	
7	7.8	2650	2	379.9	IE4	BK70Z-../S4E08MA4	0.39	1.3	2.6	7.8	9.4	1890	2200	2650	2650	207	24100	50000	
7	7.8	2650	2	379.9	IE5	BK70Z-../S5E08LA4	0.39	1.3	2.6	7.8	9.4	2450	2650	2650	2650	208	24100	50000	
7	6.9	3000	1.7	432.1	IE4	BK70Z-../S4E08MA4	0.34	1.1	2.3	6.9	8.3	2150	2500	3000	3000	207	24100	50000	
7	6.9	3000	1.7	432.1	IE5	BK70Z-../S5E08LA4	0.34	1.1	2.3	6.9	8.3	2800	3000	3000	3000	208	24100	50000	
7	5.9	3500	1.5	501.8	IE4	BK70Z-../S4E08MA4	0.29	0.95	1.9	5.9	7.1	2500	2950	3500	3500	207	24100	50000	
7	5.9	3500	1.5	501.8	IE5	BK70Z-../S5E08LA4	0.29	0.95	1.9	5.9	7.1	3250	3500	3500	3500	208	24100	50000	
7	5.2	3950	1.3	570.8	IE4	BK70Z-../S4E08MA4	0.26	0.85	1.7	5.2	6.3	2850	3350	3950	3950	207	24100	50000	
7	5.2	3950	1.3	570.8	IE5	BK70Z-../S5E08LA4	0.26	0.85	1.7	5.2	6.3	3700	3950	3950	3950	208	24100	50000	
7	4.6	4500	1.2	644.9	IE4	BK70Z-../S4E08MA4	0.23	0.75	1.5	4.6	5.5	3200	3800	4500	4500	207	24100	50000	
7	4.6	4500	1.2	644.9	IE5	BK70Z-../S5E08LA4	0.23	0.75	1.5	4.6	5.5	4150	4500	4500	4500	208	24100	50000	
7	4	5100	1	733.6	IE4	BK70Z-../S4E08MA4	0.2	0.65	1.3	4	4.9	3650	4300	5100	5100	207	24100	50000	
7	4	5100	1	733.6	IE5	BK70Z-../S5E08LA4	0.2	0.65	1.3	4	4.9	4750	5100	5100	5100	208	24100	50000	
7	3.5	5900	0.96	847.7	IE4	BK70G20-../S4E08MA4	0.17	0.55	1.1	3.5	4.2	4200	5000	5900	5900	205	24100	50000	
7	3.5	5900	0.96	847.7	IE5	BK70G20-../S5E08LA4	0.17	0.55	1.1	3.5	4.2	5500	5900	5900	5900	206	24100	50000	
7	3.1	6700	0.84	964.6	IE4	BK70G20-../S4E08MA4	0.15	0.5	1	3.1	3.7	4800	5600	6700	6700	205	24100	50000	
7	3.1	6700	0.84	964.6	IE5	BK70G20-../S5E08LA4	0.15	0.5	1	3.1	3.7	6200	6700	6700	6700	206	24100	50000	
7	4.9	4250	2.7	607.8	IE4	BK80G40-../S4E08MA4	0.24	0.8	1.6	4.9	5.9	3000	3550	4250	4250	347	30000	75000	
7	4.9	4250	2.7	607.8	IE5	BK80G40-../S5E08LA4	0.24	0.8	1.6	4.9	5.9	3950	4250	4250	4250	348	30000	75000	
7	4.4	4750	2.4	680.9	IE4	BK80G40-../S4E08MA4	0.22	0.7	1.4	4.4	5.2	3400	4000	4750	4750	347	30000	75000	
7	4.4	4750	2.4	680.9	IE5	BK80G40-../S5E08LA4	0.22	0.7	1.4	4.4	5.2	4400	4750	4750	4750	348	30000	75000	
7	3.9	5200	2.2	756.3	IE4	BK80G40-../S4E08MA4	0.19	0.65	1.3	3.9	4.7	3750	4450	5200	5200	347	30000	75000	
7	3.9	5200	2.2	756.3	IE5	BK80G40-../S5E08LA4	0.19	0.65	1.3	3.9	4.7	4900	5200	5200	5200	348	30000	75000	
7	3.5	5900	1.9	847.2	IE4	BK80G40-../S4E08MA4	0.17	0.55	1.1	3.5	4.2	4200	4950	5900	5900	347	30000	75000	
7	3.5	5900	1.9	847.2	IE5	BK80G40-../S5E08LA4	0.17	0.55	1.1	3.5	4.2	5500	5900	5900	5900	348	30000	75000	
7	3.1	6700	1.7	963	IE4	BK80G40-../S4E08MA4	0.15	0.5	1	3.1	3.7	4800	5600	6700	6700	347	30000	75000	
7	3.1	6700	1.7	963	IE5	BK80G40-../S5E08LA4	0.15	0.5	1	3.1	3.7	6200	6700	6700	6700	348	30000	75000	
7	2.7	7500	1.5	1079	IE4	BK80G40-../S4E08MA4	0.13	0.46	0.9	2.7	3.3	5300	6300	7500	7500	347	30000	75000	
7	2.7	7500	1.5	1079	IE5	BK80G40-../S5E08LA4	0.13	0.46	0.9	2.7	3.3	7000	7500	7500	7500	348	30000	75000	
7	2.2	9100	1.3	1307	IE4	BK80G40-../S4E08MA4	0.11	0.38	0.75	2.2	2.7	6500	7700	9100	9100	347	30000	75000	
7	2.2	9100	1.3	1307	IE5	BK80G40-../S5E08LA4	0.11	0.38	0.75	2.2	2.7	8400	9100	9100	9100	348	30000	75000	
7	2.1	9900	1.2	1425	IE4	BK80G40-../S4E08MA4	0.1	0.35	0.7	2.1	2.5	7100	8400	9900	9900	347	30000	75000	
7	2.1	9900	1.2	1425	IE5	BK80G40-../S5E08LA4	0.1	0.35	0.7	2.1	2.5	9200	9900	9900	9900	348	30000	75000	
7	1.8	11000	1	1583	IE4	BK80G40-../S4E08MA4	0.09	0.31	0.6	1.8	2.2	7900	9300	11000	11000	347	30000	75000	
7	1.8	11000	1	1583	IE5	BK80G40-../S5E08LA4	0.09	0.31	0.6	1.8	2.2	10200	11000	11000	11000	348	30000	75000	
7	1.6	12400	0.93	1775	IE4	BK80G40-../S4E08MA4	0.08	0.28	0.55	1.6	2	8800	10400	12400	12400	347	30000	75000	
7	1.6	12400	0.93	1775	IE5	BK80G40-../S5E08LA4	0.08	0.28	0.55	1.6	2	11500	12400	12400	12400	348	30000	75000	
7	3.4	6100	3	882.3	IE4	BK90G50-../S4E08MA4	0.17	0.55	1.1	3.4	4	4400	5200	6100	6100	620	49400	120000	
7	3.4	6100	3	882.3	IE5	BK90G50-../S5E08LA4	0.17	0.55	1.1	3.4	4	5700	6100	6100	6100	621	49400	120000	
7	2.9	7000	2.6	1008	IE4	BK90G50-../S4E08MA4	0.14	0.49	0.95	2.9	3.5	5000	5900	7000	7000	620	49400	120000	
7	2.9	7000	2.6	1008	IE5	BK90G50-../S5E08LA4	0.14	0.49	0.95	2.9	3.5	6500	7000	7000	7000	621	49400	120000	
7	2.6	7800	2.3	1127	IE4	BK90G50-../S4E08MA4	0.13	0.44	0.85	2.6	3.1	5600	6600	7800	7800	620	49400	120000	
7	2.6	7800	2.3	1127	IE5	BK90G50-../S5E08LA4	0.13	0.44	0.85	2.6	3.1	7300	7800	7800	7800	621	49400	120000	
7	2.2	9500	1.9	1363	IE4	BK90G50-../S4E08MA4	0.11	0.36	0.7	2.2	2.6	6800	8000	9500	9500	620	49400	120000	
7	2.2	9500	1.9	1363	IE5	BK90G50-../S5E08LA4	0.11	0.36	0.7	2.2	2.6	8800	9500	9500	9500	621	49400	120000	
7	1.8	11000	1.7	1579	IE4	BK90G50-../S4E08MA4	0.09	0.31	0.6	1.8	2.2	7800	9300	11000	11000	620	49400	120000	
7	1.8	11000	1.7	1579	IE5	BK90G50-../S5E08LA4	0.09	0.31	0.6	1.8	2.2	10200	11000	11000	11000	621	49400	120000	
7	1.6	12600	1.5	1803	IE4	BK90G50-../S4E08MA4	0.08	0.27	0.55	1.6	1.9	9000	10600	12600	12600	620	49400	120000	
7	1.6	12600	1.5	1803	IE5	BK90G50-../S5E08LA4	0.08	0.27	0.55	1.6	1.9	11700	12600	12600	12600	621	49400	120000	
7	1.4	14100	1.3	2016	IE4	BK90G50-../S4E08MA4	0.07	0.24	0.49	1.4	1.7	10000	11800	14100	14100	620	49400	120000	
7	1.4	14100	1.3	2016	IE5	BK90G50-../S5E08LA4	0.07	0.24	0.49	1.4	1.7	13100	14100	14100	14100	621	49400	120000	
7																			

# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

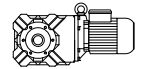
 **$M_N = 10 \text{ Nm}$  ( $P_N = 3.1 \text{ kW}$ )**


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
10	410	66	1.1	7.25	IE3	BK06-../SPE08LA4	20.5	68	137	410	495	43	53	66	66	66	16	800	-
10	305	89	0.9	9.71	IE3	BK06-../SPE08LA4	15	51	102	305	370	58	71	89	89	89	16	880	-
10	670	40.5	2.3	4.44	IE3	BK08-../SPE08LA4	33.5	112	225	670	810	26.5	32.5	40.5	40.5	40.5	28	1900	-
10	495	55	1.9	6.02	IE3	BK08-../SPE08LA4	24.5	83	166	495	590	35.5	44	55	55	55	28	2100	-
10	390	70	1.6	7.68	IE3	BK08-../SPE08LA4	19.5	65	130	390	465	45.5	56	70	70	70	28	2400	-
10	315	86	1.3	9.4	IE3	BK08-../SPE08LA4	15.5	53	106	315	380	56	69	86	86	86	28	2700	-
10	280	96	1.9	10.7	IE3	BK08-../SPE08LA4	14	46.5	93	280	335	62	77	96	96	96	28	3500	-
10	250	109	1	11.93	IE3	BK08-../SPE08LA4	12.5	41.5	83	250	300	71	87	109	109	109	28	3100	-
10	205	130	1.5	14.5	IE3	BK08-../SPE08LA4	10	34	68	205	245	84	104	130	130	130	28	3900	-
10	177	152	0.89	16.92	IE3	BK08-../SPE08LA4	8.8	29.5	59	177	210	98	121	152	152	152	28	3700	-
10	161	166	1.2	18.52	IE3	BK08-../SPE08LA4	8	26.5	53	161	194	108	133	166	166	166	28	4300	-
10	132	200	0.98	22.65	IE3	BK08-../SPE08LA4	6.6	22	44	132	158	132	163	200	200	200	28	4650	-
10	670	40.5	2.3	4.44	IE3	BK10-../SPE08LA4	33.5	112	225	670	810	26.5	32.5	40.5	40.5	40.5	28	1900	-
10	495	55	1.9	6.02	IE3	BK10-../SPE08LA4	24.5	83	166	495	590	35.5	44	55	55	55	28	2100	-
10	390	70	1.6	7.68	IE3	BK10-../SPE08LA4	19.5	65	130	390	465	45.5	56	70	70	70	28	2400	-
10	315	86	1.3	9.4	IE3	BK10-../SPE08LA4	15.5	53	106	315	380	56	69	86	86	86	28	2700	-
10	280	96	1.9	10.7	IE3	BK10-../SPE08LA4	14	46.5	93	280	335	62	77	96	96	96	28	3500	-
10	250	109	1	11.93	IE3	BK10-../SPE08LA4	12.5	41.5	83	250	300	71	87	109	109	109	28	3100	-
10	205	130	1.5	14.5	IE3	BK10-../SPE08LA4	10	34	68	205	245	84	104	130	130	130	28	3900	-
10	177	152	0.89	16.92	IE3	BK10-../SPE08LA4	8.8	29.5	59	177	210	98	121	152	152	152	28	3700	-
10	161	166	1.2	18.52	IE3	BK10-../SPE08LA4	8	26.5	53	161	194	108	133	166	166	166	28	4300	-
10	132	200	0.98	22.65	IE3	BK10-../SPE08LA4	6.6	22	44	132	158	132	163	200	200	200	28	4650	-
10	300	91	2.5	9.91	IE3	BK17-../SPE08LA4	15	50	100	300	360	59	72	91	91	91	38	1910	8300
10	265	100	3	11.14	IE3	BK17-../SPE08LA4	13	44.5	89	265	320	65	80	100	100	100	38	3300	8100
10	255	107	2.1	11.69	IE3	BK17-../SPE08LA4	12.5	42.5	85	255	305	69	86	107	107	107	38	2400	8800
10	200	132	2.5	14.75	IE3	BK17-../SPE08LA4	10	33.5	67	200	240	86	106	132	132	132	38	3650	9000
10	172	158	1.5	17.42	IE3	BK17-../SPE08LA4	8.6	28.5	57	172	205	103	126	158	158	158	38	3250	9000
10	154	174	1.9	19.39	IE3	BK17-../SPE08LA4	7.7	25.5	51	154	185	113	139	174	174	174	38	4050	9000
10	123	215	1.5	24.29	IE3	BK17-../SPE08LA4	6.1	20.5	41	123	148	142	174	215	215	215	38	4500	9000
10	104	255	1.3	28.66	IE3	BK17-../SPE08LA4	5.2	17	34.5	104	125	167	205	255	255	255	38	4850	9000
10	81	330	1	36.69	IE3	BK17-../SPE08LA4	4	13.5	27	81	98	210	260	330	330	330	38	5400	9000
10	70	380	0.86	42.7	IE3	BK17-../SPE08LA4	3.5	11.5	23	70	84	245	305	380	380	380	38	5800	9000
10	300	91	2.5	9.91	IE3	BK20-../SPE08LA4	15	50	100	300	360	59	72	91	91	91	38	1910	8300
10	265	100	3	11.14	IE3	BK20-../SPE08LA4	13	44.5	89	265	320	65	80	100	100	100	38	3300	8100
10	255	107	2.1	11.69	IE3	BK20-../SPE08LA4	12.5	42.5	85	255	305	69	86	107	107	107	38	2400	8800
10	200	132	2.5	14.75	IE3	BK20-../SPE08LA4	10	33.5	67	200	240	86	106	132	132	132	38	3650	9000
10	172	158	1.5	17.42	IE3	BK20-../SPE08LA4	8.6	28.5	57	172	205	103	126	158	158	158	38	3250	9000
10	154	174	1.9	19.39	IE3	BK20-../SPE08LA4	7.7	25.5	51	154	185	113	139	174	174	174	38	4050	9000
10	123	215	1.5	24.29	IE3	BK20-../SPE08LA4	6.1	20.5	41	123	148	142	174	215	215	215	38	4500	9000
10	104	255	1.3	28.66	IE3	BK20-../SPE08LA4	5.2	17	34.5	104	125	167	205	255	255	255	38	4850	9000
10	81	330	1	36.69	IE3	BK20-../SPE08LA4	4	13.5	27	81	98	210	260	330	330	330	38	5400	9000
10	70	380	0.86	42.7	IE3	BK20-../SPE08LA4	3.5	11.5	23	70	84	245	305	380	380	380	38	5800	9000
10	250	109	2.9	11.93	IE3	BK30-../SPE08LA4	12.5	41.5	83	250	300	71	87	109	109	109	44	3650	12000
10	210	127	2.5	13.98	IE3	BK30-../SPE08LA4	10.5	35.5	71	210	255	82	101	127	127	127	44	4050	12000
10	167	161	2.8	17.95	IE3	BK30-../SPE08LA4	8.3	27.5	55	167	200	105	129	161	161	161	44	5300	12000
10	143	189	1.7	20.85	IE3	BK30-../SPE08LA4	7.1	23.5	47.5	143	172	123	151	189	189	189	44	5000	12000
10	129	205	2.2	23.2	IE3	BK30-../SPE08LA4	6.4	21.5	43	129	155	135	167	205	205	205	44	5900	12000
10	104	255	1.7	28.76	IE3	BK30-../SPE08LA4	5.2	17	34.5	104	125	168	205	255	255	255	44	6500	12000
10	89	300	1.5	33.7	IE3	BK30-../SPE08LA4	4.4	14.5	29.5	89	106	197	240	300	300	300	44	7000	12000
10	69	380	1.2	42.89	IE3	BK30-../SPE08LA4	3.4	11.5	23	69	83	245	305	380	380	380	44	7800	12000
10	59	440	1	50.27	IE3	BK30-../SPE08LA4	2.9	9.9	19.5	59	71	285	350	440	440	440	44	8300	12000
10	50	520	0.86	59.27	IE3	BK30-../SPE08LA4	2.5	8.4	16.5	50	60	335	415	520	520	520	44	8900	12000
10	104	255	3	28.59	IE3	BK40-../SPE08LA4	5.2	17	34.5	104	125	167	205	255	255	255	64	6300	17000
10	86	310	2.5	34.61	IE3	BK40-../SPE08LA4	4.3	14	28.5	86	104	200	245	310	310	310	64	6900	17000
10	73	365	2.1	40.88	IE3	BK40-../SPE08LA4	3.6	12	24	73	88	235	290	365	365	365	64	7600	17000
10	58	450	1.7	51.18	IE3	BK40-../SPE08LA4	2.9	9.7	19.5	58	70	290	360	450	450	450	64	8400	17000
10	50	520	1.5	59.66	IE3	BK40-../SPE08LA4	2.5	8.3	16.5	50	60	340	420	520	520	520	64	9100	17000
10	42.5	600	1.3	70.11	IE3	BK40-../SPE08LA4	2.1	7.1	14	42.5	51	395	485	600	600	600	64	9800	17000
10	35.5	730	1.1	84.36	IE3	BK40-../SPE08LA4	1.7	5.9	11.5	35.5	42.5	475	580	730	730	730	64	10700	17000
10	28.5	880	0.88	104	IE3	BK40-../SPE08LA4	1.4	4.8	9.6	28.5	34.5	570	700	880	880	880	64	11700	17000
10	63	420	2.5	47.5	IE3	BK50-../SPE08LA4	3.1	10.5	21	63	75	270	335	420	420	420	93	1	

# BK-series bevel geared motors

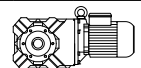
## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 10 \text{ Nm}$ ( $P_N = 3.1 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							[Nm]	[1/min]	[Nm]	[-]	[:1]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]			
10	8.9	3300	1.6	333.6	IE3	BK70Z-../SPE08LA4	0.44	1.4	2.9	8.9	10.5	2150	2650	3300	3300	3300	208	24100	50000
10	7.8	3750	1.4	379.9	IE3	BK70Z-../SPE08LA4	0.39	1.3	2.6	7.8	9.4	2450	3000	3750	3750	3750	208	24100	50000
10	6.9	4300	1.2	432.1	IE3	BK70Z-../SPE08LA4	0.34	1.1	2.3	6.9	8.3	2800	3450	4300	4300	4300	208	24100	50000
10	5.9	5000	1	501.8	IE3	BK70Z-../SPE08LA4	0.29	0.95	1.9	5.9	7.1	3250	4000	5000	5000	5000	208	24100	50000
10	5.2	5700	0.91	570.8	IE3	BK70Z-../SPE08LA4	0.26	0.85	1.7	5.2	6.3	3700	4550	5700	5700	5700	208	24100	50000
10	4.6	6400	0.81	644.9	IE3	BK70Z-../SPE08LA4	0.23	0.75	1.5	4.6	5.5	4150	5100	6400	6400	6400	208	24100	50000
10	4.9	6000	1.9	607.8	IE3	BK80G40-../SPE08LA4	0.24	0.8	1.6	4.9	5.9	3950	4850	6000	6000	6000	348	30000	75000
10	4.4	6800	1.7	680.9	IE3	BK80G40-../SPE08LA4	0.22	0.7	1.4	4.4	5.2	4400	5400	6800	6800	6800	348	30000	75000
10	3.9	7500	1.5	756.3	IE3	BK80G40-../SPE08LA4	0.19	0.65	1.3	3.9	4.7	4900	6000	7500	7500	7500	348	30000	75000
10	3.5	8400	1.4	847.2	IE3	BK80G40-../SPE08LA4	0.17	0.55	1.1	3.5	4.2	5500	6700	8400	8400	8400	348	30000	75000
10	3.1	9600	1.2	963	IE3	BK80G40-../SPE08LA4	0.15	0.5	1	3.1	3.7	6200	7700	9600	9600	9600	348	30000	75000
10	2.7	10700	1.1	1079	IE3	BK80G40-../SPE08LA4	0.13	0.46	0.9	2.7	3.3	7000	8600	10700	10700	10700	348	30000	75000
10	2.2	13000	0.88	1307	IE3	BK80G40-../SPE08LA4	0.11	0.38	0.75	2.2	2.7	8400	10400	13000	13000	13000	348	30000	75000
10	2.1	14200	0.81	1425	IE3	BK80G40-../SPE08LA4	0.1	0.35	0.7	2.1	2.5	9200	11400	14200	14200	14200	348	30000	75000
10	3.6	8200	2.3	821	IE3	BK90G50-../SPE08LA4	0.18	0.6	1.2	3.6	4.3	5300	6500	8200	8200	8200	621	49400	120000
10	3.4	8800	2.1	882.3	IE3	BK90G50-../SPE08LA4	0.17	0.55	1.1	3.4	4	5700	7000	8800	8800	8800	621	49400	120000
10	2.9	10000	1.8	1008	IE3	BK90G50-../SPE08LA4	0.14	0.49	0.95	2.9	3.5	6500	8000	10000	10000	10000	621	49400	120000
10	2.6	11200	1.6	1127	IE3	BK90G50-../SPE08LA4	0.13	0.44	0.85	2.6	3.1	7300	9000	11200	11200	11200	621	49400	120000
10	2.2	13600	1.4	1363	IE3	BK90G50-../SPE08LA4	0.11	0.36	0.7	2.2	2.6	8800	10900	13600	13600	13600	621	49400	120000
10	1.8	15700	1.2	1579	IE3	BK90G50-../SPE08LA4	0.09	0.31	0.6	1.8	2.2	10200	12600	15700	15700	15700	621	49400	120000
10	1.6	18000	1	1803	IE3	BK90G50-../SPE08LA4	0.08	0.27	0.55	1.6	1.9	11700	14400	18000	18000	18000	621	49400	120000
10	1.4	20000	0.92	2016	IE3	BK90G50-../SPE08LA4	0.07	0.24	0.49	1.4	1.7	13100	16100	20000	20000	20000	621	49400	120000

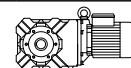
### $M_N = 13 \text{ Nm}$ ( $P_N = 4 \text{ kW}$ )



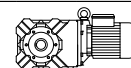
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							[Nm]	[1/min]	[Nm]	[-]	[:1]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]			
13	670	53	1.8	4.44	IE4	BK10-../S4E09SA4	33.5	112	225	670	810	34.5	40.5	53	53	53	32	1900	-
13	495	71	1.5	6.02	IE4	BK10-../S4E09SA4	24.5	83	166	495	590	47	55	71	71	71	32	2100	-
13	390	91	1.3	7.68	IE4	BK10-../S4E09SA4	19.5	65	130	390	465	60	70	91	91	91	32	2400	-
13	315	112	1	9.4	IE4	BK10-../S4E09SA4	15.5	53	106	315	380	73	86	112	112	112	32	2700	-
13	280	125	1.4	10.7	IE4	BK10-../S4E09SA4	14	46.5	93	280	335	81	96	125	125	125	32	3500	-
13	250	142	0.81	11.93	IE4	BK10-../S4E09SA4	12.5	41.5	83	250	300	93	109	142	142	142	32	3100	-
13	205	169	1.2	14.5	IE4	BK10-../S4E09SA4	10	34	68	205	245	110	130	169	169	169	32	3900	-
13	161	215	0.92	18.52	IE4	BK10-../S4E09SA4	8	26.5	53	161	194	141	166	215	215	215	32	4300	-
13	495	71	3	6.02	IE4	BK17-../S4E09SA4	24.5	83	166	495	590	47	55	71	71	71	42	580	6800
13	375	94	2.4	7.91	IE4	BK17-../S4E09SA4	18.5	63	126	375	455	61	72	94	94	94	42	1330	7600
13	300	118	1.9	9.91	IE4	BK17-../S4E09SA4	15	50	100	300	360	77	91	118	118	118	42	1910	8300
13	265	130	2.3	11.14	IE4	BK17-../S4E09SA4	13	44.5	89	265	320	85	100	130	130	130	42	3300	8100
13	255	139	1.6	11.69	IE4	BK17-../S4E09SA4	12.5	42.5	85	255	305	91	107	139	139	139	42	2400	8800
13	200	172	1.9	14.75	IE4	BK17-../S4E09SA4	10	33.5	67	200	240	112	132	172	172	172	42	3650	9000
13	172	205	1.1	17.42	IE4	BK17-../S4E09SA4	8.6	28.5	57	172	205	134	158	205	205	205	42	3250	9000
13	154	225	1.5	19.39	IE4	BK17-../S4E09SA4	7.7	25.5	51	154	185	148	174	225	225	225	42	4050	9000
13	123	280	1.2	24.29	IE4	BK17-../S4E09SA4	6.1	20.5	41	123	148	185	215	280	280	280	42	4500	9000
13	104	335	0.98	28.66	IE4	BK17-../S4E09SA4	5.2	17	34.5	104	125	215	255	335	335	335	42	4850	9000
13	495	71	3	6.02	IE4	BK20-../S4E09SA4	24.5	83	166	495	590	47	55	71	71	71	42	580	6800
13	375	94	2.4	7.91	IE4	BK20-../S4E09SA4	18.5	63	126	375	455	61	72	94	94	94	42	1330	7600
13	300	118	1.9	9.91	IE4	BK20-../S4E09SA4	15	50	100	300	360	77	91	118	118	118	42	1910	8300
13	265	130	2.3	11.14	IE4	BK20-../S4E09SA4	13	44.5	89	265	320	85	100	130	130	130	42	3300	8100
13	255	139	1.6	11.69	IE4	BK20-../S4E09SA4	12.5	42.5	85	255	305	91	107	139	139	139	42	2400	8800
13	200	172	1.9	14.75	IE4	BK20-../S4E09SA4	10	33.5	67	200	240	112	132	172	172	172	42	3650	9000
13	172	205	1.1	17.42	IE4	BK20-../S4E09SA4	8.6	28.5	57	172	205	134	158	205	205	205	42	3250	9000
13	154	225	1.5	19.39	IE4	BK20-../S4E09SA4	7.7	25.5	51	154	185	148	174	225	225	225	42	4050	9000
13	123	280	1.2	24.29	IE4	BK20-../S4E09SA4	6.1	20.5	41	123	148	185	215	280	280	280	42	4500	9000
13	104	335	0.98	28.66	IE4	BK20-../S4E09SA4	5.2	17	34.5	104	125	215	255	335	335	335	42	4850	9000
13	495	71	2.9	6.02	IE4	BK30-../S4E09SA4	24.5	83	166	495	590	47	55	71	71	71	48	1690	9600
13	400	89	3	7.45	IE4	BK30-../S4E09SA4	20	67	134	400	480	58	68	89	89	89	48	2200	10400
13	310	115	2.8	9.63	IE4	BK30-../S4E09SA4	15.5	51	103	310	370	75	88	115	115	115	48	3150	11500
13	250	142	2.2	11.93	IE4	BK30-../S4E09SA4	12.5	41.5	83	250	300	93	109	142	142	142	48	3650	12000
13	210	165	1.9	13.98	IE4	BK30-../S4E09SA4	10.5	35.5	71	210	255	108	127	165	165	165	48	4050	12000
13	205	169	2.7	14.5	IE4	BK30-../S4E09SA4	10	34	68	205	245	110	130	169	169	169	48	4900	12000
13	167	210	2.1	17.95	IE4	BK30-../S4E09SA4	8.3	27.5	55	167	200	137	161	210	210	210	48	5300	12000
13	143	245	1.3	20.85	IE4	BK30-../S4E09SA4	7.1	23.5	47.5	143	172	161	189	245	245	245	48	5000	12000
13	129	270	1.7	23.2	IE4	BK30-../S4E09SA4	6.4	21.5	43	129	155	177	205	270	270	270	48	5900	12000
13	104	335	1.3	28.76	IE4	BK30-../S4E09SA4	5.2	17	34.5	104	125	220	255	335	335	335	48	6500	12000
13	89	390	1.1	33.7	IE4	BK30-../S4E09SA4	4.4	14.5	29.5	89	106	255	300	390	390	390	48	7000	12000
13	69	495	0.91	42.89	IE4	BK30-../S4E09SA4	3.4	11.5	23	69	83								

# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 13 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
13	35.5	950	0.82	84.36	IE4	BK40-../S4E09SA4	1.7	5.9	11.5	35.5	42.5	620	730	950	950	950	68	10700	17000
13	85	410	2.5	35.21	IE4	BK50-../S4E09SA4	4.2	14	28	85	102	265	315	410	410	410	96	8700	23100
13	63	540	1.9	47.5	IE4	BK50-../S4E09SA4	3.1	10.5	21	63	75	355	420	540	540	540	96	10100	25700
13	49	690	1.5	60.76	IE4	BK50-../S4E09SA4	2.4	8.2	16	49	59	450	530	690	690	690	96	11400	26000
13	39.5	850	1.2	75.4	IE4	BK50-../S4E09SA4	1.9	6.6	13	39.5	47.5	550	650	850	850	850	96	12600	26000
13	31	1060	0.99	95.29	IE4	BK50-../S4E09SA4	1.5	5.2	10	31	37.5	690	810	1060	1060	1060	96	14100	26000
13	25.5	1270	0.82	115.4	IE4	BK50Z-../S4E09SA4	1.2	4.3	8.6	25.5	31	830	980	1270	1270	1270	101	14100	26000
13	50	760	3	58.95	IE4	BK60-../S4E09SA4	2.5	8.4	16.5	50	61	500	580	760	760	760	105	9900	31500
13	45	850	2.7	65.95	IE4	BK60-../S4E09SA4	2.2	7.5	15	45	54	560	650	850	850	850	105	10900	33000
13	38	1010	2.3	78.13	IE4	BK60-../S4E09SA4	1.9	6.3	12.5	38	46	660	780	1010	1010	1010	105	11900	34000
13	34	1130	2	87.41	IE4	BK60-../S4E09SA4	1.7	5.7	11	34	41	740	870	1130	1130	1130	105	12900	34000
13	29.5	1310	1.7	101.2	IE4	BK60-../S4E09SA4	1.4	4.9	9.8	29.5	35.5	860	1010	1310	1310	1310	105	13900	34000
13	26.5	1470	1.6	113.2	IE4	BK60-../S4E09SA4	1.3	4.4	8.8	26.5	31.5	960	1130	1470	1470	1470	105	15000	34000
13	24	1590	1.4	122.5	IE4	BK60-../S4E09SA4	1.2	4	8.1	24	29	1040	1220	1590	1590	1590	105	15500	34000
13	21.5	1780	1.3	137	IE4	BK60-../S4E09SA4	1	3.6	7.2	21.5	26	1160	1370	1780	1780	1780	105	16600	34000
13	19.5	1990	1.2	153.7	IE4	BK60Z-../S4E09SA4	0.95	3.2	6.5	19.5	23	1300	1530	1990	1990	1990	124	16600	34000
13	16	2350	0.97	183.2	IE4	BK60Z-../S4E09SA4	0.8	2.7	5.4	16	19.5	1550	1830	2350	2350	2350	124	16600	34000
13	14.5	2650	0.86	205	IE4	BK60Z-../S4E09SA4	0.7	2.4	4.8	14.5	17.5	1740	2050	2650	2650	2650	124	16600	34000
13	21.5	1770	2.9	136.7	IE4	BK70-../S4E09SA4	1	3.6	7.3	21.5	26	1160	1360	1770	1770	1770	191	20700	50000
13	19	2000	2.6	154.4	IE4	BK70-../S4E09SA4	0.95	3.2	6.4	19	23	1310	1540	2000	2000	2000	191	21900	50000
13	17	2250	2.3	175.7	IE4	BK70-../S4E09SA4	0.85	2.8	5.6	17	20	1490	1750	2250	2250	2250	191	24100	50000
13	15.5	2450	2.1	190.4	IE4	BK70Z-../S4E09SA4	0.75	2.6	5.2	15.5	18.5	1610	1900	2450	2450	2450	212	24100	50000
13	13	2900	1.8	226.2	IE4	BK70Z-../S4E09SA4	0.65	2.2	4.4	13	15.5	1920	2250	2900	2900	2900	212	24100	50000
13	11.5	3300	1.6	257.3	IE4	BK70Z-../S4E09SA4	0.55	1.9	3.8	11.5	13.5	2150	2550	3300	3300	3300	212	24100	50000
13	10	3800	1.4	293.3	IE4	BK70Z-../S4E09SA4	0.5	1.7	3.4	10	12	2450	2900	3800	3800	3800	212	24100	50000
13	8.9	4300	1.2	333.6	IE4	BK70Z-../S4E09SA4	0.44	1.4	2.9	8.9	10.5	2800	3300	4300	4300	4300	212	24100	50000
13	7.8	4900	1.1	379.9	IE4	BK70Z-../S4E09SA4	0.39	1.3	2.6	7.8	9.4	3200	3750	4900	4900	4900	212	24100	50000
13	6.9	5600	0.93	432.1	IE4	BK70Z-../S4E09SA4	0.34	1.1	2.3	6.9	8.3	3650	4300	5600	5600	5600	212	24100	50000
13	5.9	6500	0.8	501.8	IE4	BK70Z-../S4E09SA4	0.29	0.95	1.9	5.9	7.1	4250	5000	6500	6500	6500	212	24100	50000
13	9.9	3900	2.9	300.6	IE4	BK80Z-../S4E09SA4	0.49	1.6	3.3	9.9	11.5	2550	3000	3900	3900	3900	341	30000	75000
13	8.9	4350	2.6	336.7	IE4	BK80Z-../S4E09SA4	0.44	1.4	2.9	8.9	10.5	2850	3350	4350	4350	4350	341	30000	75000
13	7.7	5000	2.3	389	IE4	BK80Z-../S4E09SA4	0.38	1.2	2.5	7.7	9.2	3300	3850	5000	5000	5000	341	30000	75000
13	6.8	5600	2	435.7	IE4	BK80Z-../S4E09SA4	0.34	1.1	2.2	6.8	8.2	3700	4350	5600	5600	5600	341	30000	75000
13	6	6400	1.8	499.5	IE4	BK80Z-../S4E09SA4	0.3	1	2	6	7.2	4200	4950	6400	6400	6400	341	30000	75000
13	5.3	7200	1.6	559.5	IE4	BK80Z-../S4E09SA4	0.26	0.85	1.7	5.3	6.4	4750	5500	7200	7200	7200	341	30000	75000
13	4.9	7900	1.5	607.8	IE4	BK80G40-../S4E09SA4	0.24	0.8	1.6	4.9	5.9	5100	6000	7900	7900	7900	352	30000	75000
13	4.4	8800	1.3	680.9	IE4	BK80G40-../S4E09SA4	0.22	0.7	1.4	4.4	5.2	5700	6800	8800	8800	8800	352	30000	75000
13	3.9	9800	1.2	756.3	IE4	BK80G40-../S4E09SA4	0.19	0.65	1.3	3.9	4.7	6400	7500	9800	9800	9800	352	30000	75000
13	3.5	11000	1	847.2	IE4	BK80G40-../S4E09SA4	0.17	0.55	1.1	3.5	4.2	7200	8400	11000	11000	11000	352	30000	75000
13	3.1	12500	0.92	963	IE4	BK80G40-../S4E09SA4	0.15	0.5	1	3.1	3.7	8100	9600	12500	12500	12500	352	30000	75000
13	2.7	14000	0.82	1079	IE4	BK80G40-../S4E09SA4	0.13	0.46	0.9	2.7	3.3	9100	10700	14000	14000	14000	352	30000	75000
13	6	6400	2.9	499.2	IE4	BK90Z-../S4E09SA4	0.3	1	2	6	7.2	4200	4950	6400	6400	6400	614	49400	120000
13	5.3	7200	2.5	558.5	IE4	BK90Z-../S4E09SA4	0.26	0.85	1.7	5.3	6.4	4700	5500	7200	7200	7200	614	49400	120000
13	4.7	8200	2.2	637.7	IE4	BK90Z-../S4E09SA4	0.23	0.75	1.5	4.7	5.6	5400	6300	8200	8200	8200	614	49400	120000
13	4.2	9200	2	713.5	IE4	BK90Z-../S4E09SA4	0.21	0.7	1.4	4.2	5	6000	7100	9200	9200	9200	614	49400	120000
13	3.6	10600	1.7	821	IE4	BK90G50-../S4E09SA4	0.18	0.6	1.2	3.6	4.3	6900	8200	10600	10600	10600	625	49400	120000
13	3.4	11400	1.6	882.3	IE4	BK90G50-../S4E09SA4	0.17	0.55	1.1	3.4	4	7400	8800	11400	11400	11400	625	49400	120000
13	2.9	13100	1.4	1008	IE4	BK90G50-../S4E09SA4	0.14	0.49	0.95	2.9	3.5	8500	10000	13100	13100	13100	625	49400	120000
13	2.6	14600	1.3	1127	IE4	BK90G50-../S4E09SA4	0.13	0.44	0.85	2.6	3.1	9500	11200	14600	14600	14600	625	49400	120000
13	2.2	17700	1	1363	IE4	BK90G50-../S4E09SA4	0.11	0.36	0.7	2.2	2.6	11500	13600	17700	17700	17700	625	49400	120000
13	1.8	20500	0.9	1579	IE4	BK90G50-../S4E09SA4	0.09	0.31	0.6	1.8	2.2	13400	15700	20500	20500	20500	625	49400	120000

 **$M_N = 17.5 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**


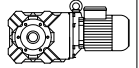
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
17.5	670	71	1.3	4.44	IE5	BK10-../S5E09XA4	33.5	112	225	670	810	53	65	71	71	71	40	1900	-
17.5	495	96	1.1	6.02	IE5	BK10-../S5E09XA4	24.5	83	166	495	590	71	88	96	96	96	40	2100	-
17.5	390	123	0.93	7.68	IE5	BK10-../S5E09XA4	19.5	65	130	390	465	91	113	123	123	123	40	2400	-
17.5	280	168	1.1	10.7	IE5	BK10-../S5E09XA4	14	46.5	93	280	335	125	154	168	168	168	40	3500	-
17.5	205	225	0.88	14.5	IE5	BK10-../S5E09XA4	10	34	68	205	245	169	205	225	225	225	40	3900	-
17.5	660	73	2.7	4.54	IE5	BK17-../S5E09XA4	33	110	220	660	790	54	66	73	73	73	50	520	6100
17.5	495	96	2.2	6.02	IE5	BK17-../S5E09XA4	24.5	83	166	495	590	71	88	96	96	96	50	580	6800
17.5	375	127	1.8	7.91	IE5	BK17-../S5E09XA4	18.5	63	126	375	455	94	116	127	127	127	50	1330	7600
17.5	300	159	1.4	9.91	IE5	BK17-../S5E09XA4	15	50	100	300	360	118	145	159	159	159	50	1910	8300
17.5	265	175	1.7	11.14	IE5	BK17-../S5E09XA4	13	44.5											



# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

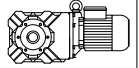
**M<sub>N</sub> = 17.5 Nm (P<sub>N</sub> = 5.5 kW)**



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	600	1000	3000	3600	150	500	1000	3000	3600			
17.5	375	127	1.8	7.91	IE5	BK20-../S5E09XA4	18.5	63	126	375	455	94	116	127	127	127	50	1330	7600
17.5	300	159	1.4	9.91	IE5	BK20-../S5E09XA4	15	50	100	300	360	118	145	159	159	159	50	1910	8300
17.5	265	175	1.7	11.14	IE5	BK20-../S5E09XA4	13	44.5	89	265	320	130	160	175	175	175	50	3300	8100
17.5	255	188	1.2	11.69	IE5	BK20-../S5E09XA4	12.5	42.5	85	255	305	139	172	188	188	188	50	2400	8800
17.5	200	230	1.4	14.75	IE5	BK20-../S5E09XA4	10	33.5	67	200	240	172	210	230	230	230	50	3650	9000
17.5	172	275	0.83	17.42	IE5	BK20-../S5E09XA4	8.6	28.5	57	172	205	205	250	275	275	275	50	3250	9000
17.5	154	305	1.1	19.39	IE5	BK20-../S5E09XA4	7.7	25.5	51	154	185	225	275	305	305	305	50	4050	9000
17.5	123	380	0.86	24.29	IE5	BK20-../S5E09XA4	6.1	20.5	41	123	148	280	345	380	380	380	50	4500	9000
17.5	630	76	2.5	4.73	IE4	BK30-../S4E11SA6	31.5	105	210	630	760	76	76	76	76	76	65	1550	8800
17.5	630	76	2.5	4.73	IE5	BK30-../S5E09XA4	31.5	105	210	630	760	56	69	76	76	76	56	1550	8800
17.5	495	96	2.2	6.02	IE4	BK30-../S4E11SA6	24.5	83	166	495	590	96	96	96	96	96	65	1690	9600
17.5	495	96	2.2	6.02	IE5	BK30-../S5E09XA4	24.5	83	166	495	590	71	88	96	96	96	56	1690	9600
17.5	400	119	2.2	7.45	IE4	BK30-../S4E11SA6	20	67	134	400	480	119	119	119	119	119	65	2200	10400
17.5	400	119	2.2	7.45	IE5	BK30-../S5E09XA4	20	67	134	400	480	89	109	119	119	119	56	2200	10400
17.5	310	155	2.1	9.63	IE4	BK30-../S4E11SA6	15.5	51	103	310	370	155	155	155	155	155	65	3150	11500
17.5	310	155	2.1	9.63	IE5	BK30-../S5E09XA4	15.5	51	103	310	370	115	141	155	155	155	56	3150	11500
17.5	260	179	2.3	11.39	IE4	BK30-../S4E11SA6	13	43.5	87	260	315	179	179	179	179	179	65	4150	11000
17.5	260	179	2.3	11.39	IE5	BK30-../S5E09XA4	13	43.5	87	260	315	133	164	179	179	179	56	4150	11000
17.5	250	192	1.7	11.93	IE4	BK30-../S4E11SA6	12.5	41.5	83	250	300	192	192	192	192	192	65	3650	12000
17.5	250	192	1.7	11.93	IE5	BK30-../S5E09XA4	12.5	41.5	83	250	300	142	175	192	192	192	56	3650	12000
17.5	210	220	1.4	13.98	IE4	BK30-../S4E11SA6	10.5	35.5	71	210	255	220	220	220	220	220	65	4050	12000
17.5	210	220	1.4	13.98	IE5	BK30-../S5E09XA4	10.5	35.5	71	210	255	165	200	220	220	220	56	4050	12000
17.5	205	225	2	14.5	IE4	BK30-../S4E11SA6	10	34	68	205	245	225	225	225	225	225	65	4900	12000
17.5	205	225	2	14.5	IE5	BK30-../S5E09XA4	10	34	68	205	245	169	205	225	225	225	56	4900	12000
17.5	167	280	1.6	17.95	IE4	BK30-../S4E11SA6	8.3	27.5	55	167	200	280	280	280	280	280	65	5300	12000
17.5	167	280	1.6	17.95	IE5	BK30-../S5E09XA4	8.3	27.5	55	167	200	210	255	280	280	280	56	5300	12000
17.5	143	330	0.96	20.85	IE5	BK30-../S5E09XA4	7.1	23.5	47.5	143	172	245	300	330	330	330	56	5000	12000
17.5	129	365	1.2	23.2	IE4	BK30-../S4E11SA6	6.4	21.5	43	129	155	365	365	365	365	365	65	5900	12000
17.5	129	365	1.2	23.2	IE5	BK30-../S5E09XA4	6.4	21.5	43	129	155	270	330	365	365	365	56	5900	12000
17.5	104	450	0.99	28.76	IE4	BK30-../S4E11SA6	5.2	17	34.5	104	125	450	450	450	450	450	65	6500	12000
17.5	104	450	0.99	28.76	IE5	BK30-../S5E09XA4	5.2	17	34.5	104	125	335	410	450	450	450	56	6500	12000
17.5	89	530	0.85	33.7	IE4	BK30-../S4E11SA6	4.4	14.5	29.5	89	106	530	530	530	530	530	65	7000	12000
17.5	89	530	0.85	33.7	IE5	BK30-../S5E09XA4	4.4	14.5	29.5	89	106	390	485	530	530	530	56	7000	12000
17.5	250	190	2.6	11.86	IE4	BK40-../S4E11SA6	12.5	42	84	250	300	190	190	190	190	190	90	1770	12200
17.5	250	190	2.6	11.86	IE5	BK40-../S5E09XA4	12.5	42	84	250	300	141	174	190	190	190	76	1770	12200
17.5	166	280	2.7	18.05	IE4	BK40-../S4E11SA6	8.3	27.5	55	166	199	280	280	280	280	280	90	4900	15300
17.5	166	280	2.7	18.05	IE5	BK40-../S5E09XA4	8.3	27.5	55	166	199	210	255	280	280	280	76	4900	15300
17.5	133	350	2.2	22.44	IE4	BK40-../S4E11SA6	6.6	22	44.5	133	160	350	350	350	350	350	90	5500	16500
17.5	133	350	2.2	22.44	IE5	BK40-../S5E09XA4	6.6	22	44.5	133	160	260	320	350	350	350	76	5500	16500
17.5	104	450	1.7	28.59	IE4	BK40-../S4E11SA6	5.2	17	34.5	104	125	450	450	450	450	450	90	6300	17000
17.5	104	450	1.7	28.59	IE5	BK40-../S5E09XA4	5.2	17	34.5	104	125	330	410	450	450	450	76	6300	17000
17.5	86	540	1.4	34.61	IE4	BK40-../S4E11SA6	4.3	14	28.5	86	104	540	540	540	540	540	90	6900	17000
17.5	86	540	1.4	34.61	IE5	BK40-../S5E09XA4	4.3	14	28.5	86	104	400	495	540	540	540	76	6900	17000
17.5	73	640	1.2	40.88	IE4	BK40-../S4E11SA6	3.6	12	24	73	88	640	640	640	640	640	90	7600	17000
17.5	73	640	1.2	40.88	IE5	BK40-../S5E09XA4	3.6	12	24	73	88	475	580	640	640	640	76	7600	17000
17.5	58	780	0.99	51.18	IE5	BK40-../S5E09XA4	2.9	9.7	19.5	58	70	580	720	780	780	780	76	8400	17000
17.5	50	910	0.85	59.66	IE5	BK40-../S5E09XA4	2.5	8.3	16.5	50	60	680	840	910	910	910	76	9100	17000
17.5	167	285	2.5	17.92	IE4	BK50-../S4E11SA6	8.3	27.5	55	167	200	285	285	285	285	285	120	4600	16800
17.5	167	285	2.5	17.92	IE5	BK50-../S5E09XA4	8.3	27.5	55	167	200	210	260	285	285	285	104	4600	16800
17.5	113	415	2.5	26.51	IE4	BK50-../S4E11SA6	5.6	18.5	37.5	113	135	415	415	415	415	415	120	7800	21200
17.5	113	415	2.5	26.51	IE5	BK50-../S5E09XA4	5.6	18.5	37.5	113	135	310	380	415	415	415	104	7800	21200
17.5	85	550	1.9	35.21	IE4	BK50-../S4E11SA6	4.2	14	28	85	102	550	550	550	550	550	120	8700	23100
17.5	85	550	1.9	35.21	IE5	BK50-../S5E09XA4	4.2	14	28	85	102	410	500	550	550	550	104	8700	23100
17.5	63	730	1.4	47.5	IE4	BK50-../S4E11SA6	3.1	10.5	21	63	75	730	730	730	730	730	120	10100	25700
17.5	63	730	1.4	47.5	IE5	BK50-../S5E09XA4	3.1	10.5	21	63	75	540	670	730	730	730	104	10100	25700
17.5	49	930	1.1	60.76	IE4	BK50-../S4E11SA6	2.4	8.2	16	49	59	930	930	930	930	930	120	11400	26000
17.5	49	930	1.1	60.76	IE5	BK50-../S5E09XA4	2.4	8.2	16	49	59	690	850	930	930	930	104	11400	26000
17.5	39.5	1140	0.91	75.4	IE4	BK50-../S4E11SA6	1.9	6.6	13	39.5	47.5	1140	1140	1140	1140	1140	120	12600	26000
17.5	39.5	1140	0.91	75.4	IE5	BK50-../S5E09XA4	1.9	6.6	13	39.5	47.5	850	1040	1140	1140	1140	104	12600	26000
17.5	66	780	2.9	45.05	IE4	BK60-../S4E11SA6	3.3	11	22	66	79	780	780	780	780	780	130	8200	28300
17.5	66	780	2.9	45.05	IE5	BK60-../S5E09XA4	3.3	11	22	66	79	580	720	780	780	780	113	8200	28300
17.5	59	880	2.6	50.4	IE4	BK60-../S4E11SA6	2.9	9.9	19.5	59	71	880	880	880	880	880	130	9100	29800
17.5	59	880	2.6	50.4	IE5	BK60-../S5E09XA4	2.9	9.9	19.5	59	71	650	800	880	880	880	113	9100	29800
17.5	50	1030	2.2	58.95	IE4	BK60-../S4E11SA6	2.5	8.4	16.5	50	61	1030	1030	1030	1030	1030	130	9900	31500
17.5	50	1030	2.2	58.95	IE5	BK60-../S5E09XA4	2.5	8.4	16.5	50	61	760	940	1030	1030	1030	113	9900	31500
17.5	45	1150	2	65.95	IE4	BK60-../S4E11SA6	2.2	7.5	15	45	54	1150	1150	1150	1150	1150	130	10900	

# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

 **$M_N = 17.5 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**


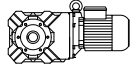
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
17.5	19.5	2650	0.86	153.7	IE5	BK60Z-../S5E09XA4	0.95	3.2	6.5	19.5	23	1990	2450	2650	2650	2650	132	16600	34000
17.5	28.5	1810	2.9	103.5	IE4	BK70-../S4E11SA6	1.4	4.8	9.6	28.5	34.5	1810	1810	1810	1810	1810	209	17200	50000
17.5	28.5	1810	2.9	103.5	IE5	BK70-../S5E09XA4	1.4	4.8	9.6	28.5	34.5	1340	1650	1810	1810	1810	199	17200	50000
17.5	24.5	2100	2.5	120.2	IE4	BK70-../S4E11SA6	1.2	4.1	8.3	24.5	29.5	2100	2100	2100	2100	2100	209	18600	50000
17.5	24.5	2100	2.5	120.2	IE5	BK70-../S5E09XA4	1.2	4.1	8.3	24.5	29.5	1560	1920	2100	2100	2100	199	18600	50000
17.5	21.5	2350	2.2	136.7	IE4	BK70-../S4E11SA6	1	3.6	7.3	21.5	26	2350	2350	2350	2350	2350	209	20700	50000
17.5	21.5	2350	2.2	136.7	IE5	BK70-../S5E09XA4	1	3.6	7.3	21.5	26	1770	2150	2350	2350	2350	199	20700	50000
17.5	19	2700	1.9	154.4	IE4	BK70-../S4E11SA6	0.95	3.2	6.4	19	23	2700	2700	2700	2700	2700	209	21900	50000
17.5	19	2700	1.9	154.4	IE5	BK70-../S5E09XA4	0.95	3.2	6.4	19	23	2000	2450	2700	2700	2700	199	21900	50000
17.5	17	3050	1.7	175.7	IE4	BK70-../S4E11SA6	0.85	2.8	5.6	17	20	3050	3050	3050	3050	3050	209	24100	50000
17.5	17	3050	1.7	175.7	IE5	BK70-../S5E09XA4	0.85	2.8	5.6	17	20	2250	2800	3050	3050	3050	199	24100	50000
17.5	15.5	3300	1.6	190.4	IE4	BK70Z-../S4E11SA6	0.75	2.6	5.2	15.5	18.5	3300	3300	3300	3300	3300	236	24100	50000
17.5	15.5	3300	1.6	190.4	IE5	BK70Z-../S5E09XA4	0.75	2.6	5.2	15.5	18.5	2450	3000	3300	3300	3300	220	24100	50000
17.5	13	3950	1.3	226.2	IE4	BK70Z-../S4E11SA6	0.65	2.2	4.4	13	15.5	3950	3950	3950	3950	3950	236	24100	50000
17.5	13	3950	1.3	226.2	IE5	BK70Z-../S5E09XA4	0.65	2.2	4.4	13	15.5	2900	3600	3950	3950	3950	220	24100	50000
17.5	11.5	4500	1.2	257.3	IE4	BK70Z-../S4E11SA6	0.55	1.9	3.8	11.5	13.5	4500	4500	4500	4500	4500	236	24100	50000
17.5	11.5	4500	1.2	257.3	IE5	BK70Z-../S5E09XA4	0.55	1.9	3.8	11.5	13.5	3300	4100	4500	4500	4500	220	24100	50000
17.5	10	5100	1	293.3	IE4	BK70Z-../S4E11SA6	0.5	1.7	3.4	10	12	5100	5100	5100	5100	5100	236	24100	50000
17.5	10	5100	1	293.3	IE5	BK70Z-../S5E09XA4	0.5	1.7	3.4	10	12	3800	4650	5100	5100	5100	220	24100	50000
17.5	8.9	5800	0.89	333.6	IE4	BK70Z-../S4E11SA6	0.44	1.4	2.9	8.9	10.5	5800	5800	5800	5800	5800	236	24100	50000
17.5	8.9	5800	0.89	333.6	IE5	BK70Z-../S5E09XA4	0.44	1.4	2.9	8.9	10.5	4300	5300	5800	5800	5800	220	24100	50000
17.5	13	3950	2.9	226.1	IE4	BK80Z-../S4E11SA6	0.65	2.2	4.4	13	15.5	3950	3950	3950	3950	3950	366	30000	75000
17.5	13	3950	2.9	226.1	IE5	BK80Z-../S5E09XA4	0.65	2.2	4.4	13	15.5	2900	3600	3950	3950	3950	349	30000	75000
17.5	11.5	4400	2.6	253.3	IE4	BK80Z-../S4E11SA6	0.55	1.9	3.9	11.5	14	4400	4400	4400	4400	4400	366	30000	75000
17.5	11.5	4400	2.6	253.3	IE5	BK80Z-../S5E09XA4	0.55	1.9	3.9	11.5	14	3250	4050	4400	4400	4400	349	30000	75000
17.5	9.9	5200	2.2	300.6	IE4	BK80Z-../S4E11SA6	0.49	1.6	3.3	9.9	11.5	5200	5200	5200	5200	5200	366	30000	75000
17.5	9.9	5200	2.2	300.6	IE5	BK80Z-../S5E09XA4	0.49	1.6	3.3	9.9	11.5	3900	4800	5200	5200	5200	349	30000	75000
17.5	8.9	5800	2	336.7	IE4	BK80Z-../S4E11SA6	0.44	1.4	2.9	8.9	10.5	5800	5800	5800	5800	5800	366	30000	75000
17.5	8.9	5800	2	336.7	IE5	BK80Z-../S5E09XA4	0.44	1.4	2.9	8.9	10.5	4350	5300	5800	5800	5800	349	30000	75000
17.5	7.7	6800	1.7	389	IE4	BK80Z-../S4E11SA6	0.38	1.2	2.5	7.7	9.2	6800	6800	6800	6800	6800	366	30000	75000
17.5	7.7	6800	1.7	389	IE5	BK80Z-../S5E09XA4	0.38	1.2	2.5	7.7	9.2	5000	6200	6800	6800	6800	349	30000	75000
17.5	6.8	7600	1.5	435.7	IE4	BK80Z-../S4E11SA6	0.34	1.1	2.2	6.8	8.2	7600	7600	7600	7600	7600	366	30000	75000
17.5	6.8	7600	1.5	435.7	IE5	BK80Z-../S5E09XA4	0.34	1.1	2.2	6.8	8.2	5600	6900	7600	7600	7600	349	30000	75000
17.5	6	8700	1.3	499.5	IE4	BK80Z-../S4E11SA6	0.3	1	2	6	7.2	8700	8700	8700	8700	8700	366	30000	75000
17.5	6	8700	1.3	499.5	IE5	BK80Z-../S5E09XA4	0.3	1	2	6	7.2	6400	7900	8700	8700	8700	349	30000	75000
17.5	5.3	9700	1.2	559.5	IE4	BK80Z-../S4E11SA6	0.26	0.85	1.7	5.3	6.4	9700	9700	9700	9700	9700	366	30000	75000
17.5	5.3	9700	1.2	559.5	IE5	BK80Z-../S5E09XA4	0.26	0.85	1.7	5.3	6.4	7200	8900	9700	9700	9700	349	30000	75000
17.5	4.9	10600	1.1	607.8	IE4	BK80G40-../S4E11SA6	0.24	0.8	1.6	4.9	5.9	10600	10600	10600	10600	10600	374	30000	75000
17.5	4.9	10600	1.1	607.8	IE5	BK80G40-../S5E09XA4	0.24	0.8	1.6	4.9	5.9	7900	9700	10600	10600	10600	360	30000	75000
17.5	4.4	11900	0.97	680.9	IE4	BK80G40-../S4E11SA6	0.22	0.7	1.4	4.4	5.2	11900	11900	11900	11900	11900	374	30000	75000
17.5	4.4	11900	0.97	680.9	IE5	BK80G40-../S5E09XA4	0.22	0.7	1.4	4.4	5.2	8800	10800	11900	11900	11900	360	30000	75000
17.5	3.9	13200	0.87	756.3	IE4	BK80G40-../S4E11SA6	0.19	0.65	1.3	3.9	4.7	13200	13200	13200	13200	13200	374	30000	75000
17.5	3.9	13200	0.87	756.3	IE5	BK80G40-../S5E09XA4	0.19	0.65	1.3	3.9	4.7	9800	12100	13200	13200	13200	360	30000	75000
17.5	7.7	6800	2.7	389.1	IE4	BK90Z-../S4E11SA6	0.38	1.2	2.5	7.7	9.2	6800	6800	6800	6800	6800	632	49400	120000
17.5	7.7	6800	2.7	389.1	IE5	BK90Z-../S5E09XA4	0.38	1.2	2.5	7.7	9.2	5000	6200	6800	6800	6800	622	49400	120000
17.5	6.8	7600	2.4	435.3	IE4	BK90Z-../S4E11SA6	0.34	1.1	2.2	6.8	8.2	7600	7600	7600	7600	7600	632	49400	120000
17.5	6.8	7600	2.4	435.3	IE5	BK90Z-../S5E09XA4	0.34	1.1	2.2	6.8	8.2	5600	6900	7600	7600	7600	622	49400	120000
17.5	6	8700	2.1	499.2	IE4	BK90Z-../S4E11SA6	0.3	1	2	6	7.2	8700	8700	8700	8700	8700	632	49400	120000
17.5	6	8700	2.1	499.2	IE5	BK90Z-../S5E09XA4	0.3	1	2	6	7.2	6400	7900	8700	8700	8700	622	49400	120000
17.5	5.3	9700	1.9	558.5	IE4	BK90Z-../S4E11SA6	0.26	0.85	1.7	5.3	6.4	9700	9700	9700	9700	9700	632	49400	120000
17.5	5.3	9700	1.9	558.5	IE5	BK90Z-../S5E09XA4	0.26	0.85	1.7	5.3	6.4	7200	8900	9700	9700	9700	622	49400	120000
17.5	4.7	11100	1.7	637.7	IE4	BK90Z-../S4E11SA6	0.23	0.75	1.5	4.7	5.6	11100	11100	11100	11100	11100	632	49400	120000
17.5	4.7	11100	1.7	637.7	IE5	BK90Z-../S5E09XA4	0.23	0.75	1.5	4.7	5.6	8200	10200	11100	11100	11100	622	49400	120000
17.5	4.2	12400	1.5	713.5	IE4	BK90Z-../S4E11SA6	0.21	0.7	1.4	4.2	5	12400	12400	12400	12400	12400	632	49400	120000
17.5	4.2	12400	1.5	713.5	IE5	BK90Z-../S5E09XA4	0.21	0.7	1.4	4.2	5	9200	11400	12400	12400	12400	622	49400	120000
17.5	3.6	14300	1.3	821	IE4	BK90G50-../S4E11SA6	0.18												



# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

**$M_N = 20 \text{ Nm}$  ( $P_N = 6.3 \text{ kW}$ )**

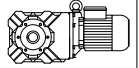


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
20	265	200	1.5	11.14	IE5	BK17-../S5E09XA4	13	44.5	89	265	320	130	160	200	200	175	50	3300	8100
20	255	215	1.1	11.69	IE5	BK17-../S5E09XA4	12.5	42.5	85	255	305	139	172	215	215	188	50	2400	8800
20	200	265	1.2	14.75	IE5	BK17-../S5E09XA4	10	33.5	67	200	240	172	210	265	265	230	50	3650	9000
20	154	345	0.95	19.39	IE5	BK17-../S5E09XA4	7.7	25.5	51	154	185	225	275	345	345	305	50	4050	9000
20	660	83	2.3	4.54	IE5	BK20-../S5E09XA4	33	110	220	660	790	54	66	83	83	73	50	520	6100
20	495	110	1.9	6.02	IE5	BK20-../S5E09XA4	24.5	83	166	495	590	71	88	110	110	96	50	580	6800
20	375	145	1.6	7.91	IE5	BK20-../S5E09XA4	18.5	63	126	375	455	94	116	145	145	127	50	1330	7600
20	300	182	1.3	9.91	IE5	BK20-../S5E09XA4	15	50	100	300	360	118	145	182	182	159	50	1910	8300
20	265	200	1.5	11.14	IE5	BK20-../S5E09XA4	13	44.5	89	265	320	130	160	200	200	175	50	3300	8100
20	255	215	1.1	11.69	IE5	BK20-../S5E09XA4	12.5	42.5	85	255	305	139	172	215	215	188	50	2400	8800
20	200	265	1.2	14.75	IE5	BK20-../S5E09XA4	10	33.5	67	200	240	172	210	265	265	230	50	3650	9000
20	154	345	0.95	19.39	IE5	BK20-../S5E09XA4	7.7	25.5	51	154	185	225	275	345	345	305	50	4050	9000
20	630	87	2.2	4.73	IE5	BK30-../S5E09XA4	31.5	105	210	630	760	56	69	87	87	76	56	1550	8800
20	495	110	1.9	6.02	IE5	BK30-../S5E09XA4	24.5	83	166	495	590	71	88	110	110	96	56	1690	9600
20	400	137	1.9	7.45	IE5	BK30-../S5E09XA4	20	67	134	400	480	89	109	137	137	119	56	2200	10400
20	310	177	1.8	9.63	IE5	BK30-../S5E09XA4	15.5	51	103	310	370	115	141	177	177	155	56	3150	11500
20	260	205	2	11.39	IE5	BK30-../S5E09XA4	13	43.5	87	260	315	133	164	205	205	179	56	4150	11000
20	250	215	1.5	11.93	IE5	BK30-../S5E09XA4	12.5	41.5	83	250	300	142	175	215	215	192	56	3650	12000
20	210	250	1.3	13.98	IE5	BK30-../S5E09XA4	10.5	35.5	71	210	255	165	200	250	250	220	56	4050	12000
20	205	260	1.7	14.5	IE5	BK30-../S5E09XA4	10	34	68	205	245	169	205	260	260	225	56	4900	12000
20	167	320	1.4	17.95	IE5	BK30-../S5E09XA4	8.3	27.5	55	167	200	210	255	320	320	280	56	5300	12000
20	143	375	0.84	20.85	IE5	BK30-../S5E09XA4	7.1	23.5	47.5	143	172	245	300	375	375	330	56	5000	12000
20	129	415	1.1	23.2	IE5	BK30-../S5E09XA4	6.4	21.5	43	129	155	270	330	415	415	365	56	5900	12000
20	104	510	0.87	28.76	IE5	BK30-../S5E09XA4	5.2	17	34.5	104	125	335	410	510	510	450	56	6500	12000
20	320	171	2.9	9.31	IE5	BK40-../S5E09XA4	16	53	107	320	385	111	137	171	171	149	76	1040	11200
20	250	215	2.2	11.86	IE5	BK40-../S5E09XA4	12.5	42	84	250	300	141	174	215	215	190	76	1770	12200
20	205	260	3	14.5	IE5	BK40-../S5E09XA4	10	34	68	205	245	169	205	260	260	225	76	4500	14300
20	166	320	2.4	18.05	IE5	BK40-../S5E09XA4	8.3	27.5	55	166	199	210	255	320	320	280	76	4900	15300
20	133	400	1.9	22.44	IE5	BK40-../S5E09XA4	6.6	22	44.5	133	160	260	320	400	400	350	76	5500	16500
20	104	510	1.5	28.59	IE5	BK40-../S5E09XA4	5.2	17	34.5	104	125	330	410	510	510	450	76	6300	17000
20	86	620	1.3	34.61	IE5	BK40-../S5E09XA4	4.3	14	28.5	86	104	400	495	620	620	540	76	6900	17000
20	73	730	1.1	40.88	IE5	BK40-../S5E09XA4	3.6	12	24	73	88	475	580	730	730	640	76	7600	17000
20	58	900	0.87	51.18	IE5	BK40-../S5E09XA4	2.9	9.7	19.5	58	70	580	720	900	900	780	76	8400	17000
20	167	325	2.2	17.92	IE5	BK50-../S5E09XA4	8.3	27.5	55	167	200	210	260	325	325	285	104	4600	16800
20	155	345	3	19.33	IE5	BK50-../S5E09XA4	7.7	25.5	51	155	186	225	275	345	345	300	104	6900	19200
20	113	475	2.2	26.51	IE5	BK50-../S5E09XA4	5.6	18.5	37.5	113	135	310	380	475	475	415	104	7800	21200
20	85	630	1.7	35.21	IE5	BK50-../S5E09XA4	4.2	14	28	85	102	410	500	630	630	550	104	8700	23100
20	63	840	1.2	47.5	IE5	BK50-../S5E09XA4	3.1	10.5	21	63	75	540	670	840	840	730	104	10100	25700
20	49	1060	0.98	60.76	IE5	BK50-../S5E09XA4	2.4	8.2	16	49	59	690	850	1060	1060	930	104	11400	26000
20	39.5	1310	0.8	75.4	IE5	BK50-../S5E09XA4	1.9	6.6	13	39.5	47.5	850	1040	1310	1310	1140	104	12600	26000
20	79	750	3	37.8	IE5	BK60-../S5E09XA4	3.9	13	26	79	95	490	600	750	750	660	113	7300	26500
20	66	900	2.6	45.05	IE5	BK60-../S5E09XA4	3.3	11	22	66	79	580	720	900	900	780	113	8200	28300
20	59	1000	2.3	50.4	IE5	BK60-../S5E09XA4	2.9	9.9	19.5	59	71	650	800	1000	1000	880	113	9100	29800
20	50	1170	2	58.95	IE5	BK60-../S5E09XA4	2.5	8.4	16.5	50	61	760	940	1170	1170	1030	113	9900	31500
20	45	1310	1.7	65.95	IE5	BK60-../S5E09XA4	2.2	7.5	15	45	54	850	1050	1310	1310	1150	113	10900	33000
20	38	1560	1.5	78.13	IE5	BK60-../S5E09XA4	1.9	6.3	12.5	38	46	1010	1250	1560	1560	1360	113	11900	34000
20	34	1740	1.3	87.41	IE5	BK60-../S5E09XA4	1.7	5.7	11	34	41	1130	1390	1740	1740	1520	113	12900	34000
20	29.5	2000	1.1	101.2	IE5	BK60-../S5E09XA4	1.4	4.9	9.8	29.5	35.5	1310	1610	2000	2000	1770	113	13900	34000
20	26.5	2250	1	113.2	IE5	BK60-../S5E09XA4	1.3	4.4	8.8	26.5	31.5	1470	1810	2250	2250	1980	113	15000	34000
20	24	2450	0.94	122.5	IE5	BK60-../S5E09XA4	1.2	4	8.1	24	29	1590	1960	2450	2450	2100	113	15500	34000
20	21.5	2700	0.84	137	IE5	BK60-../S5E09XA4	1	3.6	7.2	21.5	26	1780	2150	2700	2700	2350	113	16600	34000
20	32.5	1810	2.9	90.96	IE5	BK70-../S5E09XA4	1.6	5.4	10.5	32.5	39.5	1180	1450	1810	1810	1590	199	15300	49900
20	28.5	2050	2.5	103.5	IE5	BK70-../S5E09XA4	1.4	4.8	9.6	28.5	34.5	1340	1650	2050	2050	1810	199	17200	50000
20	24.5	2400	2.2	120.2	IE5	BK70-../S5E09XA4	1.2	4.1	8.3	24.5	29.5	1560	1920	2400	2400	2100	199	18600	50000
20	21.5	2700	1.9	136.7	IE5	BK70-../S5E09XA4	1	3.6	7.3	21.5	26	1770	2150	2700	2700	2350	199	20700	50000
20	19	3050	1.7	154.4	IE5	BK70-../S5E09XA4	0.95	3.2	6.4	19	23	2000	2450	3050	3050	2700	199	21900	50000
20	17	3500	1.5	175.7	IE5	BK70-../S5E09XA4	0.85	2.8	5.6	17	20	2250	2800	3500	3500	3050	199	24100	50000
20	15.5	3800	1.4	190.4	IE5	BK70Z-../S5E09XA4	0.75	2.6	5.2	15.5	18.5	2450	3000	3800	3800	3300	220	24100	50000
20	13	4500	1.1	226.2	IE5	BK70Z-../S5E09XA4	0.65	2.2	4.4	13	15.5	2900	3600	4					

# BK-series bevel geared motors

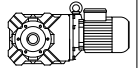
## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 20 \text{ Nm}$ ( $P_N = 6.3 \text{ kW}$ )



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
[Nm]	[1/min]	[Nm]	[-]	[:1]			150	500	1000	3000	3600	150	500	1000	3000	3600	[kg]	[N]	[N]
20	5.3	11100	1.7	558.5	IE5	BK90Z-../S5E09XA4	0.26	0.85	1.7	5.3	6.4	7200	8900	11100	11100	9700	622	49400	120000
20	4.7	12700	1.5	637.7	IE5	BK90Z-../S5E09XA4	0.23	0.75	1.5	4.7	5.6	8200	10200	12700	12700	11100	622	49400	120000
20	4.2	14200	1.3	713.5	IE5	BK90Z-../S5E09XA4	0.21	0.7	1.4	4.2	5	9200	11400	14200	14200	12400	622	49400	120000
20	3.6	16400	1.1	821	IE5	BK90G50-../S5E09XA4	0.18	0.6	1.2	3.6	4.3	10600	13100	16400	16400	14300	633	49400	120000
20	3.4	17600	1	882.3	IE5	BK90G50-../S5E09XA4	0.17	0.55	1.1	3.4	4	11400	14100	17600	17600	15400	633	49400	120000
20	2.9	20000	0.92	1008	IE5	BK90G50-../S5E09XA4	0.14	0.49	0.95	2.9	3.5	13100	16100	20000	20000	17600	633	49400	120000
20	2.6	22500	0.82	1127	IE5	BK90G50-../S5E09XA4	0.13	0.44	0.85	2.6	3.1	14600	18000	22500	22500	19700	633	49400	120000

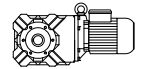
### $M_N = 24 \text{ Nm}$ ( $P_N = 7.5 \text{ kW}$ )



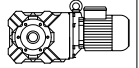
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
[Nm]	[1/min]	[Nm]	[-]	[:1]			150	500	1000	3000	3600	150	500	1000	3000	3600	[kg]	[N]	[N]
24	630	104	1.9	4.73	IE4	BK30-../S4E11SA6	31.5	105	210	630	760	82	93	104	104	104	65	1550	8800
24	630	104	1.9	4.73	IE5	BK30-../S5E11MA6	31.5	105	210	630	760	104	104	104	104	104	65	1550	8800
24	495	132	1.6	6.02	IE4	BK30-../S4E11SA6	24.5	83	166	495	590	105	119	132	132	132	65	1690	9600
24	495	132	1.6	6.02	IE5	BK30-../S5E11MA6	24.5	83	166	495	590	132	132	132	132	132	65	1690	9600
24	400	164	1.6	7.45	IE4	BK30-../S4E11SA6	20	67	134	400	480	130	147	164	164	164	65	2200	10400
24	400	164	1.6	7.45	IE5	BK30-../S5E11MA6	20	67	134	400	480	164	164	164	164	164	65	2200	10400
24	310	210	1.5	9.63	IE4	BK30-../S4E11SA6	15.5	51	103	310	370	168	190	210	210	210	65	3150	11500
24	310	210	1.5	9.63	IE5	BK30-../S5E11MA6	15.5	51	103	310	370	210	210	210	210	210	65	3150	11500
24	260	245	1.7	11.39	IE4	BK30-../S4E11SA6	13	43.5	87	260	315	194	220	245	245	245	65	4150	11000
24	260	245	1.7	11.39	IE5	BK30-../S5E11MA6	13	43.5	87	260	315	245	245	245	245	245	65	4150	11000
24	250	260	1.2	11.93	IE4	BK30-../S4E11SA6	12.5	41.5	83	250	300	205	235	260	260	260	65	3650	12000
24	250	260	1.2	11.93	IE5	BK30-../S5E11MA6	12.5	41.5	83	250	300	260	260	260	260	260	65	3650	12000
24	210	305	1	13.98	IE4	BK30-../S4E11SA6	10.5	35.5	71	210	255	240	270	305	305	305	65	4050	12000
24	210	305	1	13.98	IE5	BK30-../S5E11MA6	10.5	35.5	71	210	255	305	305	305	305	305	65	4050	12000
24	205	310	1.4	14.5	IE4	BK30-../S4E11SA6	10	34	68	205	245	245	280	310	310	310	65	4900	12000
24	205	310	1.4	14.5	IE5	BK30-../S5E11MA6	10	34	68	205	245	310	310	310	310	310	65	4900	12000
24	167	385	1.2	17.95	IE4	BK30-../S4E11SA6	8.3	27.5	55	167	200	305	345	385	385	385	65	5300	12000
24	167	385	1.2	17.95	IE5	BK30-../S5E11MA6	8.3	27.5	55	167	200	385	385	385	385	385	65	5300	12000
24	129	500	0.9	23.2	IE4	BK30-../S4E11SA6	6.4	21.5	43	129	155	395	445	500	500	500	65	5900	12000
24	129	500	0.9	23.2	IE5	BK30-../S5E11MA6	6.4	21.5	43	129	155	500	500	500	500	500	65	5900	12000
24	400	165	3	7.49	IE4	BK40-../S4E11SA6	20	66	133	400	480	130	148	165	165	165	90	750	10500
24	400	165	3	7.49	IE5	BK40-../S5E11MA6	20	66	133	400	480	165	165	165	165	165	90	750	10500
24	320	205	2.4	9.31	IE4	BK40-../S4E11SA6	16	53	107	320	385	162	184	205	205	205	90	1040	11200
24	320	205	2.4	9.31	IE5	BK40-../S5E11MA6	16	53	107	320	385	205	205	205	205	205	90	1040	11200
24	265	240	3	11.17	IE4	BK40-../S4E11SA6	13	44.5	89	265	320	191	215	240	240	240	90	4100	13100
24	265	240	3	11.17	IE5	BK40-../S5E11MA6	13	44.5	89	265	320	240	240	240	240	240	90	4100	13100
24	250	260	1.9	11.86	IE4	BK40-../S4E11SA6	12.5	42	84	250	300	205	230	260	260	260	90	1770	12200
24	250	260	1.9	11.86	IE5	BK40-../S5E11MA6	12.5	42	84	250	300	260	260	260	260	260	90	1770	12200
24	205	310	2.5	14.5	IE4	BK40-../S4E11SA6	10	34	68	205	245	245	280	310	310	310	90	4500	14300
24	205	310	2.5	14.5	IE5	BK40-../S5E11MA6	10	34	68	205	245	310	310	310	310	310	90	4500	14300
24	166	385	2	18.05	IE4	BK40-../S4E11SA6	8.3	27.5	55	166	199	305	345	385	385	385	90	4900	15300
24	166	385	2	18.05	IE5	BK40-../S5E11MA6	8.3	27.5	55	166	199	385	385	385	385	385	90	4900	15300
24	133	480	1.6	22.44	IE4	BK40-../S4E11SA6	6.6	22	44.5	133	160	380	430	480	480	480	90	5500	16500
24	133	480	1.6	22.44	IE5	BK40-../S5E11MA6	6.6	22	44.5	133	160	480	480	480	480	480	90	5500	16500
24	104	610	1.3	28.59	IE4	BK40-../S4E11SA6	5.2	17	34.5	104	125	485	550	610	610	610	90	6300	17000
24	104	610	1.3	28.59	IE5	BK40-../S5E11MA6	5.2	17	34.5	104	125	610	610	610	610	610	90	6300	17000
24	86	740	1	34.61	IE4	BK40-../S4E11SA6	4.3	14	28.5	86	104	590	660	740	740	740	90	6900	17000
24	86	740	1	34.61	IE5	BK40-../S5E11MA6	4.3	14	28.5	86	104	740	740	740	740	740	90	6900	17000
24	73	880	0.88	40.88	IE4	BK40-../S4E11SA6	3.6	12	24	73	88	690	790	880	880	880	90	7600	17000
24	73	880	0.88	40.88	IE5	BK40-../S5E11MA6	3.6	12	24	73	88	880	880	880	880	880	90	7600	17000
24	167	390	1.8	17.92	IE4	BK50-../S4E11SA6	8.3	27.5	55	167	200	305	350	390	390	390	120	4600	16800
24	167	390	1.8	17.92	IE5	BK50-../S5E11MA6	8.3	27.5	55	167	200	390	390	390	390	390	120	4600	16800
24	155	415	2.5	19.33	IE4	BK50-../S4E11SA6	7.7	25.5	51	155	186	330	370	415	415	415	120	6900	19200
24	155	415	2.5	19.33	IE5	BK50-../S5E11MA6	7.7	25.5	51	155	186	415	415	415	415	415	120	6900	19200
24	113	570	1.8	26.51	IE4	BK50-../S4E11SA6	5.6	18.5	37.5	113	135	450	510	570	570	570	120	7800	21200
24	113	570	1.8	26.51	IE5	BK50-../S5E11MA6	5.6	18.5	37.5	113	135	570	570	570	570	570	120	7800	21200
24	85	760	1.4	35.21	IE4	BK50-../S4E11SA6	4.2	14	28	85	102	600	680	760	760	760	120	8700	23100
24	85	760	1.4	35.21	IE5	BK50-../S5E11MA6	4.2	14	28	85	102	760	760	760	760	760	120	8700	23100
24	63	1010	1	47.5	IE4	BK50-../S4E11SA6	3.1	10.5	21	63	75	800	900	1010	1010	1010	120	10100	25700
24	63	1010	1	47.5	IE5	BK50-../S5E11MA6	3.1	10.5	21	63	75	1010	1010	1010	1010	1010	120	10100	25700
24	49	1280	0.82	60.76	IE4	BK50-../S4E11SA6	2.4	8.2	16	49	59	1010	1140	1280	1280	1280	120	11400	26000
24	49	1280	0.82	60.76	IE5	BK50-../S5E11MA6	2.4	8.2	16	49	59	1280	1280	1280	1280	1280	120	11400	26000
24	88	810	2.8	33.78	IE4	BK60-../S4E11SA6	4.4	14.5	29.5	88	106	640	720	810	810	810	130	6500	25200
24	88	810	2.8	33.78	IE5	BK60-../S5E11MA6	4.4	14.5	29.5	88	106	810	810	810	810	810	130	6500	25200
24	79	900	2.5	37.8	IE4	BK60-../S4E11SA6	3.9	13	26	79	95	710	810	900	900	900	130	7300	26500
24	79	900	2.5	37.8	IE5	BK60-../S5E11MA6	3.9	13	26	79									

# BK-series bevel geared motors

## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

**M<sub>N</sub> = 24 Nm (P<sub>N</sub> = 7.5 kW)**

M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
[Nm]	[1/min]	[Nm]	[-]	[:1]															
24	38	1870	1.2	78.13	IE5	BK60-../S5E11MA6	1.9	6.3	12.5	38	46	1870	1870	1870	1870	130	11900	34000	
24	34	2050	1.1	87.41	IE4	BK60-../S4E11SA6	1.7	5.7	11	34	41	1660	1870	2050	2050	130	12900	34000	
24	34	2050	1.1	87.41	IE5	BK60-../S5E11MA6	1.7	5.7	11	34	41	2050	2050	2050	2050	130	12900	34000	
24	29.5	2400	0.95	101.2	IE4	BK60-../S4E11SA6	1.4	4.9	9.8	29.5	35.5	1920	2150	2400	2400	130	13900	34000	
24	29.5	2400	0.95	101.2	IE5	BK60-../S5E11MA6	1.4	4.9	9.8	29.5	35.5	2400	2400	2400	2400	130	13900	34000	
24	26.5	2700	0.85	113.2	IE4	BK60-../S4E11SA6	1.3	4.4	8.8	26.5	31.5	2150	2400	2700	2700	130	15000	34000	
24	26.5	2700	0.85	113.2	IE5	BK60-../S5E11MA6	1.3	4.4	8.8	26.5	31.5	2700	2700	2700	2700	130	15000	34000	
24	37.5	1910	2.7	79.89	IE4	BK70-../S4E11SA6	1.8	6.2	12.5	37.5	45	1510	1710	1910	1910	209	14300	47600	
24	37.5	1910	2.7	79.89	IE5	BK70-../S5E11MA6	1.8	6.2	12.5	37.5	45	1910	1910	1910	1910	209	14300	47600	
24	32.5	2150	2.4	90.96	IE4	BK70-../S4E11SA6	1.6	5.4	10.5	32.5	39.5	1720	1950	2150	2150	209	15300	49900	
24	32.5	2150	2.4	90.96	IE5	BK70-../S5E11MA6	1.6	5.4	10.5	32.5	39.5	2150	2150	2150	2150	209	15300	49900	
24	28.5	2450	2.1	103.5	IE4	BK70-../S4E11SA6	1.4	4.8	9.6	28.5	34.5	1960	2200	2450	2450	209	17200	50000	
24	28.5	2450	2.1	103.5	IE5	BK70-../S5E11MA6	1.4	4.8	9.6	28.5	34.5	2450	2450	2450	2450	209	17200	50000	
24	24.5	2850	1.8	120.2	IE4	BK70-../S4E11SA6	1.2	4.1	8.3	24.5	29.5	2250	2550	2850	2850	209	18600	50000	
24	24.5	2850	1.8	120.2	IE5	BK70-../S5E11MA6	1.2	4.1	8.3	24.5	29.5	2850	2850	2850	2850	209	18600	50000	
24	21.5	3250	1.6	136.7	IE4	BK70-../S4E11SA6	1	3.6	7.3	21.5	26	2550	2900	3250	3250	209	20700	50000	
24	21.5	3250	1.6	136.7	IE5	BK70-../S5E11MA6	1	3.6	7.3	21.5	26	3250	3250	3250	3250	209	20700	50000	
24	19	3700	1.4	154.4	IE4	BK70-../S4E11SA6	0.95	3.2	6.4	19	23	2900	3300	3700	3700	209	21900	50000	
24	19	3700	1.4	154.4	IE5	BK70-../S5E11MA6	0.95	3.2	6.4	19	23	3700	3700	3700	3700	209	21900	50000	
24	17	4200	1.2	175.7	IE4	BK70-../S4E11SA6	0.85	2.8	5.6	17	20	3300	3750	4200	4200	209	24100	50000	
24	17	4200	1.2	175.7	IE5	BK70-../S5E11MA6	0.85	2.8	5.6	17	20	4200	4200	4200	4200	209	24100	50000	
24	15.5	4550	1.1	190.4	IE4	BK70Z-../S4E11SA6	0.75	2.6	5.2	15.5	18.5	3600	4050	4550	4550	236	24100	50000	
24	15.5	4550	1.1	190.4	IE5	BK70Z-../S5E11MA6	0.75	2.6	5.2	15.5	18.5	4550	4550	4550	4550	236	24100	50000	
24	13	5400	0.96	226.2	IE4	BK70Z-../S4E11SA6	0.65	2.2	4.4	13	15.5	4250	4850	5400	5400	236	24100	50000	
24	13	5400	0.96	226.2	IE5	BK70Z-../S5E11MA6	0.65	2.2	4.4	13	15.5	5400	5400	5400	5400	236	24100	50000	
24	11.5	6100	0.84	257.3	IE4	BK70Z-../S4E11SA6	0.55	1.9	3.8	11.5	13.5	4850	5500	6100	6100	236	24100	50000	
24	11.5	6100	0.84	257.3	IE5	BK70Z-../S5E11MA6	0.55	1.9	3.8	11.5	13.5	6100	6100	6100	6100	236	24100	50000	
24	19.5	3650	2.9	153.1	IE4	BK80-../S4E11SA6	0.95	3.2	6.5	19.5	23.5	2900	3250	3650	3650	324	27200	75000	
24	19.5	3650	2.9	153.1	IE5	BK80-../S5E11MA6	0.95	3.2	6.5	19.5	23.5	3650	3650	3650	3650	324	27200	75000	
24	17	4100	2.6	171.5	IE4	BK80-../S4E11SA6	0.85	2.9	5.8	17	20.5	3250	3650	4100	4100	324	30000	75000	
24	17	4100	2.6	171.5	IE5	BK80-../S5E11MA6	0.85	2.9	5.8	17	20.5	4100	4100	4100	4100	324	30000	75000	
24	16.5	4250	2.7	177.6	IE4	BK80Z-../S4E11SA6	0.8	2.8	5.6	16.5	20	3350	3800	4250	4250	366	30000	75000	
24	16.5	4250	2.7	177.6	IE5	BK80Z-../S5E11MA6	0.8	2.8	5.6	16.5	20	4250	4250	4250	4250	366	30000	75000	
24	15	4750	2.4	198.9	IE4	BK80Z-../S4E11SA6	0.75	2.5	5	15	18	3750	4250	4750	4750	366	30000	75000	
24	15	4750	2.4	198.9	IE5	BK80Z-../S5E11MA6	0.75	2.5	5	15	18	4750	4750	4750	4750	366	30000	75000	
24	13	5400	2.1	226.1	IE4	BK80Z-../S4E11SA6	0.65	2.2	4.4	13	15.5	4250	4850	5400	5400	366	30000	75000	
24	13	5400	2.1	226.1	IE5	BK80Z-../S5E11MA6	0.65	2.2	4.4	13	15.5	5400	5400	5400	5400	366	30000	75000	
24	11.5	6000	1.9	253.3	IE4	BK80Z-../S4E11SA6	0.55	1.9	3.9	11.5	14	4800	5400	6000	6000	366	30000	75000	
24	11.5	6000	1.9	253.3	IE5	BK80Z-../S5E11MA6	0.55	1.9	3.9	11.5	14	6000	6000	6000	6000	366	30000	75000	
24	9.9	7200	1.6	300.6	IE4	BK80Z-../S4E11SA6	0.49	1.6	3.3	9.9	11.5	5700	6400	7200	7200	366	30000	75000	
24	9.9	7200	1.6	300.6	IE5	BK80Z-../S5E11MA6	0.49	1.6	3.3	9.9	11.5	7200	7200	7200	7200	366	30000	75000	
24	8.9	8000	1.4	336.7	IE4	BK80Z-../S4E11SA6	0.44	1.4	2.9	8.9	10.5	6300	7200	8000	8000	366	30000	75000	
24	8.9	8000	1.4	336.7	IE5	BK80Z-../S5E11MA6	0.44	1.4	2.9	8.9	10.5	8000	8000	8000	8000	366	30000	75000	
24	7.7	9300	1.2	389	IE4	BK80Z-../S4E11SA6	0.38	1.2	2.5	7.7	9.2	7300	8300	9300	9300	366	30000	75000	
24	7.7	9300	1.2	389	IE5	BK80Z-../S5E11MA6	0.38	1.2	2.5	7.7	9.2	9300	9300	9300	9300	366	30000	75000	
24	6.8	10400	1.1	435.7	IE4	BK80Z-../S4E11SA6	0.34	1.1	2.2	6.8	8.2	8200	9300	10400	10400	366	30000	75000	
24	6.8	10400	1.1	435.7	IE5	BK80Z-../S5E11MA6	0.34	1.1	2.2	6.8	8.2	10400	10400	10400	10400	366	30000	75000	
24	6	11900	0.96	499.5	IE4	BK80Z-../S4E11SA6	0.3	1	2	6	7.2	9400	10700	11900	11900	366	30000	75000	
24	6	11900	0.96	499.5	IE5	BK80Z-../S5E11MA6	0.3	1	2	6	7.2	11900	11900	11900	11900	366	30000	75000	
24	5.3	13400	0.86	559.5	IE4	BK80Z-../S4E11SA6	0.26	0.85	1.7	5.3	6.4	10600	12000	13400	13400	366	30000	75000	
24	5.3	13400	0.86	559.5	IE5	BK80Z-../S5E11MA6	0.26	0.85	1.7	5.3	6.4	13400	13400	13400	13400	366	30000	75000	
24	11	6300	2.9	262.5	IE4	BK90Z-../S4E11SA6	0.55	1.9	3.8	11	13.5	4950	5600	6300	6300	632	49400	120000	
24	11	6300	2.9	262.5	IE5	BK90Z-../S5E11MA6	0.55	1.9	3.8	11	13.5	6300	6300	6300	6300	632	49400	120000	
24	10	7000	2.6	295.6	IE4	BK90Z-../S4E11SA6	0.5	1.6	3.3	10	12	5600	6300	7000	7000	632	49400	120000	
24	10	7000	2.6	295.6	IE5	BK90Z-../S5E11MA6	0.5	1.6	3.3	10	12	7000	7000	7000	7000	632	49400	120000	
24	9	7900	2.3	330.7	IE4	BK90Z-../S4E11SA6	0.45	1.5	3	9	10.5	6200	7100	7900	7900	632	49400	120000	
24	9	7900	2.3	330.7	IE5	BK90Z-../S5E11MA6	0.45	1.5	3	9	10.5	7900	7900	7900	7900	632	49400	120000	
24	7.7	9300	2	389.1	IE4	BK90Z-../S4E11SA6	0.38	1.2	2.5	7.7	9.2	7300	8300	9300	9300	632	49400	120000	
24	7.7	9300	2	389.1	IE5	BK90Z-../S5E11MA6	0.38	1.2	2.5	7.7	9.2	9300	9300	9300	9300	632	49400	120000	
24	6.8	10400	1.8	435.3	IE4	BK90Z-../S4E11SA6	0.34	1.1	2.2	6.8	8.2	8200	9300	10400	10400	632	49400	120000	
24	6.8	10400	1.8	435.3	IE5	BK90Z-../S5E11MA6	0.34	1.1	2.2	6.8	8.2	10400	10400	10400	10400	632	49400	120000	
24	6	11900	1.5	499.2	IE4	BK90Z-../S4E11SA6	0.3	1	2	6	7.2	9400	10700	11900	11900	632	49400	120000	
24	6	11900	1.5	499.2	IE5	BK90Z-../S5E11MA6	0.3	1	2	6	7.2	11900	11900	11900	11900	632	49400	120000	
24	5.3	13400	1.4	558.5	IE4	BK90Z-../S4E11SA6	0.26	0.85	1.7	5.3	6.4	10600	12000	13400	13400	632	49400	120000	
24	5.3	13400	1.4	558.5	IE5	BK90Z-../S5E11MA6	0.26	0.85	1.7	5.3	6.4	13400	13400	13400	13400	632	49400	120000	
24	4.7	15300	1.2	637.7	IE4	BK90Z-../S4E11SA6	0.23	0.75	1.										

Selection - bevel geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$ **M<sub>N</sub> = 30 Nm (P<sub>N</sub> = 9.5 kW)**

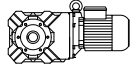
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	100	1000	3000	3600	150	500	1000	3000	3600			
30	630	130	1.5	4.73	IE5	BK30-../S5E11LA6	31.5	105	210	630	760	130	130	130	130	130	76	1550	8800
30	630	130	1.5	4.73	IE5	BK30-../S5E11MA6	31.5	105	210	630	760	115	130	130	130	130	65	1550	8800
30	495	166	1.3	6.02	IE5	BK30-../S5E11LA6	24.5	83	166	495	590	166	166	166	166	166	76	1690	9600
30	495	166	1.3	6.02	IE5	BK30-../S5E11MA6	24.5	83	166	495	590	146	166	166	166	166	65	1690	9600
30	400	205	1.3	7.45	IE5	BK30-../S5E11LA6	20	67	134	400	480	205	205	205	205	205	76	2200	10400
30	400	205	1.3	7.45	IE5	BK30-../S5E11MA6	20	67	134	400	480	181	205	205	205	205	65	2200	10400
30	310	265	1.2	9.63	IE5	BK30-../S5E11LA6	15.5	51	103	310	370	265	265	265	265	265	76	3150	11500
30	310	265	1.2	9.63	IE5	BK30-../S5E11MA6	15.5	51	103	310	370	230	265	265	265	265	65	3150	11500
30	260	305	1.3	11.39	IE5	BK30-../S5E11LA6	13	43.5	87	260	315	305	305	305	305	305	76	4150	11000
30	260	305	1.3	11.39	IE5	BK30-../S5E11MA6	13	43.5	87	260	315	270	305	305	305	305	65	4150	11000
30	250	325	0.97	11.93	IE5	BK30-../S5E11LA6	12.5	41.5	83	250	300	325	325	325	325	325	76	3650	12000
30	250	325	0.97	11.93	IE5	BK30-../S5E11MA6	12.5	41.5	83	250	300	290	325	325	325	325	65	3650	12000
30	210	380	0.84	13.98	IE5	BK30-../S5E11LA6	10.5	35.5	71	210	255	380	380	380	380	380	76	4050	12000
30	210	380	0.84	13.98	IE5	BK30-../S5E11MA6	10.5	35.5	71	210	255	335	380	380	380	380	65	4050	12000
30	205	390	1.1	14.5	IE5	BK30-../S5E11LA6	10	34	68	205	245	390	390	390	390	390	76	4900	12000
30	205	390	1.1	14.5	IE5	BK30-../S5E11MA6	10	34	68	205	245	345	390	390	390	390	65	4900	12000
30	167	480	0.93	17.95	IE5	BK30-../S5E11LA6	8.3	27.5	55	167	200	480	480	480	480	480	76	5300	12000
30	167	480	0.93	17.95	IE5	BK30-../S5E11MA6	8.3	27.5	55	167	200	425	480	480	480	480	65	5300	12000
30	495	166	2.8	6.02	IE5	BK40-../S5E11LA6	24.5	83	166	495	590	166	166	166	166	166	102	470	9800
30	495	166	2.8	6.02	IE5	BK40-../S5E11MA6	24.5	83	166	495	590	146	166	166	166	166	90	470	9800
30	400	205	2.4	7.49	IE5	BK40-../S5E11LA6	20	66	133	400	480	205	205	205	205	205	102	750	10500
30	400	205	2.4	7.49	IE5	BK40-../S5E11MA6	20	66	133	400	480	182	205	205	205	205	90	750	10500
30	320	255	1.9	9.31	IE5	BK40-../S5E11LA6	16	53	107	320	385	255	255	255	255	255	102	1040	11200
30	320	255	1.9	9.31	IE5	BK40-../S5E11MA6	16	53	107	320	385	225	255	255	255	255	90	1040	11200
30	265	300	2.4	11.17	IE5	BK40-../S5E11LA6	13	44.5	89	265	320	300	300	300	300	300	102	4100	13100
30	265	300	2.4	11.17	IE5	BK40-../S5E11MA6	13	44.5	89	265	320	265	300	300	300	300	90	4100	13100
30	250	325	1.5	11.86	IE5	BK40-../S5E11LA6	12.5	42	84	250	300	325	325	325	325	325	102	1770	12200
30	250	325	1.5	11.86	IE5	BK40-../S5E11MA6	12.5	42	84	250	300	285	325	325	325	325	90	1770	12200
30	205	390	2	14.5	IE5	BK40-../S5E11LA6	10	34	68	205	245	390	390	390	390	390	102	4500	14300
30	205	390	2	14.5	IE5	BK40-../S5E11MA6	10	34	68	205	245	345	390	390	390	390	90	4500	14300
30	166	485	1.6	18.05	IE5	BK40-../S5E11LA6	8.3	27.5	55	166	199	485	485	485	485	485	102	4900	15300
30	166	485	1.6	18.05	IE5	BK40-../S5E11MA6	8.3	27.5	55	166	199	430	485	485	485	485	90	4900	15300
30	133	600	1.3	22.44	IE5	BK40-../S5E11LA6	6.6	22	44.5	133	160	600	600	600	600	600	102	5500	16500
30	133	600	1.3	22.44	IE5	BK40-../S5E11MA6	6.6	22	44.5	133	160	530	600	600	600	600	90	5500	16500
30	104	770	1	28.59	IE5	BK40-../S5E11LA6	5.2	17	34.5	104	125	770	770	770	770	770	102	6300	17000
30	104	770	1	28.59	IE5	BK40-../S5E11MA6	5.2	17	34.5	104	125	680	770	770	770	770	90	6300	17000
30	86	930	0.83	34.61	IE5	BK40-../S5E11LA6	4.3	14	28.5	86	104	930	930	930	930	930	102	6900	17000
30	86	930	0.83	34.61	IE5	BK40-../S5E11MA6	4.3	14	28.5	86	104	820	930	930	930	930	90	6900	17000
30	300	275	2.9	10	IE5	BK50-../S5E11LA6	15	50	100	300	360	275	275	275	275	275	132	1220	13200
30	300	275	2.9	10	IE5	BK50-../S5E11MA6	15	50	100	300	360	240	275	275	275	275	120	1220	13200
30	215	375	2.8	13.95	IE5	BK50-../S5E11LA6	10.5	35.5	71	215	255	375	375	375	375	375	132	6100	17400
30	215	375	2.8	13.95	IE5	BK50-../S5E11MA6	10.5	35.5	71	215	255	330	375	375	375	375	120	6100	17400
30	167	485	1.5	17.92	IE5	BK50-../S5E11LA6	8.3	27.5	55	167	200	485	485	485	485	485	132	4600	16800
30	167	485	1.5	17.92	IE5	BK50-../S5E11MA6	8.3	27.5	55	167	200	430	485	485	485	485	120	4600	16800
30	155	520	2	19.33	IE5	BK50-../S5E11LA6	7.7	25.5	51	155	186	520	520	520	520	520	132	6900	19200
30	155	520	2	19.33	IE5	BK50-../S5E11MA6	7.7	25.5	51	155	186	460	520	520	520	520	120	6900	19200
30	113	710	1.5	26.51	IE5	BK50-../S5E11LA6	5.6	18.5	37.5	113	135	710	710	710	710	710	132	7800	21200
30	113	710	1.5	26.51	IE5	BK50-../S5E11MA6	5.6	18.5	37.5	113	135	630	710	710	710	710	120	7800	21200
30	85	950	1.1	35.21	IE5	BK50-../S5E11LA6	4.2	14	28	85	102	950	950	950	950	950	132	8700	23100
30	85	950	1.1	35.21	IE5	BK50-../S5E11MA6	4.2	14	28	85	102	830	950	950	950	950	120	8700	23100
30	63	1260	0.83	47.5	IE5	BK50-../S5E11LA6	3.1	10.5	21	63	75	1260	1260	1260	1260	1260	132	10100	25700
30	63	1260	0.83	47.5	IE5	BK50-../S5E11MA6	3.1	10.5	21	63	75	1120	1260	1260	1260	1260	120	10100	25700
30	109	820	2.8	27.36	IE5	BK60-../S5E11LA6	5.4	18	36.5	109	131	820	820	820	820	820	142	5600	23200
30	109	820	2.8	27.36	IE5	BK60-../S5E11MA6	5.4	18	36.5	109	131	720	820	820	820	820	130	5600	23200
30	88	1010	2.3	33.78	IE5	BK60-../S5E11LA6	4.4	14.5	29.5	88	106	1010	1010	1010	1010	1010	142	6500	25200
30	88	1010	2.3	33.78	IE5	BK60-../S5E11MA6	4.4	14.5	29.5	88	106	890	1010	1010	1010	1010	130	6500	25200
30	79	1130	2	37.8	IE5	BK60-../S5E11LA6	3.9	13	26	79	95	1130	1130	1130	1130	1130	142	7300	26500
30	79	1130	2	37.8	IE5	BK60-../S5E11MA6	3.9	13	26	79	95	1000	1130	1130	1130	1130	130	7300	26500
30	66	1350	1.7	45.05	IE5	BK60-../S5E11LA6	3.3	11	22	66	79	1350	1350	1350	1350	1350	142	8200	28300
30	66	1350	1.7	45.05	IE5	BK60-../S5E11MA6	3.3	11	22	66	79	1190	1350	1350	1350	1350	130	8200	28300
30	59	1510	1.5	50.4	IE5	BK60-../S5E11LA6	2.9	9.9	19.5	59	71	1510	1510	1510	1510	1510	142	9100	29800
30	59	1510	1.5	50.4	IE5	BK60-../S5E11MA6	2.9	9.9	19.5	59	71	1330	1510	1510	1510	1510	130	9100	29800
30	50	1760	1.3	58.95	IE5	BK60-../S5E11LA6	2.5	8.4	16.5	50	61	1760	1760	1760	1760	1760	142	9900	31500
30	50	1760	1.3	58.95	IE5	BK60-../S5E11MA6	2.5	8.4	16.5	50	61	1560	1760	1760	1760	1760	130	9900	31500
30	45	1970	1.2	65.95	IE5	BK60-../S5E11LA6	2.2	7.5	15	45	54	1970	1970	1970	1970	1970	142	10900	33000
30	45	1970	1.2	65.95	IE5	BK60-../S5E11MA6	2.2	7.5	15	45	54	1740	1970	1970	1970	1970	130	10900	33000
30	38	2300	0.98	78.13	IE5	BK60-../S5E11LA6	1.9	6.3	12.5	38	46	2300	2300	2					



# BK-series bevel geared motors

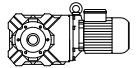
## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

**$M_N = 30 \text{ Nm}$  ( $P_N = 9.5 \text{ kW}$ )**

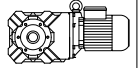


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
30	24.5	3600	1.4	120.2	IE5	BK70-../S5E11LA6	1.2	4.1	8.3	24.5	29.5	3600	3600	3600	3600	221	18600	50000	
30	24.5	3600	1.4	120.2	IE5	BK70-../S5E11MA6	1.2	4.1	8.3	24.5	29.5	3150	3600	3600	3600	209	18600	50000	
30	21.5	4100	1.3	136.7	IE5	BK70-../S5E11LA6	1	3.6	7.3	21.5	26	4100	4100	4100	4100	221	20700	50000	
30	21.5	4100	1.3	136.7	IE5	BK70-../S5E11MA6	1	3.6	7.3	21.5	26	3600	4100	4100	4100	209	20700	50000	
30	19	4600	1.1	154.4	IE5	BK70-../S5E11LA6	0.95	3.2	6.4	19	23	4600	4600	4600	4600	221	21900	50000	
30	19	4600	1.1	154.4	IE5	BK70-../S5E11MA6	0.95	3.2	6.4	19	23	4050	4600	4600	4600	209	21900	50000	
30	17	5200	0.99	175.7	IE5	BK70-../S5E11LA6	0.85	2.8	5.6	17	20	5200	5200	5200	5200	221	24100	50000	
30	17	5200	0.99	175.7	IE5	BK70-../S5E11MA6	0.85	2.8	5.6	17	20	4650	5200	5200	5200	209	24100	50000	
30	15.5	5700	0.91	190.4	IE5	BK70Z-../S5E11LA6	0.75	2.6	5.2	15.5	18.5	5700	5700	5700	5700	247	24100	50000	
30	15.5	5700	0.91	190.4	IE5	BK70Z-../S5E11MA6	0.75	2.6	5.2	15.5	18.5	5000	5700	5700	5700	236	24100	50000	
30	25.5	3500	3	117.5	IE5	BK80-../S5E11LA6	1.2	4.2	8.5	25.5	30.5	3500	3500	3500	3500	336	22300	75000	
30	25.5	3500	3	117.5	IE5	BK80-../S5E11MA6	1.2	4.2	8.5	25.5	30.5	3100	3500	3500	3500	324	22300	75000	
30	22.5	3900	2.7	131.6	IE5	BK80-../S5E11LA6	1.1	3.7	7.5	22.5	27	3900	3900	3900	3900	336	24900	75000	
30	22.5	3900	2.7	131.6	IE5	BK80-../S5E11MA6	1.1	3.7	7.5	22.5	27	3450	3900	3900	3900	324	24900	75000	
30	19.5	4550	2.3	153.1	IE5	BK80-../S5E11LA6	0.95	3.2	6.5	19.5	23.5	4550	4550	4550	4550	366	27200	75000	
30	19.5	4550	2.3	153.1	IE5	BK80-../S5E11MA6	0.95	3.2	6.5	19.5	23.5	4050	4550	4550	4550	324	27200	75000	
30	17	5100	2	171.5	IE5	BK80-../S5E11LA6	0.85	2.9	5.8	17	20.5	5100	5100	5100	5100	336	30000	75000	
30	17	5100	2	171.5	IE5	BK80-../S5E11MA6	0.85	2.9	5.8	17	20.5	4500	5100	5100	5100	324	30000	75000	
30	16.5	5300	2.2	177.6	IE5	BK80Z-../S5E11LA6	0.8	2.8	5.6	16.5	20	5300	5300	5300	5300	378	30000	75000	
30	16.5	5300	2.2	177.6	IE5	BK80Z-../S5E11MA6	0.8	2.8	5.6	16.5	20	4700	5300	5300	5300	366	30000	75000	
30	15	5900	1.9	198.9	IE5	BK80Z-../S5E11LA6	0.75	2.5	5	15	18	5900	5900	5900	5900	378	30000	75000	
30	15	5900	1.9	198.9	IE5	BK80Z-../S5E11MA6	0.75	2.5	5	15	18	5200	5900	5900	5900	366	30000	75000	
30	13	6700	1.7	226.1	IE5	BK80Z-../S5E11LA6	0.65	2.2	4.4	13	15.5	6700	6700	6700	6700	378	30000	75000	
30	13	6700	1.7	226.1	IE5	BK80Z-../S5E11MA6	0.65	2.2	4.4	13	15.5	5900	6700	6700	6700	366	30000	75000	
30	11.5	7500	1.5	253.3	IE5	BK80Z-../S5E11LA6	0.55	1.9	3.9	11.5	14	7500	7500	7500	7500	378	30000	75000	
30	11.5	7500	1.5	253.3	IE5	BK80Z-../S5E11MA6	0.55	1.9	3.9	11.5	14	6700	7500	7500	7500	366	30000	75000	
30	9.9	9000	1.3	300.6	IE5	BK80Z-../S5E11LA6	0.49	1.6	3.3	9.9	11.5	9000	9000	9000	9000	378	30000	75000	
30	9.9	9000	1.3	300.6	IE5	BK80Z-../S5E11MA6	0.49	1.6	3.3	9.9	11.5	7900	9000	9000	9000	366	30000	75000	
30	8.9	10100	1.1	336.7	IE5	BK80Z-../S5E11LA6	0.44	1.4	2.9	8.9	10.5	10100	10100	10100	10100	378	30000	75000	
30	8.9	10100	1.1	336.7	IE5	BK80Z-../S5E11MA6	0.44	1.4	2.9	8.9	10.5	8900	10100	10100	10100	366	30000	75000	
30	7.7	11600	0.99	389	IE5	BK80Z-../S5E11LA6	0.38	1.2	2.5	7.7	9.2	11600	11600	11600	11600	378	30000	75000	
30	7.7	11600	0.99	389	IE5	BK80Z-../S5E11MA6	0.38	1.2	2.5	7.7	9.2	10300	11600	11600	11600	366	30000	75000	
30	6.8	13000	0.88	435.7	IE5	BK80Z-../S5E11LA6	0.34	1.1	2.2	6.8	8.2	13000	13000	13000	13000	378	30000	75000	
30	6.8	13000	0.88	435.7	IE5	BK80Z-../S5E11MA6	0.34	1.1	2.2	6.8	8.2	11500	13000	13000	13000	366	30000	75000	
30	12.5	7000	2.6	234.6	IE5	BK90Z-../S5E11LA6	0.6	2.1	4.2	12.5	15	7000	7000	7000	7000	643	49400	120000	
30	12.5	7000	2.6	234.6	IE5	BK90Z-../S5E11MA6	0.6	2.1	4.2	12.5	15	6200	7000	7000	7000	632	49400	120000	
30	11	7800	2.3	262.5	IE5	BK90Z-../S5E11LA6	0.55	1.9	3.8	11	13.5	7800	7800	7800	7800	643	49400	120000	
30	11	7800	2.3	262.5	IE5	BK90Z-../S5E11MA6	0.55	1.9	3.8	11	13.5	6900	7800	7800	7800	632	49400	120000	
30	10	8800	2.1	295.6	IE5	BK90Z-../S5E11LA6	0.5	1.6	3.3	10	12	8800	8800	8800	8800	643	49400	120000	
30	10	8800	2.1	295.6	IE5	BK90Z-../S5E11MA6	0.5	1.6	3.3	10	12	7800	8800	8800	8800	632	49400	120000	
30	9	9900	1.9	330.7	IE5	BK90Z-../S5E11LA6	0.45	1.5	3	9	10.5	9900	9900	9900	9900	643	49400	120000	
30	9	9900	1.9	330.7	IE5	BK90Z-../S5E11MA6	0.45	1.5	3	9	10.5	8700	9900	9900	9900	632	49400	120000	
30	7.7	11600	1.6	389.1	IE5	BK90Z-../S5E11LA6	0.38	1.2	2.5	7.7	9.2	11600	11600	11600	11600	643	49400	120000	
30	7.7	11600	1.6	389.1	IE5	BK90Z-../S5E11MA6	0.38	1.2	2.5	7.7	9.2	10300	11600	11600	11600	632	49400	120000	
30	6.8	13000	1.4	435.3	IE5	BK90Z-../S5E11LA6	0.34	1.1	2.2	6.8	8.2	13000	13000	13000	13000	643	49400	120000	
30	6.8	13000	1.4	435.3	IE5	BK90Z-../S5E11MA6	0.34	1.1	2.2	6.8	8.2	11500	13000	13000	13000	632	49400	120000	
30	6	14900	1.2	499.2	IE5	BK90Z-../S5E11LA6	0.3	1	2	6	7.2	14900	14900	14900	14900	643	49400	120000	
30	6	14900	1.2	499.2	IE5	BK90Z-../S5E11MA6	0.3	1	2	6	7.2	13200	14900	14900	14900	632	49400	120000	
30	5.3	16700	1.1	558.5	IE5	BK90Z-../S5E11LA6	0.26	0.85	1.7	5.3	6.4	16700	16700	16700	16700	643	49400	120000	
30	5.3	16700	1.1	558.5	IE5	BK90Z-../S5E11MA6	0.26	0.85	1.7	5.3	6.4	14800	16700	16700	16700	632	49400	120000	
30	4.7	19100	0.97	637.7	IE5	BK90Z-../S5E11LA6	0.23	0.75	1.5	4.7	5.6	19100	19100	19100	19100	643	49400	120000	
30	4.7	19100	0.97	637.7	IE5	BK90Z-../S5E11MA6	0.23	0.75	1.5	4.7	5.6	16800	19100	19100	19100	632	49400	120000	
30	4.2	21000	0.86	713.5	IE5	BK90Z-../S5E11LA6	0.21	0.7	1.4	4.2	5	21000	21000	21000	21000	643	49400	120000	
30	4.2	21000	0.86	713.5	IE5	BK90Z-../S5E11MA6	0.21	0.7	1.4	4.2	5	18900	21000	21000	21000	632	49400	120000	

**$M_N = 35 \text{ Nm}$  ( $P_N = 11 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
35	630	152	1.3	4.73	IE4	BK30-../S4E11MA6	31.5	105	210	630	760	115	130	152	152	152	65	1550	8800
35	630	152	1.3	4.73	IE5	BK30-../S5E11LA6	31.5	105	210	630	760	152	152	152	152	152	76	1550	8800
35	495	193	1.1	6.02	IE4	BK30-../S4E11MA6	24.5	83	166	495	590	146	166	193	193	193	65	1690	9600
35	495	193	1.1	6.02	IE5	BK30-../S5E11LA6	24.5	83	166	495	590	193	193	193	193	193	76	1690	9600
35	400	235	1.1	7.45	IE4	BK30-../S4E11MA6	20	67	134	400	480	181	205	235	235	235	65	2200	10400
35	400	235	1.1	7.45	IE5	BK30-../S5E11LA6	20	67	134	400	480	235	235	235	235	235	76	2200	10400
35	310	310	1	9.63	IE4	BK30-../S4E11MA6	15.5	51	103	310	370	230	265	310	310	310	65	3150	11500
35	310	310	1	9.63	IE5	BK30-../S5E11LA6	15.5	51	103	310	370	310	310	310	310	310</			

Selection - bevel geared motors -  $n_1 = 3000 \frac{1}{min}$ **M<sub>N</sub> = 35 Nm (P<sub>N</sub> = 11 kW)**

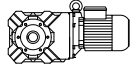
M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min] at engine speed n <sub>1</sub> [1/min]					Torque range M <sub>2</sub> [Nm] at engine speed n <sub>1</sub> [1/min]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]	
							150	80	1000	3000	3600	150	500	1000	3000	3600				
35	495	193	2.4	6.02	IE4	BK40-../S4E11MA6	24.5	83	166	495	590	146	166	193	193	193	193	90	470	9800
35	495	193	2.4	6.02	IE5	BK40-../S5E11LA6	24.5	83	166	495	590	193	193	193	193	193	193	102	470	9800
35	400	240	2	7.49	IE4	BK40-../S4E11MA6	20	66	133	400	480	182	205	240	240	240	240	90	750	10500
35	400	240	2	7.49	IE5	BK40-../S5E11LA6	20	66	133	400	480	240	240	240	240	240	240	102	750	10500
35	320	295	1.6	9.31	IE4	BK40-../S4E11MA6	16	53	107	320	385	225	255	295	295	295	295	90	1040	11200
35	320	295	1.6	9.31	IE5	BK40-../S5E11LA6	16	53	107	320	385	295	295	295	295	295	295	102	1040	11200
35	265	350	2	11.17	IE4	BK40-../S4E11MA6	13	44.5	89	265	320	265	300	350	350	350	350	90	4100	13100
35	265	350	2	11.17	IE5	BK40-../S5E11LA6	13	44.5	89	265	320	350	350	350	350	350	350	102	4100	13100
35	250	380	1.3	11.86	IE4	BK40-../S4E11MA6	12.5	42	84	250	300	285	325	380	380	380	380	90	1770	12200
35	250	380	1.3	11.86	IE5	BK40-../S5E11LA6	12.5	42	84	250	300	380	380	380	380	380	380	102	1770	12200
35	205	455	1.7	14.5	IE4	BK40-../S4E11MA6	10	34	68	205	245	345	390	455	455	455	455	90	4500	14300
35	205	455	1.7	14.5	IE5	BK40-../S5E11LA6	10	34	68	205	245	455	455	455	455	455	455	102	4500	14300
35	166	560	1.4	18.05	IE4	BK40-../S4E11MA6	8.3	27.5	55	166	199	430	485	560	560	560	560	90	4900	15300
35	166	560	1.4	18.05	IE5	BK40-../S5E11LA6	8.3	27.5	55	166	199	560	560	560	560	560	560	102	4900	15300
35	133	700	1.1	22.44	IE4	BK40-../S4E11MA6	6.6	22	44.5	133	160	530	600	700	700	700	700	90	5500	16500
35	133	700	1.1	22.44	IE5	BK40-../S5E11LA6	6.6	22	44.5	133	160	700	700	700	700	700	700	102	5500	16500
35	104	900	0.87	28.59	IE4	BK40-../S4E11MA6	5.2	17	34.5	104	125	680	770	900	900	900	900	90	6300	17000
35	104	900	0.87	28.59	IE5	BK40-../S5E11LA6	5.2	17	34.5	104	125	900	900	900	900	900	900	102	6300	17000
35	305	305	3	9.73	IE4	BK50-../S4E11MA6	15	51	102	305	365	230	260	305	305	305	305	120	5400	15400
35	305	305	3	9.73	IE5	BK50-../S5E11LA6	15	51	102	305	365	305	305	305	305	305	305	132	5400	15400
35	300	320	2.5	10	IE4	BK50-../S4E11MA6	15	50	100	300	360	240	275	320	320	320	320	120	1220	13200
35	300	320	2.5	10	IE5	BK50-../S5E11LA6	15	50	100	300	360	320	320	320	320	320	320	132	1220	13200
35	215	435	2.4	13.95	IE4	BK50-../S4E11MA6	10.5	35.5	71	215	255	330	375	435	435	435	435	120	6100	17400
35	215	435	2.4	13.95	IE5	BK50-../S5E11LA6	10.5	35.5	71	215	255	435	435	435	435	435	435	132	6100	17400
35	167	570	1.3	17.92	IE4	BK50-../S4E11MA6	8.3	27.5	55	167	200	430	485	570	570	570	570	120	4600	16800
35	167	570	1.3	17.92	IE5	BK50-../S5E11LA6	8.3	27.5	55	167	200	570	570	570	570	570	570	132	4600	16800
35	155	600	1.7	19.33	IE4	BK50-../S4E11MA6	7.7	25.5	51	155	186	460	520	600	600	600	600	120	6900	19200
35	155	600	1.7	19.33	IE5	BK50-../S5E11LA6	7.7	25.5	51	155	186	600	600	600	600	600	600	132	6900	19200
35	113	830	1.3	26.51	IE4	BK50-../S4E11MA6	5.6	18.5	37.5	113	135	630	710	830	830	830	830	120	7800	21200
35	113	830	1.3	26.51	IE5	BK50-../S5E11LA6	5.6	18.5	37.5	113	135	830	830	830	830	830	830	132	7800	21200
35	85	1100	0.95	35.21	IE4	BK50-../S4E11MA6	4.2	14	28	85	102	830	950	1100	1100	1100	1100	120	8700	23100
35	85	1100	0.95	35.21	IE5	BK50-../S5E11LA6	4.2	14	28	85	102	1100	1100	1100	1100	1100	1100	132	8700	23100
35	122	850	2.7	24.45	IE4	BK60-../S4E11MA6	6.1	20	40.5	122	147	640	730	850	850	850	850	130	4850	22000
35	122	850	2.7	24.45	IE5	BK60-../S5E11LA6	6.1	20	40.5	122	147	850	850	850	850	850	850	142	4850	22000
35	109	950	2.4	27.36	IE4	BK60-../S4E11MA6	5.4	18	36.5	109	131	720	820	950	950	950	950	130	5600	23200
35	109	950	2.4	27.36	IE5	BK60-../S5E11LA6	5.4	18	36.5	109	131	950	950	950	950	950	950	142	5600	23200
35	88	1180	1.9	33.78	IE4	BK60-../S4E11MA6	4.4	14.5	29.5	88	106	890	1010	1180	1180	1180	1180	130	6500	25200
35	88	1180	1.9	33.78	IE5	BK60-../S5E11LA6	4.4	14.5	29.5	88	106	1180	1180	1180	1180	1180	1180	142	6500	25200
35	79	1320	1.7	37.8	IE4	BK60-../S4E11MA6	3.9	13	26	79	95	1000	1130	1320	1320	1320	1320	130	7300	26500
35	79	1320	1.7	37.8	IE5	BK60-../S5E11LA6	3.9	13	26	79	95	1320	1320	1320	1320	1320	1320	142	7300	26500
35	66	1570	1.5	45.05	IE4	BK60-../S4E11MA6	3.3	11	22	66	79	1190	1350	1570	1570	1570	1570	130	8200	28300
35	66	1570	1.5	45.05	IE5	BK60-../S5E11LA6	3.3	11	22	66	79	1570	1570	1570	1570	1570	1570	142	8200	28300
35	59	1760	1.3	50.4	IE4	BK60-../S4E11MA6	2.9	9.9	19.5	59	71	1330	1510	1760	1760	1760	1760	130	9100	29800
35	59	1760	1.3	50.4	IE5	BK60-../S5E11LA6	2.9	9.9	19.5	59	71	1760	1760	1760	1760	1760	1760	142	9100	29800
35	50	2050	1.1	58.95	IE4	BK60-../S4E11MA6	2.5	8.4	16.5	50	61	1560	1760	2050	2050	2050	2050	130	9900	31500
35	50	2050	1.1	58.95	IE5	BK60-../S5E11LA6	2.5	8.4	16.5	50	61	2050	2050	2050	2050	2050	2050	142	9900	31500
35	45	2300	1	65.95	IE4	BK60-../S4E11MA6	2.2	7.5	15	45	54	1740	1970	2300	2300	2300	2300	130	10900	33000
35	45	2300	1	65.95	IE5	BK60-../S5E11LA6	2.2	7.5	15	45	54	2300	2300	2300	2300	2300	2300	142	10900	33000
35	38	2700	0.84	78.13	IE4	BK60-../S4E11MA6	1.9	6.3	12.5	38	46	2050	2300	2700	2700	2700	2700	130	11900	34000
35	38	2700	0.84	78.13	IE5	BK60-../S5E11LA6	1.9	6.3	12.5	38	46	2700	2700	2700	2700	2700	2700	142	11900	34000
35	55	1890	2.7	54.15	IE4	BK70-../S4E11MA6	2.7	9.2	18	55	66	1430	1620	1890	1890	1890	1890	209	9900	40200
35	55	1890	2.7	54.15	IE5	BK70-../S5E11LA6	2.7	9.2	18	55	66	1890	1890	1890	1890	1890	1890	221	9900	40200
35	48.5	2150	2.4	61.6	IE4	BK70-../S4E11MA6	2.4	8.1	16	48.5	58	1630	1840	2150	2150	2150	2150	209	11500	42800
35	48.5	2150	2.4	61.6	IE5	BK70-../S5E11LA6	2.4	8.1	16	48.5	58	2150	2150	2150	2150	2150	2150	221	11500	42800
35	42.5	2450	2.1	70.23	IE4	BK70-../S4E11MA6	2.1	7.1	14	42.5	51	1860	2100	2450	2450	2450	2450	209	12500	44800
35	42.5	2450	2.1	70.23	IE5	BK70-../S5E11LA6	2.1	7.1	14	42.5	51	2450	2450	2450	2450	2450	2450	221	12500	44800
35	37.5	2750	1.9	79.89	IE4	BK70-../S4E11MA6	1.8	6.2	12.5	37.5	45	2100	2350	2750	2750	2750	2750	209	14300	47600
35	37.5	2750	1.9	79.89	IE5	BK70-../S5E11LA6	1.8	6.2	12.5	37.5	45	2750	2750	2750	2750	2750	2750	221	14300	47600
35	32.5	3150	1.6	90.96	IE4	BK70-../S4E11MA6	1.6	5.4	10.5	32.5	39.5	2400	2700	3150	3150	3150	3150	209	15300	49900
35	32.5	3150	1.6	90.96	IE5	BK70-../S5E11LA6	1.6	5.4	10.5	32.5	39.5	3150	3150	3150	3150	3150	3150	221	15300	49900
35	28.5	3600	1.4	103.5	IE4	BK70-../S4E11MA6	1.4	4.8	9.6	28.5	34.5	2700	3100	3600	3600	3600	3600	209	17200	50000
35	28.5	3600	1.4	103.5	IE5	BK70-../S5E11LA6	1.4	4.8	9.6	28.5	34.5	3600	3600	3600	3600	3600	3600	221	17200	50000
35	24.5	4200	1.2	12																



# BK-series bevel geared motors

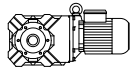
## Selection - bevel geared motors - $n_1 = 3000 \frac{1}{min}$

### $M_N = 35 \text{ Nm}$ ( $P_N = 11 \text{ kW}$ )

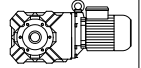


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
35	16.5	6200	1.9	177.6	IE4	BK80Z-../S4E11MA6	0.8	2.8	5.6	16.5	20	4700	5300	6200	6200	6200	366	30000	75000
35	16.5	6200	1.9	177.6	IE5	BK80Z-../S5E11LA6	0.8	2.8	5.6	16.5	20	6200	6200	6200	6200	6200	378	30000	75000
35	15	6900	1.7	198.9	IE4	BK80Z-../S4E11MA6	0.75	2.5	5	15	18	5200	5900	6900	6900	6900	366	30000	75000
35	15	6900	1.7	198.9	IE5	BK80Z-../S5E11LA6	0.75	2.5	5	15	18	6900	6900	6900	6900	6900	378	30000	75000
35	13	7900	1.5	226.1	IE4	BK80Z-../S4E11MA6	0.65	2.2	4.4	13	15.5	5900	6700	7900	7900	7900	366	30000	75000
35	13	7900	1.5	226.1	IE5	BK80Z-../S5E11LA6	0.65	2.2	4.4	13	15.5	7900	7900	7900	7900	7900	378	30000	75000
35	11.5	8800	1.3	253.3	IE4	BK80Z-../S4E11MA6	0.55	1.9	3.9	11.5	14	6700	7500	8800	8800	8800	366	30000	75000
35	11.5	8800	1.3	253.3	IE5	BK80Z-../S5E11LA6	0.55	1.9	3.9	11.5	14	8800	8800	8800	8800	8800	378	30000	75000
35	9.9	10500	1.1	300.6	IE4	BK80Z-../S4E11MA6	0.49	1.6	3.3	9.9	11.5	7900	9000	10500	10500	10500	366	30000	75000
35	9.9	10500	1.1	300.6	IE5	BK80Z-../S5E11LA6	0.49	1.6	3.3	9.9	11.5	10500	10500	10500	10500	10500	378	30000	75000
35	8.9	11700	0.98	336.7	IE4	BK80Z-../S4E11MA6	0.44	1.4	2.9	8.9	10.5	8900	10100	11700	11700	11700	366	30000	75000
35	8.9	11700	0.98	336.7	IE5	BK80Z-../S5E11LA6	0.44	1.4	2.9	8.9	10.5	11700	11700	11700	11700	11700	378	30000	75000
35	7.7	13600	0.84	389	IE4	BK80Z-../S4E11MA6	0.38	1.2	2.5	7.7	9.2	10300	11600	13600	13600	13600	366	30000	75000
35	7.7	13600	0.84	389	IE5	BK80Z-../S5E11LA6	0.38	1.2	2.5	7.7	9.2	13600	13600	13600	13600	13600	378	30000	75000
35	17	6100	3	174.7	IE4	BK90Z-../S4E11MA6	0.85	2.8	5.7	17	20.5	4600	5200	6100	6100	6100	632	49400	120000
35	17	6100	3	174.7	IE5	BK90Z-../S5E11LA6	0.85	2.8	5.7	17	20.5	6100	6100	6100	6100	6100	643	49400	120000
35	15	6800	2.7	195.4	IE4	BK90Z-../S4E11MA6	0.75	2.5	5.1	15	18	5100	5800	6800	6800	6800	632	49400	120000
35	15	6800	2.7	195.4	IE5	BK90Z-../S5E11LA6	0.75	2.5	5.1	15	18	6800	6800	6800	6800	6800	643	49400	120000
35	12.5	8200	2.3	234.6	IE4	BK90Z-../S4E11MA6	0.6	2.1	4.2	12.5	15	6200	7000	8200	8200	8200	632	49400	120000
35	12.5	8200	2.3	234.6	IE5	BK90Z-../S5E11LA6	0.6	2.1	4.2	12.5	15	8200	8200	8200	8200	8200	643	49400	120000
35	11	9100	2	262.5	IE4	BK90Z-../S4E11MA6	0.55	1.9	3.8	11	13.5	6900	7800	9100	9100	9100	632	49400	120000
35	11	9100	2	262.5	IE5	BK90Z-../S5E11LA6	0.55	1.9	3.8	11	13.5	9100	9100	9100	9100	9100	643	49400	120000
35	10	10300	1.8	295.6	IE4	BK90Z-../S4E11MA6	0.5	1.6	3.3	10	12	7800	8800	10300	10300	10300	632	49400	120000
35	10	10300	1.8	295.6	IE5	BK90Z-../S5E11LA6	0.5	1.6	3.3	10	12	10300	10300	10300	10300	10300	643	49400	120000
35	9	11500	1.6	330.7	IE4	BK90Z-../S4E11MA6	0.45	1.5	3	9	10.5	8700	9900	11500	11500	11500	632	49400	120000
35	9	11500	1.6	330.7	IE5	BK90Z-../S5E11LA6	0.45	1.5	3	9	10.5	11500	11500	11500	11500	11500	643	49400	120000
35	7.7	13600	1.4	389.1	IE4	BK90Z-../S4E11MA6	0.38	1.2	2.5	7.7	9.2	10300	11600	13600	13600	13600	632	49400	120000
35	7.7	13600	1.4	389.1	IE5	BK90Z-../S5E11LA6	0.38	1.2	2.5	7.7	9.2	13600	13600	13600	13600	13600	643	49400	120000
35	6.8	15200	1.2	435.3	IE4	BK90Z-../S4E11MA6	0.34	1.1	2.2	6.8	8.2	11500	13000	15200	15200	15200	632	49400	120000
35	6.8	15200	1.2	435.3	IE5	BK90Z-../S5E11LA6	0.34	1.1	2.2	6.8	8.2	15200	15200	15200	15200	15200	643	49400	120000
35	6	17400	1.1	499.2	IE4	BK90Z-../S4E11MA6	0.3	1	2	6	7.2	13200	14900	17400	17400	17400	632	49400	120000
35	6	17400	1.1	499.2	IE5	BK90Z-../S5E11LA6	0.3	1	2	6	7.2	17400	17400	17400	17400	17400	643	49400	120000
35	5.3	19500	0.95	558.5	IE4	BK90Z-../S4E11MA6	0.26	0.85	1.7	5.3	6.4	14800	16700	19500	19500	19500	632	49400	120000
35	5.3	19500	0.95	558.5	IE5	BK90Z-../S5E11LA6	0.26	0.85	1.7	5.3	6.4	19500	19500	19500	19500	19500	643	49400	120000
35	4.7	22000	0.83	637.7	IE4	BK90Z-../S4E11MA6	0.23	0.75	1.5	4.7	5.6	16800	19100	22000	22000	22000	632	49400	120000
35	4.7	22000	0.83	637.7	IE5	BK90Z-../S5E11LA6	0.23	0.75	1.5	4.7	5.6	22000	22000	22000	22000	22000	643	49400	120000

### $M_N = 48 \text{ Nm}$ ( $P_N = 15 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
48	630	205	0.93	4.73	IE5	BK30-../S5E11LA6	31.5	105	210	630	760	152	174	205	205	174	76	1550	8800
48	400	325	0.81	7.45	IE5	BK30-../S5E11LA6	20	67	134	400	480	235	270	325	325	270	76	2200	10400
48	260	490	0.84	11.39	IE5	BK30-../S5E11LA6	13	43.5	87	260	315	355	410	490	490	410	76	4150	11000
48	640	200	2.1	4.63	IE5	BK40-../S5E11LA6	32	107	215	640	770	149	170	200	200	170	102	430	8900
48	495	265	1.8	6.02	IE5	BK40-../S5E11LA6	24.5	83	166	495	590	193	220	265	265	220	102	470	9800
48	400	330	1.5	7.49	IE5	BK40-../S5E11LA6	20	66	133	400	480	240	275	330	330	275	102	750	10500
48	320	410	1.2	9.31	IE5	BK40-../S5E11LA6	16	53	107	320	385	295	340	410	410	340	102	1040	11200
48	265	480	1.5	11.17	IE5	BK40-../S5E11LA6	13	44.5	89	265	320	350	400	480	480	400	102	4100	13100
48	250	520	0.94	11.86	IE5	BK40-../S5E11LA6	12.5	42	84	250	300	380	435	520	520	435	102	1770	12200
48	205	620	1.2	14.5	IE5	BK40-../S5E11LA6	10	34	68	205	245	455	520	620	620	520	102	4500	14300
48	166	770	1	18.05	IE5	BK40-../S5E11LA6	8.3	27.5	55	166	199	560	640	770	770	640	102	4900	15300
48	133	960	0.8	22.44	IE5	BK40-../S5E11LA6	6.6	22	44.5	133	160	700	800	960	960	800	102	5500	16500
48	410	320	2.5	7.29	IE5	BK50-../S5E11LA6	20.5	68	137	410	490	230	265	320	320	265	132	620	111000
48	305	420	2.2	9.73	IE5	BK50-../S5E11LA6	15	51	102	305	365	305	350	420	420	350	132	5400	15400
48	300	440	1.8	10	IE5	BK50-../S5E11LA6	15	50	100	300	360	320	365	440	440	365	132	1220	13200
48	215	600	1.7	13.95	IE5	BK50-../S5E11LA6	10.5	35.5	71	215	255	435	500	600	600	500	132	6100	17400
48	167	780	0.92	17.92	IE5	BK50-../S5E11LA6	8.3	27.5	55	167	200	570	650	780	780	650	132	4600	16800
48	155	830	1.3	19.33	IE5	BK50-../S5E11LA6	7.7	25.5	51	155	186	600	690	830	830	690	132	6900	19200
48	113	1140	0.92	26.51	IE5	BK50-../S5E11LA6	5.6	18.5	37.5	113	135	830	950	1140	1140	950	132	7800	21200
48	215	660	3	13.85	IE5	BK60-../S5E11LA6	10.5	36	72	215	255	480	550	660	660	550	142	3850	18000
48	205	690	2.8	14.41	IE5	BK60-../S5E11LA6	10	34.5	69	205	245	500	570	690	690	570	142	3650	18600
48	186	770	2.6	16.05	IE5	BK60-../S5E11LA6	9.3	31	62	186	220	560	640	770	770	640	142	4050	18800
48	163	880	2.4	18.36	IE5	BK60-../S5E11LA6	8.1	27	54	163	196	640	730	880	880	730	142	4000	19900
48	146	980	2.3	20.54	IE5	BK60-../S5E11LA6	7.3	24	48.5	146	175	710	820	980	980	820			

**BK-series bevel geared motors****Selection - bevel geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 48 \text{ Nm}$  ( $P_N = 15 \text{ kW}$ )**

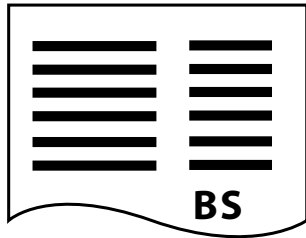
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							48	65	2150	2.3	45.59	IE5	BK70-../S5E11LA6	3.2	10.5	21.5			
48	55	2550	2	54.15	IE5	BK70-../S5E11LA6	2.7	9.2	18	55	66	1890	2150	2550	2550	2150	221	9900	40200
48	48.5	2950	1.8	61.6	IE5	BK70-../S5E11LA6	2.4	8.1	16	48.5	58	2150	2450	2950	2950	2450	221	11500	42800
48	42.5	3350	1.5	70.23	IE5	BK70-../S5E11LA6	2.1	7.1	14	42.5	51	2450	2800	3350	3350	2800	221	12500	44800
48	37.5	3800	1.4	79.89	IE5	BK70-../S5E11LA6	1.8	6.2	12.5	37.5	45	2750	3150	3800	3800	3150	221	14300	47600
48	32.5	4350	1.2	90.96	IE5	BK70-../S5E11LA6	1.6	5.4	10.5	32.5	39.5	3150	3600	4350	4350	3600	221	15300	49900
48	28.5	4950	1	103.5	IE5	BK70-../S5E11LA6	1.4	4.8	9.6	28.5	34.5	3600	4100	4950	4950	4100	221	17200	50000
48	24.5	5700	0.9	120.2	IE5	BK70-../S5E11LA6	1.2	4.1	8.3	24.5	29.5	4200	4800	5700	5700	4800	221	18600	50000
48	42	3350	2.8	70.72	IE5	BK80-../S5E11LA6	2.1	7	14	42	50	2450	2800	3350	3350	2800	336	16600	68700
48	37.5	3800	2.6	79.22	IE5	BK80-../S5E11LA6	1.8	6.3	12.5	37.5	45	2750	3150	3800	3800	3150	336	17600	71300
48	32.5	4350	2.3	91.53	IE5	BK80-../S5E11LA6	1.6	5.4	10.5	32.5	39	3200	3650	4350	4350	3650	336	18300	74200
48	29	4900	2.1	102.5	IE5	BK80-../S5E11LA6	1.4	4.8	9.7	29	35	3550	4100	4900	4900	4100	336	20500	75000
48	25.5	5600	1.9	117.5	IE5	BK80-../S5E11LA6	1.2	4.2	8.5	25.5	30.5	4100	4700	5600	5600	4700	336	22300	75000
48	22.5	6300	1.7	131.6	IE5	BK80-../S5E11LA6	1.1	3.7	7.5	22.5	27	4600	5200	6300	6300	5200	336	24900	75000
48	19.5	7300	1.4	153.1	IE5	BK80-../S5E11LA6	0.95	3.2	6.5	19.5	23.5	5300	6100	7300	7300	6100	336	27200	75000
48	17	8200	1.3	171.5	IE5	BK80-../S5E11LA6	0.85	2.9	5.8	17	20.5	6000	6800	8200	8200	6800	336	30000	75000
48	16.5	8500	1.3	177.6	IE5	BK80Z-../S5E11LA6	0.8	2.8	5.6	16.5	20	6200	7100	8500	8500	7100	378	30000	75000
48	15	9500	1.2	198.9	IE5	BK80Z-../S5E11LA6	0.75	2.5	5	15	18	6900	7900	9500	9500	7900	378	30000	75000
48	13	10800	1.1	226.1	IE5	BK80Z-../S5E11LA6	0.65	2.2	4.4	13	15.5	7900	9000	10800	10800	9000	378	30000	75000
48	11.5	12100	0.95	253.3	IE5	BK80Z-../S5E11LA6	0.55	1.9	3.9	11.5	14	8800	10100	12100	12100	10100	378	30000	75000
48	9.9	14400	0.8	300.6	IE5	BK80Z-../S5E11LA6	0.49	1.6	3.3	9.9	11.5	10500	12000	14400	14400	12000	378	30000	75000
48	17	8300	2.2	174.7	IE5	BK90Z-../S5E11LA6	0.85	2.8	5.7	17	20.5	6100	6900	8300	8300	6900	643	49400	120000
48	15	9300	2	195.4	IE5	BK90Z-../S5E11LA6	0.75	2.5	5.1	15	18	6800	7800	9300	9300	7800	643	49400	120000
48	12.5	11200	1.6	234.6	IE5	BK90Z-../S5E11LA6	0.6	2.1	4.2	12.5	15	8200	9300	11200	11200	9300	643	49400	120000
48	11	12600	1.5	262.5	IE5	BK90Z-../S5E11LA6	0.55	1.9	3.8	11	13.5	9100	10500	12600	12600	10500	643	49400	120000
48	10	14100	1.3	295.6	IE5	BK90Z-../S5E11LA6	0.5	1.6	3.3	10	12	10300	11800	14100	14100	11800	643	49400	120000
48	9	15800	1.2	330.7	IE5	BK90Z-../S5E11LA6	0.45	1.5	3	9	10.5	11500	13200	15800	15800	13200	643	49400	120000
48	7.7	18600	0.99	389.1	IE5	BK90Z-../S5E11LA6	0.38	1.2	2.5	7.7	9.2	13600	15500	18600	18600	15500	643	49400	120000
48	6.8	20500	0.89	435.3	IE5	BK90Z-../S5E11LA6	0.34	1.1	2.2	6.8	8.2	15200	17400	20500	20500	17400	643	49400	120000

# Energy Efficient Geared Motors

## AC Variable Speed

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9



## BS-series worm-gear motors - Selection

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# Energy Efficient Geared Motors

## AC Variable Speed

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# BS-series worm-geared motors

## Description of worm-gear units

### Sizes

Bauer BS-series worm-geared motors are normally supplied in eight frame sizes and with torques of 25 to 1,000 Nm. Higher torques are available on request. The gear unit is accommodated in a sturdy cast housing.

### Efficiency

The efficiency of worm-geared motors depends on numerous factors, including lubrication, extent of wear, temperature and vibration. Calculated efficiency, therefore, is merely a guideline value. Please consult BAUER and state the boundary conditions if efficiency or self-locking capability are important factors for your application.

### Bauer service factors ( $f_b$ ) for worm-geared motors

Worm gears transmit torque by sliding friction only, which means that losses and temperature are inevitably higher than with helical-gear arrangements.

Of the numerous factors influencing the total loading of a worm-gear unit, the most important include:

- Mean torque (rated torque)
- Daily operating hours
- Severity of torque peaks (shock classification)
- Frequency of torque peaks (switching duty)
- Ambient temperature

These factors can be represented in a simplified and practical manner by **service factors**. The tables and explanations below attempt to provide an objective description of the **shock classification**, rather than a classification of the driven machinery. Experience has shown that, in addition to the torque shocks caused by the driven machinery ( $M_x/M_N$ ), above all the power transmission components (clutches, chains etc.) plus the mass ratios play a decisive role in this.

See Bauer special imprint SD32 for more information.

### Continuous operation without switching frequency $Z \leq 1/h$

**Factor  $f_1$**  for shock classification and operating time

Shock classification	Operating hours per day $t_d \leq 10$ min	$\leq 1$ h	$> 1$ h	$> 4$ h	$> 8$ h	$> 16$ h
			$\leq 4$ h	$\leq 8$ h	$\leq 16$ h	$\leq 24$ h
I	0,7	0,8	0,9	1,0	1,25	1,4
II	0,9	1,0	1,12	1,25	1,6	1,8
III	1,25	1,4	1,6	1,8	2,2	2,5



# BS-series worm-geared motors

## Description of worm-gear units

### Switching duty

#### Factor $f_2$ or shock classification and switching frequency

Switching frequency in single- shift operation  $t_d \leq 8$  h/d

Shock classification	$1 < Z \leq 100$	$100 < Z \leq 1000$	$1000 < Z$
I	1.25	1.4	1.6
II	1.6	1.8	2.0
III	1.8	2.0	2.2

Switching frequency in multiple- shift operation  $t_d > 8$  h/d

Shock classification	$1 < Z \leq 100$	$100 < Z \leq 1000$	$1000 < Z$
I	1.4	1.6	1.8
II	1.8	2.0	2.2
III	2.0	2.2	2.5

### Ambient temperature

#### Factor $f_3$ for increased ambient temperature

AT	-10°C .. +25°C	>25°C	>30°C	>35°C	>40°C	>45°C	>50°C	>55°C
	no Factor	1.1	1.2	1.3	1.4	1.5	1.6	Enquiry

### Bauer service factor

Bauer service factor  $f_B$  = maximum value  $f_1, f_2, f_3$  (at daily operating hours > 1h)

For example: Shock classification II for  $Z = 100$  switching operations per hour and multiple-shift operation yields a service factor  $f_B = f_2 = 1.8$

### Explanation of shock classification

#### Shock classification I:

Uniform without shock loads. All the following requirements must be satisfied:

- $FI \leq 1.3$
- $M_x/M_N \leq 1.0$
- Shock-absorbing power transmission components (e.g. highly resilient, zero-play coupling,  $\varphi N \geq 5^\circ$ )

#### Shock classification II:

Moderate shock loads. At least one of the following conditions applies:

- $1.3 < FI \leq 2$
- $1 \leq M_x/M_N \leq 1.4$
- Shock-neutral power transmission components (e.g. gear wheels, zero-playrigid coupling or resilient coupling with  $\varphi N < 5^\circ$ )

#### Shock classification III:

Heavy shock loads. At least one of the following conditions applies:

- $FI > 2$
- $1.4 < M_x/M_N \leq 2.0$
- Shock-amplifying power transmission components (e.g. coupling with play or chain drive)

# BS-series worm-geared motors

## Description of worm-gear units

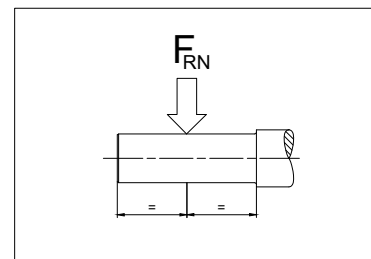
### Key to abbreviations

Z	Switching duty number of switching operations per hour
$t_d$	Daily operating time in hours (h/d)
FI	Factor of inertia $FI = (J_{ext} + J_{rot})/J_{rot}$
$J_{ext}$	Mass moment of inertia of the machine to be driven, in relation to the motor's rotor shaft ( $\text{kgm}^2$ )
$J_{rot}$	Mass moment of inertia of the motor rotor ( $\text{kgm}^2$ )
$M_x$	Highest impact torque above the static torque which can occur during normal operation or in emergency situations
$M_N$	Required static load torque for the application
$M_x/M_N$	Relative torque - Factor
$\varphi_N$	Torsional offset of the resilient coupling under rated torque
UT	Ambient temperature ( $^{\circ}\text{C}$ )

### Selection tables, worm-geared motors

#### Key to abbreviations

P	Rated output
$n_2$	Rated speed of the output shaft
i	Gear reduction ratio
$M_2$	Rated torque at the output shaft
$f_B$	Bauer Service factor
$F_{RN}$	Maximum permissible radial force with standard solid shaft (Code -.1 und -.2)



Use the selection tables to determine the size of geared motor required. The codes clearly define the Type of gear unit and output shaft (see chapter 13 "dimensional drawings worm-geared motors").

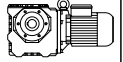
#### Motor power overload protection

Motor-power ratings, particularly in conjunction with four-stage and multi-stage gear units, are more than ample in some instances. Consequently, and in much the same way as with low-power motors, rated current is not a measure of gear loading and cannot be used to protect the gear unit against overloading. It is advisable to provide gears at risk from excessive load or blockage with a protective mechanism (e. g., slip clutch, slip hub, shear pin or an alternative).

# BS-series worm-geared motors

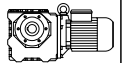
## Selection - worm-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

### $M_N = 0.76 \text{ Nm}$ ( $P_N = 0.12 \text{ kW}$ )

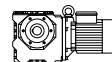


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
0.76	83	10.1	2.5	18	IE4	BS02-../S4E04SA4-1	8.3	27.5	55	83	100	10.1	10.1	10.1	10.1	10.1	3.5	1250	-
0.76	68	11.7	2.1	22	IE4	BS02-../S4E04SA4-1	6.8	22.5	45	68	81	11.7	11.7	11.7	11.7	11.7	3.5	1250	-
0.76	55	12.9	1.9	27	IE4	BS02-../S4E04SA4-1	5.5	18.5	37	55	66	12.9	12.9	12.9	12.9	12.9	3.5	1250	-
0.76	45	15	1.7	33	IE4	BS02-../S4E04SA4-1	4.5	15	30	45	54	15	15	15	15	15	3.5	1250	-
0.76	34.5	20	1.2	43	IE4	BS02-../S4E04SA4-1	3.4	11.5	23	34.5	41.5	20	20	20	20	20	3.5	1250	-
0.76	27.5	23	0.94	54	IE4	BS02-../S4E04SA4-1	2.7	9.2	18.5	27.5	33	23	23	23	23	23	3.5	1250	-
0.76	61	14	2.4	24.25	IE4	BS04-../S4E04SA4-1	6.1	20.5	41	61	74	14	14	14	14	14	3.9	2250	-
0.76	57	14.1	2.7	26.21	IE4	BS04-../S4E04SA4-1	5.7	19	38	57	68	14.1	14.1	14.1	14.1	14.1	3.9	2250	-
0.76	47.5	16.7	2.3	31.5	IE4	BS04-../S4E04SA4-1	4.7	15.5	31.5	47.5	57	16.7	16.7	16.7	16.7	16.7	3.9	2250	-
0.76	39	20	1.8	38.42	IE4	BS04-../S4E04SA4-1	3.9	13	26	39	46.5	20	20	20	20	20	3.9	2250	-
0.76	31	24.5	1.5	47.86	IE4	BS04-../S4E04SA4-1	3.1	10	20.5	31	37.5	24.5	24.5	24.5	24.5	24.5	3.9	2250	-
0.76	24	31	1.2	61.5	IE4	BS04-../S4E04SA4-1	2.4	8.1	16	24	29	31	31	31	31	31	3.9	2250	-
0.76	23	30.5	1.2	64.06	IE4	BS04-../S4E04SA4-1	2.3	7.8	15.5	23	28	30.5	30.5	30.5	30.5	30.5	3.9	2250	-
0.76	21	35.5	1.1	71.18	IE4	BS04-../S4E04SA4-1	2.1	7	14	21	25	35.5	35.5	35.5	35.5	35.5	3.9	2250	-
0.76	19	35.5	1.1	77	IE4	BS04-../S4E04SA4-1	1.9	6.4	12.5	19	23	35.5	35.5	35.5	35.5	35.5	3.9	2250	-
0.76	16.5	44	0.85	90	IE4	BS04-../S4E04SA4-1	1.6	5.5	11	16.5	20	44	44	44	44	44	3.9	2250	-
0.76	15.5	42	0.9	93.92	IE4	BS04-../S4E04SA4-1	1.5	5.3	10.5	15.5	19	42	42	42	42	42	3.9	2250	-
0.76	25.5	31	2.9	58.15	IE4	BS06-../S4E04SA4-1	2.5	8.5	17	25.5	30.5	31	31	31	31	31	8.4	3500	-
0.76	23	33	2.4	64.06	IE4	BS06-../S4E04SA4-1	2.3	7.8	15.5	23	28	33	33	33	33	33	8.4	3500	-
0.76	21	38	2.4	71.18	IE4	BS06-../S4E04SA4-1	2.1	7	14	21	25	38	38	38	38	38	8.4	3500	-
0.76	19	39	2.2	77	IE4	BS06-../S4E04SA4-1	1.9	6.4	12.5	19	23	39	39	39	39	39	8.4	3500	-
0.76	16.5	47.5	2	90	IE4	BS06-../S4E04SA4-1	1.6	5.5	11	16.5	20	47.5	47.5	47.5	47.5	47.5	8.4	3500	-
0.76	14.5	54	1.8	103.1	IE4	BS06-../S4E04SA4-1	1.4	4.8	9.6	14.5	17	54	54	54	54	54	8.4	3500	-
0.76	12.5	58	1.6	118.8	IE4	BS06-../S4E04SA4-1	1.2	4.2	8.4	12.5	15	58	58	58	58	58	8.4	3500	-
0.76	11.5	65	1.6	129	IE4	BS06-../S4E04SA4-1	1.1	3.8	7.7	11.5	13.5	65	65	65	65	65	8.4	3500	-
0.76	10.5	69	1.4	142.2	IE4	BS06-../S4E04SA4-1	1	3.5	7	10.5	12.5	69	69	69	69	69	8.4	3500	-
0.76	10	72	1.5	146.8	IE4	BS06-../S4E04SA4-1	1	3.4	6.8	10	12	72	72	72	72	72	8.4	3500	-
0.76	8.7	83	1.1	171	IE4	BS06-../S4E04SA4-1	0.85	2.9	5.8	8.7	10.5	83	83	83	83	83	8.4	3500	-
0.76	8.6	79	1.2	174	IE4	BS06-../S4E04SA4-1	0.85	2.8	5.7	8.6	10	79	79	79	79	79	8.4	3500	-
0.76	6.8	98	0.99	220	IE4	BS06-../S4E04SA4-1	0.65	2.2	4.5	6.8	8.1	98	98	98	98	98	8.4	3500	-
0.76	5.9	111	0.89	252	IE4	BS06-../S4E04SA4-1	0.55	1.9	3.9	5.9	7.1	111	111	111	111	111	8.4	3500	-
0.76	7.5	97	1.5	200	IE4	BS10Z-../S4E04SA4-1	0.75	2.5	5	7.5	9	97	97	97	97	97	21	6000	-
0.76	5.9	123	1.5	254	IE4	BS10Z-../S4E04SA4-1	0.55	1.9	3.9	5.9	7	123	123	123	123	123	21	6000	-
0.76	4.9	142	1.3	302.5	IE4	BS10Z-../S4E04SA4-1	0.49	1.6	3.3	4.9	5.9	142	142	142	142	142	21	6000	-
0.76	4.1	169	1.1	360.3	IE4	BS10Z-../S4E04SA4-1	0.41	1.3	2.7	4.1	4.9	169	169	169	169	169	21	6000	-
0.76	3.4	200	0.95	432.4	IE4	BS10Z-../S4E04SA4-1	0.34	1.1	2.3	3.4	4.1	200	200	200	200	200	21	6000	-
0.76	7.4	97	2.9	201.4	IE4	BS20Z-../S4E04SA4-1	0.7	2.4	4.9	7.4	8.9	97	97	97	97	97	32	8000	-
0.76	5.8	125	2.4	257.8	IE4	BS20Z-../S4E04SA4-1	0.55	1.9	3.8	5.8	6.9	125	125	125	125	125	32	8000	-
0.76	4.9	143	2.1	300.1	IE4	BS20Z-../S4E04SA4-1	0.49	1.6	3.3	4.9	5.9	143	143	143	143	143	32	8000	-
0.76	4.1	169	1.9	359.9	IE4	BS20Z-../S4E04SA4-1	0.41	1.3	2.7	4.1	5	169	169	169	169	169	32	8000	-
0.76	3.4	199	1.7	430.8	IE4	BS20Z-../S4E04SA4-1	0.34	1.1	2.3	3.4	4.1	199	199	199	199	199	32	8000	-
0.76	2.7	225	1.6	539.7	IE4	BS20Z-../S4E04SA4-1	0.27	0.9	1.8	2.7	3.3	225	225	225	225	225	32	8000	-
0.76	2.4	250	1.3	619.2	IE4	BS20Z-../S4E04SA4-1	0.24	0.8	1.6	2.4	2.9	250	250	250	250	250	32	8000	-
0.76	1.9	310	0.99	763.4	IE4	BS20Z-../S4E04SA4-1	0.19	0.65	1.3	1.9	2.3	310	310	310	310	310	32	8000	-
0.76	1.4	530	0.91	1022	IE4	BS30G06-../S4E04SA4-1	0.14	0.48	0.95	1.4	1.7	530	530	530	530	530	53	10000	-

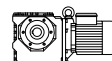
### $M_N = 1 \text{ Nm}$ ( $P_N = 0.157 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1	140	8.7	2.9	10.67	IE2	BS02-../SHE04SA4-1	14	46.5	93	140	168	6.6	7.4	8.7	8.7	8.7	3.5	1250	-
1	111	10.5	2.4	13.5	IE2	BS02-../SHE04SA4-1	11	37	74	111	133	8	8.9	10.5	10.5	10.5	3.5	1250	-
1	83	13.3	1.9	18	IE2	BS02-../SHE04SA4-1	8.3	27.5	55	83	100	10.1	11.3	13.3	13.3	13.3	3.5	1250	-
1	68	15.3	1.6	22	IE2	BS02-../SHE04SA4-1	6.8	22.5	45	68	81	11.7	13	15.3	15.3	15.3	3.5	1250	-
1	55	17	1.5	27	IE2	BS02-../SHE04SA4-1	5.5	18.5	37	55	66	12.9	14.4	17	17	17	3.5	1250	-
1	45	19.8	1.3	33	IE2	BS02-../SHE04SA4-1	4.5	15	30	45	54	15	16.8	19.8	19.8	19.8	3.5	1250	-
1	34.5	26.5	0.9	43	IE2	BS02-../SHE04SA4-1	3.4	11.5	23	34.5	41.5	20	22.5	26.5	26.5	26.5	3.5	1250	-
1	91	12.5	2.8	16.31	IE2	BS04-../SHE04SA4-1	9.1	30.5	61	91	110	9.5	10.6	12.5	12.5	12.5	3.9	1970	-
1	83	12.7	2.7	18	IE2	BS04-../SHE04SA4-1	8.3	27.5	55	83	100	9.7	10.8	12.7	12.7	12.7	3.9	1950	-
1	71	15.9	2.3	20.96	IE2	BS04-../SHE04SA4-1	7.1	23.5	47.5	71	85	12.1	13.5	15.9	15.9	15.9	3.9	2100	-
1	61	18.4	1.8	24.25	IE2	BS04-../SHE04SA4-1	6.1	20.5	41	61	74	14	15.6	18.4	18.4	18.4	3.9	2250	-
1	57	18.6	2	26.21	IE2	BS04-../SHE04SA4-1	5.7	19	38	57	68	14.1	15.8	18.6	18.6	18.6	3.9	2250	-
1	47.5	22	1.7	31.5	IE2	BS04-../SHE04SA4-1	4.7	15.5	31.5	47.5	57	16.7	18.7	22	22	22	3.9	2250	-
1	39	26.5	1.4	38.42	IE2	BS04-../SHE04SA4-1	3.9	13	26	39	46.5	20	22.5	26.5	26.5	26.5	3.9	2250	-
1	31	32.5	1.2	47.86	IE2	BS04-../SHE04SA4-1	3.1	10	20.5	31	37.5	24.5	27.5	32.5	32.5	32.5	3.9	2250	-
1	24	41	0.92	61.5	IE2	BS04-../SHE04SA4-1	2.4	8.1	16	24	29	31	35	41	41	41	3.9	2250	-
1	23	40	0.89	64.06	IE2	BS04-../SHE04SA4-1	2.3	7.8	15.5	23	28	30.5	34	40	40	40	3.9	2250	-
1	21	46.5	0.81	71.18	IE2	BS04-../SHE04SA4-1	2.1	7	14	21	25	35.5	39.5	46.5	46.5	46.5	3.9	2250	-
1	19	46.5	0.81	77	IE2	BS04-../SHE04SA4-1	1.9	6.4	12.5	19	23	35.5	39.5	46.5	4				

**BS-series worm-geared motors****Selection - worm-geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 1 \text{ Nm}$  ( $P_N = 0.157 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							1	23	43.5	1.8	64.06	IE2	BS06-../SHE04SA4-1	2.3	7.8	15.5			
1	21	50	1.9	71.18	IE2	BS06-../SHE04SA4-1	2.1	7	14	21	25	38	42.5	50	50	8.4	3500	-	
1	19	51	1.6	77	IE2	BS06-../SHE04SA4-1	1.9	6.4	12.5	19	23	39	43.5	51	51	8.4	3500	-	
1	16.5	62	1.6	90	IE2	BS06-../SHE04SA4-1	1.6	5.5	11	16.5	20	47.5	53	62	62	8.4	3500	-	
1	14.5	71	1.4	103.1	IE2	BS06-../SHE04SA4-1	1.4	4.8	9.6	14.5	17	54	60	71	71	8.4	3500	-	
1	12.5	77	1.2	118.8	IE2	BS06-../SHE04SA4-1	1.2	4.2	8.4	12.5	15	58	65	77	77	8.4	3500	-	
1	11.5	86	1.2	129	IE2	BS06-../SHE04SA4-1	1.1	3.8	7.7	11.5	13.5	65	73	86	86	8.4	3500	-	
1	10.5	91	1.1	142.2	IE2	BS06-../SHE04SA4-1	1	3.5	7	10.5	12.5	69	77	91	91	8.4	3500	-	
1	10	95	1.1	146.8	IE2	BS06-../SHE04SA4-1	1	3.4	6.8	10	12	72	81	95	95	8.4	3500	-	
1	8.7	109	0.8	171	IE2	BS06-../SHE04SA4-1	0.85	2.9	5.8	8.7	10.5	83	93	109	109	8.4	3500	-	
1	8.6	104	0.94	174	IE2	BS06-../SHE04SA4-1	0.85	2.8	5.7	8.6	10	79	88	104	104	8.4	3500	-	
1	7.5	128	1.2	200	IE2	BS10Z-../SHE04SA4-1	0.75	2.5	5	7.5	9	97	108	128	128	21	6000	-	
1	5.9	162	1.1	254	IE2	BS10Z-../SHE04SA4-1	0.55	1.9	3.9	5.9	7	123	138	162	162	21	6000	-	
1	4.9	187	1	302.5	IE2	BS10Z-../SHE04SA4-1	0.49	1.6	3.3	4.9	5.9	142	159	187	187	21	6000	-	
1	4.1	220	0.85	360.3	IE2	BS10Z-../SHE04SA4-1	0.41	1.3	2.7	4.1	4.9	169	189	220	220	21	6000	-	
1	7.4	128	2.2	201.4	IE2	BS20Z-../SHE04SA4-1	0.7	2.4	4.9	7.4	8.9	97	109	128	128	32	8000	-	
1	5.8	164	1.8	257.8	IE2	BS20Z-../SHE04SA4-1	0.55	1.9	3.8	5.8	6.9	125	140	164	164	32	8000	-	
1	4.9	189	1.6	300.1	IE2	BS20Z-../SHE04SA4-1	0.49	1.6	3.3	4.9	5.9	143	160	189	189	32	8000	-	
1	4.1	220	1.4	359.9	IE2	BS20Z-../SHE04SA4-1	0.41	1.3	2.7	4.1	5	169	189	220	220	32	8000	-	
1	3.4	260	1.3	430.8	IE2	BS20Z-../SHE04SA4-1	0.34	1.1	2.3	3.4	4.1	199	220	260	260	32	8000	-	
1	2.7	295	1.2	539.7	IE2	BS20Z-../SHE04SA4-1	0.27	0.9	1.8	2.7	3.3	225	250	295	295	32	8000	-	
1	2.4	330	0.99	619.2	IE2	BS20Z-../SHE04SA4-1	0.24	0.8	1.6	2.4	2.9	250	280	330	330	32	8000	-	

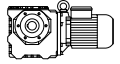
 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							1.3	325	5.2	2.9	4.6	IE5	BS02-../S5E06MA4	32.5	108	215			
1.3	181	9	2.8	8.25	IE5	BS02-../S5E06MA4	18	60	121	181	215	9	9	9	9	9	6.8	1100	-
1.3	140	11.3	2.2	10.67	IE5	BS02-../S5E06MA4	14	46.5	93	140	168	11.3	11.3	11.3	11.3	11.3	6.8	1250	-
1.3	111	13.6	1.8	13.5	IE5	BS02-../S5E06MA4	11	37	74	111	133	13.6	13.6	13.6	13.6	13.6	6.8	1250	-
1.3	83	17.3	1.4	18	IE5	BS02-../S5E06MA4	8.3	27.5	55	83	100	17.3	17.3	17.3	17.3	17.3	6.8	1250	-
1.3	68	20	1.2	22	IE5	BS02-../S5E06MA4	6.8	22.5	45	68	81	20	20	20	20	20	6.8	1250	-
1.3	55	22	1.1	27	IE5	BS02-../S5E06MA4	5.5	18.5	37	55	66	22	22	22	22	22	6.8	1250	-
1.3	45	25.5	0.97	33	IE5	BS02-../S5E06MA4	4.5	15	30	45	54	25.5	25.5	25.5	25.5	25.5	6.8	1250	-
1.3	78	18.7	2.9	19	IE5	BS03-../S5E06MA4	7.8	26	52	78	94	18.7	18.7	18.7	18.7	18.7	6.9	1950	-
1.3	60	22	2.5	25	IE5	BS03-../S5E06MA4	6	20	40	60	72	22	22	22	22	22	6.9	1950	-
1.3	45	26	2.1	33	IE5	BS03-../S5E06MA4	4.5	15	30	45	54	26	26	26	26	26	6.9	1950	-
1.3	38	32	1.7	39	IE5	BS03-../S5E06MA4	3.8	12.5	25.5	38	46	32	32	32	32	32	6.9	1950	-
1.3	30	37.5	1.5	50	IE5	BS03-../S5E06MA4	3	10	20	30	36	37.5	37.5	37.5	37.5	37.5	6.9	1950	-
1.3	24	42.5	1.1	62	IE5	BS03-../S5E06MA4	2.4	8	16	24	29	42.5	42.5	42.5	42.5	42.5	6.9	1950	-
1.3	20	49.5	0.8	75	IE5	BS03-../S5E06MA4	2	6.6	13	20	24	49.5	49.5	49.5	49.5	49.5	6.9	1950	-
1.3	139	10.8	2.9	10.73	IE5	BS04-../S5E06MA4	13.5	46.5	93	139	167	10.8	10.8	10.8	10.8	10.8	7.3	1600	-
1.3	114	13.1	2.5	13.09	IE5	BS04-../S5E06MA4	11	38	76	114	137	13.1	13.1	13.1	13.1	13.1	7.3	1760	-
1.3	91	16.3	2.1	16.31	IE5	BS04-../S5E06MA4	9.1	30.5	61	91	110	16.3	16.3	16.3	16.3	16.3	7.3	1970	-
1.3	83	16.6	2	18	IE5	BS04-../S5E06MA4	8.3	27.5	55	83	100	16.6	16.6	16.6	16.6	16.6	7.3	1950	-
1.3	71	20.5	1.8	20.96	IE5	BS04-../S5E06MA4	7.1	23.5	47.5	71	85	20.5	20.5	20.5	20.5	20.5	7.3	2100	-
1.3	61	23.5	1.4	24.25	IE5	BS04-../S5E06MA4	6.1	20.5	41	61	74	23.5	23.5	23.5	23.5	23.5	7.3	2250	-
1.3	57	24	1.6	26.21	IE5	BS04-../S5E06MA4	5.7	19	38	57	68	24	24	24	24	24	7.3	2250	-
1.3	47.5	28.5	1.3	31.5	IE5	BS04-../S5E06MA4	4.7	15.5	31.5	47.5	57	28.5	28.5	28.5	28.5	28.5	7.3	2250	-
1.3	39	34	1.1	38.42	IE5	BS04-../S5E06MA4	3.9	13	26	39	46.5	34	34	34	34	34	7.3	2250	-
1.3	31	42	0.9	47.86	IE5	BS04-../S5E06MA4	3.1	10	20.5	31	37.5	42	42	42	42	42	7.3	2250	-
1.3	47.5	29.5	2.7	31.5	IE5	BS06-../S5E06MA4	4.7	15.5	31.5	47.5	57	29.5	29.5	29.5	29.5	29.5	12	3200	-
1.3	36	38.5	2.2	41.29	IE5	BS06-../S5E06MA4	3.6	12	24	36	43.5	38.5	38.5	38.5	38.5	38.5	12	3500	-
1.3	30.5	45	1.9	48.6	IE5	BS06-../S5E06MA4	3	10	20.5	30.5	37	45	45	45	45	45	12	3500	-
1.3	25.5	53	1.7	58.15	IE5	BS06-../S5E06MA4	2.5	8.5	17	25.5	30.5	53	53	53	53	53	12	3500	-
1.3	23	56	1.4	64.06	IE5	BS06-../S5E06MA4	2.3	7.8	15.5	23	28	56	56	56	56	56	12	3500	-
1.3	21	65	1.4	71.18	IE5	BS06-../S5E06MA4	2.1	7	14	21	25	65	65	65	65	65	12	3500	-
1.3	19	67	1.3	77	IE5	BS06-../S5E06MA4	1.9	6.4	12.5	19	23	67	67	67	67	67	12	3500	-
1.3	16.5	81	1.2	90	IE5	BS06-../S5E06MA4	1.6	5.5	11	16.5	20	81	81	81	81	81	12	3500	-
1.3	14.5	92	1.1	103.1	IE5	BS06-../S5E06MA4	1.4	4.8	9.6	14.5	17	92	92	92	92	92	12	3500	-
1.3	12.5	100	0.94	118.8	IE5	BS06-../S5E06MA4	1.2	4.2	8.4	12.5	15	100	100	100	100	100	12	3500	-
1.3	11.5	112	0.93	129	IE5	BS06-../S5E06MA4	1.1	3.8	7.7	11.5	13.5	112	112	112	112	112	12	3500	-
1.3	10.5	118	0.83	142.2	IE5	BS06-../S5E06MA4	1	3.5	7	10.5	12.5	118	118	118	118	118	12	3500	-
1.3	10	124	0.85	146															

# BS-series worm-geared motors

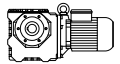
## Selection - worm-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

### $M_N = 1.3 \text{ Nm}$ ( $P_N = 0.55 \text{ kW}$ )

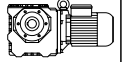


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]			
1.3	6.9	180	1	216.6	IE5	BS10-../S5E06MA4	0.65	2.3	4.6	6.9	8.3	180	180	180	180	180	23	6000	-
1.3	7.5	166	0.89	200	IE5	BS10Z-../S5E06MA4	0.75	2.5	5	7.5	9	166	166	166	166	166	24	6000	-
1.3	5.9	210	0.85	254	IE5	BS10Z-../S5E06MA4	0.55	1.9	3.9	5.9	7	210	210	210	210	210	24	6000	-
1.3	14.5	97	2.6	101.1	IE5	BS20-../S5E06MA4	1.4	4.9	9.8	14.5	17.5	97	97	97	97	97	34	7100	-
1.3	14	91	3	106.3	IE5	BS20-../S5E06MA4	1.4	4.7	9.4	14	16.5	91	91	91	91	91	34	7600	-
1.3	11.5	109	2.5	127.3	IE5	BS20-../S5E06MA4	1.1	3.9	7.8	11.5	14	109	109	109	109	109	34	8000	-
1.3	9.4	136	2	159.4	IE5	BS20-../S5E06MA4	0.9	3.1	6.2	9.4	11	136	136	136	136	136	34	8000	-
1.3	8.1	157	1.8	183	IE5	BS20-../S5E06MA4	0.8	2.7	5.4	8.1	9.8	157	157	157	157	157	34	8000	-
1.3	6.6	187	1.5	225.6	IE5	BS20-../S5E06MA4	0.65	2.2	4.4	6.6	7.9	187	187	187	187	187	34	8000	-
1.3	7.4	167	1.7	201.4	IE5	BS20Z-../S5E06MA4	0.7	2.4	4.9	7.4	8.9	167	167	167	167	167	35	8000	-
1.3	5.8	210	1.4	257.8	IE5	BS20Z-../S5E06MA4	0.55	1.9	3.8	5.8	6.9	210	210	210	210	210	35	8000	-
1.3	4.9	245	1.2	300.1	IE5	BS20Z-../S5E06MA4	0.49	1.6	3.3	4.9	5.9	245	245	245	245	245	35	8000	-
1.3	4.1	290	1.1	359.9	IE5	BS20Z-../S5E06MA4	0.41	1.3	2.7	4.1	5	290	290	290	290	290	35	8000	-
1.3	3.4	340	0.97	430.8	IE5	BS20Z-../S5E06MA4	0.34	1.1	2.3	3.4	4.1	340	340	340	340	340	35	8000	-
1.3	2.7	385	0.95	539.7	IE5	BS20Z-../S5E06MA4	0.27	0.9	1.8	2.7	3.3	385	385	385	385	385	35	8000	-
1.3	6.9	185	2.8	216.4	IE5	BS30-../S5E06MA4	0.65	2.3	4.6	6.9	8.3	185	185	185	185	185	51	10000	-
1.3	7.1	181	2.5	211.1	IE5	BS30Z-../S5E06MA4	0.7	2.3	4.7	7.1	8.5	181	181	181	181	181	54	10000	-
1.3	5.7	220	2.5	261.6	IE5	BS30Z-../S5E06MA4	0.55	1.9	3.8	5.7	6.8	220	220	220	220	220	54	10000	-
1.3	4.8	255	2.2	306.6	IE5	BS30Z-../S5E06MA4	0.48	1.6	3.2	4.8	5.8	255	255	255	255	255	54	10000	-
1.3	4.1	345	1.1	359.6	IE5	BS30Z-../S5E06MA4	0.41	1.3	2.7	4.1	5	345	345	345	345	345	54	10000	-
1.3	3.8	325	1.8	390.2	IE5	BS30Z-../S5E06MA4	0.38	1.2	2.5	3.8	4.6	325	325	325	325	325	54	10000	-
1.3	3.2	380	1.6	457.3	IE5	BS30Z-../S5E06MA4	0.32	1	2.1	3.2	3.9	380	380	380	380	380	54	10000	-
1.3	2.7	445	1.3	539.3	IE5	BS30Z-../S5E06MA4	0.27	0.9	1.8	2.7	3.3	445	445	445	445	445	54	10000	-
1.3	2.3	500	1.1	651	IE5	BS30Z-../S5E06MA4	0.23	0.75	1.5	2.3	2.7	500	500	500	500	500	54	10000	-
1.3	5.2	275	2.6	287.7	IE5	BS40Z-../S5E06MA4	0.5	1.7	3.4	5.2	6.2	275	275	275	275	275	68	15000	-
1.3	3.3	365	2.7	446.8	IE5	BS40Z-../S5E06MA4	0.33	1.1	2.2	3.3	4	365	365	365	365	365	68	15000	-
1.3	2.8	425	2.6	520.8	IE5	BS40Z-../S5E06MA4	0.28	0.95	1.9	2.8	3.4	425	425	425	425	425	68	15000	-
1.3	2.4	485	1.9	612.1	IE5	BS40Z-../S5E06MA4	0.24	0.8	1.6	2.4	2.9	485	485	485	485	485	68	15000	-
1.3	2	570	1.3	736.5	IE5	BS40Z-../S5E06MA4	0.2	0.65	1.3	2	2.4	570	570	570	570	570	68	15000	-
1.3	1.6	690	1.1	908.2	IE5	BS40Z-../S5E06MA4	0.16	0.55	1.1	1.6	1.9	690	690	690	690	690	68	15000	-
1.3	1.5	870	1	965.5	IE5	BS40G10-../S5E06MA4	0.15	0.5	1	1.5	1.8	870	870	870	870	870	73	15000	-
1.3	1.2	1070	0.82	1180	IE5	BS40G10-../S5E06MA4	0.12	0.42	0.8	1.2	1.5	1070	1070	1070	1070	1070	73	15000	-

### $M_N = 1.6 \text{ Nm}$ ( $P_N = 0.67 \text{ kW}$ )

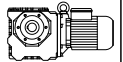


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]	[Nm]	[1/min]			
1.6	325	6.4	2.3	4.6	IE4	BS02-../S4E06MA4	32.5	108	215	325	390	6.4	6.4	6.4	6.4	6.4	6.8	1000	-
1.6	275	7.6	2.6	5.4	IE4	BS02-../S4E06MA4	27.5	92	185	275	330	7.6	7.6	7.6	7.6	7.6	6.8	1000	-
1.6	220	9.2	2.7	6.75	IE4	BS02-../S4E06MA4	22	74	148	220	265	9.2	9.2	9.2	9.2	9.2	6.8	1000	-
1.6	181	11	2.3	8.25	IE4	BS02-../S4E06MA4	18	60	121	181	215	11	11	11	11	11	6.8	1100	-
1.6	140	13.9	1.8	10.67	IE4	BS02-../S4E06MA4	14	46.5	93	140	168	13.9	13.9	13.9	13.9	13.9	6.8	1250	-
1.6	111	16.8	1.5	13.5	IE4	BS02-../S4E06MA4	11	37	74	111	133	16.8	16.8	16.8	16.8	16.8	6.8	1250	-
1.6	83	21	1.2	18	IE4	BS02-../S4E06MA4	8.3	27.5	55	83	100	21	21	21	21	21	6.8	1250	-
1.6	68	24.5	1	22	IE4	BS02-../S4E06MA4	6.8	22.5	45	68	81	24.5	24.5	24.5	24.5	24.5	6.8	1250	-
1.6	55	27	0.92	27	IE4	BS02-../S4E06MA4	5.5	18.5	37	55	66	27	27	27	27	27	6.8	1250	-
1.6	78	23	2.4	19	IE4	BS03-../S4E06MA4	7.8	26	52	78	94	23	23	23	23	23	6.9	1950	-
1.6	60	27.5	2	25	IE4	BS03-../S4E06MA4	6	20	40	60	72	27.5	27.5	27.5	27.5	27.5	6.9	1950	-
1.6	45	32	1.7	33	IE4	BS03-../S4E06MA4	4.5	15	30	45	54	32	32	32	32	32	6.9	1950	-
1.6	38	39.5	1.4	39	IE4	BS03-../S4E06MA4	3.8	12.5	25.5	38	46	39.5	39.5	39.5	39.5	39.5	6.9	1950	-
1.6	30	46	1.2	50	IE4	BS03-../S4E06MA4	3	10	20	30	36	46	46	46	46	46	6.9	1950	-
1.6	24	52	0.91	62	IE4	BS03-../S4E06MA4	2.4	8	16	24	29	52	52	52	52	52	6.9	1950	-
1.6	167	11.1	2.7	8.93	IE4	BS04-../S4E06MA4	16.5	55	111	167	200	11.1	11.1	11.1	11.1	11.1	7.3	1500	-
1.6	139	13.3	2.4	10.73	IE4	BS04-../S4E06MA4	13.5	46.5	93	139	167	13.3	13.3	13.3	13.3	13.3	7.3	1600	-
1.6	114	16.1	2	13.09	IE4	BS04-../S4E06MA4	11	38	76	114	137	16.1	16.1	16.1	16.1	16.1	7.3	1760	-
1.6	91	20	1.7	16.31	IE4	BS04-../S4E06MA4	9.1	30.5	61	91	110	20	20	20	20	20	7.3	1970	-
1.6	83	20	1.7	18	IE4	BS04-../S4E06MA4	8.3	27.5	55	83	100	20	20	20	20	20	7.3	1950	-
1.6	71	25	1.5	20.96	IE4	BS04-../S4E06MA4	7.1	23.5	47.5	71	85	25	25	25	25	25	7.3	2100	-
1.6	61	29	1.2	24.25	IE4	BS04-../S4E06MA4	6.1	20.5	41	61	74	29	29	29	29	29	7.3	2250	-
1.6	57	29.5	1.3	26.21	IE4	BS04-../S4E06MA4	5.7	19	38	57	68	29.5	29.5	29.5	29.5	29.5	7.3	2250	-
1.6	47.5	35	1.1	31.5	IE4	BS04-../S4E06MA4	4.7	15.5	31.5	47.5	57	35	35	35	35	35	7.3	2250	-
1.6	39	42	0.87	38.42	IE4	BS04-../S4E06MA4	3.9	13	26	39	46.5	42	42	42	42	42	7.3	2250	-
1.6	75	25	3	19.82	IE4	BS06-../S4E06MA4	7.5	25	50	75	90	25	25	25	25	25	12	2500	-
1.6	61	31	2.5	24.25	IE4	BS06-../S4E06MA4	6.1	20.5	41	61	74	31	31	31	31	31	12	2600	-
1.6	57	30.5	2.5	26.21	IE4	BS06-../S4E06MA4	5.7	19	38	57	68	30.5	30.5	30.5	30.5	30.5	12	3000	-
1.6	47.5	36.5	2.2	31.5	IE4	BS06-../S4E06MA4	4.7	15.5	31.5	47.5	57	36.5	36.5	36.5	36.5	36.5	12	3200	-
1.6	36	47.5	1.8	41.29	IE4	BS06-../S4E06MA4	3.6	12	24	36	43.5	47.5	47.5	47.5	47.5	47.5	12	3500	-
1.6	30.5	55	1.6	48.6	IE4	BS06-../S4E06MA4	3	10	20.5	30.5	37	55	55	55	55	55	12	3500	-
1.6	25.5	66	1.4	58.15	IE4	BS06-../S4E06MA4	2.5	8.5	17	25.5	30.5	66	66	66	66	66	12	3500	-
1.6	23	69	1																

**BS-series worm-geared motors****Selection - worm-geared motors -  $n_1 = 1500 \frac{1}{min}$**  **$M_N = 1.6 \text{ Nm}$  ( $P_N = 0.67 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
1.6	37.5	47.5	2.9	39.96	IE4	BS10-../S4E06MA4	3.7	12.5	25	37.5	45	47.5	47.5	47.5	47.5	23	3800	-	
1.6	31.5	57	2.5	47.59	IE4	BS10-../S4E06MA4	3.1	10.5	21	31.5	37.5	57	57	57	23	4050	-		
1.6	26	67	2.2	57.12	IE4	BS10-../S4E06MA4	2.6	8.7	17.5	26	31.5	67	67	67	23	4350	-		
1.6	24.5	65	2.3	60.74	IE4	BS10-../S4E06MA4	2.4	8.2	16	24.5	29.5	65	65	65	23	4550	-		
1.6	20.5	85	1.9	71.96	IE4	BS10-../S4E06MA4	2	6.9	13.5	20.5	25	85	85	85	23	5000	-		
1.6	17.5	99	1.5	84.36	IE4	BS10-../S4E06MA4	1.7	5.9	11.5	17.5	21	99	99	99	23	5300	-		
1.6	14.5	105	1.5	103.4	IE4	BS10-../S4E06MA4	1.4	4.8	9.6	14.5	17	105	105	105	23	5600	-		
1.6	12.5	141	0.85	119.6	IE4	BS10-../S4E06MA4	1.2	4.1	8.3	12.5	15	141	141	141	23	6000	-		
1.6	11.5	133	1.2	130.3	IE4	BS10-../S4E06MA4	1.1	3.8	7.6	11.5	13.5	133	133	133	23	6000	-		
1.6	9.8	156	1.1	152.7	IE4	BS10-../S4E06MA4	0.95	3.2	6.5	9.8	11.5	156	156	156	23	6000	-		
1.6	7.9	193	0.88	188.6	IE4	BS10-../S4E06MA4	0.75	2.6	5.3	7.9	9.5	193	193	193	23	6000	-		
1.6	6.9	220	0.81	216.6	IE4	BS10-../S4E06MA4	0.65	2.3	4.6	6.9	8.3	220	220	220	23	6000	-		
1.6	16.5	93	2.9	88.67	IE4	BS20-../S4E06MA4	1.6	5.6	11	16.5	20	93	93	93	34	7000	-		
1.6	14.5	119	2.1	101.1	IE4	BS20-../S4E06MA4	1.4	4.9	9.8	14.5	17.5	119	119	119	34	7100	-		
1.6	14	112	2.4	106.3	IE4	BS20-../S4E06MA4	1.4	4.7	9.4	14	16.5	112	112	112	34	7600	-		
1.6	11.5	134	2	127.3	IE4	BS20-../S4E06MA4	1.1	3.9	7.8	11.5	14	134	134	134	34	8000	-		
1.6	9.4	168	1.6	159.4	IE4	BS20-../S4E06MA4	0.9	3.1	6.2	9.4	11	168	168	168	34	8000	-		
1.6	8.1	193	1.4	183	IE4	BS20-../S4E06MA4	0.8	2.7	5.4	8.1	9.8	193	193	193	34	8000	-		
1.6	6.6	230	1.3	225.6	IE4	BS20-../S4E06MA4	0.65	2.2	4.4	6.6	7.9	230	230	230	34	8000	-		
1.6	7.4	205	1.4	201.4	IE4	BS20Z-../S4E06MA4	0.7	2.4	4.9	7.4	8.9	205	205	205	35	8000	-		
1.6	5.8	260	1.1	257.8	IE4	BS20Z-../S4E06MA4	0.55	1.9	3.8	5.8	6.9	260	260	260	35	8000	-		
1.6	4.9	300	0.99	300.1	IE4	BS20Z-../S4E06MA4	0.49	1.6	3.3	4.9	5.9	300	300	300	35	8000	-		
1.6	4.1	355	0.9	359.9	IE4	BS20Z-../S4E06MA4	0.41	1.3	2.7	4.1	5	355	355	355	35	8000	-		
1.6	8	197	2.7	186.7	IE4	BS30-../S4E06MA4	0.8	2.6	5.3	8	9.6	197	197	197	51	10000	-		
1.6	6.9	225	2.3	216.4	IE4	BS30-../S4E06MA4	0.65	2.3	4.6	6.9	8.3	225	225	225	51	10000	-		
1.6	7.1	220	2	211.1	IE4	BS30Z-../S4E06MA4	0.7	2.3	4.7	7.1	8.5	220	220	220	54	10000	-		
1.6	5.7	275	2	261.6	IE4	BS30Z-../S4E06MA4	0.55	1.9	3.8	5.7	6.8	275	275	275	54	10000	-		
1.6	4.8	315	1.8	306.6	IE4	BS30Z-../S4E06MA4	0.48	1.6	3.2	4.8	5.8	315	315	315	54	10000	-		
1.6	4.1	425	0.93	359.6	IE4	BS30Z-../S4E06MA4	0.41	1.3	2.7	4.1	5	425	425	425	54	10000	-		
1.6	3.8	405	1.5	390.2	IE4	BS30Z-../S4E06MA4	0.38	1.2	2.5	3.8	4.6	405	405	405	54	10000	-		
1.6	3.2	465	1.3	457.3	IE4	BS30Z-../S4E06MA4	0.32	1	2.1	3.2	3.9	465	465	465	54	10000	-		
1.6	2.7	550	1.1	539.3	IE4	BS30Z-../S4E06MA4	0.27	0.9	1.8	2.7	3.3	550	550	550	54	10000	-		
1.6	2.3	620	0.91	651	IE4	BS30Z-../S4E06MA4	0.23	0.75	1.5	2.3	2.7	620	620	620	54	10000	-		
1.6	7.6	230	3	197.1	IE4	BS40Z-../S4E06MA4	0.75	2.5	5	7.6	9.1	230	230	230	68	15000	-		
1.6	5.2	340	2.1	287.7	IE4	BS40Z-../S4E06MA4	0.5	1.7	3.4	5.2	6.2	340	340	340	68	15000	-		
1.6	4.2	355	3	356.8	IE4	BS40Z-../S4E06MA4	0.42	1.4	2.8	4.2	5	355	355	355	68	15000	-		
1.6	3.3	450	2.2	446.8	IE4	BS40Z-../S4E06MA4	0.33	1.1	2.2	3.3	4	450	450	450	68	15000	-		
1.6	2.8	520	2.1	520.8	IE4	BS40Z-../S4E06MA4	0.28	0.95	1.9	2.8	3.4	520	520	520	68	15000	-		
1.6	2.4	590	1.5	612.1	IE4	BS40Z-../S4E06MA4	0.24	0.8	1.6	2.4	2.9	590	590	590	68	15000	-		
1.6	2	700	1.1	736.5	IE4	BS40Z-../S4E06MA4	0.2	0.65	1.3	2	2.4	700	700	700	68	15000	-		
1.6	1.6	850	0.86	908.2	IE4	BS40Z-../S4E06MA4	0.16	0.55	1.1	1.6	1.9	850	850	850	68	15000	-		
1.6	1.5	1080	0.81	965.5	IE4	BS40G10-../S4E06MA4	0.15	0.5	1	1.5	1.8	1080	1080	1080	73	15000	-		

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 **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.37 \text{ kW}$ )**

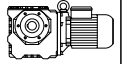
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	325	9.7	1.5	4.6	IE1	BS02-../SSE06MA4	32.5	108	215	325	390	7.2	8	8.9	9.7	6.8	1000	-	
2.4	325	9.7	1.5	4.6	IE4	BS02-../S4E06LA4	32.5	108	215	325	390	9.7	9.7	9.7	9.7	6.8	1000	-	
2.4	275	11.4	1.8	5.4	IE4	BS02-../S4E06LA4	27.5	92	185	275	330	11.4	11.4	11.4	11.4	6.8	1000	-	
2.4	275	11.4	1.8	5.4	IE1	BS02-../SSE06MA4	27.5	92	185	275	330	8.5	9.5	10.4	11.4	6.8	1000	-	
2.4	220	13.9	1.8	6.75	IE4	BS02-../S4E06LA4	22	74	148	220	265	13.9	13.9	13.9	13.9	6.8	1000	-	
2.4	220	13.9	1.8	6.75	IE1	BS02-../SSE06MA4	22	74	148	220	265	10.4	11.6	12.7	13.9	6.8	1000	-	
2.4	181	16.6	1.5	8.25	IE4	BS02-../S4E06LA4	18	60	121	181	215	16.6	16.6	16.6	16.6	6.8	1100	-	
2.4	181	16.6	1.5	8.25	IE1	BS02-../SSE06MA4	18	60	121	181	215	12.4	13.8	15.2	16.6	6.8	1100	-	
2.4	140	20.5	1.2	10.67	IE1	BS02-../SSE06MA4	14	46.5	93	140	168	15.7	17.4	19.2	20.5	6.8	1250	-	
2.4	140	20.5	1.2	10.67	IE4	BS02-../S4E06LA4	14	46.5	93	140	168	20.5	20.5	20.5	20.5	6.8	1250	-	
2.4	111	25	0.99	13.5	IE1	BS02-../SSE06MA4	11	37	74	111	133	18.9	21	23	25	6.8	1250	-	
2.4	111	25	0.99	13.5	IE4	BS02-../S4E06LA4	11	37	74	111	133	25	25	25	25	6.8	1250	-	
2.4	111	25	2.2	13.5	IE1	BS03-../SSE06MA4	11	37	74	111	133	18.9	21	23	25	6.9	1600	-	
2.4	111	25	2.2	13.5	IE4	BS03-../S4E06LA4	11	37	74	111	133	25	25	25	25	6.9	1600	-	
2.4	78	34.5	1.6	19	IE1	BS03-../SSE06MA4	7.8	26	52	78	94	25.5	28.5	31.5	34.5	6.9	1950	-	
2.4	78	34.5	1.6	19	IE4	BS03-../S4E06LA4	7.8	26	52	78	94	34.5	34.5	34.5	34.5	6.9	1950	-	
2.4	60	41	1.3	25	IE1	BS03-../SSE06MA4	6	20	40	60	72	31	34.5	37.5	41	6.9	1950	-	
2.4	60	41	1.3	25	IE4	BS03-../S4E06LA4	6	20	40	60	72	41	41	41	41	6.9	1950	-	
2.4	45	48	1.1	33	IE4	BS03-../S4E06LA4	4.5	15	30	45	54	48	48	48	48	6.9	1950	-	
2.4	45	48	1.1	33	IE1	BS03-../SSE06MA4	4.5	15	30	45	54	36	40	44	48	6.9	1950	-	
2.4	38	59	0.92	39	IE4	BS03-../S4E06LA4	3.8	12.5	25.5	38	46	59	59	59	59	6.9	1950	-	
2.4	38	59	0.92	39	IE1	BS03-../SSE06MA4	3.8	12.5	25.5	38	46	44.5	49.5	54	59	6.9	1950	-	
2.4	240	11.4	2.3	6.13	IE4	BS04-../S4E06LA4	24	81	163	240	290	11.4	11.4	11.4	11.4	7.3	1300	-	
2.4	240	11.4	2.3	6.13	IE1	BS04-../SSE06MA4	24	81	163	240	290	8.6	9.5	10.5	11.4	7.3	1300	-	
2.4	167	16.7	1.8	8.93	IE1	BS04-../SSE06MA4	16.5	55	111	167	200	12.5	13.9	15.3	16.7	7.3	1500	-	
2.4	167	16.7	1.8	8.93	IE4	BS04-../S4E06LA4	16.5	55	111	167	200	16.7	16.7	16.7	16.7	7.3	1500	-	
2.4	139	20	1.6	10.73	IE1	BS04-../SSE06MA4	13.5	46.5	93	139	167	15	16.7	18.4	20	7.3	1600	-	
2.4	139	20	1																



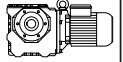
# BS-series worm-geared motors

## Selection - worm-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

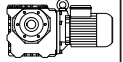
### $M_N = 2.4 \text{ Nm}$ ( $P_N = 0.37 \text{ kW}$ )



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.4	114	24	1.4	13.09	IE1	BS04-../SSE06MA4	11	38	76	114	137	18.1	20	22	24	24	7.3	1760	-
2.4	114	24	1.4	13.09	IE4	BS04-../S4E06LA4	11	38	76	114	137	24	24	24	24	24	7.3	1760	-
2.4	91	30	1.2	16.31	IE4	BS04-../S4E06LA4	9.1	30.5	61	91	110	30	30	30	30	30	7.3	1970	-
2.4	91	30	1.2	16.31	IE1	BS04-../SSE06MA4	9.1	30.5	61	91	110	22.5	25	27.5	30	30	7.3	1970	-
2.4	83	30.5	1.1	18	IE4	BS04-../S4E06LA4	8.3	27.5	55	83	100	30.5	30.5	30.5	30.5	30.5	7.3	1950	-
2.4	83	30.5	1.1	18	IE1	BS04-../SSE06MA4	8.3	27.5	55	83	100	23	25.5	28	30.5	30.5	7.3	1950	-
2.4	71	38	0.97	20.96	IE4	BS04-../S4E06LA4	7.1	23.5	47.5	71	85	38	38	38	38	38	7.3	2100	-
2.4	71	38	0.97	20.96	IE1	BS04-../SSE06MA4	7.1	23.5	47.5	71	85	28.5	31.5	35	38	38	7.3	2100	-
2.4	57	44.5	0.85	26.21	IE4	BS04-../S4E06LA4	5.7	19	38	57	68	44.5	44.5	44.5	44.5	44.5	7.3	2250	-
2.4	57	44.5	0.85	26.21	IE1	BS04-../SSE06MA4	5.7	19	38	57	68	33	37	40.5	44.5	44.5	7.3	2250	-
2.4	106	27	2.5	14.07	IE4	BS06-../S4E06LA4	10.5	35.5	71	106	127	27	27	27	27	27	12	2200	-
2.4	106	27	2.5	14.07	IE1	BS06-../SSE06MA4	10.5	35.5	71	106	127	20.5	22.5	25	27	27	12	2200	-
2.4	90	31.5	2.3	16.56	IE4	BS06-../S4E06LA4	9	30	60	90	108	31.5	31.5	31.5	31.5	31.5	12	2400	-
2.4	90	31.5	2.3	16.56	IE1	BS06-../SSE06MA4	9	30	60	90	108	23.5	26	29	31.5	31.5	12	2400	-
2.4	75	38	2	19.82	IE4	BS06-../S4E06LA4	7.5	25	50	75	90	38	38	38	38	38	12	2500	-
2.4	75	38	2	19.82	IE1	BS06-../SSE06MA4	7.5	25	50	75	90	28.5	31.5	34.5	38	38	12	2500	-
2.4	61	46.5	1.7	24.25	IE1	BS06-../SSE06MA4	6.1	20.5	41	61	74	34.5	38.5	42.5	46.5	46.5	12	2600	-
2.4	61	46.5	1.7	24.25	IE4	BS06-../S4E06LA4	6.1	20.5	41	61	74	46.5	46.5	46.5	46.5	46.5	12	2600	-
2.4	57	45.5	1.7	26.21	IE4	BS06-../S4E06LA4	5.7	19	38	57	68	45.5	45.5	45.5	45.5	45.5	12	3000	-
2.4	57	45.5	1.7	26.21	IE1	BS06-../SSE06MA4	5.7	19	38	57	68	34	38	42	45.5	45.5	12	3000	-
2.4	47.5	55	1.4	31.5	IE1	BS06-../SSE06MA4	4.7	15.5	31.5	47.5	57	41	45.5	50	55	55	12	3200	-
2.4	47.5	55	1.4	31.5	IE4	BS06-../S4E06LA4	4.7	15.5	31.5	47.5	57	55	55	55	55	55	12	3200	-
2.4	36	71	1.2	41.29	IE4	BS06-../S4E06LA4	3.6	12	24	36	43.5	71	71	71	71	71	12	3500	-
2.4	36	71	1.2	41.29	IE1	BS06-../SSE06MA4	3.6	12	24	36	43.5	53	59	65	71	71	12	3500	-
2.4	30.5	83	1	48.6	IE1	BS06-../SSE06MA4	3	10	20.5	30.5	37	62	69	76	83	83	12	3500	-
2.4	30.5	83	1	48.6	IE4	BS06-../S4E06LA4	3	10	20.5	30.5	37	83	83	83	83	83	12	3500	-
2.4	25.5	99	0.92	58.15	IE4	BS06-../S4E06LA4	2.5	8.5	17	25.5	30.5	99	99	99	99	99	12	3500	-
2.4	25.5	99	0.92	58.15	IE1	BS06-../SSE06MA4	2.5	8.5	17	25.5	30.5	74	82	90	99	99	12	3500	-
2.4	69	41	3	21.61	IE4	BS10-../S4E06LA4	6.9	23	46	69	83	41	41	41	41	41	23	3000	-
2.4	69	41	3	21.61	IE1	BS10-../SSE06MA4	6.9	23	46	69	83	31	34.5	38	41	41	23	3000	-
2.4	56	49	2.6	26.42	IE4	BS10-../S4E06LA4	5.6	18.5	37.5	56	68	49	49	49	49	49	23	3250	-
2.4	56	49	2.6	26.42	IE1	BS10-../SSE06MA4	5.6	18.5	37.5	56	68	37	41	45	49	49	23	3250	-
2.4	44.5	61	2.2	33.55	IE4	BS10-../S4E06LA4	4.4	14.5	29.5	44.5	53	61	61	61	61	61	23	3550	-
2.4	44.5	61	2.2	33.55	IE1	BS10-../SSE06MA4	4.4	14.5	29.5	44.5	53	45.5	50	56	61	61	23	3550	-
2.4	37.5	71	1.9	39.96	IE4	BS10-../S4E06LA4	3.7	12.5	25	37.5	45	71	71	71	71	71	23	3800	-
2.4	37.5	71	1.9	39.96	IE1	BS10-../SSE06MA4	3.7	12.5	25	37.5	45	53	59	65	71	71	23	3800	-
2.4	31.5	85	1.7	47.59	IE4	BS10-../S4E06LA4	3.1	10.5	21	31.5	37.5	85	85	85	85	85	23	4050	-
2.4	31.5	85	1.7	47.59	IE1	BS10-../SSE06MA4	3.1	10.5	21	31.5	37.5	64	71	78	85	85	23	4050	-
2.4	26	101	1.5	57.12	IE4	BS10-../S4E06LA4	2.6	8.7	17.5	26	31.5	101	101	101	101	101	23	4350	-
2.4	26	101	1.5	57.12	IE1	BS10-../SSE06MA4	2.6	8.7	17.5	26	31.5	76	84	92	101	101	23	4350	-
2.4	24.5	97	1.5	60.74	IE4	BS10-../S4E06LA4	2.4	8.2	16	24.5	29.5	97	97	97	97	97	23	4550	-
2.4	24.5	97	1.5	60.74	IE1	BS10-../SSE06MA4	2.4	8.2	16	24.5	29.5	73	81	89	97	97	23	4550	-
2.4	20.5	127	1.3	71.96	IE1	BS10-../SSE06MA4	2	6.9	13.5	20.5	25	95	106	117	127	127	23	5000	-
2.4	20.5	127	1.3	71.96	IE4	BS10-../S4E06LA4	2	6.9	13.5	20.5	25	127	127	127	127	127	23	5000	-
2.4	17.5	149	1	84.36	IE4	BS10-../S4E06LA4	1.7	5.9	11.5	17.5	21	149	149	149	149	149	23	5300	-
2.4	17.5	149	1	84.36	IE1	BS10-../SSE06MA4	1.7	5.9	11.5	17.5	21	112	124	137	149	149	23	5300	-
2.4	14.5	158	1	103.4	IE1	BS10-../SSE06MA4	1.4	4.8	9.6	14.5	17	119	132	145	158	158	23	5600	-
2.4	14.5	158	1	103.4	IE4	BS10-../S4E06LA4	1.4	4.8	9.6	14.5	17	158	158	158	158	158	23	5600	-
2.4	11.5	200	0.82	130.3	IE4	BS10-../S4E06LA4	1.1	3.8	7.6	11.5	13.5	200	200	200	200	200	23	6000	-
2.4	11.5	200	0.82	130.3	IE1	BS10-../SSE06MA4	1.1	3.8	7.6	11.5	13.5	150	166	183	200	200	23	6000	-
2.4	25.5	105	2.6	58.74	IE4	BS20-../S4E06LA4	2.5	8.5	17	25.5	30.5	105	105	105	105	105	34	5900	-
2.4	25.5	105	2.6	58.74	IE1	BS20-../SSE06MA4	2.5	8.5	17	25.5	30.5	79	88	96	105	105	34	5900	-
2.4	21	126	2.4	70.3	IE1	BS20-../SSE06MA4	2.1	7.1	14	21	25.5	94	105	115	126	126	34	6300	-
2.4	21	126	2.4	70.3	IE4	BS20-../S4E06LA4	2.1	7.1	14	21	25.5	126	126	126	126	126	34	6300	-
2.4	19.5	120	2.2	76.18	IE1	BS20-../SSE06MA4	1.9	6.5	13	19.5	23.5	90	100	110	120	120	34	6600	-
2.4	19.5	120	2.2	76.18	IE4	BS20-../S4E06LA4	1.9	6.5	13	19.5	23.5	120	120	120	120	120	34	6600	-
2.4	16.5	140	1.9	88.67	IE4	BS20-../S4E06LA4	1.6	5.6	11	16.5	20	140	140	140	140	140	34	7000	-
2.4	16.5	140	1.9	88.67	IE1	BS20-../SSE06MA4	1.6	5.6	11	16.5	20	105	117	128	140	140	34	7000	-
2.4	14.5	179	1.4	101.1	IE4	BS20-../S4E06LA4	1.4	4.9	9.8	14.5	17.5	179	179	179	179	179	34	7100	-
2.4	14.5	179	1.4	101.1	IE1	BS20-../SSE06MA4	1.4	4.9	9.8	14.5	17.5	134	149	164	179	179	34	7100	-
2.4	14	168	1.6	106.3	IE4	BS20-../S4E06LA4	1.4	4.7	9.4	14	16.5	168	168	168	168	168	34	7600	-
2.4	14	168	1.6	106.3	IE1	BS20-../SSE06MA4	1.4	4.7	9.4	14	16.5	126	140	154	168	168	34	7600	-
2.4	11.5	200	1.3	127.3	IE1	BS20-../SSE06MA4	1.1	3.9	7.8	11.5	14	151	168	184	200	200	34	8000	-
2.4	11.5	200	1.3	127.3	IE4	BS20-../S4E06LA4	1.1	3.9	7.8	11.5	14	200	200	200	200	200	34	8000	-
2.4	9.4	250	1.1	159.4	IE4	BS20-../S4E06LA4	0.9	3.1	6.2	9.4	11	250	250	250	250	250	34	8000	-
2.4	9.4	250	1.1	159.4	IE1	BS20-../SSE06MA4	0.9	3.1	6.2	9.4	11	189	210	230	250	250	34	8000	-
2.4	8.1	285	0.97	183	IE4	BS20-../S4E06LA4	0.8	2.7	5.4	8.1	9.8	285	285	285	285	285	34	8000	-
2.4	8.1	285	0.97	183	IE1	BS20-../SSE06MA4	0.8	2.7	5.4	8.1	9.8	215	240	265	285	285	34	8000	-
2.4	6.6	345	0.84	225.6	IE4	BS20-../S4E06LA4	0.65	2.2	4.4	6.6	7.9	345	345	345	345	345	34	8000</	

Selection - worm-geared motors -  $n_1 = 1500 \frac{1}{min}$  **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.37 \text{ kW}$ )**

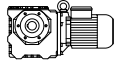
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							2.4	8	295	1.8	186.7	IE4	BS30-../S4E06LA4	0.8	2.6	5.3			
2.4	8	295	1.8	186.7	IE1	BS30-../SSE06MA4	0.8	2.6	5.3	8	9.6	220	245	270	295	295	51	10000	-
2.4	6.9	340	1.5	216.4	IE4	BS30-../S4E06LA4	0.65	2.3	4.6	6.9	8.3	340	340	340	340	51	10000	-	
2.4	6.9	340	1.5	216.4	IE1	BS30-../SSE06MA4	0.65	2.3	4.6	6.9	8.3	255	285	310	340	340	51	10000	-
2.4	7.1	330	1.3	211.1	IE4	BS30Z-../S4E06LA4	0.7	2.3	4.7	7.1	8.5	330	330	330	330	54	10000	-	
2.4	7.1	330	1.3	211.1	IE1	BS30Z-../SSE06MA4	0.7	2.3	4.7	7.1	8.5	250	275	305	330	330	54	10000	-
2.4	5.7	410	1.4	261.6	IE1	BS30Z-../SSE06MA4	0.55	1.9	3.8	5.7	6.8	310	345	375	410	410	54	10000	-
2.4	5.7	410	1.4	261.6	IE4	BS30Z-../S4E06LA4	0.55	1.9	3.8	5.7	6.8	410	410	410	410	410	54	10000	-
2.4	4.8	475	1.2	306.6	IE4	BS30Z-../S4E06LA4	0.48	1.6	3.2	4.8	5.8	475	475	475	475	475	54	10000	-
2.4	4.8	475	1.2	306.6	IE1	BS30Z-../SSE06MA4	0.48	1.6	3.2	4.8	5.8	355	395	435	475	475	54	10000	-
2.4	3.8	600	0.97	390.2	IE1	BS30Z-../SSE06MA4	0.38	1.2	2.5	3.8	4.6	455	500	550	600	600	54	10000	-
2.4	3.8	600	0.97	390.2	IE4	BS30Z-../S4E06LA4	0.38	1.2	2.5	3.8	4.6	600	600	600	600	600	54	10000	-
2.4	3.2	700	0.85	457.3	IE4	BS30Z-../S4E06LA4	0.32	1	2.1	3.2	3.9	700	700	700	700	700	54	10000	-
2.4	3.2	700	0.85	457.3	IE1	BS30Z-../SSE06MA4	0.32	1	2.1	3.2	3.9	520	580	640	700	700	54	10000	-
2.4	7.6	350	2	197.1	IE4	BS40Z-../S4E06LA4	0.75	2.5	5	7.6	9.1	350	350	350	350	350	68	15000	-
2.4	7.6	350	2	197.1	IE1	BS40Z-../SSE06MA4	0.75	2.5	5	7.6	9.1	260	290	320	350	350	68	15000	-
2.4	6	375	2.4	249.6	IE1	BS40Z-../SSE06MA4	0.6	2	4	6	7.2	280	310	345	375	375	68	15000	-
2.4	6	375	2.4	249.6	IE4	BS40Z-../S4E06LA4	0.6	2	4	6	7.2	375	375	375	375	375	68	15000	-
2.4	5.2	510	1.4	287.7	IE4	BS40Z-../S4E06LA4	0.5	1.7	3.4	5.2	6.2	510	510	510	510	510	68	15000	-
2.4	5.2	510	1.4	287.7	IE1	BS40Z-../SSE06MA4	0.5	1.7	3.4	5.2	6.2	380	425	465	510	510	68	15000	-
2.4	4.9	455	2.3	302.1	IE1	BS40Z-../SSE06MA4	0.49	1.6	3.3	4.9	5.9	340	380	415	455	455	68	15000	-
2.4	4.9	455	2.3	302.1	IE4	BS40Z-../S4E06LA4	0.49	1.6	3.3	4.9	5.9	455	455	455	455	455	68	15000	-
2.4	4.2	530	2	356.8	IE4	BS40Z-../S4E06LA4	0.42	1.4	2.8	4.2	5	530	530	530	530	530	68	15000	-
2.4	4.2	530	2	356.8	IE1	BS40Z-../SSE06MA4	0.42	1.4	2.8	4.2	5	400	445	490	530	530	68	15000	-
2.4	3.3	670	1.5	446.8	IE1	BS40Z-../SSE06MA4	0.33	1.1	2.2	3.3	4	500	560	610	670	670	68	15000	-
2.4	3.3	670	1.5	446.8	IE4	BS40Z-../S4E06LA4	0.33	1.1	2.2	3.3	4	670	670	670	670	670	68	15000	-
2.4	2.8	780	1.4	520.8	IE1	BS40Z-../SSE06MA4	0.28	0.95	1.9	2.8	3.4	590	650	720	780	780	68	15000	-
2.4	2.8	780	1.4	520.8	IE4	BS40Z-../S4E06LA4	0.28	0.95	1.9	2.8	3.4	780	780	780	780	780	68	15000	-
2.4	2.4	890	1	612.1	IE4	BS40Z-../S4E06LA4	0.24	0.8	1.6	2.4	2.9	890	890	890	890	890	68	15000	-
2.4	2.4	890	1	612.1	IE1	BS40Z-../SSE06MA4	0.24	0.8	1.6	2.4	2.9	670	740	820	890	890	68	15000	-

 **$M_N = 2.6 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
							2.6	325	10.5	1.4	4.6	IE4	BS02-../S4E06LA4	32.5	108	215			
2.6	275	12.3	1.6	5.4	IE4	BS02-../S4E06LA4	27.5	92	185	275	330	11.8	12.3	12.3	12.3	12.3	6.8	1000	-
2.6	220	15	1.7	6.75	IE4	BS02-../S4E06LA4	22	74	148	220	265	14.5	15	15	15	15	6.8	1000	-
2.6	181	18	1.4	8.25	IE4	BS02-../S4E06LA4	18	60	121	181	215	17.3	18	18	18	18	6.8	1100	-
2.6	140	22.5	1.1	10.67	IE4	BS02-../S4E06LA4	14	46.5	93	140	168	21.5	22.5	22.5	22.5	22.5	6.8	1250	-
2.6	111	27	0.91	13.5	IE4	BS02-../S4E06LA4	11	37	74	111	133	26	27	27	27	27	6.8	1250	-
2.6	111	27	2	13.5	IE4	BS03-../S4E06LA4	11	37	74	111	133	26	27	27	27	27	6.9	1600	-
2.6	78	37.5	1.5	19	IE4	BS03-../S4E06LA4	7.8	26	52	78	94	36	37.5	37.5	37.5	37.5	6.9	1950	-
2.6	60	44.5	1.2	25	IE4	BS03-../S4E06LA4	6	20	40	60	72	43	44.5	44.5	44.5	44.5	6.9	1950	-
2.6	45	52	1.1	33	IE4	BS03-../S4E06LA4	4.5	15	30	45	54	50	52	52	52	52	6.9	1950	-
2.6	38	64	0.85	39	IE4	BS03-../S4E06LA4	3.8	12.5	25.5	38	46	62	64	64	64	64	6.9	1950	-
2.6	240	12.4	2.1	6.13	IE4	BS04-../S4E06LA4	24	81	163	240	290	11.9	12.4	12.4	12.4	12.4	7.3	1300	-
2.6	167	18.1	1.7	8.93	IE4	BS04-../S4E06LA4	16.5	55	111	167	200	17.4	18.1	18.1	18.1	18.1	7.3	1500	-
2.6	139	21.5	1.5	10.73	IE4	BS04-../S4E06LA4	13.5	46.5	93	139	167	20.5	21.5	21.5	21.5	21.5	7.3	1600	-
2.6	114	26	1.3	13.09	IE4	BS04-../S4E06LA4	11	38	76	114	137	25	26	26	26	26	7.3	1760	-
2.6	91	32.5	1.1	16.31	IE4	BS04-../S4E06LA4	9.1	30.5	61	91	110	31	32.5	32.5	32.5	32.5	7.3	1970	-
2.6	83	33	1	18	IE4	BS04-../S4E06LA4	8.3	27.5	55	83	100	31.5	33	33	33	33	7.3	1950	-
2.6	71	41	0.89	20.96	IE4	BS04-../S4E06LA4	7.1	23.5	47.5	71	85	39.5	41	41	41	41	7.3	2100	-
2.6	139	22.5	2.9	10.73	IE4	BS06-../S4E06LA4	13.5	46.5	93	139	167	21.5	22.5	22.5	22.5	22.5	12	1850	-
2.6	106	29.5	2.3	14.07	IE4	BS06-../S4E06LA4	10.5	35.5	71	106	127	28	29.5	29.5	29.5	29.5	12	2200	-
2.6	90	34	2.1	16.56	IE4	BS06-../S4E06LA4	9	30	60	90	108	33	34	34	34	34	12	2400	-
2.6	75	41	1.8	19.82	IE4	BS06-../S4E06LA4	7.5	25	50	75	90	39.5	41	41	41	41	12	2500	-
2.6	61	50	1.5	24.25	IE4	BS06-../S4E06LA4	6.1	20.5	41	61	74	48.5	50	50	50	50	12	2600	-
2.6	57	49.5	1.5	26.21	IE4	BS06-../S4E06LA4	5.7	19	38	57	68	47.5	49.5	49.5	49.5	49.5	12	3000	-
2.6	47.5	59	1.3	31.5	IE4	BS06-../S4E06LA4	4.7	15.5	31.5	47.5	57	57	59	59	59	59	12	3200	-
2.6	36	77	1.1	41.29	IE4	BS06-../S4E06LA4	3.6	12	24	36	43.5	74	77	77	77	77	12	3500	-
2.6	30.5	90	0.97	48.6	IE4	BS06-../S4E06LA4	3	10	20.5	30.5	37	87	90	90	90	90	12	3500	-
2.6	25.5	107	0.85	58.15	IE4	BS06-../S4E06LA4	2.5	8.5	17	25.5	30.5	103	107	107	107	107	12	3500	-
2.6	69	44.5	2.8	21.61	IE4	BS10-../S4E06LA4	6.9	23	46	69	83	43	44.5	44.5	44.5	44.5	23	3000	-
2.6	56	53	2.4	26.42	IE4	BS10-../S4E06LA4	5.6	18.5	37.5	56	68	51	53	53	53	53	23	3250	-
2.6	44.5	66	2	33.55	IE4	BS10-../S4E06LA4	4.4	14.5	29.5	44.5	53	63	66	66	66	66	23	3550	-
2.6	37.5	77	1.8	39.96	IE4	BS10-../S4E06LA4	3.7	12.5	25	37.5	45	74	77	77	77	77	23	3800	-
2.6	31.5	92	1.6	47.59	IE4	BS10-../S4E06LA4	3.1	10.5	21	31.5	37.5	89	92	92	92	92	23	4050	-
2.6	26	109	1.4	57.12	IE4	BS10-../S4E06LA4	2.6	8.7	17.5	26	31.5	105	109	109	109	109	23	4350	-
2.6	24.5	105	1.4	60.74	IE4	BS10-../S4E06LA4	2.4	8.2	16	24.5	29.5	101	105	105	105	105	23	4550	

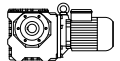
# BS-series worm-geared motors

## Selection - worm-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

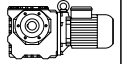
 **$M_N = 2.6 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
2.6	25.5	114	2.4	58.74	IE4	BS20-../S4E06LA4	2.5	8.5	17	25.5	30.5	110	114	114	114	114	34	5900	-
2.6	21	137	2.2	70.3	IE4	BS20-../S4E06LA4	2.1	7.1	14	21	25.5	131	137	137	137	34	6300	-	
2.6	19.5	130	2.1	76.18	IE4	BS20-../S4E06LA4	1.9	6.5	13	19.5	23.5	125	130	130	130	34	6600	-	
2.6	16.5	152	1.8	88.67	IE4	BS20-../S4E06LA4	1.6	5.6	11	16.5	20	146	152	152	152	34	7000	-	
2.6	14.5	194	1.3	101.1	IE4	BS20-../S4E06LA4	1.4	4.9	9.8	14.5	17.5	187	194	194	194	34	7100	-	
2.6	14	182	1.5	106.3	IE4	BS20-../S4E06LA4	1.4	4.7	9.4	14	16.5	175	182	182	182	34	7600	-	
2.6	11.5	215	1.2	127.3	IE4	BS20-../S4E06LA4	1.1	3.9	7.8	11.5	14	210	215	215	215	34	8000	-	
2.6	9.4	270	1	159.4	IE4	BS20-../S4E06LA4	0.9	3.1	6.2	9.4	11	260	270	270	270	34	8000	-	
2.6	8.1	310	0.89	183	IE4	BS20-../S4E06LA4	0.8	2.7	5.4	8.1	9.8	300	310	310	310	34	8000	-	
2.6	7.4	335	0.84	201.4	IE4	BS20Z-../S4E06LA4	0.7	2.4	4.9	7.4	8.9	320	335	335	335	35	8000	-	
2.6	17.5	167	2.4	83.48	IE4	BS30-../S4E06LA4	1.7	5.9	11.5	17.5	21.5	160	167	167	167	51	6800	-	
2.6	16.5	162	3	90.59	IE4	BS30-../S4E06LA4	1.6	5.5	11	16.5	19.5	156	162	162	162	51	7700	-	
2.6	14	187	2.7	106.2	IE4	BS30-../S4E06LA4	1.4	4.7	9.4	14	16.5	180	187	187	187	51	8200	-	
2.6	11.5	220	2.3	125.2	IE4	BS30-../S4E06LA4	1.1	3.9	7.9	11.5	14	210	220	220	220	51	8700	-	
2.6	9.9	260	2.1	151.1	IE4	BS30-../S4E06LA4	0.95	3.3	6.6	9.9	11.5	250	260	260	260	51	9500	-	
2.6	8	320	1.7	186.7	IE4	BS30-../S4E06LA4	0.8	2.6	5.3	8	9.6	305	320	320	320	51	10000	-	
2.6	6.9	370	1.4	216.4	IE4	BS30-../S4E06LA4	0.65	2.3	4.6	6.9	8.3	355	370	370	370	51	10000	-	
2.6	7.1	360	1.2	211.1	IE4	BS30Z-../S4E06LA4	0.7	2.3	4.7	7.1	8.5	345	360	360	360	54	10000	-	
2.6	5.7	445	1.2	261.6	IE4	BS30Z-../S4E06LA4	0.55	1.9	3.8	5.7	6.8	430	445	445	445	54	10000	-	
2.6	4.8	510	1.1	306.6	IE4	BS30Z-../S4E06LA4	0.48	1.6	3.2	4.8	5.8	495	510	510	510	54	10000	-	
2.6	3.8	650	0.89	390.2	IE4	BS30Z-../S4E06LA4	0.38	1.2	2.5	3.8	4.6	630	650	650	650	54	10000	-	
2.6	7.6	375	1.8	197.1	IE4	BS40Z-../S4E06LA4	0.75	2.5	5	7.6	9.1	360	375	375	375	68	15000	-	
2.6	6	405	2.2	249.6	IE4	BS40Z-../S4E06LA4	0.6	2	4	6	7.2	390	405	405	405	68	15000	-	
2.6	5.2	550	1.3	287.7	IE4	BS40Z-../S4E06LA4	0.5	1.7	3.4	5.2	6.2	530	550	550	550	68	15000	-	
2.6	4.9	490	2.2	302.1	IE4	BS40Z-../S4E06LA4	0.49	1.6	3.3	4.9	5.9	475	490	490	490	68	15000	-	
2.6	4.2	580	1.8	356.8	IE4	BS40Z-../S4E06LA4	0.42	1.4	2.8	4.2	5	560	580	580	580	68	15000	-	
2.6	3.3	730	1.4	446.8	IE4	BS40Z-../S4E06LA4	0.33	1.1	2.2	3.3	4	700	730	730	730	68	15000	-	
2.6	2.8	850	1.3	520.8	IE4	BS40Z-../S4E06LA4	0.28	0.95	1.9	2.8	3.4	820	850	850	850	68	15000	-	
2.6	2.4	970	0.93	612.1	IE4	BS40Z-../S4E06LA4	0.24	0.8	1.6	2.4	2.9	930	970	970	970	68	15000	-	

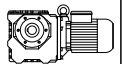
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 **$M_N = 3.5 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
3.5	325	14.1	1.1	4.6	IE1	BS02-../SSE06LA4	32.5	108	215	325	390	10.1	11.7	14.1	14.1	14.1	6.8	1000	-
3.5	275	16.6	1.2	5.4	IE1	BS02-../SSE06LA4	27.5	92	185	275	330	11.8	13.7	16.6	16.6	16.6	6.8	1000	-
3.5	220	20	1.2	6.75	IE1	BS02-../SSE06LA4	22	74	148	220	265	14.5	16.8	20	20	20	6.8	1000	-
3.5	181	24	1	8.25	IE1	BS02-../SSE06LA4	18	60	121	181	215	17.3	20	24	24	24	6.8	1100	-
3.5	140	30.5	0.82	10.67	IE1	BS02-../SSE06LA4	14	46.5	93	140	168	21.5	25	30.5	30.5	30.5	6.8	1250	-
3.5	111	36.5	1.5	13.5	IE1	BS03-../SSE06LA4	11	37	74	111	133	26	30.5	36.5	36.5	36.5	6.9	1600	-
3.5	78	50	1.1	19	IE1	BS03-../SSE06LA4	7.8	26	52	78	94	36	41.5	50	50	50	6.9	1950	-
3.5	60	60	0.91	25	IE1	BS03-../SSE06LA4	6	20	40	60	72	43	50	60	60	60	6.9	1950	-
3.5	240	16.7	1.6	6.13	IE1	BS04-../SSE06LA4	24	81	163	240	290	11.9	13.8	16.7	16.7	16.7	7.3	1300	-
3.5	167	24	1.2	8.93	IE1	BS04-../SSE06LA4	16.5	55	111	167	200	17.4	20	24	24	24	7.3	1500	-
3.5	139	29	1.1	10.73	IE1	BS04-../SSE06LA4	13.5	46.5	93	139	167	20.5	24	29	29	29	7.3	1600	-
3.5	114	35	0.94	13.09	IE1	BS04-../SSE06LA4	11	38	76	114	137	25	29	35	35	35	7.3	1760	-
3.5	91	43.5	0.8	16.31	IE1	BS04-../SSE06LA4	9.1	30.5	61	91	110	31	36	43.5	43.5	43.5	7.3	1970	-
3.5	167	25	2.4	8.93	IE1	BS06-../SSE06LA4	16.5	55	111	167	200	18	20.5	25	25	25	12	1710	-
3.5	139	30	2.1	10.73	IE1	BS06-../SSE06LA4	13.5	46.5	93	139	167	21.5	25	30	30	30	12	1850	-
3.5	106	39.5	1.7	14.07	IE1	BS06-../SSE06LA4	10.5	35.5	71	106	127	28	33	39.5	39.5	39.5	12	2200	-
3.5	90	46	1.6	16.56	IE1	BS06-../SSE06LA4	9	30	60	90	108	33	38	46	46	46	12	2400	-
3.5	75	55	1.4	19.82	IE1	BS06-../SSE06LA4	7.5	25	50	75	90	39.5	45.5	55	55	55	12	2500	-
3.5	61	67	1.1	24.25	IE1	BS06-../SSE06LA4	6.1	20.5	41	61	74	48.5	56	67	67	67	12	2600	-
3.5	57	66	1.1	26.21	IE1	BS06-../SSE06LA4	5.7	19	38	57	68	47.5	55	66	66	66	12	3000	-
3.5	47.5	80	0.99	31.5	IE1	BS06-../SSE06LA4	4.7	15.5	31.5	47.5	57	57	66	80	80	80	12	3200	-
3.5	36	104	0.83	41.29	IE1	BS06-../SSE06LA4	3.6	12	24	36	43.5	74	86	104	104	104	12	3500	-
3.5	69	60	2.1	21.61	IE1	BS10-../SSE06LA4	6.9	23	46	69	83	43	50	60	60	60	23	3000	-
3.5	56	72	1.8	26.42	IE1	BS10-../SSE06LA4	5.6	18.5	37.5	56	68	51	59	72	72	72	23	3250	-
3.5	44.5	89	1.5	33.55	IE1	BS10-../SSE06LA4	4.4	14.5	29.5	44.5	53	63	73	89	89	89	23	3550	-
3.5	37.5	104	1.3	39.96	IE1	BS10-../SSE06LA4	3.7	12.5	25	37.5	45	74	86	104	104	104	23	3800	-
3.5	31.5	124	1.2	47.59	IE1	BS10-../SSE06LA4	3.1	10.5	21	31.5	37.5	89	103	124	124	124	23	4050	-
3.5	26	147	1	57.12	IE1	BS10-../SSE06LA4	2.6	8.7	17.5	26	31.5	105	122	147	147	147	23	4350	-
3.5	24.5	142	1.1	60.74	IE1	BS10-../SSE06LA4	2.4	8.2	16	24.5	29.5	101	118	142	142	142	23	4550	-
3.5	20.5	186	0.86	71.96	IE1	BS10-../SSE06LA4	2	6.9	13.5	20.5	25	133	154	186	186	186	23	5000	-
3.5	45.5	88	3	32.87	IE1	BS20-../SSE06LA4	4.5	15	30	45.5	54	63	73	88	88	88	34	4750	-
3.5	35.5	111	2.4	42.08	IE1	BS20-../SSE06LA4	3.5	11.5	23.5	35.5	42.5	79	92	111	111	111	34	5200	-
3.5	30.5	128	2.1	48.98	IE1	BS20-../SSE06LA4	3	10	20	30.5	36.5	91	106	128	128	128	34	5500	-
3.5	29.5	118	2.3	50.44	IE1	BS20-../SSE06LA4	2.9	9.9	19.5	29.5	35.5	84	98	118	118	118	34	5700	-
3.5	25.5	154	1.8	58.74	IE1	BS20-../SSE06LA4	2.5	8.5	17	25.5	30.5	110	127	154	154	154	34	5900	-
3.5	21	184	1.6	70.3	IE1	BS20-../SSE06LA4	2.1	7.1	14	21	25.5	131	152	184	184	184	34	6300	-
3.5	19.5	175	1.5	76.18	IE1	BS20-../SSE06LA4	1.9	6.5	13	19.5	23.5	125	145	175					

**BS-series worm-geared motors****Selection - worm-geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 3.5 \text{ Nm}$  ( $P_N = 0.55 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
3.5	14.5	260	0.95	101.1	IE1	BS20-../SSE06LA4	1.4	4.9	9.8	14.5	17.5	187	215	260	260	260	34	7100	-
3.5	14	245	1.1	106.3	IE1	BS20-../SSE06LA4	1.4	4.7	9.4	14	16.5	175	200	245	245	245	34	7600	-
3.5	11.5	290	0.92	127.3	IE1	BS20-../SSE06LA4	1.1	3.9	7.8	11.5	14	210	240	290	290	290	34	8000	-
3.5	25.5	158	2.9	58.64	IE1	BS30-../SSE06LA4	2.5	8.5	17	25.5	30.5	112	130	158	158	158	51	6900	-
3.5	21	174	2.8	71.17	IE1	BS30-../SSE06LA4	2.1	7	14	21	25	124	144	174	174	174	51	7000	-
3.5	17.5	220	1.8	83.48	IE1	BS30-../SSE06LA4	1.7	5.9	11.5	17.5	21.5	160	186	220	220	220	51	6800	-
3.5	16.5	215	2.2	90.59	IE1	BS30-../SSE06LA4	1.6	5.5	11	16.5	19.5	156	181	215	215	215	51	7700	-
3.5	14	250	2	106.2	IE1	BS30-../SSE06LA4	1.4	4.7	9.4	14	16.5	180	205	250	250	250	51	8200	-
3.5	11.5	295	1.7	125.2	IE1	BS30-../SSE06LA4	1.1	3.9	7.9	11.5	14	210	245	295	295	295	51	8700	-
3.5	9.9	350	1.5	151.1	IE1	BS30-../SSE06LA4	0.95	3.3	6.6	9.9	11.5	250	290	350	350	350	51	9500	-
3.5	8	430	1.3	186.7	IE1	BS30-../SSE06LA4	0.8	2.6	5.3	8	9.6	305	355	430	430	430	51	10000	-
3.5	6.9	495	1	216.4	IE1	BS30-../SSE06LA4	0.65	2.3	4.6	6.9	8.3	355	410	495	495	495	51	10000	-
3.5	7.1	485	0.91	211.1	IE1	BS30Z-../SSE06LA4	0.7	2.3	4.7	7.1	8.5	345	400	485	485	485	54	10000	-
3.5	5.7	600	0.93	261.6	IE1	BS30Z-../SSE06LA4	0.55	1.9	3.8	5.7	6.8	430	500	600	600	600	54	10000	-
3.5	4.8	690	0.83	306.6	IE1	BS30Z-../SSE06LA4	0.48	1.6	3.2	4.8	5.8	495	570	690	690	690	54	10000	-
3.5	7.6	510	1.4	197.1	IE1	BS40Z-../SSE06LA4	0.75	2.5	5	7.6	9.1	360	420	510	510	510	68	15000	-
3.5	6	550	1.6	249.6	IE1	BS40Z-../SSE06LA4	0.6	2	4	6	7.2	390	455	550	550	550	68	15000	-
3.5	5.2	740	0.95	287.7	IE1	BS40Z-../SSE06LA4	0.5	1.7	3.4	5.2	6.2	530	610	740	740	740	68	15000	-
3.5	4.9	660	1.6	302.1	IE1	BS40Z-../SSE06LA4	0.49	1.6	3.3	4.9	5.9	475	550	660	660	660	68	15000	-
3.5	4.2	780	1.4	356.8	IE1	BS40Z-../SSE06LA4	0.42	1.4	2.8	4.2	5	560	650	780	780	780	68	15000	-
3.5	3.3	980	1	446.8	IE1	BS40Z-../SSE06LA4	0.33	1.1	2.2	3.3	4	700	810	980	980	980	68	15000	-
3.5	2.8	1140	0.96	520.8	IE1	BS40Z-../SSE06LA4	0.28	0.95	1.9	2.8	3.4	820	950	1140	1140	1140	68	15000	-

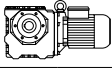
 **$M_N = 5 \text{ Nm}$  ( $P_N = 0.78 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
5	325	20	2	4.6	IE4	BS03-../S4E08MA4	32.5	108	215	325	390	20	20	20	20	20	10	1070	-
5	250	26	1.7	6	IE4	BS03-../S4E08MA4	25	83	166	250	300	26	26	26	26	26	10	1170	-
5	187	34	1.4	8	IE4	BS03-../S4E08MA4	18.5	62	125	187	225	34	34	34	34	34	10	1320	-
5	150	42	1.2	10	IE4	BS03-../S4E08MA4	15	50	100	150	180	42	42	42	42	42	10	1450	-
5	111	52	1	13.5	IE4	BS03-../S4E08MA4	11	37	74	111	133	52	52	52	52	52	10	1600	-
5	220	27	2.1	6.67	IE4	BS06-../S4E08MA4	22	74	149	220	265	27	27	27	27	27	16	1550	-
5	167	36	1.7	8.93	IE4	BS06-../S4E08MA4	16.5	55	111	167	200	36	36	36	36	36	16	1710	-
5	139	43	1.5	10.73	IE4	BS06-../S4E08MA4	13.5	46.5	93	139	167	43	43	43	43	43	16	1850	-
5	106	56	1.2	14.07	IE4	BS06-../S4E08MA4	10.5	35.5	71	106	127	56	56	56	56	56	16	2200	-
5	90	66	1.1	16.56	IE4	BS06-../S4E08MA4	9	30	60	90	108	66	66	66	66	66	16	2400	-
5	76	71	0.98	19.58	IE4	BS06-../S4E08MA4	7.6	25.5	51	76	91	71	71	71	71	71	16	2700	-
5	75	79	0.95	19.82	IE4	BS06-../S4E08MA4	7.5	25	50	75	90	79	79	79	79	79	16	2500	-
5	57	95	0.8	26.21	IE4	BS06-../S4E08MA4	5.7	19	38	57	68	95	95	95	95	95	16	3000	-
5	120	49.5	2.2	12.49	IE4	BS10-../S4E08MA4	12	40	80	120	144	49.5	49.5	49.5	49.5	49.5	27	2400	-
5	88	67	1.8	16.92	IE4	BS10-../S4E08MA4	8.8	29.5	59	88	106	67	67	67	67	67	27	2700	-
5	69	86	1.4	21.61	IE4	BS10-../S4E08MA4	6.9	23	46	69	83	86	86	86	86	86	27	3000	-
5	66	77	1.5	22.6	IE4	BS10-../S4E08MA4	6.6	22	44	66	79	77	77	77	77	27	3200	-	
5	56	103	1.3	26.42	IE4	BS10-../S4E08MA4	5.6	18.5	37.5	56	68	103	103	103	103	103	27	3250	-
5	48.5	105	1.2	30.63	IE4	BS10-../S4E08MA4	4.8	16	32.5	48.5	58	105	105	105	105	105	27	3550	-
5	44.5	127	1.1	33.55	IE4	BS10-../S4E08MA4	4.4	14.5	29.5	44.5	53	127	127	127	127	127	27	3550	-
5	37.5	149	0.93	39.96	IE4	BS10-../S4E08MA4	3.7	12.5	25	37.5	45	149	149	149	149	149	27	3800	-
5	31.5	178	0.81	47.59	IE4	BS10-../S4E08MA4	3.1	10.5	21	31.5	37.5	178	178	178	178	178	27	4050	-
5	67	90	2.6	22.23	IE4	BS20-../S4E08MA4	6.7	22	44.5	67	80	90	90	90	90	90	37	4100	-
5	64	83	2.7	23.13	IE4	BS20-../S4E08MA4	6.4	21.5	43	64	77	83	83	83	83	83	37	4300	-
5	53	108	2.3	27.86	IE4	BS20-../S4E08MA4	5.3	17.5	35.5	53	64	108	108	108	108	108	37	4450	-
5	48.5	110	2.3	30.63	IE4	BS20-../S4E08MA4	4.8	16	32.5	48.5	58	110	110	110	110	110	37	4750	-
5	45.5	126	2.1	32.87	IE4	BS20-../S4E08MA4	4.5	15	30	45.5	54	126	126	126	126	126	37	4750	-
5	37	144	1.8	40.25	IE4	BS20-../S4E08MA4	3.7	12	24.5	37	44.5	144	144	144	144	144	37	5300	-
5	35.5	159	1.7	42.08	IE4	BS20-../S4E08MA4	3.5	11.5	23.5	35.5	42.5	159	159	159	159	159	37	5200	-
5	30.5	183	1.5	48.98	IE4	BS20-../S4E08MA4	3	10	20	30.5	36.5	183	183	183	183	183	37	5500	-
5	29.5	168	1.6	50.44	IE4	BS20-../S4E08MA4	2.9	9.9	19.5	29.5	35.5	168	168	168	168	168	37	5700	-
5	25.5	220	1.3	58.74	IE4	BS20-../S4E08MA4	2.5	8.5	17	25.5	30.5	220	220	220	220	220	37	5900	-
5	21	260	1.1	70.3	IE4	BS20-../S4E08MA4	2.1	7.1	14	21	25.5	260	260	260	260	260	37	6300	-
5	19.5	250	1.1	76.18	IE4	BS20-../S4E08MA4	1.9	6.5	13	19.5	23.5	250	250	250	250	250	37	6600	-
5	16.5	290	0.92	88.67	IE4	BS20-../S4E08MA4	1.6	5.6	11	16.5	20	290	290	290	290	290	37	7000	-
5	39.5	142	3	37.92	IE4	BS30-../S4E08MA4	3.9	13	26	39.5	47	142	142	142	142	142	55	5500	-
5	38	159	2.7	39.31	IE4	BS30-../S4E08MA4	3.8	12.5	25	38	45.5	159	159	159	159	159	55	5500	-
5	29.5	192	2.3	50.04	IE4	BS30-../S4E08MA4	2.9	9.9	19.5	29.5	35.5	192	192	192	192	192	55	5900	-
5	25.5	225	2	58.64	IE4	BS30-../S4E08MA4	2.5	8.5	17	25.5	30.5	225	225	225	225	225	55	6900	-
5	21	245	1.9	71.17	IE4	BS30-../S4E08MA4	2.1	7	14	21	25	245	245	245	245	245	55	7000	-
5	17.5	320	1.3	83.48	IE4	BS30-../S4E08MA4	1.7	5.9	11.5	17.5	21.5	320	320	320	320	320	55	6800	-
5	16.5	310	1.6	90.59	IE4	BS30-../S4E08MA4	1.6	5.5	11	16.5	19.5	310	310	310	310	310	55	7700	-
5	14	360	1.4	106.2	IE4	BS30-../S4E08MA4	1.4	4.7	9.4	14	16.5	360	360	360	360	360	55	8200	-
5	11.5	425	1.2	125.2	IE4	BS30-../S4E08MA4	1.1												

# BS-series worm-geared motors

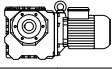
## Selection - worm-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

**$M_N = 7 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
5	21.5	265	2.8	69.6	IE4	BS40-../S4E08MA4	2.1	7.1	14	21.5	25.5	265	265	265	265	68	11800	-	
5	17	295	3	86.33	IE4	BS40-../S4E08MA4	1.7	5.7	11.5	17	20.5	295	295	295	295	68	12900	-	
5	13.5	360	2.6	108.1	IE4	BS40-../S4E08MA4	1.3	4.6	9.2	13.5	16.5	360	360	360	360	68	14000	-	
5	11.5	420	2.3	126	IE4	BS40-../S4E08MA4	1.1	3.9	7.9	11.5	14	420	420	420	420	68	14900	-	
5	10	480	2	148.1	IE4	BS40-../S4E08MA4	1	3.3	6.7	10	12	480	480	480	480	68	15000	-	
5	8.4	570	1.4	178.2	IE4	BS40-../S4E08MA4	0.8	2.8	5.6	8.4	10	570	570	570	570	68	15000	-	
5	6.8	690	1.1	219.7	IE4	BS40-../S4E08MA4	0.65	2.2	4.5	6.8	8.1	690	690	690	690	68	15000	-	
5	7.6	720	0.96	197.1	IE4	BS40Z-../S4E08MA4	0.75	2.5	5	7.6	9.1	720	720	720	720	71	15000	-	
5	6	780	1.1	249.6	IE4	BS40Z-../S4E08MA4	0.6	2	4	6	7.2	780	780	780	780	71	15000	-	
5	4.9	950	1.1	302.1	IE4	BS40Z-../S4E08MA4	0.49	1.6	3.3	4.9	5.9	950	950	950	950	71	15000	-	
5	4.2	1120	0.96	356.8	IE4	BS40Z-../S4E08MA4	0.42	1.4	2.8	4.2	5	1120	1120	1120	1120	71	15000	-	

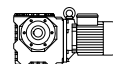
**$M_N = 10 \text{ Nm}$  ( $P_N = 1.55 \text{ kW}$ )**



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
7	325	28	1.4	4.6	IE3	BS03-../SPE08LA4	32.5	108	215	325	390	26	28	28	28	28	12	1070	-
7	250	36.5	1.2	6	IE3	BS03-../SPE08LA4	25	83	166	250	300	34	36.5	36.5	36.5	36.5	12	1170	-
7	187	48	1	8	IE3	BS03-../SPE08LA4	18.5	62	125	187	225	44.5	48	48	48	48	12	1320	-
7	150	58	0.88	10	IE3	BS03-../SPE08LA4	15	50	100	150	180	54	58	58	58	58	12	1450	-
7	220	37.5	1.5	6.67	IE3	BS06-../SPE08LA4	22	74	149	220	265	35	37.5	37.5	37.5	37.5	17	1550	-
7	167	50	1.2	8.93	IE3	BS06-../SPE08LA4	16.5	55	111	167	200	47	50	50	50	50	17	1710	-
7	139	60	1.1	10.73	IE3	BS06-../SPE08LA4	13.5	46.5	93	139	167	56	60	60	60	60	17	1850	-
7	106	79	0.85	14.07	IE3	BS06-../SPE08LA4	10.5	35.5	71	106	127	74	79	79	79	79	17	2200	-
7	120	69	1.5	12.49	IE3	BS10-../SPE08LA4	12	40	80	120	144	64	69	69	69	69	28	2400	-
7	88	94	1.3	16.92	IE3	BS10-../SPE08LA4	8.8	29.5	59	88	106	87	94	94	94	94	28	2700	-
7	69	121	1	21.61	IE3	BS10-../SPE08LA4	6.9	23	46	69	83	112	121	121	121	121	28	3000	-
7	66	109	1.1	22.6	IE3	BS10-../SPE08LA4	6.6	22	44	66	79	101	109	109	109	109	28	3200	-
7	56	144	0.9	26.42	IE3	BS10-../SPE08LA4	5.6	18.5	37.5	56	68	133	144	144	144	144	28	3250	-
7	48.5	147	0.88	30.63	IE3	BS10-../SPE08LA4	4.8	16	32.5	48.5	58	137	147	147	147	147	28	3550	-
7	117	72	2.8	12.77	IE3	BS20-../SPE08LA4	11.5	39	78	117	140	67	72	72	72	72	39	3350	-
7	88	95	2.3	16.92	IE3	BS20-../SPE08LA4	8.8	29.5	59	88	106	89	95	95	95	95	39	3700	-
7	67	126	1.8	22.23	IE3	BS20-../SPE08LA4	6.7	22	44.5	67	80	117	126	126	126	126	39	4100	-
7	64	116	2	23.13	IE3	BS20-../SPE08LA4	6.4	21.5	43	64	77	108	116	116	116	116	39	4300	-
7	53	152	1.6	27.86	IE3	BS20-../SPE08LA4	5.3	17.5	35.5	53	64	141	152	152	152	152	39	4450	-
7	48.5	154	1.6	30.63	IE3	BS20-../SPE08LA4	4.8	16	32.5	48.5	58	143	154	154	154	154	39	4750	-
7	45.5	177	1.5	32.87	IE3	BS20-../SPE08LA4	4.5	15	30	45.5	54	164	177	177	177	177	39	4750	-
7	37	200	1.3	40.25	IE3	BS20-../SPE08LA4	3.7	12	24.5	37	44.5	188	200	200	200	200	39	5300	-
7	35.5	220	1.2	42.08	IE3	BS20-../SPE08LA4	3.5	11.5	23.5	35.5	42.5	205	220	220	220	220	39	5200	-
7	30.5	255	1	48.98	IE3	BS20-../SPE08LA4	3	10	20	30.5	36.5	235	255	255	255	255	39	5500	-
7	29.5	235	1.1	50.44	IE3	BS20-../SPE08LA4	2.9	9.9	19.5	29.5	35.5	215	235	235	235	235	39	5700	-
7	25.5	305	0.91	58.74	IE3	BS20-../SPE08LA4	2.5	8.5	17	25.5	30.5	285	305	305	305	305	39	5900	-
7	21	365	0.81	70.3	IE3	BS20-../SPE08LA4	2.1	7.1	14	21	25.5	340	365	365	365	365	39	6300	-
7	62	126	2.9	24.06	IE3	BS30-../SPE08LA4	6.2	20.5	41.5	62	74	117	126	126	126	126	56	4600	-
7	55	157	2.5	27.07	IE3	BS30-../SPE08LA4	5.5	18	36.5	55	66	146	157	157	157	157	56	4750	-
7	48.5	160	2.5	30.63	IE3	BS30-../SPE08LA4	4.8	16	32.5	48.5	58	149	160	160	160	160	56	5000	-
7	44.5	192	2.2	33.55	IE3	BS30-../SPE08LA4	4.4	14.5	29.5	44.5	53	178	192	192	192	192	56	5200	-
7	39.5	199	2.1	37.92	IE3	BS30-../SPE08LA4	3.9	13	26	39.5	47	184	199	199	199	199	56	5500	-
7	38	220	1.9	39.31	IE3	BS30-../SPE08LA4	3.8	12.5	25	38	45.5	205	220	220	220	220	56	5500	-
7	29.5	265	1.7	50.04	IE3	BS30-../SPE08LA4	2.9	9.9	19.5	29.5	35.5	250	265	265	265	265	56	5900	-
7	25.5	315	1.5	58.64	IE3	BS30-../SPE08LA4	2.5	8.5	17	25.5	30.5	290	315	315	315	315	56	6900	-
7	21	345	1.4	71.17	IE3	BS30-../SPE08LA4	2.1	7	14	21	25	320	345	345	345	345	56	7000	-
7	17.5	445	0.9	83.48	IE3	BS30-../SPE08LA4	1.7	5.9	11.5	17.5	21.5	415	445	445	445	445	56	6800	-
7	16.5	435	1.1	90.59	IE3	BS30-../SPE08LA4	1.6	5.5	11	16.5	19.5	405	435	435	435	435	56	7700	-
7	14	500	1	106.2	IE3	BS30-../SPE08LA4	1.4	4.7	9.4	14	16.5	465	500	500	500	500	56	8200	-
7	11.5	590	0.87	125.2	IE3	BS30-../SPE08LA4	1.1	3.9	7.9	11.5	14	550	590	590	590	590	56	8700	-
7	24.5	300	2.9	60.38	IE3	BS40-../SPE08LA4	2.4	8.2	16.5	24.5	29.5	275	300	300	300	300	69	11200	-
7	21.5	375	2	69.6	IE3	BS40-../SPE08LA4	2.1	7.1	14	21.5	25.5	345	375	375	375	375	69	11800	-
7	20.5	355	2.5	73.09	IE3	BS40-../SPE08LA4	2	6.8	13.5	20.5	24.5	330	355	355	355	355	69	12100	-
7	17	415	2.2	86.33	IE3	BS40-../SPE08LA4	1.7	5.7	11.5	17	20.5	385	415	415	415	415	69	12900	-
7	13.5	500	1.9	108.1	IE3	BS40-../SPE08LA4	1.3	4.6	9.2	13.5	16.5	470	500	500	500	500	69	14000	-
7	11.5	590	1.7	126	IE3	BS40-../SPE08LA4	1.1	3.9	7.9	11.5	14	540	590	590	590	590	69	14900	-
7	10	670	1.4	148.1	IE3	BS40-../SPE08LA4	1	3.3	6.7	10	12	620	670	670	670	670	69	15000	-
7	8.4	810	1	178.2	IE3	BS40-../SPE08LA4	0.8	2.8	5.6	8.4	10	750	810	810	810	810	69	15000	-
7	6.8	960	0.82	219.7	IE3	BS40-../SPE08LA4	0.65	2.2	4.5	6.8	8.1	890	960	960	960	960	69	15000	-
7	6	1100	0.82	249.6	IE3	BS40Z-../SPE08LA4	0.6	2	4	6	7.2	1020	1100	1100	1100	1100	73	15000	-
7	4.9	1330	0.8	302.1	IE3	BS40Z-../SPE08LA4	0.49	1.6	3.3	4.9	5.9	1230	1330	1330	1330	1330	73	15000	-



## BS-series worm-geared motors

Selection - worm-geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$ **M<sub>N</sub> = 10 Nm (P<sub>N</sub> = 1.55 kW)**

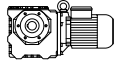
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	1500	1800	150	500	1000	1500	1800			
10	325	40	0.99	4.6	IE1	BS03-../SSE08LA4	32.5	108	215	325	390	26	32	40	40	40	12	1070	-
10	250	52	0.83	6	IE1	BS03-../SSE08LA4	25	83	166	250	300	34	42	52	52	52	12	1170	-
10	220	54	1	6.67	IE1	BS06-../SSE08LA4	22	74	149	220	265	35	43	54	54	54	17	1550	-
10	167	72	0.86	8.93	IE1	BS06-../SSE08LA4	16.5	55	111	167	200	47	57	72	72	72	17	1710	-
10	120	99	1.1	12.49	IE4	BS10-../S4E09SA4	12	40	80	120	144	84	99	99	99	99	32	2400	-
10	120	99	1.1	12.49	IE1	BS10-../SSE08LA4	12	40	80	120	144	64	79	99	99	99	28	2400	-
10	88	135	0.89	16.92	IE1	BS10-../SSE08LA4	8.8	29.5	59	88	106	87	108	135	135	135	28	2700	-
10	88	135	0.89	16.92	IE4	BS10-../S4E09SA4	8.8	29.5	59	88	106	115	135	135	135	135	32	2700	-
10	117	103	1.9	12.77	IE4	BS20-../S4E09SA4	11.5	39	78	117	140	87	103	103	103	103	42	3350	-
10	117	103	1.9	12.77	IE1	BS20-../SSE08LA4	11.5	39	78	117	140	67	82	103	103	103	39	3350	-
10	88	137	1.6	16.92	IE4	BS20-../S4E09SA4	8.8	29.5	59	88	106	116	137	137	137	137	42	3700	-
10	88	137	1.6	16.92	IE1	BS20-../SSE08LA4	8.8	29.5	59	88	106	89	109	137	137	137	39	3700	-
10	67	180	1.3	22.23	IE1	BS20-../SSE08LA4	6.7	22	44.5	67	80	117	144	180	180	180	39	4100	-
10	67	180	1.3	22.23	IE4	BS20-../S4E09SA4	6.7	22	44.5	67	80	153	180	180	180	180	42	4100	-
10	64	166	1.4	23.13	IE1	BS20-../SSE08LA4	6.4	21.5	43	64	77	108	133	166	166	166	39	4300	-
10	64	166	1.4	23.13	IE4	BS20-../S4E09SA4	6.4	21.5	43	64	77	141	166	166	166	166	42	4300	-
10	53	215	1.2	27.86	IE4	BS20-../S4E09SA4	5.3	17.5	35.5	53	64	184	215	215	215	215	42	4450	-
10	53	215	1.2	27.86	IE1	BS20-../SSE08LA4	5.3	17.5	35.5	53	64	141	173	215	215	215	39	4450	-
10	48.5	220	1.1	30.63	IE4	BS20-../S4E09SA4	4.8	16	32.5	48.5	58	187	220	220	220	220	42	4750	-
10	48.5	220	1.1	30.63	IE1	BS20-../SSE08LA4	4.8	16	32.5	48.5	58	143	176	220	220	220	39	4750	-
10	45.5	250	1.1	32.87	IE4	BS20-../S4E09SA4	4.5	15	30	45.5	54	215	250	250	250	250	42	4750	-
10	45.5	250	1.1	32.87	IE1	BS20-../SSE08LA4	4.5	15	30	45.5	54	164	200	250	250	250	39	4750	-
10	37	285	0.9	40.25	IE4	BS20-../S4E09SA4	3.7	12	24.5	37	44.5	245	285	285	285	285	42	5300	-
10	37	285	0.9	40.25	IE1	BS20-../SSE08LA4	3.7	12	24.5	37	44.5	188	230	285	285	285	39	5300	-
10	35.5	315	0.84	42.08	IE1	BS20-../SSE08LA4	3.5	11.5	23.5	35.5	42.5	205	255	315	315	315	39	5200	-
10	35.5	315	0.84	42.08	IE4	BS20-../S4E09SA4	3.5	11.5	23.5	35.5	42.5	270	315	315	315	315	42	5200	-
10	29.5	335	0.8	50.44	IE1	BS20-../SSE08LA4	2.9	9.9	19.5	29.5	35.5	215	270	335	335	335	39	5700	-
10	29.5	335	0.8	50.44	IE4	BS20-../S4E09SA4	2.9	9.9	19.5	29.5	35.5	285	335	335	335	335	42	5700	-
10	112	110	3	13.29	IE1	BS30-../SSE08LA4	11	37.5	75	112	135	71	88	110	110	110	56	3600	-
10	112	110	3	13.29	IE4	BS30-../S4E09SA4	11	37.5	75	112	135	93	110	110	110	110	60	3600	-
10	88	140	2.6	16.92	IE4	BS30-../S4E09SA4	8.8	29.5	59	88	106	119	140	140	140	140	60	3950	-
10	88	140	2.6	16.92	IE1	BS30-../SSE08LA4	8.8	29.5	59	88	106	91	112	140	140	140	56	3950	-
10	71	173	2.2	20.94	IE1	BS30-../SSE08LA4	7.1	23.5	47.5	71	85	112	139	173	173	173	56	4300	-
10	71	173	2.2	20.94	IE4	BS30-../S4E09SA4	7.1	23.5	47.5	71	85	147	173	173	173	173	60	4300	-
10	62	180	2	24.06	IE1	BS30-../SSE08LA4	6.2	20.5	41.5	62	74	117	144	180	180	180	56	4600	-
10	62	180	2	24.06	IE4	BS30-../S4E09SA4	6.2	20.5	41.5	62	74	153	180	180	180	180	60	4600	-
10	55	220	1.8	27.07	IE1	BS30-../SSE08LA4	5.5	18	36.5	55	66	146	179	220	220	220	56	4750	-
10	55	220	1.8	27.07	IE4	BS30-../S4E09SA4	5.5	18	36.5	55	66	190	220	220	220	220	60	4750	-
10	48.5	225	1.7	30.63	IE4	BS30-../S4E09SA4	4.8	16	32.5	48.5	58	195	225	225	225	225	60	5000	-
10	48.5	225	1.7	30.63	IE1	BS30-../SSE08LA4	4.8	16	32.5	48.5	58	149	183	225	225	225	56	5000	-
10	44.5	275	1.5	33.55	IE1	BS30-../SSE08LA4	4.4	14.5	29.5	44.5	53	178	220	275	275	275	56	5200	-
10	44.5	275	1.5	33.55	IE4	BS30-../S4E09SA4	4.4	14.5	29.5	44.5	53	230	275	275	275	275	60	5200	-
10	39.5	280	1.5	37.92	IE4	BS30-../S4E09SA4	3.9	13	26	39.5	47	240	280	280	280	280	60	5500	-
10	39.5	280	1.5	37.92	IE1	BS30-../SSE08LA4	3.9	13	26	39.5	47	184	225	280	280	280	56	5500	-
10	38	315	1.4	39.31	IE1	BS30-../SSE08LA4	3.8	12.5	25	38	45.5	205	250	315	315	315	56	5500	-
10	38	315	1.4	39.31	IE4	BS30-../S4E09SA4	3.8	12.5	25	38	45.5	270	315	315	315	315	60	5500	-
10	29.5	385	1.2	50.04	IE1	BS30-../SSE08LA4	2.9	9.9	19.5	29.5	35.5	250	305	385	385	385	56	5900	-
10	29.5	385	1.2	50.04	IE4	BS30-../S4E09SA4	2.9	9.9	19.5	29.5	35.5	325	385	385	385	385	60	5900	-
10	25.5	450	1	58.64	IE1	BS30-../SSE08LA4	2.5	8.5	17	25.5	30.5	290	360	450	450	450	56	6900	-
10	25.5	450	1	58.64	IE4	BS30-../S4E09SA4	2.5	8.5	17	25.5	30.5	380	450	450	450	450	60	6900	-
10	21	495	0.96	71.17	IE4	BS30-../S4E09SA4	2.1	7	14	21	25	420	495	495	495	495	60	7000	-
10	21	495	0.96	71.17	IE1	BS30-../SSE08LA4	2.1	7	14	21	25	320	395	495	495	495	56	7000	-
10	44.5	265	2.9	33.35	IE4	BS40-../S4E09SA4	4.4	14.5	29.5	44.5	53	225	265	265	265	265	73	8300	-
10	44.5	265	2.9	33.35	IE1	BS40-../SSE08LA4	4.4	14.5	29.5	44.5	53	173	210	265	265	265	69	8300	-
10	39	275	2.8	38.13	IE4	BS40-../S4E09SA4	3.9	13	26	39	47	235	275	275	275	275	73	9400	-
10	39	275	2.8	38.13	IE1	BS40-../SSE08LA4	3.9	13	26	39	47	180	220	275	275	275	69	9400	-
10	37	315	2.5	40.37	IE4	BS40-../S4E09SA4	3.7	12	24.5	37	44.5	270	315	315	315	315	73	9000	-
10	37	315	2.5	40.37	IE1	BS40-../SSE08LA4	3.7	12	24.5	37	44.5	205	255	315	315	315	69	9000	-
10	31	370	2.2	47.69	IE4	BS40-../S4E09SA4	3.1	10	20.5	31	37.5	315	370	370	370	370	73	9600	-
10	31	370	2.2	47.69	IE1	BS40-../SSE08LA4	3.1	10	20.5	31	37.5	240	295	370	370	370	69	9600	-
10	24.5	425	2	60.38	IE1	BS40-../SSE08LA4	2.4	8.2	16.5	24.5	29.5	275	340	425	425	425	69	11200	-
10	24.5	425	2	60.38	IE4	BS40-../S4E09SA4	2.4	8.2	16.5	24.5	29.5	360	425	425	425	425	73	11200	-
10	21.5	530	1.4	69.6	IE4	BS40-../S4E09SA4	2.1	7.1	14	21.5	25.5	455	530	530	530	530	73	11800	-
10	21.5	530	1.4	69.6	IE1	BS40-../SSE08LA4	2.1	7.1	14	21.5	25.5	345	425	530	530	530	69	11800	-
10	20.5	510	1.7	73.09	IE4	BS40-../S4E09SA4	2	6.8	13.5	20.5	24.5	430	510	510	510	510	73	12100	-
10	20.5	510	1.7	73.09	IE1	BS40-../SSE08LA4	2	6.8	13.5	20.5	24.5	330	405	510	510	510	69	12100	-
10	17	590	1.5	86.33	IE1	BS40-../SSE08LA4	1.7	5.7	11.5	17	20.5	385	475	590	590	590	69	12900	-
10	17	590	1.5	86.33	IE4	BS40-../S4E09SA4	1.7	5.7	11.5	17	20.5	500	590	590	590	590	73	12900	-
10	13.5	720	1.3	108.1	IE4	BS40-../S4E09SA4	1.3	4.6	9.2	13.5	16.5	610	720	720	720	720	73	14000	



# BS-series Worm-geared motors

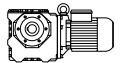
## Selection - worm-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

### $M_N = 14 \text{ Nm}$ ( $P_N = 2.2 \text{ kW}$ )

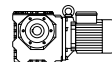


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]	
							150	500	1000	1500	1800	150	500	1000	1500	1800				
14	117	144	1.4	12.77	IE2	BS20-../SHE09SA4	11.5	39	78	117	140	87	103	144	144	144	144	42	3350	-
14	117	144	1.4	12.77	IE5	BS20-../S5E09XA4	11.5	39	78	117	140	134	144	144	144	144	50	3350	-	
14	88	191	1.1	16.92	IE5	BS20-../S5E09XA4	8.8	29.5	59	88	106	178	191	191	191	191	50	3700	-	
14	88	191	1.1	16.92	IE2	BS20-../SHE09SA4	8.8	29.5	59	88	106	116	137	191	191	191	42	3700	-	
14	67	250	0.91	22.23	IE2	BS20-../SHE09SA4	6.7	22	44.5	67	80	153	180	250	250	250	42	4100	-	
14	67	250	0.91	22.23	IE5	BS20-../S5E09XA4	6.7	22	44.5	67	80	230	250	250	250	250	50	4100	-	
14	64	230	0.98	23.13	IE5	BS20-../S5E09XA4	6.4	21.5	43	64	77	215	230	230	230	230	50	4300	-	
14	64	230	0.98	23.13	IE2	BS20-../SHE09SA4	6.4	21.5	43	64	77	141	166	230	230	230	42	4300	-	
14	53	300	0.82	27.86	IE5	BS20-../S5E09XA4	5.3	17.5	35.5	53	64	280	300	300	300	300	50	4450	-	
14	53	300	0.82	27.86	IE2	BS20-../SHE09SA4	5.3	17.5	35.5	53	64	184	215	300	300	300	42	4450	-	
14	48.5	305	0.81	30.63	IE5	BS20-../S5E09XA4	4.8	16	32.5	48.5	58	285	305	305	305	305	50	4750	-	
14	48.5	305	0.81	30.63	IE2	BS20-../SHE09SA4	4.8	16	32.5	48.5	58	187	220	305	305	305	42	4750	-	
14	112	154	2.1	13.29	IE2	BS30-../SHE09SA4	11	37.5	75	112	135	93	110	154	154	154	60	3600	-	
14	112	154	2.1	13.29	IE5	BS30-../S5E09XA4	11	37.5	75	112	135	143	154	154	154	68	3600	-		
14	88	196	1.8	16.92	IE5	BS30-../S5E09XA4	8.8	29.5	59	88	106	182	196	196	196	68	3950	-		
14	88	196	1.8	16.92	IE2	BS30-../SHE09SA4	8.8	29.5	59	88	106	119	140	196	196	196	60	3950	-	
14	71	240	1.6	20.94	IE2	BS30-../SHE09SA4	7.1	23.5	47.5	71	85	147	173	240	240	240	60	4300	-	
14	71	240	1.6	20.94	IE5	BS30-../S5E09XA4	7.1	23.5	47.5	71	85	225	240	240	240	240	68	4300	-	
14	62	250	1.5	24.06	IE2	BS30-../SHE09SA4	6.2	20.5	41.5	62	74	153	180	250	250	250	60	4600	-	
14	62	250	1.5	24.06	IE5	BS30-../S5E09XA4	6.2	20.5	41.5	62	74	230	250	250	250	250	68	4600	-	
14	55	310	1.3	27.07	IE2	BS30-../SHE09SA4	5.5	18	36.5	55	66	190	220	310	310	310	60	4750	-	
14	55	310	1.3	27.07	IE5	BS30-../S5E09XA4	5.5	18	36.5	55	66	290	310	310	310	310	68	4750	-	
14	48.5	320	1.2	30.63	IE5	BS30-../S5E09XA4	4.8	16	32.5	48.5	58	295	320	320	320	320	68	5000	-	
14	48.5	320	1.2	30.63	IE2	BS30-../SHE09SA4	4.8	16	32.5	48.5	58	195	225	320	320	320	60	5000	-	
14	44.5	385	1.1	33.55	IE2	BS30-../SHE09SA4	4.4	14.5	29.5	44.5	53	230	275	385	385	385	60	5200	-	
14	44.5	385	1.1	33.55	IE5	BS30-../S5E09XA4	4.4	14.5	29.5	44.5	53	355	385	385	385	385	68	5200	-	
14	39.5	395	1.1	37.92	IE2	BS30-../SHE09SA4	3.9	13	26	39.5	47	240	280	395	395	395	60	5500	-	
14	39.5	395	1.1	37.92	IE5	BS30-../S5E09XA4	3.9	13	26	39.5	47	365	395	395	395	395	68	5500	-	
14	38	445	0.96	39.31	IE5	BS30-../S5E09XA4	3.8	12.5	25	38	45.5	410	445	445	445	445	68	5500	-	
14	38	445	0.96	39.31	IE2	BS30-../SHE09SA4	3.8	12.5	25	38	45.5	270	315	445	445	445	60	5500	-	
14	29.5	530	0.83	50.04	IE5	BS30-../S5E09XA4	2.9	9.9	19.5	29.5	35.5	500	530	530	530	530	68	5900	-	
14	29.5	530	0.83	50.04	IE2	BS30-../SHE09SA4	2.9	9.9	19.5	29.5	35.5	325	385	530	530	530	60	5900	-	
14	71	240	2.9	21.06	IE2	BS40-../SHE09SA4	7.1	23.5	47	71	85	146	172	240	240	240	73	6900	-	
14	71	240	2.9	21.06	IE5	BS40-../S5E09XA4	7.1	23.5	47	71	85	220	240	240	240	240	81	6900	-	
14	63	240	2.8	23.59	IE5	BS40-../S5E09XA4	6.3	21	42	63	76	225	240	240	240	240	81	7900	-	
14	63	240	2.8	23.59	IE2	BS40-../SHE09SA4	6.3	21	42	63	76	148	174	240	240	240	73	7900	-	
14	57	300	2.5	26.18	IE5	BS40-../S5E09XA4	5.7	19	38	57	68	275	300	300	300	300	81	7500	-	
14	57	300	2.5	26.18	IE2	BS40-../SHE09SA4	5.7	19	38	57	68	182	210	300	300	300	73	7500	-	
14	48.5	315	2.4	30.63	IE5	BS40-../S5E09XA4	4.8	16	32.5	48.5	58	290	315	315	315	315	81	8700	-	
14	48.5	315	2.4	30.63	IE2	BS40-../SHE09SA4	4.8	16	32.5	48.5	58	192	225	315	315	315	73	8700	-	
14	44.5	370	2.1	33.35	IE5	BS40-../S5E09XA4	4.4	14.5	29.5	44.5	53	345	370	370	370	370	81	8300	-	
14	44.5	370	2.1	33.35	IE2	BS40-../SHE09SA4	4.4	14.5	29.5	44.5	53	225	265	370	370	370	73	8300	-	
14	39	385	2	38.13	IE5	BS40-../S5E09XA4	3.9	13	26	39	47	360	385	385	385	385	81	9400	-	
14	39	385	2	38.13	IE2	BS40-../SHE09SA4	3.9	13	26	39	47	235	275	385	385	385	73	9400	-	
14	37	445	1.8	40.37	IE5	BS40-../S5E09XA4	3.7	12	24.5	37	44.5	410	445	445	445	445	81	9000	-	
14	37	445	1.8	40.37	IE2	BS40-../SHE09SA4	3.7	12	24.5	37	44.5	270	315	445	445	445	73	9000	-	
14	31	520	1.6	47.69	IE5	BS40-../S5E09XA4	3.1	10	20.5	31	37.5	480	520	520	520	520	81	9600	-	
14	31	520	1.6	47.69	IE2	BS40-../SHE09SA4	3.1	10	20.5	31	37.5	315	370	520	520	520	73	9600	-	
14	24.5	600	1.4	60.38	IE2	BS40-../SHE09SA4	2.4	8.2	16.5	24.5	29.5	360	425	600	600	600	73	11200	-	
14	24.5	600	1.4	60.38	IE5	BS40-../S5E09XA4	2.4	8.2	16.5	24.5	29.5	500	600	600	600	600	81	11200	-	
14	21.5	750	0.99	69.6	IE2	BS40-../SHE09SA4	2.1	7.1	14	21.5	25.5	455	530	750	750	750	73	11800	-	
14	21.5	750	0.99	69.6	IE5	BS40-../S5E09XA4	2.1	7.1	14	21.5	25.5	690	750	750	750	750	81	11800	-	
14	20.5	710	1.2	73.09	IE5	BS40-../S5E09XA4	2	6.8	13.5	20.5	24.5	660	710	710	710	710	81	12100	-	
14	20.5	710	1.2	73.09	IE2	BS40-../SHE09SA4	2	6.8	13.5	20.5	24.5	430	510	710	710	710	73	12100	-	
14	17	830	1.1	86.33	IE5	BS40-../S5E09XA4	1.7	5.7	11.5	17	20.5	770	830	830	830	830	81	12900	-	
14	17	830	1.1	86.33	IE2	BS40-../SHE09SA4	1.7	5.7	11.5	17	20.5	500	590	830	830	830	73	12900	-	
14	13.5	1010	0.94	108.1	IE5	BS40-../S5E09XA4	1.3	4.6	9.2	13.5	16.5	940	1010	1010	1010	1010	81	14000	-	
14	13.5	1010	0.94	108.1	IE2	BS40-../SHE09SA4	1.3	4.6	9.2	13.5	16.5	610	720	1010	1010	1010	73	14000	-	
14	11.5	1180	0.83	126	IE5	BS40-../S5E09XA4	1.1	3.9	7.9	11.5	14	1090	1180	1180	1180	1180	81	14900	-	
14	11.5	1180	0.83	126	IE2	BS40-../SHE09SA4	1.1	3.9	7.9	11.5	14	710	840	1180	1180	1180	73	14900	-	

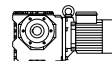
### $M_N = 19 \text{ Nm}$ ( $P_N = 3 \text{ kW}$ )



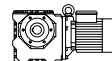
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
19	112	205	1.6	13.29	IE4	BS30-../S4E11SA6	11	37.5	75	112	135	205	205	205	205	205	77	3600	-
19	88	265	1.3	16.92	IE4	BS30-../S4E11SA6	8.8	29.5	59	88	106	265	265	265	265	265	77	3950	-
19	71	330	1.2	20.94	IE4	BS30-../S4E11SA6	7.1	23.5	47.5	71	85	330	330	330	330	330	77	4300	-
19	62	340	1.1	24.06	IE4	BS30-../S4E11SA6	6.2	20.5	41.5	62	74	340	340	340	340	340	77	4600	-
19	55	425	0.94	27.07	IE4	BS30-../S4E11SA6	5.5	18	36.5	55									

**BS-series worm-geared motors****Selection - worm-geared motors -  $n_1 = 1500 \frac{1}{\text{min}}$**  **$M_N = 19 \text{ Nm}$  ( $P_N = 3 \text{ kW}$ )**

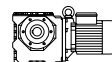
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
19	48.5	430	1.7	30.63	IE4	BS40-../S4E11SA6	4.8	16	32.5	48.5	58	430	430	430	430	95	8700	-	
19	44.5	500	1.5	33.35	IE4	BS40-../S4E11SA6	4.4	14.5	29.5	44.5	53	500	500	500	500	95	8300	-	
19	39	520	1.5	38.13	IE4	BS40-../S4E11SA6	3.9	13	26	39	47	520	520	520	520	95	9400	-	
19	37	600	1.3	40.37	IE4	BS40-../S4E11SA6	3.7	12	24.5	37	44.5	600	600	600	600	95	9000	-	
19	31	700	1.2	47.69	IE4	BS40-../S4E11SA6	3.1	10	20.5	31	37.5	700	700	700	700	95	9600	-	
19	24.5	810	1.1	60.38	IE4	BS40-../S4E11SA6	2.4	8.2	16.5	24.5	29.5	810	810	810	810	95	11200	-	
19	20.5	970	0.91	73.09	IE4	BS40-../S4E11SA6	2	6.8	13.5	20.5	24.5	970	970	970	970	95	12100	-	
19	17	1130	0.8	86.33	IE4	BS40-../S4E11SA6	1.7	5.7	11.5	17	20.5	1130	1130	1130	1130	95	12900	-	

 **$M_N = 20 \text{ Nm}$  ( $P_N = 3.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
20	117	205	0.97	12.77	IE3	BS20-../SPE09XA4	11.5	39	78	117	140	134	165	205	205	50	3350	-	
20	88	270	0.8	16.92	IE3	BS20-../SPE09XA4	8.8	29.5	59	88	106	178	215	270	270	50	3700	-	
20	112	220	1.5	13.29	IE3	BS30-../SPE09XA4	11	37.5	75	112	135	143	176	220	220	68	3600	-	
20	88	280	1.3	16.92	IE3	BS30-../SPE09XA4	8.8	29.5	59	88	106	182	220	280	280	68	3950	-	
20	71	345	1.1	20.94	IE3	BS30-../SPE09XA4	7.1	23.5	47.5	71	85	225	275	345	345	68	4300	-	
20	62	360	1	24.06	IE3	BS30-../SPE09XA4	6.2	20.5	41.5	62	74	230	285	360	360	68	4600	-	
20	55	445	0.89	27.07	IE3	BS30-../SPE09XA4	5.5	18	36.5	55	66	290	355	445	445	68	4750	-	
20	48.5	455	0.87	30.63	IE3	BS30-../SPE09XA4	4.8	16	32.5	48.5	58	295	365	455	455	68	5000	-	
20	115	220	2.8	13.03	IE3	BS40-../SPE09XA4	11.5	38	76	115	138	143	177	220	220	81	5800	-	
20	88	285	2.3	16.92	IE3	BS40-../SPE09XA4	8.8	29.5	59	88	106	186	230	285	285	81	6400	-	
20	71	345	2.1	21.06	IE3	BS40-../SPE09XA4	7.1	23.5	47	71	85	220	275	345	345	81	6900	-	
20	63	345	2	23.59	IE3	BS40-../SPE09XA4	6.3	21	42	63	76	225	275	345	345	81	7900	-	
20	57	425	1.7	26.18	IE3	BS40-../SPE09XA4	5.7	19	38	57	68	275	340	425	425	81	7500	-	
20	48.5	450	1.7	30.63	IE3	BS40-../SPE09XA4	4.8	16	32.5	48.5	58	290	360	450	450	81	8700	-	
20	44.5	530	1.5	33.35	IE3	BS40-../SPE09XA4	4.4	14.5	29.5	44.5	53	345	425	530	530	81	8300	-	
20	39	550	1.4	38.13	IE3	BS40-../SPE09XA4	3.9	13	26	39	47	360	445	550	550	81	9400	-	
20	37	630	1.3	40.37	IE3	BS40-../SPE09XA4	3.7	12	24.5	37	44.5	410	510	630	630	81	9000	-	
20	31	740	1.1	47.69	IE3	BS40-../SPE09XA4	3.1	10	20.5	31	37.5	480	590	740	740	81	9600	-	
20	24.5	850	1	60.38	IE3	BS40-../SPE09XA4	2.4	8.2	16.5	24.5	29.5	550	680	850	850	81	11200	-	
20	20.5	1020	0.86	73.09	IE3	BS40-../SPE09XA4	2	6.8	13.5	20.5	24.5	660	810	1020	1020	81	12100	-	

 **$M_N = 25.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
25.5	112	280	1.2	13.29	IE3	BS30-../SPE11SA6	11	37.5	75	112	135	205	240	280	280	77	3600	-	
25.5	88	355	1	16.92	IE3	BS30-../SPE11SA6	8.8	29.5	59	88	106	265	305	355	355	77	3950	-	
25.5	71	440	0.86	20.94	IE3	BS30-../SPE11SA6	7.1	23.5	47.5	71	85	330	380	440	440	77	4300	-	
25.5	62	460	0.8	24.06	IE3	BS30-../SPE11SA6	6.2	20.5	41.5	62	74	340	395	460	460	77	4600	-	
25.5	115	280	2.2	13.03	IE3	BS40-../SPE11SA6	11.5	38	76	115	138	210	240	280	280	95	5800	-	
25.5	88	365	1.8	16.92	IE3	BS40-../SPE11SA6	8.8	29.5	59	88	106	270	315	365	365	95	6400	-	
25.5	71	440	1.6	21.06	IE3	BS40-../SPE11SA6	7.1	23.5	47	71	85	325	375	440	440	95	6900	-	
25.5	63	445	1.5	23.59	IE3	BS40-../SPE11SA6	6.3	21	42	63	76	330	380	445	445	95	7900	-	
25.5	57	540	1.4	26.18	IE3	BS40-../SPE11SA6	5.7	19	38	57	68	405	470	540	540	95	7500	-	
25.5	48.5	570	1.3	30.63	IE3	BS40-../SPE11SA6	4.8	16	32.5	48.5	58	430	495	570	570	95	8700	-	
25.5	44.5	680	1.1	33.35	IE3	BS40-../SPE11SA6	4.4	14.5	29.5	44.5	53	500	580	680	680	95	8300	-	
25.5	39	700	1.1	38.13	IE3	BS40-../SPE11SA6	3.9	13	26	39	47	520	610	700	700	95	9400	-	
25.5	37	810	0.98	40.37	IE3	BS40-../SPE11SA6	3.7	12	24.5	37	44.5	600	700	810	810	95	9000	-	
25.5	31	940	0.88	47.69	IE3	BS40-../SPE11SA6	3.1	10	20.5	31	37.5	700	810	940	940	95	9600	-	

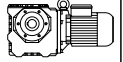
 **$M_N = 26.5 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
26.5	112	290	1.1	13.29	IE5	BS30-../S5E11MA6	11	37.5	75	112	135	290	290	290	290	77	3600	-	
26.5	88	370	0.97	16.92	IE5	BS30-../S5E11MA6	8.8	29.5	59	88	106	370	370	370	370	77	3950	-	
26.5	71	460	0.83	20.94	IE5	BS30-../S5E11MA6	7.1	23.5	47.5	71	85	460	460	460	460	77	4300	-	
26.5	115	290	2.1	13.03	IE5	BS40-../S5E11MA6	11.5	38	76	115	138	290	290	290	290	95	5800	-	
26.5	88	380	1.8	16.92	IE5	BS40-../S5E11MA6	8.8	29.5	59	88	106	380	380	380	380	95	6400	-	
26.5	71	455	1.6	21.06	IE5	BS40-../S5E11MA6	7.1	23.5	47	71	85	455	455	455	455	95	6900	-	
26.5	63	460	1.5	23.59	IE5	BS40-../S5E11MA6	6.3	21	42	63	76	460	460	460	460	95	7900	-	
26.5	57	560	1.3	26.18	IE5	BS40-../S5E11MA6	5.7	19	38	57	68	560	560	560	560	95	7500	-	
26.5	48.5	600	1.2	30.63	IE5	BS40-../S5E11MA6	4.8	16	32.5	48.5	58	600	600	600	600	95	8700	-	
26.5	44.5	700	1.1	33.35	IE5	BS40-../S5E11MA6	4.4	14.5	29.5	44.5	53	700	700	700	700	95	8300	-	

# BS-series worm-geared motors

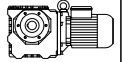
## Selection - worm-geared motors - $n_1 = 1500 \frac{1}{\text{min}}$

### $M_N = 26.5 \text{ Nm}$ ( $P_N = 4 \text{ kW}$ )



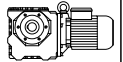
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
26.5	39	730	1.1	38.13	IE5	BS40-../S5E11MA6	3.9	13	26	39	47	730	730	730	730	730	95	9400	-
26.5	37	840	0.95	40.37	IE5	BS40-../S5E11MA6	3.7	12	24.5	37	44.5	840	840	840	840	840	95	9000	-
26.5	31	980	0.84	47.69	IE5	BS40-../S5E11MA6	3.1	10	20.5	31	37.5	980	980	980	980	980	95	9600	-

### $M_N = 35 \text{ Nm}$ ( $P_N = 5.5 \text{ kW}$ )

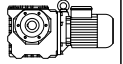


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
35	112	385	0.86	13.29	IE5	BS30-../S5E11LA6	11	37.5	75	112	135	385	385	385	385	385	89	3600	-
35	112	385	0.86	13.29	IE4	BS30-../S4E11MA6	11	37.5	75	112	135	290	330	385	385	385	77	3600	-
35	115	385	1.6	13.03	IE4	BS40-../S4E11MA6	11.5	38	76	115	138	290	330	385	385	385	95	5800	-
35	115	385	1.6	13.03	IE5	BS40-../S5E11LA6	11.5	38	76	115	138	385	385	385	385	385	107	5800	-
35	88	500	1.3	16.92	IE5	BS40-../S5E11LA6	8.8	29.5	59	88	106	500	500	500	500	500	107	6400	-
35	88	500	1.3	16.92	IE4	BS40-../S4E11MA6	8.8	29.5	59	88	106	380	430	500	500	500	95	6400	-
35	71	600	1.2	21.06	IE4	BS40-../S4E11MA6	7.1	23.5	47	71	85	455	510	600	600	600	95	6900	-
35	71	600	1.2	21.06	IE5	BS40-../S5E11LA6	7.1	23.5	47	71	85	600	600	600	600	600	107	6900	-
35	63	610	1.1	23.59	IE4	BS40-../S4E11MA6	6.3	21	42	63	76	460	520	610	610	610	95	7900	-
35	63	610	1.1	23.59	IE5	BS40-../S5E11LA6	6.3	21	42	63	76	610	610	610	610	610	107	7900	-
35	57	750	0.98	26.18	IE4	BS40-../S4E11MA6	5.7	19	38	57	68	560	640	750	750	750	95	7500	-
35	57	750	0.98	26.18	IE5	BS40-../S5E11LA6	5.7	19	38	57	68	750	750	750	750	750	107	7500	-
35	48.5	790	0.95	30.63	IE4	BS40-../S4E11MA6	4.8	16	32.5	48.5	58	600	670	790	790	790	95	8700	-
35	48.5	790	0.95	30.63	IE5	BS40-../S5E11LA6	4.8	16	32.5	48.5	58	790	790	790	790	790	107	8700	-
35	44.5	930	0.84	33.35	IE5	BS40-../S5E11LA6	4.4	14.5	29.5	44.5	53	930	930	930	930	930	107	8300	-
35	44.5	930	0.84	33.35	IE4	BS40-../S4E11MA6	4.4	14.5	29.5	44.5	53	700	800	930	930	930	95	8300	-
35	39	970	0.8	38.13	IE4	BS40-../S4E11MA6	3.9	13	26	39	47	730	830	970	970	970	95	9400	-
35	39	970	0.8	38.13	IE5	BS40-../S5E11LA6	3.9	13	26	39	47	970	970	970	970	970	107	9400	-

### $M_N = 48 \text{ Nm}$ ( $P_N = 7.5 \text{ kW}$ )

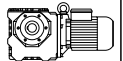


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	1500	1800	150	500	1000	1500	1800			
48	115	530	1.2	13.03	IE3	BS40-../SPE11LA6	11.5	38	76	115	138	385	440	530	530	530	107	5800	-
48	88	690	0.97	16.92	IE3	BS40-../SPE11LA6	8.8	29.5	59	88	106	500	570	690	690	690	107	6400	-
48	71	820	0.86	21.06	IE3	BS40-../SPE11LA6	7.1	23.5	47	71	85	600	690	820	820	820	107	6900	-
48	63	830	0.82	23.59	IE3	BS40-../SPE11LA6	6.3	21	42	63	76	610	690	830	830	830	107	7900	-

Selection - worm-geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$  **$M_N = 0.65 \text{ Nm}$  ( $P_N = 0.2 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.65	166	8.6	2.9	18	IE5	BS02-../S5E04SA4-1	8.3	27.5	55	166	200	8.6	8.6	8.6	8.6	8.6	3.5	1250	-
0.65	136	10	2.5	22	IE5	BS02-../S5E04SA4-1	6.8	22.5	45	136	163	10	10	10	10	10	3.5	1250	-
0.65	111	11	2.3	27	IE5	BS02-../S5E04SA4-1	5.5	18.5	37	111	133	11	11	11	11	11	3.5	1250	-
0.65	90	12.8	1.9	33	IE5	BS02-../S5E04SA4-1	4.5	15	30	90	109	12.8	12.8	12.8	12.8	12.8	3.5	1250	-
0.65	69	17.3	1.4	43	IE5	BS02-../S5E04SA4-1	3.4	11.5	23	69	83	17.3	17.3	17.3	17.3	17.3	3.5	1250	-
0.65	55	20	1.1	54	IE5	BS02-../S5E04SA4-1	2.7	9.2	18.5	55	66	20	20	20	20	20	3.5	1250	-
0.65	42.5	23	0.86	70	IE5	BS02-../S5E04SA4-1	2.1	7.1	14	42.5	51	23	23	23	23	23	3.5	1250	-
0.65	123	11.9	2.8	24.25	IE5	BS04-../S5E04SA4-1	6.1	20.5	41	123	148	11.9	11.9	11.9	11.9	11.9	3.9	2250	-
0.65	95	14.3	2.7	31.5	IE5	BS04-../S5E04SA4-1	4.7	15.5	31.5	95	114	14.3	14.3	14.3	14.3	14.3	3.9	2250	-
0.65	78	17.2	2.1	38.42	IE5	BS04-../S5E04SA4-1	3.9	13	26	78	93	17.2	17.2	17.2	17.2	17.2	3.9	2250	-
0.65	62	21	1.8	47.86	IE5	BS04-../S5E04SA4-1	3.1	10	20.5	62	75	21	21	21	21	21	3.9	2250	-
0.65	48.5	26.5	1.4	61.5	IE5	BS04-../S5E04SA4-1	2.4	8.1	16	48.5	58	26.5	26.5	26.5	26.5	26.5	3.9	2250	-
0.65	46.5	26	1.4	64.06	IE5	BS04-../S5E04SA4-1	2.3	7.8	15.5	46.5	56	26	26	26	26	26	3.9	2250	-
0.65	42	30.5	1.2	71.18	IE5	BS04-../S5E04SA4-1	2.1	7	14	42	50	30.5	30.5	30.5	30.5	30.5	3.9	2250	-
0.65	38.5	30.5	1.2	77	IE5	BS04-../S5E04SA4-1	1.9	6.4	12.5	38.5	46.5	30.5	30.5	30.5	30.5	30.5	3.9	2250	-
0.65	33	38	1	90	IE5	BS04-../S5E04SA4-1	1.6	5.5	11	33	40	38	38	38	38	38	3.9	2250	-
0.65	31.5	36	1.1	93.92	IE5	BS04-../S5E04SA4-1	1.5	5.3	10.5	31.5	38	36	36	36	36	36	3.9	2250	-
0.65	29	42.5	0.89	102.9	IE5	BS04-../S5E04SA4-1	1.4	4.8	9.7	29	34.5	42.5	42.5	42.5	42.5	42.5	3.9	2250	-
0.65	25.5	43	0.88	117	IE5	BS04-../S5E04SA4-1	1.2	4.2	8.5	25.5	30.5	43	43	43	43	43	3.9	2250	-
0.65	24	50	0.81	123	IE5	BS04-../S5E04SA4-1	1.2	4	8.1	24	29	50	50	50	50	50	3.9	2250	-
0.65	46.5	28	2.8	64.06	IE5	BS06-../S5E04SA4-1	2.3	7.8	15.5	46.5	56	28	28	28	28	28	8.4	3500	-
0.65	42	32.5	2.9	71.18	IE5	BS06-../S5E04SA4-1	2.1	7	14	42	50	32.5	32.5	32.5	32.5	32.5	8.4	3500	-
0.65	38.5	33.5	2.5	77	IE5	BS06-../S5E04SA4-1	1.9	6.4	12.5	38.5	46.5	33.5	33.5	33.5	33.5	33.5	8.4	3500	-
0.65	33	40.5	2.4	90	IE5	BS06-../S5E04SA4-1	1.6	5.5	11	33	40	40.5	40.5	40.5	40.5	40.5	8.4	3500	-
0.65	29	46	2.2	103.1	IE5	BS06-../S5E04SA4-1	1.4	4.8	9.6	29	34.5	46	46	46	46	46	8.4	3500	-
0.65	25	50	1.9	118.8	IE5	BS06-../S5E04SA4-1	1.2	4.2	8.4	25	30	50	50	50	50	50	8.4	3500	-
0.65	23	56	1.9	129	IE5	BS06-../S5E04SA4-1	1.1	3.8	7.7	23	27.5	56	56	56	56	56	8.4	3500	-
0.65	21	59	1.7	142.2	IE5	BS06-../S5E04SA4-1	1	3.5	7	21	25	59	59	59	59	59	8.4	3500	-
0.65	20	62	1.7	146.8	IE5	BS06-../S5E04SA4-1	1	3.4	6.8	20	24.5	62	62	62	62	62	8.4	3500	-
0.65	17.5	71	1.2	171	IE5	BS06-../S5E04SA4-1	0.85	2.9	5.8	17.5	21	71	71	71	71	71	8.4	3500	-
0.65	17	67	1.4	174	IE5	BS06-../S5E04SA4-1	0.85	2.8	5.7	17	20.5	67	67	67	67	67	8.4	3500	-
0.65	13.5	84	1.2	220	IE5	BS06-../S5E04SA4-1	0.65	2.2	4.5	13.5	16	84	84	84	84	84	8.4	3500	-
0.65	11.5	95	1	252	IE5	BS06-../S5E04SA4-1	0.55	1.9	3.9	11.5	14	95	95	95	95	95	8.4	3500	-
0.65	9.5	116	0.91	315.3	IE5	BS06-../S5E04SA4-1	0.47	1.5	3.1	9.5	11	116	116	116	116	116	8.4	3500	-
0.65	8.3	130	0.84	358.9	IE5	BS06-../S5E04SA4-1	0.41	1.3	2.7	8.3	10	130	130	130	130	130	8.4	3500	-
0.65	15	83	1.8	200	IE5	BS10Z-../S5E04SA4-1	0.75	2.5	5	15	18	83	83	83	83	83	21	6000	-
0.65	11.5	105	1.7	254	IE5	BS10Z-../S5E04SA4-1	0.55	1.9	3.9	11.5	14	105	105	105	105	105	21	6000	-
0.65	9.9	121	1.6	302.5	IE5	BS10Z-../S5E04SA4-1	0.49	1.6	3.3	9.9	11.5	121	121	121	121	121	21	6000	-
0.65	8.3	145	1.3	360.3	IE5	BS10Z-../S5E04SA4-1	0.41	1.3	2.7	8.3	9.9	145	145	145	145	145	21	6000	-
0.65	6.5	171	1.1	432.4	IE5	BS10Z-../S5E04SA4-1	0.34	1.1	2.3	6.9	8.3	171	171	171	171	171	21	6000	-
0.65	5.5	205	0.91	544.8	IE5	BS10Z-../S5E04SA4-1	0.27	0.9	1.8	5.5	6.6	205	205	205	205	205	21	6000	-
0.65	4.6	230	0.82	638.7	IE5	BS10Z-../S5E04SA4-1	0.23	0.75	1.5	4.6	5.6	230	230	230	230	230	21	6000	-
0.65	11.5	107	2.8	257.8	IE5	BS20Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	107	107	107	107	107	32	8000	-
0.65	9.9	122	2.4	300.1	IE5	BS20Z-../S5E04SA4-1	0.49	1.6	3.3	9.9	11.5	122	122	122	122	122	32	8000	-
0.65	8.3	145	2.2	359.9	IE5	BS20Z-../S5E04SA4-1	0.41	1.3	2.7	8.3	10	145	145	145	145	145	32	8000	-
0.65	6.9	170	1.9	430.8	IE5	BS20Z-../S5E04SA4-1	0.34	1.1	2.3	6.9	8.3	170	170	170	170	170	32	8000	-
0.65	5.5	192	1.9	539.7	IE5	BS20Z-../S5E04SA4-1	0.27	0.9	1.8	5.5	6.6	192	192	192	192	192	32	8000	-
0.65	4.8	215	1.5	619.2	IE5	BS20Z-../S5E04SA4-1	0.24	0.8	1.6	4.8	5.8	215	215	215	215	215	32	8000	-
0.65	3.9	265	1.2	763.4	IE5	BS20Z-../S5E04SA4-1	0.19	0.65	1.3	3.9	4.7	265	265	265	265	265	32	8000	-
0.65	2.9	455	1.1	1022	IE5	BS30G06-../S5E04SA4-1	0.14	0.48	0.95	2.9	3.5	455	455	455	455	455	53	10000	-
0.65	2.5	520	0.93	1176	IE5	BS30G06-../S5E04SA4-1	0.12	0.42	0.85	2.5	3	520	520	520	520	520	53	10000	-

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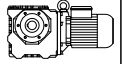
 **$M_N = 0.8 \text{ Nm}$  ( $P_N = 0.25 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.8	220	8.4	3	13.5	IE5	BS02-../S5E04SA4-1	11	37	74	220	265	8	8.4	8.4	8.4	8.4	3.5	1250	-
0.8	166	10.6	2.3	18	IE5	BS02-../S5E04SA4-1	8.3	27.5	55	166	200	10.1	10.6	10.6	10.6	10.6	3.5	1250	-
0.8	136	12.3	2	22	IE5	BS02-../S5E04SA4-1	6.8	22.5	45	136	163	11.7	12.3	12.3	12.3	12.3	3.5	1250	-
0.8	111	13.6	1.8	27	IE5	BS02-../S5E04SA4-1	5.5	18.5	37	111	133	12.9	13.6	13.6	13.6	13.6	3.5	1250	-
0.8	90	15.8	1.6	33	IE5	BS02-../S5E04SA4-1	4.5	15	30	90	109	15	15.8	15.8	15.8	15.8	3.5	1250	-
0.8	69	21	1.1	43	IE5	BS02-../S5E04SA4-1	3.4	11.5	23	69	83	20	21	21	21	21	3.5	1250	-
0.8	55	24.5	0.89	54	IE5	BS02-../S5E04SA4-1	2.7	9.2	18.5	55	66	23	24.5	24.5	24.5	24.5	3.5	1250	-
0.8	143	12.7	2.9	20.96	IE5	BS04-../S5E04SA4-1	7.1	23.5	47.5	143	171	12.1	12.7	12.7	12.7	12.7	3.9	2100	-
0.8	123	14.7	2.3	24.25	IE5	BS04-../S5E04SA4-1	6.1	20.5	41	123	148	14	14.7	14.7	14.7	14.7	3.9	2250	-
0.8	114	14.8	2.6	26.21	IE5	BS04-../S5E04SA4-1	5.7	19	38	114	137	14.1	14.8	14.8	14.8	14.8	3.9	2250	-
0.8	95	17.6	2.2	31.5	IE5	BS04-../S5E04SA4-1	4.7	15.5	31.5	95	114	16.7	17.6	17.6	17.6	17.6	3.9	2250	-
0.8	78	21	1.7	38.42	IE5	BS04-../S5E04SA4-1	3.9	13	26	78	93	20	21	21	21	21	3.9	2250	-
0.8	62	2																	

# BS-series worm-geared motors

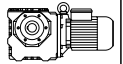
## Selection - worm-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 0.8 \text{ Nm}$ ( $P_N = 0.25 \text{ kW}$ )



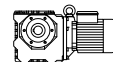
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
0.8	31.5	44	0.86	93.92	IE5	BS04-../S5E04SA4-1	1.5	5.3	10.5	31.5	38	42	44	44	44	44	3.9	2250	-
0.8	51	33	2.8	58.15	IE5	BS06-../S5E04SA4-1	2.5	8.5	17	51	61	31	33	33	33	33	8.4	3500	-
0.8	46.5	34.5	2.3	64.06	IE5	BS06-../S5E04SA4-1	2.3	7.8	15.5	46.5	56	33	34.5	34.5	34.5	34.5	8.4	3500	-
0.8	42	40	2.3	71.18	IE5	BS06-../S5E04SA4-1	2.1	7	14	42	50	38	40	40	40	40	8.4	3500	-
0.8	38.5	41	2.1	77	IE5	BS06-../S5E04SA4-1	1.9	6.4	12.5	38.5	46.5	39	41	41	41	41	8.4	3500	-
0.8	33	50	1.9	90	IE5	BS06-../S5E04SA4-1	1.6	5.5	11	33	40	47.5	50	50	50	50	8.4	3500	-
0.8	29	56	1.8	103.1	IE5	BS06-../S5E04SA4-1	1.4	4.8	9.6	29	34.5	54	56	56	56	56	8.4	3500	-
0.8	25	61	1.5	118.8	IE5	BS06-../S5E04SA4-1	1.2	4.2	8.4	25	30	58	61	61	61	61	8.4	3500	-
0.8	23	69	1.5	129	IE5	BS06-../S5E04SA4-1	1.1	3.8	7.7	23	27.5	65	69	69	69	69	8.4	3500	-
0.8	21	72	1.3	142.2	IE5	BS06-../S5E04SA4-1	1	3.5	7	21	25	69	72	72	72	72	8.4	3500	-
0.8	20	76	1.4	146.8	IE5	BS06-../S5E04SA4-1	1	3.4	6.8	20	24.5	72	76	76	76	76	8.4	3500	-
0.8	17.5	87	1	171	IE5	BS06-../S5E04SA4-1	0.85	2.9	5.8	17.5	21	83	87	87	87	87	8.4	3500	-
0.8	17	83	1.2	174	IE5	BS06-../S5E04SA4-1	0.85	2.8	5.7	17	20.5	79	83	83	83	83	8.4	3500	-
0.8	13.5	103	0.94	220	IE5	BS06-../S5E04SA4-1	0.65	2.2	4.5	13.5	16	98	103	103	103	103	8.4	3500	-
0.8	11.5	116	0.85	252	IE5	BS06-../S5E04SA4-1	0.55	1.9	3.9	11.5	14	111	116	116	116	116	8.4	3500	-
0.8	15	102	1.4	200	IE5	BS10Z-../S5E04SA4-1	0.75	2.5	5	15	18	97	102	102	102	102	21	6000	-
0.8	11.5	130	1.4	254	IE5	BS10Z-../S5E04SA4-1	0.55	1.9	3.9	11.5	14	123	130	130	130	130	21	6000	-
0.8	9.9	150	1.3	302.5	IE5	BS10Z-../S5E04SA4-1	0.49	1.6	3.3	9.9	11.5	142	150	150	150	150	21	6000	-
0.8	8.3	178	1.1	360.3	IE5	BS10Z-../S5E04SA4-1	0.41	1.3	2.7	8.3	9.9	169	178	178	178	178	21	6000	-
0.8	6.9	210	0.9	432.4	IE5	BS10Z-../S5E04SA4-1	0.34	1.1	2.3	6.9	8.3	200	210	210	210	210	21	6000	-
0.8	14.5	103	2.7	201.4	IE5	BS20Z-../S5E04SA4-1	0.7	2.4	4.9	14.5	17.5	97	103	103	103	103	32	8000	-
0.8	11.5	131	2.2	257.8	IE5	BS20Z-../S5E04SA4-1	0.55	1.9	3.8	11.5	13.5	125	131	131	131	131	32	8000	-
0.8	9.9	151	2	300.1	IE5	BS20Z-../S5E04SA4-1	0.49	1.6	3.3	9.9	11.5	143	151	151	151	151	32	8000	-
0.8	8.3	178	1.8	359.9	IE5	BS20Z-../S5E04SA4-1	0.41	1.3	2.7	8.3	10	169	178	178	178	178	32	8000	-
0.8	6.9	210	1.6	430.8	IE5	BS20Z-../S5E04SA4-1	0.34	1.1	2.3	6.9	8.3	199	210	210	210	210	32	8000	-
0.8	5.5	235	1.5	539.7	IE5	BS20Z-../S5E04SA4-1	0.27	0.9	1.8	5.5	6.6	225	235	235	235	235	32	8000	-
0.8	4.8	265	1.2	619.2	IE5	BS20Z-../S5E04SA4-1	0.24	0.8	1.6	4.8	5.8	250	265	265	265	265	32	8000	-
0.8	3.9	325	0.94	763.4	IE5	BS20Z-../S5E04SA4-1	0.19	0.65	1.3	3.9	4.7	310	325	325	325	325	32	8000	-
0.8	2.9	560	0.87	1022	IE5	BS30G06-../S5E04SA4-1	0.14	0.48	0.95	2.9	3.5	530	560	560	560	560	53	10000	-

### $M_N = 1 \text{ Nm}$ ( $P_N = 0.315 \text{ kW}$ )

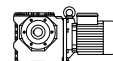


M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1	280	8.7	2.9	10.67	IE4	BS02-../S4E04SA4-1	14	46.5	93	280	335	6.6	7.4	8.7	8.7	8.7	3.5	1250	-
1	220	10.5	2.4	13.5	IE4	BS02-../S4E04SA4-1	11	37	74	220	265	8	8.9	10.5	10.5	10.5	3.5	1250	-
1	166	13.3	1.9	18	IE4	BS02-../S4E04SA4-1	8.3	27.5	55	166	200	10.1	11.3	13.3	13.3	13.3	3.5	1250	-
1	136	15.3	1.6	22	IE4	BS02-../S4E04SA4-1	6.8	22.5	45	136	163	11.7	13	15.3	15.3	15.3	3.5	1250	-
1	111	17	1.5	27	IE4	BS02-../S4E04SA4-1	5.5	18.5	37	111	133	12.9	14.4	17	17	17	3.5	1250	-
1	90	19.8	1.3	33	IE4	BS02-../S4E04SA4-1	4.5	15	30	90	109	15	16.8	19.8	19.8	19.8	3.5	1250	-
1	69	26.5	0.9	43	IE4	BS02-../S4E04SA4-1	3.4	11.5	23	69	83	20	22.5	26.5	26.5	26.5	3.5	1250	-
1	183	12.5	2.8	16.31	IE4	BS04-../S4E04SA4-1	9.1	30.5	61	183	220	9.5	10.6	12.5	12.5	12.5	3.9	1970	-
1	166	12.7	2.7	18	IE4	BS04-../S4E04SA4-1	8.3	27.5	55	166	200	9.7	10.8	12.7	12.7	12.7	3.9	1950	-
1	143	15.9	2.3	20.96	IE4	BS04-../S4E04SA4-1	7.1	23.5	47.5	143	171	12.1	13.5	15.9	15.9	15.9	3.9	2100	-
1	123	18.4	1.8	24.25	IE4	BS04-../S4E04SA4-1	6.1	20.5	41	123	148	14	15.6	18.4	18.4	18.4	3.9	2250	-
1	114	18.6	2	26.21	IE4	BS04-../S4E04SA4-1	5.7	19	38	114	137	14.1	15.8	18.6	18.6	18.6	3.9	2250	-
1	95	22	1.7	31.5	IE4	BS04-../S4E04SA4-1	4.7	15.5	31.5	95	114	16.7	18.7	22	22	22	3.9	2250	-
1	78	26.5	1.4	38.42	IE4	BS04-../S4E04SA4-1	3.9	13	26	78	93	20	22.5	26.5	26.5	26.5	3.9	2250	-
1	62	32.5	1.2	47.86	IE4	BS04-../S4E04SA4-1	3.1	10	20.5	62	75	24.5	27.5	32.5	32.5	32.5	3.9	2250	-
1	48.5	41	0.92	61.5	IE4	BS04-../S4E04SA4-1	2.4	8.1	16	48.5	58	31	35	41	41	41	3.9	2250	-
1	46.5	40	0.89	64.06	IE4	BS04-../S4E04SA4-1	2.3	7.8	15.5	46.5	56	30.5	34	40	40	40	3.9	2250	-
1	42	46.5	0.81	71.18	IE4	BS04-../S4E04SA4-1	2.1	7	14	42	50	35.5	39.5	46.5	46.5	46.5	3.9	2250	-
1	38.5	46.5	0.81	77	IE4	BS04-../S4E04SA4-1	1.9	6.4	12.5	38.5	46.5	35.5	39.5	46.5	46.5	46.5	3.9	2250	-
1	72	29.5	2.9	41.29	IE4	BS06-../S4E04SA4-1	3.6	12	24	72	87	22.5	25	29.5	29.5	29.5	8.4	3500	-
1	61	34.5	2.5	48.6	IE4	BS06-../S4E04SA4-1	3	10	20.5	61	74	26.5	29.5	34.5	34.5	34.5	8.4	3500	-
1	51	41	2.2	58.15	IE4	BS06-../S4E04SA4-1	2.5	8.5	17	51	61	31	35	41	41	41	8.4	3500	-
1	46.5	43.5	1.8	64.06	IE4	BS06-../S4E04SA4-1	2.3	7.8	15.5	46.5	56	33	37	43.5	43.5	43.5	8.4	3500	-
1	42	50	1.9	71.18	IE4	BS06-../S4E04SA4-1	2.1	7	14	42	50	38	42.5	50	50	50	8.4	3500	-
1	38.5	51	1.6	77	IE4	BS06-../S4E04SA4-1	1.9	6.4	12.5	38.5	46.5	39	43.5	51	51	51	8.4	3500	-
1	33	62	1.6	90	IE4	BS06-../S4E04SA4-1	1.6	5.5	11	33	40	47.5	53	62	62	62	8.4	3500	-
1	29	71	1.4	103.1	IE4	BS06-../S4E04SA4-1	1.4	4.8	9.6	29	34.5	54	60	71	71	71	8.4	3500	-
1	25	77	1.2	118.8	IE4	BS06-../S4E04SA4-1	1.2	4.2	8.4	25	30	58	65	77	77	77	8.4	3500	-
1	23	86	1.2	129	IE4	BS06-../S4E04SA4-1	1.1	3.8	7.7	2									



**BS-series worm-geared motors****Selection - worm-geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 1 \text{ Nm}$  ( $P_N = 0.315 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1	11.5	164	1.8	257.8	IE4	BS20Z-../S4E04SA4-1	0.55	1.9	3.8	11.5	13.5	125	140	164	164	164	32	8000	-
1	9.9	189	1.6	300.1	IE4	BS20Z-../S4E04SA4-1	0.49	1.6	3.3	9.9	11.5	143	160	189	189	189	32	8000	-
1	8.3	220	1.4	359.9	IE4	BS20Z-../S4E04SA4-1	0.41	1.3	2.7	8.3	10	169	189	220	220	220	32	8000	-
1	6.9	260	1.3	430.8	IE4	BS20Z-../S4E04SA4-1	0.34	1.1	2.3	6.9	8.3	199	220	260	260	260	32	8000	-
1	5.5	295	1.2	539.7	IE4	BS20Z-../S4E04SA4-1	0.27	0.9	1.8	5.5	6.6	225	250	295	295	295	32	8000	-
1	4.8	330	0.99	619.2	IE4	BS20Z-../S4E04SA4-1	0.24	0.8	1.6	4.8	5.8	250	280	330	330	330	32	8000	-

 **$M_N = 1.3 \text{ Nm}$  ( $P_N = 0.4 \text{ kW}$ )**

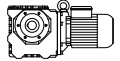
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.3	650	5.2	2.9	4.6	IE5	BS02-../S5E06MA4	32.5	108	215	650	780	5.2	5.2	5.2	5.2	5.2	6.8	1000	-
1.3	360	9	2.8	8.25	IE5	BS02-../S5E06MA4	18	60	121	360	435	9	9	9	9	9	6.8	1100	-
1.3	280	11.3	2.2	10.67	IE5	BS02-../S5E06MA4	14	46.5	93	280	335	11.3	11.3	11.3	11.3	11.3	6.8	1250	-
1.3	220	13.6	1.8	13.5	IE5	BS02-../S5E06MA4	11	37	74	220	265	13.6	13.6	13.6	13.6	13.6	6.8	1250	-
1.3	166	17.3	1.4	18	IE5	BS02-../S5E06MA4	8.3	27.5	55	166	200	17.3	17.3	17.3	17.3	17.3	6.8	1250	-
1.3	136	20	1.2	22	IE5	BS02-../S5E06MA4	6.8	22.5	45	136	163	20	20	20	20	20	6.8	1250	-
1.3	111	22	1.1	27	IE5	BS02-../S5E06MA4	5.5	18.5	37	111	133	22	22	22	22	22	6.8	1250	-
1.3	90	25.5	0.97	33	IE5	BS02-../S5E06MA4	4.5	15	30	90	109	25.5	25.5	25.5	25.5	25.5	6.8	1250	-
1.3	157	18.7	2.9	19	IE5	BS03-../S5E06MA4	7.8	26	52	157	189	18.7	18.7	18.7	18.7	18.7	6.9	1950	-
1.3	120	22	2.5	25	IE5	BS03-../S5E06MA4	6	20	40	120	144	22	22	22	22	22	6.9	1950	-
1.3	90	26	2.1	33	IE5	BS03-../S5E06MA4	4.5	15	30	90	109	26	26	26	26	26	6.9	1950	-
1.3	76	32	1.7	39	IE5	BS03-../S5E06MA4	3.8	12.5	25.5	76	92	32	32	32	32	32	6.9	1950	-
1.3	60	37.5	1.5	50	IE5	BS03-../S5E06MA4	3	10	20	60	72	37.5	37.5	37.5	37.5	37.5	6.9	1950	-
1.3	48	42.5	1.1	62	IE5	BS03-../S5E06MA4	2.4	8	16	48	58	42.5	42.5	42.5	42.5	42.5	6.9	1950	-
1.3	40	49.5	0.8	75	IE5	BS03-../S5E06MA4	2	6.6	13	40	48	49.5	49.5	49.5	49.5	49.5	6.9	1950	-
1.3	275	10.8	2.9	10.73	IE5	BS04-../S5E06MA4	13.5	46.5	93	275	335	10.8	10.8	10.8	10.8	10.8	7.3	1600	-
1.3	225	13.1	2.5	13.09	IE5	BS04-../S5E06MA4	11	38	76	225	275	13.1	13.1	13.1	13.1	13.1	7.3	1760	-
1.3	183	16.3	2.1	16.31	IE5	BS04-../S5E06MA4	9.1	30.5	61	183	220	16.3	16.3	16.3	16.3	16.3	7.3	1970	-
1.3	166	16.6	2	18	IE5	BS04-../S5E06MA4	8.3	27.5	55	166	200	16.6	16.6	16.6	16.6	16.6	7.3	1950	-
1.3	143	20.5	1.8	20.96	IE5	BS04-../S5E06MA4	7.1	23.5	47.5	143	171	20.5	20.5	20.5	20.5	20.5	7.3	2100	-
1.3	123	23.5	1.4	24.25	IE5	BS04-../S5E06MA4	6.1	20.5	41	123	148	23.5	23.5	23.5	23.5	23.5	7.3	2250	-
1.3	114	24	1.6	26.21	IE5	BS04-../S5E06MA4	5.7	19	38	114	137	24	24	24	24	24	7.3	2250	-
1.3	95	28.5	1.3	31.5	IE5	BS04-../S5E06MA4	4.7	15.5	31.5	95	114	28.5	28.5	28.5	28.5	28.5	7.3	2250	-
1.3	78	34	1.1	38.42	IE5	BS04-../S5E06MA4	3.9	13	26	78	93	34	34	34	34	34	7.3	2250	-
1.3	62	42	0.9	47.86	IE5	BS04-../S5E06MA4	3.1	10	20.5	62	75	42	42	42	42	42	7.3	2250	-
1.3	95	29.5	2.7	31.5	IE5	BS06-../S5E06MA4	4.7	15.5	31.5	95	114	29.5	29.5	29.5	29.5	29.5	12	3200	-
1.3	72	38.5	2.2	41.29	IE5	BS06-../S5E06MA4	3.6	12	24	72	87	38.5	38.5	38.5	38.5	38.5	12	3500	-
1.3	61	45	1.9	48.6	IE5	BS06-../S5E06MA4	3	10	20.5	61	74	45	45	45	45	45	12	3500	-
1.3	51	53	1.7	58.15	IE5	BS06-../S5E06MA4	2.5	8.5	17	51	61	53	53	53	53	53	12	3500	-
1.3	46.5	56	1.4	64.06	IE5	BS06-../S5E06MA4	2.3	7.8	15.5	46.5	56	56	56	56	56	56	12	3500	-
1.3	42	65	1.4	71.18	IE5	BS06-../S5E06MA4	2.1	7	14	42	50	65	65	65	65	65	12	3500	-
1.3	38.5	67	1.3	77	IE5	BS06-../S5E06MA4	1.9	6.4	12.5	38.5	46.5	67	67	67	67	67	12	3500	-
1.3	33	81	1.2	90	IE5	BS06-../S5E06MA4	1.6	5.5	11	33	40	81	81	81	81	81	12	3500	-
1.3	29	92	1.1	103.1	IE5	BS06-../S5E06MA4	1.4	4.8	9.6	29	34.5	92	92	92	92	92	12	3500	-
1.3	25	100	0.94	118.8	IE5	BS06-../S5E06MA4	1.2	4.2	8.4	25	30	100	100	100	100	100	12	3500	-
1.3	23	112	0.93	129	IE5	BS06-../S5E06MA4	1.1	3.8	7.7	23	27.5	112	112	112	112	112	12	3500	-
1.3	21	118	0.83	142.2	IE5	BS06-../S5E06MA4	1	3.5	7	21	25	118	118	118	118	118	12	3500	-
1.3	20	124	0.85	146.8	IE5	BS06-../S5E06MA4	1	3.4	6.8	20	24.5	124	124	124	124	124	12	3500	-
1.3	52	54	2.7	57.12	IE5	BS10-../S5E06MA4	2.6	8.7	17.5	52	63	54	54	54	54	54	23	4350	-
1.3	49	52	2.8	60.74	IE5	BS10-../S5E06MA4	2.4	8.2	16	49	59	52	52	52	52	52	23	4550	-
1.3	41.5	69	2.3	71.96	IE5	BS10-../S5E06MA4	2	6.9	13.5	41.5	50	69	69	69	69	69	23	5000	-
1.3	35.5	81	1.8	84.36	IE5	BS10-../S5E06MA4	1.7	5.9	11.5	35.5	42.5	81	81	81	81	81	23	5300	-
1.3	29	86	1.9	103.4	IE5	BS10-../S5E06MA4	1.4	4.8	9.6	29	34.5	86	86	86	86	86	23	5600	-
1.3	25	115	1.1	119.6	IE5	BS10-../S5E06MA4	1.2	4.1	8.3	25	30	115	115	115	115	115	23	6000	-
1.3	23	108	1.5	130.3	IE5	BS10-../S5E06MA4	1.1	3.8	7.6	23	27.5	108	108	108	108	108	23	6000	-
1.3	19.5	127	1.3	152.7	IE5	BS10-../S5E06MA4	0.95	3.2	6.5	19.5	23.5	127	127	127	127	127	23	6000	-
1.3	15.5	156	1.1	188.6	IE5	BS10-../S5E06MA4	0.75	2.6	5.3	15.5	19	156	156	156	156	156	23	6000	-
1.3	13.5	180	1	216.6	IE5	BS10-../S5E06MA4	0.65	2.3	4.6	13.5	16.5	180	180	180	180	180	23	6000	-
1.3	15	166	0.89	200	IE5	BS10Z-../S5E06MA4	0.75	2.5	5	15	18	166	166	166	166	166	24	6000	-
1.3	11.5	210	0.85	254	IE5	BS10Z-../S5E06MA4	0.55	1.9	3.9	11.5	14	210	210	210	210	210	24	6000	-
1.3	29.5	97	2.6	101.1	IE5	BS20-../S5E06MA4	1.4	4.9	9.8	29.5	35.5	97	97	97	97	97	34	7100	-
1.3	28	91	3	106.3	IE5	BS20-../S5E06MA4	1.4	4.7	9.4	28	33.5	91	91	91	91	91	34	7600	-
1.3	23.5	109	2.5	127.3	IE5	BS20-../S5E06MA4	1.1	3.9	7.8	23.5	28	109	109	109	109	109	34	8000	-
1.3	18.5	136	2	159.4	IE5	BS20-../S5E06MA4	0.9	3.1	6.2	18.5	22.5	136	136	136	136	136	34	8000	-
1.3	16	157	1.8	183	IE5	BS20-../S5E06MA4	0.8	2.7	5.4	16	19.5	157	157	157	157	157	34	8000	-
1.3	13	187	1.5	225.6	IE5	BS20-../S5E06MA4	0.65	2.2	4.4	13	15.5	187	187	187	187	187	34	8000	-
1.3	14.5	167	1.7	201.4	IE5	BS20Z-../S5E06MA4	0.7	2.4	4.9	14.5	17.5	167	167	167	167	167	35	8000	-
1.3	11.5	210	1.4	257.8	IE5	BS20Z-../S5E06MA4	0.55	1.9	3.8	11.5	13.5	210	210	210	210	210	35	8000	-
1.3	9.9	245	1.2	300.1	IE5	BS20Z-../S5E06MA4	0.49	1.6	3.3	9.9	11.5	245	245	245	245				



# BS-series worm-geared motors

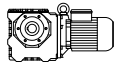
## Selection - worm-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 1.3 \text{ Nm}$ ( $P_N = 0.4 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.3	14	181	2.5	211.1	IE5	BS30Z-../S5E06MA4	0.7	2.3	4.7	14	17	181	181	181	181	54	10000	-	
1.3	11	220	2.5	261.6	IE5	BS30Z-../S5E06MA4	0.55	1.9	3.8	11	13.5	220	220	220	220	54	10000	-	
1.3	9.7	255	2.2	306.6	IE5	BS30Z-../S5E06MA4	0.48	1.6	3.2	9.7	11.5	255	255	255	255	54	10000	-	
1.3	8.3	345	1.1	359.6	IE5	BS30Z-../S5E06MA4	0.41	1.3	2.7	8.3	10	345	345	345	345	54	10000	-	
1.3	7.6	325	1.8	390.2	IE5	BS30Z-../S5E06MA4	0.38	1.2	2.5	7.6	9.2	325	325	325	325	54	10000	-	
1.3	6.5	380	1.6	457.3	IE5	BS30Z-../S5E06MA4	0.32	1	2.1	6.5	7.8	380	380	380	380	54	10000	-	
1.3	5.5	445	1.3	539.3	IE5	BS30Z-../S5E06MA4	0.27	0.9	1.8	5.5	6.6	445	445	445	445	54	10000	-	
1.3	4.6	500	1.1	651	IE5	BS30Z-../S5E06MA4	0.23	0.75	1.5	4.6	5.5	500	500	500	500	54	10000	-	
1.3	10	275	2.6	287.7	IE5	BS40Z-../S5E06MA4	0.5	1.7	3.4	10	12.5	275	275	275	275	68	15000	-	
1.3	6.7	365	2.7	446.8	IE5	BS40Z-../S5E06MA4	0.33	1.1	2.2	6.7	8	365	365	365	365	68	15000	-	
1.3	5.7	425	2.6	520.8	IE5	BS40Z-../S5E06MA4	0.28	0.95	1.9	5.7	6.9	425	425	425	425	68	15000	-	
1.3	4.9	485	1.9	612.1	IE5	BS40Z-../S5E06MA4	0.24	0.8	1.6	4.9	5.8	485	485	485	485	68	15000	-	
1.3	4	570	1.3	736.5	IE5	BS40Z-../S5E06MA4	0.2	0.65	1.3	4	4.8	570	570	570	570	68	15000	-	
1.3	3.3	690	1.1	908.2	IE5	BS40Z-../S5E06MA4	0.16	0.55	1.1	3.3	3.9	690	690	690	690	68	15000	-	
1.3	3.1	870	1	965.5	IE5	BS40G10-../S5E06MA4	0.15	0.5	1	3.1	3.7	870	870	870	870	73	15000	-	
1.3	2.5	1070	0.82	1180	IE5	BS40G10-../S5E06MA4	0.12	0.42	0.8	2.5	3	1070	1070	1070	1070	73	15000	-	

### $M_N = 1.75 \text{ Nm}$ ( $P_N = 0.55 \text{ kW}$ )

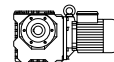


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.75	650	7	2.1	4.6	IE5	BS02-../S5E06MA4	32.5	108	215	650	780	7	7	7	7	6.8	1000	-	
1.75	550	8.3	2.4	5.4	IE5	BS02-../S5E06MA4	27.5	92	185	550	660	8.3	8.3	8.3	8.3	6.8	1000	-	
1.75	440	10.1	2.5	6.75	IE5	BS02-../S5E06MA4	22	74	148	440	530	10.1	10.1	10.1	10.1	6.8	1000	-	
1.75	360	12.1	2.1	8.25	IE5	BS02-../S5E06MA4	18	60	121	360	435	12.1	12.1	12.1	12.1	6.8	1100	-	
1.75	280	15.3	1.6	10.67	IE5	BS02-../S5E06MA4	14	46.5	93	280	335	15.3	15.3	15.3	15.3	6.8	1250	-	
1.75	220	18.4	1.4	13.5	IE5	BS02-../S5E06MA4	11	37	74	220	265	18.4	18.4	18.4	18.4	6.8	1250	-	
1.75	166	23	1.1	18	IE5	BS02-../S5E06MA4	8.3	27.5	55	166	200	23	23	23	23	6.8	1250	-	
1.75	136	26.5	0.93	22	IE5	BS02-../S5E06MA4	6.8	22.5	45	136	163	26.5	26.5	26.5	26.5	6.8	1250	-	
1.75	111	29.5	0.84	27	IE5	BS02-../S5E06MA4	5.5	18.5	37	111	133	29.5	29.5	29.5	29.5	6.8	1250	-	
1.75	220	18.4	3	13.5	IE5	BS03-../S5E06MA4	11	37	74	220	265	18.4	18.4	18.4	18.4	6.9	1600	-	
1.75	157	25	2.2	19	IE5	BS03-../S5E06MA4	7.8	26	52	157	189	25	25	25	25	6.9	1950	-	
1.75	120	30	1.8	25	IE5	BS03-../S5E06MA4	6	20	40	120	144	30	30	30	30	6.9	1950	-	
1.75	90	35	1.6	33	IE5	BS03-../S5E06MA4	4.5	15	30	90	109	35	35	35	35	6.9	1950	-	
1.75	76	43.5	1.3	39	IE5	BS03-../S5E06MA4	3.8	12.5	25.5	76	92	43.5	43.5	43.5	43.5	6.9	1950	-	
1.75	60	50	1.1	50	IE5	BS03-../S5E06MA4	3	10	20	60	72	50	50	50	50	6.9	1950	-	
1.75	48	57	0.83	62	IE5	BS03-../S5E06MA4	2.4	8	16	48	58	57	57	57	57	6.9	1950	-	
1.75	335	12.1	2.5	8.93	IE5	BS04-../S5E06MA4	16.5	55	111	335	400	12.1	12.1	12.1	12.1	7.3	1500	-	
1.75	275	14.6	2.2	10.73	IE5	BS04-../S5E06MA4	13.5	46.5	93	275	335	14.6	14.6	14.6	14.6	7.3	1600	-	
1.75	225	17.6	1.9	13.09	IE5	BS04-../S5E06MA4	11	38	76	225	275	17.6	17.6	17.6	17.6	7.3	1760	-	
1.75	183	21.5	1.6	16.31	IE5	BS04-../S5E06MA4	9.1	30.5	61	183	220	21.5	21.5	21.5	21.5	7.3	1970	-	
1.75	166	22	1.5	18	IE5	BS04-../S5E06MA4	8.3	27.5	55	166	200	22	22	22	22	7.3	1950	-	
1.75	143	27.5	1.3	20.96	IE5	BS04-../S5E06MA4	7.1	23.5	47.5	143	171	27.5	27.5	27.5	27.5	7.3	2100	-	
1.75	123	32	1.1	24.25	IE5	BS04-../S5E06MA4	6.1	20.5	41	123	148	32	32	32	32	7.3	2250	-	
1.75	114	32.5	1.2	26.21	IE5	BS04-../S5E06MA4	5.7	19	38	114	137	32.5	32.5	32.5	32.5	7.3	2250	-	
1.75	95	38.5	0.98	31.5	IE5	BS04-../S5E06MA4	4.7	15.5	31.5	95	114	38.5	38.5	38.5	38.5	7.3	2250	-	
1.75	78	46	0.8	38.42	IE5	BS04-../S5E06MA4	3.9	13	26	78	93	46	46	46	46	7.3	2250	-	
1.75	151	27.5	2.7	19.82	IE5	BS06-../S5E06MA4	7.5	25	50	151	181	27.5	27.5	27.5	27.5	12	2500	-	
1.75	123	33.5	2.3	24.25	IE5	BS06-../S5E06MA4	6.1	20.5	41	123	148	33.5	33.5	33.5	33.5	12	2600	-	
1.75	114	33	2.3	26.21	IE5	BS06-../S5E06MA4	5.7	19	38	114	137	33	33	33	33	12	3000	-	
1.75	95	40	2	31.5	IE5	BS06-../S5E06MA4	4.7	15.5	31.5	95	114	40	40	40	40	12	3200	-	
1.75	72	52	1.7	41.29	IE5	BS06-../S5E06MA4	3.6	12	24	72	87	52	52	52	52	12	3500	-	
1.75	61	61	1.4	48.6	IE5	BS06-../S5E06MA4	3	10	20.5	61	74	61	61	61	61	12	3500	-	
1.75	51	72	1.3	58.15	IE5	BS06-../S5E06MA4	2.5	8.5	17	51	61	72	72	72	72	12	3500	-	
1.75	46.5	76	1	64.06	IE5	BS06-../S5E06MA4	2.3	7.8	15.5	46.5	56	76	76	76	76	12	3500	-	
1.75	42	88	1.1	71.18	IE5	BS06-../S5E06MA4	2.1	7	14	42	50	88	88	88	88	12	3500	-	
1.75	38.5	90	0.94	77	IE5	BS06-../S5E06MA4	1.9	6.4	12.5	38.5	46.5	90	90	90	90	12	3500	-	
1.75	33	110	0.89	90	IE5	BS06-../S5E06MA4	1.6	5.5	11	33	40	110	110	110	110	12	3500	-	
1.75	29	124	0.8	103.1	IE5	BS06-../S5E06MA4	1.4	4.8	9.6	29	34.5	124	124	124	124	12	3500	-	
1.75	89	44.5	3	33.55	IE5	BS10-../S5E06MA4	4.4	14.5	29.5	89	107	44.5	44.5	44.5	44.5	23	3550	-	
1.75	75	52	2.7	39.96	IE5	BS10-../S5E06MA4	3.7	12.5	25	75	90	52	52	52	52	23	3800	-	
1.75	63	62	2.3	47.59	IE5	BS10-../S5E06MA4	3.1	10.5	21	63	75	62	62	62	62	23	4050	-	
1.75	52	73	2	57.12	IE5	BS10-../S5E06MA4	2.6	8.7	17.5	52	63	73	73	73	73	23	4350	-	
1.75	49	71	2.1	60.74	IE5	BS10-../S5E06MA4	2.4	8.2	16	49	59	71	71	71	71	23	4550	-	
1.75	41.5	93	1.7	71.96	IE5	BS10-../S5E06MA4	2	6.9	13.5	41.5	50	93	93	93	93	23	5000	-	
1.75	35.5	109	1.4	84.36	IE5	BS10-../S5E06MA4	1.7	5.9	11.5	35.5	42.5	109	109	109	109	23	5300	-	
1.75	29	115	1.4	103.4	IE5	BS10-../S5E06MA4	1.4	4.8	9.6	29	34.5	115	115	115	115	23	5600	-	
1.75	23	145	1.1	130.3	IE5	BS10-../S5E06MA4	1.1	3.8	7.6	23	27.5	145	145	145	145	23	6000	-	
1.75	19.5	171	0.96	152.7	IE5	BS10-../S5E06MA4	0.95	3.2	6.5	19.5	23.5	171	171	171	171	23	6000	-	
1.75	15.5	210	0.8	188.6	IE5	BS10-../S5E06MA4	0.75	2.6	5.3	15.5	19	210	210	210	210	23	6000	-	
1.75	33.5	102	2.6	88.67	IE5	BS20-../S5E06MA4	1.6	5.6	11	33.5	40.5	102	102	102	102	34	7000	-	
1.75	29.5	130	1.9	101.1	IE5	BS20-../S5E06MA4	1.4	4.9	9.8	29.5	35.5	130	130	130	130	34	7100	-	
1.75	28	122	2.2	106.3	IE5	BS20-../S5E06MA4	1.4	4.7	9.4	28	33.5	122	122	122					

# BS-series worm-geared motors

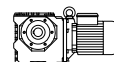
## Selection - worm-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 1.75 \text{ Nm}$ ( $P_N = 0.55 \text{ kW}$ )



M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
1.75	18.5	184	1.5	159.4	IE5	BS20-../S5E06MA4	0.9	3.1	6.2	18.5	22.5	184	184	184	184	184	34	8000	-
1.75	16	210	1.3	183	IE5	BS20-../S5E06MA4	0.8	2.7	5.4	16	19.5	210	210	210	210	210	34	8000	-
1.75	13	250	1.1	225.6	IE5	BS20-../S5E06MA4	0.65	2.2	4.4	13	15.5	250	250	250	250	250	34	8000	-
1.75	14.5	225	1.2	201.4	IE5	BS20Z-../S5E06MA4	0.7	2.4	4.9	14.5	17.5	225	225	225	225	225	35	8000	-
1.75	11.5	285	1	257.8	IE5	BS20Z-../S5E06MA4	0.55	1.9	3.8	11.5	13.5	285	285	285	285	285	35	8000	-
1.75	9.9	330	0.91	300.1	IE5	BS20Z-../S5E06MA4	0.49	1.6	3.3	9.9	11.5	330	330	330	330	330	35	8000	-
1.75	8.3	390	0.82	359.9	IE5	BS20Z-../S5E06MA4	0.41	1.3	2.7	8.3	10	390	390	390	390	390	35	8000	-
1.75	19.5	177	3	151.1	IE5	BS30-../S5E06MA4	0.95	3.3	6.6	19.5	23.5	177	177	177	177	177	51	9500	-
1.75	16	215	2.5	186.7	IE5	BS30-../S5E06MA4	0.8	2.6	5.3	16	19	215	215	215	215	215	51	10000	-
1.75	13.5	245	2.1	216.4	IE5	BS30-../S5E06MA4	0.65	2.3	4.6	13.5	16.5	245	245	245	245	245	51	10000	-
1.75	14	240	1.8	211.1	IE5	BS30Z-../S5E06MA4	0.7	2.3	4.7	14	17	240	240	240	240	240	54	10000	-
1.75	11	300	1.9	261.6	IE5	BS30Z-../S5E06MA4	0.55	1.9	3.8	11	13.5	300	300	300	300	300	54	10000	-
1.75	9.7	345	1.7	306.6	IE5	BS30Z-../S5E06MA4	0.48	1.6	3.2	9.7	11.5	345	345	345	345	345	54	10000	-
1.75	8.3	465	0.85	359.6	IE5	BS30Z-../S5E06MA4	0.41	1.3	2.7	8.3	10	465	465	465	465	465	54	10000	-
1.75	7.6	440	1.3	390.2	IE5	BS30Z-../S5E06MA4	0.38	1.2	2.5	7.6	9.2	440	440	440	440	440	54	10000	-
1.75	6.5	510	1.2	457.3	IE5	BS30Z-../S5E06MA4	0.32	1	2.1	6.5	7.8	510	510	510	510	510	54	10000	-
1.75	5.5	600	0.99	539.3	IE5	BS30Z-../S5E06MA4	0.27	0.9	1.8	5.5	6.6	600	600	600	600	600	54	10000	-
1.75	4.6	680	0.83	651	IE5	BS30Z-../S5E06MA4	0.23	0.75	1.5	4.6	5.5	680	680	680	680	680	54	10000	-
1.75	15	255	2.7	197.1	IE5	BS40Z-../S5E06MA4	0.75	2.5	5	15	18	255	255	255	255	255	68	15000	-
1.75	10	370	1.9	287.7	IE5	BS40Z-../S5E06MA4	0.5	1.7	3.4	10	12.5	370	370	370	370	370	68	15000	-
1.75	8.4	390	2.7	356.8	IE5	BS40Z-../S5E06MA4	0.42	1.4	2.8	8.4	10	390	390	390	390	390	68	15000	-
1.75	6.7	490	2	446.8	IE5	BS40Z-../S5E06MA4	0.33	1.1	2.2	6.7	8	490	490	490	490	490	68	15000	-
1.75	5.7	570	1.9	520.8	IE5	BS40Z-../S5E06MA4	0.28	0.95	1.9	5.7	6.9	570	570	570	570	570	68	15000	-
1.75	4.9	650	1.4	612.1	IE5	BS40Z-../S5E06MA4	0.24	0.8	1.6	4.9	5.8	650	650	650	650	650	68	15000	-
1.75	4	770	0.97	736.5	IE5	BS40Z-../S5E06MA4	0.2	0.65	1.3	4	4.8	770	770	770	770	770	68	15000	-

### $M_N = 2.4 \text{ Nm}$ ( $P_N = 0.75 \text{ kW}$ )

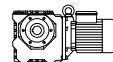


M <sub>N</sub> [Nm]	n <sub>2</sub> [1/min]	M <sub>2</sub> [Nm]	f <sub>B</sub> [-]	i [:1]	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m [kg]	F <sub>RN</sub> [N]	F <sub>RV</sub> [N]
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
2.4	650	9.7	1.5	4.6	IE5	BS02-../S5E06LA4	32.5	108	215	650	780	9.7	9.7	9.7	9.7	9.7	6.8	1000	-
2.4	650	9.7	1.5	4.6	IE3	BS02-../SPE06MA4	32.5	108	215	650	780	7.2	8	8.9	9.7	9.7	6.8	1000	-
2.4	550	11.4	1.8	5.4	IE5	BS02-../S5E06LA4	27.5	92	185	550	660	11.4	11.4	11.4	11.4	11.4	6.8	1000	-
2.4	550	11.4	1.8	5.4	IE3	BS02-../SPE06MA4	27.5	92	185	550	660	8.5	9.5	10.4	11.4	11.4	6.8	1000	-
2.4	440	13.9	1.8	6.75	IE5	BS02-../S5E06LA4	22	74	148	440	530	13.9	13.9	13.9	13.9	13.9	6.8	1000	-
2.4	440	13.9	1.8	6.75	IE3	BS02-../SPE06MA4	22	74	148	440	530	10.4	11.6	12.7	13.9	13.9	6.8	1000	-
2.4	360	16.6	1.5	8.25	IE5	BS02-../S5E06LA4	18	60	121	360	435	16.6	16.6	16.6	16.6	16.6	6.8	1100	-
2.4	360	16.6	1.5	8.25	IE3	BS02-../SPE06MA4	18	60	121	360	435	12.4	13.8	15.2	16.6	16.6	6.8	1100	-
2.4	280	20.5	1.2	10.67	IE5	BS02-../S5E06LA4	14	46.5	93	280	335	20.5	20.5	20.5	20.5	20.5	6.8	1250	-
2.4	280	20.5	1.2	10.67	IE3	BS02-../SPE06MA4	14	46.5	93	280	335	15.7	17.4	19.2	20.5	20.5	6.8	1250	-
2.4	220	25	0.99	13.5	IE5	BS02-../S5E06LA4	11	37	74	220	265	25	25	25	25	25	6.8	1250	-
2.4	220	25	0.99	13.5	IE3	BS02-../SPE06MA4	11	37	74	220	265	18.9	21	23	25	25	6.8	1250	-
2.4	220	25	2.2	13.5	IE5	BS03-../S5E06LA4	11	37	74	220	265	25	25	25	25	25	6.9	1600	-
2.4	220	25	2.2	13.5	IE3	BS03-../SPE06MA4	11	37	74	220	265	18.9	21	23	25	25	6.9	1600	-
2.4	157	34.5	1.6	19	IE5	BS03-../S5E06LA4	7.8	26	52	157	189	34.5	34.5	34.5	34.5	34.5	6.9	1950	-
2.4	157	34.5	1.6	19	IE3	BS03-../SPE06MA4	7.8	26	52	157	189	25.5	28.5	31.5	34.5	34.5	6.9	1950	-
2.4	120	41	1.3	25	IE5	BS03-../S5E06LA4	6	20	40	120	144	41	41	41	41	41	6.9	1950	-
2.4	120	41	1.3	25	IE3	BS03-../SPE06MA4	6	20	40	120	144	31	34.5	37.5	41	41	6.9	1950	-
2.4	90	48	1.1	33	IE5	BS03-../S5E06LA4	4.5	15	30	90	109	48	48	48	48	48	6.9	1950	-
2.4	90	48	1.1	33	IE3	BS03-../SPE06MA4	4.5	15	30	90	109	36	40	44	48	48	6.9	1950	-
2.4	76	59	0.92	39	IE5	BS03-../S5E06LA4	3.8	12.5	25.5	76	92	59	59	59	59	59	6.9	1950	-
2.4	76	59	0.92	39	IE3	BS03-../SPE06MA4	3.8	12.5	25.5	76	92	44.5	49.5	54	59	59	6.9	1950	-
2.4	485	11.4	2.3	6.13	IE5	BS04-../S5E06LA4	24	81	163	485	580	11.4	11.4	11.4	11.4	11.4	7.3	1300	-
2.4	485	11.4	2.3	6.13	IE3	BS04-../SPE06MA4	24	81	163	485	580	8.6	9.5	10.5	11.4	11.4	7.3	1300	-
2.4	335	16.7	1.8	8.93	IE5	BS04-../S5E06LA4	16.5	55	111	335	400	16.7	16.7	16.7	16.7	16.7	7.3	1500	-
2.4	335	16.7	1.8	8.93	IE3	BS04-../SPE06MA4	16.5	55	111	335	400	12.5	13.9	15.3	16.7	16.7	7.3	1500	-
2.4	275	20	1.6	10.73	IE5	BS04-../S5E06LA4	13.5	46.5	93	275	335	20	20	20	20	20	7.3	1600	-
2.4	275	20	1.6	10.73	IE3	BS04-../SPE06MA4	13.5	46.5	93	275	335	15	16.7	18.4	20	20	7.3	1600	-
2.4	225	24	1.4	13.09	IE5	BS04-../S5E06LA4	11	38	76	225	275	24	24	24	24	24	7.3	1760	-
2.4	225	24	1.4	13.09	IE3	BS04-../SPE06MA4	11	38	76	225	275	18.1	20	22	24	24	7.3	1760	-
2.4	183	30	1.2	16.31	IE5	BS04-../S5E06LA4	9.1	30.5	61	183	220	30	30	30	30	30	7.3	1970	-
2.4	183	30	1.2	16.31	IE3	BS04-../SPE06MA4	9.1	30.5	61	183	220	22.5	25	27.5	30	30	7.3	1970	-
2.4	166	30.5	1.1	18	IE5	BS04-../S5E06LA4	8.3	27.5	55	166	200	30.5	30.5	30.5	30.5	30.5	7.3	1950	-
2.4	166	30.5	1.1	18	IE3	BS04-../SPE06MA4	8.3	27.5	55	166	200	23	25.5	28	30.5	30.5	7.3	1950	-
2.4	143	38	0.97	20.96	IE5	BS04-../S5E06LA4	7.1	23.5	47.5	143	171	38	38	38	38	38	7.3	2100	-
2.4	143	38	0.97	20.96	IE3	BS04-../SPE06MA4	7.1	23.5	47.5	143	171	28.5	31.5	35	38	38	7.3	2100	-
2.4	114	44.5	0.85	26.21	IE5	BS04-../S5E06LA4	5.7	19	38	114	137	44.5	44.5	44.5	44.5	44.5	7.3	2250	-
2.4	114	44.5	0.85	26.21	IE3	BS04-../SPE06MA4	5.7	19	38	114	137	33	37	40.5	44.5	44.5	7.3	2250	-
2.4	210	27	2.5	14.07	IE5	BS06-../S5E06LA4	10.5	35.5	71	210	255	27	27	27	27	27	12	2200	-
2.4	210	27	2.5	14.07	IE3	BS06-../SPE06MA4	10.5	35.5	71										

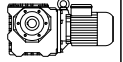
# BS-series worm-geared motors

## Selection - worm-geared motors - $n_1 = 3000 \frac{1}{min}$

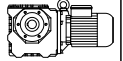
**$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**



M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
2.4	123	46.5	1.7	24.25	IE3	BS06-../SPE06MA4	6.1	20.5	41	123	148	34.5	38.5	42.5	46.5	46.5	12	2600	-
2.4	114	45.5	1.7	26.21	IE5	BS06-../S5E06LA4	5.7	19	38	114	137	45.5	45.5	45.5	45.5	45.5	12	3000	-
2.4	114	45.5	1.7	26.21	IE3	BS06-../SPE06MA4	5.7	19	38	114	137	34	38	42	45.5	45.5	12	3000	-
2.4	95	55	1.4	31.5	IE5	BS06-../S5E06LA4	4.7	15.5	31.5	95	114	55	55	55	55	55	12	3200	-
2.4	95	55	1.4	31.5	IE3	BS06-../SPE06MA4	4.7	15.5	31.5	95	114	41	45.5	50	55	55	12	3200	-
2.4	72	71	1.2	41.29	IE5	BS06-../S5E06LA4	3.6	12	24	72	87	71	71	71	71	71	12	3500	-
2.4	72	71	1.2	41.29	IE3	BS06-../SPE06MA4	3.6	12	24	72	87	53	59	65	71	71	12	3500	-
2.4	61	83	1	48.6	IE5	BS06-../S5E06LA4	3	10	20.5	61	74	83	83	83	83	83	12	3500	-
2.4	61	83	1	48.6	IE3	BS06-../SPE06MA4	3	10	20.5	61	74	62	69	76	83	83	12	3500	-
2.4	51	99	0.92	58.15	IE5	BS06-../S5E06LA4	2.5	8.5	17	51	61	99	99	99	99	99	12	3500	-
2.4	51	99	0.92	58.15	IE3	BS06-../SPE06MA4	2.5	8.5	17	51	61	74	82	90	99	99	12	3500	-
2.4	138	41	3	21.61	IE5	BS10-../S5E06LA4	6.9	23	46	138	166	41	41	41	41	41	23	3000	-
2.4	138	41	3	21.61	IE3	BS10-../SPE06MA4	6.9	23	46	138	166	31	34.5	38	41	41	23	3000	-
2.4	113	49	2.6	26.42	IE5	BS10-../S5E06LA4	5.6	18.5	37.5	113	136	49	49	49	49	49	23	3250	-
2.4	113	49	2.6	26.42	IE3	BS10-../SPE06MA4	5.6	18.5	37.5	113	136	37	41	45	49	49	23	3250	-
2.4	89	61	2.2	33.55	IE5	BS10-../S5E06LA4	4.4	14.5	29.5	89	107	61	61	61	61	61	23	3550	-
2.4	89	61	2.2	33.55	IE3	BS10-../SPE06MA4	4.4	14.5	29.5	89	107	45.5	50	56	61	61	23	3550	-
2.4	75	71	1.9	39.96	IE5	BS10-../S5E06LA4	3.7	12.5	25	75	90	71	71	71	71	71	23	3800	-
2.4	75	71	1.9	39.96	IE3	BS10-../SPE06MA4	3.7	12.5	25	75	90	53	59	65	71	71	23	3800	-
2.4	63	85	1.7	47.59	IE5	BS10-../S5E06LA4	3.1	10.5	21	63	75	85	85	85	85	85	23	4050	-
2.4	63	85	1.7	47.59	IE3	BS10-../SPE06MA4	3.1	10.5	21	63	75	64	71	78	85	85	23	4050	-
2.4	52	101	1.5	57.12	IE5	BS10-../S5E06LA4	2.6	8.7	17.5	52	63	101	101	101	101	101	23	4350	-
2.4	52	101	1.5	57.12	IE3	BS10-../SPE06MA4	2.6	8.7	17.5	52	63	76	84	92	101	101	23	4350	-
2.4	49	97	1.5	60.74	IE5	BS10-../S5E06LA4	2.4	8.2	16	49	59	97	97	97	97	97	23	4550	-
2.4	49	97	1.5	60.74	IE3	BS10-../SPE06MA4	2.4	8.2	16	49	59	73	81	89	97	97	23	4550	-
2.4	41.5	127	1.3	71.96	IE5	BS10-../S5E06LA4	2	6.9	13.5	41.5	50	127	127	127	127	127	23	5000	-
2.4	41.5	127	1.3	71.96	IE3	BS10-../SPE06MA4	2	6.9	13.5	41.5	50	95	106	117	127	127	23	5000	-
2.4	35.5	149	1	84.36	IE5	BS10-../S5E06LA4	1.7	5.9	11.5	35.5	42.5	149	149	149	149	149	23	5300	-
2.4	35.5	149	1	84.36	IE3	BS10-../SPE06MA4	1.7	5.9	11.5	35.5	42.5	112	124	137	149	149	23	5300	-
2.4	29	158	1	103.4	IE5	BS10-../S5E06LA4	1.4	4.8	9.6	29	34.5	158	158	158	158	158	23	5600	-
2.4	29	158	1	103.4	IE3	BS10-../SPE06MA4	1.4	4.8	9.6	29	34.5	119	132	145	158	158	23	5600	-
2.4	23	200	0.82	130.3	IE5	BS10-../S5E06LA4	1.1	3.8	7.6	23	27.5	200	200	200	200	200	23	6000	-
2.4	23	200	0.82	130.3	IE3	BS10-../SPE06MA4	1.1	3.8	7.6	23	27.5	150	166	183	200	200	23	6000	-
2.4	51	105	2.6	58.74	IE5	BS20-../S5E06LA4	2.5	8.5	17	51	61	105	105	105	105	105	34	5900	-
2.4	51	105	2.6	58.74	IE3	BS20-../SPE06MA4	2.5	8.5	17	51	61	79	88	96	105	105	34	5900	-
2.4	42.5	126	2.4	70.3	IE5	BS20-../S5E06LA4	2.1	7.1	14	42.5	51	126	126	126	126	126	34	6300	-
2.4	42.5	126	2.4	70.3	IE3	BS20-../SPE06MA4	2.1	7.1	14	42.5	51	94	105	115	126	126	34	6300	-
2.4	39	120	2.2	76.18	IE5	BS20-../S5E06LA4	1.9	6.5	13	39	47	120	120	120	120	120	34	6600	-
2.4	39	120	2.2	76.18	IE3	BS20-../SPE06MA4	1.9	6.5	13	39	47	90	100	110	120	120	34	6600	-
2.4	33.5	140	1.9	88.67	IE5	BS20-../S5E06LA4	1.6	5.6	11	33.5	40.5	140	140	140	140	140	34	7000	-
2.4	33.5	140	1.9	88.67	IE3	BS20-../SPE06MA4	1.6	5.6	11	33.5	40.5	105	117	128	140	140	34	7000	-
2.4	29.5	179	1.4	101.1	IE5	BS20-../S5E06LA4	1.4	4.9	9.8	29.5	35.5	179	179	179	179	179	34	7100	-
2.4	29.5	179	1.4	101.1	IE3	BS20-../SPE06MA4	1.4	4.9	9.8	29.5	35.5	134	149	164	179	179	34	7100	-
2.4	28	168	1.6	106.3	IE5	BS20-../S5E06LA4	1.4	4.7	9.4	28	33.5	168	168	168	168	168	34	7600	-
2.4	28	168	1.6	106.3	IE3	BS20-../SPE06MA4	1.4	4.7	9.4	28	33.5	126	140	154	168	168	34	7600	-
2.4	23.5	200	1.3	127.3	IE5	BS20-../S5E06LA4	1.1	3.9	7.8	23.5	28	200	200	200	200	200	34	8000	-
2.4	23.5	200	1.3	127.3	IE3	BS20-../SPE06MA4	1.1	3.9	7.8	23.5	28	151	168	184	200	200	34	8000	-
2.4	18.5	250	1.1	159.4	IE5	BS20-../S5E06LA4	0.9	3.1	6.2	18.5	22.5	250	250	250	250	250	34	8000	-
2.4	18.5	250	1.1	159.4	IE3	BS20-../SPE06MA4	0.9	3.1	6.2	18.5	22.5	189	210	230	250	250	34	8000	-
2.4	16	285	0.97	183	IE5	BS20-../S5E06LA4	0.8	2.7	5.4	16	19.5	285	285	285	285	285	34	8000	-
2.4	16	285	0.97	183	IE3	BS20-../SPE06MA4	0.8	2.7	5.4	16	19.5	215	240	265	285	285	34	8000	-
2.4	13	345	0.84	225.6	IE5	BS20-../S5E06LA4	0.65	2.2	4.4	13	15.5	345	345	345	345	345	34	8000	-
2.4	13	345	0.84	225.6	IE3	BS20-../SPE06MA4	0.65	2.2	4.4	13	15.5	255	285	315	345	345	34	8000	-
2.4	14.5	305	0.91	201.4	IE5	BS20Z-../S5E06LA4	0.7	2.4	4.9	14.5	17.5	305	305	305	305	305	35	8000	-
2.4	14.5	305	0.91	201.4	IE3	BS20Z-../SPE06MA4	0.7	2.4	4.9	14.5	17.5	230	255	280	305	305	35	8000	-
2.4	35.5	154	2.6	83.48	IE5	BS30-../S5E06LA4	1.7	5.9	11.5	35.5	43	154	154	154	154	154	51	6800	-
2.4	35.5	154	2.6	83.48	IE3	BS30-../SPE06MA4	1.7	5.9	11.5	35.5	43	115	128	141	154	154	51	6800	-
2.4	28	173	2.9	106.2	IE5	BS30-../S5E06LA4	1.4	4.7	9.4	28	33.5	173	173	173	173	173	51	8200	-
2.4	28	173	2.9	106.2	IE3	BS30-../SPE06MA4	1.4	4.7	9.4	28	33.5	129	144	158	173	173	51	8200	-
2.4	23.5	200	2.5	125.2	IE5	BS30-../S5E06LA4	1.1	3.9	7.9	23.5	28.5	200	200	200	200	200	51	8700	-
2.4	23.5	200	2.5	125.2	IE3	BS30-../SPE06MA4	1.1	3.9	7.9	23.5	28.5	153	170	187	200	200	51	8700	-
2.4	19.5	240	2.2	151.1	IE5	BS30-../S5E06LA4	0.95	3.3	6.6	19.5	23.5	240	240	240	240	240	51	9500	-
2.4	19.5	240	2.2	151.1	IE3	BS30-../SPE06MA4	0.95	3.3	6.6	19.5	23.5	182	200	220	240	240	51	9500	-
2.4	16	295	1.8	186.7	IE5	BS30-../S5E06LA4	0.8	2.6	5.3	16	19	295	295	295	295	295	51	10000	-
2.4	16	295	1.8	186.7	IE3	BS30-../SPE06MA4	0.8	2.6	5.3	16	19	220	245	270	295	295	51	10000	-
2.4	13.5	340	1.5	216.4	IE5	BS30-../S5E06LA4	0.65	2.3	4.6	13.5	16.5	340	340	340	340	340	51	10000	-
2.4	13.5	340	1.5	216.4	IE3	BS30-../SPE06MA4	0.65	2.3	4.6	13.5	16.5	255	285	310	340	340	51	10000	-
2.4	14	330	1.3	211.1	IE5	BS30Z-../S5E06LA4	0.7	2.3	4.7	14	17	330	330	330	330	330	54	10000	-
2.4	14	330	1.3	211.1	IE3	BS30Z-../SPE06MA4	0.7	2.3	4.7	14	17	250	275	305	3				

**BS-series worm-geared motors****Selection - worm-geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 2.4 \text{ Nm}$  ( $P_N = 0.75 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							2.4	12	375	2.4	249.6	IE3	BS40Z-../SPE06MA4	0.6	2	4			
2.4	10	510	1.4	287.7	IE5	BS40Z-../S5E06LA4	0.5	1.7	3.4	10	12.5	510	510	510	510	510	68	15000	-
2.4	10	510	1.4	287.7	IE3	BS40Z-../SPE06MA4	0.5	1.7	3.4	10	12.5	380	425	465	510	510	68	15000	-
2.4	9.9	455	2.3	302.1	IE5	BS40Z-../S5E06LA4	0.49	1.6	3.3	9.9	11.5	455	455	455	455	455	68	15000	-
2.4	9.9	455	2.3	302.1	IE3	BS40Z-../SPE06MA4	0.49	1.6	3.3	9.9	11.5	340	380	415	455	455	68	15000	-
2.4	8.4	530	2	356.8	IE5	BS40Z-../S5E06LA4	0.42	1.4	2.8	8.4	10	530	530	530	530	530	68	15000	-
2.4	8.4	530	2	356.8	IE3	BS40Z-../SPE06MA4	0.42	1.4	2.8	8.4	10	400	445	490	530	530	68	15000	-
2.4	6.7	670	1.5	446.8	IE5	BS40Z-../S5E06LA4	0.33	1.1	2.2	6.7	8	670	670	670	670	670	68	15000	-
2.4	6.7	670	1.5	446.8	IE3	BS40Z-../SPE06MA4	0.33	1.1	2.2	6.7	8	500	560	610	670	670	68	15000	-
2.4	5.7	780	1.4	520.8	IE5	BS40Z-../S5E06LA4	0.28	0.95	1.9	5.7	6.9	780	780	780	780	780	68	15000	-
2.4	5.7	780	1.4	520.8	IE3	BS40Z-../SPE06MA4	0.28	0.95	1.9	5.7	6.9	590	650	720	780	780	68	15000	-
2.4	4.9	890	1	612.1	IE5	BS40Z-../S5E06LA4	0.24	0.8	1.6	4.9	5.8	890	890	890	890	890	68	15000	-
2.4	4.9	890	1	612.1	IE3	BS40Z-../SPE06MA4	0.24	0.8	1.6	4.9	5.8	670	740	820	890	890	68	15000	-

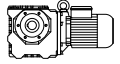
 **$M_N = 3.5 \text{ Nm}$  ( $P_N = 1.1 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							3.5	650	14.1	1.1	4.6	IE4	BS02-../S4E06LA4	32.5	108	215			
3.5	550	16.6	1.2	5.4	IE4	BS02-../S4E06LA4	27.5	92	185	550	660	11.8	13.7	16.6	16.6	16.6	6.8	1000	-
3.5	440	20	1.2	6.75	IE4	BS02-../S4E06LA4	22	74	148	440	530	14.5	16.8	20	20	20	6.8	1000	-
3.5	360	24	1	8.25	IE4	BS02-../S4E06LA4	18	60	121	360	435	17.3	20	24	24	24	6.8	1100	-
3.5	280	30.5	0.82	10.67	IE4	BS02-../S4E06LA4	14	46.5	93	280	335	21.5	25	30.5	30.5	30.5	6.8	1250	-
3.5	220	36.5	1.5	13.5	IE4	BS03-../S4E06LA4	11	37	74	220	265	26	30.5	36.5	36.5	36.5	6.9	1600	-
3.5	157	50	1.1	19	IE4	BS03-../S4E06LA4	7.8	26	52	157	189	36	41.5	50	50	50	6.9	1950	-
3.5	120	60	0.91	25	IE4	BS03-../S4E06LA4	6	20	40	120	144	43	50	60	60	60	6.9	1950	-
3.5	485	16.7	1.6	6.13	IE4	BS04-../S4E06LA4	24	81	163	485	580	11.9	13.8	16.7	16.7	16.7	7.3	1300	-
3.5	335	24	1.2	8.93	IE4	BS04-../S4E06LA4	16.5	55	111	335	400	17.4	20	24	24	24	7.3	1500	-
3.5	275	29	1.1	10.73	IE4	BS04-../S4E06LA4	13.5	46.5	93	275	335	20.5	24	29	29	29	7.3	1600	-
3.5	225	35	0.94	13.09	IE4	BS04-../S4E06LA4	11	38	76	225	275	25	29	35	35	35	7.3	1760	-
3.5	183	43.5	0.8	16.31	IE4	BS04-../S4E06LA4	9.1	30.5	61	183	220	31	36	43.5	43.5	43.5	7.3	1970	-
3.5	335	25	2.4	8.93	IE4	BS06-../S4E06LA4	16.5	55	111	335	400	18	20.5	25	25	25	12	1710	-
3.5	275	30	2.1	10.73	IE4	BS06-../S4E06LA4	13.5	46.5	93	275	335	21.5	25	30	30	30	12	1850	-
3.5	210	39.5	1.7	14.07	IE4	BS06-../S4E06LA4	10.5	35.5	71	210	255	28	33	39.5	39.5	39.5	12	2200	-
3.5	181	46	1.6	16.56	IE4	BS06-../S4E06LA4	9	30	60	181	215	33	38	46	46	46	12	2400	-
3.5	151	55	1.4	19.82	IE4	BS06-../S4E06LA4	7.5	25	50	151	181	39.5	45.5	55	55	55	12	2500	-
3.5	123	67	1.1	24.25	IE4	BS06-../S4E06LA4	6.1	20.5	41	123	148	48.5	56	67	67	67	12	2600	-
3.5	114	66	1.1	26.21	IE4	BS06-../S4E06LA4	5.7	19	38	114	137	47.5	55	66	66	66	12	3000	-
3.5	95	80	0.99	31.5	IE4	BS06-../S4E06LA4	4.7	15.5	31.5	95	114	57	66	80	80	80	12	3200	-
3.5	72	104	0.83	41.29	IE4	BS06-../S4E06LA4	3.6	12	24	72	87	74	86	104	104	104	12	3500	-
3.5	138	60	2.1	21.61	IE4	BS10-../S4E06LA4	6.9	23	46	138	166	43	50	60	60	60	23	3000	-
3.5	113	72	1.8	26.42	IE4	BS10-../S4E06LA4	5.6	18.5	37.5	113	136	51	59	72	72	72	23	3250	-
3.5	89	89	1.5	33.55	IE4	BS10-../S4E06LA4	4.4	14.5	29.5	89	107	63	73	89	89	89	23	3550	-
3.5	75	104	1.3	39.96	IE4	BS10-../S4E06LA4	3.7	12.5	25	75	90	74	86	104	104	104	23	3800	-
3.5	63	124	1.2	47.59	IE4	BS10-../S4E06LA4	3.1	10.5	21	63	75	89	103	124	124	124	23	4050	-
3.5	52	147	1	57.12	IE4	BS10-../S4E06LA4	2.6	8.7	17.5	52	63	105	122	147	147	147	23	4350	-
3.5	49	142	1.1	60.74	IE4	BS10-../S4E06LA4	2.4	8.2	16	49	59	101	118	142	142	142	23	4550	-
3.5	41.5	186	0.86	71.96	IE4	BS10-../S4E06LA4	2	6.9	13.5	41.5	50	133	154	186	186	186	23	5000	-
3.5	91	88	3	32.87	IE4	BS20-../S4E06LA4	4.5	15	30	91	109	63	73	88	88	88	34	4750	-
3.5	71	111	2.4	42.08	IE4	BS20-../S4E06LA4	3.5	11.5	23.5	71	85	79	92	111	111	111	34	5200	-
3.5	61	128	2.1	48.98	IE4	BS20-../S4E06LA4	3	10	20	61	73	91	106	128	128	128	34	5500	-
3.5	59	118	2.3	50.44	IE4	BS20-../S4E06LA4	2.9	9.9	19.5	59	71	84	98	118	118	118	34	5700	-
3.5	51	154	1.8	58.74	IE4	BS20-../S4E06LA4	2.5	8.5	17	51	61	110	127	154	154	154	34	5900	-
3.5	42.5	184	1.6	70.3	IE4	BS20-../S4E06LA4	2.1	7.1	14	42.5	51	131	152	184	184	184	34	6300	-
3.5	39	175	1.5	76.18	IE4	BS20-../S4E06LA4	1.9	6.5	13	39	47	125	145	175	175	175	34	6600	-
3.5	33.5	200	1.3	88.67	IE4	BS20-../S4E06LA4	1.6	5.6	11	33.5	40.5	146	169	200	200	200	34	7000	-
3.5	29.5	260	0.95	101.1	IE4	BS20-../S4E06LA4	1.4	4.9	9.8	29.5	35.5	187	215	260	260	260	34	7100	-
3.5	28	245	1.1	106.3	IE4	BS20-../S4E06LA4	1.4	4.7	9.4	28	33.5	175	200	245	245	245	34	7600	-
3.5	23.5	290	0.92	127.3	IE4	BS20-../S4E06LA4	1.1	3.9	7.8	23.5	28	210	240	290	290	290	34	8000	-
3.5	51	158	2.9	58.64	IE4	BS30-../S4E06LA4	2.5	8.5	17	51	61	112	130	158	158	158	51	6900	-
3.5	42	174	2.8	71.17	IE4	BS30-../S4E06LA4	2.1	7	14	42	50	124	144	174	174	174	51	7000	-
3.5	35.5	220	1.8	83.48	IE4	BS30-../S4E06LA4	1.7	5.9	11.5	35.5	43	160	186	220	220	220	51	6800	-
3.5	33	215	2.2	90.59	IE4	BS30-../S4E06LA4	1.6	5.5	11	33	39.5	156	181	215	215	215	51	7700	-

# BS-series worm-geared motors

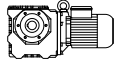
## Selection - worm-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 3.5 \text{ Nm}$ ( $P_N = 1.1 \text{ kW}$ )



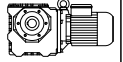
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
3.5	10	740	0.95	287.7	IE4	BS40Z-../S4E06LA4	0.5	1.7	3.4	10	12.5	530	610	740	740	740	68	15000	-
3.5	9.9	660	1.6	302.1	IE4	BS40Z-../S4E06LA4	0.49	1.6	3.3	9.9	11.5	475	550	660	660	660	68	15000	-
3.5	8.4	780	1.4	356.8	IE4	BS40Z-../S4E06LA4	0.42	1.4	2.8	8.4	10	560	650	780	780	780	68	15000	-
3.5	6.7	980	1	446.8	IE4	BS40Z-../S4E06LA4	0.33	1.1	2.2	6.7	8	700	810	980	980	980	68	15000	-
3.5	5.7	1140	0.96	520.8	IE4	BS40Z-../S4E06LA4	0.28	0.95	1.9	5.7	6.9	820	950	1140	1140	1140	68	15000	-

### $M_N = 5 \text{ Nm}$ ( $P_N = 1.55 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
5	650	20	2	4.6	IE5	BS03-../S5E08MA4	32.5	108	215	650	780	20	20	20	20	20	10	1070	-
5	500	26	1.7	6	IE5	BS03-../S5E08MA4	25	83	166	500	600	26	26	26	26	26	10	1170	-
5	375	34	1.4	8	IE5	BS03-../S5E08MA4	18.5	62	125	375	450	34	34	34	34	34	10	1320	-
5	300	42	1.2	10	IE5	BS03-../S5E08MA4	15	50	100	300	360	42	42	42	42	42	10	1450	-
5	220	52	1	13.5	IE5	BS03-../S5E08MA4	11	37	74	220	265	52	52	52	52	52	10	1600	-
5	445	27	2.1	6.67	IE5	BS06-../S5E08MA4	22	74	149	445	530	27	27	27	27	27	16	1550	-
5	335	36	1.7	8.93	IE5	BS06-../S5E08MA4	16.5	55	111	335	400	36	36	36	36	36	16	1710	-
5	275	43	1.5	10.73	IE5	BS06-../S5E08MA4	13.5	46.5	93	275	335	43	43	43	43	43	16	1850	-
5	210	56	1.2	14.07	IE5	BS06-../S5E08MA4	10.5	35.5	71	210	255	56	56	56	56	56	16	2200	-
5	181	66	1.1	16.56	IE5	BS06-../S5E08MA4	9	30	60	181	215	66	66	66	66	66	16	2400	-
5	153	71	0.98	19.58	IE5	BS06-../S5E08MA4	7.6	25.5	51	153	183	71	71	71	71	71	16	2700	-
5	151	79	0.95	19.82	IE5	BS06-../S5E08MA4	7.5	25	50	151	181	79	79	79	79	79	16	2500	-
5	114	95	0.8	26.21	IE5	BS06-../S5E08MA4	5.7	19	38	114	137	95	95	95	95	95	16	3000	-
5	240	49.5	2.2	12.49	IE5	BS10-../S5E08MA4	12	40	80	240	285	49.5	49.5	49.5	49.5	49.5	27	2400	-
5	177	67	1.8	16.92	IE5	BS10-../S5E08MA4	8.8	29.5	59	177	210	67	67	67	67	67	27	2700	-
5	138	86	1.4	21.61	IE5	BS10-../S5E08MA4	6.9	23	46	138	166	86	86	86	86	86	27	3000	-
5	132	77	1.5	22.6	IE5	BS10-../S5E08MA4	6.6	22	44	132	159	77	77	77	77	77	27	3200	-
5	113	103	1.3	26.42	IE5	BS10-../S5E08MA4	5.6	18.5	37.5	113	136	103	103	103	103	103	27	3250	-
5	97	105	1.2	30.63	IE5	BS10-../S5E08MA4	4.8	16	32.5	97	117	105	105	105	105	105	27	3550	-
5	89	127	1.1	33.55	IE5	BS10-../S5E08MA4	4.4	14.5	29.5	89	107	127	127	127	127	127	27	3550	-
5	75	149	0.93	39.96	IE5	BS10-../S5E08MA4	3.7	12.5	25	75	90	149	149	149	149	149	27	3800	-
5	63	178	0.81	47.59	IE5	BS10-../S5E08MA4	3.1	10.5	21	63	75	178	178	178	178	178	27	4050	-
5	134	90	2.6	22.23	IE5	BS20-../S5E08MA4	6.7	22	44.5	134	161	90	90	90	90	90	37	4100	-
5	129	83	2.7	23.13	IE5	BS20-../S5E08MA4	6.4	21.5	43	129	155	83	83	83	83	83	37	4300	-
5	107	108	2.3	27.86	IE5	BS20-../S5E08MA4	5.3	17.5	35.5	107	129	108	108	108	108	108	37	4450	-
5	97	110	2.3	30.63	IE5	BS20-../S5E08MA4	4.8	16	32.5	97	117	110	110	110	110	110	37	4750	-
5	91	126	2.1	32.87	IE5	BS20-../S5E08MA4	4.5	15	30	91	109	126	126	126	126	126	37	4750	-
5	74	144	1.8	40.25	IE5	BS20-../S5E08MA4	3.7	12	24.5	74	89	144	144	144	144	144	37	5300	-
5	71	159	1.7	42.08	IE5	BS20-../S5E08MA4	3.5	11.5	23.5	71	85	159	159	159	159	159	37	5200	-
5	61	183	1.5	48.98	IE5	BS20-../S5E08MA4	3	10	20	61	73	183	183	183	183	183	37	5500	-
5	59	168	1.6	50.44	IE5	BS20-../S5E08MA4	2.9	9.9	19.5	59	71	168	168	168	168	168	37	5700	-
5	51	220	1.3	58.74	IE5	BS20-../S5E08MA4	2.5	8.5	17	51	61	220	220	220	220	220	37	5900	-
5	42.5	260	1.1	70.3	IE5	BS20-../S5E08MA4	2.1	7.1	14	42.5	51	260	260	260	260	260	37	6300	-
5	39	250	1.1	76.18	IE5	BS20-../S5E08MA4	1.9	6.5	13	39	47	250	250	250	250	250	37	6600	-
5	33.5	290	0.92	88.67	IE5	BS20-../S5E08MA4	1.6	5.6	11	33.5	40.5	290	290	290	290	290	37	7000	-
5	79	142	3	37.92	IE5	BS30-../S5E08MA4	3.9	13	26	79	94	142	142	142	142	142	55	5500	-
5	76	159	2.7	39.31	IE5	BS30-../S5E08MA4	3.8	12.5	25	76	91	159	159	159	159	159	55	5500	-
5	59	192	2.3	50.04	IE5	BS30-../S5E08MA4	2.9	9.9	19.5	59	71	192	192	192	192	192	55	5900	-
5	51	225	2	58.64	IE5	BS30-../S5E08MA4	2.5	8.5	17	51	61	225	225	225	225	225	55	6900	-
5	42	245	1.9	71.17	IE5	BS30-../S5E08MA4	2.1	7	14	42	50	245	245	245	245	245	55	7000	-
5	35.5	320	1.3	83.48	IE5	BS30-../S5E08MA4	1.7	5.9	11.5	35.5	43	320	320	320	320	320	55	6800	-
5	33	310	1.6	90.59	IE5	BS30-../S5E08MA4	1.6	5.5	11	33	39.5	310	310	310	310	310	55	7700	-
5	28	360	1.4	106.2	IE5	BS30-../S5E08MA4	1.4	4.7	9.4	28	33.5	360	360	360	360	360	55	8200	-
5	23.5	425	1.2	125.2	IE5	BS30-../S5E08MA4	1.1	3.9	7.9	23.5	28.5	425	425	425	425	425	55	8700	-
5	19.5	500	1.1	151.1	IE5	BS30-../S5E08MA4	0.95	3.3	6.6	19.5	23.5	500	500	500	500	500	55	9500	-
5	16	610	0.88	186.7	IE5	BS30-../S5E08MA4	0.8	2.6	5.3	16	19	610	610	610	610	610	55	10000	-
5	43	265	2.8	69.6	IE5	BS40-../S5E08MA4	2.1	7.1	14	43	51	265	265	265	265	265	68	11800	-
5	34.5	295	3	86.33	IE5	BS40-../S5E08MA4	1.7	5.7	11.5	34.5	41.5	295	295	295	295	295	68	12900	-
5	27.5	360	2.6	108.1	IE5	BS40-../S5E08MA4	1.3	4.6	9.2	27.5	33	360	360	360	360	360	68	14000	-
5	23.5	420	2.3	126	IE5	BS40-../S5E08MA4	1.1	3.9	7.9	23.5	28.5	420	420	420	420	420	68	14900	-
5	20	480	2	148.1	IE5	BS40-../S5E08MA4	1	3.3	6.7	20	24	480	480	480	480	480	68	15000	-
5	16.5	570	1.4	178.2	IE5	BS40-../S5E08MA4	0.8	2.8	5.6	16.5	20	570	570	570	570	570	68	15000	-
5	13.5	690	1.1	219.7	IE5	BS40-../S5E08MA4	0.65	2.2	4.5	13.5	16	690	690	690	690	690	68	15000	-
5	15	720	0.96	197.															



Selection - worm-geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$ **M<sub>N</sub> = 7 Nm (P<sub>N</sub> = 2.2 kW)**

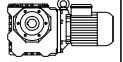
M <sub>N</sub>	n <sub>2</sub>	M <sub>2</sub>	f <sub>B</sub>	i	IE- Classe	Type	Speed range n <sub>2</sub> [1/min]					Torque range M <sub>2</sub> [Nm]					m	F <sub>RN</sub>	F <sub>RV</sub>
							at engine speed n <sub>1</sub> [1/min]					at engine speed n <sub>1</sub> [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
7	650	28	1.4	4.6	IE4	BS03-../S4E08MA4	32.5	108	215	650	780	20	23.5	28	28	28	10	1070	-
7	650	28	1.4	4.6	IE5	BS03-../S5E08LA4	32.5	108	215	650	780	26	28	28	28	28	12	1070	-
7	500	36.5	1.2	6	IE4	BS03-../S4E08MA4	25	83	166	500	600	26	31	36.5	36.5	36.5	10	1170	-
7	500	36.5	1.2	6	IE5	BS03-../S5E08LA4	25	83	166	500	600	34	36.5	36.5	36.5	36.5	12	1170	-
7	375	48	1	8	IE4	BS03-../S4E08MA4	18.5	62	125	375	450	34	40.5	48	48	48	10	1320	-
7	375	48	1	8	IE5	BS03-../S5E08LA4	18.5	62	125	375	450	44.5	48	48	48	48	12	1320	-
7	300	58	0.88	10	IE4	BS03-../S4E08MA4	15	50	100	300	360	42	49.5	58	58	58	10	1450	-
7	300	58	0.88	10	IE5	BS03-../S5E08LA4	15	50	100	300	360	54	58	58	58	58	12	1450	-
7	445	37.5	1.5	6.67	IE4	BS06-../S4E08MA4	22	74	149	445	530	27	31.5	37.5	37.5	37.5	16	1550	-
7	445	37.5	1.5	6.67	IE5	BS06-../S5E08LA4	22	74	149	445	530	35	37.5	37.5	37.5	37.5	17	1550	-
7	335	50	1.2	8.93	IE4	BS06-../S4E08MA4	16.5	55	111	335	400	36	42.5	50	50	50	16	1710	-
7	335	50	1.2	8.93	IE5	BS06-../S5E08LA4	16.5	55	111	335	400	47	50	50	50	50	17	1710	-
7	275	60	1.1	10.73	IE4	BS06-../S4E08MA4	13.5	46.5	93	275	335	43	51	60	60	60	16	1850	-
7	275	60	1.1	10.73	IE5	BS06-../S5E08LA4	13.5	46.5	93	275	335	56	60	60	60	60	17	1850	-
7	210	79	0.85	14.07	IE4	BS06-../S4E08MA4	10.5	35.5	71	210	255	56	67	79	79	79	16	2200	-
7	210	79	0.85	14.07	IE5	BS06-../S5E08LA4	10.5	35.5	71	210	255	74	79	79	79	79	17	2200	-
7	240	69	1.5	12.49	IE4	BS10-../S4E08MA4	12	40	80	240	285	49.5	58	69	69	69	27	2400	-
7	240	69	1.5	12.49	IE5	BS10-../S5E08LA4	12	40	80	240	285	64	69	69	69	69	28	2400	-
7	177	94	1.3	16.92	IE4	BS10-../S4E08MA4	8.8	29.5	59	177	210	67	79	94	94	94	27	2700	-
7	177	94	1.3	16.92	IE5	BS10-../S5E08LA4	8.8	29.5	59	177	210	87	94	94	94	94	28	2700	-
7	138	121	1	21.61	IE4	BS10-../S4E08MA4	6.9	23	46	138	166	86	101	121	121	121	27	3000	-
7	138	121	1	21.61	IE5	BS10-../S5E08LA4	6.9	23	46	138	166	112	121	121	121	121	28	3000	-
7	132	109	1.1	22.6	IE4	BS10-../S4E08MA4	6.6	22	44	132	159	77	92	109	109	109	27	3200	-
7	132	109	1.1	22.6	IE5	BS10-../S5E08LA4	6.6	22	44	132	159	101	109	109	109	109	28	3200	-
7	113	144	0.9	26.42	IE4	BS10-../S4E08MA4	5.6	18.5	37.5	113	136	103	121	144	144	144	27	3250	-
7	113	144	0.9	26.42	IE5	BS10-../S5E08LA4	5.6	18.5	37.5	113	136	133	144	144	144	144	28	3250	-
7	97	147	0.88	30.63	IE4	BS10-../S4E08MA4	4.8	16	32.5	97	117	105	124	147	147	147	27	3550	-
7	97	147	0.88	30.63	IE5	BS10-../S5E08LA4	4.8	16	32.5	97	117	137	147	147	147	147	28	3550	-
7	230	72	2.8	12.77	IE4	BS20-../S4E08MA4	11.5	39	78	230	280	51	61	72	72	72	37	3350	-
7	230	72	2.8	12.77	IE5	BS20-../S5E08LA4	11.5	39	78	230	280	67	72	72	72	72	39	3350	-
7	177	95	2.3	16.92	IE4	BS20-../S4E08MA4	8.8	29.5	59	177	210	68	80	95	95	95	37	3700	-
7	177	95	2.3	16.92	IE5	BS20-../S5E08LA4	8.8	29.5	59	177	210	89	95	95	95	95	39	3700	-
7	134	126	1.8	22.23	IE4	BS20-../S4E08MA4	6.7	22	44.5	134	161	90	106	126	126	126	37	4100	-
7	134	126	1.8	22.23	IE5	BS20-../S5E08LA4	6.7	22	44.5	134	161	117	126	126	126	126	39	4100	-
7	129	116	2	23.13	IE4	BS20-../S4E08MA4	6.4	21.5	43	129	155	83	98	116	116	116	37	4300	-
7	129	116	2	23.13	IE5	BS20-../S5E08LA4	6.4	21.5	43	129	155	108	116	116	116	116	39	4300	-
7	107	152	1.6	27.86	IE4	BS20-../S4E08MA4	5.3	17.5	35.5	107	129	108	128	152	152	152	37	4450	-
7	107	152	1.6	27.86	IE5	BS20-../S5E08LA4	5.3	17.5	35.5	107	129	141	152	152	152	152	39	4450	-
7	97	154	1.6	30.63	IE4	BS20-../S4E08MA4	4.8	16	32.5	97	117	110	130	154	154	154	37	4750	-
7	97	154	1.6	30.63	IE5	BS20-../S5E08LA4	4.8	16	32.5	97	117	143	154	154	154	154	39	4750	-
7	91	177	1.5	32.87	IE4	BS20-../S4E08MA4	4.5	15	30	91	109	126	149	177	177	177	37	4750	-
7	91	177	1.5	32.87	IE5	BS20-../S5E08LA4	4.5	15	30	91	109	164	177	177	177	177	39	4750	-
7	74	200	1.3	40.25	IE4	BS20-../S4E08MA4	3.7	12	24.5	74	89	144	170	200	200	200	37	5300	-
7	74	200	1.3	40.25	IE5	BS20-../S5E08LA4	3.7	12	24.5	74	89	188	200	200	200	200	39	5300	-
7	71	220	1.2	42.08	IE4	BS20-../S4E08MA4	3.5	11.5	23.5	71	85	159	188	220	220	220	37	5200	-
7	71	220	1.2	42.08	IE5	BS20-../S5E08LA4	3.5	11.5	23.5	71	85	205	220	220	220	220	39	5200	-
7	61	255	1	48.98	IE4	BS20-../S4E08MA4	3	10	20	61	73	183	215	255	255	255	37	5500	-
7	61	255	1	48.98	IE5	BS20-../S5E08LA4	3	10	20	61	73	235	255	255	255	255	39	5500	-
7	59	235	1.1	50.44	IE4	BS20-../S4E08MA4	2.9	9.9	19.5	59	71	168	199	235	235	235	37	5700	-
7	59	235	1.1	50.44	IE5	BS20-../S5E08LA4	2.9	9.9	19.5	59	71	215	235	235	235	235	39	5700	-
7	51	305	0.91	58.74	IE4	BS20-../S4E08MA4	2.5	8.5	17	51	61	220	255	305	305	305	37	5900	-
7	51	305	0.91	58.74	IE5	BS20-../S5E08LA4	2.5	8.5	17	51	61	285	305	305	305	305	39	5900	-
7	42.5	365	0.81	70.3	IE4	BS20-../S4E08MA4	2.1	7.1	14	42.5	51	260	310	365	365	365	37	6300	-
7	42.5	365	0.81	70.3	IE5	BS20-../S5E08LA4	2.1	7.1	14	42.5	51	340	365	365	365	365	39	6300	-
7	124	126	2.9	24.06	IE4	BS30-../S4E08MA4	6.2	20.5	41.5	124	149	90	106	126	126	126	55	4600	-
7	124	126	2.9	24.06	IE5	BS30-../S5E08LA4	6.2	20.5	41.5	124	149	117	126	126	126	126	56	4600	-
7	110	157	2.5	27.07	IE4	BS30-../S4E08MA4	5.5	18	36.5	110	132	112	132	157	157	157	55	4750	-
7	110	157	2.5	27.07	IE5	BS30-../S5E08LA4	5.5	18	36.5	110	132	146	157	157	157	157	56	4750	-
7	97	160	2.5	30.63	IE4	BS30-../S4E08MA4	4.8	16	32.5	97	117	114	135	160	160	160	55	5000	-
7	97	160	2.5	30.63	IE5	BS30-../S5E08LA4	4.8	16	32.5	97	117	149	160	160	160	160	56	5000	-
7	89	192	2.2	33.55	IE4	BS30-../S4E08MA4	4.4	14.5	29.5	89	107	137	162	192	192	192	55	5200	-
7	89	192	2.2	33.55	IE5	BS30-../S5E08LA4	4.4	14.5	29.5	89	107	178	192	192	192	192	56	5200	-
7	79	199	2.1	37.92	IE4	BS30-../S4E08MA4	3.9	13	26	79	94	142	167	199	199	199	55	5500	-
7	79	199	2.1	37.92	IE5	BS30-../S5E08LA4	3.9	13	26	79	94	184	199	199	199	199	56	5500	-
7	76	220	1.9	39.31	IE4	BS30-../S4E08MA4	3.8	12.5	25	76	91	159	187	220	220	220	55	5500	-
7	76	220	1.9	39.31	IE5	BS30-../S5E08LA4	3.8	12.5	25	76	91	205	220	220	220	220	56	5500	-
7	59	265	1.7	50.04	IE4	BS30-../S4E08MA4	2.9	9.9	19.5	59	71	192	225	265	265	265	55	5900	-
7	59	265	1.7	50.04	IE5	BS30-../S5E08LA4	2.9	9.9	19.5	59	71	250	265	265	265	265	56	5900	-
7	51	315	1.5	58.64	IE4	BS30-../S4E08MA4	2.5	8.5	17	51	61	225	265	315	315	315	55	6900	-
7	51	315	1.5	58.64	IE5	BS30-../S5E08LA4	2.5	8.5	17	51	61	290	315	315	315	315	56	6900	-
7	42	345	1.4	71.17															



# BS-series worm-geared motors

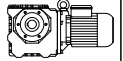
## Selection - worm-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 7 \text{ Nm}$ ( $P_N = 2.2 \text{ kW}$ )

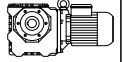


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							7	49.5	300	2.9	60.38	IE4	BS40-../S4E08MA4	2.4	8.2	16.5			
7	49.5	300	2.9	60.38	IE5	BS40-../S5E08LA4	2.4	8.2	16.5	49.5	59	275	300	300	300	300	69	11200	-
7	43	375	2	69.6	IE4	BS40-../S4E08MA4	2.1	7.1	14	43	51	265	315	375	375	375	68	11800	-
7	43	375	2	69.6	IE5	BS40-../S5E08LA4	2.1	7.1	14	43	51	345	375	375	375	375	69	11800	-
7	41	355	2.5	73.09	IE4	BS40-../S4E08MA4	2	6.8	13.5	41	49	255	300	355	355	355	68	12100	-
7	41	355	2.5	73.09	IE5	BS40-../S5E08LA4	2	6.8	13.5	41	49	330	355	355	355	355	69	12100	-
7	34.5	415	2.2	86.33	IE4	BS40-../S4E08MA4	1.7	5.7	11.5	34.5	41.5	295	350	415	415	415	68	12900	-
7	34.5	415	2.2	86.33	IE5	BS40-../S5E08LA4	1.7	5.7	11.5	34.5	41.5	385	415	415	415	415	69	12900	-
7	27.5	500	1.9	108.1	IE4	BS40-../S4E08MA4	1.3	4.6	9.2	27.5	33	360	425	500	500	500	68	14000	-
7	27.5	500	1.9	108.1	IE5	BS40-../S5E08LA4	1.3	4.6	9.2	27.5	33	470	500	500	500	500	69	14000	-
7	23.5	590	1.7	126	IE4	BS40-../S4E08MA4	1.1	3.9	7.9	23.5	28.5	420	495	590	590	590	68	14900	-
7	23.5	590	1.7	126	IE5	BS40-../S5E08LA4	1.1	3.9	7.9	23.5	28.5	540	590	590	590	590	69	14900	-
7	20	670	1.4	148.1	IE4	BS40-../S4E08MA4	1	3.3	6.7	20	24	480	560	670	670	670	68	15000	-
7	20	670	1.4	148.1	IE5	BS40-../S5E08LA4	1	3.3	6.7	20	24	620	670	670	670	670	69	15000	-
7	16.5	810	1	178.2	IE4	BS40-../S4E08MA4	0.8	2.8	5.6	16.5	20	570	680	810	810	810	68	15000	-
7	16.5	810	1	178.2	IE5	BS40-../S5E08LA4	0.8	2.8	5.6	16.5	20	750	810	810	810	810	69	15000	-
7	13.5	960	0.82	219.7	IE4	BS40-../S4E08MA4	0.65	2.2	4.5	13.5	16	690	810	960	960	960	68	15000	-
7	13.5	960	0.82	219.7	IE5	BS40-../S5E08LA4	0.65	2.2	4.5	13.5	16	890	960	960	960	960	69	15000	-
7	12	1100	0.82	249.6	IE4	BS40Z-../S4E08MA4	0.6	2	4	12	14	780	920	1100	1100	1100	71	15000	-
7	12	1100	0.82	249.6	IE5	BS40Z-../S5E08LA4	0.6	2	4	12	14	1020	1100	1100	1100	1100	73	15000	-
7	9.9	1330	0.8	302.1	IE4	BS40Z-../S4E08MA4	0.49	1.6	3.3	9.9	11.5	950	1120	1330	1330	1330	71	15000	-
7	9.9	1330	0.8	302.1	IE5	BS40Z-../S5E08LA4	0.49	1.6	3.3	9.9	11.5	1230	1330	1330	1330	1330	73	15000	-

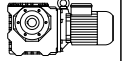
### $M_N = 10 \text{ Nm}$ ( $P_N = 3.1 \text{ kW}$ )



$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							10	650	40	0.99	4.6	IE3	BS03-../SPE08LA4	32.5	108	215			
10	500	52	0.83	6	IE3	BS03-../SPE08LA4	25	83	166	500	600	34	42	52	52	52	12	1170	-
10	445	54	1	6.67	IE3	BS06-../SPE08LA4	22	74	149	445	530	35	43	54	54	54	17	1550	-
10	335	72	0.86	8.93	IE3	BS06-../SPE08LA4	16.5	55	111	335	400	47	57	72	72	72	17	1710	-
10	240	99	1.1	12.49	IE3	BS10-../SPE08LA4	12	40	80	240	285	64	79	99	99	99	28	2400	-
10	177	135	0.89	16.92	IE3	BS10-../SPE08LA4	8.8	29.5	59	177	210	87	108	135	135	135	28	2700	-
10	230	103	1.9	12.77	IE3	BS20-../SPE08LA4	11.5	39	78	230	280	67	82	103	103	103	39	3350	-
10	177	137	1.6	16.92	IE3	BS20-../SPE08LA4	8.8	29.5	59	177	210	89	109	137	137	137	39	3700	-
10	134	180	1.3	22.23	IE3	BS20-../SPE08LA4	6.7	22	44.5	134	161	117	144	180	180	180	39	4100	-
10	129	166	1.4	23.13	IE3	BS20-../SPE08LA4	6.4	21.5	43	129	155	108	133	166	166	166	39	4300	-
10	107	215	1.2	27.86	IE3	BS20-../SPE08LA4	5.3	17.5	35.5	107	129	141	173	215	215	215	39	4450	-
10	97	220	1.1	30.63	IE3	BS20-../SPE08LA4	4.8	16	32.5	97	117	143	176	220	220	220	39	4750	-
10	91	250	1.1	32.87	IE3	BS20-../SPE08LA4	4.5	15	30	91	109	164	200	250	250	250	39	4750	-
10	74	285	0.9	40.25	IE3	BS20-../SPE08LA4	3.7	12	24.5	74	89	188	230	285	285	285	39	5300	-
10	71	315	0.84	42.08	IE3	BS20-../SPE08LA4	3.5	11.5	23.5	71	85	205	255	315	315	315	39	5200	-
10	59	335	0.8	50.44	IE3	BS20-../SPE08LA4	2.9	9.9	19.5	59	71	215	270	335	335	335	39	5700	-
10	225	110	3	13.29	IE3	BS30-../SPE08LA4	11	37.5	75	225	270	71	88	110	110	110	56	3600	-
10	177	140	2.6	16.92	IE3	BS30-../SPE08LA4	8.8	29.5	59	177	210	91	112	140	140	140	56	3950	-
10	143	173	2.2	20.94	IE3	BS30-../SPE08LA4	7.1	23.5	47.5	143	171	112	139	173	173	173	56	4300	-
10	124	180	2	24.06	IE3	BS30-../SPE08LA4	6.2	20.5	41.5	124	149	117	144	180	180	180	56	4600	-
10	110	220	1.8	27.07	IE3	BS30-../SPE08LA4	5.5	18	36.5	110	132	146	179	220	220	220	56	4750	-
10	97	225	1.7	30.63	IE3	BS30-../SPE08LA4	4.8	16	32.5	97	117	149	183	225	225	225	56	5000	-
10	89	275	1.5	33.55	IE3	BS30-../SPE08LA4	4.4	14.5	29.5	89	107	178	220	275	275	275	56	5200	-
10	79	280	1.5	37.92	IE3	BS30-../SPE08LA4	3.9	13	26	79	94	184	225	280	280	280	56	5500	-
10	76	315	1.4	39.31	IE3	BS30-../SPE08LA4	3.8	12.5	25	76	91	205	250	315	315	315	56	5500	-
10	59	385	1.2	50.04	IE3	BS30-../SPE08LA4	2.9	9.9	19.5	59	71	250	305	385	385	385	56	5900	-
10	51	450	1	58.64	IE3	BS30-../SPE08LA4	2.5	8.5	17	51	61	290	360	450	450	450	56	6900	-
10	42	495	0.96	71.17	IE3	BS30-../SPE08LA4	2.1	7	14	42	50	320	395	495	495	495	56	7000	-
10	89	265	2.9	33.35	IE3	BS40-../SPE08LA4	4.4	14.5	29.5	89	107	173	210	265	265	265	69	8300	-
10	78	275	2.8	38.13	IE3	BS40-../SPE08LA4	3.9	13	26	78	94	180	220	275	275	275	69	9400	-
10	74	315	2.5	40.37	IE3	BS40-../SPE08LA4	3.7	12	24.5	74	89	205	255	315	315	315	69	9000	-
10	62	370	2.2	47.69	IE3	BS40-../SPE08LA4	3.1	10	20.5	62	75	240	295	370	370	370	69	9600	-
10	49.5	425	2	60.38	IE3	BS40-../SPE08LA4	2.4	8.2	16.5	49.5	59	275	340	425	425	425	69	11200	-
10	43	530	1.4	69.6	IE3	BS40-../SPE08LA4	2.1	7.1	14	43	51	345	425	530	530	530	69	11800	-
10	41	510	1.7	73.09	IE3	BS40-../SPE08LA4	2	6.8	13.5	41	49	330	405	510	510	510	69	12100	-
10	34.5	590	1.5	86.33	IE3	BS40-../SPE08LA4	1.7	5.7	11.5	34.5	41.5	385	475	590	590	590	69	12900	-
10	27.5	720	1.3	108.1	IE3	BS40-../SPE08LA4	1.3	4.6	9.2	27.5	33	470	570	720	720	720	69	14000	-
10	23.5	840	1.2	126	IE3	BS40-../SPE08LA4	1.1	3.9	7.9	23.5	28.5	540	670	840	840	840	69	14900	-
10	20	960	1	148.1	IE3	BS40-../SPE08LA4	1	3.3	6.7	20	24	620	770	960	960	960	69	15000	-

**BS-series worm-geared motors****Selection - worm-geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 13 \text{ Nm}$  ( $P_N = 4 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
13	240	129	0.83	12.49	IE4	BS10-../S4E09SA4	12	40	80	240	285	84	99	129	129	129	32	2400	-
13	230	134	1.5	12.77	IE4	BS20-../S4E09SA4	11.5	39	78	230	280	87	103	134	134	42	3350	-	
13	177	178	1.2	16.92	IE4	BS20-../S4E09SA4	8.8	29.5	59	177	210	116	137	178	178	42	3700	-	
13	134	230	0.98	22.23	IE4	BS20-../S4E09SA4	6.7	22	44.5	134	161	153	180	230	230	42	4100	-	
13	129	215	1.1	23.13	IE4	BS20-../S4E09SA4	6.4	21.5	43	129	155	141	166	215	215	42	4300	-	
13	107	280	0.88	27.86	IE4	BS20-../S4E09SA4	5.3	17.5	35.5	107	129	184	215	280	280	42	4450	-	
13	97	285	0.87	30.63	IE4	BS20-../S4E09SA4	4.8	16	32.5	97	117	187	220	285	285	42	4750	-	
13	91	325	0.82	32.87	IE4	BS20-../S4E09SA4	4.5	15	30	91	109	215	250	325	325	42	4750	-	
13	225	143	2.3	13.29	IE4	BS30-../S4E09SA4	11	37.5	75	225	270	93	110	143	143	60	3600	-	
13	177	182	2	16.92	IE4	BS30-../S4E09SA4	8.8	29.5	59	177	210	119	140	182	182	60	3950	-	
13	143	225	1.7	20.94	IE4	BS30-../S4E09SA4	7.1	23.5	47.5	143	171	147	173	225	225	60	4300	-	
13	124	230	1.6	24.06	IE4	BS30-../S4E09SA4	6.2	20.5	41.5	124	149	153	180	230	230	60	4600	-	
13	110	290	1.4	27.07	IE4	BS30-../S4E09SA4	5.5	18	36.5	110	132	190	220	290	290	60	4750	-	
13	97	295	1.3	30.63	IE4	BS30-../S4E09SA4	4.8	16	32.5	97	117	195	225	295	295	60	5000	-	
13	89	355	1.2	33.55	IE4	BS30-../S4E09SA4	4.4	14.5	29.5	89	107	230	275	355	355	60	5200	-	
13	79	365	1.1	37.92	IE4	BS30-../S4E09SA4	3.9	13	26	79	94	240	280	365	365	60	5500	-	
13	76	410	1	39.31	IE4	BS30-../S4E09SA4	3.8	12.5	25	76	91	270	315	410	410	60	5500	-	
13	59	500	0.9	50.04	IE4	BS30-../S4E09SA4	2.9	9.9	19.5	59	71	325	385	500	500	60	5900	-	
13	127	225	3	23.59	IE4	BS40-../S4E09SA4	6.3	21	42	127	152	148	174	225	225	73	7900	-	
13	114	275	2.7	26.18	IE4	BS40-../S4E09SA4	5.7	19	38	114	137	182	210	275	275	73	7500	-	
13	97	290	2.5	30.63	IE4	BS40-../S4E09SA4	4.8	16	32.5	97	117	192	225	290	290	73	8700	-	
13	89	345	2.2	33.35	IE4	BS40-../S4E09SA4	4.4	14.5	29.5	89	107	225	265	345	345	73	8300	-	
13	78	360	2.2	38.13	IE4	BS40-../S4E09SA4	3.9	13	26	78	94	235	275	360	360	73	9400	-	
13	74	410	1.9	40.37	IE4	BS40-../S4E09SA4	3.7	12	24.5	74	89	270	315	410	410	73	9000	-	
13	62	480	1.7	47.69	IE4	BS40-../S4E09SA4	3.1	10	20.5	62	75	315	370	480	480	73	9600	-	
13	49.5	550	1.5	60.38	IE4	BS40-../S4E09SA4	2.4	8.2	16.5	49.5	59	360	425	550	550	73	11200	-	
13	43	690	1.1	69.6	IE4	BS40-../S4E09SA4	2.1	7.1	14	43	51	455	530	690	690	73	11800	-	
13	41	660	1.3	73.09	IE4	BS40-../S4E09SA4	2	6.8	13.5	41	49	430	510	660	660	73	12100	-	
13	34.5	770	1.2	86.33	IE4	BS40-../S4E09SA4	1.7	5.7	11.5	34.5	41.5	500	590	770	770	73	12900	-	
13	27.5	940	1	108.1	IE4	BS40-../S4E09SA4	1.3	4.6	9.2	27.5	33	610	720	940	940	73	14000	-	
13	23.5	1090	0.89	126	IE4	BS40-../S4E09SA4	1.1	3.9	7.9	23.5	28.5	710	840	1090	1090	73	14900	-	

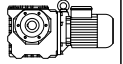
 **$M_N = 17.5 \text{ Nm}$  ( $P_N = 5.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [1]	IE- Classe	Type	Speed range $n_2$ [1/min]					Torque range $M_2$ [Nm]					$m$ [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							at engine speed $n_1$ [1/min]					at engine speed $n_1$ [1/min]							
							150	500	1000	3000	3600	150	500	1000	3000	3600			
17.5	230	181	1.1	12.77	IE5	BS20-../S5E09XA4	11.5	39	78	230	280	134	165	181	181	50	3350	-	
17.5	177	235	0.92	16.92	IE5	BS20-../S5E09XA4	8.8	29.5	59	177	210	178	215	235	235	50	3700	-	
17.5	225	193	1.7	13.29	IE4	BS30-../S4E11SA6	11	37.5	75	225	270	193	193	193	193	77	3600	-	
17.5	225	193	1.7	13.29	IE5	BS30-../S5E09XA4	11	37.5	75	225	270	143	176	193	193	68	3600	-	
17.5	177	245	1.5	16.92	IE4	BS30-../S4E11SA6	8.8	29.5	59	177	210	245	245	245	245	77	3950	-	
17.5	177	245	1.5	16.92	IE5	BS30-../S5E09XA4	8.8	29.5	59	177	210	182	220	245	245	68	3950	-	
17.5	143	300	1.2	20.94	IE4	BS30-../S4E11SA6	7.1	23.5	47.5	143	171	300	300	300	300	77	4300	-	
17.5	143	300	1.2	20.94	IE5	BS30-../S5E09XA4	7.1	23.5	47.5	143	171	225	275	300	300	68	4300	-	
17.5	124	315	1.2	24.06	IE4	BS30-../S4E11SA6	6.2	20.5	41.5	124	149	315	315	315	315	77	4600	-	
17.5	124	315	1.2	24.06	IE5	BS30-../S5E09XA4	6.2	20.5	41.5	124	149	230	285	315	315	68	4600	-	
17.5	110	390	1	27.07	IE4	BS30-../S4E11SA6	5.5	18	36.5	110	132	390	390	390	390	77	4750	-	
17.5	110	390	1	27.07	IE5	BS30-../S5E09XA4	5.5	18	36.5	110	132	290	355	390	390	68	4750	-	
17.5	97	400	0.99	30.63	IE4	BS30-../S4E11SA6	4.8	16	32.5	97	117	400	400	400	400	77	5000	-	
17.5	97	400	0.99	30.63	IE5	BS30-../S5E09XA4	4.8	16	32.5	97	117	295	365	400	400	68	5000	-	
17.5	89	480	0.87	33.55	IE4	BS30-../S4E11SA6	4.4	14.5	29.5	89	107	480	480	480	480	77	5200	-	
17.5	89	480	0.87	33.55	IE5	BS30-../S5E09XA4	4.4	14.5	29.5	89	107	355	440	480	480	68	5200	-	
17.5	79	495	0.84	37.92	IE4	BS30-../S4E11SA6	3.9	13	26	79	94	495	495	495	495	77	5500	-	
17.5	79	495	0.84	37.92	IE5	BS30-../S5E09XA4	3.9	13	26	79	94	365	455	495	495	68	5500	-	
17.5	177	250	2.7	16.92	IE4	BS40-../S4E11SA6	8.8	29.5	59	177	210	250	250	250	250	95	6400	-	
17.5	177	250	2.7	16.92	IE5	BS40-../S5E09XA4	8.8	29.5	59	177	210	186	230	250	250	81	6400	-	
17.5	142	300	2.3	21.06	IE4	BS40-../S4E11SA6	7.1	23.5	47	142	170	300	300	300	300	95	6900	-	
17.5	142	300	2.3	21.06	IE5	BS40-../S5E09XA4	7.1	23.5	47	142	170	220	275	300	300	81	6900	-	
17.5	127	305	2.2	23.59	IE4	BS40-../S4E11SA6	6.3	21	42	127	152	305	305	305	305	95	7900	-	
17.5	127	305	2.2	23.59	IE5	BS40-../S5E09XA4	6.3	21	42	127	152	225	275	305	305	81	7900	-	
17.5	114	375	2	26.18	IE4	BS40-../S4E11SA6	5.7	19	38	114	137	375	375	375	375	95	7500	-	
17.5	114	375	2	26.18	IE5	BS40-../S5E09XA4	5.7	19	38	114	137	275	340	375	375	81	7500	-	
17.5	97	395	1.9	30.63	IE4	BS40-../S4E11SA6	4.8	16	32.5	97	117	395	395	395	395	95	8700	-	
17.5	97	395	1.9	30.63	IE5	BS40-../S5E09XA4	4.8	16	32.5	97	117	290	360	395	395	81	8700	-	
17.5	89	465	1.7	33.35	IE4	BS40-../S4E11SA6	4.4	14.5	29.5	89	107	465	465	465	465	95	8300	-	
17.5	89	465	1.7	33.35	IE5	BS40-../S5E09XA4	4.4	14.5	29.5	89	107	345	425	465	465	81	8300	-	
17.5	78	485	1.6	38.13	IE4	BS40-../S4E11SA6	3.9	13	26	78	94	485	485	485	485	95	9400	-	
17.5	78	485	1.6	38.13	IE5	BS40-../S5E09XA4	3.9	13	26	78	94	360	445	485	485	81	9400	-	
17.5	74	550	1.4	40.37	IE4	BS40-../S4E11SA6	3.7	12	24.5	74	89	550	550	550	550	95	9000	-	
17.5	74	550	1.4	40.37	IE5	BS40-../S5E09XA4	3.7	12	24.5	74	89	410	510	550	550	81	9000	-	
17.5	62	650	1.3	47.69	IE4	BS40-../S4E11SA6	3.1	10	20.5	62	75	650	650	650	650	95	9600	-	
17.5	62	650	1.3	47.69	IE5	BS40-../S5E09XA4	3.1	10	20.5	62	75	480	590	650	650	81	9600	-	
17.5	49.5	750	1.1	60.38	IE4	BS40-../S4E11SA6	2.4	8.2	16.5	49.5	59	750	750	750	750	95	11200	-	
17.5</																			

# BS-series worm-geared motors

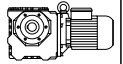
## Selection - worm-geared motors - $n_1 = 3000 \frac{1}{\text{min}}$

### $M_N = 17.5 \text{ Nm}$ ( $P_N = 5.5 \text{ kW}$ )



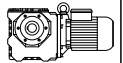
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
17.5	41	890	0.98	73.09	IE5	BS40-../S5E09XA4	2	6.8	13.5	41	49	660	810	890	890	890	81	12100	-
17.5	34.5	1040	0.86	86.33	IE4	BS40-../S4E11SA6	1.7	5.7	11.5	34.5	41.5	1040	1040	1040	1040	1040	95	12900	-
17.5	34.5	1040	0.86	86.33	IE5	BS40-../S5E09XA4	1.7	5.7	11.5	34.5	41.5	770	950	1040	1040	1040	81	12900	-

### $M_N = 20 \text{ Nm}$ ( $P_N = 6.3 \text{ kW}$ )

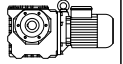


$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
20	230	205	0.97	12.77	IE5	BS20-../S5E09XA4	11.5	39	78	230	280	134	165	205	205	181	50	3350	-
	177	270	0.8	16.92	IE5	BS20-../S5E09XA4	8.8	29.5	59	177	210	178	215	270	270	235	50	3700	-
20	225	220	1.5	13.29	IE5	BS30-../S5E09XA4	11	37.5	75	225	270	143	176	220	220	193	68	3600	-
20	177	280	1.3	16.92	IE5	BS30-../S5E09XA4	8.8	29.5	59	177	210	182	220	280	280	245	68	3950	-
20	143	345	1.1	20.94	IE5	BS30-../S5E09XA4	7.1	23.5	47.5	143	171	225	275	345	345	300	68	4300	-
20	124	360	1	24.06	IE5	BS30-../S5E09XA4	6.2	20.5	41.5	124	149	230	285	360	360	315	68	4600	-
20	110	445	0.89	27.07	IE5	BS30-../S5E09XA4	5.5	18	36.5	110	132	290	355	445	445	390	68	4750	-
20	97	455	0.87	30.63	IE5	BS30-../S5E09XA4	4.8	16	32.5	97	117	295	365	455	455	400	68	5000	-
20	230	220	2.8	13.03	IE5	BS40-../S5E09XA4	11.5	38	76	230	275	143	177	220	220	193	81	5800	-
20	177	285	2.3	16.92	IE5	BS40-../S5E09XA4	8.8	29.5	59	177	210	186	230	285	285	250	81	6400	-
20	142	345	2.1	21.06	IE5	BS40-../S5E09XA4	7.1	23.5	47	142	170	220	275	345	345	300	81	6900	-
20	127	345	2	23.59	IE5	BS40-../S5E09XA4	6.3	21	42	127	152	225	275	345	345	305	81	7900	-
20	114	425	1.7	26.18	IE5	BS40-../S5E09XA4	5.7	19	38	114	137	275	340	425	425	375	81	7500	-
20	97	450	1.7	30.63	IE5	BS40-../S5E09XA4	4.8	16	32.5	97	117	290	360	450	450	395	81	8700	-
20	89	530	1.5	33.35	IE5	BS40-../S5E09XA4	4.4	14.5	29.5	89	107	345	425	530	530	465	81	8300	-
20	78	550	1.4	38.13	IE5	BS40-../S5E09XA4	3.9	13	26	78	94	360	445	550	550	485	81	9400	-
20	74	630	1.3	40.37	IE5	BS40-../S5E09XA4	3.7	12	24.5	74	89	410	510	630	630	550	81	9000	-
20	62	740	1.1	47.69	IE5	BS40-../S5E09XA4	3.1	10	20.5	62	75	480	590	740	740	650	81	9600	-
20	49.5	850	1	60.38	IE5	BS40-../S5E09XA4	2.4	8.2	16.5	49.5	59	550	680	850	850	750	81	11200	-
20	41	1020	0.86	73.09	IE5	BS40-../S5E09XA4	2	6.8	13.5	41	49	660	810	1020	1020	890	81	12100	-

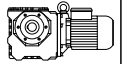
### $M_N = 24 \text{ Nm}$ ( $P_N = 7.5 \text{ kW}$ )



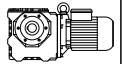
$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
24	225	260	1.3	13.29	IE4	BS30-../S4E11SA6	11	37.5	75	225	270	205	235	260	260	260	77	3600	-
24	225	260	1.3	13.29	IE5	BS30-../S5E11MA6	11	37.5	75	225	270	260	260	260	260	260	77	3600	-
24	177	335	1.1	16.92	IE4	BS30-../S4E11SA6	8.8	29.5	59	177	210	265	300	335	335	335	77	3950	-
24	177	335	1.1	16.92	IE5	BS30-../S5E11MA6	8.8	29.5	59	177	210	335	335	335	335	335	77	3950	-
24	143	415	0.91	20.94	IE4	BS30-../S4E11SA6	7.1	23.5	47.5	143	171	330	370	415	415	415	77	4300	-
24	143	415	0.91	20.94	IE5	BS30-../S5E11MA6	7.1	23.5	47.5	143	171	415	415	415	415	415	77	4300	-
24	124	430	0.85	24.06	IE4	BS30-../S4E11SA6	6.2	20.5	41.5	124	149	340	385	430	430	430	77	4600	-
24	124	430	0.85	24.06	IE5	BS30-../S5E11MA6	6.2	20.5	41.5	124	149	430	430	430	430	430	77	4600	-
24	230	265	2.3	13.03	IE4	BS40-../S4E11SA6	11.5	38	76	230	275	210	235	265	265	265	95	5800	-
24	230	265	2.3	13.03	IE5	BS40-../S5E11MA6	11.5	38	76	230	275	265	265	265	265	265	95	5800	-
24	177	345	1.9	16.92	IE4	BS40-../S4E11SA6	8.8	29.5	59	177	210	270	305	345	345	345	95	6400	-
24	177	345	1.9	16.92	IE5	BS40-../S5E11MA6	8.8	29.5	59	177	210	345	345	345	345	345	95	6400	-
24	142	410	1.7	21.06	IE4	BS40-../S4E11SA6	7.1	23.5	47	142	170	325	370	410	410	410	95	6900	-
24	142	410	1.7	21.06	IE5	BS40-../S5E11MA6	7.1	23.5	47	142	170	410	410	410	410	410	95	6900	-
24	127	415	1.6	23.59	IE4	BS40-../S4E11SA6	6.3	21	42	127	152	330	375	415	415	415	95	7900	-
24	127	415	1.6	23.59	IE5	BS40-../S5E11MA6	6.3	21	42	127	152	415	415	415	415	415	95	7900	-
24	114	510	1.4	26.18	IE4	BS40-../S4E11SA6	5.7	19	38	114	137	405	460	510	510	510	95	7500	-
24	114	510	1.4	26.18	IE5	BS40-../S5E11MA6	5.7	19	38	114	137	510	510	510	510	510	95	7500	-
24	97	540	1.4	30.63	IE4	BS40-../S4E11SA6	4.8	16	32.5	97	117	430	485	540	540	540	95	8700	-
24	97	540	1.4	30.63	IE5	BS40-../S5E11MA6	4.8	16	32.5	97	117	540	540	540	540	540	95	8700	-
24	89	640	1.2	33.35	IE4	BS40-../S4E11SA6	4.4	14.5	29.5	89	107	500	570	640	640	640	95	8300	-
24	89	640	1.2	33.35	IE5	BS40-../S5E11MA6	4.4	14.5	29.5	89	107	640	640	640	640	640	95	8300	-
24	78	660	1.2	38.13	IE4	BS40-../S4E11SA6	3.9	13	26	78	94	520	590	660	660	660	95	9400	-
24	78	660	1.2	38.13	IE5	BS40-../S5E11MA6	3.9	13	26	78	94	660	660	660	660	660	95	9400	-
24	74	760	1	40.37	IE4	BS40-../S4E11SA6	3.7	12	24.5	74	89	600	680	760	760	760	95	9000	-
24	74	760	1	40.37	IE5	BS40-../S5E11MA6	3.7	12	24.5	74	89	760	760	760	760	760	95	9000	-
24	62	890	0.93	47.69	IE4	BS40-../S4E11SA6	3.1	10	20.5	62	75	700	790	890	890	890	95	9600	-
24	62	890	0.93	47.69	IE5	BS40-../S5E11MA6	3.1	10	20.5	62	75	890	890	890	890	890	95	9600	-
24	49.5	1020	0.84	60.38	IE4	BS40-../S4E11SA6	2.4	8.2	16.5	49.5	59	810	920	1020	1020	1020	95	11200	-
24	49.5	1020	0.84	60.38	IE5	BS40-../S5E11MA6	2.4	8.2	16.5	49.5	59	1020	1020	1020	1020	1020	95	11200	-

**BS-series worm-geared motors****Selection - worm-geared motors -  $n_1 = 3000 \frac{1}{\text{min}}$**  **$M_N = 30 \text{ Nm}$  ( $P_N = 9.5 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]		
							150	500	1000	3000	3600	150	500	1000	3000	3600					
							30	225	330	1	13.29	IE5	BS30-../S5E11LA6	11	37.5	75				225	270
30	225	330	1	13.29	IE5	BS30-../S5E11MA6	11	37.5	75	225	270	290	330	330	330	330	330	77	3600	-	
30	177	420	0.85	16.92	IE5	BS30-../S5E11LA6	8.8	29.5	59	177	210	420	420	420	420	420	420	89	3950	-	
30	177	420	0.85	16.92	IE5	BS30-../S5E11MA6	8.8	29.5	59	177	210	370	420	420	420	420	420	77	3950	-	
30	230	330	1.8	13.03	IE5	BS40-../S5E11LA6	11.5	38	76	230	275	330	330	330	330	330	330	107	5800	-	
30	230	330	1.8	13.03	IE5	BS40-../S5E11MA6	11.5	38	76	230	275	290	330	330	330	330	330	95	5800	-	
30	177	430	1.6	16.92	IE5	BS40-../S5E11LA6	8.8	29.5	59	177	210	430	430	430	430	430	430	107	6400	-	
30	177	430	1.6	16.92	IE5	BS40-../S5E11MA6	8.8	29.5	59	177	210	380	430	430	430	430	430	95	6400	-	
30	142	510	1.4	21.06	IE5	BS40-../S5E11LA6	7.1	23.5	47	142	170	510	510	510	510	510	510	107	6900	-	
30	142	510	1.4	21.06	IE5	BS40-../S5E11MA6	7.1	23.5	47	142	170	455	510	510	510	510	510	95	6900	-	
30	127	520	1.3	23.59	IE5	BS40-../S5E11LA6	6.3	21	42	127	152	520	520	520	520	520	520	107	7900	-	
30	127	520	1.3	23.59	IE5	BS40-../S5E11MA6	6.3	21	42	127	152	460	520	520	520	520	520	95	7900	-	
30	114	640	1.1	26.18	IE5	BS40-../S5E11LA6	5.7	19	38	114	137	640	640	640	640	640	640	107	7500	-	
30	114	640	1.1	26.18	IE5	BS40-../S5E11MA6	5.7	19	38	114	137	560	640	640	640	640	640	95	7500	-	
30	97	670	1.1	30.63	IE5	BS40-../S5E11LA6	4.8	16	32.5	97	117	670	670	670	670	670	670	107	8700	-	
30	97	670	1.1	30.63	IE5	BS40-../S5E11MA6	4.8	16	32.5	97	117	600	670	670	670	670	670	95	8700	-	
30	89	800	0.97	33.35	IE5	BS40-../S5E11LA6	4.4	14.5	29.5	89	107	800	800	800	800	800	800	107	8300	-	
30	89	800	0.97	33.35	IE5	BS40-../S5E11MA6	4.4	14.5	29.5	89	107	700	800	800	800	800	800	95	8300	-	
30	78	830	0.93	38.13	IE5	BS40-../S5E11LA6	3.9	13	26	78	94	830	830	830	830	830	830	107	9400	-	
30	78	830	0.93	38.13	IE5	BS40-../S5E11MA6	3.9	13	26	78	94	730	830	830	830	830	830	95	9400	-	
30	74	950	0.84	40.37	IE5	BS40-../S5E11LA6	3.7	12	24.5	74	89	950	950	950	950	950	950	107	9000	-	
30	74	950	0.84	40.37	IE5	BS40-../S5E11MA6	3.7	12	24.5	74	89	840	950	950	950	950	950	95	9000	-	

 **$M_N = 35 \text{ Nm}$  ( $P_N = 11 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]	
							150	500	1000	3000	3600	150	500	1000	3000	3600				
							35	225	385	0.86	13.29	IE4	BS30-../S4E11MA6	11	37.5	75				225
35	225	385	0.86	13.29	IE5	BS30-../S5E11LA6	11	37.5	75	225	270	385	385	385	385	385	385	89	3600	-
35	230	385	1.6	13.03	IE4	BS40-../S4E11MA6	11.5	38	76	230	275	290	330	385	385	385	385	95	5800	-
35	230	385	1.6	13.03	IE5	BS40-../S5E11LA6	11.5	38	76	230	275	385	385	385	385	385	385	107	5800	-
35	177	500	1.3	16.92	IE4	BS40-../S4E11MA6	8.8	29.5	59	177	210	380	430	500	500	500	500	95	6400	-
35	177	500	1.3	16.92	IE5	BS40-../S5E11LA6	8.8	29.5	59	177	210	500	500	500	500	500	500	107	6400	-
35	142	600	1.2	21.06	IE4	BS40-../S4E11MA6	7.1	23.5	47	142	170	455	510	600	600	600	600	95	6900	-
35	142	600	1.2	21.06	IE5	BS40-../S5E11LA6	7.1	23.5	47	142	170	600	600	600	600	600	600	107	6900	-
35	127	610	1.1	23.59	IE4	BS40-../S4E11MA6	6.3	21	42	127	152	460	520	610	610	610	610	95	7900	-
35	127	610	1.1	23.59	IE5	BS40-../S5E11LA6	6.3	21	42	127	152	610	610	610	610	610	610	107	7900	-
35	114	750	0.98	26.18	IE4	BS40-../S4E11MA6	5.7	19	38	114	137	560	640	750	750	750	750	95	7500	-
35	114	750	0.98	26.18	IE5	BS40-../S5E11LA6	5.7	19	38	114	137	750	750	750	750	750	750	107	7500	-
35	97	790	0.95	30.63	IE4	BS40-../S4E11MA6	4.8	16	32.5	97	117	600	670	790	790	790	790	95	8700	-
35	97	790	0.95	30.63	IE5	BS40-../S5E11LA6	4.8	16	32.5	97	117	790	790	790	790	790	790	107	8700	-
35	89	930	0.84	33.35	IE4	BS40-../S4E11MA6	4.4	14.5	29.5	89	107	700	800	930	930	930	930	95	8300	-
35	89	930	0.84	33.35	IE5	BS40-../S5E11LA6	4.4	14.5	29.5	89	107	930	930	930	930	930	930	107	8300	-
35	78	970	0.8	38.13	IE4	BS40-../S4E11MA6	3.9	13	26	78	94	730	830	970	970	970	970	95	9400	-
35	78	970	0.8	38.13	IE5	BS40-../S5E11LA6	3.9	13	26	78	94	970	970	970	970	970	970	107	9400	-

 **$M_N = 48 \text{ Nm}$  ( $P_N = 15 \text{ kW}$ )**

$M_N$ [Nm]	$n_2$ [1/min]	$M_2$ [Nm]	$f_B$ [-]	$i$ [:1]	IE- Classe	Type	Speed range $n_2$ [1/min] at engine speed $n_1$ [1/min]					Torque range $M_2$ [Nm] at engine speed $n_1$ [1/min]					m [kg]	$F_{RN}$ [N]	$F_{RV}$ [N]
							150	500	1000	3000	3600	150	500	1000	3000	3600			
							48	230	530	1.2	13.03	IE5	BS40-../S5E11LA6	11.5	38	76			
48	177	690	0.97	16.92	IE5	BS40-../S5E11LA6	8.8	29.5	59	177	210	500	570	690	690	570	107	6400	-
48	142	820	0.86	21.06	IE5	BS40-../S5E11LA6	7.1	23.5	47	142	170	600	690	820	820	690	107	6900	-
48	127	830	0.82	23.59	IE5	BS40-../S5E11LA6	6.3	21	42	127	152	610	690	830	830	690	107	7900	-

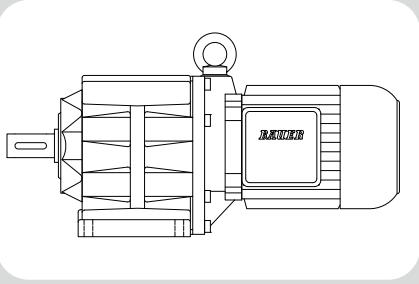
# Energy Efficient Geared Motors

## AC Variable Speed

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# Energy Efficient Geared Motors

## AC Variable Speed



# 10

### BG-series helical-gear motors - Dimensions

<b>Dimension - Standard .....</b>	<b>291</b>
BG04 .....	291
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BG80G40 .....	336
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# Energy Efficient Geared Motors

## AC Variable Speed

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10

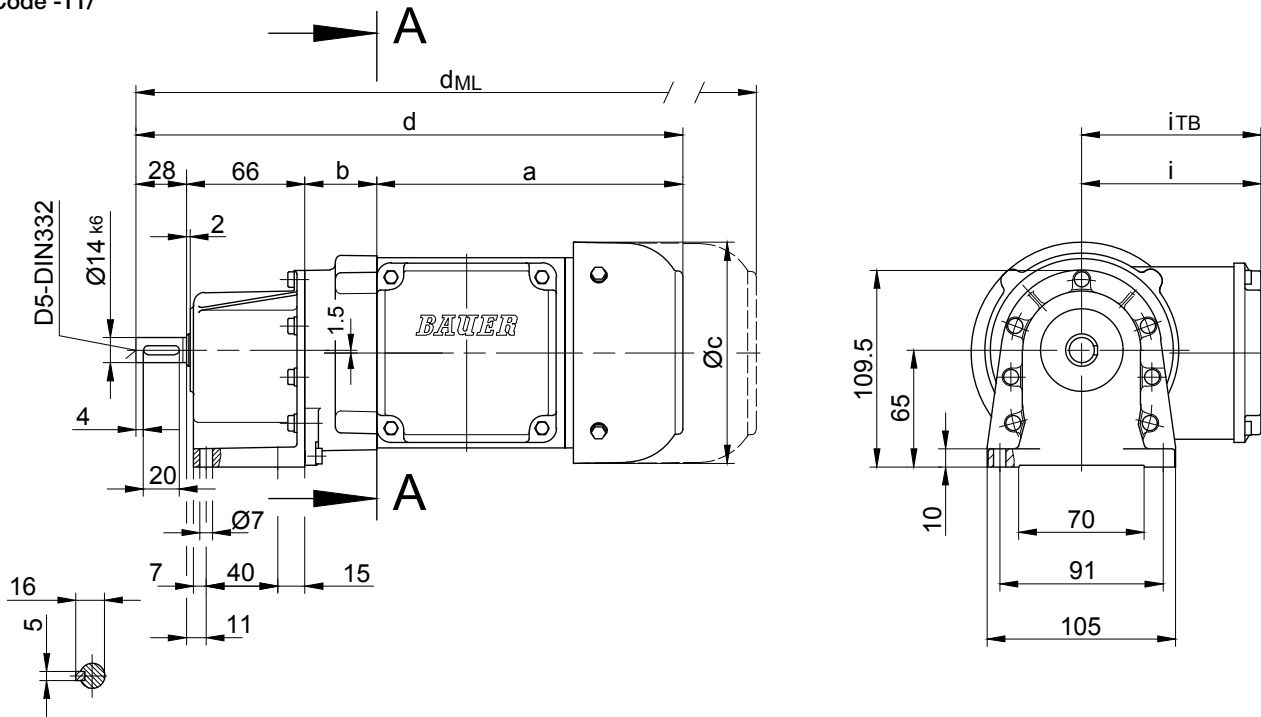


# BG-series helical-geared motors

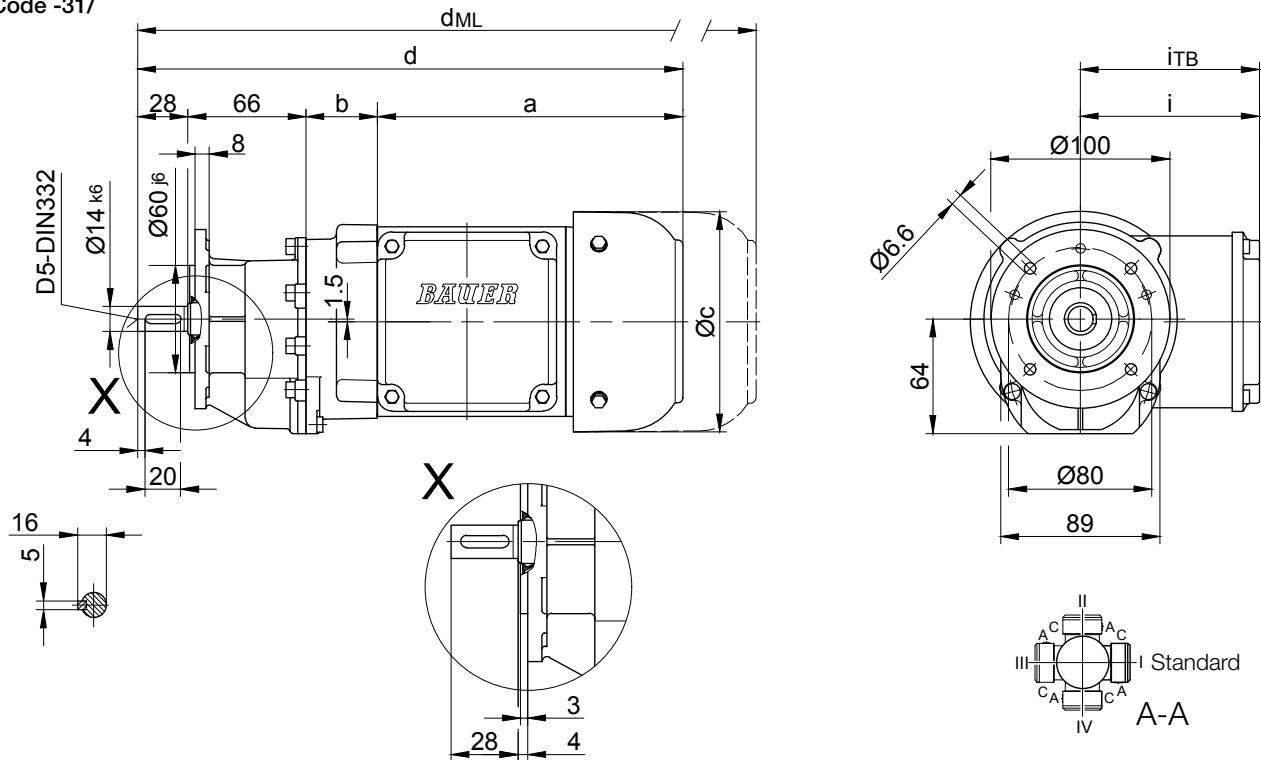
## Dimension - Standard

### BG05

Foot mounting  
Code -11/



Flange with clearance holes  
Code -31/



10

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG05-../S04S	142.5	38	110.5	274.5	90	112	318	362	405.5	-
BG05-../S..06 (M, L)	170.5	40	123	304.5	99	119	346.5	407	444.5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

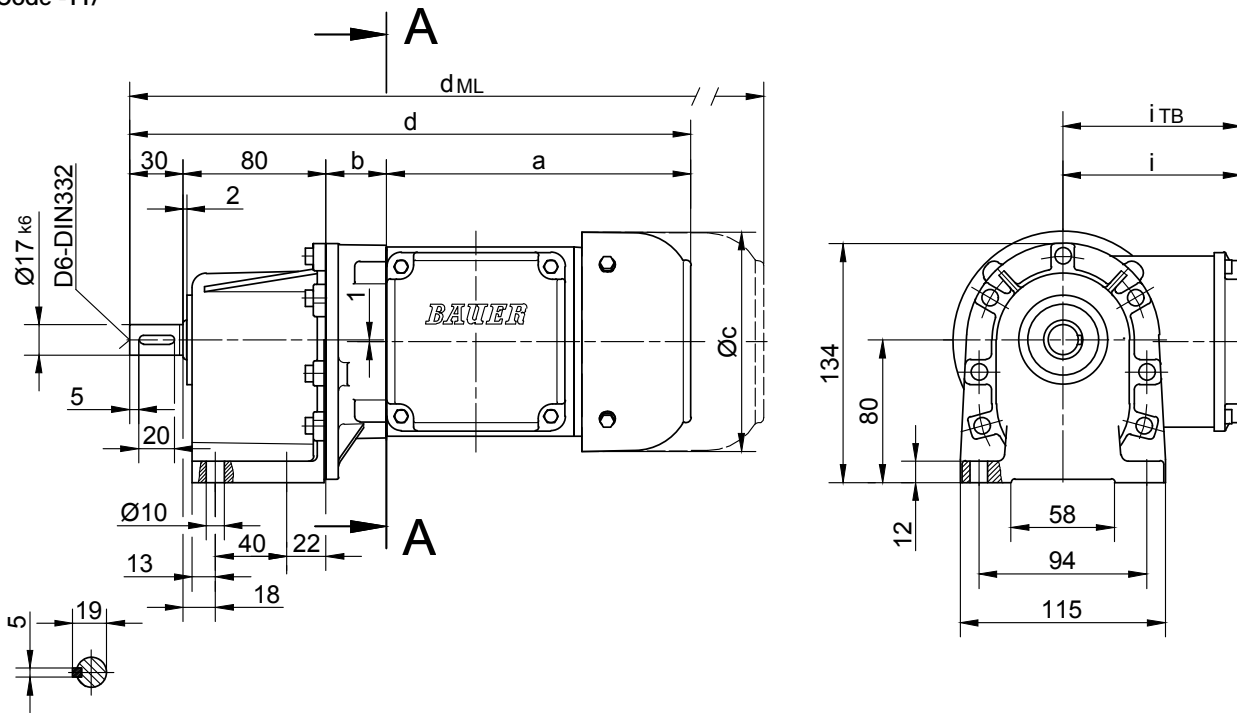
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# BG-series helical-geared motors

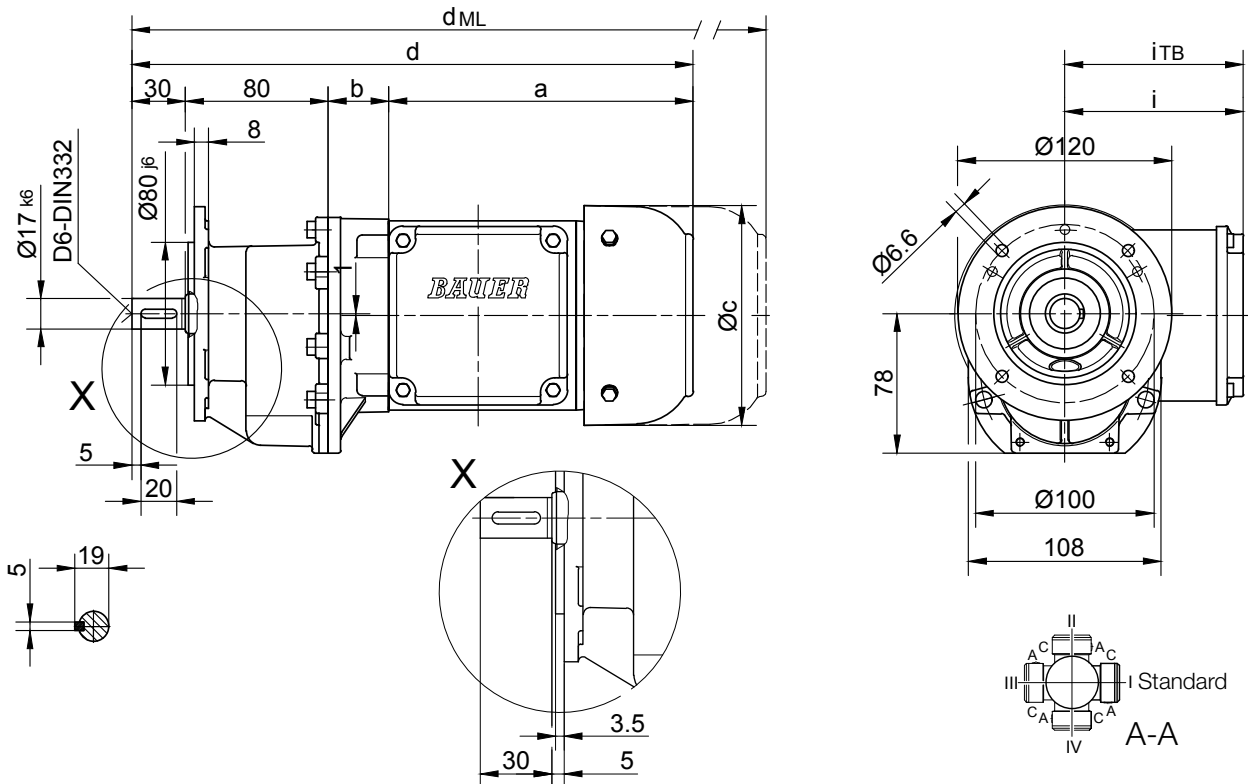
## Dimension - Standard

### BG06

Foot mounting  
Code -11/



Flange with clearance holes  
Code -31/



10

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG06-../S04S	142.5	32	110.5	284.5	90	112	328	372	415.5	-
BG06-../S..06 (M, L)	170.5	34	123	314.5	99	119	356.5	417	454.5	-
BG06-../S..08 (M, L)	199.5	78	156	387.5	114.5	136.5	453.5	499.5	561	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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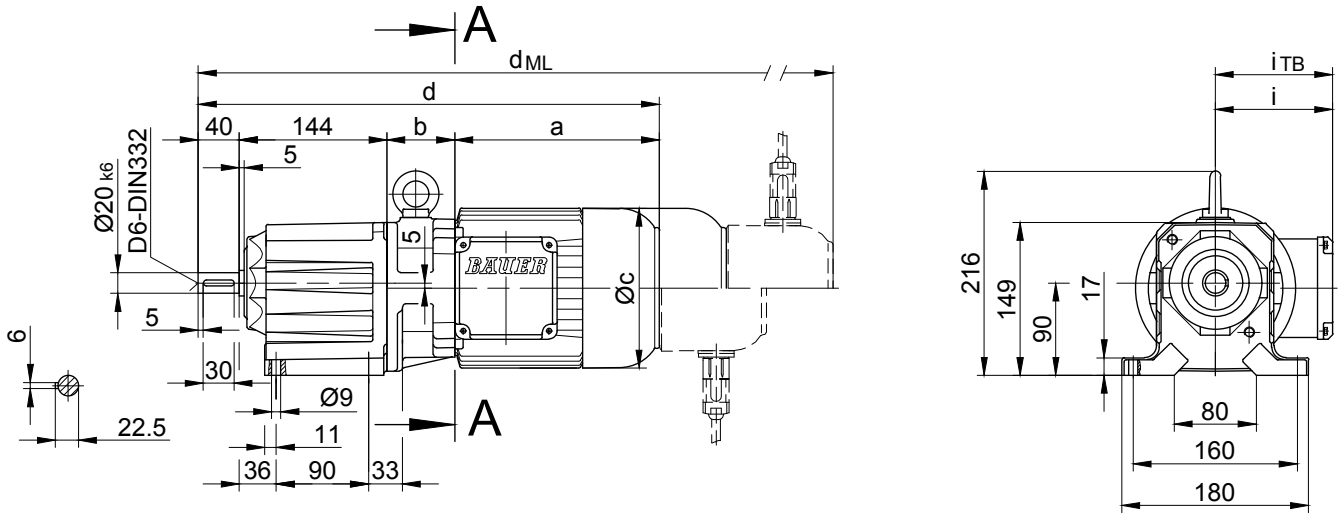
# BG-series helical-geared motors

## Dimension - Standard

### BG10-BG10Z

Foot mounting with clearance holes

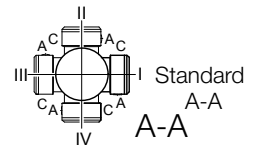
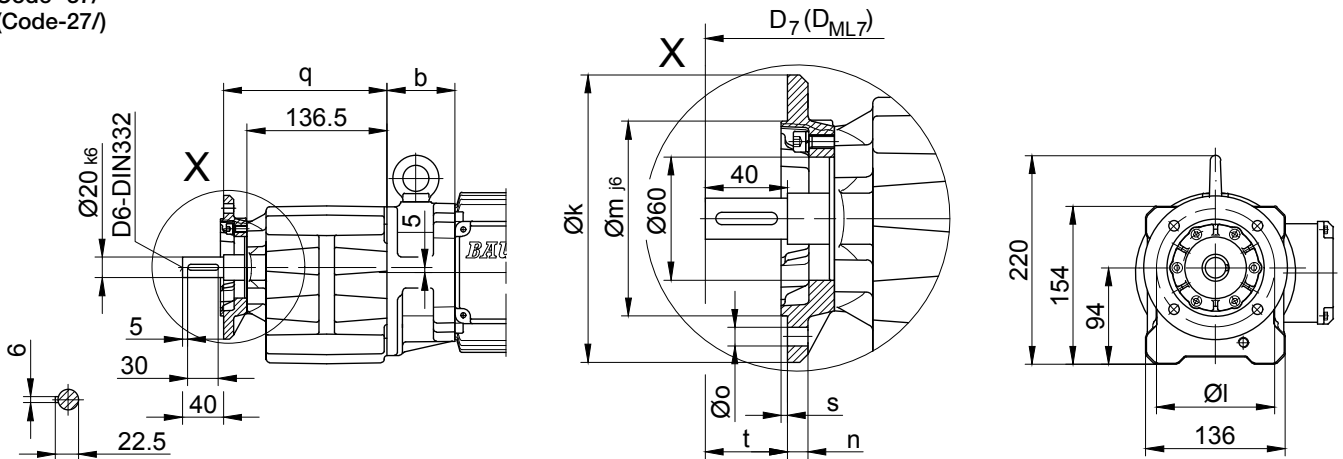
Code -11/



Flange with clearance holes

Code -37/

(Code-27/)



Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG10..	Code -37V/	140	115	95	10	9	159.5	3	40.5	d+15.5	d <sub>ML7</sub> +15.5
BG10..	Code -27V/	120	100	80	8	6.6	154.5	3	45.5	d+15.5	d <sub>ML7</sub> +15.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG10Z-../S04S	142.5	86	110.5	412.5	90	112	456	500	543.5	-
BG10-../S..06 (M, L)	170.5	62	123	416.5	99	119	458.5	519	556.5	-
BG10Z-../S..06 (M, L)	170.5	88	123	442.5	99	119	484.5	545	582.5	-
BG10-../S..08 (M, L)	199.5	66	156	449.5	114.5	136.5	515.5	561.5	623	-
BG10Z-../S..08 (M, L)	199.5	132	156	515.5	114.5	136.5	581.5	627.5	689	-
BG10-../S..09 (S, X)	250.5	80.5	176	515	124	157	608	622.5	712	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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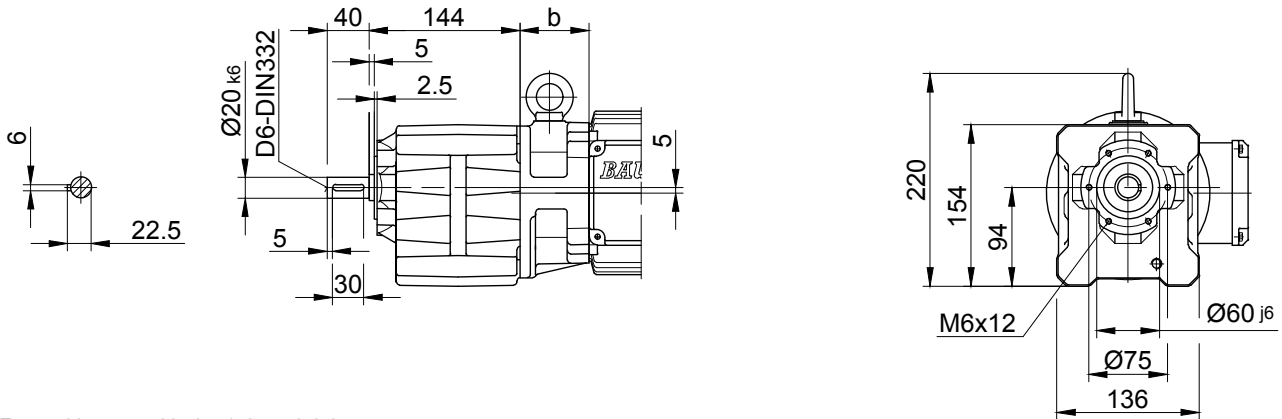
# BG-series helical-geared motors

## Dimension - Standard

### BG10-BG10Z

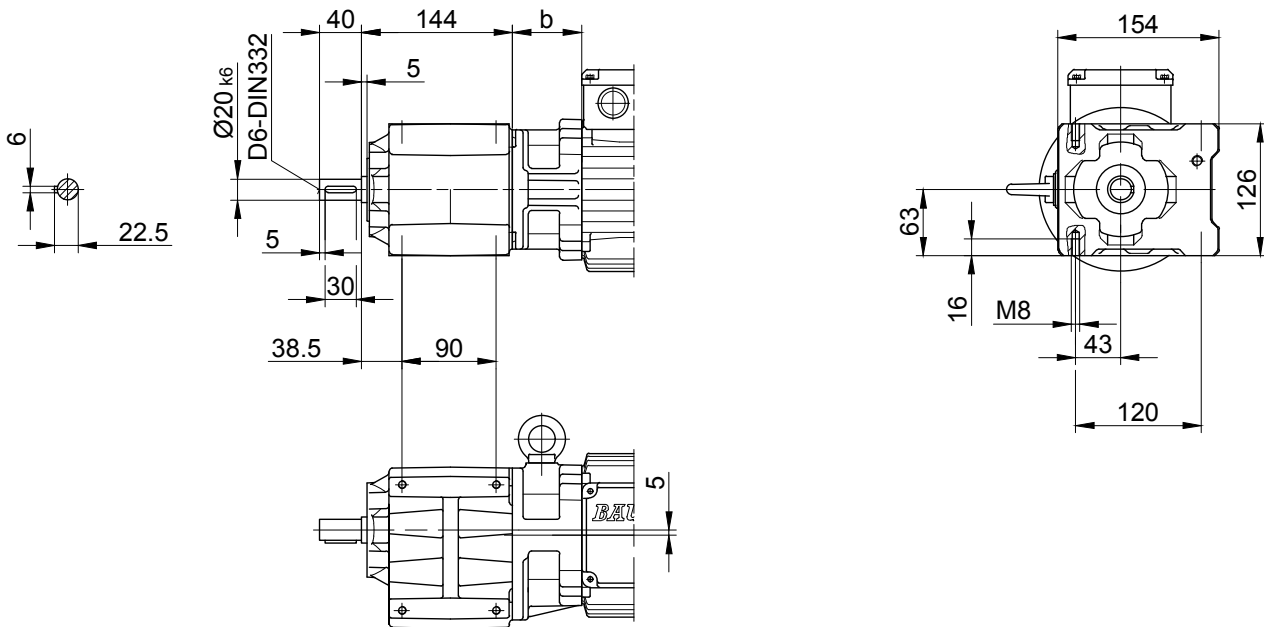
Flange with tapped holes

Code -71/



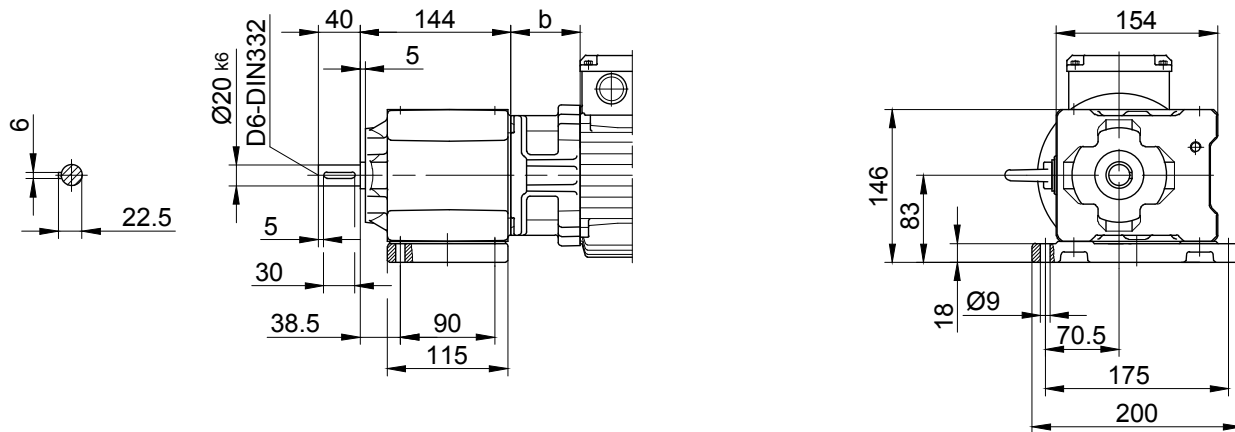
Foot with tapped holes left and right

Code -61LR/



Foot plate left

Code -91L/





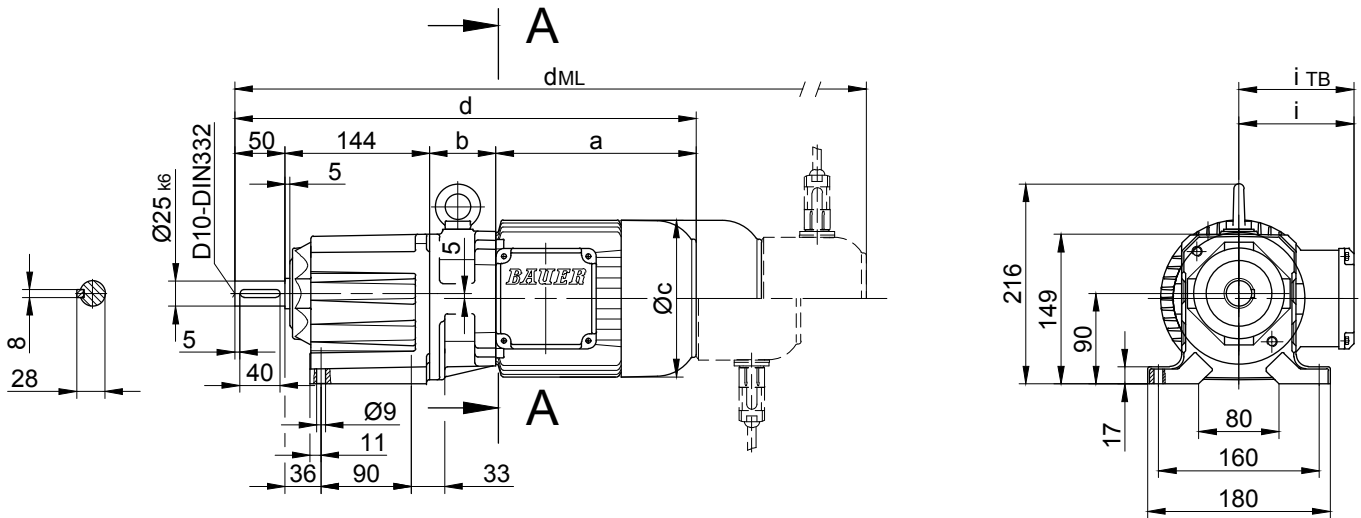
# BG-series helical-geared motors

## Dimension - Standard

### BG10X-BG10XZ

Foot mounting with clearance holes

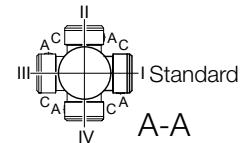
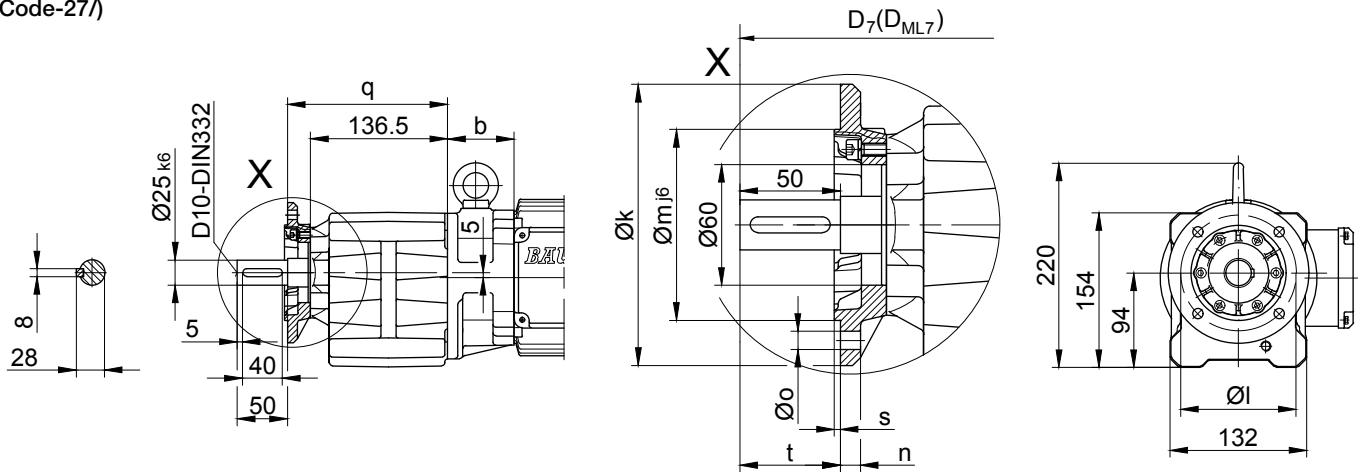
Code -11/



Flange with clearance holes

Code -37/

(Code-27/)



Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG10X..	Code -37V/	140	115	95	10	9	159.5	3	50.5	d+15.5	d <sub>ML</sub> +15.5
BG10X..	Code -27V/	120	100	80	8	6.6	154.5	3	55.5	d+15.5	d <sub>ML</sub> +15.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG10XZ-../S04S	142.5	86	110.5	422.5	90	112	466	510	553.5	-
BG10X-../S..06 (M, L)	170.5	62	123	426.5	99	119	468.5	529	566.5	-
BG10XZ-../S..06 (M, L)	170.5	88	123	452.5	99	119	494.5	555	592.5	-
BG10X-../S..08 (M, L)	199.5	66	156	459.5	114.5	136.5	525.5	571.5	633	-
BG10XZ-../S..08 (M, L)	199.5	132	156	525.5	114.5	136.5	591.5	637.5	699	-
BG10X-../S..09 (S, X)	250.5	80.5	176	525	124	157	618	632.5	722	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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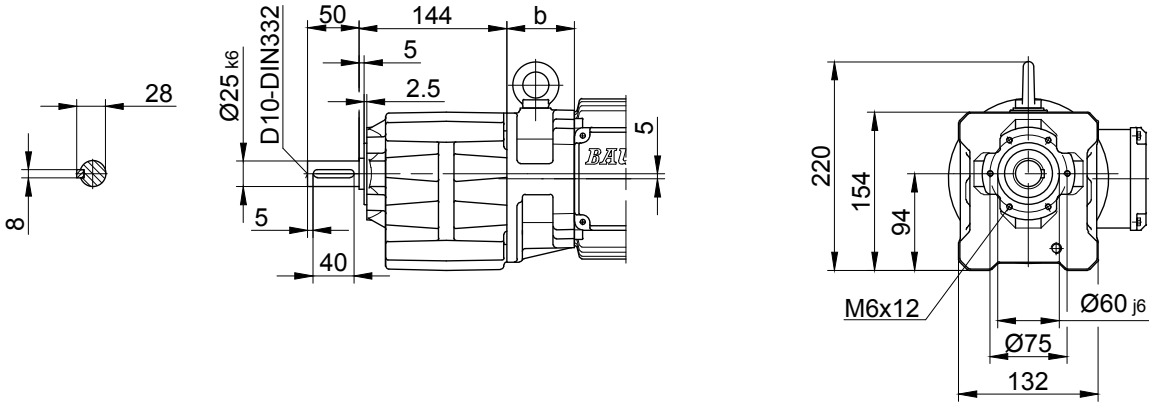
# BG-series helical-geared motors

## Dimension - Standard

### BG10X-BG10XZ

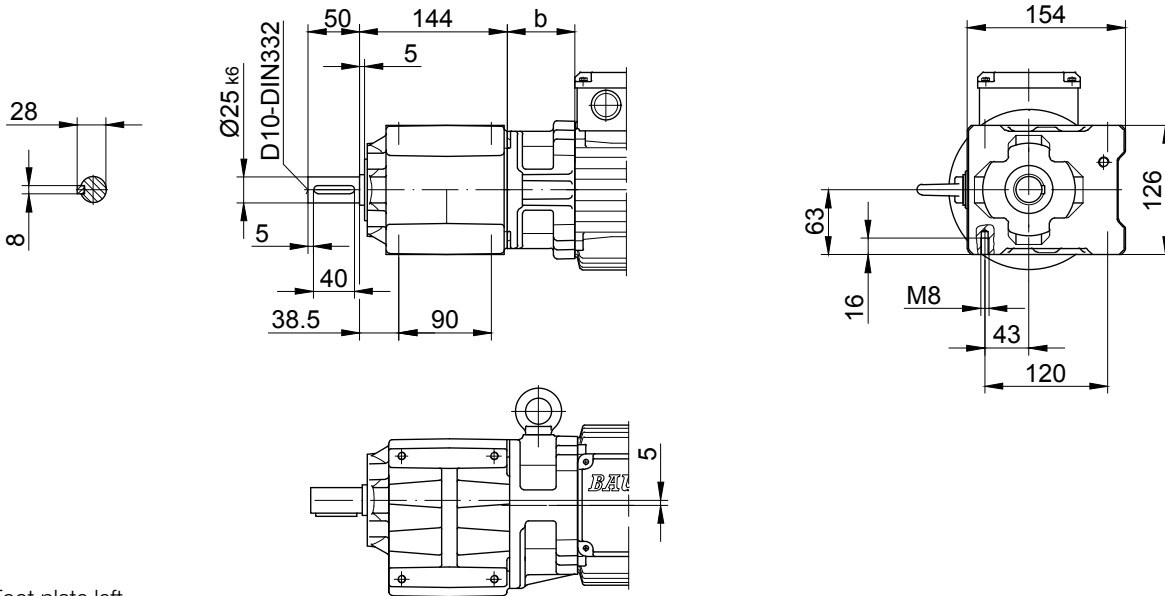
Flange with tapped holes

Code -71/



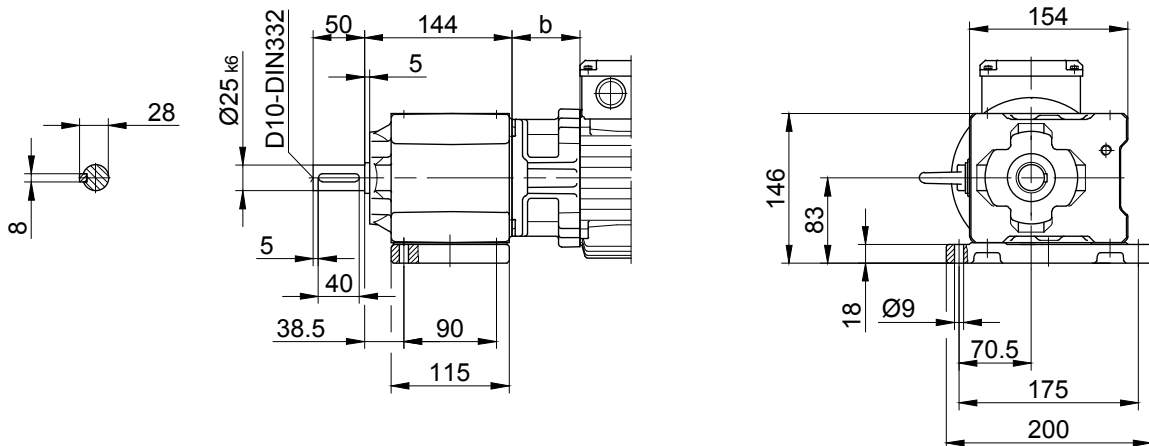
Foot with tapped holes left and right

Code -61LR/



Foot plate left

Code -91L/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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# BG-series helical-gear motors

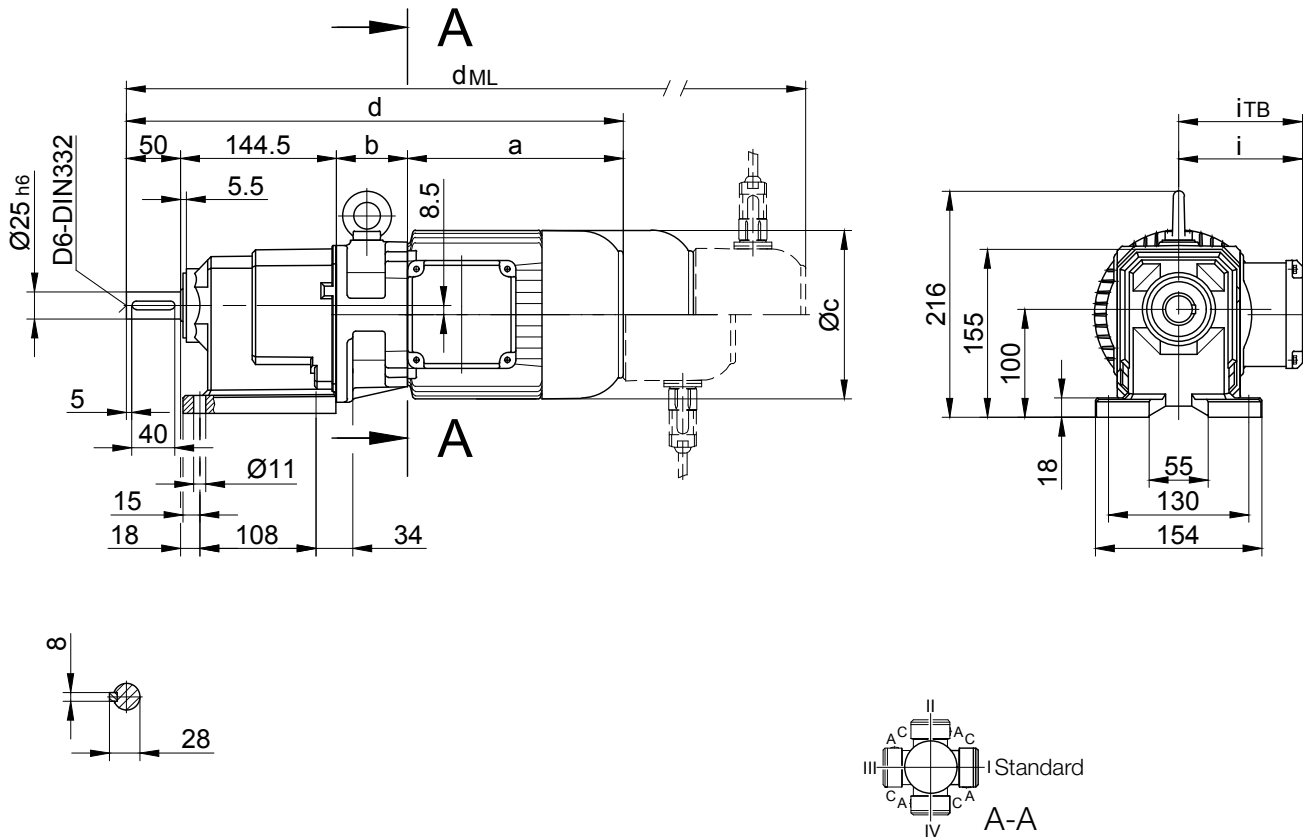
---

10

**BG-series helical-geared motors****Dimension - Standard****BG15**

Foot mounting with clearance holes

Code -11/



10

Type	a	b	c	d	i	Design with motor extensions				
						$i_{TB}$	Brake	Encoder	Brake with Encoder	Back Stop
							$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$
BG15-../S..06 (M, L)	170.5	62	123	427	99	119	469	529.5	567	-
BG15-../S..08 (M, L)	199.5	66	156	460	114.5	136.5	526	572	633.5	-
BG15-../S..09 (S, X)	250.5	80.5	176	525.5	124	157	618.5	633	722.5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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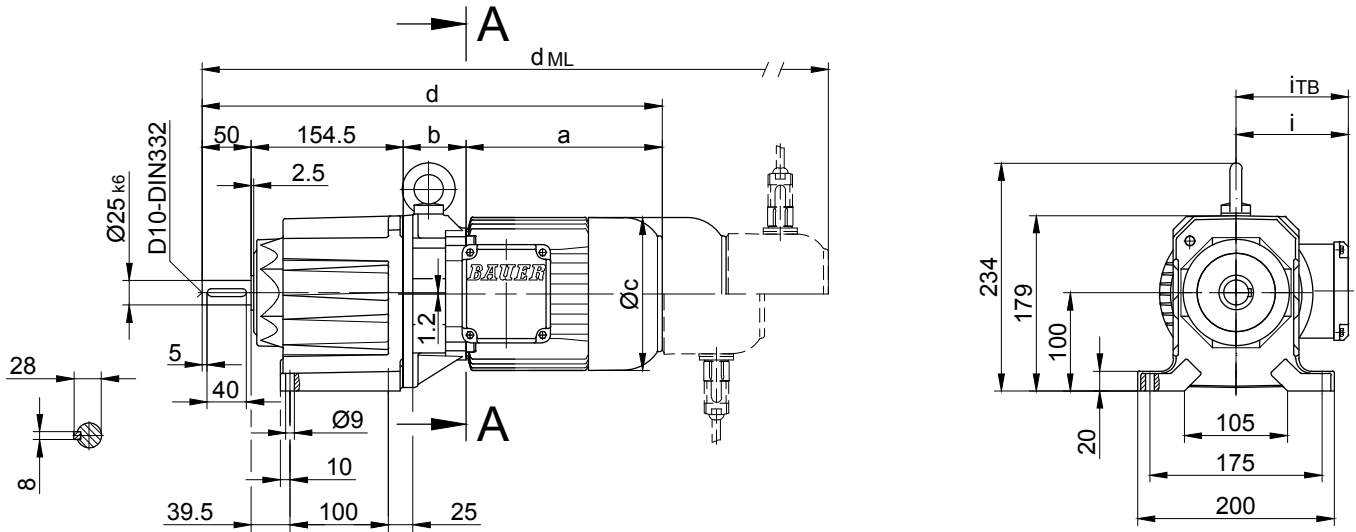
# BG-series helical-geared motors

## Dimension - Standard

### BG20-BG20Z

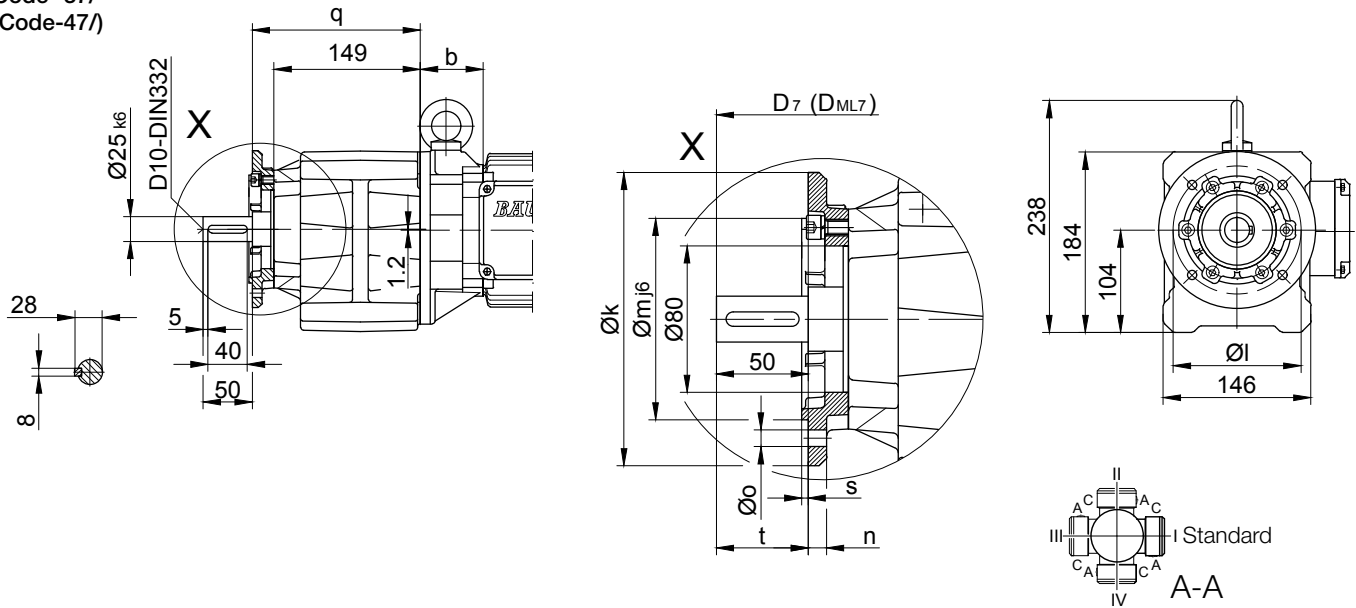
Foot mounting with clearance holes

Code -11/



Flange with clearance holes

Code -37/  
(Code-47/)



10

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG20..	Code -37V/	160	130	110	10	9	171	3.5	50.5	d+16.5	d <sub>ML</sub> +16.5
BG20..	Code -47V/	200	165	130	12	11	178	3.5	43.5	d+16.5	d <sub>ML</sub> +16.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG20Z-../S04S	142.5	100	110.5	447	90	112	490.5	534.5	578	-
BG20-../S..06 (M, L)	170.5	60	123	435	99	119	477	537.5	575	-
BG20Z-../S..06 (M, L)	170.5	102	123	477	99	119	519	579.5	617	-
BG20-../S..08 (M, L)	199.5	64	156	468	114.5	136.5	534	580	641.5	-
BG20Z-../S..08 (M, L)	199.5	146	156	550	114.5	136.5	616	662	723.5	-
BG20-../S..09 (S, X)	250.5	78.5	176	533.5	124	157	626.5	641	730.5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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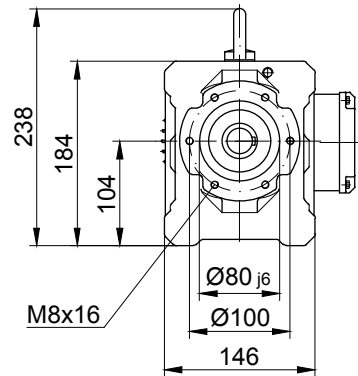
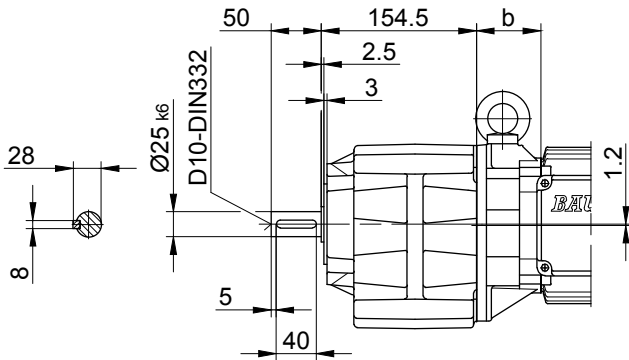
# BG-series helical-geared motors

## Dimension - Standard

### BG20-BG20Z

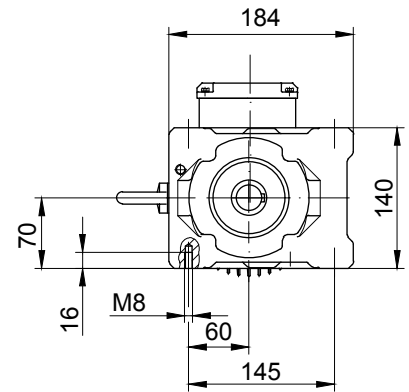
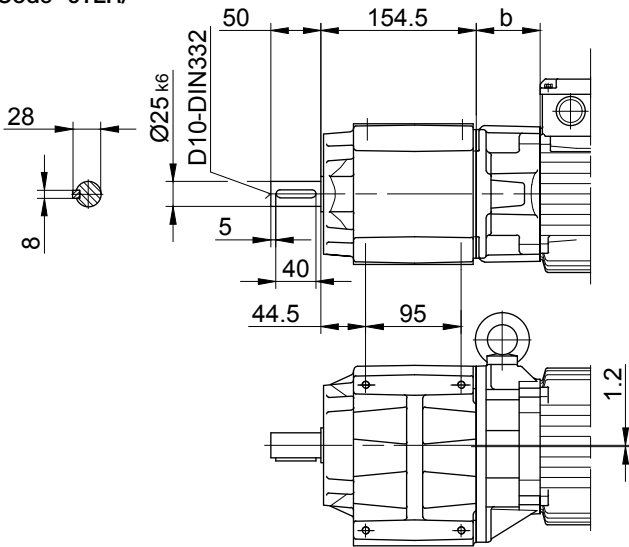
Flange with tapped holes

Code -71/



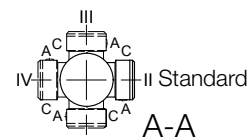
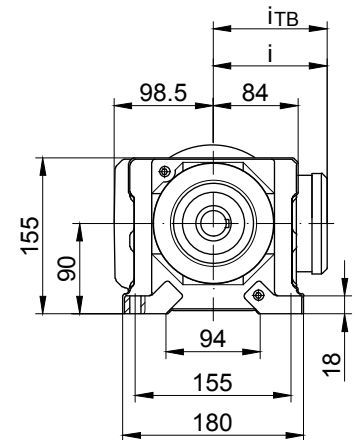
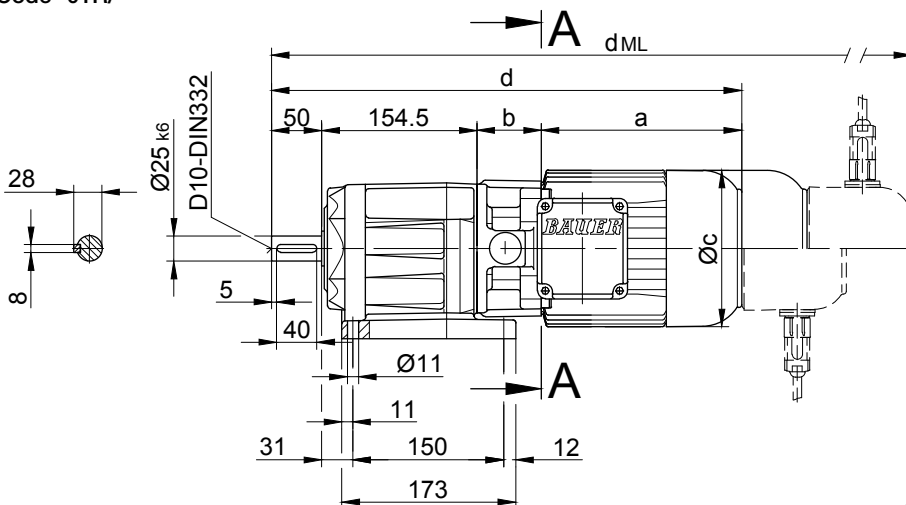
Foot with tapped holes left and right

Code -61LR/



Foot mounting right with clearance holes

Code -01R/



only for BG20-01R!

10



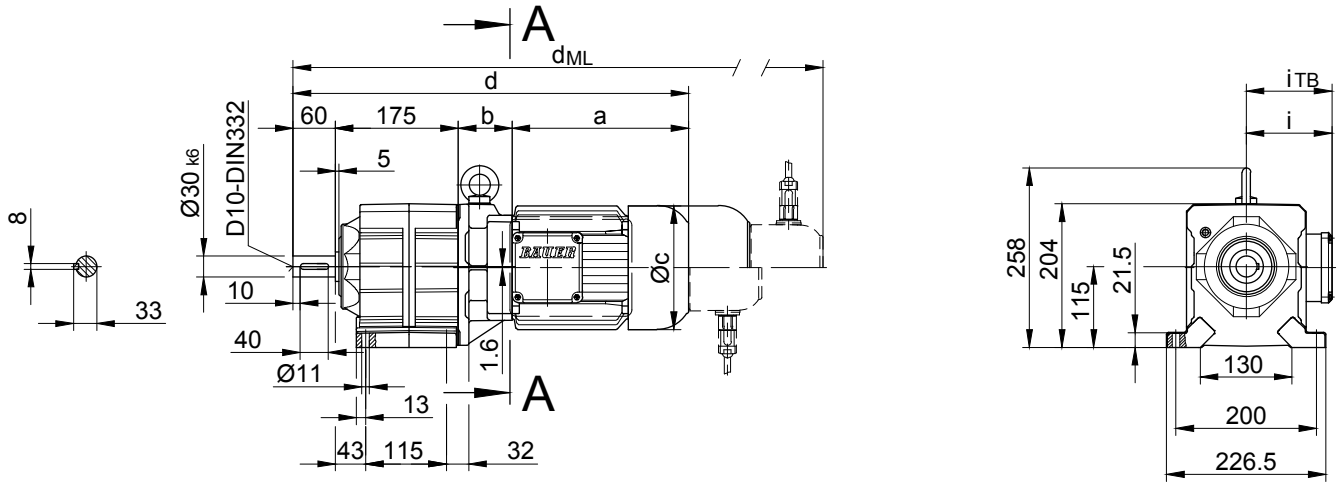
# BG-series helical-geared motors

## Dimension - Standard

### BG30-BG30Z

Foot mounting with clearance holes

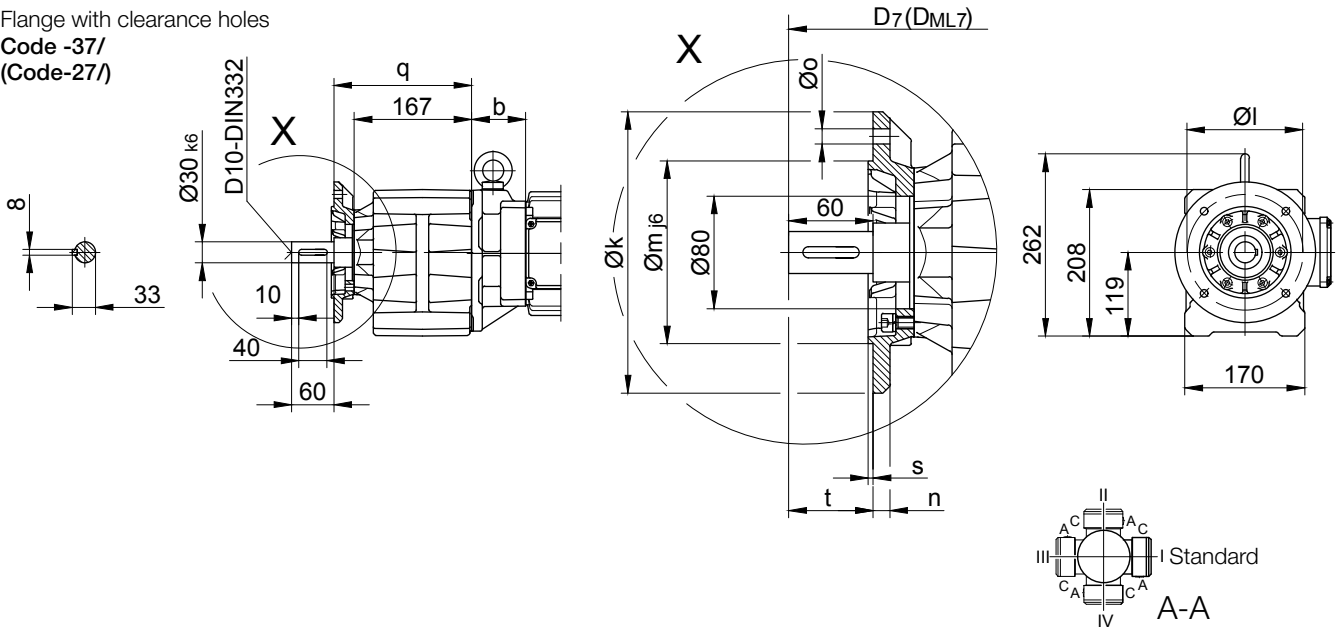
Code -11/



Flange with clearance holes

Code -37/

(Code-27/)



10

Flange Dimensions											
Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG30..	Code -37/	200	165	130	12	11	196	3.5	60.5	d+21	d <sub>ML</sub> +21
BG30..	Code -27/	160	130	110	10	9	189	3.5	67.5	d+21	d <sub>ML</sub> +21

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG30-../S..06 (M, L)	170.5	58	123	463.5	99	119	505.5	566	603.5	-
BG30Z-../S..06 (M, L)	170.5	133.5	123	539	99	119	581	641.5	679	-
BG30-../S..08 (M, L)	199.5	62	156	496.5	114.5	136.5	562.5	608.5	670	-
BG30Z-../S..08 (M, L)	199.5	137.5	156	572	114.5	136.5	638	684	745.5	-
BG30-../S..09 (S, X)	250.5	76.5	176	562	124	157	655	727	759	-
BG30Z-../S..09 (S, X)	250.5	152	176	637.5	124	157	730.5	802.5	834.5	-
BG30-../S..11 (S, M, L)	319	83	218	637	165	176	735	744.5	837	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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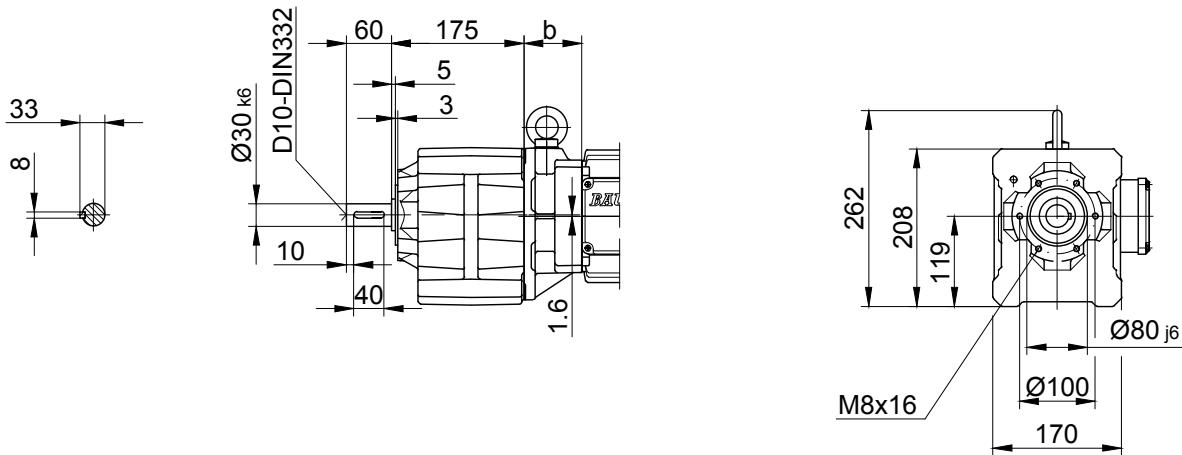
# BG-series helical-geared motors

## Dimension - Standard

### BG30-BG30Z

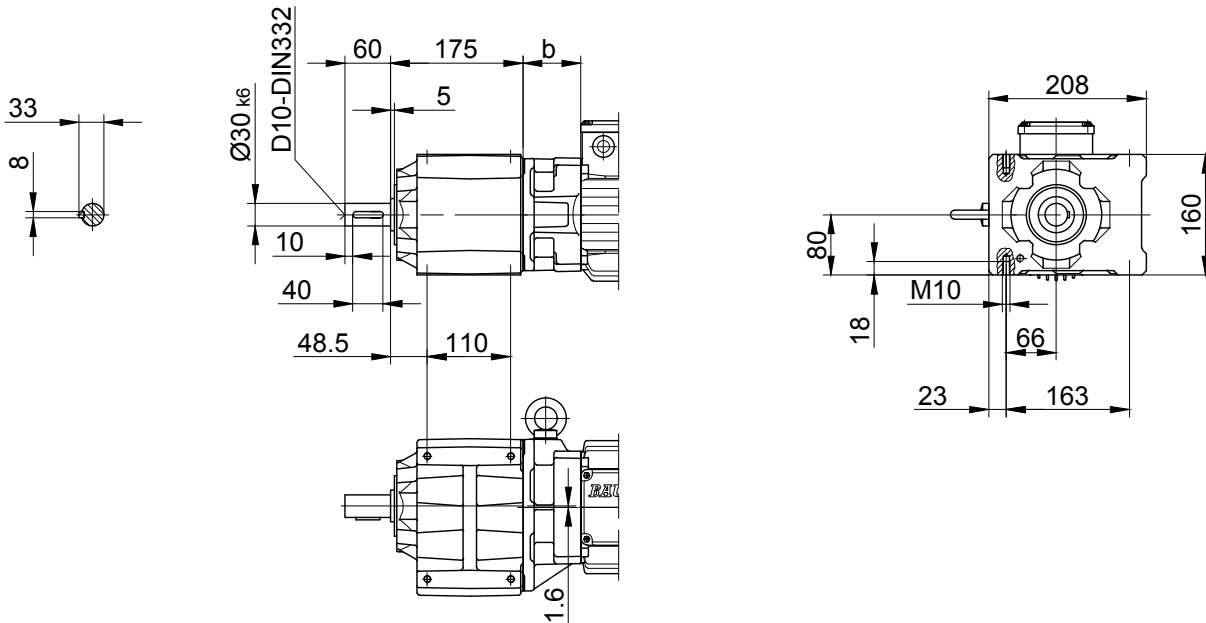
Flange with tapped holes

Code -71/



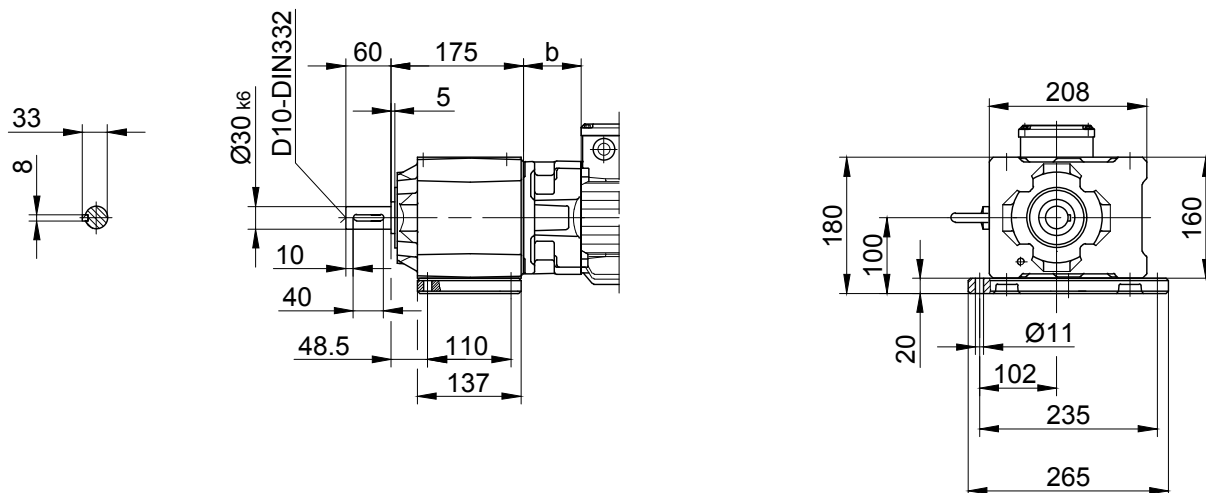
Foot with tapped holes left and right

Code -61LR/



Foot plate left

Code -91L/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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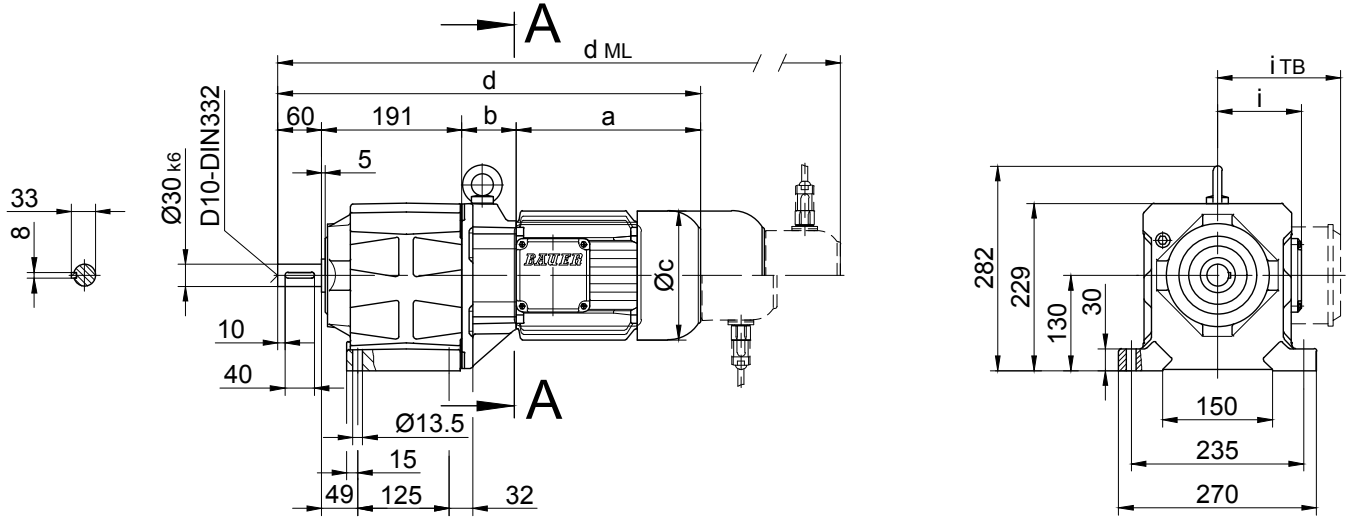
# BG-series helical-geared motors

## Dimension - Standard

### BG40-BG40Z

Foot mounting with clearance holes

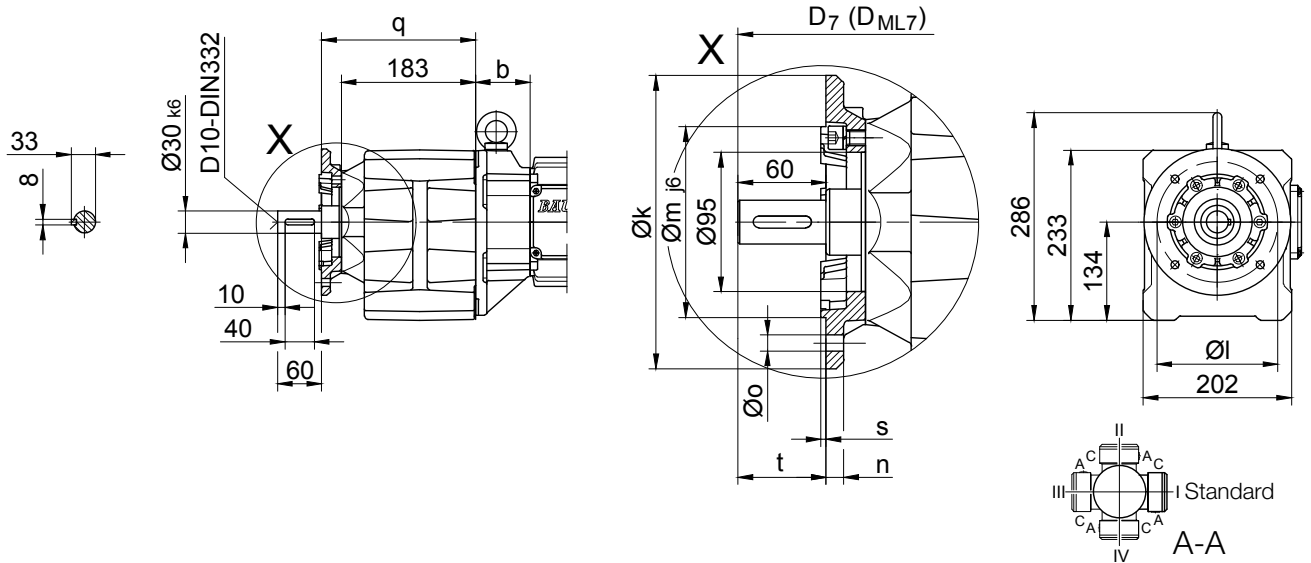
Code -11/



Flange with clearance holes

Code -37/

(Code-47/)



10

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG40..	Code -37/	200	165	130	12	11	210	3.5	61	d+19	d <sub>ML</sub> +19
BG40..	Code -47/	250	215	180	16	13.5	219	4	52	d+19	d <sub>ML</sub> +19

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG40Z-../S..06 (M, L)	170.5	138.5	123	560	99	119	602	662.5	700	-
BG40-../S..08 (M, L)	199.5	60	156	510.5	114.5	136.5	576.5	622.5	684	-
BG40Z-../S..08 (M, L)	199.5	142.5	156	593	114.5	136.5	659	705	766.5	-
BG40-../S..09 (S, X)	250.5	74.5	176	576	124	157	669	683.5	773	-
BG40Z-../S..09 (S, X)	250.5	157	176	658.5	124	157	751.5	766	855.5	-
BG40-../S..11 (S, L)	319	81	218	651	165	176	749	758.5	851	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedpt.com

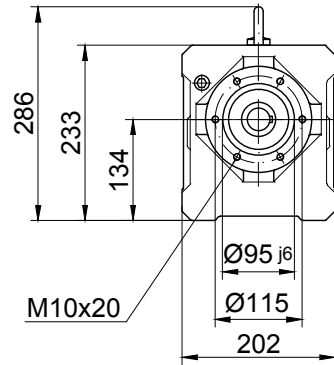
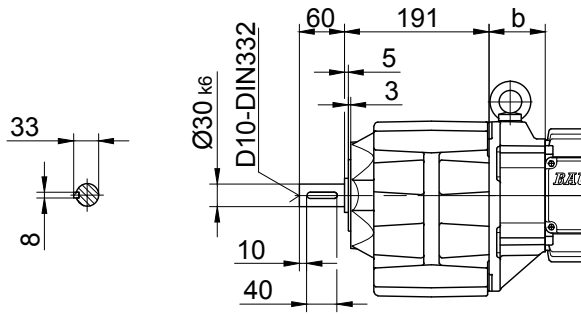
# BG-series helical-geared motors

## Dimension - Standard

### BG40-BG40Z

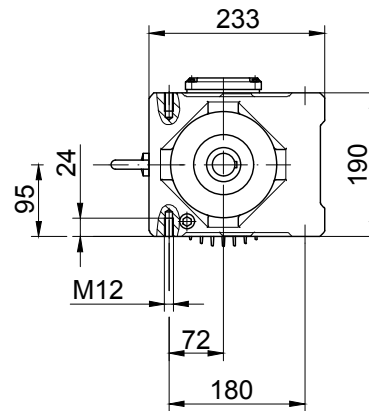
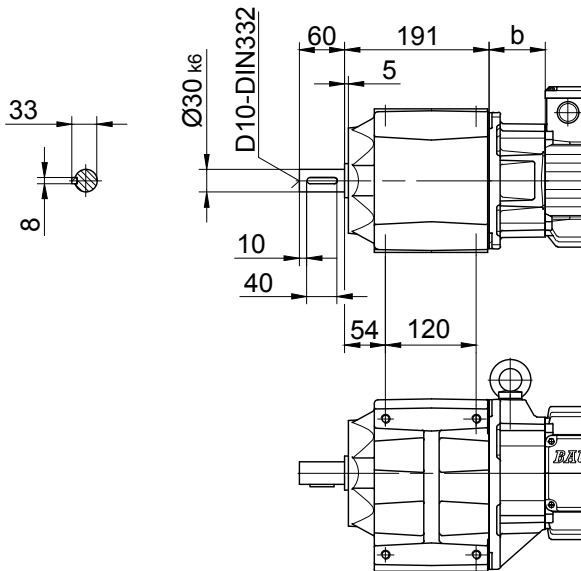
Flange with tapped holes

Code -71/



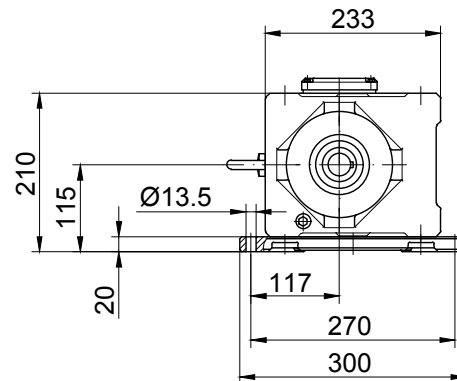
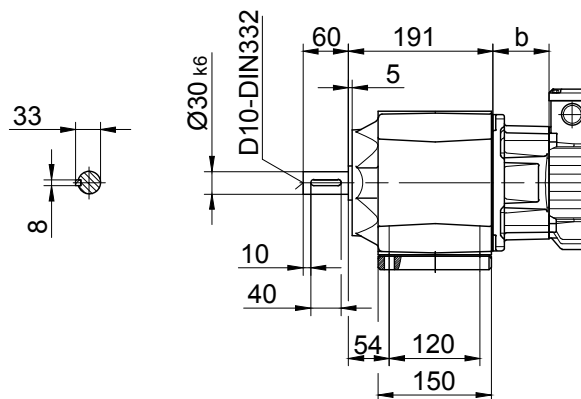
Foot with tapped holes left and right

Code -61LR/



Foot plate left

Code -91L/



10

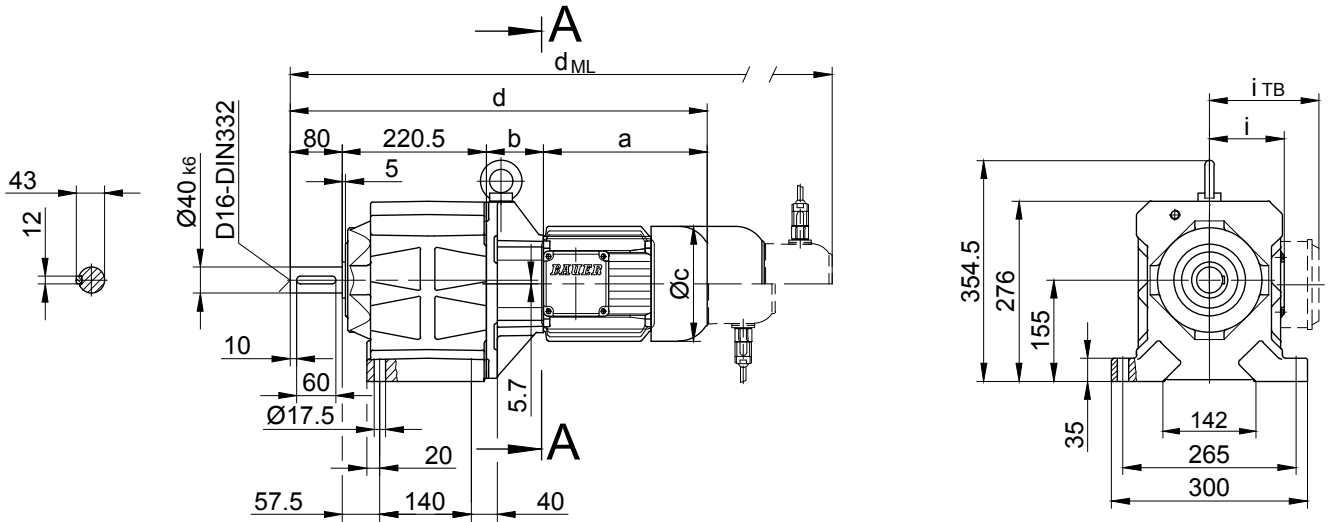
# BG-series helical-geared motors

## Dimension - Standard

### BG50-BG50Z

Foot mounting with clearance holes

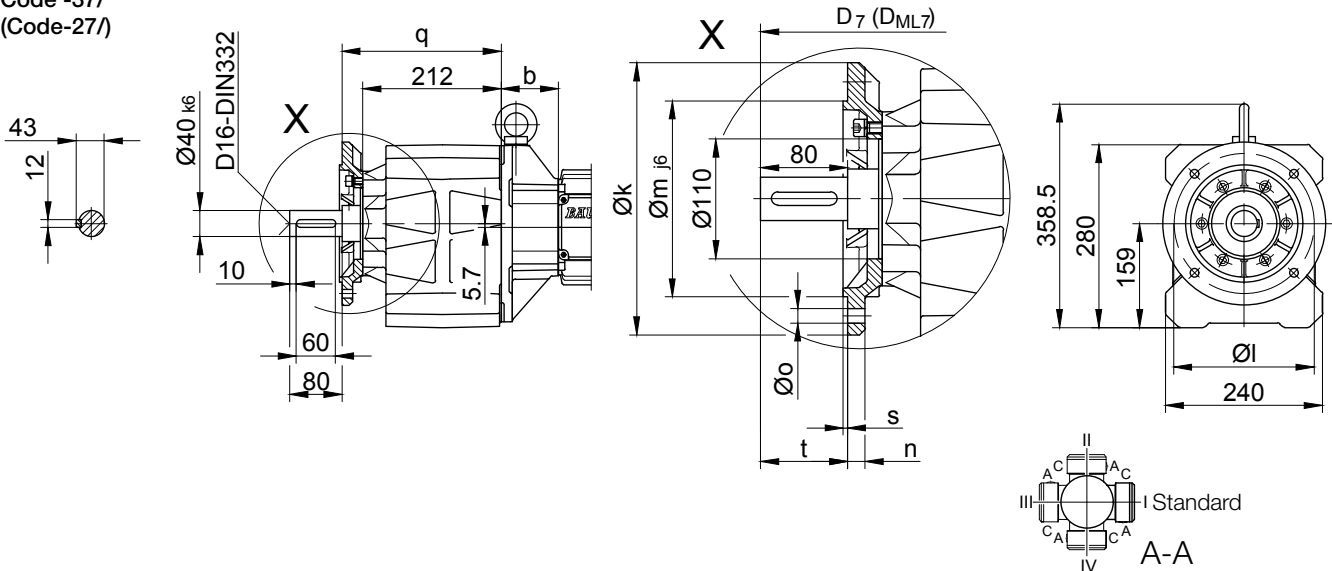
Code -11/



Flange with clearance holes

Code -37/

(Code-27/)



Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG50..	Code -37/	250	215	180	16	13.5	244	4	80.5	d+23.5	d <sub>ML</sub> +23.5
BG50..	Code -27/	200	165	130	12	11	241	3.5	83.5	d+23.5	d <sub>ML</sub> +23.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG50Z-../S..06 (M, L)	170.5	155	123	626	99	119	668	728.5	766	-
BG50-../S..08 (M, L)	199.5	73	156	573	114.5	136.5	639	685	746.5	-
BG50Z-../S..08 (M, L)	199.5	159	156	659	114.5	136.5	725	771	832.5	-
BG50-../S..09 (S, X)	250.5	87.5	176	638.5	124	157	731.5	746	835.5	-
BG50Z-../S..09 (S, X)	250.5	173.5	176	724.5	124	157	817.5	832	921.5	-
BG50-../S..11 (S, M, L)	319	94	218	713.5	165	176	811.5	821	913.5	-

Dimensions in millimetres (mm)

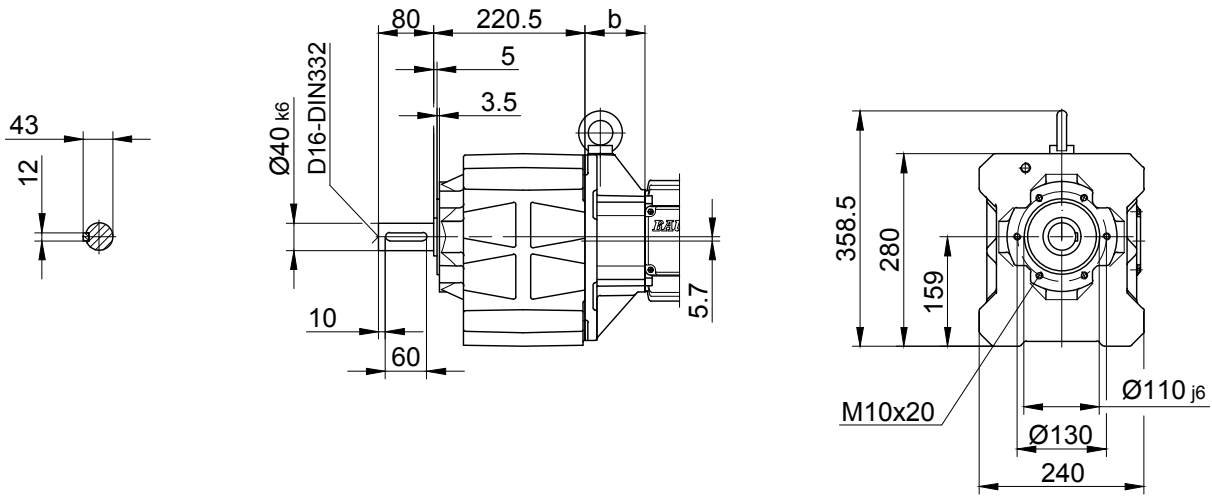
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedpt.com

**BG-series helical-geared motors****Dimension - Standard****BG50-BG50Z**

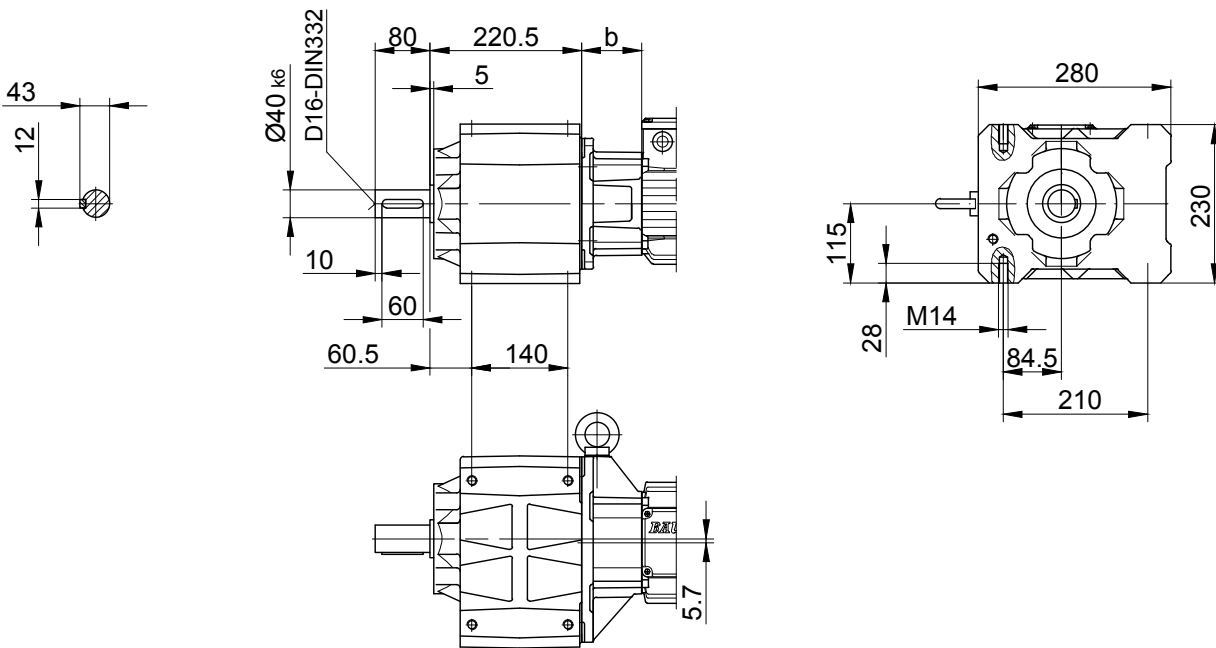
Flange with tapped holes

Code -71/



Foot with tapped holes left and right

Code -61LR/



10



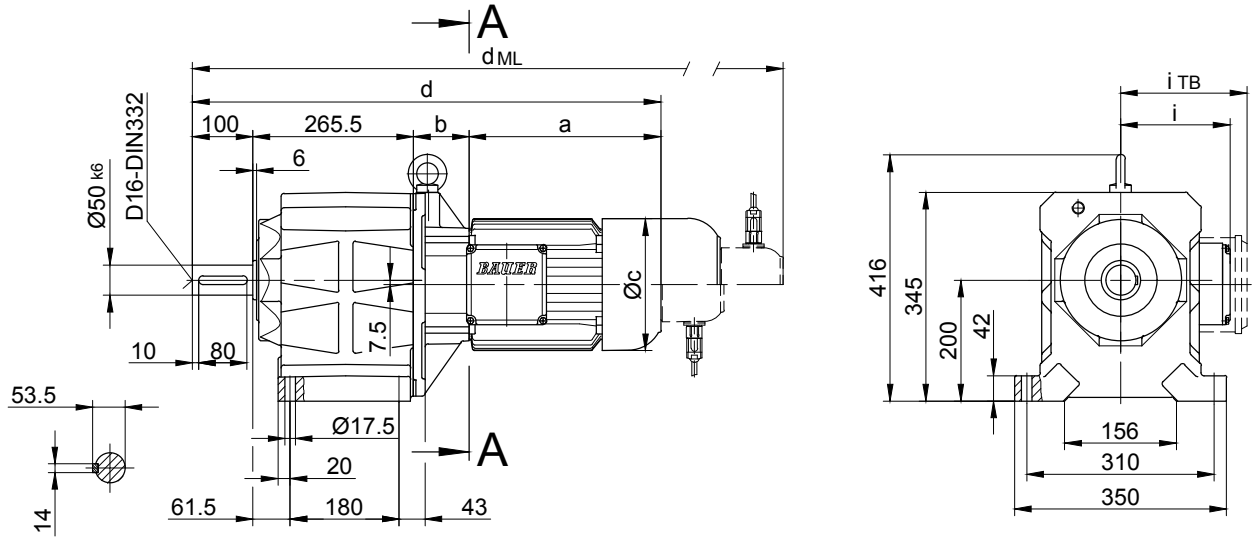
# BG-series helical-geared motors

## Dimension - Standard

### BG60-BG60Z

Foot mounting with clearance holes

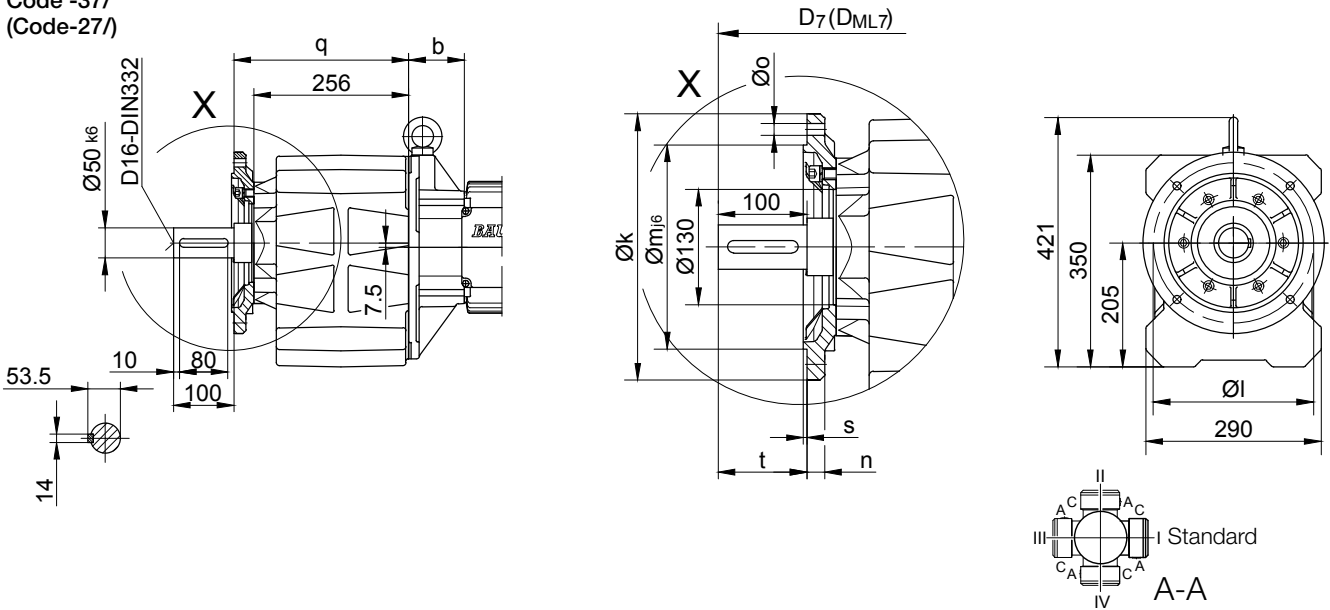
Code -11/



Flange with clearance holes

Code -37/

(Code-27/)



10

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG60..	Code -37/	300	265	230	20	13.5	289	4	100.5	d+23.5	d <sub>ML</sub> +23.5
BG60..	Code -27/	250	215	180	16	13.5	286	4	103.5	d+23.5	d <sub>ML</sub> +23.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG60Z-../S..08 (M, L)	199.5	181	156	746	114.5	136.5	812	858	919.5	-
BG60-../S..09 (S, X)	250.5	85.5	176	701.5	124	157	794.5	809	898.5	-
BG60Z-../S..09 (S, X)	250.5	195.5	176	811.5	124	157	904.5	919	1008.5	-
BG60-../S..11 (S, M, L)	319	92	218	776.5	165	176	874.5	884	976.5	-
BG60Z-../S..11 (S, M, L)	319	202	218	886.5	165	176	984.5	994	1086.5	-

Dimensions in millimetres (mm)

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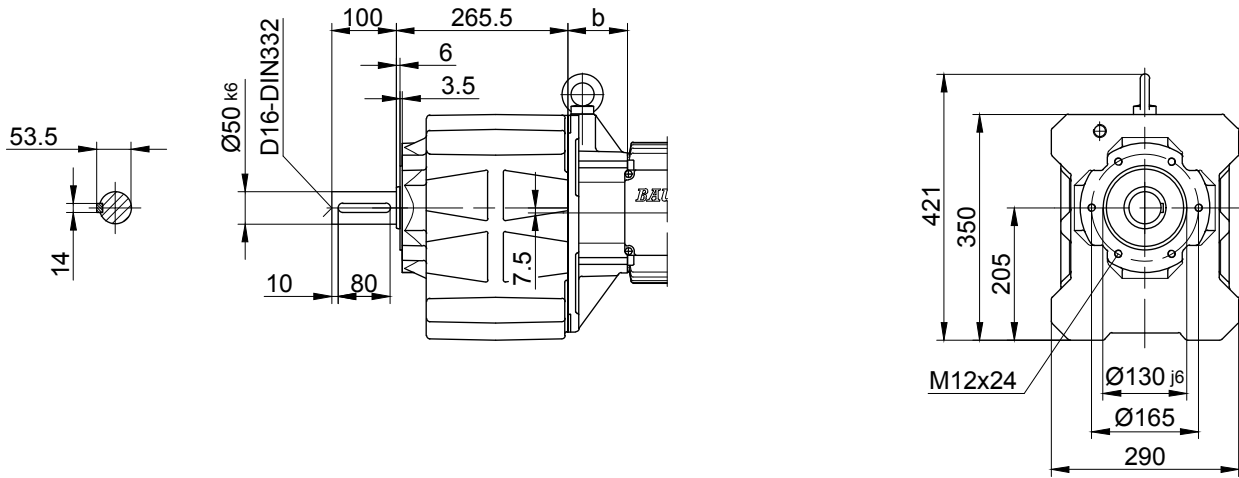
# BG-series helical-geared motors

## Dimension - Standard

### BG60-BG60Z

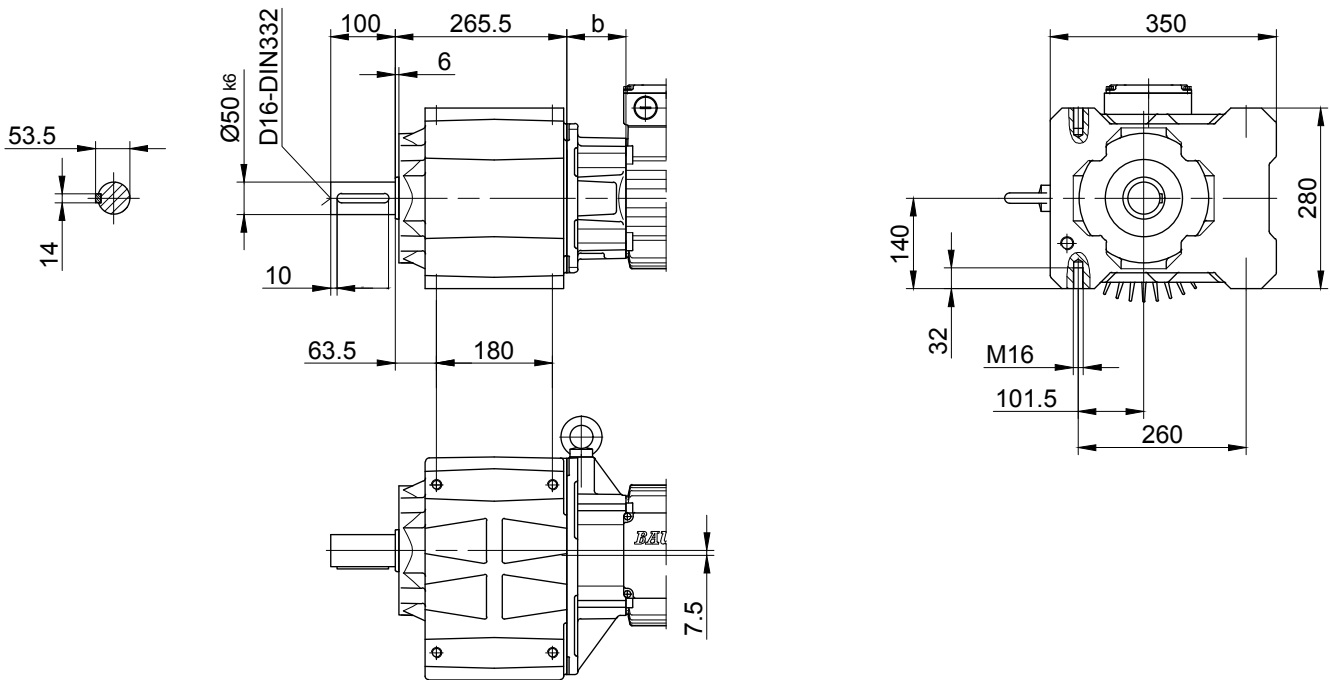
Flange with tapped holes

Code -71/



Foot with tapped holes left and right

Code -61LR/



10

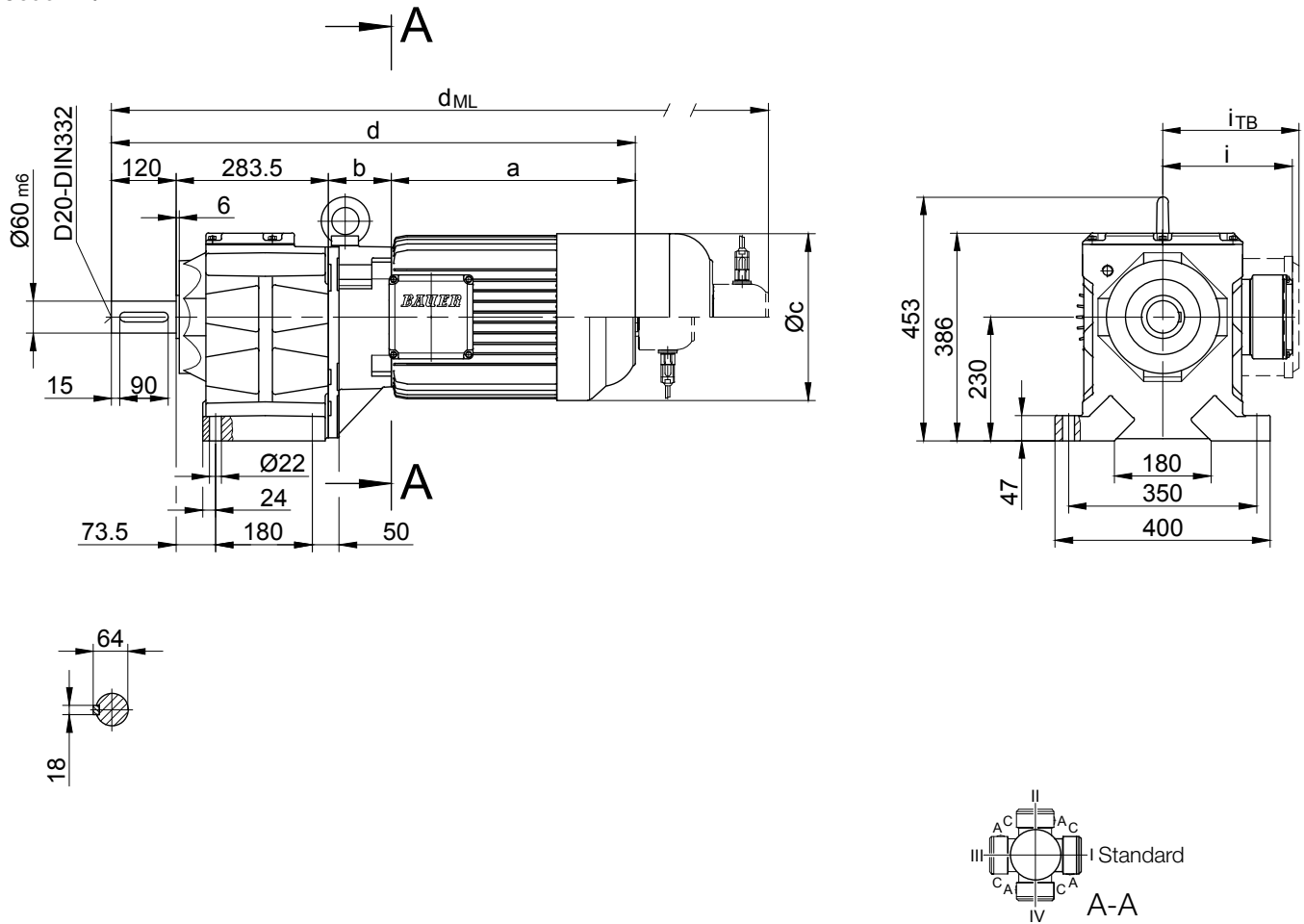
# BG-series helical-geared motors

## Dimension - Standard

### BG70 - BG70Z

Foot mounting with clearance holes

Code -11/



10

Flange Dimensions											
Type	Design	k	l	m	n	o	q	s	t	$D_7$	$D_{ML7}$
BG70..	Code -37/	350	300	250	20	17.5	314	5	120.5	$d+30.5$	$d_{ML}+30.5$
BG70..	Code -27/	300	265	230	20	13.5	322	4	113.5	$d+30.5$	$d_{ML}+30.5$

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						$i_{TB}$	Brake	Encoder	Brake with Encoder	Back Stop
							$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$
BG70Z-../S..08 (M, L)	199.5	202	156	805	114.5	136.5	871	917	978.5	-
BG70-../S..09 (S, X)	250.5	83.5	176	737.5	124	157	830.5	845	934.5	-
BG70Z-../S..09 (S, X)	250.5	216.5	176	870.5	124	157	963.5	978	1067.5	-
BG70-../S..11 (S, M, L)	319	90	218	812.5	165	176	910.5	920	1012.5	-
BG70Z-../S..11 (S, M, L)	319	223	218	945.5	165	176	1043.5	1053	1145.5	-

Dimensions in millimetres (mm)

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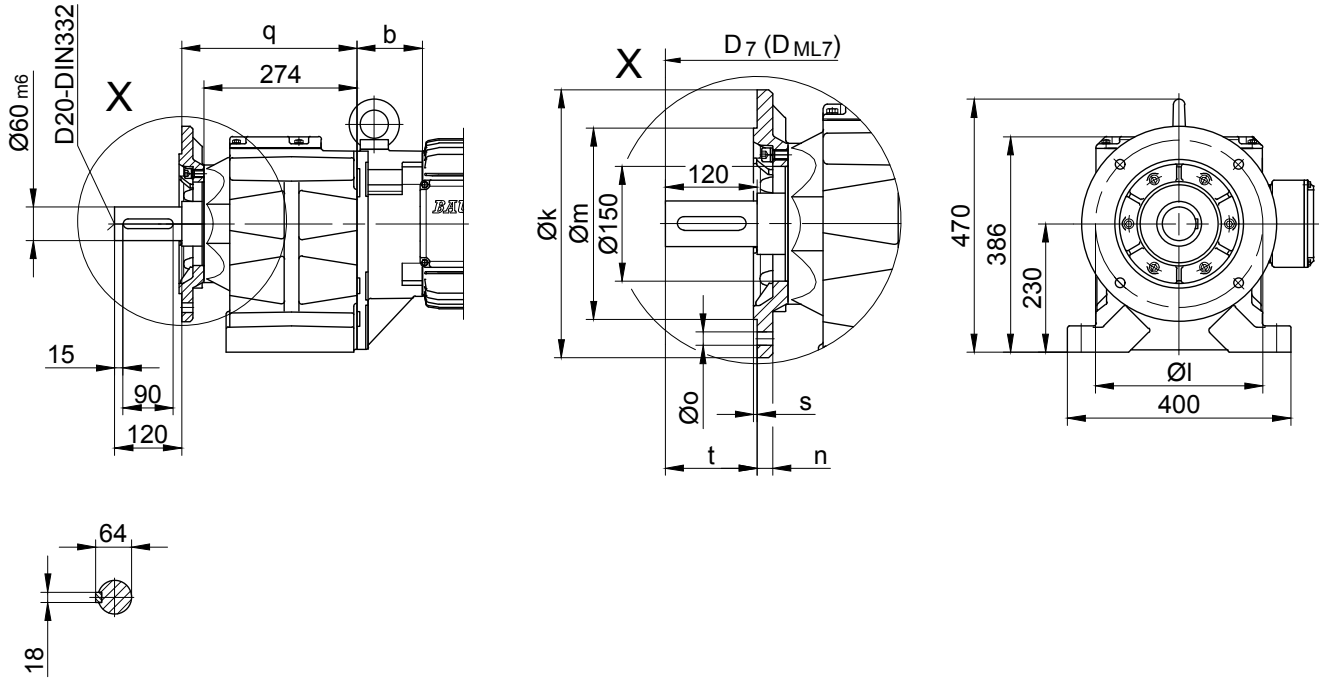
# BG-series helical-geared motors

## Dimension - Standard

### BG70 - BG70Z

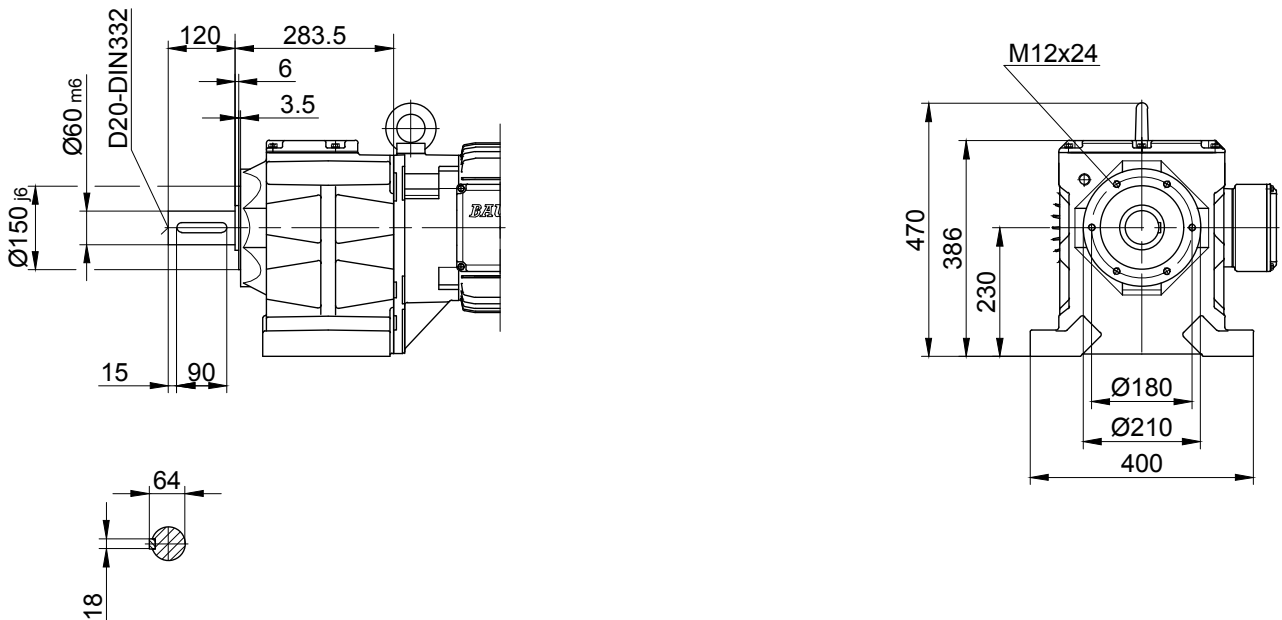
Flange with clearance holes

Code -37/  
(Code -27/)



Flange with tapped holes

Code -71/



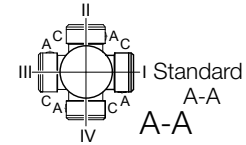
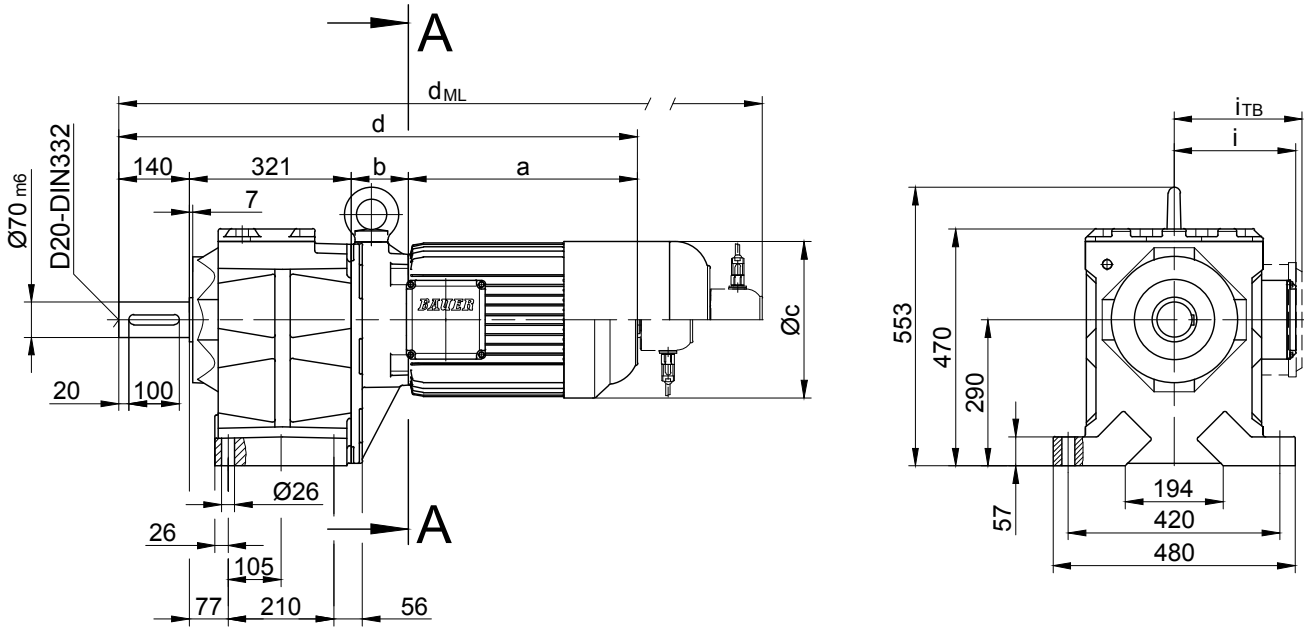
# BG-series helical-geared motors

## Dimension - Standard

### BG80-BG80Z

Foot mounting with clearance holes

Code -11/



10

Flange Dimensions											
Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG80..	Code -37/	400	350	300	20	4 x 17.5	345	5	141	d+24	d <sub>ML</sub> +24
BG80..	Code -27/	350	300	250	20	4 x 17.5	345	5	141	d+24	d <sub>ML</sub> +24
BG80..	Code -47/	450	400	350	22	8 x 17.5	355	5	131	d+24	d <sub>ML</sub> +24

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG80Z-../S..09 (S, X)	250.5	252.5	176	964	124	157	1057	1071.5	1161	-
BG80-../S..11 (S, M, L)	319	87	218	867	165	176	965	974.5	1067	-
BG80Z-../S..11 (S, M, L)	319	259	218	1039	165	176	1137	1146.5	1067	-

Dimensions in millimetres (mm)

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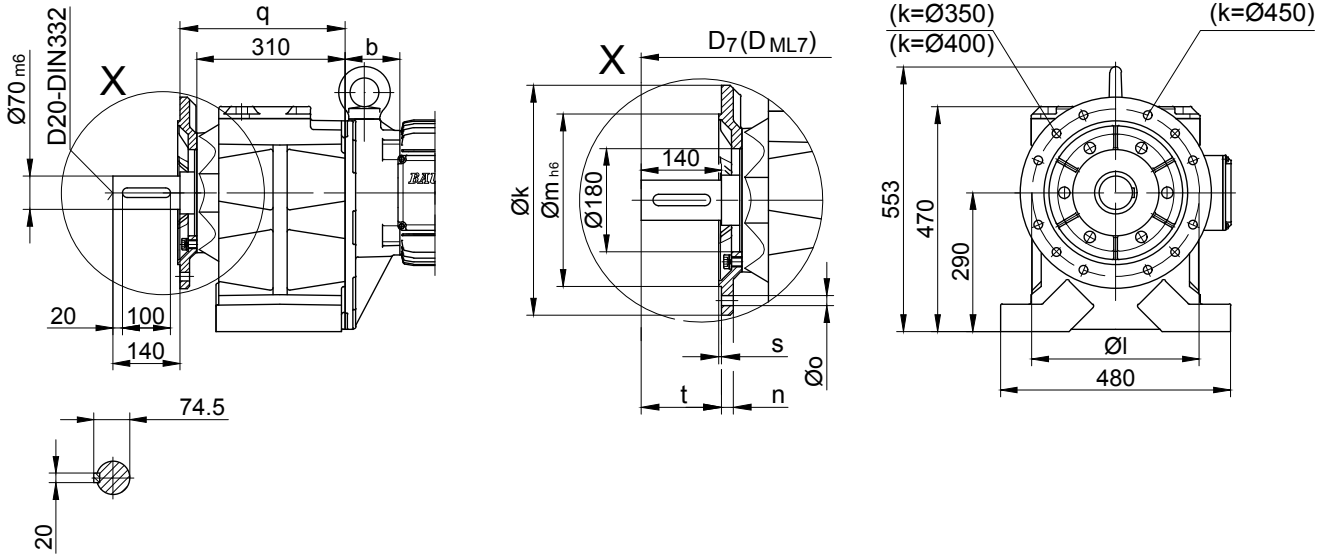
# BG-series helical-geared motors

## Dimension - Standard

### BG80-BG80Z

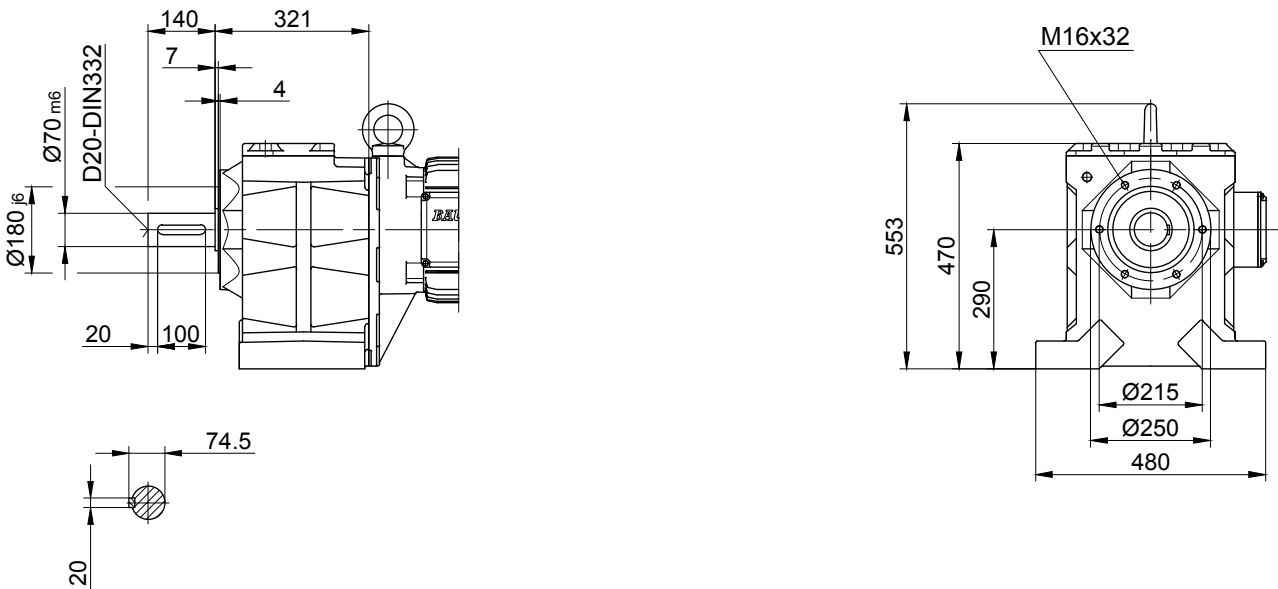
Flange with clearance holes

Code -37/  
(Code -27/  
(Code -47/)



Flange with tapped holes

Code -71/



10



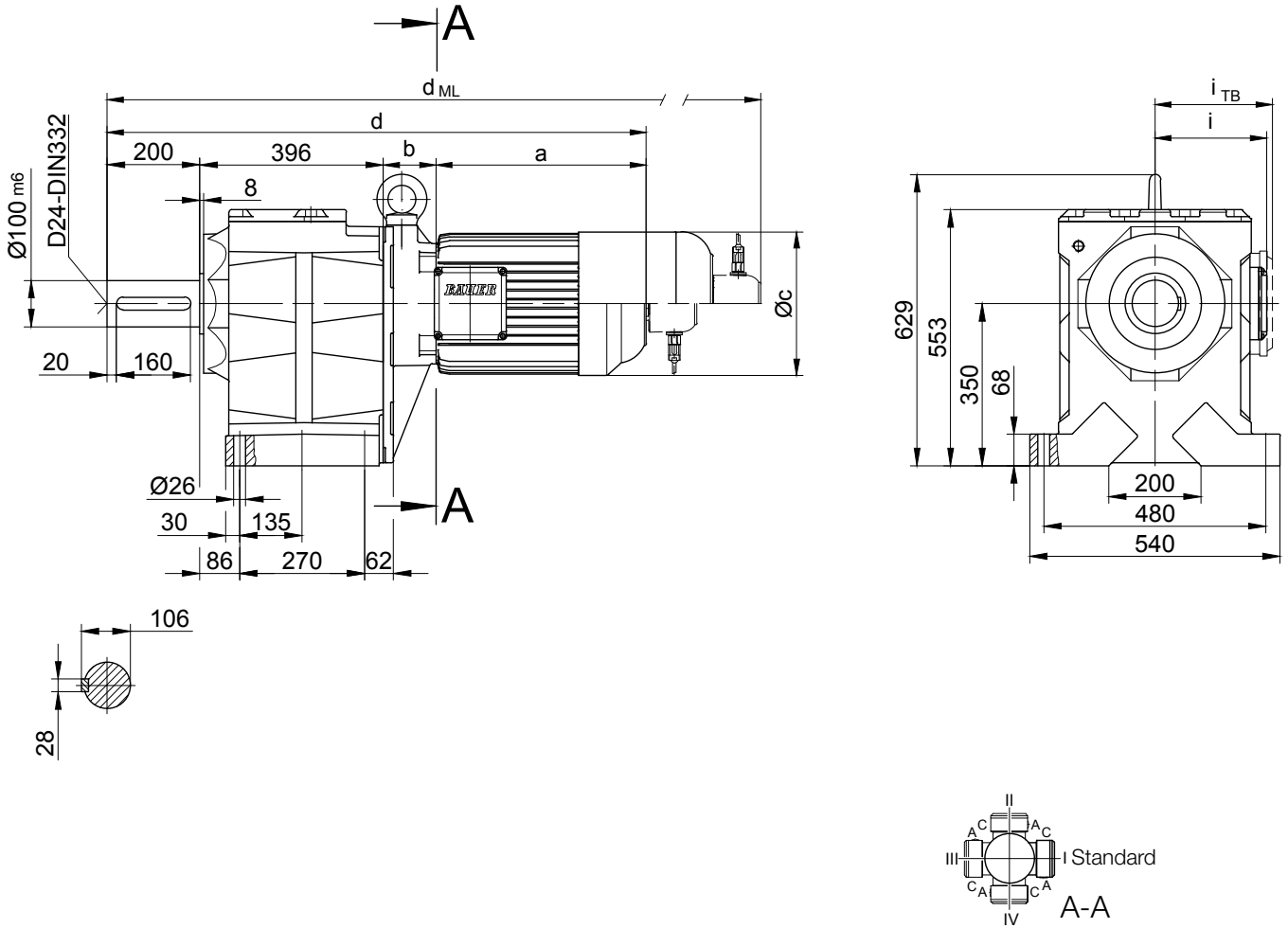
# BG-series helical-geared motors

## Dimension - Standard

### BG90-BG90Z

Foot mounting with clearance holes

Code -11/



10

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG90..	Code -37/	450	400	350	22	17.5	439	5	201	d+43	d <sub>ML</sub> +43
BG90..	Code -47/	550	500	450	22	17.5	444	5	196	d+43	d <sub>ML</sub> +43

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG90Z-../S..09 (S, X)	250.5	267	176	1113.5	124	157	1206.5	1221	1310.5	-
BG90Z-../S..11 (S, M, L)	319	273.5	218	1188.5	165	176	1286.5	1296	1388.5	-

Dimensions in millimetres (mm)

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# BG-series helical-geared motors

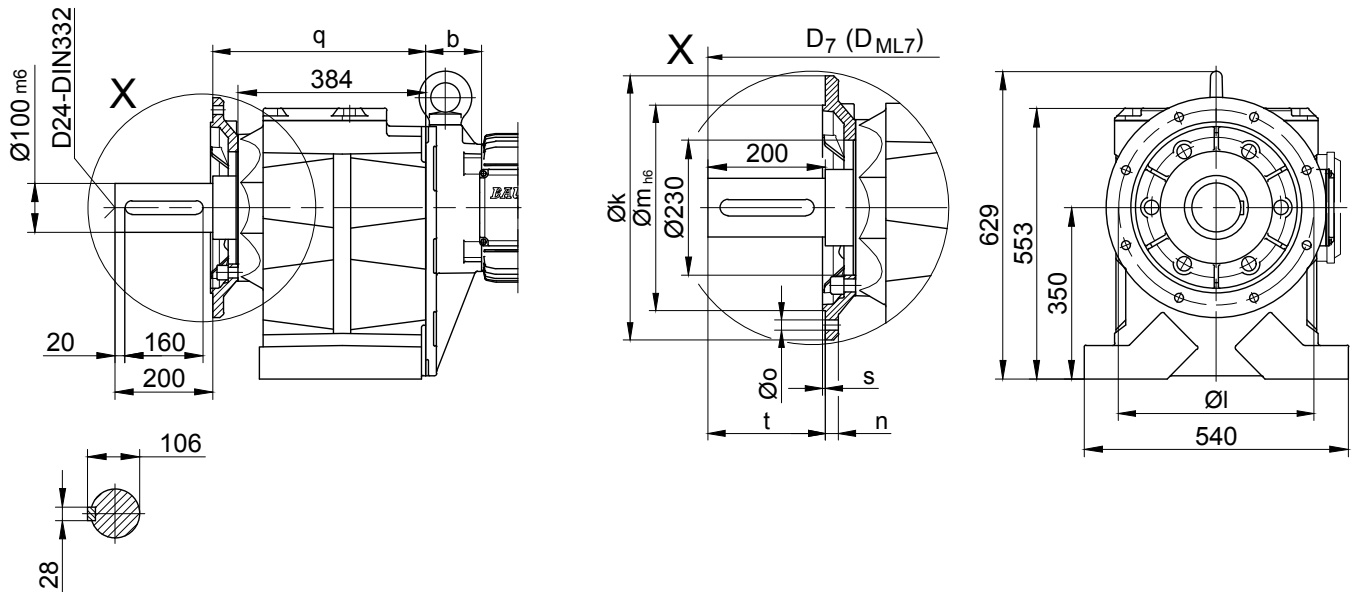
## Dimension - Standard

### BG90-BG90Z

Flange with clearance holes

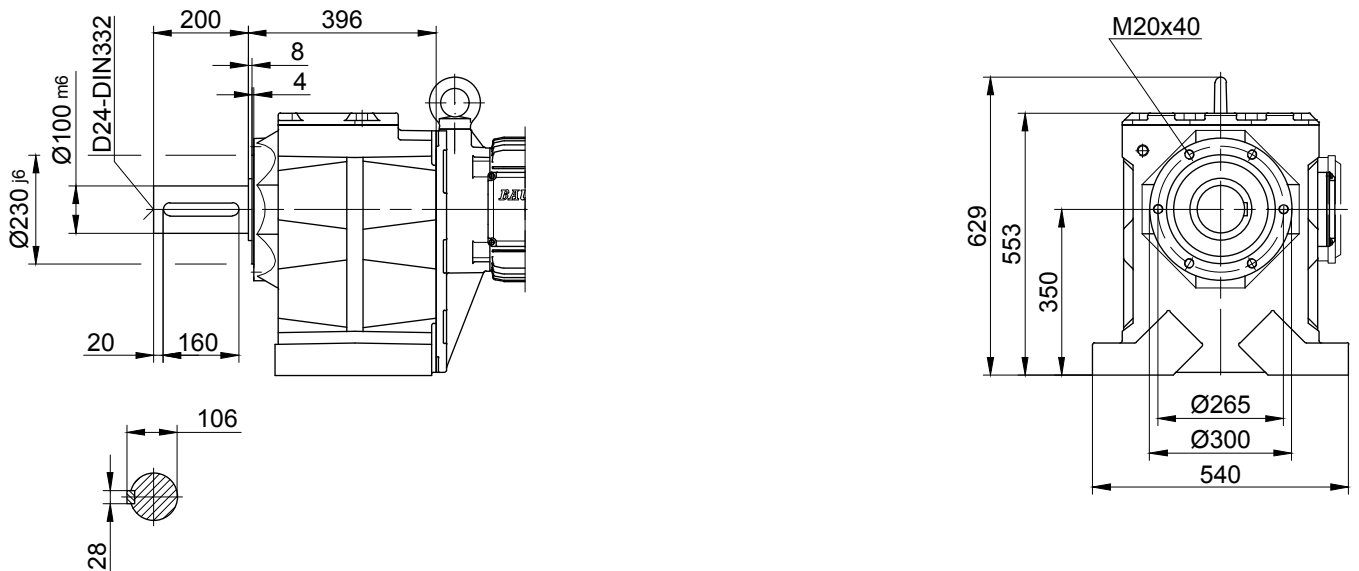
Code -37/

(Code -47/)



Flange with tapped holes

Code -71/



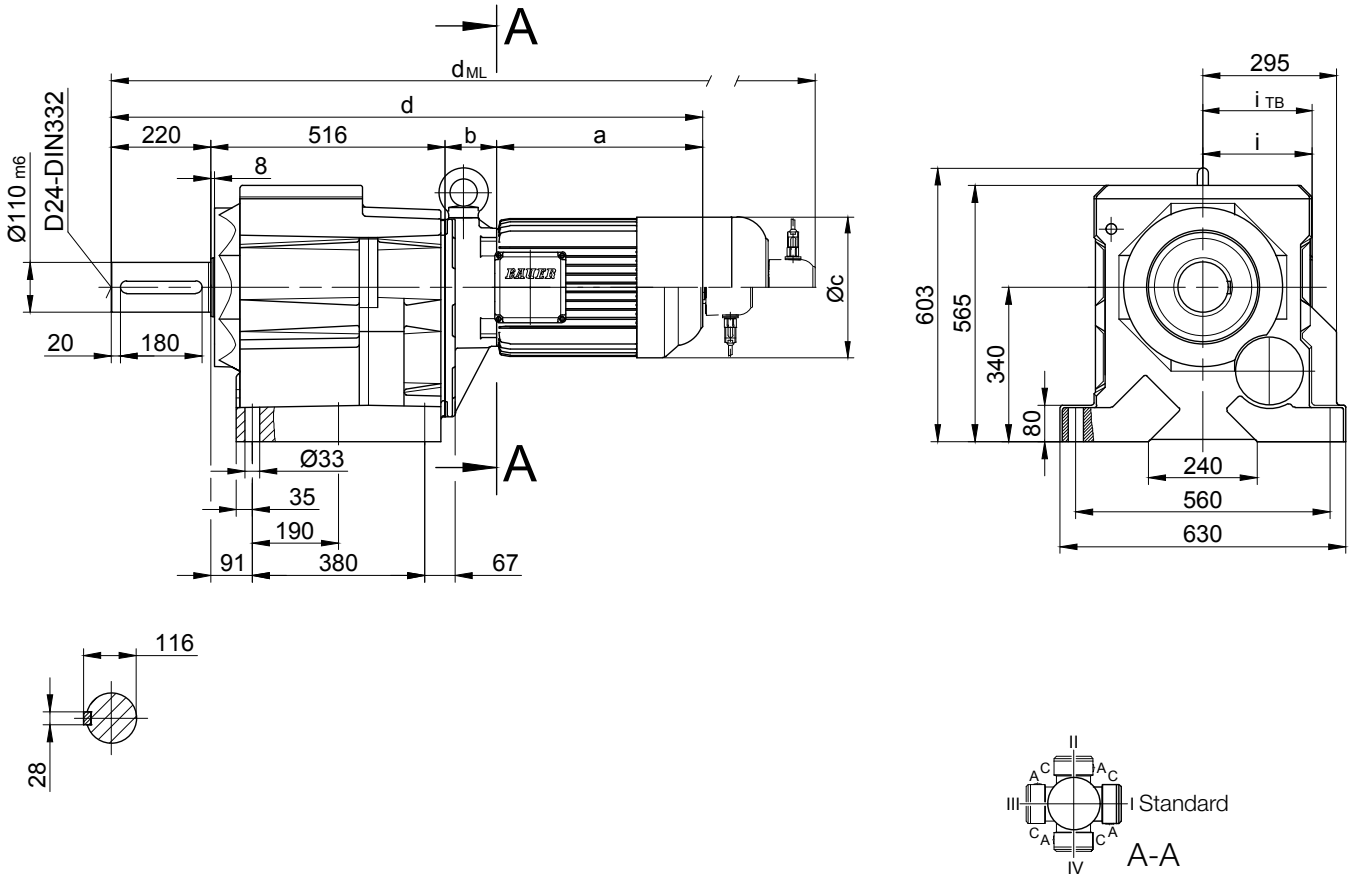
# BG-series helical-geared motors

## Dimension - Standard

### BG100-BG100Z

Foot mounting with clearance holes

Code -11/



10

Flange Dimensions											
Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG100..	Code -37/	550	500	450	22	17.5	558	5	220	d+42	d <sub>ML</sub> +42
BG100..	Code -47/	660	600	550	25	22	552	6	227	d+42	d <sub>ML</sub> +42

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG100Z-../S..09 (S, X)	250.5	252.5	176	1239	124	157	1332	1346.5	1436	-
BG100-../S..11 (S, M, L)	319	87	218	1142	165	176	1240	1249.5	1342	-
BG100Z-../S..11 (S, M, L)	319	259	218	1314	165	176	1412	1421.5	1514	-

Dimensions in millimetres (mm)

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# BG-series helical-geared motors

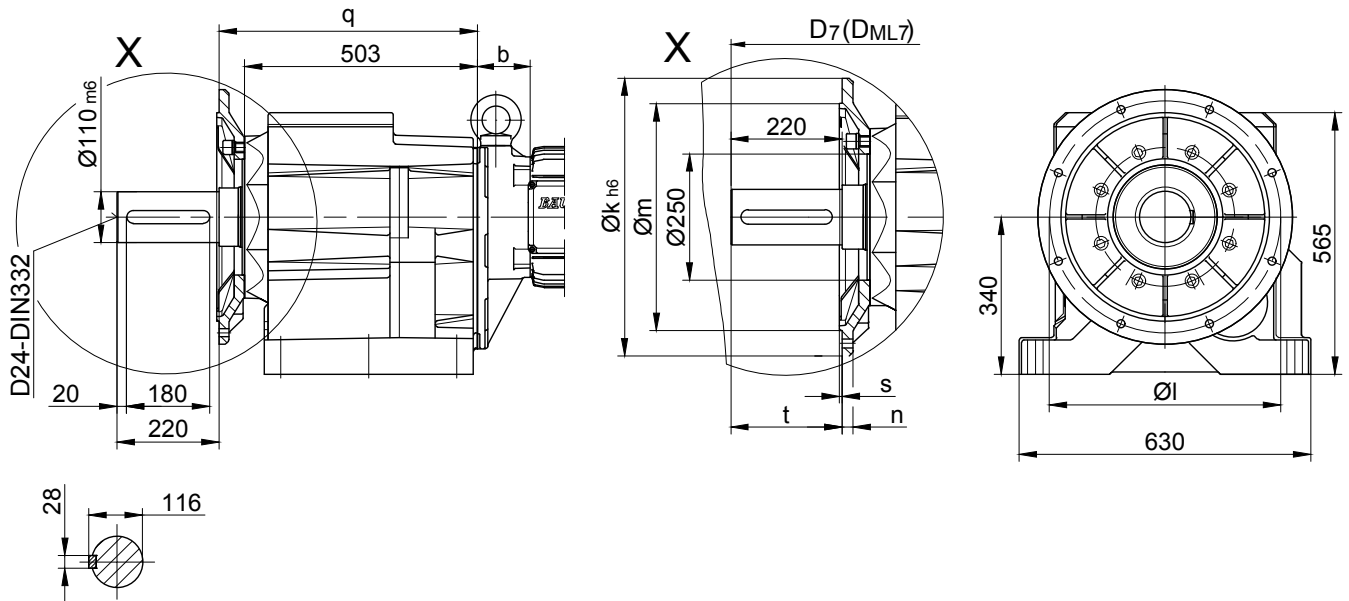
## Dimension - Standard

### BG100-BG100Z

Flange with clearance holes

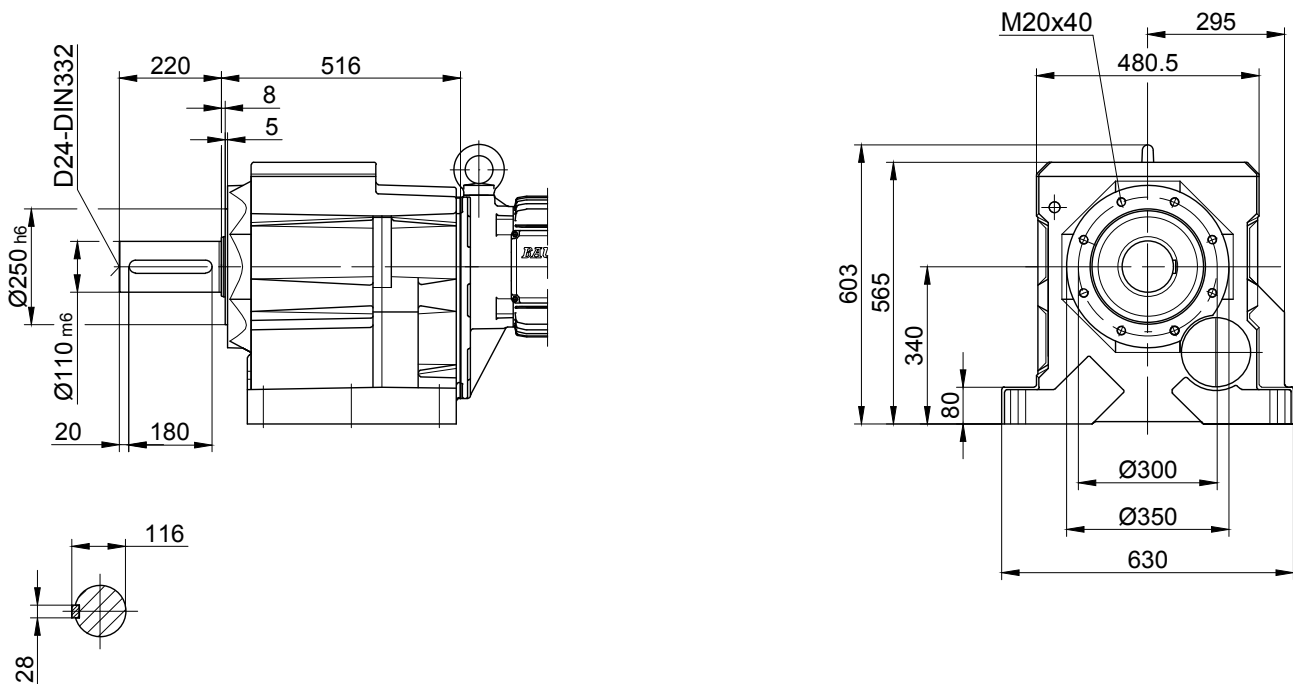
Code -37/

(Code -47/)



Flange with tapped holes

Code -71/



# BG-series helical-gear motors

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10

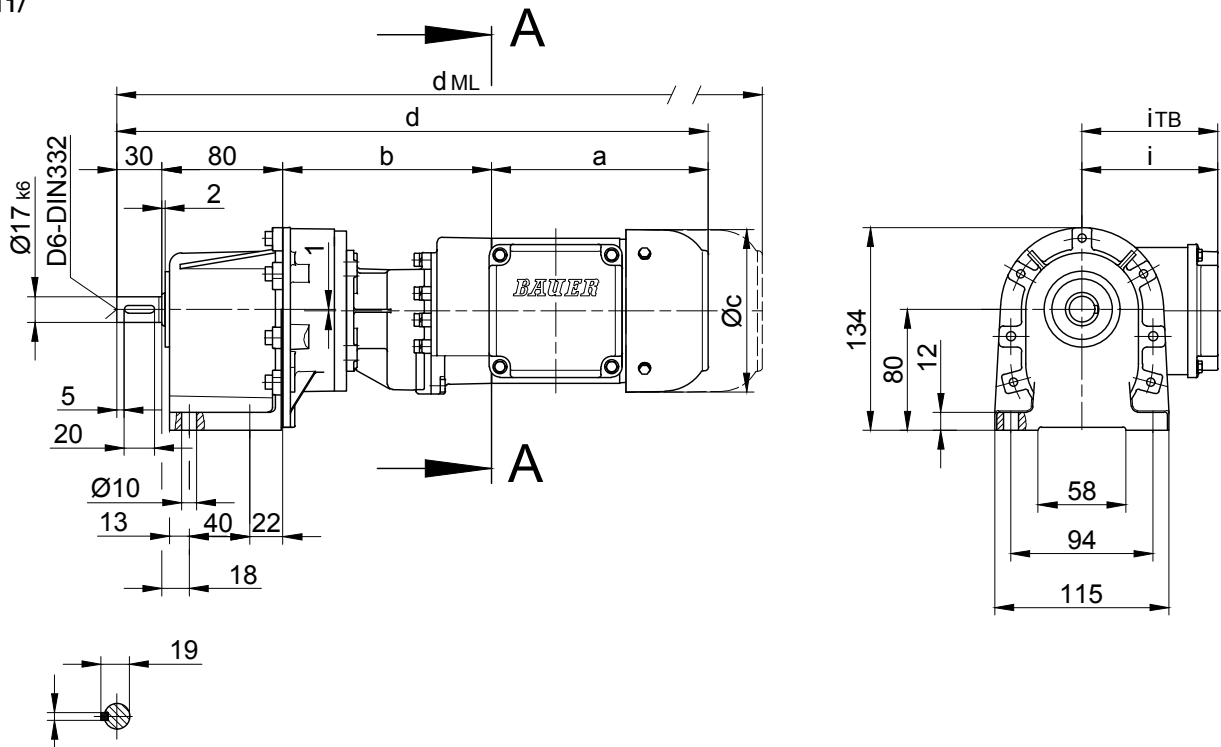
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG06G04

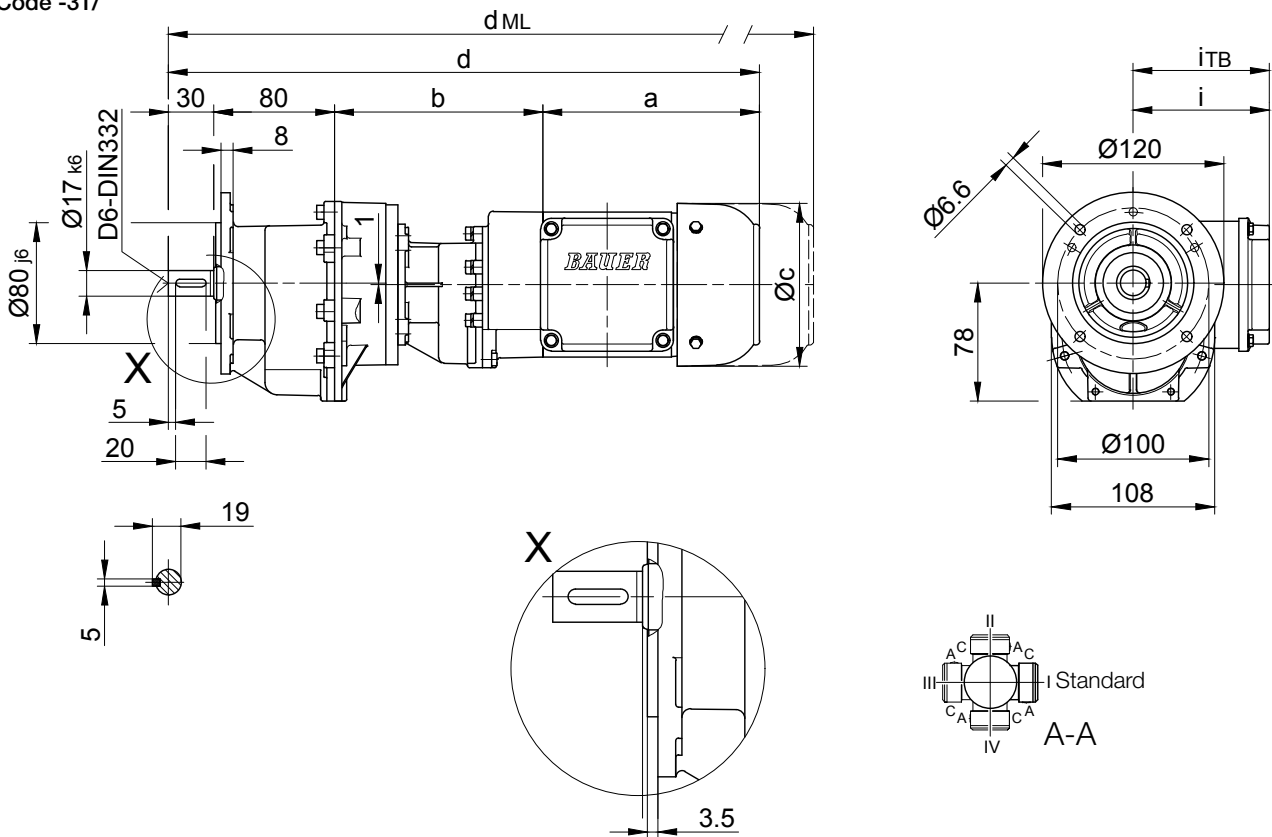
Foot mounting

Code -11/



Flange with clearance holes

Code -31/



10

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG06G04-.../S04S	142.5	134	110.5	386.5	90	112	430	474	517.5	-

Dimensions in millimetres (mm)

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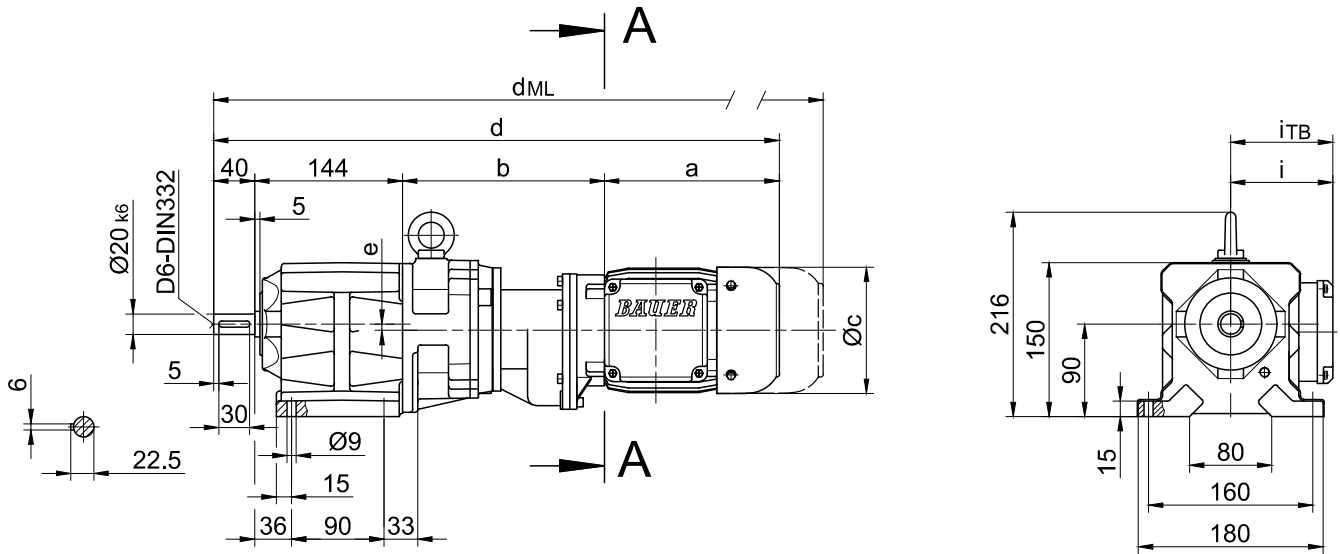
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG10G06

Foot mounting with clearance holes

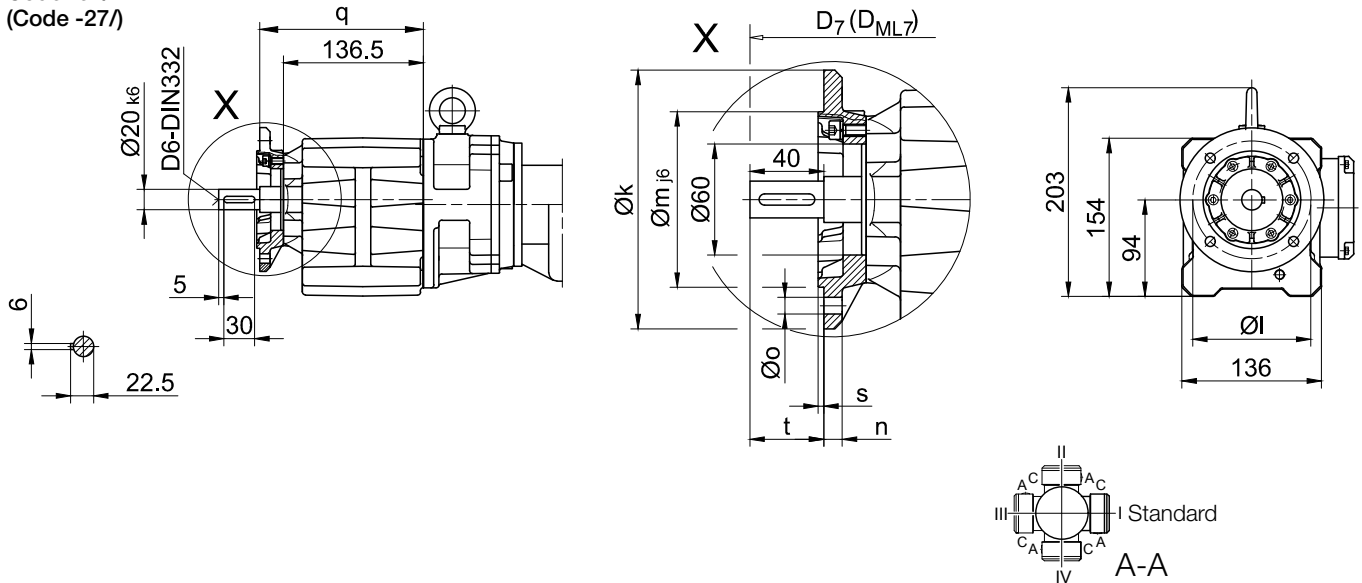
Code -11/



Flange with clearance holes

Code -37/

(Code -27/)



10

#### Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG10..	Code -37V/	140	115	95	10	9	159.5	3	40.5	d+15.5	d <sub>ML</sub> +15.5
BG10..	Code -27V/	120	100	80	8	6.6	154.5	3	45.5	d+15.5	d <sub>ML</sub> +15.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG10G06-../S04S	142.5	195	110.5	521.5	90	112	565	609	652.5	-
BG10G06-../S..06 (M, L)	170.5	197	123	551.5	99	119	593.5	654	691.5	-
BG10G06-../S..08 (M, L)	199.5	241	156	624.5	114.5	136.5	690.5	736.5	798	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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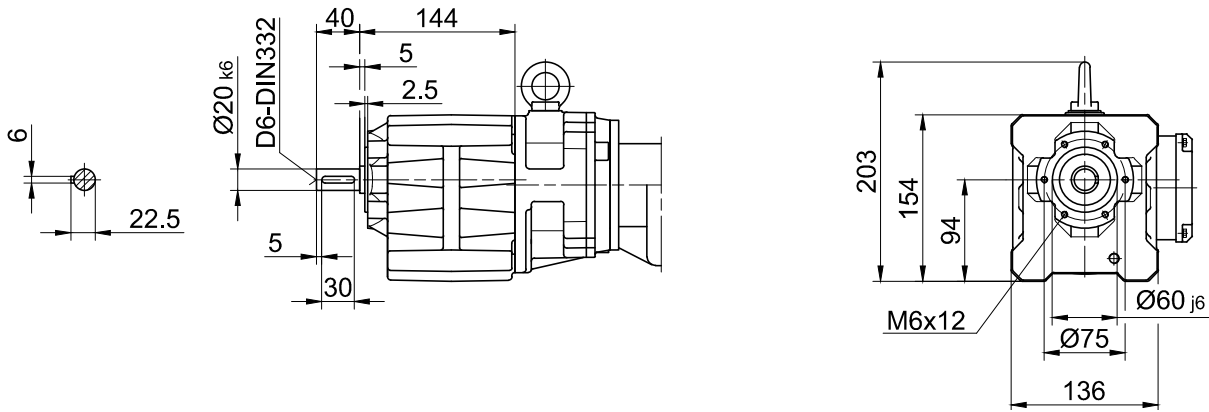
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG10G06

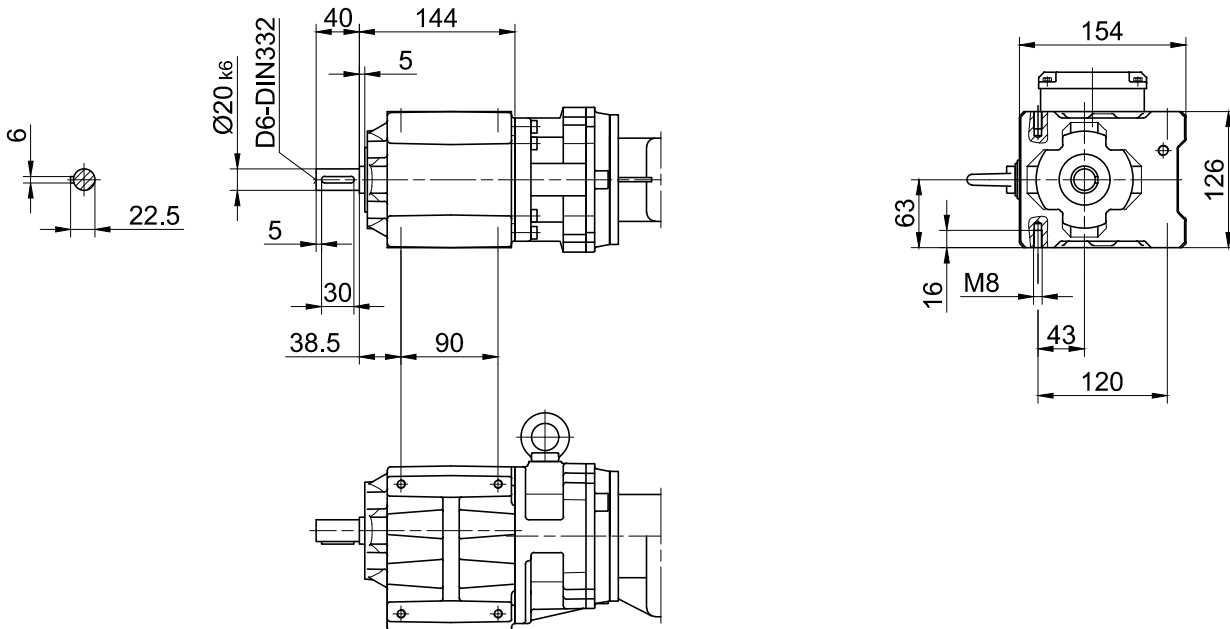
Flange with tapped holes

Code -71/



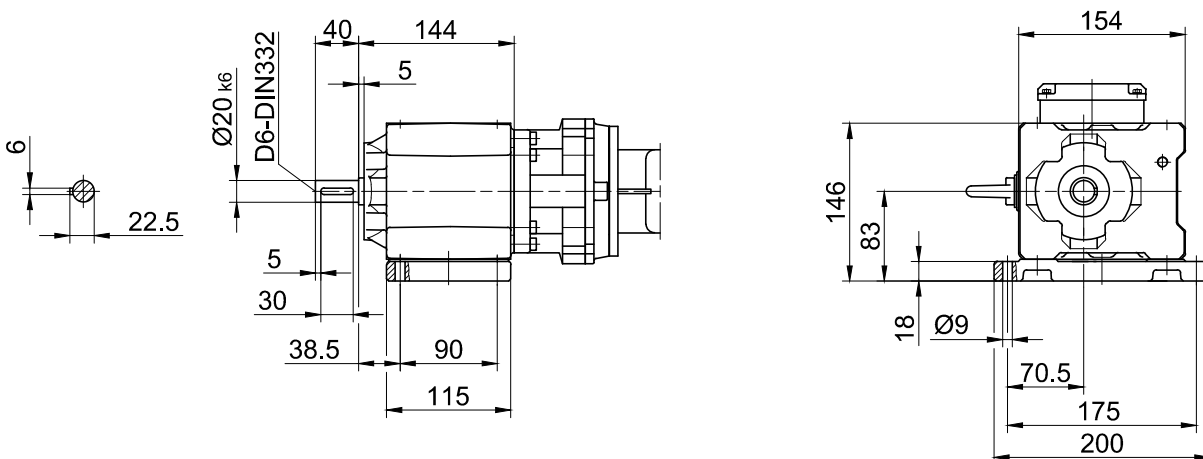
Foot with tapped holes left and right

Code -61LR/



Foot plate left

Code -91L/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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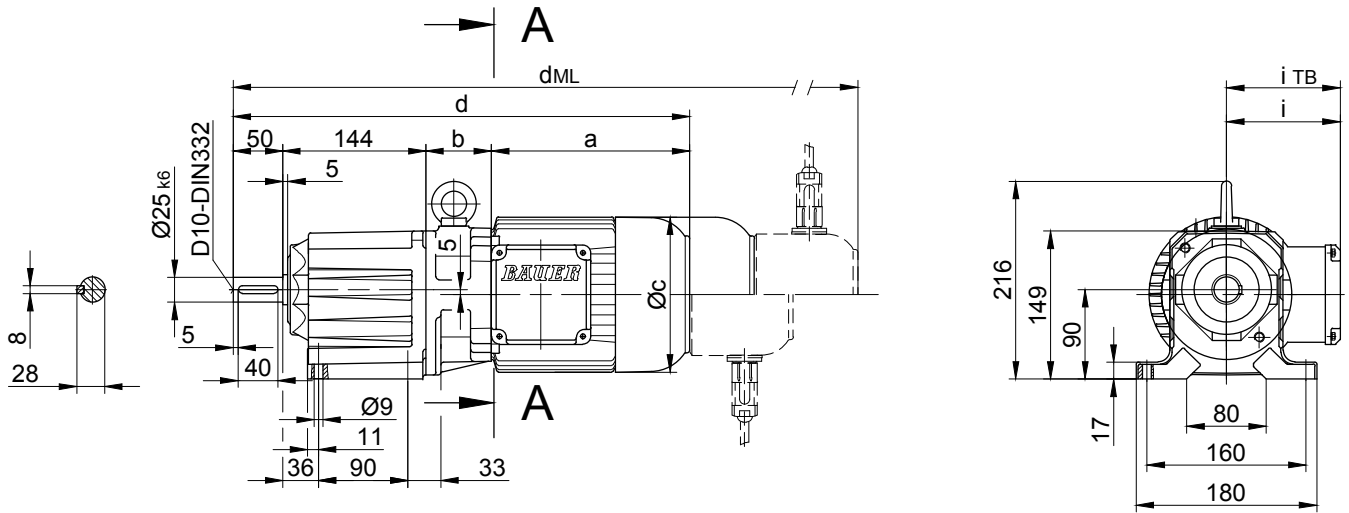
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG10XG06

Foot mounting with clearance holes

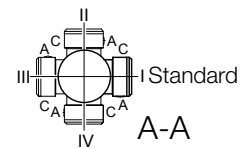
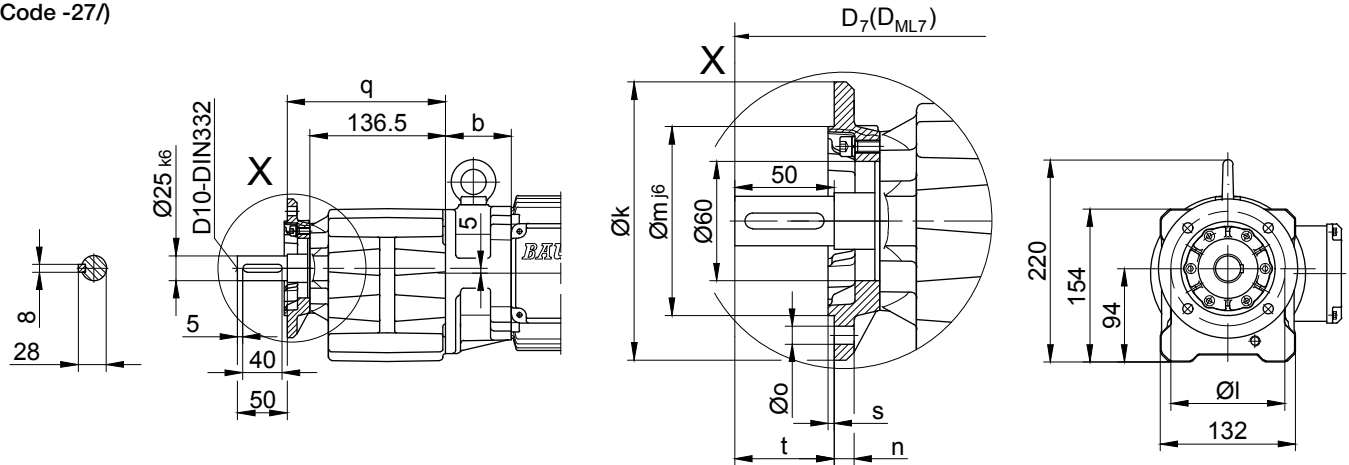
Code -11/



Flange with clearance holes

Code -37/

(Code -27/)



Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG10X..	Code -37V/	140	115	95	10	9	159.5	3	50.5	d+15.5	d <sub>ML</sub> +15.5
BG10X..	Code -27V/	120	100	80	8	6.6	154.5	3	55.5	d+15.5	d <sub>ML</sub> +15.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG10XG06-.../S04S	142.5	195	110.5	531.5	90	112	575	619	662.5	-
BG10XG06-.../S..06 (M, L)	170.5	197	123	561.5	99	119	603.5	664	701.5	-
BG10XG06-.../S..08 (M, L)	199.5	241	156	634.5	114.5	136.5	700.5	746.5	808	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to [info@automatedpt.com](mailto:info@automatedpt.com)

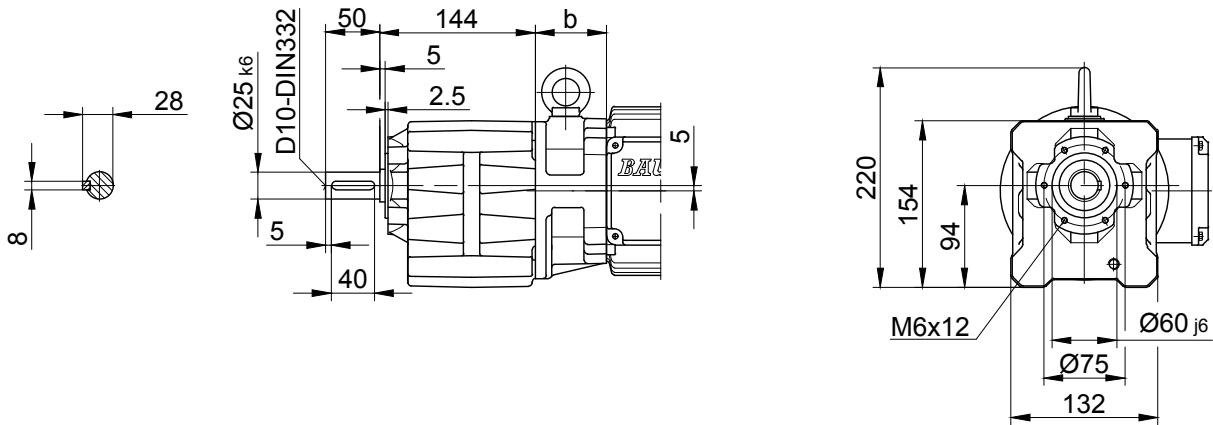
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG10XG06

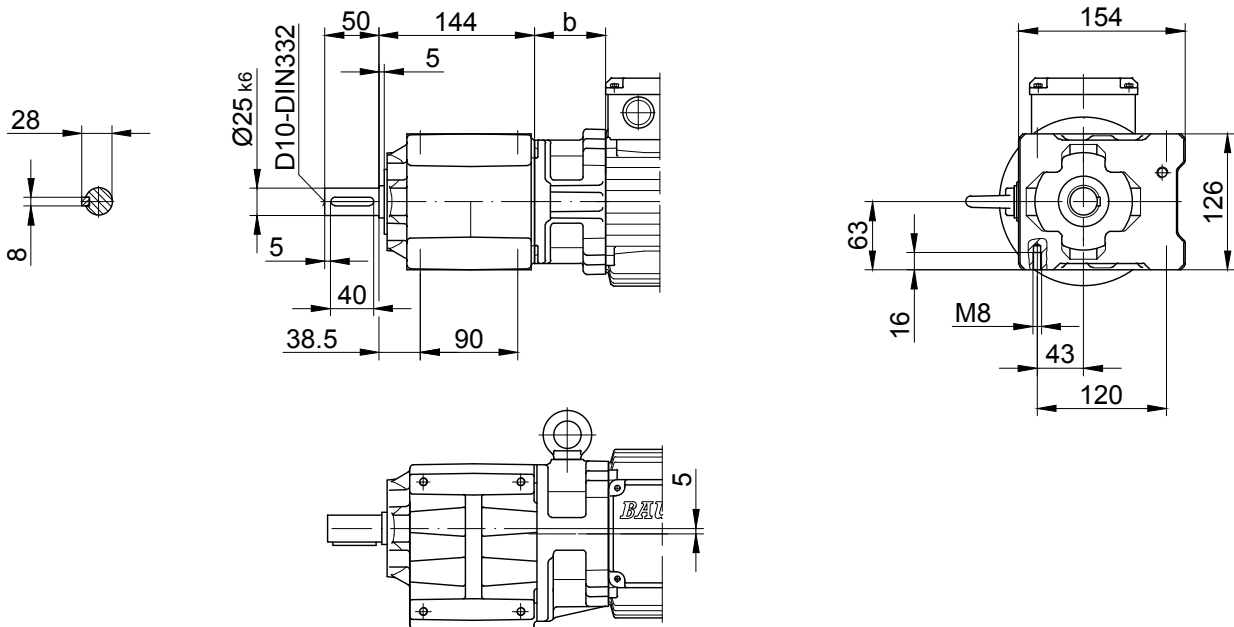
Flange with tapped holes

Code -71/



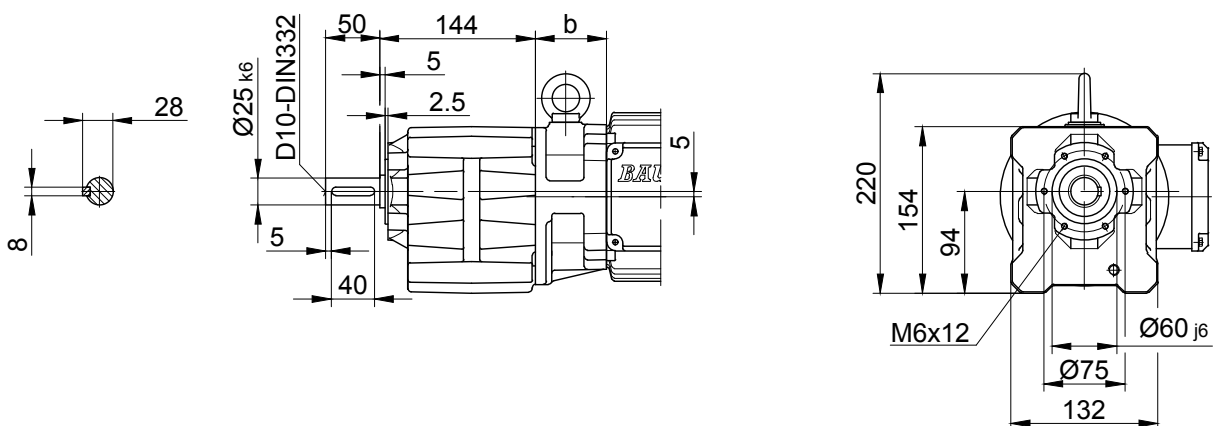
Foot with tapped holes left and right

Code -61LR/



Foot plate left

Code -91L/



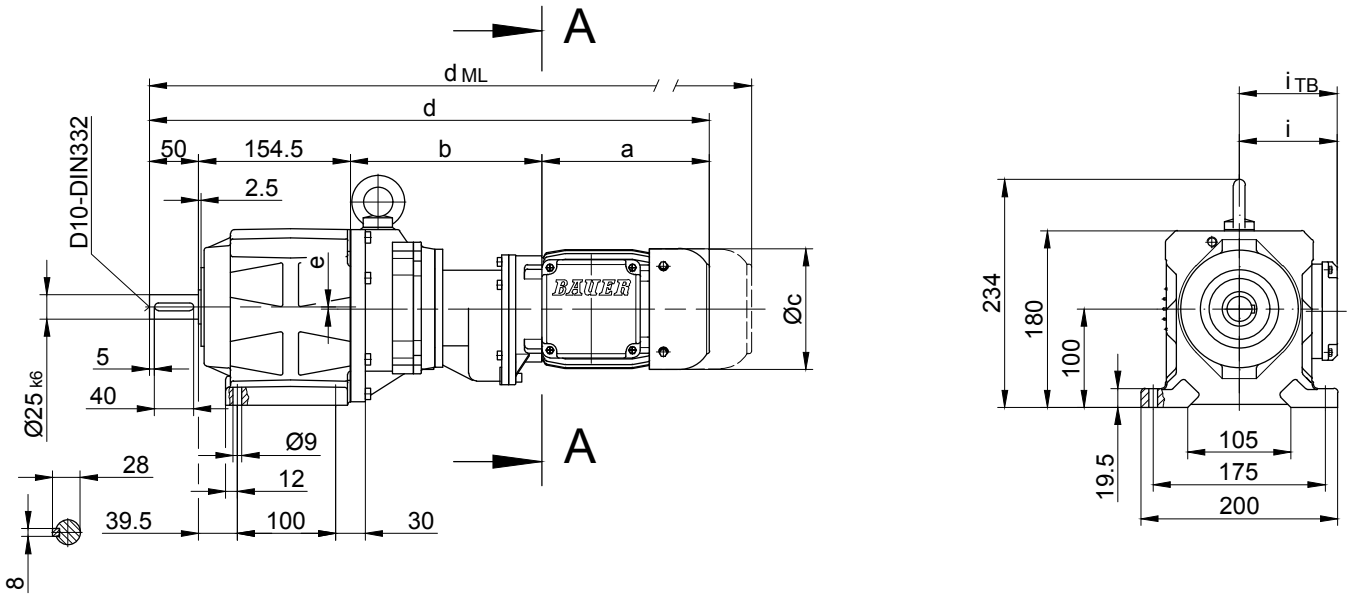
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG20G06

Foot mounting with clearance holes

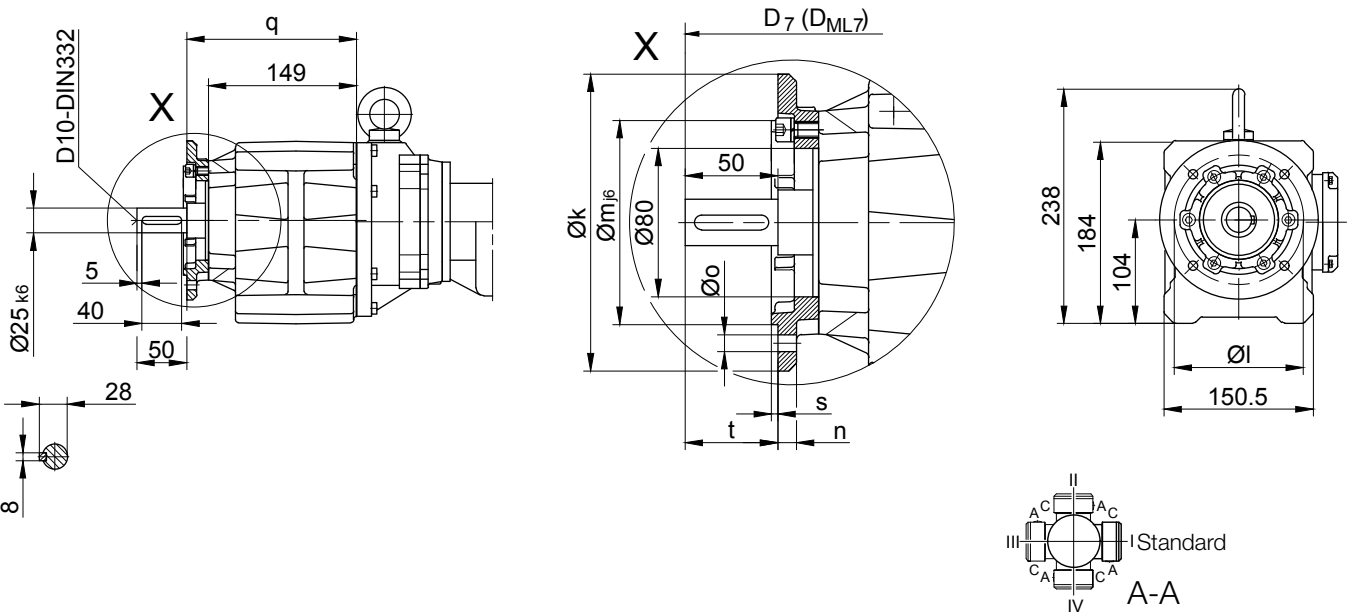
Code -11/



Flange with clearance holes

Code -37/

(Code -47/)



10

Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG20..	Code -37V/	160	130	110	10	9	171	3.5	50.5	d+16.5	d <sub>ML</sub> +16.5
BG20..	Code -47V/	200	165	130	12	11	178	3.5	43.5	d+16.5	d <sub>ML</sub> +16.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG20G06-../S04S	142.5	193	110.5	540	90	112	583.5	627.5	671	-
BG20G06-../S..06 (M, L)	170.5	195	123	570	99	119	612	672.5	710	-
BG20G06-../S..08 (M, L)	199.5	239	156	643	114.5	136.5	709	755	816.5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

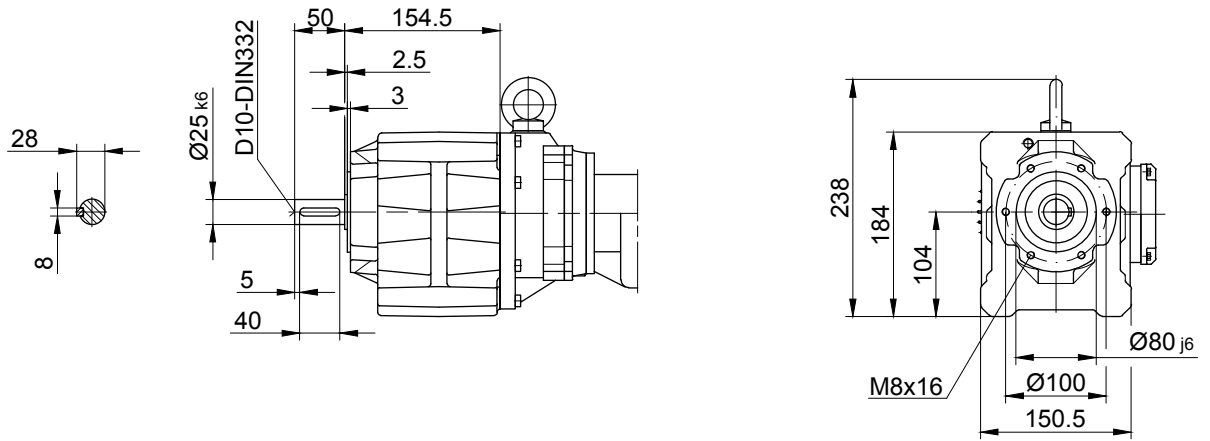
Send Quote Requests to info@automatedpt.com

# BG-series helical-geared motors

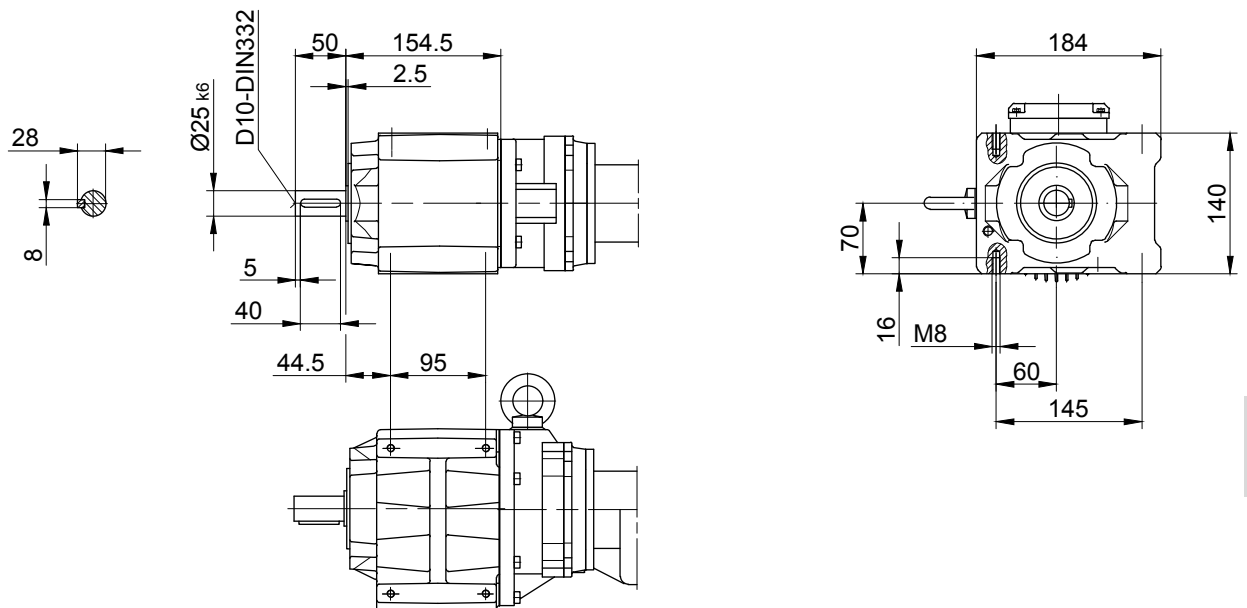
## Dimension - Tandem Gearbox

### BG20G06

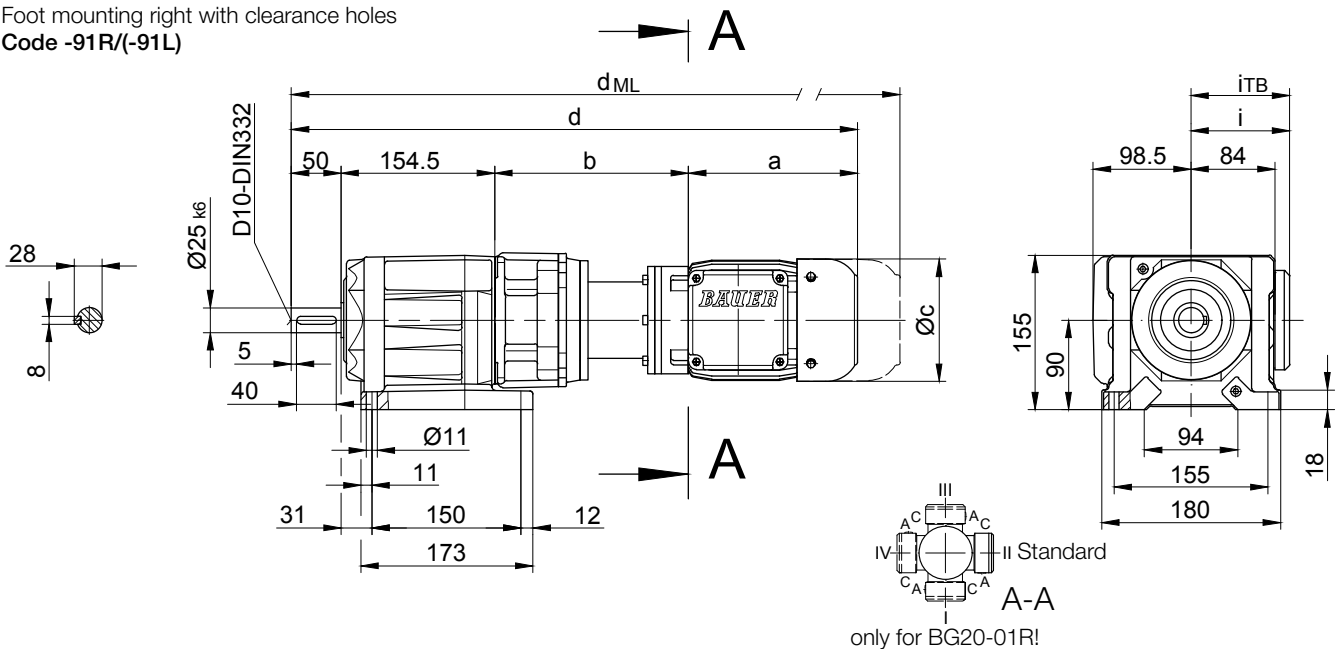
Flange with tapped holes  
Code -71/



Foot with tapped holes left and right  
Code -61LR/



Foot mounting right with clearance holes  
Code -91R/(-91L)



10



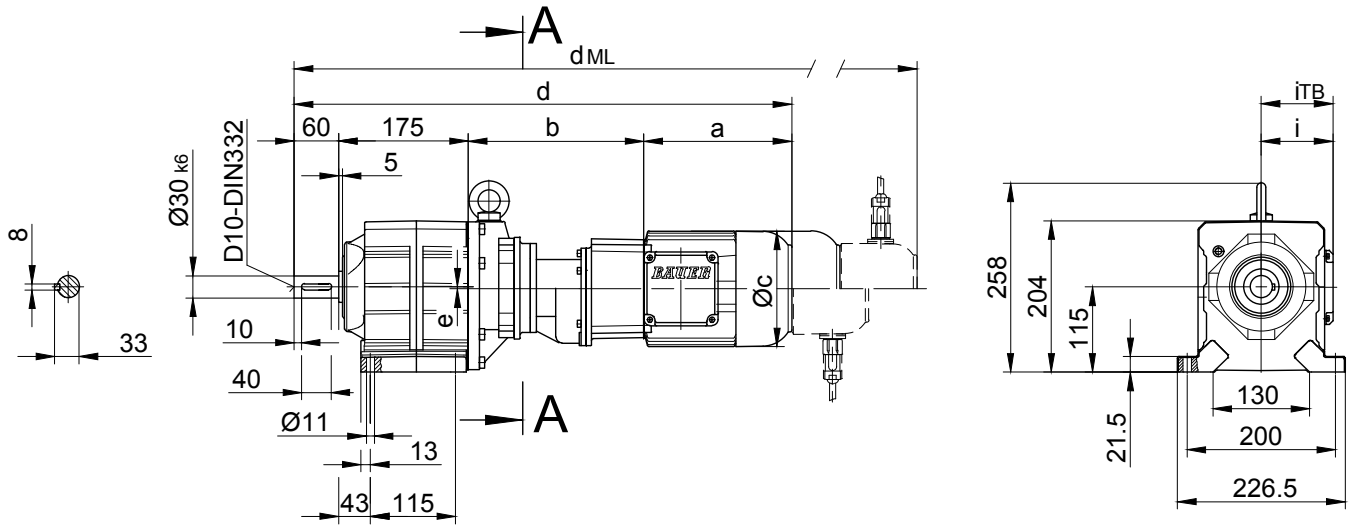
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG30G06

Foot mounting with clearance holes

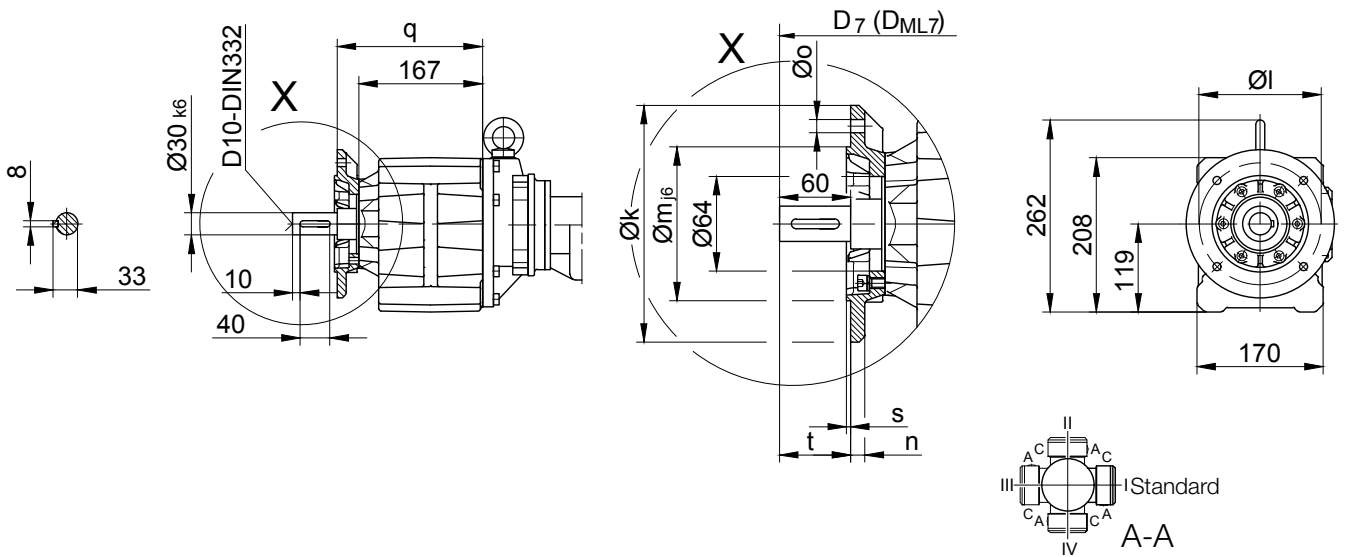
Code -11/



Flange with clearance holes

Code -37/

(Code -27/)



10

#### Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>M<sub>L</sub>7</sub>
BG30..	Code -37/	200	165	130	12	11	196	3.5	60.5	d+21	d <sub>M<sub>L</sub></sub> +21
BG30..	Code -27/	160	130	110	10	9	189	3.5	67.5	d+21	d <sub>M<sub>L</sub></sub> +21

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>M<sub>L</sub></sub>	d <sub>M<sub>L</sub></sub>	d <sub>M<sub>L</sub></sub>	d <sub>M<sub>L</sub></sub>
BG30G06-../S04S	142.5	191	110.5	568.5	90	112	612	656	699.5	-
BG30G06-../S..06 (M, L)	170.5	193	123	598.5	99	119	640.5	701	738.5	-
BG30G06-../S..08 (M, L)	199.5	237	156	671.5	114.5	136.5	737.5	783.5	845	-

Dimensions in millimetres (mm)

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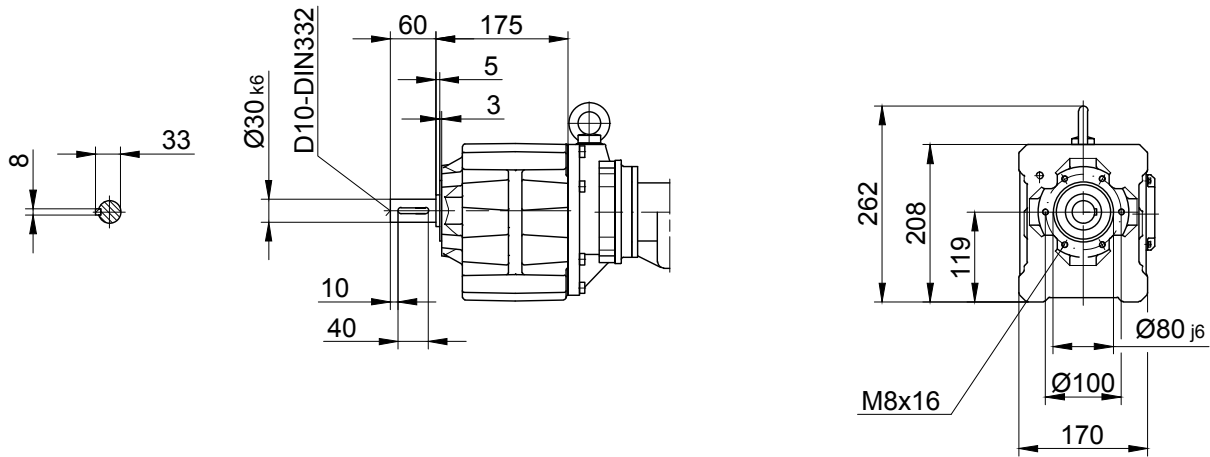
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG30G06

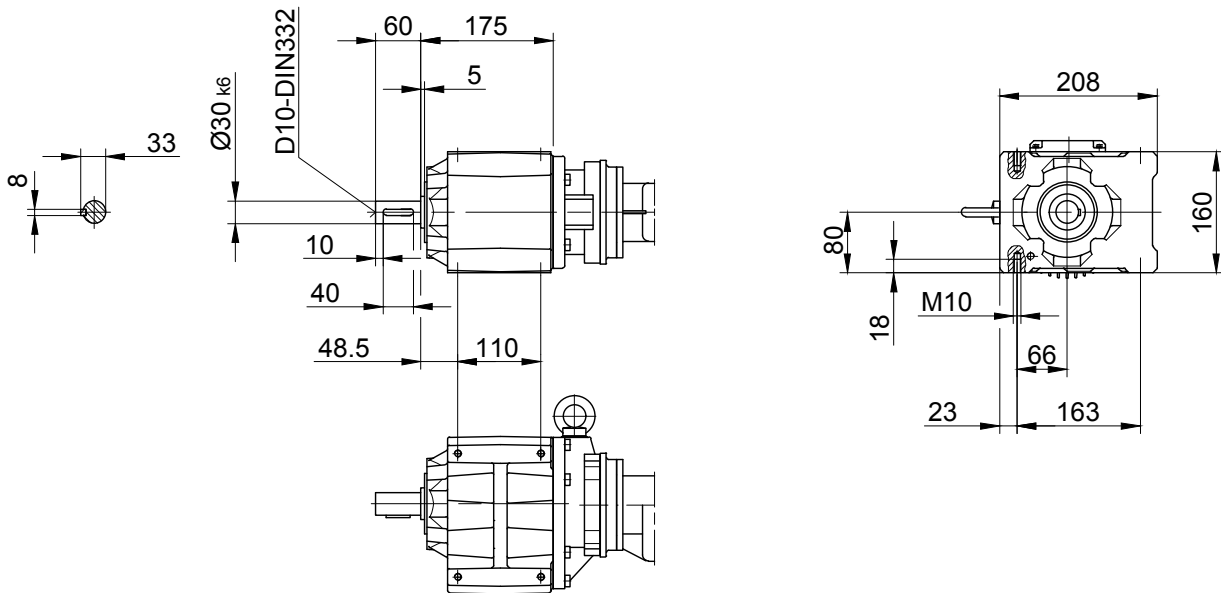
Flange with tapped holes

Code -71/



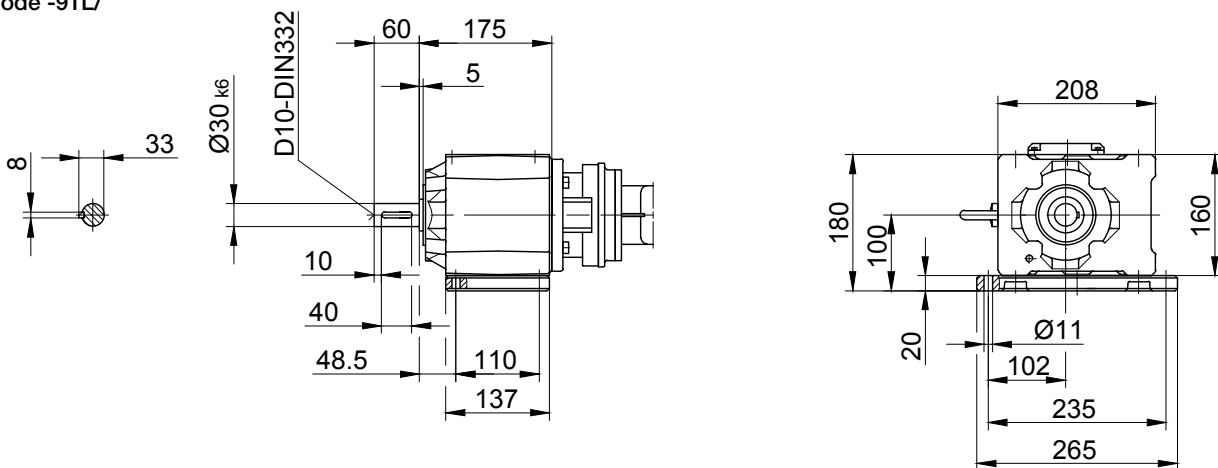
Foot with tapped holes left and right

Code -61LR/



Foot plate left

Code -91L/



10

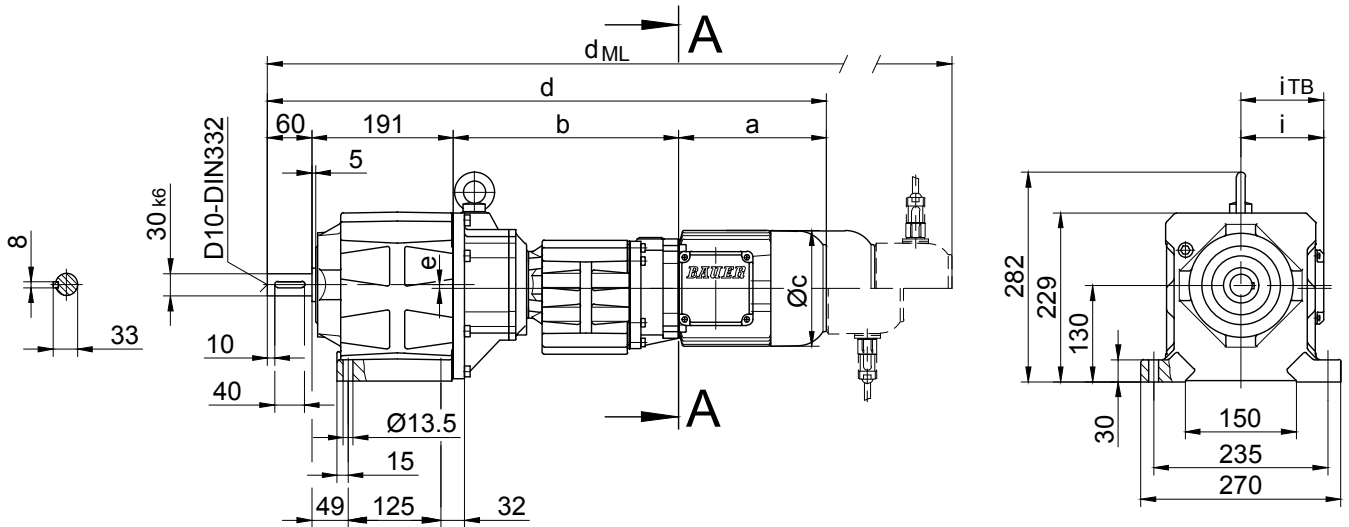
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG40G10

Foot mounting with clearance holes

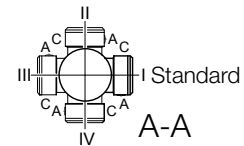
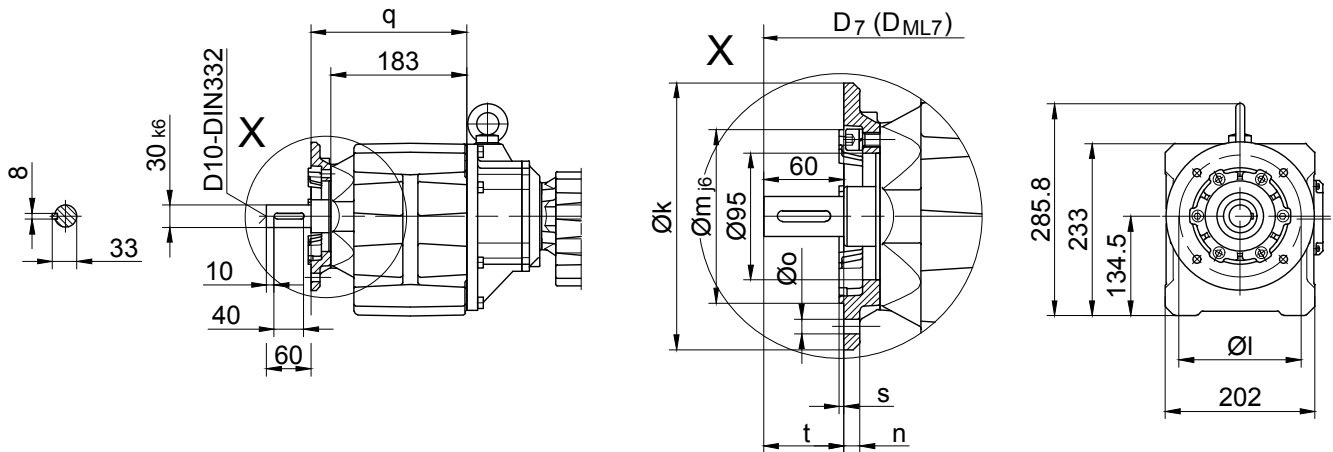
Code -11/



Flange with clearance holes

Code -37/

(Code -47/)



Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG40..	Code -37/	200	165	130	12	11	210	3.5	61	d+19	d <sub>ML</sub> +19
BG40..	Code -47/	250	215	180	16	13.5	219	4	52	d+19	d <sub>ML</sub> +19

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG40G10-../S..06 (M, L)	170.5	300	123	721.5	99	119	763.5	824	861.5	-
BG40G10-../S..08 (M, L)	199.5	304	156	754.5	114.5	136.5	820.5	866.5	928	-
BG40G10-../S..09 (S, X)	250.5	318.5	176	820	124	157	913	927.5	1017	-

Dimensions in millimetres (mm)

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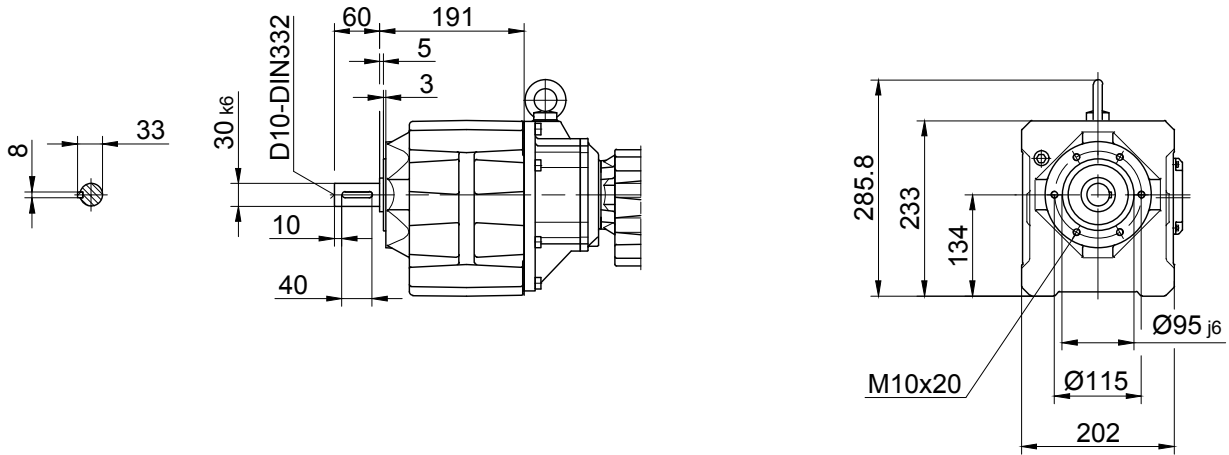
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG40G10

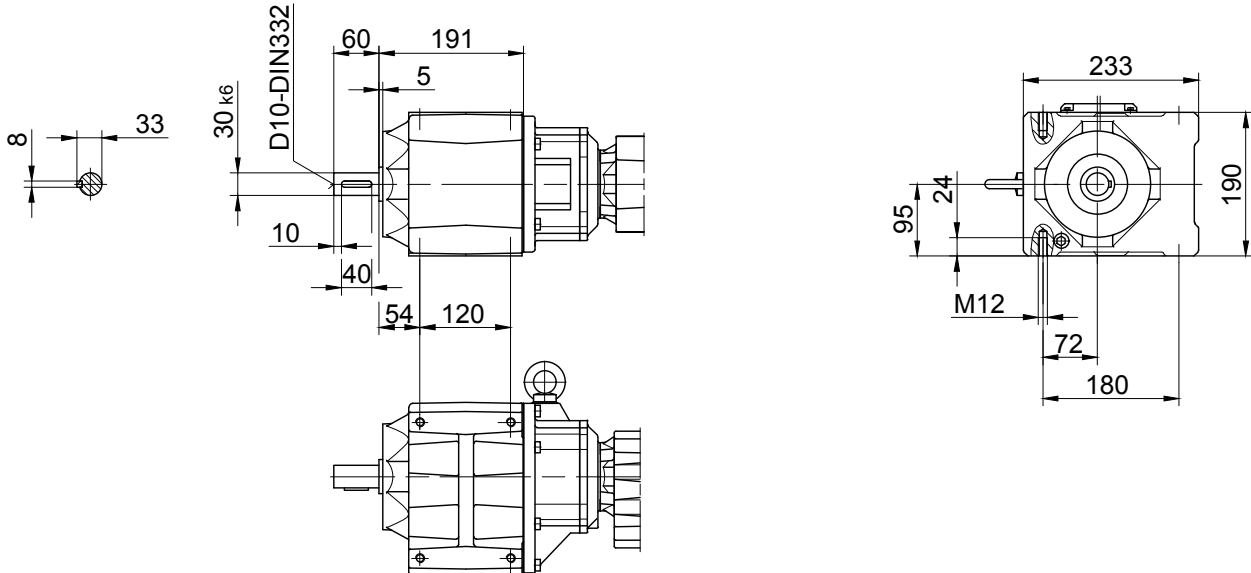
Flange with tapped holes

Code -71/



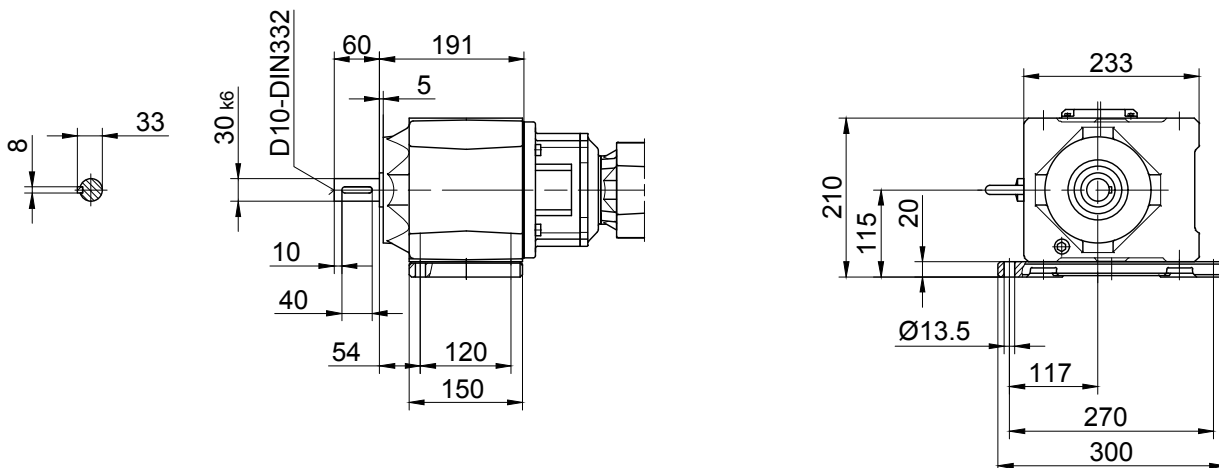
Foot with tapped holes left and right

Code -61LR/



Foot plate left

Code -91L/



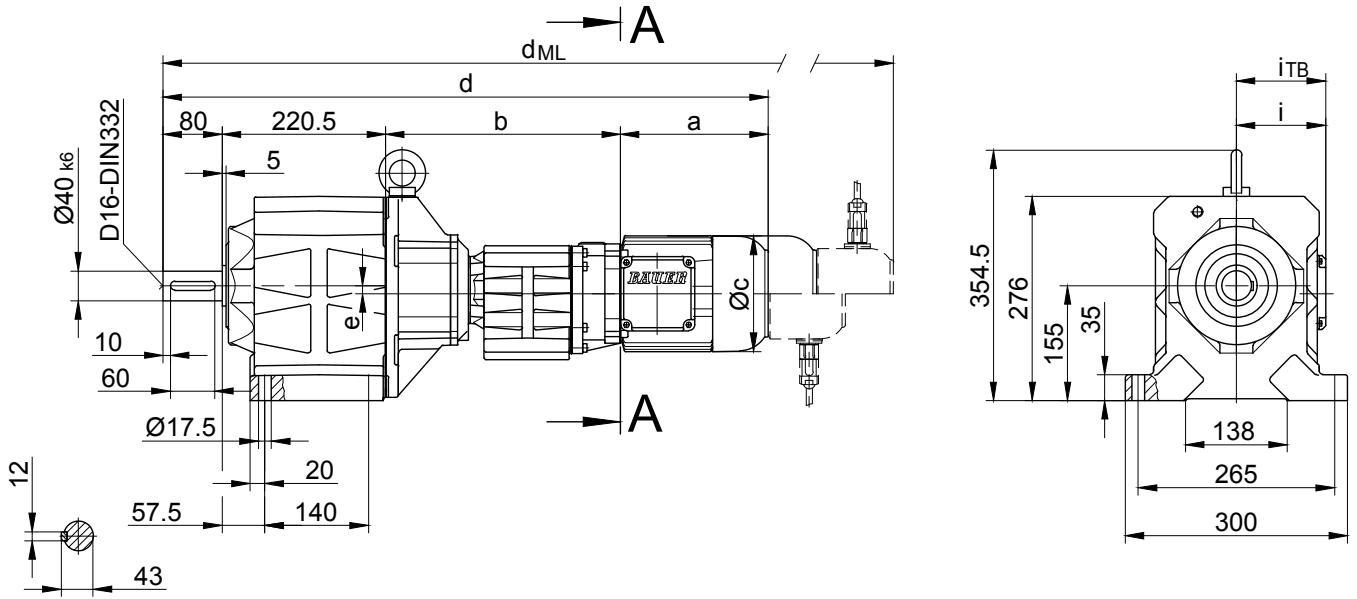
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG50G10

Foot mounting with clearance holes

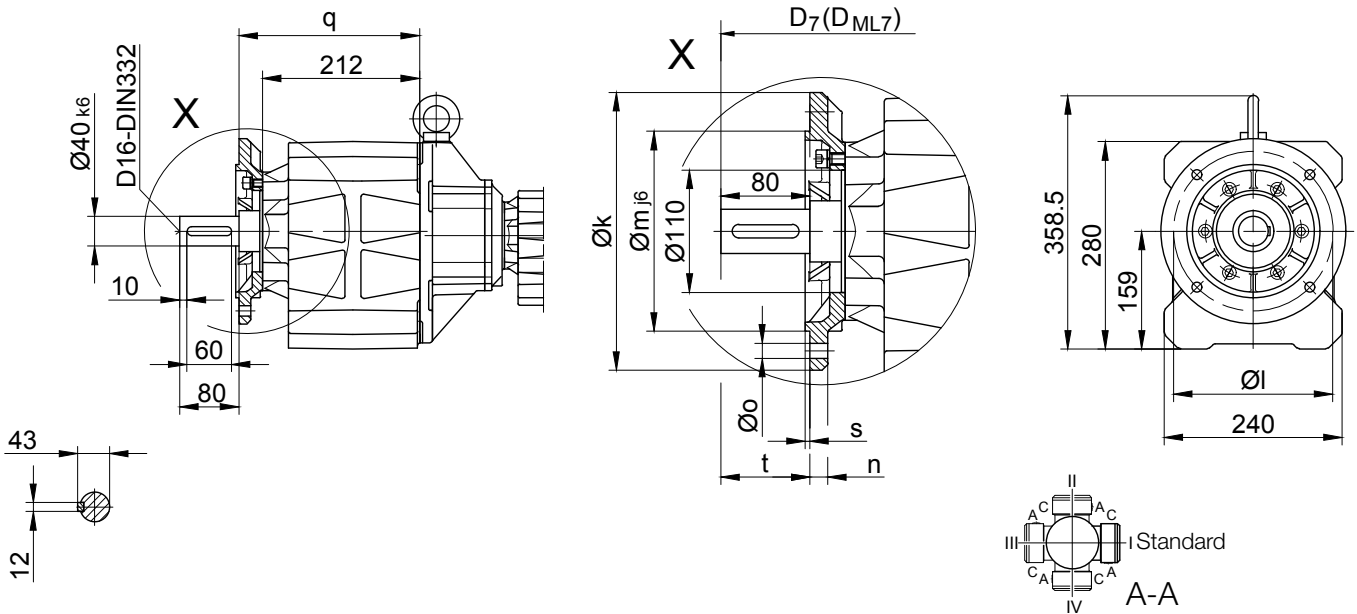
Code -11/



Flange with clearance holes

Code -37/

(Code -27/)



### Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	$D_7$	$D_{ML7}$
BG50..	Code -37/	250	215	180	16	13.5	244	4	80.5	$d+23.5$	$d_{ML}+23.5$
BG50..	Code -27/	200	165	130	12	11	241	3.5	83.5	$d+23.5$	$d_{ML}+23.5$

Dimensions in millimetres (mm)

Type	a	b	c	d	i	$i_{TB}$	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$
BG50G10-../S..06 (M, L)	170.5	313	123	784	99	119	826	886.5	924	-
BG50G10-../S..08 (M, L)	199.5	317	156	817	114.5	136.5	883	929	990.5	-
BG50G10-../S..09 (S, X)	250.5	331.5	176	882.5	124	157	975.5	990	1079.5	-

Dimensions in millimetres (mm)

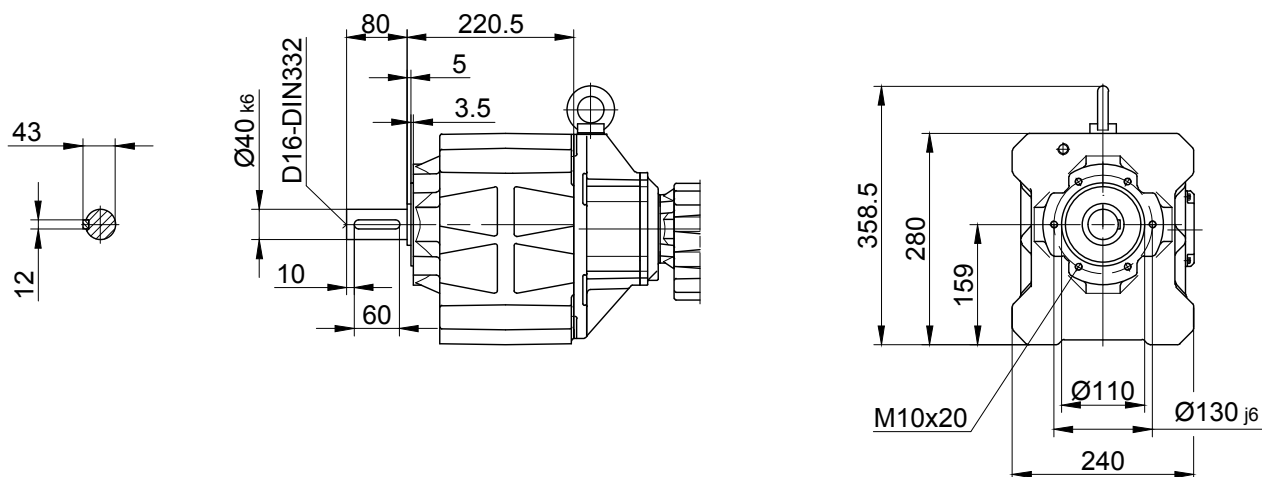
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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**BG-series helical-geared motors****Dimension - Tandem Gearbox****BG50G10**

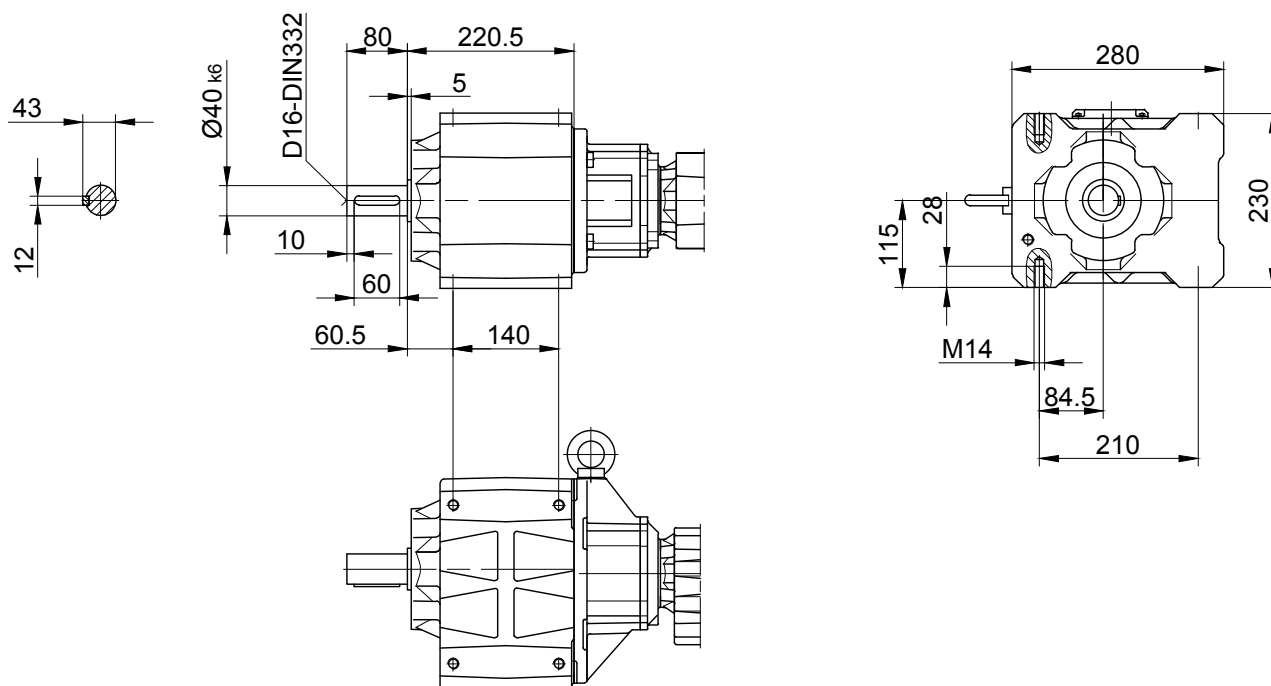
Flange with tapped holes

Code -71/



Foot with tapped holes left and right

Code -61LR/



10



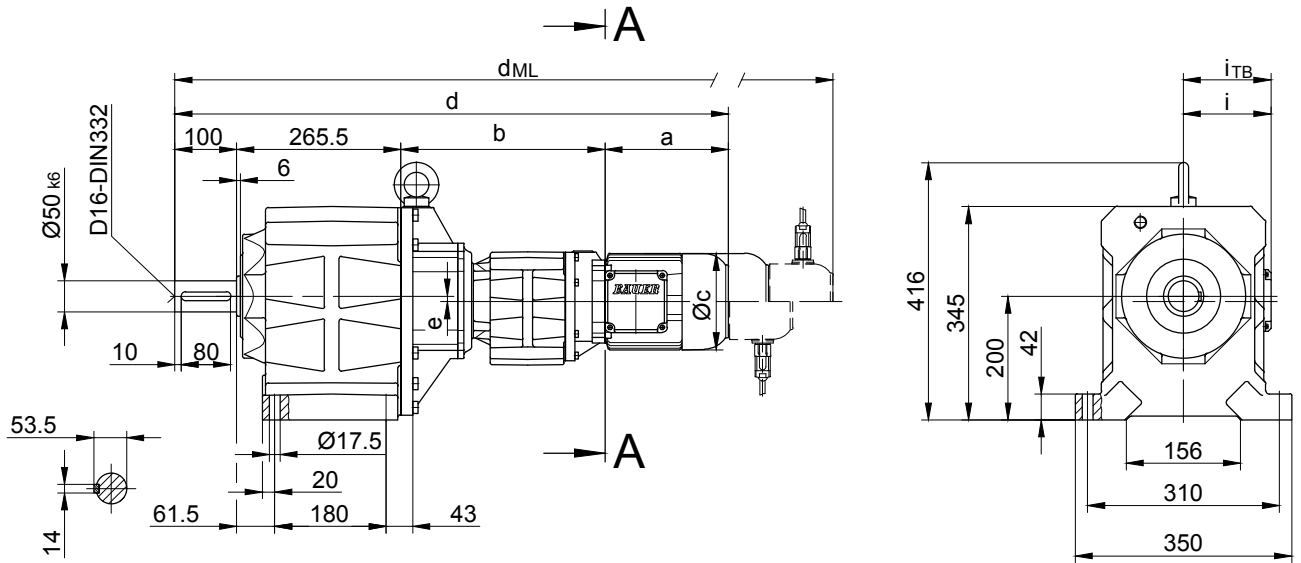
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG60G20

Foot mounting with clearance holes

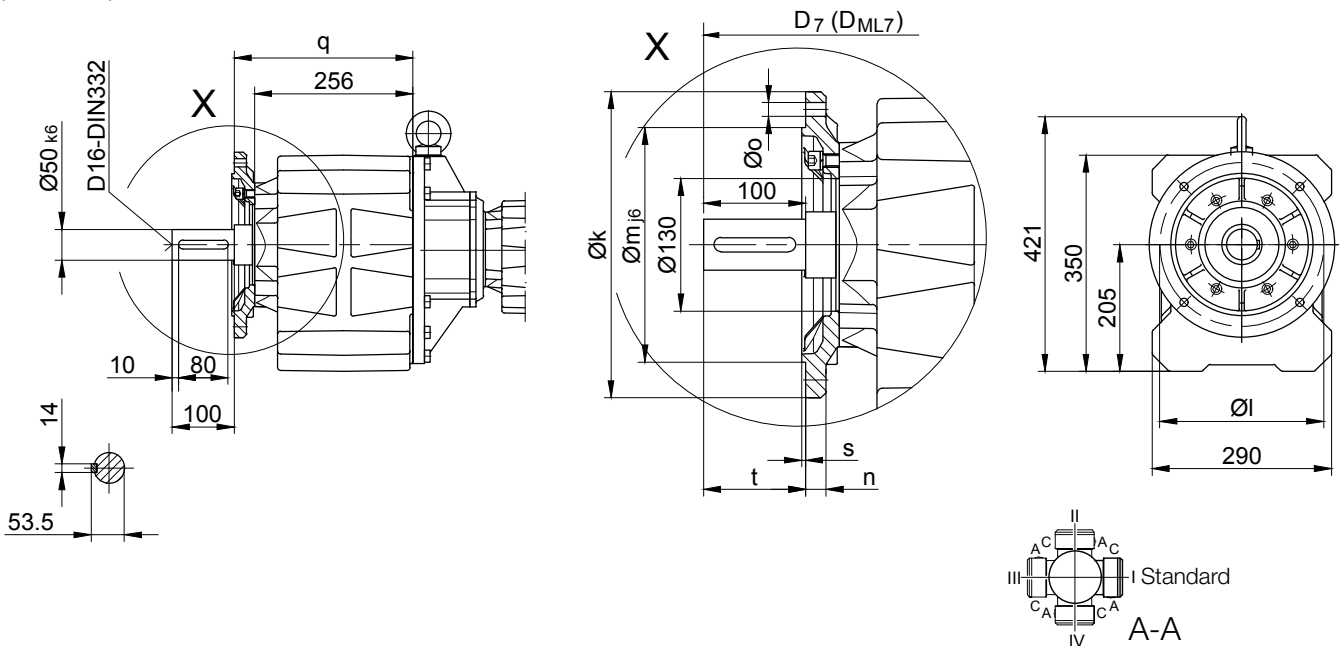
Code -11/



Flange with clearance holes

Code -37/

(Code -27/)



### Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	$D_7$	$D_{ML7}$
BG60..	Code -37/	300	265	230	20	13.5	289	4	100.5	$d+23.5$	$d_{ML}+23.5$
BG60..	Code -27/	250	215	180	16	13.5	286	4	103.5	$d+23.5$	$d_{ML}+23.5$

Dimensions in millimetres (mm)

Type	a	b	c	d	i	$i_{TB}$	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$
BG60G20-../S..06 (M, L)	170.5	326	123	862	99	119	904	964.5	1002	-
BG60G20-../S..08 (M, L)	199.5	330	156	895	114.5	136.5	961	1007	1068.5	-
BG60G20-../S..09 (S, X)	250.5	344.5	176	960.5	124	157	1053.5	1068	1157.5	-

Dimensions in millimetres (mm)

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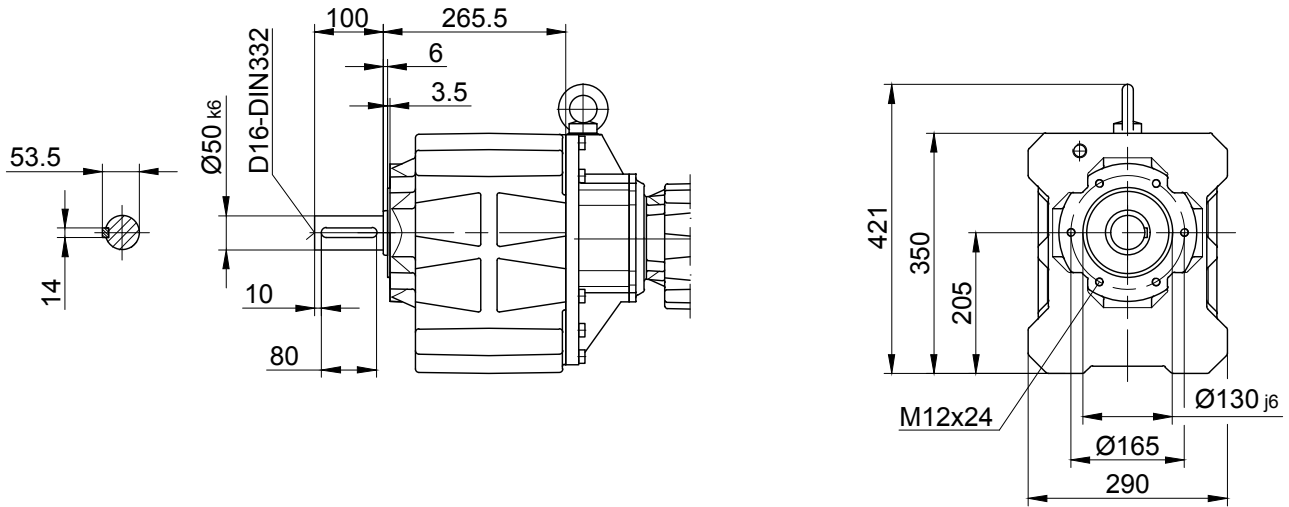
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG60G20

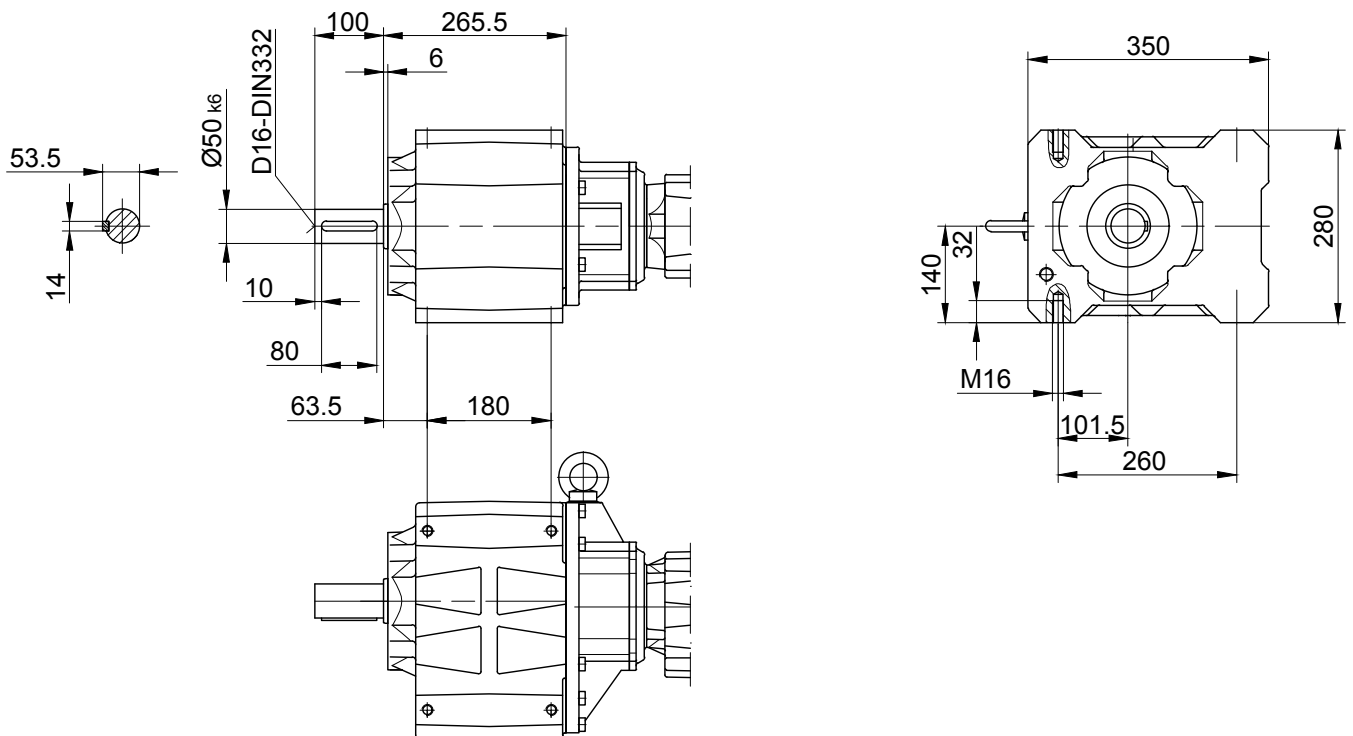
Flange with tapped holes

Code -71/



Foot with tapped holes left and right

Code -61LR/



10

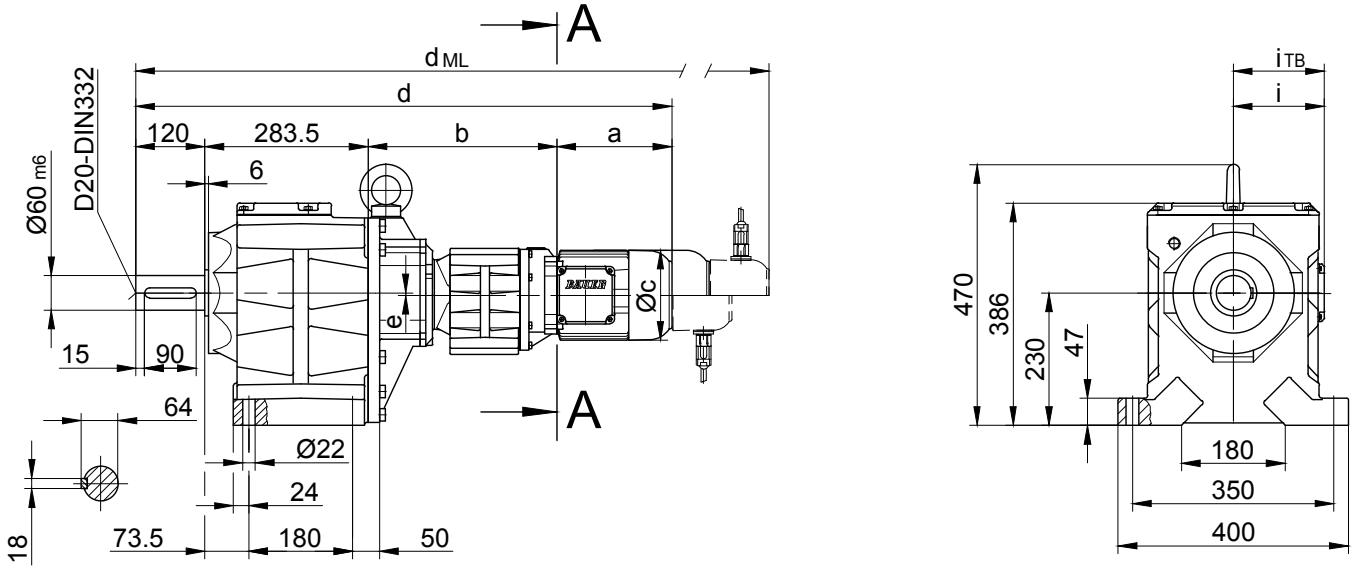
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG70G20

Foot mounting with clearance holes

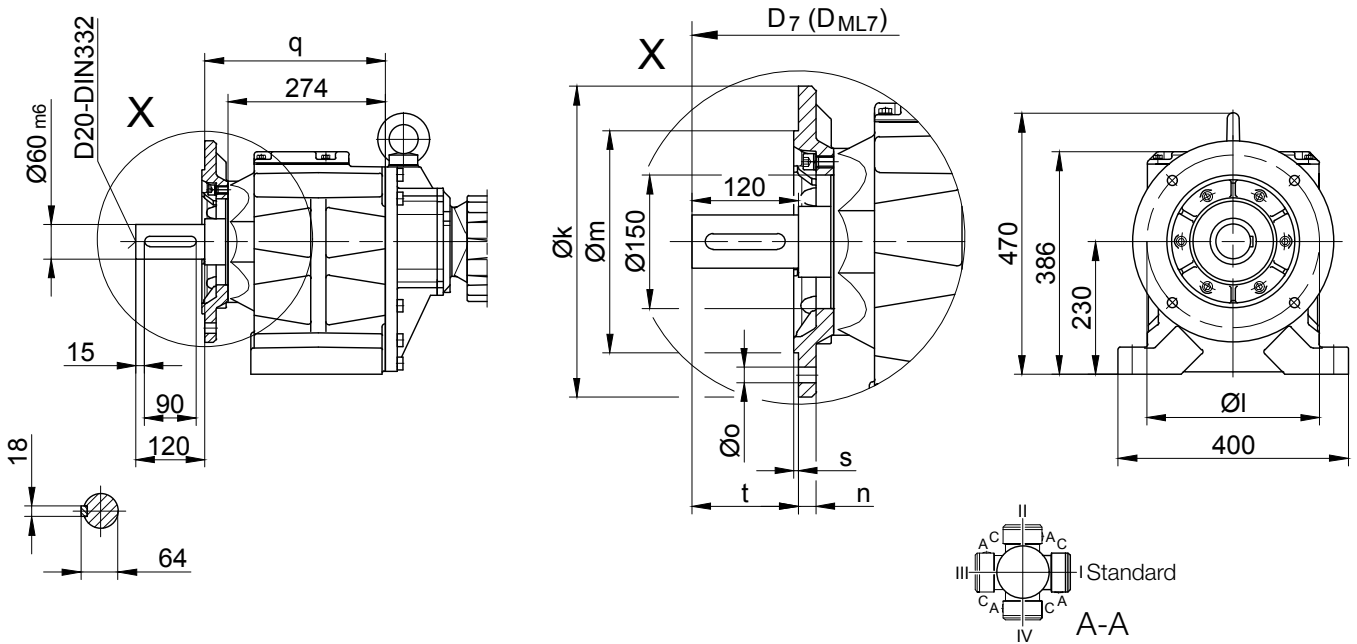
Code -11/



Flange with clearance holes

Code -37/

(Code -27/)



10

#### Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG70..	Code -37/	350	300	250	20	17.5	314	5	120.5	d+30.5	d <sub>ML</sub> +30.5
BG70..	Code -27/	300	265	230	20	13.5	322	4	113.5	d+30.5	d <sub>ML</sub> +30.5

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG70G20-../S..06 (M, L)	170.5	324	123	898	99	119	940	1000.5	1038	-
BG70G20-../S..08 (M, L)	199.5	328	156	931	114.5	136.5	997	1043	1104.5	-
BG70G20-../S..09 (S, X)	250.5	342.5	176	996.5	124	157	1089.5	1104	1193.5	-

Dimensions in millimetres (mm)

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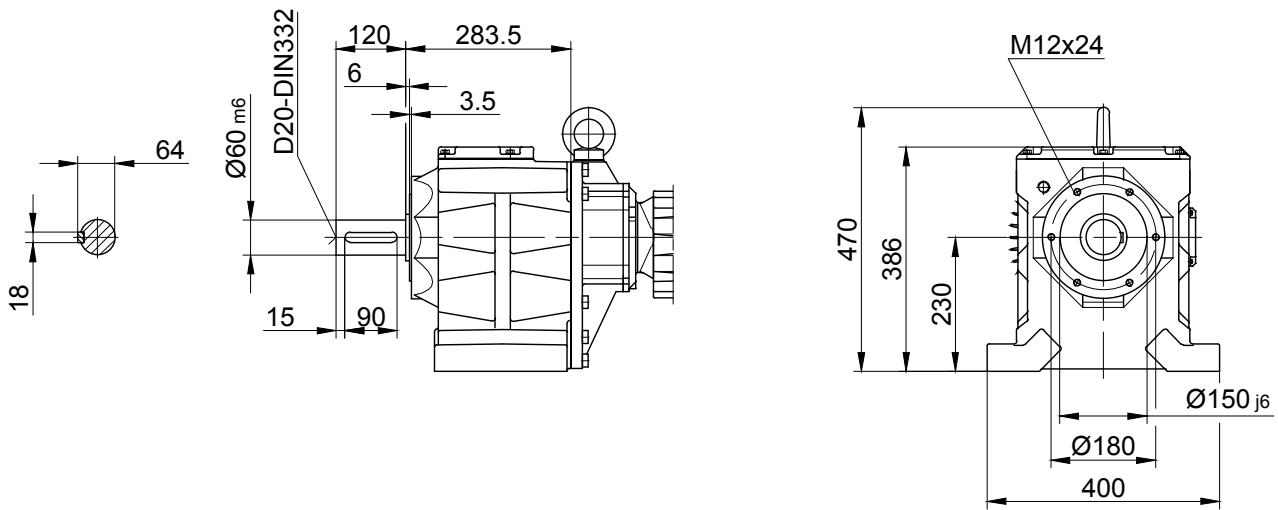
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG70G20

Flange with tapped holes

Code -71/



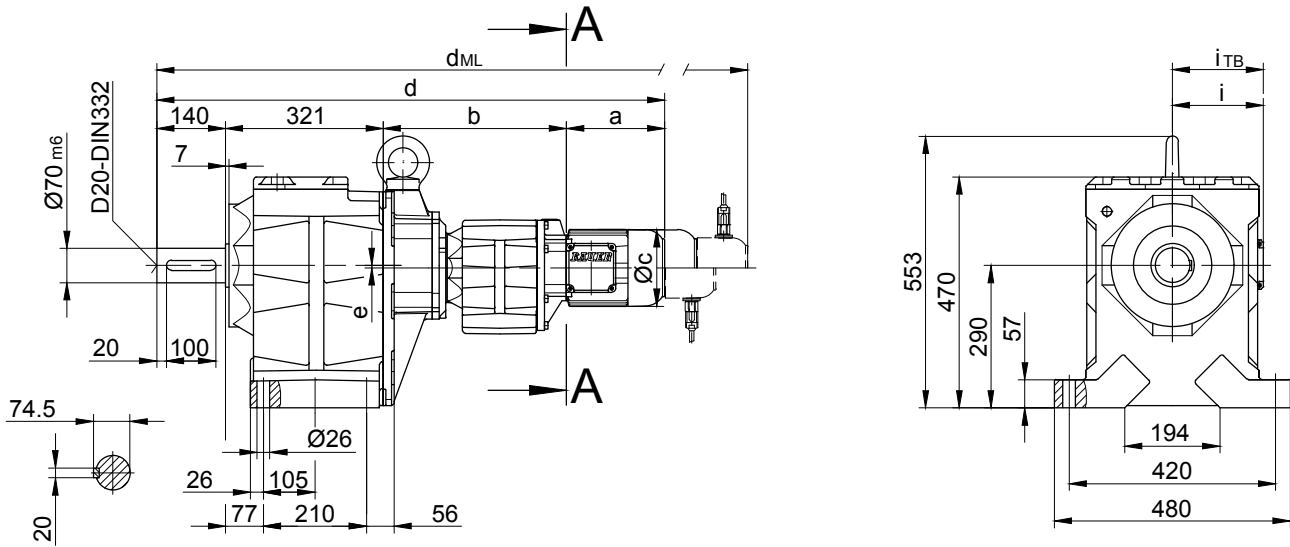
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG80G40

Foot mounting with clearance holes

Code -11/

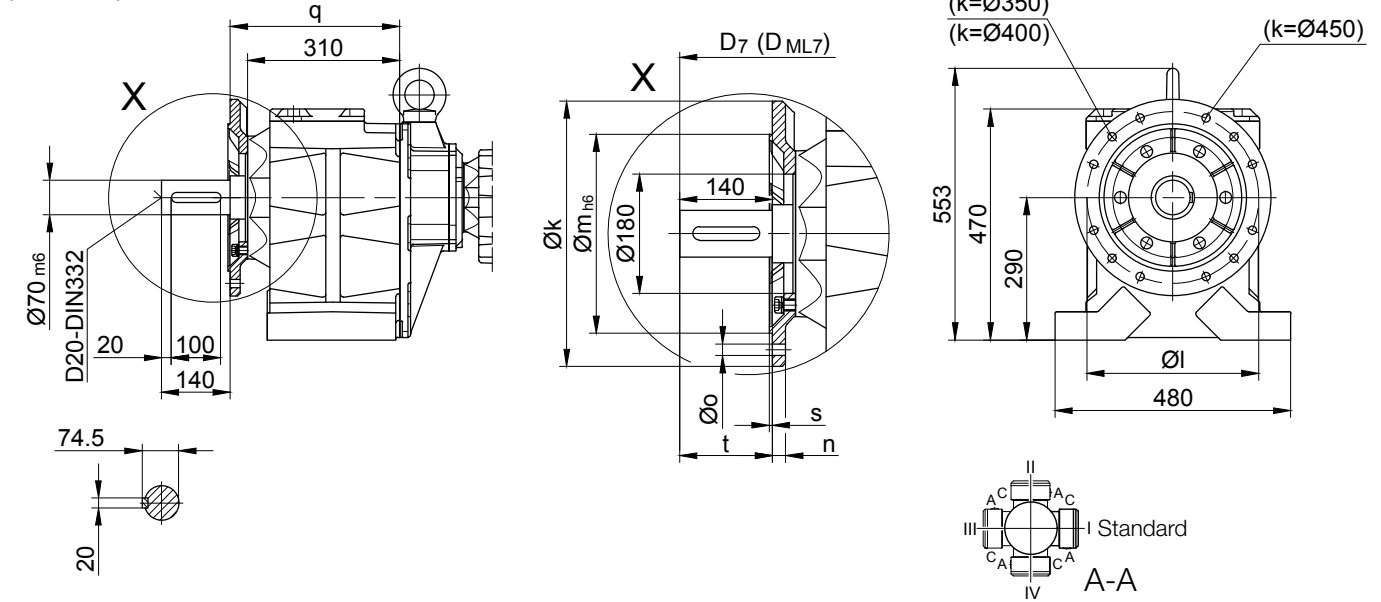


Flange with clearance holes

Code -37/

(Code -27/)

(Code -47/)



10

Type	Design	k	l	m	n	o	q	s	t	D <sub>7</sub>	D <sub>ML7</sub>
BG80..	Code -37/	400	350	300	20	4 x 17.5	345	5	141	d+24	d <sub>ML</sub> +24
BG80..	Code -27/	350	300	250	20	4 x 17.5	345	5	141	d+24	d <sub>ML</sub> +24
BG80..	Code -47/	450	400	350	22	8 x 17.5	355	5	131	d+24	d <sub>ML</sub> +24

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BG80G40-../S..08 (M, L)	199.5	373	156	1033.5	114.5	136.5	1099.5	1145.5	1207	-
BG80G40-../S..09 (S, X)	250.5	387.5	176	1099	124	157	1192	1206.5	1296	-
BG80G40-../S..11 (S, M, L)	319	394	218	1174	165	176	1272	1281.5	1374	-

Dimensions in millimetres (mm)

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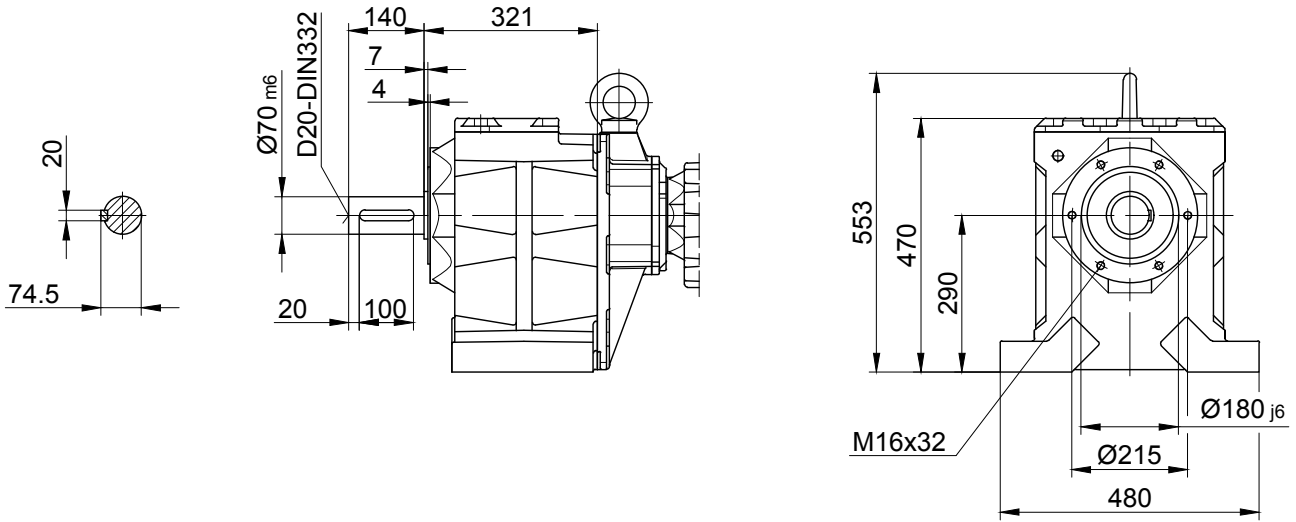
# BG-series helical-gearred motors

## Dimension - Tandem Gearbox

### BG80G40

Flange with tapped holes

Code -71/





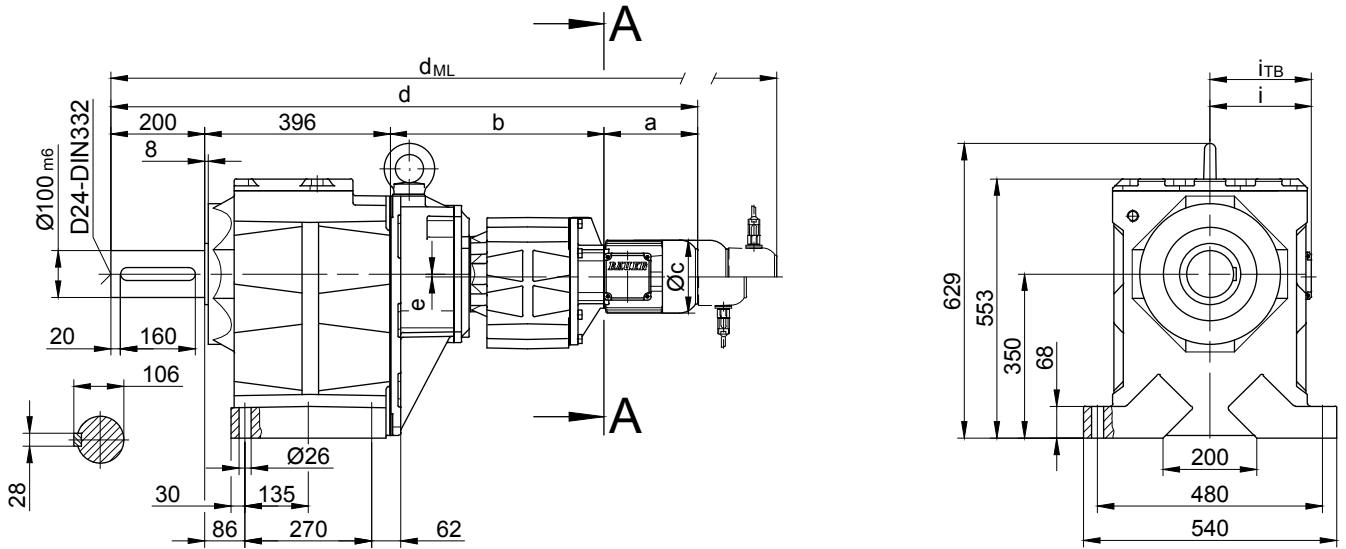
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG90G50

Foot mounting with clearance holes

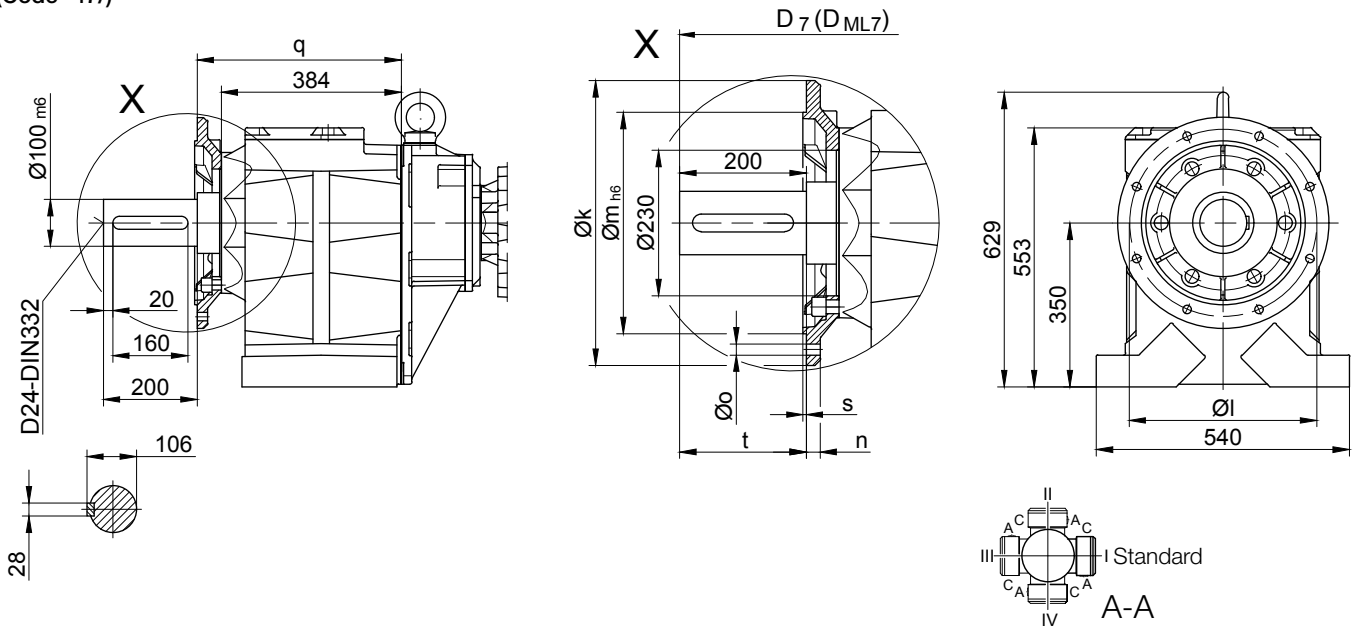
Code -11/



Flange with clearance holes

Code -37/

(Code -47/)



10

#### Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	$D_7$	$D_{ML7}$
BG90..	Code -37/	450	400	350	22	17.5	439	5	201	$d+43$	$d_{ML}+43$
BG90..	Code -47/	550	500	450	22	17.5	444	5	196	$d+43$	$d_{ML}+43$

Dimensions in millimetres (mm)

Type	a	b	c	d	i	$i_{TB}$	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$
BG90G50-../S..08 (M, L)	199.5	456	156	1251.5	114.5	136.5	1317.5	1363.5	1425	-
BG90G50-../S..09 (S, X)	250.5	470.5	176	1317	124	157	1410	1424.5	1514	-
BG90G50-../S..11 (S, M, L)	319	477	218	1392	165	176	1490	1499.5	1592	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedpt.com

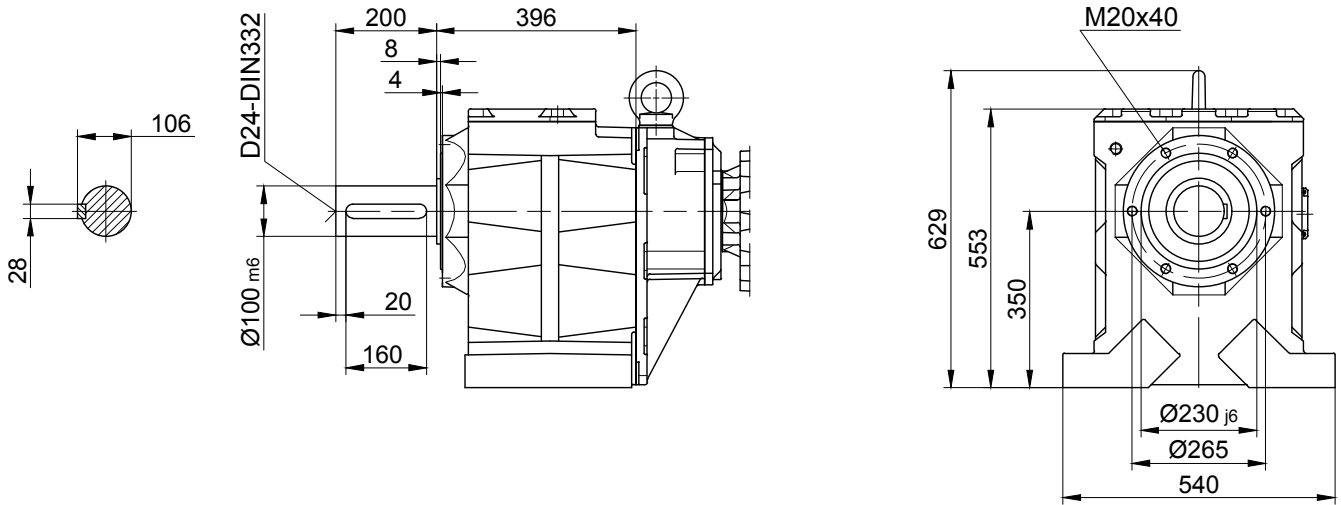
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG90G50

Flange with tapped holes

Code -71/



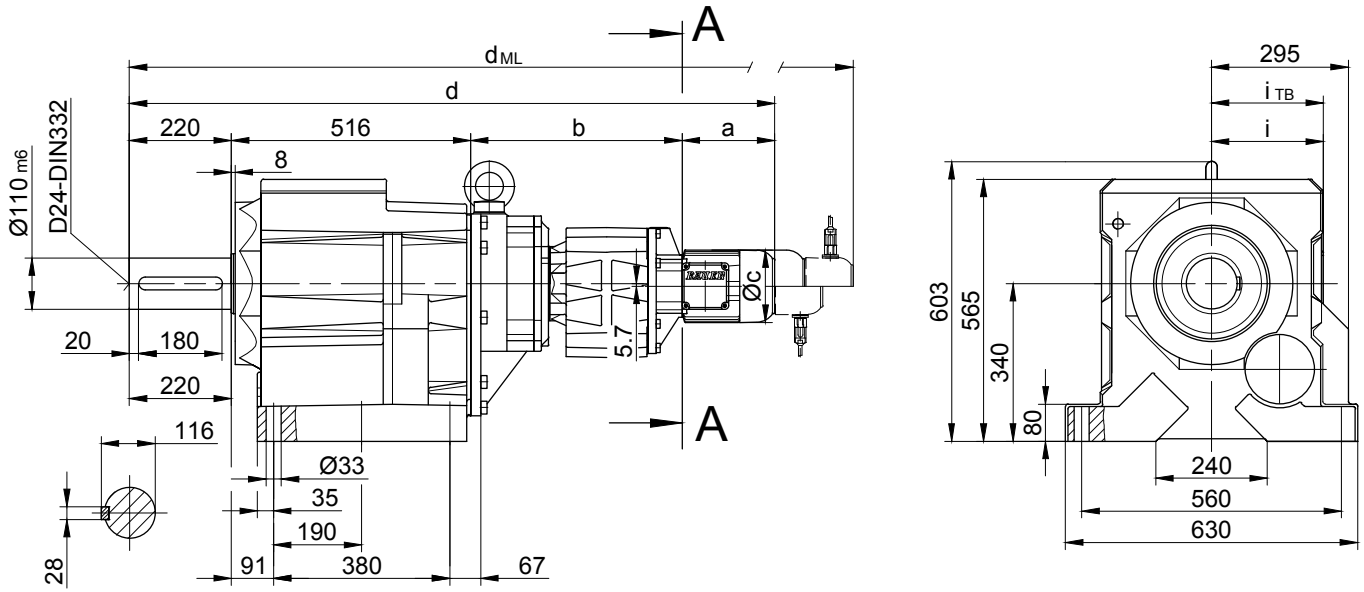
# BG-series helical-geared motors

## Dimension - Tandem Gearbox

### BG100G50

Foot mounting with clearance holes

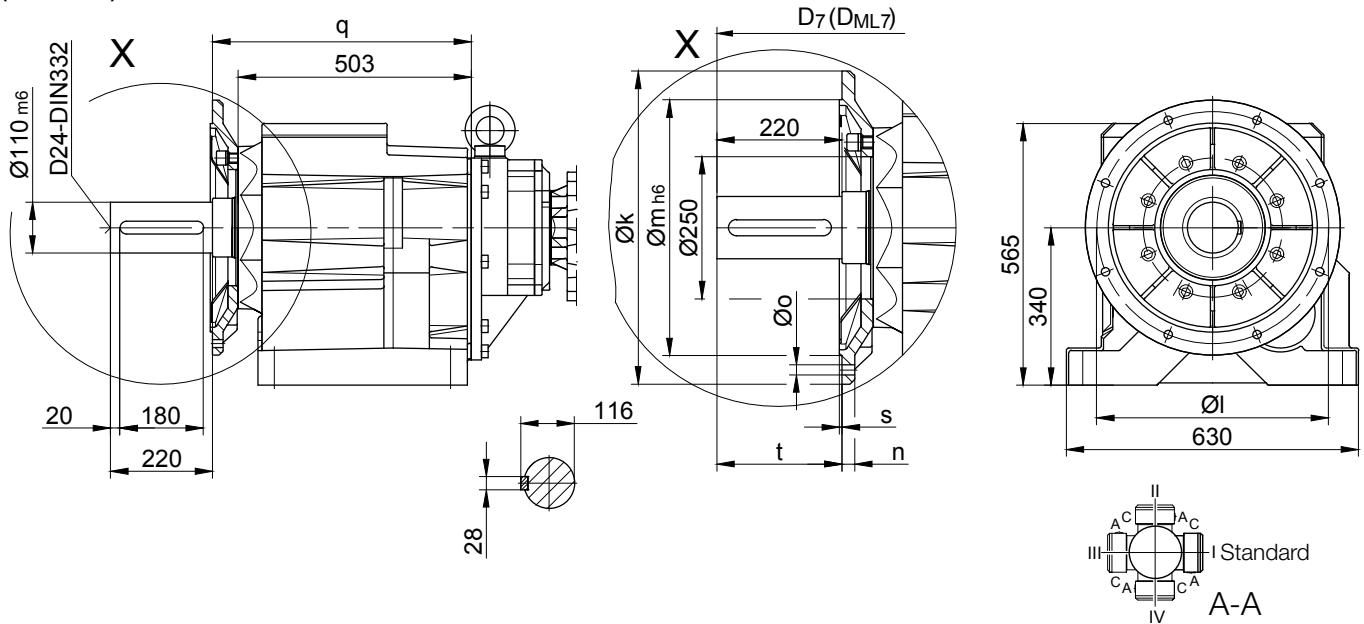
Code -11/



Flange with clearance holes

Code -37/

(Code -47/)



10

### Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t	$D_7$	$D_{\text{ML}7}$
BG100..	Code -37/	550	500	450	22	17.5	558	5	220	$d+42$	$d_{\text{ML}}+42$
BG100..	Code -47/	660	600	550	25	22	552	6	227	$d+42$	$d_{\text{ML}}+42$

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						$i_{\text{TB}}$	Brake	Encoder	Brake with Encoder	Back Stop
							$d_{\text{ML}}$	$d_{\text{ML}}$	$d_{\text{ML}}$	$d_{\text{ML}}$
BG100G50-.../S..08 (M, L)	199.5	456	156	1391.5	114.5	136.5	1457.5	1503.5	1565	-
BG100G50-.../S..09 (S, X)	250.5	470.5	176	1457	124	157	1550	1564.5	1654	-
BG100G50-.../S..11 (S, M, L)	319	477	218	1532	165	176	1630	1639.5	1732	-

Dimensions in millimetres (mm)

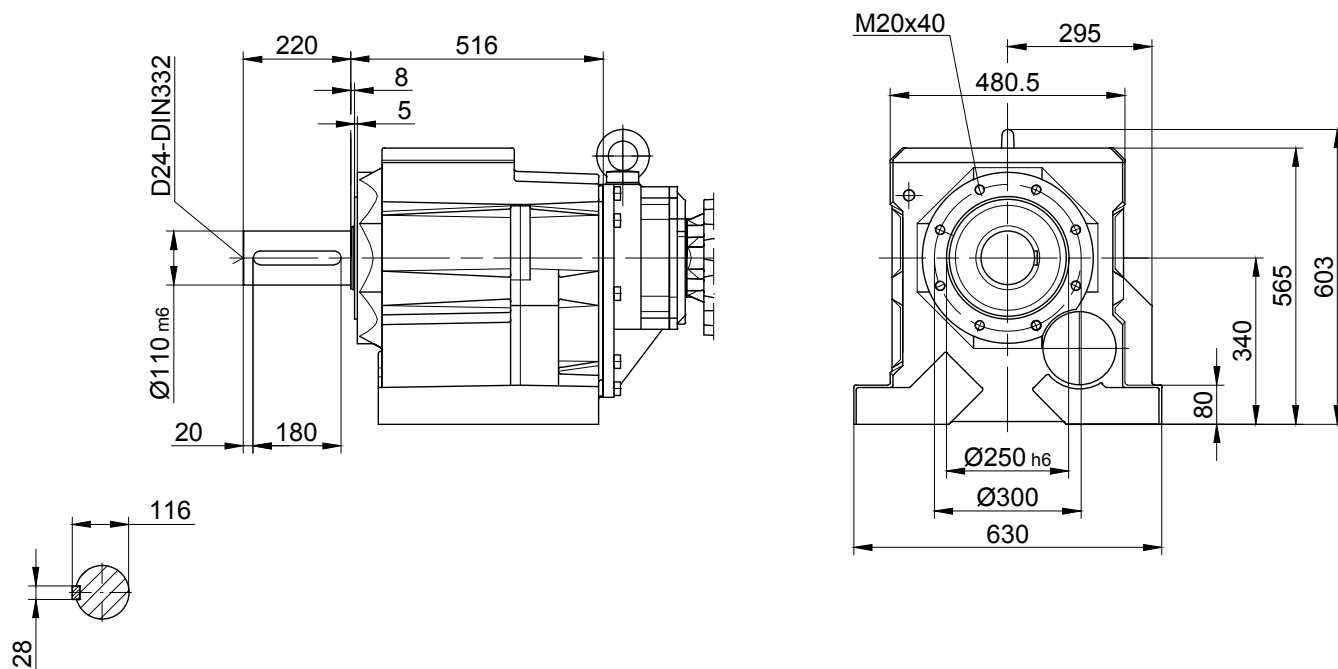
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to [info@automatedpt.com](mailto:info@automatedpt.com)

**BG-series helical-geared motors****Dimension - Tandem Gearbox****BG100G50**

Flange with tapped holes

Code -71/

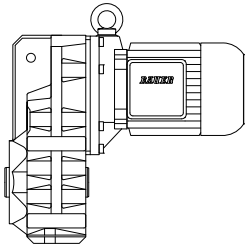


10

# Energy Efficient Geared Motors

## AC Variable Speed

---



# 11

## BF-series shaft-mounted geared motors - Dimensions

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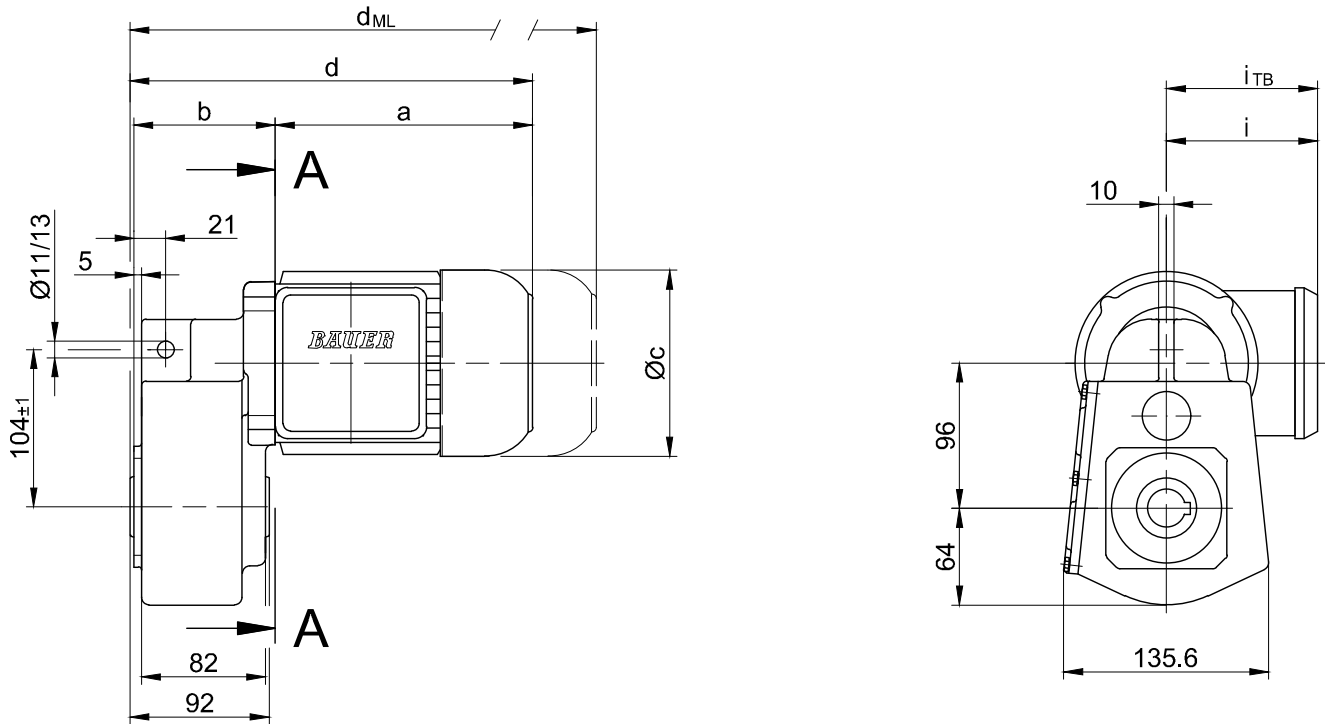


# BF-series shaft-mounted geared motors

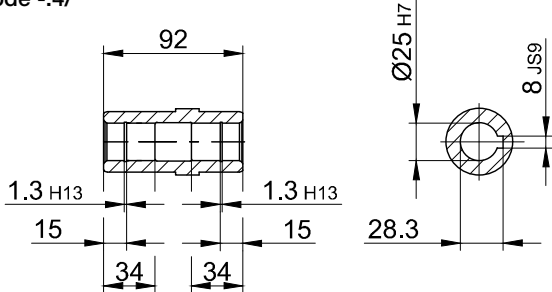
## Dimension - Standard

### BF06

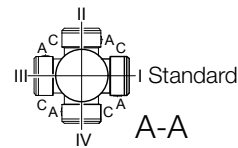
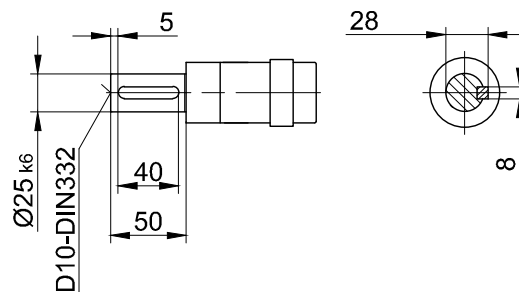
with torque arm  
Code -0./



Code -./



Code -./



11

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF06-../S..06 (M, L)	170,5	93,5	123	266,5	99	119	306	366,5	404	-
BF06-../S..08 (M, L)	199,5	141,5	156	343,5	114,5	136,5	407	453	514,5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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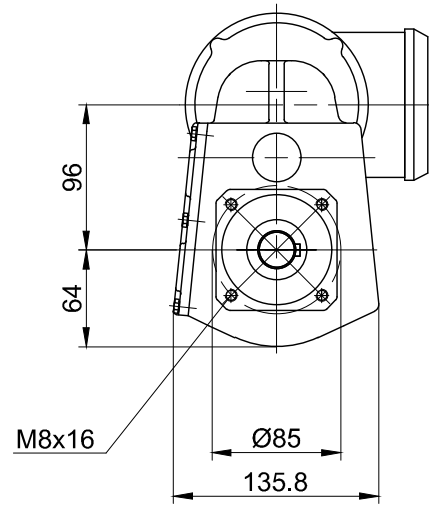
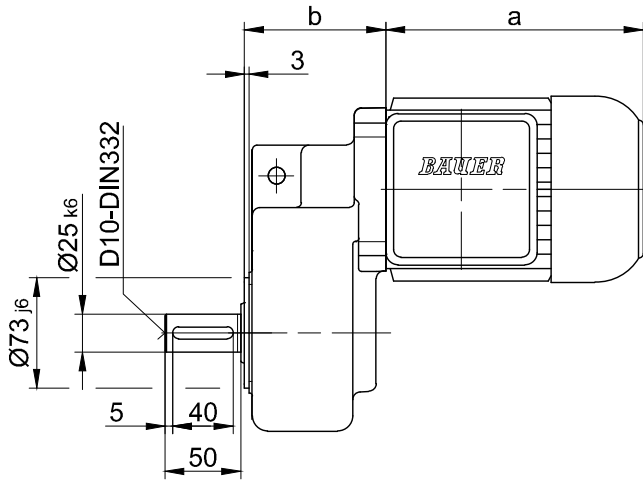
# BF-series shaft-mounted geared motors

## Dimension -Standard

### BF06

Flange with tapped holes

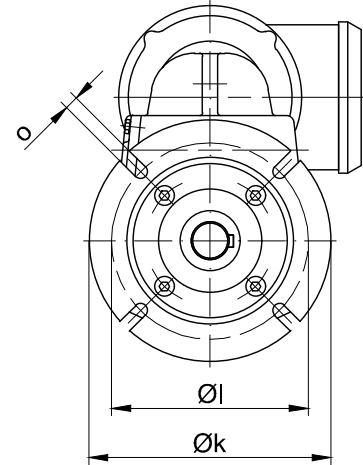
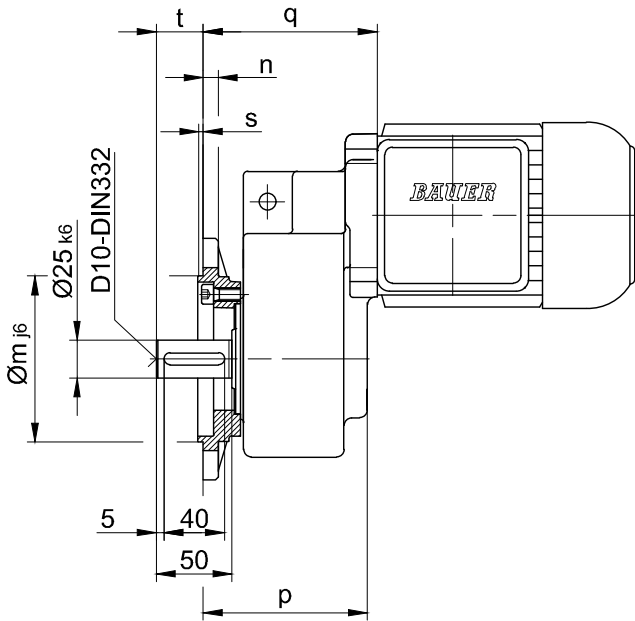
Code -7./



Flange with clearance holes

Code -3.V/

(Code -4.V/)



11

Flange Dimensions											
Type	Design	k	l	m	n	o	p	q <sup>1)</sup>	q <sup>2)</sup>	s	t
BF06	Code -3./	140	115	95	10	9	108.5	115	163	3	31
BF06	Code -4./	160	130	110	10	9	108.5	115	163	3.5	31

q<sup>1)</sup> only for D05; D06; D07  
q<sup>2)</sup> only for D08..

Dimensions in millimetres (mm)

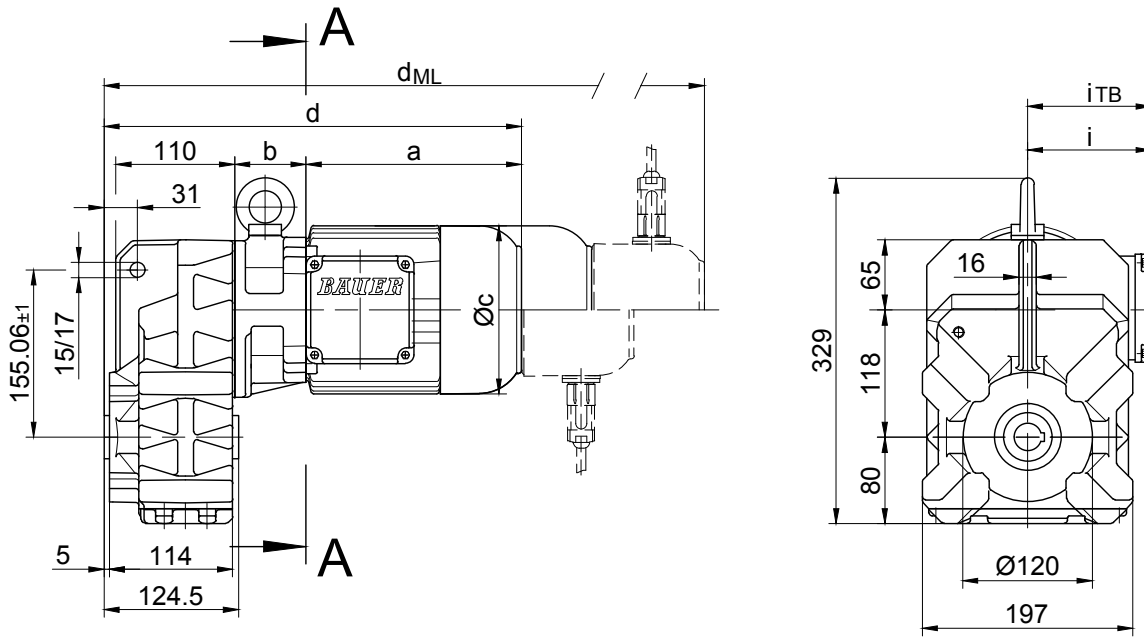
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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# BF-series shaft-mounted geared motors

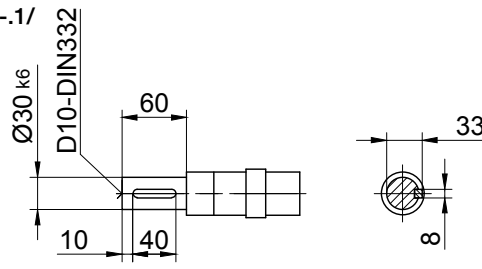
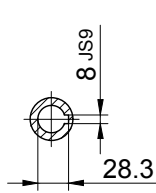
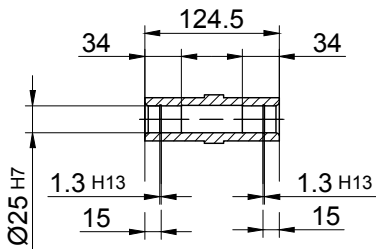
## Dimension - Standard

**BF10-BF10Z**  
with torque arm  
Code -0./

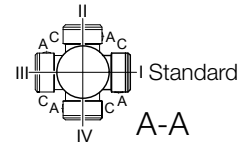
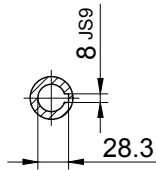
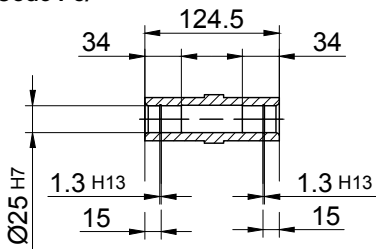


Code -4/

Code -1/



Code -5/



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF10Z-../S04S	142,5	86	110,5	349,5	90	112	393	437	480,5	-
BF10-../S..06 (M, L)	170,5	62	123	353,5	99	119	395,5	456	493,5	-
BF10Z-../S..06 (M, L)	170,5	88	123	379,5	99	119	421,5	482	519,5	-
BF10-../S..08 (M, L)	199,5	66	156	386,5	114,5	136,5	452,5	498,5	560	-
BF10Z-../S..08 (M, L)	199,5	132	156	452,5	114,5	136,5	518,5	564,5	626	-
BF10-../S..09 (S, X)	250,5	80,5	176	452	124	157	545	559,5	649	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedpt.com

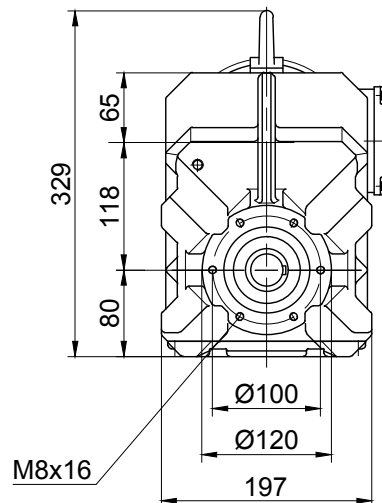
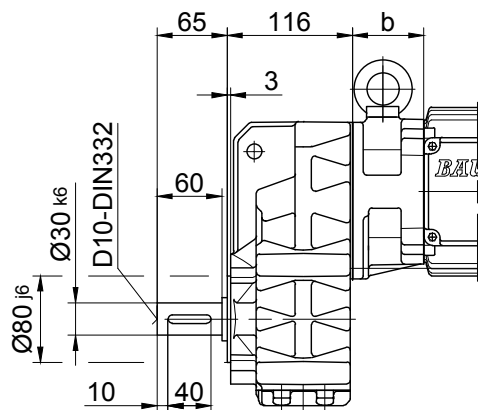
# BF-series shaft-mounted geared motors

## Dimension -Standard

### BF10-BF10Z

Flange with tapped holes

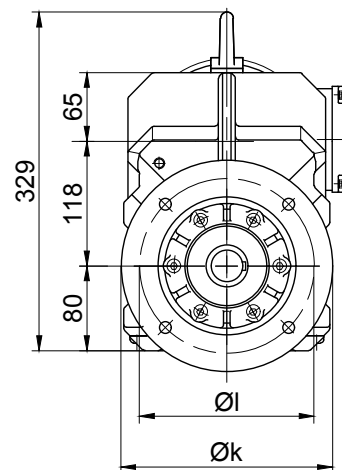
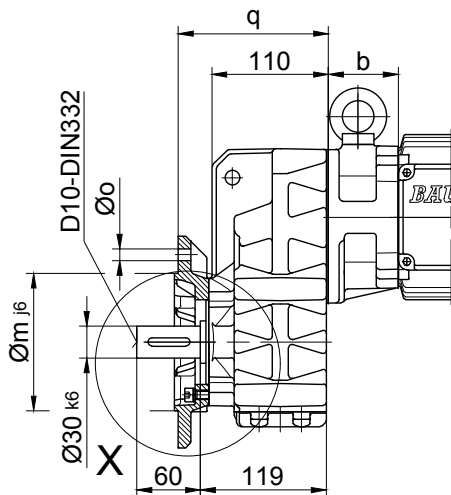
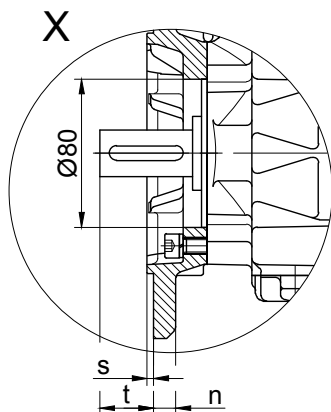
Code -7./



Flange with clearance holes

Code -3./

(Code -2./)

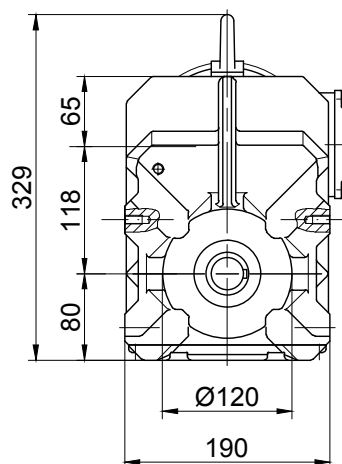
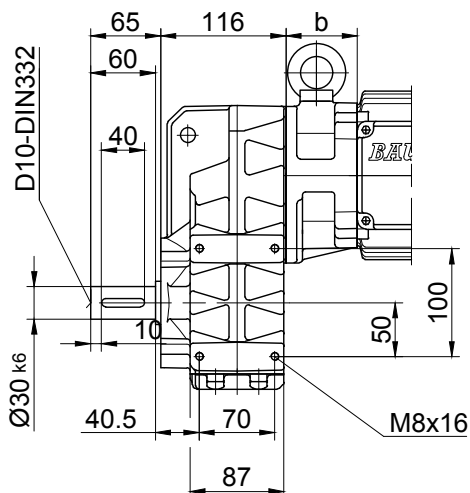


Flange Dimensions		k	l	m	n	o	q	s	t
BF10..	Code -3./	200	165	130	12	11	142	3,5	39
BF10..	Code -2./	160	130	110	10	9	135	3,5	46

Dimensions in millimetres (mm)

Foot with tapped holes left and right

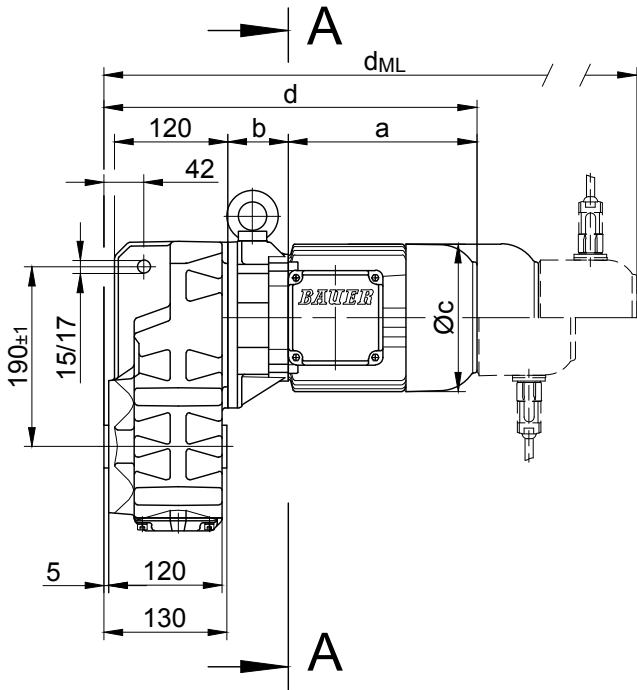
Code -6.LR/



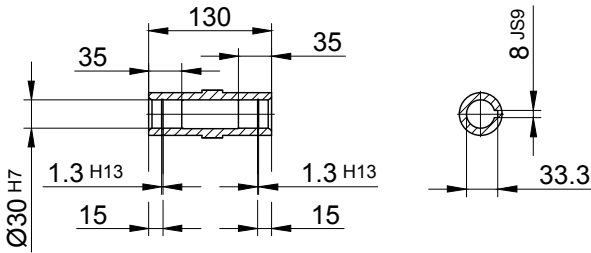
# BF-series shaft-mounted geared motors

## Dimension - Standard

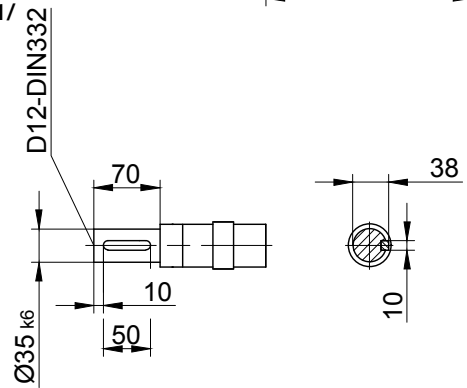
**BF20-BF20Z**  
with torque arm  
Code -0./



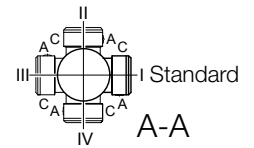
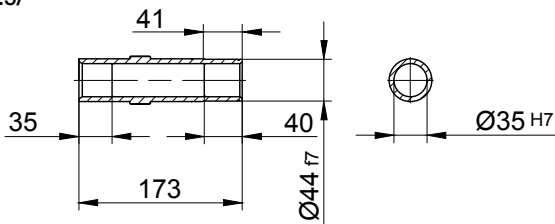
Code -4/



Code -1/



Code -5/



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF20Z-../S04S	142,5	100	110,5	373,5	90	112	417	461	504,5	-
BF20-../S..06 (M, L)	170,5	60	123	361,5	99	119	403,5	464	501,5	-
BF20Z-../S..06 (M, L)	170,5	102	123	403,5	99	119	445,5	506	543,5	-
BF20-../S..08 (M, L)	199,5	64	156	394,5	114,5	136,5	460,5	506,5	568	-
BF20Z-../S..08 (M, L)	199,5	146	156	476,5	114,5	136,5	542,5	588,5	650	-
BF20-../S..09 (S, X)	250,5	78,5	176	460	124	157	553	567,5	657	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

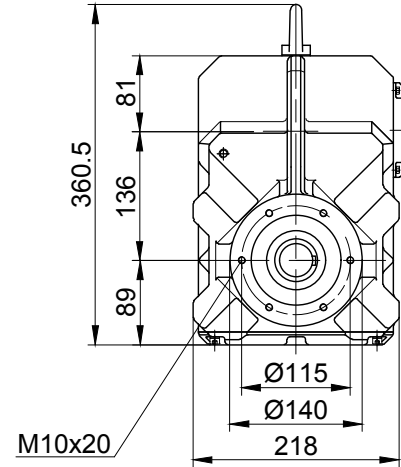
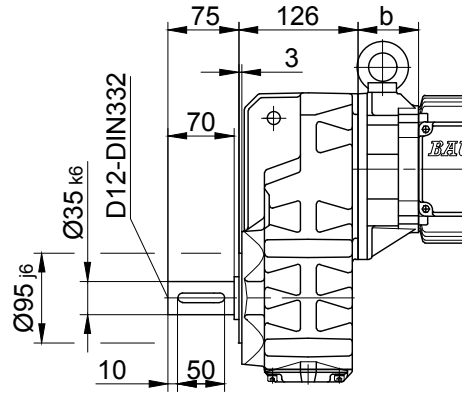
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

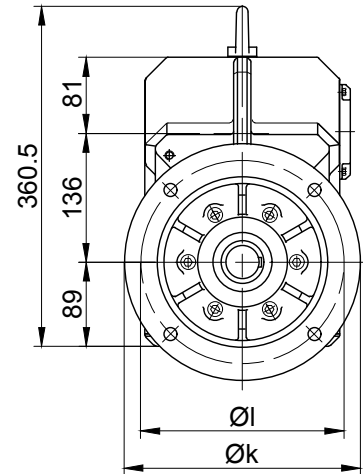
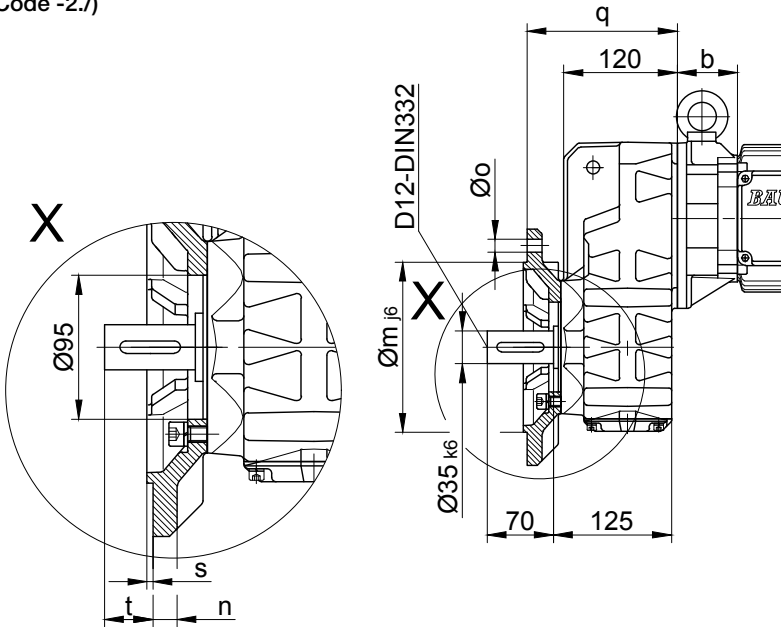
## Dimension -Standard

### BF20-BF20Z

Flange with tapped holes  
Code -7./



Flange with clearance holes  
Code -3./  
(Code -2./)

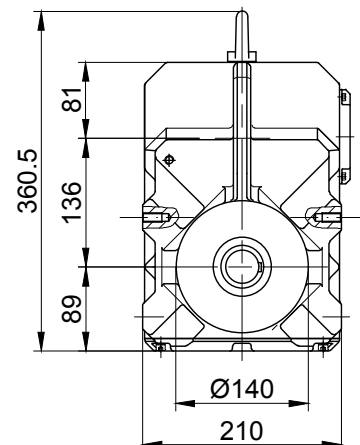
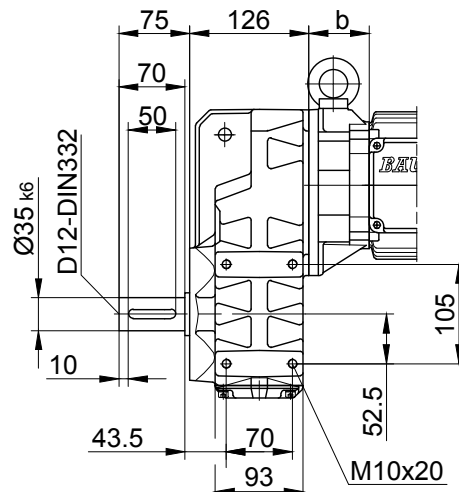


11

Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF20..	Code -3./	250	215	180	16	13,5	159	4	42
BF20..	Code -2./	200	165	130	12	11	150	3,5	51

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

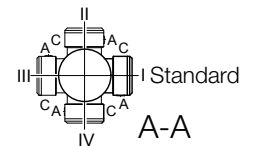
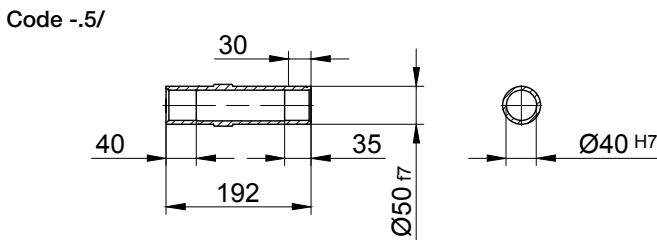
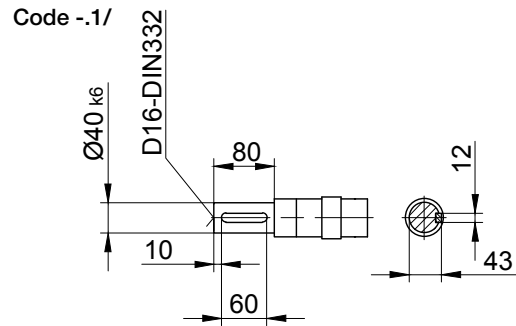
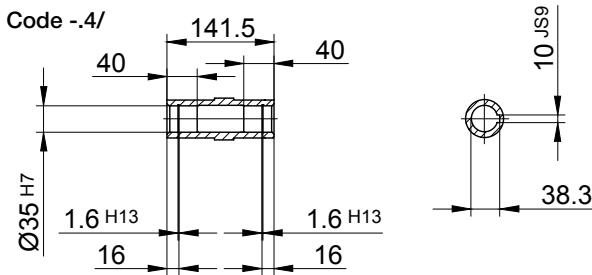
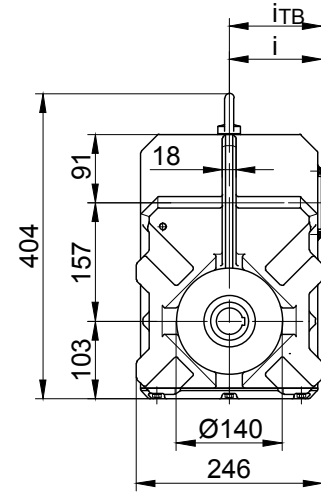
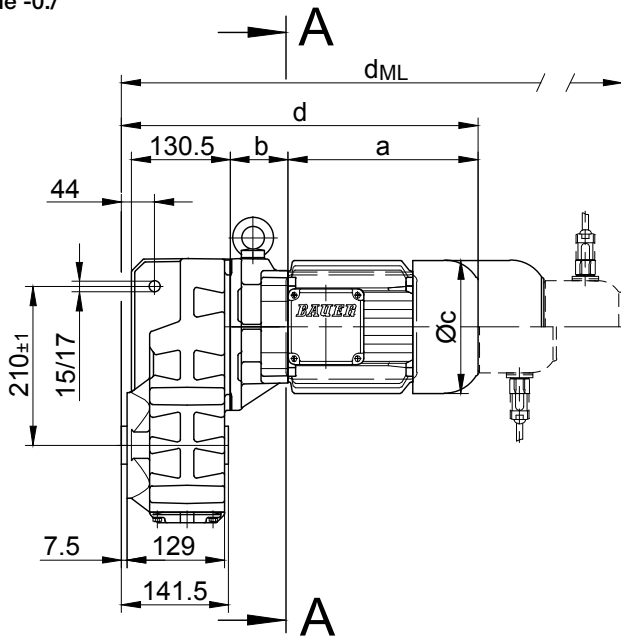
Send Quote Requests to info@automatedpt.com



# BF-series shaft-mounted geared motors

## Dimension - Standard

**BF30-BF30Z**  
with torque arm  
Code -0./



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF30-../S..06 (M, L)	170,5	58	123	372,5	99	119	414,5	475	512,5	-
BF30Z-../S..06 (M, L)	170,5	133,5	123	448	99	119	490	550,5	588	-
BF30-../S..08 (M, L)	199,5	62	156	405,5	114,5	136,5	471,5	517,5	579	-
BF30Z-../S..08 (M, L)	199,5	137,5	156	481	114,5	136,5	547	593	654,5	-
BF30-../S..09 (S, X)	250,5	76,5	176	471	124	157	564	578,5	668	-
BF30Z-../S..09 (S, X)	250,5	152	176	546,5	124	157	639,5	654	743,5	-
BF30-../S..11 (S, M, L)	319	83	218	546	165	176	644	653,5	746	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedpt.com

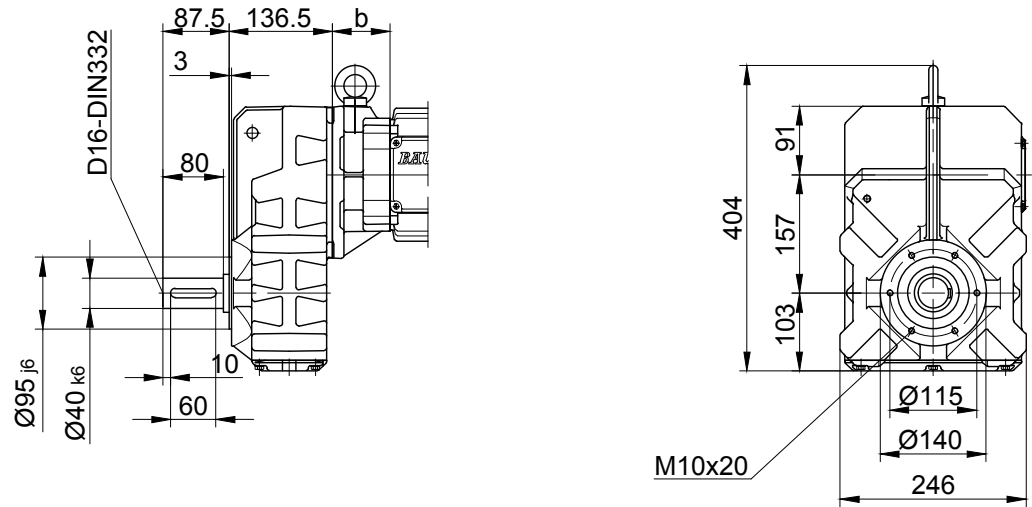
# BF-series shaft-mounted geared motors

## Dimension -Standard

### BF30-BF30Z

Flange with tapped holes

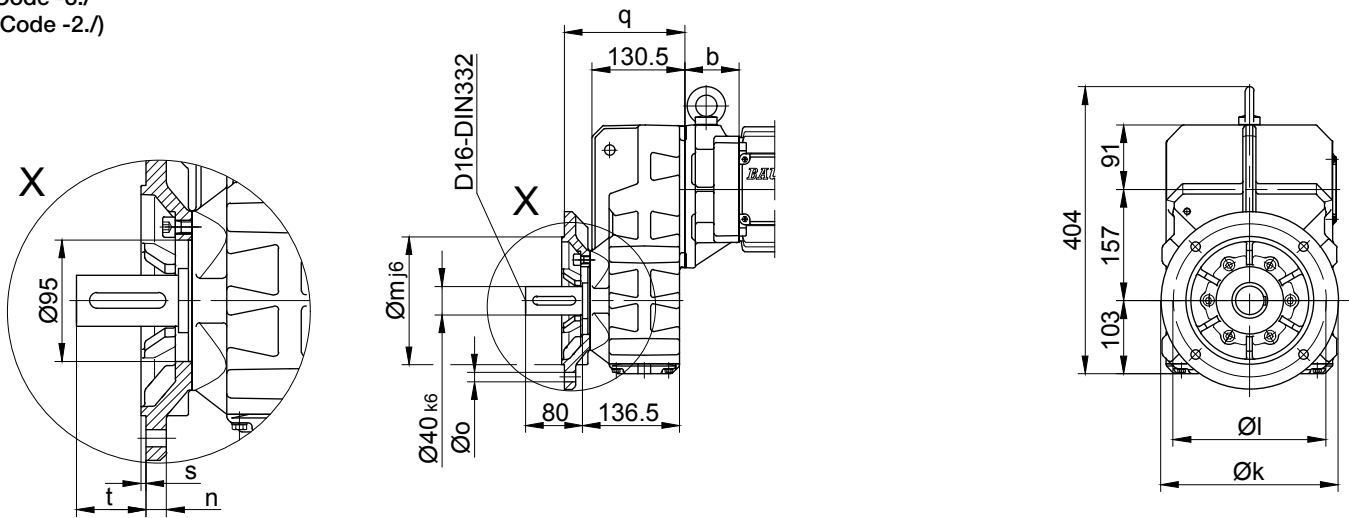
Code -7./



Flange with clearance holes

Code -3./

(Code -2./)

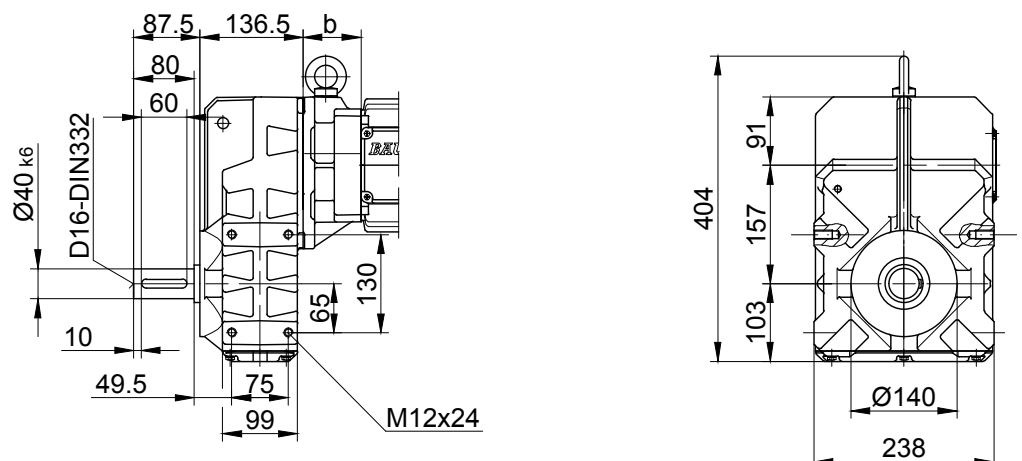


Type	Design	k	l	m	n	o	q	s	t
BF30..	Code -3./	250	215	180	16	13,5	169,5	4	54,5
BF30..	Code -2./	200	165	130	12	11	160,5	3,5	63,5

Dimensions in millimetres (mm)

Foot with tapped holes left and right

Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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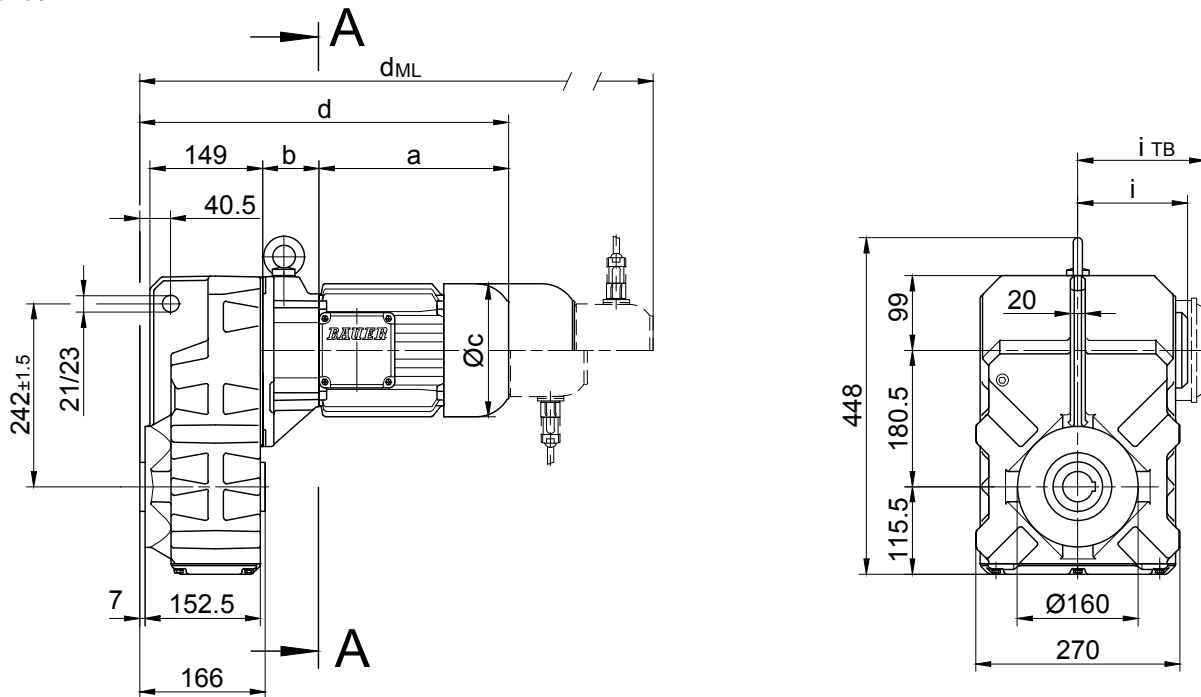
# BF-series shaft-mounted geared motors

## Dimension - Standard

### BF40-BF40Z

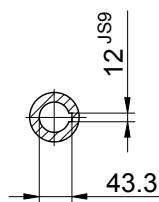
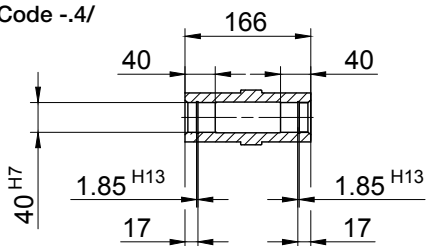
with torque arm

Code -0./

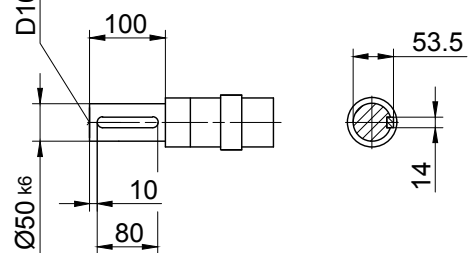


Code -1./

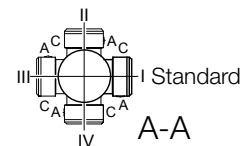
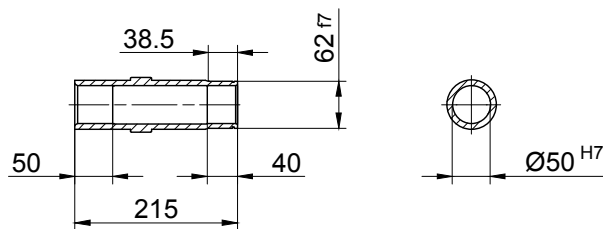
Code -4./



D16-DIN332



Code -5./



Type	a	b	c	d	i	Design with motor extensions				
						$i_{TB}$	Brake	Encoder	Brake with Encoder	Back Stop
							$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$
BF40Z-../S..06 (M, L)	170,5	138,5	123	471,5	99	119	513,5	574	611,5	-
BF40-../S..08 (M, L)	199,5	60	156	422	114,5	136,5	488	534	595,5	-
BF40Z-../S..08 (M, L)	199,5	142,5	156	504,5	114,5	136,5	570,5	616,5	678	-
BF40-../S..09 (S, X)	250,5	74,5	176	487,5	124	157	580,5	595	684,5	-
BF40Z-../S..09 (S, X)	250,5	157	176	570	124	157	663	677,5	767	-
BF40-../S..11 (S, M, L)	319	81	218	562,5	165	176	660,5	670	762,5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedpt.com

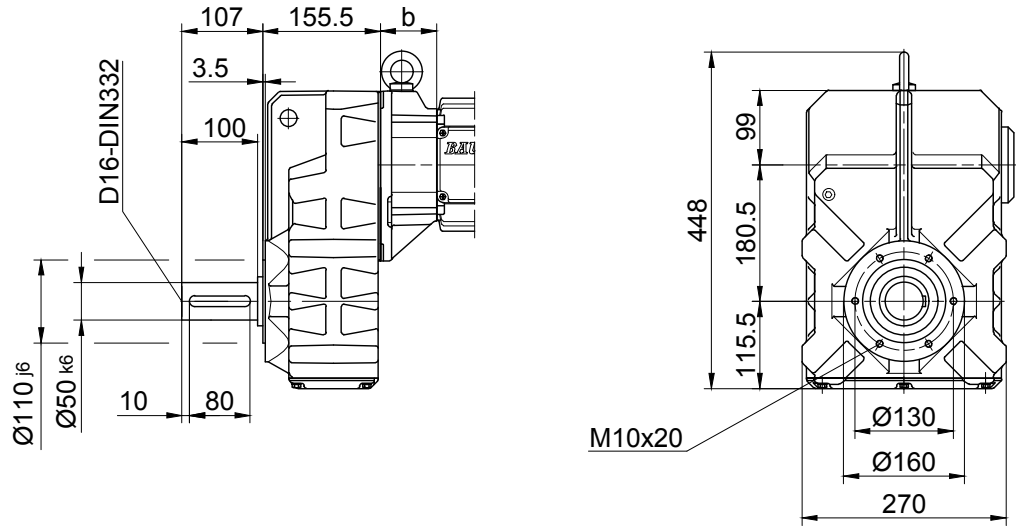
# BF-series shaft-mounted geared motors

## Dimension -Standard

### BF40-BF40Z

Flange with tapped holes

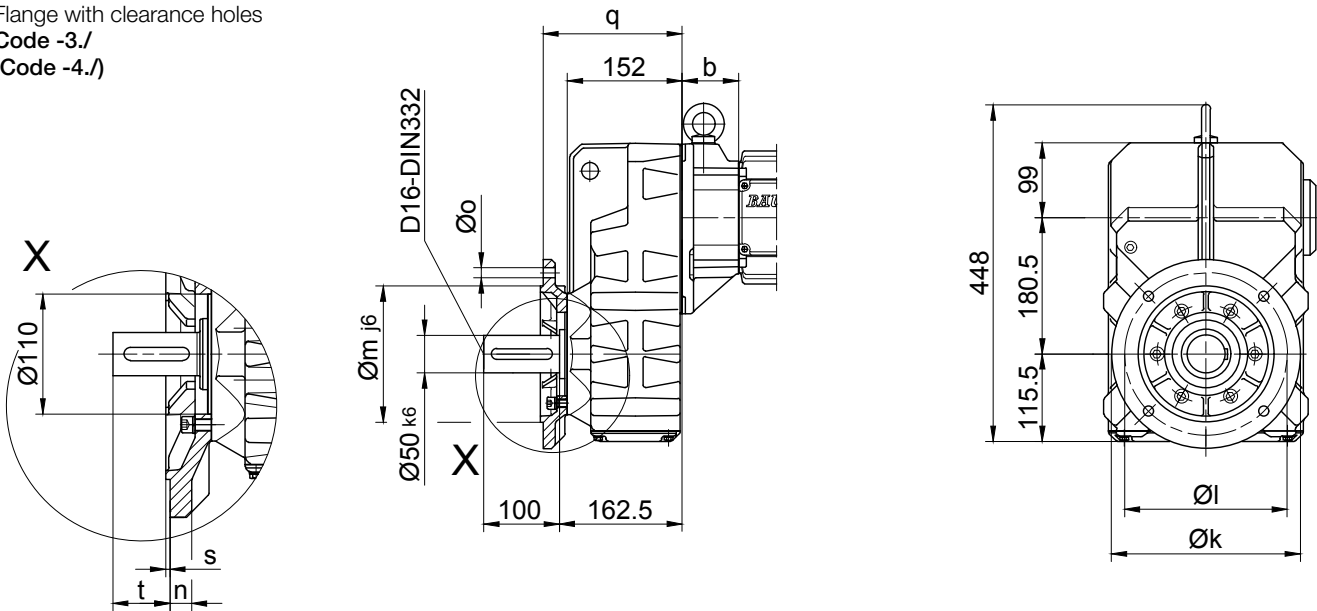
Code -7./



Flange with clearance holes

Code -3./

(Code -4./)



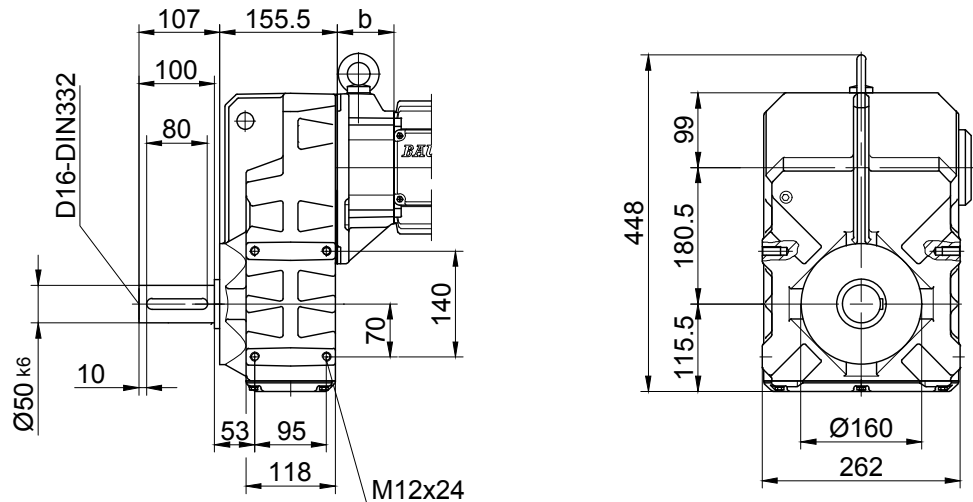
11

Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF40..	Code -3./	250	215	180	16	13,5	184	4	78,5
BF40..	Code -4./	300	265	230	20	13,5	190	4	72,5

Dimensions in millimetres (mm)

Foot with tapped holes left and right

Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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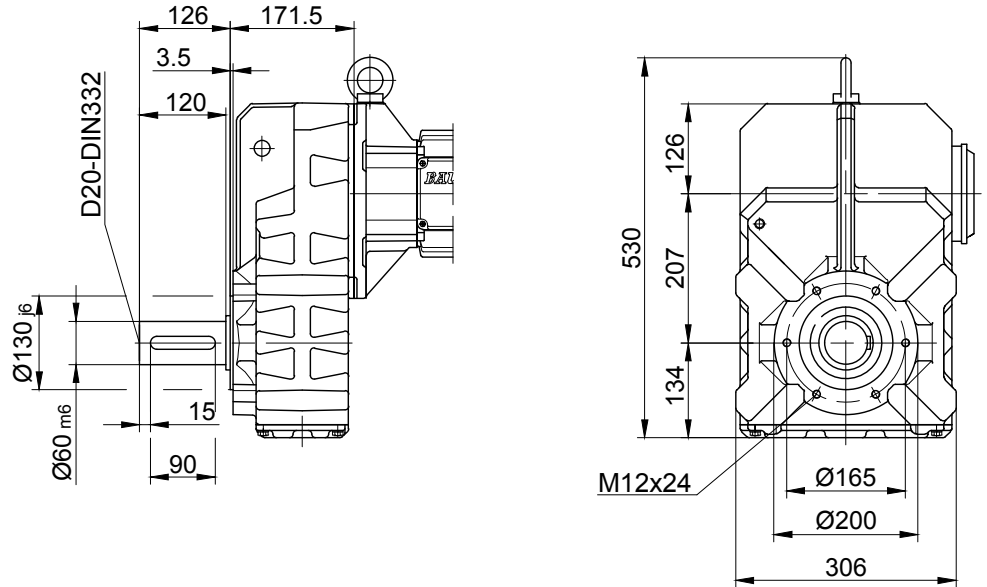
# BF-series shaft-mounted geared motors

## Dimension -Standard

### BF50-BF50Z

Flange with tapped holes

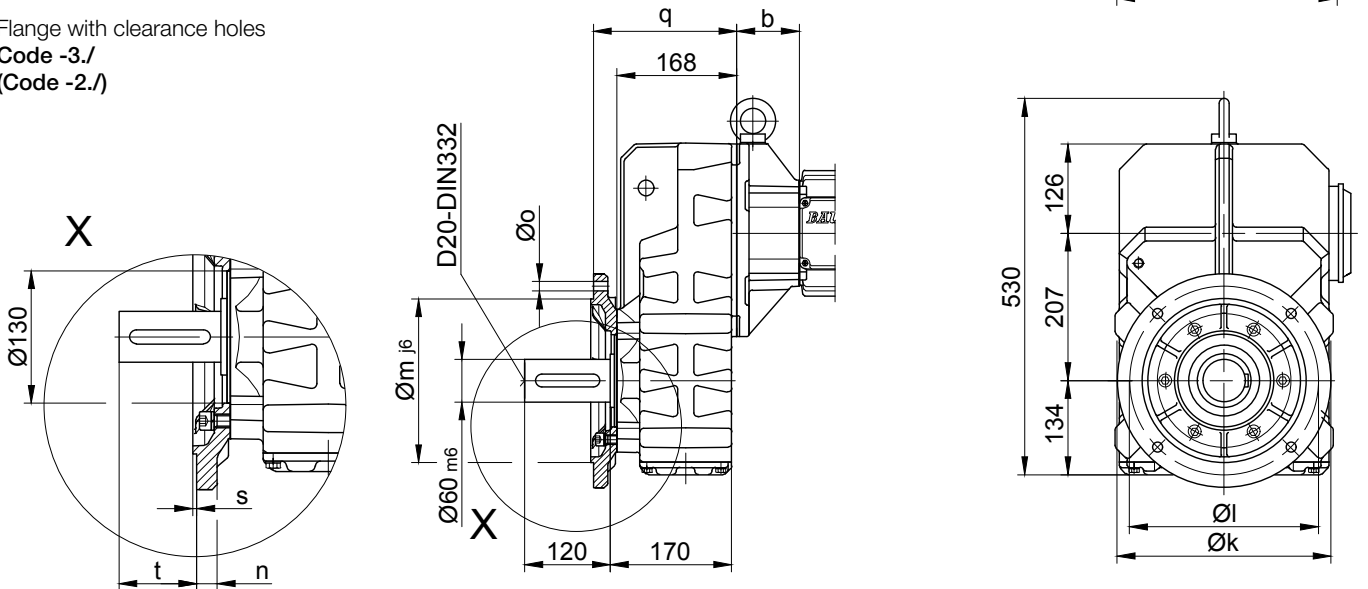
Code -7./



Flange with clearance holes

Code -3./

(Code -2./)

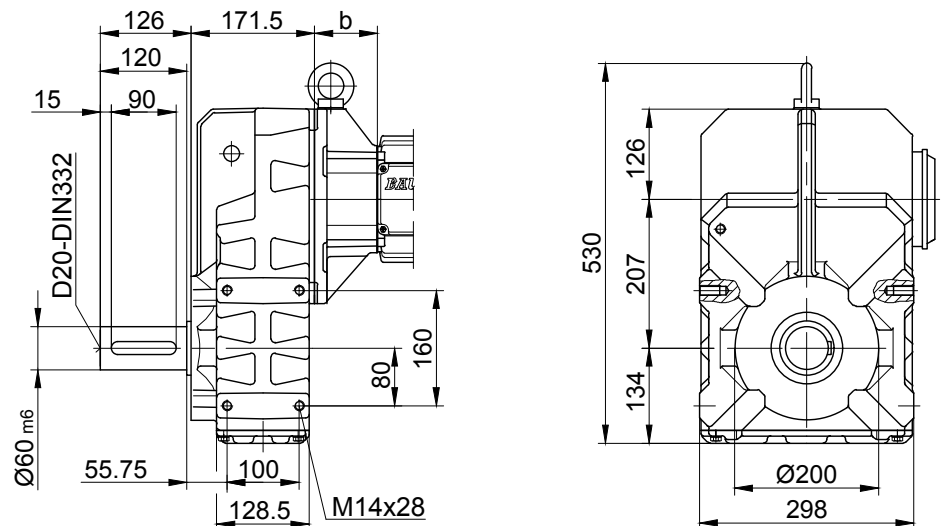


Type	Design	k	l	m	n	o	q	s	t
BF50..	Code -3./	300	265	230	20	13,5	201	4	96,5
BF50..	Code -2./	250	215	180	16	13,5	198	4	99,5

Dimensions in millimetres (mm)

Foot with tapped holes left and right

Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

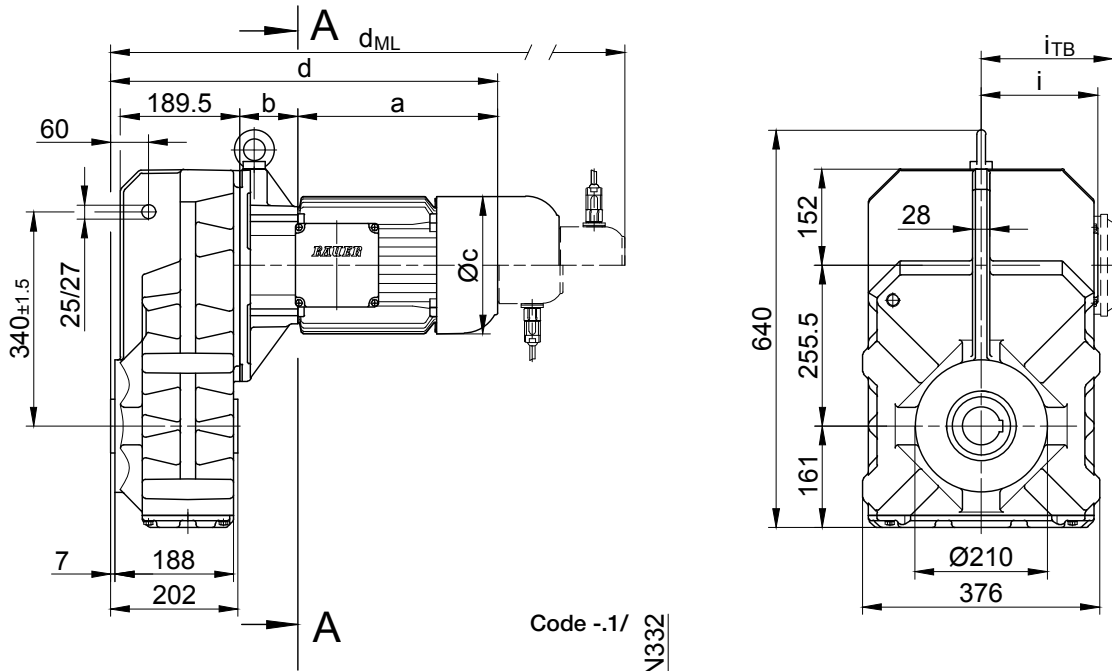
Send Quote Requests to info@automatedpt.com



# BF-series shaft-mounted geared motors

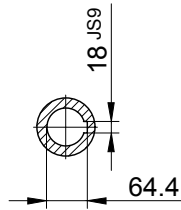
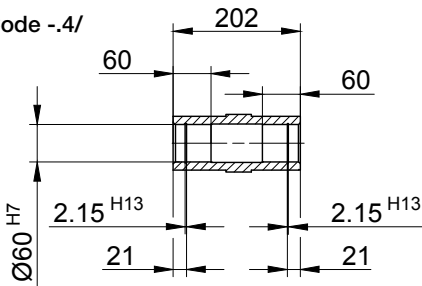
## Dimension - Standard

**BF60-BF60Z**  
with torque arm  
Code -0./

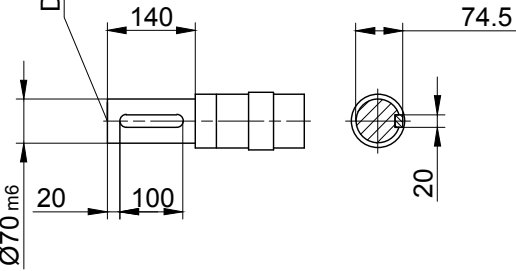


Code -1./

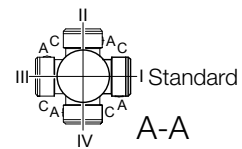
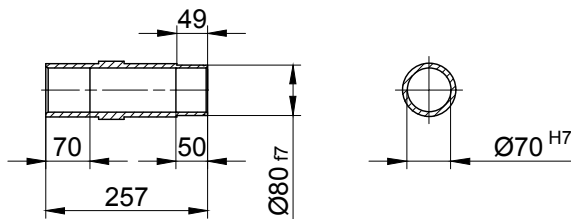
Code -4./



D20-DIN332  
Ø70 m6



Code -5./



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF60Z-../S..08 (M, L)	199,5	181	156	585,5	114,5	136,5	651,5	697,5	759	-
BF60-../S..09 (S, X)	250,5	85,5	176	541	124	157	634	648,5	738	-
BF60Z-../S..09 (S, X)	250,5	195,5	176	651	124	157	744	758,5	848	-
BF60-../S..11 (S, M, L)	319	92	218	616	165	176	714	723,5	816	-
BF60Z-../S..11 (S, M, L)	319	202	218	726	165	176	824	833,5	926	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

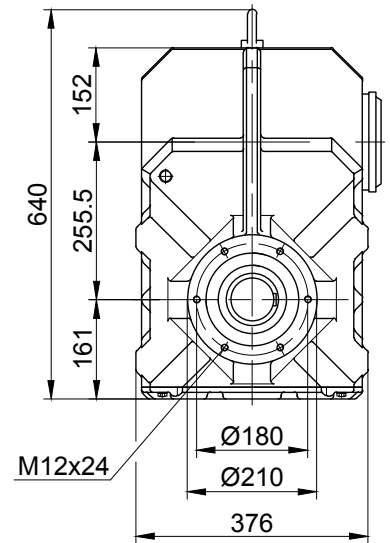
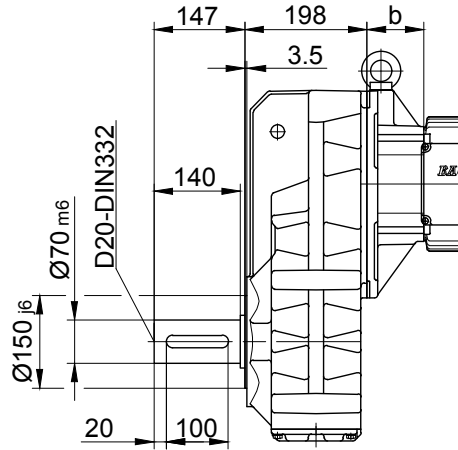
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

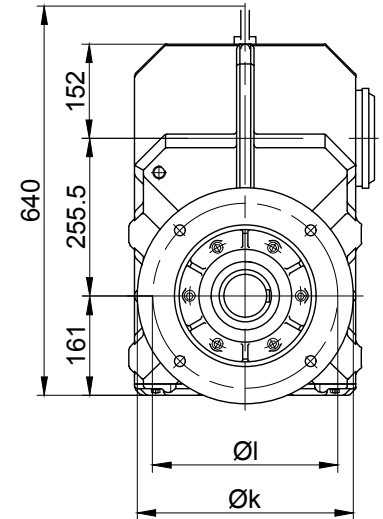
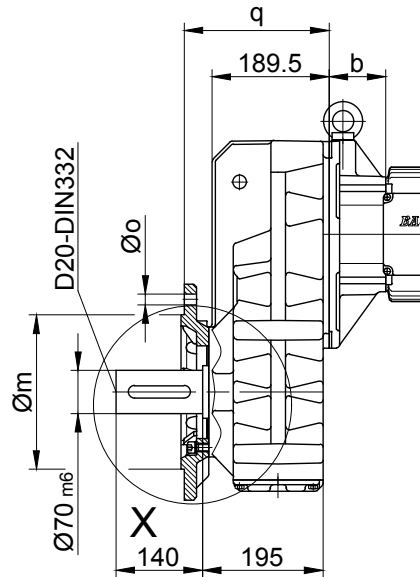
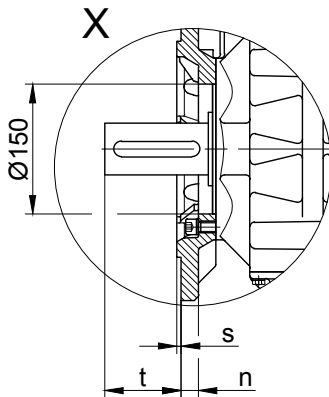
## Dimension -Standard

### BF60-BF60Z

Flange with tapped holes  
Code -7./



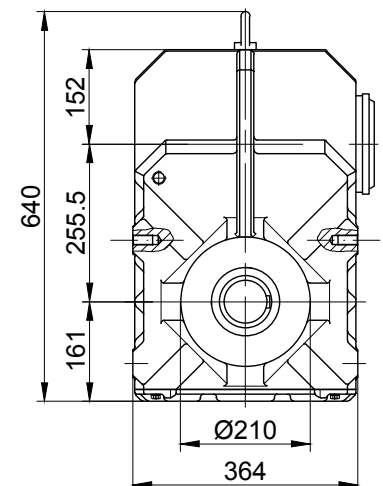
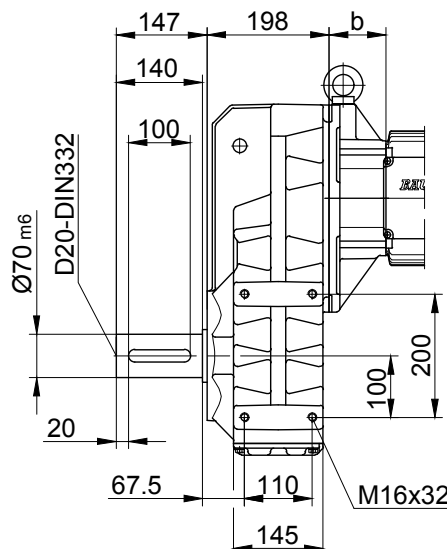
Flange with clearance holes  
Code -3./  
(Code -2./)



Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF60..	Code -3./	350	300	250	20	17,5	234,5	5	110,5
BF60..	Code -2./	300	265	230	20	13,5	242,5	4	102,5

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/



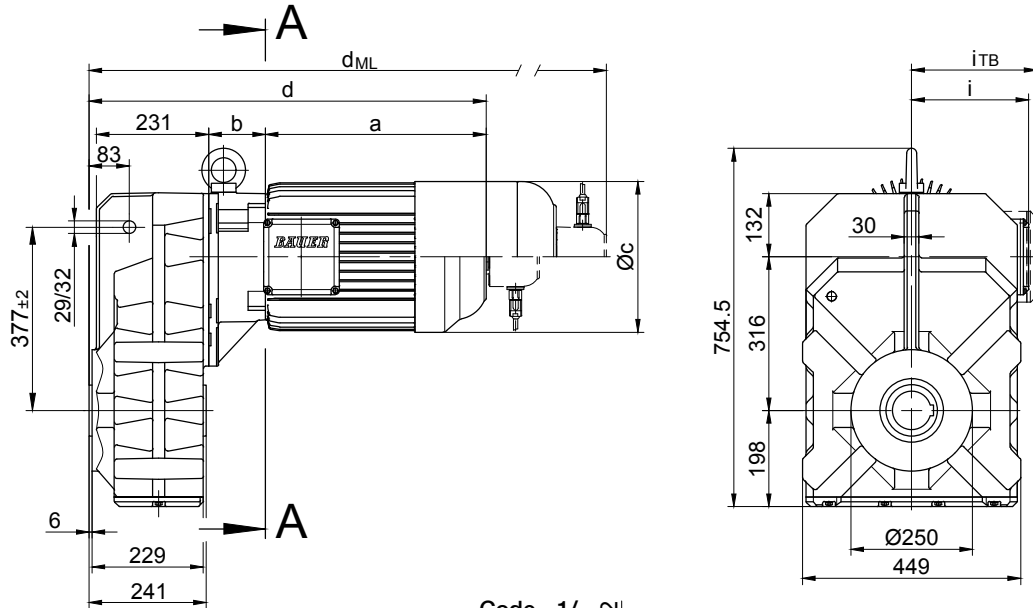
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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# BF-series shaft-mounted geared motors

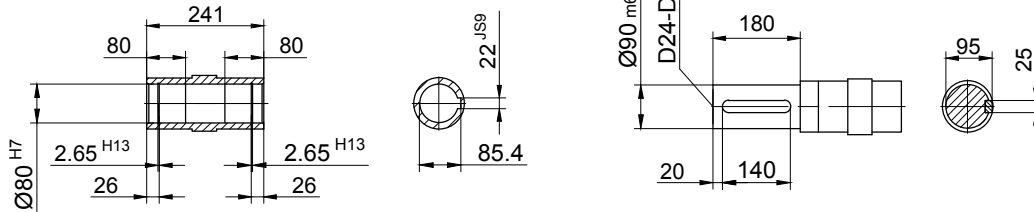
## Dimension - Standard

**BF70-BF70Z**  
with torque arm  
Code -0./

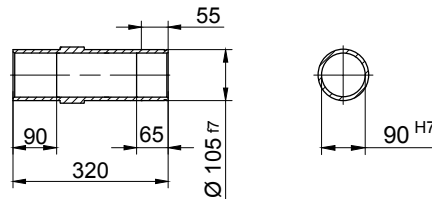


Code -1/

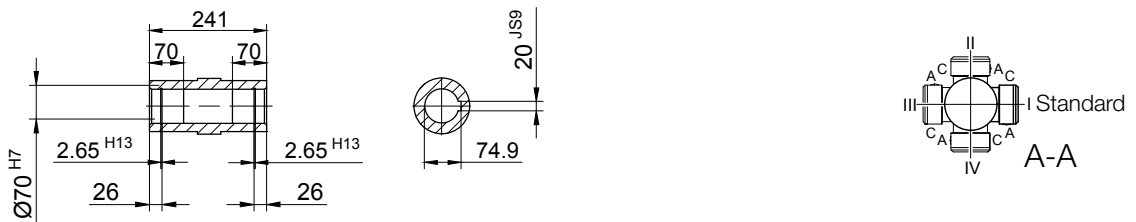
Code -4/



Code -5/



Code -4/K70



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Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF70Z-../S..08 (M, L)	199,5	202	156	647,5	114,5	136,5	713,5	759,5	821	-
BF70-../S..09 (S, X)	250,5	83,5	176	580	124	157	673	687,5	777	-
BF70Z-../S..09 (S, X)	250,5	216,5	176	713	124	157	806	820,5	910	-
BF70-../S..11 (S, M, L)	319	90	218	655	165	176	753	762,5	855	-
BF70Z-../S..11 (S, M, L)	319	223	218	788	165	176	886	895,5	988	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

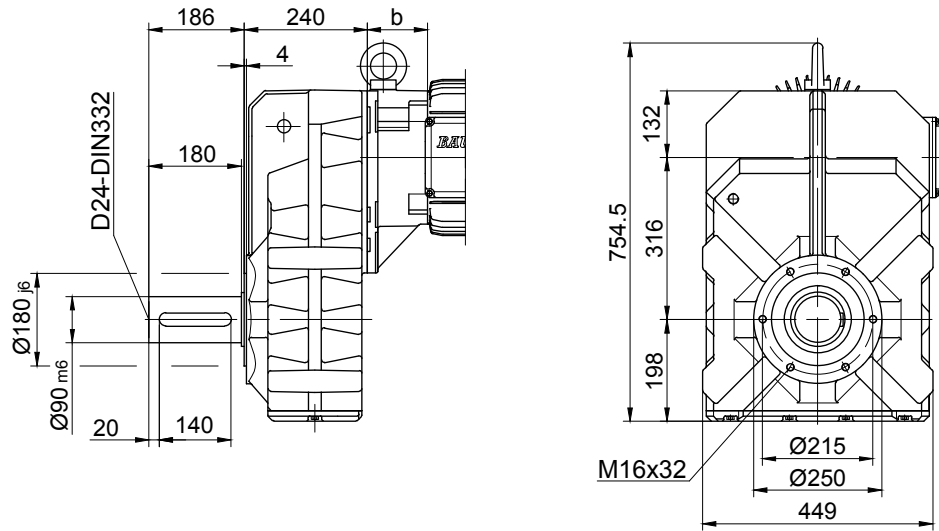
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

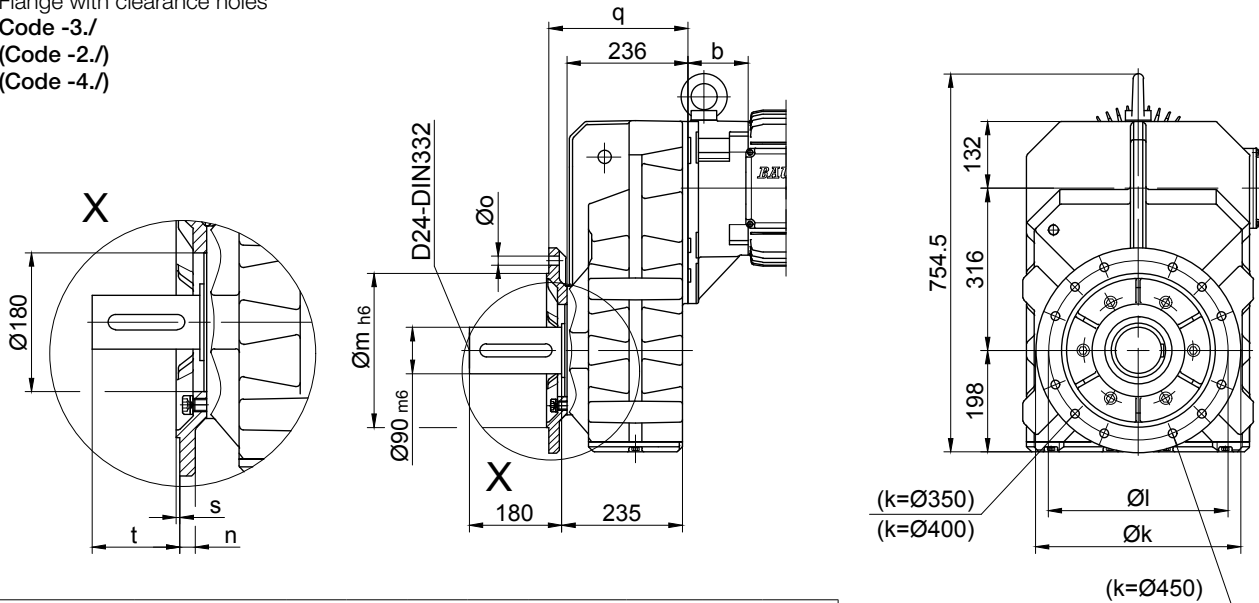
## Dimension -Standard

### BF70-BF70Z

Flange with tapped holes  
Code -7./



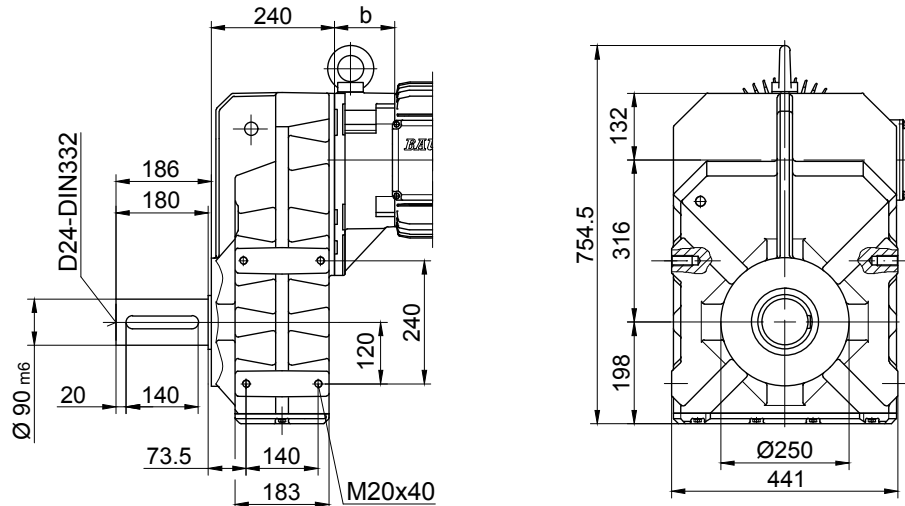
Flange with clearance holes  
Code -3./  
(Code -2./)  
(Code -4./)



Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF70..	Code -3./	400	350	300	20	4 x 17,5	271	5	155
BF70..	Code -2./	350	300	250	20	4 x 17,5	271	5	155
BF70..	Code -4./	450	400	350	22	8 x 17,5	281	5	145

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/

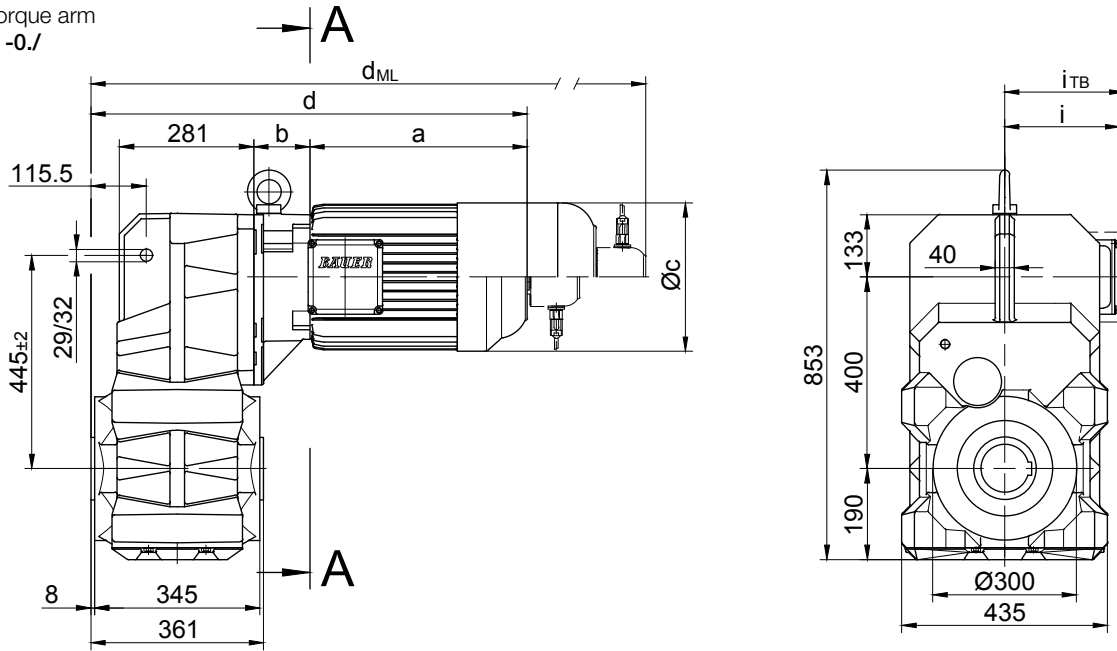


# BF-series shaft-mounted geared motors

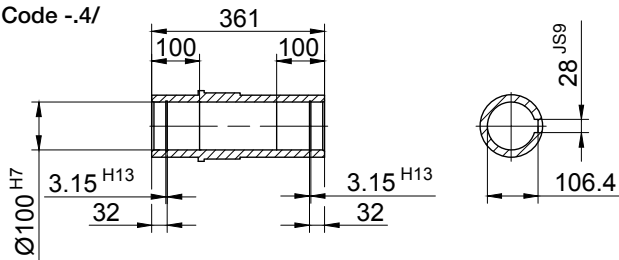
## Dimension - Standard

### BF80-BF80Z

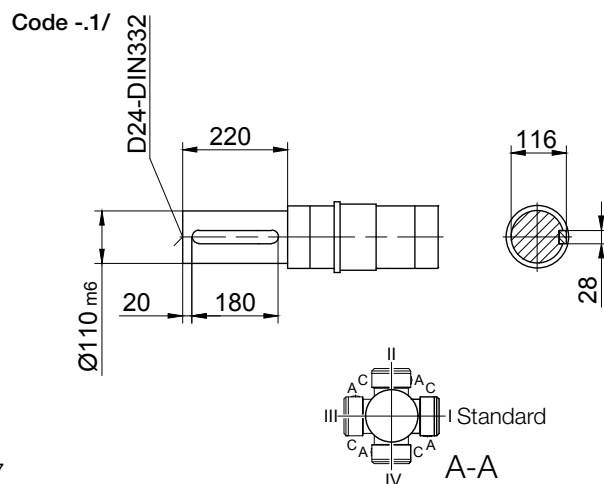
with torque arm  
Code -0./



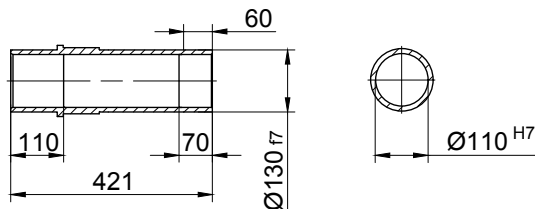
Code -4/



Code -1/



Code -5/



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF80Z-../S..08 (M, L)	199,5	202	156	742	114,5	136,5	808	854	915,5	-
BF80-../S..09 (S, X)	250,5	83,5	176	674,5	124	157	767,5	782	871,5	-
BF80Z-../S..09 (S, X)	250,5	216,5	176	807,5	124	157	900,5	915	1004,5	-
BF80-../S..11 (S, M, L)	319	90	218	749,5	165	176	847,5	857	949,5	-
BF80Z-../S..11 (S, M, L)	319	223	218	882,5	165	176	980,5	990	1082,5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

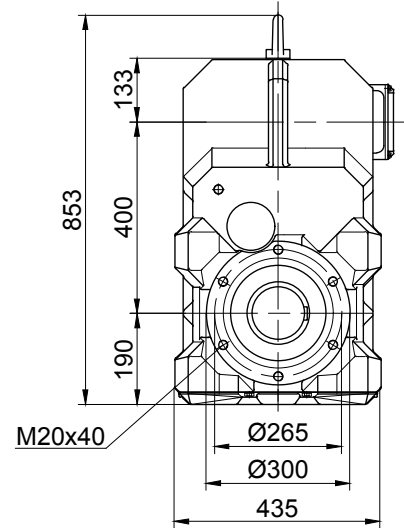
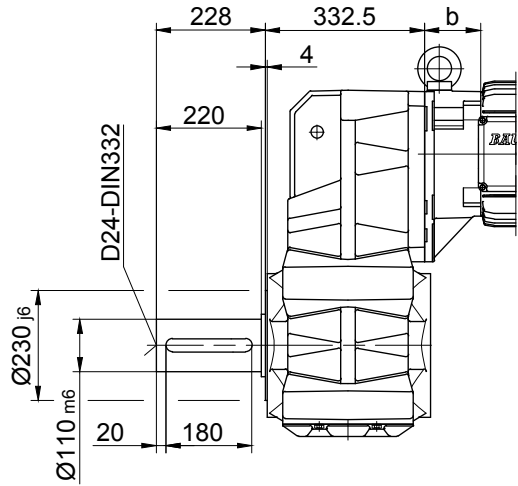
Send Quote Requests to info@automatedopt.com

# BF-series shaft-mounted geared motors

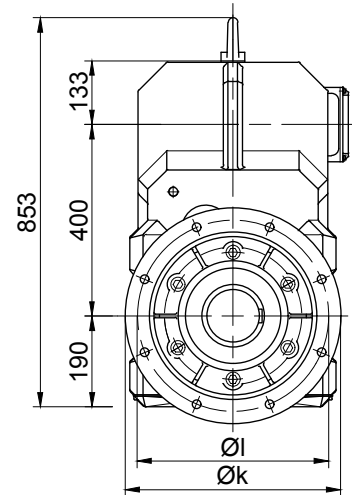
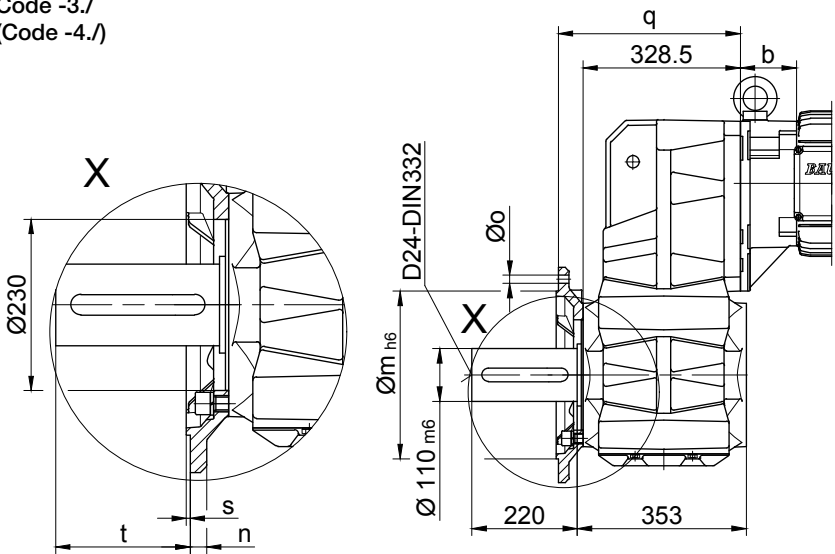
## Dimension -Standard

### BF80-BF80Z

Flange with tapped holes  
Code -7./



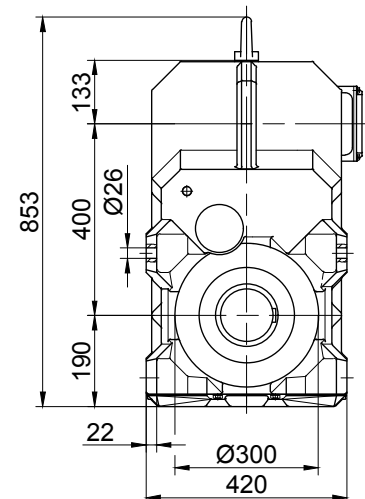
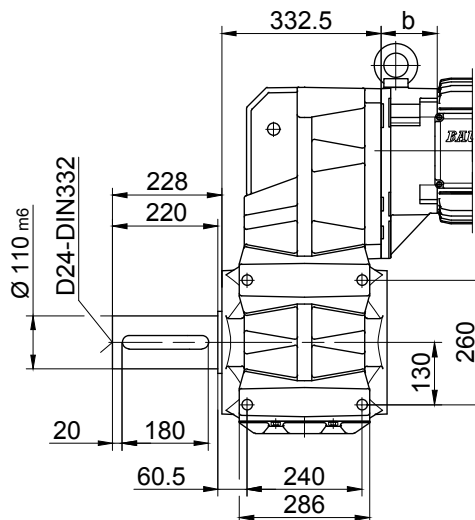
Flange with clearance holes  
Code -3./  
(Code -4./)



Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF80..	Code -3./	450	400	350	22	17,5	383,5	5	177
BF80..	Code -4./	550	500	450	22	17,5	388,5	5	172

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -1.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

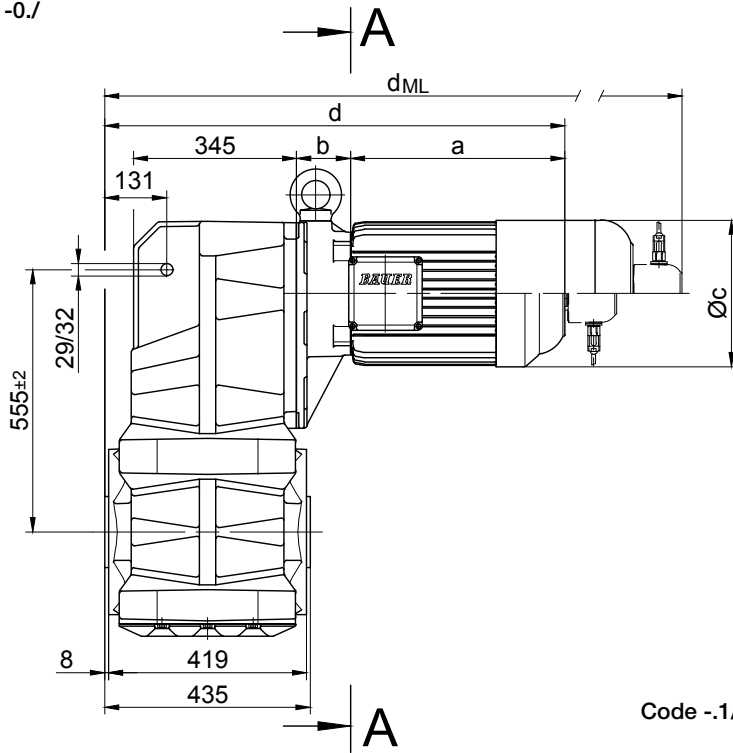
Send Quote Requests to info@automatedpt.com



# BF-series shaft-mounted geared motors

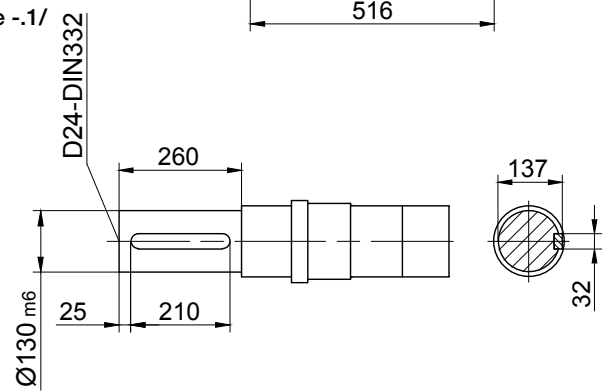
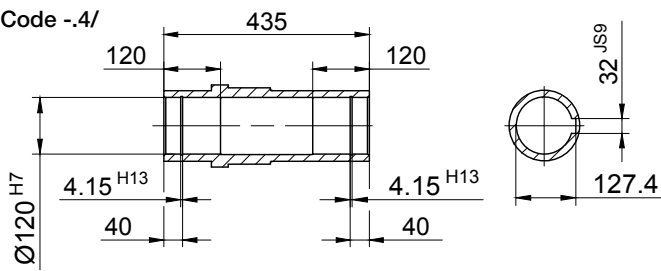
## Dimension - Standard

**BF90-BF90Z**  
with torque arm  
Code -0./

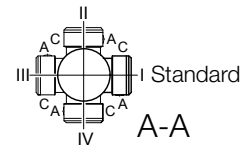
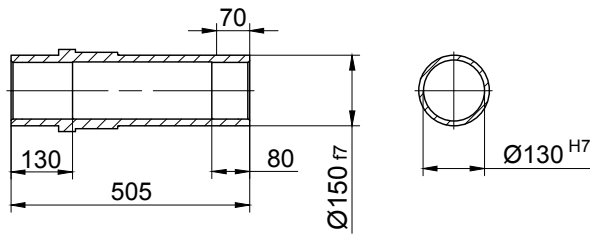


Code -1./

Code -4./



Code -5./



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF90Z-../S..09 (S, X)	250,5	252,5	176	909	124	157	1002	1016,5	1106	-
BF90-../S..11 (S, M, L)	319	87	218	812	165	176	910	919,5	1012	-
BF90Z-../S..11 (S, M, L)	319	259	218	984	165	176	1082	1091,5	1184	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

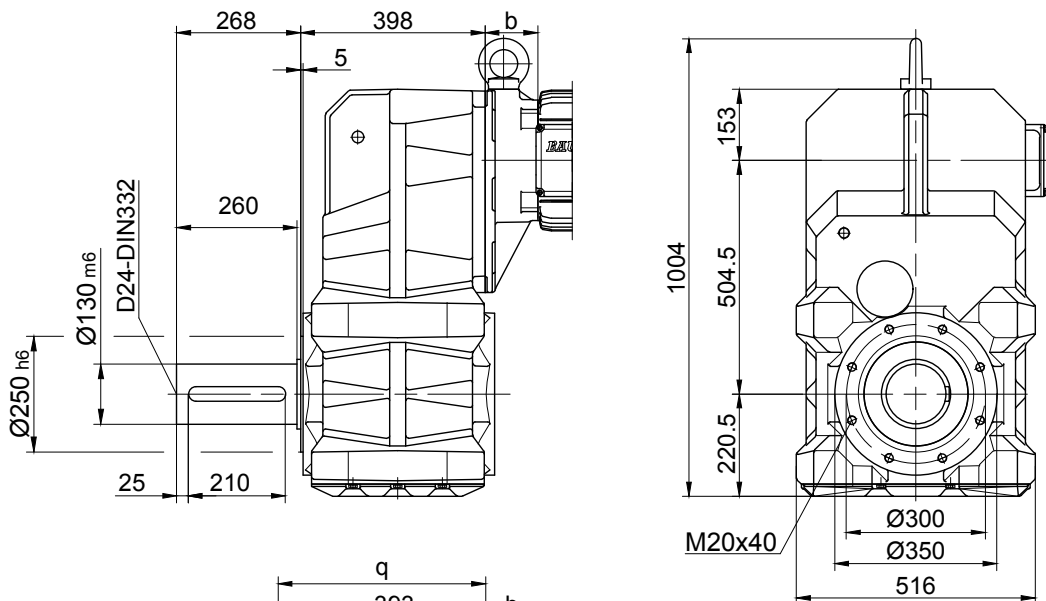
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

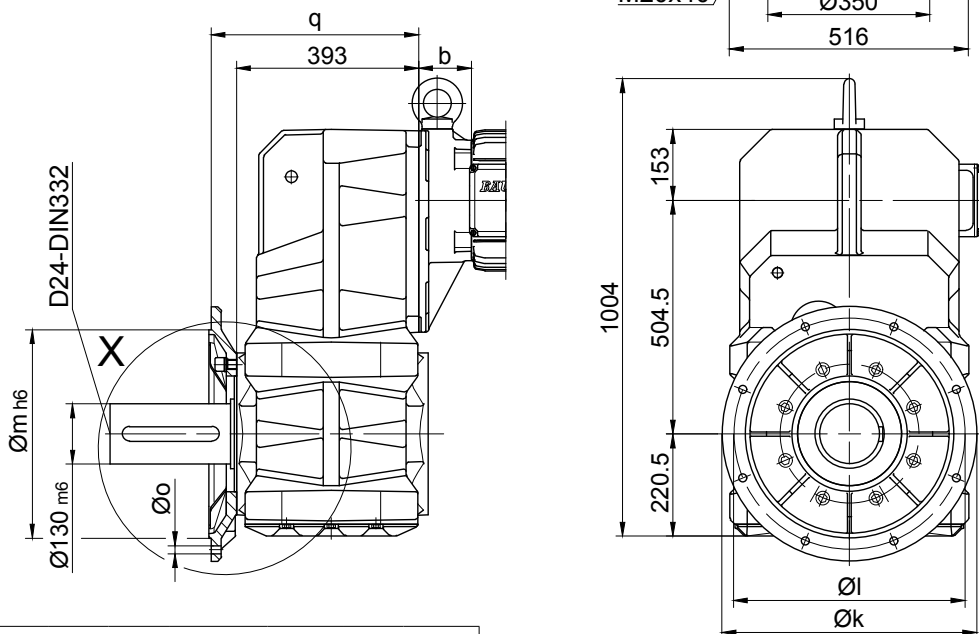
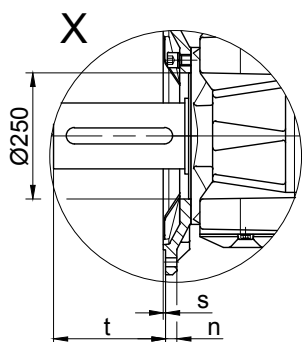
## Dimension -Standard

### BF90-BF90Z

Flange with tapped holes  
Code -7./



Flange with clearance holes  
Code -3./  
(Code -4./)

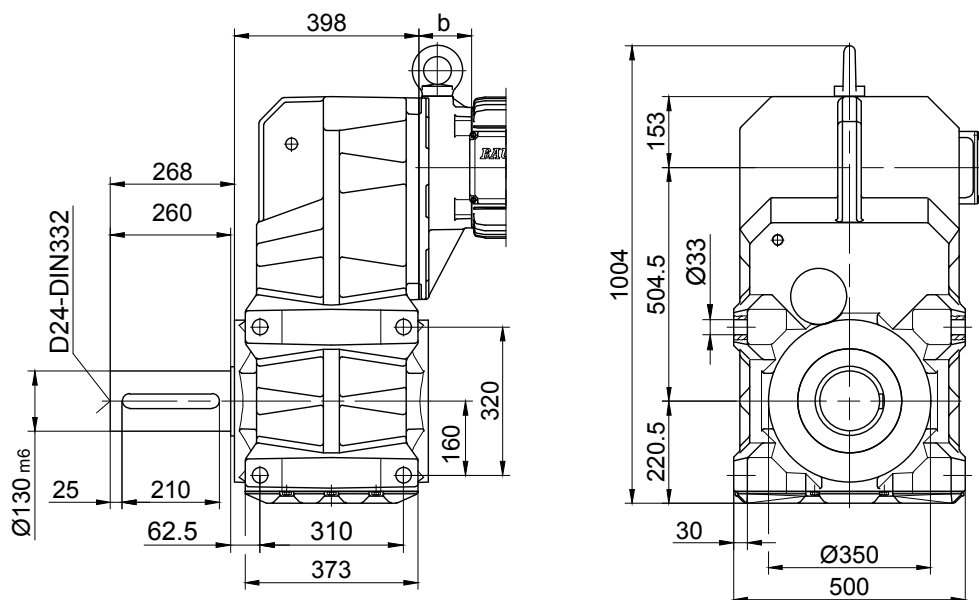


Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t
BF90..	Code -3./	550	500	450	22	17,5	448	5	218
BF90..	Code -4./	660	600	550	25	22	442	6	224

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -1.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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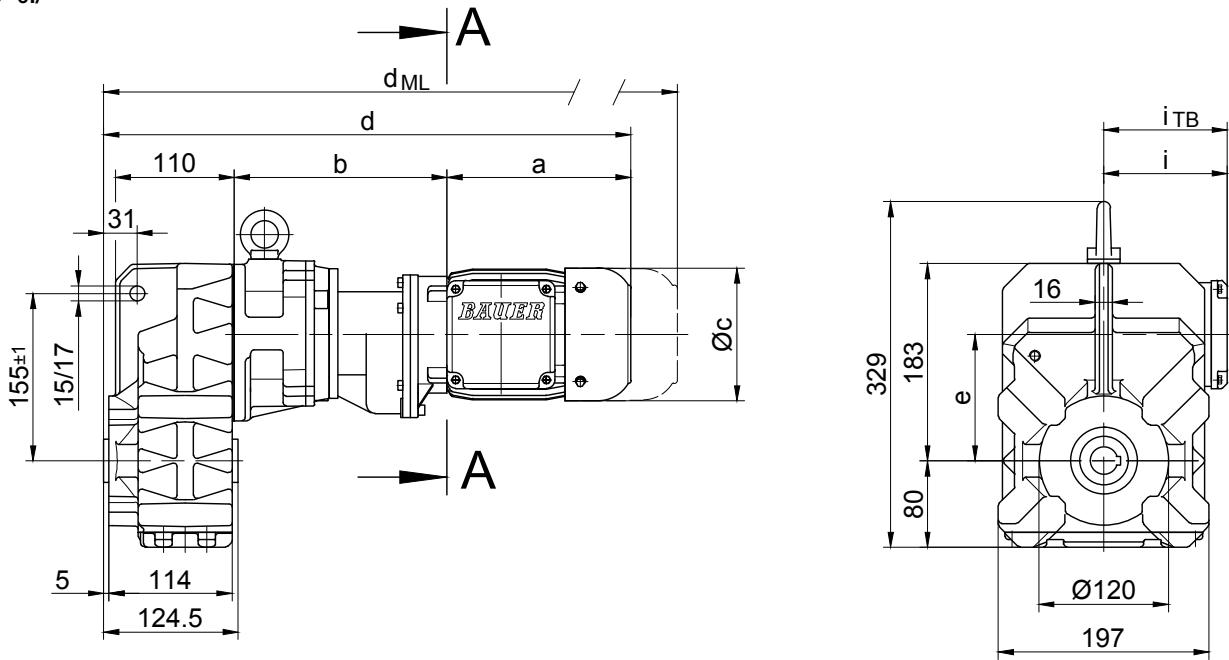
# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

### BF10G06

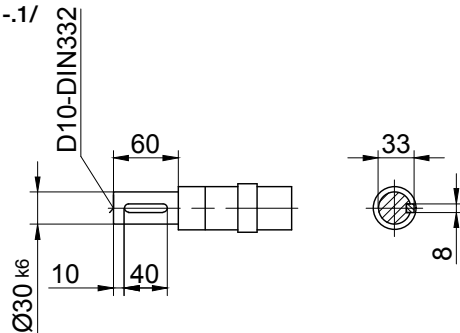
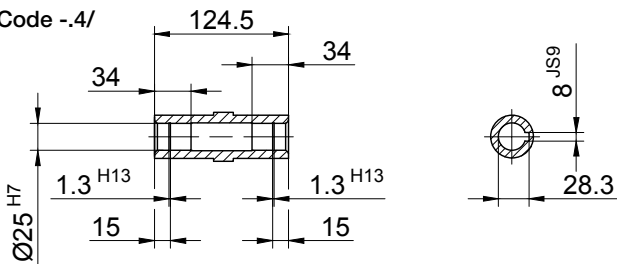
with torque arm

Code -0./

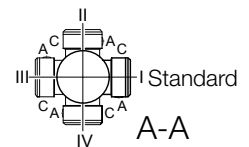
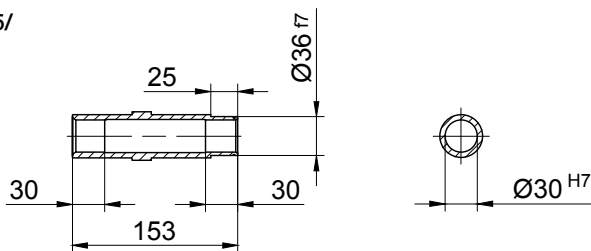


Code -.1/

Code -.4/



Code -.5/



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF10G06-.../S04S	142,5	195	110,5	458,5	90	112	502	546	589,5	-
BF10G06-.../S..06 (M, L)	170,5	197	123	488,5	99	119	530,5	591	628,5	-
BF10G06-.../S..08 (M, L)	199,5	241	156	561,5	114,5	136,5	627,5	673,5	735	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

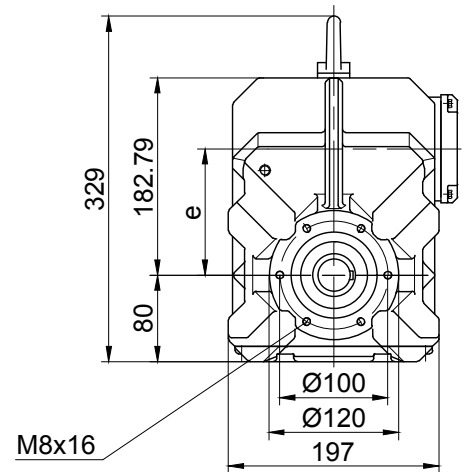
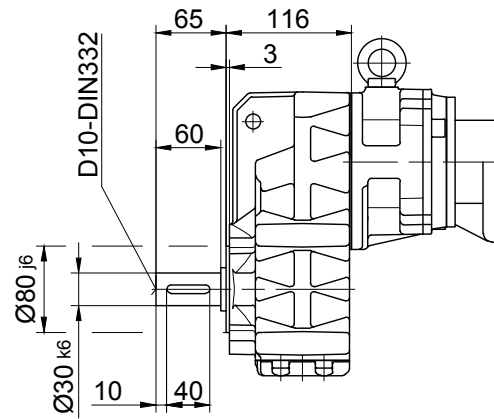
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

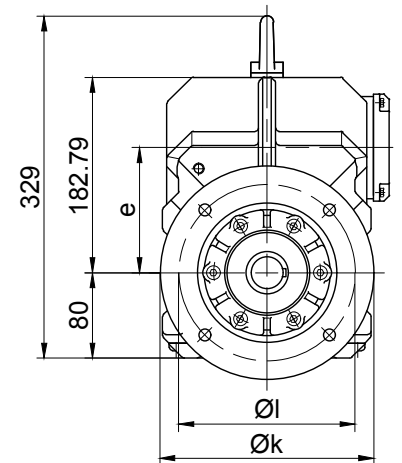
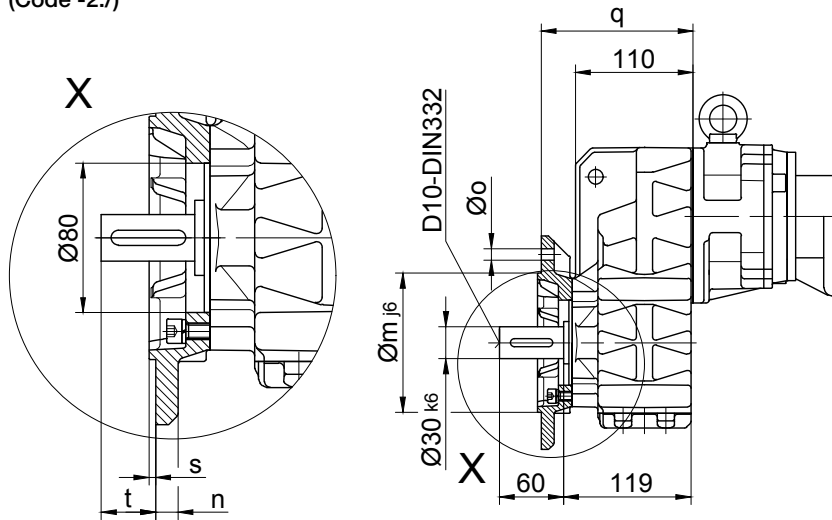
## Dimension - Tandem Gearbox

### BF10G06

Flange with tapped holes  
Code -7./



Flange with clearance holes  
Code -3./  
(Code -2./)



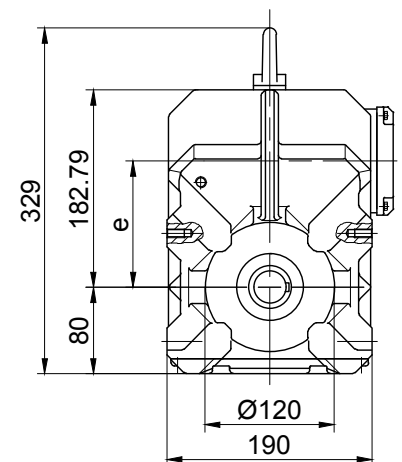
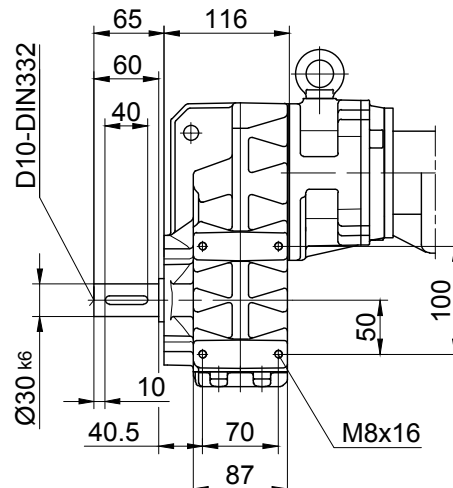
11

### Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t
BF10..	Code -3./	200	165	130	12	11	142	3,5	39
BF10..	Code -2./	160	130	110	10	9	135	3,5	46

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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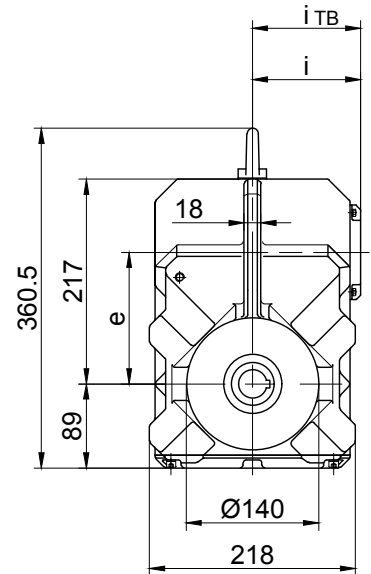
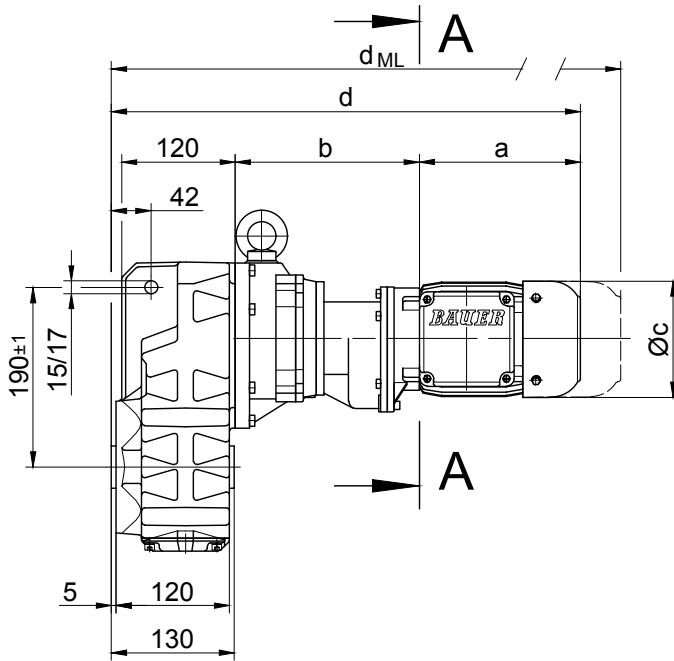
# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

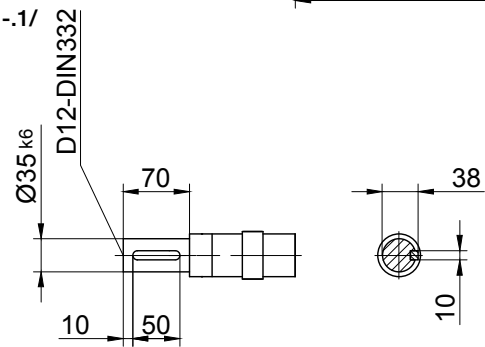
### BF20G06

with torque arm

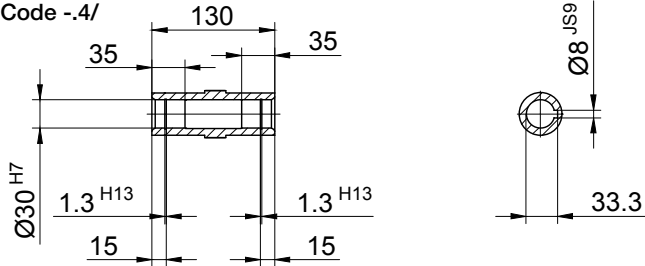
Code -0./



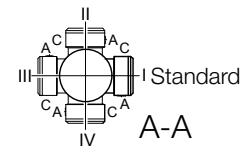
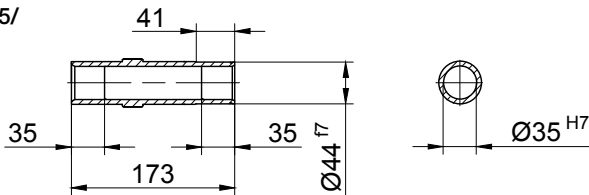
Code -1/



Code -4/



Code -5/



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF20G06-.../S04S	142,5	193	110,5	466,5	90	112	510	554	597,5	-
BF20G06-.../S..06 (M, L)	170,5	195	123	496,5	99	119	538,5	599	636,5	-
BF20G06-.../S..08 (M, L)	199,5	239	156	569,5	114,5	136,5	635,5	681,5	743	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

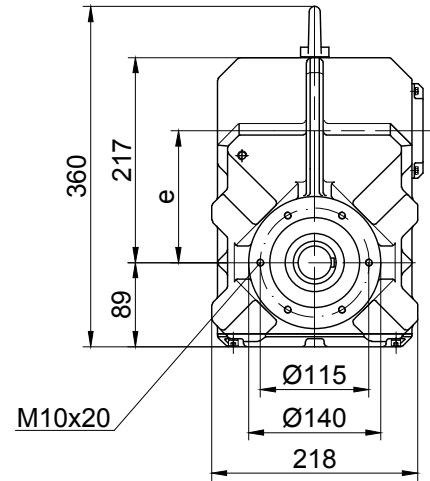
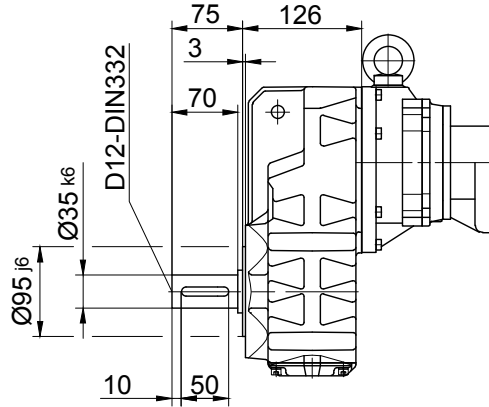
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

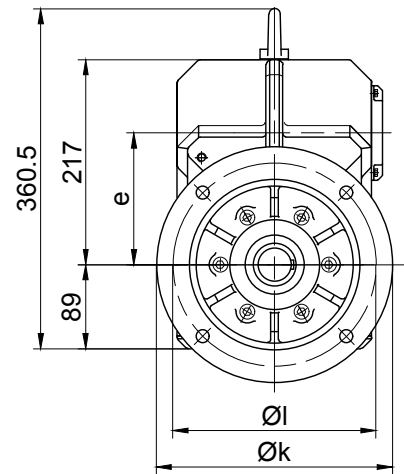
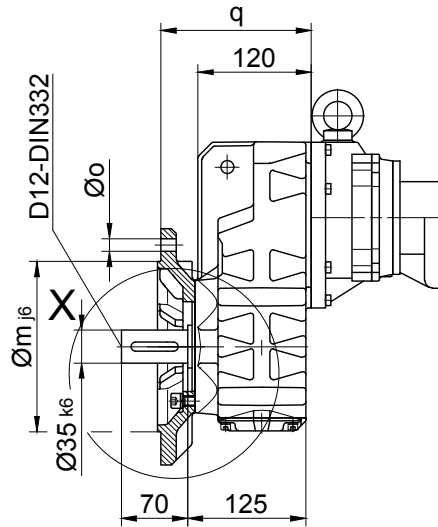
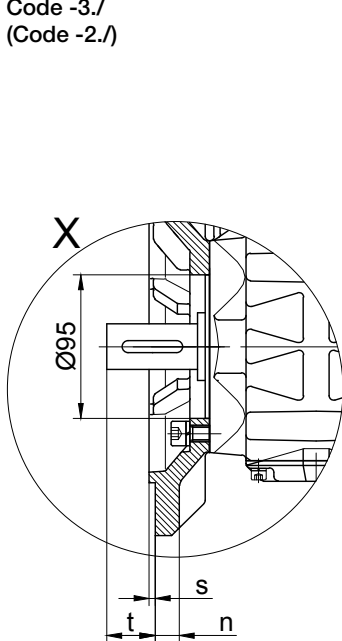
## Dimension - Tandem Gearbox

### BF20G06

Flange with tapped holes  
Code -7./



Flange with clearance holes  
Code -3./  
(Code -2./)

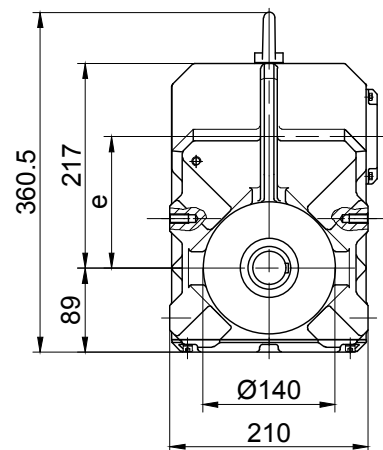
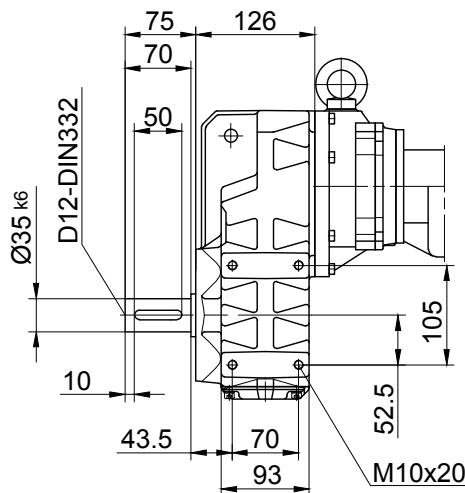


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Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF20..	Code -3./	250	215	180	16	13,5	159	4	42
BF20..	Code -2./	200	165	130	12	11	150	3,5	51

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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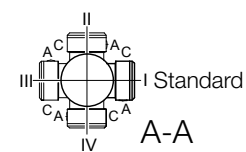
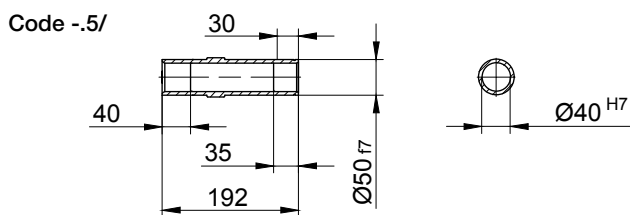
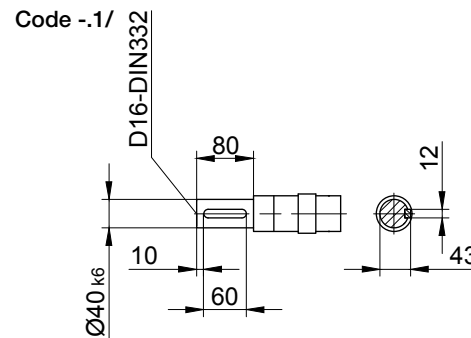
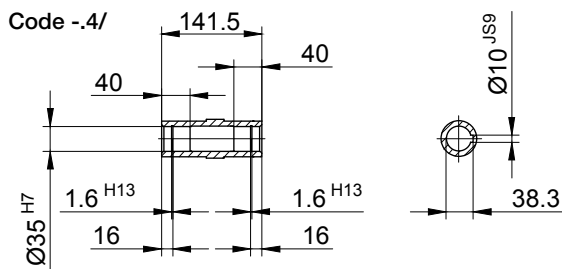
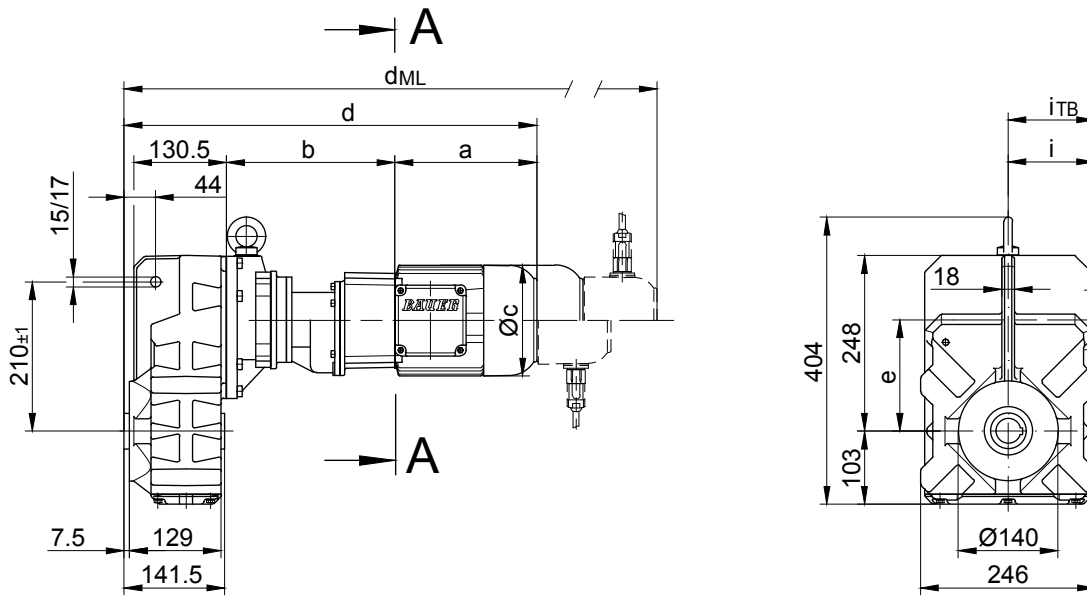
# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

### BF30G06

with torque arm

Code -0./



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF30G06-.../S04S	142,5	191	110,5	477,5	90	112	521	565	608,5	-
BF30G06-.../S..06 (M, L)	170,5	193	123	507,5	99	119	549,5	610	647,5	-
BF30G06-.../S..08 (M, L)	199,5	237	156	580,5	114,5	136,5	646,5	692,5	754	-

Dimensions in millimetres (mm)

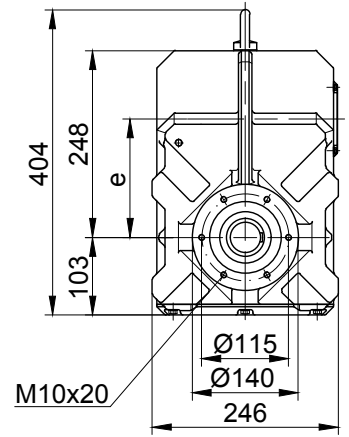
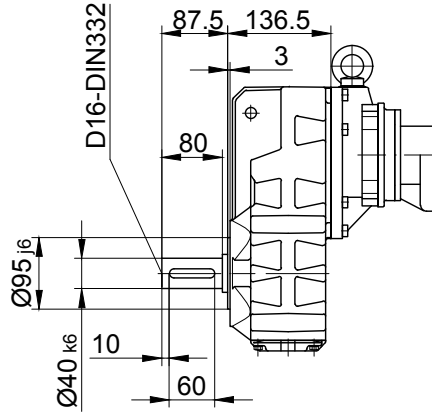
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).Send Quote Requests to [info@automatedpt.com](mailto:info@automatedpt.com)

# BF-series shaft-mounted geared motors

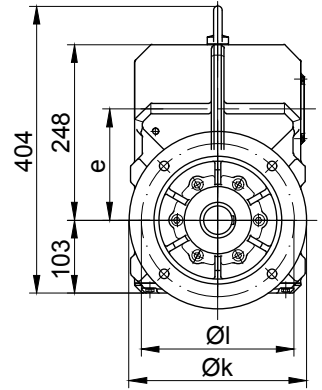
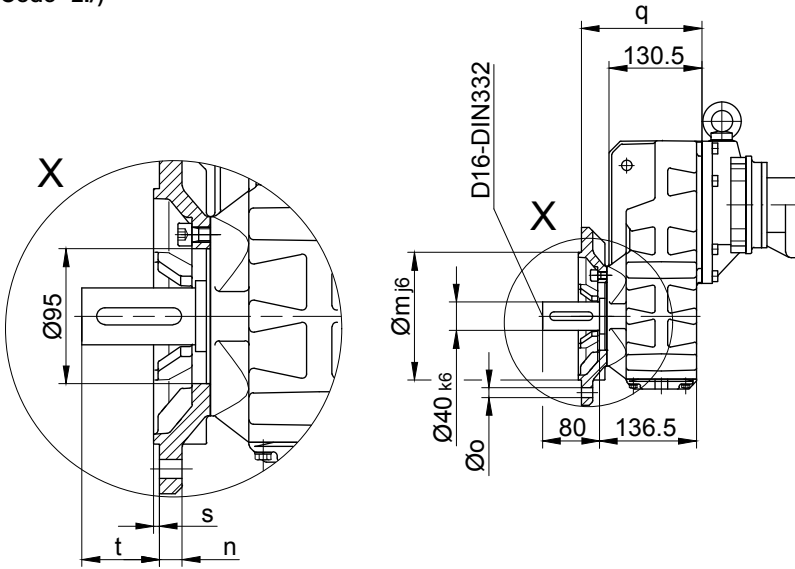
## Dimension - Tandem Gearbox

### BF30G06

Flange with tapped holes  
Code -7./



Flange with clearance holes  
Code -3./  
(Code -2./)

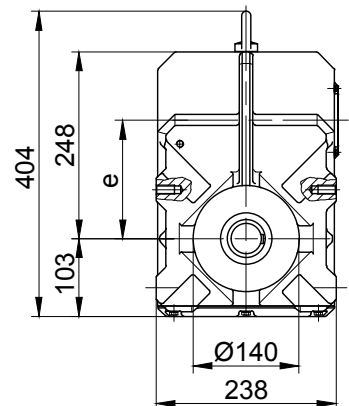
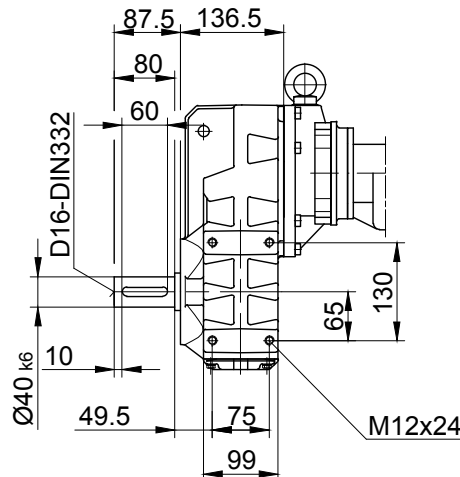


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Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF30..	Code -3./	250	215	180	16	13,5	169,5	4	54,5
BF30..	Code -2./	200	165	130	12	11	160,5	3,5	63,5

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

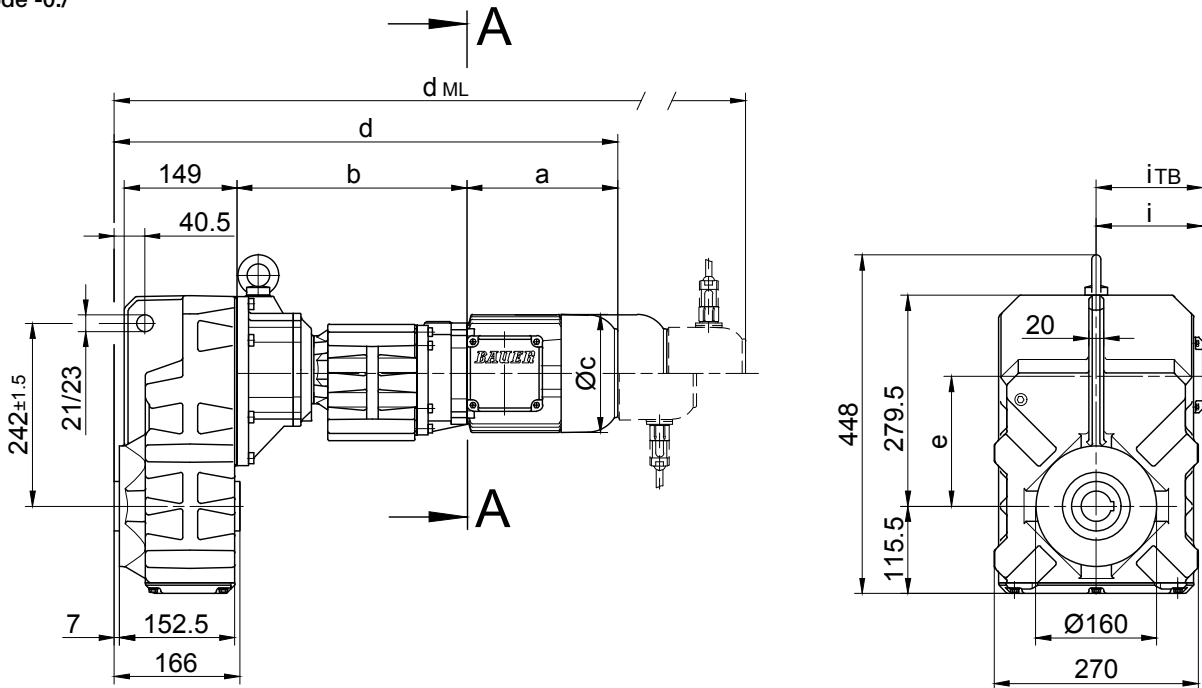
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# BF-series shaft-mounted geared motors

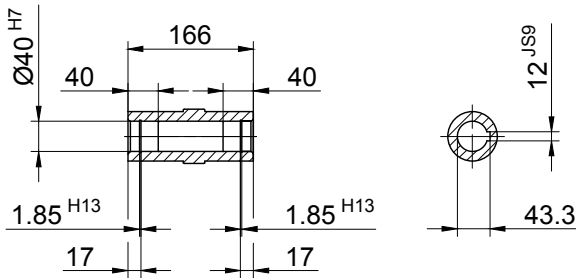
## Dimension - Tandem Gearbox

### BF40G10

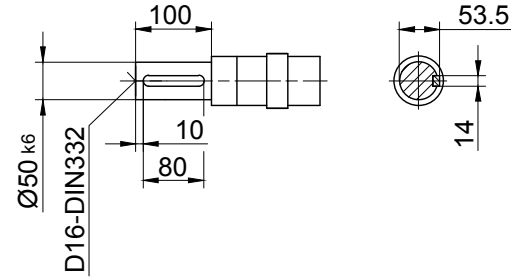
with torque arm  
Code -0./



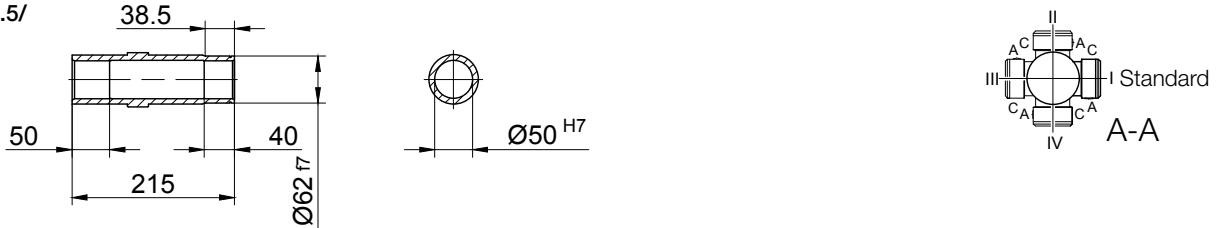
### Code -.4/



### Code -.1/



### Code -.5/



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF40G10-.../S..06 (M, L)	170,5	300	123	633	99	119	675	735,5	773	-
BF40G10-.../S..08 (M, L)	199,5	304	156	666	114,5	136,5	732	778	839,5	-
BF40G10-.../S..09 (S, X)	250,5	318,5	176	731,5	124	157	824,5	839	928,5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

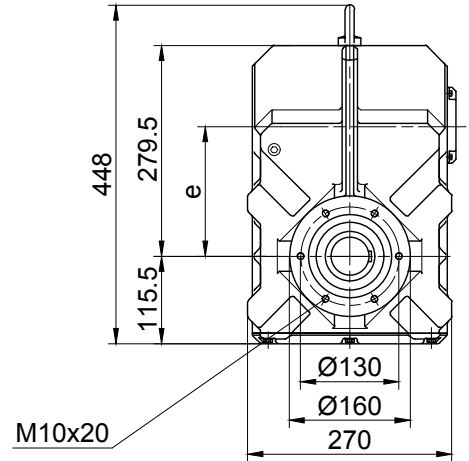
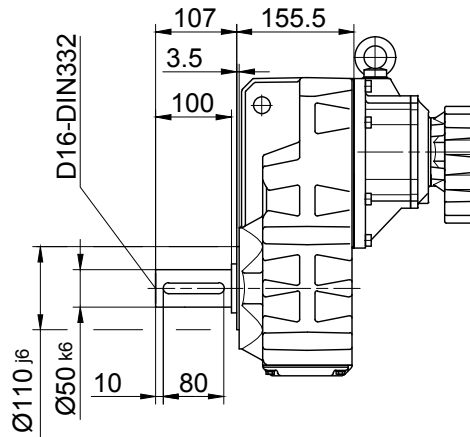
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

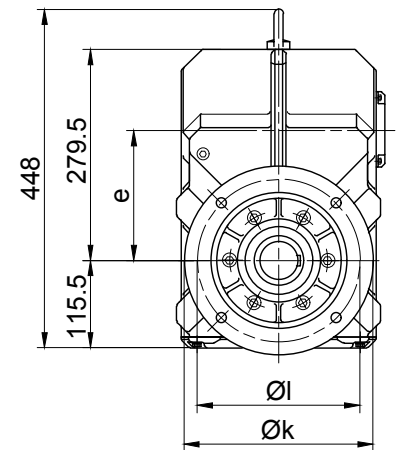
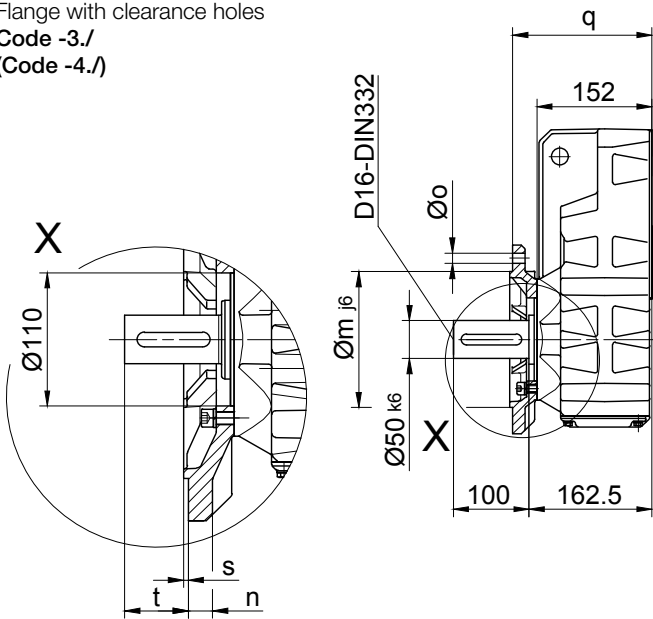
## Dimension - Tandem Gearbox

### BF40G10

Flange with tapped holes  
Code -7./



Flange with clearance holes  
Code -3./  
(Code -4./)

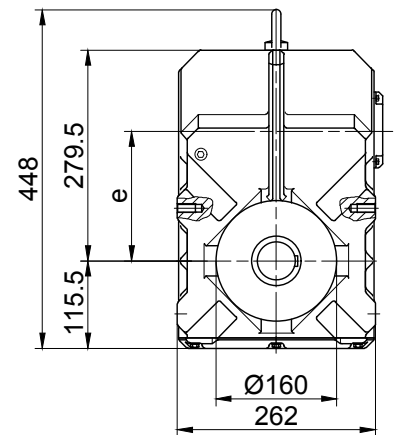
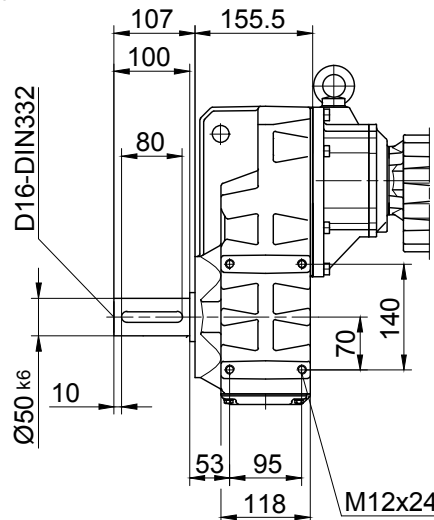


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Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF40..	Code -3./	250	215	180	16	13,5	184	4	78,5
BF40..	Code -4./	300	265	230	20	13,5	190	4	72,5

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

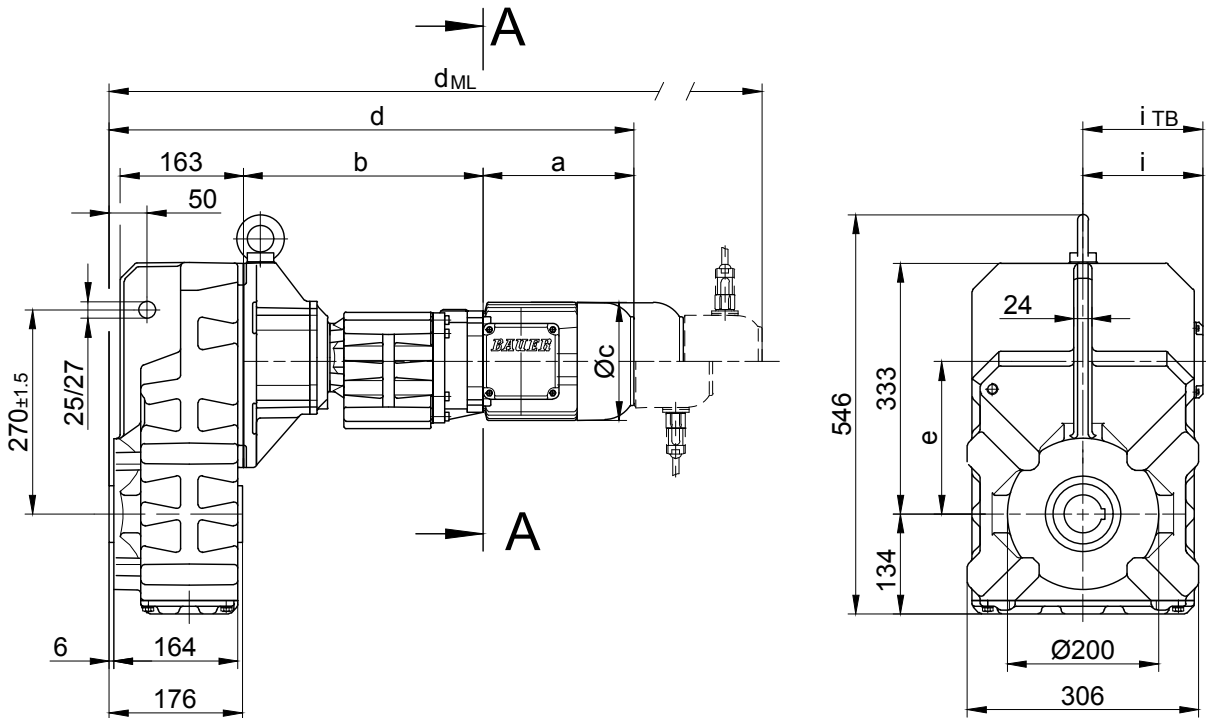
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# BF-series shaft-mounted geared motors

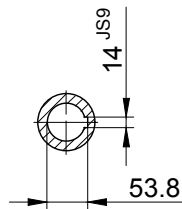
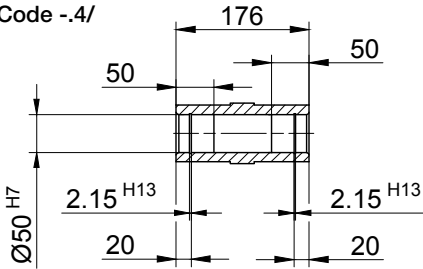
## Dimension - Tandem Gearbox

### BF50G10

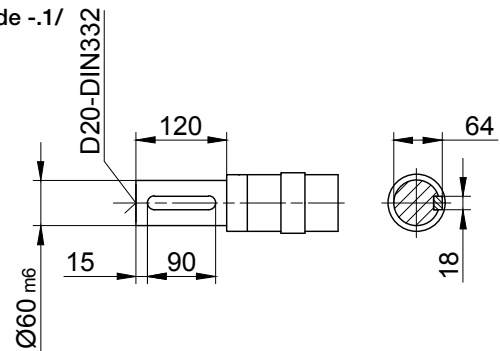
with torque arm  
Code -0./



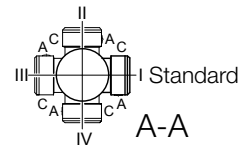
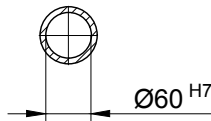
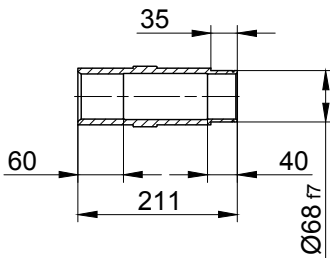
### Code -.4/



### Code -.1/



### Code -.5/



Type	a	b	c	d	i	Design with motor extensions				
						$i_{TB}$	Brake	Encoder	Brake with Encoder	Back Stop
						$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$	
BF50G10-.../S..06 (M, L)	170,5	313	123	661	99	119	703	763,5	801	-
BF50G10-.../S..08 (M, L)	199,5	317	156	694	114,5	136,5	760	806	867,5	-
BF50G10-.../S..09 (S, X)	250,5	331,5	176	759,5	124	157	852,5	867	956,5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

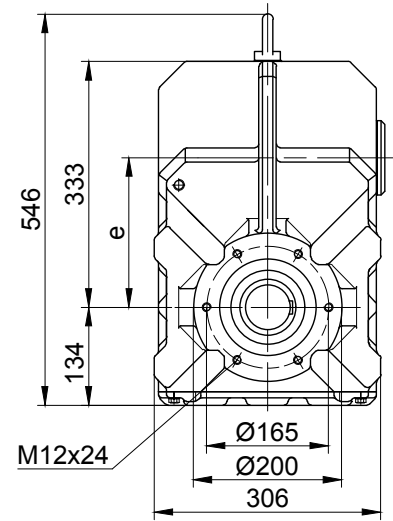
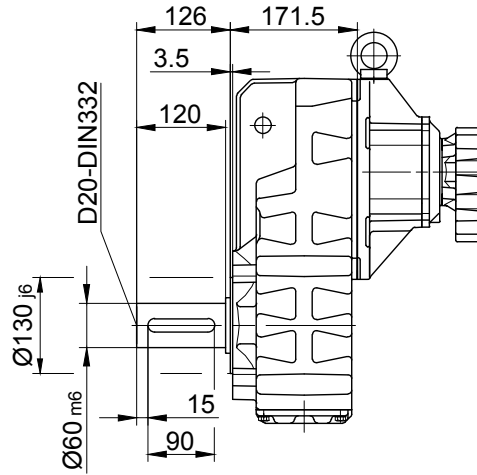
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

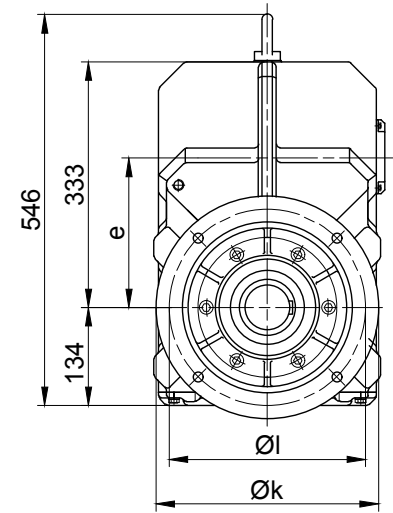
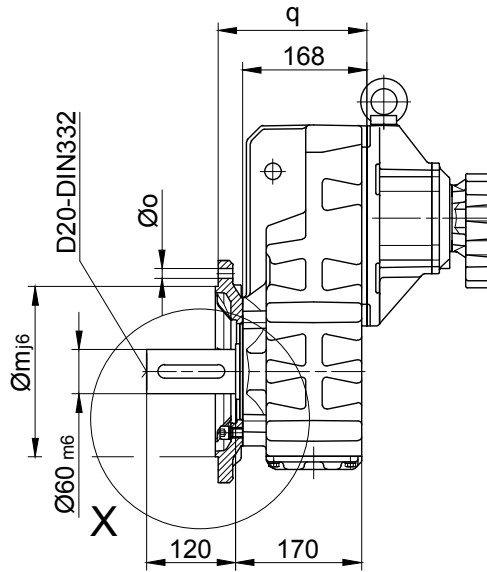
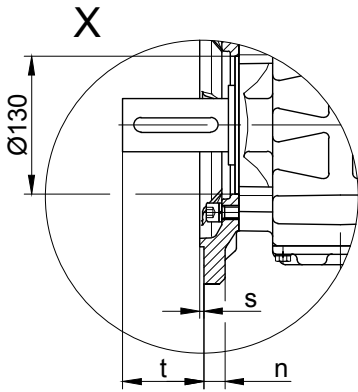
## Dimension - Tandem Gearbox

### BF50G10

Flange with tapped holes  
Code -7./



Flange with clearance holes  
Code -3./  
(Code -2./)



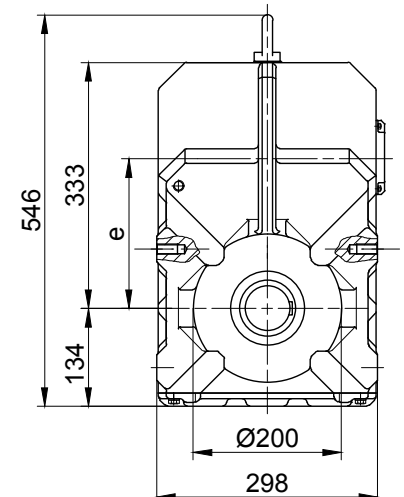
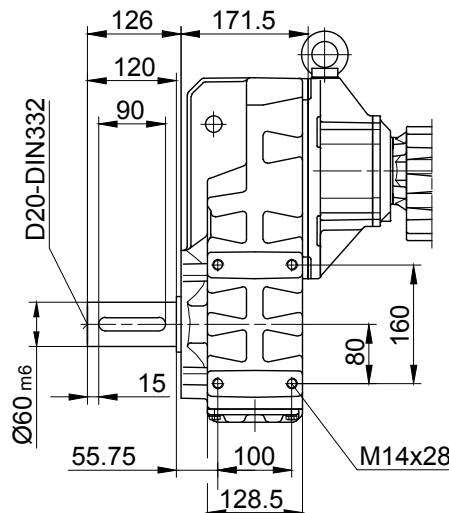
11

Flange Dimensions

Type	Design	k	l	m	n	o	q	s	t
BF50..	Code -3./	300	265	230	20	13,5	201	4	96,5
BF50..	Code -2./	250	215	180	16	13,5	198	4	99,5

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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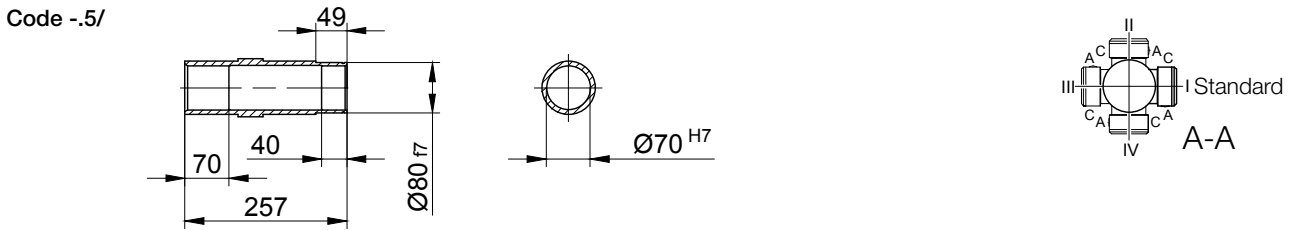
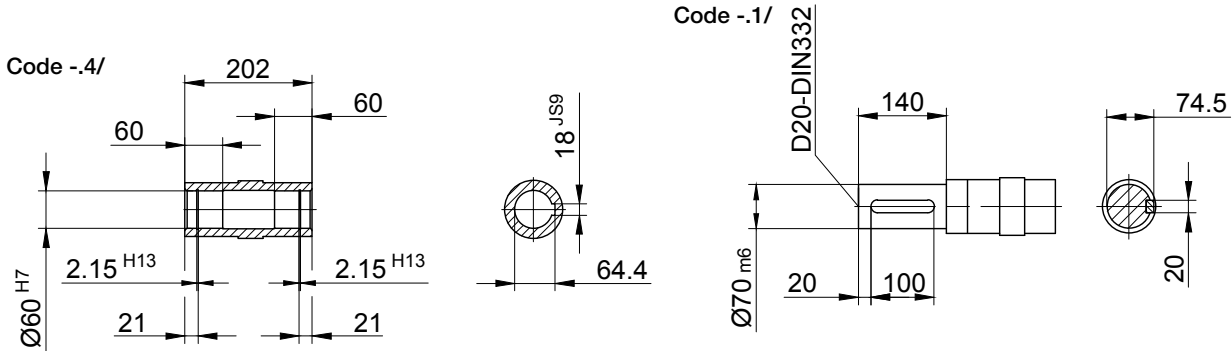
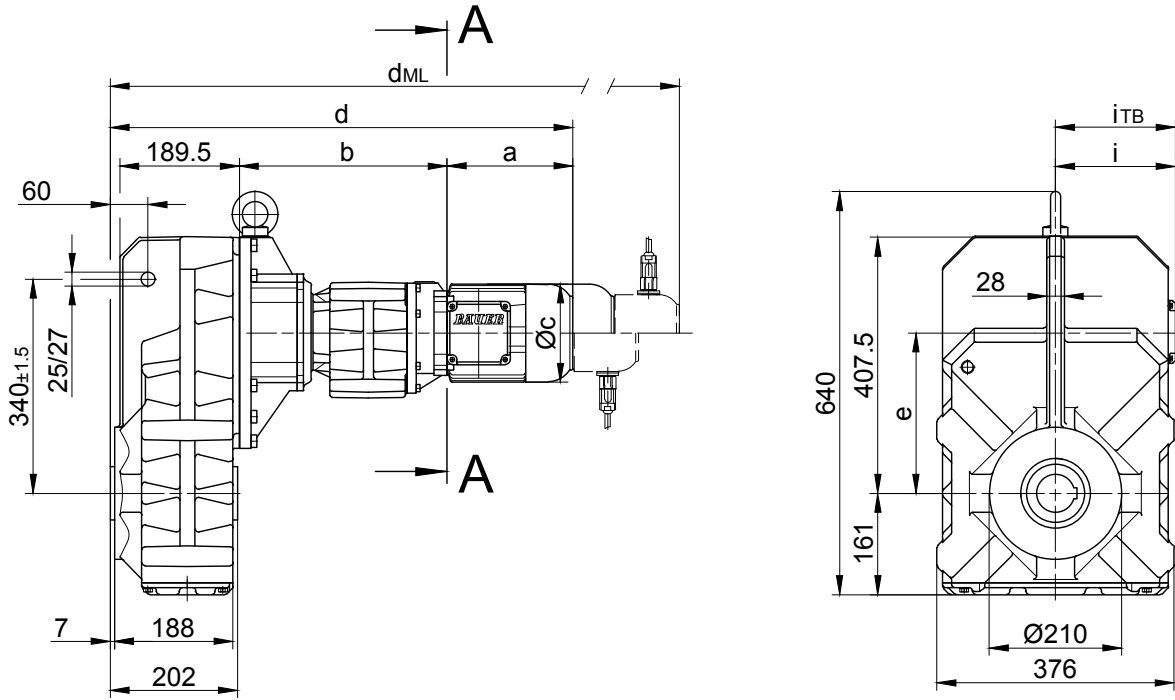


# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

### BF60G20

with torque arm  
Code -0./



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	
BF60G20-.../S..06 (M, L)	170,5	326	123	701,5	99	119	743,5	804	841,5	-
BF60G20-.../S..08 (M, L)	199,5	330	156	734,5	114,5	136,5	800,5	846,5	908	-
BF60G20-.../S..09 (S, X)	250,5	344,5	176	800	124	157	893	907,5	997	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

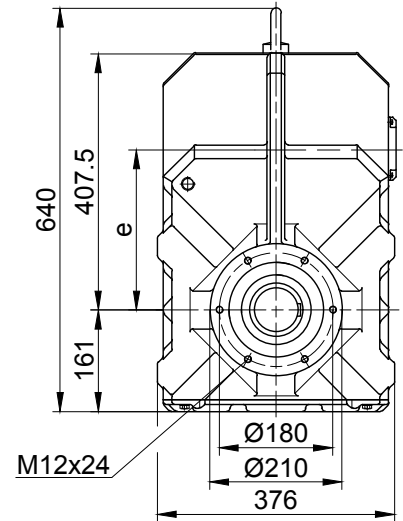
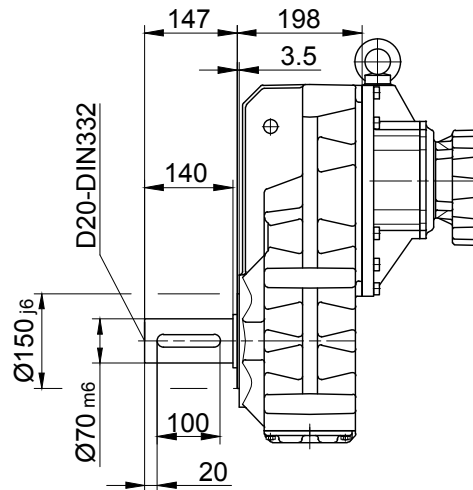
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# BF-series shaft-mounted geared motors

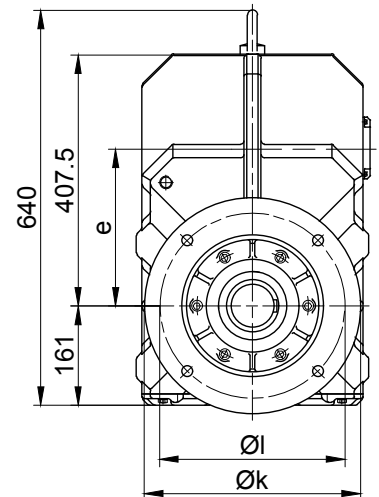
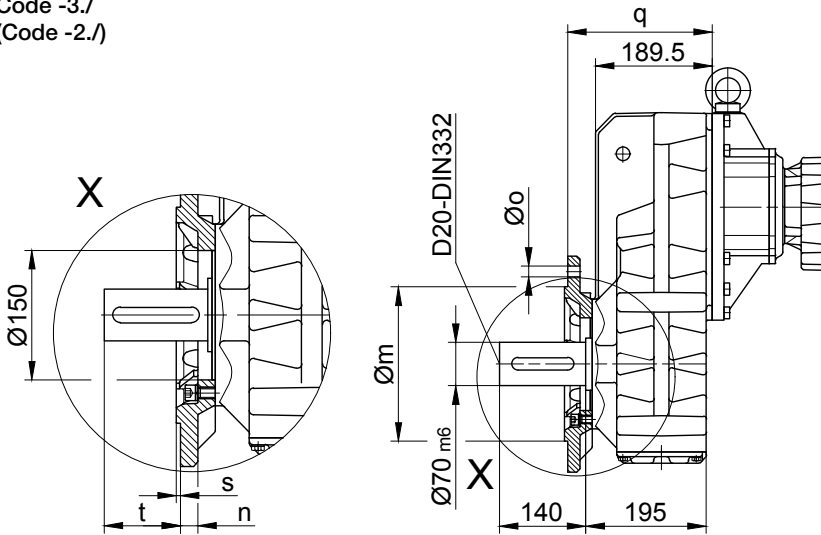
## Dimension - Tandem Gearbox

### BF60G20

Flange with tapped holes  
Code -7./



Flange with clearance holes  
Code -3./  
(Code -2./)

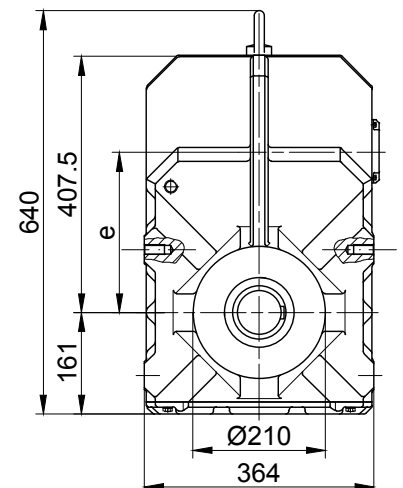
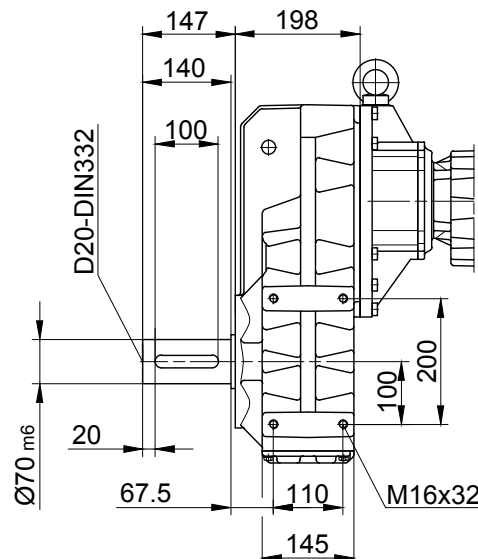


11

Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF60..	Code -3./	350	300	250	20	17,5	234,5	5	110,5
BF60..	Code -2./	300	265	230	20	13,5	242,5	4	102,5

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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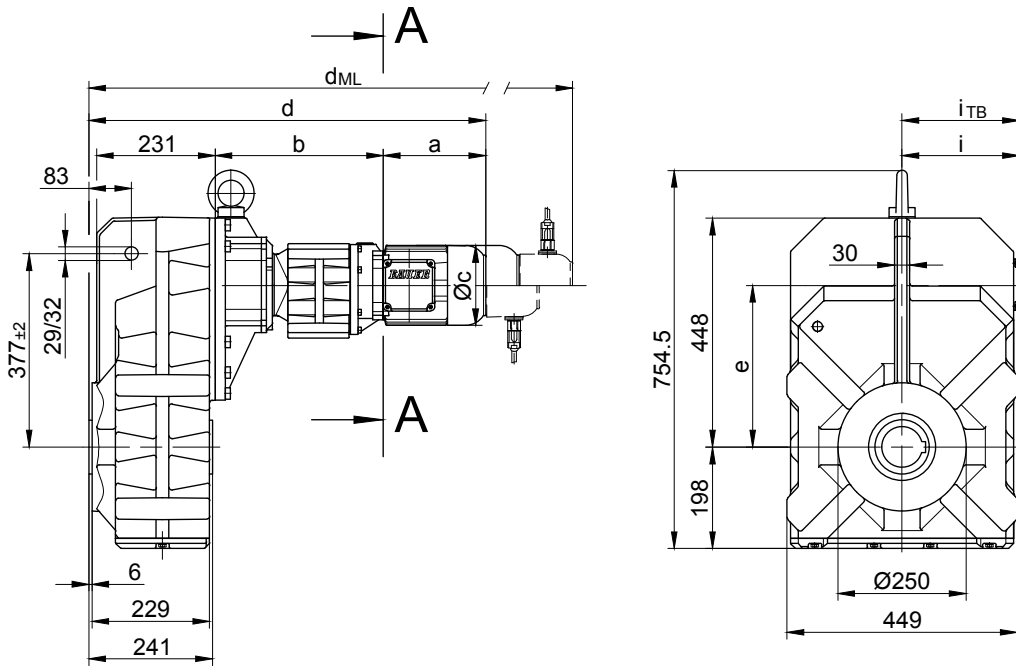
# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

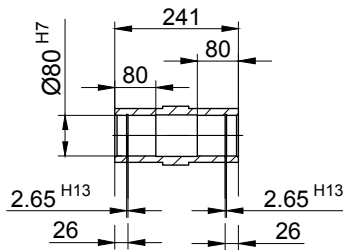
### BF70G20

with torque arm

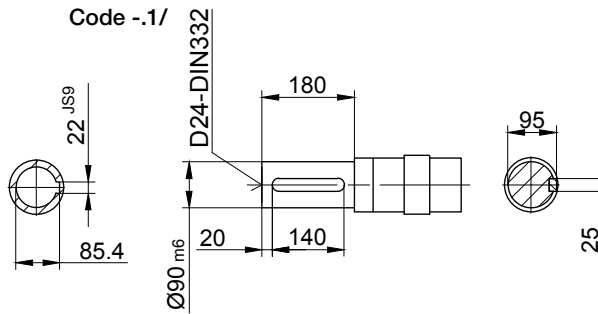
Code -0./



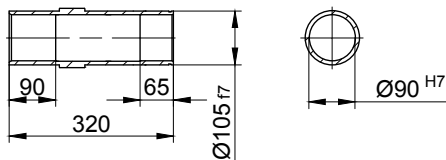
### Code -4/



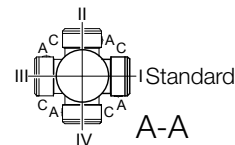
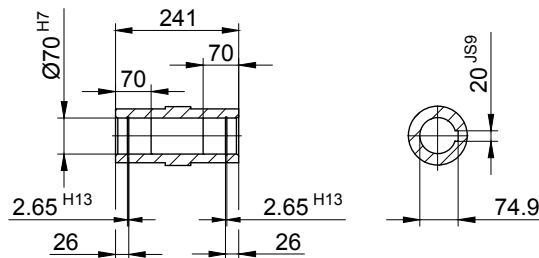
### Code -1/



### Code -5/



### Code -4/K70



Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BF70G20-.../S..06 (M, L)	170,5	324	123	740,5	99	119	782,5	843	880,5	-
BF70G20-.../S..08 (M, L)	199,5	328	156	773,5	114,5	136,5	839,5	885,5	947	-
BF70G20-.../S..09 (S, X)	250,5	342,5	176	839	124	157	932	946,5	1036	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

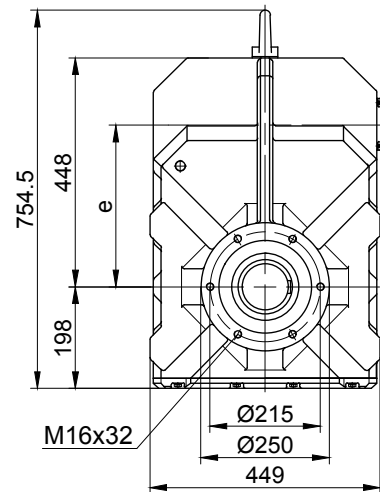
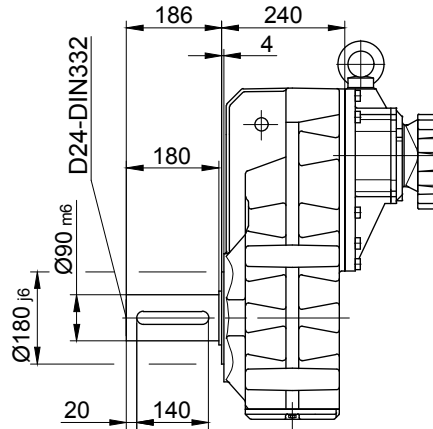
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

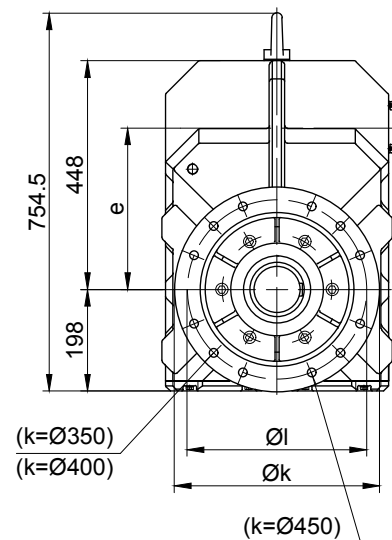
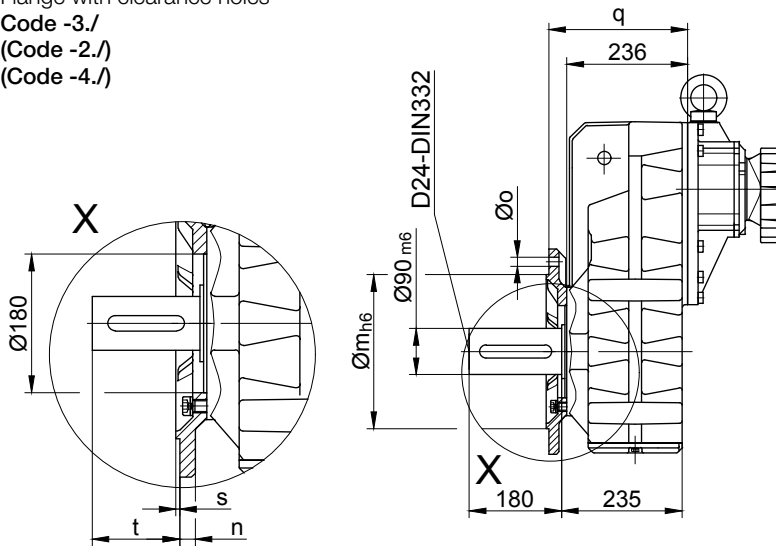
### BF70G20

Flange with tapped holes  
Code -7./



Flange with clearance holes

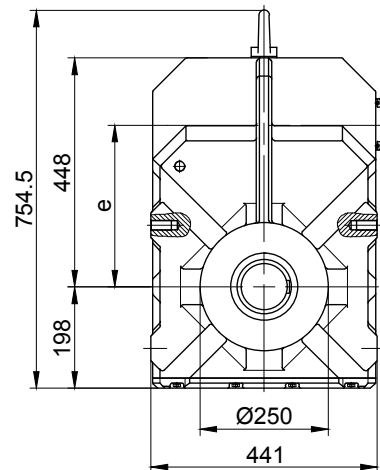
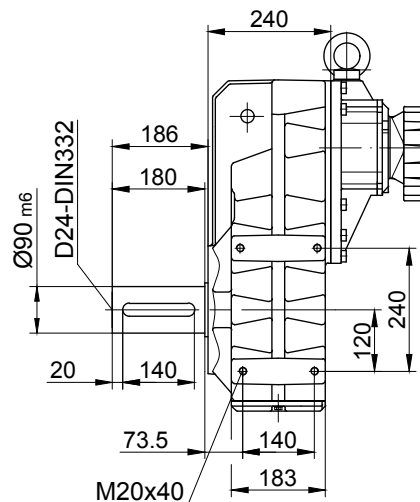
Code -3./  
(Code -2./)  
(Code -4./)



Type	Design	k	l	m	n	o	q	s	t
BF70..	Code -3./	400	350	300	20	4 x 17,5	271	5	155
BF70..	Code -2./	350	300	250	20	4 x 17,5	271	5	155
BF70..	Code -4./	450	400	350	22	8 x 17,5	281	5	145

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -6.LR/

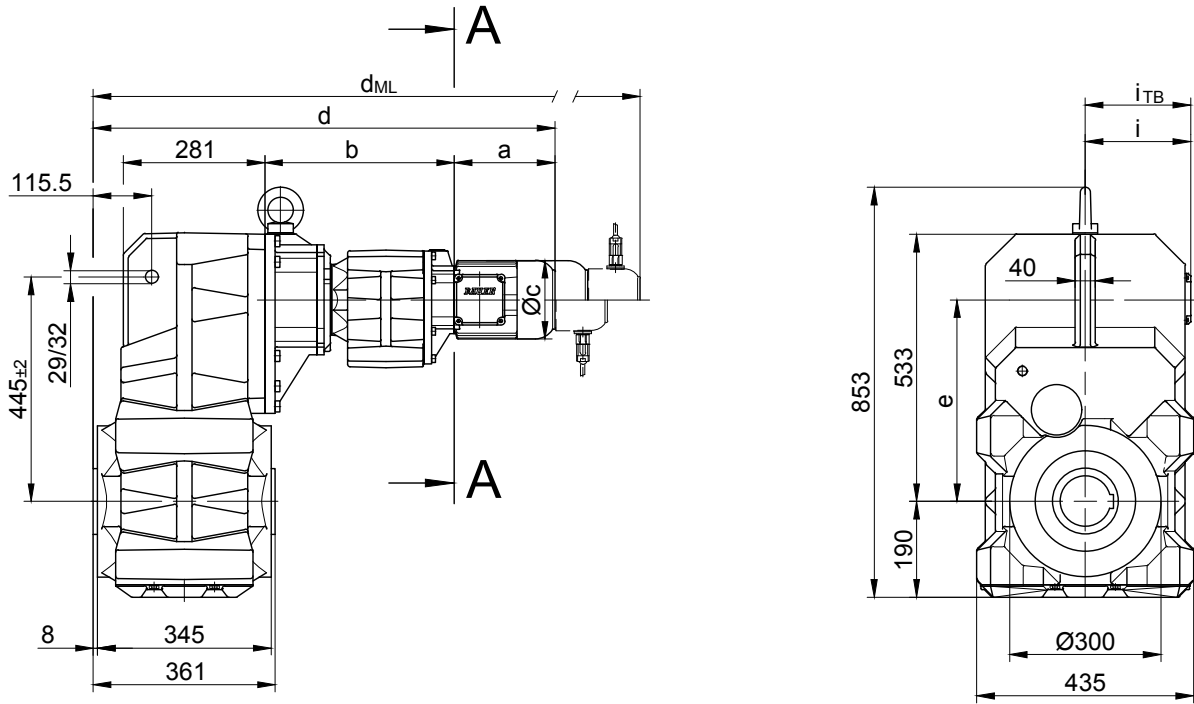


# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

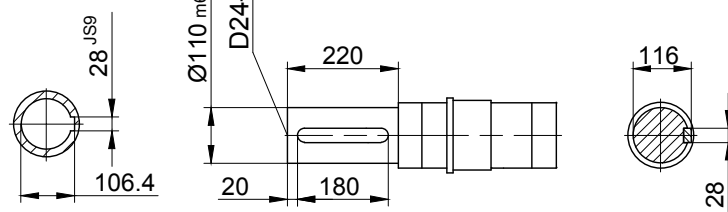
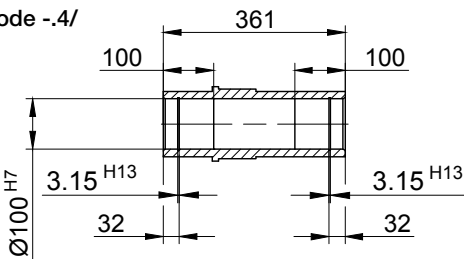
### BF80G40

with torque arm  
Code -0./

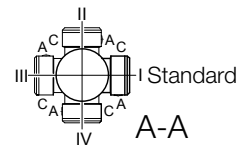
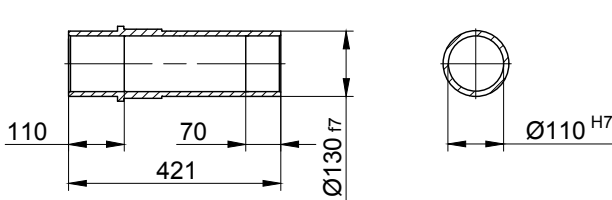


### Code -1./

### Code -4./



### Code -5./



Type	a	b	c	d	i	Design with motor extensions				
						$i_{TB}$	Brake	Encoder	Brake with Encoder	Back Stop
						$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$	
BF80G40-.../S..08 (M, L)	199,5	376	156	916	114,5	136,5	982	1028	1089,5	-
BF80G40-.../S..09 (S, X)	250,5	390,5	176	981,5	124	157	1074,5	1089	1178,5	-
BF80G40-.../S..11 (S, M, L)	319	397	218	1056,5	165	176	1154,5	1164	1256,5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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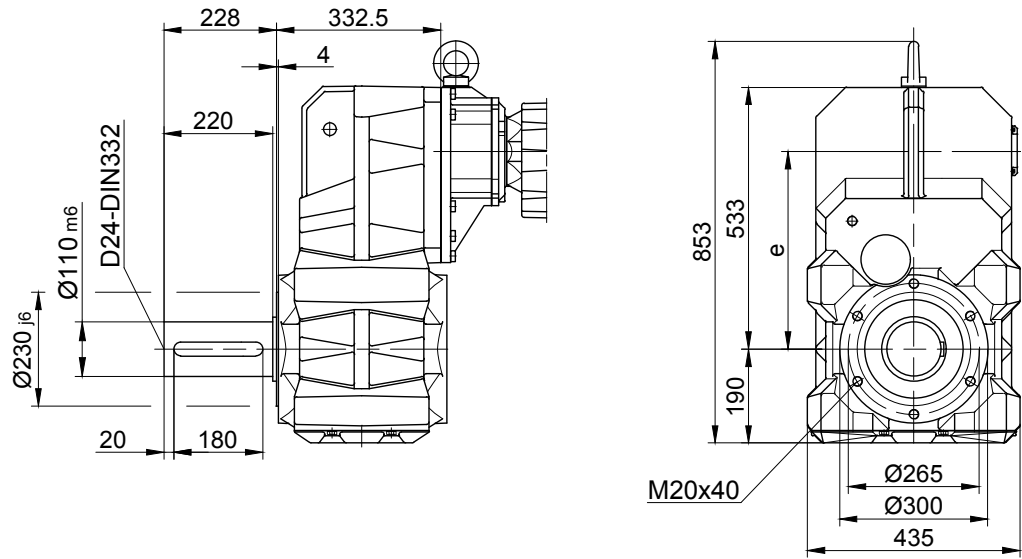
# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

### BF80G40

Flange with tapped holes

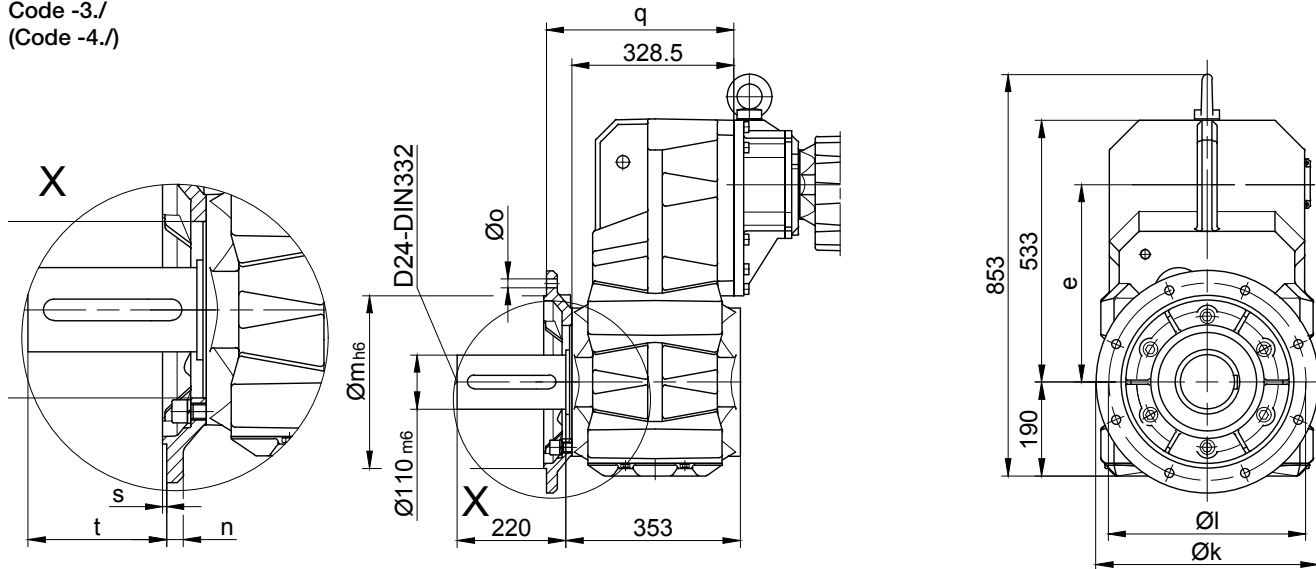
Code -7./



Flange with clearance holes

Code -3./

(Code -4./)

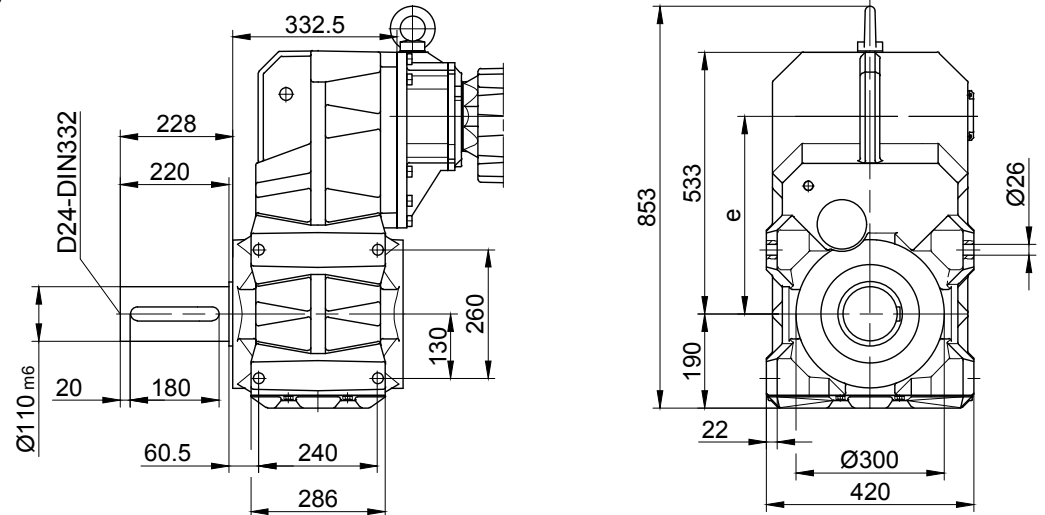


Flange Dimensions									
Type	Design	k	l	m	n	o	q	s	t
BF80..	Code -3./	450	400	350	22	17,5	383,5	5	177
BF80..	Code -4./	550	500	450	22	17,5	388,5	5	172

Dimensions in millimetres (mm)

Foot with tapped holes left and right

Code -1.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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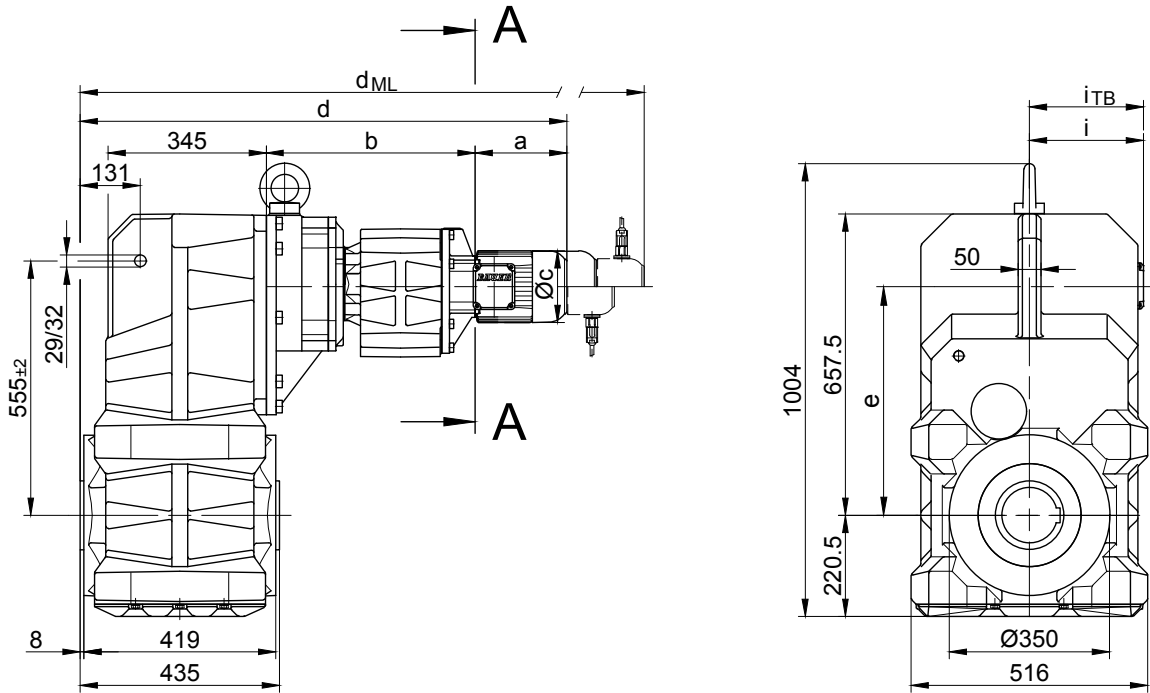
# BF-series shaft-mounted geared motors

## Dimension - Tandem Gearbox

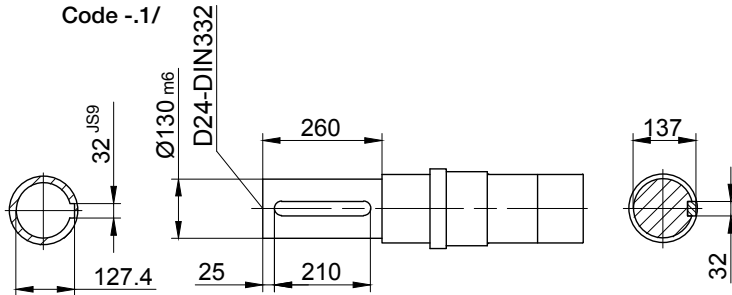
### BF90G50

with torque arm

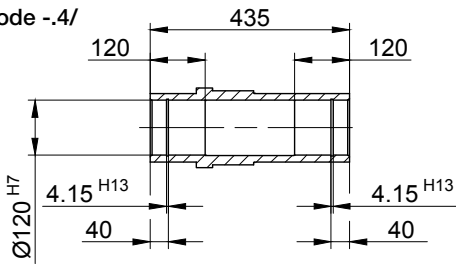
Code -0./



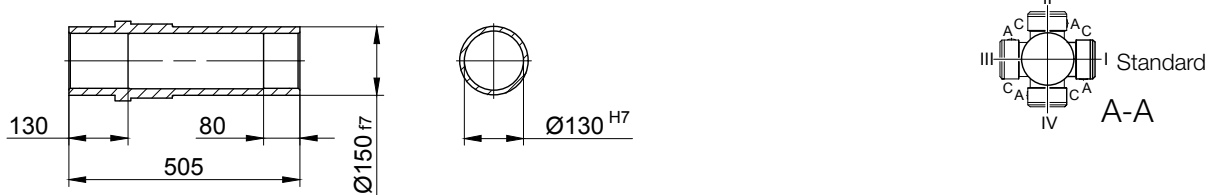
Code -1/



Code -4/



Code -5/



Type	a	b	c	d	i	Design with motor extensions				
						$i_{TB}$	Brake	Encoder	Brake with Encoder	Back Stop
							$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$
BF90G50-.../S..08 (M, L)	199,5	456	156	1061,5	114,5	136,5	1127,5	1173,5	1235	-
BF90G50-.../S..09 (S, X)	250,5	470,5	176	1127	124	157	1220	1234,5	1324	-
BF90G50-.../S..11 (S, M, L)	319	477	218	1202	165	176	1300	1309,5	1402	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

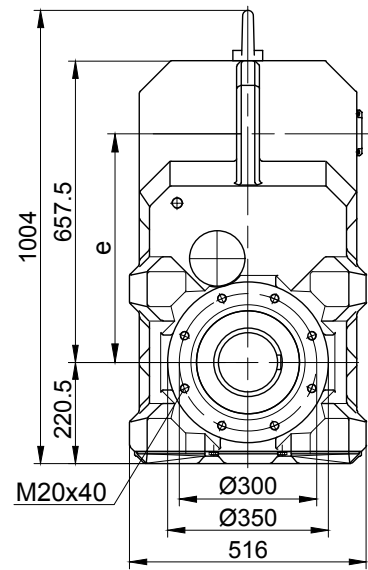
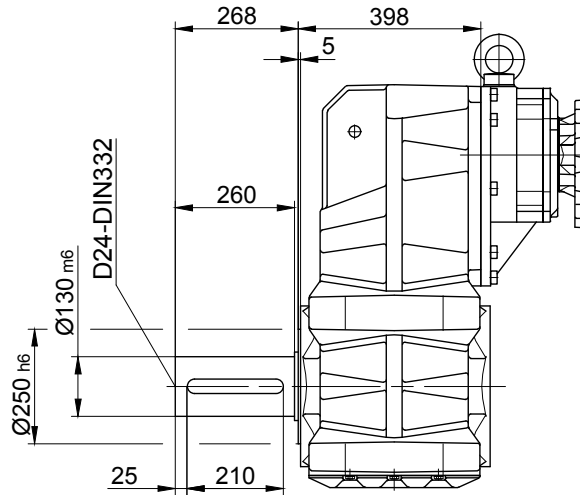
Send Quote Requests to info@automatedpt.com

# BF-series shaft-mounted geared motors

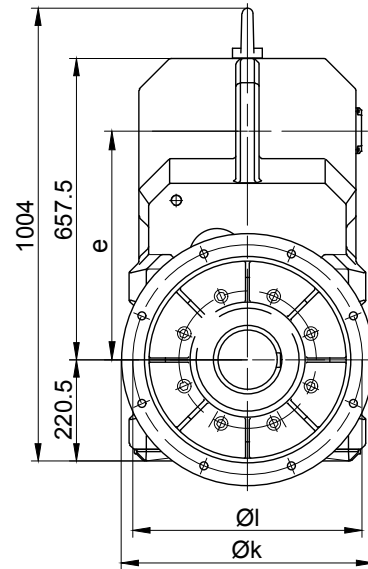
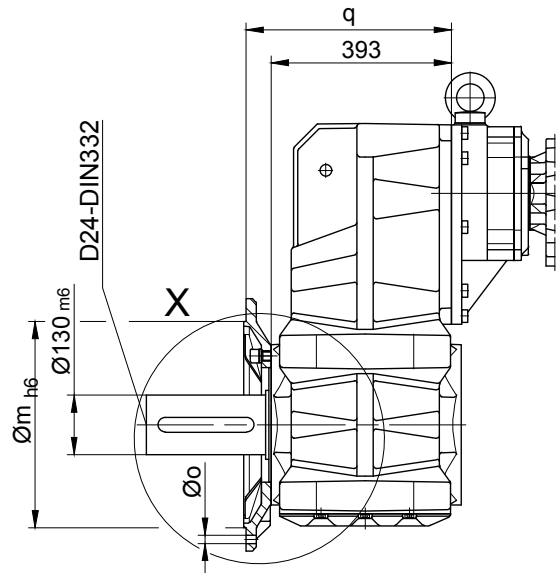
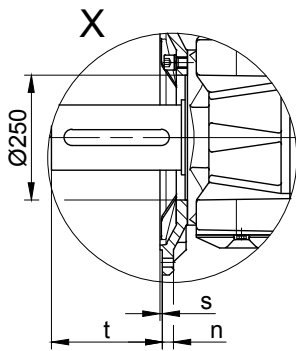
## Dimension - Tandem Gearbox

### BF90G50

Flange with tapped holes  
Code -7./



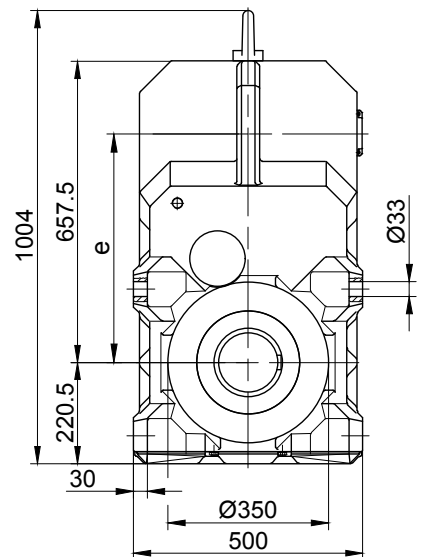
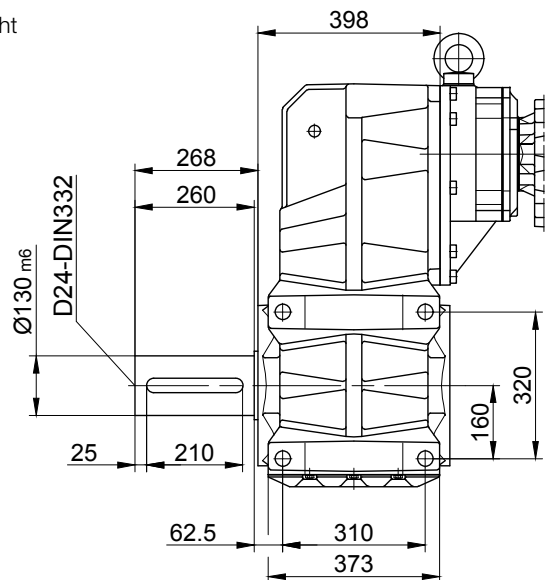
Flange with clearance holes  
Code -3./  
(Code -4./)



Type	Design	k	l	m	n	o	q	s	t
BF90..	Code -3./	550	500	450	22	17,5	448	5	218
BF90..	Code -4./	660	600	550	25	22	442	6	224

Dimensions in millimetres (mm)

Foot with tapped holes left and right  
Code -1.LR/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

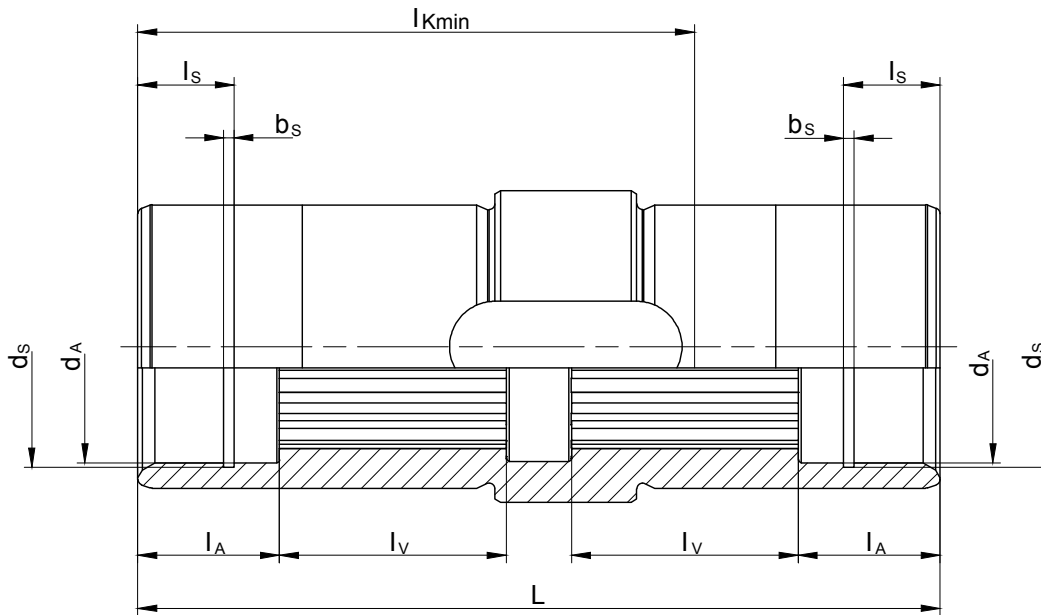
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# Energy Efficient Geared Motors

## AC Variable Speed

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**BF-series shaft-mounted geared motors****Additional Dimension Sheet****Splined shaft BF**

Type	Splined shaft acc. to DIN 5480	$d_A$	$l_A$	$l_v$	$l_{Kmin}$	L	$d_s$	$l_s$	$b_s$
BF06	N25x1.25x18x9H	30 <sup>G7</sup>	22	20	68	92	31.4 <sup>H12</sup>	15	1.3 <sup>H13</sup>
BF10	N30x1.25x22x9H	30.5 <sup>G7</sup>	22	33.5	87	124.5	31.4 <sup>H12</sup>	15	1.3 <sup>H13</sup>
BF20	N35x2x16x9H	36 <sup>G7</sup>	22	35	92	130	37 <sup>H12</sup>	9.5	1.6 <sup>H13</sup>
BF30	N40x2x18x9H	41 <sup>G7</sup>	25	40	103	141.5	42.5 <sup>H12</sup>	15	1.85 <sup>H13</sup>
BF40	N50x2x24x9H	51 <sup>G7</sup>	25	48	120	166	53 <sup>H12</sup>	9.5	2.15 <sup>H13</sup>
BF50	N60x2x28x9H	61 <sup>G7</sup>	25	55	123	176	63 <sup>H12</sup>	17	2.15 <sup>H13</sup>
BF60	N70x2x34x9H	72 <sup>G7</sup>	25	70	147	202	75 <sup>H12</sup>	17	2.65 <sup>H13</sup>
BF70	N85x3x27x9H	86 <sup>G7</sup>	26	85	185	241	88.5 <sup>H12</sup>	17	3.15 <sup>H13</sup>
BF80	N110x3x35x9H	112 <sup>G7</sup>	50	90	292	361	116 <sup>H12</sup>	30	4.15 <sup>H13</sup>
BF90	N130x5x24x9H	131.5 <sup>G7</sup>	60	110	365	435	134 <sup>H12</sup>	30	4.15 <sup>H13</sup>

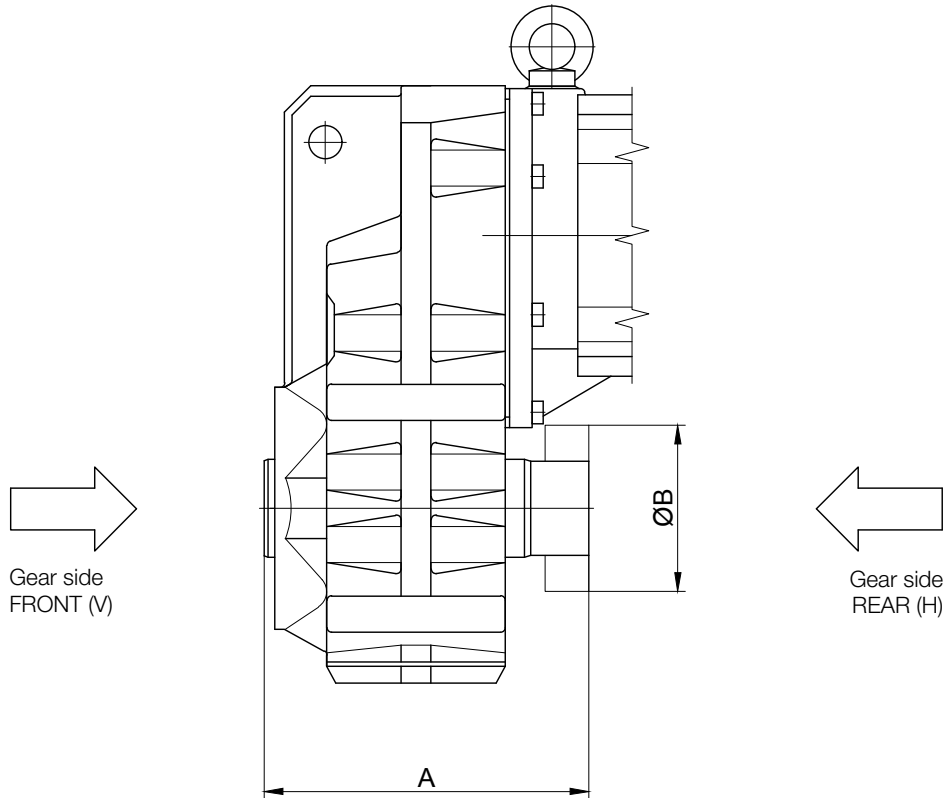
Dimensions in millimetres (mm)

# BF-series shaft-mounted geared motors

## Additional Dimension Sheet

### Shrink disc coupling (SSV)

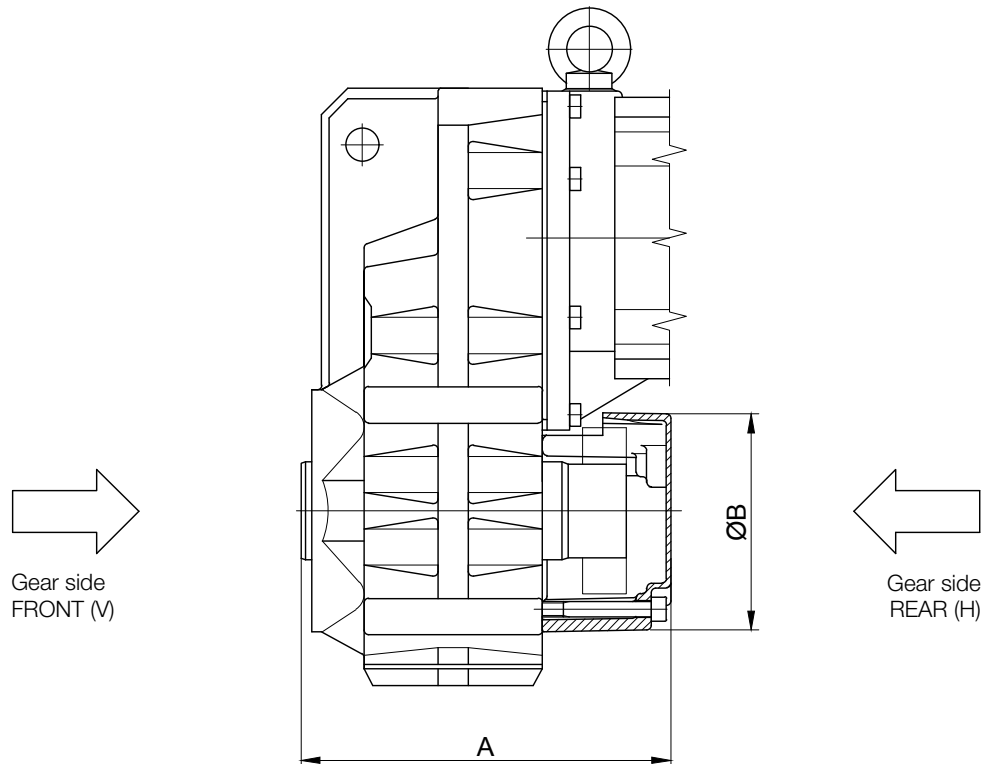
(Code BF10-.5/...)  
(Code BF10Z-.5/...)



Type	SSV Ringfeder	SSV STÜWE	A	B
BF10	RfN 4161 036x072	HDS 36-22x36	153	72
BF20	RfN 4161 044x080	HDS 44-22x44	173	80
BF30	RfN 4161 050x090	HDS 50-22x50	192	90
BF40	RfN 4161 062x110	HDS 62-22x62	215	110
BF50	RfN 4161 068x115	HDS 68-22x68	211	115
BF60	RfN 4161 080x141	HDS 80-22x80	257	140
BF70	RfN 4161 105x185	HDS 110-22x105	320	185
BF80	RfN 4161 130x215	HDS 125-22x130	421	215
BF90	RfN 4161 150x263	HDS 155-22x150	505	263
Dimensions in millimetres (mm)				

**BF-series shaft-mounted geared motors****Additional Dimension Sheet****Shrink disc coupling with (SSV) cover**

(Code BF10-.5A/...)  
(Code BF10Z-.5A/...)



11

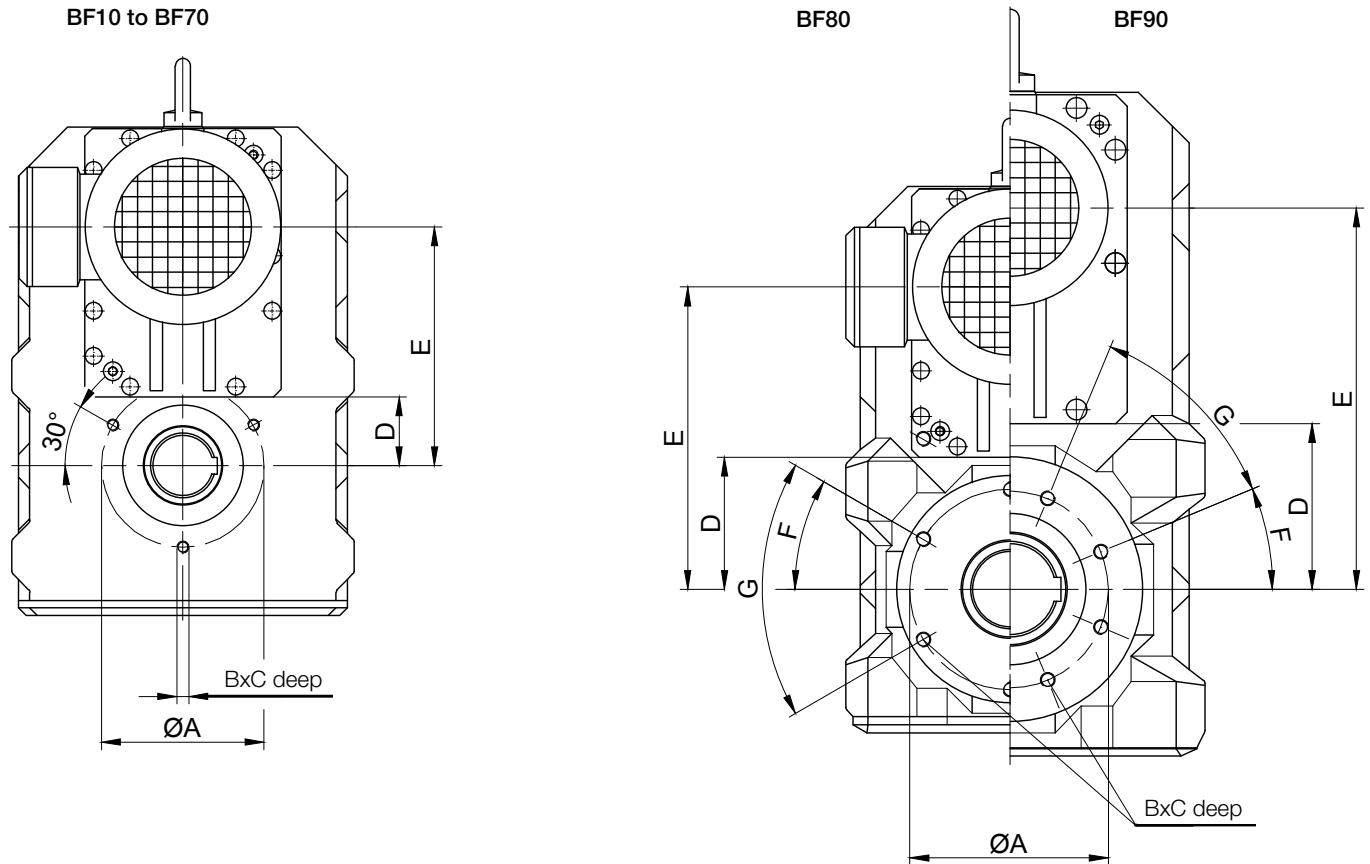
Type	SSV Ringfeder	SSV STÜWE	A	B
BF10	RfN 4161 036x072	HDS 36-22x36	174	120
BF20	RfN 4161 044x080	HDS 44-22x44	211	140
BF30	RfN 4161 050x090	HDS 50-22x50	223	140
BF40	RfN 4161 062x110	HDS 62-22x62	245	160
BF50	RfN 4161 068x115	HDS 68-22x68	227	200
BF60	RfN 4161 080x141	HDS 80-22x80	290	210
BF70	RfN 4161 105x185	HDS 110-22x105	359	250
BF80	RfN 4161 130x215	HDS 125-22x130	463	300
BF90	RfN 4161 150x263	HDS 155-22x150	557	350
Dimensions in millimetres (mm)				



# BF-series shaft-mounted geared motors

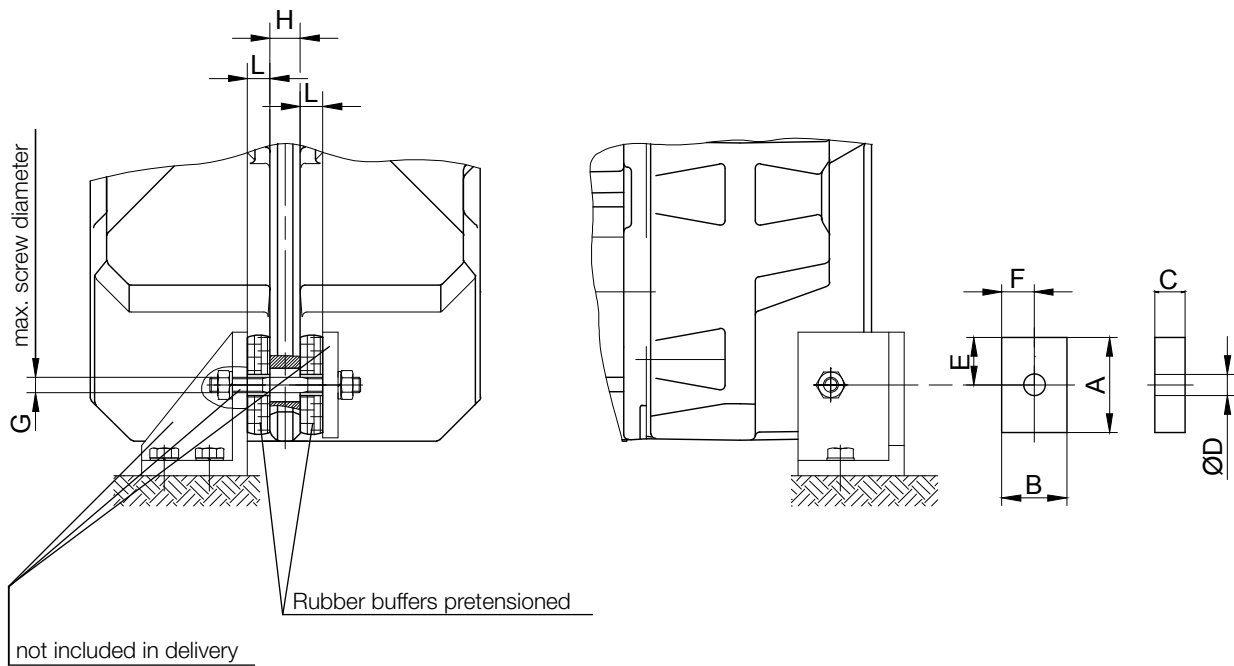
## Additional Dimension Sheet

Tapped Holes Side (H) → Shaft Cover



Gear	A	B	C	D	E	F	G
BF10	100	M8	16	35	118	-	-
BF20	115	M10	20	39	136	-	-
BF30	115	M10	20	44	157	-	-
BF40	130	M10	20	52	180.5	-	-
BF50	165	M12	24	60	207	-	-
BF60	180	M12	24	69	255.5	-	-
BF70	215	M16	32	89	316	-	-
BF80	265	M20	40	173	400	30°	6x60°
BF90	300	M20	40	219	504.5	22.5°	8x45°

Dimensions in millimetres (mm)

**BF-series shaft-mounted geared motors****Additional Dimension Sheet****Rubber buffer for torque restraint**

11

Material: Natural rubber Hardness 50 +/-5 Shore A

Dimensions of the transverse hole: See dimensioned sketch of the respective shaft mounted gearbox

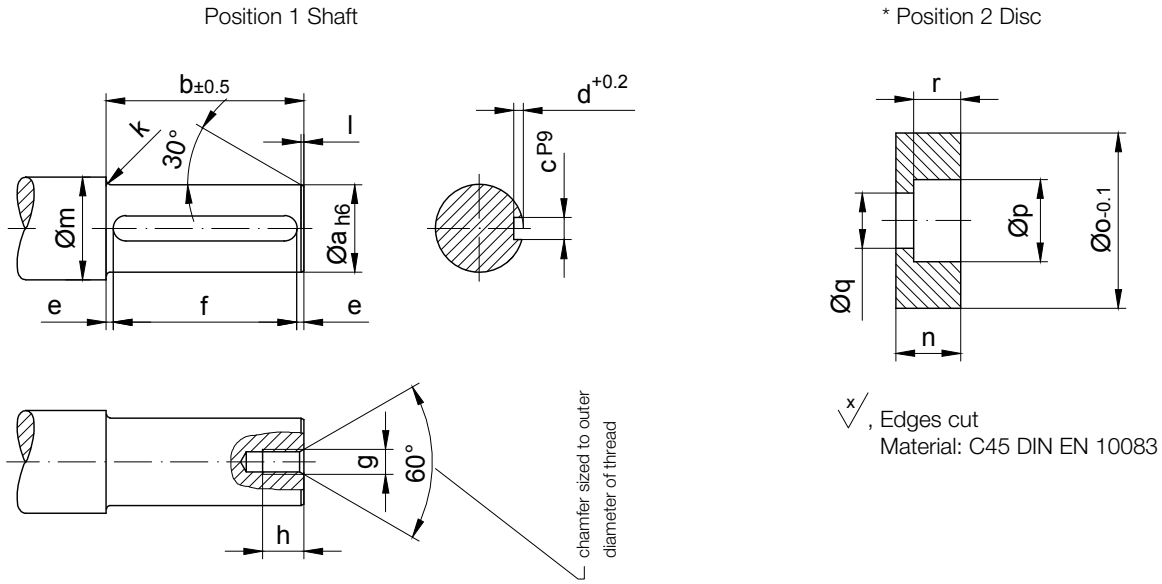
Gear	Position	A	B	C	D	E	F	G	H	L
BF06	Position 0	30	30	12	12	15	15	M10	10	10
BF10	Position 1	48	32	15	14	24	16	M10	16	13.5
BF20	Position 1	48	32	15	14	24	16	M10	18	13
BF30	Position 2	63	43	20	14	31.5	21.5	M10	18	17
BF40	Position 2	63	43	20	14	31.5	21.5	M10	20	16.5
BF50	Position 3	88	60	25	22	44	30	M18	24	21.5
BF60	Position 3	88	60	25	22	44	30	M18	28	21
BF70	Position 4	123	88	30	26	61.5	44	M20	30	25.5
BF80	Position 5	133	103	35	26	66.5	51.5	M20	40	30
BF90	Position 5	133	103	35	26	66.5	51.5	M20	50	29.5

Dimensions in millimetres (mm)

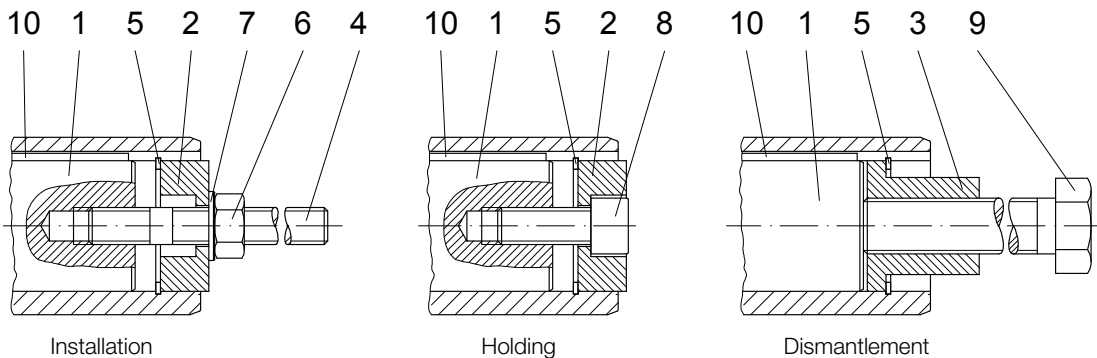
# BF-series shaft-mounted geared motors

## Additional Dimension Sheet

### Assembly tools for hollow shaft and keyway

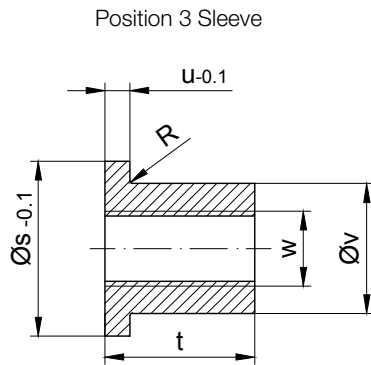


Type	Dimensions (mm)															
	Position 1 Shaft											Position 2 Disc				
	a	b	c	d	e	f	g	h	k	l	m	n	o	p	q	r
BF06	25	70	8	4	3.5	63 <sup>+0.5</sup>	M8	18	2	1.5	33	13.5	24.8	15	9	8.5
BF10	25	102	8	4	6	90 <sup>+0.5</sup>	M8	18	2.5	1.5	33	13.5	24.8	15	9	8.5
BF20	30	108	8	4	9	90 <sup>+0.5</sup>	M10	20	3	1.5	38	15	29.8	18	11	10
BF30	35	118	10	5	9	100 <sup>+0.5</sup>	M10	20	3	1.5	43	16	34.8	18	11	10
BF40	40	141	12	5	8	125 <sup>+0.5</sup>	M12	22	3	2	48	18	39.8	20	13.5	12
BF50	50	148	14	5.5	11.5	125 <sup>+0.5</sup>	M16	30	3.5	2	58	21	49.8	26	17.5	15
BF60	60	173	18	7	6.5	160 <sup>+0.5</sup>	M20	38	3.5	2	68	24	59.8	33	22	18
BF70	80	205	22	9	12.5	180 <sup>+0.5</sup>	M20	38	4	2	90	27	79.8	33	22	20
BF70-K70	70	205	20	7.5	12.5	180 <sup>+0.5</sup>	M20	38	4	2	90	27	69.8	33	22	20
BF80	100	317	28	10	18.5	280 <sup>+0.5</sup>	M24	45	4	3	110	32	99.8	40	26	25
BF90	120	383	32	11	11.5	360 <sup>+0.5</sup>	M24	45	4.5	3	130	35	119.8	40	26	28

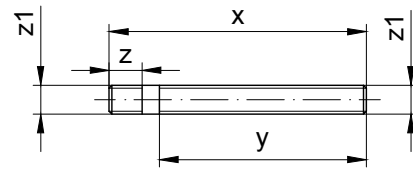


The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit. Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

**BF-series shaft-mounted geared motors****Additional Dimension Sheet****Assembly tools for hollow shaft and keyway**

$\sqrt{x}$ , Edges cut  
Material: C45 DIN EN 10083

**\* Position 4 Stud bolt**

Material: Steel, tensile strength  
 $\geq 1000\text{N/mm}^2$   
Threads rolled

Type	Dimensions (mm)										* Retaining ring DIN 472	Hexagon nut DIN 394-8	Disc DIN 125-St	* Filister head screw DIN 912-8.8	Tightening torques (Nm)	Hexagon bolt DIN EN 24017-8.8	Key DIN 6885 Width/Height/Length
	Position 3 Sleeve					Position 4 Stud bolt											
	s	t	u	v	w	R	x	y	z	z1							
BF06	24.8	24	5	15.4	M12	0.8	160	130	20	M8	25x1.2	M8	8.4	M8x30	5	M12x110	A 8x7x63
BF10	24.8	24	5	15.4	M12	0.8	160	130	20	M8	25x1.2	M8	8.4	M8x30		M12x140	A 8x7x90
BF20	29.8	28	5	19.8	M14	0.8	170	135	23	M10	30x1.2	M10	10.5	M10x30	8	M14x150	A 8x7x90
BF30	34.8	28	5	23	M14	-	180	145	23	M10	35x1.5	M10	10.5	M10x35		M14x160	A 10x8x100
BF40	39.8	40	6	27.7	M20	0.8	210	170	28	M12	40x1.75	M12	13	M12x35	16	M20x200	A 12x8x125
BF50	49.8	48	6	36	M24	-	230	175	37	M16	50x2.0	M16	17	M16x40	30	M24x210	A 14x9x125
BF60	59.8	60	6	44	M30	-	270	205	45	M20	60x2.0	M20	21	M20x50	42	M30x250	A 18x11x160
BF70	79.8	60	8	55	M30	-	310	240	45	M20	80x2.5	M20	21	M20x50		M30x280	A 22x14x180
BF70-K70	69.8	60	8	53	M30	-	310	240	45	M20	70x2.5	M20	21	M20x50		M30x280	A 20x12x180
BF80	99.8	72	10	75	M36	-	440	360	55	M24	100x3.0	M24	25	M24x60	100	M36x410	A 28x16x280
BF90	119.8	72	10	80	M36	-	510	430	55	M24	120x4.0	M24	25	M24x60		M36x480	A 32x18x360

The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit.  
Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

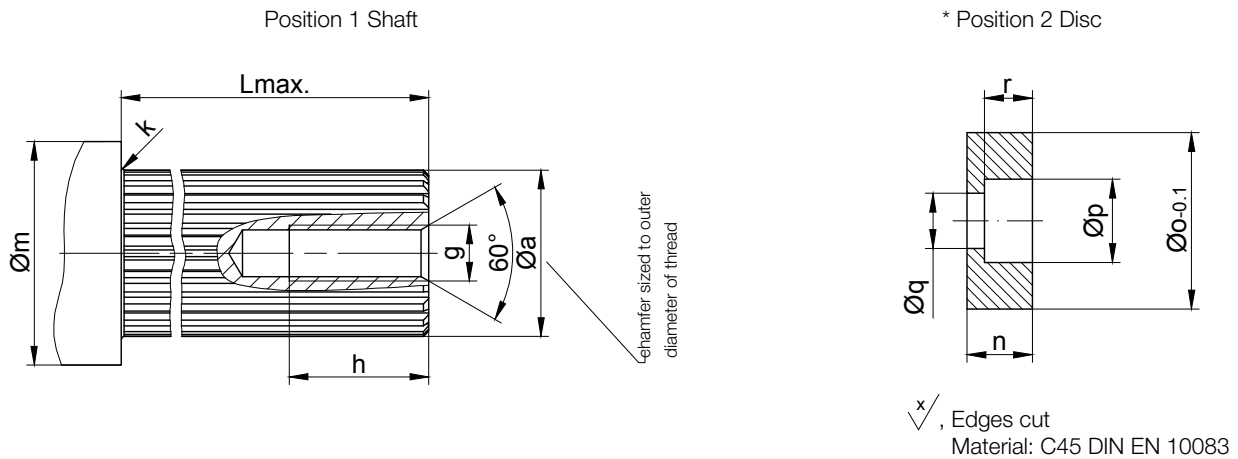
Optional

Type	Ø s	Order text
BF06	25	Id.Nr. 4103921 Assembly tool „holding“
BF10	25	Id.Nr. 4103921 Assembly tool „holding“
BF20	30	Id.Nr. 4103939 Assembly tool „holding“
BF30	35	Id.Nr. 4103947 Assembly tool „holding“
BF40	40	Id.Nr. 4103955 Assembly tool „holding“
BF50	50	Id.Nr. 4103963 Assembly tool „holding“
BF60	60	Id.Nr. 4103971 Assembly tool „holding“
BF70	80	Id.Nr. 4103980 Assembly tool „holding“
BF70-K70	70	Id.Nr. 4104765 Assembly tool „holding“
BF80	100	Id.Nr. 4103998 Assembly tool „holding“
BF90	120	Id.Nr. 4104005 Assembly tool „holding“

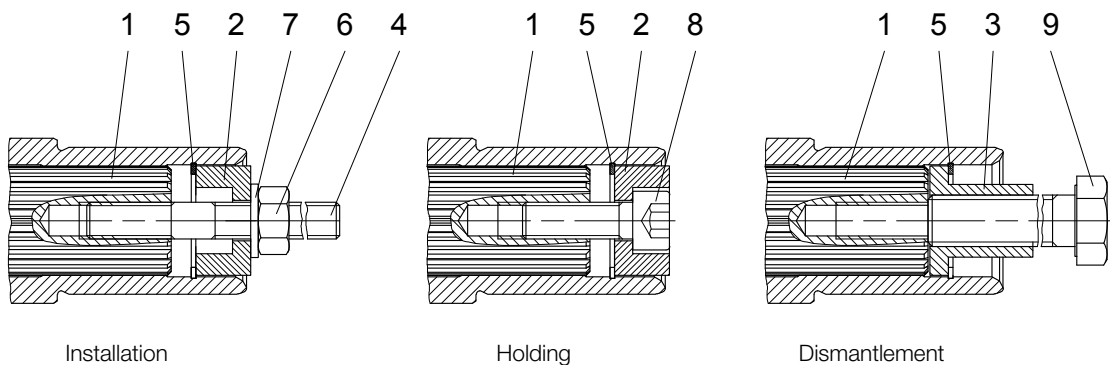
# BF-series shaft-mounted geared motors

## Additional Dimension Sheet

### Assembly tools for shaft mounted gears with splined shaft



Type	Dimensions (mm)										
	Position 1 Shaft						Position 2 Disc				
	a	g	h	g	Lmax.	m	n	o	p	q	r
BF06	DIN 5480-W25x1.25x18x8f	M8	20	2	70	37	13	29.9	15	9	8
BF10	DIN 5480-W30x1.25x22x8f	M10	25	2.5	100	38	15	30.4	18	11	10
BF20	DIN 5480-W35x2x16x8f	M10	25	3	110	43	14	35.9	18	11	10
BF30	DIN 5480-W40x2x18x8f	M12	30	3	117	48	18	40.9	20	13.5	12
BF40	DIN 5480-W50x2x24x8f	M16	35	3	145	60	17.5	50.9	26	17.5	12.5
BF50	DIN 5480-W60x2x28x8f	M20	40	3.5	150	69	24	60.9	33	22	18
BF60	DIN 5480-W70x2x34x8f	M20	40	3.5	175	80	24	71.9	33	22	18
BF70	DIN 5480-W85x3x27x8f	M20	40	4	215	96	22	85.9	33	22	16
BF80	DIN 5480-W110x3x35x8f	M24	50	4	315	122	32	111.9	40	26	25
BF90	DIN 5480-W130x5x24x8f	M24	50	4.5	390	141	25	131.4	40	26	18



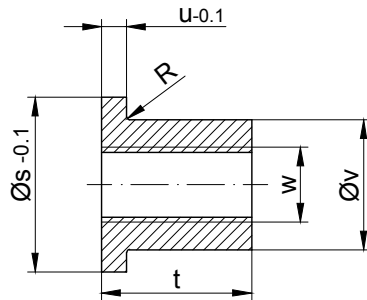
The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit. Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

# BF-series shaft-mounted geared motors

## Additional Dimension Sheet

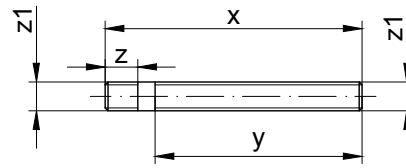
### Assembly tools for shaft mounted gears with splined shaft

Position 3 Sleeve



✓ Edges cut  
Material: C45 DIN EN 10083

\* Position 4 Stud bolt



Material: Steel, tensile strength  
≥ 1000N/mm<sup>2</sup>  
Threads rolled

Type	Dimensions (mm)										* Retaining ring DIN 472	Hexagon nut DIN 394-8	Disc DIN 125-St	* Filister head screw DIN 912-8.8	Starting torque (Nm)	Hexagon bolt DIN EN 24017-8.8
	Position 3 Sleeve					Position 4 Stud bolt										
	s	t	u	v	w	R	x	y	z	z1						
BF06	29.9	24	5	15.4	M12	0.8	160	130	20	M8	30x1.2	M8	8.4	M8x30	5	M12x110
BF10	30.4	28	5	19.8	M14	-	170	135	23	M10	30x1.2	M10	10.5	M10x30	8	M14x150
BF20	35.9	28	5	23	M14	-	180	145	23	M10	35x1.5	M10	10.5	M10x35		M14x160
BF30	40.9	40	6	27.7	M20	-	210	170	28	M12	40x1.75	M12	13	M12x35	16	M20x200
BF40	50.9	48	6	36	M24	0.8	230	175	37	M16	50x2.0	M16	17	M16x40	30	M24x210
BF50	60.9	60	6	44	M30	-	270	205	45	M20	60x2.0	M20	21	M20x50	42	M30x250
BF60	71.9	60	6	53	M30	0.8	310	240	45	M20	72x2.5	M20	21	M20x50		M20x280
BF70	85.9	60	8	65	M30	0.8	310	240	45	M20	85x3	M20	21	M20x50		M30x280
BF80	111.9	72	10	85	M36	0.8	440	360	55	M24	112x4	M24	25	M24x60	100	M36x410
BF90	131.4	72	10	95	M36	0.8	510	430	55	M24	130x4	M24	25	M24x60		M36x480

The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit.  
Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

Optional

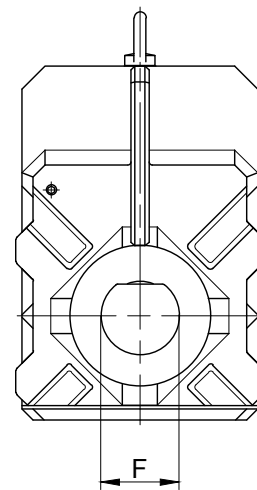
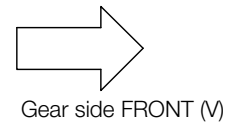
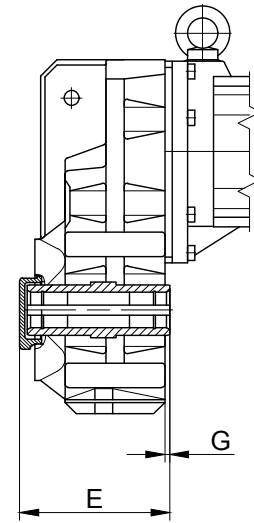
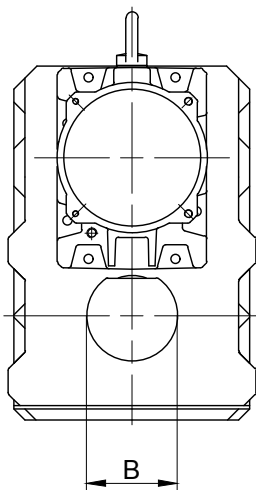
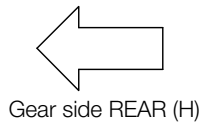
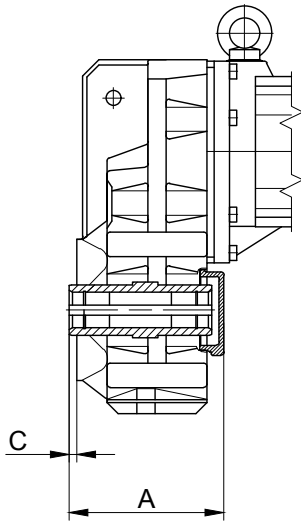
Type	Ø s	Order text
BF06	30	Id.Nr. 4105125 Assembly tool „holding“
BF10	30.5	Id.Nr. 4105133 Assembly tool „holding“
BF20	36	Id.Nr. 4105141 Assembly tool „holding“
BF30	41	Id.Nr. 4105150 Assembly tool „holding“
BF40	51	Id.Nr. 4105168 Assembly tool „holding“
BF50	61	Id.Nr. 4105176 Assembly tool „holding“
BF60	72	Id.Nr. 4105184 Assembly tool „holding“
BF70	86	Id.Nr. 4105192 Assembly tool „holding“
BF80	112	Id.Nr. 4105206 Assembly tool „holding“
BF90	131.5	Id.Nr. 4105214 Assembly tool „holding“



# BF-series shaft-mounted geared motors

## Additional Dimension Sheet

### Shaft Cap (VK)

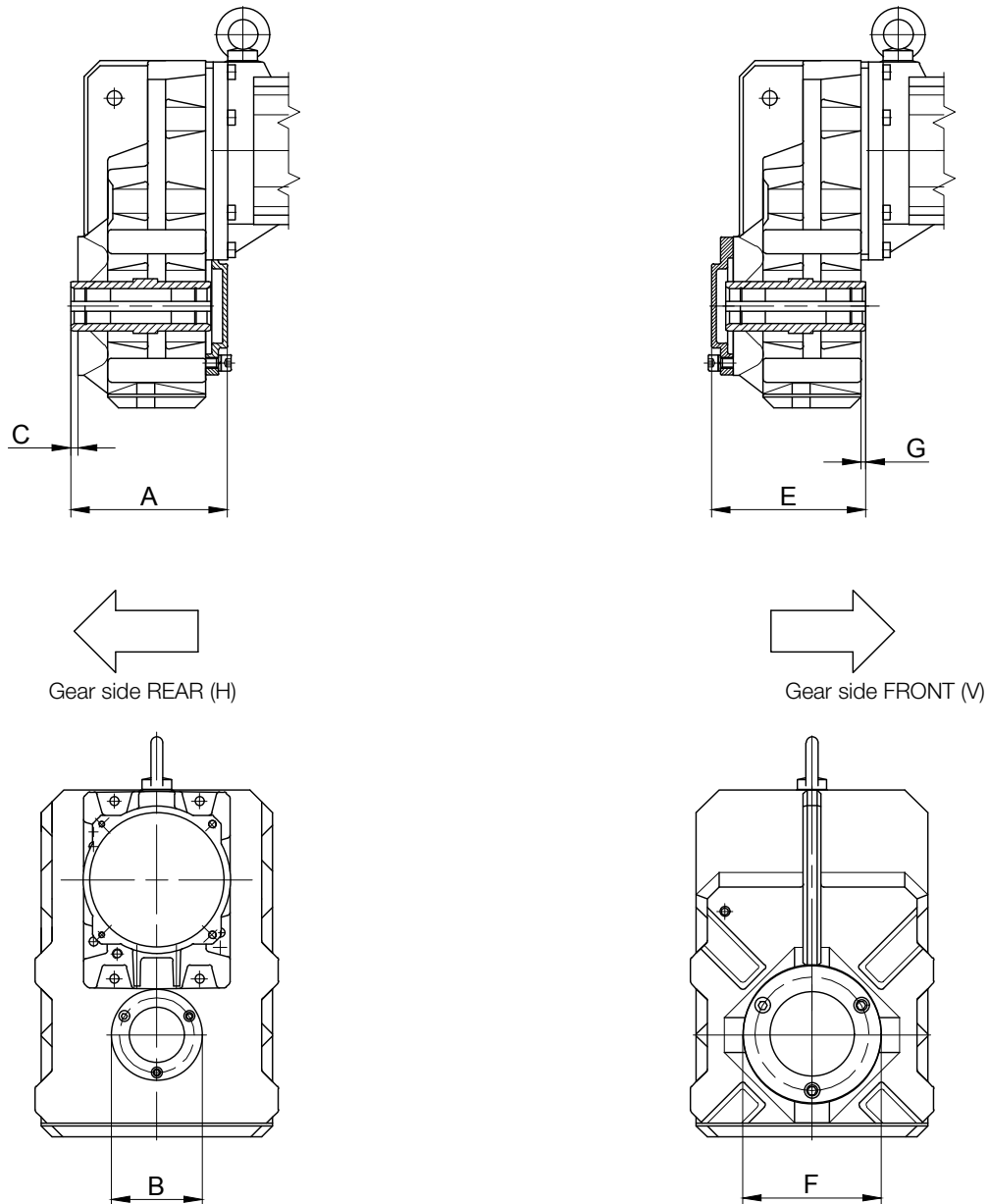


Shaft cap REAR (H)

Type	A	B	C
BF10	134	78	5
BF20	142	85	5
BF30	153.5	90	7.5
BF40	179.5	110	7
BF50	192	125	6
BF60	222	140	7
BF70	258	170	6
Dimensions in millimetres (mm)			

Shaft cap FRONT (V)

Type	E	F	G
BF30	149	78	7.5
BF50	189.5	110	6
BF70	262	130	6
Dimensions in millimetres (mm)			

**BF-series shaft-mounted geared motors****Additional Dimension Sheet****Shaft Cover (VD)**

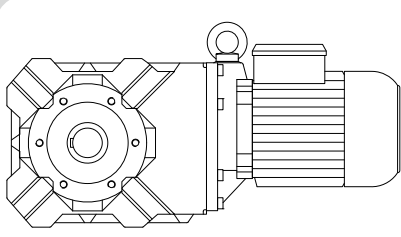
Shaft cover REAR (H)			
Type	A	B	C
BF70	376	300	8
BF90	442	350	8
Dimensions in millimetres (mm)			

Shaft cover FRONT (V)			
Type	E	F	G
BF10	135.5	120	5
BF20	144	139.5	5
BF30	153	139.5	7.5
BF40	179.5	160	7
BF50	191.5	199	6
BF60	221.5	210	7
BF70	258	250	6
BF80	376	300	8
BF90	442	350	8
Dimensions in millimetres (mm)			

# Energy Efficient Geared Motors

## AC Variable Speed

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# 12

## BK-series bevel-gear motors - Dimensions

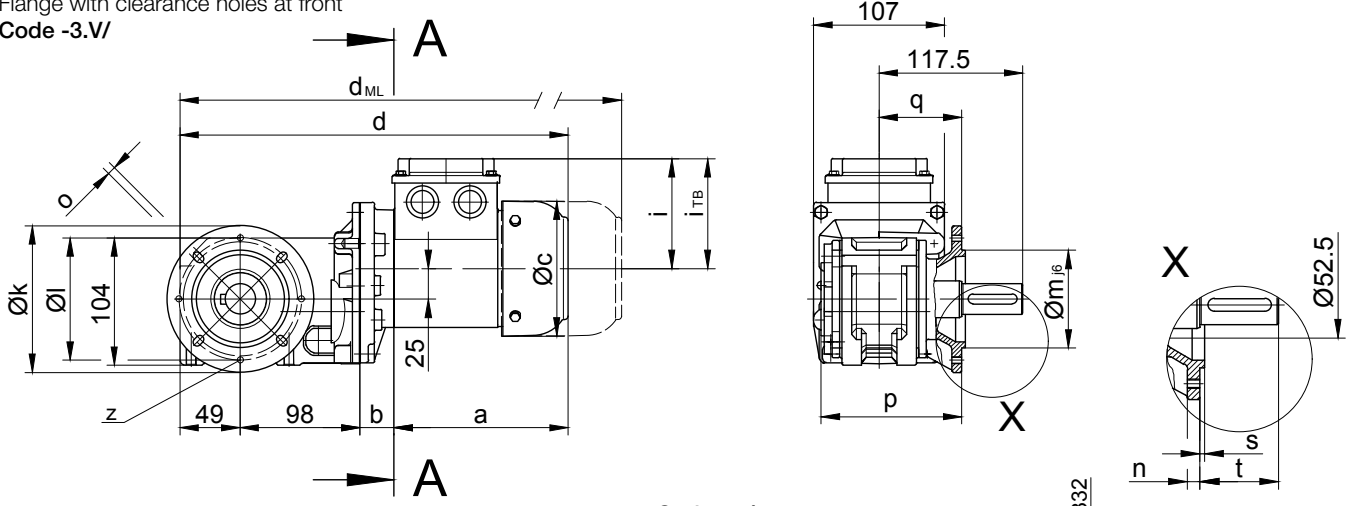
<b>Dimension - Standard</b> .....	<b>396</b>
BK06 .....	396
BK08 .....	398
BK10-BK10Z .....	400
BK17 .....	402
BK20-BK20Z .....	404
BK30-BK30Z .....	406
BK40-BK40Z .....	408
BK50-BK50Z .....	410
BK60-BK60Z .....	412
BK70-BK70Z .....	414
BK80-BK80Z .....	416
BK90-BK90Z .....	418
<b>Dimension - Tandem Gearbox</b> .....	<b>420</b>
BK10G06 .....	420
BK20G06 .....	422
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BK40G10 .....	426
BK50G10 .....	428
BK60G20 .....	430
BK70G20 .....	432
BK80G40 .....	434
BK90G50 .....	436
<b>Additional Dimension Sheet</b> .....	<b>439</b>
Splined shaft BK .....	439
Shrink disc couplings (SSV) .....	440
Shrink disc connection with cover (SSV) .....	441
Rubber buffer for torque arm .....	442
Position of the torque arm .....	443
Foot with tapped holes .....	444
Foot plate with clearance holes .....	445
Assembly tools for hollow shaft and keyway .....	446
Assembly tools for splined shaft .....	448
Shaft cap (VK) .....	450
Shaft cover (VD) .....	451

# BK-series bevel-geared motors

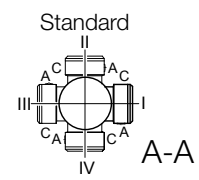
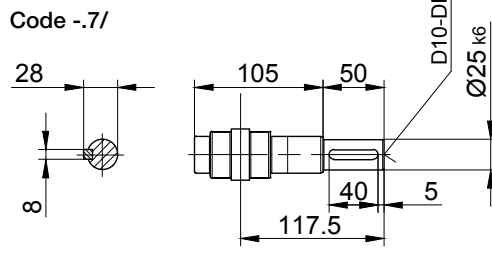
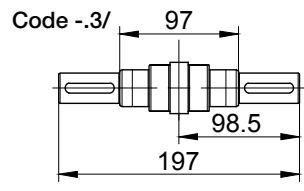
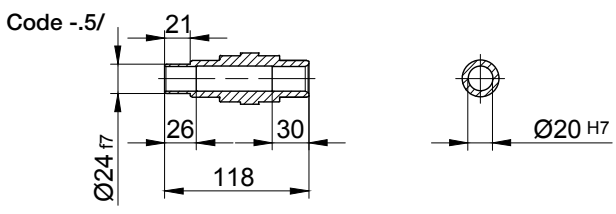
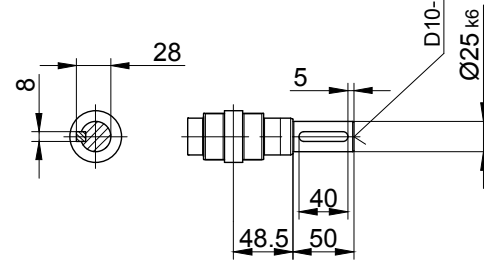
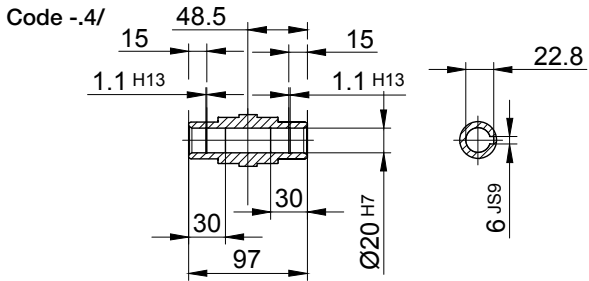
## Dimension - Standard

### BK06

Flange with clearance holes at front  
Code -3.V/



Code -.1/



Type	Design	k	l	m	n	o	p	q	s	t	z
BK06	Code -3.V/	120	100	80	8	6.6	115	67.5	3	50	-
BK06	Code -3.V/	120	100	80	8	6.6	115	67.5	3	50	4xM6

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK06-../S04S	142.5	28	110.5	317.5	90	112	361	405	448.5	-
BK06-../S..06 (M, L)	170.5	30	123	347.5	99	119	389.5	450	487.5	-
BK06-../S..08 (M, L)	199.5	74	156	420.5	114.5	136.5	486.5	532.5	594	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

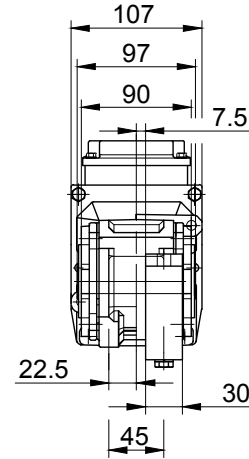
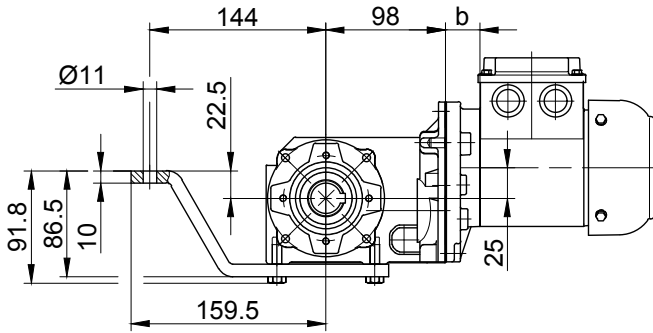
Send Quote Requests to [info@automatedpt.com](mailto:info@automatedpt.com)

# BK-series bevel-gear motors

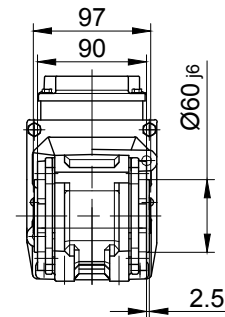
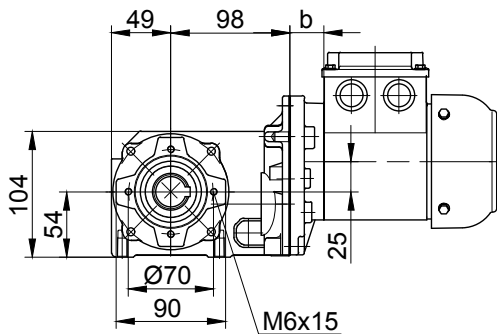
## Dimension - Standard

### BK06

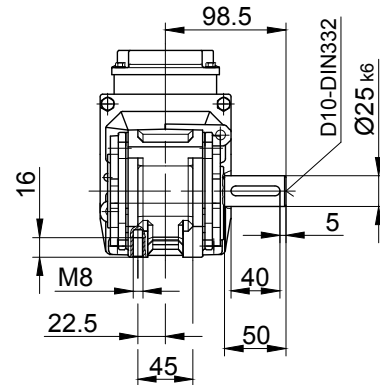
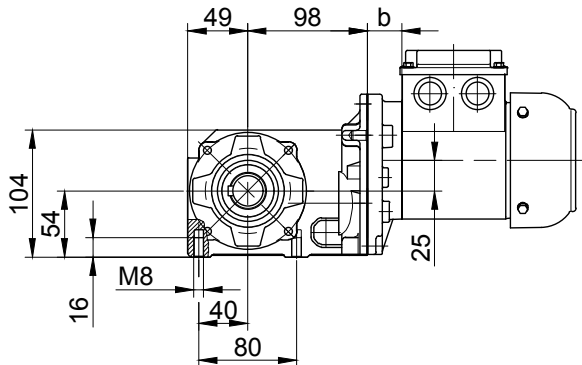
Torque arm at front  
Code -5.V/



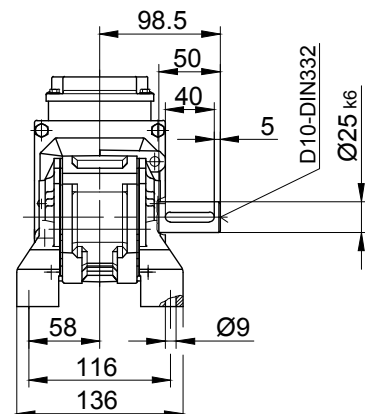
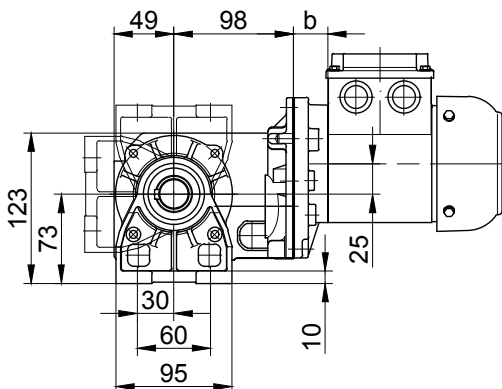
Flange with tapped holes at front  
Code -7.V/



Foot with tapped holes at bottom  
Code -6.U/



Foot with clearance holes at bottom  
Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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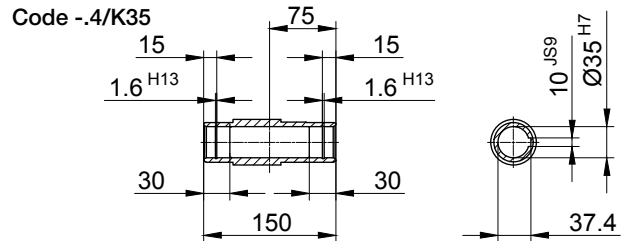
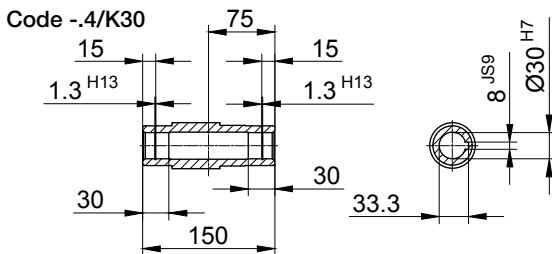
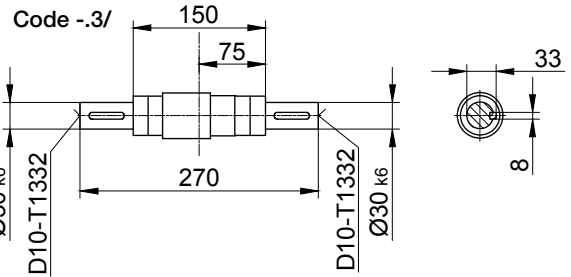
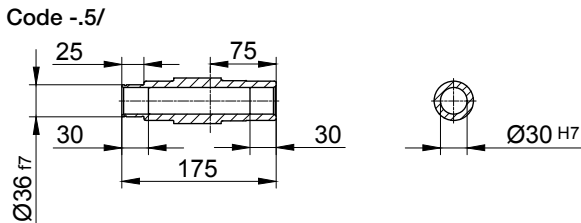
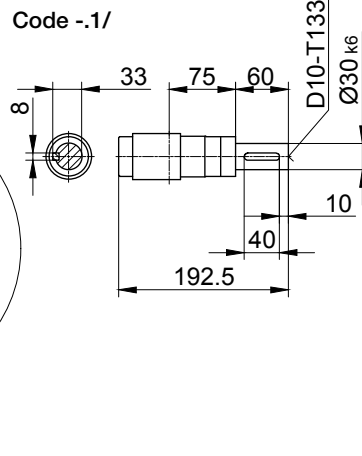
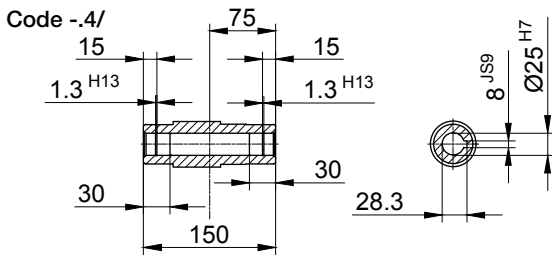
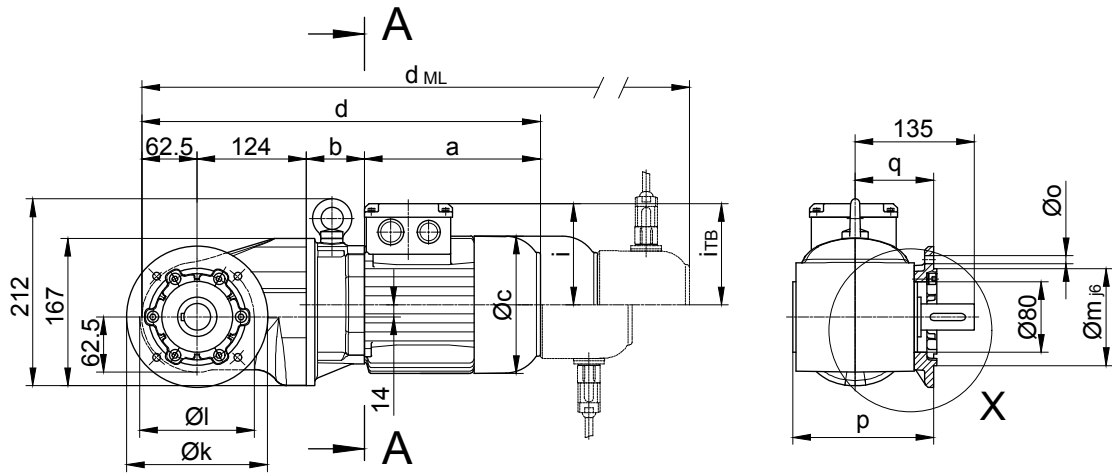
# BK-series bevel-geared motors

## Dimension - Standard

### BK08

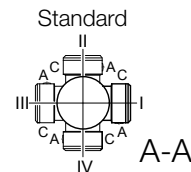
Flange with clearance holes at front

Code -3.V/  
(Code -2.V)



Type	Design	k	l	m	n	o	p	q	s	t	z
BK08	Code -3.V/	200	165	130	12	11	166.5	96	3.5	39	-
BK08	Code -2.V/	160	130	110	10	9	159.5	89	3.5	46	-

Dimensions in millimetres (mm)



Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
BK08-../S..08 (M, L)	199.5	66	156	452	114.5	136.5	d <sub>ML</sub> 518	d <sub>ML</sub> 564	d <sub>ML</sub> 625.5	d <sub>ML</sub> -

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedopt.com

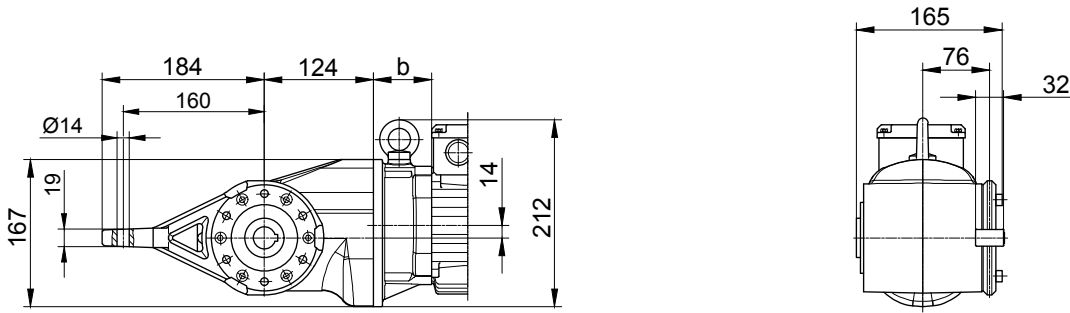
# BK-series bevel-gear motors

## Dimension - Standard

### BK08

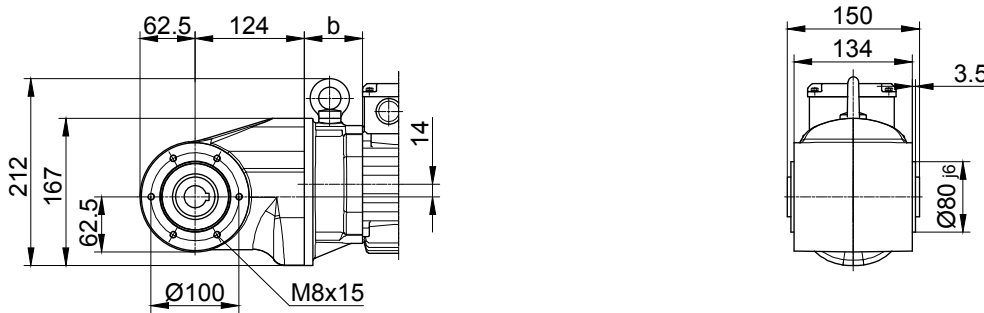
Torque arm at front

Code -5.V/



Flange with tapped holes at front

Code -7.V/

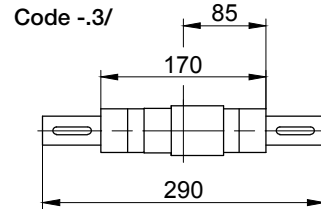
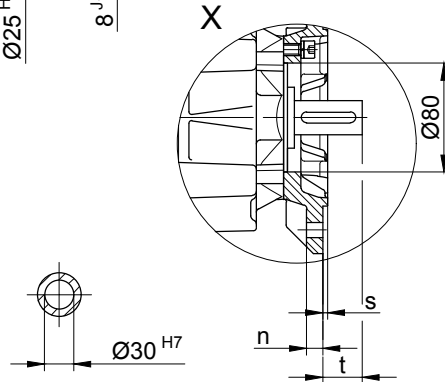
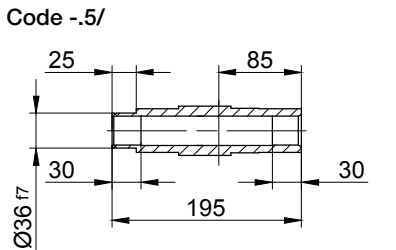
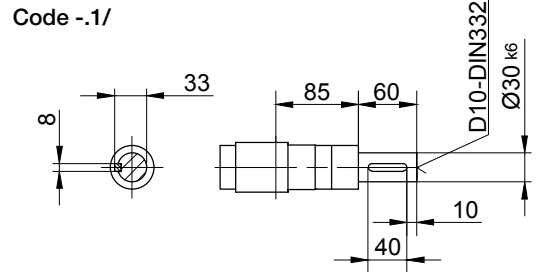
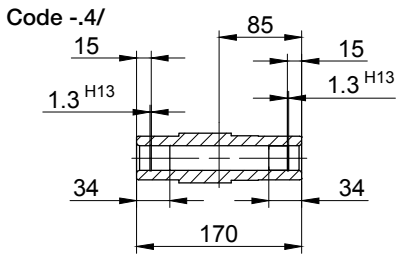
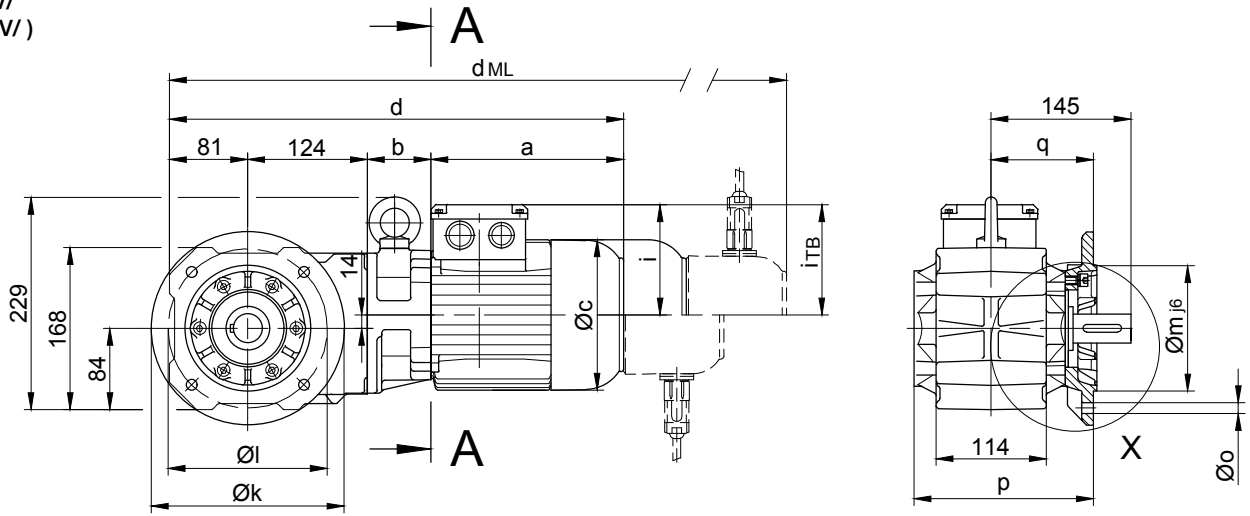


# BK-series bevel-geared motors

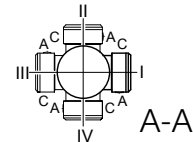
## Dimension - Standard

### BK10-BK10Z

Flange with clearance holes at front  
Code -3.V/  
(Code -2.V/)



Standard



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK10..	Code -3.V/	200	165	130	12	11	186.5	106	3.5	39	-
BK10..	Code -2.V/	160	130	110	10	9	179.5	99	3.5	46	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK10Z-../S04S	142.5	86	110.5	433.5	90	112	477	521	564.5	-
BK10-../S..06 (M, L)	170.5	62	123	437.5	99	119	479.5	540	577.5	-
BK10Z-../S..06 (M, L)	170.5	88	123	463.5	99	119	505.5	566	603.5	-
BK10-../S..08 (M, L)	199.5	66	156	470.5	114.5	136.5	536.5	582.5	644	-
BK10Z-../S..08 (M, L)	199.5	132	156	536.5	114.5	136.5	602.5	648.5	710	-
BK10-../S..09 (S, X)	250.5	80.5	176	536	124	157	629	643.5	733	-

Dimensions in millimetres (mm)

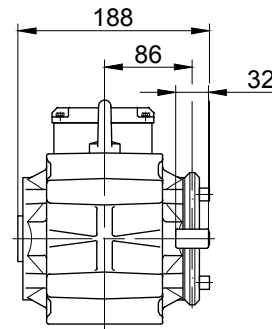
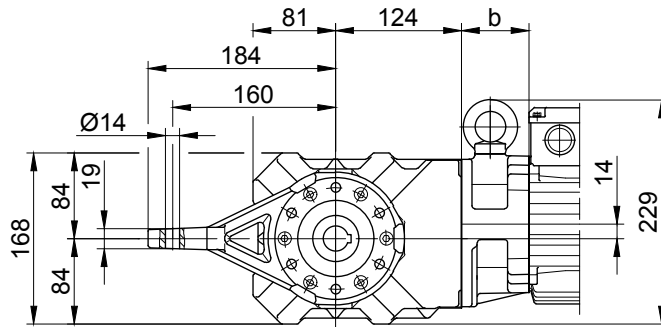
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedpt.com

**BK-series bevel-geared motors****Dimension - Standard****BK10-BK10Z**

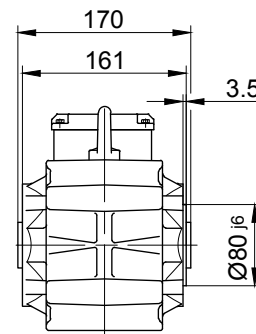
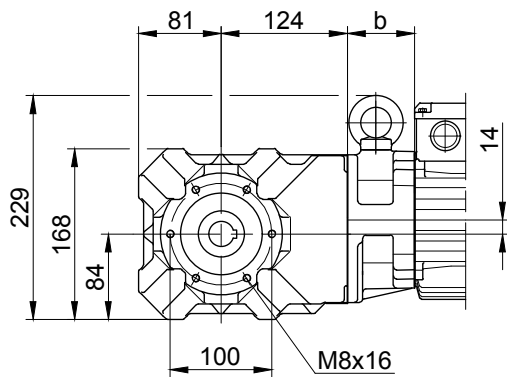
Torque arm at front

Code -5.V/



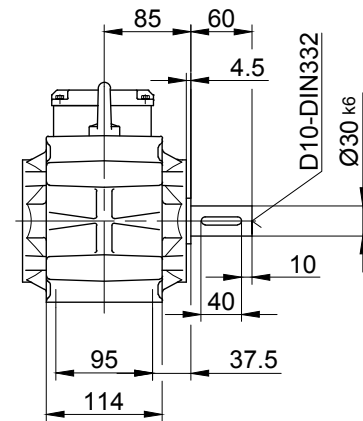
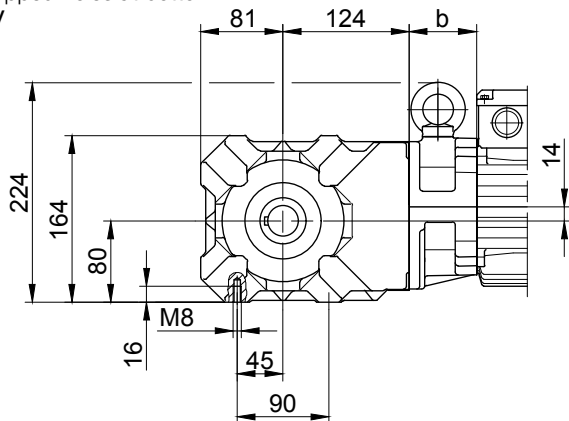
Flange with tapped holes at front

Code -7.V/



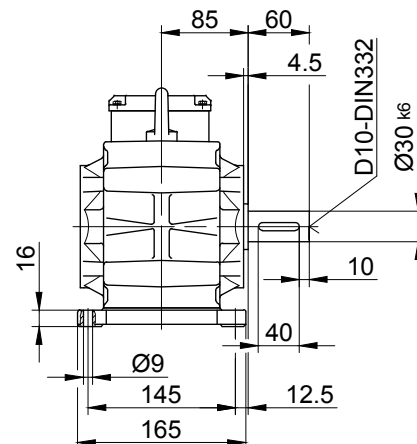
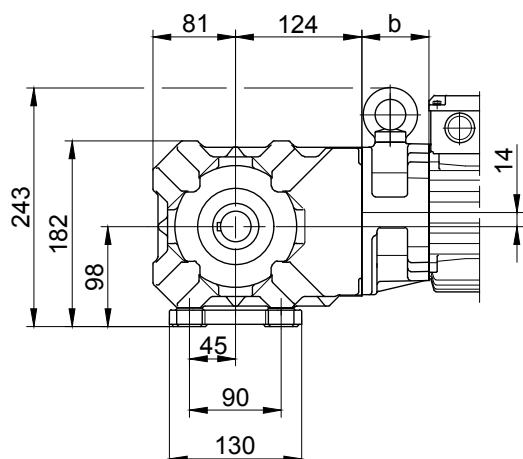
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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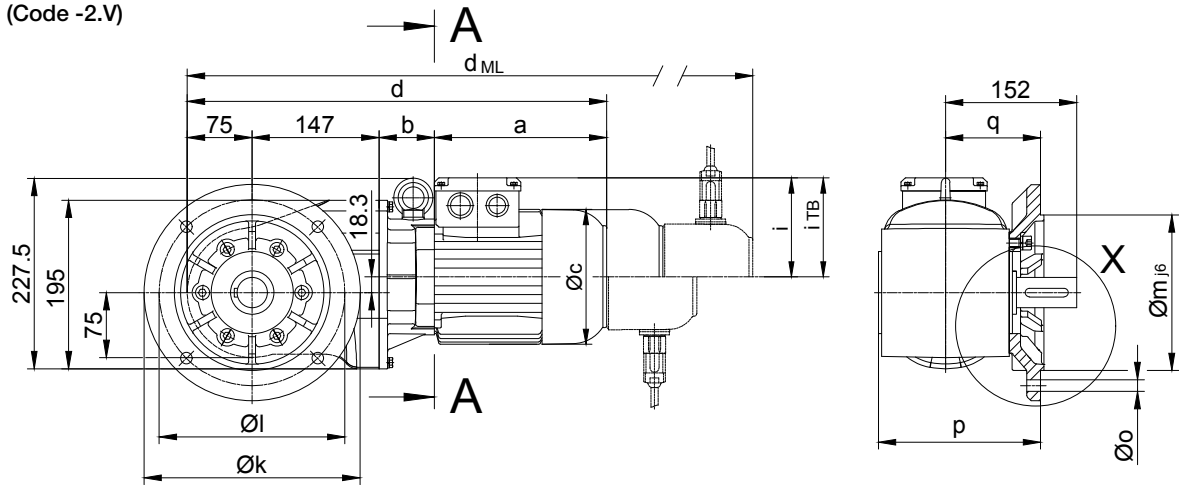
# BK-series bevel-geared motors

## Dimension - Standard

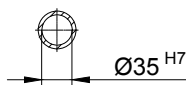
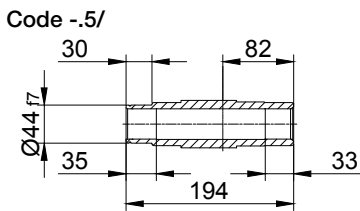
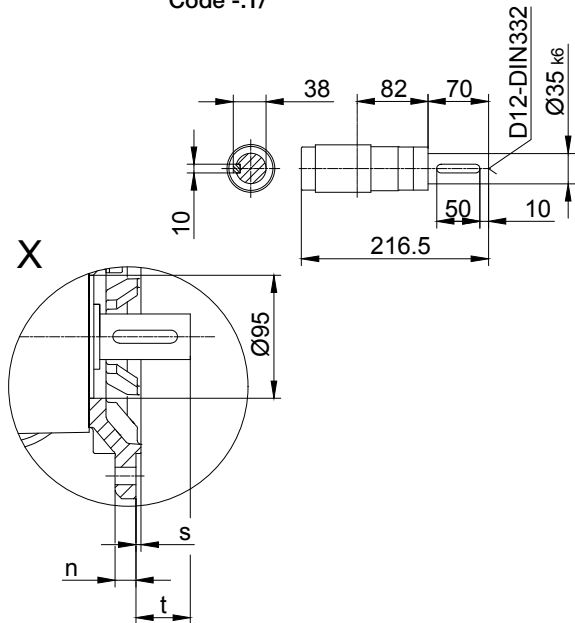
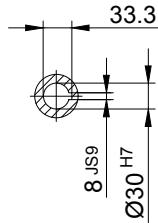
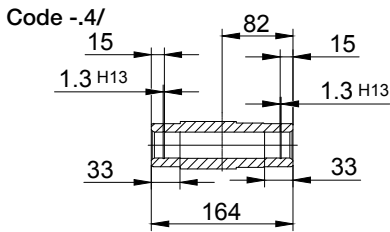
### BK17

Flange with clearance holes at front

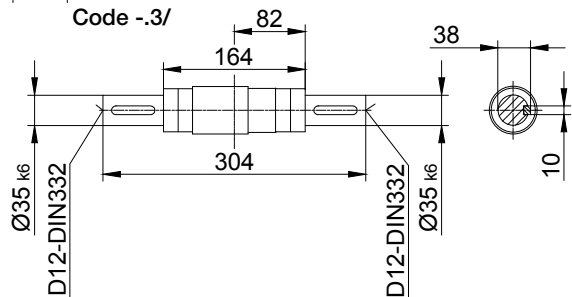
Code -3.V/  
(Code -2.V)



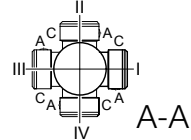
Code -.1/



Code -.3/



Standard



#### Flange Dimensions

Type	Design	k	l	m	n	o	p	q	s	t	z
BK17	Code -3.V/	250	215	180	16	13.5	187.5	110	4	42.5	-
BK17	Code -2.V/	200	165	130	12	11	178.5	101	3.5	51	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
BK17-../S..08 (M, L)	199.5	64	156	485.5	114.5	136.5	d <sub>ML</sub> 551.5	d <sub>ML</sub> 597.5	d <sub>ML</sub> 659	-
BK17-../S..09 (S, X)	250.5	78.5	176	551	124	157	644	658.5	748	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

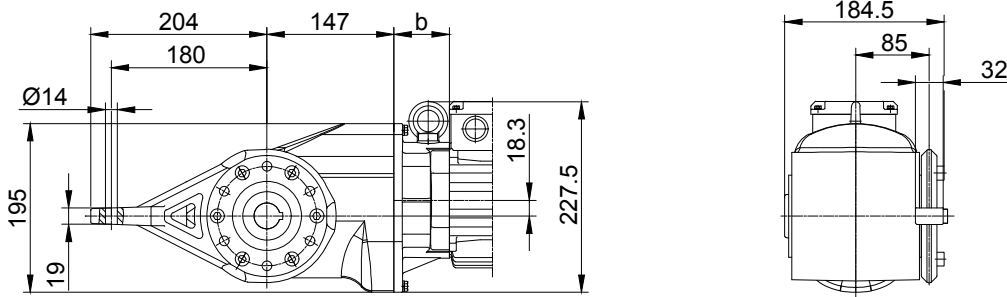
Send Quote Requests to info@automatedpt.com

# BK-series bevel-geared motors

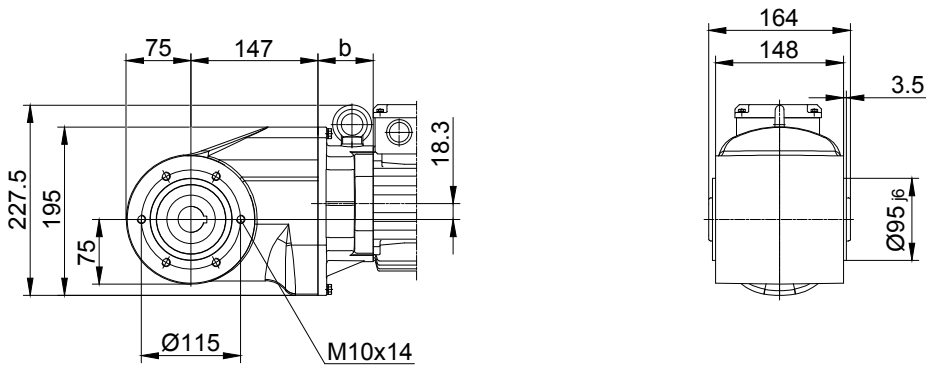
## Dimension - Standard

### BK17

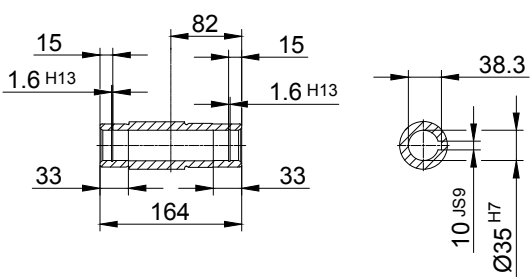
Torque arm at front  
Code -5.V/



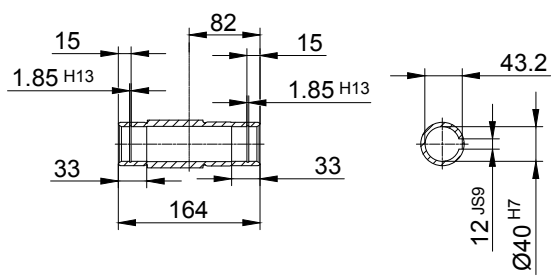
Flange with tapped holes at front  
Code -7.V/



Code -.4/K35



Code -.4/K40



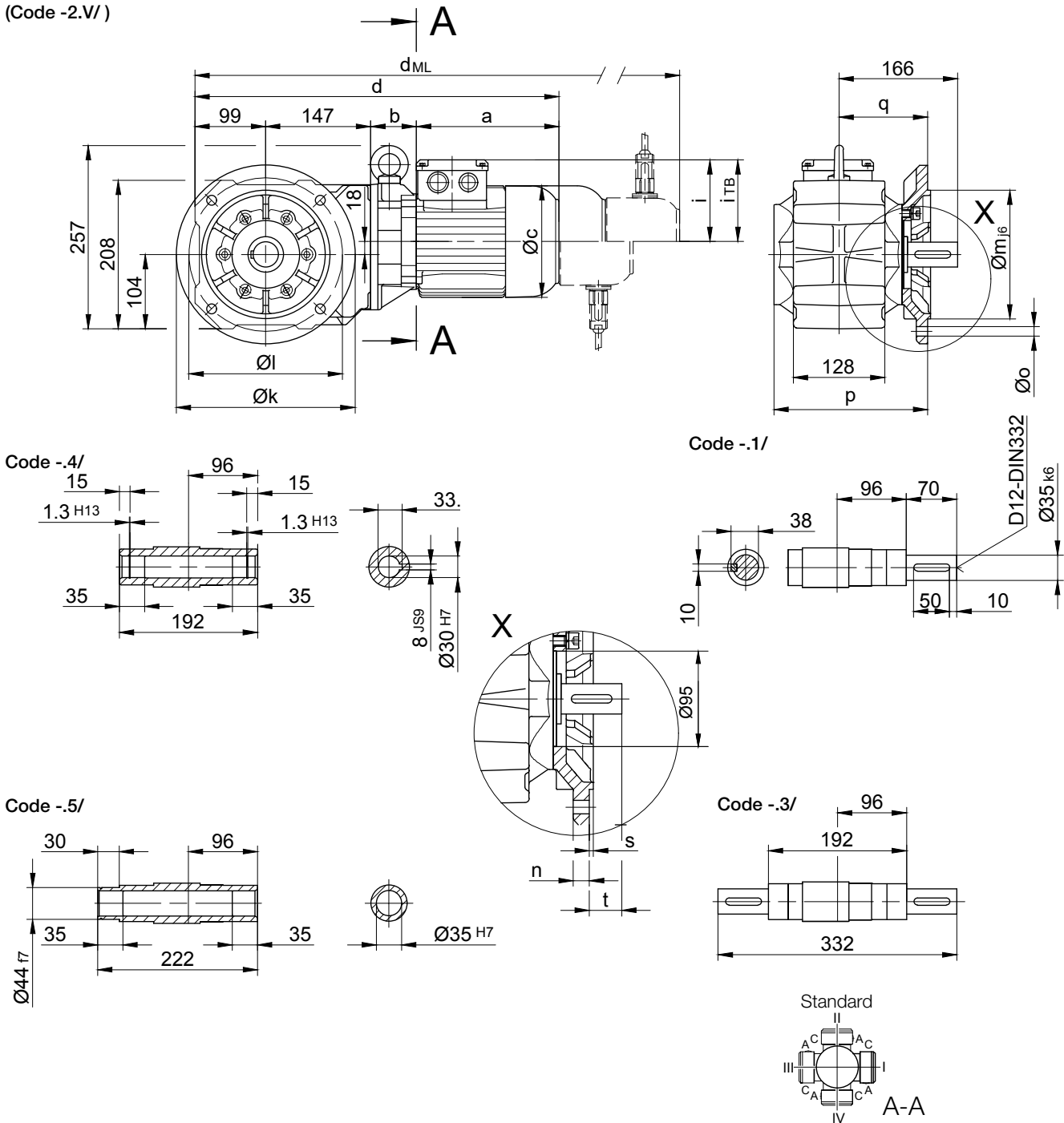


# BK-series bevel-geared motors

## Dimension - Standard

### BK20-BK20Z

Flange with clearance holes at front  
Code -3.V/  
(Code -2.V/)



Flange Dimensions												
Type	Design	k	l	m	n	o	p	q	s	t	z	
BK20..	Code -3.V/	250	215	180	16	13.5	215.5	124	4	42.5	-	
BK20..	Code -2.V/	200	165	130	12	11	206.5	115	3.5	51	-	

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK20Z-../S04S	142.5	100	110.5	488.5	90	112	532	576	619.5	-
BK20-../S..06 (M, L)	170.5	60	123	476.5	99	119	518.5	579	616.5	-
BK20Z-../S..06 (M, L)	170.5	102	123	518.5	99	119	560.5	621	658.5	-
BK20-../S..08 (M, L)	199.5	64	156	509.5	114.5	136.5	575.5	621.5	683	-
BK20Z-../S..08 (M, L)	199.5	146	156	591.5	114.5	136.5	657.5	703.5	765	-
BK20-../S..09 (S, X)	250.5	78.5	176	575	124	157	741.5	682.5	772	-

Dimensions in millimetres (mm)

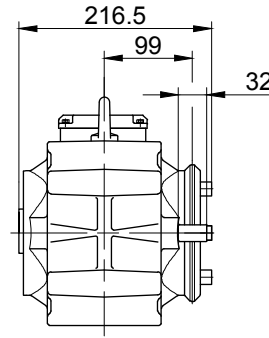
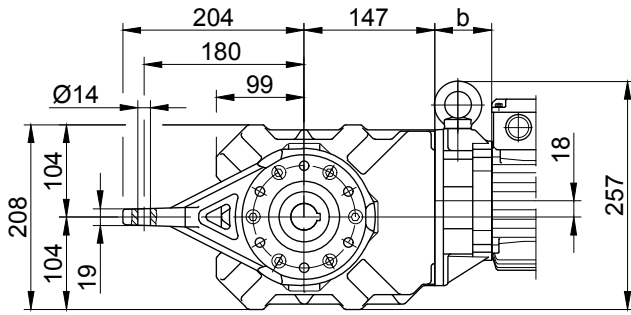
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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**BK-series bevel-gear motors****Dimension - Standard****BK20-BK20Z**

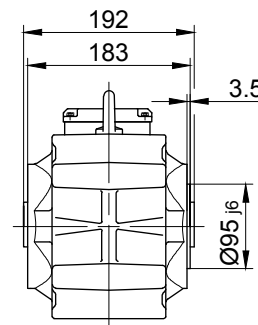
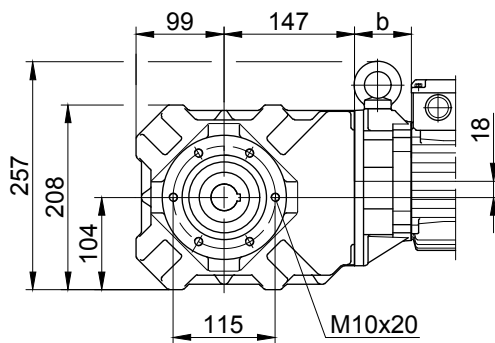
Torque arm at front

Code -5.V/



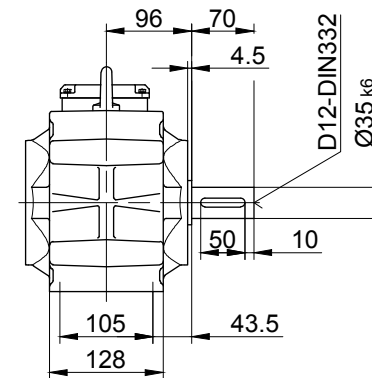
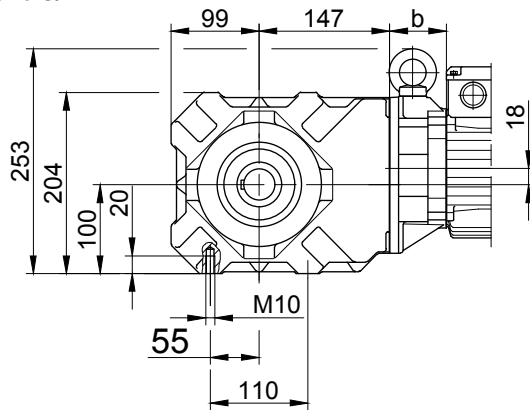
Flange with tapped holes at front

Code -7.V/



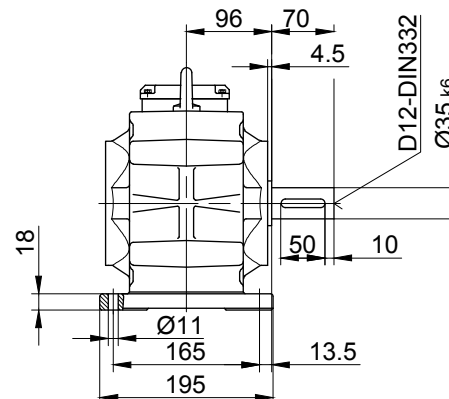
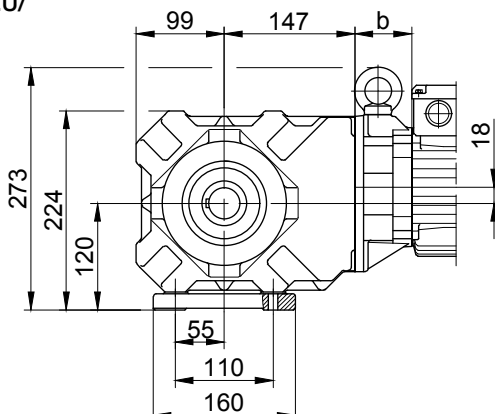
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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# BK-series bevel-geared motors

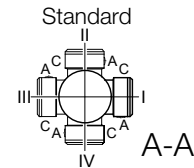
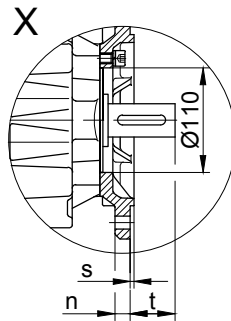
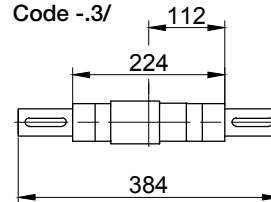
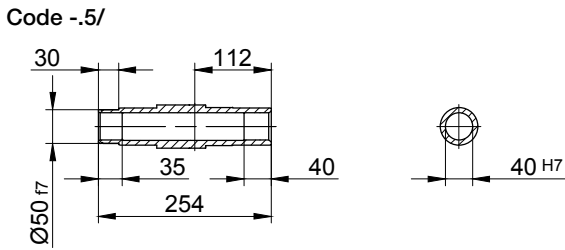
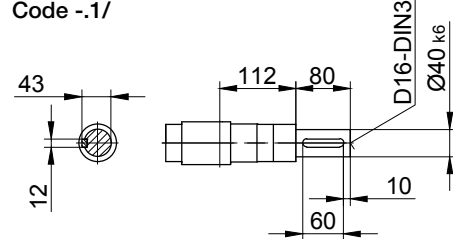
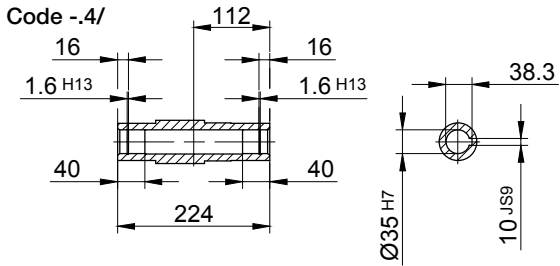
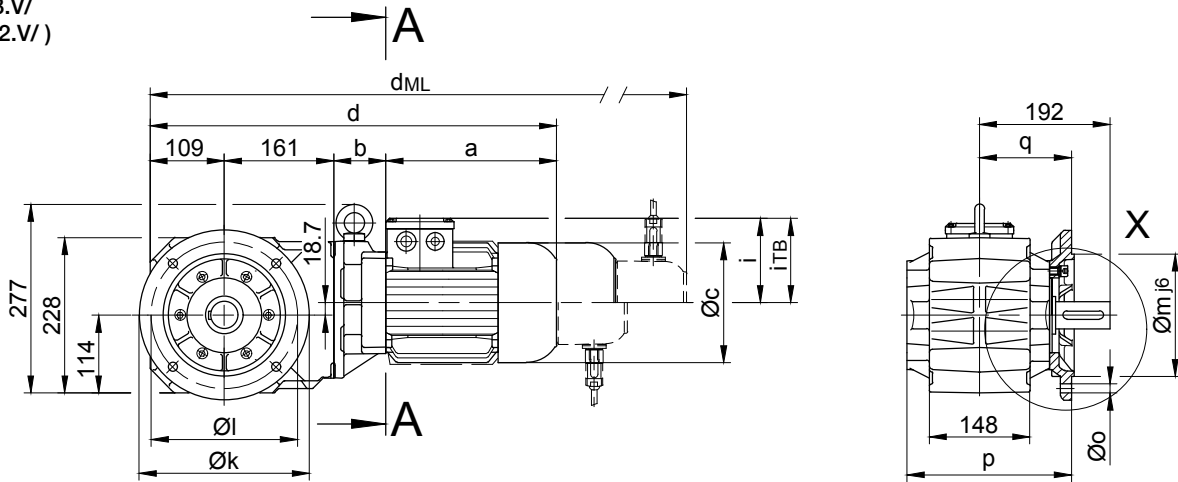
## Dimension - Standard

### BK30-BK30Z

Flange with clearance holes at front

Code -3.V/

(Code -2.V/)



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK30..	Code -3.V/	250	215	180	16	13.5	242	135	4	57	-
BK30..	Code -2.V/	200	165	130	12	11	239	132	3.5	59.5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	
BK30-../S..06 (M, L)	170.5	58	123	498.5	99	119	540.5	601	638.5	-
BK30Z-../S..06 (M, L)	170.5	133.5	123	574	99	119	616	676.5	714	-
BK30-../S..08 (M, L)	199.5	62	156	531.5	114.5	136.5	597.5	643.5	705	-
BK30Z-../S..08 (M, L)	199.5	137.5	156	607	114.5	136.5	673	719	780.5	-
BK30-../S..09 (S, X)	250.5	76.5	176	597	124	157	690	704.5	794	-
BK30Z-../S..09 (S, X)	250.5	152	176	672.5	124	157	765.5	780	869.5	-
BK30-../S..11 (S, M, L)	319	83	218	672	165	176	770	779.5	872	-

Dimensions in millimetres (mm)

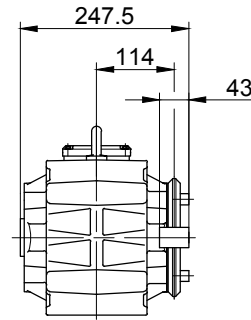
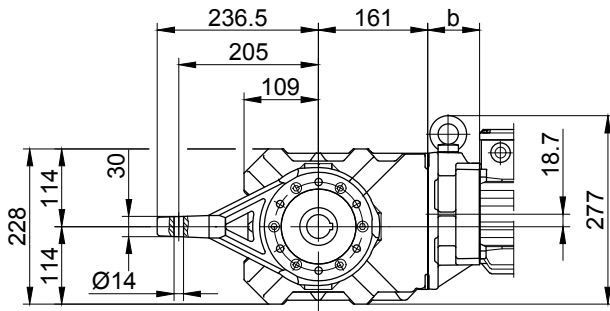
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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**BK-series bevel-gear motors****Dimension - Standard****BK30-BK30Z**

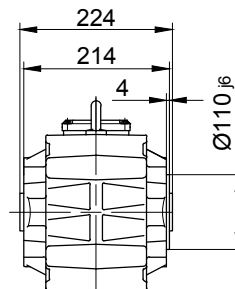
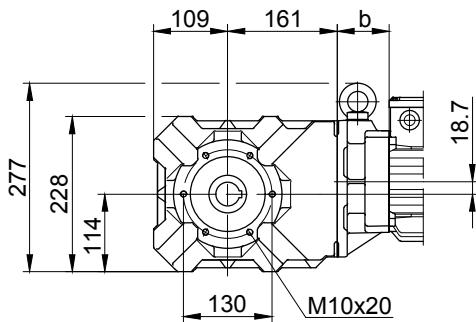
Torque arm at front

Code -5.V/



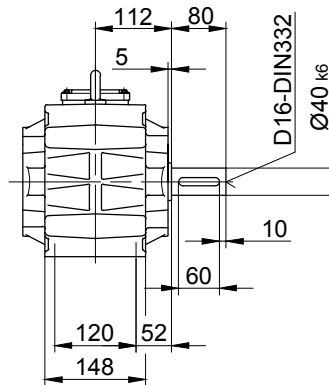
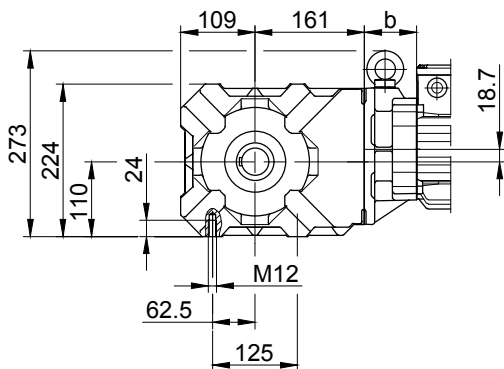
Flange with tapped holes at front

Code -7.V/



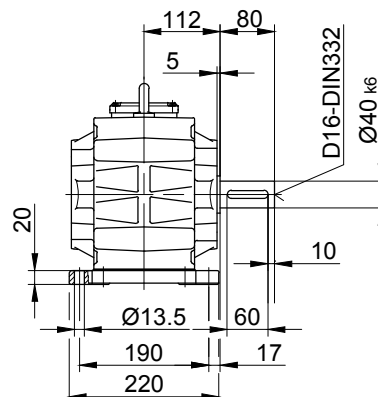
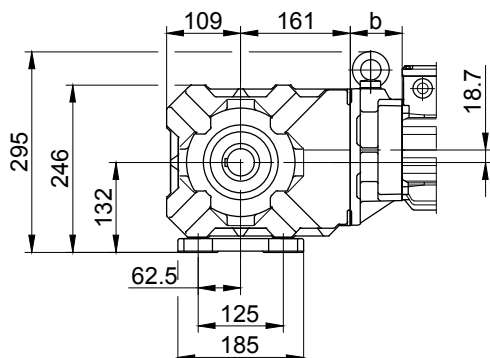
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

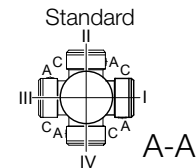
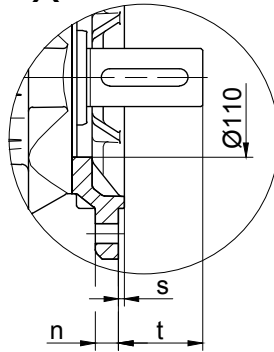
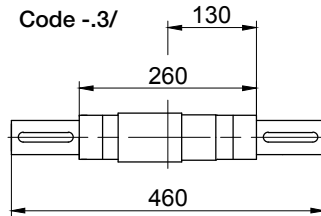
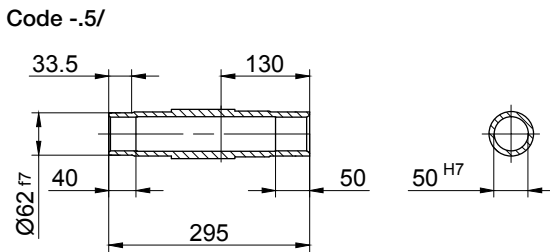
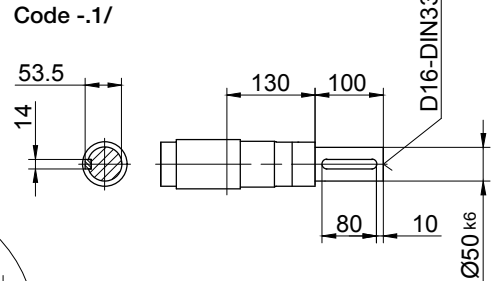
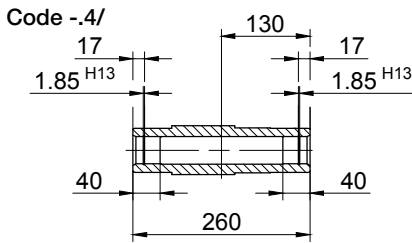
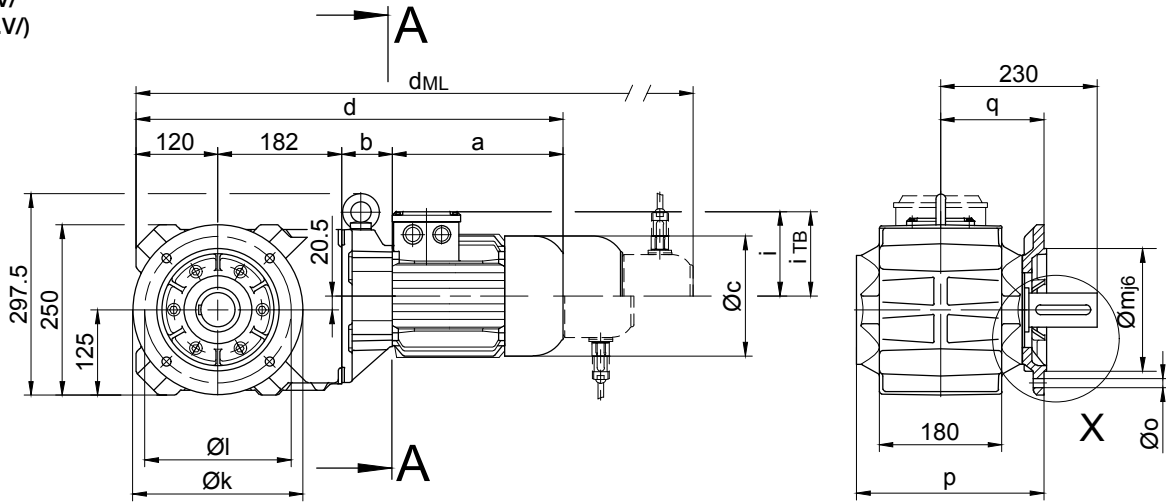
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# BK-series bevel-geared motors

## Dimension - Standard

### BK40-BK40Z

Flange with clearance holes at front  
Code -3.V/  
(Code -4.V)



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK40..	Code -3.V/	250	215	180	16	13.5	276	152	4	78	-
BK40..	Code -4.V/	300	265	230	20	13.5	282	158	4	72	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK40Z-../S..06 (M, L)	170.5	138.5	123	611	99	119	653	713.5	751	-
BK40-../S..08 (M, L)	199.5	60	156	561.5	114.5	136.5	627.5	673.5	735	-
BK40Z-../S..08 (M, L)	199.5	142.5	156	644	114.5	136.5	710	756	817.5	-
BK40-../S..09 (S, X)	250.5	74.5	176	627	124	157	720	734.5	824	-
BK40Z-../S..09 (S, X)	250.5	157	176	709.5	124	157	802.5	817	906.5	-
BK40-../S..11 (S, M, L)	319	81	218	702	165	176	800	809.5	902	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

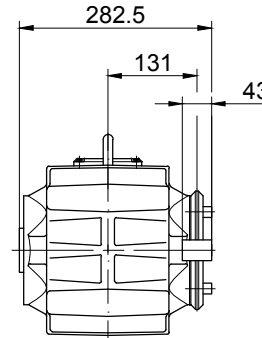
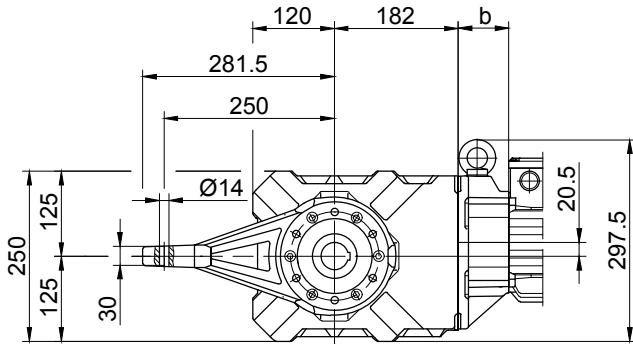
Send Quote Requests to info@automatedpt.com

# BK-series bevel-gear motors

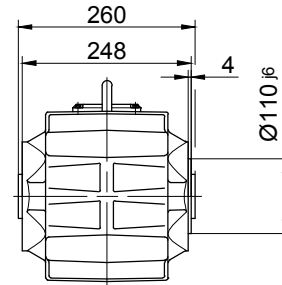
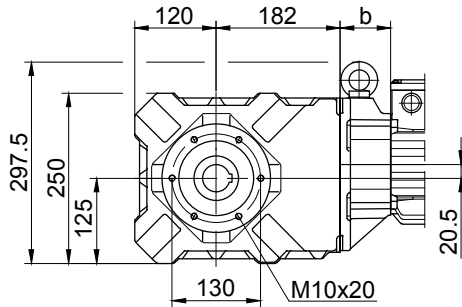
## Dimension - Standard

### BK40-BK40Z

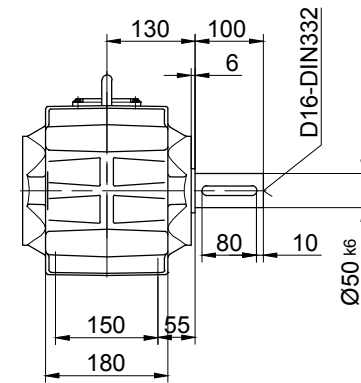
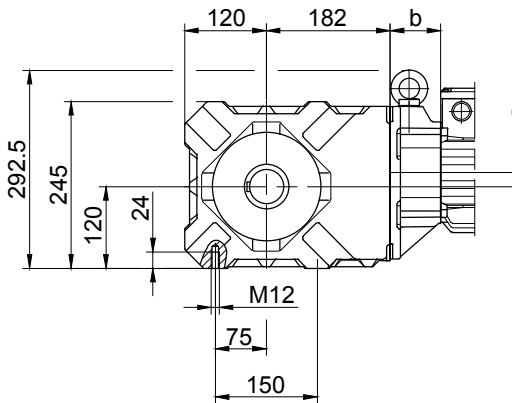
Torque arm at front  
Code -5.V/



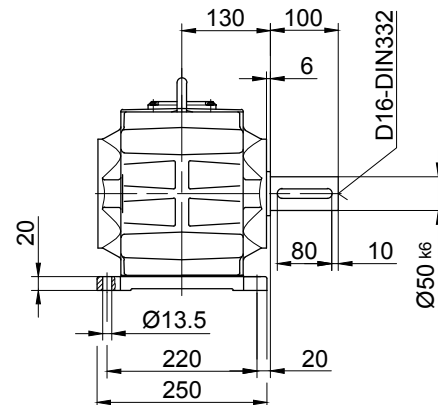
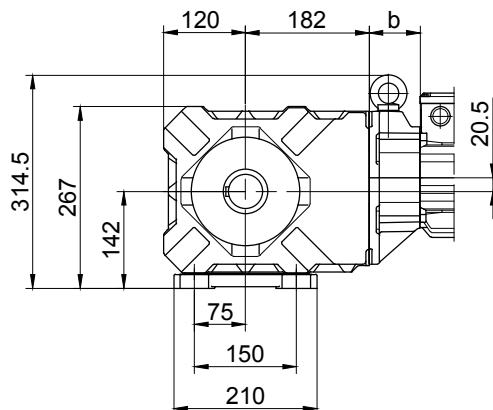
Flange with tapped holes at front  
Code -7.V/



Foot with tapped holes at bottom  
Code -6.U/



Foot with clearance holes at bottom  
Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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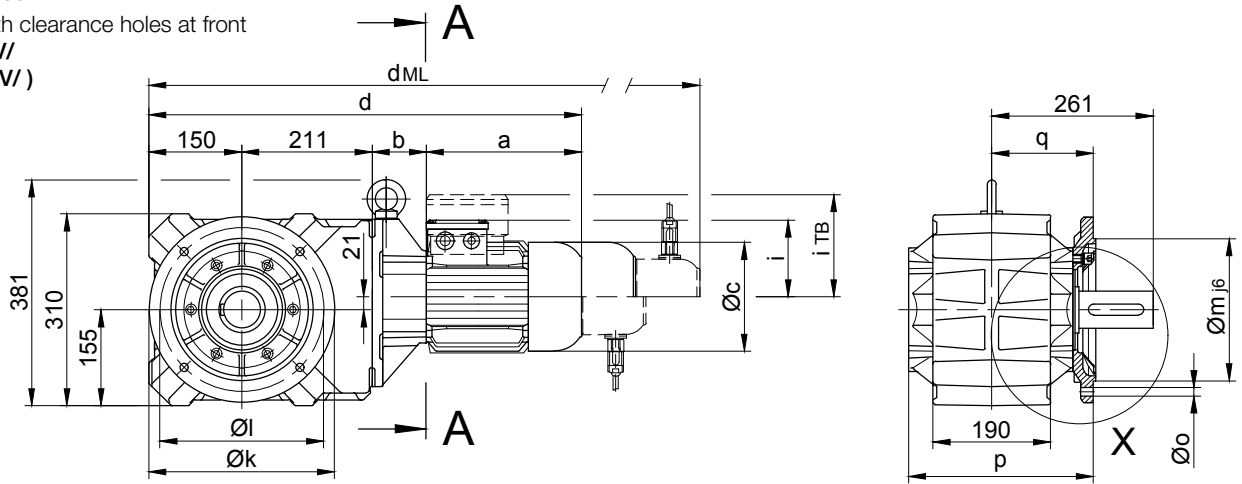


# BK-series bevel-geared motors

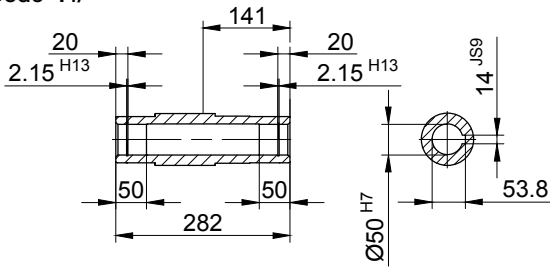
## Dimension - Standard

### BK50-BK50Z

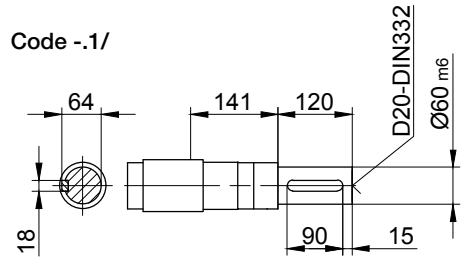
Flange with clearance holes at front  
Code -3.V/  
(Code -2.V/)



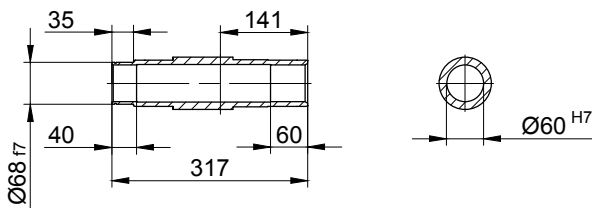
### Code -4/



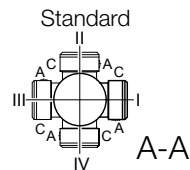
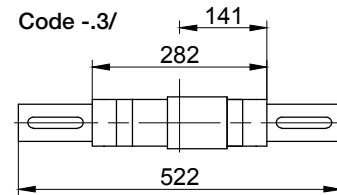
### Code -1/



### Code -5/



### Code -3/



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK50..	Code -3.V/	300	265	230	20	13.5	299	164	4	97	-
BK50..	Code -2.V/	250	215	180	16	13.5	296	161	4	100	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK50Z-../S..06 (M, L)	170.5	155	123	686.5	99	119	728.5	789	826.5	-
BK50-../S..08 (M, L)	199.5	73	156	633.5	114.5	136.5	699.5	745.5	807	-
BK50Z-../S..08 (M, L)	199.5	159	156	719.5	114.5	136.5	785.5	831.5	893	-
BK50-../S..09 (S, X)	250.5	87.5	176	699	124	157	792	806.5	896	-
BK50Z-../S..09 (S, X)	250.5	173.5	176	785	124	157	878	892.5	982	-
BK50-../S..11 (S, M, L)	319	94	218	774	165	176	872	881.5	974	-

Dimensions in millimetres (mm)

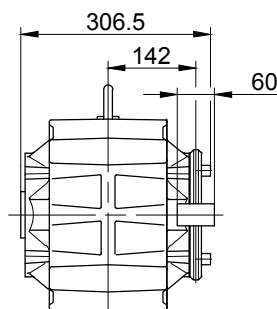
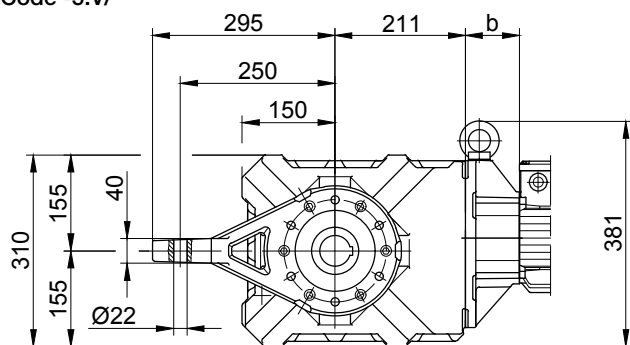
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedopt.com

**BK-series bevel-gear motors****Dimension - Standard****BK50-BK50Z**

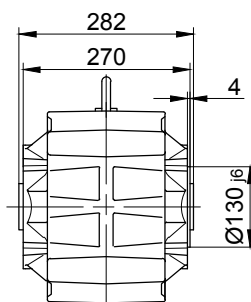
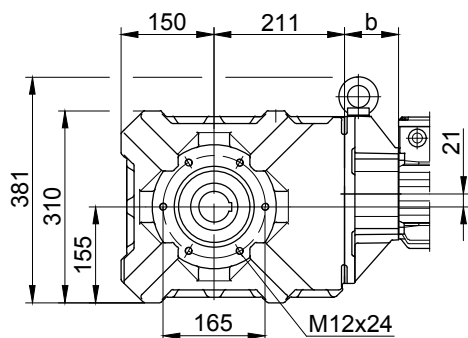
Torque arm at front

Code -5.V/



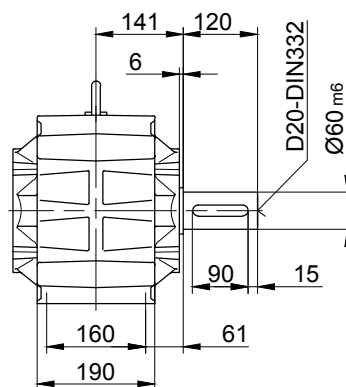
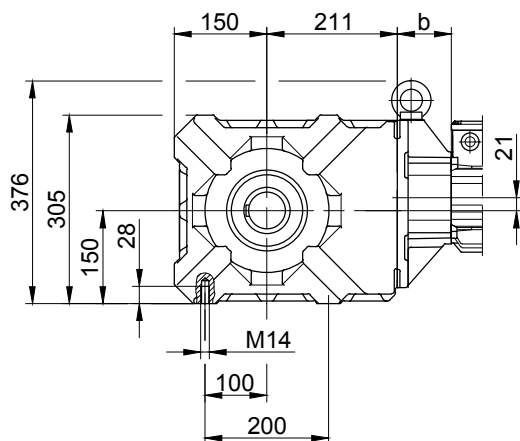
Flange with tapped holes at front

Code -7.V/



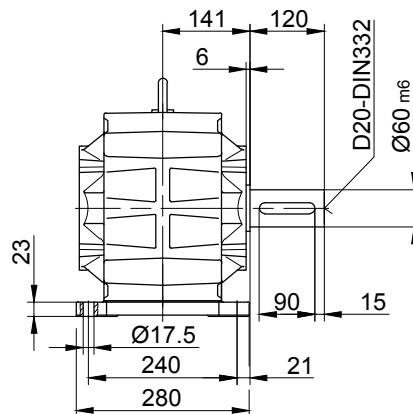
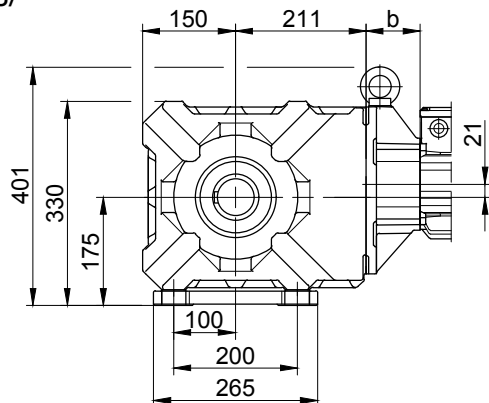
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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# BK-series bevel-geared motors

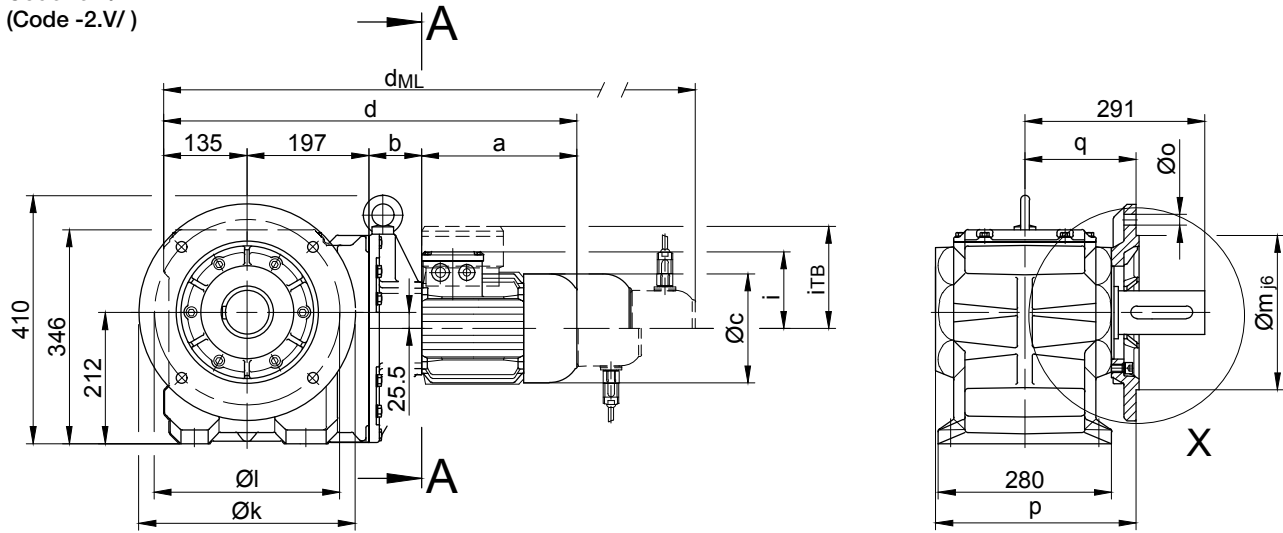
## Dimension - Standard

### BK60-BK60Z

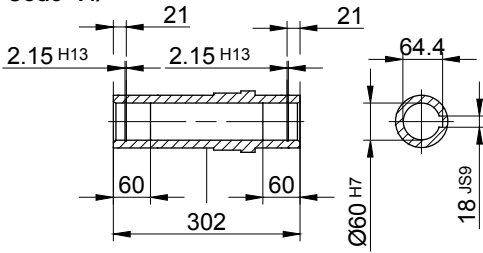
Flange with clearance holes at front

Code -3.V/

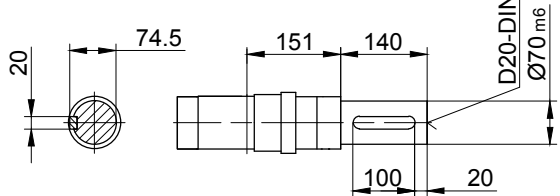
(Code -2.V/)



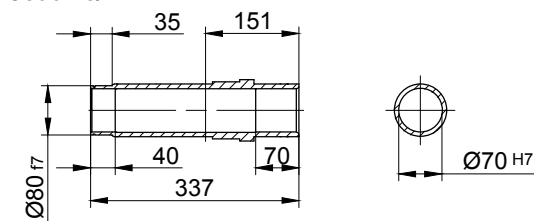
#### Code -4/



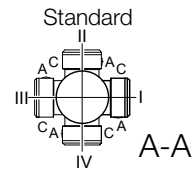
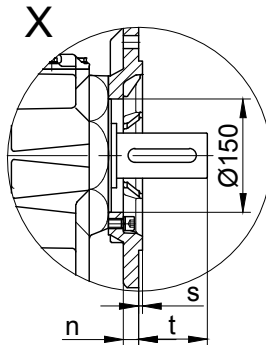
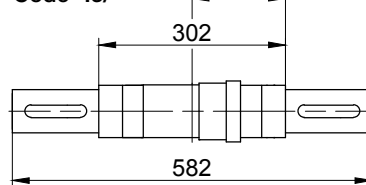
#### Code -1/



#### Code -5/



#### Code -3/



Flange Dimensions												
Type	Design	k	l	m	n	o	p	q	s	t	z	
BK60..	Code -3.V/	350	300	250	20	17.5	324	180	5	112	-	
BK60..	Code -2.V/	300	265	230	20	13.5	332	188	4	103	-	

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK60Z-../S..08 (M, L)	199.5	181	156	712.5	114.5	136.5	778.5	824.5	886	-
BK60-../S..09 (S, X)	250.5	85.5	176	668	124	157	761	775.5	865	-
BK60Z-../S..09 (S, X)	250.5	195.5	176	778	124	157	871	885.5	975	-
BK60-../S..11 (S, M, L)	319	92	218	743	165	176	841	850.5	943	-
BK60Z-../S..11 (S, M, L)	319	202	218	853	165	176	951	960.5	1053	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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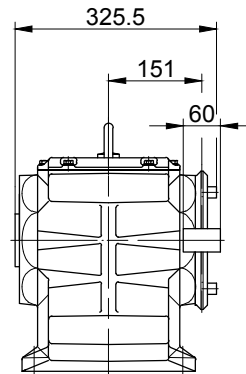
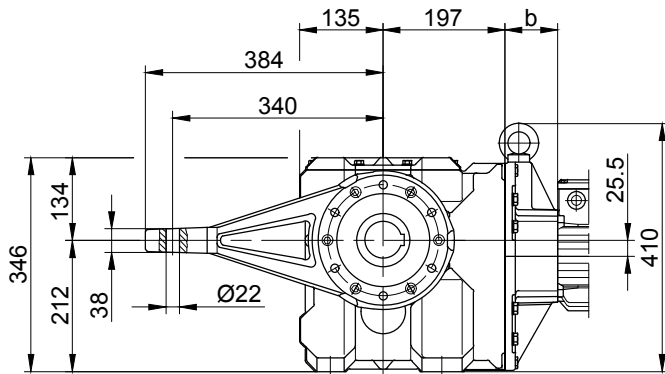
# BK-series bevel-geared motors

## Dimension - Standard

### BK60-BK60Z

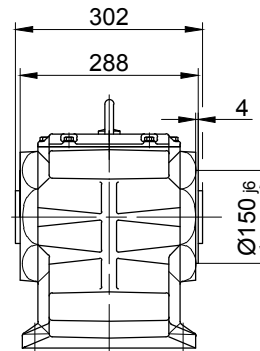
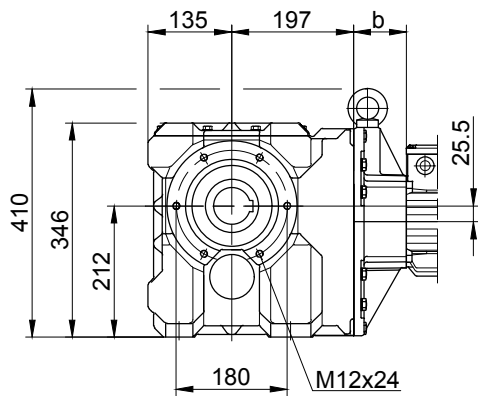
Torque arm at front

Code -5.V/



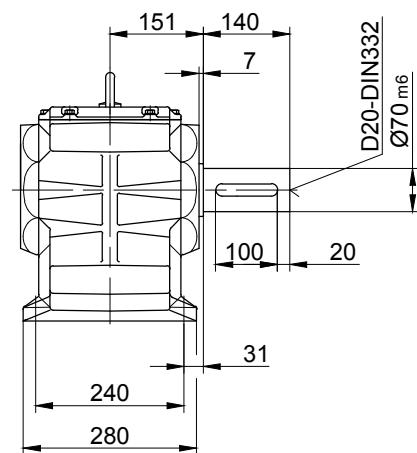
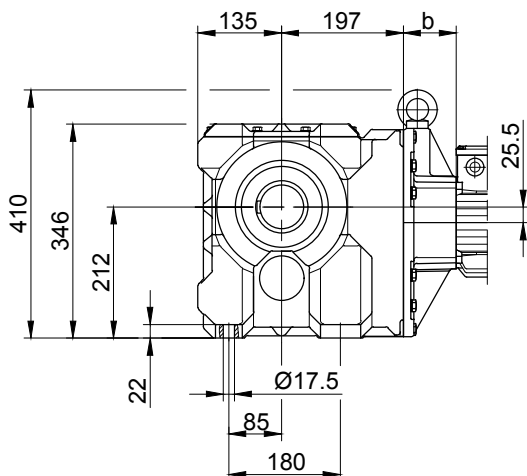
Flange with tapped holes at front

Code -7.V/



Foot with clearance holes at bottom

Code -1.U/



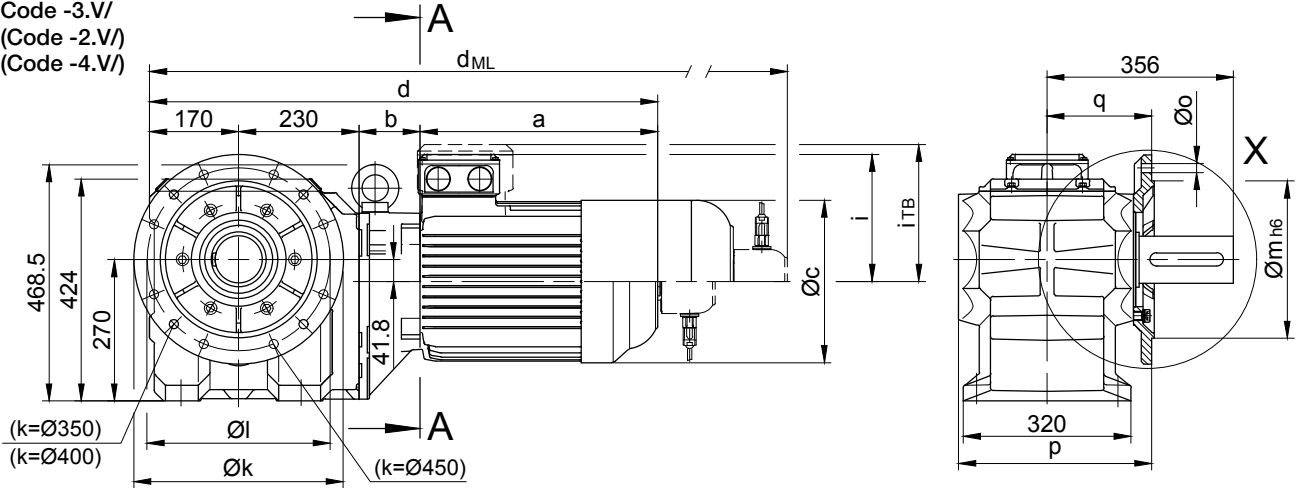
# BK-series bevel-geared motors

## Dimension - Standard

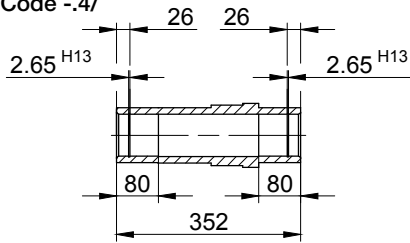
### BK70-BK70Z

Flange with clearance holes at front

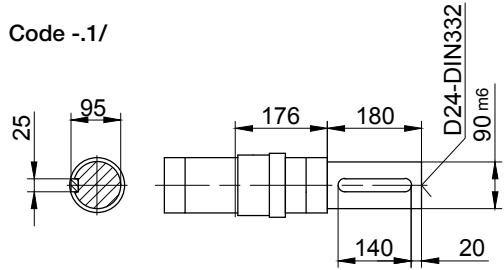
Code -3.V/  
(Code -2.V)  
(Code -4.V)



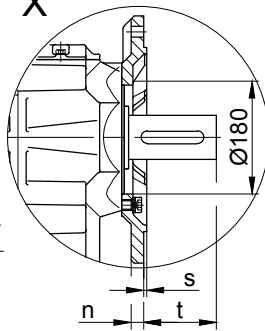
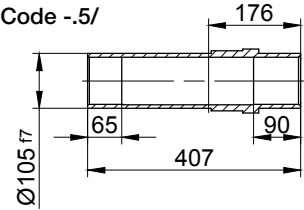
### Code -4/



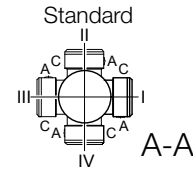
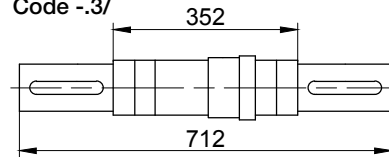
### Code -1/



### Code -5/



### Code -3/



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Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK70..	Code -3.V/	400	350	300	20	17.5	369	200	5	157	-
BK70..	Code -2.V/	350	300	250	20	17.5	369	200	5	157	-
BK70..	Code -4.V/	450	400	350	22	17.5	379	210	5	147	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK70Z-../S..08 (M, L)	199.5	202	156	801.5	114.5	136.5	867.5	913.5	975	-
BK70-../S..09 (S, X)	250.5	83.5	176	734	124	157	827	841.5	931	-
BK70Z-../S..09 (S, X)	250.5	216.5	176	867	124	157	960	974.5	1064	-
BK70-../S..11 (S, M, L)	319	90	218	809	165	176	907	916.5	1009	-
BK70Z-../S..11 (S, M, L)	319	223	218	942	165	176	1040	1049.5	1142	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

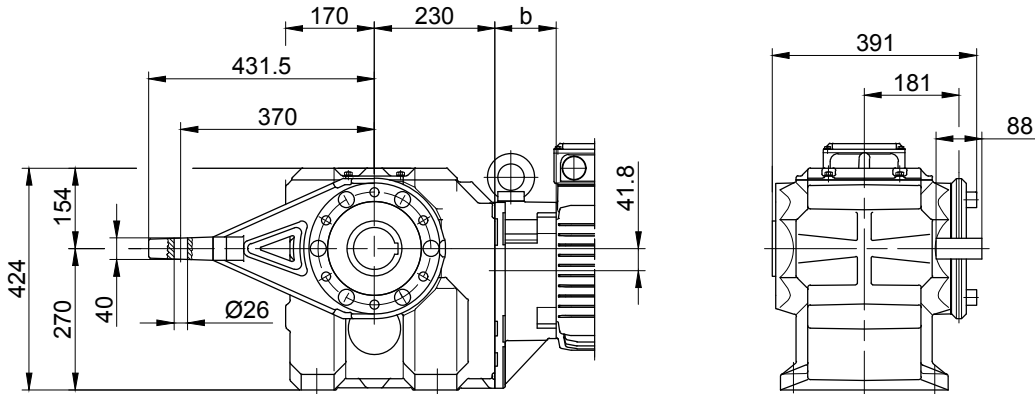
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# BK-series bevel-gear motors

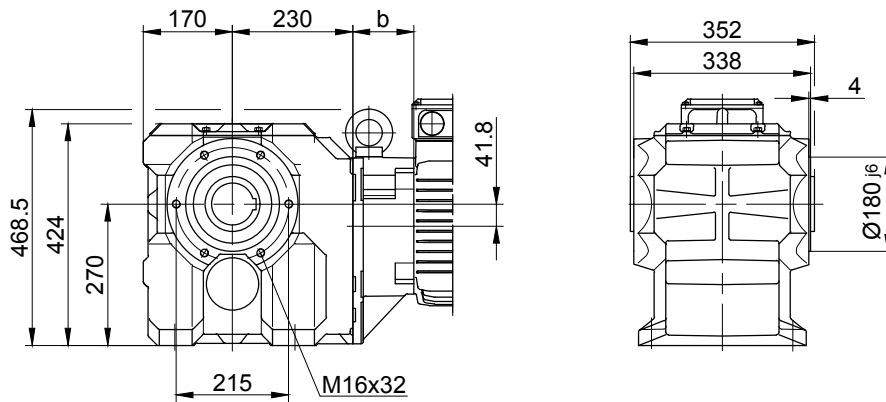
## Dimension - Standard

### BK70-BK70Z

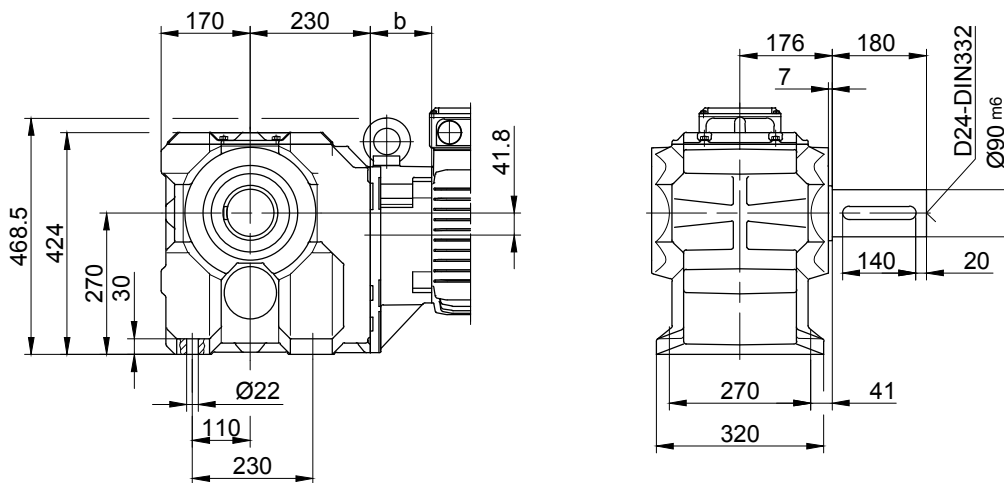
Torque arm at front  
Code -5.V/



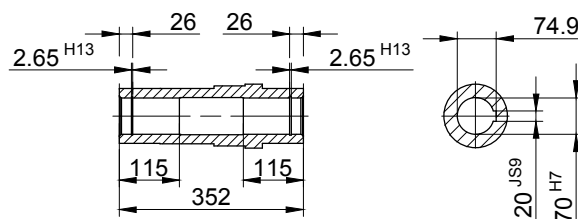
Flange with tapped holes at front  
Code -7.V/



Foot with clearance holes at bottom  
Code -1.U/



Code -4/K70



# BK-series bevel-geared motors

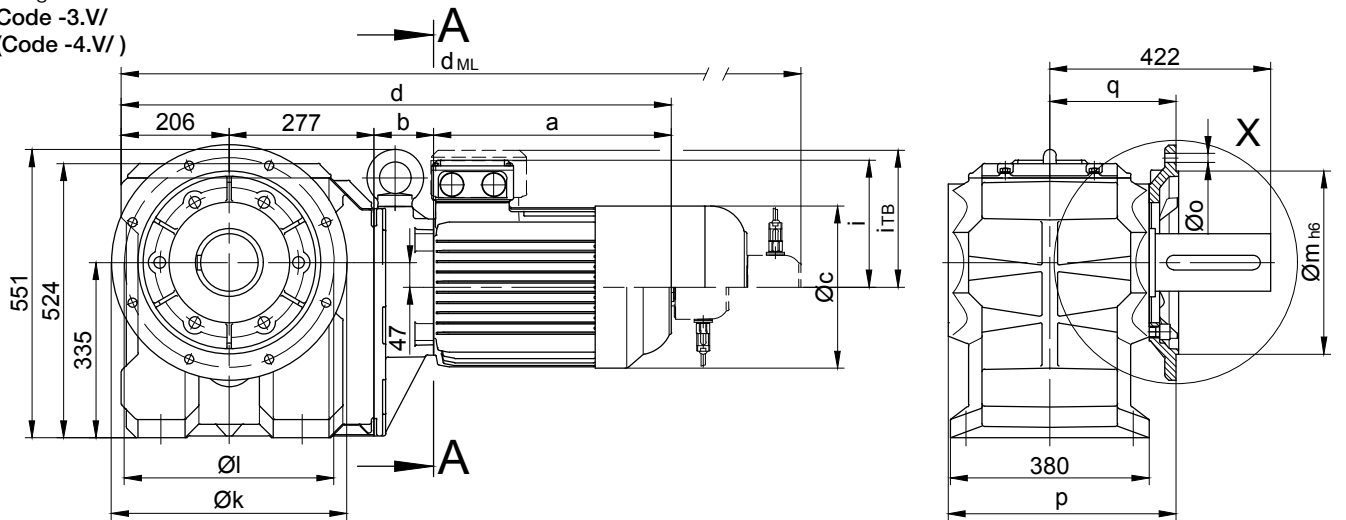
## Dimension - Standard

### BK80-BK80Z

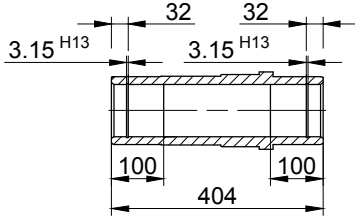
Flange with clearance holes at front

Code -3.V/

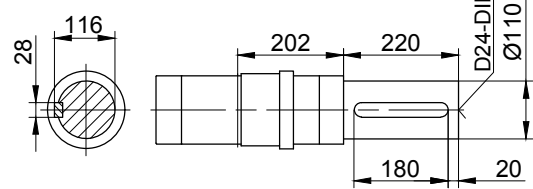
(Code -4.V/)



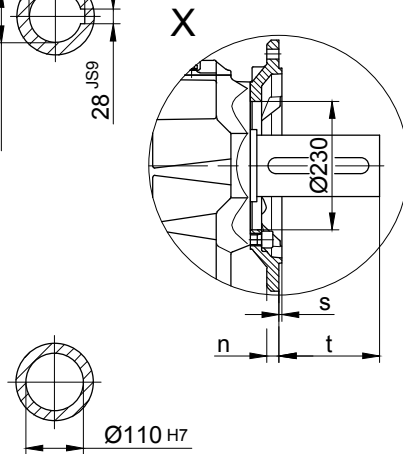
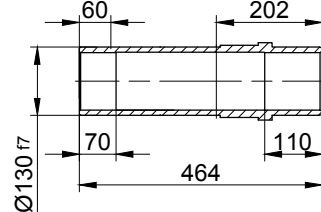
### Code -4/



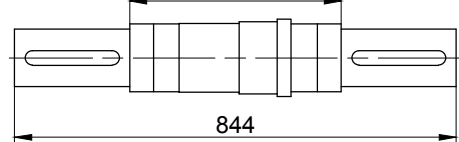
### Code -.1/



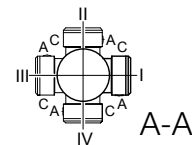
### Code -.5/



### Code -.3/



Standard



Flange Dimensions		k	l	m	n	o	p	q	s	t	z
BK80..	Code -3.V/	450	400	350	22	17.5	439	245	5	178	-
BK80..	Code -4.V/	550	500	450	22	17.5	444	250	5	173	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	
BK80Z-../S..09 (S, X)	250.5	252.5	176	986	124	157	1079	1093.5	1183	-
BK80-../S..11 (S, M, L)	319	87	218	889	165	176	987	996.5	1089	-
BK80Z-../S..11 (S, M, L)	319	259	218	1061	165	176	987	1168.5	1261	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

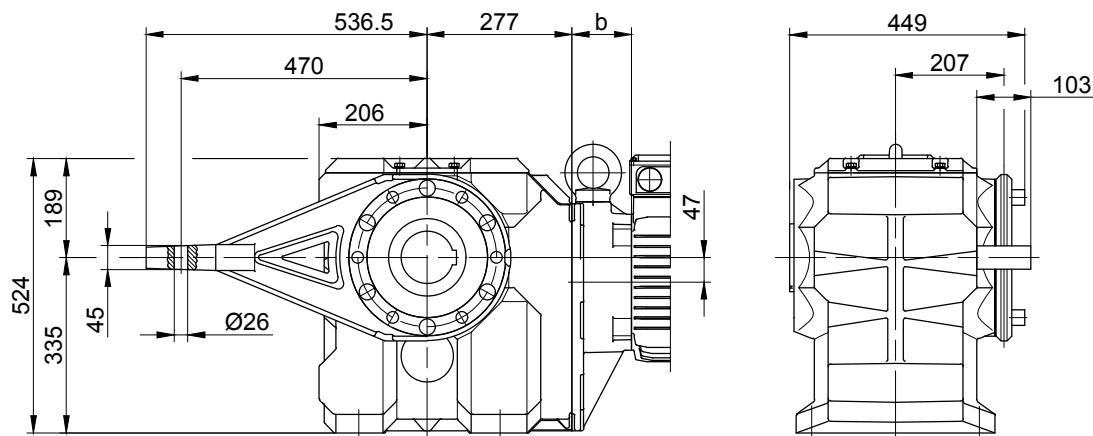
Send Quote Requests to info@automatedpt.com



**BK-series bevel-gear motors****Dimension - Standard****BK80-BK80Z**

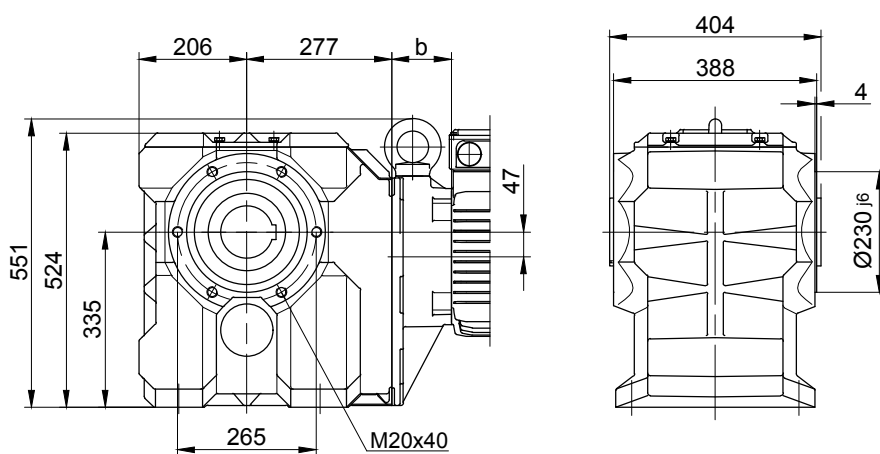
Torque arm at front

Code -5.V/



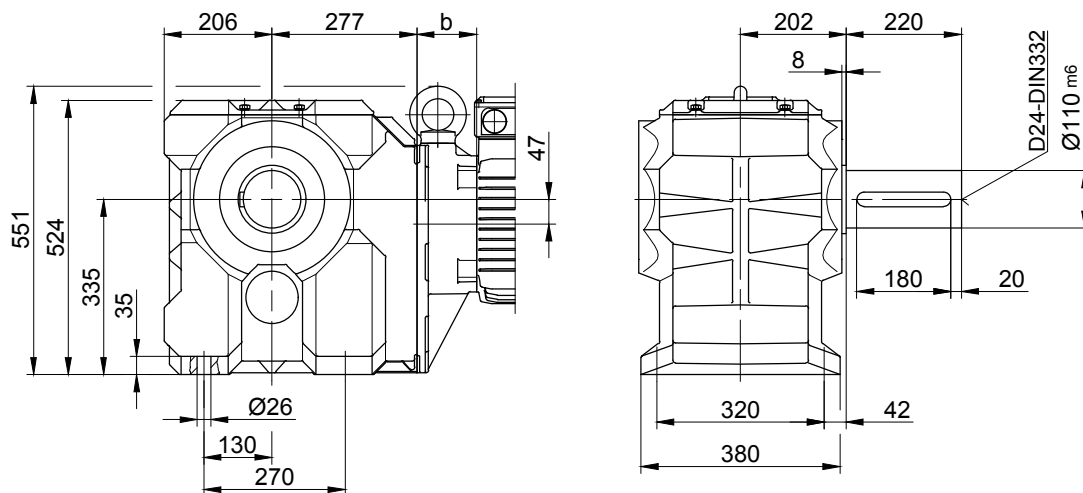
Flange with tapped holes at front

Code -7.V/



Foot with clearance holes at bottom

Code -1.U/

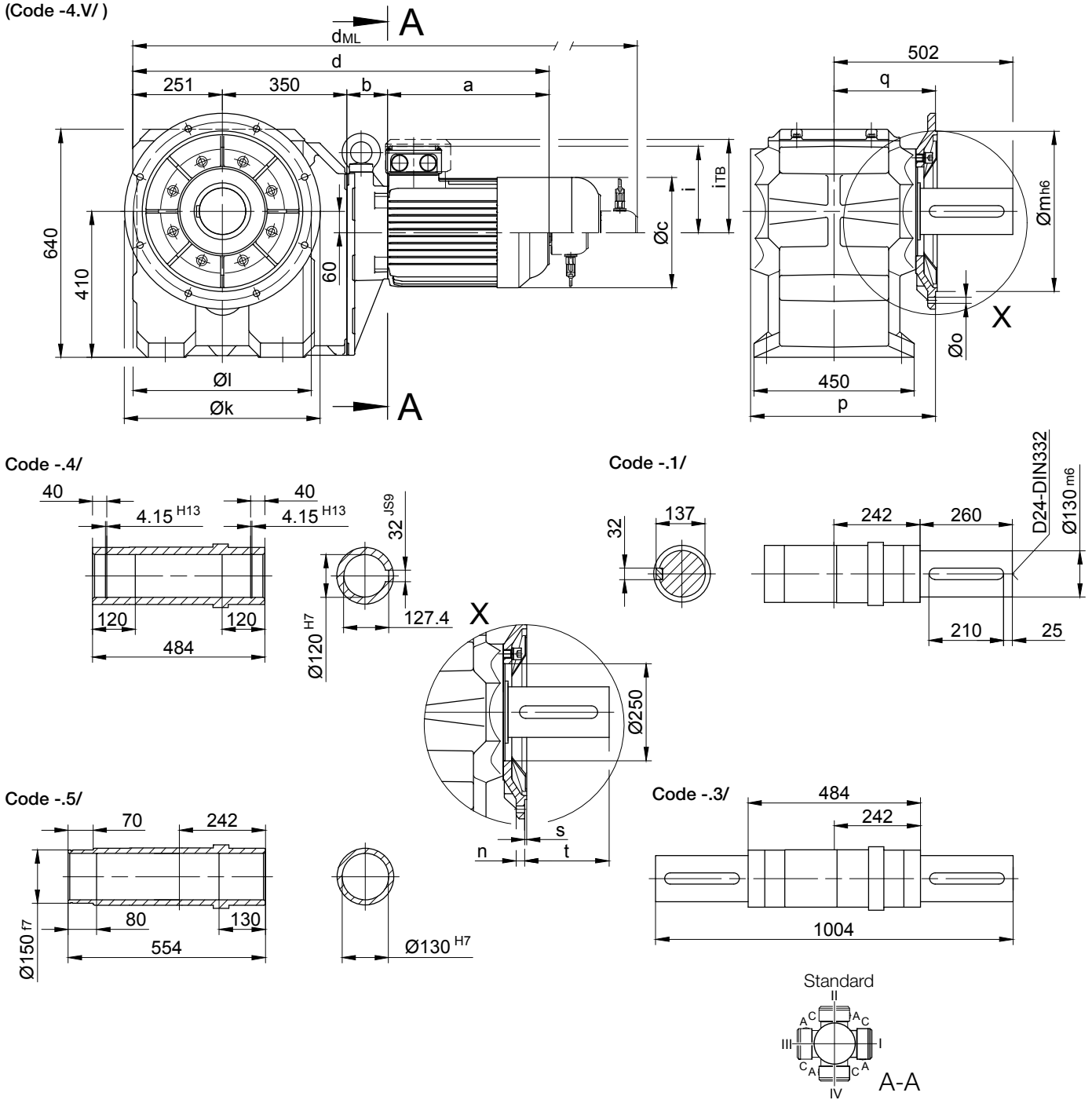


# BK-series bevel-geared motors

## Dimension - Standard

### BK90-BK90Z

Flange with clearance holes at front  
Code -3.V/  
(Code -4.V/)



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK90..	Code -3.V/	550	500	450	22	17.5	519	285	5	218	-
BK90..	Code -4.V/	660	600	550	25	22	513	279	6	225	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK90Z-../S..09 (S, X)	250.5	267	176	1118.5	124	157	1211.5	1226	1315.5	-
BK90Z-../S..11 (S, M, L)	319	273.5	218	1193.5	165	176	1291.5	1301	1393.5	-

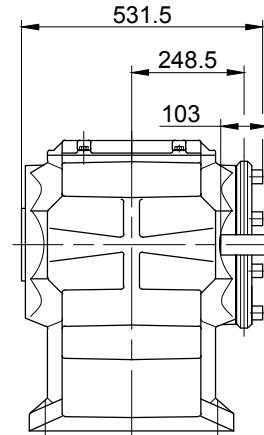
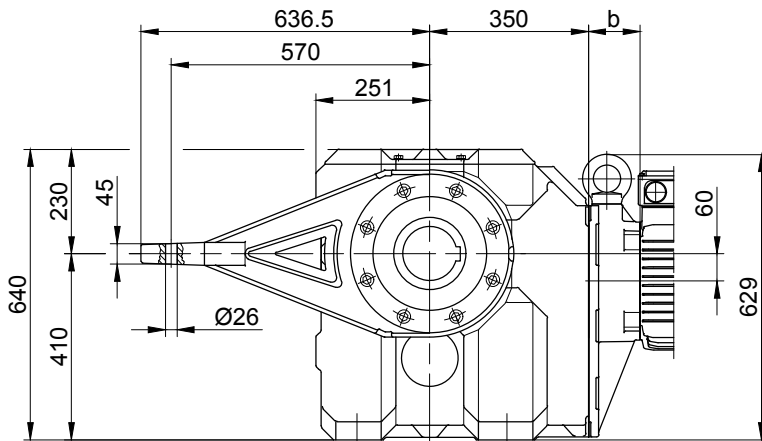
Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

**BK-series bevel-gear motors****Dimension - Standard****BK90-BK90Z**

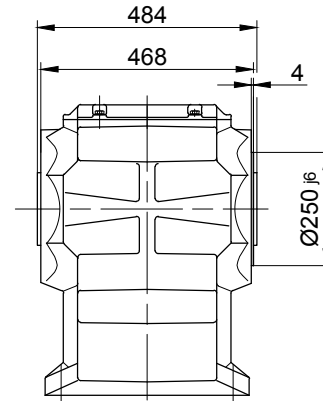
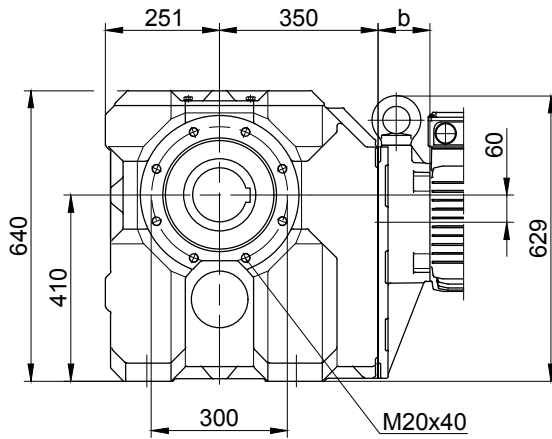
Torque arm at front

Code -5.V/



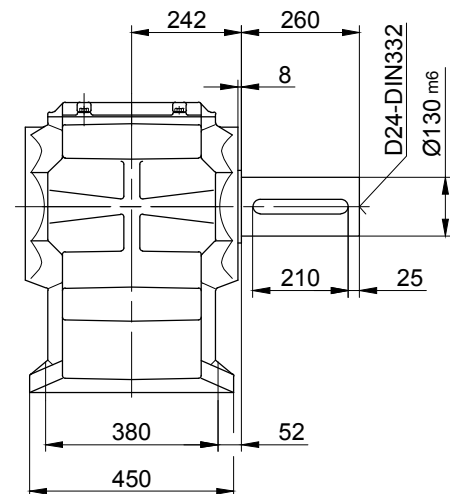
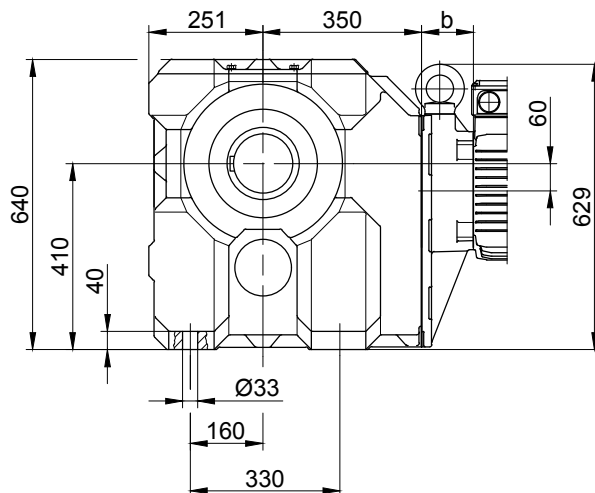
Flange with tapped holes at front

Code -7.V/



Foot with tapped holes at bottom

Code -1.U/



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# BK-series bevel-geared motors

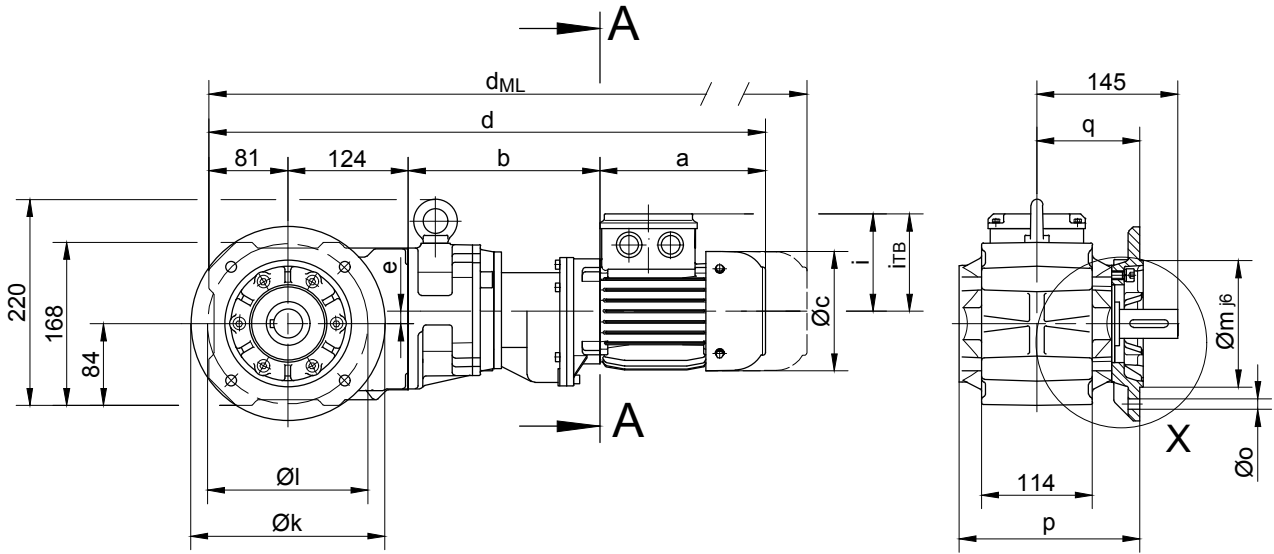
## Dimension - Tandem Gearbox

### BK10G06

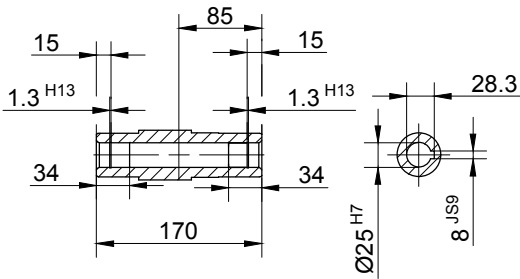
Flange with clearance holes at front

Code -3.V/

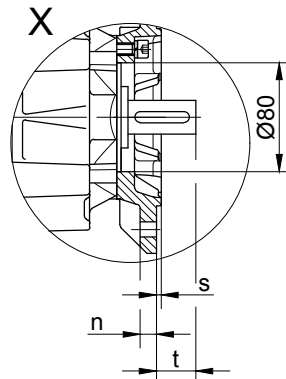
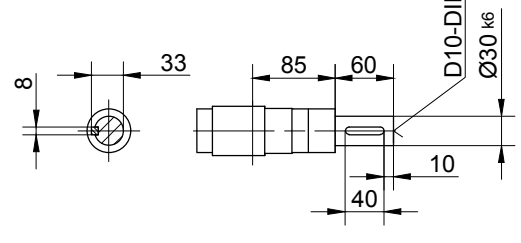
(Code -2.V/)



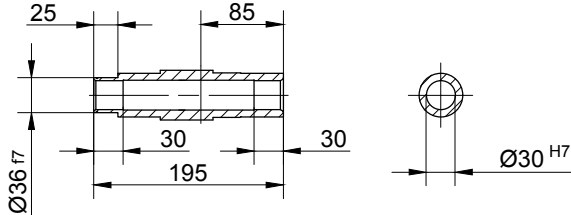
### Code -.4/



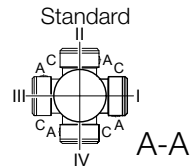
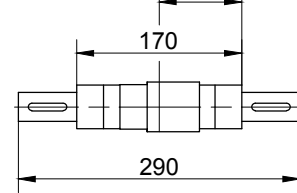
### Code -.1/



### Code -.5/



### Code -.3/



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK10..	Code -3.V/	200	165	130	12	11	186,5	106	3,5	39	-
BK10..	Code -2.V/	160	130	110	10	9	179,5	99	3,5	46	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK10G06-.../S04S	142.5	193	110.5	540.5	90	112	584	628	671.5	-
BK10G06-.../S..06 (M, L)	170.5	195	123	570.5	99	119	612.5	673	710.5	-
BK10G06-.../S..08 (M, L)	199.5	239	156	643.5	114.5	136.5	709.5	755.5	817	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to [info@automatedpt.com](mailto:info@automatedpt.com)

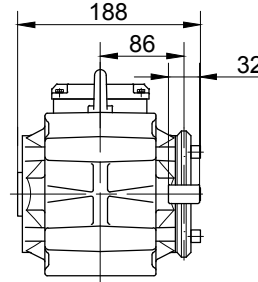
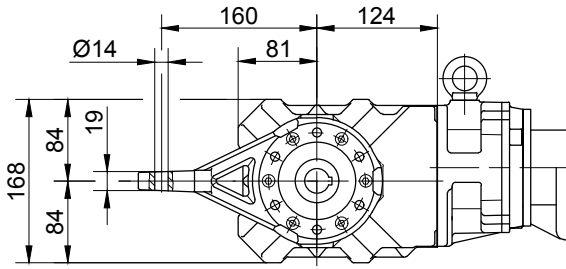
# BK-series bevel-geared motors

## Dimension - Tandem Gearbox

### BK10G06

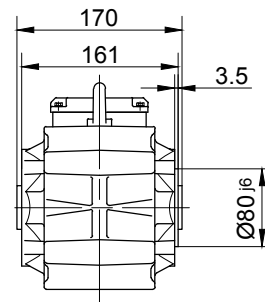
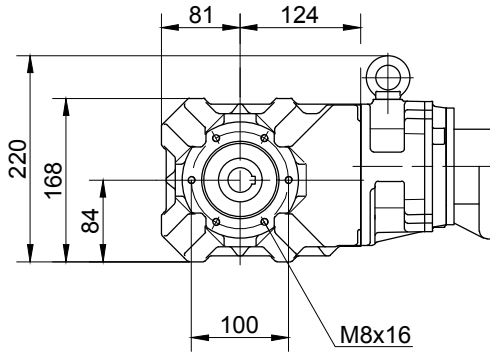
Torque arm at front

Code -5.V/



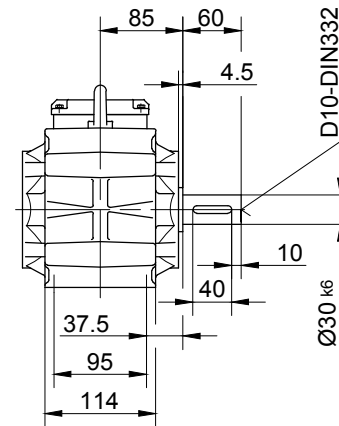
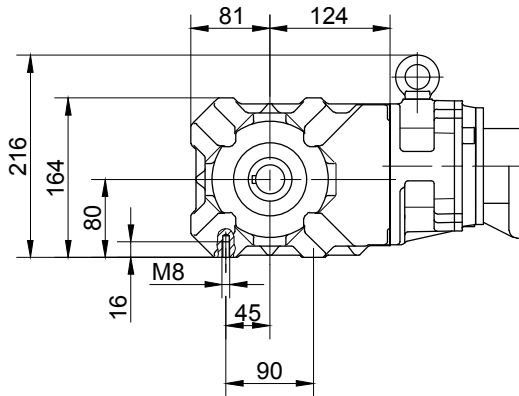
Flange with tapped holes at front

Code -7.V/



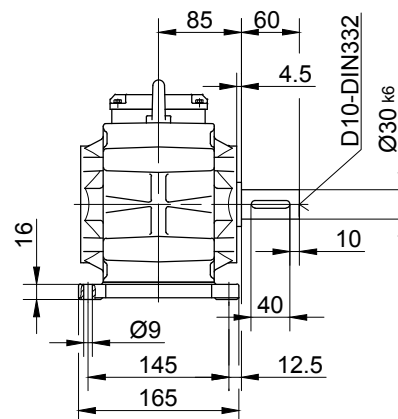
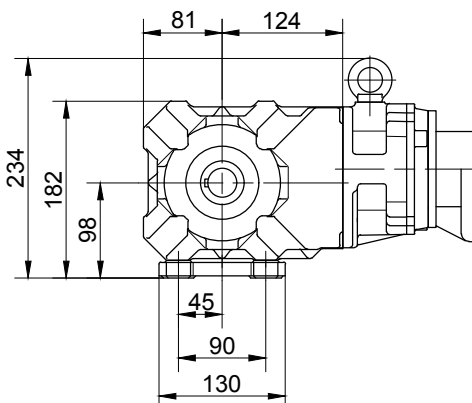
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



12

# BK-series bevel-geared motors

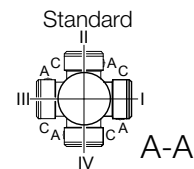
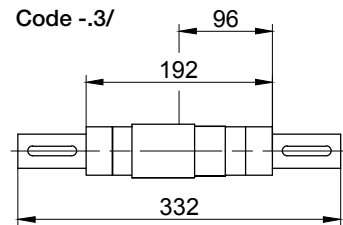
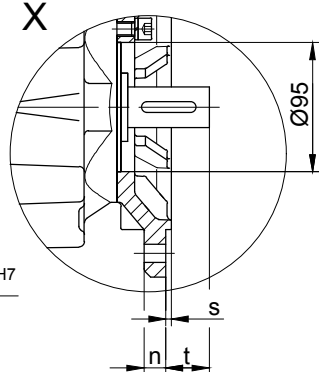
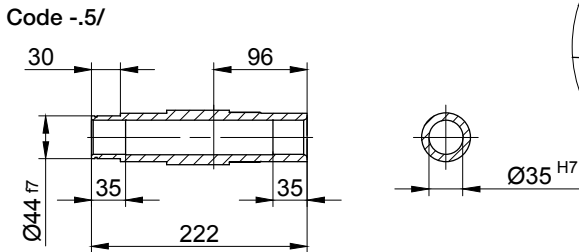
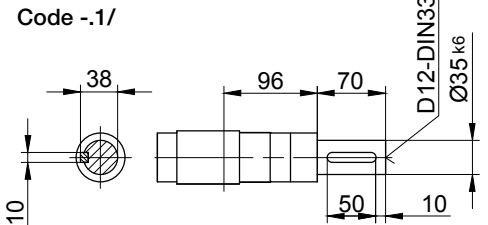
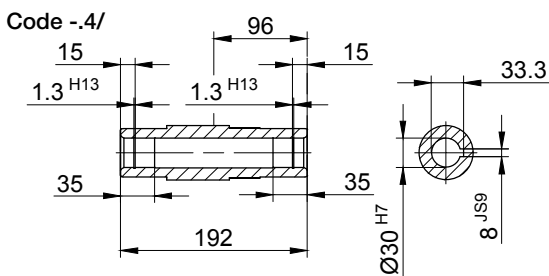
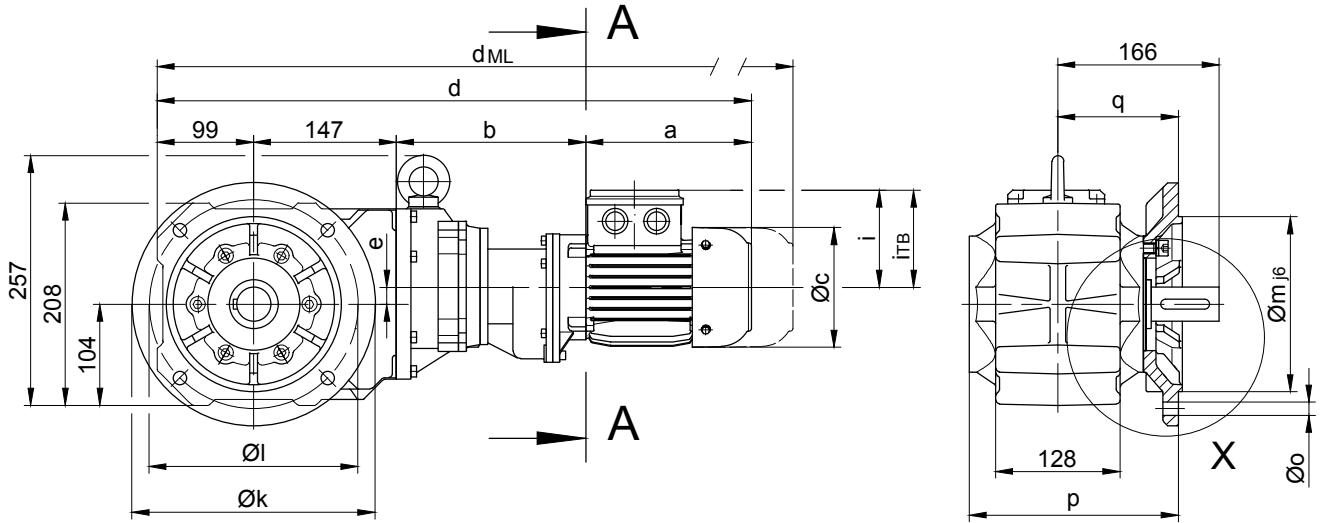
## Dimension - Tandem Gearbox

### BK20G06

Flange with clearance holes at front

Code -3.V/

(Code -2.V/)



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK20..	Code -3.V/	250	215	180	16	13,5	215,5	124	4	42,5	-
BK20..	Code -2.V/	200	165	130	12	11	206,5	115	3,5	51	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK20G06-.../S04S	142.5	193	110.5	581.5	90	112	625	669	712.5	-
BK20G06-.../S..06 (M, L)	170.5	195	123	611.5	99	119	653.5	714	751.5	-
BK20G06-.../S..08 (M, L)	199.5	239	156	684.5	114.5	136.5	750.5	796.5	858	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to [info@automatedopt.com](mailto:info@automatedopt.com)

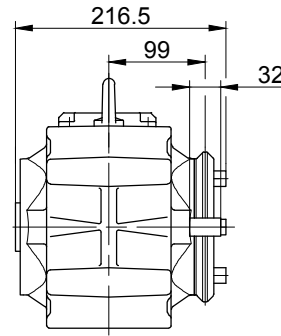
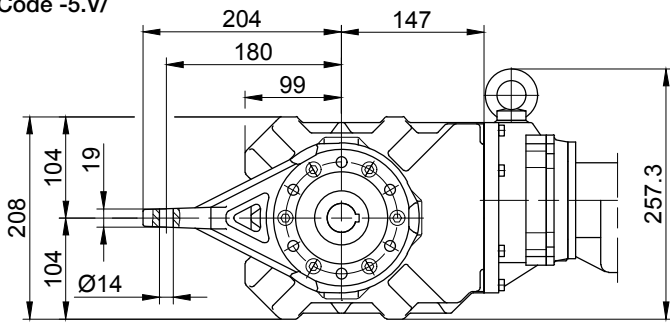
# BK-series bevel-gear motors

## Dimension - Tandem Gearbox

### BK20G06

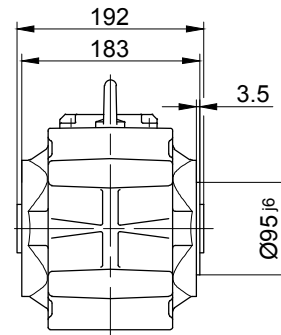
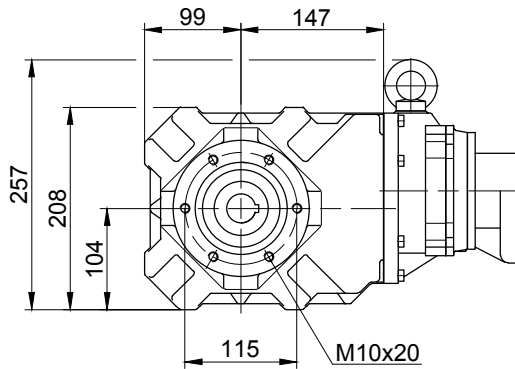
Torque arm at front

Code -5.V/



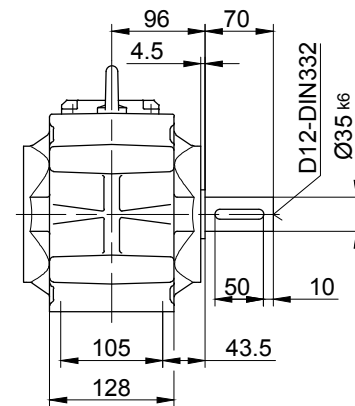
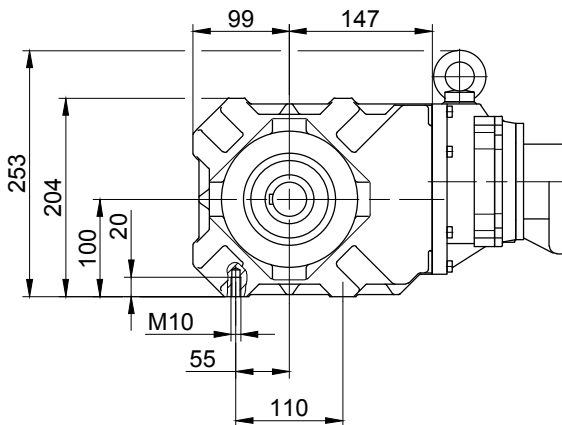
Flange with tapped holes at front

Code -7.V/



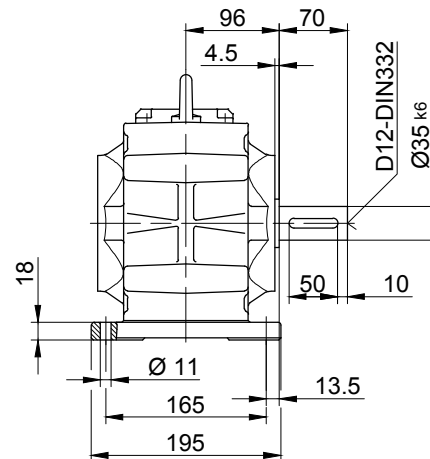
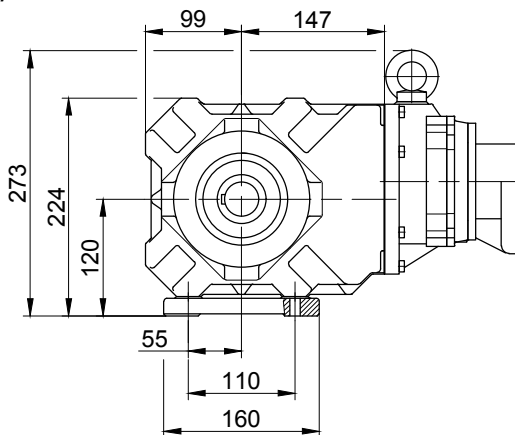
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



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# BK-series bevel-geared motors

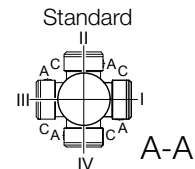
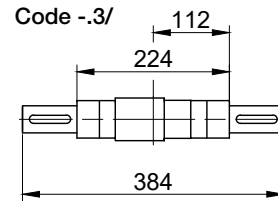
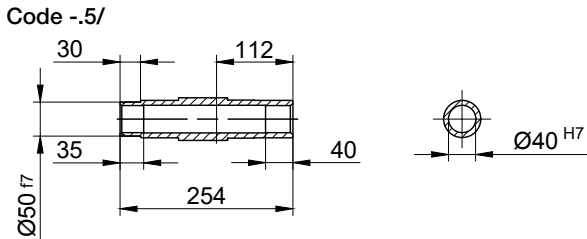
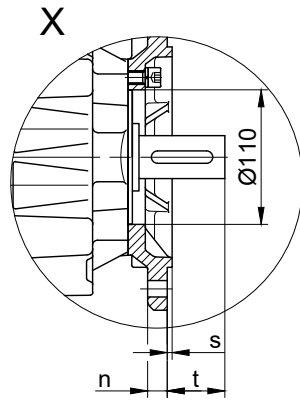
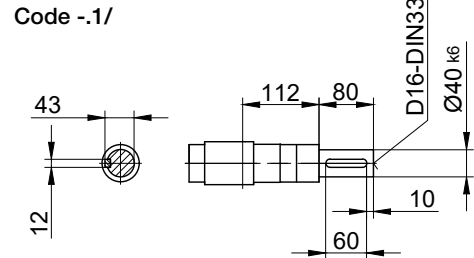
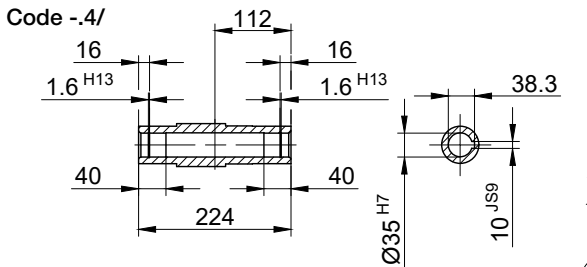
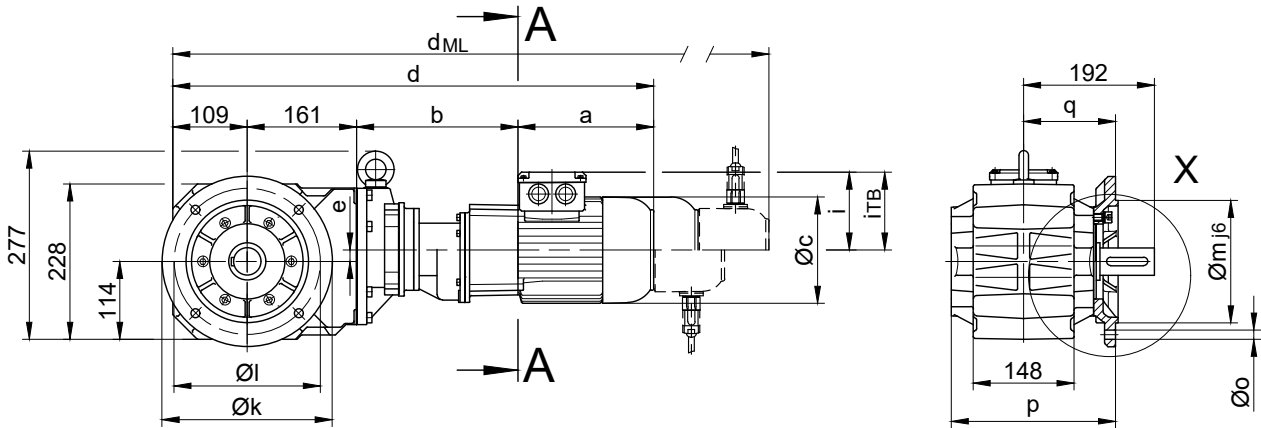
## Dimension - Tandem Gearbox

### BK30G06

Flange with clearance holes at front

Code -3.V/

(Code -2.V/)



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK30..	Code -3.V/	250	215	180	16	13,5	242	135	4	57	-
BK30..	Code -2.V/	200	165	130	12	11	239	132	3,5	59,5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK30G06-.../S04S	142.5	191	110.5	603.5	90	112	647	691	734.5	-
BK30G06-.../S..06 (M, L)	170.5	193	123	633.5	99	119	675.5	736	773.5	-
BK30G06-.../S..08 (M, L)	199.5	237	156	706.5	114.5	136.5	772.5	818.5	880	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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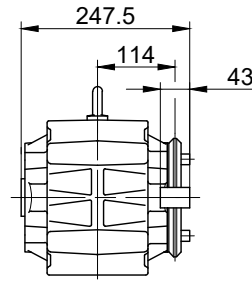
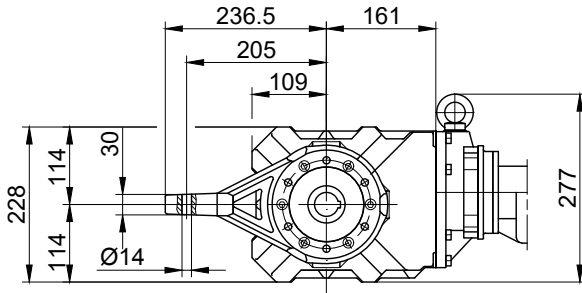
# BK-series bevel-gear motors

## Dimension - Tandem Gearbox

### BK30G06

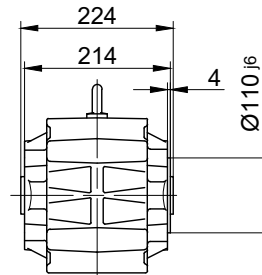
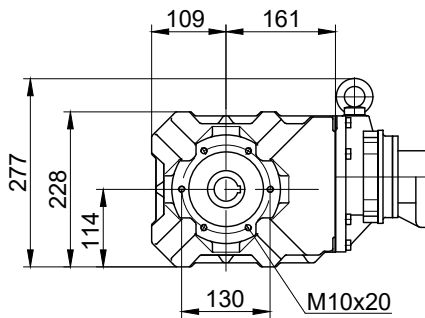
Torque arm at front

Code -5.V/



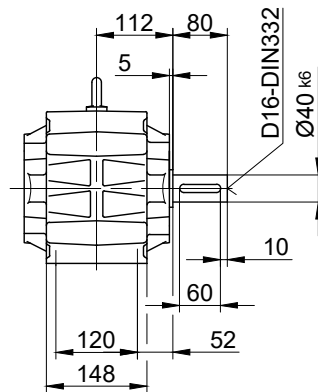
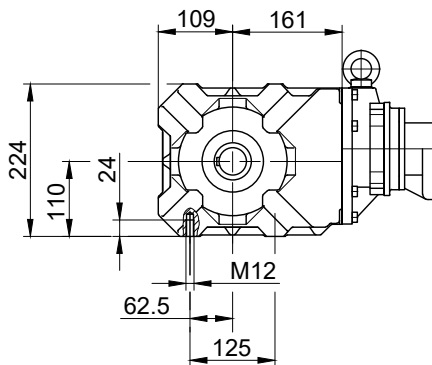
Flange with tapped holes at front

Code -7.V/



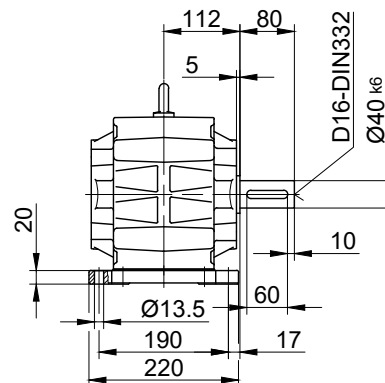
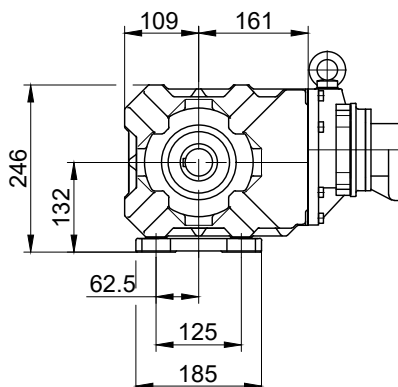
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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# BK-series bevel-geared motors

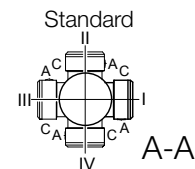
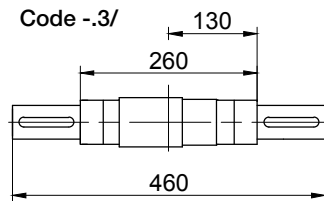
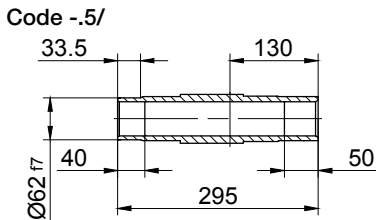
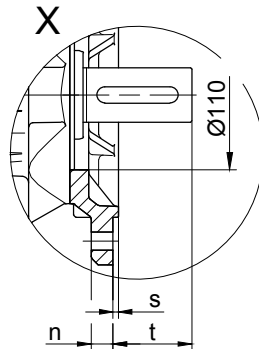
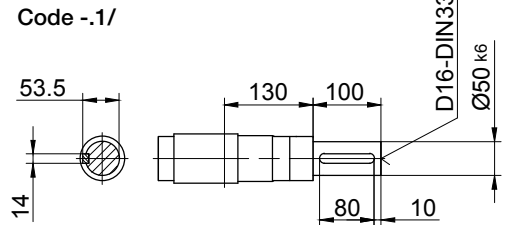
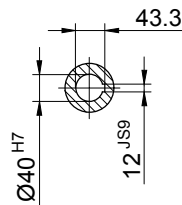
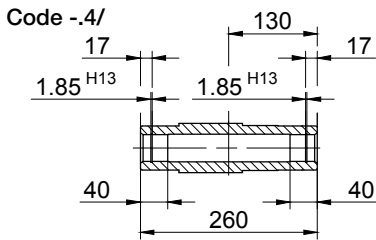
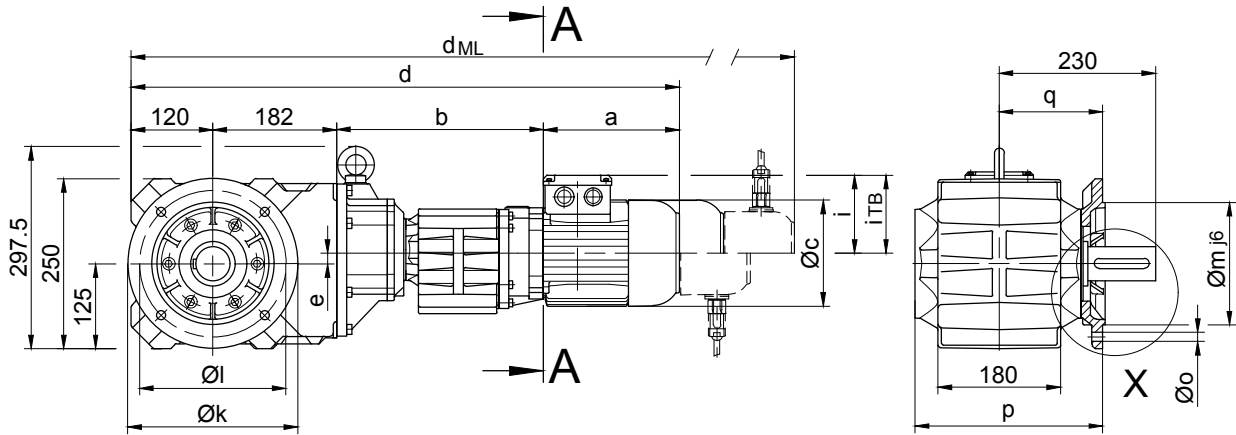
## Dimension - Tandem Gearbox

### BK40G10

Flange with clearance holes at front

Code -3.V/

(Code -4.V/)



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK40..	Code -3.V/	250	215	180	16	13,5	276	152	4	78	-
BK40..	Code -4.V/	300	265	230	20	13,5	282	158	4	72	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK40G10-.../S..06 (M, L)	170.5	300	123	772.5	99	119	814.5	875	912.5	-
BK40G10-.../S..08 (M, L)	199.5	304	156	805.5	114.5	136.5	871.5	917.5	979	-
BK40G10-.../S..09 (S, X)	250.5	318.5	176	871	124	157	964	978.5	1068	-

Dimensions in millimetres (mm)

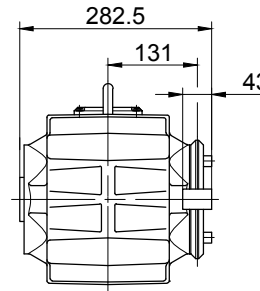
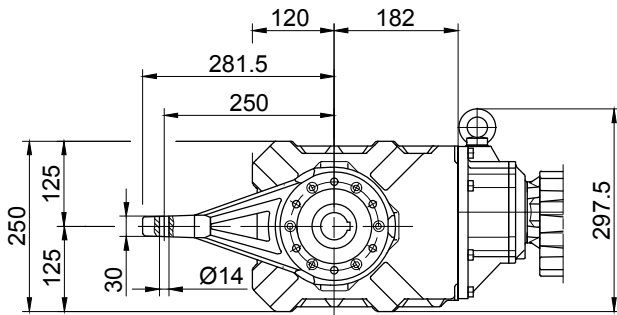
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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**BK-series bevel-gear motors****Dimension - Tandem Gearbox****BK40G10**

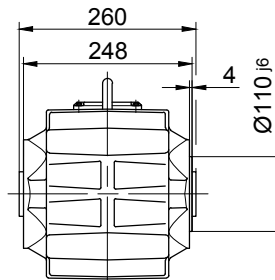
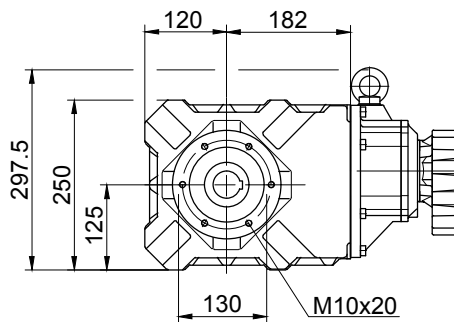
Torque arm at front

Code -5.V/



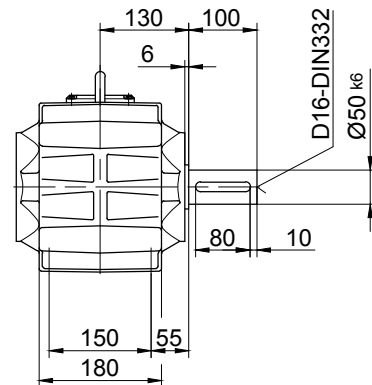
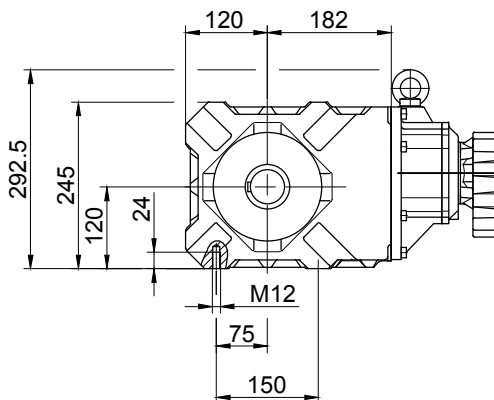
Flange with tapped holes at front

Code -7.V/



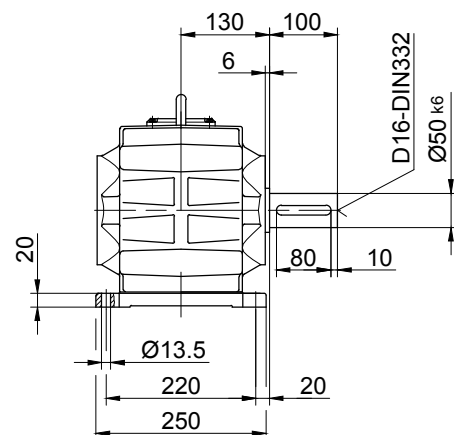
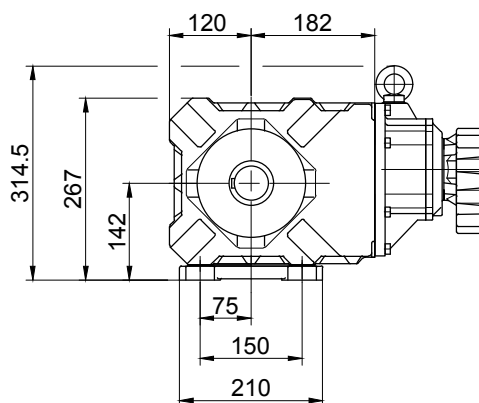
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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# BK-series bevel-geared motors

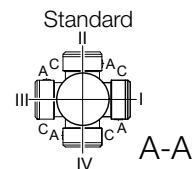
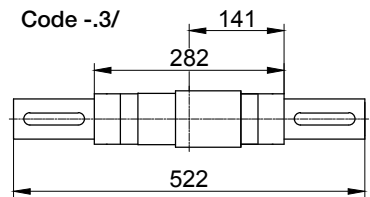
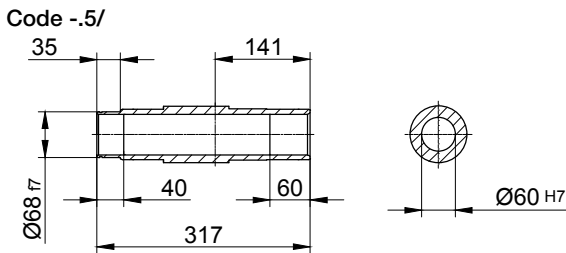
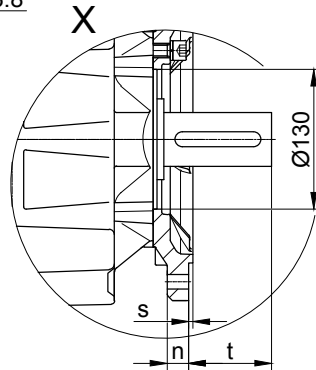
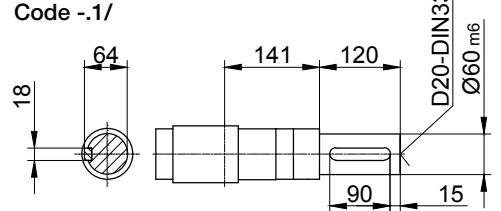
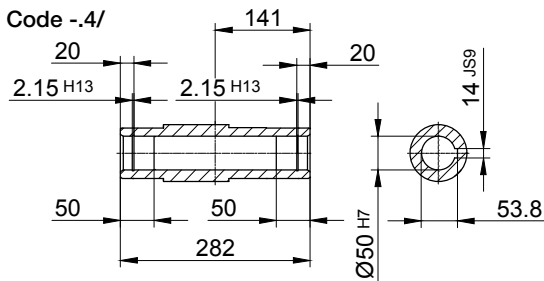
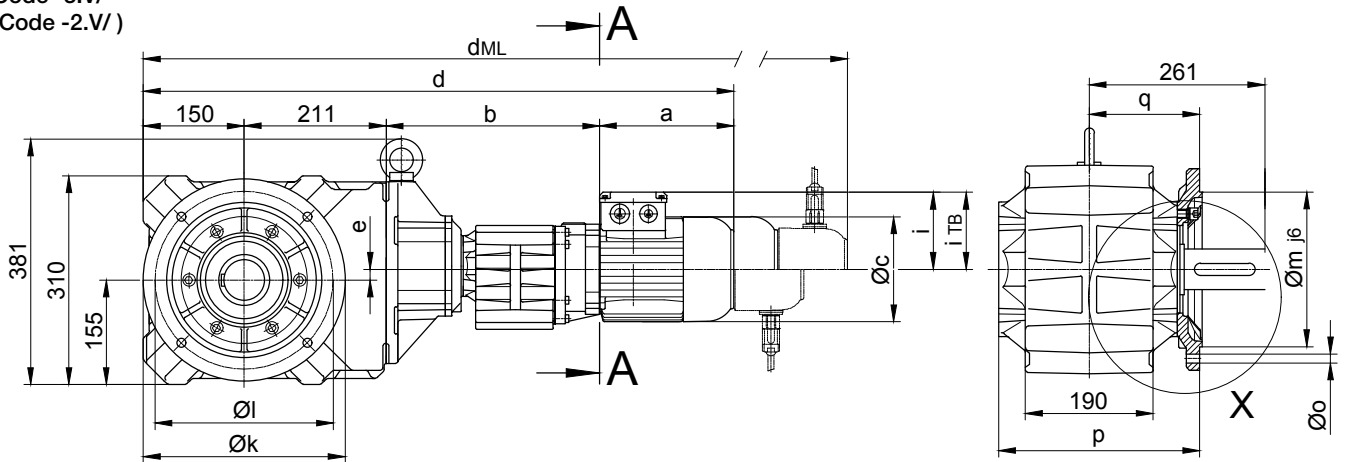
## Dimension - Tandem Gearbox

### BK50G10

Flange with clearance holes at front

Code -3.V/

(Code -2.V/)



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK50..	Code -3.V/	300	265	230	20	13,5	299	164	4	97	-
BK50..	Code -2.V/	250	215	180	16	13,5	296	161	4	100	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK50G10-../S..06 (M, L)	170.5	313	123	844.5	99	119	886.5	947	984.5	-
BK50G10-../S..08 (M, L)	199.5	317	156	877.5	114.5	136.5	943.5	989.5	1051	-
BK50G10-../S..09 (S, X)	250.5	331.5	176	943	124	157	1036	1050.5	1140	-

Dimensions in millimetres (mm)

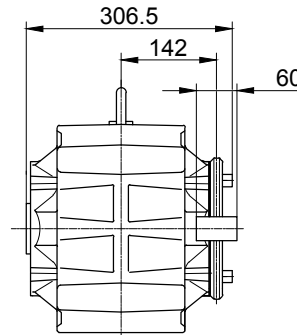
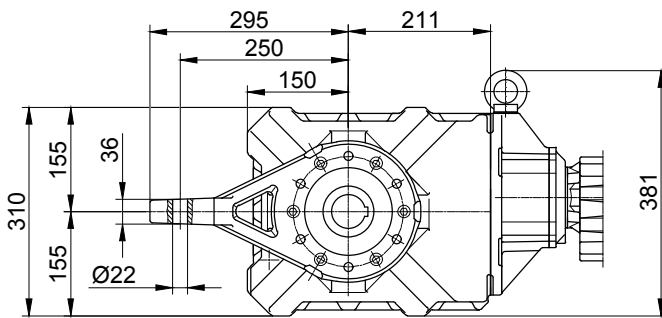
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

Send Quote Requests to info@automatedpt.com

**BK-series bevel-gear motors****Dimension - Tandem Gearbox****BK50G10**

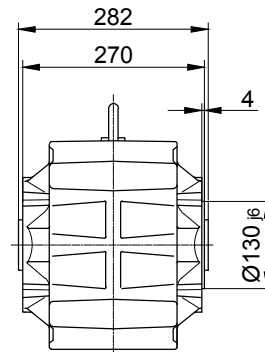
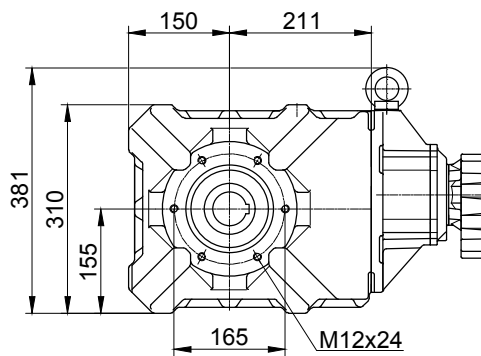
Torque arm at front

Code -5.V/



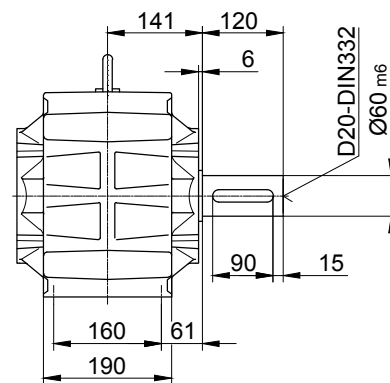
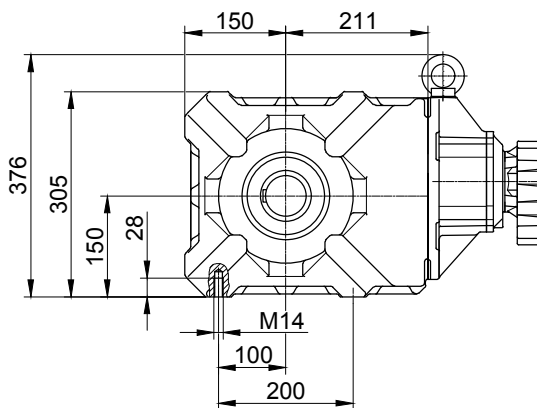
Flange with tapped holes at front

Code -7.V/



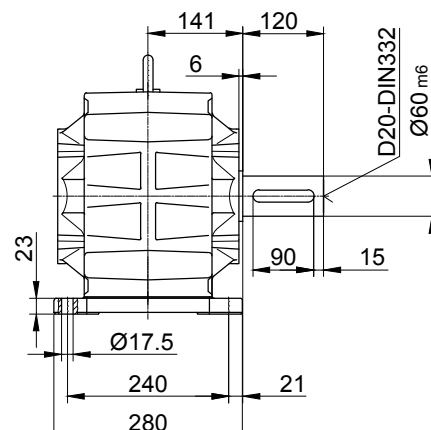
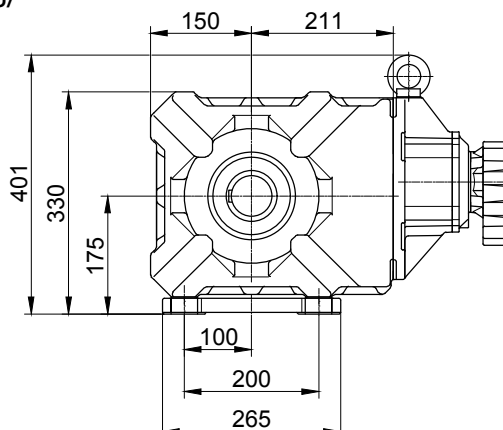
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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# BK-series bevel-geared motors

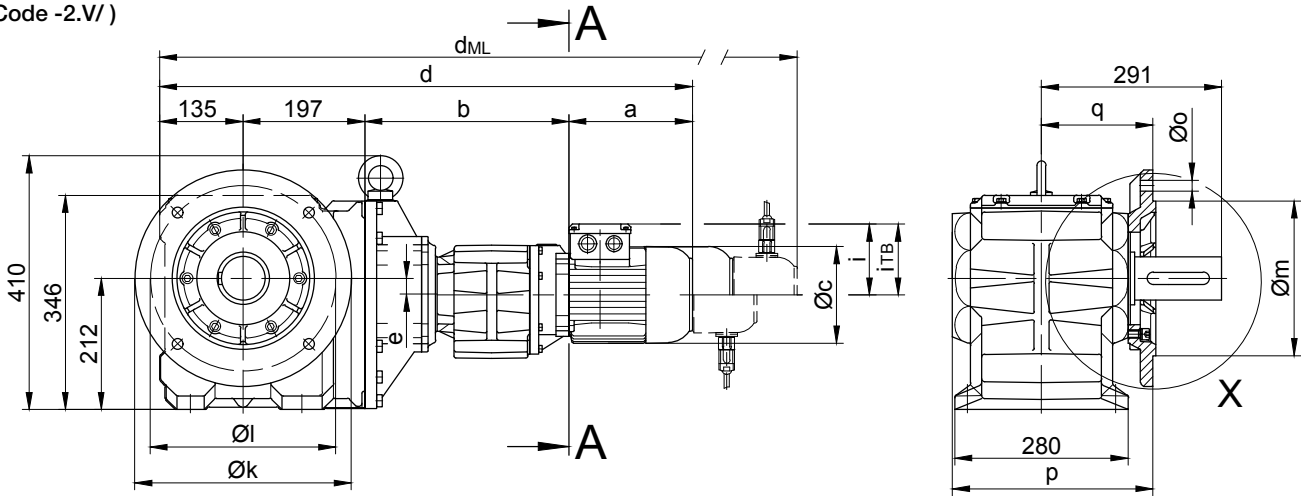
## Dimension - Tandem Gearbox

### BK60G20

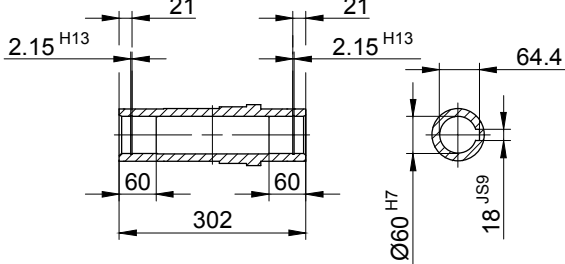
Flange with clearance holes at front

Code -3.V/

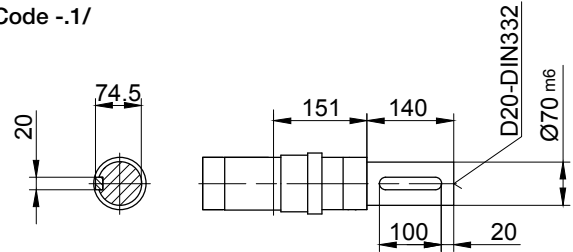
(Code -2.V/)



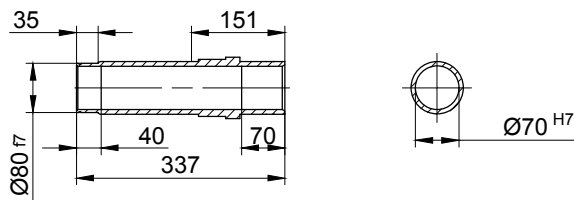
### Code -4/



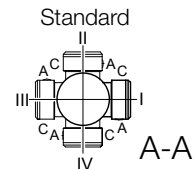
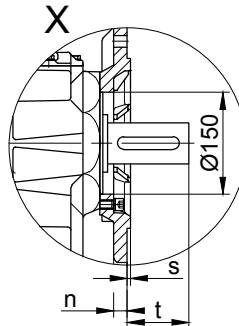
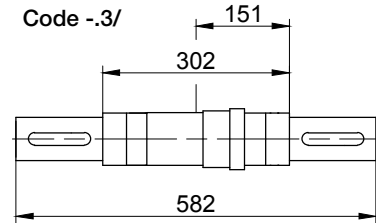
### Code -1/



### Code -5/



### Code -3/



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK60..	Code -3.V/	350	300	250	20	17,5	324	180	5	112	-
BK60..	Code -2.V/	300	265	230	20	13,5	332	188	4	103	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK60G20-../S..06 (M, L)	170.5	326	123	828.5	99	119	870.5	931	968.5	-
BK60G20-../S..08 (M, L)	199.5	330	156	861.5	114.5	136.5	927.5	973.5	1035	-
BK60G20-../S..09 (S, X)	250.5	344.5	176	927	124	157	1020	1034.5	1124	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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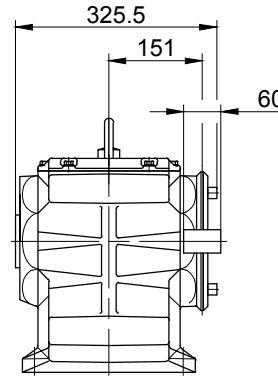
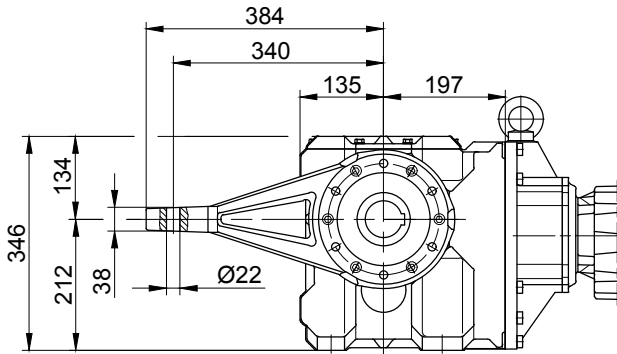
# BK-series bevel-geared motors

## Dimension - Tandem Gearbox

### BK60G20

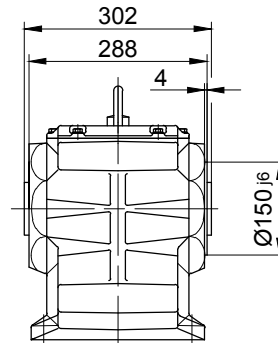
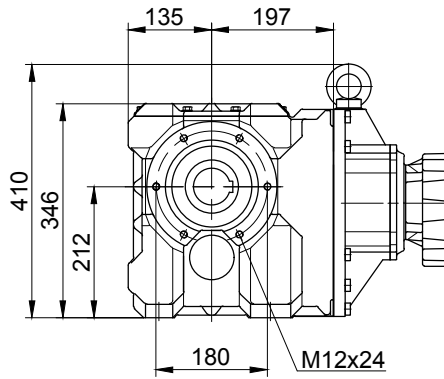
Torque arm at front

Code -5.V/



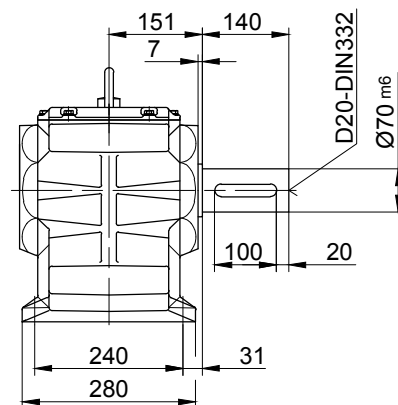
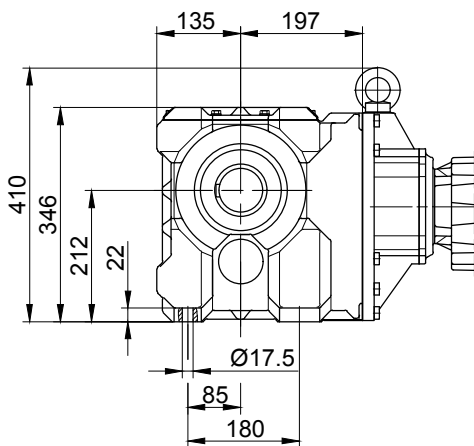
Flange with tapped holes at front

Code -7.V/



Foot with clearance holes at bottom

Code -1.U/



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# BK-series bevel-geared motors

## Dimension - Tandem Gearbox

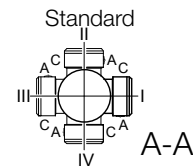
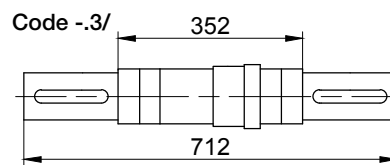
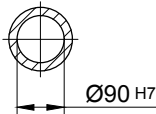
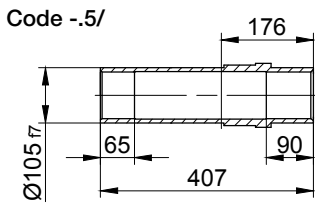
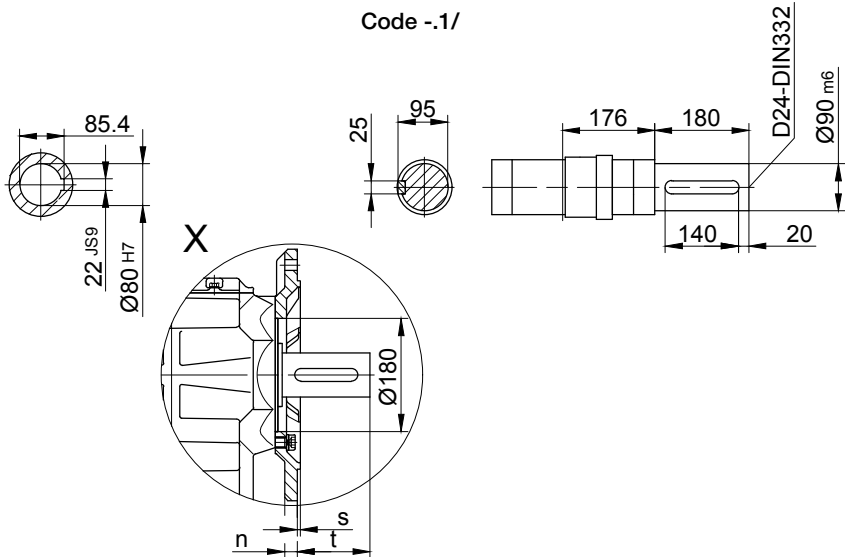
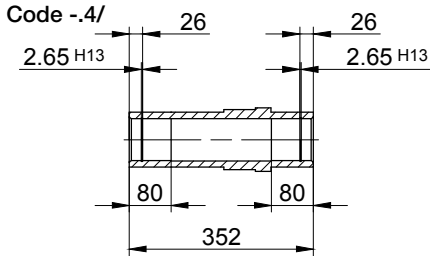
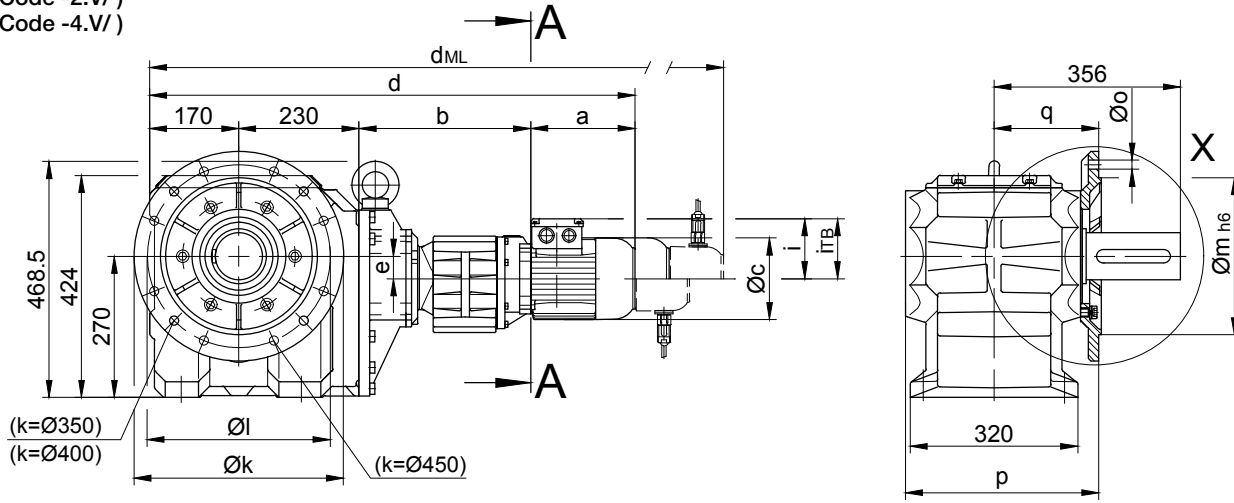
### BK70G20

Flange with clearance holes at front

Code -3.V/

(Code -2.V/)

(Code -4.V/)



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK70..	Code -3.V/	400	350	300	20	17,5	369	200	5	157	-
BK70..	Code -2.V/	350	300	250	20	17,5	369	200	5	157	-
BK70..	Code -4.V/	450	400	350	22	17,5	379	210	5	147	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK70G20-.../S..06 (M, L)	170.5	326	123	896.5	99	119	938.5	999	1036.5	-
BK70G20-.../S..08 (M, L)	199.5	330	156	929.5	114.5	136.5	995.5	1041.5	1103	-
BK70G20-.../S..09 (S, X)	250.5	344.5	176	995	124	157	1088	1102.5	1192	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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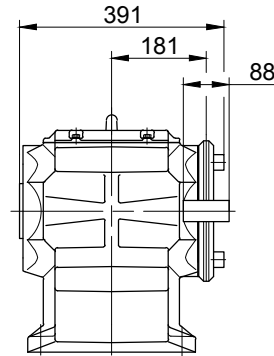
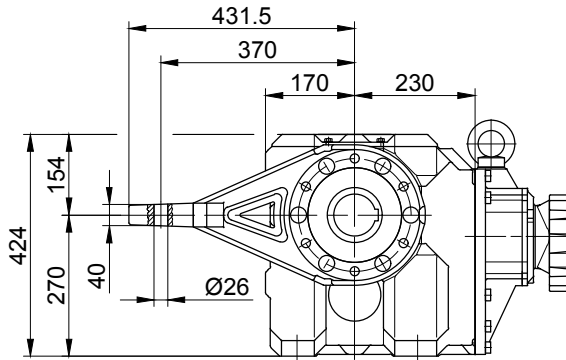
# BK-series bevel-gear motors

## Dimension - Tandem Gearbox

### BK70G20

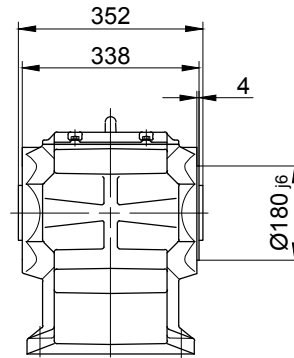
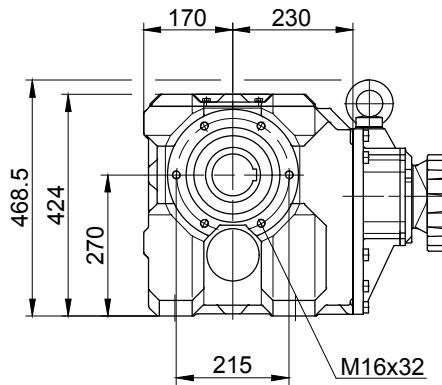
Torque arm at front

Code -5.V/



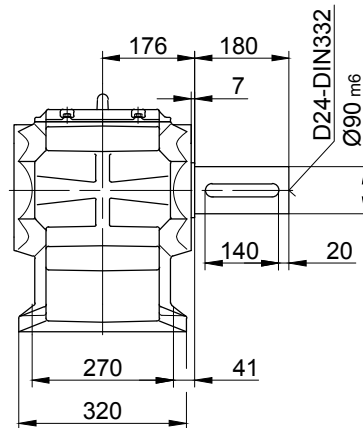
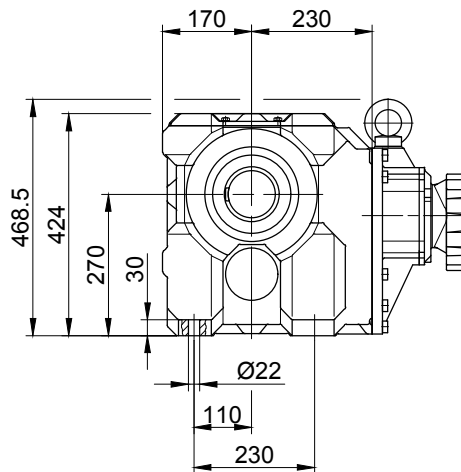
Flange with tapped holes at front

Code -7.V/

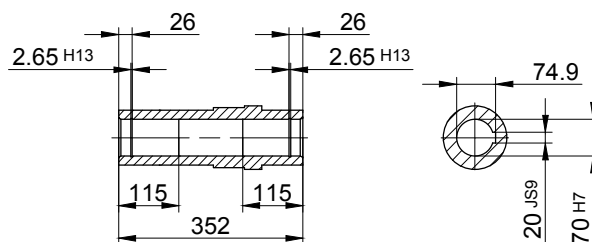


Foot with clearance holes at bottom

Code -1.U/



Code -.4/K70



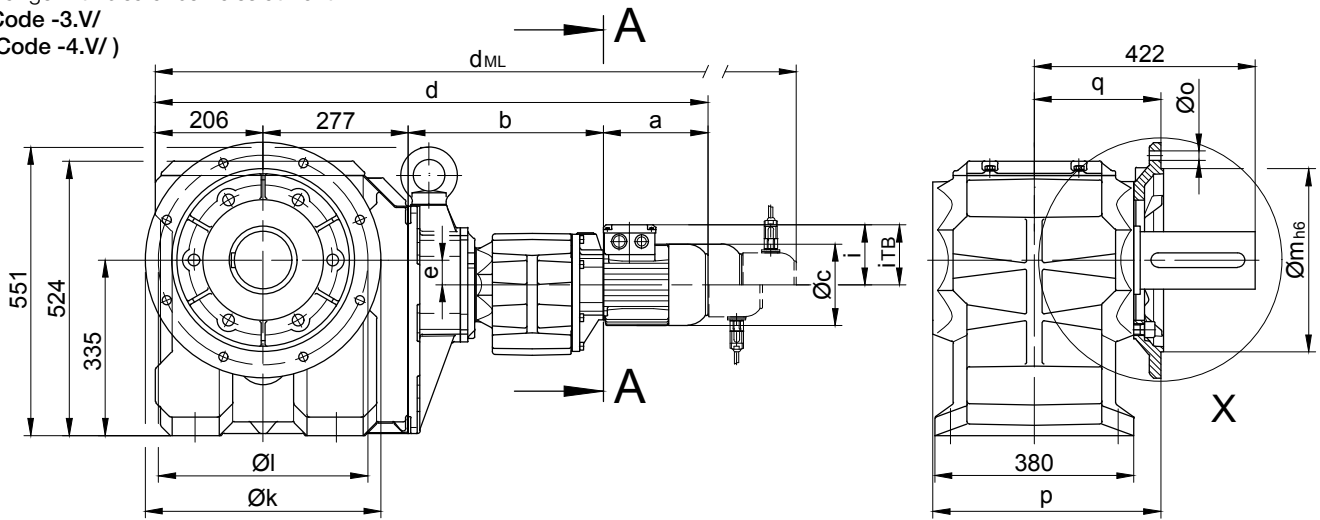
# BK-series bevel-geared motors

## Dimension - Tandem Gearbox

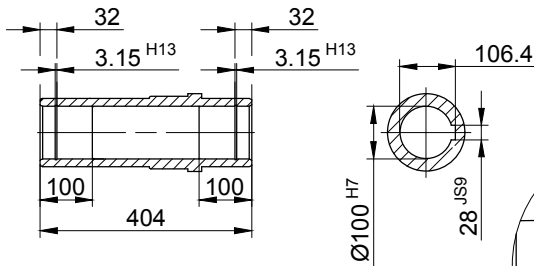
### BK80G40

Flange with clearance holes at front

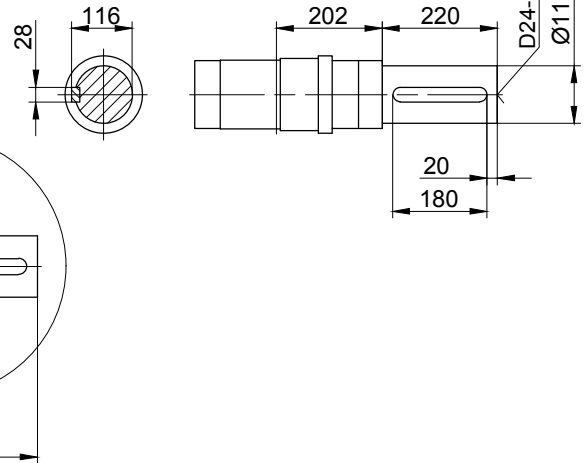
Code -3.V/  
(Code -4.V/)



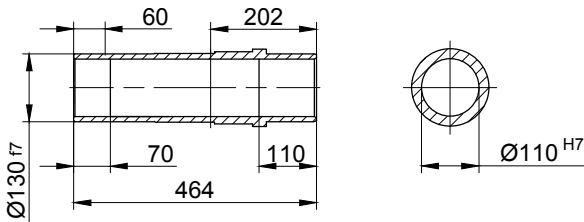
Code -4/



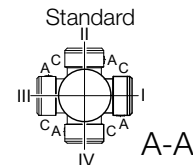
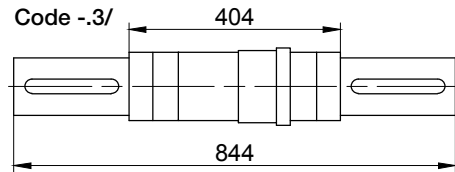
Code -1/



Code -5/



Code -3/



Flange Dimensions		k	l	m	n	o	p	q	s	t	z
BK80..	Code -3.V/	450	400	350	22	17,5	439	245	5	178	-
BK80..	Code -4.V/	550	500	450	22	17,5	444	250	5	173	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK80G40-.../S..08 (M, L)	199.5	357	156	1039.5	114.5	136.5	1105.5	1151.5	1213	-
BK80G40-.../S..09 (S, X)	250.5	371.5	176	1105	124	157	1198	1212.5	1302	-
BK80G40-.../S..11 (S, M, L)	319	378	218	1180	165	176	1278	1287.5	1380	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

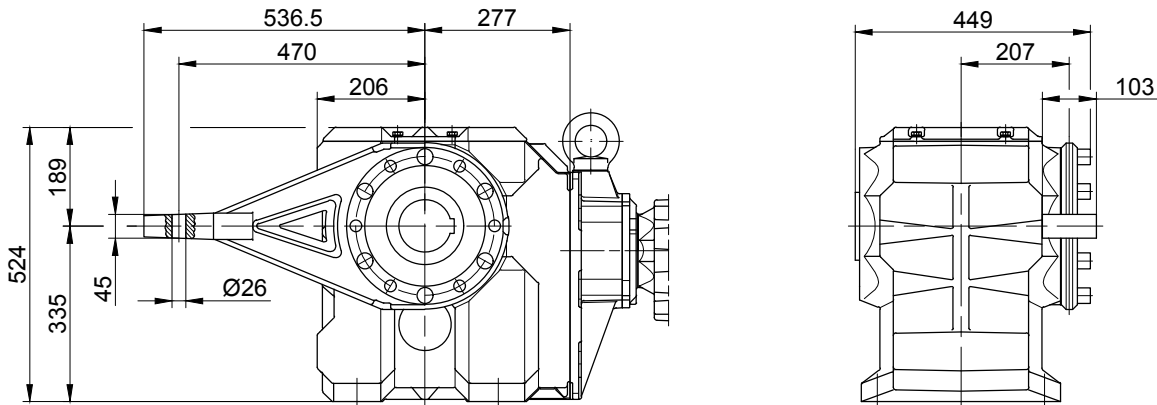
Send Quote Requests to info@automatedpt.com

# BK-series bevel-geared motors

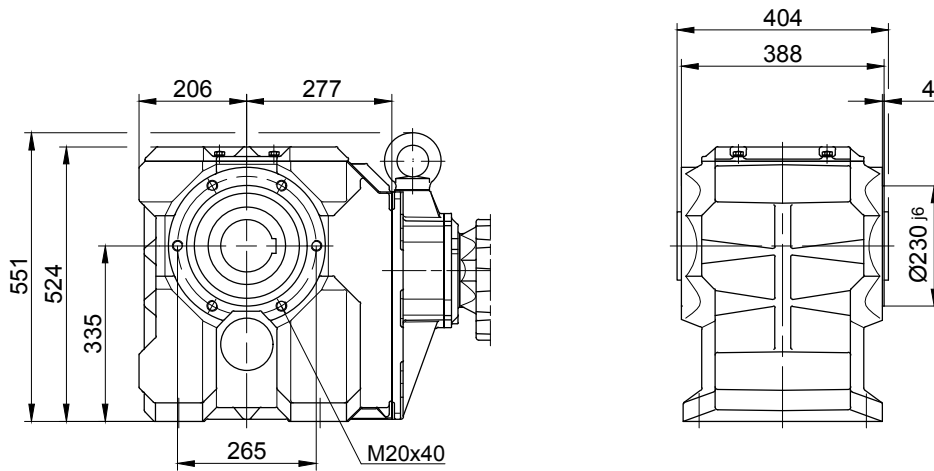
## Dimension - Tandem Gearbox

### BK80G40

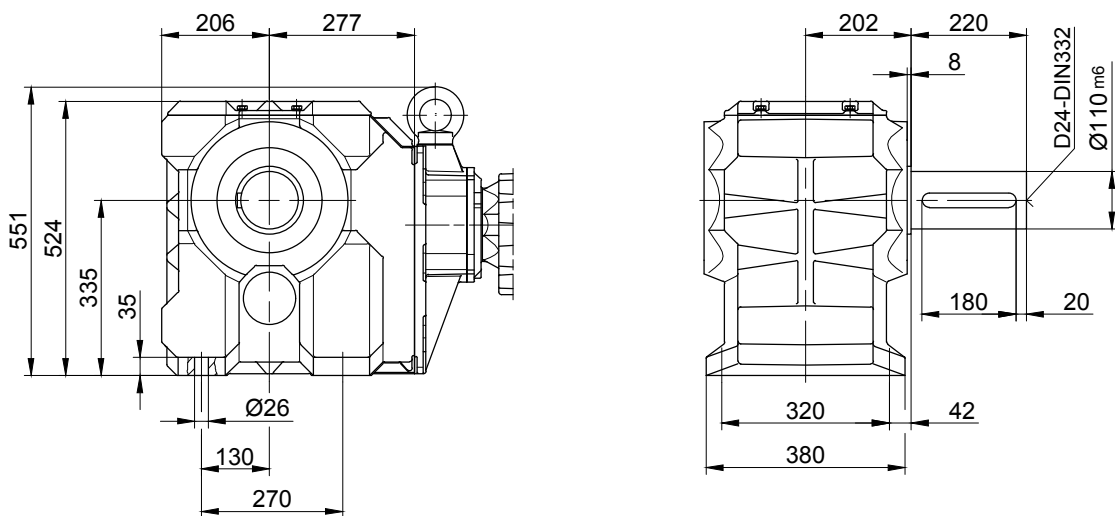
Torque arm at front  
Code -5.V/



Flange with tapped holes at front  
Code -7.V/



Foot with clearance holes at bottom  
Code -1.U/



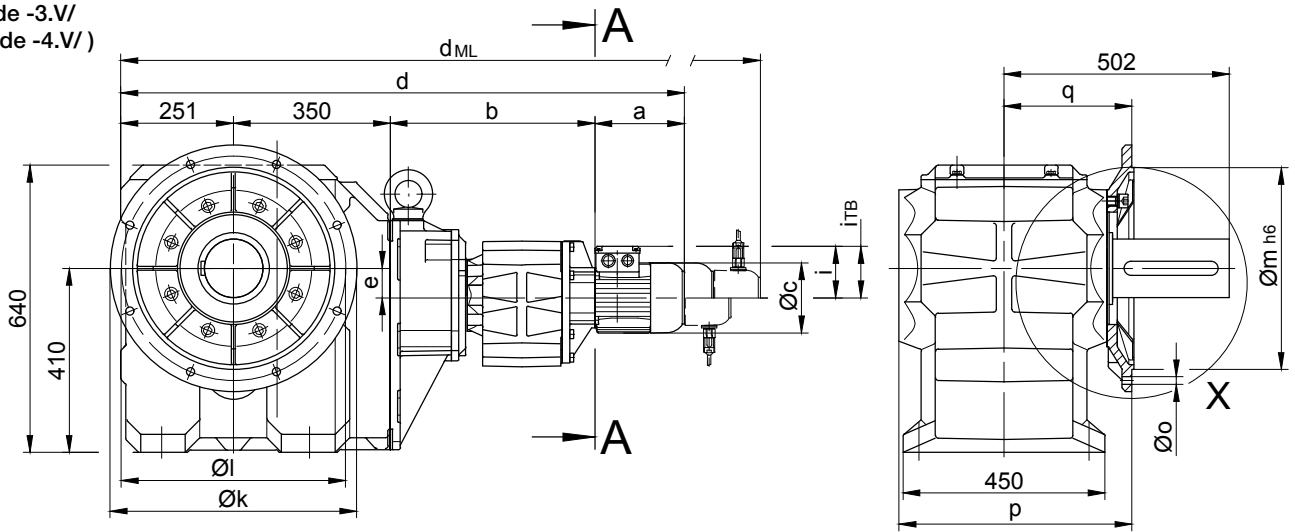
12

# BK-series bevel-geared motors

## Dimension - Tandem Gearbox

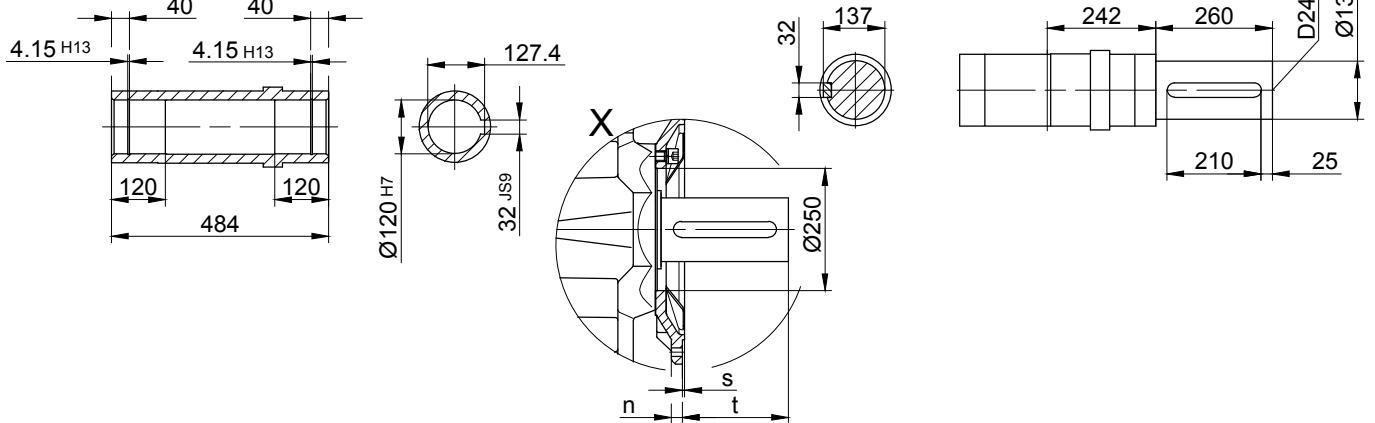
### BK90G50

Flange with clearance holes at front  
Code -3.V/  
(Code -4.V/)

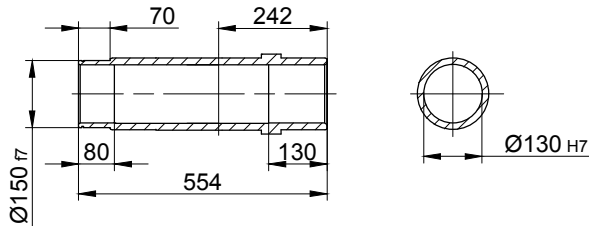


Code -1/

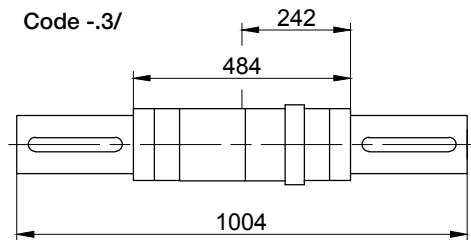
Code -4/



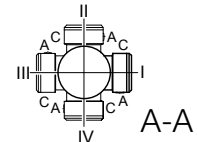
Code -5/



Code -3/



Standard



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BK90..	Code -3.V/	550	500	450	22	17,5	519	285	5	218	-
BK90..	Code -4.V/	660	600	550	25	22	513	279	6	225	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	i <sub>TB</sub>	Design with motor extensions			
							Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BK90G50-.../S..08 (M, L)	199.5	427	156	1227.5	114.5	136.5	1293.5	1339.5	1401	-
BK90G50-.../S..09 (S, X)	250.5	441.5	176	1293	124	157	1386	1400.5	1490	-
BK90G50-.../S..11 (S, M, L)	319	448	218	1368	165	176	1466	1475.5	1568	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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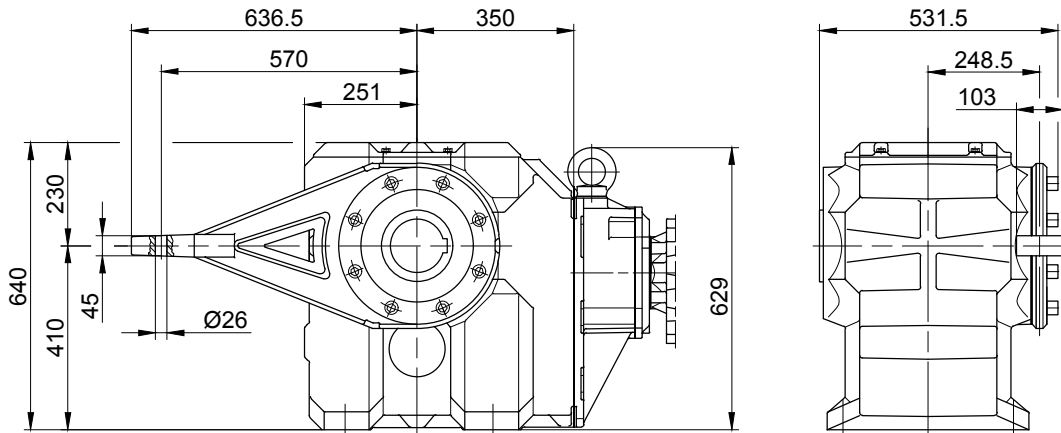
# BK-series bevel-gear motors

## Dimension - Tandem Gearbox

### BK90G50

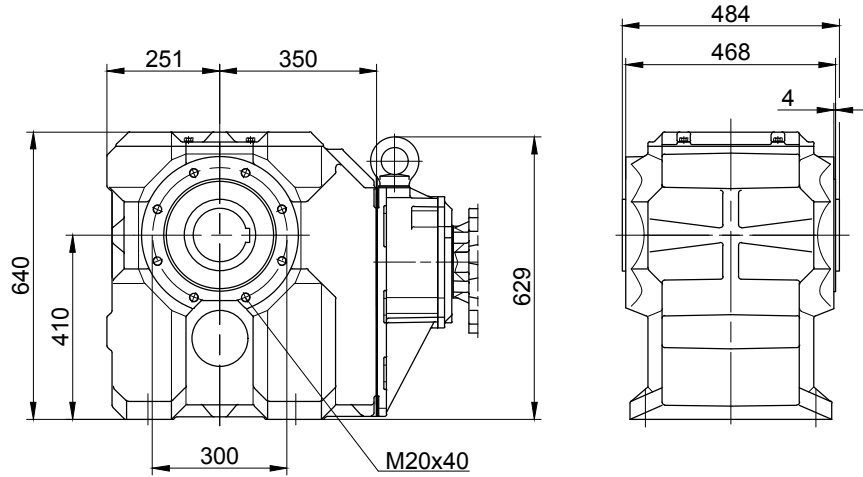
Torque arm at front

Code -5.V/



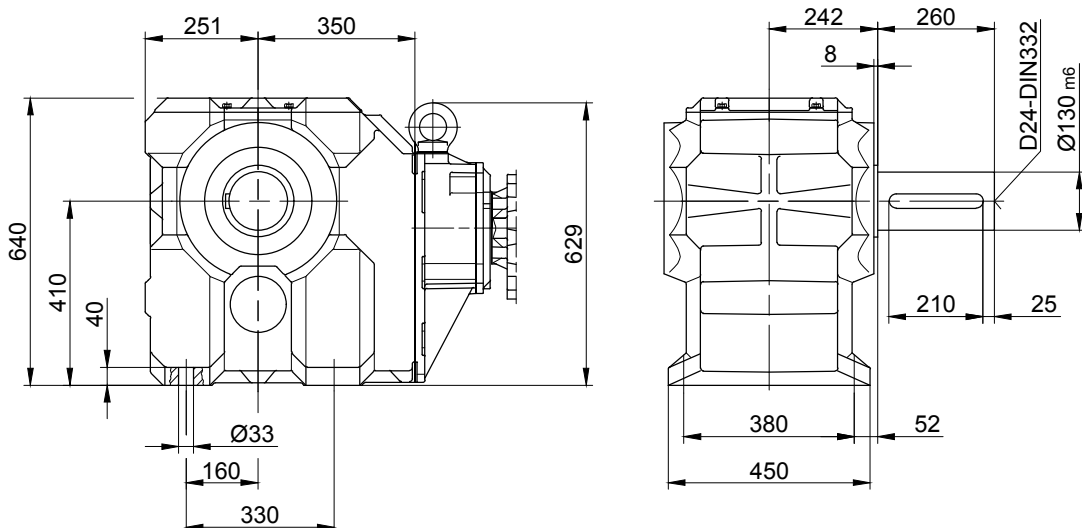
Flange with tapped holes at front

Code -7.V/



Foot with clearance holes at bottom

Code -1.U/



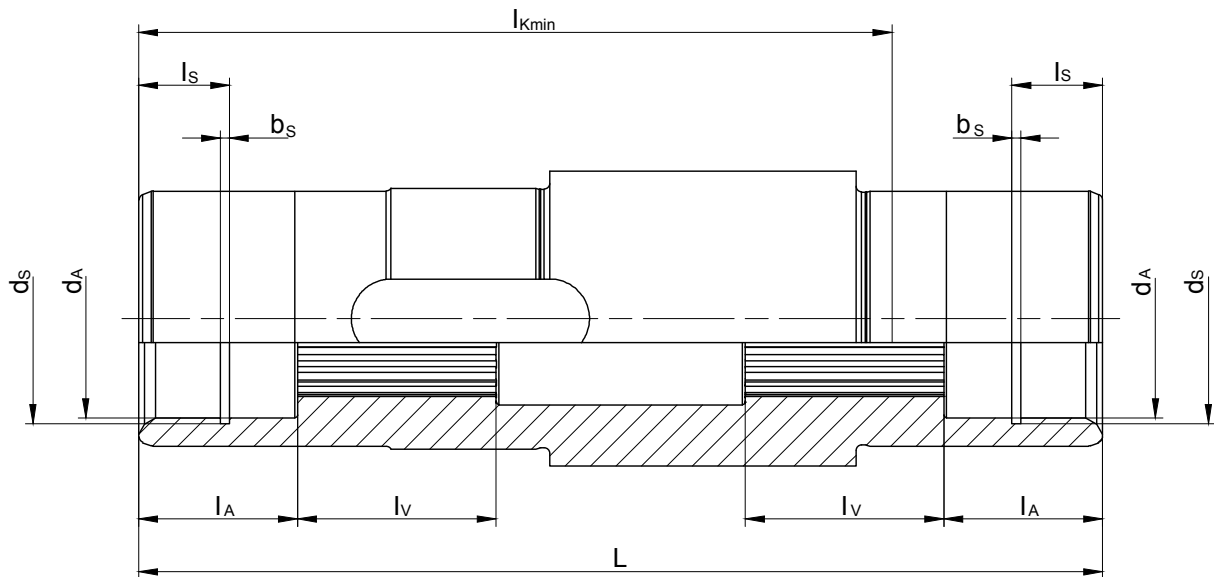


# Energy Efficient Geared Motors

## AC Variable Speed

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**BK-series bevel-gear motors****Additional Dimension Sheet****Splined shaft BK**

Type	Splined shaft acc. to DIN 5480	$d_A$	$l_A$	$l_v$	$l_{kmin}$	$L$	$d_s$	$l_s$	$b_s$
BK10	N30x1.25x22x9H	35 <sup>G7</sup>	28	35	132	170	37 <sup>H12</sup>	16	1.6 <sup>H13</sup>
BK20	N35x2x16x9H	36 <sup>G7</sup>	28	35	154	192	37 <sup>H12</sup>	16	1.6 <sup>H13</sup>
BK30	N40x2x18x9H	41 <sup>G7</sup>	25	42	179	224	42.5 <sup>H12</sup>	17	1.85 <sup>H13</sup>
BK40	N50x2x24x9H	51 <sup>G7</sup>	25	49	214	260	53 <sup>H12</sup>	17	2.15 <sup>H13</sup>
BK50	N60x2x28x9H	61 <sup>G7</sup>	25	58	229	282	63 <sup>H12</sup>	17	2.15 <sup>H13</sup>
BK60	N70x2x34x9H	72 <sup>G7</sup>	25	72	248	302	75 <sup>H12</sup>	17	2.65 <sup>H13</sup>
BK70	N85x3x27x9H	86 <sup>G7</sup>	26	100	295	352	88.5 <sup>H12</sup>	17	3.15 <sup>H13</sup>
BK80	N110x3x35x9H	112 <sup>G7</sup>	60	90	335	404	116 <sup>H12</sup>	30	4.15 <sup>H13</sup>
BK90	N130x5x24x9H	131.5 <sup>G7</sup>	60	110	410	484	134 <sup>H12</sup>	30	4.15 <sup>H13</sup>

Dimensions in millimetres (mm)

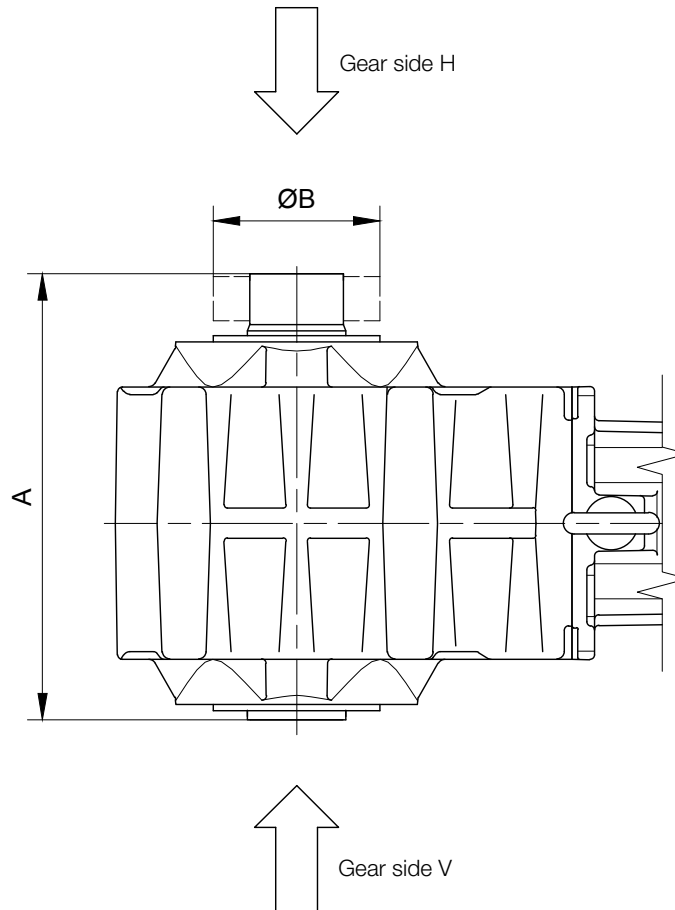
12

# BK-series bevel-geared motors

## Additional Dimension Sheet

### Shrink disc couplings (SSV)

(Code BK10-.5/...)  
(Code BK10Z-.5/...)



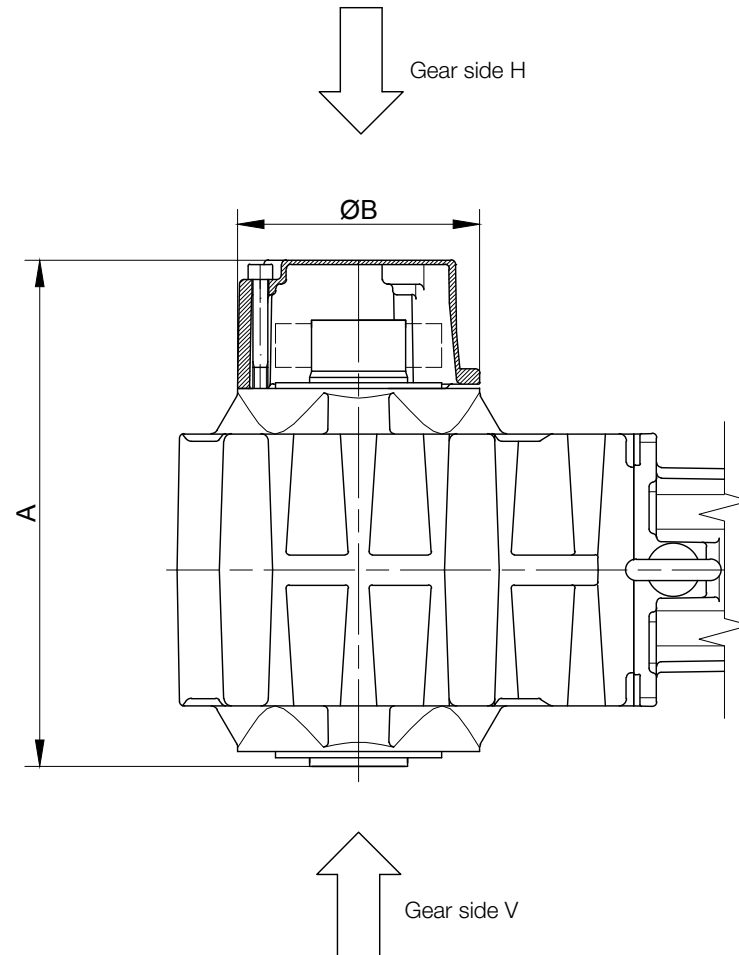
Type	SSV Ringfeder	SSV STÜWE	A	B
BK06	RfN 4161 024x050	HSD 24-22x24	118	50
BK10	RfN 4161 036x072	HSD 36-22x36	195	72
BK20	RfN 4161 044x080	HSD 44-22x44	222	80
BK30	RfN 4161 050x090	HSD 50-22x50	254	90
BK40	RfN 4161 062x110	HSD 62-22x62	295	110
BK50	RfN 4161 068x115	HSD 68-22x68	317	115
BK60	RfN 4161 080x141	HSD 80-22x80	337	140
BK70	RfN 4161 105x185	HSD 110-22x105	407	185
BK80	RfN 4161 130x215	HSD 125-22x130	464	215
BK90	RfN 4161 150x263	HSD 155-22x150	554	263
Dimensions in millimetres (mm)				

# BK-series bevel-gear motors

## Additional Dimension Sheet

### Shrink disc connection with cover (SSV)

(Code BK10-.5A/...)  
(Code BK10Z-.5A/...)

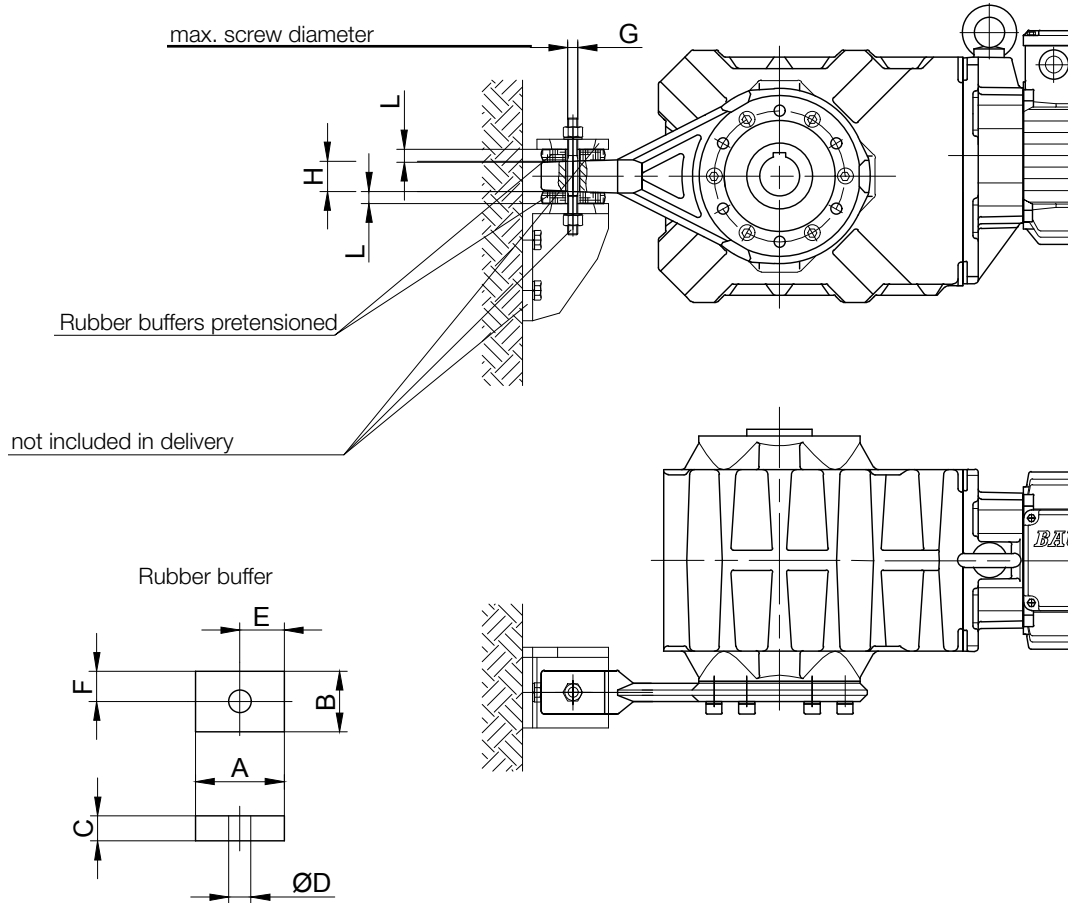


Type	SSV Ringfeder	SSV STÜWE	A	B
BK10	RfN 4161 036x072	HSD 36-22x36	217	120
BK20	RfN 4161 044x080	HSD 44-22x44	270	140
BK30	RfN 4161 050x090	HSD 50-22x50	300	160
BK40	RfN 4161 062x110	HSD 62-22x62	335	160
BK50	RfN 4161 068x115	HSD 68-22x68	329	200
BK60	RfN 4161 080x141	HSD 80-22x80	386	210
BK70	RfN 4161 105x185	HSD110-22x105	465	250
BK80	RfN 4161 130x215	HSD125-22x130	502	300
BK90	RfN 4161 150x263	HSD155-22x150	602	350
Dimensions in millimetres (mm)				

# BK-series bevel-gear motors

## Additional Dimension Sheet

### Rubber buffer for torque arm



Material: Natural rubber  
Hardness 50 +/-5 Shore A

Dimensions of the transverse hole:  
see dimensioned sketch of the respective shaft mounted gearbox

Gear	Position	A	B	C	D	E	F	G	H	L
BK06	Position 0	30	30	12	12	15	15	M10	10	10
BK08	Position 1	48	32	15	14	24	16	M10	19	13.5
BK10	Position 1	48	32	15	14	24	16	M10	19	13.5
BK17	Position 1	48	32	15	14	24	16	M10	19	13
BK20	Position 1	48	32	15	14	24	16	M10	19	13
BK30	Position 2	63	43	20	14	31.5	21.5	M10	30	17
BK40	Position 2	63	43	20	14	31.5	21.5	M10	30	17
BK50	Position 3	88	60	25	22	44	30	M18	36	21.5
BK60	Position 3	88	60	25	22	44	30	M18	38	21
BK70	Position 4	123	88	30	26	61.5	44	M20	40	25.5
BK80	Position 5	133	103	35	26	66.5	51.5	M20	45	30
BK90	Position 5	133	103	35	26	66.5	51.5	M20	45	29.5

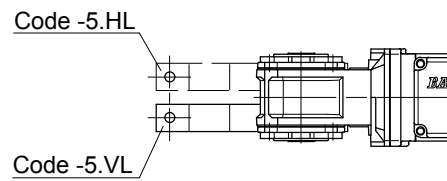
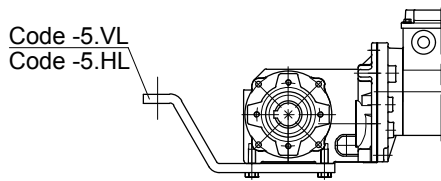
Dimensions in millimetres (mm)

# BK-series bevel-gear motors

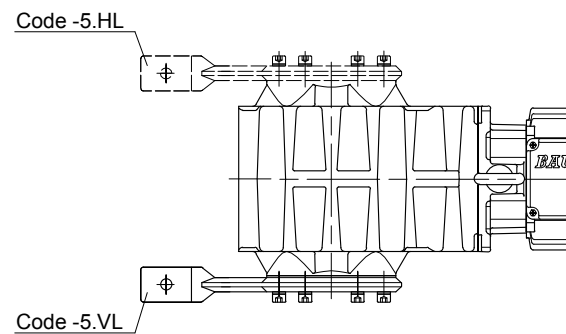
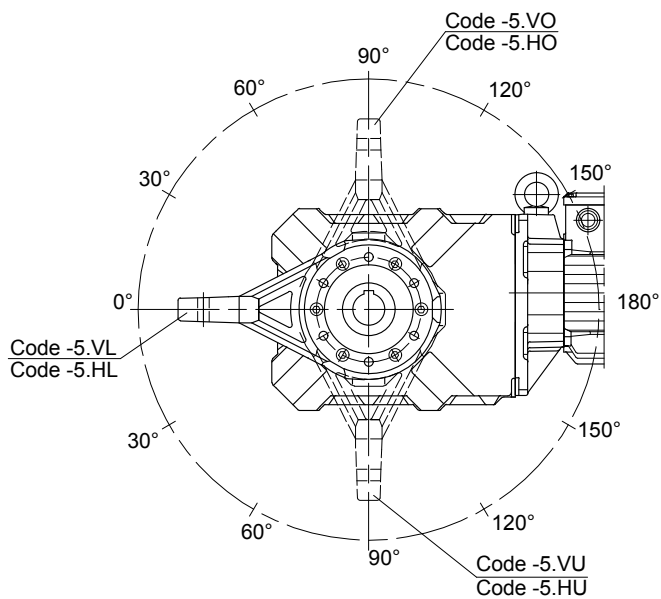
## Additional Dimension Sheet

### Position of the torque arm

#### BK06



#### BK10 - BK70

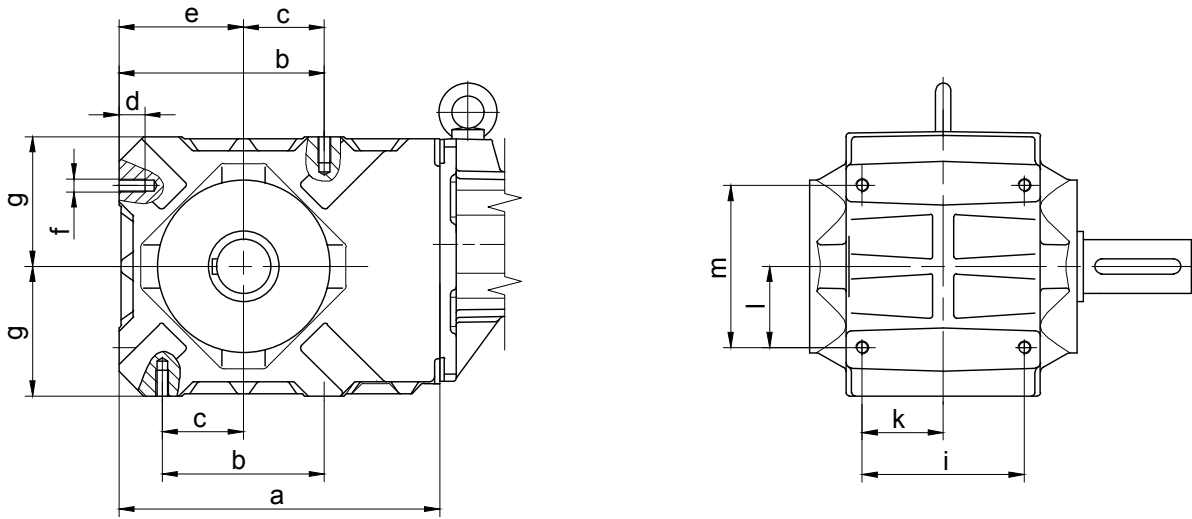


Gear	Position						
	VL/HL	VO/HO/VU/HU					VR/HR
BK06	0°	-	-	-	-	-	-
BK08	0°	30°	60°	90°	120°	-	-
BK10	0°	30°	60°	90°	120°	150°	-
BK17	0°	30°	60°	90°	120°	-	-
BK20	0°	30°	60°	90°	120°	150°	-
BK30	0°	30°	60°	90°	120°	150°	-
BK40	0°	30°	60°	90°	120°	150°	-
BK50	0°	30°	60°	90°	120°	150°	-
BK60	0°	30°	60°	90°	120°	150°	-
BK70	0°	30°	60°	90°	120°	150°	-
BK80	0°	30°	60°	90°	120°	150°	-
BK90	0°	45°		90°	135°		-

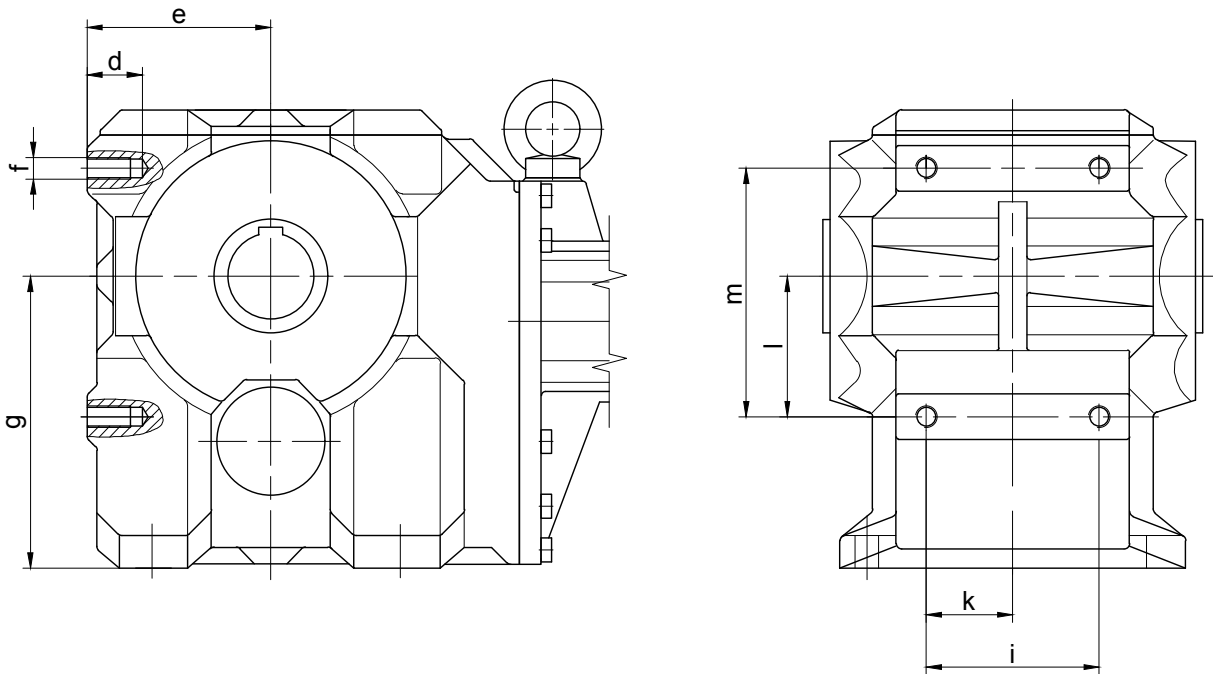
# BK-series bevel-gear motors

## Additional Dimension Sheet

### Foot with tapped holes



Type	a	b	c	d	e	f	g	i	k	l	m
BK10-BK10Z	202	90	45	16	78	M8	80	95	47.5	45	90
BK20-BK20Z	242	110	55	20	95	M10	100	105	52.5	55	110
BK30-BK30Z	266	125	62.5	24	105	M12	110	120	60	62.5	125
BK40-BK40Z	297	150	75	24	115	M12	120	150	75	75	150
BK50-BK50Z	356	200	100	28	145	M14	150	160	80	100	200

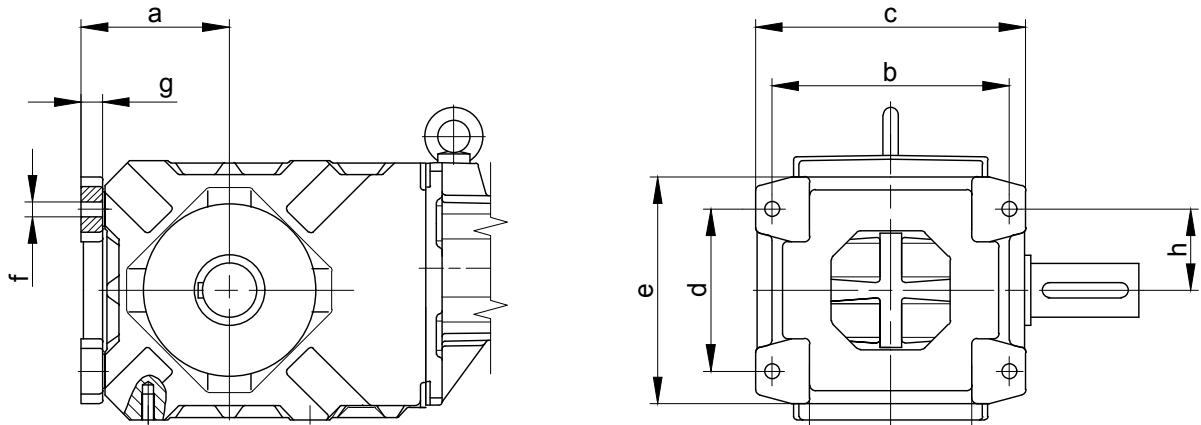


Type	a	b	c	d	e	f	g	i	k	l	m
BK60-BK60Z	-	-	-	40	130	M20	212	160	80	145	230
BK70-BK70Z	-	-	-	40	165	M20	270	160	80	130	230
BK80-BK80Z	-	-	-	60	200	M30	335	210	105	240	360
BK90-BK90Z	-	-	-	60	245	M30	410	210	105	215	360

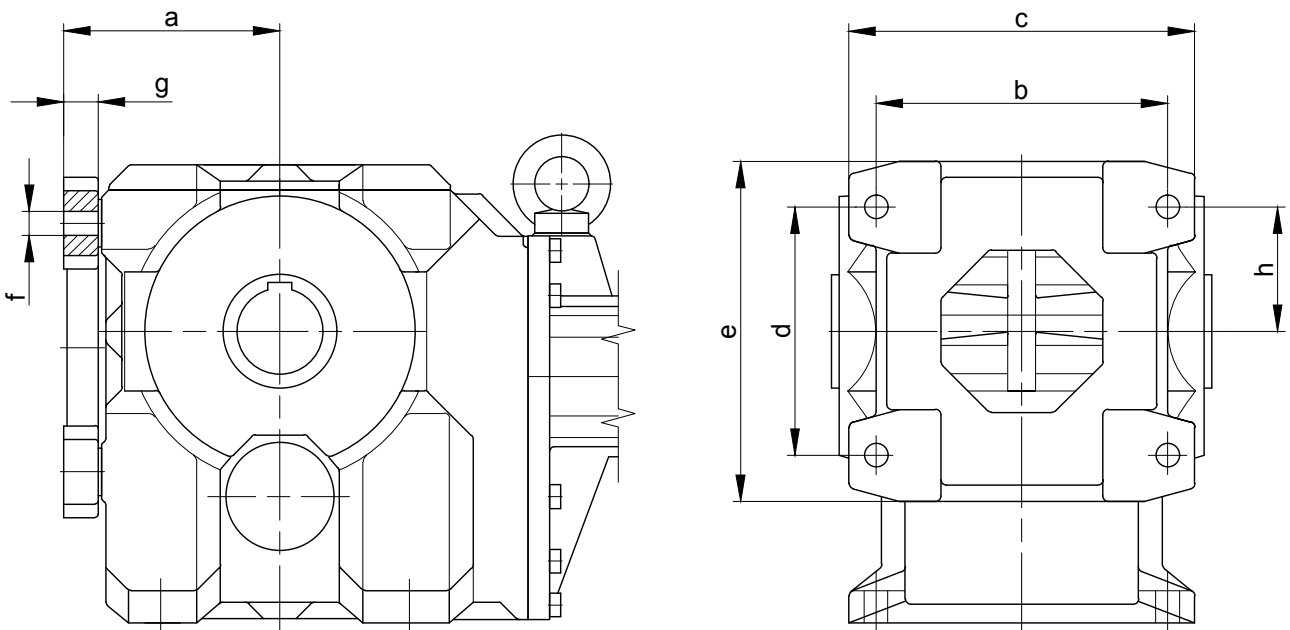
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to [info@automatedpt.com](mailto:info@automatedpt.com)



**BK-series bevel-gear motors****Additional Dimension Sheet****Foot plate with clearance holes**

Type	a	b	c	d	e	f	g	h
BK10-BK10Z	96	145	165	90	130	Ø9	16	45
BK20-BK20Z	115	165	195	110	160	Ø11	18	55
BK30-BK30Z	127	190	220	125	185	Ø13.5	20	62.5
BK40-BK40Z	137	220	250	150	210	Ø13.5	20	75
BK50-BK50Z	170	240	280	200	265	Ø17.5	23	100



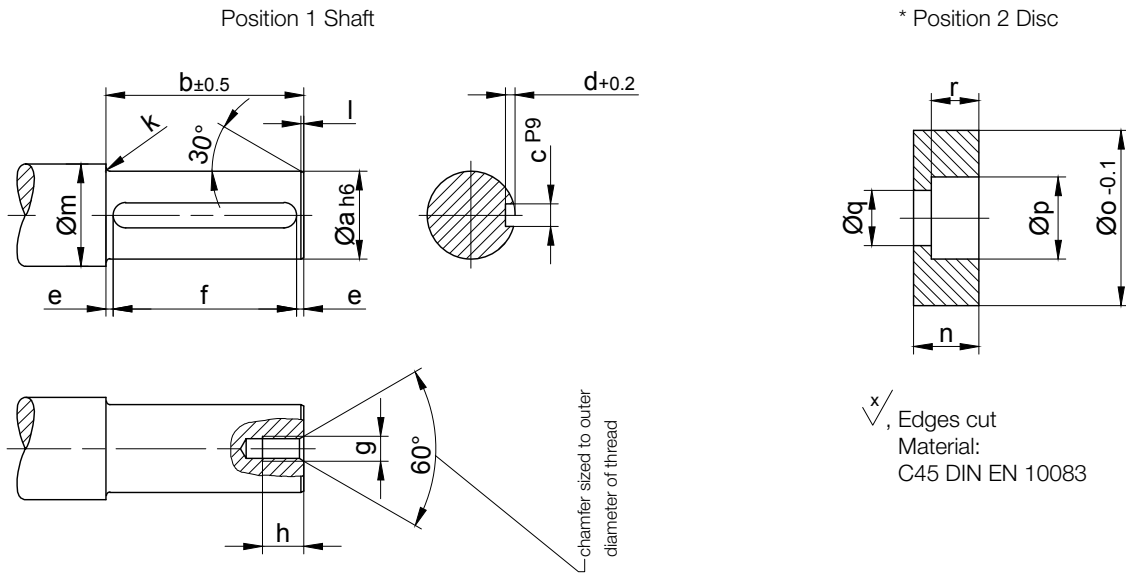
Type	a	b	c	d	e	f	g	h
BK60-BK60Z	165	270	320	230	315	Ø22	32	85
BK70-BK70Z	200	270	320	230	315	Ø22	32	100
BK80-BK80Z	250	400	480	360	480	Ø33	47	120
BK90-BK90Z	295	400	480	360	480	Ø33	47	145

12

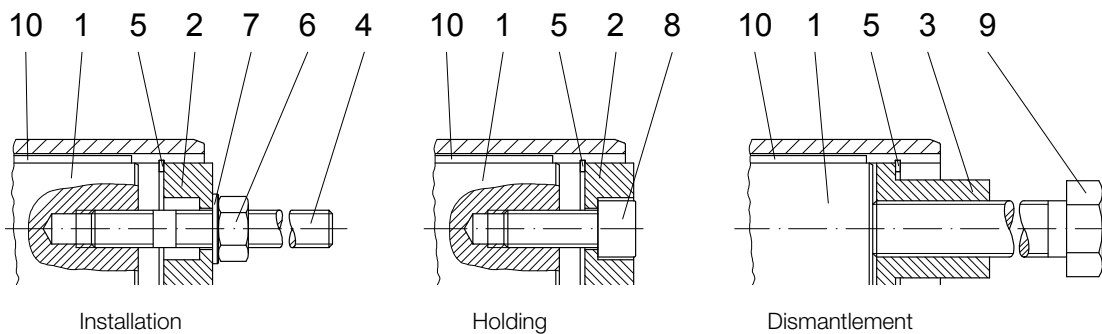
# BK-series bevel-gear motors

## Additional Dimension Sheet

### Assembly tools for hollow shaft and keyway



Type	Dimensions (mm)															
	Position 1 Shaft											Position 2 Disc				
	a	b	c	d	e	f	g	h	k	l	m	n	o	p	q	r
BK06	20	75	6	3.5	6	63+0.3	M8	16	2	1	28	13.5	19.8	11	6.6	6.5
BK10	25	148	8	4	11.5	125.0.5	M8	18	2.5	1.5	33	13.5	24.8	15	9	8.5
BK20	30	170	8	4	15	140+0.5	M10	20	3	1.5	38	15	29.8	18	11	10
BK30	35	201	10	5	10.5	180+0.5	M10	20	3	1.5	43	16	34.8	18	11	10
BK40	40	235	12	5	17.5	200+0.5	M12	22	3	2	48	18	39.8	20	13.5	12
BK50	50	254	14	5.5	17	220+0.5	M16	30	3.5	2	58	21	49.8	26	17.5	15
BK60	60	273	18	7	11.5	250+0.5	M20	38	3.5	2	68	24	59.8	33	22	18
BK70	80	316	22	9	18	280+0.5	M20	38	4	2	90	27	79.8	33	22	20
BK70-K70	70	316	20	7.5	18	280+0.5	M20	38	4	2	90	27	69.8	33	22	20
BK80	100	360	28	10	20	320+0.5	M24	45	4	3	110	32	99.8	40	26	25
BK90	120	432	32	11	16	400+0.5	M24	45	4.5	3	130	35	119.8	40	26	28



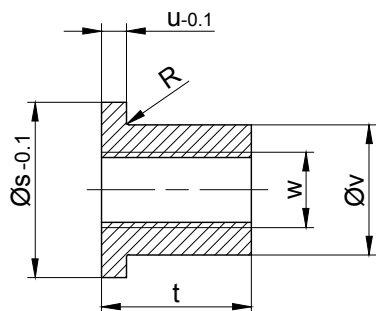
The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit. Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

# BK-series bevel-gear motors

## Additional Dimension Sheet

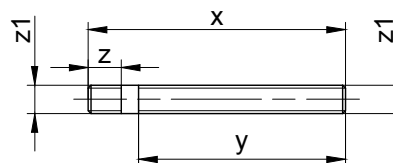
### Assembly tools for hollow shaft and keyway

Position 3 Sleeve



∠ Edges cut  
Material:  
C45 DIN EN 10083

\* Position 4 Stud bolt



Material: Steel, tensile strength  
≥ 1000N/mm<sup>2</sup>  
Threads rolled

Type	Dimensions (mm)										* Retaining ring DIN 472	Hexagon nut DIN 394-8	Disc DIN 125-St	* Filister head screw DIN 912-8.8	Starting torque (Nm)	Hexagon bolt DIN EN 24017-8.8	Key DIN 6865 Width/Height/Length						
	Position 3 Sleeve						Position 4 Stud bolt											Pos.5	Pos.6	Pos.7	Pos.8	Pos.9	Pos.10
	s	t	u	v	w	R	x	y	z	z1													
BK06	19.8	20	5	11.1	M8	0.8	130	100	20	M6	20x1	M6	6.4	M6x30	5	M6x120	A 6x6x63						
BK10	24.8	24	5	15.4	M12	0.8	200	170	20	M8	25x1.2	M8	8.4	M8x30		M12x190	A 8x7x125						
BK20	29.8	28	5	19.8	M14	0.8	230	195	23	M10	30x1.2	M10	10.5	M10x30	8	M14x210	A 8x7x140						
BK30	34.8	28	5	23	M14	-	260	220	23	M10	35x1.5	M10	10.5	M10x35		M14x240	A 10x8x180						
BK40	39.8	40	6	27.7	M20	0.8	300	260	28	M12	40x1.75	M12	13	M12x35	16	M20x290	A 12x8x200						
BK50	49.8	48	6	36	M24	-	340	290	37	M16	50x2.0	M16	17	M16x40	30	M24x320	A 14x9x220						
BK60	59.8	60	6	44	M30	-	370	310	45	M20	60x2.0	M20	21	M20x50	42	M30x350	A 18x11x250						
BK70	79.8	60	8	55	M30	-	420	360	45	M20	80x2.5	M20	21	M20x50		M30x400	A 22x14x280						
BK70-K70	69.8	60	8	53	M30	-	420	360	45	M20	70x2.5	M20	21	M20x50		M30x400	A 20x12x280						
BK80	99.8	72	10	75	M36	-	480	410	55	M24	100x3.0	M24	25	M24x60	100	M36x450	A 28x16x320						
BK90	119.8	72	10	80	M36	-	560	480	55	M24	120x4.0	M24	25	M24x60		M36x520	A 32x18x400						

The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit.

Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

Optional	Type	Ø s	Order text
	BK06	20	Id.Nr.4104013 Assembly tool „holding“
	BK10	25	Id.Nr.4103921 Assembly tool „holding“
	BK20	30	Id.Nr.4103939 Assembly tool „holding“
	BK30	35	Id.Nr.4103947 Assembly tool „holding“
	BK40	40	Id.Nr.4103955 Assembly tool „holding“
	BK50	50	Id.Nr.4103963 Assembly tool „holding“
	BK60	60	Id.Nr.4103971 Assembly tool „holding“
	BK70	80	Id.Nr.4103980 Assembly tool „holding“
	BK70-K70	70	Id.Nr.4104765 Assembly tool „holding“
	BK80	100	Id.Nr.4103998 Assembly tool „holding“
	BK90	120	Id.Nr.4104005 Assembly tool „holding“

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

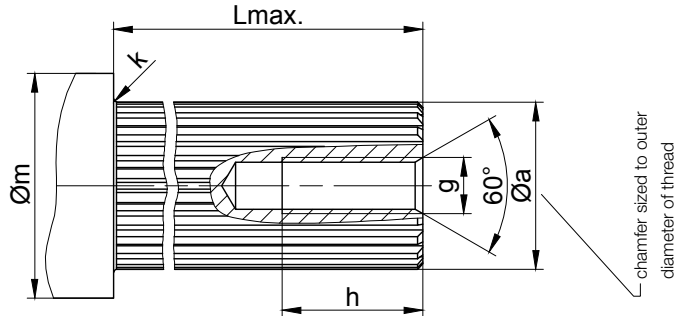
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# BK-series bevel-gear motors

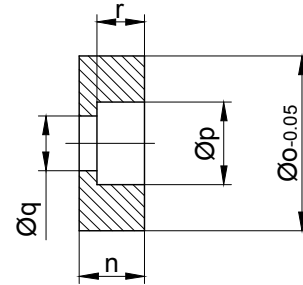
## Additional Dimension Sheet

### Assembly tools for splined shaft

Position 1 Shaft

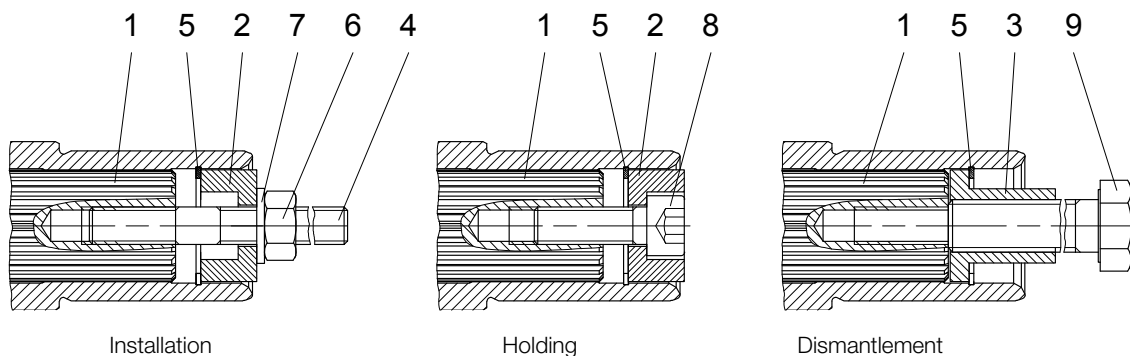


\* Position 2 Disc



√<sup>x</sup>, Edges cut  
Material:  
C45 DIN EN 10083

Type	Dimensions (mm)										
	Position 1 Shaft						Position 2 Disc				
	a	g	h	g	Lmax.	m	n	o	p	q	r
BK10	DIN 5480-W30x1.25x22	M10	25	2.5	145	42	15	34.9	18	11	10
BK20	DIN 5480-W35x2x16	M10	25	3	167	44	14	35.9	18	11	10
BK30	DIN 5480-W40x2x18	M12	30	3	200	49	18	40.9	20	13.5	12
BK40	DIN 5480-W50x2x24	M16	35	3	235	59	17.5	50.9	26	17.5	12.5
BK50	DIN 5480-W60x2x28	M20	40	3.5	255	69	24	60.9	33	22	18
BK60	DIN 5480-W70x2x34	M20	40	3.5	275	80	24	71.9	33	22	18
BK70	DIN 5480-W85x3x27	M20	40	4	323	96	22	85.9	33	22	16
BK80	DIN 5480-W110x3x35	M24	50	4	360	122	32	111.9	40	26	25
BK90	DIN 5480-W130x5x24	M24	50	4.5	440	143	25	131.4	40	26	18



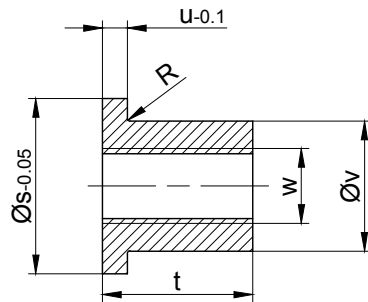
The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit.  
Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

# BK-series bevel-gear motors

## Additional Dimension Sheet

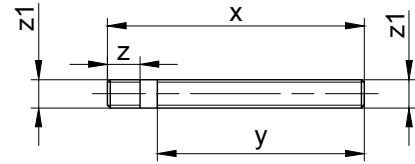
### Assembly tools for splined shaft

Position 3 Sleeve



√<sup>x</sup>, Kanten gebrochen  
Werkstoff:  
C45 DIN EN 10083

\* Position 4 Stud bolt



Material: Steel, tensile strength  
≥ 1000N/mm<sup>2</sup>  
Threads rolled

Type	Dimensions (mm)										* Retaining ring DIN 472	Hexagon nut DIN 394-8	Disc DIN 125-St	* Filister head screw DIN 912-8.8	Tightening torques (Nm)	Hexagon bolt DIN EN 24017-8.8
	Position 3 Sleeve					Position 4 Stud bolt										
	s	t	u	v	w	R	x	y	z	z1						
BK10	30.4	28	5	19.8	M14	-	200	170	23	M10	35x1.5	M10	10.5	M10x30	8	M14x190
BK20	35.9	28	5	23	M14	-	230	195	23	M10	35x1.5	M10	10.5	M10x35		M14x210
BK30	40.9	40	6	27.7	M20	-	260	220	28	M12	40x1.75	M12	13	M12x35	16	M20x240
BK40	50.9	48	6	36	M24	0.8	300	260	37	M16	50x2.0	M16	17	M16x40	30	M24x290
BK50	60.9	60	6	44	M30	-	340	290	45	M20	60x2.0	M20	21	M20x50	42	M30x320
BK60	71.9	60	6	53	M30	0.8	370	310	45	M20	72x2.5	M20	21	M20x50		M30x350
BK70	85.9	60	8	65	M30	0.8	420	360	45	M20	85x3	M20	21	M20x50		M30x400
BK80	111.9	72	10	85	M36	0.8	480	410	55	M24	112x4	M24	25	M24x60	100	M36x450
BK90	131.4	72	10	95	M36	0.8	560	480	55	M24	130x4	M24	25	M24x60		M36x520

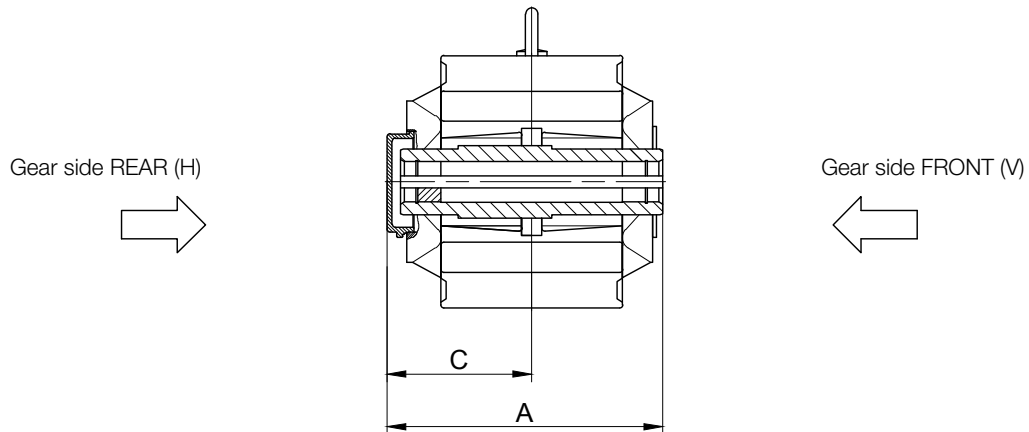
The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit.  
Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

Optional	Type	Ø s	Order text
	BK10	30.5	Id.Nr. 4105133 Assembly tool „holding“
	BK20	36	Id.Nr. 4105141 Assembly tool „holding“
	BK30	41	Id.Nr. 4105150 Assembly tool „holding“
	BK40	51	Id.Nr. 4105168 Assembly tool „holding“
	BK50	61	Id.Nr. 4105176 Assembly tool „holding“
	BK60	72	Id.Nr. 4105184 Assembly tool „holding“
	BK70	86	Id.Nr. 4105192 Assembly tool „holding“
	BK80	112	Id.Nr. 4105206 Assembly tool „holding“
	BK90	131.5	Id.Nr. 4105214 Assembly tool „holding“

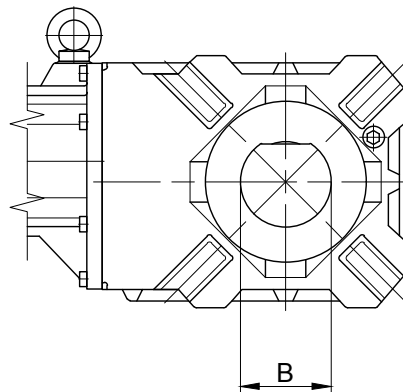
# BK-series bevel-gear motors

## Additional Dimension Sheet

### Shaft cap (VK)



Gear side REAR (H)



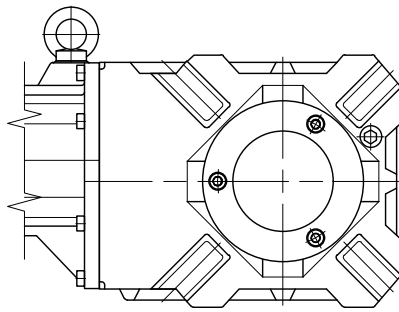
Type	A	B	C
BK10	182.5	85	97.5
BK20	204.5	90	108.5
BK40	273.5	100	143.5
BK50	298	115	157
BK60	322	130	171
BK70	370	160	194
Dimensions in millimetres (mm)			

# BK-series bevel-gear motors

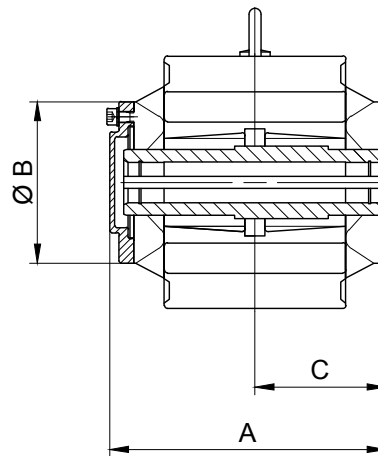
## Additional Dimension Sheet

### Shaft cover (VD)

Gear side REAR (H)



Gear side REAR (H)



Gear side FRONT (V)



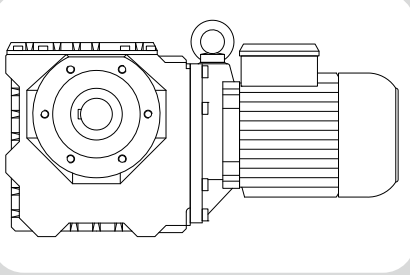
Type	A	B	C
BK10	181	120	85
BK20	206	139.5	96
BK30	239	160	112
BK40	274	160	130
BK50	297	199	141
BK60	321	210	151
BK70	368	250	176
BK80	419	300	202
BK90	492	351	242
Dimensions in millimetres (mm)			



# Energy Efficient Geared Motors

## AC Variable Speed

---



# 13

## BS-series worm-geared motors - Dimensions

<b>Dimension - Standard</b> .....	<b>454</b>
BS02 .....	454
BS03 .....	456
BS04 .....	458
BS06 .....	460
BS10-BS10Z .....	462
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<b>Dimension - Tandem Gearbox</b> .....	<b>470</b>
BS06G04 .....	470
BS10G06 .....	472
BS20G06 .....	474
BS30G06 .....	476
BS40G10 .....	478
<b>Additional Dimension Sheet</b> .....	<b>480</b>
Shrink disc couplings (SSV) .....	480
Shrink disc couplings with (SSV) cover .....	481
Rubber buffer for torque arm .....	482
Position of the torque arm .....	483
Threaded foot .....	484
Foot plate, left .....	485
Assembly tools for hollow shaft and keyway .....	486
Shaft Cap (VK) .....	488
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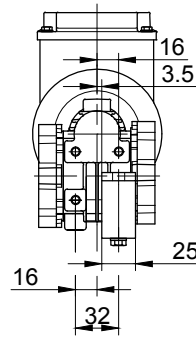
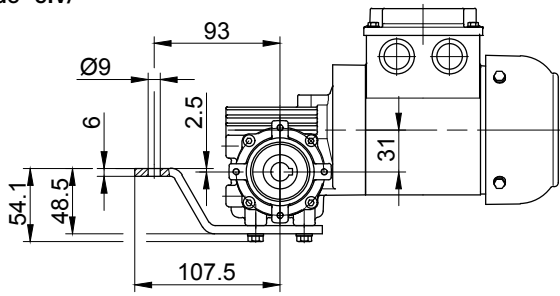


# BS-series worm-gearred motors

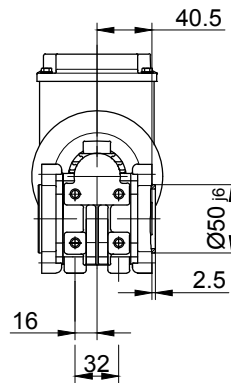
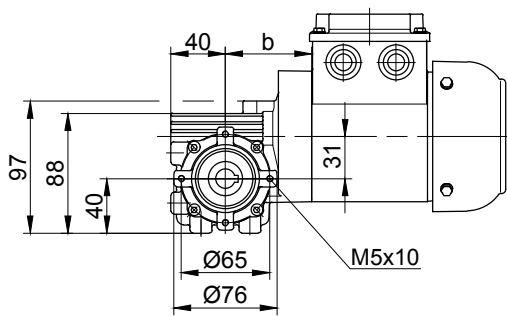
## Dimension - Standard

### BS02

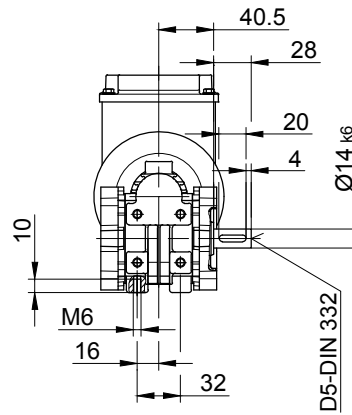
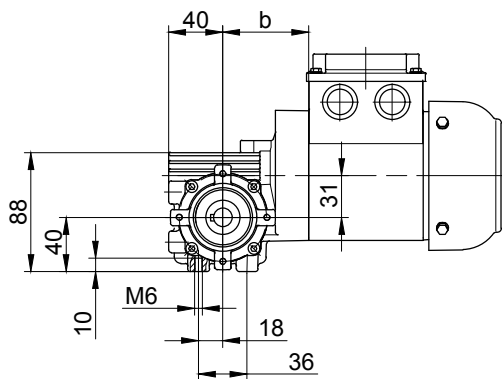
Torque arm at front  
Code -5.V/



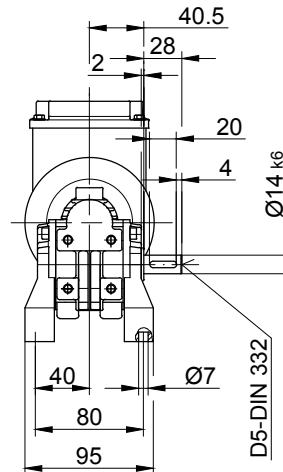
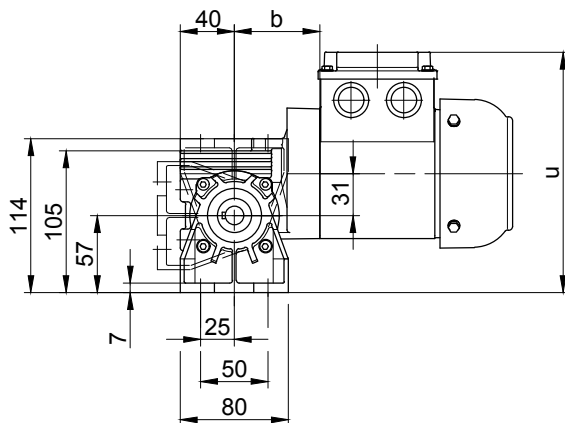
Flange with tapped holes at front  
Code -7.V/



Foot with tapped holes at bottom  
Code -6.U/



Foot with clearance holes at bottom  
Code -1.U/



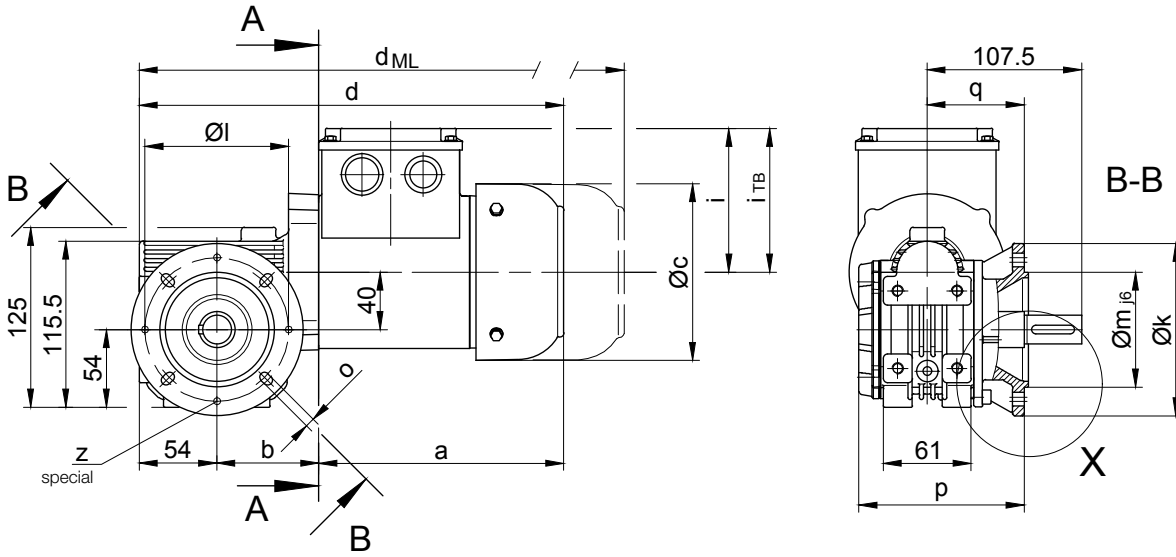
# BS-series worm-geared motors

## Dimension - Standard

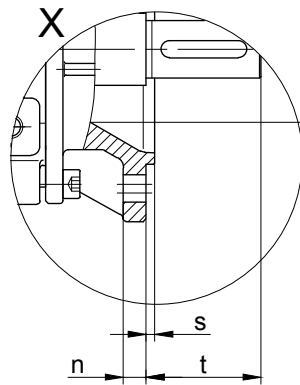
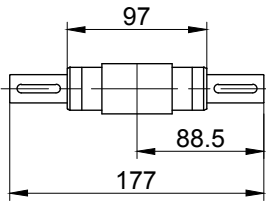
### BS03

Flange with clearance holes at front

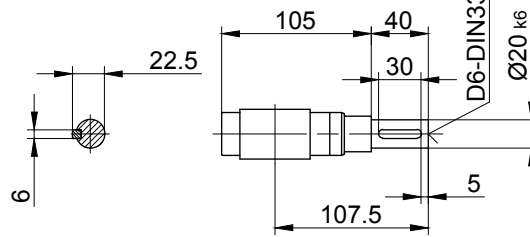
Code -3.V/



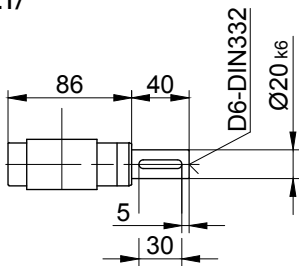
Code -3/



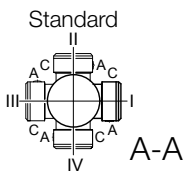
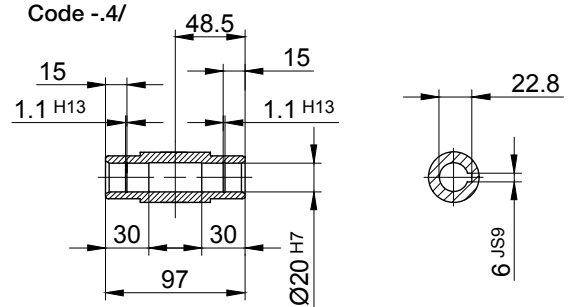
Code -7/



Code -1/



Code -4/



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BS03	Code -37V/	120	100	80	8	6.6	115	67.5	3	40	-
BS03	Code -37V/	120	100	80	8	6.6	115	67.5	3	40	4xM6

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BS03-../S...06 (M, L)	170.5	71	123	295.5	99	119	337.5	398	435.5	-
BS03-../S...08 (M, L)	199.5	115	156	368.5	114.5	136.5	434.5	480.5	542	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

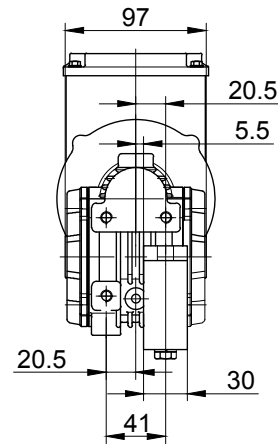
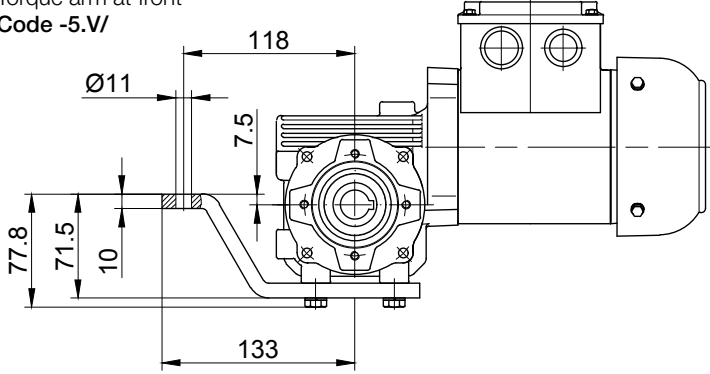
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# BS-series worm-gear motors

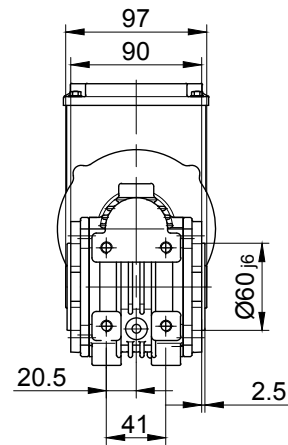
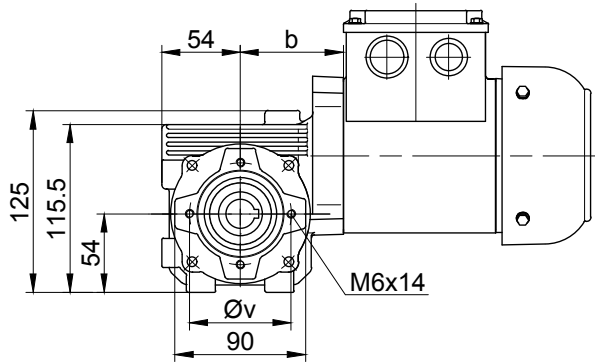
## Dimension - Standard

### BS03

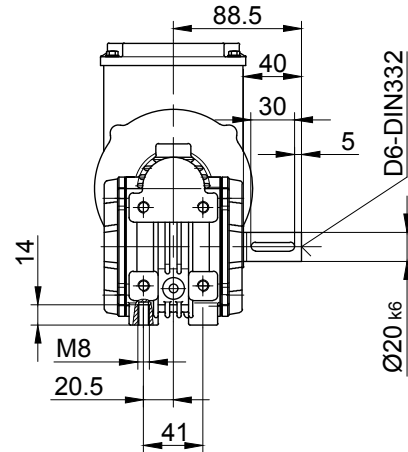
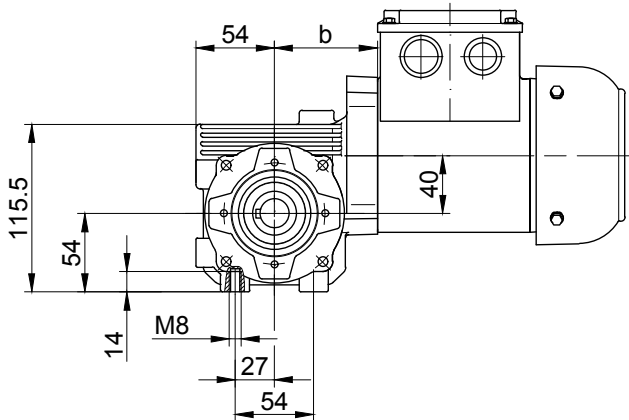
Torque arm at front  
Code -5.V/



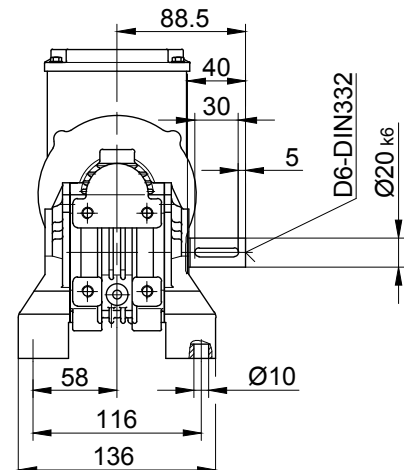
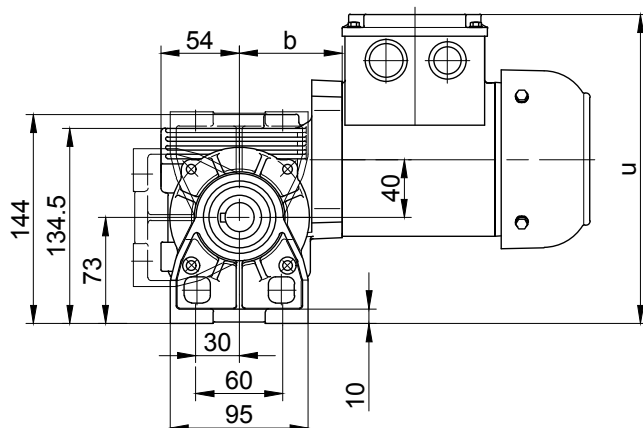
Flange with tapped holes at front  
Code -7.V/



Foot with tapped holes at bottom  
Code -6.U/



Foot with clearance holes at bottom  
Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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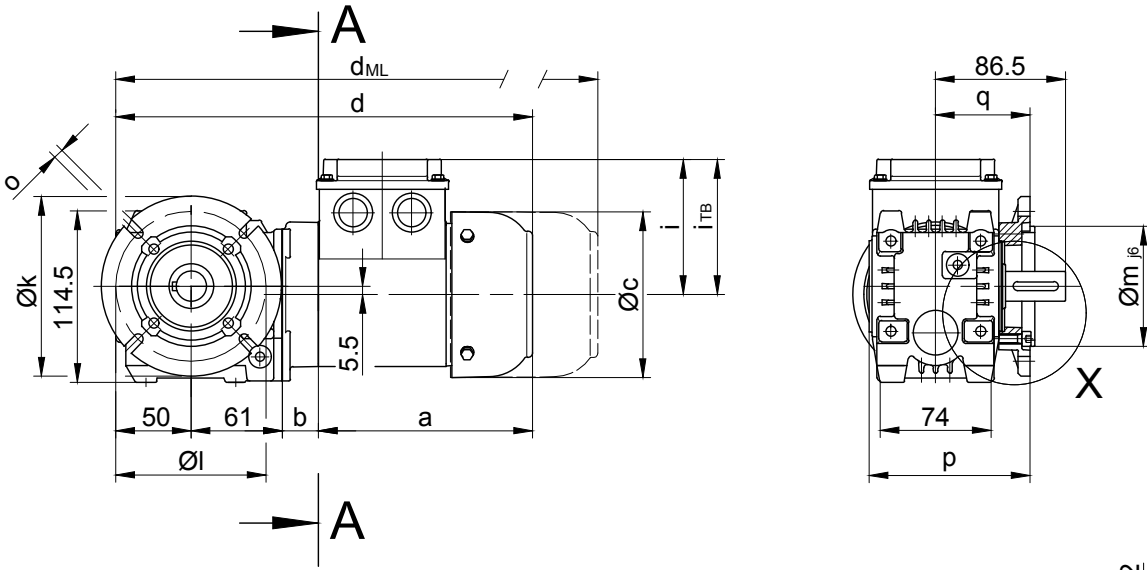
# BS-series worm-geared motors

## Dimension - Standard

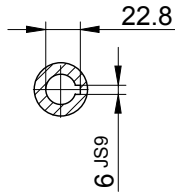
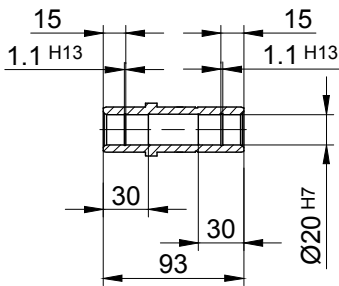
### BS04

Flange with clearance holes at front

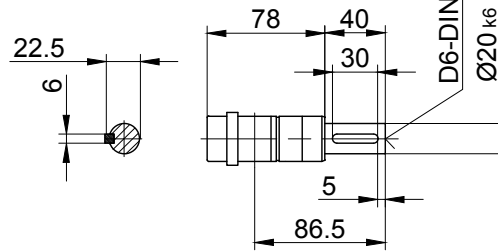
Code -3.V/



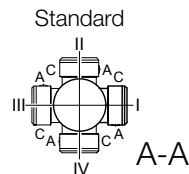
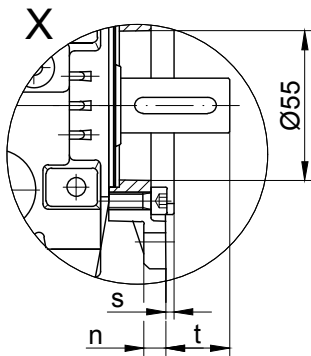
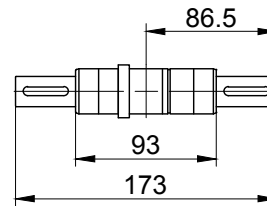
Code -.4/



Code -.1/



Code -.3/



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BS04	Code -3.V/	120	100	80	8	6.6	107.5	63	3	23.5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BS04-../S04S	142.5	24	110.5	277.5	90	112	321	365	408.5	-
BS04-../S..06 (M, L)	170.5	26	123	307.5	99	119	349.5	410	447.5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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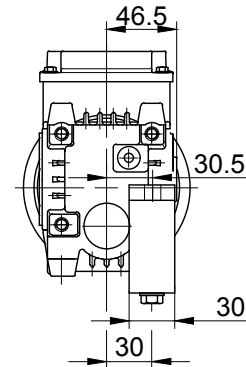
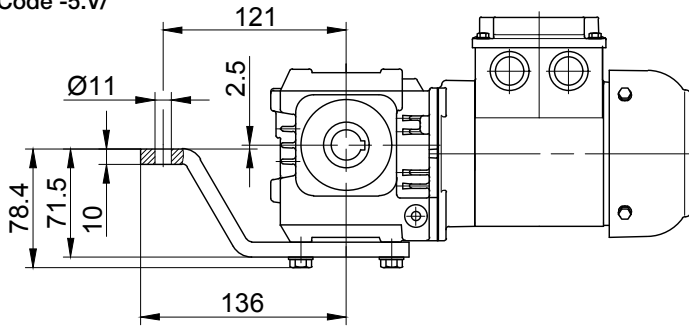


## Dimension - Standard

**BS04**

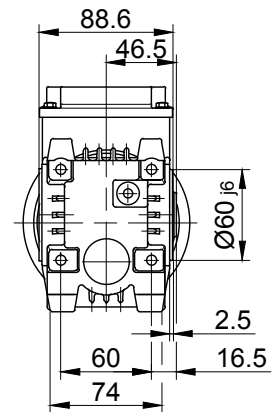
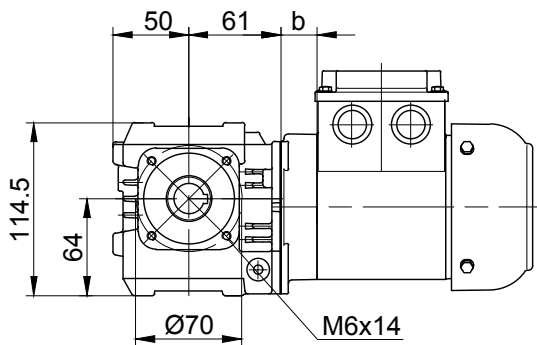
Torque arm at front

Code -5.V/



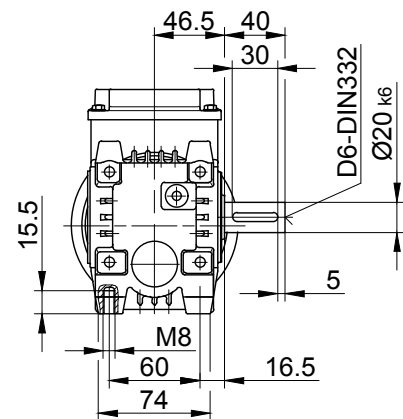
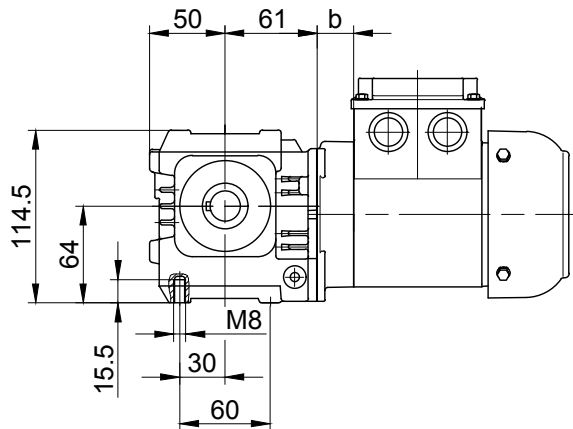
Flange with tapped holes at front

Code -7.V/



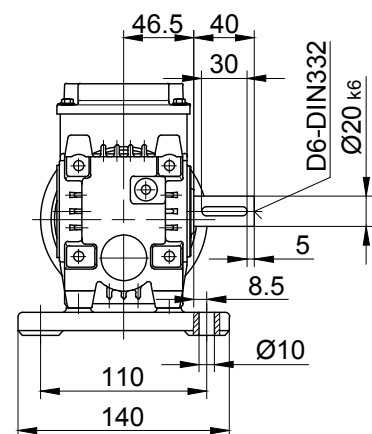
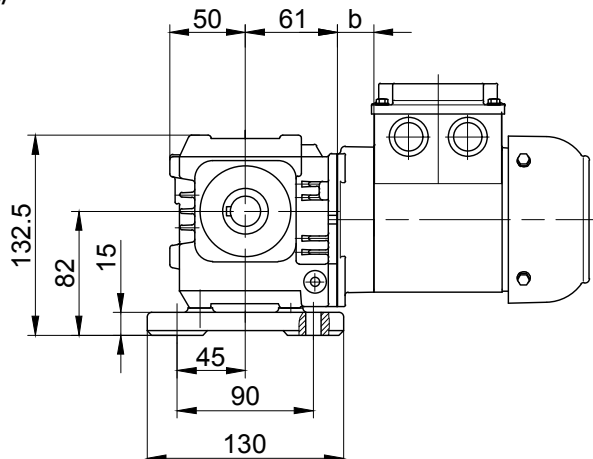
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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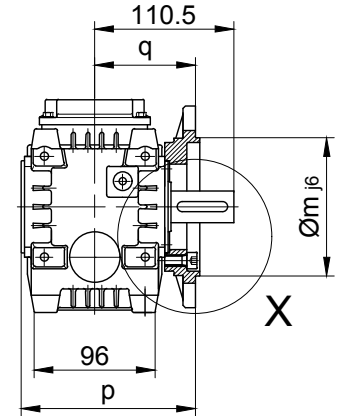
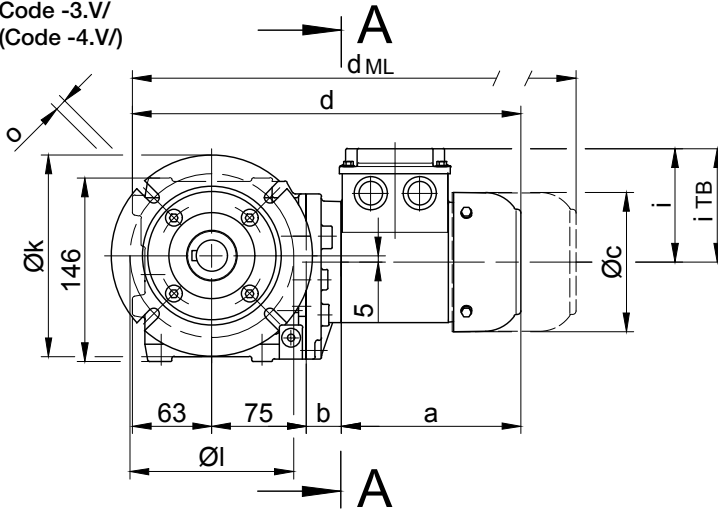
# BS-series Worm-geared motors

## Dimension - Standard

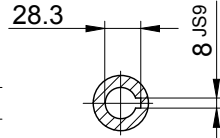
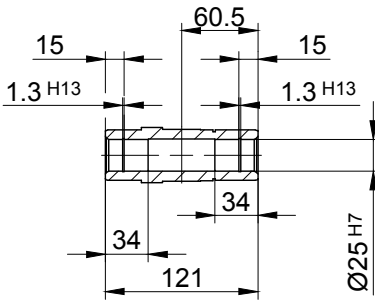
### BS06

Flange with clearance holes at front

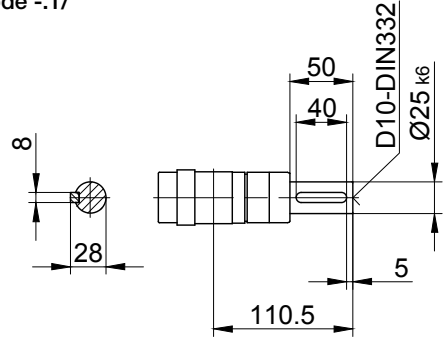
Code -3.V/  
(Code -4.V)



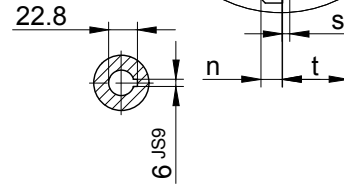
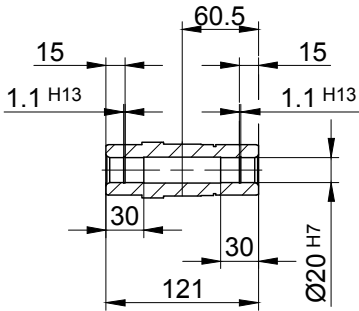
Code -4/  
Standard



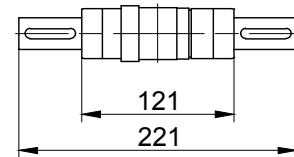
Code -1/



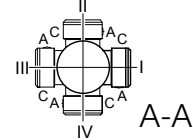
Code -4/K20



Code -3/



Standard



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BS06..	Code -3.V/	140	115	95	10	9	138.3	80	3	30.5	-
BS06..	Code -4.V/	160	130	110	10	9	138.3	80	3.5	30.5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i_TB	Brake	Encoder	Brake with Encoder	Back Stop
							d_ML	d_ML	d_ML	d_ML
BS06-../S04S	142.5	28	110.5	308.5	90	112	352	396	439.5	-
BS06-../S..06 (M, L)	170.5	30	123	338.5	99	119	380.5	441	478.5	-
BS06-../S..08 (M, L)	199.5	74	156	411.5	114.5	136.5	477.5	523.5	585	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

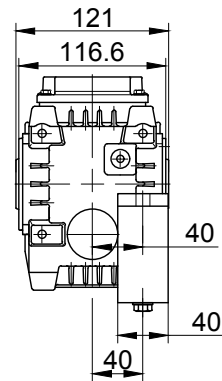
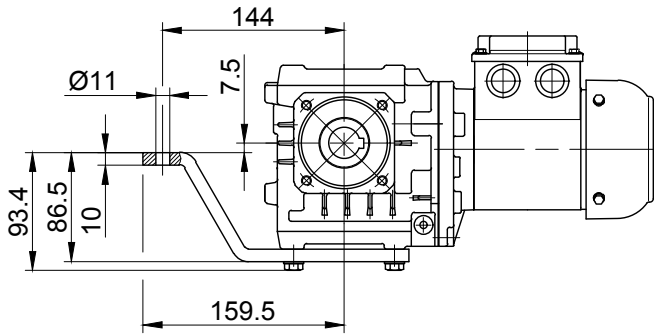
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# BS-series worm-geared motors

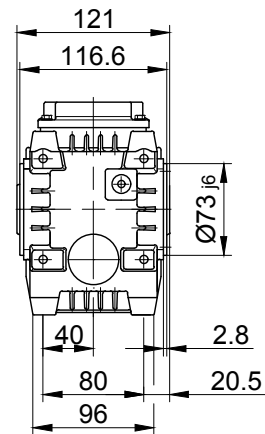
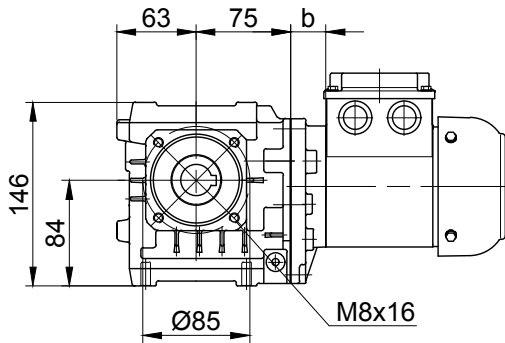
## Dimension - Standard

### BS06

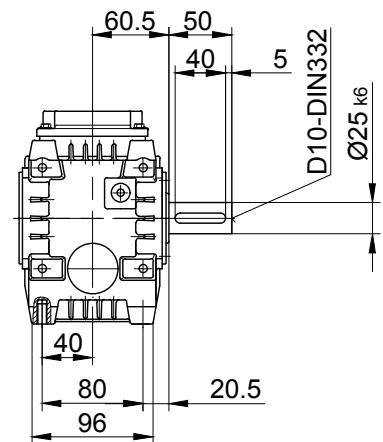
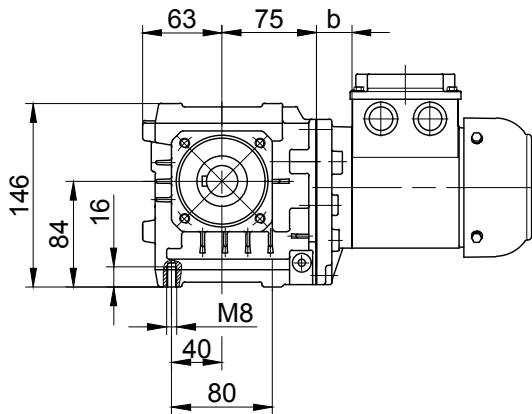
Torque arm at front  
Code -5.V/



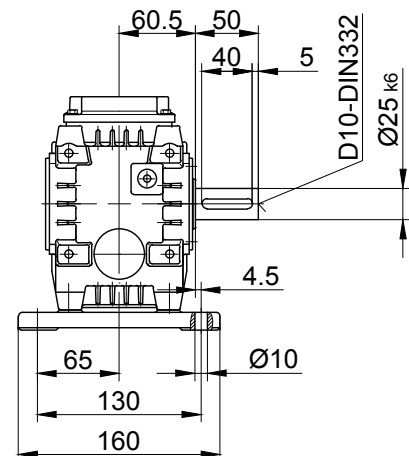
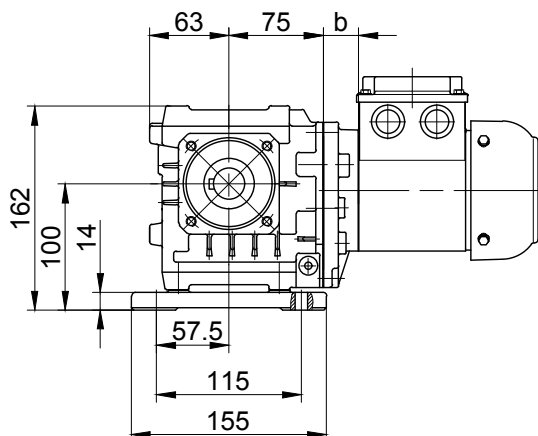
Flange with tapped holes at front  
Code -7.V/



Foot with tapped holes at bottom  
Code -6.U/



Foot with clearance holes at bottom  
Code -1.U/



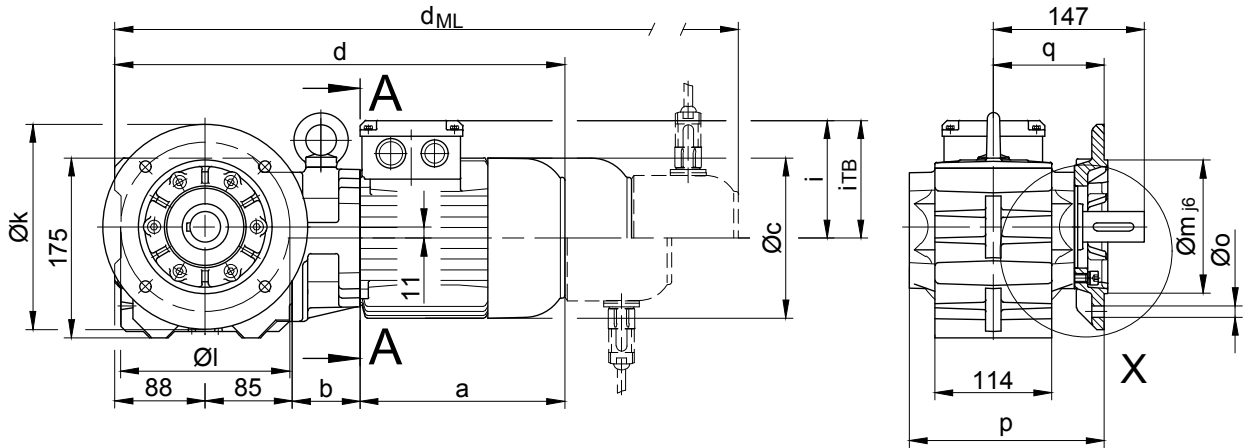
13

# BS-series worm-geared motors

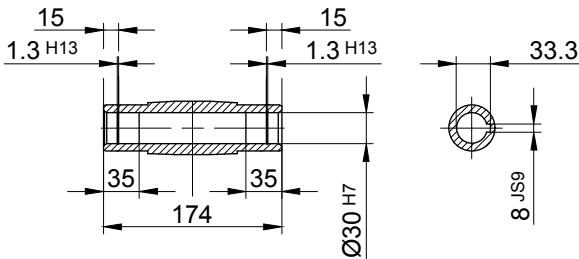
## Dimension - Standard

### BS10-BS10Z

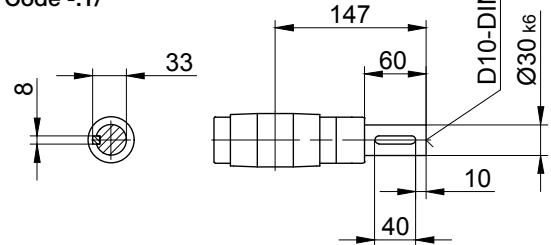
Flange with clearance holes at front  
Code -3.V/  
(Code -2.V)



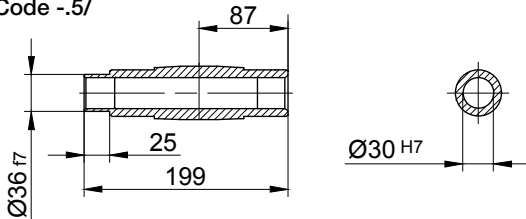
### Code -4/



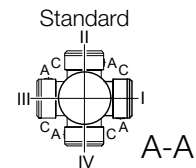
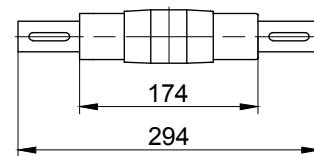
### Code -1/



### Code -5/



### Code -3/



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BS10..	Code -3.V/	200	165	130	12	11	190	108	3.5	39	-
BS10..	Code -2.V/	160	130	110	10	9	183	101	3.5	46	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						$i_{TB}$	Brake	Encoder	Brake with Encoder	Back Stop
							$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$
BS10Z-../S04S	142.5	86	110.5	401.5	90	112	445	489	532.5	-
BS10-../S..06 (M, L)	170.5	62	123	405.5	99	119	447.5	508	545.5	-
BS10Z-../S..06 (M, L)	170.5	88	123	431.5	99	119	473.5	534	571.5	-
BS10-../S..08 (M, L)	199.5	66	156	438.5	114.5	136.5	504.5	550.5	612	-
BS10Z-../S..08 (M, L)	199.5	132	156	504.5	114.5	136.5	570.5	616.5	678	-
BS10-../S..09 (S, X)	250.5	80.5	176	504	124	157	597	611.5	701	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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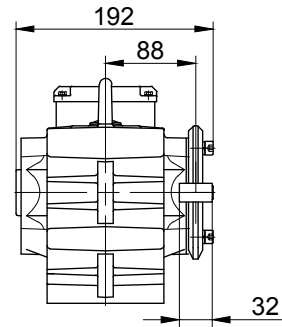
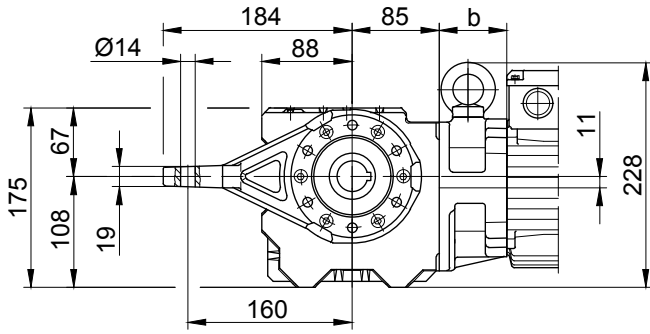
# BS-series worm-geared motors

## Dimension - Standard

### BS10-BS10Z

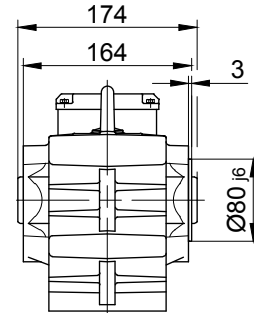
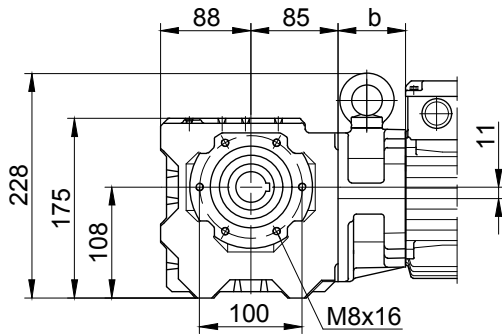
Torque arm at front

Code -5.V/



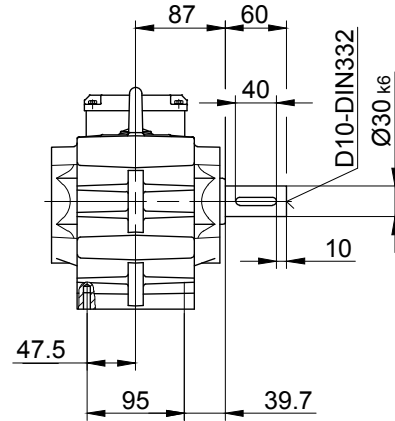
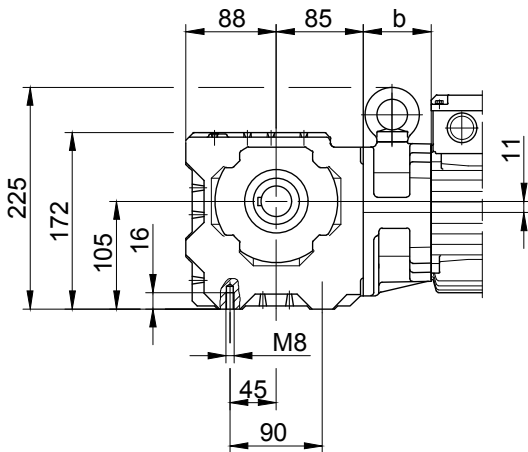
Flange with tapped holes at front

Code -7.V/



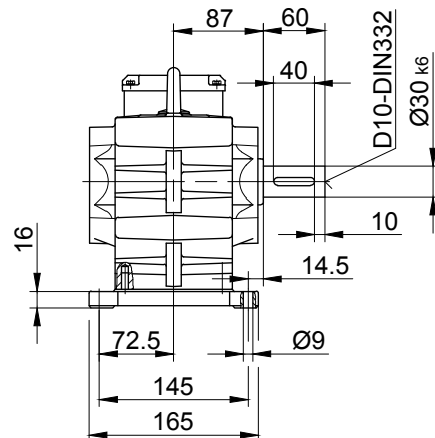
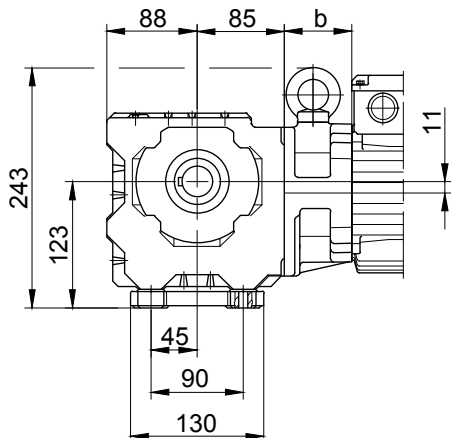
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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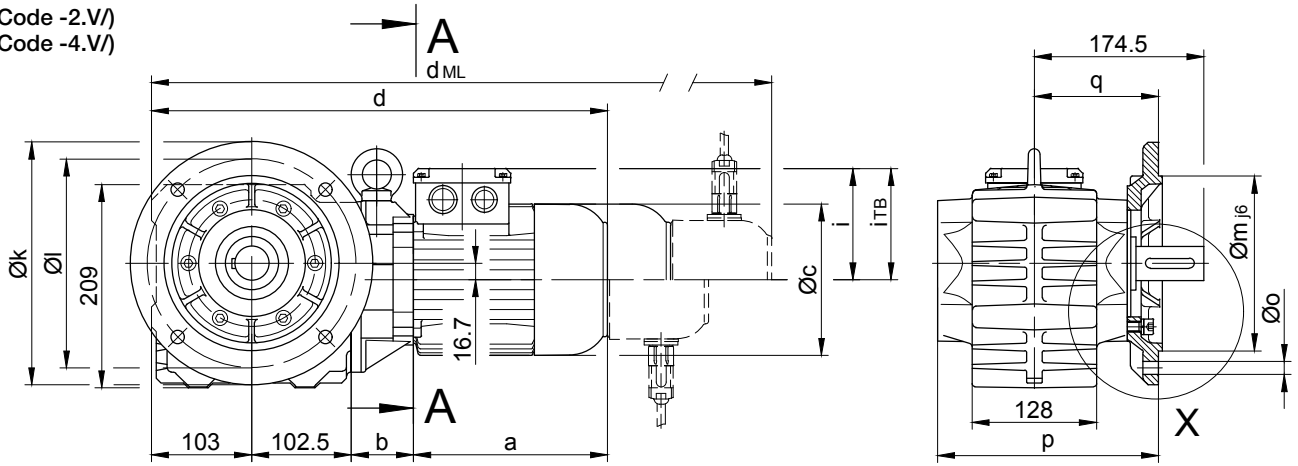
# BS-series Worm-geared motors

## Dimension - Standard

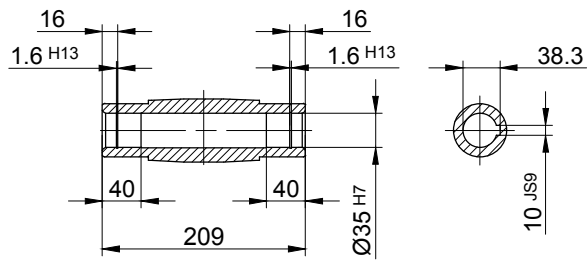
### BS20-BS20Z

Flange with clearance holes at front

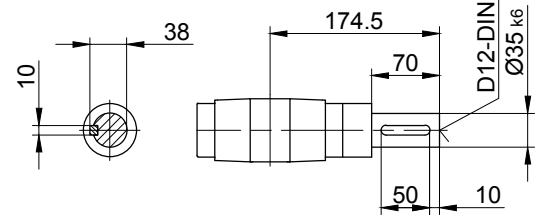
Code -3.V/  
(Code -2.V/  
(Code -4.V/)



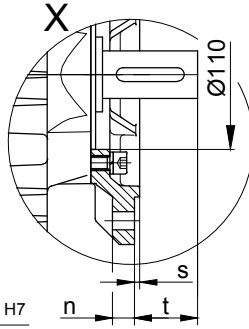
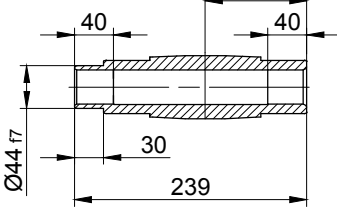
### Code -4/



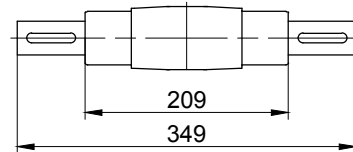
### Code -1/



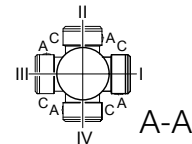
### Code -5/



### Code -3/



### Standard



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BS20..	Code -3.V/	250	215	180	16	13.5	227.5	128	4	46.5	-
BS20..	Code -2.V/	200	165	130	12	11	224.5	125	3.5	49.5	-
BS20..	Code -4.V/	300	265	230	20	13.5	233.5	134	4	40.5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BS20Z-../S04S	142.5	100	110.5	448	90	112	491.5	535.5	579	-
BS20-../S..06 (M, L)	170.5	60	123	436	99	119	478	538.5	576	-
BS20Z-../S..06 (M, L)	170.5	102	123	478	99	119	520	580.5	618	-
BS20-../S..08 (M, L)	199.5	64	156	469	114.5	136.5	535	581	642.5	-
BS20Z-../S..08 (M, L)	199.5	146	156	551	114.5	136.5	617	663	724.5	-
BS20-../S..09 (S, X)	250.5	78.5	176	534.5	124	157	627.5	642	731.5	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedopt.com

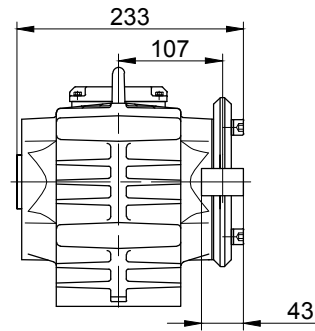
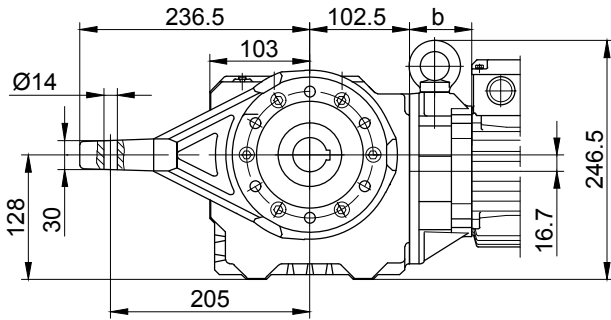
# BS-series worm-gear motors

## Dimension - Standard

### BS20-BS20Z

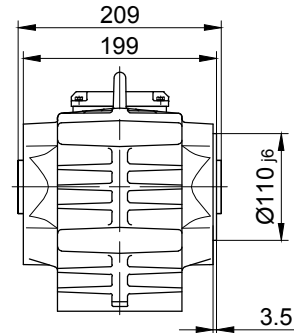
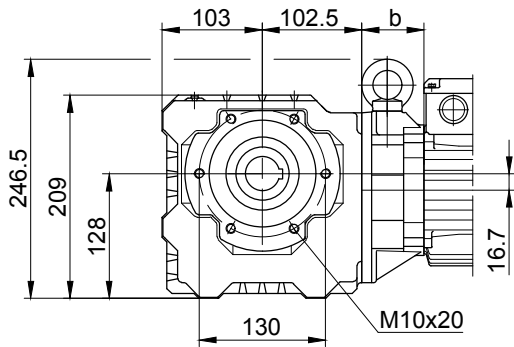
Torque arm at front

Code -5.V/



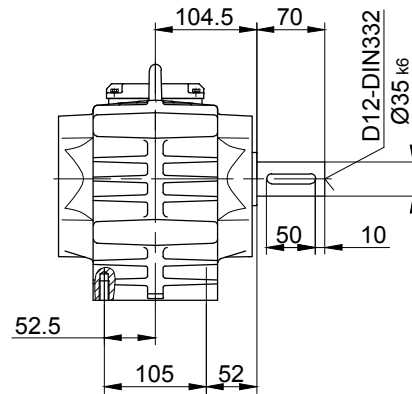
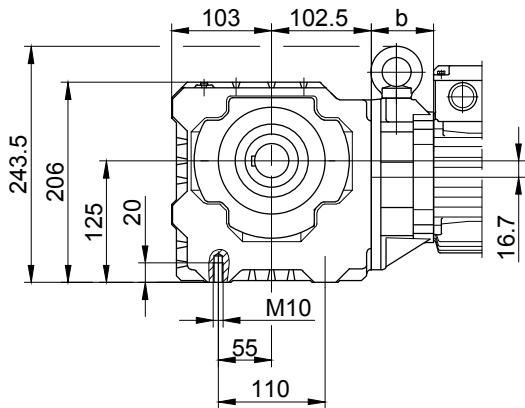
Flange with tapped holes at front

Code -7.V/



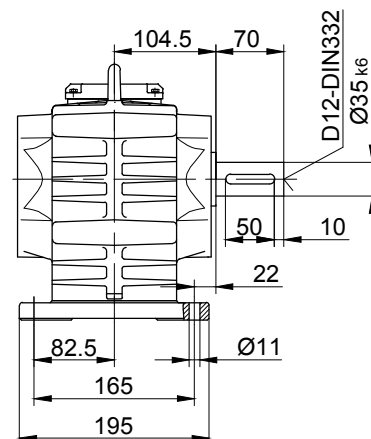
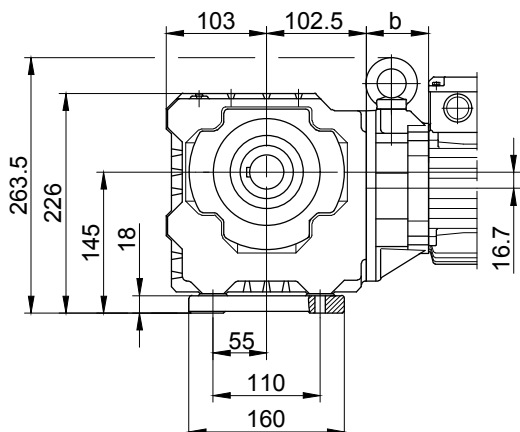
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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# BS-series Worm-geared motors

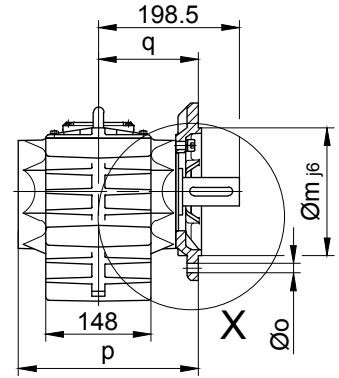
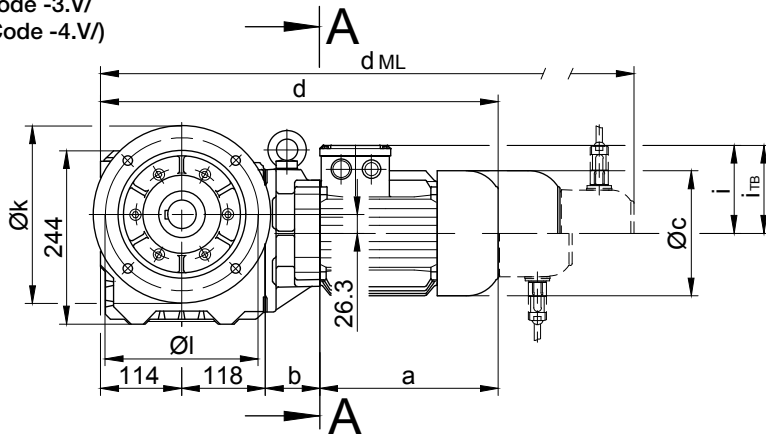
## Dimension - Standard

### BS30-BS30Z

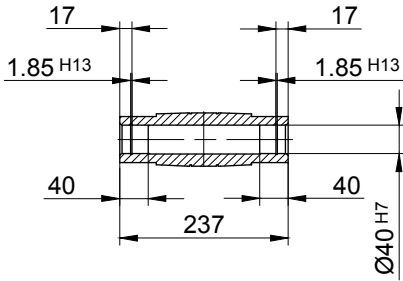
Flange with clearance holes at front

Code -3.V/

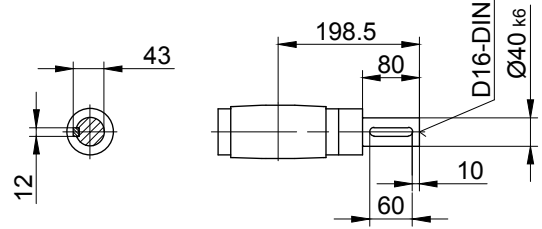
(Code -4.V/)



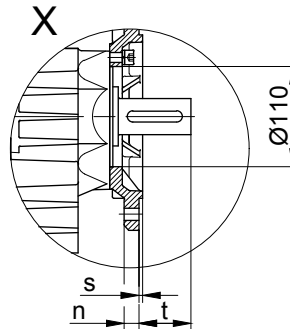
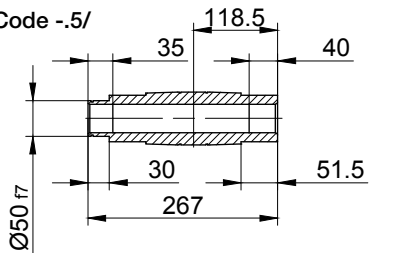
Code -4/



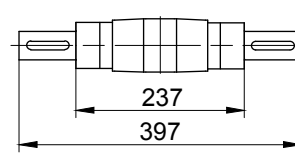
Code -1/



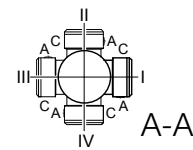
Code -5/



Code -3/



Standard



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BS30..	Code -3.V/	250	215	180	16	13.5	253.5	141	4	57.5	-
BS30..	Code -4.V/	300	265	230	20	13.5	259.5	147	4	51.5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BS30-../S..06 (M, L)	170.5	58	123	460.5	99	119	502.5	563	600.5	-
BS30Z-../S..06 (M, L)	170.5	133.5	123	536	99	119	578	638.5	676	-
BS30-../S..08 (M, L)	199.5	62	156	493.5	114.5	136.5	559.5	605.5	667	-
BS30Z-../S..08 (M, L)	199.5	137.5	156	569	114.5	136.5	635	681	742.5	-
BS30-../S..09 (S, X)	250.5	76.5	176	559	124	157	652	666.5	756	-
BS30Z-../S..09 (S, X)	250.5	152	176	634.5	124	157	727.5	742	831.5	-
BS30-../S..11 (S, M, L)	319	83	218	634	165	176	732	741.5	834	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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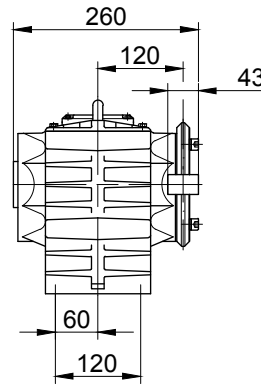
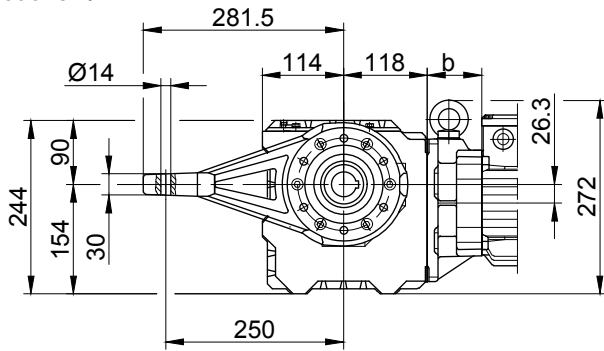
# BS-series worm-gear motors

## Dimension - Standard

### BS30-BS30Z

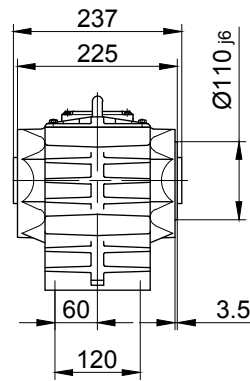
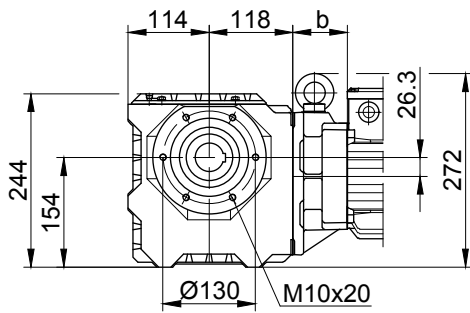
Torque arm at front

Code -5.V/



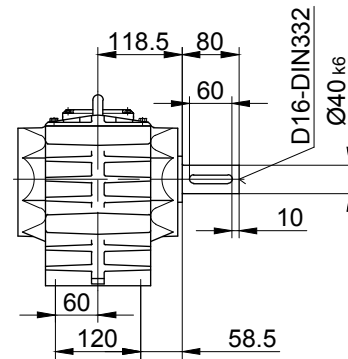
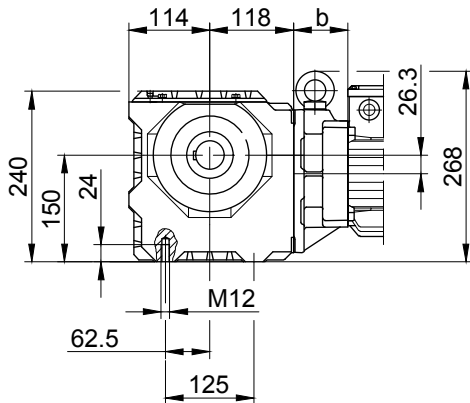
Flange with tapped holes at front

Code -7.V/



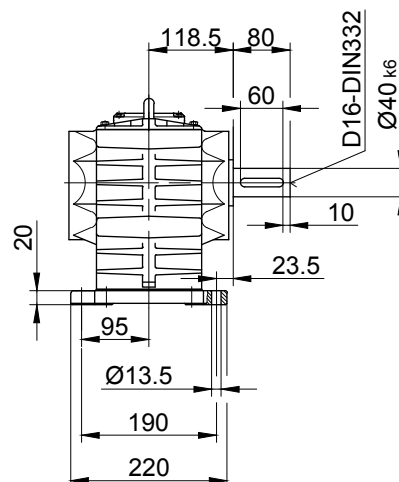
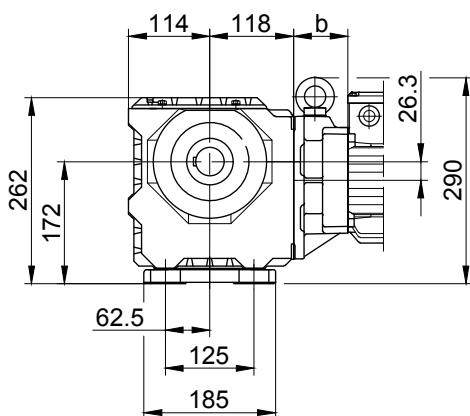
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



13

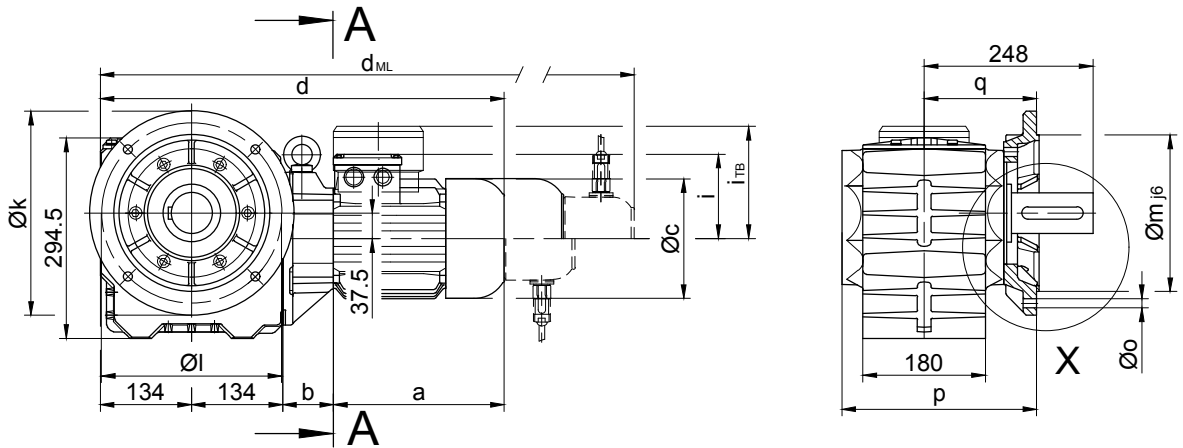
# BS-series Worm-geared motors

## Dimension - Standard

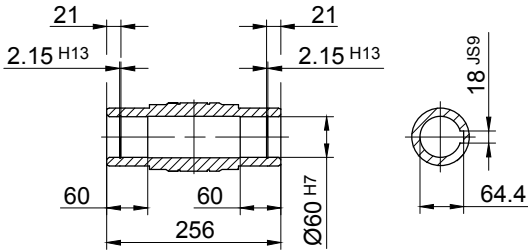
### BS40-BS40Z

Flange with clearance holes at front

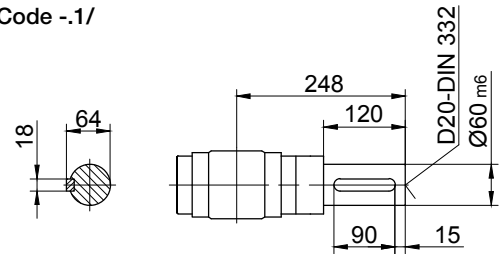
Code -3.V/



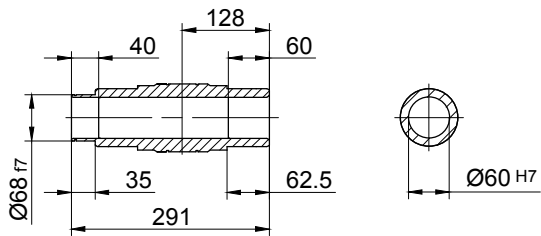
### Code -4/



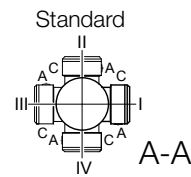
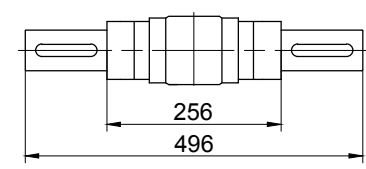
### Code -.1/



### Code -5/



### Code -3/



Type	Design	k	l	m	n	o	p	q	s	t	z
BS40..	Code -3.V/	300	265	230	20	13.5	286	165	4	83	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BS40Z-../S..06 (M, L)	170.5	138.5	123	577	99	119	619	679.5	717	-
BS40-../S..08 (M, L)	199.5	60	156	527.5	114.5	136.5	593.5	639.5	701	-
BS40Z-../S..08 (M, L)	199.5	142.5	156	610	114.5	136.5	676	722	783.5	-
BS40-../S..09 (S, X)	250.5	74.5	176	593	124	157	686	700.5	790	-
BS40Z-../S..09 (S, X)	250.5	157	176	675.5	124	157	768.5	783	872.5	-
BS40-../S..11 (S, M, L)	319	81	218	668	165	176	766	775.5	868	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

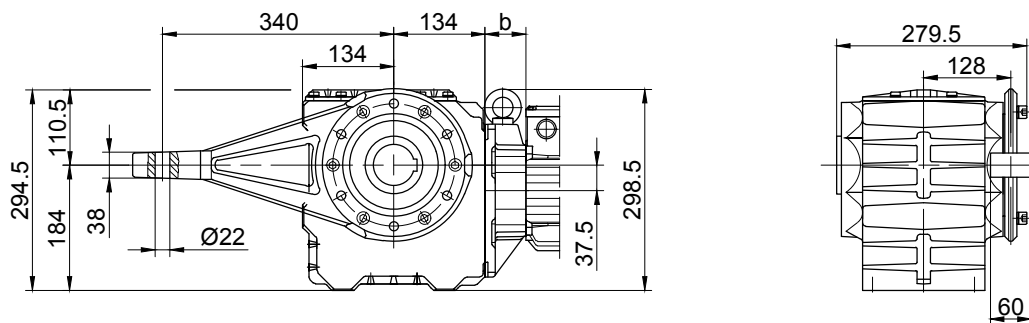
Send Quote Requests to info@automatedopt.com

## Dimension - Standard

**BS40-BS40Z**

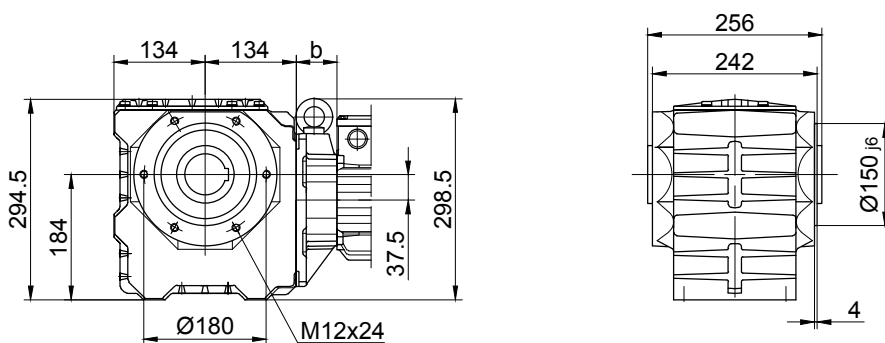
Torque arm at front

Code -5.V/



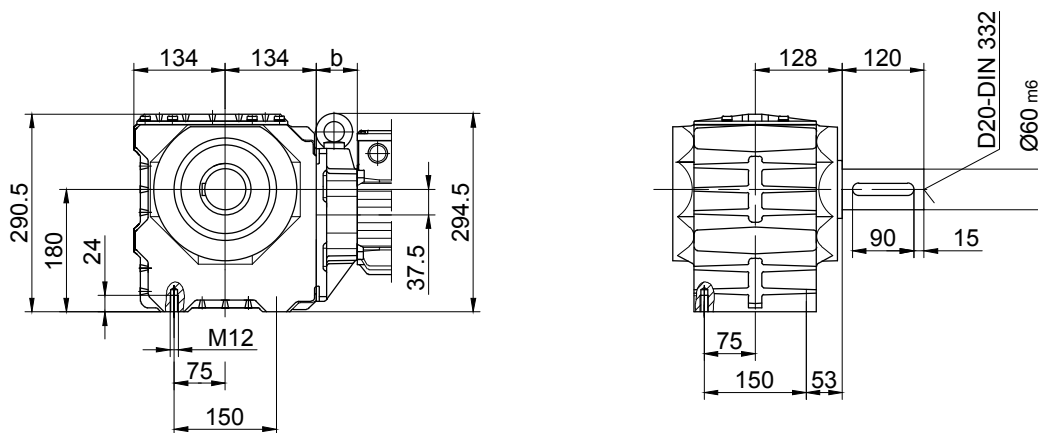
Flange with tapped holes at front

Code -7.V/



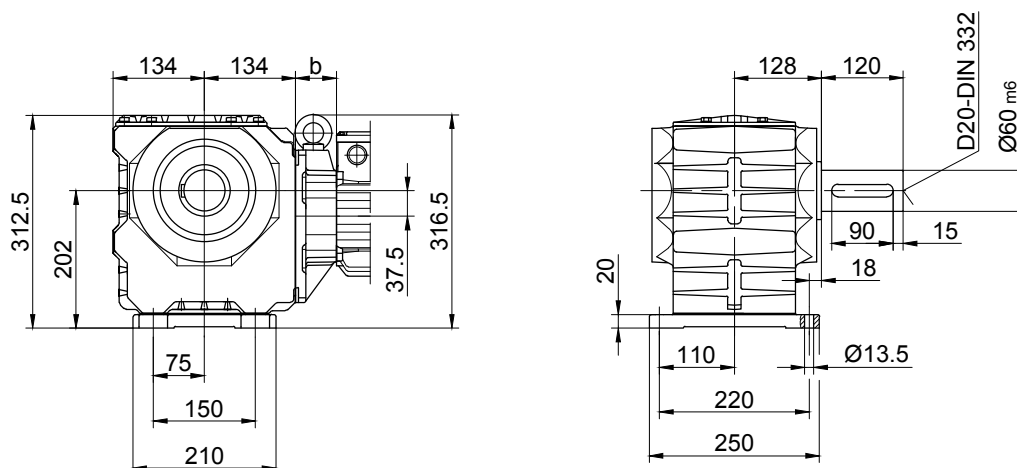
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

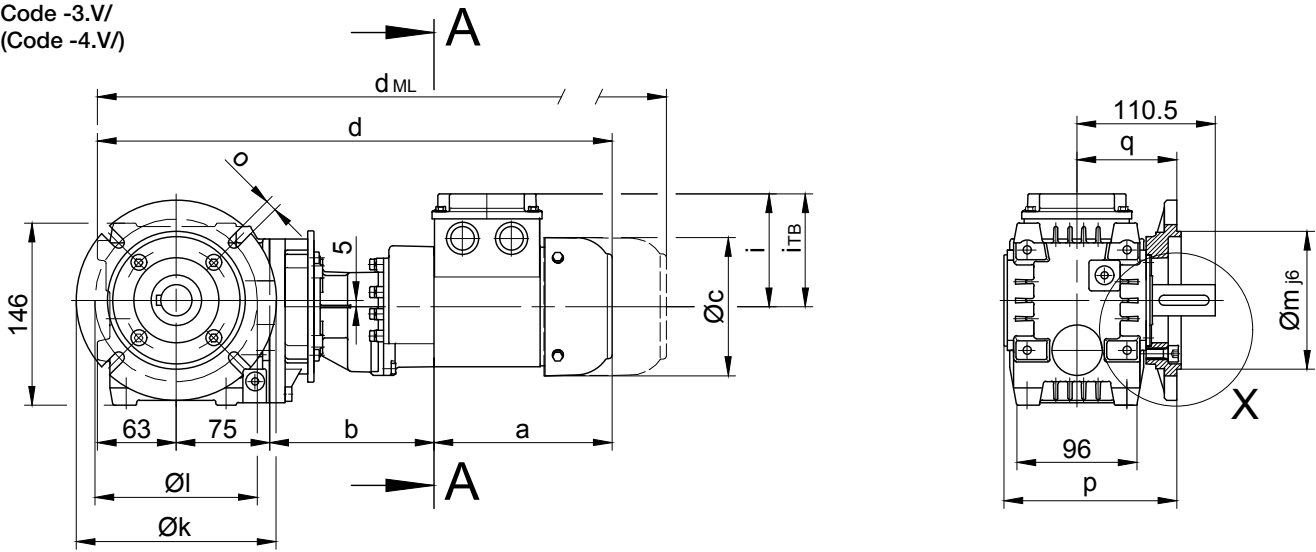
Send Quote Requests to info@automatedpt.com

# BS-series Worm-geared motors

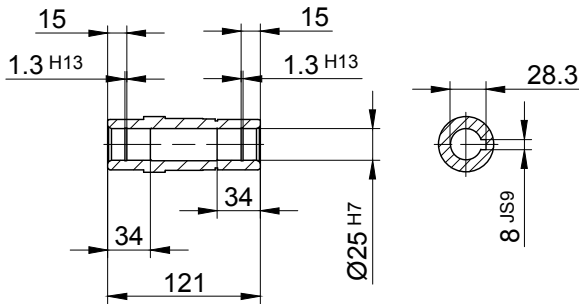
## Dimension - Tandem Gearbox

### BS06G04

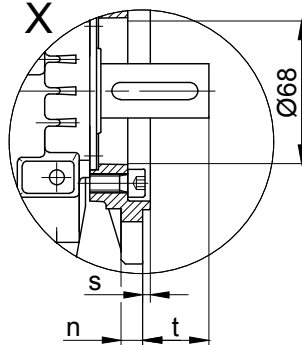
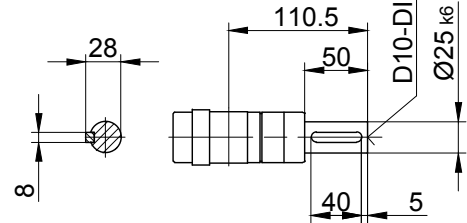
Flange with clearance holes at front  
Code -3.V/  
(Code -4.V)



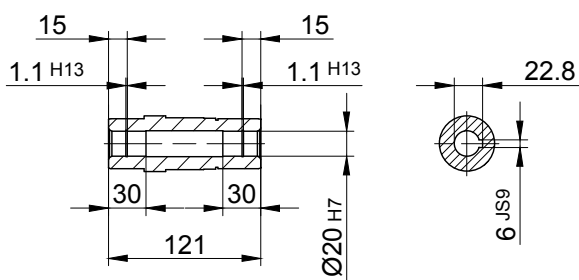
Code -4/  
Standard



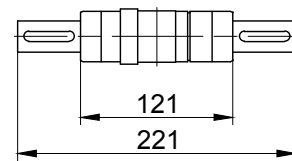
Code -.1/



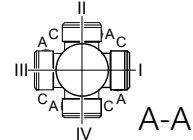
Code -4/K20



Code -3/



Standard



Type	Design	k	l	m	n	o	p	q	s	t	z
BS06..	Code -3.V/	140	115	95	10	9	138,3	80	3	30,5	-
BS06..	Code -4.V/	160	130	110	10	9	138,3	80	3,5	30,5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
							d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BS06G04-.../S04S	142.5	131	110.5	411.5	90	112	455	499	542.5	-

Dimensions in millimetres (mm)

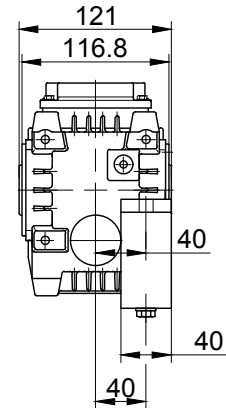
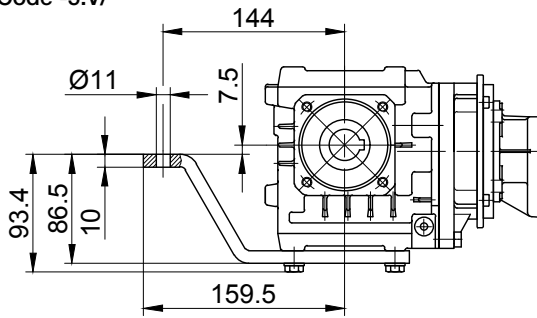
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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**BS-series worm-gearred motors****Dimension - Tandem Gearbox****BS06G04**

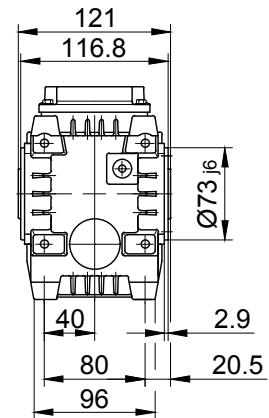
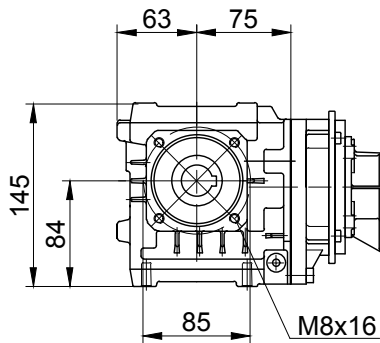
Torque arm at front

Code -5.V/



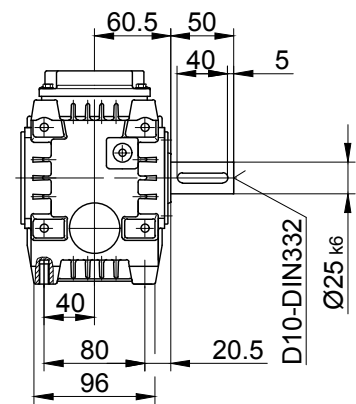
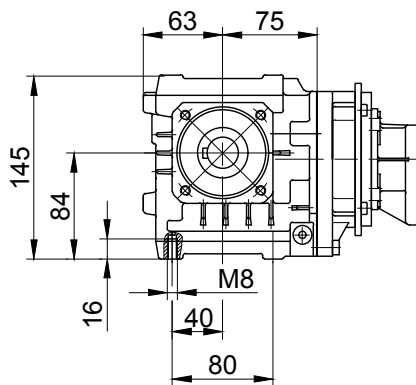
Flange with tapped holes at front

Code -7.V/



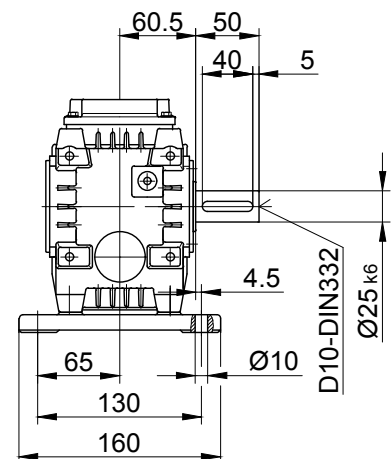
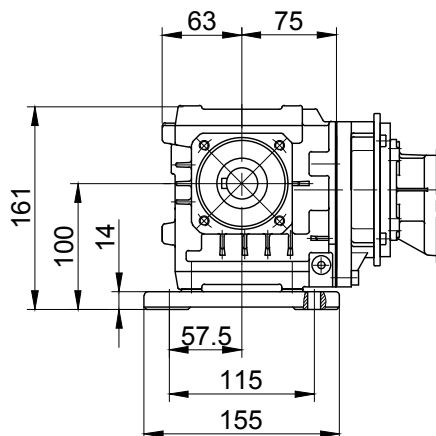
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



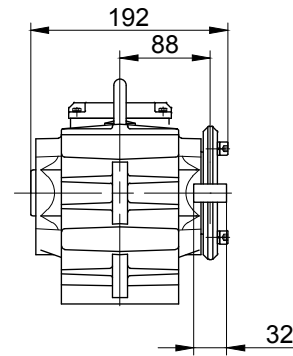
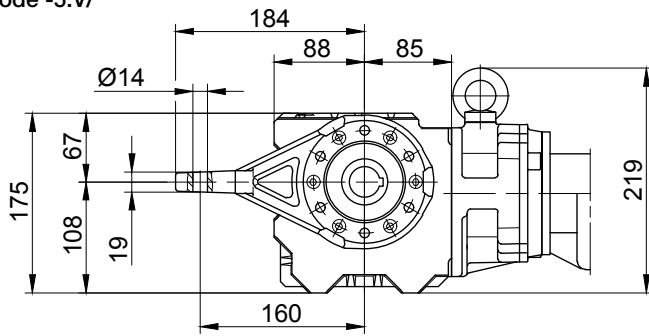




**BS-series worm-gearred motors****Dimension - Tandem Gearbox****BS10G06**

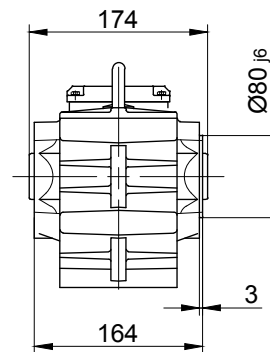
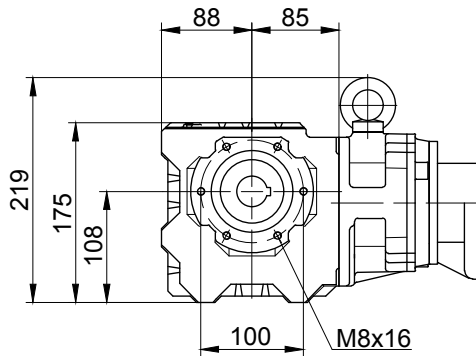
Torque arm at front

Code -5.V/



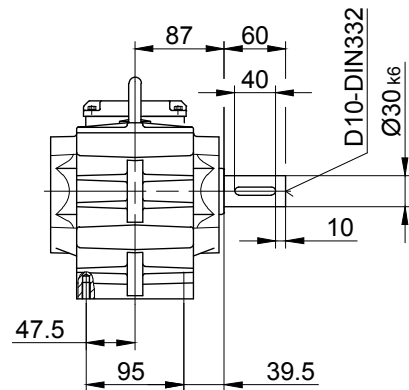
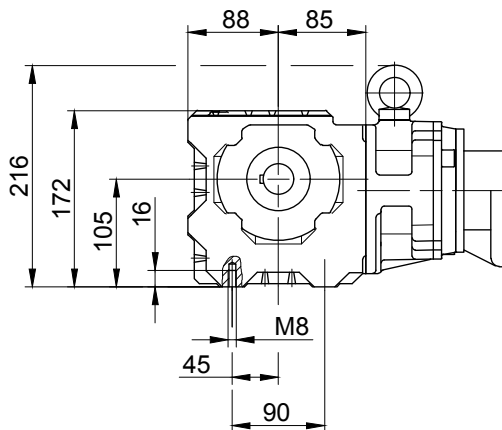
Flange with tapped holes at front

Code -7.V/



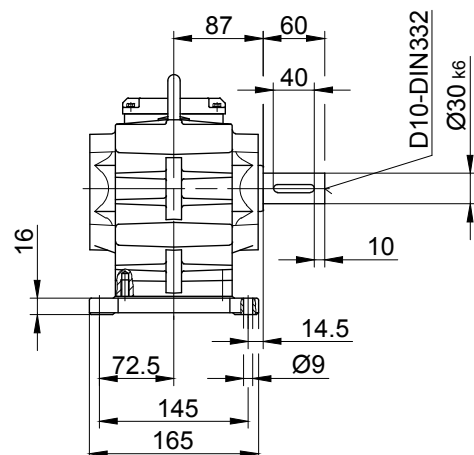
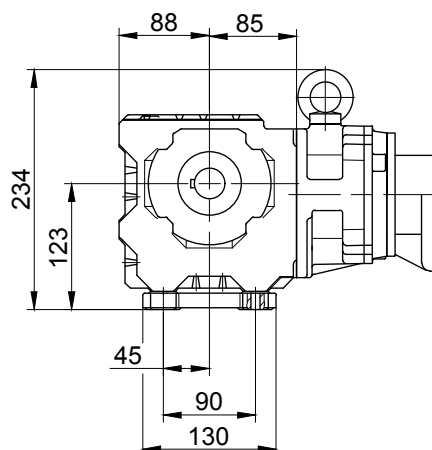
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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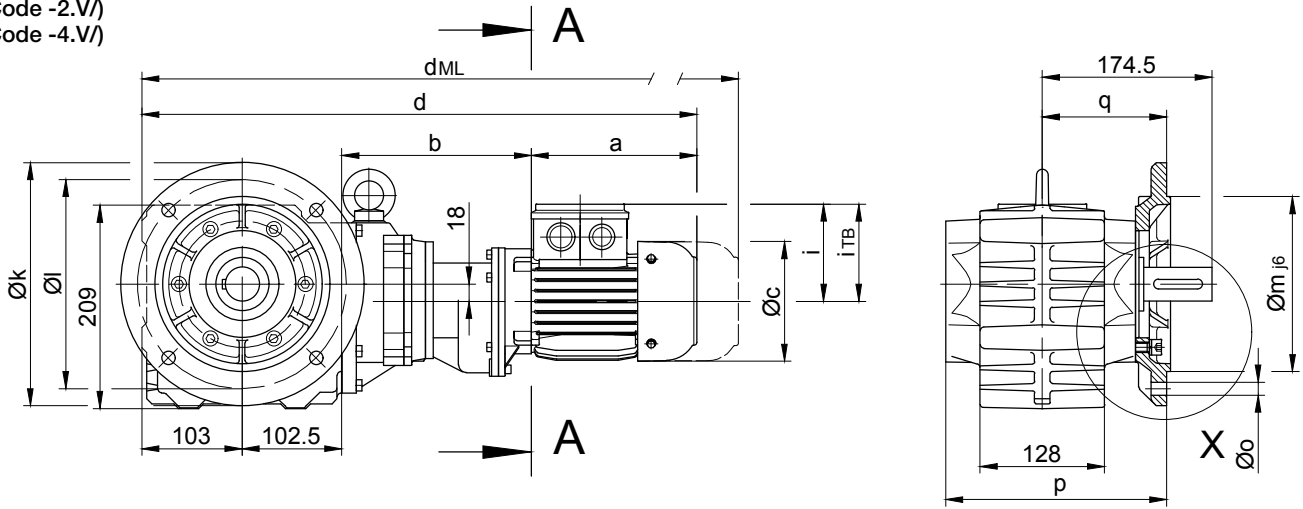
# BS-series worm-geared motors

## Dimension - Tandem Gearbox

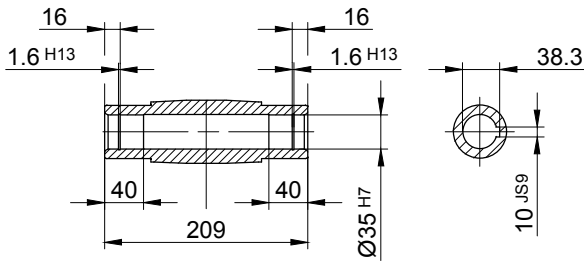
### BS20G06

Flange with clearance holes at front

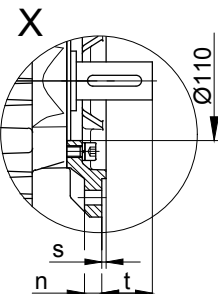
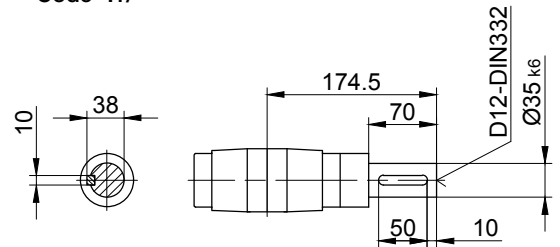
Code -3.V/  
(Code -2.V)  
(Code -4.V)



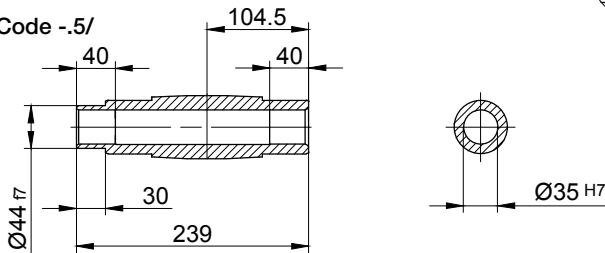
#### Code -4/



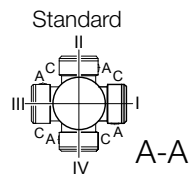
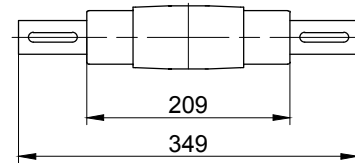
#### Code -.1/



#### Code -5/



#### Code -.3/



Type	Design	k	l	m	n	o	p	q	s	t	z
BS20..	Code -3.V/	250	215	180	16	13,5	227,5	128	4	46,5	-
BS20..	Code -2.V/	200	165	130	12	11	224,5	125	3,5	49,5	-
BS20..	Code -4.V/	300	265	230	20	13,5	233,5	134	4	40,5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BS20G06-.../S04S	142.5	193	110.5	541	90	112	584.5	628.5	672	-
BS20G06-.../S..06 (M, L)	170.5	195	123	571	99	119	613	673.5	711	-
BS20G06-.../S..08 (M, L)	199.5	239	156	644	114.5	136.5	710	756	817.5	-

Dimensions in millimetres (mm)

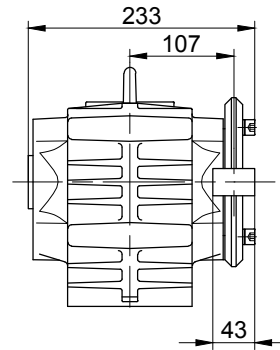
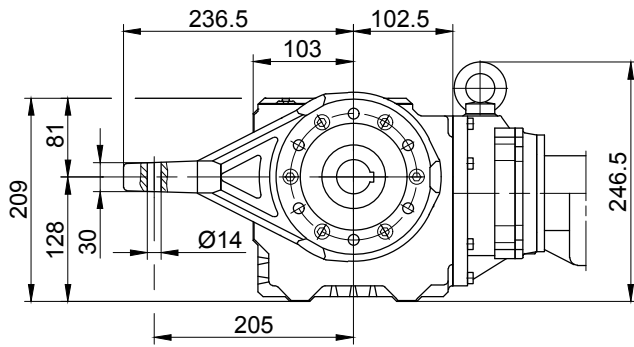
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

Send Quote Requests to info@automatedpt.com

**BS-series worm-gearred motors****Dimension - Tandem Gearbox****BS20G06**

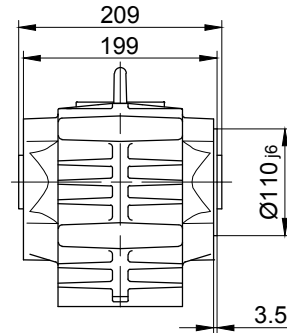
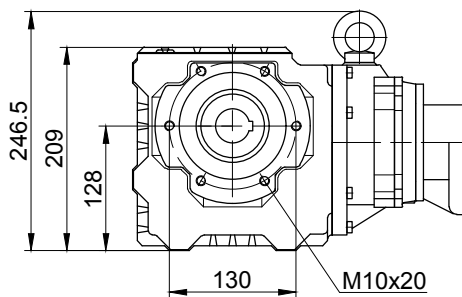
Torque arm at front

Code -5.V/



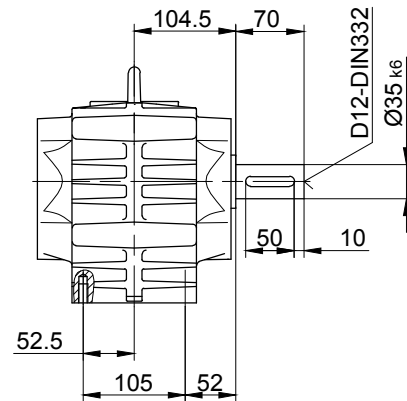
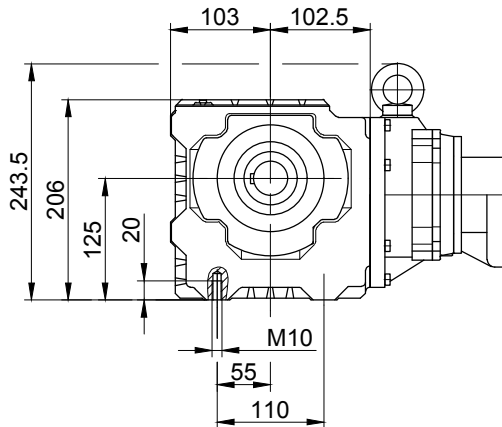
Flange with tapped holes at front

Code -7.V/



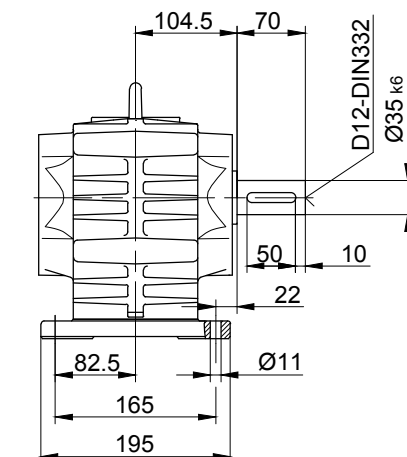
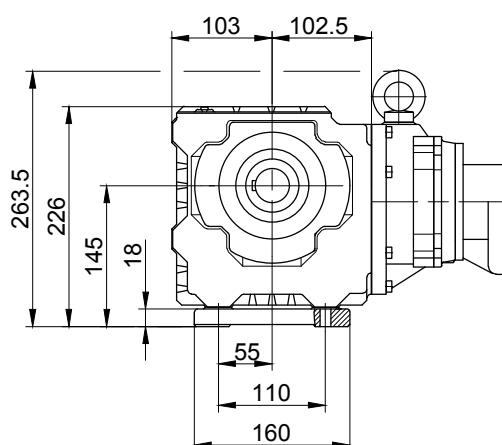
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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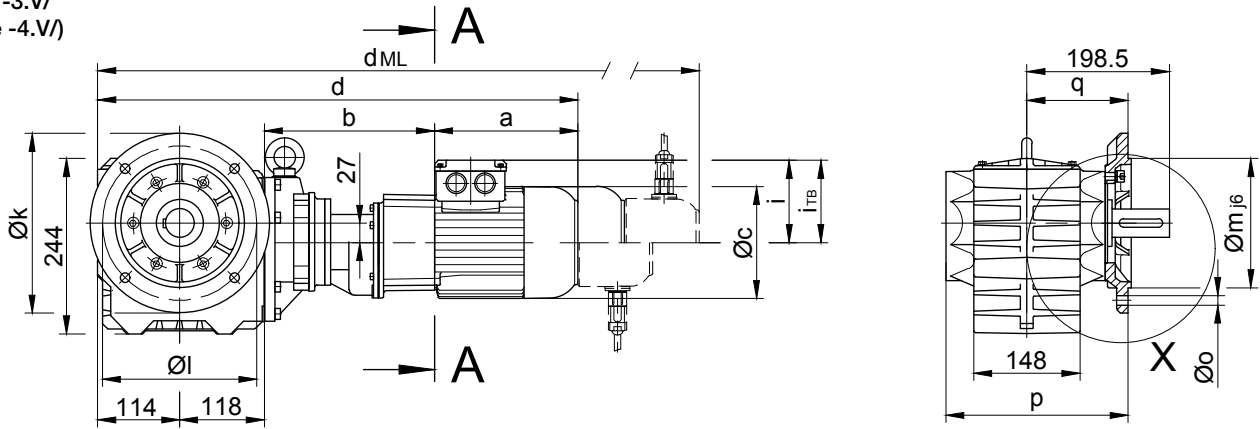
# BS-series Worm-geared motors

## Dimension - Tandem Gearbox

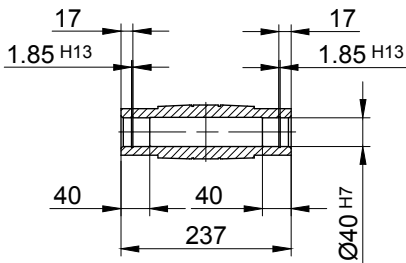
### BS30G06

Flange with clearance holes at front

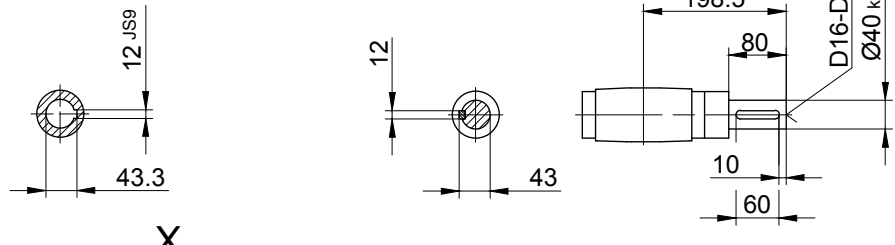
Code -3.V/  
(Code -4.V)



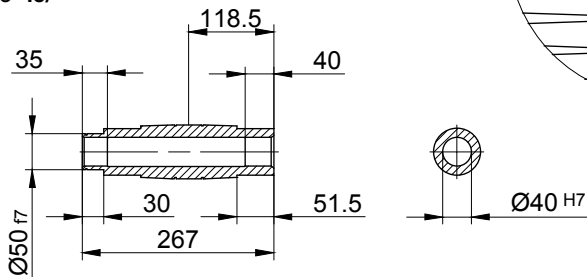
#### Code -4/



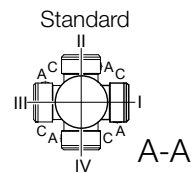
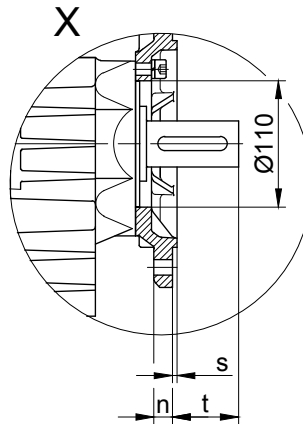
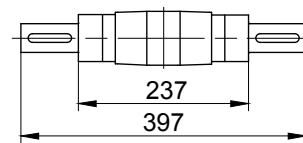
#### Code -1/



#### Code -5/



#### Code -3/



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BS30..	Code -3.V/	250	215	180	16	13,5	253,5	141	4	57,5	-
BS30..	Code -4.V/	300	265	230	20	13,5	259,5	147	4	51,5	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						i <sub>TB</sub>	Brake	Encoder	Brake with Encoder	Back Stop
						d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>	d <sub>ML</sub>
BS30G06-.../S04S	142.5	191	110.5	565.5	90	112	609	653	696.5	-
BS30G06-.../S..06 (M, L)	170.5	193	123	595.5	99	119	637.5	698	735.5	-
BS30G06-.../S..08 (M, L)	199.5	237	156	668.5	114.5	136.5	734.5	780.5	842	-

Dimensions in millimetres (mm)

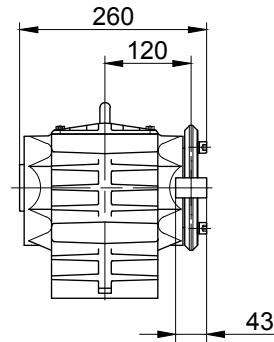
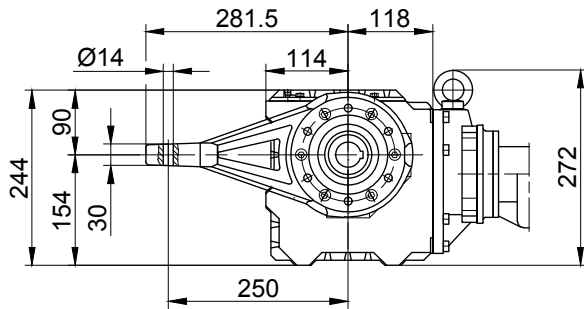
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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**BS-series worm-gearred motors****Dimension - Tandem Gearbox****BS30G06**

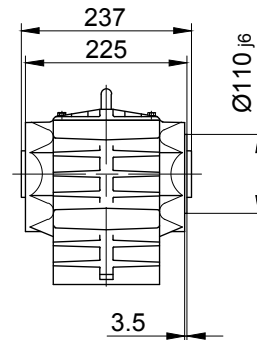
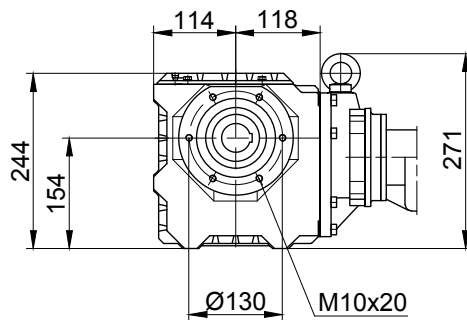
Torque arm at front

Code -5.V/



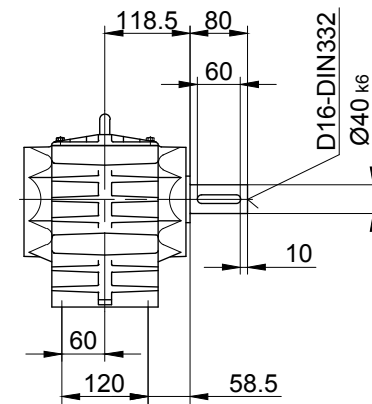
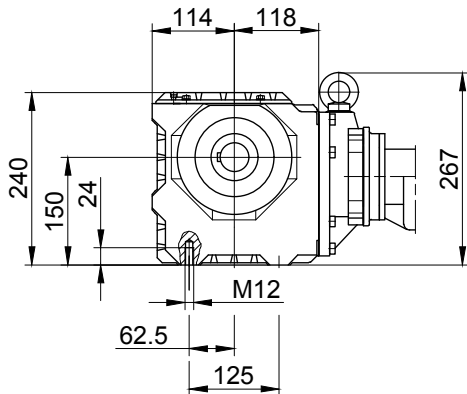
Flange with tapped holes at front

Code -7.V/



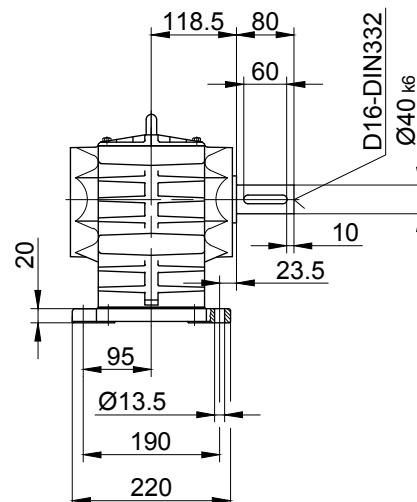
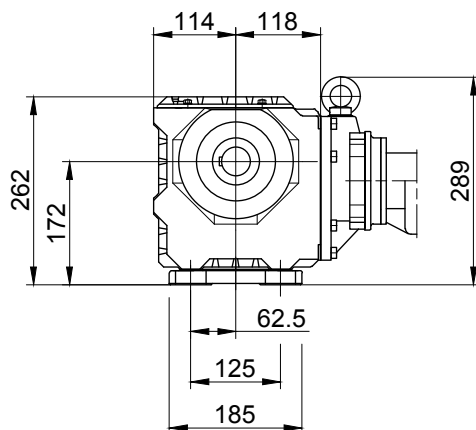
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under www.BauerCat.com.

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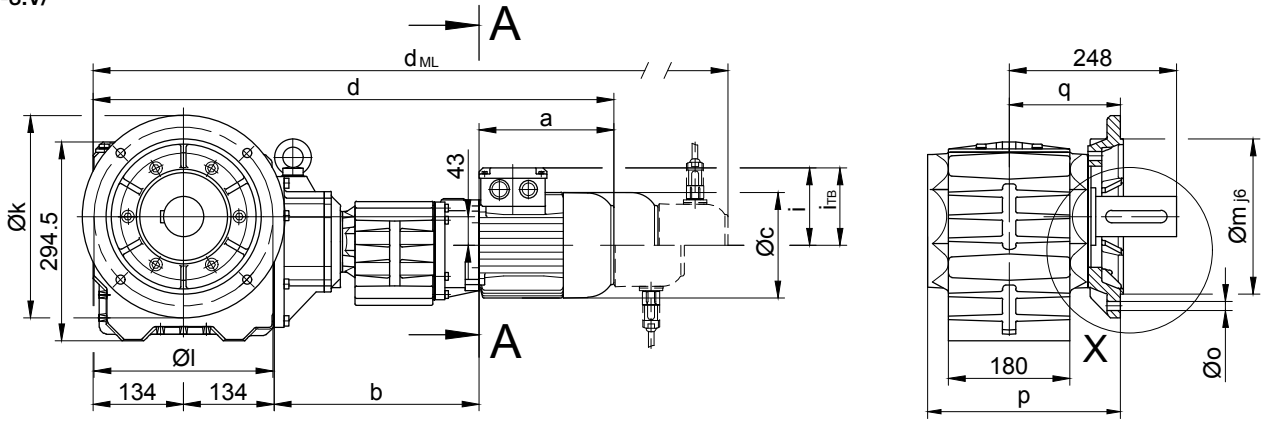
# BS-series Worm-geared motors

## Dimension - Tandem Gearbox

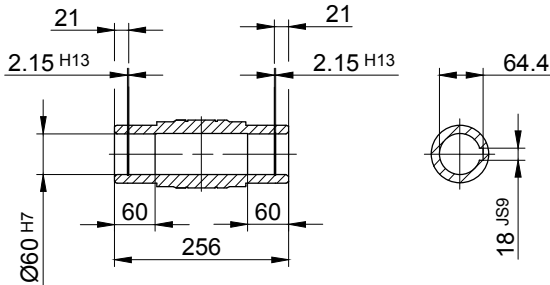
### BS40G10

Flange with clearance holes at front

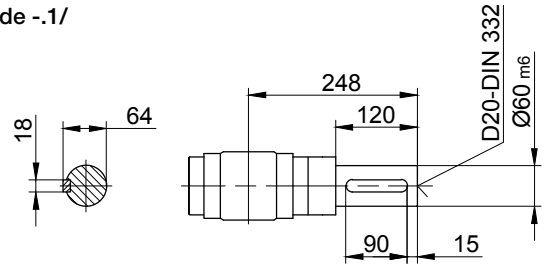
Code -3.V/



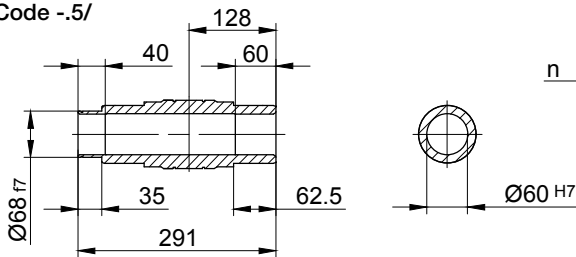
### Code -4/



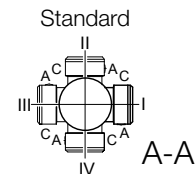
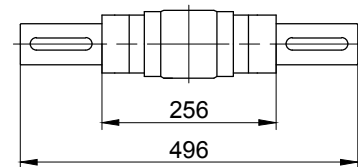
### Code -1/



### Code -5/



### Code -3/



Flange Dimensions											
Type	Design	k	l	m	n	o	p	q	s	t	z
BS40..	Code -3.V/	300	265	230	20	13,5	286	165	4	83	-

Dimensions in millimetres (mm)

Type	a	b	c	d	i	Design with motor extensions				
						$i_{TB}$	Brake	Encoder	Brake with Encoder	Back Stop
						$d_{ML}$	$d_{ML}$	$d_{ML}$	$d_{ML}$	
BS40G10-.../S..06 (M, L)	170.5	300	123	738.5	99	119	780.5	841	878.5	-
BS40G10-.../S..08 (M, L)	199.5	304	156	771.5	114.5	136.5	837.5	883.5	945	-
BS40G10-.../S..09 (S, X)	250.5	318.5	176	837	124	157	930	944.5	1034	-

Dimensions in millimetres (mm)

The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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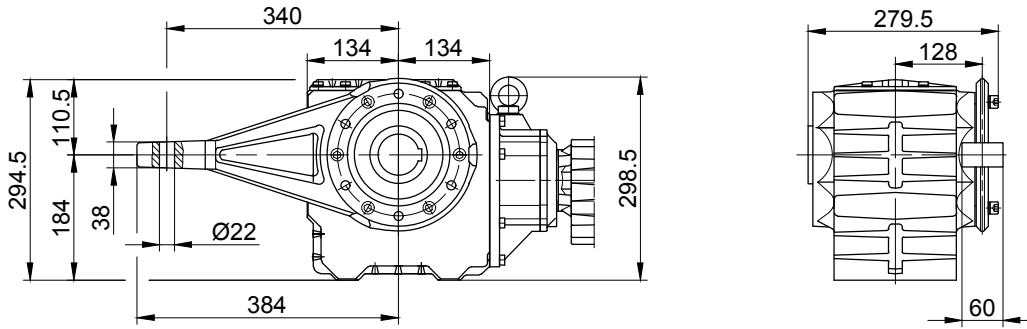
# BS-series worm-gearred motors

## Dimension - Tandem Gearbox

### BS40G10

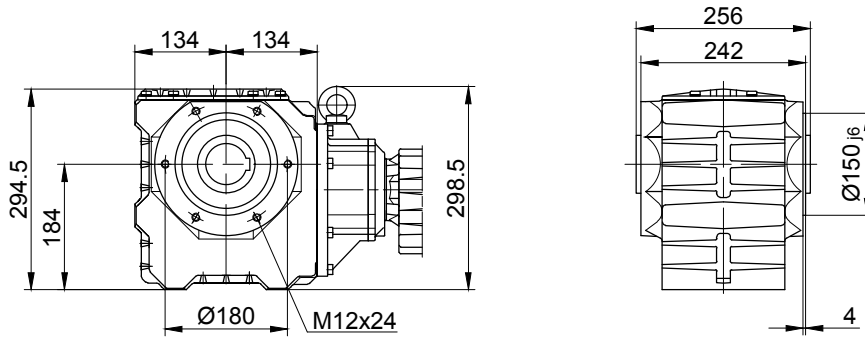
Torque arm at front

Code -5.V/



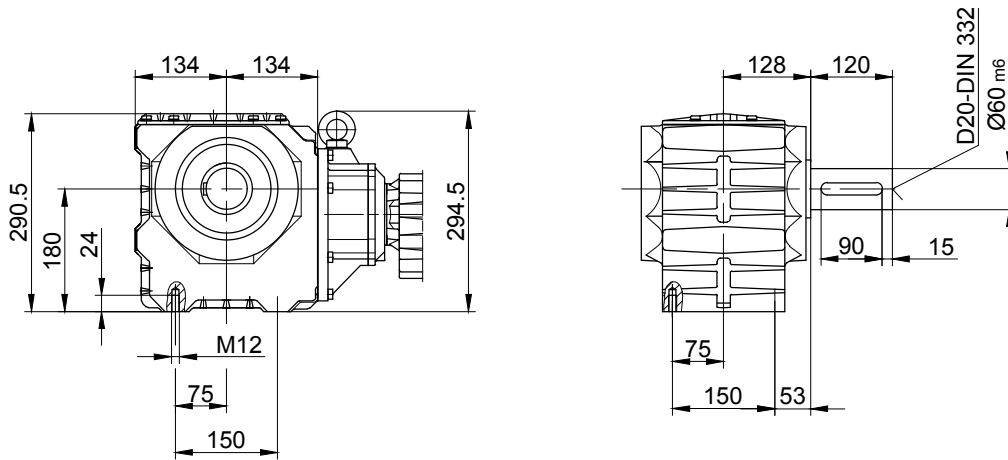
Flange with tapped holes at front

Code -7.V/



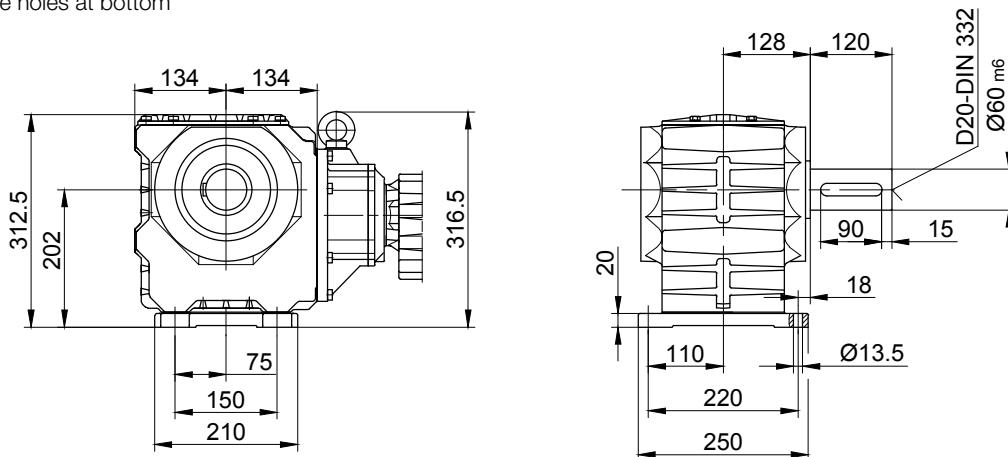
Foot with tapped holes at bottom

Code -6.U/



Foot with clearance holes at bottom

Code -1.U/



The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

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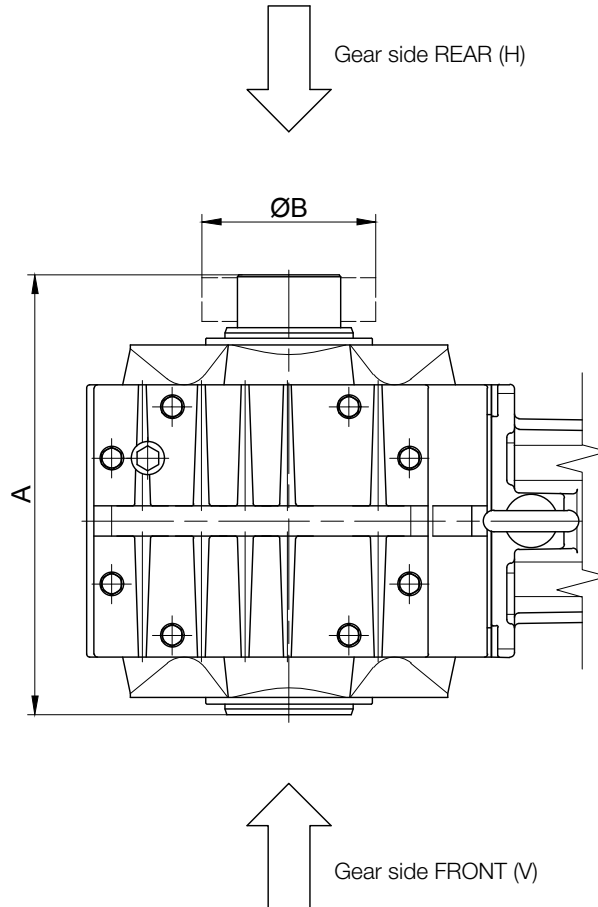


# BS-series Worm-geared motors

## Additional Dimension Sheet

### Shrink disc couplings (SSV)

(Code BS10-.5A/...)



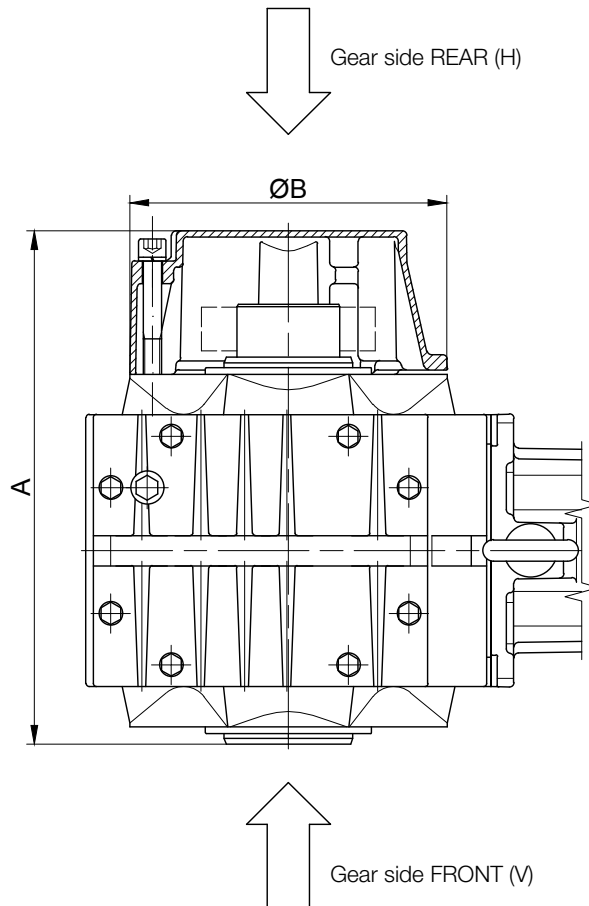
Type	SSV Ringfeder	SSV STÜWE	A	B
BS10	RfN 4161 036x072	HSD 36-22x36	199	72
BS20	RfN 4161 044x080	HSD 44-22x44	239	80
BS30	RfN 4161 050x090	HSD 50-22x50	267	90
BS40	RfN 4161 062x110	HSD 68-22x68	291	115
Dimensions in millimetres (mm)				

# BS-series worm-geared motors

## Additional Dimension Sheet

### Shrink disc couplings with (SSV) cover

(Code BS10-.5A/...)



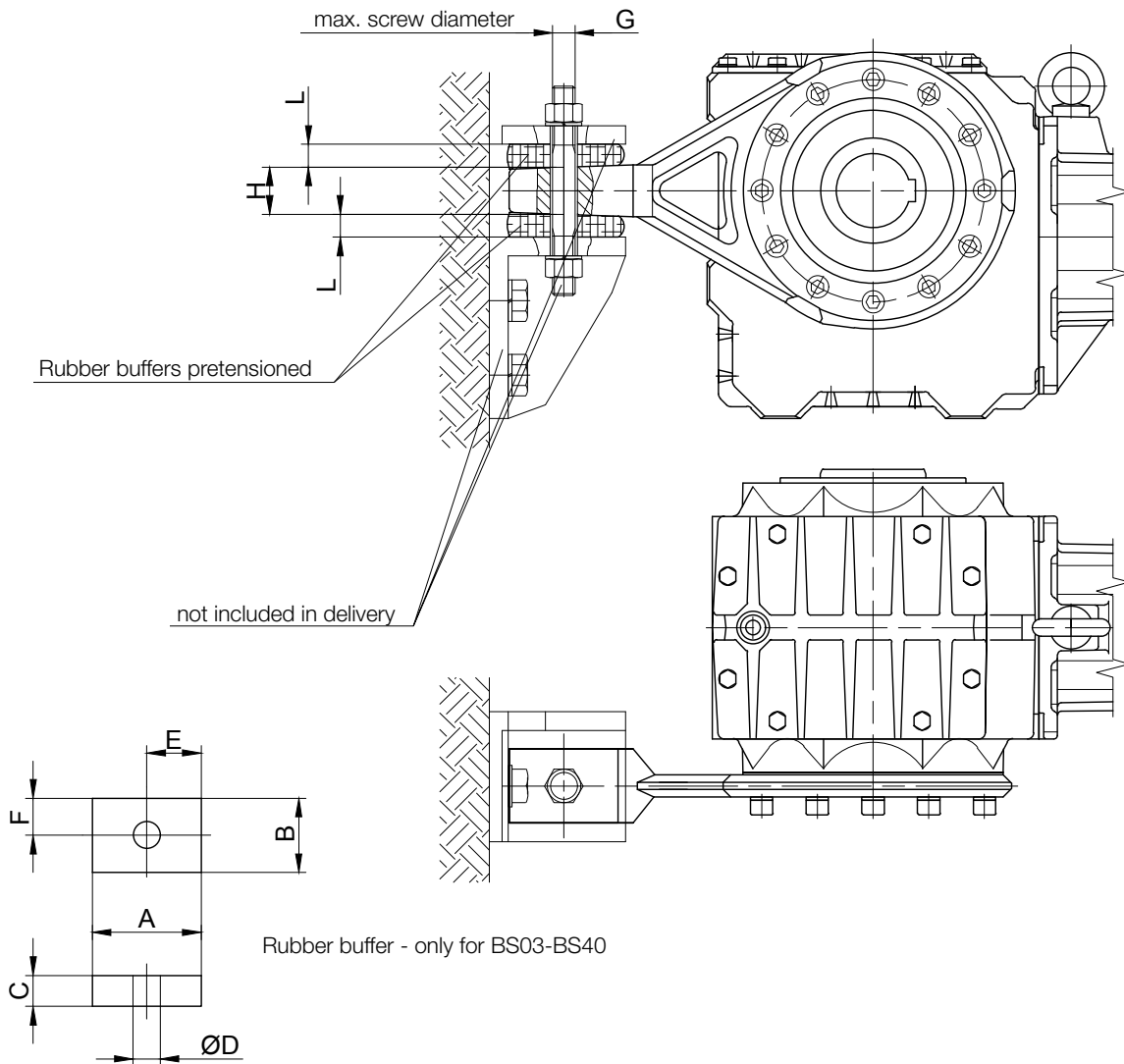
Type	SSV Ringfeder	SSV STÜWE	A	B
BS10	RfN 4161 036x072	HSD 36-22x36	221	120
BS20	RfN 4161 044x080	HSD 44-22x44	286	160
BS30	RfN 4161 050x090	HSD 50-22x50	313	160
BS40	RfN 4161 062x110	HSD 68-22x68	340	210

Dimensions in millimetres (mm)

# BS-series worm-geared motors

## Additional Dimension Sheet

### Rubber buffer for torque arm



Material: Natural rubber  
Hardness 50 +/-5 Shore A

Dimensions of the transverse hole:  
see dimensioned sketch of the respective shaft mounted gearbox

Gear	Position	A	B	C	D	E	F	G	H	L
BS02	-	-	-	-	-	-	-	M8	6	-
BS03	Position 0	30	30	12	12	15	15	M8	10	10.5
BS04	Position 0	30	30	12	12	15	15	M8	10	10.5
BS06	Position 0	30	30	12	12	15	15	M10	10	10
BS10	Position 1	48	32	15	14	24	16	M10	19	13
BS20	Position 2	63	43	20	14	31.5	21.5	M10	30	17.5
BS30	Position 2	63	43	20	14	31.5	21.5	M10	30	17
BS40	Position 3	88	60	25	22	44	30	M18	38	22

Dimensions in millimetres (mm)

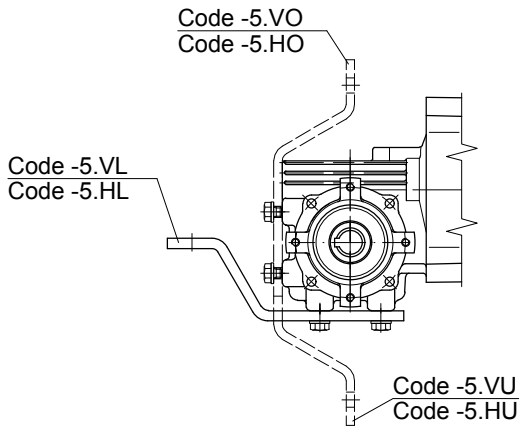
The actual gearbox design can vary from the geometry shown. Generate drive specific 3D and 2D geometries under [www.BauerCat.com](http://www.BauerCat.com).

# BS-series worm-gear motors

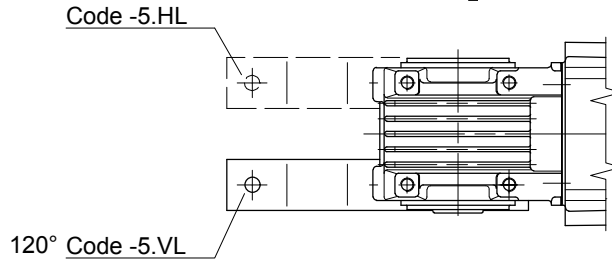
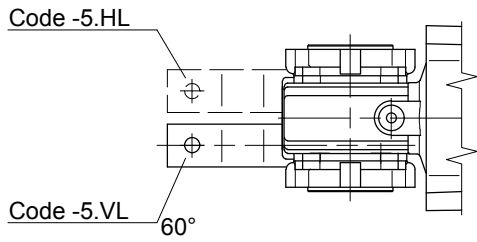
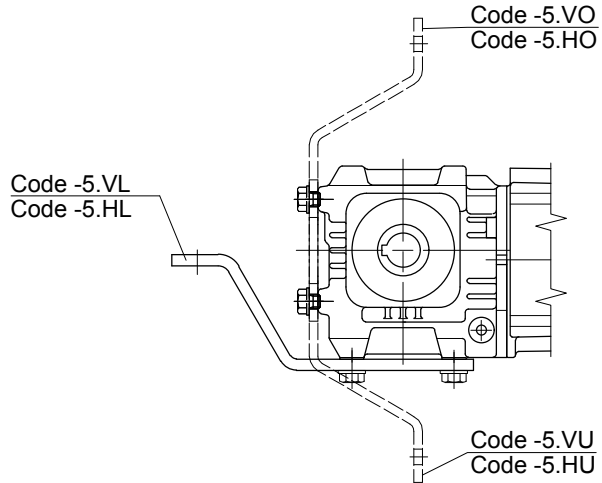
## Additional Dimension Sheet

### Position of the torque arm

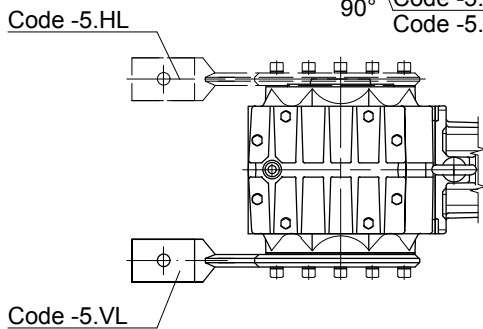
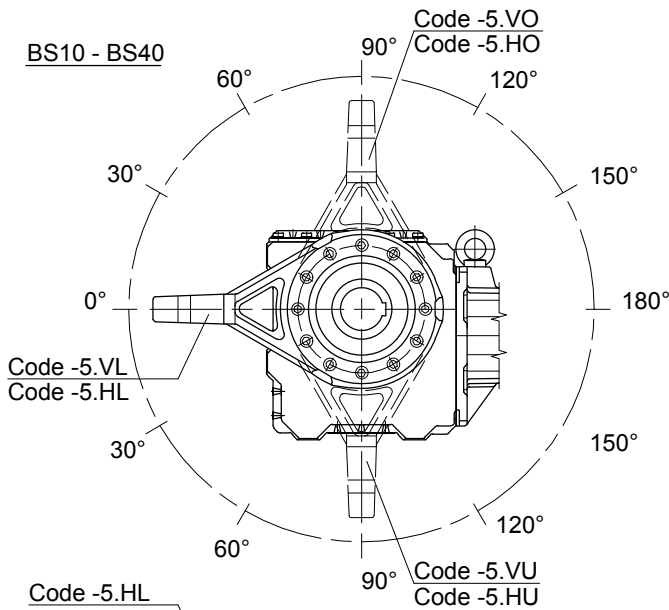
BS02 / BS03



BS04 / BS06



BS10 - BS40

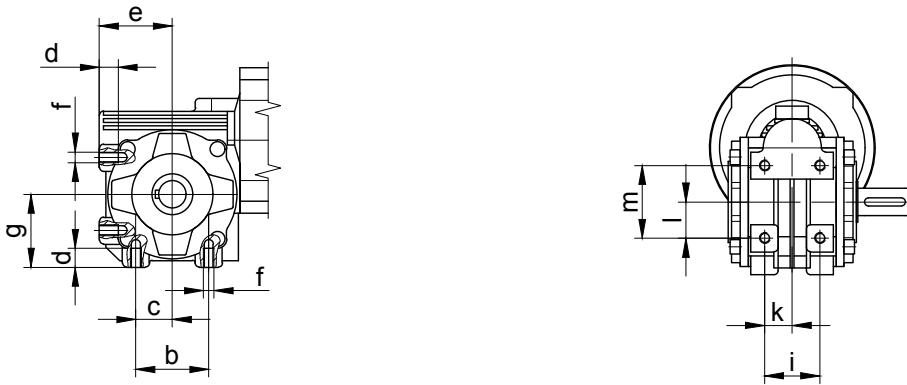


Gear	Position						
	VL/HL	VO/HO/VO/HU					VR/HR
BS10	0°	30°	60°	90°	120°	150°	-
BS20	0°	30°	60°	90°	120°	150°	-
BS30	0°	30°	60°	90°	120°	150°	-
BS40	0°	30°	60°	90°	120°	150°	-

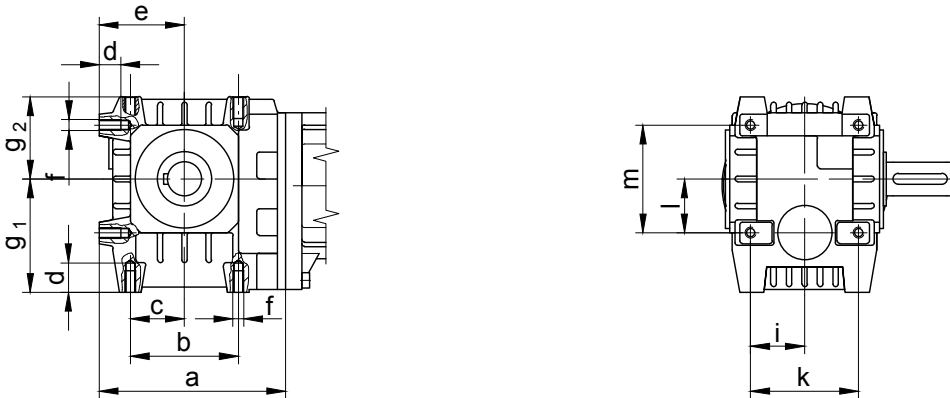
# BS-series Worm-geared motors

## Additional Dimension Sheet

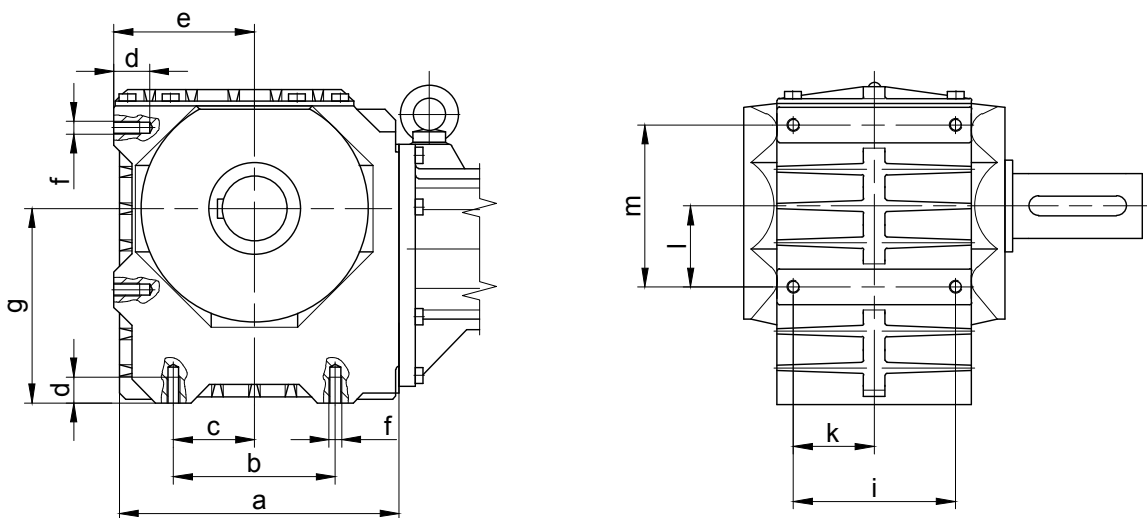
### Threaded foot



Type	a	b	c	d	e	f	g	-	i	k	l	m
BS02	-	36	18	10	40	M6	40	-	32	16	18	36
BS03	-	54	27	14	54	M8	54	-	41	20.5	27	54



Type	a	b	c	d	e	f	g1	g2	i	k	l	m
BS04	111	60	30	15.5	50	M8	64	49.5	30	60	30	60
BS06	138	80	40	16	63	M8	84	61	40	80	40	80



Type	a	b	c	d	e	f	g	-	i	k	l	m
BS10-BS10Z	170	90	45	16	85	M8	105	-	95	47.5	45	90
BS20-BS20Z	202.5	110	55	20	100	M10	125	-	105	52.5	55	110
BS30-BS30Z	228	125	62.5	24	110	M12	150	-	120	60	62.5	125
BS40-BS40Z	264	150	75	24	130	M12	180	-	150	75	75	150

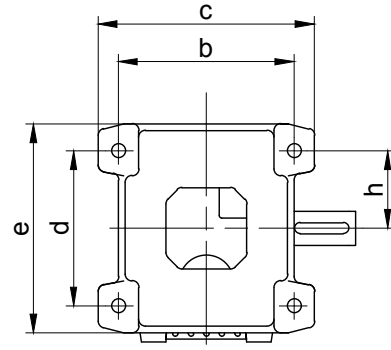
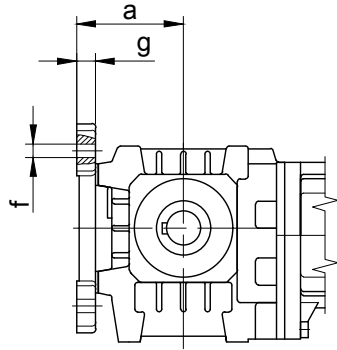
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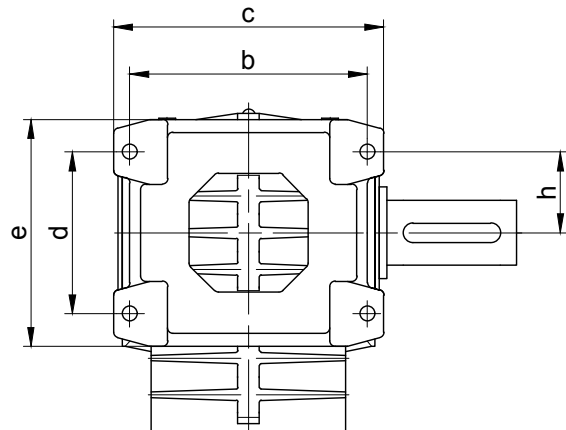
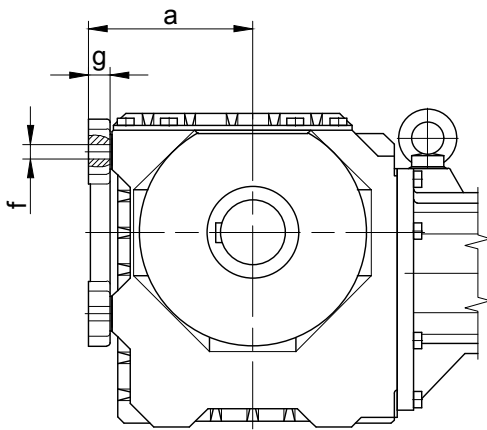
# BS-series worm-geared motors

## Additional Dimension Sheet

### Foot plate, left



Type	a	b	c	d	e	f	g	h
BS04	68	110	140	90	130	10	15	45
BS06	79	130	160	115	155	10	14	57.5



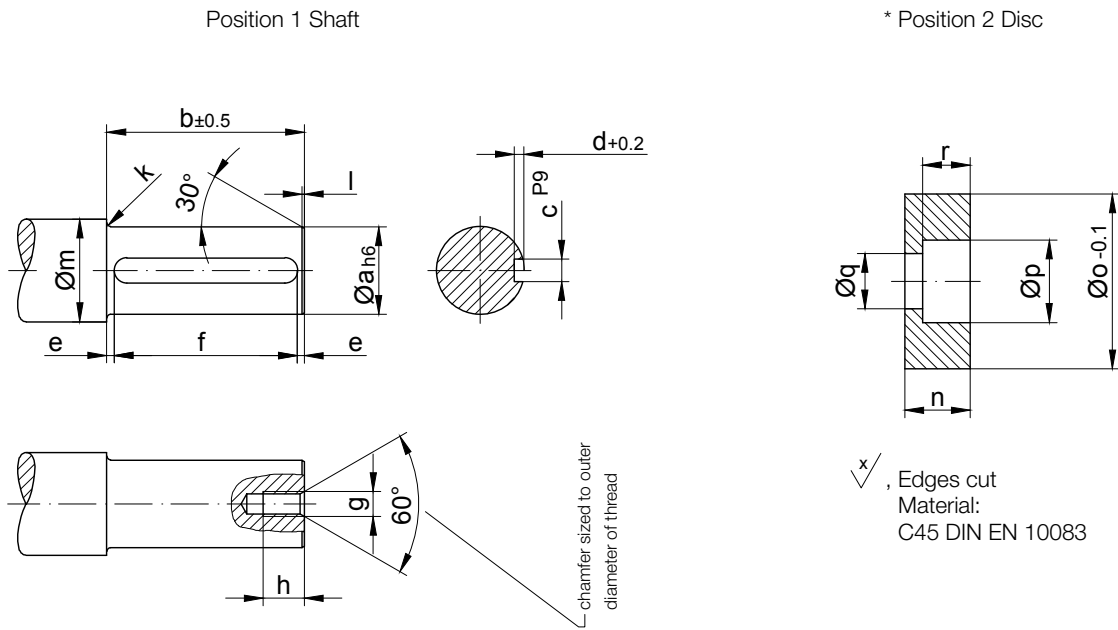
Type	a	b	c	d	e	f	g	h
BS10-BS10Z	103	145	165	90	130	Ø9	16	72.5
BS20-BS20Z	120	165	195	110	160	Ø11	18	55
BS30-BS30Z	132	190	220	125	185	Ø13.5	20	62.5
BS40-BS40Z	152	220	250	150	210	Ø13.5	20	75

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# BS-series Worm-geared motors

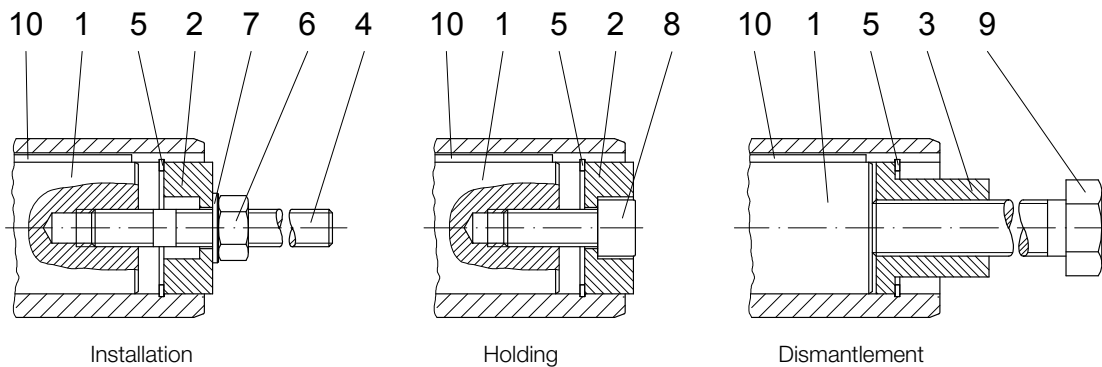
## Additional Dimension Sheet

### Assembly tools for hollow shaft and keyway



Type	Dimensions (mm)															
	Position 1 Shaft											Position 2 Disc				
	a	b	c	d	e	f	g	h	k	l	m	n	o	p	q	r
BS03	20	75	6	3.5	6	63 <sup>+0.3</sup>	M6	16	2	1.5	28	13.5	19.8	11	6.6	6.5
BS04	20	71	6	3.5	7.5	56 <sup>+0.3</sup>	M6	16	2	1.5	28	13.5	19.8	11	6.6	6.5
BS06	25	99	8	4	9.5	80 <sup>+0.3</sup>	M8	18	2.5	1.5	33	13.5	24.8	15	9	8.5
BS10	30	152	8	4	6	140 <sup>+0.5</sup>	M10	20	3	1.5	38	15	29.8	18	11	10
BS20	35	186	10	5	13	160 <sup>+0.5</sup>	M10	20	3	1.5	43	16	34.8	18	11	10
BS30	40	212	12	5	6	200 <sup>+0.5</sup>	M12	22	3	2	48	18	39.8	20	13.5	12
BS40	60	227	18	7	13.5	200 <sup>+0.5</sup>	M20	38	3.5	2	68	24	59.8	33	22	18

13



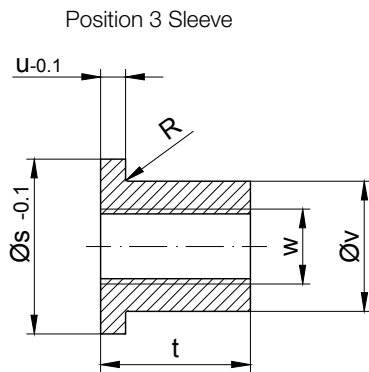
The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit. Suitable measures are to be used to secure Bolt Pos. 8 against loosening!



# BS-series worm-geared motors

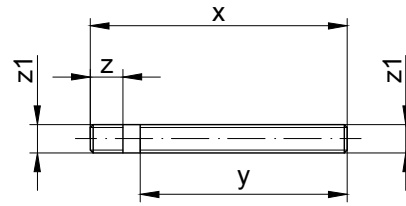
## Additional Dimension Sheet

### Assembly tools for hollow shaft and keyway



$\chi$  , Edges cut  
Material:  
C45 DIN EN 10083

\* Position 4 Stud bolt



Material: Steel, tensile strength  
 $\geq 1000\text{N/mm}^2$   
Threads rolled

Type	Dimensions (mm)										* Retaining ring DIN 472	Hexagon nut DIN 394-8	Disc DIN 125-St	* Filister head screw DIN 912-8.8	Starting torque (Nm)	Hexagon bolt DIN EN 24017-8.8	Key DIN 6885 Width/Height/Length
	Position 3 Sleeve					Position 4 Stud bolt											
	s	t	u	v	w	R	x	y	z	z1							
BS03	19.8	24	5	11	M8	-	120	90	18	M6	20x1.0	M6	6.4	M6x25	5	M8x110	A 8x7x63
BS04	19.8	24	5	11	M8	-	120	90	18	M6	20x1.0	M6	6.4	M6x25		M8x110	A 8x7x56
BS06	19.8	24	5	15.4	M12	0.8	150	120	20	M8	25x1.2	M8	8.4	M8x30	8	M12x140	A 8x7x80
BS10	29.8	28	5	19.8	M14	0.8	210	175	23	M10	30x1.2	M10	10.5	M10x30		M14x190	A 8x7x140
BS20	34.9	28	5	23	M14	-	250	215	23	M10	35x1.5	M10	10.5	M10x35	16	M14x230	A 10x8x160
BS30	39.9	40	6	27.7	M20	0.8	280	240	28	M12	40x1.75	M12	13	M12x35		M20x270	A 12x8x200
BS40	59.8	60	6	44	M30	-	320	260	45	M20	60x2.0	M20	21	M20x50	42	M30x310	A 18x11x200

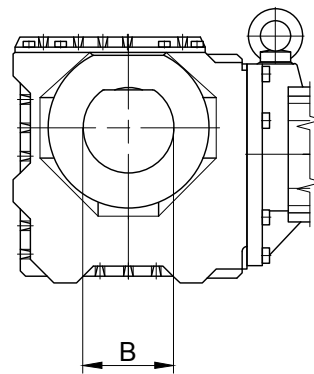
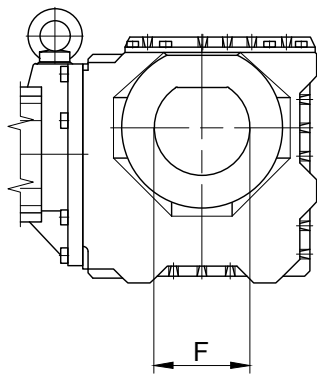
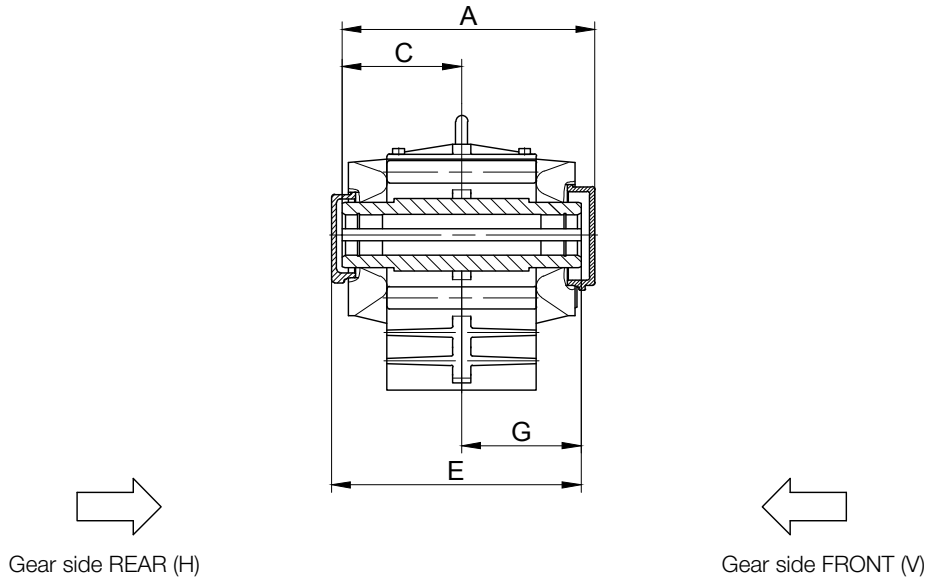
The parts shown are necessary for assembly. ONLY \* specified parts are enclosed in the assembly kit.  
Suitable measures are to be used to secure Bolt Pos. 8 against loosening!

Optional	Type	Order text
	BS03	Id.Nr. 4104013 Assembly tool „holding“
	BS04	Id.Nr. 4104013 Assembly tool „holding“
	BS06	Id.Nr. 4103921 Assembly tool „holding“
	BS10	Id.Nr. 4103939 Assembly tool „holding“
	BS20	Id.Nr. 4103947 Assembly tool „holding“
	BS30	Id.Nr. 4103955 Assembly tool „holding“
	BS40	Id.Nr. 4103971 Assembly tool „holding“

# BS-series Worm-geared motors

## Additional Dimension Sheet

### Shaft Cap (VK)



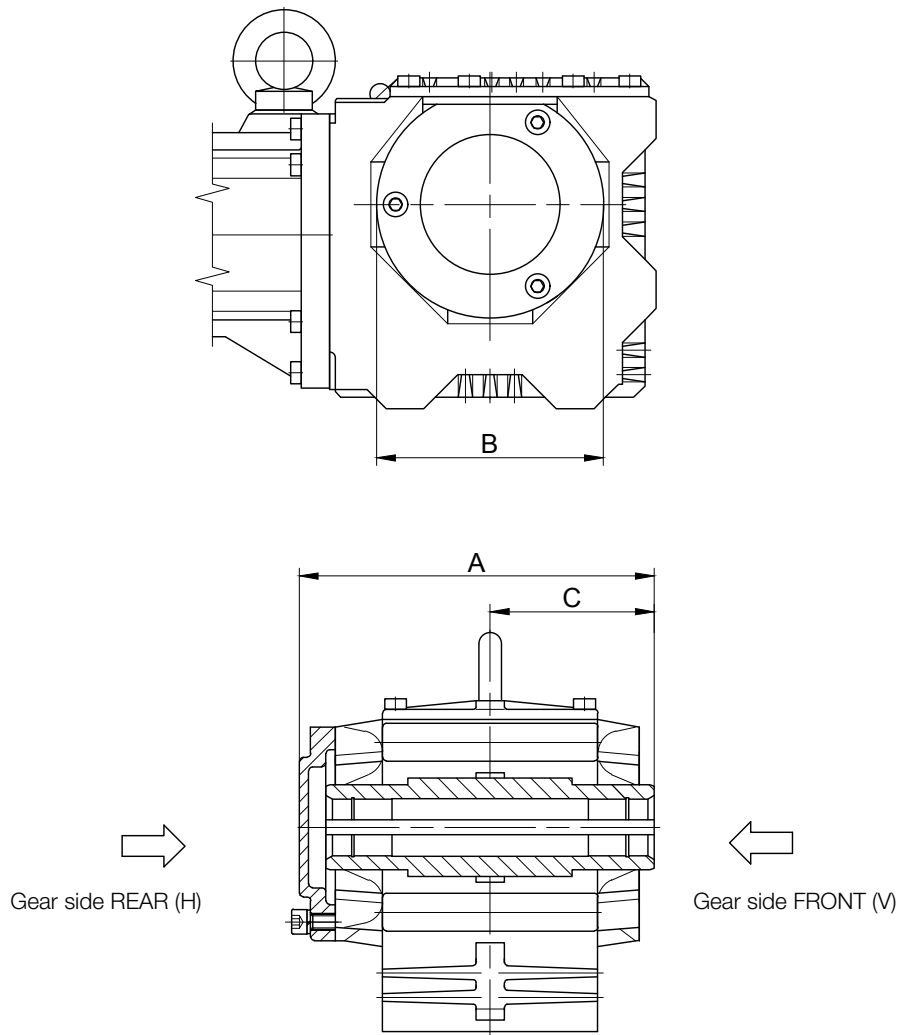
Sealing cap REAR (H)			
Type	A	B	C
BS10	186	68	87
BS30	250.5	100	132
BS40	276	130	128
Dimensions in millimetres (mm)			

Sealing cap FRONT (V)			
Type	E	F	G
BS20	221	78	104.5
Dimensions in millimetres (mm)			

# BS-series worm-geared motors

## Additional Dimension Sheet

### Shaft Cover (VD)



Type	A	B	C
BS04	99.5	68	46.5
BS06	128.5	81	60.5
BS10	185	Ø120	87
BS20	224.5	Ø160	104.5
BS30	251.5	Ø160	118.5
BS40	275	Ø210	128
Dimensions in millimetres (mm)			

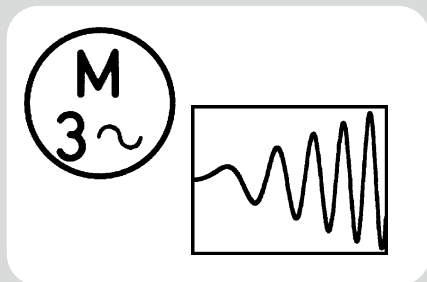
# Energy Efficient Geared Motors

## AC Variable Speed

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# Energy Efficient Geared Motors

## AC Variable Speed



# 14

### Motors

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# Energy Efficient Geared Motors

## AC Variable Speed

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### ErP Directive 2009/125/EC

Directive 2009/125/EC of the European Parliament and the Council, issued in 2009, specifies requirements for the environmentally responsible design of energy-related products (ErPs). In November 2009 it superseded Directive 2005/32/EC, which formed the framework for requirements for the environmentally responsible design of energy-using products (EuPs). This change has no effect on already proclaimed implementation measures.

#### Objectives

The ErP Directive has several objectives:

#### 1. Mitigating the environmental impact of energy-using products

This objective is intended to be achieved by the documentation and labelling of products, by regulations for inspection, and by the formulation of individual requirements in implementation measures. As the entire product life cycle is taken into consideration, action must be taken as early as the design phase.

#### 2. Climate protection

Achievement of the EU climate protection objectives is to be supported. This can be implemented by reducing energy consumption and the emission of global warming gasses in the production, operation and disposal of energy-using products.

#### 3. Harmonised legislation

The directive creates a framework for the European regulation of environmental design requirements. This avoids trade impediments resulting from differences in national regulations. This can be achieved by means of the proclamation of legally binding implementation measures for the entire Community and protection of free trade in goods against further-reaching regulations of the Member States.

### Regulation (EG) 640/2009 & (EU) 4/2014

For the implementation of the Directive

#### Efficiency requirement: IE3 + IE2 for inverter operation

**Valid since: 01.01.2017**

#### Scope

- Single-speed, three-phase, 50 Hz and 60 Hz
- 2-, 4- or 6-pole motors
- Rated power from 0.75 to 375 kW
- Nominal voltage UN up to 1000 V
- Continuous operation



# Motors

## General

### Which motors are excluded from the scheme?

- Motors designed to be operated completely immersed in a liquid
- motors fully integrated into a product (e.g. a gearbox, a pump, a fan or a compressor) whose energy efficiency cannot be measured independently of that product
- at altitudes above 4000 meters above sea level
- at ambient temperatures above 60 °C
- at ambient temperatures below - 30 °C (any motor) or at ambient temperatures below 0 °C (air-cooled motor)
- in potentially explosive atmospheres within the meaning of Directive 94/9/EC of the European Parliament and of the Council
- Brake motors

### Example:



### Regulation (EU) 2019/1781

To establish eco-design requirements for electric motors and variable speed drives pursuant to Directive 2009/125/EC

#### Valid from: 01.07.2021

- Frequency converter 0.12 - 1,000 kW: IE2
- 3-phase motors 0.12 < 0.75 kW/2.4, 6 or 8 poles: IE2 (Excluded: Ex eb (DXE))
- 3-phase motors 0.75 - 1,000 kW/2.4, 6 or 8 poles: IE3 (Excluded: Ex eb (DXE))

#### ATTENTION:

Brake motors are no longer exempt!!  
IE2 for inverter operation is no longer permitted!!!

#### Valid from: 01.07.2023

- 1-phase motors  $\geq 0.12$  kW: IE2
- Ex eb (DXE) Motors  $\geq 0,12$  kW: IE2
- 3-phase motors 75 kW – 200 kW 2, 4 or 6 pole: IE4  
(Exempt: brake motor and all explosion-proof motors)

#### Scope

Induction electric motors without brushes, commutators, slip rings or electrical connections to the rotor, rated for operation on a 50 Hz, 60 Hz or 50/60 Hz sinusoidal voltage and having the following characteristics:

- 2-, 4-, 6- and 8-pole motors
- Rated power  $P_N$  between 0,12 kW and 1000 kW
- Rated voltage  $U_N$  over 50 V up to and including 1,000 V
- are designed for continuous operation ( $S1$ ,  $S3 \geq 80$  % ED,  $S6 \geq 80$  % ED) and are intended for direct mains operation

### Which engines are excluded from the scheme?

- Motors designed to be operated completely immersed in a liquid
- Motors fully integrated into a product (e.g. a gearbox, a pump, a fan or a compressor) whose energy efficiency cannot be measured independently of that product
- Motors with integrated frequency converter (compact drives) whose energy efficiency cannot be tested independently of the frequency converter
- Motors specifically designed and specified to operate exclusively
  - at altitudes exceeding 4000 m above sea-level
  - at ambient temperatures above 60 °C
  - at ambient temperatures below -30 °C
- Motors with integrated brake, which is an integral part of the inner motor construction and cannot be removed or supplied from a separate power source when testing the motor efficiency.
- Motors specifically qualified for the safety of nuclear installations, as defined in Article 3 of Council Directive 2009/71/EURATOM
- Motors with mechanical commutators
- Totally enclosed Non-Ventilated motors (TENV)
- Engines from the respective scope of application of the two deadlines 01.07.2021 or 01.07.2023, which were placed on the market before these deadlines, may continue to be placed on the market until 30.06.2029 as 1:1 replacements and may be specifically marketed as such
- Multi-speed motors, i.e. pole-changing motors
- Motors designed specifically for the traction of electric vehicles
- Motors in portable equipment whose weight is supported by hand during operation
- Motors in hand-held mobile equipment which are moved during operation
- Motors in cordless or battery-operated equipment
- Motors for underground mining (mines)

### Method for determining the motor efficiency according to IEC 60034-2-1

Individual loss procedure

Additional losses according to residual loss method

Low measurement uncertainty

# Motors

## General

Bauer geared motors for connection to three-phase supply are supplied with specially designed induction motors. This design ensures maximum operating safety with high breakaway torque and minimum starting current.

The torque/speed characteristic is largely free of torque dips. Torque is optimised to suit requirements and application parameters. See "www.bauergears.com" for more information.

### Torques

The torques as stated in the selection tables are fully available at the output shaft. These figures apply for continuous operation (S1-100 %) at a maximum ambient temperature of 40 °C and at site elevations up to 1000 m above sea level. Drives for higher ambient temperatures and site elevations are available on request. Gear efficiencies, which are lower than the usual values for spur gears, are taken into account in the torques listed in the selection tables.

### Line voltages

BAUER motors are available as standard for the following three-phase line voltages:

Motor size	Standard voltages:
S04LA4 - S09XA4	220 V Δ/ 380 V Y 50 Hz
0,06 - 2,2 kW	230 V Δ/ <b>400 V Y 50 Hz*</b>
	240 V Δ/415 V Y 50 Hz**
	440 V Y/60 Hz 460 V Y/60 Hz
from S11SA4	220 V Δ/ 380 V Y 50 Hz
from 3,0 kW	230 V Δ/ 400 V Y 50 Hz
	240 V Δ/ 415 V Y 50 Hz**
	440 V Y/60 Hz 460 V Y/60 Hz
	380 V Δ/ 660 V Y 50 Hz
	<b>400 V Δ/ 690 V Y 50 Hz*</b>
	415 V Δ/50 Hz**
	440 V Δ/ 60 Hz
	460 V Δ/ 60 Hz

\*Voltage recommended world-wide by IEC 38 and in Europe by CENELEC.

\*\*= Insulation Class F is necessary.

Designs for other voltages available on request and at extra cost.

Unless otherwise specified, motors for operation in conjunction with frequency converters with a 50 or 60 Hz frequency have a Y-circuit to optimise operating noise and winding load.

Unless otherwise stated, the tolerance for the rated voltage is +/- 5 %, in accordance with IEC 60034-1.

The S04 to S..11 motors in 4 pole design can be operated within a tolerance of +/- 10 % of the rated voltage (400 V 50 Hz).

### Line frequencies

All motors are available with the same power ratings for either 50 or 60 Hz. Increased power models are available on request.

### Rating plate

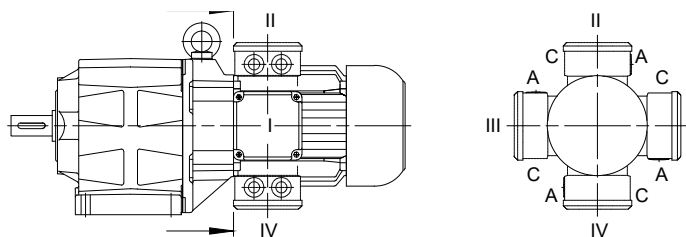
Bauer geared motors are supplied with a corrosion-proof rating plate as standard. The standard rating plate is made of special plastic tried and tested in many years of practical use and approved for hazardous areas by the Physikalisch-Technische-Bundesanstalt (PTB).

<b>Bauer</b>		<b>D-73734 Esslingen</b>	
<b>Made in Germany</b>			
3-Mot.-No E 11242943 - 1		A/ 188Z9641	
Type BF80Z-44/S09SA4-TF/C2-SP		11/2021	
PMSM 2p=4 U-VSD 380...500V 50/60 HZ IE4-89,2 % F/155 °C 50 HZ			
1,5 kW	n <sub>1</sub> 1500 1/n <sub>2</sub> 1,3 1/n <sub>3</sub>	M <sub>2</sub> 1200 Nm	
5	0,13 2,6	150	8,5
16,66	0,52 3,1	500	10
33,33	1,05 3,1	1000	10
50	1,5 2,9	1500	10
60	1,9 3,1	1800	10
IM H4/V2 15° IP65 21/1,2 L CPL 220			
PTC		tamb -20... 40 °C S1 i124	
Ld/Lq 64,1/1000,0 mH	R-St.4,950 Ω	Ke 208 V/1000 min <sup>-1</sup>	kt 3,20 Nm/A
IE4 acc. IEC 60034-30-2 TS:2/1813/CD			339,9 kg
CE			EN 60034 SCH1B

PMSM Permanent Magnet Synchron Motor
USE WITH VARIABLE SPEED DRIVE INVERTER DUTY
Mot-Nr: 11242943

### Terminal box

The cables of motors with and without brakes can be introduced into the motor terminal box from side A or side C.



The standard position for the motor terminal box is shown in the dimensional drawings for the geared motors (see chapter 10,11,12 and 13). The terminal box can be installed at any of 3 other positions on request, if on-site space is restricted. The 4 possible positions are 90° offsets around the axis of the motor (dimensional drawing and designation for standard terminal box, see chapter 16 "Dimensional drawing standard terminal box").

Cast-on terminal boxes (KAG) are supplied with knock out entries with metric nut for cable gland. Screw- on terminal boxes (TBI...4 are supplied with a metric screw thread as standard.

# Motors

## General

### Motor connections

The electrical connection of gear motors is time consuming and creates costs, which cannot be neglected both during initial installation and in service cases. These costs are reduced considerably by the use of BAUER Gear Motors, have CAGE CLAMP® connection technology instead of the conventional terminal block – and that without extra charge.



#### What are the advantages for you ?

##### Cost reduction during connection

Public timing test have confirmed, that the electrical connection of a cable by means of CAGE CLAMP® technology saves up to 75 % working time compared with the classic screw connection.

##### Simple Handling

Cable connection from the top, very easily accessible: The CAGE CLAMP® spring is pressed, and the cable inserted from the front, i.e. in the field of vision of the installation engineer.

##### Which cable core diameters ?

Suitable for all copper wires from 0.5 mm<sup>2</sup> to 25 mm<sup>2</sup>.

##### Cost saving in material and tooling

- multicore cable ends, cable eyes or cable ring eyes are no longer needed
- Tools such as crimping pliers are no longer needed
- Inadvertently over tightening or breaking of the terminal bolts and the procurement of a new terminal block belong in the past.
- Searching and procurement of nuts and washers for the terminal blocks, which have fallen down, also belongs in the past.

##### Vibration and shock resistant

Vibration and shock result neither in conductor damage nor in a measurable contact interruption. The connection is service free.

##### Type of conductors

The CAGE CLAMP®-connector can clamp fine stranded, stranded and solid cores wires.

**Terminal connections for single speed motors**

Standard connection of three phase motors via CAGE CLAMP®. S04.. - S..09..

Connection of three-phase motor via CAGE CLAMP®

	IEC/EN 60034-8	NEMA MG 1	Colour
Supply lines	L1 L2 L3	L1 L2 L3	
Motor winding	U1 V1 W1 U2 V2 W2	T1 T2 T3 T4 T5 T6	black blue brown yellow red violet
Δ	Connections for the low rated voltage (e.g.: 230V)		
Y	Connections for the high rated voltage (e.g.: 400V)		

S..11

Connection of three-phase motor via CAGE CLAMP®

	IEC/EN 60034-8	NEMA MG 1	Colour
Supply lines	L1 L2 L3	L1 L2 L3	
Motor winding	U1 V1 W1 U2 V2 W2	T1 T2 T3 T4 T5 T6	black blue brown yellow red violet
Δ	Connections for the low rated voltage (e.g.: 230V)		
Y	Connections for the high rated voltage (e.g.: 400V)		
ZK	Optimal additional connection		

# Motors

## General

### Terminal connections for single speed motors with thermal motor protection

Standard connection of three phase motors with thermal motor protection via CAGE CLAMP®. S04.. - S..09..

Connection of three-phase motor and thermal motor protection via CAGE CLAMP®

	IEC/EN 60034-8	NEMA MG 1	Colour
Supply lines	L1 L2 L3	L1 L2 L3	
Motor winding	U1 V1 W1 U2 V2 W2	T1 T2 T3 T4 T5 T6	black blue brown yellow red violet
Δ	Schaltung für niedrige Nennspannung (z. B.: 230V)		
Y	Schaltung für hohe Nennspannung (z. B.: 400V)		
T1 T2	Thermal motor protection		

S..11

Connection of three-phase motor via CAGE CLAMP®

	IEC/EN 60034-8	NEMA MG 1	Colour
Supply lines	L1 L2 L3	L1 L2 L3	
Motor winding	U1 V1 W1 U2 V2 W2	T1 T2 T3 T4 T5 T6	black blue brown yellow red violet
Δ	Connections for the low rated voltage (e.g.: 230V)		
Y	Connections for the high rated voltage (e.g.: 400V)		
ZK	Optimal additional connection		



**Terminal connections for pole changing motors in Dahlander connection (Δ/YY or Y/YY)**

Standard connection of three phase motors without motor protection via CAGE CLAMP®. S04.. - S..09..

Motor 2 Speeds, Dahlander connection D/YY or Y/YY  
(T1-T2 Thermal Motor protection optional)

	IEC/EN 60034-8	NEMA MG 1	Colour
Supply lines	L1 L2 L3	L1 L2 L3	
Motor winding	1U	T1	black
	1V	T2	blue
	1W	T3	brown
	2U	T5	yellow
	2V	T6	red
	2W	T4	violet
I	low speed		
II	high speed		

S..11

Connection of three phase motor via CAGE CLAMP®  
Pole changing for 2 speeds; Dahlander connection Δ/ YY

	IEC/EN 60034-8	NEMA MG 1	Colour
Supply lines	L1 L2 L3	L1 L2 L3	
Motor winding	1U	T1	black
	1V	T2	blue
	1W	T3	brown
	2U	T4	yellow
	2V	T5	red
	2W	T6	violet
I	low speed		
II	high speed		
ZK	Optimal additional connection		
*	Star point over Dahlander Relay		

# Motors

## General

### Terminal connections for pole changing motors with two separate windings (Y/Y or Δ/Δ)

Standard connection of three phase motors with motor protection via CAGE CLAMP®. S04.. - S..09..

Motor pole-changing  
2 speeds, 2 windings: Y/Y or Δ/Δ  
(T1-T2 thermal motor protection optional)

	IEC/EN 60034-8	NEMA MG 1	Colour
Supply lines	L1 L2 L3	L1 L2 L3	
Motor winding	1U 1V 1W	T1 T2 T3	black blue brown
	2U 2V 2W	T11 T12 T13	yellow red violet
	I II	low speed high speed	
T1 T2	Thermal motor protection		

S..11..

Connection of three phase motor via CAGE CLAMP®  
Motor pole-changing 2 speeds, 2 windings; Y/Y or Δ/Δ

	IEC/EN 60034-8	NEMA MG 1	Colour
Supply lines	L1 L2 L3	L1 L2 L3	
Motor winding	1U 1V 1W	T1 T2 T3	black blue brown
	2U 2V 2W	T4 T5 T6	yellow red violet
	I II	low speed high speed	
ZK	Optimal additional connection		

Send Quote Requests to info@automatedpt.com  
Call +1(800)985-6929 to talk to an expert

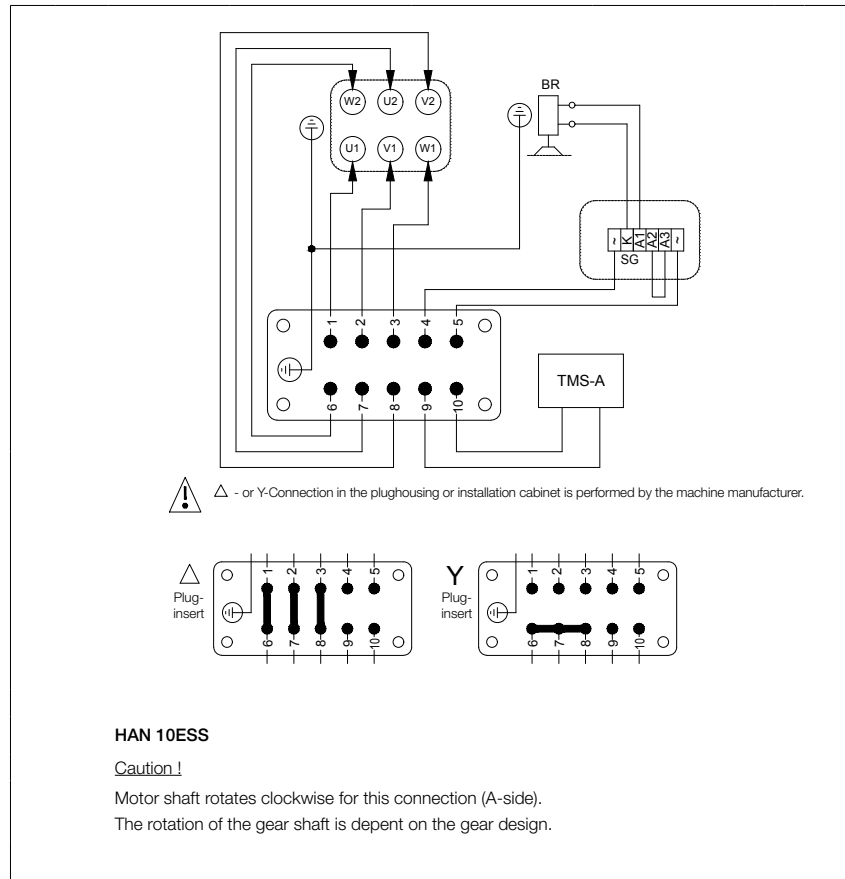
### Plug-and-socket connection

D06 to D..16 Bauer motors are available with plug-in motor connection. The socket housing is mounted on the fan-cowl side of the terminal box as standard. This layout minimises the protrusion caused by the plug.

The standard plug-and-socket type connection incorporates the attachment housing, pin insert and cover. Grommet-type housings and jack inserts are available on request at extra cost. Pin assignments on request (dimensional drawing, see chapter 16 "Dimensional drawing, plug-connector terminal box").



A design with single clamp lever according to the DESINA regulation of the „Verbandes Deutscher Werkzeugmaschinenhersteller“ (VDW) is also available.



The motors are also available with a low-cost round plug connector as an alternative. This is fitted at the factory in the standard terminal box and is also suitable for brake connection, thermistors and thermostats. Additional information on request.

Bauer motors from S..08.. with motor-mounted brake are also available with plug-in brake connection. This means that if it requires attention, the brake can be replaced on site with no loss of time.

# Motors

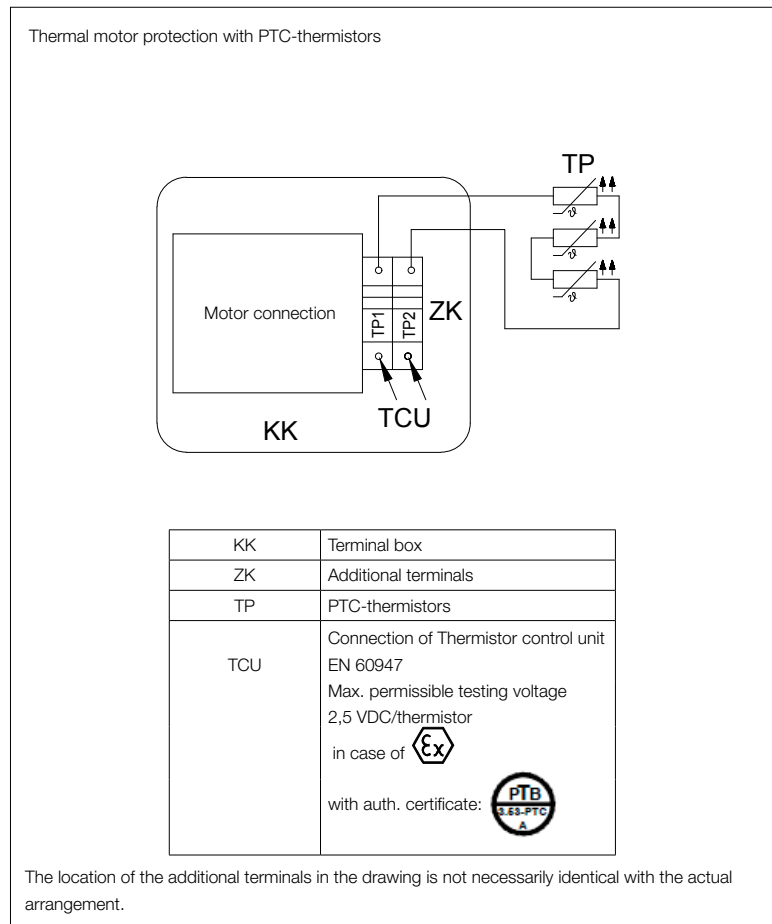
## General

### Motor protection

Each geared motor requires a current-dependent motor protection switch or an overcurrent relay with thermal delay in the switchgear to protect the motor windings. The rated motor currents required for settings are stated in the order acknowledgment. Thermal protection for the winding is recommended as an additional safety measure for special operating conditions (short-time or intermittent periodic duty, high switching frequency, severe voltage fluctuations or restricted cooling) and for operation in conjunction with a frequency converter.

### Thermistors (PTC)

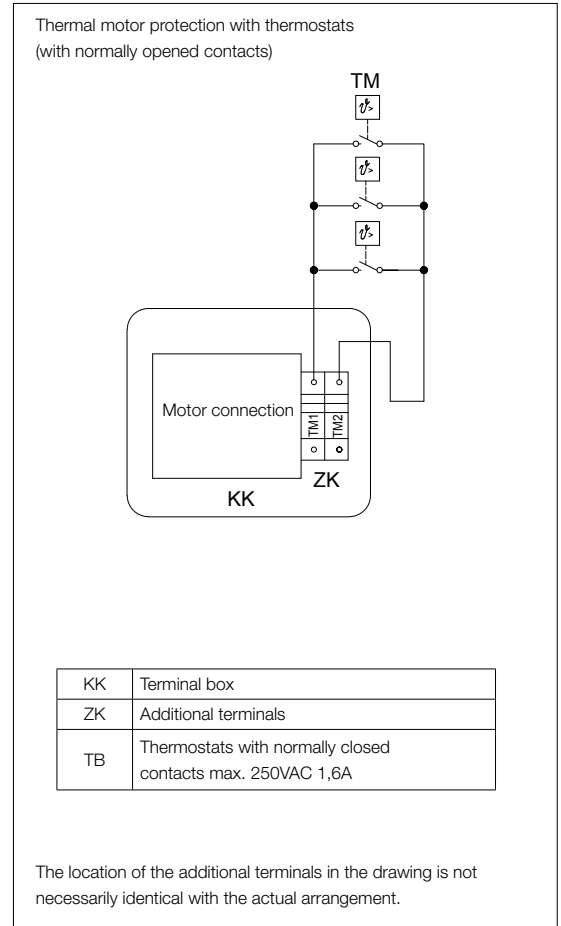
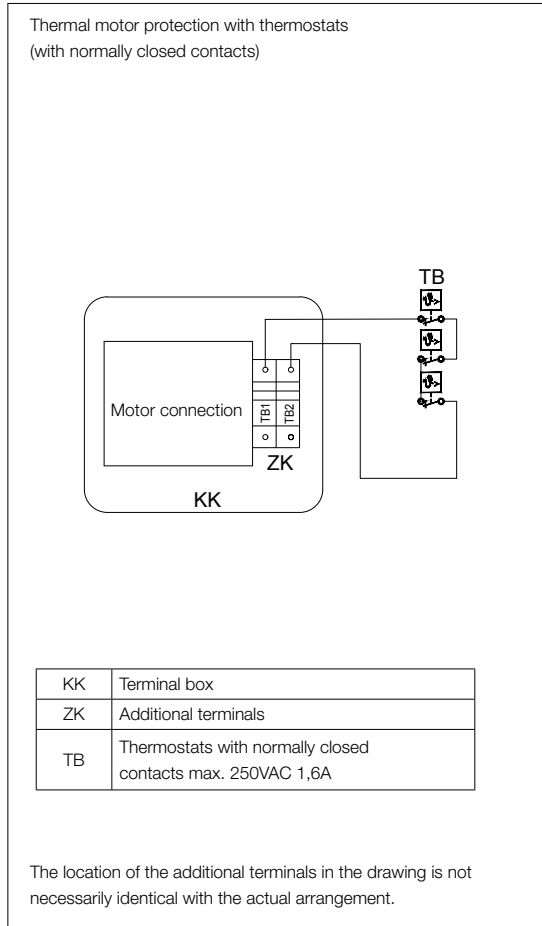
Thermistors are temperature-dependent resistors which are fitted in each phase winding. In conjunction with a motor protection switch, they ensure optimum protection for the winding in the event of rapid temperature rise. Characteristic to DIN 44081 and "Mark A" to IEC 34-11-2. Thermistors are available for all motors at extra cost. The requisite monitoring device is not included in the scope of supply.



### Thermostatic protection

Bimetal switches are used for slow-acting, independent temperature monitoring and are embedded in each winding section of the motor.

The bimetal disc is sized such that when the temperature rises above a specific, previously set value, the disc suddenly snaps from a convex state to a concave state and the contact moves vertically away from the contact plate. In this state the switch is either open (normally closed switch) or closed (normally open switch). A significant temperature change is necessary to allow the bimetal disc to independently snap back to its initial position. When it does, the switch is again closed (normally closed switch) or open (normally open switch). Thermal protection switches are available for all motors at additional cost. For technical reasons, this option is not recommended for large motors (S..11..).



# Motors

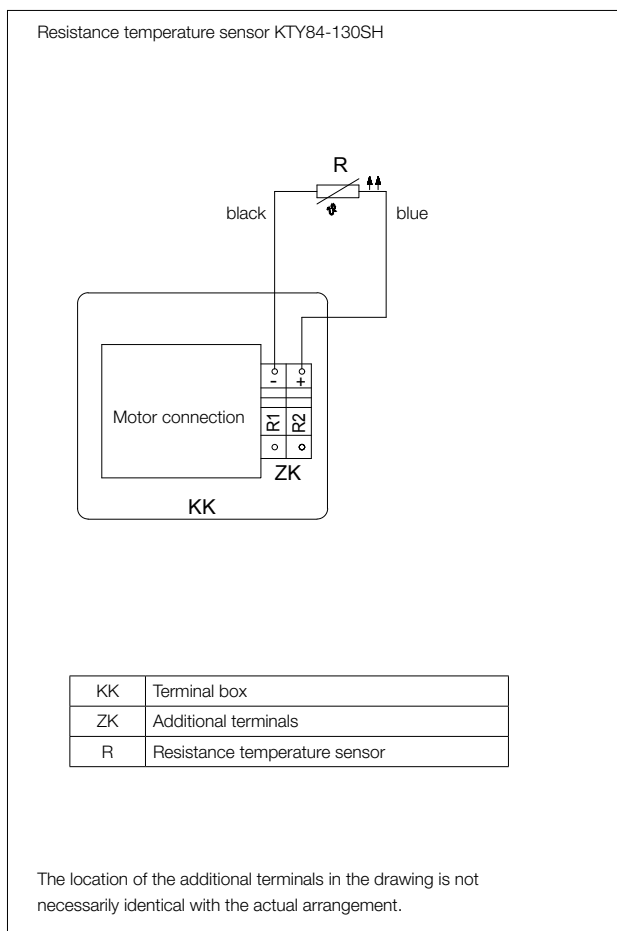
## General

### KTY sensors

KTY sensors with heat-shrink insulation can be used to measure and monitor critical surface temperatures and internal temperatures of motors and machines. These sensors are suitable for use in harsh industrial environments in all places where accurate measurements with a single sensor are required. KTY sensors are available for all types of motors at additional cost.

Type 84-130 SH: primarily installed in motors that are operated with Siemens frequency converters.

Working principle: KTY sensors are temperature-dependent components. The resistance of the KTY sensor increases when its temperature rises. The characteristic curve is nearly linear in the sensor's measuring range; the reference resistance (at 100 °C) is 970 to 1030 ohms.



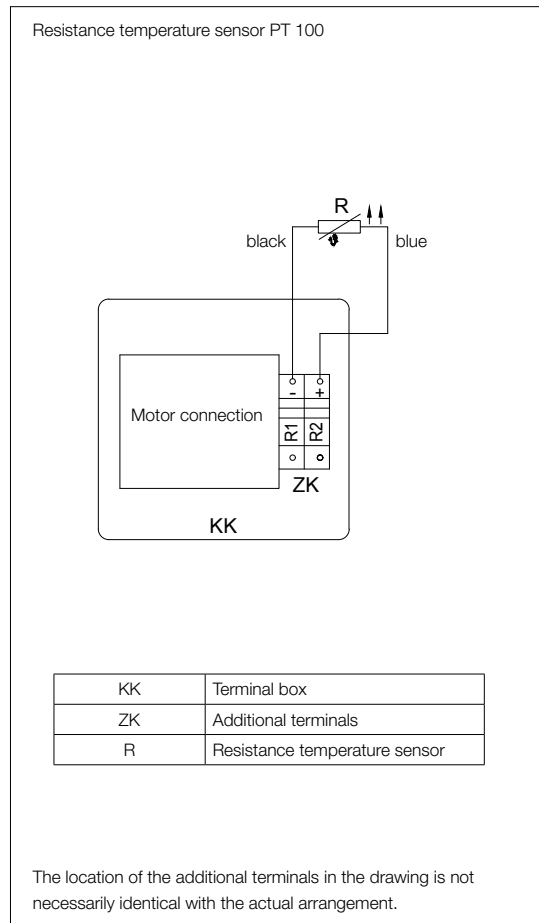
### PT100 sensors

Precise monitoring of motor temperatures is necessary in many fields of industry. Pt100 sensors feature high accuracy, short response time and long-term stability, and they are suitable for use over a wide range of temperatures. Pt100 sensors are available for all motor types at additional cost.

#### Specifications

Nominal resistance: 100  $\Omega$  at 0 °C

The resistance characteristics are specified in EN 60751.





# Motors

## General

### Insulation

The gearmotors described in the selection tables of this catalogue with the motor sizes S04, S..05, S..06, S..08, S..09S and S..09L are executed in insulation class B. Temperature class F is available on request at extra cost.


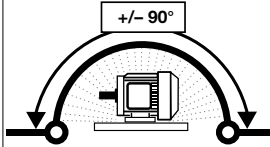
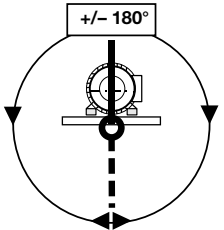
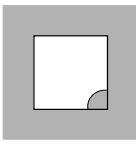
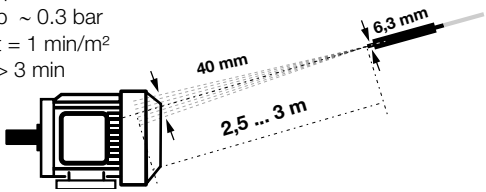
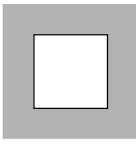

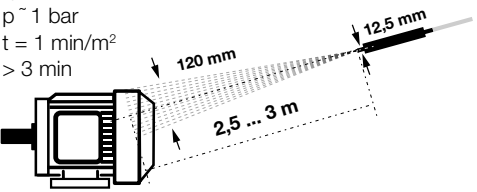
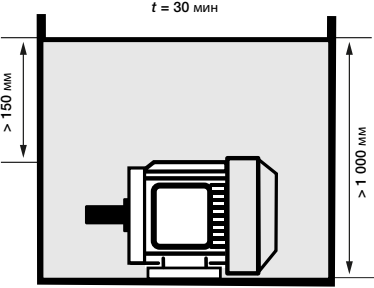
4-pole motors S..07 and S..09XA4 (2.2 kW) to S..18XA4 (30 kW) and all multi-speed motors are rated in Temperature Class F as standard.

Insulation Class F bestows the winding a multiple protection against high humidity, acidic gases and heavy tropical influences while making the same shock resistant and more resistant to heat. Protection against insects (termites) is guaranteed through the complete enclosure (IP65) as long as the mains cables are encased in metal.

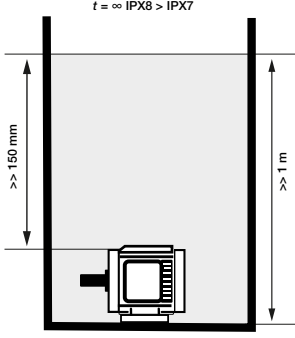
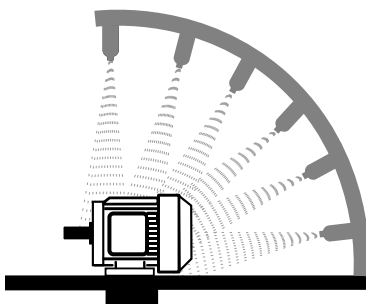
### IP – Protection classes

Bauer motors from motor size S..06 are manufactured to IP65 degree of protection as standard. Motor sizes S04 and S..05 have a smooth motor housing of IP54. Higher IP protection classes on request.

### Degrees of protection provided by enclosures for electrical equipment

First IP - code number after DIN EN 60629				Second IP - code number after DIN EN 60629			
Protection against penetration of solid foreign bodies		Protection of persons against access to hazardous parts with		Protection against penetration of moisture or water			
4	diameter $\geq 1.0$ mm			4	Splash water		
5	Dustproof		Wire	5	Jet water		
6	Dust tight			6	Strong Jet water		
				7	Temporary Submerge		

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First IP - code number after DIN EN 60629		Second IP - code number after DIN EN 60629	
Protection against penetration of solid foreign bodies	Protection of persons against access to hazardous parts with	Protection against penetration of moisture or water	
		8	Permanent Submerge  <p><math>t = \infty</math> IPX8 &gt; IPX7</p> <p>&gt;&gt; 150 mm</p> <p>E A</p> <p>x = 5 m (Standard) or by agreement</p>
		6 (9K = DIN 40050-9)	High pressure and high jet water temperature  <p>Housing <math>\geq</math> 250 mm  <math>t = 1 \text{ min /m}^2</math>  <math>&gt; 3 \text{ min}</math>            Water temperature <math>(80 \pm 5) \text{ }^\circ\text{C}</math>            15 l/min, 100 bar            Distance <math>(175 \pm 25) \text{ mm}</math></p>

### Speed of output shaft

The rated speeds in the selection tables are guidelines for load at rated power. Speed can vary depending on degree of load and temperature (particularly in the case of relatively small motors). Combination gear units for lower speeds are available on request.

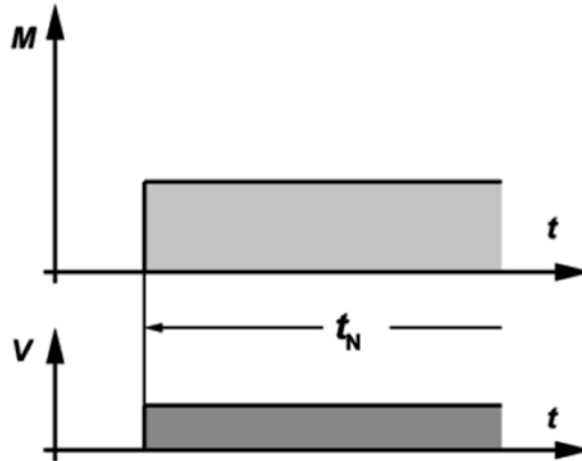
# Motors

## Duty types as defined by EN 60034

### General

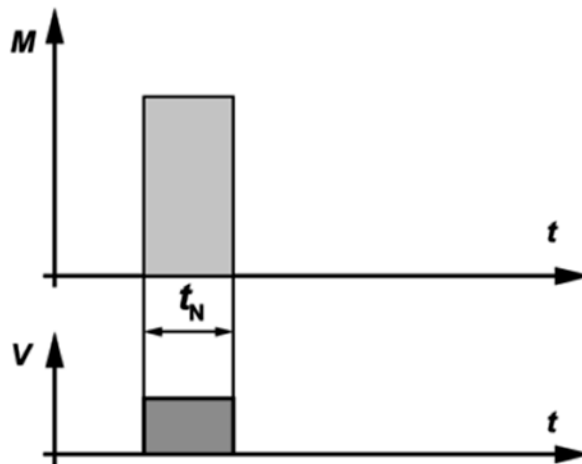
Aside from special drives (such as lifting equipment), standard motors are always designed for continuous running duty. If the drive is operated with frequent on/off cycles, it may be necessary to select a larger motor with a special design. On the other hand, with pronounced short-time duty it is often possible to select a smaller model. **For this reason, it is technically necessary or economically advantageous to inform the motor manufacturer of any duty type that differs from continuous running.**

### Continuous running duty (S1)



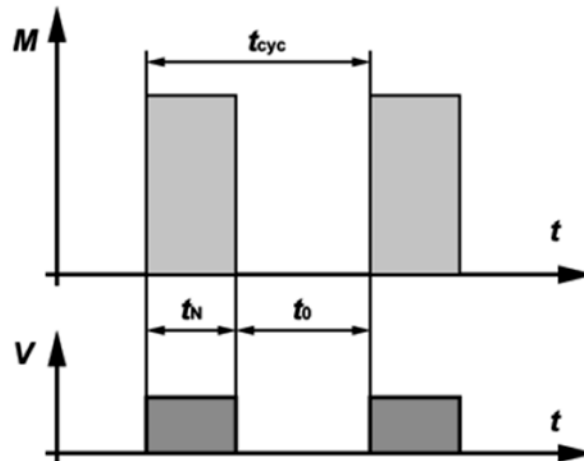
Operation under rated load for sufficient time to allow temperature equilibrium to be attained, such that the temperature does not increase any more with continued operation. The equipment can operate continuously under the rated load without exceeding the allowable temperature.

### Short-time duty (S2)



The operating time under rated load is short compared with the subsequent rest period. The standard operating times are 10, 30, 60 and 90 minutes. The equipment can operate for this period under the rated load without exceeding the allowable temperature.

Example: S2 – 60 min

**Duty types as defined by EN 60034****Intermittent periodic duty (S3)**

S3 duty consists of a sequence of identical cycles, each composed of an operating time with constant load and a rest time with the windings de-energised. The cycle is such that the starting current does not significantly affect the temperature rise. The operating time under rated load and the subsequent pause are both short. The equipment can operate under load only during the period indicated by the duty cycle as a percentage of the total cycle time (cycle duration).

The standardised duty cycles are 15, 25, 40 and 60 %. The cycle duration is 10 minutes unless otherwise specified.

Intermittent periodic duty means that a state of thermal equilibrium is not reached during the load interval.

The duty cycle can be determined as follows:

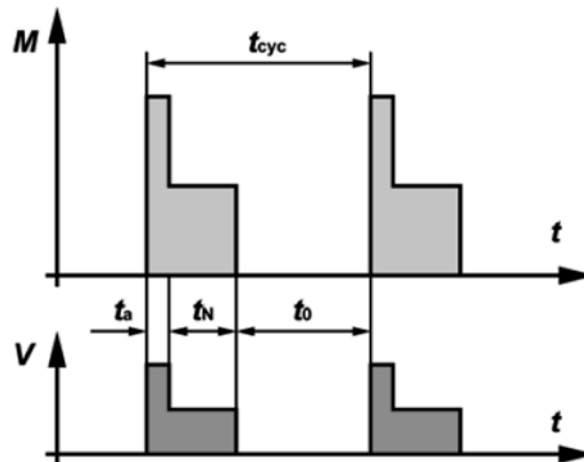
$$ED = \frac{t_N}{t_{cyc}} \times 100\% = \frac{t_N}{t_N + t_0} \times 100\%$$

Example: S3 – 25%

# Motors

## Duty types as defined by EN 60034

### Intermittent periodic duty with starting (S4)



S4 duty consists of a sequence of identical cycles, each of which is composed of a distinct starting time, a time of operation under constant load, and a rest period with the windings de-energised.

The operating time under rated load and the subsequent pause are both short. The equipment can operate under load only during the period indicated by the duty cycle as a percentage of the total cycle time (cycle duration).

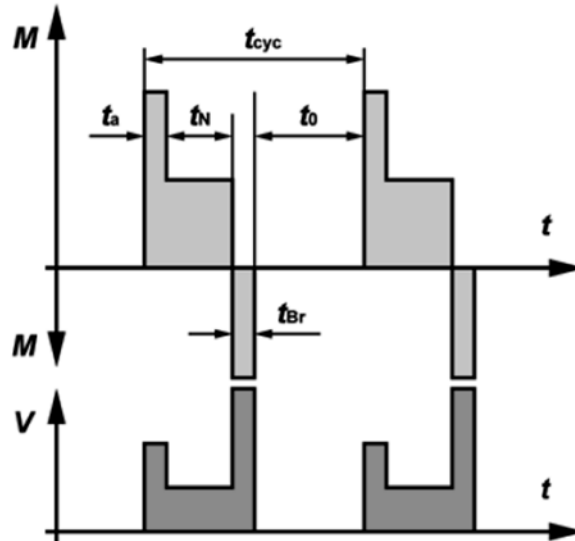
The standardised duty cycles are 15, 20, 40 and 60 %. The cycle duration is 10 minutes unless otherwise specified.

The load cycle corresponds to mode S3, but with additional heating during the starting time that must be taken into account.

The duty cycle can be determined as follows:

$$ED = \frac{(t_a + t_N)}{t_{cyc}} \times 100\% = \frac{t_a + t_N}{t_a + t_N + t_o} \times 100\%$$

Example: S4 – 25 %,  $J_M = 0.15 \text{ kgm}^2$

**Duty types as defined by EN 60034****Intermittent periodic duty with electric braking (S5)**

S5 duty consists of a sequence of identical cycles, each of which is composed of a starting time, a time of operation under constant load, a time of fast electric braking, and a rest period with the windings de-energised.

The operating time under rated load and the subsequent pause are both short. The equipment can operate under load only during the period indicated by the duty cycle as a percentage of the total cycle time (cycle duration).

The standardised duty cycles are 15, 20, 40 and 60 %. The cycle duration is 10 minutes unless otherwise specified.

The load cycle corresponds to S3 duty, but with additional warming during the starting time  $t_a$  and the braking time  $t_{Br}$  taken into account.

The duty cycle can be determined as follows:

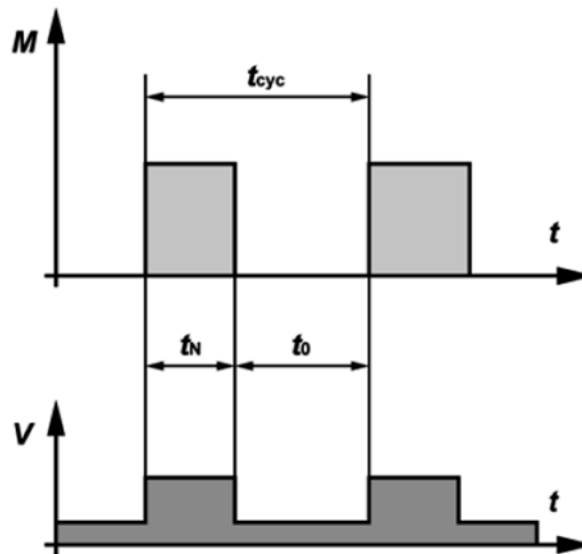
$$ED = \frac{(t_a + t_N + t_{Br})}{t_{cyc}} \times 100\% = \frac{t_a + t_N + t_{Br}}{t_a + t_N + t_{Br} + t_0} \times 100\%$$

Example: S5 – 25%;  $J_M = 0.15 \text{ kgm}^2$ ,  $J_{ext} = 0.7 \text{ kgm}^2$   
 ( $J_M$  Moment of inertia of the motor /  $J_{ext}$  Moment of inertia of the load)

# Motors

## Duty types as defined by EN 60034

### Continuous-operation periodic duty (S6)



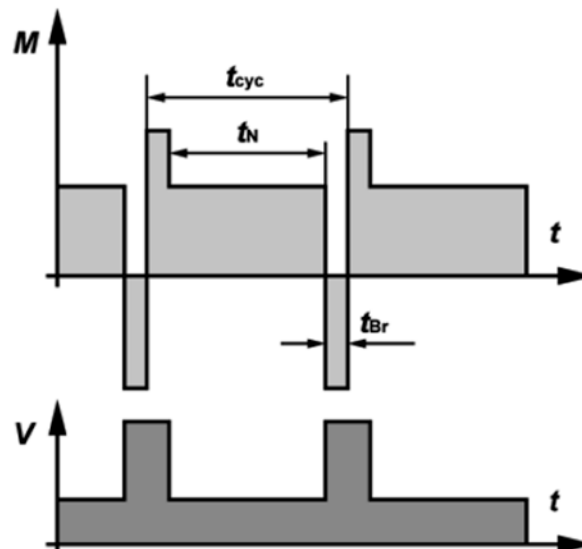
This type of duty corresponds to S3, with the exception that the equipment remains energised during the rest periods. In other words, it operates with no load during these periods. The duty cycle and cycle duration are specified the same way as for S3 duty.

The duty cycle can be determined as follows:

$$ED = \frac{t_N}{t_{cyc}} \times 100\% = \frac{t_N}{t_N + t_0} \times 100\%$$

Example: S6 – 40 %

### Continuous-operation periodic duty with electric braking (S7)



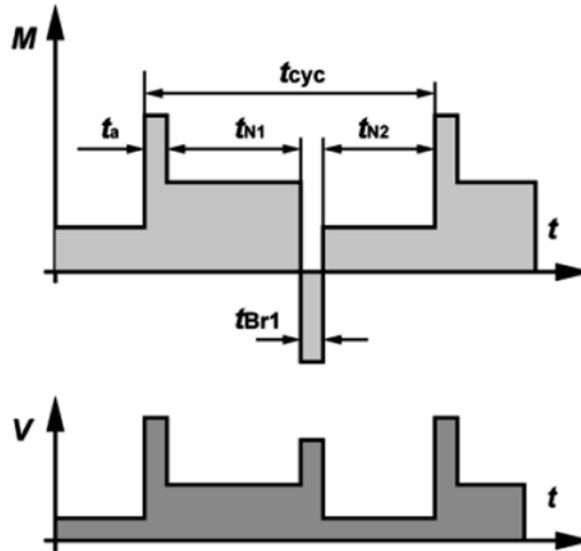
The machine starts up, operates under load, and then is braked electrically, for example by feeding it from a DC power source. Following this, it starts up again immediately. The machine can operate continuously in this manner if the specified moments of inertia of the motor  $J_M$  and of the load  $J_{Ext}$  as well as the specified duty cycle are not exceeded. If the cycle duration is not specified, it is assumed to be 10 minutes.

The duty cycle can be determined as follows:  $DC = 1$

Example: S7 –  $J_M = 0.4 \text{ kgm}^2$ ,  $J_{Ext} = 7.5 \text{ kgm}^2$

( $J_M$  Moment of inertia of the motor /  $J_{Ext}$  Moment of inertia of the load)



**Duty types as defined by EN 60034****Continuous-operation periodic duty with relative load/speed changes (S8)**

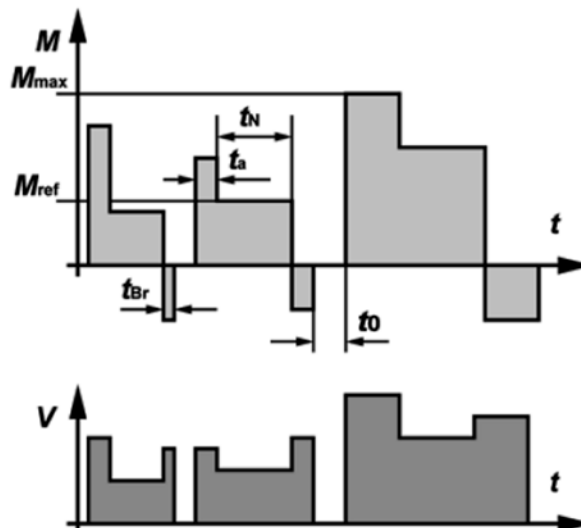
The machine runs continuously under variable load with frequent speed variations. The machine can operate continuously in this manner if at each speed the specified values are not exceeded (moments of inertia  $J_M$  and  $J_{Ext}$  cycle duration (if other than 10 minutes), rated output and duty cycle. With a moment of inertia of  $1 \text{ kg m}^2$ , the acceleration characteristics are the same as with a mass of  $1 \text{ kg}$  at a distance of  $1 \text{ m}$  from the axis of rotation).

The duty cycle can be determined as follows:

$$ED = \frac{t_a + t_{N1}}{t_{cyc}} \times 100\% = \frac{t_{Br} + t_{N2}}{t_{cyc}} \times 100\%$$

Example: S8 –  $J_M = 0.5 \text{ kgm}^2$ ,  $J_{Ext} = 6 \text{ kgm}^2$

( $J_M$  Moment of inertia of the motor /  $J_{Ext}$  Moment of inertia of the load)

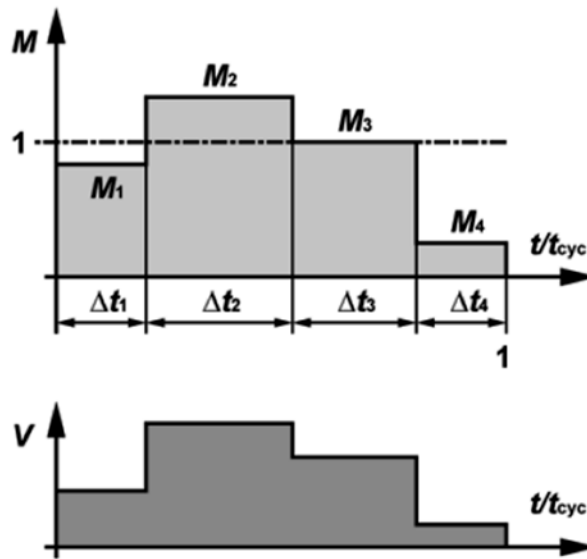
**Duty with non-periodic load and speed variations (S9)**

In S9 duty the load and the speed vary non-periodically within the permissible operating range. This includes frequently applied overloads, which must never exceed the reference load. For this duty type, a constant load appropriately selected and based on duty type S1 shall be taken as the reference value  $M_{ref}$  for the overload.

# Motors

## Duty types as defined by EN 60034

### Duty with discreet constant loads and speeds (S10)



S10 duty comprises operation with at most four different load levels, each of which is maintained long enough to allow the machine to reach thermal equilibrium.

The minimum load within a duty cycle may have a value of zero (no-load operation or at rest with the windings de-energised).

The appropriate abbreviation is S10 followed by the per unit quantities  $p/\Delta t$  for the respective load and its duration and the per unit quantity  $TL$  for the relative thermal life expectancy of the insulation system. The reference value for the thermal life expectancy is the thermal life expectancy at rating for continuous running duty and permissible limits of temperature rise based on duty type S1. For a time de-energized and at rest, the load shall be indicated by the letter  $r$ .

Example: S10  $p/\Delta t = 1.1/0.4, 1/0.3, 0.9/0.2, r/0.1$ ;  $TL = 0.6$

## Operation with frequency converter

The figures given in the table below are for Bauer motors operating in conjunction with the frequency inverter. The torques referred to in tables can be entered for the respective frequencies in continuous operation (S1 = duty factor 100 %).

### Notes on design

Use the torque required at the lowest operating speed to select motors for applications which require constant torque over the entire speed range, as is the case, for example, with lifting gear and conveyors. Bear in mind, too, the possibility of torque being lower in the field-weakening range.

Use only the torque required at the highest operating speed to select motors for applications which require square-law torque over the speed range, as is the case, for example, with pumps and fans. Field weakening is not permissible.

The motor's power is frequency-dependent. It can be approximated in kW from torque M in Nm, the 50 Hz or 60 Hz speed n and the frequency f in Hz by means of the equation

$$P = M \times n / 9550 \times f/50$$

or

$$P = M \times n / 9550 \times f/60$$

If a frequency inverter is used in conjunction with a pulse generator, the full 50 Hz or 60 Hz rated torque is available as holding torque at motor standstill (independent fan required for prolonged periods at standstill). In many instances, however, a mechanical brake is necessary for holding a position exactly or for safety reasons.

The use of thermistors for the thermal protection of the motor winding for frequency inverter duty are strictly recommended (available at extra cost for all motor sizes).

### Increased torque with reduced duty factor

A reduction in duty factor increases the torque available at the low end of the frequency range (up to the transition frequency for field weakening) in accordance with the factors in the table below:

Duty factor	Motor torque with reduced duty factor	Increase in current requirement - approximate
100 %	-	-
60 %	1.15 x S1 torque	1.15 x S1 current
40 %	1.30 x S1 torque	1.30 x S1 current
25 %	1.45 x S1 torque	1.45 x S1 current
15 %	1.60 x S1 torque	1.60 x S1 current

This, in turn, means that short-term overload by a factor of 1.6 is permissible for starting from a low speed, for example. An increase in torque in the field-weakening range due to a reduction in duty factor is possible only under certain conditions; the 1.6x S1 torque generally cannot be achieved

### Increased torque with external fan

If an independent fan is used, the S1-torque in the lower frequency range (below 30 Hz) need not be reduced, i.e., when it has an independent fan the motor can provide the 50 Hz or 60 Hz rated torque throughout the entire frequency range to the cut-off frequency of the field weakening.

With a high quality frequency inverter of 160 %, when independent ventilation is combined with a reduced duty factor the 50 Hz or 60 Hz torque is available from rest through to the transition frequency of the field weakening range.

External ventilation is available for motor types S..08 and larger (see chapter 16 "Motor-independent fan (FV)). In many instances, a more economical alternative is to select a larger motor without external ventilation.

# Motors

## Operation with frequency converter

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### Energy-saving function

High quality frequency inverters reduce voltage in part-load operation to lower the motor current and thus improve efficiency. This converter function emulates the method of operation of commercially available "energy-saving devices".

### Regeneration

Regenerative torques (braking torques) are required for motors used in lifting gear, for example. In conjunction with high quality frequency inverters, the motor torques listed in the table can also be applied as regenerative torques. As with motor torque, an increase in regenerative torque with reduced duty factor is permissible.

### Notes on operation with other-make frequency inverters

The precondition is that the motor current generated by the frequency converter is largely free of harmonics. The harmonics generated in the motor by some old-style frequency inverters result in additional losses and cut available torque by some 10 % across the entire frequency range. There is also a risk of oscillation causing damage to the gear unit.

At frequencies below approximately 5 Hz, operation without pulse generators is possible only using a frequency inverter with state-of-the-art control. If frequency inverters are used that do not feature load-dependent frequency and current adjustment, the increase in the motor's current consumption means that, particularly in the case of small motors (S04-S..09), torque has to be reduced at frequencies below approximately 10 Hz even if an external fan is used or the duty factor is reduced. Regenerative operation is possible only under certain circumstances.

**Explosion protection****General**

The gears described in this catalogue are suitable for use in explosion hazard areas of zones 1, 2, 21 and 22. An **EC Declaration of Conformity** is available upon request; it is based on an „assessment of the explosion risk“, which has been recorded with a notified body (PTB). The ignition protection type of the corresponding **motors** is determined by the zone in which they are to be used and by the duty type (e.g. operation on a converter). The motor parts are in some cases larger compared to the normal design shown in this catalogue, or in the case of pressurised enclosures, they are designed entirely differently. However, the modular system shown in section 3 allows, in the majority of cases, the retention of the gear size and the connection dimensions laid out in this catalogue.

**ATEX**

The term **ATEX** is derived from **A**tmosphères **e**xplosibles. The designations **95** and **137** relate to the renumbering of the article of the first Treaty establishing the EU. **ATEX 95:** Directive 94/9/EC to approximate the laws of the Member States for devices and protection systems for intended use in potentially explosive atmospheres; mandatory for **bringing to market** since 1 July 2013 **ATEX 137:** Directive 1999/92/EC on minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres; mandatory for the **operation** of new systems since 1 July 2003 and mandatory for the adaptation of the operating regulations of existing plants from 1 July 2006. Safety guidelines for the operation of explosion-protected gear motors can be found in BA170...

**Frequency converters**

Frequency converters used must comply with the requirements set out in the EC Type Examination Certificate.

For the corresponding motor type, the EC Type Examination Certificate contains the maximum possible torques depending on the frequency, the corresponding rated current, converter settings and other requirements for the converter.

The pulse voltage at the motor terminals must be limited to a maximum permissible pulse voltage of  $1.556 \text{ V} (2 \times \sqrt{2} \times 550 \text{ V})$  by selecting a suitable frequency converter and/or using filters. The maximum permissible frequency converter input voltage is 500 V

**Protective device**

The motor is protected against unacceptable heating by the defined frequency converter setting, as well as by the integrated thermistor sensor in accordance with DIN 44081 / 44082 Response temperature **140 °C**. Analysis of the built-in thermal winding protection must be done by using a trip unit with Ex-mark II (2) G or II (2) D that fulfils the requirements of Directive 94/9/EC.

# Motors

## Explosion protection

### Voltages

The voltages at the motor terminals depend on the input voltage of the frequency converter, the voltage loss at the filter and in the motor supply cable, and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the case of reduced voltages at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account for the sizing of the motor, the parameterisation of the converter and for the minimum converter input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz. Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate. Max. permissible ambient temperature range -20 °C to +50 °C

#### Converter Settings:

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>n</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	Up to 180 Hz, depending on motor design
Permissible operating time below f <sub>min</sub> :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes

### Gears with non-electrical explosion protection

As of 1 July 2003, only mechanical equipment („devices“) which comply with the requirements of ATEX 95 may be placed on the market. The ATEX and ExVO define the following: „Equipment includes machines, apparatus, fixed or mobile devices, control components and instrumentation thereof and detection or prevention systems which, separately or jointly, are intended for the generation, transfer, storage, measurement, control and conversion of energy and/or the processing of material and which are capable of causing an explosion through their own potential sources of ignition.“ The definition therefore applies to the gear component of a gear motor; but also to the process machinery and equipment being driven, if these are installed in explosion hazard areas. An „**Assessment of the Ignition Hazard**“ must be carried out and documented by the manufacturer for the „**Declaration of Conformity**“ for the machine being driven; this task is simplified if a dedicated assessment is carried out for the „gear motor“ components. The assessment can only be undertaken in accordance with the ATEX requirements; the „Presumption of Conformity“ applies in favour of the product, however, if a standard or draft standard is taken as a basis.

**When difficult conditions combine (e.g. ambient temperature > 40 °C, speed > 1500 r/min, vertical arrangement of the motor component, temperature class T4), there may be restrictions on the selection of gears in the upper power range.**

The following standards, among others, were observed for the assessment of the Bauer gears:

- EN 1127 Explosion Protection; basic concepts and methodology
- EN 13463 Non-electrical equipment for use in potentially explosive atmospheres
- EN 13463-1 Basic method
- EN 13463-5 Constructional safety
- EN 13463-8 Liquid immersion

**Standard Motors****Motors with rated speed 1500 1/min**

M <sub>n</sub> Nm	IE Class	Type	P <sub>n</sub> kW	I <sub>n</sub> A	2p	n <sub>n</sub> 1/min	f Hz	η %	Conne- tion	R <sub>20</sub> Ω	R <sub>s20</sub> Ω	L <sub>d</sub> mH	L <sub>q</sub> mH	ke V/1000 1/min	kt Nm/A	M <sub>max</sub> (60s) Nm	I <sub>max</sub> (60s) A	J kgm <sup>2</sup>
0.76	4	S4E04SA4-1	0.12	0.41	4	1500	50	IE4-67.4	Y	154	77.2	268	412	120	1.85	1.6	0.86	0.00014
0.76	3	SPEU04SA4-1	0.12	0.42	4	1500	50	IE3-66	Y	154	77.2	268	412	120	1.8	1.2	0.67	0.00014
1	2	SHE04SA4-1	0.157	0.54	4	1500	50	IE2-61.4	Y	154	77.2	268	412	120	1.85	1.6	0.86	0.00014
1.15	5	S5EU06MA4	0.18	0.49	4	1500	50	IE5-80.8	Y	79	39.5	171	271	152	2.35	2.6	1.1	0.0002
1.3	5	S5E06MA4	0.2	0.55	4	1500	50	IE5-79.6	Y	79	39.5	171	271	152	2.4	3.8	1.6	0.0002
1.3	5	S5EU06MA4	0.2	0.55	4	1500	50	IE5-79.1	Y	79	39.5	171	271	152	2.35	2.6	1.1	0.0002
1.6	4	S4E06MA4	0.25	0.67	4	1500	50	IE4-76.6	Y	79	39.5	171	271	152	2.4	3.8	1.6	0.0002
1.6	4	S4EU06MA4	0.25	0.68	4	1500	50	IE4-75.5	Y	79	39.5	171	271	152	2.35	2.6	1.1	0.0002
1.6	5	S5EU06LA4	0.25	0.7	4	1500	50	IE5-85.5	Y	37.2	18.6	99.5	133	148	2.3	3.8	1.7	0.000295
2.4	1	SSE06MA4	0.37	1	4	1500	50	IE1-66.1	Y	79	39.5	171	271	152	2.4	3.8	1.6	0.0002
2.4	4	S4EU06LA4	0.37	1.05	4	1500	50	IE4-80	Y	37.2	18.6	99.5	133	148	2.3	3.8	1.7	0.000295
2.6	4	S4E06LA4	0.4	1.12	4	1500	50	IE4-79.8	Y	37.2	18.6	99.5	133	148	2.3	5.6	2.4	0.000295
3.5	1	SSE06LA4	0.55	1.5	4	1500	50	IE1-74.1	Y	37.2	18.6	99.5	133	148	2.3	5.6	2.4	0.000295
3.5	5	S5EU08MA4	0.55	1.28	4	1500	50	IE5-87.2	Y	18.7	9.35	97	170	180	2.7	10	3.7	0.00115
5	4	S4E08MA4	0.78	1.8	4	1500	50	IE4-85.7	Y	18.7	9.35	97	170	180	2.8	10	3.7	0.00115
5	5	S5EU08LA4	0.78	1.9	4	1500	50	IE5-86.9	Y	11	5.5	70	117	171	2.6	15	5.6	0.0015
7	3	SPE08LA4	1.1	2.6	4	1500	50	IE3-85.4	Y	11	5.5	70	117	171	2.75	15	5.6	0.0015
7	5	S5EU09SA4	1.1	2.2	4	1500	50	IE5-90.8	Y	9.9	4.95	64.1	110	208	3.2	20	6.4	0.00245
10	1	SSE08LA4	1.55	3.6	4	1500	50	IE1-80.5	Y	11	5.5	70	117	171	2.8	15	5.6	0.0015
10	4	S4E09SA4	1.55	3	4	1500	50	IE4-88.2	Y	9.9	4.95	64.1	110	208	3.3	20	6.4	0.00245
10	5	S5EU09XA4	1.55	3.1	4	1500	50	IE5-89.9	Y	5.25	2.63	41.2	70.1	209	3.2	30	10	0.0038
14	2	SHE09SA4	2.2	4.3	4	1500	50	IE2-83.9	Y	9.9	4.95	64.1	110	208	3.3	20	6.4	0.00245
14	5	S5E09XA4	2.2	4.2	4	1500	50	IE5-90.3	Y	5.25	2.63	41.2	70.1	209	3.35	31	10	0.0038
14	5	S5EU11SA6	2.2	4.4	6	1500	75	IE5-91.3	Y	3.52	1.76	20	30	210	3.1	40	13	0.012
20	3	SPE09XA4	3.1	5.9	4	1500	50	IE3-88	Y	5.25	2.63	41.2	70.1	209	3.35	31	10	0.0038
19	4	S4E11SA6	3	5.9	6	1500	75	IE4-90.1	Y	3.52	1.76	20	30	210	3.2	35	11	0.012
20	5	S5EU11MA6	3.1	6.4	6	1500	75	IE5-93.3	Y	1.78	0.892	12	18.4	206	3.1	55	17	0.0175
25.5	3	SPE11SA6	4	8	6	1500	75	IE3-87.7	Y	3.52	1.76	20	30	210	3.2	35	11	0.012
25.5	5	S5EU11LA6	4	8.1	6	1500	75	IE5-93.2	Y	1.21	0.605	9.3	13.9	210	3.1	75	23	0.0215
26.5	5	S5E11MA6	4.2	8.3	6	1500	75	IE5-92.5	Y	1.78	0.892	12	18.4	206	3.15	55	17	0.0175
35	5	S5E11LA6	5.5	10.8	6	1500	75	IE5-93.2	Y	1.21	0.605	9.3	13.9	210	3.25	75	23	0.0215
35	4	S4E11MA6	5.5	11	6	1500	75	IE4-90.8	Y	1.78	0.892	12	18.4	206	3.15	55	17	0.0175
48	3	SPE11LA6	7.5	14.7	6	1500	75	IE3-91.4	Y	1.21	0.605	9.3	13.9	210	3.25	75	23	0.0215

M <sub>n</sub>	Rated torque
P <sub>n</sub>	Rated power
I <sub>n</sub>	Rated current
2p	No. of Motor Poles
n <sub>n</sub>	Rated speed
f	Nominal Frequency
η	Motor efficiency
R <sub>20</sub>	Phase Resistance U-V
R <sub>s20</sub>	Winding Resistance
L <sub>d</sub>	Inductance D-Axis
L <sub>q</sub>	Inductance Q-Axis
ke	Voltage constant
kt	Torque constant
M <sub>max</sub> (60s)	Peak Torque
I <sub>max</sub> (60s)	Peak Current
J	Moment of inertia

All motors: converter supply voltage 380 to 500 V



## Motors

## Technical data

## Rated speed 1500 1/min

Rated speed 1500 1/min	$\eta$ (100%-Load)	$\eta$ (75%-Load)	$\eta$ (50%-Load)	IE Class	Manufacturer data	Type	Number of poles	$M_n$	P	Frequency	Voltage	$n_n$	Type of motor	Operating conditions	Power losses in % at operating points (Speed/Torque)						
															25/25	25/100	50/25	50/50	50/100	90/50	90/100
	67.4	n.A	n.A	IE4	1) S4E04SA4-1	4	0.76	0.12	50	380	1500	2)	3)	4.1	39.2	5.0	12.2	41.1	14.2	43.9	
	66.0	n.A	n.A	IE3	1) SPEU04SA4-1	4	0.76	0.12	50	380	1500	2)	3)	4.1	42.8	5.2	13.0	44.8	15.2	46.6	
	61.4	n.A	n.A	IE2	1) SHE04SA4-1	4	1	0.157	50	380	1500	2)	3)	4.5	54.3	5.4	15.6	55.2	17.3	56.7	
	80.8	n.A	n.A	IE5	1) S5EU06MA4	4	1.15	0.18	50	380	1500	2)	3)	2.3	18.9	3.3	6.7	19.8	8.5	21.5	
	79.6	n.A	n.A	IE5	1) S5E06MA4	4	1.3	0.2	50	380	1500	2)	3)	2.5	20.6	3.5	7.2	21.6	9.1	23.5	
	79.1	n.A	n.A	IE5	1) S5EU06MA4	4	1.3	0.2	50	380	1500	2)	3)	2.8	21.8	3.6	7.1	22.7	8.6	24.3	
	76.6	n.A	n.A	IE4	1) S4E06MA4	4	1.6	0.25	50	380	1500	2)	3)	2.2	24.8	3.0	7.5	25.6	9.6	27.7	
	75.5	n.A	n.A	IE4	1) S4EU06MA4	4	1.6	0.25	50	380	1500	2)	3)	2.4	27.4	3.0	8.0	28.2	9.3	29.4	
	85.5	n.A	n.A	IE5	1) S5EU06LA4	4	1.6	0.25	50	380	1500	2)	3)	1.9	12.8	2.8	5.1	13.6	6.6	15.3	
	66.1	n.A	n.A	IE1	1) SSE06MA4	4	2.4	0.37	50	380	1500	2)	3)	3.1	45.5	3.7	11.6	46.2	13.3	47.1	
	80.0	n.A	n.A	IE4	1) S4EU06LA4	4	2.4	0.37	50	380	1500	2)	3)	2.0	21.4	2.5	6.4	21.9	7.4	22.9	
	79.8	n.A	n.A	IE4	1) S4E06LA4	4	2.6	0.4	50	380	1500	2)	3)	2.2	20.5	3.0	6.7	21.5	8.5	23.2	
	74.1	n.A	n.A	IE1	1) SSE06LA4	4	3.5	0.55	50	380	1500	2)	3)	1.5	10.6	2.5	4.4	11.6	5.9	13.2	
	87.2	n.A	n.A	IE5	1) S5EU08MA4	4	3.5	0.55	50	380	1500	2)	3)	2.3	29.7	2.9	8.2	30.2	9.4	31.4	
	85.7	n.A	n.A	IE4	1) S4E08MA4	4	5	0.78	50	380	1500	2)	3)	1.4	13.4	1.9	4.4	14.0	5.5	15.2	
	86.9	n.A	n.A	IE5	1) S5EU08LA4	4	5	0.78	50	380	1500	2)	3)	1.7	10.4	2.8	4.7	11.7	6.6	13.7	
	85.4	n.A	n.A	IE3	1) SPE08LA4	4	7	1.1	50	380	1500	2)	3)	1.4	12.7	2.2	4.4	13.7	6.3	15.4	
	90.8	n.A	n.A	IE5	1) S5EU09SA4	4	7	1.1	50	380	1500	2)	3)	0.9	7.7	1.2	2.7	8.3	3.5	9.1	
	80.5	n.A	n.A	IE1	1) SSE08LA4	4	10	1.55	50	380	1500	2)	3)	1.6	21.2	2.3	6.3	21.8	7.5	22.2	
	88.2	n.A	n.A	IE4	1) S4E09SA4	4	10	1.55	50	380	1500	2)	3)	1.2	10.4	1.7	3.7	11.1	4.9	12.2	
	89.9	n.A	n.A	IE5	1) S5EU09XA4	4	10	1.55	50	380	1500	2)	3)	1.6	7.1	2.7	3.9	8.3	5.9	10.3	
	83.9	n.A	n.A	IE2	1) SHE09SA4	4	14	2.2	50	380	1500	2)	3)	1.3	15.9	1.7	4.7	16.4	5.6	17.3	
	90.3	n.A	n.A	IE5	1) S5E09XA4	4	14	2.2	50	380	1500	2)	3)	1.1	7.6	1.8	3.2	8.4	4.4	9.6	
	91.3	n.A	n.A	IE5	1) S5EU11SA6	6	14	2.2	50	380	1500	2)	3)	1.0	6.3	1.7	2.9	7.1	4.4	8.6	
	88.0	n.A	n.A	IE3	1) SPE09XA4	4	20	3.1	50	380	1500	2)	3)	1.0	11.4	1.4	3.5	11.7	4.2	12.5	
	90.1	n.A	n.A	IE4	1) S4E11SA6	6	19	3	75	380	1500	2)	3)	1.0	7.4	1.7	3.1	8.3	4.7	9.9	
	93.3	n.A	n.A	IE5	1) S5EU11MA6	6	20	3.1	75	380	1500	2)	3)	0.8	5.0	1.4	2.2	5.6	3.3	6.6	
	87.7	n.A	n.A	IE3	1) SPE11SA6	6	25.5	4	75	380	1500	2)	3)	1.0	10.9	1.5	3.4	11.5	4.6	12.7	
	93.2	n.A	n.A	IE5	1) S5EU11LA6	6	25.5	4	75	380	1500	2)	3)	0.8	4.5	1.4	2.2	5.3	3.4	6.5	
	92.5	n.A	n.A	IE5	1) S5E11MA6	6	26.5	4.2	75	380	1500	2)	3)	0.7	5.5	1.2	2.3	6.2	3.4	7.2	
	93.2	n.A	n.A	IE5	1) S5E11LA6	6	35	5.5	75	380	1500	2)	3)	0.8	5.0	1.3	2.3	5.6	3.4	6.6	
	90.8	n.A	n.A	IE4	1) S4E11MA6	6	35	5.5	75	380	1500	2)	3)	0.8	7.7	1.2	2.6	8.2	3.5	9.1	
	91.4	n.A	n.A	IE3	1) SPE11LA6	6	48	7.5	75	380	1500	2)	3)	0.7	7.2	1.1	2.4	7.7	3.3	8.5	

\*Dimensioned according to IEC TS 60034-30-2

1) Manufacturer:	Bauer Gear Motor GmbH	2) Type of motor:	Three-phase permanent magnet excited synchronous motor	3) Installation altitude above sea level (m):	1000
Commercial register number:	HRB 736269			Ambient temperature:	-20 °C to +40 °C
Address:	Eberhard-Bauer-Str. 37, 73734 Esslingen / Germany				

**Technical data**

The figures given in the table below are for Bauer motors operating in conjunction with the frequency inverter. The torques referred to in tables can be entered for the respective frequencies in continuous operation (S1 = duty factor 100 %).

**Motor torques in the adjusting range 150 1/min - 1800 1/min. duty type S1**

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
0.76	0.12	S4E04SA4-1	150	0.76	0.012	0.41	5	Y
			500	0.76	0.04	0.41	16.67	Y
			1000	0.76	0.08	0.41	33.33	Y
			1500	0.76	0.12	0.41	50	Y
			1800	0.76	0.143	0.41	60	Y
0.76	0.12	SPEU04SA4-1	150	0.76	0.012	0.42	5	Y
			500	0.76	0.04	0.42	16.67	Y
			1000	0.76	0.08	0.42	33.33	Y
			1500	0.76	0.12	0.42	50	Y
			1800	0.76	0.143	0.42	60	Y
1	0.157	SHE04SA4-1	150	0.76	0.012	0.41	5	Y
			500	0.85	0.045	0.46	16.67	Y
			1000	1	0.105	0.54	33.33	Y
			1500	1	0.157	0.54	50	Y
			1800	1	0.188	0.54	60	Y
1.15	0.18	S5EU06MA4	150	1.15	0.018	0.49	5	Y
			500	1.15	0.06	0.49	16.67	Y
			1000	1.15	0.12	0.49	33.33	Y
			1500	1.15	0.18	0.49	50	Y
			1800	1.15	0.217	0.49	60	Y
1.3	0.2	S5E06MA4	150	1.3	0.02	0.55	5	Y
			500	1.3	0.068	0.55	16.67	Y
			1000	1.3	0.136	0.55	33.33	Y
			1500	1.3	0.2	0.55	50	Y
			1800	1.3	0.245	0.55	60	Y
1.3	0.2	S5EU06MA4	150	1.3	0.02	0.55	5	Y
			500	1.3	0.068	0.55	16.67	Y
			1000	1.3	0.136	0.55	33.33	Y
			1500	1.3	0.2	0.55	50	Y
			1800	1.3	0.245	0.55	60	Y
1.6	0.25	S4E06MA4	150	1.6	0.025	0.67	5	Y
			500	1.6	0.092	0.67	16.67	Y
			1000	1.6	0.168	0.67	33.33	Y
			1500	1.6	0.25	0.67	50	Y
			1800	1.6	0.3	0.67	60	Y
1.6	0.25	S4EU06MA4	150	1.6	0.025	0.68	5	Y
			500	1.6	0.084	0.68	16.67	Y
			1000	1.6	0.168	0.68	33.33	Y
			1500	1.6	0.25	0.68	50	Y
			1800	1.6	0.3	0.7	60	Y
1.6	0.25	S5EU06LA4	150	1.6	0.025	0.7	5	Y
			500	1.6	0.084	0.7	16.67	Y
			1000	1.6	0.168	0.7	33.33	Y
			1500	1.6	0.25	0.7	50	Y
			1800	1.6	0.3	0.7	60	Y
2.4	0.37	SSE06MA4	150	1.8	0.028	0.75	5	Y
			500	2	0.105	0.84	16.67	Y
			1000	2.2	0.23	0.93	33.33	Y
			1500	2.4	0.37	1	50	Y
			1800	2.4	0.45	1	60	Y

# Motors

## Technical data

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
2.4	0.37	S4EU06LA4	150	2.4	0.038	1.05	5	Y
			500	2.4	0.126	1.05	16.67	Y
			1000	2.4	0.25	1.05	33.33	Y
			1500	2.4	0.37	1.05	50	Y
			1800	2.4	0.45	1.05	60	Y
2.6	0.37	S4E06LA4	150	2.5	0.04	1.07	5	Y
			500	2.6	0.136	1.12	16.67	Y
			1000	2.6	0.27	1.12	33.33	Y
			1500	2.6	0.4	1.12	50	Y
			1800	2.6	0.5	1.12	60	Y
3.5	0.55	SSE06LA4	150	2.5	0.04	1.07	5	Y
			500	2.9	0.15	1.25	16.67	Y
			1000	3.5	0.37	1.5	33.33	Y
			1500	3.5	0.55	1.5	50	Y
			1800	3.5	0.66	1.5	60	Y
3.5	0.55	S5EU08MA4	150	3.5	0.06	1.28	5	Y
			500	-	-	-	16.67	Y
			1000	-	-	-	33.33	Y
			1500	3.5	0.55	1.28	50	Y
			1800	3.5	0.66	1.28	60	Y
5	0.78	S4E08MA4	150	5	0.08	1.8	5	Y
			500	5	0.26	1.8	16.67	Y
			1000	5	0.52	1.8	33.33	Y
			1500	5	0.78	1.8	50	Y
			1800	5	0.9	1.8	60	Y
5	0.78	S5EU08LA4	150	5	0.08	1.9	5	Y
			500	-	-	-	16.67	Y
			1000	-	-	-	33.33	Y
			1500	5	0.78	1.9	50	Y
			1800	5	0.9	1.9	60	Y
7	1.1	SPE08LA4	150	6.5	0.1	2.4	5	Y
			500	7	0.37	2.6	16.67	Y
			1000	7	0.73	2.6	33.33	Y
			1500	7	1.1	2.6	50	Y
			1800	7	1.3	2.6	60	Y
7	1.1	S5EU09SA4	150	7	0.11	2.2	5	Y
			500	-	-	-	16.67	Y
			1000	-	-	-	33.33	Y
			1500	7	1.1	2.2	50	Y
			1800	7	1.3	2.2	60	Y
10	1.55	SSE08LA4	150	6.5	0.1	2.4	5	Y
			500	8	0.42	2.9	16.67	Y
			1000	10	1.05	3.6	33.33	Y
			1500	10	1.55	3.6	50	Y
			1800	10	1.9	3.6	60	Y
10	1.55	S4E09SA4	150	8.5	0.13	2.6	5	Y
			500	10	0.52	3	16.67	Y
			1000	10	1.05	3	33.33	Y
			1500	10	1.55	3	50	Y
			1800	10	1.9	3	60	Y
10	1.55	S5EU09XA4	150	10	0.16	3.1	5	Y
			500	-	-	-	16.67	Y
			1000	-	-	-	33.33	Y
			1500	10	1.55	3.1	50	Y
			1800	10	1.9	3.2	60	Y

**Technical data**

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
14	2.2	SHE09SA4	150	8.5	0.13	2.6	5	Y
			500	10	0.52	3.1	16.67	Y
			1000	14	1.47	4.3	33.33	Y
			1500	14	2.2	4.3	50	Y
			1800	14	2.6	4.5	60	Y
14	2.2	S5E09XA4	150	13	0.2	3.9	5	Y
			500	14	0.73	4.2	16.67	Y
			1000	14	1.47	4.2	33.33	Y
			1500	14	2.2	4.2	50	Y
			1800	14	2.6	4.5	60	Y
14	2.2	S5EU11SA6	150	14	0.22	4.4	7.5	Y
			500	-	-	-	-	Y
			1000	-	-	-	-	Y
			1500	14	2.2	4.4	75	Y
			1800	14	2.6	4.4	90	Y
19	3	S4E11SA6	150	19	0.3	5.9	7.5	Y
			500	19	1	5.9	25	Y
			1000	19	2	5.9	50	Y
			1500	19	3	5.9	75	Y
			1800	19	3.6	5.9	90	Y
20	3.1	SPE09XA4	150	13	0.2	3.9	5	Y
			500	16	0.84	4.8	16.67	Y
			1000	20	2.1	5.9	33.33	Y
			1500	20	3.1	5.9	50	Y
			1800	20	3.8	6.7	60	Y
20	3.1	S5EU11MA6	150	20	0.31	6.4	7.5	Y
			500	-	-	-	-	Y
			1000	-	-	-	-	Y
			1500	20	3.1	6.4	75	Y
			1800	20	3.8	6.4	90	Y
25.5	4	SPE11SA6	150	19	0.3	5.9	7.5	Y
			500	22	1.2	6.9	25	Y
			1000	25.5	2.7	8	50	Y
			1500	25.5	4	8	75	Y
			1800	25.5	4.8	8	90	Y
25.5	4	S5EU11LA6	150	25.5	0.4	8.1	7.5	Y
			500	-	-	-	-	Y
			1000	-	-	-	-	Y
			1500	25.5	4	8.1	75	Y
			1800	25.5	4.8	8.1	90	Y
26.5	4.2	S5E11MA6	150	26.5	0.42	8.3	7.5	Y
			500	26.5	1.4	8.3	25	Y
			1000	26.5	2.8	8.3	50	Y
			1500	26.5	4.2	8.3	75	Y
			1800	26.5	5	8.3	90	Y
35	5.5	S5E11LA6	150	35	0.55	10.8	7.5	Y
			500	35	1.8	10.8	25	Y
			1000	35	3.7	10.8	50	Y
			1500	35	5.5	10.8	75	Y
			1800	35	6.6	10.8	90	Y
35	5.5	S4E11MA6	150	26.5	0.42	8.3	7.5	Y
			500	30	1.6	9.5	25	Y
			1000	35	3.7	11	50	Y
			1500	35	5.5	11	75	Y
			1800	35	6.6	11	90	Y

# Motors

## Technical data

$M_n$ Nm	$P_n$ kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
48	7.5	SPE11LA6	150	35	0.55	10.8	7.5	Y
			500	40	2.1	12.3	25	Y
			1000	48	5	14.7	50	Y
			1500	48	7.5	14.7	75	Y
			1800	48	9	14.7	90	Y

### Converter Settings:

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * $I_{1500/min}$
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s (in open loop mode)

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

Non-standard operating conditions on request.

All motors: converter supply voltage 380 to 500 V

**Technical data****Motors with rated speed 2250 1/min**

M <sub>n</sub> Nm	IE Classe	Type	P <sub>n</sub> kW	I <sub>n</sub> A	2p	n <sub>n</sub> 1/min	f Hz	η %	Connection	R <sub>20</sub> Ω	R <sub>s20</sub> Ω	L <sub>d</sub> mH	L <sub>q</sub> mH	ke V/1000 1/min	kt Nm/A	M <sub>max (60s)</sub> Nm	I <sub>max (60s)</sub> A	J kgm <sup>2</sup>
3.5	5	S5EU08MA4	0.82	2.25	4	2250	75	IE5-88.4	D	6.23	9.35	34	57	103	1.4	10	6.4	0.00115
5	5	S5E08MA4	1.18	3.1	4	2250	75	IE5-87.9	D	6.23	9.35	34	57	103	1.6	10	6.4	0.00115
5	5	S5EU08LA4	1.18	3.6	4	2250	75	IE5-86.5	D	3.67	5.5	24	39	99	1.4	14	9.5	0.0015
7	4	S4E08LA4	1.65	4.7	4	2250	75	IE4-85.9	D	3.67	5.5	24	39	99	1.5	14	9.5	0.0015
7	3	SPE08MA4	1.65	4.3	4	2250	75	IE3-83.8	D	6.23	9.35	34	57	103	1.6	10	6.4	0.00115
7	5	S5EU09SA4	1.65	3.75	4	2250	75	IE5-91.3	D	3.3	4.95	21.4	36.6	120	1.85	20	11	0.00245
10	1	SSE08LA4	2.35	6.6	4	2250	75	IE1-81.4	D	3.67	5.5	24	39	99	1.5	14	9.5	0.0015
10	5	S5E09SA4	2.35	5.3	4	2250	75	IE5-89.3	D	3.3	4.95	21.4	36.6	120	1.9	20	11	0.00245
10	5	S5EU09XA4	2.35	5.5	4	2250	75	IE5-90.6	D	1.75	2.63	13.8	24.4	120	1.8	30	16	0.0038
13	3	SPE09SA4	3	6.9	4	2250	75	IE3-86.8	D	3.3	4.95	21.4	36.6	120	1.9	20	11	0.00245
17.5	4	S4E09XA4	4.1	9.2	4	2250	75	IE4-89.4	D	1.75	2.63	13.8	24.4	120	1.9	29	16	0.0038

M <sub>n</sub>	Rated torque
P <sub>n</sub>	Rated power
I <sub>n</sub>	Rated current
2p	No. of Motor Poles
n <sub>n</sub>	Rated speed
f	Nominal Frequency
η	Motor efficiency
R <sub>20</sub>	Phase Resistance U-V
R <sub>s20</sub>	Winding Resistance
L <sub>d</sub>	Inductance D-Axis
L <sub>q</sub>	Inductance Q-Axis
ke	Voltage constant
kt	Torque constant
M <sub>max (60s)</sub>	Peak Torque
I <sub>max (60s)</sub>	Peak Current
J	Moment of inertia

All motors: converter supply voltage 380 to 500 V

## Motors

## Technical data

## Rated speed 2250 1/min

Rated speed 2250 1/min	Power losses in % at operating points (Speed/Torque)																				
	25/25	25/100	50/25	50/50	50/100	90/50	90/100	90/100	90/100	90/100											
$\eta$ (100 %-Load)	%	88.4	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A
$\eta$ (75 %-Load)	%	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A
$\eta$ (50 %-Load)	%	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A
IE Class		5	5	5	4	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Manufacturer data		1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)	1)
Type		S5EU08MA4	S5EU08MA4	S5EU08LA4	S4E08LA4	SPE08MA4	S5EU09SA4	S5EU08LA4	S5E09SA4	S5EU09XA4	SPE09SA4	S4E09XA4									
Number of poles		4	4	4	4	4	4	4	4	4	4	4									
$M_n$	Nm	3.5	5	5	7	7	7	10	10	10	13	17.5									
P	kW	0.82	1.18	1.18	1.65	1.65	1.65	2.35	2.35	2.35	3	4.1									
Frequency	Hz	75	75	75	75	75	75	75	75	75	75	75									
Voltage	V	380	380	380	380	380	380	380	380	380	380	380									
nN	1/min	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250									
Type of motor		2)	2)	2)	2)	2)	2)	2)	2)	2)	2)	2)									
Operating conditions		3)	3)	3)	3)	3)	3)	3)	3)	3)	3)	3)									

\*Dimensioned according to IEC TS 60034-30-2

1) Manufacturer:	Bauer Gear Motor GmbH	2) Type of motor:	Three-phase permanent magnet excited synchronous motor	3) Installation altitude above sea level (m):	1000
Commercial register number:	HRB 736269	Ambient temperature:	-20 °C to +40 °C		
Address:	Eberhard-Bauer-Str. 37, 73734 Esslingen / Germany				



**Technical data**

The figures given in the table below are for Bauer motors operating in conjunction with the frequency inverter. The torques referred to in tables can be entered for the respective frequencies in continuous operation (S1 = duty factor 100 %).

**Motor torques in the adjusting range 150 1/min - 3600 1/min. duty type S1**

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
3.5	0.82	S5EU08MA4	150	3.5	0.06	2.25	5	D
			500	-	-	-	16.66	D
			1000	-	-	-	33.33	D
			2250	3.5	0.82	2.25	75	D
			2600	3.5	1	2.25	87	D
5	1.18	S5E08MA4	150	5	0.08	3.1	5	D
			500	5	0.26	3.1	16.66	D
			1000	5	0.52	3.1	33.33	D
			2250	5	1.18	3.1	75	D
			2600	5	1.4	3.1	87	D
5	1.18	S5EU08LA4	150	5	0.08	3.6	5	D
			500	-	-	-	16.66	D
			1000	-	-	-	33.33	D
			2250	5	1.18	3.6	75	D
			2600	5	1.4	3.6	87	D
7	1.65	S4E08LA4	150	6.5	0.1	4.4	5	D
			500	7	0.37	4.7	16.66	D
			1000	7	0.73	4.7	33.33	D
			2250	7	1.65	4.7	75	D
			2600	7	1.9	4.7	87	D
7	1.65	SPE08MA4	150	5	0.08	3.1	5	D
			500	5.9	0.31	3.7	16.66	D
			1000	7	0.73	4.3	33.33	D
			2250	7	1.65	4.3	75	D
			2600	7	1.9	4.3	87	D
7	1.65	S5EU09SA4	150	7	0.11	3.75	5	D
			500	-	-	-	16.66	D
			1000	-	-	-	33.33	D
			2250	7	1.6	3.75	75	D
			2600	7	1.9	3.75	87	D
10	2.35	SSE08LA4	150	6.5	0.1	4.3	5	D
			500	8	0.42	5.3	16.66	D
			1000	10	1.05	6.6	33.33	D
			2250	10	2.35	6.6	75	D
			2600	10	2.7	6.6	87	D
10	2.35	S5E09SA4	150	8.5	0.13	4.5	5	D
			500	10	0.52	5.3	16.66	D
			1000	10	1.05	5.3	33.33	D
			2250	10	2.35	5.3	75	D
			2600	10	2.7	5.3	87	D
10	2.35	S5EU09XA4	150	10	0.16	5.5	5	D
			500	-	-	-	16.66	D
			1000	-	-	-	33.33	D
			2250	10	2.35	5.5	75	D
			2600	10	2.7	5.5	87	D
13	3	SPE09SA4	150	8.5	0.13	4.5	5	D
			500	10	0.52	5.3	16.66	D
			1000	13	1.36	6.9	33.33	D
			2250	13	3	6.9	75	D
			2600	13	3.5	6.9	87	D

# Motors

## Technical data

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
17.5	4.1	S4E09XA4	150	13	0.2	6.9	5	D
			500	16	0.84	8.4	16.66	D
			1000	17.5	1.83	9.2	33.33	D
			2250	17.5	4.1	9.2	75	D
			2600	17.5	4.8	9.2	87	D

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>2250/min</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	120 Hz
Permissible operating time below f <sub>min</sub> :	60 s (in open loop mode)

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

Non-standard operating conditions on request.

All motors: converter supply voltage 380 to 500 V

**Motors with rated speed 3000 1/min**

M <sub>n</sub> Nm	IE Class	Type	P <sub>n</sub> kW	I <sub>n</sub> A	2p	n <sub>n</sub> 1/min	f Hz	η %	Connection	R <sub>20</sub> Ω	R <sub>s20</sub> Ω	L <sub>d</sub> mH	L <sub>q</sub> mH	ke V/1000 1/min	kt Nm/A	M <sub>max</sub> (60s) Nm	I <sub>max</sub> (60s) A	J kgm <sup>2</sup>
0.38	5	S5EU04SA4-1	0.12	0.33	4	3000	100	IE5-82.2	Y	70.6	35.3	120	185	80	1.2	1	0.85	0.00014
0.58	5	S5EU04SA4-1	0.18	0.49	4	3000	100	IE5-80	Y	70.6	35.3	120	185	80	1.2	1	0.85	0.00014
0.65	5	S5E04SA4-1	0.2	0.52	4	3000	100	IE5-80.3	Y	70.6	35.3	120	185	80	1.25	1.6	1.3	0.00014
0.65	5	S5EU04SA4-1	0.2	0.54	4	3000	100	IE5-79.1	Y	70.6	35.3	120	185	80	1.2	1	0.85	0.00014
0.8	5	S5E04SA4-1	0.25	0.64	4	3000	100	IE5-78.5	Y	70.6	35.3	120	185	80	1.25	1.6	1.3	0.00014
0.8	5	S5EU06MA4	0.25	0.63	4	3000	100	IE5-87.8	Y	24.6	12.3	52.3	83.3	84	1.3	2.8	2.2	0.0002
1	4	S4E04SA4-1	0.315	0.8	4	3000	100	IE4-74.5	Y	70.6	35.3	120	185	80	1.25	1.6	1.3	0.00014
1.2	5	S5EU06MA4	0.37	0.93	4	3000	100	IE5-86.6	Y	24.6	12.3	52.3	83.3	84	1.3	2.8	2.2	0.0002
1.3	5	S5E06MA4	0.4	1	4	3000	100	IE5-86.2	Y	24.6	12.3	52.3	83.3	84	1.3	3.8	3	0.0002
1.3	5	S5EU06MA4	0.4	1	4	3000	100	IE5-86.3	Y	24.6	12.3	52.3	83.3	84	1.3	2.8	2.2	0.0002
1.75	5	S5E06MA4	0.55	1.35	4	3000	100	IE5-84	Y	24.6	12.3	52.3	83.3	84	1.3	3.8	3	0.0002
1.75	5	S5EU06LA4	0.55	1.45	4	3000	100	IE5-87.9	Y	11.5	5.75	29.4	40.1	80.3	1.2	3.8	3.2	0.000295
2.4	3	SPE06MA4	0.75	1.85	4	3000	100	IE3-78.6	Y	24.6	12.3	52.3	83.3	84	1.3	3.8	3	0.0002
2.4	5	S5E06LA4	0.75	1.9	4	3000	100	IE5-88.3	Y	11.5	5.75	29.4	40.1	80.3	1.25	5.6	4.5	0.000295
3.5	4	S4E06LA4	1.1	2.8	4	3000	100	IE4-84	Y	11.5	5.75	29.4	40.1	80.3	1.25	5.6	4.5	0.000295
3.5	5	S5EU08MA4	1.1	2.55	4	3000	100	IE5-90.8	Y	4.73	2.36	24.7	43.5	90	1.4	10	7.5	0.00115
5	5	S5E08MA4	1.55	3.5	4	3000	100	IE5-91.2	Y	4.73	2.36	24.7	43.5	90	1.45	10	7.5	0.00115
5	5	S5EU08LA4	1.55	3.9	4	3000	100	IE5-88.9	Y	2.82	1.41	16.8	29.6	87	1.3	15	11.2	0.0015
7	5	S5E08LA4	2.2	5.2	4	3000	100	IE5-89.2	Y	2.82	1.41	16.8	29.6	87	1.35	15	11.2	0.0015
7	4	S4E08MA4	2.2	4.8	4	3000	100	IE4-88.8	Y	4.73	2.36	24.7	43.5	90	1.45	10	7.5	0.00115
7	5	S5EU09SA4	2.2	4.45	4	3000	100	IE5-91.9	Y	2.42	1.21	15.5	27.6	103	1.6	20	12.5	0.00245
10	3	SPE08LA4	3.1	7.4	4	3000	100	IE3-86.9	Y	2.82	1.41	16.8	29.6	87	1.35	15	11.2	0.0015
10	5	S5EU09XA4	3.1	6.3	4	3000	100	IE5-92.8	Y	1.31	0.66	12.7	17.9	102	1.6	30	20	0.0038
10	5	S5EU11SA6	3.1	6.6	6	3000	150	IE5-91.5	Y	0.89	0.447	5	7.7	106	1.52	40	25	0.012
13	4	S4E09SA4	4	8	4	3000	100	IE4-89.7	Y	2.42	1.21	15.5	27.6	103	1.63	20	12.5	0.00245
12.75	5	S5EU11SA6	4	8.4	6	3000	150	IE5-91.9	Y	0.89	0.447	5	7.7	106	1.52	40	25	0.012
13	5	S5EU11MA6	4	8.6	6	3000	150	IE5-92.5	Y	0.43	0.217	3	4.6	104	1.52	55	35	0.0175
17.5	5	S5E09XA4	5.5	10.5	4	3000	100	IE5-92.5	Y	1.31	0.66	12.7	17.9	102	1.67	30	20	0.0038
17.5	4	S4E11SA6	5.5	11	6	3000	150	IE4-91.2	Y	0.89	0.447	5	7.7	106	1.55	40	25	0.012
17.5	5	S5EU11LA6	5.5	11.5	6	3000	150	IE5-91.9	Y	0.3	0.15	2.4	3.5	105	1.52	75	48	0.0215
17.5	5	S5EU11MA6	5.5	11.5	6	3000	150	IE5-93.3	Y	0.43	0.217	3	4.6	104	1.52	55	35	0.0175
20	5	S5E09XA4	6.3	12	4	3000	100	IE5-92	Y	1.31	0.66	12.7	17.9	102	1.67	30	20	0.0038
24	5	S5E11MA6	7.5	15.4	6	3000	150	IE5-93.2	Y	0.43	0.217	3	4.6	104	1.55	55	35	0.0175
24	4	S4E11SA6	7.5	15.2	6	3000	150	IE4-90.8	Y	0.89	0.447	5	7.7	106	1.55	40	25	0.012
23.9	5	S5EU11LA6	7.5	15.7	6	3000	150	IE5-93.3	Y	0.3	0.15	2.4	3.5	105	1.52	75	48	0.0215
30	5	S5E11LA6	9.5	18.5	6	3000	150	IE5-93.8	Y	0.3	0.15	2.4	3.5	105	1.6	75	48	0.0215
30	5	S5E11MA6	9.5	19.3	6	3000	150	IE5-93.2	Y	0.43	0.217	3	4.6	104	1.55	55	35	0.0175
35	5	S5E11LA6	11	21.5	6	3000	150	IE5-94.1	Y	0.3	0.15	2.4	3.5	105	1.6	75	48	0.0215
35	4	S4E11MA6	11	22.5	6	3000	150	IE4-93.1	Y	0.43	0.217	3	4.6	104	1.55	55	35	0.0175
48	5	S5E11LA6	15	30	6	3000	150	IE5-93.8	Y	0.3	0.15	2.4	3.5	105	1.6	75	48	0.0215

M <sub>n</sub>	Rated torque
P <sub>n</sub>	Rated power
I <sub>n</sub>	Rated current
2p	No. of Motor Poles
n <sub>n</sub>	Rated speed
f	Nominal Frequency
η	Motor efficiency
R <sub>20</sub>	Phase Resistance U-V
R <sub>s20</sub>	Winding Resistance
L <sub>d</sub>	Inductance D-Axis
L <sub>q</sub>	Inductance Q-Axis
ke	Voltage constant
kt	Torque constant
M <sub>max</sub> (60s)	Peak Torque
I <sub>max</sub> (60s)	Peak Current
J	Moment of inertia

All motors: converter supply voltage 380 to 500 V

## Motors

## Technical data

## Rated speed 3000 1/min

Rated speed 3000 1/min	$\eta$ (100 %-Load)	$\eta$ (75 %-Load)	$\eta$ (50 %-Load)	IE	Manufacturer data	Type	Number of poles	$M_n$	P	Frequency	Voltage	$n_n$	Type of motor	Operating conditions	Power losses in % at operating points (Speed/Torque)						
															25/25	25/100	50/25	50/50	50/100	90/50	90/100
82.2	n.A	n.A	n.A	5	1)	S5EU04SA4-1	4	0.38	0.12	100	380	3000	2)	3)	3.5	12.5	6.0	7.9	15.1	12.1	19.5
80	n.A	n.A	n.A	5	1)	S5EU04SA4-1	4	0.58	0.18	100	380	3000	2)	3)	3.0	18.0	4.5	7.8	19.8	10.9	22.8
80.3	n.A	n.A	n.A	5	1)	S5E04SA4-1	4	0.65	0.2	100	380	3000	2)	3)	2.9	17.7	4.5	7.7	19.5	11.0	22.6
79.1	n.A	n.A	n.A	5	1)	S5EU04SA4-1	4	0.65	0.2	100	380	3000	2)	3)	2.8	20.1	4.1	7.8	21.8	10.3	24.3
78.5	n.A	n.A	n.A	5	1)	S5E04SA4-1	4	0.8	0.25	100	380	3000	2)	3)	2.6	20.7	3.9	7.6	22.3	10.5	24.8
78.8	n.A	n.A	n.A	5	1)	S5EU06MA4	4	0.8	0.25	100	380	3000	2)	3)	2.1	7.8	3.8	5.0	9.5	8.2	12.6
74.5	n.A	n.A	n.A	4	1)	S4E04SA4-1	4	1	0.315	100	380	3000	2)	3)	2.8	27.2	3.8	8.9	28.5	11.7	30.9
86.6	n.A	n.A	n.A	5	1)	S5EU06MA4	4	1.2	0.37	100	380	3000	2)	3)	1.8	11.0	3.0	4.8	12.1	7.1	14.2
86.2	n.A	n.A	n.A	5	1)	S5E06MA4	4	1.3	0.4	100	380	3000	2)	3)	1.7	10.5	3.0	4.9	11.8	7.9	14.7
86.3	n.A	n.A	n.A	5	1)	S5EU06MA4	4	1.3	0.4	100	380	3000	2)	3)	1.7	11.6	2.7	4.7	12.7	6.6	14.6
84	n.A	n.A	n.A	5	1)	S5E06MA4	4	1.75	0.55	100	380	3000	2)	3)	1.6	14.0	2.5	5.0	15.0	7.3	17.2
87.9	n.A	n.A	n.A	5	1)	S5EU06LA4	4	1.75	0.55	100	380	3000	2)	3)	1.8	8.8	3.0	4.5	10.2	6.7	12.5
78.6	n.A	n.A	n.A	3	1)	SPE06MA4	4	2.4	0.75	100	380	3000	2)	3)	1.8	22.3	2.6	6.5	22.9	8.3	24.7
88.3	n.A	n.A	n.A	5	1)	S5E06LA4	4	2.4	0.75	100	380	3000	2)	3)	1.2	9.6	1.8	3.4	10.2	5.1	11.9
84	n.A	n.A	n.A	4	1)	S4E06LA4	4	3.5	1.1	100	380	3000	2)	3)	1.3	15.3	1.9	4.4	16.0	5.7	17.2
90.8	n.A	n.A	n.A	5	1)	S5EU08MA4	4	3.5	1.1	100	380	3000	2)	3)	1.5	6.2	2.4	3.4	7.2	5.3	9.1
91.2	n.A	n.A	n.A	5	1)	S5E08MA4	4	5	1.55	100	380	3000	2)	3)	0.9	6.7	1.4	2.6	7.3	4.1	8.8
88.9	n.A	n.A	n.A	5	1)	S5EU08LA4	4	5	1.55	100	380	3000	2)	3)	1.9	7.0	3.3	4.5	8.7	7.1	11.5
89.2	n.A	n.A	n.A	5	1)	S5E08LA4	4	7	2.2	100	380	3000	2)	3)	1.4	7.2	2.5	3.8	8.5	6.0	10.9
88.8	n.A	n.A	n.A	4	1)	S4E08MA4	4	7	2.2	100	380	3000	2)	3)	0.9	9.7	1.3	3.1	10.2	4.1	11.3
91.9	n.A	n.A	n.A	5	1)	S5EU09SA4	4	7	2.2	100	380	3000	2)	3)	1.1	5.2	2.1	3.0	6.2	4.6	7.9
86.9	n.A	n.A	n.A	3	1)	SPE08LA4	4	10	3.1	100	380	3000	2)	3)	1.5	10.7	2.4	4.4	11.8	6.3	13.8
92.8	n.A	n.A	n.A	5	1)	S5EU09XA4	4	10	3.1	100	380	3000	2)	3)	1.3	4.2	2.2	2.8	5.3	4.7	7.1
91.5	n.A	n.A	n.A	5	1)	S5EU11SA6	6	10	3.1	150	380	3000	2)	3)	1.4	3.7	3.0	3.5	5.4	6.6	8.5
89.7	n.A	n.A	n.A	4	1)	S4E09SA4	4	13	4	100	380	3000	2)	3)	1.1	8.0	1.8	3.2	8.9	4.8	10.6
91.9	n.A	n.A	n.A	5	1)	S5EU11SA6	6	12.75	4	150	380	3000	2)	3)	1.2	4.2	2.4	3.1	5.6	5.5	8.0
92.5	n.A	n.A	n.A	5	1)	S5EU11MA6	6	13	4	150	380	3000	2)	3)	1.5	2.8	3.2	3.3	4.5	6.3	7.5
92.5	n.A	n.A	n.A	5	1)	S5E09XA4	4	17.5	5.5	100	380	3000	2)	3)	0.8	5.1	1.5	2.4	5.9	4.0	7.3
91.2	n.A	n.A	n.A	4	1)	S4E11SA6	6	17.5	5.5	150	380	3000	2)	3)	1.0	4.4	2.2	3.0	5.7	5.9	8.7
91.9	n.A	n.A	n.A	5	1)	S5EU11LA6	6	17.5	5.5	150	380	3000	2)	3)	1.3	2.3	3.0	3.1	4.0	7.1	7.9
93.3	n.A	n.A	n.A	5	1)	S5EU11MA6	6	17.5	5.5	150	380	3000	2)	3)	1.1	3.0	2.3	2.6	4.2	4.7	6.5
92	n.A	n.A	n.A	5	1)	S5E09XA4	4	20	6.3	100	380	3000	2)	3)	0.8	5.9	1.4	2.4	6.5	3.7	7.8
93.2	n.A	n.A	n.A	5	1)	S5E11MA6	6	24	7.5	150	380	3000	2)	3)	0.9	2.9	1.9	2.4	4.1	4.8	6.6
90.8	n.A	n.A	n.A	4	1)	S4E11SA6	6	24	8	150	380	3000	2)	3)	0.9	5.9	1.8	2.8	7.0	5.0	9.2
93.3	n.A	n.A	n.A	5	1)	S5EU11LA6	6	24	8	150	380	3000	2)	3)	1.0	2.3	2.2	2.5	3.6	5.3	6.5
93.8	n.A	n.A	n.A	5	1)	S5E11LA6	6	30	10	150	380	3000	2)	3)	0.8	2.5	1.7	2.2	3.5	4.4	5.9
93.2	n.A	n.A	n.A	5	1)	S5E11MA6	6	30	10	150	380	3000	2)	3)	0.8	3.4	1.6	2.2	4.4	4.2	6.6

**Rated speed 3000 1/min**

Rated speed 3000 1/min	Power losses in % at operating points (Speed/Torque)																				
	$\eta$ (100 %-Load)	$\eta$ (75 %-Load)	$\eta$ (50 %-Load)	IE Class	Manufacturer data	Type	Number of poles	$M_n$	P	Frequency	Voltage	nN	Type of motor	Operating conditions	25/25	25/100	50/25	50/50	50/100	90/50	90/100
94.1	n.A	n.A	n.A	5	1) S5E11LA6		6	35	11	150	380	3000	2)	3)	0.7	2.8	1.6	2.0	3.7	3.9	5.7
93.1	n.A	n.A	n.A	4	1) S4E11MA6		6	35	11	150	380	3000	2)	3)	0.7	3.9	1.5	2.1	4.8	3.9	6.7
93.8	n.A	n.A	n.A	5	1) S5E11LA6		6	48	15	150	380	3000	2)	3)	0.7	3.6	1.3	1.9	4.4	3.3	6.0

\*Dimensioned according to IEC TS 60034-30-2

1) Manufacturer:	Bauer Gear Motor GmbH	2) Type of motor:	Three-phase permanent magnet excited synchronous motor	3) Installation altitude above sea level (m):	1000
Commercial register number:	HRB 736269	Ambient temperature:	-20 °C to +40 °C		
Address:	Eberhard-Bauer-Str. 37, 73734 Esslingen / Germany				

# Motors

## Technical data

The figures given in the table below are for Bauer motors operating in conjunction with the frequency inverter. The torques referred to in tables can be entered for the respective frequencies in continuous operation (S1 = duty factor 100 %).

### Motor torques in the adjusting range 150 1/min - 3600 1/min. duty type S1

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
0.38	0.12	S5EU04SA4-1	150	0.38	0.006	0.33	5	Y
			500	0.38	0.02	0.33	16.67	Y
			1000	0.38	0.04	0.33	33.33	Y
			3000	0.38	0.12	0.33	100	Y
			3600	0.38	0.14	0.33	120	Y
0.58	0.18	S5EU04SA4-1	150	0.58	0.009	0.49	5	Y
			500	0.58	0.03	0.49	16.67	Y
			1000	0.58	0.06	0.49	33.33	Y
			3000	0.58	0.18	0.49	100	Y
			3600	0.58	0.22	0.49	120	Y
0.65	0.2	S5E04SA4-1	150	0.65	0.01	0.52	5	Y
			500	0.65	0.034	0.52	16.67	Y
			1000	0.65	0.068	0.52	33.33	Y
			3000	0.65	0.2	0.52	100	Y
			3600	0.65	0.245	0.52	120	Y
0.65	0.2	S5EU04SA4-1	150	0.65	0.01	0.54	5	Y
			500	0.65	0.034	0.54	16.67	Y
			1000	0.65	0.068	0.54	33.33	Y
			3000	0.65	0.2	0.54	100	Y
			3600	0.65	0.245	0.54	120	Y
0.8	0.25	S5E04SA4-1	150	0.76	0.012	0.61	5	Y
			500	0.8	0.042	0.64	16.67	Y
			1000	0.8	0.084	0.64	33.33	Y
			3000	0.8	0.25	0.64	100	Y
			3600	0.8	0.3	0.64	120	Y
0.8	0.25	S5EU06MA4	150	0.8	0.013	0.63	5	Y
			500	0.8	0.042	0.63	16.67	Y
			1000	0.8	0.084	0.63	33.33	Y
			3000	0.8	0.25	0.63	100	Y
			3600	0.8	0.3	0.63	120	Y
1	0.315	S4E04SA4-1	150	0.76	0.012	0.61	5	Y
			500	0.85	0.045	0.68	16.67	Y
			1000	1	0.105	0.8	33.33	Y
			3000	1	0.315	0.8	100	Y
			3600	1	0.38	0.8	120	Y
1.2	0.37	S5EU06MA4	150	1.2	0.019	0.93	5	Y
			500	1.2	0.063	0.93	16.67	Y
			1000	1.2	0.126	0.93	33.33	Y
			3000	1.2	0.37	0.93	100	Y
			3600	1.2	0.45	0.93	120	Y
1.3	0.4	S5E06MA4	150	1.3	0.02	1	5	Y
			500	1.3	0.068	1	16.67	Y
			1000	1.3	0.136	1	33.33	Y
			3000	1.3	0.4	1	100	Y
			3600	1.3	0.5	1	120	Y
1.3	0.4	S5EU06MA4	150	1.3	0.02	1	5	Y
			500	1.3	0.068	1	16.67	Y
			1000	1.3	0.136	1	33.33	Y
			3000	1.3	0.4	1	100	Y
			3600	1.3	0.5	1	120	Y

**Technical data**

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
1.75	0.55	S5E06MA4	150	1.75	0.027	1.35	5	Y
			500	1.75	0.092	1.35	16.67	Y
			1000	1.75	0.183	1.35	33.33	Y
			3000	1.75	0.55	1.35	100	Y
			3600	1.75	0.66	1.35	120	Y
1.75	0.55	S5EU06LA4	150	1.75	0.027	1.45	5	Y
			500	1.75	0.092	1.45	16.67	Y
			1000	1.75	0.183	1.45	33.33	Y
			3000	1.75	0.55	1.45	100	Y
			3600	1.75	0.66	1.45	120	Y
2.4	0.75	SPE06MA4	150	1.8	0.028	1.38	5	Y
			500	2	0.105	1.51	16.67	Y
			1000	2.2	0.23	1.68	33.33	Y
			3000	2.4	0.75	1.85	100	Y
			3600	2.4	0.9	1.85	120	Y
2.4	0.75	S5E06LA4	150	2.4	0.038	1.9	5	Y
			500	2.4	0.126	1.9	16.67	Y
			1000	2.4	0.25	1.9	33.33	Y
			3000	2.4	0.75	1.9	100	Y
			3600	2.4	0.9	1.9	120	Y
3.5	1.1	S4E06LA4	150	2.5	0.04	2	5	Y
			500	2.9	0.15	2.3	16.67	Y
			1000	3.5	0.37	2.8	33.33	Y
			3000	3.5	1.1	2.8	100	Y
			3600	3.5	1.3	2.8	120	Y
3.5	1.1	S5EU08MA4	150	3.5	0.06	2.55	5	Y
			500	-	-	-	16.67	Y
			1000	-	-	-	33.33	Y
			3000	3.5	1.1	2.55	100	Y
			3600	3.5	1.3	2.55	120	Y
5	1.55	S5E08MA4	150	5	0.08	3.5	5	Y
			500	5	0.26	3.5	16.67	Y
			1000	5	0.52	3.5	33.33	Y
			3000	5	1.55	3.5	100	Y
			3600	5	1.9	3.5	120	Y
5	1.55	S5EU08LA4	150	5	0.08	3.9	5	Y
			500	-	-	-	16.67	Y
			1000	-	-	-	33.33	Y
			3000	5	1.55	3.9	100	Y
			3600	5	1.9	3.9	120	Y
7	2.2	S5E08LA4	150	6.5	0.1	4.8	5	Y
			500	7	0.37	5.2	16.67	Y
			1000	7	0.73	5.2	33.33	Y
			3000	7	2.2	5.2	100	Y
			3600	7	2.6	5.2	120	Y
7	2.2	S4E08MA4	150	5	0.08	3.5	5	Y
			500	5.9	0.31	4.1	16.67	Y
			1000	7	0.73	4.8	33.33	Y
			3000	7	2.2	4.8	100	Y
			3600	7	2.6	4.8	120	Y
7	2.2	S5EU09SA4	150	7	0.11	4.45	5	Y
			500	-	-	-	16.67	Y
			1000	-	-	-	33.33	Y
			3000	7	2.2	4.45	100	Y
			3600	7	2.6	4.45	120	Y



# Motors

## Technical data

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
10	3.1	SPE08LA4	150	6.5	0.1	4.8	5	Y
			500	8	0.42	5.9	16.67	Y
			1000	10	1.05	7.4	33.33	Y
			3000	10	3.1	7.4	100	Y
			3600	10	3.8	7.4	120	Y
10	3.1	S5EU09XA4	150	10	0.16	6.3	5	Y
			500	-	-	-	16.67	Y
			1000	-	-	-	33.33	Y
			3000	10	3.1	6.3	100	Y
			3600	10	3.8	6.3	120	Y
10	3.1	S5EU11SA6	150	10	0.16	6.6	7.5	Y
			500	-	-	-	25	Y
			1000	-	-	-	50	Y
			3000	10	3.1	6.6	150	Y
			3600	10	3.8	6.6	180	Y
13	4	S4E09SA4	150	8.5	0.13	5.3	5	Y
			500	10	0.52	6.2	16.67	Y
			1000	13	1.36	8	33.33	Y
			3000	13	4	8	100	Y
			3600	13	4.9	8.7	120	Y
12.75	4	S5EU11SA6	150	12.75	0.2	8.4	7.5	Y
			500	-	-	-	25	Y
			1000	-	-	-	50	Y
			3000	12.75	4	8.4	150	Y
			3600	12.75	4.8	8.4	180	Y
13	4	S5EU11MA6	150	13	0.2	8.6	7.5	Y
			500	-	-	-	25	Y
			1000	-	-	-	50	Y
			3000	13	4	8.6	150	Y
			3600	13	4.9	8.6	180	Y
17.5	5.5	S5E09XA4	150	13	0.2	7.8	5	Y
			500	16	0.84	9.6	16.67	Y
			1000	17.5	1.83	10.5	33.33	Y
			3000	17.5	5.5	10.5	100	Y
			3600	17.5	6.6	11.1	120	Y
17.5	5.5	S4E11SA6	150	17.5	0.27	11	7.5	Y
			500	17.5	0.9	11	25	Y
			1000	17.5	1.8	11	50	Y
			3000	17.5	5.5	11	150	Y
			3600	17.5	6.6	11	180	Y
17.5	5.5	S5EU11MA6	150	17.5	0.27	11.5	7.5	Y
			500	-	-	-	25	Y
			1000	-	-	-	50	Y
			3000	17.5	5.5	11.5	150	Y
			3600	17.5	6.6	11.5	180	Y
17.5	5.5	S5EU11LA6	150	17.5	0.27	11.5	7.5	Y
			500	-	-	-	25	Y
			1000	-	-	-	50	Y
			3000	17.5	5.5	11.5	150	Y
			3600	17.5	6.6	11.5	180	Y
20	6.3	S5E09XA4	150	13	0.2	7.8	5	Y
			500	16	0.84	9.6	16.67	Y
			1000	20	2.1	12	33.33	Y
			3000	20	6.3	12	100	Y
			3600	17.5	6.6	11.1	120	Y

**Technical data**

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
24	7.5	S4E11SA6	150	19	0.3	12	7.5	Y
			500	21.5	1.1	13.6	25	Y
			1000	24	2.5	15.2	50	Y
			3000	24	7.5	15.2	150	Y
			3600	24	9	15.2	180	Y
24	7.5	S5E11MA6	150	24	0.38	15.4	7.5	Y
			500	24	1.3	15.4	25	Y
			1000	24	2.5	15.4	50	Y
			3000	24	7.5	15.4	150	Y
			3600	24	9	15.4	180	Y
23.9	7.5	S5EU11LA6	150	23.9	0.38	15.7	7.5	Y
			500	-	-	-	25	Y
			1000	-	-	-	50	Y
			3000	23.9	7.5	15.7	150	Y
			3600	23.9	9	15.7	180	Y
30	9.5	S5E11MA6	150	26.5	0.42	17	7.5	Y
			500	30	1.6	19.3	25	Y
			1000	30	3.1	19.3	50	Y
			3000	30	9.5	19.3	150	Y
			3600	30	11	19.3	180	Y
30	9.5	S5E11LA6	150	30	0.47	18.5	7.5	Y
			500	30	1.6	18.5	25	Y
			1000	30	3.1	18.5	50	Y
			3000	30	9.5	18.5	150	Y
			3600	30	11	18.5	180	Y
35	11	S4E11MA6	150	26.5	0.42	17	7.5	Y
			500	30	1.6	19.3	25	Y
			1000	35	3.7	22.5	50	Y
			3000	35	11	22.5	150	Y
			3600	35	13	22.5	180	Y
35	11	S5E11LA6	150	35	0.55	21.5	7.5	Y
			500	35	1.8	21.5	25	Y
			1000	35	3.7	21.5	50	Y
			3000	35	11	21.5	150	Y
			3600	35	13	21.5	180	Y
48	15	S5E11LA6	150	35	0.55	21.5	7.5	Y
			500	40	2.1	25	25	Y
			1000	48	5	30	50	Y
			3000	48	15	30	150	Y
			3600	40	15	25.8	180	Y

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>3000/min</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	120 Hz
Permissible operating time below f <sub>min</sub> :	60 s (in open loop mode)

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

Non-standard operating conditions on request.

All motors: converter supply voltage 380 to 500 V

# Motors

## Technical data

### Aseptic-Motors

#### Aseptic motors with rated speed 1500 1/min

M <sub>n</sub> Nm	IE Classe	Type	P <sub>n</sub> kW	I <sub>n</sub> A	2p	n <sub>n</sub> 1/min	f Hz	η %	Conne- tion	R <sub>20</sub> Ω	RS <sub>20</sub> Ω	L <sub>d</sub> mH	L <sub>q</sub> mH	ke V/1000 1/min	kt Nm/A	M <sub>max</sub> (60s) Nm	I <sub>max</sub> (60s) A	J kgm <sup>2</sup>
3.5	5	SA5E08MB4	0.55	1.3	4	1500	50	IE5-86.5	Y	18.7	9.35	97	170	180	2.7	10	3.7	0.00115
5	5	SA5E08LB4	0.78	1.85	4	1500	50	IE5-88.4	Y	11	5.5	70	117	171	2.7	15	5.6	0.0015
7	5	SA5E09SB4	1.1	2.2	4	1500	50	IE5-89.2	Y	9.9	4.95	64.1	110	208	3.2	20	6.4	0.00245
10	5	SA5E09XB4	1.55	3.1	4	1500	50	IE5-91	Y	5.25	2.63	41.2	70.1	209	3.2	30	10	0.0038

#### Aseptic motors torques in the adjusting range 150 1/min - 1800 1/min. duty type S1

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
3.5	0.55	SA5E08MB4	150	3.5	0.06	1.3	5	Y
			1500	3.5	0.55	1.3	50	Y
			1800	3.5	0.66	1.3	60	Y
5	0.78	SA5E08LB4	150	5	0.08	1.85	5	Y
			1500	5	0.78	1.85	50	Y
			1800	5	0.94	1.85	60	Y
7	1.1	SA5E09SB4	150	7	0.11	2.2	5	Y
			1500	7	1.1	2.2	50	Y
			1800	7	1.3	2.2	60	Y
10	1.55	SA5E09XB4	150	10	0.16	3.1	5	Y
			1500	10	1.55	3.1	50	Y
			1800	10	1.9	3.1	60	Y

#### Converter Settings:

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>1500/min</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below f <sub>min</sub> :	60 s (in open loop mode)

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

Non-standard operating conditions on request.

All motors: converter supply voltage 380 to 500 V

**Aseptic motors with rated speed 1500 1/min**

Aseptic motors with rated speed 1500 1/min		Power losses in % at operating points (Speed/Torque)																		
$\eta$ (100 % -Load)	$\eta$ (75 % -Load)	$\eta$ (50 % -Load)	IE Class	Manufacturer data	Type	Number of poles	$M_n$ Nm	P kW	Frequency Hz	Voltage V	$n_n$ 1/min	Type of motor	Operating conditions	25/25	25/100	50/25	50/50	50/100	90/50	90/100
86.5	n.A	n.A	5	1) SA5E08MB4		4	3.5	0.55	50	380	1500	2)	3)	1.3	11.2	2.0	4.2	12.0	5.9	14.0
88.4	n.A	n.A	5	1) SA5E08LB4		4	5	0.78	50	380	1500	2)	3)	1.4	9.5	2.3	4.0	10.5	5.8	11.9
89.2	n.A	n.A	5	1) SA5E09SB4		4	7	1.1	50	380	1500	2)	3)	1.6	8.0	2.5	3.5	9.0	5.2	10.9
91	n.A	n.A	5	1) SA5E09XB4		4	10	1.55	50	380	1500	2)	3)	1.1	6.6	2.0	3.1	7.6	4.6	9.0

\*Dimensioned according to IEC TS 60034-30-2

1) Manufacturer:	Bauer Gear Motor GmbH	2) Type of motor:	Three-phase permanent magnet excited synchronous motor	3) Installation altitude above sea level (m):	1000
Commercial register number:	HRB 736269	Ambient temperature:	-20 °C to +40 °C		
Address:	Eberhard-Bauer-Str. 37, 73734 Esslingen / Germany				

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# Motors

## Technical data

### Aseptic motors with rated speed 3000 1/min

M <sub>n</sub> Nm	IE Classe	Type	P <sub>n</sub> kW	I <sub>n</sub> A	2p	n <sub>n</sub> 1/min	f Hz	η %	Conne- ction	R <sub>20</sub> Ω	RS <sub>20</sub> Ω	L <sub>d</sub> mH	L <sub>q</sub> mH	ke V/1000 1/min	kt Nm/A	M <sub>max</sub> (60s) Nm	I <sub>max</sub> (60s) A	J kgm <sup>2</sup>
2.5	5	SA5E08MB4	0.78	1.85	4	3000	100	IE5-90.2	Y	4.73	2.36	24.7	43.5	90	1.35	10	7.5	0.00115
3.5	5	SA5E08LB4	1.1	2.6	4	3000	100	IE5-92.3	Y	2.82	1.41	16.8	29.6	87	1.35	15	11.5	0.0015
4.8	5	SA5E08LB4	1.5	3.55	4	3000	100	IE5-91.8	Y	2.82	1.41	16.8	29.6	87	1.35	15	11.5	0.0015
5	5	SA5E09SB4	1.55	3.3	4	3000	100	IE5-90.7	Y	2.42	1.21	15.5	27.6	103	1.5	20	12.5	0.00245
7	5	SA5E09XB4	2.2	4.5	4	3000	100	IE5-92.9	Y	1.31	0.66	12.7	17.9	102	1.56	30	20	0.0038
9.55	5	SA5E09XB4	3	6.1	4	3000	100	IE5-92.5	Y	1.31	0.66	12.7	17.9	102	1.56	30	20	0.0038

### Aseptic motor torques in the adjusting range 150 1/min - 3600 1/min. duty type S1

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed	Torque	Power	Current	Frequency	Connection
			1/min	Nm	kW	A	Hz	
2.5	0.78	SA5E08MB4	150	2.5	0.04	1.85	5	Y
			3000	2.5	0.78	1.85	100	Y
			3600	2.5	0.94	1.85	120	Y
3.5	1.1	SA5E08LB4	150	3.5	0.06	2.6	5	Y
			3000	3.5	1.1	2.6	100	Y
			3600	3.5	1.3	2.6	120	Y
4.8	1.5	SA5E08LB4	150	4.8	0.08	3.55	5	Y
			3000	4.8	1.5	3.55	100	Y
			3600	3.5	1.3	2.6	120	Y
5	1.55	SA5E09SB4	150	5	0.08	3.3	5	Y
			3000	5	1.55	3.3	100	Y
			3600	5	1.9	3.3	120	Y
7	2.2	SA5E09XB4	150	7	0.11	4.5	5	Y
			3000	7	2.2	4.5	100	Y
			3600	7	2.6	4.5	120	Y
9.55	3	SA5E09XB4	150	9.55	0.15	6.1	5	Y
			3000	9.55	3	6.1	100	Y
			3600	-	-	-	120	Y

#### Converter Settings:

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>3000/min</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	120 Hz
Permissible operating time below f <sub>min</sub> :	60 s (in open loop mode)

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

Non-standard operating conditions on request.

All motors: converter supply voltage 380 to 500 V

## Aseptic motors with rated speed 3000 1/min

Aseptic motors with rated speed 3000 1/min		Power losses in % at operating points (Speed/Torque)																		
$\eta$ (100 %-Load)	$\eta$ (75 %-Load)	$\eta$ (50 %-Load)	IE Class	Manufacturer data	Type	Number of poles	$M_n$	P	Frequency	Voltage	$n_N$	Type of motor	Operating conditions	25/25	25/100	50/25	50/50	50/100	90/50	90/100
90.2	n.A	n.A	5	1) SA5E08MB4	4	2.5	0.78	100	380	3000	2)	3)	1.7	5.2	3.2	4.1	6.9	6.9	6.9	9.9
92.3	n.A	n.A	5	1) SA5E08LB4	4	3.5	1.1	100	380	3000	2)	3)	1.2	4.3	2.4	3.0	5.4	5.0	5.0	7.6
91.8	n.A	n.A	5	1) SA5E08LB4	4	4.8	1.5	100	380	3000	2)	3)	1.0	5.5	2.0	2.9	6.4	4.6	4.6	8.1
90.7	n.A	n.A	5	1) SA5E09SB4	4	5	1.55	100	380	3000	2)	3)	1.7	4.6	3.2	4.0	6.4	7.2	7.2	9.4
92.9	n.A	n.A	5	1) SA5E09XB4	4	7	2.2	100	380	3000	2)	3)	1.2	3.4	2.4	2.8	4.6	5.0	5.0	6.8
92.5	n.A	n.A	5	1) SA5E09XB4	4	9.55	3	100	380	3000	2)	3)	1.0	4.3	1.9	2.7	5.4	4.7	4.7	7.3

\*Dimensioned according to IEC TS 60034-30-2

1) Manufacturer:	Bauer Gear Motor GmbH	2) Type of motor:	Three-phase permanent magnet excited synchronous motor	3) Installation altitude above sea level (m):	1000
Commercial register number:	HRB 736269	Ambient temperature:			-20 °C to +40 °C
Address:	Eberhard-Bauer-Str. 37, 73734 Esslingen / Germany				

# Motors

## Technical data

### Stainless Steel Motors

#### Stainless steel motors with rated speed 1500 1/min

M <sub>n</sub> Nm	IE Classe	Type	P <sub>n</sub> kW	I <sub>n</sub> A	2p	n <sub>n</sub> 1/min	f Hz	η %	Connec- tion	R <sub>20</sub> Ω	Rs <sub>20</sub> Ω	L <sub>d</sub> mH	L <sub>q</sub> mH	ke V/1000 1/min	kt Nm/A	M <sub>max</sub> (60s) Nm	I <sub>max</sub> (60s) A	J kgm <sup>2</sup>
1.6	5	SA5E08MA4	0.25	0.56	4	1500	50	IE5-88.2	Y	18.7	9.35	97	170	180	2.8	5.6	2.1	0.00115
2.4	5	SA5E08MA4	0.37	0.86	4	1500	50	IE5-88	Y	18.7	9.35	97	170	180	2.8	5.6	2.1	0.00115
2.4	5	SA5E09SA4	0.37	0.75	4	1500	50	IE5-89.2	Y	9.9	4.95	64.1	110	208	3.2	7.7	2.4	0.00245
3.5	5	SA5E08MA4	0.55	1.3	4	1500	50	IE5-85.5	Y	18.7	9.35	97	170	180	2.7	5.6	2.1	0.00115
3.5	5	SA5E09SA4	0.55	1.1	4	1500	50	IE5-90.3	Y	9.9	4.95	64.1	110	208	3.2	7.7	2.4	0.00245
3.5	5	SA5E09XA4	0.55	1.1	4	1500	50	IE5-89.9	Y	5.25	2.63	41.2	70.1	209	3.2	11.2	3.7	0.0038
4.8	5	SA5E09SA4	0.75	1.5	4	1500	50	IE5-90.5	Y	9.9	4.95	64.1	110	208	3.2	7.7	2.4	0.00245
4.8	5	SA5E09XA4	0.75	1.6	4	1500	50	IE5-91.2	Y	5.25	2.63	41.2	70.1	209	3	11.2	3.7	0.0038
7	5	SA5E09XA4	1.1	2.3	4	1500	50	IE5-91.4	Y	5.25	2.63	41.2	70.1	209	3	11.2	3.7	0.0038

#### Stainless steel motors torques in the adjusting range 150 1/min - 1800 1/min. duty type S1

M <sub>n</sub> Nm	P <sub>n</sub> kW	Type	Speed 1/min	Torque Nm	Power kW	Current A	Frequency Hz	Connection
1.6	0.25	SA5E08MA4	150	1.6	0.025	0.56	5	Y
			1500	1.6	0.25	0.56	50	Y
			1800	1.6	0.3	0.56	60	Y
2.4	0.37	SA5E08MA4	150	2.4	0.037	0.86	5	Y
			1500	2.4	0.37	0.86	50	Y
			1800	2.4	0.45	0.86	60	Y
2.4	0.37	SA5E09SA4	150	2.4	0.037	0.75	5	Y
			1500	2.4	0.37	0.75	50	Y
			1800	2.4	0.45	0.75	60	Y
3.5	0.55	SA5E08MA4	150	3.5	0.055	1.3	5	Y
			1500	3.5	0.55	1.3	50	Y
			1800	3.5	0.66	1.3	60	Y
3.5	0.55	SA5E09SA4	150	3.5	0.055	1.1	5	Y
			1500	3.5	0.55	1.1	50	Y
			1800	3.5	0.66	1.1	60	Y
3.5	0.55	SA5E09XA4	150	3.5	0.055	3.5	5	Y
			1500	3.5	0.55	3.5	50	Y
			1800	3.5	0.66	3.5	60	Y
4.8	0.75	SA5E09SA4	150	4.8	0.075	1.5	5	Y
			1500	4.8	0.75	1.5	50	Y
			1800	4.8	0.9	1.5	60	Y
4.8	0.75	SA5E09XA4	150	4.8	0.075	1.6	5	Y
			1500	4.8	0.75	1.6	50	Y
			1800	4.8	0.9	1.6	60	Y
7	1.1	SA5E09XA4	150	7	0.11	2.3	5	Y
			1500	7	1.1	2.3	50	Y
			1800	7	1.32	2.3	60	Y

#### Converter Settings:

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>1500/min</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below f <sub>min</sub> :	60 s (in open loop mode)

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

Non-standard operating conditions on request.

All motors: converter supply voltage 380 to 500 V



## Stainless steel motors with rated speed 1500 1/min

Stainless steel motors with rated speed 1500 1/min		Power losses in % at operating points (Speed/Torque)																		
$\eta$ (100 %-Load)	$\eta$ (75 %-Load)	$\eta$ (50 %-Load)	IE ClassKlasse	Manufacturer data	Type	Number of poles	$M_n$	P	Frequency	Voltage	$n_N$	Type of motor	Operating conditions	25/25	25/100	50/25	50/50	50/100	90/50	90/100
88.2	n.A	n.A	5	1) SA5E08MA4	SA5E08MA4	4	1.6	0.25	50	380	1500	2)	3)	1.7	6.1	3.0	4.2	7.9	8.7	12.1
88	n.A	n.A	5	1) SA5E08MA4	SA5E08MA4	4	2.4	0.37	50	380	1500	2)	3)	1.4	8.3	2.3	3.9	9.5	7.2	12.5
89.2	n.A	n.A	5	1) SA5E09SA4	SA5E09SA4	4	2.4	0.37	50	380	1500	2)	3)	2.0	4.3	4.0	4.3	6.4	9.4	11.1
85.5	n.A	n.A	5	1) SA5E08MA4	SA5E08MA4	4	3.5	0.55	50	380	1500	2)	3)	1.3	12.1	2.0	4.4	13.0	6.3	15.3
90.3	n.A	n.A	5	1) SA5E09SA4	SA5E09SA4	4	3.5	0.55	50	380	1500	2)	3)	1.4	4.9	2.7	3.4	6.3	6.8	9.7
89.9	n.A	n.A	5	1) SA5E09XA4	SA5E09XA4	4	3.5	0.55	50	380	1500	2)	3)	2.2	3.7	4.2	4.1	5.8	8.4	10.1
90.5	n.A	n.A	5	1) SA5E09SA4	SA5E09SA4	4	4.8	0.75	50	380	1500	2)	3)	1.1	6.1	2.1	3.1	7.1	5.6	9.5
91.2	n.A	n.A	5	1) SA5E09XA4	SA5E09XA4	4	4.8	0.75	50	380	1500	2)	3)	1.5	4.1	2.9	3.4	5.6	6.5	8.7
91.4	n.A	n.A	5	1) SA5E09XA4	SA5E09XA4	4	7	1.1	50	380	1500	2)	3)	1.2	5.1	2.5	3.4	6.2	5.3	8.4

\*Dimensioned according to IEC TS 60034-30-2

1) Manufacturer:	Bauer Gear Motor GmbH	2) Type of motor:	Three-phase permanent magnet excited synchronous motor	3) Installation altitude above sea level (m):	1000
Commercial register number:	HRB 736269			Ambient temperature:	-20 °C to +40 °C
Address:	Eberhard-Bauer-Str. 37, 73734 Esslingen / Germany				

# Motors

## Technical data

### Stainless steel motors with rated speed 3000 1/min

M <sub>n</sub>	IE	Type	P <sub>n</sub>	I <sub>n</sub>	2p	n <sub>n</sub>	f	η	Connec- tion	R <sub>20</sub>	RS <sub>20</sub>	L <sub>d</sub>	L <sub>q</sub>	ke	kt	M <sub>max</sub> (60s)	I <sub>max</sub> (60s)	J
Nm	Classe		kW	A		1/min	Hz	%		Ω	Ω	mH	mH	V/1000 1/min	Nm/A	Nm	A	kgm <sup>2</sup>
1.2	5	SA5E08MA4	0.37	0.9	4	3000	100	IE5-87.5	Y	4.73	2.36	24.7	43.5	90	1.33	3.8	2.9	0.00115
1.75	5	SA5E08MA4	0.55	1.32	4	3000	100	IE5-89.7	Y	4.73	2.36	24.7	43.5	90	1.33	3.8	2.9	0.00115
2.4	5	SA5E08MA4	0.75	1.8	4	3000	100	IE5-90.5	Y	4.73	2.36	24.7	43.5	90	1.33	3.8	2.9	0.00115
2.4	5	SA5E09SA4	0.75	1.6	4	3000	100	IE5-89.3	Y	2.42	1.21	15.5	27.6	103	1.5	7.7	5.1	0.00245
3.5	5	SA5E09SA4	1.1	2.3	4	3000	100	IE5-91.3	Y	2.42	1.21	15.5	27.6	103	1.5	7.7	5.1	0.00245

### Stainless steel motors torques in the adjusting range 150 1/min - 3000 1/min. duty type S1

M <sub>n</sub>	P <sub>n</sub>	Type	Speed	Torque	Power	Current	Frequency	Connection
Nm	kW		1/min	Nm	kW	A	Hz	
1.2	0.37	SA5E08MA4	150	1.2	0.019	0.9	5	Y
			3000	1.2	0.37	0.9	100	Y
1.75	0.55	SA5E08MA4	150	1.75	0.027	1.32	5	Y
			3000	1.75	0.55	1.32	100	Y
2.4	0.75	SA5E08MA4	150	2.4	0.038	1.8	5	Y
			3000	2.4	0.75	1.8	100	Y
2.4	0.75	SA5E09SA4	150	2.4	0.038	1.6	5	Y
			3000	2.4	0.75	1.6	100	Y
3.5	1.1	SA5E09SA4	150	3.5	0.055	2.3	5	Y
			3000	3.5	1.1	2.3	100	Y

#### Converter Settings:

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>3000/min</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	120 Hz
Permissible operating time below f <sub>min</sub> :	60 s (in open loop mode)

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

Non-standard operating conditions on request.

All motors: converter supply voltage 380 to 500 V

## Stainless steel motors with rated speed 3000 1/min

Stainless steel motors with rated speed 3000 1/min		Power losses in % at operating points (Speed/Torque)									
		25/25	25/100	50/25	50/50	50/100	90/50	90/100	90/100		
$\eta$ (100 %-Load)	%	IE5-87.5	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A
$\eta$ (75 %-Load)	%	IE5-89.7	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A
$\eta$ (50 %-Load)	%	IE5-90.5	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A
IE ClassKlasse		IE5-89.3	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A
Manufacturer data		IE5-91.3	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A	n.A
Type		SA5E08MA4	SA5E08MA4	SA5E08MA4	SA5E08MA4	SA5E08MA4	SA5E09SA4	SA5E09SA4	SA5E09SA4	SA5E09SA4	SA5E09SA4
Number of poles		4	4	4	4	4	4	4	4	4	4
$M_n$	Nm	1.2	1.75	2.4	2.4	2.4	3.5	1.1	1.1	1.1	1.1
P	kW	0.37	0.55	0.75	0.75	0.75	1.1	1.1	1.1	1.1	1.1
Frequency	Hz	100	100	100	100	100	100	100	100	100	100
Voltage	V	380	380	380	380	380	380	380	380	380	380
$n_N$	1/min	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Type of motor		2)	2)	2)	2)	2)	2)	2)	2)	2)	2)
Operating conditions		3)	3)	3)	3)	3)	3)	3)	3)	3)	3)
*Dimensioned according to IEC TS 60034-30-2											
1) Manufacturer:		Bauer Gear Motor GmbH									
Commercial register number:		HRB 736269									
Address:		Eberhard-Bauer-Str. 37, 73734 Esslingen / Germany									
2) Type of motor:		Three-phase permanent magnet excited synchronous motor									
3) Installation altitude above sea level (m):		1000									
Ambient temperature:		-20 °C to +40 °C									

# Motors

## Technical data

### Atex-Motors

Rated speed 1500 1/min  
-Type S.XE.08MA4-..

#### Rated data of the motor

Type: **S.XE.08MA4-..** Ignition protection type: Increased Safety  
**S.XC.08MA4-..** Dust explosion protection – Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIIC T120 °C – T160 °C Db IP6x**

#### Rated parameters and data of the motor

Rated power P <sub>n</sub>	1.0	1.75	kW
Rated torque M <sub>n</sub>	6.5	6.5	Nm
Rated current I <sub>n</sub>	2.3	4.0	A
No. of Motor Poles 2p	4	4	
Rated speed n <sub>n</sub>	1500	2600	1/min
Nominal Frequency	50	87	Hz
Motorcircuit	Wye circuit	Delta circuit	
Strang-Resistance R <sub>s20</sub>	9.35*		Ohm
Strang-Inductance D-Axis L <sub>d</sub>	97*		mH
Strang-Inductance Q-Axis L <sub>q</sub>	170*		mH
Voltage constant k <sub>e</sub>	180	103	V / 1000 1/min
Torque constant k <sub>t</sub>	2.82	1.62	Nm / A
Peak Torque M <sub>max</sub> (60s)	10	10	Nm
Peak Current I <sub>max</sub> (60s)	3.7	6.4	A
Converter supply voltage	380 - 500		V

Δ \* Input value Danfoss Frequency converter FC302 => delta circuit 1/3 of the phase value

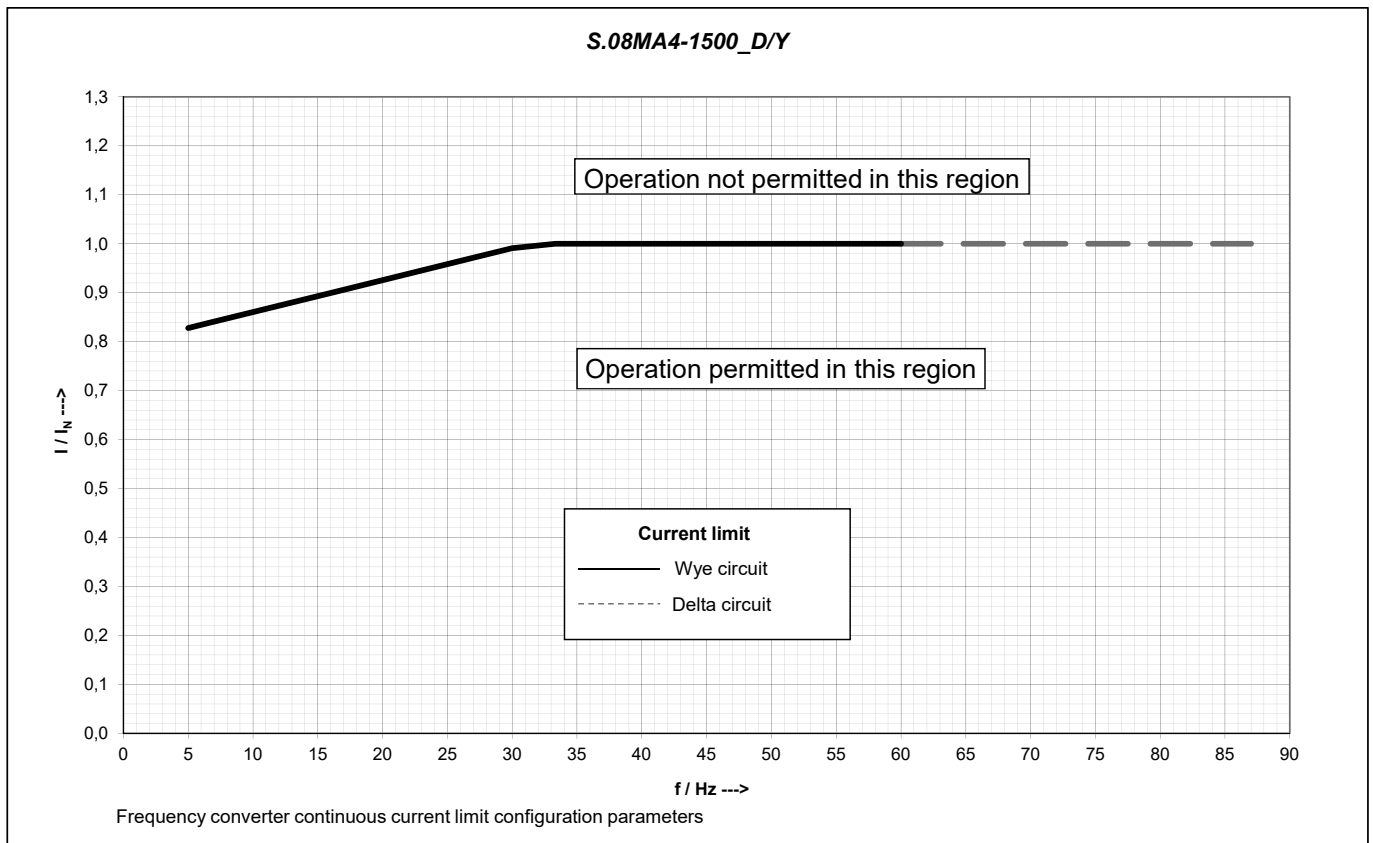
#### Data operation with frequency converter S1 operation. wye circuit

Torque	5.0	5.6	6.5	6.5	6.5	Nm
Power	0.08	0.29	0.68	1.0	1.2	kW
Voltage *	66	138	243	340	378	V
Current	1.9	2.1	2.3	2.3	2.3	A
Frequenz	5	16.66	33.33	50	60	Hz
Speed	150	500	1000	1500	1800	1/min
Duty type	S1					

#### Data operation with frequency converter S1 operation. delta circuit

Torque	5.0	5.6	6.5	6.5	6.5	Nm
Power	0.08	0.29	0.68	1.0	1.75	kW
Voltage *	38	79	142	198	320	V
Current	3.3	3.6	4.0	4.0	4.0	A
Frequenz	5	16.66	33.33	50	87	Hz
Speed	150	500	1000	1500	2600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * $I_n$
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 1500 1/min  
-Type S.XE.08LA4-..

### Rated data of the motor

Type: **S.XE.08LA4-..** Ignition protection type: Increased Safety  
**S.XC.08LA4-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3**

Labelling:  **II 2 D Ex tb IIC T 120 °C - T160 °C Db IP6x**

### Rated parameters and data of the motor

Rated power P <sub>n</sub>	1.50	2.45	kW
Rated torque M <sub>n</sub>	9.55	9.0	Nm
Rated current I <sub>n</sub>	3.5	5.9	A
No. of Motor Poles 2p	4	4	
Rated speed n <sub>n</sub>	1500	2600	1/min
Nominal Frequency	50	87	Hz
Motorcircuit	Wye circuit	Delta circuit	
Strang-Resistance R <sub>s20</sub>	5.5 *		Ohm
Strang-Inductance D-Axis L <sub>d</sub>	70 *		mH
Strang-Inductance Q-Axis L <sub>q</sub>	117 *		mH
Voltage constant k <sub>e</sub>	171	99	V / 1000 1/min
Torque constant k <sub>t</sub>	2.73	1.52	Nm / A
Peak Torque M <sub>max</sub> (60s)	15	14	Nm
Peak Current I <sub>max</sub> (60s)	5.6	9.5	A
Converter supply voltage	380 - 500		V

Δ \* Input value Danfoss Frequency converter FC302 => delta circuit 1/3 of the phase value

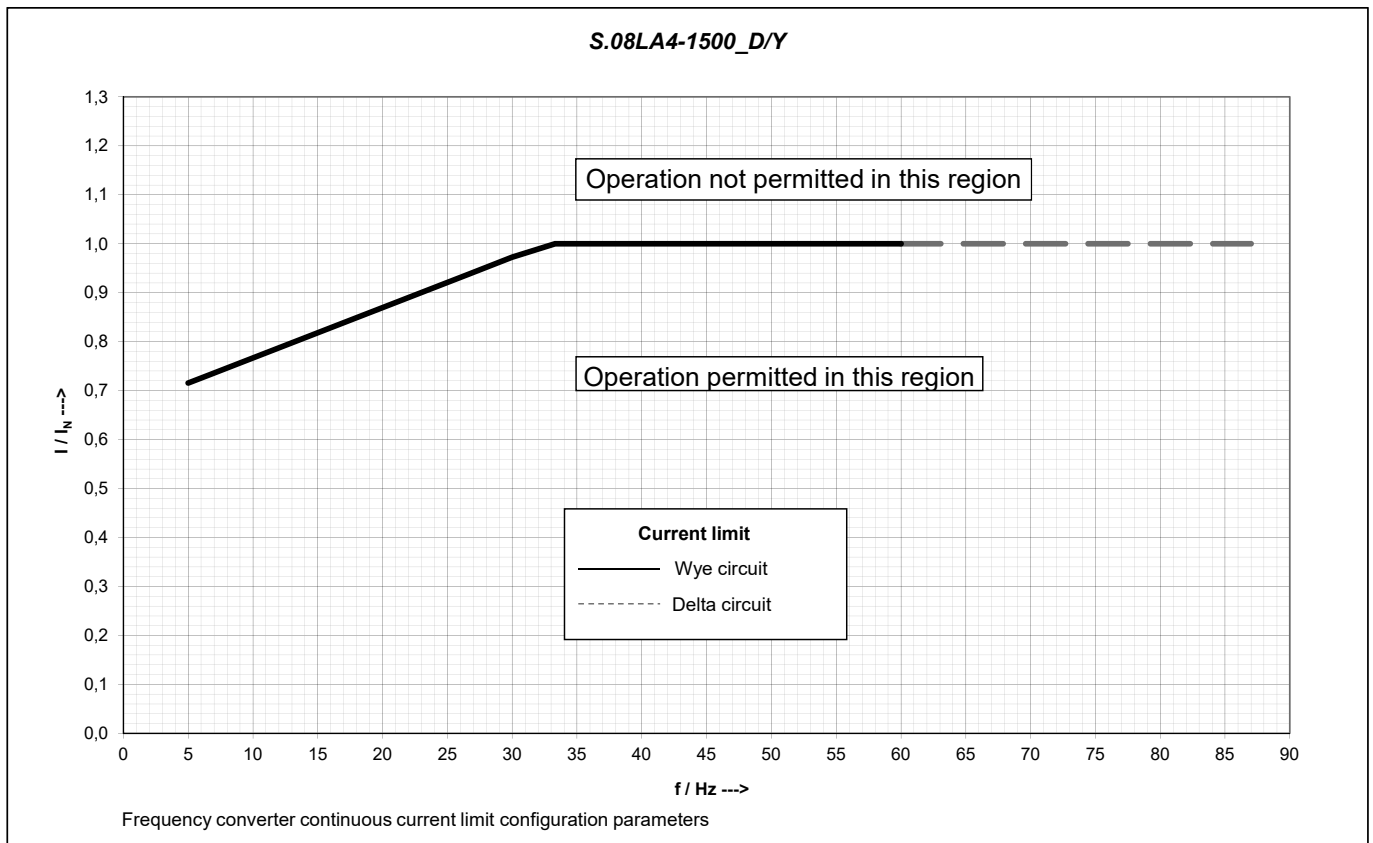
### Data operation with frequency converter S1 operation. wye circuit

Torque	6.5	8.0	9.55	9.55	9.55	Nm
Power	0.1	0.42	1.0	1.5	1.8	kW
Voltage *	55	125	225	315	378	V
Current	2.5	3.0	3.5	3.5	3.5	A
Frequenz	5	16.66	33.33	50	60	Hz
Speed	150	500	1000	1500	1800	1/min
Duty type	S1					

### Data operation with frequency converter S1 operation. delta circuit

Torque	6.25	8.0	9.0	9.0	9.0	Nm
Power	0.10	0.39	0.94	1.4	2.45	kW
Voltage *	33	72	131	182	300	V
Current	4.3	5.0	5.9	5.9	5.9	A
Frequenz	5	16.66	33.33	50	87	Hz
Speed	150	500	1000	1500	2600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * In
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.



# Motors

## Technical data

Rated speed 1500 1/min  
-Type S.XE.09SA4-..

### Rated data of the motor

Type: **S.XE.09SA4-..** Ignition protection type: Increased Safety  
**S.XC.09SA4-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIC T120 °C - T160 °C Db IP6x**

### Rated parameters and data of the motor

Rated power P <sub>n</sub>	2.0	3.5	kW
Rated torque M <sub>n</sub>	13	13	Nm
Rated current I <sub>n</sub>	4.0	7.0	A
No. of Motor Poles 2p	4	4	
Rated speed n <sub>n</sub>	1500	2600	1/min
Nominal Frequency	50	87	Hz
Motorcircuit	Wye circuit	Delta circuit	
Strang-Resistance R <sub>s20</sub>	4.95*		Ohm
Strang-Inductance D-Axis L <sub>d</sub>	64.1*		mH
Strang-Inductance Q-Axis L <sub>q</sub>	109.8*		mH
Voltage constant k <sub>e</sub>	208	120	V / 1000 1/min
Torque constant k <sub>t</sub>	3.2	1.85	Nm / A
Peak Torque M <sub>max</sub> (60s)	20	20	Nm
Peak Current I <sub>max</sub> (60s)	6.4	11.0	A
Converter supply voltage	380 - 500		V

Δ \* Input value Danfoss Frequency converter FC302 => delta circuit 1/3 of the phase value

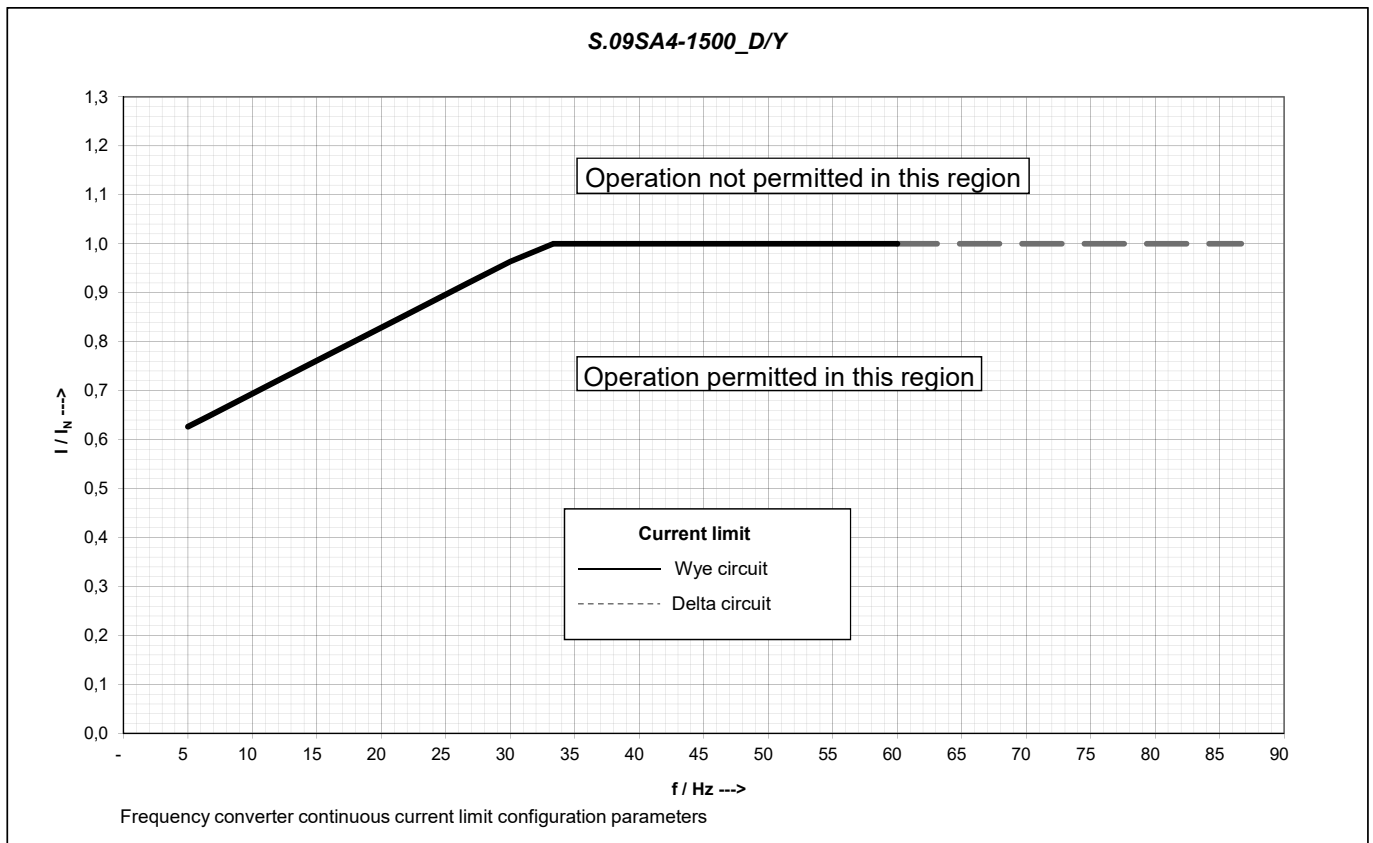
### Data operation with frequency converter S1 operation. wye circuit

Torque	8	10	13	13	11.5	Nm
Power	0.13	0.53	1.36	2	2.2	kW
Voltage *	56	140	258	370	375	V
Current	2.5	3.2	4.0	4.0	4.0	A
Frequenz	5	16.66	33.33	50	60	Hz
Speed	150	500	1000	1500	1800	1/min
Duty type	S1					

### Data operation with frequency converter S1 operation. delta circuit

Torque	8	10	13	13	13	Nm
Power	0.13	0.53	1.36	2	3.5	kW
Voltage *	33	81	149	214	370	V
Current	4.3	5.5	7.0	7.0	7.0	A
Frequenz	5	16.66	33.33	50	87	Hz
Speed	150	500	1000	1500	2600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * In
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 1500 1/min  
-Type S.XE.09XA4-..

### Rated data of the motor

Type: **S.XE.09XA4-..** Ignition protection type: Increased Safety  
**S.XC.09XA4-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIIC T120 °C - T160 °C Db IP6x**

### Rated parameters and data of the motor

Rated power P <sub>n</sub>	3.1	5.5	kW
Rated torque M <sub>n</sub>	20	20	Nm
Rated current I <sub>n</sub>	6.3	10.9	A
No. of Motor Poles 2p	4	4	
Rated speed n <sub>n</sub>	1500	2600	1/min
Nominal Frequency	50	87	Hz
Motorcircuit	Wye circuit	Delta circuit	
Strang-Resistance R <sub>s20</sub>	2.625*		Ohm
Strang-Inductance D-Axis L <sub>d</sub>	41.2*		mH
Strang-Inductance Q-Axis L <sub>q</sub>	70.1*		mH
Voltage constant k <sub>e</sub>	209	120	V / 1000 1/min
Torque constant k <sub>t</sub>	3.2	1.85	Nm / A
Peak Torque M <sub>max</sub> (60s)	31	29	Nm
Peak Current I <sub>max</sub> (60s)	10	16	A
Converter supply voltage	380 - 500		V

Δ \* Input value Danfoss Frequency converter FC302 => delta circuit 1/3 of the phase value

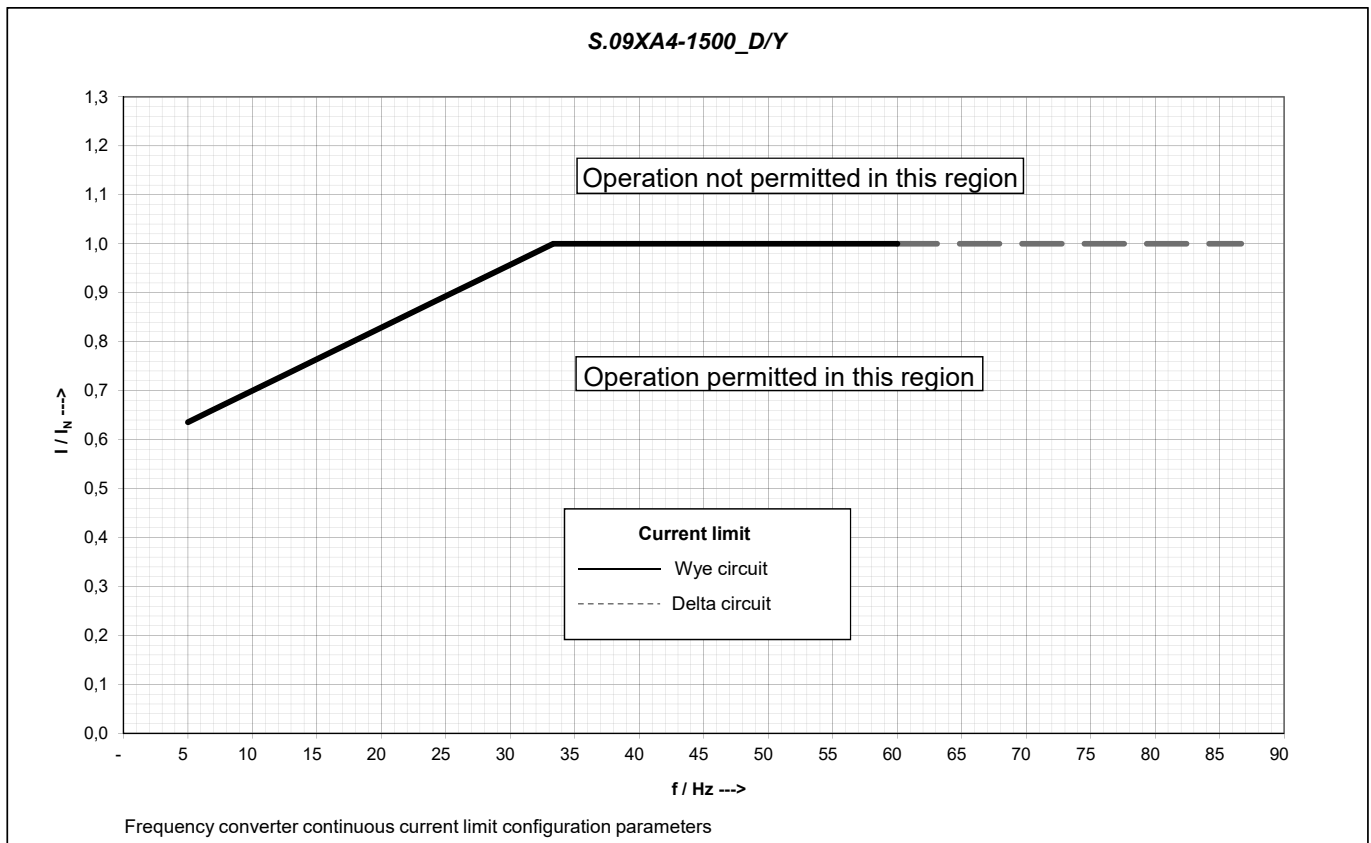
### Data operation with frequency converter S1 operation. wye circuit

Torque	13	16	20	20	19	Nm
Power	0.20	0.84	2.1	3.1	3.6	kW
Voltage *	53	134	253	364	380	V
Current	4.0	5.0	6.3	6.3	6.3	A
Frequenz	5	16.66	33.33	50	60	Hz
Speed	150	500	1000	1500	1800	1/min
Duty type	S1					

### Data operation with frequency converter S1 operation. delta circuit

Torque	13	16	20	20	20	Nm
Power	0.2	0.84	2.1	3.1	5.5	kW
Voltage *	31	78	146	210	348	V
Current	7.0	8.7	10.9	10.9	10.9	A
Frequenz	5	16.66	33.33	50	87	Hz
Speed	150	500	1000	1500	2600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * $I_n$
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 1500 1/min  
-Type S.XE.11SA6--

### Rated data of the motor

Type: **S.XE.11SA6--** Ignition protection type: Increased Safety  
**S.XC.11SA6--** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **III 2 D Ex tb IIC T120 °C - T160 °C Db IP6x**

### Rated parameters and data of the motor

Rated power P <sub>n</sub>	3.5	6.1	kW
Rated torque M <sub>n</sub>	22.5	22.5	Nm
Rated current I <sub>n</sub>	7.0	12.5	A
No. of Motor Poles 2p	6	6	
Rated speed n <sub>n</sub>	1500	2600	1/min
Nominal Frequency	75	130	Hz
Motorcircuit	Wye circuit	Delta circuit	
Strang-Resistance R <sub>s20</sub>	1.76*		Ohm
Strang-Inductance D-Axis L <sub>d</sub>	20*		mH
Strang-Inductance Q-Axis L <sub>q</sub>	30*		mH
Voltage constant k <sub>e</sub>	210	121	V / 1000 1/min
Torque constant k <sub>t</sub>	3.20	1.80	Nm / A
Peak Torque M <sub>max</sub> (60s)	35	35	Nm
Peak Current I <sub>max</sub> (60s)	11	19	A
Converter supply voltage	380 - 500		V

Δ \* Input value Danfoss Frequency converter FC302 => delta circuit 1/3 of the phase value

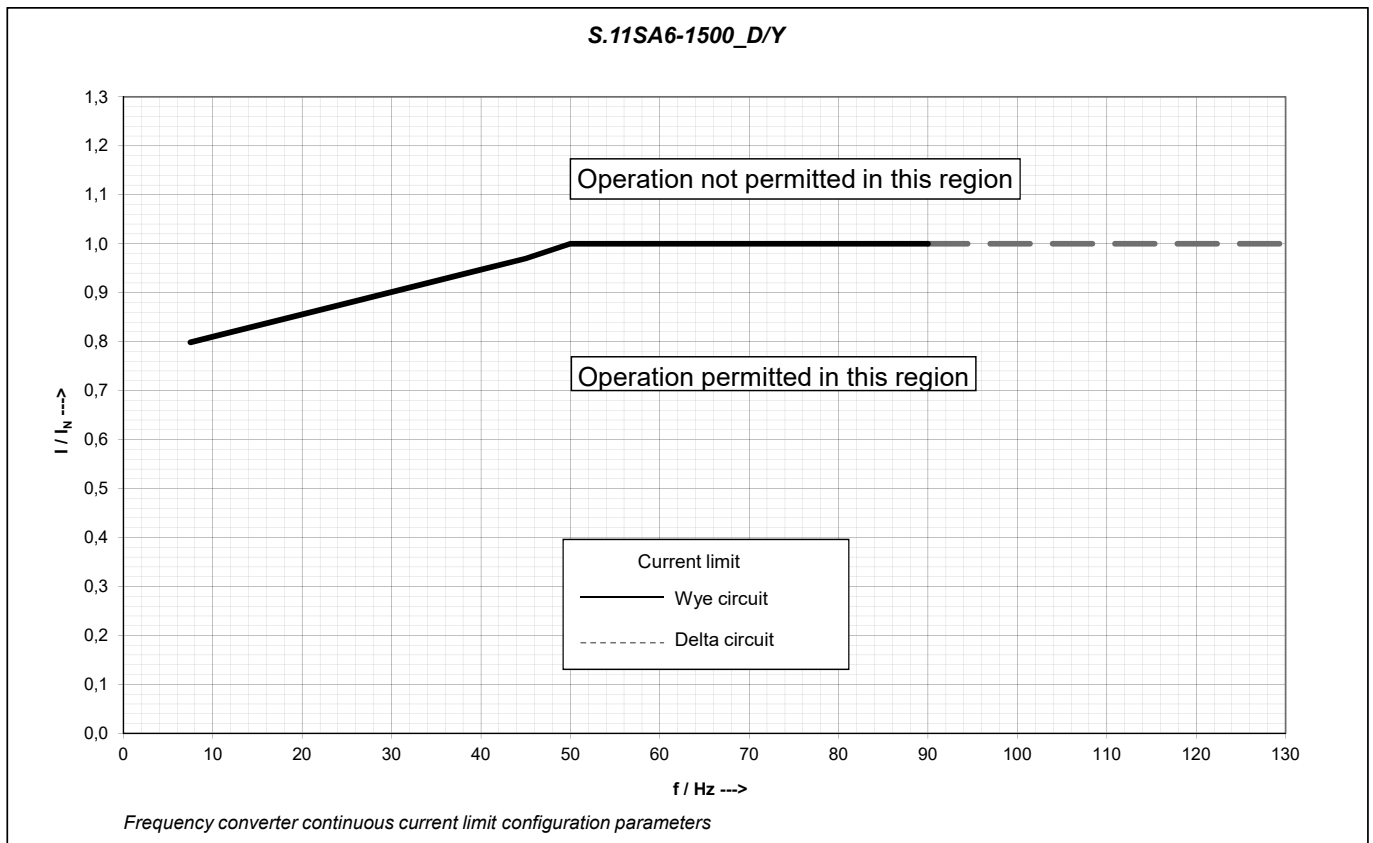
### Data operation with frequency converter S1 operation. wye circuit

Torque	18	20	22.5	22.5	22.5	Nm
Power	0.28	1.0	2.4	3.5	6.1	kW
Voltage *	54	132	245	351	381	V
Current	5.6	6.2	7.0	7.0	7.0	A
Frequenz	7.5	25	50	75	90	Hz
Speed	150	500	1000	1500	1800	1/min
Duty type	S1					

### Data operation with frequency converter S1 operation. delta circuit

Torque	18	20	22.5	22.5	22.5	Nm
Power	0.28	1.0	2.4	3.5	6.1	kW
Voltage *	31	76	142	203	341	V
Current	10	11	12.5	12.5	12.5	A
Frequenz	7.5	25	50	75	130	Hz
Speed	150	500	1000	1500	2600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * $I_n$
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 1500 1/min  
-Type S.XE.11MA6-..

### Rated data of the motor

Type: **S.XE.11MA6-..** Ignition protection type: Increased Safety  
**S.XC.11MA6-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIC T120 °C - T160 °C Db IP6x**

### Rated parameters and data of the motor

Rated power P <sub>n</sub>	5.50	9.50	kW
Rated torque M <sub>n</sub>	35	35	Nm
Rated current I <sub>n</sub>	11.0	19.1	A
No. of Motor Poles 2p	6	6	
Rated speed n <sub>n</sub>	1500	3600	1/min
Nominal Frequency	75	130	Hz
Motorcircuit	Wye circuit	Delta circuit	
Strang-Resistance R <sub>s20</sub>	0.892*		Ohm
Strang-Inductance D-Axis L <sub>d</sub>	12*		mH
Strang-Inductance Q-Axis L <sub>q</sub>	18.4*		mH
Voltage constant k <sub>e</sub>	206	117	V / 1000 1/min
Torque constant k <sub>t</sub>	3.15	1.79	Nm / A
Peak Torque M <sub>max</sub> (60s)	55	55	Nm
Peak Current I <sub>max</sub> (60s)	17	30	A
Converter supply voltage	380 - 500		V

Δ \* Input value Danfoss Frequency converter FC302 => delta circuit 1/3 of the phase value

### Data operation with frequency converter S1 operation. wye circuit

Torque	26.5	30	35	35	35	Nm
Power	0.42	1.6	3.7	5.5	6.5	kW
Voltage *	46	121	229	331	377	V
Current	8.5	9.5	11.0	11.0	11.0	A
Frequenz	7.5	25	50	75	90	Hz
Speed	150	500	1000	1500	1800	1/min
Duty type	S1					

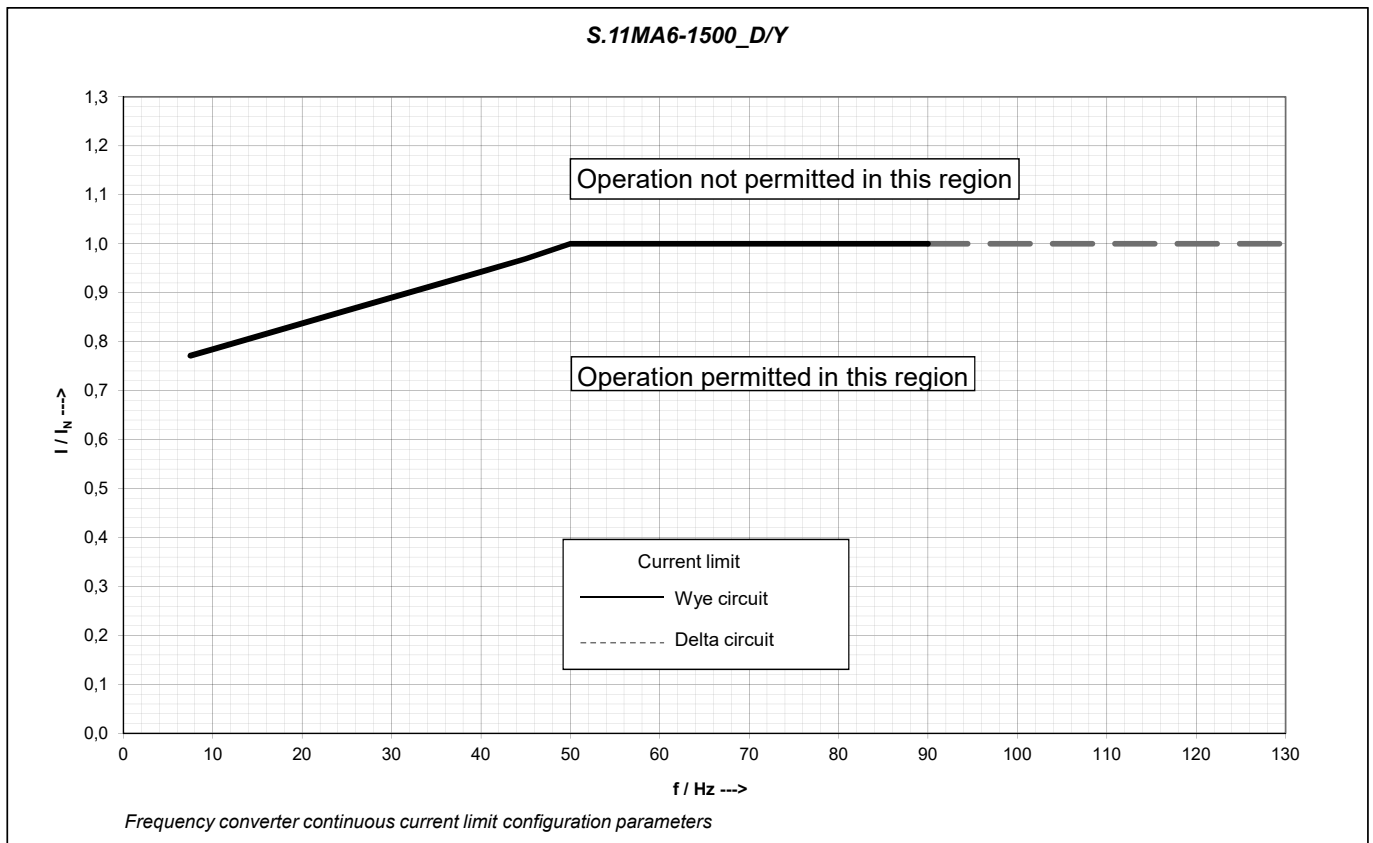
### Data operation with frequency converter S1 operation. delta circuit

Torque	26.2	30	35	35	35	Nm
Power	0.41	1.6	3.7	5.5	9.5	kW
Voltage *	27	70	132	190	321	V
Current	14.7	16.7	19.1	19.1	19.1	A
Frequenz	7.5	25	50	75	130	Hz
Speed	150	500	1000	1500	2600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)



### Frequency converter continuous current limit configuration parameters



The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

#### Converter Settings:

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>n</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below f <sub>min</sub> :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 1500 1/min  
-Type S.XE.11LA6-..

### Rated data of the motor

Type: **S.XE.11LA6-..** Ignition protection type: Increased Safety  
**S.XC.11LA6-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIC T120 °C - T160 °C Db IP6x**

### Rated parameters and data of the motor

Rated power P <sub>n</sub>	7.50	13	kW
Rated torque M <sub>n</sub>	48	48	Nm
Bemessungsstrom I <sub>n</sub>	14.7	26	A
No. of Motor Poles 2p	6	6	
Rated speed n <sub>n</sub>	1500	2600	1/min
Nominal Frequency	75	130	Hz
Motorcircuit	Wye circuit	Delta circuit	
Strang-Resistance R <sub>s20</sub>	0.605*		Ohm
Strang-Inductance D-Axis L <sub>d</sub>	9.3*		mH
Strang-Inductance Q-Axis L <sub>q</sub>	13.9*		mH
Voltage constant k <sub>e</sub>	210	121	V / 1000 1/min
Torque constant k <sub>t</sub>	3.25	1.84	Nm / A
Peak Torque M <sub>max</sub> (60s)	75	75	Nm
Peak Current I <sub>max</sub> (60s)	23	40	A
Converter supply voltage	380 - 500		V

Δ \* Input value Danfoss Frequency converter FC302 => delta circuit 1/3 of the phase value

### Data operation with frequency converter S1 operation. wye circuit

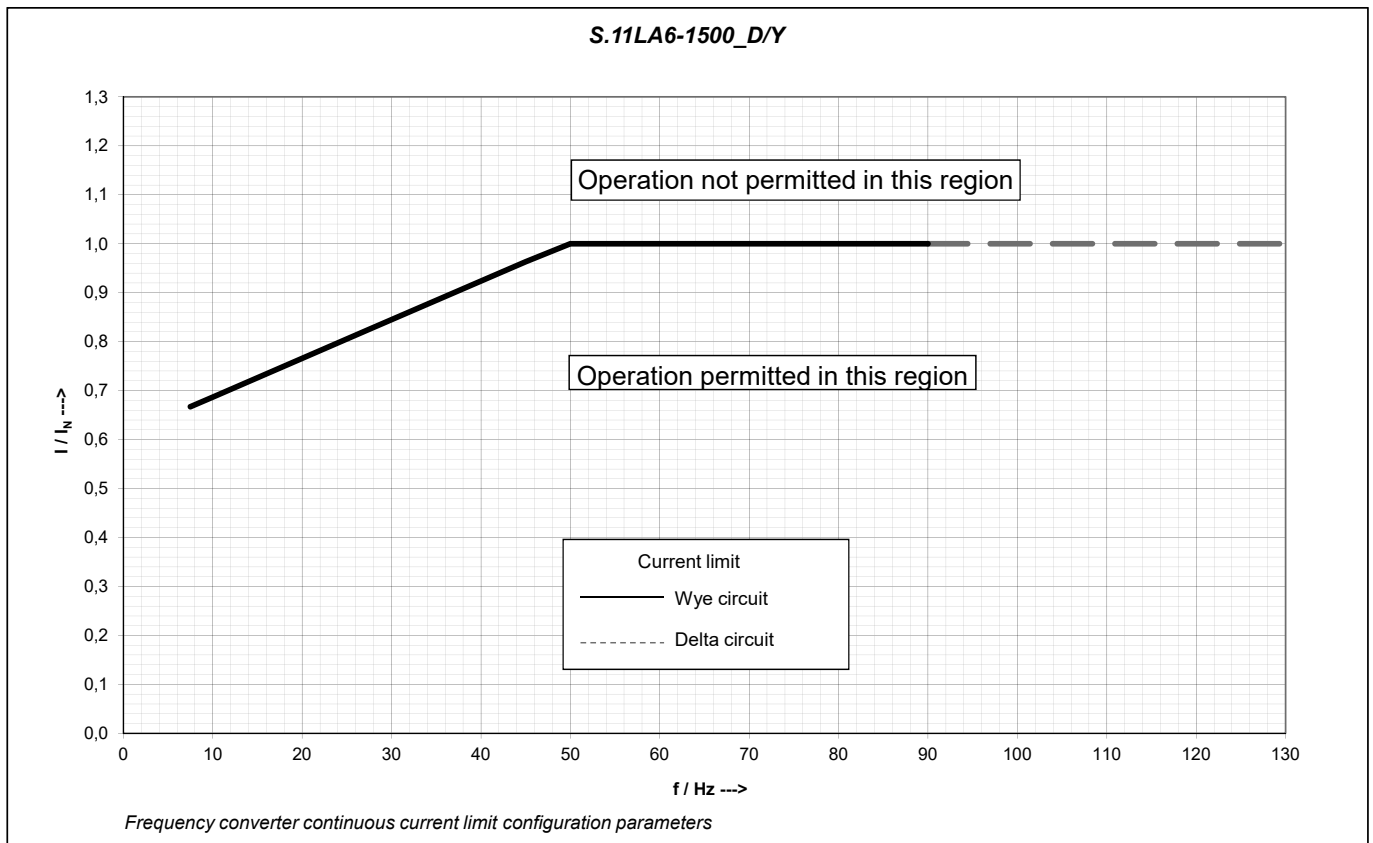
Torque	32.5	39.4	48	48	47.5	Nm
Power	0.51	2.0	5.0	7.5	9.0	kW
Voltage *	44	121	231	338	375	V
Current	9.8	12.0	14.7	14.7	14.7	A
Frequenz	7.5	25	50	75	90	Hz
Speed	150	500	1000	1500	1800	1/min
Duty type	S1					

### Data operation with frequency converter S1 operation. delta circuit

Torque	32.5	39.5	48	48	48	Nm
Power	0.51	2.0	5.0	7.5	13	kW
Voltage *	26	71	134	197	328	V
Current	17.6	21.1	26	26	26	A
Frequenz	7.5	25	50	75	130	Hz
Speed	150	500	1000	1500	2600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

## Frequency converter continuous current limit configuration parameters



The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>n</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below f <sub>min</sub> :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 3000 1/min  
-Type S.XE.08MA4-..

### Rated data of the motor

Type: **S.XE.08MA4-..** Ignition protection type: Increased Safety  
**S.XC.08MA4-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIC T120 °C - T160 °C Db IP6x**

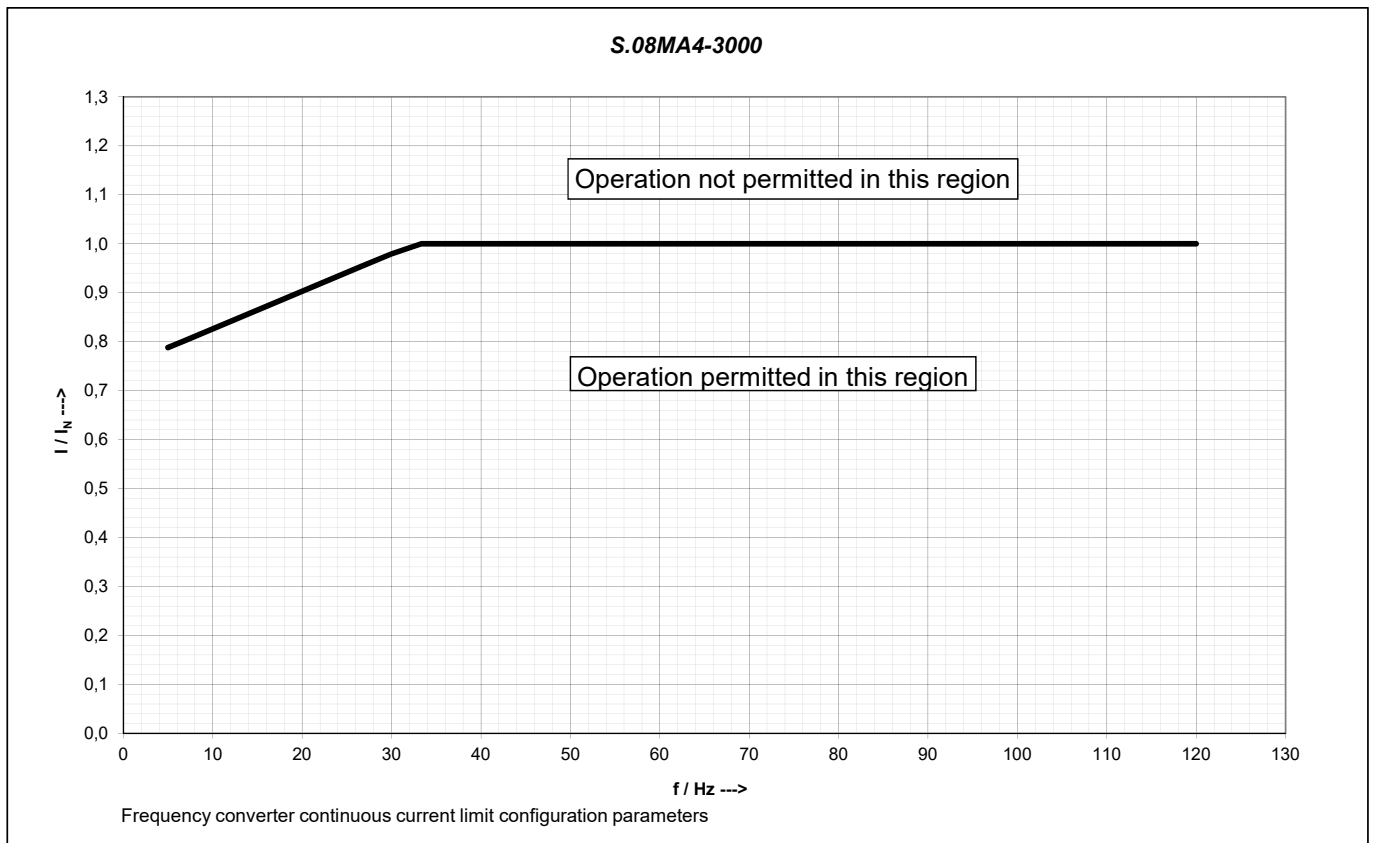
### Rated parameters and data of the motor

Rated power P <sub>n</sub>	2.0	kW
Rated torque M <sub>n</sub>	6.50	Nm
Rated current I <sub>n</sub>	4.7	A
No. of Motor Poles 2p	4	
Rated speed n <sub>n</sub>	3000	1/min
Nominal Frequency	100	Hz
Motorcircuit	Wye circuit	
Strang-Resistance R <sub>s20</sub>	2.36	Ohm
Strang-Inductance D-Axis L <sub>d</sub>	24.7	mH
Strang-Inductance Q-Axis L <sub>q</sub>	43.5	mH
Voltage constant k <sub>e</sub>	90	V / 1000 1/min
Torque constant k <sub>t</sub>	1.28	Nm / A
Peak Torque M <sub>max</sub> (60s)	10	Nm
Peak Current I <sub>max</sub> (60s)	7.5	A
Converter supply voltage	380 - 500	V

### Data operation with frequency converter

Torque	5.0	5.6	6.5	6.5	6.5	Nm
Power	0.08	0.29	0.68	2.0	2.5	kW
Voltage *	34	68	119	308	372	V
Current	3.7	4.1	4.7	4.7	4.7	A
Frequenz	5	16.66	33.33	100	120	Hz
Speed	150	500	1000	3000	3600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * In
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 3000 1/min  
-Type S.XE.08LA4-..

### Rated data of the motor

Type: **S.XE.08LA4-..** Ignition protection type: Increased Safety  
**S.XC.08LA4-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIC T120 °C - T160 °C Db IP6x**

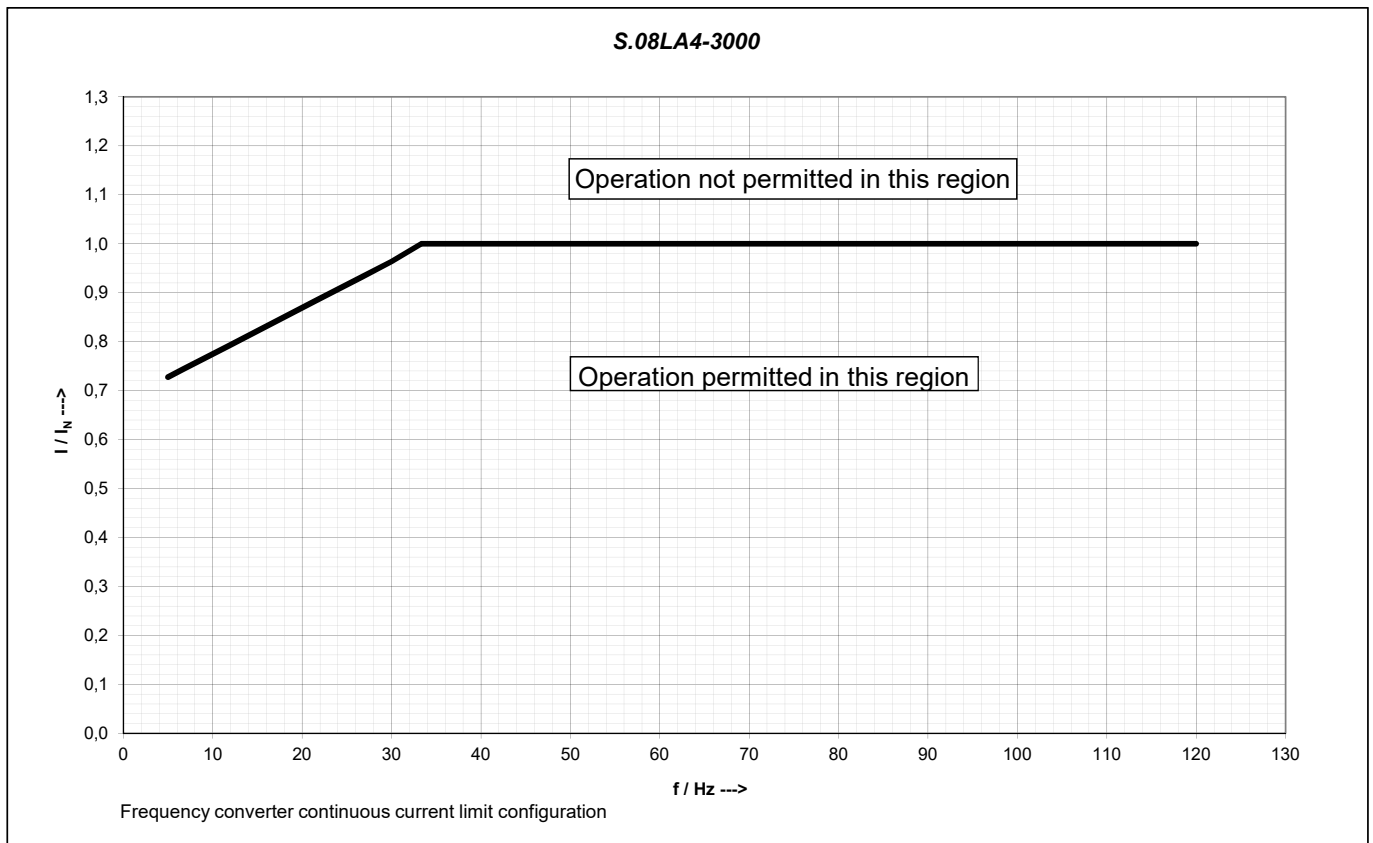
### Rated parameters and data of the motor

Rated power P <sub>n</sub>	3.0	kW
Rated torque M <sub>n</sub>	9.55	Nm
Rated current I <sub>n</sub>	7.0	A
No. of Motor Poles 2p	4	
Rated speed n <sub>n</sub>	3000	1/min
Nominal Frequency	100	Hz
Motorcircuit	Wye circuit	
Strang-Resistance R <sub>s20</sub>	1.41	Ohm
Strang-Inductance D-Axis L <sub>d</sub>	16.8	mH
Strang-Inductance Q-Axis L <sub>q</sub>	29.6	mH
Voltage constant k <sub>e</sub>	87	V / 1000 1/min
Torque constant k <sub>t</sub>	1.36	Nm / A
Peak Torque M <sub>max</sub> (60s)	15	Nm
Peak Current I <sub>max</sub> (60s)	11.2	A
Converter supply voltage	380 - 500	V

### Data operation with frequency converter

Torque	6.5	8.0	9.55	9.55	9.55	Nm
Power	0.1	0.42	1.0	3.0	3.6	kW
Voltage *	28	63	114	296	358	V
Current	5.2	5.9	7.0	7.0	7.0	A
Frequenz	5	16.66	33.33	100	120	Hz
Speed	150	500	1000	3000	3600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * In
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.



# Motors

## Technical data

Rated speed 3000 1/min  
-Type S.XE.09SA4-..

### Rated data of the motor

Type: **S.XE.09SA4-..** Ignition protection type: Increased Safety  
**S.XC.09SA4-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIIC T120 °C - T160 °C Db IP6x**

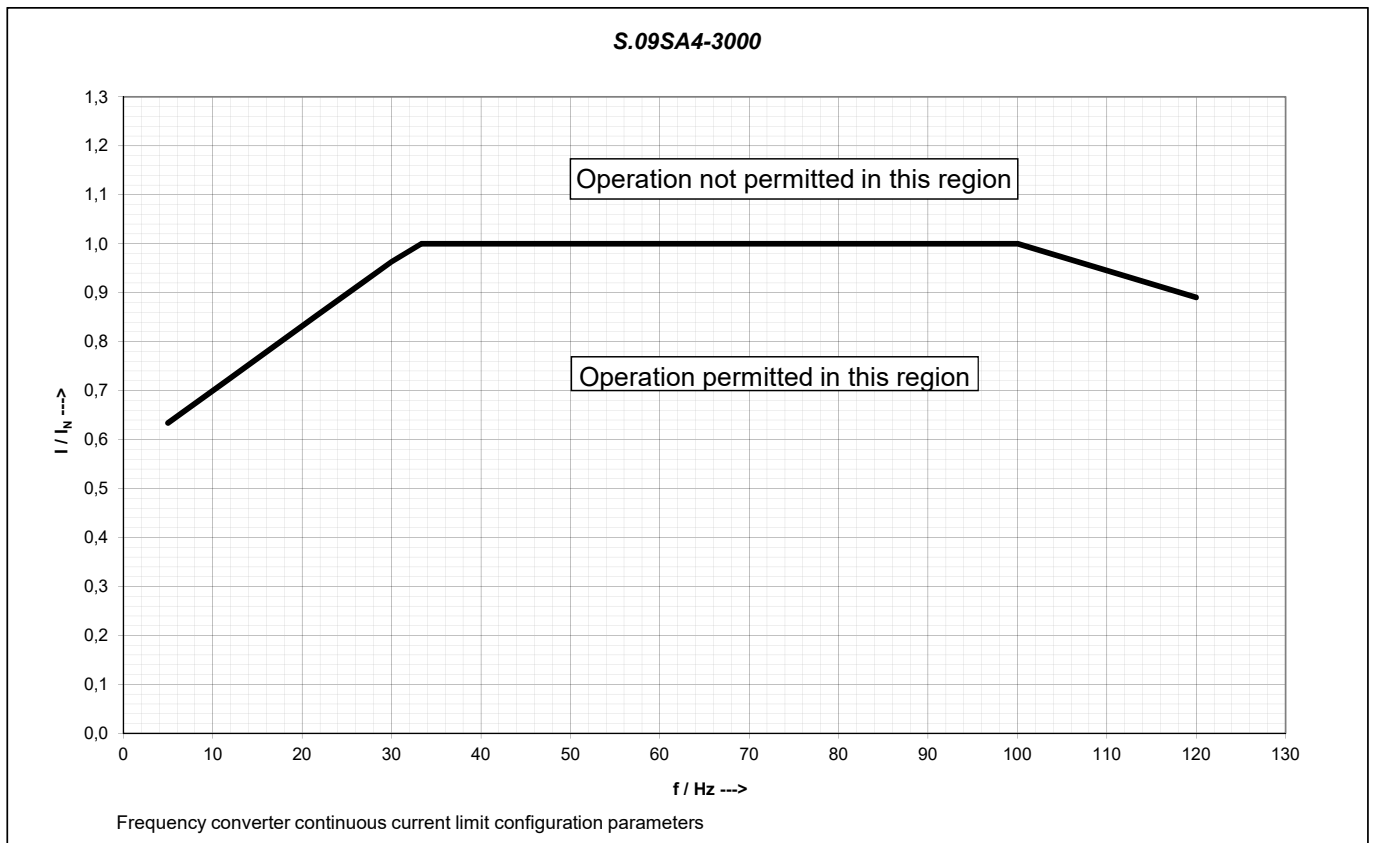
### Rated parameters and data of the motor

Rated power P <sub>n</sub>	6.3	kW
Rated torque M <sub>n</sub>	20	Nm
Rated current I <sub>n</sub>	12.5	A
No. of Motor Poles 2p	4	
Rated speed n <sub>n</sub>	3000	1/min
Nominal Frequency	100	Hz
Motorcircuit	Wye circuit	
Phase Resistance U-V R <sub>20</sub>	1.305	Ohm
Strang-Resistance R <sub>s20</sub>	0.653	Ohm
Strang-Inductance D-Axis L <sub>d</sub>	12.7	mH
Strang-Inductance Q-Axis L <sub>q</sub>	17.9	mH
Voltage constant k <sub>e</sub>	102	V / 1000 1/min
Torque constant k <sub>t</sub>	1.60	Nm / A
Peak Torque M <sub>max</sub> (60s)	30	Nm
Peak Current I <sub>max</sub> (60s)	20	A
Converter supply voltage	380 - 500	V

### Data operation with frequency converter

Torque	12.5	15.7	20	20	14.5	Nm
Power	0.196	0.84	2.1	6.3	5.5	kW
Voltage *	26	66	124	334	380	V
Current	8	9.9	12.5	12.5	9.2	A
Frequenz	5	16.66	33.33	100	120	Hz
Speed	150	500	1000	3000	3600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * I <sub>n</sub>
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below f <sub>min</sub> :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below f<sub>min</sub> are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 3000 1/min  
-Type S.XE.09XA4-..

### Rated data of the motor

Type: **S.XE.09XA4-..** Ignition protection type: Increased Safety  
**S.XC.09XA4-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIC T120 °C - T160 °C Db IP6x**

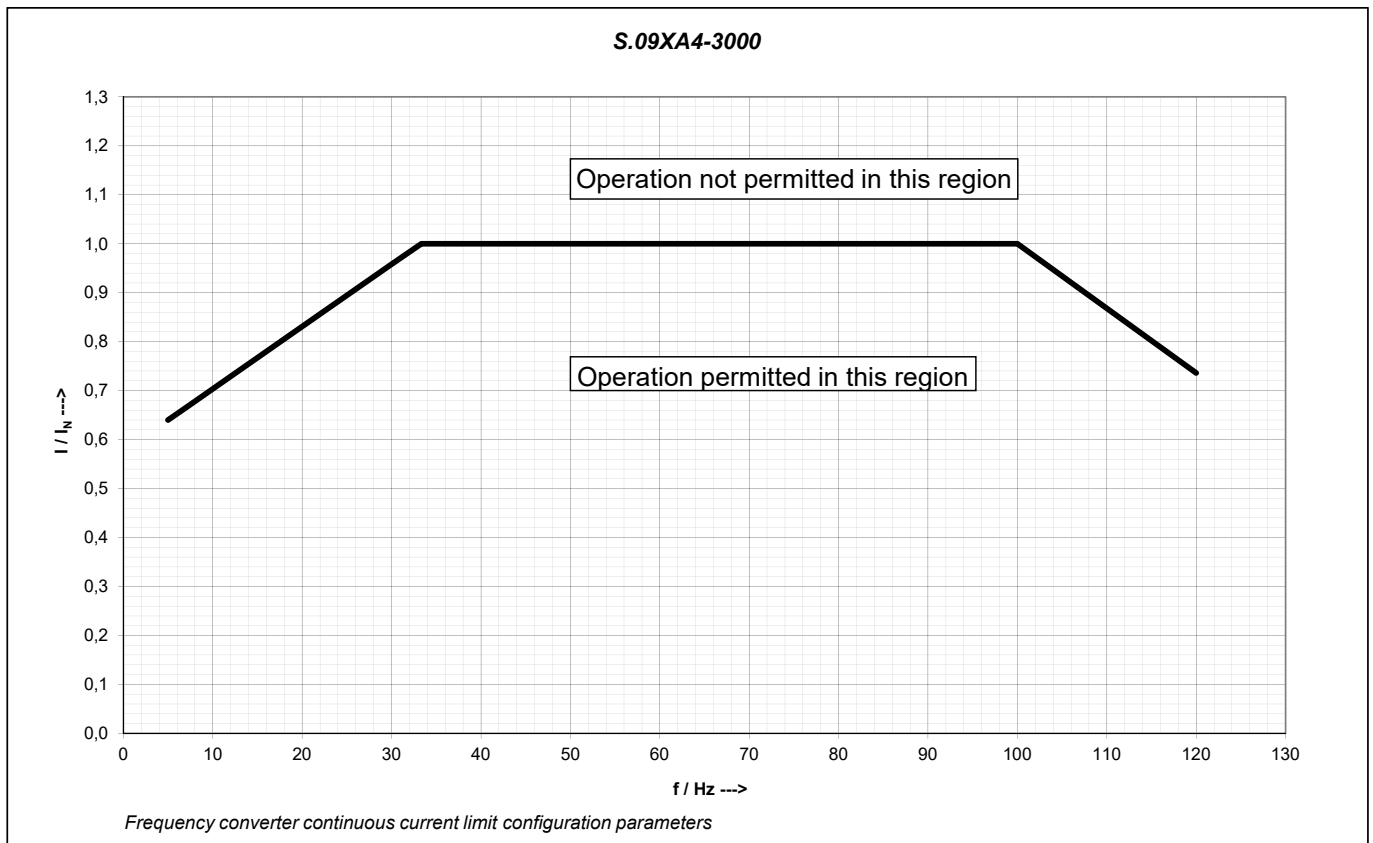
### Rated parameters and data of the motor

Rated power P <sub>n</sub>	6.3	kW
Rated torque M <sub>n</sub>	20	Nm
Rated current I <sub>n</sub>	12.5	A
No. of Motor Poles 2p	4	
Rated speed n <sub>n</sub>	3000	1/min
Nominal Frequency	100	Hz
Motorcircuit	Wye circuit	
Phase Resistance U-V R <sub>20</sub>	1.305	Ohm
Strang-Resistance R <sub>s20</sub>	0.653	Ohm
Strang-Inductance D-Axis L <sub>d</sub>	12.7	mH
Strang-Inductance Q-Axis L <sub>q</sub>	17.9	mH
Voltage constant k <sub>e</sub>	102	V / 1000 1/min
Torque constant k <sub>t</sub>	1.60	Nm / A
Peak Torque M <sub>max</sub> (60s)	30	Nm
Peak Current I <sub>max</sub> (60s)	20	A
Converter supply voltage	380 - 500	V

### Data operation with frequency converter

Torque	12.5	15.7	20	20	14.5	Nm
Power	0.196	0.84	2.1	6.3	5.5	kW
Voltage *	26	66	124	334	380	V
Current	8	9.9	12.5	12.5	9.2	A
Frequenz	5	16.66	33.33	100	120	Hz
Speed	150	500	1000	3000	3600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * In
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 3000 1/min  
-Type S.XE.11SA6-..

### Rated data of the motor

Type: **S.XE.11SA6-..** Ignition protection type: Increased Safety  
**S.XC.11SA6-..** Staubexplosionsschutz - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIIC T120 °C - T160 °C Db IP6x**

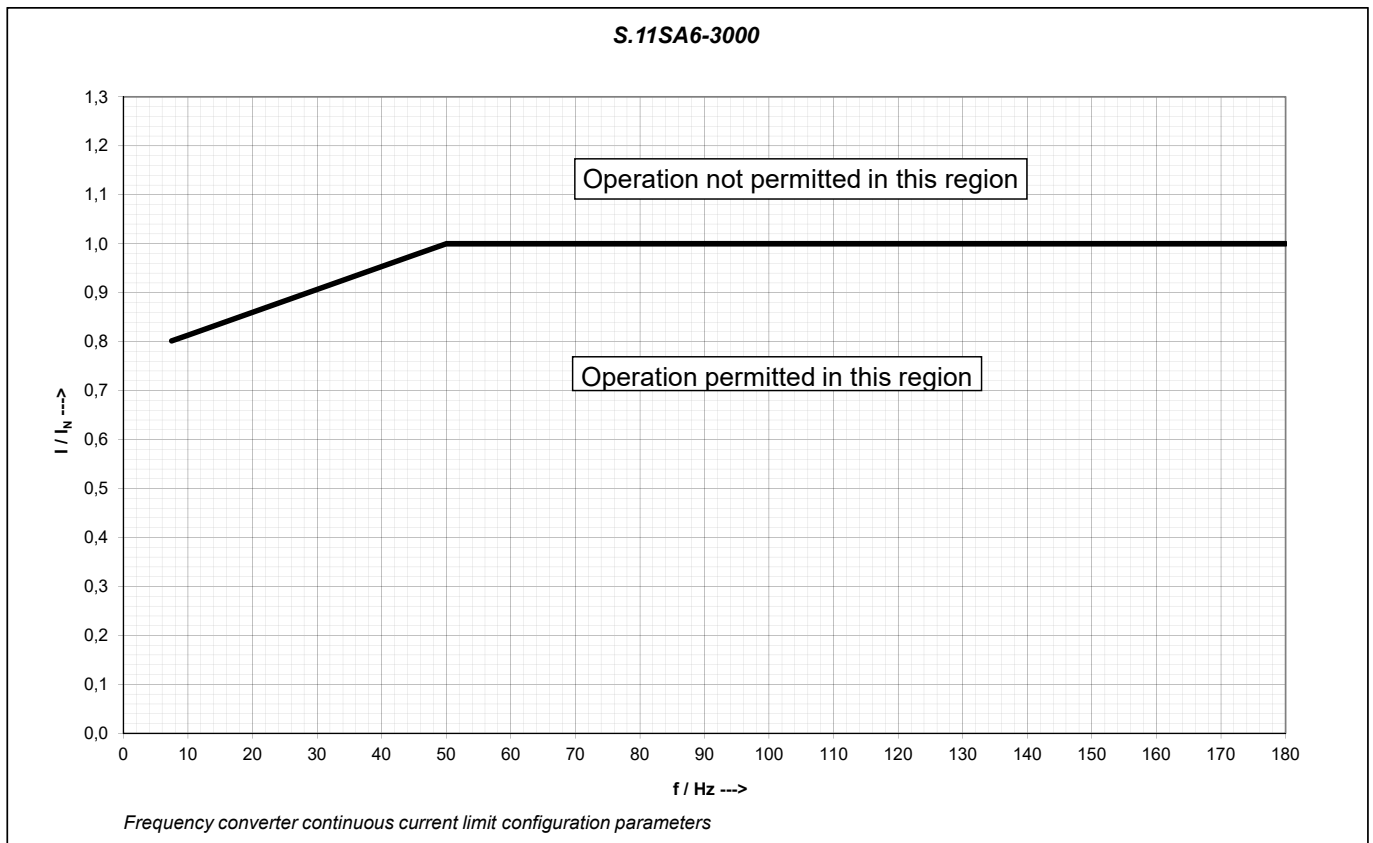
### Rated parameters and data of the motor

Rated power P <sub>n</sub>	7.1	kW
Rated torque M <sub>n</sub>	22.5	Nm
Rated current I <sub>n</sub>	15.0	A
No. of Motor Poles 2p	6	
Rated speed n <sub>n</sub>	3000	1/min
Nominal Frequency	150	Hz
Motorcircuit	Wye circuit	
Strang-Resistance R <sub>s20</sub>	0.447	Ohm
Strang-Inductance D-Axis L <sub>d</sub>	5.0	mH
Strang-Inductance Q-Axis L <sub>q</sub>	7.7	mH
Voltage constant k <sub>e</sub>	106	V / 1000 1/min
Torque constant k <sub>t</sub>	1.55	Nm / A
Peak Torque M <sub>max</sub> (60s)	35	Nm
Peak Current I <sub>max</sub> (60s)	23	A
Converter supply voltage	380 - 500	V

### Data operation with frequency converter

Torque	18	20	22.5	22.5	22.5	Nm
Power	0.28	1.0	2.4	7.1	8.5	kW
Voltage *	28	66	122	333	368	V
Current	12	13.3	15	15	15	A
Frequenz	7.5	25	50	150	180	Hz
Speed	150	500	1000	3000	3600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * $I_n$
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 3000 1/min  
-Type S.XE.11MA6-..

### Rated data of the motor

Type: **S.XE.11MA6-..** Ignition protection type: Increased Safety  
**S.XC.11MA6-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIIC T120 °C - T160 °C Db IP6x**

### Rated parameters and data of the motor

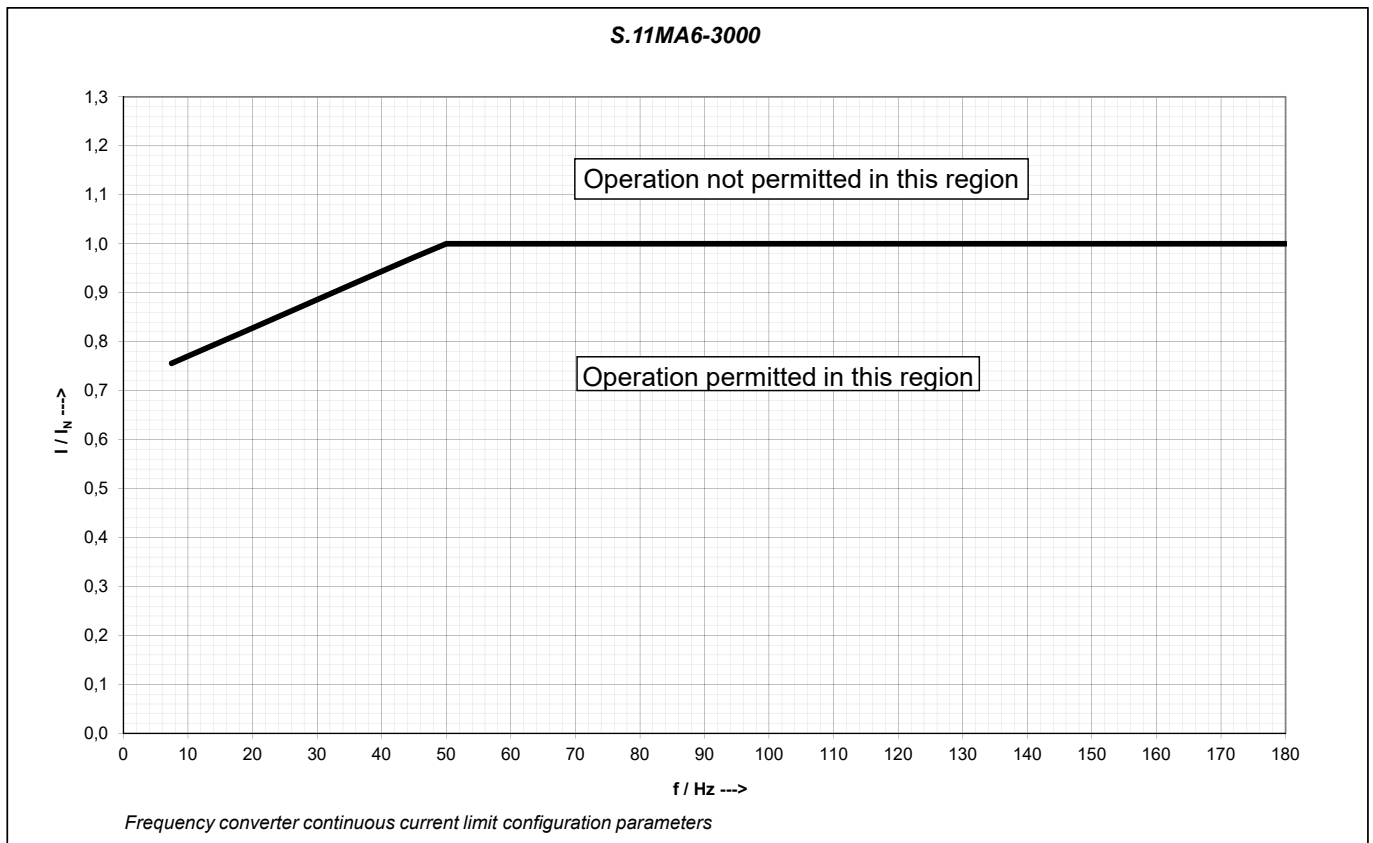
Rated power P <sub>n</sub>	11.0	kW
Rated torque M <sub>n</sub>	35	Nm
Rated current I <sub>n</sub>	22.5	A
No. of Motor Poles 2p	6	
Rated speed n <sub>n</sub>	3000	1/min
Nominal Frequency	150	Hz
Motorcircuit	Wye circuit	
Strang-Resistance R <sub>s20</sub>	0.217	Ohm
Strang-Inductance D-Axis L <sub>d</sub>	3.0	mH
Strang-Inductance Q-Axis L <sub>q</sub>	4.6	mH
Voltage constant k <sub>e</sub>	104	V / 1000 1/min
Torque constant k <sub>t</sub>	1.55	Nm / A
Peak Torque M <sub>max</sub> (60s)	55	Nm
Peak Current I <sub>max</sub> (60s)	35	A
Converter supply voltage	380 - 500	V

### Data operation with frequency converter

Torque	26.5	30	35	35	34.3	Nm
Power	0.42	1.6	3.7	11	12.9	kW
Voltage *	23	61	115	320	368	V
Current	17	19.3	22.5	22.5	22.5	A
Frequenz	7.5	25	50	150	180	Hz
Speed	150	500	1000	3000	3600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)



**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * In
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Motors

## Technical data

Rated speed 3000 1/min  
-Type S.XE.11LA6-..

### Rated data of the motor

Type: **S.XE.11LA6-..** Ignition protection type: Increased Safety  
**S.XC.11LA6-..** Dust explosion protection - Zone 21

Labelling:  **II 2 G Ex e IIC T1 - T3 Gb**

Labelling:  **II 2 D Ex tb IIIC T120 °C - T160 °C Db IP6x**

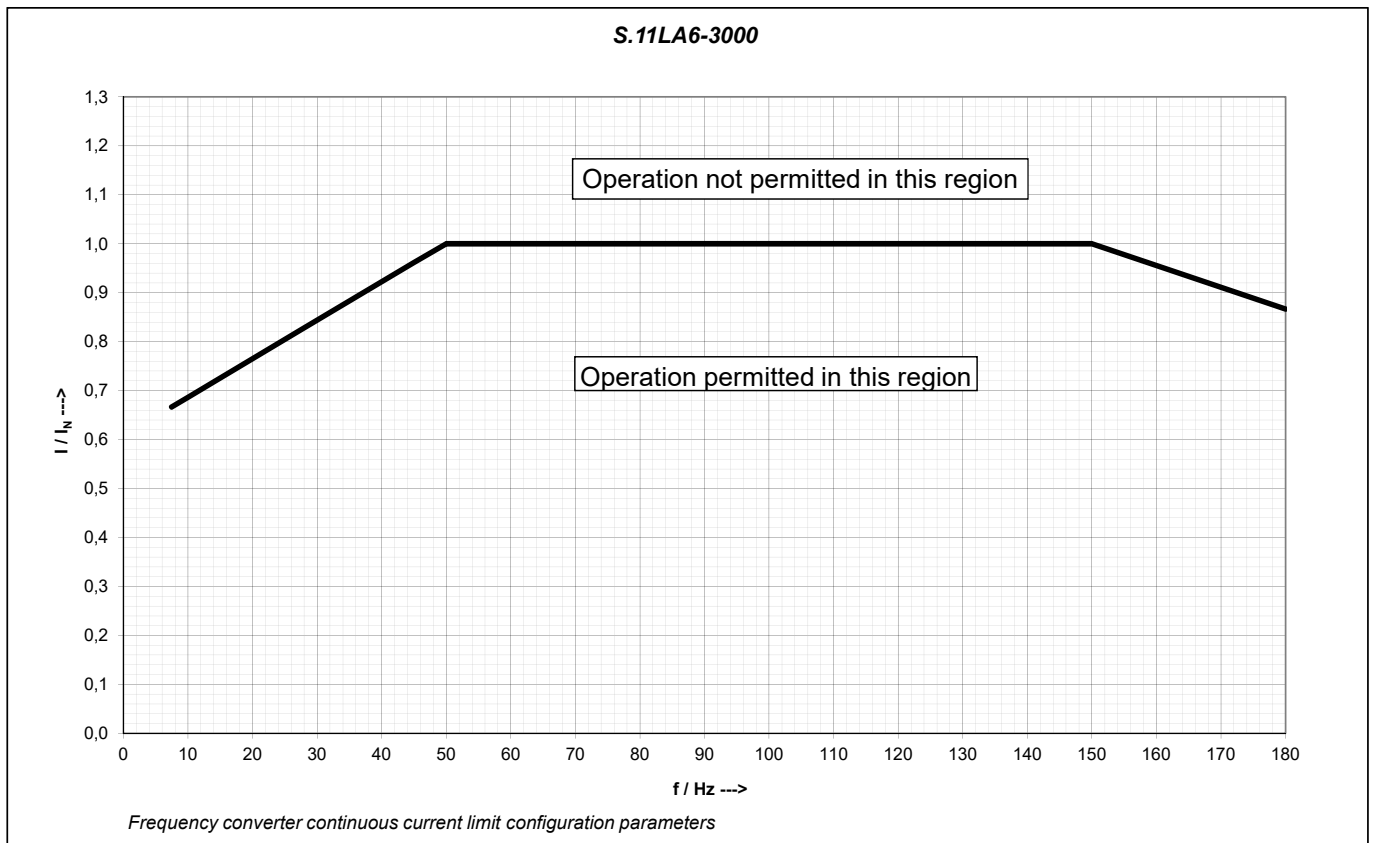
### Rated parameters and data of the motor

Rated power P <sub>n</sub>	15.0	kW
Rated torque M <sub>n</sub>	48	Nm
Rated current I <sub>n</sub>	30	A
No. of Motor Poles 2p	6	
Rated speed n <sub>n</sub>	3000	1/min
Nominal Frequency	150	Hz
Motorcircuit	Wye circuit	
Strang-Resistance R <sub>s20</sub>	0.150	Ohm
Strang-Inductance D-Axis L <sub>d</sub>	2.4	mH
Strang-Inductance Q-Axis L <sub>q</sub>	3.5	mH
Voltage constant k <sub>e</sub>	105	V / 1000 1/min
Torque constant k <sub>t</sub>	1.59	Nm / A
Peak Torque M <sub>max</sub> (60s)	75	Nm
Peak Current I <sub>max</sub> (60s)	48	A
Converter supply voltage	380 - 500	V

### Data operation with frequency converter

Torque	32.5	39.4	48	48	40	Nm
Power	0.5	2.1	5.0	15.0	15.0	kW
Voltage *	22.6	61.4	116	327	368	V
Current	20	24	30	30	25.8	A
Frequenz	7.5	25	50	150	180	Hz
Speed	150	500	1000	3000	3600	1/min
Duty type	S1					

\* Basic oscillation at the motor terminals (output voltage of the frequency converter)

**Frequency converter continuous current limit configuration parameters**

The voltage at the motor terminals depends on the input voltage from the frequency converter, the loss of voltage at the filter and in the motor supply cable and may not fall below the rated value by more than 10 % according to IEC 60034 - 1 Range „B“, even with minimum input voltage from the frequency converter. In the event of reduced voltage at the motor terminals, the permissible motor torque must be reduced proportionally to the change in voltage. This must be taken into account when sizing the motor, and the parameterisation of the converter and for the converter minimum input voltage.

The maximum permissible frequency converter input voltage is 500 V +10 %, 50/60 Hz.

Max. permissible ambient temperature range -20 °C to +50 °C

Changes to the rated values (torque, speed adjusting range) within the permissible operating range are permissible and are determined by the manufacturer. Permissible continuous current limit, torque and speed adjusting range are specified on the nameplate.

**Converter Settings:**

Minimum clock frequency:	3 kHz
Short-term current limit:	160 % * $I_n$
Maximum overload time:	60 s
Minimum frequency:	5 Hz
Maximum frequency:	60 Hz
Permissible operating time below $f_{min}$ :	60 s

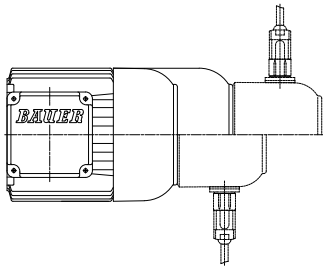
All other settings must be selected according the requirements of the drive.

The maximum overload time and the permissible operating time below  $f_{min}$  are based on an interval of 10 minutes.

# Energy Efficient Geared Motors

## AC Variable Speed

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# 15

## Motor Mounted Components

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# Energy Efficient Geared Motors

## AC Variable Speed

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**Functional description**

The compression springs act on the anchor disc, which is free to move in the axial direction and presses the brake disc, which is keyed to the rotor shaft, against the friction plate or the motor bearing plate. This produces the braking torque.

When a DC voltage is applied to the coil in the electromagnet housing, it generates a magnetic force that opposes the spring force and causes the anchor disc to be pulled toward the electromagnet enclosure.

This releases the brake disc and disengages the brake.

Brakes are classified into two types according to how they are used: holding brakes and working brakes.

**Holding brake ES.. / ZS..**

brake that in normal operation does not convert kinetic energy into frictional energy but is only used to hold a mechanism in a particular position, but which can also be used for motion braking in an emergency.

**Service brake ESX.. / ZSX..**

A brake that converts kinetic energy into frictional energy in normal operation, which means that it brakes mechanical motion.

When a working brake is used as a holding brake, the braking torque tolerance of up to -30 % (in new condition) must be taken into account.

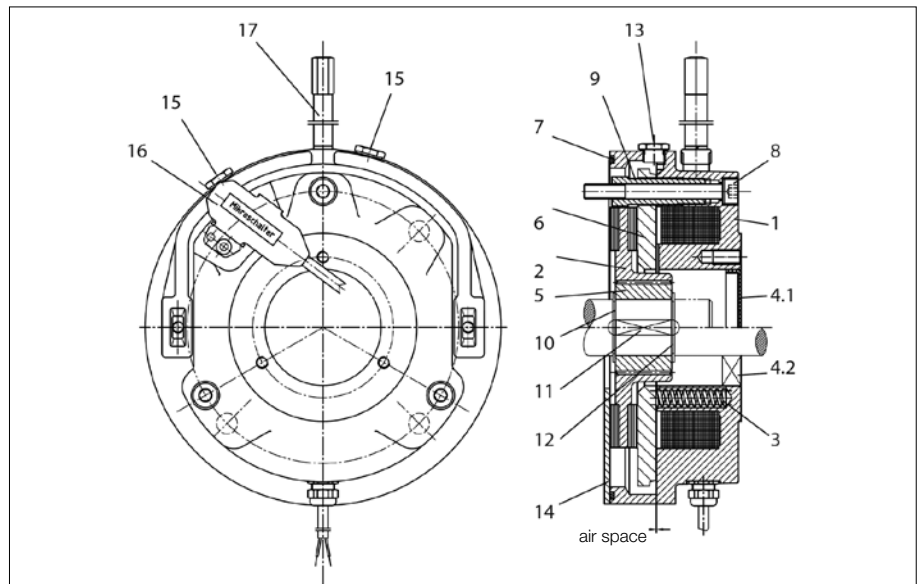
**Product description of type ES(X) spring-actuated brakes**

Figure 1: Construction of ES(X) brake

**Construction of ES(X) brake**

1	Electromagnet housing	9	Hollow screw
2	Brake disc	10	Retaining ring
3	Compression spring	11	Key
4.1	Cover plate with closed brake	12	Retaining ring
4.2	Shaft seal with through shaft	13	Screw plug for checking air gap
5	Drive bush	14	Friction plate (only with motor size Dxx08 or Dxx09)
6	Anchor disc	15	Screw plug for checking microswitch setting
7	O-ring	16	Microswitch (optional)
8	Fitting screw with copper washer	17	Manual release (optional)

**Brake mounting**

ES and ESX: Brake mounting is under the fan cover

EH and EHX: Brake mounting is on the fan cover

**Options**

- Manual release, non-locking or locking
- Microswitch for monitoring operation or wear



# Motor Mounted Components

## Brake

### Product description of type ZS(X) spring-actuated brakes

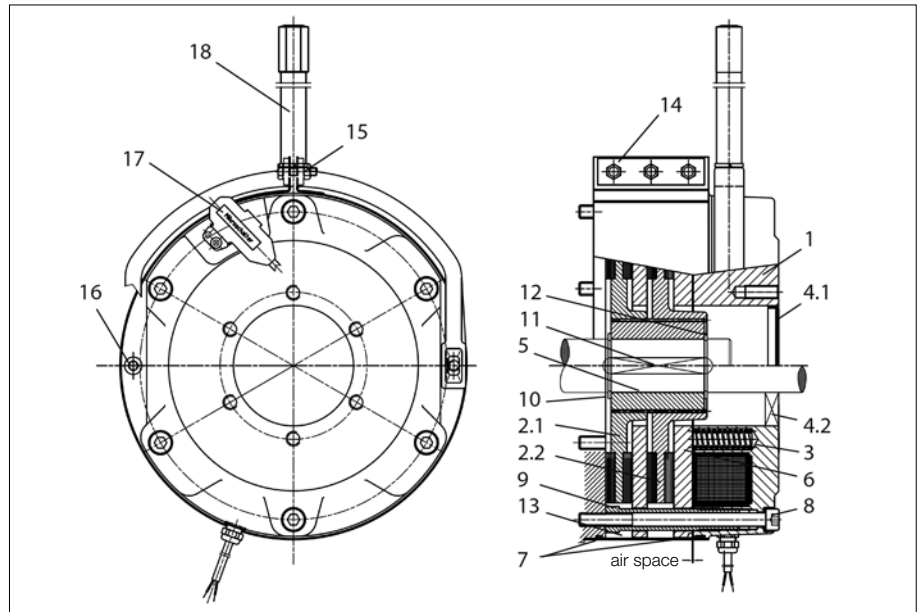


Figure 2: Construction of ZS(X) brake

### Construction of ZS(X) brake

1	Electromagnet housing	9	Hollow screw
2.1	Brake disc	10	Retaining ring
2.2	Brake disc	11	Key
3	Compression spring	12	Retaining ring
4.1	Cover plate	13	Cover
4.2	Shaft seal with through shaft	14	Fitting screws
5	Drive bush	15	Bracket
6	Anchor disc	16	Assembly screw/assembly aid
7	O-ring	17	Microswitch (optional)
8	Fitting screw with copper washer	18	Manual release (optional)

### Options

- Manual release, non-locking or locking
- Microswitch for monitoring operation or wear

**Brake selection and sizing**

If the working brake is undersized, it will have increased wear and a shorter lifetime. If it is oversized, the resulting mechanical forces may overload the drive.

If specific application data is not available, in the case of horizontally driven equipment we recommend selecting a braking torque with a safety factor (K) of 1 to 1.5 times the rated torque of the motor.

For braking to standstill, the selected braking torque should be at least 80 % of the rated torque of the drive.

Rated torque:

$$M_{\text{Berf}} = \frac{P \times 9550}{n_2} \times K$$

$M_{\text{Berf}}$	Braking torque	[Nm]
P	Motor power	[kW]
n	Rated speed at rotor shaft	[rpm]

For lifting operation, a braking torque equal to twice the rated motor torque should always be chosen for safety reasons.

If the moment of inertia, speed and allowable deceleration time of the machine are known, the braking torque can be calculated as described below.

**External moments of inertia**

If the masses to be decelerated by the brake do not run at the same speed as the rotor shaft, the moment of inertia ( $J_{\text{ext}}$ ) must be reduced to the value at the rotor shaft

$$J_{\text{ext}'} = \frac{J_{\text{ext}1} \times n_1^2 + J_{\text{ext}2} \times n_2^2 + \dots + J_{\text{ext}n} \times n_n^2}{i^2}$$

or the external moment of inertia reduced by the gear ratio of the gear unit to the value at the rotor shaft.

$$J_{\text{ext}'} = \frac{J_{\text{ext}}}{i^2}$$

$J_{\text{ext}}$	Total external moment of inertia [kgm <sup>2</sup> ]
$J_{\text{ext}'}$	Total external moment of inertia referenced to the rotor shaft [kgm <sup>2</sup> ]
$J_{\text{ext}1,2,\dots}$	Individual external moments of inertia [kgm <sup>2</sup> ]
i	Gear reduction ratio
n	Rotor shaft speed
$n_{1,2,\dots}$	Speeds of the individual moments of inertia [rpm]
	Load torque under static load

$$M_L = F \times r$$

$M_L$	Load torque [Nm]
F	Force [N]
r	radius [m]

# Motor Mounted Components

## Brake

### Braking torque with dynamic load

A purely dynamic load is present when flywheels, rolls, etc. must be decelerated and the static load torque is negligible.

$$M_a = \frac{J_{ges} \times n_a}{9,55 \times (t_a - t_A)} = \frac{(J_{ext} + J_{rot} + J_{Br}) \times n_a}{9,55 \times (t_a - t_A)}$$

$J_{br}$	Moment of inertia of the brake [kgm <sup>2</sup> ]
$J_{rot}$	Moment of inertia of the rotor shaft and rotor [kgm <sup>2</sup> ]
$M_a$	Deceleration torque [Nm]
$n_a$	Initial speed at start of deceleration [rpm]
$t_a$	Total deceleration time (from switch-off until drive is stationary) [s]
$t_A$	The response time of the brake for braking corresponds to $t_{AC}$ or $t_{DC}$ in the specification tables [s]

### Dynamic and static loads

In most application situations, both static and dynamic loads are present.

$$M_{Berf} = (M_a \pm M_L) \times K \quad \text{where} \quad M_{Berf} \leq M_{Br} \quad \text{must hold true.}$$

$M_L$  braking (positive) or driving (negative) load torque [Nm]

### Heat generated by each brake cycle

Friction converts the kinetic energy of the moving masses into heat.

This amounts to

$$W = \frac{J_{ges} \times n^2}{182,5} = \frac{(J_{ext} + J_{rot} + J_{Br}) \times n_a^2}{182,5} \quad \text{where} \quad W \leq W_{max} \quad \text{must hold true.}$$

$W$	Braking energy for each brake cycle [J]
$M_{max}$	Maximum permissible frictional energy per brake cycle (see brake tables)

**Thermally allowable braking energy of working brakes**

With a uniform sequence of brake cycles, which means a certain average number of brake cycles per hour, the temperature rises until an equilibrium between heat input and heat dissipation is reached. The temperature rise must be sized to avoid overheating the coil and the friction layer, taking the ambient temperature into account.

**Braking to standstill:**

$$W_z = W \times Z \leq W_{th}$$

$W_{th}$  Maximum allowable braking energy per hour

$W_z$  Braking energy with Z brake cycles

Z Number of brake cycles per hour

**Lifting operation**

In lowering operation, the drive motor acts as a generator and its braking effect results in a steady downward motion (constant speed). If we ignore transmission losses, under full load the drive must brake the load with the rated motor torque. If a mechanical brake with a braking torque equal to the braking torque of the motor is applied after the drive is switched off, the downward motion will continue at the same speed. This means that additional braking torque is necessary to stop the motion of the load. For example, if the brake is dimensioned for 200 % braking torque, approximately 100 % is used for "static" deceleration and the rest is used for "dynamic" deceleration.

If part of the braking torque is required for braking the load during lowering (downward motion), the brake engagement time is greater, and the thermal load is therefore greater.

In this case

$$W_H = \frac{M_{Br}}{M_{Br} - M_L} \times W_z$$

$W_H$  Friction energy per hour in lifting operation

$M_{Br}$  Braking torque of the brake

**Brake lifetime**

The energy absorbed during braking causes the brake disc to wear, which increases the air gap. If the air gap increases beyond a certain maximum gap size, the magnetic field is so weak that the pulling force of the electromagnet is no longer sufficient to release the brake. A proper air gap must be restored by adjusting the air gap or by replacing the brake disc, depending on the type of brake construction.

The maximum number of brake cycles until service is necessary can be calculated as follows:

$$Z_L = \frac{W_L}{W}$$

$Z_L$  Number of brake cycles until the air gap limit is reached

$W_L$  Maximum allowable braking energy until maintenance; i.e. replacing the brake disc or adjusting the air gap. Adjustment of the air gap is possible only with type ZXsxx brakes.

**Deceleration time**

The pure braking time from the start of mechanical braking to standstill depends on the braking deceleration.

Especially with lifting operation, but also in other types of operation, it is necessary to check whether the load torque reinforces the braking effect or counters the braking effect.

The deceleration time is therefore calculated as follows:

$$t_a = \frac{J_{ges} \times n_a}{9,55 \times (M_{Br} \pm M_L)}$$

# Motor Mounted Components

## Brake

### Electrical connection

### General

There are two basic options for providing the supply voltage for the DC electromagnet:

1. Externally from an existing DC control voltage mains or a rectifier in the cabinet.
2. From a rectifier built into the motor or brake terminal box. In this case, the rectifier can be powered either directly from the motor terminal board or from the mains.

Note that in the following cases the rectifier is not allowed to be connected to the terminal board of the motor:

- Pole-changing motors and motors with wide operating voltage range
- Operation from a frequency converter
- Other configurations in which the motor voltage is not constant, such as operation with soft-start devices, start-up transformers, etc.

### Release

When the rated voltage is applied to the electromagnet coil, the current through the coils increases exponentially and with it the generated magnetic field. The current must rise to a certain value ( $I_{\text{release}}$ ) before it overcomes the spring force and starts to release the brake.

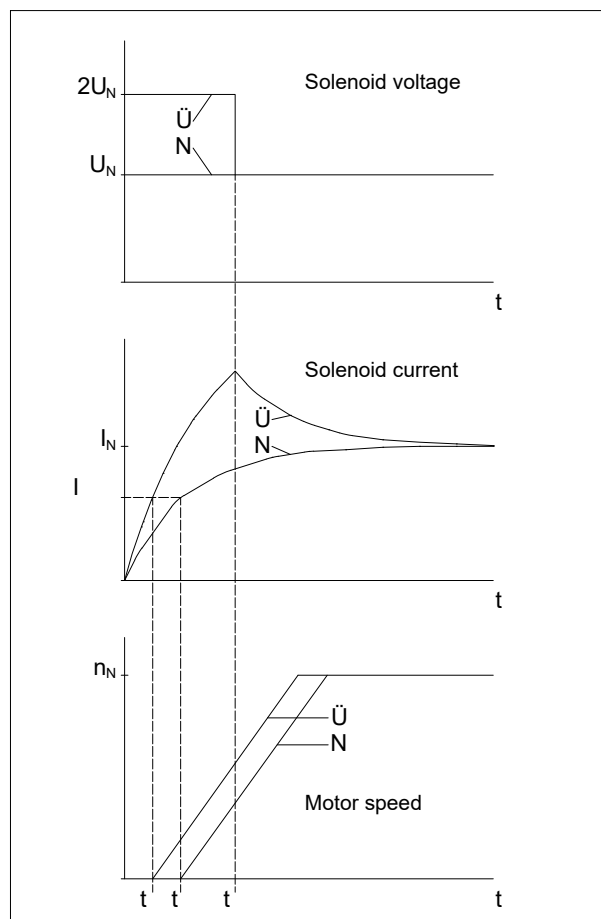


Figure 3: Idealised curves of coil voltage, coil current and motor speed with normal excitation (N) and overexcitation (Ü).

$t'_{Ü}$ : overexcitation time;  $t'_{AN}$ ,  $t'_{AÜ}$ : Response time with normal excitation and overexcitation.

Two different situations can arise during the response time  $t_A$ , assuming that the voltage is applied to the motor and the brake simultaneously:

- The motor is locked if  $M_A < M_L + M_{Br}$   
The motor draws its locked-rotor current, which increases the thermal load on the motor. This situation is illustrated in Figure 3.
- The brake slips if  $M_A > M_L + M_{Br}$   
In this case, the brake is also thermally stressed during start-up and wears faster.

■  
 $M_A$ : locked rotor torque of the motor;  $M_L$ : load torque;  $M_{Br}$ : braking torque

As can be seen, there is an additional load on the motor and brake in both cases. The effect of the response time increases with increasing brake size. Consequently, it is advisable to reduce the response time, especially with medium-sized and large brakes and with a high cycle rate. This can be achieved relatively easily by means of electrical overexcitation. With this approach, the coil is briefly operated at twice its rated voltage after switch-on.

This causes the current to rise faster than with normal excitation, and it reduces the response time by approximately 50 %. This overexcitation function is built into the type MSG special rectifier.

The release current increases with increasing air gap, and with it the response time. When the release current exceeds the rated coil current, the brake will not be released with normal excitation and the brake has reached its wear limit.

### Braking

The brake does not start generating braking torque immediately after the coil voltage is switched off. First the magnetic energy must decline to the point that the spring force can overcome the magnetic force. This occurs at the holding current  $I_{hold}$ , which is lower than the release current.

The response time depends on how the voltage is switched off.

Switching off the AC supply voltage to a type SG standard rectifier

- a) Rectifier powered from the motor terminal board (Figure 4, curve 1)  
Response time  $t_{A1}$ : very long

Cause: Due to the residual magnetism of the motor, after the motor voltage is switched off a slowly decaying voltage is induced, and it continues to supply power to the rectifier and thereby to the brake. In addition, the magnetic energy of the brake coil is dissipated relatively slowly in the freewheel circuit of the rectifier.

- b) Rectifier powered separately (Figure 4, curve 2)  
Response time  $t_{A2}$ : long

Cause: After the rectifier voltage is switched off, the magnetic energy of the brake coil is dissipated relatively slowly in the freewheel circuit of the rectifier.

If the supply voltage is interrupted on the AC side, no significant switch-off voltage occurs on the electromagnet coil.

# Motor Mounted Components

## Brake

Interrupting the DC circuit of the electromagnet coil (Figure 4, curve 3)

a) By a mechanical switch

- with separate power supply from a DC control voltage mains or
- at the DC switch contacts (A2 and A3) of the type SG standard rectifier

Response time  $t_{A3}$ : very short

Cause: The magnetic energy of the brake coil is dissipated very quickly by arcing across the switch contacts.

b) Electronic

Using a type ESG or MSG special rectifier

Response time  $t_{A3}$ : short

Cause: The magnetic energy of the brake coil is dissipated quickly by a varistor integrated in the rectifier.

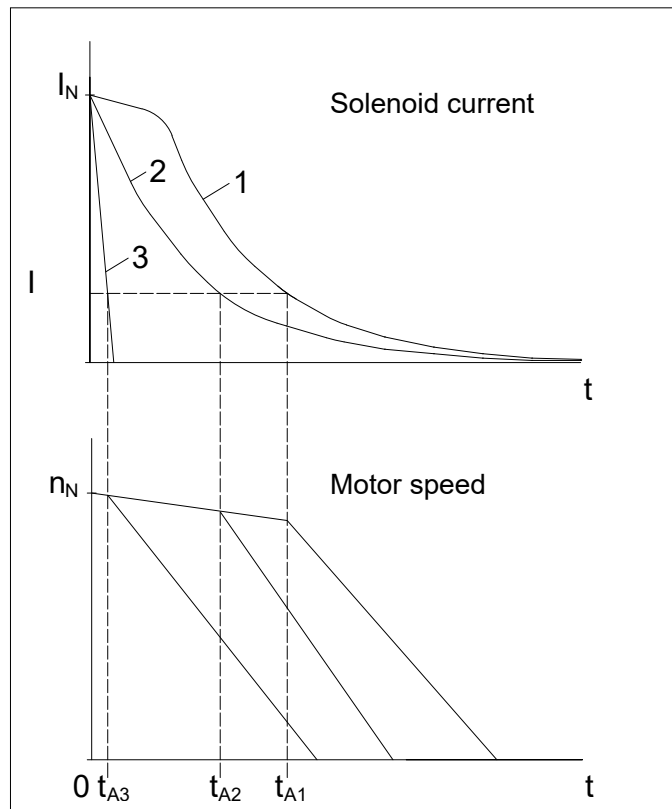


Figure 4: Idealised coil current and motor speed curves after switching off power on the AC side (1 and 2) or DC side (3)

If the circuit is interrupted on the DC side, a high voltage  $u_q$  is induced by the electromagnet coil. The magnitude of this voltage depends on the inductance  $L$  of the coil and the switch-off speed  $di/dt$  according to the formula

$$u_q = L \cdot \frac{di}{dt}$$

Due to the winding design, the inductance  $L$  increases with increasing rated coil voltage.

Consequently, the voltage spikes induced at switch-off can reach hazardous levels with relatively high coil voltages. For this reason, a varistor is included in the circuit for all brakes with voltages greater than 24 V.

This varistor is solely intended to protect the electromagnet coil; it is not intended to protect adjacent electronic components or devices against electromagnetic interference. On request, brakes with rated voltages of 24 V or less can also be fitted with a varistor.

If the circuit is interrupted on the DC side by a mechanical switch, the resulting arcing over the switch contacts causes strong erosion of the contacts. For this reason, only special DC contactors or adapted AC contactors with contacts rated for use class AC3 as specified in EN 60947-4-1 may be used.



# Motor Mounted Components

## Brake

### Specifications of holding brakes with emergency stop capability

The maximum allowable friction energy values stated here do not apply to brake motors for use in areas with potentially explosive atmospheres. Refer to separate data in appropriate documents for explosion-proof drives.

Type	M <sub>Br</sub> [Nm]	W <sub>max</sub> [10 <sup>3</sup> J]	W <sub>th</sub> [10 <sup>3</sup> J]	W <sub>L</sub> [10 <sup>6</sup> J]	t <sub>A</sub> [ms]	t <sub>AC</sub> [ms]	t <sub>DC</sub> [ms]	P <sub>el</sub> [W]	J [10 <sup>-3</sup> kgm <sup>2</sup> ]
E003B9	3	1.5	-	-	35	150	15	20	0.01
E003B7	2.2	1.8	-	-	28	210	20		
E003B4	1.5	2.1	-	-	21	275	30		
E004B9	5	2.5	-	-	37	125	15	30	0.017
E004B8	4	3	-	-	30	160	18		
E004B6	2.8	3.6	-	-	23	230	26		
E004B4	2	4.1	-	-	18	290	37		
E004B2	1.4	4.8	-	-	15	340	47		
ES/EH010AX	15*	3	-	-	110	-	30	35	0.045
ES/EH010A9	10	3	-	-	60	100	15		
ES/EH010A8	8	3	-	-	55	150	20		
ES/EH010A5	5	3	-	-	45	220	20		
ES/EH010A4	4	3	-	-	30	250	20		
ES/EH010A2	2.5	3	-	-	25	350	25		
ES027AX	32*	2.5	-	-	80	-	30	50	0.172
ES/EH027A9	27	2.5	-	-	120	100	15		
ES/EH027A7	20	2.5	-	-	100	130	20		
ES/EH027A6	16	2.5	-	-	80	170	25		
ES/EH040A9	40	3.5	-	-	100	100	20	65	0.45
ES/EH040A8	34	3.5	-	-	80	200	25		
ES/EH040A7	27	3.5	-	-	70	250	30		
ES/EH070AX	90*	3.5	-	-	120	-	40	85	0.86
ES/EH070A9	70	3.5	-	-	120	150	18		
ES/EH070A8	63	3.5	-	-	120	200	20		
ES/EH070A7	50	3.5	-	-	90	220	25		
ES/EH125A9	125	4.5	-	-	170	220	25	105	1.22
ES/EH125A8	105	4.5	-	-	150	320	28		
ES/EH125A7	85	4.5	-	-	135	350	30		
ES/EH125A6	70	4.5	-	-	120	440	35		
ES125A5	57	4.5	-	-	100	600	40		
ES125A3	42	4.5	-	-	90	700	45		
ES/EH200A9**	200	8	-	-	400	150	22	105	2.85
ES/EH200A8**	150	8	-	-	280	250	35		
ES/EH200A7**	140	8	-	-	200	320	35		
ES250A9**	250	9	-	-	300	500	45	135	6.65
ES250A8**	200	9	-	-	200	960	60		
ES250A6**	150	9	-	-	160	1100	60		
ES250A5**	125	9	-	-	150	1500	90		
ES250A4**	105	9	-	-	130	1800	110		
ZS300A9**	300	8	-	-	280	220	35	75	5.7
ZS300A8**	250	8	-	-	210	380	45		
EH400A9**	400	10	-	-	300	600	60	180	19.5
EH400A7**	300	10	-	-	200	850	75		
EH400A5**	200	10	-	-	150	1400	85		
ZS500A9**	500	9	-	-	320	320	50	100	13.3
ZS500A8**	400	9	-	-	260	600	60		

\* Requires overexcitation; permissible only with MSG rectifier

\*\* Cannot be combined with PMSM motors of the S series

Braking torque tolerance: -10 / +30 %

W<sub>th</sub> and W<sub>L</sub> are not specified because little or no braking energy is dissipated by holding brakes when they are used as intended.

For versions with braking torque marked with \*, which may only be used with an MSG rectifier, the values of t<sub>A</sub> and t<sub>DC</sub> apply to operation with an MSG rectifier; i.e. t<sub>A</sub> for overexcitation or t<sub>DC</sub> for electronic circuit interruption on the DC side.

Due to the effects of operating temperature and manufacturing tolerances, actual response times may differ from the guideline values listed here.

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# Motor Mounted Components

## Brake

### Specifications of working brakes

The maximum braking energy values stated here do not apply to brake motors for use in areas with potentially explosive atmospheres.

Refer to separate data in appropriate documents for explosion-proof drives.

Type	M <sub>Br</sub> [Nm]	W <sub>max</sub> [10 <sup>3</sup> J]	W <sub>th</sub> [10 <sup>3</sup> J]	W <sub>L</sub> [10 <sup>6</sup> J]		t <sub>A</sub> [ms]	t <sub>AC</sub> [ms]	t <sub>DC</sub> [ms]	P <sub>el</sub> [W]	J [10 <sup>-3</sup> kgm <sup>2</sup> ]
				without HL***	with HL***					
E003B9	3	1.5	36	55	55	35	150	15	20	0.01
E003B7	2.2	1.8	36	90	90	28	210	20		
E003B4	1.5	2.1	36	140	140	21	275	30		
E004B9	5	2.5	60	50	50	37	125	15	30	0.017
E004B8	4	3	60	100	100	30	160	18		
E004B6	2.8	3.6	60	180	180	23	230	26		
E004B4	2	4.1	60	235	235	18	290	37		
E004B2	1.4	4.8	60	310	310	15	340	47		
ESX/EHX010AX	15*	3	250	120	120	110	-	30	35	0.045
ESX/EHX010A9	10	3	250	120	120	60	100	15		
ESX/EHX010A8	8	3	250	150	150	55	150	20		
ESX/EHX010A5	5	3	250	240	240	45	220	20		
ESX/EHX010A4	4	3	250	300	240	30	250	20		
ESX/EHX010A2	2.5	3	250	390	240	25	350	25		
ESX027AX	27*	10	350	150	150	80	-	30	50	0.172
ESX/EHX027A9	22	10	350	150	150	120	100	15		
ESX/EHX027A7	16	10	350	300	300	100	130	20		
ESX/EHX027A6	13	10	350	350	350	80	170	25		
ESX/EHX040A9	32	20	450	420	420	100	100	20	65	0.45
ESX/EHX040A8	27	20	450	560	490	80	200	25		
ESX/EHX040A7	22	20	450	700	490	70	250	30		
ESX/EHX070AX	72*	28	550	700	700	120	-	40	85	0.86
ESX/EHX070A9	58	28	550	500	500	120	150	18		
ESX/EHX070A8	50	28	550	800	700	120	200	20		
ESX/EHX070A7	40	28	550	1200	700	90	220	25		
ESX/EHX125AX	100*	40	700	1900	1900	100	-	70	105	1.22
ESX/EHX125A9	85	40	700	1700	1700	150	320	28		
ESX/EHX125A8	70	40	700	1900	1700	135	350	30		
ESX/EHX125A7	58	40	700	2700	1700	120	440	35		
ESX125A5	45	40	700	3300	1700	100	600	40		
ESX125A3	34	40	700	3300	1700	90	700	45		
ESX/EHX200AX**	160*	60	850	2000	2000	105	-	70	105	2.85
ESX/EHX200A9**	120	60	850	1700	1700	280	250	35		
ESX/EHX200A8**	110	60	850	2600	2600	200	320	35		
ESX250A9**	200	84	1000	2800	2800	300	500	45		
ESX250A8**	160	84	1000	6800	5700	200	960	60	135	6.65
ESX250A6**	120	84	1000	8500	5700	160	1100	60		
ESX250A5**	100	84	1000	11000	5700	150	1500	90		
ESX250A4**	85	84	1000	11000	5700	130	1800	110		
ZSX300A9**	250	60	850	1300	1300	280	220	35	75	5.7
ZSX300A8**	200	60	850	2000	2000	210	380	45		
EHX400A9**	320	120	1100	3000	3000	300	600	60	180	19.5
EHX400A7**	240	120	1100	4800	4800	200	850	75		
EHX400A5**	160	120	1100	6000	4800	150	1400	85		
ZSX500A9**	400	84	1000	2800	2800	320	320	50	100	13.3
ZSX500A8**	320	84	1000	4000	4000	260	600	60		

\* Requires overexcitation; permissible only with MSG rectifier

\*\* Cannot be combined with PMSM motors of the S series

\*\*\* HL = manual release

Braking torque tolerance:

E003 / E004: -10 / +30 %

ESXxx / ZSXxx: -20 / +30 % after run-in; up to -30 % in new condition.

For versions with braking torque marked with \*, which may only be used with an MSG rectifier, the values of t<sub>A</sub> and t<sub>DC</sub> apply for operation with an MSG rectifier; i.e. t<sub>A</sub> for overexcitation or t<sub>DC</sub> for electronic circuit interruption on the DC side.

The values for W<sub>L</sub> are guidelines; actual values may vary significantly depending on the application situation. Periodic inspection of the air gap or brake disc thickness is recommended.

Actual response times may differ from the times listed here due to the effects of operating temperature, brake disc wear and manufacturing tolerances.

### Key to symbols

$M_{Br}$	Rated braking torque
$W_{max}$	Maximum allowable friction energy for an emergency stop with a holding brake
$W_{max}$	Maximum allowable friction energy for each brake cycle with working brakes
$W_{th}$	Maximum allowable braking energy per hour
$W_L$	Maximum allowable braking energy until maintenance; i.e. brake disc replacement or air gap adjustment. Air gap adjustment is possible only with type ZSxxx brakes.
HL	Manual release
$t_A$	Response time for release with normal excitation. Overexcitation with a type MSG special rectifier reduces the response time by approximately 50 %.
$t_{AC}$	Response time for brakes with AC-side switch-off, i.e. by switching off the supply voltage to a separately powered standard rectifier. If the supply voltage for the rectifier is taken from the motor terminals, considerably longer response times should be expected (depending on the motor size and winding design).
$t_{DC}$	Response time for braking with DC-side circuit interruption by a mechanical switch. In the case of electronic circuit interruption on the DC side by a type ESG or MSG special rectifier, the response times will be approximately two to three times as long.
$P_{el}$	Electromagnet coil power consumption at 20 °C. Depending on the rated voltage of the coil, the actual power may differ from the guideline value stated here.
J	Moment of inertia of the drive bush and brake disc(s)

# Motor Mounted Components

## Brake

### Connection

The electrical connections to the brake are made in the motor terminal box using terminals or the rectifier. Standard voltages:

380–420 V 50/60 Hz (brake coil voltage 180 V DC)

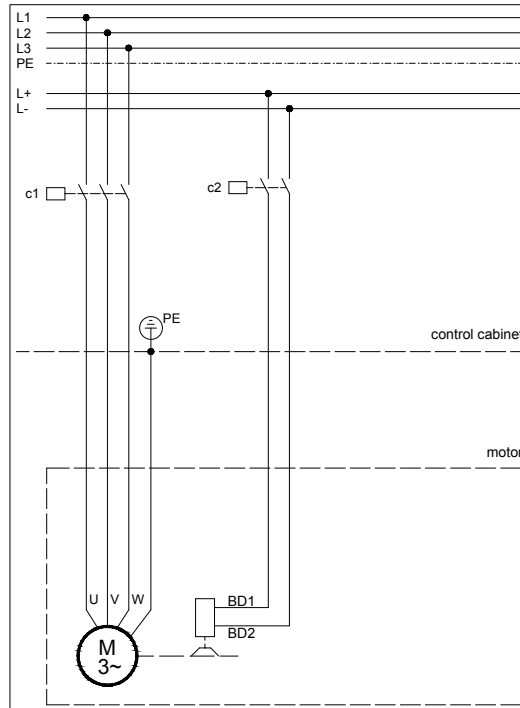
220–230 V 50/60 Hz (brake coil voltage 105 V DC)

24 V DC (brake coil voltage 24 V DC)

Other voltages are available at additional cost.

### DC connection via terminals (K)

The brake must be connected via separate terminals in the motor or brake terminal box directly to the DC voltage. The standard voltages are 180 V DC, 105 V DC and 24 V DC. Brakes with other operating voltages are available at additional cost.



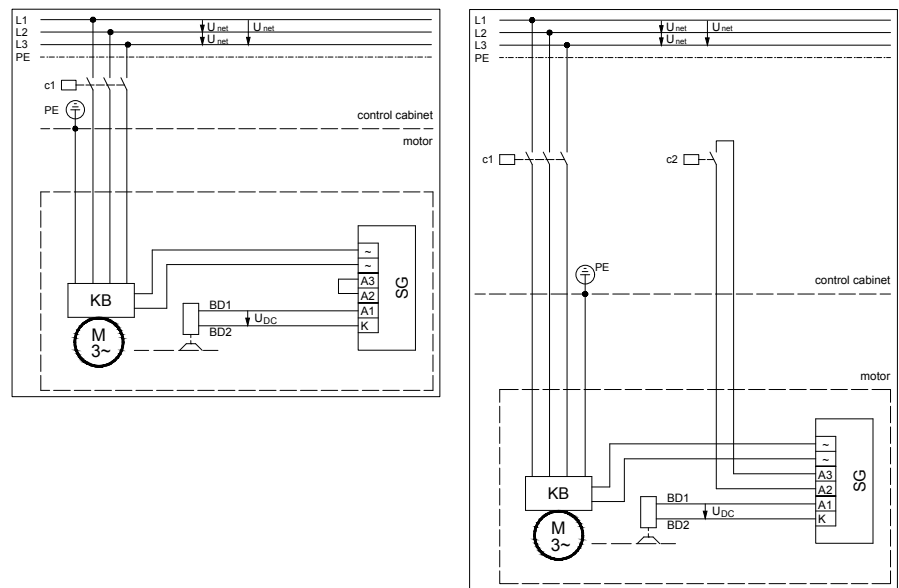
# Motor Mounted Components

## Brake

### Standard rectifier (S)

Working principle	Half-wave rectifier with switch contacts for DC-side circuit interruption
Input voltage $U_1$	max. 575 VAC +5 %
Output voltage	$0.45 \times U_1$ VDC
Max. output current	2.5 A DC
Ambient temperature	-40 to +40 °C
Connection	Caged Clamp terminals with clamp lever
Clampable conductor cross-section	max. 1.5 mm <sup>2</sup> without wire end sleeve max. 1.5 mm <sup>2</sup> with wire end sleeve
Approvals	c-CSA-us c-UL-us (only in combination with B2000 geared motors and brakes in the ES(X) or ZS(X) product series)

The brake must be connected to the AC supply via the standard rectifier in the motor terminal box or brake terminal box. The standard voltages are 380 ... 420 V 50/60 Hz or 220 ... 230 V 50/60 Hz. Other voltages up to 575 V are available at extra cost. In a configuration with standard rectifier, the brake circuit can be interrupted by an extra contact on the d.c. side in order to reduce the response time. This significantly reduces the braking time and overtravel distance.



Voltage connection for the rectifier from the motor terminal block or cage clamp (see Rectifier Connection on Motor Terminal Block or Cage Clamp)

# Motor Mounted Components

## Brake

### Rectifier for electronic rapid shutdown (E)

Working principle

Half-wave rectifier with electronic

DC-side circuit interruption

Input voltage  $U_1$

220–460 V AC  $\pm 5\%$ , 50/60 Hz

Output voltage

$0.45 \times U_1$  V DC

Max. output current

1 A DC

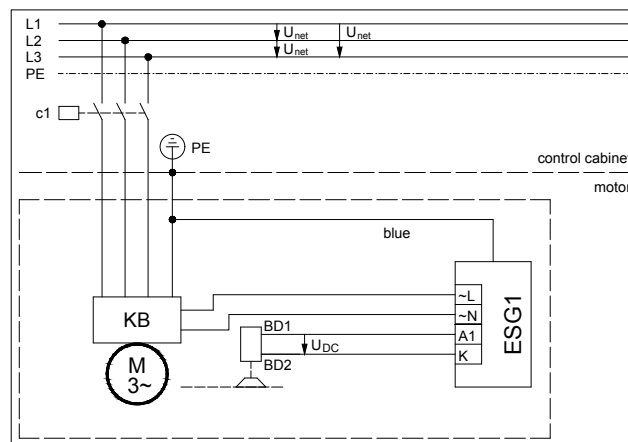
Ambient temperature

-20 °C to +40 °C

Clampable conductor cross-section

max. 1.5 mm<sup>2</sup>

This rectifier permits electronic DC-side interruption of the brake circuit. No additional cable to the rectifier is necessary. The rectifier is supplied complete with a protective resistor which prevents a mains short-circuit via the shutdown arc of the high-speed motor contactor. Brake response times are significantly shorter than those achievable by AC-side interruption of the brake circuit. They are, however, longer than those achievable with DC-side interruption by a mechanical switch. The brake must be connected to the alternating current via the rapid shutdown rectifier in the motor terminal box or the brake terminal box. The standard voltages are 380 ... 420 V 50/60 Hz or 220 ... 230 V 50/60 Hz. Other voltages up to 460 V are available at extra cost.

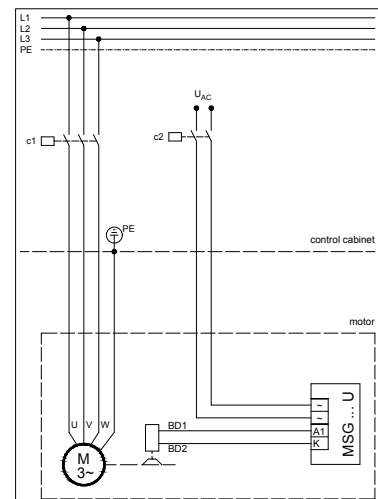
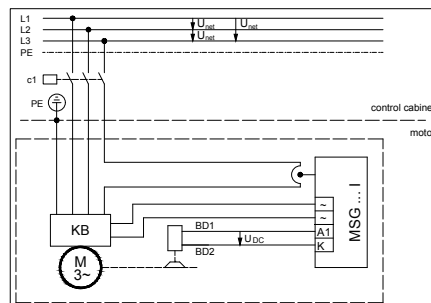


Voltage connection for the rectifier from the motor terminal block or cage clamp (see Rectifier Connection on Motor Terminal Block or Cage Clamp)

**Rectifier for overexcitation and rapid shutdown (M)**

Working principle	MSG 1.5.480I Half-wave rectifier with time-limited overexcitation and electronic DC-side circuit interruption Fast shutdown due to no motor current in one phase
Input voltage $U_1$	220–480 V AC +6 / -10 %, 50/60 Hz
Output voltage	0.9 x $U_1$ V DC during overexcitation 0.45 x $U_1$ V DC over overexcitation period
Overexcitation time	0.3 s
Max. output current	1.5 A DC
Ambient temperature	-20 °C to +40 °C
Clampable	
conductor cross-section	max. 1.5 mm <sup>2</sup>
Working principle	MSG 1.5.500U Half-wave rectifier with time-limited overexcitation and electronic DC-side circuit interruption Fast shutdown due to the absence of input voltage
Input voltage $U_1$	220–500 V AC ±10 %, 50/60 Hz
Output voltage	0.9 x $U_1$ V DC during overexcitation 0.45 x $U_1$ V DC over overexcitation period
Overexcitation time	0.3 s
Max. output current	1.5 A DC
Ambient temperature	-20 °C to +40 °C
Clampable	
conductor cross-section	max. 1.5 mm <sup>2</sup>

In cases where there are high motor switching frequencies, the brake can be de-energised more rapidly with this rectifier thereby significantly reducing the thermal stress on the motor. In addition, interrupting the brake's DC circuit by electronic means significantly reduces response times. Depending on the circumstances in which they are to be used, either the MSG 1.5.500 U (rapid shutdown brought about by removed supply voltage) or MSG 1.5.480 I (rapid shutdown brought about by removed motor current in a phase) is used. Power supply 220 to 480 V AC.





# Motor Mounted Components

## Brake

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### **Brake connection, operation with frequency converter**

The voltage present at the motor terminal block when operating with a frequency converter is frequency-dependent. Brakes require a constant voltage, so they need a separate electrical connection. This is the reason why the brake is not connected to the motor terminals externally.

### **Manual release (HA, HN)**

All brakes are available with mechanical manual release on request. Non-latching manual release is the standard version (HN). A latching manual release (HA) can be supplied if required for all brake sizes.

## Brake

**Second motor shaft extension (ZW, ZV)** The motors are also available on request with a second motor shaft extension in design ZW (shaft with key) or ZV (shaft with square end).

Half the central motor's rated power is available at each of the two shafts. Permissible radial loads available on request. Guards are not included in the scope of supply (for dimensional drawing see chapter 17).

Motors with brakes are available on request with a second shaft stub extended through the brake.

**Protective fan cowl (D)** A protective hood over the fan cowl is recommended for outdoor installations where the motor is pointing upward and subject to severe or prolonged exposure to water (dimensional drawing, see chapter 17).

A special fan cowl for the textiles industry is available on request at extra cost. This design prevents airborne fibres and fluff clogging the fan cowl.

**Motor-independent fan (FV)** For special applications, standard motors and brake motors of size S08 and larger are available with externally mounted motor-independent fans. The standard line voltage of the motor-independent fan matches the voltage of the geared motor (dimensional drawing for motor-independent fan, see chapter 17).

**Technical Data:**

Multivolt Conception Running capacitor for single phase duty enclosed as standard.

**Technical Data Motor-independent fan**

Mode	Frame size	Blower Diameter [mm]	Range of voltage		max. permissible current		max. power input	
			[V]		[A]		[W]	
			50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
1 ~ (Δ)	63	118	230-277	230-277	0,18	0,21	46	54
	71	132	230-277	230-277	0,18	0,21	48	56
	80	150	230-277	230-277	0,19	0,22	48	59
	90	169	220-277	220-277	0,29	0,23	59	61
	100	187	220-277	220-277	0,29	0,28	62	73
	112	210	220-277	220-277	0,27	0,36	64	88
	132	250	230-277	230-277	0,52	0,61	125	163
	160-200	300	230-277	230-277	1,05	1,52	246	390
3 ~ Y	63	118	346-525	380-575	0,09	0,08	28	29
	71	132	346-525	380-575	0,09	0,07	29	28
	80	150	346-525	380-575	0,09	0,07	33	36
	90	169	346-525	380-575	0,22	0,18	78	71
	100	187	346-525	380-575	0,21	0,18	80	80
	112	210	346-525	380-575	0,2	0,17	87	93
	132	250	346-525	380-575	0,37	0,32	160	180
	160-200	300	346-525	380-575	0,74	0,62	314	391
3 ~ Δ	63	118	200-303	220-332	0,15	0,14	28	29
	71	132	200-303	220-332	0,15	0,13	29	28
	80	150	200-303	220-332	0,16	0,13	33	36
	90	169	200-303	220-332	0,39	0,32	78	71
	100	187	200-303	220-332	0,37	0,3	80	80
	112	210	200-303	220-332	0,35	0,29	87	93
	132	250	200-303	220-332	0,64	0,55	160	180
	160-200	300	200-303	220-332	1,28	1,08	314	391

# Motor Mounted Components

## Encoder system

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### Shaft encoder (G)

Bauer gear motors can be fitted with either an incremental encoder or an absolute encoder for special applications. Both the standard incremental encoder and the absolute encoder are optimised and suitable for use with all modern inverters.

Bauer standard encoders as from motor frame size D05 (0,18 kW) are protected against mechanical damage by means of a protective cover (Additional Dimension Sheet see chapter 16).

Special features: standard incremental encoder:

- Robust mount
- EMC-tested
- Protected against polarity reversal
- Supply voltage 8-30 V DC
- A-, B- and N-lines and inverted signals or output signals as preferred
- HTL output circuit (TTL on request)
- 1024 pulses per revolution

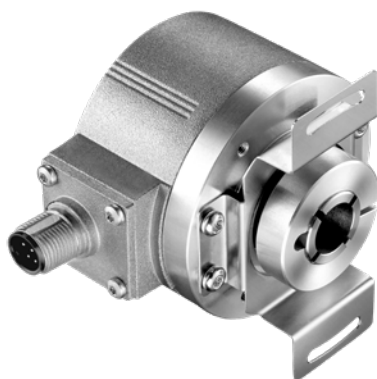
Special features: standard absolute encoder

- Steps per revolution: 8192 (13 Bit)
- Number of turns: 4096 (12 Bit) shaft turns
- Execution of electronic: SSI (Synchronous-Serial Interface)
- Output code: Gray-Code
- Supply voltage: 11-27 V DC
- Loss efficiency (no load):  $\leq 3$  Watt
- Output driver: RS-422 (2-wire)

# Motor Mounted Components

## Incremental rotary encoder

### Functional description



Incremental encoders are used to determine motor shaft positions. An incremental encoder detects rotary motion and converts it into an electrical output signal. An encoder disc with a specific number of periods per rotation senses angular motion. The optoelectronic scanning unit generates signals and issues pulses after the signals have been processed in trigger stages. The resolution is defined by the number of opaque and clear segments on the encoder disc. For example, an encoder with 1024 lines will generate a sequence of 1024 pulses for one full rotation.

The combination of an incremental encoder and a frequency converter allows optimised solutions to be developed, such as

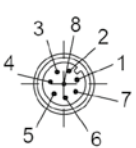
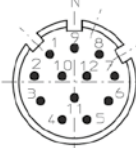
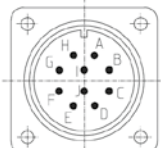
- speed controllers with a wide adjustment range
- accurate speed control
- constant-speed control
- position control

Supply voltage:	8–30 V DC with HTL 5 V DC with differential TTL
Output signals:	HTL A, B and N tracks; optional TTL
Pulses per revolution:	1024 Optional 1...65536
Enclosure rating:	IP65 (optional IP67)
Temperature range:	-40 °C to +100 °C

### Electrical specifications

Output voltage	RS 422 (TTL compatible)	RS 422 (TTL compatible)	Differential	Differential (7272)
Supply voltage	5–30 V DC	5 V ±5%	8–30 V DC	5–30 V DC
No-load current consumption With inversion:	max. 70 mA	max. 70 mA	max. 70 mA	max. 70 mA
Allowable load per channel: Pulse rate:	max. ±20 mA max. 300 kHz	max. ±20 mA max. 300 kHz	max. ±20 mA max. 160 kHz	max. ±20 mA max. 160 kHz
High signal level:	min. 2.5 V	min. 2.5 V	min. UB – 3 V	min. UB – 3 V
Low signal level:	max. 0.5 V	max. 0.5 V	max. 1 V	max. 1 V

### Plug end view with male pin insert

Connector type	8-pin M12 plug	12-pin M23 plug	MIL connector 10-pin
Layout			
Order code:	8.5000.XXX3.XXXX 8.5000.XXX4.XXXX	8.5000.XXX7.XXXX 8.5000.XXX8.XXXX	8.5000XXX.Y.XXXX
Mating 05.CMB-8181-0 connector:		8.0000.5012.0000	8.0000.5062.0000

### Signal assignments

Signal:	0 V GND	+U <sub>B</sub>	0 V Sens	+U <sub>B</sub> Sens	A	A	B	B	Z	Z	Shield
M23 Multifast, 12-pin connector; pin assignments:	10	12	11	2	5	6	8	1	3	4	1)
M12 Eurofast, 8-pin connector; pin assignments:	1	2			3	4	5	6	7	8	1)
Military version; 10-pin connector; pin assignments:	F	D		E	A	G	B	H	C	I	J <sup>1)</sup>
Cable; lead colour:	WH	BN	GY PK	RD BU	GN	YE	GY	PK	BU	RD	Shield

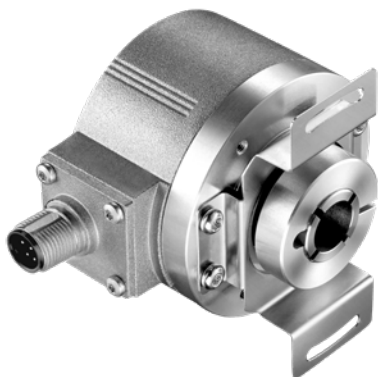
<sup>1</sup> Shield connected to plug housing.

Insulate unused outputs before putting into service.

# Motor Mounted Components

## SinCos feedback

### Functional description



The SinCos feedback system is a combination of incremental sensor and absolute sensor. The absolute value is initially only defined when the device is switched on and transmitted to an external counter, which then continues counting incrementally from this absolute value with the analogue Sinus/Cosinus interface.

Hollow shaft	diameter 10.00 mm
Speed	Max. 6000 RPM
Enclosure rating	IP65
Interface	Sinus
Connection type	Cable
	M23-socket
Resolution	max. 5000 Imp.
Temperature	-20...+80 °C
Supply voltage	5 VDC
	10...30 VDC

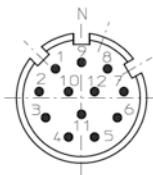
Shock resistance in accordance with EN 60068-2-27 1000 m/s<sup>2</sup>, 6 ms  
 Vibration resistance in accordance with EN 60068-2-6 100 m/s<sup>2</sup>, 10 ... 2000 Hz ^

### Electrical specifications

Output circuit	SinCos, U=1 Vss	SinCos, U=1 Vss
Supply voltage	5 V (± 5 %)	10 ... 30 V DC
Current conversion with inversion (without load)	typ. 65 mA / max. 110 mA	typ. 65 mA / max. 110 mA
-3 dB frequency	≤ 180 kHz	≤ 180 kHz
Signal level channels A/B	1 Vss (±20 %)	1 Vss (±20 %)
Channel 0	0,1 ... 1,2 V	0,1 ... 1,2 V
Short-circuit proof outputs*	yes	yes
Reverse polarity protection of the supply voltage	no	yes
CE-compliant in accordance with EN 61000-6-1, EN 61000-6-4 and EN 61000-6-3		

\* If supply voltage is correctly installed

### Ansichten auf Steckseite, Stiftkontakteinsatz



M23 socket, 12-pin

### Terminal assignment

Signal	0 V	0 V Sensor**	+UB	+UB Sensor**	A	Ā	B	B	0	0	Signal
	A	Ā	B	B	0	0					
M23-socket, Pin 12-pin	10	11	12	2	5	6					PH*
Core colour	WH 0,5 mm <sup>2</sup>	WH	BN 0,5 mm <sup>2</sup>	BN	GN	YE	GY	PK	BU	RD	

\* PH = The shielding touches the plug housing.

\*\* The sensor lines are connected with the power supply internally. Special power supply units correct for the loss of voltage on long lines.

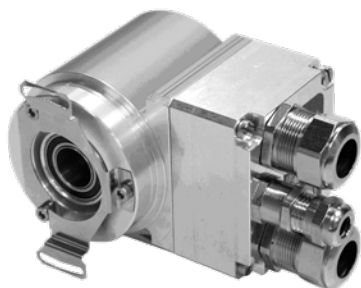
# Motor Mounted Components

## Absolute rotary encoders

### Functional description

Absolute encoders detect both angular and rotational motions and convert them into electrical signals. In contrast to incremental encoders, with absolute encoders the current position is directly available. If an absolute encoder is moved mechanically while it is switched off, after the power is switched on again the current position can be read out immediately and directly. Absolute encoders are available in single-turn and multi-turn versions.

### Profibus DP interface



### Specifications

Supply voltage	11–27 VDC
No-load current consumption	< 350 mA
Total resolution <sup>1</sup>	≤ 33 bits
Number of steps per revolution, standard/extended <sup>1</sup>	≤ 8,192 / ≤ 32,768
Number of turns, standard/extended <sup>1</sup>	≤ 4,096 / ≤ 256,000
Profibus DP V0	IEC 61158, IEC 61784
PNO encoder profile parameters <sup>1</sup>	Class 1/Class 2 Counting direction switchover, scaling function, etc.
Output code <sup>1</sup>	Binary, Gray, truncated Gray
Address	3–99, set using a rotary switch
Baud rate	9.6 kbit/s to 12 Mbit/s
TR-specific functions <sup>1</sup>	Gear and speed outputs
Data width on bus for actual position	≤ 25 bits
Permissible mechanical speed	≤ 12,000 rpm
Shaft load	Own mass
Bearing life	≥ 3.9 × 10 <sup>10</sup> revolutions at
- speed	≤ 6,000 rpm
- operating temperature	≤ 60 °C
Shaft diameter [mm]	10H7
Permissible angular acceleration	≤ 10 <sup>4</sup> rad/s <sup>2</sup>
Moment of inertia	2.5 × 10 <sup>-6</sup> kg m <sup>2</sup> (typical)
Start-up torque at 20 °C	2 Ncm (typical)
Weight	0.3–0.5 kg

<sup>1</sup> Configurable parameter

### Ambient conditions

Vibration (EN 60068-2-6:1996)	≤ 100 m/s <sup>2</sup> , sinusoidal 50–2,000 Hz
Shock (EN 60068-2-27:1995)	≤ 1000 m/s <sup>2</sup> , half-cycle sinusoidal 11 ms
EMC	
- Interference emission compliant with EN 61000-6-3:2007	
- Interference immunity compliant with EN 61000-6-2:2006	
Operating temperature	0 °C to +60 °C; optionally -20 °C to +70 °C
Storage temperature	-30 °C to +80 °C, dry
Relative humidity (EN 60068-3-4:2002)	98%, non condensing
Enclosure rating (EN 60529:1991) <sup>2</sup>	IP 65

<sup>2</sup>With mating connector fitted and/or cable glands fitted and tightened

# Motor Mounted Components

## Absolute rotary encoders

### SSI interface



### Specifications

Supply voltage	11–27 VDC
No-load current consumption	< 350 mA
Total resolution <sup>1</sup>	≤ 25 bits
Number of steps per revolution <sup>1</sup>	≤ 8,192
Number of rotations, standard <sup>1</sup>	≤ 4,096
Number of rotations, extended <sup>1</sup>	≤ 256,000
SSI	Synchronous Serial Interface
Clock input	Optocoupler
Data output	RS-422, 2-wire
Clock frequency	80 kHz – 1 MHz
Monostable time $t_M$	16 $\mu$ s ≤ $t_M$ ≤ 25 $\mu$ s (20 $\mu$ s typical)
Output code <sup>1</sup>	Binary, Gray, BCD
Output format <sup>1</sup>	Standard, Tannenbaum, SSI + CRC, 26-bit cycle, variable number of data bits
Negative values <sup>1</sup>	Sign and magnitude, twos complement
SSI or parallel special bits <sup>1</sup>	Limit switch, overspeed, direction indication, motion indication, error indication, parity
F/R <sup>1</sup>	Counting direction
Preset <sup>1</sup>	Electronic alignment
Logic levels	“0” < +2 VDC; “1” = supply voltage
Permissible mechanical speed	≤ 12,000 rpm
Shaft load	Own mass
Bearing life	≥ 3.9 × 10 <sup>10</sup> revolutions at
- speed	≤ 6,000 rpm
- operating temperature	≤ 60 °C
Shaft diameter [mm]	10H7
Permissible angular acceleration	≤ 10 <sup>4</sup> rad/s <sup>2</sup>
Moment of inertia	2.5 × 10 <sup>-6</sup> kg m <sup>2</sup> (typical)
Start-up torque at 20 °C	2 Ncm (typical)
Weight	0.3–0.5 kg
Optional	- incremental signals, RS422 levels K1+, K1-, K2+, K2- with 1024 or 2048 pulses

<sup>1)</sup> Configurable parameter

### Ambient conditions

Vibration (EN 60068-2-6:1996)	≤ 100 m/s <sup>2</sup> , sinusoidal 50–2,000 Hz
Shock (EN 60068-2-27:1995)	≤ 1000 m/s <sup>2</sup> , half-cycle sinusoidal 11 ms
EMC	- Interference emission compliant with EN 61000-6-3:2007 - Interference immunity compliant with EN 61000-6-2:2006
Operating temperature	0 °C to +60 °C; optionally -20 °C to +70 °C
Storage temperature	-30 °C to +80 °C, dry
Relative humidity (EN 60068-3-4:2002)	98 %, non condensing
Enclosure rating (EN 60529:1991) <sup>2)</sup>	IP65

<sup>2)</sup> With mating connector fitted and/or cable glands fitted and tightened

In addition to the angular position within a rotation, multiturn encoders detect multiple rotations. An internal reduction gear mechanism connected to the motor shaft is used to detect the number of turns. Consequently, the value measured by a multiturn encoder consists of the current angular position and the number of turns. As with incremental encoders, the reading is calculated and output via various interface modules, depending on the interface.

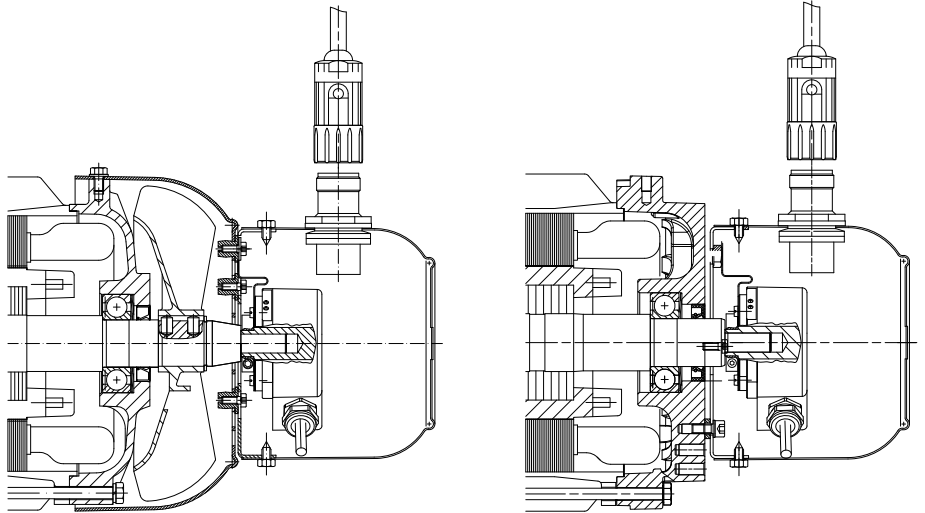
On request, a large range of motor frames can be fitted with sensor bearings. The output signal from the sensor allows the direction of rotation to be determined, among other things. The number of possible pulse counts depends on the frame size. Please enquire for more information.



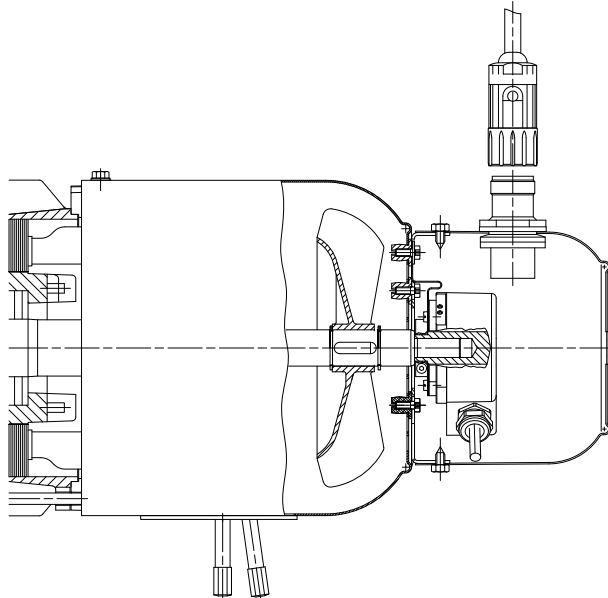
# Motor Mounted Components

## Modular motor system

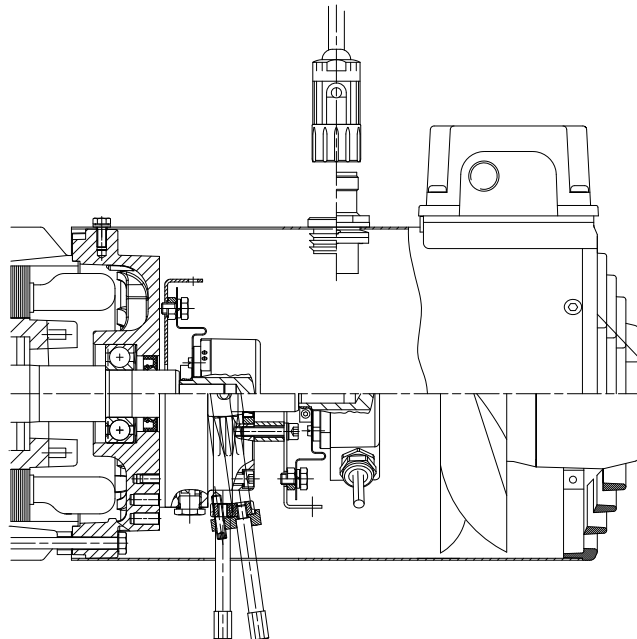
### Motor and encoder



### Motor, brake and encoder



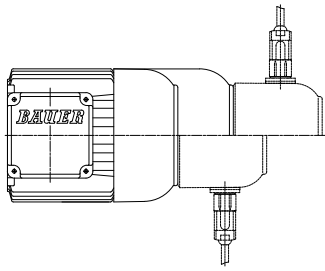
### Motor and forced ventilation



# Energy Efficient Geared Motors

## AC Variable Speed

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# 16

## Motor Mounted Components - Dimensions

<b>Dimensions .....</b>	<b>603</b>
Standard terminal box .....	603
Terminal box for plug-connector .....	604
Motor with standard brake .....	605
"Heavy-Duty" - brake .....	606
Motor with second shaft end .....	607
Motor with brake and second shaft end .....	608
Motor with "heavy duty" brake and second shaft end .....	609
Motor with protective hood .....	610
Motor with independent fan .....	611
Motor with brake and independent fan .....	612
Motor with encoder with built-on independent fan .....	613
Motor with brake and encoder with built-on independent fan .....	614
Motor with encoder .....	615
Motor with "heavy duty" encoder .....	616
Motor with brake and encoder .....	617
Motor with "heavy duty" brake and encoder .....	618
Motor in IEC design .....	619

# Energy Efficient Geared Motors

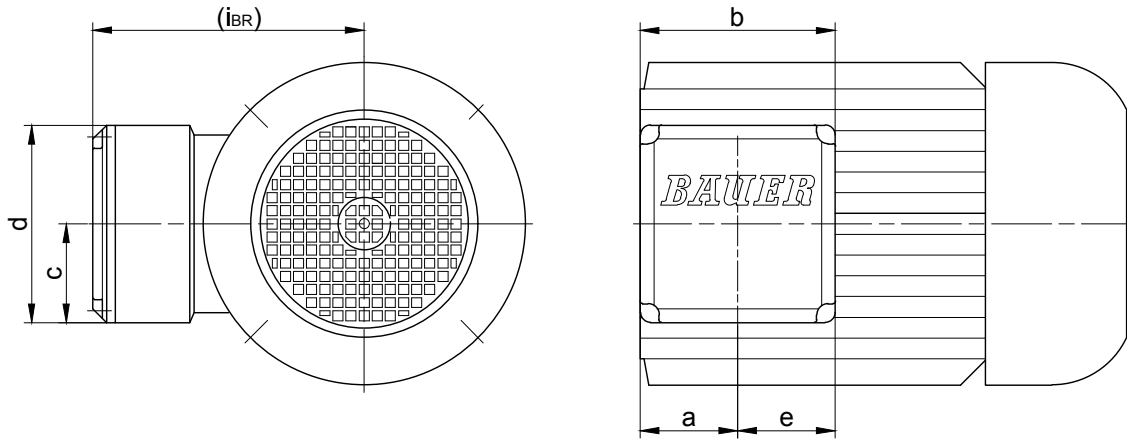
## AC Variable Speed

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# Motor-mounted components

## Dimensions

### Standard terminal box



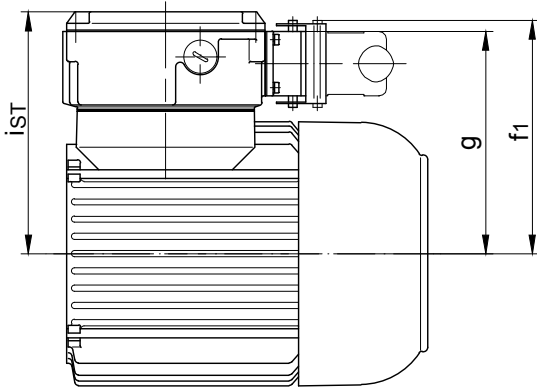
Motor/ Motor with brake	Dimensions (mm)						Code	Cable entry		max. spanner width for cable entry gland
	a	b	c	d	e	i/i <sub>BR</sub>		Major (M)	Next to (N)	
S04..	42.5	88	44	88	44	90	KAG1	M=2xM20x1.5	-	24 mm
S..06..	50	100	50	100	50	100	KAG2	M=2xM25x1.5	-	29 mm
S..08..	50	100	50	100	50	115	KAG2	M=2xM25x1.5	-	29 mm
S..09..	50	100	50	100	50	124	KAG2	M=2xM25x1.5	-	29 mm
S..11..	66.5	133	66.5	133	66.5	165	KAG3	M=2xM32x1.5	-	-

# Motor-mounted components

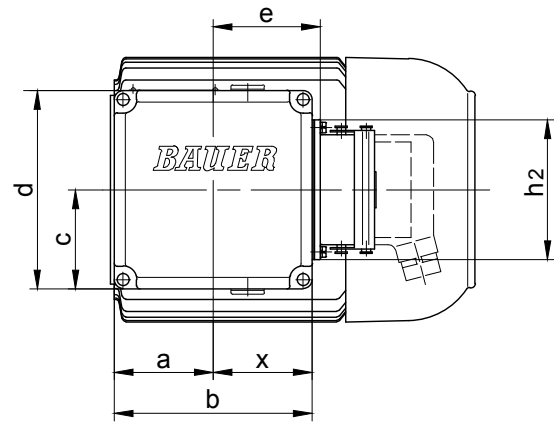
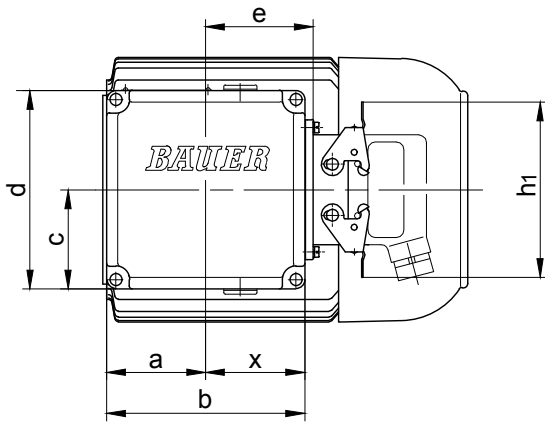
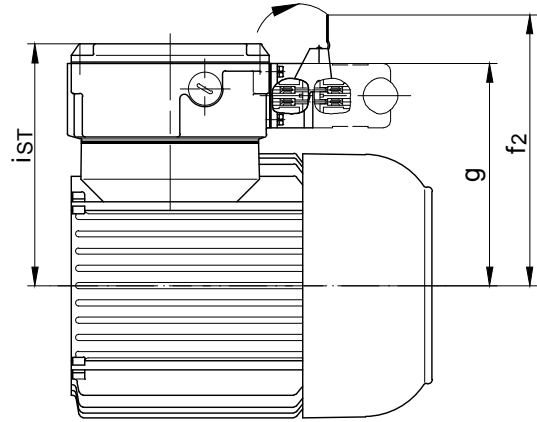
## Dimensions

### Terminal box for plug-connector

Standard design (two brackets)



Optional for DESINA (one bracket)



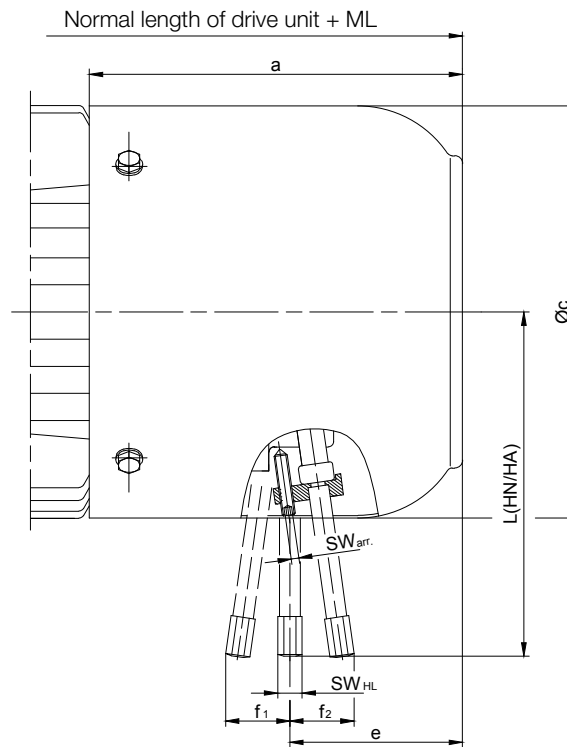
Motor	Size Terminal box	a	b	c	d	e	f <sub>1</sub>	f <sub>2</sub>	g	h <sub>1</sub>	h <sub>2</sub>	i <sub>ST</sub>	x
S04..	TBS1	30	90	52.5	106	49	118.5	147	111	117	93	124.5	46
S..06..	TBS1	45	90	52.5	106	49	125.5	154	118	117	93	131.5	46
S..08..	TBS1	45	90	52.5	106	49	143.5	172	136	117	93	149.5	46
S..09..	TBS2	62	132	66	135	71.5	158.5	187	158	117	93	164	68.5
S..11..	TBS2	62	132	66	135	71.5	175.5	191	166	117	93	181	68.5

Dimensions in millimetres (mm)

# Motor-mounted components

## Dimensions

### Motor with standard brake



Motor	Brake	ML (mm) Additional length with brake	Dimensions (mm)								Additional weight kg
			a	Øc	e	f <sub>1</sub>	f <sub>2</sub>	L(HA/HN)	SW <sub>HL</sub>	SW <sub>arr.</sub>	
S04..	E003	43.5	97	110.5	58.5	20.5	24	96/102	11	11	1.0
S..06..		42	102	123	58.5						
S..08..	ES(X)010	66	141	156	68	-	29	132	8	2.5	2.6
S..09..	ES(X)010	93	173	176	99	-	29	132	8	2.5	2.7
	ES(X)027				91	-	35.5	162			4.2
S..11..	ES(X)027	98	195	218	103	-	35.5	162	8	2.5	4.5
	ES(X)040				100	-	37	172			6.3
	ES(X)070				96	-	34.5	190			12

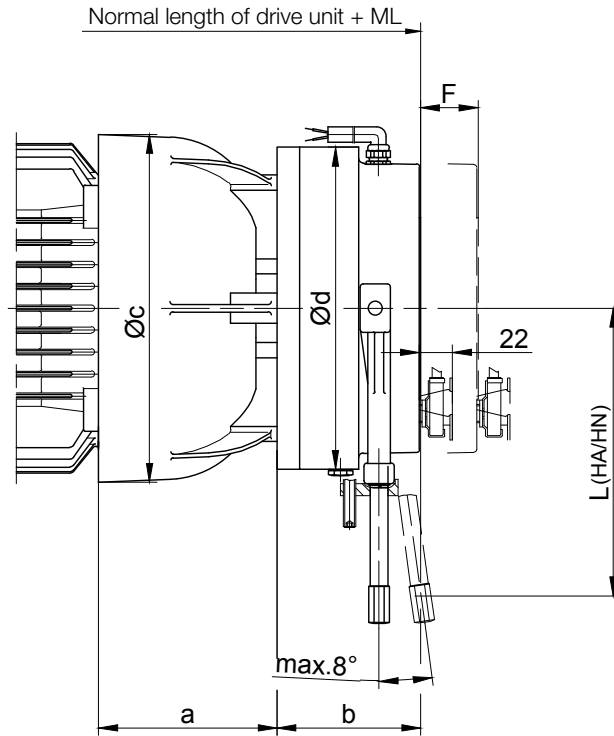
HA = manual release lockable  
HN = manual release not lockable



# Motor-mounted components

## Dimensions

“Heavy-Duty“ - brake



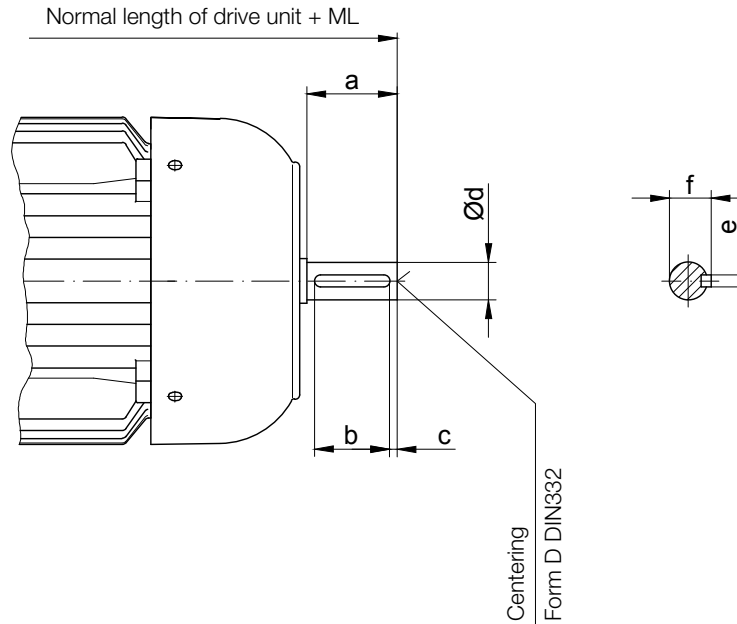
Motor	Brake	Additional length with brake (mm)		Dimensions (mm)					Additional weight kg
		ML Standard	ML Microswitch	a	b	c	Ød	L (HA/HN)	
S..08..	EH(X)027	79	101	83.5	66.5	166	145	162	5.5
S..09..	EH(X)040	90	112	102	73	191	168	172	8.3
S..11..	EH(X)125	114	136	120	95	231	213	208.5	19.5

HA = manual release lockable  
HN = manual release not lockable

# Motor-mounted components

## Dimensions

### Motor with second shaft end

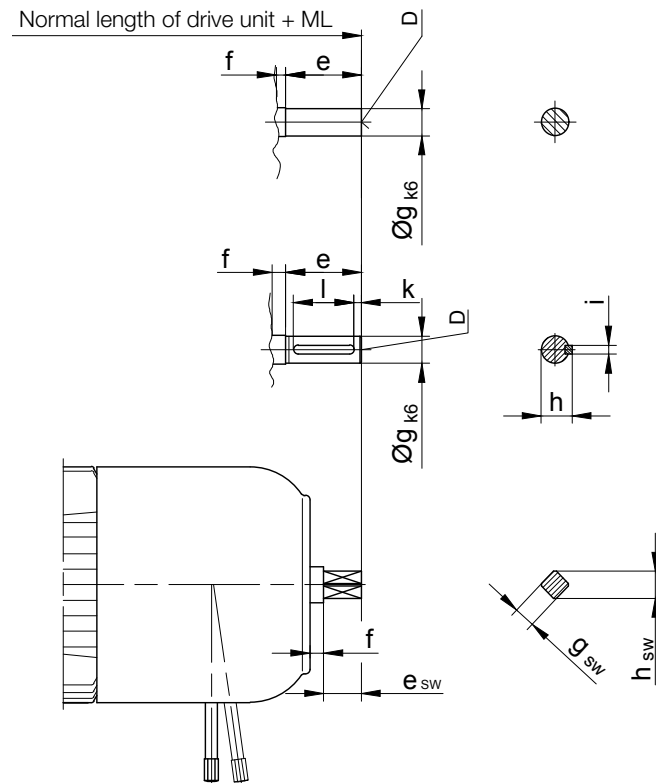


Motor	ML (mm) Additional length with second shaft end	Dimensions (mm)						Centering DIN 332
		a	b	c	d	e	f	
S04..	20	15	-	-	8 <sub>g6</sub>	-	-	-
S..06..	25	20	-	-	10 <sub>k6</sub>	-	-	-
S..08..	45	40	30	5	16 <sub>k6</sub>	5	18	D5
S..09..	55	50	40	5	20 <sub>k6</sub>	6	22.5	D5
S..11..	65	60	50	5	25 <sub>k6</sub>	8	28	D8

# Motor-mounted components

## Dimensions

### Motor with brake and second shaft end



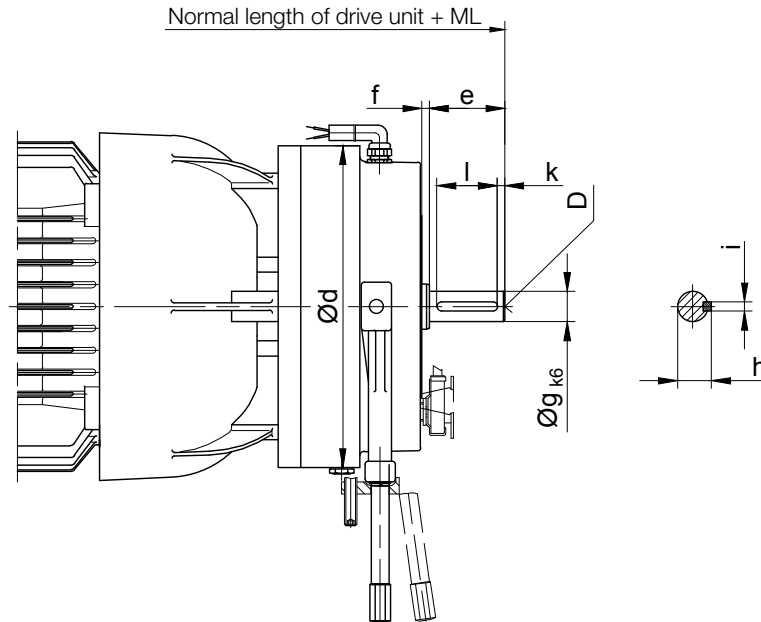
Motor	Brake	Additional length (mm)		Dimensions (mm)										Centering	
		ML	ML <sub>sw</sub>	e	e <sub>sw</sub>	f	g	g <sub>sw</sub>	h	h <sub>sw</sub>	i	k	l	DIN 332	SW
S04..	E003	63	-	15	-	5	8	-	-	-	-	-	-	-	-
S..06..				20			10								
S..08..	ES(X)..	121	96*	50	25*	5	18	SW14*	20.5	18*	6	5	40	D6	D4*
S..09..		98	123*												
S..11..		153.5*	128												

\* special design with manual release

# Motor-mounted components

## Dimensions

### Motor with "heavy duty" brake and second shaft end

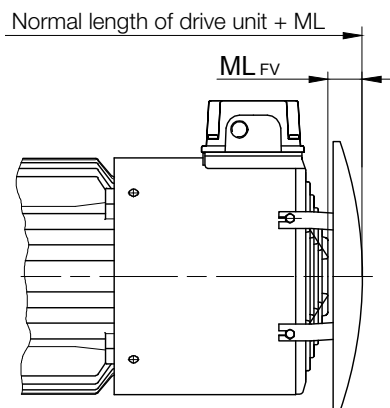
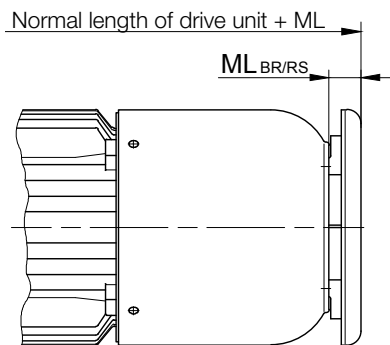
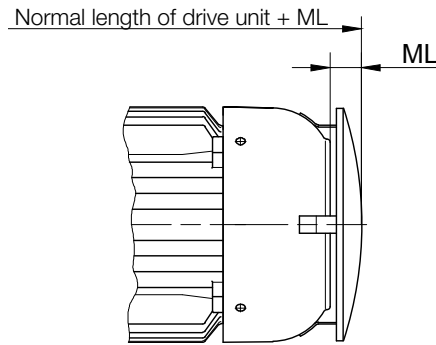


Motor	Brake	ML (mm)	Dimensions (mm)								Centering D 332	Additional weight kg
			Additional length with encoder and brake	Ød	e	f	Øg	h	i	k		
S..08..	EH(X)027	132	145	50	4	18	20.5	6	5	6	D6	6
S..09..	EH(X)040	144	168		5							9
S..11..	EH(X)125	169	213	20	22.5	20						

# Motor-mounted components

## Dimensions

### Motor with protective hood

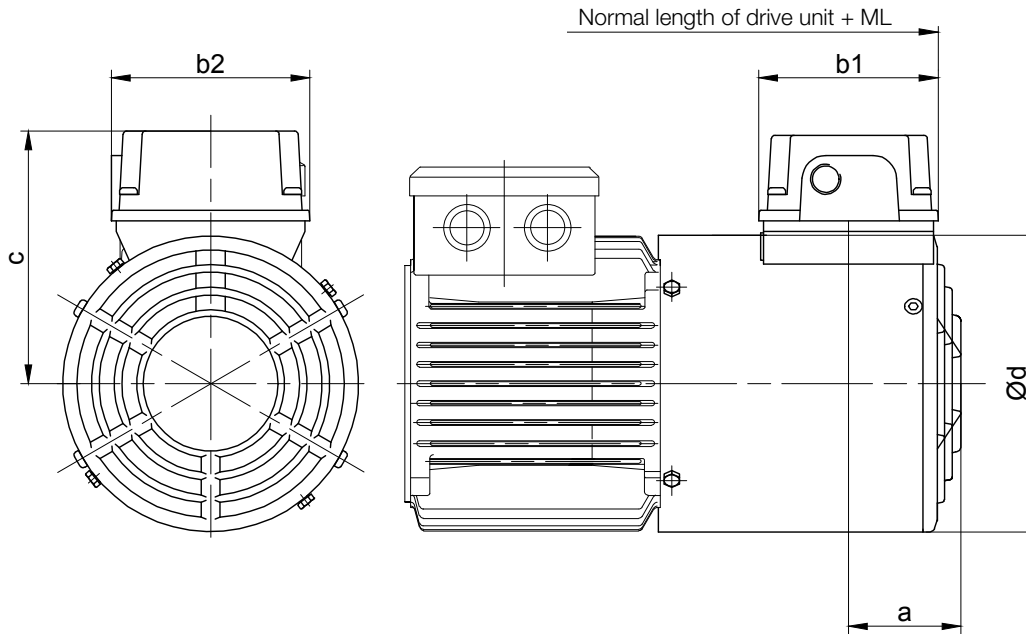


Motor	ML (mm)				Additional weight kg
	Additional length with attached protective cover				
	ML	ML <sub>BR</sub>	ML <sub>RS</sub>	ML <sub>FV</sub>	
S04..	16	-	-	-	0.15
S..06..	18	-	-	-	0.15
S..08..	14.5	24.5	24.5	40	0.20
S..09..	22	24.5	24.5	30	0.30
S..11..	29	29.5	29.5	33	0.40

# Motor-mounted components

## Dimensions

### Motor with independent fan

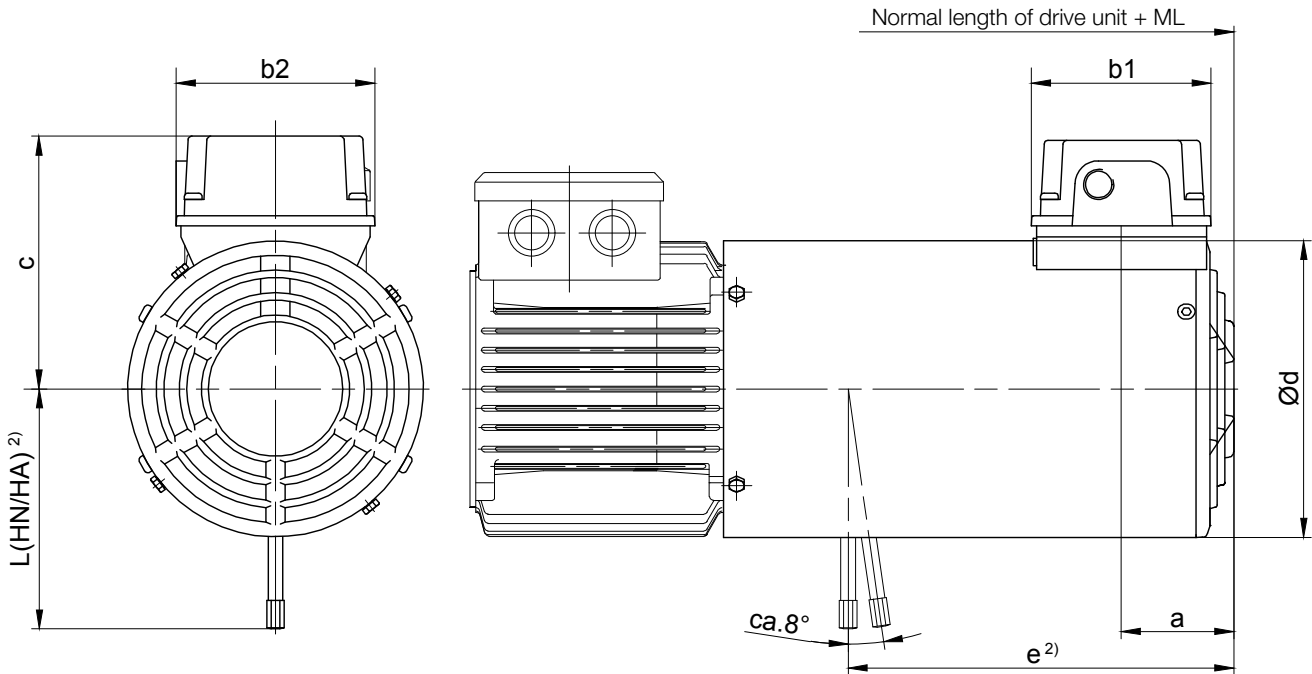


Drive Motor	Fan Motor	kW	r/min	400 V A	ML (mm) Additional length with forced cooling fan	Dimensions (mm)					Additional weight ~kg
						a	b1	b2	c	d	
S..08..	FV D08	0.019	2670	0.029	92	69.5	107	105	134	157	2.2
S..09..	FV D09	0.046	2820	0.106	97	69.5	107	105	143	177	2.7
S..11..	FV D11	0.051	2660	0.110	97	79.5	107	105	162.5	219	3.2

# Motor-mounted components

## Dimensions

### Motor with brake and independent fan



Motor	Brake	ML (mm) <sup>1)</sup> Additional length with brake and forced ventilation	Dimensions (mm)							Additional weight ~kg
			a	b1	b2	c	$\varnothing d$	$e^{2)}$	$L(HA/HN)^{2)}$	
S..08..	ES(X)010	202	59	107	105	134	157	204	132	5.0
S..09..	ES(X)010	214	69.5	107	105	143	177	220	132	5.5
	ES(X)027							212	162	7.5
S..11*	ES(X)027	221	69.5	107	105	162.5	219	226	162	8.0
	ES(X)040							223	172	10
	ES(X)070							218	184	12

\* with bayonet joint

<sup>1)</sup> The additional length is for normal motor unit without brake.

Other dimensions see the appropriate normal dimensioned sketch.

<sup>2)</sup> Brake release on request

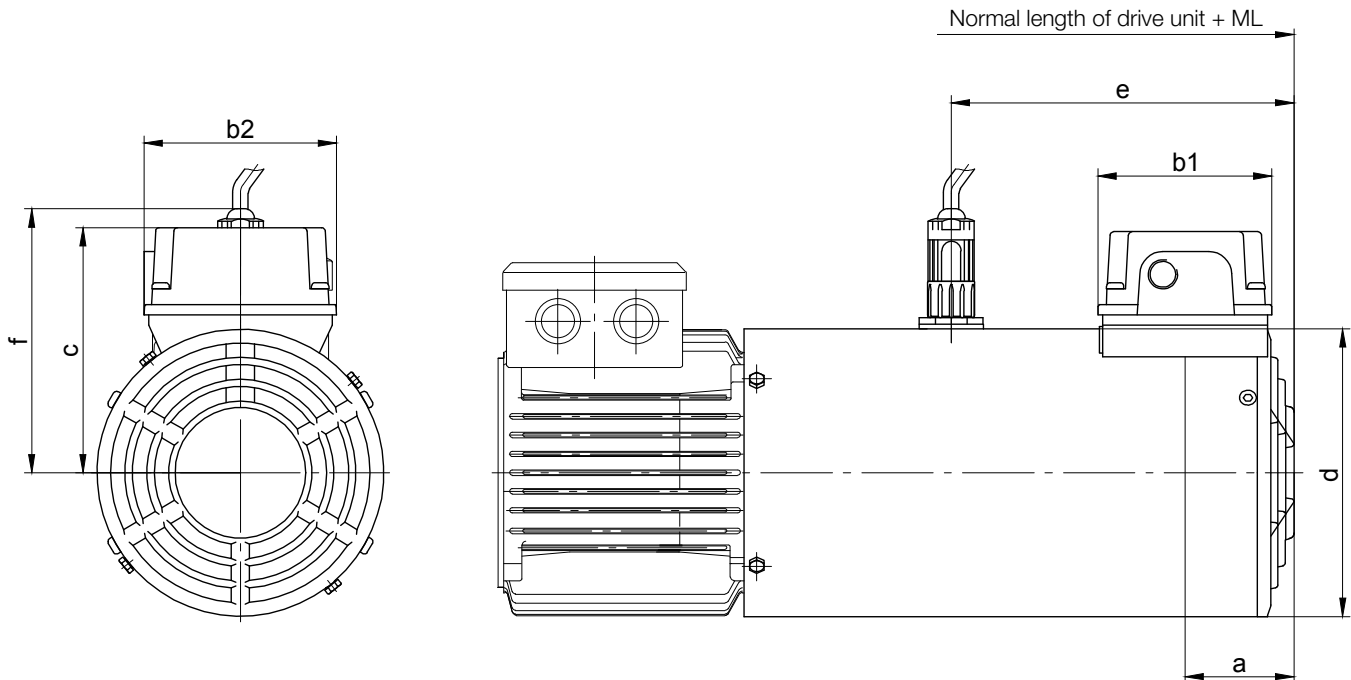
HA = manual release lockable

HN = manual release not lockable



## Dimensions

### Motor with encoder with built-on independent fan



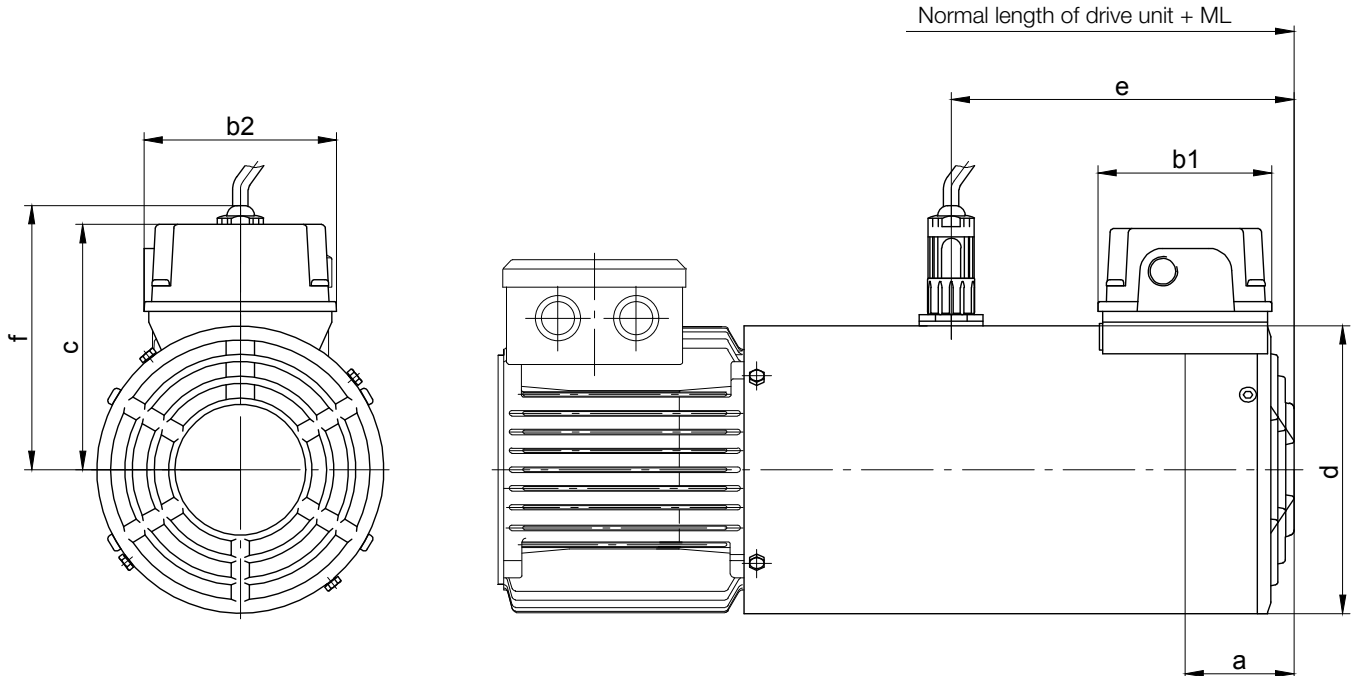
Motor	ML (mm) <sup>1)</sup> Additional length with encoder and forced ventilation	Dimensions (mm)							Additional weight ~kg
		a	b1	b2	c	d	e	f	
S..08..	202	59	107	105	134	157	187	144	2.6
S..09..	214	69.5	107	105	143	177	192	153.5	3.3
S..11*	221	69.5	107	105	162.5	218	192	-	4.0

\* with bayonet joint  
<sup>1)</sup> The additional length is for normal motor unit without brake.  
 Other dimensions see the appropriate normal dimensioned sketch.

# Motor-mounted components

## Dimensions

### Motor with brake and encoder with built-on independent fan



Motor	Brake	ML (mm) <sup>1)</sup> Additional length with brake, encoder and forced ventilation	Dimensions (mm)									Additional weight ~kg
			a	b1	b2	c	Ød	e <sup>2)</sup>	g	h	L(HA/HN) <sup>2)</sup>	
S..08..	ES(X)010	202	59	107	105	134	157	204	150	150	132	6.0
S..09..	ES(X)010	214	69.5	107	105	143	177	220	160	160	132	6.5
	212							160	162		8.5	
S..11*	ES(X)027	221	69.5	107	105	162.5	219	226	155	175	162	9.0
	ES(X)040							223	155		172	11.5
	ES(X)070							218	155		184	13.5

\* with bayonet joint

<sup>1)</sup> The additional length is for normal motor unit without brake.

Other dimensions see the appropriate normal dimensioned sketch.

<sup>2)</sup> Brake release on request

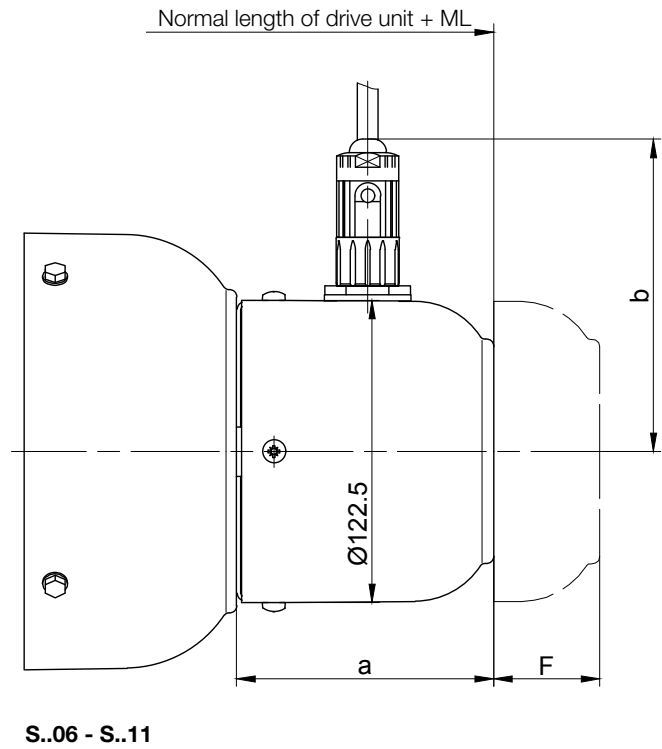
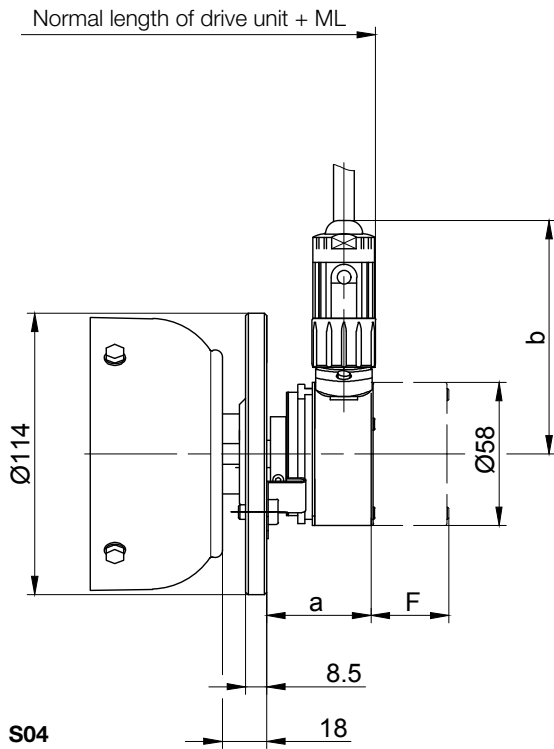
HA = manual release lockable

HN = manual release not lockable

# Motor-mounted components

## Dimensions

### Motor with encoder



Motor	ML (mm) Additional length with encoder	Dimensions (mm)				Additional weight kg	Free space for removing encoder „F“	
		Incremental encoder		Absolute encoder			Incremental encoder	Absolute encoder
		a	c	a	b			
S04..	62.5	43.5	95	69.5	109.5	0.7	30	55
S..06..	103	98.5	127	98.5	127	0.9	63	88
S..08..	107	107.5		107.5			41	66
S..09..		104		104		0.8	43	68
S..11..								

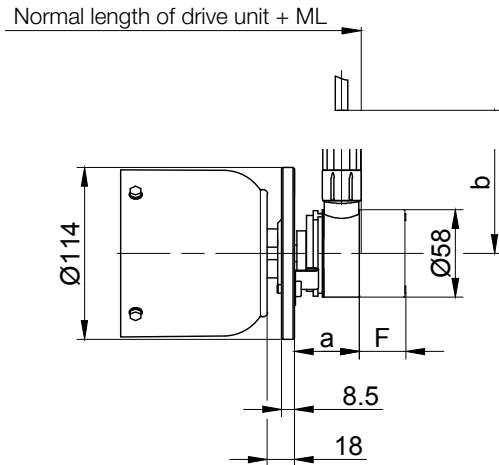


# Motor-mounted components

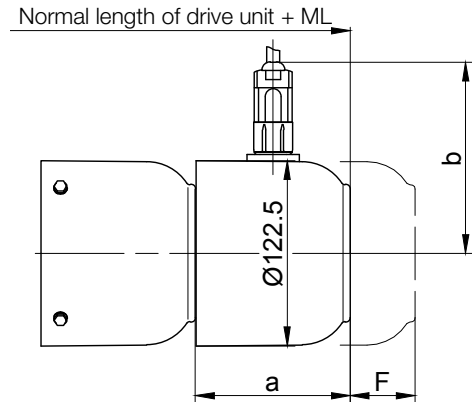
## Dimensions

### Motor with brake and encoder

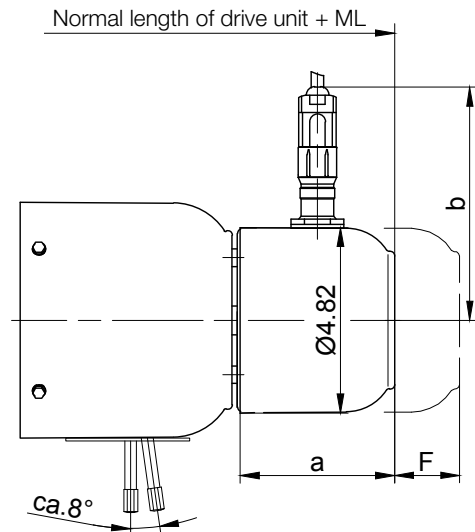
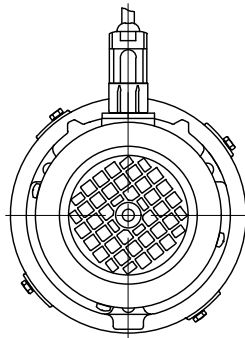
S04



S..06



S..08 - S..11



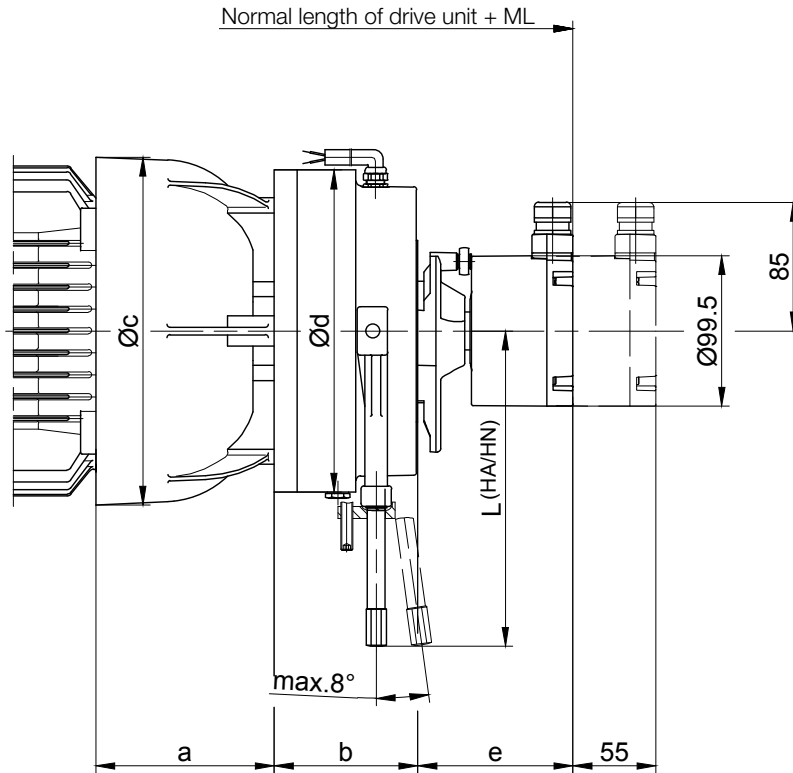
Motor	Brake	ML (mm) Additional length with brake and encoder	Dimensions (mm)				Additional weight kg	Free space for removing encoder „F“	
			Incremental encoder		Absolute en- coder			Incremental en- coder	Absolute encoder
			a	c	a	b			
S04..	E003	105.5	43.5	95	69.5	109.5	0.7	30	55
S..06..		145					0.9	63	88
S..08..	ES(X)..	173.5	102	127	102	127	0.8	49	74
S..09..	ES(X)..	197							
S..11..	ES(X)..	200							

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# Motor-mounted components

## Dimensions

### Motor with "heavy duty" brake and encoder



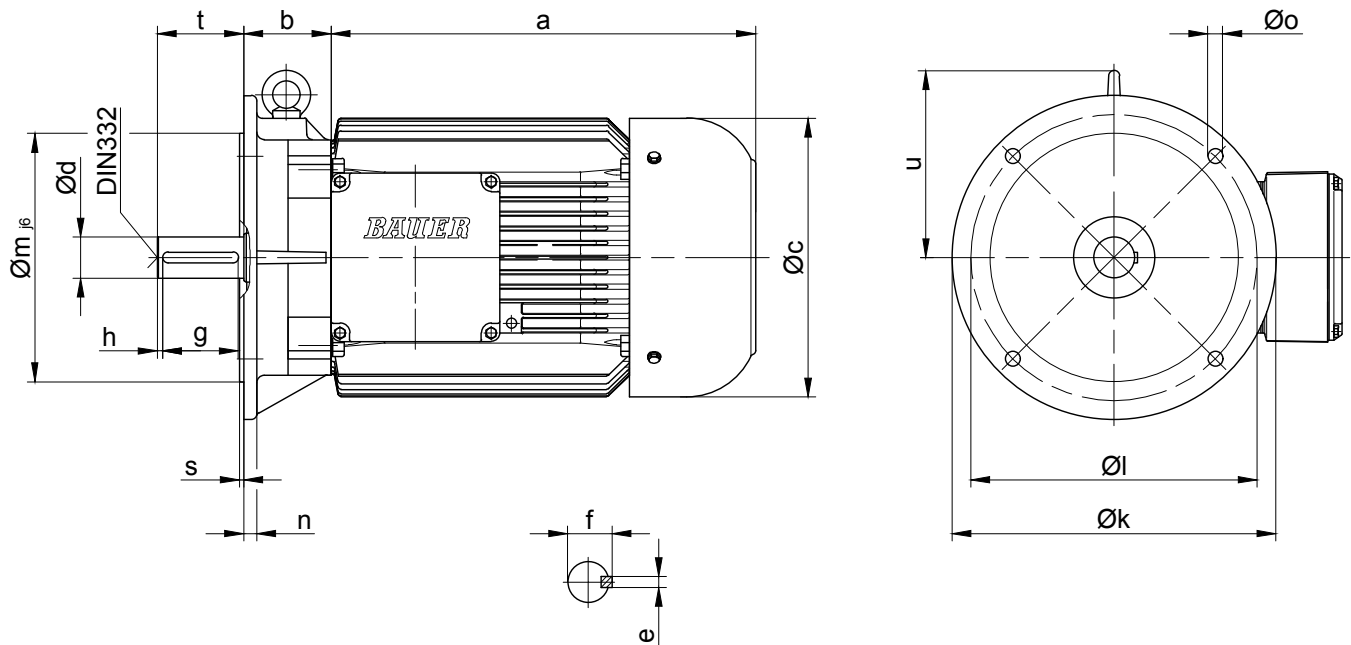
Motor	Brake	ML (mm) Additional length with brake and encoder	Dimensions (mm)						Additional weight kg
			a	b	c	Ød	e	L (HA/HN)	
S..08..	EH(X)027	180.5	83.5	66.5	166	145	102.5	162	7.1
S..09..	EH(X)040	191.5	102	73	191	168		172	10
S..11..	EH(X)125	216.5	120	95	231	213		208.5	21.4

HA = manual release lockable  
HN = manual release not lockable

# Motor-mounted components

## Dimensions

### Motor in IEC design



Motor	Dimensions (mm)																Centering DIN 332
	a	b	c	d	e	f	g	h	k	l	m	n	o	s	t	u	
S..06..	170	45	123	11 <sub>±6</sub>	4	12.5	18	2.5	140	115	95	9	10	2.75	23	-	D4
S..08..	200	49	156	19 <sub>±6</sub>	6	21.5	35	2.5	200	165	130	10	12	3.5	40	-	D4
S..09..	251	66	176	24 <sub>±6</sub>	8	27	40	5	200	165	130	10	12	3.5	50	128.5	D6
S..11..	319	75	218	28 <sub>±6</sub>	8	31	50	5	250	215	180	11	14.5	4	60	145.5	D10



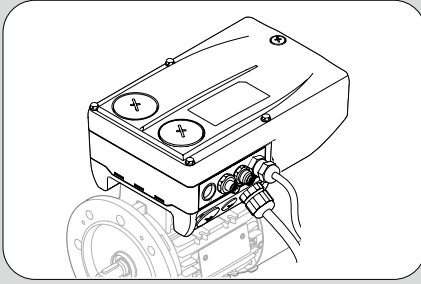
# Energy Efficient Geared Motors

## AC Variable Speed

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# Energy Efficient Geared Motors

## AC Variable Speed



# 17

### Decentral Drive Technology

<b>Decentral Drive Technology .....</b>	<b>623</b>
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# Energy Efficient Geared Motors

## AC Variable Speed

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**Decentral Drive Technology****EtaK2.0 geared motors**

All Bauer geared motors from 0.12 to 7.5 kW are available with an externally mounted EtaK2.0 frequency inverter. These are mounted directly onto the motor in place of a terminal box. The installation volume required for the geared motor is not much greater than that required for standard geared motors.

**Efficient and ideal for distributed systems**

EtaK2.0 geared motors help you to save several times over: in planning and installation, in operation and in maintenance. They help you boost the efficiency of your installations, protect your mechanical components and reduce the mains load. In this way, EtaK2.0 geared motors make a significant contribution to energy savings and efficiency optimisation of your application.

All EtaK2.0 geared motor models (helical, shaft-mounted, bevel and worm-gear motors) are equipped with a variable frequency drive (VFD). They give you compact drive solutions with continuously variable speed and rated motor power up to 7.5 kW.

EtaK2.0 geared motors are smart power components for future-oriented system designs and can easily be adapted to specific working conditions and required process speeds. They are preferably controlled using a field bus system, but they also support control through digital and analogue inputs and outputs. The VFD provides valuable additional information for system protection and monitoring.

**Features of EtaK2.0 geared motors**

The combination of geared motor with inverter opens up a whole range of attractive possibilities:

**Reduce costs - Save space**

- Planning and installation costs are down
- Less space needed for switchgear
- Fewer drive versions, so stock holding is streamlined
- Thermal situation inside the switchgear cabinet is better
- Fewer shielded motor cables

**Think system - Avoid interfaces**

- Inverter and motor are integrated in a single, compact unit
- Inverter is optimised ex-works for motor and application
- Retrofits available for existing drive configurations
- Cabling is simplified

**User benefits**

- Preconfigured, plug and play on application-specific basis
- Slip compensation for load-independent constant speed
- PID controller for structuring process control
- Switching frequency adjusts automatically to temperature

## Decentral Drive Technology

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### Technical Data for EtaK2.0

- Motor power range 0,12 to 7,5 kW
- Supply voltage 3 x 400 .. 480 V +/- 10 %
- Input frequency 50/60 Hz
- 200 % of rated motor torque over the entire frequency-inverter range
- Design compliant with UL requirements
- Degree of protection IP 65: motor and inverter
- Integrated protection against overload, overcurrent, phase failure, overvoltage and under-voltage
- Drive is thermally monitored

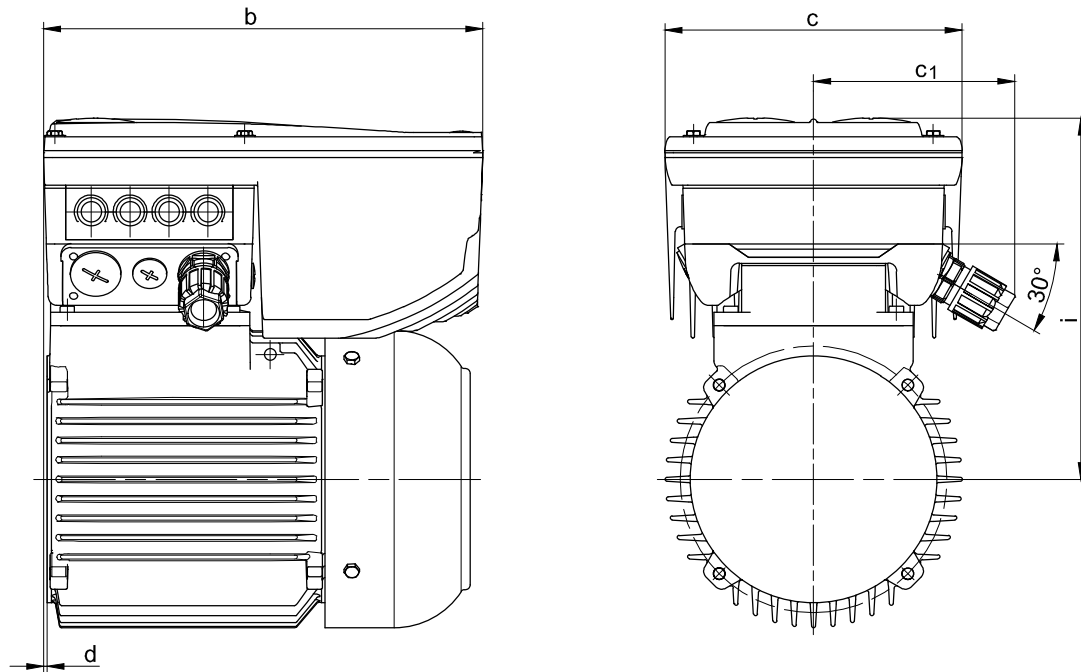
### Added benefits

- 200 % overload current (3 s)
- V/f control with or without encoder
- Sensorless vector control
- Short-circuit and frame fault protection
- Direct current braking
- S ramps for gentle acceleration
- Maximum output frequency 300 Hz
- CANopen, PROFIBUS, PROFINET, EtherCAT, EtherNet/IP and AS-Interface
- Safety function STO in combination with a communication unit with field bus system

**Decentral Drive Technology****Motor combinations****Induction motors (ASM)**

P <sub>N</sub> 50Hz [kW]	Typ*	Base frequency 50 Hz Motor: 350V/50Hz/Y	Base frequency 87 Hz Motor: 202V/50Hz/D
		P <sub>FU</sub> [kW]	P <sub>FU</sub> [kW]
0.12	DHE06LA4	0.37	0.37
0.18	DHE06LA4	0.37	0.37
0.25	DHE07LA4	0.37	0.55
0.37	DHE08MA4	0.37	0.75
0.55	DHE08LA4	0.55	1.1
0.75	DHE08XA4	0.75	1.5
1.1	DHE09LA4	1.1	2.2
1.5	DHE09XA4	1.5	3
2.2	DHE09XB4	2.2	4
3	DHE11MA4	3	5.5
4	DHE11LA4	4	7.5
5.5	DHE11LB4	5.5	-
7.5	DHE13LA4	7.5	-

P <sub>N</sub> 60Hz [kW]	Typ*	Base frequency 60 Hz Motor: 400V/60Hz/Y	Base frequency 104 Hz Motor: 230V/60Hz/D
		P <sub>FU</sub> [kW]	P <sub>FU</sub> [kW]
0.12	DHE06LA4	0.37	0.37
0.18	DHE06LA4	0.37	0.37
0.25	DHE07LA4	0.37	0.55
0.37	DHE08MA4	0.37	0.75
0.55	DHE08LA4	0.55	1.1
0.75	DHE08XA4	0.75	1.5
1.1	DHE09LA4	1.1	2.2
1.5	DHE09XA4	1.5	3
2.2	DHE09XB4	2.2	4
3	DHE11MA4	3	5.5
4	DHE11LA4	4	7.5
5.5	DHE11LB4	5.5	-
7.5	DHE13LA4	7.5	-

**Decentral Drive Technology****Dimensional drawing with attached EtaK2.0 inverter**

Other dimensions see the appropriate normal dimensioned sketch

Motor	Type ETA-K2...		Dimensions (mm)					Cable entry
			b	c	c <sub>1</sub>	d	i	
D06	K2A003		245	156	120	-5	159	QUICKON
D07	K2A005		245	156	120	-5	159	QUICKON
D..08	K2A003	K2A005	341	156	120	-1	176	QUICKON
	K2A007	K2A011	341	156	120	-1	176	QUICKON
	K2A015		341	156	120	-1	176	QUICKON
D..09	K2A011	K2A015	238	156	120	2	213	QUICKON
	K2A022	K2A030	258	176	120	2	213	QUICKON
	K2A040		326	195	120	-1	285	QUICKON
D..11	K2A022	K2A030	259	176	120	1	233	QUICKON
	K2A040	K2A055	327	195	120	-2	304	QUICKON
	K2A075		327	195	132	-2	304	QUICKON
D..13	K2A075		344	195	132	-18.5	335	QUICKON

**Decentral Drive Technology****Available accessories**

Either the USB diagnostic adapter in combination with free software or the handheld terminal is required for parameterisation and control of the EtaK2.0. Without this accessory, no parameter adjustments are possible.

**USB diagnostic adapter**

The EtaK 2.0 is operated, parameterised and diagnosed via the diagnostic interface. A PC can be connected via the USB interface and the USB diagnostic adapter. To connect the USB diagnostic adapter to the diagnostic interface (DIAG) on the inverter, a 5-metre flying lead is already included in the package. The connection can be established during operation. The EASY Starter or Engineer engineering tools can be used to operate, parameterise or diagnose the inverters. Both tools have simple intuitive interfaces. This makes commissioning, for example, quick and easy to carry out.

Features	Plug-in location	BAU ID
<ul style="list-style-type: none"> <li>• Input-side power supply via USB connection from PC</li> <li>• Output-side power supply via inverter diagnostic interface</li> <li>• Diagnostic LEDs</li> <li>• Galvanic decoupling of PC and inverter</li> <li>• Hot-plug-capable</li> <li>• 5 m flying lead</li> </ul>	DIAG	BAU4020468

**Handheld terminal**

As an alternative to the PC, the handheld terminal can be used for local operation, parameterisation or diagnostics. The data is quickly accessible via structured menus and a plain text display. The handheld terminal can be plugged onto the diagnostic interface (DIAG) of the VFD from the outside.

Features	Plug-in location	BAU ID
<ul style="list-style-type: none"> <li>• Handheld terminal in robust housing</li> <li>• Including 2.5 m cable</li> <li>• IP20 enclosure rating</li> <li>• For 8400 motec</li> </ul>	DIAG	BAU2612968





# Electronics

## Decentral Drive Technology

### Switch potentiometer unit

The switch / potentiometer unit is mounted directly onto the 8400 motec or to another part of the system. With the switch/potentiometer unit and the control connections integrated into the drive controller, an analogue reference value can be preset with the integrated potentiometer; the drive can be started or stopped or the direction of rotation can be changed, for example, via the rotary switch.

Specification	Features	Plug-in location	BAU ID
Switch / potentiometer unit E82ZBU	<ul style="list-style-type: none"> <li>• 2.5 m flying lead</li> <li>• IP65 enclosure rating</li> </ul>	Connection to the control ports of the communication unit	BAU2616424

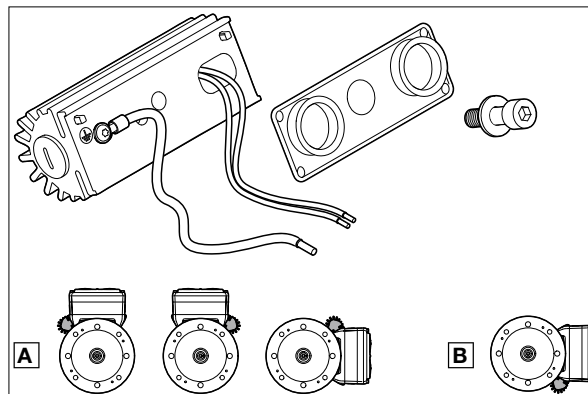


### Built-in potentiometer

Features	Plug-in location	BAU ID
<ul style="list-style-type: none"> <li>• The mounted potentiometer can be mounted directly to the EtaK2.0 wiring unit.</li> <li>• With the potentiometer and the control connections integrated into the drive controller, an analogue reference value can be preset or the drive can be started or stopped.</li> </ul>	Connection to the control ports of the communication unit	BAU3126561



### Internal braking resistances



**Decentral Drive Technology**

	$R_B$	$P_D$		$Q_B$	C00574	IP	E84DGDVB...
	(C00129)	(C00130)		(C00131)			
	[ $\Omega$ ]	A	B	[kWA]			
		[W]	[W]	=			
BAU-ID 2612887	220	40	30	0.6	1 Fault	IP65	3714 5514 7514 1124 1524
BAU-ID 2612879	100	40	30	0.6	1 Fault	IP65	2224 3024
BAU-ID 2612861	47	40	30	0.6	1 Fault	IP65	4024 5524 7524

**Setpoint potentiometer**

A setpoint potentiometer for installation in a cable entry gland of the inverter housing is available for adjusting speed directly at the drive. This potentiometer is particularly suitable as an alternative to mechanical actuating drives.

**Easy Starter**

All VFDs can be parameterised, operated and controlled from the PC using this software. This considerably simplifies parameter setting, commissioning, diagnostics and documentation of the systems. Networking of up to 126 VFDs is possible. Downtimes during device replacement can thus be drastically reduced.

- Basic module for convenient parameterisation and test run.
- Protocol module with monitor function for commissioning complex systems and possibility of modem connection.
- Masking module for creating input and output masks with password protection.

**Braking operation with braking resistor**

For regenerative operation over a longer period of time or when you have to decelerate large moments of inertia, you need a braking resistor. It converts the braking energy into heat.

The braking resistor is switched on when the DC link voltage exceeds the switching threshold. This prevents the drive controller from setting pulse inhibition due to the „overvoltage“ fault and the drive from running out.

The braking resistor guides the braking process at all times.

**Note:**

An internal braking resistor is not integrated in the device. Conversion of braking energy into heat is not possible. Only the brake chopper is integrated in the device.

**Supply for mechanical brake**

Bauer geared motors can be equipped with spring-applied brakes. A mechanical brake for the motor can be actuated directly by the frequency inverter. The EtaK2.0 VFDs have an integrated motor brake control. The EtaK2.0 supplies and controls the brake as long as it is supplied with mains voltage. The EtaK2.0 generates an appropriate brake supply voltage depending on the mains voltage present, so that a brake suitable for the application can be fitted. The corresponding values for a brake supply voltage are listed in the following table:

--> on the 400 V mains: solenoid voltage 180 V DC
--> on the 400 V mains: solenoid voltage 180 V DC

Optionally, the switching of the brake can also be controlled via an external control contact (e.g. PLC).

**Decentral Drive Technology****Possible assemblies for EtaK2.0****BG-series**

Terminal box position	B3 H4	B6 H1	B7 H2	B8 H3	V5 H5	V6 H6	B5	V1	V3
I	✓	x	✓	✓	✓	✓	✓	✓	✓
II	✓	✓	✓	x	✓	✓	✓	✓	✓
III	✓	✓	x	✓	✓	✓	✓	✓	✓
IV	x	✓	✓	✓	✓	✓	x	✓	✓

✓ possible, x not possible

**BF-series**

Terminal box position	H1	H2	H3	H4	V1	V2
I	x	✓	✓	✓	✓	✓
II	✓	✓	x	✓	✓	✓
III	✓	x	✓	✓	✓	✓
IV	✓	✓	✓	x	✓	✓

✓ possible, x not possible

**BK-series**

Terminal box position	H1	H2	H3	H4	V1	V2
I	✓	✓	✓	✓	x	✓
II	✓	x	✓	✓	✓	✓
III	✓	✓	✓	✓	✓	x
IV	x	✓	✓	✓	✓	✓

✓ possible, x not possible

**BS-series**

Terminal box position	H1	H2	H3	H4	V1	V2
I	✓	✓	✓	✓	x	✓
II	✓	x	✓	✓	✓	✓
III	✓	✓	✓	✓	✓	x
IV	x	✓	✓	✓	✓	✓

✓ possible, x not possible



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**BAUER global**

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<b>APAC</b> .....	<b>640</b>
<b>China</b> .....	<b>641</b>

# Energy Efficient Geared Motors

## AC Variable Speed

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# Energy Efficient Geared Motors

## AC Variable Speed

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### Notes

**Notes**

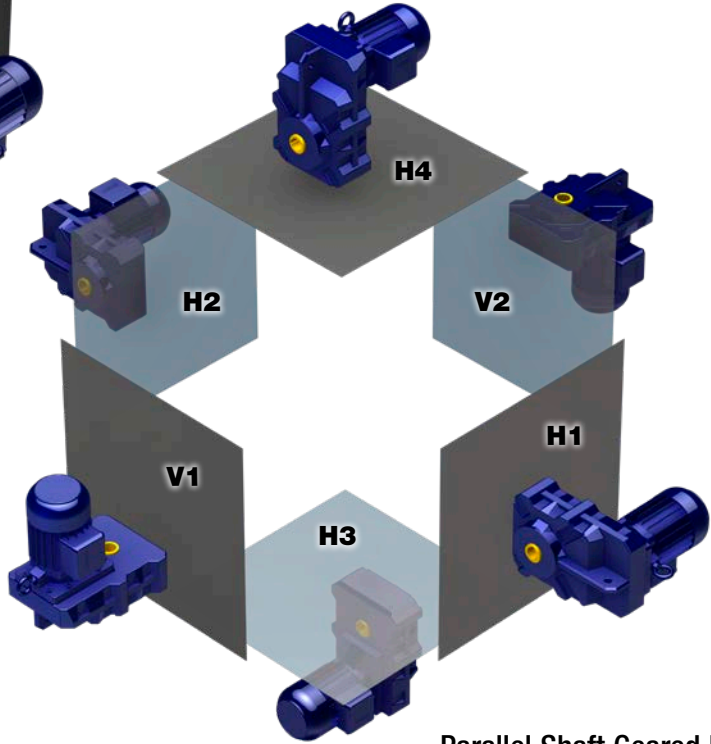
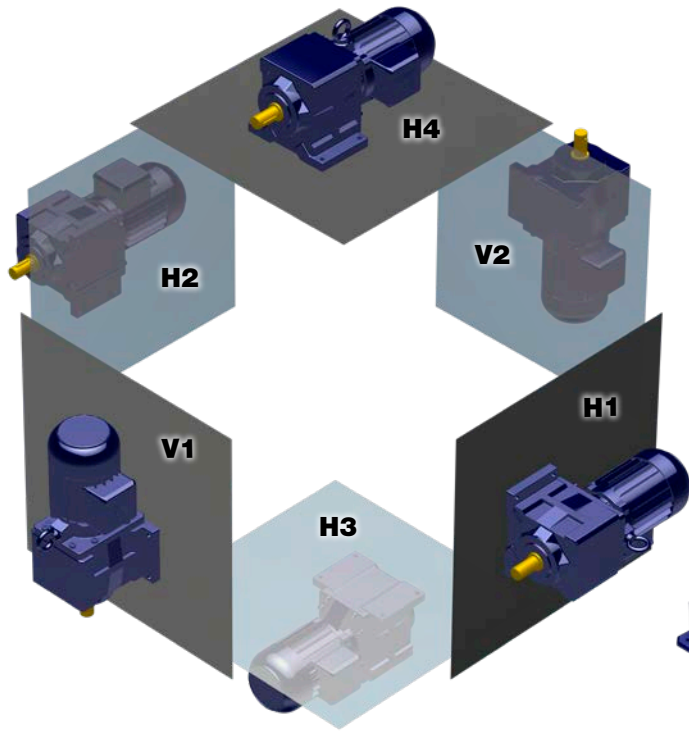


# Energy Efficient Geared Motors

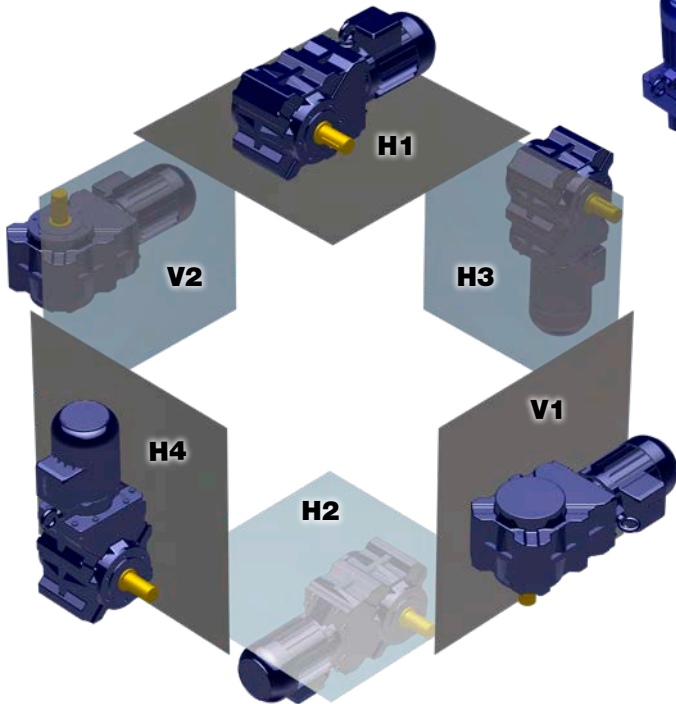
## AC Variable Speed

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# Mounting Positions

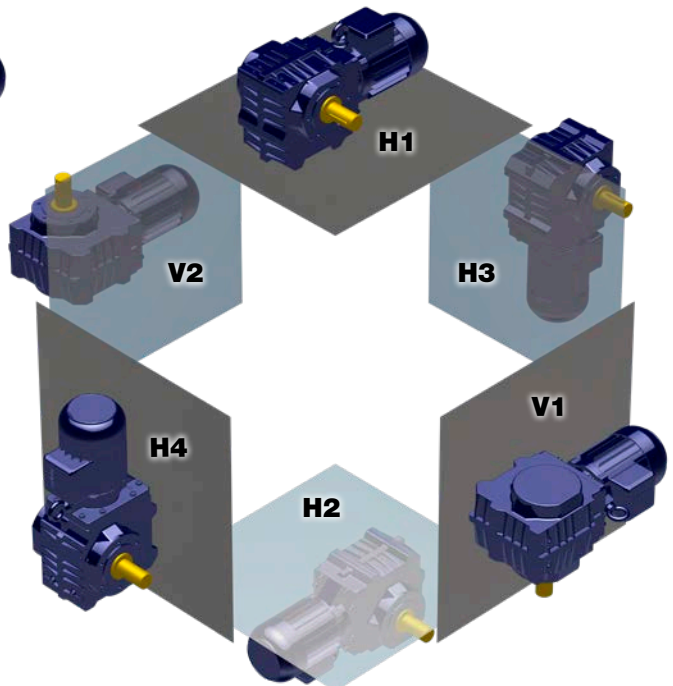


## Helical Geared Motors



## Parallel Shaft Geared Motors

## Bevel Geared Motors



## Worm Geared Motors

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[www.ameridrives.com](http://www.ameridrives.com)

**Bibby Turboflex**  
[www.bibbyturboflex.com](http://www.bibbyturboflex.com)

**Guardian Couplings**  
[www.guardiancouplings.com](http://www.guardiancouplings.com)

**Huco**  
[www.huco.com](http://www.huco.com)

**Lamiflex Couplings**  
[www.lamiflexcouplings.com](http://www.lamiflexcouplings.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Linear Systems

**Thomson**  
[www.thomsonlinear.com](http://www.thomsonlinear.com)

### Geared Cam Limit Switches

**Stromag**  
[www.stromag.com](http://www.stromag.com)

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[www.kilianbearings.com](http://www.kilianbearings.com)

### Electric Clutches & Brakes

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[www.matrix-international.com](http://www.matrix-international.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Warner Electric**  
[www.warnerelectric.com](http://www.warnerelectric.com)

### Belted Drives

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Heavy Duty Clutches & Brakes

**Twiflex**  
[www.twiflex.com](http://www.twiflex.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Svendborg Brakes**  
[www.svendborg-brakes.com](http://www.svendborg-brakes.com)

**Wichita Clutch**  
[www.wichitaclutch.com](http://www.wichitaclutch.com)

### Gearing & Specialty Components

**Bauer Gear Motor**  
[www.bauergears.com](http://www.bauergears.com)

**Boston Gear**  
[www.bostongear.com](http://www.bostongear.com)

**Delevan**  
[www.delevan.com](http://www.delevan.com)

**Delroyd Worm Gear**  
[www.delroyd.com](http://www.delroyd.com)

**Nuttall Gear**  
[www.nuttallgear.com](http://www.nuttallgear.com)

### Engine Braking Systems

**Jacobs Vehicle Systems**  
[www.jacobsvehiclesystems.com](http://www.jacobsvehiclesystems.com)

### Precision Motors & Automation

**Kollmorgen**  
[www.kollmorgen.com](http://www.kollmorgen.com)

### Miniature Motors

**Portescap**  
[www.portescap.com](http://www.portescap.com)

### Overrunning Clutches

**Formsprag Clutch**  
[www.formsprag.com](http://www.formsprag.com)

**Marland Clutch**  
[www.marland.com](http://www.marland.com)

**Stieber**  
[www.stieberclutch.com](http://www.stieberclutch.com)

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