

# **Bonfiglioli** **Riduttori**

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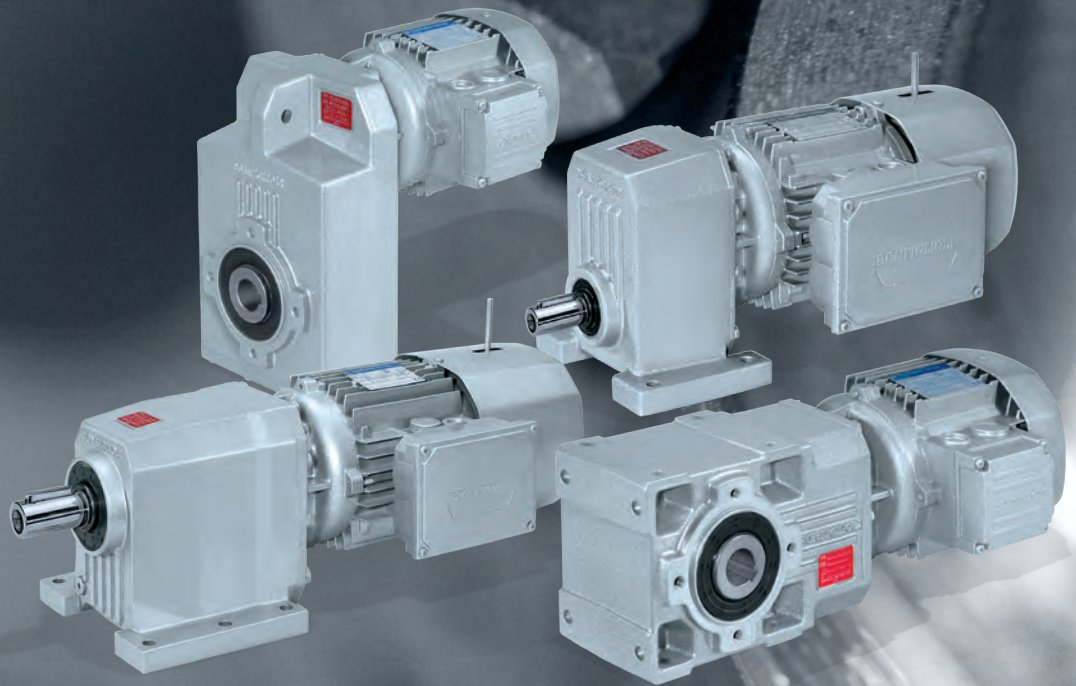
## **C-A-F-S series**

Helical gear units C

Helical bevel gear units A

Shaft mounted gear units F

Single stage gearboxes S



PRODUCT

IE2-IE3

 **Bonfiglioli**  
*Forever Forward*





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#### Revisions

Refer to page 582 for the catalogue revision index. Visit [www.bonfiglioli.com](http://www.bonfiglioli.com) to search for catalogues with up-to-date revisions.

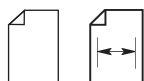


## GENERAL INFORMATION

### 1 SYMBOLS AND UNITS OF MEASURE

Symbols	Units of Measure	Description	Symbols	Units of Measure	Description
$A_{N1,2}$	[N]	Permissible axial force	$P_{1,2}$	[kW]	Power
$f_s$	–	Service factor	$P_{N1,2}$	[kW]	Rated power
$f_T$	–	Thermal factor	$P_{R1,2}$	[kW]	Power demand
$f_{TP}$	–	Temperature factor	$R_{C1,2}$	[N]	Calculated radial force
$i$	–	Gear ratio	$R_{N1,2}$	[N]	Permissible overhung load
$l$	–	Cyclic duration factor	$S$	–	Safety factor
$J_C$	[Kgm <sup>2</sup> ]	Mass moment of inertia to be driven	$t_a$	[°C]	Ambient temperature
$J_M$	[Kgm <sup>2</sup> ]	Motor mass moment of inertia	$t_s$	[°C]	Surface temperature
$J_R$	[Kgm <sup>2</sup> ]	Mass moment of inertia for the gear unit	$t_o$	[°C]	Oil temperature
$K$	–	Mass acceleration factor	$t_f$	[min]	Work time under constant load
$K_r$	–	Transmission element factor	$t_r$	[min]	Rest time
$M_{1,2}$	[Nm]	Torque	$\eta_d$	–	Dynamic efficiency
$M_{c1,2}$	[Nm]	Calculated torque	$\eta_s$	–	Static efficiency
$M_{n1,2}$	[Nm]	Rated torque	$\varphi$	[']	Output shaft angular backlash (with locked input shaft)
$M_{r1,2}$	[Nm]	Torque demand			
$n_{1,2}$	[min <sup>-1</sup> ]	Speed			

<sub>1</sub> value applies to input shaft  
<sub>2</sub> value applies to output shaft



The symbol shows the page the information can be sorted from.



This symbol refers to the angle the overhung load applies (viewing from drive end).



**DANGER - WARNING**

This symbol indicates situations of danger, which if ignored, may result in serious injury to the operator.



Symbol refers to weight of gearmotors and speed reducers. Figure for gearmotors incorporates the weight of the 4-pole motor and for life lubricated units, where applicable, the weight of the oil.



**IMPORTANT**

This symbol indicates important technical information.



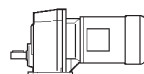
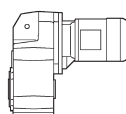
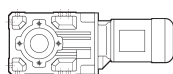
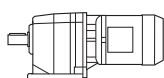
Apply to equipment complying with "ATEX" Directive.

**Series C**

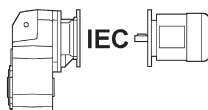
**Series A**

**Series F**

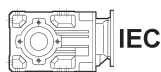
**Series S**



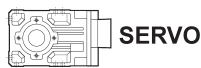
Gearmotor with compact motor.



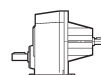
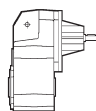
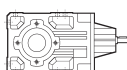
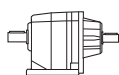
Gearmotor with IEC motor.



Gear unit with IEC motor interface.



Gear unit with servomotor input adapter.




Speed reducer with solid input shaft.




## 2 ALLOWED TEMPERATURE LIMITS

Symbols	Description / Condition	Value (*)	
		Synthetic Oil	Mineral Oil
$t_a$	Ambient temperature		
$t_{au \text{ min}}$	Minimum operating ambient temperature	-30°C	-10°C
$t_{au \text{ Max}}$	Maximum operating ambient temperature	+50°C	+40°C
$t_{as \text{ min}}$	Minimum storage ambient temperature	-40°C	-10°C
$t_{as \text{ Max}}$	Maximum storage ambient temperature	+50°C	+50°C
$t_s$	Surface temperature		
$t_{s \text{ min}}$	Minimum gearbox surface temperature starting with partial load (#)	-25°C	-10°C
$t_{sc \text{ min}}$	Minimum gearbox surface temperature starting with full load	-10°C	-5°C
$t_{s \text{ Max}}$	Maximum casing surface temperature during continuous operation (measured next to the gearbox input)	+100°C	+100°C (@)
$t_o$	Oil temperature		
$t_{o \text{ Max}}$	Maximum oil temperature during continuous operation	+95°C	+95°C (@)

(\*) = Refer to the table "Selection of the optimal oil viscosity" for further information about minimum and maximum values of different oil viscosity. For values of  $t_a < -20^\circ\text{C}$  and  $t_s, t_o > 80^\circ\text{C}$ , choose (as permitted in the product configuration stage) the sealing type of the most suitable material to the type of application. If needed contact Bonfiglioli Technical Service. 

(@) = Continuous operation it is not advised if  $t_s$  and  $t_o$  range is  $80^\circ\text{C}$  to  $95^\circ\text{C}$ .

(#) = For full load start-up it is recommended to ramp-up and provide for greater absorption of the motor. If needed, contact Bonfiglioli Technical Service. 



## 3 TORQUE

### 3.1 Rated torque $M_{n2}$ [Nm]

The torque that can be transmitted continuously through the output shaft, with the gear unit operated under a service factor  $f_s = 1$ .

Rating is speed sensitive.

### 3.2 Required torque $M_{r2}$ [Nm]

The torque demand based on application requirement.

It must always be equal to or less than torque  $M_{n2}$  the gearbox under study is rated for.

### 3.3 Calculated torque $M_{c2}$ [Nm]

Computational torque value to be used when selecting the gearbox. It is calculated considering the required torque  $M_{r2}$  and service factor  $f_s$ , as per the equation here after:

$$M_{c2} = M_{r2} \cdot f_s < M_{n2} \quad (1)$$

## 4 POWER

### 4.1 Rated power $P_{n1}$ [kW]

In the gearbox selection charts this is the power applicable to input shaft, based on input speed  $n_1$  and corresponding to service factor  $f_s = 1$ .





## 5 THERMAL CAPACITY $P_t$ [kW]


$P_t$  is the power that can be transmitted through the gear unit, under a continuous duty and an ambient temperature of 20 °C, without resulting into damage of the inner parts or degradation of the lubricant properties. Refer to chart (A1) for specific kW ratings. In case of intermittent duty, or an operating ambient temperature other than the rated 20°C, the  $P_t$  value should be adjusted through the factor  $f_t$ , obtained from chart (A2), as per the following equation:  $P_t' = P_t \times f_t$


Gear units featuring more than 2 reductions and/or a gear ratio greater than  $i = 45$  do not normally require the thermal limit to be checked as in these cases the thermal rating usually exceeds the mechanical rating.

(A 1)

$P_t$ [kW] 20 °C		
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$
<b>C 05 2</b>	—	—
<b>C 12 2</b>	—	—
<b>C 22 2</b>	—	—
<b>C 32 2</b>	—	4.5
<b>C 36 2</b>	6.5	5.0
<b>C 41 2</b>	8.0	6.0
<b>C 51 2</b>	11.0	7.8
<b>C 61 2</b>	14.0	10.0
<b>C 70 2</b>	21	16.0
<b>C 80 2</b>	32	24
<b>C 90 2</b>	43	32
<b>C 100 2</b>	59	42

$P_t$ [kW] 20 °C		
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$
<b>A 05 2</b>	2.0	1.5
<b>A 10 2</b>	2.1	1.5
<b>A 20 2</b>	6.0	5.4
<b>A 30 2</b>	8.0	6.6
<b>A 35 2</b>	9.5	8.2
<b>A 41 2</b>	11.5	9.6
<b>A 50 2</b>	20	18.0
<b>A 55 2</b>	21	18.0
<b>A 60 2</b>	27	23
<b>A 70 3</b>	31	24
<b>A 80 3</b>	44	33
<b>A 90 3</b>	64	48

$P_t$ [kW] 20 °C		
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$
<b>F 10 2</b>	3.8	2.7
<b>F 20 2</b>	9.1	6.5
<b>F 25 2</b>	10.2	7.4
<b>F 31 2</b>	11.7	8.5
<b>F 41 2</b>	14.3	10.4
<b>F 51 2</b>	21.5	15.0
<b>F 60 3</b>	26.0	18.9
<b>F 70 3</b>	36.4	26.0
<b>F 80 3</b>	52	36
<b>F 90 3</b>	75	53

$P_t$ [kW] 20 °C		
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$
<b>S 10 1</b>	5.5	4.9
<b>S 20 1</b>	7.8	7.2
<b>S 30 1</b>	10.0	9.1
<b>S 40 1</b>	15.6	14.3
<b>S 50 1</b>	21	18.9





(A 2)

		$f_t$			
$t_a$ [°C]	Continuous duty	Intermittent duty			
		Degree of intermittence [I]			
		80%	60%	40%	20%
40	0.80	1.1	1.3	1.5	1.6
30	0.85	1.3	1.5	1.6	1.8
20	1.0	1.5	1.6	1.8	2.0
10	1.15	1.6	1.8	2.0	2.3

Where cyclic duration factor (I)% is the relationship of operating time under load  $t_f$  to total time ( $t_f + t_r$ ) expressed as a percentage.

$$I = \frac{t_f}{t_f + t_r} \cdot 100 \quad (2)$$

The condition to be verified is:

$$P_{r1} \leq P_t \times f_t \quad (3)$$















## 6 EFFICIENCY

### 6.1 Dynamic efficiency $\eta_d$

Obtained from the relationship of delivered power  $P_2$  to input power  $P_1$ , according to the following equation:

$$\eta_d = \frac{P_2}{P_1} \cdot 100 \quad [\%] \quad (4)$$

(A 3)

	 2 x	 3 x	 4 x		 2 x	 3 x	 4 x
$\eta_d$	95%	93%	90%	$\eta_d$	94%	91%	89%
	 2 x	 3 x	 4 x		 1 x		
$\eta_d$	95%	93%	90%	$\eta_d$	98%		



## 7 GEAR RATIO $i$

The value for the gear ratio is referred to with the letter [ $i$ ] and calculated through the relationship of the input speed  $n_1$  to the output speed  $n_2$ :

$$i = \frac{n_1}{n_2} \quad (5)$$

The gear ratio is usually a decimal number which in this catalogue is truncated at one digit after the comma (no decimals for  $i > 1000$ ).

If interested in knowing the exact value see also chapters "EXACT RATIOS".

## 8 ANGULAR VELOCITY

### 8.1 Input speed $n_1$ [min<sup>-1</sup>]

The speed is related to the prime mover selected. Catalogue values refer to speed of either single or double speed motors that are common in the industry.

If the gearbox is driven by an external transmission it is recommended to operate it with a speed of 1400 min<sup>-1</sup>, or lower, in order to optimise operating conditions and lifetime.

Higher input speeds are permitted, however in this case consider that torque rating  $M_{n2}$  is affected adversely.

Please consult a Bonfiglioli representative.

### 8.2 Output speed $n_2$ [min<sup>-1</sup>]

The output speed value  $n_2$  is calculated from the relationship of input speed  $n_1$  to the gear ratio  $i$ , as per the following equation:

$$n_2 = \frac{n_1}{i} \quad (6)$$

## 9 MOMENT OF INERTIA $J_r$ [Kgm<sup>2</sup>]

Moments of inertia specified in the catalogue refer to the gear unit input axis.

They are therefore related to motor speed, in the case of direct motor mounting.



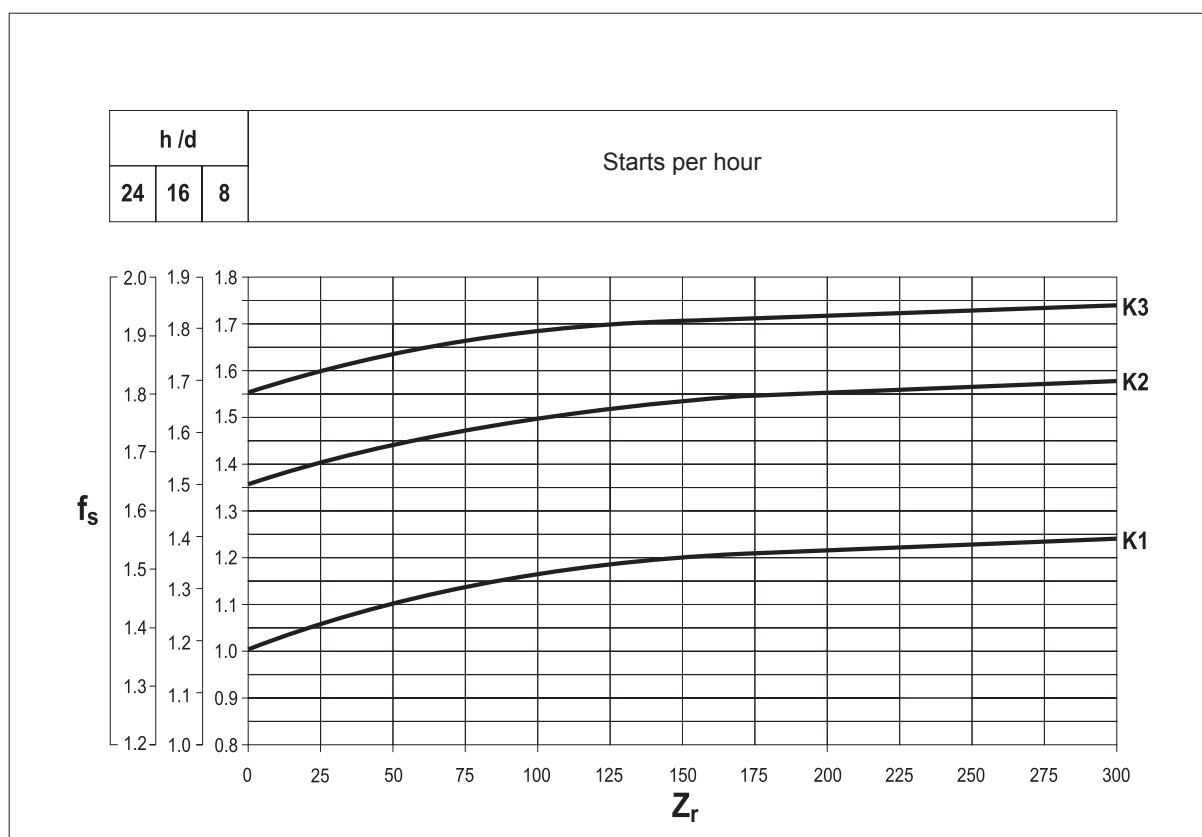
## 10 SERVICE FACTOR $f_s$

This factor is the numeric value describing reducer service duty. It takes into consideration, with unavoidable approximation, daily operating conditions, load variations and overloads connected with reducer application.

In the graph (A4) below, after selecting proper “daily working hours” column, the service factor is given by intersecting the number of starts per hour and one of the K1, K2 or K3 curves.

$K$  curves are linked with the service nature (approximately: uniform, medium and heavy) through the acceleration factor of masses  $K$ , connected to the ratio between driven masses and motor inertia values. Regardless of the value given for the service factor, we would like to remind that in some applications, which for example involve lifting of parts, failure of the reducer may expose the operators to the risk of injuries. If in doubt, please contact our Technical Service Department.

(A 4)



### 10.1 Acceleration factor of masses $K$

This parameter serves for selecting the right curve for the type of load.

The value is given by the following ratio:

(A 5)

$K = \frac{J_c}{J_m}$	$J_c =$ Moment of inertia of driven masses referred to motor drive shaft	<b><math>K \leq 0,25</math></b>	→ <b>K1</b>	Uniform load
	→	<b><math>0,25 &lt; K \leq 3</math></b>	→ <b>K2</b>	Moderate shock load
	$J_m =$ Motor moment of inertia	<b><math>3 &lt; K \leq 10</math></b>	→ <b>K3</b>	Heavy shock load
		<b><math>K &gt; 10</math></b>	→	Please consult Bonfiglioli Technical Service



## 11 LUBRICATION

Life lubricated gearboxes do not require any periodical oil changes.

Refer to the User's Manual available at [www.bonfiglioli.com](http://www.bonfiglioli.com) for indications about checking the oil level and its replacement for other types of gearboxes.

Do not mix mineral oils with synthetic oils and/or different brands.

However, oil level should be checked at regular intervals and topped up as required.

Check monthly if unit operates under intermittent duty, more frequently if duty is continuous.

### 11.1 Selection of the optimal oil viscosity (data relating to Shell Oils)

(A 6)

		Operating ambient temperature [C°]																			
		-40	-35	-30	-25	-20	-15	-10	-5	0	+5	+10	+15	+20	+25	+30	+35	+40	+45	+50	
		suitability seals check				standard seals provided in the catalog															
Splash lubrication	Mineral oil	150 VG							*												
		220 VG	⊘						*											☎	
		320 VG	⊘	☎						*											
		460 VG	⊘	☎							*										
	Synthetic oil (PAG)	150 VG								*											☎
		220 VG	⊘							*											
		320 VG	⊘	☎						*											
	Synthetic oil (PAO)	150 VG								*											☎
		220 VG	⊘							*											
		320 VG	⊘	☎						*											

Recommended operating limits

Allowed operating limits. ☎

Forbidden operating limits.

\* = It is recommended to ramp-up and to provide for greater absorption of the motor.

If needed and in the event of impulse loads, contact Bonfiglioli Technical Service. ☎



## 11.2 Lubrication for C, A, F, S series gearboxes

The inner parts of Bonfiglioli gear units are oil-bath and splash lubricated.

Frame sizes C 05...C 41, A 05...A 41, F 10...F 41, S 10...S 40 are supplied by the factory, or by the authorized dealers, already filled with oil.

Unless otherwise specified, units size C 51, A 50, F 51, S 50 and larger are usually supplied unlubricated at it will be the customer care to fill them with oil prior to putting them into operation. In both cases, depending on the version, prior to putting the gear unit into operation may need to replace the closed plug used for transportation purposes with breather plug supplied with.

For the reference charts of oil plugs placement and quantity of lubricant, refer to the Installation, Operation and Maintenance Manual (available on [www.bonfiglioli.com](http://www.bonfiglioli.com)).

The “long life” polyglycol-based lubricant supplied by the factory, in the absence of contamination, does not require periodical oil changes throughout the lifetime of the gear unit.

## 11.3 Lubrication for A-EX (Atex) gearboxes

The inner parts of Bonfiglioli gear units are oil-bath and splash lubricated.

The ATEX version gear unit (with some exceptions see Table below) are factory-charged with “long-life” lubricant SHELL OMALA S4 WE 320 in the quantity suitable for the mounting position specified in the order.

(A 7)

A 05	A 10	A 20	A 30	A 35	A 41	A 50	A 55 <sup>1)</sup>	A 60 2 <sup>2)</sup>	A 60 3 <sup>1)</sup>	A 60 4 <sup>1)</sup>	A 70 <sup>1)</sup>	A 80 <sup>1)</sup>	A 90 <sup>1)</sup>
------	------	------	------	------	------	------	--------------------	----------------------	----------------------	----------------------	--------------------	--------------------	--------------------

■ Gearbox pre-filled with a synthetic “for life” lubricant

■ Gearbox pre-filled with a synthetic lubricant

<sup>(1)</sup> Without lubricant for mounting positions B6 and B7

<sup>(2)</sup> Without lubricant for mounting positions B6, B7 and VB

Gearboxes are fitted with sealed filler plugs for transport purposes. Depending on version, they may be supplied with a vented plug which the user must fit before putting the gearbox into service.

Refer to the installation, operation and maintenance manual to replace the filler plug correctly. (These manuals are available in a number of languages and can be downloaded in pdf format from the website [www.bonfiglioli.com](http://www.bonfiglioli.com).)

When a gearbox is supplied with no lubricant, it is recommended to fill it with a lubricant of a similar type, selected from those listed in its installation, operation and maintenance manual.



## 12 SELECTION

Some fundamental data are necessary to assist the correct selection of a gearbox or gearmotor. The table below (A7) briefly sums up this information.

To simplify selection, fill in the table and send a copy to our Technical Service which will select the most suitable drive unit for your application.

(A 8)

Type of application .....	<b>A<sub>c1</sub></b> Thrust load on input shaft (+/-)( <sup>***</sup> ) .....	N
<b>P<sub>r2</sub></b> Output power at n <sub>2</sub> max .....	<b>J<sub>c</sub></b> Moment of inertia of the load .....	Kgm <sup>2</sup>
<b>P<sub>r2</sub>'</b> Output power at n <sub>2</sub> min .....	<b>t<sub>a</sub></b> Ambient temperature .....	C°
<b>M<sub>r2</sub></b> Output torque at n <sub>2</sub> max .....	Altitude above sea level .....	m
<b>n<sub>2</sub></b> Max.output speed .....	Duty type to IEC norms S...../.....%	
<b>n<sub>2</sub>'</b> Min.output speed .....	<b>Z</b> Starting frequency .....	1/h
<b>n<sub>1</sub></b> Max.input speed .....	Motor voltage .....	V
<b>n<sub>1</sub>'</b> Min.input speed .....	Brake voltage .....	V
<b>R<sub>c2</sub></b> Radial load on output shaft .....	Frequency .....	Hz
<b>x<sub>2</sub></b> Load application distance (*) .....	<b>M<sub>b</sub></b> Brake torque .....	Nm
Load orientation at output .....	Motor protection degree IP.....	
Output shaft rotation direction (CW-CCW) (**)	Insulation class .....	
<b>R<sub>c1</sub></b> Radial load on input shaft .....		
<b>x<sub>1</sub></b> Load application distance (*) .....		
Load orientation at input .....		
Input shaft rotation direction (CW-CCW) (**)		
<b>A<sub>c2</sub></b> Thrust load on output shaft (+/-)( <sup>***</sup> ) .....		N

(\*) Distance x1-2 is between force application point and shaft shoulder (if not indicated the force acting at mid-point of the shaft extension will be considered).

(\*\*) CW = clockwise;  
CCW = counterclockwise

(\*\*\*) + = push  
- = pull



For the selection of Series A gear units in ATEX configuration, see also the specific chapter on page 310.

## 12.1 Selection of a gearmotor

a) Determine service factor  $f_s$  according to type of duty (factor K), number of starts per hour  $Z_r$  and hours of operation.

b) From values of torque  $M_{r2}$ , speed  $n_2$  and efficiency  $\eta_d$  the required input power can be calculated from the equation:

$$P_{r1} = \frac{M_{r2} \cdot n_2}{9550 \cdot \eta_d} \text{ [kW]} \quad (7)$$

Value of  $\eta_d$  for the captioned gear unit can be sorted out from paragraph 6.

c) Consult the gearmotor selection charts and locate the table corresponding to normalised power  $P_n$ :

$$P_n \geq P_{r1} \quad (8)$$

Unless otherwise specified, power  $P_n$  of motors indicated in the catalogue refers to continuous duty S1. For motors used in conditions other than S1, the type of duty required by reference to CEI 2-3/IEC 34-1 Standards must be mentioned.

For duties from S2 to S8 in particular and for motor frame 132 or smaller, extra power output can be obtained with respect to continuous duty.

Accordingly the following condition must be satisfied:

$$P_n \geq \frac{P_{r1}}{f_m} \quad (9)$$

The adjusting factor  $f_m$  can be obtained from table (A9).

## 12.2 Intermittence ratio

$$I = \frac{t_f}{t_f + t_r} \cdot 100 \quad (10)$$

$t_f$  = work time at constant load

$t_r$  = rest time



(A 9)

	DUTY						Please contact us
	S2			S3*			
	Cycle duration [min]			Cyclic duration factor (I)			
	10	30	60	25%	40%	60%	
$f_m$	1.35	1.15	1.05	1.25	1.15	1.1	

\* Cycle duration, in any event, must be 10 minutes or less. If it is longer, please contact our Technical Service.

Next, refer to the appropriate  $P_n$  section within the gearmotor selection charts and locate the unit that features the desired output speed  $n_2$ , or closest to, along with a safety factor  $S$  that meets or exceeds the applicable service factor  $f_s$ .

The safety factor is so defined:

$$S = \frac{M_{n2}}{M_2} = \frac{P_{n1}}{P_1} \quad (11)$$

As standard, gear and motor combinations are implemented with 2, 4 and 6 pole motors, 50 Hz supplied.

Should the drive speed be different from 2800, 1400 or 900 min<sup>-1</sup>, base the selection on the gear unit nominal rating.

### 12.3 Selection of speed reducer and gearbox with IEC motor adapter

a) Determine service factor  $f_s$ .

b) Assuming the required output torque for the application  $M_{r2}$  is known, the calculation torque can be then defined as:

$$M_{c2} = M_{r2} \cdot f_s \quad (12)$$

c) The gear ratio is calculated according to requested output speed  $n_2$  and drive speed  $n_1$ :

$$i = \frac{n_1}{n_2} \quad (13)$$





Once values for  $M_{c2}$  and  $i$  are known consult the rating charts under the appropriate input speed  $n_1$  and locate the gear unit that features the gear ratio closest to  $[i]$  and at same time offers a rated torque value  $M_{n2}$  so that:

$$M_{n2} \geq M_{c2} \quad (14)$$

If a IEC normalized motor must be fitted check geometrical compatibility with the gear unit at paragraph "MOTOR AVAILABILITY".

### 13 VERIFICATION

After the selection of the speed reducer, or gearmotor, is complete it is recommended that the following verifications are conducted:

a) Thermal capacity

Make sure that the thermal capacity of the gearbox is equal to or greater than the power required by the application according to equation (3) on page 7.

If this condition is not verified, select a larger gearbox or apply a forced cooling system.

b) Maximum torque

The maximum torque (intended as instantaneous peak load) applicable to the gearbox must not, in general, exceed 200% of rated torque  $M_{n2}$ . Therefore, check that this limit is not exceeded, using suitable torque limiting devices, if necessary.

For three-phase double speed motors, it is important to pay attention to the switching torque which is generated when switching from high to low speed, because it could be significantly higher than maximum torque.

A simple, economical way to minimize overloading is to power only two phases of the motor during switch-over (power-up time on two phases can be controlled with a time-relay):

$$M_{g2} = 0.5 \cdot M_{g3}$$

$M_{g2}$  = Switching torque with two-phase power-up

$M_{g3}$  = Switching torque with three-phase power-up

We recommend, in any event, to contact our Technical Service.

c) Radial loads

Make sure that radial forces applying on input and/or output shaft are within permittend catalogue values.

If they were higher consider designing a different bearing arrangement before switching to a larger gear unit.

Catalogue values for rated overhung loads refer to mid-point of shaft under study.

Should application point of the overhung load be localised further out the revised loading capability must be adjusted as per instructions given in this manual.

Please refer to the paragraphs relating to radial loads.



d) Thrust loads

Actual thrust load must be found within 20% of the equivalent overhung load capacity.

Should an extremely high, or a combination of radial and axial load apply, consult Bonfiglioli Technical Service.

e) Starts per hour

For duties featuring a high number of switches the actual starting capability in loaded condition [Z] must be calculated.

Actual number of starts per hour must be lower than value so calculated.

## 14 INSTALLATION

The following installation instructions must be observed:

a) Make sure that the gearbox is correctly secured to avoid vibrations.

If shocks or overloads are expected, install hydraulic couplings, clutches, torque limiters, etc.

b) Before being paint coated, the machined surfaces and the outer face of the oil seals must be protected to prevent paint drying out the rubber and jeopardising the sealing function.

c) Parts fitted on the gearbox output shaft must be machined to ISO H7 tolerance to prevent interference fits that could damage the gearbox itself.

Further, to mount or remove such parts, use suitable pullers or extraction devices using the tapped hole located at the top of the shaft extension.

d) Mating surfaces must be cleaned and treated with suitable protective products before mounting to avoid oxidation and, as a result, seizure of parts.

e) Prior to putting the gear unit into operation make sure that the equipment that incorporates the same complies with the current revision of the Machines Directive 2006/42/EC.

f) Before starting up the machine, make sure that oil level conforms to the mounting position specified for the gear unit and the viscosity is adequate (refer to the User's Manual available at [www.bonfiglioli.com](http://www.bonfiglioli.com)).

g) For outdoor installation provide adequate guards in order to protect the drive from rainfalls as well as direct sun radiation.



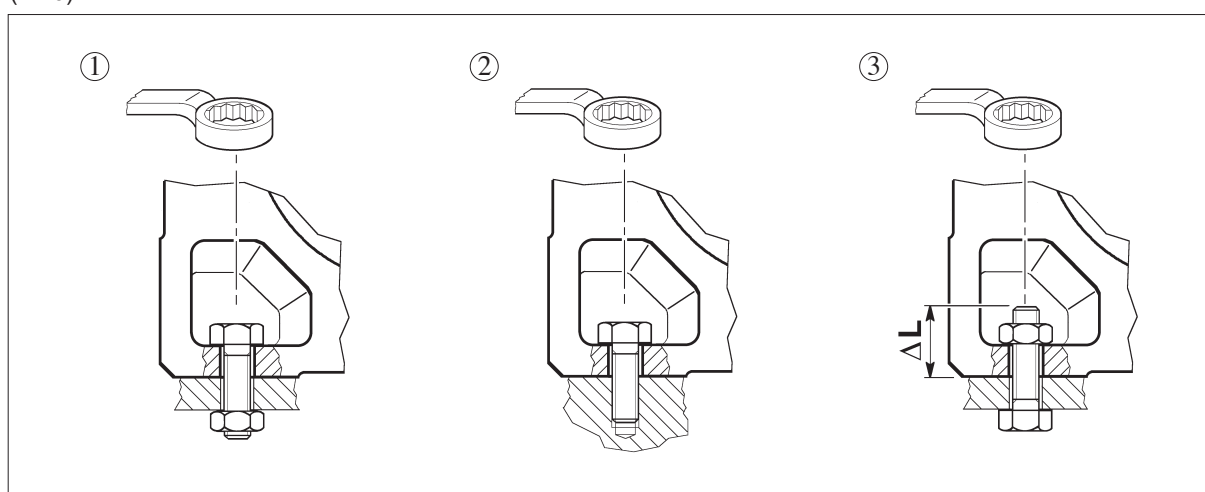
## 14.1 Fitting servomotors to gear heads featuring a clamping device (adapter type SC)

Turn the clamping device until its slot is aligned to those that are milled on the reducer input shaft. If the motor shaft features a key, this must be removed and the relevant keyway must also be aligned with the slots of clamping device and gear head input shaft, prior to inserting the servomotor into site. The keyway must be sitting on the same side as the locking screw. Tighten the bolts that hold the servomotor to the gear head, insert a torque wrench through the hole on the side of the flange and tighten the locking screw of the clamping device to the torque that is specified in the drawing section for the given adapter.

## 15 INSTALLATION INSTRUCTIONS

Schemes in table (A10) show the 3 possible installation patterns for A gear units to the machine frame. For each of these circumstances, table (A11) indicates exagonal head screw sizes to be used. Besides, to facilitate the installation, we suggest to use a wrench of the type shown in table (A10).

(A 10)



(A 11)

	Bolt type			
	①	②	③	ΔL (mm)
<b>A 05</b>	M8x22	M8x20	M8x ...	22
<b>A 10</b>	M8x25	M8x20	M8x ...	20
<b>A 20</b>	M8x25	M8x20	M8x ...	20
<b>A 30</b>	M10x30	M10x25	M10x ...	25
<b>A 35</b>	M10x30	M10x25	M10x ...	25
<b>A 41</b>	M12x35	M12x30	M12x ...	30

	Bolt type			
	①	②	③	ΔL (mm)
<b>A 50</b>	M14x45	M14x40	M14x ...	35
<b>A 55</b>	M14x40	M14x40	M14x ...	35
<b>A 60</b>	M16x50	M16x45	M16x ...	40
<b>A 70</b>	M20x60	M20x55	M20x ...	45
<b>A 80</b>	M24x70	M24x65	M24x ...	55
<b>A 90</b>	M24x90	M24x80	M24x ...	65



## 16 STORAGE

Observe the following instructions to ensure correct storage of the products:

- a) Do not store outdoors, in areas exposed to weather or with excessive humidity.
- b) Always place boards, wood or other material between the products and the floor. The gearboxes should not have direct contact with the floor.
- c) In case of long-term storage all machined surfaces such as flanges, shafts and couplings must be coated with a suitable rust inhibiting product (Mobilarma 248 or equivalent).

Furthermore gear units must be placed with the fill plug in the highest position and filled up with oil. Before putting the units into operation the appropriate quantity, and type, of oil must be restored (refer to the User's Manual available at [www.bonfiglioli.com](http://www.bonfiglioli.com)).

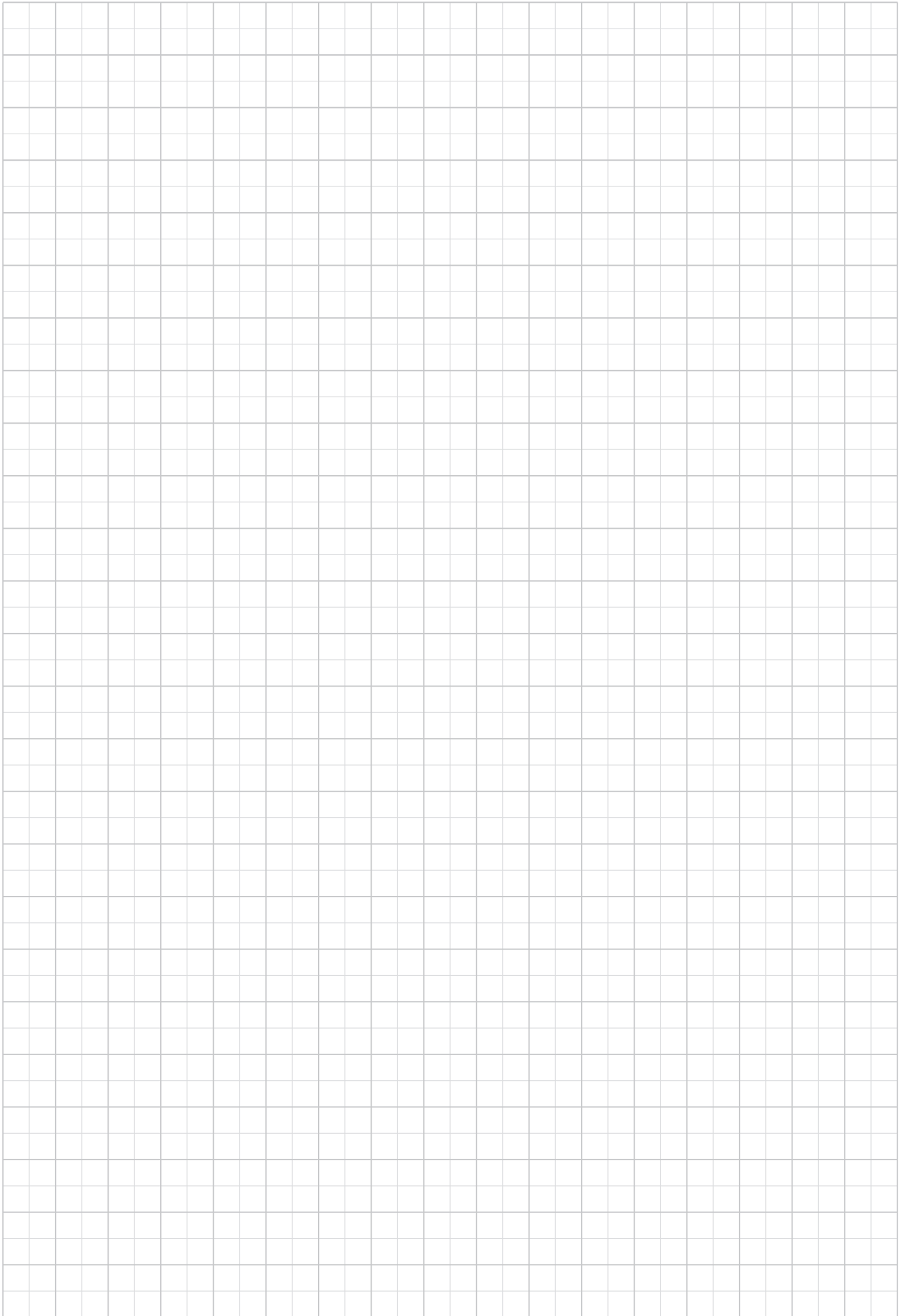
## 17 CONDITIONS OF SUPPLY

Gear units are supplied as follows:

- a) configured for installation in the mounting position specified when ordering;
- b) tested to manufacturer specifications;
- c) mating machined surfaces come unpainted;
- d) nuts and bolts for mounting motors are provided;
- e) shafts are protected during transportation by plastic caps;
- f) supplied with lifting lug (where applicable).

## 18 PAINT SPECIFICATIONS

Specifications for paint applied to gearboxes (where applicable) may be obtained from the branches or dealers that supplied the units.





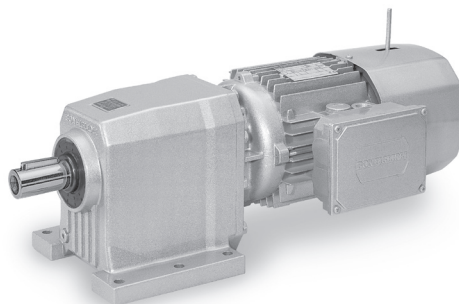
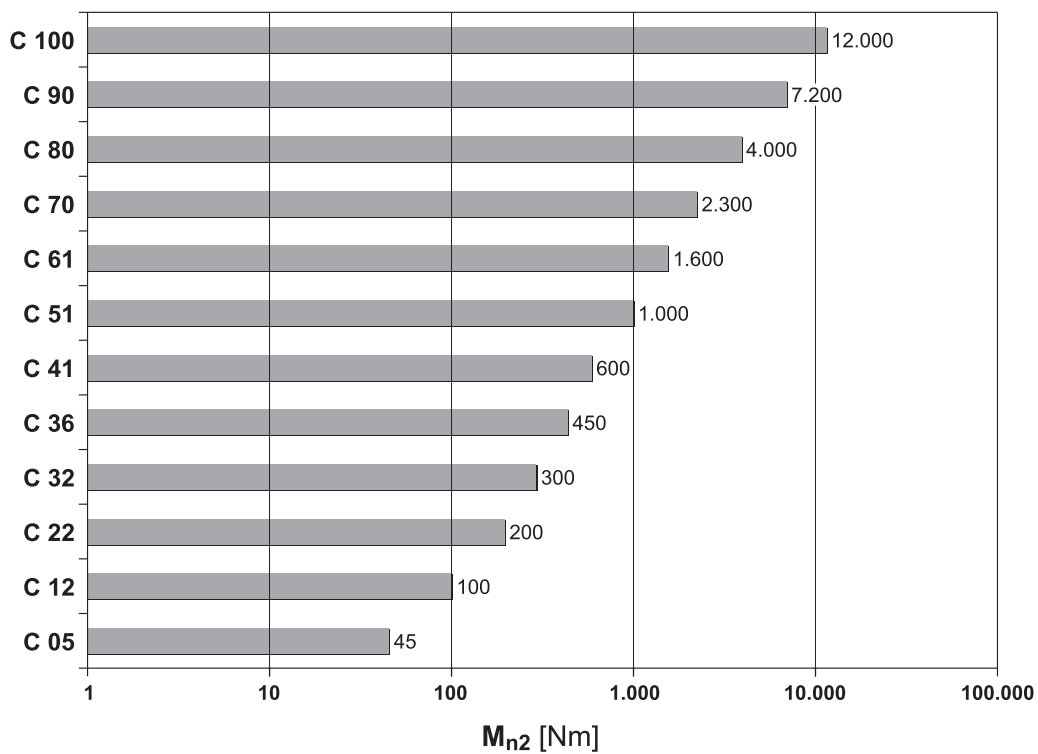
## HELICAL GEAR UNITS SERIES C

### 19 DESIGN FEATURES

The main design characteristics are:

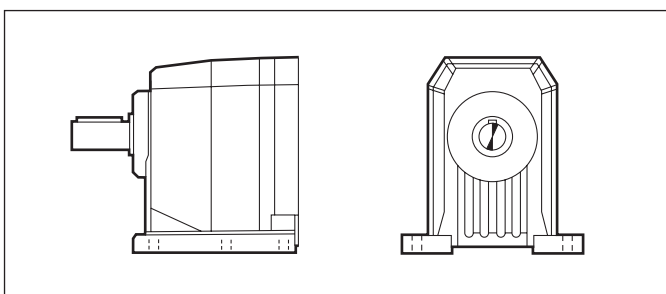
- modularity
  - space effective
  - universal mounting
  - high efficiency
  - quiet operation
  - gears in hardened and case-hardened steel
  - bare aluminium housing for sizes 05, 12, 22 and 32.
- Larger frame sizes come in sturdy cast iron housings
- input and output shafts from high grade steel.

(B 12)





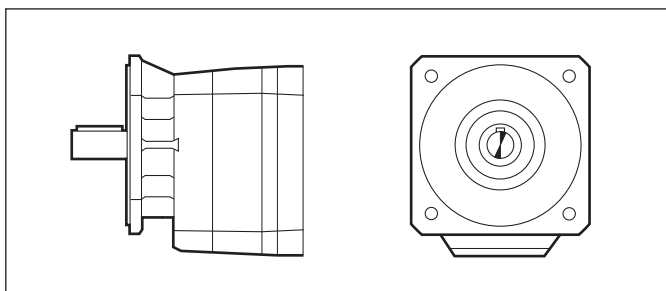
## 20 VERSIONS



**P**

Foot mount

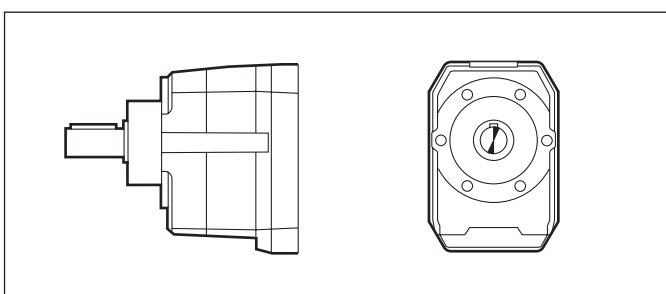
C 05 ... C 100



**F**

Flange mount

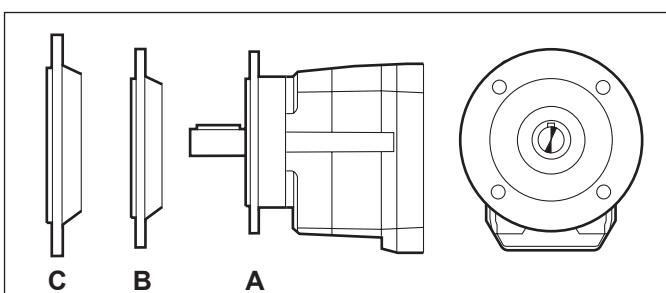
C 05 ... C 32  
C 70 ... C 100



**U**

UNIBOX- universal housing

C 12 ... C 61



**UF**

UNIBOX bolt-on flange

C 12 ... C 61



**21 DESIGNATION**

GEAR UNIT

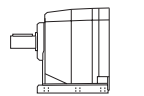
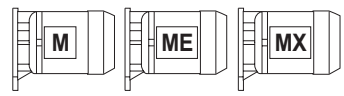
**C 32 2 F 52.4 S1 B5** .....

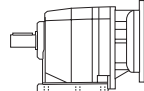
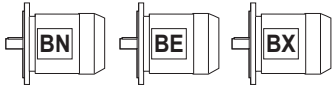
OPTIONS

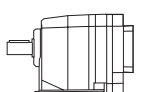
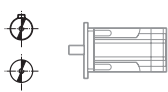
MOUNTING POSITION

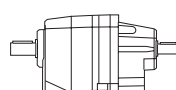
C...P: **B3** (Standard), B6, B7, B8, V5, V6  
 C...F/U/UF: **B5** (Standard), B51, B53, B52, V1, V3

INPUT CONFIGURATION

 **S05 ... S5** 

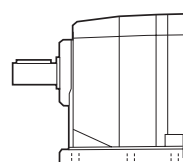
 **IEC\_ P63 ... P180** 

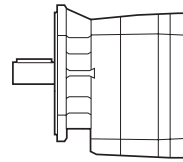
 **SK\_**   
**SC\_**

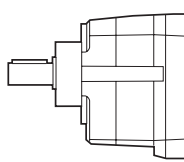
 **HS**

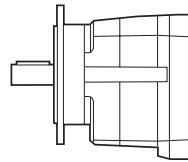
GEAR RATIO

VERSION

 **P**  
(C05...C100)

 **F**  
(C05...C32)  
(C70...C100)

 **U**  
(C12...C61)

 **UFA**  
**UFB**  
**UFC**  
(C12...C61)

REDUCTIONS  
**2, 3, 4**

GEAR FRAME SIZE  
**05, 12, 22, 32, 36, 41, 51, 61, 70, 80, 90, 100**

TYPE: **C** = helical in-line gear units





MOTOR

BRAKE

**M 1LA 4 230/400-50 IP54 CLF ..... W FD 7.5 R SB 220 SA .....**

OPTIONS

BRAKE  
SUPPLY

RECTIFIER TYPE  
AC/DC  
**NB, SB, NBR, SBR**

BRAKE HAND RELEASE  
**R, RM**

BRAKE TORQUE

BRAKE TYPE  
**FD** (d.c. brake)  
**FA** (a.c. brake)

TERMINAL BOX POSITION  
**W** (default), **N, E, S**

MOTOR MOUNTING  
— (compact motor)  
**B5** (IEC - motor)

INSULATION CLASS  
**CL F** standard  
**CL H** option

DEGREE OF PROTECTION  
**IP55** standard (IP54 - brake motor)

VOLTAGE - FREQUENCY

POLE NUMBER  
**2, 4, 6, 2/4, 2/6, 2/8, 2/12, 4/6, 4/8**

MOTOR SIZE  
**0B ... 5LA** (compact motor)  
**63A ... 280M** (IEC motor)

MOTOR TYPE

**MX**= compact 3-phase, class IE3  
**BX** = IEC 3-phase, class IE3

**ME**= compact 3-phase, class IE2  
**BE** = IEC 3-phase, class IE2

**M** = compact 3-phase  
**BN** = IEC 3-phase



## 21.1 Gearbox options

### SO

Gear units C05, C12, C22, C32, C36, C41, usually factory filled with oil, to be supplied unlubricated.

### LO

Gearboxes C51, C61, C70, C80, C90, C100 usually supplied without oil, to be supplied with synthetic oil currently used by BONFIGLIOLI RIDUTTORI and filled according to the mounting position specified.

### DL

The output shaft features a dual oil seal.

### DV

Dual oil seals on input shaft. (Only available for integral gearmotors).

### VV

Fluoro elastomer oil seal on input shaft.

### PV

Both input and output shafts feature Fluoro elastomer oil seals.

### RB

Gear units C12, C22, C32, C36, C41, C51 and C61, usually supplied with standard values of angular backlash, are, in this case, supplied with reduced angular backlash values.

The following table specifies the corresponding figures of angular backlash.

(B 13)

		standard		RB	
C 05	i =	5.5 ; 9.3 ; 15.6 ; 27.1	6.7 ; 7.4 ; 11.2 ; 12.5 ; 18.9 ; 21.0 ; 32.8_44.7		—
	φ [°]	34	29		
C 12	i =	2.8_6.2	7.6_66.2		2.8_6.2
	φ [°]	55	29		13
C 22	i =	2.7_6.1	7.1_261.0		2.7_6.1
	φ [°]	47	25		12
C 32	i =	2.9_6.3	7.2_274.7		2.9_6.3
	φ [°]	39	21		11
C 36	i =	2.7_5.8	6.8_19.0	22.1_848.5	2.7_5.8
	φ [°]	37	20	17	10
C 41 2	i =	2.7_6.0	6.4_44.8	—	2.7_6.0
	φ [°]	34	17	—	9
C 41 3/4	i =	—	—	28.5_855.5	—
	φ [°]	—	—	15	9
C 51 2	i =	2.6_5.6	7.0_57.0	—	2.6_5.6
	φ [°]	32	15	—	8
C 51 3/4	i =	—	—	21.8_884.9	—
	φ [°]	—	—	13	8
C 61 2	i =	2.8_6.0	6.7_38.0	—	2.8_6.0
	φ [°]	27	13	—	12
C 61 3/4	i =	—	—	26.8_796.1	—
	φ [°]	—	—	11	7
C 70	i =	4.6_34.7	41.3_1476		—
	φ [°]	18	20		
C 80	i =	5.6_39.1	43.5_1481		—
	φ [°]	16	18		
C 90	i =	5.2_35.1	39.4_1240		—
	φ [°]	16	18		
C 100	i =	4.9_29.6	34.3_1081		—
	φ [°]	14	16		

For the delivery timeframe contact the Bonfiglioli's sales network



## SURFACE PROTECTION

When no specific protection class is requested, the painted (ferrous) surfaces of gearboxes are protected to at least corrosivity class C2 (UNI EN ISO 12944-2). For improved resistance to atmospheric corrosion, gearboxes can be delivered with **C3** and **C4** surface protection, obtained by painting the complete gearbox.

(B 14)

<b>SURFACE PROTECTION</b>	Typical environments	Maximum surface temperature	Corrosivity class according to UNI EN ISO 12944-2
<b>C3</b>	Urban and industrial environments with up to 100% relative humidity (medium air pollution)	120°C	C3
<b>C4</b>	Industrial areas, coastal areas, chemical plant, with up to 100% relative humidity (high air pollution)	120°C	C4

Gearboxes with optional protection to class **C3** or **C4** are available in a choice of colours. If no specific colour is requested (see the “PAINTING” option) gearboxes are finished in RAL 7042. Gearboxes can also be supplied with surface protection for corrosivity class **C5** according to UNI EN ISO 12944-2. Contact our Technical Service for further details.

## PAINTING

Gearboxes with optional protection to class C3 or C4 are available in the colours listed in the following table.

(B 15)

<b>PAINTING</b>	Colour	RAL number
<b>RAL7042*</b>	Traffic Grey A	7042
<b>RAL5010</b>	Gentian Blue	5010
<b>RAL9005</b>	Jet Black	9005
<b>RAL9006</b>	White Aluminium	9006
<b>RAL9010</b>	Pure White	9010

\* Gearboxes are supplied in this standard colour if no other colour is specified.

NOTE – “PAINTING” options can only be specified in conjunction with “SURFACE PROTECTION” options.



## CERTIFICATES

### AC - Certificate of compliance

The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

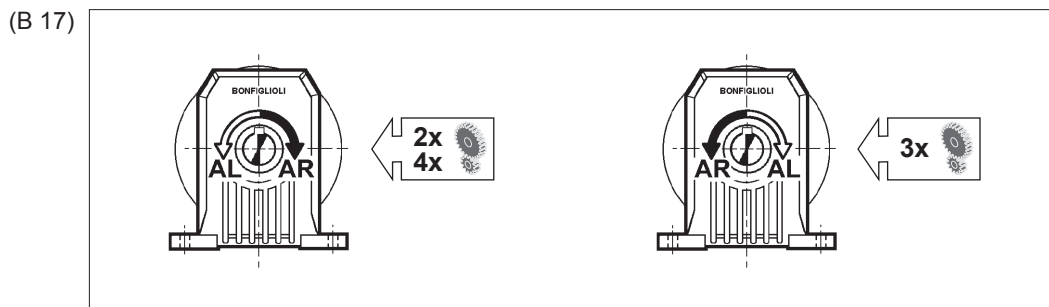
### CC - Inspection certificate

The document entails checking on order compliance, the visual inspection of external conditions and of mating dimensions. Checking on main functional parameters in unloaded conditions is also performed along with oil seal proofing, both in static and in running conditions. Units inspected are sampled within the shipping batch and marked individually.

## 21.2 Motor options

### AL, AR

A backstop device on the motor itself, as described in the electric motors section of this catalogue, is available for gearmotors with integral M, ME or MX Series motors. The following table shows the direction of free rotation of the gearbox, on the basis of which the correct option must be selected.



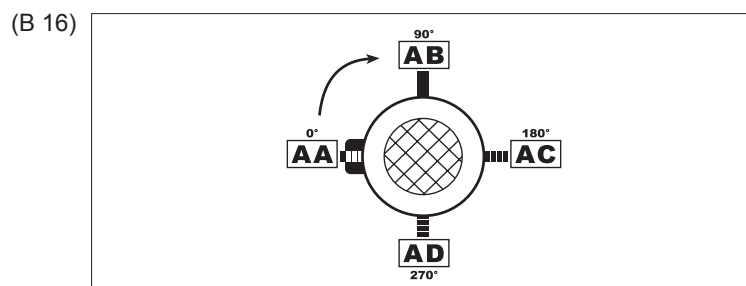
For further information on options, consult the electric motors section.

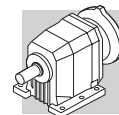
## 22 MOUNTING POSITION AND TERMINAL BOX ORIENTATION

Location of motor terminal box can be specified by viewing the motor from the fan side; standard location is shown in black (W).

### Angular position of the brake release lever.

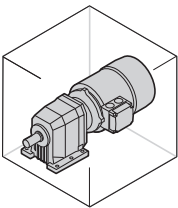
Unless otherwise specified, brake motors have the manual device side located, 90° apart from terminal box. Different angles can be specified through the relevant options available.



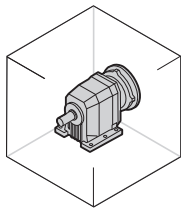


# C ... P

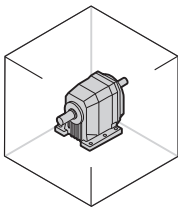
## B3



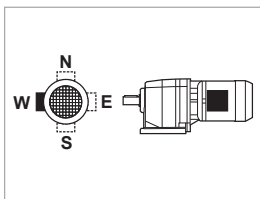
\_S



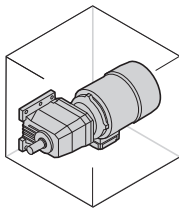
\_P(IEC) \_SK / \_SC



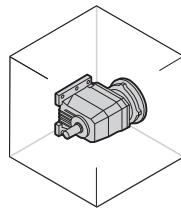
\_HS



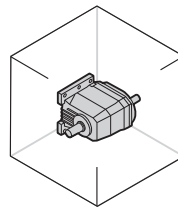
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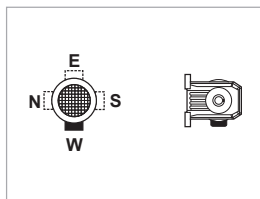
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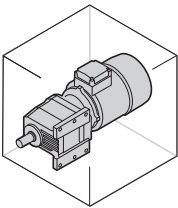
\_P(IEC) \_SK / \_SC



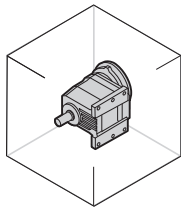
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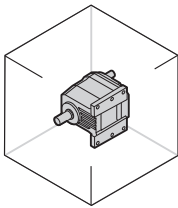
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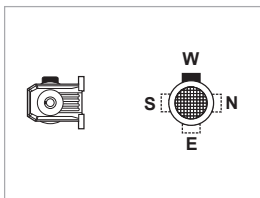
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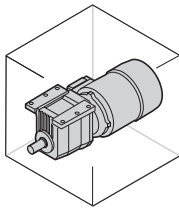
\_P(IEC) \_SK / \_SC



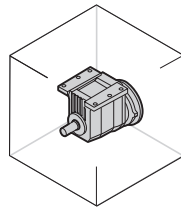
\_HS



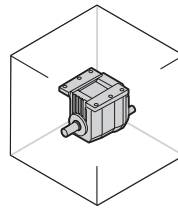
## B8



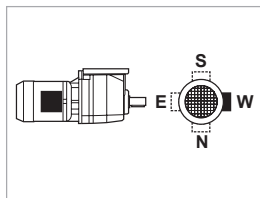
\_S



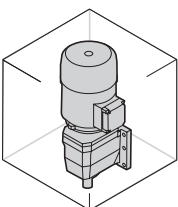
\_P(IEC) \_SK / \_SC



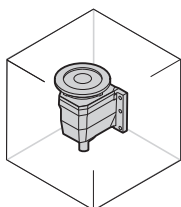
\_HS



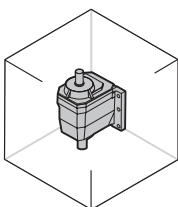
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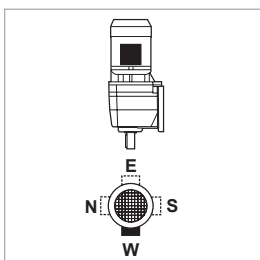
\_S



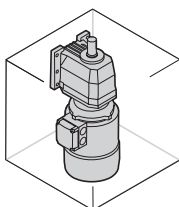
\_P(IEC) \_SK / \_SC



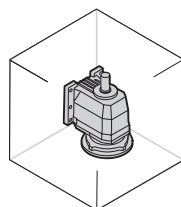
\_HS



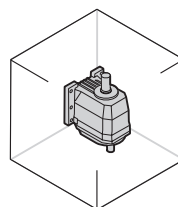
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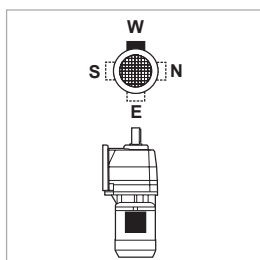
\_S



\_P(IEC) \_SK / \_SC



\_HS



W = Default

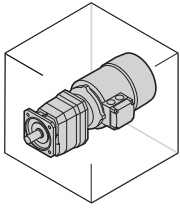


C ... F

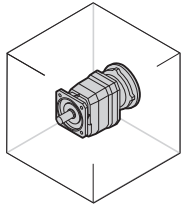
C ... U

C ... UF

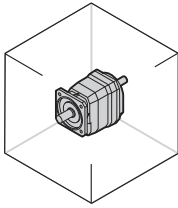
B5



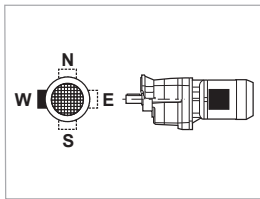
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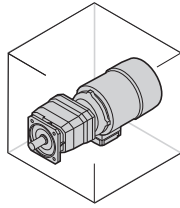
\_P(IEC) \_SK / \_SC



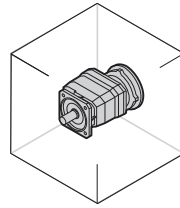
\_HS



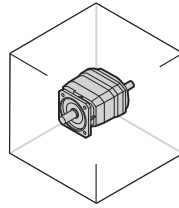
B51



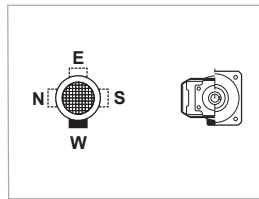
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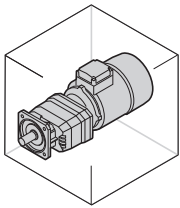
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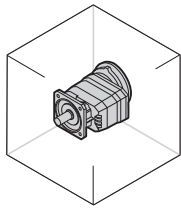
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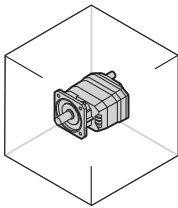
B53



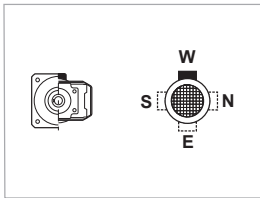
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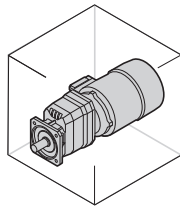
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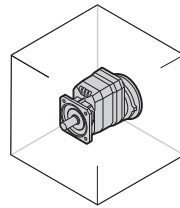
\_HS



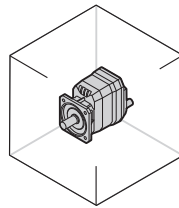
B52



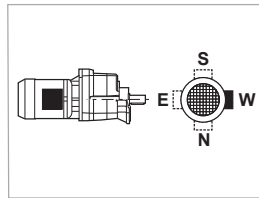
\_S



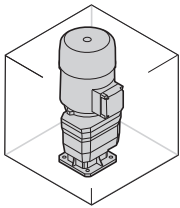
\_P(IEC) \_SK / \_SC



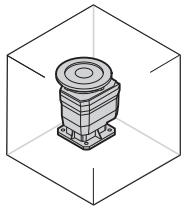
\_HS



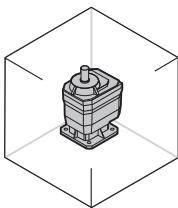
V1



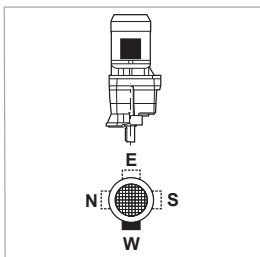
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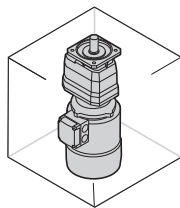
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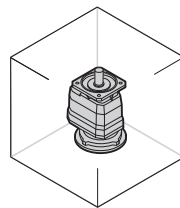
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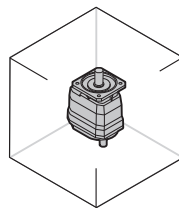
V3



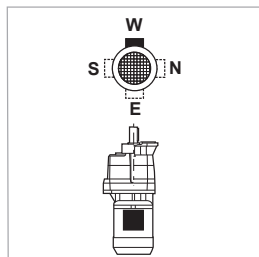
\_S



\_P(IEC) \_SK / \_SC



\_HS



W = Default



## 23 OVERHUNG LOADS

External transmissions keyed onto input and/or output shaft generate loads that act radially onto same shaft.

Resulting shaft loading must be compatible with both the bearing and the shaft capacity. Namely shaft loading ( $R_{c1}$  for input shaft,  $R_{c2}$  for output shaft), must be equal or lower than admissible overhung load capacity for shaft under study ( $R_{n1}$  for input shaft,  $R_{n2}$  for output shaft). OHL capability listed in the rating chart section.

In the formulas given below, index (1) applies to parameters relating to input shaft, whereas index (2) refers to output shaft.

The load generated by an external transmission can be calculated with close approximation by the following equations:

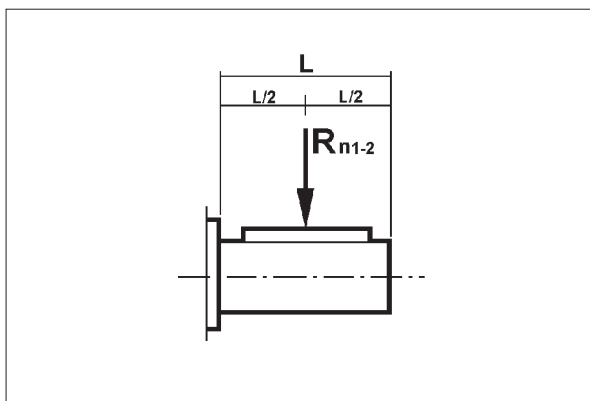
$$R_{c1} [N] = \frac{2000 \cdot M_1 [Nm] \cdot K_r}{d [mm]} \quad ; \quad R_{c2} [N] = \frac{2000 \cdot M_2 [Nm] \cdot K_r}{d [mm]} \quad (15)$$

(B 18)

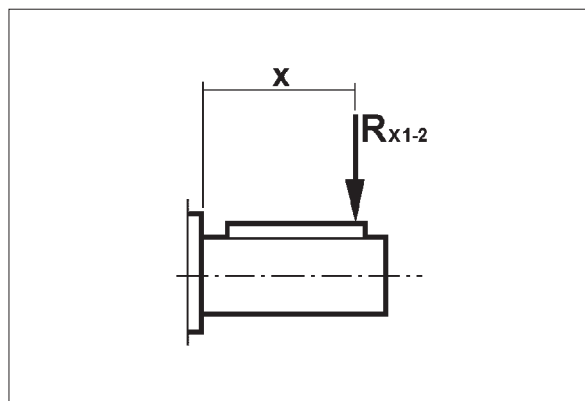
$M_1$ [Nm]	Torque applied to input shaft	$K_r = 1,25$	Gear transmission
$M_2$ [Nm]	Torque drawn at output shaft	$K_r = 1,5$	V-belt transmission
$d$ [mm]	Pitch diameter of element keyed onto shaft	$K_r = 2,0$	Flat belt transmission
$K_r = 1$	Chain transmission		

Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(B 19)



(B 20)





### a) Load applied at midpoint of shaft, tab. (B19)

A comparison of shaft loading with catalogue OHL ratings should verify the following condition:

$$R_{c1} \leq R_{n1} \quad [\text{input shaft}]$$

or

$$R_{c2} \leq R_{n2} \quad [\text{output shaft}]$$

### b) Load off the midpoint tab. (B20)

When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.

Revised permissible overhung loads  $R_{x1}$  (input) and  $R_{x2}$  (output) are calculated respectively from original rated values  $R_{n1}$  and  $R_{n2}$  through factor:

Verification procedure is described here after.

$$\frac{a}{b+x} \quad (16)$$

(B 21)

	Load location factors					
	Output shaft			Input shaft		
	a	b	c	a	b	c
<b>C 05 2</b>	38	18	250	—	—	—
<b>C 12 2</b>	46	26	450	21	1	300
<b>C 22 2</b>	53	28	550	40	20	350
<b>C 22 3</b>	53	28	550	21	1	300
<b>C 32 2</b>	60.5	30.5	750	41.5	21.5	350
<b>C 32 3</b>	60.5	30.5	750	21	1	300
<b>C 36 2 - C 36 3</b>	69.5	34.5	800	51.5	26.5	450
<b>C 36 4</b>	69.5	34.5	800	21	1	300
<b>C 41 2 - C 41 3</b>	69.5	34.5	850	51.5	26.5	450
<b>C 41 4</b>	69.5	34.5	850	40	20	350
<b>C 51 2 - C 51 3</b>	76.5	36.5	900	51.5	26.5	450
<b>C 51 4</b>	76.5	36.5	900	41.5	21.5	350
<b>C 61 2 - C 61 3</b>	95.5	45.5	1000	57.5	27.5	450
<b>C 61 4</b>	95.5	45.5	1000	51.5	26.5	450
<b>C 70 2 - C 70 3</b>	114	54	1200	86	31	1000
<b>C 70 4</b>	114	54	1200	49.5	24.5	450
<b>C 80 2 - C 80 3</b>	131	61	1500	86	31	1000
<b>C 80 4</b>	131	61	1500	49.5	24.5	450
<b>C 90 2 - C 90 3</b>	161	76	2000	116	46	1400
<b>C 90 4</b>	161	76	2000	49.5	24.5	450
<b>C 100 2 - C 100 3</b>	163.5	58.5	2500	116	46	1400
<b>C 100 4</b>	163.5	58.5	2500	49.5	24.5	450





## INPUT SHAFT

1. Calculate:

$$R_{x1} = R_{n1} \cdot \frac{a}{b+x} \quad (17)$$

N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (18)$$

Finally, the following condition must be verified:

$$R_{c1} \leq R_{x1} \quad (19)$$

## OUTPUT SHAFT

1. Calculate:

$$R_{x2} = R_{n2} \cdot \frac{a}{b+x} \quad (20)$$

N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (21)$$

Finally, the following condition must be verified:

$$R_{c2} \leq R_{x2} \quad (22)$$



## 24 THRUST LOADS, $A_{n1}$ , $A_{n2}$

Permissible thrust loads on input [ $A_{n1}$ ] and output [ $A_{n2}$ ] shafts are obtained from the radial loading for the shaft under consideration [ $R_{n1}$ ] and [ $R_{n2}$ ] through the following equation:

$$\begin{aligned} A_{n1} &= R_{n1} \cdot 0.2 \\ A_{n2} &= R_{n2} \cdot 0.2 \end{aligned} \quad (23)$$

The thrust loads calculated through these formulas apply to thrust forces occurring at the same time as rated radial loads.

In the only case that no overhung load acts on the shaft the value of the admissible thrust load [ $A_n$ ] amounts to 50% of rated OHL [ $R_n$ ] on same shaft.

Where thrust loads exceed permissible value or largely prevail over radial loads, contact Bonfiglioli Riduttori for an in-depth analysis of the application.



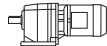



## 25 GEARMOTOR RATING CHARTS



The selection of motors without brake takes into account the requirements of Regulation EC 640/2009 (see section **M** of this catalogue). When the motor rated power is below 0.75kW, BN/M motors can be provided.

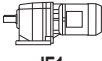


Considering that the Regulation EC 640/2009 shall not apply to the motors equipped with brake, the brakemotor selection takes into account BN/M motors only, without taking into account the rated power BX, BE, MX and ME brakemotors are available on request.

### 0.09 kW

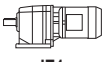


$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IEC	 IE1	 IEC
1.0	760	0.8	855.5	7000	C414_855.5 S05 M05A6	138	C414_855.5 P63 BN63A6	139
1.2	654	0.9	735.9	7000	C414_735.9 S05 M05A6	138	C414_735.9 P63 BN63A6	139
1.3	597	1.0	671.3	7000	C414_671.3 S05 M05A6	138	C414_671.3 P63 BN63A6	139
1.5	511	0.9	574.7	6500	C364_574.7 S05 M05A6	134	C364_574.7 P63 BN63A6	139
1.6	483	1.2	543.5	7000	C414_543.5 S05 M05A6	138	C414_543.5 P63 BN63A6	139
1.9	407	1.1	458.4	6500	C364_458.4 S05 M05A6	134	C364_458.4 P63 BN63A6	139
2.0	400	1.5	450.2	7000	C414_450.2 S05 M05A6	138	C414_450.2 P63 BN63A6	139
2.6	301	1.5	341.7	6500	C364_341.7 S05 M05A6	134	C364_341.7 P63 BN63A6	139
2.6	296	2.0	333.4	7000	C414_333.4 S05 M05A6	138	C414_333.4 P63 BN63A6	139
3.2	250	1.1	274.7	5500	C323_274.7 S05 M05A6	130	C323_274.7 P63 BN63A6	131
3.9	205	1.0	225.8	5000	C223_225.8 S05 M05A6	126	C223_225.8 P63 BN63A6	127
4.1	196	1.5	215.6	5500	C323_215.6 S05 M05A6	130	C323_215.6 P63 BN63A6	131
4.9	162	1.2	178.5	5000	C223_178.5 S05 M05A6	126	C223_178.5 P63 BN63A6	127
5.8	138	1.5	151.7	5000	C223_151.7 S05 M05A6	126	C223_151.7 P63 BN63A6	127
5.9	135	2.2	148.4	5500	C323_148.4 S05 M05A6	130	C323_148.4 P63 BN63A6	131
7.2	111	1.8	122.2	5000	C223_122.2 S05 M05A6	126	C223_122.2 P63 BN63A6	127
7.2	111	2.7	122.4	5500	C323_122.4 S05 M05A6	130	C323_122.4 P63 BN63A6	131
7.9	102	2.0	112.0	5000	C223_112.0 S05 M05A6	126	C223_112.0 P63 BN63A6	127
8.8	91	2.2	100.2	5000	C223_100.2 S05 M05A6	126	C223_100.2 P63 BN63A6	127
10.7	75	2.7	82.6	5000	C223_82.6 S05 M05A6	126	C223_82.6 P63 BN63A6	127
13.3	61	1.5	66.2	2000	C122_66.2 S05 M05A6	122	C122_66.2 P63 BN63A6	123
16.0	51	1.8	55.2	2000	C122_55.2 S05 M05A6	122	C122_55.2 P63 BN63A6	123
18.5	44	2.0	47.6	2000	C122_47.6 S05 M05A6	122	C122_47.6 P63 BN63A6	123
19.7	42	1.1	44.7	1170	C052_44.7 S05 M05A6	121		
20.8	39	2.3	42.3	2000	C122_42.3 S05 M05A6	122	C122_42.3 P63 BN63A6	123
21.8	38	1.2	40.3	1150	C052_40.3 S05 M05A6	121		
23.8	34	2.6	37.0	2000	C122_37.0 S05 M05A6	122	C122_37.0 P63 BN63A6	123
24.2	34	1.3	36.4	1140	C052_36.4 S05 M05A6	121		
26.8	31	1.5	32.8	1110	C052_32.8 S05 M05A6	121		
26.8	31	2.9	32.8	2000	C122_32.8 S05 M05A6	122	C122_32.8 P63 BN63A6	123
30	27	1.7	44.7	1170	C052_44.7 S0 M0B4	121		
33	25	1.8	40.3	990	C052_40.3 S0 M0B4	121		
37	22	2.0	36.4	980	C052_36.4 S0 M0B4	121		
41	20	2.3	32.8	960	C052_32.8 S0 M0B4	121		
42	19	2.3	21.0	1020	C052_21.0 S05 M05A6	121		



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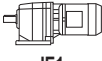

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	
50	16	2.7	27.1	930	C052_27.1 S0 M0B4	121	
56	15	3.1	15.6	950	C052_15.6 S05 M05A6	121	
66	12	6.5	13.4	2000	C122_13.4 S05 M05A6	122	C122_13.4 P63 BN63A6 123
71	12	3.9	12.5	900	C052_12.5 S05 M05A6	121	
74	11	7.0	11.9	2000	C122_11.9 S05 M05A6	122	C122_11.9 P63 BN63A6 123
78	10	4.3	11.2	880	C052_11.2 S05 M05A6	121	
88	9	7.7	10.1	2000	C122_10.1 S05 M05A6	122	C122_10.1 P63 BN63A6 123
95	9	5.2	9.3	830	C052_9.3 S05 M05A6	121	
100	8	8.4	8.8	2000	C122_8.8 S05 M05A6	122	C122_8.8 P63 BN63A6 123
119	7	6.5	7.4	780	C052_7.4 S05 M05A6	121	
132	6	7.3	6.7	760	C052_6.7 S05 M05A6	121	
146	6	10.9	6.2	1960	C122_6.2 S05 M05A6	122	C122_6.2 P63 BN63A6 123
157	5	11.1	5.6	1850	C122_5.6 S05 M05A6	122	C122_5.6 P63 BN63A6 123
159	5	8.8	5.5	720	C052_5.5 S05 M05A6	121	
187	4	12.6	4.9	1810	C122_4.9 S05 M05A6	122	C122_4.9 P63 BN63A6 123
205	4	13.0	4.3	1730	C122_4.3 S05 M05A6	122	C122_4.3 P63 BN63A6 123
249	3	15.0	3.7	1650	C122_3.7 S05 M05A6	122	C122_3.7 P63 BN63A6 123
275	3	15.4	3.2	1580	C122_3.2 S05 M05A6	122	C122_3.2 P63 BN63A6 123
329	2	17.3	2.8	1510	C122_2.8 S05 M05A6	122	C122_2.8 P63 BN63A6 123

## 0.12 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	
0.98	1061	0.9	884.9	10000		C514_884.9 P63 BN63B6	143
1.2	860	1.2	717.7	10000		C514_717.7 P63 BN63B6	143
1.5	681	0.9	855.5	7000	C414_855.5 S05 M05A4	138	C414_855.5 P63 BN63A4 139
1.6	643	1.6	808.0	10000		C514_808.0 P63 BN63A4	143
1.7	621	1.0	780.4	7000	C414_780.4 S05 M05A4	138	C414_780.4 P63 BN63A4 139
1.8	586	1.0	735.9	7000	C414_735.9 S05 M05A4	138	C414_735.9 P63 BN63A4 139
2.0	534	1.1	671.3	7000	C414_671.3 S05 M05A4	138	C414_671.3 P63 BN63A4 139
2.0	509	0.9	665.9	6500	C364_665.9 S05 M05A4	134	C364_665.9 P63 BN63A4 139
2.2	474	1.3	595.8	7000	C414_595.8 S05 M05A4	138	C414_595.8 P63 BN63A4 139
2.3	440	1.0	574.7	6500	C364_574.7 S05 M05A4	134	C364_574.7 P63 BN63A4 139
2.4	433	1.4	543.5	7000	C414_543.5 S05 M05A4	138	C414_543.5 P63 BN63A4 139
2.6	396	1.1	517.2	6500	C364_517.2 S05 M05A4	134	C364_517.2 P63 BN63A4 139
2.7	393	1.5	493.5	7000	C414_493.5 S05 M05A4	138	C414_493.5 P63 BN63A4 139
2.9	351	1.3	458.4	6500	C364_458.4 S05 M05A4	134	C364_458.4 P63 BN63A4 139
2.9	358	1.7	450.2	7000	C414_450.2 S05 M05A4	138	C414_450.2 P63 BN63A4 139
3.1	333	1.8	418.5	7000	C414_418.5 S05 M05A4	138	C414_418.5 P63 BN63A4 139
3.2	321	1.4	420.2	6500	C364_420.2 S05 M05A4	134	C364_420.2 P63 BN63A4 139
3.4	304	2.0	381.8	7000	C414_381.8 S05 M05A4	138	C414_381.8 P63 BN63A4 139
3.6	289	1.6	377.9	6500	C364_377.9 S05 M05A4	134	C364_377.9 P63 BN63A4 139
3.9	265	2.3	333.4	7000	C414_333.4 S05 M05A4	138	C414_333.4 P63 BN63A4 139
4.0	261	1.7	341.7	6500	C364_341.7 S05 M05A4	134	C364_341.7 P63 BN63A4 139
4.2	244	1.8	318.9	6500	C364_318.9 S05 M05A4	134	C364_318.9 P63 BN63A4 139
4.3	242	2.5	304.2	7000	C414_304.2 S05 M05A4	138	C414_304.2 P63 BN63A4 139
4.6	223	2.0	290.9	6500	C364_290.9 S05 M05A4	134	C364_290.9 P63 BN63A4 139
4.9	219	0.9	178.5	5000	C223_178.5 S05 M05B6	126	C223_178.5 P63 BN63B6 127

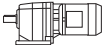



## 0.12 kW

<b>n<sub>2</sub></b> min <sup>-1</sup>	<b>M<sub>2</sub></b> Nm	<b>S</b>	<b>i</b>	<b>R<sub>n2</sub></b> N	 IE1	 IEC IE1	
4.9	217	1.2	274.7	5500	C323_274.7 S05 M05A4	130 C323_274.7 P63 BN63A4	131
5.0	209	2.9	263.0	7000	C414_263.0 S05 M05A4	138 C414_263.0 P63 BN63A4	139
5.3	195	2.3	255.0	6500	C364_255.0 S05 M05A4	134 C364_255.0 P63 BN63A4	139
5.5	193	1.3	244.2	5500	C323_244.2 S05 M05A4	130 C323_244.2 P63 BN63A4	131
5.8	177	2.5	230.9	6500	C364_230.9 S05 M05A4	134 C364_230.9 P63 BN63A4	139
6.0	178	1.0	225.8	5000	C223_225.8 S05 M05A4	126 C223_225.8 P63 BN63A4	127
6.3	170	1.8	215.6	5500	C323_215.6 S05 M05A4	130 C323_215.6 P63 BN63A4	131
6.5	163	2.8	206.4	6500	C363_206.4 S05 M05A4	134 C363_206.4 P63 BN63A4	135
6.7	159	1.2	200.7	5000	C223_200.7 S05 M05A4	126 C223_200.7 P63 BN63A4	127
7.3	147	2.0	186.0	5500	C323_186.0 S05 M05A4	130 C323_186.0 P63 BN63A4	131
7.4	145	3.1	183.5	6500	C363_183.5 S05 M05A4	134 C363_183.5 P63 BN63A4	135
7.6	141	1.4	178.5	5000	C223_178.5 S05 M05A4	126 C223_178.5 P63 BN63A4	127
8.1	132	2.3	167.4	5500	C323_167.4 S05 M05A4	130 C323_167.4 P63 BN63A4	131
8.9	120	1.7	151.7	5000	C223_151.7 S05 M05A4	126 C223_151.7 P63 BN63A4	127
9.1	117	2.6	148.4	5500	C323_148.4 S05 M05A4	130 C323_148.4 P63 BN63A4	131
9.9	108	1.9	136.5	5000	C223_136.5 S05 M05A4	126 C223_136.5 P63 BN63A4	127
9.9	108	2.8	136.0	5500	C323_136.0 S05 M05A4	130 C323_136.0 P63 BN63A4	131
11.0	97	3.1	122.4	5500	C323_122.4 S05 M05A4	130 C323_122.4 P63 BN63A4	131
11.0	97	2.1	122.2	5000	C223_122.2 S05 M05A4	126 C223_122.2 P63 BN63A4	127
12.1	89	2.3	112.0	5000	C223_112.0 S05 M05A4	126 C223_112.0 P63 BN63A4	127
13.5	79	2.5	100.2	5000	C223_100.2 S05 M05A4	126 C223_100.2 P63 BN63A4	127
15.3	70	2.9	88.5	5000	C223_88.5 S05 M05A4	126 C223_88.5 P63 BN63A4	127
16.3	65	3.1	82.6	5000	C223_82.6 S05 M05A4	126 C223_82.6 P63 BN63A4	127
20.4	53	1.7	66.2	2000	C122_66.2 S05 M05A4	122 C122_66.2 P63 BN63A4	123
21.3	51	2.5	63.3	5000	C222_63.3 S05 M05A4	126 C222_63.3 P63 BN63A4	127
24.5	45	2.0	55.2	2000	C122_55.2 S05 M05A4	122 C122_55.2 P63 BN63A4	123
24.7	44	3.5	54.7	5000	C222_54.7 S05 M05A4	126 C222_54.7 P63 BN63A4	127
28.4	38	2.3	47.6	2000	C122_47.6 S05 M05A4	122 C122_47.6 P63 BN63A4	123
29.3	37	1.2	44.7	1010	C052_44.7 S05 M05A4	121	
32	34	2.6	42.3	2000	C122_42.3 S05 M05A4	122 C122_42.3 P63 BN63A4	123
33	34	1.3	40.3	990	C052_40.3 S05 M05A4	121	
36	30	1.5	36.4	980	C052_36.4 S05 M05A4	121	
36	30	3.0	37.0	2000	C122_37.0 S05 M05A4	122 C122_37.0 P63 BN63A4	123
40	27	1.6	32.8	960	C052_32.8 S05 M05A4	121	
41	26	3.4	32.8	2000	C122_32.8 S05 M05A4	122 C122_32.8 P63 BN63A4	123
48	23	2.0	27.1	930	C052_27.1 S05 M05A4	121	
56	20	2.3	15.6	900	C052_15.6 S05 M05B6	121	
62	18	2.6	21.0	890	C052_21.0 S05 M05A4	121	
69	16	2.5	18.9	860	C052_18.9 S05 M05A4	121	
78	14	3.2	11.2	850	C052_11.2 S05 M05B6	121	
84	13	3.1	15.6	820	C052_15.6 S05 M05A4	121	
105	10	3.8	12.5	780	C052_12.5 S05 M05A4	121	
117	9	4.3	11.2	760	C052_11.2 S05 M05A4	121	
130	8	5.4	6.7	740	C052_6.7 S05 M05B6	121	
141	8	3.9	9.3	720	C052_9.3 S05 M05A4	121	
177	6	4.8	7.4	680	C052_7.4 S05 M05A4	121	
196	6	5.4	6.7	660	C052_6.7 S05 M05A4	121	

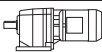




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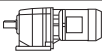


n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IEC IE1		
0.66	2367	1.0	1362	25000			C704_1362 P71 BN71A6	151
0.84	1858	1.2	1069	25000			C704_1069 P71 BN71A6	151
1.2	1262	1.3	726.3	16000	C614_726.3 S1 M1SC6	146	C614_726.3 P71 BN71A6	147
1.3	1248	0.8	717.7	10000	C514_717.7 S1 M1SC6	142	C514_717.7 P71 BN71A6	143
1.5	1049	1.0	884.9	10000			C514_884.9 P63 BN63B4	143
1.6	958	1.0	808.0	10000			C514_808.0 P63 BN63B4	143
1.6	955	1.0	549.7	10000	C514_549.7 S1 M1SC6	142	C514_549.7 P71 BN71A6	143
1.8	861	1.9	726.3	16000			C614_726.3 P63 BN63B4	147
1.8	851	1.2	717.7	10000			C514_717.7 P63 BN63B4	143
1.9	806	1.2	463.9	10000	C514_463.9 S1 M1SC6	142	C514_463.9 P71 BN71A6	143
1.9	803	2.0	462.0	16000	C614_462.0 S1 M1SC6	146	C614_462.0 P71 BN71A6	147
2.0	796	0.8	671.3	7000	C414_671.3 S05 M05B4	138	C414_671.3 P63 BN63B4	139
2.0	783	0.8	450.2	7000	C414_450.2 S1 M1SC6	138	C414_450.2 P71 BN71A6	139
2.0	777	1.3	655.4	10000			C514_655.4 P63 BN63B4	143
2.2	727	0.8	418.5	7000	C414_418.5 S1 M1SC6	138	C414_418.5 P71 BN71A6	139
2.2	723	1.4	415.7	10000	C514_415.7 S1 M1SC6	142	C514_415.7 P71 BN71A6	143
2.2	706	0.8	595.8	7000	C414_595.8 S05 M05B4	138	C414_595.8 P63 BN63B4	139
2.4	660	1.5	379.6	10000	C514_379.6 S1 M1SC6	142	C514_379.6 P71 BN71A6	143
2.4	644	0.9	543.5	7000	C414_543.5 S05 M05B4	138	C414_543.5 P63 BN63B4	139
2.6	587	0.8	341.7	6300	C364_341.7 S1 M1SC6	134	C364_341.7 P71 BN71A6	139
2.7	585	1.0	493.5	7000	C414_493.5 S05 M05B4	138	C414_493.5 P63 BN63B4	139
2.9	534	1.1	450.2	7000	C414_450.2 S05 M05B4	138	C414_450.2 P63 BN63B4	139
2.9	536	0.8	458.4	6500	C364_458.4 S05 M05B4	134	C364_458.4 P63 BN63B4	139
3.1	492	0.9	420.2	6500	C364_420.2 S05 M05B4	134	C364_420.2 P63 BN63B4	139
3.2	496	1.2	418.5	7000	C414_418.5 S05 M05B4	138	C414_418.5 P63 BN63B4	139
3.5	452	1.3	381.8	7000	C414_381.8 S05 M05B4	138	C414_381.8 P63 BN63B4	139
3.5	442	1.0	377.9	6500	C364_377.9 S05 M05B4	134	C364_377.9 P63 BN63B4	139
3.9	400	1.1	341.7	6500	C364_341.7 S05 M05B4	134	C364_341.7 P63 BN63B4	139
4.0	395	1.5	333.4	7000	C414_333.4 S05 M05B4	138	C414_333.4 P63 BN63B4	139
4.1	373	1.2	318.9	6500	C364_318.9 S05 M05B4	134	C364_318.9 P63 BN63B4	139
4.3	371	1.6	209.1	7000	C413_209.1 S1 M1SC6	138	C413_209.1 P71 BN71A6	139
4.3	360	1.7	304.2	7000	C414_304.2 S05 M05B4	138	C414_304.2 P63 BN63B4	139
4.5	340	1.3	290.9	6500	C364_290.9 S05 M05B4	134	C364_290.9 P63 BN63B4	139
4.7	339	1.8	190.8	7000	C413_190.8 S1 M1SC6	138	C413_190.8 P71 BN71A6	139
4.8	330	0.9	186.0	5500	C323_186.0 S1 M1SC6	130	C323_186.0 P71 BN71A6	131
5.0	312	1.9	263.0	7000	C414_263.0 S05 M05B4	138	C414_263.0 P63 BN63B4	139
5.2	298	1.5	255.0	6500	C364_255.0 S05 M05B4	134	C364_255.0 P63 BN63B4	139
5.4	297	1.0	167.4	5500	C323_167.4 S1 M1SC6	130	C323_167.4 P71 BN71A6	131
5.4	295	0.9	244.2	5500	C323_244.2 S05 M05B4	130	C323_244.2 P63 BN63B4	131
5.7	270	1.7	230.9	6500	C364_230.9 S05 M05B4	134	C364_230.9 P63 BN63B4	139
6.1	261	1.2	215.6	5500	C323_215.6 S05 M05B4	130	C323_215.6 P63 BN63B4	131
6.4	250	1.8	206.4	6500	C363_206.4 S05 M05B4	134	C363_206.4 P63 BN63B4	135
7.1	225	1.3	186.0	5500	C323_186.0 S05 M05B4	130	C323_186.0 P63 BN63B4	131
7.2	222	2.0	183.5	6500	C363_183.5 S05 M05B4	134	C363_183.5 P63 BN63B4	135
7.4	216	0.9	178.5	5000	C223_178.5 S05 M05B4	126	C223_178.5 P63 BN63B4	127
7.9	202	1.5	167.4	5500	C323_167.4 S05 M05B4	130	C323_167.4 P63 BN63B4	131
8.1	196	2.3	162.0	6500	C363_162.0 S05 M05B4	134	C363_162.0 P63 BN63B4	135
8.7	183	1.1	151.7	5000	C223_151.7 S05 M05B4	126	C223_151.7 P63 BN63B4	127
8.9	179	1.7	148.4	5500	C323_148.4 S05 M05B4	130	C323_148.4 P63 BN63B4	131
9.4	169	2.7	139.8	6500	C363_139.8 S05 M05B4	134	C363_139.8 P63 BN63B4	135
9.7	165	1.2	136.5	5000	C223_136.5 S05 M05B4	126	C223_136.5 P63 BN63B4	127
9.7	164	1.8	136.0	5500	C323_136.0 S05 M05B4	130	C323_136.0 P63 BN63B4	131
10.5	152	3.0	125.8	6500	C363_125.8 S05 M05B4	134	C363_125.8 P63 BN63B4	135
10.8	148	2.0	122.4	5500	C323_122.4 S05 M05B4	130	C323_122.4 P63 BN63B4	131
10.8	148	1.4	122.2	5000	C223_122.2 S05 M05B4	126	C223_122.2 P63 BN63B4	127
11.8	135	1.5	112.0	5000	C223_112.0 S05 M05B4	126	C223_112.0 P63 BN63B4	127
11.8	135	3.3	111.5	6500	C363_111.5 S05 M05B4	134	C363_111.5 P63 BN63B4	135
11.9	134	2.2	110.6	5500	C323_110.6 S05 M05B4	130	C323_110.6 P63 BN63B4	131
12.8	125	2.4	103.3	5500	C323_103.3 S05 M05B4	130	C323_103.3 P63 BN63B4	131
12.9	124	3.6	102.2	6500	C363_102.2 S05 M05B4	134	C363_102.2 P63 BN63B4	135
13.2	121	1.7	100.2	5000	C223_100.2 S05 M05B4	126	C223_100.2 P63 BN63B4	127
14.0	114	2.6	94.2	5500	C323_94.2 S05 M05B4	130	C323_94.2 P63 BN63B4	131
14.9	107	1.9	88.5	5000	C223_88.5 S05 M05B4	126	C223_88.5 P63 BN63B4	127
16.0	100	2.0	82.6	5000	C223_82.6 S05 M05B4	126	C223_82.6 P63 BN63B4	127
16.0	100	3.0	82.6	5500	C323_82.6 S05 M05B4	130	C323_82.6 P63 BN63B4	131

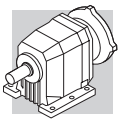


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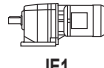



$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1		
17.6	90	2.2	74.8	5000	C223_74.8 S05 M05B4	126	C223_74.8 P63 BN63B4	127
17.7	90	3.2	74.7	5500	C323_74.7 S05 M05B4	130	C323_74.7 P63 BN63B4	131
19.8	83	2.6	66.8	5500	C322_66.8 S05 M05B4	130	C322_66.8 P63 BN63B4	131
20.0	82	1.1	66.2	2000	C122_66.2 S05 M05B4	122	C122_66.2 P63 BN63B4	123
20.2	79	2.5	65.3	5000	C223_65.3 S05 M05B4	126	C223_65.3 P63 BN63B4	127
20.9	78	1.7	63.3	5000	C222_63.3 S05 M05B4	126	C222_63.3 P63 BN63B4	127
22.0	73	2.6	60.0	5000	C223_60.0 S05 M05B4	126	C223_60.0 P63 BN63B4	127
22.2	73	2.9	59.4	5500	C322_59.4 S05 M05B4	130	C322_59.4 P63 BN63B4	131
23.9	68	1.3	55.2	2000	C122_55.2 S05 M05B4	122	C122_55.2 P63 BN63B4	123
24.1	68	2.3	54.7	5000	C222_54.7 S05 M05B4	126	C222_54.7 P63 BN63B4	127
27.1	60	2.6	48.6	5000	C222_48.6 S05 M05B4	126	C222_48.6 P63 BN63B4	127
27.7	59	1.5	47.6	2000	C122_47.6 S05 M05B4	122	C122_47.6 P63 BN63B4	123
31	53	3.6	43.3	5000	C222_43.3 S05 M05B4	126	C222_43.3 P63 BN63B4	127
31	52	1.7	42.3	2000	C122_42.3 S05 M05B4	122	C122_42.3 P63 BN63B4	123
33	50	0.9	40.3	850	C052_40.3 S05 M05B4	121		
36	45	1.0	36.4	850	C052_36.4 S05 M05B4	121		
36	46	2.0	37.0	2000	C122_37.0 S05 M05B4	122	C122_37.0 P63 BN63B4	123
40	40	2.2	32.8	2000	C122_32.8 S05 M05B4	122	C122_32.8 P63 BN63B4	123
40	41	1.1	32.8	840	C052_32.8 S05 M05B4	121		
45	36	2.5	29.5	2000	C122_29.5 S05 M05B4	122	C122_29.5 P63 BN63B4	123
49	34	1.3	27.1	820	C052_27.1 S05 M05B4	121		
52	31	2.8	25.4	2000	C122_25.4 S05 M05B4	122	C122_25.4 P63 BN63B4	123
57	29	3.0	23.2	2000	C122_23.2 S05 M05B4	122	C122_23.2 P63 BN63B4	123
63	26	1.7	21.0	810	C052_21.0 S05 M05B4	121		
64	25	3.2	20.6	2000	C122_20.6 S05 M05B4	122	C122_20.6 P63 BN63B4	123
70	23	1.7	18.9	790	C052_18.9 S05 M05B4	121		
72	23	3.4	18.4	2000	C122_18.4 S05 M05B4	122	C122_18.4 P63 BN63B4	123
77	21	3.6	17.2	2000	C122_17.2 S05 M05B4	122	C122_17.2 P63 BN63B4	123
85	19	2.1	15.6	760	C052_15.6 S05 M05B4	121		
106	15	2.6	12.5	740	C052_12.5 S05 M05B4	121		
118	14	2.9	11.2	720	C052_11.2 S05 M05B4	121		
142	11	2.6	9.3	690	C052_9.3 S05 M05B4	121		
178	9	3.3	7.4	650	C052_7.4 S05 M05B4	121		
197	8	3.6	6.7	640	C052_6.7 S05 M05B4	121		
229	7	7.4	11.9	1670	C122_11.9 S05 M05A2	122	C122_11.9 P63 BN63A2	123
240	7	4.4	5.5	600	C052_5.5 S05 M05B4	121		
268	6	8.1	10.1	1600	C122_10.1 S05 M05A2	122	C122_10.1 P63 BN63A2	123
310	5	8.9	8.8	1530	C122_8.8 S05 M05A2	122	C122_8.8 P63 BN63A2	123
354	5	9.8	7.6	1470	C122_7.6 S05 M05A2	122	C122_7.6 P63 BN63A2	123
440	4	11.3	6.2	1390	C122_6.2 S05 M05A2	122	C122_6.2 P63 BN63A2	123
488	3	11.9	5.6	1300	C122_5.6 S05 M05A2	122	C122_5.6 P63 BN63A2	123
577	3	13.4	4.9	1250	C122_4.9 S05 M05A2	122	C122_4.9 P63 BN63A2	123
635	3	14.0	4.3	1190	C122_4.3 S05 M05A2	122	C122_4.3 P63 BN63A2	123
770	2	16.0	3.7	1140	C122_3.7 S05 M05A2	122	C122_3.7 P63 BN63A2	123
853	2	16.7	3.2	1090	C122_3.2 S05 M05A2	122	C122_3.2 P63 BN63A2	123
1015	2	18.7	2.8	1040	C122_2.8 S05 M05A2	122	C122_2.8 P63 BN63A2	123

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$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1		
0.61	3575	1.1	1481	35000		C804_1481 P71 BN71B6	154	
0.77	2820	1.4	1168	35000		C804_1168 P71 BN71B6	154	
1.2	1753	0.9	726.3	16000	C614_726.3 S1 M1SD6	146	C614_726.3 P71 BN71B6	147
1.6	1330	0.8	808.0	10000		C514_808.0 P63 BN63C4	143	
1.6	1327	0.8	549.7	10000	C514_549.7 S1 M1SD6	142	C514_549.7 P71 BN71B6	143
1.9	1134	0.9	717.7	10000		C514_717.7 P71 BN71A4	143	
1.9	1120	0.9	463.9	10000	C514_463.9 S1 M1SD6	142	C514_463.9 P71 BN71B6	143
2.0	1101	1.5	668.8	16000		C614_668.8 P63 BN63C4	147	
2.4	894	1.8	370.1	16000	C614_370.1 S1 M1SD6	146	C614_370.1 P71 BN71B6	147
2.5	869	1.2	549.7	10000		C514_549.7 P71 BN71A4	143	
2.9	741	0.8	450.2	7000	C414_450.2 S05 M05C4	138	C414_450.2 P71 BN71A4	139



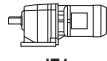


## 0.25 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IEC	
3.2	689	0.9	418.5	7000	C414_418.5 S05 M05C4	138	C414_418.5 P71 BN71A4	139
3.2	684	1.5	415.7	10000			C514_415.7 P71 BN71A4	143
3.5	628	1.0	381.8	7000	C414_381.8 S05 M05C4	138	C414_381.8 P71 BN71A4	139
3.5	625	1.6	379.6	10000			C514_379.6 P71 BN71A4	143
3.8	567	0.8	344.3	6500	C364_344.3 S05 M05C4	134	C364_344.3 P71 BN71A4	139
4.0	549	1.1	333.4	7000	C414_333.4 S05 M05C4	138	C414_333.4 P71 BN71A4	139
4.0	537	1.9	326.1	10000			C514_326.1 P71 BN71A4	143
4.2	511	0.9	318.9	6500	C364_318.9 S05 M05C4	134	C364_318.9 P71 BN71A4	139
4.3	501	1.2	304.2	7000	C414_304.2 S05 M05C4	138	C414_304.2 P71 BN71A4	139
4.4	490	2.0	297.8	10000			C514_297.8 P71 BN71A4	143
4.6	466	1.0	290.9	6500	C364_290.9 S05 M05C4	134	C364_290.9 P71 BN71A4	139
5.0	434	2.3	263.8	10000			C514_263.8 P71 BN71A4	143
5.0	433	1.4	263.0	7000	C414_263.0 S05 M05C4	138	C414_263.0 P71 BN71A4	139
5.3	409	1.1	255.0	6500	C364_255.0 S05 M05C4	134	C364_255.0 P71 BN71A4	139
5.5	395	1.5	239.9	7000	C414_239.9 S05 M05C4	138	C414_239.9 P71 BN71A4	139
5.8	370	1.2	230.9	6500	C364_230.9 S05 M05C4	134	C364_230.9 P71 BN71A4	139
6.3	350	2.9	216.7	10000			C513_216.7 P71 BN71A4	143
6.5	342	1.3	206.4	6500	C363_206.4 S05 M05C4	134	C363_206.4 P71 BN71A4	135
7.2	308	1.9	190.8	7000			C413_190.8 P71 BN71A4	139
7.2	308	1.0	186.0	5500	C323_186.0 S05 M05C4	130	C323_186.0 P71 BN71A4	131
7.3	304	1.5	183.5	6500	C363_183.5 S05 M05C4	134	C363_183.5 P71 BN71A4	135
8.0	277	1.1	167.4	5500	C323_167.4 S05 M05C4	130	C323_167.4 P71 BN71A4	131
8.3	268	1.7	162.0	6500	C363_162.0 S05 M05C4	134	C363_162.0 P71 BN71A4	135
8.4	265	2.3	164.1	7000			C413_164.1 P71 BN71A4	139
9.0	246	1.2	148.4	5500	C323_148.4 S05 M05C4	130	C323_148.4 P71 BN71A4	131
9.6	231	1.9	139.8	6500	C363_139.8 S05 M05C4	134	C363_139.8 P71 BN71A4	135
9.8	226	0.9	136.5	5000	C223_136.5 S05 M05C4	126	C223_136.5 P71 BN71A4	127
9.9	225	1.3	136.0	5500	C323_136.0 S05 M05C4	130	C323_136.0 P71 BN71A4	131
10.3	215	2.8	132.9	7000			C413_132.9 P71 BN71A4	139
10.7	208	2.2	125.8	6500	C363_125.8 S05 M05C4	134	C363_125.8 P71 BN71A4	135
11.0	203	1.5	122.4	5500	C323_122.4 S05 M05C4	130	C323_122.4 P71 BN71A4	131
11.0	202	1.0	122.2	5000	C223_122.2 S05 M05C4	126	C223_122.2 P71 BN71A4	127
12.0	185	1.1	112.0	5000	C223_112.0 S05 M05C4	126	C223_112.0 P71 BN71A4	127
12.0	185	2.4	111.5	6500	C363_111.5 S05 M05C4	134	C363_111.5 P71 BN71A4	135
12.1	183	1.6	110.6	5500	C323_110.6 S05 M05C4	130	C323_110.6 P71 BN71A4	131
13.0	171	1.8	103.3	5500	C323_103.3 S05 M05C4	130	C323_103.3 P71 BN71A4	131
13.1	169	2.7	102.2	6500	C363_102.2 S05 M05C4	134	C363_102.2 P71 BN71A4	135
13.4	166	1.2	100.2	5000	C223_100.2 S05 M05C4	126	C223_100.2 P71 BN71A4	127
14.2	156	1.9	94.2	5500	C323_94.2 S05 M05C4	130	C323_94.2 P71 BN71A4	131
14.6	152	3.0	91.9	6500	C363_91.9 S05 M05C4	134	C363_91.9 P71 BN71A4	135
15.1	147	1.4	88.5	5000	C223_88.5 S05 M05C4	126	C223_88.5 P71 BN71A4	127
16.2	137	1.5	82.6	5000	C223_82.6 S05 M05C4	126	C223_82.6 P71 BN71A4	127
16.2	137	2.2	82.6	5500	C323_82.6 S05 M05C4	130	C323_82.6 P71 BN71A4	131
17.9	124	1.6	74.8	5000	C223_74.8 S05 M05C4	126	C223_74.8 P71 BN71A4	127
17.9	124	2.3	74.7	5500	C323_74.7 S05 M05C4	130	C323_74.7 P71 BN71A4	131
20.1	113	1.9	66.8	5500	C322_66.8 S05 M05C4	130	C322_66.8 P71 BN71A4	131
20.3	112	0.8	66.2	2000	C122_66.2 S05 M05C4	122	C122_66.2 P71 BN71A4	123
20.5	108	1.8	65.3	5000	C223_65.3 S05 M05C4	126	C223_65.3 P71 BN71A4	127
21.2	107	1.2	63.3	5000	C222_63.3 S05 M05C4	126	C222_63.3 P71 BN71A4	127
22.3	99	1.9	60.0	5000	C223_60.0 S05 M05C4	126	C223_60.0 P71 BN71A4	127
22.6	100	2.1	59.4	5500	C322_59.4 S05 M05C4	130	C322_59.4 P71 BN71A4	131
24.3	93	1.0	55.2	2000	C122_55.2 S05 M05C4	122	C122_55.2 P71 BN71A4	123
24.5	93	1.7	54.7	5000	C222_54.7 S05 M05C4	126	C222_54.7 P71 BN71A4	127
25.6	89	3.4	52.4	5500	C322_52.4 S05 M05C4	130	C322_52.4 P71 BN71A4	131
27.5	82	1.9	48.6	5000	C222_48.6 S05 M05C4	126	C222_48.6 P71 BN71A4	127
28.1	80	1.1	47.6	2000	C122_47.6 S05 M05C4	122	C122_47.6 P71 BN71A4	123
31	73	2.6	43.3	4750	C222_43.3 S05 M05C4	126	C222_43.3 P71 BN71A4	127
32	72	1.3	42.3	2000	C122_42.3 S05 M05C4	122	C122_42.3 P71 BN71A4	123
36	63	1.4	37.0	2000	C122_37.0 S05 M05C4	122	C122_37.0 P71 BN71A4	123
36	62	3.2	36.8	4540	C222_36.8 S05 M05C4	126	C222_36.8 P71 BN71A4	127
40	56	3.6	33.1	4500	C222_33.1 S05 M05C4	126	C222_33.1 P71 BN71A4	127
41	55	1.6	32.8	2000	C122_32.8 S05 M05C4	122	C122_32.8 P71 BN71A4	123
45	50	1.8	29.5	2000	C122_29.5 S05 M05C4	122	C122_29.5 P71 BN71A4	123
49	47	1.0	27.1	700	C052_27.1 S05 M05C4	121		
53	43	2.1	25.4	2000	C122_25.4 S05 M05C4	122	C122_25.4 P71 BN71A4	123

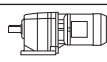






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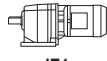


$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1		
58	39	2.2	23.2	2000	C122_23.2 S05 M05C4	122	C122_23.2 P71 BN71A4	123
63	36	1.2	21.0	720	C052_21.0 S05 M05C4	121		
65	35	2.4	20.6	2000	C122_20.6 S05 M05C4	122	C122_20.6 P71 BN71A4	123
70	33	1.2	18.9	710	C052_18.9 S05 M05C4	121		
73	31	2.5	18.4	2000	C122_18.4 S05 M05C4	122	C122_18.4 P71 BN71A4	123
78	29	2.6	17.2	2000	C122_17.2 S05 M05C4	122	C122_17.2 P71 BN71A4	123
85	27	1.5	15.6	700	C052_15.6 S05 M05C4	121		
87	26	2.8	15.4	2000	C122_15.4 S05 M05C4	122	C122_15.4 P71 BN71A4	123
100	23	3.1	13.4	2000	C122_13.4 S05 M05C4	122	C122_13.4 P71 BN71A4	123
106	22	1.9	12.5	690	C052_12.5 S05 M05C4	121		
113	20	3.3	11.9	2000	C122_11.9 S05 M05C4	122	C122_11.9 P71 BN71A4	123
118	19	2.1	11.2	670	C052_11.2 S05 M05C4	121		
133	17	3.7	10.1	1980	C122_10.1 S05 M05C4	122	C122_10.1 P71 BN71A4	123
142	16	1.9	9.3	650	C052_9.3 S05 M05C4	121		
157	14	4.2	17.2	1870	C122_17.2 S05 M05B2	122	C122_17.2 P63 BN63B2	123
178	13	2.4	7.4	620	C052_7.4 S05 M05C4	121		
197	12	2.6	6.7	610	C052_6.7 S05 M05C4	121		
204	11	5.0	13.4	1710	C122_13.4 S05 M05B2	122	C122_13.4 P63 BN63B2	123
230	10	5.4	11.9	1660	C122_11.9 S05 M05B2	122	C122_11.9 P63 BN63B2	123
240	9	3.2	5.5	580	C052_5.5 S05 M05C4	121		
268	8	5.8	10.1	1590	C122_10.1 S05 M05B2	122	C122_10.1 P63 BN63B2	123
311	7	6.5	8.8	1510	C122_8.8 S05 M05B2	122	C122_8.8 P63 BN63B2	123
354	6	7.0	7.6	1460	C122_7.6 S05 M05B2	122	C122_7.6 P63 BN63B2	123
442	5	8.2	6.2	1350	C122_6.2 S05 M05B2	122	C122_6.2 P63 BN63B2	123
489	5	8.6	5.6	1290	C122_5.6 S05 M05B2	122	C122_5.6 P63 BN63B2	123
577	4	9.7	4.9	1240	C122_4.9 S05 M05B2	122	C122_4.9 P63 BN63B2	123
637	4	10.1	4.3	1180	C122_4.3 S05 M05B2	122	C122_4.3 P63 BN63B2	123
770	3	11.5	3.7	1130	C122_3.7 S05 M05B2	122	C122_3.7 P63 BN63B2	123
856	3	12.1	3.2	1080	C122_3.2 S05 M05B2	122	C122_3.2 P63 BN63B2	123
979	2	13.0	2.8	1030	C122_2.8 S05 M05B2	122	C122_2.8 P63 BN63B2	123

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$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1		
0.73	4382	1.6	1240	60000	C904_1240 S1 M1LA6	156	C904_1240 P80 BN80A6	157
0.78	4127	1.0	1168	35000			C804_1168 P80 BN80A6	154
0.93	3476	1.2	1481	35000			C804_1481 P71 BN71B4	154
1.2	2741	1.5	1168	35000			C804_1168 P71 BN71B4	154
1.4	2220	1.8	945.7	35000			C804_945.7 P71 BN71B4	154
1.5	2165	1.1	922.6	25000			C704_922.6 P71 BN71B4	151
1.7	1869	0.9	796.1	16000	C614_796.1 S1 M1SD4	146	C614_796.1 P71 BN71B4	147
2.0	1570	1.0	668.8	16000	C614_668.8 S1 M1SD4	146	C614_668.8 P71 BN71B4	147
2.1	1543	1.5	657.3	25000			C704_657.3 P71 BN71B4	151
2.4	1341	1.2	571.2	16000	C614_571.2 S1 M1SD4	146	C614_571.2 P71 BN71B4	147
2.5	1302	1.8	554.7	25000			C704_554.7 P71 BN71B4	151
2.5	1290	0.8	549.7	10000	C514_549.7 S1 M1SD4	142	C514_549.7 P71 BN71B4	143
2.6	1223	1.3	521.1	16000	C614_521.1 S1 M1SD4	146	C614_521.1 P71 BN71B4	147
3.3	989	1.6	421.5	16000	C614_421.5 S1 M1SD4	146	C614_421.5 P71 BN71B4	147
3.3	976	1.0	415.7	10000	C514_415.7 S1 M1SD4	142	C514_415.7 P71 BN71B4	143
3.3	961	2.4	409.4	25000			C704_409.4 P71 BN71B4	151
3.6	891	1.1	379.6	10000	C514_379.6 S1 M1SD4	142	C514_379.6 P71 BN71B4	143
3.7	869	1.8	370.1	16000	C614_370.1 S1 M1SD4	146	C614_370.1 P71 BN71B4	147
4.1	793	2.0	337.7	16000	C614_337.7 S1 M1SD4	146	C614_337.7 P71 BN71B4	147
4.1	783	0.8	333.4	7000	C414_333.4 S1 M1SD4	138	C414_333.4 P71 BN71B4	139
4.2	765	1.3	326.1	10000	C514_326.1 S1 M1SD4	142	C514_326.1 P71 BN71B4	143
4.6	699	1.4	297.8	10000	C514_297.8 S1 M1SD4	142	C514_297.8 P71 BN71B4	143
5.2	619	1.6	263.8	10000	C514_263.8 S1 M1SD4	142	C514_263.8 P71 BN71B4	143
5.2	617	1.0	263.0	7000	C414_263.0 S1 M1SD4	138	C414_263.0 P71 BN71B4	139
5.9	540	0.8	230.9	6300	C364_230.9 S1 M1SD4	134	C364_230.9 P71 BN71B4	139
6.3	520	1.9	216.7	10000	C513_216.7 S1 M1SD4	142	C513_216.7 P71 BN71B4	143

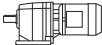



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n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IEC IE1		
6.6	502	1.2	209.1	7000	C413_209.1 S1 M1SD4	138	C413_209.1 P71 BN71B4	139
6.6	499	0.9	206.4	6500			C363_206.4 P71 BN71B4	135
6.9	475	2.1	197.9	10000	C513_197.9 S1 M1SD4	142	C513_197.9 P71 BN71B4	143
7.2	458	1.3	190.8	7000	C413_190.8 S1 M1SD4	138	C413_190.8 P71 BN71B4	139
7.5	444	1.0	183.5	6500			C363_183.5 P71 BN71B4	135
7.6	431	1.4	179.9	7000	C413_179.9 S1 M1SD4	138	C413_179.9 P71 BN71B4	139
7.8	422	2.4	175.8	10000	C513_175.8 S1 M1SD4	142	C513_175.8 P71 BN71B4	143
8.3	394	1.5	164.1	7000	C413_164.1 S1 M1SD4	138	C413_164.1 P71 BN71B4	139
8.5	385	2.6	160.5	10000	C513_160.5 S1 M1SD4	142	C513_160.5 P71 BN71B4	143
8.5	392	1.1	162.0	6500	C363_162.0 S1 M1SD4	134	C363_162.0 P71 BN71B4	135
9.4	349	1.7	145.6	7000	C413_145.6 S1 M1SD4	138	C413_145.6 P71 BN71B4	139
9.8	338	1.3	139.8	6500	C363_139.8 S1 M1SD4	134	C363_139.8 P71 BN71B4	135
10.1	329	0.9	136.0	5500	C323_136.0 S1 M1SD4	130	C323_136.0 P71 BN71B4	131
10.3	319	1.9	132.9	7000	C413_132.9 S1 M1SD4	138	C413_132.9 P71 BN71B4	139
10.9	304	1.5	125.8	6500	C363_125.8 S1 M1SD4	134	C363_125.8 P71 BN71B4	135
11.2	296	1.0	122.4	5500	C323_122.4 S1 M1SD4	130	C323_122.4 P71 BN71B4	131
11.4	289	2.1	120.6	7000	C413_120.6 S1 M1SD4	138	C413_120.6 P71 BN71B4	139
12.3	270	1.7	111.5	6500	C363_111.5 S1 M1SD4	134	C363_111.5 P71 BN71B4	135
12.4	264	2.3	110.1	7000	C413_110.1 S1 M1SD4	138	C413_110.1 P71 BN71B4	139
12.4	267	1.1	110.6	5500	C323_110.6 S1 M1SD4	130	C323_110.6 P71 BN71B4	131
13.3	250	1.2	103.3	5500	C323_103.3 S1 M1SD4	130	C323_103.3 P71 BN71B4	131
13.4	245	2.4	102.3	7000	C413_102.3 S1 M1SD4	138	C413_102.3 P71 BN71B4	139
13.4	247	1.8	102.2	6500	C363_102.2 S1 M1SD4	134	C363_102.2 P71 BN71B4	135
14.5	228	1.3	94.2	5500	C323_94.2 S1 M1SD4	130	C323_94.2 P71 BN71B4	131
14.7	224	2.7	93.3	7000	C413_93.3 S1 M1SD4	138	C413_93.3 P71 BN71B4	139
14.9	222	2.0	91.9	6500	C363_91.9 S1 M1SD4	134	C363_91.9 P71 BN71B4	135
15.5	214	0.9	88.5	4850	C223_88.5 S1 M1SD4	126	C223_88.5 P71 BN71B4	127
16.5	201	2.2	83.1	6500	C363_83.1 S1 M1SD4	134	C363_83.1 P71 BN71B4	135
16.6	200	1.0	82.6	5000	C223_82.6 S1 M1SD4	126	C223_82.6 P71 BN71B4	127
16.6	200	1.5	82.6	5500	C323_82.6 S1 M1SD4	130	C323_82.6 P71 BN71B4	131
16.8	196	3.1	81.5	7000	C413_81.5 S1 M1SD4	138	C413_81.5 P71 BN71B4	139
17.7	188	2.4	77.6	6500	C363_77.6 S1 M1SD4	134	C363_77.6 P71 BN71B4	135
18.3	181	1.1	74.8	5000	C223_74.8 S1 M1SD4	126	C223_74.8 P71 BN71B4	127
18.3	181	1.6	74.7	5500	C323_74.7 S1 M1SD4	130	C323_74.7 P71 BN71B4	131
18.4	178	3.4	74.4	7000	C413_74.4 S1 M1SD4	138	C413_74.4 P71 BN71B4	139
19.4	171	2.6	70.8	6500	C363_70.8 S1 M1SD4	134	C363_70.8 P71 BN71B4	135
20.5	165	1.3	66.8	5500			C322_66.8 P71 BN71B4	131
21.0	158	1.3	65.3	5000	C223_65.3 S1 M1SD4	126	C223_65.3 P71 BN71B4	127
21.7	156	0.8	63.3	4850			C222_63.3 P71 BN71B4	127
22.1	150	3.0	62.0	6500	C363_62.0 S1 M1SD4	134	C363_62.0 P71 BN71B4	135
22.8	145	1.3	60.0	5000	C223_60.0 S1 M1SD4	126	C223_60.0 P71 BN71B4	127
23.1	147	1.5	59.4	5500	C322_59.4 S1 M1SD4	130	C322_59.4 P71 BN71B4	131
25.0	135	1.1	54.7	5000			C222_54.7 P71 BN71B4	127
26.1	130	2.3	52.4	5500	C322_52.4 S1 M1SD4	130	C322_52.4 P71 BN71B4	131
28.2	120	1.3	48.6	4850			C222_48.6 P71 BN71B4	127
30	112	2.7	45.3	5500	C322_45.3 S1 M1SD4	130	C322_45.3 P71 BN71B4	131
32	107	1.8	43.3	4530	C222_43.3 S1 M1SD4	126	C222_43.3 P71 BN71B4	127
34	101	3.0	40.7	5500	C322_40.7 S1 M1SD4	130	C322_40.7 P71 BN71B4	131
37	91	1.0	37.0	2000	C122_37.0 S1 M1SD4	122	C122_37.0 P71 BN71B4	123
37	91	2.2	36.8	4360	C222_36.8 S1 M1SD4	126	C222_36.8 P71 BN71B4	127
38	89	3.4	36.1	5500	C322_36.1 S1 M1SD4	130	C322_36.1 P71 BN71B4	131
41	82	2.4	33.1	4240	C222_33.1 S1 M1SD4	126	C222_33.1 P71 BN71B4	127
42	81	1.1	32.8	2000	C122_32.8 S1 M1SD4	122	C122_32.8 P71 BN71B4	123
46	73	2.7	29.6	4130	C222_29.6 S1 M1SD4	126	C222_29.6 P71 BN71B4	127
46	73	1.2	29.5	2000	C122_29.5 S1 M1SD4	122	C122_29.5 P71 BN71B4	123
50	67	3.0	27.2	4100	C222_27.2 S1 M1SD4	126	C222_27.2 P71 BN71B4	127
54	63	1.4	25.4	2000	C122_25.4 S1 M1SD4	122	C122_25.4 P71 BN71B4	123
56	60	3.3	24.3	3920	C222_24.3 S1 M1SD4	126	C222_24.3 P71 BN71B4	127
59	57	1.5	23.2	2000	C122_23.2 S1 M1SD4	122	C122_23.2 P71 BN71B4	123
66	51	1.6	20.6	2000	C122_20.6 S1 M1SD4	122	C122_20.6 P71 BN71B4	123
74	45	1.7	18.4	2000	C122_18.4 S1 M1SD4	122	C122_18.4 P71 BN71B4	123
80	42	1.8	17.2	2000	C122_17.2 S1 M1SD4	122	C122_17.2 P71 BN71B4	123
88	39	1.0	15.6	580	C052_15.6 S1 M1SD4	121		
89	38	1.9	15.4	2000	C122_15.4 S1 M1SD4	122	C122_15.4 P71 BN71B4	123
102	33	2.1	13.4	2000	C122_13.4 S1 M1SD4	122	C122_13.4 P71 BN71B4	123

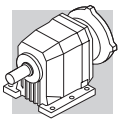


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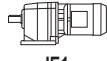



<b>n<sub>2</sub></b> min <sup>-1</sup>	<b>M<sub>2</sub></b> Nm	<b>S</b>	<b>i</b>	<b>R<sub>n2</sub></b> N	 IE1	 IE1
110	31	1.3	12.5	600	C052_12.5 S1 M1SD4	121
115	29	2.3	11.9	2000	C122_11.9 S1 M1SD4	122
122	28	1.4	11.2	590	C052_11.2 S1 M1SD4	121
136	25	2.5	10.1	1930	C122_10.1 S1 M1SD4	122
147	23	1.3	9.3	580	C052_9.3 S1 M1SD4	121
155	22	2.7	8.8	1850	C122_8.8 S1 M1SD4	122
164	20	2.2	5.5	570	C052_5.5 S1 M1LA6	121
180	19	3.0	7.6	1780	C122_7.6 S1 M1SD4	122
185	18	1.6	7.4	570	C052_7.4 S1 M1SD4	121
204	17	1.8	6.7	560	C052_6.7 S1 M1SD4	121
220	15	3.4	6.2	1650	C122_6.2 S1 M1SD4	122
235	14	3.7	11.9	1610	C122_11.9 S05 M05C2	122
249	14	2.2	5.5	540	C052_5.5 S1 M1SD4	121
273	12	4.0	10.1	1570	C122_10.1 S05 M05C2	122
318	11	4.5	8.8	1500	C122_8.8 S05 M05C2	122
361	9	4.8	7.6	1440	C122_7.6 S05 M05C2	122
452	7	5.7	6.2	1350	C122_6.2 S05 M05C2	122
500	7	6.0	5.6	1290	C122_5.6 S05 M05C2	122
577	6	6.5	4.9	1230	C122_4.9 S05 M05C2	122
651	5	7.0	4.3	1180	C122_3.2 S05 M05C2	122
770	4	7.8	3.7	1120	C122_3.7 S05 M05C2	122
875	4	8.4	3.2	1080	C122_3.2 S05 M05C2	122
1015	3	9.1	2.8	1030	C122_2.8 S05 M05C2	122

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<b>n<sub>2</sub></b> min <sup>-1</sup>	<b>M<sub>2</sub></b> Nm	<b>S</b>	<b>i</b>	<b>R<sub>n2</sub></b> N	 IE1	 IE1
0.74	6442	1.1	1240	60000	C904_1240 S2 M2SA6	156
0.85	5616	2.1	1081	85000	C1004_1081 S2 M2SA6	159
1.0	4792	1.5	922.3	60000	C904_922.3 S2 M2SA6	156
1.1	4381	0.9	1274	35000	C804_1274 S1 M1LA4	153
1.1	4295	1.7	1240	60000	C904_1240 S1 M1LA4	156
1.3	3549	1.1	1032	35000	C804_1032 S1 M1LA4	153
1.4	3484	2.1	1006	60000	C904_1006 S1 M1LA4	156
1.6	2939	1.4	854.6	35000	C804_854.6 S1 M1LA4	153
1.6	2923	2.5	844.0	65000	C904_844.0 S1 M1LA4	156
1.9	2531	0.9	736.0	25000	C704_736.0 S1 M1LA4	150
1.9	2492	1.6	724.7	35000	C804_724.7 S1 M1LA4	153
2.1	2284	1.8	664.3	35000	C804_664.3 S1 M1LA4	153
2.1	2260	1.0	657.3	25000	C704_657.3 S1 M1LA4	150
2.4	1978	0.8	571.2	16000	C614_571.2 S1 M1LA4	146
2.5	1907	1.2	554.7	25000	C704_554.7 S1 M1LA4	150
2.6	1820	2.2	529.3	35000	C804_529.3 S1 M1LA4	153
3.0	1600	1.0	462.0	16000	C614_462.0 S1 M1LA4	146
3.1	1566	2.6	455.4	35000	C804_455.4 S1 M1LA4	153
3.1	1525	1.5	443.5	25000	C704_443.5 S1 M1LA4	150
3.3	1460	1.1	421.5	16000	C614_421.5 S1 M1LA4	146
3.6	1315	0.8	379.6	10000	C514_379.6 S1 M1LA4	142
3.7	1282	1.2	370.1	16000	C614_370.1 S1 M1LA4	146
3.8	1254	3.2	364.7	35000	C804_364.7 S1 M1LA4	153
4.0	1184	1.9	344.3	25000	C704_344.3 S1 M1LA4	150
4.1	1170	1.4	337.7	16000	C614_337.7 S1 M1LA4	146
4.2	1130	0.9	326.1	10000	C514_326.1 S1 M1LA4	142
4.6	1031	1.0	297.8	10000	C514_297.8 S1 M1LA4	142
5.0	953	1.7	275.3	16000	C614_275.3 S1 M1LA4	146
5.1	936	2.5	272.2	25000	C704_272.2 S1 M1LA4	150
5.2	914	1.1	263.8	10000	C514_263.8 S1 M1LA4	142
5.7	834	1.2	240.9	10000	C514_240.9 S1 M1LA4	142
5.8	847	2.7	239.3	25000	C704_239.3 S1 M1LA4	150
5.8	825	1.9	238.3	16000	C614_238.3 S1 M1LA4	146

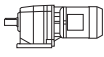



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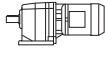

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IEC	 IE1	
6.2	782	2.9	220.9	25000			C703_220.9 P80 BN80A4	151
6.3	753	2.1	217.4	16000	C614_217.4 S1 M1LA4	146	C614_217.4 P80 BN80A4	147
6.4	767	1.3	216.7	10000	C513_216.7 S1 M1LA4	142	C513_216.7 P80 BN80A4	143
7.0	700	1.4	197.9	10000	C513_197.9 S1 M1LA4	142	C513_197.9 P80 BN80A4	143
7.0	693	2.3	195.8	16000			C613_195.8 P80 BN80A4	146
7.1	687	3.3	194.1	25000			C703_194.1 P80 BN80A4	151
7.7	637	0.9	179.9	7000	C413_179.9 S1 M1LA4	138	C413_179.9 P80 BN80A4	139
7.7	632	2.5	178.6	16000			C613_178.6 P80 BN80A4	146
7.9	622	1.6	175.8	10000	C513_175.8 S1 M1LA4	142	C513_175.8 P80 BN80A4	143
8.4	582	2.7	164.5	16000			C613_164.5 P80 BN80A4	146
8.4	581	1.0	164.1	7000	C413_164.1 S1 M1LA4	138	C413_164.1 P80 BN80A4	139
8.6	568	1.8	160.5	10000	C513_160.5 S1 M1LA4	142	C513_160.5 P80 BN80A4	143
9.2	531	3.0	150.0	16000			C613_150.0 P80 BN80A4	146
9.4	522	1.9	147.4	10000	C513_147.4 S1 M1LA4	142	C513_147.4 P80 BN80A4	143
9.5	516	1.2	145.6	7000	C413_145.6 S1 M1LA4	138	C413_145.6 P80 BN80A4	139
9.8	497	3.2	140.5	16000			C613_140.5 P80 BN80A4	146
9.9	494	0.9	139.8	6500	C363_139.8 S1 M1LA4	134	C363_139.8 P80BN80A4	135
10.3	477	2.1	134.6	10000	C513_134.6 S1 M1LA4	142	C513_134.6 P80 BN80A4	143
10.4	470	1.3	132.9	7000	C413_132.9 S1 M1LA4	138	C413_132.9 P80 BN80A4	139
11.0	445	1.0	125.8	6500	C363_125.8 S1 M1LA4	134	C363_125.8 P80BN80A4	135
11.1	440	2.3	124.4	10000	C513_124.4 S1 M1LA4	142	C513_124.4 P80 BN80A4	143
11.4	427	1.4	120.6	7000	C413_120.6 S1 M1LA4	138	C413_120.6 P80 BN80A4	139
12.1	402	2.5	113.6	10000	C513_113.6 S1 M1LA4	142	C513_113.6 P80 BN80A4	143
12.4	394	1.1	111.5	6500	C363_111.5 S1 M1LA4	134	C363_111.5 P80BN80A4	135
12.5	390	1.5	110.1	7000	C413_110.1 S1 M1LA4	138	C413_110.1 P80 BN80A4	139
13.5	362	1.7	102.3	7000	C413_102.3 S1 M1LA4	138	C413_102.3 P80 BN80A4	139
13.5	361	1.2	102.2	6500	C363_102.2 S1 M1LA4	134	C363_102.2 P80BN80A4	135
13.6	360	2.8	101.8	10000	C513_101.8 S1 M1LA4	142	C513_101.8 P80 BN80A4	143
14.7	333	0.9	94.2	5500	C323_94.2 S1 M1LA4	130	C323_94.2 P80BN80A4	131
14.8	330	1.8	93.3	7000	C413_93.3 S1 M1LA4	138	C413_93.3 P80 BN80A4	139
14.8	329	3.0	93.0	10000	C513_93.0 S1 M1LA4	142	C513_93.0 P80 BN80A4	143
15.0	325	1.4	91.9	6500	C363_91.9 S1 M1LA4	134	C363_91.9 P80BN80A4	135
16.6	294	1.5	83.1	6500	C363_83.1 S1 M1LA4	134	C363_83.1 P80BN80A4	135
16.7	292	1.0	82.6	5500	C323_82.6 S1 M1LA4	130	C323_82.6 P80BN80A4	131
16.9	289	2.1	81.5	7000	C413_81.5 S1 M1LA4	138	C413_81.5 P80 BN80A4	139
17.5	284	1.1	52.4	5500	C322_52.4 S2 M2SA6	130	C322_52.4 P80 BN80B6	131
17.8	274	1.6	77.6	6500	C363_77.6 S1 M1LA4	134	C363_77.6 P80BN80A4	135
18.5	264	1.1	74.7	5500	C323_74.7 S1 M1LA4	130	C323_74.7 P80BN80A4	131
18.6	263	2.3	74.4	7000	C413_74.4 S1 M1LA4	138	C413_74.4 P80 BN80A4	139
19.5	250	1.8	70.8	6500	C363_70.8 S1 M1LA4	134	C363_70.8 P80BN80A4	135
20.7	241	0.9	66.8	5500			C322_66.8 P80BN80A4	131
21.5	228	2.6	64.3	7000	C413_64.3 S1 M1LA4	138	C413_64.3 P80 BN80A4	139
22.2	219	2.1	62.0	6500	C363_62.0 S1 M1LA4	134	C363_62.0 P80BN80A4	135
22.6	221	1.4	40.7	5500	C322_40.7 S2 M2SA6	130	C322_40.7 P80 BN80B6	131
23.0	212	0.9	60.0	4280	C223_60.0 S1 M1LA4	126	C223_60.0 P80BN80A4	127
23.2	214	1.0	59.4	5500	C322_59.4 S1 M1LA4	130	C322_59.4 P80BN80A4	131
23.5	208	2.9	58.7	7000	C413_58.7 S1 M1LA4	138	C413_58.7 P80 BN80A4	139
24.6	198	2.3	56.2	6500	C363_56.2 S1 M1LA4	134	C363_56.2 P80BN80A4	135
26.3	189	1.6	52.4	5500	C322_52.4 S1 M1LA4	130	C322_52.4 P80BN80A4	131
26.8	182	3.3	51.5	7000	C413_51.5 S1 M1LA4	138	C413_51.5 P80 BN80A4	139
27.8	180	1.1	33.1	4270	C222_33.1 S2 M2SA6	126	C222_33.1 P80 BN80B6	127
28.7	170	2.6	48.2	6500	C363_48.2 S1 M1LA4	134	C363_48.2 P80BN80A4	135
30	163	1.8	45.3	5500	C322_45.3 S1 M1LA4	130	C322_45.3 P80BN80A4	131
31	162	3.1	44.8	7000	C412_44.8 S1 M1LA4	138	C412_44.8 P80 BN80A4	139
32	154	2.9	43.5	6500	C363_43.5 S1 M1LA4	134	C363_43.5 P80BN80A4	135
32	156	1.2	43.3	4190	C222_43.3 S1 M1LA4	126	C222_43.3 P80BN80A4	127
34	147	2.0	40.7	5500	C322_40.7 S1 M1LA4	130	C322_40.7 P80BN80A4	131
36	135	3.3	38.1	6500	C363_38.1 S1 M1LA4	134	C363_38.1 P80BN80A4	135
38	133	1.5	36.8	4070	C222_36.8 S1 M1LA4	126	C222_36.8 P80BN80A4	127
38	130	2.3	36.1	5500	C322_36.1 S1 M1LA4	130	C322_36.1 P80BN80A4	131
42	119	1.7	33.1	3970	C222_33.1 S1 M1LA4	126	C222_33.1 P80BN80A4	127
42	119	2.5	33.1	5500	C322_33.1 S1 M1LA4	130	C322_33.1 P80BN80A4	131
46	107	2.8	29.8	5500	C322_29.8 S1 M1LA4	130	C322_29.8 P80BN80A4	131
47	107	1.9	29.6	3890	C222_29.6 S1 M1LA4	126	C222_29.6 P80BN80A4	127
47	106	0.8	29.5	1820	C122_29.5 S1 M1LA4	122	C122_29.5 P80BN80A4	123



## 0.55 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IE1	
51	98	2.0	27.2	3860	C222_27.2 S1 M1LA4	126	C222_27.2 P80BN80A4	127
51	97	3.1	26.9	5500	C322_26.9 S1 M1LA4	130	C322_26.9 P80BN80A4	131
54	92	1.0	25.4	2000	C122_25.4 S1 M1LA4	122	C122_25.4 P80BN80A4	123
55	91	3.3	25.1	5500	C322_25.1 S1 M1LA4	130	C322_25.1 P80BN80A4	131
57	88	2.3	24.3	3720	C222_24.3 S1 M1LA4	126	C222_24.3 P80BN80A4	127
59	84	1.0	23.2	2000	C122_23.2 S1 M1LA4	122	C122_23.2 P80BN80A4	123
64	77	2.5	21.5	3700	C222_21.5 S1 M1LA4	126	C222_21.5 P80BN80A4	127
67	74	1.1	20.6	2000	C122_20.6 S1 M1LA4	122	C122_20.6 P80BN80A4	123
69	72	2.6	20.0	3560	C222_20.0 S1 M1LA4	126	C222_20.0 P80BN80A4	127
75	66	1.2	18.4	2000	C122_18.4 S1 M1LA4	122	C122_18.4 P80BN80A4	123
76	65	2.8	18.1	3500	C222_18.1 S1 M1LA4	126	C222_18.1 P80BN80A4	127
80	62	1.2	17.2	2000	C122_17.2 S1 M1LA4	122	C122_17.2 P80BN80A4	123
87	57	3.1	15.8	3350	C222_15.8 S1 M1LA4	126	C222_15.8 P80BN80A4	127
89	56	1.3	15.4	2000	C122_15.4 S1 M1LA4	122	C122_15.4 P80BN80A4	123
95	53	3.2	14.5	3300	C222_14.5 S1 M1LA4	126	C222_14.5 P80BN80A4	127
103	48	1.4	13.4	1990	C122_13.4 S1 M1LA4	122	C122_13.4 P80BN80A4	123
116	43	1.6	11.9	1920	C122_11.9 S1 M1LA4	122	C122_11.9 P80BN80A4	123
121	41	1.6	7.6	1910	C122_7.6 S2 M2SA6	122	C122_7.6 P80 BN80B6	123
123	40	1.0	11.2	480	C052_11.2 S1 M1LA4	121		
137	36	1.7	10.1	1850	C122_10.1 S1 M1LA4	122	C122_10.1 P80BN80A4	123
151	33	3.3	6.1	2860	C222_6.1 S2 M2SA6	126	C222_6.1 P80 BN80B6	127
156	32	1.9	8.8	1780	C122_8.8 S1 M1LA4	122	C122_8.8 P80BN80A4	123
181	28	2.0	7.6	1720	C122_7.6 S1 M1LA4	122	C122_7.6 P80BN80A4	123
186	27	1.1	7.4	460	C052_7.4 S1 M1LA4	121		
206	24	1.2	6.7	450	C052_6.7 S1 M1LA4	121		
221	22	2.4	6.2	1590	C122_6.2 S1 M1LA4	122	C122_6.2 P80BN80A4	123
237	21	2.5	11.9	1580	C122_11.9 S1 M1SD2	122	C122_11.9 P71 BN71B2	123
246	20	2.5	5.6	1540	C122_5.6 S1 M1LA4	122	C122_5.6 P80BN80A4	123
251	20	1.5	5.5	430	C052_5.5 S1 M1LA4	121		
279	18	2.7	10.1	1530	C122_10.1 S1 M1SD2	122	C122_10.1 P71 BN71B2	123
283	18	2.7	4.9	1490	C122_4.9 S1 M1LA4	122	C122_4.9 P80BN80A4	123
320	16	3.0	8.8	1470	C122_8.8 S1 M1SD2	122	C122_8.8 P71 BN71B2	123
320	16	2.9	4.3	1420	C122_4.3 S1 M1LA4	122	C122_4.3 P80BN80A4	123
369	14	3.3	7.6	1410	C122_7.6 S1 M1SD2	122	C122_7.6 P71 BN71B2	123
378	13	3.2	3.7	1370	C122_3.7 S1 M1LA4	122	C122_3.7 P80BN80A4	123
451	11	3.8	6.2	1300	C122_6.2 S1 M1SD2	122	C122_6.2 P71 BN71B2	123
504	10	4.0	5.6	1260	C122_5.6 S1 M1SD2	122	C122_5.6 P71 BN71B2	123
577	9	4.4	4.9	1210	C122_4.9 S1 M1SD2	122	C122_4.9 P71 BN71B2	123
656	8	4.7	4.3	1170	C122_4.3 S1 M1SD2	122	C122_4.3 P71 BN71B2	123
770	6	5.2	3.7	1110	C122_3.7 S1 M1SD2	122	C122_3.7 P71 BN71B2	123
881	6	5.7	3.2	990	C122_3.2 S1 M1SD2	122	C122_3.2 P71 BN71B2	123
1007	5	6.1	2.8	950	C122_2.8 S1 M1SD2	122	C122_2.8 P71 BN71B2	123

## 0.75 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE2 IE3		 IE2 IE3	
0.86	7413	1.6	1081	85000	C1004_1081 S3 ME3SA6	159	C1004_1081 P90 BE90S6	160
0.93	6973	1.0	1006	60000	C904_1006 S3 ME3SA6	156	C904_1006 P90 BE90S6	157
1.2	5582	1.3	1240	60000	C904_1240 S2 ME2SB4	156	C904_1240 P80 BE80B4	157
1.3	5117	1.4	1137	60000	C904_1137 S2 ME2SB4	156	C904_1137 P80 BE80B4	157
1.3	4865	2.5	1081	85000	C1004_1081 S2 ME2SB4	159	C1004_1081 P80 BE80B4	160
1.4	4528	1.6	1006	60000	C904_1006 S2 ME2SB4	156	C904_1006 P80 BE80B4	157
1.4	4517	2.7	1004	85000	C1004_1004 S2 ME2SB4	159	C1004_1004 P80 BE80B4	160
1.5	4256	0.9	945.7	35000	C804_945.7 S2 ME2SB4	153	C804_945.7 P80 BE80B4	154
1.6	4150	1.7	922.3	60000	C904_922.3 S2 ME2SB4	156	C904_922.3 P80 BE80B4	157
1.6	4087	2.9	908.2	85000	C1004_908.2 S2 ME2SB4	159	C1004_908.2 P80 BE80B4	160
1.7	3846	1.0	854.6	35000	C804_854.6 S2 ME2SB4	153	C804_854.6 P80 BE80B4	154
1.7	3798	1.9	844.0	6000	C904_844.0 S2 ME2SB4	156	C904_844.0 P80 BE80B4	157
1.8	3525	1.1	783.4	35000	C804_783.4 S2 ME2SB4	153	C804_783.4 P80 BE80B4	154
1.8	3481	2.1	773.6	60000	C904_773.6 S2 ME2SB4	156	C904_773.6 P80 BE80B4	157
2.0	3261	1.2	724.7	35000	C804_724.7 S2 ME2SB4	153	C804_724.7 P80 BE80B4	154
2.0	3205	2.2	712.2	60000	C904_712.2 S2 ME2SB4	156	C904_712.2 P80 BE80B4	157













## 1.1 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
115	87	1.8	12.4	2840	C222_12.4 S3 ME3SA4	C222_12.4 S3 MX3SA4	126	C222_12.4 P90 BE90S4	C222_12.4 P90 BX90S4	127
116	87	2.8	12.3	4350	C322_12.3 S3 ME3SA4	C322_12.3 S3 MX3SA4	130	C322_12.3 P90 BE90S4	C322_12.3 P90 BX90S4	131
128	79	2.9	11.2	4200	C322_11.2 S3 ME3SA4	C322_11.2 S3 MX3SA4	130	C322_11.2 P90 BE90S4	C322_11.2 P90 BX90S4	131
129	78	2.0	11.1	2800	C222_11.1 S3 ME3SA4	C222_11.1 S3 MX3SA4	126	C222_11.1 P90 BE90S4	C222_11.1 P90 BX90S4	127
142	71	0.9	10.1	1400	C122_10.1 S3 ME3SA4	C122_10.1 S3 MX3SA4	122	C122_10.1 P90 BE90S4	C122_10.1 P90 BX90S4	123
148	68	2.1	9.6	2700	C222_9.6 S3 ME3SA4	C222_9.6 S3 MX3SA4	126	C222_9.6 P90 BE90S4	C222_9.6 P90 BX90S4	127
154	65	3.4	9.3	4030	C322_6.3 S3 ME3SA4	C322_6.3 S3 MX3SA4	130	C322_6.3 P90 BE90S4	C322_6.3 P90 BX90S4	131
162	62	1.0	8.8	1560	C122_8.8 S3 ME3SA4	C122_8.8 S3 MX3SA4	122	C122_8.8 P90 BE90S4	C122_8.8 P90 BX90S4	123
165	61	2.3	8.7	2630	C222_8.7 S3 ME3SA4	C222_8.7 S3 MX3SA4	126	C222_8.7 P90 BE90S4	C222_8.7 P90 BX90S4	127
188	54	1.0	7.6	1550	C122_7.6 S3 ME3SA4	C122_7.6 S3 MX3SA4	122	C122_7.6 P90 BE90S4	C122_7.6 P90 BX90S4	123
202	50	2.6	7.1	2510	C222_7.1 S3 ME3SA4	C222_7.1 S3 MX3SA4	126	C222_7.1 P90 BE90S4	C222_7.1 P90 BX90S4	127
229	44	1.2	6.2	1220	C122_6.2 S3 ME3SA4	C122_6.2 S3 MX3SA4	122	C122_6.2 P90 BE90S4	C122_6.2 P90 BX90S4	123
235	43	2.5	6.1	2380	C222_6.1 S3 ME3SA4	C222_6.1 S3 MX3SA4	126	C222_6.1 P90 BE90S4	C222_6.1 P90 BX90S4	127
238	42	1.6	11.9	1420	C122_11.9 S2 ME2SB2		122	C122_11.9 P80 BE80B2		123
255	39	3.9	11.1	2980	C222_11.1 S2 ME2SB2		126	C222_11.1 P80 BE80B2		127
255	39	1.3	5.6	1270	C122_5.6 S3 ME3SA4	C122_5.6 S3 MX3SA4	122	C122_5.6 P90 BE90S4	C122_5.6 P90 BX90S4	123
256	39	2.6	5.6	2350	C222_5.6 S3 ME3SA4	C222_5.6 S3 MX3SA4	126	C222_5.6 P90 BE90S4	C222_5.6 P90 BX90S4	127
259	39	1.1	3.7	1320	C122_3.7 S3 ME3LA6		122	C122_3.7 P100 BE100M6		123
281	35	1.8	10.1	1420	C122_10.1 S2 ME2SB2		122	C122_10.1 P80 BE80B2		123
294	34	1.4	4.9	1370	C122_4.9 S3 ME3SA4	C122_4.9 S3 MX3SA4	122	C122_4.9 P90 BE90S4	C122_4.9 P90 BX90S4	123
300	34	3.0	4.8	2240	C222_4.8 S3 ME3SA4	C222_4.8 S3 MX3SA4	126	C222_4.8 P90 BE90S4	C222_4.8 P90 BX90S4	127
320	31	1.9	8.8	1370	C122_8.8 S2 ME2SB2		122	C122_8.8 P80 BE80B2		123
332	30	1.5	4.3	1320	C122_4.3 S3 ME3SA4	C122_4.3 S3 MX3SA4	122	C122_4.3 P90 BE90S4	C122_4.3 P90 BX90S4	123
336	30	3.1	4.3	2200	C222_4.3 S3 ME3SA4	C222_4.3 S3 MX3SA4	126	C222_4.3 P90 BE90S4	C222_4.3 P90 BX90S4	127
341	29	1.3	2.8	1320	C122_2.8 S3 M3SA6		122	C122_2.8 P90 BN90L6		123
347	29	2.8	2.7	2160	C222_2.7 S3 M3SA6		126	C222_2.7 P90 BN90L6		127
371	27	2.1	7.6	1330	C122_7.6 S2 ME2SB2		122	C122_7.6 P80 BE80B2		123
386	26	3.5	3.7	2090	C222_3.7 S3 ME3SA4	C222_3.7 S3 MX3SA4	126	C222_3.7 P90 BE90S4	C222_3.7 P90 BX90S4	127
392	26	1.6	3.7	1280	C122_3.7 S3 ME3SA4	C122_3.7 S3 MX3SA4	122	C122_3.7 P90 BE90S4	C122_3.7 P90 BX90S4	123
446	23	1.8	3.2	1230	C122_3.2 S3 ME3SA4	C122_3.2 S3 MX3SA4	122	C122_3.2 P90 BE90S4	C122_3.2 P90 BX90S4	123
454	22	2.4	6.2	1230	C122_6.2 S2 ME2SB2		122	C122_6.2 P80 BE80B2		123
505	20	2.6	5.6	1190	C122_5.6 S2 ME2SB2		122	C122_5.6 P80 BE80B2		123
517	19	1.9	2.8	1190	C122_2.8 S3 ME3SA4	C122_2.8 S3 MX3SA4	122	C122_2.8 P90 BE90S4	C122_2.8 P90 BX90S4	123
581	17	2.8	4.9	1150	C122_4.9 S2 ME2SB2		122	C122_4.9 P80 BE80B2		123
656	15	3.0	4.3	1110	C122_4.3 S2 ME2SB2		122	C122_4.3 P80 BE80B2		123
775	13	3.3	3.7	1070	C122_3.7 S2 ME2SB2		122	C122_3.7 P80 BE80B2		123
882	11	3.5	3.2	1020	C122_3.2 S2 ME2SB2		122	C122_3.2 P80 BE80B2		123
1023	10	3.8	2.8	980	C122_2.8 S2 ME2SB2		122	C122_2.8 P80 BE80B2		123

## 1.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
1.0	12390	1.0	908.2	85000	C1004_908.2 S3 ME3LB6		159	C1004_908.2 P100 BE100LA6		160
1.3	9730	1.2	1081	85000	C1004_1081 S3 ME3SB4	C1004_1081 S3 MX3SB4	159	C1004_1081 P90 BE90LA4	C1004_1081 P90 BX90LA4	160
1.4	9035	1.3	1004	85000	C1004_1004 S3 ME3SB4	C1004_1004 S3 MX3SB4	159	C1004_1004 P90 BE90LA4	C1004_1004 P90 BX90LA4	160
1.6	8174	1.5	908.2	85000	C1004_908.2 S3 ME3SB4	C1004_908.2 S3 MX3SB4	159	C1004_908.2 P90 BE90LA4	C1004_908.2 P90 BX90LA4	160
1.7	7596	0.9	844.0	60000	C904_844.0 S3 ME3SB4	C904_844.0 S3 MX3SB4	156	C904_844.0 P90 BE90LA4	C904_844.0 P90 BX90LA4	157
1.7	7590	1.6	843.3	85000	C1004_843.3 S3 ME3SB4	C1004_843.3 S3 MX3SB4	159	C1004_843.3 P90 BE90LA4	C1004_843.3 P90 BX90LA4	160
1.8	6981	1.7	775.7	85000	C1004_775.7 S3 ME3SB4	C1004_775.7 S3 MX3SB4	159	C1004_775.7 P90 BE90LA4	C1004_775.7 P90 BX90LA4	160
1.8	6963	1.0	773.6	60000	C904_773.6 S3 ME3SB4	C904_773.6 S3 MX3SB4	156	C904_773.6 P90 BE90LA4	C904_773.6 P90 BX90LA4	157
2.0	6483	1.9	720.3	85000	C1004_720.3 S3 ME3SB4	C1004_720.3 S3 MX3SB4	159	C1004_720.3 P90 BE90LA4	C1004_720.3 P90 BX90LA4	160
2.0	6410	1.1	712.2	60000	C904_712.2 S3 ME3SB4	C904_712.2 S3 MX3SB4	156	C904_712.2 P90 BE90LA4	C904_712.2 P90 BX90LA4	157
2.2	5875	1.2	652.8	60000	C904_652.8 S3 ME3SB4	C904_652.8 S3 MX3SB4	156	C904_652.8 P90 BE90LA4	C904_652.8 P90 BX90LA4	157
2.3	5647	2.1	627.4	85000	C1004_627.4 S3 ME3SB4	C1004_627.4 S3 MX3SB4	159	C1004_627.4 P90 BE90LA4	C1004_627.4 P90 BX90LA4	160
2.5	5245	1.4	582.8	60000	C904_582.8 S3 ME3SB4	C904_582.8 S3 MX3SB4	156	C904_582.8 P90 BE90LA4	C904_582.8 P90 BX90LA4	157
2.5	5243	2.3	582.6	85000	C1004_582.6 S3 ME3SB4	C1004_582.6 S3 MX3SB4	159	C1004_582.6 P90 BE90LA4	C1004_582.6 P90 BX90LA4	160
2.7	4808	1.5	534.2	60000	C904_534.2 S3 ME3SB4	C904_534.2 S3 MX3SB4	156	C904_534.2 P90 BE90LA4	C904_534.2 P90 BX90LA4	157
2.8	4524	2.7	502.6	85000	C1004_502.6 S3 ME3SB4	C1004_502.6 S3 MX3SB4	159	C1004_502.6 P90 BE90LA4	C1004_502.6 P90 BX90LA4	160
3.1	4201	2.9	466.7	85000	C1004_466.7 S3 ME3SB4	C1004_466.7 S3 MX3SB4	159	C1004_466.7 P90 BE90LA4	C1004_466.7 P90 BX90LA4	160







## 1.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
235	58	1.8	6.1	2250	C222_6.1 S3 ME3SB4	C222_6.1 S3 MX3SB4	126	C222_6.1 P90 BE90LA4	C222_6.1 P90 BX90LA4	127
240	57	1.2	11.9	1250	C122_11.9 S3 ME3SA2		122	C122_11.9 P90 BE90SA2		123
253	54	2.9	5.7	3320	C322_5.7 S3 ME3SB4	C322_5.7 S3 MX3SB4	130	C322_5.7 P90 BE90LA4	C322_5.7 P90 BX90LA4	131
255	53	1.7	3.7	2210	C222_3.7 S3 ME3LB6		126	C222_3.7 P100 BE100LA6		127
255	53	1.0	5.6	720	C122_5.6 S3 ME3SB4	C122_5.6 S3 MX3SB4	122	C122_5.6 P90 BE90LA4	C122_5.6 P90 BX90LA4	123
256	53	1.9	5.6	2200	C222_5.6 S3 ME3SB4	C222_5.6 S3 MX3SB4	126	C222_5.6 P90 BE90LA4	C222_5.6 P90 BX90LA4	127
284	48	1.3	10.1	1340	C122_10.1 S3 ME3SA2		122	C122_10.1 P90 BE90SA2		123
289	47	3.3	5.0	3240	C322_5.0 S3 ME3SB4	C322_5.0 S3 MX3SB4	130	C322_5.0 P90 BE90LA4	C322_5.0 P90 BX90LA4	131
294	46	1.0	4.9	840	C122_4.9 S3 ME3SB4	C122_4.9 S3 MX3SB4	122	C122_4.9 P90 BE90LA4	C122_4.9 P90 BX90LA4	123
300	45	2.2	4.8	2140	C222_4.8 S3 ME3SB4	C222_4.8 S3 MX3SB4	126	C222_4.8 P90 BE90LA4	C222_4.8 P90 BX90LA4	127
323	42	1.4	8.8	1300	C122_8.8 S3 ME3SA2		122	C122_8.8 P90 BE90SA2		123
330	41	3.3	8.7	2130	C222_8.7 S3 ME3SA2		126	C222_8.7 P90 BE90SA2		127
332	41	1.1	4.3	930	C122_4.3 S3 ME3SB4	C122_4.3 S3 MX3SB4	122	C122_4.3 P90 BE90LA4	C122_4.3 P90 BX90LA4	123
336	40	2.3	4.3	2100	C222_4.3 S3 ME3SB4	C222_4.3 S3 MX3SB4	126	C222_4.3 P90 BE90LA4	C222_4.3 P90 BX90LA4	127
341	40	0.9	2.8	1000	C122_2.8 S3 ME3LB6		122	C122_2.8 P100 BE100LA6		123
347	39	2.0	2.7	2060	C222_2.7 S3 ME3LB6		126	C222_2.7 P100 BE100LA6		127
375	36	1.5	7.6	1270	C122_7.6 S3 ME3SA2		122	C122_7.6 P90 BE90SA2		123
386	35	2.6	3.7	2020	C222_3.7 S3 ME3SB4	C222_3.7 S3 MX3SB4	126	C222_3.7 P90 BE90LA4	C222_3.7 P90 BX90LA4	127
392	35	1.2	3.7	1100	C122_3.7 S3 ME3SB4	C122_3.7 S3 MX3SB4	122	C122_3.7 P90 BE90LA4	C122_3.7 P90 BX90LA4	123
403	34	3.9	7.1	2030	C222_7.1 S3 ME3SA2		126	C222_7.1 P90 BE90SA2		127
430	32	2.7	3.3	2000	C222_3.3 S3 ME3SB4	C222_3.3 S3 MX3SB4	126	C222_3.3 P90 BE90LA4	C222_3.3 P90 BX90LA4	127
446	30	1.3	3.2	1120	C122_3.2 S3 ME3SB4	C122_3.2 S3 MX3SB4	122	C122_3.2 P90 BE90LA4	C122_3.2 P90 BX90LA4	123
458	30	1.8	6.2	1180	C122_6.2 S3 ME3SA2		122	C122_6.2 P90 BE90SA2		123
469	29	3.6	6.1	1920	C222_6.1 S3 ME3SA2		126	C222_6.1 P90 BE90SA2		127
510	27	1.9	5.6	1140	C122_5.6 S3 ME3SA2		122	C122_5.6 P90 BE90SA2		123
511	27	3.8	5.6	1860	C222_5.6 S3 ME3SA2		126	C222_5.6 P90 BE90SA2		127
517	26	1.4	2.8	1140	C122_2.8 S3 ME3SB4	C122_2.8 S3 MX3SB4	122	C122_2.8 P90 BE90LA4	C122_2.8 P90 BX90LA4	123
525	26	3.1	2.7	1870	C222_2.7 S3 ME3SB4	C222_2.7 S3 MX3SB4	126	C222_2.7 P90 BE90LA4	C222_2.7 P90 BX90LA4	127
586	23	2.1	4.9	1110	C122_4.9 S3 ME3SA2		122	C122_4.9 P90 BE90SA2		123
599	23	4.4	4.8	1810	C222_4.8 S3 ME3SA2		126	C222_4.8 P90 BE90SA2		127
662	21	2.2	4.3	1070	C122_4.3 S3 ME3SA2		122	C122_4.3 P90 BE90SA2		123
782	17	2.4	3.7	1030	C122_3.7 S3 ME3SA2		122	C122_3.7 P90 BE90SA2		123
890	15	2.6	3.2	990	C122_3.2 S3 ME3SA2		122	C122_3.2 P90 BE90SA2		123
1032	13	2.8	2.8	960	C122_2.8 S3 ME3SA2		122	C122_2.8 P90 BE90SA2		123

## 2.2 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
1.4	13281	0.9	1004	85000	C1004_1004 S3 ME3LA4	C1004_1004 S3 MX3LA4	159	C1004_1004 P100 BE100LA4	C1004_1004 P100 BX100LA4	160
1.6	12016	1.0	908.2	85000	C1004_908.2 S3 ME3LA4	C1004_908.2 S3 MX3LA4	159	C1004_908.2 P100 BE100LA4	C1004_908.2 P100 BX100LA4	160
1.7	11157	1.1	843.3	85000	C1004_843.3 S3 ME3LA4	C1004_843.3 S3 MX3LA4	159	C1004_843.3 P100 BE100LA4	C1004_843.3 P100 BX100LA4	160
1.8	10263	1.2	775.7	85000	C1004_775.7 S3 ME3LA4	C1004_775.7 S3 MX3LA4	159	C1004_775.7 P100 BE100LA4	C1004_775.7 P100 BX100LA4	160
2.0	9530	1.3	720.3	85000	C1004_720.3 S3 ME3LA4	C1004_720.3 S3 MX3LA4	159	C1004_720.3 P100 BE100LA4	C1004_720.3 P100 BX100LA4	160
2.3	8301	1.4	627.4	85000	C1004_627.4 S3 ME3LA4	C1004_627.4 S3 MX3LA4	159	C1004_627.4 P100 BE100LA4	C1004_627.4 P100 BX100LA4	160
2.5	7710	0.9	582.8	60000	C904_582.8 S3 ME3LA4	C904_582.8 S3 MX3LA4	156	C904_582.8 P100 BE100LA4	C904_582.8 P100 BX100LA4	157
2.5	7708	1.6	582.6	85000	C1004_582.6 S3 ME3LA4	C1004_582.6 S3 MX3LA4	159	C1004_582.6 P100 BE100LA4	C1004_582.6 P100 BX100LA4	160
2.7	7068	1.0	534.2	60000	C904_534.2 S3 ME3LA4	C904_534.2 S3 MX3LA4	156	C904_534.2 P100 BE100LA4	C904_534.2 P100 BX100LA4	157
2.8	6650	1.8	502.6	85000	C1004_502.6 S3 ME3LA4	C1004_502.6 S3 MX3LA4	159	C1004_502.6 P100 BE100LA4	C1004_502.6 P100 BX100LA4	160
3.1	6175	1.9	466.7	85000	C1004_466.7 S3 ME3LA4	C1004_466.7 S3 MX3LA4	159	C1004_466.7 P100 BE100LA4	C1004_466.7 P100 BX100LA4	160
3.1	6048	1.2	457.1	60000	C904_457.1 S3 ME3LA4	C904_457.1 S3 MX3LA4	156	C904_457.1 P100 BE100LA4	C904_457.1 P100 BX100LA4	157
3.4	5544	1.3	419.0	60000	C904_419.0 S3 ME3LA4	C904_419.0 S3 MX3LA4	156	C904_419.0 P100 BE100LA4	C904_419.0 P100 BX100LA4	157
3.5	5421	2.2	409.8	85000	C1004_409.8 S3 ME3LA4	C1004_409.8 S3 MX3LA4	159	C1004_409.8 P100 BE100LA4	C1004_409.8 P100 BX100LA4	160
3.8	5034	2.4	380.5	85000	C1004_380.5 S3 ME3LA4	C1004_380.5 S3 MX3LA4	159	C1004_380.5 P100 BE100LA4	C1004_380.5 P100 BX100LA4	160
3.9	4892	1.5	369.8	60000	C904_369.8 S3 ME3LA4	C904_369.8 S3 MX3LA4	156	C904_369.8 P100 BE100LA4	C904_369.8 P100 BX100LA4	157
4.2	4484	1.6	339.0	60000	C904_339.0 S3 ME3LA4	C904_339.0 S3 MX3LA4	156	C904_339.0 P100 BE100LA4	C904_339.0 P100 BX100LA4	157
4.3	4422	0.9	334.3	35000	C804_334.3 S3 ME3LA4	C804_334.3 S3 MX3LA4	153	C804_334.3 P100 BE100LA4	C804_334.3 P100 BX100LA4	154
4.4	4282	2.8	323.6	85000	C1004_323.6 S3 ME3LA4	C1004_323.6 S3 MX3LA4	159	C1004_323.6 P100 BE100LA4	C1004_323.6 P100 BX100LA4	160
4.9	3875	1.9	292.9	60000	C904_292.9 S3 ME3LA4	C904_292.9 S3 MX3LA4	156	C904_292.9 P100 BE100LA4	C904_292.9 P100 BX100LA4	157
5.0	3779	1.1	285.7	35000	C804_285.7 S3 ME3LA4	C804_285.7 S3 MX3LA4	153	C804_285.7 P100 BE100LA4	C804_285.7 P100 BX100LA4	154
5.3	3552	2.0	268.5	60000	C904_268.5 S3 ME3LA4	C904_268.5 S3 MX3LA4	156	C904_268.5 P100 BE100LA4	C904_268.5 P100 BX100LA4	157
5.5	3464	1.2	261.9	35000	C804_261.9 S3 ME3LA4	C804_261.9 S3 MX3LA4	153	C804_261.9 P100 BE100LA4	C804_261.9 P100 BX100LA4	154







## 2.2 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
401	50	4.0	7.2	2920	C322_7.2 S3 ME3LA2		130	C322_7.2 P90 BE90L2		131
405	49	2.6	7.1	1920	C222_7.1 S3 ME3LA2		126	C222_7.1 P90 BE90L2		127
419	48	2.9	3.4	2800	C322_3.4 S3 ME3LA4	C322_3.4 S3 MX3LA4	130	C322_3.4 P100 BE100LA4	C322_3.4 P100 BX100LA4	131
430	46	1.8	3.3	1890	C222_3.3 S3 ME3LA4	C222_3.3 S3 MX3LA4	126	C222_3.3 P100 BE100LA4	C222_3.3 P100 BX100LA4	127
446	45	0.9	3.2	580	C122_3.2 S3 ME3LA4	C122_3.2 S3 MX3LA4	122	C122_3.2 P100 BE100LA4	C122_3.2 P100 BX100LA4	123
458	44	3.6	6.3	2760	C322_6.3 S3 ME3LA2		130	C322_6.3 P90 BE90L2		131
472	42	2.5	6.1	1820	C222_6.1 S3 ME3LA2		126	C222_6.1 P90 BE90L2		127
497	40	3.2	2.9	2700	C322_2.9 S3 ME3LA4	C322_2.9 S3 MX3LA4	130	C322_2.9 P100 BE100LA4	C322_2.9 P100 BX100LA4	131
513	39	2.6	5.6	1770	C222_5.6 S3 ME3LA2		126	C222_5.6 P90 BE90L2		127
517	39	1.0	2.8	690	C122_2.8 S3 ME3LA4	C122_2.8 S3 MX3LA4	122	C122_2.8 P100 BE100LA4	C122_2.8 P100 BX100LA4	123
525	38	2.1	2.7	1770	C222_2.7 S3 ME3LA4	C222_2.7 S3 MX3LA4	126	C222_2.7 P100 BE100LA4	C222_2.7 P100 BX100LA4	127
602	33	3.0	4.8	1720	C222_4.8 S3 ME3LA2		126	C222_4.8 P90 BE90L2		127
674	30	3.2	4.3	1670	C222_4.3 S3 ME3LA2		126	C222_4.3 P90 BE90L2		127
774	26	3.5	3.7	1620	C222_3.7 S3 ME3LA2		126	C222_3.7 P90 BE90L2		127
786	25	1.7	3.7	970	C122_3.7 S3 ME3LA2		122	C122_3.7 P90 BE90L2		123
863	23	3.7	3.3	1550	C222_3.3 S3 ME3LA2		126	C222_3.3 P90 BE90L2		127
895	22	1.8	3.2	940	C122_3.2 S3 ME3LA2		122	C122_3.2 P90 BE90L2		123
1037	19	1.9	2.8	920	C122_2.8 S3 ME3LA2		122	C122_2.8 P90 BE90L2		123
1054	19	4.2	2.7	1490	C222_2.7 S3 ME3LA2		126	C222_2.7 P90 BE90L2		127

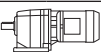

## 3 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
2.0	12965	0.9	720.3	85000	C1004_720.3 S3 ME3LB4	C1004_720.3 S3 MX3LB4	159	C1004_720.3 P100 BE100LB4	C1004_720.3 P100 BX100LB4	160
2.3	11293	1.1	627.4	85000	C1004_627.4 S3 ME3LB4	C1004_627.4 S3 MX3LB4	159	C1004_627.4 P100 BE100LB4	C1004_627.4 P100 BX100LB4	160
2.5	10487	1.1	582.6	85000	C1004_582.6 S3 ME3LB4	C1004_582.6 S3 MX3LB4	159	C1004_582.6 P100 BE100LB4	C1004_582.6 P100 BX100LB4	160
2.9	9047	1.3	502.6	85000	C1004_502.6 S3 ME3LB4	C1004_502.6 S3 MX3LB4	159	C1004_502.6 P100 BE100LB4	C1004_502.6 P100 BX100LB4	160
3.1	8401	1.4	466.7	85000	C1004_466.7 S3 ME3LB4	C1004_466.7 S3 MX3LB4	159	C1004_466.7 P100 BE100LB4	C1004_466.7 P100 BX100LB4	160
3.4	7543	1.0	419.0	60000	C904_419.0 S3 ME3LB4	C904_419.0 S3 MX3LB4	156	C904_419.0 P100 BE100LB4	C904_419.0 P100 BX100LB4	157
3.5	7376	1.6	409.8	85000	C1004_409.8 S3 ME3LB4	C1004_409.8 S3 MX3LB4	159	C1004_409.8 P100 BE100LB4	C1004_409.8 P100 BX100LB4	160
3.8	6849	1.8	380.5	85000	C1004_380.5 S3 ME3LB4	C1004_380.5 S3 MX3LB4	159	C1004_380.5 P100 BE100LB4	C1004_380.5 P100 BX100LB4	160
3.9	6656	1.1	369.8	60000	C904_369.8 S3 ME3LB4	C904_369.8 S3 MX3LB4	156	C904_369.8 P100 BE100LB4	C904_369.8 P100 BX100LB4	157
4.2	6101	1.2	339.0	60000	C904_339.0 S3 ME3LB4	C904_339.0 S3 MX3LB4	156	C904_339.0 P100 BE100LB4	C904_339.0 P100 BX100LB4	157
4.4	5825	2.1	323.6	85000	C1004_323.6 S3 ME3LB4	C1004_323.6 S3 MX3LB4	159	C1004_323.6 P100 BE100LB4	C1004_323.6 P100 BX100LB4	160
4.8	5409	2.2	300.5	85000	C1004_300.5 S3 ME3LB4	C1004_300.5 S3 MX3LB4	159	C1004_300.5 P100 BE100LB4	C1004_300.5 P100 BX100LB4	160
4.9	5272	1.4	292.9	60000	C904_292.9 S3 ME3LB4	C904_292.9 S3 MX3LB4	156	C904_292.9 P100 BE100LB4	C904_292.9 P100 BX100LB4	157
5.4	4833	1.5	268.5	60000	C904_268.5 S3 ME3LB4	C904_268.5 S3 MX3LB4	156	C904_268.5 P100 BE100LB4	C904_268.5 P100 BX100LB4	157
5.5	4734	2.5	263.0	85000	C1004_263.0 S3 ME3LB4	C1004_263.0 S3 MX3LB4	159	C1004_263.0 P100 BE100LB4	C1004_263.0 P100 BX100LB4	160
5.9	4396	2.7	244.2	85000	C1004_244.2 S3 ME3LB4	C1004_244.2 S3 MX3LB4	159	C1004_244.2 P100 BE100LB4	C1004_244.2 P100 BX100LB4	160
6.2	4170	1.7	231.7	60000	C904_231.7 S3 ME3LB4	C904_231.7 S3 MX3LB4	156	C904_231.7 P100 BE100LB4	C904_231.7 P100 BX100LB4	157
6.7	4015	1.0	215.8	35000	C803_215.8 S3 ME3LB4	C803_215.8 S3 MX3LB4	153	C803_215.8 P100 BE100LB4	C803_215.8 P100 BX100LB4	154
6.8	3823	1.9	212.4	60000	C904_212.4 S3 ME3LB4	C904_212.4 S3 MX3LB4	156	C904_212.4 P100 BE100LB4	C904_212.4 P100 BX100LB4	157
7.3	3680	1.0	197.9	35000	C803_197.9 S3 ME3LB4	C803_197.9 S3 MX3LB4	153	C803_197.9 P100 BE100LB4	C803_197.9 P100 BX100LB4	154
7.8	3429	1.2	184.4	35000	C803_184.4 S3 ME3LB4	C803_184.4 S3 MX3LB4	153	C803_184.4 P100 BE100LB4	C803_184.4 P100 BX100LB4	154
8.4	3201	2.2	172.1	60000	C903_172.1 S3 ME3LB4	C903_172.1 S3 MX3LB4	156	C903_172.1 P100 BE100LB4	C903_172.1 P100 BX100LB4	157
8.5	3143	1.3	169.0	35000	C803_169.0 S3 ME3LB4	C803_169.0 S3 MX3LB4	153	C803_169.0 P100 BE100LB4	C803_169.0 P100 BX100LB4	154
9.1	2934	2.4	157.8	60000	C903_157.8 S3 ME3LB4	C903_157.8 S3 MX3LB4	156	C903_157.8 P100 BE100LB4	C903_157.8 P100 BX100LB4	157
9.7	2773	1.4	149.1	35000	C803_149.1 S3 ME3LB4	C803_149.1 S3 MX3LB4	153	C803_149.1 P100 BE100LB4	C803_149.1 P100 BX100LB4	154
9.8	2722	2.6	146.3	60000	C903_146.3 S3 ME3LB4	C903_146.3 S3 MX3LB4	156	C903_146.3 P100 BE100LB4	C903_146.3 P100 BX100LB4	157
10.5	2542	1.6	136.7	35000	C803_136.7 S3 ME3LB4	C803_136.7 S3 MX3LB4	153	C803_136.7 P100 BE100LB4	C803_136.7 P100 BX100LB4	154
10.7	2495	2.8	134.1	60000	C903_134.1 S3 ME3LB4	C903_134.1 S3 MX3LB4	156	C903_134.1 P100 BE100LB4	C903_134.1 P100 BX100LB4	157
11.4	2359	1.0	126.8	25000	C703_126.8 S3 ME3LB4	C703_126.8 S3 MX3LB4	150	C703_126.8 P100 BE100LB4	C703_126.8 P100 BX100LB4	151
12.1	2222	1.8	119.5	35000	C803_119.5 S3 ME3LB4	C803_119.5 S3 MX3LB4	153	C803_119.5 P100 BE100LB4	C803_119.5 P100 BX100LB4	154



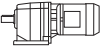



### 3 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
12.3	2171	3.3	116.7	60000	C903_116.7 S3 ME3LB4	C903_116.7 S3 MX3LB4	156	C903_116.7 P100 BE100LB4	C903_116.7 P100 BX100LB4	157
12.8	2091	1.1	112.4	25000	C703_112.4 S3 ME3LB4	C703_112.4 S3 MX3LB4	150	C703_112.4 P100 BE100LB4	C703_112.4 P100 BX100LB4	151
13.2	2037	2.0	109.5	35000	C803_109.5 S3 ME3LB4	C803_109.5 S3 MX3LB4	153	C803_109.5 P100 BE100LB4	C803_109.5 P100 BX100LB4	154
13.9	1931	1.2	103.8	25000	C703_103.8 S3 ME3LB4	C703_103.8 S3 MX3LB4	150	C703_103.8 P100 BE100LB4	C703_103.8 P100 BX100LB4	151
14.8	1811	2.2	97.4	35000	C803_97.4 S3 ME3LB4	C803_97.4 S3 MX3LB4	153	C803_97.4 P100 BE100LB4	C803_97.4 P100 BX100LB4	154
15.8	1638	1.0	91.0	16000	C613_91.0 S3 ME3LB4	C613_91.0 S3 MX3LB4	146	C613_91.0 P100 BE100LB4	C613_91.0 P100 BX100LB4	147
16.1	1660	2.4	89.3	35000	C803_89.3 S3 ME3LB4	C803_89.3 S3 MX3LB4	153	C803_89.3 P100 BE100LB4	C803_89.3 P100 BX100LB4	154
16.3	1640	1.4	88.2	25000	C703_88.2 S3 ME3LB4	C703_88.2 S3 MX3LB4	150	C703_88.2 P100 BE100LB4	C703_88.2 P100 BX100LB4	151
17.3	1495	1.1	83.0	16000	C613_83.0 S3 ME3LB4	C613_83.0 S3 MX3LB4	146	C613_83.0 P100 BE100LB4	C613_83.0 P100 BX100LB4	147
17.7	1514	1.5	81.4	25000	C703_81.4 S3 ME3LB4	C703_81.4 S3 MX3LB4	150	C703_81.4 P100 BE100LB4	C703_81.4 P100 BX100LB4	151
18.7	1431	2.8	76.9	35000	C803_76.9 S3 ME3LB4	C803_76.9 S3 MX3LB4	153	C803_76.9 P100 BE100LB4	C803_76.9 P100 BX100LB4	154
19.4	1336	1.2	74.2	16000	C613_74.2 S3 ME3LB4	C613_74.2 S3 MX3LB4	146	C613_74.2 P100 BE100LB4	C613_74.2 P100 BX100LB4	147
20.2	1327	1.7	71.3	25000	C703_71.3 S3 ME3LB4	C703_71.3 S3 MX3LB4	150	C703_71.3 P100 BE100LB4	C703_71.3 P100 BX100LB4	151
20.4	1311	3.1	70.5	35000	C803_70.5 S3 ME3LB4	C803_70.5 S3 MX3LB4	153	C803_70.5 P100 BE100LB4	C803_70.5 P100 BX100LB4	154
21.3	1218	1.3	67.7	16000	C613_67.7 S3 ME3LB4	C613_67.7 S3 MX3LB4	146	C613_67.7 P100 BE100LB4	C613_67.7 P100 BX100LB4	147
21.9	1225	1.9	65.9	25000	C703_65.9 S3 ME3LB4	C703_65.9 S3 MX3LB4	150	C703_65.9 P100 BE100LB4	C703_65.9 P100 BX100LB4	151
24.4	1097	0.9	59.0	10000	C513_59.0 S3 ME3LB4	C513_59.0 S3 MX3LB4	142	C513_59.0 P100 BE100LB4	C513_59.0 P100 BX100LB4	143
24.6	1055	1.5	58.6	16000	C613_58.6 S3 ME3LB4	C613_58.6 S3 MX3LB4	146	C613_58.6 P100 BE100LB4	C613_58.6 P100 BX100LB4	147
25.5	1051	2.2	56.5	25000	C703_56.5 S3 ME3LB4	C703_56.5 S3 MX3LB4	150	C703_56.5 P100 BE100LB4	C703_56.5 P100 BX100LB4	151
26.9	962	1.7	53.5	16000	C613_53.5 S3 ME3LB4	C613_53.5 S3 MX3LB4	146	C613_53.5 P100 BE100LB4	C613_53.5 P100 BX100LB4	147
27.6	970	2.4	52.2	25000	C703_52.2 S3 ME3LB4	C703_52.2 S3 MX3LB4	150	C703_52.2 P100 BE100LB4	C703_52.2 P100 BX100LB4	151
28.1	952	1.1	51.2	10000	C513_51.2 S3 ME3LB4	C513_51.2 S3 MX3LB4	142	C513_51.2 P100 BE100LB4	C513_51.2 P100 BX100LB4	143
30	857	1.9	47.6	16000	C613_47.6 S3 ME3LB4	C613_47.6 S3 MX3LB4	146	C613_47.6 P100 BE100LB4	C613_47.6 P100 BX100LB4	147
31	869	1.2	46.7	10000	C513_46.7 S3 ME3LB4	C513_46.7 S3 MX3LB4	142	C513_46.7 P100 BE100LB4	C513_46.7 P100 BX100LB4	143
32	831	2.8	44.7	25000	C703_44.7 S3 ME3LB4	C703_44.7 S3 MX3LB4	150	C703_44.7 P100 BE100LB4	C703_44.7 P100 BX100LB4	151
33	782	2.0	43.4	16000	C613_43.4 S3 ME3LB4	C613_43.4 S3 MX3LB4	146	C613_43.4 P100 BE100LB4	C613_43.4 P100 BX100LB4	147
33	819	0.9	43.1	10000	C512_43.1 S3 ME3LB4	C512_43.1 S3 MX3LB4	142	C512_43.1 P100 BE100LB4	C512_43.1 P100 BX100LB4	143
35	767	3.0	41.3	25000	C703_41.3 S3 ME3LB4	C703_41.3 S3 MX3LB4	150	C703_41.3 P100 BE100LB4	C703_41.3 P100 BX100LB4	151
36	753	1.3	40.5	10000	C513_40.5 S3 ME3LB4	C513_40.5 S3 MX3LB4	142	C513_40.5 P100 BE100LB4	C513_40.5 P100 BX100LB4	143
36	767	1.0	40.4	10000	C512_40.4 S3 ME3LB4	C512_40.4 S3 MX3LB4	142	C512_40.4 P100 BE100LB4	C512_40.4 P100 BX100LB4	143
38	722	1.9	38.0	16000	C612_38.0 S3 ME3LB4	C612_38.0 S3 MX3LB4	146	C612_38.0 P100 BE100LB4	C612_38.0 P100 BX100LB4	147
39	687	1.5	37.0	10000	C513_37.0 S3 ME3LB4	C513_37.0 S3 MX3LB4	142	C513_37.0 P100 BE100LB4	C513_37.0 P100 BX100LB4	143
40	691	1.1	36.4	10000	C512_36.4 S3 ME3LB4	C512_36.4 S3 MX3LB4	142	C512_36.4 P100 BE100LB4	C512_36.4 P100 BX100LB4	143
40	651	2.4	36.1	16000	C613_36.1 S3 ME3LB4	C613_36.1 S3 MX3LB4	146	C613_36.1 P100 BE100LB4	C613_36.1 P100 BX100LB4	147
42	650	1.9	34.2	16000	C612_34.2 S3 ME3LB4	C612_34.2 S3 MX3LB4	146	C612_34.2 P100 BE100LB4	C612_34.2 P100 BX100LB4	147
44	628	1.3	33.0	10000	C512_33.0 S3 ME3LB4	C512_33.0 S3 MX3LB4	142	C512_33.0 P100 BE100LB4	C512_33.0 P100 BX100LB4	143
44	594	2.6	33.0	16000	C613_33.0 S3 ME3LB4	C613_33.0 S3 MX3LB4	146	C613_33.0 P100 BE100LB4	C613_33.0 P100 BX100LB4	147
46	581	1.0	31.2	5550	C413_31.2 S3 ME3LB4	C413_31.2 S3 MX3LB4	138	C413_31.2 P100 BE100LB4	C413_31.2 P100 BX100LB4	139
47	578	2.3	30.4	15900	C612_30.4 S3 ME3LB4	C612_30.4 S3 MX3LB4	146	C612_30.4 P100 BE100LB4	C612_30.4 P100 BX100LB4	147
48	559	1.8	30.1	10000	C513_30.1 S3 ME3LB4	C513_30.1 S3 MX3LB4	142	C513_30.1 P100 BE100LB4	C513_30.1 P100 BX100LB4	143
48	566	1.4	29.8	10000	C512_29.8 S3 ME3LB4	C512_29.8 S3 MX3LB4	142	C512_29.8 P100 BE100LB4	C512_29.8 P100 BX100LB4	143
51	538	0.9	28.3	5460	C412_28.3 S3 ME3LB4	C412_28.3 S3 MX3LB4	138	C412_28.3 P100 BE100LB4	C412_28.3 P100 BX100LB4	139
52	511	1.9	27.4	10000	C513_27.4 S3 ME3LB4	C513_27.4 S3 MX3LB4	142	C513_27.4 P100 BE100LB4	C513_27.4 P100 BX100LB4	143
53	521	2.6	27.4	15400	C612_27.4 S3 ME3LB4	C612_27.4 S3 MX3LB4	146	C612_27.4 P100 BE100LB4	C612_27.4 P100 BX100LB4	147
55	487	0.9	26.2	4500	C363_26.2 S3 ME3LB4	C363_26.2 S3 MX3LB4	134	C363_26.2 P100 BE100LB4	C363_26.2 P100 BX100LB4	135
56	492	1.6	25.9	10000	C512_25.9 S3 ME3LB4	C512_25.9 S3 MX3LB4	142	C512_25.9 P100 BE100LB4	C512_25.9 P100 BX100LB4	143
57	476	1.1	25.0	5480	C412_25.0 S3 ME3LB4	C412_25.0 S3 MX3LB4	138	C412_25.0 P100 BE100LB4	C412_25.0 P100 BX100LB4	139
58	472	2.9	24.8	15100	C612_24.8 S3 ME3LB4	C612_24.8 S3 MX3LB4	146	C612_24.8 P100 BE100LB4	C612_24.8 P100 BX100LB4	147
62	444	1.8	23.4	10000	C512_23.4 S3 ME3LB4	C512_23.4 S3 MX3LB4	142	C512_23.4 P100 BE100LB4	C512_23.4 P100 BX100LB4	143
64	429	1.2	22.6	5420	C412_22.6 S3 ME3LB4	C412_22.6 S3 MX3LB4	138	C412_22.6 P100 BE100LB4	C412_22.6 P100 BX100LB4	139
64	425	3.2	22.4	14600	C612_22.4 S3 ME3LB4	C612_22.4 S3 MX3LB4	146	C612_22.4 P100 BE100LB4	C612_22.4 P100 BX100LB4	147
65	412	1.0	22.1	4530	C363_22.1 S3 ME3LB4	C363_22.1 S3 MX3LB4	134	C363_22.1 P100 BE100LB4	C363_22.1 P100 BX100LB4	135
69	398	2.0	21.0	10000	C512_21.0 S3 ME3LB4	C512_21.0 S3 MX3LB4	142	C512_21.0 P100 BE100LB4	C512_21.0 P100 BX100LB4	143
73	375	1.3	19.8	5390	C412_19.8 S3 ME3LB4	C412_19.8 S3 MX3LB4	138	C412_19.8 P100 BE100LB4	C412_19.8 P100 BX100LB4	139
76	361	1.1	19.0	4450	C362_19.0 S3 ME3LB4	C362_19.0 S3 MX3LB4	134	C362_19.0 P100 BE100LB4	C362_19.0 P100 BX100LB4	135
76	359	2.2	18.9	10000	C512_18.9 S3 ME3LB4	C512_18.9 S3 MX3LB4	142	C512_18.9 P100 BE100LB4	C512_18.9 P100 BX100LB4	143
81	338	1.4	17.8	5300	C412_17.8 S3 ME3LB4	C412_17.8 S3 MX3LB4	138	C412_17.8 P100 BE100LB4	C412_17.8 P100 BX100LB4	139

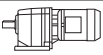





### 3 kW

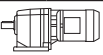



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
84	327	1.2	17.2	4400	C362_17.2 S3 ME3LB4	C362_17.2 S3 MX3LB4	134	C362_17.2 P100 BE100LB4	C362_17.2 P100 BX100LB4	135
87	315	2.5	16.6	9790	C512_16.6 S3 ME3LB4	C512_16.6 S3 MX3LB4	142	C512_16.6 P100 BE100LB4	C512_16.6 P100 BX100LB4	143
91	301	1.5	15.8	5240	C412_15.8 S3 ME3LB4	C412_15.8 S3 MX3LB4	138	C412_15.8 P100 BE100LB4	C412_15.8 P100 BX100LB4	139
92	296	0.9	15.6	3680	C322_15.6 S3 ME3LB4	C322_15.6 S3 MX3LB4	130	C322_15.6 P100 BE100LB4	C322_15.6 P100 BX100LB4	131
96	284	2.8	15.0	9540	C512_15.0 S3 ME3LB4	C512_15.0 S3 MX3LB4	142	C512_15.0 P100 BE100LB4	C512_15.0 P100 BX100LB4	143
98	280	1.4	14.8	4340	C362_14.8 S3 ME3LB4	C362_14.8 S3 MX3LB4	134	C362_14.8 P100 BE100LB4	C362_14.8 P100 BX100LB4	135
101	271	1.6	14.2	5140	C412_14.2 S3 ME3LB4	C412_14.2 S3 MX3LB4	138	C412_14.2 P100 BE100LB4	C412_14.2 P100 BX100LB4	139
102	267	0.9	14.1	3650	C322_14.1 S3 ME3LB4	C322_14.1 S3 MX3LB4	130	C322_14.1 P100 BE100LB4	C322_14.1 P100 BX100LB4	131
108	253	1.5	13.3	4260	C362_13.3 S3 ME3LB4	C362_13.3 S3 MX3LB4	134	C362_13.3 P100 BE100LB4	C362_13.3 P100 BX100LB4	135
110	249	3.0	13.1	9200	C512_13.1 S3 ME3LB4	C512_13.1 S3 MX3LB4	142	C512_13.1 P100 BE100LB4	C512_13.1 P100 BX100LB4	143
116	235	1.8	12.4	5040	C412_12.4 S3 ME3LB4	C412_12.4 S3 MX3LB4	138	C412_12.4 P100 BE100LB4	C412_12.4 P100 BX100LB4	139
117	234	1.0	12.3	3580	C322_12.3 S3 ME3LB4	C322_12.3 S3 MX3LB4	130	C322_12.3 P100 BE100LB4	C322_12.3 P100 BX100LB4	131
123	222	1.7	11.7	4200	C362_11.7 S3 ME3LB4	C362_11.7 S3 MX3LB4	134	C362_11.7 P100 BE100LB4	C362_11.7 P100 BX100LB4	135
129	213	1.1	11.2	3520	C322_11.2 S3 ME3LB4	C322_11.2 S3 MX3LB4	130	C322_11.2 P100 BE100LB4	C322_11.2 P100 BX100LB4	131
129	212	2.0	11.2	4930	C412_11.2 S3 ME3LB4	C412_11.2 S3 MX3LB4	138	C412_11.2 P100 BE100LB4	C412_11.2 P100 BX100LB4	139
136	201	1.9	10.6	4100	C362_10.6 S3 ME3LB4	C362_10.6 S3 MX3LB4	134	C362_10.6 P100 BE100LB4	C362_10.6 P100 BX100LB4	135
143	190	1.6	20.1	3480	C322_20.1 S3 ME3LB2		130	C322_20.1 P100 BE100L2		131
150	182	2.1	9.6	4800	C412_9.6 S3 ME3LB4	C412_9.6 S3 MX3LB4	138	C412_9.6 P100 BE100LB4	C412_9.6 P100 BX100LB4	139
155	177	1.2	9.3	3450	C322_9.3 S3 ME3LB4	C322_9.3 S3 MX3LB4	130	C322_9.3 P100 BE100LB4	C322_9.3 P100 BX100LB4	131
158	172	1.6	18.2	3410	C322_18.2 S3 ME3LB2		130	C322_18.2 P100 BE100L2		131
164	167	2.3	8.8	3990	C362_8.8 S3 ME3LB4	C362_8.8 S3 MX3LB4	134	C362_8.8 P100 BE100LB4	C362_8.8 P100 BX100LB4	135
167	164	2.3	8.6	4600	C412_8.6 S3 ME3LB4	C412_8.6 S3 MX3LB4	138	C412_8.6 P100 BE100LB4	C412_8.6 P100 BX100LB4	139
170	161	1.3	8.5	3400	C322_8.5 S3 ME3LB4	C322_8.5 S3 MX3LB4	130	C322_8.5 P100 BE100LB4	C322_8.5 P100 BX100LB4	131
179	153	2.4	8.0	3840	C362_8.0 S3 ME3LB4	C362_8.0 S3 MX3LB4	134	C362_8.0 P100 BE100LB4	C362_8.0 P100 BX100LB4	135
182	150	1.2	15.8	1940	C222_15.8 S3 ME3LB2		126	C222_15.8 P100 BE100L2		127
185	147	1.8	15.6	3340	C322_15.6 S3 ME3LB2		130	C322_15.6 P100 BE100L2		131
201	136	1.5	7.2	3300	C322_7.2 S3 ME3LB4	C322_7.2 S3 MX3LB4	130	C322_7.2 P100 BE100LB4	C322_7.2 P100 BX100LB4	131
203	135	1.0	7.1	1940	C222_7.1 S3 ME3LB4	C222_7.1 S3 MX3LB4	126	C222_7.1 P100 BE100LB4	C222_7.1 P100 BX100LB4	127
204	134	2.6	7.1	4490	C412_7.1 S3 ME3LB4	C412_7.1 S3 MX3LB4	138	C412_7.1 P100 BE100LB4	C412_7.1 P100 BX100LB4	139
205	133	1.9	14.1	3250	C322_14.1 S3 ME3LB2		130	C322_14.1 P100 BE100L2		131
212	129	2.8	6.8	3780	C362_6.8 S3 ME3LB4	C362_6.8 S3 MX3LB4	134	C362_6.8 P100 BE100LB4	C362_6.8 P100 BX100LB4	135
226	121	2.9	6.4	4370	C412_6.4 S3 ME3LB4	C412_6.4 S3 MX3LB4	138	C412_6.4 P100 BE100LB4	C412_6.4 P100 BX100LB4	139
230	119	1.3	6.3	3100	C322_6.3 S3 ME3LB4	C322_6.3 S3 MX3LB4	130	C322_6.3 P100 BE100LB4	C322_6.3 P100 BX100LB4	131
234	116	2.1	12.3	3190	C322_12.3 S3 ME3LB2		130	C322_12.3 P100 BE100L2		131
237	116	0.9	6.1	1600	C222_6.1 S3 ME3LB4	C222_6.1 S3 MX3LB4	126	C222_6.1 P100 BE100LB4	C222_6.1 P100 BX100LB4	127
242	113	2.3	6.0	4090	C412_6.0 S3 ME3LB4	C412_6.0 S3 MX3LB4	138	C412_6.0 P100 BE100LB4	C412_6.0 P100 BX100LB4	139
246	111	1.8	5.8	3530	C362_5.8 S3 ME3LB4	C362_5.8 S3 MX3LB4	134	C362_5.8 P100 BE100LB4	C362_5.8 P100 BX100LB4	135
255	107	1.4	5.7	3040	C322_5.7 S3 ME3LB4	C322_5.7 S3 MX3LB4	130	C322_5.7 P100 BE100LB4	C322_5.7 P100 BX100LB4	131
257	106	2.2	11.2	3090	C322_11.2 S3 ME3LB2		130	C322_11.2 P100 BE100L2		131
258	106	1.0	5.6	1750	C222_5.6 S3 ME3LB4	C222_5.6 S3 MX3LB4	126	C222_5.6 P100 BE100LB4	C222_5.6 P100 BX100LB4	127
260	105	1.5	11.1	1850	C222_11.1 S3 ME3LB2		126	C222_11.1 P100 BE100L2		127
273	100	2.0	5.3	3380	C362_5.3 S3 ME3LB4	C362_5.3 S3 MX3LB4	134	C362_5.3 P100 BE100LB4	C362_5.3 P100 BX100LB4	135
291	94	1.6	5.0	2950	C322_5.0 S3 ME3LB4	C322_5.0 S3 MX3LB4	130	C322_5.0 P100 BE100LB4	C322_5.0 P100 BX100LB4	131
299	91	1.6	9.6	1880	C222_9.6 S3 ME3LB2		126	C222_9.6 P100 BE100L2		127
302	91	1.1	4.8	1780	C222_4.8 S3 ME3LB4	C222_4.8 S3 MX3LB4	126	C222_4.8 P100 BE100LB4	C222_4.8 P100 BX100LB4	127
309	89	2.9	4.7	3880	C412_4.7 S3 ME3LB4	C412_4.7 S3 MX3LB4	138	C412_4.7 P100 BE100LB4	C412_4.7 P100 BX100LB4	139
310	88	2.5	9.3	2990	C322_9.3 S3 ME3LB2		130	C322_9.3 P100 BE100L2		131
312	88	2.3	4.6	3270	C362_4.6 S3 ME3LB4	C362_4.6 S3 MX3LB4	134	C362_4.6 P100 BE100LB4	C362_4.6 P100 BX100LB4	135
320	85	1.8	4.5	2880	C322_4.5 S3 ME3LB4	C322_4.5 S3 MX3LB4	130	C322_4.5 P100 BE100LB4	C322_4.5 P100 BX100LB4	131
333	82	1.7	8.7	1840	C222_8.7 S3 ME3LB2		126	C222_8.7 P100 BE100L2		127
338	81	1.2	4.3	1800	C222_4.3 S3 ME3LB4	C222_4.3 S3 MX3LB4	126	C222_4.3 P100 BE100LB4	C222_4.3 P100 BX100LB4	127
339	80	2.6	8.5	2900	C322_8.5 S3 ME3LB2		130	C322_8.5 P100 BE100L2		131
343	80	2.5	4.2	3190	C362_4.2 S3 ME3LB4	C362_4.2 S3 MX3LB4	134	C362_4.2 P100 BE100LB4	C362_4.2 P100 BX100LB4	135
386	71	2.1	3.7	2780	C322_3.7 S3 ME3LB4	C322_3.7 S3 MX3LB4	130	C322_3.7 P100 BE100LB4	C322_3.7 P100 BX100LB4	131
388	70	1.3	3.7	1740	C222_3.7 S3 ME3LB4	C222_3.7 S3 MX3LB4	126	C222_3.7 P100 BE100LB4	C222_3.7 P100 BX100LB4	127
402	68	3.0	7.2	2810	C322_7.2 S3 ME3LB2		130	C322_7.2 P100 BE100L2		131
407	67	1.9	7.1	1800	C222_7.1 S3 ME3LB2		126	C222_7.1 P100 BE100L2		127

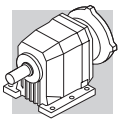


### 3 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
413	66	3.0	3.5	3130	C362_3.5 S3 ME3LB4	C362_3.5 S3 MX3LB4	134	C362_3.5 P100 BE100LB4	C362_3.5 P100 BX100LB4	135
422	65	2.1	3.4	2690	C322_3.4 S3 ME3LB4	C322_3.4 S3 MX3LB4	130	C322_3.4 P100 BE100LB4	C322_3.4 P100 BX100LB4	131
433	63	1.3	3.3	1740	C222_3.3 S3 ME3LB4	C222_3.3 S3 MX3LB4	126	C222_3.3 P100 BE100LB4	C222_3.3 P100 BX100LB4	127
460	59	2.6	6.3	2650	C322_6.3 S3 ME3LB2		130	C322_6.3 P100 BE100L2		131
473	58	1.8	6.1	1690	C222_6.1 S3 ME3LB2		126	C222_6.1 P100 BE100L2		127
500	55	2.4	2.9	2610	C322_2.9 S3 ME3LB4	C322_2.9 S3 MX3LB4	130	C322_2.9 P100 BE100LB4	C322_2.9 P100 BX100LB4	131
509	53	2.9	5.7	2570	C322_5.7 S3 ME3LB2		130	C322_5.7 P100 BE100L2		131
515	53	1.9	5.6	1650	C222_5.6 S3 ME3LB2		126	C222_5.6 P100 BE100L2		127
529	52	1.5	2.7	1660	C222_2.7 S3 ME3LB4	C222_2.7 S3 MX3LB4	126	C222_2.7 P100 BE100LB4	C222_2.7 P100 BX100LB4	127
582	47	3.3	5.0	2500	C322_5.0 S3 ME3LB2		130	C322_5.0 P100 BE100L2		131
604	45	2.2	4.8	1620	C222_4.8 S3 ME3LB2		126	C222_4.8 P100 BE100L2		127
640	43	3.6	4.5	2400	C322_4.5 S3 ME3LB2		130	C322_4.5 P100 BE100L2		131
676	40	2.3	4.3	1580	C222_4.3 S3 ME3LB2		126	C222_4.3 P100 BE100L2		127
771	35	4.2	3.7	2320	C322_3.7 S3 ME3LB2		130	C322_3.7 P100 BE100L2		131
777	35	2.6	3.7	1540	C222_3.7 S3 ME3LB2		126	C222_3.7 P100 BE100L2		127
789	35	1.2	3.7	560	C122_3.7 S3 ME3LB2		122	C122_3.7 P100 BE100L2		123
866	31	2.7	3.3	1480	C222_3.3 S3 ME3LB2		126	C222_3.3 P100 BE100L2		127
898	30	1.3	3.2	630	C122_3.2 S3 ME3LB2		122	C122_3.2 P100 BE100L2		123
1041	26	1.4	2.8	750	C122_2.8 S3 ME3LB2		122	C122_2.8 P100 BE100L2		123
1058	26	3.1	2.7	1430	C222_2.7 S3 ME3LB2		126	C222_2.7 P100 BE100L2		127

### 4 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
2.9	12214	1.0	502.6	85000	C1004_502.6 S4 ME4SA4	C1004_502.6 S4 MX4SA4	159	C1004_502.6 P112 BE112M4	C1004_502.6 P112 BX112M4	160
3.1	11342	1.1	466.7	85000	C1004_466.7 S4 ME4SA4	C1004_466.7 S4 MX4SA4	159	C1004_466.7 P112 BE112M4	C1004_466.7 P112 BX112M4	160
3.5	9957	1.2	409.8	85000	C1004_409.8 S4 ME4SA4	C1004_409.8 S4 MX4SA4	159	C1004_409.8 P112 BE112M4	C1004_409.8 P112 BX112M4	160
3.8	9246	1.3	380.5	85000	C1004_380.5 S4 ME4SA4	C1004_380.5 S4 MX4SA4	159	C1004_380.5 P112 BE112M4	C1004_380.5 P112 BX112M4	160
4.4	7864	1.5	323.6	85000	C1004_323.6 S4 ME4SA4	C1004_323.6 S4 MX4SA4	159	C1004_323.6 P112 BE112M4	C1004_323.6 P112 BX112M4	160
4.8	7302	1.6	300.5	85000	C1004_300.5 S4 ME4SA4	C1004_300.5 S4 MX4SA4	159	C1004_300.5 P112 BE112M4	C1004_300.5 P112 BX112M4	160
4.9	7118	1.0	292.9	60000	C904_292.9 S4 ME4SA4	C904_292.9 S4 MX4SA4	156	C904_292.9 P112 BE112M4	C904_292.9 P112 BX112M4	157
5.4	6524	1.1	268.5	60000	C904_268.5 S4 ME4SA4	C904_268.5 S4 MX4SA4	156	C904_268.5 P112 BE112M4	C904_268.5 P112 BX112M4	157
5.5	6391	1.9	263.0	85000	C1004_263.0 S4 ME4SA4	C1004_263.0 S4 MX4SA4	159	C1004_263.0 P112 BE112M4	C1004_263.0 P112 BX112M4	160
5.9	5934	2.0	244.2	85000	C1004_244.2 S4 ME4SA4	C1004_244.2 S4 MX4SA4	159	C1004_244.2 P112 BE112M4	C1004_244.2 P112 BX112M4	160
6.2	5630	1.3	231.7	60000	C904_231.7 S4 ME4SA4	C904_231.7 S4 MX4SA4	156	C904_231.7 P112 BE112M4	C904_231.7 P112 BX112M4	157
6.8	5161	1.4	212.4	60000	C904_212.4 S4 ME4SA4	C904_212.4 S4 MX4SA4	156	C904_212.4 P112 BE112M4	C904_212.4 P112 BX112M4	157
7.2	4851	2.5	199.6	85000	C1004_199.6 S4 ME4SA4	C1004_199.6 S4 MX4SA4	159	C1004_199.6 P112 BE112M4	C1004_199.6 P112 BX112M4	160
7.8	4504	2.7	185.4	85000	C1004_185.4 S4 ME4SA4	C1004_185.4 S4 MX4SA4	159	C1004_185.4 P112 BE112M4	C1004_185.4 P112 BX112M4	160
8.4	4322	1.7	172.1	60000	C903_172.1 S4 ME4SA4	C903_172.1 S4 MX4SA4	156	C903_172.1 P112 BE112M4	C903_172.1 P112 BX112M4	157
8.5	4243	0.9	169.0	35000	C803_169.0 S4 ME4SA4	C803_169.0 S4 MX4SA4	153	C803_169.0 P112 BE112M4	C803_169.0 P112 BX112M4	154
9.1	3961	1.8	157.8	60000	C903_157.8 S4 ME4SA4	C903_157.8 S4 MX4SA4	156	C903_157.8 P112 BE112M4	C903_157.8 P112 BX112M4	157
9.7	3744	1.1	149.1	35000	C803_149.1 S4 ME4SA4	C803_149.1 S4 MX4SA4	153	C803_149.1 P112 BE112M4	C803_149.1 P112 BX112M4	154
9.8	3674	2.0	146.3	60000	C903_146.3 S4 ME4SA4	C903_146.3 S4 MX4SA4	156	C903_146.3 P112 BE112M4	C903_146.3 P112 BX112M4	157
10.5	3432	1.2	136.7	35000	C803_136.7 S4 ME4SA4	C803_136.7 S4 MX4SA4	153	C803_136.7 P112 BE112M4	C803_136.7 P112 BX112M4	154
10.7	3368	2.1	134.1	60000	C903_134.1 S4 ME4SA4	C903_134.1 S4 MX4SA4	156	C903_134.1 P112 BE112M4	C903_134.1 P112 BX112M4	157
12.1	3000	1.3	119.5	35000	C803_119.5 S4 ME4SA4	C803_119.5 S4 MX4SA4	153	C803_119.5 P112 BE112M4	C803_119.5 P112 BX112M4	154
12.3	2931	2.5	116.7	60000	C903_116.7 S4 ME4SA4	C903_116.7 S4 MX4SA4	156	C903_116.7 P112 BE112M4	C903_116.7 P112 BX112M4	157
13.2	2750	1.5	109.5	35000	C803_109.5 S4 ME4SA4	C803_109.5 S4 MX4SA4	153	C803_109.5 P112 BE112M4	C803_109.5 P112 BX112M4	154
13.5	2687	2.6	107.0	60000	C903_107.0 S4 ME4SA4	C903_107.0 S4 MX4SA4	156	C903_107.0 P112 BE112M4	C903_107.0 P112 BX112M4	157
14.8	2445	1.6	97.4	35000	C803_97.4 S4 ME4SA4	C803_97.4 S4 MX4SA4	153	C803_97.4 P112 BE112M4	C803_97.4 P112 BX112M4	154
15.0	2417	3.0	96.2	60000	C903_96.2 S4 ME4SA4	C903_96.2 S4 MX4SA4	156	C903_96.2 P112 BE112M4	C903_96.2 P112 BX112M4	157
16.1	2242	1.8	89.3	35000	C803_89.3 S4 ME4SA4	C803_89.3 S4 MX4SA4	153	C803_89.3 P112 BE112M4	C803_89.3 P112 BX112M4	154
16.3	2215	1.0	88.2	25000	C703_88.2 S4 ME4SA4	C703_88.2 S4 MX4SA4	150	C703_88.2 P112 BE112M4	C703_88.2 P112 BX112M4	151



## 4 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
17.7	2044	1.1	81.4	25000	C703_81.4 S4 ME4SA4	C703_81.4 S4 MX4SA4	150	C703_81.4 P112 BE112M4	C703_81.4 P112 BX112M4	151
18.7	1931	2.1	76.9	35000	C803_76.9 S4 ME4SA4	C803_76.9 S4 MX4SA4	153	C803_76.9 P112 BE112M4	C803_76.9 P112 BX112M4	154
20.2	1791	1.3	71.3	25000	C703_71.3 S4 ME4SA4	C703_71.3 S4 MX4SA4	150	C703_71.3 P112 BE112M4	C703_71.3 P112 BX112M4	151
20.4	1770	2.3	70.5	35000	C803_70.5 S4 ME4SA4	C803_70.5 S4 MX4SA4	153	C803_70.5 P112 BE112M4	C803_70.5 P112 BX112M4	154
21.3	1645	1.0	67.7	16000	C613_67.7 S4 ME4SA4	C613_67.7 S4 MX4SA4	146	C613_67.7 P112 BE112M4	C613_67.7 P112 BX112M4	147
21.9	1654	1.4	65.9	25000	C703_65.9 S4 ME4SA4	C703_65.9 S4 MX4SA4	150	C703_65.9 P112 BE112M4	C703_65.9 P112 BX112M4	151
23.0	1570	2.5	62.5	35000	C803_62.5 S4 ME4SA4	C803_62.5 S4 MX4SA4	153	C803_62.5 P112 BE112M4	C803_62.5 P112 BX112M4	154
24.6	1424	1.1	58.6	16000	C613_58.6 S4 ME4SA4	C613_58.6 S4 MX4SA4	146	C613_58.6 P112 BE112M4	C613_58.6 P112 BX112M4	147
25.1	1439	2.8	57.3	35000	C803_57.3 S4 ME4SA4	C803_57.3 S4 MX4SA4	153	C803_57.3 P112 BE112M4	C803_57.3 P112 BX112M4	154
25.5	1419	1.6	56.5	25000	C703_56.5 S4 ME4SA4	C703_56.5 S4 MX4SA4	150	C703_56.5 P112 BE112M4	C703_56.5 P112 BX112M4	151
26.9	1299	1.2	53.5	16000	C613_53.5 S4 ME4SA4	C613_53.5 S4 MX4SA4	146	C613_53.5 P112 BE112M4	C613_53.5 P112 BX112M4	147
27.6	1310	1.8	52.2	25000	C703_52.2 S4 ME4SA4	C703_52.2 S4 MX4SA4	150	C703_52.2 P112 BE112M4	C703_52.2 P112 BX112M4	151
30	1157	1.4	47.6	16000	C613_47.6 S4 ME4SA4	C613_47.6 S4 MX4SA4	146	C613_47.6 P112 BE112M4	C613_47.6 P112 BX112M4	147
30	1191	3.2	47.4	35000	C803_47.4 S4 ME4SA4	C803_47.4 S4 MX4SA4	153	C803_47.4 P112 BE112M4	C803_47.4 P112 BX112M4	154
32	1122	2.0	44.7	25000	C703_44.7 S4 ME4SA4	C703_44.7 S4 MX4SA4	150	C703_44.7 P112 BE112M4	C703_44.7 P112 BX112M4	151
33	1092	3.5	43.5	35000	C803_43.5 S4 ME4SA4	C803_43.5 S4 MX4SA4	153	C803_43.5 P112 BE112M4	C803_43.5 P112 BX112M4	154
33	1056	1.5	43.4	16000	C613_43.4 S4 ME4SA4	C613_43.4 S4 MX4SA4	146	C613_43.4 P112 BE112M4	C613_43.4 P112 BX112M4	147
35	1036	2.2	41.3	25000	C703_41.3 S4 ME4SA4	C703_41.3 S4 MX4SA4	150	C703_41.3 P112 BE112M4	C703_41.3 P112 BX112M4	151
36	1016	1.0	40.5	10000	C513_40.5 S4 ME4SA4	C513_40.5 S4 MX4SA4	142	C513_40.5 P112 BE112M4	C513_40.5 P112 BX112M4	143
38	975	1.4	38.0	16000	C612_38.0 S4 ME4SA4	C612_38.0 S4 MX4SA4	146	C612_38.0 P112 BE112M4	C612_38.0 P112 BX112M4	147
39	928	1.1	37.0	10000	C513_37.0 S4 ME4SA4	C513_37.0 S4 MX4SA4	142	C513_37.0 P112 BE112M4	C513_37.0 P112 BX112M4	143
40	878	1.8	36.1	15700	C613_36.1 S4 ME4SA4	C613_36.1 S4 MX4SA4	146	C613_36.1 P112 BE112M4	C613_36.1 P112 BX112M4	147
41	891	2.4	34.7	23400	C702_34.7 S4 ME4SA4	C702_34.7 S4 MX4SA4	150	C702_34.7 P112 BE112M4	C702_34.7 P112 BX112M4	151
42	878	1.4	34.2	15700	C612_34.2 S4 ME4SA4	C612_34.2 S4 MX4SA4	146	C612_34.2 P112 BE112M4	C612_34.2 P112 BX112M4	147
44	847	0.9	33.0	10000	C512_33.0 S4 ME4SA4	C512_33.0 S4 MX4SA4	142	C512_33.0 P112 BE112M4	C512_33.0 P112 BX112M4	143
44	801	1.9	33.0	15500	C613_33.0 S4 ME4SA4	C613_33.0 S4 MX4SA4	146	C613_33.0 P112 BE112M4	C613_33.0 P112 BX112M4	147
47	781	1.7	30.4	15300	C612_30.4 S4 ME4SA4	C612_30.4 S4 MX4SA4	146	C612_30.4 P112 BE112M4	C612_30.4 P112 BX112M4	147
48	755	1.3	30.1	9880	C513_30.1 S4 ME4SA4	C513_30.1 S4 MX4SA4	142	C513_30.1 P112 BE112M4	C513_30.1 P112 BX112M4	143
48	764	1.0	29.8	10000	C512_29.8 S4 ME4SA4	C512_29.8 S4 MX4SA4	142	C512_29.8 P112 BE112M4	C512_29.8 P112 BX112M4	143
52	711	3.0	27.7	22300	C702_27.7 S4 ME4SA4	C702_27.7 S4 MX4SA4	150	C702_27.7 P112 BE112M4	C702_27.7 P112 BX112M4	151
52	689	1.4	27.4	9550	C513_27.4 S4 ME4SA4	C513_27.4 S4 MX4SA4	142	C513_27.4 P112 BE112M4	C513_27.4 P112 BX112M4	143
53	703	1.9	27.4	14900	C612_27.4 S4 ME4SA4	C612_27.4 S4 MX4SA4	146	C612_27.4 P112 BE112M4	C612_27.4 P112 BX112M4	147
54	651	2.2	26.8	14700	C613_26.8 S4 ME4SA4	C613_26.8 S4 MX4SA4	146	C613_26.8 P112 BE112M4	C613_26.8 P112 BX112M4	147
56	665	1.2	25.9	10000	C512_25.9 S4 ME4SA4	C512_25.9 S4 MX4SA4	142	C512_25.9 P112 BE112M4	C512_25.9 P112 BX112M4	143
58	637	2.1	24.8	14600	C612_24.8 S4 ME4SA4	C612_24.8 S4 MX4SA4	146	C612_24.8 P112 BE112M4	C612_24.8 P112 BX112M4	147
60	600	1.5	23.9	9250	C513_23.9 S4 ME4SA4	C513_23.9 S4 MX4SA4	142	C513_23.9 P112 BE112M4	C513_23.9 P112 BX112M4	143
62	599	1.3	23.4	10000	C512_23.4 S4 ME4SA4	C512_23.4 S4 MX4SA4	142	C512_23.4 P112 BE112M4	C512_23.4 P112 BX112M4	143
64	573	2.4	22.4	14200	C612_22.4 S4 ME4SA4	C612_22.4 S4 MX4SA4	146	C612_22.4 P112 BE112M4	C612_22.4 P112 BX112M4	147
69	538	1.5	21.0	9920	C512_21.0 S4 ME4SA4	C512_21.0 S4 MX4SA4	142	C512_21.0 P112 BE112M4	C512_21.0 P112 BX112M4	143
73	507	1.0	19.8	4760	C412_19.8 S4 ME4SA4	C412_19.8 S4 MX4SA4	138	C412_19.8 P112 BE112M4	C412_19.8 P112 BX112M4	139
73	503	2.7	19.6	13800	C612_19.6 S4 ME4SA4	C612_19.6 S4 MX4SA4	146	C612_19.6 P112 BE112M4	C612_19.6 P112 BX112M4	147
76	485	1.7	18.9	9730	C512_18.9 S4 ME4SA4	C512_18.9 S4 MX4SA4	142	C512_18.9 P112 BE112M4	C512_18.9 P112 BX112M4	143
81	456	1.1	17.8	4720	C412_17.8 S4 ME4SA4	C412_17.8 S4 MX4SA4	138	C412_17.8 P112 BE112M4	C412_17.8 P112 BX112M4	139
82	453	3.0	17.7	13400	C612_17.7 S4 ME4SA4	C612_17.7 S4 MX4SA4	146	C612_17.7 P112 BE112M4	C612_17.7 P112 BX112M4	147
87	426	1.9	16.6	9440	C512_16.6 S4 ME4SA4	C512_16.6 S4 MX4SA4	142	C512_16.6 P112 BE112M4	C512_16.6 P112 BX112M4	143
90	409	3.3	15.9	13100	C612_15.9 S4 ME4SA4	C612_15.9 S4 MX4SA4	146	C612_15.9 P112 BE112M4	C612_15.9 P112 BX112M4	147
91	406	1.1	15.8	4740	C412_15.8 S4 ME4SA4	C412_15.8 S4 MX4SA4	138	C412_15.8 P112 BE112M4	C412_15.8 P112 BX112M4	139
96	384	2.1	15.0	9230	C512_15.0 S4 ME4SA4	C512_15.0 S4 MX4SA4	142	C512_15.0 P112 BE112M4	C512_15.0 P112 BX112M4	143
98	378	1.0	14.8	3880	C362_14.8 S4 ME4SA4	C362_14.8 S4 MX4SA4	134	C362_14.8 P112 BE112M4	C362_14.8 P112 BX112M4	135
101	365	1.2	14.2	4690	C412_14.2 S4 ME4SA4	C412_14.2 S4 MX4SA4	138	C412_14.2 P112 BE112M4	C412_14.2 P112 BX112M4	139
108	342	1.1	13.3	3840	C362_13.3 S4 ME4SA4	C362_13.3 S4 MX4SA4	134	C362_13.3 P112 BE112M4	C362_13.3 P112 BX112M4	135
110	337	2.2	13.1	8930	C512_13.1 S4 ME4SA4	C512_13.1 S4 MX4SA4	142	C512_13.1 P112 BE112M4	C512_13.1 P112 BX112M4	143
116	318	1.3	12.4	4660	C412_12.4 S4 ME4SA4	C412_12.4 S4 MX4SA4	138	C412_12.4 P112 BE112M4	C412_12.4 P112 BX112M4	139
122	304	2.5	11.8	8720	C512_11.8 S4 ME4SA4	C512_11.8 S4 MX4SA4	142	C512_11.8 P112 BE112M4	C512_11.8 P112 BX112M4	143
123	299	1.3	11.7	3840	C362_11.7 S4 ME4SA4	C362_11.7 S4 MX4SA4	134	C362_11.7 P112 BE112M4	C362_11.7 P112 BX112M4	135
129	286	1.5	11.2	4580	C412_11.2 S4 ME4SA4	C412_11.2 S4 MX4SA4	138	C412_11.2 P112 BE112M4	C412_11.2 P112 BX112M4	139
136	272	1.4	10.6	3780	C362_10.6 S4 ME4SA4	C362_10.6 S4 MX4SA4	134	C362_10.6 P112 BE112M4	C362_10.6 P112 BX112M4	135



## 4 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
148	250	2.7	9.8	8290	C512_9.8 S4 ME4SA4	C512_9.8 S4 MX4SA4	142	C512_9.8 P112 BE112M4	C512_9.8 P112 BX112M4	143
150	246	1.6	9.6	4510	C412_9.6 S4 ME4SA4	C412_9.6 S4 MX4SA4	138	C412_9.6 P112 BE112M4	C412_9.6 P112 BX112M4	139
155	238	0.9	9.3	3150	C322_9.3 S4 ME4SA4	C322_9.3 S4 MX4SA4	130	C322_9.3 P112 BE112M4	C322_9.3 P112 BX112M4	131
164	226	1.7	8.8	3720	C362_8.8 S4 ME4SA4	C362_8.8 S4 MX4SA4	134	C362_8.8 P112 BE112M4	C362_8.8 P112 BX112M4	135
164	225	3.0	8.8	8070	C512_8.8 S4 ME4SA4	C512_8.8 S4 MX4SA4	142	C512_8.8 P112 BE112M4	C512_8.8 P112 BX112M4	143
167	222	1.7	8.6	4420	C412_8.6 S4 ME4SA4	C412_8.6 S4 MX4SA4	138	C412_8.6 P112 BE112M4	C412_8.6 P112 BX112M4	139
170	218	1.0	8.5	3110	C322_8.5 S4 ME4SA4	C322_8.5 S4 MX4SA4	130	C322_8.5 P112 BE112M4	C322_8.5 P112 BX112M4	131
179	206	1.8	8.0	3650	C362_8.0 S4 ME4SA4	C362_8.0 S4 MX4SA4	134	C362_8.0 P112 BE112M4	C362_8.0 P112 BX112M4	135
186	199	3.2	7.8	7800	C512_7.8 S4 ME4SA4	C512_7.8 S4 MX4SA4	142	C512_7.8 P112 BE112M4	C512_7.8 P112 BX112M4	143
186	195	1.4	15.6	3090	C322_15.6 S4 ME4SA2		130	C322_15.6 P112 BE112M2		131
201	184	1.1	7.2	3070	C322_7.2 S4 ME4SA4	C322_7.2 S4 MX4SA4	130	C322_7.2 P112 BE112M4	C322_7.2 P112 BX112M4	131
204	181	2.0	7.1	4280	C412_7.1 S4 ME4SA4	C412_7.1 S4 MX4SA4	138	C412_7.1 P112 BE112M4	C412_7.1 P112 BX112M4	139
206	176	1.4	14.1	3040	C322_14.1 S4 ME4SA2		130	C322_14.1 P112 BE112M2		131
206	179	3.5	7.0	7580	C512_7.0 S4 ME4SA4	C512_7.0 S4 MX4SA4	142	C512_7.0 P112 BE112M4	C512_7.0 P112 BX112M4	143
212	174	2.0	6.8	3580	C362_6.8 S4 ME4SA4	C362_6.8 S4 MX4SA4	134	C362_6.8 P112 BE112M4	C362_6.8 P112 BX112M4	135
226	163	2.1	6.4	4180	C412_6.4 S4 ME4SA4	C412_6.4 S4 MX4SA4	138	C412_6.4 P112 BE112M4	C412_6.4 P112 BX112M4	139
230	161	1.0	6.3	2840	C322_6.3 S4 ME4SA4	C322_6.3 S4 MX4SA4	130	C322_6.3 P112 BE112M4	C322_6.3 P112 BX112M4	131
235	154	1.6	12.3	2990	C322_12.3 S4 ME4SA2		130	C322_12.3 P112 BE112M2		131
242	153	1.7	6.0	3840	C412_6.0 S4 ME4SA4	C412_6.0 S4 MX4SA4	138	C412_6.0 P112 BE112M4	C412_6.0 P112 BX112M4	139
246	150	1.3	5.8	3310	C362_5.8 S4 ME4SA4	C362_5.8 S4 MX4SA4	134	C362_5.8 P112 BE112M4	C362_5.8 P112 BX112M4	135
255	145	1.1	5.7	2780	C322_5.7 S4 ME4SA4	C322_5.7 S4 MX4SA4	130	C322_5.7 P112 BE112M4	C322_5.7 P112 BX112M4	131
259	140	1.6	11.2	2900	C322_11.2 S4 ME4SA2		130	C322_11.2 P112 BE112M2		131
273	135	1.5	5.3	3200	C362_5.3 S4 ME4SA4	C362_5.3 S4 MX4SA4	134	C362_5.3 P112 BE112M4	C362_5.3 P112 BX112M4	135
291	127	1.2	5.0	2760	C322_5.0 S4 ME4SA4	C322_5.0 S4 MX4SA4	130	C322_5.0 P112 BE112M4	C322_5.0 P112 BX112M4	131
301	121	1.2	9.6	1680				C222_9.6 P112 BE112M2		127
309	120	2.2	4.7	3500	C412_4.7 S4 ME4SA4	C412_4.7 S4 MX4SA4	138	C412_4.7 P112 BE112M4	C412_4.7 P112 BX112M4	139
312	119	1.7	4.6	3180	C362_4.6 S4 ME4SA4	C362_4.6 S4 MX4SA4	134	C362_4.6 P112 BE112M4	C362_4.6 P112 BX112M4	135
312	116	1.9	9.3	2840	C322_9.3 S4 ME4SA2		130	C322_9.3 P112 BE112M2		131
320	115	1.3	4.5	2690	C322_4.5 S4 ME4SA4	C322_4.5 S4 MX4SA4	130	C322_4.5 P112 BE112M4	C322_4.5 P112 BX112M4	131
335	108	1.3	8.7	1660				C222_8.7 P112 BE112M2		127
338	109	0.9	4.3	1300				C222_4.3 P112 BE112M4	C222_4.3 P112 BX112M4	127
342	106	2.0	8.5	2750	C322_8.5 S4 ME4SA2		130	C322_8.5 P112 BE112M2		131
343	108	1.9	4.2	3060	C362_4.2 S4 ME4SA4	C362_4.2 S4 MX4SA4	134	C362_4.2 P112 BE112M4	C362_4.2 P112 BX112M4	135
386	96	1.6	3.7	2640	C322_3.7 S4 ME4SA4	C322_3.7 S4 MX4SA4	130	C322_3.7 P112 BE112M4	C322_3.7 P112 BX112M4	131
388	95	0.9	3.7	1560				C222_3.7 P112 BE112M4	C222_3.7 P112 BX112M4	127
399	93	2.8	3.6	3180	C412_3.6 S4 ME4SA4	C412_3.6 S4 MX4SA4	138	C412_3.6 P112 BE112M4	C412_3.6 P112 BX112M4	139
405	90	2.2	7.2	2690	C322_7.2 S4 ME4SA2		130	C322_7.2 P112 BE112M2		131
409	89	1.5	7.1	1650				C222_7.1 P112 BE112M2		127
413	89	2.2	3.5	3010	C362_3.5 S4 ME4SA4	C362_3.5 S4 MX4SA4	134	C362_3.5 P112 BE112M4	C362_3.5 P112 BX112M4	135
422	87	1.6	3.4	2580	C322_3.4 S4 ME4SA4	C322_3.4 S4 MX4SA4	130	C322_3.4 P112 BE112M4	C322_3.4 P112 BX112M4	131
433	85	1.0	3.3	1540				C222_3.3 P112 BE112M4	C222_3.3 P112 BX112M4	127
453	82	2.5	3.2	2890	C362_3.2 S4 ME4SA4	C362_3.2 S4 MX4SA4	134	C362_3.2 P112 BE112M4	C362_3.2 P112 BX112M4	135
463	78	2.0	6.3	2530	C322_6.3 S4 ME4SA2		130	C322_6.3 P112 BE112M2		131
476	76	1.4	6.1	1540				C222_6.1 P112 BE112M2		127
500	74	1.8	2.9	2500	C322_2.9 S4 ME4SA4	C322_2.9 S4 MX4SA4	130	C322_2.9 P112 BE112M4	C322_2.9 P112 BX112M4	131
519	70	1.5	5.6	1520				C222_5.6 P112 BE112M2		127
529	70	1.1	2.7	1530				C222_2.7 P112 BE112M4	C222_2.7 P112 BX112M4	127
536	69	2.9	2.7	2840	C362_2.7 S4 ME4SA4	C362_2.7 S4 MX4SA4	134	C362_2.7 P112 BE112M4	C362_2.7 P112 BX112M4	135
586	62	2.4	5.0	2410	C322_5.0 S4 ME4SA2		130	C322_5.0 P112 BE112M2		131
608	60	1.7	4.8	1500				C222_4.8 P112 BE112M2		127
644	56	2.7	4.5	2330	C322_4.5 S4 ME4SA2		130	C322_4.5 P112 BE112M2		131
681	53	1.8	4.3	1470				C222_4.3 P112 BE112M2		127
776	47	3.2	3.7	2250	C322_3.7 S4 ME4SA2		130	C322_3.7 P112 BE112M2		131
782	46	1.9	3.7	1450				C222_3.7 P112 BE112M2		127
851	43	3.2	3.4	2170	C322_3.4 S4 ME4SA2		130	C322_3.4 P112 BE112M2		131
872	42	2.0	3.3	1410				C222_3.3 P112 BE112M2		127
1007	36	3.6	2.9	2100	C322_2.9 S4 ME4SA2		130	C322_2.9 P112 BE112M2		131
1065	34	2.3	2.7	1370				C222_2.7 P112 BE112M2		127



## 5.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
3.6	13276	0.9	409.8	85000	C1004_409.8 S4 ME4SB4	C1004_409.8 S4 MX4SB4	159	C1004_409.8 P132 BE132S4	C1004_409.8 P132 BX132S4	160
3.8	12328	1.0	380.5	85000	C1004_380.5 S4 ME4SB4	C1004_380.5 S4 MX4SB4	159	C1004_380.5 P132 BE132S4	C1004_380.5 P132 BX132S4	160
4.5	10485	1.1	323.6	85000	C1004_323.6 S4 ME4SB4	C1004_323.6 S4 MX4SB4	159	C1004_323.6 P132 BE132S4	C1004_323.6 P132 BX132S4	160
4.9	9736	1.2	300.5	85000	C1004_300.5 S4 ME4SB4	C1004_300.5 S4 MX4SB4	159	C1004_300.5 P132 BE132S4	C1004_300.5 P132 BX132S4	160
5.6	8521	1.4	263.0	85000	C1004_263.0 S4 ME4SB4	C1004_263.0 S4 MX4SB4	159	C1004_263.0 P132 BE132S4	C1004_263.0 P132 BX132S4	160
6.0	7913	1.5	244.2	85000	C1004_244.2 S4 ME4SB4	C1004_244.2 S4 MX4SB4	159	C1004_244.2 P132 BE132S4	C1004_244.2 P132 BX132S4	160
6.3	7507	1.0	231.7	60000	C904_231.7 S4 ME4SB4	C904_231.7 S4 MX4SB4	156	C904_231.7 P132 BE132S4	C904_231.7 P132 BX132S4	157
6.9	6881	1.0	212.4	60000	C904_212.4 S4 ME4SB4	C904_212.4 S4 MX4SB4	156	C904_212.4 P132 BE132S4	C904_212.4 P132 BX132S4	157
7.3	6468	1.9	199.6	85000	C1004_199.6 S4 ME4SB4	C1004_199.6 S4 MX4SB4	159	C1004_199.6 P132 BE132S4	C1004_199.6 P132 BX132S4	160
7.9	6006	2.0	185.4	85000	C1004_185.4 S4 ME4SB4	C1004_185.4 S4 MX4SB4	159	C1004_185.4 P132 BE132S4	C1004_185.4 P132 BX132S4	160
8.5	5762	1.2	172.1	60000	C903_172.1 S4 ME4SB4	C903_172.1 S4 MX4SB4	156	C903_172.1 P132 BE132S4	C903_172.1 P132 BX132S4	157
9.0	5252	2.3	162.1	85000	C1004_162.1 S4 ME4SB4	C1004_162.1 S4 MX4SB4	159	C1004_162.1 P132 BE132S4	C1004_162.1 P132 BX132S4	160
9.3	5282	1.3	157.8	60000	C903_157.8 S4 ME4SB4	C903_157.8 S4 MX4SB4	156	C903_157.8 P132 BE132S4	C903_157.8 P132 BX132S4	157
9.7	5036	2.4	150.4	85000	C1003_150.4 S4 ME4SB4	C1003_150.4 S4 MX4SB4	159	C1003_150.4 P132 BE132S4	C1003_150.4 P132 BX132S4	160
10.0	4899	1.5	146.3	60000	C903_146.3 S4 ME4SB4	C903_146.3 S4 MX4SB4	156	C903_146.3 P132 BE132S4	C903_146.3 P132 BX132S4	157
10.5	4677	2.4	139.7	85000	C1003_139.7 S4 ME4SB4	C1003_139.7 S4 MX4SB4	159	C1003_139.7 P132 BE132S4	C1003_139.7 P132 BX132S4	160
10.9	4491	1.6	134.1	60000	C903_134.1 S4 ME4SB4	C903_134.1 S4 MX4SB4	156	C903_134.1 P132 BE132S4	C903_134.1 P132 BX132S4	157
12.1	4035	3.0	120.5	85000	C1003_120.5 S4 ME4SB4	C1003_120.5 S4 MX4SB4	159	C1003_120.5 P132 BE132S4	C1003_120.5 P132 BX132S4	160
12.2	3999	1.0	119.5	35000	C803_119.5 S4 ME4SB4	C803_119.5 S4 MX4SB4	153	C803_119.5 P132 BE132S4	C803_119.5 P132 BX132S4	154
12.5	3908	1.8	116.7	60000	C903_116.7 S4 ME4SB4	C903_116.7 S4 MX4SB4	156	C903_116.7 P132 BE132S4	C903_116.7 P132 BX132S4	157
13.3	3666	1.1	109.5	35000	C803_109.5 S4 ME4SB4	C803_109.5 S4 MX4SB4	153	C803_109.5 P132 BE132S4	C803_109.5 P132 BX132S4	154
13.6	3582	2.0	107.0	60000	C903_107.0 S4 ME4SB4	C903_107.0 S4 MX4SB4	156	C903_107.0 P132 BE132S4	C903_107.0 P132 BX132S4	157
15.0	3260	1.2	97.4	35000	C803_97.4 S4 ME4SB4	C803_97.4 S4 MX4SB4	153	C803_97.4 P132 BE132S4	C803_97.4 P132 BX132S4	154
15.2	3222	2.2	96.2	60000	C903_96.2 S4 ME4SB4	C903_96.2 S4 MX4SB4	156	C903_96.2 P132 BE132S4	C903_96.2 P132 BX132S4	157
16.4	2989	1.3	89.3	35000	C803_89.3 S4 ME4SB4	C803_89.3 S4 MX4SB4	153	C803_89.3 P132 BE132S4	C803_89.3 P132 BX132S4	154
16.5	2954	2.4	88.2	60000	C903_88.2 S4 ME4SB4	C903_88.2 S4 MX4SB4	156	C903_88.2 P132 BE132S4	C903_88.2 P132 BX132S4	157
18.0	2719	2.6	81.2	59100	C903_81.2 S4 ME4SB4	C903_81.2 S4 MX4SB4	156	C903_81.2 P132 BE132S4	C903_81.2 P132 BX132S4	157
19.0	2575	1.6	76.9	35000	C803_76.9 S4 ME4SB4	C803_76.9 S4 MX4SB4	153	C803_76.9 P132 BE132S4	C803_76.9 P132 BX132S4	154
19.6	2492	2.8	74.4	58200	C903_74.4 S4 ME4SB4	C903_74.4 S4 MX4SB4	156	C903_74.4 P132 BE132S4	C903_74.4 P132 BX132S4	157
20.5	2388	1.0	71.3	25000	C703_71.3 S4 ME4SB4	C703_71.3 S4 MX4SB4	150	C703_71.3 P132 BE132S4	C703_71.3 P132 BX132S4	151
20.7	2360	1.7	70.5	35000	C803_70.5 S4 ME4SB4	C803_70.5 S4 MX4SB4	153	C803_70.5 P132 BE132S4	C803_70.5 P132 BX132S4	154
22.2	2205	1.0	65.9	25000	C703_65.9 S4 ME4SB4	C703_65.9 S4 MX4SB4	150	C703_65.9 P132 BE132S4	C703_65.9 P132 BX132S4	151
23.4	2093	1.9	62.5	35000	C803_62.5 S4 ME4SB4	C803_62.5 S4 MX4SB4	153	C803_62.5 P132 BE132S4	C803_62.5 P132 BX132S4	154
25.5	1918	2.1	57.3	35000	C803_57.3 S4 ME4SB4	C803_57.3 S4 MX4SB4	153	C803_57.3 P132 BE132S4	C803_57.3 P132 BX132S4	154
25.8	1892	1.2	56.5	25000	C703_56.5 S4 ME4SB4	C703_56.5 S4 MX4SB4	150	C703_56.5 P132 BE132S4	C703_56.5 P132 BX132S4	151
27.3	1732	0.9	53.5	15000	C613_53.5 S4 ME4SB4	C613_53.5 S4 MX4SB4	146	C613_53.5 P132 BE132S4	C613_53.5 P132 BX132S4	147
28.0	1746	1.3	52.2	24700	C703_52.2 S4 ME4SB4	C703_52.2 S4 MX4SB4	150	C703_52.2 P132 BE132S4	C703_52.2 P132 BX132S4	151
31	1543	1.0	47.6	15300	C613_47.6 S4 ME4SB4	C613_47.6 S4 MX4SB4	146	C613_47.6 P132 BE132S4	C613_47.6 P132 BX132S4	147
31	1588	2.4	47.4	35000	C803_47.4 S4 ME4SB4	C803_47.4 S4 MX4SB4	153	C803_47.4 P132 BE132S4	C803_47.4 P132 BX132S4	154
33	1497	1.5	44.7	24100	C703_44.7 S4 ME4SB4	C703_44.7 S4 MX4SB4	150	C703_44.7 P132 BE132S4	C703_44.7 P132 BX132S4	151
34	1456	2.6	43.5	35000	C803_43.5 S4 ME4SB4	C803_43.5 S4 MX4SB4	153	C803_43.5 P132 BE132S4	C803_43.5 P132 BX132S4	154
34	1408	1.1	43.4	15000	C613_43.4 S4 ME4SB4	C613_43.4 S4 MX4SB4	146	C613_43.4 P132 BE132S4	C613_43.4 P132 BX132S4	147
35	1381	1.7	41.3	23800	C703_41.3 S4 ME4SB4	C703_41.3 S4 MX4SB4	150	C703_41.3 P132 BE132S4	C703_41.3 P132 BX132S4	151
37	1338	2.4	39.1	35000	C802_39.1 S4 ME4SB4	C802_39.1 S4 MX4SB4	153	C802_39.1 P132 BE132S4	C802_39.1 P132 BX132S4	154
38	1300	1.0	38.0	14800	C612_38.0 S4 ME4SB4	C612_38.0 S4 MX4SB4	146	C612_38.0 P132 BE132S4	C612_38.0 P132 BX132S4	147
40	1171	1.3	36.1	14800	C613_36.1 S4 ME4SB4	C613_36.1 S4 MX4SB4	146	C613_36.1 P132 BE132S4	C613_36.1 P132 BX132S4	147
42	1188	1.8	34.7	22100	C702_34.7 S4 ME4SB4	C702_34.7 S4 MX4SB4	150	C702_34.7 P132 BE132S4	C702_34.7 P132 BX132S4	151
43	1170	1.0	34.2	14500	C612_34.2 S4 ME4SB4	C612_34.2 S4 MX4SB4	146	C612_34.2 P132 BE132S4	C612_34.2 P132 BX132S4	147
44	1068	1.4	33.0	14500	C613_33.0 S4 ME4SB4	C613_33.0 S4 MX4SB4	146	C613_33.0 P132 BE132S4	C613_33.0 P132 BX132S4	147
47	1072	3.5	31.3	33400	C802_31.3 S4 ME4SB4	C802_31.3 S4 MX4SB4	153	C802_31.3 P132 BE132S4	C802_31.3 P132 BX132S4	154
48	1041	1.3	30.4	14300	C612_30.4 S4 ME4SB4	C612_30.4 S4 MX4SB4	146	C612_30.4 P132 BE132S4	C612_30.4 P132 BX132S4	147
49	1006	1.0	30.1	9610	C513_30.1 S4 ME4SB4	C513_30.1 S4 MX4SB4	142	C513_30.1 P132 BE132S4	C513_30.1 P132 BX132S4	143
53	948	2.2	27.7	21200	C702_27.7 S4 ME4SB4	C702_27.7 S4 MX4SB4	150	C702_27.7 P132 BE132S4	C702_27.7 P132 BX132S4	151
53	919	1.1	27.4	9490	C513_27.4 S4 ME4SB4	C513_27.4 S4 MX4SB4	142	C513_27.4 P132 BE132S4	C513_27.4 P132 BX132S4	143
53	938	1.4	27.4	13900	C612_27.4 S4 ME4SB4	C612_27.4 S4 MX4SB4	146	C612_27.4 P132 BE132S4	C612_27.4 P132 BX132S4	147
56	886	0.9	25.9	9350	C512_25.9 S4 ME4SB4	C512_25.9 S4 MX4SB4	142	C512_25.9 P132 BE132S4	C512_25.9 P132 BX132S4	143
59	849	1.6	24.8	13700	C612_24.8 S4 ME4SB4	C612_24.8 S4 MX4SB4	146	C612_24.8 P132 BE132S4	C612_24.8 P132 BX132S4	147



## 5.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
61	800	1.2	23.9	9540	C513_23.9 S4 ME4SB4	C513_23.9 S4 MX4SB4	142	C513_23.9 P132 BE132S4	C513_23.9 P132 BX132S4	143
63	799	1.0	23.4	9310	C512_23.4 S4 ME4SB4	C512_23.4 S4 MX4SB4	142	C512_23.4 P132 BE132S4	C512_23.4 P132 BX132S4	143
64	782	2.7	22.9	20400	C702_22.9 S4 ME4SB4	C702_22.9 S4 MX4SB4	150	C702_22.9 P132 BE132S4	C702_22.9 P132 BX132S4	151
65	764	1.8	22.4	13400	C612_22.4 S4 ME4SB4	C612_22.4 S4 MX4SB4	146	C612_22.4 P132 BE132S4	C612_22.4 P132 BX132S4	147
70	717	1.1	21.0	9150	C512_21.0 S4 ME4SB4	C512_21.0 S4 MX4SB4	142	C512_21.0 P132 BE132S4	C512_21.0 P132 BX132S4	143
74	670	2.0	19.6	13100	C612_19.6 S4 ME4SB4	C612_19.6 S4 MX4SB4	146	C612_19.6 P132 BE132S4	C612_19.6 P132 BX132S4	147
76	660	3.2	19.3	19700	C702_19.3 S4 ME4SB4	C702_19.3 S4 MX4SB4	150	C702_19.3 P132 BE132S4	C702_19.3 P132 BX132S4	151
77	646	1.2	18.9	9030	C512_18.9 S4 ME4SB4	C512_18.9 S4 MX4SB4	142	C512_18.9 P132 BE132S4	C512_18.9 P132 BX132S4	143
83	604	2.2	17.7	12700	C612_17.7 S4 ME4SB4	C612_17.7 S4 MX4SB4	146	C612_17.7 P132 BE132S4	C612_17.7 P132 BX132S4	147
88	568	1.4	16.6	8810	C512_16.6 S4 ME4SB4	C512_16.6 S4 MX4SB4	142	C512_16.6 P132 BE132S4	C512_16.6 P132 BX132S4	143
92	545	2.5	15.9	12500	C612_15.9 S4 ME4SB4	C612_15.9 S4 MX4SB4	146	C612_15.9 P132 BE132S4	C612_15.9 P132 BX132S4	147
98	512	1.6	15.0	8660	C512_15.0 S4 ME4SB4	C512_15.0 S4 MX4SB4	142	C512_15.0 P132 BE132S4	C512_15.0 P132 BX132S4	143
102	491	2.8	14.3	12100	C612_14.3 S4 ME4SB4	C612_14.3 S4 MX4SB4	146	C612_14.3 P132 BE132S4	C612_14.3 P132 BX132S4	147
102	487	0.9	14.2	4000	C412_14.2 S4 ME4SB4	C412_14.2 S4 MX4SB4	138	C412_14.2 P132 BE132S4	C412_14.2 P132 BX132S4	139
111	449	1.7	13.1	8420	C512_13.1 S4 ME4SB4	C512_13.1 S4 MX4SB4	142	C512_13.1 P132 BE132S4	C512_13.1 P132 BX132S4	143
118	424	1.0	12.4	4060	C412_12.4 S4 ME4SB4	C412_12.4 S4 MX4SB4	138	C412_12.4 P132 BE132S4	C412_12.4 P132 BX132S4	139
121	414	3.3	12.1	11600	C612_12.1 S4 ME4SB4	C612_12.1 S4 MX4SB4	146	C612_12.1 P132 BE132S4	C612_12.1 P132 BX132S4	147
123	405	1.9	11.8	8250	C512_11.8 S4 ME4SB4	C512_11.8 S4 MX4SB4	142	C512_11.8 P132 BE132S4	C512_11.8 P132 BX132S4	143
125	399	1.0	11.7	3380	C362_11.7 S4 ME4SB4	C362_11.7 S4 MX4SB4	134	C362_11.7 P132 BE132S4	C362_11.7 P132 BX132S4	135
131	382	1.1	11.2	4030	C412_11.2 S4 ME4SB4	C412_11.2 S4 MX4SB4	138	C412_11.2 P132 BE132S4	C412_11.2 P132 BX132S4	139
138	363	1.0	10.6	3350	C362_10.6 S4 ME4SB4	C362_10.6 S4 MX4SB4	134	C362_10.6 P132 BE132S4	C362_10.6 P132 BX132S4	135
150	334	2.1	9.8	7890	C512_9.8 S4 ME4SB4	C512_9.8 S4 MX4SB4	142	C512_9.8 P132 BE132S4	C512_9.8 P132 BX132S4	143
152	328	1.2	9.6	4030	C412_9.6 S4 ME4SB4	C412_9.6 S4 MX4SB4	138	C412_9.6 P132 BE132S4	C412_9.6 P132 BX132S4	139
166	301	1.3	8.8	3350	C362_8.8 S4 ME4SB4	C362_8.8 S4 MX4SB4	134	C362_8.8 P132 BE132S4	C362_8.8 P132 BX132S4	135
166	301	2.3	8.8	7700	C512_8.8 S4 ME4SB4	C512_8.8 S4 MX4SB4	142	C512_8.8 P132 BE132S4	C512_8.8 P132 BX132S4	143
182	275	1.3	8.0	3330	C362_8.0 S4 ME4SB4	C362_8.0 S4 MX4SB4	134	C362_8.0 P132 BE132S4	C362_8.0 P132 BX132S4	135
188	265	2.4	7.8	7460	C512_7.8 S4 ME4SB4	C512_7.8 S4 MX4SB4	142	C512_7.8 P132 BE132S4	C512_7.8 P132 BX132S4	143
207	242	1.5	7.1	3920	C412_7.1 S4 ME4SB4	C412_7.1 S4 MX4SB4	138	C412_7.1 P132 BE132S4	C412_7.1 P132 BX132S4	139
209	239	2.6	7.0	7280	C512_7.0 S4 ME4SB4	C512_7.0 S4 MX4SB4	142	C512_7.0 P132 BE132S4	C512_7.0 P132 BX132S4	143
215	232	1.5	6.8	3280	C362_6.8 S4 ME4SB4	C362_6.8 S4 MX4SB4	134	C362_6.8 P132 BE132S4	C362_6.8 P132 BX132S4	135
229	218	1.6	6.4	3840	C412_6.4 S4 ME4SB4	C412_6.4 S4 MX4SB4	138	C412_6.4 P132 BE132S4	C412_6.4 P132 BX132S4	139
243	205	3.2	6.0	9480	C612_6.0 S4 ME4SB4	C612_6.0 S4 MX4SB4	146	C612_6.0 P132 BE132S4	C612_6.0 P132 BX132S4	147
245	204	1.3	6.0	3430	C412_6.0 S4 ME4SB4	C412_6.0 S4 MX4SB4	138	C412_6.0 P132 BE132S4	C412_6.0 P132 BX132S4	139
250	200	1.0	5.8	3020	C362_5.8 S4 ME4SB4	C362_5.8 S4 MX4SB4	134	C362_5.8 P132 BE132S4	C362_5.8 P132 BX132S4	135
259	193	2.3	5.6	6720	C512_5.6 S4 ME4SB4	C512_5.6 S4 MX4SB4	142	C512_5.6 P132 BE132S4	C512_5.6 P132 BX132S4	143
262	190	2.2	11.2	3770	C412_11.2 S4 ME4SB2		138	C412_11.2 P132 BE132SA2		139
277	181	1.1	5.3	2930	C362_5.3 S4 ME4SB4	C362_5.3 S4 MX4SB4	134	C362_5.3 P132 BE132S4	C362_5.3 P132 BX132S4	135
292	171	2.5	3.3	6530	C512_3.3 S5 ME5SA6		142	C512_3.3 P160 BE160MA6		143
295	169	0.9	5.0	2480	C322_5.0 S4 ME4SB4	C322_5.0 S4 MX4SB4	130	C322_5.0 P132 BE132S4	C322_5.0 P132 BX132S4	131
305	164	2.4	9.6	3680	C412_9.6 S4 ME4SB2		138	C412_9.6 P132 BE132SA2		139
313	159	1.6	4.7	3360	C412_4.7 S4 ME4SB4	C412_4.7 S4 MX4SB4	138	C412_4.7 P132 BE132S4	C412_4.7 P132 BX132S4	139
316	158	1.3	4.6	2860	C362_4.6 S4 ME4SB4	C362_4.6 S4 MX4SB4	134	C362_4.6 P132 BE132S4	C362_4.6 P132 BX132S4	135
324	154	1.0	4.5	2500	C322_4.5 S4 ME4SB4	C322_4.5 S4 MX4SB4	130	C322_4.5 P132 BE132S4	C322_4.5 P132 BX132S4	131
328	152	2.9	4.5	6330	C512_4.5 S4 ME4SB4	C512_4.5 S4 MX4SB4	142	C512_4.5 P132 BE132S4	C512_4.5 P132 BX132S4	143
338	147	2.6	8.6	3600	C412_8.6 S4 ME4SB2		138	C412_8.6 P132 BE132SA2		139
348	144	1.4	4.2	2830	C362_4.2 S4 ME4SB4	C362_4.2 S4 MX4SB4	134	C362_4.2 P132 BE132S4	C362_4.2 P132 BX132S4	135
364	137	2.7	8.0	2850	C362_8.0 S4 ME4SB2		134	C362_8.0 P132 BE132SA2		135
367	136	2.9	2.6	6150	C512_2.6 S5 ME5SA6		142	C512_2.6 P160 BE160MA6		143
391	128	1.2	3.7	2410	C322_3.7 S4 ME4SB4	C322_3.7 S4 MX4SB4	130	C322_3.7 P132 BE132S4	C322_3.7 P132 BX132S4	131
404	123	2.1	3.6	3240	C412_3.6 S4 ME4SB4	C412_3.6 S4 MX4SB4	138	C412_3.6 P132 BE132S4	C412_3.6 P132 BX132S4	139
414	121	2.9	7.1	3460	C412_7.1 S4 ME4SB2		138	C412_7.1 P132 BE132SA2		139
419	119	1.7	3.5	2750	C362_3.5 S4 ME4SB4	C362_3.5 S4 MX4SB4	134	C362_3.5 P132 BE132S4	C362_3.5 P132 BX132S4	135
428	117	1.2	3.4	2370	C322_3.4 S4 ME4SB4	C322_3.4 S4 MX4SB4	130	C322_3.4 P132 BE132S4	C322_3.4 P132 BX132S4	131
431	116	3.1	6.8	2750	C362_6.8 S4 ME4SB2		134	C362_6.8 P132 BE132SA2		135
459	109	1.8	3.2	2700	C362_3.2 S4 ME4SB4	C362_3.2 S4 MX4SB4	134	C362_3.2 P132 BE132S4	C362_3.2 P132 BX132S4	135
460	109	3.2	6.4	3370	C412_6.4 S4 ME4SB2		138	C412_6.4 P132 BE132SA2		139
491	102	2.6	6.0	3140	C412_6.0 S4 ME4SB2		138	C412_6.0 P132 BE132SA2		139



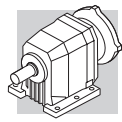
## 5.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
500	100	2.0	5.8	2620	C362_5.8 S4 ME4SB2		134	C362_5.8 P132 BE132SA2		135
507	98	1.3	2.9	2310	C322_2.9 S4 ME4SB4	C322_2.9 S4 MX4SB4	130	C322_2.9 P132 BE132S4	C322_2.9 P132 BX132S4	131
543	92	2.2	2.7	2620	C362_2.7 S4 ME4SB4	C362_2.7 S4 MX4SB4	134	C362_2.7 P132 BE132S4	C362_2.7 P132 BX132S4	135
549	91	2.7	2.7	3070	C412_2.7 S4 ME4SB4	C412_2.7 S4 MX4SB4	138	C412_2.7 P132 BE132S4	C412_2.7 P132 BX132S4	139
554	90	2.2	5.3	2550	C362_5.3 S4 ME4SB2		134	C362_5.3 P132 BE132SA2		135
591	84	1.8	5.0	2230	C322_5.0 S4 ME4SB2		130	C322_5.0 P132 BE132SA2		131
627	80	3.3	4.7	2990	C412_4.7 S4 ME4SB2		138	C412_4.7 P132 BE132SA2		139
650	77	2.0	4.5	2190	C322_4.5 S4 ME4SB2		130	C322_4.5 P132 BE132SA2		131
783	64	2.4	3.7	2120	C322_3.7 S4 ME4SB2		130	C322_3.7 P132 BE132SA2		131
858	58	2.4	3.4	2080	C322_3.4 S4 ME4SB2		130	C322_3.4 P132 BE132SA2		131
1016	49	2.6	2.9	2000	C322_2.9 S4 ME4SB2		130	C322_2.9 P132 BE132SA2		131

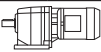

## 7.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
4.8	13252	0.9	300.5	85000	C1004_300.5 S4 ME4LA4	C1004_300.5 S4 MX4LA4	159	C1004_300.5 P132 BE132MA4	C1004_300.5 P132 BX132MA4	160
5.5	11598	1.0	263.0	85000	C1004_263.0 S4 ME4LA4	C1004_263.0 S4 MX4LA4	159	C1004_263.0 P132 BE132MA4	C1004_263.0 P132 BX132MA4	160
6.0	10770	1.1	244.2	85000	C1004_244.2 S4 ME4LA4	C1004_244.2 S4 MX4LA4	159	C1004_244.2 P132 BE132MA4	C1004_244.2 P132 BX132MA4	160
7.3	8804	1.4	199.6	85000	C1004_199.6 S4 ME4LA4	C1004_199.6 S4 MX4LA4	159	C1004_199.6 P132 BE132MA4	C1004_199.6 P132 BX132MA4	160
7.8	8175	1.5	185.4	85000	C1004_185.4 S4 ME4LA4	C1004_185.4 S4 MX4LA4	159	C1004_185.4 P132 BE132MA4	C1004_185.4 P132 BX132MA4	160
8.5	7843	0.9	172.1	60000	C903_172.1 S4 ME4LA4	C903_172.1 S4 MX4LA4	156	C903_172.1 P132 BE132MA4	C903_172.1 P132 BX132MA4	157
9.0	7149	1.7	162.1	85000	C1004_162.1 S4 ME4LA4	C1004_162.1 S4 MX4LA4	159	C1004_162.1 P132 BE132MA4	C1004_162.1 P132 BX132MA4	160
9.2	7189	1.0	157.8	60000	C903_157.8 S4 ME4LA4	C903_157.8 S4 MX4LA4	156	C903_157.8 P132 BE132MA4	C903_157.8 P132 BX132MA4	157
9.7	6855	1.8	150.4	85000	C1003_150.4 S4 ME4LA4	C1003_150.4 S4 MX4LA4	159	C1003_150.4 P132 BE132MA4	C1003_150.4 P132 BX132MA4	160
9.9	6668	1.1	146.3	59600	C903_146.3 S4 ME4LA4	C903_146.3 S4 MX4LA4	156	C903_146.3 P132 BE132MA4	C903_146.3 P132 BX132MA4	157
10.4	6365	1.7	139.7	85000	C1003_139.7 S4 ME4LA4	C1003_139.7 S4 MX4LA4	159	C1003_139.7 P132 BE132MA4	C1003_139.7 P132 BX132MA4	160
10.8	6113	1.2	134.1	59400	C903_134.1 S4 ME4LA4	C903_134.1 S4 MX4LA4	156	C903_134.1 P132 BE132MA4	C903_134.1 P132 BX132MA4	157
12.1	5492	2.2	120.5	85000	C1003_120.5 S4 ME4LA4	C1003_120.5 S4 MX4LA4	159	C1003_120.5 P132 BE132MA4	C1003_120.5 P132 BX132MA4	160
12.5	5319	1.4	116.7	58600	C903_116.7 S4 ME4LA4	C903_116.7 S4 MX4LA4	156	C903_116.7 P132 BE132MA4	C903_116.7 P132 BX132MA4	157
13.0	5100	2.4	111.9	85000	C1003_111.9 S4 ME4LA4	C1003_111.9 S4 MX4LA4	159	C1003_111.9 P132 BE132MA4	C1003_111.9 P132 BX132MA4	160
13.6	4876	1.5	107.0	58200	C903_107.0 S4 ME4LA4	C903_107.0 S4 MX4LA4	156	C903_107.0 P132 BE132MA4	C903_107.0 P132 BX132MA4	157
14.6	4548	2.6	99.8	85000	C1003_99.8 S4 ME4LA4	C1003_99.8 S4 MX4LA4	159	C1003_99.8 P132 BE132MA4	C1003_99.8 P132 BX132MA4	160
14.9	4438	0.9	97.4	34500	C803_97.4 S4 ME4LA4	C803_97.4 S4 MX4LA4	153	C803_97.4 P132 BE132MA4	C803_97.4 P132 BX132MA4	154
15.1	4386	1.6	96.2	57500	C903_96.2 S4 ME4LA4	C903_96.2 S4 MX4LA4	156	C903_96.2 P132 BE132MA4	C903_96.2 P132 BX132MA4	157
15.7	4223	2.8	92.7	85000	C1003_92.7 S4 ME4LA4	C1003_92.7 S4 MX4LA4	159	C1003_92.7 P132 BE132MA4	C1003_92.7 P132 BX132MA4	160
16.3	4068	1.0	89.3	35000	C803_89.3 S4 ME4LA4	C803_89.3 S4 MX4LA4	153	C803_89.3 P132 BE132MA4	C803_89.3 P132 BX132MA4	154
16.5	4020	1.8	88.2	56600	C903_88.2 S4 ME4LA4	C903_88.2 S4 MX4LA4	156	C903_88.2 P132 BE132MA4	C903_88.2 P132 BX132MA4	157
17.0	3899	3.1	85.6	85000	C1003_85.6 S4 ME4LA4	C1003_85.6 S4 MX4LA4	159	C1003_85.6 P132 BE132MA4	C1003_85.6 P132 BX132MA4	160
17.9	3701	1.9	81.2	56100	C903_81.2 S4 ME4LA4	C903_81.2 S4 MX4LA4	156	C903_81.2 P132 BE132MA4	C903_81.2 P132 BX132MA4	157
18.9	3505	1.1	76.9	35000	C803_76.9 S4 ME4LA4	C803_76.9 S4 MX4LA4	153	C803_76.9 P132 BE132MA4	C803_76.9 P132 BX132MA4	154
19.5	3392	2.1	74.4	55200	C903_74.4 S4 ME4LA4	C903_74.4 S4 MX4LA4	156	C903_74.4 P132 BE132MA4	C903_74.4 P132 BX132MA4	157
20.6	3213	1.2	70.5	35000	C803_70.5 S4 ME4LA4	C803_70.5 S4 MX4LA4	153	C803_70.5 P132 BE132MA4	C803_70.5 P132 BX132MA4	154
22.5	2943	2.4	64.6	54000	C903_64.6 S4 ME4LA4	C903_64.6 S4 MX4LA4	156	C903_64.6 P132 BE132MA4	C903_64.6 P132 BX132MA4	157
23.3	2848	1.4	62.5	35000	C803_62.5 S4 ME4LA4	C803_62.5 S4 MX4LA4	153	C803_62.5 P132 BE132MA4	C803_62.5 P132 BX132MA4	154
24.6	2698	2.6	59.2	53000	C903_59.2 S4 ME4LA4	C903_59.2 S4 MX4LA4	156	C903_59.2 P132 BE132MA4	C903_59.2 P132 BX132MA4	157
25.4	2611	1.5	57.3	35000	C803_57.3 S4 ME4LA4	C803_57.3 S4 MX4LA4	153	C803_57.3 P132 BE132MA4	C803_57.3 P132 BX132MA4	154
26.5	2501	2.9	54.9	52400	C903_54.9 S4 ME4LA4	C903_54.9 S4 MX4LA4	156	C903_54.9 P132 BE132MA4	C903_54.9 P132 BX132MA4	157
27.9	2377	1.0	52.2	22900	C703_52.2 S4 ME4LA4	C703_52.2 S4 MX4LA4	150	C703_52.2 P132 BE132MA4	C703_52.2 P132 BX132MA4	151
31	2162	1.8	47.4	35000	C803_47.4 S4 ME4LA4	C803_47.4 S4 MX4LA4	153	C803_47.4 P132 BE132MA4	C803_47.4 P132 BX132MA4	154
33	2037	1.1	44.7	22500	C703_44.7 S4 ME4LA4	C703_44.7 S4 MX4LA4	150	C703_44.7 P132 BE132MA4	C703_44.7 P132 BX132MA4	151
33	1982	1.9	43.5	35000	C803_43.5 S4 ME4LA4	C803_43.5 S4 MX4LA4	153	C803_43.5 P132 BE132MA4	C803_43.5 P132 BX132MA4	154
35	1880	1.2	41.3	22300	C703_41.3 S4 ME4LA4	C703_41.3 S4 MX4LA4	150	C703_41.3 P132 BE132MA4	C703_41.3 P132 BX132MA4	151
37	1821	1.8	39.1	33600	C802_39.1 S4 ME4LA4	C802_39.1 S4 MX4LA4	153	C802_39.1 P132 BE132MA4	C802_39.1 P132 BX132MA4	154





# 7.5 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
40	1594	1.0	36.1	13300	C613_36.1 S4 ME4LA4	C613_36.1 S4 MX4LA4	146	C613_36.1 P132 BE132MA4	C613_36.1 P132 BX132MA4	147
41	1634	3.3	35.1	47300	C902_35.1 S4 ME4LA4	C902_35.1 S4 MX4LA4	156	C902_35.1 P132 BE132MA4	C902_35.1 P132 BX132MA4	157
42	1617	1.3	34.7	20500	C702_34.7 S4 ME4LA4	C702_34.7 S4 MX4LA4	150	C702_34.7 P132 BE132MA4	C702_34.7 P132 BX132MA4	151
44	1454	1.0	33.0	13100	C613_33.0 S4 ME4LA4	C613_33.0 S4 MX4LA4	146	C613_33.0 P132 BE132MA4	C613_33.0 P132 BX132MA4	147
46	1459	2.5	31.3	32200	C802_31.3 S4 ME4LA4	C802_31.3 S4 MX4LA4	153	C802_31.3 P132 BE132MA4	C802_31.3 P132 BX132MA4	154
48	1417	1.0	30.4	13000	C612_30.4 S4 ME4LA4	C612_30.4 S4 MX4LA4	146	C612_30.4 P132 BE132MA4	C612_30.4 P132 BX132MA4	147
50	1295	1.1	29.4	13100	C613_29.4 S4 ME4LA4	C613_29.4 S4 MX4LA4	146	C613_29.4 P132 BE132MA4	C613_29.4 P132 BX132MA4	147
52	1290	1.6	27.7	20000	C702_27.7 S4 ME4LA4	C702_27.7 S4 MX4LA4	150	C702_27.7 P132 BE132MA4	C702_27.7 P132 BX132MA4	151
53	1276	1.1	27.4	12800	C612_27.4 S4 ME4LA4	C612_27.4 S4 MX4LA4	146	C612_27.4 P132 BE132MA4	C612_27.4 P132 BX132MA4	147
56	1208	3.1	25.9	31000	C802_25.9 S4 ME4LA4	C802_25.9 S4 MX4LA4	153	C802_25.9 P132 BE132MA4	C802_25.9 P132 BX132MA4	154
59	1155	1.2	24.8	12700	C612_24.8 S4 ME4LA4	C612_24.8 S4 MX4LA4	146	C612_24.8 P132 BE132MA4	C612_24.8 P132 BX132MA4	147
61	1115	3.2	24.0	30500	C802_24.0 S4 ME4LA4	C802_24.0 S4 MX4LA4	153	C802_24.0 P132 BE132MA4	C802_24.0 P132 BX132MA4	154
64	1064	2.0	22.9	19400	C702_22.9 S4 ME4LA4	C702_22.9 S4 MX4LA4	150	C702_22.9 P132 BE132MA4	C702_22.9 P132 BX132MA4	151
65	1040	1.3	22.4	12500	C612_22.4 S4 ME4LA4	C612_22.4 S4 MX4LA4	146	C612_22.4 P132 BE132MA4	C612_22.4 P132 BX132MA4	147
65	1035	3.6	22.2	30000	C802_22.2 S4 ME4LA4	C802_22.2 S4 MX4LA4	153	C802_22.2 P132 BE132MA4	C802_22.2 P132 BX132MA4	154
67	994	0.9	21.8	7200	C513_21.8 S4 ME4LA4	C513_21.8 S4 MX4LA4	142	C513_21.8 P132 BE132MA4	C513_21.8 P132 BX132MA4	143
74	912	1.5	19.6	12300	C612_19.6 S4 ME4LA4	C612_19.6 S4 MX4LA4	146	C612_19.6 P132 BE132MA4	C612_19.6 P132 BX132MA4	147
75	898	2.3	19.3	18900	C702_19.3 S4 ME4LA4	C702_19.3 S4 MX4LA4	150	C702_19.3 P132 BE132MA4	C702_19.3 P132 BX132MA4	151
77	879	0.9	18.9	7100	C512_18.9 S4 ME4LA4	C512_18.9 S4 MX4LA4	142	C512_18.9 P132 BE132MA4	C512_18.9 P132 BX132MA4	143
82	822	1.6	17.7	12000	C612_17.7 S4 ME4LA4	C612_17.7 S4 MX4LA4	146	C612_17.7 P132 BE132MA4	C612_17.7 P132 BX132MA4	147
87	778	2.6	16.7	18200	C702_16.7 S4 ME4LA4	C702_16.7 S4 MX4LA4	150	C702_16.7 P132 BE132MA4	C702_16.7 P132 BX132MA4	151
88	773	1.0	16.6	8070	C512_16.6 S4 ME4LA4	C512_16.6 S4 MX4LA4	142	C512_16.6 P132 BE132MA4	C512_16.6 P132 BX132MA4	143
91	742	1.8	15.9	11800	C612_15.9 S4 ME4LA4	C612_15.9 S4 MX4LA4	146	C612_15.9 P132 BE132MA4	C612_15.9 P132 BX132MA4	147
95	714	2.9	15.3	18000	C702_15.3 S4 ME4LA4	C702_15.3 S4 MX4LA4	150	C702_15.3 P132 BE132MA4	C702_15.3 P132 BX132MA4	151
97	697	1.1	15.0	8000	C512_15.0 S4 ME4LA4	C512_15.0 S4 MX4LA4	142	C512_15.0 P132 BE132MA4	C512_15.0 P132 BX132MA4	143
101	668	2.0	14.3	11500	C612_14.3 S4 ME4LA4	C612_14.3 S4 MX4LA4	146	C612_14.3 P132 BE132MA4	C612_14.3 P132 BX132MA4	147
111	611	1.2	13.1	7840	C512_13.1 S4 ME4LA4	C512_13.1 S4 MX4LA4	142	C512_13.1 P132 BE132MA4	C512_13.1 P132 BX132MA4	143
120	563	2.4	12.1	11100	C612_12.1 S4 ME4LA4	C612_12.1 S4 MX4LA4	146	C612_12.1 P132 BE132MA4	C612_12.1 P132 BX132MA4	147
123	551	1.4	11.8	7730	C512_11.8 S4 ME4LA4	C512_11.8 S4 MX4LA4	142	C512_11.8 P132 BE132MA4	C512_11.8 P132 BX132MA4	143
134	507	2.7	10.9	10900	C612_10.9 S4 ME4LA4	C612_10.9 S4 MX4LA4	146	C612_10.9 P132 BE132MA4	C612_10.9 P132 BX132MA4	147
148	457	3.0	9.8	10600	C612_9.8 S4 ME4LA4	C612_9.8 S4 MX4LA4	146	C612_9.8 P132 BE132MA4	C612_9.8 P132 BX132MA4	147
149	454	1.5	9.8	7450	C512_9.8 S4 ME4LA4	C512_9.8 S4 MX4LA4	142	C512_9.8 P132 BE132MA4	C512_9.8 P132 BX132MA4	143
152	447	0.9	9.6	3300	C412_9.6 S4 ME4LA4	C412_9.6 S4 MX4LA4	138	C412_9.6 P132 BE132MA4	C412_9.6 P132 BX132MA4	139
165	412	3.3	8.8	10300	C612_8.8 S4 ME4LA4	C612_8.8 S4 MX4LA4	146	C612_8.8 P132 BE132MA4	C612_8.8 P132 BX132MA4	147
165	410	0.9	8.8	2880	C362_8.8 S4 ME4LA4	C362_8.8 S4 MX4LA4	134	C362_8.8 P132 BE132MA4	C362_8.8 P132 BX132MA4	135
166	409	1.7	8.8	7320	C512_8.8 S4 ME4LA4	C512_8.8 S4 MX4LA4	142	C512_8.8 P132 BE132MA4	C512_8.8 P132 BX132MA4	143
168	402	1.0	8.6	3430	C412_8.6 S4 ME4LA4	C412_8.6 S4 MX4LA4	138	C412_8.6 P132 BE132MA4	C412_8.6 P132 BX132MA4	139
181	374	1.0	8.0	2900	C362_8.0 S4 ME4LA4	C362_8.0 S4 MX4LA4	134	C362_8.0 P132 BE132MA4	C362_8.0 P132 BX132MA4	135
188	361	1.8	7.8	7120	C512_7.8 S4 ME4LA4	C512_7.8 S4 MX4LA4	142	C512_7.8 P132 BE132MA4	C512_7.8 P132 BX132MA4	143
206	329	1.1	7.1	3470	C412_7.1 S4 ME4LA4	C412_7.1 S4 MX4LA4	138	C412_7.1 P132 BE132MA4	C412_7.1 P132 BX132MA4	139
208	325	1.9	7.0	6970	C512_7.0 S4 ME4LA4	C512_7.0 S4 MX4LA4	142	C512_7.0 P132 BE132MA4	C512_7.0 P132 BX132MA4	143
215	316	1.1	6.8	2900	C362_6.8 S4 ME4LA4	C362_6.8 S4 MX4LA4	134	C362_6.8 P132 BE132MA4	C362_6.8 P132 BX132MA4	135
229	296	1.2	6.4	3440	C412_6.4 S4 ME4LA4	C412_6.4 S4 MX4LA4	138	C412_6.4 P132 BE132MA4	C412_6.4 P132 BX132MA4	139
242	279	2.4	6.0	9180	C612_6.0 S4 ME4LA4	C612_6.0 S4 MX4LA4	146	C612_6.0 P132 BE132MA4	C612_6.0 P132 BX132MA4	147
244	277	0.9	6.0	2920	C412_6.0 S4 ME4LA4	C412_6.0 S4 MX4LA4	138	C412_6.0 P132 BE132MA4	C412_6.0 P132 BX132MA4	139
258	262	1.7	5.6	6410	C512_5.6 S4 ME4LA4	C512_5.6 S4 MX4LA4	142	C512_5.6 P132 BE132MA4	C512_5.6 P132 BX132MA4	143
312	217	1.2	4.7	2960	C412_4.7 S4 ME4LA4	C412_4.7 S4 MX4LA4	138	C412_4.7 P132 BE132MA4	C412_4.7 P132 BX132MA4	139
315	215	0.9	4.6	2600	C362_4.6 S4 ME4LA4	C362_4.6 S4 MX4LA4	134	C362_4.6 P132 BE132MA4	C362_4.6 P132 BX132MA4	135
319	212	3.1	4.6	8550	C612_4.6 S4 ME4LA4	C612_4.6 S4 MX4LA4	146	C612_4.6 P132 BE132MA4	C612_4.6 P132 BX132MA4	147
327	207	2.1	4.5	6090	C512_4.5 S4 ME4LA4	C512_4.5 S4 MX4LA4	142	C512_4.5 P132 BE132MA4	C512_4.5 P132 BX132MA4	143
342	199	3.3	2.8	8390	C612_2.8 S5 ME5SB6		146	C612_2.8 P160 BE160MB6		147
346	196	1.0	4.2	2550	C362_4.2 S4 ME4LA4	C362_4.2 S4 MX4LA4	134	C362_4.2 P132 BE132MA4	C362_4.2 P132 BX132MA4	135
367	185	2.2	2.6	5920	C512_2.6 S5 ME5SB6		142	C512_2.6 P160 BE160MB6		143
403	168	1.5	3.6	2930	C412_3.6 S4 ME4LA4	C412_3.6 S4 MX4LA4	138	C412_3.6 P132 BE132MA4	C412_3.6 P132 BX132MA4	139
414	164	2.2	7.1	3240	C412_7.1 S4 ME4LA2		138	C412_7.1 P132 BE132SB2		139
417	162	1.2	3.5	2500	C362_3.5 S4 ME4LA4	C362_3.5 S4 MX4LA4	134	C362_3.5 P132 BE132MA4	C362_3.5 P132 BX132MA4	135
440	154	2.7	3.3	5660	C512_3.3 S4 ME4LA4	C512_3.3 S4 MX4LA4	142	C512_3.3 P132 BE132MA4	C512_3.3 P132 BX132MA4	143



## 7.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
457	148	1.4	3.2	2500	C362_3.2 S4 ME4LA4	C362_3.2 S4 MX4LA4	134	C362_3.2 P132 BE132MA4	C362_3.2 P132 BX132MA4	135
460	148	2.3	6.4	3170	C412_6.4 S4 ME4LA2		138	C412_6.4 P132 BE132SB2		139
491	138	1.9	6.0	2880	C412_6.0 S4 ME4LA2		138	C412_6.0 P132 BE132SB2		139
505	134	1.0	2.9	2100	C322_2.9 S4 ME4LA4	C322_2.9 S4 MX4LA4	130	C322_2.9 P132 BN132MA4	C322_2.9 P132 BX132MA4	131
519	131	3.3	5.6	5420	C512_5.6 S4 ME4LA2		142	C512_5.6 P132 BE132SB2		143
542	125	1.6	2.7	2440	C362_2.7 S4 ME4LA4	C362_2.7 S4 MX4LA4	134	C362_2.7 P132 BE132MA4	C362_2.7 P132 BX132MA4	135
547	124	2.0	2.7	2840	C412_2.7 S4 ME4LA4	C412_2.7 S4 MX4LA4	138	C412_2.7 P132 BE132MA4	C412_2.7 P132 BX132MA4	139
553	122	3.3	2.6	5330	C512_2.6 S4 ME4LA4	C512_2.6 S4 MX4LA4	142	C512_2.6 P132 BE132MA4	C512_2.6 P132 BX132MA4	143
554	123	1.6	5.3	2370	C362_5.3 S4 ME4LA2		134	C362_5.3 P132 BE132SB2		135
627	108	2.4	4.7	2790	C412_4.7 S4 ME4LA2		138	C412_4.7 P132 BE132SB2		139
633	108	1.9	4.6	2330	C362_4.6 S4 ME4LA2		134	C362_4.6 P132 BE132SB2		135
696	98	2.0	4.2	2290	C362_4.2 S4 ME4LA2		134	C362_4.2 P132 BE132SB2		135
810	84	3.0	3.6	2670	C412_3.6 S4 ME4LA2		138	C412_3.6 P132 BE132SB2		139
839	81	2.5	3.5	2210	C362_3.5 S4 ME4LA2		134	C362_3.5 P132 BE132SB2		135
919	74	2.7	3.2	2170	C362_3.2 S4 ME4LA2		134	C362_3.2 P132 BE132SB2		135
1089	62	3.2	2.7	2100	C362_2.7 S4 ME4LA2		134	C362_2.7 P132 BE132SB2		135

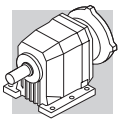
## 9.2 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
5.9	13408	0.9	244.2	85000	C1004_244.2 S4 ME4LB4		159	C1004_244.2 P132 BE132MB4	C1004_244.2 P160 BX160MA4	160
7.3	10960	1.1	199.6	85000	C1004_199.6 S4 ME4LB4		159	C1004_199.6 P132 BE132MB4	C1004_199.6 P160 BX160MA4	160
7.8	10177	1.2	185.4	85000	C1004_185.4 S4 ME4LB4		159	C1004_185.4 P132 BE132MB4	C1004_185.4 P160 BX160MA4	160
8.9	8900	1.3	162.1	85000	C1004_162.1 S4 ME4LB4		159	C1004_162.1 P132 BE132MB4	C1004_162.1 P160 BX160MA4	160
9.6	8534	1.4	150.4	85000	C1003_150.4 S4 ME4LB4	C1003_150.4 S5 MX5SA4	159	C1003_150.4 P132 BE132MB4	C1003_150.4 P160 BX160MA4	160
10.4	7924	1.4	139.7	85000	C1003_139.7 S4 ME4LB4	C1003_139.7 S5 MX5SA4	159	C1003_139.7 P132 BE132MB4	C1003_139.7 P160 BX160MA4	160
10.8	7610	0.9	134.1	54900	C903_134.1 S4 ME4LB4	C903_134.1 S5 MX5SA4	156	C903_134.1 P132 BE132MB4	C903_134.1 P160 BX160MA4	157
12.0	6837	1.8	120.5	85000	C1003_120.5 S4 ME4LB4	C1003_120.5 S5 MX5SA4	159	C1003_120.5 P132 BE132MB4	C1003_120.5 P160 BX160MA4	160
12.4	6622	1.1	116.7	54800	C903_116.7 S4 ME4LB4	C903_116.7 S5 MX5SA4	156	C903_116.7 P132 BE132MB4	C903_116.7 P160 BX160MA4	157
13.0	6348	1.9	111.9	85000	C1003_111.9 S4 ME4LB4	C1003_111.9 S5 MX5SA4	159	C1003_111.9 P132 BE132MB4	C1003_111.9 P160 BX160MA4	160
13.6	6070	1.2	107.0	54600	C903_107.0 S4 ME4LB4	C903_107.0 S5 MX5SA4	156	C903_107.0 P132 BE132MB4	C903_107.0 P160 BX160MA4	157
14.5	5662	2.1	99.8	85000	C1003_99.8 S4 ME4LB4	C1003_99.8 S5 MX5SA4	159	C1003_99.8 P132 BE132MB4	C1003_99.8 P160 BX160MA4	160
15.1	5460	1.3	96.2	54200	C903_96.2 S4 ME4LB4	C903_96.2 S5 MX5SA4	156	C903_96.2 P132 BE132MB4	C903_96.2 P160 BX160MA4	157
15.6	5257	2.3	92.7	85000	C1003_92.7 S4 ME4LB4	C1003_92.7 S5 MX5SA4	159	C1003_92.7 P132 BE132MB4	C1003_92.7 P160 BX160MA4	160
16.4	5005	1.4	88.2	53700	C903_88.2 S4 ME4LB4	C903_88.2 S5 MX5SA4	156	C903_88.2 P132 BE132MB4	C903_88.2 P160 BX160MA4	157
16.9	4854	2.5	85.6	85000	C1003_85.6 S4 ME4LB4	C1003_85.6 S5 MX5SA4	159	C1003_85.6 P132 BE132MB4	C1003_85.6 P160 BX160MA4	160
17.9	4607	1.6	81.2	53300	C903_81.2 S4 ME4LB4	C903_81.2 S5 MX5SA4	156	C903_81.2 P132 BE132MB4	C903_81.2 P160 BX160MA4	157
18.3	4507	2.7	79.4	85000	C1003_79.4 S4 ME4LB4	C1003_79.4 S5 MX5SA4	159	C1003_79.4 P132 BE132MB4	C1003_79.4 P160 BX160MA4	160
18.9	4363	0.9	76.9	33700	C803_76.9 S4 ME4LB4	C803_76.9 S5 MX5SA4	153	C803_76.9 P132 BE132MB4	C803_76.9 P160 BX160MA4	154
19.5	4223	1.7	74.4	52700	C903_74.4 S4 ME4LB4	C903_74.4 S5 MX5SA4	156	C903_74.4 P132 BE132MB4	C903_74.4 P160 BX160MA4	157
20.6	4000	1.0	70.5	35000	C803_70.5 S4 ME4LB4	C803_70.5 S5 MX5SA4	153	C803_70.5 P132 BE132MB4	C803_70.5 P160 BX160MA4	154
22.5	3664	2.0	64.6	51800	C903_64.6 S4 ME4LB4	C903_64.6 S5 MX5SA4	156	C903_64.6 P132 BE132MB4	C903_64.6 P160 BX160MA4	157
23.2	3546	1.1	62.5	35000	C803_62.5 S4 ME4LB4	C803_62.5 S5 MX5SA4	153	C803_62.5 P132 BE132MB4	C803_62.5 P160 BX160MA4	154
24.5	3358	2.1	59.2	51100	C903_59.2 S4 ME4LB4	C903_59.2 S5 MX5SA4	156	C903_59.2 P132 BE132MB4	C903_59.2 P160 BX160MA4	157
25.3	3250	1.2	57.3	35000	C803_57.3 S4 ME4LB4	C803_57.3 S5 MX5SA4	153	C803_57.3 P132 BE132MB4	C803_57.3 P160 BX160MA4	154
26.4	3113	2.3	54.9	50500	C903_54.9 S4 ME4LB4	C903_54.9 S5 MX5SA4	156	C903_54.9 P132 BE132MB4	C903_54.9 P160 BX160MA4	157
28.8	2854	2.5	50.3	49700	C903_50.3 S4 ME4LB4	C903_50.3 S5 MX5SA4	156	C903_50.3 P132 BE132MB4	C903_50.3 P160 BX160MA4	157
31	2692	1.4	47.4	34900	C803_47.4 S4 ME4LB4	C803_47.4 S5 MX5SA4	153	C803_47.4 P132 BE132MB4	C803_47.4 P160 BX160MA4	154
32	2536	0.9	44.7	21100	C703_44.7 S4 ME4LB4	C703_44.7 S5 MX5SA4	150	C703_44.7 P132 BE132MB4	C703_44.7 P160 BX160MA4	151
33	2467	1.5	43.5	34400	C803_43.5 S4 ME4LB4	C803_43.5 S5 MX5SA4	153	C803_43.5 P132 BE132MB4	C803_43.5 P160 BX160MA4	154
34	2439	3.0	43.0	48300	C903_43.0 S4 ME4LB4	C903_43.0 S5 MX5SA4	156	C903_43.0 P132 BE132MB4	C903_43.0 P160 BX160MA4	157
35	2341	1.0	41.3	21000	C703_41.3 S4 ME4LB4	C703_41.3 S5 MX5SA4	150	C703_41.3 P132 BE132MB4	C703_41.3 P160 BX160MA4	151
37	2266	1.4	39.1	32300	C802_39.1 S4 ME4LB4	C802_39.1 S5 MX5SA4	153	C802_39.1 P132 BE132MB4	C802_39.1 P160 BX160MA4	154



## 9.2 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
41	2034	2.7	35.1	46200	C902_35.1 S4 ME4LB4	C902_35.1 S5 MX5SA4	156	C902_35.1 P132 BE132MB4	C902_35.1 P160 BX160MA4	157
42	2014	1.0	34.7	19200	C702_34.7 S4 ME4LB4	C702_34.7 S5 MX5SA4	150	C702_34.7 P132 BE132MB4	C702_34.7 P160 BX160MA4	151
46	1816	2.0	31.3	31100	C802_31.3 S4 ME4LB4	C802_31.3 S5 MX5SA4	153	C802_31.3 P132 BE132MB4	C802_31.3 P160 BX160MA4	154
49	1706	3.5	29.4	44600	C902_29.4 S4 ME4LB4	C902_29.4 S5 MX5SA4	156	C902_29.4 P132 BE132MB4	C902_29.4 P160 BX160MA4	157
49	1612	0.9	29.4	10500	C613_29.4 S4 ME4LB4	C613_29.4 S5 MX5SA4	146	C613_29.4 P132 BE132MB4	C613_29.4 P160 BX160MA4	147
52	1606	1.3	27.7	18900	C702_27.7 S4 ME4LB4	C702_27.7 S5 MX5SA4	150	C702_27.7 P132 BE132MB4	C702_27.7 P160 BX160MA4	151
54	1470	1.0	26.8	11400	C613_26.8 S4 ME4LB4	C613_26.8 S5 MX5SA4	146	C613_26.8 P132 BE132MB4	C613_26.8 P160 BX160MA4	147
56	1504	2.5	25.9	30300	C802_25.9 S4 ME4LB4	C802_25.9 S5 MX5SA4	153	C802_25.9 P132 BE132MB4	C802_25.9 P160 BX160MA4	154
58	1438	0.9	24.8	11800	C612_24.8 S4 ME4LB4	C612_24.8 S5 MX5SA4	146	C612_24.8 P132 BE132MB4	C612_24.8 P160 BX160MA4	147
61	1388	2.6	24.0	30000	C802_24.0 S4 ME4LB4	C802_24.0 S5 MX5SA4	153	C802_24.0 P132 BE132MB4	C802_24.0 P160 BX160MA4	154
63	1324	1.6	22.9	18500	C702_22.9 S4 ME4LB4	C702_22.9 S5 MX5SA4	150	C702_22.9 P132 BE132MB4	C702_22.9 P160 BX160MA4	151
65	1295	1.0	22.4	11700	C612_22.4 S4 ME4LB4	C612_22.4 S5 MX5SA4	146	C612_22.4 P132 BE132MB4	C612_22.4 P160 BX160MA4	147
65	1289	2.9	22.2	29200	C802_22.2 S4 ME4LB4	C802_22.2 S5 MX5SA4	153	C802_22.2 P132 BE132MB4	C802_22.2 P160 BX160MA4	154
71	1190	3.0	20.5	28900	C802_20.5 S4 ME4LB4	C802_20.5 S5 MX5SA4	153	C802_20.5 P132 BE132MB4	C802_20.5 P160 BX160MA4	154
74	1136	1.2	19.6	11600	C612_19.6 S4 ME4LB4	C612_19.6 S5 MX5SA4	146	C612_19.6 P132 BE132MB4	C612_19.6 P160 BX160MA4	147
75	1118	1.9	19.3	18100	C702_19.3 S4 ME4LB4	C702_19.3 S5 MX5SA4	150	C702_19.3 P132 BE132MB4	C702_19.3 P160 BX160MA4	151
82	1023	1.3	17.7	11400	C612_17.7 S4 ME4LB4	C612_17.7 S5 MX5SA4	146	C612_17.7 P132 BE132MB4	C612_17.7 P160 BX160MA4	147
87	968	2.1	16.7	17500	C702_16.7 S4 ME4LB4	C702_16.7 S5 MX5SA4	150	C702_16.7 P132 BE132MB4	C702_16.7 P160 BX160MA4	151
91	923	1.5	15.9	11200	C612_15.9 S4 ME4LB4	C612_15.9 S5 MX5SA4	146	C612_15.9 P132 BE132MB4	C612_15.9 P160 BX160MA4	147
95	889	2.4	15.3	17500	C702_15.3 S4 ME4LB4	C702_15.3 S5 MX5SA4	150	C702_15.3 P132 BE132MB4	C702_15.3 P160 BX160MA4	151
97	867	0.9	15.0	7430	C512_15.0 S4 ME4LB4	C512_15.0 S5 MX5SA4	142	C512_15.0 P132 BE132MB4	C512_15.0 P160 BX160MA4	143
101	831	1.6	14.3	11000	C612_14.3 S4 ME4LB4	C612_14.3 S5 MX5SA4	146	C612_14.3 P132 BE132MB4	C612_14.3 P160 BX160MA4	147
103	817	2.6	14.1	17000	C702_14.1 S4 ME4LB4	C702_14.1 S5 MX5SA4	150	C702_14.1 P132 BE132MB4	C702_14.1 P160 BX160MA4	151
110	761	1.0	13.1	7340	C512_13.1 S4 ME4LB4	C512_13.1 S5 MX5SA4	142	C512_13.1 P132 BE132MB4	C512_13.1 P160 BX160MA4	143
111	755	2.8	13.0	17000	C702_13.0 S4 ME4LB4	C702_13.0 S5 MX5SA4	150	C702_13.0 P132 BE132MB4	C702_13.0 P160 BX160MA4	151
120	701	1.9	12.1	10700	C612_12.1 S4 ME4LB4	C612_12.1 S5 MX5SA4	146	C612_12.1 P132 BE132MB4	C612_12.1 P160 BX160MA4	147
123	686	1.1	11.8	7280	C512_11.8 S4 ME4LB4	C512_11.8 S5 MX5SA4	142	C512_11.8 P132 BE132MB4	C512_11.8 P160 BX160MA4	143
128	653	3.2	22.9	16500	C702_22.9 S4 ME4LB2	C702_22.9 S5 ME4LB2	150	C702_22.9 P132 BE132MB2	C702_22.9 P160 BE132MB2	151
133	631	2.1	10.9	10500	C612_10.9 S4 ME4LB4	C612_10.9 S5 MX5SA4	146	C612_10.9 P132 BE132MB4	C612_10.9 P160 BX160MA4	147
148	569	2.4	9.8	10300	C612_9.8 S4 ME4LB4	C612_9.8 S5 MX5SA4	146	C612_9.8 P132 BE132MB4	C612_9.8 P160 BX160MA4	147
149	565	1.2	9.8	7080	C512_9.8 S4 ME4LB4	C512_9.8 S5 MX5SA4	142	C512_9.8 P132 BE132MB4	C512_9.8 P160 BX160MA4	143
164	512	2.6	8.8	10000	C612_8.8 S4 ME4LB4	C612_8.8 S5 MX5SA4	146	C612_8.8 P132 BE132MB4	C612_8.8 P160 BX160MA4	147
165	509	1.3	8.8	6990	C512_8.8 S4 ME4LB4	C512_8.8 S5 MX5SA4	142	C512_8.8 P132 BE132MB4	C512_8.8 P160 BX160MA4	143
187	449	1.4	7.8	6820	C512_7.8 S4 ME4LB4	C512_7.8 S5 MX5SA4	142	C512_7.8 P132 BE132MB4	C512_7.8 P160 BX160MA4	143
194	434	3.1	7.5	9670	C612_7.5 S4 ME4LB4	C612_7.5 S5 MX5SA4	146	C612_7.5 P132 BE132MB4	C612_7.5 P160 BX160MA4	147
208	405	1.6	7.0	6710	C512_7.0 S4 ME4LB4	C512_7.0 S5 MX5SA4	142	C512_7.0 P132 BE132MB4	C512_7.0 P160 BX160MA4	143
215	391	3.5	6.7	9410	C612_6.7 S4 ME4LB4	C612_6.7 S5 MX5SA4	146	C612_6.7 P132 BE132MB4	C612_6.7 P160 BX160MA4	147
228	369	0.9	6.4	3100	C412_6.4 S4 ME4LB4		138	C412_6.4 P132 BE132MB4		139
242	348	1.9	6.0	8930	C612_6.0 S4 ME4LB4	C612_6.0 S5 MX5SA4	146	C612_6.0 P132 BE132MB4	C612_6.0 P160 BX160MA4	147
258	326	1.3	5.6	6150	C512_5.6 S4 ME4LB4	C512_5.6 S5 MX5SA4	142	C512_5.6 P132 BE132MB4	C512_5.6 P160 BX160MA4	143
262	319	1.3	11.2	3110	C412_11.2 S4 ME4LB2		138	C412_11.2 P132 BE132MB2		139
311	270	1.0	4.7	2620	C412_4.7 S4 ME4LB4		138	C412_4.7 P132 BE132MB4		139
318	264	2.5	4.6	8360	C612_4.6 S4 ME4LB4	C612_4.6 S5 MX5SA4	146	C612_4.6 P132 BE132MB4	C612_4.6 P160 BX160MA4	147
326	258	1.7	4.5	5880	C512_4.5 S4 ME4LB4	C512_4.5 S5 MX5SA4	142	C512_4.5 P132 BE132MB4	C512_5.6 P160 BX160MA4	143
338	247	1.6	8.6	3090	C412_8.6 S4 ME4LB2		138	C412_8.6 P132 BE132MB2		139
377	222	2.9	7.8	5870	C512_7.8 S4 ME4LB2		142	C512_7.8 P132 BE132MB2		143
402	209	1.2	3.6	2670	C412_3.6 S4 ME4LB4		138	C412_3.6 P132 BE132MB4		139
413	202	1.8	7.1	3050	C412_7.1 S4 ME4LB2		138	C412_7.1 P132 BE132MB2		139
416	202	1.0	3.5	2300	C362_3.5 S4 ME4LB4		134	C362_3.5 P132 BE132MB4		135
418	200	3.2	7.0	5730	C512_7.0 S4 ME4LB2		142	C512_7.0 P132 BE132MB2		143
438	192	2.2	3.3	5510	C512_3.3 S4 ME4LB4	C512_3.3 S5 MX5SA4	142	C512_3.3 P132 BE132MB4	C512_3.3 P160 BX160MA4	143
456	184	1.1	3.2	2300	C362_3.2 S4 ME4LB4		134	C362_3.2 P132 BE132MB4		135
459	182	1.9	6.4	3000	C412_6.4 S4 ME4LB2		138	C412_6.4 P132 BE132MB2		139
491	170	1.5	6.0	2660	C412_6.0 S4 ME4LB2		138	C412_6.0 P132 BE132MB2		139
519	161	2.7	5.6	5290	C512_5.6 S4 ME4LB2		142	C512_5.6 P132 BE132MB2		143
540	156	1.3	2.7	2280	C362_2.7 S4 ME4LB4		134	C362_2.7 P132 BE132MB4		135
545	154	1.6	2.7	2650	C412_2.7 S4 ME4LB4		138	C412_2.7 P132 BE132MB4		139



## 9.2 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
552	152	2.6	2.6	5210	C512_2.6 S4 ME4LB4	C512_2.6 S5 MX5SA4	142	C512_2.6 P132 BE132MB4	C512_2.6 P160 BX160MA4	143
626	133	2.0	4.7	2620	C412_4.7 S4 ME4LB2		138	C412_4.7 P132 BE132MB2		139
656	127	3.4	4.5	4980	C512_4.5 S4 ME4LB2		142	C512_4.5 P132 BE132MB2		143
695	120	1.7	4.2	2180	C362_4.2 S4 ME4LB2		134	C362_4.2 P132 BE132MB2		135
809	103	2.5	3.6	2540	C412_3.6 S4 ME4LB2		138	C412_3.6 P132 BE132MB2		139
838	100	2.0	3.5	2120	C362_3.5 S4 ME4LB2		134	C362_3.5 P132 BE132MB2		135
918	91	2.2	3.2	2090	C362_3.2 S4 ME4LB2		134	C362_3.2 P132 BE132MB2		135
1087	77	2.6	2.7	2020	C362_2.7 S4 ME4LB2		134	C362_2.7 P132 BE132MB2		135
1098	76	3.2	2.7	2410	C412_2.7 S4 ME4LB2		138	C412_2.7 P132 BE132MB2		139

## 11 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
7.4	12936	0.9	199.6	85000	C1004_199.6 S5 ME5SA4	C1004_199.6 S5 MX5SB4	159	C1004_199.6 P160 BE160M4	C1004_199.6 P160 BX160MB4	160
7.9	12012	1.0	185.4	85000	C1004_185.4 S5 ME5SA4	C1004_185.4 S5 MX5SB4	159	C1004_185.4 P160 BE160M4	C1004_185.4 P160 BX160MB4	160
9.1	10504	1.1	162.1	85000	C1004_162.1 S5 ME5SA4	C1004_162.1 S5 MX5SB4	159	C1004_162.1 P160 BE160M4	C1004_162.1 P160 BX160MB4	160
9.8	10073	1.2	150.4	85000	C1003_150.4 S5 ME5SA4	C1003_150.4 S5 MX5SB4	159	C1003_150.4 P160 BE160M4	C1003_150.4 P160 BX160MB4	160
10.5	9353	1.2	139.7	85000	C1003_139.7 S5 ME5SA4	C1003_139.7 S5 MX5SB4	159	C1003_139.7 P160 BE160M4	C1003_139.7 P160 BX160MB4	160
12.2	8070	1.5	120.5	85000	C1003_120.5 S5 ME5SA4	C1003_120.5 S5 MX5SB4	159	C1003_120.5 P160 BE160M4	C1003_120.5 P160 BX160MB4	160
12.6	7816	0.9	116.7	50800	C903_116.7 S5 ME5SA4	C903_116.7 S5 MX5SB4	156	C903_116.7 P160 BE160M4	C903_116.7 P160 BX160MB4	157
13.1	7493	1.6	111.9	85000	C1003_111.9 S5 ME5SA4	C1003_111.9 S5 MX5SB4	159	C1003_111.9 P160 BE160M4	C1003_111.9 P160 BX160MB4	160
13.7	7165	1.0	107.0	51000	C903_107.0 S5 ME5SA4	C903_107.0 S5 MX5SB4	156	C903_107.0 P160 BE160M4	C903_107.0 P160 BX160MB4	157
14.7	6683	1.8	99.8	85000	C1003_99.8 S5 ME5SA4	C1003_99.8 S5 MX5SB4	159	C1003_99.8 P160 BE160M4	C1003_99.8 P160 BX160MB4	160
15.3	6444	1.1	96.2	50800	C903_96.2 S5 ME5SA4	C903_96.2 S5 MX5SB4	156	C903_96.2 P160 BE160M4	C903_96.2 P160 BX160MB4	157
15.9	6205	1.9	92.7	85000	C1003_92.7 S5 ME5SA4	C1003_92.7 S5 MX5SB4	159	C1003_92.7 P160 BE160M4	C1003_92.7 P160 BX160MB4	160
16.7	5907	1.2	88.2	50700	C903_88.2 S5 ME5SA4	C903_88.2 S5 MX5SB4	156	C903_88.2 P160 BE160M4	C903_88.2 P160 BX160MB4	157
17.2	5729	2.1	85.6	85000	C1003_85.6 S5 ME5SA4	C1003_85.6 S5 MX5SB4	159	C1003_85.6 P160 BE160M4	C1003_85.6 P160 BX160MB4	160
18.1	5438	1.3	81.2	50700	C903_81.2 S5 ME5SA4	C903_81.2 S5 MX5SB4	156	C903_81.2 P160 BE160M4	C903_81.2 P160 BX160MB4	157
18.5	5320	2.3	79.4	85000	C1003_79.4 S5 ME5SA4	C1003_79.4 S5 MX5SB4	159	C1003_79.4 P160 BE160M4	C1003_79.4 P160 BX160MB4	160
19.7	4985	1.4	74.4	50200	C903_74.4 S5 ME5SA4	C903_74.4 S5 MX5SB4	156	C903_74.4 P160 BE160M4	C903_74.4 P160 BX160MB4	157
21.2	4649	2.6	69.4	84800	C1003_69.4 S5 ME5SA4	C1003_69.4 S5 MX5SB4	159	C1003_69.4 P160 BE160M4	C1003_69.4 P160 BX160MB4	160
22.8	4324	1.7	64.6	50000	C903_64.6 S5 ME5SA4	C903_64.6 S5 MX5SB4	156	C903_64.6 P160 BE160M4	C903_64.6 P160 BX160MB4	157
22.8	4317	2.8	64.5	83100	C1003_64.5 S5 ME5SA4	C1003_64.5 S5 MX5SB4	159	C1003_64.5 P160 BE160M4	C1003_64.5 P160 BX160MB4	160
23.5	4185	1.0	62.5	33000	C803_62.5 S5 ME5SA4	C803_62.5 S5 MX5SB4	153	C803_62.5 P160 BE160M4	C803_62.5 P160 BX160MB4	154
24.8	3964	1.8	59.2	49000	C903_59.2 S5 ME5SA4	C903_59.2 S5 MX5SB4	156	C903_59.2 P160 BE160M4	C903_59.2 P160 BX160MB4	157
25.7	3837	1.0	57.3	34200	C803_57.3 S5 ME5SA4	C803_57.3 S5 MX5SB4	153	C803_57.3 P160 BE160M4	C803_57.3 P160 BX160MB4	154
26.8	3674	2.0	54.9	48800	C903_54.9 S5 ME5SA4	C903_54.9 S5 MX5SB4	156	C903_54.9 P160 BE160M4	C903_54.9 P160 BX160MB4	157
29.2	3368	2.1	50.3	48000	C903_50.3 S5 ME5SA4	C903_50.3 S5 MX5SB4	156	C903_50.3 P160 BE160M4	C903_50.3 P160 BX160MB4	157
31	3177	1.2	47.4	33500	C803_47.4 S5 ME5SA4	C803_47.4 S5 MX5SB4	153	C803_47.4 P160 BE160M4	C803_47.4 P160 BX160MB4	154
34	2912	1.3	43.5	33100	C803_43.5 S5 ME5SA4	C803_43.5 S5 MX5SB4	153	C803_43.5 P160 BE160M4	C803_43.5 P160 BX160MB4	154
34	2878	2.5	43.0	47000	C903_43.0 S5 ME5SA4	C903_43.0 S5 MX5SB4	156	C903_43.0 P160 BE160M4	C903_43.0 P160 BX160MB4	157
37	2638	2.7	39.4	46100	C903_39.4 S5 ME5SA4	C903_39.4 S5 MX5SB4	156	C903_39.4 P160 BE160M4	C903_39.4 P160 BX160MB4	157
38	2675	1.2	39.1	30900	C802_39.1 S5 ME5SA4	C802_39.1 S5 MX5SB4	153	C802_39.1 P160 BE160M4	C802_39.1 P160 BX160MB4	154
42	2401	2.2	35.1	45000	C902_35.1 S5 ME5SA4	C902_35.1 S5 MX5SB4	156	C902_35.1 P160 BE160M4	C902_35.1 P160 BX160MB4	157
47	2143	1.7	31.3	30000	C802_31.3 S5 ME5SA4	C802_31.3 S5 MX5SB4	153	C802_31.3 P160 BE160M4	C802_31.3 P160 BX160MB4	154
50	2013	2.9	29.4	43400	C902_29.4 S5 ME5SA4	C902_29.4 S5 MX5SB4	156	C902_29.4 P160 BE160M4	C902_29.4 P160 BX160MB4	157
53	1896	1.1	27.7	17800	C702_27.7 S5 ME5SA4	C702_27.7 S5 MX5SB4	150	C702_27.7 P160 BE160M4	C702_27.7 P160 BX160MB4	151
54	1859	3.0	27.2	42700	C902_27.2 S5 ME5SA4	C902_27.2 S5 MX5SB4	156	C902_27.2 P160 BE160M4	C902_27.2 P160 BX160MB4	157
57	1775	2.1	25.9	29200	C802_25.9 S5 ME5SA4	C802_25.9 S5 MX5SB4	153	C802_25.9 P160 BE160M4	C802_25.9 P160 BX160MB4	154
61	1638	2.2	24.0	28700	C802_24.0 S5 ME5SA4	C802_24.0 S5 MX5SB4	153	C802_24.0 P160 BE160M4	C802_24.0 P160 BX160MB4	154
64	1563	1.3	22.9	17600	C702_22.9 S5 ME5SA4	C702_22.9 S5 MX5SB4	150	C702_22.9 P160 BE160M4	C702_22.9 P160 BX160MB4	151
66	1522	2.4	22.2	28400	C802_22.2 S5 ME5SA4	C802_22.2 S5 MX5SB4	153	C802_22.2 P160 BE160M4	C802_22.2 P160 BX160MB4	154
72	1404	2.5	20.5	28000	C802_20.5 S5 ME5SA4	C802_20.5 S5 MX5SB4	153	C802_20.5 P160 BE160M4	C802_20.5 P160 BX160MB4	154

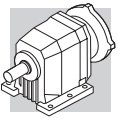


## 11 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
75	1341	1.0	19.6	10800	C612_19.6 S5 ME5SA4	C612_19.6 S5 MX5SB4	146	C612_19.6 P160 BE160M4	C612_19.6 P160 BX160MB4	147
76	1319	1.6	19.3	17300	C702_19.3 S5 ME5SA4	C702_19.3 S5 MX5SB4	150	C702_19.3 P160 BE160M4	C702_19.3 P160 BX160MB4	151
81	1235	3.0	18.1	27300	C802_18.1 S5 ME5SA4	C802_18.1 S5 MX5SB4	153	C802_18.1 P160 BE160M4	C802_18.1 P160 BX160MB4	154
83	1207	1.1	17.7	10700	C612_17.7 S5 ME5SA4	C612_17.7 S5 MX5SB4	146	C612_17.7 P160 BE160M4	C612_17.7 P160 BX160MB4	147
88	1143	1.8	16.7	16800	C702_16.7 S5 ME5SA4	C702_16.7 S5 MX5SB4	150	C702_16.7 P160 BE160M4	C702_16.7 P160 BX160MB4	151
88	1140	3.1	16.7	26900	C802_16.7 S5 ME5SA4	C802_16.7 S5 MX5SB4	153	C802_16.7 P160 BE160M4	C802_16.7 P160 BX160MB4	154
92	1090	1.2	15.9	10700	C612_15.9 S5 ME5SA4	C612_15.9 S5 MX5SB4	146	C612_15.9 P160 BE160M4	C612_15.9 P160 BX160MB4	147
96	1049	2.0	15.3	16800	C702_15.3 S5 ME5SA4	C702_15.3 S5 MX5SB4	150	C702_15.3 P160 BE160M4	C702_15.3 P160 BX160MB4	151
102	981	1.4	14.3	10500	C612_14.3 S5 ME5SA4	C612_14.3 S5 MX5SB4	146	C612_14.3 P160 BE160M4	C612_14.3 P160 BX160MB4	147
104	964	2.2	14.1	16400	C702_14.1 S5 ME5SA4	C702_14.1 S5 MX5SB4	150	C702_14.1 P160 BE160M4	C702_14.1 P160 BX160MB4	151
113	891	2.4	13.0	16400	C702_13.0 S5 ME5SA4	C702_13.0 S5 MX5SB4	150	C702_13.0 P160 BE160M4	C702_13.0 P160 BX160MB4	151
122	827	1.6	12.1	10300	C612_12.1 S5 ME5SA4	C612_12.1 S5 MX5SB4	146	C612_12.1 P160 BE160M4	C612_12.1 P160 BX160MB4	147
124	810	1.0	11.8	6810	C512_11.8 S5 ME5SA4	C512_11.8 S5 MX5SB4	142	C512_11.8 P160 BE160M4	C512_11.8 P160 BX160MB4	143
131	767	2.8	11.2	15800	C702_11.2 S5 ME5SA4	C702_11.2 S5 MX5SB4	150	C702_11.2 P160 BE160M4	C702_11.2 P160 BX160MB4	151
135	745	1.8	10.9	10100	C612_10.9 S5 ME5SA4	C612_10.9 S5 MX5SB4	146	C612_10.9 P160 BE160M4	C612_10.9 P160 BX160MB4	147
144	698	3.0	10.2	15700	C702_10.2 S5 ME5SA4	C702_10.2 S5 MX5SB4	150	C702_10.2 P160 BE160M4	C702_10.2 P160 BX160MB4	151
150	672	2.0	9.8	9910	C612_9.8 S5 ME5SA4	C612_9.8 S5 MX5SB4	146	C612_9.8 P160 BE160M4	C612_9.8 P160 BX160MB4	147
151	667	1.0	9.8	6690	C512_9.8 S5 ME5SA4	C512_9.8 S5 MX5SB4	142	C512_9.8 P160 BE160M4	C512_9.8 P160 BX160MB4	143
154	651	3.3	9.5	15400	C702_9.5 S5 ME5SA4	C702_9.5 S5 MX5SB4	150	C702_9.5 P160 BE160M4	C702_9.5 P160 BX160MB4	151
166	605	2.2	8.8	9690	C612_8.8 S5 ME5SA4	C612_8.8 S5 MX5SB4	146	C612_8.8 P160 BE160M4	C612_8.8 P160 BX160MB4	147
167	601	1.1	8.8	6640	C512_8.8 S5 ME5SA4	C512_8.8 S5 MX5SB4	142	C512_8.8 P160 BE160M4	C512_8.8 P160 BX160MB4	143
190	530	1.2	7.8	6510	C512_7.8 S5 ME5SA4	C512_7.8 S5 MX5SB4	142	C512_7.8 P160 BE160M4	C512_7.8 P160 BX160MB4	143
196	512	2.6	7.5	9390	C612_7.5 S5 ME5SA4	C612_7.5 S5 MX5SB4	146	C612_7.5 P160 BE160M4	C612_7.5 P160 BX160MB4	147
210	478	1.3	7.0	6430	C512_7.0 S5 ME5SA4	C512_7.0 S5 MX5SB4	142	C512_7.0 P160 BE160M4	C512_7.0 P160 BX160MB4	143
218	461	2.9	6.7	9150	C612_6.7 S5 ME5SA4	C612_6.7 S5 MX5SB4	146	C612_6.7 P160 BE160M4	C612_6.7 P160 BX160MB4	147
245	411	1.6	6.0	8670	C612_6.0 S5 ME5SA4	C612_6.0 S5 MX5SB4	146	C612_6.0 P160 BE160M4	C612_6.0 P160 BX160MB4	147
261	385	1.1	5.6	5880	C512_5.6 S5 ME5SA4	C512_5.6 S5 MX5SB4	142	C512_5.6 P160 BE160M4	C512_5.6 P160 BX160MB4	143
323	312	2.1	4.6	8160	C612_4.6 S5 ME5SA4	C612_4.6 S5 MX5SB4	146	C612_4.6 P160 BE160M4	C612_4.6 P160 BX160MB4	147
330	305	1.4	4.5	5660	C512_4.5 S5 ME5SA4	C512_4.5 S5 MX5SB4	142	C512_4.5 P160 BE160M4	C512_4.5 P160 BX160MB4	143
397	253	2.6	3.7	7760	C612_3.7 S5 ME5SA4	C612_3.7 S5 MX5SB4	146	C612_3.7 P160 BE160M4	C612_3.7 P160 BX160MB4	147
444	226	1.9	3.3	5340	C512_3.3 S5 ME5SA4	C512_3.3 S5 MX5SB4	142	C512_3.3 P160 BE160M4	C512_3.3 P160 BX160MB4	143
521	193	3.4	2.8	7240	C612_2.8 S5 ME5SA4	C612_2.8 S5 MX5SB4	146	C612_2.8 P160 BE160M4	C612_2.8 P160 BX160MB4	147
522	191	2.3	5.6	5140	C512_5.6 S5 ME5SA2		142	C512_5.6 P160 BE160MA2		143
559	180	2.2	2.6	5080	C512_2.6 S5 ME5SA4	C512_2.6 S5 MX5SB4	142	C512_2.6 P160 BE160M4	C512_2.6 P160 BX160MB4	143
660	151	2.9	4.5	4870	C512_4.5 S5 ME5SA2		142	C512_4.5 P160 BE160MA2		143

## 15 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
12.2	10984	1.1	120.5	83800	C1003_120.5 S5 ME5LA4	C1003_120.5 S5 MX5LA4	159	C1003_120.5 P160 BE160L4	C1003_120.5 P160 BX160LA4	160
13.1	10199	1.2	111.9	83300	C1003_111.9 S5 ME5LA4	C1003_111.9 S5 MX5LA4	159	C1003_111.9 P160 BE160L4	C1003_111.9 P160 BX160LA4	160
14.7	9096	1.3	99.8	82700	C1003_99.8 S5 ME5LA4	C1003_99.8 S5 MX5LA4	159	C1003_99.8 P160 BE160L4	C1003_99.8 P160 BX160LA4	160
15.9	8446	1.4	92.7	82400	C1003_92.7 S5 ME5LA4	C1003_92.7 S5 MX5LA4	159	C1003_92.7 P160 BE160L4	C1003_92.7 P160 BX160LA4	160
17.2	7798	1.5	85.6	81500	C1003_85.6 S5 ME5LA4	C1003_85.6 S5 MX5LA4	159	C1003_85.6 P160 BE160L4	C1003_85.6 P160 BX160LA4	160
18.1	7402	1.0	81.2	44300	C903_81.2 S5 ME5LA4	C903_81.2 S5 MX5LA4	156	C903_81.2 P160 BE160L4	C903_81.2 P160 BX160LA4	157
18.5	7241	1.7	79.4	81000	C1003_79.4 S5 ME5LA4	C1003_79.4 S5 MX5LA4	159	C1003_79.4 P160 BE160L4	C1003_79.4 P160 BX160LA4	160
19.7	6785	1.0	74.4	44800	C903_74.4 S5 ME5LA4	C903_74.4 S5 MX5LA4	156	C903_74.4 P160 BE160L4	C903_74.4 P160 BX160LA4	157
21.2	6328	1.9	69.4	79500	C1003_69.4 S5 ME5LA4	C1003_69.4 S5 MX5LA4	159	C1003_69.4 P160 BE160L4	C1003_69.4 P160 BX160LA4	160
22.8	5886	1.2	64.6	44500	C903_64.6 S5 ME5LA4	C903_64.6 S5 MX5LA4	156	C903_64.6 P160 BE160L4	C903_64.6 P160 BX160LA4	157
22.8	5876	2.0	64.5	78600	C1003_64.5 S5 ME5LA4	C1003_64.5 S5 MX5LA4	159	C1003_64.5 P160 BE160L4	C1003_64.5 P160 BX160LA4	160
24.8	5396	1.3	59.2	44400	C903_59.2 S5 ME5LA4	C903_59.2 S5 MX5LA4	156	C903_59.2 P160 BE160L4	C903_59.2 P160 BX160LA4	157
25.6	5227	2.3	57.4	77400	C1003_57.4 S5 ME5LA4	C1003_57.4 S5 MX5LA4	159	C1003_57.4 P160 BE160L4	C1003_57.4 P160 BX160LA4	160
26.8	5001	1.4	54.9	44300	C903_54.9 S5 ME5LA4	C903_54.9 S5 MX5LA4	156	C903_54.9 P160 BE160L4	C903_54.9 P160 BX160LA4	157
27.6	4854	2.5	53.3	76200	C1003_53.3 S5 ME5LA4	C1003_53.3 S5 MX5LA4	159	C1003_53.3 P160 BE160L4	C1003_53.3 P160 BX160LA4	160
29.2	4584	1.5	50.3	44100	C903_50.3 S5 ME5LA4	C903_50.3 S5 MX5LA4	156	C903_50.3 P160 BE160L4	C903_50.3 P160 BX160LA4	157

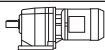




# 15 kW

n <sub>2</sub>	M <sub>2</sub>	S	i	R <sub>n2</sub>						
					min-1	Nm	N	IE2	IE3	IEC
32	4213	2.8	46.2	74500	C1003_46.2 S5 ME5LA4	C1003_46.2 S5 MX5LA4	159	C1003_46.2 P160 BE160L4	C1003_46.2 P160 BX160LA4	160
34	3964	1.0	43.5	30300	C803_43.5 S5 ME5LA4	C803_43.5 S5 MX5LA4	153	C803_43.5 P160 BE160L4	C803_43.5 P160 BX160LA4	154
34	3918	1.8	43.0	44100	C903_43.0 S5 ME5LA4	C903_43.0 S5 MX5LA4	156	C903_43.0 P160 BE160L4	C903_43.0 P160 BX160LA4	157
37	3591	2.0	39.4	43000	C903_39.4 S5 ME5LA4	C903_39.4 S5 MX5LA4	156	C903_39.4 P160 BE160L4	C903_39.4 P160 BX160LA4	157
38	3641	0.9	39.1	27300	C802_39.1 S5 ME5LA4	C802_39.1 S5 MX5LA4	153	C802_39.1 P160 BE160L4	C802_39.1 P160 BX160LA4	154
42	3268	1.7	35.1	42200	C902_35.1 S5 ME5LA4	C902_35.1 S5 MX5LA4	156	C902_35.1 P160 BE160L4	C902_35.1 P160 BX160LA4	157
47	2917	1.3	31.3	27500	C802_31.3 S5 ME5LA4	C802_31.3 S5 MX5LA4	153	C802_31.3 P160 BE160L4	C802_31.3 P160 BX160LA4	154
50	2740	2.2	29.4	41100	C902_29.4 S5 ME5LA4	C902_29.4 S5 MX5LA4	156	C902_29.4 P160 BE160L4	C902_29.4 P160 BX160LA4	157
54	2530	2.2	27.2	40700	C902_27.2 S5 ME5LA4	C902_27.2 S5 MX5LA4	156	C902_27.2 P160 BE160L4	C902_27.2 P160 BX160LA4	157
57	2416	1.5	25.9	27100	C802_25.9 S5 ME5LA4	C802_25.9 S5 MX5LA4	153	C802_25.9 P160 BE160L4	C802_25.9 P160 BX160LA4	154
59	2311	2.9	24.8	40000	C902_24.8 S5 ME5LA4	C902_24.8 S5 MX5LA4	156	C902_24.8 P160 BE160L4	C902_24.8 P160 BX160LA4	157
61	2230	1.6	24.0	26900	C802_24.0 S5 ME5LA4	C802_24.0 S5 MX5LA4	153	C802_24.0 P160 BE160L4	C802_24.0 P160 BX160LA4	154
64	2134	2.9	22.9	39500	C902_22.9 S5 ME5LA4	C902_22.9 S5 MX5LA4	156	C902_22.9 P160 BE160L4	C902_22.9 P160 BX160LA4	157
64	2128	1.0	22.9	15400	C702_22.9 S5 ME5LA4	C702_22.9 S5 MX5LA4	150	C702_22.9 P160 BE160L4	C702_22.9 P160 BX160LA4	151
66	2071	1.8	22.2	26600	C802_22.2 S5 ME5LA4	C802_22.2 S5 MX5LA4	153	C802_22.2 P160 BE160L4	C802_22.2 P160 BX160LA4	154
72	1912	1.9	20.5	26200	C802_20.5 S5 ME5LA4	C802_20.5 S5 MX5LA4	153	C802_20.5 P160 BE160L4	C802_20.5 P160 BX160LA4	154
73	1884	3.5	20.2	38500	C902_20.2 S5 ME5LA4	C902_20.2 S5 MX5LA4	156	C902_20.2 P160 BE160L4	C902_20.2 P160 BX160LA4	157
76	1795	1.2	19.3	15600	C702_19.3 S5 ME5LA4	C702_19.3 S5 MX5LA4	150	C702_19.3 P160 BE160L4	C702_19.3 P160 BX160LA4	151
81	1681	2.2	18.1	25800	C802_18.1 S5 ME5LA4	C802_18.1 S5 MX5LA4	153	C802_18.1 P160 BE160L4	C802_18.1 P160 BX160LA4	154
88	1555	1.3	16.7	15400	C702_16.7 S5 ME5LA4	C702_16.7 S5 MX5LA4	150	C702_16.7 P160 BE160L4	C702_16.7 P160 BX160LA4	151
88	1551	2.3	16.7	25500	C802_16.7 S5 ME5LA4	C802_16.7 S5 MX5LA4	153	C802_16.7 P160 BE160L4	C802_16.7 P160 BX160LA4	154
92	1483	0.9	15.9	9350	C612_15.9 S5 ME5LA4	C612_15.9 S5 MX5LA4	146	C612_15.9 P160 BE160L4	C612_15.9 P160 BX160LA4	147
96	1428	1.5	15.3	15400	C702_15.3 S5 ME5LA4	C702_15.3 S5 MX5LA4	150	C702_15.3 P160 BE160L4	C702_15.3 P160 BX160LA4	151
99	1388	2.7	14.9	25000	C802_14.9 S5 ME5LA4	C802_14.9 S5 MX5LA4	153	C802_14.9 P160 BE160L4	C802_14.9 P160 BX160LA4	154
102	1336	1.0	14.3	9280	C612_14.3 S5 ME5LA4	C612_14.3 S5 MX5LA4	146	C612_14.3 P160 BE160L4	C612_14.3 P160 BX160LA4	147
104	1312	1.6	14.1	15300	C702_14.1 S5 ME5LA4	C702_14.1 S5 MX5LA4	150	C702_14.1 P160 BE160L4	C702_14.1 P160 BX160LA4	151
107	1281	2.7	13.8	25000	C802_13.8 S5 ME5LA4	C802_13.8 S5 MX5LA4	153	C802_13.8 P160 BE160L4	C802_13.8 P160 BX160LA4	154
113	1213	1.7	13.0	15200	C702_13.0 S5 ME5LA4	C702_13.0 S5 MX5LA4	150	C702_13.0 P160 BE160L4	C702_13.0 P160 BX160LA4	151
122	1126	1.2	12.1	9270	C612_12.1 S5 ME5LA4	C612_12.1 S5 MX5LA4	146	C612_12.1 P160 BE160L4	C612_12.1 P160 BX160LA4	147
131	1044	2.1	11.2	14700	C702_11.2 S5 ME5LA4	C702_11.2 S5 MX5LA4	150	C702_11.2 P160 BE160L4	C702_11.2 P160 BX160LA4	151
135	1014	1.3	10.9	9140	C612_10.9 S5 ME5LA4	C612_10.9 S5 MX5LA4	146	C612_10.9 P160 BE160L4	C612_10.9 P160 BX160LA4	147
144	950	2.2	10.2	14600	C702_10.2 S5 ME5LA4	C702_10.2 S5 MX5LA4	150	C702_10.2 P160 BE160L4	C702_10.2 P160 BX160LA4	151
150	914	1.5	9.8	9090	C612_9.8 S5 ME5LA4	C612_9.8 S5 MX5LA4	146	C612_9.8 P160 BE160L4	C612_9.8 P160 BX160LA4	147
154	887	2.4	9.5	14400	C702_9.5 S5 ME5LA4	C702_9.5 S5 MX5LA4	150	C702_9.5 P160 BE160L4	C702_9.5 P160 BX160LA4	151
166	823	1.6	8.8	8930	C612_8.8 S5 ME5LA4	C612_8.8 S5 MX5LA4	146	C612_8.8 P160 BE160L4	C612_8.8 P160 BX160LA4	147
184	745	2.8	8.0	14200				C702_8.0 P160 BE160L4	C702_8.0 P160 BX160LA4	151
196	697	1.9	7.5	8760	C612_7.5 S5 ME5LA4	C612_7.5 S5 MX5LA4	146	C612_7.5 P160 BE160L4	C612_7.5 P160 BX160LA4	147
197	695	3.0	7.5	14000	C702_7.5 S5 ME5LA4	C702_7.5 S5 MX5LA4	150	C702_7.5 P160 BE160L4	C702_7.5 P160 BX160LA4	151
210	650	1.0	7.0	5800	C512_7.0 S5 ME5LA4	C512_7.0 S5 MX5LA4	142	C512_7.0 P160 BE160L4	C512_7.0 P160 BX160LA4	143
218	628	2.2	6.7	8570	C612_6.7 S5 ME5LA4	C612_6.7 S5 MX5LA4	146	C612_6.7 P160 BE160L4	C612_6.7 P160 BX160LA4	147
224	608	1.2	13.1	5760	C512_13.1 S5 ME5SB2		142	C512_13.1 P160 BE160MB2		143
243	560	2.4	12.1	8430	C612_12.1 S5 ME5SB2		146	C612_12.1 P160 BE160MB2		147
245	559	1.2	6.0	8130	C612_6.0 S5 ME5LA4	C612_6.0 S5 MX5LA4	146	C612_6.0 P160 BE160L4	C612_6.0 P160 BX160LA4	147
248	548	1.4	11.8	5720	C512_11.8 S5 ME5SB2		142	C512_11.8 P160 BE160MB2		143
270	504	2.7	10.9	8230	C612_10.9 S5 ME5SB2		146	C612_10.9 P160 BE160MB2		147
299	454	3.0	9.8	8090	C612_9.8 S5 ME5SB2		146	C612_9.8 P160 BE160MB2		147
301	451	1.5	9.8	5570	C512_9.8 S5 ME5SB2		142	C512_9.8 P160 BE160MB2		143
323	424	1.6	4.6	7690	C612_4.6 S5 ME5LA4	C612_4.6 S5 MX5LA4	146	C612_4.6 P160 BE160L4	C612_4.6 P160 BX160LA4	147
330	415	1.0	4.5	5250	C512_4.5 S5 ME5LA4	C512_4.5 S5 MX5LA4	142	C512_4.5 P160 BE160L4	C512_4.5 P160 BX160LA4	143
333	409	3.3	8.8	7880	C612_8.8 S5 ME5SB2		146	C612_8.8 P160 BE160MB2		147
334	407	1.7	8.8	5490	C512_8.8 S5 ME5SB2		142	C512_8.8 P160 BE160MB2		143
379	359	1.8	7.8	5370	C512_7.8 S5 ME5SB2		142	C512_7.8 P160 BE160MB2		143
397	344	1.9	3.7	7370	C612_3.7 S5 ME5LA4	C612_3.7 S5 MX5LA4	146	C612_3.7 P160 BE160L4	C612_3.7 P160 BX160LA4	147
421	323	1.9	7.0	5280	C512_7.0 S5 ME5SB2		142	C512_7.0 P160 BE160MB2		143
444	308	1.4	3.3	5080	C512_3.3 S5 ME5LA4	C512_3.3 S5 MX5LA4	142	C512_3.3 P160 BE160L4	C512_3.3 P160 BX160LA4	143
490	278	2.4	6.0	7030	C612_6.0 S5 ME5SB2		146	C612_6.0 P160 BE160MB2		147
521	263	2.5	2.8	6940	C612_2.8 S5 ME5LA4	C612_2.8 S5 MX5LA4	146	C612_2.8 P160 BE160L4	C612_2.8 P160 BX160LA4	147
522	261	1.7	5.6	4840	C512_5.6 S5 ME5SB2		142	C512_5.6 P160 BE160MB2		143
559	245	1.6	2.6	4940	C512_2.6 S5 ME5LA4	C512_2.6 S5 MX5LA4	142	C512_2.6 P160 BE160L4	C512_2.6 P160 BX160LA4	143
645	211	3.2	4.6	6580	C612_4.6 S5 ME5SB2		146	C612_4.6 P160 BE160MB2		147
660	206	2.1	4.5	4630	C512_4.5 S5 ME5SB2		142	C512_4.5 P160 BE160MB2		143
889	153	2.7	3.3	4330	C512_3.3 S5 ME5SB2		142	C512_3.3 P160 BE160MB2		143
1118	122	3.3	2.6	4100	C512_2.6 S5 ME5SB2		142	C512_2.6 P160 BE160MB2		143



## 18.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N					
					IE2	IE3		IE2	IE3
13.1	12489	1.0	111.9	76600			C1003_111.9 P180 BE180M4	C1003_111.9 P180 BX180M4	160
14.7	11138	1.1	99.8	76700			C1003_99.8 P180 BE180M4	C1003_99.8 P180 BX180M4	160
15.9	10342	1.2	92.7	76700			C1003_92.7 P180 BE180M4	C1003_92.7 P180 BX180M4	160
17.2	9548	1.3	85.6	76400			C1003_85.6 P180 BE180M4	C1003_85.6 P180 BX180M4	160
18.5	8866	1.4	79.4	76100			C1003_79.4 P180 BE180M4	C1003_79.4 P180 BX180M4	160
21.2	7748	1.5	69.4	75400			C1003_69.4 P180 BE180M4	C1003_69.4 P180 BX180M4	160
22.8	7207	1.0	64.6	40300			C903_64.6 P180 BE180M4	C903_64.6 P180 BX180M4	157
22.8	7195	1.7	64.5	74800			C1003_64.5 P180 BE180M4	C1003_64.5 P180 BX180M4	160
24.8	6607	1.1	59.2	40500			C903_59.2 P180 BE180M4	C903_59.2 P180 BX180M4	157
25.6	6400	1.9	57.4	73700			C1003_57.4 P180 BE180M4	C1003_57.4 P180 BX180M4	160
26.8	6124	1.2	54.9	40700			C903_54.9 P180 BE180M4	C903_54.9 P180 BX180M4	157
27.6	5943	2.0	53.3	73100			C1003_53.3 P180 BE180M4	C1003_53.3 P180 BX180M4	160
29.2	5614	1.3	50.3	40700			C903_50.3 P180 BE180M4	C903_50.3 P180 BX180M4	157
32	5159	2.3	46.2	71600			C1003_46.2 P180 BE180M4	C1003_46.2 P180 BX180M4	160
34	4797	1.5	43.0	40600			C903_43.0 P180 BE180M4	C903_43.0 P180 BX180M4	157
34	4790	2.5	42.9	70800			C1003_42.9 P180 BE180M4	C1003_42.9 P180 BX180M4	160
37	4397	1.6	39.4	40500			C903_39.4 P180 BE180M4	C903_39.4 P180 BX180M4	157
40	4122	2.9	36.9	69000			C1003_36.9 P180 BE180M4	C1003_36.9 P180 BX180M4	160
42	4001	1.3	35.1	39800			C902_35.1 P180 BE180M4	C902_35.1 P180 BX180M4	157
43	3828	3.1	34.3	68100			C1003_34.3 P180 BE180M4	C1003_34.3 P180 BX180M4	160
47	3572	1.0	31.3	25000			C802_31.3 P180 BE180M4	C802_31.3 P180 BX180M4	154
50	3298	2.8	29.6	65800			C1002_29.6 P180 BE180M4	C1002_29.6 P180 BX180M4	160
50	3356	1.8	29.4	39100			C902_29.4 P180 BE180M4	C902_29.4 P180 BX180M4	157
54	3098	1.8	27.2	38800			C902_27.2 P180 BE180M4	C902_27.2 P180 BX180M4	157
57	2958	1.3	25.9	25300			C802_25.9 P180 BE180M4	C802_25.9 P180 BX180M4	154
59	2830	2.3	24.8	38400			C902_24.8 P180 BE180M4	C902_24.8 P180 BX180M4	157
61	2731	1.3	24.0	25000			C802_24.0 P180 BE180M4	C802_24.0 P180 BX180M4	154
64	2613	2.4	22.9	37900			C902_22.9 P180 BE180M4	C902_22.9 P180 BX180M4	157
66	2536	1.5	22.2	25100			C802_22.2 P180 BE180M4	C802_22.2 P180 BX180M4	154
72	2341	1.5	20.5	24900			C802_20.5 P180 BE180M4	C802_20.5 P180 BX180M4	154
73	2307	2.9	20.2	37200			C902_20.2 P180 BE180M4	C902_20.2 P180 BX180M4	157
76	2198	1.0	19.3	14100			C702_19.3 P180 BE180M4	C702_19.3 P180 BX180M4	151
79	2130	2.9	18.7	36700			C902_18.7 P180 BE180M4	C902_18.7 P180 BX180M4	157
81	2058	1.8	18.1	24700			C802_18.1 P180 BE180M4	C802_18.1 P180 BX180M4	154
85	1973	3.3	17.3	36200			C902_17.3 P180 BE180M4	C902_17.3 P180 BX180M4	157
88	1904	1.1	16.7	13800			C702_16.7 P180 BE180M4	C702_16.7 P180 BX180M4	151
88	1900	1.8	16.7	24400			C802_16.7 P180 BE180M4	C802_16.7 P180 BX180M4	154
96	1748	1.2	15.3	13800			C702_15.3 P180 BE180M4	C702_15.3 P180 BX180M4	151
99	1700	2.2	14.9	24000			C802_14.9 P180 BE180M4	C802_14.9 P180 BX180M4	154
104	1607	1.3	14.1	13900			C702_14.1 P180 BE180M4	C702_14.1 P180 BX180M4	151
107	1569	2.2	13.8	23700			C802_13.8 P180 BE180M4	C802_13.8 P180 BX180M4	154
113	1485	1.4	13.0	13800			C702_13.0 P180 BE180M4	C702_13.0 P180 BX180M4	151
122	1378	1.0	12.1	8420			C612_12.1 P180 BE180M4	C612_12.1 P180 BX180M4	147
122	1370	2.7	12.0	23500			C802_12.0 P180 BE180M4	C802_12.0 P180 BX180M4	154
131	1278	1.7	11.2	13800			C702_11.2 P180 BE180M4	C702_11.2 P180 BX180M4	151
133	1265	2.8	11.1	22900			C802_11.1 P180 BE180M4	C802_11.1 P180 BX180M4	154
135	1241	1.1	10.9	8360			C612_10.9 P180 BE180M4	C612_10.9 P180 BX180M4	147
144	1164	1.8	10.2	13700			C702_10.2 P180 BE180M4	C702_10.2 P180 BX180M4	151
150	1119	1.2	9.8	8400			C612_9.8 P180 BE180M4	C612_9.8 P180 BX180M4	147
154	1086	2.0	9.5	13600			C702_9.5 P180 BE180M4	C702_9.5 P180 BX180M4	151
166	1008	1.3	8.8	8300			C612_8.8 P180 BE180M4	C612_8.8 P180 BX180M4	147
184	912	2.3	8.0	13500			C702_8.0 P180 BE180M4	C702_8.0 P180 BX180M4	151
196	853	1.6	7.5	8230			C612_7.5 P180 BE180M4	C612_7.5 P180 BX180M4	147
197	850	2.4	7.5	13400			C702_7.5 P180 BE180M4	C702_7.5 P180 BX180M4	151
218	768	1.8	6.7	8090			C612_6.7 P180 BE180M4	C612_6.7 P180 BX180M4	147
235	713	2.7	6.3	13300			C702_6.3 P180 BE180M4	C702_6.3 P180 BX180M4	151
245	684	1.0	6.0	7550			C612_6.0 P180 BE180M4	C612_6.0 P180 BX180M4	147



## 18.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N					
					IE2	IE3	IE2	IE3	
251	667	2.8	5.9	13200			C702_5.9 P180 BE180M4	C702_5.9 P180 BX180M4	151
270	621	2.2	10.9	7840	C612_10.9 S5 ME5LA2	146	C612_10.9 P160 BE160L2		147
300	560	2.4	9.8	7740	C612_9.8 S5 ME5LA2	146	C612_9.8 P160 BE160L2		147
302	556	1.2	9.8	5190	C512_9.8 S5 ME5LA2	142	C512_9.8 P160 BE160L2		143
322	521	3.3	4.6	13000			C702_4.6 P180 BE180M4	C702_4.6 P180 BX180M4	151
323	519	1.3	4.6	7300			C612_4.6 P180 BE180M4	C612_4.6 P180 BX180M4	147
333	504	2.7	8.8	7570	C612_8.8 S5 ME5LA2	146	C612_8.8 P160 BE160L2		147
335	501	1.4	8.8	5160	C512_8.8 S5 ME5LA2	142	C512_8.8 P160 BE160L2		143
380	442	1.4	7.8	5070	C512_7.8 S5 ME5LA2	142	C512_7.8 P160 BE160L2		143
393	427	3.2	7.5	7350	C612_7.5 S5 ME5LA2	146	C612_7.5 P160 BE160L2		147
397	422	1.6	3.7	7060			C612_3.7 P180 BE180M4	C612_3.7 P180 BX180M4	147
422	398	1.6	7.0	5010	C512_7.0 S5 ME5LA2	142	C512_7.0 P160 BE160L2		143
437	384	3.5	6.7	7170	C612_6.7 S5 ME5LA2	146	C612_6.7 P160 BE160L2		147
444	377	1.1	3.3	4750			C512_3.3 P180 BE180M4	C512_3.3 P180 BX180M4	143
491	342	1.9	6.0	6780	C612_6 S5 ME5LA2	146	C612_6.0 P160 BE160L2		147
521	321	2.1	2.8	6700			C612_2.8 P180 BE180M4		147
523	321	1.4	5.6	4580	C512_5.6 S5 ME5LA2	142	C512_5.6 P160 BE160L2		143
559	300	1.3	2.6	4600			C512_2.6 P180 BE180M4	C512_2.6 P180 BX180M4	143
646	260	2.6	4.6	6390	C612_4.6 S5 ME5LA2	146	C612_4.6 P160 BE160L2		147
661	254	1.7	4.5	4420	C512_4.5 S5 ME5LA2	142	C512_4.5 P160 BE160L2		143
796	211	3.2	3.7	6080	C612_3.7 S5 ME5LA2	146	C612_3.7 P160 BE160L2		147
890	188	2.2	3.3	4180	C512_3.3 S5 ME5LA2	142	C512_3.3 P160 BE160L2		143
1120	150	2.7	2.6	3980	C512_2.6 S5 ME5LA2	142	C512_2.6 P160 BE160L2		143

## 22 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N					
					IE2	IE3	IE2	IE3	
14.7	13273	0.9	99.8	70600			C1003_99.8 P180 BE180L4	C1003_99.8 P180 BX180L4	160
15.9	12325	1.0	92.7	70900			C1003_92.7 P180 BE180L4	C1003_92.7 P180 BX180L4	160
17.2	11378	1.1	85.6	71100			C1003_85.6 P180 BE180L4	C1003_85.6 P180 BX180L4	160
18.5	10565	1.1	79.4	71200			C1003_79.4 P180 BE180L4	C1003_79.4 P180 BX180L4	160
21.2	9233	1.3	69.4	71000			C1003_69.4 P180 BE180L4	C1003_69.4 P180 BX180L4	160
22.8	8574	1.4	64.5	70800			C1003_64.5 P180 BE180L4	C1003_64.5 P180 BX180L4	160
24.8	7873	0.9	59.2	36700			C903_59.2 P180 BE180L4	C903_59.2 P180 BX180L4	157
25.6	7627	1.6	57.4	70300			C1003_57.4 P180 BE180L4	C1003_57.4 P180 BX180L4	160
26.8	7298	1.0	54.9	36000			C903_54.9 P180 BE180L4	C903_54.9 P180 BX180L4	157
27.6	7082	1.7	53.3	69800			C1003_53.3 P180 BE180L4	C1003_53.3 P180 BX180L4	160
29.2	6690	1.1	50.3	37400			C903_50.3 P180 BE180L4	C903_50.3 P180 BX180L4	157
32	6147	2.0	46.2	68800			C1003_46.2 P180 BE180L4	C1003_46.2 P180 BX180L4	160
34	5716	1.3	43.0	37500			C903_43.0 P180 BE180L4	C903_43.0 P180 BX180L4	157
34	5708	2.1	42.9	68100			C1003_42.9 P180 BE180L4	C1003_42.9 P180 BX180L4	160
37	5240	1.4	39.4	37500			C903_39.4 P180 BE180L4	C903_39.4 P180 BX180L4	157
40	4912	2.4	36.9	66700			C1003_36.9 P180 BE180L4	C1003_36.9 P180 BX180L4	160
42	4768	1.1	35.1	37400			C902_35.1 P180 BE180L4	C902_35.1 P180 BX180L4	157
43	4561	2.6	34.3	65900			C1003_34.3 P180 BE180L4	C1003_34.3 P180 BX180L4	160
50	3931	2.3	29.6	64100			C1002_29.6 P180 BE180L4	C1002_29.6 P180 BX180L4	160
50	3999	1.5	29.4	37100			C902_29.4 P180 BE180L4	C902_29.4 P180 BX180L4	157
54	3691	1.5	27.2	36900			C902_27.2 P180 BE180L4	C902_27.2 P180 BX180L4	157
57	3525	1.0	25.9	23000			C802_25.9 P180 BE180L4	C802_25.9 P180 BX180L4	154
59	3373	2.0	24.8	36600			C902_24.8 P180 BE180L4	C902_24.8 P180 BX180L4	157
61	3254	1.1	24.0	23700			C802_24.0 P180 BE180L4	C802_24.0 P180 BX180L4	154
64	3113	2.0	22.9	36400			C902_22.9 P180 BE180L4	C902_22.9 P180 BX180L4	157
66	3022	1.2	22.2	23500			C802_22.2 P180 BE180L4	C802_22.2 P180 BX180L4	154
72	2789	1.3	20.5	23400			C802_20.5 P180 BE180L4	C802_20.5 P180 BX180L4	154
73	2749	2.4	20.2	35800			C902_20.2 P180 BE180L4	C902_20.2 P180 BX180L4	157
79	2538	2.4	18.7	35400			C902_18.7 P180 BE180L4	C902_18.7 P180 BX180L4	157
81	2452	1.5	18.1	23300			C802_18.1 P180 BE180L4	C802_18.1 P180 BX180L4	154





## 22 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N					
					IE2	IE3	IE2	IE3	
85	2352	2.8	17.3	34900			C902_17.3 P180 BE180L4	C902_17.3 P180 BX180L4	157
88	2269	0.9	16.7	12400			C702_16.7 P180 BE180L4	C702_16.7 P180 BX180L4	151
88	2264	1.5	16.7	23100			C802_16.7 P180 BE180L4	C802_16.7 P180 BX180L4	154
92	2171	2.9	16.0	34600			C902_16.0 P180 BE180L4	C902_16.0 P180 BX180L4	157
96	2083	1.0	15.3	12400			C702_15.3 P180 BE180L4	C702_15.3 P180 BX180L4	151
99	2026	1.8	14.9	22900			C802_14.9 P180 BE180L4	C802_14.9 P180 BX180L4	154
104	1915	1.1	14.1	12700			C702_14.1 P180 BE180L4	C702_14.1 P180 BX180L4	151
106	1882	3.2	13.9	33700			C902_13.9 P180 BE180L4	C902_13.9 P180 BX180L4	157
107	1870	1.9	13.8	22700			C802_13.8 P180 BE180L4	C802_13.8 P180 BX180L4	154
113	1770	1.2	13.0	12700			C702_13.0 P180 BE180L4	C702_13.0 P180 BX180L4	151
122	1633	2.3	12.0	22500			C802_12.0 P180 BE180L4	C802_12.0 P180 BX180L4	154
131	1523	1.4	11.2	12900			C702_11.2 P180 BE180L4	C702_11.2 P180 BX180L4	151
133	1507	2.3	11.1	22100			C802_11.1 P180 BE180L4	C802_11.1 P180 BX180L4	154
135	1479	0.9	10.9	7580			C612_10.9 P180 BE180L4	C612_10.9 P180 BX180L4	147
144	1387	1.5	10.2	12800			C702_10.2 P180 BE180L4	C702_10.2 P180 BX180L4	151
150	1334	1.0	9.8	7710			C612_9.8 P180 BE180L4	C612_9.8 P180 BX180L4	147
153	1305	2.8	9.6	21900			C802_9.6 P180 BE180L4	C802_9.6 P180 BX180L4	154
154	1294	1.7	9.5	12800			C702_9.5 P180 BE180L4	C702_9.5 P180 BX180L4	151
166	1204	2.9	8.9	21300			C802_8.9 P180 BE180L4	C802_8.9 P180 BX180L4	154
166	1201	1.1	8.8	7660			C612_8.8 P180 BE180L4	C612_8.8 P180 BX180L4	147
184	1087	1.9	8.0	12700			C702_8.0 P180 BE180L4	C702_8.0 P180 BX180L4	151
196	1017	1.3	7.5	7690			C612_7.5 P180 BE180L4	C612_7.5 P180 BX180L4	147
197	1013	2.0	7.5	12700			C702_7.5 P180 BE180L4	C702_7.5 P180 BX180L4	151
218	916	1.5	6.7	7600			C612_6.7 P180 BE180L4	C612_6.7 P180 BX180L4	147
235	850	2.3	6.3	12500			C702_6.3 P180 BE180L4	C702_6.3 P180 BX180L4	151
251	795	2.4	5.9	12300			C702_5.9 P180 BE180L4	C702_5.9 P180 BX180L4	151
322	621	2.7	4.6	11900			C702_4.6 P180 BE180L4	C702_4.6 P180 BX180L4	151
323	619	1.1	4.6	6910			C612_4.6 P180 BE180L4	C612_4.6 P180 BX180L4	147
397	503	1.3	3.7	6740			C612_3.7 P180 BE180L4	C612_3.7 P180 BX180L4	147
444	449	0.9	3.3	4350			C512_3.3 P180 BE180L4	C512_3.3 P180 BX180L4	143
521	383	1.7	2.8	6450			C612_2.8 P180 BE180L4	C612_2.8 P180 BX180L4	147
559	357	1.1	2.6	4290			C512_2.6 P180 BE180L4	C512_2.6 P180 BX180L4	143

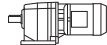



## 30 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N					
					IE...	IE...	IE...	IE...	
21.2	12584	1.0	69.4	61300			C1003_69.4 P200 IEC200L4		160
25.6	10395	1.2	57.4	62200			C1003_57.4 P200 IEC200L4		160
32	8379	1.4	46.2	62300			C1003_46.2 P200 IEC200L4		160
37	7142	1.0	39.4	31900			C903_39.4 P200 IEC200L4		157
50	5472	1.7	29.6	59800			C1002_29.6 P200 IEC200L4		160
50	5450	1.1	29.4	32600			C902_29.4 P200 IEC200L4		157
64	4243	1.5	22.9	32900			C902_22.9 P200 IEC200L4		157
66	4119	2.4	22.2	57700			C1002_22.2 P200 IEC200L4		160
79	3459	1.8	18.7	32600			C902_18.7 P200 IEC200L4		157
79	3456	3.1	18.7	56000			C1002_18.7 P200 IEC200L4		160
99	2761	1.3	14.9	20600			C802_14.9 P200 IEC200L4		154
106	2566	2.4	13.9	31500			C902_13.9 P200 IEC200L4		157
122	2225	1.7	12.0	20500			C802_12.0 P200 IEC200L4		154
131	2079	2.7	11.2	30600			C902_11.2 P200 IEC200L4		157
153	1778	2.1	9.6	20100			C802_9.6 P200 IEC200L4		154
154	1763	1.2	9.5	11000			C702_9.5 P200 IEC200L4		151
184	1482	1.4	8.0	11600			C702_8.0 P200 IEC200L4		151
193	1412	2.4	7.6	19500			C802_7.6 P200 IEC200L4		154
209	1303	2.6	7.0	19300			C802_7.0 P200 IEC200L4		154
235	1158	1.7	6.3	11500			C702_6.3 P200 IEC200L4		151
241	1131	2.8	6.1	18900			C802_6.1 P200 IEC200L4		154
261	1044	3.0	5.6	18600			C802_5.6 P200 IEC200L4		154
322	846	2.0	4.6	11000			C702_4.6 P200 IEC200L4		151





The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.







## 37 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE...		 IEC IE...	
25.8	12734	0.9	57.4	55300			C1003_57.4 P225 IEC225S4	160
32	10264	1.2	46.2	56600			C1003_46.2 P225 IEC225S4	160
40	8201	1.4	36.9	57000			C1003_36.9 P225 IEC225S4	160
60	5631	1.2	24.8	29500			C902_24.8 P225 IEC225S4	157
61	5467	2.0	24.1	55200			C1002_24.1 P225 IEC225S4	160
79	4237	1.5	18.7	30100			C902_18.7 P225 IEC225S4	157
79	4234	2.5	18.7	53600			C1002_18.7 P225 IEC225S4	160
89	3779	0.9	16.7	18500			C802_16.7 P225 IEC225S4	154
107	3143	1.9	13.9	29700			C902_13.9 P225 IEC225S4	157
108	3122	1.1	13.8	18800			C802_13.8 P225 IEC225S4	154
123	2726	1.4	12.0	18800			C802_12.0 P225 IEC225S4	154
132	2546	2.2	11.2	29100			C902_11.2 P225 IEC225S4	157
154	2178	1.7	9.6	18800			C802_9.6 P225 IEC225S4	154
164	2046	2.5	9.0	28300			C902_9.0 P225 IEC225S4	157
194	1730	2.0	7.6	18500			C802_7.6 P225 IEC225S4	154
202	1661	2.9	7.3	27400			C902_7.3 P225 IEC225S4	157
242	1386	2.3	6.1	18000			C802_6.1 P225 IEC225S4	154
264	1271	3.5	5.6	26100			C902_5.6 P225 IEC225S4	157
286	1173	3.7	5.2	25700			C902_5.2 P225 IEC225S4	157

## 45 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE...		 IEC IE...	
32	12483	1.0	46.2	50200			C1003_46.2 P225 IEC225M4	160
40	9974	1.2	36.9	51900			C1003_36.9 P225 IEC225M4	160
50	8153	1.1	29.6	51900			C1002_29.6 P225 IEC225M4	160
65	6322	1.0	22.9	26400			C902_22.9 P225 IEC225M4	157
67	6137	1.6	22.2	51700			C1002_22.2 P225 IEC225M4	160
79	5153	1.2	18.7	27200			C902_18.7 P225 IEC225M4	157
79	5149	2.1	18.7	51000			C1002_18.7 P225 IEC225M4	160
107	3822	1.6	13.9	27600			C902_13.9 P225 IEC225M4	157
108	3797	0.9	13.8	16700			C802_13.8 P225 IEC225M4	154
123	3315	1.1	12.0	17000			C802_12.0 P225 IEC225M4	154
132	3097	1.8	11.2	27400			C902_11.2 P225 IEC225M4	157
154	2649	1.4	9.6	17300			C802_9.6 P225 IEC225M4	154
164	2488	2.1	9.0	26900			C902_9.0 P225 IEC225M4	157
194	2104	1.6	7.6	17300			C802_7.6 P225 IEC225M4	154
202	2020	2.4	7.3	26300			C902_7.3 P225 IEC225M4	157
262	1556	2.0	5.6	17000			C802_5.6 P225 IEC225M4	154
264	1546	2.8	5.6	25200			C902_5.6 P225 IEC225M4	157
279	1464	2.9	5.2	25200			C902_5.2 P225 IEC225M4	157

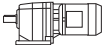

## 55 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE...		 IEC IE...	
40	12191	1.0	36.9	45400			C1003_36.9 P250 IEC250M4	160
50	9965	0.9	29.6	46700			C1002_29.6 P250 IEC250M4	160
61	8126	1.3	24.1	47500			C1002_24.1 P250 IEC250M4	160
79	6298	1.0	18.7	22200			C902_18.7 P250 IEC250M4	157
79	6294	1.7	18.7	47700			C1002_18.7 P250 IEC250M4	160
107	4672	1.3	13.9	24900			C902_13.9 P250 IEC250M4	157
110	4549	2.1	13.5	46500			C1002_13.5 P250 IEC250M4	160
135	3686	2.4	10.9	45400			C1002_10.9 P250 IEC250M4	160
164	3050	2.7	9.0	44100			C1002_9.0 P250 IEC250M4	160
164	3041	1.7	9.0	25200			C902_9.0 P250 IEC250M4	157
202	2468	2.0	7.3	24900			C902_7.3 P250 IEC250M4	157
209	2383	3.2	7.1	42300			C1002_7.1 P250 IEC250M4	160
264	1889	2.3	5.6	24200			C902_5.6 P250 IEC250M4	157
286	1744	2.5	5.2	24000			C902_5.2 P250 IEC250M4	157



The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.



## 75 kW

<b>n<sub>2</sub></b> min <sup>-1</sup>	<b>M<sub>2</sub></b> Nm	<b>S</b>	<b>i</b>	<b>R<sub>n2</sub></b> N	 IE...	 IEC... IE...
62	11044	1.0	24.1	38100		C1002_24.1 P280 IEC280S4 163
67	10194	1.0	22.2	40000		C1002_22.2 P280 IEC280S4 163
73	9266	1.2	20.2	40500		C1002_20.2 P280 IEC280S4 163
80	8553	1.3	18.7	41100		C1002_18.7 P280 IEC280S4 163
90	7552	1.3	16.5	41400		C1002_16.5 P280 IEC280S4 163
98	6971	1.4	15.2	41800		C1002_15.2 P280 IEC280S4 163
110	6182	1.5	13.5	41700		C1002_13.5 P280 IEC280S4 163
119	5707	1.6	12.5	41800		C1002_12.5 P280 IEC280S4 163
136	5010	1.8	10.9	41500		C1002_10.9 P280 IEC280S4 163
147	4624	1.9	10.1	41400		C1002_10.1 P280 IEC280S4 163
164	4146	2.0	9.0	40900		C1002_9.0 P280 IEC280S4 163
178	3827	2.1	8.4	40600		C1002_8.4 P280 IEC280S4 163
210	3238	2.4	7.1	39700		C1002_7.1 P280 IEC280S4 163
228	2989	2.5	6.5	39300		C1002_6.5 P280 IEC280S4 163
278	2444	2.8	5.3	38100		C1002_5.3 P280 IEC280S4 163
302	2256	3.0	4.9	37600		C1002_4.9 P280 IEC280S4 163

## 90 kW

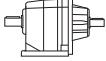

<b>n<sub>2</sub></b> min <sup>-1</sup>	<b>M<sub>2</sub></b> Nm	<b>S</b>	<b>i</b>	<b>R<sub>n2</sub></b> N	 IE...	 IEC... IE...
73	11119	1.0	20.2	30600		C1002_20.2 P280 IEC280M4 163
80	10264	1.0	18.7	35500		C1002_18.7 P280 IEC280M4 163
90	9062	1.1	16.5	37100		C1002_16.5 P280 IEC280M4 163
98	8365	1.2	15.2	37800		C1002_15.2 P280 IEC280M4 160
110	7419	1.3	13.5	38100		C1002_13.5 P280 IEC280M4 160
119	6848	1.4	12.5	38500		C1002_12.5 P280 IEC280M4 163
136	6012	1.5	10.9	38600		C1002_10.9 P280 IEC280M4 160
147	5549	1.6	10.1	38700		C1002_10.1 P280 IEC280M4 163
164	4975	1.7	9.0	38500		C1002_9.0 P280 IEC280M4 160
178	4592	1.8	8.4	38400		C1002_8.4 P280 IEC280M4 163
210	3886	2.0	7.1	37800		C1002_7.1 P280 IEC280M4 160
228	3587	2.1	6.5	37600		C1002_6.5 P280 IEC280M4 157
278	2933	2.4	5.3	36600		C1002_5.3 P280 IEC280M4 157
302	2707	2.5	4.9	36300		C1002_4.9 P280 IEC280M4 154

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.



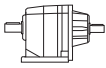

**C 12**

**100 Nm**

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 12 2_2.8	2.8	1012	30	3.3	750	600	506	37	2.1	990	790	125
C 12 2_3.2	3.2	873	32	3.1	730	600	436	40	1.9	960	790	
C 12 2_3.7	3.7	767	34	2.9	720	610	383	42	1.8	960	800	
C 12 2_4.3	4.3	649	36	2.6	710	630	325	45	1.6	890	800	
C 12 2_4.9	4.9	575	38	2.4	710	640	288	48	1.5	880	800	
C 12 2_5.6	5.6	500	40	2.2	680	650	250	51	1.4	840	810	
C 12 2_6.2	6.2	449	42	2.1	650	660	225	53	1.3	810	830	
C 12 2_7.6	7.6	367	45	1.8	1140	1220	184	56	1.1	1300	1540	
C 12 2_8.8	8.8	317	47	1.6	1140	1280	158	59	1.0	1300	1620	
C 12 2_10.1	10.1	278	49	1.5	1150	1340	139	63	0.97	1300	1680	
C 12 2_11.9	11.9	236	53	1.4	1140	1390	118	67	0.87	1300	1760	
C 12 2_13.4	13.4	209	55	1.3	1140	1460	104	70	0.81	1300	1840	
C 12 2_15.4	15.4	182	58	1.2	1130	1500	91	73	0.73	1300	1930	
C 12 2_17.2	17.2	163	60	1.1	1130	1590	82	76	0.68	1300	2000	
C 12 2_18.4	18.4	152	62	1.0	1120	1620	76	78	0.65	1300	2000	
C 12 2_20.6	20.6	136	65	1.0	1110	1670	68	82	0.61	1300	2000	
C 12 2_23.2	23.2	120	67	0.89	1110	1720	60	85	0.56	1300	2000	
C 12 2_25.4	25.4	110	69	0.84	1110	1800	55	88	0.54	1300	2000	
C 12 2_29.5	29.5	95	74	0.77	1100	1880	47	93	0.49	1300	2000	
C 12 2_32.8	32.8	85	75	0.71	1090	1970	43	90	0.42	1300	2000	
C 12 2_37.0	37.0	76	79	0.66	1070	2000	38	90	0.38	1300	2000	
C 12 2_42.3	42.3	66	84	0.61	1060	2000	33	100	0.36	1300	2000	
C 12 2_47.6	47.6	59	85	0.55	1050	2000	29.4	90	0.29	1300	2000	
C 12 2_55.2	55.2	51	89	0.50	1030	2000	25.4	90	0.25	1300	2000	
C 12 2_66.2	66.2	42	86	0.40	1060	2000	21.2	90	0.21	1300	2000	



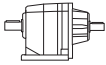

# C 12 100 Nm

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 12 2_2.8	2.8	325	43	1.5	1140	910	181	53	1.1	1300	1080	125
C 12 2_3.2	3.2	281	46	1.4	1100	910	156	57	1.0	1300	1080	
C 12 2_3.7	3.7	246	49	1.3	1090	920	137	60	0.91	1300	1100	
C 12 2_4.3	4.3	209	52	1.2	1050	920	116	64	0.82	1280	1100	
C 12 2_4.9	4.9	185	55	1.1	1050	960	103	67	0.76	1280	1160	
C 12 2_5.6	5.6	161	58	1.0	1000	980	89	69	0.68	1300	1280	
C 12 2_6.2	6.2	144	61	1.0	960	980	80	70	0.62	1300	1390	
C 12 2_7.6	7.6	118	65	0.85	1300	1780	66	79	0.57	1300	2000	
C 12 2_8.8	8.8	102	69	0.77	1300	1830	57	84	0.52	1300	2000	
C 12 2_10.1	10.1	89	72	0.71	1300	1950	50	88	0.48	1300	2000	
C 12 2_11.9	11.9	76	77	0.64	1300	2000	42	89	0.41	1300	2000	
C 12 2_13.4	13.4	67	81	0.60	1300	2000	37	90	0.37	1300	2000	
C 12 2_15.4	15.4	58	85	0.55	1300	2000	32	89	0.32	1300	2000	
C 12 2_17.2	17.2	52	88	0.51	1300	2000	29.1	90	0.29	1300	2000	
C 12 2_18.4	18.4	49	88	0.47	1300	2000	27.2	89	0.27	1300	2000	
C 12 2_20.6	20.6	44	89	0.43	1300	2000	24.2	89	0.24	1300	2000	
C 12 2_23.2	23.2	39	89	0.38	1300	2000	21.5	89	0.21	1300	2000	
C 12 2_25.4	25.4	35	89	0.35	1300	2000	19.7	89	0.19	1300	2000	
C 12 2_29.5	29.5	31	100	0.34	1300	2000	16.9	100	0.19	1300	2000	
C 12 2_32.8	32.8	27.5	90	0.27	1300	2000	15.3	90	0.15	1300	2000	
C 12 2_37.0	37.0	24.3	90	0.24	1300	2000	13.5	90	0.13	1300	2000	
C 12 2_42.3	42.3	21.3	100	0.23	1300	2000	11.8	100	0.13	1300	2000	
C 12 2_47.6	47.6	18.9	90	0.19	1300	2000	10.5	90	0.10	1300	2000	
C 12 2_55.2	55.2	16.3	90	0.16	1300	2000	9.1	90	0.09	1300	2000	
C 12 2_66.2	66.2	13.6	90	0.13	1300	2000	7.6	90	0.07	1300	2000	



# C 22

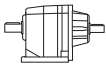

# 200 Nm

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 22 2_2.7	2.7	1029	65	7.4	—	1150	514	80	4.5	—	1460	129
C 22 2_3.3	3.3	842	68	6.3	—	1230	421	85	3.9	—	1560	
C 22 2_3.7	3.7	755	70	5.8	—	1290	378	90	3.7	—	1610	
C 22 2_4.3	4.3	658	75	5.4	—	1320	329	94	3.4	—	1650	
C 22 2_4.8	4.8	587	80	5.2	—	1370	294	100	3.2	—	1730	
C 22 2_5.6	5.6	501	82	4.5	—	1410	250	102	2.8	—	1790	
C 22 2_6.1	6.1	460	85	4.3	—	1500	230	105	2.7	—	1900	
C 22 2_7.1	7.1	395	105	4.6	1090	1570	198	130	2.8	1420	1990	
C 22 2_8.7	8.7	324	110	3.9	1130	1680	162	138	2.5	1430	2090	
C 22 2_9.6	9.6	290	115	3.7	1160	1750	145	145	2.3	1460	2200	
C 22 2_11.1	11.1	253	120	3.3	1130	1820	126	153	2.1	1390	2270	
C 22 2_12.4	12.4	226	125	3.1	1160	1900	113	160	2.0	1420	2380	
C 22 2_14.5	14.5	193	133	2.8	1090	1980	96	168	1.8	1360	2450	
C 22 2_15.8	15.8	177	140	2.7	1030	2030	88	175	1.7	1320	2570	
C 22 2_18.1	18.1	154	145	2.5	1000	2140	77	183	1.6	1250	2650	
C 22 2_20.0	20.0	140	150	2.3	1000	2210	70	190	1.5	1250	2770	
C 22 2_21.5	21.5	131	153	2.2	970	2250	65	194	1.4	1190	2820	
C 22 2_24.3	24.3	115	160	2.0	980	2350	58	200	1.3	1250	2970	
C 22 2_27.2	27.2	103	166	1.9	960	2420	52	200	1.1	1340	3110	
C 22 2_29.6	29.6	95	175	1.8	850	2490	47	200	1.0	1350	3270	
C 22 2_33.1	33.1	85	178	1.7	840	2590	42	200	0.93	1390	3400	
C 22 2_36.8	36.8	76	185	1.6	750	2690	38	200	0.84	1400	3610	
C 22 2_43.3	43.3	65	185	1.3	830	2910	32	190	0.68	1610	3950	
C 22 2_48.6	48.6	58	150	0.95	1300	3300	28.8	155	0.49	1740	4400	
C 22 2_54.7	54.7	51	150	0.85	1320	3470	25.6	155	0.44	1770	4600	
C 22 2_63.3	63.3	44	125	0.61	1400	3860	22.1	130	0.32	1820	5000	
C 22 3_60.0	60.0	47	180	0.93	840	3400	23.3	190	0.49	1230	4500	
C 22 3_65.3	65.3	43	200	0.94	880	3440	21.4	200	0.47	1270	4670	
C 22 3_74.8	74.8	37	200	0.83	940	3600	18.7	200	0.41	1270	4800	
C 22 3_82.6	82.6	34	200	0.75	1010	3820	16.9	200	0.37	1300	5000	
C 22 3_88.5	88.5	32	200	0.70	1040	3900	15.8	200	0.35	1300	5000	
C 22 3_100.2	100.2	28.0	200	0.62	1090	4160	14.0	200	0.31	1300	5000	
C 22 3_112.0	112.0	25.0	200	0.55	1130	4300	12.5	200	0.28	1300	5000	
C 22 3_122.2	122.2	22.9	200	0.51	1160	4540	11.5	200	0.25	1300	5000	
C 22 3_136.5	136.5	20.5	200	0.45	1180	4700	10.3	200	0.23	1300	5000	
C 22 3_151.7	151.7	18.5	200	0.41	1220	4980	9.2	200	0.20	1300	5000	
C 22 3_178.5	178.5	15.7	200	0.35	1260	5000	7.8	200	0.17	1300	5000	
C 22 3_200.7	200.7	14.0	190	0.29	1280	5000	7.0	190	0.15	1300	5000	
C 22 3_225.8	225.8	12.4	180	0.25	1300	5000	6.2	185	0.13	1300	5000	
C 22 3_261.0	261.0	10.7	145	0.17	1300	5000	5.4	155	0.09	1300	5000	

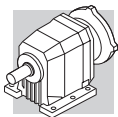
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# C 22 200 Nm

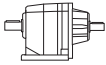

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 22 2_2.7	2.7	331	95	3.5	—	1670	184	100	2.0	400	2150	129
C 22 2_3.3	3.3	271	100	3.0	—	1760	150	103	1.7	570	2300	
C 22 2_3.7	3.7	243	105	2.8	—	1850	135	105	1.6	800	2430	
C 22 2_4.3	4.3	211	105	2.4	—	1980	117	105	1.4	940	2550	
C 22 2_4.8	4.8	189	105	2.2	170	2090	105	105	1.2	1200	2710	
C 22 2_5.6	5.6	161	105	1.9	200	2250	89	112	1.1	1020	2850	
C 22 2_6.1	6.1	148	110	1.8	200	2290	82	116	1.1	980	2930	
C 22 2_7.1	7.1	127	150	2.1	1650	2310	71	180	1.4	2060	2820	
C 22 2_8.7	8.7	104	160	1.8	1650	2440	58	190	1.2	2100	3000	
C 22 2_9.6	9.6	93	170	1.7	1650	2530	52	200	1.1	2130	3130	
C 22 2_11.1	11.1	81	176	1.6	1640	2650	45	200	0.99	2170	3270	
C 22 2_12.4	12.4	73	185	1.5	1650	2760	40	200	0.89	2200	3520	
C 22 2_14.5	14.5	62	193	1.3	1610	2850	34	200	0.76	2200	3670	
C 22 2_15.8	15.8	57	200	1.3	1580	2990	32	200	0.70	2200	3920	
C 22 2_18.1	18.1	50	200	1.1	1650	3150	27.6	200	0.61	2200	4200	
C 22 2_20.0	20.0	45	200	0.99	1750	3340	25.0	200	0.55	2200	4350	
C 22 2_21.5	21.5	42	200	0.92	1760	3450	23.3	200	0.51	2200	4550	
C 22 2_24.3	24.3	37	200	0.82	1900	3650	20.6	200	0.45	2200	4720	
C 22 2_27.2	27.2	33	200	0.73	1950	3820	18.4	200	0.41	2200	5000	
C 22 2_29.6	29.6	30	200	0.67	1980	3990	16.9	200	0.37	2200	5000	
C 22 2_33.1	33.1	27.2	200	0.60	1970	4200	15.1	200	0.33	2200	5000	
C 22 2_36.8	36.8	24.5	200	0.54	1990	4390	13.6	200	0.30	2200	5000	
C 22 2_43.3	43.3	20.8	190	0.44	2020	4770	11.6	190	0.24	2200	5000	
C 22 2_48.6	48.6	18.5	160	0.33	2050	5000	10.3	170	0.19	2200	5000	
C 22 2_54.7	54.7	16.4	160	0.29	2090	5000	9.1	170	0.17	2200	5000	
C 22 2_63.3	63.3	14.2	135	0.21	2140	5000	7.9	140	0.12	2200	5000	
C 22 3_60.0	60.0	15.0	190	0.31	1300	5000	8.3	200	0.18	1300	5000	
C 22 3_65.3	65.3	13.8	200	0.31	1300	5000	7.7	200	0.17	1300	5000	
C 22 3_74.8	74.8	12.0	200	0.27	1300	5000	6.7	200	0.15	1300	5000	
C 22 3_82.6	82.6	10.9	200	0.25	1300	5000	6.1	200	0.14	1300	5000	
C 22 3_88.5	88.5	10.2	200	0.22	1300	5000	5.6	200	0.12	1300	5000	
C 22 3_100.2	100.2	9.0	200	0.20	1300	5000	5.0	200	0.11	1300	5000	
C 22 3_112.0	112.0	8.0	200	0.18	1300	5000	4.5	200	0.10	1300	5000	
C 22 3_122.2	122.2	7.4	200	0.17	1300	5000	4.1	200	0.09	1300	5000	
C 22 3_136.5	136.5	6.6	200	0.15	1300	5000	3.7	200	0.08	1300	5000	
C 22 3_151.7	151.7	5.9	200	0.13	1300	5000	3.3	200	0.07	1300	5000	
C 22 3_178.5	178.5	5.0	200	0.11	1300	5000	2.8	200	0.06	1300	5000	
C 22 3_200.7	200.7	4.5	195	0.10	1300	5000	2.5	200	0.05	1300	5000	
C 22 3_225.8	225.8	4.0	195	0.09	1300	5000	2.2	200	0.05	1300	5000	
C 22 3_261.0	261.0	3.4	160	0.06	1300	5000	1.9	165	0.04	1300	5000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# C 32

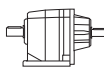

# 300 Nm

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 32 2_2.9	2.9	973	105	11.3	670	1710	486	130	7.0	940	2170	133
C 32 2_3.4	3.4	821	116	10.5	480	1770	411	138	6.2	900	2280	
C 32 2_3.7	3.7	750	120	9.9	560	1830	375	150	6.2	750	2310	
C 32 2_4.5	4.5	622	129	8.8	450	1930	311	152	5.2	970	2500	
C 32 2_5.0	5.0	565	135	8.4	470	1990	283	155	4.8	1100	2600	
C 32 2_5.7	5.7	495	141	7.7	380	2080	248	155	4.2	1250	2760	
C 32 2_6.3	6.3	447	150	7.4	300	2130	223	155	3.8	1450	2890	
C 32 2_7.2	7.2	391	160	6.9	1890	2370	195	200	4.3	2200	2990	
C 32 2_8.5	8.5	330	168	6.1	1900	2510	165	209	3.8	2200	3180	
C 32 2_9.3	9.3	301	175	5.8	1910	2580	151	220	3.7	2200	3260	
C 32 2_11.2	11.2	250	187	5.2	1910	2740	125	231	3.2	2200	3480	
C 32 2_12.3	12.3	227	195	4.9	1910	2820	114	245	3.1	2200	3560	
C 32 2_14.1	14.1	199	205	4.5	1900	2940	99	251	2.8	2200	3750	
C 32 2_15.6	15.6	180	215	4.3	1900	3030	90	270	2.7	2200	3820	
C 32 2_18.2	18.2	154	223	3.8	1900	3210	77	275	2.3	2200	4070	
C 32 2_20.1	20.1	139	235	3.6	1900	3290	70	295	2.3	2200	4160	
C 32 2_22.9	22.9	122	240	3.2	1880	3470	61	295	2.0	2200	4400	
C 32 2_25.1	25.1	111	250	3.1	1890	3560	56	300	1.8	2200	4570	
C 32 2_26.9	26.9	104	255	2.9	1880	3650	52	300	1.7	2200	4700	
C 32 2_29.8	29.8	94	265	2.7	1880	3770	47	300	1.6	2200	4920	
C 32 2_33.1	33.1	85	270	2.5	1880	3920	42	300	1.4	2200	5150	
C 32 2_36.1	36.1	78	280	2.4	1870	4030	39	300	1.3	2200	5350	
C 32 2_40.7	40.7	69	290	2.2	1860	4200	34	300	1.1	2200	5500	
C 32 2_45.3	45.3	62	300	2.0	1860	4360	31	300	1.0	2200	5500	
C 32 2_52.4	52.4	53	300	1.8	1860	4650	26.7	300	0.88	2200	5500	
C 32 2_59.4	59.4	47	205	1.1	2020	5000	23.6	215	0.56	2200	5500	
C 32 2_66.8	66.8	42	205	0.95	2020	5500	21.0	215	0.50	2200	5500	
C 32 3_74.7	74.7	37	280	1.2	750	5500	18.7	290	0.60	1170	5500	
C 32 3_82.6	82.6	34	300	1.1	820	5500	17.0	300	0.56	1240	5500	
C 32 3_94.2	94.2	29.7	300	0.98	900	5500	14.9	300	0.49	1270	5500	
C 32 3_103.3	103.3	27.1	300	0.90	980	5500	13.6	300	0.45	1300	5500	
C 32 3_110.6	110.6	25.3	300	0.84	1000	5500	12.7	300	0.42	1300	5500	
C 32 3_122.4	122.4	22.9	300	0.76	1060	5500	11.4	300	0.38	1300	5500	
C 32 3_136.0	136.0	20.6	300	0.68	1110	5500	10.3	300	0.34	1300	5500	
C 32 3_148.4	148.4	18.9	300	0.62	1130	5500	9.4	300	0.31	1300	5500	
C 32 3_167.4	167.4	16.7	300	0.55	1180	5500	8.4	300	0.28	1300	5500	
C 32 3_186.0	186.0	15.1	300	0.50	1200	5500	7.5	300	0.25	1300	5500	
C 32 3_215.6	215.6	13.0	300	0.43	1240	5500	6.5	300	0.21	1300	5500	
C 32 3_244.2	244.2	11.5	240	0.30	1280	5500	5.7	255	0.16	1300	5500	
C 32 3_274.7	274.7	10.2	240	0.27	1300	5500	5.1	255	0.14	1300	5500	





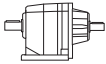

# C 32 300 Nm

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 32 2_2.9	2.9	313	150	5.2	1120	2510	174	155	3.0	2200	3220	133
C 32 2_3.4	3.4	264	152	4.4	1390	2690	147	167	2.7	2200	3390	
C 32 2_3.7	3.7	241	155	4.1	1570	2790	134	175	2.6	2200	3480	
C 32 2_4.5	4.5	200	158	3.5	1750	3010	111	188	2.3	2200	3690	
C 32 2_5.0	5.0	182	162	3.2	1870	3120	101	198	2.2	2200	3790	
C 32 2_5.7	5.7	159	171	3.0	1730	3250	88	198	1.9	2200	4010	
C 32 2_6.3	6.3	144	178	2.8	1730	3350	80	200	1.8	2200	4180	
C 32 2_7.2	7.2	126	235	3.3	2200	3450	70	285	2.2	2200	4200	
C 32 2_8.5	8.5	106	246	2.9	2200	3660	59	288	1.9	2200	4520	
C 32 2_9.3	9.3	97	260	2.8	2200	3750	54	300	1.8	2200	4640	
C 32 2_11.2	11.2	80	272	2.4	2200	4010	45	300	1.5	2200	5030	
C 32 2_12.3	12.3	73	285	2.3	2200	4120	41	300	1.3	2200	5250	
C 32 2_14.1	14.1	64	290	2.0	2200	4340	36	300	1.2	2200	5500	
C 32 2_15.6	15.6	58	300	1.9	2200	4500	32	300	1.1	2200	5500	
C 32 2_18.2	18.2	50	300	1.6	2200	4810	27.5	300	0.91	2200	5500	
C 32 2_20.1	20.1	45	300	1.5	2200	5030	24.9	300	0.82	2200	5500	
C 32 2_22.9	22.9	39	300	1.3	2200	5300	21.8	300	0.72	2200	5500	
C 32 2_25.1	25.1	36	300	1.2	2200	5500	19.9	300	0.66	2200	5500	
C 32 2_26.9	26.9	33	300	1.1	2200	5500	18.6	300	0.61	2200	5500	
C 32 2_29.8	29.8	30	300	1.0	2200	5500	16.8	300	0.56	2200	5500	
C 32 2_33.1	33.1	27.2	300	0.90	2200	5500	15.1	300	0.50	2200	5500	
C 32 2_36.1	36.1	24.9	300	0.82	2200	5500	13.9	300	0.46	2200	5500	
C 32 2_40.7	40.7	22.1	300	0.73	2200	5500	12.3	300	0.41	2200	5500	
C 32 2_45.3	45.3	19.9	300	0.66	2200	5500	11.0	300	0.37	2200	5500	
C 32 2_52.4	52.4	17.2	300	0.57	2200	5500	9.5	300	0.32	2200	5500	
C 32 2_59.4	59.4	15.2	220	0.37	2200	5500	8.4	230	0.21	2200	5500	
C 32 2_66.8	66.8	13.5	220	0.33	2200	5500	7.5	230	0.19	2200	5500	
C 32 3_74.7	74.7	12.0	290	0.38	1300	5500	6.7	300	0.22	1300	5500	
C 32 3_82.6	82.6	10.9	300	0.36	1300	5500	6.1	300	0.20	1300	5500	
C 32 3_94.2	94.2	9.6	300	0.32	1300	5500	5.3	300	0.18	1300	5500	
C 32 3_103.3	103.3	8.7	300	0.29	1300	5500	4.8	300	0.16	1300	5500	
C 32 3_110.6	110.6	8.1	300	0.27	1300	5500	4.5	300	0.15	1300	5500	
C 32 3_122.4	122.4	7.4	300	0.24	1300	5500	4.1	300	0.14	1300	5500	
C 32 3_136.0	136.0	6.6	300	0.22	1300	5500	3.7	300	0.12	1300	5500	
C 32 3_148.4	148.4	6.1	300	0.20	1300	5500	3.4	300	0.11	1300	5500	
C 32 3_167.4	167.4	5.4	300	0.18	1300	5500	3.0	300	0.10	1300	5500	
C 32 3_186.0	186.0	4.8	300	0.16	1300	5500	2.7	300	0.09	1300	5500	
C 32 3_215.6	215.6	4.2	300	0.14	1300	5500	2.3	300	0.08	1300	5500	
C 32 3_244.2	244.2	3.7	260	0.11	1300	5500	2.0	275	0.06	1300	5500	
C 32 3_274.7	274.7	3.3	260	0.09	1300	5500	1.8	275	0.06	1300	5500	



# C 36

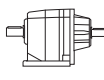

# 450 Nm

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 36 2_2.7	2.7	1042	140	16.1	670	1750	521	170	9.8	1150	2240	
C 36 2_3.2	3.2	880	145	14.1	790	1870	440	177	8.6	1240	2380	
C 36 2_3.5	3.5	803	150	13.3	910	1920	402	185	8.2	1320	2440	
C 36 2_4.2	4.2	667	157	11.5	920	2050	333	192	7.1	1410	2620	
C 36 2_4.6	4.6	606	165	11.0	920	2110	303	200	6.7	1470	2700	
C 36 2_5.3	5.3	530	167	9.8	990	2230	265	200	5.8	1650	2870	
C 36 2_5.8	5.8	479	170	9.0	1160	2330	239	200	5.3	1990	3020	
C 36 2_6.8	6.8	413	285	13.0	1750	2130	206	355	8.1	2220	2710	
C 36 2_8.0	8.0	349	297	11.4	1770	2270	174	365	7.0	2250	2910	
C 36 2_8.8	8.8	318	310	10.9	1780	2330	159	380	6.7	2270	3000	
C 36 2_10.6	10.6	264	325	9.5	1790	2500	132	380	5.5	2320	3290	
C 36 2_11.7	11.7	240	340	9.0	1790	2560	120	380	5.0	2370	3460	
C 36 2_13.3	13.3	210	350	8.1	1800	2700	105	380	4.4	2400	3670	
C 36 2_14.8	14.8	190	360	7.5	1800	2810	95	380	4.0	2440	3890	
C 36 2_17.2	17.2	163	370	6.6	1810	3000	81	380	3.4	2460	4200	
C 36 2_19.0	19.0	147	380	6.2	1820	3110	74	380	3.1	2500	4400	
C 36 3_22.1	22.1	127	340	4.7	2300	3570	63	430	3.0	2900	4490	
C 36 3_26.2	26.2	107	355	4.2	2300	3790	53	440	2.6	2910	4810	
C 36 3_28.7	28.7	98	385	4.1	2300	3820	49	450	2.4	2930	4980	
C 36 3_34.6	34.6	81	400	3.6	2300	4100	40	450	2.0	2950	5420	
C 36 3_38.1	38.1	74	435	3.5	2300	4140	37	450	1.8	2970	5690	
C 36 3_43.5	43.5	64	440	3.1	2300	4450	32	450	1.6	2980	6050	
C 36 3_48.2	48.2	58	450	2.9	2310	4580	29.1	450	1.4	2990	6330	
C 36 3_56.2	56.2	50	450	2.5	2320	4970	24.9	450	1.2	2990	6500	
C 36 3_62.0	62.0	45	450	2.2	2330	5170	22.6	450	1.1	3000	6500	
C 36 3_70.8	70.8	40	450	2.0	2340	5520	19.8	450	0.98	3000	6500	
C 36 3_77.6	77.6	36	450	1.8	2350	5740	18.0	450	0.90	3000	6500	
C 36 3_83.1	83.1	34	450	1.7	2350	5930	16.8	450	0.84	3000	6500	
C 36 3_91.9	91.9	30	450	1.5	2360	6200	15.2	450	0.76	3000	6500	
C 36 3_102.2	102.2	27.4	450	1.4	2360	6400	13.7	450	0.68	3000	6500	
C 36 3_111.5	111.5	25.1	450	1.2	2360	6500	12.6	450	0.62	3000	6500	
C 36 3_125.8	125.8	22.3	450	1.1	2370	6500	11.1	450	0.55	3000	6500	
C 36 3_139.8	139.8	20.0	450	0.99	2370	6500	10.0	450	0.50	3000	6500	
C 36 3_162.0	162.0	17.3	450	0.86	2380	6500	8.6	450	0.43	3000	6500	
C 36 3_183.5	183.5	15.3	450	0.76	2380	6500	7.6	450	0.38	3000	6500	
C 36 3_206.4	206.4	13.6	450	0.67	2380	6500	6.8	450	0.34	3000	6500	
C 36 4_230.9	230.9	12.1	450	0.60	1150	6500	6.1	450	0.30	1300	6500	
C 36 4_255.0	255.0	11.0	450	0.54	1190	6500	5.5	450	0.27	1300	6500	
C 36 4_290.9	290.9	9.6	450	0.48	1210	6500	4.8	450	0.24	1300	6500	
C 36 4_318.9	318.9	8.8	450	0.44	1230	6500	4.4	450	0.22	1300	6500	
C 36 4_341.7	341.7	8.2	450	0.41	1240	6500	4.1	450	0.20	1300	6500	
C 36 4_377.9	377.9	7.4	450	0.37	1260	6500	3.7	450	0.18	1300	6500	
C 36 4_420.2	420.2	6.7	450	0.33	1270	6500	3.3	450	0.17	1300	6500	
C 36 4_458.4	458.4	6.1	450	0.30	1280	6500	3.1	450	0.15	1300	6500	
C 36 4_517.2	517.2	5.4	450	0.27	1300	6500	2.7	450	0.13	1300	6500	
C 36 4_574.7	574.7	4.9	450	0.24	1300	6500	2.4	450	0.12	1300	6500	
C 36 4_665.9	665.9	4.2	450	0.21	1300	6500	2.1	450	0.10	1300	6500	
C 36 4_754.2	754.2	3.7	450	0.18	1300	6500	1.9	450	0.09	1300	6500	
C 36 4_848.5	848.5	3.3	450	0.16	1300	6500	1.6	450	0.08	1300	6500	

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# C 36 450 Nm

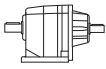

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 36 2_2.7	2.7	335	190	7.0	1670	2640	186	200	4.1	3000	3390	
C 36 2_3.2	3.2	283	190	5.9	2080	2790	157	200	3.5	3000	3650	
C 36 2_3.5	3.5	258	200	5.7	2160	2920	143	200	3.2	3000	3810	
C 36 2_4.2	4.2	214	200	4.7	2410	3170	119	200	2.6	3000	4100	
C 36 2_4.6	4.6	195	200	4.3	2590	3320	108	200	2.4	3000	4300	
C 36 2_5.3	5.3	171	200	3.8	2630	3500	95	200	2.1	3000	4520	
C 36 2_5.8	5.8	154	200	3.4	2680	3690	86	200	1.9	3000	4740	
C 36 2_6.8	6.8	133	380	5.6	2660	3290	74	380	3.1	3000	4400	
C 36 2_8.0	8.0	112	380	4.7	2720	3580	62	380	2.6	3000	4750	
C 36 2_8.8	8.8	102	380	4.3	2790	3750	57	380	2.4	3000	4960	
C 36 2_10.6	10.6	85	380	3.6	2850	4110	47	380	2.0	3000	5360	
C 36 2_11.7	11.7	77	380	3.2	2900	4300	43	380	1.8	3000	5630	
C 36 2_13.3	13.3	68	380	2.8	2930	4590	38	380	1.6	3000	5930	
C 36 2_14.8	14.8	61	380	2.6	2970	4800	34	380	1.4	3000	6240	
C 36 2_17.2	17.2	52	380	2.2	2980	5100	29.1	380	1.2	3000	6330	
C 36 2_19.0	19.0	47	380	2.0	3000	5390	26.3	380	1.1	3000	6500	
C 36 3_22.1	22.1	41	450	2.0	3000	5430	22.6	450	1.1	3000	6500	
C 36 3_26.2	26.2	34	450	1.7	3000	5850	19.1	450	0.95	3000	6500	
C 36 3_28.7	28.7	31	450	1.6	3000	6120	17.4	450	0.86	3000	6500	
C 36 3_34.6	34.6	26.0	450	1.3	3000	6500	14.5	450	0.72	3000	6500	
C 36 3_38.1	38.1	23.6	450	1.2	3000	6500	13.1	450	0.65	3000	6500	
C 36 3_43.5	43.5	20.7	450	1.0	3000	6500	11.5	450	0.57	3000	6500	
C 36 3_48.2	48.2	18.7	450	0.93	3000	6500	10.4	450	0.52	3000	6500	
C 36 3_56.2	56.2	16.0	450	0.79	3000	6500	8.9	450	0.44	3000	6500	
C 36 3_62.0	62.0	14.5	450	0.72	3000	6500	8.1	450	0.40	3000	6500	
C 36 3_70.8	70.8	12.7	450	0.63	3000	6500	7.1	450	0.35	3000	6500	
C 36 3_77.6	77.6	11.6	450	0.58	3000	6500	6.4	450	0.32	3000	6500	
C 36 3_83.1	83.1	10.8	450	0.54	3000	6500	6.0	450	0.30	3000	6500	
C 36 3_91.9	91.9	9.8	450	0.49	3000	6500	5.4	450	0.27	3000	6500	
C 36 3_102.2	102.2	8.8	450	0.44	3000	6500	4.9	450	0.24	3000	6500	
C 36 3_111.5	111.5	8.1	450	0.40	3000	6500	4.5	450	0.22	3000	6500	
C 36 3_125.8	125.8	7.2	450	0.35	3000	6500	4.0	450	0.20	3000	6500	
C 36 3_139.8	139.8	6.4	450	0.32	3000	6500	3.6	450	0.18	3000	6500	
C 36 3_162.0	162.0	5.6	450	0.28	3000	6500	3.1	450	0.15	3000	6500	
C 36 3_183.5	183.5	4.9	450	0.24	3000	6500	2.7	450	0.14	3000	6500	
C 36 3_206.4	206.4	4.4	450	0.22	3000	6500	2.4	450	0.12	3000	6500	
C 36 4_230.9	230.9	3.9	450	0.19	1300	6500	2.2	450	0.11	1300	6500	
C 36 4_255.0	255.0	3.5	450	0.18	1300	6500	2.0	450	0.10	1300	6500	
C 36 4_290.9	290.9	3.1	450	0.15	1300	6500	1.7	450	0.09	1300	6500	
C 36 4_318.9	318.9	2.8	450	0.14	1300	6500	1.6	450	0.08	1300	6500	
C 36 4_341.7	341.7	2.6	450	0.13	1300	6500	1.5	450	0.07	1300	6500	
C 36 4_377.9	377.9	2.4	450	0.12	1300	6500	1.3	450	0.07	1300	6500	
C 36 4_420.2	420.2	2.1	450	0.11	1300	6500	1.2	450	0.06	1300	6500	
C 36 4_458.4	458.4	2.0	450	0.10	1300	6500	1.1	450	0.05	1300	6500	
C 36 4_517.2	517.2	1.7	450	0.09	1300	6500	1.0	450	0.05	1300	6500	
C 36 4_574.7	574.7	1.6	450	0.08	1300	6500	0.9	450	0.04	1300	6500	
C 36 4_665.9	665.9	1.4	450	0.07	1300	6500	0.8	450	0.04	1300	6500	
C 36 4_754.2	754.2	1.2	450	0.06	1300	6500	0.7	450	0.03	1300	6500	
C 36 4_848.5	848.5	1.1	450	0.05	1300	6500	0.6	450	0.03	1300	6500	

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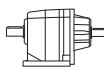

# C 41

# 600 Nm

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 41 2_2.7	2.7	1037	245	28	980	1290	519	245	14.0	1390	2060	141
C 41 2_3.6	3.6	778	255	22	1070	1540	389	255	10.9	1650	2390	
C 41 2_4.7	4.7	596	260	17.1	1170	1800	298	260	8.5	2010	2730	
C 41 2_6.0	6.0	467	260	13.4	1290	2100	233	260	6.7	2400	3110	
C 41 2_6.4	6.4	438	275	13.3	2270	2590	219	345	8.3	2860	3260	
C 41 2_7.1	7.1	394	285	12.4	2360	2700	197	355	7.7	2980	3420	
C 41 2_8.6	8.6	326	305	10.9	2300	2860	163	385	6.9	2900	3600	
C 41 2_9.6	9.6	292	310	10.0	2410	3010	146	390	6.3	3030	3800	
C 41 2_11.2	11.2	250	335	9.2	2310	3100	125	420	5.8	2910	3920	
C 41 2_12.4	12.4	226	340	8.5	2440	3270	113	425	5.3	3070	4140	
C 41 2_14.2	14.2	197	355	7.7	2330	3410	99	445	4.8	2980	4300	
C 41 2_15.8	15.8	177	360	7.0	2460	3590	89	450	4.4	3120	4540	
C 41 2_17.8	17.8	157	380	6.6	2330	3680	79	480	4.2	3050	4630	
C 41 2_19.8	19.8	141	385	6.0	2460	3880	71	485	3.8	3180	4890	
C 41 2_22.6	22.6	124	410	5.6	2320	3990	62	500	3.4	3110	5110	
C 41 2_25.0	25.0	112	415	5.1	2460	4210	56	500	3.1	3230	5420	
C 41 2_28.3	28.3	99	445	4.9	2310	4290	49	500	2.7	3180	5710	
C 41 2_31.4	31.4	89	445	4.4	2440	4550	45	500	2.5	3300	6040	
C 41 2_33.4	33.4	84	465	4.3	2390	4560	42	500	2.3	3220	6170	
C 41 2_37.1	37.1	75	470	3.9	2440	4810	38	500	2.1	3320	6520	
C 41 2_44.8	44.8	63	500	3.4	2660	5130	31	500	1.7	3500	7000	
C 41 3_28.5	28.5	98	445	4.9	3060	4300	49	560	3.1	3500	5420	
C 41 3_31.2	31.2	90	450	4.5	3090	4510	45	570	2.9	3500	5670	
C 41 3_36.8	36.8	76	480	4.1	3070	4710	38	600	2.6	3500	5960	
C 41 3_40.3	40.3	69	485	3.8	3100	4940	35	600	2.3	3500	6280	
C 41 3_47.0	47.0	60	515	3.5	3070	5140	29.8	600	2.0	3500	6720	
C 41 3_51.5	51.5	54	525	3.2	3090	5360	27.2	600	1.8	3500	7000	
C 41 3_58.7	58.7	48	550	3.0	3070	5550	23.9	600	1.6	3500	7000	
C 41 3_64.3	64.3	44	560	2.7	3090	5800	21.8	600	1.5	3500	7000	
C 41 3_74.4	74.4	38	590	2.5	3060	6040	18.8	600	1.3	3500	7000	
C 41 3_81.5	81.5	34	600	2.3	3090	6310	17.2	600	1.2	3500	7000	
C 41 3_93.3	93.3	30	600	2.0	3080	6700	15.0	600	1.0	3500	7000	
C 41 3_102.3	102.3	27.4	600	1.8	3110	7000	13.7	600	0.92	3500	7000	
C 41 3_110.1	110.1	25.4	600	1.7	3090	7000	12.7	600	0.86	3500	7000	
C 41 3_120.6	120.6	23.2	600	1.6	3110	7000	11.6	600	0.78	3500	7000	
C 41 3_132.9	132.9	21.1	600	1.4	3090	7000	10.5	600	0.71	3500	7000	
C 41 3_145.6	145.6	19.2	600	1.3	3120	7000	9.6	600	0.65	3500	7000	
C 41 3_164.1	164.1	17.1	600	1.2	3100	7000	8.5	600	0.58	3500	7000	
C 41 3_179.9	179.9	15.6	600	1.1	3120	7000	7.8	600	0.53	3500	7000	
C 41 3_190.8	190.8	14.7	600	0.99	3110	7000	7.3	600	0.50	3500	7000	
C 41 3_209.1	209.1	13.4	600	0.90	3130	7000	6.7	600	0.45	3500	7000	
C 41 4_239.9	239.9	11.7	600	0.81	1480	7000	5.8	600	0.40	1910	7000	
C 41 4_263.0	263.0	10.6	600	0.74	1500	7000	5.3	600	0.37	1920	7000	
C 41 4_304.2	304.2	9.2	600	0.64	1520	7000	4.6	600	0.32	1950	7000	
C 41 4_333.4	333.4	8.4	600	0.58	1530	7000	4.2	600	0.29	1960	7000	
C 41 4_381.8	381.8	7.3	600	0.51	1540	7000	3.7	600	0.25	1970	7000	
C 41 4_418.5	418.5	6.7	600	0.46	1550	7000	3.3	600	0.23	1980	7000	
C 41 4_450.2	450.2	6.2	600	0.43	1560	7000	3.1	600	0.21	1990	7000	
C 41 4_493.5	493.5	5.7	600	0.39	1570	7000	2.8	600	0.20	2000	7000	
C 41 4_543.5	543.5	5.2	600	0.36	1570	7000	2.6	600	0.18	2000	7000	
C 41 4_595.8	595.8	4.7	600	0.32	1580	7000	2.3	600	0.16	2010	7000	
C 41 4_671.3	671.3	4.2	600	0.29	1590	7000	2.1	600	0.14	2020	7000	
C 41 4_735.9	735.9	3.8	600	0.26	1590	7000	1.9	600	0.13	2020	7000	
C 41 4_780.4	780.4	3.6	600	0.25	1600	7000	1.8	600	0.12	2030	7000	
C 41 4_855.5	855.5	3.3	600	0.23	1600	7000	1.6	600	0.11	2030	7000	



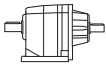

# C 41 600 Nm

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 41 2_2.7	2.7	333	245	9.0	2560	2650	185	245	5.0	3500	3590	
C 41 2_3.6	3.6	250	255	7.0	2710	3050	139	255	3.9	3500	4090	
C 41 2_4.7	4.7	191	260	5.5	2900	3440	106	260	3.0	3500	4570	
C 41 2_6.0	6.0	150	260	4.3	3080	3890	83	260	2.4	3500	5110	
C 41 2_6.4	6.4	141	400	6.2	3310	3780	78	490	4.2	3500	4580	
C 41 2_7.1	7.1	127	415	5.8	3460	3940	70	500	3.9	3500	4820	
C 41 2_8.6	8.6	105	445	5.1	3360	4180	58	500	3.2	3500	5290	
C 41 2_9.6	9.6	94	450	4.7	3500	4410	52	500	2.9	3500	5600	
C 41 2_11.2	11.2	80	490	4.3	3500	4520	45	500	2.5	3500	5980	
C 41 2_12.4	12.4	73	495	4.0	3500	4780	40	500	2.2	3500	6320	
C 41 2_14.2	14.2	63	500	3.5	3500	5060	35	500	1.9	3500	6700	
C 41 2_15.8	15.8	57	500	3.1	3500	5370	32	500	1.7	3500	7000	
C 41 2_17.8	17.8	51	500	2.8	3500	5650	28.1	500	1.5	3500	7000	
C 41 2_19.8	19.8	45	500	2.5	3500	5970	25.3	500	1.4	3500	7000	
C 41 2_22.6	22.6	40	500	2.2	3500	6320	22.1	500	1.2	3500	7000	
C 41 2_25.0	25.0	36	500	2.0	3500	6670	20.0	500	1.1	3500	7000	
C 41 2_28.3	28.3	32	500	1.8	3500	7000	17.7	500	0.97	3500	7000	
C 41 2_31.4	31.4	28.7	500	1.6	3500	7000	15.9	500	0.88	3500	7000	
C 41 2_33.4	33.4	26.9	500	1.5	3500	7000	15.0	500	0.83	3500	7000	
C 41 2_37.1	37.1	24.3	500	1.3	3500	7000	13.5	500	0.74	3500	7000	
C 41 2_44.8	44.8	20.1	500	1.1	3500	7000	11.2	500	0.62	3500	7000	
C 41 3_28.5	28.5	32	600	2.1	3500	6530	17.5	600	1.2	3500	7000	
C 41 3_31.2	31.2	28.8	600	1.9	3500	6870	16.0	600	1.1	3500	7000	
C 41 3_36.8	36.8	24.5	600	1.7	3500	7000	13.6	600	0.92	3500	7000	
C 41 3_40.3	40.3	22.3	600	1.5	3500	7000	12.4	600	0.84	3500	7000	
C 41 3_47.0	47.0	19.1	600	1.3	3500	7000	10.6	600	0.72	3500	7000	
C 41 3_51.5	51.5	17.5	600	1.2	3500	7000	9.7	600	0.66	3500	7000	
C 41 3_58.7	58.7	15.3	600	1.0	3500	7000	8.5	600	0.58	3500	7000	
C 41 3_64.3	64.3	14.0	600	0.95	3500	7000	7.8	600	0.53	3500	7000	
C 41 3_74.4	74.4	12.1	600	0.82	3500	7000	6.7	600	0.45	3500	7000	
C 41 3_81.5	81.5	11.0	600	0.75	3500	7000	6.1	600	0.41	3500	7000	
C 41 3_93.3	93.3	9.6	600	0.65	3500	7000	5.4	600	0.36	3500	7000	
C 41 3_102.3	102.3	8.8	600	0.59	3500	7000	4.9	600	0.33	3500	7000	
C 41 3_110.1	110.1	8.2	600	0.55	3500	7000	4.5	600	0.31	3500	7000	
C 41 3_120.6	120.6	7.5	600	0.50	3500	7000	4.1	600	0.28	3500	7000	
C 41 3_132.9	132.9	6.8	600	0.46	3500	7000	3.8	600	0.25	3500	7000	
C 41 3_145.6	145.6	6.2	600	0.42	3500	7000	3.4	600	0.23	3500	7000	
C 41 3_164.1	164.1	5.5	600	0.37	3500	7000	3.0	600	0.21	3500	7000	
C 41 3_179.9	179.9	5.0	600	0.34	3500	7000	2.8	600	0.19	3500	7000	
C 41 3_190.8	190.8	4.7	600	0.32	3500	7000	2.6	600	0.18	3500	7000	
C 41 3_209.1	209.1	4.3	600	0.29	3500	7000	2.4	600	0.16	3500	7000	
C 41 4_239.9	239.9	3.8	600	0.26	2200	7000	2.1	600	0.14	2200	7000	
C 41 4_263.0	263.0	3.4	600	0.24	2200	7000	1.9	600	0.13	2200	7000	
C 41 4_304.2	304.2	3.0	600	0.20	2200	7000	1.6	600	0.11	2200	7000	
C 41 4_333.4	333.4	2.7	600	0.19	2200	7000	1.5	600	0.10	2200	7000	
C 41 4_381.8	381.8	2.4	600	0.16	2200	7000	1.3	600	0.09	2200	7000	
C 41 4_418.5	418.5	2.2	600	0.15	2200	7000	1.2	600	0.08	2200	7000	
C 41 4_450.2	450.2	2.0	600	0.14	2200	7000	1.1	600	0.08	2200	7000	
C 41 4_493.5	493.5	1.8	600	0.13	2200	7000	1.0	600	0.07	2200	7000	
C 41 4_543.5	543.5	1.7	600	0.11	2200	7000	0.92	600	0.06	2200	7000	
C 41 4_595.8	595.8	1.5	600	0.10	2200	7000	0.84	600	0.06	2200	7000	
C 41 4_671.3	671.3	1.3	600	0.09	2200	7000	0.74	600	0.05	2200	7000	
C 41 4_735.9	735.9	1.2	600	0.08	2200	7000	0.68	600	0.05	2200	7000	
C 41 4_780.4	780.4	1.2	600	0.08	2200	7000	0.64	600	0.04	2200	7000	
C 41 4_855.5	855.5	1.1	600	0.07	2200	7000	0.58	600	0.04	2200	7000	



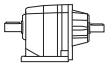

# C 51

# 1000 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
C 51 2_2.6	2.6	1077	315	37	980	3340	538	400	24	1390	4200	145
C 51 2_3.3	3.3	848	340	32	1070	3610	424	420	19.6	1650	4580	
C 51 2_4.5	4.5	622	370	25	1170	4010	311	435	14.9	2010	5180	
C 51 2_5.6	5.6	500	390	21	1290	4380	250	435	12.0	2400	5760	
C 51 2_7.0	7.0	400	500	22	2270	4760	200	630	13.9	2860	6000	
C 51 2_7.8	7.8	359	510	20	2360	4940	179	640	12.7	2980	6230	
C 51 2_8.8	8.8	318	545	19.1	2300	5120	159	685	12.0	2900	6450	
C 51 2_9.8	9.8	286	545	17.2	2410	5350	143	685	10.8	3030	6750	
C 51 2_11.8	11.8	237	610	16.0	2310	5620	119	770	10.1	2910	7080	
C 51 2_13.1	13.1	214	595	14.0	2440	5930	107	750	8.8	3070	7470	
C 51 2_15.0	15.0	187	660	13.6	2330	6080	93	800	8.2	2980	7770	
C 51 2_16.6	16.6	169	640	11.9	2460	6420	84	795	7.4	3120	8130	
C 51 2_18.9	18.9	148	695	11.3	2330	6630	74	800	6.5	3050	8620	
C 51 2_21.0	21.0	133	675	9.9	2460	7000	67	795	5.8	3180	9020	
C 51 2_23.4	23.4	120	735	9.7	2320	7160	60	800	5.3	3110	9460	
C 51 2_25.9	25.9	108	715	8.5	2460	7550	54	795	4.7	3230	9890	
C 51 2_29.8	29.8	94	795	8.2	2310	7770	47	800	4.1	3180	10000	
C 51 2_33.0	33.0	85	775	7.2	2440	8190	42	795	3.7	3300	10000	
C 51 2_36.4	36.4	77	750	6.4	2390	8660	38	790	3.3	3220	10000	
C 51 2_40.4	40.4	69	795	6.1	2440	8870	35	795	3.0	3320	10000	
C 51 2_43.1	43.1	65	730	5.2	2450	9380	32	770	2.8	3280	10000	
C 51 2_47.8	47.8	59	800	5.2	2460	9530	29.3	800	2.6	3350	10000	
C 51 2_51.4	51.4	54	665	4.0	2550	10000	27.2	700	2.1	3390	10000	
C 51 2_57.0	57.0	49	745	4.0	2540	10000	24.6	785	2.1	3380	10000	
C 51 3_21.8	21.8	128	720	10.4	2870	6940	64	905	6.5	3500	8750	
C 51 3_23.9	23.9	117	730	9.6	2910	7230	59	920	6.1	3500	9110	
C 51 3_27.4	27.4	102	770	8.9	2890	7510	51	970	5.6	3500	9470	
C 51 3_30.1	30.1	93	780	8.2	2930	7830	47	1000	5.2	3500	9810	
C 51 3_37.0	37.0	76	840	7.2	2910	8330	38	1000	4.3	3500	10000	
C 51 3_40.5	40.5	69	855	6.7	2940	8670	35	1000	3.9	3500	10000	
C 51 3_46.7	46.7	60	905	6.1	2920	9020	30	1000	3.4	3500	10000	
C 51 3_51.2	51.2	55	920	5.7	2950	9390	27.3	1000	3.1	3500	10000	
C 51 3_59.0	59.0	47	970	5.2	2910	9780	23.7	1000	2.7	3500	10000	
C 51 3_64.6	64.6	43	1000	4.9	2940	10000	21.7	1000	2.4	3500	10000	
C 51 3_72.9	72.9	38	1000	4.3	2920	10000	19.2	1000	2.2	3500	10000	
C 51 3_79.9	79.9	35	1000	3.9	2960	10000	17.5	1000	2.0	3500	10000	
C 51 3_93.0	93.0	30	1000	3.4	2950	10000	15.1	1000	1.7	3500	10000	
C 51 3_101.8	101.8	27.5	1000	3.1	2990	10000	13.8	1000	1.5	3500	10000	
C 51 3_113.6	113.6	24.6	1000	2.8	2960	10000	12.3	1000	1.4	3500	10000	
C 51 3_124.4	124.4	22.5	1000	2.5	3000	10000	11.3	1000	1.3	3500	10000	
C 51 3_134.6	134.6	20.8	1000	2.3	2970	10000	10.4	1000	1.2	3500	10000	
C 51 3_147.4	147.4	19.0	1000	2.1	3010	10000	9.5	1000	1.1	3500	10000	
C 51 3_160.5	160.5	17.4	1000	2.0	2980	10000	8.7	1000	0.98	3500	10000	
C 51 3_175.8	175.8	15.9	1000	1.8	3020	10000	8.0	1000	0.90	3500	10000	
C 51 3_197.9	197.9	14.1	1000	1.6	2980	10000	7.1	1000	0.80	3500	10000	
C 51 3_216.7	216.7	12.9	1000	1.5	3020	10000	6.5	1000	0.73	3500	10000	
C 51 4_240.9	240.9	11.6	1000	1.3	2100	10000	5.8	1000	0.67	2200	10000	
C 51 4_263.8	263.8	10.6	1000	1.2	2120	10000	5.3	1000	0.61	2200	10000	
C 51 4_297.8	297.8	9.4	1000	1.1	2140	10000	4.7	1000	0.54	2200	10000	
C 51 4_326.1	326.1	8.6	1000	0.99	2160	10000	4.3	1000	0.49	2200	10000	
C 51 4_379.6	379.6	7.4	1000	0.85	2190	10000	3.7	1000	0.42	2200	10000	
C 51 4_415.7	415.7	6.7	1000	0.78	2200	10000	3.4	1000	0.39	2200	10000	
C 51 4_463.9	463.9	6.0	1000	0.69	2200	10000	3.0	1000	0.35	2200	10000	
C 51 4_508.0	508.0	5.5	1000	0.63	2200	10000	2.8	1000	0.32	2200	10000	
C 51 4_549.7	549.7	5.1	1000	0.59	2200	10000	2.5	1000	0.29	2200	10000	
C 51 4_602.0	602.0	4.7	1000	0.54	2200	10000	2.3	1000	0.27	2200	10000	
C 51 4_655.4	655.4	4.3	1000	0.49	2200	10000	2.1	1000	0.25	2200	10000	
C 51 4_717.7	717.7	3.9	1000	0.45	2200	10000	2.0	1000	0.22	2200	10000	
C 51 4_808.0	808.0	3.5	1000	0.40	2200	10000	1.7	1000	0.20	2200	10000	
C 51 4_884.9	884.9	3.2	1000	0.36	2200	10000	1.6	1000	0.18	2200	10000	



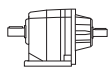

# C 51 1000 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
C 51 2_2.6	2.6	346	400	15.3	2560	5130	192	400	8.5	3500	6620	
C 51 2_3.3	3.3	273	420	12.6	2710	5590	152	420	7.0	3500	7200	
C 51 2_4.5	4.5	200	435	9.6	2900	6300	111	435	5.3	3500	8070	
C 51 2_5.6	5.6	161	435	7.7	3080	6970	89	435	4.3	3500	8880	
C 51 2_7.0	7.0	129	730	10.3	3310	6950	71	800	6.3	3500	8760	
C 51 2_7.8	7.8	115	740	9.4	3460	7220	64	800	5.7	3500	9140	
C 51 2_8.8	8.8	102	795	9.0	3360	7470	57	800	5.0	3500	9680	
C 51 2_9.8	9.8	92	800	8.1	3500	7790	51	800	4.5	3500	10000	
C 51 2_11.8	11.8	76	800	6.7	3500	8530	42	800	3.7	3500	10000	
C 51 2_13.1	13.1	69	800	6.1	3500	8900	38	800	3.4	3500	10000	
C 51 2_15.0	15.0	60	800	5.3	3500	9450	33	800	2.9	3500	10000	
C 51 2_16.6	16.6	54	800	4.8	3500	9850	30	800	2.7	3500	10000	
C 51 2_18.9	18.9	48	800	4.2	3500	10000	26.5	800	2.3	3500	10000	
C 51 2_21.0	21.0	43	800	3.8	3500	10000	23.8	800	2.1	3500	10000	
C 51 2_23.4	23.4	38	800	3.4	3500	10000	21.4	800	1.9	3500	10000	
C 51 2_25.9	25.9	35	800	3.1	3500	10000	19.3	800	1.7	3500	10000	
C 51 2_29.8	29.8	30	800	2.7	3500	10000	16.8	800	1.5	3500	10000	
C 51 2_33.0	33.0	27.3	800	2.4	3500	10000	15.2	800	1.3	3500	10000	
C 51 2_36.4	36.4	24.7	800	2.2	3500	10000	13.7	800	1.2	3500	10000	
C 51 2_40.4	40.4	22.3	800	2.0	3500	10000	12.4	800	1.1	3500	10000	
C 51 2_43.1	43.1	20.9	800	1.8	3500	10000	11.6	800	1.0	3500	10000	
C 51 2_47.8	47.8	18.8	800	1.7	3500	10000	10.5	800	0.92	3500	10000	
C 51 2_51.4	51.4	17.5	725	1.4	3500	10000	9.7	755	0.81	3500	10000	
C 51 2_57.0	57.0	15.8	795	1.4	3500	10000	8.8	795	0.77	3500	10000	
C 51 3_21.8	21.8	41	1000	4.6	3500	10000	22.9	1000	2.6	3500	10000	
C 51 3_23.9	23.9	38	1000	4.2	3500	10000	20.9	1000	2.4	3500	10000	
C 51 3_27.4	27.4	33	1000	3.7	3500	10000	18.2	1000	2.1	3500	10000	
C 51 3_30.1	30.1	29.9	1000	3.4	3500	10000	16.6	1000	1.9	3500	10000	
C 51 3_37.0	37.0	24.3	1000	2.7	3500	10000	13.5	1000	1.5	3500	10000	
C 51 3_40.5	40.5	22.2	1000	2.5	3500	10000	12.3	1000	1.4	3500	10000	
C 51 3_46.7	46.7	19.3	1000	2.2	3500	10000	10.7	1000	1.2	3500	10000	
C 51 3_51.2	51.2	17.6	1000	2.0	3500	10000	9.8	1000	1.1	3500	10000	
C 51 3_59.0	59.0	15.3	1000	1.7	3500	10000	8.5	1000	0.95	3500	10000	
C 51 3_64.6	64.6	13.9	1000	1.6	3500	10000	7.7	1000	0.87	3500	10000	
C 51 3_72.9	72.9	12.3	1000	1.4	3500	10000	6.9	1000	0.77	3500	10000	
C 51 3_79.9	79.9	11.3	1000	1.3	3500	10000	6.3	1000	0.70	3500	10000	
C 51 3_93.0	93.0	9.7	1000	1.1	3500	10000	5.4	1000	0.61	3500	10000	
C 51 3_101.8	101.8	8.8	1000	1.0	3500	10000	4.9	1000	0.55	3500	10000	
C 51 3_113.6	113.6	7.9	1000	0.89	3500	10000	4.4	1000	0.50	3500	10000	
C 51 3_124.4	124.4	7.2	1000	0.81	3500	10000	4.0	1000	0.45	3500	10000	
C 51 3_134.6	134.6	6.7	1000	0.75	3500	10000	3.7	1000	0.42	3500	10000	
C 51 3_147.4	147.4	6.1	1000	0.69	3500	10000	3.4	1000	0.38	3500	10000	
C 51 3_160.5	160.5	5.6	1000	0.63	3500	10000	3.1	1000	0.35	3500	10000	
C 51 3_175.8	175.8	5.1	1000	0.58	3500	10000	2.8	1000	0.32	3500	10000	
C 51 3_197.9	197.9	4.5	1000	0.51	3500	10000	2.5	1000	0.28	3500	10000	
C 51 3_216.7	216.7	4.2	1000	0.47	3500	10000	2.3	1000	0.26	3500	10000	
C 51 4_240.9	240.9	3.7	1000	0.43	2200	10000	2.1	1000	0.24	2200	10000	
C 51 4_263.8	263.8	3.4	1000	0.39	2200	10000	1.9	1000	0.22	2200	10000	
C 51 4_297.8	297.8	3.0	1000	0.35	2200	10000	1.7	1000	0.19	2200	10000	
C 51 4_326.1	326.1	2.8	1000	0.32	2200	10000	1.5	1000	0.18	2200	10000	
C 51 4_379.6	379.6	2.4	1000	0.27	2200	10000	1.3	1000	0.15	2200	10000	
C 51 4_415.7	415.7	2.2	1000	0.25	2200	10000	1.2	1000	0.14	2200	10000	
C 51 4_463.9	463.9	1.9	1000	0.22	2200	10000	1.1	1000	0.12	2200	10000	
C 51 4_508.0	508.0	1.8	1000	0.20	2200	10000	1.0	1000	0.11	2200	10000	
C 51 4_549.7	549.7	1.6	1000	0.19	2200	10000	0.91	1000	0.10	2200	10000	
C 51 4_602.0	602.0	1.5	1000	0.17	2200	10000	0.83	1000	0.10	2200	10000	
C 51 4_655.4	655.4	1.4	1000	0.16	2200	10000	0.76	1000	0.09	2200	10000	
C 51 4_717.7	717.7	1.3	1000	0.14	2200	10000	0.70	1000	0.08	2200	10000	
C 51 4_808.0	808.0	1.1	1000	0.13	2200	10000	0.62	1000	0.07	2200	10000	
C 51 4_884.9	884.9	1.0	1000	0.12	2200	10000	0.57	1000	0.07	2200	10000	

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# C 61 1600 Nm

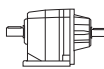

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 61 2_2.8	2.8	1000	445	49	—	4670	500	550	30	770	5930	149
C 61 2_3.7	3.7	757	530	44	—	4950	378	575	24	1730	6600	
C 61 2_4.6	4.6	609	575	39	—	5280	304	600	20	2150	7130	
C 61 2_6.0	6.0	467	575	30	—	6000	233	625	16.1	2700	7950	
C 61 2_6.7	6.7	418	900	41	2230	5600	209	1130	26	2850	7060	
C 61 2_7.5	7.5	373	1000	41	2220	5620	187	1250	26	2900	7110	
C 61 2_8.8	8.8	318	1000	35	2290	6080	159	1250	22	2980	7690	
C 61 2_9.8	9.8	286	1100	35	2380	6140	143	1350	21	3330	7850	
C 61 2_10.9	10.9	257	1050	30	2530	6590	128	1350	19.1	2940	8210	
C 61 2_12.1	12.1	231	1150	29	2670	6670	116	1350	17.2	3600	8730	
C 61 2_14.3	14.3	196	1150	25	2450	7220	98	1350	14.6	3590	9430	
C 61 2_15.9	15.9	176	1250	24	2660	7350	88	1350	13.1	3780	9990	
C 61 2_17.7	17.7	158	1200	21	2540	7850	79	1350	11.8	3700	10400	
C 61 2_19.6	19.6	143	1300	20	2780	8000	71	1350	10.6	3890	11000	
C 61 2_22.4	22.4	125	1250	17.2	2630	8650	63	1350	9.3	3810	11600	
C 61 2_24.8	24.8	113	1350	16.8	2840	8840	56	1350	8.4	3980	12300	
C 61 2_27.4	27.4	102	1300	14.6	2600	9390	51	1350	7.6	3880	12800	
C 61 2_30.4	30.4	92	1350	13.7	2900	9770	46	1350	6.9	4050	13500	
C 61 2_34.2	34.2	82	1165	10.5	3020	10900	41	1225	5.5	4090	14500	
C 61 2_38.0	38.0	74	1280	10.4	3030	11100	37	1350	5.5	4100	14800	
C 61 3_26.8	26.8	104	1140	13.4	3740	9810	52	1435	8.4	4700	12400	
C 61 3_29.4	29.4	95	1160	12.4	3780	10200	48	1465	7.9	4700	12900	
C 61 3_33.0	33.0	85	1210	11.6	3750	10600	42	1525	7.3	4700	13300	
C 61 3_36.1	36.1	78	1235	10.8	3800	11000	39	1555	6.8	4700	13800	
C 61 3_43.4	43.4	65	1315	9.6	3760	11600	32	1600	5.8	4700	14800	
C 61 3_47.6	47.6	59	1340	8.9	3810	12100	29.4	1600	5.3	4700	15500	
C 61 3_53.5	53.5	52	1400	8.2	3760	12500	26.2	1600	4.7	4700	16000	
C 61 3_58.6	58.6	48	1430	7.7	3810	13000	23.9	1600	4.3	4700	16000	
C 61 3_67.7	67.7	41	1505	7.0	3750	13500	20.7	1600	3.7	4700	16000	
C 61 3_74.2	74.2	38	1535	6.5	3800	14100	18.9	1600	3.4	4700	16000	
C 61 3_83.0	83.0	34	1600	6.1	3740	14500	16.9	1600	3.0	4700	16000	
C 61 3_91.0	91.0	31	1600	5.5	3800	15200	15.4	1600	2.8	4700	16000	
C 61 3_103.6	103.6	27.0	1600	4.9	3760	16000	13.5	1600	2.4	4700	16000	
C 61 3_113.6	113.6	24.6	1600	4.4	3820	16000	12.3	1600	2.2	4700	16000	
C 61 3_128.1	128.1	21.9	1600	3.9	3790	16000	10.9	1600	2.0	4700	16000	
C 61 3_140.5	140.5	19.9	1600	3.6	3840	16000	10.0	1600	1.8	4700	16000	
C 61 3_150.0	150.0	18.7	1600	3.4	3800	16000	9.3	1600	1.7	4700	16000	
C 61 3_164.5	164.5	17.0	1600	3.1	3850	16000	8.5	1600	1.5	4700	16000	
C 61 3_178.6	178.6	15.7	1600	2.8	3800	16000	7.8	1600	1.4	4700	16000	
C 61 3_195.8	195.8	14.3	1600	2.6	3860	16000	7.2	1600	1.3	4700	16000	
C 61 4_217.4	217.4	12.9	1600	2.4	3020	16000	6.4	1600	1.2	3500	16000	
C 61 4_238.3	238.3	11.7	1600	2.2	3060	16000	5.9	1600	1.1	3500	16000	
C 61 4_275.3	275.3	10.2	1600	1.9	3100	16000	5.1	1600	0.94	3500	16000	
C 61 4_301.7	301.7	9.3	1600	1.7	3130	16000	4.6	1600	0.85	3500	16000	
C 61 4_337.7	337.7	8.3	1600	1.5	3160	16000	4.1	1600	0.76	3500	16000	
C 61 4_370.1	370.1	7.6	1600	1.4	3180	16000	3.8	1600	0.70	3500	16000	
C 61 4_421.5	421.5	6.6	1600	1.2	3200	16000	3.3	1600	0.61	3500	16000	
C 61 4_462.0	462.0	6.1	1600	1.1	3220	16000	3.0	1600	0.56	3500	16000	
C 61 4_521.1	521.1	5.4	1600	0.99	3240	16000	2.7	1600	0.49	3500	16000	
C 61 4_571.2	571.2	4.9	1600	0.90	3250	16000	2.5	1600	0.45	3500	16000	
C 61 4_610.1	610.1	4.6	1600	0.84	3260	16000	2.3	1600	0.42	3500	16000	
C 61 4_668.8	668.8	4.2	1600	0.77	3280	16000	2.1	1600	0.39	3500	16000	
C 61 4_726.3	726.3	3.9	1600	0.71	3290	16000	1.9	1600	0.35	3500	16000	
C 61 4_796.1	796.1	3.5	1600	0.65	3300	16000	1.8	1600	0.32	3500	16000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)





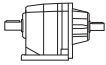

# C 61 1600 Nm

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 61 2_2.8	2.8	321	565	20	2840	7150	179	665	13.1	4050	8790	
C 61 2_3.7	3.7	243	625	16.8	3000	7800	135	665	9.9	4700	9860	
C 61 2_4.6	4.6	196	665	14.3	3170	8380	109	665	8.0	4700	10760	
C 61 2_6.0	6.0	150	665	11.0	4120	9440	83	665	6.1	4700	12000	
C 61 2_6.7	6.7	134	1350	20	2850	8050	75	1350	11.1	4700	10800	
C 61 2_7.5	7.5	120	1350	17.9	4010	8560	67	1350	9.9	4700	11400	
C 61 2_8.8	8.8	102	1350	15.2	4070	9240	57	1350	8.5	4700	12200	
C 61 2_9.8	9.8	92	1350	13.7	4310	9790	51	1350	7.6	4700	12900	
C 61 2_10.9	10.9	83	1350	12.3	4270	10200	46	1350	6.8	4700	13400	
C 61 2_12.1	12.1	74	1350	11.1	4480	10800	41	1350	6.1	4700	14100	
C 61 2_14.3	14.3	63	1350	9.4	4470	11600	35	1350	5.2	4700	15100	
C 61 2_15.9	15.9	57	1350	8.4	4660	12300	31	1350	4.7	4700	15900	
C 61 2_17.7	17.7	51	1350	7.6	4580	12800	28.2	1350	4.2	4700	16000	
C 61 2_19.6	19.6	46	1350	6.8	4700	13500	25.5	1350	3.8	4700	16000	
C 61 2_22.4	22.4	40	1350	6.0	4690	14200	22.3	1350	3.3	4700	16000	
C 61 2_24.8	24.8	36	1350	5.4	4700	14900	20.2	1350	3.0	4700	16000	
C 61 2_27.4	27.4	33	1350	4.9	4700	15500	18.2	1350	2.7	4700	16000	
C 61 2_30.4	30.4	29.6	1350	4.4	4700	16000	16.4	1350	2.4	4700	16000	
C 61 2_34.2	34.2	26.3	1265	3.7	4700	16000	14.6	1325	2.1	4700	16000	
C 61 2_38.0	38.0	23.7	1350	3.5	4700	16000	13.2	1350	2.0	4700	16000	
C 61 3_26.8	26.8	34	1600	6.0	4700	14500	18.7	1600	3.4	4700	16000	
C 61 3_29.4	29.4	31	1600	5.5	4700	15200	17.0	1600	3.1	4700	16000	
C 61 3_33.0	33.0	27.3	1600	4.9	4700	15900	15.2	1600	2.7	4700	16000	
C 61 3_36.1	36.1	24.9	1600	4.5	4700	16000	13.9	1600	2.5	4700	16000	
C 61 3_43.4	43.4	20.7	1600	3.7	4700	16000	11.5	1600	2.1	4700	16000	
C 61 3_47.6	47.6	18.9	1600	3.4	4700	16000	10.5	1600	1.9	4700	16000	
C 61 3_53.5	53.5	16.8	1600	3.0	4700	16000	9.3	1600	1.7	4700	16000	
C 61 3_58.6	58.6	15.4	1600	2.8	4700	16000	8.5	1600	1.5	4700	16000	
C 61 3_67.7	67.7	13.3	1600	2.4	4700	16000	7.4	1600	1.3	4700	16000	
C 61 3_74.2	74.2	12.1	1600	2.2	4700	16000	6.7	1600	1.2	4700	16000	
C 61 3_83.0	83.0	10.8	1600	2.0	4700	16000	6.0	1600	1.1	4700	16000	
C 61 3_91.0	91.0	9.9	1600	1.8	4700	16000	5.5	1600	0.99	4700	16000	
C 61 3_103.6	103.6	8.7	1600	1.6	4700	16000	4.8	1600	0.87	4700	16000	
C 61 3_113.6	113.6	7.9	1600	1.4	4700	16000	4.4	1600	0.79	4700	16000	
C 61 3_128.1	128.1	7.0	1600	1.3	4700	16000	3.9	1600	0.70	4700	16000	
C 61 3_140.5	140.5	6.4	1600	1.2	4700	16000	3.6	1600	0.64	4700	16000	
C 61 3_150.0	150.0	6.0	1600	1.1	4700	16000	3.3	1600	0.60	4700	16000	
C 61 3_164.5	164.5	5.5	1600	0.99	4700	16000	3.0	1600	0.55	4700	16000	
C 61 3_178.6	178.6	5.0	1600	0.91	4700	16000	2.8	1600	0.50	4700	16000	
C 61 3_195.8	195.8	4.6	1600	0.83	4700	16000	2.6	1600	0.46	4700	16000	
C 61 4_217.4	217.4	4.1	1600	0.76	3500	16000	2.3	1600	0.42	3500	16000	
C 61 4_238.3	238.3	3.8	1600	0.70	3500	16000	2.1	1600	0.39	3500	16000	
C 61 4_275.3	275.3	3.3	1600	0.60	3500	16000	1.8	1600	0.33	3500	16000	
C 61 4_301.7	301.7	3.0	1600	0.55	3500	16000	1.7	1600	0.31	3500	16000	
C 61 4_337.7	337.7	2.7	1600	0.49	3500	16000	1.5	1600	0.27	3500	16000	
C 61 4_370.1	370.1	2.4	1600	0.45	3500	16000	1.4	1600	0.25	3500	16000	
C 61 4_421.5	421.5	2.1	1600	0.39	3500	16000	1.2	1600	0.22	3500	16000	
C 61 4_462.0	462.0	1.9	1600	0.36	3500	16000	1.1	1600	0.20	3500	16000	
C 61 4_521.1	521.1	1.7	1600	0.32	3500	16000	1.0	1600	0.18	3500	16000	
C 61 4_571.2	571.2	1.6	1600	0.29	3500	16000	0.88	1600	0.16	3500	16000	
C 61 4_610.1	610.1	1.5	1600	0.27	3500	16000	0.82	1600	0.15	3500	16000	
C 61 4_668.8	668.8	1.3	1600	0.25	3500	16000	0.75	1600	0.14	3500	16000	
C 61 4_726.3	726.3	1.2	1600	0.23	3500	16000	0.69	1600	0.13	3500	16000	
C 61 4_796.1	796.1	1.1	1600	0.21	3500	16000	0.63	1600	0.12	3500	16000	



# C 70

# 2300 Nm

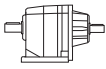

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
C 70 2_4.6	4.6	613	1400	95	—	5590	306	1700	57	—	7100	
C 70 2_5.9	5.9	479	1550	82	—	5610	239	1900	50	—	6990	
C 70 2_6.3	6.3	448	1600	79	1980	6570	224	1950	48	2630	8250	
C 70 2_7.5	7.5	375	1550	64	—	7130	188	1950	40	—	8400	
C 70 2_8.0	8.0	350	1750	68	1760	6840	175	2100	41	2670	8880	
C 70 2_9.5	9.5	294	1600	52	770	8260	147	2000	32	620	9910	
C 70 2_10.2	10.2	274	1900	57	2000	7200	137	2100	32	4470	10800	
C 70 2_11.2	11.2	250	1600	44	1130	9350	125	2000	28	1070	11300	
C 70 2_13.0	13.0	215	2050	49	1860	7700	107	2100	25	5600	12900	
C 70 2_14.1	14.1	199	1700	37	1100	10100	99	2100	23	1280	12400	
C 70 2_15.3	15.3	183	2100	42	1810	8540	91	2100	21	5860	14300	
C 70 2_16.7	16.7	168	1700	31	1570	11400	84	2050	18.9	2350	14300	
C 70 2_19.3	19.3	145	2100	34	2730	10400	73	2100	16.8	6000	16300	
C 70 2_22.9	22.9	123	2100	28	3160	11800	61	2100	14.2	6060	18000	
C 70 2_27.7	27.7	101	2100	23	3570	13400	51	2100	11.7	6120	19900	
C 70 2_34.7	34.7	81	2100	18.7	3960	15400	40	2100	9.3	6180	22200	
C 70 3_41.3	41.3	68	1900	14.5	5670	18400	34	2300	8.8	7000	22800	
C 70 3_44.7	44.7	63	1900	13.4	5700	19100	31	2300	8.1	7000	23800	
C 70 3_52.2	52.2	54	2050	12.4	5680	19600	26.8	2300	7.0	7000	25000	
C 70 3_56.5	56.5	50	2050	11.4	5710	20400	24.8	2300	6.4	7000	25000	
C 70 3_65.9	65.9	43	2200	10.5	5670	21000	21.3	2300	5.5	7000	25000	
C 70 3_71.3	71.3	39	2200	9.7	5710	21900	19.6	2300	5.1	7000	25000	
C 70 3_81.4	81.4	34	2300	8.9	5680	22700	17.2	2300	4.5	7000	25000	
C 70 3_88.2	88.2	32	2300	8.2	5710	23600	15.9	2300	4.1	7000	25000	
C 70 3_103.8	103.8	27.0	2300	7.0	5700	25000	13.5	2300	3.5	7000	25000	
C 70 3_112.4	112.4	24.9	2300	6.4	5740	25000	12.5	2300	3.2	7000	25000	
C 70 3_126.8	126.8	22.1	2300	5.7	5720	25000	11.0	2300	2.9	7000	25000	
C 70 3_137.4	137.4	20.4	2300	5.3	5750	25000	10.2	2300	2.6	7000	25000	
C 70 3_150.3	150.3	18.6	2300	4.8	5730	25000	9.3	2300	2.4	7000	25000	
C 70 3_162.8	162.8	17.2	2300	4.5	5760	25000	8.6	2300	2.2	7000	25000	
C 70 3_179.2	179.2	15.6	2300	4.0	5740	25000	7.8	2300	2.0	7000	25000	
C 70 3_194.1	194.1	14.4	2300	3.7	5770	25000	7.2	2300	1.9	7000	25000	
C 70 3_220.9	220.9	12.7	2250	3.2	5750	25000	6.3	2250	1.6	7000	25000	
C 70 3_239.3	239.3	11.7	2300	3.0	5770	25000	5.8	2300	1.5	7000	25000	
C 70 4_251.3	251.3	11.1	2300	2.9	2000	25000	5.6	2300	1.5	2620	25000	
C 70 4_272.2	272.2	10.3	2300	2.7	2030	25000	5.1	2300	1.4	2650	25000	
C 70 4_317.9	317.9	8.8	2300	2.3	2030	25000	4.4	2300	1.2	2650	25000	
C 70 4_344.3	344.3	8.1	2300	2.2	2050	25000	4.1	2300	1.1	2670	25000	
C 70 4_409.4	409.4	6.8	2300	1.8	2050	25000	3.4	2300	0.90	2670	25000	
C 70 4_443.5	443.5	6.3	2300	1.7	2070	25000	3.2	2300	0.80	2700	25000	
C 70 4_512.0	512.0	5.5	2300	1.4	2070	25000	2.7	2300	0.70	2680	25000	
C 70 4_554.7	554.7	5.0	2300	1.3	2090	25000	2.5	2300	0.70	2710	25000	
C 70 4_606.8	606.8	4.6	2300	1.2	2080	25000	2.3	2300	0.60	2700	25000	
C 70 4_657.3	657.3	4.3	2300	1.1	2100	25000	2.1	2300	0.60	2720	25000	
C 70 4_736.0	736.0	3.8	2300	1.0	2090	25000	1.9	2300	0.50	2700	25000	
C 70 4_797.3	797.3	3.5	2300	0.90	2110	25000	1.8	2300	0.50	2720	25000	
C 70 4_922.6	922.6	3.0	2300	0.80	2100	25000	1.5	2300	0.40	2710	25000	
C 70 4_999.5	999.5	2.8	2300	0.70	2110	25000	1.4	2300	0.40	2730	25000	
C 70 4_1069	1069	2.6	2300	0.70	2100	25000	1.3	2300	0.30	2720	25000	
C 70 4_1158	1158	2.4	2300	0.60	2100	25000	1.2	2300	0.30	2800	25000	
C 70 4_1362	1362	2.1	2300	0.50	2100	25000	1.0	2300	0.30	2800	25000	
C 70 4_1476	1476	1.9	2300	0.50	2100	25000	0.90	2300	0.30	2800	25000	

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(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# C 70 2300 Nm

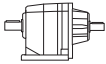

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
<b>C 70 2_4.6</b>	4.6	197	1800	39	650	9360	109	1800	22	5500	13900	
<b>C 70 2_5.9</b>	5.9	154	1950	33	560	9980	85	2150	20	2890	13400	
<b>C 70 2_6.3</b>	6.3	144	2100	33	4260	10400	80	2100	18.5	7000	15500	
<b>C 70 2_7.5</b>	7.5	121	2100	28	1120	10800	67	2150	15.9	5400	15600	
<b>C 70 2_8.0</b>	8.0	113	2100	26	5800	12500	63	2100	14.5	7000	17800	
<b>C 70 2_9.5</b>	9.5	95	2150	22	2140	12400	53	2150	12.4	6990	18100	
<b>C 70 2_10.2</b>	10.2	88	2100	20	6870	14600	49	2100	11.3	7000	20200	
<b>C 70 2_11.2</b>	11.2	80	2150	19.0	2620	14000	45	2150	10.6	7000	19800	
<b>C 70 2_13.0</b>	13.0	69	2100	16.0	7000	16900	38	2100	8.9	7000	22800	
<b>C 70 2_14.1</b>	14.1	64	2150	15.1	3900	16000	35	2150	8.4	7000	22300	
<b>C 70 2_15.3</b>	15.3	59	2100	13.6	7000	18400	33	2100	7.5	7000	24600	
<b>C 70 2_16.7</b>	16.7	54	2050	12.2	5470	18500	29.9	2050	6.8	7000	25000	
<b>C 70 2_19.3</b>	19.3	47	2100	10.8	7000	20700	25.9	2100	6.0	7000	25000	
<b>C 70 2_22.9</b>	22.9	39	2100	9.1	7000	22500	21.9	2100	5.1	7000	25000	
<b>C 70 2_27.7</b>	27.7	32	2100	7.5	7000	24600	18.0	2100	4.2	7000	25000	
<b>C 70 2_34.7</b>	34.7	25.9	2100	6.0	7000	25000	14.4	2100	3.3	7000	25000	
<b>C 70 3_41.3</b>	41.3	21.8	2300	5.6	7000	25000	12.1	2300	3.1	7000	25000	
<b>C 70 3_44.7</b>	44.7	20.1	2300	5.2	7000	25000	11.2	2300	2.9	7000	25000	
<b>C 70 3_52.2</b>	52.2	17.3	2300	4.5	7000	25000	9.6	2300	2.5	7000	25000	
<b>C 70 3_56.5</b>	56.5	15.9	2300	4.1	7000	25000	8.8	2300	2.3	7000	25000	
<b>C 70 3_65.9</b>	65.9	13.7	2300	3.5	7000	25000	7.6	2300	2.0	7000	25000	
<b>C 70 3_71.3</b>	71.3	12.6	2300	3.3	7000	25000	7.0	2300	1.8	7000	25000	
<b>C 70 3_81.4</b>	81.4	11.1	2300	2.9	7000	25000	6.1	2300	1.6	7000	25000	
<b>C 70 3_88.2</b>	88.2	10.2	2300	2.6	7000	25000	5.7	2300	1.5	7000	25000	
<b>C 70 3_103.8</b>	103.8	8.7	2300	2.2	7000	25000	4.8	2300	1.2	7000	25000	
<b>C 70 3_112.4</b>	112.4	8.0	2300	2.1	7000	25000	4.4	2300	1.2	7000	25000	
<b>C 70 3_126.8</b>	126.8	7.1	2300	1.8	7000	25000	3.9	2300	1.0	7000	25000	
<b>C 70 3_137.4</b>	137.4	6.6	2300	1.7	7000	25000	3.6	2300	0.90	7000	25000	
<b>C 70 3_150.3</b>	150.3	6.0	2300	1.6	7000	25000	3.3	2300	0.90	7000	25000	
<b>C 70 3_162.8</b>	162.8	5.5	2300	1.4	7000	25000	3.1	2300	0.80	7000	25000	
<b>C 70 3_179.2</b>	179.2	5.0	2300	1.3	7000	25000	2.8	2300	0.70	7000	25000	
<b>C 70 3_194.1</b>	194.1	4.6	2300	1.2	7000	25000	2.6	2300	0.70	7000	25000	
<b>C 70 3_220.9</b>	220.9	4.1	2250	1.0	7000	25000	2.3	2250	0.60	7000	25000	
<b>C 70 3_239.3</b>	239.3	3.8	2300	1.0	7000	25000	2.1	2300	0.50	7000	25000	
<b>C 70 4_251.3</b>	251.3	3.6	2300	0.90	2000	25000	2.0	2300	0.50	2620	25000	
<b>C 70 4_272.2</b>	272.2	3.3	2300	0.90	2030	25000	1.8	2300	0.50	2650	25000	
<b>C 70 4_317.9</b>	317.9	2.8	2300	0.70	2030	25000	1.6	2300	0.40	2650	25000	
<b>C 70 4_344.3</b>	344.3	2.6	2300	0.70	2050	25000	1.5	2300	0.40	2670	25000	
<b>C 70 4_409.4</b>	409.4	2.2	2300	0.60	2050	25000	1.2	2300	0.30	2670	25000	
<b>C 70 4_443.5</b>	443.5	2.0	2300	0.50	2070	25000	1.1	2300	0.30	2700	25000	
<b>C 70 4_512.0</b>	512.0	1.8	2300	0.50	2070	25000	1.0	2300	0.30	2680	25000	
<b>C 70 4_554.7</b>	554.7	1.6	2300	0.40	2090	25000	0.90	2300	0.20	2710	25000	
<b>C 70 4_606.8</b>	606.8	1.5	2300	0.40	2080	25000	0.80	2300	0.20	2700	25000	
<b>C 70 4_657.3</b>	657.3	1.4	2300	0.40	2100	25000	0.80	2300	0.20	2720	25000	
<b>C 70 4_736.0</b>	736.0	1.2	2300	0.30	2090	25000	0.70	2300	0.20	2700	25000	
<b>C 70 4_797.3</b>	797.3	1.1	2300	0.30	2110	25000	0.60	2300	0.20	2720	25000	
<b>C 70 4_922.6</b>	922.6	1.0	2300	0.30	2100	25000	0.50	2300	0.10	2710	25000	
<b>C 70 4_999.5</b>	999.5	0.90	2300	0.20	2110	25000	0.50	2300	0.10	2730	25000	
<b>C 70 4_1069</b>	1069	0.80	2300	0.20	2100	25000	0.50	2300	0.10	2720	25000	
<b>C 70 4_1158</b>	1158	0.80	2300	0.20	2100	25000	0.40	2300	0.10	2800	25000	
<b>C 70 4_1362</b>	1362	0.70	2300	0.20	2100	25000	0.40	2300	0.10	2800	25000	
<b>C 70 4_1476</b>	1476	0.60	2300	0.20	2100	25000	0.30	2300	0.10	2800	25000	

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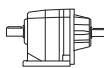

# C 80

# 4000 Nm

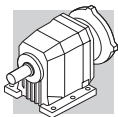
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		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
C 80 2_5.6	5.6	496	2400	131	370	10900	248	3100	85	690	12300	155
C 80 2_6.1	6.1	458	2450	124	890	11000	229	3150	80	1380	12700	
C 80 2_7.0	7.0	398	2650	116	350	11000	199	3350	73	910	12900	
C 80 2_7.6	7.6	367	2700	109	890	11300	183	3400	69	1600	13300	
C 80 2_8.9	8.9	316	2800	98	420	12100	158	3500	61	1120	14500	
C 80 2_9.6	9.6	292	3000	96	520	11300	146	3700	59	1380	13900	
C 80 2_11.1	11.1	252	2800	78	1110	14200	126	3500	49	1950	17100	
C 80 2_12.0	12.0	233	3000	77	1200	13500	116	3700	48	2190	16600	
C 80 2_13.8	13.8	203	2800	63	1420	16400	102	3500	39	2330	19800	
C 80 2_14.9	14.9	188	3000	62	1510	15800	94	3700	38	2560	19300	
C 80 2_16.7	16.7	168	2800	52	1840	18500	84	3500	32	2840	22300	
C 80 2_18.1	18.1	155	3000	50	1930	17900	78	3700	32	3060	22000	
C 80 2_20.5	20.5	136	2850	43	2000	20500	68	3550	27	3060	24800	
C 80 2_22.2	22.2	126	3000	42	2210	20300	63	3700	26	3400	24900	
C 80 2_24.0	24.0	117	2850	37	2090	22400	58	3550	23	3180	27000	
C 80 2_25.9	25.9	108	3000	36	2300	22300	54	3700	22	3510	27200	
C 80 2_31.3	31.3	89	3000	30	2480	24700	45	3700	18.2	3730	30000	
C 80 2_39.1	39.1	72	2500	19.7	3820	31000	36	3200	12.6	5060	35000	
C 80 3_43.5	43.5	64	3100	23	5610	28700	32	3800	13.8	7000	34800	
C 80 3_47.4	47.4	59	3100	21	5660	30000	29.5	3800	12.6	7000	35000	
C 80 3_57.3	57.3	49	3400	18.7	5620	30500	24.4	4000	11.0	7000	35000	
C 80 3_62.5	62.5	45	3400	17.1	5670	31800	22.4	4000	10.1	7000	35000	
C 80 3_70.5	70.5	40	3650	16.3	5620	32200	19.9	4000	8.9	7000	35000	
C 80 3_76.9	76.9	36	3600	14.8	5670	33900	18.2	4000	8.2	7000	35000	
C 80 3_89.3	89.3	31	3900	13.8	5620	34700	15.7	4000	7.1	7000	35000	
C 80 3_97.4	97.4	28.7	3900	12.6	5670	35000	14.4	4000	6.5	7000	35000	
C 80 3_109.5	109.5	25.5	4000	11.5	5630	35000	12.8	4000	5.8	7000	35000	
C 80 3_119.5	119.5	23.4	4000	10.6	5680	35000	11.7	4000	5.3	7000	35000	
C 80 3_136.7	136.7	20.5	4000	9.2	5660	35000	10.2	4000	4.6	7000	35000	
C 80 3_149.1	149.1	18.8	4000	8.5	5700	35000	9.4	4000	4.2	7000	35000	
C 80 3_169.0	169.0	16.6	4000	7.5	5680	35000	8.3	4000	3.7	7000	35000	
C 80 3_184.4	184.4	15.2	4000	6.8	5720	35000	7.6	4000	3.4	7000	35000	
C 80 3_197.9	197.9	14.2	3800	6.1	5710	35000	7.1	3800	3.0	7000	35000	
C 80 3_215.8	215.8	13.0	4000	5.8	5730	35000	6.5	4000	2.9	7000	35000	
C 80 4_261.9	261.9	10.7	4000	4.9	1850	35000	5.3	4000	2.5	2470	35000	
C 80 4_285.7	285.7	9.8	4000	4.5	1890	35000	4.9	4000	2.3	2510	35000	
C 80 4_334.3	334.3	8.4	4000	3.9	1880	35000	4.2	4000	1.9	2500	35000	
C 80 4_364.7	364.7	7.7	4000	3.5	1920	35000	3.8	4000	1.8	2540	35000	
C 80 4_417.5	417.5	6.7	4000	3.1	1910	35000	3.4	4000	1.5	2530	35000	
C 80 4_455.4	455.4	6.1	4000	2.8	1950	35000	3.1	4000	1.4	2570	35000	
C 80 4_529.3	529.3	5.3	4000	2.4	1940	35000	2.6	4000	1.2	2550	35000	
C 80 4_577.4	577.4	4.8	4000	2.2	1970	35000	2.4	4000	1.1	2590	35000	
C 80 4_664.3	664.3	4.2	4000	1.9	1960	35000	2.1	4000	1.0	2570	35000	
C 80 4_724.7	724.7	3.9	4000	1.8	1990	35000	1.9	4000	0.90	2610	35000	
C 80 4_783.4	783.4	3.6	4000	1.6	1970	35000	1.8	4000	0.80	2590	35000	
C 80 4_854.6	854.6	3.3	4000	1.5	2000	35000	1.6	4000	0.80	2620	35000	
C 80 4_945.7	945.7	3.0	4000	1.4	1980	35000	1.5	4000	0.70	2600	35000	
C 80 4_1032	1032	2.7	4000	1.2	2010	35000	1.4	4000	0.60	2630	35000	
C 80 4_1168	1168	2.4	4000	1.1	1980	35000	1.2	4000	0.60	2600	35000	
C 80 4_1274	1274	2.2	4000	1.0	2020	35000	1.1	4000	0.50	2640	35000	
C 80 4_1358	1358	2.1	4000	0.90	1990	35000	1.0	4000	0.50	2610	35000	
C 80 4_1481	1481	1.9	4000	0.90	2030	35000	0.90	4000	0.40	2640	35000	



# C 80 4000 Nm

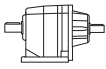

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 80 2_5.6	5.6	160	3500	62	1480	14400	89	3500	34	4970	21600	
C 80 2_6.1	6.1	147	3600	58	2100	14400	82	3700	33	5270	21200	
C 80 2_7.0	7.0	128	3500	49	2630	17000	71	3500	27	6130	24600	
C 80 2_7.6	7.6	118	3650	47	3060	16800	66	3650	26	6550	24600	
C 80 2_8.9	8.9	102	3500	39	3330	19900	56	3500	22	6800	27800	
C 80 2_9.6	9.6	94	3700	38	3590	19400	52	3700	21	7000	27700	
C 80 2_11.1	11.1	81	3500	31	4160	22800	45	3500	17.4	7000	31200	
C 80 2_12.0	12.0	75	3700	31	4400	22500	42	3700	17.0	7000	31200	
C 80 2_13.8	13.8	65	3500	25	4540	25700	36	3500	14.0	7000	34700	
C 80 2_14.9	14.9	60	3700	25	4770	25500	34	3700	13.7	7000	34700	
C 80 2_16.7	16.7	54	3500	21	5050	28500	30	3500	11.6	7000	35000	
C 80 2_18.1	18.1	50	3700	20	5280	28400	27.7	3700	11.3	7000	35000	
C 80 2_20.5	20.5	44	3550	17.2	5270	31400	24.4	3550	9.5	7000	35000	
C 80 2_22.2	22.2	40	3700	16.5	5610	31600	22.5	3700	9.2	7000	35000	
C 80 2_24.0	24.0	38	3550	14.7	5390	33800	20.9	3550	8.2	7000	35000	
C 80 2_25.9	25.9	35	3700	14.1	5730	34200	19.3	3700	7.9	7000	35000	
C 80 2_31.3	31.3	28.7	3700	11.7	5940	35000	16.0	3700	6.5	7000	35000	
C 80 2_39.1	39.1	23.0	3200	8.1	7000	35000	12.8	3200	4.5	7000	35000	
C 80 3_43.5	43.5	20.7	4000	9.3	7000	35000	11.5	4000	5.2	7000	35000	
C 80 3_47.4	47.4	19.0	4000	8.5	7000	35000	10.5	4000	4.7	7000	35000	
C 80 3_57.3	57.3	15.7	4000	7.1	7000	35000	8.7	4000	3.9	7000	35000	
C 80 3_62.5	62.5	14.4	4000	6.5	7000	35000	8.0	4000	3.6	7000	35000	
C 80 3_70.5	70.5	12.8	4000	5.7	7000	35000	7.1	4000	3.2	7000	35000	
C 80 3_76.9	76.9	11.7	4000	5.3	7000	35000	6.5	4000	2.9	7000	35000	
C 80 3_89.3	89.3	10.1	4000	4.5	7000	35000	5.6	4000	2.5	7000	35000	
C 80 3_97.4	97.4	9.2	4000	4.2	7000	35000	5.1	4000	2.3	7000	35000	
C 80 3_109.5	109.5	8.2	4000	3.7	7000	35000	4.6	4000	2.1	7000	35000	
C 80 3_119.5	119.5	7.5	4000	3.4	7000	35000	4.2	4000	1.9	7000	35000	
C 80 3_136.7	136.7	6.6	4000	3.0	7000	35000	3.7	4000	1.6	7000	35000	
C 80 3_149.1	149.1	6.0	4000	2.7	7000	35000	3.4	4000	1.5	7000	35000	
C 80 3_169.0	169.0	5.3	4000	2.4	7000	35000	3.0	4000	1.3	7000	35000	
C 80 3_184.4	184.4	4.9	4000	2.2	7000	35000	2.7	4000	1.2	7000	35000	
C 80 3_197.9	197.9	4.5	3800	1.9	7000	35000	2.5	3800	1.1	7000	35000	
C 80 3_215.8	215.8	4.2	4000	1.9	7000	35000	2.3	4000	1.0	7000	35000	
C 80 4_261.9	261.9	3.4	4000	1.6	2950	35000	1.9	4000	0.90	3500	35000	
C 80 4_285.7	285.7	3.2	4000	1.4	2990	35000	1.8	4000	0.80	3500	35000	
C 80 4_334.3	334.3	2.7	4000	1.2	2980	35000	1.5	4000	0.70	3500	35000	
C 80 4_364.7	364.7	2.5	4000	1.1	3020	35000	1.4	4000	0.60	3500	35000	
C 80 4_417.5	417.5	2.2	4000	1.0	3000	35000	1.2	4000	0.60	3500	35000	
C 80 4_455.4	455.4	2.0	4000	0.90	3050	35000	1.1	4000	0.50	3500	35000	
C 80 4_529.3	529.3	1.7	4000	0.80	3030	35000	0.90	4000	0.40	3500	35000	
C 80 4_577.4	577.4	1.6	4000	0.70	3070	35000	0.90	4000	0.40	3500	35000	
C 80 4_664.3	664.3	1.4	4000	0.60	3050	35000	0.80	4000	0.30	3500	35000	
C 80 4_724.7	724.7	1.2	4000	0.60	3090	35000	0.70	4000	0.30	3500	35000	
C 80 4_783.4	783.4	1.1	4000	0.50	3060	35000	0.60	4000	0.30	3500	35000	
C 80 4_854.6	854.6	1.1	4000	0.50	3100	35000	0.60	4000	0.30	3500	35000	
C 80 4_945.7	945.7	1.0	4000	0.40	3070	35000	0.50	4000	0.20	3500	35000	
C 80 4_1032	1032	0.90	4000	0.40	3110	35000	0.50	4000	0.20	3500	35000	
C 80 4_1168	1168	0.80	4000	0.40	3080	35000	0.40	4000	0.20	3500	35000	
C 80 4_1274	1274	0.70	4000	0.30	3110	35000	0.40	4000	0.20	3500	35000	
C 80 4_1358	1358	0.70	4000	0.30	3090	35000	0.40	4000	0.20	3500	35000	
C 80 4_1481	1481	0.60	4000	0.30	3120	35000	0.30	4000	0.20	3500	35000	

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# C 90

# 7200 Nm

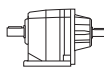

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 90 2_5.2	5.2	542	3500	209	1700	12800	271	4300	128	2170	15800	
C 90 2_5.6	5.6	500	3600	198	3240	12800	250	4400	121	4250	16000	
C 90 2_6.8	6.8	414	3850	176	1860	13400	207	4750	108	2210	16400	
C 90 2_7.3	7.3	383	3950	167	3470	13500	191	4850	102	4360	16700	
C 90 2_8.3	8.3	336	4150	154	2010	13800	168	5100	94	2540	17100	
C 90 2_9.0	9.0	310	4250	145	3660	14000	155	5200	89	4720	17500	
C 90 2_10.4	10.4	270	4500	134	990	14200	135	5550	83	1150	17400	
C 90 2_11.2	11.2	249	4600	126	2750	14400	125	5650	78	3460	17800	
C 90 2_12.8	12.8	219	4850	117	580	14700	109	5950	72	840	18200	
C 90 2_13.9	13.9	202	4900	109	2700	15300	101	6050	67	3220	18700	
C 90 2_16.0	16.0	175	5050	98	690	16800	88	6200	60	950	20800	
C 90 2_17.3	17.3	162	5300	94	1670	15900	81	6500	58	2200	19800	
C 90 2_18.7	18.7	150	5050	83	1140	19600	75	6200	51	1500	24300	
C 90 2_20.2	20.2	138	5400	82	1540	17900	69	6600	50	2160	22500	
C 90 2_22.9	22.9	122	5050	68	2110	22400	61	6200	42	2700	27600	
C 90 2_24.8	24.8	113	5400	67	2500	21900	56	6600	41	3340	27300	
C 90 2_27.2	27.2	103	4500	51	6160	26000	52	5500	31	7820	32200	
C 90 2_29.4	29.4	95	4800	50	6560	26000	48	5900	31	8130	32000	
C 90 2_35.1	35.1	80	4400	39	8090	29400	40	5400	24	11100	36300	
C 90 3_39.4	39.4	71	6350	51	10800	23900	36	7100	28	13700	32900	
C 90 3_43.0	43.0	65	6500	48	10800	24700	33	7200	26	13800	34000	
C 90 3_50.3	50.3	56	6800	43	10800	26000	27.8	7100	22	13800	37000	
C 90 3_54.9	54.9	51	7000	40	10900	26500	25.5	7200	21	13900	38300	
C 90 3_59.2	59.2	47	7100	38	10800	27700	23.6	7100	18.9	13900	40000	
C 90 3_64.6	64.6	43	7200	35	10900	29100	21.7	7200	17.6	14000	41300	
C 90 3_74.4	74.4	38	7100	30	10900	31900	18.8	7100	15.0	14000	44400	
C 90 3_81.2	81.2	34	7200	28	10900	33000	17.2	7200	14.0	14100	45900	
C 90 3_88.2	88.2	32	7100	25	11000	34800	15.9	7100	12.7	14000	47900	
C 90 3_96.2	96.2	29.1	7200	24	11000	35900	14.5	7200	11.8	14100	49400	
C 90 3_107.0	107.0	26.2	7100	21	11000	38100	13.1	7100	10.5	14100	52100	
C 90 3_116.7	116.7	24.0	7200	19.4	11000	39400	12.0	7200	9.7	14100	53700	
C 90 3_134.1	134.1	20.9	7100	16.7	11000	42400	10.4	7100	8.3	14100	57300	
C 90 3_146.3	146.3	19.1	7200	15.5	11000	43800	9.6	7200	7.8	14200	59000	
C 90 3_157.8	157.8	17.7	7100	14.2	11000	45600	8.9	7100	7.1	14100	60000	
C 90 3_172.1	172.1	16.3	7200	13.2	11000	47100	8.1	7200	6.6	14200	60000	
C 90 4_212.4	212.4	13.2	7200	10.9	—	60000	6.6	7200	5.5	1180	60000	
C 90 4_231.7	231.7	12.1	7200	10.0	—	60000	6.0	7200	5.0	1560	60000	
C 90 4_268.5	268.5	10.4	7200	8.6	—	60000	5.2	7200	4.3	1540	60000	
C 90 4_292.9	292.9	9.6	7200	7.9	—	60000	4.8	7200	4.0	1880	60000	
C 90 4_339.0	339.0	8.3	7200	6.8	—	60000	4.1	7200	3.4	1720	60000	
C 90 4_369.8	369.8	7.6	7200	6.3	—	60000	3.8	7200	3.1	2050	60000	
C 90 4_419.0	419.0	6.7	7200	5.5	—	60000	3.3	7200	2.8	1890	60000	
C 90 4_457.1	457.1	6.1	7200	5.1	—	60000	3.1	7200	2.5	2210	60000	
C 90 4_534.2	534.2	5.2	7200	4.3	—	60000	2.6	7200	2.2	2090	60000	
C 90 4_582.8	582.8	4.8	7200	4.0	—	60000	2.4	7200	2.0	2270	60000	
C 90 4_652.8	652.8	4.3	7200	3.6	—	60000	2.1	7200	1.8	2160	60000	
C 90 4_712.2	712.2	3.9	7200	3.3	—	60000	2.0	7200	1.6	2290	60000	
C 90 4_773.6	773.6	3.3	7200	3.0	—	60000	1.8	7200	1.5	2250	60000	
C 90 4_844.0	844.0	3.0	7200	2.7	—	60000	1.7	7200	1.4	2310	60000	
C 90 4_922.3	922.3	2.8	7200	2.5	—	60000	1.5	7200	1.3	2260	60000	
C 90 4_1006	1006	2.5	7200	2.3	—	60000	1.4	7200	1.2	2320	60000	
C 90 4_1137	1137	2.3	7200	2.0	—	60000	1.2	7200	1.0	2270	60000	
C 90 4_1240	1240	2.2	7200	1.9	—	60000	1.1	7200	0.90	2230	60000	

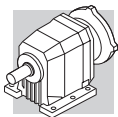
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(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# C 90 7200 Nm

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
C 90 2_5.2	5.2	174	4900	94	2560	18200	97	5850	62	3010	21600	158
C 90 2_5.6	5.6	161	5050	89	4640	18100	89	6000	59	5720	21800	
C 90 2_6.8	6.8	133	5450	80	2310	18500	74	6200	51	5130	24600	
C 90 2_7.3	7.3	123	5550	75	4890	18900	68	6550	49	6340	23200	
C 90 2_8.3	8.3	108	5850	70	2700	19300	60	6200	41	8870	27800	
C 90 2_9.0	9.0	100	5950	65	5300	19800	55	6600	40	9660	27600	
C 90 2_10.4	10.4	87	6200	59	2250	21000	48	6200	33	11000	31000	
C 90 2_11.2	11.2	80	6450	57	3960	20400	45	6600	32	11700	30800	
C 90 2_12.8	12.8	70	6250	48	4500	25300	39	6250	27	13200	34100	
C 90 2_13.9	13.9	65	6550	47	5830	24400	36	6550	26	14600	34300	
C 90 2_16.0	16.0	56	6200	38	6570	28700	31	6200	21	15000	38000	
C 90 2_17.3	17.3	52	6550	38	7530	28600	28.9	6550	21	15000	38100	
C 90 2_18.7	18.7	48	6200	33	7120	31000	26.7	6200	18.3	15000	40700	
C 90 2_20.2	20.2	44	6600	32	7780	30800	24.8	6600	18.0	15000	40700	
C 90 2_22.9	22.9	39	6200	27	8310	34200	21.8	6200	14.9	15000	44500	
C 90 2_24.8	24.8	36	6600	26	8950	34100	20.2	6600	14.6	15000	44600	
C 90 2_27.2	27.2	33	5500	20	13400	39200	18.4	5500	11.2	15000	50000	
C 90 2_29.4	29.4	31	5900	19.9	13700	39100	17.0	5900	11.0	15000	50200	
C 90 2_35.1	35.1	25.6	5400	15.3	14100	43800	14.2	5400	8.5	15000	55500	
C 90 3_39.4	39.4	22.8	7100	18.3	15000	40600	12.7	7100	10.1	15000	40600	
C 90 3_43.0	43.0	20.9	7200	17.0	15000	42000	11.6	7200	9.4	15000	42000	
C 90 3_50.3	50.3	17.9	7100	14.3	15000	45400	9.9	7100	7.9	15000	45400	
C 90 3_54.9	54.9	16.4	7200	13.3	15000	46900	9.1	7200	7.4	15000	46900	
C 90 3_59.2	59.2	15.2	7100	12.2	15000	48800	8.4	7100	6.8	15000	48800	
C 90 3_64.6	64.6	13.9	7200	11.3	15000	50400	7.7	7200	6.3	15000	50400	
C 90 3_74.4	74.4	12.1	7100	9.7	15000	53800	6.7	7100	5.4	15000	53800	
C 90 3_81.2	81.2	11.1	7200	9.0	15000	55500	6.2	7200	5.0	15000	55500	
C 90 3_88.2	88.2	10.2	7100	8.2	15000	57800	5.7	7100	4.5	15000	57800	
C 90 3_96.2	96.2	9.4	7200	7.6	15000	59600	5.2	7200	4.2	15000	59600	
C 90 3_107.0	107.0	8.4	7100	6.7	15000	60000	4.7	7100	3.7	15000	60000	
C 90 3_116.7	116.7	7.7	7200	6.3	15000	60000	4.3	7200	3.5	15000	60000	
C 90 3_134.1	134.1	6.7	7100	5.4	15000	60000	3.7	7100	3.0	15000	60000	
C 90 3_146.3	146.3	6.2	7200	5.0	15000	60000	3.4	7200	2.8	15000	60000	
C 90 3_157.8	157.8	5.7	7100	4.6	15000	60000	3.2	7100	2.5	15000	60000	
C 90 3_172.1	172.1	5.2	7200	4.2	15000	60000	2.9	7200	2.4	15000	60000	
C 90 4_212.4	212.4	4.2	7200	3.5	2090	60000	2.4	7200	2.0	3210	60000	
C 90 4_231.7	231.7	3.9	7200	3.2	2460	60000	2.2	7200	1.8	3290	60000	
C 90 4_268.5	268.5	3.4	7200	2.8	2440	60000	1.9	7200	1.5	3300	60000	
C 90 4_292.9	292.9	3.1	7200	2.5	2620	60000	1.7	7200	1.4	3370	60000	
C 90 4_339.0	339.0	2.7	7200	2.2	2590	60000	1.5	7200	1.2	3340	60000	
C 90 4_369.8	369.8	2.4	7200	2.0	2660	60000	1.4	7200	1.1	3420	60000	
C 90 4_419.0	419.0	2.1	7200	1.8	2630	60000	1.2	7200	1.0	3390	60000	
C 90 4_457.1	457.1	2.0	7200	1.6	2700	60000	1.1	7200	0.90	3460	60000	
C 90 4_534.2	534.2	1.7	7200	1.4	2680	60000	0.90	7200	0.80	3380	60000	
C 90 4_582.8	582.8	1.5	7200	1.3	2750	60000	0.90	7200	0.70	3500	60000	
C 90 4_652.8	652.8	1.4	7200	1.1	2700	60000	0.80	7200	0.60	3450	60000	
C 90 4_712.2	712.2	1.3	7200	1.0	2760	60000	0.70	7200	0.60	3500	60000	
C 90 4_773.6	773.6	1.2	7200	1.0	2720	60000	0.60	7200	0.50	3480	60000	
C 90 4_844.0	844.0	1.1	7200	0.90	2790	60000	0.60	7200	0.50	3500	60000	
C 90 4_922.3	922.3	1.0	7200	0.80	2730	60000	0.50	7200	0.40	3490	60000	
C 90 4_1006	1006	0.90	7200	0.70	2800	60000	0.50	7200	0.40	3500	60000	
C 90 4_1137	1137	0.80	7200	0.70	2740	60000	0.40	7200	0.40	3500	60000	
C 90 4_1240	1240	0.70	7200	0.60	2800	60000	0.40	7200	0.30	3500	60000	



# C 100 12000 Nm

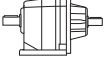

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
C 100 2_4.9	4.9	569	5500	345	1900	20600	285	6800	213	3790	25300	161
C 100 2_5.3	5.3	525	5650	327	2790	21000	263	6950	201	4940	25800	
C 100 2_6.5	6.5	429	6150	291	1920	21800	215	7550	179	3950	27000	
C 100 2_7.1	7.1	396	6200	271	3100	22700	198	7650	167	5270	27900	
C 100 2_8.4	8.4	335	6700	248	1870	22800	168	8200	152	3970	28500	
C 100 2_9.0	9.0	309	6800	232	2950	23500	155	8350	142	5190	29200	
C 100 2_10.1	10.1	278	7100	217	1930	24100	139	8750	134	3900	29500	
C 100 2_10.9	10.9	256	7100	200	3240	25700	128	8750	124	5460	31600	
C 100 2_12.5	12.5	225	7650	190	1360	24900	112	9400	117	3260	30800	
C 100 2_13.5	13.5	208	7700	176	2600	26300	104	9500	109	4680	32100	
C 100 2_15.2	15.2	184	8100	164	1270	26600	92	10000	101	2680	32500	
C 100 2_16.5	16.5	170	8250	154	2320	27200	85	10150	95	4420	33600	
C 100 2_18.7	18.7	150	8200	136	1500	30800	75	10000	83	3600	38000	
C 100 2_20.2	20.2	138	8100	124	3047	32200	69	10000	76	5210	39600	
C 100 2_22.2	22.2	126	7500	104	3570	35800	63	9200	64	5960	44100	
C 100 2_24.1	24.1	116	8100	104	3620	35200	58	10000	64	5900	43300	
C 100 2_29.6	29.6	95	6900	72	6380	42400	47	8500	44	9220	52200	
C 100 3_34.3	34.3	82	10350	95	9790	33300	41	11700	54	13000	46400	
C 100 3_36.9	36.9	76	10650	91	10200	34500	38	11800	50	13100	48000	
C 100 3_42.9	42.9	65	11350	83	9640	33200	33	12000	44	13100	51200	
C 100 3_46.2	46.2	61	11700	80	10100	33100	30	12000	41	13300	53100	
C 100 3_53.3	53.3	53	12000	71	9450	36400	26.3	12000	36	13200	56900	
C 100 3_57.4	57.4	49	12000	66	10200	39500	24.4	12000	33	13400	59000	
C 100 3_64.5	64.5	43	12000	59	9950	44100	21.7	12000	29	13400	62300	
C 100 3_69.4	69.4	40	12000	54	10400	45900	20.2	12000	27	13500	64500	
C 100 3_79.4	79.4	35	12000	48	10300	49200	17.6	12000	24	13500	68600	
C 100 3_85.6	85.6	33	12000	44	10400	51100	16.4	12000	22	13600	70900	
C 100 3_92.7	92.7	30	12000	41	10400	53200	15.1	12000	20	13500	73500	
C 100 3_99.8	99.8	28.1	12000	38	10500	55200	14.0	12000	19.0	13600	75900	
C 100 3_111.9	111.9	25.0	12000	34	10400	58300	12.5	12000	16.9	13500	79800	
C 100 3_120.5	120.5	23.2	12000	31	10500	60400	11.6	12000	15.7	13700	82400	
C 100 3_139.7	139.7	20.0	11050	25	10600	67400	10.0	11050	12.5	13700	85000	
C 100 3_150.4	150.4	18.6	12000	25	10600	66900	9.3	12000	12.6	13700	85000	
C 100 4_162.1	162.1	17.3	12000	24	—	85000	8.6	12000	11.9	—	85000	
C 100 4_185.4	185.4	15.1	12000	21	—	85000	7.6	12000	10.4	—	85000	
C 100 4_199.6	199.6	14.0	12000	19.4	—	85000	7.0	12000	9.7	—	85000	
C 100 4_244.2	244.2	11.5	12000	15.8	—	85000	5.7	12000	7.9	—	85000	
C 100 4_263.0	263.0	10.6	12000	14.7	—	85000	5.3	12000	7.4	—	85000	
C 100 4_300.5	300.5	9.3	12000	12.9	—	85000	4.7	12000	6.4	—	85000	
C 100 4_323.6	323.6	8.7	12000	11.9	—	85000	4.3	12000	6.0	—	85000	
C 100 4_380.5	380.5	7.4	12000	10.2	—	85000	3.7	12000	5.1	—	85000	
C 100 4_409.8	409.8	6.8	12000	9.4	—	85000	3.4	12000	4.7	—	85000	
C 100 4_466.7	466.7	6.0	12000	8.3	—	85000	3.0	12000	4.1	—	85000	
C 100 4_502.6	502.6	5.6	12000	7.7	—	85000	2.8	12000	3.8	—	85000	
C 100 4_582.6	582.6	4.8	12000	6.6	—	85000	2.4	12000	3.3	—	85000	
C 100 4_627.4	627.4	4.5	12000	6.2	—	85000	2.2	12000	3.1	—	85000	
C 100 4_720.3	720.3	3.9	12000	5.4	—	85000	1.9	12000	2.7	—	85000	
C 100 4_775.7	775.7	3.6	12000	5.0	—	85000	1.8	12000	2.5	—	85000	
C 100 4_843.3	843.3	3.3	12000	4.6	—	85000	1.7	12000	2.3	—	85000	
C 100 4_908.2	908.2	3.1	12000	4.3	—	85000	1.5	12000	2.1	830	85000	
C 100 4_1004	1004	2.8	12000	3.9	—	85000	1.4	12000	1.9	—	85000	
C 100 4_1081	1081	2.6	12000	3.6	—	85000	1.3	12000	1.8	870	85000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)





# C 100 12000 Nm

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
<b>C 100 2_4.9</b>	4.9	183	7800	157	5310	28800	102	9300	104	6720	34400	161
<b>C 100 2_5.3</b>	5.3	169	7950	148	6680	29500	94	9450	98	9740	35200	
<b>C 100 2_6.5</b>	6.5	138	8600	131	5670	31000	77	10250	87	7540	37000	
<b>C 100 2_7.1</b>	7.1	127	8750	123	7050	31800	71	10450	81	10100	37800	
<b>C 100 2_8.4</b>	8.4	108	9350	111	5670	32600	60	10950	72	8530	40100	
<b>C 100 2_9.0</b>	9.0	99	9500	104	7080	33600	55	11350	69	10100	39900	
<b>C 100 2_10.1</b>	10.1	89	10000	98	5540	33600	50	10900	60	10600	44500	
<b>C 100 2_10.9</b>	10.9	82	10150	92	6980	34700	46	11500	58	11300	44300	
<b>C 100 2_12.5</b>	12.5	72	10700	85	3910	35400	40	10850	48	11700	49600	
<b>C 100 2_13.5</b>	13.5	67	10850	80	6440	36700	37	11450	47	12300	49500	
<b>C 100 2_15.2</b>	15.2	59	10800	70	5940	40800	33	10800	39	13000	54700	
<b>C 100 2_16.5</b>	16.5	55	11500	69	6320	39100	30	11500	38	13400	54500	
<b>C 100 2_18.7</b>	18.7	48	10900	58	6310	45100	26.8	10900	32	13400	59800	
<b>C 100 2_20.2</b>	20.2	45	11500	56	6890	45000	24.7	11500	31	14000	60100	
<b>C 100 2_22.2</b>	22.2	40	9850	44	9170	52200	22.5	9850	24	15000	67800	
<b>C 100 2_24.1</b>	24.1	37	10800	44	8930	51200	20.7	10800	25	15000	67200	
<b>C 100 2_29.6</b>	29.6	30	9100	31	12600	61400	16.9	9100	17.0	15000	78300	
<b>C 100 3_34.3</b>	34.3	26.2	11700	35	15000	57800	14.6	11700	19.2	15000	75500	
<b>C 100 3_36.9</b>	36.9	24.4	11800	32	15000	59600	13.5	11800	18.0	15000	77700	
<b>C 100 3_42.9</b>	42.9	21.0	12000	28	15000	63400	11.6	12000	15.7	15000	82300	
<b>C 100 3_46.2</b>	46.2	19.5	12000	26	15000	65600	10.8	12000	14.6	15000	84900	
<b>C 100 3_53.3</b>	53.3	16.9	12000	23	15000	69900	9.4	12000	12.7	15000	85000	
<b>C 100 3_57.4</b>	57.4	15.7	12000	21	15000	72300	8.7	12000	11.8	15000	85000	
<b>C 100 3_64.5</b>	64.5	14.0	12000	18.6	15000	76100	7.8	12000	10.5	15000	85000	
<b>C 100 3_69.4</b>	69.4	13.0	12000	17.5	15000	78600	7.2	12000	9.7	15000	85000	
<b>C 100 3_79.4</b>	79.4	11.3	12000	15.3	15000	83300	6.3	12000	8.5	15000	85000	
<b>C 100 3_85.6</b>	85.6	10.5	12000	14.2	15000	85000	5.8	12000	7.9	15000	85000	
<b>C 100 3_92.7</b>	92.7	9.7	12000	13.1	15000	85000	5.4	12000	7.3	15000	85000	
<b>C 100 3_99.8</b>	99.8	9.0	12000	12.2	15000	85000	5.0	12000	6.8	15000	85000	
<b>C 100 3_111.9</b>	111.9	8.0	12000	10.9	15000	85000	4.5	12000	6.0	15000	85000	
<b>C 100 3_120.5</b>	120.5	7.5	12000	10.1	15000	85000	4.1	12000	5.6	15000	85000	
<b>C 100 3_139.7</b>	139.7	6.4	11500	8.0	15000	85000	3.6	11050	4.5	15000	85000	
<b>C 100 3_150.4</b>	150.4	6.0	12000	8.1	15000	85000	3.3	12000	4.5	15000	85000	
<b>C 100 4_162.1</b>	162.1	5.6	12000	7.7	—	85000	3.1	12000	4.3	—	85000	
<b>C 100 4_185.4</b>	185.4	4.9	12000	6.7	—	85000	2.7	12000	3.7	920	85000	
<b>C 100 4_199.6</b>	199.6	4.5	12000	6.2	—	85000	2.5	12000	3.5	1430	85000	
<b>C 100 4_244.2</b>	244.2	3.7	12000	5.1	—	85000	2.0	12000	2.8	1490	85000	
<b>C 100 4_263.0</b>	263.0	3.4	12000	4.7	—	85000	1.9	12000	2.6	1950	85000	
<b>C 100 4_300.5</b>	300.5	3.0	12000	4.1	—	85000	1.7	12000	2.3	1840	85000	
<b>C 100 4_323.6</b>	323.6	2.8	12000	3.8	850	85000	1.5	12000	2.1	2280	85000	
<b>C 100 4_380.5</b>	380.5	2.4	12000	3.3	700	85000	1.3	12000	1.8	2130	85000	
<b>C 100 4_409.8</b>	409.8	2.2	12000	3.0	1120	85000	1.2	12000	1.7	2550	85000	
<b>C 100 4_466.7</b>	466.7	1.9	12000	2.7	910	85000	1.1	12000	1.5	2340	85000	
<b>C 100 4_502.6</b>	502.6	1.8	12000	2.5	1320	85000	1.0	12000	1.4	2740	85000	
<b>C 100 4_582.6</b>	582.6	1.5	12000	2.1	1100	85000	0.90	12000	1.2	2520	85000	
<b>C 100 4_627.4</b>	627.4	1.4	12000	2.0	1490	85000	0.80	12000	1.1	2910	85000	
<b>C 100 4_720.3</b>	720.3	1.2	12000	1.7	1270	85000	0.70	12000	1.0	2700	85000	
<b>C 100 4_775.7</b>	775.7	1.2	12000	1.6	1650	85000	0.60	12000	0.90	3070	85000	
<b>C 100 4_843.3</b>	843.3	1.1	12000	1.5	1360	85000	0.60	12000	0.80	2790	85000	
<b>C 100 4_908.2</b>	908.2	1.0	12000	1.4	1730	85000	0.60	12000	0.80	3160	85000	
<b>C 100 4_1004</b>	1004	0.90	12000	1.2	1400	85000	0.50	12000	0.70	2830	85000	
<b>C 100 4_1081</b>	1081	0.90	12000	1.1	1770	85000	0.50	12000	0.60	3170	85000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



## 27 MOTOR AVAILABILITY

Please be aware that motor-gearbox combinations resulting from the following charts are purely based on geometrical compatibility.

**When selecting a gearmotor, refer to procedure specified at paragraph 12 and observe particularly the condition  $S \geq f_s$ .**

(B 22)

		IEC_  (IM B5)																												
		BN	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	IEC	IEC	IEC			
P <sub>n1</sub> (#) [kW]	2p	0.37	0.75	1.5	1.1	—	2.2	2.2	—	4	3	—	4	4	—	9.2	9.2	—	18.5	18.5	—	22	—	—	30	45	55	90		
	4p	0.25	0.55	1.1	0.75	0.75	1.85	1.5	1.5	3	3	3	4	4	4	9.2	9.2	7.5	15	15	15	22	22	22	30	47	55	90		
	6p	0.12	0.37	0.75	—	—	1.1	0.75	—	1.85	1.5	—	2.2	2.2	—	5.5	4	—	11	7.5	—	15	—	—	18.5	30	37	55		
		P63	P71	P80		P90		P100		P112		P132		P160		P180		P200	P225	P250	P280									
C 12 2		2.8_66.2		2.8_47.6				2.8_47.6																						
C 22 2		3.7_63.3 ⊖(7.1_8.7)		2.7_54.7				2.7_54.7																						
C 22 3		60.0_261.0		60.0_261.0				60.0_261.0																						
C 32 2		5.0_66.8 ⊖(7.2_11.2)		2.9_66.8				2.9_66.8				2.9_25.1																		
C 32 3		74.7_274.7		74.7_274.7				74.7_274.7																						
C 36 2		4.6_19.0 ⊖(6.8_10.6)		2.7_19.0				2.7_19.0				2.7_19.0																		
C 36 3		38.1_206.4		22.1_206.4				22.1_206.4				22.1_77.6																		
C 36 4		230.9_848.5		230.9_848.5				230.9_848.5																						
C 41 2		14.2_44.8		2.7_44.8				2.7_44.8				2.7_31.4																		
C 41 3		47.0_209.1		28.5_209.1				28.5_209.1				28.5_102.3																		
C 41 4		239.9_855.5		239.9_855.5				239.9_855.5																						
C 51 2		18.9_57.0		2.6_57.0				2.6_57.0				2.6_40.4		2.6_40.4		2.6_40.4														
C 51 3		59.0_216.7		21.8_216.7				21.8_216.7				21.8_124.4		21.8_124.4		21.8_124.4														
C 51 4		240.9_884.9		240.9_884.9				240.9_884.9																						
C 61 2	i =	22.4_38.0		3.7_38.0 ⊖(6.7_7.5)				3.7_38.0 ⊖(6.7_7.5)				2.8_38.0		2.8_38.0		2.8_38.0														
C 61 3		67.7_195.8		26.8_195.8				26.8_195.8				26.8_140.5		26.8_140.5		26.8_140.5														
C 61 4		217.4_796.1		217.4_796.1				217.4_796.1																						
C 70 2				14.1_34.7 ⊖(15.3)				14.1_34.7 ⊖(15.3)				7.5_34.7 ⊖(8.0)		4.6_34.7		4.6_34.7*		4.6_10.2* ⊖(9.5)												
C 70 3				41.3_239.3				41.3_239.3				41.3_137.4		41.3_137.4		41.3_137.4*														
C 70 4		251.3_1476		251.3_1476				251.3_1476				251.3_554.7																		
C 80 2				20.5_39.1				20.5_39.1				11.1_39.1		7.0_39.1		5.6_39.1		5.6_25.9*		5.6_25.9*										
C 80 3				43.5_215.8				43.5_215.8				43.5_184.4		43.5_184.4		43.5_184.4														
C 80 4		334.3_1481		261.9_1481				261.9_1481				261.9_724.7																		
C 90 2				22.9_35.1				22.9_35.1				12.8_35.1		10.4_35.1		10.4_35.1		5.2_29.4		5.2_29.4*		5.2_29.4*								
C 90 3				74.4_172.1				74.4_172.1				39.4_172.1		39.4_172.1		39.4_172.1		39.4_96.2		39.4_96.2*		39.4_96.2*								
C 90 4		339.0_1240		212.4_1240				212.4_1240				212.4_712.2		212.4_712.2		212.4_712.2														
C 100 2								29.6				15.2_29.6		12.5_29.6		12.5_29.6		4.9_29.6		4.9_29.6		4.9_29.6*		4.9_29.6*						
C 100 3								79.4_150.4				42.9_150.4		34.3_150.4		34.3_150.4		34.3_99.8		34.3_99.8		34.3_99.8		34.3_99.8*						
C 100 4		380.5_1081		162.1_1081				162.1_1081				162.1_775.7		162.1_775.7		162.1_775.7														

(#) P<sub>n1</sub> = maximum installable power on input P<sub>—</sub>

For mounting position B3-B5 B6-B7-B8 the motor marked with \* will be supplied in B3/B5



(B 23)

		M0	M05	M1	ME2 - MX2	ME3 - MX3	ME4 - MX4	ME5 - MX5
C 05 2	i =	27.1_44.7	5.5_44.7	5.5_44.7				
C 12 2			2.8_66.2	2.8_37.0	2.8_47.7	2.8_47.7		
C 22 2			3.7_63.3 ⊖ (7.1_8.7)	3.7_43.3 ⊖ (7.1_8.7)	2.7_54.7	2.7_54.7		
C 22 3			60.0_261.0	60.0_261.0	60.0_261.0	60.0_261.0		
C 32 2				5.0_52.4 ⊖ (7.2_11.2)	2.9_66.8	2.9_66.8	2.9_25.1	
C 32 3			74.7_274.7	74.7_274.7	74.7_274.7	74.7_274.7		
C 36 2				4.6_19.0 ⊖ (6.8_10.6)	2.7_19.0	2.7_19.0	2.7_19.0	
C 36 3				38.1_162.0	22.1_206.4	22.1_206.4	22.1_77.6	
C 36 4			230.9_848.5	230.9_848.5	230.9_848.5	230.9_848.5		
C 41 2				14.2_44.8	2.7_44.8	2.7_44.8	2.7_31.4	
C 41 3				47.0_209.1	28.5_209.1	28.5_209.1	28.5_102.3	
C 41 4			239.9_855.5	239.9_855.5	239.9_855.5	239.9_855.5		
C 51 2				18.9_57.0	2.6_57.0	2.6_57.0	2.6_40.4	2.6_40.4
C 51 3				59.0_216.7	21.8_216.7	21.8_216.7	21.8_124.4	21.8_124.4
C 51 4				240.9_884.9	240.9_884.9	240.9_884.9		
C 61 2					3.7_38.0 ⊖ (6.7_7.5)	3.7_38.0 ⊖ (6.7_7.5)	2.8_38.0	2.8_38.0
C 61 3					26.8_195.8	26.8_195.8	26.8_140.5	26.8_140.5
C 61 4				217.4_796.1	217.4_796.1	217.4_796.1		
C 70 2					14.1_34.7 ⊖ (15.3)	14.1_34.7 ⊖ (15.3)	7.5_34.7 ⊖ (8.0)	7.5_34.7 ⊖ (8.0)
C 70 3					41.3_239.3	41.3_239.3	41.3_137.4	41.3_137.4
C 70 4				251.3_1476	251.3_1476	251.3_1476	251.3_554.7	
C 80 2						20.5_39.1	11.1_39.1	11.1_39.1
C 80 3						43.5_215.8	43.5_184.4	43.5_184.4
C 80 4				334.3_1481	261.9_1481	261.9_1481	261.9_724.7	
C 90 2						22.9_35.1	12.8_35.1	12.8_35.1
C 90 3						74.4_172.1	39.4_172.1	39.4_172.1
C 90 4				339.0_1240	212.4_1240	212.4_1240	212.4_712.2	
C 100 2							15.2_29.6	15.2_29.6
C 100 3						42.9_150.4	42.9_150.4	
C 100 4			380.5_1081	162.1_1081	162.1_1081	162.1_775.7		



Motor adapters matching the most popular brands of servomotors are available for units size C12... C61. Dimensions of servomotor inputs are provided within the drawing section for each frame size. The code **SK** applies for inputs featuring a conventional keyway, while through the specification of the **SC** code the input shaft will feature a clamping device instead.

(B 24)

		SERVO INPUT							
		SK60A	SK60B	SK80A	SK80B	SK80C	SK95A	SK95B	SK95C
		SC60A	SC60B	SC80A	SC80B	SC80C	SC95A	SC95B	SC95C
C 12 2	i =	2.8_66.2	2.8_66.2	2.8_66.2		2.8_47.6	2.8_66.2	2.8_47.6	2.8_47.6
C 22 2		3.7_63.3 ⌀ (7.1_8.7)	3.7_63.3 ⌀ (7.1_8.7)	3.7_63.3 ⌀ (7.1_8.7)		2.7_54.7	3.7_63.3 ⌀ (7.1_8.7)	2.7_54.7	2.7_54.7
C 22 3		60.0_261.0	60.0_261.0	60.0_261.0		60.0_261.0	60.0_261.0	60.0_261.0	60.0_261.0
C 32 2		5.0_66.8 ⌀ (7.2_11.2)	5.0_66.8 ⌀ (7.2_11.2)	5.0_66.8 ⌀ (7.2_11.2)		2.9_66.8	5.0_66.8 ⌀ (7.2_11.2)	2.9_66.8	2.9_66.8
C 32 3		74.7_274.7	74.7_274.7	74.7_274.7		74.7_274.7	74.7_274.7	74.7_274.7	74.7_274.7
C 36 2		4.6_19.0 ⌀ (6.8_10.6)	4.6_19.0 ⌀ (6.8_10.6)	4.6_19.0 ⌀ (6.8_10.6)		2.7_19.0	4.6_19.0 ⌀ (6.8_10.6)	2.7_19.0	2.7_19.0
C 36 3		38.1_206.4	38.1_206.4	38.1_206.4		22.1_206.4	38.1_206.4	22.1_206.4	22.1_206.4
C 36 4		230.9_848.5	230.9_848.5	230.9_848.5		230.9_848.5	230.9_848.5	230.9_848.5	230.9_848.5
C 41 2					6.0_44.8 ⌀ (6.4_12.4)	2.7_44.8	6.0_44.8 ⌀ (6.4_12.4)	2.7_44.8	2.7_44.8
C 41 3					47.0_209.1	28.5_209.1	47.0_209.1	28.5_209.1	28.5_209.1
C 41 4					239.9_855.5	239.9_855.5	239.9_855.5	239.9_855.5	239.9_855.5
C 51 2					18.9_57.0	2.6_57.0	18.9_57.0	2.6_57.0	2.6_57.0
C 51 3					59.0_216.7	21.8_216.7	59.0_216.7	21.8_216.7	21.8_216.7
C 51 4						240.9_884.9	240.9_884.9	240.9_884.9	240.9_884.9
C 61 2						3.7_38.0 ⌀ (6.7_7.5)	22.4_38.0	3.7_38.0 ⌀ (6.7_7.5)	3.7_38.0 ⌀ (6.7_7.5)
C 61 3						26.8_195.8	67.7_195.8	26.8_195.8	26.8_195.8
C 61 4						217.4_796.1	217.4_796.1	217.4_796.1	217.4_796.1

(B 25)

		SK110A	SK110B	SK130A	SK130B	SK180A	SK180B
		SC110A	SC110B	SC130A	SC130B	SC180A	SC180B
C 12 2	i =	2.8_47.6	2.8_47.6				
C 22 2		2.7_54.7	2.7_54.7				
C 22 3		60.0_261.0	60.0_261.0				
C 32 2		2.9_66.8	2.9_66.8	2.9_66.8			
C 32 3		74.7_274.7	74.7_274.7				
C 36 2		2.7_19.0	2.7_19.0	2.7_19.0			
C 36 3		22.1_206.4	22.1_206.4	22.1_206.4			
C 36 4		230.9_848.5	230.9_848.5				
C 41 2		2.7_44.8	2.7_44.8	2.7_44.8	2.7_31.4	2.7_31.4	2.7_31.4
C 41 3		28.5_209.1	28.5_209.1	28.5_209.1	28.5_102.3	28.5_102.3	28.5_102.3
C 41 4		239.9_855.5	239.9_855.5				
C 51 2		2.6_57.0	2.6_57.0	2.6_57.0	2.6_40.4	2.6_40.4	2.6_40.4
C 51 3		21.8_216.7	21.8_216.7	21.8_216.7	21.8_124.4	21.8_124.4	21.8_124.4
C 51 4		240.9_884.9	240.9_884.9	240.9_884.9			
C 61 2		3.7_38.0 ⌀ (6.7_7.5)	3.7_38.0 ⌀ (6.7_7.5)	3.7_38.0 ⌀ (6.7_7.5)	2.8_38.0	2.8_38.0	2.8_38.0
C 61 3		26.8_195.8	26.8_195.8	26.8_195.8	26.8_140.5	26.8_140.5	26.8_140.5
C 61 4		217.4_796.1	217.4_796.1	217.4_796.1			



## 28 MOMENT OF INERTIA

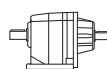
The following charts indicate moment of inertia values  $J_r$  [kgm<sup>2</sup>] referred to the gear unit high speed shaft. A key to the symbols used follows:



Values under this icon refer to compact gear units, without motor. To obtain the overall moment of inertia for the gearmotor just add the value of the inertia for the specific compact motor, given in the relevant rating chart.



Values under this symbol refer to gearboxes with IEC motor adaptor (IEC size...).



This symbol refers to gearbox values.



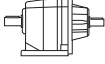


Values under this symbol refer to gear unit with servomotor input adapter.

C 05		
	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]
C 05_5.5	5.5	0.29
C 05_6.7	6.7	0.29
C 05_7.4	7.4	0.28
C 05_9.3	9.3	0.17
C 05_11.2	11.2	0.16
C 05_12.5	12.5	0.16
C 05_15.6	15.6	0.09
C 05_18.9	18.9	0.09
C 05_21.0	21.0	0.08
C 05_27.1	27.1	0.04
C 05_32.8	32.8	0.04
C 05_36.4	36.4	0.04
C 05_40.3	40.3	0.03
C 05_44.7	44.7	0.03




## C 12

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]							
			 IEC						
			63	71	80	90	100	112	
<b>C 12 2_2.8</b>	2.8	0.44	1.9	1.9	3.3	3.2	4.5	4.5	1.3
<b>C 12 2_3.2</b>	3.2	0.34	1.8	1.8	3.2	3.1	4.4	4.4	1.2
<b>C 12 2_3.7</b>	3.7	0.29	1.8	1.7	3.1	3.1	4.4	4.4	1.2
<b>C 12 2_4.3</b>	4.3	0.21	1.7	1.7	3.1	3.0	4.3	4.3	1.1
<b>C 12 2_4.9</b>	4.9	0.19	1.7	1.7	3.0	3.0	4.3	4.3	1.1
<b>C 12 2_5.6</b>	5.6	0.15	1.6	1.6	3.0	2.9	4.2	4.2	1.0
<b>C 12 2_6.2</b>	6.2	0.12	1.6	1.6	3.0	2.9	4.2	4.2	1.0
<b>C 12 2_7.6</b>	7.6	0.33	1.8	1.8	3.2	3.1	4.4	4.4	1.2
<b>C 12 2_8.8</b>	8.8	0.32	1.8	1.8	3.2	3.1	4.4	4.4	1.2
<b>C 12 2_10.1</b>	10.1	0.23	1.7	1.7	3.1	3.0	4.3	4.3	1.1
<b>C 12 2_11.9</b>	11.9	0.17	1.6	1.6	3.0	3.0	4.2	4.2	1.1
<b>C 12 2_13.4</b>	13.4	0.16	1.6	1.6	3.0	2.9	4.2	4.2	1.1
<b>C 12 2_15.4</b>	15.4	0.12	1.6	1.6	3.0	2.9	4.2	4.2	1.0
<b>C 12 2_17.2</b>	17.2	0.10	1.6	1.6	2.9	2.9	4.2	4.2	1.0
<b>C 12 2_18.4</b>	18.4	0.08	1.6	1.5	2.9	2.9	4.2	4.2	0.98
<b>C 12 2_20.6</b>	20.6	0.08	1.5	1.5	2.9	2.9	4.2	4.2	0.98
<b>C 12 2_23.2</b>	23.2	0.07	1.5	1.5	2.9	2.9	4.1	4.1	0.97
<b>C 12 2_25.4</b>	25.4	0.06	1.5	1.5	2.9	2.8	4.1	4.1	0.96
<b>C 12 2_29.5</b>	29.5	0.05	1.5	1.5	2.9	2.8	4.1	4.1	0.95
<b>C 12 2_32.8</b>	32.8	0.04	1.5	1.5	2.9	2.8	4.1	4.1	0.94
<b>C 12 2_37.0</b>	37.0	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
<b>C 12 2_42.3</b>	42.3	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
<b>C 12 2_47.6</b>	47.6	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
<b>C 12 2_55.2</b>	55.2	0.02	1.5	1.5	—	—	—	—	0.92
<b>C 12 2_66.2</b>	66.2	0.01	1.5	1.5	—	—	—	—	0.91



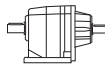


# C 12

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 <b>SERVO</b>									
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
<b>C 12 2_2.8</b>	2.8	0.71	0.97	0.73	1.2	3.3	3.7	3.3	3.8	3.2	4.2
<b>C 12 2_3.2</b>	3.2	0.61	0.87	0.63	1.1	3.2	3.6	3.2	3.7	3.1	4.1
<b>C 12 2_3.7</b>	3.7	0.56	0.82	0.58	1.0	3.1	3.5	3.1	3.6	3.1	4.1
<b>C 12 2_4.3</b>	4.3	0.48	0.74	0.50	0.94	3.0	3.5	3.1	3.6	3.0	4.0
<b>C 12 2_4.9</b>	4.9	0.46	0.72	0.48	0.92	3.0	3.4	3.0	3.5	3.0	4.0
<b>C 12 2_5.6</b>	5.6	0.42	0.68	0.44	0.88	3.0	3.4	3.0	3.5	2.9	3.9
<b>C 12 2_6.2</b>	6.2	0.39	0.65	0.41	0.85	2.9	3.4	3.0	3.5	2.9	3.9
<b>C 12 2_7.6</b>	7.6	0.60	0.86	0.62	1.1	3.2	3.6	3.2	3.7	3.1	4.1
<b>C 12 2_8.8</b>	8.8	0.59	0.85	0.61	1.0	3.1	3.6	3.2	3.7	3.1	4.1
<b>C 12 2_10.1</b>	10.1	0.50	0.76	0.52	0.96	3.1	3.5	3.1	3.6	3.0	4.0
<b>C 12 2_11.9</b>	11.9	0.44	0.70	0.46	0.90	3.0	3.4	3.0	3.5	3.0	4.0
<b>C 12 2_13.4</b>	13.4	0.43	0.69	0.45	0.83	3.0	3.4	3.0	3.5	2.9	3.9
<b>C 12 2_15.4</b>	15.4	0.39	0.65	0.41	0.85	2.9	3.4	3.0	3.5	2.9	3.9
<b>C 12 2_17.2</b>	17.2	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.9	3.9
<b>C 12 2_18.4</b>	18.4	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.9	3.9
<b>C 12 2_20.6</b>	20.6	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.9	3.9
<b>C 12 2_23.2</b>	23.2	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.9	3.9
<b>C 12 2_25.4</b>	25.4	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.8	3.8
<b>C 12 2_29.5</b>	29.5	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8
<b>C 12 2_32.8</b>	32.8	0.34	0.60	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8
<b>C 12 2_37.0</b>	37.0	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
<b>C 12 2_42.3</b>	42.3	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
<b>C 12 2_47.6</b>	47.6	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
<b>C 12 2_55.2</b>	55.2	0.29	0.55	0.31	0.75	2.8	3.3	—	—	—	—
<b>C 12 2_66.2</b>	66.2	0.28	0.54	0.30	0.74	2.8	3.3	—	—	—	—




## C 22

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]							
			 IEC						
			63	71	80	90	100		
C 22 2_2.7	2.7	1.2	—	—	4.0	4.0	5.3	5.3	3.1
C 22 2_3.3	3.3	0.83	—	—	3.7	3.6	4.9	4.9	2.7
C 22 2_3.7	3.7	0.72	2.2	2.2	3.6	3.5	4.8	4.8	2.6
C 22 2_4.3	4.3	0.56	2.0	2.0	3.4	3.3	4.6	4.6	2.4
C 22 2_4.8	4.8	0.48	2.0	1.9	3.3	3.3	4.6	4.6	2.4
C 22 2_5.6	5.6	0.36	1.8	1.8	3.2	3.2	4.4	4.4	2.2
C 22 2_6.1	6.1	0.29	1.8	1.7	3.1	3.1	4.4	4.4	2.2
C 22 2_7.1	7.1	0.77	—	—	3.6	3.6	4.8	4.8	2.6
C 22 2_8.7	8.7	0.55	—	—	3.4	3.3	4.6	4.6	2.4
C 22 2_9.6	9.6	0.50	2.0	2.0	3.3	3.3	4.6	4.6	2.4
C 22 2_11.1	11.1	0.39	1.9	1.8	3.2	3.2	4.5	4.5	2.3
C 22 2_12.4	12.4	0.35	1.8	1.8	3.2	3.1	4.4	4.4	2.2
C 22 2_14.5	14.5	0.36	1.7	1.7	3.1	3.1	4.3	4.3	2.1
C 22 2_15.8	15.8	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.1
C 22 2_18.1	18.1	0.18	1.6	1.6	3.0	3.0	4.3	4.3	2.0
C 22 2_20.0	20.0	0.15	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 22 2_21.5	21.5	0.13	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 22 2_24.3	24.3	0.12	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 22 2_27.2	27.2	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 22 2_29.6	29.6	0.09	1.6	1.5	2.9	2.9	4.2	4.2	2.0
C 22 2_33.1	33.1	0.07	1.5	1.5	2.9	2.9	4.2	4.2	1.9
C 22 2_36.8	36.8	0.06	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 22 2_43.3	43.3	0.05	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 22 2_48.6	48.6	0.04	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 22 2_54.7	54.7	0.03	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 22 2_63.3	63.3	0.02	1.5	1.5	—	—	—	—	1.9
C 22 3_60.0	60.0	0.04	1.5	1.5	2.9	2.8	4.1	4.1	0.94
C 22 3_65.3	65.3	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_74.8	74.8	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_82.6	82.6	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_88.5	88.5	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_100.2	100.2	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_112.0	112.0	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_122.2	122.2	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_136.5	136.5	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_151.7	151.7	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_178.5	178.5	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_200.7	200.7	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_225.8	225.8	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_261.0	261.0	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92





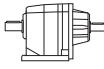


# C 22

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 <b>SERVO</b>									
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 22 2_2.7	2.7	—	—	—	—	—	—	4.0	4.5	4.0	5.0
C 22 2_3.3	3.3	—	—	—	—	—	—	3.7	4.2	3.6	4.6
C 22 2_3.7	3.7	0.99	1.3	1.0	1.4	3.5	4.0	3.6	4.1	3.5	4.5
C 22 2_4.3	4.3	0.83	1.1	0.85	1.3	3.4	3.8	3.4	3.9	3.3	4.3
C 22 2_4.8	4.8	0.75	1.0	0.77	1.2	3.3	3.7	3.3	3.8	3.3	4.3
C 22 2_5.6	5.6	0.63	0.89	0.65	1.1	3.2	3.6	3.2	3.7	3.2	4.2
C 22 2_6.1	6.1	0.56	0.82	0.58	1.0	3.1	3.5	3.1	3.6	3.1	4.1
C 22 2_7.1	7.1	—	—	—	—	—	—	3.6	4.1	3.6	4.6
C 22 2_8.7	8.7	—	—	—	—	—	—	3.4	3.9	3.3	4.3
C 22 2_9.6	9.6	0.77	1.0	0.79	1.2	3.3	3.8	3.3	3.8	3.3	4.3
C 22 2_11.1	11.1	0.66	0.92	0.68	1.1	3.2	3.6	3.2	3.7	3.2	4.2
C 22 2_12.4	12.4	0.62	0.88	0.64	1.1	3.2	3.6	3.2	3.7	3.1	4.1
C 22 2_14.5	14.5	0.63	0.89	0.65	1.1	3.2	3.6	3.1	3.6	3.1	4.1
C 22 2_15.8	15.8	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0
C 22 2_18.1	18.1	0.45	0.71	0.47	0.91	3.0	3.4	3.0	3.5	3.0	4.0
C 22 2_20.0	20.0	0.42	0.68	0.44	0.88	3.0	3.4	3.0	3.5	2.9	3.9
C 22 2_21.5	21.5	0.40	0.66	0.42	0.86	3.0	3.4	3.0	3.5	2.9	3.9
C 22 2_24.3	24.3	0.39	0.65	0.41	0.85	2.9	3.4	3.0	3.5	2.9	3.9
C 22 2_27.2	27.2	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
C 22 2_29.6	29.6	0.36	0.62	0.38	0.82	2.9	3.3	2.9	3.4	2.9	3.9
C 22 2_33.1	33.1	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.9	3.9
C 22 2_36.8	36.8	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.8	3.8
C 22 2_43.3	43.3	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8
C 22 2_48.6	48.6	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8
C 22 2_54.7	54.7	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 2_63.3	63.3	0.29	0.55	0.31	0.75	2.8	3.3	—	—	—	—
C 22 3_60.0	60.0	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_65.3	65.3	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_74.8	74.8	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_82.6	82.6	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_88.5	88.5	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_100.2	100.2	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_112.0	112.0	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_122.2	122.2	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_136.5	136.5	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_151.7	151.7	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_178.5	178.5	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_200.7	200.7	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_225.8	225.8	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_261.0	261.0	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8




## C 32

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]								
										
			63	71	80	90	100	112		
<b>C 32 2_2.9</b>	2.9	2.3	—	—	5.2	5.1	6.4	6.4	20	4.6
<b>C 32 2_3.4</b>	3.4	1.8	—	—	4.6	4.6	5.9	5.9	20	4.0
<b>C 32 2_3.7</b>	3.7	1.6	—	—	4.4	4.3	5.6	5.6	20	3.8
<b>C 32 2_4.5</b>	4.5	1.2	—	—	4.0	4.0	5.2	5.2	19	3.4
<b>C 32 2_5.0</b>	5.0	0.87	2.3	2.3	3.7	3.7	5.0	5.0	19	3.1
<b>C 32 2_5.7</b>	5.7	0.82	2.3	2.3	3.7	3.6	4.9	4.9	19	3.0
<b>C 32 2_6.3</b>	6.3	0.63	2.1	2.1	3.5	3.4	4.7	4.7	18	2.8
<b>C 32 2_7.2</b>	7.2	1.5	—	—	4.4	4.3	5.6	5.6	19	3.7
<b>C 32 2_8.5</b>	8.5	1.2	—	—	4.1	4.0	5.3	5.3	19	3.4
<b>C 32 2_9.3</b>	9.3	1.1	—	—	3.9	3.9	5.1	5.1	19	3.3
<b>C 32 2_11.2</b>	11.2	0.83	—	—	3.7	3.6	4.9	4.9	19	3.0
<b>C 32 2_12.3</b>	12.3	0.60	2.1	2.1	3.4	3.4	4.7	4.7	18	2.8
<b>C 32 2_14.1</b>	14.1	0.61	2.1	2.1	3.5	3.4	4.7	4.7	18	2.8
<b>C 32 2_15.6</b>	15.6	0.46	1.9	1.9	3.3	3.2	4.5	4.5	18	2.7
<b>C 32 2_18.2</b>	18.2	0.42	1.9	1.9	3.3	3.2	4.5	4.5	18	2.6
<b>C 32 2_20.1</b>	20.1	0.34	1.8	1.8	3.2	3.1	4.4	4.4	18	2.6
<b>C 32 2_22.9</b>	22.9	0.31	1.8	1.8	3.2	3.1	4.4	4.4	17	2.5
<b>C 32 2_25.1</b>	25.1	0.25	1.7	1.7	3.1	3.0	4.3	4.3	17	2.5
<b>C 32 2_26.9</b>	26.9	0.24	1.7	1.7	3.1	3.0	4.3	4.3	—	2.5
<b>C 32 2_29.8</b>	29.8	0.19	1.7	1.7	3.0	3.0	4.3	4.3	—	2.4
<b>C 32 2_33.1</b>	33.1	0.19	1.7	1.7	3.0	3.0	4.3	4.3	—	2.4
<b>C 32 2_36.1</b>	36.1	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	2.4
<b>C 32 2_40.7</b>	40.7	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	2.4
<b>C 32 2_45.3</b>	45.3	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.3
<b>C 32 2_52.4</b>	52.4	0.08	1.6	1.6	2.9	2.9	4.2	4.2	—	2.3
<b>C 32 2_59.4</b>	59.4	0.07	1.5	1.5	2.9	2.9	4.2	4.2	—	2.3
<b>C 32 2_66.8</b>	66.8	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	2.3
<b>C 32 3_74.7</b>	74.7	0.06	1.5	1.5	2.9	2.9	4.1	4.1	—	0.96
<b>C 32 3_82.6</b>	82.6	0.06	1.5	1.5	2.9	2.8	4.1	4.1	—	0.96
<b>C 32 3_94.2</b>	94.2	0.06	1.5	1.5	2.9	2.8	4.1	4.1	—	0.96
<b>C 32 3_103.3</b>	103.3	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
<b>C 32 3_110.6</b>	110.6	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
<b>C 32 3_122.4</b>	122.4	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
<b>C 32 3_136.0</b>	136.0	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
<b>C 32 3_148.4</b>	148.4	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
<b>C 32 3_167.4</b>	167.4	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
<b>C 32 3_186.0</b>	186.0	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
<b>C 32 3_215.6</b>	215.6	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
<b>C 32 3_244.2</b>	244.2	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
<b>C 32 3_274.7</b>	274.7	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94



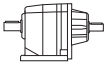


# C 32

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
		 <b>SERVO</b>											
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B		130A	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 32 2_2.9	2.9	—	—	—	—	—	—	5.2	5.7	5.1	6.1	5.1	6.1
C 32 2_3.4	3.4	—	—	—	—	—	—	4.6	5.1	4.6	5.6	4.6	5.6
C 32 2_3.7	3.7	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
C 32 2_4.5	4.5	—	—	—	—	—	—	4.0	4.5	4.0	5.0	4.0	5.0
C 32 2_5.0	5.0	1.1	1.4	1.2	1.6	3.7	4.1	3.7	4.2	3.7	4.7	3.7	4.7
C 32 2_5.7	5.7	1.1	1.4	1.1	1.5	3.6	4.1	3.7	4.2	3.6	4.6	3.6	4.6
C 32 2_6.3	6.3	0.90	1.2	0.92	1.4	3.5	3.9	3.5	4.0	3.4	4.4	3.4	4.4
C 32 2_7.2	7.2	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
C 32 2_8.5	8.5	—	—	—	—	—	—	4.1	4.6	4.0	5.0	4.0	5.0
C 32 2_9.3	9.3	—	—	—	—	—	—	3.9	4.4	3.9	4.9	3.9	4.9
C 32 2_11.2	11.2	—	—	—	—	—	—	3.7	4.2	3.6	4.6	3.6	4.6
C 32 2_12.3	12.3	0.87	1.1	0.89	1.3	3.4	3.9	3.4	3.9	3.4	4.4	3.4	4.4
C 32 2_14.1	14.1	0.88	1.1	0.90	1.3	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4
C 32 2_15.6	15.6	0.73	0.99	0.75	1.2	3.3	3.7	3.3	3.8	3.2	4.2	3.2	4.2
C 32 2_18.2	18.2	0.69	0.95	0.71	1.1	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2
C 32 2_20.1	20.1	0.61	0.87	0.63	1.1	3.2	3.6	3.2	3.7	3.1	4.1	3.1	4.1
C 32 2_22.9	22.9	0.58	0.84	0.60	1.0	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1
C 32 2_25.1	25.1	0.52	0.78	0.54	0.98	3.1	3.5	3.1	3.6	3.0	4.0	3.0	4.0
C 32 2_26.9	26.9	0.51	0.77	0.53	0.97	3.1	3.5	3.1	3.6	3.0	4.0	3.0	4.0
C 32 2_29.8	29.8	0.46	0.72	0.48	0.92	3.0	3.4	3.0	3.5	3.0	4.0	3.0	4.0
C 32 2_33.1	33.1	0.46	0.72	0.48	0.92	3.0	3.4	3.0	3.5	3.0	4.0	3.0	4.0
C 32 2_36.1	36.1	0.41	0.67	0.43	0.87	3.0	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 32 2_40.7	40.7	0.41	0.67	0.43	0.87	3.0	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 32 2_45.3	45.3	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 32 2_52.4	52.4	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.9	3.9	2.9	3.9
C 32 2_59.4	59.4	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.9	3.9	2.9	3.9
C 32 2_66.8	66.8	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	2.8	3.8
C 32 3_74.7	74.7	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.9	3.9	—	—
C 32 3_82.6	82.6	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_94.2	94.2	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_103.3	103.3	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_110.6	110.6	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_122.4	122.4	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_136.0	136.0	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_148.4	148.4	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_167.4	167.4	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_186.0	186.0	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_215.6	215.6	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_244.2	244.2	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_274.7	274.7	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—




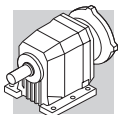
## C 36

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]								
			 IEC							
			63	71	80	90	100	112	132	
<b>C 36 2_2.7</b>	2.7	3.6	—	—	6.5	6.4	7.7	7.7	22	14
<b>C 36 2_3.2</b>	3.2	2.5	—	—	5.4	5.3	6.6	6.6	21	13
<b>C 36 2_3.5</b>	3.5	2.4	—	—	5.3	5.2	6.5	6.5	20	13
<b>C 36 2_4.2</b>	4.2	1.6	—	—	4.5	4.4	5.7	5.7	20	12
<b>C 36 2_4.6</b>	4.6	1.5	3.0	3.0	4.4	4.3	5.6	5.6	19	12
<b>C 36 2_5.3</b>	5.3	1.1	2.6	2.6	4.0	3.9	5.2	5.2	19	12
<b>C 36 2_5.8</b>	5.8	0.98	2.5	2.5	3.9	3.8	5.1	5.1	19	12
<b>C 36 2_6.8</b>	6.8	2.2	—	—	5.1	5.0	6.3	6.3	20	13
<b>C 36 2_8.0</b>	8.0	1.6	—	—	4.4	4.3	5.6	5.6	20	12
<b>C 36 2_8.8</b>	8.8	1.5	—	—	4.4	4.3	5.6	5.6	19	12
<b>C 36 2_10.6</b>	10.6	1.1	—	—	3.9	3.8	5.1	5.1	19	12
<b>C 36 2_11.7</b>	11.7	1.0	2.5	2.5	3.9	3.8	5.1	5.1	19	12
<b>C 36 2_13.3</b>	13.3	0.69	2.2	2.2	3.6	3.5	4.8	4.8	19	11
<b>C 36 2_14.8</b>	14.8	0.68	2.2	2.2	3.6	3.5	4.8	4.8	19	11
<b>C 36 2_17.2</b>	17.2	0.47	2.0	2.0	3.4	3.3	4.6	4.6	18	11
<b>C 36 2_19.0</b>	19.0	0.47	2.0	2.0	3.4	3.3	4.6	4.6	18	11
<b>C 36 3_22.1</b>	22.1	1.8	—	—	4.7	4.6	5.9	5.9	19	12
<b>C 36 3_26.2</b>	26.2	1.3	—	—	4.2	4.1	5.4	5.4	19	12
<b>C 36 3_28.7</b>	28.7	1.3	—	—	4.2	4.1	5.4	5.4	19	12
<b>C 36 3_34.6</b>	34.6	0.88	—	—	3.8	3.7	5.0	5.0	19	11
<b>C 36 3_38.1</b>	38.1	0.90	2.4	2.4	3.8	3.7	5.0	5.0	19	11
<b>C 36 3_43.5</b>	43.5	0.59	2.1	2.1	3.5	3.4	4.7	4.7	19	11
<b>C 36 3_48.2</b>	48.2	0.60	2.1	2.1	3.5	3.4	4.7	4.7	19	11
<b>C 36 3_56.2</b>	56.2	0.41	1.9	1.9	3.3	3.2	4.5	4.5	18	11
<b>C 36 3_62.0</b>	62.0	0.42	1.9	1.9	3.3	3.2	4.5	4.5	18	11
<b>C 36 3_70.8</b>	70.8	0.30	1.8	1.8	3.2	3.1	4.4	4.4	18	11
<b>C 36 3_77.6</b>	77.6	0.28	1.8	1.8	3.2	3.1	4.4	4.4	17	11
<b>C 36 3_83.1</b>	83.1	0.24	1.7	1.7	3.1	3.0	4.3	4.3	—	11
<b>C 36 3_91.9</b>	91.9	0.21	1.7	1.7	3.1	3.0	4.3	4.3	—	11
<b>C 36 3_102.2</b>	102.2	0.19	1.7	1.7	3.1	3.0	4.3	4.3	—	11
<b>C 36 3_111.5</b>	111.5	0.16	1.7	1.7	3.1	3.0	4.3	4.3	—	11
<b>C 36 3_125.8</b>	125.8	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	11
<b>C 36 3_139.8</b>	139.8	0.11	1.6	1.6	3.0	2.9	4.2	4.2	—	11
<b>C 36 3_162.0</b>	162.0	0.09	1.6	1.6	3.0	2.9	4.2	4.2	—	11
<b>C 36 3_183.5</b>	183.5	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	11
<b>C 36 3_206.4</b>	206.4	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	11
<b>C 36 4_230.9</b>	230.9	0.08	—	—	—	—	—	—	—	—
<b>C 36 4_255.0</b>	255.0	0.08	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
<b>C 36 4_290.9</b>	290.9	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.89
<b>C 36 4_318.9</b>	318.9	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.89
<b>C 36 4_341.7</b>	341.7	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.89
<b>C 36 4_377.9</b>	377.9	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.89
<b>C 36 4_420.2</b>	420.2	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
<b>C 36 4_458.4</b>	458.4	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
<b>C 36 4_517.2</b>	517.2	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
<b>C 36 4_574.7</b>	574.7	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
<b>C 36 4_665.9</b>	665.9	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
<b>C 36 4_754.2</b>	754.2	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
<b>C 36 4_848.5</b>	848.5	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88



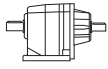


# C 36

		J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]											
		 <b>SERVO</b>											
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B		130A	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 36 2_2.7	2.7	—	—	—	—	—	—	6.5	7.0	6.4	7.4	6.4	7.4
C 36 2_3.2	3.2	—	—	—	—	—	—	5.4	5.9	5.3	6.3	5.3	6.3
C 36 2_3.5	3.5	—	—	—	—	—	—	5.3	5.8	5.2	6.2	5.2	6.2
C 36 2_4.2	4.2	—	—	—	—	—	—	4.5	5.0	4.4	5.4	4.4	5.4
C 36 2_4.6	4.6	1.8	2.0	1.8	2.2	4.3	4.7	4.4	4.9	4.3	5.3	4.3	5.3
C 36 2_5.3	5.3	1.4	1.6	1.4	1.8	3.9	4.4	4.0	4.5	3.9	4.9	3.9	4.9
C 36 2_5.8	5.8	1.3	1.5	1.3	1.7	3.8	4.2	3.9	4.4	3.8	4.8	3.8	4.8
C 36 2_6.8	6.8	—	—	—	—	—	—	5.1	5.6	5.0	6.0	5.0	6.0
C 36 2_8.0	8.0	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
C 36 2_8.8	8.8	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
C 36 2_10.6	10.6	—	—	—	—	—	—	3.9	4.4	3.8	4.8	3.8	4.8
C 36 2_11.7	11.7	1.3	1.5	1.3	1.7	3.8	4.3	3.9	4.4	3.8	4.8	3.8	4.8
C 36 2_13.3	13.3	0.96	1.2	0.98	1.4	3.5	3.9	3.6	4.1	3.5	4.5	3.5	4.5
C 36 2_14.8	14.8	0.95	1.2	0.97	1.4	3.5	3.9	3.6	4.1	3.5	4.5	3.5	4.5
C 36 2_17.2	17.2	0.74	1.0	0.76	1.2	3.3	3.7	3.4	3.9	3.3	4.3	3.3	4.3
C 36 2_19.0	19.0	0.74	1.0	0.76	1.2	3.3	3.7	3.4	3.9	3.3	4.3	3.3	4.3
C 36 3_22.1	22.1	—	—	—	—	—	—	4.7	5.2	4.6	5.6	4.6	5.6
C 36 3_26.2	26.2	—	—	—	—	—	—	4.2	4.7	4.1	5.1	4.1	5.1
C 36 3_28.7	28.7	—	—	—	—	—	—	4.2	4.7	4.1	5.1	4.1	5.1
C 36 3_34.6	34.6	—	—	—	—	—	—	3.8	4.3	3.7	4.7	3.7	4.7
C 36 3_38.1	38.1	1.2	1.4	1.2	1.6	3.7	4.2	3.8	4.3	3.7	4.7	3.7	4.7
C 36 3_43.5	43.5	0.86	1.1	0.88	1.3	3.4	3.8	3.5	4.0	3.4	4.4	3.4	4.4
C 36 3_48.2	48.2	0.87	1.1	0.89	1.3	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4
C 36 3_56.2	56.2	0.68	0.94	0.70	1.1	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2
C 36 3_62.0	62.0	0.69	0.95	0.71	1.1	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2
C 36 3_70.8	70.8	0.57	0.83	0.59	1.0	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1
C 36 3_77.6	77.6	0.55	0.81	0.57	1.0	3.1	3.5	3.2	3.7	3.1	4.1	3.1	4.1
C 36 3_83.1	83.1	0.51	0.77	0.53	0.97	3.1	3.5	3.1	3.6	3.0	4.0	3.0	4.0
C 36 3_91.9	91.9	0.48	0.74	0.50	0.94	3.0	3.5	3.1	3.6	3.0	4.0	3.0	4.0
C 36 3_102.2	102.2	0.46	0.72	0.48	0.92	3.0	3.4	3.1	3.6	3.0	4.0	3.0	4.0
C 36 3_111.5	111.5	0.43	0.69	0.45	0.89	3.0	3.4	3.1	3.6	3.0	4.0	3.0	4.0
C 36 3_125.8	125.8	0.41	0.67	0.43	0.87	3.0	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 36 3_139.8	139.8	0.38	0.64	0.40	0.84	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 36 3_162.0	162.0	0.36	0.62	0.38	0.82	2.9	3.3	3.0	3.5	2.9	3.9	2.9	3.9
C 36 3_183.5	183.5	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	2.9	3.9
C 36 3_206.4	206.4	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	2.9	3.9
C 36 4_230.9	230.9	0.35	0.61	0.37	0.81	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_255.0	255.0	0.35	0.61	0.37	0.81	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_290.9	290.9	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_318.9	318.9	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_341.7	341.7	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_377.9	377.9	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_420.2	420.2	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_458.4	458.4	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_517.2	517.2	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_574.7	574.7	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_665.9	665.9	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_754.2	754.2	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_848.5	848.5	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—





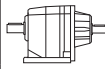
# C 41

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]								
			 IEC							
			63	71	80	90	100	112	132	
C 41 2_2.7	2.7	10	—	—	13	13	14	14	29	21
C 41 2_3.6	3.6	6.0	—	—	8.9	8.8	10	10	25	17
C 41 2_4.7	4.7	3.7	—	—	6.6	6.5	7.8	7.8	23	14
C 41 2_6.0	6.0	2.5	—	—	5.4	5.3	6.6	6.6	21	13
C 41 2_6.4	6.4	4.3	—	—	7.2	7.1	8.4	8.4	23	15
C 41 2_7.1	7.1	4.1	—	—	7.0	6.9	8.2	8.2	23	15
C 41 2_8.6	8.6	2.9	—	—	5.8	5.7	7.0	7.0	22	13
C 41 2_9.6	9.6	2.8	—	—	5.7	5.6	6.9	6.9	22	13
C 41 2_11.2	11.2	1.8	—	—	4.7	4.6	5.9	5.9	21	12
C 41 2_12.4	12.4	1.8	—	—	4.7	4.6	5.9	5.9	21	12
C 41 2_14.2	14.2	1.4	2.9	2.9	4.3	4.2	5.5	5.5	20	12
C 41 2_15.8	15.8	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	12
C 41 2_17.8	17.8	1.0	2.5	2.5	3.9	3.8	5.1	5.1	20	12
C 41 2_19.8	19.8	0.98	2.5	2.5	3.9	3.8	5.1	5.1	20	12
C 41 2_22.6	22.6	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	11
C 41 2_25.0	25.0	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	11
C 41 2_28.3	28.3	0.44	1.9	1.9	3.3	3.2	4.5	4.5	19	11
C 41 2_31.4	31.4	0.43	1.9	1.9	3.3	3.2	4.5	4.5	19	11
C 41 2_33.4	33.4	0.34	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 2_37.1	37.1	0.33	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 2_44.8	44.8	0.27	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_28.5	28.5	2.5	—	—	5.4	5.3	6.6	6.6	21	13
C 41 3_31.2	31.2	2.5	—	—	5.4	5.3	6.6	6.6	21	13
C 41 3_36.8	36.8	1.6	—	—	4.5	4.4	5.7	5.7	21	12
C 41 3_40.3	40.3	1.6	—	—	4.5	4.4	5.7	5.7	21	12
C 41 3_47.0	47.0	1.2	2.7	2.7	4.1	4.0	5.3	5.3	20	12
C 41 3_51.5	51.5	1.2	2.7	2.7	4.1	4.0	5.3	5.3	20	12
C 41 3_58.7	58.7	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	11
C 41 3_64.3	64.3	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	11
C 41 3_74.4	74.4	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	11
C 41 3_81.5	81.5	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	11
C 41 3_93.9	93.9	0.40	1.9	1.9	3.3	3.2	4.5	4.5	19	11
C 41 3_102.3	102.3	0.40	1.9	1.9	3.3	3.2	4.5	4.5	19	11
C 41 3_110.1	110.1	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_120.6	120.6	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_132.9	132.9	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_145.6	145.6	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_164.1	164.1	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 41 3_179.9	179.9	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 41 3_190.8	190.8	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 41 3_209.1	209.1	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 41 4_239.9	239.9	0.15	1.7	1.7	3.1	3.0	4.3	4.3	—	2.1
C 41 4_263.0	263.0	0.15	1.7	1.7	3.1	3.0	4.3	4.3	—	2.1
C 41 4_304.2	304.2	0.13	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_333.4	333.4	0.13	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_382.0	382.0	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_419.0	419.0	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_450.2	450.2	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_493.5	493.5	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_543.5	543.5	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_595.8	595.8	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_671.3	671.3	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_735.9	735.9	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_780.4	780.4	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_855.5	855.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0






# C 51

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]										
			 IEC									
			63	71	80	90	100	112	132	160		180
C 51 2_2.6	2.6	15	—	—	17	17	19	19	33	79	76	25
C 51 2_3.3	3.3	10	—	—	13	13	14	14	29	75	72	21
C 51 2_4.5	4.5	6.3	—	—	9.2	9.1	10	10	25	71	68	17
C 51 2_5.6	5.6	4.1	—	—	7.0	6.9	8.2	8.2	23	69	66	15
C 51 2_7.0	7.0	8.1	—	—	11	11	12	12	27	73	70	19
C 51 2_7.8	7.8	7.8	—	—	11	11	12	12	27	73	70	18
C 51 2_8.8	8.8	6.0	—	—	8.9	8.8	10	10	25	71	68	17
C 51 2_9.8	9.8	5.8	—	—	8.7	8.6	9.9	9.9	25	71	68	16
C 51 2_11.8	11.8	4.1	—	—	7.0	6.9	8.2	8.2	23	69	66	15
C 51 2_13.1	13.1	4.0	—	—	6.9	6.8	8.1	8.1	23	69	66	15
C 51 2_15.0	15.0	2.7	—	—	5.6	5.5	6.8	6.8	22	68	65	13
C 51 2_16.6	16.6	2.6	—	—	5.5	5.4	6.7	6.7	22	68	65	13
C 51 2_18.9	18.9	2.0	3.5	3.5	4.9	4.8	6.1	6.1	21	67	64	13
C 51 2_21.0	21.0	1.9	3.4	3.4	4.8	4.7	6.0	6.0	21	67	64	12
C 51 2_23.4	23.4	1.5	3.0	3.0	4.4	4.3	5.6	5.6	20	66	63	12
C 51 2_25.9	25.9	1.4	2.9	2.9	4.3	4.2	5.5	5.5	20	66	63	12
C 51 2_29.8	29.8	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	66	63	11
C 51 2_33.0	33.0	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	66	63	11
C 51 2_36.4	36.4	0.70	2.2	2.2	3.6	3.5	4.8	4.8	20	66	63	11
C 51 2_40.4	40.4	0.70	2.2	2.2	3.6	3.5	4.8	4.8	20	66	63	11
C 51 2_43.1	43.1	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 51 2_47.8	47.8	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 51 2_51.4	51.4	0.40	1.9	1.9	3.3	3.2	4.5	4.5	—	—	—	11
C 51 2_57.0	57.0	0.40	1.9	1.9	3.3	3.2	4.5	4.5	—	—	—	11
C 51 3_21.8	21.8	6.8	—	—	9.7	9.6	11	11	26	72	69	17
C 51 3_23.9	23.9	6.8	—	—	9.7	9.6	11	11	26	72	69	17
C 51 3_27.4	27.4	5.2	—	—	8.1	8.0	9.3	9.3	24	70	67	16
C 51 3_30.1	30.1	5.2	—	—	8.1	8.0	9.3	9.3	24	70	67	16
C 51 3_37.0	37.0	3.6	—	—	6.5	6.4	7.7	7.7	23	69	66	14
C 51 3_40.5	40.5	3.6	—	—	6.5	6.4	7.7	7.7	23	69	66	14
C 51 3_46.7	46.7	2.4	—	—	5.3	5.2	6.5	6.5	21	67	64	13
C 51 3_51.2	51.2	2.4	—	—	5.3	5.2	6.5	6.5	21	67	64	13
C 51 3_59.0	59.0	1.8	3.3	3.3	4.7	4.6	5.9	5.9	21	67	64	12
C 51 3_64.6	64.6	1.8	3.3	3.3	4.7	4.6	5.9	5.9	21	67	64	12
C 51 3_72.9	72.9	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	66	63	12
C 51 3_79.9	79.9	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	66	63	12
C 51 3_93.0	93.0	0.80	2.3	2.3	3.7	3.6	4.9	4.9	20	66	63	11
C 51 3_101.8	101.8	0.80	2.3	2.3	3.7	3.6	4.9	4.9	20	66	63	11
C 51 3_113.6	113.6	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	66	63	11
C 51 3_124.4	124.4	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	66	63	11
C 51 3_134.6	134.6	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 51 3_147.4	147.4	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 51 3_160.5	160.5	0.40	1.9	1.9	3.3	3.2	4.5	4.5	—	—	—	11
C 51 3_175.8	175.8	0.40	1.9	1.9	3.3	3.2	4.5	4.5	—	—	—	11
C 51 3_197.9	197.9	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	11
C 51 3_216.7	216.7	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	11
C 51 4_240.9	240.9	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	1.2
C 51 4_263.8	263.8	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	1.2
C 51 4_297.8	297.8	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	1.2
C 51 4_326.1	326.1	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	1.2
C 51 4_380.0	380.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_416.0	416.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_463.9	463.9	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_508.0	508.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_549.7	549.7	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_602.0	602.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_655.4	655.4	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_717.7	717.7	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_808.0	808.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_884.9	884.9	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1





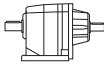


# C 51

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
		 <b>SERVO</b>											
i		80B		95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 51 2_2.6	2.6	—	—	—	—	17	18	17	18	32	34	33	38
C 51 2_3.3	3.3	—	—	—	—	13	14	13	14	27	29	29	34
C 51 2_4.5	4.5	—	—	—	—	9.2	9.7	9.1	10	23	26	25	30
C 51 2_5.6	5.6	—	—	—	—	7.0	7.5	6.9	7.9	21	24	23	28
C 51 2_7.0	7.0	—	—	—	—	11	12	11	12	25	28	27	32
C 51 2_7.8	7.8	—	—	—	—	11	12	11	12	25	27	27	32
C 51 2_8.8	8.8	—	—	—	—	8.9	9.4	8.8	9.8	23	25	25	30
C 51 2_9.8	9.8	—	—	—	—	8.7	9.2	8.6	9.6	23	25	25	30
C 51 2_11.8	11.8	—	—	—	—	7.0	7.5	6.9	7.9	21	24	23	28
C 51 2_13.1	13.1	—	—	—	—	6.9	7.4	6.8	7.8	21	23	23	28
C 51 2_15.0	15.0	—	—	—	—	5.6	6.1	5.5	6.5	20	22	22	27
C 51 2_16.6	16.6	—	—	—	—	5.5	6.0	5.4	6.4	20	22	22	27
C 51 2_18.9	18.9	4.8	5.3	4.8	5.3	4.9	5.4	4.8	5.8	19	21	21	26
C 51 2_21.0	21.0	4.7	5.2	4.7	5.2	4.8	5.3	4.7	5.7	19	21	21	26
C 51 2_23.4	23.4	4.3	4.8	4.3	4.8	4.4	4.3	4.3	5.3	18	21	20	25
C 51 2_25.9	25.9	4.2	4.7	4.2	4.7	4.3	4.8	4.2	5.2	18	21	20	25
C 51 2_29.8	29.8	3.7	4.2	3.7	4.2	3.8	4.3	3.7	4.7	18	20	20	25
C 51 2_33.0	33.0	3.7	4.2	3.7	4.2	3.8	4.3	3.7	4.7	18	20	20	25
C 51 2_36.4	36.4	3.5	4.0	3.5	4.0	3.6	4.1	3.5	4.5	18	20	20	25
C 51 2_40.4	40.4	3.5	4.0	3.5	4.0	3.6	4.1	3.5	4.5	18	20	20	25
C 51 2_43.1	43.1	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 51 2_47.8	47.8	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 51 2_51.4	51.4	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	—	—	—	—
C 51 2_57.0	57.0	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	—	—	—	—
C 51 3_21.8	21.8	—	—	—	—	9.7	10	9.6	11	24	26	26	31
C 51 3_23.9	23.9	—	—	—	—	9.7	10	9.6	11	24	26	26	31
C 51 3_27.4	27.4	—	—	—	—	8.1	8.6	8.0	9.0	22	25	24	29
C 51 3_30.1	30.1	—	—	—	—	8.1	8.6	8.0	9.0	22	25	24	29
C 51 3_37.0	37.0	—	—	—	—	6.5	7.0	6.4	7.4	21	23	23	28
C 51 3_40.5	40.5	—	—	—	—	6.5	7.0	6.4	7.4	21	23	23	28
C 51 3_46.7	46.7	—	—	—	—	5.3	5.8	5.2	6.2	19	22	21	26
C 51 3_51.2	51.2	—	—	—	—	5.3	5.8	5.2	6.2	19	22	21	26
C 51 3_59.0	59.0	4.6	5.1	4.6	5.1	4.7	5.2	4.6	5.6	19	21	21	26
C 51 3_64.6	64.6	4.6	5.1	4.6	5.1	4.7	5.2	4.6	5.6	19	21	21	26
C 51 3_72.9	72.9	4.1	4.6	4.1	4.6	4.2	5.2	4.1	5.1	18	21	20	25
C 51 3_79.9	79.9	4.1	4.6	4.1	4.6	4.2	5.2	4.1	5.1	18	21	20	25
C 51 3_93.0	93.0	3.6	4.1	3.6	4.1	3.7	4.2	3.6	4.6	18	20	20	25
C 51 3_101.8	101.8	3.6	4.1	3.6	4.1	3.7	4.2	3.6	4.6	18	20	20	25
C 51 3_113.6	113.6	3.4	3.9	3.4	3.9	3.5	4.0	3.4	4.4	18	20	20	25
C 51 3_124.4	124.4	3.4	3.9	3.4	3.9	3.5	4.0	3.4	4.4	18	20	20	25
C 51 3_134.6	134.6	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 51 3_147.4	147.4	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 51 3_160.5	160.5	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	—	—	—	—
C 51 3_175.8	175.8	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	—	—	—	—
C 51 3_197.9	197.9	3.1	3.6	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 3_216.7	216.7	3.1	3.6	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_240.9	240.9	—	—	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_263.8	263.8	—	—	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_297.8	297.8	—	—	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_326.1	326.1	—	—	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_380.0	380.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_416.0	416.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_463.9	463.9	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_508.0	508.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_549.7	549.7	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_602.0	602.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_655.4	655.4	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_717.7	717.7	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_808.0	808.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_884.9	884.9	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—




# C 61

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
			 IEC										
			63	71	80	90	100	112	132	160		180	
C 61 2_2.8	2.8	30	—	—	—	—	—	—	—	49	78	76	52
C 61 2_3.7	3.7	19	—	—	22	22	23	23	38	78	76	76	41
C 61 2_4.6	4.6	14	—	—	17	17	18	18	33	78	76	76	36
C 61 2_6.0	6.0	8.8	—	—	12	12	13	13	28	78	76	76	31
C 61 2_6.7	6.7	14	—	—	—	—	—	—	33	78	76	76	36
C 61 2_7.5	7.5	13	—	—	—	—	—	—	32	78	76	76	35
C 61 2_8.8	8.8	13	—	—	16	16	17	17	32	78	76	76	35
C 61 2_9.8	9.8	12	—	—	15	15	16	16	31	78	76	76	34
C 61 2_10.9	10.9	9.6	—	—	13	12	14	14	29	78	76	76	31
C 61 2_12.1	12.1	9.2	—	—	12	12	13	13	28	78	76	76	31
C 61 2_14.3	14.3	5.8	—	—	8.7	8.6	9.9	9.9	25	78	76	76	28
C 61 2_15.9	15.9	5.6	—	—	8.5	8.4	9.7	9.7	25	78	76	76	27
C 61 2_17.7	17.7	4.4	—	—	7.3	7.2	8.5	8.5	23	78	76	76	26
C 61 2_19.6	19.6	4.3	—	—	7.2	7.1	8.4	8.4	23	78	76	76	26
C 61 2_22.4	22.4	3.2	4.7	4.7	6.1	6.0	7.3	7.3	22	78	76	76	25
C 61 2_24.8	24.8	3.1	4.6	4.6	6.0	5.9	7.2	7.2	22	78	76	76	25
C 61 2_27.4	27.4	2.1	3.6	3.6	5.0	4.9	6.2	6.2	21	78	76	76	24
C 61 2_30.4	30.4	2.2	3.7	3.7	5.1	5.0	6.3	6.3	21	78	76	76	24
C 61 2_34.2	34.2	1.5	3.0	3.0	4.4	4.3	5.6	5.6	20	78	76	76	23
C 61 2_38.0	38.0	1.5	3.0	3.0	4.4	4.3	5.6	5.6	20	78	76	76	23
C 61 3_26.8	26.8	10	—	—	13	13	14	14	29	78	76	76	32
C 61 3_29.4	29.4	10	—	—	13	13	14	14	29	78	76	76	32
C 61 3_33.0	33.0	8.1	—	—	11	11	12	12	27	78	76	76	30
C 61 3_36.1	36.1	8.1	—	—	11	11	12	12	27	78	76	76	30
C 61 3_43.4	43.4	5.0	—	—	7.9	7.8	9.1	9.1	24	78	76	76	27
C 61 3_47.6	47.6	5.0	—	—	7.9	7.8	9.1	9.1	24	78	76	76	27
C 61 3_53.5	53.5	3.9	—	—	6.8	6.7	8.0	8.0	23	78	76	76	26
C 61 3_58.6	58.6	3.8	—	—	6.7	6.6	7.9	7.9	23	78	76	76	26
C 61 3_67.7	67.7	2.8	4.3	4.3	5.7	5.6	6.9	6.9	22	78	76	76	25
C 61 3_74.2	74.2	2.8	4.3	4.3	5.7	5.6	6.9	6.9	22	78	76	76	25
C 61 3_83.0	83.0	1.9	3.4	3.4	4.8	4.7	6.0	6.0	21	78	76	76	24
C 61 3_91.0	91.0	1.9	3.4	3.4	4.8	4.7	6.0	6.0	21	78	76	76	24
C 61 3_103.6	103.6	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	78	76	76	23
C 61 3_113.6	113.6	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	78	76	76	23
C 61 3_128.1	128.1	1.0	2.5	2.5	3.9	3.8	5.1	5.1	20	78	76	76	23
C 61 3_140.5	140.5	1.0	2.5	2.5	3.9	3.8	5.1	5.1	20	78	76	76	23
C 61 3_150.0	150.0	0.70	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	—	23
C 61 3_164.5	164.5	0.70	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	—	23
C 61 3_178.6	178.6	0.60	2.1	2.1	3.5	3.4	4.7	4.7	—	—	—	—	22
C 61 3_195.8	195.8	0.60	2.1	2.1	3.5	3.4	4.7	4.7	—	—	—	—	22
C 61 4_217.4	217.4	0.67	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	—	11
C 61 4_238.3	238.3	0.67	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	—	11
C 61 4_275.3	275.3	0.81	2.3	2.3	3.7	3.6	4.9	4.9	—	—	—	—	11
C 61 4_301.7	301.7	0.81	2.3	2.3	3.7	3.6	4.9	4.9	—	—	—	—	11
C 61 4_337.7	337.7	0.56	2.1	2.1	3.5	3.4	4.7	4.7	—	—	—	—	11
C 61 4_370.1	370.1	0.56	2.1	2.1	3.5	3.4	4.7	4.7	—	—	—	—	11
C 61 4_421.5	421.5	0.53	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	—	11
C 61 4_462.0	462.0	0.53	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	—	11
C 61 4_521.1	521.1	0.51	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	—	11
C 61 4_571.2	571.2	0.51	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	—	11
C 61 4_610.1	610.1	0.49	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	—	11
C 61 4_668.8	668.8	0.49	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	—	11
C 61 4_726.3	726.3	0.48	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	—	11
C 61 4_796.1	796.1	0.48	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	—	11




# C 61

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
		 <b>SERVO</b>											
i		80B		95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 61 2_2.8	2.8	—	—	—	—	—	—	—	—	47	49	49	54
C 61 2_3.7	3.7	—	—	—	—	22	23	22	23	36	38	38	43
C 61 2_4.6	4.6	—	—	—	—	17	18	17	18	31	33	33	38
C 61 2_6.0	6.0	—	—	—	—	12	13	12	13	26	28	28	33
C 61 2_6.7	6.7	—	—	—	—	—	—	—	—	31	33	33	38
C 61 2_7.5	7.5	—	—	—	—	—	—	—	—	30	32	32	37
C 61 2_8.8	8.8	—	—	—	—	16	17	16	17	30	32	32	37
C 61 2_9.8	9.8	—	—	—	—	15	16	15	16	23	31	31	36
C 61 2_10.9	10.9	—	—	—	—	13	14	12	13	27	29	29	34
C 61 2_12.1	12.1	—	—	—	—	12	13	12	13	26	29	28	33
C 61 2_14.3	14.3	—	—	—	—	8.7	9.2	8.6	9.6	23	25	25	30
C 61 2_15.9	15.9	—	—	—	—	8.5	9.0	8.4	9.4	23	25	25	30
C 61 2_17.7	17.7	—	—	—	—	7.3	7.8	7.2	8.2	21	24	23	28
C 61 2_19.6	19.6	—	—	—	—	7.2	7.7	7.1	8.1	21	24	23	28
C 61 2_22.4	22.4	—	—	6.0	6.5	6.1	6.6	6.0	7.0	20	23	22	27
C 61 2_24.8	24.8	—	—	5.9	6.4	6.0	6.5	5.9	6.9	20	23	22	27
C 61 2_27.4	27.4	—	—	4.9	5.4	5.0	5.5	4.9	5.9	19	22	21	26
C 61 2_30.4	30.4	—	—	5.0	5.5	5.1	5.6	5.0	6.0	19	22	21	26
C 61 2_34.2	34.2	—	—	4.3	4.8	4.4	4.9	4.3	5.3	18	21	20	25
C 61 2_38.0	38.0	—	—	4.3	4.8	4.4	4.9	4.3	5.3	18	21	20	25
C 61 3_26.8	26.8	—	—	—	—	13	14	13	14	27	29	29	34
C 61 3_29.4	29.4	—	—	—	—	13	14	13	14	27	29	29	34
C 61 3_33.0	33.0	—	—	—	—	11	12	11	12	25	28	27	32
C 61 3_36.1	36.1	—	—	—	—	11	12	11	12	25	28	27	32
C 61 3_43.4	43.4	—	—	—	—	7.9	8.4	7.8	8.8	22	24	24	29
C 61 3_47.6	47.6	—	—	—	—	7.9	8.4	7.8	8.8	22	24	24	29
C 61 3_53.5	53.5	—	—	—	—	6.8	7.3	6.7	7.7	21	23	23	28
C 61 3_58.6	58.6	—	—	—	—	6.7	7.2	6.6	7.6	21	23	23	28
C 61 3_67.7	67.7	—	—	5.6	6.1	5.7	6.2	5.6	6.6	20	22	22	27
C 61 3_74.2	74.2	—	—	5.6	6.1	5.7	6.2	5.6	6.6	20	22	22	27
C 61 3_83.0	83.0	—	—	4.7	5.2	4.8	5.3	4.7	5.7	19	21	21	26
C 61 3_91.0	91.0	—	—	4.7	5.2	4.8	5.3	4.7	5.7	19	21	21	26
C 61 3_103.6	103.6	—	—	4.1	4.6	4.2	4.7	4.1	5.1	18	21	20	25
C 61 3_113.6	113.6	—	—	4.1	4.6	4.2	4.7	4.1	5.1	18	21	20	25
C 61 3_128.1	128.1	—	—	3.8	4.3	3.9	4.4	3.8	4.8	18	20	20	25
C 61 3_140.5	140.5	—	—	3.8	4.3	3.9	4.4	3.8	4.8	18	20	20	25
C 61 3_150.0	150.0	—	—	3.5	4.0	3.6	4.1	3.5	4.5	—	—	—	—
C 61 3_164.5	164.5	—	—	3.5	4.0	3.6	4.1	3.5	4.5	—	—	—	—
C 61 3_178.6	178.6	—	—	3.4	3.9	3.5	4.0	3.4	4.4	—	—	—	—
C 61 3_195.8	195.8	—	—	3.4	3.9	3.5	4.0	3.4	4.4	—	—	—	—
C 61 4_217.4	217.4	3.5	3.9	3.5	3.9	3.6	4.1	3.5	4.5	—	—	—	—
C 61 4_238.3	238.3	3.5	3.9	3.5	3.9	3.6	4.1	3.5	4.5	—	—	—	—
C 61 4_275.3	275.3	3.6	4.1	3.6	4.1	3.7	4.2	3.6	4.6	—	—	—	—
C 61 4_301.7	301.7	3.6	4.1	3.6	4.1	3.7	4.2	3.6	4.6	—	—	—	—
C 61 4_337.7	337.7	3.4	3.8	3.4	3.8	3.5	4.0	3.4	4.4	—	—	—	—
C 61 4_370.1	370.1	3.4	3.8	3.4	3.8	3.5	4.0	3.4	4.4	—	—	—	—
C 61 4_421.5	421.5	3.4	3.8	3.4	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_462.0	462.0	3.4	3.8	3.4	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_521.1	521.1	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_571.2	571.2	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_610.1	610.1	3.3	3.7	3.3	3.7	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_668.8	668.8	3.3	3.7	3.3	3.7	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_726.3	726.3	3.3	3.7	3.3	3.7	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_796.1	796.1	3.3	3.7	3.3	3.7	3.4	3.9	3.3	4.3	—	—	—	—






# C 70

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]												
			63	71	80	90	100 112	132	160	180	200	225	250	280
C 70 2_4.6	4.6	—	—	—	—	—	—	136	133	143	—	—	—	99
C 70 2_5.9	5.9	—	—	—	—	—	—	119	117	126	—	—	—	32
C 70 2_6.3	6.3	—	—	—	—	—	—	129	127	136	—	—	—	93
C 70 2_7.5	7.5	26	—	—	—	—	45	105	102	112	—	—	—	68
C 70 2_8.0	8.0	—	—	—	—	—	—	115	113	122	—	—	—	78
C 70 2_9.5	9.5	19	—	—	—	—	38	97	95	—	—	—	—	60
C 70 2_10.2	10.2	24	—	—	—	—	43	102	100	109	—	—	—	65
C 70 2_11.2	11.2	15	—	—	—	—	34	94	91	—	—	—	—	56
C 70 2_13.0	13.0	17	—	—	—	—	36	95	93	—	—	—	—	58
C 70 2_14.1	14.1	9.9	—	—	12	12	14	29	88	86	—	—	—	51
C 70 2_15.3	15.3	14	—	—	—	—	33	93	90	—	—	—	—	55
C 70 2_16.7	16.7	6.9	—	—	9.5	9.4	11	26	85	83	—	—	—	48
C 70 2_19.3	19.3	9.1	—	—	12	12	13	28	87	85	—	—	—	50
C 70 2_22.9	22.9	6.4	—	—	9.0	8.9	10	25	85	83	—	—	—	48
C 70 2_27.7	27.7	5.2	—	—	8.0	7.9	9.2	24	84	81	—	—	—	46
C 70 2_34.7	34.7	3.2	—	—	6.1	6.0	7.3	22	82	79	—	—	—	44
C 70 3_41.3	41.3	4.4	—	—	7.2	7.2	8.5	23	83	80	—	—	—	46
C 70 3_44.7	44.7	4.2	—	—	7.0	7.0	8.2	23	83	80	—	—	—	45
C 70 3_52.2	52.2	3.0	—	—	5.8	5.8	7.0	22	81	79	—	—	—	44
C 70 3_56.5	56.5	2.8	—	—	5.7	5.6	6.9	22	81	79	—	—	—	44
C 70 3_65.9	65.9	2.0	—	—	4.9	4.8	6.1	21	80	78	—	—	—	43
C 70 3_71.3	71.3	2.0	—	—	4.8	4.8	6.0	21	80	78	—	—	—	43
C 70 3_81.4	81.4	1.5	—	—	4.3	4.3	5.6	20	80	78	—	—	—	43
C 70 3_88.2	88.2	1.4	—	—	4.3	4.2	5.5	20	80	76	—	—	—	43
C 70 3_103.8	103.8	1.0	—	—	3.8	3.8	5.1	20	79	77	—	—	—	42
C 70 3_112.4	112.4	0.90	—	—	3.8	3.7	5.0	20	79	77	—	—	—	42
C 70 3_126.8	126.8	0.70	—	—	3.5	3.5	4.8	20	79	77	—	—	—	42
C 70 3_137.4	137.4	0.70	—	—	3.5	3.5	4.7	20	79	77	—	—	—	42
C 70 3_150.3	150.3	0.50	—	—	3.4	3.4	9.6	—	—	—	—	—	—	42
C 70 3_162.8	162.8	0.50	—	—	3.4	3.4	4.6	—	—	—	—	—	—	42
C 70 3_179.2	179.2	0.40	—	—	3.2	3.3	4.5	—	—	—	—	—	—	42
C 70 3_194.1	194.1	0.40	—	—	3.2	3.2	4.5	—	—	—	—	—	—	42
C 70 3_220.9	220.9	0.30	—	—	3.1	3.1	4.3	—	—	—	—	—	—	41
C 70 3_239.3	239.3	0.30	—	—	3.1	3.1	4.3	—	—	—	—	—	—	41
C 70 4_251.3	251.3	0.70	2.2	2.2	3.5	3.5	4.8	20	—	—	—	—	—	11
C 70 4_272.2	272.2	0.70	2.2	2.1	3.5	3.5	4.8	20	—	—	—	—	—	11
C 70 4_317.9	317.9	0.50	2.0	2.0	3.4	3.3	4.6	19	—	—	—	—	—	11
C 70 4_344.3	344.3	0.50	2.0	2.0	3.4	3.3	4.6	19	—	—	—	—	—	11
C 70 4_409.4	409.4	0.40	1.8	1.8	3.2	3.2	4.5	19	—	—	—	—	—	7.9
C 70 4_443.5	443.5	0.40	1.8	1.8	3.2	3.2	4.5	19	—	—	—	—	—	7.9
C 70 4_512.0	512.0	0.30	1.7	1.7	3.1	3.1	4.4	19	—	—	—	—	—	7.8
C 70 4_554.7	554.7	0.30	1.7	1.7	3.1	3.1	4.4	19	—	—	—	—	—	7.8
C 70 4_606.8	606.8	0.20	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	7.8
C 70 4_657.3	657.3	0.20	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	7.7
C 70 4_736.0	736.0	0.20	1.6	1.6	3.0	2.9	4.3	—	—	—	—	—	—	7.7
C 70 4_797.3	797.3	0.20	1.6	1.6	3.0	2.9	4.3	—	—	—	—	—	—	7.7
C 70 4_922.6	922.6	0.10	1.6	1.6	3.0	2.9	4.2	—	—	—	—	—	—	7.7
C 70 4_999.5	999.5	0.10	1.6	1.6	3.0	2.9	4.2	—	—	—	—	—	—	7.6
C 70 4_1069	1069	0.80	1.6	1.5	2.9	2.9	4.2	—	—	—	—	—	—	7.6
C 70 4_1158	1158	0.80	1.6	1.5	2.9	2.9	4.2	—	—	—	—	—	—	7.6
C 70 4_1362	1362	0.60	1.5	1.5	2.9	2.9	4.1	—	—	—	—	—	—	7.6
C 70 4_1476	1476	0.60	1.5	1.5	2.9	2.9	4.1	—	—	—	—	—	—	7.6


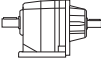


# C 80

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]													
			 IEC												
			63	71	80	90	100 112	132	160	180	200	225	250		280
C 80 2_5.6	5.6	—	—	—	—	—	—	—	—	197	211	489	—	—	164
C 80 2_6.1	6.1	—	—	—	—	—	—	—	—	193	210	485	—	—	159
C 80 2_7.0	7.0	—	—	—	—	—	—	—	160	161	174	452	—	—	127
C 80 2_7.6	7.6	—	—	—	—	—	—	—	158	158	172	449	—	—	124
C 80 2_8.9	8.9	—	—	—	—	—	—	—	137	135	146	429	—	—	101
C 80 2_9.6	9.6	—	—	—	—	—	—	—	136	133	144	427	—	—	99
C 80 2_11.1	11.1	38	—	—	—	—	—	56	116	113	124	408	—	—	79
C 80 2_12.0	12.0	36	—	—	—	—	—	55	115	112	123	407	—	—	78
C 80 2_13.8	13.8	28	—	—	—	—	—	47	106	104	135	398	—	—	69
C 80 2_14.9	14.9	27	—	—	—	—	—	46	106	103	134	397	—	—	69
C 80 2_16.7	16.7	21	—	—	—	—	—	40	100	97	127	391	—	—	63
C 80 2_18.1	18.1	21	—	—	—	—	—	40	99	97	127	390	—	—	62
C 80 2_20.5	20.5	14	—	—	17	17	18	33	93	90	120	383	—	—	55
C 80 2_22.2	22.2	14	—	—	16	16	18	33	92	90	120	383	—	—	55
C 80 2_24.0	24.0	13	—	—	16	16	17	32	91	89	119	382	—	—	54
C 80 2_25.9	25.9	13	—	—	16	15	17	32	91	89	118	382	—	—	54
C 80 2_31.3	31.3	8.7	—	—	12	11	13	28	87	85	—	—	—	—	50
C 80 2_39.1	39.1	5.2	—	—	8.0	8.0	9.2	24	84	81	—	—	—	—	46
C 80 3_43.5	43.5	9.6	—	—	12	12	14	29	88	86	—	—	—	—	51
C 80 3_47.4	47.4	9.1	—	—	12	12	13	28	87	85	—	—	—	—	50
C 80 3_57.3	57.3	5.7	—	—	8.5	8.5	9.7	25	84	82	—	—	—	—	47
C 80 3_62.5	62.5	5.4	—	—	8.2	8.2	9.5	24	84	82	—	—	—	—	47
C 80 3_70.5	70.5	4.3	—	—	7.1	7.0	8.3	23	83	80	—	—	—	—	45
C 80 3_76.9	76.9	4.1	—	—	7.0	6.9	8.2	23	82	80	—	—	—	—	45
C 80 3_89.3	89.3	3.0	—	—	5.9	5.8	7.1	22	81	79	—	—	—	—	44
C 80 3_97.4	97.4	2.9	—	—	5.8	5.7	7.0	22	81	79	—	—	—	—	44
C 80 3_109.5	109.5	2.0	—	—	4.8	4.8	6.1	21	80	78	—	—	—	—	43
C 80 3_119.5	119.5	1.9	—	—	4.8	4.7	6.0	21	80	79	—	—	—	—	43
C 80 3_136.7	136.7	1.4	—	—	4.3	4.2	5.5	20	80	78	—	—	—	—	43
C 80 3_149.1	149.1	1.4	—	—	4.2	4.2	5.5	20	80	77	—	—	—	—	43
C 80 3_169.0	169.0	1.0	—	—	3.9	3.8	5.1	20	80	77	—	—	—	—	42
C 80 3_184.4	184.4	1.0	—	—	3.9	3.8	5.1	20	80	77	—	—	—	—	42
C 80 3_197.9	197.9	0.80	—	—	3.7	3.6	4.9	—	—	—	—	—	—	—	42
C 80 3_215.8	215.8	0.80	—	—	3.6	3.6	4.9	—	—	—	—	—	—	—	42
C 80 4_261.9	261.9	1.7	—	—	4.6	4.5	5.8	21	—	—	—	—	—	—	12
C 80 4_285.7	285.7	1.7	—	—	4.6	4.5	5.8	21	—	—	—	—	—	—	12
C 80 4_334.3	334.3	1.2	2.7	2.7	4.0	4.0	5.3	20	—	—	—	—	—	—	11
C 80 4_364.7	364.7	1.2	2.7	2.6	4.0	4.0	5.3	20	—	—	—	—	—	—	11
C 80 4_417.5	417.5	0.90	2.4	2.3	3.7	3.7	5.0	20	—	—	—	—	—	—	11
C 80 4_455.4	455.4	0.90	2.3	2.3	3.7	3.7	5.5	20	—	—	—	—	—	—	11
C 80 4_529.3	529.3	0.50	2.0	2.0	3.4	3.3	4.6	19	—	—	—	—	—	—	11
C 80 4_577.4	577.4	0.50	2.0	2.0	3.4	3.3	4.6	19	—	—	—	—	—	—	11
C 80 4_664.3	664.3	0.40	2.0	1.9	3.3	3.2	4.5	19	—	—	—	—	—	—	11
C 80 4_724.7	724.7	0.40	2.0	1.9	3.3	3.2	4.5	19	—	—	—	—	—	—	11
C 80 4_783.4	783.4	0.30	2.0	1.8	3.2	3.1	4.4	—	—	—	—	—	—	—	9.4
C 80 4_854.6	854.6	0.30	2.0	1.8	3.2	3.1	4.4	—	—	—	—	—	—	—	9.4
C 80 4_945.7	945.7	0.20	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	9.3
C 80 4_1032	1032	0.20	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	9.3
C 80 4_1168	1168	0.20	1.6	1.6	3.0	3.0	4.2	—	—	—	—	—	—	—	9.2
C 80 4_1274	1274	0.20	1.6	1.6	3.0	3.0	4.2	—	—	—	—	—	—	—	9.2
C 80 4_1358	1358	0.10	1.6	1.6	3.0	2.9	4.2	—	—	—	—	—	—	—	9.2
C 80 4_1481	1481	0.10	1.6	1.6	3.0	2.9	4.2	—	—	—	—	—	—	—	9.2





# C 90

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]													
			63	71	80	90	100 112	132	160	180	200	225	250	280	
C 90 2_5.2	5.2	—	—	—	—	—	—	—	—	—	332	610	637	—	619
C 90 2_5.6	5.6	—	—	—	—	—	—	—	—	—	321	599	626	—	609
C 90 2_6.8	6.8	—	—	—	—	—	—	—	—	—	252	530	557	—	540
C 90 2_7.3	7.3	—	—	—	—	—	—	—	—	—	246	524	551	—	533
C 90 2_8.3	8.3	—	—	—	—	—	—	—	—	—	212	490	517	—	499
C 90 2_9.0	9.0	—	—	—	—	—	—	—	—	—	208	485	513	—	495
C 90 2_10.4	10.4	—	—	—	—	—	—	167	164	175	458	484	—	461	
C 90 2_11.2	11.2	—	—	—	—	—	—	164	162	173	455	482	—	458	
C 90 2_12.8	12.8	65	—	—	—	—	84	143	141	152	436	462	—	439	
C 90 2_13.9	13.9	63	—	—	—	—	82	141	139	200	434	460	—	437	
C 90 2_16.0	16.0	47	—	—	—	—	66	125	123	154	417	443	—	420	
C 90 2_17.3	17.3	46	—	—	—	—	65	124	122	153	416	442	—	419	
C 90 2_18.7	18.7	42	—	—	—	—	61	121	119	148	412	433	—	415	
C 90 2_20.2	20.2	41	—	—	—	—	61	199	118	147	411	438	—	414	
C 90 2_22.9	22.9	28	—	—	30	30	31	47	106	104	133	397	423	—	400
C 90 2_24.8	24.8	27	—	—	29	29	31	46	105	103	133	396	422	—	399
C 90 2_27.2	27.2	22	—	—	25	25	26	41	101	99	128	391	418	—	394
C 90 2_29.4	29.4	22	—	—	25	24	26	41	100	98	127	391	417	—	394
C 90 2_35.1	35.1	14	—	—	17	17	18	33	93	90	—	—	—	—	386
C 90 3_39.4	39.4	27	—	—	—	—	—	46	105	103	112	398	424	—	412
C 90 3_43.0	43.0	26	—	—	—	—	—	45	104	102	111	396	422	—	410
C 90 3_50.3	50.3	19	—	—	—	—	—	38	98	95	126	389	415	—	403
C 90 3_54.9	54.9	19	—	—	—	—	—	37	97	95	125	389	415	—	401
C 90 3_59.2	59.2	16	—	—	—	—	—	35	94	92	122	385	411	—	398
C 90 3_64.6	64.6	15	—	—	—	—	—	34	94	91	121	384	410	—	398
C 90 3_74.4	74.4	10	—	—	13	13	14	29	88	86	116	379	405	—	393
C 90 3_81.2	81.2	9.8	—	—	12	12	13	29	88	86	115	379	405	—	392
C 90 3_88.2	88.2	7.1	—	—	9.7	9.6	11	26	85	83	113	376	402	—	389
C 90 3_96.2	96.2	6.9	—	—	9.4	9.4	11	26	85	83	112	376	402	—	389
C 90 3_107.0	107.0	5.7	—	—	8.4	8.4	9.6	25	84	82	—	—	—	—	388
C 90 3_116.7	116.7	5.5	—	—	8.3	8.2	9.5	24	84	82	—	—	—	—	388
C 90 3_134.1	134.1	3.5	—	—	6.4	6.3	7.6	22	82	80	—	—	—	—	386
C 90 3_146.3	146.3	3.4	—	—	6.3	6.2	7.5	22	82	80	—	—	—	—	386
C 90 3_157.8	157.8	2.5	—	—	5.4	5.3	6.6	21	81	79	—	—	—	—	385
C 90 3_172.1	172.1	2.4	—	—	5.3	5.2	6.5	21	81	79	—	—	—	—	385
C 90 4_212.4	212.4	4.2	—	—	7.0	7.0	8.3	23	83	80	—	—	—	—	14
C 90 4_231.7	231.7	4.1	—	—	7.0	6.9	8.2	23	82	80	—	—	—	—	14
C 90 4_268.5	268.5	2.8	—	—	5.7	5.6	6.9	22	81	79	—	—	—	—	13
C 90 4_292.9	292.9	2.8	—	—	5.7	2.6	6.9	22	81	79	—	—	—	—	13
C 90 4_339.0	339.0	2.0	3.4	3.4	4.8	4.8	6.0	21	80	78	—	—	—	—	12
C 90 4_369.8	369.8	2.0	3.4	3.4	4.8	4.8	6.0	21	80	78	—	—	—	—	12
C 90 4_419.0	419.0	1.4	2.9	2.9	4.3	4.2	5.5	20	80	78	—	—	—	—	12
C 90 4_457.1	457.1	1.4	2.9	2.9	4.3	4.2	5.5	20	80	78	—	—	—	—	12
C 90 4_534.2	534.2	0.90	2.4	2.4	3.8	3.7	5.0	20	79	77	—	—	—	—	11
C 90 4_582.8	582.8	0.90	2.4	2.4	3.8	3.7	5.0	20	79	77	—	—	—	—	11
C 90 4_652.8	652.8	0.70	2.1	2.1	3.5	3.5	4.7	20	79	77	—	—	—	—	11
C 90 4_712.2	712.2	0.70	2.1	2.1	3.5	3.5	4.7	20	79	77	—	—	—	—	11
C 90 4_773.6	773.6	0.50	2.0	2.0	3.4	3.3	4.6	—	—	—	—	—	—	—	9.7
C 90 4_844.0	844.0	0.50	2.0	2.0	3.4	3.3	4.6	—	—	—	—	—	—	—	9.6
C 90 4_922.3	922.3	0.40	1.8	1.8	3.2	3.2	4.5	—	—	—	—	—	—	—	9.5
C 90 4_1006	1006	0.40	1.8	1.8	3.2	3.2	4.5	—	—	—	—	—	—	—	9.4
C 90 4_1137	1137	0.30	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	9.3
C 90 4_1240	1240	0.30	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	9.3



# C 100

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]													
			63	71	80	90	100 112	132	160	180	200	225	250	280	
C 100 2_4.9	4.9	—	—	—	—	—	—	—	—	—	674	960	987	970	972
C 100 2_5.3	5.3	—	—	—	—	—	—	—	—	—	647	933	960	943	944
C 100 2_6.5	6.5	—	—	—	—	—	—	—	—	—	481	767	794	777	778
C 100 2_7.1	7.1	—	—	—	—	—	—	—	—	—	465	751	778	761	763
C 100 2_8.4	8.4	—	—	—	—	—	—	—	—	—	365	651	678	660	662
C 100 2_9.0	9.0	—	—	—	—	—	—	—	—	—	355	641	668	651	653
C 100 2_10.1	10.1	—	—	—	—	—	—	—	—	—	291	577	604	587	589
C 100 2_10.9	10.9	—	—	—	—	—	—	—	—	—	285	570	597	580	582
C 100 2_12.5	12.5	—	—	—	—	—	—	—	224	222	233	521	550	539	529
C 100 2_13.5	13.5	—	—	—	—	—	—	—	220	218	228	517	545	532	524
C 100 2_15.2	15.2	122	—	—	—	—	—	82	141	200	199	472	499	528	514
C 100 2_16.5	16.5	119	—	—	—	—	—	138	197	195	206	496	525	511	504
C 100 2_18.7	18.7	97	—	—	—	—	—	116	175	173	203	474	501	488	480
C 100 2_20.2	20.2	95	—	—	—	—	—	114	173	171	201	471	499	486	478
C 100 2_22.2	22.2	73	—	—	—	—	—	92	102	150	179	448	477	463	456
C 100 2_24.1	24.1	72	—	—	—	—	—	91	150	148	178	447	476	462	455
C 100 2_29.6	29.6	50	—	—	—	—	54	69	129	127	156	425	454	440	433
C 100 3_34.3	34.3	—	—	—	—	—	—	—	148	146	155	439	465	471	461
C 100 3_36.9	36.9	—	—	—	—	—	—	—	145	143	152	436	462	468	458
C 100 3_42.9	42.9	44	—	—	—	—	—	63	123	120	130	415	441	451	437
C 100 3_46.2	46.2	43	—	—	—	—	—	61	121	118	128	413	439	452	435
C 100 3_53.3	53.3	33	—	—	—	—	—	51	111	109	139	403	429	432	424
C 100 3_57.4	57.4	31	—	—	—	—	—	50	110	107	138	401	427	431	423
C 100 3_64.5	64.5	24	—	—	—	—	—	43	103	101	130	394	420	422	415
C 100 3_69.4	69.4	24	—	—	—	—	—	43	102	100	129	393	419	421	414
C 100 3_79.4	79.4	16	—	—	—	—	20	35	95	92	122	385	411	413	407
C 100 3_85.6	85.6	16	—	—	—	—	19	35	94	92	121	385	411	413	406
C 100 3_92.7	92.7	15	—	—	—	—	18	34	93	91	120	384	410	412	405
C 100 3_99.8	99.8	14	—	—	—	—	18	33	93	90	119	383	409	411	404
C 100 3_111.9	111.9	9.9	—	—	—	—	14	29	88	86	—	—	—	—	392
C 100 3_120.5	120.5	9.6	—	—	—	—	14	29	88	86	—	—	—	—	392
C 100 3_139.7	139.7	6.0	—	—	—	—	10	25	84	82	—	—	—	—	388
C 100 3_150.4	150.4	5.8	—	—	—	—	9.8	25	84	82	—	—	—	—	388
C 100 4_162.1	162.1	13	—	—	16	16	17	32	100	89	—	—	—	—	23
C 100 4_185.4	185.4	9.6	—	—	13	12	14	29	88	86	—	—	—	—	20
C 100 4_199.6	199.6	8.5	—	—	12	12	14	28	88	86	—	—	—	—	20
C 100 4_244.2	244.2	5.7	—	—	8.5	8.5	9.8	25	84	82	—	—	—	—	16
C 100 4_263.0	263.0	5.6	—	—	8.5	8.4	9.7	25	84	82	—	—	—	—	16
C 100 4_300.5	300.5	4.2	—	—	7.1	7.1	8.4	23	83	80	—	—	—	—	15
C 100 4_323.6	323.6	4.2	—	—	7.1	7.0	8.3	23	83	80	—	—	—	—	14
C 100 4_380.5	380.5	3.1	4.5	4.5	5.9	5.5	7.1	22	81	79	—	—	—	—	13
C 100 4_409.8	409.8	3.0	4.5	4.5	5.9	5.5	7.1	22	81	79	—	—	—	—	13
C 100 4_466.7	466.7	2.0	3.5	3.5	4.9	4.8	6.1	20	80	78	—	—	—	—	12
C 100 4_502.6	502.6	2.0	3.5	3.4	4.8	4.8	6.1	20	80	78	—	—	—	—	12
C 100 4_582.6	582.6	1.4	2.9	2.9	4.3	4.2	5.5	20	80	77	—	—	—	—	12
C 100 4_627.4	627.4	1.4	2.9	2.9	4.3	4.2	5.5	20	80	77	—	—	—	—	12
C 100 4_720.3	720.3	1.0	2.5	2.5	3.9	3.4	5.1	20	79	77	—	—	—	—	11
C 100 4_775.7	775.7	1.0	2.5	2.5	3.9	3.4	5.1	20	79	77	—	—	—	—	11
C 100 4_843.3	843.3	0.80	2.3	2.3	3.7	3.6	4.9	—	—	—	—	—	—	—	9.9
C 100 4_908.2	908.2	0.80	2.3	2.3	3.7	3.6	4.9	—	—	—	—	—	—	—	9.9
C 100 4_1004	1004	0.60	2.1	2.0	3.4	3.4	4.7	—	—	—	—	—	—	—	9.7
C 100 4_1081	1081	0.60	2.1	2.0	3.4	3.4	4.7	—	—	—	—	—	—	—	9.7



## 29 EXACT RATIOS

$i_N$	C12	C22	C32	C36	C41	C51	C61	C70	C80	C90	C100
2.5						2.62895					
2.8	2.76731	2.72212	2.87879	2.68687	2.65909		2.82011				
3.2	3.20743	3.32609		3.18182		3.30758					
3.5	3.65132	3.70709	3.40909	3.48617	3.61111		3.69925				
4.0			3.73518	4.20000							
4.5	4.31203	4.25831	4.50000	4.62201	4.66304	4.45370	4.55556	4.57143			
5.0	4.86842	4.76902	4.95215	5.27807						5.17231	4.92308
5.6	5.59868	5.59006	5.65508	5.84659	5.95263	5.63043		5.85034	5.64103	5.60333	5.33333
6.3	6.23158	6.08696	6.26420		6.36364		6.00176 6.74074	6.25455	6.11111	6.75824	6.52308
7.1		7.08300	7.16498	6.78114	7.06612	6.98684	7.48485	7.46032	7.04000	7.32143	7.06667
8.0	7.62201		8.48485	8.03030		7.75120		8.00433	7.62667	8.32615	8.35165
9.0	8.83422	8.65455	9.29644	8.79842	8.64198	8.79040	8.84211	9.52381	8.86447	9.02000	9.04762
10.0	10.05682	9.64593		10.60000	9.59596	9.75207	9.81818	10.20707	9.60317	10.36264	10.09231
11.2		11.08021	11.20000	11.66507	11.15942	11.83642	10.88889	11.20879	11.09402	11.22619	10.93333
12.5	11.87662	12.40909	12.32536	13.32086	12.39130	13.13131	12.09091	13.03030	12.01852	12.79060	12.45421
14.0	13.40909	14.54545	14.07487	14.75568	14.24561	14.96377	14.34568	14.09524	13.76410 14.91111	13.85648	13.49206
16.0	15.42045	15.83838	15.59091		15.81818	16.60079	15.92929	15.33566 16.70330	16.66272	15.97949	15.21368 16.48148
18.0	17.16364 18.38961	18.13636	18.18182	17.20779	17.79167	18.89035	17.65217		18.05128	17.31111 18.68047	18.66667
20.0	20.62937	20.02424	20.08081	19.00505	19.75568	20.95694 21.81606	19.60079	19.28485	20.53333	20.23718	20.22222
22.4	23.24242	21.45455	22.90909	22.13187	22.55556	23.35417 23.89242	22.35088	22.85315	22.24444	22.91795	22.24852
25.0	25.35537	24.27972	25.11515	26.20879	25.04545	25.90909	24.81818 26.77895		23.95266 25.94872	24.82778	24.10256
28.0	29.50000	27.15152 29.61983	26.90909	28.71572	28.31111 28.49003	27.44759 29.77315	27.41667 29.35385	27.71901		27.17160 29.43590	29.55556
31.5	32.77778	33.09091	29.76224 33.09091		31.22945 31.43636	30.05994 33.03030	30.44318 32.97778		31.33333		
35.5	37.00909	36.76768	36.09917	34.59560	33.38462 36.78930	36.38333 36.95862	34.22222 36.14872	34.74747		35.09848	34.29705 36.93529
40.0	42.31313		40.72727	38.07172	37.06993 40.32673	40.36364 40.47619	38.00000	41.26263	39.11111	39.40239	42.92328
45.0		43.27273	45.25253	43.47576	44.75207 46.96356	43.11538 46.72360	43.44691	44.70118	43.49074	42.98443	46.22507
50.0	47.60227	48.64646	52.43636	48.15865	51.47929	47.83217 51.40152	47.62450	52.16479	47.44444	50.30093	53.25397
56.0	55.16883	54.72727	59.39394	56.16170	58.65385	57.02479 58.98416	53.46087 58.60134	56.51186	57.29733	54.87374 59.20032	57.35043
63.0	66.15152	60.00000 63.27273	66.81818	62.02747	64.29364	64.59803		65.85315	62.50617	64.58217	64.46886
71.0		65.33333 74.81250	74.74747	70.76374	74.35897	72.92219	67.69123 74.20000	71.34091	70.50362	74.44537	69.42801
80.0		82.60000	82.55443	77.57802 83.11931	81.50888	79.86264	83.03333	81.41434	76.91304	81.21313	79.44444
90.0		88.50000	94.18182	91.93238	93.33333	92.96514	91.01731	88.19886	89.27047	88.22009	85.55556 92.67399
100.0		100.15385	103.25118	102.21429	102.30769	101.81319	103.64444	103.79138	97.38596	96.24009	99.80276

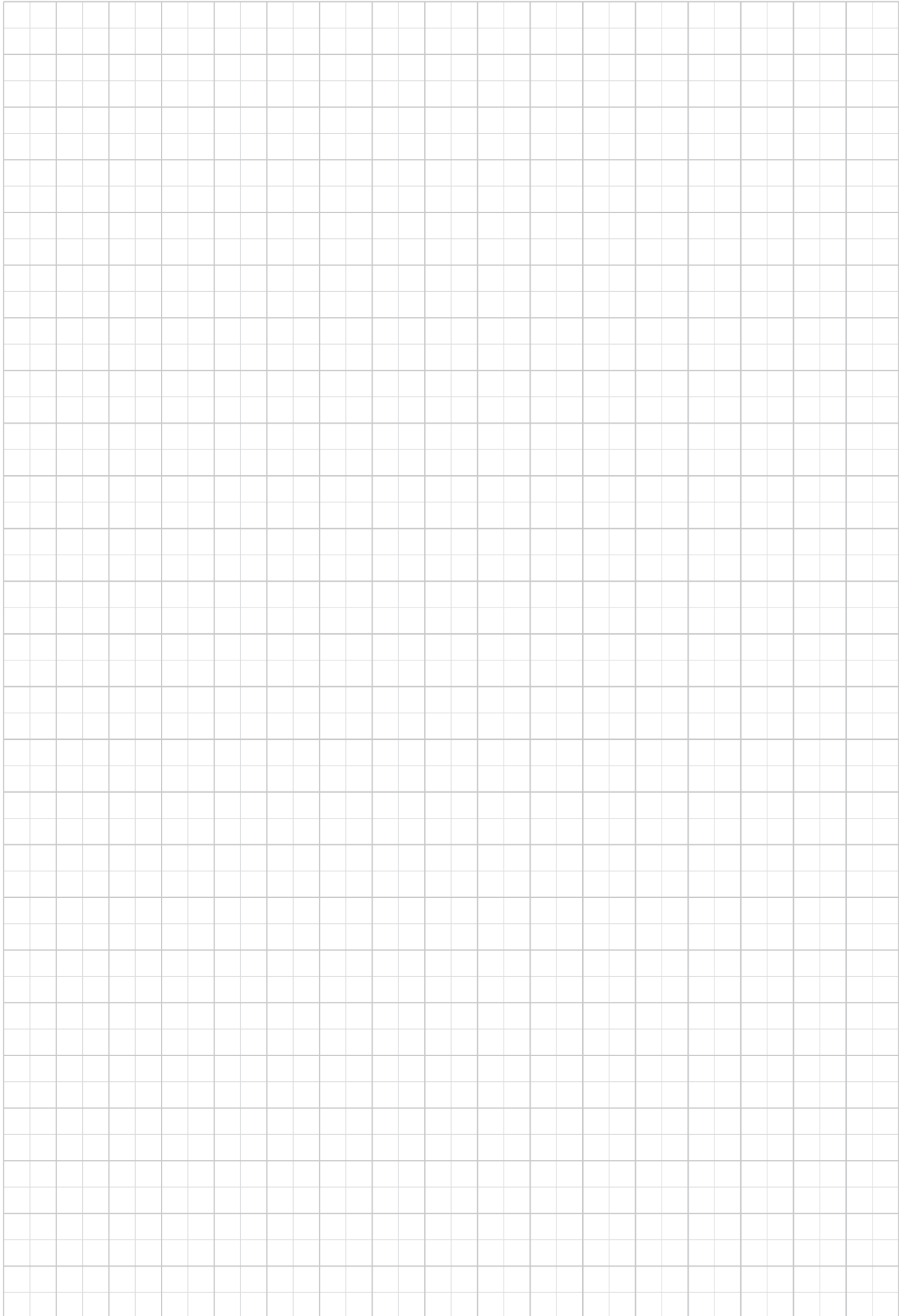






$i_N$	C12	C22	C32	C36	C41	C51	C61	C70	C80	C90	C100
112.2		112.00000	110.62626	111.50649	110.05917	113.60510	113.61026	112.44066	109.50347	107.00379 116.73140	111.90476
125.5		122.18182	122.35587	125.80220	120.64178	124.41758	128.14222	126.83497	119.45833		120.51282
140.0		136.50000	136.04040 148.40771	139.78022	132.86713 145.64282	134.62559 147.43872	140.46359	137.40455	136.68519 149.11111	134.13580 146.32997	139.68254
160.0		151.66667	167.43434	161.97033	164.10256	160.49861	150.03077 164.45680	150.30339 162.82867	168.99259	157.76199	150.42735 162.10526
180.0		178.50000	186.03816	183.46154	179.88166	175.77423	178.59394	179.18945	184.35556	172.10399	185.37037
200.0		200.66667		206.39423	190.76923 209.11243	197.87075	195.76643	194.12190	197.85897	212.38169	199.62963
225.0		225.75000	215.57172	230.88697		216.70330	217.40754	220.91375	215.84615	231.68911	
250.0		261.00000	244.17508	255.00183	239.94755	240.85197 263.77530	238.31211	239.32323 251.28438	261.85613	268.49591	244.21811 263.00412
280.0			274.69697	290.91758	263.01943		275.27766	272.22475	285.66123	292.90463	300.50725
315.0				318.93187	304.19580 333.44540	297.76563 326.10577	301.74667	317.86109	334.27376	338.95085	323.62319
355.0				341.71272			337.66889 370.13705	344.34951	364.66228	369.76457	380.49708
400.0				377.94421 420.21429	381.81818 418.53147	379.60764 415.73718	421.48741	409.39931	417.48199	419.04541	409.76608
450.0				458.41558	450.24207	463.88750	462.01504	443.51592	455.43490	457.14044	466.73611
500.0				517.18681	493.53457	508.03846	521.11170	512.03745	529.26678		502.63889
560.0				574.65201	543.54736	549.72115	571.21860	554.70724	577.38194	534.22163 582.78723	582.59259
630.0				665.87802	595.81153	602.04142 655.36932	610.12513 668.79101	606.78035 657.34538	664.32106	652.82863	627.40741
710.0				754.23077	671.32867 735.87951	717.74476	726.28202	735.97521	724.71389	712.17669	720.29630
800.0				848.50962	780.41958	807.97222	796.11683	797.30647	783.37099	773.62229 843.95159	775.70370 843.33333
900.0					855.45992	884.87179		922.59000	854.58654 945.71181	922.30089	908.20513
1000.0								999.47250 1069.05117	1031.68561	1006.14643	1003.88889
1125.0								1158.13876	1168.03704	1137.05888	1081.11111
1250.0									1274.22222	1240.42787	
1400.0								1362.26180 1475.78362	1357.84306 1481.28333		

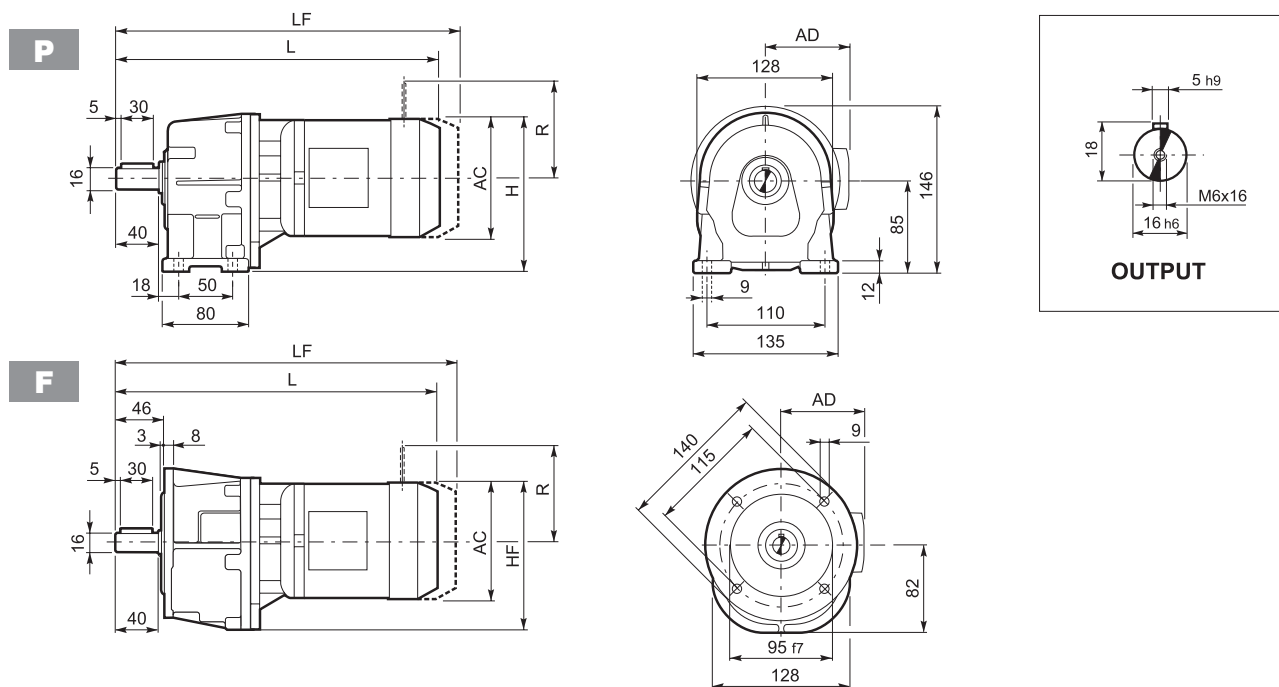






## 30 DIMENSIONS

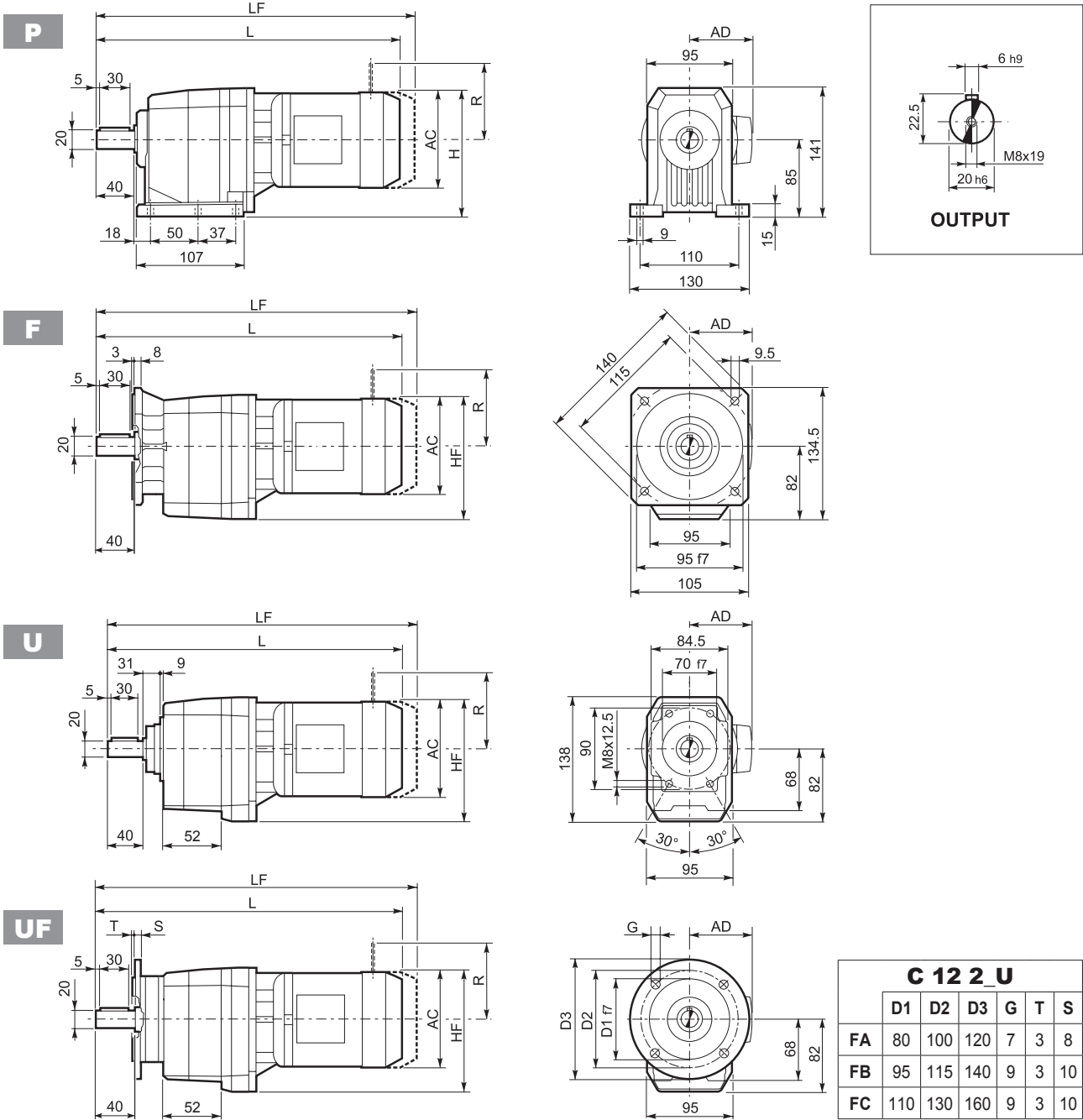
### C 05...M



			AC	H	HF	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
C 05 2	S0	M0	110	140	137	287	91	7	—	—	—	—	—	—
C 05 2	S05	M05	121	145.5	142.5	332	95	8	398	10	96	122	116	95
C 05 2	S1	M1	138	154	151	360.5	108	11	423	13	103	135	124	108



# C 12...M



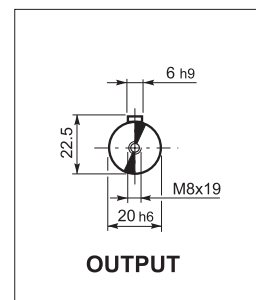
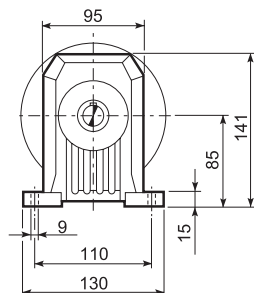
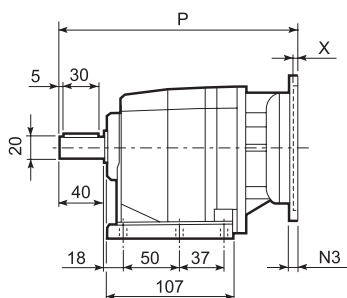
C 12 2 U						
	D1	D2	D3	G	T	S
FA	80	100	120	7	3	8
FB	95	115	140	9	3	10
FC	110	130	160	9	3	10

Motor Icon	S	M	AC	H	HF	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
C 12 2	S05	M05	121	145.5	142.5	370.5	95	9	436.5	10	96	122	116	95
C 12 2	S1	M1	138	154	151	404.5	108	11	460.5	13	103	135	124	108
C 12 2	S2	M2S	156	163	160	428.5	119	15	498.5	18	129	146	134	119
C 12 2	S3	M3S	195	182.5	179.5	471.5	142	20	567.5	25	160	158	160	142
C 12 2	S3	M3L	195	182.5	179.5	503.5	142	22	594.5	27	160	158	160	142

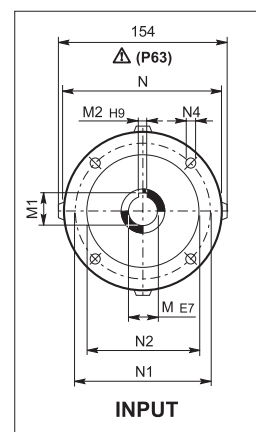
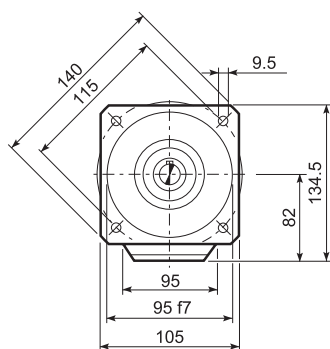
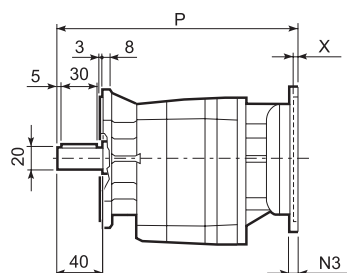


## C 12...P (IEC)

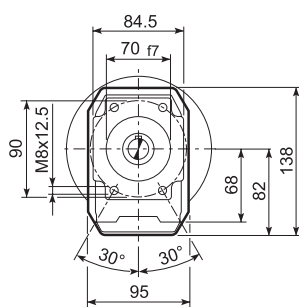
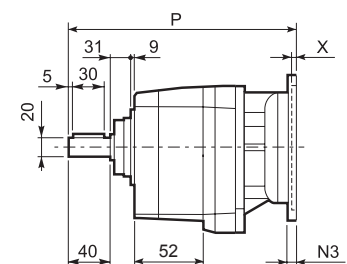
**P**



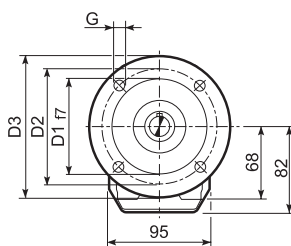
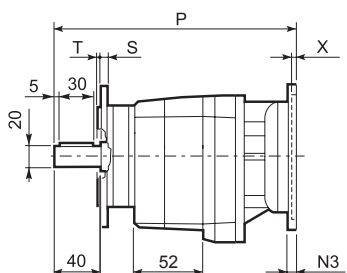
**F**



**U**



**UF**



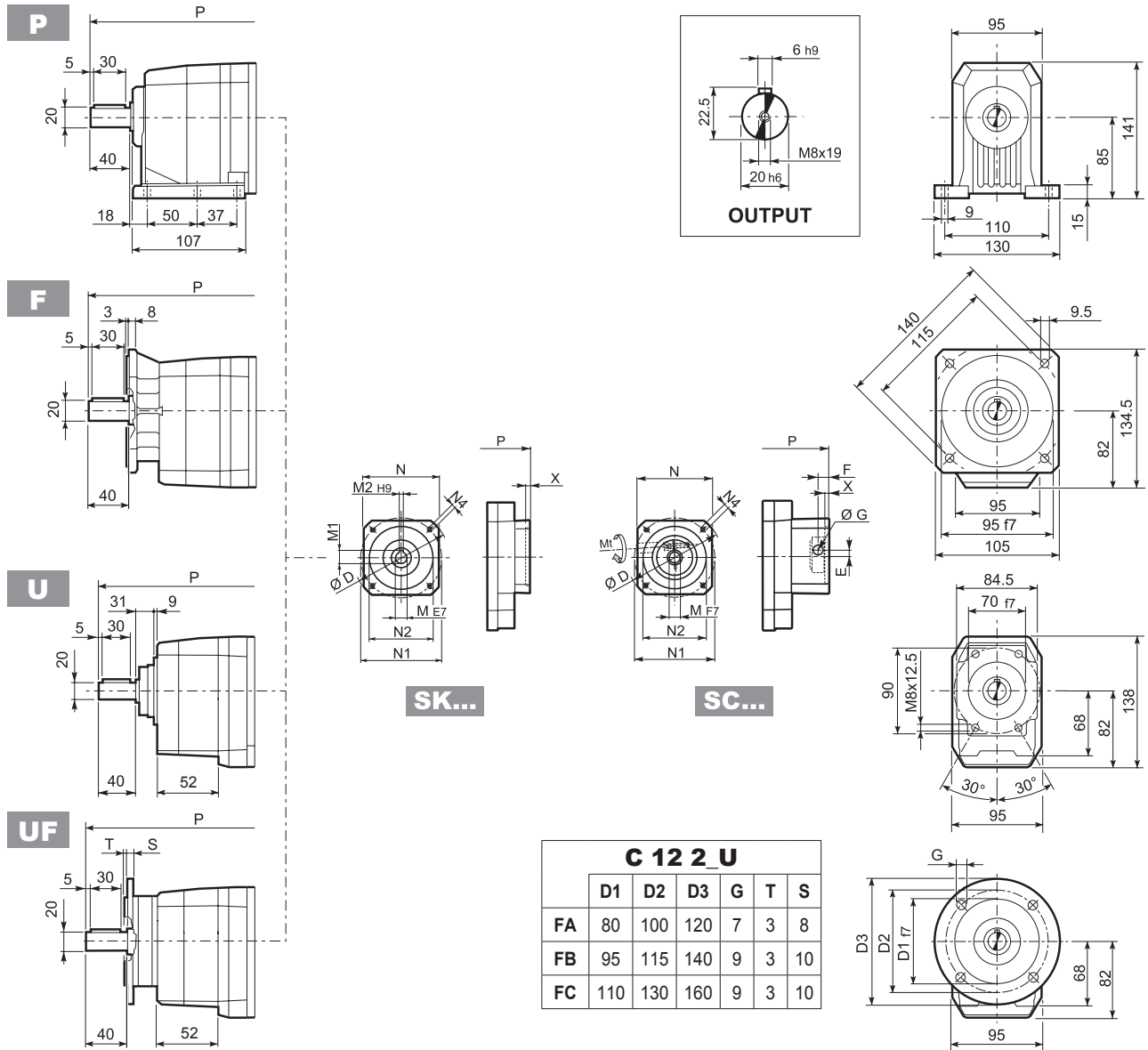
### C 12 2 U

	D1	D2	D3	G	T	S
<b>FA</b>	80	100	120	7	3	8
<b>FB</b>	95	115	140	9	3	10
<b>FC</b>	110	130	160	9	3	10

		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
<b>C 12 2</b>	<b>P63</b>	11	12.8	4	140	115	95	—	M8x19	4	244.5	6
<b>C 12 2</b>	<b>P71</b>	14	16.3	5	160	130	110	—	M8x16	4.5	244.5	6
<b>C 12 2</b>	<b>P80</b>	19	21.8	6	200	165	130	—	M10x14.5	4	264	7
<b>C 12 2</b>	<b>P90</b>	24	27.3	8	200	165	130	—	M10x14.5	4	264	7
<b>C 12 2</b>	<b>P100</b>	28	31.3	8	250	215	180	—	M12x16	4.5	274	11
<b>C 12 2</b>	<b>P112</b>	28	31.3	8	250	215	180	—	M12x16	4.5	274	11



# C 12...SK / SC



C 12 2 U						
	D1	D2	D3	G	T	S
FA	80	100	120	7	3	8
FB	95	115	140	9	3	10
FC	110	130	160	9	3	10

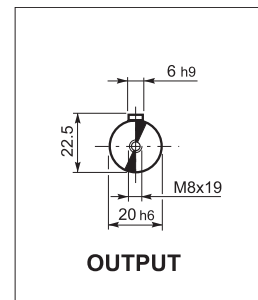
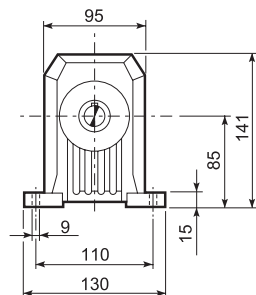
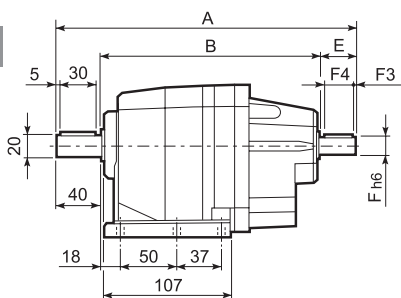
		D	M	M1	M2	N	N1	N2	N4	X	P	Kg
C 12 2	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	216	6
C 12 2	SK60B	102	14	16.3	5	82	75	60	M5x10	4	223	5
C 12 2	SK80A	115	14	16.3	5	90	100	80	M6x12	4	223	5
C 12 2	SK80C	120	19	21.8	6	96	100	80	M6x12	4	264	7
C 12 2	SK95A	130	14	16.3	5	102	115	95	M8x12	4	264	6
C 12 2	SK95B	130	19	21.8	6	102	115	95	M8x12	4	264	7
C 12 2	SK95C	130	24	27.3	8	102	115	95	M8x12	4	264	7
C 12 2	SK110A	150	19	21.8	6	120	130	110	M8x12	5	264	7
C 12 2	SK110B	150	24	27.3	8	120	130	110	M8x12	5	264	7

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P	Kg
C 12 2	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	243	7
C 12 2	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	243	6
C 12 2	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	243	6
C 12 2	SC80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	287.5	8
C 12 2	SC95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	287.5	7
C 12 2	SC95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	287.5	8
C 12 2	SC95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	287.5	8
C 12 2	SC110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	287.5	10
C 12 2	SC110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	287.5	10

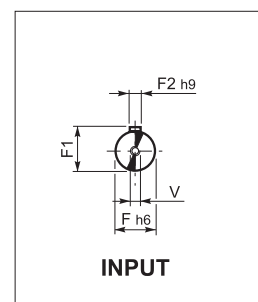
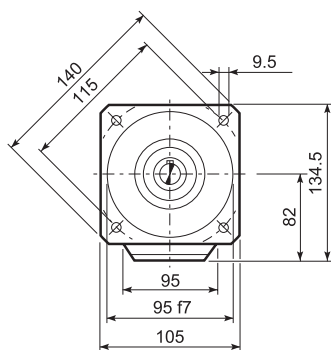
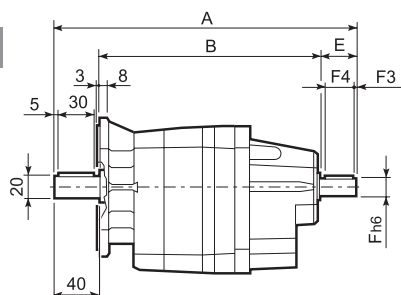


# C 12...HS

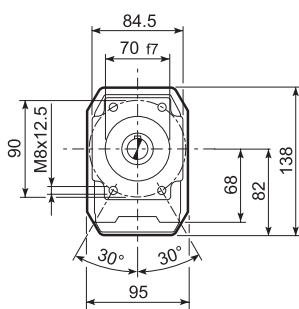
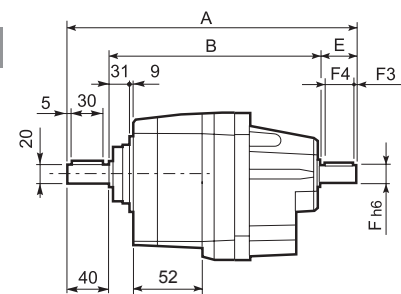
**P**



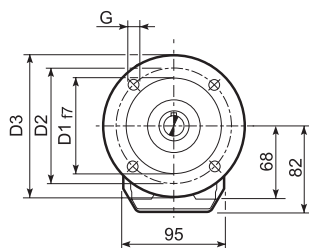
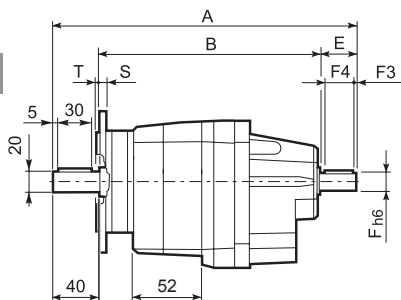
**F**



**U**



**UF**

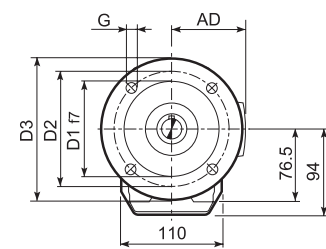
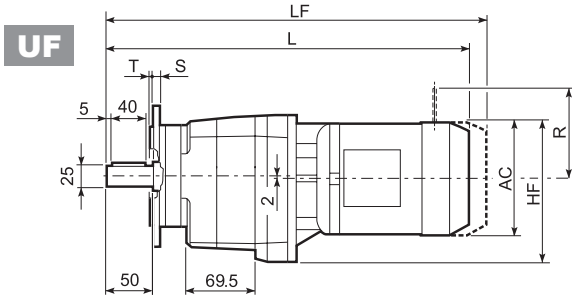
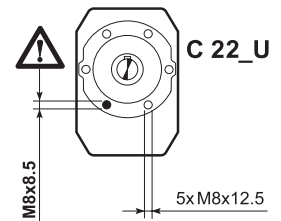
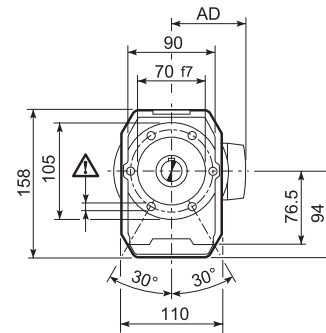
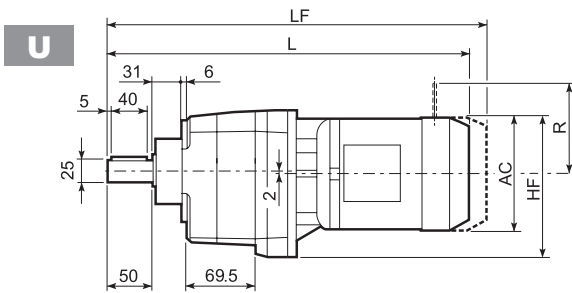
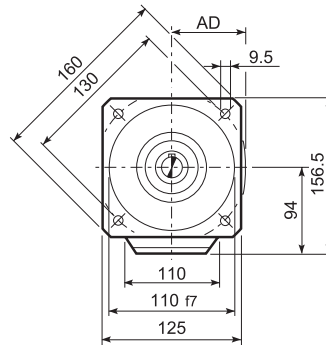
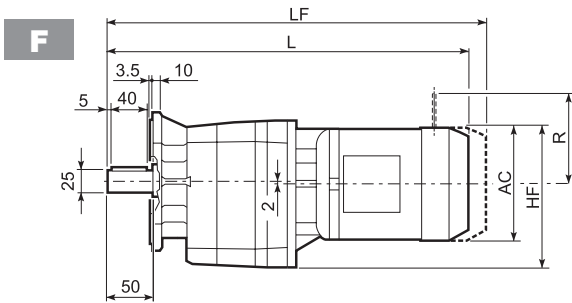
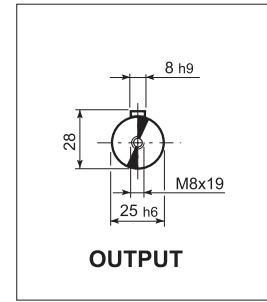
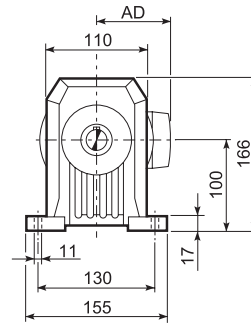
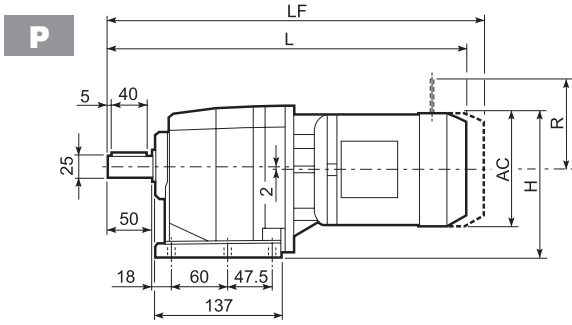


C 12 2 U						
	D1	D2	D3	G	T	S
FA	80	100	120	7	3	8
FB	95	115	140	9	3	10
FC	110	130	160	9	3	10

			A	B	E	F	F1	F2	F3	F4	V	
C 12 2	HS		251.5	171.5	40	16	18	5	2.5	35	M6x16	7.8



## C 22...M



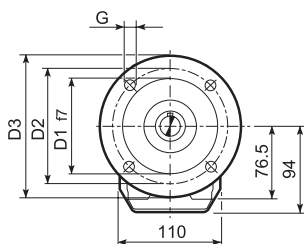
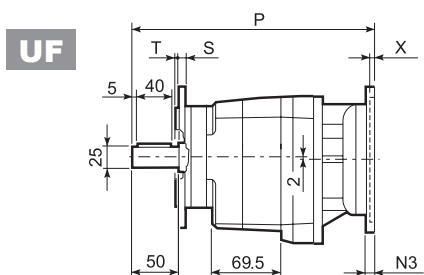
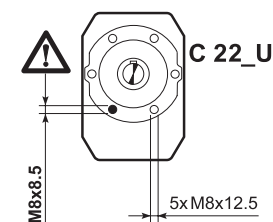
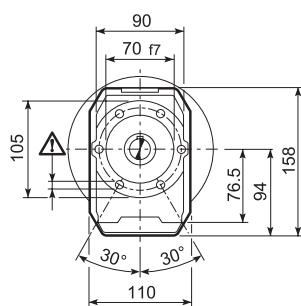
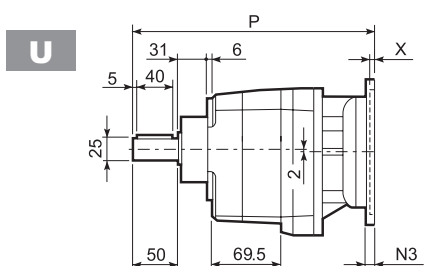
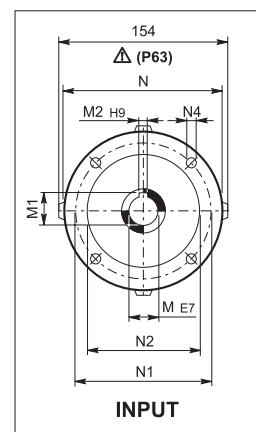
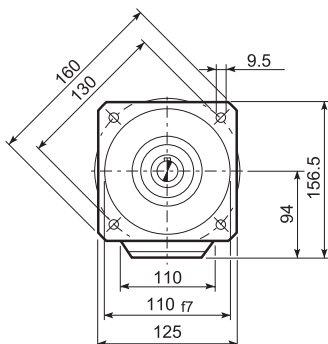
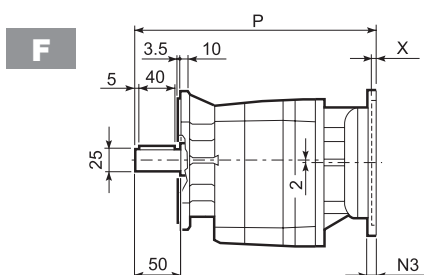
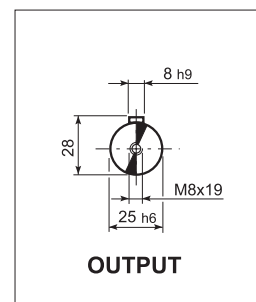
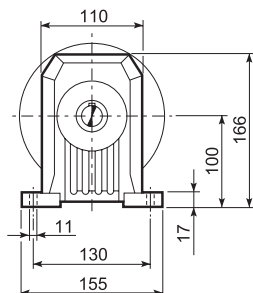
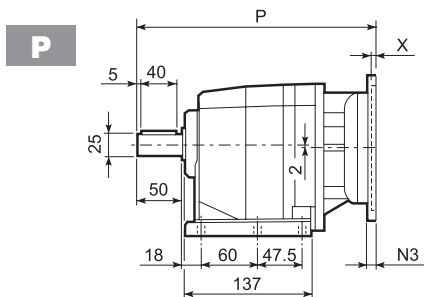
C 22_U						
	D1	D2	D3	G	T	S
FA	95	115	140	9	3	10
FB	110	130	160	9	3	10
FC	130	165	200	11	3.5	11

			AC	H	HF	L	AD	Kg	M...FD	Kg	M...FD		M...FA	
									M...FA		R	AD	R	AD
C 22 2	S05	M05	121	160.5	154.5	399	95	8	465	10	96	119	116	95
C 22 2	S1	M1	138	169	163	428	108	11	489	14	103	135	124	108
C 22 2	S2	M2S	156	178	170	456	119	16	527	19	129	146	134	119
C 22 2	S3	M3S	195	197.5	191.5	500	142	21	596	26	160	158	160	142
C 22 2	S3	M3L	195	197.5	191.5	532	142	27	623	32	160	158	160	142
C 22 3	S05	M05	121	160.5	154.5	454.5	95	11	520.5	12	96	122	116	95
C 22 3	S1	M1	138	169	163	483.5	108	13	544.5	15	103	135	124	108
C 22 3	S2	M2S	156	178	170	511.5	119	18	582.5	21	129	146	134	119
C 22 3	S3	M3S	195	197.5	191.5	555.5	142	23	601.5	28	160	158	160	142
C 22 3	S3	M3L	195	197.5	191.5	587.5	142	29	678.5	34	160	158	160	142





## C 22...P(IEC)

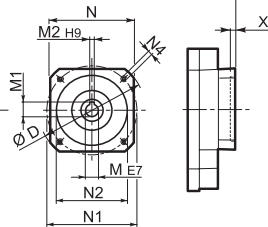
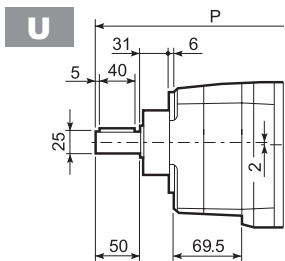
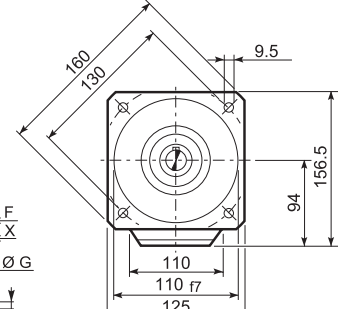
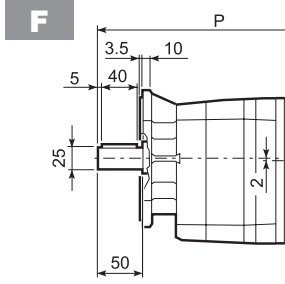
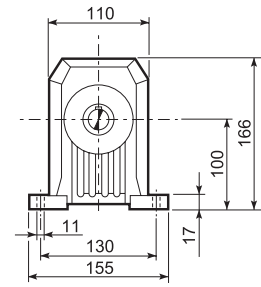
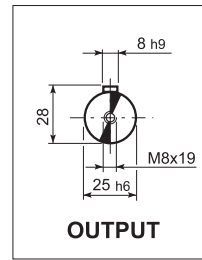
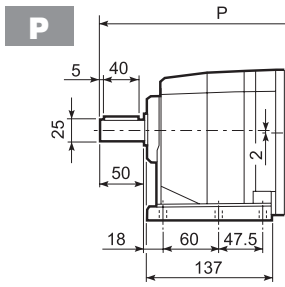


C 22_U						
	D1	D2	D3	G	T	S
FA	95	115	140	9	3	10
FB	110	130	160	9	3	10
FC	130	165	200	11	3.5	11

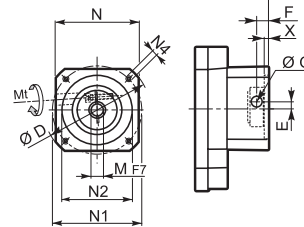
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 22 2	P63	11	12.8	4	140	115	95	—	M8x19	4	273	7
C 22 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	273	7
C 22 2	P80	19	21.8	6	200	165	130	—	M10x14.5	4	292.5	8
C 22 2	P90	24	27.3	8	200	165	130	—	M10x14.5	4	292.5	8
C 22 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	302.5	12
C 22 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	302.5	12
C 22 3	P63	11	12.8	4	140	115	95	—	M8x19	4	328.5	8
C 22 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	328.5	8
C 22 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	348	9
C 22 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	348	9
C 22 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	358	13
C 22 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	358	13



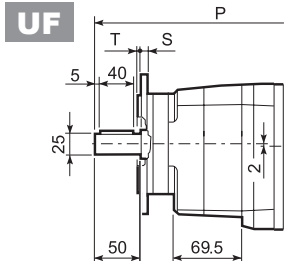
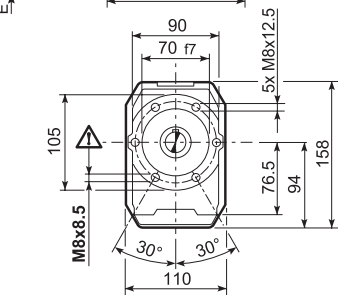
## C 22...SK / SC



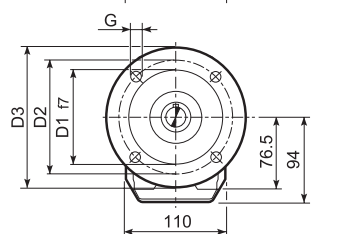
**SK...**



**SC...**



C 22_U						
	D1	D2	D3	G	T	S
FA	95	115	140	9	3	10
FB	110	130	160	9	3	10
FC	130	165	200	11	3.5	11



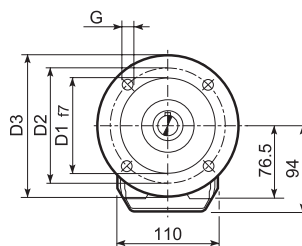
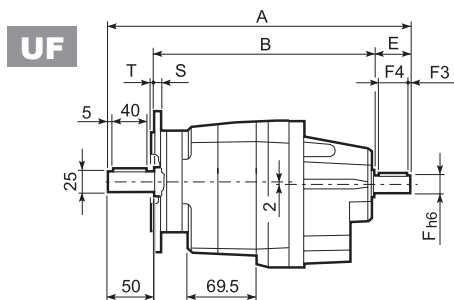
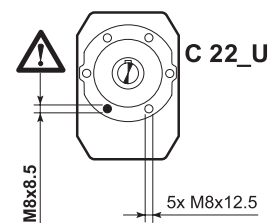
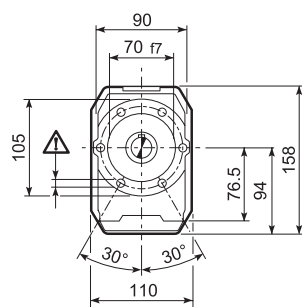
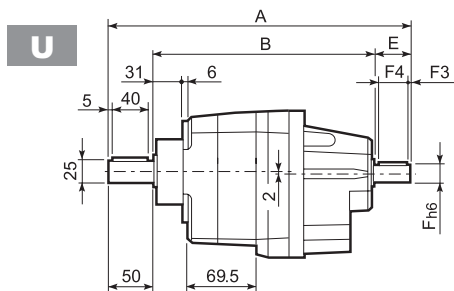
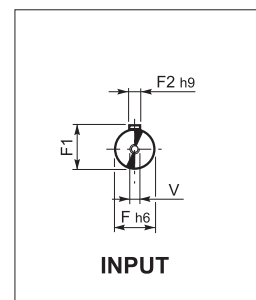
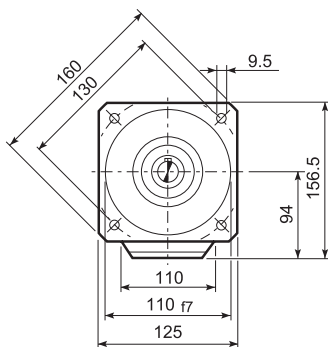
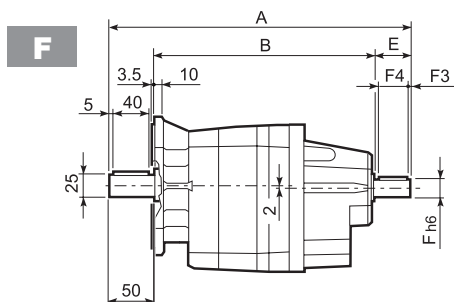
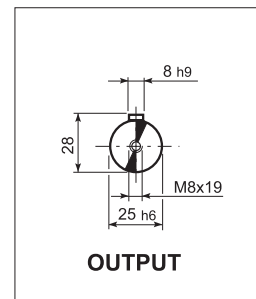
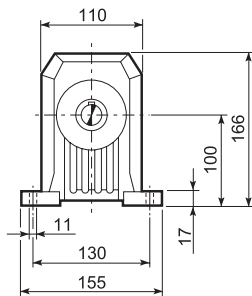
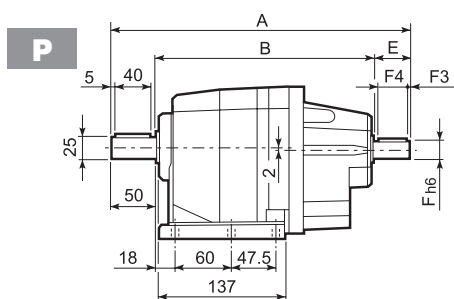
		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2x	3x	
C 22 2/3	SK60A*	102	11	12.8	4	82	75	60	M5x10	3.5	224.5	300	6/9
C 22 2/3	SK60B*	102	14	16.3	5	82	75	60	M5x10	4	251.5	307	7/8
C 22 2/3	SK80A*	115	14	16.3	5	90	100	80	M6x12	4	251.5	307	7/8
C 22 2/3	SK80C	120	19	21.8	6	96	100	80	M6x12	4	292.5	348	8/9
C 22 2/3	SK95A	130	14	16.3	5	102	115	95	M8x12	4	292.5	348	8/9
C 22 2/3	SK95B	130	19	21.8	6	102	115	95	M8x12	4	292.5	348	8/9
C 22 2/3	SK95C	130	24	27.3	8	102	115	95	M8x12	4	292.5	348	8/9
C 22 2/3	SK110A	150	19	21.8	6	120	130	110	M8x12	5	292.5	348	8/9
C 22 2/3	SK110B	150	24	27.3	8	120	130	110	M8x12	5	292.5	348	8/9

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
														2x	3x	
C 22 2/3	SC60A*	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	271.5	327	7/8
C 22 2/3	SC60B*	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	271.5	327	8/9
C 22 2/3	SC80A*	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	271.5	327	8/9
C 22 2/3	SC80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	316	371.5	9/10
C 22 2/3	SC95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	316	371.5	9/10
C 22 2/3	SC95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	316	371.5	9/10
C 22 2/3	SC95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	316	371.5	9/10
C 22 2/3	SC110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	316	371.5	10/11
C 22 2/3	SC110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	316	371.5	10/11

\* Contact our technical service department advising application data



# C 22...HS

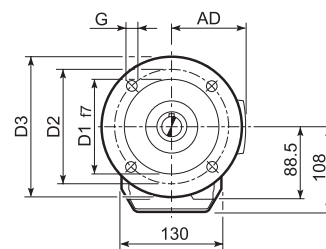
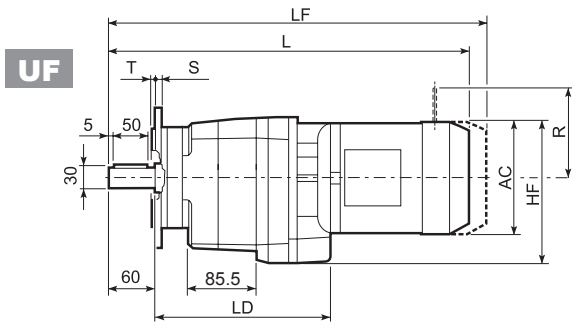
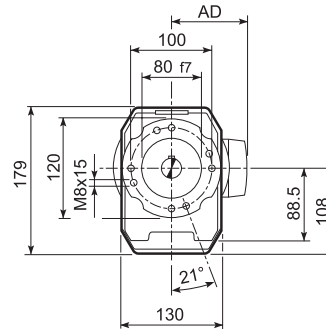
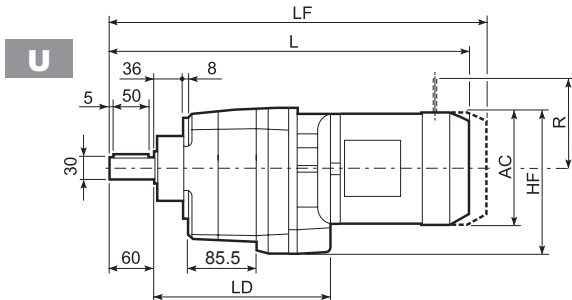
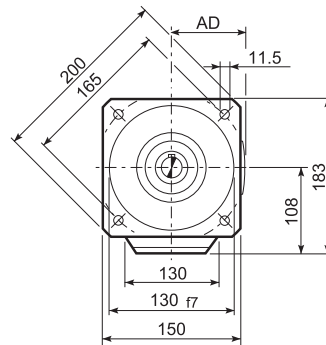
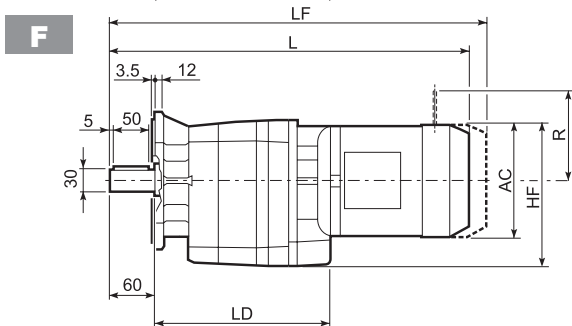
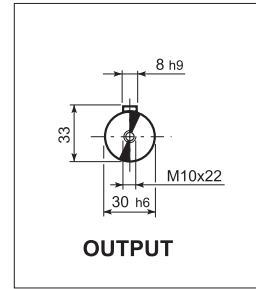
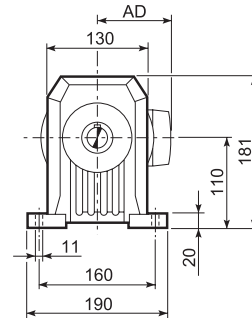
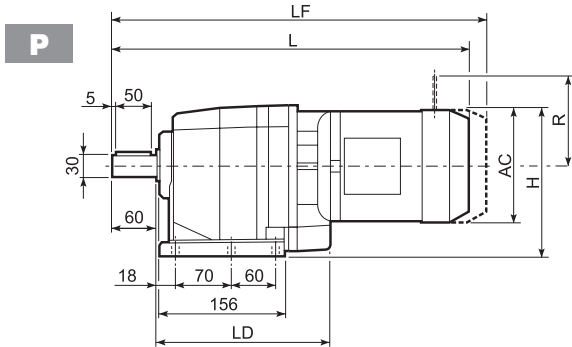


C 22_U						
	D1	D2	D3	G	T	S
FA	95	115	140	9	3	10
FB	110	130	160	9	3	10
FC	130	165	200	11	3.5	11

		A	B	E	F	F1	F2	F3	F4	V	Kg
C 22 2	HS	323	233	40	19	21.5	6	2.5	35	M6x16	7.2
C 22 3		335.5	245.5	40	16	18	6	2.5	36	M6x16	7.5



# C 32...M



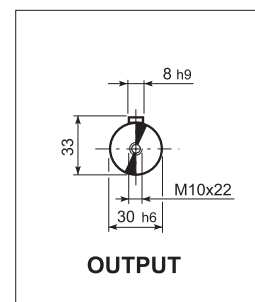
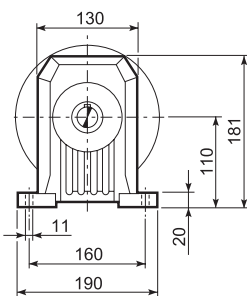
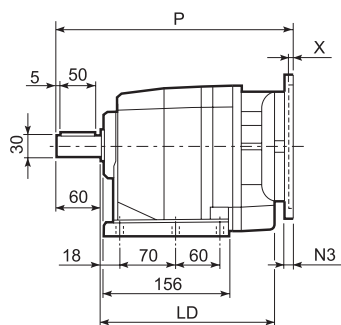
C 32_U						
	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

			AC	H	HF	L	LD	AD	Kg	M...FD		M...FD		M...FA	
										LF	Kg	R	AD	R	AD
C 32 2	S1	M1	138	179	177	462.5	205.5	108	14	523.5	16	103	135	124	108
C 32 2	S2	M2S	156	188	186	490.5	217.5	119	18	561.5	21	129	146	134	119
C 32 2	S3	M3S	195	207.5	205.5	534.5	227.5	142	23	630.5	28	160	158	160	142
C 32 2	S3	M3L	195	207.5	205.5	566.5	227.5	142	32	657.5	37	160	158	160	142
C 32 2	S4	M4	258	239	237	674.5	—	193	66	738.5	82	226	210	217	193
C 32 2	S4	M4LC	258	239	237	709.5	—	193	74	763.5	90	226	210	217	193
C 32 3	S05	M05	121	170.5	168.5	491	—	95	13	557	15	96	122	116	95
C 32 3	S1	M1	138	179	177	520	—	108	15	581	17	103	135	124	108
C 32 3	S2	M2S	156	188	186	548	—	119	18	619	21	129	146	134	119
C 32 3	S3	M3S	195	207.5	205.5	592	—	142	24	688	29	160	158	160	142
C 32 3	S3	M3L	195	207.5	205.5	624	—	142	33	715	38	160	158	160	142

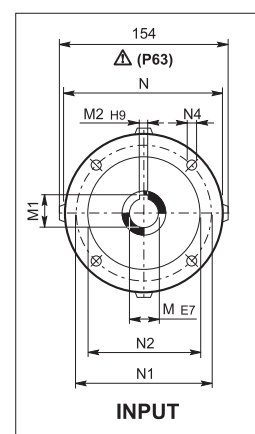
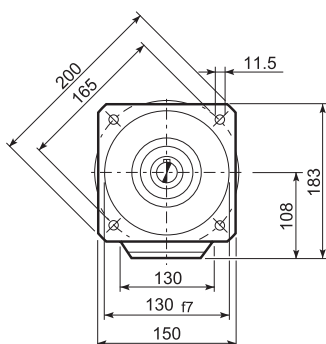
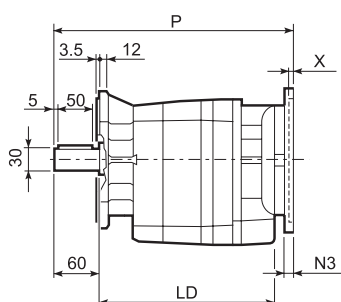


## C 32...P(IEC)

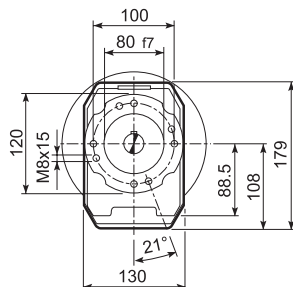
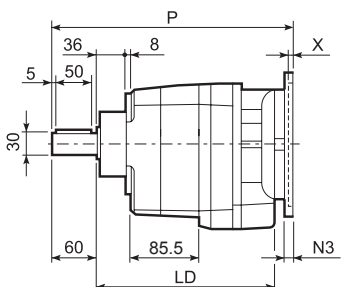
**P**



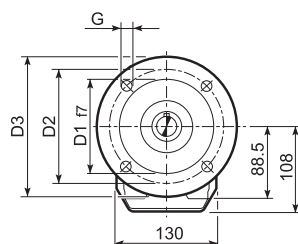
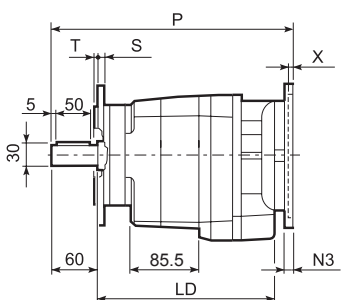
**F**



**U**



**UF**

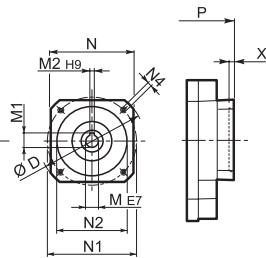
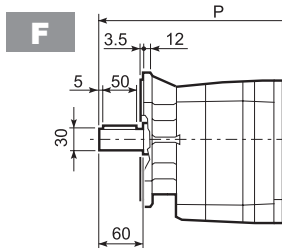
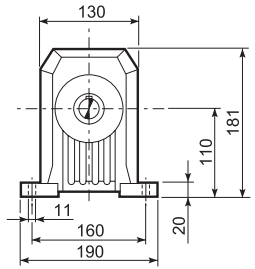
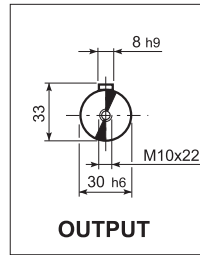
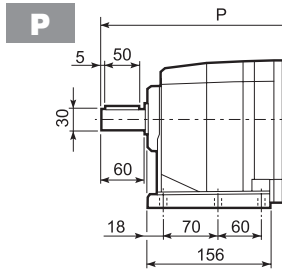


C 32_U						
	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

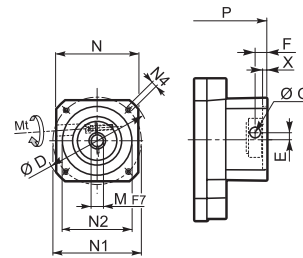
		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	
C 32 2	P63	217.5	11	12.8	4	140	115	95	—	M8x19	4	307.5	9
C 32 2	P71	217.5	14	16.3	5	160	130	110	—	M8x16	4.5	307.5	9
C 32 2	P80	227.5	19	21.8	6	200	165	130	—	M10x14.5	4	327	10
C 32 2	P90	227.5	24	27.3	8	200	165	130	—	M10x14.5	4	327	10
C 32 2	P100	227.5	28	31.3	8	250	215	180	—	M12x16	4.5	337	14
C 32 2	P112	227.5	28	31.3	8	250	215	180	—	M12x16	4.5	337	14
C 32 2	P132	—	38	41.3	10	300	265	230	16	14	5	373	17
C 32 3	P63	—	11	12.8	4	140	115	95	—	M8x19	4	365	10
C 32 3	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	365	10
C 32 3	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	384.5	11
C 32 3	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	384.5	11
C 32 3	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	394.5	15
C 32 3	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	394.5	15



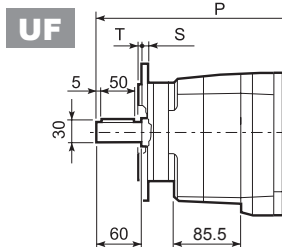
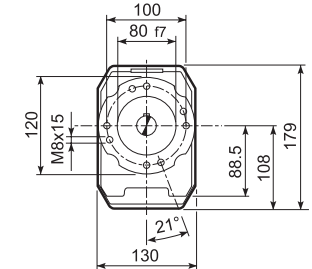
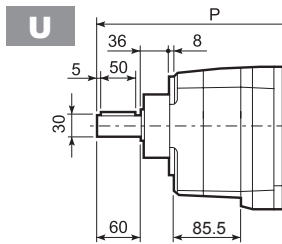
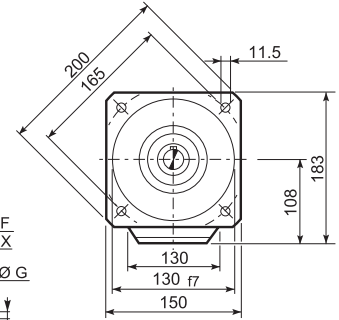
# C 32...SK / SC



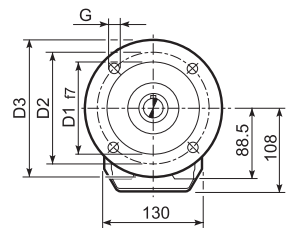
SK...



SC...



C 32_U						
	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

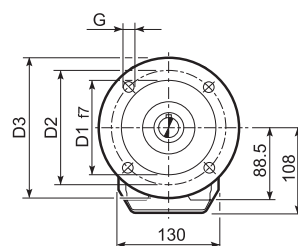
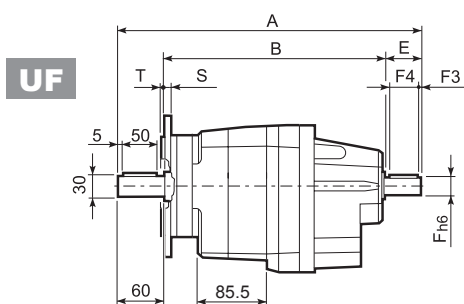
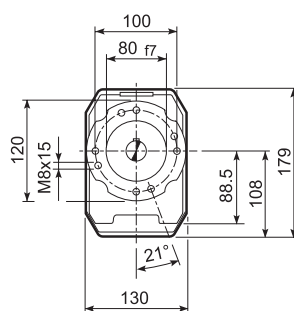
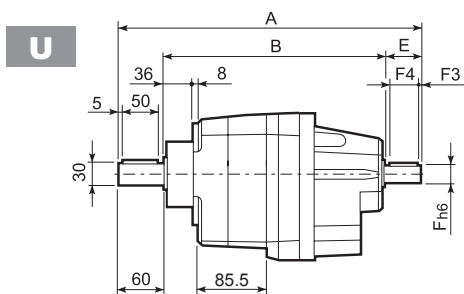
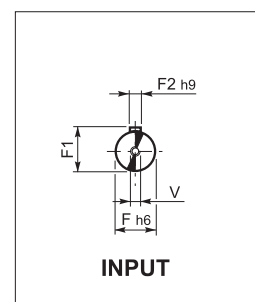
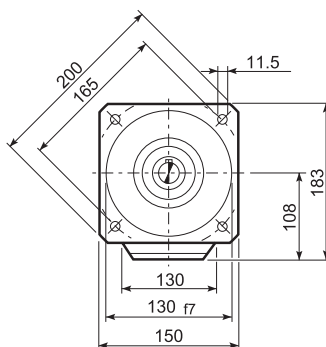
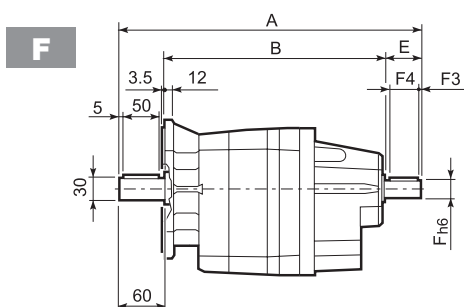
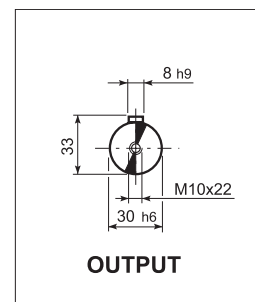
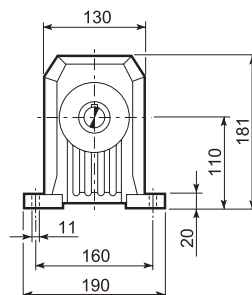
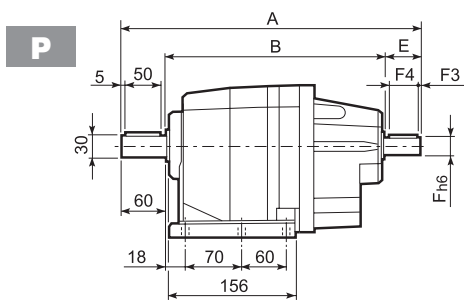


		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2x	3x	
C 32 2/3	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	279	336.5	8/9
C 32 2/3	SK60B	102	14	16.3	5	82	75	60	M5x10	4	286	343.5	9/10
C 32 2/3	SK80A	115	14	16.3	5	90	100	80	M6x12	4	286	343.5	9/10
C 32 2/3	SK80C	120	19	21.8	6	96	100	80	M6x12	4	327	384.5	10/11
C 32 2/3	SK95A	130	14	16.3	5	102	115	95	M8x12	4	327	384.5	10/11
C 32 2/3	SK95B	130	19	21.8	6	102	115	95	M8x12	4	327	384.5	10/11
C 32 2/3	SK95C	130	24	27.3	8	102	115	95	M8x12	4	327	384.5	10/11
C 32 2/3	SK110A	150	19	21.8	6	120	130	110	M8x12	5	327	384.5	10/11
C 32 2/3	SK110B	150	24	27.3	8	120	130	110	M8x12	5	327	384.5	10/11
C 32 2	SK130A	188	24	27.3	8	142	165	130	M10x20	5	327	—	11

		Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg	
													2x	3x		
C 32 2/3	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	306	363.5	9/10
C 32 2/3	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	306	363.5	10/11
C 32 2/3	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	306	363.5	10/11
C 32 2/3	SC80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	350.5	408	11/12
C 32 2/3	SC95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	350.5	408	11/12
C 32 2/3	SC95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	350.5	408	11/12
C 32 2/3	SC95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	350.5	408	11/12
C 32 2/3	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	350.5	408	12/13
C 32 2/3	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	350.5	408	12/13
C 32 2	SC 130A	M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	350.5	—	13



# C 32...HS

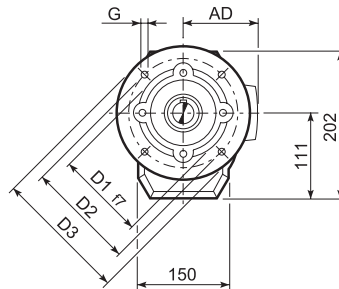
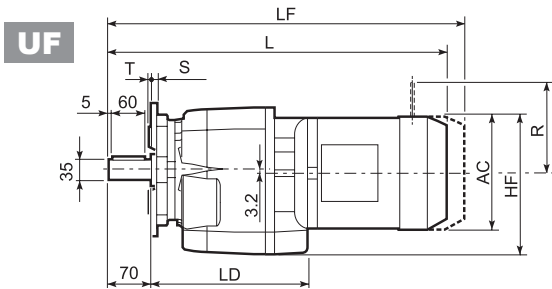
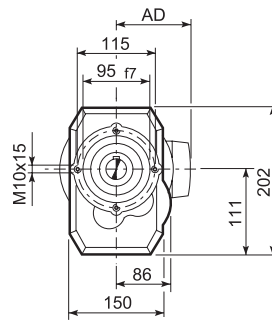
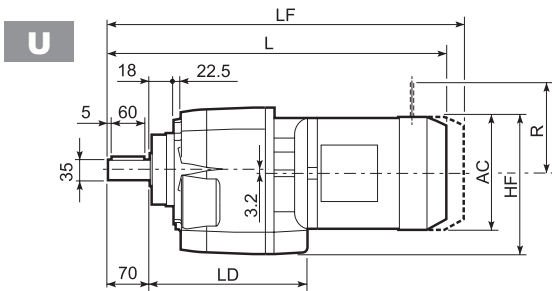
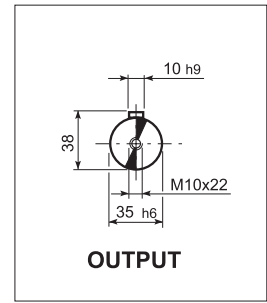
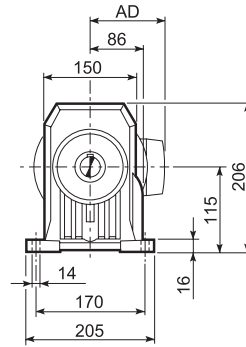
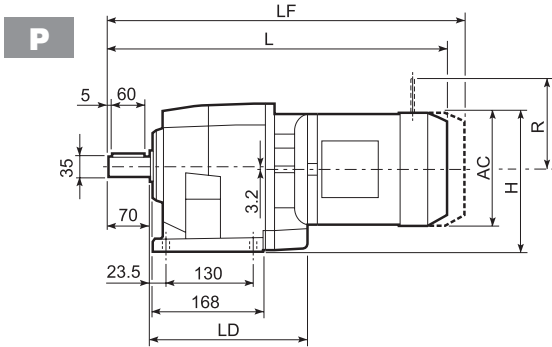


C 32_U						
	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

		A	B	E	F	F1	F2	F3	F4	V	Kg
C 32 2	HS	357.5	257.5	40	19	21.5	6	2.5	35	M6x16	11.1
C 32 3		372	272	40	16	18	5	2.5	35	M6x16	10.6



## C 36...M



C 36_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14

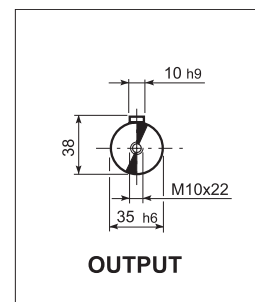
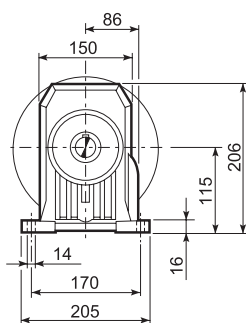
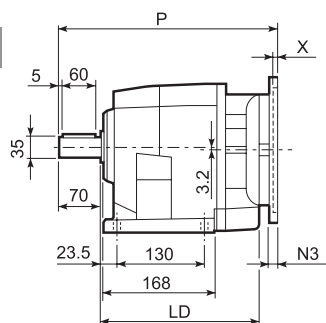
			AC	H	HF	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
										LF	Kg	R	AD	R	AD
C 36 2/3	S1	M1	138	184	177	481	214	108	20	542	21	103	135	124	108
C 36 2/3	S2	M2S	156	193	186	509	226	119	23	580	27	129	146	134	119
C 36 2/3	S3	M3S	195	212.5	205.5	553	236	142	28	649	33	160	158	160	142
C 36 2/3	S3	M3L	195	212.5	205.5	585	236	142	37	676	42	160	158	160	142
C 36 2/3	S4	M4	258	244	240	693.5	—	193	71	802.5	87	226	210	217	193
C 36 2/3	S4	M4LC	258	244	240	728.5	—	193	79	827.5	95	226	210	217	193
C 36 4	S05	M05	121	175.5	168.5	509.5	—	95	19	575.5	20	96	122	116	95
C 36 4	S1	M1	138	184	177	538.5	—	108	21	599.5	22	103	135	124	108
C 36 4	S2	M2S	156	193	186	566.5	—	119	24	637.5	28	129	146	134	119
C 36 4	S3	M3S	195	212.5	205.5	610.5	—	142	29	706.5	34	160	158	160	142
C 36 4	S3	M3L	195	212.5	205.5	642.5	—	142	38	733.5	43	160	158	160	142



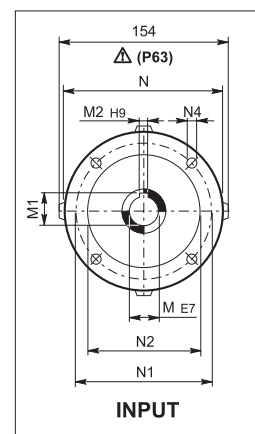
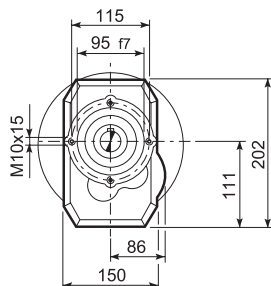
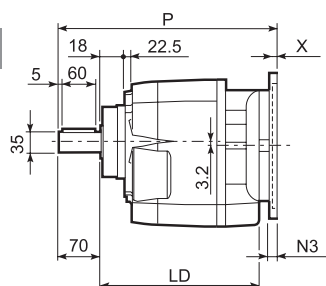


## C 36...P(IEC)

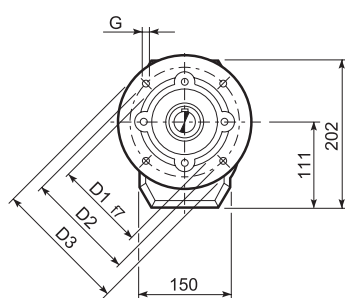
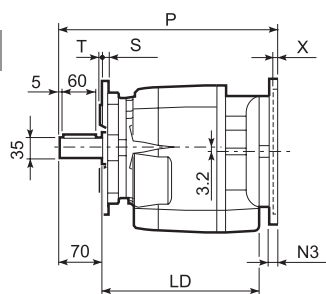
**P**



**U**



**UF**



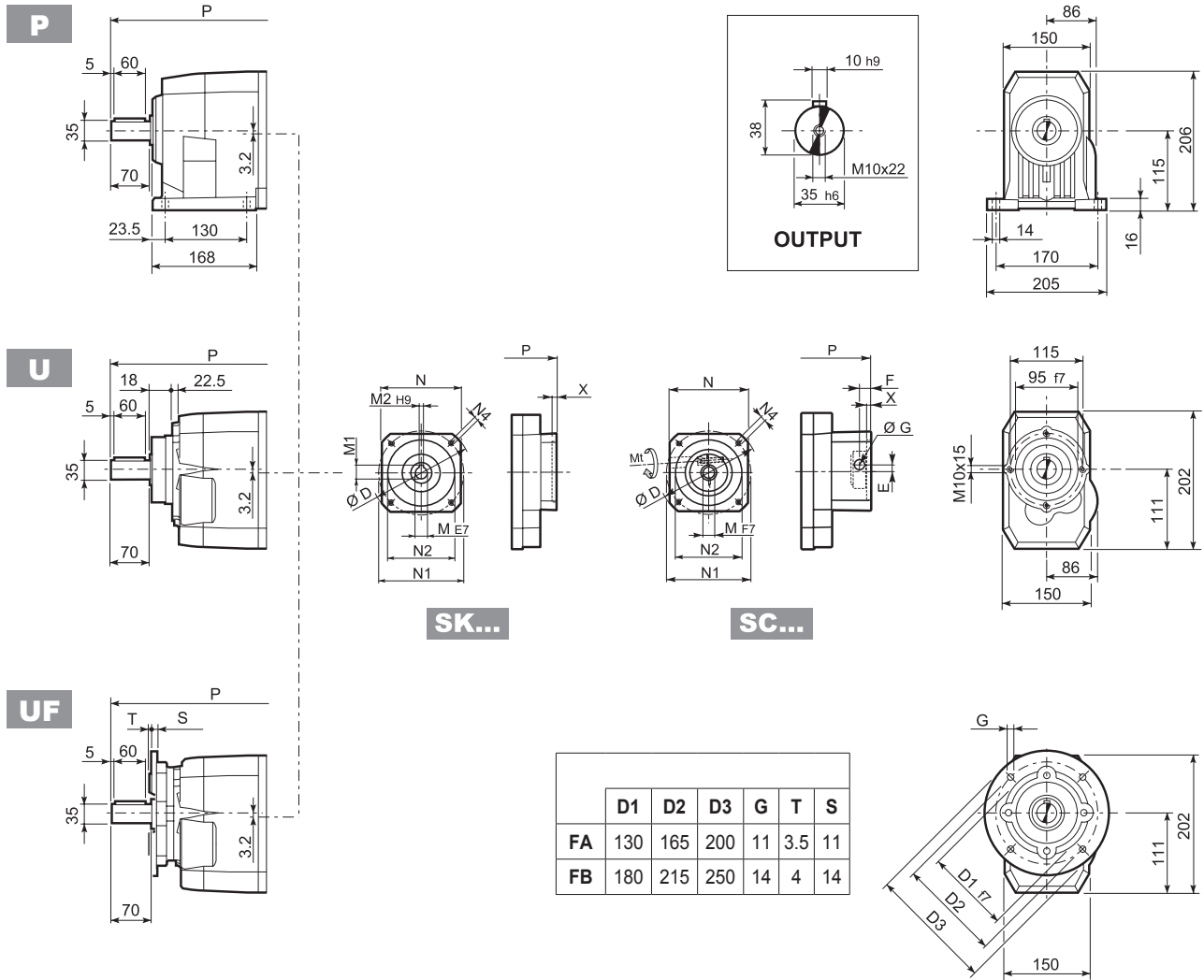
### C 36 U

	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14

		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 36 2/3	P63	226	11	12.8	4	140	115	95	—	M8x19	4	326	17
C 36 2/3	P71	226	14	16.3	5	160	130	110	—	M8x16	4.5	326	17
C 36 2/3	P80	236	19	21.8	6	200	165	130	—	M10x14.5	4	345.5	18
C 36 2/3	P90	236	24	27.3	8	200	165	130	—	M10x14.5	4	345.5	18
C 36 2/3	P100	236	28	31.3	8	250	215	180	—	M12x16	4.5	355.5	22
C 36 2/3	P112	236	28	31.3	8	250	215	180	—	M12x16	4.5	355.5	22
C 36 2/3	P132	—	38	41.3	10	300	265	230	16	14	5	392.5	25
C 36 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	383.5	20
C 36 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	383.5	20
C 36 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	403	21
C 36 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	403	21
C 36 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	413	25
C 36 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	413	25



## C 36...SK / SC



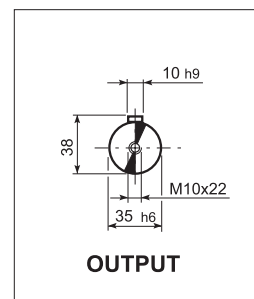
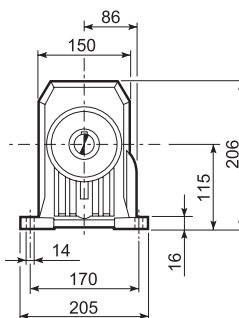
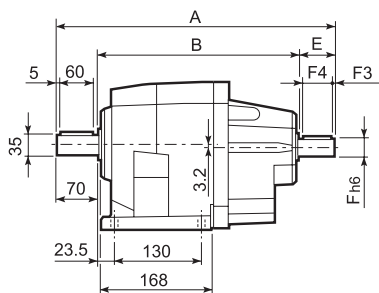
		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
C 36 2/3/4	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	297.5	355	16/16/19
C 36 2/3/4	SK60B	102	14	16.3	5	82	75	60	M5x10	4	304.5	362	17/17/20
C 36 2/3/4	SK80A	115	14	16.3	5	90	100	80	M6x12	4	304.5	362	18/18/21
C 36 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	304.5	403	18/18/21
C 36 2/3/4	SK95A	130	14	16.3	5	102	115	95	M8x12	4	345.5	403	18/18/21
C 36 2/3/4	SK95B	130	19	21.8	6	102	115	95	M8x12	4	345.5	403	18/18/21
C 36 2/3/4	SK95C	130	24	27.3	8	102	115	95	M8x12	4	345.5	403	18/18/21
C 36 2/3/4	SK110A	150	19	21.8	6	120	130	110	M8x12	5	345.5	403	18/18/21
C 36 2/3/4	SK110B	150	24	27.3	8	120	130	110	M8x12	5	345.5	403	18/18/21
C 36 2/3	SK130A	188	24	27.3	8	142	165	130	M10x20	5	345.5	—	19/19

		Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2/3x	4x	
C 36 2/3/4	SC60A	M6 15	102	7	12.5	12.5	11	82	75	60	M5x10	4	324.5	382	17/17/20
C 36 2/3/4	SC60B	M6 15	102	7	12.5	12.5	14	82	75	60	M5x10	4	324.5	382	18/18/21
C 36 2/3/4	SC80A	M6 15	115	6	12.5	12.5	14	90	100	80	M6x12	4	324.5	426.5	18/18/21
C 36 2/3/4	SC80C	M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	369	426.5	19/19/22
C 36 2/3/4	SC95A	M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	369	426.5	19/19/22
C 36 2/3/4	SC95B	M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	369	426.5	19/19/22
C 36 2/3/4	SC95C	M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	369	426.5	19/19/22
C 36 2/3/4	SC110A	M6 15	150	16.5	16	17.75	19	120	130	110	M8x16	5	369	426.5	21/21/24
C 36 2/3/4	SC110B	M6 15	150	16.5	16	17.75	24	120	130	110	M8x16	5	369	426.5	21/21/24
C 36 2/3	SC130A	M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	369	—	22/22

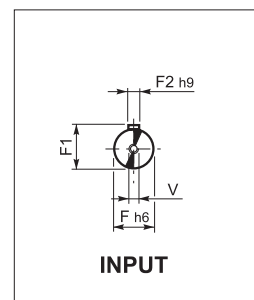
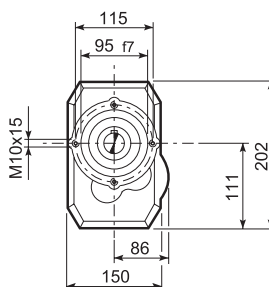
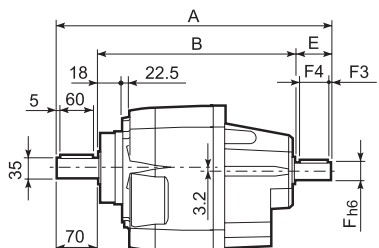


## C 36...HS

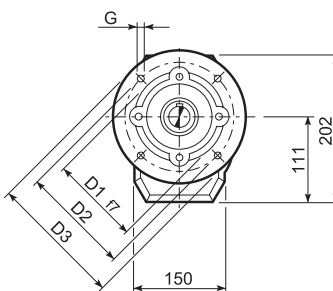
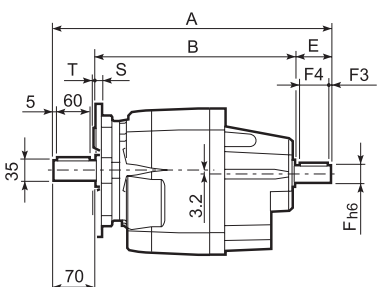
**P**



**U**



**UF**

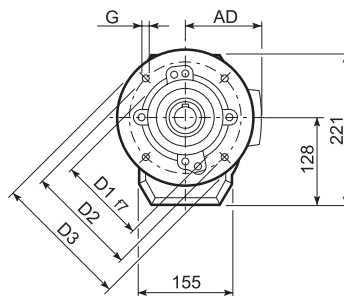
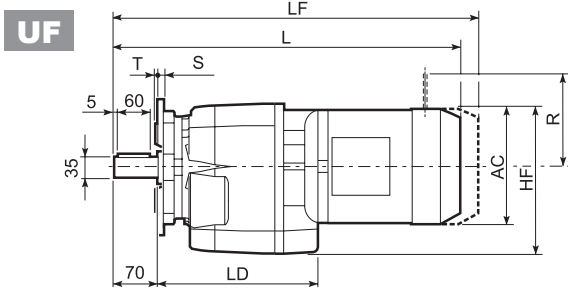
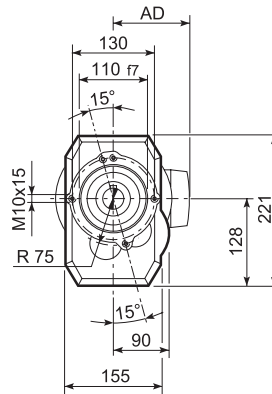
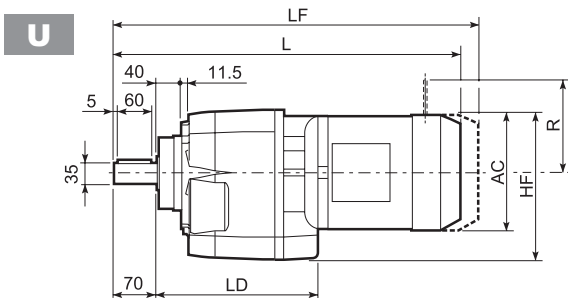
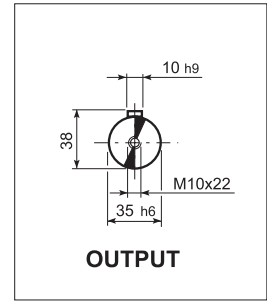
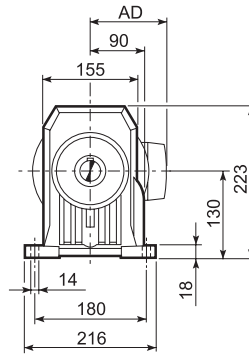
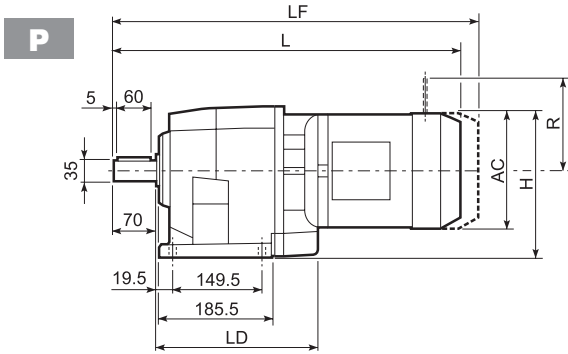


C 36 U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14

		A	B	E	F	F1	F2	F3	F4	V	kg
C 36 2	HS	415.5	295.5	50	24	27	8	2.5	45	M8x19	25.5
C 36 3		415.5	295.5	50	24	27	8	2.5	45	M8x19	25.5
C 36 4		390.5	280.5	40	16	18	5	2.5	36	M6x16	26.5



# C 41...M



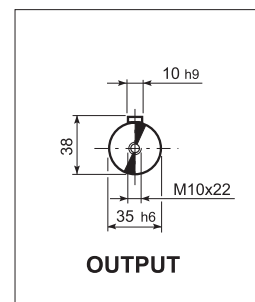
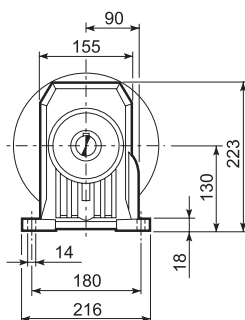
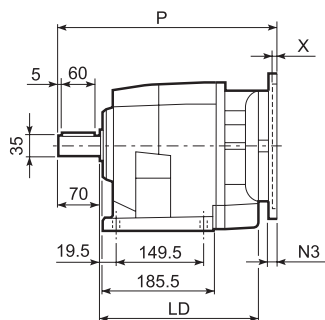
C 41_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	13

Motor Type	Flange	Motor Body	AC	H	HF	L	LD	AD	Kg	LF	Kg	M...FD		M...FA	
												R	AD	R	AD
C 41 2/3	S1	M1	138	199	197	491.5	220	108	25	552.5	28	103	135	124	108
C 41 2/3	S2	M2S	156	208	206	519.5	235.5	119	31	590.5	34	129	146	134	119
C 41 2/3	S3	M3S	195	227.5	225.5	563.5	251.5	142	36	659.5	41	160	158	160	142
C 41 2/3	S3	M3L	195	227.5	225.5	595.5	251.5	142	45	686.5	50	160	158	160	142
C 41 2/3	S4	M4	258	259	257	703.5	—	193	71	812.5	83	226	210	217	193
C 41 2/3	S4	M4LC	258	259	257	739	—	193	78	838	91	226	210	217	193
C 41 4	S05	M05	231	245.5	243.5	524	—	95	27	590	28	96	122	116	95
C 41 4	S1	M1	138	199	197	553	—	108	28	614	31	103	135	124	108
C 41 4	S2	M2S	156	208	206	581	—	119	34	652	37	129	146	134	119
C 41 4	S3	M3S	195	227.5	225.5	625	—	142	39	721	44	160	158	160	142
C 41 4	S3	M3L	195	227.5	225.5	657	—	142	48	748	53	160	158	160	142

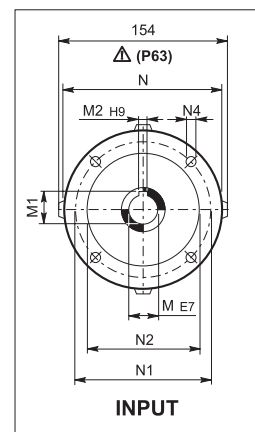
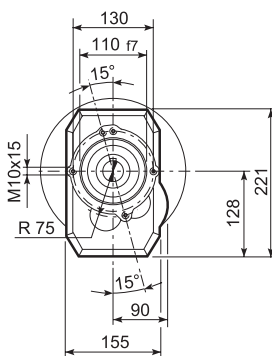
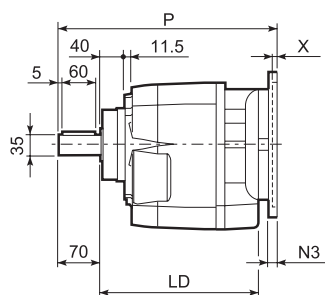


## C 41...P(IEC)

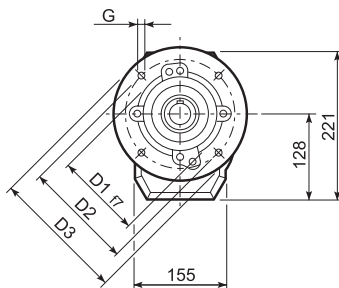
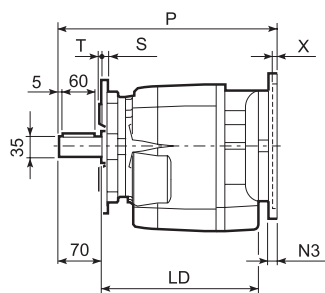
**P**



**U**



**UF**



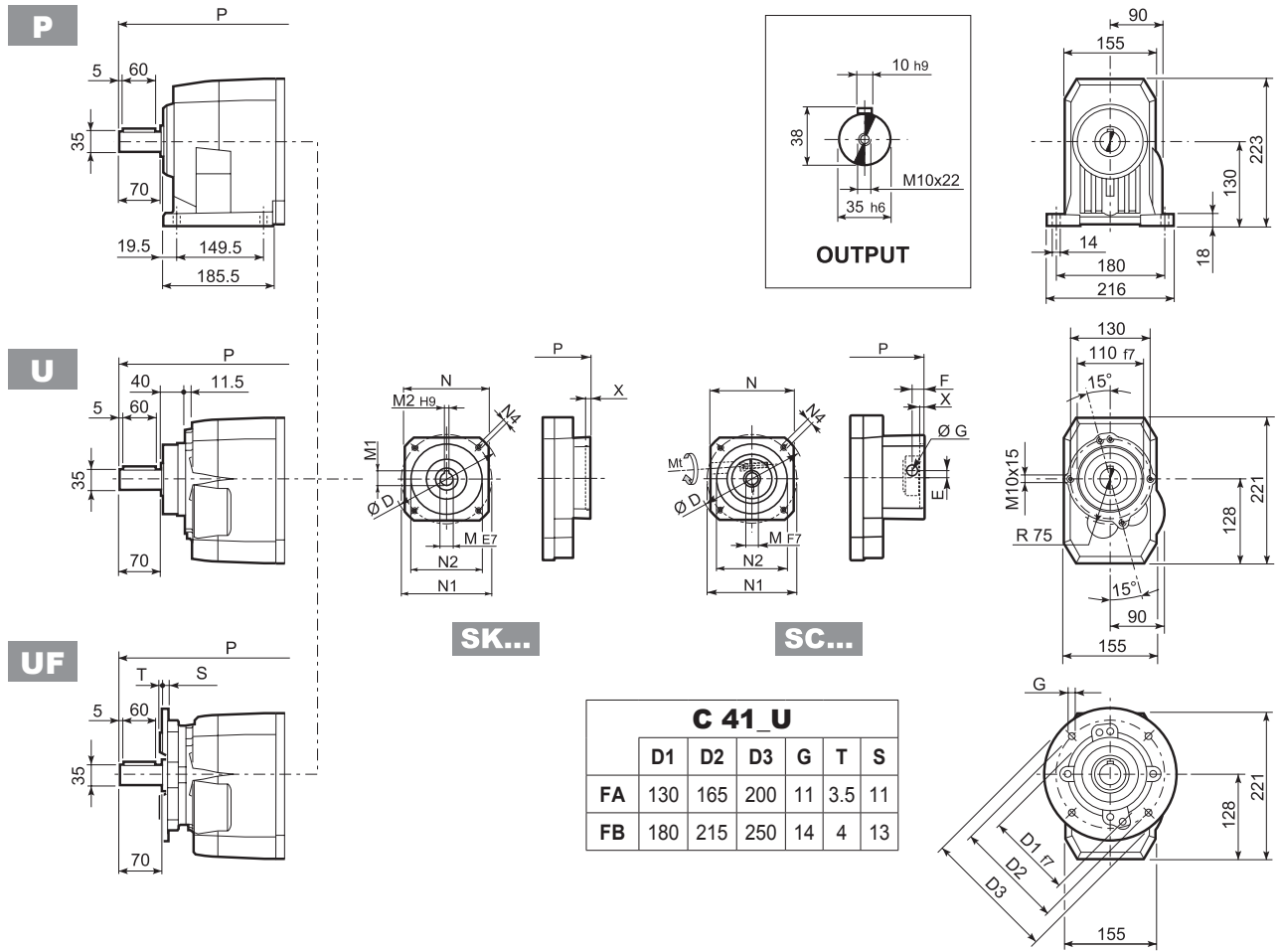
### C 41\_U

	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	13

		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 41 2/3	P63	235.5	11	12.8	4	140	115	95	—	M8x19	4	336.5	27
C 41 2/3	P71	235.5	14	16.3	5	160	130	110	—	M8x16	4.5	336.5	28
C 41 2/3	P80	251.5	19	21.8	6	200	165	130	—	M10x14.5	4	356	29
C 41 2/3	P90	251.5	24	27.3	8	200	165	130	—	M10x14.5	4	356	29
C 41 2/3	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	366	33
C 41 2/3	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	366	33
C 41 2/3	P132	—	38	41.3	10	300	265	230	16	14	5	402.5	35
C 41 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	395	30
C 41 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	395	31
C 41 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	414.5	32
C 41 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	414.5	32
C 41 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	424.5	36
C 41 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	424.5	36



# C 41...SK / SC



C 41_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	13

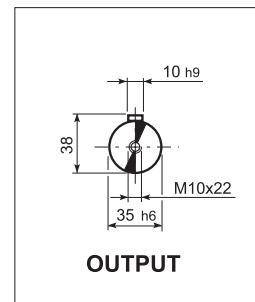
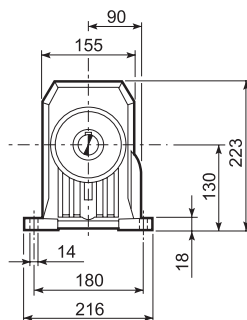
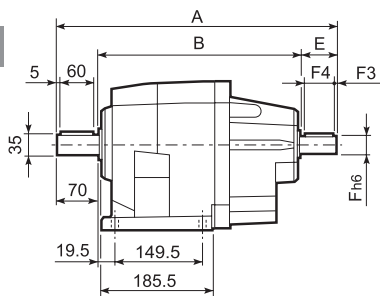
Icon	Icon	D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
C41 4	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	—	370	31
C41 4	SK60B	102	14	16.3	5	82	75	60	M5x10	4	—	377	32
C41 4	SK80A	115	14	16.3	5	90	100	80	M6x12	4	—	377	32
C41 2/3	SK80B	120	14	16.3	5	96	100	80	M6x12	4	356.5	—	29/29
C41 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	356.5	418	29/29/32
C41 2/3/4	SK95A	130	14	16.3	5	102	115	95	M8x12	4	356.5	418	29/29/32
C41 2/3/4	SK95B	130	19	21.8	6	102	115	95	M8x12	4	356.5	418	29/29/33
C41 2/3/4	SK95C	130	24	27.3	8	102	115	95	M8x12	4	356.5	418	29/29/36
C41 2/3/4	SK110A	150	19	21.8	6	120	130	110	M8x12	5	356.5	418	29/29/36
C41 2/3/4	SK110B	150	24	27.3	8	120	130	110	M8x12	5	356.5	418	29/29/36
C41 2/3	SK130A	188	24	27.3	8	142	165	130	M10x20	5	356.5	—	31/31
C41 2/3	SK130B	189	32	35.3	10	160	165	130	M10x20	5	403	—	33/33
C41 2/3	SK180A	240	32	35.3	10	192	215	180	M12x19	5	403	—	33/33
C41 2/3	SK180B	240	38	41.3	10	192	215	180	M12x19	5	403	—	38/38

Icon	Icon	Icon	Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
														2/3x	4x	
C41 4	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	—	397	32
C41 4	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	—	397	33
C41 4	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	—	397	33
C41 2/3	SC80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	380	—	30/30
C41 2/3/4	SC80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	380	441.5	30/30/33
C41 2/3/4	SC95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	380	441.5	30/30/34
C41 2/3/4	SC95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	380	441.5	30/30/34
C41 2/3/4	SC95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	380	441.5	30/30/35
C41 2/3/4	SC110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	380	441.5	31/31/39
C41 2/3/4	SC110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	380	441.5	31/31/39
C41 2/3	SC130A	M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	380	—	32/32
C41 2/3	SC130B	M8	36	189	20	17	17.75	32	160	165	130	M10x20	5	426	—	36/36
C41 2/3	SC180A	M8	36	240	20	17.5	17.75	32	192	215	180	M12x24	5	430	—	36/36
C41 2/3	SC180B	M8	36	240	20	17.5	17.75	38	192	215	180	M12x24	5	430	—	35/35

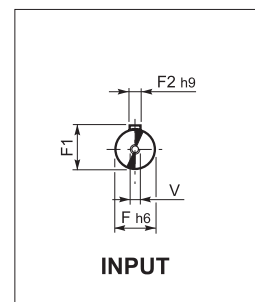
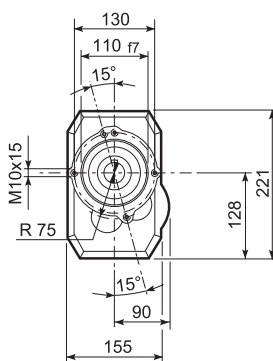
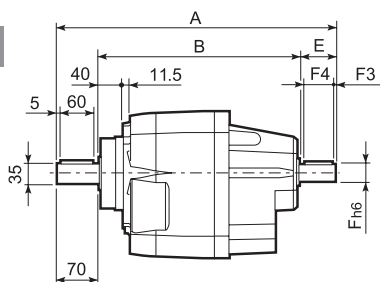


# C 41...HS

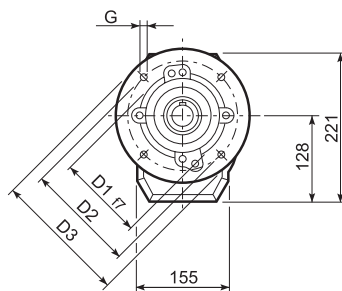
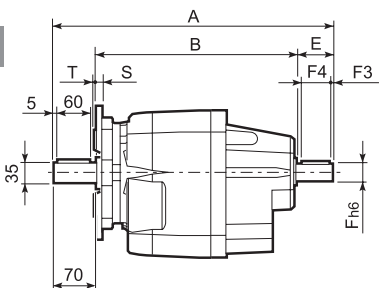
**P**



**U**



**UF**

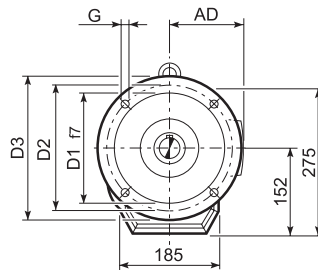
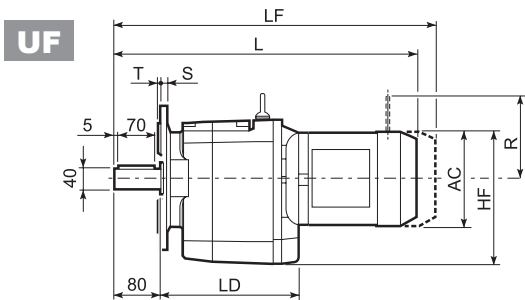
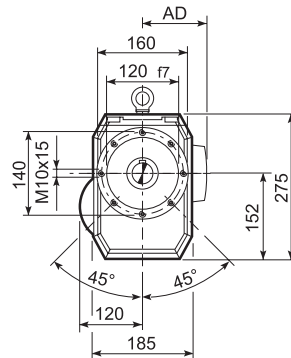
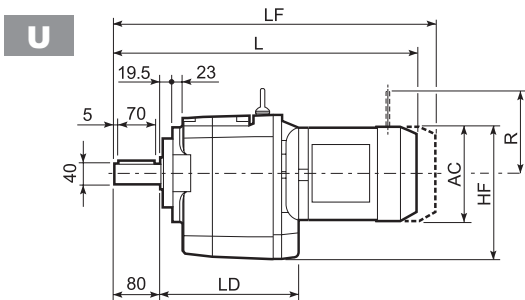
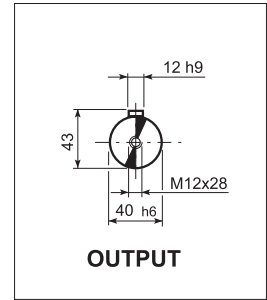
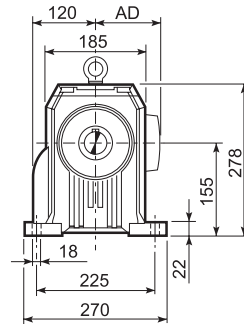
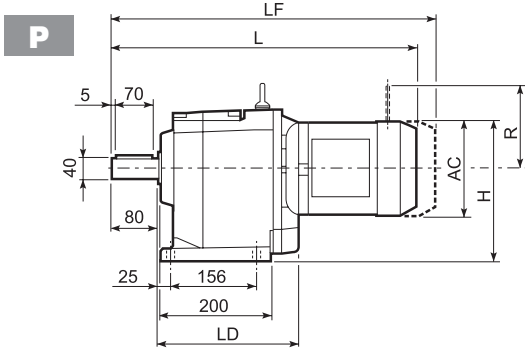


		<b>C 41 U</b>					
		D1	D2	D3	G	T	S
FA		130	165	200	11	3.5	11
FB		180	215	250	14	4	13

		A	B	E	F	F1	F2	F3	F4	V	Kg
<b>C 41 2</b>	<b>HS</b>	425.5	305.5	50	24	27	8	2.5	45	M8x19	30
<b>C 41 3</b>		425.5	305.5	50	24	27	8	2.5	45	M8x19	30
<b>C 41 4</b>		448	338	40	19	21.5	6	2.5	35	M6x16	33



# C 51...M



C 51_U						
	D1	D2	D3	G	T	S
FA	180	215	250	14	4	13
FB	230	265	300	14	4	16

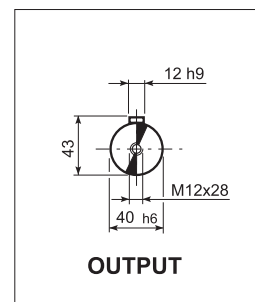
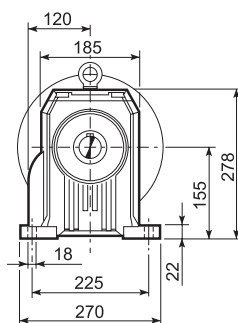
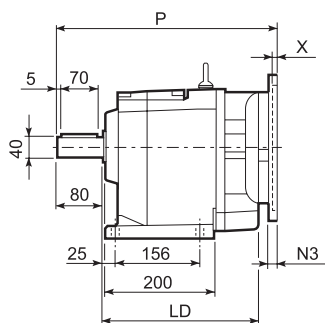
			AC	H	HF	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
										LF	Kg	R	AD	R	AD
C 51 2/3	S1	M1	138	224	221	517.5	—	108	49	578.5	52	103	135	124	108
C 51 2/3	S2	M2S	156	233	230	545.5	252.5	119	53	616.5	57	129	146	134	119
C 51 2/3	S3	M3S	195	252.5	249.5	589.5	267.5	142	58	685.5	65	160	158	160	142
C 51 2/3	S3	M3L	195	252.5	249.5	621.5	267.5	142	65	712.5	72	160	158	160	142
C 51 2/3	S4	M4	258	284	281	729.5	—	193	99	838.5	117	226	210	217	193
C 51 2/3	S4	M4LC	258	284	281	764.5	—	193	107	863.5	125	226	210	217	193
C 51 2/3	S5	M5S	310	310	307	816	—	245	127	956	157	266	245	247	245
C 51 2/3	S5	M5L	310	310	307	860	—	245	143	1000	173	266	245	247	245
C 51 4	S1	M1	138	224	221	589	—	108	52	650	55	103	135	124	108
C 51 4	S2	M2S	156	233	230	617	—	119	56	688	60	129	146	134	119
C 51 4	S3	M3S	195	252.5	249.5	661	—	142	61	757	68	160	158	160	142
C 51 4	S3	M3L	195	252.5	249.5	693	—	142	68	784	75	160	158	160	142



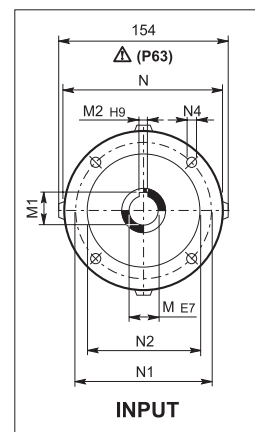
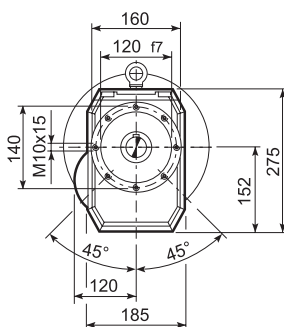
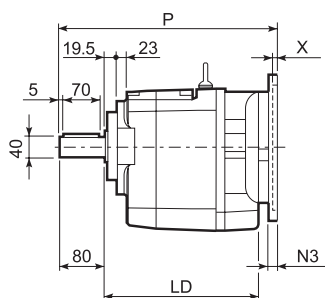


## C 51...P(IEC)

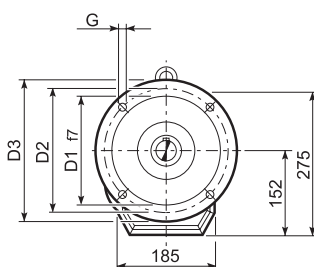
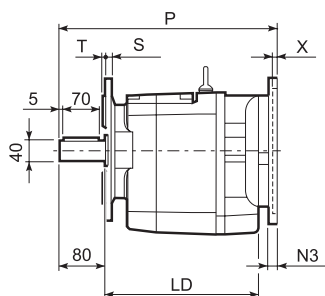
**P**



**U**



**UF**



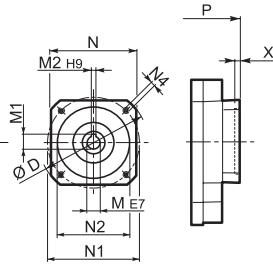
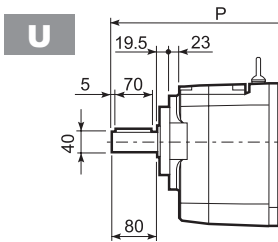
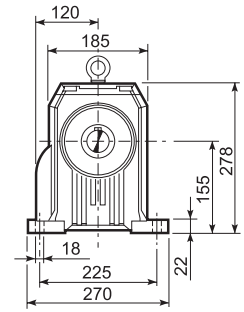
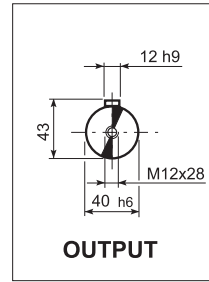
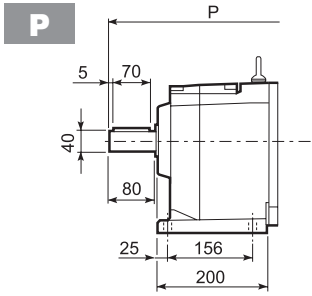
### C 51\_U

	D1	D2	D3	G	T	S
FA	180	215	250	14	4	13
FB	230	265	300	14	4	16

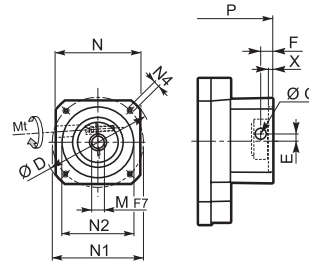
		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 51 2/3	P63	252.5	11	12.8	4	140	115	95	—	M8x19	4	362.5	45
C 51 2/3	P71	252.5	14	16.3	5	160	130	110	—	M8x16	4.5	362.5	45
C 51 2/3	P80	267.5	19	21.8	6	200	165	130	—	M10x14.5	4	382	47
C 51 2/3	P90	267.5	24	27.3	8	200	165	130	—	M10x14.5	4	382	47
C 51 2/3	P100	252.5	28	31.3	8	250	215	180	—	M12x16	4.5	392	51
C 51 2/3	P112	252.5	28	31.3	8	250	215	180	—	M12x16	4.5	392	51
C 51 2/3	P132	252.5	38	41.3	10	300	265	230	16	14	5	428.5	54
C 51 2/3	P160	—	42	45.3	12	350	300	250	23	18	5.5	479	58
C 51 2/3	P180	—	48	51.8	14	350	300	250	23	18	5.5	479	58
C 51 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	434	47
C 51 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	434	47
C 51 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	453.5	49
C 51 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	463.5	49
C 51 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	463.5	53
C 51 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	463.5	53



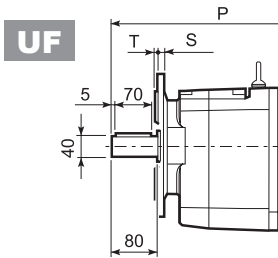
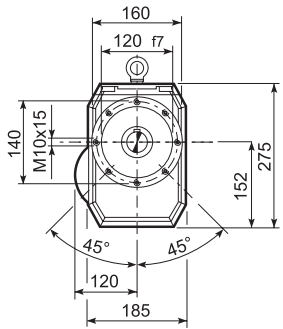
# C 51...SK / SC



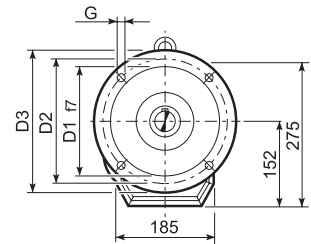
SK...



SC...



C 51_U						
	D1	D2	D3	G	T	S
FA	180	215	250	14	4	13
FB	230	265	300	14	4	16

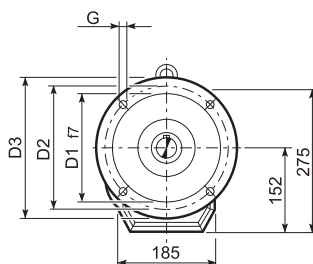
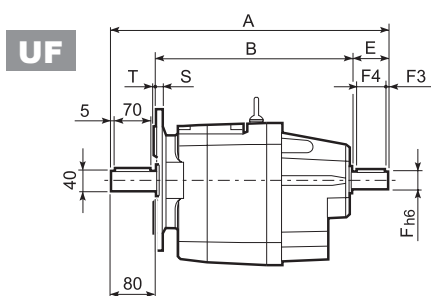
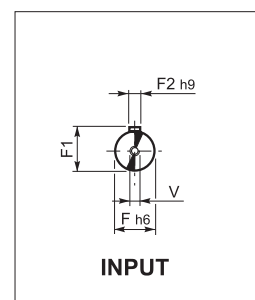
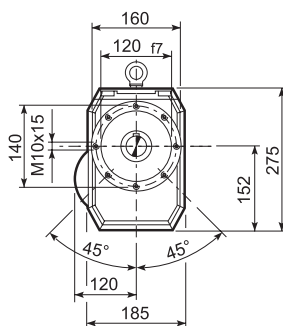
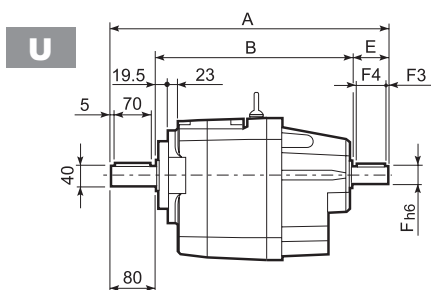
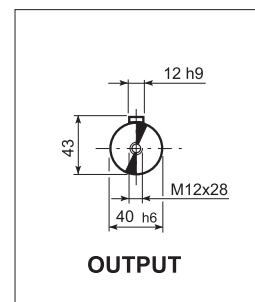
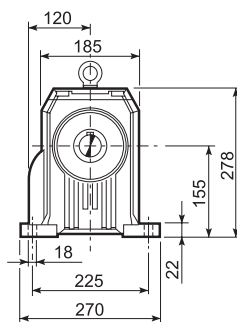
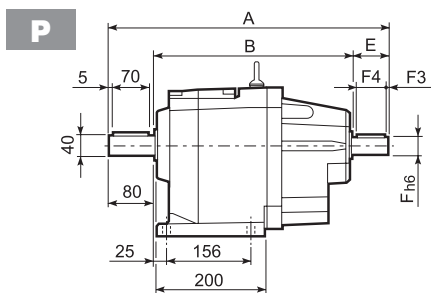


Icon	Icon	D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
C 51 2/3	SK80B	120	14	16.3	5	96	100	80	M6x12	4	382	—	46/46
C 51 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	382	453.5	47/47/49
C 51 2/3/4	SK95A	130	14	16.3	5	102	115	95	M8x12	4	382	453.5	46/46/48
C 51 2/3/4	SK95B	130	19	21.8	6	102	115	95	M8x12	4	382	453.5	47/47/49
C 51 2/3/4	SK95C	130	24	27.3	8	102	115	95	M8x12	4	382	453.5	47/47/49
C 51 2/3/4	SK110A	150	19	21.8	6	120	130	110	M8x12	5	382	453.5	47/47/51
C 51 2/3/4	SK110B	150	24	27.3	8	120	130	110	M8x12	5	382	453.5	47/47/51
C 51 2/3/4	SK130A	188	24	27.3	8	142	165	130	M10x20	5	382	453.5	49/49/52
C 51 2/3	SK130B	189	32	35.3	10	160	165	130	M10x20	5	428.5	—	55/55
C 51 2/3	SK180A	240	32	35.3	10	192	215	180	M12x19	5	428.5	—	55/55
C 51 2/3	SK180B	240	38	41.3	10	192	215	180	M12x19	5	428.5	—	55/55

Icon	Icon	Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2/3x	4x	
C 51 2/3	SC80B	M6 15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	405.5	—	47/47
C 51 2/3/4	SC80C	M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	405.5	477	48/48/50
C 51 2/3/4	SC95A	M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	405.5	477	47/47/49
C 51 2/3/4	SC95B	M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	405.5	477	48/48/50
C 51 2/3/4	SC95C	M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	405.5	477	48/48/50
C 51 2/3/4	SC110A	M6 15	150	16.5	16	17.75	19	120	130	110	M8x16	5	405.5	477	49/49/52
C 51 2/3/4	SC110B	M6 15	150	16.5	16	17.75	24	120	130	110	M8x16	5	405.5	477	49/49/52
C 51 2/3/4	SC130A	M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	405.5	477	50/50/53
C 51 2/3	SC130B	M8 36	189	20	17	17.75	32	160	165	130	M10x20	5	451.5	—	54/54
C 51 2/3	SC180A	M8 36	240	20	17.5	17.75	32	192	215	180	M12x24	5	455.5	—	54/54
C 51 2/3	SC180B	M8 36	240	20	17.5	17.75	38	192	215	180	M12x24	5	455.5	—	54/54



## C 51...HS



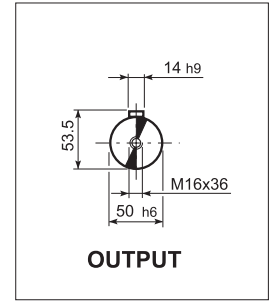
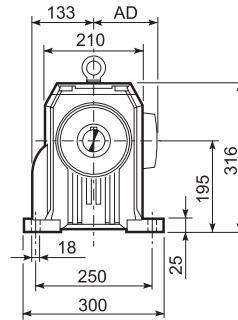
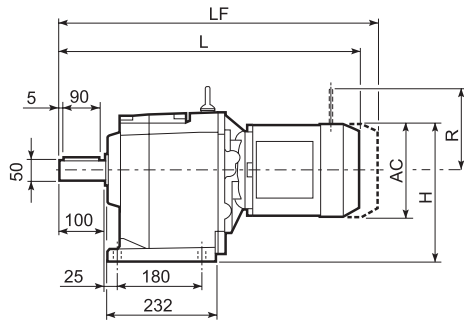
C 51_U						
	D1	D2	D3	G	T	S
FA	180	215	250	14	4	13
FB	230	265	300	14	4	16

		A	B	E	F	F1	F2	F3	F4	V	kg
C 51 2	HS	451.5	322	50	24	24	8	2.5	45	M8x19	45
C 51 3		451.5	322	50	24	24	8	2.5	45	M8x19	45
C 51 4		484	364	40	19	21.5	6	2.5	35	M6x16	48

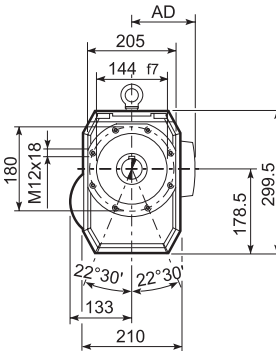
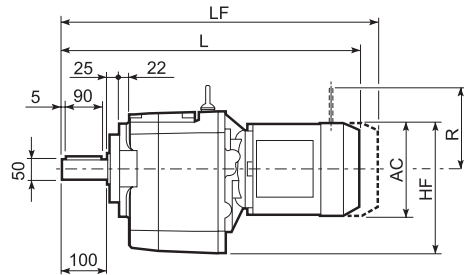


# C 61...M

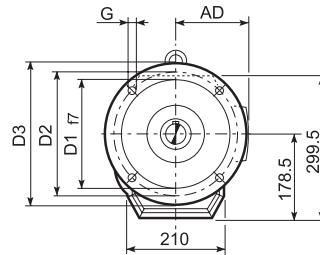
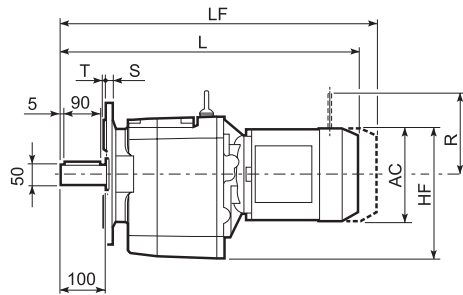
**P**



**U**



**UF**



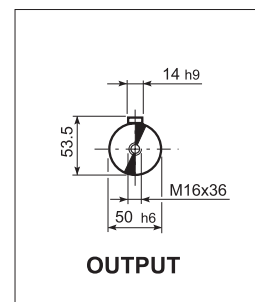
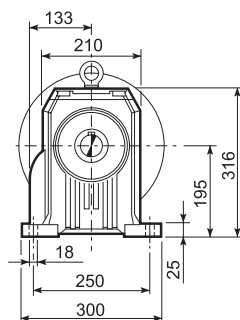
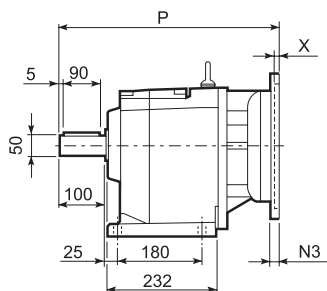
C 61_U						
	D1	D2	D3	G	T	S
FA	230	265	300	14	4	16
FB	250	300	350	18	5	18

Motor Type	S	M	AC	H	HF	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
C 61 2/3	S2	M2S	156	273	256.5	598.5	119	61	669.5	65	129	146	134	119
C 61 2/3	S3	M3S	195	292.5	276	642.5	142	66	738.5	74	160	158	160	142
C 61 2/3	S3	M3L	195	292.5	276	674.5	142	74	765.5	81	160	158	160	142
C 61 2/3	S4	M4	258	324	307.5	782.5	193	108	891.5	126	226	210	217	193
C 61 2/3	S4	M4LC	258	324	307.5	817.5	193	116	916.5	134	226	210	217	193
C 61 2/3	S5	M5S	310	350	333.5	869	245	136	1009	166	266	245	247	245
C 61 2/3	S5	M5L	310	350	333.5	913	245	152	1053	182	266	245	247	245
C 61 4	S1	M1	138	264	247.5	641	108	71	702	74	103	135	124	108
C 61 4	S2	M2S	156	273	256.5	669	119	75	740	78	129	146	134	119
C 61 4	S3	M3S	195	292.5	276	713	142	79	809	87	160	158	160	142
C 61 4	S3	M3L	195	292.5	276	745	142	87	836	94	160	158	160	142

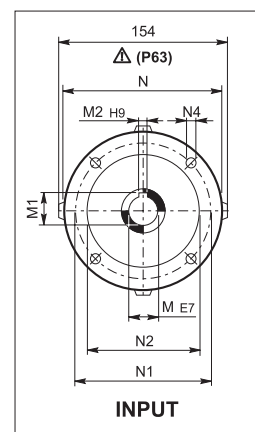
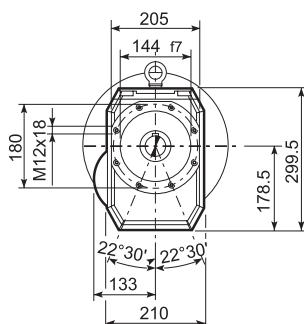
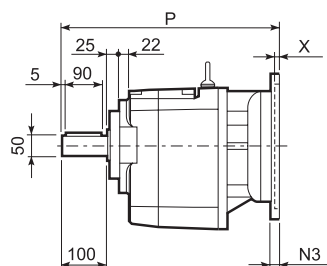


## C 61...P(IEC)

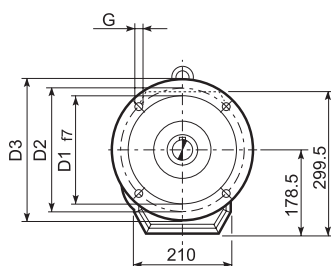
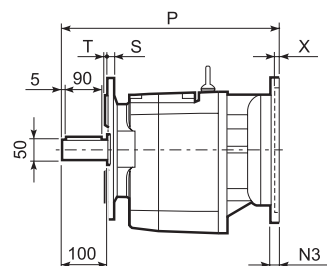
**P**



**U**



**UF**

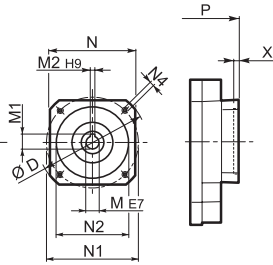
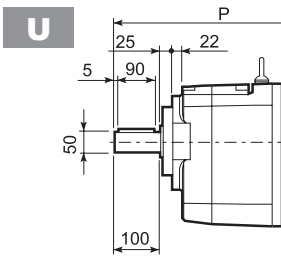
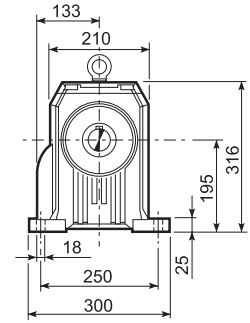
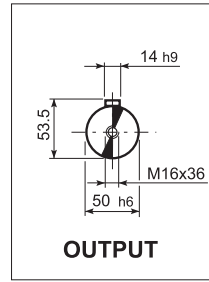
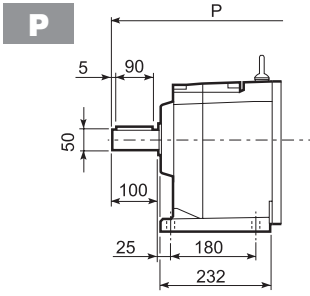


C 61_U						
	D1	D2	D3	G	T	S
FA	230	265	300	14	4	16
FB	250	300	350	18	5	18

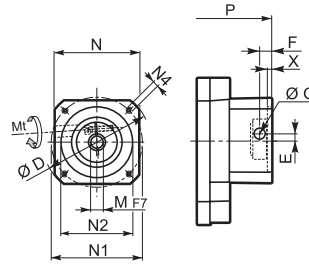
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 61 2/3	P63	11	12.8	4	140	115	95	—	M8x19	4	415.5	55
C 61 2/3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	415.5	57
C 61 2/3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	435	61
C 61 2/3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	435	61
C 61 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	444	65
C 61 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	444	65
C 61 2/3	P132	38	41.3	10	300	265	230	16	14	5	481.5	68
C 61 2/3	P160	42	45.3	12	350	300	250	23	18	5.5	532	73
C 61 2/3	P180	48	51.8	14	350	300	250	23	18	5.5	532	73
C 61 4	P63	11	12.8	4	140	115	95	—	M8x19	4	486	61
C 61 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	489	63
C 61 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	505.5	67
C 61 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	505.5	67
C 61 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	515.5	71
C 61 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	515.5	71



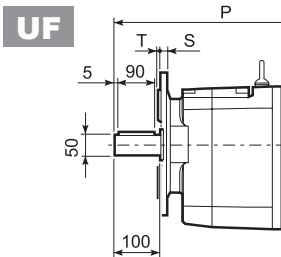
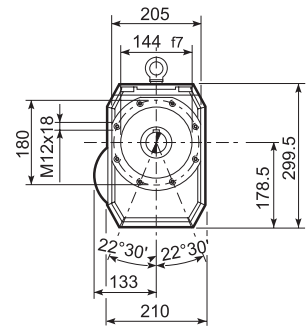
# C 61...SK / SC



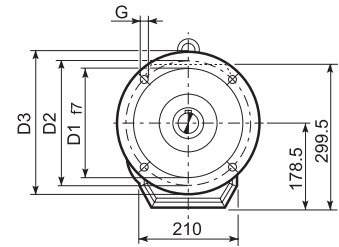
SK...



SC...



C 61_U						
	D1	D2	D3	G	T	S
FA	230	265	300	14	4	16
FB	250	300	350	18	5	18



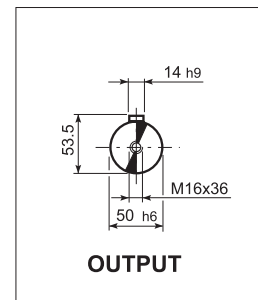
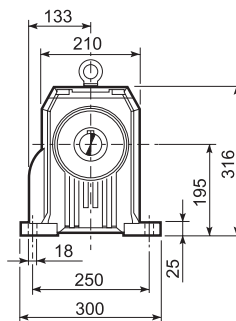
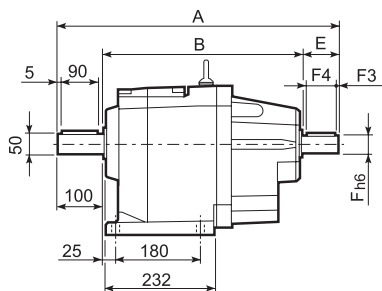
		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
C 61 4	SK80B	120	14	16.3	5	96	100	80	M6x12	4	—	505.5	62
C 61 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	435	505.5	63/63/69
C 61 2/3/4	SK95A	130	14	16.3	5	102	115	95	M8x12	4	435	505.5	60/60/67
C 61 2/3/4	SK95B	130	19	21.8	6	102	115	95	M8x12	4	435	505.5	63/63/69
C 61 2/3/4	SK95C	130	24	27.3	8	102	115	95	M8x12	4	435	505.5	63/63/69
C 61 2/3/4	SK110A	140	19	21.8	6	120	130	110	M8x12	5	435	505.5	63/63/69
C 61 2/3/4	SK110B	140	24	27.3	8	120	130	110	M8x12	5	435	505.5	63/63/69
C 61 2/3/4	SK130A	188	24	27.3	8	142	165	130	M10x20	5	435	505.5	67/67/80
C 61 2/3	SK130B	189	32	35.3	10	160	165	130	M10x20	5	481.5	—	72/72
C 61 2/3	SK180A	240	32	35.3	10	192	215	180	M12x19	5	481.5	—	72/72
C 61 2/3	SK180B	240	38	41.3	10	192	215	180	M12x19	5	481.5	—	66/66

		Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2/3x	4x	
C 61 4	SC80B	M6 15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	—	529	63
C 61 2/3/4	SC80C	M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	458.5	529	64/64/70
C 61 2/3/4	SC95A	M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	458.5	529	61/61/68
C 61 2/3/4	SC95B	M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	458.5	529	64/64/70
C 61 2/3/4	SC95C	M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	458.5	529	64/64/70
C 61 2/3/4	SC110A	M6 15	140	16.5	16	17.75	19	120	130	110	M8x16	5	458.5	529	65/65/70
C 61 2/3/4	SC110B	M6 15	140	16.5	16	17.75	24	120	130	110	M8x16	5	458.5	529	65/65/70
C 61 2/3/4	SC130A	M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	458.5	529	66/66/81
C 61 2/3	SC130B	M8 36	189	20	17	17.75	32	160	165	130	M10x20	5	504.5	—	75/75
C 61 2/3	SC180A	M8 36	240	20	17.5	17.75	32	192	215	180	M12x24	5	508.5	—	75/75
C 61 2/3	SC180B	M8 36	240	20	17.5	17.75	38	192	215	180	M12x24	5	508.5	—	69/69

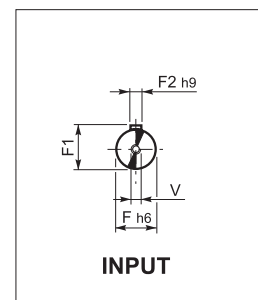
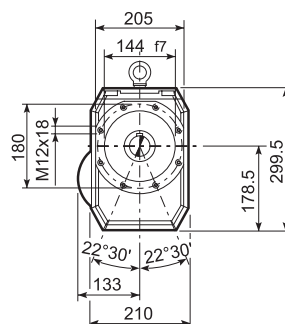
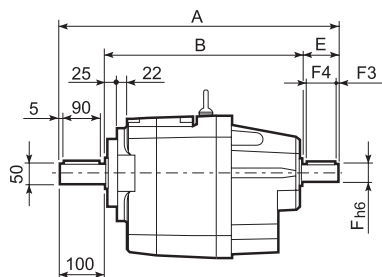


# C 61...HS

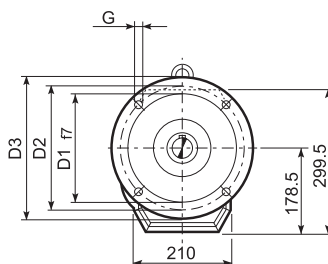
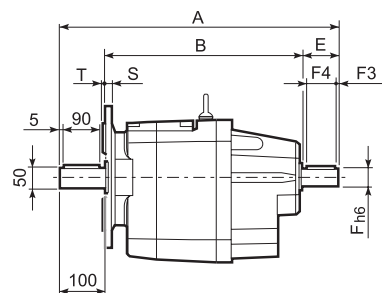
**P**



**U**



**UF**



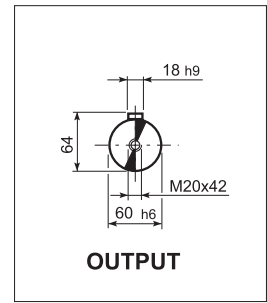
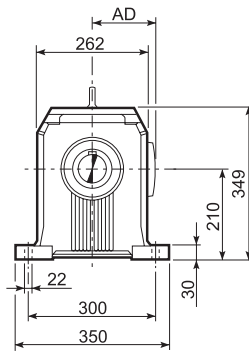
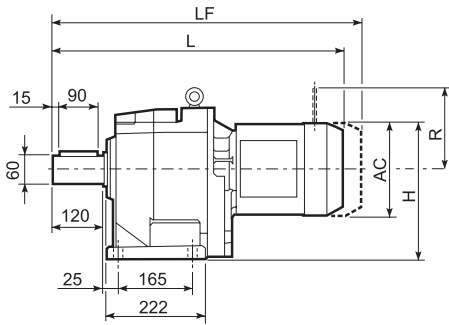
C 61_U						
	D1	D2	D3	G	T	S
FA	230	265	300	14	4	16
FB	250	300	350	18	5	18

		A	B	E	F	F1	F2	F3	F4	V	kg
C 61 2	HS	532	372	60	28	31	8	5	50	M10x22	66
C 61 3		532	372	60	28	31	8	5	50	M10x22	66
C 61 4		575	425	50	24	27	8	2.5	45	M8x19	72

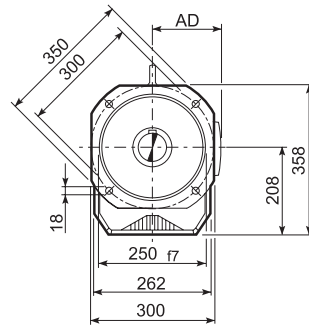
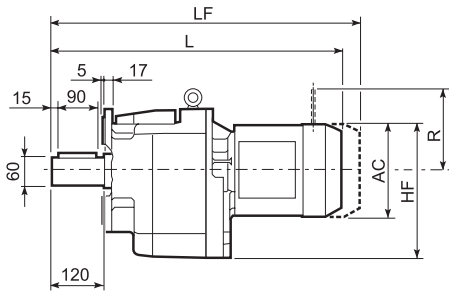


## C 70...M

**P**



**F**



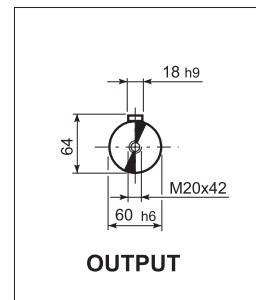
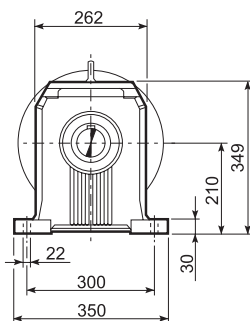
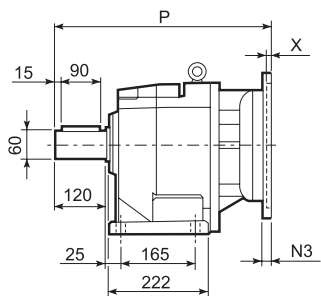
										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD		LF		R	AD	R	AD	
<b>C 70 2/3</b>	<b>S2</b>	<b>M2S</b>	156	288	286	636.5	119	88	707.5	92	129	146	134	119	
<b>C 70 2/3</b>	<b>S3</b>	<b>M3S</b>	195	307.5	305.5	680.5	142	93	776.5	101	160	158	160	142	
<b>C 70 2/3</b>	<b>S3</b>	<b>M3L</b>	195	307.5	305.5	712.5	142	101	803.5	108	160	158	160	142	
<b>C 70 2/3</b>	<b>S4</b>	<b>M4</b>	258	339	337	820.5	193	135	929.5	153	226	210	217	193	
<b>C 70 2/3</b>	<b>S4</b>	<b>M4LC</b>	258	339	337	855.5	193	143	954.5	161	226	210	217	193	
<b>C 70 2/3</b>	<b>S5</b>	<b>M5S</b>	310	365	363	907	245	163	1047	193	266	245	247	245	
<b>C 70 2/3</b>	<b>S5</b>	<b>M5L</b>	310	365	363	951	245	179	1091	209	266	245	247	245	
<b>C 70 4</b>	<b>S1</b>	<b>M1</b>	138	279	277	659.5	108	88	720.5	91	103	135	124	108	
<b>C 70 4</b>	<b>S2</b>	<b>M2S</b>	156	288	286	687.5	119	92	758.5	96	129	146	134	119	
<b>C 70 4</b>	<b>S3</b>	<b>M3S</b>	195	307.5	305.5	731.5	142	97	827.5	104	160	158	160	142	
<b>C 70 4</b>	<b>S3</b>	<b>M3L</b>	195	307.5	305.5	763.5	142	104	854.5	111	160	158	160	142	
<b>C 70 4</b>	<b>S4</b>	<b>M4</b>	258	339	337	871.5	193	138	980.5	156	226	210	217	193	
<b>C 70 4</b>	<b>S4</b>	<b>M4LC</b>	258	339	337	906.5	193	146	1005.5	164	226	210	217	193	



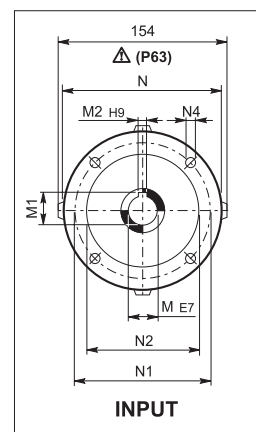
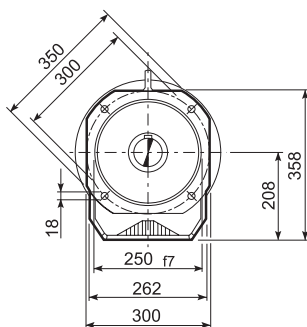
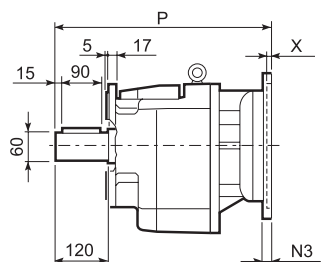


## C 70...P(IEC)

**P**



**F**

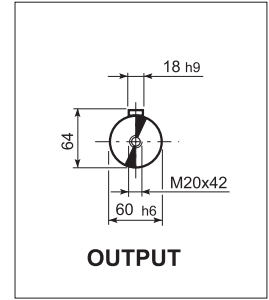
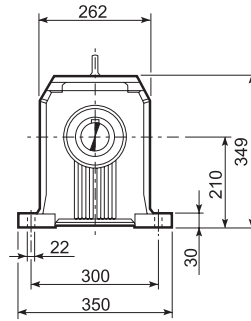
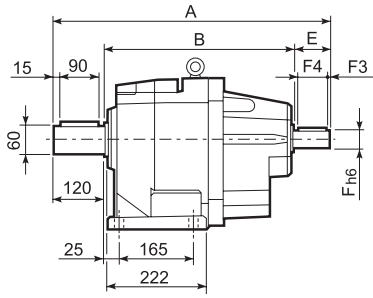


		M	M1	M2	N	N1	N2	N3	N4	X	P	
C 70 2/3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	473	88
C 70 2/3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	473	88
C 70 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	483	92
C 70 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	483	92
C 70 2/3	P132	38	41.3	10	300	265	230	16	14	5	519.5	95
C 70 2/3	P160	42	45.3	12	350	300	250	23	18	6	575	107
C 70 2/3	P180	48	51.8	14	350	300	250	23	18	6	575	107
C 70 2	P200	55	59.3	16	400	350	300	—	M16x25	7	600	129
C 70 4	P63	11	12.8	4	140	115	95	—	M8x19	4	504.5	91
C 70 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	504.5	91
C 70 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	524	92
C 70 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	524	92
C 70 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	534	96
C 70 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	534	96
C 70 4	P132	38	41.3	10	300	265	230	16	14	5	570.5	98

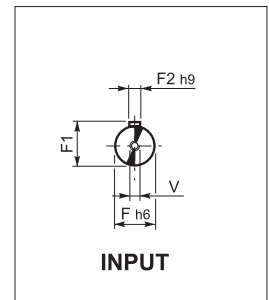
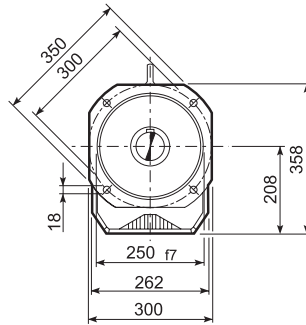
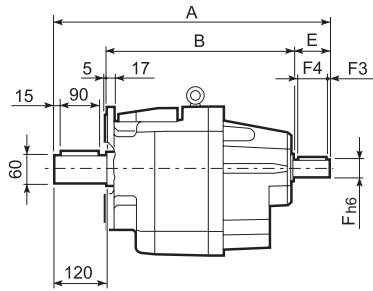


## C 70...HS

**P**



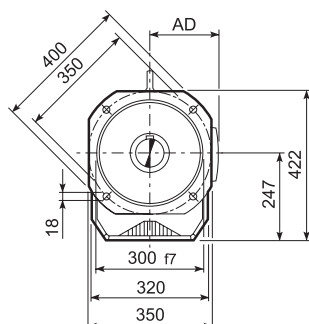
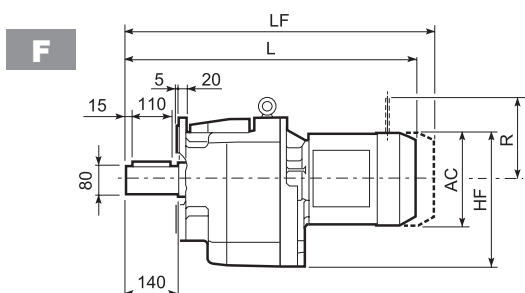
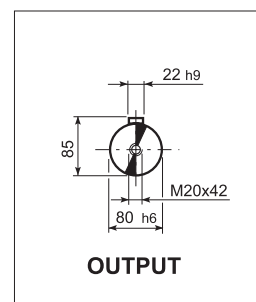
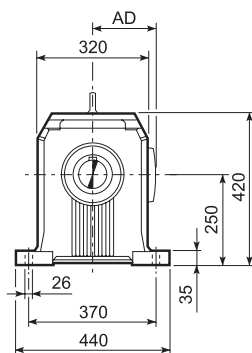
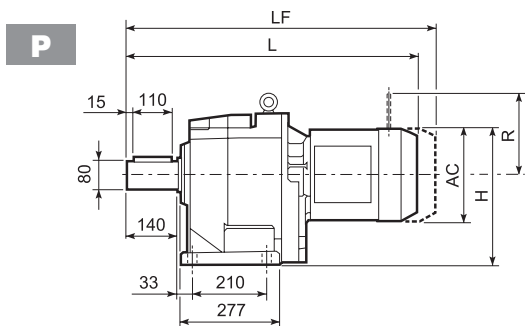
**F**



		A	B	E	F	F1	F2	F3	F4	V	kg
<b>C 70 2</b>	HS	657.5	427.5	110	42	45	12	10	90	M12x28	108
<b>C 70 3</b>		657.5	427.5	110	42	45	12	10	90	M12x28	108
<b>C 70 4</b>		593.5	423.5	50	24	27	8	2.5	45	M8x19	94



## C 80...M

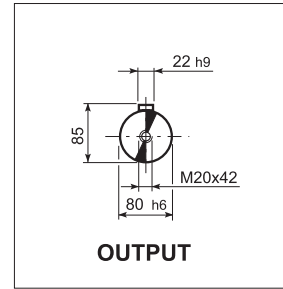
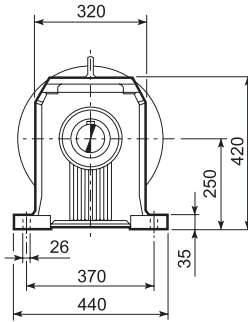
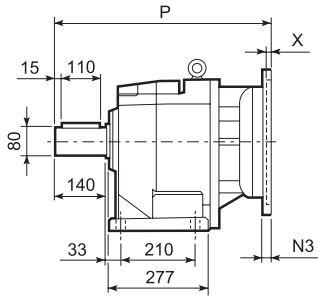


										M...FD M...FA		M...FD		M...FA			
			AC	H	HF	L	AD		LF		R	AD	R	AD			
			C 80 2/3	S3	M3S	195	347.5	344.5	742.5	142	139	838.5	146	160	158	160	142
			C 80 2/3	S3	M3L	195	347.5	344.5	774.5	142	146	865.5	153	160	158	160	142
			C 80 2/3	S4	M4	258	379	376	882.5	193	180	991.5	196	226	210	217	193
			C 80 2/3	S4	M4LC	258	379	376	917.5	193	188	1016.5	204	226	210	217	193
			C 80 2/3	S5	M5S	310	405	402	969	245	208	1109	238	266	245	247	245
			C 80 2/3	S5	M5L	310	405	402	1013	245	224	1153	254	266	245	247	245
			C 80 4	S1	M1	138	319	316	733.5	108	133	794.5	136	103	135	124	108
			C 80 4	S2	M2S	156	328	325	761.5	119	137	832.5	141	129	146	134	119
			C 80 4	S3	M3S	195	347.5	344.5	805.5	142	142	901.5	149	160	158	160	142
			C 80 4	S3	M3L	195	347.5	344.5	837.5	142	149	928.5	156	160	158	160	142
			C 80 4	S4	M4	258	379	376	945.5	193	183	1054.5	201	226	210	217	193
			C 80 4	S4	M4LC	258	379	376	980.5	193	191	1079.5	209	226	210	217	193

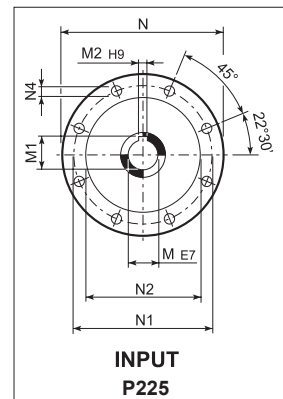
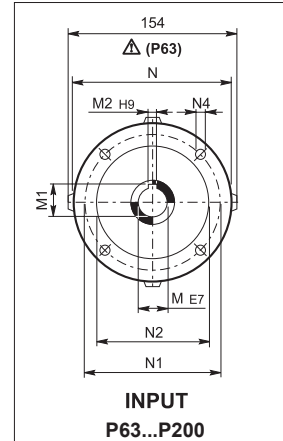
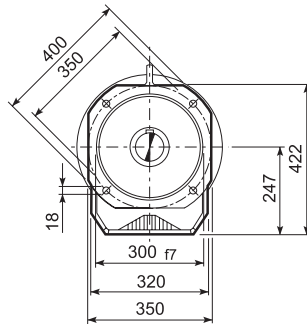
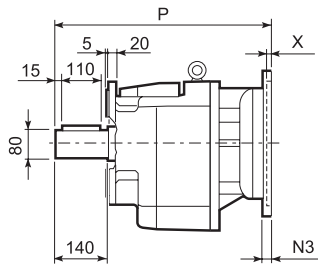


## C 80...P(IEC)

**P**



**F**

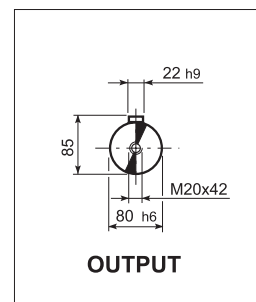
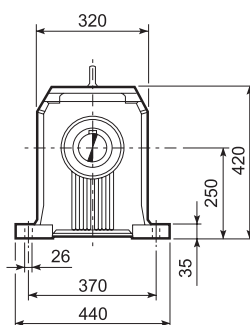
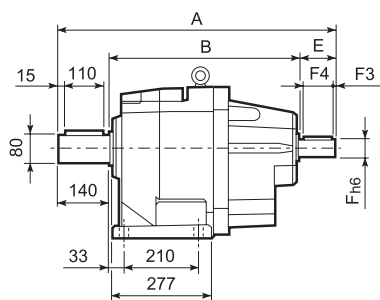


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 80 2/3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	533	135
C 80 2/3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	533	135
C 80 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	543	139
C 80 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	543	139
C 80 2/3	P132	38	41.3	10	300	265	230	16	14	5	579.5	141
C 80 2/3	P160	42	45.3	12	350	300	250	23	18	6	635	154
C 80 2/3	P180	48	51.8	14	350	300	250	23	18	6	635	154
C 80 2	P200	55	59.3	16	400	350	300	—	M16x25	7	660	176
C 80 2	P225	60	64.4	18	450	400	350	25	18	6	705.5	178
C 80 4	P63	11	12.8	4	140	115	95	—	M8x19	4	576.5	138
C 80 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	576.5	138
C 80 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	596	140
C 80 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	596	140
C 80 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	606	144
C 80 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	606	144
C 80 4	P132	38	41.3	10	300	265	230	16	M12x16	5	642.5	146

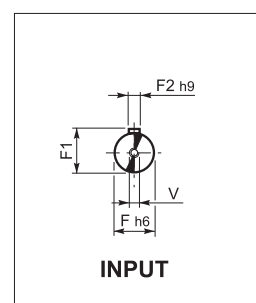
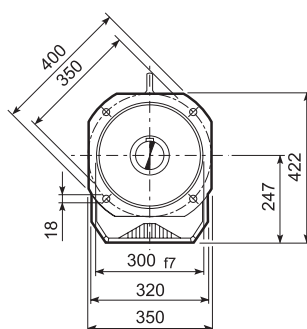
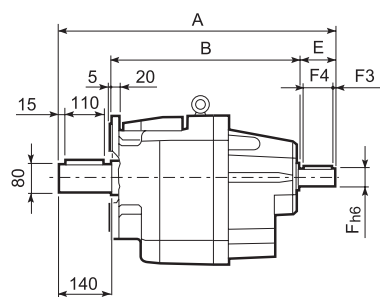


## C 80...HS

**P**



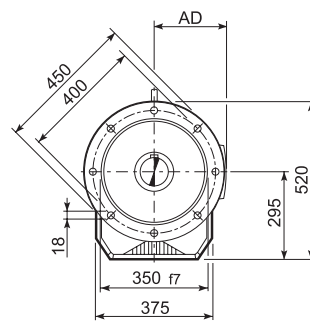
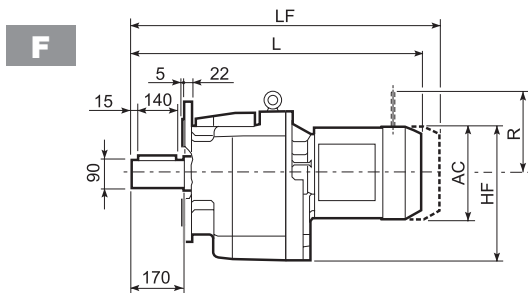
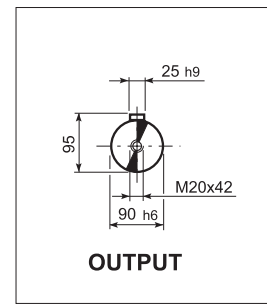
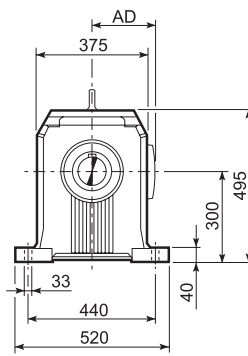
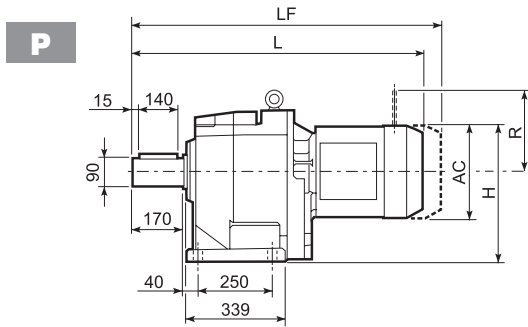
**F**



		A	B	E	F	F1	F2	F3	F4	V	Kg
<b>C 80 2</b>	HS	718.5	468.5	110	42	45	12	10	90	M12x28	154
<b>C 80 3</b>		718.5	468.5	110	42	45	12	10	90	M12x28	154
<b>C 80 4</b>		666.5	476.5	50	24	27	8	2.5	45	M8x19	141



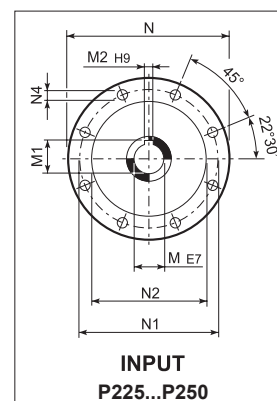
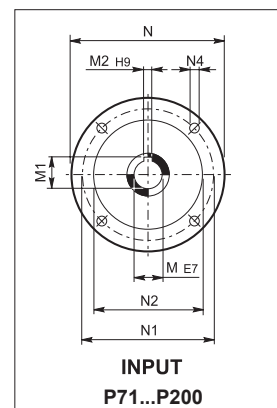
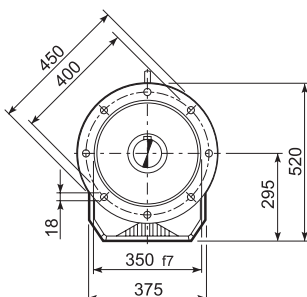
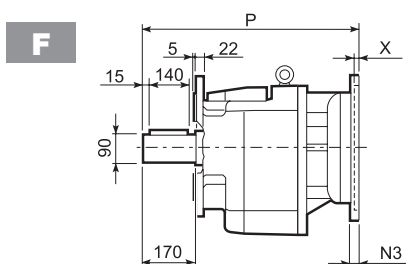
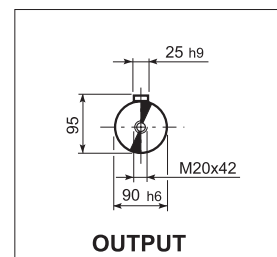
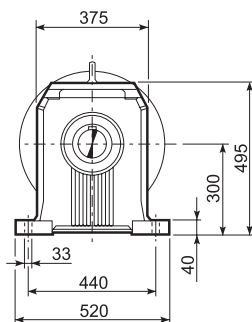
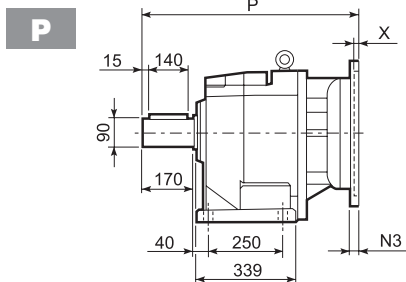
## C 90...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD		LF		R	AD	R	AD	
<b>C 90 2/3</b>	<b>S3</b>	<b>M3S</b>	195	397.5	392.5	852	142	228	948	236	160	158	160	142	
<b>C 90 2/3</b>	<b>S3</b>	<b>M3L</b>	195	397.5	392.5	884	142	236	975	243	160	158	160	142	
<b>C 90 2/3</b>	<b>S4</b>	<b>M4</b>	258	429	424	992	193	270	1101	288	226	210	217	193	
<b>C 90 2/3</b>	<b>S4</b>	<b>M4LC</b>	258	429	424	1027	193	278	1126	296	226	210	217	193	
<b>C 90 2/3</b>	<b>S5</b>	<b>M5S</b>	310	455	450	1078.5	245	298	1218.5	328	266	245	247	245	
<b>C 90 2/3</b>	<b>S5</b>	<b>M5L</b>	310	455	450	1122.5	245	314	1262.5	344	266	245	247	245	
<b>C 90 4</b>	<b>S1</b>	<b>M1</b>	138	369	364	862	108	226	923	228	103	135	124	108	
<b>C 90 4</b>	<b>S2</b>	<b>M2S</b>	156	378	373	891	119	234	962	238	129	146	134	119	
<b>C 90 4</b>	<b>S3</b>	<b>M3S</b>	195	397.5	392.5	935	142	239	1031	246	160	158	160	142	
<b>C 90 4</b>	<b>S3</b>	<b>M3L</b>	195	397.5	392.5	967	142	246	1058	253	160	158	160	142	
<b>C 90 4</b>	<b>S4</b>	<b>M4</b>	258	429	424	1075	193	280	1184	298	226	210	217	193	
<b>C 90 4</b>	<b>S4</b>	<b>M4LC</b>	258	429	424	1126.5	193	288	1209	306	226	210	217	193	



## C 90...P(IEC)

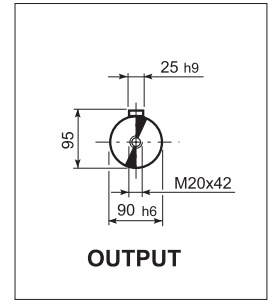
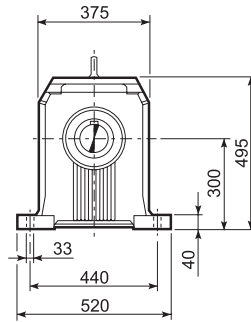
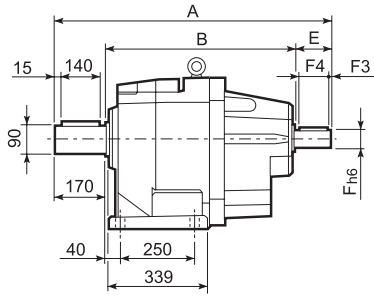


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 90 2/3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	644.5	229
C 90 2/3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	644.5	229
C 90 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	654.5	234
C 90 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	654.5	234
C 90 2/3	P132	38	41.3	10	300	265	230	16	14	5	691	236
C 90 2/3	P160	42	45.3	12	350	300	250	23	18	6	746.5	251
C 90 2/3	P180	48	51.8	14	350	300	250	23	18	6	746.5	251
C 90 2/3	P200	55	59.3	16	400	350	300	—	M16x25	7	771.5	272
C 90 2/3	P225	60	64.4	18	450	400	350	30	18	6	817	273
C 90 2/3	P250	65	69.4	18	550	500	450	30	18	6	847	295
C 90 4	P63	11	12.8	4	140	115	95	—	M8x19	4	707.5	236
C 90 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	707.5	236
C 90 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	727	238
C 90 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	727	238
C 90 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	737	242
C 90 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	737	242
C 90 4	P132	38	41.3	10	300	265	230	16	14	5	773.5	244
C 90 4	P160	42	45.3	12	350	300	250	23	18	5.5	824	248
C 90 4	P180	48	51.8	14	350	300	250	23	18	5.5	824	248

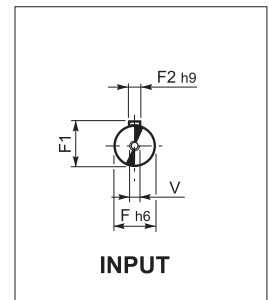
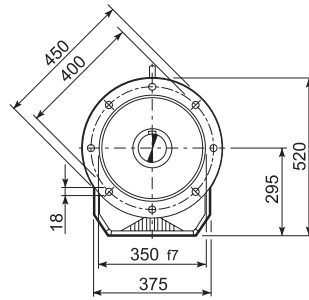
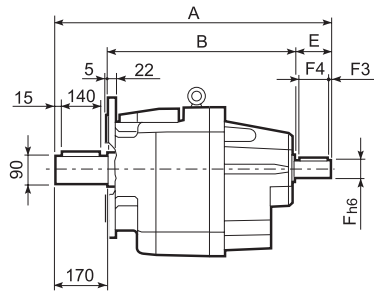


## C 90...HS

**P**



**F**



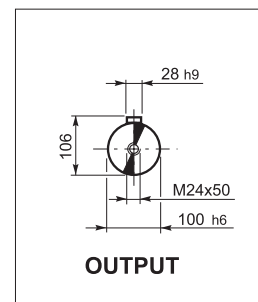
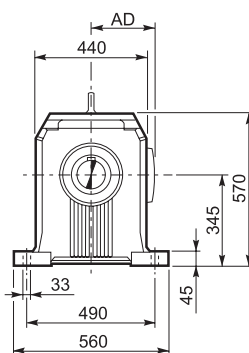
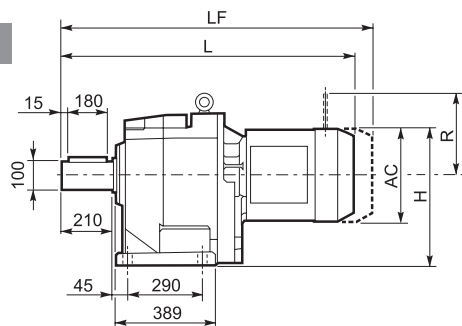
		A	B	E	F	F1	F2	F3	F4	V	Kg
<b>C 90 2</b>	HS	930.5	620.5	140	60	64	18	10	120	M16x36	273
<b>C 90 3</b>		930.5	620.5	140	60	64	18	10	120	M16x36	273
<b>C 90 4</b>		797	577	50	24	27	8	2.5	45	M8x19	240



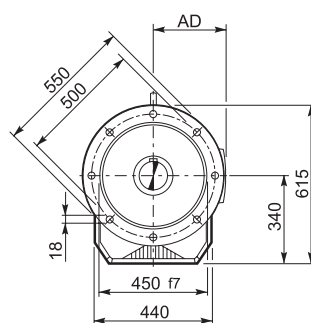
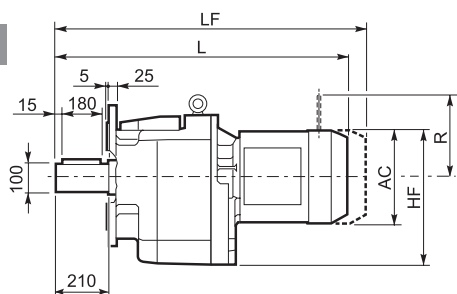


## C 100...M

**P**



**F**

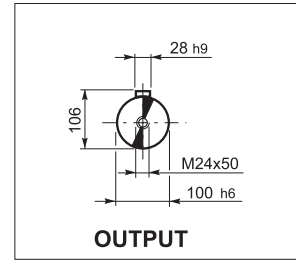
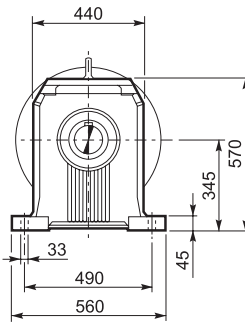
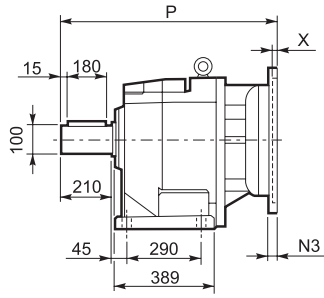


										M...FD M...FA		M...FD		M...FA			
			AC	H	HF	L	AD		LF		R	AD	R	AD			
			C 100 2/3	S4	M4	258	474	469	1087	193	392	1196	410	226	210	217	193
			C 100 2/3	S4	M4LC	258	474	469	1122	193	400	1221	418	226	210	217	193
			C 100 2/3	S5	M5S	310	500	495	1173.5	245	420	1313.5	450	266	245	247	245
			C 100 2/3	S5	M5L	310	500	495	1217.5	245	436	1357.5	466	266	245	247	245
			C 100 4	S1	M1	138	414	409	956.5	108	346	1027.5	348	103	135	124	108
			C 100 4	S2	M2S	156	423	418	985.5	119	354	1056.5	357	129	146	134	119
			C 100 4	S3	M3S	195	442.5	437.5	1029.5	142	358	1125.5	366	160	158	160	142
			C 100 4	S3	M3L	195	442.5	437.5	1061.5	142	366	1152.5	373	160	158	160	142
			C 100 4	S4	M4	258	474	469	1169.5	193	400	1278.5	418	226	210	217	193
			C 100 4	S4	M4LC	258	474	469	1204.5	245	408	1303.5	426	226	210	217	193

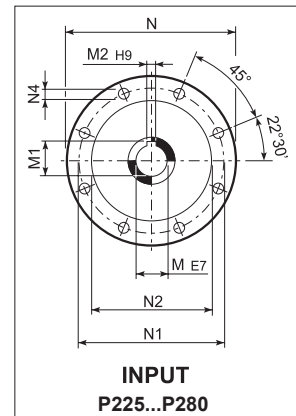
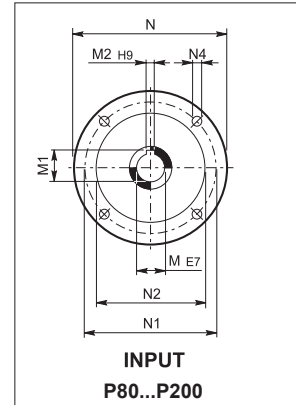
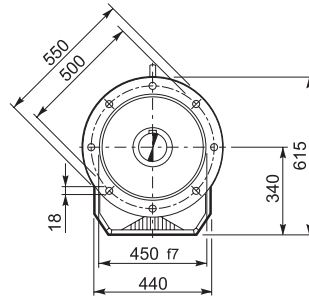
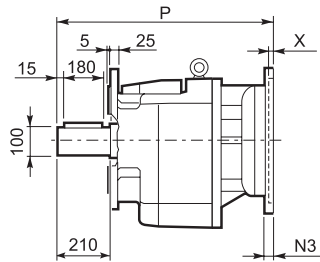


# C 100...P(IEC)

**P**



**F**

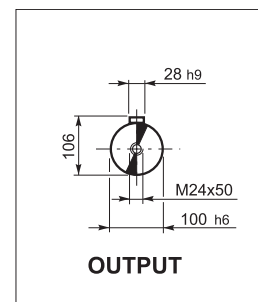
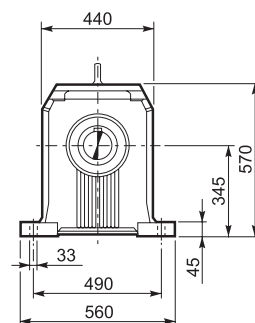
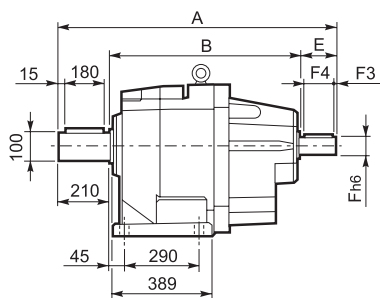


		M	M1	M2	N	N1	N2	N3	N4	X	P	
C 100 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	749.5	364
C 100 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	749.5	364
C 100 2/3	P132	38	41.3	10	300	265	230	16	14	5	786	367
C 100 2/3	P160	42	45.3	12	350	300	250	23	18	6	841.5	382
C 100 2/3	P180	48	51.8	14	350	300	250	23	18	6	841.5	382
C 100 2/3	P200	55	59.3	16	400	350	300	—	M16x25	7	866.5	403
C 100 2/3	P225	60	64.4	18	450	400	350	30	18	7	912	403
C 100 2/3	P250	65	69.4	18	550	500	450	30	18	7	942	426
C 100 2/3	P280	75	79.9	20	550	500	450	30	18	6	942	426
C 100 4	P63	11	12.8	4	140	115	95	—	M8x19	4	803	369
C 100 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	803	369
C 100 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	822.5	371
C 100 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	822.5	371
C 100 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	832.5	375
C 100 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	832.5	375
C 100 4	P132	38	41.3	10	300	265	230	16	14	5	869	377
C 100 4	P160	42	45.3	12	350	300	250	23	18	5.5	919.5	381
C 100 4	P180	48	51.8	14	350	300	250	23	18	5.5	919.5	381



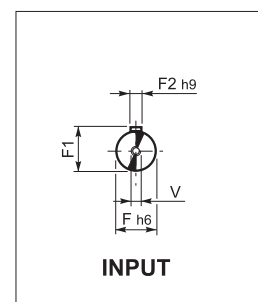
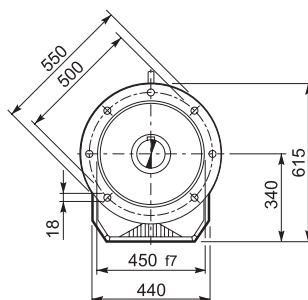
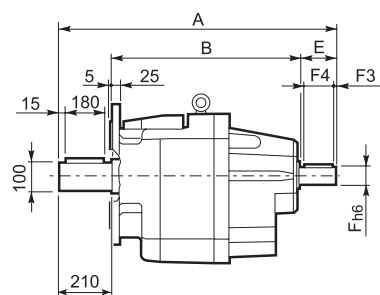
# C 100...HS

**P**



**OUTPUT**

**F**



**INPUT**

		A	B	E	F	F1	F2	F3	F4	V	kg
C 100 2	HS	1025.5	676	140	60	64	18	10	120	M16x36	409
C 100 3		1025.5	676	140	60	64	18	10	120	M16x36	409
C 100 4		892	632	50	24	27	8	2.5	45	M8x19	372



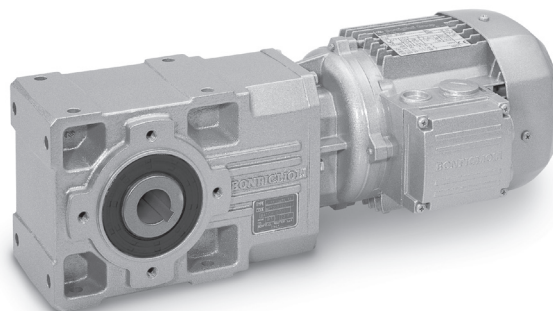
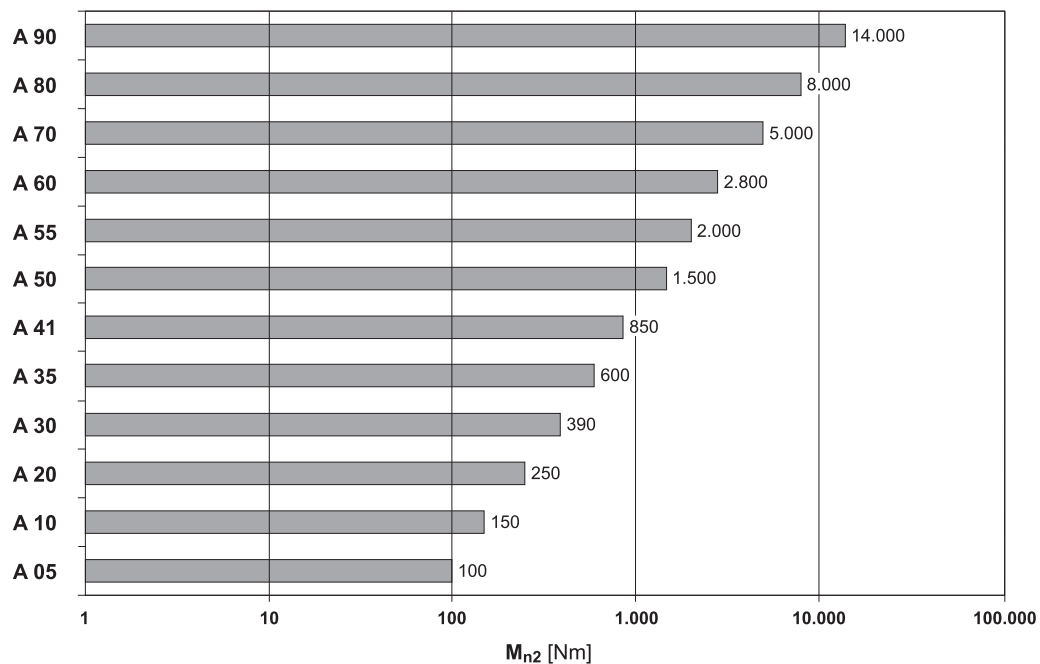
## HELICAL BEVEL GEAR UNITS SERIES A

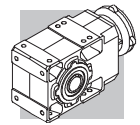
### 31 DESIGN FEATURES

The main design characteristics are:

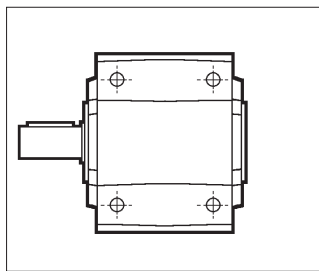
- modularity
- space effective
- universal mounting
- high efficiency
- quiet operation
- gears in hardened and case-hardened steel
- bare aluminium housing for sizes 05, 10, 20, 30, unpainted high strength painted cast-iron housings for larger frame sizes
- input and output shafts from high grade steel.

(C 26)



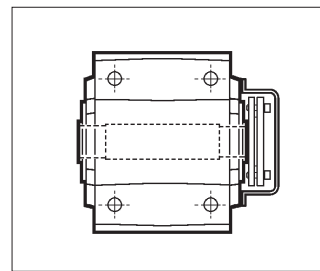


32 VERSIONS



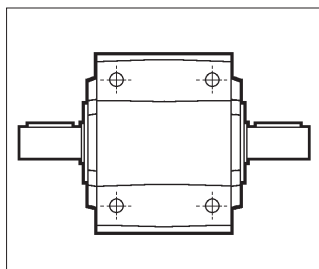
**UR**  
Single extension  
output shaft

A 05 ... A 90



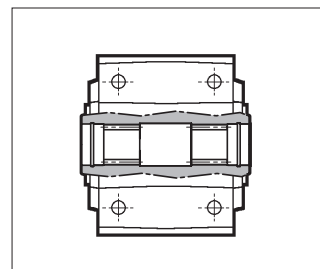
**US**  
Hollow output shaft  
and shrink disc

A 05 ... A 90



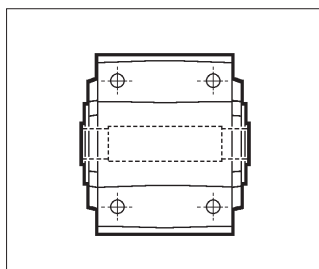
**UD**  
Double extended  
output shaft

A 05 ... A 90



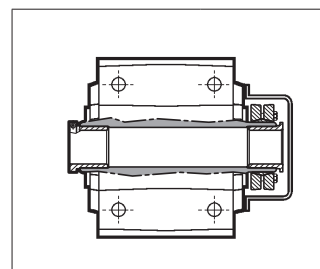
**UV**  
Splined hollow shaft  
DIN 5480

A 20 ... A 60



**UH**  
Hollow output shaft  
and keyway

A 05 ... A 90



**QF (Quick-fit)**  
Hollow shaft with  
adapter bushings  
and shrink disc

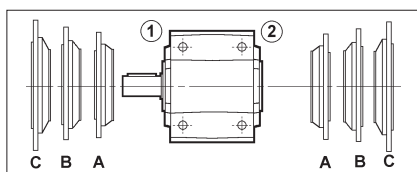
A 10 ... A 60

$M_{n2\ max}$ [Nm]	
A 35 QF35	550
A 55 QF55	1900

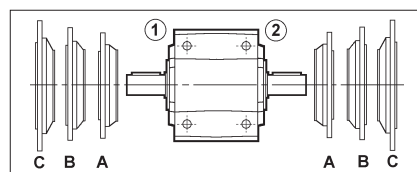
**Basic versions with bolted flange**

The sketches show the applicable flanges to the basic versions and their positions, designated with either ① or ②.

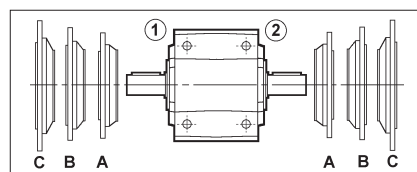
**UR F1...**



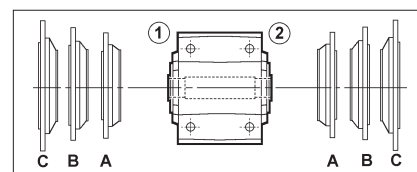
**UR F2...**



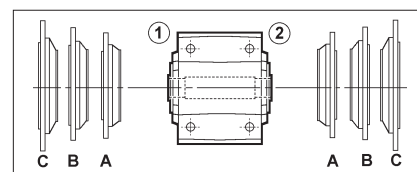
**UD F1...**



**UD F2...**

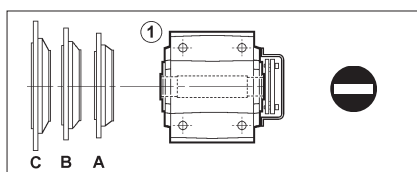


**UH... F1...**



**UH... F2...**

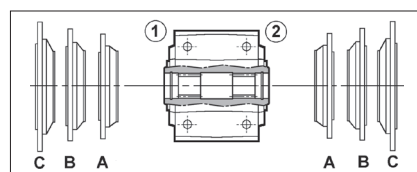
**US F1...**



**US F2...**



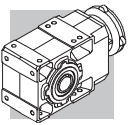
**UV F1...**



**UV F2...**



**QF...**



**33 DESIGNATION**

GEAR UNIT

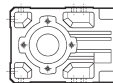
**A 35 2 UH40 F1A 49.1 S1 VA .....**

OPTIONS

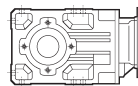
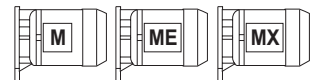
MOUNTING POSITION

**B3** (Standard), **B6, B7, B8, VA, VB**

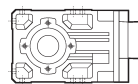
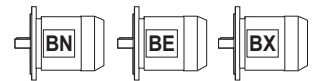
INPUT CONFIGURATION



**S05 ... S5**

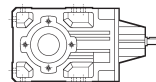


**IEC\_ P63 ... P180**



**SK\_**

**SC\_**



**HS**

GEAR RATIO

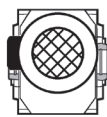
OUTPUT FLANGE SIZE AND POSITION  
(specify only if requested)

**F** = Flanged version

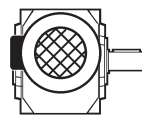
**1, 2** = Flange position

**A, B, C** = Flange size

VERSION

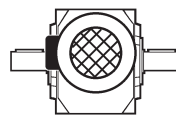


**UH\_**



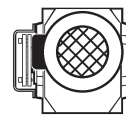
**UR**

(A 05...A 90)



**UD**

(A 05...A 90)



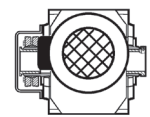
**US**

(A 05...A 90)



**UV**

(A 20...A 60)



**QF**

(A 10...A 60)

A 05	A 10	A 20	A 30	A 35	A 41	A 50	A 55	A 60	A 70	A 80	A 90
UH25	UH25	UH30	UH35	UH40	UH45	UH50	UH60	UH60	UH70	UH80	UH90
—	UH30	UH35	UH40	UH35	UH40	UH55	UH50	UH70	UH80	UH90	UH100

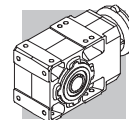
REDUCTIONS

**2** (A 05...A 60), **3** (A 20...A 90), **4** (A 50...A 90)

GEAR FRAME SIZE

**05, 10, 20, 30, 35, 41, 50, 55, 60, 70, 80, 90**

TYPE: **A** = Helical bevel gear units



MOTOR

BRAKE

**M 1LA 4 230/400-50 IP54 CLF ..... W FD 7.5 R SB 220 SA .....**

OPTIONS

BRAKE  
SUPPLY

RECTIFIER TYPE  
AC/DC  
**NB, SB, NBR, SBR**

BRAKE HAND RELEASE  
**R, RM**

BRAKE TORQUE

BRAKE TYPE  
**FD** (d.c. brake)  
**FA** (a.c. brake)

TERMINAL BOX POSITION  
**W** (default), **N, E, S**

MOTOR MOUNTING  
— (compact motor)  
**B5** (IEC - motor)

INSULATION CLASS  
**CL F** standard  
**CL H** option

DEGREE OF PROTECTION  
**IP55** standard (IP54 - brake motor)

VOLTAGE - FREQUENCY

POLE NUMBER  
**2, 4, 6, 2/4, 2/6, 2/8, 2/12, 4/6, 4/8**

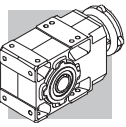
MOTOR SIZE  
**0B ... 5LA** (compact motor)  
**63A ... 180L** (IEC motor)

MOTOR TYPE

**MX** = compact 3-phase, class IE3  
**BX** = IEC 3-phase, class IE3

**ME** = compact 3-phase, class IE2  
**BE** = IEC 3-phase, class IE2

**M** = compact 3-phase  
**BN** = IEC 3-phase



### 33.1 Gearbox options

#### AL, AR

On request the gear unit can be provided complete with a backstop device allowing the output shaft to rotate only in the direction specified at the time of ordering. The following table shows the gearboxes in which the anti-run back device can be installed. Anti-run back device exclude RB option.

(C 27)

<b>A 30 2*</b>	<b>A 35 2*</b> ● (5.4_11.8)	<b>A 41 2</b> ● (5.2; 10.1)	<b>A 50 3</b>	<b>A 55 3</b>	<b>A 60 3</b>	<b>A 70 3</b>	<b>A 80 3</b>	<b>A 90 3</b>
			<b>A 50 4</b>	<b>A 55 4</b>	<b>A 60 4</b>	<b>A 70 4</b>	<b>A 80 4</b>	<b>A 90 4</b>

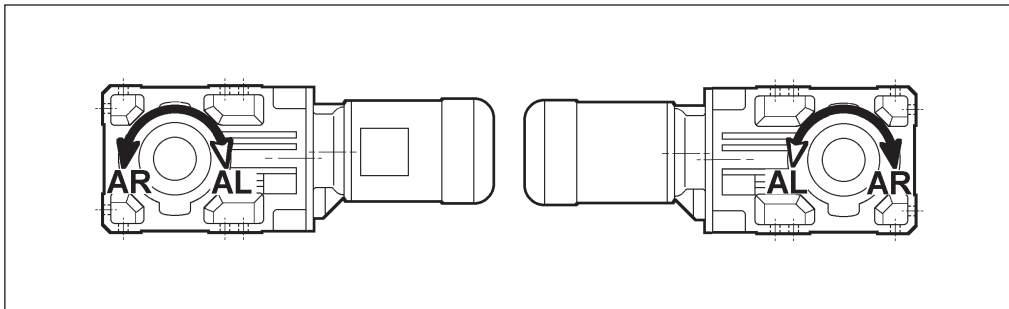
\* The supply of the backstop will ban the configuration of servomotor adapters type S\_60A, S\_60B, S\_80A.

When ordering the gear unit, the direction of free rotation must be specified through either the AR or the AL option (Table C28).



N.B. When the anti-run back device operates very frequently make sure that the torque backdriving the gearbox does not exceed 70% of the rated torque  $M_{n2}$  for the captioned gear unit.

(C 28)



#### SO

Gear units A05, A10, A20, A30, A35 and A41, usually factory filled with oil, are, in this case, supplied unlubricated.

#### LO

Gearboxes A50, A55, A60, A70, A80 and A90, usually supplied without oil, to be supplied with synthetic oil currently used by BONFIGLIOLI RIDUTTORI and filled according to the mounting position specified.

#### DV

Dual oil seals on input shaft. (Only available for integral gearmotors).

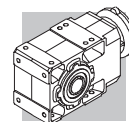
#### VV

Fluoro elastomer oil seal on input shaft.

#### PV

All oil seals in Fluoro elastomer material.





### TKL

Taconite seals are available, for output axis of gearboxes sizes (from) A70 to A90, to use in environments characterized by the presence of abrasive dust or powders. Taconite seals incorporate a combination of sealing rings, labyrinths and a grease chamber.

Greasing must be ensured as part of the scheduled maintenance programme.

This option includes fluoro elastomer oil seals on all axes.

For mounting position B6 please consult Bonfiglioli's Technical service.

### HDB

Certain gearboxes are available with increased overhung load ratings for use in applications characterised by high overhung loads beyond the capacity of the standard gearboxes. Specify the HDB option when ordering to obtain this increased overhung load capacity. The HDB option is available for gearbox sizes A10 to A50 with a single sided or through solid output shaft.

The following table specifies the maximum loads for HDB reinforced gearbox versions.

Figures refer to forces along the centreline of the output shaft.

(C 29)

HDB	$R_{N2}$					
	A 10	A 20	A 30	A 35	A 41	A 50
$n_1 = 2800$	5500 N	6200 N	9600 N	12000 N	15000 N	20000 N
			8970 N @ i=5.4	10200 N @ i=5.4 10600 N @ i=6.4 11000 N @ i=7.0	11500 N @ i=5.2 12700 N @ i=7.1 13300 N @ i=8.3 13700 N @ i=9.2	19000 N @ i=7.7
$n_1 = 1400$	5500 N	6200 N	9600 N	12000 N	15000 N	20000 N
$n_1 = 900$	5500 N	6200 N	9600 N	12000 N	15000 N	20000 N
$n_1 = 500$	5500 N	6200 N	9600 N	12000 N	15000 N	20000 N

Reinforced bearings also allow these versions to withstand increased thrust loads, and in particular.

$$A_{N2} = 0.35 \times R_{N2} \quad (24)$$

In applications free from overhung load, thrust load capacity increases to:

$$A_{N2} = 0.70 \times R_{N2} \quad (25)$$

If load is applied simultaneously to both ends of a through output shaft, contact the Bonfiglioli Technical Service to verify the application.

### RB

Gear units A10, A20, A30, A35, A41, A50, A55 and A60, usually supplied with standard values of angular backlash, are, in this case, supplied with reduced angular backlash values (excludes gear units options AL and AR described in this paragraph).

The following table specifies the corresponding figures of angular backlash.



(C 30)

		standard		RB	
A05	i =	5.5_12.3 - $\ominus$ (10.6)	10.6_91.6 - $\ominus$ (12.3)	—	
	$\varphi$ [°]	28	18	—	
A10	i =	5.5_12.3 - $\ominus$ (10.6)	10.6_91.6 - $\ominus$ (12.3)	5.5_12.3 - $\ominus$ (10.6)	10.6_91.6 - $\ominus$ (12.3)
	$\varphi$ [°]	27	17	12	8
A20	i =	5.4_12 - $\ominus$ (10.3)	10.3_380.9 - $\ominus$ (12)	5.4_12 - $\ominus$ (10.3)	10.3_380.9 - $\ominus$ (12)
	$\varphi$ [°]	23	15	11	7
A30	i =	5.4_11.8 - $\ominus$ (10.5)	10.5_400.8 - $\ominus$ (11.8)	5.4_11.8 - $\ominus$ (10.5)	10.5_400.8 - $\ominus$ (11.8)
	$\varphi$ [°]	22	15	10	7
A35	i =	5.4_11.8	13.1_393.2	5.4_11.8	13.1_393.2
	$\varphi$ [°]	20	11	9	6
A41	i =	5.2_11.7 - $\ominus$ (10.1)	10.1_376.8 - $\ominus$ (11.7)	5.2-11.7 - $\ominus$ (10.1)	10.1_376.8 - $\ominus$ (11.7)
	$\varphi$ [°]	19	13	9	6
A50	i =	7.7_778.2		7.7_778.2	
	$\varphi$ [°]	16		7	
A55	i =	4.9_19.2	23.8_793	4.9_19.2	23.8_793
	$\varphi$ [°]	17	11	8	6
A60	i =	7.9_20.6	25.7_755.4	7.9_20.6	25.7_755.4
	$\varphi$ [°]	12	9	5	4
A70	i =	9.4_21.3	23.5_1715	—	
	$\varphi$ [°]	14	12	—	
A80	i =	9.8_20.9	22.6_1558	—	
	$\varphi$ [°]	13	11	—	
A90	i =	9.7_21	22.3_1632	—	
	$\varphi$ [°]	12	10	—	

For the delivery timeframe contact the Bonfiglioli's sales network

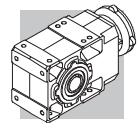
## SURFACE PROTECTION

When no specific protection class is requested, the painted (ferrous) surfaces of gearboxes are protected to at least corrosivity class C2 (UNI EN ISO 12944-2). For improved resistance to atmospheric corrosion, gearboxes can be delivered with **C3** and **C4** surface protection, obtained by painting the complete gearbox.

(C 31)

SURFACE PROTECTION	Typical environments	Maximum surface temperature	Corrosivity class according to UNI EN ISO 12944-2
<b>C3</b>	Urban and industrial environments with up to 100% relative humidity (medium air pollution)	120°C	C3
<b>C4</b>	Industrial areas, coastal areas, chemical plant, with up to 100% relative humidity (high air pollution)	120°C	C4

Gearboxes with optional protection to class **C3** or **C4** are available in a choice of colours. If no specific colour is requested (see the "PAINTING" option) gearboxes are finished in RAL 7042. Gearboxes can also be supplied with surface protection for corrosivity class **C5** according to UNI EN ISO 12944-2. Contact our Technical Service for further details.



## PAINTING

Gearboxes with optional protection to class C3 or C4 are available in the colours listed in the following table.

(C 32)

PAINTING	Colour	RAL number
<b>RAL7042*</b>	Traffic Grey A	7042
<b>RAL5010</b>	Gentian Blue	5010
<b>RAL9005</b>	Jet Black	9005
<b>RAL9006</b>	White Aluminium	9006
<b>RAL9010</b>	Pure White	9010

\* Gearboxes are supplied in this standard colour if no other colour is specified.

NOTE – “PAINTING” options can only be specified in conjunction with “SURFACE PROTECTION” options.

## CERTIFICATES

### AC - Certificate of compliance

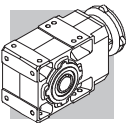
The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

### CC - Inspection certificate

The document entails checking on order compliance, the visual inspection of external conditions and of mating dimensions. Checking on main functional parameters in unloaded conditions is also performed along with oil seal proofing, both in static and in running conditions. Units inspected are sampled within the shipping batch and marked individually.

## 33.2 Accessories

See chapter 44 of this catalogue.

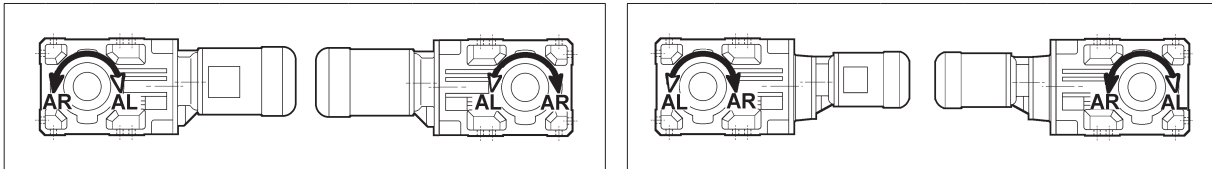


### 33.3 Motor options

#### AL, AR

The backstop option is also available for M, ME or MX motors and is not compatible with the presence of the same option of the gearbox. The following table shows the direction of free rotation of the gearbox, on the basis of which the correct option must be selected.

(C 34)



2x	A 05	A 10	A 20	A 30	A 35	A 41	A 50	A 60
3x	A 60	A 70	A 80	A 90				
4x	A 50	A 55						

2x	A 55							
3x	A 20	A 30	A 35	A 41	A 50	A 55		
4x	A 60	A 70	A 80	A 90				

For further information on options, consult the electric motors section.

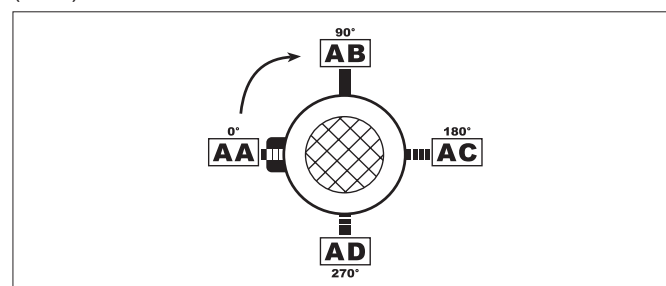
### 34 MOUNTING POSITION AND TERMINAL BOX ANGULAR LOCATION

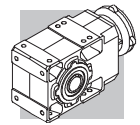
Location of motor terminal box can be specified by viewing the motor from the fan side; standard location is shown in black (W).

#### Angular location of the brake release lever.

Unless otherwise specified, brake motors have the manual device side located, 90° apart from terminal box. Different angles can be specified through the relevant options available.

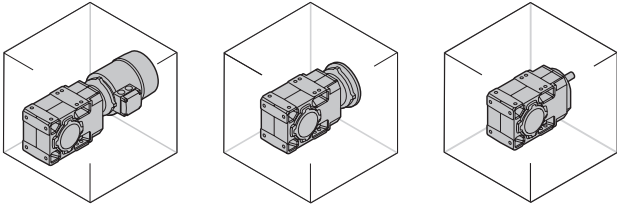
(C 33)



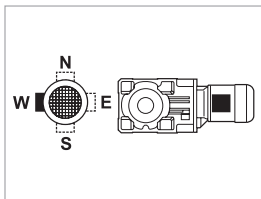


# A ...

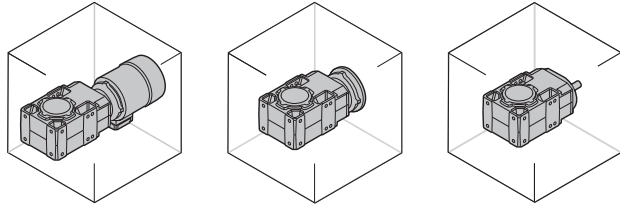
## B3



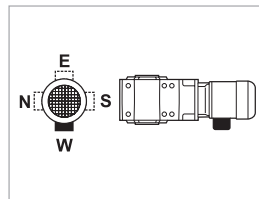
**\_S**      **\_P(IEC) \_SK / \_SC**      **\_HS**



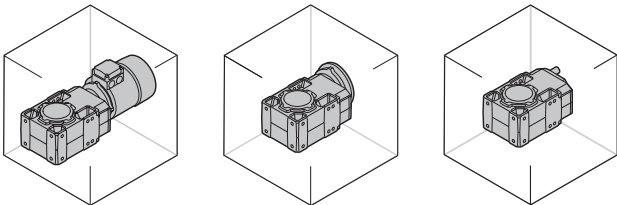
## B6



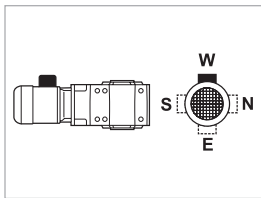
**\_S**      **\_P(IEC) \_SK / \_SC**      **\_HS**



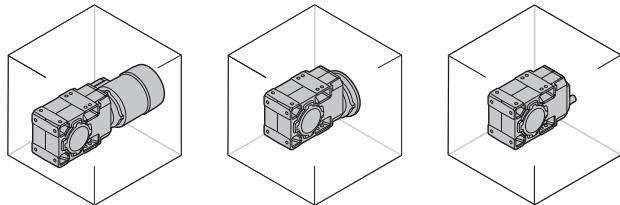
## B7



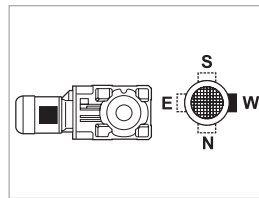
**\_S**      **\_P(IEC) \_SK / \_SC**      **\_HS**



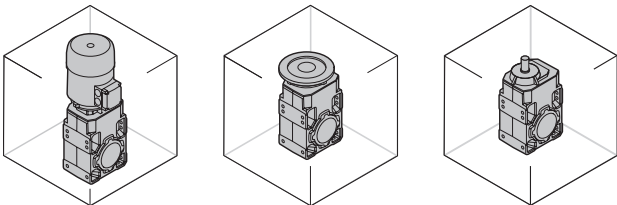
## B8



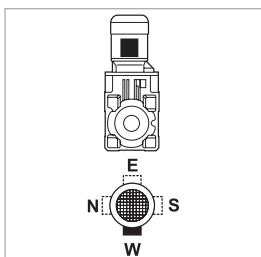
**\_S**      **\_P(IEC) \_SK / \_SC**      **\_HS**



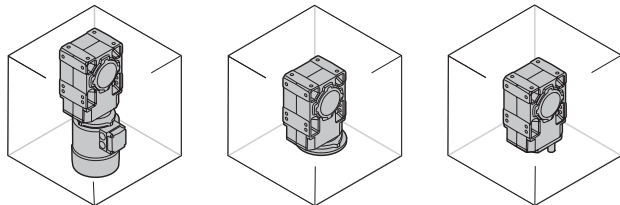
## VA



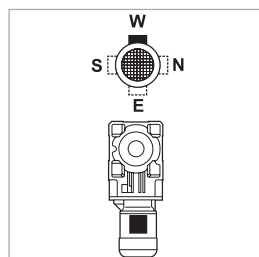
**\_S**      **\_P(IEC) \_SK / \_SC**      **\_HS**



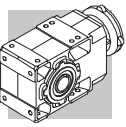
## VB



**\_S**      **\_P(IEC) \_SK / \_SC**      **\_HS**



W = Default



### 35 OVERHUNG LOADS

External transmissions keyed onto input and/or output shaft generate loads that act radially onto same shaft.

Resulting shaft loading must be compatible with both the bearing and the shaft capacity. Namely shaft loading ( $R_{c1}$  for input shaft,  $R_{c2}$  for output shaft), must be equal or lower than admissible overhung load capacity for shaft under study ( $R_{n1}$  for input shaft,  $R_{n2}$  for output shaft). OHL capability listed in the rating chart section.

In the formulas given below, index (1) applies to parameters relating to input shaft, whereas index (2) refers to output shaft.

The load generated by an external transmission can be calculated with close approximation by the following equations:

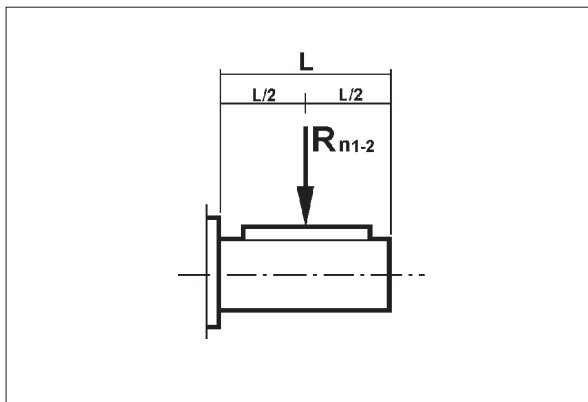
$$R_{c1} [N] = \frac{2000 \cdot M_1 [Nm] \cdot K_r}{d [mm]} \quad ; \quad R_{c2} [N] = \frac{2000 \cdot M_2 [Nm] \cdot K_r}{d [mm]} \quad (26)$$

(C 35)

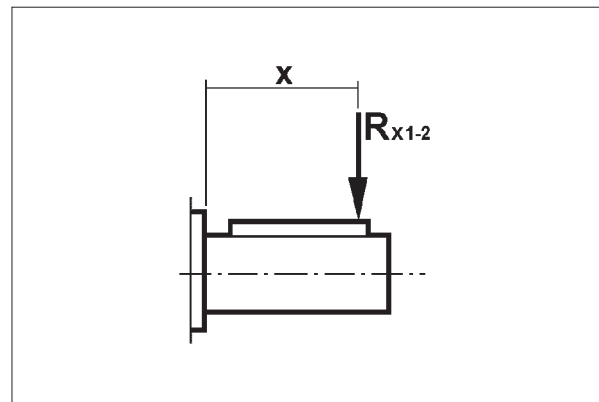
$M_1$ [Nm]	Torque applied to input shaft	$K_r = 1,25$	Gear transmission
$M_2$ [Nm]	Torque drawn at output shaft	$K_r = 1,5$	V-belt transmission
$d$ [mm]	Pitch diameter of element keyed onto shaft	$K_r = 2,0$	Flat belt transmission
$K_r = 1$	Chain transmission		

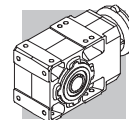
Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(C 36)



(C 37)





### a) Load applied at midpoint of shaft, tab. (C36)

A comparison of shaft loading with catalogue OHL ratings should verify the following condition:

$$R_{c1} \leq R_{n1} \quad [\text{input shaft}]$$

or

$$R_{c2} \leq R_{n2} \quad [\text{output shaft}]$$

### b) Load off the midpoint tab. (C37)

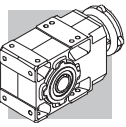
When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.

Revised permissible overhung loads  $R_{x1}$  (input) and  $R_{x2}$  (output) are calculated respectively from original rated values  $R_{n1}$  and  $R_{n2}$  through factor:

$$\frac{a}{b+x} \quad (27)$$

(C 38)

	Load location factors					
	Output shaft			Input shaft		
	a	b	c	a	b	c
<b>A 05 2</b>	116	86	450	—	—	—
<b>A 10 2</b>	123	101	600	21	1	300
<b>A 20 2</b>	150	120	750	40	20	350
<b>A 20 3</b>	150	120	750	21	1	300
<b>A 30 2</b>	168	138	900	38.5	18.5	350
<b>A 30 3</b>	168	138	900	21	1	300
<b>A 35 2</b>	182.5	147.5	950	38.5	18.5	350
<b>A 35 3</b>	182.5	147.5	950	21	1	300
<b>A 41 2</b>	198	158	1050	49.5	24.5	450
<b>A 41 3</b>	198	158	1050	40	20	350
<b>A 50 2 - A 50 3</b>	242.5	201.5	1300	49.5	24.5	450
<b>A 50 4</b>	242.5	201.5	1300	38.5	18.5	350
<b>A 55 2 - A 55 3</b>	231.5	179	1300	49.5	24.5	450
<b>A 55 4</b>	231.5	179	1300	38.5	18.5	350
<b>A 60 2 - A 60 3</b>	242.5	190	1550	55.5	25.5	600
<b>A 60 4</b>	242.5	190	1550	49.5	24.5	450
<b>A 70 3</b>	295.5	230.5	1900	86	31	1000
<b>A 70 4</b>	295.5	230.5	1900	49.5	24.5	450
<b>A 80 3</b>	345	280	2400	86	31	1000
<b>A 80 4</b>	345	280	2400	49.5	24.5	450
<b>A 90 3</b>	432	327	3000	116	46	1400
<b>A 90 4</b>	432	327	3000	49.5	24.5	450



Verification procedure is described here after.

### INPUT SHAFT

1. Calculate:

$$R_{x1} = R_{n1} \cdot \frac{a}{b+x} \quad (28)$$

N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (29)$$

Finally, the following condition must be verified:

$$R_{c1} \leq R_{x1} \quad (30)$$

### OUTPUT SHAFT

1. Calculate:

$$R_{x2} = R_{n2} \cdot \frac{a}{b+x} \quad (31)$$

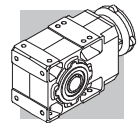
N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (32)$$

Finally, the following condition must be verified:

$$R_{c2} \leq R_{x2} \quad (33)$$





### 36 THRUST LOADS, $A_{n1}$ , $A_{n2}$

Permissible thrust loads on input [ $A_{n1}$ ] and output [ $A_{n2}$ ] shafts are obtained from the radial loading for the shaft under consideration [ $R_{n1}$ ] and [ $R_{n2}$ ] through the following equation:

$$\begin{aligned}
 A_{n1} &= R_{n1} \cdot 0.2 \\
 A_{n2} &= R_{n2} \cdot 0.2
 \end{aligned}
 \tag{34}$$

The thrust loads calculated through these formulas apply to thrust forces occurring at the same time as rated radial loads.

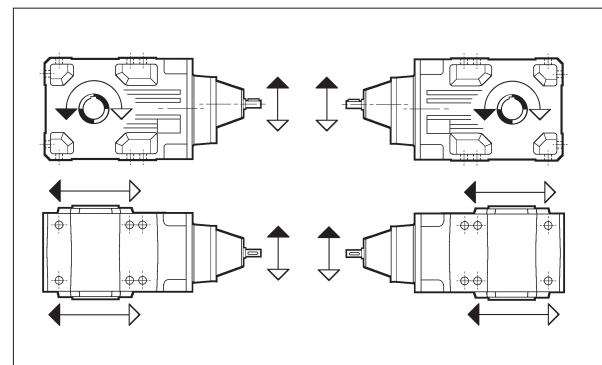
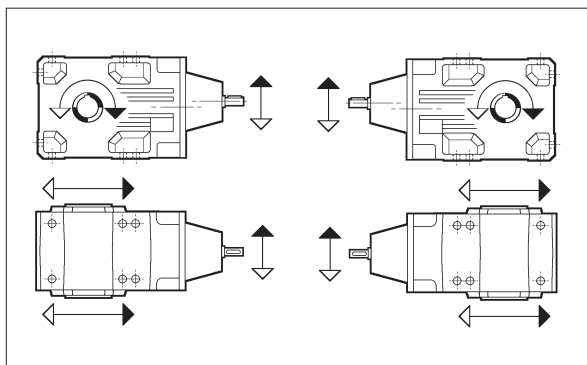
In the only case that no overhung load acts on the shaft the value of the admissible thrust load [ $A_n$ ] amounts to 50% of rated OHL [ $R_n$ ] on same shaft.

Where thrust loads exceed permissible value or largely prevail over radial loads, contact Bonfiglioli Riduttori for an in-depth analysis of the application.

### 37 SHAFTS ARRANGEMENT

The following table shows standard directions of rotation for 2, 3 and 4 stage helical-bevel gearboxes.

(C 39)




2x	A 05	A 10	A 20	A 30	A 35	A 41	A 50	A 60
3x	A 60	A 70	A 80	A 90				
4x	A 50	A 55						

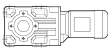



2x	A 55						
3x	A 20	A 30	A 35	A 41	A 50	A 55	
4x	A 60	A 70	A 80	A 90			

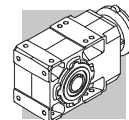


## 38 GEARMOTOR RATING CHARTS

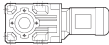

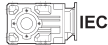

 The selection of motors without brake takes into account the requirements of Regulation EC 640/2009 (see section **M** of this catalogue). When the motor rated power is below 0.75kW, BN/M motors can be provided.

Considering that the Regulation EC 640/2009 shall not apply to the motors equipped with brake, the brakemotor selection takes into account BN/M motors only, without taking into account the rated power BX, BE, MX and ME brakemotors are available on request.

0.09 kW								
$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	 IEC IE1	
0.51	1492	3.4	1715	50000			A704_1715 P63 BN63A6	297
1.1	677	2.2	778.2	20000			A504_778.2 P63 BN63A6	285
1.2	616	2.4	707.9	20000			A504_707.9 P63 BN63A6	285
1.4	549	2.7	631.2	20000			A504_631.2 P63 BN63A6	285
1.5	499	3.0	574.2	20000			A504_574.2 P63 BN63A6	285
1.7	461	3.3	529.5	20000			A504_529.5 P63 BN63A6	285
2.2	356	1.0	400.8	9600	A303_400.8 S05 M05A6	272	A303_400.8 P63 BN63A6	273
2.6	302	1.7	339.3	12000	A353_339.3 S05 M05A6	276	A353_339.3 P63 BN63A6	277
3.0	259	3.3	291.7	15000	A413_291.7 S05 M05A6	280	A413_291.7 P63 BN63A6	281
3.5	221	2.7	248.1	12000	A353_248.1 S05 M05A6	276	A353_248.1 P63 BN63A6	277
4.1	193	2.1	216.6	9600	A303_216.6 S05 M05A6	272	A303_216.6 P63 BN63A6	273
4.9	159	1.6	178.3	6200	A203_178.3 S05 M05A6	268	A203_178.3 P63 BN63A6	269
5.8	134	2.8	150.7	9600	A303_150.7 S05 M05A6	272	A303_150.7 P63 BN63A6	273
6.8	115	2.2	129.1	6200	A203_129.1 S05 M05A6	268	A203_129.1 P63 BN63A6	269
8.1	97	2.5	109.2	6200	A203_109.2 S05 M05A6	268	A203_109.2 P63 BN63A6	269
9.6	84	1.5	91.6	5500	A102_91.6 S05 M05A6	264	A102_91.6 P63 BN63A6	265
11.5	70	2.1	76.4	5500	A102_76.4 S05 M05A6	264	A102_76.4 P63 BN63A6	265
13.3	61	2.5	65.9	5500	A102_65.9 S05 M05A6	264	A102_65.9 P63 BN63A6	265
15.0	54	2.8	58.6	5500	A102_58.6 S05 M05A6	264	A102_58.6 P63 BN63A6	265
17.2	47	3.2	51.3	5500	A102_51.3 S05 M05A6	264	A102_51.3 P63 BN63A6	265
19.4	42	2.4	45.4	4250	A052_45.4 S05 M05A6	261	A052_45.4 P63 BN63A6	261
21.5	38	2.7	40.9	4120	A052_40.9 S05 M05A6	261	A052_40.9 P63 BN63A6	261
25.1	32	3.1	35.1	3950	A052_35.1 S05 M05A6	261	A052_35.1 P63 BN63A6	261
27.3	30	3.4	32.2	3850	A052_32.2 S05 M05A6	261	A052_32.2 P63 BN63A6	261
31	26	3.8	28.6	3720	A052_28.6 S05 M05A6	261	A052_28.6 P63 BN63A6	261
35	23	4.4	25.5	3590	A052_25.5 S05 M05A6	261	A052_25.5 P63 BN63A6	261
37	22	4.6	23.8	3520	A052_23.8 S05 M05A6	261	A052_23.8 P63 BN63A6	261
41	19.6	5.3	21.4	3410	A052_21.4 S05 M05A6	261	A052_21.4 P63 BN63A6	261
47	17.1	5.9	18.6	3270	A052_18.6 S05 M05A6	261	A052_18.6 P63 BN63A6	261
53	15.1	6.8	16.4	3150	A052_16.4 S05 M05A6	261	A052_16.4 P63 BN63A6	261
63	12.8	7.8	13.9	2990	A052_13.9 S05 M05A6	261	A052_13.9 P63 BN63A6	261
72	11.3	8.8	12.3	2880	A052_12.3 S05 M05A6	261	A052_12.3 P63 BN63A6	261
83	9.7	10.3	10.6	2740	A052_10.6 S05 M05A6	261	A052_10.6 P63 BN63A6	261
92	8.8	11.3	9.6	2670	A052_9.6 S05 M05A6	261	A052_9.6 P63 BN63A6	261
103	7.8	13.2	8.5	2570	A052_8.5 S05 M05A6	261	A052_8.5 P63 BN63A6	261
122	6.6	15.1	7.2	2440	A052_7.2 S05 M05A6	261	A052_7.2 P63 BN63A6	261
139	5.8	17.8	6.3	2340	A052_6.3 S05 M05A6	261	A052_6.3 P63 BN63A6	261
161	5.0	19.9	5.5	2230	A052_5.5 S05 M05A6	261	A052_5.5 P63 BN63A6	261

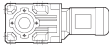





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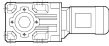



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0.55	1857	2.7	1583	50000			A704_1583 P63 BN63B6	297
0.65	1579	3.2	1346	50000			A704_1346 P63 BN63B6	297
0.70	1457	3.4	1242	50000			A704_1242 P63 BN63B6	297
1.1	913	1.6	778.2	20000			A504_778.2 P63 BN63B6	285
1.2	818	3.4	697.3	30000			A604_697.3 P63 BN63B6	293
1.4	740	2.0	631.2	20000			A504_631.2 P63 BN63B6	285
1.6	621	2.4	529.5	20000			A504_529.5 P63 BN63B6	285
1.7	588	2.5	778.2	20000			A504_778.2 P63 BN63A4	285
1.9	535	2.8	707.9	20000			A504_707.9 P63 BN63A4	285
2.1	477	3.1	631.2	20000			A504_631.2 P63 BN63A4	285
2.4	434	3.5	574.2	20000			A504_574.2 P63 BN63A4	285
3.4	310	1.2	400.8	9600	A303_400.8 S05 M05A4	272	A303_400.8 P63 BN63A4	273
3.4	304	1.5	393.2	12000	A353_393.2 S05 M05A4	276	A353_393.2 P63 BN63A4	277
3.6	291	2.9	376.8	15000	A413_376.8 S05 M05A4	280	A413_376.8 P63 BN63A4	281
3.8	275	1.3	356.3	9600	A303_356.3 S05 M05A4	272	A303_356.3 P63 BN63A4	273
4.0	262	2.0	339.3	12000	A353_339.3 S05 M05A4	276	A353_339.3 P63 BN63A4	277
4.1	255	1.0	329.4	6200	A203_329.4 S05 M05A4	268	A203_329.4 P63 BN63A4	269
4.2	251	3.4	324.2	15000	A413_324.2 S05 M05A4	280	A413_324.2 P63 BN63A4	281
4.3	243	1.6	314.5	9600	A303_314.5 S05 M05A4	272	A303_314.5 P63 BN63A4	273
4.4	236	2.5	305.4	12000	A353_305.4 S05 M05A4	276	A353_305.4 P63 BN63A4	277
4.6	226	1.1	292.8	6200	A203_292.8 S05 M05A4	268	A203_292.8 P63 BN63A4	269
5.0	210	1.8	271.5	9600	A303_271.5 S05 M05A4	272	A303_271.5 P63 BN63A4	273
5.0	209	2.9	270.7	12000	A353_270.7 S05 M05A4	276	A353_270.7 P63 BN63A4	277
5.2	201	1.2	260.5	6200	A203_260.5 S05 M05A4	268	A203_260.5 P63 BN63A4	269
5.4	192	3.1	248.1	12000	A353_248.1 S05 M05A4	276	A353_248.1 P63 BN63A4	277
5.5	189	2.0	244.3	9600	A303_244.3 S05 M05A4	272	A303_244.3 P63 BN63A4	273
6.0	172	3.5	223.2	12000	A353_223.2 S05 M05A4	276	A353_223.2 P63 BN63A4	277
6.1	171	1.5	221.3	6200	A203_221.3 S05 M05A4	268	A203_221.3 P63 BN63A4	269
6.2	167	2.2	216.6	9600	A303_216.6 S05 M05A4	272	A303_216.6 P63 BN63A4	273
6.8	154	1.6	199.2	6200	A203_199.2 S05 M05A4	268	A203_199.2 P63 BN63A4	269
6.8	153	2.3	198.5	9600	A303_198.5 S05 M05A4	272	A303_198.5 P63 BN63A4	273
7.6	138	2.5	178.5	9600	A303_178.5 S05 M05A4	272	A303_178.5 P63 BN63A4	273
7.6	138	1.8	178.3	6200	A203_178.3 S05 M05A4	268	A203_178.3 P63 BN63A4	269
8.3	126	1.9	163.4	6200	A203_163.4 S05 M05A4	268	A203_163.4 P63 BN63A4	269
8.4	125	2.7	161.4	9600	A303_161.4 S05 M05A4	272	A303_161.4 P63 BN63A4	273
9.0	116	2.8	150.7	9600	A303_150.7 S05 M05A4	272	A303_150.7 P63 BN63A4	273
9.2	113	2.0	146.1	6200	A203_146.1 S05 M05A4	268	A203_146.1 P63 BN63A4	269
9.8	106	3.0	137.4	9600	A303_137.4 S05 M05A4	272	A303_137.4 P63 BN63A4	273
10.5	100	2.2	129.1	6200	A203_129.1 S05 M05A4	268	A203_129.1 P63 BN63A4	269
11.2	93	2.3	120.5	6200	A203_120.5 S05 M05A4	268	A203_120.5 P63 BN63A4	269
11.2	93	3.2	120.5	9600	A303_120.5 S05 M05A4	272	A303_120.5 P63 BN63A4	273
12.4	84	2.4	109.2	6200	A203_109.2 S05 M05A4	268	A203_109.2 P63 BN63A4	269
14.6	74	2.7	92.3	6200	A202_92.3 S05 M05A4	268	A202_92.3 P63 BN63A4	269
14.7	73	1.4	91.6	4420	A052_91.6 S05 M05A4	261	A052_91.6 P63 BN63A4	261
14.7	73	1.8	91.6	5500	A102_91.6 S05 M05A4	264	A102_91.6 P63 BN63A4	265
16.9	64	3.3	79.9	6200	A202_79.9 S05 M05A4	268	A202_79.9 P63 BN63A4	269
17.7	61	1.6	76.4	4230	A052_76.4 S05 M05A4	261	A052_76.4 P63 BN63A4	261
17.7	61	2.5	76.4	5500	A102_76.4 S05 M05A4	264	A102_76.4 P63 BN63A4	265
20.5	53	1.9	65.9	4070	A052_65.9 S05 M05A4	261	A052_65.9 P63 BN63A4	261
20.5	53	2.8	65.9	5500	A102_65.9 S05 M05A4	264	A102_65.9 P63 BN63A4	265
23.0	47	2.1	58.6	3950	A052_58.6 S05 M05A4	261	A052_58.6 P63 BN63A4	261
23.0	47	3.2	58.6	5500	A102_58.6 S05 M05A4	264	A102_58.6 P63 BN63A4	265
26.3	41	2.4	51.3	3810	A052_51.3 S05 M05A4	261	A052_51.3 P63 BN63A4	261
29.7	36	2.8	45.4	3680	A052_45.4 S05 M05A4	261	A052_45.4 P63 BN63A4	261
33	33	3.1	40.9	3570	A052_40.9 S05 M05A4	261	A052_40.9 P63 BN63A4	261
38	28	3.6	35.1	3420	A052_35.1 S05 M05A4	261	A052_35.1 P63 BN63A4	261
42	26	3.9	32.2	3340	A052_32.2 S05 M05A4	261	A052_32.2 P63 BN63A4	261
47	23	4.4	28.6	3220	A052_28.6 S05 M05A4	261	A052_28.6 P63 BN63A4	261
53	20	4.9	25.5	3110	A052_25.5 S05 M05A4	261	A052_25.5 P63 BN63A4	261
57	19	5.3	23.8	3050	A052_23.8 S05 M05A4	261	A052_23.8 P63 BN63A4	261
62	17.3	5.8	13.9	2960	A052_13.9 S05 M05B6	261	A052_13.9 P63 BN63B6	261
63	17.1	5.9	21.4	2950	A052_21.4 S05 M05A4	261	A052_21.4 P63 BN63A4	261
73	14.8	6.7	18.6	2830	A052_18.6 S05 M05A4	261	A052_18.6 P63 BN63A4	261
82	13.1	7.6	16.4	2730	A052_16.4 S05 M05A4	261	A052_16.4 P63 BN63A4	261

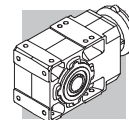


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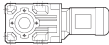



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
90	11.9	8.4	9.6	2640	A052_9.6 S05 M05B6	261	A052_9.6 P63 BN63B6	261
97	11.1	9.0	13.9	2590	A052_13.9 S05 M05A4	261	A052_13.9 P63 BN63A4	261
110	9.8	10.2	12.3	2500	A052_12.3 S05 M05A4	261	A052_12.3 P63 BN63A4	261
121	8.9	11.2	7.2	2420	A052_7.2 S05 M05B6	261	A052_7.2 P63 BN63B6	261
128	8.4	11.9	10.6	2380	A052_10.6 S05 M05A4	261	A052_10.6 P63 BN63A4	261
140	7.7	13.0	9.6	2310	A052_9.6 S05 M05A4	261	A052_9.6 P63 BN63A4	261
159	6.8	14.7	8.5	2220	A052_8.5 S05 M05A4	261	A052_8.5 P63 BN63A4	261
187	5.8	17.4	7.2	2110	A052_7.2 S05 M05A4	261	A052_7.2 P63 BN63A4	261
213	5.1	19.8	6.3	2020	A052_6.3 S05 M05A4	261	A052_6.3 P63 BN63A4	261
247	4.4	21.8	5.5	1930	A052_5.5 S05 M05A4	261	A052_5.5 P63 BN63A4	261

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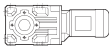



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
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0.58	2649	3.0	1558	65000	A804_1558 S1 M1SC6	299	A804_1558 P71 BN71A6	300
0.67	2279	3.5	1340	65000	A804_1340 S1 M1SC6	299	A804_1340 P71 BN71A6	300
0.77	1989	2.5	1715	50000			A704_1715 P63 BN63B4	297
0.83	1836	2.7	1583	50000			A704_1583 P63 BN63B4	297
0.98	1561	3.2	1346	50000			A704_1346 P63 BN63B4	297
1.1	1441	3.5	1242	50000			A704_1242 P63 BN63B4	297
1.3	1186	2.4	697.3	30000	A604_697.3 S1 M1SC6	292	A604_697.3 P71 BN71A6	293
1.5	996	2.8	585.8	30000	A604_585.8 S1 M1SC6	292	A604_585.8 P71 BN71A6	293
1.7	902	1.7	778.2	20000			A504_778.2 P63 BN63B4	285
1.7	876	3.2	755.4	30000			A604_755.4 P63 BN63B4	293
1.9	821	1.8	707.9	20000			A504_707.9 P63 BN63B4	285
1.9	809	3.5	697.3	30000			A604_697.3 P63 BN63B4	293
2.1	732	2.0	631.2	20000			A504_631.2 P63 BN63B4	285
2.3	666	2.3	574.2	20000			A504_574.2 P63 BN63B4	285
2.5	614	2.4	529.5	20000			A504_529.5 P63 BN63B4	285
2.7	559	2.7	481.6	20000			A504_481.6 P63 BN63B4	285
3.0	518	2.9	446.8	20000			A504_446.8 P63 BN63B4	285
3.2	471	3.2	406.4	20000			A504_406.4 P63 BN63B4	285
3.4	466	1.0	393.2	12000	A353_393.2 S05 M05B4	276	A353_393.2 P63 BN63B4	277
3.5	447	1.9	376.8	15000	A413_376.8 S05 M05B4	280	A413_376.8 P63 BN63B4	281
3.6	424	3.5	365.6	20000			A504_365.6 P63 BN63B4	285
3.7	422	0.9	356.3	9600	A303_356.3 S05 M05B4	272	A303_356.3 P63 BN63B4	273
3.9	402	1.3	339.3	12000	A353_339.3 S05 M05B4	276	A353_339.3 P63 BN63B4	277
4.1	384	2.2	324.2	15000	A413_324.2 S05 M05B4	280	A413_324.2 P63 BN63B4	281
4.2	373	1.0	314.5	9600	A303_314.5 S05 M05B4	272	A303_314.5 P63 BN63B4	273
4.3	362	1.7	305.4	12000	A353_305.4 S05 M05B4	276	A353_305.4 P63 BN63B4	277
4.5	346	2.5	291.7	15000	A413_291.7 S05 M05B4	280	A413_291.7 P63 BN63B4	281
4.9	322	1.2	271.5	9600	A303_271.5 S05 M05B4	272	A303_271.5 P63 BN63B4	273
4.9	321	1.9	270.7	12000	A353_270.7 S05 M05B4	276	A353_270.7 P63 BN63B4	277
5.0	311	2.7	262.5	15000	A413_262.5 S05 M05B4	280	A413_262.5 P63 BN63B4	281
5.3	294	2.0	248.1	12000	A353_248.1 S05 M05B4	276	A353_248.1 P63 BN63B4	277
5.4	290	1.3	244.3	9600	A303_244.3 S05 M05B4	272	A303_244.3 P63 BN63B4	273
5.5	285	3.0	240.6	15000	A413_240.6 S05 M05B4	280	A413_240.6 P63 BN63B4	281
5.9	265	2.3	223.2	12000	A353_223.2 S05 M05B4	276	A353_223.2 P63 BN63B4	277
6.0	262	1.0	221.3	6200	A203_221.3 S05 M05B4	268	A203_221.3 P63 BN63B4	269
6.1	258	3.3	217.4	15000	A413_217.4 S05 M05B4	280	A413_217.4 P63 BN63B4	281
6.1	257	1.4	216.6	9600	A303_216.6 S05 M05B4	272	A303_216.6 P63 BN63B4	273
6.5	239	2.5	201.8	12000	A353_201.8 S05 M05B4	276	A353_201.8 P63 BN63B4	277
6.6	236	1.1	199.2	6200	A203_199.2 S05 M05B4	268	A203_199.2 P63 BN63B4	269
6.6	235	1.5	198.5	9600	A303_198.5 S05 M05B4	272	A303_198.5 P63 BN63B4	273
7.0	223	2.7	188.3	12000	A353_188.3 S05 M05B4	276	A353_188.3 P63 BN63B4	277
7.4	212	1.6	178.5	9600	A303_178.5 S05 M05B4	272	A303_178.5 P63 BN63B4	273
7.4	211	1.2	178.3	6200	A203_178.3 S05 M05B4	268	A203_178.3 P63 BN63B4	269
7.7	204	2.9	171.8	12000	A353_171.8 S05 M05B4	276	A353_171.8 P63 BN63B4	277
8.1	194	1.2	163.4	6200	A203_163.4 S05 M05B4	268	A203_163.4 P63 BN63B4	269
8.2	191	1.8	161.4	9600	A303_161.4 S05 M05B4	272	A303_161.4 P63 BN63B4	273



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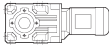



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	IE1		IEC	
								
8.8	179	1.8	150.7	9600	A303_150.7 S05 M05B4	272	A303_150.7 P63 BN63B4	273
8.8	179	3.4	150.6	12000	A353_150.6 S05 M05B4	276	A353_150.6 P63 BN63B4	277
9.0	173	1.3	146.1	6200	A203_146.1 S05 M05B4	268	A203_146.1 P63 BN63B4	269
9.6	163	1.9	137.4	9600	A303_137.4 S05 M05B4	272	A303_137.4 P63 BN63B4	273
10.2	153	1.4	129.1	6200	A203_129.1 S05 M05B4	268	A203_129.1 P63 BN63B4	269
11.0	143	1.5	120.5	6200	A203_120.5 S05 M05B4	268	A203_120.5 P63 BN63B4	269
11.0	143	2.1	120.5	9600	A303_120.5 S05 M05B4	272	A303_120.5 P63 BN63B4	273
12.1	129	1.6	109.2	6200	A203_109.2 S05 M05B4	268	A203_109.2 P63 BN63B4	269
12.1	129	2.3	109.1	9600	A303_109.1 S05 M05B4	272	A303_109.1 P63 BN63B4	273
13.5	119	2.5	97.5	9600			A302_97.5 P63 BN63B4	273
14.3	113	1.8	92.3	6200	A202_92.3 S05 M05B4	268	A202_92.3 P63 BN63B4	269
14.4	112	0.9	91.6	4120	A052_91.6 S05 M05B4	261	A052_91.6 P63 BN63B4	261
14.4	112	1.2	91.6	5500	A102_91.6 S05 M05B4	264	A102_91.6 P63 BN63B4	265
15.2	106	3.0	86.7	9600			A302_86.7 P63 BN63B4	273
16.5	98	2.1	79.9	6200	A202_79.9 S05 M05B4	268	A202_79.9 P63 BN63B4	269
17.3	94	1.1	76.4	3980	A052_76.4 S05 M05B4	261	A052_76.4 P63 BN63B4	261
17.3	94	1.6	76.4	5500	A102_76.4 S05 M05B4	264	A102_76.4 P63 BN63B4	265
18.6	87	2.4	71.0	6200	A202_71.0 S05 M05B4	268	A202_71.0 P63 BN63B4	269
20.0	81	1.2	65.9	3860	A052_65.9 S05 M05B4	261	A052_65.9 P63 BN63B4	261
20.0	81	1.9	65.9	5500	A102_65.9 S05 M05B4	264	A102_65.9 P63 BN63B4	265
20.9	77	3.2	63.1	6200	A202_63.1 S05 M05B4	268	A202_63.1 P63 BN63B4	269
22.5	72	1.4	58.6	3760	A052_58.6 S05 M05B4	261	A052_58.6 P63 BN63B4	261
22.5	72	2.1	58.6	5500	A102_58.6 S05 M05B4	264	A102_58.6 P63 BN63B4	265
25.8	63	1.6	51.3	3640	A052_51.3 S05 M05B4	261	A052_51.3 P63 BN63B4	261
25.8	63	2.4	51.3	5500	A102_51.3 S05 M05B4	264	A102_51.3 P63 BN63B4	265
29.1	56	1.8	45.4	3540	A052_45.4 S05 M05B4	261	A052_45.4 P63 BN63B4	261
29.1	56	2.7	45.4	5500	A102_45.4 S05 M05B4	264	A102_45.4 P63 BN63B4	265
32	50	2.0	40.9	3440	A052_40.9 S05 M05B4	261	A052_40.9 P63 BN63B4	261
32	50	3.0	40.9	5500	A102_40.9 S05 M05B4	264	A102_40.9 P63 BN63B4	265
38	43	2.3	35.1	3310	A052_35.1 S05 M05B4	261	A052_35.1 P63 BN63B4	261
38	43	3.5	35.1	5380	A102_35.1 S05 M05B4	264	A102_35.1 P63 BN63B4	265
41	39	2.5	32.2	3240	A052_32.2 S05 M05B4	261	A052_32.2 P63 BN63B4	261
46	35	2.9	28.6	3130	A052_28.6 S05 M05B4	261	A052_28.6 P63 BN63B4	261
52	31	3.2	25.5	3040	A052_25.5 S05 M05B4	261	A052_25.5 P63 BN63B4	261
56	29	3.4	23.8	2980	A052_23.8 S05 M05B4	261	A052_23.8 P63 BN63B4	261
62	26	3.8	21.4	2890	A052_21.4 S05 M05B4	261	A052_21.4 P63 BN63B4	261
71	23	4.4	18.6	2780	A052_18.6 S05 M05B4	261	A052_18.6 P63 BN63B4	261
80	20	5.0	16.4	2680	A052_16.4 S05 M05B4	261	A052_16.4 P63 BN63B4	261
95	17.1	5.9	13.9	2550	A052_13.9 S05 M05B4	261	A052_13.9 P63 BN63B4	261
107	15.1	6.6	12.3	2460	A052_12.3 S05 M05B4	261	A052_12.3 P63 BN63B4	261
125	12.9	7.7	10.6	2350	A052_10.6 S05 M05B4	261	A052_10.6 P63 BN63B4	261
137	11.8	8.5	9.6	2280	A052_9.6 S05 M05B4	261	A052_9.6 P63 BN63B4	261
142	11.4	8.8	6.3	2300	A052_6.3 S1 M1SC6	261	A052_6.3 P71 BN71A6	261
155	10.4	9.6	8.5	2200	A052_8.5 S05 M05B4	261	A052_8.5 P63 BN63B4	261
183	8.8	11.3	7.2	2090	A052_7.2 S05 M05B4	261	A052_7.2 P63 BN63B4	261
208	7.8	12.9	6.3	2010	A052_6.3 S05 M05B4	261	A052_6.3 P63 BN63B4	261
242	6.7	14.2	5.5	1920	A052_5.5 S05 M05B4	261	A052_5.5 P63 BN63B4	261
284	5.7	16.7	9.6	1830	A052_9.6 S05 M05A2	261	A052_9.6 P63 BN63A2	261
321	5.0	17.8	8.5	1770	A052_8.5 S05 M05A2	261	A052_8.5 P63 BN63A2	261
379	4.3	19.9	7.2	1670	A052_7.2 S05 M05A2	261	A052_7.2 P63 BN63A2	261
431	3.8	21.3	6.3	1610	A052_6.3 S05 M05A2	261	A052_6.3 P63 BN63A2	261
499	3.2	23.2	5.5	1530	A052_5.5 S05 M05A2	261	A052_5.5 P63 BN63A2	261

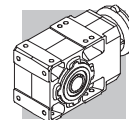
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0.52	4051	1.2	1715	50000	A704_1715 S1 M1SD6	296	A704_1715 P71 BN71B6	297
0.58	3680	2.2	1558	65000	A804_1558 S1 M1SD6	299	A804_1558 P71 BN71B6	300
0.67	3165	2.5	1340	65000	A804_1340 S1 M1SD6	299	A804_1340 P71 BN71B6	300
0.80	2642	1.9	1715	50000			A704_1715 P71 BN71A4	297

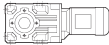



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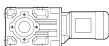

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC IE1	
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0.89	2400	3.3	1558	65000			A804_1558 P71 BN71A4	300
1.0	2073	2.4	1346	50000			A704_1346 P71 BN71A4	297
1.1	1914	2.6	1242	50000			A704_1242 P71 BN71A4	297
1.2	1789	2.8	1161	50000			A704_1161 P71 BN71A4	297
1.3	1652	3.0	1072	50000			A704_1072 P71 BN71A4	297
1.5	1427	3.5	926.5	50000			A704_926.5 P71 BN71A4	297
1.8	1199	1.3	778.2	20000			A504_778.2 P71 BN71A4	285
1.8	1164	2.4	755.4	30000			A604_755.4 P71 BN71A4	293
1.9	1091	1.4	707.9	20000			A504_707.9 P71 BN71A4	285
2.0	1074	2.6	697.3	30000			A604_697.3 P71 BN71A4	293
2.2	978	2.9	634.6	30000			A604_634.6 P71 BN71A4	293
2.2	972	1.5	631.2	20000			A504_631.2 P71 BN71A4	285
2.4	902	3.1	585.8	30000			A604_585.8 P71 BN71A4	293
2.4	885	1.7	574.2	20000			A504_574.2 P71 BN71A4	285
2.5	835	3.4	542.0	30000			A604_542.0 P71 BN71A4	293
2.6	816	1.8	529.5	20000			A504_529.5 P71 BN71A4	285
2.9	742	2.0	481.6	20000			A504_481.6 P71 BN71A4	285
3.1	688	2.2	446.8	20000			A504_446.8 P71 BN71A4	285
3.4	626	2.4	406.4	20000			A504_406.4 P71 BN71A4	285
3.6	611	1.4	376.8	15000	A413_376.8 S05 M05C4	280	A413_376.8 P71 BN71A4	281
3.8	563	2.7	365.6	20000			A504_365.6 P71 BN71A4	285
3.9	550	0.9	339.3	12000	A353_339.3 S05 M05C4	276	A353_339.3 P71 BN71A4	277
4.1	526	1.6	324.2	15000	A413_324.2 S05 M05C4	280	A413_324.2 P71 BN71A4	281
4.1	512	2.9	332.6	20000			A504_332.6 P71 BN71A4	285
4.4	495	1.2	305.4	12000	A353_305.4 S05 M05C4	276	A353_305.4 P71 BN71A4	277
4.7	460	1.8	291.7	15000	A413_291.7 S05 M05C4	280	A413_291.7 P71 BN71A4	281
4.8	442	3.4	286.8	20000			A504_286.8 P71 BN71A4	285
4.9	440	0.9	271.5	9600	A303_271.5 S05 M05C4	272	A303_271.5 P71 BN71A4	273
5.0	439	1.4	270.7	12000	A353_270.7 S05 M05C4	276	A353_270.7 P71 BN71A4	277
5.1	426	2.0	262.5	15000	A413_262.5 S05 M05C4	280	A413_262.5 P71 BN71A4	281
5.4	403	1.5	248.1	12000	A353_248.1 S05 M05C4	276	A353_248.1 P71 BN71A4	277
5.6	385	1.0	244.3	9600	A303_244.3 S05 M05C4	272	A303_244.3 P71 BN71A4	273
5.7	379	2.2	240.6	15000	A413_240.6 S05 M05C4	280	A413_240.6 P71 BN71A4	281
6.0	362	1.7	223.2	12000	A353_223.2 S05 M05C4	276	A353_223.2 P71 BN71A4	277
6.2	353	2.4	217.4	15000	A413_217.4 S05 M05C4	280	A413_217.4 P71 BN71A4	281
6.2	351	1.0	216.6	9600	A303_216.6 S05 M05C4	272	A303_216.6 P71 BN71A4	273
6.6	327	1.8	201.8	12000	A353_201.8 S05 M05C4	276	A353_201.8 P71 BN71A4	277
7.0	313	1.1	198.5	9600	A303_198.5 S05 M05C4	272	A303_198.5 P71 BN71A4	273
7.0	311	2.7	197.5	15000	A413_197.5 S05 M05C4	280	A413_197.5 P71 BN71A4	281
7.1	306	2.0	188.3	12000	A353_188.3 S05 M05C4	276	A353_188.3 P71 BN71A4	277
7.3	299	2.8	184.4	15000	A413_184.4 S05 M05C4	280	A413_184.4 P71 BN71A4	281
7.5	290	1.2	178.5	9600	A303_178.5 S05 M05C4	272	A303_178.5 P71 BN71A4	273
7.8	279	2.2	171.8	12000	A353_171.8 S05 M05C4	276	A353_171.8 P71 BN71A4	277
8.4	257	0.9	163.4	6200	A203_163.4 S05 M05C4	268	A203_163.4 P71 BN71A4	269
8.5	254	1.3	161.4	9600	A303_161.4 S05 M05C4	272	A303_161.4 P71 BN71A4	273
8.9	244	1.4	150.7	9600	A303_150.7 S05 M05C4	272	A303_150.7 P71 BN71A4	273
8.9	244	2.5	150.6	12000	A353_150.6 S05 M05C4	276	A353_150.6 P71 BN71A4	277
9.2	237	1.0	146.1	6200	A203_146.1 S05 M05C4	268	A203_146.1 P71 BN71A4	269
9.8	221	2.6	136.3	12000	A353_136.3 S05 M05C4	276	A353_136.3 P71 BN71A4	277
10.0	216	1.5	137.4	9600	A303_137.4 S05 M05C4	272	A303_137.4 P71 BN71A4	273
10.7	203	1.1	129.1	6200	A203_129.1 S05 M05C4	268	A203_129.1 P71 BN71A4	269
11.1	196	1.1	120.5	6200	A203_120.5 S05 M05C4	268	A203_120.5 P71 BN71A4	269
11.1	195	1.5	120.5	9600	A303_120.5 S05 M05C4	272	A303_120.5 P71 BN71A4	273
11.5	190	3.0	116.9	12000	A353_116.9 S05 M05C4	276	A353_116.9 P71 BN71A4	277
12.6	172	1.2	109.2	6200	A203_109.2 S05 M05C4	268	A203_109.2 P71 BN71A4	269
12.7	172	1.7	109.1	9600	A303_109.1 S05 M05C4	272	A303_109.1 P71 BN71A4	273
12.7	171	3.1	105.5	12000	A353_105.5 S05 M05C4	276	A353_105.5 P71 BN71A4	277
14.2	159	1.9	97.5	9600			A302_97.5 P71 BN71A4	273
14.4	156	3.5	95.6	12000			A352_95.6 P71 BN71A4	277
14.5	155	1.3	92.3	6200	A202_92.3 S05 M05C4	268	A202_92.3 P71 BN71A4	269
15.9	141	2.3	86.7	9600			A302_86.7 P71 BN71A4	273
16.8	134	1.6	79.9	6200	A202_79.9 S05 M05C4	268	A202_79.9 P71 BN71A4	269
17.5	128	1.2	76.4	5500	A102_76.4 S05 M05C4	264	A102_76.4 P71 BN71A4	265
18.0	125	2.8	76.5	9600			A302_76.5 P71 BN71A4	273



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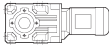


n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC IE1	
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20.3	110	0.9	65.9	3610	A052_65.9 S05 M05C4	261	A052_65.9 P71 BN71A4	261
20.3	110	1.4	65.9	5500	A102_65.9 S05 M05C4	264	A102_65.9 P71 BN71A4	265
21.2	106	2.3	63.1	6200	A202_63.1 S05 M05C4	268	A202_63.1 P71 BN71A4	269
22.9	98	1.0	58.6	3540	A052_58.6 S05 M05C4	261	A052_58.6 P71 BN71A4	261
23.5	95	1.6	58.6	5500	A102_58.6 S05 M05C4	264	A102_58.6 P71 BN71A4	265
25.0	90	2.8	53.7	6200	A202_53.7 S05 M05C4	268	A202_53.7 P71 BN71A4	269
26.1	86	1.2	51.3	3450	A052_51.3 S05 M05C4	261	A052_51.3 P71 BN71A4	261
26.1	86	1.7	51.3	5500	A102_51.3 S05 M05C4	264	A102_51.3 P71 BN71A4	265
28.6	79	3.2	48.3	6180	A202_48.3 S05 M05C4	268	A202_48.3 P71 BN71A4	269
29.5	76	1.3	45.4	3370	A052_45.4 S05 M05C4	261	A052_45.4 P71 BN71A4	261
29.5	76	2.0	45.4	5500	A102_45.4 S05 M05C4	264	A102_45.4 P71 BN71A4	265
33	68	1.5	40.9	3290	A052_40.9 S05 M05C4	261	A052_40.9 P71 BN71A4	261
34	66	2.3	40.9	5500	A102_40.9 S05 M05C4	264	A102_40.9 P71 BN71A4	265
38	59	1.7	35.1	3180	A052_35.1 S05 M05C4	261	A052_35.1 P71 BN71A4	261
38	59	2.5	35.1	5260	A102_35.1 S05 M05C4	264	A102_35.1 P71 BN71A4	265
42	54	1.9	32.2	3120	A052_32.2 S05 M05C4	261	A052_32.2 P71 BN71A4	261
43	52	2.9	32.2	5500	A102_32.2 S05 M05C4	264	A102_32.2 P71 BN71A4	265
47	48	2.1	28.6	3030	A052_28.6 S05 M05C4	261	A052_28.6 P71 BN71A4	261
47	48	3.1	28.6	4970	A102_28.6 S05 M05C4	264	A102_28.6 P71 BN71A4	265
53	43	2.3	25.5	2940	A052_25.5 S05 M05C4	261	A052_25.5 P71 BN71A4	261
56	40	2.5	23.8	2890	A052_23.8 S05 M05C4	261	A052_23.8 P71 BN71A4	261
63	36	2.8	21.4	2810	A052_21.4 S05 M05C4	261	A052_21.4 P71 BN71A4	261
72	31	3.2	18.6	2710	A052_18.6 S05 M05C4	261	A052_18.6 P71 BN71A4	261
84	27	3.7	16.4	2620	A052_16.4 S05 M05C4	261	A052_16.4 P71 BN71A4	261
99	23	4.4	13.9	2500	A052_13.9 S05 M05C4	261	A052_13.9 P71 BN71A4	261
112	20	5.0	12.3	2420	A052_12.3 S05 M05C4	261	A052_12.3 P71 BN71A4	261
131	17.2	5.8	10.6	2310	A052_10.6 S05 M05C4	261	A052_10.6 P71 BN71A4	261
144	15.7	6.4	9.6	2260	A052_9.6 S05 M05C4	261	A052_9.6 P71 BN71A4	261
162	13.9	7.2	8.5	2180	A052_8.5 S05 M05C4	261	A052_8.5 P71 BN71A4	261
191	11.7	8.5	7.2	2070	A052_7.2 S05 M05C4	261	A052_7.2 P71 BN71A4	261
218	10.3	9.7	6.3	1990	A052_6.3 S05 M05C4	261	A052_6.3 P71 BN71A4	261
252	8.9	10.7	5.5	1900	A052_5.5 S05 M05C4	261	A052_5.5 P71 BN71A4	261
285	7.9	12.1	9.6	1820	A052_9.6 S05 M05B2	261	A052_9.6 P63 BN63B2	261
322	7.0	12.9	8.5	1750	A052_8.5 S05 M05B2	261	A052_8.5 P63 BN63B2	261
380	5.9	14.4	7.2	1660	A052_7.2 S05 M05B2	261	A052_7.2 P63 BN63B2	261
433	5.2	15.4	6.3	1590	A052_6.3 S05 M05B2	261	A052_6.3 P63 BN63B2	261
501	4.5	16.7	5.5	1520	A052_5.5 S05 M05B2	261	A052_5.5 P63 BN63B2	261

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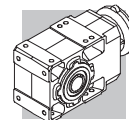
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0.63	4972	1.6	1438	65000	A804_1438 S1 M1LA6	299	A804_1438 P80 BN80A6	300
0.74	4226	3.3	1222	75000	A904_1222 S1 M1LA6	302	A904_1222 P80 BN80A6	303
0.80	3939	1.3	1715	50000	A704_1715 S1 M1SD4	296	A704_1715 P71 BN71B4	297
0.87	3636	1.4	1583	50000	A704_1583 S1 M1SD4	296	A704_1583 P71 BN71B4	297
0.88	3577	2.2	1558	65000	A804_1558 S1 M1SD4	299	A804_1558 P71 BN71B4	300
0.95	3302	2.4	1438	65000	A804_1438 S1 M1SD4	299	A804_1438 P71 BN71B4	300
1.0	3091	1.6	1346	50000	A704_1346 S1 M1SD4	296	A704_1346 P71 BN71B4	297
1.0	3077	2.6	1340	65000	A804_1340 S1 M1SD4	299	A804_1340 P71 BN71B4	300
1.1	2853	1.8	1242	50000	A704_1242 S1 M1SD4	296	A704_1242 P71 BN71B4	297
1.1	2841	2.8	1237	65000	A804_1237 S1 M1SD4	299	A804_1237 P71 BN71B4	300
1.2	2668	1.9	1161	50000	A704_1161 S1 M1SD4	296	A704_1161 P71 BN71B4	297
1.3	2492	3.2	1085	65000	A804_1085 S1 M1SD4	299	A804_1085 P71 BN71B4	300
1.3	2462	2.0	1072	50000	A704_1072 S1 M1SD4	296	A704_1072 P71 BN71B4	297
1.4	2300	3.5	1001	65000	A804_1001 S1 M1SD4	299	A804_1001 P71 BN71B4	300
1.5	2128	2.3	926.5	50000	A704_926.5 S1 M1SD4	296	A704_926.5 P71 BN71B4	297
1.6	1964	2.5	855.3	50000	A704_855.3 S1 M1SD4	296	A704_855.3 P71 BN71B4	297



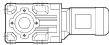

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n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IEC	 IE1	
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1.8	1735	1.6	755.4	30000	A604_755.4 S1 M1SD4	292	A604_755.4 P71 BN71B4	293
1.9	1626	0.9	707.9	20000	A504_707.9 S1 M1SD4	284	A504_707.9 P71 BN71B4	285
1.9	1619	3.1	705.1	50000	A704_705.1 S1 M1SD4	296	A704_705.1 P71 BN71B4	297
2.0	1601	1.7	697.3	30000	A604_697.3 S1 M1SD4	292	A604_697.3 P71 BN71B4	293
2.1	1481	3.4	644.6	50000	A704_644.6 S1 M1SD4	296	A704_644.6 P71 BN71B4	297
2.2	1457	1.9	634.6	30000	A604_634.6 S1 M1SD4	292	A604_634.6 P71 BN71B4	293
2.2	1450	1.0	631.2	20000	A504_631.2 S1 M1SD4	284	A504_631.2 P71 BN71B4	285
2.3	1345	2.1	585.8	30000	A604_585.8 S1 M1SD4	292	A604_585.8 P71 BN71B4	293
2.4	1319	1.1	574.2	20000	A504_574.2 S1 M1SD4	284	A504_574.2 P71 BN71B4	285
2.5	1245	2.2	542.0	30000	A604_542.0 S1 M1SD4	292	A604_542.0 P71 BN71B4	293
2.6	1216	1.2	529.5	20000	A504_529.5 S1 M1SD4	284	A504_529.5 P71 BN71B4	285
2.7	1149	2.4	500.3	30000	A604_500.3 S1 M1SD4	292	A604_500.3 P71 BN71B4	293
2.8	1106	1.4	481.6	20000	A504_481.6 S1 M1SD4	284	A504_481.6 P71 BN71B4	285
3.1	1026	1.5	446.8	20000	A504_446.8 S1 M1SD4	284	A504_446.8 P71 BN71B4	285
3.1	1007	2.8	438.4	30000	A604_438.4 S1 M1SD4	292	A604_438.4 P71 BN71B4	293
3.4	933	1.6	406.4	20000	A504_406.4 S1 M1SD4	284	A504_406.4 P71 BN71B4	285
3.4	929	3.0	404.7	30000	A604_404.7 S1 M1SD4	292	A604_404.7 P71 BN71B4	293
3.6	885	1.0	376.8	15000	A413_376.8 S1 M1SD4	280	A413_376.8 P71 BN71B4	281
3.7	840	1.8	365.6	20000	A504_365.6 S1 M1SD4	284	A504_365.6 P71 BN71B4	285
3.9	807	3.5	351.2	30000	A604_351.2 S1 M1SD4	292	A604_351.2 P71 BN71B4	293
4.1	764	2.0	332.6	20000	A504_332.6 S1 M1SD4	284	A504_332.6 P71 BN71B4	285
4.2	761	1.1	324.2	15000	A413_324.2 S1 M1SD4	280	A413_324.2 P71 BN71B4	281
4.7	685	1.2	291.7	15000	A413_291.7 S1 M1SD4	280	A413_291.7 P71 BN71B4	281
4.8	659	2.3	286.8	20000	A504_286.8 S1 M1SD4	284	A504_286.8 P71 BN71B4	285
5.1	636	0.9	270.7	12000	A353_270.7 S1 M1SD4	276	A353_270.7 P71 BN71B4	277
5.2	616	1.4	262.5	15000	A413_262.5 S1 M1SD4	280	A413_262.5 P71 BN71B4	281
5.3	599	2.5	260.9	20000	A504_260.9 S1 M1SD4	284	A504_260.9 P71 BN71B4	285
5.5	583	1.0	248.1	12000	A353_248.1 S1 M1SD4	276	A353_248.1 P71 BN71B4	277
5.7	565	1.5	240.6	15000	A413_240.6 S1 M1SD4	280	A413_240.6 P71 BN71B4	281
5.9	533	2.8	232.0	20000	A504_232.0 S1 M1SD4	284	A504_232.0 P71 BN71B4	285
6.1	524	1.1	223.2	12000	A353_223.2 S1 M1SD4	276	A353_223.2 P71 BN71B4	277
6.3	511	1.7	217.4	15000	A413_217.4 S1 M1SD4	280	A413_217.4 P71 BN71B4	281
6.5	485	3.1	211.0	20000	A504_211.0 S1 M1SD4	284	A504_211.0 P71 BN71B4	285
6.8	474	1.3	201.8	12000	A353_201.8 S1 M1SD4	276	A353_201.8 P71 BN71B4	277
6.9	464	1.8	197.5	15000	A413_197.5 S1 M1SD4	280	A413_197.5 P71 BN71B4	281
7.2	448	3.4	190.6	20000	A503_190.6 S1 M1SD4	284	A503_190.6 P71 BN71B4	285
7.3	442	1.4	188.3	12000	A353_188.3 S1 M1SD4	276	A353_188.3 P71 BN71B4	277
7.4	433	2.0	184.4	15000	A413_184.4 S1 M1SD4	280	A413_184.4 P71 BN71B4	281
8.0	403	1.5	171.8	12000	A353_171.8 S1 M1SD4	276	A353_171.8 P71 BN71B4	277
9.1	354	0.9	150.7	9600	A303_150.7 S1 M1SD4	272	A303_150.7 P71 BN71B4	273
9.1	354	1.7	150.6	12000	A353_150.6 S1 M1SD4	276	A353_150.6 P71 BN71B4	277
9.3	345	2.5	146.9	15000	A413_146.9 S1 M1SD4	280	A413_146.9 P71 BN71B4	281
10.0	323	1.0	137.4	9600	A303_137.4 S1 M1SD4	272	A303_137.4 P71 BN71B4	273
10.0	320	1.8	136.3	12000	A353_136.3 S1 M1SD4	276	A353_136.3 P71 BN71B4	277
11.4	283	1.1	120.5	9600	A303_120.5 S1 M1SD4	272	A303_120.5 P71 BN71B4	273
11.7	275	2.0	116.9	12000	A353_116.9 S1 M1SD4	276	A353_116.9 P71 BN71B4	277
11.8	272	3.1	115.9	15000	A413_115.9 S1 M1SD4	280	A413_115.9 P71 BN71B4	281
12.6	256	1.2	109.1	9600	A303_109.1 S1 M1SD4	272	A303_109.1 P71 BN71B4	273
13.0	248	2.1	105.5	12000	A353_105.5 S1 M1SD4	276	A353_105.5 P71 BN71B4	277
14.1	237	1.3	97.5	9600	A302_97.5 S1 M1SD4	272	A302_97.5 P71 BN71B4	273
14.3	232	2.3	95.6	12000	A352_95.6 S1 M1SD4	276	A352_95.6 P71 BN71B4	277
15.8	210	1.5	86.7	9600	A302_86.7 S1 M1SD4	272	A302_86.7 P71 BN71B4	273
16.6	200	3.0	82.5	12000	A352_82.5 S1 M1SD4	276	A352_82.5 P71 BN71B4	277
17.2	194	1.1	79.9	6200	A202_79.9 S1 M1SD4	268	A202_79.9 P71 BN71B4	269
17.9	186	1.9	76.5	9600	A302_76.5 S1 M1SD4	272	A302_76.5 P71 BN71B4	273
18.4	180	3.3	74.3	12000	A352_74.3 S1 M1SD4	276	A352_74.3 P71 BN71B4	277
19.3	172	1.2	71.0	6200	A202_71.0 S1 M1SD4	268	A202_71.0 P71 BN71B4	269
20.7	160	2.4	66.0	9350	A302_66.0 S1 M1SD4	272	A302_66.0 P71 BN71B4	273
20.8	160	0.9	65.9	5500	A102_65.9 S1 M1SD4	264	A102_65.9 P71 BN71B4	265
21.7	153	1.6	63.1	6200	A202_63.1 S1 M1SD4	268	A202_63.1 P71 BN71B4	269
23.1	144	2.8	59.4	9080	A302_59.4 S1 M1SD4	272	A302_59.4 P71 BN71B4	273
23.4	142	1.1	58.6	5500	A102_58.6 S1 M1SD4	264	A102_58.6 P71 BN71B4	265
25.5	130	1.9	53.7	6090	A202_53.7 S1 M1SD4	268	A202_53.7 P71 BN71B4	269
26.0	128	3.2	52.7	8790	A302_52.7 S1 M1SD4	272	A302_52.7 P71 BN71B4	273

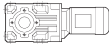



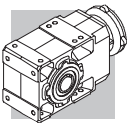


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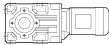



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC IE1	
26.7	124	1.2	51.3	5490	A102_51.3 S1 M1SD4	264	A102_51.3 P71 BN71B4	265
28.4	117	2.1	48.3	5940	A202_48.3 S1 M1SD4	268	A202_48.3 P71 BN71B4	269
28.4	117	3.5	48.3	8580	A302_48.3 S1 M1SD4	272	A302_48.3 P71 BN71B4	273
30	110	0.9	45.4	3060	A052_45.4 S1 M1SD4	261	A052_45.4 P71 BN71B4	261
30	110	1.4	45.4	5350	A102_45.4 S1 M1SD4	264	A102_45.4 P71 BN71B4	265
32	105	2.4	43.2	5780	A202_43.2 S1 M1SD4	268	A202_43.2 P71 BN71B4	269
34	99	1.0	40.9	3020	A052_40.9 S1 M1SD4	261	A052_40.9 P71 BN71B4	261
34	99	1.5	40.9	5500	A102_40.9 S1 M1SD4	264	A102_40.9 P71 BN71B4	265
35	96	2.6	39.6	5650	A202_39.6 S1 M1SD4	268	A202_39.6 P71 BN71B4	269
39	86	2.9	35.4	5480	A202_35.4 S1 M1SD4	268	A202_35.4 P71 BN71B4	269
39	85	1.2	35.1	2950	A052_35.1 S1 M1SD4	261	A052_35.1 P71 BN71B4	261
39	85	1.8	35.1	5040	A102_35.1 S1 M1SD4	264	A102_35.1 P71 BN71B4	265
43	78	1.3	32.2	2900	A052_32.2 S1 M1SD4	261	A052_32.2 P71 BN71B4	261
43	78	1.9	32.2	5500	A102_32.2 S1 M1SD4	264	A102_32.2 P71 BN71B4	265
44	76	3.3	31.3	5310	A202_31.3 S1 M1SD4	268	A202_31.3 P71 BN71B4	269
47	71	3.5	29.2	5210	A202_29.2 S1 M1SD4	268	A202_29.2 P71 BN71B4	269
48	69	1.4	28.6	2840	A052_28.6 S1 M1SD4	261	A052_28.6 P71 BN71B4	261
48	69	2.2	28.6	4790	A102_28.6 S1 M1SD4	264	A102_28.6 P71 BN71B4	265
54	62	1.6	25.5	2770	A052_25.5 S1 M1SD4	261	A052_25.5 P71 BN71B4	261
54	62	2.4	25.5	5500	A102_25.5 S1 M1SD4	264	A102_25.5 P71 BN71B4	265
58	58	1.7	23.8	2730	A052_23.8 S1 M1SD4	261	A052_23.8 P71 BN71B4	261
58	58	2.6	23.8	4570	A102_23.8 S1 M1SD4	264	A102_23.8 P71 BN71B4	265
64	52	1.9	21.4	2670	A052_21.4 S1 M1SD4	261	A052_21.4 P71 BN71B4	261
64	52	2.9	21.4	5270	A102_21.4 S1 M1SD4	264	A102_21.4 P71 BN71B4	265
74	45	2.2	18.6	2590	A052_18.6 S1 M1SD4	261	A052_18.6 P71 BN71B4	261
74	45	3.3	18.6	4270	A102_18.6 S1 M1SD4	264	A102_18.6 P71 BN71B4	265
83	40	2.5	16.4	2510	A052_16.4 S1 M1SD4	261	A052_16.4 P71 BN71B4	261
98	34	3.0	13.9	2410	A052_13.9 S1 M1SD4	261	A052_13.9 P71 BN71B4	261
111	30	3.3	12.3	2350	A052_12.3 S1 M1SD4	261	A052_12.3 P71 BN71B4	261
130	26	3.9	10.6	2240	A052_10.6 S1 M1SD4	261	A052_10.6 P71 BN71B4	261
142	23	4.3	9.6	2190	A052_9.6 S1 M1SD4	261	A052_9.6 P71 BN71B4	261
161	21	4.8	8.5	2120	A052_8.5 S1 M1SD4	261	A052_8.5 P71 BN71B4	261
190	17.5	5.7	7.2	2030	A052_7.2 S1 M1SD4	261	A052_7.2 P71 BN71B4	261
216	15.4	6.5	6.3	1950	A052_6.3 S1 M1SD4	261	A052_6.3 P71 BN71B4	261
228	14.6	6.8	12.3	1920	A052_12.3 S05 M05C2	261	A052_12.3 P71 BN71A2	261
251	13.3	7.2	5.5	1870	A052_5.5 S1 M1SD4	261	A052_5.5 P71 BN71B4	261
265	12.5	6.4	10.6	1830	A052_10.6 S05 M05C2	261	A052_10.6 P71 BN71A2	261
291	11.4	8.3	9.6	1790	A052_9.6 S05 M05C2	261	A052_9.6 P71 BN71A2	261
331	10.0	9.0	8.5	1720	A052_8.5 S05 M05C2	261	A052_8.5 P71 BN71A2	261
388	8.6	9.9	7.2	1640	A052_7.2 S05 M05C2	261	A052_7.2 P71 BN71A2	261
445	7.5	10.7	6.3	1570	A052_6.3 S05 M05C2	261	A052_6.3 P71 BN71A2	261
512	6.5	11.6	5.5	1500	A052_5.5 S05 M05C2	261	A052_5.5 P71 BN71A2	261

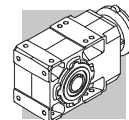
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n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC IE1	
0.56	8299	1.7	1632	75000	A904_1632 S2 M2SA6	302	A904_1632 P80 BN80B6	303
0.64	7310	1.1	1438	65000	A804_1438 S2 M2SA6	299	A804_1438 P80 BN80B6	300
0.75	6213	2.3	1222	75000	A904_1222 S2 M2SA6	302	A904_1222 P80 BN80B6	303
0.80	5813	0.9	1715	50000	A704_1715 S1 M1LA4	296	A704_1715 P80 BN80A4	297
0.85	5532	2.5	1632	75000	A904_1632 S1 M1LA4	302	A904_1632 P80 BN80A4	303
0.87	5365	0.9	1583	50000	A704_1583 S1 M1LA4	296	A704_1583 P80 BN80A4	297
0.89	5279	1.5	1558	65000	A804_1558 S1 M1LA4	299	A804_1558 P80 BN80A4	300
0.92	5070	2.8	1507	75000	A904_1507 S1 M1LA4	302	A904_1507 P80 BN80A4	303
0.96	4873	1.6	1438	65000	A804_1438 S1 M1LA4	299	A804_1438 P80 BN80A4	300
1.0	4561	1.1	1346	50000	A704_1346 S1 M1LA4	296	A704_1346 P80 BN80A4	297
1.0	4541	1.8	1340	65000	A804_1340 S1 M1LA4	299	A804_1340 P80 BN80A4	300
1.0	4455	3.1	1324	75000	A904_1324 S1 M1LA4	302	A904_1324 P80 BN80A4	303
1.1	4211	1.2	1242	50000	A704_1242 S1 M1LA4	296	A704_1242 P80 BN80A4	297

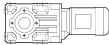





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n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IEC	 IE1	
1.1	4192	1.9	1237	65000	A804_1237 S1 M1LA4	299	A804_1237 P80 BN80A4	300
1.1	4112	3.4	1222	75000	A904_1222 S1 M1LA4	302	A904_1222 P80 BN80A4	303
1.2	3937	1.3	1161	50000	A704_1161 S1 M1LA4	296	A704_1161 P80 BN80A4	297
1.3	3677	2.2	1085	65000	A804_1085 S1 M1LA4	299	A804_1085 P80 BN80A4	300
1.3	3634	1.4	1072	50000	A704_1072 S1 M1LA4	296	A704_1072 P80 BN80A4	297
1.4	3394	2.4	1001	65000	A804_1001 S1 M1LA4	299	A804_1001 P80 BN80A4	300
1.5	3140	1.6	926.5	50000	A704_926.5 S1 M1LA4	296	A704_926.5 P80 BN80A4	297
1.5	3046	2.6	898.7	65000	A804_898.7 S1 M1LA4	299	A804_898.7 P80 BN80A4	300
1.6	2899	1.7	855.3	50000	A704_855.3 S1 M1LA4	296	A704_855.3 P80 BN80A4	297
1.7	2811	2.8	829.5	65000	A804_829.5 S1 M1LA4	299	A804_829.5 P80 BN80A4	300
1.8	2589	1.9	763.9	50000	A704_763.9 S1 M1LA4	296	A704_763.9 P80 BN80A4	297
1.8	2583	3.1	762.1	65000	A804_762.1 S1 M1LA4	299	A804_762.1 P80 BN80A4	300
1.8	2560	1.1	755.4	30000	A604_755.4 S1 M1LA4	292	A604_755.4 P80 BN80A4	293
2.0	2390	2.1	705.1	50000	A704_705.1 S1 M1LA4	296	A704_705.1 P80 BN80A4	297
2.0	2384	3.4	703.5	65000	A804_703.5 S1 M1LA4	299	A804_703.5 P80 BN80A4	300
2.0	2363	1.2	697.3	30000	A604_697.3 S1 M1LA4	292	A604_697.3 P80 BN80A4	293
2.1	2185	2.3	644.6	50000	A704_644.6 S1 M1LA4	296	A704_644.6 P80 BN80A4	297
2.2	2151	1.3	634.6	30000	A604_634.6 S1 M1LA4	292	A604_634.6 P80 BN80A4	293
2.3	2017	2.5	595.0	50000	A704_595.0 S1 M1LA4	296	A704_595.0 P80 BN80A4	297
2.4	1985	1.4	585.8	30000	A604_585.8 S1 M1LA4	292	A604_585.8 P80 BN80A4	293
2.5	1837	1.5	542.0	30000	A604_542.0 S1 M1LA4	292	A604_542.0 P80 BN80A4	293
2.7	1747	2.9	515.4	50000	A704_515.4 S1 M1LA4	296	A704_515.4 P80 BN80A4	297
2.8	1696	1.7	500.3	30000	A604_500.3 S1 M1LA4	292	A604_500.3 P80 BN80A4	293
2.9	1632	0.9	481.6	20000	A504_481.6 S1 M1LA4	284	A504_481.6 P80 BN80A4	285
2.9	1612	3.1	475.8	50000	A704_475.8 S1 M1LA4	296	A704_475.8 P80 BN80A4	297
3.1	1514	1.0	446.8	20000	A504_446.8 S1 M1LA4	284	A504_446.8 P80 BN80A4	285
3.1	1486	1.9	438.4	30000	A604_438.4 S1 M1LA4	292	A604_438.4 P80 BN80A4	293
3.4	1378	1.1	406.4	20000	A504_406.4 S1 M1LA4	284	A504_406.4 P80 BN80A4	285
3.4	1372	2.0	404.7	30000	A604_404.7 S1 M1LA4	292	A604_404.7 P80 BN80A4	293
3.8	1239	1.2	365.6	20000	A504_365.6 S1 M1LA4	284	A504_365.6 P80 BN80A4	285
3.9	1190	2.4	351.2	30000	A604_351.2 S1 M1LA4	292	A604_351.2 P80 BN80A4	293
4.1	1127	1.3	332.6	20000	A504_332.6 S1 M1LA4	284	A504_332.6 P80 BN80A4	285
4.3	1099	2.5	324.2	30000	A604_324.2 S1 M1LA4	292	A604_324.2 P80 BN80A4	293
4.8	972	1.5	286.8	20000	A504_286.8 S1 M1LA4	284	A504_286.8 P80 BN80A4	285
4.8	970	2.9	286.3	30000	A604_286.3 S1 M1LA4	292	A604_286.3 P80 BN80A4	293
5.2	896	3.1	264.3	30000	A604_264.3 S1 M1LA4	292	A604_264.3 P80 BN80A4	293
5.3	910	0.9	262.5	15000	A413_262.5 S1 M1LA4	280	A413_262.5 P80 BN80A4	281
5.3	884	1.7	260.9	20000	A504_260.9 S1 M1LA4	284	A504_260.9 P80 BN80A4	285
5.7	834	1.0	240.6	15000	A413_240.6 S1 M1LA4	280	A413_240.6 P80 BN80A4	281
5.9	786	1.9	232.0	20000	A504_232.0 S1 M1LA4	284	A504_232.0 P80 BN80A4	285
6.3	753	1.1	217.4	15000	A413_217.4 S1 M1LA4	280	A413_217.4 P80 BN80A4	281
6.5	715	2.1	211.0	20000	A504_211.0 S1 M1LA4	284	A504_211.0 P80 BN80A4	285
7.0	685	1.2	197.5	15000	A413_197.5 S1 M1LA4	280	A413_197.5 P80 BN80A4	281
7.1	673	3.0	194.2	30000	A553_194.2 S1 M1LA4	288	A553_194.2 P80 BN80A4	289
7.2	660	2.3	190.6	20000	A503_190.6 S1 M1LA4	284	A503_190.6 P80 BN80A4	285
7.3	653	0.9	188.3	12000	A353_188.3 S1 M1LA4	276	A353_188.3 P80 BN80A4	277
7.5	639	1.3	184.4	15000	A413_184.4 S1 M1LA4	280	A413_184.4 P80 BN80A4	281
7.9	607	3.3	175.0	30000	A553_175.0 S1 M1LA4	288	A553_175.0 P80 BN80A4	289
8.0	601	2.5	173.4	20000	A503_173.4 S1 M1LA4	284	A503_173.4 P80 BN80A4	285
8.0	595	1.0	171.8	12000	A353_171.8 S1 M1LA4	276	A353_171.8 P80 BN80A4	277
9.0	532	2.8	154.6	20000	A503_154.6 S1 M1LA4	284	A503_154.6 P80 BN80A4	285
9.2	522	1.1	150.6	12000	A353_150.6 S1 M1LA4	276	A353_150.6 P80 BN80A4	277
9.4	509	1.7	146.9	15000	A413_146.9 S1 M1LA4	280	A413_146.9 P80 BN80A4	281
9.9	484	3.1	140.6	20000	A503_140.6 S1 M1LA4	284	A503_140.6 P80 BN80A4	285
10.1	472	1.2	136.3	12000	A353_136.3 S1 M1LA4	276	A353_136.3 P80 BN80A4	277
10.7	446	3.4	129.7	20000	A503_129.7 S1 M1LA4	284	A503_129.7 P80 BN80A4	285
11.8	405	1.4	116.9	12000	A353_116.9 S1 M1LA4	276	A353_116.9 P80 BN80A4	277
11.9	402	2.1	115.9	15000	A413_115.9 S1 M1LA4	280	A413_115.9 P80 BN80A4	281
13.1	366	1.4	105.5	12000	A353_105.5 S1 M1LA4	276	A353_105.5 P80 BN80A4	277
14.2	349	0.9	97.5	9600			A302_97.5 P80 BN80A4	273
14.4	342	1.6	95.6	12000	A352_95.6 S1 M1LA4	276	A352_95.6 P80 BN80A4	277
14.9	321	2.5	92.8	15000	A413_92.8 S1 M1LA4	280	A413_92.8 P80 BN80A4	281
15.9	310	1.0	86.7	9420			A302_86.7 P80 BN80A4	273
16.7	295	2.0	82.5	12000	A352_82.5 S1 M1LA4	276	A352_82.5 P80 BN80A4	277
17.4	284	3.0	79.2	15000	A412_79.2 S1 M1LA4	280	A412_79.2 P80 BN80A4	281



## 0.55 kW

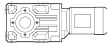



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC	
					 IE1	 IE1		
18.0	274	1.3	76.5	9180	A302_76.5 S1 M1LA4	272	A302_76.5 P80 BN80A4	273
18.6	266	2.3	74.3	12000	A352_74.3 S1 M1LA4	276	A352_74.3 P80 BN80A4	277
19.4	255	3.3	71.3	15000	A412_71.3 S1 M1LA4	280	A412_71.3 P80 BN80A4	281
20.9	236	1.6	66.0	8880	A302_66.0 S1 M1LA4	272	A302_66.0 P80 BN80A4	273
21.0	236	2.5	65.8	12000	A352_65.8 S1 M1LA4	276	A352_65.8 P80 BN80A4	277
21.9	226	1.1	63.1	5840	A202_63.1 S1 M1LA4	268	A202_63.1 P80 BN80A4	269
22.9	216	2.8	60.4	12000	A352_60.4 S1 M1LA4	276	A352_60.4 P80 BN80A4	277
23.2	213	1.9	59.4	8660	A302_59.4 S1 M1LA4	272	A302_59.4 P80 BN80A4	273
25.4	194	3.1	54.3	12000	A352_54.3 S1 M1LA4	276	A352_54.3 P80 BN80A4	277
25.7	192	1.3	53.7	5670	A202_53.7 S1 M1LA4	268	A202_53.7 P80 BN80A4	269
26.2	189	2.2	52.7	8410	A302_52.7 S1 M1LA4	272	A302_52.7 P80 BN80A4	273
28.1	176	3.4	49.1	12000	A352_49.1 S1 M1LA4	276	A352_49.1 P80 BN80A4	277
28.6	173	1.4	48.3	5560	A202_48.3 S1 M1LA4	268	A202_48.3 P80 BN80A4	269
28.6	173	2.4	48.3	8230	A302_48.3 S1 M1LA4	272	A302_48.3 P80 BN80A4	273
30	163	0.9	45.4	4910	A102_45.4 S1 M1LA4	264	A102_45.4 P80 BN80A4	265
32	155	2.6	43.4	8010	A302_43.4 S1 M1LA4	272	A302_43.4 P80 BN80A4	273
32	155	1.6	43.2	5440	A202_43.2 S1 M1LA4	268	A202_43.2 P80 BN80A4	269
34	146	1.0	40.9	5500	A102_40.9 S1 M1LA4	264	A102_40.9 P80 BN80A4	265
35	142	1.8	39.6	5340	A202_39.6 S1 M1LA4	268	A202_39.6 P80 BN80A4	269
35	141	2.9	39.3	7800	A302_39.3 S1 M1LA4	272	A302_39.3 P80 BN80A4	273
38	131	3.1	36.6	7660	A302_36.6 S1 M1LA4	272	A302_36.6 P80 BN80A4	273
39	127	2.0	35.4	5200	A202_35.4 S1 M1LA4	268	A202_35.4 P80 BN80A4	269
39	126	1.2	35.1	4700	A102_35.1 S1 M1LA4	264	A102_35.1 P80 BN80A4	265
41	120	3.4	33.4	7480	A302_33.4 S1 M1LA4	272	A302_33.4 P80 BN80A4	273
43	115	1.3	32.2	5490	A102_32.2 S1 M1LA4	264	A102_32.2 P80 BN80A4	265
44	112	2.2	31.3	5060	A202_31.3 S1 M1LA4	268	A202_31.3 P80 BN80A4	269
47	105	2.4	29.2	4970	A202_29.2 S1 M1LA4	268	A202_29.2 P80 BN80A4	269
48	102	1.0	28.6	2550	A052_28.6 S1 M1LA4	261	A052_28.6 P80 BN80A4	261
48	102	1.5	28.6	4510	A102_28.6 S1 M1LA4	264	A102_28.6 P80 BN80A4	265
52	95	2.6	26.5	4850	A202_26.5 S1 M1LA4	268	A202_26.5 P80 BN80A4	269
54	91	1.1	25.5	2510	A052_25.5 S1 M1LA4	261	A052_25.5 P80 BN80A4	261
54	91	1.6	25.5	5230	A102_25.5 S1 M1LA4	264	A102_25.5 P80 BN80A4	265
58	85	1.2	23.8	2490	A052_23.8 S1 M1LA4	261	A052_23.8 P80 BN80A4	261
58	85	1.8	23.8	4330	A102_23.8 S1 M1LA4	264	A102_23.8 P80 BN80A4	265
60	83	3.0	23.1	4690	A202_23.1 S1 M1LA4	268	A202_23.1 P80 BN80A4	269
65	76	1.3	21.4	2450	A052_21.4 S1 M1LA4	261	A052_21.4 P80 BN80A4	261
65	76	2.0	21.4	5020	A102_21.4 S1 M1LA4	264	A102_21.4 P80 BN80A4	265
65	76	3.3	21.2	4590	A202_21.2 S1 M1LA4	268	A202_21.2 P80 BN80A4	269
74	66	1.5	18.6	2400	A052_18.6 S1 M1LA4	261	A052_18.6 P80 BN80A4	261
74	66	2.3	18.6	4090	A102_18.6 S1 M1LA4	264	A102_18.6 P80 BN80A4	265
84	59	1.7	16.4	2340	A052_16.4 S1 M1LA4	261	A052_16.4 P80 BN80A4	261
84	59	2.5	16.4	4710	A102_16.4 S1 M1LA4	264	A102_16.4 P80 BN80A4	265
99	50	2.0	13.9	2270	A052_13.9 S1 M1LA4	261	A052_13.9 P80 BN80A4	261
99	50	3.0	13.9	3800	A102_13.9 S1 M1LA4	264	A102_13.9 P80 BN80A4	265
112	44	2.3	12.3	2220	A052_12.3 S1 M1LA4	261	A052_12.3 P80 BN80A4	261
112	44	3.2	12.3	3670	A102_12.3 S1 M1LA4	264	A102_12.3 P80 BN80A4	265
131	38	2.6	10.6	2130	A052_10.6 S1 M1LA4	261	A052_10.6 P80 BN80A4	261
144	34	2.9	9.6	2100	A052_9.6 S1 M1LA4	261	A052_9.6 P80 BN80A4	261
162	30	3.3	8.5	2030	A052_8.5 S1 M1LA4	261	A052_8.5 P80 BN80A4	261
171	29	3.1	16.4	2000	A052_16.4 S1 M1SD2	261	A052_16.4 P71 BN71B2	261
191	26	3.9	7.2	1950	A052_7.2 S1 M1LA4	261	A052_7.2 P80 BN80A4	261
218	23	4.4	6.3	1880	A052_6.3 S1 M1LA4	261	A052_6.3 P80 BN80A4	261
229	22	4.6	12.3	1860	A052_12.3 S1 M1SD2	261	A052_12.3 P71 BN71B2	261
252	19.6	4.9	5.5	1810	A052_5.5 S1 M1LA4	261	A052_5.5 P80 BN80A4	261
267	18.5	4.3	10.6	1780	A052_10.6 S1 M1SD2	261	A052_10.6 P71 BN71B2	261
293	16.8	5.6	9.6	1740	A052_9.6 S1 M1SD2	261	A052_9.6 P71 BN71B2	261
331	14.9	6.0	8.5	1680	A052_8.5 S1 M1SD2	261	A052_8.5 P71 BN71B2	261
391	12.6	6.7	7.2	1600	A052_7.2 S1 M1SD2	261	A052_7.2 P71 BN71B2	261
445	11.1	7.2	6.3	1540	A052_6.3 S1 M1SD2	261	A052_6.3 P71 BN71B2	261
516	9.6	7.8	5.5	1480	A052_5.5 S1 M1SD2	261	A052_5.5 P71 BN71B2	261



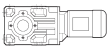







### 0.75 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				 IEC		
					IE2	IE3		IE2	IE3	
79	85	2.9	18.1	4230	A202_18.1 S2 ME2SB4	A202_18.1 S2 MX2SB4	268	A202_18.1 P80 BE80B4	A202_18.1 P80 BX80B4	269
87	77	1.3	16.4	2160	A052_16.4 S2 ME2SB4	A052_16.4 S2 MX2SB4	261	A052_16.4 P80 BE80B4	A052_16.4 P80 BX80B4	261
87	77	1.9	16.4	4490	A102_16.4 S2 ME2SB4	A102_16.4 S2 MX2SB4	264	A102_16.4 P80 BE80B4	A102_16.4 P80 BX80B4	265
88	76	3.3	16.2	4110	A202_16.2 S2 ME2SB4	A202_16.2 S2 MX2SB4	268	A202_16.2 P80 BE80B4	A202_16.2 P80 BX80B4	269
103	65	1.5	13.9	2110	A052_13.9 S2 ME2SB4	A052_13.9 S2 MX2SB4	261	A052_13.9 P80 BE80B4	A052_13.9 P80 BX80B4	261
103	65	2.3	13.9	3640	A102_13.9 S2 ME2SB4	A102_13.9 S2 MX2SB4	264	A102_13.9 P80 BE80B4	A102_13.9 P80 BX80B4	265
116	58	1.7	12.3	2080	A052_12.3 S2 ME2SB4	A052_12.3 S2 MX2SB4	261	A052_12.3 P80 BE80B4	A052_12.3 P80 BX80B4	261
116	58	2.4	12.3	3530	A102_12.3 S2 ME2SB4	A102_12.3 S2 MX2SB4	264	A102_12.3 P80 BE80B4	A102_12.3 P80 BX80B4	265
135	50	2.0	10.6	2010	A052_10.6 S2 ME2SB4	A052_10.6 S2 MX2SB4	261	A052_10.6 P80 BE80B4	A052_10.6 P80 BX80B4	261
135	50	3.0	10.6	3400	A102_10.6 S2 ME2SB4	A102_10.6 S2 MX2SB4	264	A102_10.6 P80 BE80B4	A102_10.6 P80 BX80B4	265
149	45	2.2	9.6	1990	A052_9.6 S2 ME2SB4	A052_9.6 S2 MX2SB4	261	A052_9.6 P80 BE80B4	A052_9.6 P80 BX80B4	261
149	45	3.1	9.6	3320	A102_9.6 S2 ME2SB4	A102_9.6 S2 MX2SB4	264	A102_9.6 P80 BE80B4	A102_9.6 P80 BX80B4	265
168	40	2.5	8.5	1940	A052_8.5 S2 ME2SB4	A052_8.5 S2 MX2SB4	261	A052_8.5 P80 BE80B4	A052_8.5 P80 BX80B4	261
168	40	3.5	8.5	3820	A102_8.5 S2 ME2SB4	A102_8.5 S2 MX2SB4	264	A102_8.5 P80 BE80B4	A102_8.5 P80 BX80B4	265
198	34	3.0	7.2	1870	A052_7.2 S2 ME2SB4	A052_7.2 S2 MX2SB4	261	A052_7.2 P80 BE80B4	A052_7.2 P80 BX80B4	261
226	30	3.4	6.3	1810	A052_6.3 S2 ME2SB4	A052_6.3 S2 MX2SB4	261	A052_6.3 P80 BE80B4	A052_6.3 P80 BX80B4	261
262	26	3.7	5.5	1750	A052_5.5 S2 ME2SB4	A052_5.5 S2 MX2SB4	261	A052_5.5 P80 BE80B4	A052_5.5 P80 BX80B4	261
270	25	3.2	10.6	1720	A052_10.6 S2 ME2SA2		261	A052_10.6 P80 BE80A2		261
296	23	4.2	9.6	1690	A052_9.6 S2 ME2SA2		261	A052_9.6 P80 BE80A2		261
335	20	4.5	8.5	1640	A052_8.5 S2 ME2SA2		261	A052_8.5 P80 BE80A2		261
395	17.0	5.0	7.2	1570	A052_7.2 S2 ME2SA2		261	A052_7.2 P80 BE80A2		261
450	15.0	5.3	6.3	1510	A052_6.3 S2 ME2SA2		261	A052_6.3 P80 BE80A2		261
521	12.9	5.8	5.5	1450	A052_5.5 S2 ME2SA2		261	A052_5.5 P80 BE80A2		261

### 1.1 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				 IEC		
					IE2	IE3		IE2	IE3	
0.63	14914	0.9	1507	75000	A904_1507 S3 ME3LA6		302	A904_1507 P100 BE100M6		303
0.71	13103	1.1	1324	75000	A904_1324 S3 ME3LA6		302	A904_1324 P100 BE100M6		303
0.77	12094	1.2	1222	75000	A904_1222 S3 ME3LA6		302	A904_1222 P100 BE100M6		303
0.88	10751	1.3	1632	75000	A904_1632 S3 ME3SA4	A904_1632 S3 MX3SA4	302	A904_1632 P90 BE90S4	A904_1632 P90 BX90S4	303
0.95	9924	1.4	1507	75000	A904_1507 S3 ME3SA4	A904_1507 S3 MX3SA4	302	A904_1507 P90 BE90S4	A904_1507 P90 BX90S4	303
1.1	8825	0.9	1340	65000	A804_1340 S3 ME3SA4	A804_1340 S3 MX3SA4	299	A804_1340 P90 BE90S4	A804_1340 P90 BX90S4	300
1.1	8720	1.6	1324	75000	A904_1324 S3 ME3SA4	A904_1324 S3 MX3SA4	302	A904_1324 P90 BE90S4	A904_1324 P90 BX90S4	303
1.2	8146	1.0	1237	65000	A804_1237 S3 ME3SA4	A804_1237 S3 MX3SA4	299	A804_1237 P90 BE90S4	A804_1237 P90 BX90S4	300
1.2	8049	1.7	1222	75000	A904_1222 S3 ME3SA4	A904_1222 S3 MX3SA4	302	A904_1222 P90 BE90S4	A904_1222 P90 BX90S4	303
1.3	7314	1.9	1111	75000	A904_1111 S3 ME3SA4	A904_1111 S3 MX3SA4	302	A904_1111 P90 BE90S4	A904_1111 P90 BX90S4	303
1.3	7145	1.1	1085	65000	A804_1085 S3 ME3SA4	A804_1085 S3 MX3SA4	299	A804_1085 P90 BE90S4	A804_1085 P90 BX90S4	300
1.4	6752	2.1	1025	75000	A904_1025 S3 ME3SA4	A904_1025 S3 MX3SA4	302	A904_1025 P90 BE90S4	A904_1025 P90 BX90S4	303
1.4	6595	1.2	1001	65000	A804_1001 S3 ME3SA4	A804_1001 S3 MX3SA4	299	A804_1001 P90 BE90S4	A804_1001 P90 BX90S4	300
1.5	6172	2.3	937.2	75000	A904_937.2 S3 ME3SA4	A904_937.2 S3 MX3SA4	302	A904_937.2 P90 BE90S4	A904_937.2 P90 BX90S4	303
1.6	5919	1.4	898.7	65000	A804_898.7 S3 ME3SA4	A804_898.7 S3 MX3SA4	299	A804_898.7 P90 BE90S4	A804_898.7 P90 BX90S4	300
1.7	5697	2.5	865.1	75000	A904_865.1 S3 ME3SA4	A904_865.1 S3 MX3SA4	302	A904_865.1 P90 BE90S4	A904_865.1 P90 BX90S4	303
1.7	5633	0.9	855.3	50000	A704_855.3 S3 ME3SA4	A704_855.3 S3 MX3SA4	296	A704_855.3 P90 BE90S4	A704_855.3 P90 BX90S4	297
1.7	5463	1.5	829.5	65000	A804_829.5 S3 ME3SA4	A804_829.5 S3 MX3SA4	299	A804_829.5 P90 BE90S4	A804_829.5 P90 BX90S4	300
1.9	5051	2.8	766.9	75000	A904_766.9 S3 ME3SA4	A904_766.9 S3 MX3SA4	302	A904_766.9 P90 BE90S4	A904_766.9 P90 BX90S4	303
1.9	5031	1.0	763.9	50000	A704_763.9 S3 ME3SA4	A704_763.9 S3 MX3SA4	296	A704_763.9 P90 BE90S4	A704_763.9 P90 BX90S4	297
1.9	5019	1.6	762.1	65000	A804_762.1 S3 ME3SA4	A804_762.1 S3 MX3SA4	299	A804_762.1 P90 BE90S4	A804_762.1 P90 BX90S4	300
2.0	4662	3.0	707.9	75000	A904_707.9 S3 ME3SA4	A904_707.9 S3 MX3SA4	302	A904_707.9 P90 BE90S4	A904_707.9 P90 BX90S4	303
2.0	4644	1.1	705.1	50000	A704_705.1 S3 ME3SA4	A704_705.1 S3 MX3SA4	296	A704_705.1 P90 BE90S4	A704_705.1 P90 BX90S4	297
2.0	4633	1.7	703.5	65000	A804_703.5 S3 ME3SA4	A804_703.5 S3 MX3SA4	299	A804_703.5 P90 BE90S4	A804_703.5 P90 BX90S4	300
2.2	4245	1.2	644.6	50000	A704_644.6 S3 ME3SA4	A704_644.6 S3 MX3SA4	296	A704_644.6 P90 BE90S4	A704_644.6 P90 BX90S4	297
2.4	3999	2.0	607.2	65000	A804_607.2 S3 ME3SA4	A804_607.2 S3 MX3SA4	299	A804_607.2 P90 BE90S4	A804_607.2 P90 BX90S4	300
2.4	3962	3.5	601.6	75000	A904_601.6 S3 ME3SA4	A904_601.6 S3 MX3SA4	302	A904_601.6 P90 BE90S4	A904_601.6 P90 BX90S4	303
2.4	3919	1.3	595.0	50000	A704_595.0 S3 ME3SA4	A704_595.0 S3 MX3SA4	296	A704_595.0 P90 BE90S4	A704_595.0 P90 BX90S4	297
2.6	3691	2.2	560.5	65000	A804_560.5 S3 ME3SA4	A804_560.5 S3 MX3SA4	299	A804_560.5 P90 BE90S4	A804_560.5 P90 BX90S4	300
2.8	3394	1.5	515.4	50000	A704_515.4 S3 ME3SA4	A704_515.4 S3 MX3SA4	296	A704_515.4 P90 BE90S4	A704_515.4 P90 BX90S4	297
3.0	3154	2.5	478.9	65000	A804_478.9 S3 ME3SA4	A804_478.9 S3 MX3SA4	299	A804_478.9 P90 BE90S4	A804_478.9 P90 BX90S4	300
3.0	3133	1.6	475.8	50000	A704_475.8 S3 ME3SA4	A704_475.8 S3 MX3SA4	296	A704_475.8 P90 BE90S4	A704_475.8 P90 BX90S4	297





## 1.1 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
31	319	1.9	45.8	11700	A352_45.8 S3 ME3SA4	A352_45.8 S3 MX3SA4	276	A352_45.8 P90 BE90S4	A352_45.8 P90 BX90S4	277
32	313	2.6	45.1	15000	A412_45.1 S3 ME3SA4	A412_45.1 S3 MX3SA4	280	A412_45.1 P90 BE90S4	A412_45.1 P90 BX90S4	281
33	302	1.4	43.4	7100	A302_43.4 S3 ME3SA4	A302_43.4 S3 MX3SA4	272	A302_43.4 P90 BE90S4	A302_43.4 P90 BX90S4	273
34	291	2.1	41.8	11400	A352_41.8 S3 ME3SA4	A352_41.8 S3 MX3SA4	276	A352_41.8 P90 BE90S4	A352_41.8 P90 BX90S4	277
36	276	0.9	39.6	4500	A202_39.6 S3 ME3SA4	A202_39.6 S3 MX3SA4	268	A202_39.6 P90 BE90S4	A202_39.6 P90 BX90S4	269
36	273	1.5	39.3	6970	A302_39.3 S3 ME3SA4	A302_39.3 S3 MX3SA4	272	A302_39.3 P90 BE90S4	A302_39.3 P90 BX90S4	273
39	255	1.6	36.6	6880	A302_36.6 S3 ME3SA4	A302_36.6 S3 MX3SA4	272	A302_36.6 P90 BE90S4	A302_36.6 P90 BX90S4	273
39	255	2.4	36.6	11100	A352_36.6 S3 ME3SA4	A352_36.6 S3 MX3SA4	276	A352_36.6 P90 BE90S4	A352_36.6 P90 BX90S4	277
40	250	3.1	35.9	14300	A412_35.9 S3 ME3SA4	A412_35.9 S3 MX3SA4	280	A412_35.9 P90 BE90S4	A412_35.9 P90 BX90S4	281
40	246	1.0	35.4	4380	A202_35.4 S3 ME3SA4	A202_35.4 S3 MX3SA4	268	A202_35.4 P90 BE90S4	A202_35.4 P90 BX90S4	269
43	233	1.8	33.4	6760	A302_33.4 S3 ME3SA4	A302_33.4 S3 MX3SA4	272	A302_33.4 P90 BE90S4	A302_33.4 P90 BX90S4	273
43	231	2.6	33.2	10800	A352_33.2 S3 ME3SA4	A352_33.2 S3 MX3SA4	276	A352_33.2 P90 BE90S4	A352_33.2 P90 BX90S4	277
46	218	1.1	31.3	4320	A202_31.3 S3 ME3SA4	A202_31.3 S3 MX3SA4	268	A202_31.3 P90 BE90S4	A202_31.3 P90 BX90S4	269
49	204	2.0	29.3	6580	A302_29.3 S3 ME3SA4	A302_29.3 S3 MX3SA4	272	A302_29.3 P90 BE90S4	A302_29.3 P90 BX90S4	273
49	203	1.2	29.2	4290	A202_29.2 S3 ME3SA4	A202_29.2 S3 MX3SA4	268	A202_29.2 P90 BE90S4	A202_29.2 P90 BX90S4	269
50	198	3.0	28.4	10400	A352_28.4 S3 ME3SA4	A352_28.4 S3 MX3SA4	276	A352_28.4 P90 BE90S4	A352_28.4 P90 BX90S4	277
54	185	2.2	26.5	6440	A302_26.5 S3 ME3SA4	A302_26.5 S3 MX3SA4	272	A302_26.5 P90 BE90S4	A302_26.5 P90 BX90S4	273
54	184	1.4	26.5	4230	A202_26.5 S3 ME3SA4	A202_26.5 S3 MX3SA4	268	A202_26.5 P90 BE90S4	A202_26.5 P90 BX90S4	269
56	179	3.4	25.7	10100	A352_25.7 S3 ME3SA4	A352_25.7 S3 MX3SA4	276	A352_25.7 P90 BE90S4	A352_25.7 P90 BX90S4	277
60	165	0.9	23.8	3640	A102_23.8 S3 ME3SA4	A102_23.8 S3 MX3SA4	264	A102_23.8 P90 BE90S4	A102_23.8 P90 BX90S4	265
62	161	1.6	23.1	4140	A202_23.1 S3 ME3SA4	A202_23.1 S3 MX3SA4	268	A202_23.1 P90 BE90S4	A202_23.1 P90 BX90S4	269
63	158	2.6	22.8	6220	A302_22.8 S3 ME3SA4	A302_22.8 S3 MX3SA4	272	A302_22.8 P90 BE90S4	A302_22.8 P90 BX90S4	273
67	149	1.0	21.4	4280	A102_21.4 S3 ME3SA4	A102_21.4 S3 MX3SA4	264	A102_21.4 P90 BE90S4	A102_21.4 P90 BX90S4	265
67	148	1.7	21.2	4080	A202_21.2 S3 ME3SA4	A202_21.2 S3 MX3SA4	268	A202_21.2 P90 BE90S4	A202_21.2 P90 BX90S4	269
70	143	2.9	20.5	6070	A302_20.5 S3 ME3SA4	A302_20.5 S3 MX3SA4	272	A302_20.5 P90 BE90S4	A302_20.5 P90 BX90S4	273
77	129	1.2	18.6	3540	A102_18.6 S3 ME3SA4	A102_18.6 S3 MX3SA4	264	A102_18.6 P90 BE90S4	A102_18.6 P90 BX90S4	265
79	126	2.0	18.1	3970	A202_18.1 S3 ME3SA4	A202_18.1 S3 MX3SA4	268	A202_18.1 P90 BE90S4	A202_18.1 P90 BX90S4	269
80	125	3.2	18.0	5880	A302_18.0 S3 ME3SA4	A302_18.0 S3 MX3SA4	272	A302_18.0 P90 BE90S4	A302_18.0 P90 BX90S4	273
87	114	1.3	16.4	4130	A102_16.4 S3 ME3SA4	A102_16.4 S3 MX3SA4	264	A102_16.4 P90 BE90S4	A102_16.4 P90 BX90S4	265
88	114	3.4	16.3	5740	A302_16.3 S3 ME3SA4	A302_16.3 S3 MX3SA4	272	A302_16.3 P90 BE90S4	A302_16.3 P90 BX90S4	273
88	112	2.2	16.2	3880	A202_16.2 S3 ME3SA4	A202_16.2 S3 MX3SA4	268	A202_16.2 P90 BE90S4	A202_16.2 P90 BX90S4	269
102	98	2.5	14.1	3770	A202_14.1 S3 ME3SA4	A202_14.1 S3 MX3SA4	268	A202_14.1 P90 BE90S4	A202_14.1 P90 BX90S4	269
103	97	1.5	13.9	3380	A102_13.9 S3 ME3SA4	A102_13.9 S3 MX3SA4	264	A102_13.9 P90 BE90S4	A102_13.9 P90 BX90S4	265
116	86	1.6	12.3	3300	A102_12.3 S3 ME3SA4	A102_12.3 S3 MX3SA4	264	A102_12.3 P90 BE90S4	A102_12.3 P90 BX90S4	265
120	83	2.5	12.0	3620	A202_12.0 S3 ME3SA4	A202_12.0 S3 MX3SA4	268	A202_12.0 P90 BE90S4	A202_12.0 P90 BX90S4	269
135	73	2.0	10.6	3210	A102_10.6 S3 ME3SA4	A102_10.6 S3 MX3SA4	264	A102_10.6 P90 BE90S4	A102_10.6 P90 BX90S4	265
138	72	3.1	10.3	3510	A202_10.3 S3 ME3SA4	A202_10.3 S3 MX3SA4	268	A202_10.3 P90 BE90S4	A202_10.3 P90 BX90S4	269
149	67	2.1	9.6	3140	A102_9.6 S3 ME3SA4	A102_9.6 S3 MX3SA4	264	A102_9.6 P90 BE90S4	A102_9.6 P90 BX90S4	265
153	65	3.2	9.4	3420	A202_9.4 S3 ME3SA4	A202_9.4 S3 MX3SA4	268	A202_9.4 P90 BE90S4	A202_9.4 P90 BX90S4	269
168	59	2.4	8.5	3630	A102_8.5 S3 ME3SA4	A102_8.5 S3 MX3SA4	264	A102_8.5 P90 BE90S4	A102_8.5 P90 BX90S4	265
198	50	2.8	7.2	2940	A102_7.2 S3 ME3SA4	A102_7.2 S3 MX3SA4	264	A102_7.2 P90 BE90S4	A102_7.2 P90 BX90S4	265
226	44	3.2	6.3	3390	A102_6.3 S3 ME3SA4	A102_6.3 S3 MX3SA4	264	A102_6.3 P90 BE90S4	A102_6.3 P90 BX90S4	265
230	43	3.3	12.3	2830	A102_12.3 S2 ME2SB2		264	A102_12.3 P90 BE90B2		265
294	34	2.8	9.6	1600	A052_9.6 S2 ME2SB2		261	A052_9.6 P90 BE90B2		261
332	30	3.0	8.5	1560	A052_8.5 S2 ME2SB2		261	A052_8.5 P90 BE90B2		261
392	25	3.4	7.2	1500	A052_7.2 S2 ME2SB2		261	A052_7.2 P90 BE90B2		261
447	22	3.6	6.3	1450	A052_6.3 S2 ME2SB2		261	A052_6.3 P90 BE90B2		261
518	19.1	3.9	5.5	1400	A052_5.5 S2 ME2SB2		261	A052_5.5 P90 BE90B2		261

## 1.5 kW

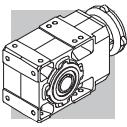
n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
0.88	14528	1.0	1632	75000	A904_1632 S3 ME3SB4	A904_1632 S3 MX3SB4	302	A904_1632 P90 BE90LA4	A904_1632 P90 BX90LA4	303
0.95	13410	1.0	1507	75000	A904_1507 S3 ME3SB4	A904_1507 S3 MX3SB4	302	A904_1507 P90 BE90LA4	A904_1507 P90 BX90LA4	303
1.1	11784	1.2	1324	75000	A904_1324 S3 ME3SB4	A904_1324 S3 MX3SB4	302	A904_1324 P90 BE90LA4	A904_1324 P90 BX90LA4	303
1.2	10877	1.3	1222	75000	A904_1222 S3 ME3SB4	A904_1222 S3 MX3SB4	302	A904_1222 P90 BE90LA4	A904_1222 P90 BX90LA4	303
1.3	9884	1.4	1111	75000	A904_1111 S3 ME3SB4	A904_1111 S3 MX3SB4	302	A904_1111 P90 BE90LA4	A904_1111 P90 BX90LA4	303
1.4	9124	1.5	1025	75000	A904_1025 S3 ME3SB4	A904_1025 S3 MX3SB4	302	A904_1025 P90 BE90LA4	A904_1025 P90 BX90LA4	303
1.4	8913	0.9	1001	65000	A804_1001 S3 ME3SB4	A804_1001 S3 MX3SB4	299	A804_1001 P90 BE90LA4	A804_1001 P90 BX90LA4	300
1.5	8341	1.7	937.2	75000	A904_937.2 S3 ME3SB4	A904_937.2 S3 MX3SB4	302	A904_937.2 P90 BE90LA4	A904_937.2 P90 BX90LA4	303



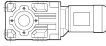





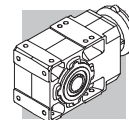






## 2.2 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				 IEC		
					IE2	IE3		IE2	IE3	
16.0	1198	1.3	89.5	19800	A503_89.5 S3 ME3LA4	A503_89.5 S3 MX3LA4	284	A503_89.5 P100 BE100LA4	A503_89.5 P100 BX100LA4	285
16.6	1155	2.4	86.4	30000	A603_86.4 S3 ME3LA4	A603_86.4 S3 MX3LA4	292	A603_86.4 P100 BE100LA4	A603_86.4 P100 BX100LA4	293
17.6	1090	1.4	81.5	19600	A503_81.5 S3 ME3LA4	A503_81.5 S3 MX3LA4	284	A503_81.5 P100 BE100LA4	A503_81.5 P100 BX100LA4	285
17.9	1066	2.6	79.7	30000	A603_79.7 S3 ME3LA4	A603_79.7 S3 MX3LA4	292	A603_79.7 P100 BE100LA4	A603_79.7 P100 BX100LA4	293
18.0	1064	1.9	79.5	30000	A553_79.5 S3 ME3LA4	A553_79.5 S3 MX3LA4	288	A553_79.5 P100 BE100LA4	A553_79.5 P100 BX100LA4	289
20.3	942	3.0	70.4	30000	A603_70.4 S3 ME3LA4	A603_70.4 S3 MX3LA4	292	A603_70.4 P100 BE100LA4	A603_70.4 P100 BX100LA4	293
20.4	940	1.6	70.2	19300	A503_70.2 S3 ME3LA4	A503_70.2 S3 MX3LA4	284	A503_70.2 P100 BE100LA4	A503_70.2 P100 BX100LA4	285
22.0	869	3.2	65.0	30000	A603_65.0 S3 ME3LA4	A603_65.0 S3 MX3LA4	292	A603_65.0 P100 BE100LA4	A603_65.0 P100 BX100LA4	293
22.2	860	2.3	64.3	30000	A553_64.3 S3 ME3LA4	A553_64.3 S3 MX3LA4	288	A553_64.3 P100 BE100LA4	A553_64.3 P100 BX100LA4	289
22.3	887	1.0	64.2	14500	A412_64.2 S3 ME3LA4	A412_64.2 S3 MX3LA4	280	A412_64.2 P100 BE100LA4	A412_64.2 P100 BX100LA4	281
22.4	855	1.8	63.9	19000	A503_63.9 S3 ME3LA4	A503_63.9 S3 MX3LA4	284	A503_63.9 P100 BE100LA4	A503_63.9 P100 BX100LA4	285
24.3	813	1.0	58.8	14400	A412_58.8 S3 ME3LA4	A412_58.8 S3 MX3LA4	280	A412_58.8 P100 BE100LA4	A412_58.8 P100 BX100LA4	281
25.2	760	2.0	56.8	18600	A503_56.8 S3 ME3LA4	A503_56.8 S3 MX3LA4	284	A503_56.8 P100 BE100LA4	A503_56.8 P100 BX100LA4	285
26.9	734	1.2	53.1	14100	A412_53.1 S3 ME3LA4	A412_53.1 S3 MX3LA4	280	A412_53.1 P100 BE100LA4	A412_53.1 P100 BX100LA4	281
27.7	691	2.2	51.7	18300	A503_51.7 S3 ME3LA4	A503_51.7 S3 MX3LA4	284	A503_51.7 P100 BE100LA4	A503_51.7 P100 BX100LA4	285
28.1	682	2.9	51.0	30000	A553_51.0 S3 ME3LA4	A553_51.0 S3 MX3LA4	288	A553_51.0 P100 BE100LA4	A553_51.0 P100 BX100LA4	289
29.1	678	0.9	49.1	9900	A352_49.1 S3 ME3LA4	A352_49.1 S3 MX3LA4	276	A352_49.1 P100 BE100LA4	A352_49.1 P100 BX100LA4	277
29.6	667	1.3	48.3	13900	A412_48.3 S3 ME3LA4	A412_48.3 S3 MX3LA4	280	A412_48.3 P100 BE100LA4	A412_48.3 P100 BX100LA4	281
31	633	0.9	45.8	9840	A352_45.8 S3 ME3LA4	A352_45.8 S3 MX3LA4	276	A352_45.8 P100 BE100LA4	A352_45.8 P100 BX100LA4	277
32	623	1.3	45.1	13700	A412_45.1 S3 ME3LA4	A412_45.1 S3 MX3LA4	280	A412_45.1 P100 BE100LA4	A412_45.1 P100 BX100LA4	281
32	602	2.5	45.0	17900	A503_45.0 S3 ME3LA4	A503_45.0 S3 MX3LA4	284	A503_45.0 P100 BE100LA4	A503_45.0 P100 BX100LA4	285
34	577	1.0	41.8	9750	A352_41.8 S3 ME3LA4	A352_41.8 S3 MX3LA4	276	A352_41.8 P100 BE100LA4	A352_41.8 P100 BX100LA4	277
35	548	2.7	40.9	17500	A503_40.9 S3 ME3LA4	A503_40.9 S3 MX3LA4	284	A503_40.9 P100 BE100LA4	A503_40.9 P100 BX100LA4	285
39	506	1.2	36.6	9600	A352_36.6 S3 ME3LA4	A352_36.6 S3 MX3LA4	276	A352_36.6 P100 BE100LA4	A352_36.6 P100 BX100LA4	277
40	496	1.6	35.9	13100	A412_35.9 S3 ME3LA4	A412_35.9 S3 MX3LA4	280	A412_35.9 P100 BE100LA4	A412_35.9 P100 BX100LA4	281
40	476	3.1	35.6	17000	A503_35.6 S3 ME3LA4	A503_35.6 S3 MX3LA4	284	A503_35.6 P100 BE100LA4	A503_35.6 P100 BX100LA4	285
43	462	0.9	33.4	5050	A302_33.4 S3 ME3LA4	A302_33.4 S3 MX3LA4	272	A302_33.4 P100 BE100LA4	A302_33.4 P100 BX100LA4	273
43	458	1.3	33.2	9460	A352_33.2 S3 ME3LA4	A352_33.2 S3 MX3LA4	276	A352_33.2 P100 BE100LA4	A352_33.2 P100 BX100LA4	277
44	433	3.5	32.4	16600	A503_32.4 S3 ME3LA4	A503_32.4 S3 MX3LA4	284	A503_32.4 P100 BE100LA4	A503_32.4 P100 BX100LA4	285
49	405	1.0	29.3	5380	A302_29.3 S3 ME3LA4	A302_29.3 S3 MX3LA4	272	A302_29.3 P100 BE100LA4	A302_29.3 P100 BX100LA4	273
50	393	1.5	28.4	9230	A352_28.4 S3 ME3LA4	A352_28.4 S3 MX3LA4	276	A352_28.4 P100 BE100LA4	A352_28.4 P100 BX100LA4	277
50	391	1.9	28.3	12400	A412_28.3 S3 ME3LA4	A412_28.3 S3 MX3LA4	280	A412_28.3 P100 BE100LA4	A412_28.3 P100 BX100LA4	281
54	367	1.1	26.5	5350	A302_26.5 S3 ME3LA4	A302_26.5 S3 MX3LA4	272	A302_26.5 P100 BE100LA4	A302_26.5 P100 BX100LA4	273
56	355	1.7	25.7	9070	A352_25.7 S3 ME3LA4	A352_25.7 S3 MX3LA4	276	A352_25.7 P100 BE100LA4	A352_25.7 P100 BX100LA4	277
63	314	1.3	22.8	5290	A302_22.8 S3 ME3LA4	A302_22.8 S3 MX3LA4	272	A302_22.8 P100 BE100LA4	A302_22.8 P100 BX100LA4	273
63	313	2.2	22.7	11700	A412_22.7 S3 ME3LA4	A412_22.7 S3 MX3LA4	280	A412_22.7 P100 BE100LA4	A412_22.7 P100 BX100LA4	281
64	311	1.9	22.5	8840	A352_22.5 S3 ME3LA4	A352_22.5 S3 MX3LA4	276	A352_22.5 P100 BE100LA4	A352_22.5 P100 BX100LA4	277
70	284	1.4	20.5	5230	A302_20.5 S3 ME3LA4	A302_20.5 S3 MX3LA4	272	A302_20.5 P100 BE100LA4	A302_20.5 P100 BX100LA4	273
70	282	2.1	20.4	8660	A352_20.4 S3 ME3LA4	A352_20.4 S3 MX3LA4	276	A352_20.4 P100 BE100LA4	A352_20.4 P100 BX100LA4	277
79	250	1.0	18.1	3140	A202_18.1 S3 ME3LA4	A202_18.1 S3 MX3LA4	268	A202_18.1 P100 BE100LA4	A202_18.1 P100 BX100LA4	269
80	249	1.6	18.0	5140	A302_18.0 S3 ME3LA4	A302_18.0 S3 MX3LA4	272	A302_18.0 P100 BE100LA4	A302_18.0 P100 BX100LA4	273
81	245	2.6	17.8	11000	A412_17.8 S3 ME3LA4	A412_17.8 S3 MX3LA4	280	A412_17.8 P100 BE100LA4	A412_17.8 P100 BX100LA4	281
84	234	2.6	17.0	8320	A352_17.0 S3 ME3LA4	A352_17.0 S3 MX3LA4	276	A352_17.0 P100 BE100LA4	A352_17.0 P100 BX100LA4	277
88	226	1.7	16.3	5060	A302_16.3 S3 ME3LA4	A302_16.3 S3 MX3LA4	272	A302_16.3 P100 BE100LA4	A302_16.3 P100 BX100LA4	273
88	223	1.1	16.2	3140	A202_16.2 S3 ME3LA4	A202_16.2 S3 MX3LA4	268	A202_16.2 P100 BE100LA4	A202_16.2 P100 BX100LA4	269
89	222	2.7	16.1	10800	A412_16.1 S3 ME3LA4	A412_16.1 S3 MX3LA4	280	A412_16.1 P100 BE100LA4	A412_16.1 P100 BX100LA4	281
92	214	2.8	15.5	8150	A352_15.5 S3 ME3LA4	A352_15.5 S3 MX3LA4	276	A352_15.5 P100 BE100LA4	A352_15.5 P100 BX100LA4	277
102	194	1.3	14.1	3120	A202_14.1 S3 ME3LA4	A202_14.1 S3 MX3LA4	268	A202_14.1 P100 BE100LA4	A202_14.1 P100 BX100LA4	269
104	190	3.1	13.8	10300	A412_13.8 S3 ME3LA4	A412_13.8 S3 MX3LA4	280	A412_13.8 P100 BE100LA4	A412_13.8 P100 BX100LA4	281
105	187	2.0	13.6	4900	A302_13.6 S3 ME3LA4	A302_13.6 S3 MX3LA4	272	A302_13.6 P100 BE100LA4	A302_13.6 P100 BX100LA4	273
109	181	3.3	13.1	7820	A352_13.1 S3 ME3LA4	A352_13.1 S3 MX3LA4	276	A352_13.1 P100 BE100LA4	A352_13.1 P100 BX100LA4	277
120	165	1.3	12.0	3070	A202_12.0 S3 ME3LA4	A202_12.0 S3 MX3LA4	268	A202_12.0 P100 BE100LA4	A202_12.0 P100 BX100LA4	269
121	163	1.8	11.8	4750	A302_11.8 S3 ME3LA4	A302_11.8 S3 MX3LA4	272	A302_11.8 P100 BE100LA4	A302_11.8 P100 BX100LA4	273
121	163	2.5	11.8	7710	A352_11.8 S3 ME3LA4	A352_11.8 S3 MX3LA4	276	A352_11.8 P100 BE100LA4	A352_11.8 P100 BX100LA4	277
122	162	3.4	11.7	9870	A412_11.7 S3 ME3LA4	A412_11.7 S3 MX3LA4	280	A412_11.7 P100 BE100LA4	A412_11.7 P100 BX100LA4	281
124	159	2.0	23.1	3070	A202_23.1 S3 ME3LA2		268	A202_23.1 P90 BE90L2		269
134	147	2.7	10.6	7510	A352_10.6 S3 ME3LA4	A352_10.6 S3 MX3LA4	276	A352_10.6 P100 BE100LA4	A352_10.6 P100 BX100LA4	277

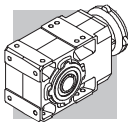


## 2.2 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
135	146	1.0	10.6	2600	A102_10.6 S3 ME3LA4	A102_10.6 S3 MX3LA4	264	A102_10.6 P100 BE100LA4	A102_10.6 P100 BX100LA4	265
137	144	2.4	10.5	4660	A302_10.5 S3 ME3LA4	A302_10.5 S3 MX3LA4	272	A302_10.5 P100 BE100LA4	A302_10.5 P100 BX100LA4	273
138	143	1.6	10.3	3030	A202_10.3 S3 ME3LA4	A202_10.3 S3 MX3LA4	268	A202_10.3 P100 BE100LA4	A202_10.3 P100 BX100LA4	269
149	133	1.1	9.6	2580	A102_9.6 S3 ME3LA4	A102_9.6 S3 MX3LA4	264	A102_9.6 P100 BE100LA4	A102_9.6 P100 BX100LA4	265
153	130	1.6	9.4	2980	A202_9.4 S3 ME3LA4	A202_9.4 S3 MX3LA4	268	A202_9.4 P100 BE100LA4	A202_9.4 P100 BX100LA4	269
154	129	2.3	9.3	4530	A302_9.3 S3 ME3LA4	A302_9.3 S3 MX3LA4	272	A302_9.3 P100 BE100LA4	A302_9.3 P100 BX100LA4	273
154	129	3.1	9.3	7240	A352_9.3 S3 ME3LA4	A352_9.3 S3 MX3LA4	276	A352_9.3 P100 BE100LA4	A352_9.3 P100 BX100LA4	277
168	118	1.2	8.5	3050	A102_8.5 S3 ME3LA4	A102_8.5 S3 MX3LA4	264	A102_8.5 P100 BE100LA4	A102_8.5 P100 BX100LA4	265
169	117	2.6	8.5	4430	A302_8.5 S3 ME3LA4	A302_8.5 S3 MX3LA4	272	A302_8.5 P100 BE100LA4	A302_8.5 P100 BX100LA4	273
169	117	3.3	8.5	7060	A352_8.5 S3 ME3LA4	A352_8.5 S3 MX3LA4	276	A352_8.5 P100 BE100LA4	A352_8.5 P100 BX100LA4	277
171	116	1.8	8.4	2930	A202_8.4 S3 ME3LA4	A202_8.4 S3 MX3LA4	268	A202_8.4 P100 BE100LA4	A202_8.4 P100 BX100LA4	269
196	101	2.1	7.3	2860	A202_7.3 S3 ME3LA4	A202_7.3 S3 MX3LA4	268	A202_7.3 P100 BE100LA4	A202_7.3 P100 BX100LA4	269
198	100	1.4	7.2	2520	A102_7.2 S3 ME3LA4	A102_7.2 S3 MX3LA4	264	A102_7.2 P100 BE100LA4	A102_7.2 P100 BX100LA4	265
204	97	3.1	7.0	4240	A302_7.0 S3 ME3LA4	A302_7.0 S3 MX3LA4	272	A302_7.0 P100 BE100LA4	A302_7.0 P100 BX100LA4	273
219	90	2.3	6.5	2810	A202_6.5 S3 ME3LA4	A202_6.5 S3 MX3LA4	268	A202_6.5 P100 BE100LA4	A202_6.5 P100 BX100LA4	269
223	89	3.4	6.4	4150	A302_6.4 S3 ME3LA4	A302_6.4 S3 MX3LA4	272	A302_6.4 P100 BE100LA4	A302_6.4 P100 BX100LA4	273
226	88	1.6	6.3	2950	A102_6.3 S3 ME3LA4	A102_6.3 S3 MX3LA4	264	A102_6.3 P100 BE100LA4	A102_6.3 P100 BX100LA4	265
262	76	1.9	5.5	2430	A102_5.5 S3 ME3LA4	A102_5.5 S3 MX3LA4	264	A102_5.5 P100 BE100LA4	A102_5.5 P100 BX100LA4	265
267	74	2.8	5.4	2700	A202_5.4 S3 ME3LA4	A202_5.4 S3 MX3LA4	268	A202_5.4 P100 BE100LA4	A202_5.4 P100 BX100LA4	269
306	65	3.2	9.4	2620	A202_9.4 S3 ME3LA2		268	A202_9.4 P90 BE90L2		269

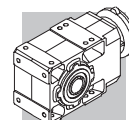
## 3 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
1.7	15399	0.9	865.1	75000	A904_865.1 S3 ME3LB4	A904_865.1 S3 MX3LB4	302	A904_865.1 P100 BE100LB4	A904_865.1 P100 BX100LB4	303
1.9	13651	1.0	766.9	75000	A904_766.9 S3 ME3LB4	A904_766.9 S3 MX3LB4	302	A904_766.9 P100 BE100LB4	A904_766.9 P100 BX100LB4	303
2.0	12601	1.1	707.9	75000	A904_707.9 S3 ME3LB4	A904_707.9 S3 MX3LB4	302	A904_707.9 P100 BE100LB4	A904_707.9 P100 BX100LB4	303
2.4	10708	1.3	601.6	75000	A904_601.6 S3 ME3LB4	A904_601.6 S3 MX3LB4	302	A904_601.6 P100 BE100LB4	A904_601.6 P100 BX100LB4	303
2.6	9884	1.4	555.3	75000	A904_555.3 S3 ME3LB4	A904_555.3 S3 MX3LB4	302	A904_555.3 P100 BE100LB4	A904_555.3 P100 BX100LB4	303
3.0	8661	1.6	486.6	75000	A904_486.6 S3 ME3LB4	A904_486.6 S3 MX3LB4	302	A904_486.6 P100 BE100LB4	A904_486.6 P100 BX100LB4	303
3.0	8525	0.9	478.9	65000	A804_478.9 S3 ME3LB4	A804_478.9 S3 MX3LB4	299	A804_478.9 P100 BE100LB4	A804_478.9 P100 BX100LB4	300
3.2	7995	1.8	449.2	75000	A904_449.2 S3 ME3LB4	A904_449.2 S3 MX3LB4	302	A904_449.2 P100 BE100LB4	A904_449.2 P100 BX100LB4	303
3.3	7869	1.0	442.1	65000	A804_442.1 S3 ME3LB4	A804_442.1 S3 MX3LB4	299	A804_442.1 P100 BE100LB4	A804_442.1 P100 BX100LB4	300
3.7	6861	2.0	385.4	75000	A904_385.4 S3 ME3LB4	A904_385.4 S3 MX3LB4	302	A904_385.4 P100 BE100LB4	A904_385.4 P100 BX100LB4	303
3.8	6826	1.2	383.5	65000	A804_383.5 S3 ME3LB4	A804_383.5 S3 MX3LB4	299	A804_383.5 P100 BE100LB4	A804_383.5 P100 BX100LB4	300
4.0	6333	2.2	355.8	75000	A904_355.8 S3 ME3LB4	A904_355.8 S3 MX3LB4	302	A904_355.8 P100 BE100LB4	A904_355.8 P100 BX100LB4	303
4.1	6301	1.3	354.0	65000	A804_354.0 S3 ME3LB4	A804_354.0 S3 MX3LB4	299	A804_354.0 P100 BE100LB4	A804_354.0 P100 BX100LB4	300
4.6	5631	0.9	316.4	50000	A704_316.4 S3 ME3LB4	A704_316.4 S3 MX3LB4	296	A704_316.4 P100 BE100LB4	A704_316.4 P100 BX100LB4	297
4.7	5427	2.6	304.9	75000	A904_304.9 S3 ME3LB4	A904_304.9 S3 MX3LB4	302	A904_304.9 P100 BE100LB4	A904_304.9 P100 BX100LB4	303
4.8	5347	1.5	300.4	65000	A804_300.4 S3 ME3LB4	A804_300.4 S3 MX3LB4	299	A804_300.4 P100 BE100LB4	A804_300.4 P100 BX100LB4	300
4.9	5198	1.0	292.0	50000	A704_292.0 S3 ME3LB4	A704_292.0 S3 MX3LB4	296	A704_292.0 P100 BE100LB4	A704_292.0 P100 BX100LB4	297
5.1	5010	2.8	281.4	75000	A904_281.4 S3 ME3LB4	A904_281.4 S3 MX3LB4	302	A904_281.4 P100 BE100LB4	A904_281.4 P100 BX100LB4	303
5.2	4936	1.6	277.3	65000	A804_277.3 S3 ME3LB4	A804_277.3 S3 MX3LB4	299	A804_277.3 P100 BE100LB4	A804_277.3 P100 BX100LB4	300
6.0	4247	1.2	238.6	50000	A704_238.6 S3 ME3LB4	A704_238.6 S3 MX3LB4	296	A704_238.6 P100 BE100LB4	A704_238.6 P100 BX100LB4	297
6.2	4141	1.9	232.6	65000	A804_232.6 S3 ME3LB4	A804_232.6 S3 MX3LB4	299	A804_232.6 P100 BE100LB4	A804_232.6 P100 BX100LB4	300
6.4	4030	3.5	226.4	75000	A904_226.4 S3 ME3LB4	A904_226.4 S3 MX3LB4	302	A904_226.4 P100 BE100LB4	A904_226.4 P100 BX100LB4	303
6.5	3921	1.3	220.3	50000	A704_220.3 S3 ME3LB4	A704_220.3 S3 MX3LB4	296	A704_220.3 P100 BE100LB4	A704_220.3 P100 BX100LB4	297
6.7	3822	2.1	214.7	65000	A804_214.7 S3 ME3LB4	A804_214.7 S3 MX3LB4	299	A804_214.7 P100 BE100LB4	A804_214.7 P100 BX100LB4	300
7.8	3273	1.5	183.9	50000	A704_183.9 S3 ME3LB4	A704_183.9 S3 MX3LB4	296	A704_183.9 P100 BE100LB4	A704_183.9 P100 BX100LB4	297
8.4	3121	0.9	171.5	30000	A603_171.5 S3 ME3LB4	A603_171.5 S3 MX3LB4	292	A603_171.5 P100 BE100LB4	A603_171.5 P100 BX100LB4	293
8.4	3049	2.6	171.3	65000	A804_171.3 S3 ME3LB4	A804_171.3 S3 MX3LB4	299	A804_171.3 P100 BE100LB4	A804_171.3 P100 BX100LB4	300
8.5	3022	1.7	169.8	50000	A704_169.8 S3 ME3LB4	A704_169.8 S3 MX3LB4	296	A704_169.8 P100 BE100LB4	A704_169.8 P100 BX100LB4	297



### 3 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
9.2	2854	2.8	156.8	65000	A803_156.8 S3 ME3LB4	A803_156.8 S3 MX3LB4	299	A803_156.8 P100 BE100LB4	A803_156.8 P100 BX100LB4	300
9.2	2840	1.0	156.0	30000	A603_156.0 S3 ME3LB4	A603_156.0 S3 MX3LB4	292	A603_156.0 P100 BE100LB4	A603_156.0 P100 BX100LB4	293
9.4	2797	1.4	153.7	50000	A703_153.7 S3 ME3LB4	A703_153.7 S3 MX3LB4	296	A703_153.7 P100 BE100LB4	A703_153.7 P100 BX100LB4	297
9.9	2634	3.0	144.7	65000	A803_144.7 S3 ME3LB4	A803_144.7 S3 MX3LB4	299	A803_144.7 P100 BE100LB4	A803_144.7 P100 BX100LB4	300
10.0	2622	1.1	144.0	30000	A603_144.0 S3 ME3LB4	A603_144.0 S3 MX3LB4	292	A603_144.0 P100 BE100LB4	A603_144.0 P100 BX100LB4	293
10.2	2582	1.9	141.9	50000	A703_141.9 S3 ME3LB4	A703_141.9 S3 MX3LB4	296	A703_141.9 P100 BE100LB4	A703_141.9 P100 BX100LB4	297
10.8	2426	1.2	133.3	30000	A603_133.3 S3 ME3LB4	A603_133.3 S3 MX3LB4	292	A603_133.3 P100 BE100LB4	A603_133.3 P100 BX100LB4	293
11.0	2378	2.1	130.7	50000	A703_130.7 S3 ME3LB4	A703_130.7 S3 MX3LB4	296	A703_130.7 P100 BE100LB4	A703_130.7 P100 BX100LB4	297
11.5	2286	3.5	125.6	65000	A803_125.6 S3 ME3LB4	A803_125.6 S3 MX3LB4	299	A803_125.6 P100 BE100LB4	A803_125.6 P100 BX100LB4	300
11.6	2255	0.9	123.9	30000	A553_123.9 S3 ME3LB4	A553_123.9 S3 MX3LB4	288	A553_123.9 P100 BE100LB4	A553_123.9 P100 BX100LB4	289
11.7	2239	1.3	123.0	30000	A603_123.0 S3 ME3LB4	A603_123.0 S3 MX3LB4	292	A603_123.0 P100 BE100LB4	A603_123.0 P100 BX100LB4	293
11.9	2195	2.3	120.6	50000	A703_120.6 S3 ME3LB4	A703_120.6 S3 MX3LB4	296	A703_120.6 P100 BE100LB4	A703_120.6 P100 BX100LB4	297
13.4	1962	1.4	107.8	30000	A603_107.8 S3 ME3LB4	A603_107.8 S3 MX3LB4	292	A603_107.8 P100 BE100LB4	A603_107.8 P100 BX100LB4	293
13.8	1897	2.6	104.2	50000	A703_104.2 S3 ME3LB4	A703_104.2 S3 MX3LB4	296	A703_104.2 P100 BE100LB4	A703_104.2 P100 BX100LB4	297
14.2	1845	1.1	101.4	30000	A553_101.4 S3 ME3LB4	A553_101.4 S3 MX3LB4	288	A553_101.4 P100 BE100LB4	A553_101.4 P100 BX100LB4	289
14.5	1811	1.5	99.5	30000	A603_99.5 S3 ME3LB4	A603_99.5 S3 MX3LB4	292	A603_99.5 P100 BE100LB4	A603_99.5 P100 BX100LB4	293
15.0	1751	2.9	96.2	50000	A703_96.2 S3 ME3LB4	A703_96.2 S3 MX3LB4	296	A703_96.2 P100 BE100LB4	A703_96.2 P100 BX100LB4	297
16.1	1630	0.9	89.5	17100	A503_89.5 S3 ME3LB4	A503_89.5 S3 MX3LB4	284	A503_89.5 P100 BE100LB4	A503_89.5 P100 BX100LB4	285
16.7	1572	1.8	86.4	30000	A603_86.4 S3 ME3LB4	A603_86.4 S3 MX3LB4	292	A603_86.4 P100 BE100LB4	A603_86.4 P100 BX100LB4	293
16.8	1564	3.2	85.9	50000	A703_85.9 S3 ME3LB4	A703_85.9 S3 MX3LB4	296	A703_85.9 P100 BE100LB4	A703_85.9 P100 BX100LB4	297
17.7	1482	1.0	81.5	17200	A503_81.5 S3 ME3LB4	A503_81.5 S3 MX3LB4	284	A503_81.5 P100 BE100LB4	A503_81.5 P100 BX100LB4	285
18.1	1451	1.9	79.7	30000	A603_79.7 S3 ME3LB4	A603_79.7 S3 MX3LB4	292	A603_79.7 P100 BE100LB4	A603_79.7 P100 BX100LB4	293
18.1	1447	1.4	79.5	30000	A553_79.5 S3 ME3LB4	A553_79.5 S3 MX3LB4	288	A553_79.5 P100 BE100LB4	A553_79.5 P100 BX100LB4	289
18.2	1444	3.5	79.3	50000	A703_79.3 S3 ME3LB4	A703_79.3 S3 MX3LB4	296	A703_79.3 P100 BE100LB4	A703_79.3 P100 BX100LB4	297
20.5	1281	2.2	70.4	30000	A603_70.4 S3 ME3LB4	A603_70.4 S3 MX3LB4	292	A603_70.4 P100 BE100LB4	A603_70.4 P100 BX100LB4	293
20.5	1278	1.2	70.2	17200	A503_70.2 S3 ME3LB4	A503_70.2 S3 MX3LB4	284	A503_70.2 P100 BE100LB4	A503_70.2 P100 BX100LB4	285
22.2	1183	2.4	65.0	30000	A603_65.0 S3 ME3LB4	A603_65.0 S3 MX3LB4	292	A603_65.0 P100 BE100LB4	A603_65.0 P100 BX100LB4	293
22.4	1171	1.7	64.3	30000	A553_64.3 S3 ME3LB4	A553_64.3 S3 MX3LB4	288	A553_64.3 P100 BE100LB4	A553_64.3 P100 BX100LB4	289
22.5	1163	1.3	63.9	17100	A503_63.9 S3 ME3LB4	A503_63.9 S3 MX3LB4	284	A503_63.9 P100 BE100LB4	A503_63.9 P100 BX100LB4	285
25.3	1034	1.5	56.8	17000	A503_56.8 S3 ME3LB4	A503_56.8 S3 MX3LB4	284	A503_56.8 P100 BE100LB4	A503_56.8 P100 BX100LB4	285
25.9	1012	2.8	55.6	30000	A603_55.6 S3 ME3LB4	A603_55.6 S3 MX3LB4	292	A603_55.6 P100 BE100LB4	A603_55.6 P100 BX100LB4	293
27.9	941	1.6	51.7	16800	A503_51.7 S3 ME3LB4	A503_51.7 S3 MX3LB4	284	A503_51.7 P100 BE100LB4	A503_51.7 P100 BX100LB4	285
28.1	934	3.0	51.3	30000	A603_51.3 S3 ME3LB4	A603_51.3 S3 MX3LB4	292	A603_51.3 P100 BE100LB4	A603_51.3 P100 BX100LB4	293
28.3	927	2.2	51.0	30000	A553_51.0 S3 ME3LB4	A553_51.0 S3 MX3LB4	288	A553_51.0 P100 BE100LB4	A553_51.0 P100 BX100LB4	289
29.8	908	0.9	48.3	12700	A412_48.3 S3 ME3LB4	A412_48.3 S3 MX3LB4	280	A412_48.3 P100 BE100LB4	A412_48.3 P100 BX100LB4	281
32	822	3.4	45.2	30000	A603_45.2 S3 ME3LB4	A603_45.2 S3 MX3LB4	292	A603_45.2 P100 BE100LB4	A603_45.2 P100 BX100LB4	293
32	847	1.0	45.1	12600	A412_45.1 S3 ME3LB4	A412_45.1 S3 MX3LB4	280	A412_45.1 P100 BE100LB4	A412_45.1 P100 BX100LB4	281
32	819	1.8	45.0	16500	A503_45.0 S3 ME3LB4	A503_45.0 S3 MX3LB4	284	A503_45.0 P100 BE100LB4	A503_45.0 P100 BX100LB4	285
35	745	2.0	40.9	16300	A503_40.9 S3 ME3LB4	A503_40.9 S3 MX3LB4	284	A503_40.9 P100 BE100LB4	A503_40.9 P100 BX100LB4	285
36	734	2.7	40.3	30000	A553_40.3 S3 ME3LB4	A553_40.3 S3 MX3LB4	288	A553_40.3 P100 BE100LB4	A553_40.3 P100 BX100LB4	289
39	689	0.9	36.6	8550	A352_36.6 S3 ME3LB4	A352_36.6 S3 MX3LB4	276	A352_36.6 P100 BE100LB4	A352_36.6 P100 BX100LB4	277
40	675	1.2	35.9	12200	A412_35.9 S3 ME3LB4	A412_35.9 S3 MX3LB4	280	A412_35.9 P100 BE100LB4	A412_35.9 P100 BX100LB4	281
40	648	2.3	35.6	16000	A503_35.6 S3 ME3LB4	A503_35.6 S3 MX3LB4	284	A503_35.6 P100 BE100LB4	A503_35.6 P100 BX100LB4	285
43	623	1.0	33.2	8520	A352_33.2 S3 ME3LB4	A352_33.2 S3 MX3LB4	276	A352_33.2 P100 BE100LB4	A352_33.2 P100 BX100LB4	277
44	589	2.5	32.4	15700	A503_32.4 S3 ME3LB4	A503_32.4 S3 MX3LB4	284	A503_32.4 P100 BE100LB4	A503_32.4 P100 BX100LB4	285
51	535	1.1	28.4	8420	A352_28.4 S3 ME3LB4	A352_28.4 S3 MX3LB4	276	A352_28.4 P100 BE100LB4	A352_28.4 P100 BX100LB4	277
51	532	1.4	28.3	11700	A412_28.3 S3 ME3LB4	A412_28.3 S3 MX3LB4	280	A412_28.3 P100 BE100LB4	A412_28.3 P100 BX100LB4	281
54	481	3.1	26.4	15100	A503_26.4 S3 ME3LB4	A503_26.4 S3 MX3LB4	284	A503_26.4 P100 BE100LB4	A503_26.4 P100 BX100LB4	285
56	483	1.2	25.7	8330	A352_25.7 S3 ME3LB4	A352_25.7 S3 MX3LB4	276	A352_25.7 P100 BE100LB4	A352_25.7 P100 BX100LB4	277
60	438	3.4	24.0	14800	A503_24.0 S3 ME3LB4	A503_24.0 S3 MX3LB4	284	A503_24.0 P100 BE100LB4	A503_24.0 P100 BX100LB4	285
63	428	1.0	22.8	4610	A302_22.8 S3 ME3LB4	A302_22.8 S3 MX3LB4	272	A302_22.8 P100 BE100LB4	A302_22.8 P100 BX100LB4	273
64	426	1.6	22.7	11200	A412_22.7 S3 ME3LB4	A412_22.7 S3 MX3LB4	280	A412_22.7 P100 BE100LB4	A412_22.7 P100 BX100LB4	281
64	423	1.4	22.5	8190	A352_22.5 S3 ME3LB4	A352_22.5 S3 MX3LB4	276	A352_22.5 P100 BE100LB4	A352_22.5 P100 BX100LB4	277
69	393	3.1	20.9	15500	A502_20.9 S3 ME3LB4	A502_20.9 S3 MX3LB4	284	A502_20.9 P100 BE100LB4	A502_20.9 P100 BX100LB4	285
70	386	1.1	20.5	4620	A302_20.5 S3 ME3LB4	A302_20.5 S3 MX3LB4	272	A302_20.5 P100 BE100LB4	A302_20.5 P100 BX100LB4	273

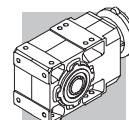


## 3 kW

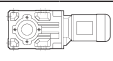



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
70	384	1.6	20.4	8080	A352_20.4 S3 ME3LB4	A352_20.4 S3 MX3LB4	276	A352_20.4 P100 BE100LB4	A352_20.4 P100 BX100LB4	277
80	338	1.2	18.0	4600	A302_18.0 S3 ME3LB4	A302_18.0 S3 MX3LB4	272	A302_18.0 P100 BE100LB4	A302_18.0 P100 BX100LB4	273
81	334	1.9	17.8	10600	A412_17.8 S3 ME3LB4	A412_17.8 S3 MX3LB4	280	A412_17.8 P100 BE100LB4	A412_17.8 P100 BX100LB4	281
85	319	1.9	17.0	7830	A352_17.0 S3 ME3LB4	A352_17.0 S3 MX3LB4	276	A352_17.0 P100 BE100LB4	A352_17.0 P100 BX100LB4	277
88	307	1.3	16.3	4580	A302_16.3 S3 ME3LB4	A302_16.3 S3 MX3LB4	272	A302_16.3 P100 BE100LB4	A302_16.3 P100 BX100LB4	273
89	303	2.0	16.1	10400	A412_16.1 S3 ME3LB4	A412_16.1 S3 MX3LB4	280	A412_16.1 P100 BE100LB4	A412_16.1 P100 BX100LB4	281
93	291	2.1	15.5	7700	A352_15.5 S3 ME3LB4	A352_15.5 S3 MX3LB4	276	A352_15.5 P100 BE100LB4	A352_15.5 P100 BX100LB4	277
102	265	0.9	14.1	2650	A202_14.1 S3 ME3LB4	A202_14.1 S3 MX3LB4	268	A202_14.1 P100 BE100LB4	A202_14.1 P100 BX100LB4	269
105	259	2.3	13.8	9990	A412_13.8 S3 ME3LB4	A412_13.8 S3 MX3LB4	280	A412_13.8 P100 BE100LB4	A412_13.8 P100 BX100LB4	281
106	255	1.5	13.6	4500	A302_13.6 S3 ME3LB4	A302_13.6 S3 MX3LB4	272	A302_13.6 P100 BE100LB4	A302_13.6 P100 BX100LB4	273
110	246	2.4	13.1	7450	A352_13.1 S3 ME3LB4	A352_13.1 S3 MX3LB4	276	A352_13.1 P100 BE100LB4	A352_13.1 P100 BX100LB4	277
120	225	0.9	12.0	2670	A202_12.0 S3 ME3LB4	A202_12.0 S3 MX3LB4	268	A202_12.0 P100 BE100LB4	A202_12.0 P100 BX100LB4	269
122	221	1.4	11.8	4400	A302_11.8 S3 ME3LB4	A302_11.8 S3 MX3LB4	272	A302_11.8 P100 BE100LB4	A302_11.8 P100 BX100LB4	273
122	221	1.8	11.8	7410	A352_11.8 S3 ME3LB4	A352_11.8 S3 MX3LB4	276	A352_11.8 P100 BE100LB4	A352_11.8 P100 BX100LB4	277
123	221	2.5	11.7	9580	A412_11.7 S3 ME3LB4	A412_11.7 S3 MX3LB4	280	A412_11.7 P100 BE100LB4	A412_11.7 P100 BX100LB4	281
125	216	1.5	23.1	2690	A202_23.1 S3 ME3LB2		268	A202_23.1 P100 BE100L2		269
135	200	2.0	10.6	7230	A352_10.6 S3 ME3LB4	A352_10.6 S3 MX3LB4	276	A352_10.6 P100 BE100LB4	A352_10.6 P100 BX100LB4	277
138	197	1.7	10.5	4350	A302_10.5 S3 ME3LB4	A302_10.5 S3 MX3LB4	272	A302_10.5 P100 BE100LB4	A302_10.5 P100 BX100LB4	273
139	194	1.2	10.3	2690	A202_10.3 S3 ME3LB4	A202_10.3 S3 MX3LB4	268	A202_10.3 P100 BE100LB4	A202_10.3 P100 BX100LB4	269
142	190	2.8	10.1	9230	A412_10.1 S3 ME3LB4	A412_10.1 S3 MX3LB4	280	A412_10.1 P100 BE100LB4	A412_10.1 P100 BX100LB4	281
154	176	1.2	9.4	2670	A202_9.4 S3 ME3LB4	A202_9.4 S3 MX3LB4	268	A202_9.4 P100 BE100LB4	A202_9.4 P100 BX100LB4	269
155	175	1.7	9.3	4240	A302_9.3 S3 ME3LB4	A302_9.3 S3 MX3LB4	272	A302_9.3 P100 BE100LB4	A302_9.3 P100 BX100LB4	273
155	175	2.3	9.3	7000	A352_9.3 S3 ME3LB4	A352_9.3 S3 MX3LB4	276	A352_9.3 P100 BE100LB4	A352_9.3 P100 BX100LB4	277
157	173	3.2	9.2	8980	A412_9.2 S3 ME3LB4	A412_9.2 S3 MX3LB4	280	A412_9.2 P100 BE100LB4	A412_9.2 P100 BX100LB4	281
170	159	1.9	8.5	4170	A302_8.5 S3 ME3LB4	A302_8.5 S3 MX3LB4	272	A302_8.5 P100 BE100LB4	A302_8.5 P100 BX100LB4	273
170	159	2.4	8.5	6840	A352_8.5 S3 ME3LB4	A352_8.5 S3 MX3LB4	276	A352_8.5 P100 BE100LB4	A352_8.5 P100 BX100LB4	277
172	157	1.3	8.4	2650	A202_8.4 S3 ME3LB4	A202_8.4 S3 MX3LB4	268	A202_8.4 P100 BE100LB4	A202_8.4 P100 BX100LB4	269
173	157	3.5	8.3	8740	A412_8.3 S3 ME3LB4	A412_8.3 S3 MX3LB4	280	A412_8.3 P100 BE100LB4	A412_8.3 P100 BX100LB4	281
198	137	1.5	7.3	2620	A202_7.3 S3 ME3LB4	A202_7.3 S3 MX3LB4	268	A202_7.3 P100 BE100LB4	A202_7.3 P100 BX100LB4	269
200	136	1.0	7.2	2220	A102_7.2 S3 ME3LB4	A102_7.2 S3 MX3LB4	264	A102_7.2 P100 BE100LB4	A102_7.2 P100 BX100LB4	265
205	132	2.3	7.0	4030	A302_7.0 S3 ME3LB4	A302_7.0 S3 MX3LB4	272	A302_7.0 P100 BE100LB4	A302_7.0 P100 BX100LB4	273
205	132	2.8	7.0	6520	A352_7.0 S3 ME3LB4	A352_7.0 S3 MX3LB4	276	A352_7.0 P100 BE100LB4	A352_7.0 P100 BX100LB4	277
220	123	1.7	6.5	2590	A202_6.5 S3 ME3LB4	A202_6.5 S3 MX3LB4	268	A202_6.5 P100 BE100LB4	A202_6.5 P100 BX100LB4	269
225	121	2.5	6.4	3950	A302_6.4 S3 ME3LB4	A302_6.4 S3 MX3LB4	272	A302_6.4 P100 BE100LB4	A302_6.4 P100 BX100LB4	273
225	121	2.9	6.4	6360	A352_6.4 S3 ME3LB4	A352_6.4 S3 MX3LB4	276	A352_6.4 P100 BE100LB4	A352_6.4 P100 BX100LB4	277
227	119	1.2	6.3	2640	A102_6.3 S3 ME3LB4	A102_6.3 S3 MX3LB4	264	A102_6.3 P100 BE100LB4	A102_6.3 P100 BX100LB4	265
245	110	2.7	11.8	3870	A302_11.8 S3 ME3LB2		272	A302_11.8 P100 BE100L2		273
263	103	1.4	5.5	2200	A102_5.5 S3 ME3LB4	A102_5.5 S3 MX3LB4	264	A102_5.5 P100 BE100LB4	A102_5.5 P100 BX100LB4	265
266	102	2.9	5.4	3810	A302_5.4 S3 ME3LB4	A302_5.4 S3 MX3LB4	272	A302_5.4 P100 BE100LB4	A302_5.4 P100 BX100LB4	273
266	102	3.3	5.4	6070	A352_5.4 S3 ME3LB4	A352_5.4 S3 MX3LB4	276	A352_5.4 P100 BE100LB4	A352_5.4 P100 BX100LB4	277
269	101	2.1	5.4	2520	A202_5.4 S3 ME3LB4	A202_5.4 S3 MX3LB4	268	A202_5.4 P100 BE100LB4	A202_5.4 P100 BX100LB4	269
279	97	1.9	10.3	2500	A202_10.3 S3 ME3LB2		268	A202_10.3 P100 BE100L2		269
309	87	3.4	9.3	3670	A302_9.3 S3 ME3LB2		272	A302_9.3 P100 BE100L2		273
344	78	2.7	8.4	2410	A202_8.4 S3 ME3LB2		268	A202_8.4 P100 BE100L2		269
399	67	2.1	7.2	2090	A102_7.2 S3 ME3LB2		264	A102_7.2 P100 BE100L2		265
455	59	2.3	6.3	2430	A102_6.3 S3 ME3LB2		264	A102_6.3 P100 BE100L2		265
527	51	2.6	5.5	1990	A102_5.5 S3 ME3LB2		264	A102_5.5 P100 BE100L2		265



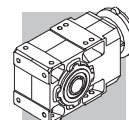




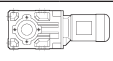



## 4 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
35	1006	1.5	40.9	14800	A503_40.9 S4 ME4SA4	A503_40.9 S4 MX4SA4	284	A503_40.9 P112 BE112M4	A503_40.9 P112 BX112M4	285
36	990	2.0	40.3	30000	A553_40.3 S4 ME4SA4	A553_40.3 S4 MX4SA4	288	A553_40.3 P112 BE112M4	A553_40.3 P112 BX112M4	289
40	875	1.7	35.6	14700	A503_35.6 S4 ME4SA4	A503_35.6 S4 MX4SA4	284	A503_35.6 P112 BE112M4	A503_35.6 P112 BX112M4	285
42	843	3.3	34.3	30000	A603_34.3 S4 ME4SA4	A603_34.3 S4 MX4SA4	292	A603_34.3 P112 BE112M4	A603_34.3 P112 BX112M4	293
44	796	1.9	32.4	14500	A503_32.4 S4 ME4SA4	A503_32.4 S4 MX4SA4	284	A503_32.4 P112 BE112M4	A503_32.4 P112 BX112M4	285
48	735	2.7	29.9	30000	A553_29.9 S4 ME4SA4	A553_29.9 S4 MX4SA4	288	A553_29.9 P112 BE112M4	A553_29.9 P112 BX112M4	289
51	719	1.0	28.3	10900	A412_28.3 S4 ME4SA4	A412_28.3 S4 MX4SA4	280	A412_28.3 P112 BE112M4	A412_28.3 P112 BX112M4	281
54	650	2.3	26.4	14100	A503_26.4 S4 ME4SA4	A503_26.4 S4 MX4SA4	284	A503_26.4 P112 BE112M4	A503_26.4 P112 BX112M4	285
56	652	0.9	25.7	7420				A352_25.7 P112 BE112M4	A352_25.7 P112 BX112M4	277
60	591	2.5	24.0	13900	A503_24.0 S4 ME4SA4	A503_24.0 S4 MX4SA4	284	A503_24.0 P112 BE112M4	A503_24.0 P112 BX112M4	285
61	585	3.3	23.8	30000	A553_23.8 S4 ME4SA4	A553_23.8 S4 MX4SA4	288	A553_23.8 P112 BE112M4	A553_23.8 P112 BX112M4	289
64	576	1.2	22.7	10500	A412_22.7 S4 ME4SA4	A412_22.7 S4 MX4SA4	280	A412_22.7 P112 BE112M4	A412_22.7 P112 BX112M4	281
64	571	1.1	22.5	7400				A352_22.5 P112 BE112M4	A352_22.5 P112 BX112M4	277
69	531	2.3	20.9	15100	A502_20.9 S4 ME4SA4	A502_20.9 S4 MX4SA4	284	A502_20.9 P112 BE112M4	A502_20.9 P112 BX112M4	285
70	518	1.2	20.4	7360				A352_20.4 P112 BE112M4	A352_20.4 P112 BX112M4	277
80	456	0.9	18.0	3930				A302_18.0 P112 BE112M4	A302_18.0 P112 BX112M4	273
81	451	1.4	17.8	10100	A412_17.8 S4 ME4SA4	A412_17.8 S4 MX4SA4	280	A412_17.8 P112 BE112M4	A412_17.8 P112 BX112M4	281
85	430	1.4	17.0	7240				A352_17.0 P112 BE112M4	A352_17.0 P112 BX112M4	277
87	421	2.9	16.6	14200	A502_16.6 S4 ME4SA4	A502_16.6 S4 MX4SA4	284	A502_16.6 P112 BE112M4	A502_16.6 P112 BX112M4	285
88	415	0.9	16.3	3970				A302_16.3 P112 BE112M4	A302_16.3 P112 BX112M4	273
89	408	1.5	16.1	9940	A412_16.1 S4 ME4SA4	A412_16.1 S4 MX4SA4	280	A412_16.1 P112 BE112M4	A412_16.1 P112 BX112M4	281
93	393	1.5	15.5	7160				A352_15.5 P112 BE112M4	A352_15.5 P112 BX112M4	277
105	349	1.7	13.8	9610	A412_13.8 S4 ME4SA4	A412_13.8 S4 MX4SA4	280	A412_13.8 P112 BE112M4	A412_13.8 P112 BX112M4	281
106	344	1.1	13.6	4000				A302_13.6 P112 BE112M4	A302_13.6 P112 BX112M4	273
110	333	3.3	13.1	13300	A502_13.1 S4 ME4SA4	A502_13.1 S4 MX4SA4	284	A502_13.1 P112 BE112M4	A502_13.1 P112 BX112M4	285
110	332	1.8	13.1	7000				A352_13.1 P112 BE112M4	A352_13.1 P112 BX112M4	277
122	299	1.0	11.8	3960				A302_11.8 P112 BE112M4	A302_11.8 P112 BX112M4	273
122	299	1.3	11.8	7050	A352_11.8 S4 ME4SA4	A352_11.8 S4 MX4SA4	276	A352_11.8 P112 BE112M4	A352_11.8 P112 BX112M4	277
123	298	1.8	11.7	9260	A412_11.7 S4 ME4SA4	A412_11.7 S4 MX4SA4	280	A412_11.7 P112 BE112M4	A412_11.7 P112 BX112M4	281
127	282	1.2	22.8	3980				A302_22.8 P112 BE112M2		273
135	270	1.5	10.6	6910	A352_10.6 S4 ME4SA4	A352_10.6 S4 MX4SA4	276	A352_10.6 P112 BE112M4	A352_10.6 P112 BX112M4	277
138	265	1.3	10.5	3970				A302_10.5 P112 BE112M4	A302_10.5 P112 BX112M4	273
142	257	2.1	10.1	8960	A412_10.1 S4 ME4SA4	A412_10.1 S4 MX4SA4	280	A412_10.1 P112 BE112M4	A412_10.1 P112 BX112M4	281
155	236	1.3	9.3	3900				A302_9.3 P112 BE112M4	A302_9.3 P112 BX112M4	273
155	236	1.7	9.3	6730	A352_9.3 S4 ME4SA4	A352_9.3 S4 MX4SA4	276	A352_9.3 P112 BE112M4	A352_9.3 P112 BX112M4	277
157	233	2.4	9.2	8740	A412_9.2 S4 ME4SA4	A412_9.2 S4 MX4SA4	280	A412_9.2 P112 BE112M4	A412_9.2 P112 BX112M4	281
170	215	1.4	8.5	3860				A302_8.5 P112 BE112M4	A302_8.5 P112 BX112M4	273
170	215	1.8	8.5	6590	A352_8.5 S4 ME4SA4	A352_8.5 S4 MX4SA4	276	A352_8.5 P112 BE112M4	A352_8.5 P112 BX112M4	277
172	212	1.0	8.4	2300				A202_8.4 P112 BE112M4	A202_8.4 P112 BX112M4	269
173	211	2.6	8.3	8520	A412_8.3 S4 ME4SA4	A412_8.3 S4 MX4SA4	280	A412_8.3 P112 BE112M4	A412_8.3 P112 BX112M4	281
198	185	1.1	7.3	2310				A202_7.3 P112 BE112M4	A202_7.3 P112 BX112M4	269
202	181	3.0	7.1	8180	A412_7.1 S4 ME4SA4	A412_7.1 S4 MX4SA4	280	A412_7.1 P112 BE112M4	A412_7.1 P112 BX112M4	281
205	178	1.7	7.0	3770				A302_7.0 P112 BE112M4	A302_7.0 P112 BX112M4	273
205	178	2.1	7.0	6310	A352_7.0 S4 ME4SA4	A352_7.0 S4 MX4SA4	276	A352_7.0 P112 BE112M4	A352_7.0 P112 BX112M4	277
220	166	1.3	6.5	2310				A202_6.5 P112 BE112M4	A202_6.5 P112 BX112M4	269
225	163	1.8	6.4	3720				A302_6.4 P112 BE112M4	A302_6.4 P112 BX112M4	273
225	163	2.2	6.4	6180	A352_6.4 S4 ME4SA4	A352_6.4 S4 MX4SA4	276	A352_6.4 P112 BE112M4	A352_6.4 P112 BX112M4	277
263	139	1.0	5.5	1910	A102_5.5 S4 ME4SA4	A102_5.5 S4 MX4SA4	264	A102_5.5 P112 BE112M4	A102_5.5 P112 BX112M4	265
266	137	2.2	5.4	3610				A302_5.4 P112 BE112M4	A302_5.4 P112 BX112M4	273
266	137	2.5	5.4	5920	A352_5.4 S4 ME4SA4	A352_5.4 S4 MX4SA4	276	A352_5.4 P112 BE112M4	A352_5.4 P112 BX112M4	277
269	136	1.5	5.4	2300				A202_5.4 P112 BE112M4	A202_5.4 P112 BX112M4	269
273	132	3.0	10.6	5850	A352_10.6 S4 ME4SA2		276	A352_10.6 P112 BE112M2		277
311	115	3.5	9.3	5650	A352_9.3 S4 ME4SA2		276	A352_9.3 P112 BE112M2		277
346	104	2.1	8.4	2230				A202_8.4 P112 BE112M2		269
413	87	3.4	7.0	3280				A302_7.0 P112 BE112M2		273
458	78	1.8	6.3	2240				A102_6.3 P112 BE112M2		265
542	66	2.9	5.4	2080				A202_5.4 P112 BE112M2		269

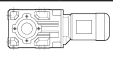







## 5.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
49	981	2.0	29.9	30000	A553_29.9 S4 ME4SB4	A553_29.9 S4 MX4SB4	288	A553_29.9 P132 BE132S4	A553_29.9 P132 BX132S4	289
52	912	3.1	27.9	30000	A603_27.9 S4 ME4SB4	A603_27.9 S4 MX4SB4	292	A603_27.9 P132 BE132S4	A603_27.9 P132 BX132S4	293
55	866	1.7	26.4	12600	A503_26.4 S4 ME4SB4	A503_26.4 S4 MX4SB4	284	A503_26.4 P132 BE132S4	A503_26.4 P132 BX132S4	285
57	842	3.3	25.7	30000	A603_25.7 S4 ME4SB4	A603_25.7 S4 MX4SB4	292	A603_25.7 P132 BE132S4	A603_25.7 P132 BX132S4	293
61	788	1.9	24.0	12500	A503_24.0 S4 ME4SB4	A503_24.0 S4 MX4SB4	284	A503_24.0 P132 BE132S4	A503_24.0 P132 BX132S4	285
61	779	2.5	23.8	29800	A553_23.8 S4 ME4SB4	A553_23.8 S4 MX4SB4	288	A553_23.8 P132 BE132S4	A553_23.8 P132 BX132S4	289
70	708	1.7	20.9	14400	A502_20.9 S4 ME4SB4	A502_20.9 S4 MX4SB4	284	A502_20.9 P132 BE132S4	A502_20.9 P132 BX132S4	285
71	697	2.9	20.6	30000	A602_20.6 S4 ME4SB4	A602_20.6 S4 MX4SB4	292	A602_20.6 P132 BE132S4	A602_20.6 P132 BX132S4	293
76	651	2.8	19.2	29300	A552_19.2 S4 ME4SB4	A552_19.2 S4 MX4SB4	288	A552_19.2 P132 BE132S4	A552_19.2 P132 BX132S4	289
82	601	1.0	17.8	9280	A412_17.8 S4 ME4SB4	A412_17.8 S4 MX4SB4	280	A412_17.8 P132 BE132S4	A412_17.8 P132 BX132S4	281
87	566	3.5	16.7	30000	A602_16.7 S4 ME4SB4	A602_16.7 S4 MX4SB4	292	A602_16.7 P132 BE132S4	A602_16.7 P132 BX132S4	293
88	561	2.1	16.6	13600	A502_16.6 S4 ME4SB4	A502_16.6 S4 MX4SB4	284	A502_16.6 P132 BE132S4	A502_16.6 P132 BX132S4	285
91	545	1.1	16.1	9160	A412_16.1 S4 ME4SB4	A412_16.1 S4 MX4SB4	280	A412_16.1 P132 BE132S4	A412_16.1 P132 BX132S4	281
93	531	3.4	15.7	27700	A552_15.7 S4 ME4SB4	A552_15.7 S4 MX4SB4	288	A552_15.7 P132 BE132S4	A552_15.7 P132 BX132S4	289
106	466	1.3	13.8	8940	A412_13.8 S4 ME4SB4	A412_13.8 S4 MX4SB4	280	A412_13.8 P132 BE132S4	A412_13.8 P132 BX132S4	281
111	444	2.5	13.1	12800	A502_13.1 S4 ME4SB4	A502_13.1 S4 MX4SB4	284	A502_13.1 P132 BE132S4	A502_13.1 P132 BX132S4	285
124	397	1.4	11.7	8670	A412_11.7 S4 ME4SB4	A412_11.7 S4 MX4SB4	280	A412_11.7 P132 BE132S4	A412_11.7 P132 BX132S4	281
124	399	1.0	11.8	6450	A352_11.8 S4 ME4SB4	A352_11.8 S4 MX4SB4	276	A352_11.8 P132 BE132S4	A352_11.8 P132 BX132S4	277
138	360	1.1	10.6	6360	A352_10.6 S4 ME4SB4	A352_10.6 S4 MX4SB4	276	A352_10.6 P132 BE132S4	A352_10.6 P132 BX132S4	277
144	343	1.6	10.1	8440	A412_10.1 S4 ME4SB4	A412_10.1 S4 MX4SB4	280	A412_10.1 P132 BE132S4	A412_10.1 P132 BX132S4	281
150	329	3.0	9.7	11800	A502_9.7 S4 ME4SB4	A502_9.7 S4 MX4SB4	284	A502_9.7 P132 BE132S4	A502_9.7 P132 BX132S4	285
157	315	1.3	9.3	6240	A352_9.3 S4 ME4SB4	A352_9.3 S4 MX4SB4	276	A352_9.3 P132 BE132S4	A352_9.3 P132 BX132S4	277
159	311	1.8	9.2	8250	A412_9.2 S4 ME4SB4	A412_9.2 S4 MX4SB4	280	A412_9.2 P132 BE132S4	A412_9.2 P132 BX132S4	281
173	286	1.3	8.5	6140	A352_8.5 S4 ME4SB4	A352_8.5 S4 MX4SB4	276	A352_8.5 P132 BE132S4	A352_8.5 P132 BX132S4	277
175	282	2.0	8.3	8080	A412_8.3 S4 ME4SB4	A412_8.3 S4 MX4SB4	280	A412_8.3 P132 BE132S4	A412_8.3 P132 BX132S4	281
205	241	2.3	7.1	7790	A412_7.1 S4 ME4SB4	A412_7.1 S4 MX4SB4	280	A412_7.1 P132 BE132S4	A412_7.1 P132 BX132S4	281
208	238	1.6	7.0	5930	A352_7.0 S4 ME4SB4	A352_7.0 S4 MX4SB4	276	A352_7.0 P132 BE132S4	A352_7.0 P132 BX132S4	277
228	217	1.6	6.4	5820	A352_6.4 S4 ME4SB4	A352_6.4 S4 MX4SB4	276	A352_6.4 P132 BE132S4	A352_6.4 P132 BX132S4	277
249	198	2.8	11.7	7430	A412_11.7 S4 ME4SB2		280	A412_11.7 P132 BE132SA2		281
270	183	1.9	5.4	5610	A352_5.4 S4 ME4SB4	A352_5.4 S4 MX4SB4	276	A352_5.4 P132 BE132S4	A352_5.4 P132 BX132S4	277
289	171	2.5	10.1	7170	A412_10.1 S4 ME4SB2		280	A412_10.1 P132 BE132SA2		281
416	119	3.1	7.0	5060	A352_7.0 S4 ME4SB2		276	A352_7.0 P132 BE132SA2		277

## 7.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
4.1	15516	0.9	355.8	75000	A904_355.8 S4 ME4LA4	A904_355.8 S4 MX4LA4	302	A904_355.8 P132 BE132MA4	A904_355.8 P132 BX132MA4	303
4.8	13296	1.1	304.9	75000	A904_304.9 S4 ME4LA4	A904_304.9 S4 MX4LA4	302	A904_304.9 P132 BE132MA4	A904_304.9 P132 BX132MA4	303
5.2	12273	1.1	281.4	75000	A904_281.4 S4 ME4LA4	A904_281.4 S4 MX4LA4	302	A904_281.4 P132 BE132MA4	A904_281.4 P132 BX132MA4	303
6.4	9875	1.4	226.4	75000	A904_226.4 S4 ME4LA4	A904_226.4 S4 MX4LA4	302	A904_226.4 P132 BE132MA4	A904_226.4 P132 BX132MA4	303
7.0	9115	1.5	209.0	75000	A904_209.0 S4 ME4LA4	A904_209.0 S4 MX4LA4	302	A904_209.0 P132 BE132MA4	A904_209.0 P132 BX132MA4	303
8.1	7849	1.8	180.0	75000	A904_180.0 S4 ME4LA4	A904_180.0 S4 MX4LA4	302	A904_180.0 P132 BE132MA4	A904_180.0 P132 BX132MA4	303
8.5	7470	1.1	171.3	65000	A804_171.3 S4 ME4LA4	A804_171.3 S4 MX4LA4	299	A804_171.3 P132 BE132MA4	A804_171.3 P132 BX132MA4	300
8.8	7245	1.9	166.1	75000	A904_166.1 S4 ME4LA4	A904_166.1 S4 MX4LA4	302	A904_166.1 P132 BE132MA4	A904_166.1 P132 BX132MA4	303
9.3	6992	1.1	156.8	65000	A803_156.8 S4 ME4LA4	A803_156.8 S4 MX4LA4	299	A803_156.8 P132 BE132MA4	A803_156.8 P132 BX132MA4	300
9.6	6733	2.0	151.0	75000	A903_151.0 S4 ME4LA4	A903_151.0 S4 MX4LA4	302	A903_151.0 P132 BE132MA4	A903_151.0 P132 BX132MA4	303
10.1	6454	1.2	144.7	65000	A803_144.7 S4 ME4LA4	A803_144.7 S4 MX4LA4	299	A803_144.7 P132 BE132MA4	A803_144.7 P132 BX132MA4	300
10.4	6216	2.1	139.4	75000	A903_139.4 S4 ME4LA4	A903_139.4 S4 MX4LA4	302	A903_139.4 P132 BE132MA4	A903_139.4 P132 BX132MA4	303
11.5	5647	2.3	126.6	75000	A903_126.6 S4 ME4LA4	A903_126.6 S4 MX4LA4	302	A903_126.6 P132 BE132MA4	A903_126.6 P132 BX132MA4	303
11.6	5601	1.4	125.6	65000	A803_125.6 S4 ME4LA4	A803_125.6 S4 MX4LA4	299	A803_125.6 P132 BE132MA4	A803_125.6 P132 BX132MA4	300
12.1	5378	0.9	120.6	50000	A703_120.6 S4 ME4LA4	A703_120.6 S4 MX4LA4	296	A703_120.6 P132 BE132MA4	A703_120.6 P132 BX132MA4	297
12.4	5213	2.7	116.9	75000	A903_116.9 S4 ME4LA4	A903_116.9 S4 MX4LA4	302	A903_116.9 P132 BE132MA4	A903_116.9 P132 BX132MA4	303
12.5	5170	1.5	116.0	65000	A803_116.0 S4 ME4LA4	A803_116.0 S4 MX4LA4	299	A803_116.0 P132 BE132MA4	A803_116.0 P132 BX132MA4	300
13.6	4763	2.9	106.8	75000	A903_106.8 S4 ME4LA4	A903_106.8 S4 MX4LA4	302	A903_106.8 P132 BE132MA4	A903_106.8 P132 BX132MA4	303





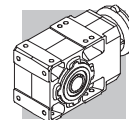


## 9.2 kW

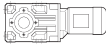


n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
87	960	2.1	16.7	30000	A602_16.7 S4 ME4LB4	A602_16.7 S5 MX5SA4	292	A602_16.7 P132 BE132MB4	A602_16.7 P160 BX160MA4	293
88	950	1.3	16.6	12500	A502_16.6 S4 ME4LB4	A502_16.6 S5 MX5SA4	284	A502_16.6 P132 BE132MB4	A502_16.6 P160 BX160MA4	285
92	899	2.0	15.7	27000	A552_15.7 S4 ME4LB4	A552_15.7 S5 MX5SA4	288	A552_15.7 P132 BE132MB4	A552_15.7 P160 BX160MA4	289
111	752	1.5	13.1	11900	A502_13.1 S4 ME4LB4	A502_13.1 S5 MX5SA4	284	A502_13.1 P132 BE132MB4	A502_13.1 P160 BX160MA4	285
111	750	2.4	13.1	25800	A552_13.1 S4 ME4LB4	A552_13.1 S5 MX5SA4	288	A552_13.1 P132 BE132MB4	A552_13.1 P160 BX160MA4	289
114	728	2.7	12.7	30000	A602_12.7 S4 ME4LB4	A602_12.7 S5 MX5SA4	292	A602_12.7 P132 BE132MB4	A602_12.7 P160 BX160MA4	293
123	651	2.5	23.8	24100	A553_23.8 S4 ME4LB2	A553_23.8 S5 ME4LB2	288	A553_23.8 P132 BE132MB2	A553_23.8 P160 BE132MB2	289
140	594	3.0	10.4	24200	A552_10.4 S4 ME4LB4	A552_10.4 S5 MX5SA4	288	A552_10.4 P132 BE132MB4	A552_10.4 P160 BX160MA4	289
141	592	3.4	10.3	30000	A602_10.3 S4 ME4LB4	A602_10.3 S5 MX5SA4	292	A602_10.3 P132 BE132MB4	A602_10.3 P160 BX160MA4	293
143	581	0.9	10.1	7340	A412_10.1 S4 ME4LB4	A502_9.7 S5 MX5SA4	280	A412_10.1 P132 BE132MB4	A502_9.7 P160 BX160MA4	281
149	558	1.8	9.7	11200	A502_9.7 S4 ME4LB4		284	A502_9.7 P132 BE132MB4		285
158	527	1.0	9.2	7250	A412_9.2 S4 ME4LB4		280	A412_9.2 P132 BE132MB4		281
174	478	1.2	8.3	7170	A412_8.3 S4 ME4LB4		280	A412_8.3 P132 BE132MB4		281
187	444	2.1	7.7	10600	A502_7.7 S4 ME4LB4	A502_7.7 S5 MX5SA4	284	A502_7.7 P132 BE132MB4	A502_7.7 P160 BX160MA4	285
204	408	1.3	7.1	7020	A412_7.1 S4 ME4LB4	A502_7.7 S5 MX5SA4	280	A412_7.1 P132 BE132MB4	A502_7.7 P160 BX160MA4	281
206	403	0.9	7.0	5110	A352_7.0 S4 ME4LB4		276	A352_7.0 P132 BE132MB4		277
226	368	1.0	6.4	5070	A352_6.4 S4 ME4LB4		276	A352_6.4 P132 BE132MB4		277
268	310	1.1	5.4	4980	A352_5.4 S4 ME4LB4		276	A352_5.4 P132 BE132MB4		277
276	301	1.8	5.2	6660	A412_5.2 S4 ME4LB4	A502_7.7 S5 MX5SA4	280	A412_5.2 P132 BE132MB4	A502_7.7 P160 BX160MA4	281
317	260	2.0	9.2	6480	A412_9.2 S4 ME4LB2		280	A412_9.2 P132 BE132MB2		281
377	219	3.4	7.7	8780	A502_7.7 S4 ME4LB2		284	A502_7.7 P132 BE132MB2		285
539	153	2.2	5.4	4410	A352_5.4 S4 ME4LB2		276	A352_5.4 P132 BE132MB2		277
557	148	3.0	5.2	5690	A412_5.2 S4 ME4LB2	280	A412_5.2 P132 BE132MB2	281		

## 11 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
6.5	14510	1.0	226.4	75000	A904_226.4 S5 ME5SA4	A904_226.4 S5 MX5SB4	302	A904_226.4 P160 BE160M4	A904_226.4 P160 BX160MB4	303
7.0	13393	1.0	209.0	75000	A904_209.0 S5 ME5SA4	A904_209.0 S5 MX5SB4	302	A904_209.0 P160 BE160M4	A904_209.0 P160 BX160MB4	303
8.2	11533	1.2	180.0	75000	A904_180.0 S5 ME5SA4	A904_180.0 S5 MX5SB4	302	A904_180.0 P160 BE160M4	A904_180.0 P160 BX160MB4	303
8.8	10645	1.3	166.1	75000	A904_166.1 S5 ME5SA4	A904_166.1 S5 MX5SB4	302	A904_166.1 P160 BE160M4	A904_166.1 P160 BX160MB4	303
9.7	9894	1.4	151.0	75000	A903_151.0 S5 ME5SA4	A903_151.0 S5 MX5SB4	302	A903_151.0 P160 BE160M4	A903_151.0 P160 BX160MB4	303
10.5	9133	1.4	139.4	75000	A903_139.4 S5 ME5SA4	A903_139.4 S5 MX5SB4	302	A903_139.4 P160 BE160M4	A903_139.4 P160 BX160MB4	303
11.6	8298	1.6	126.6	75000	A903_126.6 S5 ME5SA4	A903_126.6 S5 MX5SB4	302	A903_126.6 P160 BE160M4	A903_126.6 P160 BX160MB4	303
11.7	8231	1.0	125.6	65000	A803_125.6 S5 ME5SA4	A803_125.6 S5 MX5SB4	299	A803_125.6 P160 BE160M4	A803_125.6 P160 BX160MB4	300
12.6	7660	1.8	116.9	75000	A903_116.9 S5 ME5SA4	A903_116.9 S5 MX5SB4	302	A903_116.9 P160 BE160M4	A903_116.9 P160 BX160MB4	303
12.7	7597	1.1	116.0	65000	A803_116.0 S5 ME5SA4	A803_116.0 S5 MX5SB4	299	A803_116.0 P160 BE160M4	A803_116.0 P160 BX160MB4	300
13.8	6999	2.0	106.8	75000	A903_106.8 S5 ME5SA4	A903_106.8 S5 MX5SB4	302	A903_106.8 P160 BE160M4	A903_106.8 P160 BX160MB4	303
14.1	6816	1.2	104.0	65000	A803_104.0 S5 ME5SA4	A803_104.0 S5 MX5SB4	299	A803_104.0 P160 BE160M4	A803_104.0 P160 BX160MB4	300
14.9	6460	2.2	98.6	75000	A903_98.6 S5 ME5SA4	A903_98.6 S5 MX5SB4	302	A903_98.6 P160 BE160M4	A903_98.6 P160 BX160MB4	303
15.3	6292	1.3	96.0	65000	A803_96.0 S5 ME5SA4	A803_96.0 S5 MX5SB4	299	A803_96.0 P160 BE160M4	A803_96.0 P160 BX160MB4	300
16.5	5843	1.4	89.2	65000	A803_89.2 S5 ME5SA4	A803_89.2 S5 MX5SB4	299	A803_89.2 P160 BE160M4	A803_89.2 P160 BX160MB4	300
16.9	5705	2.5	87.1	75000	A903_87.1 S5 ME5SA4	A903_87.1 S5 MX5SB4	302	A903_87.1 P160 BE160M4	A903_87.1 P160 BX160MB4	303
17.9	5394	1.5	82.3	64500	A803_82.3 S5 ME5SA4	A803_82.3 S5 MX5SB4	299	A803_82.3 P160 BE160M4	A803_82.3 P160 BX160MB4	300
18.3	5266	2.7	80.4	75000	A903_80.4 S5 ME5SA4	A903_80.4 S5 MX5SB4	302	A903_80.4 P160 BE160M4	A903_80.4 P160 BX160MB4	303
18.5	5198	1.0	79.3	50000	A703_79.3 S5 ME5SA4	A703_79.3 S5 MX5SB4	296	A703_79.3 P160 BE160M4	A703_79.3 P160 BX160MB4	297
19.7	4880	2.9	74.5	75000	A903_74.5 S5 ME5SA4	A903_74.5 S5 MX5SB4	302	A903_74.5 P160 BE160M4	A903_74.5 P160 BX160MB4	303
20.3	4752	1.1	72.5	50000	A703_72.5 S5 ME5SA4	A703_72.5 S5 MX5SB4	296	A703_72.5 P160 BE160M4	A703_72.5 P160 BX160MB4	297
20.3	4742	1.7	72.4	63200	A803_72.4 S5 ME5SA4	A803_72.4 S5 MX5SB4	299	A803_72.4 P160 BE160M4	A803_72.4 P160 BX160MB4	300
21.4	4505	3.1	68.8	75000	A903_68.8 S5 ME5SA4	A903_68.8 S5 MX5SB4	302	A903_68.8 P160 BE160M4	A903_68.8 P160 BX160MB4	303
22.0	4386	1.1	66.9	50000	A703_66.9 S5 ME5SA4	A703_66.9 S5 MX5SB4	296	A703_66.9 P160 BE160M4	A703_66.9 P160 BX160MB4	297

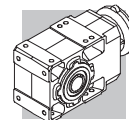


# 11 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
22.0	4377	1.8	66.8	62200	A803_66.8 S5 ME5SA4	A803_66.8 S5 MX5SB4	299	A803_66.8 P160 BE160M4	A803_66.8 P160 BX160MB4	300
24.6	3917	2.0	59.8	60900	A803_59.8 S5 ME5SA4	A803_59.8 S5 MX5SB4	299	A803_59.8 P160 BE160M4	A803_59.8 P160 BX160MB4	300
24.7	3906	3.6	59.6	75000	A903_59.6 S5 ME5SA4	A903_59.6 S5 MX5SB4	302	A903_59.6 P160 BE160M4	A903_59.6 P160 BX160MB4	303
25.5	3778	1.3	57.7	50000	A703_57.7 S5 ME5SA4	A703_57.7 S5 MX5SB4	296	A703_57.7 P160 BE160M4	A703_57.7 P160 BX160MB4	297
26.6	3615	2.2	55.2	59900	A803_55.2 S5 ME5SA4	A803_55.2 S5 MX5SB4	299	A803_55.2 P160 BE160M4	A803_55.2 P160 BX160MB4	300
27.6	3488	1.4	53.2	50000	A703_53.2 S5 ME5SA4	A703_53.2 S5 MX5SB4	296	A703_53.2 P160 BE160M4	A703_53.2 P160 BX160MB4	297
30	3210	1.6	49.0	50000	A703_49.0 S5 ME5SA4	A703_49.0 S5 MX5SB4	296	A703_49.0 P160 BE160M4	A703_49.0 P160 BX160MB4	297
31	3157	2.5	48.2	58300	A803_48.2 S5 ME5SA4	A803_48.2 S5 MX5SB4	299	A803_48.2 P160 BE160M4	A803_48.2 P160 BX160MB4	300
33	2964	1.6	45.2	50000	A703_45.2 S5 ME5SA4	A703_45.2 S5 MX5SB4	296	A703_45.2 P160 BE160M4	A703_45.2 P160 BX160MB4	297
33	2961	0.9	45.2	30000	A603_45.2 S5 ME5SA4	A603_45.2 S5 MX5SB4	292	A603_45.2 P160 BE160M4	A603_45.2 P160 BX160MB4	293
33	2914	2.6	44.5	57300	A803_44.5 S5 ME5SA4	A803_44.5 S5 MX5SB4	299	A803_44.5 P160 BE160M4	A803_44.5 P160 BX160MB4	300
35	2733	1.0	41.7	30000	A603_41.7 S5 ME5SA4	A603_41.7 S5 MX5SB4	292	A603_41.7 P160 BE160M4	A603_41.7 P160 BX160MB4	293
38	2523	3.0	38.5	55500				A803_38.5 P160 BE160M4	A803_38.5 P160 BX160MB4	300
38	2515	1.9	38.4	50000	A703_38.4 S5 ME5SA4	A703_38.4 S5 MX5SB4	296	A703_38.4 P160 BE160M4	A703_38.4 P160 BX160MB4	297
41	2328	3.0	35.5	54500				A803_35.5 P160 BE160M4	A803_35.5 P160 BX160MB4	300
41	2321	1.9	35.4	50000	A703_35.4 S5 ME5SA4	A703_35.4 S5 MX5SB4	296	A703_35.4 P160 BE160M4	A703_35.4 P160 BX160MB4	297
43	2247	1.2	34.3	30000	A603_34.3 S5 ME5SA4	A603_34.3 S5 MX5SB4	292	A603_34.3 P160 BE160M4	A603_34.3 P160 BX160MB4	293
46	2074	1.3	31.7	30000	A603_31.7 S5 ME5SA4	A603_31.7 S5 MX5SB4	292	A603_31.7 P160 BE160M4	A603_31.7 P160 BX160MB4	293
48	2003	3.2	30.6	52600				A803_30.6 P160 BE160M4	A803_30.6 P160 BX160MB4	300
49	1972	2.3	30.1	49400				A703_30.1 P160 BE160M4	A703_30.1 P160 BX160MB4	297
49	1961	1.0	29.9	28200	A553_29.9 S5 ME5SA4	A553_29.9 S5 MX5SB4	288	A553_29.9 P160 BE160M4	A553_29.9 P160 BX160MB4	289
52	1849	3.6	28.2	51600			5	A803_28.2 P160 BE160M4	A803_28.2 P160 BX160MB4	300
53	1825	1.5	27.9	30000	A603_27.9 S5 ME5SA4	A603_27.9 S5 MX5SB4	292	A603_27.9 P160 BE160M4	A603_27.9 P160 BX160MB4	293
53	1820	2.3	27.8	48500				A703_27.8 P160 BE160M4	A703_27.8 P160 BX160MB4	297
57	1685	1.7	25.7	30000	A603_25.7 S5 ME5SA4	A603_25.7 S5 MX5SB4	292	A603_25.7 P160 BE160M4	A603_25.7 P160 BX160MB4	293
61	1576	1.0	24.0	7800	A503_24.0 S5 ME5SA4	A503_24.0 S5 MX5SB4	284	A503_24.0 P160 BE160M4	A503_24.0 P160 BX160MB4	285
62	1559	1.3	23.8	26000	A553_23.8 S5 ME5SA4	A553_23.8 S5 MX5SB4	288	A553_23.8 P160 BE160M4	A553_23.8 P160 BX160MB4	289
63	1541	2.8	23.5	46600				A703_23.5 P160 BE160M4	A703_23.5 P160 BX160MB4	297
69	1396	2.9	21.3	45500	A703_21.3 S5 ME5SA4	A703_21.3 S5 MX5SB4	296	A703_21.3 P160 BE160M4	A703_21.3 P160 BX160MB4	297
70	1416	0.8	20.9		A502_20.9 S5 ME5SA4	A502_20.9 S5 MX5SB4	284	A502_20.9 P160 BE160M4	A502_20.9 P160 BX160MB4	285
71	1394	1.4	20.6	30000	A602_20.6 S5 ME5SA4	A602_20.6 S5 MX5SB4	292	A602_20.6 P160 BE160M4	A602_20.6 P160 BX160MB4	293
75	1288	2.9	19.7	44500	A703_19.7 S5 ME5SA4	A703_19.7 S5 MX5SB4	296	A703_19.7 P160 BE160M4	A703_19.7 P160 BX160MB4	297
76	1302	1.4	19.2	27900	A552_19.2 S5 ME5SA4	A552_19.2 S5 MX5SB4	288	A552_19.2 P160 BE160M4	A552_19.2 P160 BX160MB4	289
88	1133	1.8	16.7	30000	A602_16.7 S5 ME5SA4	A602_16.7 S5 MX5SB4	292	A602_16.7 P160 BE160M4	A602_16.7 P160 BX160MB4	293
89	1121	1.1	16.6	12000	A502_16.6 S5 ME5SA4	A502_16.6 S5 MX5SB4	284	A502_16.6 P160 BE160M4	A502_16.6 P160 BX160MB4	285
94	1061	1.7	15.7	26600	A552_15.7 S5 ME5SA4	A552_15.7 S5 MX5SB4	288	A552_15.7 P160 BE160M4	A552_15.7 P160 BX160MB4	289
112	887	1.2	13.1	11500	A502_13.1 S5 ME5SA4	A502_13.1 S5 MX5SB4	284	A502_13.1 P160 BE160M4	A502_13.1 P160 BX160MB4	285
112	885	2.0	13.1	25400	A552_13.1 S5 ME5SA4	A552_13.1 S5 MX5SB4	288	A552_13.1 P160 BE160M4	A552_13.1 P160 BX160MB4	289
116	860	2.3	12.7	30000	A602_12.7 S5 ME5SA4	A602_12.7 S5 MX5SB4	292	A602_12.7 P160 BE160M4	A602_12.7 P160 BX160MB4	293
124	773	2.1	23.8	23600	A553_23.8 S5 ME5SA2		288	A553_23.8 P160 BE160MA2		289
142	701	2.6	10.4	24000	A552_10.4 S5 ME5SA4	A552_10.4 S5 MX5SB4	288	A552_10.4 P160 BE160M4	A552_10.4 P160 BX160MB4	289
143	698	2.9	10.3	30000	A602_10.3 S5 ME5SA4	A602_10.3 S5 MX5SB4	292	A602_10.3 P160 BE160M4	A602_10.3 P160 BX160MB4	293
151	659	1.5	9.7	10800	A502_9.7 S5 ME5SA4	A502_9.7 S5 MX5SB4	284	A502_9.7 P160 BE160M4	A502_9.7 P160 BX160MB4	285
174	573	3.1	8.5	22800	A552_8.5 S5 ME5SA4	A552_8.5 S5 MX5SB4	288	A552_8.5 P160 BE160M4	A552_8.5 P160 BX160MB4	289
190	524	1.8	7.7	10300	A502_7.7 S5 ME5SA4	A502_7.7 S5 MX5SB4	284	A502_7.7 P160 BE160M4	A502_7.7 P160 BX160MB4	285
224	440	2.0	13.1	9920	A502_13.1 S5 ME5SA2		284	A502_13.1 P160 BE160MA2		285
380	260	2.8	7.7	8650	A502_7.7 S5 ME5SA2		284	A502_7.7 P160 BE160MA2		285







## 15 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
190	713	1.3	7.7	9750	A502_7.7 S5 ME5LA4	A502_7.7 S5 MX5LA4	284	A502_7.7 P160 BE160L4	A502_7.7 P160 BX160L4	285
229	591	2.9	6.4	20700	A552_6.4 S5 ME5LA4	A552_6.4 S5 MX5LA4	288	A552_6.4 P160 BE160L4	A552_6.4 P160 BX160L4	289
297	456	3.5	4.9	19400	A552_4.9 S5 ME5LA4	A552_4.9 S5 MX5LA4	288	A552_4.9 P160 BE160L4	A552_4.9 P160 BX160L4	289
302	446	1.8	9.7	8830	A502_9.7 S5 ME5SB2		284	A502_9.7 P160 BE160MB2		285
380	354	2.1	7.7	8350	A502_7.7 S5 ME5SB2		284	A502_7.7 P160 BE160MB2		285

## 18.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
11.6	13830	1.0	126.6	75000				A903_126.6 P180 BE180M4	A903_126.6 P180 BX180M4	303
12.6	12766	1.1	116.9	75000				A903_116.9 P180 BE180M4	A903_116.9 P180 BX180M4	303
13.8	11665	1.2	106.8	75000				A903_106.8 P180 BE180M4	A903_106.8 P180 BX180M4	303
14.9	10767	1.3	98.6	75000				A903_98.6 P180 BE180M4	A903_98.6 P180 BX180M4	303
16.9	9508	1.5	87.1	75000				A903_87.1 P180 BE180M4	A903_87.1 P180 BX180M4	303
18.3	8777	1.6	80.4	75000				A903_80.4 P180 BE180M4	A903_80.4 P180 BX180M4	303
19.7	8133	1.7	74.5	75000				A903_74.5 P180 BE180M4	A903_74.5 P180 BX180M4	303
20.3	7903	1.0	72.4	55600				A803_72.4 P180 BE180M4	A803_72.4 P180 BX180M4	300
21.4	7508	1.9	68.8	75000				A903_68.8 P180 BE180M4	A903_68.8 P180 BX180M4	303
22.0	7295	1.1	66.8	55100				A803_66.8 P180 BE180M4	A803_66.8 P180 BX180M4	300
24.6	6528	1.2	59.8	54700				A803_59.8 P180 BE180M4	A803_59.8 P180 BX180M4	300
24.7	6510	2.2	59.6	75000				A903_59.6 P180 BE180M4	A903_59.6 P180 BX180M4	303
26.6	6026	1.3	55.2	54100				A803_55.2 P180 BE180M4	A803_55.2 P180 BX180M4	300
26.7	6009	2.3	55.0	74900				A903_55.0 P180 BE180M4	A903_55.0 P180 BX180M4	303
30	5351	0.9	49.0	49600				A703_49.0 P180 BE180M4	A703_49.0 P180 BX180M4	297
30	5274	2.7	48.3	73100				A903_48.3 P180 BE180M4	A903_48.3 P180 BX180M4	303
31	5262	1.5	48.2	53200				A803_48.2 P180 BE180M4	A803_48.2 P180 BX180M4	300
33	4939	1.0	45.2	49000				A703_45.2 P180 BE180M4	A703_45.2 P180 BX180M4	297
33	4869	2.9	44.6	71800				A903_44.6 P180 BE180M4	A903_44.6 P180 BX180M4	303
33	4857	1.5	44.5	52500				A803_44.5 P180 BE180M4	A803_44.5 P180 BX180M4	300
38	4238	3.3	38.8	69700				A903_38.8 P180 BE180M4	A903_38.8 P180 BX180M4	303
38	4204	1.8	38.5	51400				A803_38.5 P180 BE180M4	A803_38.5 P180 BX180M4	300
38	4191	1.2	38.4	48000				A703_38.4 P180 BE180M4	A703_38.4 P180 BX180M4	297
41	3912	3.5	35.8	68500				A903_35.8 P180 BE180M4	A903_35.8 P180 BX180M4	303
41	3881	1.8	35.5	50600				A803_35.5 P180 BE180M4	A803_35.5 P180 BX180M4	300
41	3869	1.2	35.4	47300				A703_35.4 P180 BE180M4	A703_35.4 P180 BX180M4	297
48	3339	1.9	30.6	49300				A803_30.6 P180 BE180M4	A803_30.6 P180 BX180M4	300
49	3287	1.4	30.1	46100				A703_30.1 P180 BE180M4	A703_30.1 P180 BX180M4	297
52	3082	2.1	28.2	48500				A803_28.2 P180 BE180M4	A803_28.2 P180 BX180M4	300
53	3042	0.9	27.9	30000				A603_27.9 P180 BE180M4	A603_27.9 P180 BX180M4	293
53	3034	1.4	27.8	45300				A703_27.8 P180 BE180M4	A703_27.8 P180 BX180M4	297
57	2808	1.0	25.7	30000				A603_25.7 P180 BE180M4	A603_25.7 P180 BX180M4	293
60	2675	2.5	24.5	47200				A803_24.5 P180 BE180M4	A803_24.5 P180 BX180M4	300
63	2568	1.7	23.5	43900				A703_23.5 P180 BE180M4	A703_23.5 P180 BX180M4	297
65	2470	2.5	22.6	46300				A803_22.6 P180 BE180M4	A803_22.6 P180 BX180M4	300
69	2326	1.7	21.3	43000				A703_21.3 P180 BE180M4	A703_21.3 P180 BX180M4	297
70	2288	2.9	20.9	45600				A803_20.9 P180 BE180M4	A803_20.9 P180 BX180M4	300
71	2323	0.9	20.6	30000				A602_20.6 P180 BE180M4	A602_20.6 P180 BX180M4	293
75	2147	1.7	19.7	42300				A703_19.7 P180 BE180M4	A703_19.7 P180 BX180M4	297
76	2112	2.9	19.3	44800				A803_19.3 P180 BE180M4	A803_19.3 P180 BX180M4	300
88	1888	1.1	16.7	30000				A602_16.7 P180 BE180M4	A602_16.7 P180 BX180M4	293
88	1822	2.2	16.7	40800				A703_16.7 P180 BE180M4	A703_16.7 P180 BX180M4	297
94	1769	1.0	15.7	25000				A552_15.7 P180 BE180M4	A552_15.7 P180 BX180M4	289
95	1682	2.2	15.4	40100				A703_15.4 P180 BE180M4	A703_15.4 P180 BX180M4	297

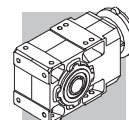


## 18.5 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N			IEC		
					IE2	IE3	IE2	IE3	
112	1429	2.7	13.1	38600			A703_13.1 P180 BE180M4	A703_13.1 P180 BX180M4	297
112	1475	1.2	13.1	24100			A552_13.1 P180 BE180M4	A552_13.1 P180 BX180M4	289
116	1433	1.4	12.7	30000			A602_12.7 P180 BE180M4	A602_12.7 P180 BX180M4	293
122	1319	2.7	12.1	37800			A703_12.1 P180 BE180M4	A703_12.1 P180 BX180M4	297
124	1299	1.2	23.8	21600	A553_23.8 S5 ME5LA2	288	A553_23.8 P160 BE160L2		289
142	1168	1.5	10.4	22900			A552_10.4 P180 BE180M4	A552_10.4 P180 BX180M4	289
143	1164	1.7	10.3	29900			A602_10.3 P180 BE180M4	A602_10.3 P180 BX180M4	293
144	1117	2.9	10.2	36300			A703_10.2 P180 BE180M4	A703_10.2 P180 BX180M4	297
151	1098	0.9	9.7	9530			A502_9.7 P180 BE180M4	A502_9.7 P180 BX180M4	285
156	1031	2.9	9.4	35600	A703_9.4 P180 BE180M4	A703_9.4 P180 BX180M4	297		
174	954	1.9	8.5	21900	A552_8.5 P180 BE180M4	A552_8.5 P180 BX180M4	289		
187	887	2.3	7.9	27900			A602_7.9 P180 BE180M4	A602_7.9 P180 BX180M4	293
190	873	1.1	7.7	9260			A502_7.7 P180 BE180M4	A502_7.7 P180 BX180M4	285
229	723	2.4	6.4	20400			A552_6.4 P180 BE180M4	A552_6.4 P180 BX180M4	289
297	558	2.9	4.9	19100			A552_4.9 P180 BE180M4	A552_4.9 P180 BX180M4	289
381	436	1.7	7.7	8100	A502_7.7 S5 ME5LA2	284	A502_7.7 P160 BE160L2		285

## 22 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N			IEC		
					IE2	IE3	IE2	IE3	
12.6	15213	0.9	116.9	75000			A903_116.9 P180 BE180L4	A903_116.9 P180 BX180L4	303
13.8	13900	1.0	106.8	75000			A903_106.8 P180 BE180L4	A903_106.8 P180 BX180L4	303
14.9	12831	1.1	98.6	75000			A903_98.6 P180 BE180L4	A903_98.6 P180 BX180L4	303
16.9	11330	1.2	87.1	75000			A903_87.1 P180 BE180L4	A903_87.1 P180 BX180L4	303
18.3	10459	1.3	80.4	75000			A903_80.4 P180 BE180L4	A903_80.4 P180 BX180L4	303
19.7	9692	1.4	74.5	75000			A903_74.5 P180 BE180L4	A903_74.5 P180 BX180L4	303
21.4	8947	1.6	68.8	75000			A903_68.8 P180 BE180L4	A903_68.8 P180 BX180L4	303
22.0	8693	0.9	66.8	51900			A803_66.8 P180 BE180L4	A803_66.8 P180 BX180L4	300
24.6	7779	1.0	59.8	51800			A803_59.8 P180 BE180L4	A803_59.8 P180 BX180L4	300
24.7	7758	1.8	59.6	73800			A903_59.6 P180 BE180L4	A903_59.6 P180 BX180L4	303
26.6	7181	1.1	55.2	51400			A803_55.2 P180 BE180L4	A803_55.2 P180 BX180L4	300
26.7	7161	2.0	55.0	72700			A903_55.0 P180 BE180L4	A903_55.0 P180 BX180L4	303
30	6285	2.2	48.3	71100			A903_48.3 P180 BE180L4	A903_48.3 P180 BX180L4	303
31	6270	1.3	48.2	50900			A803_48.2 P180 BE180L4	A803_48.2 P180 BX180L4	300
33	5802	2.4	44.6	70000			A903_44.6 P180 BE180L4	A903_44.6 P180 BX180L4	303
33	5788	1.3	44.5	50300			A803_44.5 P180 BE180L4	A803_44.5 P180 BX180L4	300
38	5050	2.8	38.8	68100			A903_38.8 P180 BE180L4	A903_38.8 P180 BX180L4	303
38	5010	1.5	38.5	49500			A803_38.5 P180 BE180L4	A803_38.5 P180 BX180L4	300
38	4995	1.0	38.4	46000			A703_38.4 P180 BE180L4	A703_38.4 P180 BX180L4	297
41	4662	2.9	35.8	67000			A903_35.8 P180 BE180L4	A903_35.8 P180 BX180L4	303
41	4625	1.5	35.5	48900			A803_35.5 P180 BE180L4	A803_35.5 P180 BX180L4	300
41	4611	1.0	35.4	45500			A703_35.4 P180 BE180L4	A703_35.4 P180 BX180L4	297
47	4099	3.4	31.5	65200			A903_31.5 P180 BE180L4	A903_31.5 P180 BX180L4	303
48	3979	1.6	30.6	47800			A803_30.6 P180 BE180L4	A803_30.6 P180 BX180L4	300
49	3917	1.2	30.1	44500			A703_30.1 P180 BE180L4	A703_30.1 P180 BX180L4	297
51	3784	3.4	29.1	64000			A903_29.1 P180 BE180L4	A903_29.1 P180 BX180L4	303
52	3673	1.8	28.2	47100			A803_28.2 P180 BE180L4	A803_28.2 P180 BX180L4	300
53	3616	1.2	27.8	43900			A703_27.8 P180 BE180L4	A703_27.8 P180 BX180L4	297
60	3188	2.1	24.5	45900			A803_24.5 P180 BE180L4	A803_24.5 P180 BX180L4	300
63	3061	1.4	23.5	42700			A703_23.5 P180 BE180L4	A703_23.5 P180 BX180L4	297
65	2943	2.1	22.6	45200			A803_22.6 P180 BE180L4	A803_22.6 P180 BX180L4	300



## 22 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N			IEC		
					IE2	IE3	IE2	IE3	
69	2772	1.4	21.3	41900			A703_21.3 P180 BE180L4	A703_21.3 P180 BX180L4	297
70	2726	2.4	20.9	44600			A803_20.9 P180 BE180L4	A803_20.9 P180 BX180L4	300
75	2559	1.4	19.7	41200			A703_19.7 P180 BE180L4	A703_19.7 P180 BX180L4	297
76	2516	2.4	19.3	43800			A803_19.3 P180 BE180L4	A803_19.3 P180 BX180L4	300
88	2178	3.0	16.7	42500			A803_16.7 P180 BE180L4	A803_16.7 P180 BX180L4	300
88	2250	0.9	16.7	30000			A602_16.7 P180 BE180L4	A602_16.7 P180 BX180L4	293
88	2172	1.8	16.7	39900			A703_16.7 P180 BE180L4	A703_16.7 P180 BX180L4	297
95	2011	3.0	15.5	41700			A803_15.5 P180 BE180L4	A803_15.5 P180 BX180L4	300
95	2005	1.8	15.4	39200			A703_15.4 P180 BE180L4	A703_15.4 P180 BX180L4	297
112	1703	2.3	13.1	37900			A703_13.1 P180 BE180L4	A703_13.1 P180 BX180L4	297
112	1758	1.0	13.1	23500			A552_13.1 P180 BE180L4	A552_13.1 P180 BX180L4	289
116	1708	1.2	12.7	30000			A602_12.7 P180 BE180L4	A602_12.7 P180 BX180L4	293
122	1572	2.3	12.1	37200			A703_12.1 P180 BE180L4	A703_12.1 P180 BX180L4	297
142	1392	1.3	10.4	22400			A552_10.4 P180 BE180L4	A552_10.4 P180 BX180L4	289
143	1387	1.4	10.3	29300			A602_10.3 P180 BE180L4	A602_10.3 P180 BX180L4	293
144	1331	2.4	10.2	35800			A703_10.2 P180 BE180L4	A703_10.2 P180 BX180L4	297
156	1228	2.4	9.4	35100			A703_9.4 P180 BE180L4	A703_9.4 P180 BX180L4	297
174	1137	1.6	8.5	21400			A552_8.5 P180 BE180L4	A552_8.5 P180 BX180L4	289
187	1057	1.9	7.9	27500			A602_7.9 P180 BE180L4	A602_7.9 P180 BX180L4	293
190	1040	0.9	7.7	8760			A502_7.7 P180 BE180L4	A502_7.7 P180 BX180L4	285
229	862	2.0	6.4	20100			A552_6.4 P180 BE180L4	A552_6.4 P180 BX180L4	289
297	665	2.4	4.9	18900			A552_4.9 P180 BE180L4	A552_4.9 P180 BX180L4	289

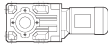



## 30 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N			IEC	
					IE...	IE...		
16.8	15556	0.9	87.1	70100			A903_87.1 P200 IEC200L4	303
18.2	14360	1.0	80.4	70000			A903_80.4 P200 IEC200L4	303
19.6	13307	1.1	74.5	69700			A903_74.5 P200 IEC200L4	303
21.2	12283	1.1	68.8	69200			A903_68.8 P200 IEC200L4	303
24.5	10651	1.3	59.6	68500			A903_59.6 P200 IEC200L4	303
26.5	9832	1.4	55.0	67800			A903_55.0 P200 IEC200L4	303
30.0	8630	1.6	48.3	66900			A903_48.3 P200 IEC200L4	303
30	8609	0.9	48.2	45700			A803_48.2 P200 IEC200L4	300
33	7966	1.8	44.6	66000			A903_44.6 P200 IEC200L4	303
33	7946	0.9	44.5	45500			A803_44.5 P200 IEC200L4	300
38	6934	2.0	38.8	64700			A903_38.8 P200 IEC200L4	303
38	6879	1.1	38.5	45300			A803_38.5 P200 IEC200L4	300
41	6400	2.1	35.8	63800			A903_35.8 P200 IEC200L4	303
41	6349	1.1	35.5	45000			A803_35.5 P200 IEC200L4	300
46	5628	2.5	31.5	62400			A903_31.5 P200 IEC200L4	303
48	5463	1.2	30.6	44500			A803_30.6 P200 IEC200L4	300
50	5195	2.5	29.1	61400			A903_29.1 P200 IEC200L4	303
52	5043	1.3	28.2	44000			A803_28.2 P200 IEC200L4	300
60	4377	1.5	24.5	43300			A803_24.5 P200 IEC200L4	300
61	4307	3.1	24.1	59200			A903_24.1 P200 IEC200L4	303
62	4202	1.0	23.5	40100			A703_23.5 P200 IEC200L4	297
65	4041	1.5	22.6	42700			A803_22.6 P200 IEC200L4	300
66	3976	3.1	22.3	58200			A903_22.3 P200 IEC200L4	303
70	3752	3.3	21.0	57500			A903_21.0 P200 IEC200L4	303
70	3743	1.7	20.9	42300			A803_20.9 P200 IEC200L4	300

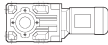



The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.



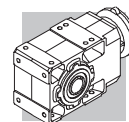
## 30 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE...	 IEC	 IEC	
75	3463	3.3	19.4	56500			A903_19.4 P200 IEC200L4	303
75	3455	1.8	19.3	41700			A803_19.3 P200 IEC200L4	300
87	2991	2.2	16.7	40700			A803_16.7 P200 IEC200L4	300
87	2982	1.3	16.7	38100			A703_16.7 P200 IEC200L4	297
94	2761	2.2	15.5	40000			A803_15.5 P200 IEC200L4	300
95	2752	1.3	15.4	37500			A703_15.4 P200 IEC200L4	297
110	2375	2.8	13.3	38900			A803_13.3 P200 IEC200L4	300
112	2338	1.6	13.1	36400			A703_13.1 P200 IEC200L4	297
119	2192	2.8	12.3	38200			A803_12.3 P200 IEC200L4	300
121	2158	1.6	12.1	35800			A703_12.1 P200 IEC200L4	297
125	2094	1.7	23.5	35600			A703_23.5 P200 IEC200LA2	297
137	1903	3.4	10.7	37100			A803_10.7 P200 IEC200L4	300
143	1827	1.8	10.2	34600			A703_10.2 P200 IEC200L4	297
148	1757	3.4	9.8	36500			A803_9.8 P200 IEC200L4	300
155	1687	1.8	9.4	34000			A703_9.4 P200 IEC200L4	297
176	1486	2.3	16.7	33100			A703_16.7 P200 IEC200LA2	297
190	1371	2.3	15.4	32500			A703_15.4 P200 IEC200LA2	297
224	1165	2.7	13.1	31300			A703_13.1 P200 IEC200LA2	297
243	1075	2.7	12.1	30600			A703_12.1 P200 IEC200LA2	297
287	910	3.2	10.2	29400			A703_10.2 P200 IEC200LA2	297
310	840	3.2	9.4	28800			A703_9.4 P200 IEC200LA2	297

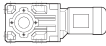



## 37 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE...	 IEC	 IEC	
21.5	14945	0.9	68.8	63900			A903_68.8 P225 IEC225S4	303
24.8	12959	1.1	59.6	63900			A903_59.6 P225 IEC225S4	303
26.9	11962	1.2	55.0	63600			A903_55.0 P225 IEC225S4	303
31	10499	1.3	48.3	63100			A903_48.3 P225 IEC225S4	303
33	9692	1.4	44.6	62500			A903_44.6 P225 IEC225S4	303
38	8436	1.7	38.8	61700			A903_38.8 P225 IEC225S4	303
38	8369	0.9	38.5	41700			A803_38.5 P225 IEC225S4	300
41	7787	1.8	35.8	61000			A903_35.8 P225 IEC225S4	303
42	7725	0.9	35.5	41600			A803_35.5 P225 IEC225S4	300
47	6847	2.0	31.5	59900			A903_31.5 P225 IEC225S4	303
48	6647	1.0	30.6	41600			A803_30.6 P225 IEC225S4	300
51	6321	2.1	29.1	59100			A903_29.1 P225 IEC225S4	303
52	6135	1.1	28.2	41300			A803_28.2 P225 IEC225S4	300
60	5326	1.3	24.5	40900			A803_24.5 P225 IEC225S4	300
61	5241	2.5	24.1	57300			A903_24.1 P225 IEC225S4	303
65	4916	1.3	22.6	40500			A803_22.6 P225 IEC225S4	300
67	4837	2.5	22.3	56400			A903_22.3 P225 IEC225S4	303
70	4565	2.7	21.0	55900			A903_21.0 P225 IEC225S4	303
71	4554	1.4	20.9	40300			A803_20.9 P225 IEC225S4	300
76	4214	2.7	19.4	54900			A903_19.4 P225 IEC225S4	303
77	4204	1.4	19.3	39800			A803_19.3 P225 IEC225S4	300
88	3668	3.2	16.9	53400			A903_16.9 P225 IEC225S4	303
88	3639	1.8	16.7	39100			A803_16.7 P225 IEC225S4	300
95	3386	3.2	15.6	52500			A903_15.6 P225 IEC225S4	303
96	3359	1.8	15.5	38500			A803_15.5 P225 IEC225S4	300
111	2890	2.3	13.3	37600			A803_13.3 P225 IEC225S4	300
121	2667	2.3	12.3	37000			A803_12.3 P225 IEC225S4	300
139	2316	2.8	10.7	36100			A803_10.7 P225 IEC225S4	300
151	2137	2.8	9.8	35500			A803_9.8 P225 IEC225S4	300

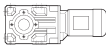



The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.



## 45 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE...		 IEC IE...	
26.9	14549	1.0	55.0	58700			A903_55.0 P225 IEC225M4	303
31	12769	1.1	48.3	58900			A903_48.3 P225 IEC225M4	303
33	11787	1.2	44.6	58600			A903_44.6 P225 IEC225M4	303
38	10260	1.4	38.8	58300			A903_38.8 P225 IEC225M4	303
41	9471	1.5	35.8	57800			A903_35.8 P225 IEC225M4	303
47	8328	1.7	31.5	57200			A903_31.5 P225 IEC225M4	303
51	7687	1.7	29.1	56600			A903_29.1 P225 IEC225M4	303
60	6477	1.0	24.5	38300			A803_24.5 P225 IEC225M4	300
61	6374	2.1	24.1	55200			A903_24.1 P225 IEC225M4	303
65	5979	1.0	22.6	38100			A803_22.6 P225 IEC225M4	300
67	5883	2.1	22.3	54500			A903_22.3 P225 IEC225M4	303
70	5552	2.2	21.0	54000			A903_21.0 P225 IEC225M4	303
71	5539	1.2	20.9	38000			A803_20.9 P225 IEC225M4	300
76	5125	2.3	19.4	53200			A903_19.4 P225 IEC225M4	303
77	5112	1.2	19.3	37700			A803_19.3 P225 IEC225M4	300
88	4461	2.7	16.9	52000			A903_16.9 P225 IEC225M4	303
88	4425	1.5	16.7	37300			A803_16.7 P225 IEC225M4	300
95	4118	2.7	15.6	51100			A903_15.6 P225 IEC225M4	303
96	4085	1.5	15.5	36900			A803_15.5 P225 IEC225M4	300
108	3621	3.1	13.7	49900			A903_13.7 P225 IEC225M4	303
111	3515	1.9	13.3	36200			A803_13.3 P225 IEC225M4	300
117	3342	3.1	12.6	49000			A903_12.6 P225 IEC225M4	303
121	3244	1.9	12.3	35700			A803_12.3 P225 IEC225M4	300
139	2816	2.3	10.7	34900			A803_10.7 P225 IEC225M4	300
141	2771	3.5	10.5	47100			A903_10.5 P225 IEC225M4	303
151	2600	2.3	9.8	34400			A803_9.8 P225 IEC225M4	300
153	2558	3.5	9.7	46200			A903_9.7 P225 IEC225M4	303

## 55 kW

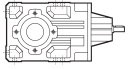

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE...		 IEC IE...	
33	14406	1.0	44.6	53900			A903_44.6 P250 IEC250M4	303
38	12540	1.1	38.8	54100			A903_38.8 P250 IEC250M4	303
41	11575	1.2	35.8	54000			A903_35.8 P250 IEC250M4	303
47	10179	1.4	31.5	53800			A903_31.5 P250 IEC250M4	303
51	9396	1.4	29.1	53400			A903_29.1 P250 IEC250M4	303
61	7790	1.7	24.1	52600			A903_24.1 P250 IEC250M4	303
67	7191	1.7	22.3	52000			A903_22.3 P250 IEC250M4	303
70	6786	1.8	21.0	51700			A903_21.0 P250 IEC250M4	303
76	6264	1.8	19.4	51100			A903_19.4 P250 IEC250M4	303
88	5452	2.2	16.9	50100			A903_16.9 P250 IEC250M4	303
95	5033	2.2	15.6	49400			A903_15.6 P250 IEC250M4	303
108	4425	2.5	13.7	48400			A903_13.7 P250 IEC250M4	303
117	4085	2.6	12.6	47600			A903_12.6 P250 IEC250M4	303
141	3387	2.9	10.5	45900			A903_10.5 P250 IEC250M4	303
153	3126	2.9	9.7	45100			A903_9.7 P250 IEC250M4	303

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.

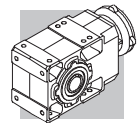


## 39 GEARBOX RATING CHARTS

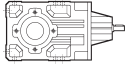

# A 10 150 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 10 2_5.5</b>	5.5	512	73	4.2	—	1830	256	73	2.1	960	2460	265
<b>A 10 2_6.3</b>	6.3	442	80	3.9	—	1900	221	80	2.0	830	2560	
<b>A 10 2_7.2</b>	7.2	388	92	4.0	—	1910	194	93	2.0	630	2600	
<b>A 10 2_8.5</b>	8.5	329	92	3.4	—	2060	164	93	1.7	720	2790	
<b>A 10 2_9.6</b>	9.6	291	102	3.3	—	2090	146	128	2.1	—	2650	
<b>A 10 2_10.6</b>	10.6	265	125	3.7	540	2010	133	150	2.2	810	2590	
<b>A 10 2_12.3</b>	12.3	228	110	2.8	—	2280	114	138	1.7	—	2880	
<b>A 10 2_13.9</b>	13.9	201	135	3.0	620	2220	101	150	1.7	1080	2960	
<b>A 10 2_16.4</b>	16.4	170	140	2.7	610	2370	85	150	1.4	1140	3200	
<b>A 10 2_18.6</b>	18.6	151	147	2.5	650	2460	75	150	1.3	1180	3380	
<b>A 10 2_21.4</b>	21.4	131	150	2.2	650	2610	66	150	1.1	1200	3600	
<b>A 10 2_23.8</b>	23.8	118	150	2.0	750	2750	59	150	0.98	1220	3780	
<b>A 10 2_25.5</b>	25.5	110	150	1.8	750	2840	55	150	0.92	1220	3900	
<b>A 10 2_28.6</b>	28.6	98	150	1.6	830	3000	49	150	0.82	1250	4100	
<b>A 10 2_32.2</b>	32.2	87	150	1.5	880	3170	43	150	0.73	1270	4310	
<b>A 10 2_35.1</b>	35.1	80	150	1.3	880	3300	40	150	0.67	1270	4470	
<b>A 10 2_40.9</b>	40.9	69	150	1.1	910	3530	34	150	0.57	1300	4770	
<b>A 10 2_45.4</b>	45.4	62	150	1.0	910	3700	31	150	0.52	1300	4980	
<b>A 10 2_51.3</b>	51.3	55	150	0.91	910	3910	27.3	150	0.46	1290	5240	
<b>A 10 2_58.6</b>	58.6	48	150	0.80	920	4140	23.9	150	0.40	1300	5500	
<b>A 10 2_65.9</b>	65.9	42	150	0.71	920	4360	21.2	150	0.35	1300	5500	
<b>A 10 2_76.4</b>	76.4	37	150	0.61	930	4640	18.3	150	0.31	1300	5500	
<b>A 10 2_91.6</b>	91.6	31	130	0.44	1020	5160	15.3	130	0.22	1300	5500	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)

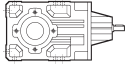



# A 10 150 Nm

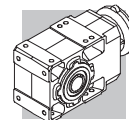
	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 10 2_5.5	5.5	165	73	1.3	1300	2950	91	73	0.74	1300	3720	265
A 10 2_6.3	6.3	142	80	1.3	1300	3070	79	80	0.70	1300	4100	
A 10 2_7.2	7.2	125	93	1.3	1160	3130	69	93	0.72	1300	3970	
A 10 2_8.5	8.5	106	95	1.1	1200	3330	59	110	0.72	1300	4100	
A 10 2_9.6	9.6	94	128	1.3	500	3230	52	128	0.74	1300	4160	
A 10 2_10.6	10.6	85	150	1.4	1300	3200	47	150	0.79	1300	4160	
A 10 2_12.3	12.3	73	150	1.2	180	3420	41	150	0.68	1030	4430	
A 10 2_13.9	13.9	65	150	1.1	1300	3630	36	150	0.60	1300	4680	
A 10 2_16.4	16.4	55	150	0.91	1300	3900	30	150	0.51	1300	5010	
A 10 2_18.6	18.6	48	150	0.81	1300	4120	26.9	150	0.45	1300	5270	
A 10 2_21.4	21.4	42	150	0.70	1300	4370	23.4	150	0.39	1300	5500	
A 10 2_23.8	23.8	38	150	0.63	1300	4570	21.0	150	0.35	1300	5500	
A 10 2_25.5	25.5	35	150	0.59	1300	4710	19.6	150	0.33	1300	5500	
A 10 2_28.6	28.6	31	150	0.53	1300	4940	17.5	150	0.29	1300	5500	
A 10 2_32.2	32.2	28.0	150	0.47	1300	5190	15.5	150	0.26	1300	5500	
A 10 2_35.1	35.1	25.6	150	0.43	1300	5380	14.2	150	0.24	1300	5500	
A 10 2_40.9	40.9	22.0	150	0.37	1300	5500	12.2	150	0.20	1300	5500	
A 10 2_45.4	45.4	19.8	150	0.33	1300	5500	11.0	150	0.18	1300	5500	
A 10 2_51.3	51.3	17.6	150	0.29	1300	5500	9.8	150	0.16	1300	5500	
A 10 2_58.6	58.6	15.4	150	0.26	1300	5500	8.5	150	0.14	1300	5500	
A 10 2_65.9	65.9	13.7	150	0.23	1300	5500	7.6	150	0.13	1300	5500	
A 10 2_76.4	76.4	11.8	150	0.20	1300	5500	6.5	150	0.11	1300	5500	
A 10 2_91.6	91.6	9.8	130	0.14	1300	5500	5.5	130	0.08	1300	5500	



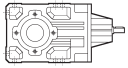

# A 20 250 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 20 2_5.4</b>	5.4	523	96	5.6	610	1910	262	121	3.5	770	2400	269
<b>A 20 2_6.5</b>	6.5	428	107	5.1	490	2010	214	135	3.2	610	2530	
<b>A 20 2_7.3</b>	7.3	384	113	4.8	510	2070	192	143	3.1	630	2600	
<b>A 20 2_8.4</b>	8.4	334	116	4.3	510	2180	167	146	2.7	650	2750	
<b>A 20 2_9.4</b>	9.4	299	122	4.1	530	2260	149	154	2.6	660	2840	
<b>A 20 2_10.3</b>	10.3	271	183	5.5	650	1970	135	225	3.4	890	2520	
<b>A 20 2_12.0</b>	12.0	234	128	3.3	550	2280	117	161	2.1	690	3120	
<b>A 20 2_14.1</b>	14.1	199	199	4.4	750	2210	99	245	2.7	960	2820	
<b>A 20 2_16.2</b>	16.2	173	209	4.0	700	2310	87	250	2.4	1040	2990	
<b>A 20 2_18.1</b>	18.1	155	216	3.7	760	2400	77	250	2.2	1210	3170	
<b>A 20 2_21.2</b>	21.2	132	226	3.3	710	2540	66	250	1.8	1290	3430	
<b>A 20 2_23.1</b>	23.1	121	232	3.1	710	2620	61	250	1.7	1360	3580	
<b>A 20 2_26.5</b>	26.5	106	241	2.8	660	2750	53	250	1.5	1410	3820	
<b>A 20 2_29.2</b>	29.2	96	249	2.7	670	2850	48	250	1.3	1510	4000	
<b>A 20 2_31.3</b>	31.3	89	250	2.5	660	2940	45	250	1.2	1510	4130	
<b>A 20 2_35.4</b>	35.4	79	250	2.2	800	3140	40	250	1.1	1650	4380	
<b>A 20 2_39.6</b>	39.6	71	250	2.0	880	3320	35	250	0.98	1710	4600	
<b>A 20 2_43.2</b>	43.2	65	250	1.8	880	3460	32	250	0.90	1710	4790	
<b>A 20 2_48.3</b>	48.3	58	250	1.6	920	3650	29.0	250	0.81	1720	5030	
<b>A 20 2_53.7</b>	53.7	52	250	1.5	920	3840	26.1	250	0.73	1720	5270	
<b>A 20 2_63.1</b>	63.1	44	245	1.2	1040	4180	22.2	245	0.61	1740	5680	
<b>A 20 2_71.0</b>	71.0	39	210	0.92	1360	4640	19.7	210	0.46	1790	6200	
<b>A 20 2_79.9</b>	79.9	35	210	0.82	1360	4880	17.5	210	0.41	1790	6200	
<b>A 20 2_92.3</b>	92.3	30	200	0.68	1380	5250	15.2	200	0.34	1810	6200	
<b>A 20 3_109.2</b>	109.2	25.6	165	0.49	1180	5900	12.8	205	0.30	1300	6200	
<b>A 20 3_120.5</b>	120.5	23.2	168	0.45	1130	6110	11.6	210	0.28	1300	6200	
<b>A 20 3_129.1</b>	129.1	21.7	175	0.44	1210	6200	10.8	215	0.27	1300	6200	
<b>A 20 3_146.1</b>	146.1	19.2	183	0.40	1160	6200	9.6	230	0.25	1300	6200	
<b>A 20 3_163.4</b>	163.4	17.1	190	0.37	1240	6200	8.6	235	0.23	1300	6200	
<b>A 20 3_178.3</b>	178.3	15.7	195	0.35	1200	6200	7.9	245	0.22	1300	6200	
<b>A 20 3_199.2</b>	199.2	14.1	200	0.32	1270	6200	7.0	250	0.20	1300	6200	
<b>A 20 3_221.3</b>	221.3	12.7	203	0.30	1240	6200	6.3	250	0.18	1300	6200	
<b>A 20 3_260.5</b>	260.5	10.8	214	0.26	1270	6200	5.4	250	0.15	1300	6200	
<b>A 20 3_292.8</b>	292.8	9.6	218	0.24	1300	6200	4.8	250	0.14	1300	6200	
<b>A 20 3_329.4</b>	329.4	8.5	221	0.22	1300	6200	4.3	250	0.12	1300	6200	
<b>A 20 3_380.9</b>	380.9	7.4	226	0.19	1300	6200	3.7	250	0.11	1300	6200	



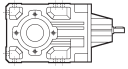



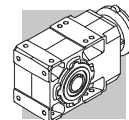
# A 20 250 Nm

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
A 20 2_5.4	5.4	168	140	2.6	900	2780	93	170	1.8	1100	3390	269
A 20 2_6.5	6.5	138	156	2.4	720	2930	76	190	1.6	860	3570	
A 20 2_7.3	7.3	123	165	2.3	740	3020	69	201	1.5	890	3670	
A 20 2_8.4	8.4	108	170	2.0	730	3180	60	206	1.4	910	3870	
A 20 2_9.4	9.4	96	179	1.9	760	3290	53	210	1.2	1090	4050	
A 20 2_10.3	10.3	87	250	2.4	1190	2990	48	250	1.3	2200	3980	
A 20 2_12.0	12.0	75	187	1.6	790	2990	42	210	0.98	1336	4510	
A 20 2_14.1	14.1	64	250	1.8	1610	3490	36	250	0.99	2200	4590	
A 20 2_16.2	16.2	56	250	1.6	1690	3730	31	250	0.86	2200	4880	
A 20 2_18.1	18.1	50	250	1.4	1860	3930	27.6	250	0.77	2200	5140	
A 20 2_21.2	21.2	42	250	1.2	1940	4230	23.6	250	0.66	2200	5500	
A 20 2_23.1	23.1	39	250	1.1	1970	4400	21.6	250	0.60	2200	5710	
A 20 2_26.5	26.5	34	250	0.95	1980	4680	18.9	250	0.53	2200	6050	
A 20 2_29.2	29.2	31	250	0.86	2000	4890	17.1	250	0.48	2200	6200	
A 20 2_31.3	31.3	28.7	250	0.80	2000	5040	16.0	250	0.44	2200	6200	
A 20 2_35.4	35.4	25.4	250	0.71	2020	5330	14.1	250	0.39	2200	6200	
A 20 2_39.6	39.6	22.7	250	0.63	2040	5590	12.6	250	0.35	2200	6200	
A 20 2_43.2	43.2	20.8	250	0.58	2040	5800	11.6	250	0.32	2200	6200	
A 20 2_48.3	48.3	18.6	250	0.52	2040	6080	10.4	250	0.29	2200	6200	
A 20 2_53.7	53.7	16.8	250	0.47	2050	6200	9.3	250	0.26	2200	6200	
A 20 2_63.1	63.1	14.3	245	0.39	2060	6200	7.9	245	0.22	2200	6200	
A 20 2_71.0	71.0	12.7	210	0.30	2120	6200	7.0	210	0.16	2200	6200	
A 20 2_79.9	79.9	11.3	210	0.26	2120	6200	6.3	210	0.15	2200	6200	
A 20 2_92.3	92.3	9.7	200	0.22	2140	6200	5.4	200	0.12	2200	6200	
A 20 3_109.2	109.2	8.2	240	0.23	1300	6200	4.6	250	0.13	1300	6200	
A 20 3_120.5	120.5	7.5	245	0.21	1300	6200	4.1	250	0.12	1300	6200	
A 20 3_129.1	129.1	7.0	250	0.20	1300	6200	3.9	250	0.11	1300	6200	
A 20 3_146.1	146.1	6.2	250	0.18	1300	6200	3.4	250	0.10	1300	6200	
A 20 3_163.4	163.4	5.5	250	0.16	1300	6200	3.1	250	0.09	1300	6200	
A 20 3_178.3	178.3	5.0	250	0.15	1300	6200	2.8	250	0.08	1300	6200	
A 20 3_199.2	199.2	4.5	250	0.13	1300	6200	2.5	250	0.07	1300	6200	
A 20 3_221.3	221.3	4.1	250	0.12	1300	6200	2.3	250	0.06	1300	6200	
A 20 3_260.5	260.5	3.5	250	0.10	1300	6200	1.9	250	0.06	1300	6200	
A 20 3_292.8	292.8	3.1	250	0.09	1300	6200	1.7	250	0.05	1300	6200	
A 20 3_329.4	329.4	2.7	250	0.08	1300	6200	1.5	250	0.04	1300	6200	
A 20 3_380.9	380.9	2.4	250	0.07	1300	6200	1.3	250	0.04	1300	6200	

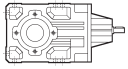



# A 30 410 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 30 2_5.4</b>	5.4	517	175	10.1	1130	2480	259	220	6.3	1430	3130	273
<b>A 30 2_6.4</b>	6.4	437	185	9.0	1120	2630	218	230	5.6	1470	3330	
<b>A 30 2_7.0</b>	7.0	399	194	8.6	1140	2690	199	245	5.4	1430	3380	
<b>A 30 2_8.5</b>	8.5	331	200	7.4	1220	2900	165	250	4.6	1570	3660	
<b>A 30 2_9.3</b>	9.3	301	214	7.2	1140	2950	150	270	4.5	1440	3710	
<b>A 30 2_10.5</b>	10.5	268	278	8.3	1800	2770	134	340	5.1	2200	3550	
<b>A 30 2_11.8</b>	11.8	238	230	6.1	1130	3200	119	290	3.8	1420	4030	
<b>A 30 2_13.6</b>	13.6	206	301	6.9	1830	3030	103	370	4.3	2200	3870	
<b>A 30 2_16.3</b>	16.3	171	318	6.1	1830	3240	86	385	3.7	2200	4170	
<b>A 30 2_18.0</b>	18.0	156	327	5.7	1840	3350	78	400	3.5	2200	4290	
<b>A 30 2_20.5</b>	20.5	136	340	5.2	1830	3510	68	410	3.1	2200	4530	
<b>A 30 2_22.8</b>	22.8	123	351	4.8	1850	3640	62	410	2.8	2200	4770	
<b>A 30 2_26.5</b>	26.5	106	367	4.3	1840	3850	53	410	2.4	2200	5150	
<b>A 30 2_29.3</b>	29.3	96	378	4.0	1847	3980	48	410	2.2	2200	5400	
<b>A 30 2_33.4</b>	33.4	84	393	3.7	1840	4170	42	410	1.9	2200	5750	
<b>A 30 2_36.6</b>	36.6	76	404	3.4	1840	4310	38	410	1.7	2200	6010	
<b>A 30 2_39.3</b>	39.3	71	410	3.3	1810	4430	36	410	1.6	2200	6200	
<b>A 30 2_43.4</b>	43.4	64	410	2.9	1850	4660	32	410	1.5	2200	6490	
<b>A 30 2_48.3</b>	48.3	58	410	2.6	1860	4920	29.0	410	1.3	2200	6810	
<b>A 30 2_52.7</b>	52.7	53	410	2.4	1860	5130	26.6	410	1.2	2200	7080	
<b>A 30 2_59.4</b>	59.4	47	400	2.1	1890	5500	23.6	400	1.0	2200	7530	
<b>A 30 2_66.0</b>	66.0	42	390	1.8	1900	5840	21.2	390	0.92	2200	7940	
<b>A 30 2_76.5</b>	76.5	37	350	1.4	1950	6480	18.3	350	0.71	2200	8690	
<b>A 30 2_86.7</b>	86.7	32	320	1.2	2000	7010	16.2	320	0.58	2200	9310	
<b>A 30 2_97.5</b>	97.5	28.7	300	0.96	2020	7480	14.4	300	0.48	2200	9600	
<b>A 30 3_109.1</b>	109.1	25.7	240	0.71	1300	8240	12.8	300	0.44	1300	9600	
<b>A 30 3_120.5</b>	120.5	23.2	243	0.65	1120	8540	11.6	300	0.40	1300	9600	
<b>A 30 3_137.4</b>	137.4	20.4	250	0.59	1300	8950	10.2	315	0.37	1300	9600	
<b>A 30 3_150.7</b>	150.7	18.6	261	0.56	1170	9210	9.3	330	0.35	1300	9600	
<b>A 30 3_161.4</b>	161.4	17.3	270	0.54	1300	9410	8.7	340	0.34	1300	9600	
<b>A 30 3_178.5</b>	178.5	15.7	274	0.49	1210	9600	7.8	345	0.31	1300	9600	
<b>A 30 3_198.5</b>	198.5	14.1	280	0.45	1300	9600	7.1	350	0.28	1300	9600	
<b>A 30 3_216.6</b>	216.6	12.9	287	0.43	1240	9600	6.5	360	0.27	1300	9600	
<b>A 30 3_244.3</b>	244.3	11.5	295	0.39	1300	9600	5.7	370	0.24	1300	9600	
<b>A 30 3_271.5</b>	271.5	10.3	301	0.36	1280	9600	5.2	380	0.23	1300	9600	
<b>A 30 3_314.5</b>	314.5	8.9	309	0.32	1300	9600	4.5	390	0.20	1300	9600	
<b>A 30 3_356.3</b>	356.3	7.9	320	0.29	1300	9600	3.9	370	0.17	1300	9600	
<b>A 30 3_400.8</b>	400.8	7.0	320	0.26	1300	9600	3.5	360	0.14	1300	9600	



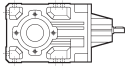

# A 30 410 Nm

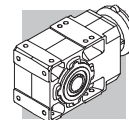
	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 30 2_5.4	5.4	166	255	4.7	1660	3630	92	300	3.1	2200	4470	273
A 30 2_6.4	6.4	140	270	4.2	1630	3830	78	300	2.6	2200	4830	
A 30 2_7.0	7.0	128	284	4.1	1650	3920	71	300	2.4	2200	5040	
A 30 2_8.5	8.5	106	290	3.4	1810	4240	59	300	2.0	2200	5470	
A 30 2_9.3	9.3	97	300	3.2	1900	4380	54	300	1.8	2200	5710	
A 30 2_10.5	10.5	86	391	3.7	2200	4130	48	410	2.2	2200	5400	
A 30 2_11.8	11.8	76	300	2.6	2200	4880	42	300	1.4	2200	6320	
A 30 2_13.6	13.6	66	410	3.0	2200	4600	37	410	1.7	2200	6110	
A 30 2_16.3	16.3	55	410	2.5	2200	5044	31	410	1.4	2200	6650	
A 30 2_18.0	18.0	50	410	2.3	2200	5280	27.8	410	1.3	2200	6940	
A 30 2_20.5	20.5	44	410	2.0	2200	5630	24.3	410	1.1	2200	7360	
A 30 2_22.8	22.8	40	410	1.8	2200	5910	22.0	410	1.0	2200	7700	
A 30 2_26.5	26.5	34	410	1.5	2200	6340	18.8	410	0.86	2200	8230	
A 30 2_29.3	29.3	31	410	1.4	2200	6640	17.1	410	0.78	2200	8590	
A 30 2_33.4	33.4	26.9	410	1.2	2200	7040	15.0	410	0.68	2200	9080	
A 30 2_36.6	36.6	24.6	410	1.1	2200	7340	13.6	410	0.62	2200	9440	
A 30 2_39.3	39.3	22.9	410	1.0	2200	7560	12.7	410	0.58	2200	9600	
A 30 2_43.4	43.4	20.7	410	0.95	2200	7900	11.5	410	0.53	2200	9600	
A 30 2_48.3	48.3	18.6	410	0.85	2200	8270	10.4	410	0.47	2200	9600	
A 30 2_52.7	52.7	17.1	410	0.78	2200	8590	9.5	410	0.43	2200	9600	
A 30 2_59.4	59.4	15.1	400	0.67	2200	9090	8.4	400	0.37	2200	9600	
A 30 2_66.0	66.0	13.6	390	0.59	2200	9560	7.6	390	0.33	2200	9600	
A 30 2_76.5	76.5	11.8	350	0.46	2200	9600	6.5	350	0.25	2200	9600	
A 30 2_86.7	86.7	10.4	320	0.37	2200	9600	5.8	320	0.21	2200	9600	
A 30 2_97.5	97.5	9.2	300	0.31	2200	9600	5.1	300	0.17	2200	9600	
A 30 3_109.1	109.1	8.3	350	0.33	1300	9600	4.6	370	0.20	1300	9600	
A 30 3_120.5	120.5	7.5	354	0.30	1300	9600	4.2	410	0.20	1300	9600	
A 30 3_137.4	137.4	6.5	370	0.28	1300	9600	3.6	410	0.17	1300	9600	
A 30 3_150.7	150.7	6.0	381	0.26	1300	9600	3.3	410	0.16	1300	9600	
A 30 3_161.4	161.4	5.6	390	0.25	1300	9600	3.1	410	0.15	1300	9600	
A 30 3_178.5	178.5	5.0	400	0.23	1300	9600	2.8	410	0.13	1300	9600	
A 30 3_198.5	198.5	4.5	410	0.21	1300	9600	2.5	410	0.12	1300	9600	
A 30 3_216.6	216.6	4.2	410	0.20	1300	9600	2.3	410	0.11	1300	9600	
A 30 3_244.3	244.3	3.7	410	0.17	1300	9600	2.0	410	0.10	1300	9600	
A 30 3_271.5	271.5	3.3	410	0.16	1300	9600	1.8	410	0.09	1300	9600	
A 30 3_314.5	314.5	2.9	410	0.13	1300	9600	1.6	410	0.07	1300	9600	
A 30 3_356.3	356.3	2.5	380	0.11	1300	9600	1.4	380	0.06	1300	9600	
A 30 3_400.8	400.8	2.2	360	0.09	1300	9600	1.2	360	0.05	1300	9600	



# A 35

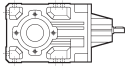

# 600 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 35 2_5.4	5.4	517	246	14.2	1420	4000	259	310	8.9	1790	5050	277
A 35 2_6.4	6.4	437	262	12.7	1420	4230	218	330	8.0	1790	5330	
A 35 2_7.0	7.0	399	278	12.3	1410	4320	199	350	7.8	1790	5440	
A 35 2_8.5	8.5	331	286	10.5	1450	4650	165	360	6.6	1830	5850	
A 35 2_9.3	9.3	301	302	10.1	1450	4760	150	380	6.4	1830	6000	
A 35 2_10.6	10.6	263	310	9.1	1440	5010	132	390	5.7	1830	6310	
A 35 2_11.8	11.8	238	317	8.4	1480	5200	119	400	5.3	1860	6550	
A 35 2_13.1	13.1	214	400	10.9	1630	4470	107	550	6.6	2100	5780	
A 35 2_15.5	15.5	181	430	10.0	1620	4670	90	570	5.7	2120	6190	
A 35 2_17.0	17.0	165	465	9.7	1620	4730	83	600	5.5	2130	6310	
A 35 2_20.4	20.4	137	500	8.4	1630	5080	69	600	4.6	2170	6930	
A 35 2_22.5	22.5	125	540	7.8	1660	5290	62	600	4.2	2200	7260	
A 35 2_25.7	25.7	109	585	7.1	1640	5540	55	600	3.6	2200	7740	
A 35 2_28.4	28.4	98	600	6.6	1660	5760	49	600	3.3	2200	8130	
A 35 2_33.2	33.2	84	600	5.6	910	6240	42	600	2.8	2200	8730	
A 35 2_36.6	36.6	76	600	5.1	1080	6560	38	600	2.6	2200	9140	
A 35 2_41.8	41.8	67	600	4.5	1140	7010	34	600	2.2	2200	9700	
A 35 2_45.8	45.8	61	600	4.1	1260	7330	31	600	2.0	2200	10100	
A 35 2_49.1	49.1	57	600	3.8	1260	7580	28.5	600	1.9	2200	10400	
A 35 2_54.3	54.3	52	600	3.4	1360	7950	25.8	600	1.7	2200	10900	
A 35 2_60.4	60.4	46	600	3.1	1470	8360	23.2	600	1.6	2200	11400	
A 35 2_65.8	65.8	43	600	2.8	1470	8700	21.3	600	1.4	2200	11800	
A 35 2_74.3	74.3	38	600	2.5	1560	9200	18.8	600	1.3	2200	12000	
A 35 2_82.5	82.5	34	600	2.3	1560	9650	17.0	600	1.1	2200	12000	
A 35 2_95.6	95.6	29.3	540	1.8	1860	10600	14.6	540	0.88	2200	12000	
A 35 3_105.5	105.5	26.5	430	1.3	550	12000	13.3	525	0.80	780	12000	
A 35 3_116.9	116.9	24.0	455	1.3	650	12000	12.0	560	0.77	870	12000	
A 35 3_136.3	136.3	20.5	470	1.1	870	12000	10.3	575	0.68	1110	12000	
A 35 3_150.6	150.6	18.6	495	1.1	900	12000	9.3	600	0.64	1160	12000	
A 35 3_171.8	171.8	16.3	505	0.95	960	12000	8.1	600	0.56	1250	12000	
A 35 3_188.3	188.3	14.9	525	0.90	990	12000	7.4	600	0.51	1300	12000	
A 35 3_201.8	201.8	13.9	525	0.84	1020	12000	6.9	600	0.48	1300	12000	
A 35 3_223.2	223.2	12.5	545	0.79	1050	12000	6.3	600	0.43	1300	12000	
A 35 3_248.1	248.1	11.3	565	0.73	1080	12000	5.6	600	0.39	1300	12000	
A 35 3_270.7	270.7	10.3	570	0.68	1110	12000	5.2	600	0.36	1300	12000	
A 35 3_305.4	305.4	9.2	585	0.62	1140	12000	4.6	600	0.32	1300	12000	
A 35 3_339.3	339.3	8.3	520	0.49	1210	12000	4.1	520	0.25	1300	12000	
A 35 3_393.2	393.2	7.1	465	0.38	1260	12000	3.6	465	0.19	1300	12000	



# A 35

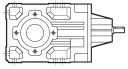

# 600 Nm

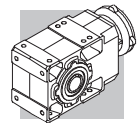
	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 35 2_5.4	5.4	166	340	6.3	2150	5940	92	340	3.5	2200	7600	277
A 35 2_6.4	6.4	140	350	5.5	2190	6340	78	350	3.0	2200	8090	
A 35 2_7.0	7.0	128	370	5.3	2200	6490	71	370	2.9	2200	8290	
A 35 2_8.5	8.5	106	380	4.5	2200	6970	59	380	2.5	2200	8890	
A 35 2_9.3	9.3	97	400	4.3	2200	7160	54	400	2.4	2200	9140	
A 35 2_10.6	10.6	85	400	3.8	2200	7570	47	400	2.1	2200	9650	
A 35 2_11.8	11.8	76	400	3.4	2200	7910	42	400	1.9	2200	10100	
A 35 2_13.1	13.1	69	600	4.6	2200	6910	38	600	2.6	2200	9140	
A 35 2_15.5	15.5	58	600	3.9	2090	7510	32	600	2.2	2200	9860	
A 35 2_17.0	17.0	53	600	3.5	2200	7840	29.5	600	2.0	2200	10300	
A 35 2_20.4	20.4	44	600	2.9	2200	8560	24.5	600	1.6	2200	11100	
A 35 2_22.5	22.5	40	600	2.7	2200	8950	22.2	600	1.5	2200	11600	
A 35 2_25.7	25.7	35	600	2.3	2200	9500	19.5	600	1.3	2200	12000	
A 35 2_28.4	28.4	32	600	2.1	2200	9950	17.6	600	1.2	2200	12000	
A 35 2_33.2	33.2	27.1	600	1.8	2200	10700	15.1	600	1.0	2200	12000	
A 35 2_36.6	36.6	24.6	600	1.6	2200	11100	13.7	600	0.91	2200	12000	
A 35 2_41.8	41.8	21.5	600	1.4	2200	11800	12.0	600	0.80	2200	12000	
A 35 2_45.8	45.8	19.6	600	1.3	2200	12000	10.9	600	0.73	2200	12000	
A 35 2_49.1	49.1	18.3	600	1.2	2200	12000	10.2	600	0.68	2200	12000	
A 35 2_54.3	54.3	16.6	600	1.1	2200	12000	9.2	600	0.62	2200	12000	
A 35 2_60.4	60.4	14.9	600	1.0	2200	12000	8.3	600	0.55	2200	12000	
A 35 2_65.8	65.8	13.7	600	0.91	2200	12000	7.6	600	0.51	2200	12000	
A 35 2_74.3	74.3	12.1	600	0.81	2200	12000	6.7	600	0.45	2200	12000	
A 35 2_82.5	82.5	10.9	600	0.73	2200	12000	6.1	600	0.40	2200	12000	
A 35 2_95.6	95.6	9.4	540	0.57	2200	12000	5.2	540	0.31	2200	12000	
A 35 3_105.5	105.5	8.5	600	0.59	940	12000	4.7	600	0.33	1300	12000	
A 35 3_116.9	116.9	7.7	600	0.53	1230	12000	4.3	600	0.30	1300	12000	
A 35 3_136.3	136.3	6.6	600	0.46	1300	12000	3.7	600	0.25	1300	12000	
A 35 3_150.6	150.6	6.0	600	0.41	1300	12000	3.3	600	0.23	1300	12000	
A 35 3_171.8	171.8	5.2	600	0.36	1300	12000	2.9	600	0.20	1300	12000	
A 35 3_188.3	188.3	4.8	600	0.33	1300	12000	2.7	600	0.18	1300	12000	
A 35 3_201.8	201.8	4.5	600	0.31	1300	12000	2.5	600	0.17	1300	12000	
A 35 3_223.2	223.2	4.0	600	0.28	1300	12000	2.2	600	0.15	1300	12000	
A 35 3_248.1	248.1	3.6	600	0.25	1300	12000	2.0	600	0.14	1300	12000	
A 35 3_270.7	270.7	3.3	600	0.23	1300	12000	1.8	600	0.13	1300	12000	
A 35 3_305.4	305.4	2.9	600	0.20	1300	12000	1.6	600	0.11	1300	12000	
A 35 3_339.3	339.3	2.7	520	0.16	1300	12000	1.5	520	0.09	1300	12000	
A 35 3_393.2	393.2	2.3	465	0.12	1300	12000	1.3	465	0.07	1300	12000	



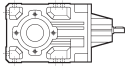

# A 41

# 850 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 41 2_5.2	5.2	534	450	27	1790	4350	267	550	16.4	2450	5560	281
A 41 2_7.1	7.1	393	490	22	1890	4850	197	550	12.0	2670	6430	
A 41 2_8.3	8.3	336	510	19.1	1900	5140	168	550	10.3	2750	6920	
A 41 2_9.2	9.2	304	530	18.0	1980	5300	152	550	9.3	2860	7240	
A 41 2_10.1	10.1	276	435	13.4	2680	6030	138	535	8.2	3390	7650	
A 41 2_11.7	11.7	238	550	14.6	2050	5870	119	550	7.3	2950	8070	
A 41 2_13.8	13.8	204	480	10.9	2690	6680	102	585	6.6	3430	8510	
A 41 2_16.1	16.1	174	500	9.7	2700	7070	87	610	5.9	3430	9000	
A 41 2_17.8	17.8	158	515	9.0	2730	7310	79	630	5.5	3470	9300	
A 41 2_22.7	22.7	123	550	7.6	2730	7970	62	680	4.7	3460	10100	
A 41 2_28.3	28.3	99	595	6.6	2670	8570	49	730	4.0	3450	10900	
A 41 2_35.9	35.9	78	635	5.5	2590	9320	39	780	3.4	3410	11800	
A 41 2_45.1	45.1	62	680	4.7	2500	10100	31	830	2.9	3330	12800	
A 41 2_48.3	48.3	58	690	4.5	2430	10300	29.0	850	2.7	3200	13100	
A 41 2_53.1	53.1	53	700	4.1	2470	10700	26.3	850	2.5	3330	13700	
A 41 2_58.8	58.8	48	730	3.9	2390	11100	23.8	850	2.3	3460	14300	
A 41 2_64.2	64.2	44	740	3.6	2320	11500	21.8	850	2.1	3460	14800	
A 41 2_71.3	71.3	39	780	3.4	2120	11800	19.6	850	1.9	3470	15000	
A 41 2_79.2	79.2	35	800	3.1	1990	12300	17.7	800	1.6	3500	15000	
A 41 3_92.8	92.8	30	650	2.3	270	14000	15.1	800	1.4	430	15000	
A 41 3_115.9	115.9	24.2	800	2.2	310	14600	12.1	850	1.2	980	15000	
A 41 3_146.9	146.9	19.1	850	1.9	790	15000	9.5	850	0.93	1640	15000	
A 41 3_184.4	184.4	15.2	850	1.5	1290	15000	7.6	850	0.74	1770	15000	
A 41 3_197.5	197.5	14.2	850	1.4	1360	15000	7.1	850	0.69	1790	15000	
A 41 3_217.4	217.4	12.9	850	1.3	1390	15000	6.4	850	0.63	1820	15000	
A 41 3_240.6	240.6	11.6	850	1.1	1410	15000	5.8	850	0.57	1840	15000	
A 41 3_262.5	262.5	10.7	850	1.0	1430	15000	5.3	850	0.52	1860	15000	
A 41 3_291.7	291.7	9.6	850	0.94	1450	15000	4.8	850	0.47	1880	15000	
A 41 3_324.2	324.2	8.6	850	0.84	1470	15000	4.3	850	0.42	1900	15000	
A 41 3_376.8	376.8	7.4	850	0.73	1500	15000	3.7	850	0.36	1930	15000	

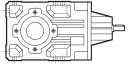



# A 41 850 Nm

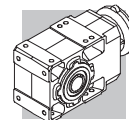
	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 41 2_5.2	5.2	172	550	10.5	3140	6850	95	550	5.8	3500	8900	281
A 41 2_7.1	7.1	126	550	7.7	3360	7870	70	550	4.3	3500	10100	
A 41 2_8.3	8.3	108	550	6.6	3440	8430	60	550	3.7	3500	10800	
A 41 2_9.2	9.2	98	550	6.0	3500	8800	54	550	3.3	3500	11300	
A 41 2_10.1	10.1	89	610	6.0	3500	8920	49	730	4.0	3500	10900	
A 41 2_11.7	11.7	77	550	4.7	3500	9760	43	550	2.6	3500	12400	
A 41 2_13.8	13.8	65	670	4.9	3500	9900	36	800	3.2	3500	12100	
A 41 2_16.1	16.1	56	700	4.4	3500	10500	31	830	2.9	3500	12800	
A 41 2_17.8	17.8	51	720	4.1	3500	10800	28.1	850	2.7	3500	13300	
A 41 2_22.7	22.7	40	780	3.4	3500	11700	22.0	850	2.1	3500	14800	
A 41 2_28.3	28.3	32	830	2.9	3500	12700	17.7	850	1.7	3500	15000	
A 41 2_35.9	35.9	25.1	850	2.4	3500	14000	13.9	850	1.3	3500	15000	
A 41 2_45.1	45.1	20.0	850	1.9	3500	15000	11.1	850	1.1	3500	15000	
A 41 2_48.3	48.3	18.6	850	1.8	3500	15000	10.4	850	0.98	3500	15000	
A 41 2_53.1	53.1	16.9	850	1.6	3500	15000	9.4	850	0.89	3500	15000	
A 41 2_58.8	58.8	15.3	850	1.4	3500	15000	8.5	850	0.81	3500	15000	
A 41 2_64.2	64.2	14.0	850	1.3	3300	15000	7.8	850	0.74	3500	15000	
A 41 2_71.3	71.3	12.6	850	1.2	3500	15000	7.0	850	0.66	3500	15000	
A 41 2_79.2	79.2	11.4	800	1.0	3500	15000	6.3	800	0.56	3500	15000	
A 41 3_92.8	92.8	9.7	800	0.89	1080	15000	5.4	800	0.50	2110	15000	
A 41 3_115.9	115.9	7.8	850	0.76	1630	15000	4.3	850	0.42	2200	15000	
A 41 3_146.9	146.9	6.1	850	0.60	2020	15000	3.4	850	0.33	2200	15000	
A 41 3_184.4	184.4	4.9	850	0.48	2100	15000	2.7	850	0.27	2200	15000	
A 41 3_197.5	197.5	4.6	850	0.45	2120	15000	2.5	850	0.25	2200	15000	
A 41 3_217.4	217.4	4.1	850	0.40	2150	15000	2.3	850	0.22	2200	15000	
A 41 3_240.6	240.6	3.7	850	0.37	2170	15000	2.1	850	0.20	2200	15000	
A 41 3_262.5	262.5	3.4	850	0.34	2190	15000	1.9	850	0.19	2200	15000	
A 41 3_291.7	291.7	3.1	850	0.30	2200	15000	1.7	850	0.17	2200	15000	
A 41 3_324.2	324.2	2.8	850	0.27	2200	15000	1.5	850	0.15	2200	15000	
A 41 3_376.8	376.8	2.4	850	0.23	2200	15000	1.3	850	0.13	2200	15000	



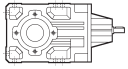

# A 50 1500 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 50 2_7.7	7.7	362	550	22	2300	7920	181	700	14.1	2890	9960	285
A 50 2_9.7	9.7	288	600	19.2	2330	8530	144	750	12.0	2950	10800	
A 50 2_13.1	13.1	214	600	14.3	2460	9600	107	750	8.9	3110	12100	
A 50 2_16.6	16.6	169	640	12.0	2490	10400	84	800	7.5	3150	13100	
A 50 2_20.9	20.9	134	640	9.5	2540	11400	67	800	6.0	3210	14400	
A 50 3_24.0	24.0	116	1150	15.4	1850	7020	58	1500	10.0	2100	8540	
A 50 3_26.4	26.4	106	1200	14.6	2100	7170	53	1500	9.1	2690	9100	
A 50 3_32.4	32.4	86	1290	12.8	1800	4630	43	1500	7.5	2760	10400	
A 50 3_35.6	35.6	79	1340	12.1	2080	7830	39	1500	6.8	3290	11000	
A 50 3_40.9	40.9	68	1415	11.1	1740	8130	34	1500	5.9	3220	11900	
A 50 3_45.0	45.0	62	1470	10.5	2030	8340	31	1500	5.4	3440	12600	
A 50 3_51.7	51.7	54	1500	9.4	1680	8970	27.1	1500	4.7	3400	13600	
A 50 3_56.8	56.8	49	1500	8.5	2150	9540	24.6	1500	4.3	3480	14400	
A 50 3_63.9	63.9	44	1500	7.6	1900	10300	21.9	1500	3.8	3450	15300	
A 50 3_70.2	70.2	40	1500	6.9	2350	10900	19.9	1500	3.4	3500	16100	
A 50 3_81.5	81.5	34	1500	5.9	2170	11900	17.2	1500	3.0	3500	17300	
A 50 3_89.5	89.5	31	1500	5.4	2590	12600	15.6	1500	2.7	3500	18200	
A 50 3_99.5	99.5	28.1	1500	4.9	2260	13400	14.1	1500	2.4	3500	19200	
A 50 3_109.4	109.4	25.6	1500	4.4	2680	14100	12.8	1500	2.2	3500	20000	
A 50 3_118.0	118.0	23.7	1500	4.1	2390	14700	11.9	1500	2.0	3500	20000	
A 50 3_129.7	129.7	21.6	1500	3.7	2720	15400	10.8	1500	1.9	3500	20000	
A 50 3_140.6	140.6	19.9	1500	3.4	2440	16100	10.0	1500	1.7	3500	20000	
A 50 3_154.6	154.6	18.1	1500	3.1	2730	16900	9.1	1500	1.6	3500	20000	
A 50 3_173.4	173.4	16.2	1500	2.8	2480	17900	8.1	1500	1.4	3500	20000	
A 50 3_190.6	190.6	14.7	1500	2.5	2740	18800	7.3	1500	1.3	3500	20000	
A 50 4_211.0	211.0	13.3	1500	2.3	1930	20000	6.6	1500	1.2	2200	20000	
A 50 4_232.0	232.0	12.1	1500	2.1	1970	20000	6.0	1500	1.1	2200	20000	
A 50 4_260.9	260.9	10.7	1500	1.9	2010	20000	5.4	1500	0.95	2200	20000	
A 50 4_286.8	286.8	9.8	1500	1.7	2040	20000	4.9	1500	0.86	2200	20000	
A 50 4_332.6	332.6	8.4	1500	1.5	2080	20000	4.2	1500	0.74	2200	20000	
A 50 4_365.6	365.6	7.7	1500	1.4	2100	20000	3.8	1500	0.68	2200	20000	
A 50 4_406.4	406.4	6.9	1500	1.2	2130	20000	3.4	1500	0.61	2200	20000	
A 50 4_446.8	446.8	6.3	1500	1.1	2140	20000	3.1	1500	0.55	2200	20000	
A 50 4_481.6	481.6	5.8	1500	1.0	2160	20000	2.9	1500	0.51	2200	20000	
A 50 4_529.5	529.5	5.3	1500	0.93	2170	20000	2.6	1500	0.47	2200	20000	
A 50 4_574.2	574.2	4.9	1500	0.86	2190	20000	2.4	1500	0.43	2200	20000	
A 50 4_631.2	631.2	4.4	1500	0.78	2200	20000	2.2	1500	0.39	2200	20000	
A 50 4_707.9	707.9	4.0	1500	0.70	2200	20000	2.0	1500	0.35	2200	20000	
A 50 4_778.2	778.2	3.6	1500	0.63	2200	20000	1.8	1500	0.32	2200	20000	



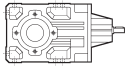



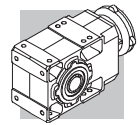
# A 50 1500 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 50 2_7.7</b>	7.7	116	770	10.0	3430	11700	65	900	6.5	3500	14300	285
<b>A 50 2_9.7</b>	9.7	92	830	8.5	3490	12600	51	1000	5.7	3500	15300	
<b>A 50 2_13.1</b>	13.1	69	830	6.3	3500	14200	38	1000	4.2	3500	17300	
<b>A 50 2_16.6</b>	16.6	54	880	5.3	3500	15400	30	1000	3.4	3500	18900	
<b>A 50 2_20.9</b>	20.9	43	880	4.2	3500	16800	23.9	1000	2.7	3500	20000	
<b>A 50 3_24.0</b>	24.0	37	1500	6.5	3480	11300	20.8	1500	3.6	3500	15700	
<b>A 50 3_26.4</b>	26.4	34	1500	5.9	3500	12000	18.9	1500	3.3	3500	16500	
<b>A 50 3_32.4</b>	32.4	27.8	1500	4.8	3500	13400	15.4	1500	2.7	3500	18300	
<b>A 50 3_35.6</b>	35.6	25.3	1500	4.4	3500	14200	14.0	1500	2.4	3500	19200	
<b>A 50 3_40.9</b>	40.9	22.0	1500	3.8	3500	15300	12.2	1500	2.1	3500	20000	
<b>A 50 3_45.0</b>	45.0	20.0	1500	3.5	3500	16000	11.1	1500	1.9	3500	20000	
<b>A 50 3_51.7</b>	51.7	17.4	1500	3.0	3450	17200	9.7	1500	1.7	3500	20000	
<b>A 50 3_56.8</b>	56.8	15.8	1500	2.7	3500	18100	8.8	1500	1.5	3500	20000	
<b>A 50 3_63.9</b>	63.9	14.1	1500	2.4	3500	19200	7.8	1500	1.4	3500	20000	
<b>A 50 3_70.2</b>	70.2	12.8	1500	2.2	3500	20000	7.1	1500	1.2	3500	20000	
<b>A 50 3_81.5</b>	81.5	11.0	1500	1.9	3500	20000	6.1	1500	1.1	3500	20000	
<b>A 50 3_89.5</b>	89.5	10.1	1500	1.7	3500	20000	5.6	1500	0.96	3500	20000	
<b>A 50 3_99.5</b>	99.5	9.0	1500	1.6	3500	20000	5.0	1500	0.87	3500	20000	
<b>A 50 3_109.4</b>	109.4	8.2	1500	1.4	3500	20000	4.6	1500	0.79	3500	20000	
<b>A 50 3_118.0</b>	118.0	7.6	1500	1.3	3500	20000	4.2	1500	0.73	3500	20000	
<b>A 50 3_129.7</b>	129.7	6.9	1500	1.2	3500	20000	3.9	1500	0.67	3500	20000	
<b>A 50 3_140.6</b>	140.6	6.4	1500	1.1	3500	20000	3.6	1500	0.61	3500	20000	
<b>A 50 3_154.6</b>	154.6	5.8	1500	1.0	3500	20000	3.2	1500	0.56	3500	20000	
<b>A 50 3_173.4</b>	173.4	5.2	1500	0.90	3500	20000	2.9	1500	0.50	3500	20000	
<b>A 50 3_190.6</b>	190.6	4.7	1500	0.82	3500	20000	2.6	1500	0.45	3500	20000	
<b>A 50 4_211.0</b>	211.0	4.3	1500	0.75	2200	20000	2.4	1500	0.42	2200	20000	
<b>A 50 4_232.0</b>	232.0	3.9	1500	0.68	2200	20000	2.2	1500	0.38	2200	20000	
<b>A 50 4_260.9</b>	260.9	3.4	1500	0.61	2200	20000	1.9	1500	0.34	2200	20000	
<b>A 50 4_286.8</b>	286.8	3.1	1500	0.55	2200	20000	1.7	1500	0.31	2200	20000	
<b>A 50 4_332.6</b>	332.6	2.7	1500	0.48	2200	20000	1.5	1500	0.27	2200	20000	
<b>A 50 4_365.6</b>	365.6	2.5	1500	0.43	2200	20000	1.4	1500	0.24	2200	20000	
<b>A 50 4_406.4</b>	406.4	2.2	1500	0.39	2200	20000	1.2	1500	0.22	2200	20000	
<b>A 50 4_446.8</b>	446.8	2.0	1500	0.36	2200	20000	1.1	1500	0.20	2200	20000	
<b>A 50 4_481.6</b>	481.6	1.9	1500	0.33	2200	20000	1.0	1500	0.18	2200	20000	
<b>A 50 4_529.5</b>	529.5	1.7	1500	0.30	2200	20000	0.94	1500	0.17	2200	20000	
<b>A 50 4_574.2</b>	574.2	1.6	1500	0.28	2200	20000	0.87	1500	0.15	2200	20000	
<b>A 50 4_631.2</b>	631.2	1.4	1500	0.25	2200	20000	0.79	1500	0.14	2200	20000	
<b>A 50 4_707.9</b>	707.9	1.3	1500	0.22	2200	20000	0.71	1500	0.12	2200	20000	
<b>A 50 4_778.2</b>	778.2	1.2	1500	0.20	2200	20000	0.64	1500	0.11	2200	20000	

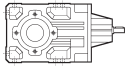



# A 55 2000 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 55 2_4.9</b>	4.9	571	760	48	1320	15100	286	900	28	2150	18700	289
<b>A 55 2_6.4</b>	6.4	438	800	39	1950	16400	219	950	23	2860	20300	
<b>A 55 2_8.5</b>	8.5	329	800	30	2810	18000	165	950	17.5	3500	22200	
<b>A 55 2_10.4</b>	10.4	269	840	25	2900	19100	135	1000	15.1	3500	23600	
<b>A 55 2_13.1</b>	13.1	214	840	20	3230	20600	107	1000	11.9	3500	25500	
<b>A 55 2_15.7</b>	15.7	178	840	16.7	3440	21900	89	1000	9.9	3500	27000	
<b>A 55 2_19.2</b>	19.2	146	925	15.0	3160	23200	73	1100	8.9	3500	28600	
<b>A 55 3_23.8</b>	23.8	118	1600	22	2050	21000	59	1950	13.2	2640	26000	
<b>A 55 3_29.9</b>	29.9	94	1700	18.3	2110	22500	47	2000	10.8	2770	28200	
<b>A 55 3_40.3</b>	40.3	69	1850	14.8	2150	24800	35	2000	8.0	2930	30000	
<b>A 55 3_51.0</b>	51.0	55	2000	12.6	2170	26500	27.5	2000	6.3	3050	30000	
<b>A 55 3_64.3</b>	64.3	44	2000	10.0	2230	29000	21.8	2000	5.0	3110	30000	
<b>A 55 3_79.5</b>	79.5	35	2000	8.1	1040	30000	17.6	2000	4.1	2820	30000	
<b>A 55 3_101.4</b>	101.4	27.6	2000	6.4	1340	30000	13.8	2000	3.2	3130	30000	
<b>A 55 3_123.9</b>	123.9	22.6	2000	5.2	1450	30000	11.3	2000	2.6	3230	30000	
<b>A 55 3_132.7</b>	132.7	21.1	2000	4.9	1450	30000	10.6	2000	2.4	3240	30000	
<b>A 55 3_146.8</b>	146.8	19.1	2000	4.4	1610	30000	9.5	2000	2.2	3290	30000	
<b>A 55 3_160.4</b>	160.4	17.5	2000	4.0	1660	30000	8.7	2000	2.0	3300	30000	
<b>A 55 3_175.0</b>	175.0	16.0	2000	3.7	1660	30000	8.0	2000	1.8	3300	30000	
<b>A 55 3_194.2</b>	194.2	14.4	2000	3.3	1710	30000	7.2	2000	1.7	3310	30000	
<b>A 55 4_208.1</b>	208.1	13.5	1600	2.5	1890	30000	6.7	1950	1.5	2200	30000	
<b>A 55 4_262.6</b>	262.6	10.7	1650	2.1	1980	30000	5.3	2000	1.3	2200	30000	
<b>A 55 4_324.7</b>	324.7	8.6	1750	1.8	2030	30000	4.3	2000	1.0	2200	30000	
<b>A 55 4_414.0</b>	414.0	6.8	1850	1.5	2080	30000	3.4	2000	0.80	2200	30000	
<b>A 55 4_505.9</b>	505.9	5.5	1900	1.2	2120	30000	2.8	2000	0.65	2200	30000	
<b>A 55 4_542.0</b>	542.0	5.2	1900	1.2	2140	30000	2.6	2000	0.61	2200	30000	
<b>A 55 4_599.5</b>	599.5	4.7	1950	1.1	2150	30000	2.3	2000	0.55	2200	30000	
<b>A 55 4_655.1</b>	655.1	4.3	1950	1.0	2180	30000	2.1	2000	0.50	2200	30000	
<b>A 55 4_714.7</b>	714.7	3.9	1950	0.90	2200	30000	2.0	2000	0.46	2200	30000	
<b>A 55 4_793.0</b>	793.0	3.5	2000	0.83	2200	30000	1.8	2000	0.42	2200	30000	

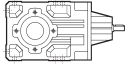



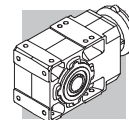
# A 55 2000 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 55 2_4.9	4.9	184	1000	20	2850	21400	102	1160	13.1	3500	25600	289
A 55 2_6.4	6.4	141	1060	16.6	3500	23200	78	1230	10.7	3500	27700	
A 55 2_8.5	8.5	106	1060	12.6	3500	25400	59	1230	8.1	3500	30000	
A 55 2_10.4	10.4	87	1120	10.8	3500	27000	48	1290	6.9	3500	30000	
A 55 2_13.1	13.1	69	1120	8.6	3500	29100	38	1290	5.5	3500	30000	
A 55 2_15.7	15.7	57	1120	7.2	3500	30000	32	1290	4.6	3500	30000	
A 55 2_19.2	19.2	47	1230	6.4	3500	30000	26.0	1420	4.1	3500	30000	
A 55 3_23.8	23.8	38	2000	8.7	3280	30000	21.0	2000	4.8	3500	30000	
A 55 3_29.9	29.9	30	2000	6.9	3450	30000	16.7	2000	3.8	3500	30000	
A 55 3_40.3	40.3	22.3	2000	5.1	3500	30000	12.4	2000	2.9	3500	30000	
A 55 3_51.0	51.0	17.6	2000	4.1	3500	30000	9.8	2000	2.3	3500	30000	
A 55 3_64.3	64.3	14.0	2000	3.2	3500	30000	7.8	2000	1.8	3500	30000	
A 55 3_79.5	79.5	11.3	2000	2.6	3500	30000	6.3	2000	1.4	3500	30000	
A 55 3_101.4	101.4	8.9	2000	2.0	3500	30000	4.9	2000	1.1	3500	30000	
A 55 3_123.9	123.9	7.3	2000	1.7	3500	30000	4.0	2000	0.93	3500	30000	
A 55 3_132.7	132.7	6.8	2000	1.6	3500	30000	3.8	2000	0.87	3500	30000	
A 55 3_146.8	146.8	6.1	2000	1.4	3500	30000	3.4	2000	0.78	3500	30000	
A 55 3_160.4	160.4	5.6	2000	1.3	3500	30000	3.1	2000	0.72	3500	30000	
A 55 3_175.0	175.0	5.1	2000	1.2	3500	30000	2.9	2000	0.66	3500	30000	
A 55 3_194.2	194.2	4.6	2000	1.1	3500	30000	2.6	2000	0.59	3500	30000	
A 55 4_208.1	208.1	4.3	2000	1.0	2200	30000	2.4	2000	0.57	2200	30000	
A 55 4_262.6	262.6	3.4	2000	0.81	2200	30000	1.9	2000	0.45	2200	30000	
A 55 4_324.7	324.7	2.8	2000	0.65	2200	30000	1.5	2000	0.36	2200	30000	
A 55 4_414.0	414.0	2.2	2000	0.51	2200	30000	1.2	2000	0.28	2200	30000	
A 55 4_505.9	505.9	1.8	2000	0.42	2200	30000	1.0	2000	0.23	2200	30000	
A 55 4_542.0	542.0	1.7	2000	0.39	2200	30000	0.92	2000	0.22	2200	30000	
A 55 4_599.5	599.5	1.5	2000	0.35	2200	30000	0.83	2000	0.20	2200	30000	
A 55 4_655.1	655.1	1.4	2000	0.32	2200	30000	0.76	2000	0.18	2200	30000	
A 55 4_714.7	714.7	1.3	2000	0.30	2200	30000	0.70	2000	0.16	2200	30000	
A 55 4_793.0	793.0	1.1	2000	0.27	2200	30000	0.63	2000	0.15	2200	30000	

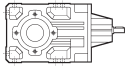



# A 60 2800 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 60 2_7.9</b>	7.9	356	950	38	2770	22500	178	1200	24	3400	27700	293
<b>A 60 2_10.3</b>	10.3	271	950	29	2970	24600	136	1200	18.1	3740	30000	
<b>A 60 2_12.7</b>	12.7	220	1000	25	3020	26200	110	1250	15.3	3810	30000	
<b>A 60 2_16.7</b>	16.7	167	1050	19.6	3080	28600	84	1300	12.1	3910	30000	
<b>A 60 2_20.6</b>	20.6	136	1100	16.7	3100	30000	68	1400	10.6	3890	30000	
<b>A 60 3_25.7</b>	25.7	109	2760	35	2380	26900	54	2800	17.5	3800	30000	
<b>A 60 3_27.9</b>	27.9	101	2800	32	2780	27700	50	2800	16.2	3930	30000	
<b>A 60 3_31.7</b>	31.7	88	2800	29	2790	29000	44	2800	14.2	3940	30000	
<b>A 60 3_34.3</b>	34.3	82	2800	26	2920	30000	41	2800	13.2	4060	30000	
<b>A 60 3_41.7</b>	41.7	67	2800	22	2940	30000	34	2800	10.8	4090	30000	
<b>A 60 3_45.2</b>	45.2	62	2800	20	3060	30000	31	2800	10.0	4200	30000	
<b>A 60 3_51.3</b>	51.3	55	2800	17.6	3030	30000	27.3	2800	8.8	4180	30000	
<b>A 60 3_55.6</b>	55.6	50	2800	16.2	3140	30000	25.2	2800	8.1	4280	30000	
<b>A 60 3_65.0</b>	65.0	43	2800	13.9	3110	30000	21.5	2800	6.9	4260	30000	
<b>A 60 3_70.4</b>	70.4	40	2800	12.8	3210	30000	19.9	2800	6.4	4360	30000	
<b>A 60 3_79.7</b>	79.7	35	2800	11.3	3160	30000	17.6	2800	5.7	4310	30000	
<b>A 60 3_86.4</b>	86.4	32	2800	10.4	3260	30000	16.2	2800	5.2	4410	30000	
<b>A 60 3_99.5</b>	99.5	28.1	2800	9.1	3210	30000	14.1	2800	4.5	4360	30000	
<b>A 60 3_107.8</b>	107.8	26.0	2800	8.4	3300	30000	13.0	2800	4.2	4450	30000	
<b>A 60 3_123.0</b>	123.0	22.8	2800	7.3	3250	30000	11.4	2800	3.7	4400	30000	
<b>A 60 3_133.3</b>	133.3	21.0	2800	6.8	3340	30000	10.5	2800	3.4	4490	30000	
<b>A 60 3_144.0</b>	144.0	19.4	2800	6.3	3280	30000	9.7	2800	3.1	4420	30000	
<b>A 60 3_156.0</b>	156.0	17.9	2800	5.8	3360	30000	9.0	2800	2.9	4510	30000	
<b>A 60 3_171.5</b>	171.5	16.3	2800	5.3	3290	30000	8.2	2800	2.6	4430	30000	
<b>A 60 3_185.8</b>	185.8	15.1	2800	4.9	3370	30000	7.5	2800	2.4	4520	30000	
<b>A 60 4_208.7</b>	208.7	13.4	2800	4.4	2720	30000	6.7	2800	2.2	3500	30000	
<b>A 60 4_226.1</b>	226.1	12.4	2800	4.1	2770	30000	6.2	2800	2.0	3500	30000	
<b>A 60 4_264.3</b>	264.3	10.6	2800	3.5	2860	30000	5.3	2800	1.7	3500	30000	
<b>A 60 4_286.3</b>	286.3	9.8	2800	3.2	2900	30000	4.9	2800	1.6	3500	30000	
<b>A 60 4_324.2</b>	324.2	8.6	2800	2.8	2960	30000	4.3	2800	1.4	3500	30000	
<b>A 60 4_351.2</b>	351.2	8.0	2800	2.6	2990	30000	4.0	2800	1.3	3500	30000	
<b>A 60 4_404.7</b>	404.7	6.9	2800	2.3	3050	30000	3.5	2800	1.1	3500	30000	
<b>A 60 4_438.4</b>	438.4	6.4	2800	2.1	3070	30000	3.2	2800	1.1	3500	30000	
<b>A 60 4_500.3</b>	500.3	5.6	2800	1.8	3110	30000	2.8	2800	0.92	3500	30000	
<b>A 60 4_542.0</b>	542.0	5.2	2800	1.7	3140	30000	2.6	2800	0.85	3500	30000	
<b>A 60 4_585.8</b>	585.8	4.8	2800	1.6	3150	30000	2.4	2800	0.79	3500	30000	
<b>A 60 4_634.6</b>	634.6	4.4	2800	1.5	3170	30000	2.2	2800	0.73	3500	30000	
<b>A 60 4_697.3</b>	697.3	4.0	2800	1.3	3190	30000	2.0	2800	0.66	3500	30000	
<b>A 60 4_755.4</b>	755.4	3.7	2800	1.2	3210	30000	1.9	2800	0.61	3500	30000	



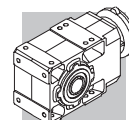
# A 60 2800 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 60 2_7.9</b>	7.9	114	1300	16.6	4190	30000	64	1550	11.0	4700	30000	293
<b>A 60 2_10.3</b>	10.3	87	1300	12.6	4470	30000	48	1550	8.4	4700	30000	
<b>A 60 2_12.7</b>	12.7	71	1400	11.0	4490	30000	39	1700	7.5	4700	30000	
<b>A 60 2_16.7</b>	16.7	54	1450	8.7	4610	30000	29.9	1700	5.7	4700	30000	
<b>A 60 2_20.6</b>	20.6	44	1550	7.5	4600	30000	24.3	1800	4.9	4700	30000	
<b>A 60 3_25.7</b>	25.7	35	2800	11.3	4680	30000	19.4	2800	6.3	4700	30000	
<b>A 60 3_27.9</b>	27.9	32	2800	10.4	4700	30000	18.0	2800	5.8	4700	30000	
<b>A 60 3_31.7</b>	31.7	28.4	2800	9.2	4700	30000	15.8	2800	5.1	4700	30000	
<b>A 60 3_34.3</b>	34.3	26.2	2800	8.5	4700	30000	14.6	2800	4.7	4700	30000	
<b>A 60 3_41.7</b>	41.7	21.6	2800	7.0	4700	30000	12.0	2800	3.9	4700	30000	
<b>A 60 3_45.2</b>	45.2	19.9	2800	6.4	4700	30000	11.1	2800	3.6	4700	30000	
<b>A 60 3_51.3</b>	51.3	17.5	2800	5.6	4700	30000	9.7	2800	3.1	4700	30000	
<b>A 60 3_55.6</b>	55.6	16.2	2800	5.2	4700	30000	9.0	2800	2.9	4700	30000	
<b>A 60 3_65.0</b>	65.0	13.8	2800	4.5	4700	30000	7.7	2800	2.5	4700	30000	
<b>A 60 3_70.4</b>	70.4	12.8	2800	4.1	4700	30000	7.1	2800	2.3	4700	30000	
<b>A 60 3_79.7</b>	79.7	11.3	2800	3.6	4700	30000	6.3	2800	2.0	4700	30000	
<b>A 60 3_86.4</b>	86.4	10.4	2800	3.4	4700	30000	5.8	2800	1.9	4700	30000	
<b>A 60 3_99.5</b>	99.5	9.0	2800	2.9	4700	30000	5.0	2800	1.6	4700	30000	
<b>A 60 3_107.8</b>	107.8	8.3	2800	2.7	4700	30000	4.6	2800	1.5	4700	30000	
<b>A 60 3_123.0</b>	123.0	7.3	2800	2.4	4700	30000	4.1	2800	1.3	4700	30000	
<b>A 60 3_133.3</b>	133.3	6.8	2800	2.2	4700	30000	3.8	2800	1.2	4700	30000	
<b>A 60 3_144.0</b>	144.0	6.2	2800	2.0	4700	30000	3.5	2800	1.1	4700	30000	
<b>A 60 3_156.0</b>	156.0	5.8	2800	1.9	4700	30000	3.2	2800	1.0	4700	30000	
<b>A 60 3_171.5</b>	171.5	5.2	2800	1.7	4700	30000	2.9	2800	0.94	4700	30000	
<b>A 60 3_185.8</b>	185.8	4.8	2800	1.6	4700	30000	2.7	2800	0.87	4700	30000	
<b>A 60 4_208.7</b>	208.7	4.3	2800	1.4	3500	30000	2.4	2800	0.79	3500	30000	
<b>A 60 4_226.1</b>	226.1	4.0	2800	1.3	3500	30000	2.2	2800	0.73	3500	30000	
<b>A 60 4_264.3</b>	264.3	3.4	2800	1.1	3500	30000	1.9	2800	0.62	3500	30000	
<b>A 60 4_286.3</b>	286.3	3.1	2800	1.0	3500	30000	1.7	2800	0.58	3500	30000	
<b>A 60 4_324.2</b>	324.2	2.8	2800	0.91	3500	30000	1.5	2800	0.51	3500	30000	
<b>A 60 4_351.2</b>	351.2	2.6	2800	0.84	3500	30000	1.4	2800	0.47	3500	30000	
<b>A 60 4_404.7</b>	404.7	2.2	2800	0.73	3500	30000	1.2	2800	0.41	3500	30000	
<b>A 60 4_438.4</b>	438.4	2.1	2800	0.68	3500	30000	1.1	2800	0.38	3500	30000	
<b>A 60 4_500.3</b>	500.3	1.8	2800	0.59	3500	30000	1.0	2800	0.33	3500	30000	
<b>A 60 4_542.0</b>	542.0	1.7	2800	0.55	3500	30000	0.92	2800	0.30	3500	30000	
<b>A 60 4_585.8</b>	585.8	1.5	2800	0.51	3500	30000	0.85	2800	0.28	3500	30000	
<b>A 60 4_634.6</b>	634.6	1.4	2800	0.47	3500	30000	0.79	2800	0.26	3500	30000	
<b>A 60 4_697.3</b>	697.3	1.3	2800	0.43	3500	30000	0.72	2800	0.24	3500	30000	
<b>A 60 4_755.4</b>	755.4	1.2	2800	0.39	3500	30000	0.66	2800	0.22	3500	30000	

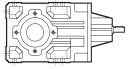



# A 70 5000 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 70 3_9.4</b>	9.4	297	2300	79	1900	25900	148	2800	48	2550	31900	297
<b>A 70 3_10.2</b>	10.2	274	2400	76	2480	26400	137	3200	50	1480	31900	
<b>A 70 3_12.1</b>	12.1	232	2400	64	2420	28000	116	3200	43	1400	33900	
<b>A 70 3_13.1</b>	13.1	214	2600	64	2420	28400	107	3350	41	2100	34600	
<b>A 70 3_15.4</b>	15.4	182	2700	56	2100	29900	91	3350	35	2430	36700	
<b>A 70 3_16.7</b>	16.7	168	2850	55	2500	30400	84	3600	35	2590	37200	
<b>A 70 3_19.7</b>	19.7	142	2900	48	2030	32100	71	3700	30	1790	39300	
<b>A 70 3_21.3</b>	21.3	131	3000	45	2750	32900	66	4000	30	1830	39800	
<b>A 70 3_23.5</b>	23.5	119	3500	48	4930	32900	60	4300	30	6250	40500	
<b>A 70 3_27.8</b>	27.8	101	3450	40	4960	35100	50	4200	24	6300	43300	
<b>A 70 3_30.1</b>	30.1	93	3700	40	4970	35600	47	4550	24	6300	43900	
<b>A 70 3_35.4</b>	35.4	79	3650	33	5040	37900	40	4500	21	6370	46600	
<b>A 70 3_38.4</b>	38.4	73	3950	33	5040	38400	36	4850	20	6380	47300	
<b>A 70 3_45.2</b>	45.2	62	3900	28	5050	40800	31	4800	17.1	6400	50000	
<b>A 70 3_49.0</b>	49.0	57	4250	28	5050	41300	28.6	5000	16.4	6450	50000	
<b>A 70 3_53.2</b>	53.2	53	4100	25	5030	42900	26.3	5000	15.1	6380	50000	
<b>A 70 3_57.7</b>	57.7	49	4450	25	5030	43400	24.3	5000	14.0	6490	50000	
<b>A 70 3_66.9</b>	66.9	42	4350	21	5050	46000	20.9	5000	12.0	6480	50000	
<b>A 70 3_72.5</b>	72.5	39	4750	21	5040	46500	19.3	5000	11.1	6580	50000	
<b>A 70 3_79.3</b>	79.3	35	4600	18.7	5020	48400	17.6	5000	10.2	6520	50000	
<b>A 70 3_85.9</b>	85.9	33	4950	18.6	5030	49100	16.3	5000	9.4	6620	50000	
<b>A 70 3_96.2</b>	96.2	29.1	4850	16.2	5000	50000	14.6	5000	8.4	6570	50000	
<b>A 70 3_104.2</b>	104.2	26.9	5000	15.5	5060	50000	13.4	5000	7.7	6660	50000	
<b>A 70 3_120.6</b>	120.6	23.2	5000	13.4	5010	50000	11.6	5000	6.7	6610	50000	
<b>A 70 3_130.7</b>	130.7	21.4	5000	12.3	5100	50000	10.7	5000	6.2	6690	50000	
<b>A 70 3_141.9</b>	141.9	19.7	5000	11.4	5040	50000	9.9	5000	5.7	6640	50000	
<b>A 70 3_153.7</b>	153.7	18.2	3300	6.9	5410	50000	9.1	4050	4.2	6920	50000	
<b>A 70 4_169.8</b>	169.8	16.5	5000	9.7	1130	50000	8.2	5000	4.9	2520	50000	
<b>A 70 4_183.9</b>	183.9	15.2	5000	9.0	1450	50000	7.6	5000	4.5	2670	50000	
<b>A 70 4_220.3</b>	220.3	12.7	5000	7.5	1560	50000	6.4	5000	3.7	2710	50000	
<b>A 70 4_238.6</b>	238.6	11.7	5000	6.9	1860	50000	5.9	5000	3.5	2770	50000	
<b>A 70 4_292.0</b>	292.0	9.6	5000	5.6	1900	50000	4.8	5000	2.8	2790	50000	
<b>A 70 4_316.4</b>	316.4	8.9	5000	5.2	2110	50000	4.4	5000	2.6	2850	50000	
<b>A 70 4_369.4</b>	369.4	7.6	5000	4.5	2110	50000	3.8	5000	2.2	2840	50000	
<b>A 70 4_400.2</b>	400.2	7.0	5000	4.1	2160	50000	3.5	5000	2.1	2900	50000	
<b>A 70 4_475.8</b>	475.8	5.9	5000	3.5	2150	50000	2.9	5000	1.7	2890	50000	
<b>A 70 4_515.4</b>	515.4	5.4	5000	3.2	2200	50000	2.7	5000	1.6	2940	50000	
<b>A 70 4_595.0</b>	595.0	4.7	5000	2.8	2190	50000	2.4	5000	1.4	2920	50000	
<b>A 70 4_644.6</b>	644.6	4.3	5000	2.6	2230	50000	2.2	5000	1.3	2970	50000	
<b>A 70 4_705.1</b>	705.1	4.0	5000	2.3	2200	50000	2.0	5000	1.2	2940	50000	
<b>A 70 4_763.9</b>	763.9	3.7	5000	2.2	2250	50000	1.8	5000	1.1	2990	50000	
<b>A 70 4_855.3</b>	855.3	3.3	5000	1.9	2220	50000	1.6	5000	0.96	2960	50000	
<b>A 70 4_926.5</b>	926.5	3.0	5000	1.8	2270	50000	1.5	5000	0.89	3000	50000	
<b>A 70 4_1072</b>	1072	2.6	5000	1.5	2240	50000	1.3	5000	0.77	2970	50000	
<b>A 70 4_1161</b>	1161	2.4	5000	1.4	2280	50000	1.2	5000	0.71	3020	50000	
<b>A 70 4_1242</b>	1242	2.3	5000	1.3	2250	50000	1.1	5000	0.66	2980	50000	
<b>A 70 4_1346</b>	1346	2.1	5000	1.2	2290	50000	1.0	5000	0.61	3030	50000	
<b>A 70 4_1583</b>	1583	1.8	5000	1.0	2260	50000	0.88	5000	0.52	2990	50000	
<b>A 70 4_1715</b>	1715	1.6	5000	0.96	2300	50000	0.82	5000	0.48	3040	50000	



# A 70 5000 Nm

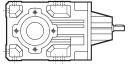

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 70 3_9.4	9.4	95	3000	33	4290	36900	53	3000	18.3	7000	45400	
A 70 3_10.2	10.2	88	3250	33	4290	37400	49	3250	18.3	7000	46100	
A 70 3_12.1	12.1	75	3650	31	1620	38700	41	3650	17.4	6470	47900	
A 70 3_13.1	13.1	69	3950	31	1650	39200	38	3950	17.4	6500	48600	
A 70 3_15.4	15.4	58	3700	25	3510	42200	32	3700	13.8	7000	50000	
A 70 3_16.7	16.7	54	4000	25	3560	42800	30	4000	13.8	7000	50000	
A 70 3_19.7	19.7	46	3700	19.5	4910	46100	25.4	3700	10.8	7000	50000	
A 70 3_21.3	21.3	42	4000	19.4	4950	46800	23.5	4000	10.8	7000	50000	
A 70 3_23.5	23.5	38	4900	21.6	7000	46300	21.3	5000	12.2	7000	50000	
A 70 3_27.8	27.8	32	4800	17.9	7000	49400	18.0	5000	10.4	7000	50000	
A 70 3_30.1	30.1	29.9	5000	17.2	7000	50000	16.6	5000	9.6	7000	50000	
A 70 3_35.4	35.4	25.4	5000	14.6	7000	50000	14.1	5000	8.1	7000	50000	
A 70 3_38.4	38.4	23.4	5000	13.5	7000	50000	13.0	5000	7.5	7000	50000	
A 70 3_45.2	45.2	19.9	5000	11.4	7000	50000	11.1	5000	6.4	7000	50000	
A 70 3_49.0	49.0	18.4	5000	10.6	7000	50000	10.2	5000	5.9	7000	50000	
A 70 3_53.2	53.2	16.9	5000	9.7	7000	50000	9.4	5000	5.4	7000	50000	
A 70 3_57.7	57.7	15.6	5000	9.0	7000	50000	8.7	5000	5.0	7000	50000	
A 70 3_66.9	66.9	13.4	5000	7.7	7000	50000	7.5	5000	4.3	7000	50000	
A 70 3_72.5	72.5	12.4	5000	7.1	7000	50000	6.9	5000	4.0	7000	50000	
A 70 3_79.3	79.3	11.3	5000	6.5	7000	50000	6.3	5000	3.6	7000	50000	
A 70 3_85.9	85.9	10.5	5000	6.0	7000	50000	5.8	5000	3.3	7000	50000	
A 70 3_96.2	96.2	9.4	5000	5.4	7000	50000	5.2	5000	3.0	7000	50000	
A 70 3_104.2	104.2	8.6	5000	5.0	7000	50000	4.8	5000	2.8	7000	50000	
A 70 3_120.6	120.6	7.5	5000	4.3	7000	50000	4.1	5000	2.4	7000	50000	
A 70 3_130.7	130.7	6.9	5000	4.0	7000	50000	3.8	5000	2.2	7000	50000	
A 70 3_141.9	141.9	6.3	5000	3.7	7000	50000	3.5	5000	2.0	7000	50000	
A 70 3_153.7	153.7	5.9	4600	3.1	7000	50000	3.3	5000	1.9	7000	50000	
A 70 4_169.8	169.8	5.3	5000	3.1	3170	50000	2.9	5000	1.7	3500	50000	
A 70 4_183.9	183.9	4.9	5000	2.9	3240	50000	2.7	5000	1.6	3500	50000	
A 70 4_220.3	220.3	4.1	5000	2.4	3270	50000	2.3	5000	1.3	3500	50000	
A 70 4_238.6	238.6	3.8	5000	2.2	3340	50000	2.1	5000	1.2	3500	50000	
A 70 4_292.0	292.0	3.1	5000	1.8	3350	50000	1.7	5000	1.0	3500	50000	
A 70 4_316.4	316.4	2.8	5000	1.7	3410	50000	1.6	5000	0.93	3500	50000	
A 70 4_369.4	369.4	2.4	5000	1.4	3410	50000	1.4	5000	0.80	3500	50000	
A 70 4_400.2	400.2	2.2	5000	1.3	3460	50000	1.2	5000	0.74	3500	50000	
A 70 4_475.8	475.8	1.9	5000	1.1	3450	50000	1.1	5000	0.62	3500	50000	
A 70 4_515.4	515.4	1.7	5000	1.0	3500	50000	0.97	5000	0.57	3500	50000	
A 70 4_595.0	595.0	1.5	5000	0.89	3480	50000	0.84	5000	0.49	3500	50000	
A 70 4_644.6	644.6	1.4	5000	0.82	3500	50000	0.78	5000	0.46	3500	50000	
A 70 4_705.1	705.1	1.3	5000	0.75	3500	50000	0.71	5000	0.42	3500	50000	
A 70 4_763.9	763.9	1.2	5000	0.69	3500	50000	0.65	5000	0.39	3500	50000	
A 70 4_855.3	855.3	1.1	5000	0.62	3500	50000	0.58	5000	0.34	3500	50000	
A 70 4_926.5	926.5	0.97	5000	0.57	3500	50000	0.54	5000	0.32	3500	50000	
A 70 4_1072	1072	0.84	5000	0.49	3500	50000	0.47	5000	0.27	3500	50000	
A 70 4_1161	1161	0.77	5000	0.46	3500	50000	0.43	5000	0.25	3500	50000	
A 70 4_1242	1242	0.72	5000	0.43	3500	50000	0.40	5000	0.24	3500	50000	
A 70 4_1346	1346	0.67	5000	0.39	3500	50000	0.37	5000	0.22	3500	50000	
A 70 4_1583	1583	0.57	5000	0.33	3500	50000	0.32	5000	0.19	3500	50000	
A 70 4_1715	1715	0.52	5000	0.31	3500	50000	0.29	5000	0.17	3500	50000	

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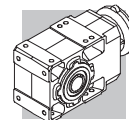
# A 80

# 8000 Nm

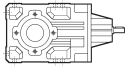

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 80 3_9.8	9.8	285	3100	102	—	26300	142	3900	64	—	32100	300
A 80 3_10.7	10.7	263	3450	104	—	26300	131	4300	65	—	32300	
A 80 3_12.3	12.3	228	3450	91	—	27700	114	4300	56	—	34000	
A 80 3_13.3	13.3	211	3450	84	1150	28700	105	4300	52	1150	35200	
A 80 3_15.5	15.5	181	3300	69	1560	30600	91	4100	43	1730	37600	
A 80 3_16.7	16.7	167	3600	69	1440	30900	84	4500	43	1460	37900	
A 80 3_19.3	19.3	145	3500	58	1870	32800	72	4400	37	1880	40200	
A 80 3_20.9	20.9	134	3840	59	1670	33100	67	4800	37	1740	40600	
A 80 3_22.6	22.6	124	5050	72	4500	31200	62	6250	45	5830	38400	
A 80 3_24.5	24.5	114	5500	72	4470	31300	57	6750	44	5840	38600	
A 80 3_28.2	28.2	99	5350	61	4700	33500	50	6600	38	5960	41200	
A 80 3_30.6	30.6	92	5250	55	4840	34900	46	6450	34	6140	43000	
A 80 3_35.5	35.5	79	5700	52	4700	36000	39	7000	32	6000	44300	
A 80 3_38.5	38.5	73	6150	51	4720	36200	36	7600	32	6000	44500	
A 80 3_44.5	44.5	63	6050	44	4790	38600	31	7450	27	6070	47500	
A 80 3_48.2	48.2	58	6550	44	4790	38800	29.1	8000	27	6090	47900	
A 80 3_55.2	55.2	51	6400	37	4710	41300	25.4	7900	23	6050	50800	
A 80 3_59.8	59.8	47	6950	37	4690	41500	23.4	8000	22	6170	52300	
A 80 3_66.8	66.8	42	6800	33	4670	43700	21.0	8000	19.3	6150	54600	
A 80 3_72.4	72.4	39	7350	33	4680	44000	19.3	8000	17.8	6280	56500	
A 80 3_82.3	82.3	34	7200	28	4570	46600	17.0	8000	15.7	6230	59300	
A 80 3_89.2	89.2	31	7800	28	4570	46900	15.7	8000	14.5	6350	61400	
A 80 3_96.0	96.0	29.2	7500	25	4410	48900	14.6	8000	13.4	6260	63000	
A 80 3_104.0	104.0	26.9	8000	25	4500	49500	13.5	8000	12.4	6380	65000	
A 80 3_116.0	116.0	24.1	7950	22	4230	51700	12.1	8000	11.1	6300	65000	
A 80 3_125.6	125.6	22.3	8000	21	4630	53400	11.1	8000	10.3	6420	65000	
A 80 3_144.7	144.7	19.3	8000	17.8	4320	56400	9.7	8000	8.9	6350	65000	
A 80 3_156.8	156.8	17.9	8000	16.4	4750	58300	8.9	8000	8.2	6460	65000	
A 80 4_171.3	171.3	16.3	8000	15.4	—	65000	8.2	8000	7.7	1230	65000	
A 80 4_214.7	214.7	13.0	8000	12.3	—	65000	6.5	8000	6.1	1400	65000	
A 80 4_232.6	232.6	12.0	8000	11.3	—	65000	6.0	8000	5.7	1810	65000	
A 80 4_277.3	277.3	10.1	8000	9.5	540	65000	5.0	8000	4.8	1930	65000	
A 80 4_300.4	300.4	9.3	8000	8.8	900	65000	4.7	8000	4.4	2290	65000	
A 80 4_354.0	354.0	7.9	8000	7.4	800	65000	4.0	8000	3.7	2190	65000	
A 80 4_383.5	383.5	7.3	8000	6.9	1140	65000	3.7	8000	3.4	2530	65000	
A 80 4_442.1	442.1	6.3	8000	6.0	1040	65000	3.2	8000	3.0	2430	65000	
A 80 4_478.9	478.9	5.8	8000	5.5	1370	65000	2.9	8000	2.8	2670	65000	
A 80 4_560.5	560.5	5.0	8000	4.7	1240	65000	2.5	8000	2.4	2630	65000	
A 80 4_607.2	607.2	4.6	8000	4.3	1550	65000	2.3	8000	2.2	2720	65000	
A 80 4_703.5	703.5	4.0	8000	3.7	1440	65000	2.0	8000	1.9	2690	65000	
A 80 4_762.1	762.1	3.7	8000	3.5	1730	65000	1.8	8000	1.7	2760	65000	
A 80 4_829.5	829.5	3.4	8000	3.2	1530	65000	1.7	8000	1.6	2720	65000	
A 80 4_898.7	898.7	3.1	8000	2.9	1820	65000	1.6	8000	1.5	2780	65000	
A 80 4_1001	1001	2.8	8000	2.6	1620	65000	1.4	8000	1.3	2740	65000	
A 80 4_1085	1085	2.6	8000	2.4	1900	65000	1.3	8000	1.2	2800	65000	
A 80 4_1237	1237	2.3	8000	2.1	1660	65000	1.1	8000	1.1	2750	65000	
A 80 4_1340	1340	2.1	8000	2.0	1940	65000	1.0	8000	0.98	2810	65000	
A 80 4_1438	1438	1.9	8000	1.8	1730	65000	0.97	8000	0.92	2770	65000	
A 80 4_1558	1558	1.8	8000	1.7	2000	65000	0.90	8000	0.85	2830	65000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)





# A 80 8000 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 80 3_9.8	9.8	92	4450	47	—	36700	51	5300	31	—	43800	300
A 80 3_10.7	10.7	84	4900	48	—	36900	47	5850	32	—	44000	
A 80 3_12.3	12.3	73	4900	41	—	38900	41	5850	27	—	46400	
A 80 3_13.3	13.3	68	4900	38	1360	40200	38	5850	25	1600	47900	
A 80 3_15.5	15.5	58	4650	31	2130	43000	32	5550	21	2530	51300	
A 80 3_16.7	16.7	54	5100	32	1840	43400	29.9	6100	21	2120	51700	
A 80 3_19.3	19.3	47	5000	27	2260	46000	25.9	6000	17.9	2530	54800	
A 80 3_20.9	20.9	43	5470	27	2030	46400	23.9	6500	17.9	2530	55400	
A 80 3_22.6	22.6	40	7100	33	6810	43900	22.1	8000	20.4	7000	53400	
A 80 3_24.5	24.5	37	7700	33	6800	44100	20.4	8000	18.8	7000	55300	
A 80 3_28.2	28.2	32	7550	28	6940	47000	17.7	8000	16.3	7000	58400	
A 80 3_30.6	30.6	29.4	7400	25	7000	49000	16.4	8000	15.1	7000	60400	
A 80 3_35.5	35.5	25.3	8000	23	6980	50600	14.1	8000	13.0	7000	63900	
A 80 3_38.5	38.5	23.4	8000	22	7000	52400	13.0	8000	12.0	7000	65000	
A 80 3_44.5	44.5	20.2	8000	18.6	7000	55400	11.2	8000	10.3	7000	65000	
A 80 3_48.2	48.2	18.7	8000	17.2	7000	57300	10.4	8000	9.6	7000	65000	
A 80 3_55.2	55.2	16.3	8000	15.0	7000	60300	9.1	8000	8.3	7000	65000	
A 80 3_59.8	59.8	15.1	8000	13.9	7000	62300	8.4	8000	7.7	7000	65000	
A 80 3_66.8	66.8	13.5	8000	12.4	7000	65000	7.5	8000	6.9	7000	65000	
A 80 3_72.4	72.4	12.4	8000	11.4	7000	65000	6.9	8000	6.4	7000	65000	
A 80 3_82.3	82.3	10.9	8000	10.1	7000	65000	6.1	8000	5.6	7000	65000	
A 80 3_89.2	89.2	10.1	8000	9.3	7000	65000	5.6	8000	5.2	7000	65000	
A 80 3_96.0	96.0	9.4	8000	8.6	7000	65000	5.2	8000	4.8	7000	65000	
A 80 3_104.0	104.0	8.7	8000	8.0	7000	65000	4.8	8000	4.4	7000	65000	
A 80 3_116.0	116.0	7.8	8000	7.1	7000	65000	4.3	8000	4.0	7000	65000	
A 80 3_125.6	125.6	7.2	8000	6.6	7000	65000	4.0	8000	3.7	7000	65000	
A 80 3_144.7	144.7	6.2	8000	5.7	7000	65000	3.5	8000	3.2	7000	65000	
A 80 3_156.8	156.8	5.7	8000	5.3	7000	65000	3.2	8000	2.9	7000	65000	
A 80 4_171.3	171.3	5.3	8000	4.9	2300	65000	2.9	8000	2.7	3500	65000	
A 80 4_214.7	214.7	4.2	8000	3.9	2470	65000	2.3	8000	2.2	3500	65000	
A 80 4_232.6	232.6	3.9	8000	3.6	2870	65000	2.1	8000	2.0	3500	65000	
A 80 4_277.3	277.3	3.2	8000	3.1	3000	65000	1.8	8000	1.7	3500	65000	
A 80 4_300.4	300.4	3.0	8000	2.8	3120	65000	1.7	8000	1.6	3500	65000	
A 80 4_354.0	354.0	2.5	8000	2.4	3100	65000	1.4	8000	1.3	3500	65000	
A 80 4_383.5	383.5	2.3	8000	2.2	3180	65000	1.3	8000	1.2	3500	65000	
A 80 4_442.1	442.1	2.0	8000	1.9	3160	65000	1.1	8000	1.1	3500	65000	
A 80 4_478.9	478.9	1.9	8000	1.8	3230	65000	1.0	8000	0.98	3500	65000	
A 80 4_560.5	560.5	1.6	8000	1.5	3210	65000	0.89	8000	0.84	3500	65000	
A 80 4_607.2	607.2	1.5	8000	1.4	3280	65000	0.82	8000	0.78	3500	65000	
A 80 4_703.5	703.5	1.3	8000	1.2	3260	65000	0.71	8000	0.67	3500	65000	
A 80 4_762.1	762.1	1.2	8000	1.1	3320	65000	0.66	8000	0.62	3500	65000	
A 80 4_829.5	829.5	1.1	8000	1.0	3280	65000	0.60	8000	0.57	3500	65000	
A 80 4_898.7	898.7	1.0	8000	0.94	3340	65000	0.56	8000	0.52	3500	65000	
A 80 4_1001	1001	0.90	8000	0.85	3300	65000	0.50	8000	0.47	3500	65000	
A 80 4_1085	1085	0.83	8000	0.78	3360	65000	0.46	8000	0.43	3500	65000	
A 80 4_1237	1237	0.73	8000	0.68	3310	65000	0.40	8000	0.38	3500	65000	
A 80 4_1340	1340	0.67	8000	0.63	3370	65000	0.37	8000	0.35	3500	65000	
A 80 4_1438	1438	0.63	8000	0.59	3330	65000	0.35	8000	0.33	3500	65000	
A 80 4_1558	1558	0.58	8000	0.54	3390	65000	0.32	8000	0.30	3500	65000	

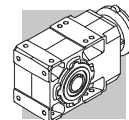
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



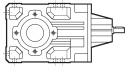

# A 90 14000 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>A 90 3_9.7</b>	9.7	289	7800	260	2440	27600	145	9050	151	5520	35000	303
<b>A 90 3_10.5</b>	10.5	267	8350	257	2620	27700	134	9800	151	5530	34900	
<b>A 90 3_12.6</b>	12.6	221	8500	217	2700	29800	111	10450	133	4790	36700	
<b>A 90 3_13.7</b>	13.7	204	8050	189	4670	31800	102	11150	131	5060	36900	
<b>A 90 3_15.6</b>	15.6	180	8900	184	3240	32000	90	10950	113	5410	39400	
<b>A 90 3_16.9</b>	16.9	166	9650	184	3230	31900	83	11850	113	5440	39300	
<b>A 90 3_19.4</b>	19.4	144	9400	156	3160	34300	72	11550	96	5350	42300	
<b>A 90 3_21.0</b>	21.0	133	10150	156	3210	34300	67	12400	95	5510	42400	
<b>A 90 3_22.3</b>	22.3	126	9850	143	9660	35700	63	12150	88	12200	43900	
<b>A 90 3_24.1</b>	24.1	116	10700	143	9660	35500	58	13150	88	12200	43800	
<b>A 90 3_29.1</b>	29.1	96	10550	117	9800	38900	48	13000	72	12400	47900	
<b>A 90 3_31.5</b>	31.5	89	11450	117	9800	38800	44	14000	72	12400	47900	
<b>A 90 3_35.8</b>	35.8	78	11150	100	9910	41600	39	13750	62	12500	51100	
<b>A 90 3_38.8</b>	38.8	72	12100	100	9900	41500	36	14000	58	12700	52700	
<b>A 90 3_44.6</b>	44.6	63	11800	85	9920	44600	31	14000	51	12700	56000	
<b>A 90 3_48.3</b>	48.3	58	12800	85	9920	44500	29.0	14000	47	12800	58000	
<b>A 90 3_55.0</b>	55.0	51	12550	73	9960	47500	25.4	14000	41	12800	61400	
<b>A 90 3_59.6</b>	59.6	47	13550	73	9970	47500	23.5	14000	38	13000	63500	
<b>A 90 3_68.8</b>	68.8	41	13350	63	9960	50900	20.4	14000	33	13000	67400	
<b>A 90 3_74.5</b>	74.5	38	14000	61	10000	51700	18.8	14000	30	13100	69700	
<b>A 90 3_80.4</b>	80.4	35	13900	56	9920	53500	17.4	14000	28	13000	71900	
<b>A 90 3_87.1</b>	87.1	32	14000	52	10100	55500	16.1	14000	26	13200	74300	
<b>A 90 3_98.6</b>	98.6	28.4	14000	46	9990	58500	14.2	14000	23	13100	75000	
<b>A 90 3_106.8</b>	106.8	26.2	14000	42	10100	60600	13.1	14000	21	13300	75000	
<b>A 90 3_116.9</b>	116.9	24.0	14000	39	10100	63000	12.0	14000	19.3	13200	75000	
<b>A 90 3_126.6</b>	126.6	22.1	10650	27	10600	71400	11.1	13150	16.7	13400	75000	
<b>A 90 3_139.4</b>	139.4	20.1	10350	24	10600	74500	10.0	12750	14.7	13400	75000	
<b>A 90 3_151.0</b>	151.0	18.5	11200	24	10600	75000	9.3	13800	14.7	13400	75000	
<b>A 90 4_166.1</b>	166.1	16.9	14000	28	—	75000	8.4	14000	13.9	—	75000	
<b>A 90 4_180.0</b>	180.0	15.6	14000	26	—	75000	7.8	14000	12.8	—	75000	
<b>A 90 4_209.0</b>	209.0	13.4	14000	22	—	75000	6.7	14000	11.0	—	75000	
<b>A 90 4_226.4</b>	226.4	12.4	14000	20	—	75000	6.2	14000	10.2	—	75000	
<b>A 90 4_281.4</b>	281.4	9.9	14000	16.4	—	75000	5.0	14000	8.2	—	75000	
<b>A 90 4_304.9</b>	304.9	9.2	14000	15.1	—	75000	4.6	14000	7.6	—	75000	
<b>A 90 4_355.8</b>	355.8	7.9	14000	13.0	—	75000	3.9	14000	6.5	—	75000	
<b>A 90 4_385.4</b>	385.4	7.3	14000	12.0	—	75000	3.6	14000	6.0	680	75000	
<b>A 90 4_449.2</b>	449.2	6.2	14000	10.3	—	75000	3.1	14000	5.1	—	75000	
<b>A 90 4_486.6</b>	486.6	5.8	14000	9.5	—	75000	2.9	14000	4.7	950	75000	
<b>A 90 4_555.3</b>	555.3	5.0	14000	8.3	—	75000	2.5	14000	4.2	740	75000	
<b>A 90 4_601.6</b>	601.6	4.7	14000	7.7	—	75000	2.3	14000	3.8	1200	75000	
<b>A 90 4_707.9</b>	707.9	4.0	14000	6.5	—	75000	2.0	14000	3.3	1050	75000	
<b>A 90 4_766.9</b>	766.9	3.7	14000	6.0	—	75000	1.8	14000	3.0	1490	75000	
<b>A 90 4_865.1</b>	865.1	3.2	14000	5.3	—	75000	1.6	14000	2.7	1170	75000	
<b>A 90 4_937.2</b>	937.2	3.0	14000	4.9	—	75000	1.5	14000	2.5	1590	75000	
<b>A 90 4_1025</b>	1025	2.7	14000	4.5	—	75000	1.4	14000	2.2	1330	75000	
<b>A 90 4_1111</b>	1111	2.5	14000	4.2	—	75000	1.3	14000	2.1	1740	75000	
<b>A 90 4_1222</b>	1222	2.3	14000	3.8	—	75000	1.1	14000	1.9	1380	75000	
<b>A 90 4_1324</b>	1324	2.1	14000	3.5	—	75000	1.1	14000	1.7	1790	75000	
<b>A 90 4_1507</b>	1507	1.9	14000	3.1	—	75000	0.93	14000	1.5	1440	75000	
<b>A 90 4_1632</b>	1632	1.7	14000	2.8	—	75000	0.86	14000	1.4	1840	75000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# A 90 14000 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
A 90 3_9.7	9.7	93	9050	97	9800	42300	52	9050	54	15000	53700	303
A 90 3_10.5	10.5	86	9800	97	9810	42500	48	9800	54	15000	54200	
A 90 3_12.6	12.6	71	11800	97	6720	42100	40	11800	54	13500	54500	
A 90 3_13.7	13.7	66	12750	96	6770	42100	37	12800	54	13500	54600	
A 90 3_15.6	15.6	58	11550	77	8730	46700	32	11550	43	15000	59900	
A 90 3_16.9	16.9	53	12500	77	8750	46800	29.6	12500	43	15000	60300	
A 90 3_19.4	19.4	46	11550	62	9630	51400	25.8	11550	34	15000	65400	
A 90 3_21.0	21.0	43	12400	61	9790	51700	23.8	12400	34	15000	66100	
A 90 3_22.3	22.3	40	13850	64	14200	50200	22.5	14000	36	15000	64700	
A 90 3_24.1	24.1	37	14000	60	14400	51900	20.7	14000	33	15000	66900	
A 90 3_29.1	29.1	31	14000	50	14600	56200	17.2	14000	28	15000	72100	
A 90 3_31.5	31.5	28.6	14000	46	14800	58400	15.9	14000	26	15000	74700	
A 90 3_35.8	35.8	25.1	14000	40	14900	61700	14.0	14000	23	15000	75000	
A 90 3_38.8	38.8	23.2	14000	37	15000	63900	12.9	14000	21	15000	75000	
A 90 3_44.6	44.6	20.2	14000	33	15000	67700	11.2	14000	18.1	15000	75000	
A 90 3_48.3	48.3	18.6	14000	30	15000	70000	10.4	14000	16.7	15000	75000	
A 90 3_55.0	55.0	16.4	14000	26	15000	73800	9.1	14000	14.6	15000	75000	
A 90 3_59.6	59.6	15.1	14000	24	15000	75000	8.4	14000	13.5	15000	75000	
A 90 3_68.8	68.8	13.1	14000	21	15000	75000	7.3	14000	11.7	15000	75000	
A 90 3_74.5	74.5	12.1	14000	19.5	15000	75000	6.7	14000	10.8	15000	75000	
A 90 3_80.4	80.4	11.2	14000	18.0	15000	75000	6.2	14000	10.0	15000	75000	
A 90 3_87.1	87.1	10.3	14000	16.7	15000	75000	5.7	14000	9.3	15000	75000	
A 90 3_98.6	98.6	9.1	14000	14.7	15000	75000	5.1	14000	8.2	15000	75000	
A 90 3_106.8	106.8	8.4	14000	13.6	15000	75000	4.7	14000	7.5	15000	75000	
A 90 3_116.9	116.9	7.7	14000	12.4	15000	75000	4.3	14000	6.9	15000	75000	
A 90 3_126.6	126.6	7.1	14000	11.4	15000	75000	3.9	14000	6.4	15000	75000	
A 90 3_139.4	139.4	6.5	14000	10.4	15000	75000	3.6	14000	5.8	15000	75000	
A 90 3_151.0	151.0	6.0	14000	9.6	15000	75000	3.3	14000	5.3	15000	75000	
A 90 4_166.1	166.1	5.4	14000	8.9	—	75000	3.0	14000	5.0	700	75000	
A 90 4_180.0	180.0	5.0	14000	8.2	—	75000	2.8	14000	4.6	1400	75000	
A 90 4_209.0	209.0	4.3	14000	7.1	—	75000	2.4	14000	3.9	1500	75000	
A 90 4_226.4	226.4	4.0	14000	6.5	500	75000	2.2	14000	3.6	2100	75000	
A 90 4_281.4	281.4	3.2	14000	5.3	690	75000	1.8	14000	2.9	2300	75000	
A 90 4_304.9	304.9	3.0	14000	4.9	1230	75000	1.6	14000	2.7	2900	75000	
A 90 4_355.8	355.8	2.5	14000	4.2	1240	75000	1.4	14000	2.3	2900	75000	
A 90 4_385.4	385.4	2.3	14000	3.8	1750	75000	1.3	14000	2.1	3400	75000	
A 90 4_449.2	449.2	2.0	14000	3.3	1540	75000	1.1	14000	1.8	3200	75000	
A 90 4_486.6	486.6	1.8	14000	3.0	2020	75000	1.0	14000	1.7	3500	75000	
A 90 4_555.3	555.3	1.6	14000	2.7	1810	75000	0.90	14000	1.5	3500	75000	
A 90 4_601.6	601.6	1.5	14000	2.5	2270	75000	0.83	14000	1.4	3500	75000	
A 90 4_707.9	707.9	1.3	14000	2.1	2120	75000	0.71	14000	1.2	3500	75000	
A 90 4_766.9	766.9	1.2	14000	1.9	2560	75000	0.65	14000	1.1	3500	75000	
A 90 4_865.1	865.1	1.0	14000	1.7	2240	75000	0.58	14000	0.95	3500	75000	
A 90 4_937.2	937.2	0.96	14000	1.6	2660	75000	0.53	14000	0.88	3500	75000	
A 90 4_1025	1025	0.88	14000	1.4	2400	75000	0.49	14000	0.80	3500	75000	
A 90 4_1111	1111	0.81	14000	1.3	2810	75000	0.45	14000	0.74	3500	75000	
A 90 4_1222	1222	0.74	14000	1.2	2450	75000	0.41	14000	0.67	3500	75000	
A 90 4_1324	1324	0.68	14000	1.1	2860	75000	0.38	14000	0.62	3500	75000	
A 90 4_1507	1507	0.60	14000	0.98	2410	75000	0.33	14000	0.55	3500	75000	
A 90 4_1632	1632	0.55	14000	0.91	2910	75000	0.31	14000	0.50	3500	75000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



## 40 MOTOR AVAILABILITY

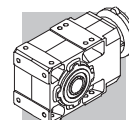
Please be aware that motor-gearbox combinations resulting from the following charts are purely based on geometrical compatibility.

**When selecting a gearmotor, refer to procedure specified at paragraph 12 and observe particularly the condition  $S \geq f_s$ .**

(C 40)

		BN		BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	IEC	IEC			
P <sub>n1</sub> (#) [kW]	2p	0.37	0.75	1.5	1.1	—	2.2	2.2	—	4	3	—	4	4	—	9.2	9.2	—	18.5	18.5	—	22	—	—	30	45	55
	4p	0.25	0.55	1.1	0.75	0.75	1.85	1.5	1.5	3	3	3	4	4	4	9.2	9.2	7.5	15	15	15	22	22	22	30	47	55
	6p	0.12	0.37	0.75	—	—	1.1	0.75	—	1.85	1.5	—	2.2	2.2	—	5.5	4	—	11	7.5	—	15	—	—	18.5	30	37
		P63	P71	P80	P90	P100	P112	P132	P160	P180	P200	P225	P250														
A 05 2	i =	5.5_91.6	5.5_51.3	5.5_51.3																							
A 10 2		5.5_91.6	5.5_91.6	5.5_65.9	5.5_65.9	5.5_65.9	5.5_65.9																				
A 20 2		7.3_92.3 ⊖(10.3)	7.3_92.3 ⊖(10.3)	5.4_79.9	5.4_79.9	5.4_79.9	5.4_79.9																				
A 20 3		109.2_380.9	109.2_380.9	109.2_380.9	109.2_380.9	109.2_380.9	109.2_380.9																				
A 30 2		9.3_97.5 ⊖(10.5; 13.6_16.3)	9.3_97.5 ⊖(10.5; 13.6_16.3)	5.4_97.5	5.4_97.5	5.4_97.5	5.4_97.5																				
A 30 3		109.1_400.8	109.1_400.8	109.1_400.8	109.1_400.8	109.1_400.8	109.1_400.8																				
A 35 2		9.3_95.6 ⊖(13.1_20.4)	9.3_95.6 ⊖(13.1_20.4)	5.4_95.6	5.4_95.6	5.4_95.6	5.4_95.6	5.4_11.8																			
A 35 3		105.5_393.2	105.5_393.2	105.5_393.2	105.5_393.2	105.5_393.2	105.5_393.2																				
A 41 2		11.7_79.2 ⊖(13.8_17.8)	11.7_79.2 ⊖(13.8_17.8)	5.2_79.2	5.2_79.2	5.2_79.2	5.2_79.2	5.2_45.1																			
A 41 3		92.8_376.8	92.8_376.8	92.8_376.8	92.8_376.8	92.8_376.8	92.8_376.8																				
A 50 2		20.9	20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9																	
A 50 3		51.7_190.6	51.7_190.6	24.0_190.6	24.0_190.6	24.0_190.6	24.0_190.6	24.0_109.4	24.0_109.4	24.0_109.4																	
A 50 4		211.0_778.2	211.0_778.2	211.0_778.2	211.0_778.2	211.0_778.2	211.0_778.2																				
A 55 2				13.1_19.2	13.1_19.2	13.1_19.2	13.1_19.2	4.9_19.2	4.9_19.2	4.9_19.2																	
A 55 3		64.3_194.2	64.3_194.2	23.8_194.2	23.8_194.2	23.8_194.2	23.8_194.2	23.8_123.9	23.8_123.9	23.8_123.9																	
A 55 4		208.1_793.0	208.1_793.0	208.1_793.0	208.1_793.0	208.1_793.0	208.1_793.0																				
A 60 2				10.3_20.6	10.3_20.6	10.3_20.6	10.3_20.6	7.9_20.6	7.9_20.6	7.9_20.6																	
A 60 3		65.0_185.8	65.0_185.8	25.7_185.8	25.7_185.8	25.7_185.8	25.7_185.8	25.7_133.3	25.7_133.3	25.7_133.3																	
A 60 4		208.7_755.4	208.7_755.4	208.7_755.4	208.7_755.4	208.7_755.4	208.7_755.4																				
A 70 3				66.9_153.7	66.9_153.7	66.9_153.7	66.9_153.7	15.4_153.7 ⊖(23.5_30.1)	9.4_153.7	9.4_153.7	9.4_153.7	9.4_38.4 ⊖(19.7_21.3)															
A 70 4		292.0_1715	292.0_1715	169.8_1715	169.8_1715	169.8_1715	169.8_1715	169.8_644.6																			
A 80 3				82.3_156.8	82.3_156.8	82.3_156.8	82.3_156.8	19.3_156.8 ⊖(22.6_38.5)	12.3_156.8 ⊖(22.6_24.5)	9.8_156.8	9.8_156.8	9.8_104.0	9.8_104.0														
A 80 4		354.0_1558	354.0_1558	171.3_1558	171.3_1558	171.3_1558	171.3_1558	171.3_762.1																			
A 90 3				98.6_151.0	98.6_151.0	98.6_151.0	98.6_151.0	55.0_151.0	19.4_151.0 ⊖(22.3_38.8)	9.7_151.0	9.7_151.0	9.7_126.6	9.7_126.6														
A 90 4		449.2_1632	449.2_1632	166.1_1632	166.1_1632	166.1_1632	166.1_1632	166.1_937.2	166.1_937.2	166.1_937.2																	

(#) P<sub>n1</sub> = maximum installable power on input P<sub>—</sub>



(C 41)

		M05	M1	ME2 - MX2	ME3 - MX4	ME4 - MX4	ME5 - MX5
A 05 2	i =	5.5_91.6	5.5_51.3	5.5_65.9			
A 10 2		5.5_91.6	5.5_51.3	5.5_65.9	5.5_65.9		
A 20 2		7.3_92.3 ⊖ (10.3)	7.3_63.1 ⊖ (10.3)	5.4_79.9	5.4_79.9		
A 20 3		109.2_380.9	109.2_380.9	109.2_380.9	109.2_380.9		
A 30 2			9.3_76.5 ⊖ (10.5 ; 13.6_16.3)	5.4_97.5	5.4_97.5		
A 30 3		109.1_400.8	109.1_400.8	109.1_400.8	109.1_400.8		
A 35 2			9.3_95.6 ⊖ (13.1_20.4)	5.4_95.6	5.4_95.6	5.4_11.8	
A 35 3		105.5_393.2	105.5_393.2	105.5_393.2	105.5_393.2		
A 41 2			11.7_79.2 ⊖ (13.8_17.8)	5.2_79.2	5.2_79.2	5.2_45.1	
A 41 3		92.8_376.8	92.8_376.8	92.8_376.8	92.8_376.8		
A 50 2			20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9
A 50 3			51.7_190.6	24.0_190.6	24.0_190.6	24.0_109.4	24.0_109.4
A 50 4			211.0_778.2	211.0_778.2	211.0_778.2		
A 55 2				13.1_19.2	13.1_19.2	4.9_19.2	4.9_19.2
A 55 3			64.3_194.2	23.8_194.2	23.8_194.2	23.8_123.9	23.8_123.9
A 55 4			208.1_793.0	208.1_793.0	208.1_793.0		
A 60 2				10.3_20.6	10.3_20.6	7.9_20.6	7.9_20.6
A 60 3				25.7_185.8	25.7_185.8	25.7_133.3	25.7_133.3
A 60 4			208.7_755.4	208.7_755.4	208.7_755.4		
A 70 3				66.9_153.7	66.9_153.7	15.4_153.7 ⊖ (23.5_30.1)	15.4_153.7 ⊖ (23.5_30.1)
A 70 4			292.0_1715	169.8_1715	169.8_1715	169.8_644.6	
A 80 3					82.3_156.8	19.3_156.8 ⊖ (22.6_38.5)	19.3_156.8 ⊖ (22.6_38.5)
A 80 4			354.0_1558	171.3_1558	171.3_1558	171.3_762.1	
A 90 3					98.6_151.0	55.0_151.0	55.0_151.0
A 90 4		449.2_1632	166.1_1632	166.1_1632	166.1_937.2		



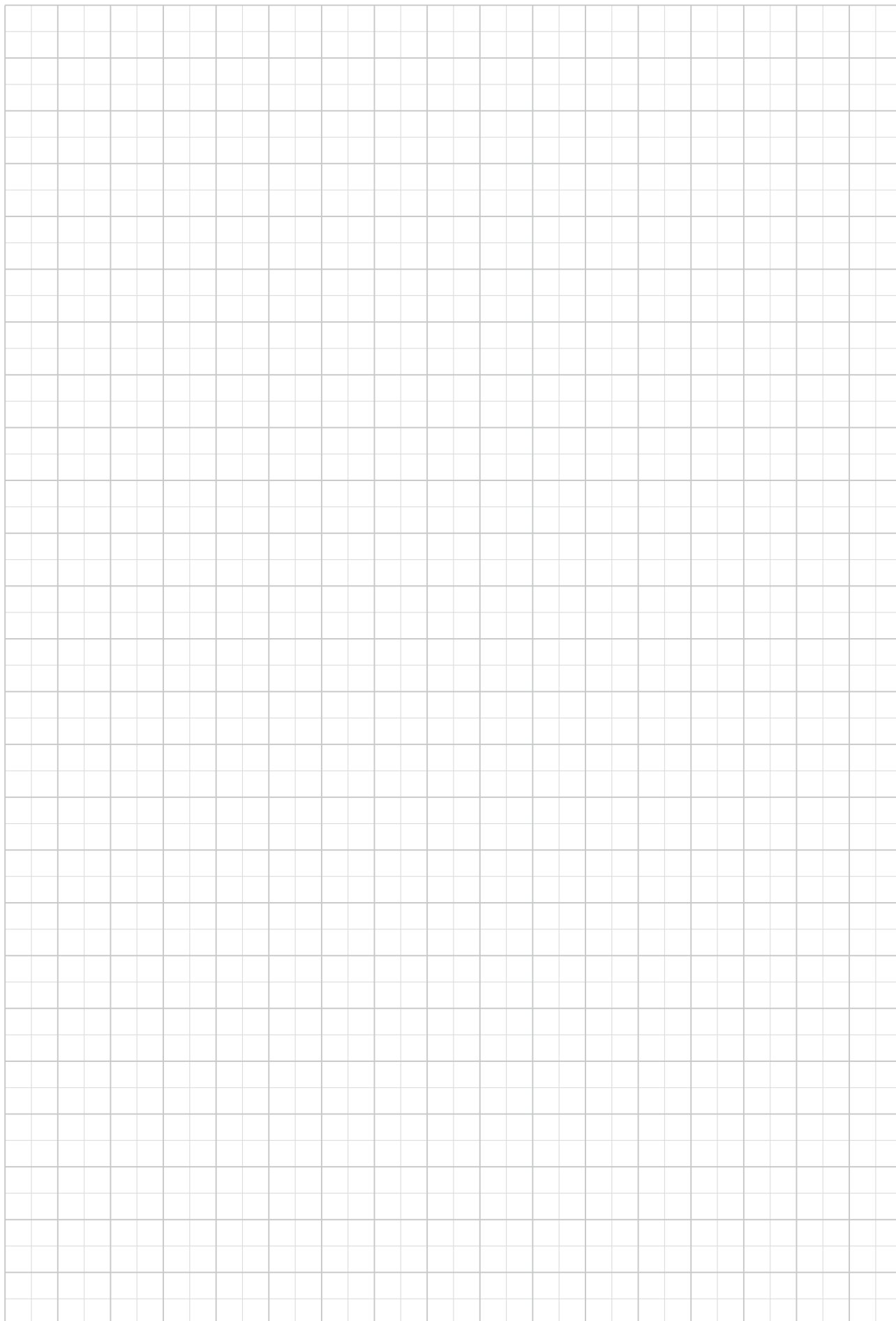
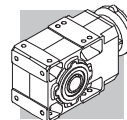
Motor adapters matching the most popular brands of servomotors are available for units size A05... A60. Dimensions of servomotor inputs are provided within the drawing section for each frame size. The code **SK** applies for inputs featuring a conventional keyway, while through the specification of the **SC** code the input shaft will feature a clamping device instead.

(C 42)

		SERVO INPUT							
		SK40A	SK60A	SK60B	SK80A	SK80B	SK80C		
		SC40A	SC60A	SC60B	SC80A	SC80B	SC80C		
A 05 2	i =	5.5_91.6	5.5_91.6	5.5_51.3	5.5_51.3				
A 10 2			5.5_91.6	5.5_51.3	5.5_51.3			5.5_65.9	
A 20 2			7.3_92.3 ⌀(10.3)	7.3_63.1 ⌀(10.3)	7.3_63.1 ⌀(10.3)			5.4_79.9	
A 20 3			109.2_380.9	109.2_380.9	109.2_380.9			109.2_380.9	
A 30 2			9.3_97.5 ⌀(10.5; 13.6_16.3)	9.3_76.5 ⌀(10.5; 13.6_16.3)	9.3_76.5 ⌀(10.5; 13.6_16.3)			5.4_97.5	
A 30 3			109.1_400.8	109.1_400.8	109.1_400.8			109.1_400.8	
A 35 2			9.3_95.6 ⌀(13.1_20.4)	9.3_95.6 ⌀(13.1_20.4)	9.3_95.6 ⌀(13.1_20.4)			5.4_95.6	
A 35 3			105.5_393.2	105.5_393.2	105.5_393.2			105.5_393.2	
A 41 2							11.7_79.2 ⌀(13.8_17.8)	5.2_79.2	
A 41 3			92.8_376.8	92.8_376.8	92.8_376.8			92.8_376.8	
A 50 2							20.9	7.7_20.9	
A 50 3							51.7_190.6	24.0_190.6	
A 50 4								211.0_778.2	
A 55 2								13.1_19.2	
A 55 3							64.3_194.2	23.8_194.2	
A 55 4								208.1_793.0	
A 60 2								10.3_20.6	
A 60 3								25.7_185.8	
A 60 4							208.7_755.4	208.7_755.4	

(C 43)

		SERVO INPUT									
		SK95A	SK95B	SK95C	SK110A	SK110B	SK130A	SK130B	SK180A	SK180B	
		SC95A	SC95B	SC95C	SC110A	SC110B	SC130A	SC130B	SC180A	SC180B	
A 10 2	i =	5.5_51.3	5.5_65.9	5.5_65.9	5.5_65.9	5.5_65.9					
A 20 2		7.3_63.1 ⌀(10.3)	5.4_79.9	5.4_79.9	5.4_79.9	5.4_79.9					
A 20 3		109.2_380.9	109.2_380.9	109.2_380.9	109.2_380.9	109.2_380.9					
A 30 2		9.3_76.5 ⌀(10.5; 13.6_16.3)	5.4_97.5	5.4_97.5	5.4_97.5	5.4_97.5	5.4_97.5				
A 30 3		109.1_400.8	109.1_400.8	109.1_400.8	109.1_400.8	109.1_400.8					
A 35 2		9.3_95.6 ⌀(13.1_20.4)	5.4_95.6	5.4_95.6	5.4_95.6	5.4_95.6	5.4_95.6				
A 35 3		105.5_393.2	105.5_393.2	105.5_393.2	105.5_393.2	105.5_393.2					
A 41 2		11.7_79.2 ⌀(13.8_17.8)	5.2_79.2	5.2_79.2	5.2_79.2	5.2_79.2	5.2_79.2	5.2_45.1	5.2_45.1	5.2_45.1	
A 41 3		92.8_376.8	92.8_376.8	92.8_376.8	92.8_376.8	92.8_376.8					
A 50 2		20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9	7.7_20.9	
A 50 3		51.7_190.6	24.0_190.6	24.0_190.6	24.0_190.6	24.0_190.6	24.0_190.6	24.0_109.4	24.0_109.4	24.0_109.4	
A 50 4		211.0_778.2	211.0_778.2	211.0_778.2	211.0_778.2	211.0_778.2	211.0_778.2				
A 55 2			13.1_19.2	13.1_19.2	13.1_19.2	13.1_19.2	13.1_19.2	4.9_19.2	4.9_19.2	4.9_19.2	
A 55 3			64.3_194.2	23.8_194.2	23.8_194.2	23.8_194.2	23.8_194.2	23.8_123.9	23.8_123.9	23.8_123.9	
A 55 4			208.1_793.0	208.1_793.0	208.1_793.0	208.1_793.0	208.1_793.0				
A 60 2			10.3_20.6	10.3_20.6	10.3_20.6	10.3_20.6	10.3_20.6	7.9_20.6	7.9_20.6	7.9_20.6	
A 60 3			65.0_185.8	25.7_185.8	25.7_185.8	25.7_185.8	25.7_185.8	25.7_133.3	25.7_133.3	25.7_133.3	
A 60 4			208.7_755.4	208.7_755.4	208.7_755.4	208.7_755.4	208.7_755.4				



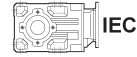


## 41 MOMENT OF INERTIA

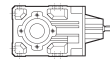
The following charts indicate moment of inertia values  $J_r$  [kgm<sup>2</sup>] referred to the gear unit high speed shaft. A key to the symbols used follows:



Values under this icon refer to compact gear units, without motor. To obtain the overall moment of inertia for the gearmotor just add the value of the inertia for the specific compact motor, given in the relevant rating chart.



Values under this symbol refer to gearboxes with IEC motor adapter (IEC size...).



This symbol refers to gearbox values.

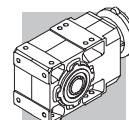


Values under this symbol refer to gear unit with servomotor input adapter.


## A 05

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]				
			63	71	80	
A 05 2_5.5	5.5	0.72	0.99	1.0	1.4	—
A 05 2_6.3	6.3	0.56	0.83	0.86	1.2	—
A 05 2_7.2	7.2	0.48	0.74	0.77	1.1	—
A 05 2_8.5	8.5	0.36	0.63	0.65	1.0	—
A 05 2_9.6	9.6	0.29	0.55	0.58	0.92	—
A 05 2_10.6	10.6	0.50	0.77	0.80	1.1	—
A 05 2_12.3	12.3	0.18	0.45	0.48	0.82	—
A 05 2_13.9	13.9	0.35	0.62	0.65	0.99	—
A 05 2_16.4	16.4	0.27	0.54	0.57	0.91	—
A 05 2_18.6	18.6	0.22	0.49	0.51	0.86	—
A 05 2_21.4	21.4	0.16	0.43	0.46	0.80	—
A 05 2_23.8	23.8	0.14	0.41	0.43	0.78	—
A 05 2_25.5	25.5	0.13	0.39	0.42	0.76	—
A 05 2_28.6	28.6	0.11	0.38	0.40	0.75	—
A 05 2_32.2	32.2	0.09	0.36	0.39	0.73	—
A 05 2_35.1	35.1	0.08	0.35	0.37	0.72	—
A 05 2_40.9	40.9	0.07	0.33	0.36	0.70	—
A 05 2_45.4	45.4	0.05	0.32	0.35	0.69	—
A 05 2_51.3	51.3	0.04	0.31	0.34	0.68	—
A 05 2_58.6	58.6	0.04	0.31	—	—	—
A 05 2_65.9	65.9	0.03	0.30	—	—	—
A 05 2_76.4	76.4	0.02	0.29	—	—	—
A 05 2_91.6	91.6	0.02	0.28	—	—	—





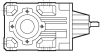


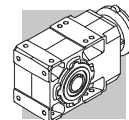
## A 05

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]					
		 SERVO					
		40A		60A		60B 80A	
i		SK	SC	SK	SC	SK	SC
A 05 2_5.5	5.5	0.89	1.1	0.99	1.3	1.0	1.4
A 05 2_6.3	6.3	0.73	0.89	0.83	1.1	0.86	1.3
A 05 2_7.2	7.2	0.65	0.81	0.74	1.0	0.77	1.2
A 05 2_8.5	8.5	0.53	0.69	0.63	0.89	0.65	1.1
A 05 2_9.6	9.6	0.46	0.62	0.55	0.81	0.58	1.0
A 05 2_10.6	10.6	0.67	0.83	0.77	1.0	0.80	1.2
A 05 2_12.3	12.3	0.35	0.51	0.45	0.71	0.48	0.92
A 05 2_13.9	13.9	0.52	0.68	0.62	0.88	0.65	1.1
A 05 2_16.4	16.4	0.44	0.60	0.54	0.80	0.57	1.0
A 05 2_18.6	18.6	0.39	0.55	0.49	0.75	0.51	0.95
A 05 2_21.4	21.4	0.33	0.49	0.43	0.69	0.46	0.90
A 05 2_23.8	23.8	0.31	0.47	0.41	0.67	0.43	0.87
A 05 2_25.5	25.5	0.30	0.46	0.39	0.65	0.42	0.86
A 05 2_28.6	28.6	0.28	0.44	0.38	0.64	0.40	0.84
A 05 2_32.2	32.2	0.26	0.42	0.36	0.62	0.39	0.83
A 05 2_35.1	35.1	0.25	0.41	0.35	0.61	0.37	0.81
A 05 2_40.9	40.9	0.24	0.40	0.33	0.59	0.36	0.80
A 05 2_45.4	45.4	0.22	0.38	0.32	0.58	0.35	0.79
A 05 2_51.3	51.3	0.21	0.37	0.31	0.57	0.34	0.78
A 05 2_58.6	58.6	0.21	0.37	0.31	0.57	—	—
A 05 2_65.9	65.9	0.20	0.36	0.30	0.56	—	—
A 05 2_76.4	76.4	0.19	0.35	0.29	0.55	—	—
A 05 2_91.6	91.6	0.19	0.35	0.28	0.54	—	—




# A 10

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]							
			 IEC						
			63	71	80	90	100	112	
<b>A 10 2_5.5</b>	5.5	1.0	2.5	2.5	3.9	3.8	5.1	5.1	1.8
<b>A 10 2_6.3</b>	6.3	0.80	2.3	2.3	3.7	3.6	4.9	4.9	1.6
<b>A 10 2_7.2</b>	7.2	0.60	2.1	2.1	3.5	3.4	4.7	4.7	1.5
<b>A 10 2_8.5</b>	8.5	0.45	1.9	1.9	3.3	3.1	4.5	4.5	1.4
<b>A 10 2_9.6</b>	9.6	0.30	1.8	1.8	3.2	3.1	4.4	4.4	1.3
<b>A 10 2_10.6</b>	10.6	0.50	2.0	2.0	3.4	3.3	4.6	4.6	1.4
<b>A 10 2_12.3</b>	12.3	0.20	1.7	1.7	3.1	3.0	4.3	4.3	1.1
<b>A 10 2_13.9</b>	13.9	0.30	1.8	1.8	3.2	3.1	4.6	4.6	1.2
<b>A 10 2_16.4</b>	16.4	0.25	1.7	1.7	3.1	3.0	4.3	4.3	1.1
<b>A 10 2_18.6</b>	18.6	0.20	1.7	1.7	3.1	3.0	4.3	4.3	1.0
<b>A 10 2_21.4</b>	21.4	0.15	1.6	1.6	3.0	2.9	4.2	4.2	1.0
<b>A 10 2_23.8</b>	23.8	0.10	1.6	1.6	3.0	2.9	4.2	4.2	1.0
<b>A 10 2_25.5</b>	25.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	1.0
<b>A 10 2_28.6</b>	28.6	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 10 2_32.2</b>	32.2	0.08	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 10 2_35.1</b>	35.1	0.07	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 10 2_40.9</b>	40.9	0.06	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 10 2_45.4</b>	45.4	0.05	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 10 2_51.3</b>	51.3	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.90
<b>A 10 2_58.6</b>	58.6	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.90
<b>A 10 2_65.9</b>	65.9	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.90
<b>A 10 2_76.4</b>	76.4	0.02	1.5	1.5	—	—	—	—	0.90
<b>A 10 2_91.6</b>	91.6	0.01	1.5	1.5	—	—	—	—	0.90



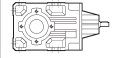


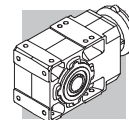
# A 10

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 <b>SERVO</b>									
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
<b>A 10 2_5.5</b>	5.5	1.3	1.5	1.3	1.7	3.8	4.3	3.9	4.4	3.8	4.8
<b>A 10 2_6.3</b>	6.3	1.1	1.3	1.1	1.5	3.6	4.1	3.7	4.2	3.6	4.6
<b>A 10 2_7.2</b>	7.2	0.87	1.1	0.89	1.3	3.4	3.9	3.5	4.0	3.4	4.4
<b>A 10 2_8.5</b>	8.5	0.72	0.98	0.74	1.2	3.3	3.7	3.3	3.8	3.1	4.1
<b>A 10 2_9.6</b>	9.6	0.57	0.83	0.59	1.0	3.1	3.6	3.2	3.7	3.1	4.1
<b>A 10 2_10.6</b>	10.6	0.77	1.0	0.79	1.2	3.3	3.8	3.4	3.9	3.3	4.3
<b>A 10 2_12.3</b>	12.3	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0
<b>A 10 2_13.9</b>	13.9	0.57	0.83	0.59	1.0	3.1	3.6	3.2	3.7	3.1	4.1
<b>A 10 2_16.4</b>	16.4	0.52	0.78	0.54	0.98	3.1	3.5	3.1	3.6	3.0	4.0
<b>A 10 2_18.6</b>	18.6	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0
<b>A 10 2_21.4</b>	21.4	0.42	0.68	0.44	0.88	3.0	3.4	3.0	3.5	2.9	3.9
<b>A 10 2_23.8</b>	23.8	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
<b>A 10 2_25.5</b>	25.5	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
<b>A 10 2_28.6</b>	28.6	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
<b>A 10 2_32.2</b>	32.2	0.35	0.61	0.37	0.81	2.9	3.3	3.0	3.5	2.9	3.9
<b>A 10 2_35.1</b>	35.1	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9
<b>A 10 2_40.9</b>	40.9	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9
<b>A 10 2_45.4</b>	45.4	0.32	0.58	0.34	0.78	2.9	3.3	3.0	3.5	2.9	3.9
<b>A 10 2_51.3</b>	51.3	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
<b>A 10 2_58.6</b>	58.6	0.30	0.56	—	—	—	—	2.9	3.4	2.8	3.8
<b>A 10 2_65.9</b>	65.9	0.29	0.55	—	—	—	—	2.9	3.4	2.8	3.8
<b>A 10 2_76.4</b>	76.4	0.29	0.55	—	—	—	—	—	—	—	—
<b>A 10 2_91.6</b>	91.6	0.28	0.54	—	—	—	—	—	—	—	—




## A 20

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]							
			 IEC						
			63	71	80	90	100	112	
A 20 2_5.4	5.4	2.4	—	—	5.3	5.2	6.5	6.5	4.3
A 20 2_6.5	6.5	1.9	—	—	4.8	4.7	6.0	6.0	3.8
A 20 2_7.3	7.3	1.4	2.9	2.9	4.3	4.2	5.5	5.5	3.3
A 20 2_8.4	8.4	1.1	2.6	2.6	4.0	3.9	5.2	5.2	3.0
A 20 2_9.4	9.4	0.90	2.4	2.4	3.8	3.7	5.0	5.0	2.8
A 20 2_10.3	10.3	1.2	—	—	4.1	4.0	5.3	5.3	3.0
A 20 2_12.0	12.0	0.50	2.0	2.0	3.4	3.3	4.6	4.6	2.4
A 20 2_14.1	14.1	0.70	2.2	2.2	3.6	3.5	4.8	4.8	2.6
A 20 2_16.2	16.2	0.55	2.0	2.0	3.4	3.3	4.6	4.6	2.5
A 20 2_18.1	18.1	0.40	1.9	1.9	3.3	3.2	4.5	4.5	2.4
A 20 2_21.2	21.2	0.35	1.8	1.8	3.2	3.1	4.4	4.4	2.3
A 20 2_23.1	23.1	0.30	1.8	1.8	3.2	3.1	4.4	4.4	2.2
A 20 2_26.5	26.5	0.25	1.7	1.7	3.1	3.0	4.3	4.3	2.1
A 20 2_29.2	29.2	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.1
A 20 2_31.3	31.3	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.1
A 20 2_35.4	35.4	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.1
A 20 2_39.6	39.6	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.0
A 20 2_43.2	43.2	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.0
A 20 2_48.3	48.3	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.0
A 20 2_53.7	53.7	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.0
A 20 2_63.1	63.1	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.0
A 20 2_71.0	71.0	0.05	1.5	1.5	2.9	2.8	4.1	4.1	2.0
A 20 2_79.9	79.9	0.03	1.5	1.5	2.9	2.8	4.1	4.1	2.0
A 20 2_92.3	92.3	0.02	1.5	1.5	—	—	—	—	2.0
A 20 3_109.2	109.2	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_120.5	120.5	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_129.1	129.1	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_146.1	146.1	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_163.4	163.4	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_178.3	178.3	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_199.2	199.2	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_221.3	221.3	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_260.5	260.5	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_292.8	292.8	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_329.4	329.4	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90
A 20 3_380.9	380.9	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90



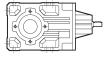


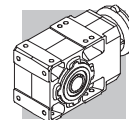
# A 20

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 <b>SERVO</b>									
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
A 20 2_5.4	5.4	—	—	—	—	—	—	5.3	5.8	5.2	6.2
A 20 2_6.5	6.5	—	—	—	—	—	—	4.8	5.3	4.7	5.7
A 20 2_7.3	7.3	1.7	1.9	1.7	2.1	4.2	4.7	4.3	4.8	4.2	5.2
A 20 2_8.4	8.4	1.4	1.6	1.4	1.8	3.9	4.6	4.0	4.5	3.9	4.9
A 20 2_9.4	9.4	1.2	1.4	1.2	1.6	3.7	4.2	3.8	4.3	3.7	4.7
A 20 2_10.3	10.3	—	—	—	—	—	—	4.1	4.6	4.0	5.0
A 20 2_12.0	12.0	0.77	1.0	0.79	1.2	3.3	3.8	3.4	3.9	3.3	4.3
A 20 2_14.1	14.1	0.97	1.2	0.99	1.4	3.5	4.0	3.6	4.1	3.5	4.5
A 20 2_16.2	16.2	0.82	1.1	0.84	1.3	3.4	3.8	3.4	3.9	3.3	4.3
A 20 2_18.1	18.1	0.67	0.93	0.69	1.1	3.2	3.7	3.3	3.8	3.2	4.2
A 20 2_21.2	21.2	0.62	0.88	0.64	1.1	3.2	3.6	3.2	3.7	3.1	4.1
A 20 2_23.1	23.1	0.57	0.83	0.59	1.0	3.1	3.6	3.2	3.7	3.1	4.1
A 20 2_26.5	26.5	0.52	0.78	0.54	0.98	3.1	3.5	3.1	3.6	3.0	4.0
A 20 2_29.2	29.2	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0
A 20 2_31.3	31.3	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0
A 20 2_35.4	35.4	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0
A 20 2_39.6	39.6	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
A 20 2_43.2	43.2	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
A 20 2_48.3	48.3	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
A 20 2_53.7	53.7	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
A 20 2_63.1	63.1	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
A 20 2_71.0	71.0	0.32	0.58	—	—	—	—	2.9	3.4	2.8	3.8
A 20 2_79.9	79.9	0.30	0.56	—	—	—	—	2.9	3.4	2.8	3.8
A 20 2_92.3	92.3	0.29	0.55	—	—	—	—	—	—	—	—
A 20 3_109.2	109.2	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_120.5	120.5	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_129.1	129.1	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_146.1	146.1	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_163.4	163.4	0.28	0.54	0.30	0.74	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_178.3	178.3	0.28	0.54	0.30	0.74	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_199.2	199.2	0.28	0.54	0.30	0.74	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_221.3	221.3	0.28	0.54	0.30	0.74	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_260.5	260.5	0.28	0.54	0.30	0.74	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_292.8	292.8	0.28	0.54	0.30	0.74	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_329.4	329.4	0.28	0.54	0.30	0.74	2.8	3.3	2.9	3.4	2.8	3.8
A 20 3_380.9	380.9	0.28	0.54	0.30	0.74	2.8	3.3	2.9	3.4	2.8	3.8




# A 30

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]							
			 IEC						
			63	71	80	90	100	112	
<b>A 30 2_5.4</b>	5.4	4.5	—	—	7.4	7.3	8.6	8.6	6.9
<b>A 30 2_6.4</b>	6.4	3.4	—	—	6.6	6.6	7.8	7.8	6.0
<b>A 30 2_7.0</b>	7.0	2.9	—	—	5.8	5.8	7.0	7.0	5.2
<b>A 30 2_8.5</b>	8.5	2.2	—	—	5.1	5.1	6.3	6.3	4.6
<b>A 30 2_9.3</b>	9.3	1.6	3.1	3.1	4.5	4.4	5.7	5.7	4.0
<b>A 30 2_10.5</b>	10.5	2.3	—	—	5.2	5.1	6.4	6.4	4.6
<b>A 30 2_11.8</b>	11.8	1.1	2.6	2.6	4.0	3.9	5.2	5.2	3.4
<b>A 30 2_13.6</b>	13.6	1.5	—	—	4.4	4.3	5.6	5.6	3.9
<b>A 30 2_16.3</b>	16.3	1.2	—	—	4.1	4.0	5.3	5.3	3.5
<b>A 30 2_18.0</b>	18.0	0.90	2.4	2.4	3.8	3.7	5.0	5.0	3.2
<b>A 30 2_20.5</b>	20.5	0.70	2.2	2.2	3.6	3.5	4.8	4.8	3.1
<b>A 30 2_22.8</b>	22.8	0.60	2.1	2.1	3.5	3.4	4.7	4.7	3.0
<b>A 30 2_26.5</b>	26.5	0.50	2.0	2.0	3.4	3.3	4.6	4.6	2.9
<b>A 30 2_29.3</b>	29.3	0.40	1.9	1.9	3.3	3.2	4.5	4.5	2.8
<b>A 30 2_33.4</b>	33.4	0.35	1.8	1.8	3.2	3.1	4.4	4.4	2.7
<b>A 30 2_36.6</b>	36.6	0.30	1.8	1.8	3.2	3.1	4.4	4.4	2.7
<b>A 30 2_39.3</b>	39.3	0.25	1.7	1.7	3.1	3.0	4.3	4.3	2.6
<b>A 30 2_43.4</b>	43.4	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.6
<b>A 30 2_48.3</b>	48.3	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.6
<b>A 30 2_52.7</b>	52.7	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.5
<b>A 30 2_59.4</b>	59.4	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.5
<b>A 30 2_66.0</b>	66.0	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.5
<b>A 30 2_76.5</b>	76.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.5
<b>A 30 2_86.7</b>	86.7	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.5
<b>A 30 2_97.5</b>	97.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.4
<b>A 30 3_109.1</b>	109.1	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_120.5</b>	120.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_137.4</b>	137.4	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_150.7</b>	150.7	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_161.4</b>	161.4	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_178.5</b>	178.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_198.5</b>	198.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_216.6</b>	216.6	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_244.3</b>	244.3	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_271.5</b>	271.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_314.5</b>	314.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_356.3</b>	356.3	0.06	1.6	1.6	3.0	2.9	4.2	4.2	0.90
<b>A 30 3_400.8</b>	400.8	0.04	1.5	1.6	2.9	2.8	4.1	4.1	0.90



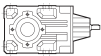


# A 30

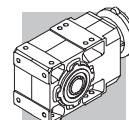
		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
		 <b>SERVO</b>											
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B		130A	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
A 30 2_5.4	5.4	—	—	—	—	—	—	7.4	7.9	7.3	8.3	7.3	8.3
A 30 2_6.4	6.4	—	—	—	—	—	—	6.6	7.1	6.6	7.6	6.6	7.6
A 30 2_7.0	7.0	—	—	—	—	—	—	5.8	6.3	5.8	6.8	5.8	6.8
A 30 2_8.5	8.5	—	—	—	—	—	—	5.1	5.6	5.1	6.1	5.1	6.1
A 30 2_9.3	9.3	1.9	2.1	1.9	2.3	4.4	4.9	4.5	5.0	4.4	5.4	4.4	5.4
A 30 2_10.5	10.5	—	—	—	—	—	—	5.2	5.7	5.1	6.1	5.1	6.1
A 30 2_11.8	11.8	1.4	1.6	1.4	1.8	3.9	4.4	4.0	4.5	3.9	4.9	3.9	4.9
A 30 2_13.6	13.6	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
A 30 2_16.3	16.3	—	—	—	—	—	—	4.1	4.6	4.0	5.0	4.0	5.0
A 30 2_18.0	18.0	1.2	1.4	1.2	1.6	3.7	4.2	3.8	4.3	3.7	4.7	3.7	4.7
A 30 2_20.5	20.5	0.97	1.2	0.99	1.4	3.5	4.0	3.6	4.1	3.5	4.5	3.5	4.5
A 30 2_22.8	22.8	0.87	1.1	0.89	1.3	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4
A 30 2_26.5	26.5	0.77	1.0	0.79	1.2	3.3	3.8	3.4	3.9	3.3	4.3	3.3	4.3
A 30 2_29.3	29.3	0.67	0.93	0.69	1.1	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2
A 30 2_33.4	33.4	0.62	0.88	0.64	1.1	3.2	3.6	3.2	3.7	3.1	4.1	3.1	4.1
A 30 2_36.6	36.6	0.57	0.83	0.59	1.0	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1
A 30 2_39.3	39.3	0.52	0.78	0.54	0.98	3.1	3.5	3.1	3.6	3.0	4.0	3.0	4.0
A 30 2_43.4	43.4	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0	3.0	4.0
A 30 2_48.3	48.3	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0	3.0	4.0
A 30 2_52.7	52.7	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0	3.0	4.0
A 30 2_59.4	59.4	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9
A 30 2_66.0	66.0	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9
A 30 2_76.5	76.5	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9
A 30 2_86.7	86.7	0.37	0.63	—	—	—	—	3.0	3.5	2.9	3.9	2.9	3.9
A 30 2_97.5	97.5	0.37	0.63	—	—	—	—	3.0	3.5	2.9	3.9	2.9	3.9
A 30 3_109.1	109.1	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_120.5	120.5	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_137.4	137.4	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_150.7	150.7	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_161.4	161.4	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_178.5	178.5	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_198.5	198.5	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_216.6	216.6	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_244.3	244.3	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_271.5	271.5	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_314.5	314.5	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	—	—
A 30 3_356.3	356.3	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
A 30 3_400.8	400.8	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—




# A 35

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]								
			 IEC							
			63	71	80	90	100	112	132	
A 35 2_5.4	5.4	7.3	—	—	10	9.9	11	11	24	9.4
A 35 2_6.4	6.4	5.4	—	—	8.1	8.0	9.2	9.2	22	7.4
A 35 2_7.0	7.0	4.6	—	—	7.3	7.2	8.4	8.4	21	6.6
A 35 2_8.5	8.5	3.3	—	—	6.1	5.9	7.1	7.1	20	5.4
A 35 2_9.3	9.3	2.8	3.5	3.5	5.6	5.4	6.6	6.6	19	4.9
A 35 2_10.6	10.6	2.1	2.9	2.9	4.9	4.8	6.0	6.0	19	4.2
A 35 2_11.8	11.8	1.8	2.5	2.5	4.6	4.4	5.7	5.7	18	3.9
A 35 2_13.1	13.1	3.0	—	—	5.7	5.6	6.8	6.8	—	5.0
A 35 2_15.5	15.5	2.2	—	—	5.0	4.9	6.1	6.1	—	4.3
A 35 2_17.0	17.0	2.0	—	—	4.7	4.6	5.8	5.8	—	4.0
A 35 2_20.4	20.4	1.6	—	—	4.3	4.2	5.4	5.4	—	3.6
A 35 2_22.5	22.5	1.3	2.0	2.0	4.1	3.9	5.1	5.1	—	3.4
A 35 2_25.7	25.7	0.97	1.7	1.7	3.7	3.6	4.8	4.8	—	3.0
A 35 2_28.4	28.4	0.86	1.6	1.6	3.6	3.5	4.7	4.7	—	2.9
A 35 2_33.2	33.2	0.69	1.4	1.4	3.5	3.3	4.5	4.5	—	2.8
A 35 2_36.6	36.6	0.58	1.3	1.3	3.3	3.2	4.4	4.4	—	2.6
A 35 2_41.8	41.8	0.48	1.2	1.2	3.2	3.1	4.3	4.3	—	2.5
A 35 2_45.8	45.8	0.42	1.1	1.1	3.2	3.1	4.3	4.3	—	2.5
A 35 2_49.1	49.1	0.38	1.1	1.1	3.1	3.0	4.2	4.2	—	2.4
A 35 2_54.3	54.3	0.33	1.1	1.0	3.1	3.0	4.2	4.2	—	2.4
A 35 2_60.4	60.4	0.29	1.0	1.0	3.0	2.9	4.1	4.1	—	2.3
A 35 2_65.8	65.8	0.25	1.0	1.0	3.0	2.9	4.1	4.1	—	2.3
A 35 2_74.3	74.3	0.21	0.95	0.93	3.0	2.8	4.1	4.1	—	2.3
A 35 2_82.5	82.5	0.18	0.92	0.90	2.9	2.8	4.0	4.0	—	2.2
A 35 2_95.6	95.6	0.15	0.88	0.87	2.9	2.8	4.0	4.0	—	2.2
A 35 3_105.5	105.5	0.11	0.89	0.87	2.9	2.8	4.0	4.0	—	0.80
A 35 3_116.9	116.9	0.11	0.88	0.87	2.9	2.8	4.0	4.0	—	0.79
A 35 3_136.3	136.3	0.10	0.87	0.86	2.9	2.8	4.0	4.0	—	0.78
A 35 3_150.6	150.6	0.09	0.86	0.85	2.9	2.8	4.0	4.0	—	0.77
A 35 3_171.8	171.8	0.08	0.86	0.84	2.9	2.8	4.0	4.0	—	0.77
A 35 3_188.3	188.3	0.08	0.85	0.84	2.9	2.7	4.0	4.0	—	0.76
A 35 3_201.8	201.8	0.08	0.85	0.84	2.9	2.7	4.0	4.0	—	0.76
A 35 3_223.2	223.2	0.08	0.85	0.84	2.9	2.7	4.0	4.0	—	0.76
A 35 3_248.1	248.1	0.07	0.85	0.83	2.9	2.7	4.0	4.0	—	0.76
A 35 3_270.7	270.7	0.07	0.84	0.83	2.9	2.7	4.0	4.0	—	0.75
A 35 3_305.4	305.4	0.07	0.84	0.83	2.9	2.7	4.0	4.0	—	0.75
A 35 3_339.3	339.3	0.07	0.84	0.83	2.9	2.7	4.0	4.0	—	0.75
A 35 3_393.2	393.2	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75





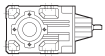


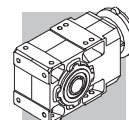
# A 35

		J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]											
		 <b>SERVO</b>											
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B		130A	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
A 35 2_5.4	5.4	—	—	—	—	—	—	10	11	9.9	10.9	9.9	11
A 35 2_6.4	6.4	—	—	—	—	—	—	8.1	8.6	8.0	9.0	8.0	9.0
A 35 2_7.0	7.0	—	—	—	—	—	—	7.3	7.8	7.2	8.2	7.2	8.2
A 35 2_8.5	8.5	—	—	—	—	—	—	6.1	6.6	5.9	6.9	5.9	6.9
A 35 2_9.3	9.3	3.1	3.3	3.1	3.5	5.6	6.1	5.6	6.1	5.4	6.4	5.4	6.4
A 35 2_10.6	10.6	2.4	2.6	2.4	2.8	4.9	5.4	4.9	5.4	4.8	5.8	4.8	5.8
A 35 2_11.8	11.8	2.1	2.3	2.1	2.5	4.6	5.1	4.6	5.1	4.4	5.4	4.4	5.4
A 35 2_13.1	13.1	—	—	—	—	—	—	5.7	6.2	5.6	6.6	5.6	6.6
A 35 2_15.5	15.5	—	—	—	—	—	—	5.0	5.5	4.9	5.9	4.9	5.9
A 35 2_17.0	17.0	—	—	—	—	—	—	4.7	5.2	4.6	5.6	4.6	5.6
A 35 2_20.4	20.4	—	—	—	—	—	—	4.3	4.8	4.2	5.2	4.2	5.2
A 35 2_22.5	22.5	1.6	1.8	1.6	2.0	4.1	4.6	4.1	4.6	3.9	4.9	3.9	4.9
A 35 2_25.7	25.7	1.2	1.5	1.3	1.7	3.8	4.2	3.7	4.2	3.6	4.6	3.6	4.6
A 35 2_28.4	28.4	1.1	1.4	1.2	1.6	3.7	4.1	3.6	4.1	3.5	4.5	3.5	4.5
A 35 2_33.2	33.2	0.96	1.2	0.98	1.4	3.5	3.9	3.5	4.0	3.3	4.3	3.3	4.3
A 35 2_36.6	36.6	0.85	1.1	0.87	1.3	3.4	3.8	3.3	3.8	3.2	4.2	3.2	4.2
A 35 2_41.8	41.8	0.75	1.0	0.77	1.2	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1
A 35 2_45.8	45.8	0.69	0.95	0.71	1.1	3.2	3.7	3.2	3.7	3.1	4.1	3.1	4.1
A 35 2_49.1	49.1	0.65	0.91	0.67	1.1	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0
A 35 2_54.3	54.3	0.60	0.86	0.62	1.1	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0
A 35 2_60.4	60.4	0.56	0.82	0.58	1.0	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9
A 35 2_65.8	65.8	0.52	0.78	0.54	0.98	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9
A 35 2_74.3	74.3	0.48	0.74	0.50	0.94	3.0	3.5	3.0	3.5	2.8	3.8	2.8	3.8
A 35 2_82.5	82.5	0.45	0.71	0.47	0.91	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8
A 35 2_95.6	95.6	0.42	0.68	0.44	0.88	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8
A 35 3_105.5	105.5	0.38	0.64	0.40	0.84	2.9	3.4	2.9	3.4	2.8	3.8	—	—
A 35 3_116.9	116.9	0.38	0.64	0.40	0.84	2.9	3.4	2.9	3.4	2.8	3.8	—	—
A 35 3_136.3	136.3	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.8	3.8	—	—
A 35 3_150.6	150.6	0.36	0.62	0.38	0.82	2.9	3.3	2.9	3.4	2.8	3.8	—	—
A 35 3_171.8	171.8	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.8	3.8	—	—
A 35 3_188.3	188.3	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
A 35 3_201.8	201.8	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
A 35 3_223.2	223.2	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
A 35 3_248.1	248.1	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
A 35 3_270.7	270.7	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
A 35 3_305.4	305.4	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
A 35 3_339.3	339.3	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
A 35 3_393.2	393.2	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—




# A 41

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]								
			 IEC							
			63	71	80	90	100	112	132	
A 41 2_5.2	5.2	13	—	—	16	16	17	17	32	23
A 41 2_7.1	7.1	7.3	—	—	10	10	11	11	26	18
A 41 2_8.3	8.3	5.9	—	—	8.8	8.7	10	10	25	16
A 41 2_9.2	9.2	4.5	—	—	7.4	7.3	8.6	8.6	23	15
A 41 2_10.1	10.1	5.9	—	—	8.8	8.7	10	10	25	16
A 41 2_11.7	11.7	2.9	4.4	4.4	5.8	5.7	7.0	7.0	22	13
A 41 2_13.8	13.8	3.6	—	—	6.5	6.4	7.7	7.7	23	14
A 41 2_16.1	16.1	2.9	—	—	5.8	5.7	7.0	7.0	22	13
A 41 2_17.8	17.8	2.2	—	—	5.1	5.0	6.3	6.3	21	11
A 41 2_22.7	22.7	1.5	3.0	3.0	4.4	4.3	5.6	5.6	20	11
A 41 2_28.3	28.3	1.1	2.6	2.6	4.0	3.9	5.2	5.2	20	10
A 41 2_35.9	35.9	1.7	3.2	3.2	4.6	4.5	5.8	5.8	20	9.8
A 41 2_45.1	45.1	1.5	3.0	3.0	4.4	4.3	5.6	5.6	20	9.6
A 41 2_48.3	48.3	1.4	2.9	2.9	4.3	4.2	5.5	5.5	—	9.5
A 41 2_53.1	53.1	1.4	2.9	2.9	4.3	4.2	5.5	5.5	—	9.5
A 41 2_58.8	58.8	1.3	2.8	2.8	4.2	4.1	5.4	5.4	—	9.4
A 41 2_64.2	64.2	1.3	2.8	2.8	4.2	4.1	5.4	5.4	—	9.4
A 41 2_71.3	71.3	1.2	2.7	2.7	4.1	4.0	5.3	5.3	—	9.3
A 41 2_79.2	79.2	1.2	2.7	2.7	4.1	4.0	5.3	5.3	—	9.3
A 41 3_92.8	92.8	1.1	2.6	2.6	4.0	3.9	5.2	5.2	—	9.2
A 41 3_115.9	115.9	0.20	1.7	1.7	2.9	3.0	4.3	4.3	—	2.1
A 41 3_146.9	146.9	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.1
A 41 3_184.4	184.4	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.1
A 41 3_197.5	197.5	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.0
A 41 3_217.4	217.4	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.0
A 41 3_240.6	240.6	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.0
A 41 3_262.5	262.5	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.0
A 41 3_291.7	291.7	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.0
A 41 3_324.2	324.2	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.0
A 41 3_376.8	376.8	0.10	1.6	1.6	2.8	2.9	4.2	4.2	—	2.0



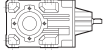


# A 41

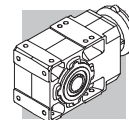
		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]																	
		 <b>SERVO</b>																	
	i	60A		60B 80A		80B		95A		80C 95B 110A		95C 110B		130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
A 41 2_5.2	5.2	—	—	—	—	—	—	—	—	16	16.5	16	17	16	17	30	32	32	37
A 41 2_7.1	7.1	—	—	—	—	—	—	—	—	10	10.5	10	11	10	11	24	27	26	31
A 41 2_8.3	8.3	—	—	—	—	—	—	—	—	8.8	9.3	8.7	9.7	8.7	9.7	23	25	25	30
A 41 2_9.2	9.2	—	—	—	—	—	—	—	—	7.4	7.9	7.3	8.3	7.3	8.3	21	24	23	28
A 41 2_10.1	10.1	—	—	—	—	—	—	—	—	8.8	9.3	8.7	9.7	8.7	9.7	23	25	25	30
A 41 2_11.7	11.7	—	—	—	—	5.7	6.2	5.7	6.2	5.8	6.3	5.7	6.7	5.7	6.7	20	22	22	27
A 41 2_13.8	13.8	—	—	—	—	—	—	—	—	6.5	7.0	6.4	7.4	6.4	7.4	21	23	23	28
A 41 2_16.1	16.1	—	—	—	—	—	—	—	—	5.8	6.3	5.7	6.7	5.7	6.7	20	22	22	27
A 41 2_17.8	17.8	—	—	—	—	—	—	—	—	5.1	5.6	5.0	6.0	5.0	6.0	19	22	21	26
A 41 2_22.7	22.7	—	—	—	—	4.3	4.8	4.3	4.8	4.4	4.9	4.3	5.3	4.3	5.3	18	21	20	25
A 41 2_28.3	28.3	—	—	—	—	3.9	4.4	3.9	4.4	4.0	4.5	3.9	4.9	3.9	4.9	18	21	20	25
A 41 2_35.9	35.9	—	—	—	—	4.5	5.0	4.5	5.0	4.6	5.1	4.5	5.5	4.5	5.5	19	21	20	25
A 41 2_45.1	45.1	—	—	—	—	4.3	4.8	4.3	4.8	4.4	4.9	4.3	5.3	4.3	5.3	18	21	20	25
A 41 2_48.3	48.3	—	—	—	—	4.2	4.7	4.2	4.7	4.3	4.8	4.2	5.2	4.2	5.2	—	—	—	—
A 41 2_53.1	53.1	—	—	—	—	4.2	4.7	4.2	4.7	4.3	4.8	4.2	5.2	4.2	5.2	—	—	—	—
A 41 2_58.8	58.8	—	—	—	—	4.1	4.6	4.1	4.6	4.2	4.7	4.1	5.1	4.1	5.1	—	—	—	—
A 41 2_64.2	64.2	—	—	—	—	4.1	4.6	4.1	4.6	4.2	4.7	4.1	5.1	4.1	5.1	—	—	—	—
A 41 2_71.3	71.3	—	—	—	—	4.0	4.5	4.0	4.5	4.1	4.6	4.0	5.0	4.0	5.0	—	—	—	—
A 41 2_79.2	79.2	—	—	—	—	4.0	4.5	4.0	4.5	4.1	4.6	4.0	5.0	4.0	5.0	—	—	—	—
A 41 3_92.8	92.8	1.4	1.6	1.4	1.8	—	—	3.9	4.4	4.0	4.5	3.9	4.9	—	—	—	—	—	—
A 41 3_115.9	115.9	0.47	0.73	0.49	0.93	—	—	3.0	3.5	2.9	3.4	3.0	4.0	—	—	—	—	—	—
A 41 3_146.9	146.9	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—
A 41 3_184.4	184.4	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—
A 41 3_197.5	197.5	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—
A 41 3_217.4	217.4	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—
A 41 3_240.6	240.6	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—
A 41 3_262.5	262.5	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—
A 41 3_291.7	291.7	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—
A 41 3_324.2	324.2	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—
A 41 3_376.8	376.8	0.37	0.63	0.39	0.83	—	—	2.9	3.4	2.8	3.3	2.9	3.9	—	—	—	—	—	—




## A 50

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]										
			 IEC 									
			63	71	80	90	100	112	132	160	180	
<b>A 50 2_7.7</b>	7.7	15	—	—	18	18	19	19	34	93	91	24
<b>A 50 2_9.7</b>	9.7	10	—	—	13	13	14	14	29	89	86	19
<b>A 50 2_13.1</b>	13.1	6.3	—	—	9.2	9.1	10	10	25	85	82	15
<b>A 50 2_16.6</b>	16.6	4.2	—	—	7.0	7.0	8.2	8.2	23	82	80	13
<b>A 50 2_20.9</b>	20.9	2.8	4.2	4.2	5.7	5.6	6.9	6.9	22	81	79	12
<b>A 50 3_24.0</b>	24.0	6.0	—	—	8.9	8.8	10	10	25	84	82	15
<b>A 50 3_26.4</b>	26.4	5.8	—	—	8.7	8.6	9.9	9.9	25	84	82	15
<b>A 50 3_32.4</b>	32.4	4.0	—	—	6.8	6.8	8.1	8.1	23	82	80	13
<b>A 50 3_35.6</b>	35.6	3.9	—	—	6.7	6.7	8.0	8.0	23	82	80	13
<b>A 50 3_40.9</b>	40.9	2.7	—	—	5.6	5.5	6.8	6.8	22	81	79	12
<b>A 50 3_45.0</b>	45.0	2.6	—	—	5.5	5.4	6.7	6.7	22	81	79	12
<b>A 50 3_51.7</b>	51.7	1.9	3.4	3.4	4.7	4.7	6.0	6.0	21	80	78	11
<b>A 50 3_56.8</b>	56.8	1.9	3.3	3.3	4.7	4.6	5.9	5.9	21	80	78	11
<b>A 50 3_63.9</b>	63.9	1.4	2.9	2.8	4.2	4.2	5.5	5.5	20	80	77	11
<b>A 50 3_70.2</b>	70.2	1.4	2.8	2.8	4.2	4.1	5.4	5.4	20	80	77	10
<b>A 50 3_81.5</b>	81.5	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	79	77	10
<b>A 50 3_89.5</b>	89.5	0.90	2.4	2.4	3.7	3.7	5.0	5.0	20	79	77	10
<b>A 50 3_99.5</b>	99.5	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	79	77	9.7
<b>A 50 3_109.4</b>	109.4	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	79	77	9.7
<b>A 50 3_118.0</b>	118.0	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	9.6
<b>A 50 3_129.7</b>	129.7	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	9.6
<b>A 50 3_140.6</b>	140.6	0.40	1.8	1.8	3.2	3.2	4.4	4.4	—	—	—	9.4
<b>A 50 3_154.6</b>	154.6	0.40	1.8	1.8	3.2	3.2	4.4	4.4	—	—	—	9.4
<b>A 50 3_173.4</b>	173.4	0.30	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	9.3
<b>A 50 3_190.6</b>	190.6	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	9.3

For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.





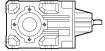
# A 50

		J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]									
		 SERVO									
	i	80B 95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
A 50 2_7.7	7.7	—	—	18	19	18	19	32	34	34	39
A 50 2_9.7	9.7	—	—	13	14	13	14	27	29	29	34
A 50 2_13.1	13.1	—	—	9.2	9.7	9.1	10	23	26	25	30
A 50 2_16.6	16.6	—	—	7.0	7.5	7.0	8.0	21	24	23	28
A 50 2_20.9	20.9	5.6	6.1	5.7	6.2	5.6	6.6	20	22	22	27
A 50 3_24.0	24.0	—	—	8.9	9.4	8.8	9.8	23	25	25	30
A 50 3_26.4	26.4	—	—	8.7	9.2	8.6	9.6	23	25	25	30
A 50 3_32.4	32.4	—	—	6.8	7.3	6.8	7.8	21	23	23	28
A 50 3_35.6	35.6	—	—	6.7	7.2	6.7	7.7	21	23	23	28
A 50 3_40.9	40.9	—	—	5.6	6.1	5.5	6.5	20	22	22	27
A 50 3_45.0	45.0	—	—	5.5	6.0	5.4	6.4	20	22	22	27
A 50 3_51.7	51.7	4.7	5.1	4.7	5.2	4.7	5.7	19	21	21	26
A 50 3_56.8	56.8	4.7	5.1	4.7	5.2	4.6	5.6	19	21	21	26
A 50 3_63.9	63.9	4.2	4.7	4.2	5.2	4.2	5.2	18	21	20	25
A 50 3_70.2	70.2	4.2	4.7	4.2	5.2	4.1	5.1	18	21	20	25
A 50 3_81.5	81.5	3.7	4.1	3.8	4.3	3.7	4.7	18	20	20	25
A 50 3_89.5	89.5	3.7	4.1	3.7	4.2	3.7	4.7	18	20	20	25
A 50 3_99.5	99.5	3.4	3.9	3.5	4.0	3.4	4.4	18	20	20	25
A 50 3_109.4	109.4	3.4	3.9	3.5	4.0	3.4	4.4	18	20	20	25
A 50 3_118.0	118.0	3.3	3.8	3.4	4.0	3.3	4.3	—	—	—	—
A 50 3_129.7	129.7	3.3	3.8	3.4	4.0	3.3	4.3	—	—	—	—
A 50 3_140.6	140.6	3.2	3.7	3.2	3.7	3.2	4.2	—	—	—	—
A 50 3_154.6	154.6	3.2	3.7	3.2	3.7	3.2	4.2	—	—	—	—
A 50 3_173.4	173.4	3.1	3.6	3.1	3.6	3.0	4.0	—	—	—	—
A 50 3_190.6	190.6	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—

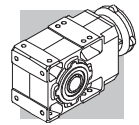
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.




## A 55

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
			 IEC										
			63	71	80	90	100	112	132	160	180		
<b>A 55 2_4.9</b>	4.9	61	—	—	—	—	—	—	—	77	123	120	70
<b>A 55 2_6.4</b>	6.4	41	—	—	—	—	—	—	—	57	103	100	50
<b>A 55 2_8.5</b>	8.5	26	—	—	—	—	—	—	—	42	88	85	35
<b>A 55 2_10.4</b>	10.4	19	—	—	—	—	—	—	—	35	81	78	28
<b>A 55 2_13.1</b>	13.1	12	—	—	14	14	17	17	28	28	74	72	21
<b>A 55 2_15.7</b>	15.7	8.9	—	—	11	11	14	14	25	25	71	68	18
<b>A 55 2_19.2</b>	19.2	6.2	—	—	8.6	8.5	11	11	23	23	68	66	15
<b>A 55 3_23.8</b>	23.8	11	—	—	13	13	16	16	27	27	73	70	20
<b>A 55 3_29.9</b>	29.9	7.9	—	—	10	10	13	13	24	24	70	67	17
<b>A 55 3_40.3</b>	40.3	5.3	—	—	7.8	7.6	10	10	22	22	68	65	14
<b>A 55 3_51.0</b>	51.0	3.6	—	—	6.0	5.9	8.6	8.6	20	20	66	63	13
<b>A 55 3_64.3</b>	64.3	2.6	3.1	3.0	5.1	5.0	7.7	7.7	19	19	65	62	12
<b>A 55 3_79.5</b>	79.5	2.0	2.4	2.4	4.5	4.4	7.1	7.1	18	18	64	62	11
<b>A 55 3_101.4</b>	101.4	1.3	1.8	1.8	3.8	3.7	6.5	6.5	18	18	64	61	10
<b>A 55 3_123.9</b>	123.9	1.0	1.5	1.5	3.6	3.4	6.2	6.2	17	17	63	61	10
<b>A 55 3_132.7</b>	132.7	0.71	1.4	1.4	3.5	3.3	6.1	6.1	—	—	—	—	9.5
<b>A 55 3_146.8</b>	146.8	0.66	1.4	1.4	3.4	3.3	6.0	6.0	—	—	—	—	9.4
<b>A 55 3_160.4</b>	160.4	0.58	1.3	1.3	3.3	3.2	6.0	6.0	—	—	—	—	9.4
<b>A 55 3_175.0</b>	175.0	0.50	1.2	1.2	3.3	3.1	5.9	5.9	—	—	—	—	9.3
<b>A 55 3_194.2</b>	194.2	0.43	1.2	1.2	3.2	3.1	5.8	5.8	—	—	—	—	9.2

For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.






## A 55

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 <b>SERVO</b>									
	i	80B 95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
<b>A 55 2_4.9</b>	4.9	—	—	—	—	—	—	78	80	77	82
<b>A 55 2_6.4</b>	6.4	—	—	—	—	—	—	58	60	57	62
<b>A 55 2_8.5</b>	8.5	—	—	—	—	—	—	43	45	42	47
<b>A 55 2_10.4</b>	10.4	—	—	—	—	—	—	36	38	35	40
<b>A 55 2_13.1</b>	13.1	—	—	14	15	14	15	29	31	28	33
<b>A 55 2_15.7</b>	15.7	—	—	11	12	11	12	26	28	25	30
<b>A 55 2_19.2</b>	19.2	—	—	8.6	9.1	8.5	9.5	23	26	23	28
<b>A 55 3_23.8</b>	23.8	—	—	13	14	13	14	28	30	27	32
<b>A 55 3_29.9</b>	29.9	—	—	10	11	10	11	25	27	24	29
<b>A 55 3_40.3</b>	40.3	—	—	7.8	8.3	7.6	8.6	22	25	22	27
<b>A 55 3_51.0</b>	51.0	—	—	6.0	6.5	5.9	6.9	21	23	20	25
<b>A 55 3_64.3</b>	64.3	5.4	5.9	5.1	5.6	5.0	6.0	20	22	19	24
<b>A 55 3_79.5</b>	79.5	4.8	5.3	4.5	5.0	4.4	5.4	19	21	18	23
<b>A 55 3_101.4</b>	101.4	4.1	4.6	3.8	4.3	3.7	4.7	18	21	18	23
<b>A 55 3_123.9</b>	123.9	3.8	4.3	3.6	4.1	3.4	4.4	18	20	17	22
<b>A 55 3_132.7</b>	132.7	3.5	4.0	3.5	4.0	3.3	4.3	—	—	—	—
<b>A 55 3_146.8</b>	146.8	3.5	3.9	3.4	3.9	3.3	4.3	—	—	—	—
<b>A 55 3_160.4</b>	160.4	3.4	3.8	3.3	3.8	3.2	4.2	—	—	—	—
<b>A 55 3_175.0</b>	175.0	3.3	3.8	3.3	3.8	3.1	4.1	—	—	—	—
<b>A 55 3_194.2</b>	194.2	3.3	3.7	3.2	3.7	3.1	4.1	—	—	—	—

For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.

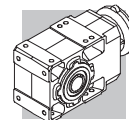


## A 60

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]											
			 IEC										
			63	71	80	90	100	112	132	160	180		
<b>A 60 2_7.9</b>	7.9	36	—	—	—	—	—	—	—	54	114	112	57
<b>A 60 2_10.3</b>	10.3	23	—	—	25	25	27	27	41	101	99	99	44
<b>A 60 2_12.7</b>	12.7	16	—	—	19	19	20	20	35	94	92	92	37
<b>A 60 2_16.7</b>	16.7	9.4	—	—	12	12	14	14	28	88	85	85	30
<b>A 60 2_20.6</b>	20.6	6.7	—	—	9.6	9.5	11	11	26	85	83	83	28
<b>A 60 3_25.7</b>	25.7	14	—	—	17	17	18	18	33	92	90	90	35
<b>A 60 3_27.9</b>	27.9	14	—	—	17	17	18	18	33	92	90	90	35
<b>A 60 3_31.7</b>	31.7	10	—	—	13	13	15	15	29	89	86	86	31
<b>A 60 3_34.3</b>	34.3	10	—	—	13	13	14	14	29	89	86	86	31
<b>A 60 3_41.7</b>	41.7	6.1	—	—	9.0	8.9	10	10	25	84	82	82	27
<b>A 60 3_45.2</b>	45.2	6.1	—	—	8.9	8.9	10	10	25	84	82	82	27
<b>A 60 3_51.3</b>	51.3	5.0	—	—	7.4	7.4	8.7	8.7	24	83	81	81	26
<b>A 60 3_55.6</b>	55.6	4.5	—	—	7.4	7.3	8.6	8.6	23	83	81	81	26
<b>A 60 3_65.0</b>	65.0	3.2	4.7	4.6	6.1	6.0	7.3	7.3	22	82	79	79	24
<b>A 60 3_70.4</b>	70.4	3.2	4.7	4.6	6.1	6.0	7.3	7.3	22	81	79	79	24
<b>A 60 3_79.7</b>	79.7	2.1	3.6	3.5	5.0	4.9	6.2	6.2	21	80	78	78	23
<b>A 60 3_86.4</b>	86.4	2.1	3.6	3.5	5.0	4.9	6.2	6.2	21	80	78	78	23
<b>A 60 3_99.5</b>	99.5	2.0	3.5	3.4	4.3	4.3	5.6	5.6	20	80	78	78	23
<b>A 60 3_107.8</b>	107.8	1.5	3.0	2.9	4.3	4.3	5.6	5.6	20	80	78	78	22
<b>A 60 3_123.0</b>	123.0	1.1	2.6	2.5	4.0	3.9	5.2	5.2	20	79	77	77	22
<b>A 60 3_133.3</b>	133.3	1.1	2.6	2.5	3.9	3.9	5.2	5.2	20	79	77	77	22
<b>A 60 3_144.0</b>	144.0	0.80	2.3	2.2	3.7	3.6	5.0	5.0	—	—	—	—	22
<b>A 60 3_156.0</b>	156.0	0.80	2.3	2.2	3.7	3.6	5.0	5.0	—	—	—	—	22
<b>A 60 3_171.5</b>	171.5	0.60	2.1	2.0	3.5	3.4	4.7	4.7	—	—	—	—	22
<b>A 60 3_185.8</b>	185.8	0.60	2.1	2.0	3.5	3.4	4.7	4.7	—	—	—	—	22

For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.







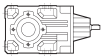
## A 60

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		<b>SERVO</b>									
	i	95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
<b>A 60 2_7.9</b>	7.9	—	—	—	—	—	—	53	55	54	59
<b>A 60 2_10.3</b>	10.3	—	—	25	26	25	26	40	42	41	46
<b>A 60 2_12.7</b>	12.7	—	—	19	20	19	20	33	35	35	40
<b>A 60 2_16.7</b>	16.7	—	—	12	13	12	13	26	29	28	33
<b>A 60 2_20.6</b>	20.6	—	—	9.6	10	9.5	10	24	26	26	31
<b>A 60 3_25.7</b>	25.7	—	—	17	18	17	18	31	33	33	38
<b>A 60 3_27.9</b>	27.9	—	—	17	18	17	18	31	33	33	38
<b>A 60 3_31.7</b>	31.7	—	—	13	14	13	14	27	29	29	34
<b>A 60 3_34.3</b>	34.3	—	—	13	14	13	14	27	29	29	34
<b>A 60 3_41.7</b>	41.7	—	—	9.0	9.5	8.9	9.9	23	26	25	30
<b>A 60 3_45.2</b>	45.2	—	—	8.9	9.4	8.9	9.9	23	26	25	30
<b>A 60 3_51.3</b>	51.3	—	—	7.4	7.9	7.4	8.4	22	24	24	29
<b>A 60 3_55.6</b>	55.6	—	—	7.4	7.9	7.3	8.3	21	24	23	28
<b>A 60 3_65.0</b>	65.0	6.0	6.5	6.1	6.6	6.0	7.0	20	23	22	27
<b>A 60 3_70.4</b>	70.4	6.0	6.5	6.1	6.6	6.0	7.0	20	23	22	27
<b>A 60 3_79.7</b>	79.7	4.9	5.4	5.0	5.5	4.9	5.9	19	22	21	26
<b>A 60 3_86.4</b>	86.4	4.9	5.4	5.0	5.5	4.9	5.9	19	22	21	26
<b>A 60 3_99.5</b>	99.5	4.8	5.3	4.3	4.8	4.3	5.3	19	21	20	25
<b>A 60 3_107.8</b>	107.8	4.3	4.8	4.3	4.8	4.3	5.3	18	21	20	25
<b>A 60 3_123.0</b>	123.0	3.9	4.4	4.0	4.5	3.9	4.9	18	21	20	25
<b>A 60 3_133.3</b>	133.3	3.9	4.4	3.9	4.4	3.9	4.9	18	21	20	25
<b>A 60 3_144.0</b>	144.0	3.6	4.1	3.7	4.2	3.6	4.6	—	—	—	—
<b>A 60 3_156.0</b>	156.0	3.6	4.1	3.7	4.2	3.6	4.6	—	—	—	—
<b>A 60 3_171.5</b>	171.5	3.4	3.9	3.5	4.0	3.4	4.4	—	—	—	—
<b>A 60 3_185.8</b>	185.8	3.4	3.9	3.5	4.0	3.4	4.4	—	—	—	—

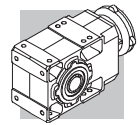
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.





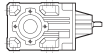
## A 70

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]											
			 IEC 										
			80	90	100	112	132	160	180	200	225	250	
<b>A 70 3_9.4</b>	9.4	—	—	—	—	—	—	187	185	194	—	—	150
<b>A 70 3_10.2</b>	10.2	—	—	—	—	—	—	183	180	190	—	—	146
<b>A 70 3_12.1</b>	12.1	—	—	—	—	—	—	150	148	157	—	—	113
<b>A 70 3_13.1</b>	13.1	—	—	—	—	—	—	147	145	154	—	—	111
<b>A 70 3_15.4</b>	15.4	45	—	—	—	—	64	124	121	161	—	—	87
<b>A 70 3_16.7</b>	16.7	44	—	—	—	—	63	122	120	129	—	—	85
<b>A 70 3_19.7</b>	19.7	30	—	—	—	—	49	109	107	—	—	—	72
<b>A 70 3_21.3</b>	21.3	29	—	—	—	—	48	108	106	—	—	—	71
<b>A 70 3_23.5</b>	23.5	—	—	—	—	—	—	116	114	123	—	—	79
<b>A 70 3_27.8</b>	27.8	—	—	—	—	—	—	118	116	125	—	—	81
<b>A 70 3_30.1</b>	30.1	—	—	—	—	—	—	117	115	124	—	—	81
<b>A 70 3_35.4</b>	35.4	26	—	—	—	—	45	104	102	111	—	—	67
<b>A 70 3_38.4</b>	38.4	25	—	—	—	—	44	104	101	111	—	—	67
<b>A 70 3_45.2</b>	45.2	18	—	—	—	—	37	97	94	—	—	—	59
<b>A 70 3_49.0</b>	49.0	18	—	—	—	—	37	96	94	—	—	—	59
<b>A 70 3_53.2</b>	53.2	15	—	—	—	—	34	93	91	—	—	—	56
<b>A 70 3_57.7</b>	57.7	15	—	—	—	—	34	93	91	—	—	—	56
<b>A 70 3_66.9</b>	66.9	9.7	12	12	13	13	29	88	86	—	—	—	51
<b>A 70 3_72.5</b>	72.5	9.6	12	12	13	13	28	88	86	—	—	—	51
<b>A 70 3_79.3</b>	79.3	6.8	9.4	9.3	11	11	26	85	83	—	—	—	48
<b>A 70 3_85.9</b>	85.9	6.7	9.3	9.3	11	11	26	85	83	—	—	—	48
<b>A 70 3_96.2</b>	96.2	5.4	8.2	8.2	9.4	9.4	24	84	82	—	—	—	47
<b>A 70 3_104.2</b>	104.2	5.4	8.2	8.1	9.4	9.4	24	84	81	—	—	—	47
<b>A 70 3_120.6</b>	120.6	3.4	6.2	6.2	7.5	7.5	22	82	79	—	—	—	45
<b>A 70 3_130.7</b>	130.7	3.4	6.2	6.2	7.4	7.4	22	82	79	—	—	—	45
<b>A 70 3_141.9</b>	141.9	2.4	5.3	5.2	6.5	6.5	21	81	78	—	—	—	44
<b>A 70 3_153.7</b>	153.7	2.4	5.2	5.2	6.5	6.5	21	81	78	—	—	—	44

For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.





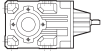
## A 80

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]											
			 IEC										
		80	90	100	112	132	160	180	200	225	250		
<b>A 80 3_9.8</b>	9.8	—	—	—	—	—	—	—	320	333	611	—	286
<b>A 80 3_10.7</b>	10.7	—	—	—	—	—	—	—	309	323	601	—	276
<b>A 80 3_12.3</b>	12.3	—	—	—	—	—	—	239	239	253	531	—	205
<b>A 80 3_13.3</b>	13.3	—	—	—	—	—	—	232	233	246	524	—	199
<b>A 80 3_15.5</b>	15.5	—	—	—	—	—	—	187	185	194	478	—	150
<b>A 80 3_16.7</b>	16.7	—	—	—	—	—	—	183	180	190	474	—	150
<b>A 80 3_19.3</b>	19.3	69	—	—	—	—	88	147	145	154	440	—	111
<b>A 80 3_20.9</b>	20.9	66	—	—	—	—	85	145	142	152	437	—	108
<b>A 80 3_22.6</b>	22.6	—	—	—	—	—	—	—	205	219	496	—	171
<b>A 80 3_24.5</b>	24.5	—	—	—	—	—	—	—	203	217	494	—	169
<b>A 80 3_28.2</b>	28.2	—	—	—	—	—	—	165	166	179	457	—	132
<b>A 80 3_30.6</b>	30.6	—	—	—	—	—	—	164	164	178	456	—	130
<b>A 80 3_35.5</b>	35.5	—	—	—	—	—	—	140	138	147	432	—	104
<b>A 80 3_38.5</b>	38.5	—	—	—	—	—	—	140	137	147	431	—	103
<b>A 80 3_44.5</b>	44.5	39	—	—	—	—	58	118	115	125	410	—	81
<b>A 80 3_48.2</b>	48.2	39	—	—	—	—	58	117	115	124	410	—	90
<b>A 80 3_55.2</b>	55.2	29	—	—	—	—	48	108	105	136	399	—	70
<b>A 80 3_59.8</b>	59.8	29	—	—	—	—	48	107	105	136	399	—	70
<b>A 80 3_66.8</b>	66.8	22	—	—	—	—	41	101	98	128	391	—	63
<b>A 80 3_72.4</b>	72.4	22	—	—	—	—	41	100	98	128	391	—	63
<b>A 80 3_82.3</b>	82.3	15	17	17	18	18	34	94	91	120	384	—	56
<b>A 80 3_89.2</b>	89.2	15	17	17	18	18	34	93	91	120	386	—	56
<b>A 80 3_96.0</b>	96.0	14	16	16	17	17	32	92	90	119	382	—	55
<b>A 80 3_104.0</b>	104.0	13	16	16	17	17	32	92	89	119	382	—	55
<b>A 80 3_116.0</b>	116.0	9.1	12	12	13	13	28	87	85	—	—	—	50
<b>A 80 3_125.6</b>	125.6	9.1	12	12	13	13	28	87	85	—	—	—	50
<b>A 80 3_144.7</b>	144.7	5.4	8.3	8.2	10	10	24	84	82	—	—	—	47
<b>A 80 3_156.8</b>	156.8	5.4	3.0	2.9	4.2	4.2	19	78	76	—	—	—	41

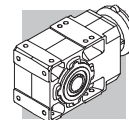
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



## A 90

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]											
			 IEC										
		80	90	100	112	132	160	180	200	225	250		
<b>A 90 3_9.7</b>	9.7	—	—	—	—	—	—	—	597	611	889	918	898
<b>A 90 3_10.5</b>	10.5	—	—	—	—	—	—	—	575	589	867	896	876
<b>A 90 3_12.6</b>	12.6	—	—	—	—	—	—	—	402	416	693	723	703
<b>A 90 3_13.7</b>	13.7	—	—	—	—	—	—	—	389	403	681	710	690
<b>A 90 3_15.6</b>	15.6	—	—	—	—	—	—	—	306	319	597	627	607
<b>A 90 3_16.9</b>	16.9	—	—	—	—	—	—	—	297	311	589	618	598
<b>A 90 3_19.4</b>	19.4	—	—	—	—	—	—	236	234	243	527	559	530
<b>A 90 3_21.0</b>	21.0	—	—	—	—	—	—	231	228	238	522	553	524
<b>A 90 3_22.3</b>	22.3	—	—	—	—	—	—	—	326	340	618	647	627
<b>A 90 3_24.1</b>	24.1	—	—	—	—	—	—	—	322	336	614	643	623
<b>A 90 3_29.1</b>	29.1	—	—	—	—	—	—	—	243	257	535	564	544
<b>A 90 3_31.5</b>	31.5	—	—	—	—	—	—	—	241	254	532	562	542
<b>A 90 3_35.8</b>	35.8	—	—	—	—	—	—	—	201	215	493	522	502
<b>A 90 3_38.8</b>	38.8	—	—	—	—	—	—	—	200	213	491	521	500
<b>A 90 3_44.6</b>	44.6	—	—	—	—	—	—	169	166	176	460	491	462
<b>A 90 3_48.3</b>	48.3	—	—	—	—	—	—	168	165	175	459	490	461
<b>A 90 3_55.0</b>	55.0	66	—	—	—	—	85	144	142	151	437	468	438
<b>A 90 3_59.6</b>	59.6	66	—	—	—	—	84	144	141	151	436	468	437
<b>A 90 3_68.8</b>	68.8	48	—	—	—	—	67	126	124	154	418	449	416
<b>A 90 3_74.5</b>	74.5	47	—	—	—	—	66	126	123	154	417	449	416
<b>A 90 3_80.4</b>	80.4	43	—	—	—	—	62	121	119	149	412	443	412
<b>A 90 3_87.1</b>	87.1	43	—	—	—	—	62	121	119	148	412	443	412
<b>A 90 3_98.6</b>	98.6	28	30	30	32	32	47	106	104	134	397	428	399
<b>A 90 3_106.8</b>	106.8	28	30	30	31	31	47	106	104	133	397	428	399
<b>A 90 3_116.9</b>	116.9	23	25	25	26	26	41	101	99	128	391	423	394
<b>A 90 3_126.6</b>	126.6	22	25	25	26	26	41	101	98	128	391	422	394
<b>A 90 3_139.4</b>	139.4	15	17	17	19	19	33	93	91	—	—	—	386
<b>A 90 3_151.0</b>	151.0	14	3.0	3.0	4.3	4.3	19	79	76	—	—	—	372

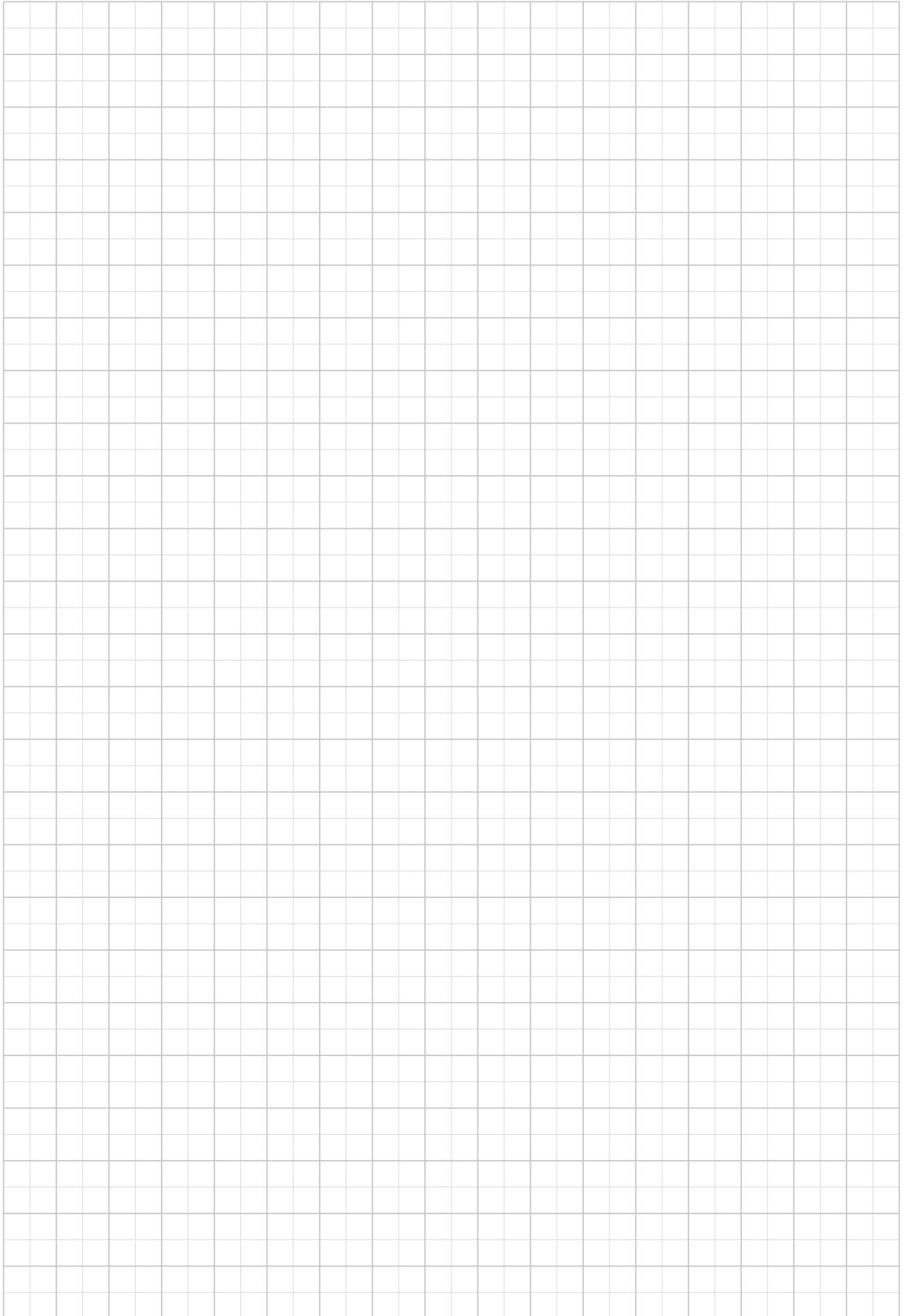
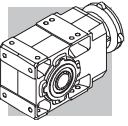
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.

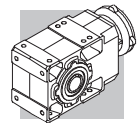


## 42 EXACT RATIOS

$i_N$	A 05	A 10	A 20	A 30	A 35	A 41	A 50	A 55	A 60	A 70	A 80	A 90
5.0								4.94505				
5.6	5.46559	5.46559	5.35117	5.41311	5.41311	5.24476						
6.3	6.33484	6.33484	6.53846	6.41026	6.41026			6.41026				
7.1	7.21154	7.21154	7.28745	7.02341	7.02341	7.12251						
8.0	8.51648	8.51648	8.37104	8.46154	8.46154	8.33333	7.73684	8.46154	7.86420			
9.0	9.61538	9.61538	9.37500	9.31174	9.31174	9.19732				9.43946		9.67545
10.0	10.55639	10.55639	10.33540	10.45503	10.63348	10.12987	9.73401	10.35503	10.31579	10.22609	9.83278	10.48174
11.2				11.77885	11.77885	11.74089				12.08027	10.65217	12.64214
12.5	12.30769	12.30769	11.96581		13.06878		13.10700	13.07692	12.70370	13.08696	12.27130	13.69565
14.0	13.92857	13.92857	14.07519	13.56522	15.47619	13.75661				15.40468	13.29391	15.57512
16.0	16.44898	16.44898	16.16807	16.34286	16.95652	16.09524	16.57005	15.68047	16.73663	16.68841	15.45151	16.87304
18.0	18.57143	18.57143	18.10714	17.98496		17.76398					19.33779	19.38462
20.0	21.35714	21.35714	21.22449	20.53782	20.42857		20.91813	19.23077	20.5942	19.66555	20.94928	21.00000
22.4	23.77143	23.77143	23.11111	22.75000	22.48120	22.67669				21.30435	22.61538	22.25354
25.0	25.46939	25.46939	26.46429	26.53061	25.67227		24.04795	23.79021	25.71012	23.52000	24.50000	24.10800
28.0	28.57143	28.57143	29.21905	29.30159	28.43750	28.32143	26.43733		27.85263	27.78462	28.22400	29.07692
31.5	32.19048	32.19048	31.30612	33.42857	33.16327		32.38095	29.93134	31.66154	30.10000	30.57600	31.50000
35.5	35.11688	35.11688	35.42857	36.64762	36.62698	35.90476	35.59829		34.30000	35.43077	35.53846	35.82277
40.0	40.85714	40.85714	39.61905	39.26531	41.78571	45.06667	40.93645	40.30303	41.71282	38.38333	38.50000	38.80800
45.0	45.39683	45.39683	43.22078	43.42857	45.80952	48.28571	45.00386		45.18889	45.23077	44.47692	44.58462
50.0	51.25714	51.25714	48.28571	48.28571	49.08163	53.14286	51.67843	50.95166	51.32709	49.00000	48.18333	48.30000
56.0	58.60317	58.60317	53.65079	52.67532	54.28571	58.80952	56.81314		55.60435	53.23314	55.18154	55.03077
63.0	65.92857	65.92857	63.14286	59.42857	60.35714	64.15584	63.89011	64.32168	64.98947	66.94154	66.80237	59.61667
71.0			70.98413	66.03175	65.84416	71.31429	70.23817		70.40526	72.52000	72.36923	68.75077
80.0	76.40816	76.40816	79.85714	76.51429	74.28571	79.23810	81.45055	79.52098	79.71923	79.32781	82.32000	80.37160
90.0	91.61905	91.61905	92.32653	86.66667	82.53968	92.76828	89.54339		86.36250	85.93846	89.18000	87.06923
100.0				97.50000	95.64286		99.53407	101.37762	99.50769	96.21818	104.03077	98.60308
112.2			109.16518	109.07029	105.54155	115.86039	109.42367	123.88531	107.80000	104.23636	115.95524	116.90414
125.0			120.52857	120.46208	116.90972		129.67046	132.73427	123.02769	120.61538	125.61818	126.64615
140.0			146.14286	137.42857	136.33787	146.88312	140.61938	146.80796	144.04260	141.86014	144.73846	139.39301
160.0			163.42857	161.42404	150.57760		154.59118	160.43706	171.46573	169.75499	156.80000	166.12694
180.0			178.28571	178.53968	171.78571	184.36364	173.36264	175.02225	185.75455	183.90123	171.29752	179.97085
200.0			199.17857	198.50794	201.78005	197.53247	190.58777	194.19860	208.73017		214.73193	209.01044
225.0			221.30952	216.55411	223.17460	217.40260	231.98700	208.05260	226.12435	220.25418	232.62626	226.42797
250.0			260.46429	244.31746	248.13492	240.58442	260.88462		264.29053	238.60870		
280.0			292.80952	271.46384	270.69264	291.74026	286.80584	262.64685	286.31474	292.01619	277.28428	281.43590
315.0			329.41071	314.55873	305.39683	324.15584	332.58974		324.19154	316.35088	300.39130	304.88889
355.0				356.29630	339.32981	376.83117	365.63552	324.71066	351.20750	369.38462	353.96864	355.79521
400.0			380.84694	400.83333	393.19841		406.43077		404.66462	400.16667	383.46603	385.44482
450.0							446.81331	413.95862	438.38667	475.76068	442.07937	449.15802
500.0							481.63314	505.86503	500.31262	515.40741	478.91932	486.58785
560.0							574.19580	541.99825	585.77325	595.03590	560.45035	555.29467
630.0							631.24731	655.11801	634.58769	644.62222	607.15455	601.56923
710.0							707.89744	714.67419	697.29399	705.13609	703.46182	707.91953
800.0							778.23340	792.97762	755.40182		829.52598	766.91282
900.0										926.54545	898.65315	865.09065
1000.0										1072.13675	1001.43166	1025.1594
1125.0										1161.48148	1084.88430	1110.58935
1250.0										1242.33846	1236.85594	1222.17967
1400.0										1345.86667	1339.92727	1324.02797
1600.0										1583.07692	1557.66545	1506.76450
1800.0										1715.00000		1632.32821

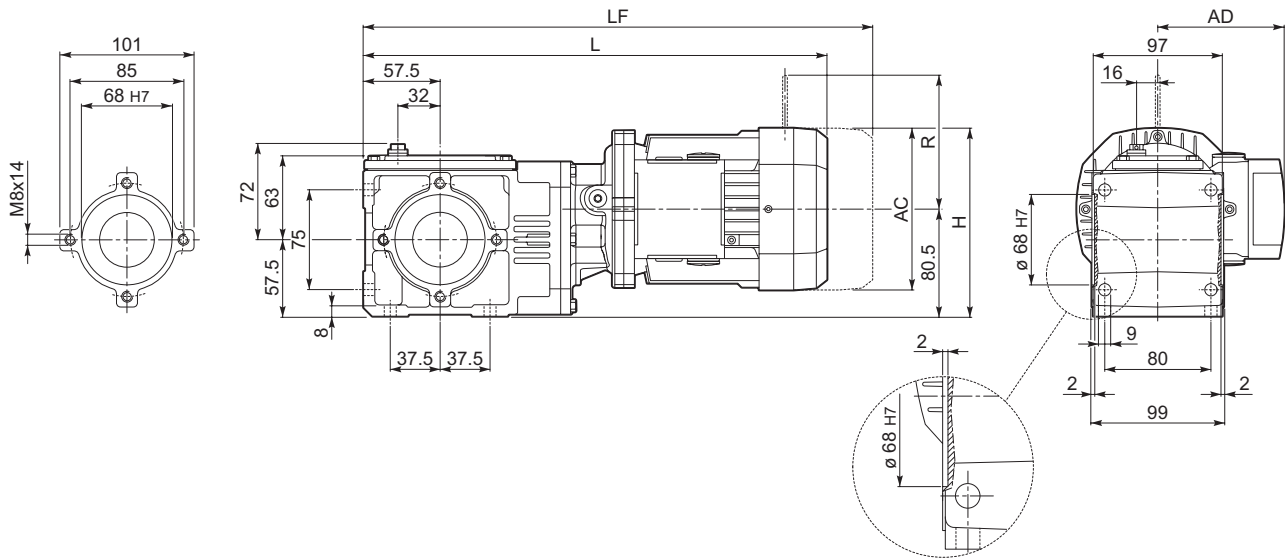






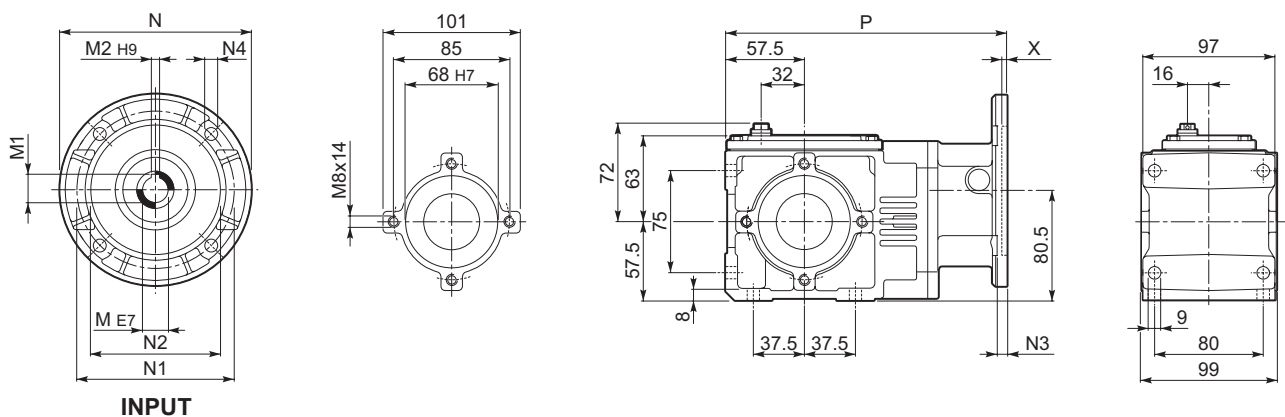
## 43 DIMENSIONS

### A 05...M/ME/MX



	AC	H	L	AD		M...FD M...FA		M...FD		M...FA	
						LF		R	AD	R	AD
A 05 2 S05 M05	121	141	360.5	95	7.5	426.5	9	96	122	116	95
A 05 2 S1 M1	138	149.5	389.5	108	11.5	450.5	14	103	135	124	108
A 05 2 S2 ME2S	156	158.5	418.5	119	15.5	—	—	—	—	—	—
A 05 2 S2 MX2S	156	158.5	452.5	119	20.6	—	—	—	—	—	—

### A 05...P(IEC)

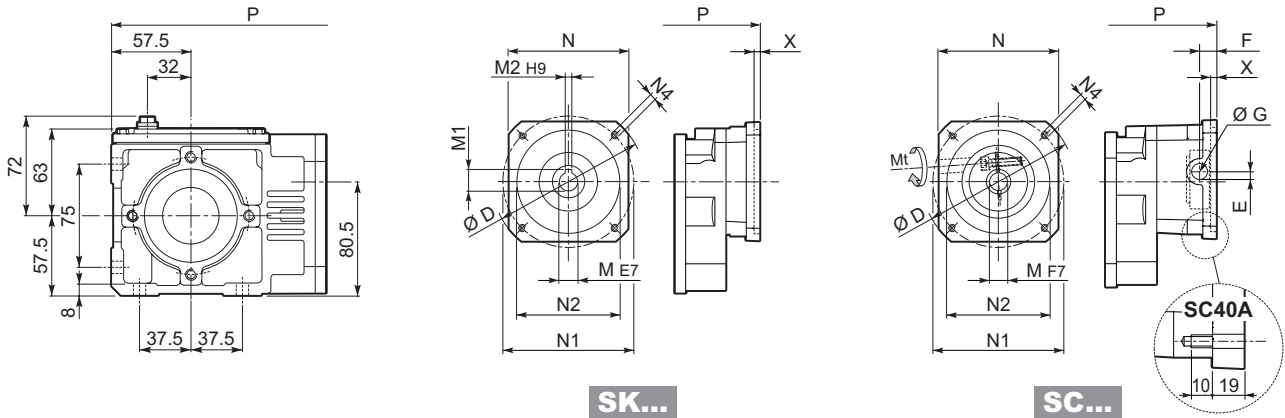


	M	M1	M2	N	N1	N2	N3	N4	X	P	
A 05 2 P71	14	16.3	5	160	130	110	7	9.5	4	213	5
A 05 2 P80	19	20.8	6	200	165	130	7	11.5	4	223	5.5

# Lowered key of Bonfiglioli supply



## A 05...SK / SC



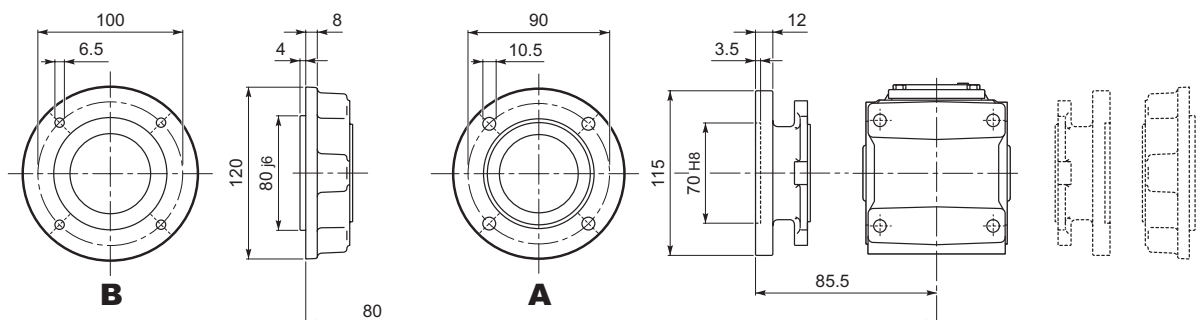
SK...

SC...

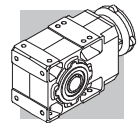
		D	M	M1	M2	N	N1	N2	N4	X	P	kg
A 05 2	SK40A	74	9	10.4	3	55	63	40	M5x10	3	207.5	5
A 05 2	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	206	5
A 05 2	SK60B	102	14	16.3	5	82	75	60	M5x10	4	213	5
A 05 2	SK80A	115	14	16.3	5	90	100	80	M6x12	4	213	5

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P	kg
A 05 2	SC40A	M5	15	74	10.5	9.5	12.5	9	55	63	40	M5x10	3	226.5	6
A 05 2	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	233	6
A 05 2	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	233	6
A 05 2	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	233	6

## A 05...F...

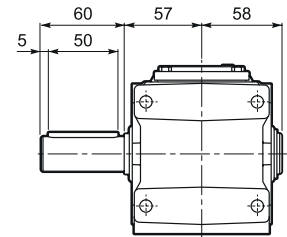
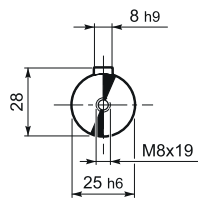




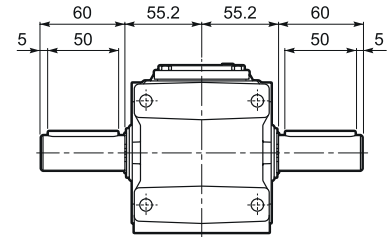
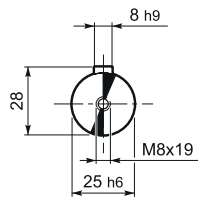


**A 05**

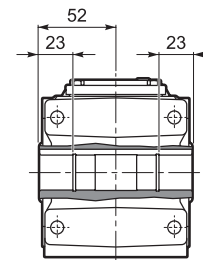
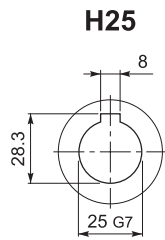
**A 05...UR**



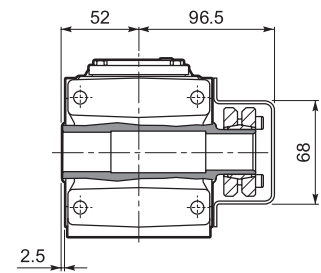
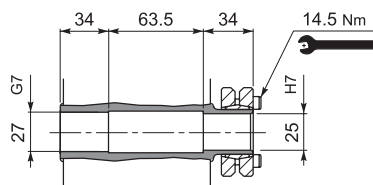
**A 05...UD**



**A 05...UH**

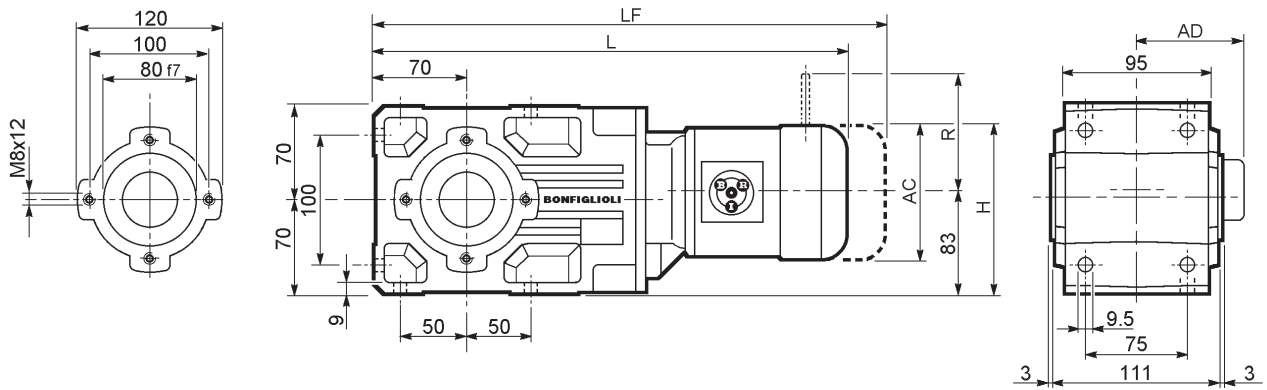


**A 05...US**

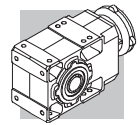




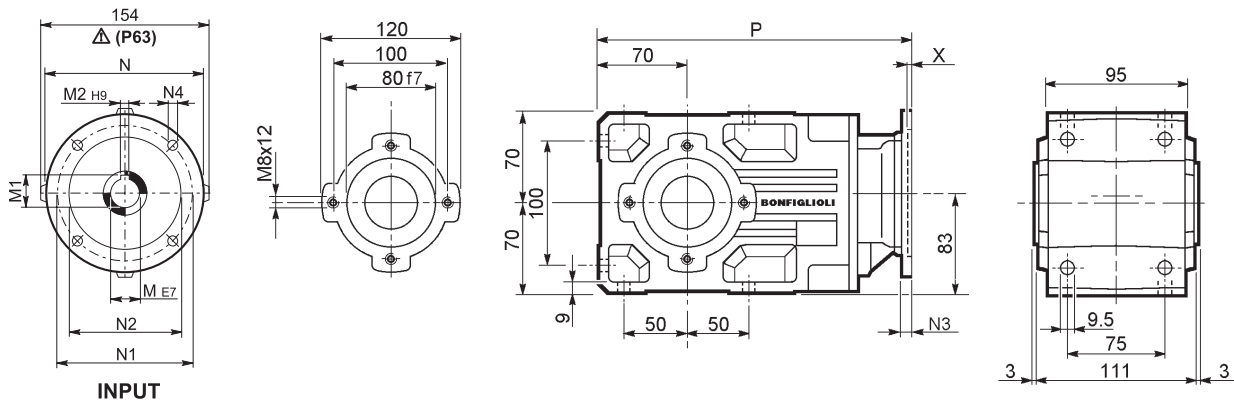
## A 10...M/ME/MX



			AC	H	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
								LF	Kg	R	AD	R	AD
A 10 2	S05	M05	121	143.5	408.5	95	12	474.5	14	96	122	116	95
A 10 2	S1	M1	138	152	437.5	108	14	498.5	17	103	135	124	108
A 10 2	S2	ME2S	156	161	466.5	119	18	—	—	—	—	—	—
A 10 2	S2	MX2S	156	161	510.5	119	23.1	—	—	—	—	—	—
A 10 2	S3	ME3S	195	180.5	509.5	142	24.5	—	—	—	—	—	—
A 10 2	S3	MX3S	195	180.5	541.5	142	27.5	—	—	—	—	—	—
A 10 2	S3	ME3L	195	180.5	541.5	142	30	—	—	—	—	—	—
A 10 2	S3	MX3L	195	180.5	585.5	142	36	—	—	—	—	—	—

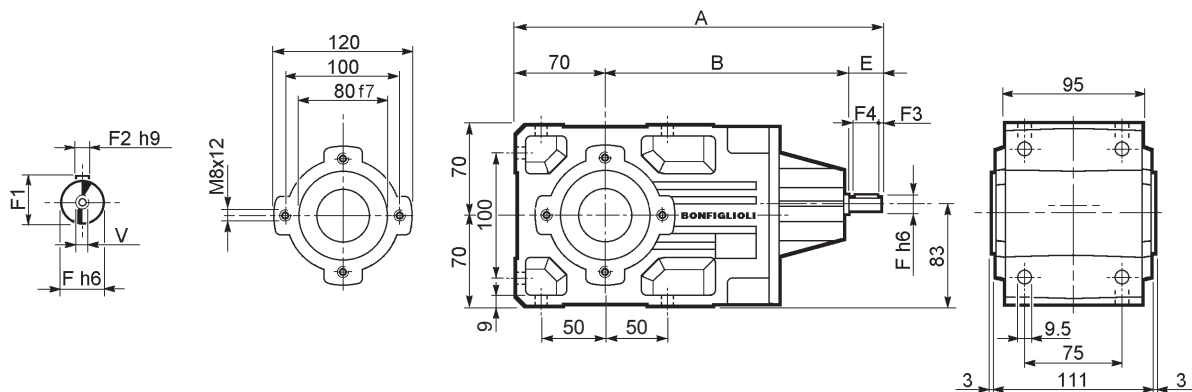


## A 10...P(IEC)



		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		11	12.8	4	140	115	95	—	M8x10	4	282.5	8
<b>A 10 2</b>	<b>P63</b>	11	12.8	4	140	115	95	—	M8x10	4	282.5	8
<b>A 10 2</b>	<b>P71</b>	14	16.3	5	160	130	110	—	M8x10	4.5	282.5	9
<b>A 10 2</b>	<b>P80</b>	19	21.8	6	200	165	130	—	M10x14.5	4	302	9
<b>A 10 2</b>	<b>P90</b>	24	27.3	8	200	165	130	—	M10x14.5	4	302	9
<b>A 10 2</b>	<b>P100</b>	28	31.3	8	250	215	180	—	M12x16	4.5	312	13
<b>A 10 2</b>	<b>P112</b>	28	31.3	8	250	215	180	—	M12x16	4.5	312	13

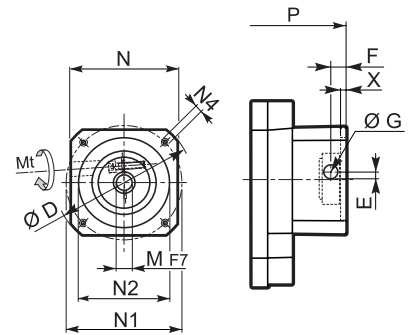
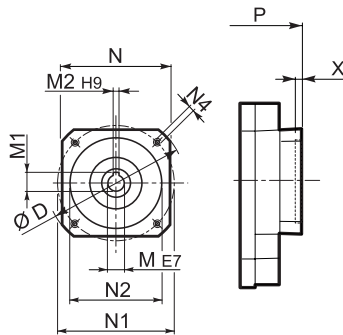
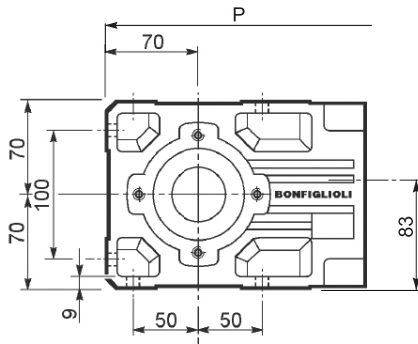
## A 10...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
		289.5	179.5	40	16	18	5	2.5	35	M6x16	7.8
<b>A 10 2</b>	<b>HS</b>	289.5	179.5	40	16	18	5	2.5	35	M6x16	7.8



## A 10...SK / SC



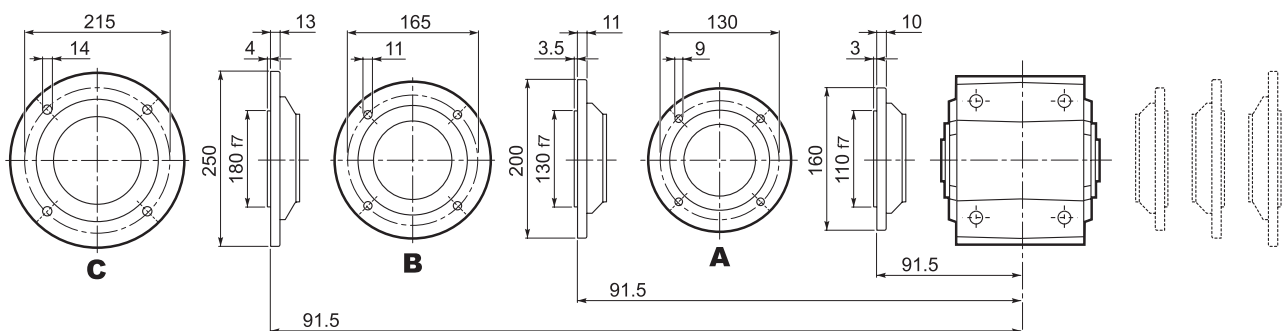
SK...

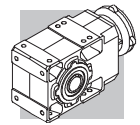
SC...

		D	M	M1	M2	N	N1	N2	N4	X	P	
A 10 2	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	254	8
A 10 2	SK60B	102	14	16.3	5	82	75	60	M5x10	4	261	8
A 10 2	SK80A	115	14	16.3	5	90	100	80	M6x12	4	261	8
A 10 2	SK80C	120	19	21.8	6	96	100	80	M6x12	4	302	9
A 10 2	SK95A	130	14	16.3	5	102	115	95	M8x12	4	302	9
A 10 2	SK95B	130	19	21.8	6	102	115	95	M8x12	4	302	9
A 10 2	SK95C	130	24	27.3	8	102	115	95	M8x12	4	302	9
A 10 2	SK110A	150	19	21.8	6	120	130	110	M8x12	5	302	9
A 10 2	SK110B	150	24	27.3	8	120	130	110	M8x12	5	302	9

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P	
A 10 2	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	281	9
A 10 2	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	281	9
A 10 2	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	281	9
A 10 2	SC80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	325.5	10
A 10 2	SC95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	325.5	10
A 10 2	SC95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	325.5	10
A 10 2	SC95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	325.5	10
A 10 2	SC110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	325.5	12
A 10 2	SC110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	325.5	12

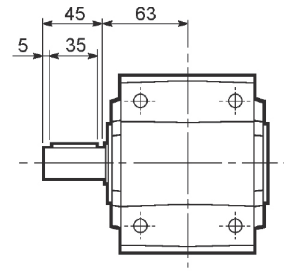
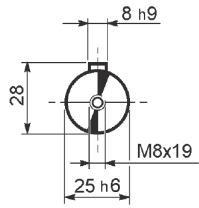
## A 10...F...



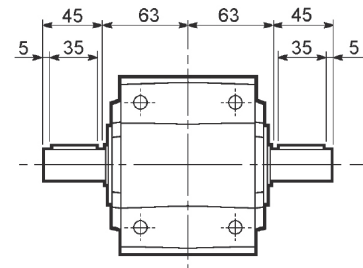
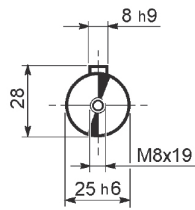


# A 10

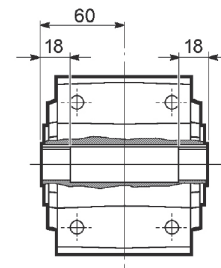
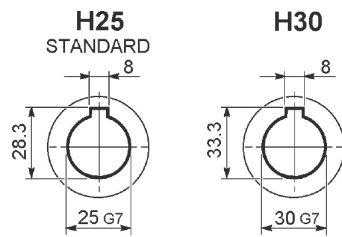
## A 10...UR



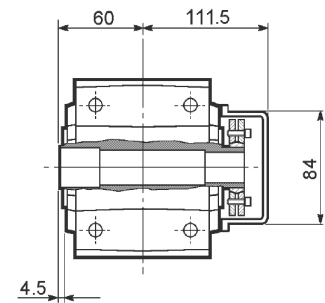
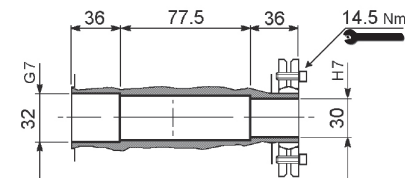
## A 10...UD



## A 10...UH

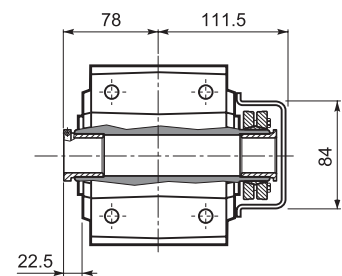
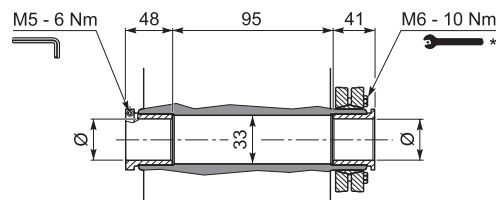


## A 10...US



## A10...QF

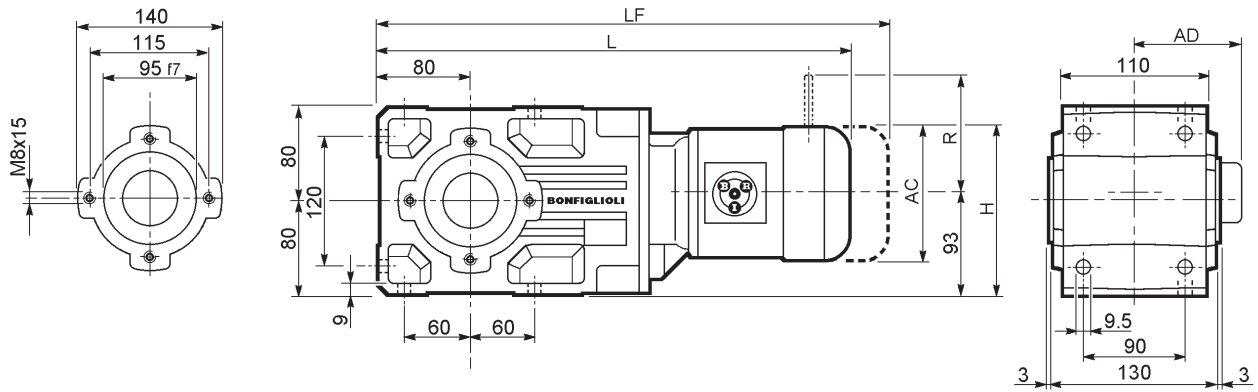
	∅
QF25	25
QF30	30



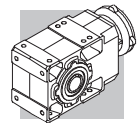
\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox. supplied with the gearbox.



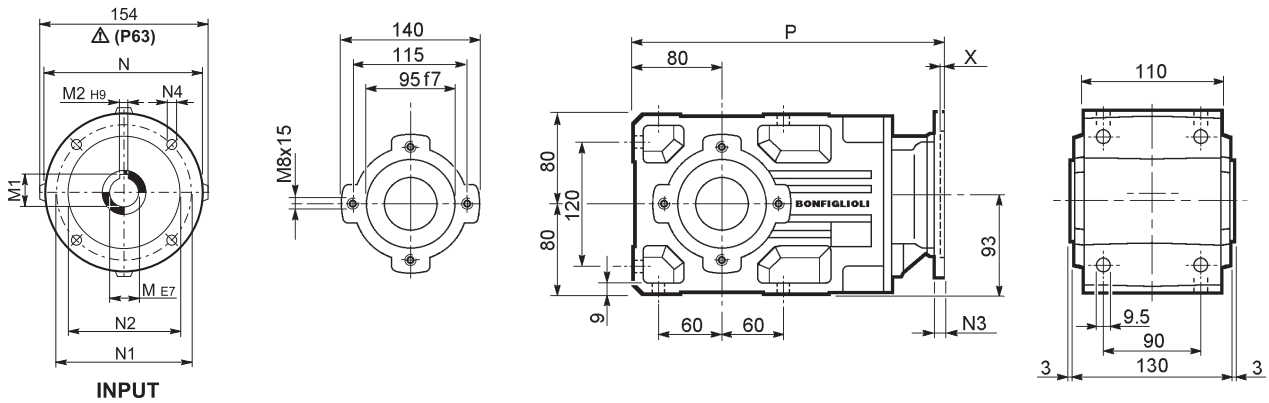
## A 20...M/ME/MX



									M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		R	AD	R	AD	
A 20 2	S05	M05	121	143.5	432	95	16	498	18	96	122	116	95	
A 20 2	S1	M1	138	152	461	108	18	522	21	103	135	124	108	
A 20 2	S2	ME2S	156	161	490	119	22	—	—	—	—	—	—	
A 20 2	S2	MX2S	156	161	434	119	27.1	—	—	—	—	—	—	
A 20 2	S3	ME3S	195	180.5	533	142	28.5	—	—	—	—	—	—	
A 20 2	S3	MX3S	195	180.5	565	142	31.5	—	—	—	—	—	—	
A 20 2	S3	ME3L	195	180.5	565	142	34	—	—	—	—	—	—	
A 20 2	S3	MX3L	195	180.5	609	142	40	—	—	—	—	—	—	
A 20 3	S05	M05	121	143.5	457.5	95	16	553.5	18	96	122	116	95	
A 20 3	S1	M1	138	152	486.5	108	19	577.5	21	103	135	124	108	
A 20 3	S2	ME2S	156	161	545.5	119	23	—	—	—	—	—	—	
A 20 3	S2	MX2S	156	161	589.5	119	28.1	—	—	—	—	—	—	
A 20 3	S3	ME3S	195	180.5	588.5	142	29.5	—	—	—	—	—	—	
A 20 3	S3	MX3S	195	180.5	620.5	142	32.5	—	—	—	—	—	—	
A 20 3	S3	ME3L	195	180.5	620.5	142	35	—	—	—	—	—	—	
A 20 3	S3	MX3L	195	180.5	664.5	142	41	—	—	—	—	—	—	

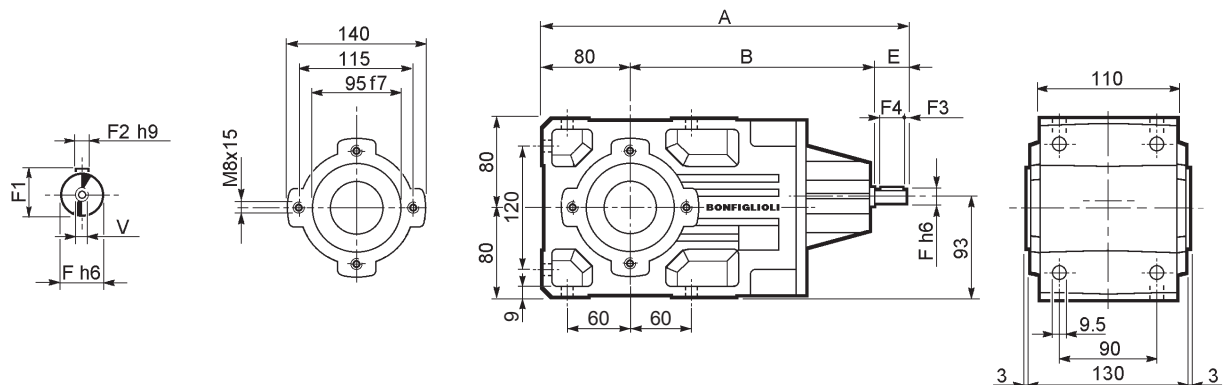


## A 20...P(IEC)



		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 20 2	P63	11	12.8	4	140	115	95	—	M8x19	4	306	12
A 20 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	306	12
A 20 2	P80	19	21.8	6	200	165	130	—	M10x14.5	4	325.5	13
A 20 2	P90	24	27.3	8	200	165	130	—	M10x14.5	4	325.5	13
A 20 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	335.5	17
A 20 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	335.5	17
A 20 3	P63	11	12.8	4	140	115	95	—	M8x19	4	361.5	13
A 20 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	361.5	13
A 20 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	381	14
A 20 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	381	14
A 20 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	391	18
A 20 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	391	18

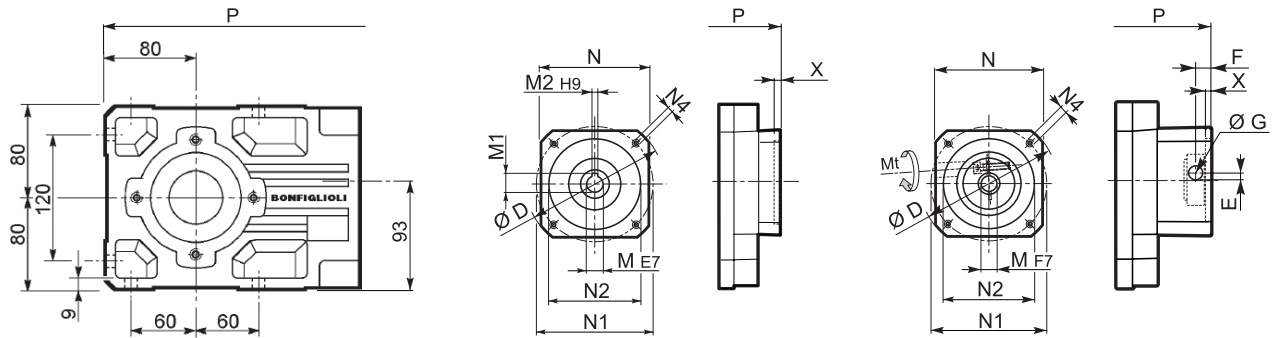
## A 20...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
A 20 2	HS	356	236	40	19	21.5	6	2.5	35	M6x16	11.9
A 20 3		368.5	248.5	40	16	18	5	2.5	35	M6x16	12.2



## A 20...SK / SC



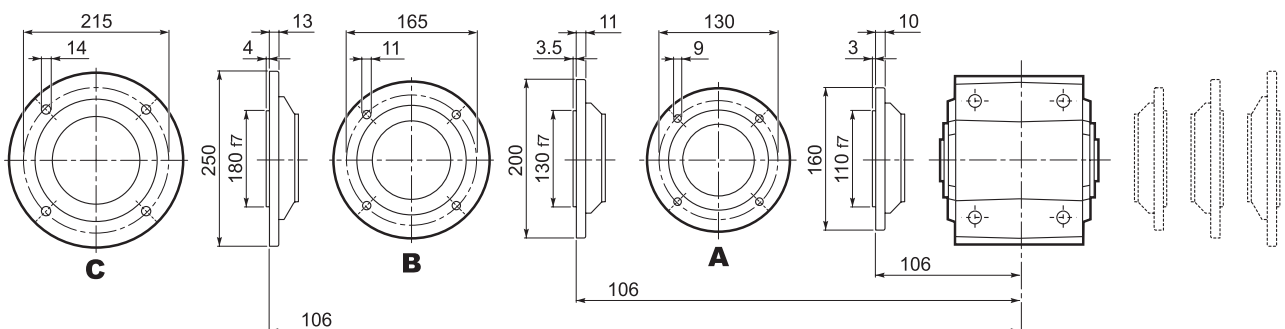
**SK...**

**SC...**

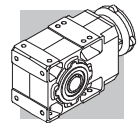
		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2x	3x	
A 20 2/3	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	277.5	333	11/12
A 20 2/3	SK60B	102	14	16.3	5	82	75	60	M5x10	4	284.5	340	12/13
A 20 2/3	SK80A	115	14	16.3	5	90	100	80	M6x12	4	284.5	340	12/13
A 20 2/3	SK80C	120	19	21.8	6	96	100	80	M6x12	4	325.5	381	13/14
A 20 2/3	SK95A	130	14	16.3	5	102	115	95	M8x12	4	325.5	381	13/14
A 20 2/3	SK95B	130	19	21.8	6	102	115	95	M8x12	4	325.5	381	13/14
A 20 2/3	SK95C	130	24	27.3	8	102	115	95	M8x12	4	325.5	381	13/14
A 20 2/3	SK110A	150	19	21.8	6	120	130	110	M8x12	5	325.5	381	13/14
A 20 2/3	SK110B	150	24	27.3	8	120	130	110	M8x12	5	325.5	381	13/14

		Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2x	3x	
A 20 2/3	SC60A	M6 15	102	7	12.5	12.5	11	82	75	60	M5x10	4	304.5	360	12/13
A 20 2/3	SC60B	M6 15	102	7	12.5	12.5	14	82	75	60	M5x10	4	304.5	360	13/14
A 20 2/3	SC80A	M6 15	115	6	12.5	12.5	14	90	100	80	M6x12	4	304.5	360	13/14
A 20 2/3	SC80C	M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	349	404.5	14/15
A 20 2/3	SC95A	M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	349	404.5	14/15
A 20 2/3	SC95B	M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	349	404.5	14/15
A 20 2/3	SC95C	M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	349	404.5	14/15
A 20 2/3	SC110A	M6 15	150	16.5	16	17.75	19	120	130	110	M8x16	5	349	404.5	15/16
A 20 2/3	SC110B	M6 15	150	16.5	16	17.75	24	120	130	110	M8x16	5	349	404.5	15/16

## A 20...F...

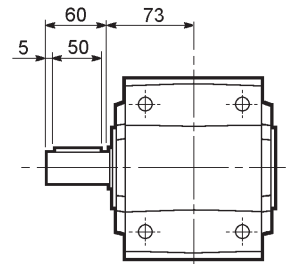
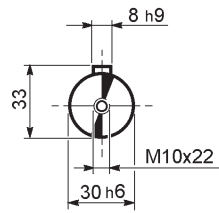




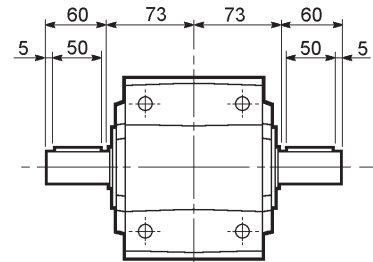
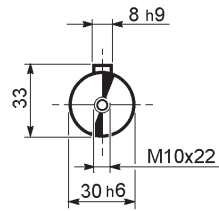


# A 20

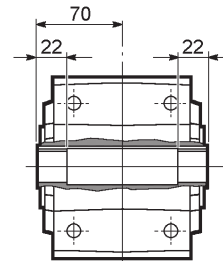
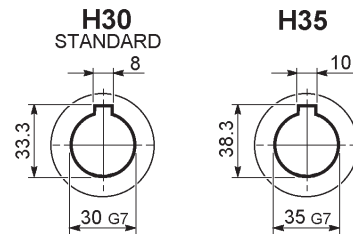
## A 20...UR



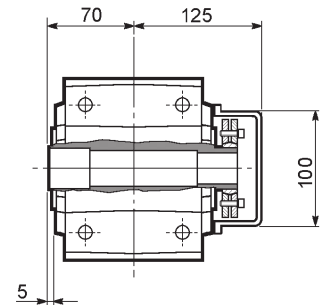
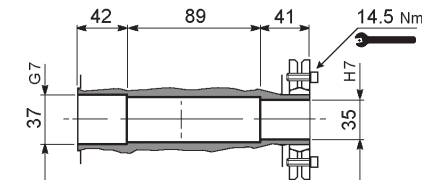
## A 20...UD



## A 20...UH

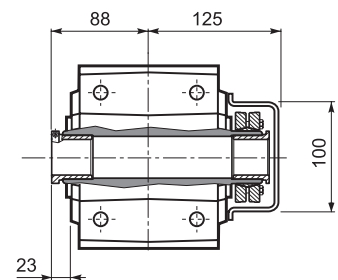
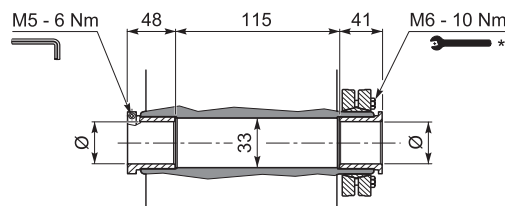


## A 20...US

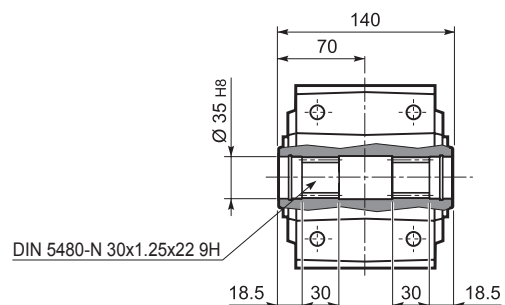


## A 20...QF

	Ø
QF25	25
QF30	30



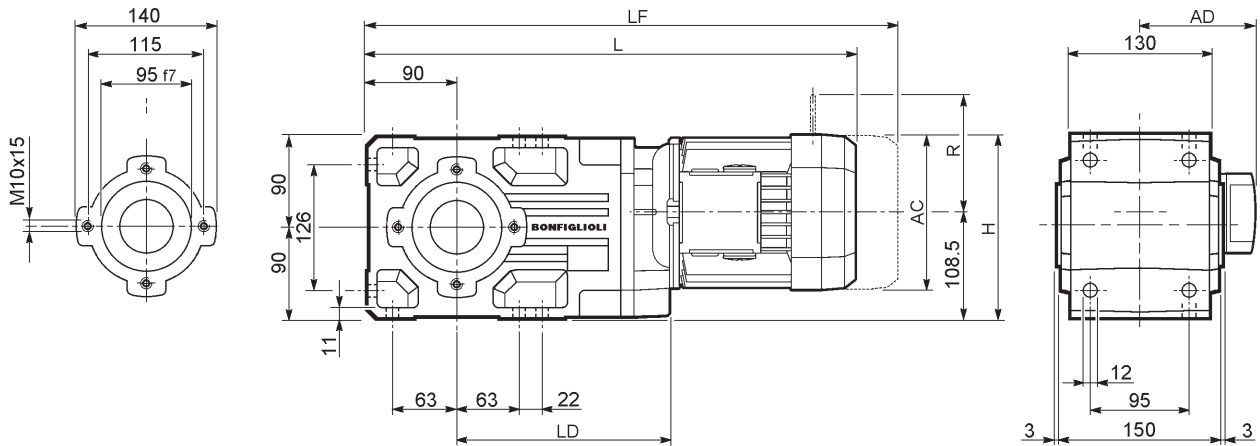
## A 20...UV



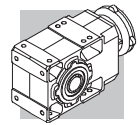
\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



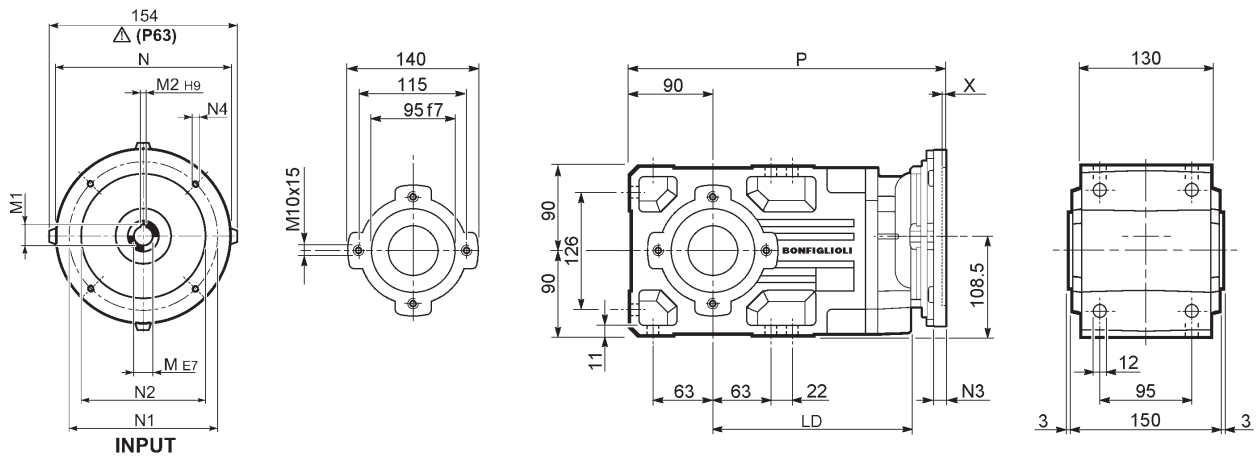
## A 30...M/ME/MX



										M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD	Kg	LF	Kg	R	AD	R	AD	
A 30 2	S1	M1	138	177.5	488	201	108	22	549	24	103	135	124	108	
A 30 2	S2	ME2S	156	186.5	517	213	119	25	—	—	—	—	—	—	
A 30 2	S2	MX2S	156	186.5	561	213	119	30.1	—	—	—	—	—	—	
A 30 2	S3	ME3S	195	206	560	223	142	31.5	—	—	—	—	—	—	
A 30 2	S3	MX3S	195	206	592	223	142	34.5	—	—	—	—	—	—	
A 30 2	S3	ME3L	195	206	592	223	142	38	—	—	—	—	—	—	
A 30 2	S3	MX3L	195	206	636	223	142	44	—	—	—	—	—	—	
A 30 3	S05	M05	121	169	516.5	—	95	21	582.5	22	96	122	116	95	
A 30 3	S1	M1	138	177.5	545.5	—	108	23	606.5	26	103	135	124	108	
A 30 3	S2	ME2S	156	186.5	574.5	—	119	25	—	—	—	—	—	—	
A 30 3	S2	MX2S	156	186.5	618.5	—	119	30.1	—	—	—	—	—	—	
A 30 3	S3	ME3S	195	206	617.5	—	142	31.5	—	—	—	—	—	—	
A 30 3	S3	MX3S	195	206	649.5	—	142	34.5	—	—	—	—	—	—	
A 30 3	S3	ME3L	195	206	649.5	—	142	38	—	—	—	—	—	—	
A 30 3	S3	MX3L	195	206	693.5	—	142	44	—	—	—	—	—	—	

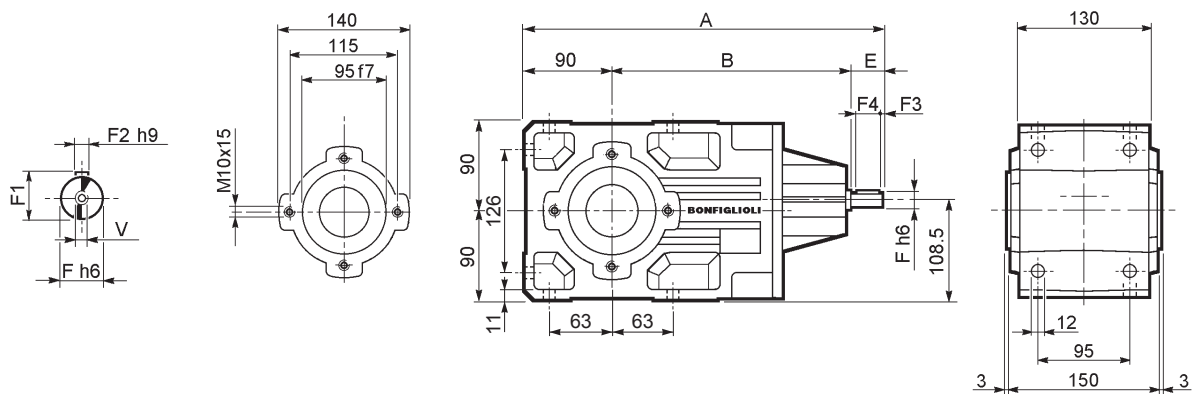


## A 30...P(IEC)



		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 30 2	P63	213	11	12.8	4	140	115	95	—	M8x19	4	333	16
A 30 2	P71	213	14	16.3	5	160	130	110	—	M8x16	4.5	333	16
A 30 2	P80	223	19	21.8	6	200	165	130	—	M10x14.5	4	352.5	17
A 30 2	P90	223	24	27.3	8	200	165	130	—	M10x14.5	4	352.5	17
A 30 2	P100	223	28	31.3	8	250	215	180	—	M12x16	4.5	362.5	20
A 30 2	P112	223	28	31.3	8	250	215	180	—	M12x16	4.5	362.5	20
A 30 3	P63	—	11	12.8	4	140	115	95	—	M8x19	4	390.5	17
A 30 3	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	390.5	17
A 30 3	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	410	18
A 30 3	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	410	18
A 30 3	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	420	22
A 30 3	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	420	22

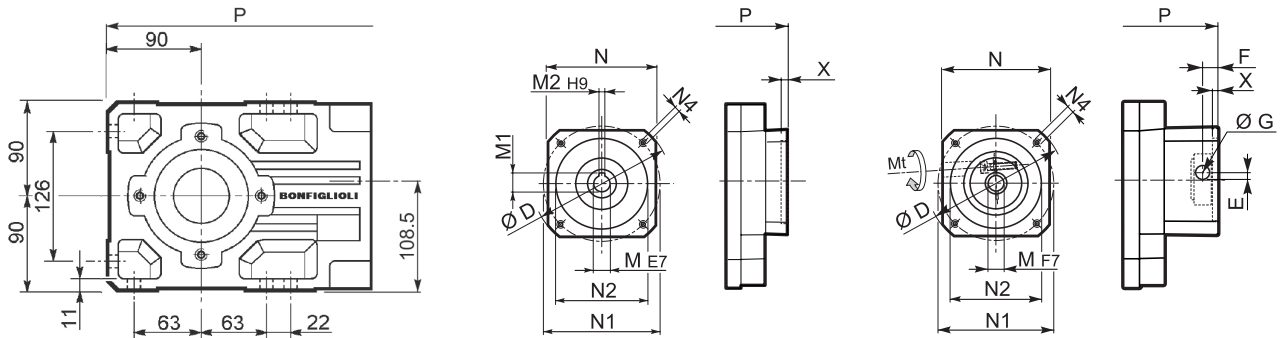
## A 30...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
A 30 2	HS	383	253	40	19	21.5	6	2.5	35	M6x16	16.7
A 30 3		397.5	267.5	40	16	18	5	2.5	35	M6x16	16.5



## A 30...SK / SC



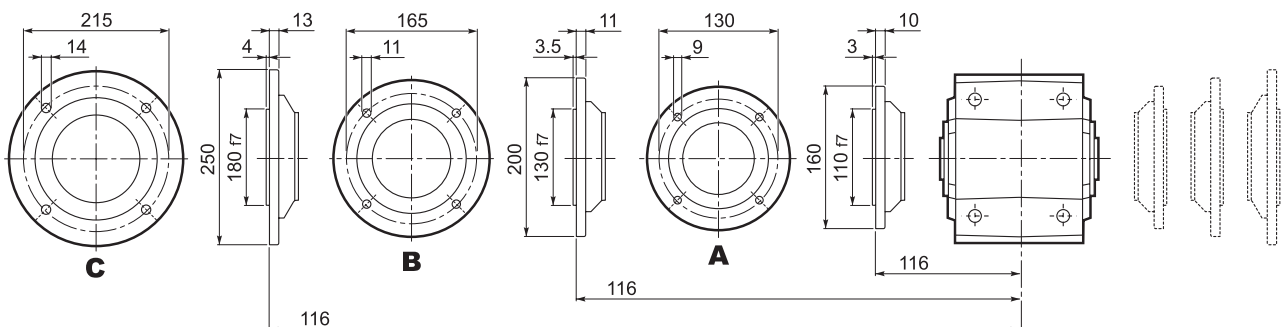
**SK...**

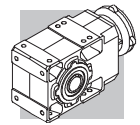
**SC...**

		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2x	3x	
A 30 2/3	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	304.5	362	15/16
A 30 2/3	SK60B	102	14	16.3	5	82	75	60	M5x10	4	311.5	369	16/17
A 30 2/3	SK80A	115	14	16.3	5	90	100	80	M6x12	4	311.5	369	16/17
A 30 2/3	SK80C	120	19	21.8	6	96	100	80	M6x12	4	352.5	410	17/18
A 30 2/3	SK95A	130	14	16.3	5	102	115	95	M8x12	4	352.5	410	17/18
A 30 2/3	SK95B	130	19	21.8	6	102	115	95	M8x12	4	352.5	410	17/18
A 30 2/3	SK95C	130	24	27.3	8	102	115	95	M8x12	4	352.5	410	17/18
A 30 2/3	SK110A	150	19	21.8	6	120	130	110	M8x12	5	352.5	410	17/18
A 30 2/3	SK110B	150	24	27.3	8	120	130	110	M8x12	5	352.5	410	17/18
A 30 2	SK130A	188	24	27.3	8	142	165	130	M10x20	5	352.5	—	18

		Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2x	3x	
A 30 2/3	SC60A	M6 15	102	7	12.5	12.5	11	82	75	60	M5x10	4	331.5	389	16/17
A 30 2/3	SC60B	M6 15	102	7	12.5	12.5	14	82	75	60	M5x10	4	331.5	389	17/18
A 30 2/3	SC80A	M6 15	115	6	12.5	12.5	14	90	100	80	M6x12	4	331.5	389	17/18
A 30 2/3	SC80C	M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	376	433.5	18/19
A 30 2/3	SC95A	M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	376	433.5	18/19
A 30 2/3	SC95B	M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	376	433.5	18/19
A 30 2/3	SC95C	M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	376	433.5	18/19
A 30 2/3	SC 110A	M6 15	150	16.5	16	17.75	19	120	130	110	M8x16	5	376	433.5	19/20
A 30 2/3	SC 110B	M6 15	150	16.5	16	17.75	24	120	130	110	M8x16	5	376	433.5	19/20
A 30 2	SC 130A	M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	376	—	20

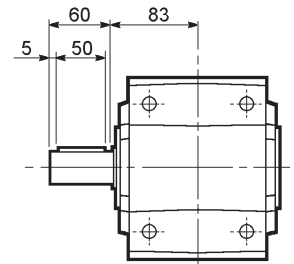
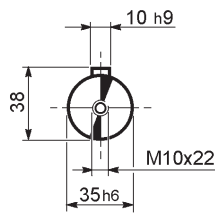
## A 30...F...



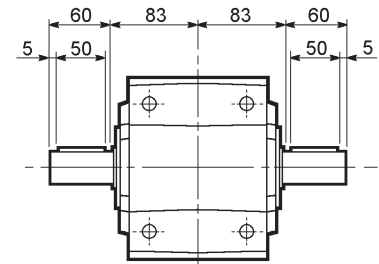
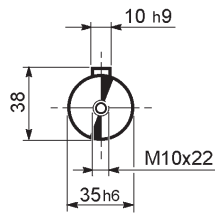


# A 30

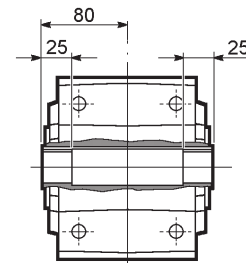
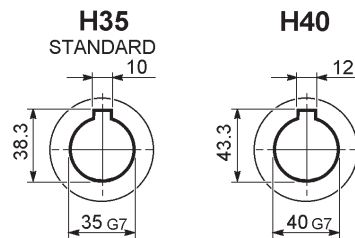
## A 30...UR



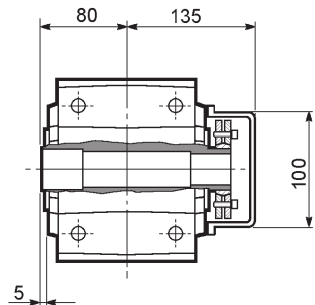
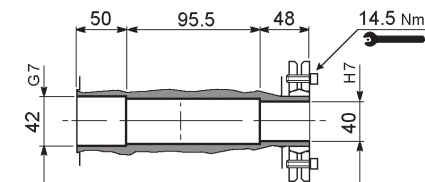
## A 30...UD



## A 30...UH

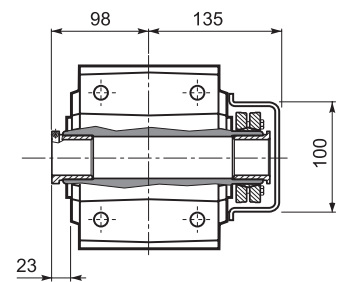
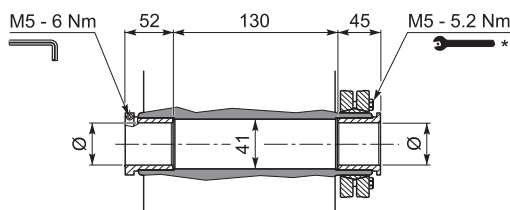


## A 30...US

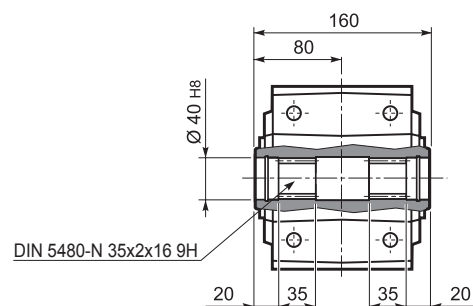


## A 30...QF

	Ø
QF35	35
QF40	40



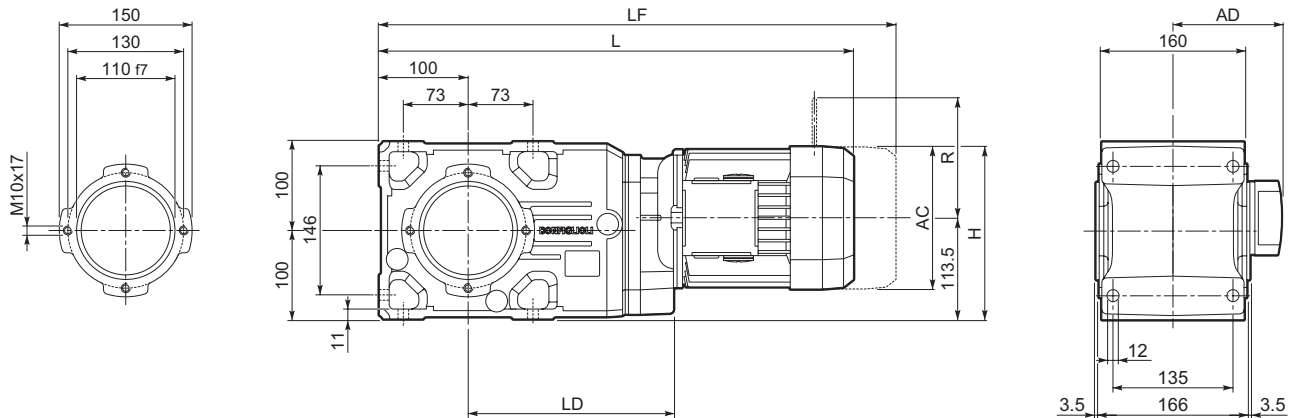
## A 30...UV






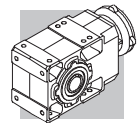
\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



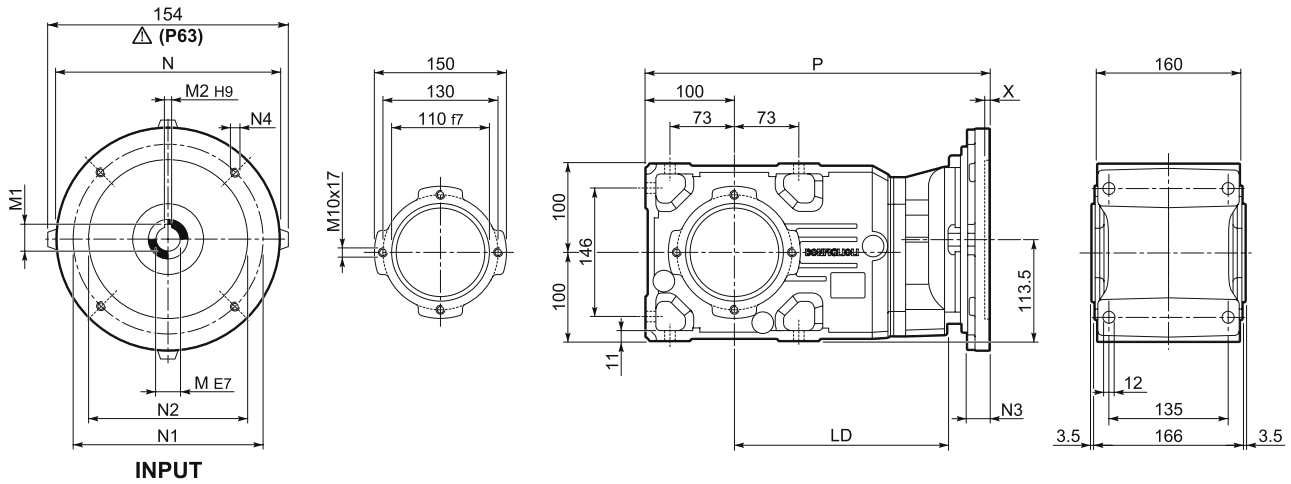
## A 35...M/ME/MX



  	AC	H	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
							LF	Kg	R	AD	R	AD
A 35 2 S1 M1	138	182.5	514.5	217.5	108	34	575.5	36	103	135	124	108
A 35 2 S2 ME2S	156	191.5	543.5	229.5	119	37	—	—	—	—	—	—
A 35 2 S2 MX2S	156	191.5	587.5	229.5	119	37	—	—	—	—	—	—
A 35 2 S3 ME3S	195	211	586.5	239.5	142	43.5	—	—	—	—	—	—
A 35 2 S3 MX3S	195	211	618.5	239.5	142	43.5	—	—	—	—	—	—
A 35 2 S3 ME3L	195	211	618.5	239.5	142	50	—	—	—	—	—	—
A 35 2 S3 MX3L	195	211	652.5	239.5	142	50	—	—	—	—	—	—
A 35 2 S4 ME4 MX4	258	242.5	726.5	—	193	89	—	—	—	—	—	—
A 35 2 S4 ME4LB MX4LA	258	242.5	761.5	—	193	97	—	—	—	—	—	—
A 35 3 S05 M05S	121	174	543	—	95	33	609	34	96	122	116	95
A 35 3 S1 M1	138	182.5	572	—	108	35	633	38	103	135	124	108
A 35 3 S2 ME2S	156	191.5	601	—	119	37	—	—	—	—	—	—
A 35 3 S2 MX2S	156	191.5	645	—	119	37	—	—	—	—	—	—
A 35 3 S3 ME3S	195	211	644	—	142	43.5	—	—	—	—	—	—
A 35 3 S3 MX3S	195	211	676	—	142	43.5	—	—	—	—	—	—
A 35 3 S3 ME3L	195	211	676	—	142	50	—	—	—	—	—	—
A 35 3 S3 MX3L	195	211	720	—	142	50	—	—	—	—	—	—

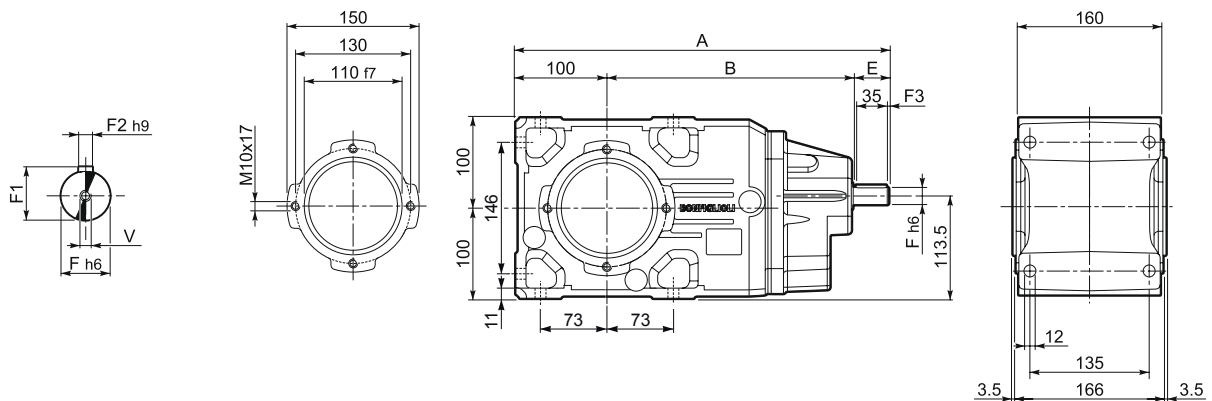


## A 35...P(IEC)



		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		229.5	11	12.8	4	140	115	95	—	M8x19	4	359.5	28
		229.5	14	16.3	5	160	130	110	—	M8x16	4.5	359.5	28
		239.5	19	21.8	6	200	165	130	—	M10x14.5	4	379	29
		239.5	24	27.3	8	200	165	130	—	M10x14.5	4	379	29
		239.5	28	31.3	8	250	215	180	—	M12x16	4.5	389	32
		239.5	28	31.3	8	250	215	180	—	M12x16	4.5	389	32
		—	38	41.3	10	300	265	230	16	14	5	425.5	40
		—	11	12.8	4	140	115	95	—	M8x19	4	417	29
		—	14	16.3	5	160	130	110	—	M8x16	4.5	417	29
		—	19	21.8	6	200	165	130	—	M10x14.5	4	436.5	30
		—	24	27.3	8	200	165	130	—	M10x14.5	4	436.5	30
		—	28	31.3	8	250	215	180	—	M12x16	4.5	446.5	34
		—	28	31.3	8	250	215	180	—	M12x16	4.5	446.5	34

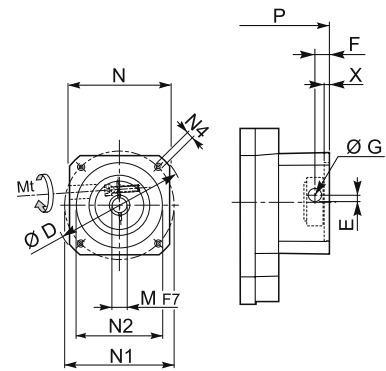
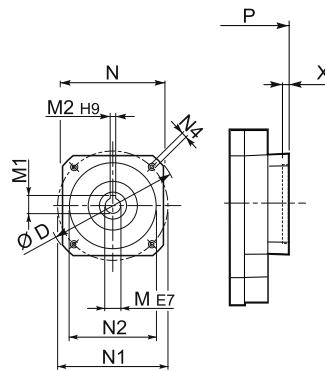
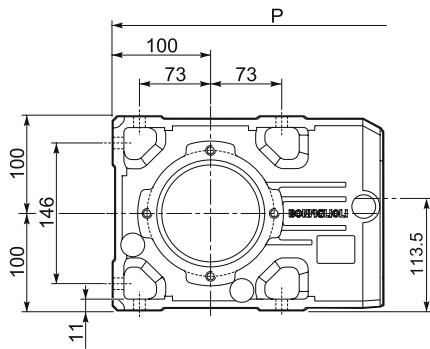
## A 35...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
		409.5	269.5	40	19	21.5	6	2.5	35	M6x16	29
		424	284	40	16	18	5	2.5	35	M6x16	29



## A 35...SK / SC



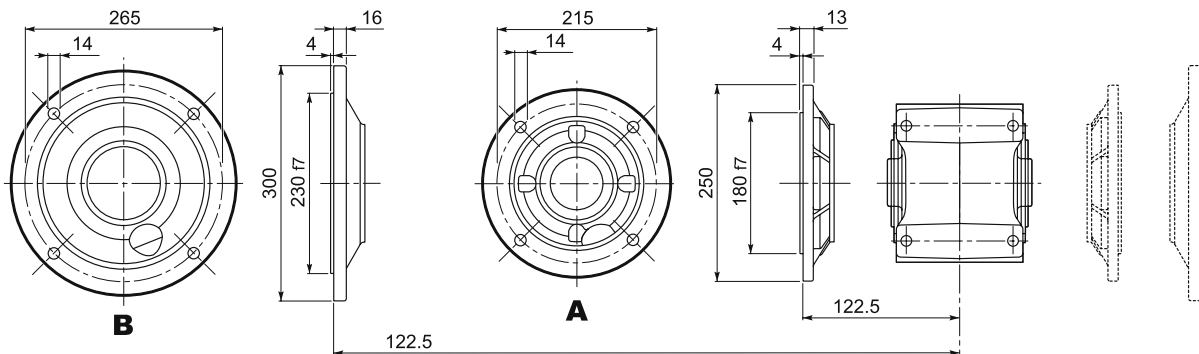
SK...

SC...

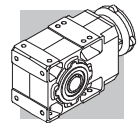
		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2x	3x	
A 35 2/3	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	331	388.5	27/28
A 35 2/3	SK60B	102	14	16.3	5	82	75	60	M5x10	4	338	395.5	28/29
A 35 2/3	SK80A	115	14	16.3	5	90	100	80	M6x12	4	338	395.5	28/29
A 35 2/3	SK80C	120	19	21.8	6	96	100	80	M6x12	4	379	436.5	29/30
A 35 2/3	SK95A	130	14	16.3	5	102	115	95	M8x12	4	379	436.5	29/30
A 35 2/3	SK95B	130	19	21.8	6	102	115	95	M8x12	4	379	436.5	29/30
A 35 2/3	SK95C	130	24	27.3	8	102	115	95	M8x12	4	379	436.5	29/30
A 35 2/3	SK110A	150	19	21.8	6	120	130	110	M8x12	5	379	436.5	29/30
A 35 2/3	SK110B	150	24	27.3	8	120	130	110	M8x12	5	379	436.5	29/30
A 35 2	SK130A	188	24	27.3	8	142	165	130	M10x20	5	379	—	30

		Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2x	3x	
A 35 2/3	SC60A	M6 15	102	7	12.5	12.5	11	82	75	60	M5x10	4	358	415.5	28/29
A 35 2/3	SC60B	M6 15	102	7	12.5	12.5	14	82	75	60	M5x10	4	358	415.5	29/30
A 35 2/3	SC80A	M6 15	115	6	12.5	12.5	14	90	100	80	M6x12	4	358	415.5	29/30
A 35 2/3	SC80C	M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	402.5	460	30/31
A 35 2/3	SC95A	M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	402.5	460	30/31
A 35 2/3	SC95B	M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	402.5	460	30/31
A 35 2/3	SC95C	M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	402.5	460	30/31
A 35 2/3	SC110A	M6 15	150	16.5	16	17.75	19	120	130	110	M8x16	5	402.5	460	32/33
A 35 2/3	SC110B	M6 15	150	16.5	16	17.75	24	120	130	110	M8x16	5	402.5	460	32/33
A 35 2	SC130A	M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	402.5	—	33

## A 35...F...

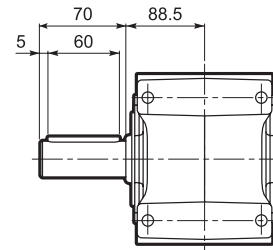
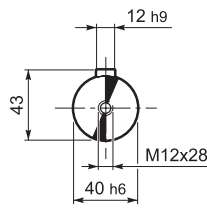




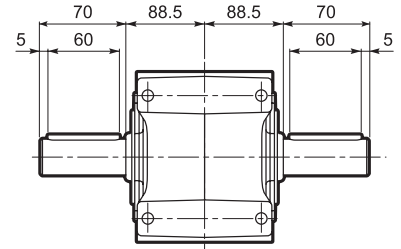
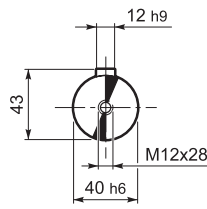


# A 35

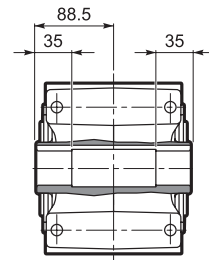
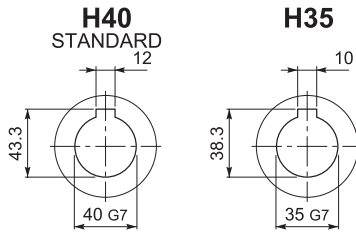
## A 35...UR



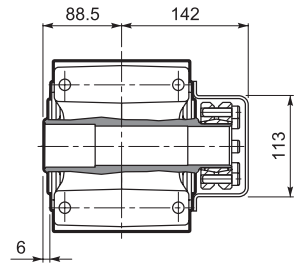
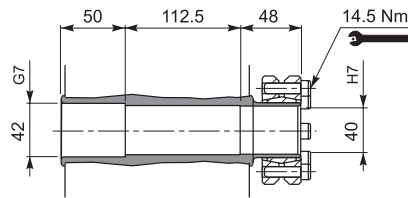
## A 35...UD



## A 35...UH



## A 35...US

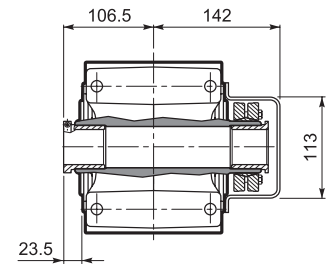
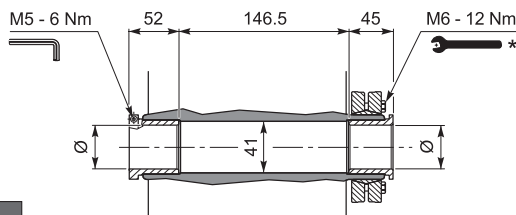


## A 35...QF

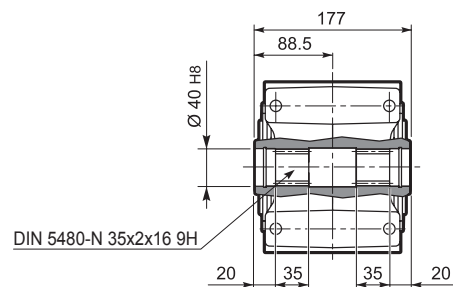
	Ø
QF35	35
QF40	40



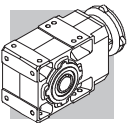
	M <sub>n2</sub> max [Nm]
A 35 QF35	550



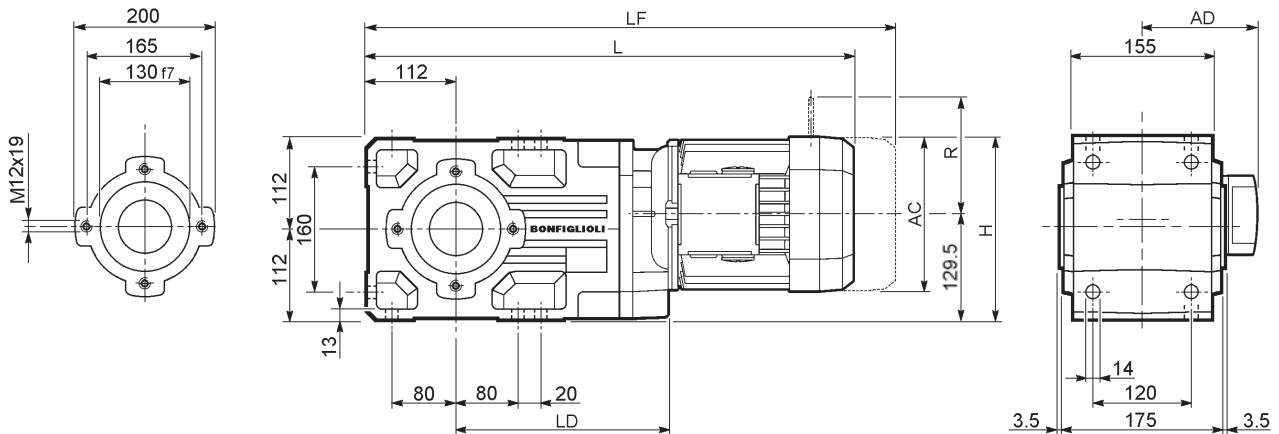
## A 35...UV



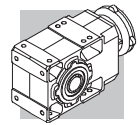
\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



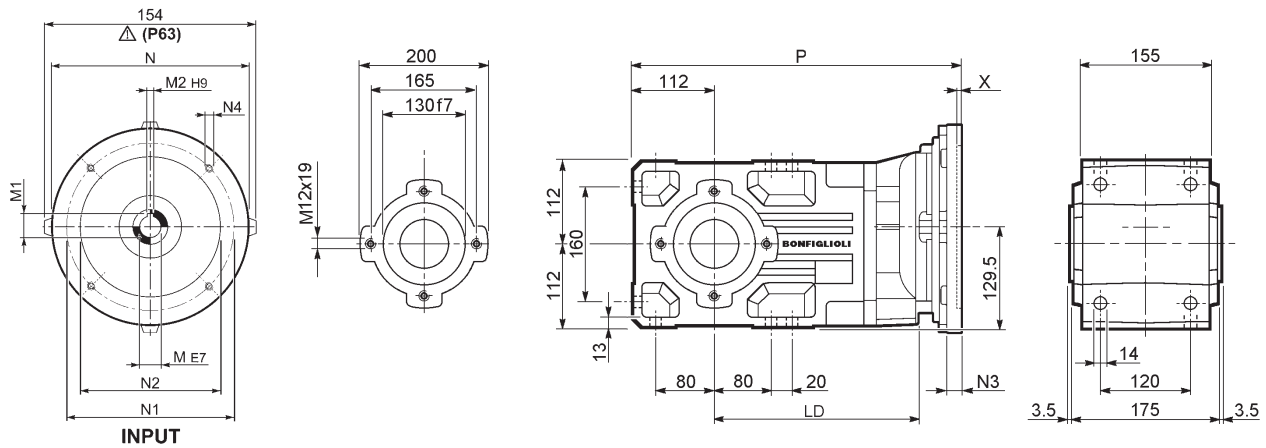
## A 41...M/ME/MX



										M...FD M...FA		M...FD		M...FA	
	AC	H	L	LD	AD		LF		R	AD	R	AD			
A 41 2 S1 M1	138	198.5	530	216.5	108	41	591	44	103	135	124	108			
A 41 2 S2 ME2S	156	207.5	559	232	119	45	—	—	—	—	—	—			
A 41 2 S2 MX2S	156	207.5	603	232	119	50.1	—	—	—	—	—	—			
A 41 2 S3 ME3S	195	227	602	248	142	51.5	—	—	—	—	—	—			
A 41 2 S3 MX3S	195	227	634	248	142	54.5	—	—	—	—	—	—			
A 41 2 S3 ME3L	195	227	634	248	142	58	—	—	—	—	—	—			
A 41 2 S3 MX3L	195	227	678	248	142	64	—	—	—	—	—	—			
A 41 2 S4 ME4 MX4	258	258.5	742	—	193	92	—	—	—	—	—	—			
A 41 2 S4 ME4LB MX4LA	258	258.5	777	—	193	100	—	—	—	—	—	—			
A 41 3 S05 M05	121	245	562.5	—	95	44	628.5	46	96	122	116	95			
A 41 3 S1 M1	138	198.5	591.5	—	108	46	652.5	49	103	135	124	108			
A 41 3 S2 ME2S	156	207.5	620.5	—	119	50	—	—	—	—	—	—			
A 41 3 S2 MX2S	156	207.5	664.5	—	119	55.1	—	—	—	—	—	—			
A 41 3 S3 ME3S	195	227	663.5	—	142	56.5	—	—	—	—	—	—			
A 41 3 S3 MX3S	195	227	695.5	—	142	59.5	—	—	—	—	—	—			
A 41 3 S3 ME3L	195	227	695.5	—	142	61	—	—	—	—	—	—			
A 41 3 S3 MX3L	195	227	739.5	—	142	67	—	—	—	—	—	—			

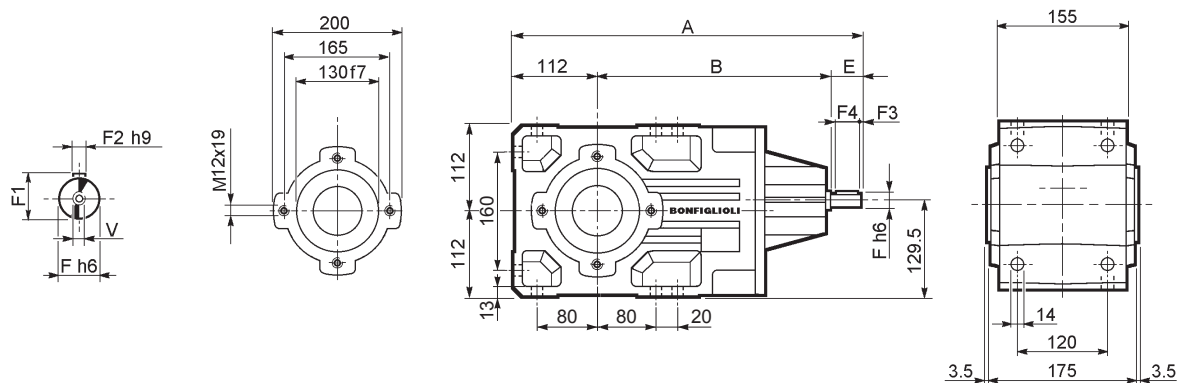


## A 41...P(IEC)



		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		232	11	12.8	4	140	115	95	—	M8x19	4	375	37
		232	14	16.3	5	160	130	110	—	M8x16	4.5	375	38
		248	19	21.8	6	200	165	130	—	M10x14.5	4	394.5	39
		248	24	27.3	8	200	165	130	—	M10x14.5	4	394.5	39
		—	28	31.3	8	250	215	180	—	M12x16	4.5	404.5	43
		—	28	31.3	8	250	215	180	—	M12x16	4.5	404.5	43
		—	38	41.3	10	300	265	230	16	14	5	441	46
		—	11	12.8	4	140	115	95	—	M8x19	4	436.5	39
		—	14	16.3	5	160	130	110	—	M8x16	4.5	436.5	39
		—	19	21.8	6	200	165	130	—	M10x14.5	4	456	40
		—	24	27.3	8	200	165	130	—	M10x14.5	4	456	40
		—	28	31.3	8	250	215	180	—	M12x16	4.5	466	44
		—	28	31.3	8	250	215	180	—	M12x16	4.5	466	44

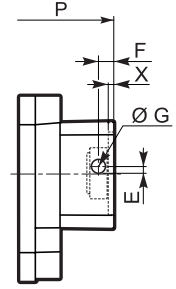
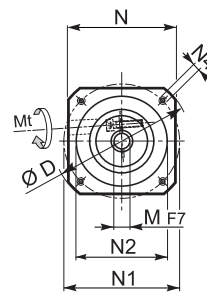
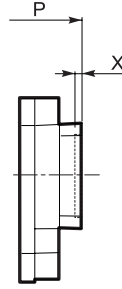
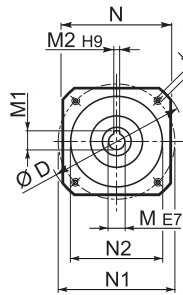
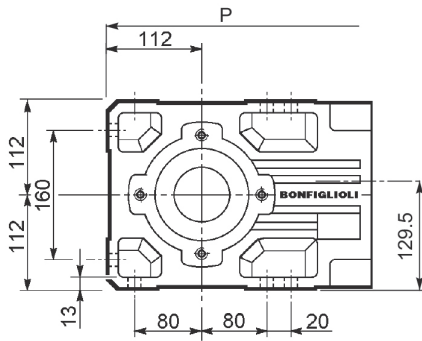
## A 41...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
		464	302.5	50	24	27	8	2.5	45	M8x19	40.7
		486.5	334.5	40	19	21.5	6	2.5	35	M6x16	39.5



## A 41...SK / SC



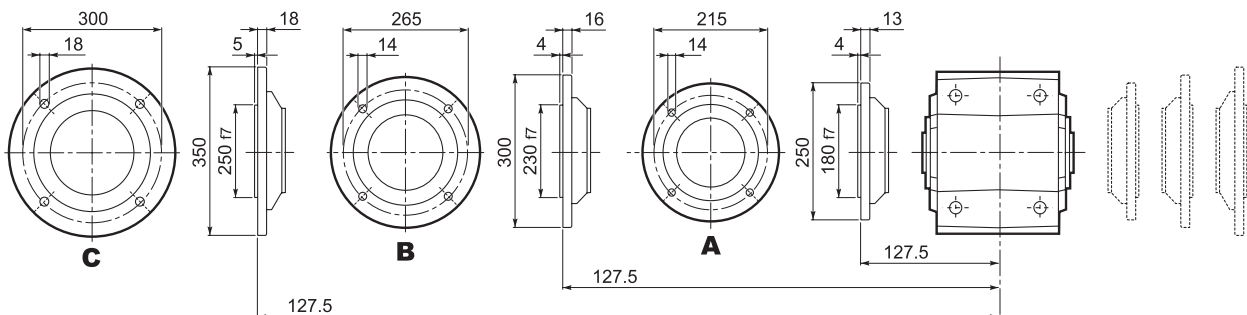
SK...

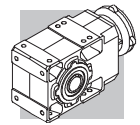
SC...

		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2x	3x	
A41 3	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	—	408	40
A41 3	SK60B	102	14	16.3	5	82	75	60	M5x10	4	—	415	40
A41 3	SK80A	115	14	16.3	5	90	100	80	M6x12	4	—	415	40
A41 2	SK80B	120	14	16.3	5	96	100	80	M6x12	4	394.5	—	39
A41 2/3	SK80C	120	19	21.8	6	96	100	80	M6x12	4	394.5	456	39/40
A41 2/3	SK95A	130	14	16.3	5	102	115	95	M8x12	4	394.5	456	39/40
A41 2/3	SK95B	130	19	21.8	6	102	115	95	M8x12	4	394.5	456	39/41
A41 2/3	SK95C	130	24	27.3	8	102	115	95	M8x12	4	394.5	456	39/44
A41 2/3	SK110A	150	19	21.8	6	120	130	110	M8x12	5	394.5	456	39/44
A41 2/3	SK110B	150	24	27.3	8	120	130	110	M8x12	5	394.5	456	39/44
A41 2	SK130A	188	24	27.3	8	142	165	130	M10x20	5	394.5	—	41
A41 2	SK130B	189	32	35.3	10	160	165	130	M10x20	5	441	—	43
A41 2	SK180A	240	32	35.3	10	192	215	180	M12x19	5	441	—	43
A41 2	SK180B	240	38	41.3	10	192	215	180	M12x19	5	441	—	43

		Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2x	3x	
A41 3	SC60A	M6 15	102	7	12.5	12.5	11	82	75	60	M5x10	4	—	435	41
A41 3	SC60B	M6 15	102	7	12.5	12.5	14	82	75	60	M5x10	4	—	435	41
A41 3	SC80A	M6 15	115	6	12.5	12.5	14	90	100	80	M6x12	4	—	435	41
A41 2	SC80B	M6 15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	418	—	40
A41 2/3	SC80C	M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	418	479.5	40/41
A41 2/3	SC95A	M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	418	479.5	40/42
A41 2/3	SC95B	M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	418	479.5	40/42
A41 2/3	SC95C	M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	418	479.5	40/43
A41 2/3	SC110A	M6 15	150	16.5	16	17.75	19	120	130	110	M8x16	5	418	479.5	41/47
A41 2/3	SC110B	M6 15	150	16.5	16	17.75	24	120	130	110	M8x16	5	418	479.5	41/47
A41 2	SC130A	M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	418	—	42
A41 2	SC130B	M8 36	189	20	17	17.75	32	160	165	130	M10x20	5	464	—	46
A41 2	SC180A	M8 36	240	20	17.5	17.75	32	192	215	180	M12x24	5	468	—	46
A41 2	SC180B	M8 36	240	20	17.5	17.75	38	192	215	180	M12x24	5	468	—	46

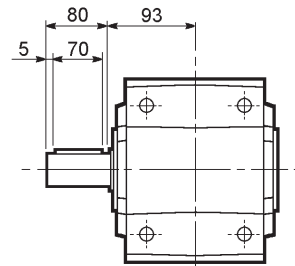
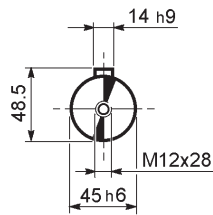
## A 41...F...



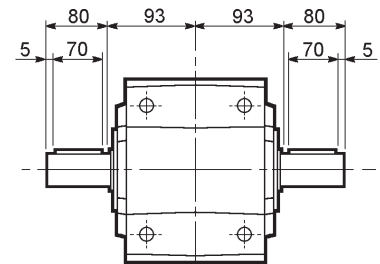
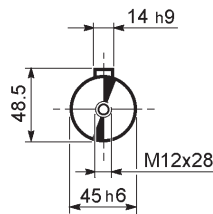


# A 41

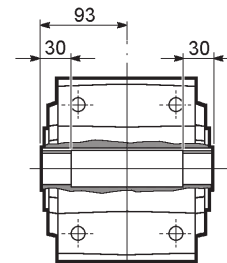
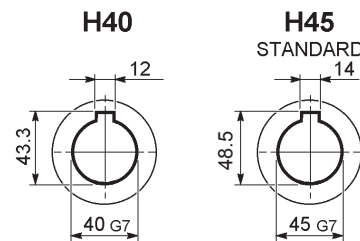
## A 41...UR



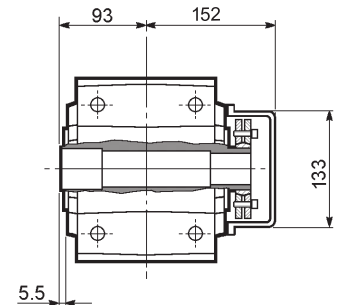
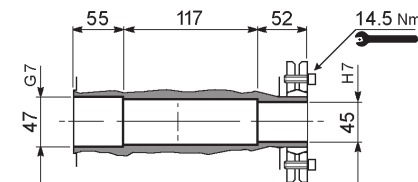
## A 41...UD



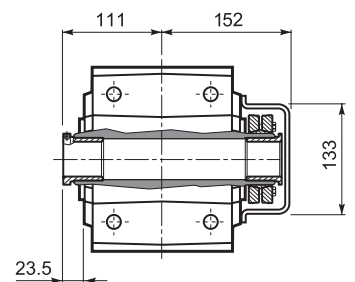
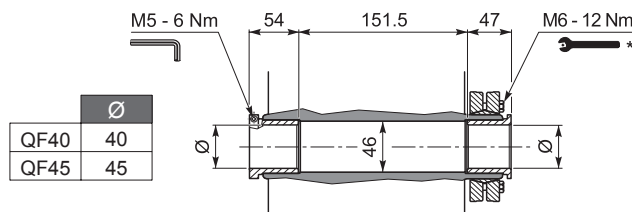
## A 41...UH



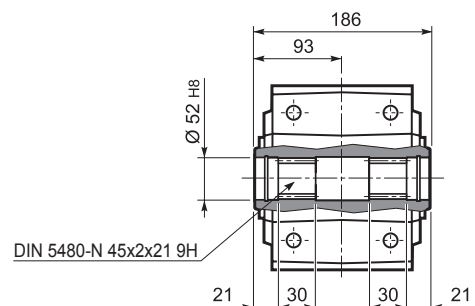
## A 41...US



## A 41...QF



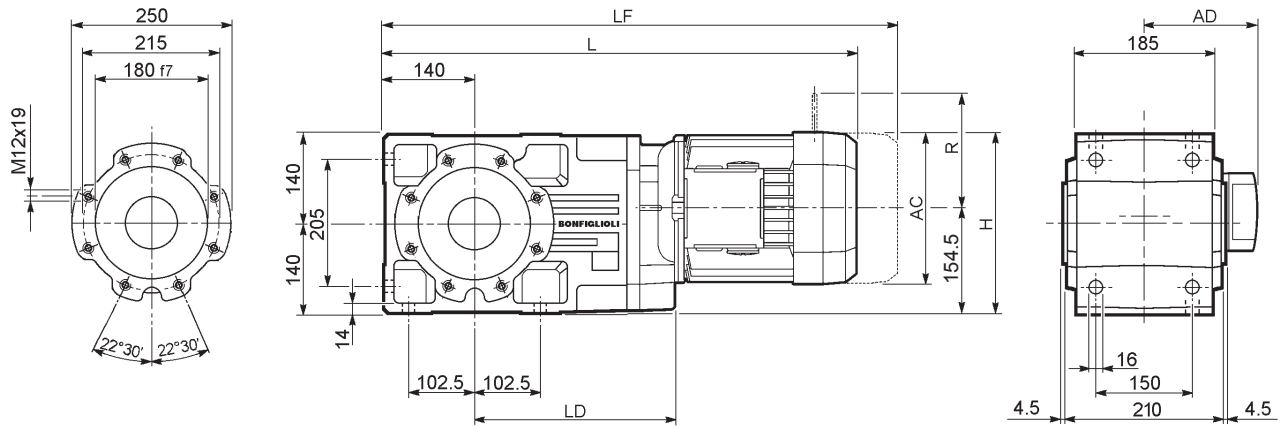
## A 41...UV






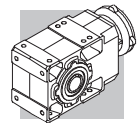
\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



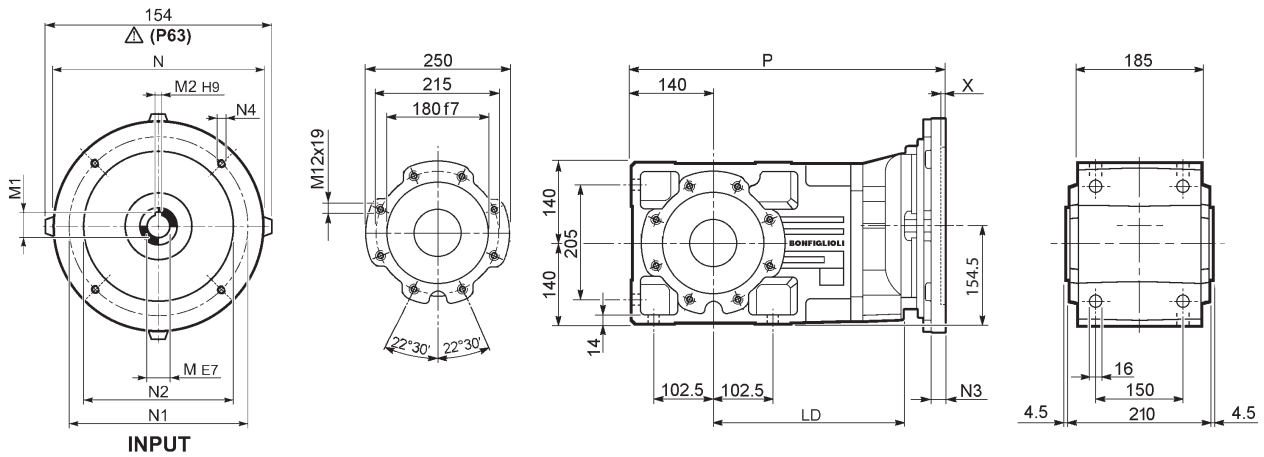
## A 50...M/ME/MX



  				AC	H	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
										LF	Kg	R	AD	R	AD
A 50 2/3	S1	M1		138	223	609.5	—	108	66	670.5	69	103	135	124	108
A 50 2/3	S2	ME2S		156	232	638.5	284.5	119	68	—	—	—	—	—	—
A 50 2/3	S2	MX2S		156	232	682.5	284.5	119	73.1	—	—	—	—	—	—
A 50 2/3	S3	ME3S		195	251.5	681.5	299.5	142	74.5	—	—	—	—	—	—
A 50 2/3	S3	MX3S		195	251.5	713.5	299.5	142	77.5	—	—	—	—	—	—
A 50 2/3	S3	ME3L		195	251.5	713.5	299.5	142	81	—	—	—	—	—	—
A 50 2/3	S3	MX3L		195	251.5	757.5	299.5	142	87	—	—	—	—	—	—
A 50 2/3	S4	ME4	MX4	258	283	821.5	284.5	193	115	—	—	—	—	—	—
A 50 2/3	S4	ME4LB	MX4LA	258	283	856.5	284.5	193	123	—	—	—	—	—	—
A 50 2/3	S5	ME5S	MX5S	310	309	908	—	245	143	—	—	—	—	—	—
A 50 2/3	S5	ME5L	MX5L	310	309	952	—	245	159	—	—	—	—	—	—
A 50 4	S1	M1		138	223	681	—	108	67	742	70	103	135	124	108
A 50 4	S2	ME2S		156	232	710	—	119	71	—	—	—	—	—	—
A 50 4	S2	MX2S		156	232	754	—	119	76.1	—	—	—	—	—	—
A 50 4	S3	ME3S		195	251.5	753	—	142	77.5	—	—	—	—	—	—
A 50 4	S3	MX3S		195	251.5	785	—	142	80.5	—	—	—	—	—	—
A 50 4	S3	ME3L		195	251.5	785	—	142	83	—	—	—	—	—	—
A 50 4	S3	MX3L		195	251.5	829	—	142	89	—	—	—	—	—	—

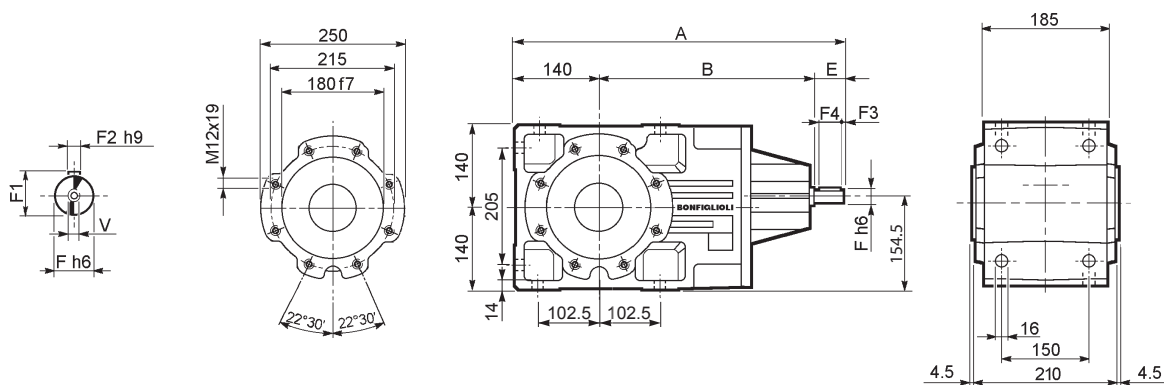


## A 50...P(IEC)

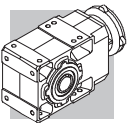


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 50 2/3	P63	284.5	11	12.8	4	140	115	95	—	M8x19	4	454.5	60
A 50 2/3	P71	284.5	14	16.3	5	160	130	110	—	M8x16	4.5	454.5	60
A 50 2/3	P80	299.5	19	21.8	6	200	165	130	—	M10x14.5	4	474	61
A 50 2/3	P90	299.5	24	27.3	8	200	165	130	—	M10x14.5	4	474	61
A 50 2/3	P100	284.5	28	31.3	8	250	215	180	—	M12x16	4.5	484	65
A 50 2/3	P112	284.5	28	31.3	8	250	215	180	—	M12x16	4.5	484	65
A 50 2/3	P132	284.5	38	41.3	10	300	265	230	16	14	5	520.5	68
A 50 2/3	P160	—	42	45.3	12	350	300	250	23	18	5.5	571	72
A 50 2/3	P180	—	48	51.8	14	350	300	250	23	18	5.5	571	72
A 50 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	526	62
A 50 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	526	62
A 50 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	545.5	63
A 50 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	545.5	63
A 50 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	555.5	67
A 50 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	555.5	67

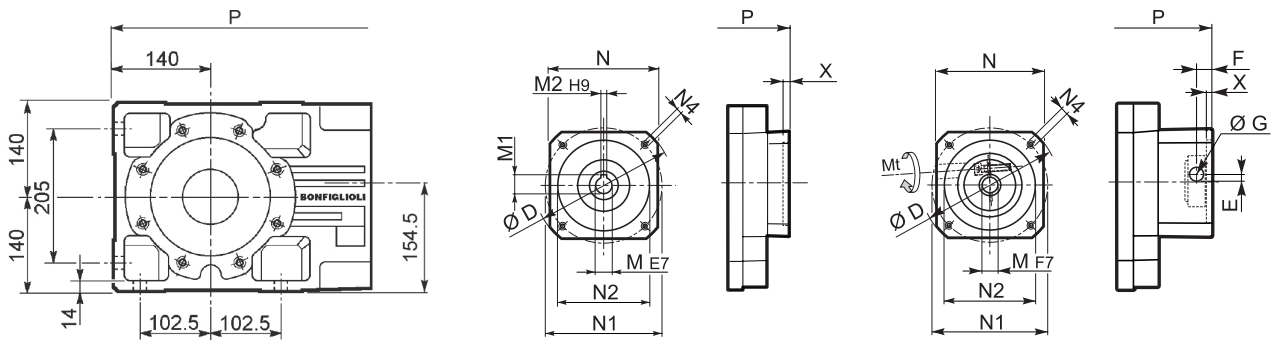
## A 50...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
A 50 2	HS	543.5	353.5	50	24	27	8	2.5	45	M8x19	72
A 50 3		543.5	353.5	50	24	27	8	2.5	45	M8x19	76
A 50 4		576	396	40	19	21.5	6	2.5	35	M6x16	77



## A 50...SK / SC



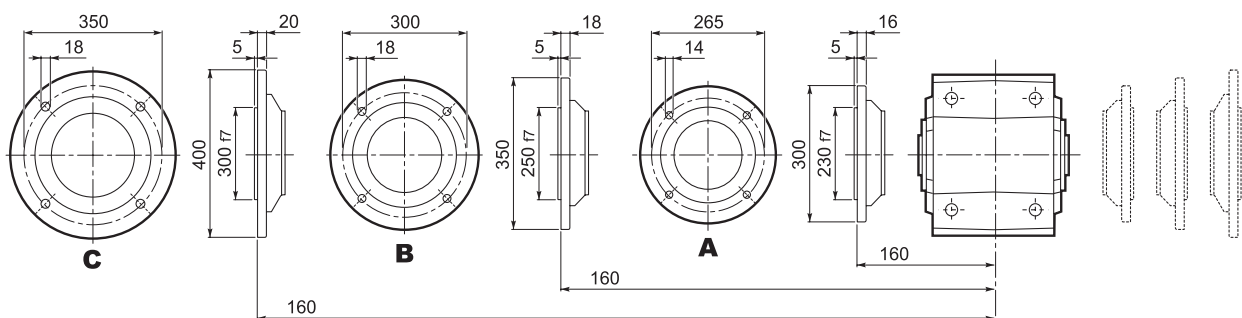
SK...

SC...

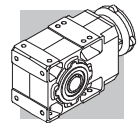
Image	Image	D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
		120	14	16.3	5	96	100	80	M6x12	4	474	—	61/61
		120	19	21.8	6	96	100	80	M6x12	4	474	545.5	61/61/63
		130	14	16.3	5	102	115	95	M8x12	4	474	545.5	61/61/63
		130	19	21.8	6	102	115	95	M8x12	4	474	545.5	61/61/63
		130	24	27.3	8	102	115	95	M8x12	4	474	545.5	61/61/63
		150	19	21.8	6	120	130	110	M8x12	5	474	545.5	61/61/65
		150	24	27.3	8	120	130	110	M8x12	5	474	575	61/61/65
		188	24	27.3	8	142	165	130	M10x20	5	474	575	63/63/66
		189	32	35.3	10	160	165	130	M10x20	5	520.5	—	69/69
		240	32	35.3	10	192	215	180	M12x19	5	520.5	—	69/69
		240	38	41.3	10	192	215	180	M12x19	5	520.5	—	69/69

Image	Image	Image	Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
														2/3x	3x	
			M6 15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	497.5	—	62/62
			M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	497.5	569	62/62/64
			M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	497.5	569	62/62/64
			M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	497.5	569	62/62/64
			M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	497.5	569	62/62/64
			M6 15	150	16.5	16	17.75	19	120	130	110	M8x16	5	497.5	569	63/63/66
			M6 15	150	16.5	16	17.75	24	120	130	110	M8x16	5	497.5	569	63/63/66
			M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	497.5	569	64/64/67
			M8 36	189	20	17	17.75	32	160	165	130	M10x20	5	543.5	—	68/68
			M8 36	240	20	17.5	17.75	32	192	215	180	M12x24	5	547.5	—	68/68
			M8 36	240	20	17.5	17.75	38	192	215	180	M12x24	5	547.5	—	68/68

## A 50...F...

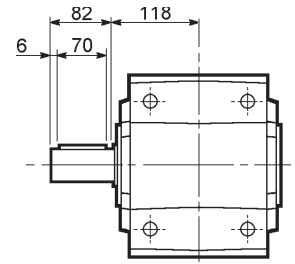
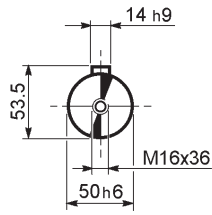




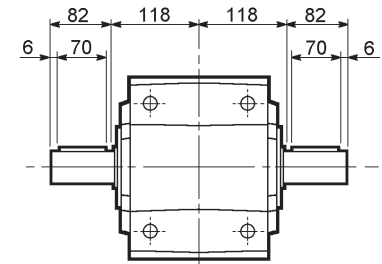
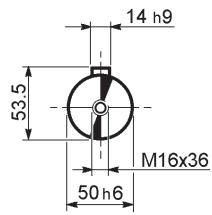


# A 50

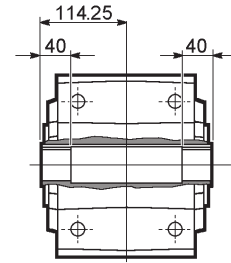
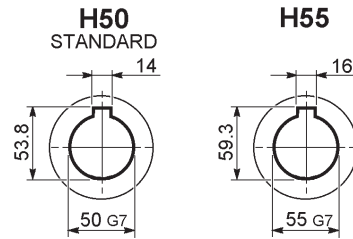
## A 50...UR



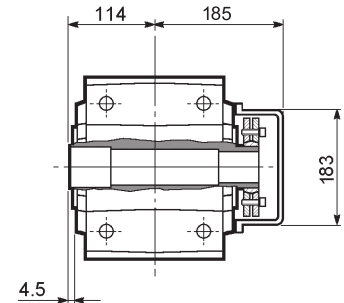
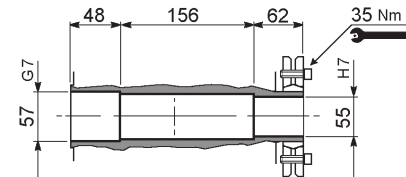
## A 50...UD



## A 50...UH

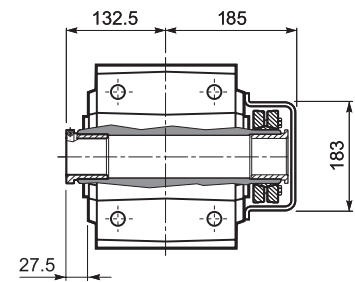
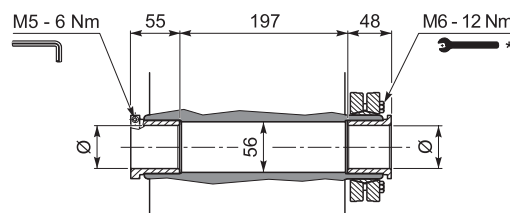


## A 50...US

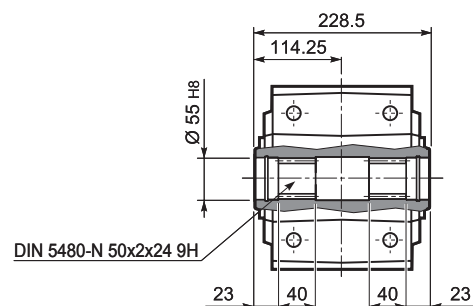


## A 50...QF

	Ø
QF50	50
QF55	55



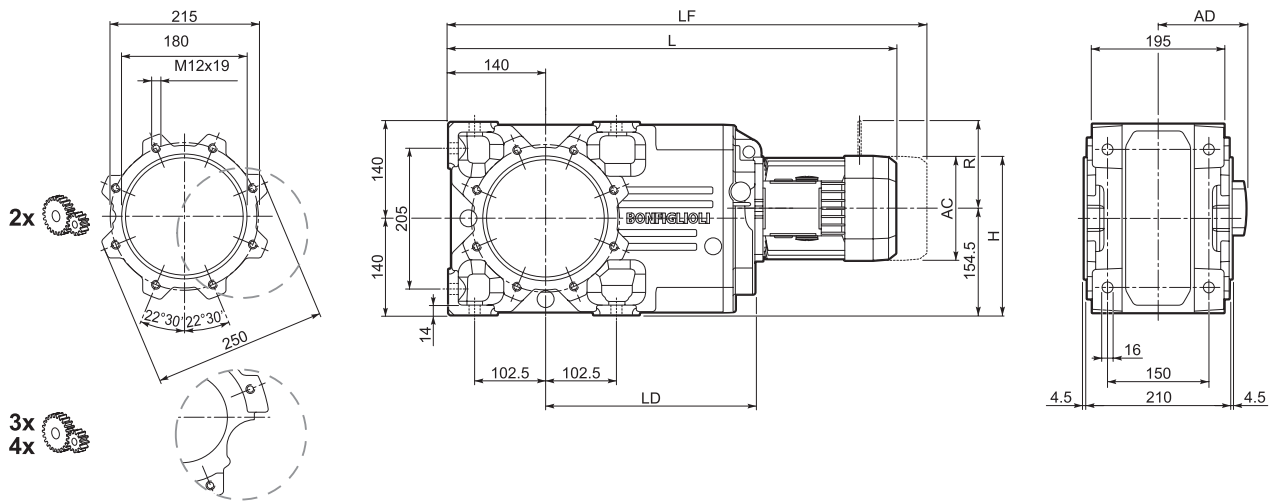
## A 50...UV



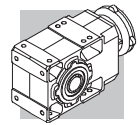
\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



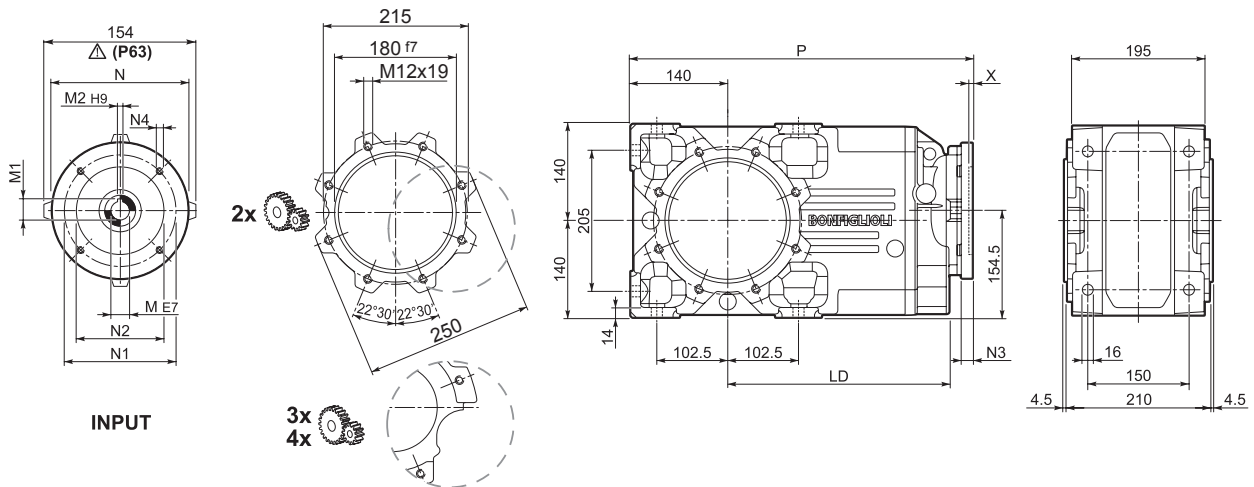
## A 55...M/ME/MX



			AC	H	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
	LF	Kg							R	AD	R	AD		
A 55 3	S1	M1	138	198.5	627.5	—	108	81	688.5	84	103	135	124	108
A 55 2/3	S2	ME2S	156	232	656.5	302.5	119	88	—	—	—	—	—	—
A 55 2/3	S2	MX2S	156	232	700.5	302.5	119	93.1	—	—	—	—	—	—
A 55 2/3	S3	ME3S	195	251	699.5	317.5	142	94.5	—	—	—	—	—	—
A 55 2/3	S3	MX3S	195	251	731.5	317.5	142	97.5	—	—	—	—	—	—
A 55 2/3	S3	ME3L	195	251	731.5	317.5	142	101	—	—	—	—	—	—
A 55 2/3	S3	MX3L	195	251	775.5	317.5	142	107	—	—	—	—	—	—
A 55 2/3	S4	ME4	MX4	258	283	839.5	302.5	135	—	—	—	—	—	—
A 55 2/3	S4	ME4LB	MX4LA	258	283	874.5	302.5	143	—	—	—	—	—	—
A 55 2/3	S5	ME5S	MX5S	310	309.5	926	—	245	163	—	—	—	—	—
A 55 2/3	S5	ME5L	MX5L	310	309.5	970	—	245	179	—	—	—	—	—
A 55 4	S1	M1	138	223	699	—	108	82	760	85	103	135	124	108
A 55 4	S2	ME2S	156	232	728	—	119	86	—	—	—	—	—	—
A 55 4	S2	MX2S	156	232	772	—	119	91.1	—	—	—	—	—	—
A 55 4	S3	ME3S	195	251.5	771	—	142	92.5	—	—	—	—	—	—
A 55 4	S3	MX3S	195	251.5	803	—	142	95.5	—	—	—	—	—	—
A 55 4	S3	ME3L	195	251.5	803	—	142	98	—	—	—	—	—	—
A 55 4	S3	MX3L	195	251.5	847	—	142	104	—	—	—	—	—	—

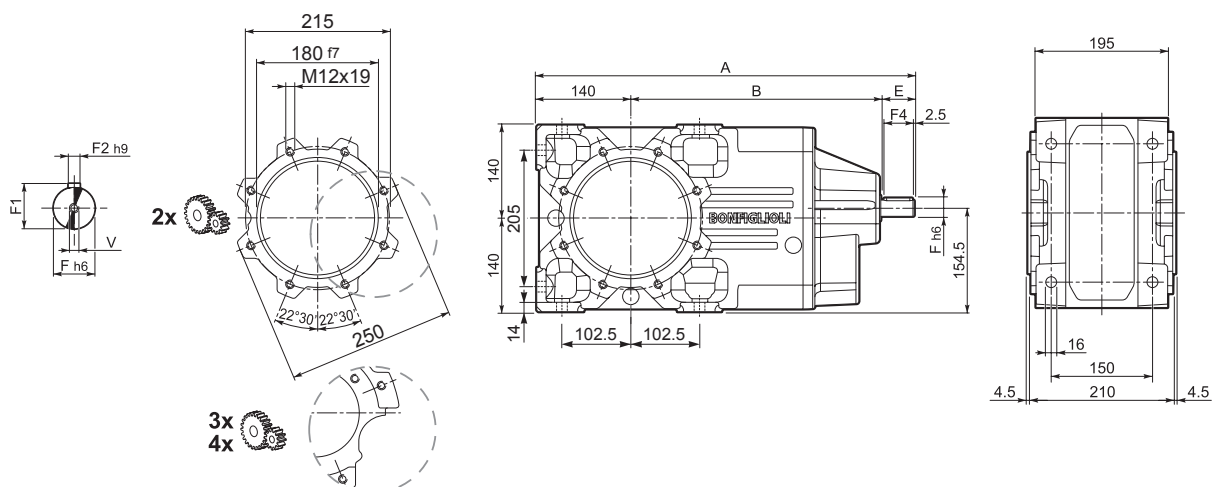


## A 55...P(IEC)



		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 55 3	P63	302.5	11	12.8	4	140	115	95	—	M8x19	4	472.5	75
A 55 3	P71	302.5	14	16.3	5	160	130	110	—	M8x16	4.5	472.5	75
A 55 2/3	P80	317.5	19	21.8	6	200	165	130	—	M10x14.5	4	492	81
A 55 2/3	P90	317.5	24	27.3	8	200	165	130	—	M10x14.5	4	492	81
A 55 2/3	P100	302.5	28	31.3	8	250	215	180	—	M12x16	4.5	502	85
A 55 2/3	P112	302.5	28	31.3	8	250	215	180	—	M12x16	4.5	502	85
A 55 2/3	P132	302.5	38	41.3	10	300	265	230	16	14	5	538.5	93
A 55 2/3	P160	—	42	45.3	12	350	300	250	23	18	5.5	589	110
A 55 2/3	P180	—	48	51.8	14	350	300	250	23	18	5.5	589	110
A 55 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	544	77
A 55 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	544	77
A 55 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	563.5	78
A 55 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	563.5	78
A 55 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	573.5	82
A 55 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	573.5	82

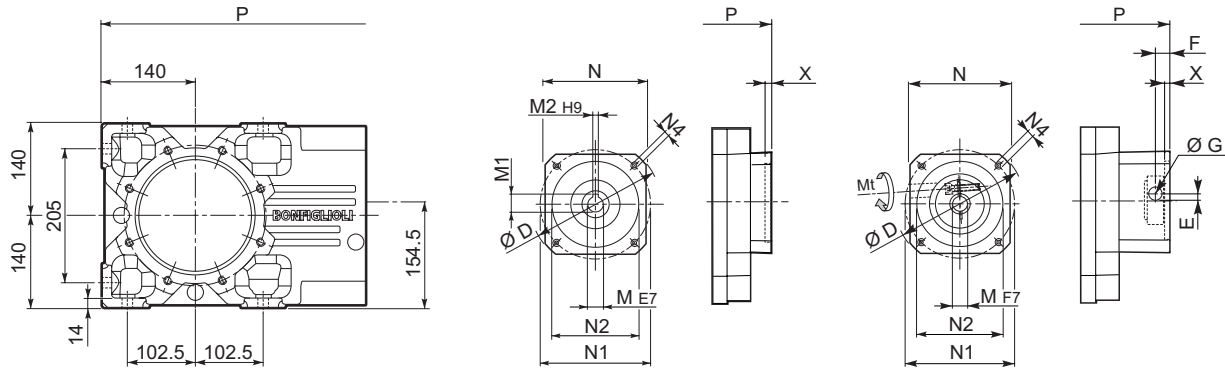
## A 55...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
A 55 2	HS	561.5	371.5	50	24	27	8	2.5	45	M8x19	96
A 55 3		561.5	371.5	50	24	27	8	2.5	45	M8x19	91
A 55 4		594	414	40	19	21.5	6	2.5	35	M6x16	92



## A 55...SK / SC



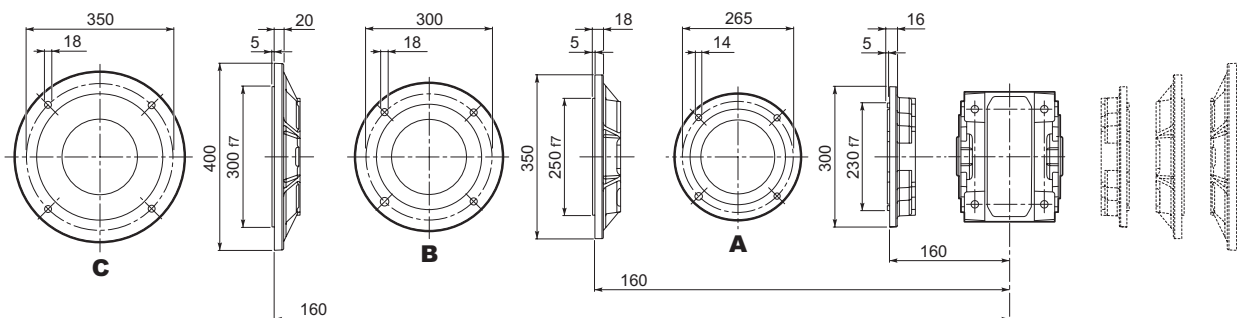
SK...

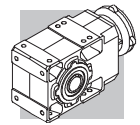
SC...

Image	Image	D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
		120	14	16.3	5	96	100	80	M6x12	4	492	—	81
		120	19	21.8	6	96	100	80	M6x12	4	492	563.5	81/81/77
		130	14	16.3	5	102	115	95	M8x12	4	492	563.5	81/81/77
		130	19	21.8	6	102	115	95	M8x12	4	492	563.5	81/81/77
		130	24	27.3	8	102	115	95	M8x12	4	492	563.5	81/81/77
		150	19	21.8	6	120	130	110	M8x12	5	492	593	81/81/78
		150	24	27.3	8	120	130	110	M8x12	5	492	593	81/81/78
		188	24	27.3	8	142	165	130	M10x20	5	492	593	83/83/79
		189	32	35.3	10	160	165	130	M10x20	5	538.5	—	90/90
		240	32	35.3	10	192	215	180	M12x19	5	538.5	—	90/90
		240	38	41.3	10	192	215	180	M12x19	5	538.5	—	90/90

Image	Image	Image	Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
														2/3x	3x	
			M6 15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	515.5	—	82
			M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	515.5	587	82/82/78
			M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	515.5	587	82/82/78
			M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	515.5	587	82/82/78
			M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	515.5	587	82/82/78
			M6 15	150	16.5	16	17.75	19	120	130	110	M8x16	5	515.5	587	83/83/79
			M6 15	150	16.5	16	17.75	24	120	130	110	M8x16	5	515.5	587	83/83/79
			M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	515.5	587	84/84/80
			M8 36	189	20	17	17.75	32	160	165	130	M10x20	5	561.5	—	93/93
			M8 36	240	20	17.5	17.75	32	192	215	180	M12x24	5	565.5	—	93/93
			M8 36	240	20	17.5	17.75	38	192	215	180	M12x24	5	565.5	—	93/93

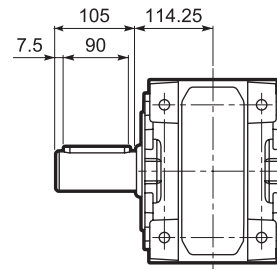
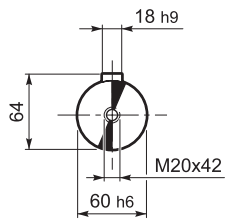
## A 55...F...



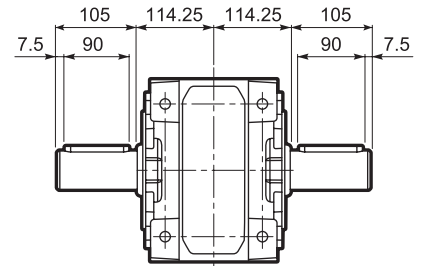
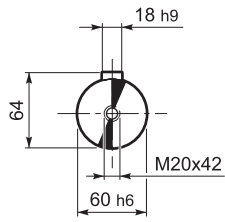


# A 55

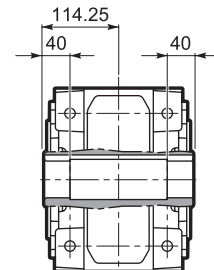
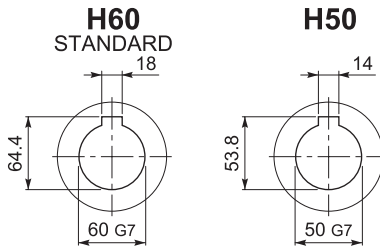
## A 55...UR



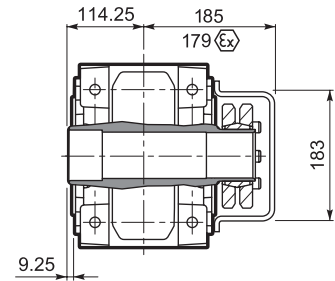
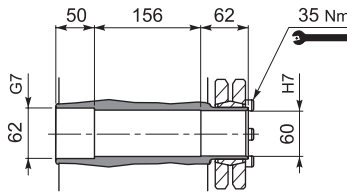
## A 55...UD



## A 55...UH



## A 55...US

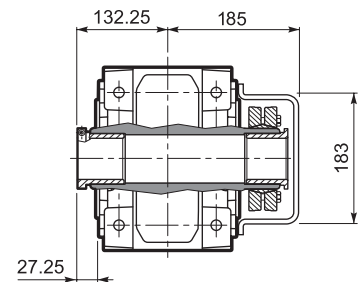
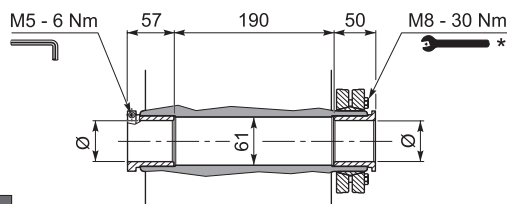


## A 55...QF

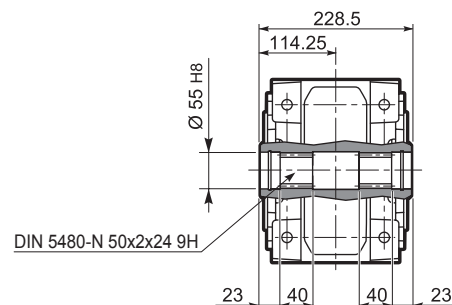
	Ø
QF55	55
QF60	60



	M <sub>n2</sub> max [Nm]
A 55 QF55	1900



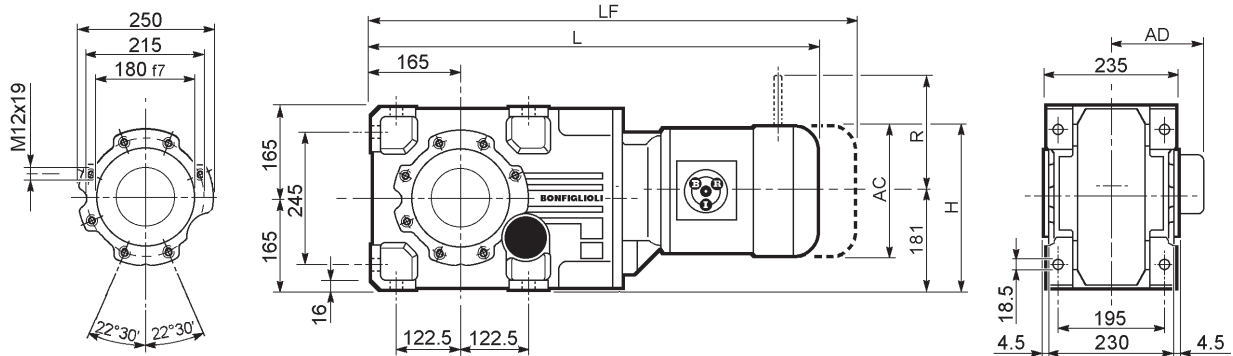
## A 55...UV



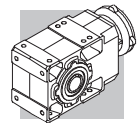
\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



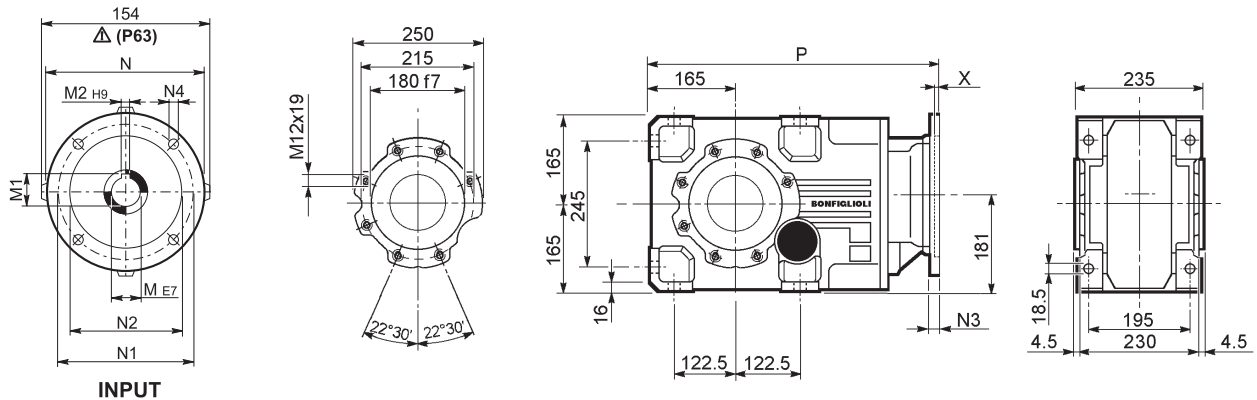
## A 60...M/ME/MX



					M...FD M...FA		M...FD		M...FA						
	AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD				
A 60 2/3	S2	ME2S			156	256.5	700.5	119	98	—	—	—	—	—	—
A 60 2/3	S2	MX2S			156	256.5	744.5	119	103.1	—	—	—	—	—	—
A 60 2/3	S3	ME3S			195	276	743.5	142	103	—	—	—	—	—	—
A 60 2/3	S3	MX3S			195	276	775.5	142	106	—	—	—	—	—	—
A 60 2/3	S3	ME3L			195	276	775.5	142	111	—	—	—	—	—	—
A 60 2/3	S3	MX3L			195	276	819.5	142	117	—	—	—	—	—	—
A 60 2/3	S4	ME4	MX4		258	307.5	883.5	193	145	—	—	—	—	—	—
A 60 2/3	S4	ME4LB	MX4LA		258	307.5	918.5	193	153	—	—	—	—	—	—
A 60 2/3	S5	ME5S	MX5S		310	333.5	970	245	173	—	—	—	—	—	—
A 60 2/3	S5	ME5L	MX5L		310	333.5	1014	245	189	—	—	—	—	—	—
A 60 4	S1	M1			138	247.5	742	108	100	803	103	103	135	124	108
A 60 4	S2	ME2S			156	256.5	771	119	104	—	—	—	—	—	—
A 60 4	S2	MX2S			156	256.5	815	119	109.1	—	—	—	—	—	—
A 60 4	S3	ME3S			195	276	814	142	109	—	—	—	—	—	—
A 60 4	S3	MX3S			195	276	846	142	112	—	—	—	—	—	—
A 60 4	S3	ME3L			195	276	846	142	117	—	—	—	—	—	—
A 60 4	S3	MX3L			195	276	890	142	123	—	—	—	—	—	—

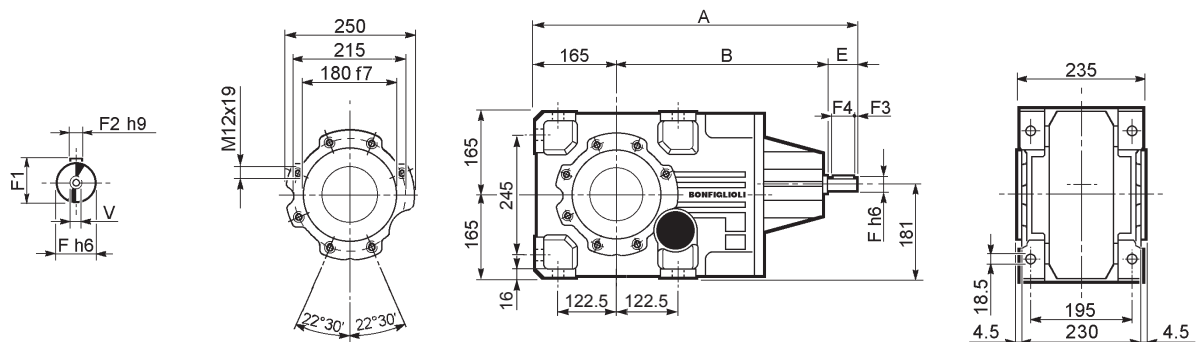


## A 60...P(IEC)



		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 60 3	P63	11	12.8	4	140	115	95	—	M8x19	4	516.5	90
A 60 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	516.5	90
A 60 2/3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	536	91
A 60 2/3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	536	91
A 60 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	546	95
A 60 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	546	95
A 60 2/3	P132	38	41.3	10	300	265	230	16	14	5	582.5	104
A 60 2/3	P160	42	45.3	12	350	300	250	23	18	5.5	633	121
A 60 2/3	P180	48	51.8	14	350	300	250	23	18	5.5	633	121
A 60 4	P63	11	12.8	4	140	115	95	—	M8x19	4	587	88
A 60 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	587	88
A 60 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	606.5	90
A 60 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	606.5	90
A 60 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	616.5	94
A 60 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	616.5	94

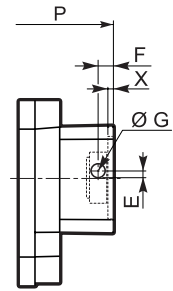
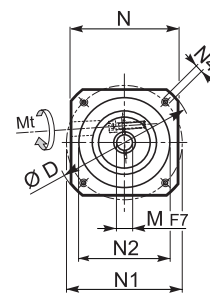
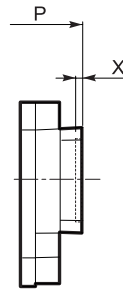
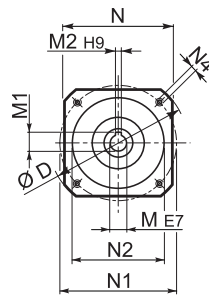
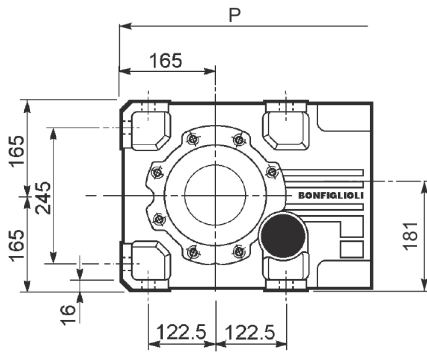
## A 60...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
A 60 2	HS	633	408	60	28	31	8	5.0	50	M10x22	106
A 60 3		633	408	60	28	31	8	5.0	50	M10x22	106
A 60 4		676	461	50	24	27	8	2.5	45	M8x19	112



## A 60...SK / SC



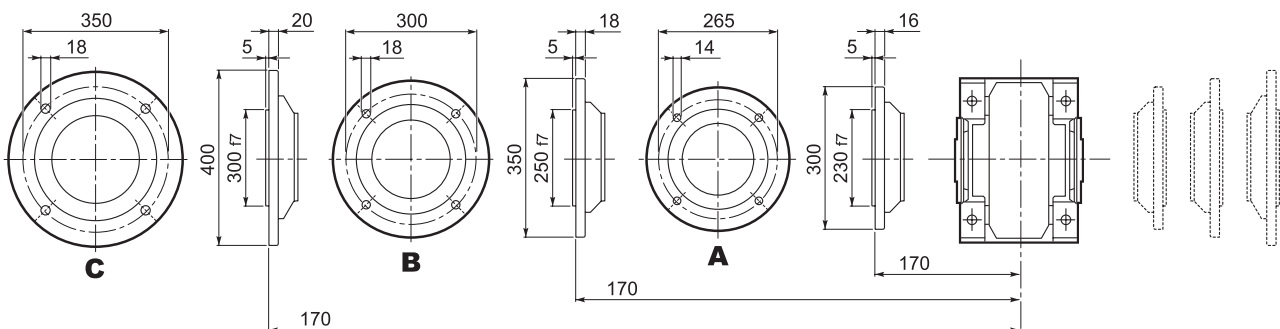
SK...

SC...

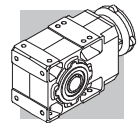
Image	Image	D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
		120	14	16.3	5	96	100	80	M6x12	4	—	606.5	89
		120	19	21.8	6	96	100	80	M6x12	4	536	606.5	93/93/92
		130	14	16.3	5	102	115	95	M8x12	4	536	606.5	93/93/92
		130	19	21.8	6	102	115	95	M8x12	4	536	606.5	93/93/92
		130	24	27.3	8	102	115	95	M8x12	4	536	606.5	93/93/92
		140	19	21.8	6	120	130	110	M8x12	5	536	606.5	93/93/92
		140	24	27.3	8	120	130	110	M8x12	5	536	606.5	93/93/92
		188	24	27.3	8	142	165	130	M10x20	5	536	606.5	97/97/103
		189	32	35.3	10	160	165	130	M10x20	5	582.5	—	102/102
		240	32	35.3	10	192	215	180	M12x19	5	582.5	—	102/102
		240	38	41.3	10	192	215	180	M12x19	5	582.5	—	102/102

Image	Image	Image	Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
														2/3x	3x	
			M6 15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	—	630	90
			M6 15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	559.5	630	94/94/93
			M6 15	130	16.5	15	17.75	14	102	115	95	M8x16	4	559.5	630	94/94/93
			M6 15	130	16.5	15	17.75	19	102	115	95	M8x16	4	559.5	630	94/94/93
			M6 15	130	16.5	15	17.75	24	102	115	95	M8x16	4	559.5	630	94/94/93
			M6 15	140	16.5	16	17.75	19	120	130	110	M8x16	5	559.5	630	95/95/93
			M6 15	140	16.5	16	17.75	24	120	130	110	M8x16	5	559.5	630	95/95/93
			M6 15	188	19	16	17.75	24	142	165	130	M10x20	5	559.5	630	96/96/104
			M8 36	189	20	17	17.75	32	160	165	130	M10x20	5	605.5	—	105/105
			M8 36	240	20	17.5	17.75	32	192	215	180	M12x24	5	609.5	—	105/105
			M8 36	240	20	17.5	17.75	38	192	215	180	M12x24	5	609.5	—	105/105

## A 60...F...

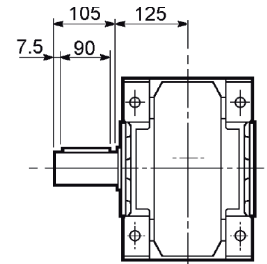
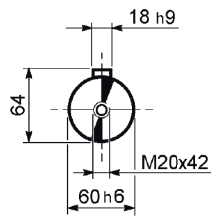




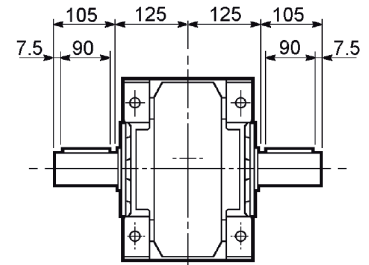
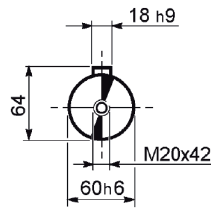


# A 60

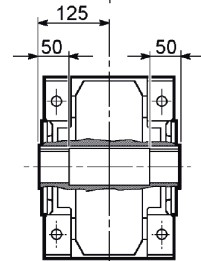
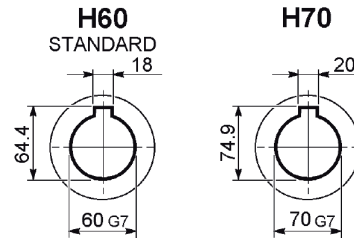
## A 60...UR



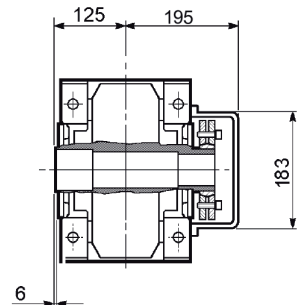
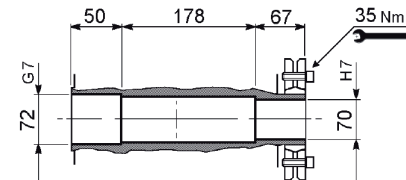
## A 60...UD



## A 60...UH

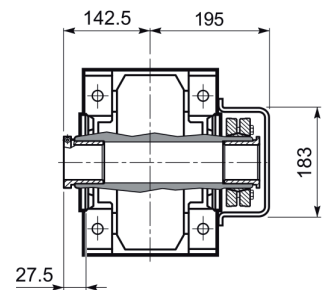
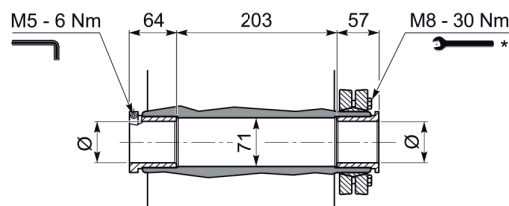


## A 60...US

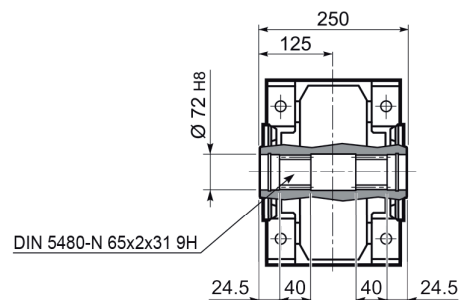


## A 60...QF

	Ø
QF60	60
QF65	65
QF70	70



## A 60...UV



\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



## A 70...M/ME/MX

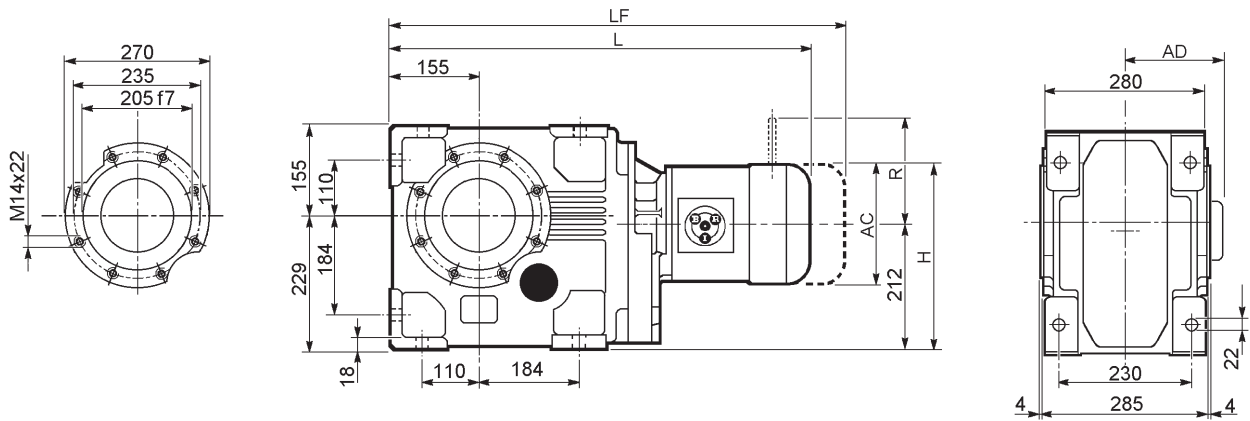
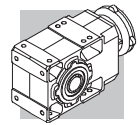
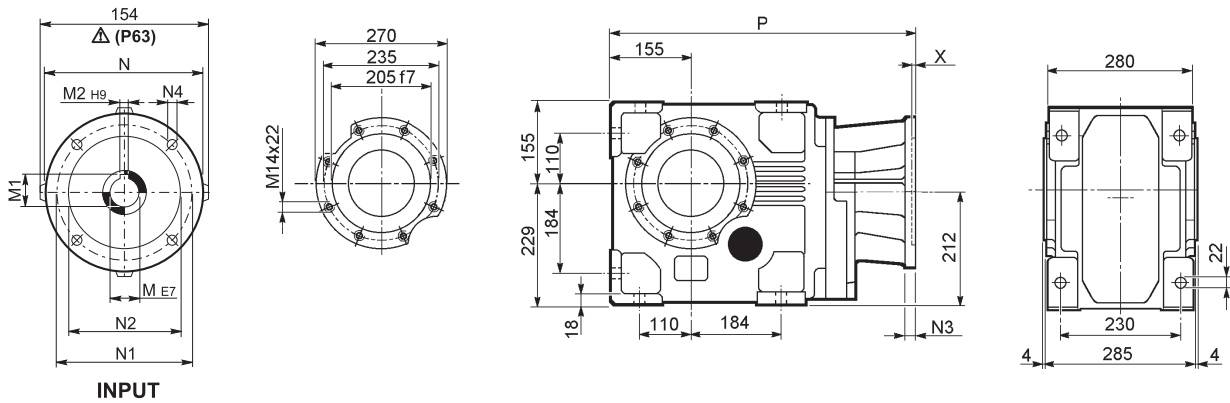


Image	S	ME	MX	AC	H	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
A 70 3	S2	ME2S		156	290	688.5	119	152	—	—	—	—	—	—
A 70 3	S2	MX2S		156	290	732.5	119	157.1	—	—	—	—	—	—
A 70 3	S3	ME3S		195	309.5	731.5	142	158.5	—	—	—	—	—	—
A 70 3	S3	MX3S		195	309.5	763.5	142	161.5	—	—	—	—	—	—
A 70 3	S3	ME3L		195	309.5	763.5	142	164	—	—	—	—	—	—
A 70 3	S3	MX3L		195	309.5	807.5	142	170	—	—	—	—	—	—
A 70 3	S4	ME4	MX4	258	341	872.5	193	198	—	—	—	—	—	—
A 70 3	S4	ME4LB	MX4LA	258	341	907.5	193	206	—	—	—	—	—	—
A 70 3	S5	ME5S	MX5S	310	367	958	245	226	—	—	—	—	—	—
A 70 3	S5	ME5L	MX5L	310	367	1002	245	242	—	—	—	—	—	—
A 70 4	S1	M1		138	281	710.5	108	152	771.5	155	103	135	124	108
A 70 4	S2	ME2S		156	290	739.5	119	156	—	—	—	—	—	—
A 70 4	S2	MX2S		156	290	783.5	119	161.1	—	—	—	—	—	—
A 70 4	S3	ME3S		195	309.5	782.5	142	162.5	—	—	—	—	—	—
A 70 4	S3	MX3S		195	309.5	814.5	142	165.5	—	—	—	—	—	—
A 70 4	S3	ME3L		195	309.5	814.5	142	168	—	—	—	—	—	—
A 70 4	S3	MX3L		195	309.5	858.5	142	174	—	—	—	—	—	—
A 70 4	S4	ME4	MX4	258	341	922.5	193	202	—	—	—	—	—	—
A 70 4	S4	ME4LB	MX4LA	258	341	957.5	193	210	—	—	—	—	—	—

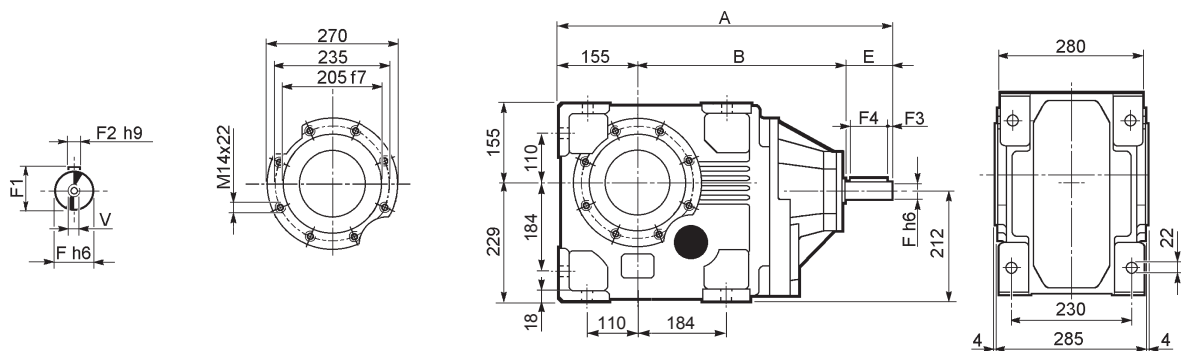


## A 70...P (IEC)



		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 70 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	524	144
A 70 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	524	144
A 70 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	534	146
A 70 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	534	146
A 70 3	P132	38	41.3	10	300	265	230	16	14	5	570.5	154
A 70 3	P160	42	45.3	12	350	300	250	23	18	6	626	169
A 70 3	P180	48	51.8	14	350	300	250	23	18	6	626	169
A 70 3	P200	55	59.3	16	400	350	300	—	M16x25	7	651	179
A 70 4	P63	11	12.8	4	140	115	95	—	M8x19	4	555.5	146
A 70 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	555.5	146
A 70 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	575	147
A 70 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	575	147
A 70 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	585	148
A 70 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	585	148
A 70 4	P132	38	41.3	10	300	265	230	16	14	5	618.5	157

## A 70...HS

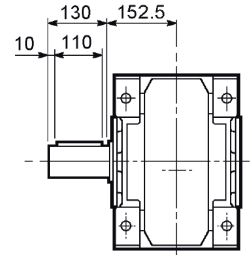
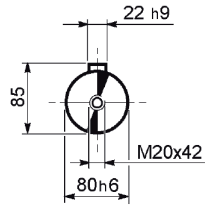


		A	B	E	F	F1	F2	F3	F4	V	Kg
A 70 3	HS	708.5	443.5	110	42	45	12	10	90	M12x28	165
A 70 4		644.5	439.5	50	24	27	8	2.5	45	M8x19	149

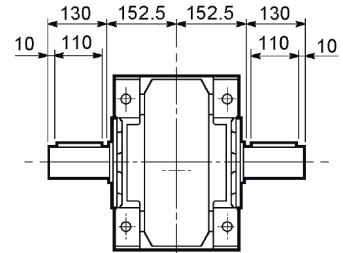
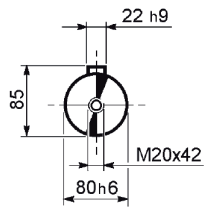


# A 70

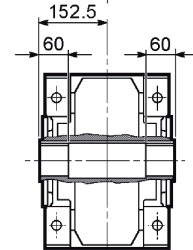
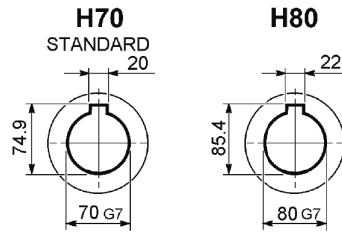
**A 70...UR**



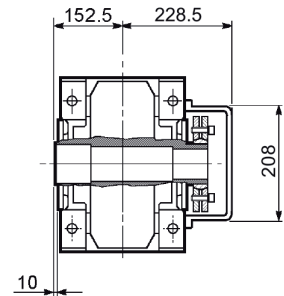
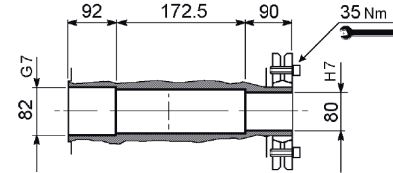
**A 70...UD**



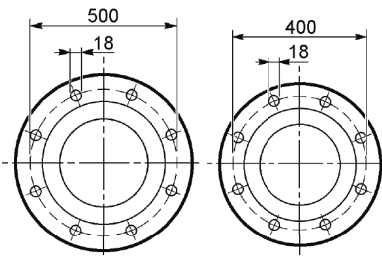
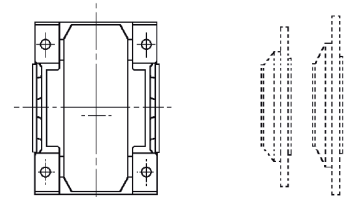
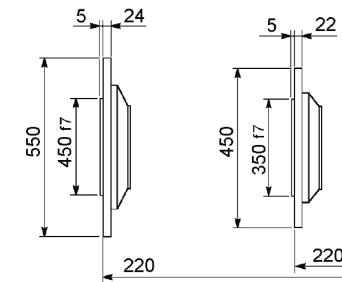
**A 70...UH**



**A 70...US**

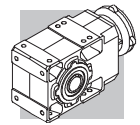


**A 70...F...**

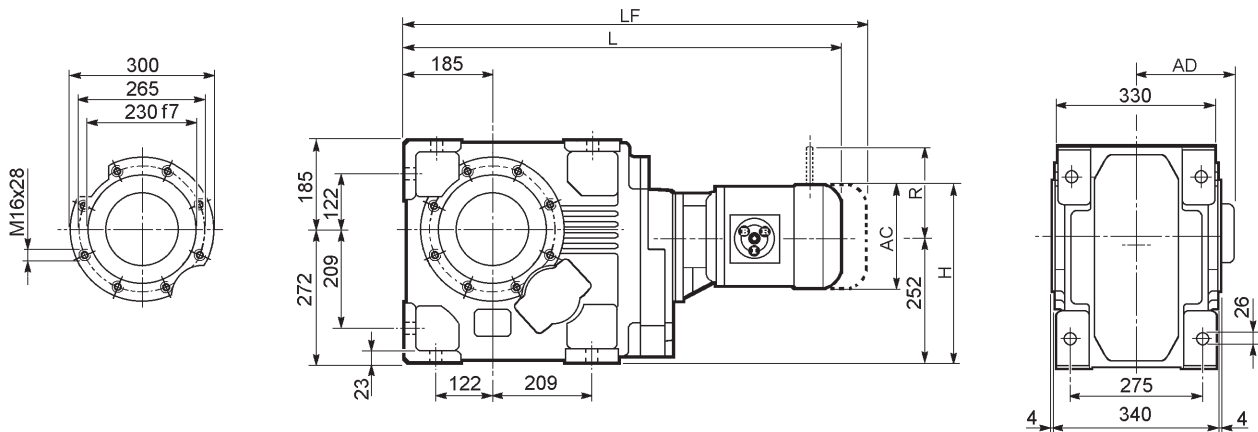





**B**

**A**



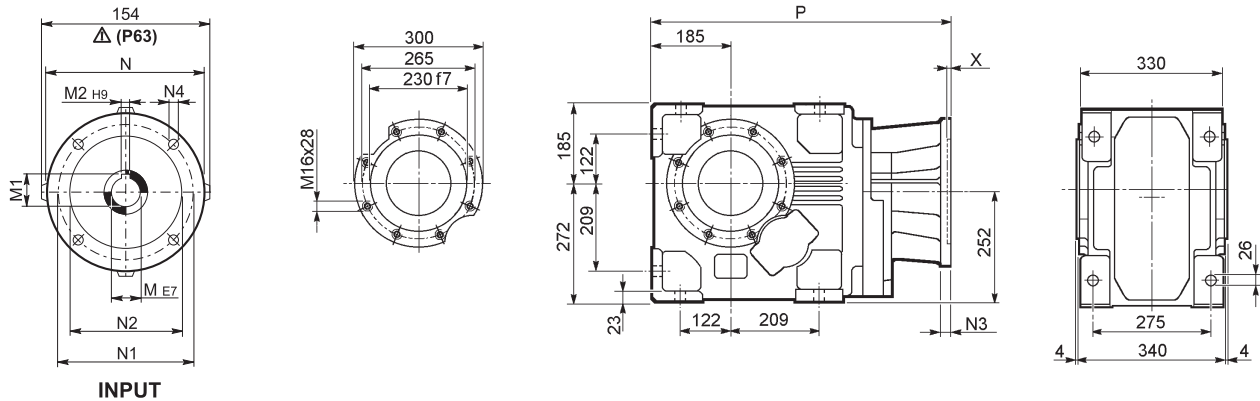
## A 80...M/ME/MX



  	AC	H	L	AD	Kg	M...FD M...FA		M...FD		M...FA				
						LF	Kg	R	AD	R	AD			
A 80 3	S3	ME3S		195	349.5	809.5	142	257.5	—	—	—	—	—	—
A 80 3	S3	MX3S		195	349.5	841.5	142	260.5	—	—	—	—	—	—
A 80 3	S3	ME3L		195	349.5	841.5	142	264	—	—	—	—	—	—
A 80 3	S3	MX3L		195	349.5	885.5	142	270	—	—	—	—	—	—
A 80 3	S4	ME4	MX4	258	381	949.5	193	298	—	—	—	—	—	—
A 80 3	S4	ME4LB	MX4LA	258	381	984.5	193	306	—	—	—	—	—	—
A 80 3	S5	ME5S	MX5S	310	407	1036	245	326	—	—	—	—	—	—
A 80 3	S5	ME5L	MX5L	310	407	1080	245	342	—	—	—	—	—	—
A 80 4	S1	M1		138	321	800.5	108	246	861.5	249	103	135	124	108
A 80 4	S2	M2S		156	330	829.5	119	250	899.5	254	129	146	134	119
A 80 4	S2	ME2S		156	330	829.5	119	250	—	—	—	—	—	—
A 80 4	S2	MX2S		156	330	873.5	119	255.1	—	—	—	—	—	—
A 80 4	S3	ME3S		195	349.5	872.5	142	256.5	—	—	—	—	—	—
A 80 4	S3	MX3S		195	349.5	904.5	142	259.5	—	—	—	—	—	—
A 80 4	S3	ME3L		195	349.5	904.5	142	262	—	—	—	—	—	—
A 80 4	S3	MX3L		195	349.5	948.5	142	268	—	—	—	—	—	—
A 80 4	S4	ME4	MX4	258	381	1012.5	193	296	—	—	—	—	—	—
A 80 4	S4	ME4LB	MX4LA	258	381	1047.5	193	304	—	—	—	—	—	—

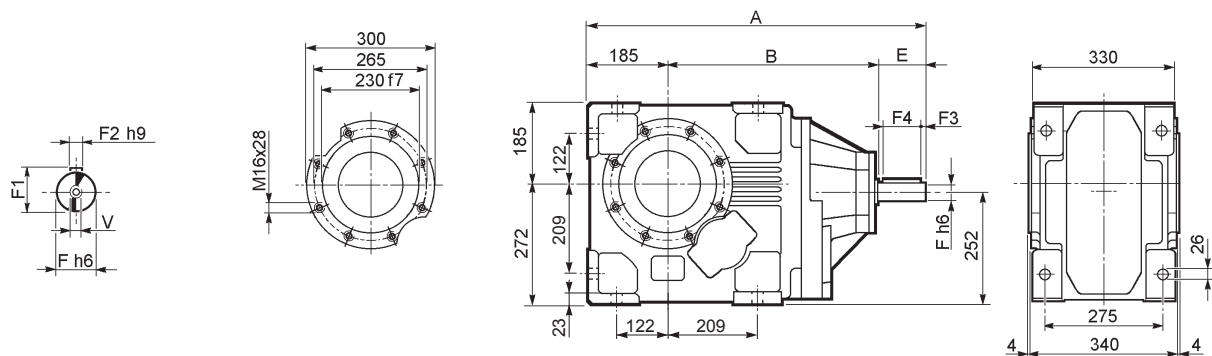


## A 80...P(IEC)

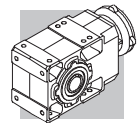


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 80 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	602	243
A 80 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	602	243
A 80 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	612	245
A 80 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	612	245
A 80 3	P132	38	41.3	10	300	265	230	16	14	5	648.5	253
A 80 3	P160	42	45.3	12	350	300	250	23	18	6	704	268
A 80 3	P180	48	51.8	14	350	300	250	23	18	6	704	268
A 80 3	P200	55	59.3	16	400	350	300	—	M16x25	7	729	279
A 80 3	P225	60	64.4	18	450	400	350	25	18	6	774.5	298
A 80 4	P63	11	12.8	4	140	115	95	—	M8x19	4	645.5	248
A 80 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	645.5	248
A 80 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	665	249
A 80 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	665	249
A 80 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	675	250
A 80 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	675	250
A 80 4	P132	38	41.3	10	300	265	230	16	M12x16	5	711.5	259

## A 80...HS

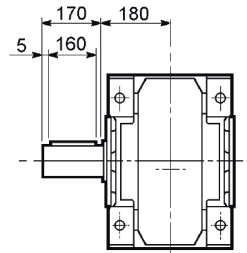
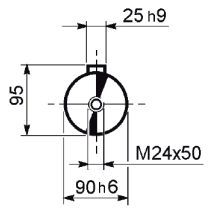


		A	B	E	F	F1	F2	F3	F4	V	Kg
A 80 3	HS	786.5	491.5	110	42	45	12	10	90	M12x28	265
A 80 4		735	500	50	24	27	8	2.5	45	M8x19	250

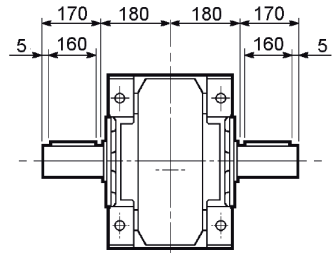
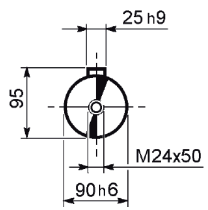


# A 80

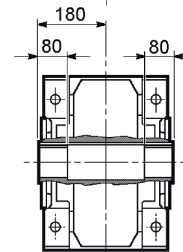
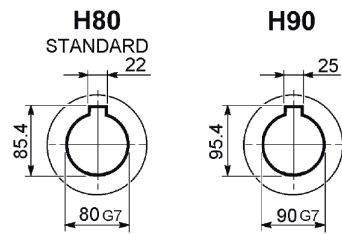
## A 80...UR



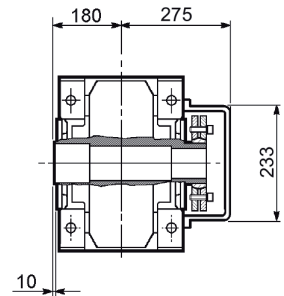
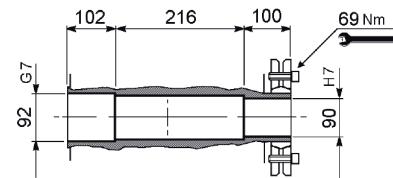
## A 80...UD



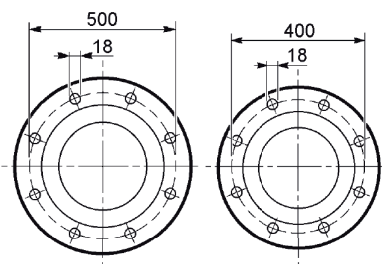
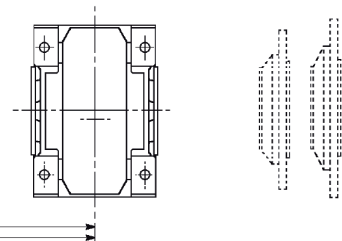
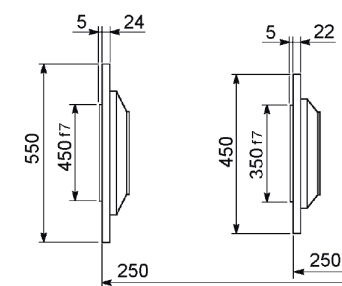
## A 80...UH



## A 80...US



## A 80...F...

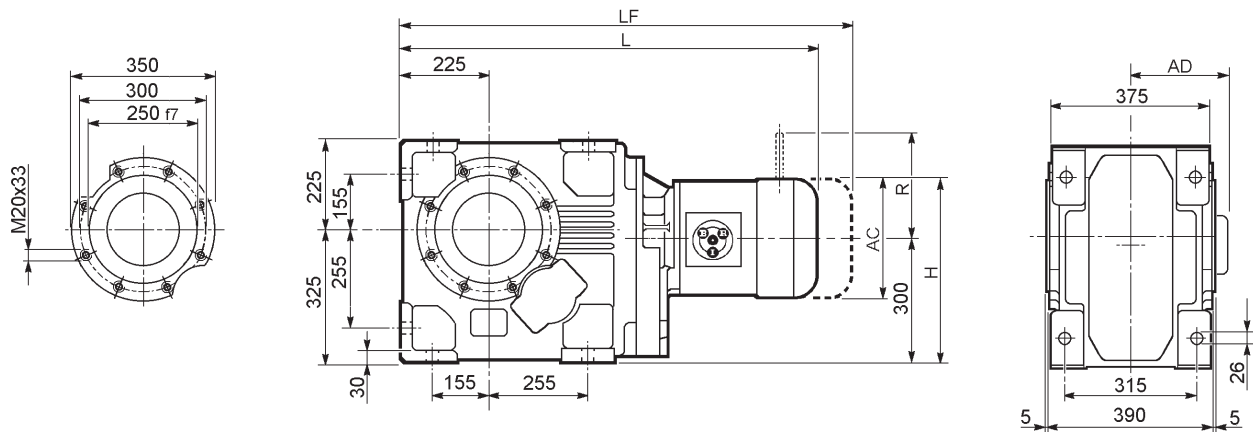





**B**

**A**

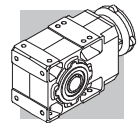


## A 90...M/ME/MX

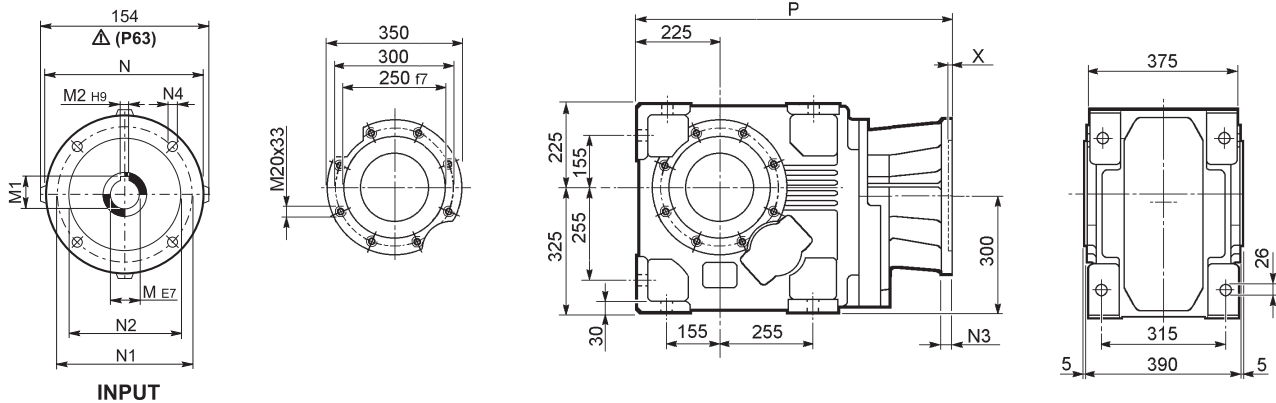


  	AC	H	L	AD	Kg	M...FD M...FA		M...FD		M...FA				
						LF	Kg	R	AD	R	AD			
A 90 3	S3	ME3S		195	397.5	930.5	142	414.5	—	—	—	—	—	—
A 90 3	S3	MX3S		195	397.5	962.5	142	413.5	—	—	—	—	—	—
A 90 3	S3	ME3L		195	397.5	962.5	142	420	—	—	—	—	—	—
A 90 3	S3	MX3L		195	397.5	1006.5	142	426	—	—	—	—	—	—
A 90 3	S4	ME4	MX4	258	429	1070.5	193	454	—	—	—	—	—	—
A 90 3	S4	ME4LB	MX4LA	258	429	1105.5	193	462	—	—	—	—	—	—
A 90 3	S5	ME5S	MX5S	310	455	1157	245	482	—	—	—	—	—	—
A 90 3	S5	ME5L	MX5L	310	455	1201	245	498	—	—	—	—	—	—
A 90 4	S1	M1		138	369	941.5	108	412	1002.5	249	103	135	124	108
A 90 4	S2	M2S		156	378	970.5	119	422	1040.5	426	129	146	134	119
A 90 4	S2	ME2S		156	378	970.5	119	422	—	—	—	—	—	—
A 90 4	S2	MX2S		156	378	1014.5	119	427.1	—	—	—	—	—	—
A 90 4	S3	ME3S		195	397.5	1013.5	142	428.5	—	—	—	—	—	—
A 90 4	S3	MX3S		195	397.5	1045.5	142	431.5	—	—	—	—	—	—
A 90 4	S3	ME3L		195	397.5	1045.5	142	434	—	—	—	—	—	—
A 90 4	S3	MX3L		195	397.5	1089.5	142	440	—	—	—	—	—	—
A 90 4	S4	ME4	MX4	258	429	1153.5	193	468	—	—	—	—	—	—
A 90 4	S4	ME4LB	MX4LA	258	429	1188.5	193	476	—	—	—	—	—	—



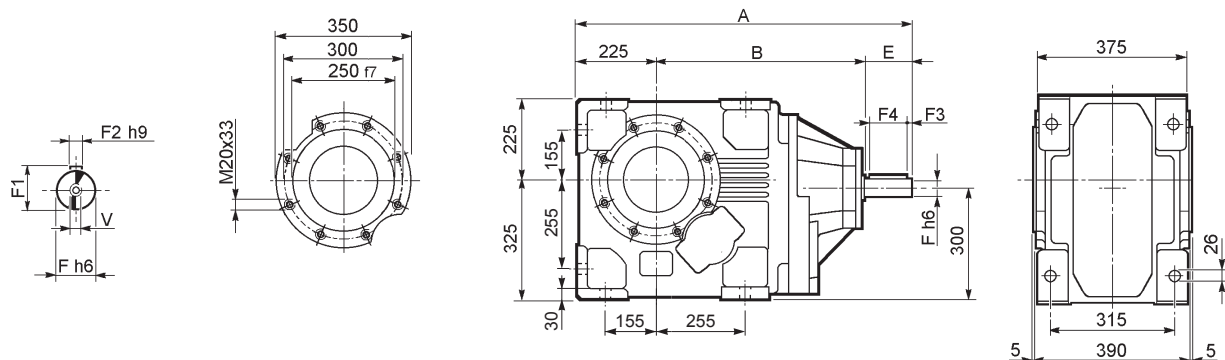


## A 90...P (IEC)



		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 90 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	723	400
A 90 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	723	400
A 90 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	733	401
A 90 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	733	401
A 90 3	P132	38	41.3	10	300	265	230	16	14	5	769.5	409
A 90 3	P160	42	45.3	12	350	300	250	23	18	6	825	428
A 90 3	P180	48	51.8	14	350	300	250	23	18	6	825	429
A 90 3	P200	55	59.3	16	400	350	300	—	M16x25	7	850	436
A 90 3	P225	60	64.4	18	450	400	350	30	18	6	895.5	472
A 90 3	P250	65	69.4	18	550	500	450	30	18	6	925.5	475
A 90 4	P63	11	12.8	4	140	115	95	—	M8x19	4	786.5	411
A 90 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	786.5	412
A 90 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	806	413
A 90 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	806	413
A 90 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	816	415
A 90 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	816	415
A 90 4	P132	38	41.3	10	300	265	230	16	14	5	852.5	423
A 90 4	P160	42	45.3	12	350	300	250	23	18	5.5	903	434
A 90 4	P180	48	51.8	14	350	300	250	23	18	5.5	903	434

## A 90...HS

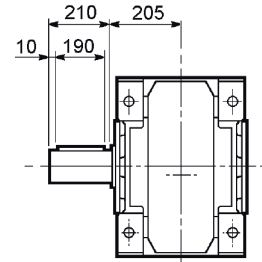
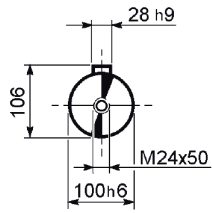


		A	B	E	F	F1	F2	F3	F4	V	Kg
A 90 3	HS	1009	644	140	60	64	18	10	120	M16x36	465
A 90 4		875.5	600.5	50	24	27	8	2.5	45	M8x19	415

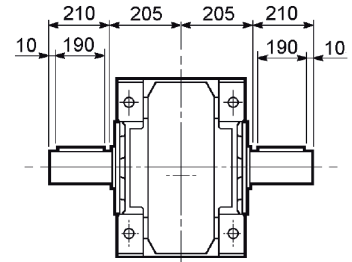
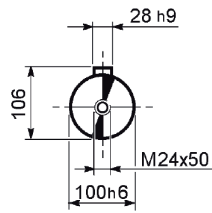


# A 90

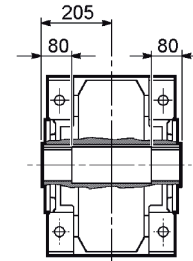
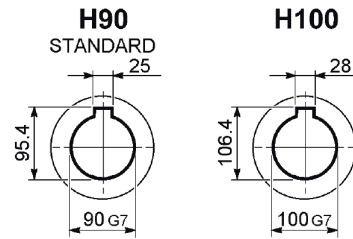
## A 90...UR



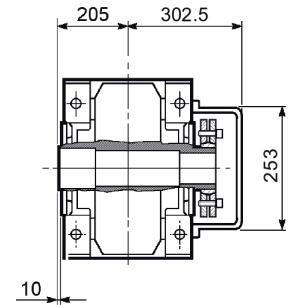
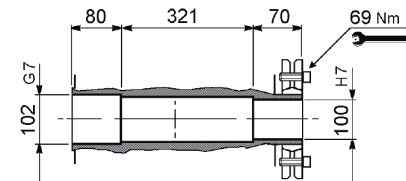
## A 90...UD



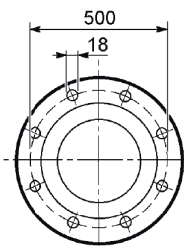
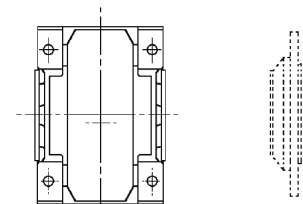
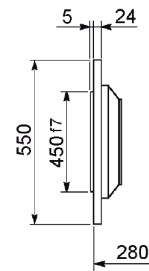
## A 90...UH



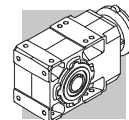
## A 90...US



## A 90...F...

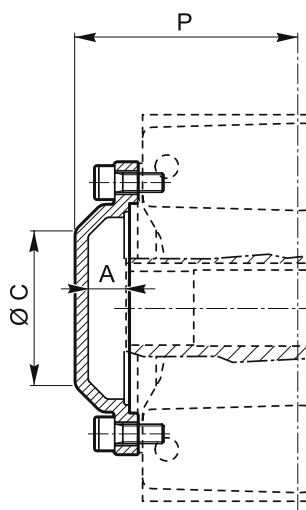


**A**



## 44 ACCESSORIES

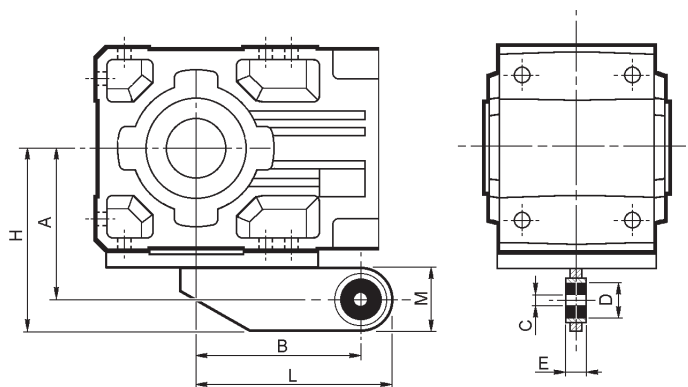
### 44.1 Safety cover



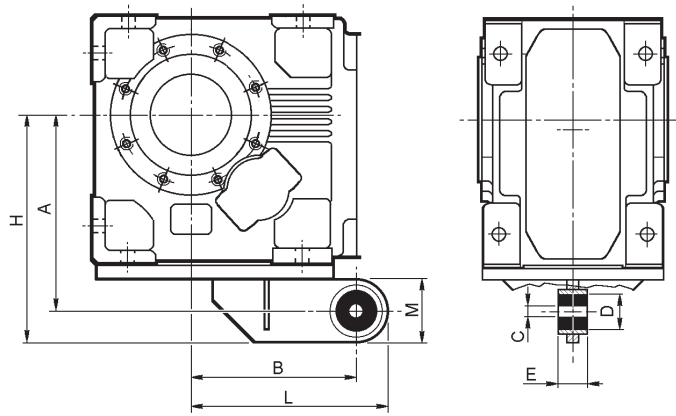
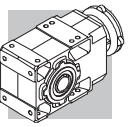
	A	ØC	P
A 05	17.5	36	73.5
A 10	20.5	60	84.5
A 20	20	75	94
A 30	20	75	104
A 35	19.5	80	114
A 41	21	110	120
A 50	26	100	148.5
A 55	27	100	149
A 60	25	100	158
A 70	33.5	120	193.5
A 80	38	140	228
A 90	43	152	258

### 44.2 Torque arm

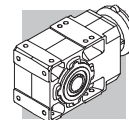
Torque arm comes complete with fastening bolts.



	A	B	C	D	E	H	L	M
A 05	90.5	80	10	30	20	115.5	105	50
A 10	108	118	10	30	20	138	148	60
A 20	118	137	10	30	20	148	167	60
A 30	135	150	20	40	25	170	185	70
A 35	145	165	20	40	25	180	200	70
A 41	157	200	20	40	25	192	235	70
A 50	200	250	32	56	40	245	295	90
A 55	200	250	32	56	40	245	295	90
A 60	225	300	32	56	40	270	345	90



	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>H</b>	<b>L</b>	<b>M</b>
<b>A 70</b>	289	250	32	56	40	334	295	90
<b>A 80</b>	357	300	42	78	60	422	365	130
<b>A 90</b>	410	350	42	78	60	475	415	130

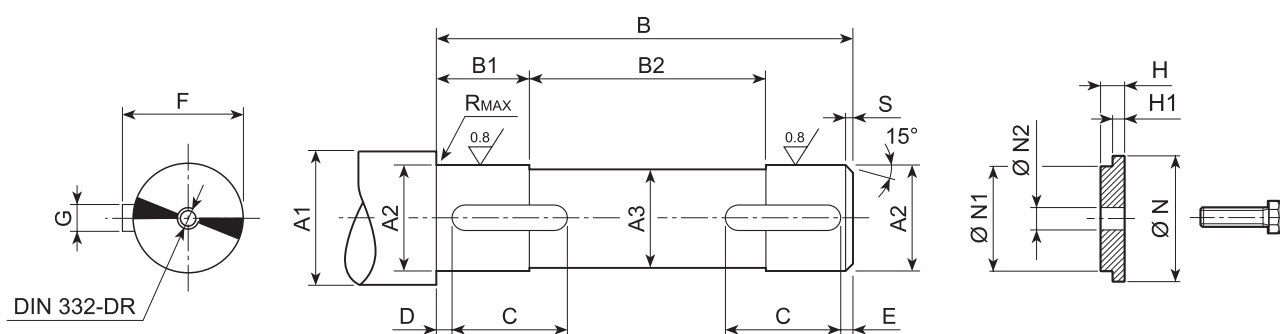




## 45 CUSTOMER' SHAFT

Make the driven shaft to be coupled to the gear unit's output shaft from a good quality steel, respecting the dimensions given in the table.

A device such as that illustrated below should also be installed to secure the shaft axially. Take care to verify and dimension the various components to suit the needs of the application.

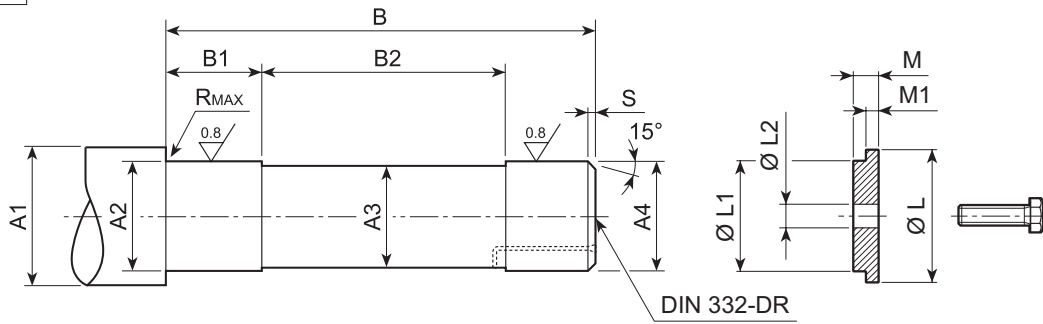
**UH\_**




	A1	A2	A3	B	B1	B2	C	D	E	F	G	R	S		N	N1	N2	H	H1	
														UNI 6604						UNI 5739
<b>A05 UH25</b>	≥ 30	25 h7	24	102	21	62	20	2	2	28	8 h9	0.5	1.5	8x7x20 A	35	25 d9	9	7	5.5	M8x25
<b>A10 UH30</b>	≥ 35	30 h7	29	118	16	87	20	2	2	33	8 h9	0.5	1.5	8x7x20 A	35	30 d9	11	8.5	7	M10x30
<b>A10 UH25</b>	≥ 30	25 h7	24	118	16	87	20	2	2	28	8 h9	0.5	1.5	8x7x20 A	30+35	25 d9	9	7	5.5	M8x25
<b>A20 UH35</b>	≥ 42	35 h7	34	138	20	98	20	2	2	38	10 h9	0.5	1.5	10x8x20 A	42	35 d9	11	8.5	7	M10x30
<b>A20 UH30</b>	≥ 35	30 h7	29	138	20	98	25	2	2	33	8 h9	0.5	1.5	8x7x25 A	35+42	30 d9	11	8.5	7	M10x30
<b>A30 UH40</b>	≥ 47	40 h7	39	158	23	112	30	2	2	43	12 h9	0.5	1.5	12x8x30 A	47	40 d9	14	8.5	7	M12x35
<b>A30 UH35</b>	≥ 42	35 h7	34	158	23	112	30	2	2	38	10 h9	0.5	1.5	10x8x30 A	42+47	35 d9	11	8.5	7	M10x30
<b>A35 UH40</b>	≥ 47	40 h7	39	175	33	109	40	2	2	43	12 h9	1	1.5	12x8x40 A	47	40 d9	14	8.5	7	M12x35
<b>A35 UH35</b>	≥ 42	35 h7	34	175	33	109	40	2	2	38	10 h9	1	1.5	10x8x40 A	42+47	35 d9	11	8.5	7	M10x30
<b>A41 UH45</b>	≥ 52	45 h7	44	184	28	128	45	2.5	2.5	48.5	14 h9	1	2	14x9x45 A	52	45 d9	14	8.5	7	M12x35
<b>A41 UH40</b>	≥ 47	40 h7	39	184	28	128	50	2.5	2.5	43	12 h9	1	2	12x8x50 A	47+52	40 d9	14	8.5	7	M12x35
<b>A50 UH55</b>	≥ 63	55 h7	54	226	37.5	151	55	2.5	2.5	59	16 h9	1	2	16x10x55 A	63	55 d9	22	10	8	M20x50
<b>A50 UH50</b>	≥ 57	50 h7	49	226	37.5	151	65	2.5	2.5	53.5	14 h9	1	2	14x9x65 A	57+63	50 d9	18	10	8	M16x45
<b>A55 UH60</b>	≥ 70	60 h7	59	226	37.5	151	65	2.5	2.5	64	18 h9	2	2	18x11x65 A	70	60 d9	22	10	8	M20x50
<b>A55 UH50</b>	≥ 60	50 h7	49	226	37.5	151	75	2.5	2.5	53.5	14 h9	2	2	14x9x75 A	60+70	50 d9	18	10	8	M16x45
<b>A60 UH70</b>	≥ 78	70 h7	69	248	48	152	70	2.5	2.5	74.5	20 h9	2.5	2	20x12x70 A	78	70 d9	22	10	8.5	M20x50
<b>A60 UH60</b>	≥ 68	60 h7	59	248	48	152	80	2.5	2.5	64	18 h9	2.5	2	18x11x80 A	68+78	60 d9	22	10	8.5	M20x50
<b>A70 UH80</b>	≥ 89	80 h7	79	303	58	187	90	3	3	85	22 h9	2.5	2.5	22x14x90 A	89	80 d9	22	10	8.5	M20x50
<b>A70 UH70</b>	≥ 78	70 h7	69	303	58	187	110	3	3	74.5	20 h9	2.5	2.5	20x12x110 A	78+89	70 d9	22	10	8.5	M20x50
<b>A80 UH90</b>	≥ 99	90 h7	89	358	78	202	120	3	3	95	25 h9	2.5	2.5	25x14x120 A	99	90 d9	26	22	20.5	M24x70
<b>A80 UH80</b>	≥ 89	80 h7	79	358	78	202	130	3	3	85	22 h9	2.5	2.5	22x14x130 A	89+99	80 d9	22	10	8.5	M20x50
<b>A90 UH100</b>	≥ 111	100 h7	99	408	78	252	160	3	3	106	28 h9	2.5	2.5	28x16x160 A	111	100 d9	26	22	20.5	M24x70
<b>A90 UH90</b>	≥ 99	90 h7	89	408	78	252	190	3	3	95	25 h9	2.5	2.5	25x14x190 A	99+111	90 d9	26	22	20.5	M24x70

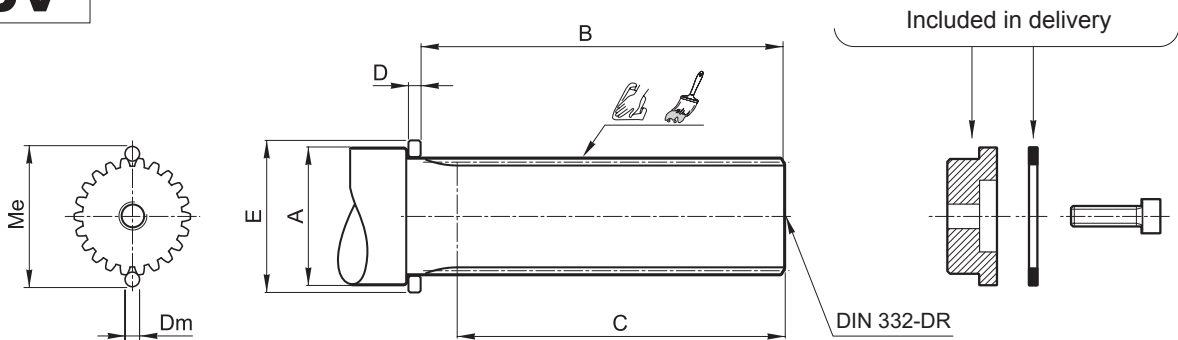




# US

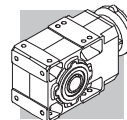


	A1	A2	A3	A4	B	B1	B2	R	S	L	L1	L2	M	M1	 UNI 5739
<b>A 05</b>	≥ 35	27 h7	24	25 h6	129.5	32	63.5	0.5	1.5	29.5	25 d9	11	8.5	7	M10x30
<b>A 10</b>	≥ 42	32 h7	29	30 h6	147.5	34	77.5	0.5	1.5	35.5	30 d9	11	8.5	7	M10x30
<b>A 20</b>	≥ 48	37 h7	34	35 h6	170	40	89	0.5	1.5	43	35 d9	14	8.5	7	M12x35
<b>A 30</b>	≥ 54	42 h7	39	40 h6	191.5	48	95.5	0.5	1.5	49	40 d9	18	10	8.5	M16x45
<b>A 35</b>	≥ 54	42 h7	39	40 h6	208.5	48	112.5	0.5	1.5	49	40 d9	18	10	8.5	M16x45
<b>A 41</b>	≥ 60	47 h7	44	45 h6	222	53	117	1	2	54	45 d9	18	10	8.5	M16x45
<b>A 50</b>	≥ 72	57 h7	54	55 g6	264	46	156	1	2	72	55 d9	22	10	8.5	M20x50
<b>A 55</b>	≥ 72	62 h7	59	60 g6	266	46	158	2.5	2	72	60 d9	22	10	8.5	M20x50
<b>A 60</b>	≥ 90	72 h7	69	70 g6	293	48	178	2.5	2.5	85	70 d9	22	10	8.5	M20x50
<b>A 70</b>	≥ 104	82 h7	79	80 g6	352.5	90	172.5	2.5	2.5	95	80 d9	22	10	8.5	M20x50
<b>A 80</b>	≥ 114	92 h7	89	90 g6	416	100	216	2.5	2.5	105	90 d9	26	22	20.5	M24x70
<b>A 90</b>	≥ 126	102 h7	99	100 g6	469	78	321	2.5	2.5	120	100 d9	26	22	20.5	M24x70

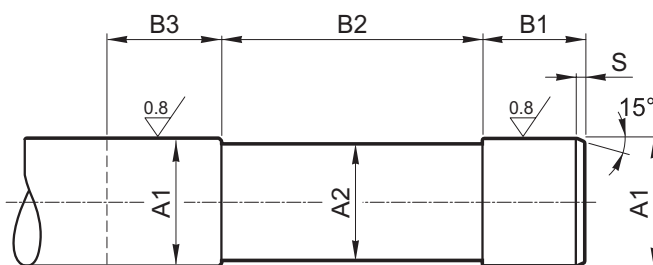
# UV



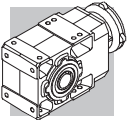
	 DIN 5480	Me	Dm	A	B	C	D	E	 ISO 4762
<b>A 20</b>	30x1.25x22	33.04 +0/-0.04	2.75	≥ 40	111.5	≥ 95	7	45	M10x35
<b>A 30</b>	35x2x16	38.93 +0/-0.04	4	≥ 45	130.5	≥ 112	7	50	M12x40
<b>A 35</b>	35x2x16	38.93 +0/-0.04	4	≥ 45	147.5	≥ 129	7	50	M12x40
<b>A 41</b>	45x2x21	48.86 +0/-0.04	4	≥ 55	155.5	≥ 136	7	60	M16x45
<b>A 50</b>	50x2x24	54.14 +0/-0.05	4	≥ 60	196	≥ 175	7	65	M16x45
<b>A 55</b>	50x2x24	54.14 +0/-0.05	4	≥ 60	196	≥ 175	7	65	M16x45
<b>A 60</b>	65x2x31	68.97 +0 /-0.05	4	≥ 75	213.5	≥ 191	7	80	M20x55



**QF**



		A1	A2	B1	B2	B3	S
A 10	QF25	25 h6	24	41	95	≥ 50	1.5
	QF30	30 h6	29				
A 20	QF25	25 h6	24	41	115	≥ 50	1.5
	QF30	30 h6	29				
A 30	QF35	35 h6	34	45	130	≥ 54	1.5
	QF40	40 h6	39				
A 35	QF35	35 h6	34	45	146.5	≥ 54	1.5
	QF40	40 h6	39				
A 41	QF40	40 h6	39	47	151.5	≥ 56	2
	QF45	45 h6	44				
A 50	QF50	50 h6	49	48	197	≥ 57	2
	QF55	55 h6	54				
A 55	QF55	55 h6	54	50	190	≥ 59	2
	QF60	60 h6	59				
A 60	QF60	60 h6	59	57	203	≥ 66	2.5
	QF65	65 h6	64				
	QF70	70 h6	69				



## HELICAL BEVEL GEAR UNITS SERIES A ATEX CONFIGURATION

### 46 INTRODUCTION TO THE ATEX DIRECTIVES

#### 46.1 Explosive atmosphere

An **explosive atmosphere** for the purposes of Directive 2014/34/EU is defined as a mixture:

- a. of **flammable substances**, in the form of gases, vapours, mists or dusts;
- b. with **air**;
- c. under atmospheric conditions;
- d. in which, after ignition, the combustion spreads to the entire unburned mixture (it has to be noted that sometimes, mainly with dust, not always the whole quantity of the combustible material is consumed by the combustion).

An atmosphere, which could become explosive due to local and/or operational conditions is called a **potentially explosive atmosphere**.

It is only in this kind of potentially explosive atmosphere which products falling under the Directive 2014/34/EU are designed for.

#### 46.2 European harmonised atex standards

Directive 2014/34/EU stipulates the minimum safety requirements for products intended for use in explosion risk areas within the member countries of the European Union. The directive also assigns such equipment to **categories**, which are defined by the directive itself.

The following table describes the **zones** into which the user of a plant, in which an explosive atmosphere may occur, is required to divide the equipment application areas.

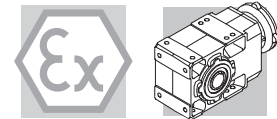
(C 1)

Zones		Formation frequency of a potentially explosive atmosphere	Type of danger
Gaseous atmosphere G	Dusty atmosphere D		
0	20	Present continuously or for long periods	Permanent
1	21	Likely to occur in normal operation occasionally	Potential
2	22	Not likely to occur in normal operation but if it does occur will persist for short period only	Minimal

**BONFIGLIOLI RIDUTTORI gear units selected in this catalogue are suitable for installation in zones 1, 21.**

Gearbox can also be supplied for installation in zones 2, 22. Contact our Technical Service for further details.





As from 20 April 2016 the ATEX directive 2014/34/EU come into force throughout the entire European Union, and replace existing conflicting national and European laws on explosive atmospheres and the previous directive 94/9/EC.

It should be emphasised that, for the first time, the directives also govern mechanical, hydraulic and pneumatic equipment, and not only electrical equipment as has been the case so far.

With regard to the Machinery Directive 2006/42/EC it should be noted that directive 2014/34/EU is a set of extremely specific requirements dedicated to the dangers deriving from potentially explosive atmospheres, whereas the Machinery Directive contains only very general explosion safety requirements (Annex I).

Consequently, as regards protection against explosion in potentially explosive atmospheres, Directive 2014/34/EU takes precedence over the Machinery Directive.

The requirements of the Machinery Directive apply to all other risks regarding machinery.

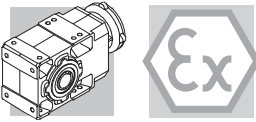
### 46.3 Levels of protection for the various categories of equipment

The various categories of equipment must be able to operate in conformity with the Manufacturer's operational specifications, at certain defined levels of protection.

The availability of BONFIGLIOLI RIDUTTORI products is highlighted in grey.

(C 2)

Protection level	Category		Type of protection	Operating conditions
	Group I	Group II		
Very high	M1		Two independent means of protection or safety capable of operating even when two independent faults occur.	The equipment remains powered and operational even in the presence of an explosive atmosphere.
Very high		1	Two independent means of protection or safety capable of operating even when two independent faults occur.	The equipment remains powered and operational in zones 0, 1, 2 (G) and/or zones 20, 21, 22 (D).
High	M2		Protection suitable for normal operation and heavy duty conditions.	Power to the equipment is shut off in the presence of a potentially explosive atmosphere.
High		2	Protection suitable for normal operation and frequent faults or equipment in which malfunction is normal.	The equipment remains powered and operational in zones 1, 2 (G) and/or zones 21, 22 (D).
Normal		3	Protection suitable for normal operation.	The equipment remains powered and operational in zones 2 (G) and/or zones 22 (D).



#### 46.4 Definition of groups

**Group I** Applies to equipment intended for use underground in parts of mines and those parts of surface installations of such mines, liable to be endangered by fire damp and/or combustible dust.

**Group II** Applies to equipment intended for use in other places liable to be endangered by explosive atmospheres.

BONFIGLIOLI RIDUTTORI products may not therefore be installed in mines, classified in **Group I** and in **Group II**, category 1.

To summarise, the classification of equipment in to groups, categories and zones is illustrated in the table below, where by the availability of BONFIGLIOLI RIDUTTORI products is highlighted in grey.

(C 3)

Group	I		II					
	Mines, firedamp		Other potentially explosive areas (gas, dust)					
Category	M1	M2	1		2		3	
Atmosphere <sup>(1)</sup>			G	D	G	D	G	D
Zone			0	20	1	21	2	22
Type of protection gear unit					c, k	c, k		

<sup>(1)</sup> G = gas      D = dust

This catalogue describes BONFIGLIOLI RIDUTTORI **gear units**, intended for use in potentially explosive atmospheres, with limitation to categorie 2.

The products described here in conform to the minimum safety requirements of European Directive 2014/34/EU, which is part of the directives known as ATEX (ATmosphères EXplosibles).

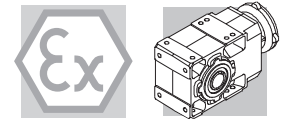
#### 46.5 Declaration of conformity

The Declaration of Conformity, is the document which attests to the conformity of the product to Directive 2014/34/EU.

The validity of the Declaration is bound to observance of the instructions given in the User, Installation and Service Manual for safe use of the product throughout its service life.

This can be downloaded from [www.bonfiglioli.com](http://www.bonfiglioli.com) where the manual is available in PDF format in a number of languages.

The instructions regarding ambient conditions are of particular importance inasmuch as failure to observe them during operation of the product renders the certificate null and void. In case of doubt regarding the validity of the certificate of conformity, contact the BONFIGLIOLI RIDUTTORI technical department.




**47 SELECTION**

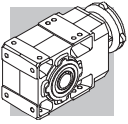
Some fundamental data are necessary to assist the correct selection of a gearbox or gear unit with IEC motor interface. The table below briefly sums up this information.

To simplify selection, a copy of this form, duly filled in, can be forwarded to our Technical Service which will select the most suitable drive unit for your application.

(C 4)

 <b>Bonfiglioli</b> <small>power, control and green solutions</small>		<b>TECHNICAL DATA REQUIRED FOR THE SELECTION OF GEARBOXS A SERIES</b>				Nr:
						Date:
						Rev_
						Date:
<b>A ) GENERAL DATA</b>						
#	1	Company / Customer				
#	2	Contact				
#	3	Branch / Distributor				
#	4	Order quantity				
#	5	Delivery time				
<b>B ) ELECTRIC MOTOR</b>						
#	6	Motor Type				
#	7	$P_{n1}$ Rated motor Power		[kW]		
#	8	$P_{r1}$ Motor power demand		[kW]		
#	9	$n_1$ Input speed		[min <sup>-1</sup> ]		
#	10	No. of Poles				
<b>C ) GEARBOX</b>						
#	11	Gearbox configuration				
#	12	$i$ Gear ratio				
#	13	$n_1$ Input speed		[min <sup>-1</sup> ]		
#	14	$M_{r2}$ Output torque demand		[Nm]		
#	15	$f_s$ Service factor demand				
#	16	Rotation of the output shaft [frontal view]:	<b>CW</b>	<b>CCW</b>		
#	17	$L_{10H}$ Bearings lifetime		[h]		
#	18	Gears lifetime		[h]		
#	19	$SF_{min}$ Safety for tooth root stress		standard reference (ISO preferred)		
#	20	$SH_{min}$ Safety for flank pressure		standard reference (ISO preferred)		
<b>D ) ADDITIONAL LOADS</b>						
#	21	$R_{c2}$ Radial load on output shaft		[N]	Orientation [°]	
#	22	$x_2$ Load application distance from shaft shoulder		[mm]		
#	23	$R_{c1}$ Radial load on input shaft		[N]	Orientation [°]	
#	24	$x_1$ Load application distance from shaft shoulder		[mm]		
#	25	$A_{n2}$ Thrust load on output shaft (+ / -)		[N]	+ = push	
#	26	$A_{n1}$ Thrust load on input shaft (+ / -)		[N]	- = pull	
<b>E ) APPLICATION</b>						
#	27	Type of application				
#	28	Duty cycle	Time phase	Gearbox output torque	Gearbox output speed	
			%	[Nm]	[min <sup>-1</sup> ]	
			****	****		
			****	****		
			****	****		
#	29	Notes about Duty Cycle:				
#	30	Rating according FEM class	T-	L-	M-	
#	31	Degree of intermittence		[%]		
#	32	$t_a$ Ambient temperature range		[°C]		
#	33	Altitude a.s.l.		[m]		
#	34	Type of ambient	small indoor space	large indoor space	outdoor	
<b>F ) NOTES</b>						
#	35	Notes and additional Customer requirements:				

# Mandatory for the selection



## 48 INSTALLATION, USE AND MAINTENANCE



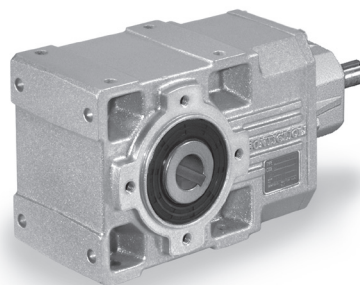
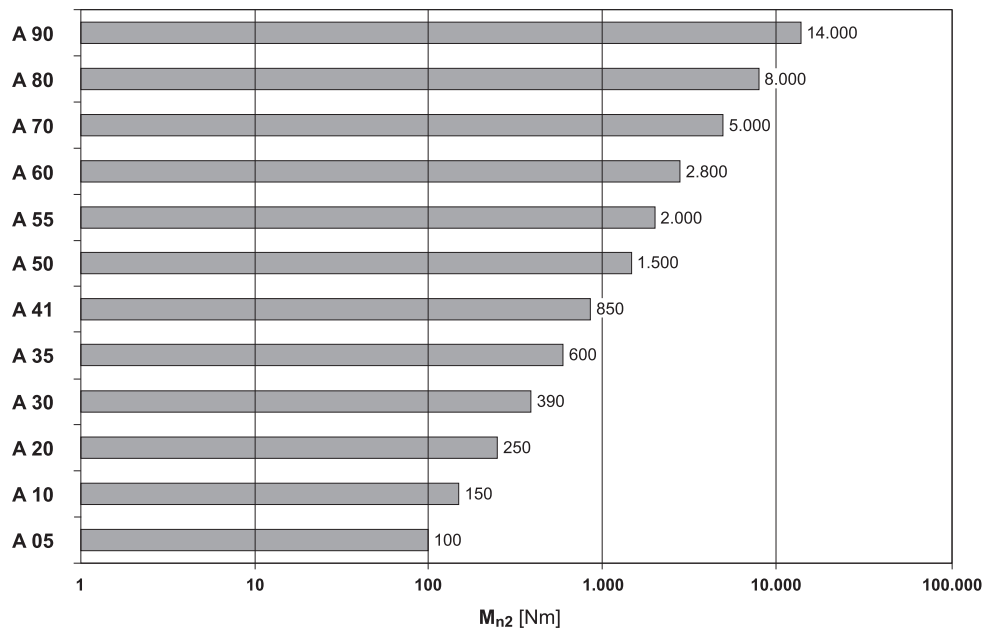
All the instructions for installation, use and maintenance of the product are given in the unit's Manual. This can be downloaded from [www.bonfiglioli.com](http://www.bonfiglioli.com) where the manual is available in PDF format in a number of languages.

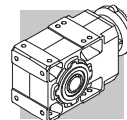
This document must be kept in a suitable place, in the vicinity of the installed gear unit, as a reference for all persons authorised to work with or on the product throughout its service life.

## 49 CONSTRUCTION OF ATEX-SPECIFIED EQUIPMENT

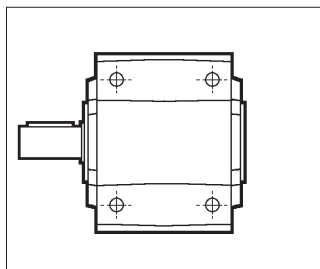
- Equipped with service plugs for periodic lubricant level checks.
- Equipped with vent caps with anti-intrusion valve.
- Factory-charged with lubricant (synthetic oil), depending on the mounting position specified in the order.
- Fluoro elastomer seal rings as standard.
- No plastic component parts..
- Nameplate indication of the product category and type of protection.
- Components operable at above the operating temperature.
- Temperature indicator supplied along with each unit.

(C 5)



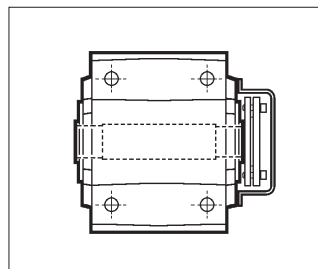


50 VERSIONS



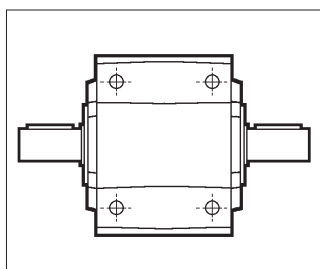
**UR**  
Single extension  
output shaft

A 10 ... A 90



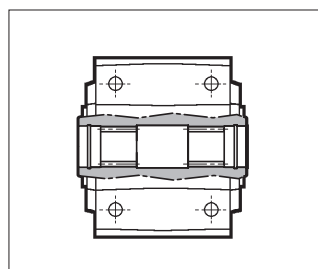
**US**  
Hollow output shaft  
and shrink disc

A 05 ... A 90



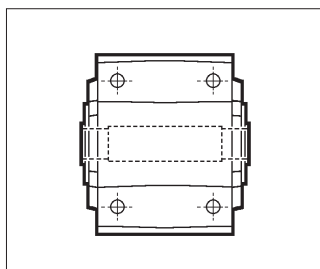
**UD**  
Double extended  
output shaft

A 10 ... A 90



**UV**  
Splined hollow  
shaft DIN 5480

A 20 ... A 60



**UH**  
Hollow output shaft  
and keyway

A 05 ... A 90

Basic versions with bolted flange

The sketches show the applicable flanges to the basic versions and their positions, designated with either ① or ② .

**UR F1...**

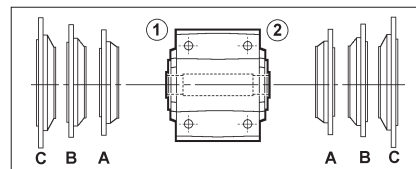
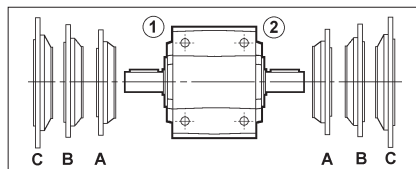
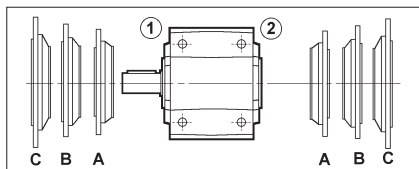
**UR F2...**

**UD F1...**

**UD F2...**

**UH... F1...**

**UH... F2...**

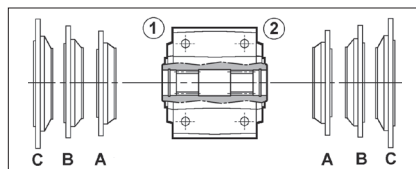
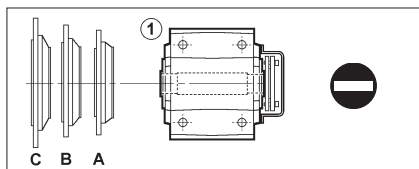


**US F1...**

**US F2...**

**UV F1...**

**UV F2...**





**51 DESIGNATION**

GEAR UNIT

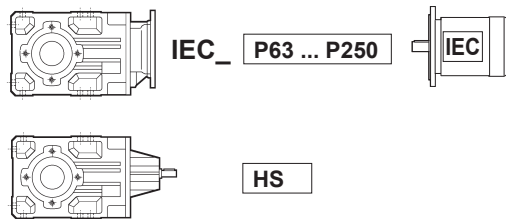
**A 50 3 UH50 F1A 99.5 P90 B3 EX**

OPTIONS

MOUNTING POSITION

**B3** (Standard), **B6, B7, B8, VA, VB**

INPUT CONFIGURATION



GEAR RATIO

OUTPUT FLANGE SIZE AND POSITION

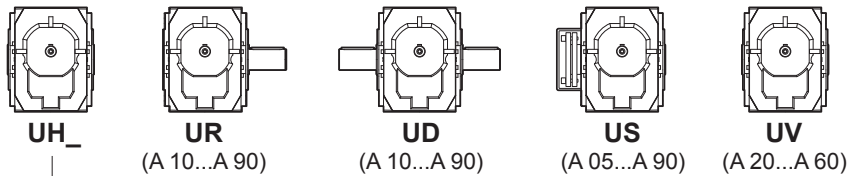
(specify only if requested)

**F** = Flanged version

**1, 2** = Flange position

**A, B, C** = Flange size

VERSION



A 05	A 10	A 20	A 30	A 35	A 41	A 50	A 55	A 60	A 70	A 80	A 90
UH25	UH25	UH30	UH35	UH40	UH45	UH50	UH60	UH60	UH70	UH80	UH90
—	UH30	UH35	UH40	UH35	UH40	UH55	UH50	UH70	UH80	UH90	UH100

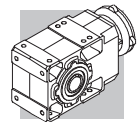
REDUCTIONS

**2** (A 05...A 60), **3** (A 20...A 90), **4** (A 50...A 90)

GEAR FRAME SIZE

**05, 10, 20, 30, 35, 41, 50, 55, 60, 70, 80, 90**

TYPE: **A** = Helical bevel gear units



## Gearbox options

### **EX**

The gear unit can be installed in zones 1 and 21 (categories 2G and 2D).  
The temperature class is T4 (max. 135 °C).

## CERTIFICATES

### **AC - Certificate of compliance**

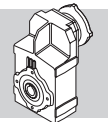
The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

### **CC - Inspection certificate**

The document entails checking on order compliance, the visual inspection of external conditions and of mating dimensions. Checking on main functional parameters in unloaded conditions is also performed along with oil seal proofing, both in static and in running conditions. Units inspected are sampled within the shipping batch and marked individually.

## 52 OTHERS INFORMATION ABOUT GEARBOX AND GEARMOTOR

Mounting positions, technical data, motor availability, moments of inertia and dimensions of **A-EX (Atex)** series don't change among equivalent **A** product series. All of these information can be obtained in the related chapters of this catalogue.



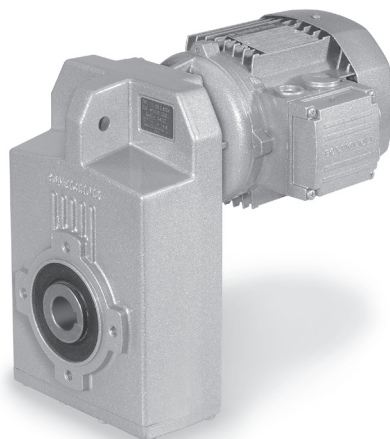
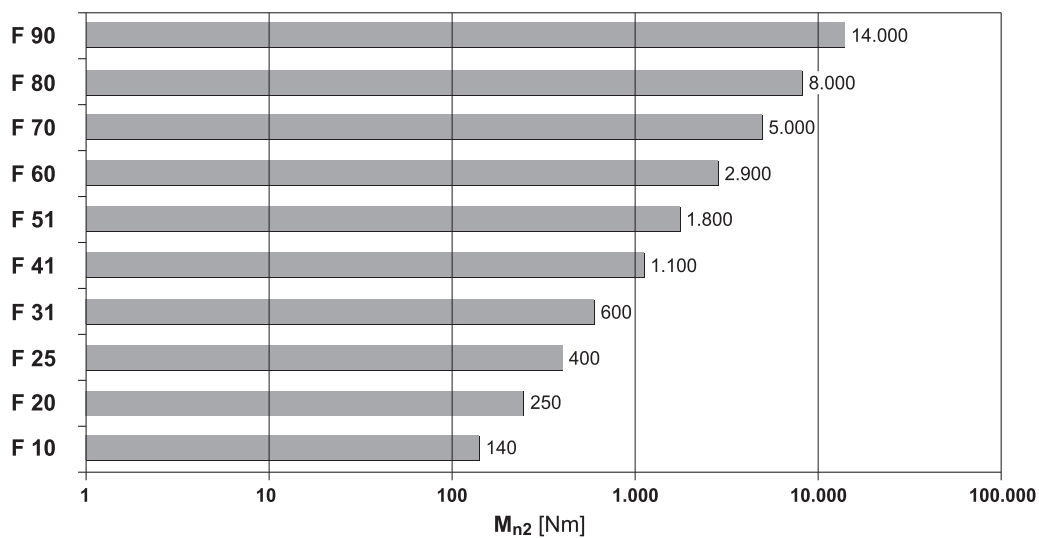
## SHAFT MOUNTED GEAR UNITS SERIES F

### 53 DESIGN FEATURES

The main design characteristics are:

- modularity
- space effectiveness
- universal mounting
- high efficiency
- quiet operation
- gears in hardened and case-hardened steel
- bare aluminium housing for sizes 10, 20 and 25,  
high strength painted cast-iron housings for larger frame sizes.

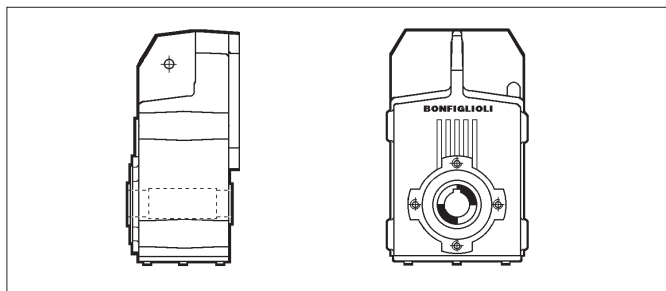
(D 44)







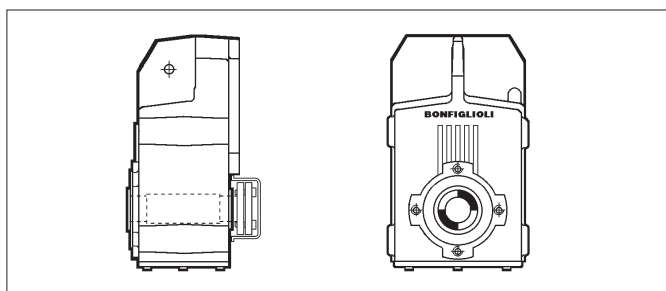
## 54 VERSIONS



**H**

Hollow output shaft and keyway

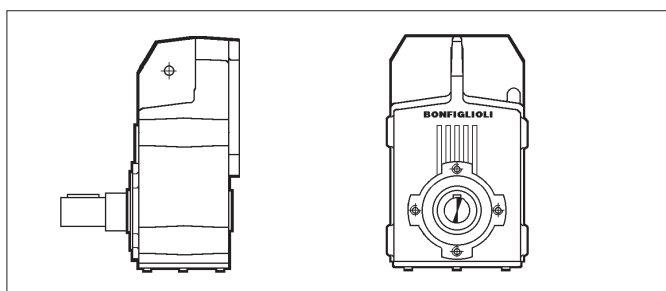
F 10 ... F 90



**S**

Hollow output shaft and shrink disc

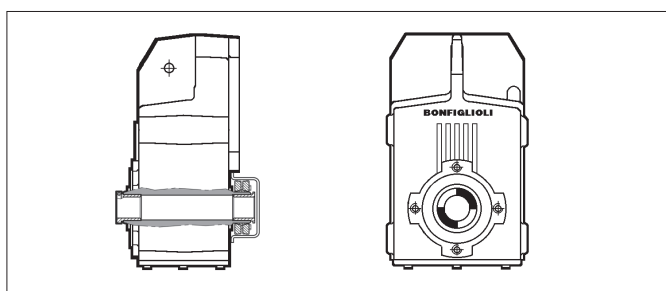
F 10 ... F 90



**R**

Solid output shaft

F 10 ... F 90



**QF (Quick-fit)**

Hollow shaft with adapter bushings and shrink disc

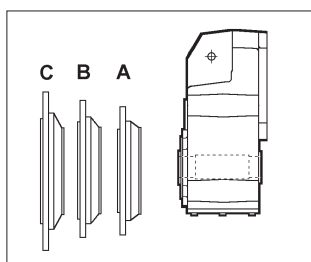
F 10 ... F 60

M <sub>n2 max</sub> [Nm]	
F 25 QF30	350
F 41 QF42	850
F 41 QF45	1000
F 51 QF50	1750

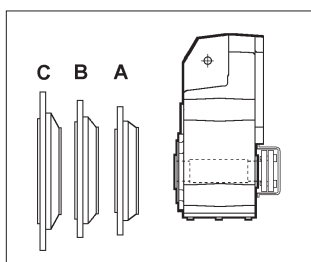
### Basic versions with bolted flange

The sketches show the applicable flanges to the basic versions.

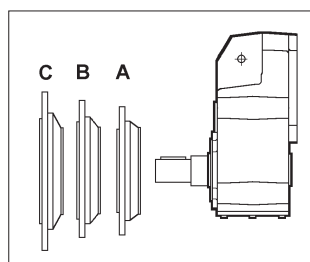
**H... F...**



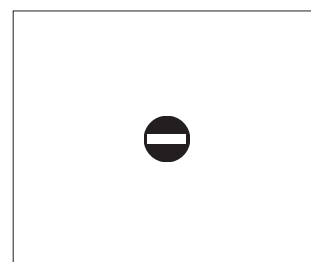
**S F...**

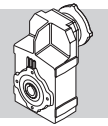


**R F...**



**QF...**





**55 DESIGNATION**

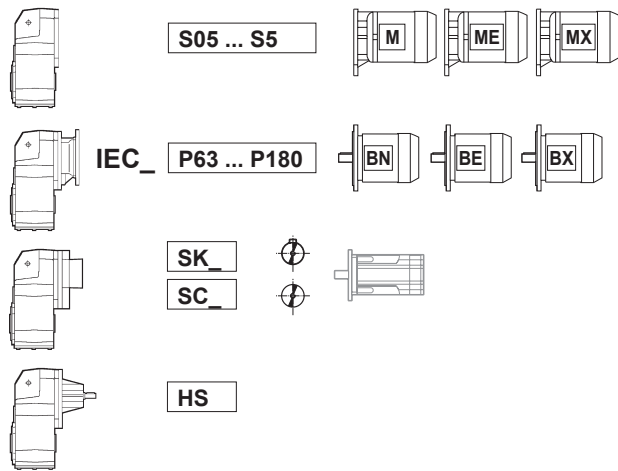
GEAR UNIT

**F 10 2 H30 FA 9.8 S2 H5 .....**

OPTIONS

MOUNTING POSITION  
H1 (Default), H2, H3, H4, H5, H6

INPUT CONFIGURATION

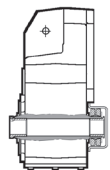
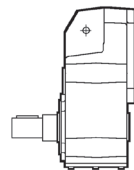
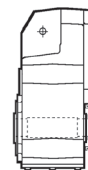
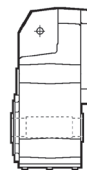


GEAR RATIO

OUTPUT FLANGE SIZE AND POSITION (specify only if requested)

**F** = Flanged version  
**A, B, C** = Flange size

VERSION



	<b>H</b>											<b>S</b>	<b>R</b>	<b>QF</b>
	F 10	F 20	F 25	F 31	F 41	F 51	F 60	F 70	F 80	F 90		(F 10...F 90)	(F 10...F 90)	(F 10...F 60)
Standard	<b>H25</b>	<b>H30</b>	<b>H35</b>	<b>H35</b>	<b>H40</b>	<b>H50</b>	<b>H60</b>	<b>H80</b>	<b>H90</b>	<b>H100</b>				
Alternative	H30	H35	H40	H40	H45	H55	H70	H70	H80	H90		← Alternative diameters available on request		

REDUCTIONS

**2** (F 10...F 51), **3** (F 20...F 90), **4** (F 31...F 90)

GEAR FRAME SIZE

**10, 20, 25, 31, 41, 51, 60, 70, 80, 90**

TYPE **F** = helical shaft-mounted gear unit



MOTOR

BRAKE

**M 1LA 4 230/400-50 IP54 CLF ..... W FD 7.5 R SB 220 SA .....**

OPTIONS

BRAKE  
SUPPLY

RECTIFIER TYPE  
AC/DC  
**NB, SB, NBR, SBR**

BRAKE HAND RELEASE  
**R, RM**

BRAKE TORQUE

BRAKE TYPE  
**FD** (d.c. brake)  
**FA** (a.c. brake)

TERMINAL BOX POSITION  
**W** (default), **N, E, S**

MOTOR MOUNTING  
— (compact motor)  
**B5** (IEC - motor)

INSULATION CLASS  
**CL F** standard  
**CL H** option

DEGREE OF PROTECTION  
**IP55** standard (IP54 - brake motor)

VOLTAGE - FREQUENCY

POLE NUMBER  
**2, 4, 6, 2/4, 2/6, 2/8, 2/12, 4/6, 4/8**

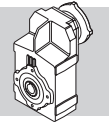
MOTOR SIZE  
**0B ... 5LA** (compact motor)  
**63A ... 180L** (IEC motor)

MOTOR TYPE

**MX** = compact 3-phase, class IE3  
**BX** = IEC 3-phase, class IE3

**ME** = compact 3-phase, class IE2  
**BE** = IEC 3-phase, class IE2

**M** = compact 3-phase  
**BN** = IEC 3-phase



## 55.1 Gearbox options

### AL, AR

On request the gear unit can be provided complete with a backstop device allowing the output shaft to rotate only in the direction specified at the time of ordering.

The following table shows the gearboxes in which the anti-run back device can be installed.

(D 45)

F 31 2*	F 41 2 ● (6.7; 10.8)					
F 31 3*	F 41 3	F 51 3	F 60 3	F 70 3	F 80 3	F 90 3
		F 51 4	F 60 4	F 70 4	F 80 4	F 90 4

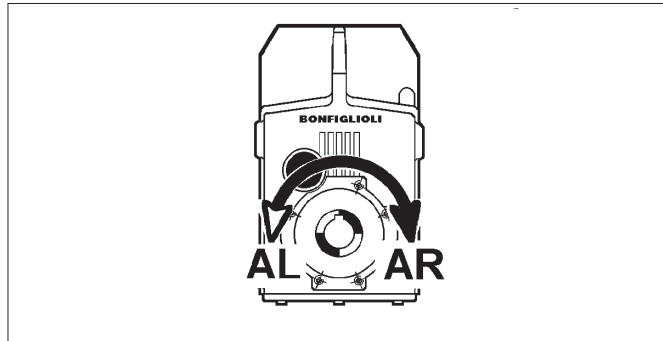
\* The supply of the backstop will ban the configuration of servomotor adapters type S\_60A, S\_60B, S\_80A.

When ordering the gear unit, the direction of free rotation must be specified through either the AR or the AL option (Table D46).



N.B. When the anti-run back device operates very frequently make sure that the torque backdriving the gearbox does not exceed 70% of the rated torque  $M_{n2}$  for the captioned gear unit.

(D 46)



### SO

Gear units F 10 through F 41 usually factory filled with oil, to be supplied unlubricated.

### LO

Gearboxes F 51 through F 90, usually supplied without oil, to be supplied with synthetic oil currently used by BONFIGLIOLI RIDUTTORI and filled according to the mounting position specified.

### DV

Dual oil seals on input shaft. (Only available for integral gearmotors).

### VV

Oil seal in Fluoro elastomer compound on input shaft.



## PV

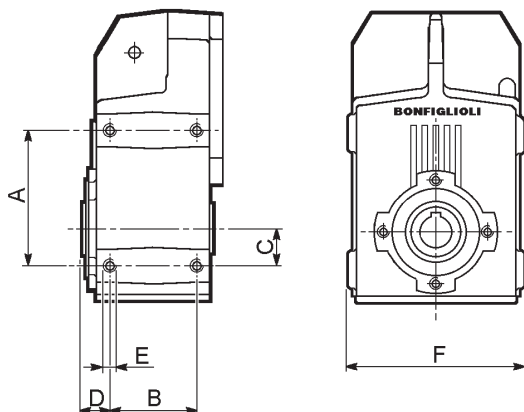
Both input and output shafts feature oil seal in Fluoro elastomer compound.

## FL

Gear units F 10...F 41 can be side machined and tapped by specifying the FL option.

Mounting dimensions relevant to the FL option are given in the following chart. Gear units type F 51 through F 90 are side machined and tapped as standard.

(D 47)



	A	B	C	D	E	F
<b>F 10</b>	115	60	35	21.25	M8x16	163
<b>F 20</b>	130	70	40	26.5	M10x20	181
<b>F 25</b>	130	70	40	27.5	M10x20	181
<b>F 31</b>	147	80	45	30	M12x20	203
<b>F 41</b>	190	95	60	32.5	M12x22	235

## SURFACE PROTECTION

When no specific protection class is requested, the painted (ferrous) surfaces of gearboxes are protected to at least corrosivity class C2 (UNI EN ISO 12944-2). For improved resistance to atmospheric corrosion, gearboxes can be delivered with **C3** and **C4** surface protection, obtained by painting the complete gearbox.

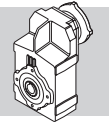
(D 48)

<b>SURFACE PROTECTION</b>	Typical environments	Maximum surface temperature	Corrosivity class according to UNI EN ISO 12944-2
<b>C3</b>	Urban and industrial environments with up to 100% relative humidity (medium air pollution)	120°C	C3
<b>C4</b>	Industrial areas, coastal areas, chemical plant, with up to 100% relative humidity (high air pollution)	120°C	C4

Gearboxes with optional protection to class **C3** or **C4** are available in a choice of colours.

If no specific colour is requested (see the "PAINTING" option) gearboxes are finished in RAL 7042.

Gearboxes can also be supplied with surface protection for corrosivity class **C5** according to UNI EN ISO 12944-2. Contact our Technical Service for further details.



## PAINTING

Gearboxes with optional protection to class C3 or C4 are available in the colours listed in the following table.

(D 49)

PAINTING	Colour	RAL number
<b>RAL7042*</b>	Traffic Grey A	7042
<b>RAL5010</b>	Gentian Blue	5010
<b>RAL9005</b>	Jet Black	9005
<b>RAL9006</b>	White Aluminium	9006
<b>RAL9010</b>	Pure White	9010

\* Gearboxes are supplied in this standard colour if no other colour is specified.

NOTE – “PAINTING” options can only be specified in conjunction with “SURFACE PROTECTION” options.

## CERTIFICATES

### AC - Certificate of compliance

The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

### CC - Inspection certificate

The document entails checking on order compliance, the visual inspection of external conditions and of mating dimensions. Checking on main functional parameters in unloaded conditions is also performed along with oil seal proofing, both in static and in running conditions. Units inspected are sampled within the shipping batch and marked individually.

## 55.2 Accessories

See chapter 65 of this catalogue.

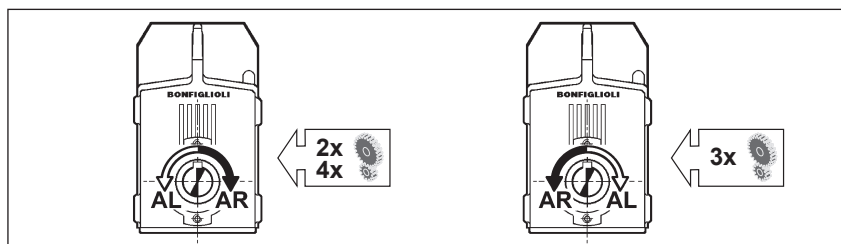


### 55.3 Motor options

#### AL, AR

A backstop device on the motor itself, as described in the electric motors section of this catalogue, is available for gearmotors with integral M, ME or MX Series motors. The following table shows the direction of free rotation of the gearbox, on the basis of which the correct option must be selected.

(D 50)



For further information on options, consult the electric motors section.

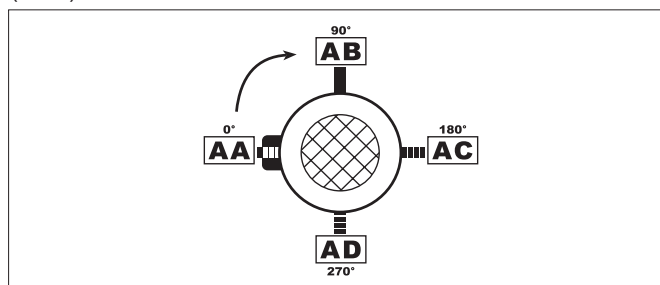
## 56 MOUNTING POSITION AND TERMINAL BOX ANGULAR LOCATION

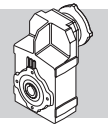
Location of motor terminal box can be specified by viewing the motor from the fan side; standard location is shown in black (W).

#### Angular location of the brake release lever.

Unless otherwise specified, brake motors have the manual device side located, 90° apart from terminal box. Different angles can be specified through the relevant options available.

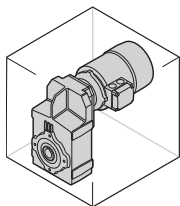
(D 51)



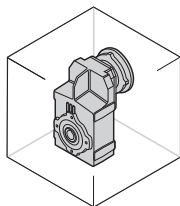


# F ...

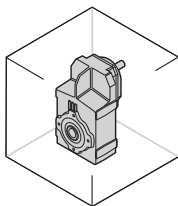
## H1



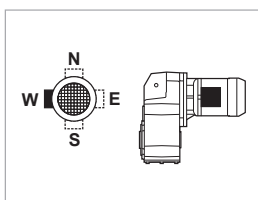
\_S



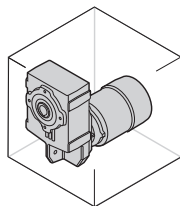
\_P(IEC) \_SK / \_SC



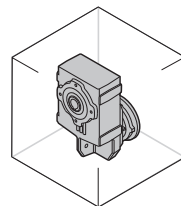
\_HS



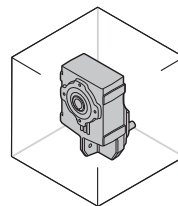
## H2



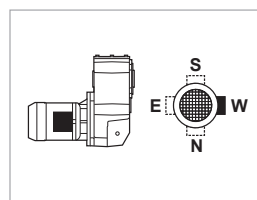
\_S



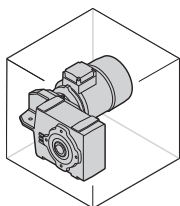
\_P(IEC) \_SK / \_SC



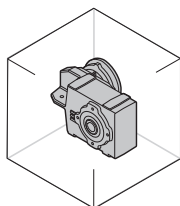
\_HS



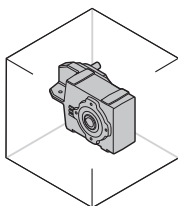
## H3



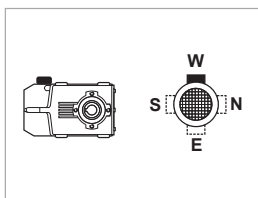
\_S



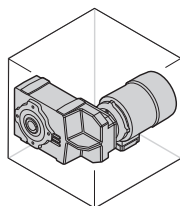
\_P(IEC) \_SK / \_SC



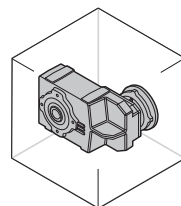
\_HS



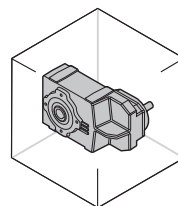
## H4



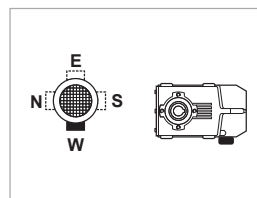
\_S



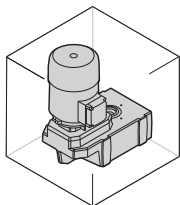
\_P(IEC) \_SK / \_SC



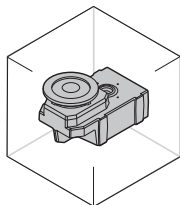
\_HS



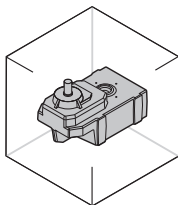
## H5



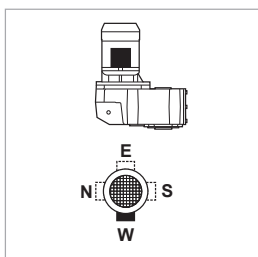
\_S



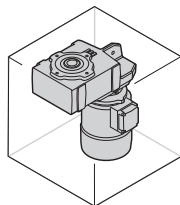
\_P(IEC) \_SK / \_SC



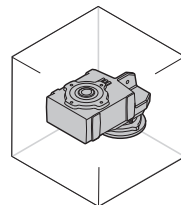
\_HS



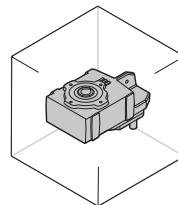
## H6



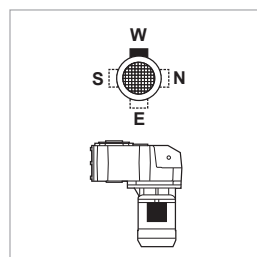
\_S



\_P(IEC) \_SK / \_SC



\_HS



W = Default





## 57 OVERHUNG LOADS

External transmissions keyed onto input and/or output shaft generate loads that act radially onto same shaft.

Resulting shaft loading must be compatible with both the bearing and the shaft capacity. Namely shaft loading ( $R_{c1}$  for input shaft,  $R_{c2}$  for output shaft), must be equal or lower than admissible overhung load capacity for shaft under study ( $R_{n1}$  for input shaft,  $R_{n2}$  for output shaft). OHL capability listed in the rating chart section.

In the formulas given below, index (1) applies to parameters relating to input shaft, whereas index (2) refers to output shaft.

The load generated by an external transmission can be calculated with close approximation by the following equations:

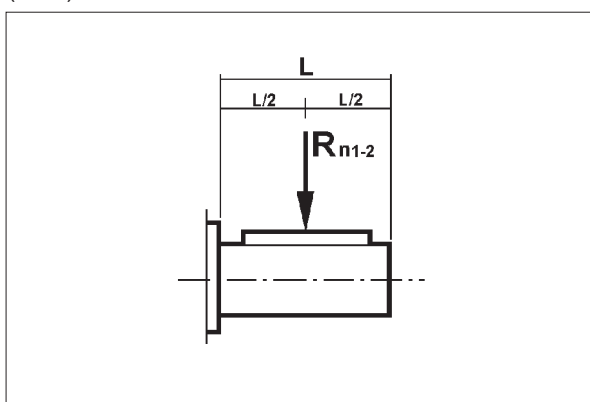
$$R_{c1} [N] = \frac{2000 \cdot M_1 [Nm] \cdot K_r}{d [mm]} \quad ; \quad R_{c2} [N] = \frac{2000 \cdot M_2 [Nm] \cdot K_r}{d [mm]} \quad (35)$$

(D 52)

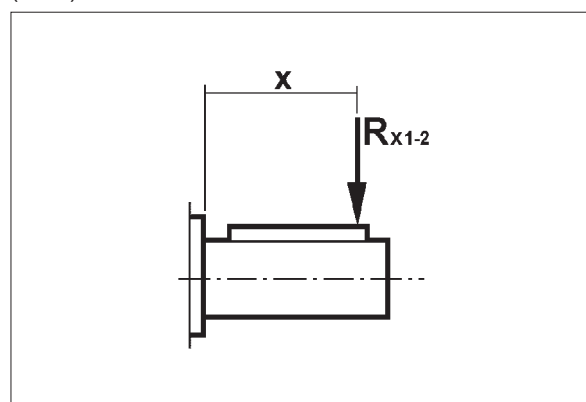
$M_1$ [Nm]	Torque applied to input shaft	$K_r = 1,25$	Gear transmission
$M_2$ [Nm]	Torque drawn at output shaft	$K_r = 1,5$	V-belt transmission
$d$ [mm]	Pitch diameter of element keyed onto shaft	$K_r = 2,0$	Flat belt transmission
$K_r = 1$	Chain transmission		

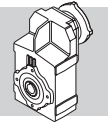
Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(D 53)



(D 54)





**a) Load applied at midpoint of shaft, tab. (D53)**

A comparison of shaft loading with catalogue OHL ratings should verify the following condition:

$$R_{c1} \leq R_{n1} \quad [\text{input shaft}]$$

or

$$R_{c2} \leq R_{n2} \quad [\text{output shaft}]$$

**b) Load off the midpoint tab. (D54)**

When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.

Revised permissible overhung loads  $R_{x1}$  (input) and  $R_{x2}$  (output) are calculated respectively from original rated values  $R_{n1}$  and  $R_{n2}$  through factor:

$$\frac{a}{b+x} \quad (36)$$

(D 55)

	Load location factors					
	Output shaft			Input shaft		
	a	b	c	a	b	c
<b>F 10 2</b>	123	100.5	450	21	1	300
<b>F 20 2</b>	145	115	600	40	20	350
<b>F 20 3</b>	145	115	600	21	1	300
<b>F 25 2 - F 25 3</b>	157.5	127.5	800	40	20	350
<b>F 25 4</b>	157.5	127.5	800	21	1	300
<b>F 31 2 - F 31 3</b>	165	135	850	38.5	18.5	350
<b>F 31 4</b>	165	135	850	21	1	300
<b>F 41 2 - F 41 3</b>	191.5	151.5	1000	49.5	24.5	450
<b>F 41 4</b>	191.5	151.5	1000	40	20	350
<b>F 51 2 - F 51 3</b>	233.5	183.5	1300	49.5	24.5	450
<b>F 51 4</b>	233.5	183.5	1300	38.5	18.5	350
<b>F 60 3</b>	258.5	198.5	1100	55.5	25.5	600
<b>F 60 4</b>	258.5	198.5	1100	49.5	24.5	450
<b>F 70 3</b>	342	277	1600	86	31	1000
<b>F 70 4</b>	342	277	1600	49.5	24.5	450
<b>F 80 3</b>	386.5	301.5	1800	86	31	1000
<b>F 80 4</b>	386.5	301.5	1800	49.5	24.5	450
<b>F 90 3</b>	458.5	353.5	2400	116	46	1400
<b>F 90 4</b>	458.5	353.5	2400	49.5	24.5	450



Verification procedure is described here after.

### INPUT SHAFT

1. Calculate:

$$R_{x1} = R_{n1} \cdot \frac{a}{b+x} \quad (37)$$

N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (38)$$

Finally, the following condition must be verified:

$$R_{c1} \leq R_{x1} \quad (39)$$

### OUTPUT SHAFT

1. Calculate:

$$R_{x2} = R_{n2} \cdot \frac{a}{b+x} \quad (40)$$

N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (41)$$

Finally, the following condition must be verified:

$$R_{c2} \leq R_{x2} \quad (42)$$



## 58 THRUST LOADS, $A_{n1}$ , $A_{n2}$

Permissible thrust loads on input [ $A_{n1}$ ] and output [ $A_{n2}$ ] shafts are obtained from the radial loading for the shaft under consideration [ $R_{n1}$ ] and [ $R_{n2}$ ] through the following equation:

$$\begin{aligned} A_{n1} &= R_{n1} \cdot 0.2 \\ A_{n2} &= R_{n2} \cdot 0.2 \end{aligned} \quad (43)$$


The thrust loads calculated through these formulas apply to thrust forces occurring at the same time as rated radial loads.

In the only case that no overhung load acts on the shaft the value of the admissible thrust load [ $A_n$ ] amounts to 50% of rated OHL [ $R_n$ ] on same shaft.

Where thrust loads exceed permissible value or largely prevail over radial loads, contact Bonfiglioli Riduttori for an in-depth analysis of the application.



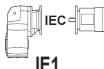



## 59 GEARMOTOR RATING CHARTS

 The selection of motors without brake takes into account the requirements of Regulation EC 640/2009 (see section **M** of this catalogue). When the motor rated power is below 0.75kW, BN/M motors can be provided.



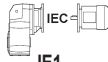

Considering that the Regulation EC 640/2009 shall not apply to the motors equipped with brake, the brakemotor selection takes into account BN/M motors only, without taking into account the rated power BX, BE, MX and ME brakemotors are available on request.

### 0.09 kW



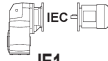

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1		 IE1	
0.40	1945	2.6	2188	35000			F704_2188 P63 BN63A6	435
0.50	1526	3.4	1717	35000			F704_1717 P63 BN63A6	435
0.62	1254	0.9	1411	8500	F414_1411 S05 M05A6	422	F414_1411 P63 BN63A6	423
0.73	1079	1.0	1213	8500	F414_1213 S05 M05A6	422	F414_1213 P63 BN63A6	423
0.81	971	1.1	1092	8500	F414_1092 S05 M05A6	422	F414_1092 P63 BN63A6	423
0.90	874	1.3	982.4	8500	F414_982.4 S05 M05A6	422	F414_982.4 P63 BN63A6	423
0.98	801	1.4	900.5	8500	F414_900.5 S05 M05A6	422	F414_900.5 P63 BN63A6	423
1.1	724	1.5	813.8	8500	F414_813.8 S05 M05A6	422	F414_813.8 P63 BN63A6	423
1.2	678	0.9	762.3	6500	F314_762.3 S05 M05A6	418	F314_762.3 P63 BN63A6	419
1.2	658	1.7	739.4	8500	F414_739.4 S05 M05A6	422	F414_739.4 P63 BN63A6	423
1.3	610	1.0	685.6	6500	F314_685.6 S05 M05A6	418	F314_685.6 P63 BN63A6	419
1.3	614	1.8	690.1	8500	F414_690.1 S05 M05A6	422	F414_690.1 P63 BN63A6	423
1.4	551	1.1	619.9	6500	F314_619.9 S05 M05A6	418	F314_619.9 P63 BN63A6	419
1.5	515	1.2	578.6	6500	F314_578.6 S05 M05A6	418	F314_578.6 P63 BN63A6	419
1.6	489	2.2	549.8	8500	F414_549.8 S05 M05A6	422	F414_549.8 P63 BN63A6	423
1.7	469	0.9	527.3	6500	F254_527.3 S05 M05A6	414	F254_527.3 P63 BN63A6	415
1.7	469	1.3	527.8	6500	F314_527.8 S05 M05A6	418	F314_527.8 P63 BN63A6	419
1.9	414	1.0	466.0	6500	F254_466.0 S05 M05A6	414	F254_466.0 P63 BN63A6	415
1.9	411	1.5	462.6	6500	F314_462.6 S05 M05A6	418	F314_462.6 P63 BN63A6	419
2.0	387	1.0	434.9	6500	F254_434.9 S05 M05A6	414	F254_434.9 P63 BN63A6	415
2.0	386	2.9	433.7	8500	F414_433.7 S05 M05A6	422	F414_433.7 P63 BN63A6	423
2.1	372	1.6	418.9	6500	F314_418.9 S05 M05A6	418	F314_418.9 P63 BN63A6	419
2.2	350	1.1	393.9	6500	F254_393.9 S05 M05A6	414	F254_393.9 P63 BN63A6	415
2.4	340	1.8	374.4	6500			F313_374.4 P63 BN63A6	419
2.6	302	2.0	332.8	6500			F313_332.8 P63 BN63A6	419
2.6	313	3.5	344.8	8500			F413_344.8 P63 BN63A6	423
2.8	288	0.9	316.9	4000	F203_316.9 S05 M05A6	410	F203_316.9 P63 BN63A6	411
3.0	267	2.2	293.8	6500			F313_293.8 P63 BN63A6	419
3.1	259	1.0	285.2	4000	F203_285.2 S05 M05A6	410	F203_285.2 P63 BN63A6	411
3.4	232	1.1	255.3	4000	F203_255.3 S05 M05A6	410	F203_255.3 P63 BN63A6	411
3.5	230	2.6	253.6	6500			F313_253.6 P63 BN63A6	419
3.9	207	2.9	228.2	6500			F313_228.2 P63 BN63A6	419
4.2	190	1.3	209.3	4000	F203_209.3 S05 M05A6	410	F203_209.3 P63 BN63A6	411
4.4	184	3.3	202.3	6500			F313_202.3 P63 BN63A6	419
4.8	168	1.5	184.9	4000	F203_184.9 S05 M05A6	410	F203_184.9 P63 BN63A6	411
5.1	157	1.6	172.6	4000	F203_172.6 S05 M05A6	410	F203_172.6 P63 BN63A6	411
5.6	142	1.8	156.3	4000	F203_156.3 S05 M05A6	410	F203_156.3 P63 BN63A6	411
6.7	123	2.0	132.2	4000	F202_132.2 S05 M05A6	410	F202_132.2 P63 BN63A6	411
6.9	118	1.2	127.1	2800	F102_127.1 S05 M05A6	406	F102_127.1 P63 BN63A6	407



## 0.09 kW



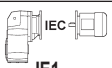

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
7.7	106	2.4	114.3	4000	F202_114.3 S05 M05A6	410	F202_114.3 P63 BN63A6	411
8.3	98	1.4	106.0	2800	F102_106.0 S05 M05A6	406	F102_106.0 P63 BN63A6	407
8.7	94	2.6	101.6	4000	F202_101.6 S05 M05A6	410	F202_101.6 P63 BN63A6	411
9.6	85	1.6	91.5	2800	F102_91.5 S05 M05A6	406	F102_91.5 P63 BN63A6	407
9.7	84	3.0	90.4	4000	F202_90.4 S05 M05A6	410	F202_90.4 P63 BN63A6	411
10.8	75	1.9	81.3	2800	F102_81.3 S05 M05A6	406	F102_81.3 P63 BN63A6	407
11.5	71	3.5	76.8	4000	F202_76.8 S05 M05A6	410	F202_76.8 P63 BN63A6	411
12.4	66	2.1	71.1	2800	F102_71.1 S05 M05A6	406	F102_71.1 P63 BN63A6	407
14.0	58	2.4	63.0	2800	F102_63.0 S05 M05A6	406	F102_63.0 P63 BN63A6	407
15.5	53	2.7	56.7	2800	F102_56.7 S05 M05A6	406	F102_56.7 P63 BN63A6	407
18.1	45	3.1	48.7	2800	F102_48.7 S05 M05A6	406	F102_48.7 P63 BN63A6	407
19.7	41	3.4	44.7	2800	F102_44.7 S05 M05A6	406	F102_44.7 P63 BN63A6	407
22.2	37	3.8	39.6	2800	F102_39.6 S05 M05A6	406	F102_39.6 P63 BN63A6	407
24.9	33	4.3	35.3	2800	F102_35.3 S05 M05A6	406	F102_35.3 P63 BN63A6	407
26.7	31	4.6	33.0	2800	F102_33.0 S05 M05A6	406	F102_33.0 P63 BN63A6	407
29.7	28	5.1	29.6	2800	F102_29.6 S05 M05A6	406	F102_29.6 P63 BN63A6	407
34	24	5.9	25.8	2800	F102_25.8 S05 M05A6	406	F102_25.8 P63 BN63A6	407
39	21	6.6	22.8	2800	F102_22.8 S05 M05A6	406	F102_22.8 P63 BN63A6	407
46	18	7.8	19.3	2800	F102_19.3 S05 M05A6	406	F102_19.3 P63 BN63A6	407
52	16	8.9	17.0	2800	F102_17.0 S05 M05A6	406	F102_17.0 P63 BN63A6	407
60	14	10.1	14.6	2700	F102_14.6 S05 M05A6	406	F102_14.6 P63 BN63A6	407
68	12	10.3	13.0	2600	F102_13.0 S05 M05A6	406	F102_13.0 P63 BN63A6	407
76	11	10.3	11.5	2500	F102_11.5 S05 M05A6	406	F102_11.5 P63 BN63A6	407
90	9	11.8	9.8	2370	F102_9.8 S05 M05A6	406	F102_9.8 P63 BN63A6	407
103	8	11.8	8.6	2270	F102_8.6 S05 M05A6	406	F102_8.6 P63 BN63A6	407
119	7	13.2	7.4	2160	F102_7.4 S05 M05A6	406	F102_7.4 P63 BN63A6	407

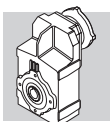
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n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
0.40	2623	1.9	2188	35000			F704_2188 P63 BN63B6	435
0.51	2058	2.5	1717	35000			F704_1717 P63 BN63B6	435
0.60	1742	2.9	2188	35000			F704_2188 P63 BN63A4	435
0.65	1607	3.1	2019	35000			F704_2019 P63 BN63A4	435
0.76	1368	2.1	1141	20000			F604_1141 P63 BN63B6	431
0.89	1178	0.9	982.4	8500	F414_982.4 S05 M05B6	422	F414_982.4 P63 BN63B6	423
0.96	1090	1.0	1411	8500	F414_1411 S05 M05A4	422	F414_1411 P63 BN63A4	423
1.1	938	1.2	1213	8500	F414_1213 S05 M05A4	422	F414_1213 P63 BN63A4	423
1.2	844	1.3	1092	8500	F414_1092 S05 M05A4	422	F414_1092 P63 BN63A4	423
1.4	759	1.4	982.4	8500	F414_982.4 S05 M05A4	422	F414_982.4 P63 BN63A4	423
1.5	696	1.6	900.5	8500	F414_900.5 S05 M05A4	422	F414_900.5 P63 BN63A4	423
1.6	643	0.9	831.6	6500	F314_831.6 S05 M05A4	418	F314_831.6 P63 BN63A4	419
1.7	629	1.7	813.8	8500	F414_813.8 S05 M05A4	422	F414_813.8 P63 BN63A4	423
1.8	589	1.0	762.3	6500	F314_762.3 S05 M05A4	418	F314_762.3 P63 BN63A4	419
1.8	571	1.9	739.4	8500	F414_739.4 S05 M05A4	422	F414_739.4 P63 BN63A4	423
2.0	530	1.1	685.6	6500	F314_685.6 S05 M05A4	418	F314_685.6 P63 BN63A4	419
2.0	533	2.1	690.1	8500	F414_690.1 S05 M05A4	422	F414_690.1 P63 BN63A4	423
2.2	479	1.3	619.9	6500	F314_619.9 S05 M05A4	418	F314_619.9 P63 BN63A4	419
2.3	456	0.9	589.7	6500	F254_589.7 S05 M05A4	414	F254_589.7 P63 BN63A4	415
2.3	447	1.3	578.6	6500	F314_578.6 S05 M05A4	418	F314_578.6 P63 BN63A4	419
2.5	425	2.6	549.8	8500	F414_549.8 S05 M05A4	422	F414_549.8 P63 BN63A4	423
2.6	408	1.0	527.3	6500	F254_527.3 S05 M05A4	414	F254_527.3 P63 BN63A4	415



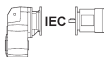



## 0.12 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IE1	
2.6	408	1.5	527.8	6500	F314_527.8 S05 M05A4	418	F314_527.8 P63 BN63A4	419
2.9	360	1.1	466.0	6500	F254_466.0 S05 M05A4	414	F254_466.0 P63 BN63A4	415
2.9	358	1.7	462.6	6500	F314_462.6 S05 M05A4	418	F314_462.6 P63 BN63A4	419
3.1	336	1.2	434.9	6500	F254_434.9 S05 M05A4	414	F254_434.9 P63 BN63A4	415
3.1	335	3.3	433.7	8500	F414_433.7 S05 M05A4	422	F414_433.7 P63 BN63A4	423
3.2	324	1.9	418.9	6500	F314_418.9 S05 M05A4	418	F314_418.9 P63 BN63A4	419
3.4	304	1.3	393.9	6500	F254_393.9 S05 M05A4	414	F254_393.9 P63 BN63A4	415
3.6	296	2.0	374.4	6500			F313_374.4 P63 BN63A4	419
4.1	263	1.5	333.1	6500	F253_333.1 S05 M05A4	414	F253_333.1 P63 BN63A4	415
4.1	263	2.3	332.8	6500			F313_332.8 P63 BN63A4	419
4.3	250	1.0	316.9	4000	F203_316.9 S05 M05A4	410	F203_316.9 P63 BN63A4	411
4.6	232	2.6	293.8	6500			F313_293.8 P63 BN63A4	419
4.7	225	1.1	285.2	4000	F203_285.2 S05 M05A4	410	F203_285.2 P63 BN63A4	411
4.7	228	1.8	288.1	6500	F253_288.1 S05 M05A4	414	F253_288.1 P63 BN63A4	415
5.3	202	1.2	255.3	4000	F203_255.3 S05 M05A4	410	F203_255.3 P63 BN63A4	411
5.3	202	2.0	256.1	6500	F253_256.1 S05 M05A4	414	F253_256.1 P63 BN63A4	415
5.3	200	3.0	253.6	6500			F313_253.6 P63 BN63A4	419
5.9	180	2.2	227.8	6500	F253_227.8 S05 M05A4	414	F253_227.8 P63 BN63A4	415
5.9	180	3.3	228.2	6500			F313_228.2 P63 BN63A4	419
6.5	165	1.5	209.3	4000	F203_209.3 S05 M05A4	410	F203_209.3 P63 BN63A4	411
7.0	153	2.6	193.6	6500	F253_193.6 S05 M05A4	414	F253_193.6 P63 BN63A4	415
7.3	146	1.7	184.9	4000	F203_184.9 S05 M05A4	410	F203_184.9 P63 BN63A4	411
7.7	138	2.9	174.2	6500	F253_174.2 S05 M05A4	414	F253_174.2 P63 BN63A4	415
7.8	136	1.8	172.6	4000	F203_172.6 S05 M05A4	410	F203_172.6 P63 BN63A4	411
8.6	123	2.0	156.3	4000	F203_156.3 S05 M05A4	410	F203_156.3 P63 BN63A4	411
8.7	123	3.2	155.9	6500	F253_155.9 S05 M05A4	414	F253_155.9 P63 BN63A4	415
9.4	113	3.5	143.0	6500	F253_143.0 S05 M05A4	414	F253_143.0 P63 BN63A4	415
10.2	107	2.3	132.2	4000	F202_132.2 S05 M05A4	410	F202_132.2 P63 BN63A4	411
10.6	103	1.4	127.1	2800	F102_127.1 S05 M05A4	406	F102_127.1 P63 BN63A4	407
11.8	92	2.7	114.3	4000	F202_114.3 S05 M05A4	410	F202_114.3 P63 BN63A4	411
12.7	86	1.6	106.0	2800	F102_106.0 S05 M05A4	406	F102_106.0 P63 BN63A4	407
13.3	82	3.0	101.6	4000	F202_101.6 S05 M05A4	410	F202_101.6 P63 BN63A4	411
14.8	74	1.9	91.5	2800	F102_91.5 S05 M05A4	406	F102_91.5 P63 BN63A4	407
14.9	73	3.4	90.4	4000	F202_90.4 S05 M05A4	410	F202_90.4 P63 BN63A4	411
16.6	66	2.1	81.3	2800	F102_81.3 S05 M05A4	406	F102_81.3 P63 BN63A4	407
19.0	57	2.4	71.1	2800	F102_71.1 S05 M05A4	406	F102_71.1 P63 BN63A4	407
21.4	51	2.8	63.0	2800	F102_63.0 S05 M05A4	406	F102_63.0 P63 BN63A4	407
23.8	46	3.1	56.7	2800	F102_56.7 S05 M05A4	406	F102_56.7 P63 BN63A4	407
27.7	39	3.6	48.7	2800	F102_48.7 S05 M05A4	406	F102_48.7 P63 BN63A4	407
30	36	3.9	44.7	2800	F102_44.7 S05 M05A4	406	F102_44.7 P63 BN63A4	407
34	32	4.4	39.6	2800	F102_39.6 S05 M05A4	406	F102_39.6 P63 BN63A4	407
38	29	4.9	35.3	2800	F102_35.3 S05 M05A4	406	F102_35.3 P63 BN63A4	407
41	27	5.3	33.0	2800	F102_33.0 S05 M05A4	406	F102_33.0 P63 BN63A4	407
46	24	5.9	29.6	2800	F102_29.6 S05 M05A4	406	F102_29.6 P63 BN63A4	407
52	21	6.7	25.8	2800	F102_25.8 S05 M05A4	406	F102_25.8 P63 BN63A4	407
59	18	7.6	22.8	2700	F102_22.8 S05 M05A4	406	F102_22.8 P63 BN63A4	407
70	16	8.7	19.3	2560	F102_19.3 S05 M05A4	406	F102_19.3 P63 BN63A4	407
80	14	9.3	17.0	2450	F102_17.0 S05 M05A4	406	F102_17.0 P63 BN63A4	407
92	12	10.1	14.6	2340	F102_14.6 S05 M05A4	406	F102_14.6 P63 BN63A4	407
104	11	9.9	13.0	2250	F102_13.0 S05 M05A4	406	F102_13.0 P63 BN63A4	407
117	9	10.3	11.5	2160	F102_11.5 S05 M05A4	406	F102_11.5 P63 BN63A4	407
138	8	11.3	9.8	2050	F102_9.8 S05 M05A4	406	F102_9.8 P63 BN63A4	407
157	7	11.8	8.6	1970	F102_8.6 S05 M05A4	406	F102_8.6 P63 BN63A4	407
182	6	12.7	7.4	1870	F102_7.4 S05 M05A4	406	F102_7.4 P63 BN63A4	407





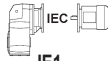

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n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC	
0.41	3804	1.3	2188	35000	F704_2188 S1 M1SC6	434	F704_2188 P71 BN71A6	435
0.45	3511	1.4	2019	35000	F704_2019 S1 M1SC6	434	F704_2019 P71 BN71A6	435
0.45	3455	2.3	1987	45000	F804_1987 S1 M1SC6	437	F804_1987 P71 BN71A6	438
0.49	3189	2.5	1834	45000	F804_1834 S1 M1SC6	437	F804_1834 P71 BN71A6	438
0.52	2985	1.7	1717	35000	F704_1717 S1 M1SC6	434	F704_1717 P71 BN71A6	435
0.53	2972	2.7	1709	45000	F804_1709 S1 M1SC6	437	F804_1709 P71 BN71A6	438
0.57	2756	1.8	1585	35000	F704_1585 S1 M1SC6	434	F704_1585 P71 BN71A6	435
0.57	2744	2.9	1578	45000	F804_1578 S1 M1SC6	437	F804_1578 P71 BN71A6	438
0.61	2576	1.9	1481	35000	F704_1481 S1 M1SC6	434	F704_1481 P71 BN71A6	435
0.65	2406	3.3	1384	45000	F804_1384 S1 M1SC6	437	F804_1384 P71 BN71A6	438
0.66	2378	2.1	1368	35000	F704_1368 S1 M1SC6	434	F704_1368 P71 BN71A6	435
0.76	2055	2.4	1182	35000	F704_1182 S1 M1SC6	434	F704_1182 P71 BN71A6	435
0.77	2030	0.9	1168	12000	F514_1168 S1 M1SC6	426	F514_1168 P71 BN71A6	427
0.79	1985	1.5	1141	20000	F604_1141 S1 M1SC6	430	F604_1141 P71 BN71A6	431
0.83	1897	2.6	1091	35000	F704_1091 S1 M1SC6	434	F704_1091 P71 BN71A6	435
0.84	1861	1.0	1070	12000	F514_1070 S1 M1SC6	426	F514_1070 P71 BN71A6	427
0.85	1832	1.6	1054	20000	F604_1054 S1 M1SC6	430	F604_1054 P71 BN71A6	431
0.92	1703	1.1	979.4	12000	F514_979.4 S1 M1SC6	426	F514_979.4 P71 BN71A6	427
0.92	1694	3.0	974.4	35000	F704_974.4 S1 M1SC6	434	F704_974.4 P71 BN71A6	435
0.94	1667	1.7	958.9	20000	F604_958.9 S1 M1SC6	430	F604_958.9 P71 BN71A6	431
1.0	1540	1.2	885.5	12000	F514_885.5 S1 M1SC6	426	F514_885.5 P71 BN71A6	427
1.0	1539	1.9	885.1	20000	F604_885.1 S1 M1SC6	430	F604_885.1 P71 BN71A6	431
1.0	1564	3.2	899.4	35000	F704_899.4 S1 M1SC6	434	F704_899.4 P71 BN71A6	435
1.1	1437	1.3	826.4	12000	F514_826.4 S1 M1SC6	426	F514_826.4 P71 BN71A6	427
1.1	1430	3.5	822.2	35000	F704_822.2 S1 M1SC6	434	F704_822.2 P71 BN71A6	435
1.2	1286	0.9	739.4	8500	F414_739.4 S1 M1SC6	422	F414_739.4 P71 BN71A6	423
1.2	1286	0.9	739.4	8500	F414_739.4 S1 M1SC6	422	F414_739.4 P71 BN71A6	423
1.3	1200	0.9	690.1	8500	F414_690.1 S1 M1SC6	422	F414_690.1 P71 BN71A6	423
1.3	1200	0.9	690.1	8500	F414_690.1 S1 M1SC6	422	F414_690.1 P71 BN71A6	423
1.3	1165	0.9	982.4	8500	F414_982.4 S05 M05B4	422	F414_982.4 P63 BN63B4	423
1.5	1068	1.0	900.5	8500	F414_900.5 S05 M05B4	422	F414_900.5 P63 BN63B4	423
1.6	965	1.1	813.8	8500	F414_813.8 S05 M05B4	422	F414_813.8 P63 BN63B4	423
1.8	877	1.3	739.4	8500	F414_739.4 S05 M05B4	422	F414_739.4 P63 BN63B4	423
1.9	818	1.3	690.1	8500	F414_690.1 S05 M05B4	422	F414_690.1 P63 BN63B4	423
2.3	686	0.9	578.6	6500	F314_578.6 S05 M05B4	418	F314_578.6 P63 BN63B4	419
2.4	652	1.7	549.8	8500	F414_549.8 S05 M05B4	422	F414_549.8 P63 BN63B4	423
2.5	626	1.0	527.8	6500	F314_527.8 S05 M05B4	418	F314_527.8 P63 BN63B4	419
2.9	549	1.1	462.6	6500	F314_462.6 S05 M05B4	418	F314_462.6 P63 BN63B4	419
3.0	514	2.1	433.7	8500	F414_433.7 S05 M05B4	422	F414_433.7 P63 BN63B4	423
3.2	497	1.2	418.9	6500	F314_418.9 S05 M05B4	418	F314_418.9 P63 BN63B4	419
3.4	467	0.9	393.9	6500	F254_393.9 S05 M05B4	414	F254_393.9 P63 BN63B4	415
3.5	454	1.3	374.4	6500			F313_374.4 P63 BN63B4	419
3.8	418	2.6	344.8	8500			F413_344.8 P63 BN63B4	423
4.0	404	1.0	333.1	6500	F253_333.1 S05 M05B4	414	F253_333.1 P63 BN63B4	415
4.0	403	1.5	332.8	6500			F313_332.8 P63 BN63B4	419
4.5	356	1.7	293.8	6500			F313_293.8 P63 BN63B4	419
4.5	359	3.1	296.6	8500			F413_296.6 P63 BN63B4	423
4.6	349	1.1	288.1	6500	F253_288.1 S05 M05B4	414	F253_288.1 P63 BN63B4	415
4.9	323	3.4	266.9	8500			F413_266.9 P63 BN63B4	423
5.2	310	1.3	256.1	6500	F253_256.1 S05 M05B4	414	F253_256.1 P63 BN63B4	415
5.2	307	2.0	253.6	6500			F313_253.6 P63 BN63B4	419
5.8	276	1.4	227.8	6500	F253_227.8 S05 M05B4	414	F253_227.8 P63 BN63B4	415
5.8	277	2.2	228.2	6500			F313_228.2 P63 BN63B4	419
6.3	254	1.0	209.3	4000	F203_209.3 S05 M05B4	410	F203_209.3 P63 BN63B4	411
6.5	245	2.4	202.3	6500			F313_202.3 P63 BN63B4	419
6.8	235	1.7	193.6	6500	F253_193.6 S05 M05B4	414	F253_193.6 P63 BN63B4	415
7.1	224	1.1	184.9	4000	F203_184.9 S05 M05B4	410	F203_184.9 P63 BN63B4	411
7.1	225	2.7	185.4	6500			F313_185.4 P63 BN63B4	419
7.6	209	1.2	172.6	4000	F203_172.6 S05 M05B4	410	F203_172.6 P63 BN63B4	411
7.6	211	1.9	174.2	6500	F253_174.2 S05 M05B4	414	F253_174.2 P63 BN63B4	415
7.9	202	3.0	166.8	6500			F313_166.8 P63 BN63B4	419
8.4	189	1.3	156.3	4000	F203_156.3 S05 M05B4	410	F203_156.3 P63 BN63B4	411
8.5	189	2.1	155.9	6500	F253_155.9 S05 M05B4	414	F253_155.9 P63 BN63B4	415
8.8	183	3.3	150.8	6500			F313_150.8 P63 BN63B4	419
9.2	173	2.3	143.0	6500	F253_143.0 S05 M05B4	414	F253_143.0 P63 BN63B4	415



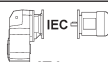





## 0.18 kW



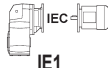

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
9.4	171	3.5	140.7	6500			F313_140.7 P63 BN63B4	419
10.0	164	1.5	132.2	4000	F202_132.2 S05 M05B4	410	F202_132.2 P63 BN63B4	411
10.3	155	2.6	127.8	6500	F253_127.8 S05 M05B4	414	F253_127.8 P63 BN63B4	415
10.4	157	0.9	127.1	2800	F102_127.1 S05 M05B4	406	F102_127.1 P63 BN63B4	407
11.5	142	1.8	114.3	4000	F202_114.3 S05 M05B4	410	F202_114.3 P63 BN63B4	411
11.7	137	2.9	113.0	6500	F253_113.0 S05 M05B4	414	F253_113.0 P63 BN63B4	415
12.5	131	1.1	106.0	2800	F102_106.0 S05 M05B4	406	F102_106.0 P63 BN63B4	407
12.5	128	3.1	105.4	6500	F253_105.4 S05 M05B4	414	F253_105.4 P63 BN63B4	415
13.0	126	2.0	101.6	4000	F202_101.6 S05 M05B4	410	F202_101.6 P63 BN63B4	411
13.8	116	3.5	95.5	6500	F253_95.5 S05 M05B4	414	F253_95.5 P63 BN63B4	415
14.4	113	1.2	91.5	2800	F102_91.5 S05 M05B4	406	F102_91.5 P63 BN63B4	407
14.6	112	2.2	90.4	4000	F202_90.4 S05 M05B4	410	F202_90.4 P63 BN63B4	411
16.2	101	1.4	81.3	2800	F102_81.3 S05 M05B4	406	F102_81.3 P63 BN63B4	407
17.2	95	2.6	76.8	4000	F202_76.8 S05 M05B4	410	F202_76.8 P63 BN63B4	411
18.6	88	1.6	71.1	2800	F102_71.1 S05 M05B4	406	F102_71.1 P63 BN63B4	407
19.1	86	2.9	69.1	4000	F202_69.1 S05 M05B4	410	F202_69.1 P63 BN63B4	411
21.0	78	1.8	63.0	2800	F102_63.0 S05 M05B4	406	F102_63.0 P63 BN63B4	407
21.3	77	3.3	61.9	4000	F202_61.9 S05 M05B4	410	F202_61.9 P63 BN63B4	411
23.3	70	2.0	56.7	2800	F102_56.7 S05 M05B4	406	F102_56.7 P63 BN63B4	407
27.1	60	2.3	48.7	2800	F102_48.7 S05 M05B4	406	F102_48.7 P63 BN63B4	407
29.6	55	2.5	44.7	2800	F102_44.7 S05 M05B4	406	F102_44.7 P63 BN63B4	407
33	49	2.9	39.6	2800	F102_39.6 S05 M05B4	406	F102_39.6 P63 BN63B4	407
37	44	3.2	35.3	2800	F102_35.3 S05 M05B4	406	F102_35.3 P63 BN63B4	407
40	41	3.4	33.0	2800	F102_33.0 S05 M05B4	406	F102_33.0 P63 BN63B4	407
45	37	3.8	29.6	2800	F102_29.6 S05 M05B4	406	F102_29.6 P63 BN63B4	407
51	32	4.4	25.8	2780	F102_25.8 S05 M05B4	406	F102_25.8 P63 BN63B4	407
58	28	5.0	22.8	2680	F102_22.8 S05 M05B4	406	F102_22.8 P63 BN63B4	407
68	24	5.7	19.3	2540	F102_19.3 S05 M05B4	406	F102_19.3 P63 BN63B4	407
78	21	6.1	17.0	2440	F102_17.0 S05 M05B4	406	F102_17.0 P63 BN63B4	407
90	18	6.6	14.6	2330	F102_14.6 S05 M05B4	406	F102_14.6 P63 BN63B4	407
101	16	6.4	13.0	2240	F102_13.0 S05 M05B4	406	F102_13.0 P63 BN63B4	407
114	14	6.7	11.5	2150	F102_11.5 S05 M05B4	406	F102_11.5 P63 BN63B4	407
135	12	7.4	9.8	2040	F102_9.8 S05 M05B4	406	F102_9.8 P63 BN63B4	407
154	11	7.7	8.6	1960	F102_8.6 S05 M05B4	406	F102_8.6 P63 BN63B4	407
178	9	8.3	7.4	1870	F102_7.4 S05 M05B4	406	F102_7.4 P63 BN63B4	407
186	9	10.7	14.6	1860	F102_14.6 S05 M05A2	406	F102_14.6 P63 BN63A2	407
210	8	10.9	13.0	1790	F102_13.0 S05 M05A2	406	F102_13.0 P63 BN63A2	407
237	7	11.3	11.5	1720	F102_11.5 S05 M05A2	406	F102_11.5 P63 BN63A2	407
279	6	12.5	9.8	1630	F102_9.8 S05 M05A2	406	F102_9.8 P63 BN63A2	407
318	5	13.0	8.6	1560	F102_8.6 S05 M05A2	406	F102_8.6 P63 BN63A2	407
369	4	14.2	7.4	1490	F102_7.4 S05 M05A2	406	F102_7.4 P63 BN63A2	407

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n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
0.41	5283	0.9	2188	35000	F704_2188 S1 M1SD6	434	F704_2188 P71 BN71B6	435
0.45	4877	1.0	2019	35000	F704_2019 S1 M1SD6	434	F704_2019 P71 BN71B6	435
0.45	4799	1.7	1987	45000	F804_1987 S1 M1SD6	437	F804_1987 P71 BN71B6	438
0.49	4430	1.8	1834	45000	F804_1834 S1 M1SD6	437	F804_1834 P71 BN71B6	438
0.52	4146	1.2	1717	35000	F704_1717 S1 M1SD6	434	F704_1717 P71 BN71B6	435
0.53	4128	1.9	1709	45000	F804_1709 S1 M1SD6	437	F804_1709 P71 BN71B6	438
0.57	3827	1.3	1585	35000	F704_1585 S1 M1SD6	434	F704_1585 P71 BN71B6	435
0.57	3810	2.1	1578	45000	F804_1578 S1 M1SD6	437	F804_1578 P71 BN71B6	438
0.61	3578	1.4	1481	35000	F704_1481 S1 M1SD6	434	F704_1481 P71 BN71B6	435
0.65	3342	2.4	1384	45000	F804_1384 S1 M1SD6	437	F804_1384 P71 BN71B6	438
0.66	3303	1.5	1368	35000	F704_1368 S1 M1SD6	434	F704_1368 P71 BN71B6	435
0.70	3085	2.6	1277	45000	F804_1277 S1 M1SD6	437	F804_1277 P71 BN71B6	438
0.76	2854	1.8	1182	35000	F704_1182 S1 M1SD6	434	F704_1182 P71 BN71B6	435



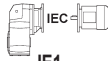



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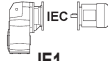

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC-IE1	
0.79	2757	1.1	1141	20000	F604_1141 S1 M1SD6	430	F604_1141 P71 BN71B6	431
0.79	2769	2.9	1146	45000	F804_1146 S1 M1SD6	437	F804_1146 P71 BN71B6	438
0.83	2635	1.9	1091	35000	F704_1091 S1 M1SD6	434	F704_1091 P71 BN71B6	435
0.85	2545	1.1	1054	20000	F604_1054 S1 M1SD6	430	F604_1054 P71 BN71B6	431
0.85	2556	3.1	1058	45000	F804_1058 S1 M1SD6	437	F804_1058 P71 BN71B6	438
0.92	2353	2.1	974.4	35000	F704_974.4 S1 M1SD6	434	F704_974.4 P71 BN71B6	435
0.94	2316	1.3	958.9	20000	F604_958.9 S1 M1SD6	430	F604_958.9 P71 BN71B6	431
1.0	2138	1.4	885.1	20000	F604_885.1 S1 M1SD6	430	F604_885.1 P71 BN71B6	431
1.0	2172	2.3	899.4	35000	F704_899.4 S1 M1SD6	434	F704_899.4 P71 BN71B6	435
1.1	1996	0.9	826.4	12000	F514_826.4 S1 M1SD6	426	F514_826.4 P71 BN71B6	427
1.1	1986	2.5	822.2	35000	F704_822.2 S1 M1SD6	434	F704_822.2 P71 BN71B6	435
1.3	1633	1.1	676.3	12000	F514_676.3 S1 M1SD6	426	F514_676.3 P71 BN71B6	427
1.4	1600	1.8	662.4	20000	F604_662.4 S1 M1SD6	430	F604_662.4 P71 BN71B6	431
1.4	1588	3.1	657.4	35000	F704_657.4 S1 M1SD6	434	F704_657.4 P71 BN71B6	435
1.5	1477	2.0	611.4	20000	F604_611.4 S1 M1SD6	430	F604_611.4 P71 BN71B6	431
1.5	1466	3.4	606.8	35000	F704_606.8 S1 M1SD6	434	F704_606.8 P71 BN71B6	435
1.7	1282	0.9	813.8	8500	F414_813.8 S05 M05C4	422	F414_813.8 P71 BN71A4	423
1.8	1199	0.9	739.4	8500	F414_739.4 S05 M05C4	422	F414_739.4 P71 BN71A4	423
1.9	1119	1.0	690.1	8500	F414_690.1 S05 M05C4	422	F414_690.1 P71 BN71A4	423
2.4	892	1.2	549.8	8500	F414_549.8 S05 M05C4	422	F414_549.8 P71 BN71A4	423
2.8	783	2.3	317.3	12000	F513_317.3 S1 M1SD6	426	F513_317.3 P71 BN71B6	427
3.1	704	1.6	433.7	8500	F414_433.7 S05 M05C4	422	F414_433.7 P71 BN71A4	423
3.2	679	0.9	418.9	6500	F314_418.9 S05 M05C4	418	F314_418.9 P71 BN71A4	419
3.7	603	1.0	374.4	6500			F313_374.4 P71 BN71A4	419
4.0	555	2.0	344.8	8500			F413_344.8 P71 BN71A4	423
4.1	536	1.1	332.8	6500			F313_332.8 P71 BN71A4	419
4.7	473	1.3	293.8	6500			F313_293.8 P71 BN71A4	419
4.7	477	2.3	296.6	8500			F413_296.6 P71 BN71A4	423
5.2	425	0.9	256.1	6500	F253_256.1 S05 M05C4	414	F253_256.1 P71 BN71A4	415
5.2	430	2.6	266.9	8500			F413_266.9 P71 BN71A4	423
5.4	408	1.5	253.6	6500			F313_253.6 P71 BN71A4	419
5.7	387	2.8	240.1	8500			F413_240.1 P71 BN71A4	423
5.9	378	1.1	227.8	6500	F253_227.8 S05 M05C4	414	F253_227.8 P71 BN71A4	415
6.0	367	1.6	228.2	6500			F313_228.2 P71 BN71A4	419
6.3	354	3.1	220.1	8500			F413_220.1 P71 BN71A4	423
6.8	326	1.8	202.3	6500			F313_202.3 P71 BN71A4	419
6.9	321	1.2	193.6	6500	F253_193.6 S05 M05C4	414	F253_193.6 P71 BN71A4	415
6.9	320	3.4	198.9	8500			F413_198.9 P71 BN71A4	423
7.4	299	2.0	185.4	6500			F313_185.4 P71 BN71A4	419
7.7	289	1.4	174.2	6500	F253_174.2 S05 M05C4	414	F253_174.2 P71 BN71A4	415
8.0	278	0.9	172.6	4000	F203_172.6 S05 M05C4	410	F203_172.6 P71 BN71A4	411
8.3	268	2.2	166.8	6500			F313_166.8 P71 BN71A4	419
8.6	259	1.0	156.3	4000	F203_156.3 S05 M05C4	410	F203_156.3 P71 BN71A4	411
8.6	259	1.5	155.9	6500	F253_155.9 S05 M05C4	414	F253_155.9 P71 BN71A4	415
9.2	243	2.5	150.8	6500			F313_150.8 P71 BN71A4	419
9.7	230	1.7	143.0	6500	F253_143.0 S05 M05C4	414	F253_143.0 P71 BN71A4	415
9.8	227	2.6	140.7	6500			F313_140.7 P71 BN71A4	419
10.1	224	1.1	132.2	4000	F202_132.2 S05 M05C4	410	F202_132.2 P71 BN71A4	411
10.5	212	1.9	127.8	6500	F253_127.8 S05 M05C4	414	F253_127.8 P71 BN71A4	415
10.7	207	2.9	128.4	6500			F313_128.4 P71 BN71A4	419
11.7	194	1.3	114.3	4000	F202_114.3 S05 M05C4	410	F202_114.3 P71 BN71A4	411
12.2	182	2.2	113.0	6500	F253_113.0 S05 M05C4	414	F253_113.0 P71 BN71A4	415
12.3	181	3.3	112.5	6500			F313_112.5 P71 BN71A4	419
12.7	175	2.3	105.4	6500	F253_105.4 S05 M05C4	414	F253_105.4 P71 BN71A4	415
13.2	172	1.5	101.6	4000	F202_101.6 S05 M05C4	410	F202_101.6 P71 BN71A4	411
14.0	158	2.5	95.5	6500	F253_95.5 S05 M05C4	414	F253_95.5 P71 BN71A4	415
14.6	155	0.9	91.5	2800	F102_91.5 S05 M05C4	406	F102_91.5 P71 BN71A4	407

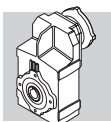


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

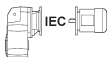

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
14.8	153	1.6	90.4	4000	F202_90.4 S05 M05C4	410	F202_90.4 P71 BN71A4	411
16.1	138	2.9	83.4	6500	F253_83.4 S05 M05C4	414	F253_83.4 P71 BN71A4	415
16.5	138	1.0	81.3	2800	F102_81.3 S05 M05C4	406	F102_81.3 P71 BN71A4	407
17.4	130	1.9	76.8	4000	F202_76.8 S05 M05C4	410	F202_76.8 P71 BN71A4	411
17.5	127	3.2	76.6	6420	F253_76.6 S05 M05C4	414	F253_76.6 P71 BN71A4	415
18.8	120	1.2	71.1	2800	F102_71.1 S05 M05C4	406	F102_71.1 P71 BN71A4	407
19.4	117	2.1	69.1	4000	F202_69.1 S05 M05C4	410	F202_69.1 P71 BN71A4	411
21.3	107	1.3	63.0	2800	F102_63.0 S05 M05C4	406	F102_63.0 P71 BN71A4	407
21.7	105	2.4	61.9	4000	F202_61.9 S05 M05C4	410	F202_61.9 P71 BN71A4	411
23.6	96	1.5	56.7	2800	F102_56.7 S05 M05C4	406	F102_56.7 P71 BN71A4	407
23.6	96	2.6	56.7	4000	F202_56.7 S05 M05C4	410	F202_56.7 P71 BN71A4	411
26.4	86	2.9	50.7	4000	F202_50.7 S05 M05C4	410	F202_50.7 P71 BN71A4	411
27.5	83	1.7	48.7	2800	F102_48.7 S05 M05C4	406	F102_48.7 P71 BN71A4	407
29.9	76	3.3	44.8	3870	F202_44.8 S05 M05C4	410	F202_44.8 P71 BN71A4	411
30	76	1.9	44.7	2800	F102_44.7 S05 M05C4	406	F102_44.7 P71 BN71A4	407
34	67	2.1	39.6	2800	F102_39.6 S05 M05C4	406	F102_39.6 P71 BN71A4	407
38	60	2.3	35.3	2800	F102_35.3 S05 M05C4	406	F102_35.3 P71 BN71A4	407
41	56	2.5	33.0	2800	F102_33.0 S05 M05C4	406	F102_33.0 P71 BN71A4	407
45	50	2.8	29.6	2800	F102_29.6 S05 M05C4	406	F102_29.6 P71 BN71A4	407
52	44	3.2	25.8	2750	F102_25.8 S05 M05C4	406	F102_25.8 P71 BN71A4	407
59	39	3.6	22.8	2650	F102_22.8 S05 M05C4	406	F102_22.8 P71 BN71A4	407
69	33	4.2	19.3	2520	F102_19.3 S05 M05C4	406	F102_19.3 P71 BN71A4	407
81	28	4.6	17.0	2420	F102_17.0 S05 M05C4	406	F102_17.0 P71 BN71A4	407
91	25	4.8	14.6	2310	F102_14.6 S05 M05C4	406	F102_14.6 P71 BN71A4	407
103	22	4.7	13.0	2230	F102_13.0 S05 M05C4	406	F102_13.0 P71 BN71A4	407
120	19	5.1	11.5	2140	F102_11.5 S05 M05C4	406	F102_11.5 P71 BN71A4	407
137	17	5.4	9.8	2030	F102_9.8 S05 M05C4	406	F102_9.8 P71 BN71A4	407
161	14	5.8	8.6	1950	F102_8.6 S05 M05C4	406	F102_8.6 P71 BN71A4	407
181	13	6.1	7.4	1860	F102_7.4 S05 M05C4	406	F102_7.4 P71 BN71A4	407
187	12	7.7	14.6	1850	F102_14.6 S05 M05B2	406	F102_14.6 P63 BN63B2	407
210	11	7.9	13.0	1780	F102_13.0 S05 M05B2	406	F102_13.0 P63 BN63B2	407
237	10	8.2	11.5	1710	F102_11.5 S05 M05B2	406	F102_11.5 P63 BN63B2	407
280	8	9.0	9.8	1620	F102_9.8 S05 M05B2	406	F102_9.8 P63 BN63B2	407
319	7	9.4	8.6	1550	F102_8.6 S05 M05B2	406	F102_8.6 P63 BN63B2	407
370	6	10.3	7.4	1480	F102_7.4 S05 M05B2	406	F102_7.4 P63 BN63B2	407

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n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
0.46	7024	1.1	1987	45000	F804_1987 S1 M1LA6	437	F804_1987 P80 BN80A6	438
0.50	6484	1.2	1834	45000	F804_1834 S1 M1LA6	437	F804_1834 P80 BN80A6	438
0.53	6042	1.3	1709	45000	F804_1709 S1 M1LA6	437	F804_1709 P80 BN80A6	438
0.57	5602	0.9	1585	35000	F704_1585 S1 M1LA6	434	F704_1585 P80 BN80A6	435
0.58	5577	1.4	1578	45000	F804_1578 S1 M1LA6	437	F804_1578 P80 BN80A6	438
0.61	5238	1.0	1481	35000	F704_1481 S1 M1LA6	434	F704_1481 P80 BN80A6	435
0.63	5137	1.0	2188	35000	F704_2188 S1 M1SD4	434	F704_2188 P71 BN71B4	435
0.68	4742	1.1	2019	35000	F704_2019 S1 M1SD4	434	F704_2019 P71 BN71B4	435
0.69	4666	1.7	1987	45000	F804_1987 S1 M1SD4	437	F804_1987 P71 BN71B4	438
0.75	4307	1.9	1834	45000	F804_1834 S1 M1SD4	437	F804_1834 P71 BN71B4	438
0.80	4031	1.2	1717	35000	F704_1717 S1 M1SD4	434	F704_1717 P71 BN71B4	435
0.80	4013	2.0	1709	45000	F804_1709 S1 M1SD4	437	F804_1709 P71 BN71B4	438
0.86	3721	1.3	1585	35000	F704_1585 S1 M1SD4	434	F704_1585 P71 BN71B4	435
0.87	3705	2.2	1578	45000	F804_1578 S1 M1SD4	437	F804_1578 P71 BN71B4	438
0.92	3479	1.4	1481	35000	F704_1481 S1 M1SD4	434	F704_1481 P71 BN71B4	435
0.99	3250	2.5	1384	45000	F804_1384 S1 M1SD4	437	F804_1384 P71 BN71B4	438



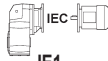



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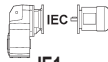

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC-IE1	
1.0	3211	1.6	1368	35000	F704_1368 S1 M1SD4	434	F704_1368 P71 BN71B4	435
1.1	3000	2.7	1277	45000	F804_1277 S1 M1SD4	437	F804_1277 P71 BN71B4	438
1.2	2680	1.1	1141	20000	F604_1141 S1 M1SD4	430	F604_1141 P71 BN71B4	431
1.2	2775	1.8	1182	35000	F704_1182 S1 M1SD4	434	F704_1182 P71 BN71B4	435
1.2	2692	3.0	1146	45000	F804_1146 S1 M1SD4	437	F804_1146 P71 BN71B4	438
1.3	2474	1.2	1054	20000	F604_1054 S1 M1SD4	430	F604_1054 P71 BN71B4	431
1.3	2562	2.0	1091	35000	F704_1091 S1 M1SD4	434	F704_1091 P71 BN71B4	435
1.3	2485	3.2	1058	45000	F804_1058 S1 M1SD4	437	F804_1058 P71 BN71B4	438
1.4	2252	1.3	958.9	20000	F604_958.9 S1 M1SD4	430	F604_958.9 P71 BN71B4	431
1.4	2288	2.2	974.4	35000	F704_974.4 S1 M1SD4	434	F704_974.4 P71 BN71B4	435
1.5	2079	0.9	885.5	12000	F514_885.5 S1 M1SD4	426	F514_885.5 P71 BN71B4	427
1.5	2078	1.4	885.1	20000	F604_885.1 S1 M1SD4	430	F604_885.1 P71 BN71B4	431
1.5	2112	2.4	899.4	35000	F704_899.4 S1 M1SD4	434	F704_899.4 P71 BN71B4	435
1.7	1941	0.9	826.4	12000	F514_826.4 S1 M1SD4	426	F514_826.4 P71 BN71B4	427
1.7	1931	2.6	822.2	35000	F704_822.2 S1 M1SD4	434	F704_822.2 P71 BN71B4	435
2.0	1588	1.1	676.3	12000	F514_676.3 S1 M1SD4	426	F514_676.3 P71 BN71B4	427
2.1	1556	1.9	662.4	20000	F604_662.4 S1 M1SD4	430	F604_662.4 P71 BN71B4	431
2.1	1544	3.2	657.4	35000	F704_657.4 S1 M1SD4	434	F704_657.4 P71 BN71B4	435
2.2	1436	2.0	611.4	20000	F604_611.4 S1 M1SD4	430	F604_611.4 P71 BN71B4	431
2.3	1425	3.5	606.8	35000	F704_606.8 S1 M1SD4	434	F704_606.8 P71 BN71B4	435
2.5	1291	0.9	549.8	8500	F414_549.8 S1 M1SD4	422	F414_549.8 P71 BN71B4	423
2.6	1246	1.4	530.5	12000	F514_530.5 S1 M1SD4	426	F514_530.5 P71 BN71B4	427
2.6	1246	2.3	530.7	20000	F604_530.7 S1 M1SD4	430	F604_530.7 P71 BN71B4	431
2.8	1150	2.5	489.8	20000	F604_489.8 S1 M1SD4	430	F604_489.8 P71 BN71B4	431
3.2	1018	1.1	433.7	8500	F414_433.7 S1 M1SD4	422	F414_433.7 P71 BN71B4	423
3.2	1008	1.8	429.1	12000	F514_429.1 S1 M1SD4	426	F514_429.1 P71 BN71B4	427
3.2	1016	2.9	432.6	20000	F604_432.6 S1 M1SD4	430	F604_432.6 P71 BN71B4	431
3.4	938	3.1	399.3	20000	F604_399.3 S1 M1SD4	430	F604_399.3 P71 BN71B4	431
3.9	846	2.1	352.5	12000	F513_352.5 S1 M1SD4	426	F513_352.5 P71 BN71B4	427
4.0	827	1.3	344.8	8500	F413_344.8 S1 M1SD4	422	F413_344.8 P71 BN71B4	423
4.3	761	2.4	317.3	12000	F513_317.3 S1 M1SD4	426	F513_317.3 P71 BN71B4	427
4.6	712	1.5	296.6	8500	F413_296.6 S1 M1SD4	422	F413_296.6 P71 BN71B4	423
4.8	686	2.6	285.9	12000	F513_285.9 S1 M1SD4	426	F513_285.9 P71 BN71B4	427
5.1	641	1.7	266.9	8500	F413_266.9 S1 M1SD4	422	F413_266.9 P71 BN71B4	423
5.2	629	2.9	262.1	12000	F513_262.1 S1 M1SD4	426	F513_262.1 P71 BN71B4	427
5.4	609	1.0	253.6	6500	F313_253.6 S1 M1SD4	418	F313_253.6 P71 BN71B4	419
5.7	576	1.9	240.1	8500	F413_240.1 S1 M1SD4	422	F413_240.1 P71 BN71B4	423
5.7	576	3.1	239.8	12000	F513_239.8 S1 M1SD4	426	F513_239.8 P71 BN71B4	427
6.0	548	1.1	228.2	6500	F313_228.2 S1 M1SD4	418	F313_228.2 P71 BN71B4	419
6.2	528	2.1	220.1	8500	F413_220.1 S1 M1SD4	422	F413_220.1 P71 BN71B4	423
6.3	520	3.5	216.9	12000	F513_216.9 S1 M1SD4	426	F513_216.9 P71 BN71B4	427
6.8	485	1.2	202.3	6500	F313_202.3 S1 M1SD4	418	F313_202.3 P71 BN71B4	419
6.9	477	2.3	198.9	8500	F413_198.9 S1 M1SD4	422	F413_198.9 P71 BN71B4	423
7.4	445	1.3	185.4	6500	F313_185.4 S1 M1SD4	418	F313_185.4 P71 BN71B4	419
7.6	434	2.5	180.7	8500	F413_180.7 S1 M1SD4	422	F413_180.7 P71 BN71B4	423
7.9	418	1.0	174.2	6500	F253_174.2 S1 M1SD4	414	F253_174.2 P71 BN71B4	415
8.1	405	2.7	168.7	8500	F413_168.7 S1 M1SD4	422	F413_168.7 P71 BN71B4	423
8.2	400	1.5	166.8	6500	F313_166.8 S1 M1SD4	418	F313_166.8 P71 BN71B4	419
8.8	374	1.1	155.9	6500	F253_155.9 S1 M1SD4	414	F253_155.9 P71 BN71B4	415
9.1	362	1.7	150.8	6500	F313_150.8 S1 M1SD4	418	F313_150.8 P71 BN71B4	419
9.6	343	1.2	143.0	6500	F253_143.0 S1 M1SD4	414	F253_143.0 P71 BN71B4	415
9.7	338	1.8	140.7	6500	F313_140.7 S1 M1SD4	418	F313_140.7 P71 BN71B4	419
10.2	323	3.4	134.4	8500	F413_134.4 S1 M1SD4	422	F413_134.4 P71 BN71B4	423
10.7	307	1.3	127.8	6500	F253_127.8 S1 M1SD4	414	F253_127.8 P71 BN71B4	415
10.7	308	1.9	128.4	6500	F313_128.4 S1 M1SD4	418	F313_128.4 P71 BN71B4	419
12.1	271	1.5	113.0	6500	F253_113.0 S1 M1SD4	414	F253_113.0 P71 BN71B4	415
12.2	270	2.2	112.5	6500	F313_112.5 S1 M1SD4	418	F313_112.5 P71 BN71B4	419
13.0	253	1.6	105.4	6500	F253_105.4 S1 M1SD4	414	F253_105.4 P71 BN71B4	415
13.4	245	2.5	101.9	6500	F313_101.9 S1 M1SD4	418	F313_101.9 P71 BN71B4	419
13.5	249	1.0	101.6	4000			F202_101.6 P71 BN71B4	411
14.3	229	1.7	95.5	6490	F253_95.5 S1 M1SD4	414	F253_95.5 P71 BN71B4	415
15.2	222	1.1	90.4	4000	F202_90.4 S1 M1SD4	410	F202_90.4 P71 BN71B4	411
15.7	210	2.9	87.4	6500	F313_87.4 S1 M1SD4	418	F313_87.4 P71 BN71B4	419
16.4	200	2.0	83.4	6280	F253_83.4 S1 M1SD4	414	F253_83.4 P71 BN71B4	415
17.4	189	3.2	78.9	6500	F313_78.9 S1 M1SD4	418	F313_78.9 P71 BN71B4	419



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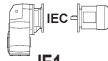

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
17.8	188	1.3	76.8	4000	F202_76.8 S1 M1SD4	410	F202_76.8 P71 BN71B4	411
17.9	184	2.2	76.6	6160	F253_76.6 S1 M1SD4	414	F253_76.6 P71 BN71B4	415
19.8	169	1.5	69.1	4000	F202_69.1 S1 M1SD4	410	F202_69.1 P71 BN71B4	411
21.0	157	2.6	65.3	5920	F253_65.3 S1 M1SD4	414	F253_65.3 P71 BN71B4	415
21.7	154	0.9	63.0	2800	F102_63.0 S1 M1SD4	406	F102_63.0 P71 BN71B4	407
22.1	152	1.6	61.9	4000	F202_61.9 S1 M1SD4	410	F202_61.9 P71 BN71B4	411
23.5	140	2.9	58.3	5750	F253_58.3 S1 M1SD4	414	F253_58.3 P71 BN71B4	415
24.2	139	1.0	56.7	2800	F102_56.7 S1 M1SD4	406	F102_56.7 P71 BN71B4	407
24.2	139	1.8	56.7	4000	F202_56.7 S1 M1SD4	410	F202_56.7 P71 BN71B4	411
27.0	124	2.0	50.7	3900	F202_50.7 S1 M1SD4	410	F202_50.7 P71 BN71B4	411
27.0	122	3.3	50.8	5540	F253_50.8 S1 M1SD4	414	F253_50.8 P71 BN71B4	415
28.1	119	1.2	48.7	2800	F102_48.7 S1 M1SD4	406	F102_48.7 P71 BN71B4	407
31	110	1.3	44.7	2800	F102_44.7 S1 M1SD4	406	F102_44.7 P71 BN71B4	407
31	110	2.3	44.8	3770	F202_44.8 S1 M1SD4	410	F202_44.8 P71 BN71B4	411
31	109	3.5	44.4	5370	F252_44.4 S1 M1SD4	414	F252_44.4 P71 BN71B4	415
33	103	2.4	41.8	3700	F202_41.8 S1 M1SD4	410	F202_41.8 P71 BN71B4	411
35	97	1.4	39.6	2800	F102_39.6 S1 M1SD4	406	F102_39.6 P71 BN71B4	407
36	93	2.7	37.9	3600	F202_37.9 S1 M1SD4	410	F202_37.9 P71 BN71B4	411
39	87	1.6	35.3	2800	F102_35.3 S1 M1SD4	406	F102_35.3 P71 BN71B4	407
41	81	3.1	33.1	3460	F202_33.1 S1 M1SD4	410	F202_33.1 P71 BN71B4	411
42	81	1.7	33.0	2800	F102_33.0 S1 M1SD4	406	F102_33.0 P71 BN71B4	407
45	75	3.4	30.4	3380	F202_30.4 S1 M1SD4	410	F202_30.4 P71 BN71B4	411
46	73	1.9	29.6	2800	F102_29.6 S1 M1SD4	406	F102_29.6 P71 BN71B4	407
53	63	2.2	25.8	2690	F102_25.8 S1 M1SD4	406	F102_25.8 P71 BN71B4	407
60	56	2.5	22.8	2600	F102_22.8 S1 M1SD4	406	F102_22.8 P71 BN71B4	407
71	47	2.9	19.3	2470	F102_19.3 S1 M1SD4	406	F102_19.3 P71 BN71B4	407
81	42	3.1	17.0	2380	F102_17.0 S1 M1SD4	406	F102_17.0 P71 BN71B4	407
94	36	3.3	14.6	2280	F102_14.6 S1 M1SD4	406	F102_14.6 P71 BN71B4	407
105	32	3.3	13.0	2200	F102_13.0 S1 M1SD4	406	F102_13.0 P71 BN71B4	407
119	28	3.4	11.5	2120	F102_11.5 S1 M1SD4	406	F102_11.5 P71 BN71B4	407
140	24	3.7	9.8	2010	F102_9.8 S1 M1SD4	406	F102_9.8 P71 BN71B4	407
160	21	3.9	8.6	1930	F102_8.6 S1 M1SD4	406	F102_8.6 P71 BN71B4	407
185	18	4.2	7.4	1850	F102_7.4 S1 M1SD4	406	F102_7.4 P71 BN71B4	407
193	17	5.4	14.6	1830	F102_14.6 S05 M05C2	406	F102_14.6 P71 BN71A2	407
216	16	5.5	13.0	1760	F102_13.0 S05 M05C2	406	F102_13.0 P71 BN71A2	407
244	14	5.7	11.5	1690	F102_11.5 S05 M05C2	406	F102_11.5 P71 BN71A2	407
289	12	6.3	9.8	1610	F102_9.8 S05 M05C2	406	F102_9.8 P71 BN71A2	407
329	10	6.6	8.6	1540	F102_8.6 S05 M05C2	406	F102_8.6 P71 BN71A2	407
381	9	7.1	7.4	1470	F102_7.4 S05 M05C2	406	F102_7.4 P71 BN71A2	407

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n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
0.44	10909	1.3	2099	55000	F904_2099 S2 M2SA6	440	F904_2099 P80 BN80B6	441
0.47	10070	1.4	1937	55000	F904_1937 S2 M2SA6	440	F904_1937 P80 BN80B6	441
0.54	8884	0.9	1709	45000	F804_1709 S2 M2SA6	437	F804_1709 P80 BN80B6	438
0.54	8849	1.6	1702	55000	F904_1702 S2 M2SA6	440	F904_1702 P80 BN80B6	441
0.58	8201	1.0	1578	45000	F804_1578 S2 M2SA6	437	F804_1578 P80 BN80B6	438
0.59	8168	1.7	1571	55000	F904_1571 S2 M2SA6	440	F904_1571 P80 BN80B6	441
0.64	7422	1.9	1428	55000	F904_1428 S2 M2SA6	440	F904_1428 P80 BN80B6	441
0.66	7193	1.1	1384	45000	F804_1384 S2 M2SA6	437	F804_1384 P80 BN80B6	438
0.69	6885	1.2	1987	45000	F804_1987 S1 M1LA4	437	F804_1987 P80 BN80A4	438
0.75	6356	1.3	1834	45000	F804_1834 S1 M1LA4	437	F804_1834 P80 BN80A4	438
0.81	5923	1.4	1709	45000	F804_1709 S1 M1LA4	437	F804_1709 P80 BN80A4	438
0.87	5491	0.9	1585	35000	F704_1585 S1 M1LA4	434	F704_1585 P80 BN80A4	435
0.87	5467	1.5	1578	45000	F804_1578 S1 M1LA4	437	F804_1578 P80 BN80A4	438
0.93	5134	1.0	1481	35000	F704_1481 S1 M1LA4	434	F704_1481 P80 BN80A4	435
1.0	4739	1.1	1368	35000	F704_1368 S1 M1LA4	434	F704_1368 P80 BN80A4	435
1.0	4795	1.7	1384	45000	F804_1384 S1 M1LA4	437	F804_1384 P80 BN80A4	438
1.1	4427	1.8	1277	45000	F804_1277 S1 M1LA4	437	F804_1277 P80 BN80A4	438



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n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1	 IE1	 IE1	
1.2	4095	1.2	1182	35000	F704_1182 S1 M1LA4	434	F704_1182 P80 BN80A4	435
1.2	3972	2.0	1146	45000	F804_1146 S1 M1LA4	437	F804_1146 P80 BN80A4	438
1.3	3780	1.3	1091	35000	F704_1091 S1 M1LA4	434	F704_1091 P80 BN80A4	435
1.3	3667	2.2	1058	45000	F804_1058 S1 M1LA4	437	F804_1058 P80 BN80A4	438
1.4	3323	0.9	958.9	20000	F604_958.9 S1 M1LA4	430	F604_958.9 P80 BN80A4	431
1.4	3377	1.5	974.4	35000	F704_974.4 S1 M1LA4	434	F704_974.4 P80 BN80A4	435
1.5	3117	1.6	899.4	35000	F704_899.4 S1 M1LA4	434	F704_899.4 P80 BN80A4	435
1.5	3109	2.6	897.3	45000	F804_897.3 S1 M1LA4	437	F804_897.3 P80 BN80A4	438
1.6	3067	0.9	885.1	20000	F604_885.1 S1 M1LA4	430	F604_885.1 P80 BN80A4	431
1.7	2849	1.8	822.2	35000	F704_822.2 S1 M1LA4	434	F704_822.2 P80 BN80A4	435
1.8	2684	3.0	774.4	45000	F804_774.4 S1 M1LA4	437	F804_774.4 P80 BN80A4	438
1.9	2477	3.2	714.9	45000	F804_714.9 S1 M1LA4	437	F804_714.9 P80 BN80A4	438
2.1	2295	1.3	662.4	20000	F604_662.4 S1 M1LA4	430	F604_662.4 P80 BN80A4	431
2.1	2278	2.2	657.4	35000	F704_657.4 S1 M1LA4	434	F704_657.4 P80 BN80A4	435
2.3	2119	1.4	611.4	20000	F604_611.4 S1 M1LA4	430	F604_611.4 P80 BN80A4	431
2.3	2103	2.4	606.8	35000	F704_606.8 S1 M1LA4	434	F704_606.8 P80 BN80A4	435
2.6	1838	1.0	530.5	12000	F514_530.5 S1 M1LA4	426	F514_530.5 P80 BN80A4	427
2.6	1839	1.6	530.7	20000	F604_530.7 S1 M1LA4	430	F604_530.7 P80 BN80A4	431
2.7	1769	2.8	510.4	35000	F704_510.4 S1 M1LA4	434	F704_510.4 P80 BN80A4	435
2.8	1698	1.7	489.8	20000	F604_489.8 S1 M1LA4	430	F604_489.8 P80 BN80A4	431
2.9	1633	3.1	471.2	35000	F704_471.2 S1 M1LA4	434	F704_471.2 P80 BN80A4	435
3.2	1487	1.2	429.1	12000	F514_429.1 S1 M1LA4	426	F514_429.1 P80 BN80A4	427
3.2	1499	1.9	432.6	20000	F604_432.6 S1 M1LA4	430	F604_432.6 P80 BN80A4	431
3.5	1384	2.1	399.3	20000	F604_399.3 S1 M1LA4	430	F604_399.3 P80 BN80A4	431
3.9	1248	1.4	352.5	12000	F513_352.5 S1 M1LA4	426	F513_352.5 P80 BN80A4	427
4.0	1221	0.9	344.8	8500	F413_344.8 S1 M1LA4	422	F413_344.8 P80 BN80A4	423
4.0	1184	2.4	341.7	20000	F604_341.7 S1 M1LA4	430	F604_341.7 P80 BN80A4	431
4.3	1124	1.6	317.3	12000	F513_317.3 S1 M1LA4	426	F513_317.3 P80 BN80A4	427
4.4	1093	2.7	315.4	20000	F604_315.4 S1 M1LA4	430	F604_315.4 P80 BN80A4	431
4.7	1050	1.0	296.6	8500	F413_296.6 S1 M1LA4	422	F413_296.6 P80 BN80A4	423
4.8	1013	1.8	285.9	12000	F513_285.9 S1 M1LA4	426	F513_285.9 P80 BN80A4	427
5.2	945	1.2	266.9	8500	F413_266.9 S1 M1LA4	422	F413_266.9 P80 BN80A4	423
5.3	928	1.9	262.1	12000	F513_262.1 S1 M1LA4	426	F513_262.1 P80 BN80A4	427
5.7	850	1.3	240.1	8500	F413_240.1 S1 M1LA4	422	F413_240.1 P80 BN80A4	423
5.8	849	2.1	239.8	12000	F513_239.8 S1 M1LA4	426	F513_239.8 P80 BN80A4	427
6.3	780	1.4	220.1	8500	F413_220.1 S1 M1LA4	422	F413_220.1 P80 BN80A4	423
6.4	768	2.3	216.9	12000	F513_216.9 S1 M1LA4	426	F513_216.9 P80 BN80A4	427
6.8	717	2.5	202.4	12000	F513_202.4 S1 M1LA4	426	F513_202.4 P80 BN80A4	427
6.9	704	1.6	198.9	8500	F413_198.9 S1 M1LA4	422	F413_198.9 P80 BN80A4	423
7.4	657	0.9	185.4	6500	F313_185.4 S1 M1LA4	418	F313_185.4 P80 BN80A4	419
7.6	640	1.7	180.7	8500	F413_180.7 S1 M1LA4	422	F413_180.7 P80 BN80A4	423
8.2	597	1.8	168.7	8500	F413_168.7 S1 M1LA4	422	F413_168.7 P80 BN80A4	423
8.3	591	1.0	166.8	6500	F313_166.8 S1 M1LA4	418	F313_166.8 P80 BN80A4	419
8.3	587	3.1	165.6	12000	F513_165.6 S1 M1LA4	426	F513_165.6 P80 BN80A4	427
9.2	534	1.1	150.8	6500	F313_150.8 S1 M1LA4	418	F313_150.8 P80 BN80A4	419
9.8	498	1.2	140.7	6500	F313_140.7 S1 M1LA4	418	F313_140.7 P80 BN80A4	419
10.3	476	2.3	134.4	8500	F413_134.4 S1 M1LA4	422	F413_134.4 P80 BN80A4	423
10.7	455	1.3	128.4	6500	F313_128.4 S1 M1LA4	418	F313_128.4 P80 BN80A4	419
12.2	400	1.0	113.0	6130	F253_113.0 S1 M1LA4	414	F253_113.0 P80 BN80A4	415
12.3	399	1.5	112.5	6500	F313_112.5 S1 M1LA4	418	F313_112.5 P80 BN80A4	419
13.0	375	2.9	106.0	8500	F413_106.0 S1 M1LA4	422	F413_106.0 P80 BN80A4	423
13.1	373	1.1	105.4	6070	F253_105.4 S1 M1LA4	414	F253_105.4 P80 BN80A4	415
13.5	361	1.7	101.9	6500	F313_101.9 S1 M1LA4	418	F313_101.9 P80 BN80A4	419
14.5	338	1.2	95.5	5980	F253_95.5 S1 M1LA4	414	F253_95.5 P80 BN80A4	415
15.8	309	1.9	87.4	6500	F313_87.4 S1 M1LA4	418	F313_87.4 P80 BN80A4	419
16.5	295	1.4	83.4	5840	F253_83.4 S1 M1LA4	414	F253_83.4 P80 BN80A4	415
17.5	279	2.1	78.9	6500	F313_78.9 S1 M1LA4	418	F313_78.9 P80 BN80A4	419
18.0	278	0.9	76.8	4000	F202_76.8 S1 M1LA4	410	F202_76.8 P80 BN80A4	411
18.0	271	1.5	76.6	5750	F253_76.6 S1 M1LA4	414	F253_76.6 P80 BN80A4	415
20.0	250	1.0	69.1	3980	F202_69.1 S1 M1LA4	410	F202_69.1 P80 BN80A4	411
20.0	245	2.5	69.1	6500	F313_69.1 S1 M1LA4	418	F313_69.1 P80 BN80A4	419
21.1	231	1.7	65.3	5570	F253_65.3 S1 M1LA4	414	F253_65.3 P80 BN80A4	415
22.1	221	2.7	62.8	6500	F313_62.8 S1 M1LA4	418	F313_62.8 P80 BN80A4	419
22.3	224	1.1	61.9	3890	F202_61.9 S1 M1LA4	410	F202_61.9 P80 BN80A4	411
23.7	207	1.9	58.3	5430	F253_58.3 S1 M1LA4	414	F253_58.3 P80 BN80A4	415



## 0.55 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	IE1		IE1	IE1	
24.3	205	1.2	56.7	3810	F202_56.7 S1 M1LA4		410	F202_56.7 P80 BN80A4	411
26.7	183	3.3	52.1	6500				F313_52.1 P80 BN80A4	419
27.2	184	1.4	50.7	3720	F202_50.7 S1 M1LA4		410	F202_50.7 P80 BN80A4	411
27.2	180	2.2	50.8	5270	F253_50.8 S1 M1LA4		414	F253_50.8 P80 BN80A4	415
29.2	167	3.5	47.5	6500				F313_47.5 P80 BN80A4	419
31	162	1.5	44.8	3610	F202_44.8 S1 M1LA4		410	F202_44.8 P80 BN80A4	411
31	161	2.4	44.4	5140	F252_44.4 S1 M1LA4		414	F252_44.4 P80 BN80A4	415
31	160	2.5	45.6	5130				F253_45.6 P80 BN80A4	415
33	151	1.7	41.8	3550	F202_41.8 S1 M1LA4		410	F202_41.8 P80 BN80A4	411
34	147	2.5	40.7	5030	F252_40.7 S1 M1LA4		414	F252_40.7 P80 BN80A4	415
35	143	1.0	39.6	2800	F102_39.6 S1 M1LA4		406	F102_39.6 P80 BN80A4	407
36	137	1.8	37.9	3460	F202_37.9 S1 M1LA4		410	F202_37.9 P80 BN80A4	411
38	132	3.0	36.4	4890	F252_36.4 S1 M1LA4		414	F252_36.4 P80 BN80A4	415
39	128	1.1	35.3	2800	F102_35.3 S1 M1LA4		406	F102_35.3 P80 BN80A4	407
42	119	1.2	33.0	2750	F102_33.0 S1 M1LA4		406	F102_33.0 P80 BN80A4	407
42	120	2.1	33.1	3340	F202_33.1 S1 M1LA4		410	F202_33.1 P80 BN80A4	411
43	116	3.4	32.2	4730	F252_32.2 S1 M1LA4		414	F252_32.2 P80 BN80A4	415
45	110	2.3	30.4	3260	F202_30.4 S1 M1LA4		410	F202_30.4 P80 BN80A4	411
47	107	1.3	29.6	2680	F102_29.6 S1 M1LA4		406	F102_29.6 P80 BN80A4	407
53	94	2.6	25.9	3130	F202_25.9 S1 M1LA4		410	F202_25.9 P80 BN80A4	411
54	93	1.5	25.8	2590	F102_25.8 S1 M1LA4		406	F102_25.8 P80 BN80A4	407
60	83	1.7	22.8	2510	F102_22.8 S1 M1LA4		406	F102_22.8 P80 BN80A4	407
60	84	2.8	23.1	3030	F202_23.1 S1 M1LA4		410	F202_23.1 P80 BN80A4	411
68	73	3.1	20.2	2910	F202_20.2 S1 M1LA4		410	F202_20.2 P80 BN80A4	411
71	70	1.9	19.3	2400	F102_19.3 S1 M1LA4		406	F102_19.3 P80 BN80A4	407
77	65	3.3	18.1	2820	F202_18.1 S1 M1LA4		410	F202_18.1 P80 BN80A4	411
81	61	2.1	17.0	2310	F102_17.0 S1 M1LA4		406	F102_17.0 P80 BN80A4	407
94	53	2.2	14.6	2220	F102_14.6 S1 M1LA4		406	F102_14.6 P80 BN80A4	407
106	47	2.2	13.0	2140	F102_13.0 S1 M1LA4		406	F102_13.0 P80 BN80A4	407
120	42	2.3	11.5	2070	F102_11.5 S1 M1LA4		406	F102_11.5 P80 BN80A4	407
141	35	2.5	9.8	1970	F102_9.8 S1 M1LA4		406	F102_9.8 P80 BN80A4	407
161	31	2.6	8.6	1890	F102_8.6 S1 M1LA4		406	F102_8.6 P80 BN80A4	407
186	27	2.8	7.4	1810	F102_7.4 S1 M1LA4		406	F102_7.4 P80 BN80A4	407
193	26	3.6	14.6	1800	F102_14.6 S1 M1SD2		406	F102_14.6 P71 BN71B2	407
216	23	3.7	13.0	1730	F102_13.0 S1 M1SD2		406	F102_13.0 P71 BN71B2	407
244	20	3.8	11.5	1670	F102_11.5 S1 M1SD2		406	F102_11.5 P71 BN71B2	407
289	17	4.2	9.8	1590	F102_9.8 S1 M1SD2		406	F102_9.8 P71 BN71B2	407
329	15	4.4	8.6	1530	F102_8.6 S1 M1SD2		406	F102_8.6 P71 BN71B2	407
381	13	4.8	7.4	1460	F102_7.4 S1 M1SD2		406	F102_7.4 P71 BN71B2	407

## 0.75 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	IE2		IE2	IE3		IE3
0.45	14391	1.0	2098.7	55000	F904_2099 S3 ME3SA6		440	F904_2099 P90 BE90S6		441
0.49	13284	1.1	1937.3	55000	F904_1937 S3 ME3SA6		440	F904_1937 P90 BE90S6		441
0.55	11673	1.2	1702.3	55000	F904_1702 S3 ME3SA6		440	F904_1702 P90 BE90S6		441
0.60	10775	1.3	1571.4	55000	F904_1571 S3 ME3SA6		440	F904_1571 P90 BE90S6		441
0.66	9791	1.4	1427.9	55000	F904_1428 S3 ME3SA6		440	F904_1428 P90 BE90S6		441
0.68	9444	1.5	2098.7	55000	F904_2099 S2 ME2SB4	F904_2099 S2 MX2SB4	440	F904_2099 P80 BE80B4	F904_2099 P80 BX80B4	441
0.72	8941	0.9	1986.8	45000	F804_1987 S2 ME2SB4	F804_1987 S2 MX2SB4	437	F804_1987 P80 BE80B4	F804_1987 P80 BX80B4	438
0.74	8718	1.6	1937.3	55000	F904_1937 S2 ME2SB4	F904_1937 S2 MX2SB4	440	F904_1937 P80 BE80B4	F904_1937 P80 BX80B4	441
0.78	8253	1.0	1834.0	45000	F804_1834 S2 ME2SB4	F804_1834 S2 MX2SB4	437	F804_1834 P80 BE80B4	F804_1834 P80 BX80B4	438
0.84	7691	1.0	1709.1	45000	F804_1709 S2 ME2SB4	F804_1709 S2 MX2SB4	437	F804_1709 P80 BE80B4	F804_1709 P80 BX80B4	438
0.84	7660	1.8	1702.3	55000	F904_1702 S2 ME2SB4	F904_1702 S2 MX2SB4	440	F904_1702 P80 BE80B4	F904_1702 P80 BX80B4	441
0.91	7099	1.1	1577.6	45000	F804_1578 S2 ME2SB4	F804_1578 S2 MX2SB4	437	F804_1578 P80 BE80B4	F804_1578 P80 BX80B4	438
0.91	7071	2.0	1571.4	55000	F904_1571 S2 ME2SB4	F904_1571 S2 MX2SB4	440	F904_1571 P80 BE80B4	F904_1571 P80 BX80B4	441
1.0	6426	2.2	1427.9	55000	F904_1428 S2 ME2SB4	F904_1428 S2 MX2SB4	440	F904_1428 P80 BE80B4	F904_1428 P80 BX80B4	441
1.0	6227	1.3	1383.8	45000	F804_1384 S2 ME2SB4	F804_1384 S2 MX2SB4	437	F804_1384 P80 BE80B4	F804_1384 P80 BX80B4	438










## 0.75 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
12.7	523	1.1	112.5	6500	F313_112.5 S2 ME2SB4	F313_112.5 S2 MX2SB4	418	F313_112.5 P80 BE80B4	F313_112.5 P80 BX80B4	419
13.5	493	2.2	106.0	8500	F413_106.0 S2 ME2SB4	F413_106.0 S2 MX2SB4	422	F413_106.0 P80 BE80B4	F413_106.0 P80 BX80B4	423
14.0	474	1.3	101.9	6500	F313_101.9 S2 ME2SB4	F313_101.9 S2 MX2SB4	418	F313_101.9 P80 BE80B4	F313_101.9 P80 BX80B4	419
15.0	444	0.9	95.5	5450	F253_95.5 S2 ME2SB4	F253_95.5 S2 MX2SB4	414	F253_95.5 P80 BE80B4	F253_95.5 P80 BX80B4	415
16.4	406	1.5	87.4	6500	F313_87.4 S2 ME2SB4	F313_87.4 S2 MX2SB4	418	F313_87.4 P80 BE80B4	F313_87.4 P80 BX80B4	419
16.8	395	2.8	84.9	8500	F413_84.9 S2 ME2SB4	F413_84.9 S2 MX2SB4	422	F413_84.9 P80 BE80B4	F413_84.9 P80 BX80B4	423
17.1	388	1.0	83.4	5350	F253_83.4 S2 ME2SB4	F253_83.4 S2 MX2SB4	414	F253_83.4 P80 BE80B4	F253_83.4 P80 BX80B4	415
18.1	367	1.6	78.9	6500	F313_78.9 S2 ME2SB4	F313_78.9 S2 MX2SB4	418	F313_78.9 P80 BE80B4	F313_78.9 P80 BX80B4	419
18.7	356	1.1	76.6	5300	F253_76.6 S2 ME2SB4	F253_76.6 S2 MX2SB4	414	F253_76.6 P80 BE80B4	F253_76.6 P80 BX80B4	415
20.7	321	1.9	69.1	6500	F313_69.1 S2 ME2SB4	F313_69.1 S2 MX2SB4	418	F313_69.1 P80 BE80B4	F313_69.1 P80 BX80B4	419
21.5	309	3.6	66.5	8500	F413_66.5 S2 ME2SB4	F413_66.5 S2 MX2SB4	422	F413_66.5 P80 BE80B4	F413_66.5 P80 BX80B4	423
21.9	304	1.3	65.3	5180	F253_65.3 S2 ME2SB4	F253_65.3 S2 MX2SB4	414	F253_65.3 P80 BE80B4	F253_65.3 P80 BX80B4	415
22.8	292	2.1	62.8	6500	F313_62.8 S2 ME2SB4	F313_62.8 S2 MX2SB4	418	F313_62.8 P80 BE80B4	F313_62.8 P80 BX80B4	419
24.5	271	1.5	58.3	5080	F253_58.3 S2 ME2SB4	F253_58.3 S2 MX2SB4	414	F253_58.3 P80 BE80B4	F253_58.3 P80 BX80B4	415
25.2	269	0.9	56.7	3590	F202_56.7 S2 ME2SB4	F202_56.7 S2 MX2SB4	410	F202_56.7 P80 BE80B4	F202_56.7 P80 BX80B4	411
27.5	242	2.5	52.1	6500	F313_52.1 S2 ME2SB4	F313_52.1 S2 MX2SB4	418	F313_52.1 P80 BE80B4	F313_52.1 P80 BX80B4	419
28.2	236	1.7	50.8	4960	F253_50.8 S2 ME2SB4	F253_50.8 S2 MX2SB4	414	F253_50.8 P80 BE80B4	F253_50.8 P80 BX80B4	415
28.2	241	1.0	50.7	3510	F202_50.7 S2 ME2SB4	F202_50.7 S2 MX2SB4	410	F202_50.7 P80 BE80B4	F202_50.7 P80 BX80B4	411
30	221	2.6	47.5	6500	F313_47.5 S2 ME2SB4	F313_47.5 S2 MX2SB4	418	F313_47.5 P80 BE80B4	F313_47.5 P80 BX80B4	419
31	212	1.9	45.6	4860	F253_45.6 S2 ME2SB4	F253_45.6 S2 MX2SB4	414	F253_45.6 P80 BE80B4	F253_45.6 P80 BX80B4	415
32	213	1.2	44.8	3420	F202_44.8 S2 ME2SB4	F202_44.8 S2 MX2SB4	410	F202_44.8 P80 BE80B4	F202_44.8 P80 BX80B4	411
32	212	2.8	44.6	6500	F312_44.6 S2 ME2SB4	F312_44.6 S2 MX2SB4	418	F312_44.6 P80 BE80B4	F312_44.6 P80 BX80B4	419
32	211	1.8	44.4	4890	F252_44.4 S2 ME2SB4	F252_44.4 S2 MX2SB4	414	F252_44.4 P80 BE80B4	F252_44.4 P80 BX80B4	415
34	199	1.3	41.8	3370	F202_41.8 S2 ME2SB4	F202_41.8 S2 MX2SB4	410	F202_41.8 P80 BE80B4	F202_41.8 P80 BX80B4	411
35	193	1.9	40.7	4790	F252_40.7 S2 ME2SB4	F252_40.7 S2 MX2SB4	414	F252_40.7 P80 BE80B4	F252_40.7 P80 BX80B4	415
35	192	3.1	40.4	6500	F312_40.4 S2 ME2SB4	F312_40.4 S2 MX2SB4	418	F312_40.4 P80 BE80B4	F312_40.4 P80 BX80B4	419
38	180	1.4	37.9	3300	F202_37.9 S2 ME2SB4	F202_37.9 S2 MX2SB4	410	F202_37.9 P80 BE80B4	F202_37.9 P80 BX80B4	411
38	179	3.4	37.7	6500	F312_37.7 S2 ME2SB4	F312_37.7 S2 MX2SB4	418	F312_37.7 P80 BE80B4	F312_37.7 P80 BX80B4	419
39	173	2.3	36.4	4680	F252_36.4 S2 ME2SB4	F252_36.4 S2 MX2SB4	414	F252_36.4 P80 BE80B4	F252_36.4 P80 BX80B4	415
43	157	1.6	33.1	3200	F202_33.1 S2 ME2SB4	F202_33.1 S2 MX2SB4	410	F202_33.1 P80 BE80B4	F202_33.1 P80 BX80B4	411
44	153	2.6	32.2	4540	F252_32.2 S2 ME2SB4	F252_32.2 S2 MX2SB4	414	F252_32.2 P80 BE80B4	F252_32.2 P80 BX80B4	415
47	144	1.7	30.4	3140	F202_30.4 S2 ME2SB4	F202_30.4 S2 MX2SB4	410	F202_30.4 P80 BE80B4	F202_30.4 P80 BX80B4	411
48	143	2.8	30.0	4470	F252_30.0 S2 ME2SB4	F252_30.0 S2 MX2SB4	414	F252_30.0 P80 BE80B4	F252_30.0 P80 BX80B4	415
48	141	1.0	29.6	2550	F102_29.6 S2 ME2SB4	F102_29.6 S2 MX2SB4	406	F102_29.6 P80 BE80B4	F102_29.6 P80 BX80B4	407
53	129	3.1	27.2	4360	F252_27.2 S2 ME2SB4	F252_27.2 S2 MX2SB4	414	F252_27.2 P80 BE80B4	F252_27.2 P80 BX80B4	415
55	123	1.9	25.9	3020	F202_25.9 S2 ME2SB4	F202_25.9 S2 MX2SB4	410	F202_25.9 P80 BE80B4	F202_25.9 P80 BX80B4	411
55	122	1.1	25.8	2470	F102_25.8 S2 ME2SB4	F102_25.8 S2 MX2SB4	406	F102_25.8 P80 BE80B4	F102_25.8 P80 BX80B4	407
60	113	3.5	23.8	4210	F252_23.8 S2 ME2SB4	F252_23.8 S2 MX2SB4	414	F252_23.8 P80 BE80B4	F252_23.8 P80 BX80B4	415
62	110	2.1	23.1	2930	F202_23.1 S2 ME2SB4	F202_23.1 S2 MX2SB4	410	F202_23.1 P80 BE80B4	F202_23.1 P80 BX80B4	411
63	108	1.3	22.8	2400	F102_22.8 S2 ME2SB4	F102_22.8 S2 MX2SB4	406	F102_22.8 P80 BE80B4	F102_22.8 P80 BX80B4	407
71	96	2.3	20.2	2830	F202_20.2 S2 ME2SB4	F202_20.2 S2 MX2SB4	410	F202_20.2 P80 BE80B4	F202_20.2 P80 BX80B4	411
74	92	1.5	19.3	2310	F102_19.3 S2 ME2SB4	F102_19.3 S2 MX2SB4	406	F102_19.3 P80 BE80B4	F102_19.3 P80 BX80B4	407
79	86	2.5	18.1	2740	F202_18.1 S2 ME2SB4	F202_18.1 S2 MX2SB4	410	F202_18.1 P80 BE80B4	F202_18.1 P80 BX80B4	411
84	81	1.6	17.0	2230	F102_17.0 S2 ME2SB4	F102_17.0 S2 MX2SB4	406	F102_17.0 P80 BE80B4	F102_17.0 P80 BX80B4	407
97	70	2.9	14.8	2600	F202_14.8 S2 ME2SB4	F202_14.8 S2 MX2SB4	410	F202_14.8 P80 BE80B4	F202_14.8 P80 BX80B4	411
98	70	1.7	14.6	2150	F102_14.6 S2 ME2SB4	F102_14.6 S2 MX2SB4	406	F102_14.6 P80 BE80B4	F102_14.6 P80 BX80B4	407
110	62	1.7	13.0	2070	F102_13.0 S2 ME2SB4	F102_13.0 S2 MX2SB4	406	F102_13.0 P80 BE80B4	F102_13.0 P80 BX80B4	407
124	55	1.8	11.5	2010	F102_11.5 S2 ME2SB4	F102_11.5 S2 MX2SB4	406	F102_11.5 P80 BE80B4	F102_11.5 P80 BX80B4	407
146	46	1.9	9.8	1920	F102_9.8 S2 ME2SB4	F102_9.8 S2 MX2SB4	406	F102_9.8 P80 BE80B4	F102_9.8 P80 BX80B4	407
167	41	2.0	8.6	1850	F102_8.6 S2 ME2SB4	F102_8.6 S2 MX2SB4	406	F102_8.6 P80 BE80B4	F102_8.6 P80 BX80B4	407
193	35	2.2	7.4	1770	F102_7.4 S2 ME2SB4	F102_7.4 S2 MX2SB4	406	F102_7.4 P80 BE80B4	F102_7.4 P80 BX80B4	407
195	35	2.7	14.6	1770	F102_14.6 S2 ME2SA2		406	F102_14.6 P80 BE80A2		407
219	31	2.7	13.0	1710	F102_13.0 S2 ME2SA2		406	F102_13.0 P80 BE80A2		407
247	28	2.8	11.5	1650	F102_11.5 S2 ME2SA2		406	F102_11.5 P80 BE80A2		407
292	23	3.1	9.8	1570	F102_9.8 S2 ME2SA2		406	F102_9.8 P80 BE80A2		407
332	20.5	3.2	8.6	1510	F102_8.6 S2 ME2SA2		406	F102_8.6 P80 BE80A2		407
385	17.7	3.6	7.4	1440	F102_7.4 S2 ME2SA2		406	F102_7.4 P80 BE80A2		407





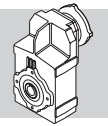
## 1.1 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3	IE2	IE3		
0.60	15694	0.9	1571.4	55000	F904_1571 S3 ME3LA6		440	F904_1571 P100 BE100M6		441
0.66	14285	1.0	1427.9	55000	F904_1428 S3 ME3LA6		440	F904_1428 P100 BE100M6		441
0.68	13977	1.0	2098.7	55000	F904_2099 S3 ME3SA4	F904_2099 S3 MX3SA4	440	F904_2099 P90 BE90S4	F904_2099 P90 BX90S4	441
0.74	12902	1.1	1937.3	55000	F904_1937 S3 ME3SA4	F904_1937 S3 MX3SA4	440	F904_1937 P90 BE90S4	F904_1937 P90 BX90S4	441
0.84	11337	1.2	1702.3	55000	F904_1702 S3 ME3SA4	F904_1702 S3 MX3SA4	440	F904_1702 P90 BE90S4	F904_1702 P90 BX90S4	441
0.91	10465	1.3	1571.4	55000	F904_1571 S3 ME3SA4	F904_1571 S3 MX3SA4	440	F904_1571 P90 BE90S4	F904_1571 P90 BX90S4	441
1.0	9510	1.5	1427.9	55000	F904_1428 S3 ME3SA4	F904_1428 S3 MX3SA4	440	F904_1428 P90 BE90S4	F904_1428 P90 BX90S4	441
1.1	8778	1.6	1318.1	55000	F904_1318 S3 ME3SA4	F904_1318 S3 MX3SA4	440	F904_1318 P90 BE90S4	F904_1318 P90 BX90S4	441
1.1	8507	0.9	1277.3	45000	F804_1277 S3 ME3SA4	F804_1277 S3 MX3SA4	437	F804_1277 P90 BE90S4	F804_1277 P90 BX90S4	438
1.2	8025	1.7	1204.9	55000	F904_1205 S3 ME3SA4	F904_1205 S3 MX3SA4	440	F904_1205 P90 BE90S4	F904_1205 P90 BX90S4	441
1.2	7634	1.0	1146.2	45000	F804_1146 S3 ME3SA4	F804_1146 S3 MX3SA4	437	F804_1146 P90 BE90S4	F804_1146 P90 BX90S4	438
1.3	7408	1.9	1112.3	55000	F904_1112 S3 ME3SA4	F904_1112 S3 MX3SA4	440	F904_1112 P90 BE90S4	F904_1112 P90 BX90S4	441
1.4	7047	1.1	1058.1	45000	F804_1058 S3 ME3SA4	F804_1058 S3 MX3SA4	437	F804_1058 P90 BE90S4	F804_1058 P90 BX90S4	438
1.5	6567	2.1	986.0	55000	F904_986.0 S3 ME3SA4	F904_986.0 S3 MX3SA4	440	F904_986.0 P90 BE90S4	F904_986.0 P90 BX90S4	441
1.5	6474	1.2	972.0	45000	F804_972.0 S3 ME3SA4	F804_972.0 S3 MX3SA4	437	F804_972.0 P90 BE90S4	F804_972.0 P90 BX90S4	438
1.6	6062	2.3	910.2	55000	F904_910.2 S3 ME3SA4	F904_910.2 S3 MX3SA4	440	F904_910.2 P90 BE90S4	F904_910.2 P90 BX90S4	441
1.6	5976	1.3	897.3	45000	F804_897.3 S3 ME3SA4	F804_897.3 S3 MX3SA4	437	F804_897.3 P90 BE90S4	F804_897.3 P90 BX90S4	438
1.7	5476	0.9	822.2	35000	F704_822.2 S3 ME3SA4	F704_822.2 S3 MX3SA4	434	F704_822.2 P90 BE90S4	F704_822.2 P90 BX90S4	435
1.8	5158	1.6	774.4	45000	F804_774.4 S3 ME3SA4	F804_774.4 S3 MX3SA4	437	F804_774.4 P90 BE90S4	F804_774.4 P90 BX90S4	438
1.8	5151	2.7	773.4	55000	F904_773.4 S3 ME3SA4	F904_773.4 S3 MX3SA4	440	F904_773.4 P90 BE90S4	F904_773.4 P90 BX90S4	441
1.9	5055	1.0	759.0	35000	F704_759.0 S3 ME3SA4	F704_759.0 S3 MX3SA4	434	F704_759.0 P90 BE90S4	F704_759.0 P90 BX90S4	435
1.9	4893	1.6	489.1	45000	F804_489.1 S3 ME3LA6		437	F804_489.1 P100 BE100M6		438
2.0	4761	1.7	714.9	45000	F804_714.9 S3 ME3SA4	F804_714.9 S3 MX3SA4	437	F804_714.9 P90 BE90S4	F804_714.9 P90 BX90S4	438
2.0	4755	2.9	714.0	55000	F904_714.0 S3 ME3SA4	F904_714.0 S3 MX3SA4	440	F904_714.0 P90 BE90S4	F904_714.0 P90 BX90S4	441
2.1	4517	1.8	451.5	45000	F804_451.5 S3 ME3LA6		437	F804_451.5 P100 BE100M6		438
2.2	4378	1.1	657.4	35000	F704_657.4 S3 ME3SA4	F704_657.4 S3 MX3SA4	434	F704_657.4 P90 BE90S4	F704_657.4 P90 BX90S4	435
2.3	4167	3.4	625.6	55000	F904_625.6 S3 ME3SA4	F904_625.6 S3 MX3SA4	440	F904_625.6 P90 BE90S4	F904_625.6 P90 BX90S4	441
2.3	4068	2.0	610.9	45000	F804_610.9 S3 ME3SA4	F804_610.9 S3 MX3SA4	437	F804_610.9 P90 BE90S4	F804_610.9 P90 BX90S4	438
2.4	4042	1.2	606.8	35000	F704_606.8 S3 ME3SA4	F704_606.8 S3 MX3SA4	434	F704_606.8 P90 BE90S4	F704_606.8 P90 BX90S4	435
2.5	3846	3.6	577.5	55000	F904_577.5 S3 ME3SA4	F904_577.5 S3 MX3SA4	440	F904_577.5 P90 BE90S4	F904_577.5 P90 BX90S4	441
2.5	3755	2.1	563.9	45000	F804_563.9 S3 ME3SA4	F804_563.9 S3 MX3SA4	437	F804_563.9 P90 BE90S4	F804_563.9 P90 BX90S4	438
2.8	3399	1.5	510.4	35000	F704_510.4 S3 ME3SA4	F704_510.4 S3 MX3SA4	434	F704_510.4 P90 BE90S4	F704_510.4 P90 BX90S4	435
2.9	3262	0.9	489.8	20000	F604_489.8 S3 ME3SA4	F604_489.8 S3 MX3SA4	430	F604_489.8 P90 BE90S4	F604_489.8 P90 BX90S4	431
2.9	3258	2.5	489.1	45000	F804_489.1 S3 ME3SA4	F804_489.1 S3 MX3SA4	437	F804_489.1 P90 BE90S4	F804_489.1 P90 BX90S4	438
3.0	3138	1.6	471.2	35000	F704_471.2 S3 ME3SA4	F704_471.2 S3 MX3SA4	434	F704_471.2 P90 BE90S4	F704_471.2 P90 BX90S4	435
3.2	3007	2.7	451.5	45000	F804_451.5 S3 ME3SA4	F804_451.5 S3 MX3SA4	437	F804_451.5 P90 BE90S4	F804_451.5 P90 BX90S4	438
3.3	2881	1.0	432.6	20000	F604_432.6 S3 ME3SA4	F604_432.6 S3 MX3SA4	430	F604_432.6 P90 BE90S4	F604_432.6 P90 BX90S4	431
3.5	2687	1.9	403.5	35000	F704_403.5 S3 ME3SA4	F704_403.5 S3 MX3SA4	434	F704_403.5 P90 BE90S4	F704_403.5 P90 BX90S4	435
3.6	2660	1.1	399.3	20000	F604_399.3 S3 ME3SA4	F604_399.3 S3 MX3SA4	430	F604_399.3 P90 BE90S4	F604_399.3 P90 BX90S4	431
3.7	2552	3.1	383.2	45000	F804_383.2 S3 ME3SA4	F804_383.2 S3 MX3SA4	437	F804_383.2 P90 BE90S4	F804_383.2 P90 BX90S4	438
3.8	2481	2.0	372.5	35000	F704_372.5 S3 ME3SA4	F704_372.5 S3 MX3SA4	434	F704_372.5 P90 BE90S4	F704_372.5 P90 BX90S4	435
4.0	2356	3.4	353.7	45000	F804_353.7 S3 ME3SA4	F804_353.7 S3 MX3SA4	437	F804_353.7 P90 BE90S4	F804_353.7 P90 BX90S4	438
4.2	2276	1.3	341.7	20000	F604_341.7 S3 ME3SA4	F604_341.7 S3 MX3SA4	430	F604_341.7 P90 BE90S4	F604_341.7 P90 BX90S4	431
4.5	2100	1.4	315.4	20000	F604_315.4 S3 ME3SA4	F604_315.4 S3 MX3SA4	430	F604_315.4 P90 BE90S4	F604_315.4 P90 BX90S4	431
4.7	2027	2.5	304.3	35000	F704_304.3 S3 ME3SA4	F704_304.3 S3 MX3SA4	434	F704_304.3 P90 BE90S4	F704_304.3 P90 BX90S4	435
5.0	1968	0.9	285.9	12000	F513_285.9 S3 ME3SA4	F513_285.9 S3 MX3SA4	426	F513_285.9 P90 BE90S4	F513_285.9 P90 BX90S4	427
5.1	1871	2.7	280.9	35000	F704_280.9 S3 ME3SA4	F704_280.9 S3 MX3SA4	434	F704_280.9 P90 BE90S4	F704_280.9 P90 BX90S4	435
5.1	1932	1.5	280.7	20000	F603_280.7 S3 ME3SA4	F603_280.7 S3 MX3SA4	430	F603_280.7 P90 BE90S4	F603_280.7 P90 BX90S4	431
5.5	1804	1.0	262.1	12000	F513_262.1 S3 ME3SA4	F513_262.1 S3 MX3SA4	426	F513_262.1 P90 BE90S4	F513_262.1 P90 BX90S4	427
5.5	1783	1.6	259.1	20000	F603_259.1 S3 ME3SA4	F603_259.1 S3 MX3SA4	430	F603_259.1 P90 BE90S4	F603_259.1 P90 BX90S4	431
6.0	1651	1.1	239.8	12000	F513_239.8 S3 ME3SA4	F513_239.8 S3 MX3SA4	426	F513_239.8 P90 BE90S4	F513_239.8 P90 BX90S4	427
6.1	1623	1.8	235.8	20000	F603_235.8 S3 ME3SA4	F603_235.8 S3 MX3SA4	430	F603_235.8 P90 BE90S4	F603_235.8 P90 BX90S4	431
6.1	1562	3.2	234.6	35000	F704_234.6 S3 ME3SA4	F704_234.6 S3 MX3SA4	434	F704_234.6 P90 BE90S4	F704_234.6 P90 BX90S4	435
6.6	1498	1.9	217.6	20000	F603_217.6 S3 ME3SA4	F603_217.6 S3 MX3SA4	430	F603_217.6 P90 BE90S4	F603_217.6 P90 BX90S4	431
6.6	1492	1.2	216.9	12000	F513_216.9 S3 ME3SA4	F513_216.9 S3 MX3SA4	426	F513_216.9 P90 BE90S4	F513_216.9 P90 BX90S4	427
6.6	1442	3.5	216.5	35000	F704_216.5 S3 ME3SA4	F704_216.5 S3 MX3SA4	434	F704_216.5 P90 BE90S4	F704_216.5 P90 BX90S4	435
7.1	1393	1.3	202.4	12000	F513_202.4 S3 ME3SA4	F513_202.4 S3 MX3SA4	426	F513_202.4 P90 BE90S4	F513_202.4 P90 BX90S4	427


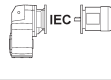


## 1.1 kW


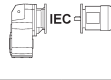
n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
7.1	1386	2.1	201.4	20000	F603_201.4 S3 ME3SA4	F603_201.4 S3 MX3SA4	430	F603_201.4 P90 BE90S4	F603_201.4 P90 BX90S4	431
7.7	1279	2.3	185.9	20000	F603_185.9 S3 ME3SA4	F603_185.9 S3 MX3SA4	430	F603_185.9 P90 BE90S4	F603_185.9 P90 BX90S4	431
7.9	1244	0.9	180.7	8500	F413_180.7 S3 ME3SA4	F413_180.7 S3 MX3SA4	422	F413_180.7 P90 BE90S4	F413_180.7 P90 BX90S4	423
8.5	1161	0.9	168.7	8500	F413_168.7 S3 ME3SA4	F413_168.7 S3 MX3SA4	422	F413_168.7 P90 BE90S4	F413_168.7 P90 BX90S4	423
8.6	1140	1.6	165.6	12000	F513_165.6 S3 ME3SA4	F513_165.6 S3 MX3SA4	426	F513_165.6 P90 BE90S4	F513_165.6 P90 BX90S4	427
8.8	1121	2.6	162.9	20000	F603_162.9 S3 ME3SA4	F603_162.9 S3 MX3SA4	430	F603_162.9 P90 BE90S4	F603_162.9 P90 BX90S4	431
9.5	1035	2.8	150.4	20000	F603_150.4 S3 ME3SA4	F603_150.4 S3 MX3SA4	430	F603_150.4 P90 BE90S4	F603_150.4 P90 BX90S4	431
10.6	925	1.2	134.4	8500	F413_134.4 S3 ME3SA4	F413_134.4 S3 MX3SA4	422	F413_134.4 P90 BE90S4	F413_134.4 P90 BX90S4	423
11.0	894	2.0	129.9	12000	F513_129.9 S3 ME3SA4	F513_129.9 S3 MX3SA4	426	F513_129.9 P90 BE90S4	F513_129.9 P90 BX90S4	427
13.5	730	1.5	106.0	8500	F413_106.0 S3 ME3SA4	F413_106.0 S3 MX3SA4	422	F413_106.0 P90 BE90S4	F413_106.0 P90 BX90S4	423
13.6	723	2.5	105.1	12000	F513_105.1 S3 ME3SA4	F513_105.1 S3 MX3SA4	426	F513_105.1 P90 BE90S4	F513_105.1 P90 BX90S4	427
16.4	601	1.0	87.4	6500	F313_87.4 S3 ME3SA4	F313_87.4 S3 MX3SA4	418	F313_87.4 P90 BE90S4	F313_87.4 P90 BX90S4	419
16.8	584	1.9	84.9	8500	F413_84.9 S3 ME3SA4	F413_84.9 S3 MX3SA4	422	F413_84.9 P90 BE90S4	F413_84.9 P90 BX90S4	423
17.2	573	3.1	83.2	12000	F513_83.2 S3 ME3SA4	F513_83.2 S3 MX3SA4	426	F513_83.2 P90 BE90S4	F513_83.2 P90 BX90S4	427
18.1	543	1.1	78.9	6500	F313_78.9 S3 ME3SA4	F313_78.9 S3 MX3SA4	418	F313_78.9 P90 BE90S4	F313_78.9 P90 BX90S4	419
20.7	475	1.3	69.1	6500	F313_69.1 S3 ME3SA4	F313_69.1 S3 MX3SA4	418	F313_69.1 P90 BE90S4	F313_69.1 P90 BX90S4	419
21.5	458	2.4	66.5	8500	F413_66.5 S3 ME3SA4	F413_66.5 S3 MX3SA4	422	F413_66.5 P90 BE90S4	F413_66.5 P90 BX90S4	423
21.9	450	0.9	65.3	4610	F253_65.3 S3 ME3SA4	F253_65.3 S3 MX3SA4	414	F253_65.3 P90 BE90S4	F253_65.3 P90 BX90S4	415
22.8	432	1.4	62.8	6500	F313_62.8 S3 ME3SA4	F313_62.8 S3 MX3SA4	418	F313_62.8 P90 BE90S4	F313_62.8 P90 BX90S4	419
23.7	415	2.7	60.2	8500	F413_60.2 S3 ME3SA4	F413_60.2 S3 MX3SA4	422	F413_60.2 P90 BE90S4	F413_60.2 P90 BX90S4	423
24.5	401	1.0	58.3	4500	F253_58.3 S3 ME3SA4	F253_58.3 S3 MX3SA4	414	F253_58.3 P90 BE90S4	F253_58.3 P90 BX90S4	415
27.5	359	1.7	52.1	6500	F313_52.1 S3 ME3SA4	F313_52.1 S3 MX3SA4	418	F313_52.1 P90 BE90S4	F313_52.1 P90 BX90S4	419
27.8	354	3.1	51.5	8500	F413_51.5 S3 ME3SA4	F413_51.5 S3 MX3SA4	422	F413_51.5 P90 BE90S4	F413_51.5 P90 BX90S4	423
28.2	350	1.1	50.8	4450	F253_50.8 S3 ME3SA4	F253_50.8 S3 MX3SA4	414	F253_50.8 P90 BE90S4	F253_50.8 P90 BX90S4	415
29.8	337	3.2	47.9	8500	F412_47.9 S3 ME3SA4	F412_47.9 S3 MX3SA4	422	F412_47.9 P90 BE90S4	F412_47.9 P90 BX90S4	423
30	327	1.8	47.5	6500	F313_47.5 S3 ME3SA4	F313_47.5 S3 MX3SA4	418	F313_47.5 P90 BE90S4	F313_47.5 P90 BX90S4	419
31	314	1.3	45.6	4400	F253_45.6 S3 ME3SA4	F253_45.6 S3 MX3SA4	414	F253_45.6 P90 BE90S4	F253_45.6 P90 BX90S4	415
32	314	1.9	44.6	6500	F312_44.6 S3 ME3SA4	F312_44.6 S3 MX3SA4	418	F312_44.6 P90 BE90S4	F312_44.6 P90 BX90S4	419
32	312	1.2	44.4	4470	F252_44.4 S3 ME3SA4	F252_44.4 S3 MX3SA4	414	F252_44.4 P90 BE90S4	F252_44.4 P90 BX90S4	415
35	286	1.3	40.7	4410	F252_40.7 S3 ME3SA4	F252_40.7 S3 MX3SA4	414	F252_40.7 P90 BE90S4	F252_40.7 P90 BX90S4	415
35	284	2.1	40.4	6500	F312_40.4 S3 ME3SA4	F312_40.4 S3 MX3SA4	418	F312_40.4 P90 BE90S4	F312_40.4 P90 BX90S4	419
38	266	0.9	37.9	3050	F202_37.9 S3 ME3SA4	F202_37.9 S3 MX3SA4	410	F202_37.9 P90 BE90S4	F202_37.9 P90 BX90S4	411
38	265	2.3	37.7	6500	F312_37.7 S3 ME3SA4	F312_37.7 S3 MX3SA4	418	F312_37.7 P90 BE90S4	F312_37.7 P90 BX90S4	419
39	256	1.6	36.4	4330	F252_36.4 S3 ME3SA4	F252_36.4 S3 MX3SA4	414	F252_36.4 P90 BE90S4	F252_36.4 P90 BX90S4	415
42	242	2.5	34.4	6500	F312_34.4 S3 ME3SA4	F312_34.4 S3 MX3SA4	418	F312_34.4 P90 BE90S4	F312_34.4 P90 BX90S4	419
43	233	1.1	33.1	2980	F202_33.1 S3 ME3SA4	F202_33.1 S3 MX3SA4	410	F202_33.1 P90 BE90S4	F202_33.1 P90 BX90S4	411
44	226	1.8	32.2	4240	F252_32.2 S3 ME3SA4	F252_32.2 S3 MX3SA4	414	F252_32.2 P90 BE90S4	F252_32.2 P90 BX90S4	415
47	214	1.2	30.4	2930	F202_30.4 S3 ME3SA4	F202_30.4 S3 MX3SA4	410	F202_30.4 P90 BE90S4	F202_30.4 P90 BX90S4	411
47	212	2.8	30.1	6500	F312_30.1 S3 ME3SA4	F312_30.1 S3 MX3SA4	418	F312_30.1 P90 BE90S4	F312_30.1 P90 BX90S4	419
48	211	1.9	30.0	4190	F252_30.0 S3 ME3SA4	F252_30.0 S3 MX3SA4	414	F252_30.0 P90 BE90S4	F252_30.0 P90 BX90S4	415
52	192	3.1	27.3	6500	F312_27.3 S3 ME3SA4	F312_27.3 S3 MX3SA4	418	F312_27.3 P90 BE90S4	F312_27.3 P90 BX90S4	419
53	191	2.1	27.2	4100	F252_27.2 S3 ME3SA4	F252_27.2 S3 MX3SA4	414	F252_27.2 P90 BE90S4	F252_27.2 P90 BX90S4	415
55	182	1.3	25.9	2840	F202_25.9 S3 ME3SA4	F202_25.9 S3 MX3SA4	410	F202_25.9 P90 BE90S4	F202_25.9 P90 BX90S4	411
60	167	2.4	23.8	3990	F252_23.8 S3 ME3SA4	F252_23.8 S3 MX3SA4	414	F252_23.8 P90 BE90S4	F252_23.8 P90 BX90S4	415
62	163	1.4	23.1	2780	F202_23.1 S3 ME3SA4	F202_23.1 S3 MX3SA4	410	F202_23.1 P90 BE90S4	F202_23.1 P90 BX90S4	411
66	153	2.6	21.8	3920	F252_21.8 S3 ME3SA4	F252_21.8 S3 MX3SA4	414	F252_21.8 P90 BE90S4	F252_21.8 P90 BX90S4	415
71	142	1.6	20.2	2690	F202_20.2 S3 ME3SA4	F202_20.2 S3 MX3SA4	410	F202_20.2 P90 BE90S4	F202_20.2 P90 BX90S4	411
74	136	1.0	19.3	2170	F102_19.3 S3 ME3SA4	F102_19.3 S3 MX3SA4	406	F102_19.3 P90 BE90S4	F102_19.3 P90 BX90S4	407
77	131	3.1	18.6	3780	F252_18.6 S3 ME3SA4	F252_18.6 S3 MX3SA4	414	F252_18.6 P90 BE90S4	F252_18.6 P90 BX90S4	415
79	127	1.7	18.1	2620	F202_18.1 S3 ME3SA4	F202_18.1 S3 MX3SA4	410	F202_18.1 P90 BE90S4	F202_18.1 P90 BX90S4	411
84	119	1.1	17.0	2110	F102_17.0 S3 ME3SA4	F102_17.0 S3 MX3SA4	406	F102_17.0 P90 BE90S4	F102_17.0 P90 BX90S4	407
86	117	3.4	16.6	3670	F252_16.6 S3 ME3SA4	F252_16.6 S3 MX3SA4	414	F252_16.6 P90 BE90S4	F252_16.6 P90 BX90S4	415
97	104	2.0	14.8	2500	F202_14.8 S3 ME3SA4	F202_14.8 S3 MX3SA4	410	F202_14.8 P90 BE90S4	F202_14.8 P90 BX90S4	411
98	103	1.2	14.6	2050	F102_14.6 S3 ME3SA4	F102_14.6 S3 MX3SA4	406	F102_14.6 P90 BE90S4	F102_14.6 P90 BX90S4	407
110	92	1.1	13.0	1980	F102_13.0 S3 ME3SA4	F102_13.0 S3 MX3SA4	406	F102_13.0 P90 BE90S4	F102_13.0 P90 BX90S4	407
124	81	1.2	11.5	1920	F102_11.5 S3 ME3SA4	F102_11.5 S3 MX3SA4	406	F102_11.5 P90 BE90S4	F102_11.5 P90 BX90S4	407
127	79	2.2	11.2	2310	F202_11.2 S3 ME3SA4	F202_11.2 S3 MX3SA4	410	F202_11.2 P90 BE90S4	F202_11.2 P90 BX90S4	411



## 1.1 kW


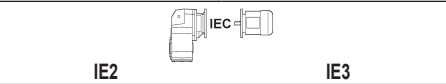
n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3	IE2	IE3		
143	71	2.3	10.0	2200	F202_10.0 S3 ME3SA4	F202_10.0 S3 MX3SA4	410	F202_10.0 P90 BE90S4	F202_10.0 P90 BX90S4	411
146	69	1.3	9.8	1840	F102_9.8 S3 ME3SA4	F102_9.8 S3 MX3SA4	406	F102_9.8 P90 BE90S4	F102_9.8 P90 BX90S4	407
164	61	2.5	8.7	2160	F202_8.7 S3 ME3SA4	F202_8.7 S3 MX3SA4	410	F202_8.7 P90 BE90S4	F202_8.7 P90 BX90S4	411
167	60	1.4	8.6	1780	F102_8.6 S3 ME3SA4	F102_8.6 S3 MX3SA4	406	F102_8.6 P90 BE90S4	F102_8.6 P90 BX90S4	407
183	55	2.6	7.8	2100	F202_7.8 S3 ME3SA4	F202_7.8 S3 MX3SA4	410	F202_7.8 P90 BE90S4	F202_7.8 P90 BX90S4	411
193	52	1.5	7.4	1720	F102_7.4 S3 ME3SA4	F102_7.4 S3 MX3SA4	406	F102_7.4 P90 BE90S4	F102_7.4 P90 BX90S4	407
223	45	2.9	6.4	1980	F202_6.4 S3 ME3SA4	F202_6.4 S3 MX3SA4	410	F202_6.4 P90 BE90S4	F202_6.4 P90 BX90S4	411
245	41	1.9	11.5	1600	F102_11.5S2ME2SB2		406	F102_11.5 P90 BE90B2		407
252	40	3.6	11.2	1910	F202_11.2S2ME2SB2		410	F202_11.2 P90 BE90B2		411
290	34	2.1	9.8	1530	F102_9.8S2ME2SB2		406	F102_9.8 P90 BE90B2		407
330	30	2.2	8.6	1480	F102_8.6S2ME2SB2		406	F102_8.6 P90 BE90B2		407
382	26	2.4	7.4	1410	F102_7.4S2ME2SB2		406	F102_7.4 P90 BE90B2		407

## 1.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3	IE2	IE3		
0.8	15321	0.9	1702.3	55000	F904_1702 S3 ME3SB4	F904_1702 S3 MX3SB4	440	F904_1702 P90 BE90LA4	F904_1702 P90 BX90LA4	441
0.9	14142	1.0	1571.4	55000	F904_1571 S3 ME3SB4	F904_1571 S3 MX3SB4	440	F904_1571 P90 BE90LA4	F904_1571 P90 BX90LA4	441
1.0	12851	1.1	1427.9	55000	F904_1428 S3 ME3SB4	F904_1428 S3 MX3SB4	440	F904_1428 P90 BE90LA4	F904_1428 P90 BX90LA4	441
1.1	11863	1.2	1318.1	55000	F904_1318 S3 ME3SB4	F904_1318 S3 MX3SB4	440	F904_1318 P90 BE90LA4	F904_1318 P90 BX90LA4	441
1.2	10845	1.3	1204.9	55000	F904_1205 S3 ME3SB4	F904_1205 S3 MX3SB4	440	F904_1205 P90 BE90LA4	F904_1205 P90 BX90LA4	441
1.3	10010	1.4	1112.3	55000	F904_1112 S3 ME3SB4	F904_1112 S3 MX3SB4	440	F904_1112 P90 BE90LA4	F904_1112 P90 BX90LA4	441
1.5	8874	1.6	986.0	55000	F904_986.0 S3 ME3SB4	F904_986.0 S3 MX3SB4	440	F904_986.0 P90 BE90LA4	F904_986.0 P90 BX90LA4	441
1.5	8748	0.9	972.0	45000	F804_972.0 S3 ME3SB4	F804_972.0 S3 MX3SB4	437	F804_972.0 P90 BE90LA4	F804_972.0 P90 BX90LA4	438
1.6	8192	1.7	910.2	55000	F904_910.2 S3 ME3SB4	F904_910.2 S3 MX3SB4	440	F904_910.2 P90 BE90LA4	F904_910.2 P90 BX90LA4	441
1.6	8075	1.0	897.3	45000	F804_897.3 S3 ME3SB4	F804_897.3 S3 MX3SB4	437	F804_897.3 P90 BE90LA4	F804_897.3 P90 BX90LA4	438
1.8	6970	1.1	774.4	45000	F804_774.4 S3 ME3SB4	F804_774.4 S3 MX3SB4	437	F804_774.4 P90 BE90LA4	F804_774.4 P90 BX90LA4	438
1.8	6961	2.0	773.4	55000	F904_773.4 S3 ME3SB4	F904_773.4 S3 MX3SB4	440	F904_773.4 P90 BE90LA4	F904_773.4 P90 BX90LA4	441
2.0	6434	1.2	714.9	45000	F804_714.9 S3 ME3SB4	F804_714.9 S3 MX3SB4	437	F804_714.9 P90 BE90LA4	F804_714.9 P90 BX90LA4	438
2.0	6426	2.2	714.0	55000	F904_714.0 S3 ME3SB4	F904_714.0 S3 MX3SB4	440	F904_714.0 P90 BE90LA4	F904_714.0 P90 BX90LA4	441
2.3	5631	2.5	625.6	55000	F904_625.6 S3 ME3SB4	F904_625.6 S3 MX3SB4	440	F904_625.6 P90 BE90LA4	F904_625.6 P90 BX90LA4	441
2.3	5498	1.5	610.9	45000	F804_610.9 S3 ME3SB4	F804_610.9 S3 MX3SB4	437	F804_610.9 P90 BE90LA4	F804_610.9 P90 BX90LA4	438
2.4	5462	0.9	606.8	35000	F704_606.8 S3 ME3SB4	F704_606.8 S3 MX3SB4	434	F704_606.8 P90 BE90LA4	F704_606.8 P90 BX90LA4	435
2.5	5197	2.7	577.5	55000	F904_577.5 S3 ME3SB4	F904_577.5 S3 MX3SB4	440	F904_577.5 P90 BE90LA4	F904_577.5 P90 BX90LA4	441
2.5	5075	1.6	563.9	45000	F804_563.9 S3 ME3SB4	F804_563.9 S3 MX3SB4	437	F804_563.9 P90 BE90LA4	F804_563.9 P90 BX90LA4	438
2.8	4594	1.1	510.4	35000	F704_510.4 S3 ME3SB4	F704_510.4 S3 MX3SB4	434	F704_510.4 P90 BE90LA4	F704_510.4 P90 BX90LA4	435
2.9	4460	3.1	495.6	55000	F904_495.6 S3 ME3SB4	F904_495.6 S3 MX3SB4	440	F904_495.6 P90 BE90LA4	F904_495.6 P90 BX90LA4	441
2.9	4402	1.8	489.1	45000	F804_489.1 S3 ME3SB4	F804_489.1 S3 MX3SB4	437	F804_489.1 P90 BE90LA4	F804_489.1 P90 BX90LA4	438
3.0	4240	1.2	471.2	35000	F704_471.2 S3 ME3SB4	F704_471.2 S3 MX3SB4	434	F704_471.2 P90 BE90LA4	F704_471.2 P90 BX90LA4	435
3.1	4117	3.4	457.5	55000	F904_457.5 S3 ME3SB4	F904_457.5 S3 MX3SB4	440	F904_457.5 P90 BE90LA4	F904_457.5 P90 BX90LA4	441
3.2	4063	2.0	451.5	45000	F804_451.5 S3 ME3SB4	F804_451.5 S3 MX3SB4	437	F804_451.5 P90 BE90LA4	F804_451.5 P90 BX90LA4	438
3.5	3632	1.4	403.5	35000	F704_403.5 S3 ME3SB4	F704_403.5 S3 MX3SB4	434	F704_403.5 P90 BE90LA4	F704_403.5 P90 BX90LA4	435
3.7	3448	2.3	383.2	45000	F804_383.2 S3 ME3SB4	F804_383.2 S3 MX3SB4	437	F804_383.2 P90 BE90LA4	F804_383.2 P90 BX90LA4	438
3.8	3352	1.5	372.5	35000	F704_372.5 S3 ME3SB4	F704_372.5 S3 MX3SB4	434	F704_372.5 P90 BE90LA4	F704_372.5 P90 BX90LA4	435
4.0	3183	2.5	353.7	45000	F804_353.7 S3 ME3SB4	F804_353.7 S3 MX3SB4	437	F804_353.7 P90 BE90LA4	F804_353.7 P90 BX90LA4	438
4.2	3075	0.9	341.7	20000	F604_341.7 S3 ME3SB4	F604_341.7 S3 MX3SB4	430	F604_341.7 P90 BE90LA4	F604_341.7 P90 BX90LA4	431
4.5	2839	1.0	315.4	20000	F604_315.4 S3 ME3SB4	F604_315.4 S3 MX3SB4	430	F604_315.4 P90 BE90LA4	F604_315.4 P90 BX90LA4	431
4.7	2739	1.8	304.3	35000	F704_304.3 S3 ME3SB4	F704_304.3 S3 MX3SB4	434	F704_304.3 P90 BE90LA4	F704_304.3 P90 BX90LA4	435
4.8	2670	3.0	296.7	45000	F804_296.7 S3 ME3SB4	F804_296.7 S3 MX3SB4	437	F804_296.7 P90 BE90LA4	F804_296.7 P90 BX90LA4	438
5.1	2528	2.0	280.9	35000	F704_280.9 S3 ME3SB4	F704_280.9 S3 MX3SB4	434	F704_280.9 P90 BE90LA4	F704_280.9 P90 BX90LA4	435
5.1	2610	1.1	280.7	20000	F603_280.7 S3 ME3SB4	F603_280.7 S3 MX3SB4	430	F603_280.7 P90 BE90LA4	F603_280.7 P90 BX90LA4	431
5.2	2465	3.2	273.9	45000	F804_273.9 S3 ME3SB4	F804_273.9 S3 MX3SB4	437	F804_273.9 P90 BE90LA4	F804_273.9 P90 BX90LA4	438
5.5	2409	1.2	259.1	20000	F603_259.1 S3 ME3SB4	F603_259.1 S3 MX3SB4	430	F603_259.1 P90 BE90LA4	F603_259.1 P90 BX90LA4	431



## 1.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
6.1	2193	1.3	235.8	20000	F603_235.8 S3 ME3SB4	F603_235.8 S3 MX3SB4	430	F603_235.8 P90 BE90LA4	F603_235.8 P90 BX90LA4	431
6.1	2111	2.4	234.6	35000	F704_234.6 S3 ME3SB4	F704_234.6 S3 MX3SB4	434	F704_234.6 P90 BE90LA4	F704_234.6 P90 BX90LA4	435
6.6	2024	1.4	217.6	20000	F603_217.6 S3 ME3SB4	F603_217.6 S3 MX3SB4	430	F603_217.6 P90 BE90LA4	F603_217.6 P90 BX90LA4	431
6.6	1949	2.6	216.5	35000	F704_216.5 S3 ME3SB4	F704_216.5 S3 MX3SB4	434	F704_216.5 P90 BE90LA4	F704_216.5 P90 BX90LA4	435
7.1	1882	1.0	202.4	12000	F513_202.4 S3 ME3SB4	F513_202.4 S3 MX3SB4	426	F513_202.4 P90 BE90LA4	F513_202.4 P90 BX90LA4	427
7.1	1873	1.5	201.4	20000	F603_201.4 S3 ME3SB4	F603_201.4 S3 MX3SB4	430	F603_201.4 P90 BE90LA4	F603_201.4 P90 BX90LA4	431
7.3	1823	2.7	196.0	35000	F703_196.0 S3 ME3SB4	F703_196.0 S3 MX3SB4	434	F703_196.0 P90 BE90LA4	F703_196.0 P90 BX90LA4	435
7.7	1729	1.7	185.9	20000	F603_185.9 S3 ME3SB4	F603_185.9 S3 MX3SB4	430	F603_185.9 P90 BE90LA4	F603_185.9 P90 BX90LA4	431
7.9	1683	3.0	180.9	35000	F703_180.9 S3 ME3SB4	F703_180.9 S3 MX3SB4	434	F703_180.9 P90 BE90LA4	F703_180.9 P90 BX90LA4	435
8.6	1550	3.2	166.7	35000	F703_166.7 S3 ME3SB4	F703_166.7 S3 MX3SB4	434	F703_166.7 P90 BE90LA4	F703_166.7 P90 BX90LA4	435
8.6	1540	1.2	165.6	12000	F513_165.6 S3 ME3SB4	F513_165.6 S3 MX3SB4	426	F513_165.6 P90 BE90LA4	F513_165.6 P90 BX90LA4	427
8.8	1515	1.9	162.9	20000	F603_162.9 S3 ME3SB4	F603_162.9 S3 MX3SB4	430	F603_162.9 P90 BE90LA4	F603_162.9 P90 BX90LA4	431
9.3	1431	3.5	153.8	35000	F703_153.8 S3 ME3SB4	F703_153.8 S3 MX3SB4	434	F703_153.8 P90 BE90LA4	F703_153.8 P90 BX90LA4	435
9.5	1398	2.1	150.4	20000	F603_150.4 S3 ME3SB4	F603_150.4 S3 MX3SB4	430	F603_150.4 P90 BE90LA4	F603_150.4 P90 BX90LA4	431
10.6	1250	0.9	134.4	8500	F413_134.4 S3 ME3SB4	F413_134.4 S3 MX3SB4	422	F413_134.4 P90 BE90LA4	F413_134.4 P90 BX90LA4	423
11.0	1214	2.4	130.5	20000	F603_130.5 S3 ME3SB4	F603_130.5 S3 MX3SB4	430	F603_130.5 P90 BE90LA4	F603_130.5 P90 BX90LA4	431
11.0	1208	1.5	129.9	12000	F513_129.9 S3 ME3SB4	F513_129.9 S3 MX3SB4	426	F513_129.9 P90 BE90LA4	F513_129.9 P90 BX90LA4	427
11.9	1120	2.6	120.5	20000	F603_120.5 S3 ME3SB4	F603_120.5 S3 MX3SB4	430	F603_120.5 P90 BE90LA4	F603_120.5 P90 BX90LA4	431
13.4	989	2.9	106.4	20000	F603_106.4 S3 ME3SB4	F603_106.4 S3 MX3SB4	430	F603_106.4 P90 BE90LA4	F603_106.4 P90 BX90LA4	431
13.5	986	1.1	106.0	8500	F413_106.0 S3 ME3SB4	F413_106.0 S3 MX3SB4	422	F413_106.0 P90 BE90LA4	F413_106.0 P90 BX90LA4	423
13.6	977	1.8	105.1	12000	F513_105.1 S3 ME3SB4	F513_105.1 S3 MX3SB4	426	F513_105.1 P90 BE90LA4	F513_105.1 P90 BX90LA4	427
14.6	913	3.2	98.2	20000	F603_98.2 S3 ME3SB4	F603_98.2 S3 MX3SB4	430	F603_98.2 P90 BE90LA4	F603_98.2 P90 BX90LA4	431
16.8	789	1.4	84.9	8500	F413_84.9 S3 ME3SB4	F413_84.9 S3 MX3SB4	422	F413_84.9 P90 BE90LA4	F413_84.9 P90 BX90LA4	423
17.2	774	2.3	83.2	12000	F513_83.2 S3 ME3SB4	F513_83.2 S3 MX3SB4	426	F513_83.2 P90 BE90LA4	F513_83.2 P90 BX90LA4	427
20.7	642	0.9	69.1	6500	F313_69.1 S3 ME3SB4	F313_69.1 S3 MX3SB4	418	F313_69.1 P90 BE90LA4	F313_69.1 P90 BX90LA4	419
21.5	618	1.8	66.5	8500	F413_66.5 S3 ME3SB4	F413_66.5 S3 MX3SB4	422	F413_66.5 P90 BE90LA4	F413_66.5 P90 BX90LA4	423
21.7	612	2.9	65.8	12000	F513_65.8 S3 ME3SB4	F513_65.8 S3 MX3SB4	426	F513_65.8 P90 BE90LA4	F513_65.8 P90 BX90LA4	427
22.8	584	1.0	62.8	6500	F313_62.8 S3 ME3SB4	F313_62.8 S3 MX3SB4	418	F313_62.8 P90 BE90LA4	F313_62.8 P90 BX90LA4	419
23.7	560	2.0	60.2	8500	F413_60.2 S3 ME3SB4	F413_60.2 S3 MX3SB4	422	F413_60.2 P90 BE90LA4	F413_60.2 P90 BX90LA4	423
27.5	484	1.2	52.1	6500	F313_52.1 S3 ME3SB4	F313_52.1 S3 MX3SB4	418	F313_52.1 P90 BE90LA4	F313_52.1 P90 BX90LA4	419
27.8	479	2.3	51.5	8500	F413_51.5 S3 ME3SB4	F413_51.5 S3 MX3SB4	422	F413_51.5 P90 BE90LA4	F413_51.5 P90 BX90LA4	423
29.8	455	2.4	47.9	8500	F412_47.9 S3 ME3SB4	F412_47.9 S3 MX3SB4	422	F412_47.9 P90 BE90LA4	F412_47.9 P90 BX90LA4	423
30	442	1.3	47.5	6500	F313_47.5 S3 ME3SB4	F313_47.5 S3 MX3SB4	418	F313_47.5 P90 BE90LA4	F313_47.5 P90 BX90LA4	419
31	424	0.9	45.6	3880	F253_45.6 S3 ME3SB4	F253_45.6 S3 MX3SB4	414	F253_45.6 P90 BE90LA4	F253_45.6 P90 BX90LA4	415
32	424	1.4	44.6	6500	F312_44.6 S3 ME3SB4	F312_44.6 S3 MX3SB4	418	F312_44.6 P90 BE90LA4	F312_44.6 P90 BX90LA4	419
32	422	0.9	44.4	4180	F252_44.4 S3 ME3SB4	F252_44.4 S3 MX3SB4	414	F252_44.4 P90 BE90LA4	F252_44.4 P90 BX90LA4	415
35	387	1.0	40.7	3970	F252_40.7 S3 ME3SB4	F252_40.7 S3 MX3SB4	414	F252_40.7 P90 BE90LA4	F252_40.7 P90 BX90LA4	415
35	383	1.6	40.4	6500	F312_40.4 S3 ME3SB4	F312_40.4 S3 MX3SB4	418	F312_40.4 P90 BE90LA4	F312_40.4 P90 BX90LA4	419
37	363	3.0	38.2	8500	F412_38.2 S3 ME3SB4	F412_38.2 S3 MX3SB4	422	F412_38.2 P90 BE90LA4	F412_38.2 P90 BX90LA4	423
38	358	1.7	37.7	6500	F312_37.7 S3 ME3SB4	F312_37.7 S3 MX3SB4	418	F312_37.7 P90 BE90LA4	F312_37.7 P90 BX90LA4	419
39	346	1.2	36.4	3940	F252_36.4 S3 ME3SB4	F252_36.4 S3 MX3SB4	414	F252_36.4 P90 BE90LA4	F252_36.4 P90 BX90LA4	415
42	326	1.8	34.4	6500	F312_34.4 S3 ME3SB4	F312_34.4 S3 MX3SB4	418	F312_34.4 P90 BE90LA4	F312_34.4 P90 BX90LA4	419
44	306	1.3	32.2	3890	F252_32.2 S3 ME3SB4	F252_32.2 S3 MX3SB4	414	F252_32.2 P90 BE90LA4	F252_32.2 P90 BX90LA4	415
47	286	2.1	30.1	6500	F312_30.1 S3 ME3SB4	F312_30.1 S3 MX3SB4	418	F312_30.1 P90 BE90LA4	F312_30.1 P90 BX90LA4	419
48	285	1.4	30.0	3860	F252_30.0 S3 ME3SB4	F252_30.0 S3 MX3SB4	414	F252_30.0 P90 BE90LA4	F252_30.0 P90 BX90LA4	415
52	259	2.3	27.3	6500	F312_27.3 S3 ME3SB4	F312_27.3 S3 MX3SB4	418	F312_27.3 P90 BE90LA4	F312_27.3 P90 BX90LA4	419
53	258	1.5	27.2	3810	F252_27.2 S3 ME3SB4	F252_27.2 S3 MX3SB4	414	F252_27.2 P90 BE90LA4	F252_27.2 P90 BX90LA4	415
55	246	1.0	25.9	2640	F202_25.9 S3 ME3SB4	F202_25.9 S3 MX3SB4	410	F202_25.9 P90 BE90LA4	F202_25.9 P90 BX90LA4	411
60	226	1.8	23.8	3730	F252_23.8 S3 ME3SB4	F252_23.8 S3 MX3SB4	414	F252_23.8 P90 BE90LA4	F252_23.8 P90 BX90LA4	415
61	222	2.7	23.4	6480	F312_23.4 S3 ME3SB4	F312_23.4 S3 MX3SB4	418	F312_23.4 P90 BE90LA4	F312_23.4 P90 BX90LA4	419
62	220	1.1	23.1	2600	F202_23.1 S3 ME3SB4	F202_23.1 S3 MX3SB4	410	F202_23.1 P90 BE90LA4	F202_23.1 P90 BX90LA4	411
66	207	1.9	21.8	3680	F252_21.8 S3 ME3SB4	F252_21.8 S3 MX3SB4	414	F252_21.8 P90 BE90LA4	F252_21.8 P90 BX90LA4	415
68	201	3.0	21.1	6320	F312_21.1 S3 ME3SB4	F312_21.1 S3 MX3SB4	418	F312_21.1 P90 BE90LA4	F312_21.1 P90 BX90LA4	419
71	191	1.2	20.2	2530	F202_20.2 S3 ME3SB4	F202_20.2 S3 MX3SB4	410	F202_20.2 P90 BE90LA4	F202_20.2 P90 BX90LA4	411
77	177	2.3	18.6	3570	F252_18.6 S3 ME3SB4	F252_18.6 S3 MX3SB4	414	F252_18.6 P90 BE90LA4	F252_18.6 P90 BX90LA4	415
77	176	3.4	18.5	6110	F312_18.5 S3 ME3SB4	F312_18.5 S3 MX3SB4	418	F312_18.5 P90 BE90LA4	F312_18.5 P90 BX90LA4	419
79	172	1.2	18.1	2480	F202_18.1 S3 ME3SB4	F202_18.1 S3 MX3SB4	410	F202_18.1 P90 BE90LA4	F202_18.1 P90 BX90LA4	411



## 1.5 kW



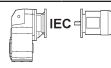

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
86	158	2.5	16.6	3490	F252_16.6 S3 ME3SB4	F252_16.6 S3 MX3SB4	414	F252_16.6 P90 BE90LA4	F252_16.6 P90 BX90LA4	415
97	141	1.4	14.8	2380	F202_14.8 S3 ME3SB4	F202_14.8 S3 MX3SB4	410	F202_14.8 P90 BE90LA4	F202_14.8 P90 BX90LA4	411
99	137	2.9	14.5	3390	F252_14.5 S3 ME3SB4	F252_14.5 S3 MX3SB4	414	F252_14.5 P90 BE90LA4	F252_14.5 P90 BX90LA4	415
110	123	3.2	13.0	3310	F252_13.0 S3 ME3SB4	F252_13.0 S3 MX3SB4	414	F252_13.0 P90 BE90LA4	F252_13.0 P90 BX90LA4	415
124	110	0.9	11.5	1160	F102_11.5 S3 ME3SB4	F102_11.5 S3 MX3SB4	406	F102_11.5 P90 BE90LA4	F102_11.5 P90 BX90LA4	407
127	107	1.7	11.2	2220	F202_11.2 S3 ME3SB4	F202_11.2 S3 MX3SB4	410	F202_11.2 P90 BE90LA4	F202_11.2 P90 BX90LA4	411
143	95	1.7	10.0	2160	F202_10.0 S3 ME3SB4	F202_10.0 S3 MX3SB4	410	F202_10.0 P90 BE90LA4	F202_10.0 P90 BX90LA4	411
146	93	1.0	9.8	1760	F102_9.8 S3 ME3SB4	F102_9.8 S3 MX3SB4	406	F102_9.8 P90 BE90LA4	F102_9.8 P90 BX90LA4	407
153	89	3.0	9.4	3070	F252_9.4 S3 ME3SB4	F252_9.4 S3 MX3SB4	414	F252_9.4 P90 BE90LA4	F252_9.4 P90 BX90LA4	415
164	83	1.9	8.7	2090	F202_8.7 S3 ME3SB4	F202_8.7 S3 MX3SB4	410	F202_8.7 P90 BE90LA4	F202_8.7 P90 BX90LA4	411
167	82	1.0	8.6	1710	F102_8.6 S3 ME3SB4	F102_8.6 S3 MX3SB4	406	F102_8.6 P90 BE90LA4	F102_8.6 P90 BX90LA4	407
170	80	3.3	8.4	2980	F252_8.4 S3 ME3SB4	F252_8.4 S3 MX3SB4	414	F252_8.4 P90 BE90LA4	F252_8.4 P90 BX90LA4	415
183	74	1.9	7.8	2030	F202_7.8 S3 ME3SB4	F202_7.8 S3 MX3SB4	410	F202_7.8 P90 BE90LA4	F202_7.8 P90 BX90LA4	411
193	70	1.1	7.4	1650	F102_7.4 S3 ME3SB4	F102_7.4 S3 MX3SB4	406	F102_7.4 P90 BE90LA4	F102_7.4 P90 BX90LA4	407
223	61	2.1	6.4	1930	F202_6.4 S3 ME3SB4	F202_6.4 S3 MX3SB4	410	F202_6.4 P90 BE90LA4	F202_6.4 P90 BX90LA4	411
247	55	1.4	11.5	1560	F102_11.5 S3 ME3SA2		406	F102_11.5 P90 BE90SA2		407
254	54	2.6	11.2	1860	F202_11.2 S3 ME3SA2		410	F202_11.2 P90 BE90SA2		411
292	47	1.6	9.8	1490	F102_9.8 S3 ME3SA2		406	F102_9.8 P90 BE90SA2		407
327	42	3.0	8.7	1740	F202_8.7 S3 ME3SA2		410	F202_8.7 P90 BE90SA2		411
333	41	1.6	8.6	1440	F102_8.6 S3 ME3SA2		406	F102_8.6 P90 BE90SA2		407
364	37	3.1	7.8	1680	F202_7.8 S3 ME3SA2		410	F202_7.8 P90 BE90SA2		411
386	35	1.8	7.4	1380	F102_7.4 S3 ME3SA2		406	F102_7.4 P90 BE90SA2		407
445	31	3.4	6.4	1590	F202_6.4 S3 ME3SA2		410	F202_6.4 P90 BE90SA2		411

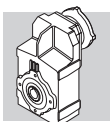
## 2.2 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
1.2	15941	0.9	1204.9	55000	F904_1205 S3 ME3LA4	F904_1205 S3 MX3LA4	440	F904_1205 P100 BE100LA4	F904_1205 P100 BX100LA4	441
1.3	14715	1.0	1112.3	55000	F904_1112 S3 ME3LA4	F904_1112 S3 MX3LA4	440	F904_1112 P100 BE100LA4	F904_1112 P100 BX100LA4	441
1.5	13045	1.1	986.0	55000	F904_986.0 S3 ME3LA4	F904_986.0 S3 MX3LA4	440	F904_986.0 P100 BE100LA4	F904_986.0 P100 BX100LA4	441
1.6	12042	1.2	910.2	55000	F904_910.2 S3 ME3LA4	F904_910.2 S3 MX3LA4	440	F904_910.2 P100 BE100LA4	F904_910.2 P100 BX100LA4	441
1.8	10233	1.4	773.4	55000	F904_773.4 S3 ME3LA4	F904_773.4 S3 MX3LA4	440	F904_773.4 P100 BE100LA4	F904_773.4 P100 BX100LA4	441
2.0	9446	1.5	714.0	55000	F904_714.0 S3 ME3LA4	F904_714.0 S3 MX3LA4	440	F904_714.0 P100 BE100LA4	F904_714.0 P100 BX100LA4	441
2.3	8277	1.7	625.6	55000	F904_625.6 S3 ME3LA4	F904_625.6 S3 MX3LA4	440	F904_625.6 P100 BE100LA4	F904_625.6 P100 BX100LA4	441
2.3	8082	1.0	610.9	45000	F804_610.9 S3 ME3LA4	F804_610.9 S3 MX3LA4	437	F804_610.9 P100 BE100LA4	F804_610.9 P100 BX100LA4	438
2.5	7640	1.8	577.5	55000	F904_577.5 S3 ME3LA4	F904_577.5 S3 MX3LA4	440	F904_577.5 P100 BE100LA4	F904_577.5 P100 BX100LA4	441
2.5	7460	1.1	563.9	45000	F804_563.9 S3 ME3LA4	F804_563.9 S3 MX3LA4	437	F804_563.9 P100 BE100LA4	F804_563.9 P100 BX100LA4	438
2.9	6556	2.1	495.6	55000	F904_495.6 S3 ME3LA4	F904_495.6 S3 MX3LA4	440	F904_495.6 P100 BE100LA4	F904_495.6 P100 BX100LA4	441
2.9	6471	1.2	489.1	45000	F804_489.1 S3 ME3LA4	F804_489.1 S3 MX3LA4	437	F804_489.1 P100 BE100LA4	F804_489.1 P100 BX100LA4	438
3.1	6052	2.3	457.5	55000	F904_457.5 S3 ME3LA4	F904_457.5 S3 MX3LA4	440	F904_457.5 P100 BE100LA4	F904_457.5 P100 BX100LA4	441
3.2	5973	1.3	451.5	45000	F804_451.5 S3 ME3LA4	F804_451.5 S3 MX3LA4	437	F804_451.5 P100 BE100LA4	F804_451.5 P100 BX100LA4	438
3.5	5338	0.9	403.5	35000	F704_403.5 S3 ME3LA4	F704_403.5 S3 MX3LA4	434	F704_403.5 P100 BE100LA4	F704_403.5 P100 BX100LA4	435
3.6	5186	2.7	392.0	55000	F904_392.0 S3 ME3LA4	F904_392.0 S3 MX3LA4	440	F904_392.0 P100 BE100LA4	F904_392.0 P100 BX100LA4	441
3.7	5069	1.6	383.2	45000	F804_383.2 S3 ME3LA4	F804_383.2 S3 MX3LA4	437	F804_383.2 P100 BE100LA4	F804_383.2 P100 BX100LA4	438
3.8	4928	1.0	372.5	35000	F704_372.5 S3 ME3LA4	F704_372.5 S3 MX3LA4	434	F704_372.5 P100 BE100LA4	F704_372.5 P100 BX100LA4	435
4.0	4787	2.9	361.8	55000	F904_361.8 S3 ME3LA4	F904_361.8 S3 MX3LA4	440	F904_361.8 P100 BE100LA4	F904_361.8 P100 BX100LA4	441
4.0	4679	1.7	353.7	45000	F804_353.7 S3 ME3LA4	F804_353.7 S3 MX3LA4	437	F804_353.7 P100 BE100LA4	F804_353.7 P100 BX100LA4	438
4.7	4027	1.2	304.3	35000	F704_304.3 S3 ME3LA4	F704_304.3 S3 MX3LA4	434	F704_304.3 P100 BE100LA4	F704_304.3 P100 BX100LA4	435
4.8	3926	2.0	296.7	45000	F804_296.7 S3 ME3LA4	F804_296.7 S3 MX3LA4	437	F804_296.7 P100 BE100LA4	F804_296.7 P100 BX100LA4	438
4.9	3852	3.6	291.1	55000	F904_291.1 S3 ME3LA4	F904_291.1 S3 MX3LA4	440	F904_291.1 P100 BE100LA4	F904_291.1 P100 BX100LA4	441
5.1	3717	1.3	280.9	35000	F704_280.9 S3 ME3LA4	F704_280.9 S3 MX3LA4	434	F704_280.9 P100 BE100LA4	F704_280.9 P100 BX100LA4	435
5.2	3624	2.2	273.9	45000	F804_273.9 S3 ME3LA4	F804_273.9 S3 MX3LA4	437	F804_273.9 P100 BE100LA4	F804_273.9 P100 BX100LA4	438
6.1	3223	0.9	235.8	20000	F603_235.8 S3 ME3LA4	F603_235.8 S3 MX3LA4	430	F603_235.8 P100 BE100LA4	F603_235.8 P100 BX100LA4	431



## 2.2 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
6.1	3103	1.6	234.6	35000	F704_234.6 S3 ME3LA4	F704_234.6 S3 MX3LA4	434	F704_234.6 P100 BE100LA4	F704_234.6 P100 BX100LA4	435
6.5	2891	2.8	218.5	45000	F804_218.5 S3 ME3LA4	F804_218.5 S3 MX3LA4	437	F804_218.5 P100 BE100LA4	F804_218.5 P100 BX100LA4	438
6.6	2975	1.0	217.6	20000	F603_217.6 S3 ME3LA4	F603_217.6 S3 MX3LA4	430	F603_217.6 P100 BE100LA4	F603_217.6 P100 BX100LA4	431
6.6	2865	1.7	216.5	35000	F704_216.5 S3 ME3LA4	F704_216.5 S3 MX3LA4	434	F704_216.5 P100 BE100LA4	F704_216.5 P100 BX100LA4	435
7.1	2753	1.1	201.4	20000	F603_201.4 S3 ME3LA4	F603_201.4 S3 MX3LA4	430	F603_201.4 P100 BE100LA4	F603_201.4 P100 BX100LA4	431
7.2	2734	2.9	200.0	45000	F803_200.0 S3 ME3LA4	F803_200.0 S3 MX3LA4	437	F803_200.0 P100 BE100LA4	F803_200.0 P100 BX100LA4	438
7.3	2680	1.9	196.0	35000	F703_196.0 S3 ME3LA4	F703_196.0 S3 MX3LA4	434	F703_196.0 P100 BE100LA4	F703_196.0 P100 BX100LA4	435
7.7	2541	1.1	185.9	20000	F603_185.9 S3 ME3LA4	F603_185.9 S3 MX3LA4	430	F603_185.9 P100 BE100LA4	F603_185.9 P100 BX100LA4	431
7.7	2524	3.2	184.6	45000	F803_184.6 S3 ME3LA4	F803_184.6 S3 MX3LA4	437	F803_184.6 P100 BE100LA4	F803_184.6 P100 BX100LA4	438
7.9	2474	2.0	180.9	35000	F703_180.9 S3 ME3LA4	F703_180.9 S3 MX3LA4	434	F703_180.9 P100 BE100LA4	F703_180.9 P100 BX100LA4	435
8.6	2279	2.2	166.7	35000	F703_166.7 S3 ME3LA4	F703_166.7 S3 MX3LA4	434	F703_166.7 P100 BE100LA4	F703_166.7 P100 BX100LA4	435
8.8	2227	1.3	162.9	20000	F603_162.9 S3 ME3LA4	F603_162.9 S3 MX3LA4	430	F603_162.9 P100 BE100LA4	F603_162.9 P100 BX100LA4	431
9.3	2103	2.4	153.8	35000	F703_153.8 S3 ME3LA4	F703_153.8 S3 MX3LA4	434	F703_153.8 P100 BE100LA4	F703_153.8 P100 BX100LA4	435
9.5	2056	1.4	150.4	20000	F603_150.4 S3 ME3LA4	F603_150.4 S3 MX3LA4	430	F603_150.4 P100 BE100LA4	F603_150.4 P100 BX100LA4	431
10.8	1818	2.8	133.0	35000	F703_133.0 S3 ME3LA4	F703_133.0 S3 MX3LA4	434	F703_133.0 P100 BE100LA4	F703_133.0 P100 BX100LA4	435
11.0	1784	1.6	130.5	20000	F603_130.5 S3 ME3LA4	F603_130.5 S3 MX3LA4	430	F603_130.5 P100 BE100LA4	F603_130.5 P100 BX100LA4	431
11.0	1776	1.0	129.9	12000	F513_129.9 S3 ME3LA4	F513_129.9 S3 MX3LA4	426	F513_129.9 P100 BE100LA4	F513_129.9 P100 BX100LA4	427
11.7	1678	3.0	122.7	35000	F703_122.7 S3 ME3LA4	F703_122.7 S3 MX3LA4	434	F703_122.7 P100 BE100LA4	F703_122.7 P100 BX100LA4	435
11.9	1647	1.8	120.5	20000	F603_120.5 S3 ME3LA4	F603_120.5 S3 MX3LA4	430	F603_120.5 P100 BE100LA4	F603_120.5 P100 BX100LA4	431
13.0	1499	3.3	109.6	35000	F703_109.6 S3 ME3LA4	F703_109.6 S3 MX3LA4	434	F703_109.6 P100 BE100LA4	F703_109.6 P100 BX100LA4	435
13.4	1454	2.0	106.4	20000	F603_106.4 S3 ME3LA4	F603_106.4 S3 MX3LA4	430	F603_106.4 P100 BE100LA4	F603_106.4 P100 BX100LA4	431
13.6	1437	1.3	105.1	12000	F513_105.1 S3 ME3LA4	F513_105.1 S3 MX3LA4	426	F513_105.1 P100 BE100LA4	F513_105.1 P100 BX100LA4	427
14.1	1383	3.6	101.2	35000	F703_101.2 S3 ME3LA4	F703_101.2 S3 MX3LA4	434	F703_101.2 P100 BE100LA4	F703_101.2 P100 BX100LA4	435
14.6	1342	2.2	98.2	20000	F603_98.2 S3 ME3LA4	F603_98.2 S3 MX3LA4	430	F603_98.2 P100 BE100LA4	F603_98.2 P100 BX100LA4	431
16.8	1160	0.9	84.9	8500	F413_84.9 S3 ME3LA4	F413_84.9 S3 MX3LA4	422	F413_84.9 P100 BE100LA4	F413_84.9 P100 BX100LA4	423
17.0	1149	2.5	84.0	20000	F603_84.0 S3 ME3LA4	F603_84.0 S3 MX3LA4	430	F603_84.0 P100 BE100LA4	F603_84.0 P100 BX100LA4	431
17.2	1138	1.6	83.2	12000	F513_83.2 S3 ME3LA4	F513_83.2 S3 MX3LA4	426	F513_83.2 P100 BE100LA4	F513_83.2 P100 BX100LA4	427
18.4	1060	2.7	77.6	20000	F603_77.6 S3 ME3LA4	F603_77.6 S3 MX3LA4	430	F603_77.6 P100 BE100LA4	F603_77.6 P100 BX100LA4	431
20.9	933	3.1	68.3	20000	F603_68.3 S3 ME3LA4	F603_68.3 S3 MX3LA4	430	F603_68.3 P100 BE100LA4	F603_68.3 P100 BX100LA4	431
21.5	909	1.2	66.5	8500	F413_66.5 S3 ME3LA4	F413_66.5 S3 MX3LA4	422	F413_66.5 P100 BE100LA4	F413_66.5 P100 BX100LA4	423
21.7	900	2.0	65.8	12000	F513_65.8 S3 ME3LA4	F513_65.8 S3 MX3LA4	426	F513_65.8 P100 BE100LA4	F513_65.8 P100 BX100LA4	427
22.7	862	3.4	63.0	20000	F603_63.0 S3 ME3LA4	F603_63.0 S3 MX3LA4	430	F603_63.0 P100 BE100LA4	F603_63.0 P100 BX100LA4	431
23.7	824	1.3	60.2	8500	F413_60.2 S3 ME3LA4	F413_60.2 S3 MX3LA4	422	F413_60.2 P100 BE100LA4	F413_60.2 P100 BX100LA4	423
27.8	704	1.5	51.5	8500	F413_51.5 S3 ME3LA4	F413_51.5 S3 MX3LA4	422	F413_51.5 P100 BE100LA4	F413_51.5 P100 BX100LA4	423
29.2	669	2.7	48.9	12000	F513_48.9 S3 ME3LA4	F513_48.9 S3 MX3LA4	426	F513_48.9 P100 BE100LA4	F513_48.9 P100 BX100LA4	427
29.8	669	1.6	47.9	8500	F412_47.9 S3 ME3LA4	F412_47.9 S3 MX3LA4	422	F412_47.9 P100 BE100LA4	F412_47.9 P100 BX100LA4	423
30	650	0.9	47.5	6500	F313_47.5 S3 ME3LA4	F313_47.5 S3 MX3LA4	418	F313_47.5 P100 BE100LA4	F313_47.5 P100 BX100LA4	419
32	623	1.0	44.6	6500	F312_44.6 S3 ME3LA4	F312_44.6 S3 MX3LA4	418	F312_44.6 P100 BE100LA4	F312_44.6 P100 BX100LA4	419
35	564	1.1	40.4	6500	F312_40.4 S3 ME3LA4	F312_40.4 S3 MX3LA4	418	F312_40.4 P100 BE100LA4	F312_40.4 P100 BX100LA4	419
37	533	2.1	38.2	8500	F412_38.2 S3 ME3LA4	F412_38.2 S3 MX3LA4	422	F412_38.2 P100 BE100LA4	F412_38.2 P100 BX100LA4	423
38	526	1.1	37.7	6500	F312_37.7 S3 ME3LA4	F312_37.7 S3 MX3LA4	418	F312_37.7 P100 BE100LA4	F312_37.7 P100 BX100LA4	419
39	519	3.3	37.1	12000	F512_37.1 S3 ME3LA4	F512_37.1 S3 MX3LA4	426	F512_37.1 P100 BE100LA4	F512_37.1 P100 BX100LA4	427
42	480	1.3	34.4	6490	F312_34.4 S3 ME3LA4	F312_34.4 S3 MX3LA4	418	F312_34.4 P100 BE100LA4	F312_34.4 P100 BX100LA4	419
44	449	0.9	32.2	3620	F252_32.2 S3 ME3LA4	F252_32.2 S3 MX3LA4	414	F252_32.2 P100 BE100LA4	F252_32.2 P100 BX100LA4	415
47	421	1.4	30.1	6360	F312_30.1 S3 ME3LA4	F312_30.1 S3 MX3LA4	418	F312_30.1 P100 BE100LA4	F312_30.1 P100 BX100LA4	419
47	421	2.6	30.1	8500	F412_30.1 S3 ME3LA4	F412_30.1 S3 MX3LA4	422	F412_30.1 P100 BE100LA4	F412_30.1 P100 BX100LA4	423
48	419	1.0	30.0	3300	F252_30.0 S3 ME3LA4	F252_30.0 S3 MX3LA4	414	F252_30.0 P100 BE100LA4	F252_30.0 P100 BX100LA4	415
52	381	1.6	27.3	6250	F312_27.3 S3 ME3LA4	F312_27.3 S3 MX3LA4	418	F312_27.3 P100 BE100LA4	F312_27.3 P100 BX100LA4	419
53	380	1.1	27.2	3300	F252_27.2 S3 ME3LA4	F252_27.2 S3 MX3LA4	414	F252_27.2 P100 BE100LA4	F252_27.2 P100 BX100LA4	415
59	337	3.3	24.1	8400	F412_24.1 S3 ME3LA4	F412_24.1 S3 MX3LA4	422	F412_24.1 P100 BE100LA4	F412_24.1 P100 BX100LA4	423
60	332	1.2	23.8	3290	F252_23.8 S3 ME3LA4	F252_23.8 S3 MX3LA4	414	F252_23.8 P100 BE100LA4	F252_23.8 P100 BX100LA4	415
61	327	1.8	23.4	6080	F312_23.4 S3 ME3LA4	F312_23.4 S3 MX3LA4	418	F312_23.4 P100 BE100LA4	F312_23.4 P100 BX100LA4	419
66	305	1.3	21.8	3270	F252_21.8 S3 ME3LA4	F252_21.8 S3 MX3LA4	414	F252_21.8 P100 BE100LA4	F252_21.8 P100 BX100LA4	415
68	295	2.0	21.1	5960	F312_21.1 S3 ME3LA4	F312_21.1 S3 MX3LA4	418	F312_21.1 P100 BE100LA4	F312_21.1 P100 BX100LA4	419
77	260	1.5	18.6	3220	F252_18.6 S3 ME3LA4	F252_18.6 S3 MX3LA4	414	F252_18.6 P100 BE100LA4	F252_18.6 P100 BX100LA4	415
77	258	2.3	18.5	5790	F312_18.5 S3 ME3LA4	F312_18.5 S3 MX3LA4	418	F312_18.5 P100 BE100LA4	F312_18.5 P100 BX100LA4	419
85	235	2.6	16.8	5670	F312_16.8 S3 ME3LA4	F312_16.8 S3 MX3LA4	418	F312_16.8 P100 BE100LA4	F312_16.8 P100 BX100LA4	419



## 2.2 kW

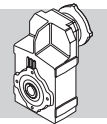
n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>N2</sub> N						
					IE2	IE3		IE2	IE3	
86	232	1.7	16.6	3180	F252_16.6 S3 ME3LA4	F252_16.6 S3 MX3LA4	414	F252_16.6 P100 BE100LA4	F252_16.6 P100 BX100LA4	415
97	207	1.0	14.8	2190	F202_14.8 S3 ME3LA4	F202_14.8 S3 MX3LA4	410	F202_14.8 P100 BE100LA4	F202_14.8 P100 BX100LA4	411
99	202	2.0	14.5	3120	F252_14.5 S3 ME3LA4	F252_14.5 S3 MX3LA4	414	F252_14.5 P100 BE100LA4	F252_14.5 P100 BX100LA4	415
103	195	3.1	13.9	5430	F312_13.9 S3 ME3LA4	F312_13.9 S3 MX3LA4	418	F312_13.9 P100 BE100LA4	F312_13.9 P100 BX100LA4	419
110	181	2.2	13.0	3070	F252_13.0 S3 ME3LA4	F252_13.0 S3 MX3LA4	414	F252_13.0 P100 BE100LA4	F252_13.0 P100 BX100LA4	415
112	178	3.4	12.7	5310	F312_12.7 S3 ME3LA4	F312_12.7 S3 MX3LA4	418	F312_12.7 P100 BE100LA4	F312_12.7 P100 BX100LA4	419
127	157	1.1	11.2	2060	F202_11.2 S3 ME3LA4	F202_11.2 S3 MX3LA4	410	F202_11.2 P100 BE100LA4	F202_11.2 P100 BX100LA4	411
135	148	2.7	10.6	2960	F252_10.6 S3 ME3LA4	F252_10.6 S3 MX3LA4	414	F252_10.6 P100 BE100LA4	F252_10.6 P100 BX100LA4	415
143	140	1.2	10.0	2000	F202_10.0 S3 ME3LA4	F202_10.0 S3 MX3LA4	410	F202_10.0 P100 BE100LA4	F202_10.0 P100 BX100LA4	411
153	131	2.0	9.4	2900	F252_9.4 S3 ME3LA4	F252_9.4 S3 MX3LA4	414	F252_9.4 P100 BE100LA4	F252_9.4 P100 BX100LA4	415
159	126	3.1	9.0	4830	F312_9.0 S3 ME3LA4	F312_9.0 S3 MX3LA4	418	F312_9.0 P100 BE100LA4	F312_9.0 P100 BX100LA4	419
164	122	1.3	8.7	1960	F202_8.7 S3 ME3LA4	F202_8.7 S3 MX3LA4	410	F202_8.7 P100 BE100LA4	F202_8.7 P100 BX100LA4	411
170	117	2.2	8.4	2830	F252_8.4 S3 ME3LA4	F252_8.4 S3 MX3LA4	414	F252_8.4 P100 BE100LA4	F252_8.4 P100 BX100LA4	415
174	115	3.4	8.2	4720	F312_8.2 S3 ME3LA4	F312_8.2 S3 MX3LA4	418	F312_8.2 P100 BE100LA4	F312_8.2 P100 BX100LA4	419
183	109	1.3	7.8	1920	F202_7.8 S3 ME3LA4	F202_7.8 S3 MX3LA4	410	F202_7.8 P100 BE100LA4	F202_7.8 P100 BX100LA4	411
208	96	2.7	6.9	2710	F252_6.9 S3 ME3LA4	F252_6.9 S3 MX3LA4	414	F252_6.9 P100 BE100LA4	F252_6.9 P100 BX100LA4	415
223	90	1.5	6.4	1840	F202_6.4 S3 ME3LA4	F202_6.4 S3 MX3LA4	410	F202_6.4 P100 BE100LA4	F202_6.4 P100 BX100LA4	411
248	80	1.0	11.5	1470	F102_11.5 S3 ME3LA2		406	F102_11.5 P90 BE90L2		407
255	78	1.8	11.2	1780	F202_11.2 S3 ME3LA2		410	F202_11.2 P90 BE90L2		411
293	68	1.1	9.8	1410	F102_9.8 S3 ME3LA2		406	F102_9.8 P90 BE90L2		407
328	61	2.0	8.7	1670	F202_8.7 S3 ME3LA2		410	F202_8.7 P90 BE90L2		411
334	60	1.1	8.6	1370	F102_8.6 S3 ME3LA2		406	F102_8.6 P90 BE90L2		407
366	55	2.1	7.8	1630	F202_7.8 S3 ME3LA2		410	F202_7.8 P90 BE90L2		411
387	52	1.2	7.4	1330	F102_7.4 S3 ME3LA2		406	F102_7.4 P90 BE90L2		407
447	45	2.3	6.4	1540	F202_6.4 S3 ME3LA2		410	F202_6.4 P90 BE90L2		411

## 3 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>N2</sub> N						
					IE2	IE3		IE2	IE3	
1.9	13922	1.0	773.4	55000	F904_773.4 S3 ME3LB4	F904_773.4 S3 MX3LB4	440	F904_773.4 P100 BE100LB4	F904_773.4 P100 BX100LB4	441
2.0	12851	1.1	714.0	55000	F904_714.0 S3 ME3LB4	F904_714.0 S3 MX3LB4	440	F904_714.0 P100 BE100LB4	F904_714.0 P100 BX100LB4	441
2.3	11261	1.2	625.6	55000	F904_625.6 S3 ME3LB4	F904_625.6 S3 MX3LB4	440	F904_625.6 P100 BE100LB4	F904_625.6 P100 BX100LB4	441
2.5	10395	1.3	577.5	55000	F904_577.5 S3 ME3LB4	F904_577.5 S3 MX3LB4	440	F904_577.5 P100 BE100LB4	F904_577.5 P100 BX100LB4	441
2.9	8920	1.6	495.6	55000	F904_495.6 S3 ME3LB4	F904_495.6 S3 MX3LB4	440	F904_495.6 P100 BE100LB4	F904_495.6 P100 BX100LB4	441
2.9	8804	0.9	489.1	45000	F804_489.1 S3 ME3LB4	F804_489.1 S3 MX3LB4	437	F804_489.1 P100 BE100LB4	F804_489.1 P100 BX100LB4	438
3.1	8234	1.7	457.5	55000	F904_457.5 S3 ME3LB4	F904_457.5 S3 MX3LB4	440	F904_457.5 P100 BE100LB4	F904_457.5 P100 BX100LB4	441
3.2	8127	1.0	451.5	45000	F804_451.5 S3 ME3LB4	F804_451.5 S3 MX3LB4	437	F804_451.5 P100 BE100LB4	F804_451.5 P100 BX100LB4	438
3.7	7056	2.0	392.0	55000	F904_392.0 S3 ME3LB4	F904_392.0 S3 MX3LB4	440	F904_392.0 P100 BE100LB4	F904_392.0 P100 BX100LB4	441
3.8	6897	1.2	383.2	45000	F804_383.2 S3 ME3LB4	F804_383.2 S3 MX3LB4	437	F804_383.2 P100 BE100LB4	F804_383.2 P100 BX100LB4	438
4.0	6513	2.1	361.8	55000	F904_361.8 S3 ME3LB4	F904_361.8 S3 MX3LB4	440	F904_361.8 P100 BE100LB4	F904_361.8 P100 BX100LB4	441
4.1	6366	1.3	353.7	45000	F804_353.7 S3 ME3LB4	F804_353.7 S3 MX3LB4	437	F804_353.7 P100 BE100LB4	F804_353.7 P100 BX100LB4	438
4.7	5478	0.9	304.3	35000	F704_304.3 S3 ME3LB4	F704_304.3 S3 MX3LB4	434	F704_304.3 P100 BE100LB4	F704_304.3 P100 BX100LB4	435
4.9	5341	1.5	296.7	45000	F804_296.7 S3 ME3LB4	F804_296.7 S3 MX3LB4	437	F804_296.7 P100 BE100LB4	F804_296.7 P100 BX100LB4	438
4.9	5240	2.7	291.1	55000	F904_291.1 S3 ME3LB4	F904_291.1 S3 MX3LB4	440	F904_291.1 P100 BE100LB4	F904_291.1 P100 BX100LB4	441
5.1	5057	1.0	280.9	35000	F704_280.9 S3 ME3LB4	F704_280.9 S3 MX3LB4	434	F704_280.9 P100 BE100LB4	F704_280.9 P100 BX100LB4	435
5.3	4930	1.6	273.9	45000	F804_273.9 S3 ME3LB4	F804_273.9 S3 MX3LB4	437	F804_273.9 P100 BE100LB4	F804_273.9 P100 BX100LB4	438
5.4	4837	2.9	268.7	55000	F904_268.7 S3 ME3LB4	F904_268.7 S3 MX3LB4	440	F904_268.7 P100 BE100LB4	F904_268.7 P100 BX100LB4	441
6.1	4222	1.2	234.6	35000	F704_234.6 S3 ME3LB4	F704_234.6 S3 MX3LB4	434	F704_234.6 P100 BE100LB4	F704_234.6 P100 BX100LB4	435
6.2	4165	3.4	231.4	55000	F904_231.4 S3 ME3LB4	F904_231.4 S3 MX3LB4	440	F904_231.4 P100 BE100LB4	F904_231.4 P100 BX100LB4	441
6.6	3933	2.0	218.5	45000	F804_218.5 S3 ME3LB4	F804_218.5 S3 MX3LB4	437	F804_218.5 P100 BE100LB4	F804_218.5 P100 BX100LB4	438
6.7	3897	1.3	216.5	35000	F704_216.5 S3 ME3LB4	F704_216.5 S3 MX3LB4	434	F704_216.5 P100 BE100LB4	F704_216.5 P100 BX100LB4	435
6.7	3845	3.6	213.6	55000	F904_213.6 S3 ME3LB4	F904_213.6 S3 MX3LB4	440	F904_213.6 P100 BE100LB4	F904_213.6 P100 BX100LB4	441
7.2	3720	2.2	200.0	45000	F803_200.0 S3 ME3LB4	F803_200.0 S3 MX3LB4	437	F803_200.0 P100 BE100LB4	F803_200.0 P100 BX100LB4	438
7.3	3646	1.4	196.0	35000	F703_196.0 S3 ME3LB4	F703_196.0 S3 MX3LB4	434	F703_196.0 P100 BE100LB4	F703_196.0 P100 BX100LB4	435
7.8	3434	2.3	184.6	45000	F803_184.6 S3 ME3LB4	F803_184.6 S3 MX3LB4	437	F803_184.6 P100 BE100LB4	F803_184.6 P100 BX100LB4	438
8.0	3366	1.5	180.9	35000	F703_180.9 S3 ME3LB4	F703_180.9 S3 MX3LB4	434	F703_180.9 P100 BE100LB4	F703_180.9 P100 BX100LB4	435





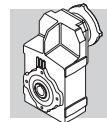


## 3 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE2 IE3			IEC		
					IE2	IE3		IE2	IE3	
256	106	1.3	11.2	1680	F202_11.2 S3 ME3LB2		410	F202_11.2 P100 BE100L2		411
271	100	3.2	10.6	2410	F252_10.6 S3 ME3LB2		414	F252_10.6 P100 BE100L2		415
308	88	3.0	9.4	2350	F252_9.4 S3 ME3LB2		414	F252_9.4 P100 BE100L2		415
330	83	1.5	8.7	1600	F202_8.7 S3 ME3LB2		410	F202_8.7 P100 BE100L2		411
343	79	3.3	8.4	2290	F252_8.4 S3 ME3LB2		414	F252_8.4 P100 BE100L2		415
368	74	1.6	7.8	1560	F202_7.8 S3 ME3LB2		410	F202_7.8 P100 BE100L2		411
449	61	1.7	6.4	1480	F202_6.4 S3 ME3LB2		410	F202_6.4 P100 BE100L2		411

## 4 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE2 IE3			IEC		
					IE2	IE3		IE2	IE3	
2.3	15202	0.9	625.6	55000	F904_625.6 S4 ME4SA4	F904_625.6 S4 MX4SA4	440	F904_625.6 P112 BE112M4	F904_625.6 P112 BX112M4	441
2.5	14033	1.0	577.5	55000	F904_577.5 S4 ME4SA4	F904_577.5 S4 MX4SA4	440	F904_577.5 P112 BE112M4	F904_577.5 P112 BX112M4	441
2.9	12042	1.2	495.6	55000	F904_495.6 S4 ME4SA4	F904_495.6 S4 MX4SA4	440	F904_495.6 P112 BE112M4	F904_495.6 P112 BX112M4	441
3.1	11116	1.3	457.5	55000	F904_457.5 S4 ME4SA4	F904_457.5 S4 MX4SA4	440	F904_457.5 P112 BE112M4	F904_457.5 P112 BX112M4	441
3.7	9526	1.5	392.0	55000	F904_392.0 S4 ME4SA4	F904_392.0 S4 MX4SA4	440	F904_392.0 P112 BE112M4	F904_392.0 P112 BX112M4	441
4.0	8793	1.6	361.8	55000	F904_361.8 S4 ME4SA4	F904_361.8 S4 MX4SA4	440	F904_361.8 P112 BE112M4	F904_361.8 P112 BX112M4	441
4.1	8594	0.9	353.7	45000	F804_353.7 S4 ME4SA4	F804_353.7 S4 MX4SA4	437	F804_353.7 P112 BE112M4	F804_353.7 P112 BX112M4	438
4.9	7210	1.1	296.7	45000	F804_296.7 S4 ME4SA4	F804_296.7 S4 MX4SA4	437	F804_296.7 P112 BE112M4	F804_296.7 P112 BX112M4	438
4.9	7074	2.0	291.1	55000	F904_291.1 S4 ME4SA4	F904_291.1 S4 MX4SA4	440	F904_291.1 P112 BE112M4	F904_291.1 P112 BX112M4	441
5.3	6656	1.2	273.9	45000	F804_273.9 S4 ME4SA4	F804_273.9 S4 MX4SA4	437	F804_273.9 P112 BE112M4	F804_273.9 P112 BX112M4	438
5.4	6530	2.1	268.7	55000	F904_268.7 S4 ME4SA4	F904_268.7 S4 MX4SA4	440	F904_268.7 P112 BE112M4	F904_268.7 P112 BX112M4	441
6.1	5700	0.9	234.6	35000	F704_234.6 S4 ME4SA4	F704_234.6 S4 MX4SA4	434	F704_234.6 P112 BE112M4	F704_234.6 P112 BX112M4	435
6.2	5623	2.5	231.4	55000	F904_231.4 S4 ME4SA4	F904_231.4 S4 MX4SA4	440	F904_231.4 P112 BE112M4	F904_231.4 P112 BX112M4	441
6.6	5309	1.5	218.5	45000	F804_218.5 S4 ME4SA4	F804_218.5 S4 MX4SA4	437	F804_218.5 P112 BE112M4	F804_218.5 P112 BX112M4	438
6.7	5262	1.0	216.5	35000	F704_216.5 S4 ME4SA4	F704_216.5 S4 MX4SA4	434	F704_216.5 P112 BE112M4	F704_216.5 P112 BX112M4	435
6.7	5190	2.7	213.6	55000	F904_213.6 S4 ME4SA4	F904_213.6 S4 MX4SA4	440	F904_213.6 P112 BE112M4	F904_213.6 P112 BX112M4	441
7.2	5022	1.6	200.0	45000	F803_200.0 S4 ME4SA4	F803_200.0 S4 MX4SA4	437	F803_200.0 P112 BE112M4	F803_200.0 P112 BX112M4	438
7.3	4922	1.0	196.0	35000	F703_196.0 S4 ME4SA4	F703_196.0 S4 MX4SA4	434	F703_196.0 P112 BE112M4	F703_196.0 P112 BX112M4	435
7.4	4875	2.9	194.2	55000	F903_194.2 S4 ME4SA4	F903_194.2 S4 MX4SA4	440	F903_194.2 P112 BE112M4	F903_194.2 P112 BX112M4	441
7.8	4636	1.7	184.6	45000	F803_184.6 S4 ME4SA4	F803_184.6 S4 MX4SA4	437	F803_184.6 P112 BE112M4	F803_184.6 P112 BX112M4	438
8.0	4544	1.1	180.9	35000	F703_180.9 S4 ME4SA4	F703_180.9 S4 MX4SA4	434	F703_180.9 P112 BE112M4	F703_180.9 P112 BX112M4	435
8.0	4500	3.1	179.2	55000	F903_179.2 S4 ME4SA4	F903_179.2 S4 MX4SA4	440	F903_179.2 P112 BE112M4	F903_179.2 P112 BX112M4	441
8.6	4185	1.2	166.7	35000	F703_166.7 S4 ME4SA4	F703_166.7 S4 MX4SA4	434	F703_166.7 P112 BE112M4	F703_166.7 P112 BX112M4	435
8.8	4089	3.4	162.8	55000	F903_162.8 S4 ME4SA4	F903_162.8 S4 MX4SA4	440	F903_162.8 P112 BE112M4	F903_162.8 P112 BX112M4	441
9.0	4023	2.0	160.2	45000	F803_160.2 S4 ME4SA4	F803_160.2 S4 MX4SA4	437	F803_160.2 P112 BE112M4	F803_160.2 P112 BX112M4	438
9.4	3863	1.3	153.8	35000	F703_153.8 S4 ME4SA4	F703_153.8 S4 MX4SA4	434	F703_153.8 P112 BE112M4	F703_153.8 P112 BX112M4	435
9.7	3714	2.2	147.9	45000	F803_147.9 S4 ME4SA4	F803_147.9 S4 MX4SA4	437	F803_147.9 P112 BE112M4	F803_147.9 P112 BX112M4	438
10.8	3338	1.5	133.0	35000	F703_133.0 S4 ME4SA4	F703_133.0 S4 MX4SA4	434	F703_133.0 P112 BE112M4	F703_133.0 P112 BX112M4	435
10.9	3332	2.4	132.7	45000	F803_132.7 S4 ME4SA4	F803_132.7 S4 MX4SA4	437	F803_132.7 P112 BE112M4	F803_132.7 P112 BX112M4	438
11.0	3277	0.9	130.5	20000	F603_130.5 S4 ME4SA4	F603_130.5 S4 MX4SA4	430	F603_130.5 P112 BE112M4	F603_130.5 P112 BX112M4	431
11.7	3082	1.6	122.7	35000	F703_122.7 S4 ME4SA4	F703_122.7 S4 MX4SA4	434	F703_122.7 P112 BE112M4	F703_122.7 P112 BX112M4	435
11.8	3076	2.6	122.5	45000	F803_122.5 S4 ME4SA4	F803_122.5 S4 MX4SA4	437	F803_122.5 P112 BE112M4	F803_122.5 P112 BX112M4	438
12.0	3025	1.0	120.5	20000	F603_120.5 S4 ME4SA4	F603_120.5 S4 MX4SA4	430	F603_120.5 P112 BE112M4	F603_120.5 P112 BX112M4	431
12.7	2856	2.8	113.8	45000	F803_113.8 S4 ME4SA4	F803_113.8 S4 MX4SA4	437	F803_113.8 P112 BE112M4	F803_113.8 P112 BX112M4	438
13.1	2752	1.8	109.6	35000	F703_109.6 S4 ME4SA4	F703_109.6 S4 MX4SA4	434	F703_109.6 P112 BE112M4	F703_109.6 P112 BX112M4	435
13.5	2671	1.1	106.4	20000	F603_106.4 S4 ME4SA4	F603_106.4 S4 MX4SA4	430	F603_106.4 P112 BE112M4	F603_106.4 P112 BX112M4	431
13.7	2637	3.0	105.0	45000	F803_105.0 S4 ME4SA4	F803_105.0 S4 MX4SA4	437	F803_105.0 P112 BE112M4	F803_105.0 P112 BX112M4	438
14.2	2541	2.0	101.2	35000	F703_101.2 S4 ME4SA4	F703_101.2 S4 MX4SA4	434	F703_101.2 P112 BE112M4	F703_101.2 P112 BX112M4	435
14.7	2466	1.2	98.2	20000	F603_98.2 S4 ME4SA4	F603_98.2 S4 MX4SA4	430	F603_98.2 P112 BE112M4	F603_98.2 P112 BX112M4	431
15.6	2323	2.2	92.5	35000	F703_92.5 S4 ME4SA4	F703_92.5 S4 MX4SA4	434	F703_92.5 P112 BE112M4	F703_92.5 P112 BX112M4	435
16.9	2144	2.3	85.4	35000	F703_85.4 S4 ME4SA4	F703_85.4 S4 MX4SA4	434	F703_85.4 P112 BE112M4	F703_85.4 P112 BX112M4	435
17.1	2110	1.4	84.0	20000	F603_84.0 S4 ME4SA4	F603_84.0 S4 MX4SA4	430	F603_84.0 P112 BE112M4	F603_84.0 P112 BX112M4	431
18.6	1947	1.5	77.6	20000	F603_77.6 S4 ME4SA4	F603_77.6 S4 MX4SA4	430	F603_77.6 P112 BE112M4	F603_77.6 P112 BX112M4	431
19.6	1847	2.7	73.6	35000	F703_73.6 S4 ME4SA4	F703_73.6 S4 MX4SA4	434	F703_73.6 P112 BE112M4	F703_73.6 P112 BX112M4	435
21.1	1715	1.7	68.3	20000	F603_68.3 S4 ME4SA4	F603_68.3 S4 MX4SA4	430	F603_68.3 P112 BE112M4	F603_68.3 P112 BX112M4	431
21.2	1705	2.9	67.9	35000	F703_67.9 S4 ME4SA4	F703_67.9 S4 MX4SA4	434	F703_67.9 P112 BE112M4	F703_67.9 P112 BX112M4	435
21.9	1653	1.1	65.8	12000	F513_65.8 S4 ME4SA4	F513_65.8 S4 MX4SA4	426	F513_65.8 P112 BE112M4	F513_65.8 P112 BX112M4	427
22.8	1583	1.8	63.0	20000	F603_63.0 S4 ME4SA4	F603_63.0 S4 MX4SA4	430	F603_63.0 P112 BE112M4	F603_63.0 P112 BX112M4	431

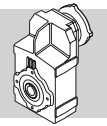


**4 kW**



n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
23.0	1569	3.2	62.5	35000	F703_62.5 S4 ME4SA4	F703_62.5 S4 MX4SA4	434	F703_62.5 P112 BE112M4	F703_62.5 P112 BX112M4	435
25.0	1449	3.5	57.7	35000	F703_57.7 S4 ME4SA4	F703_57.7 S4 MX4SA4	434	F703_57.7 P112 BE112M4	F703_57.7 P112 BX112M4	435
27.8	1301	2.2	51.8	20000	F603_51.8 S4 ME4SA4	F603_51.8 S4 MX4SA4	430	F603_51.8 P112 BE112M4	F603_51.8 P112 BX112M4	431
29.4	1228	1.5	48.9	11600	F513_48.9 S4 ME4SA4	F513_48.9 S4 MX4SA4	426	F513_48.9 P112 BE112M4	F513_48.9 P112 BX112M4	427
30	1201	2.4	47.8	20000	F603_47.8 S4 ME4SA4	F603_47.8 S4 MX4SA4	430	F603_47.8 P112 BE112M4	F603_47.8 P112 BX112M4	431
34	1057	2.7	42.1	20000	F603_42.1 S4 ME4SA4	F603_42.1 S4 MX4SA4	430	F603_42.1 P112 BE112M4	F603_42.1 P112 BX112M4	431
37	975	3.0	38.8	20000	F603_38.8 S4 ME4SA4	F603_38.8 S4 MX4SA4	430	F603_38.8 P112 BE112M4	F603_38.8 P112 BX112M4	431
38	979	1.1	38.2	7720	F412_38.2 S4 ME4SA4	F412_38.2 S4 MX4SA4	422	F412_38.2 P112 BE112M4	F412_38.2 P112 BX112M4	423
39	953	1.8	37.1	11200	F512_37.1 S4 ME4SA4	F512_37.1 S4 MX4SA4	426	F512_37.1 P112 BE112M4	F512_37.1 P112 BX112M4	427
45	806	3.6	32.1	20000	F603_32.1 S4 ME4SA4	F603_32.1 S4 MX4SA4	430			
48	773	1.4	30.1	7610	F412_30.1 S4 ME4SA4	F412_30.1 S4 MX4SA4	422	F412_30.1 P112 BE112M4	F412_30.1 P112 BX112M4	423
48	770	2.2	30.0	10700	F512_30.0 S4 ME4SA4	F512_30.0 S4 MX4SA4	426	F512_30.0 P112 BE112M4	F512_30.0 P112 BX112M4	427
57	638	3.0	25.4	20000	F603_25.4 S4 ME4SA4	F603_25.4 S4 MX4SA4	430	F603_25.4 P112 BE112M4	F603_25.4 P112 BX112M4	431
60	619	1.8	24.1	7420	F412_24.1 S4 ME4SA4	F412_24.1 S4 MX4SA4	422	F412_24.1 P112 BE112M4	F412_24.1 P112 BX112M4	423
61	610	2.7	23.8	10200	F512_23.8 S4 ME4SA4	F512_23.8 S4 MX4SA4	426	F512_23.8 P112 BE112M4	F512_23.8 P112 BX112M4	427
61	589	3.2	23.5	20000	F603_23.5 S4 ME4SA4	F603_23.5 S4 MX4SA4	430	F603_23.5 P112 BE112M4	F603_23.5 P112 BX112M4	431
62	600	1.0	23.4	5040	F312_23.4 S4 ME4SA4	F312_23.4 S4 MX4SA4	418	F312_23.4 P112 BE112M4	F312_23.4 P112 BX112M4	419
68	542	1.1	21.1	5020	F312_21.1 S4 ME4SA4	F312_21.1 S4 MX4SA4	418	F312_21.1 P112 BE112M4	F312_21.1 P112 BX112M4	419
76	485	2.2	18.9	7150	F412_18.9 S4 ME4SA4	F412_18.9 S4 MX4SA4	422	F412_18.9 P112 BE112M4	F412_18.9 P112 BX112M4	423
77	483	3.2	18.8	9640	F512_18.8 S4 ME4SA4	F512_18.8 S4 MX4SA4	426	F512_18.8 P112 BE112M4	F512_18.8 P112 BX112M4	427
78	474	1.3	18.5	4980	F312_18.5 S4 ME4SA4	F312_18.5 S4 MX4SA4	418	F312_18.5 P112 BE112M4	F312_18.5 P112 BX112M4	419
84	439	2.4	17.1	7030	F412_17.1 S4 ME4SA4	F412_17.1 S4 MX4SA4	422	F412_17.1 P112 BE112M4	F412_17.1 P112 BX112M4	423
86	431	1.4	16.8	4930	F312_16.8 S4 ME4SA4	F312_16.8 S4 MX4SA4	418	F312_16.8 P112 BE112M4	F312_16.8 P112 BX112M4	419
98	375	2.7	14.6	6820	F412_14.6 S4 ME4SA4	F412_14.6 S4 MX4SA4	422	F412_14.6 P112 BE112M4	F412_14.6 P112 BX112M4	423
103	358	1.7	13.9	4820	F312_13.9 S4 ME4SA4	F312_13.9 S4 MX4SA4	418	F312_13.9 P112 BE112M4	F312_13.9 P112 BX112M4	419
113	326	1.8	12.7	4750	F312_12.7 S4 ME4SA4	F312_12.7 S4 MX4SA4	418	F312_12.7 P112 BE112M4	F312_12.7 P112 BX112M4	419
134	276	3.3	10.8	6380	F412_10.8 S4 ME4SA4	F412_10.8 S4 MX4SA4	422	F412_10.8 P112 BE112M4	F412_10.8 P112 BX112M4	423
134	276	2.2	10.7	4620	F312_10.7 S4 ME4SA4	F312_10.7 S4 MX4SA4	418	F312_10.7 P112 BE112M4	F312_10.7 P112 BX112M4	419
158	234	3.0	9.1	6160	F412_9.1 S4 ME4SA4	F412_9.1 S4 MX4SA4	422	F412_9.1 P112 BE112M4	F412_9.1 P112 BX112M4	423
160	231	1.7	9.0	4420	F312_9.0 S4 ME4SA4	F312_9.0 S4 MX4SA4	418	F312_9.0 P112 BE112M4	F312_9.0 P112 BX112M4	419
175	211	1.8	8.2	4350	F312_8.2 S4 ME4SA4	F312_8.2 S4 MX4SA4	418	F312_8.2 P112 BE112M4	F312_8.2 P112 BX112M4	419
207	178	2.2	6.9	4200	F312_6.9 S4 ME4SA4	F312_6.9 S4 MX4SA4	418	F312_6.9 P112 BE112M4	F312_6.9 P112 BX112M4	419
228	159	3.5	12.7	4120	F312_12.7 S4 ME4SA2		418	F312_12.7 P112 BE112M2		419
322	113	3.4	9.0	3760	F312_9.0 S4 ME4SA2		418	F312_9.0 P112 BE112M2		419

**5.5 kW**

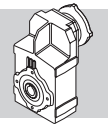
n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
2.9	16057	0.9	495.6	55000	F904_495.6 S4 ME4SB4	F904_495.6 S4 MX4SB4	440	F904_495.6 P132 BE132S4	F904_495.6 P132 BX132S4	441
3.2	14821	0.9	457.5	55000	F904_457.5 S4 ME4SB4	F904_457.5 S4 MX4SB4	440	F904_457.5 P132 BE132S4	F904_457.5 P132 BX132S4	441
3.7	12701	1.1	392.0	55000	F904_392.0 S4 ME4SB4	F904_392.0 S4 MX4SB4	440	F904_392.0 P132 BE132S4	F904_392.0 P132 BX132S4	441
4.0	11724	1.2	361.8	55000	F904_361.8 S4 ME4SB4	F904_361.8 S4 MX4SB4	440	F904_361.8 P132 BE132S4	F904_361.8 P132 BX132S4	441
5.0	9432	1.5	291.1	55000	F904_291.1 S4 ME4SB4	F904_291.1 S4 MX4SB4	440	F904_291.1 P132 BE132S4	F904_291.1 P132 BX132S4	441
5.3	8874	0.9	273.9	45000	F804_273.9 S4 ME4SB4	F804_273.9 S4 MX4SB4	437	F804_273.9 P132 BE132S4	F804_273.9 P132 BX132S4	438
5.4	8707	1.6	268.7	55000	F904_268.7 S4 ME4SB4	F904_268.7 S4 MX4SB4	440	F904_268.7 P132 BE132S4	F904_268.7 P132 BX132S4	441
6.3	7497	1.9	231.4	55000	F904_231.4 S4 ME4SB4	F904_231.4 S4 MX4SB4	440	F904_231.4 P132 BE132S4	F904_231.4 P132 BX132S4	441
6.7	7079	1.1	218.5	45000	F804_218.5 S4 ME4SB4	F804_218.5 S4 MX4SB4	437	F804_218.5 P132 BE132S4	F804_218.5 P132 BX132S4	438
6.8	6920	2.0	213.6	55000	F904_213.6 S4 ME4SB4	F904_213.6 S4 MX4SB4	440	F904_213.6 P132 BE132S4	F904_213.6 P132 BX132S4	441
7.3	6696	1.2	200.0	45000	F803_200.0 S4 ME4SB4	F803_200.0 S4 MX4SB4	437	F803_200.0 P132 BE132S4	F803_200.0 P132 BX132S4	438
7.5	6500	2.2	194.2	55000	F903_194.2 S4 ME4SB4	F903_194.2 S4 MX4SB4	440	F903_194.2 P132 BE132S4	F903_194.2 P132 BX132S4	441
7.9	6181	1.3	184.6	45000	F803_184.6 S4 ME4SB4	F803_184.6 S4 MX4SB4	437	F803_184.6 P132 BE132S4	F803_184.6 P132 BX132S4	438
8.1	6000	2.3	179.2	55000	F903_179.2 S4 ME4SB4	F903_179.2 S4 MX4SB4	440	F903_179.2 P132 BE132S4	F903_179.2 P132 BX132S4	441
8.8	5580	0.9	166.7	35000	F703_166.7 S4 ME4SB4	F703_166.7 S4 MX4SB4	434	F703_166.7 P132 BE132S4	F703_166.7 P132 BX132S4	435
9.0	5452	2.6	162.8	55000	F903_162.8 S4 ME4SB4	F903_162.8 S4 MX4SB4	440	F903_162.8 P132 BE132S4	F903_162.8 P132 BX132S4	441
9.1	5364	1.5	160.2	45000	F803_160.2 S4 ME4SB4	F803_160.2 S4 MX4SB4	437	F803_160.2 P132 BE132S4	F803_160.2 P132 BX132S4	438
9.5	5151	1.0	153.8	35000	F703_153.8 S4 ME4SB4	F703_153.8 S4 MX4SB4	434	F703_153.8 P132 BE132S4	F703_153.8 P132 BX132S4	435
9.7	5032	2.8	150.3	55000	F903_150.3 S4 ME4SB4	F903_150.3 S4 MX4SB4	440	F903_150.3 P132 BE132S4	F903_150.3 P132 BX132S4	441
9.9	4952	1.6	147.9	45000	F803_147.9 S4 ME4SB4	F803_147.9 S4 MX4SB4	437	F803_147.9 P132 BE132S4	F803_147.9 P132 BX132S4	438
10.6	4598	3.0	137.3	55000	F903_137.3 S4 ME4SB4	F903_137.3 S4 MX4SB4	440	F903_137.3 P132 BE132S4	F903_137.3 P132 BX132S4	441
11.0	4451	1.1	133.0	35000	F703_133.0 S4 ME4SB4	F703_133.0 S4 MX4SB4	434	F703_133.0 P132 BE132S4	F703_133.0 P132 BX132S4	435



### 5.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE2      IE3			 IE2      IE3		
11.0	4443	1.8	132.7	45000	F803_132.7 S4 ME4SB4	F803_132.7 S4 MX4SB4	437	F803_132.7 P132 BE132S4	F803_132.7 P132 BX132S4	438
11.5	4244	3.3	126.8	55000	F903_126.8 S4 ME4SB4	F903_126.8 S4 MX4SB4	440	F903_126.8 P132 BE132S4	F903_126.8 P132 BX132S4	441
11.9	4109	1.2	122.7	35000	F703_122.7 S4 ME4SB4	F703_122.7 S4 MX4SB4	434	F703_122.7 P132 BE132S4	F703_122.7 P132 BX132S4	435
11.9	4101	2.0	122.5	45000	F803_122.5 S4 ME4SB4	F803_122.5 S4 MX4SB4	437	F803_122.5 P132 BE132S4	F803_122.5 P132 BX132S4	438
12.8	3808	2.1	113.8	45000	F803_113.8 S4 ME4SB4	F803_113.8 S4 MX4SB4	437	F803_113.8 P132 BE132S4	F803_113.8 P132 BX132S4	438
13.3	3670	1.4	109.6	35000	F703_109.6 S4 ME4SB4	F703_109.6 S4 MX4SB4	434	F703_109.6 P132 BE132S4	F703_109.6 P132 BX132S4	435
13.9	3515	2.3	105.0	45000	F803_105.0 S4 ME4SB4	F803_105.0 S4 MX4SB4	437	F803_105.0 P132 BE132S4	F803_105.0 P132 BX132S4	438
14.4	3388	1.5	101.2	35000	F703_101.2 S4 ME4SB4	F703_101.2 S4 MX4SB4	434	F703_101.2 P132 BE132S4	F703_101.2 P132 BX132S4	435
15.8	3097	1.6	92.5	35000	F703_92.5 S4 ME4SB4	F703_92.5 S4 MX4SB4	434	F703_92.5 P132 BE132S4	F703_92.5 P132 BX132S4	435
15.8	3090	2.6	92.3	45000	F803_92.3 S4 ME4SB4	F803_92.3 S4 MX4SB4	437	F803_92.3 P132 BE132S4	F803_92.3 P132 BX132S4	438
17.1	2859	1.7	85.4	35000	F703_85.4 S4 ME4SB4	F703_85.4 S4 MX4SB4	434	F703_85.4 P132 BE132S4	F703_85.4 P132 BX132S4	435
17.1	2853	2.8	85.2	45000	F803_85.2 S4 ME4SB4	F803_85.2 S4 MX4SB4	437	F803_85.2 P132 BE132S4	F803_85.2 P132 BX132S4	438
17.4	2813	1.0	84.0	20000	F603_84.0 S4 ME4SB4	F603_84.0 S4 MX4SB4	430	F603_84.0 P132 BE132S4	F603_84.0 P132 BX132S4	431
18.8	2597	1.1	77.6	20000	F603_77.6 S4 ME4SB4	F603_77.6 S4 MX4SB4	430	F603_77.6 P132 BE132S4	F603_77.6 P132 BX132S4	431
19.1	2553	3.1	76.3	45000	F803_76.3 S4 ME4SB4	F803_76.3 S4 MX4SB4	437	F803_76.3 P132 BE132S4	F803_76.3 P132 BX132S4	438
19.8	2463	2.0	73.6	35000	F703_73.6 S4 ME4SB4	F703_73.6 S4 MX4SB4	434	F703_73.6 P132 BE132S4	F703_73.6 P132 BX132S4	435
20.7	2356	3.4	70.4	45000	F803_70.4 S4 ME4SB4	F803_70.4 S4 MX4SB4	437	F803_70.4 P132 BE132S4	F803_70.4 P132 BX132S4	438
21.4	2286	1.3	68.3	20000	F603_68.3 S4 ME4SB4	F603_68.3 S4 MX4SB4	430	F603_68.3 P132 BE132S4	F603_68.3 P132 BX132S4	431
21.5	2273	2.2	67.9	35000	F703_67.9 S4 ME4SB4	F703_67.9 S4 MX4SB4	434	F703_67.9 P132 BE132S4	F703_67.9 P132 BX132S4	435
23.2	2110	1.4	63.0	20000	F603_63.0 S4 ME4SB4	F603_63.0 S4 MX4SB4	430	F603_63.0 P132 BE132S4	F603_63.0 P132 BX132S4	431
23.4	2093	2.4	62.5	35000	F703_62.5 S4 ME4SB4	F703_62.5 S4 MX4SB4	434	F703_62.5 P132 BE132S4	F703_62.5 P132 BX132S4	435
25.3	1932	2.6	57.7	35000	F703_57.7 S4 ME4SB4	F703_57.7 S4 MX4SB4	434	F703_57.7 P132 BE132S4	F703_57.7 P132 BX132S4	435
28.2	1735	1.7	51.8	20000	F603_51.8 S4 ME4SB4	F603_51.8 S4 MX4SB4	430	F603_51.8 P132 BE132S4	F603_51.8 P132 BX132S4	431
30	1639	3.1	49.0	35000	F703_49.0 S4 ME4SB4	F703_49.0 S4 MX4SB4	434	F703_49.0 P132 BE132S4	F703_49.0 P132 BX132S4	435
30	1637	1.1	48.9	10300	F513_48.9 S4 ME4SB4	F513_48.9 S4 MX4SB4	426	F513_48.9 P132 BE132S4	F513_48.9 P132 BX132S4	427
31	1602	1.8	47.8	20000	F603_47.8 S4 ME4SB4	F603_47.8 S4 MX4SB4	430	F603_47.8 P132 BE132S4	F603_47.8 P132 BX132S4	431
32	1513	3.3	45.2	34300	F703_45.2 S4 ME4SB4	F703_45.2 S4 MX4SB4	434	F703_45.2 P132 BE132S4	F703_45.2 P132 BX132S4	435
35	1409	2.1	42.1	20000	F603_42.1 S4 ME4SB4	F603_42.1 S4 MX4SB4	430	F603_42.1 P132 BE132S4	F603_42.1 P132 BX132S4	431
38	1301	2.2	38.8	20000	F603_38.8 S4 ME4SB4	F603_38.8 S4 MX4SB4	430	F603_38.8 P132 BE132S4	F603_38.8 P132 BX132S4	431
39	1270	1.3	37.1	10300	F512_37.1 S4 ME4SB4	F512_37.1 S4 MX4SB4	426	F512_37.1 P132 BE132S4	F512_37.1 P132 BX132S4	427
46	1074	2.7	32.1	20000	F603_32.1 S4 ME4SB4	F603_32.1 S4 MX4SB4	430	F603_32.1 P132 BE132S4	F603_32.1 P132 BX132S4	431
48	1030	1.1	30.1	6580	F412_30.1 S4 ME4SB4	F412_30.1 S4 MX4SB4	422	F412_30.1 P132 BE132S4	F412_30.1 P132 BX132S4	423
49	1027	1.7	30.0	9950	F512_30.0 S4 ME4SB4	F512_30.0 S4 MX4SB4	426	F512_30.0 P132 BE132S4	F512_30.0 P132 BX132S4	427
49	992	2.9	29.6	20000	F603_29.6 S4 ME4SB4	F603_29.6 S4 MX4SB4	430	F603_29.6 P132 BE132S4	F603_29.6 P132 BX132S4	431
57	851	2.2	25.4	20000	F603_25.4 S4 ME4SB4	F603_25.4 S4 MX4SB4	430	F603_25.4 P132 BE132S4	F603_25.4 P132 BX132S4	431
61	825	1.3	24.1	6580	F412_24.1 S4 ME4SB4	F412_24.1 S4 MX4SB4	422	F412_24.1 P132 BE132S4	F412_24.1 P132 BX132S4	423
61	814	2.0	23.8	9560	F512_23.8 S4 ME4SB4	F512_23.8 S4 MX4SB4	426	F512_23.8 P132 BE132S4	F512_23.8 P132 BX132S4	427
62	786	2.4	23.5	20000	F603_23.5 S4 ME4SB4	F603_23.5 S4 MX4SB4	430	F603_23.5 P132 BE132S4	F603_23.5 P132 BX132S4	431
71	692	2.7	20.7	20000	F603_20.7 S4 ME4SB4	F603_20.7 S4 MX4SB4	430	F603_20.7 P132 BE132S4	F603_20.7 P132 BX132S4	431
77	638	3.0	19.1	20000	F603_19.1 S4 ME4SB4	F603_19.1 S4 MX4SB4	430	F603_19.1 P132 BE132S4	F603_19.1 P132 BX132S4	431
77	646	1.7	18.9	6480	F412_18.9 S4 ME4SB4	F412_18.9 S4 MX4SB4	422	F412_18.9 P132 BE132S4	F412_18.9 P132 BX132S4	423
78	644	2.4	18.8	9110	F512_18.8 S4 ME4SB4	F512_18.8 S4 MX4SB4	426	F512_18.8 P132 BE132S4	F512_18.8 P132 BX132S4	427
79	632	0.9	18.5	4480	F312_18.5 S4 ME4SB4	F312_18.5 S4 MX4SB4	418	F312_18.5 P132 BE132S4	F312_18.5 P132 BX132S4	419
85	585	1.8	17.1	6410	F412_17.1 S4 ME4SB4	F412_17.1 S4 MX4SB4	422	F412_17.1 P132 BE132S4	F412_17.1 P132 BX132S4	423
87	575	1.0	16.8	4300	F312_16.8 S4 ME4SB4	F312_16.8 S4 MX4SB4	418	F312_16.8 P132 BE132S4	F312_16.8 P132 BX132S4	419
100	500	2.0	14.6	6280	F412_14.6 S4 ME4SB4	F412_14.6 S4 MX4SB4	422	F412_14.6 P132 BE132S4	F412_14.6 P132 BX132S4	423
104	478	3.0	14.0	8520	F512_14.0 S4 ME4SB4	F512_14.0 S4 MX4SB4	426	F512_14.0 P132 BE132S4	F512_14.0 P132 BX132S4	427
105	477	1.3	13.9	4180	F312_13.9 S4 ME4SB4	F312_13.9 S4 MX4SB4	418	F312_13.9 P132 BE132S4	F312_13.9 P132 BX132S4	419
115	435	1.4	12.7	3980	F312_12.7 S4 ME4SB4	F312_12.7 S4 MX4SB4	418	F312_12.7 P132 BE132S4	F312_12.7 P132 BX132S4	419
131	380	3.5	11.1	8050	F512_11.1 S4 ME4SB4	F512_11.1 S4 MX4SB4	426	F512_11.1 P132 BE132S4	F512_11.1 P132 BX132S4	427
136	368	2.4	10.8	5970	F412_10.8 S4 ME4SB4	F412_10.8 S4 MX4SB4	422	F412_10.8 P132 BE132S4	F412_10.8 P132 BX132S4	423
136	368	1.6	10.7	3880	F312_10.7 S4 ME4SB4	F312_10.7 S4 MX4SB4	418	F312_10.7 P132 BE132S4	F312_10.7 P132 BX132S4	419
160	312	2.2	9.1	5810	F412_9.1 S4 ME4SB4	F412_9.1 S4 MX4SB4	422	F412_9.1 P132 BE132S4	F412_9.1 P132 BX132S4	423
161	310	3.6	9.1	7590	F512_9.1 S4 ME4SB4	F512_9.1 S4 MX4SB4	426	F512_9.1 P132 BE132S4	F512_9.1 P132 BX132S4	427
162	308	1.3	9.0	3850	F312_9.0 S4 ME4SB4	F312_9.0 S4 MX4SB4	418	F312_9.0 P132 BE132S4	F312_9.0 P132 BX132S4	419
177	281	1.4	8.2	3750	F312_8.2 S4 ME4SB4	F312_8.2 S4 MX4SB4	418	F312_8.2 P132 BE132S4	F312_8.2 P132 BX132S4	419
200	250	3.3	14.6	5510	F412_14.6 S4 ME4SB2		422	F412_14.6 P132 BE132SA2		423
210	238	1.6	6.9	3610	F312_6.9 S4 ME4SB4	F312_6.9 S4 MX4SB4	418	F312_6.9 P132 BE132S4	F312_6.9 P132 BX132S4	419
217	230	2.8	6.7	5430	F412_6.7 S4 ME4SB4	F412_6.7 S4 MX4SB4	422	F412_6.7 P132 BE132S4	F412_6.7 P132 BX132S4	423
272	184	4.0	10.8	5120	F412_10.8 S4 ME4SB2		422	F412_10.8 P132 BE132SA2		423
320	156	3.9	9.1	4930	F412_9.1 S4 ME4SB2		422	F412_9.1 P132 BE132SA2		423





## 7.5 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
114	592	1.0	12.7	3880	F312_12.7 S4 ME4LA4	F312_12.7 S4 MX4LA4	418	F312_12.7 P132 BE132MA4	F312_12.7 P132 BX132MA4	419
124	536	3.5	11.8	19500	F603_11.8 S4 ME4LA4	F603_11.8 S4 MX4LA4	430	F603_11.8 P132 BE132MA4	F603_11.8 P132 BX132MA4	431
131	517	2.6	11.1	7700	F512_11.1 S4 ME4LA4	F512_11.1 S4 MX4LA4	426	F512_11.1 P132 BE132MA4	F512_11.1 P132 BX132MA4	427
135	501	1.8	10.8	5490	F412_10.8 S4 ME4LA4	F412_10.8 S4 MX4LA4	422	F412_10.8 P132 BE132MA4	F412_10.8 P132 BX132MA4	423
135	500	1.2	10.7	3730	F312_10.7 S4 ME4LA4	F312_10.7 S4 MX4LA4	418	F312_10.7 P132 BE132MA4	F312_10.7 P132 BX132MA4	419
159	425	1.6	9.1	5410	F412_9.1 S4 ME4LA4	F412_9.1 S4 MX4LA4	422	F412_9.1 P132 BE132MA4	F412_9.1 P132 BX132MA4	423
161	421	2.6	9.1	7290	F512_9.1 S4 ME4LA4	F512_9.1 S4 MX4LA4	426	F512_9.1 P132 BE132MA4	F512_9.1 P132 BX132MA4	427
161	420	0.9	9.0	3770	F312_9.0 S4 ME4LA4	F312_9.0 S4 MX4LA4	418	F312_9.0 P132 BE132MA4	F312_9.0 P132 BX132MA4	419
177	383	1.0	8.2	3680	F312_8.2 S4 ME4LA4	F312_8.2 S4 MX4LA4	418	F312_8.2 P132 BE132MA4	F312_8.2 P132 BX132MA4	419
202	335	2.9	7.2	6900	F512_7.2 S4 ME4LA4	F512_7.2 S4 MX4LA4	426	F512_7.2 P132 BE132MA4	F512_7.2 P132 BX132MA4	427
209	323	1.2	6.9	3520	F312_6.9 S4 ME4LA4	F312_6.9 S4 MX4LA4	418	F312_6.9 P132 BE132MA4	F312_6.9 P132 BX132MA4	419
216	313	2.0	6.7	5140	F412_6.7 S4 ME4LA4	F412_6.7 S4 MX4LA4	422	F412_6.7 P132 BE132MA4	F412_6.7 P132 BX132MA4	423
272	251	2.9	10.8	4880	F412_10.8 S4 ME4LA2		422	F412_10.8 P132 BE132SB2		423
320	213	2.9	9.1	4730	F412_9.1 S4 ME4LA2		422	F412_9.1 P132 BE132SB2		423
435	156	3.3	6.7	4390	F412_6.7 S4 ME4LA2		422	F412_6.7 P132 BE132SB2		423

## 9.2 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
5.0	15983	0.9	291.1	55000	F904_291.1 S4 ME4LB4		440	F904_291.1 P132 BE132MB4	F904_291.1 P160 BX160MA4	441
5.4	14753	0.9	268.7	55000	F904_268.7 S4 ME4LB4		440	F904_268.7 P132 BE132MB4	F904_268.7 P160 BX160MA4	441
6.3	12703	1.1	231.4	55000	F904_231.4 S4 ME4LB4		440	F904_231.4 P132 BE132MB4	F904_231.4 P160 BX160MA4	441
6.8	11726	1.2	213.6	55000	F904_213.6 S4 ME4LB4		440	F904_213.6 P132 BE132MB4	F904_213.6 P160 BX160MA4	441
7.5	11014	1.3	194.2	55000	F903_194.2 S4 ME4LB4	F903_194.2 S5 MX5SA4	440	F903_194.2 P132 BE132MB4	F903_194.2 P160 BX160MA4	441
8.1	10167	1.4	179.2	55000	F903_179.2 S4 ME4LB4	F903_179.2 S5 MX5SA4	440	F903_179.2 P132 BE132MB4	F903_179.2 P160 BX160MA4	441
8.9	9237	1.5	162.8	55000	F903_162.8 S4 ME4LB4	F903_162.8 S5 MX5SA4	440	F903_162.8 P132 BE132MB4	F903_162.8 P160 BX160MA4	441
9.0	9090	0.9	160.2	45000	F803_160.2 S4 ME4LB4	F803_160.2 S5 MX5SA4	437	F803_160.2 P132 BE132MB4	F803_160.2 P160 BX160MA4	438
9.6	8527	1.6	150.3	55000	F903_150.3 S4 ME4LB4	F903_150.3 S5 MX5SA4	440	F903_150.3 P132 BE132MB4	F903_150.3 P160 BX160MA4	441
9.8	8390	1.0	147.9	45000	F803_147.9 S4 ME4LB4	F803_147.9 S5 MX5SA4	437	F803_147.9 P132 BE132MB4	F803_147.9 P160 BX160MA4	438
10.6	7791	1.8	137.3	55000	F903_137.3 S4 ME4LB4	F903_137.3 S5 MX5SA4	440	F903_137.3 P132 BE132MB4	F903_137.3 P160 BX160MA4	441
10.9	7528	1.1	132.7	45000	F803_132.7 S4 ME4LB4	F803_132.7 S5 MX5SA4	437	F803_132.7 P132 BE132MB4	F803_132.7 P160 BX160MA4	438
11.4	7192	1.9	126.8	55000	F903_126.8 S4 ME4LB4	F903_126.8 S5 MX5SA4	440	F903_126.8 P132 BE132MB4	F903_126.8 P160 BX160MA4	441
11.8	6949	1.2	122.5	45000	F803_122.5 S4 ME4LB4	F803_122.5 S5 MX5SA4	437	F803_122.5 P132 BE132MB4	F803_122.5 P160 BX160MA4	438
12.7	6453	1.2	113.8	45000	F803_113.8 S4 ME4LB4	F803_113.8 S5 MX5SA4	437	F803_113.8 P132 BE132MB4	F803_113.8 P160 BX160MA4	438
13.0	6351	2.2	111.9	55000	F903_111.9 S4 ME4LB4	F903_111.9 S5 MX5SA4	440	F903_111.9 P132 BE132MB4	F903_111.9 P160 BX160MA4	441
13.8	5957	1.3	105.0	45000	F803_105.0 S4 ME4LB4	F803_105.0 S5 MX5SA4	437	F803_105.0 P132 BE132MB4	F803_105.0 P160 BX160MA4	438
14.0	5862	2.4	103.3	55000	F903_103.3 S4 ME4LB4	F903_103.3 S5 MX5SA4	440	F903_103.3 P132 BE132MB4	F903_103.3 P160 BX160MA4	441
15.1	5432	2.6	95.8	55000	F903_95.8 S4 ME4LB4	F903_95.8 S5 MX5SA4	440	F903_95.8 P132 BE132MB4	F903_95.8 P160 BX160MA4	441
15.7	5248	1.0	92.5	35000	F703_92.5 S4 ME4LB4	F703_92.5 S5 MX5SA4	434	F703_92.5 P132 BE132MB4	F703_92.5 P160 BX160MA4	435
15.7	5237	1.5	92.3	45000	F803_92.3 S4 ME4LB4	F803_92.3 S5 MX5SA4	437	F803_92.3 P132 BE132MB4	F803_92.3 P160 BX160MA4	438
16.4	5015	2.8	88.4	55000	F903_88.4 S4 ME4LB4	F903_88.4 S5 MX5SA4	440	F903_88.4 P132 BE132MB4	F903_88.4 P160 BX160MA4	441
17.0	4844	1.0	85.4	35000	F703_85.4 S4 ME4LB4	F703_85.4 S5 MX5SA4	434	F703_85.4 P132 BE132MB4	F703_85.4 P160 BX160MA4	435
17.0	4834	1.7	85.2	45000	F803_85.2 S4 ME4LB4	F803_85.2 S5 MX5SA4	437	F803_85.2 P132 BE132MB4	F803_85.2 P160 BX160MA4	438
18.9	4348	3.2	76.7	55000	F903_76.7 S4 ME4LB4	F903_76.7 S5 MX5SA4	440	F903_76.7 P132 BE132MB4	F903_76.7 P160 BX160MA4	441
19.0	4326	1.8	76.3	44100	F803_76.3 S4 ME4LB4	F803_76.3 S5 MX5SA4	437	F803_76.3 P132 BE132MB4	F803_76.3 P160 BX160MA4	438
19.7	4173	1.2	73.6	35000	F703_73.6 S4 ME4LB4	F703_73.6 S5 MX5SA4	434	F703_73.6 P132 BE132MB4	F703_73.6 P160 BX160MA4	435
20.5	4014	3.5	70.8	55000	F903_70.8 S4 ME4LB4	F903_70.8 S5 MX5SA4	440	F903_70.8 P132 BE132MB4	F903_70.8 P160 BX160MA4	441
20.6	3993	2.0	70.4	43700	F803_70.4 S4 ME4LB4	F803_70.4 S5 MX5SA4	437	F803_70.4 P132 BE132MB4	F803_70.4 P160 BX160MA4	438
21.4	3852	1.3	67.9	34600	F703_67.9 S4 ME4LB4	F703_67.9 S5 MX5SA4	434	F703_67.9 P132 BE132MB4	F703_67.9 P160 BX160MA4	435
23.2	3546	1.4	62.5	34200	F703_62.5 S4 ME4LB4	F703_62.5 S5 MX5SA4	434	F703_62.5 P132 BE132MB4	F703_62.5 P160 BX160MA4	435
23.6	3487	2.3	61.5	42200	F803_61.5 S4 ME4LB4	F803_61.5 S5 MX5SA4	437	F803_61.5 P132 BE132MB4	F803_61.5 P160 BX160MA4	438
25.1	3273	1.5	57.7	33700	F703_57.7 S4 ME4LB4	F703_57.7 S5 MX5SA4	434	F703_57.7 P132 BE132MB4	F703_57.7 P160 BX160MA4	435
25.6	3218	2.5	56.7	41400	F803_56.7 S4 ME4LB4	F803_56.7 S5 MX5SA4	437	F803_56.7 P132 BE132MB4	F803_56.7 P160 BX160MA4	438
28.0	2940	1.0	51.8	20000	F603_51.8 S4 ME4LB4	F603_51.8 S5 MX5SA4	430	F603_51.8 P132 BE132MB4	F603_51.8 P160 BX160MA4	431
29.6	2777	1.8	49.0	32800	F703_49.0 S4 ME4LB4	F703_49.0 S5 MX5SA4	434	F703_49.0 P132 BE132MB4	F703_49.0 P160 BX160MA4	435
30	2714	1.1	47.8	20000	F603_47.8 S4 ME4LB4	F603_47.8 S5 MX5SA4	430	F603_47.8 P132 BE132MB4	F603_47.8 P160 BX160MA4	431
32	2564	2.0	45.2	32300	F703_45.2 S4 ME4LB4	F703_45.2 S5 MX5SA4	434	F703_45.2 P132 BE132MB4	F703_45.2 P160 BX160MA4	435
34	2387	1.2	42.1	20000	F603_42.1 S4 ME4LB4	F603_42.1 S5 MX5SA4	430	F603_42.1 P132 BE132MB4	F603_42.1 P160 BX160MA4	431
37	2204	1.3	38.8	20000	F603_38.8 S4 ME4LB4	F603_38.8 S5 MX5SA4	430	F603_38.8 P132 BE132MB4	F603_38.8 P160 BX160MA4	431

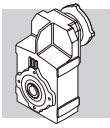


## 9.2 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
45	1820	1.6	32.1	20000	F603_32.1 S4 ME4LB4	F603_32.1 S5 MX5SA4	430	F603_32.1 P132 BE132MB4	F603_32.1 P160 BX160MA4	431
48	1741	1.0	30.0	8210	F512_30.0 S4 ME4LB4	F512_30.0 S5 MX5SA4	426	F512_30.0 P132 BE132MB4	F512_30.0 P160 BX160MA4	427
49	1680	1.7	29.6	20000	F603_29.6 S4 ME4LB4	F603_29.6 S5 MX5SA4	430	F603_29.6 P132 BE132MB4	F603_29.6 P160 BX160MA4	431
57	1442	1.3	25.4	20000	F603_25.4 S4 ME4LB4	F603_25.4 S5 MX5SA4	430	F603_25.4 P132 BE132MB4	F603_25.4 P160 BX160MA4	431
59	1393	2.9	24.6	28300	F703_24.6 S4 ME4LB4	F703_24.6 S5 MX5SA4	434	F703_24.6 P132 BE132MB4	F703_24.6 P160 BX160MA4	435
61	1379	1.2	23.8	8170	F512_23.8 S4 ME4LB4	F512_23.8 S5 MX5SA4	426	F512_23.8 P132 BE132MB4	F512_23.8 P160 BX160MA4	427
62	1331	1.4	23.5	20000	F603_23.5 S4 ME4LB4	F603_23.5 S5 MX5SA4	430	F603_23.5 P132 BE132MB4	F603_23.5 P160 BX160MA4	431
64	1282	3.4	22.6	27800	F703_22.6 S4 ME4LB4	F703_22.6 S5 MX5SA4	434	F703_22.6 P132 BE132MB4	F703_22.6 P160 BX160MA4	435
69	1184	3.4	20.9	27200	F703_20.9 S4 ME4LB4	F703_20.9 S5 MX5SA4	434	F703_20.9 P132 BE132MB4	F703_20.9 P160 BX160MA4	435
70	1172	1.6	20.7	20000	F603_20.7 S4 ME4LB4	F603_20.7 S5 MX5SA4	430	F603_20.7 P132 BE132MB4	F603_20.7 P160 BX160MA4	431
76	1082	1.8	19.1	20000	F603_19.1 S4 ME4LB4	F603_19.1 S5 MX5SA4	430	F603_19.1 P132 BE132MB4	F603_19.1 P160 BX160MA4	431
77	1095	1.0	18.9	4920	F412_18.9 S4 ME4LB4		422	F412_18.9 P132 BE132MB4		423
77	1091	1.4	18.8	8020	F512_18.8 S4 ME4LB4	F512_18.8 S5 MX5SA4	426	F512_18.8 P132 BE132MB4	F512_18.8 P160 BX160MA4	427
85	992	1.1	17.1	5000	F412_17.1 S4 ME4LB4		422	F412_17.1 P132 BE132MB4		423
92	890	2.1	15.7	20000	F603_15.7 S4 ME4LB4	F603_15.7 S5 MX5SA4	430	F603_15.7 P132 BE132MB4	F603_15.7 P160 BX160MA4	431
99	848	1.2	14.6	5070	F412_14.6 S4 ME4LB4		422	F412_14.6 P132 BE132MB4		423
100	821	2.3	14.5	20000	F603_14.5 S4 ME4LB4	F603_14.5 S5 MX5SA4	430	F603_14.5 P132 BE132MB4	F603_14.5 P160 BX160MA4	431
104	810	1.8	14.0	7700	F512_14.0 S4 ME4LB4	F512_14.0 S5 MX5SA4	426	F512_14.0 P132 BE132MB4	F512_14.0 P160 BX160MA4	427
114	722	2.6	12.7	19700	F603_12.7 S4 ME4LB4	F603_12.7 S5 MX5SA4	430	F603_12.7 P132 BE132MB4	F603_12.7 P160 BX160MA4	431
123	667	2.8	11.8	19300	F603_11.8 S4 ME4LB4	F603_11.8 S5 MX5SA4	430	F603_11.8 P132 BE132MB4	F603_11.8 P160 BX160MA4	431
131	644	2.1	11.1	7400	F512_11.1 S4 ME4LB4	F512_11.1 S5 MX5SA4	426	F512_11.1 P132 BE132MB4	F512_11.1 P160 BX160MA4	427
135	624	1.4	10.8	5080	F412_10.8 S4 ME4LB4		422	F412_10.8 P132 BE132MB4		423
135	623	1.0	10.7	3660	F312_10.7 S4 ME4LB4		418	F312_10.7 P132 BE132MB4		419
149	551	3.5	9.7	18400	F603_9.7 S4 ME4LB4	F603_9.7 S5 MX5SA4	430	F603_9.7 P132 BE132MB4	F603_9.7 P160 BX160MA4	431
159	529	1.3	9.1	5080	F412_9.1 S4 ME4LB4		422	F412_9.1 P132 BE132MB4		423
160	525	2.1	9.1	7040	F512_9.1 S4 ME4LB4	F512_9.1 S5 MX5SA4	426	F512_9.1 P132 BE132MB4	F512_9.1 P160 BX160MA4	427
202	417	2.3	7.2	6700	F512_7.2 S4 ME4LB4	F512_7.2 S5 MX5SA4	426	F512_7.2 P132 BE132MB4	F512_7.2 P160 BX160MA4	427
209	403	1.0	6.9	3450	F312_6.9 S4 ME4LB4		418	F312_6.9 P132 BE132MB4		419
216	390	1.6	6.7	4890	F412_6.7 S4 ME4LB4		422	F412_6.7 P132 BE132MB4		423
263	318	3.4	11.1	6340	F512_11.1 S4 ME4LB2		426	F512_11.1 P132 BE132MB2		427
271	308	2.4	10.8	4680	F412_10.8 S4 ME4LB2		422	F412_10.8 P132 BE132MB2		423
320	261	2.3	9.1	4560	F412_9.1 S4 ME4LB2		422	F412_9.1 P132 BE132MB2		423
323	259	3.5	9.1	5980	F512_9.1 S4 ME4LB2		426	F512_9.1 P132 BE132MB2		427
434	192	2.7	6.7	4270	F412_6.7 S4 ME4LB2		422	F412_6.7 P132 BE132MB2		423

## 11 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
6.4	14994	0.9	231.4	55000	F904_231.4 S5 ME5SA4	F904_231.4 S5 MX5SB4	440	F904_231.4 P160 BE160M4	F904_231.4 P160 BX160MB4	441
6.9	13841	1.0	213.6	55000	F904_213.6 S5 ME5SA4	F904_213.6 S5 MX5SB4	440	F904_213.6 P160 BE160M4	F904_213.6 P160 BX160MB4	441
7.6	13001	1.1	194.2	55000	F903_194.2 S5 ME5SA4	F903_194.2 S5 MX5SB4	440	F903_194.2 P160 BE160M4	F903_194.2 P160 BX160MB4	441
8.2	12001	1.2	179.2	55000	F903_179.2 S5 ME5SA4	F903_179.2 S5 MX5SB4	440	F903_179.2 P160 BE160M4	F903_179.2 P160 BX160MB4	441
9.0	10903	1.3	162.8	55000	F903_162.8 S5 ME5SA4	F903_162.8 S5 MX5SB4	440	F903_162.8 P160 BE160M4	F903_162.8 P160 BX160MB4	441
9.8	10064	1.4	150.3	55000	F903_150.3 S5 ME5SA4	F903_150.3 S5 MX5SB4	440	F903_150.3 P160 BE160M4	F903_150.3 P160 BX160MB4	441
10.7	9196	1.5	137.3	55000	F903_137.3 S5 ME5SA4	F903_137.3 S5 MX5SB4	440	F903_137.3 P160 BE160M4	F903_137.3 P160 BX160MB4	441
11.1	8885	0.9	132.7	45000	F803_132.7 S5 ME5SA4	F803_132.7 S5 MX5SB4	437	F803_132.7 P160 BE160M4	F803_132.7 P160 BX160MB4	438
11.6	8489	1.6	126.8	55000	F903_126.8 S5 ME5SA4	F903_126.8 S5 MX5SB4	440	F903_126.8 P160 BE160M4	F903_126.8 P160 BX160MB4	441
12.0	8202	1.0	122.5	45000	F803_122.5 S5 ME5SA4	F803_122.5 S5 MX5SB4	437	F803_122.5 P160 BE160M4	F803_122.5 P160 BX160MB4	438
12.9	7617	1.1	113.8	45000	F803_113.8 S5 ME5SA4	F803_113.8 S5 MX5SB4	437	F803_113.8 P160 BE160M4	F803_113.8 P160 BX160MB4	438
13.1	7496	1.9	111.9	55000	F903_111.9 S5 ME5SA4	F903_111.9 S5 MX5SB4	440	F903_111.9 P160 BE160M4	F903_111.9 P160 BX160MB4	441
14.0	7031	1.1	105.0	44400	F803_105.0 S5 ME5SA4	F803_105.0 S5 MX5SB4	437	F803_105.0 P160 BE160M4	F803_105.0 P160 BX160MB4	438
14.2	6919	2.0	103.3	55000	F903_103.3 S5 ME5SA4	F903_103.3 S5 MX5SB4	440	F903_103.3 P160 BE160M4	F903_103.3 P160 BX160MB4	441
15.4	6412	2.2	95.8	55000	F903_95.8 S5 ME5SA4	F903_95.8 S5 MX5SB4	440	F903_95.8 P160 BE160M4	F903_95.8 P160 BX160MB4	441
15.9	6181	1.3	92.3	44100	F803_92.3 S5 ME5SA4	F803_92.3 S5 MX5SB4	437	F803_92.3 P160 BE160M4	F803_92.3 P160 BX160MB4	438
16.6	5919	2.4	88.4	55000	F903_88.4 S5 ME5SA4	F903_88.4 S5 MX5SB4	440	F903_88.4 P160 BE160M4	F903_88.4 P160 BX160MB4	441
17.3	5705	1.4	85.2	44000	F803_85.2 S5 ME5SA4	F803_85.2 S5 MX5SB4	437	F803_85.2 P160 BE160M4	F803_85.2 P160 BX160MB4	438
19.2	5132	2.7	76.7	55000	F903_76.7 S5 ME5SA4	F903_76.7 S5 MX5SB4	440	F903_76.7 P160 BE160M4	F903_76.7 P160 BX160MB4	441
19.3	5106	1.6	76.3	42800	F803_76.3 S5 ME5SA4	F803_76.3 S5 MX5SB4	437	F803_76.3 P160 BE160M4	F803_76.3 P160 BX160MB4	438
20.0	4925	1.0	73.6	33500	F703_73.6 S5 ME5SA4	F703_73.6 S5 MX5SB4	434	F703_73.6 P160 BE160M4	F703_73.6 P160 BX160MB4	435



## 11 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
20.8	4738	3.0	70.8	55000	F903_70.8 S5 ME5SA4	F903_70.8 S5 MX5SB4	440	F903_70.8 P160 BE160M4	F903_70.8 P160 BX160MB4	441
20.9	4713	1.7	70.4	42500	F803_70.4 S5 ME5SA4	F803_70.4 S5 MX5SB4	437	F803_70.4 P160 BE160M4	F803_70.4 P160 BX160MB4	438
21.6	4547	1.1	67.9	33100	F703_67.9 S5 ME5SA4	F703_67.9 S5 MX5SB4	434	F703_67.9 P160 BE160M4	F703_67.9 P160 BX160MB4	435
23.5	4185	1.2	62.5	32900	F703_62.5 S5 ME5SA4	F703_62.5 S5 MX5SB4	434	F703_62.5 P160 BE160M4	F703_62.5 P160 BX160MB4	435
23.7	4158	3.4	62.1	55000				F903_62.1 P160 BE160M4	F903_62.1 P160 BX160MB4	441
23.9	4115	1.9	61.5	41100	F803_61.5 S5 ME5SA4	F803_61.5 S5 MX5SB4	437	F803_61.5 P160 BE160M4	F803_61.5 P160 BX160MB4	438
25.5	3863	1.3	57.7	32500	F703_57.7 S5 ME5SA4	F703_57.7 S5 MX5SB4	434	F703_57.7 P160 BE160M4	F703_57.7 P160 BX160MB4	435
25.9	3799	2.1	56.7	40800	F803_56.7 S5 ME5SA4	F803_56.7 S5 MX5SB4	437	F803_56.7 P160 BE160M4	F803_56.7 P160 BX160MB4	438
29.9	3288	2.4	49.1	39100				F803_49.1 P160 BE160M4	F803_49.1 P160 BX160MB4	438
30	3278	1.5	49.0	31800	F703_49.0 S5 ME5SA4	F703_49.0 S5 MX5SB4	434	F703_49.0 P160 BE160M4	F703_49.0 P160 BX160MB4	435
31	3203	0.9	47.8	20000	F603_47.8 S5 ME5SA4	F603_47.8 S5 MX5SB4	430	F603_47.8 P160 BE160M4	F603_47.8 P160 BX160MB4	431
32	3035	2.6	45.3	38900				F803_45.3 P160 BE160M4	F803_45.3 P160 BX160MB4	438
33	3026	1.7	45.2	31300	F703_45.2 S5 ME5SA4	F703_45.2 S5 MX5SB4	434	F703_45.2 P160 BE160M4	F703_45.2 P160 BX160MB4	435
35	2818	1.0	42.1	20000	F603_42.1 S5 ME5SA4	F603_42.1 S5 MX5SB4	430	F603_42.1 P160 BE160M4	F603_42.1 P160 BX160MB4	431
38	2611	3.1	39.0	36400				F803_39.0 P160 BE160M4	F803_39.0 P160 BX160MB4	438
38	2601	1.1	38.8	20000	F603_38.8 S5 ME5SA4	F603_38.8 S5 MX5SB4	430	F603_38.8 P160 BE160M4	F603_38.8 P160 BX160MB4	431
38	2571	1.9	38.4	30200				F703_38.4 P160 BE160M4	F703_38.4 P160 BX160MB4	435
41	2411	3.3	36.0	35600				F803_36.0 P160 BE160M4	F803_36.0 P160 BX160MB4	438
41	2373	2.1	35.4	29600				F703_35.4 P160 BE160M4	F703_35.4 P160 BX160MB4	435
46	2148	1.3	32.1	20000	F603_32.1 S5 ME5SA4	F603_32.1 S5 MX5SB4	430	F603_32.1 P160 BE160M4	F603_32.1 P160 BX160MB4	431
49	2009	2.5	30.0	29000				F703_30.0 P160 BE160M4	F703_30.0 P160 BX160MB4	435
50	1983	1.5	29.6	20000	F603_29.6 S5 ME5SA4	F603_29.6 S5 MX5SB4	430	F603_29.6 P160 BE160M4	F603_29.6 P160 BX160MB4	431
53	1854	2.5	27.7	28300				F703_27.7 P160 BE160M4	F703_27.7 P160 BX160MB4	435
58	1702	1.1	25.4	20000	F603_25.4 S5 ME5SA4	F603_25.4 S5 MX5SB4	430	F603_25.4 P160 BE160M4	F603_25.4 P160 BX160MB4	431
60	1644	2.4	24.6	27800	F703_24.6 S5 ME5SA4	F703_24.6 S5 MX5SB4	434	F703_24.6 P160 BE160M4	F703_24.6 P160 BX160MB4	435
62	1628	1.0	23.8	7500	F512_23.8 S5 ME5SA4	F512_23.8 S5 MX5SB4	426	F512_23.8 P160 BE160M4	F512_23.8 P160 BX160MB4	427
63	1571	1.2	23.5	20000	F603_23.5 S5 ME5SA4	F603_23.5 S5 MX5SB4	430	F603_23.5 P160 BE160M4	F603_23.5 P160 BX160MB4	431
65	1514	2.9	22.6	27300	F703_22.6 S5 ME5SA4	F703_22.6 S5 MX5SB4	434	F703_22.6 P160 BE160M4	F703_22.6 P160 BX160MB4	435
70	1397	2.9	20.9	26800	F703_20.9 S5 ME5SA4	F703_20.9 S5 MX5SB4	434	F703_20.9 P160 BE160M4	F703_20.9 P160 BX160MB4	435
71	1383	1.4	20.7	20000	F603_20.7 S5 ME5SA4	F603_20.7 S5 MX5SB4	430	F603_20.7 P160 BE160M4	F603_20.7 P160 BX160MB4	431
77	1277	1.5	19.1	20000	F603_19.1 S5 ME5SA4	F603_19.1 S5 MX5SB4	430	F603_19.1 P160 BE160M4	F603_19.1 P160 BX160MB4	431
78	1287	1.2	18.8	7490	F512_18.8 S5 ME5SA4	F512_18.8 S5 MX5SB4	426	F512_18.8 P160 BE160M4	F512_18.8 P160 BX160MB4	427
94	1050	1.8	15.7	20000	F603_15.7 S5 ME5SA4	F603_15.7 S5 MX5SB4	430	F603_15.7 P160 BE160M4	F603_15.7 P160 BX160MB4	431
102	969	2.0	14.5	20000	F603_14.5 S5 ME5SA4	F603_14.5 S5 MX5SB4	430	F603_14.5 P160 BE160M4	F603_14.5 P160 BX160MB4	431
105	956	1.5	14.0	7310	F512_14.0 S5 ME5SA4	F512_14.0 S5 MX5SB4	426	F512_14.0 P160 BE160M4	F512_14.0 P160 BX160MB4	427
115	853	2.2	12.7	19400	F603_12.7 S5 ME5SA4	F603_12.7 S5 MX5SB4	430	F603_12.7 P160 BE160M4	F603_12.7 P160 BX160MB4	431
125	787	2.4	11.8	19000	F603_11.8 S5 ME5SA4	F603_11.8 S5 MX5SB4	430	F603_11.8 P160 BE160M4	F603_11.8 P160 BX160MB4	431
132	760	1.8	11.1	7090	F512_11.1 S5 ME5SA4	F512_11.1 S5 MX5SB4	426	F512_11.1 P160 BE160M4	F512_11.1 P160 BX160MB4	427
151	650	2.9	9.7	18200	F603_9.7 S5 ME5SA4	F603_9.7 S5 MX5SB4	430	F603_9.7 P160 BE160M4	F603_9.7 P160 BX160MB4	431
162	619	1.8	9.1	6770	F512_9.1 S5 ME5SA4	F512_9.1 S5 MX5SB4	426	F512_9.1 P160 BE160M4	F512_9.1 P160 BX160MB4	427
164	600	3.2	9.0	17800	F603_9.0 S5 ME5SA4	F603_9.0 S5 MX5SB4	430	F603_9.0 P160 BE160M4	F603_9.0 P160 BX160MB4	431
204	492	2.0	7.2	6490	F512_7.2 S5 ME5SA4	F512_7.2 S5 MX5SB4	426	F512_7.2 P160 BE160M4	F512_7.2 P160 BX160MB4	427
265	377	2.9	11.1	6170	F512_11.1 S5 ME5SA2		426	F512_11.1 P160 BE160MA2		427
325	307	2.9	9.1	5840	F512_9.1 S5 ME5SA2		426	F512_9.1 P160 BE160MA2		427
409	244	3.3	7.2	5510	F512_7.2 S5 ME5SA2		426	F512_7.2 P160 BE160MA2		427

## 15 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
9.0	14840	0.9	162.8	55000	F903_162.8 S5 ME5LA4	F903_162.8 S5 MX5LA4	440	F903_162.8 P160 BE160L4	F903_162.8 P160 BX160L4	441
9.8	13699	1.0	150.3	55000	F903_150.3 S5 ME5LA4	F903_150.3 S5 MX5LA4	440	F903_150.3 P160 BE160L4	F903_150.3 P160 BX160L4	441
10.7	12517	1.1	137.3	55000	F903_137.3 S5 ME5LA4	F903_137.3 S5 MX5LA4	440	F903_137.3 P160 BE160L4	F903_137.3 P160 BX160L4	441
11.6	11554	1.2	126.8	55000	F903_126.8 S5 ME5LA4	F903_126.8 S5 MX5LA4	440	F903_126.8 P160 BE160L4	F903_126.8 P160 BX160L4	441
13.1	10203	1.4	111.9	55000	F903_111.9 S5 ME5LA4	F903_111.9 S5 MX5LA4	440	F903_111.9 P160 BE160L4	F903_111.9 P160 BX160L4	441
14.2	9418	1.5	103.3	55000	F903_103.3 S5 ME5LA4	F903_103.3 S5 MX5LA4	440	F903_103.3 P160 BE160L4	F903_103.3 P160 BX160L4	441
15.4	8728	1.6	95.8	55000	F903_95.8 S5 ME5LA4	F903_95.8 S5 MX5LA4	440	F903_95.8 P160 BE160L4	F903_95.8 P160 BX160L4	441
15.9	8413	1.0	92.3	41300	F803_92.3 S5 ME5LA4	F803_92.3 S5 MX5LA4	437	F803_92.3 P160 BE160L4	F803_92.3 P160 BX160L4	438
16.6	8056	1.7	88.4	55000	F903_88.4 S5 ME5LA4	F903_88.4 S5 MX5LA4	440	F903_88.4 P160 BE160L4	F903_88.4 P160 BX160L4	441
17.3	7766	1.0	85.2	40800	F803_85.2 S5 ME5LA4	F803_85.2 S5 MX5LA4	437	F803_85.2 P160 BE160L4	F803_85.2 P160 BX160L4	438
19.2	6986	2.0	76.7	55000	F903_76.7 S5 ME5LA4	F903_76.7 S5 MX5LA4	440	F903_76.7 P160 BE160L4	F903_76.7 P160 BX160L4	441
19.3	6949	1.2	76.3	40500	F803_76.3 S5 ME5LA4	F803_76.3 S5 MX5LA4	437	F803_76.3 P160 BE160L4	F803_76.3 P160 BX160L4	438
20.8	6449	2.2	70.8	55000	F903_70.8 S5 ME5LA4	F903_70.8 S5 MX5LA4	440	F903_70.8 P160 BE160L4	F903_70.8 P160 BX160L4	441



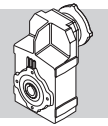


## 15 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
20.9	6415	1.2	70.4	39900	F803_70.4 S5 ME5LA4	F803_70.4 S5 MX5LA4	437	F803_70.4 P160 BE160L4	F803_70.4 P160 BX160L4	438
23.5	5696	0.9	62.5	31300	F703_62.5 S5 ME5LA4	F703_62.5 S5 MX5LA4	434	F703_62.5 P160 BE160L4	F703_62.5 P160 BX160L4	435
23.7	5660	2.5	62.1	55000				F903_62.1 P160 BE160L4	F903_62.1 P160 BX160L4	441
23.9	5601	1.4	61.5	38700	F803_61.5 S5 ME5LA4	F803_61.5 S5 MX5LA4	437	F803_61.5 P160 BE160L4	F803_61.5 P160 BX160L4	438
25.5	5258	1.0	57.7	29700	F703_57.7 S5 ME5LA4	F703_57.7 S5 MX5LA4	434	F703_57.7 P160 BE160L4	F703_57.7 P160 BX160L4	435
25.6	5224	2.7	57.3	55000				F903_57.3 P160 BE160L4	F903_57.3 P160 BX160L4	441
25.9	5170	1.5	56.7	38600	F803_56.7 S5 ME5LA4	F803_56.7 S5 MX5LA4	437	F803_56.7 P160 BE160L4	F803_56.7 P160 BX160L4	438
29.5	4548	3.1	49.9	54400				F903_49.9 P160 BE160L4	F903_49.9 P160 BX160L4	441
29.9	4476	1.8	49.1	37800				F803_49.1 P160 BE160L4	F803_49.1 P160 BX160L4	438
30	4462	1.1	49.0	29400	F703_49.0 S5 ME5LA4	F703_49.0 S5 MX5LA4	434	F703_49.0 P160 BE160L4	F703_49.0 P160 BX160L4	435
32	4198	3.3	46.1	53500				F903_46.1 P160 BE160L4	F903_46.1 P160 BX160L4	441
32	4131	1.9	45.3	37200				F803_45.3 P160 BE160L4	F803_45.3 P160 BX160L4	438
33	4119	1.2	45.2	29100	F703_45.2 S5 ME5LA4	F703_45.2 S5 MX5LA4	434	F703_45.2 P160 BE160L4	F703_45.2 P160 BX160L4	435
38	3554	2.3	39.0	35800				F803_39.0 P160 BE160L4	F803_39.0 P160 BX160L4	438
38	3499	1.4	38.4	28600				F703_38.4 P160 BE160L4	F703_38.4 P160 BX160L4	435
41	3281	2.4	36.0	35200				F803_36.0 P160 BE160L4	F803_36.0 P160 BX160L4	438
41	3230	1.5	35.4	28200				F703_35.4 P160 BE160L4	F703_35.4 P160 BX160L4	435
46	2924	1.0	32.1	20000	F603_32.1 S5 ME5LA4	F603_32.1 S5 MX5LA4	430	F603_32.1 P160 BE160L4	F603_32.1 P160 BX160L4	431
49	2734	1.8	30.0	27700				F703_30.0 P160 BE160L4	F703_30.0 P160 BX160L4	435
50	2699	1.1	29.6	20000	F603_29.6 S5 ME5LA4	F603_29.6 S5 MX5LA4	430	F603_29.6 P160 BE160L4	F603_29.6 P160 BX160L4	431
53	2524	1.9	27.7	27100				F703_27.7 P160 BE160L4	F703_27.7 P160 BX160L4	435
58	2299	2.7	25.2	32900	F803_25.2 S5 ME5LA4	F803_25.2 S5 MX5LA4	437	F803_25.2 P160 BE160L4	F803_25.2 P160 BX160L4	438
60	2238	1.8	24.6	26500	F703_24.6 S5 ME5LA4	F703_24.6 S5 MX5LA4	434	F703_24.6 P160 BE160L4	F703_24.6 P160 BX160L4	435
63	2138	0.9	23.5	20000	F603_23.5 S5 ME5LA4	F603_23.5 S5 MX5LA4	430	F603_23.5 P160 BE160L4	F603_23.5 P160 BX160L4	431
65	2060	2.1	22.6	26200	F703_22.6 S5 ME5LA4	F703_22.6 S5 MX5LA4	434	F703_22.6 P160 BE160L4	F703_22.6 P160 BX160L4	435
67	2008	3.3	22.0	31900	F803_22.0 S5 ME5LA4	F803_22.0 S5 MX5LA4	437	F803_22.0 P160 BE160L4	F803_22.0 P160 BX160L4	438
70	1902	2.1	20.9	25700	F703_20.9 S5 ME5LA4	F703_20.9 S5 MX5LA4	434	F703_20.9 P160 BE160L4	F703_20.9 P160 BX160L4	435
71	1883	1.0	20.7	20000	F603_20.7 S5 ME5LA4	F603_20.7 S5 MX5LA4	430	F603_20.7 P160 BE160L4	F603_20.7 P160 BX160L4	431
72	1853	3.3	20.3	31300	F803_20.3 S5 ME5LA4	F803_20.3 S5 MX5LA4	437	F803_20.3 P160 BE160L4	F803_20.3 P160 BX160L4	438
77	1738	1.1	19.1	20000	F603_19.1 S5 ME5LA4	F603_19.1 S5 MX5LA4	430	F603_19.1 P160 BE160L4	F603_19.1 P160 BX160L4	431
78	1752	0.9	18.8	6800	F512_18.8 S5 ME5LA4	F512_18.8 S5 MX5LA4	426	F512_18.8 P160 BE160L4	F512_18.8 P160 BX160L4	427
83	1614	2.7	17.7	24900	F703_17.7 S5 ME5LA4	F703_17.7 S5 MX5LA4	434	F703_17.7 P160 BE160L4	F703_17.7 P160 BX160L4	435
90	1490	2.7	16.3	24400	F703_16.3 S5 ME5LA4	F703_16.3 S5 MX5LA4	434	F703_16.3 P160 BE160L4	F703_16.3 P160 BX160L4	435
94	1429	1.3	15.7	19600	F603_15.7 S5 ME5LA4	F603_15.7 S5 MX5LA4	430	F603_15.7 P160 BE160L4	F603_15.7 P160 BX160L4	431
102	1319	1.4	14.5	19200	F603_14.5 S5 ME5LA4	F603_14.5 S5 MX5LA4	430	F603_14.5 P160 BE160L4	F603_14.5 P160 BX160L4	431
105	1301	1.1	14.0	6450	F512_14.0 S5 ME5LA4	F512_14.0 S5 MX5LA4	426	F512_14.0 P160 BE160L4	F512_14.0 P160 BX160L4	427
106	1266	3.1	13.9	23600	F703_13.9 S5 ME5LA4	F703_13.9 S5 MX5LA4	434	F703_13.9 P160 BE160L4	F703_13.9 P160 BX160L4	435
115	1168	3.1	12.8	23100	F703_12.8 S5 ME5LA4	F703_12.8 S5 MX5LA4	434	F703_12.8 P160 BE160L4	F703_12.8 P160 BX160L4	435
115	1160	1.6	12.7	18800	F603_12.7 S5 ME5LA4	F603_12.7 S5 MX5LA4	430	F603_12.7 P160 BE160L4	F603_12.7 P160 BX160L4	431
125	1071	1.8	11.8	18400	F603_11.8 S5 ME5LA4	F603_11.8 S5 MX5LA4	430	F603_11.8 P160 BE160L4	F603_11.8 P160 BX160L4	431
132	1034	1.3	11.1	6000	F512_11.1 S5 ME5LA4	F512_11.1 S5 MX5LA4	426	F512_11.1 P160 BE160L4	F512_11.1 P160 BX160L4	427
135	989	3.5	10.9	22300	F703_10.9 S5 ME5LA4	F703_10.9 S5 MX5LA4	434	F703_10.9 P160 BE160L4	F703_10.9 P160 BX160L4	435
147	913	3.5	10.0	21800	F703_10.0 S5 ME5LA4	F703_10.0 S5 MX5LA4	434	F703_10.0 P160 BE160L4	F703_10.0 P160 BX160L4	435
151	885	2.1	9.7	17700	F603_9.7 S5 ME5LA4	F603_9.7 S5 MX5LA4	430	F603_9.7 P160 BE160L4	F603_9.7 P160 BX160L4	431
162	843	1.3	9.1	5800	F512_9.1 S5 ME5LA4	F512_9.1 S5 MX5LA4	426	F512_9.1 P160 BE160L4	F512_9.1 P160 BX160L4	427
164	817	2.3	9.0	17300	F603_9.0 S5 ME5LA4	F603_9.0 S5 MX5LA4	430	F603_9.0 P160 BE160L4	F603_9.0 P160 BX160L4	431
204	670	1.5	7.2	5640	F512_7.2 S5 ME5LA4	F512_7.2 S5 MX5LA4	426	F512_7.2 P160 BE160L4	F512_7.2 P160 BX160L4	427

## 18.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
10.7	15327	0.9	137.3	55000				F903_137.3 P180 BE180M4	F903_137.3 P180 BX180M4	441
11.6	14148	1.0	126.8	55000				F903_126.8 P180 BE180M4	F903_126.8 P180 BX180M4	441
13.1	12493	1.1	111.9	55000				F903_111.9 P180 BE180M4	F903_111.9 P180 BX180M4	441
14.2	11532	1.2	103.3	55000				F903_103.3 P180 BE180M4	F903_103.3 P180 BX180M4	441
15.4	10687	1.3	95.8	55000				F903_95.8 P180 BE180M4	F903_95.8 P180 BX180M4	441
16.6	9865	1.4	88.4	55000				F903_88.4 P180 BE180M4	F903_88.4 P180 BX180M4	441
19.2	8554	1.6	76.7	55000				F903_76.7 P180 BE180M4	F903_76.7 P180 BX180M4	441
19.3	8510	0.9	76.3	38100				F803_76.3 P180 BE180M4	F803_76.3 P180 BX180M4	438
20.8	7896	1.8	70.8	55000				F903_70.8 P180 BE180M4	F903_70.8 P180 BX180M4	441



## 18.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N					
					IE2	IE3	IE2	IE3	
20.9	7855	1.0	70.4	37600			F803_70.4 P180 BE180M4	F803_70.4 P180 BX180M4	438
23.7	6930	2.0	62.1	55000			F903_62.1 P180 BE180M4	F903_62.1 P180 BX180M4	441
23.9	6859	1.2	61.5	37400			F803_61.5 P180 BE180M4	F803_61.5 P180 BX180M4	438
25.6	6397	2.2	57.3	55000			F903_57.3 P180 BE180M4	F903_57.3 P180 BX180M4	441
25.9	6331	1.3	56.7	36800			F803_56.7 P180 BE180M4	F803_56.7 P180 BX180M4	438
29.5	5568	2.5	49.9	55000			F903_49.9 P180 BE180M4	F903_49.9 P180 BX180M4	441
29.9	5480	1.5	49.1	35800			F803_49.1 P180 BE180M4	F803_49.1 P180 BX180M4	438
30	5464	0.9	49.0	27400			F703_49.0 P180 BE180M4	F703_49.0 P180 BX180M4	435
32	5140	2.7	46.1	55000			F903_46.1 P180 BE180M4	F903_46.1 P180 BX180M4	441
32	5059	1.6	45.3	35700			F803_45.3 P180 BE180M4	F803_45.3 P180 BX180M4	438
33	5043	1.0	45.2	27200			F703_45.2 P180 BE180M4	F703_45.2 P180 BX180M4	435
36	4520	3.1	40.5	52300			F903_40.5 P180 BE180M4	F903_40.5 P180 BX180M4	441
38	4352	1.8	39.0	35000			F803_39.0 P180 BE180M4	F803_39.0 P180 BX180M4	438
38	4285	1.2	38.4	27000			F703_38.4 P180 BE180M4	F703_38.4 P180 BX180M4	435
39	4172	3.2	37.4	51400			F903_37.4 P180 BE180M4	F903_37.4 P180 BX180M4	441
41	4018	2.0	36.0	34400			F803_36.0 P180 BE180M4	F803_36.0 P180 BX180M4	438
41	3955	1.3	35.4	26700			F703_35.4 P180 BE180M4	F703_35.4 P180 BX180M4	435
47	3488	2.3	31.3	33400			F803_31.3 P180 BE180M4	F803_31.3 P180 BX180M4	438
49	3348	1.5	30.0	26500			F703_30.0 P180 BE180M4	F703_30.0 P180 BX180M4	435
51	3219	2.5	28.8	33000			F803_28.8 P180 BE180M4	F803_28.8 P180 BX180M4	438
53	3090	1.5	27.7	26000			F703_27.7 P180 BE180M4	F703_27.7 P180 BX180M4	435
58	2815	2.2	25.2	32100			F803_25.2 P180 BE180M4	F803_25.2 P180 BX180M4	438
60	2741	1.5	24.6	25500			F703_24.6 P180 BE180M4	F703_24.6 P180 BX180M4	435
65	2523	1.7	22.6	25200			F703_22.6 P180 BE180M4	F703_22.6 P180 BX180M4	435
67	2458	2.7	22.0	31300			F803_22.0 P180 BE180M4	F803_22.0 P180 BX180M4	438
70	2329	1.7	20.9	24900			F703_20.9 P180 BE180M4	F703_20.9 P180 BX180M4	435
72	2269	2.7	20.3	30600			F803_20.3 P180 BE180M4	F803_20.3 P180 BX180M4	438
77	2128	0.9	19.1	19200			F603_19.1 P180 BE180M4	F603_19.1 P180 BX180M4	431
83	1976	2.2	17.7	24200			F703_17.7 P180 BE180M4	F703_17.7 P180 BX180M4	435
84	1964	3.4	17.6	29700			F803_17.6 P180 BE180M4	F803_17.6 P180 BX180M4	438
90	1824	2.2	16.3	23800			F703_16.3 P180 BE180M4	F703_16.3 P180 BX180M4	435
90	1813	3.4	16.2	29100			F803_16.2 P180 BE180M4	F803_16.2 P180 BX180M4	438
94	1750	1.1	15.7	18700			F603_15.7 P180 BE180M4	F603_15.7 P180 BX180M4	431
102	1615	1.2	14.5	18600			F603_14.5 P180 BE180M4	F603_14.5 P180 BX180M4	431
106	1550	2.5	13.9	23000			F703_13.9 P180 BE180M4	F703_13.9 P180 BX180M4	435
115	1430	2.5	12.8	22600			F703_12.8 P180 BE180M4	F703_12.8 P180 BX180M4	435
115	1421	1.3	12.7	18300			F603_12.7 P180 BE180M4	F603_12.7 P180 BX180M4	431
125	1312	1.4	11.8	17900			F603_11.8 P180 BE180M4	F603_11.8 P180 BX180M4	431
132	1267	1.1	11.1	5800			F512_11.1 P180 BE180M4	F512_11.1 P180 BX180M4	427
135	1211	2.8	10.9	21800			F703_10.9 P180 BE180M4	F703_10.9 P180 BX180M4	435
147	1118	2.9	10.0	21400			F703_10.0 P180 BE180M4	F703_10.0 P180 BX180M4	435
151	1083	1.8	9.7	17300			F603_9.7 P180 BE180M4	F603_9.7 P180 BX180M4	431
162	1032	1.1	9.1	5630			F512_9.1 P180 BE180M4	F512_9.1 P180 BX180M4	427
164	1000	1.9	9.0	16900			F603_9.0 P180 BE180M4	F603_9.0 P180 BX180M4	431
204	820	1.2	7.2	5400			F512_7.2 P180 BE180M4	F512_7.2 P180 BX180M4	427

## 22 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N					
					IE2	IE3	IE2	IE3	
13.1	14888	0.9	111.9	55000			F903_111.9 P180 BE180L4	F903_111.9 P180 BX180L4	441
14.2	13743	1.0	103.3	55000			F903_103.3 P180 BE180L4	F903_103.3 P180 BX180L4	441
15.4	12735	1.1	95.8	55000			F903_95.8 P180 BE180L4	F903_95.8 P180 BX180L4	441
16.6	11755	1.2	88.4	55000			F903_88.4 P180 BE180L4	F903_88.4 P180 BX180L4	441
19.2	10194	1.4	76.7	55000			F903_76.7 P180 BE180L4	F903_76.7 P180 BX180L4	441
20.8	9410	1.5	70.8	55000			F903_70.8 P180 BE180L4	F903_70.8 P180 BX180L4	441
23.7	8259	1.7	62.1	55000			F903_62.1 P180 BE180L4	F903_62.1 P180 BX180L4	441
23.9	8173	1.0	61.5	35400			F803_61.5 P180 BE180L4	F803_61.5 P180 BX180L4	438
25.6	7623	1.8	57.3	55000			F903_57.3 P180 BE180L4	F903_57.3 P180 BX180L4	441
25.9	7545	1.1	56.7	35000			F803_56.7 P180 BE180L4	F803_56.7 P180 BX180L4	438



## 22 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N							
					IE2	IE3	IE2	IE3	IE2	IE3	
29.5	6636	2.1	49.9	54400					F903_49.9 P180 BE180L4	F903_49.9 P180 BX180L4	441
29.9	6531	1.2	49.1	34100					F803_49.1 P180 BE180L4	F803_49.1 P180 BX180L4	438
32	6125	2.3	46.1	53500					F903_46.1 P180 BE180L4	F903_46.1 P180 BX180L4	441
32	6028	1.3	45.3	34300					F803_45.3 P180 BE180L4	F803_45.3 P180 BX180L4	438
36	5386	2.6	40.5	52300					F903_40.5 P180 BE180L4	F903_40.5 P180 BX180L4	441
38	5187	1.5	39.0	33300					F803_39.0 P180 BE180L4	F803_39.0 P180 BX180L4	438
38	5106	1.0	38.4	25400					F703_38.4 P180 BE180L4	F703_38.4 P180 BX180L4	435
39	4972	2.7	37.4	51400					F903_37.4 P180 BE180L4	F903_37.4 P180 BX180L4	441
41	4788	1.7	36.0	33200					F803_36.0 P180 BE180L4	F803_36.0 P180 BX180L4	438
41	4713	1.1	35.4	25300					F703_35.4 P180 BE180L4	F703_35.4 P180 BX180L4	435
47	4156	1.9	31.3	32600					F803_31.3 P180 BE180L4	F803_31.3 P180 BX180L4	438
47	4122	3.2	31.0	49500					F903_31.0 P180 BE180L4	F903_31.0 P180 BX180L4	441
49	3990	1.3	30.0	25100					F703_30.0 P180 BE180L4	F703_30.0 P180 BX180L4	435
51	3836	2.1	28.8	32000					F803_28.8 P180 BE180L4	F803_28.8 P180 BX180L4	438
51	3805	3.2	28.6	48600					F903_28.6 P180 BE180L4	F903_28.6 P180 BX180L4	441
53	3683	1.3	27.7	24800					F703_27.7 P180 BE180L4	F703_27.7 P180 BX180L4	435
58	3355	1.8	25.2	31300					F803_25.2 P180 BE180L4	F803_25.2 P180 BX180L4	438
60	3266	1.2	24.6	24500					F703_24.6 P180 BE180L4	F703_24.6 P180 BX180L4	435
65	3006	1.4	22.6	24300					F703_22.6 P180 BE180L4	F703_22.6 P180 BX180L4	435
67	2929	2.3	22.0	30200					F803_22.0 P180 BE180L4	F803_22.0 P180 BX180L4	438
70	2775	1.4	20.9	24000					F703_20.9 P180 BE180L4	F703_20.9 P180 BX180L4	435
72	2704	2.3	20.3	29900					F803_20.3 P180 BE180L4	F803_20.3 P180 BX180L4	438
83	2355	1.9	17.7	23400					F703_17.7 P180 BE180L4	F703_17.7 P180 BX180L4	435
84	2341	2.9	17.6	29100					F803_17.6 P180 BE180L4	F803_17.6 P180 BX180L4	438
90	2174	1.8	16.3	23100					F703_16.3 P180 BE180L4	F703_16.3 P180 BX180L4	435
90	2161	2.9	16.2	28500					F803_16.2 P180 BE180L4	F803_16.2 P180 BX180L4	438
94	2085	0.9	15.7	18200					F603_15.7 P180 BE180L4	F603_15.7 P180 BX180L4	431
102	1925	1.0	14.5	18000					F603_14.5 P180 BE180L4	F603_14.5 P180 BX180L4	431
106	1847	2.1	13.9	22400					F703_13.9 P180 BE180L4	F703_13.9 P180 BX180L4	435
115	1705	2.1	12.8	22100					F703_12.8 P180 BE180L4	F703_12.8 P180 BX180L4	435
115	1693	1.1	12.7	17700					F603_12.7 P180 BE180L4	F603_12.7 P180 BX180L4	431
125	1563	1.2	11.8	17400					F603_11.8 P180 BE180L4	F603_11.8 P180 BX180L4	431
135	1443	2.4	10.9	21400					F703_10.9 P180 BE180L4	F703_10.9 P180 BX180L4	435
147	1332	2.4	10.0	21000					F703_10.0 P180 BE180L4	F703_10.0 P180 BX180L4	435
151	1291	1.5	9.7	16900					F603_9.7 P180 BE180L4	F603_9.7 P180 BX180L4	431
164	1192	1.6	9.0	16500					F603_9.0 P180 BE180L4	F603_9.0 P180 BX180L4	431
204	977	1.0	7.2	5250					F512_7.2 P180 BE180L4	F512_7.2 P180 BX180L4	427



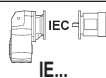

## 30 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				
					IE...	IE...	IEC...	IEC...
16.6	16022	0.9	88.4	52200			F903_88.4 P200 IEC200L4	441
19.2	13893	1.0	76.7	52400			F903_76.7 P200 IEC200L4	441
20.8	12825	1.1	70.8	52100			F903_70.8 P200 IEC200L4	441
23.7	11256	1.2	62.1	51800			F903_62.1 P200 IEC200L4	441
25.6	10390	1.3	57.3	51400			F903_57.3 P200 IEC200L4	441
29.5	9044	1.5	49.9	50800			F903_49.9 P200 IEC200L4	441
32	8348	1.7	46.1	50200			F903_46.1 P200 IEC200L4	441
32	8216	1.0	45.3	30900			F803_45.3 P200 IEC200L4	438
36	7341	1.9	40.5	49400			F903_40.5 P200 IEC200L4	441
38	7069	1.1	39.0	31000			F803_39.0 P200 IEC200L4	438
39	6776	2.0	37.4	48700			F903_37.4 P200 IEC200L4	441
41	6525	1.2	36.0	30600			F803_36.0 P200 IEC200L4	438
47	5664	1.4	31.3	29900			F803_31.3 P200 IEC200L4	438
47	5618	2.3	31.0	47300			F903_31.0 P200 IEC200L4	441



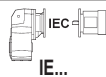

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.



## 30 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				
49	5438	0.9	30.0	22300			F703_30.0 P200 IEC200L4	435
51	5229	1.5	28.8	29500			F803_28.8 P200 IEC200L4	438
51	5186	2.3	28.6	46600			F903_28.6 P200 IEC200L4	441
53	5019	0.9	27.7	22200			F703_27.7 P200 IEC200L4	435
58	4601	2.6	25.4	45500			F903_25.4 P200 IEC200L4	441
58	4572	1.2	25.2	29500			F803_25.2 P200 IEC200L4	438
66	4039	3.0	22.3	44400			F903_22.3 P200 IEC200L4	441
67	3992	1.7	22.0	29000			F803_22.0 P200 IEC200L4	438
71	3728	3.0	20.6	43600			F903_20.6 P200 IEC200L4	441
72	3685	1.7	20.3	28500			F803_20.3 P200 IEC200L4	438
83	3209	1.4	17.7	21800			F703_17.7 P200 IEC200L4	435
84	3190	2.1	17.6	27900			F803_17.6 P200 IEC200L4	438
90	2963	1.4	16.3	21500			F703_16.3 P200 IEC200L4	435
90	2945	2.1	16.2	27400			F803_16.2 P200 IEC200L4	438
105	2534	2.7	14.0	26700			F803_14.0 P200 IEC200L4	438
106	2517	1.5	13.9	21100			F703_13.9 P200 IEC200L4	435
114	2339	2.7	12.9	26200			F803_12.9 P200 IEC200L4	438
115	2323	1.5	12.8	20900			F703_12.8 P200 IEC200L4	435
135	1967	1.8	10.9	20300			F703_10.9 P200 IEC200L4	435
142	1874	3.0	10.3	24900			F803_10.3 P200 IEC200L4	438
147	1815	1.8	10.0	20000			F703_10.0 P200 IEC200L4	435



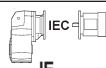

## 37 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				
20.9	15710	0.9	70.8	47600			F903_70.8 P225 IEC225S4	441
25.8	12728	1.1	57.3	47700			F903_57.3 P225 IEC225S4	441
29.7	11079	1.3	49.9	47600			F903_49.9 P225 IEC225S4	441
32	10227	1.4	46.1	47200			F903_46.1 P225 IEC225S4	441
37	8993	1.6	40.5	46800			F903_40.5 P225 IEC225S4	441
38	8659	0.9	39.0	28500			F803_39.0 P225 IEC225S4	438
40	8301	1.6	37.4	46300			F903_37.4 P225 IEC225S4	441
41	7993	1.0	36.0	28300			F803_36.0 P225 IEC225S4	438
47	6939	1.2	31.3	28400			F803_31.3 P225 IEC225S4	438
48	6882	1.9	31.0	45300			F903_31.0 P225 IEC225S4	441
51	6405	1.2	28.8	28100			F803_28.8 P225 IEC225S4	438
52	6353	1.9	28.6	44700			F903_28.6 P225 IEC225S4	441
58	5637	2.1	25.4	43900			F903_25.4 P225 IEC225S4	441
59	5601	1.1	25.2	27800			F803_25.2 P225 IEC225S4	438
66	4947	2.4	22.3	43000			F903_22.3 P225 IEC225S4	441
67	4891	1.1	22.0	27600			F803_22.0 P225 IEC225S4	438
72	4567	2.5	20.6	42300			F903_20.6 P225 IEC225S4	441
73	4515	1.1	20.3	27200			F803_20.3 P225 IEC225S4	438
83	3975	2.8	17.9	41200			F903_17.9 P225 IEC225S4	441
84	3908	1.7	17.6	26800			F803_17.6 P225 IEC225S4	438
90	3669	2.8	16.5	40500			F903_16.5 P225 IEC225S4	441
91	3607	1.7	16.2	26300			F803_16.2 P225 IEC225S4	438
102	3226	3.1	14.5	39500			F903_14.5 P225 IEC225S4	441
106	3104	2.2	14.0	25800			F803_14.0 P225 IEC225S4	438
110	2978	3.1	13.4	38700			F903_13.4 P225 IEC225S4	441
115	2865	2.2	12.9	25300			F803_12.9 P225 IEC225S4	438
132	2487	2.4	11.2	24500			F803_11.2 P225 IEC225S4	438
143	2296	2.4	10.3	24300			F803_10.3 P225 IEC225S4	438



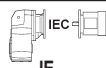

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.



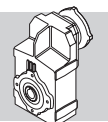
## 45 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N				
32	12438	1.1	46.1	43900			F903_46.1 P225 IEC225M4	441
37	10937	1.3	40.5	43900			F903_40.5 P225 IEC225M4	441
40	10096	1.3	37.4	43600			F903_37.4 P225 IEC225M4	441
47	8439	0.9	31.3	26100			F803_31.3 P225 IEC225M4	438
48	8370	1.6	31.0	43100			F903_31.0 P225 IEC225M4	441
51	7790	1.0	28.8	26000			F803_28.8 P225 IEC225M4	438
52	7726	1.6	28.6	42600			F903_28.6 P225 IEC225M4	441
58	6855	1.8	25.4	42000			F903_25.4 P225 IEC225M4	441
66	6017	2.0	22.3	41400			F903_22.3 P225 IEC225M4	441
67	5948	1.1	22.0	26000			F803_22.0 P225 IEC225M4	438
72	5554	2.0	20.6	40800			F903_20.6 P225 IEC225M4	441
73	5491	1.1	20.3	25700			F803_20.3 P225 IEC225M4	438
83	4834	2.3	17.9	39900			F903_17.9 P225 IEC225M4	441
84	4753	1.4	17.6	25500			F803_17.6 P225 IEC225M4	438
90	4463	2.3	16.5	39300			F903_16.5 P225 IEC225M4	441
91	4387	1.4	16.2	25200			F803_16.2 P225 IEC225M4	438
102	3924	2.5	14.5	38400			F903_14.5 P225 IEC225M4	441
106	3775	1.8	14.0	24800			F803_14.0 P225 IEC225M4	438
110	3622	2.6	13.4	37800			F903_13.4 P225 IEC225M4	441
115	3484	1.8	12.9	24100			F803_12.9 P225 IEC225M4	438
132	3025	1.5	11.2	24000			F803_11.2 P225 IEC225M4	438
133	3003	2.9	11.1	36400			F903_11.1 P225 IEC225M4	441
143	2792	2.0	10.3	23500			F803_10.3 P225 IEC225M4	438



## 55 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N				
32	15202	0.9	46.1	39700			F903_46.1 P250 IEC250M4	441
37	13367	1.0	40.5	40300			F903_40.5 P250 IEC250M4	441
40	12339	1.1	37.4	40200			F903_37.4 P250 IEC250M4	441
48	10230	1.3	31.0	40300			F903_31.0 P250 IEC250M4	441
52	9443	1.3	28.6	40100			F903_28.6 P250 IEC250M4	441
58	8379	1.4	25.4	39700			F903_25.4 P250 IEC250M4	441
66	7354	1.6	22.3	39400			F903_22.3 P250 IEC250M4	441
72	6788	1.7	20.6	38900			F903_20.6 P250 IEC250M4	441
83	5909	1.9	17.9	38300			F903_17.9 P250 IEC250M4	441
90	5454	1.9	16.5	37800			F903_16.5 P250 IEC250M4	441
102	4796	2.1	14.5	37100			F903_14.5 P250 IEC250M4	441
110	4427	2.1	13.4	36600			F903_13.4 P250 IEC250M4	441
133	3671	2.4	11.1	35400			F903_11.1 P250 IEC250M4	441
144	3388	2.4	10.3	34800			F903_10.3 P250 IEC250M4	441

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 22 kW.





**F 10** **140 Nm**

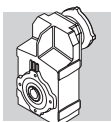
	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>F 10 2_7.4</b>	7.4	378	63	2.6	1000	1290	189	76	1.6	1290	1640	407
<b>F 10 2_8.6</b>	8.6	326	67	2.4	980	1350	163	82	1.5	1260	1710	
<b>F 10 2_9.8</b>	9.8	287	73	2.3	980	1410	143	89	1.4	1250	1780	
<b>F 10 2_11.5</b>	11.5	243	78	2.1	950	1480	121	96	1.3	1220	1870	
<b>F 10 2_13.0</b>	13.0	215	85	2.0	940	1530	107	104	1.2	1210	1940	
<b>F 10 2_14.6</b>	14.6	191	94	2.0	1120	1590	96	119	1.3	1300	2000	
<b>F 10 2_17.0</b>	17.0	165	104	1.9	1090	1650	82	128	1.2	1300	2090	
<b>F 10 2_19.3</b>	19.3	145	108	1.7	1100	1730	72	136	1.1	1300	2180	
<b>F 10 2_22.8</b>	22.8	123	119	1.6	1080	1810	61	140	0.95	1300	2310	
<b>F 10 2_25.8</b>	25.8	109	123	1.5	1090	1890	54	140	0.84	1300	2430	
<b>F 10 2_29.6</b>	29.6	94	132	1.4	1060	1970	47	140	0.73	1300	2560	
<b>F 10 2_33.0</b>	33.0	85	137	1.3	1070	2040	42	140	0.65	1300	2670	
<b>F 10 2_35.3</b>	35.3	79	140	1.2	1060	2090	40	140	0.61	1300	2740	
<b>F 10 2_39.6</b>	39.6	71	140	1.1	1080	2190	35	140	0.54	1300	2800	
<b>F 10 2_44.7</b>	44.7	63	140	0.97	1080	2290	31	140	0.48	1300	2800	
<b>F 10 2_48.7</b>	48.7	57	140	0.89	1090	2370	28.7	140	0.44	1300	2800	
<b>F 10 2_56.7</b>	56.7	49	140	0.76	1100	2520	24.7	140	0.38	1300	2800	
<b>F 10 2_63.0</b>	63.0	44	140	0.69	1110	2620	22.2	140	0.34	1300	2800	
<b>F 10 2_71.1</b>	71.1	39	140	0.61	1000	2750	19.7	140	0.30	1300	2800	
<b>F 10 2_81.3</b>	81.3	34	140	0.53	1110	2800	17.2	140	0.27	1300	2800	
<b>F 10 2_91.5</b>	91.5	31	140	0.47	1110	2800	15.3	140	0.24	1300	2800	
<b>F 10 2_106.0</b>	106.0	26.4	140	0.41	1120	2800	13.2	140	0.20	1300	2800	
<b>F 10 2_127.1</b>	127.1	22.0	140	0.34	1130	2800	11.0	140	0.17	1300	2800	





# F 10

# 140 Nm

	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
<b>F 10 2_7.4</b>	7.4	122	91	1.2	1300	1890	68	111	0.83	1300	2300	407
<b>F 10 2_8.6</b>	8.6	105	94	1.1	1300	1970	58	112	0.72	1300	2430	
<b>F 10 2_9.8</b>	9.8	92	107	1.1	1300	2050	51	130	0.73	1300	2490	
<b>F 10 2_11.5</b>	11.5	78	110	0.95	1300	2180	43	131	0.63	1300	2660	
<b>F 10 2_13.0</b>	13.0	69	124	0.94	1300	2240	38	140	0.59	1300	2800	
<b>F 10 2_14.6</b>	14.6	61	138	0.93	1300	2320	34	140	0.53	1300	2800	
<b>F 10 2_17.0</b>	17.0	53	140	0.82	1300	2450	29.5	140	0.46	1300	2800	
<b>F 10 2_19.3</b>	19.3	47	140	0.72	1300	2580	25.9	140	0.40	1300	2800	
<b>F 10 2_22.8</b>	22.8	39	140	0.61	1300	2750	21.9	140	0.34	1300	2800	
<b>F 10 2_25.8</b>	25.8	35	140	0.54	1300	2800	19.4	140	0.30	1300	2800	
<b>F 10 2_29.6</b>	29.6	30	140	0.47	1300	2800	16.9	140	0.26	1300	2800	
<b>F 10 2_33.0</b>	33.0	27.3	140	0.42	1300	2800	15.2	140	0.23	1300	2800	
<b>F 10 2_35.3</b>	35.3	25.5	140	0.39	1300	2800	14.1	140	0.22	1300	2800	
<b>F 10 2_39.6</b>	39.6	22.7	140	0.35	1300	2800	12.6	140	0.19	1300	2800	
<b>F 10 2_44.7</b>	44.7	20.1	140	0.31	1300	2800	11.2	140	0.17	1300	2800	
<b>F 10 2_48.7</b>	48.7	18.5	140	0.29	1300	2800	10.3	140	0.16	1300	2800	
<b>F 10 2_56.7</b>	56.7	15.9	140	0.24	1300	2800	8.8	140	0.14	1300	2800	
<b>F 10 2_63.0</b>	63.0	14.3	140	0.22	1300	2800	7.9	140	0.12	1300	2800	
<b>F 10 2_71.1</b>	71.1	12.7	140	0.20	1300	2800	7.0	140	0.11	1300	2800	
<b>F 10 2_81.3</b>	81.3	11.1	140	0.17	1300	2800	6.1	140	0.09	1300	2800	
<b>F 10 2_91.5</b>	91.5	9.8	140	0.15	1300	2800	5.5	140	0.08	1300	2800	
<b>F 10 2_106.0</b>	106.0	8.5	140	0.13	1300	2800	4.7	140	0.07	1300	2800	
<b>F 10 2_127.1</b>	127.1	7.1	140	0.11	1300	2800	3.9	140	0.06	1300	2800	

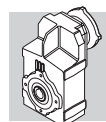


# F 20 250 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 20 2_6.4	6.4	437	103	5.0	—	1370	218	130	3.1	—	1720	411
F 20 2_7.8	7.8	357	115	4.5	—	1440	179	144	2.8	—	1820	
F 20 2_8.7	8.7	321	123	4.3	—	1490	160	155	2.7	—	1870	
F 20 2_10.0	10.0	279	131	4.0	—	1550	140	165	2.5	—	1950	
F 20 2_11.2	11.2	249	141	3.9	—	1590	125	177	2.4	—	2010	
F 20 2_14.8	14.8	189	166	3.5	760	1740	95	203	2.1	1010	2210	
F 20 2_18.1	18.1	155	175	3.0	750	1870	77	213	1.8	1020	2380	
F 20 2_20.2	20.2	139	182	2.8	810	1940	69	223	1.7	1070	2460	
F 20 2_23.1	23.1	121	190	2.5	770	2030	60	235	1.6	1000	2570	
F 20 2_25.9	25.9	108	196	2.3	830	2110	54	240	1.4	1100	2680	
F 20 2_30.4	30.4	92	205	2.1	780	2230	46	250	1.3	1050	2840	
F 20 2_33.1	33.1	85	210	2.0	800	2300	42	250	1.2	1120	2940	
F 20 2_37.9	37.9	74	220	1.8	740	2400	37	250	1.0	1130	3110	
F 20 2_41.8	41.8	67	225	1.7	780	2490	33	250	0.92	1220	3240	
F 20 2_44.8	44.8	62	235	1.6	690	2540	31	250	0.86	1200	3330	
F 20 2_50.7	50.7	55	238	1.4	780	2660	27.6	250	0.76	1320	3500	
F 20 2_56.7	56.7	49	250	1.4	730	2750	24.7	250	0.68	1360	3660	
F 20 2_61.9	61.9	45	250	1.2	750	2860	22.6	250	0.62	1370	3790	
F 20 2_69.1	69.1	40	250	1.1	760	2990	20.2	250	0.56	1370	3950	
F 20 2_76.8	76.8	36	250	1.0	780	3130	18.2	250	0.50	1380	4000	
F 20 2_90.4	90.4	31	250	0.85	830	3340	15.5	250	0.43	1390	4000	
F 20 2_101.6	101.6	27.5	250	0.76	830	3500	13.8	250	0.38	1390	4000	
F 20 2_114.3	114.3	24.5	250	0.67	850	3670	12.2	250	0.34	1400	4000	
F 20 2_132.2	132.2	21.2	250	0.58	870	3890	10.6	250	0.29	1400	4000	
F 20 3_156.3	156.3	17.9	250	0.50	1170	4000	9.0	250	0.25	1300	4000	
F 20 3_172.6	172.6	16.2	250	0.46	1200	4000	8.1	250	0.23	1300	4000	
F 20 3_184.9	184.9	15.1	250	0.43	1210	4000	7.6	250	0.21	1300	4000	
F 20 3_209.3	209.3	13.4	250	0.38	1240	4000	6.7	250	0.19	1300	4000	
F 20 3_234.0	234.0	12.0	250	0.34	1270	4000	6.0	250	0.17	1300	4000	
F 20 3_255.3	255.3	11.0	250	0.31	1280	4000	5.5	250	0.15	1300	4000	
F 20 3_285.2	285.2	9.8	250	0.28	1300	4000	4.9	250	0.14	1300	4000	
F 20 3_316.9	316.9	8.8	250	0.25	1300	4000	4.4	250	0.12	1300	4000	
F 20 3_372.9	372.9	7.5	250	0.21	1300	4000	3.8	250	0.11	1300	4000	
F 20 3_419.3	419.3	6.7	250	0.19	1300	4000	3.3	250	0.09	1300	4000	
F 20 3_471.7	471.7	5.9	250	0.17	1300	4000	3.0	250	0.08	1300	4000	
F 20 3_545.3	545.3	5.1	250	0.14	1300	4000	2.6	250	0.07	1300	4000	



(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



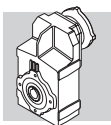


# F 20



# 250 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 20 2_6.4	6.4	140	150	2.3	—	1990	218	183	4.4	—	2420	411
F 20 2_7.8	7.8	115	167	2.1	—	2110	64	189	1.3	—	2610	
F 20 2_8.7	8.7	103	180	2.0	—	2170	57	219	1.4	—	2640	
F 20 2_10.0	10.0	90	191	1.9	—	2260	50	221	1.2	—	2790	
F 20 2_11.2	11.2	80	205	1.8	—	2330	45	250	1.2	—	2830	
F 20 2_14.8	14.8	61	232	1.6	1210	2570	34	250	0.93	1790	3230	
F 20 2_18.1	18.1	50	250	1.4	1150	2740	27.7	250	0.76	1910	3500	
F 20 2_20.2	20.2	45	250	1.2	1320	2870	24.8	250	0.68	1960	3650	
F 20 2_23.1	23.1	39	250	1.1	1350	3040	21.6	250	0.60	1970	3860	
F 20 2_25.9	25.9	35	250	0.96	1500	3190	19.3	250	0.53	2010	4000	
F 20 2_30.4	30.4	29.6	250	0.82	1530	3400	16.5	250	0.45	2020	4000	
F 20 2_33.1	33.1	27.2	250	0.75	1580	3520	15.1	250	0.42	2040	4000	
F 20 2_37.9	37.9	23.8	250	0.65	1590	3720	13.2	250	0.36	2040	4000	
F 20 2_41.8	41.8	21.5	250	0.59	1610	3870	12.0	250	0.33	2070	4000	
F 20 2_44.8	44.8	20.1	250	0.55	1610	3970	11.2	250	0.31	2060	4000	
F 20 2_50.7	50.7	17.7	250	0.49	1640	4000	9.9	250	0.27	2090	4000	
F 20 2_56.7	56.7	15.9	250	0.44	1650	4000	8.8	250	0.24	2110	4000	
F 20 2_61.9	61.9	14.5	250	0.40	1660	4000	8.1	250	0.22	2110	4000	
F 20 2_69.1	69.1	13.0	250	0.36	1660	4000	7.2	250	0.20	2110	4000	
F 20 2_76.8	76.8	11.7	250	0.32	1670	4000	6.5	250	0.18	2120	4000	
F 20 2_90.4	90.4	10.0	250	0.27	1680	4000	5.5	250	0.15	2130	4000	
F 20 2_101.6	101.6	8.9	250	0.24	1680	4000	4.9	250	0.14	2130	4000	
F 20 2_114.3	114.3	7.9	250	0.22	1690	4000	4.4	250	0.12	2140	4000	
F 20 2_132.2	132.2	6.8	250	0.19	1690	4000	3.8	250	0.10	2150	4000	
F 20 3_156.3	156.3	5.8	250	0.16	1300	4000	3.2	250	0.09	1300	4000	
F 20 3_172.6	172.6	5.2	250	0.15	1300	4000	2.9	250	0.08	1300	4000	
F 20 3_184.9	184.9	4.9	250	0.14	1300	4000	2.7	250	0.08	1300	4000	
F 20 3_209.3	209.3	4.3	250	0.12	1300	4000	2.4	250	0.07	1300	4000	
F 20 3_234.0	234.0	3.8	250	0.11	1300	4000	2.1	250	0.06	1300	4000	
F 20 3_255.3	255.3	3.5	250	0.10	1300	4000	2.0	250	0.06	1300	4000	
F 20 3_285.2	285.2	3.2	250	0.09	1300	4000	1.8	250	0.05	1300	4000	
F 20 3_316.9	316.9	2.8	250	0.08	1300	4000	1.6	250	0.04	1300	4000	
F 20 3_372.9	372.9	2.4	250	0.07	1300	4000	1.3	250	0.04	1300	4000	
F 20 3_419.3	419.3	2.1	250	0.06	1300	4000	1.2	250	0.03	1300	4000	
F 20 3_471.7	471.7	1.9	250	0.05	1300	4000	1.1	250	0.03	1300	4000	
F 20 3_545.3	545.3	1.7	250	0.05	1300	4000	0.92	250	0.03	1300	4000	

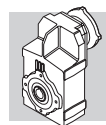
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# F 25 400 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 25 2_6.9	6.9	408	155	7.0	—	1840	204	195	4.4	—	2320	415
F 25 2_8.4	8.4	334	170	6.3	—	1950	167	215	4.0	—	2450	
F 25 2_9.4	9.4	299	180	5.9	—	2010	150	225	3.7	—	2540	
F 25 2_10.6	10.6	264	240	7.0	—	1850	132	305	4.4	—	2320	
F 25 2_13.0	13.0	216	255	6.1	—	1990	108	320	3.8	—	2510	
F 25 2_14.5	14.5	194	260	5.5	—	2080	97	330	3.5	—	2610	
F 25 2_16.6	16.6	168	270	5.0	—	2190	84	340	3.2	—	2760	
F 25 2_18.6	18.6	150	280	4.6	—	2270	75	350	2.9	—	2870	
F 25 2_21.8	21.8	128	280	4.0	—	2460	64	355	2.5	250	3090	
F 25 2_23.8	23.8	118	285	3.7	250	2540	59	360	2.3	300	3200	
F 25 2_27.2	27.2	103	290	3.3	250	2690	51	365	2.1	320	3400	
F 25 2_30.0	30.0	93	295	3.0	310	2800	47	370	1.9	410	3540	
F 25 2_32.2	32.2	87	295	2.8	310	2900	44	370	1.8	410	3660	
F 25 2_36.4	36.4	77	295	2.5	460	3070	38	370	1.6	600	3880	
F 25 2_40.7	40.7	69	295	2.2	560	3230	34	370	1.4	720	4080	
F 25 2_44.4	44.4	63	295	2.0	720	3360	32	370	1.3	720	4250	
F 25 3_45.6	45.6	61	340	2.4	1440	3100	31	400	1.4	1830	4030	
F 25 3_50.8	50.8	55	350	2.2	1450	3230	27.6	400	1.2	1850	4250	
F 25 3_58.3	58.3	48	365	2.0	1450	3390	24.0	400	1.1	1860	4530	
F 25 3_65.3	65.3	43	375	1.8	1450	3530	21.4	400	0.97	1870	4780	
F 25 3_76.6	76.6	37	395	1.6	1450	3730	18.3	400	0.82	1880	5140	
F 25 3_83.4	83.4	34	400	1.5	1450	3860	16.8	400	0.76	1880	5330	
F 25 3_95.5	95.5	29.3	400	1.3	1460	4130	14.7	400	0.66	1890	5660	
F 25 3_105.4	105.4	26.6	400	1.2	1470	4320	13.3	400	0.60	1890	5910	
F 25 3_113.0	113.0	24.8	400	1.1	1470	4470	12.4	400	0.56	1890	6090	
F 25 3_127.8	127.8	21.9	400	0.99	1480	4730	11.0	400	0.49	1900	6430	
F 25 3_143.0	143.0	19.6	400	0.88	1480	4980	9.8	400	0.44	1910	6500	
F 25 3_155.9	155.9	18.0	400	0.81	1480	5180	9.0	400	0.40	1910	6500	
F 25 3_174.2	174.2	16.1	400	0.72	1490	5440	8.0	400	0.36	1910	6500	
F 25 3_193.6	193.6	14.5	400	0.65	1490	5700	7.2	400	0.33	1910	6500	
F 25 3_227.8	227.8	12.3	400	0.55	1490	6120	6.1	400	0.28	1920	6500	
F 25 3_256.1	256.1	10.9	400	0.49	1490	6430	5.5	400	0.25	1920	6500	
F 25 3_288.1	288.1	9.7	400	0.44	1490	6500	4.9	400	0.22	1920	6500	
F 25 3_333.1	333.1	8.4	400	0.38	1500	6500	4.2	400	0.19	1930	6500	
F 25 4_393.9	393.9	7.1	400	0.33	1270	6500	3.6	400	0.17	1300	6500	
F 25 4_434.9	434.9	6.4	400	0.30	1290	6500	3.2	400	0.15	1300	6500	
F 25 4_466.0	466.0	6.0	400	0.28	1300	6500	3.0	400	0.14	1300	6500	
F 25 4_527.3	527.3	5.3	400	0.25	1300	6500	2.7	400	0.12	1300	6500	
F 25 4_589.7	589.7	4.7	400	0.22	1300	6500	2.4	400	0.11	1300	6500	
F 25 4_643.3	643.3	4.4	400	0.20	1300	6500	2.2	400	0.10	1300	6500	
F 25 4_718.7	718.7	3.9	400	0.18	1300	6500	1.9	400	0.09	1300	6500	
F 25 4_798.5	798.5	3.5	400	0.16	1300	6500	1.8	400	0.08	1300	6500	
F 25 4_939.8	939.8	3.0	400	0.14	1300	6500	1.5	400	0.07	1300	6500	
F 25 4_1057	1057	2.7	400	0.12	1300	6500	1.3	400	0.06	1300	6500	
F 25 4_1189	1189	2.4	400	0.11	1300	6500	1.2	400	0.05	1300	6500	
F 25 4_1374	1374	2.0	400	0.09	1300	6500	1.0	400	0.05	1300	6500	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



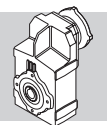
# F 25

# 400 Nm



	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 25 2_6.9	6.9	131	225	3.2	—	2690	73	255	2.0	370	3350	
F 25 2_8.4	8.4	107	250	3.0	—	2840	60	260	1.7	590	3630	
F 25 2_9.4	9.4	96	260	2.8	—	2940	53	265	1.6	820	3780	
F 25 2_10.6	10.6	85	355	3.3	—	2680	47	395	2.0	360	3420	
F 25 2_13.0	13.0	69	370	2.8	—	2910	39	400	1.7	620	3750	
F 25 2_14.5	14.5	62	380	2.6	—	3030	35	400	1.5	940	3950	
F 25 2_16.6	16.6	54	395	2.4	—	3190	30	400	1.3	1070	4210	
F 25 2_18.6	18.6	48	400	2.1	300	3350	26.9	400	1.2	1330	4440	
F 25 2_21.8	21.8	41	400	1.8	420	3630	22.9	400	1.0	1450	4770	
F 25 2_23.8	23.8	38	400	1.7	530	3780	21.0	400	0.93	1560	4950	
F 25 2_27.2	27.2	33	400	1.5	610	4030	18.4	400	0.81	1640	5260	
F 25 2_30.0	30.0	30	400	1.3	760	4220	16.6	400	0.73	1790	5490	
F 25 2_32.2	32.2	28.0	400	1.2	760	4360	15.5	400	0.69	1790	5660	
F 25 2_36.4	36.4	24.7	400	1.1	970	4610	13.7	400	0.61	2000	5970	
F 25 2_40.7	40.7	22.1	375	0.91	1330	4950	12.3	375	0.51	2000	6360	
F 25 2_44.4	44.4	20.3	385	0.86	1230	5100	11.3	385	0.48	2000	6500	
F 25 3_45.6	45.6	19.8	400	0.89	2160	4960	11.0	400	0.49	2200	6420	
F 25 3_50.8	50.8	17.7	400	0.80	2180	5210	9.8	400	0.44	2200	6500	
F 25 3_58.3	58.3	15.4	400	0.69	2190	5540	8.6	400	0.39	2200	6500	
F 25 3_65.3	65.3	13.8	400	0.62	2200	5820	7.7	400	0.34	2200	6500	
F 25 3_76.6	76.6	11.8	400	0.53	2200	6240	6.5	400	0.29	2200	6500	
F 25 3_83.4	83.4	10.8	400	0.49	2200	6470	6.0	400	0.27	2200	6500	
F 25 3_95.5	95.5	9.4	400	0.42	2200	6500	5.2	400	0.24	2200	6500	
F 25 3_105.4	105.4	8.5	400	0.38	2200	6500	4.7	400	0.21	2200	6500	
F 25 3_113.0	113.0	8.0	400	0.36	2200	6500	4.4	400	0.20	2200	6500	
F 25 3_127.8	127.8	7.0	400	0.32	2200	6500	3.9	400	0.18	2200	6500	
F 25 3_143.0	143.0	6.3	400	0.28	2200	6500	3.5	400	0.16	2200	6500	
F 25 3_155.9	155.9	5.8	400	0.26	2200	6500	3.2	400	0.14	2200	6500	
F 25 3_174.2	174.2	5.2	400	0.23	2200	6500	2.9	400	0.13	2200	6500	
F 25 3_193.6	193.6	4.6	400	0.21	2200	6500	2.6	400	0.12	2200	6500	
F 25 3_227.8	227.8	4.0	400	0.18	2200	6500	2.2	400	0.10	2200	6500	
F 25 3_256.1	256.1	3.5	400	0.16	2200	6500	2.0	400	0.09	2200	6500	
F 25 3_288.1	288.1	3.1	400	0.14	2200	6500	1.7	400	0.08	2200	6500	
F 25 3_333.1	333.1	2.7	400	0.12	2200	6500	1.5	400	0.07	2200	6500	
F 25 4_393.9	393.9	2.3	400	0.11	1300	6500	1.3	400	0.06	1300	6500	
F 25 4_434.9	434.9	2.1	400	0.10	1300	6500	1.1	400	0.05	1300	6500	
F 25 4_466.0	466.0	1.9	400	0.09	1300	6500	1.1	400	0.05	1300	6500	
F 25 4_527.3	527.3	1.7	400	0.08	1300	6500	0.95	400	0.04	1300	6500	
F 25 4_589.7	589.7	1.5	400	0.07	1300	6500	0.85	400	0.04	1300	6500	
F 25 4_643.3	643.3	1.4	400	0.07	1300	6500	0.78	400	0.04	1300	6500	
F 25 4_718.7	718.7	1.3	400	0.06	1300	6500	0.70	400	0.03	1300	6500	
F 25 4_798.5	798.5	1.1	400	0.05	1300	6500	0.63	400	0.03	1300	6500	
F 25 4_939.8	939.8	0.96	400	0.04	1300	6500	0.53	400	0.02	1300	6500	
F 25 4_1057	1057	0.85	400	0.04	1300	6500	0.47	400	0.02	1300	6500	
F 25 4_1189	1189	0.76	400	0.04	1300	6500	0.42	400	0.02	1300	6500	
F 25 4_1374	1374	0.65	400	0.03	1300	6500	0.36	400	0.02	1300	6500	

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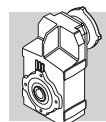
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# F 31 600 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 31 2_6.9	6.9	403	295	13.1	—	2710	201	360	8.0	—	3460	419
F 31 2_8.2	8.2	340	310	11.6	—	2880	170	375	7.0	—	3690	
F 31 2_9.0	9.0	311	310	10.6	—	3000	155	385	6.6	390	3810	
F 31 2_10.7	10.7	261	450	12.9	—	2790	130	525	7.5	500	3670	
F 31 2_12.7	12.7	220	475	11.5	—	2950	110	555	6.7	490	3880	
F 31 2_13.9	13.9	201	475	10.5	290	3100	100	570	6.3	650	4010	
F 31 2_16.8	16.8	167	475	8.7	510	3410	83	595	5.5	680	4310	
F 31 2_18.5	18.5	151	475	7.9	730	3580	76	600	5.0	910	4510	
F 31 2_21.1	21.1	133	475	6.9	830	3830	66	600	4.4	1030	4820	
F 31 2_23.4	23.4	120	475	6.3	1020	4020	60	600	4.0	1270	5060	
F 31 2_27.3	27.3	103	475	5.4	1100	4330	51	600	3.4	1380	5450	
F 31 2_30.1	30.1	93	475	4.9	1270	4540	46	600	3.1	1590	5710	
F 31 2_34.4	34.4	81	475	4.3	1330	4820	41	600	2.7	1660	6070	
F 31 2_37.7	37.7	74	475	3.9	1430	5030	37	600	2.5	1800	6330	
F 31 2_40.4	40.4	69	475	3.6	1440	5190	35	600	2.3	1800	6500	
F 31 2_44.6	44.6	63	475	3.3	1540	5430	31	600	2.1	1930	6500	
F 31 3_47.5	47.5	59	475	3.1	2110	5490	29.4	580	1.9	2200	6500	
F 31 3_52.1	52.1	54	485	2.9	2120	5680	26.9	600	1.8	2200	6500	
F 31 3_62.8	62.8	45	515	2.6	2120	6040	22.3	600	1.5	2200	6500	
F 31 3_69.1	69.1	41	530	2.4	2130	6250	20.3	600	1.4	2200	6500	
F 31 3_78.9	78.9	36	550	2.2	2120	6500	17.8	600	1.2	2200	6500	
F 31 3_87.4	87.4	32	570	2.1	2130	6500	16.0	600	1.1	2200	6500	
F 31 3_101.9	101.9	27.5	595	1.8	2130	6500	13.7	600	0.93	2200	6500	
F 31 3_112.5	112.5	24.9	600	1.7	2130	6500	12.4	600	0.84	2200	6500	
F 31 3_128.4	128.4	21.8	600	1.5	2140	6500	10.9	600	0.74	2200	6500	
F 31 3_140.7	140.7	19.9	600	1.3	2140	6500	9.9	600	0.67	2200	6500	
F 31 3_150.8	150.8	18.6	600	1.3	2140	6500	9.3	600	0.63	2200	6500	
F 31 3_166.8	166.8	16.8	600	1.1	2150	6500	8.4	600	0.57	2200	6500	
F 31 3_185.4	185.4	15.1	600	1.0	2160	6500	7.5	600	0.51	2200	6500	
F 31 3_202.3	202.3	13.8	600	0.94	2160	6500	6.9	600	0.47	2200	6500	
F 31 3_228.2	228.2	12.3	600	0.83	2160	6500	6.1	600	0.41	2200	6500	
F 31 3_253.6	253.6	11.0	600	0.75	2160	6500	5.5	600	0.37	2200	6500	
F 31 3_293.8	293.8	9.5	600	0.64	2170	6500	4.8	600	0.32	2200	6500	
F 31 3_332.8	332.8	8.4	600	0.57	2170	6500	4.2	600	0.28	2200	6500	
F 31 3_374.4	374.4	7.5	600	0.51	2170	6500	3.7	600	0.25	2200	6500	
F 31 4_418.9	418.9	6.7	600	0.47	1230	6500	3.3	600	0.23	1300	6500	
F 31 4_462.6	462.6	6.1	600	0.42	1250	6500	3.0	600	0.21	1300	6500	
F 31 4_527.8	527.8	5.3	600	0.37	1270	6500	2.7	600	0.19	1300	6500	
F 31 4_578.6	578.6	4.8	600	0.34	1290	6500	2.4	600	0.17	1300	6500	
F 31 4_619.9	619.9	4.5	600	0.32	1300	6500	2.3	600	0.16	1300	6500	
F 31 4_685.6	685.6	4.1	600	0.29	1300	6500	2.0	600	0.14	1300	6500	
F 31 4_762.3	762.3	3.7	600	0.26	1300	6500	1.8	600	0.13	1300	6500	
F 31 4_831.6	831.6	3.4	600	0.24	1300	6500	1.7	600	0.12	1300	6500	
F 31 4_938.2	938.2	3.0	600	0.21	1300	6500	1.5	600	0.10	1300	6500	
F 31 4_1042	1042	2.7	600	0.19	1300	6500	1.3	600	0.09	1300	6500	
F 31 4_1208	1208	2.3	600	0.16	1300	6500	1.2	600	0.08	1300	6500	
F 31 4_1368	1368	2.0	600	0.14	1300	6500	1.0	600	0.07	1300	6500	
F 31 4_1539	1539	1.8	600	0.13	1300	6500	0.91	600	0.06	1300	6500	

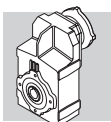
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# F 31

# 600 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 31 2_6.9	6.9	130	390	5.6	640	4120	72	390	3.1	2200	5350	419
F 31 2_8.2	8.2	109	390	4.7	990	4450	61	390	2.6	2200	5760	
F 31 2_9.0	9.0	100	390	4.3	1320	4640	55	390	2.4	2200	5980	
F 31 2_10.7	10.7	84	600	5.5	670	4280	47	600	3.1	2200	5710	
F 31 2_12.7	12.7	71	600	4.7	1020	4670	39	600	2.6	2200	6170	
F 31 2_13.9	13.9	65	600	4.3	1350	4880	36	600	2.4	2200	6440	
F 31 2_16.8	16.8	54	600	3.5	1640	5340	29.8	600	2.0	2200	6500	
F 31 2_18.5	18.5	49	600	3.2	1915	5580	27.0	600	1.8	2200	6500	
F 31 2_21.1	21.1	43	600	2.8	2040	5950	23.7	600	1.6	2200	6500	
F 31 2_23.4	23.4	38	600	2.5	2200	6230	21.4	600	1.4	2200	6500	
F 31 2_27.3	27.3	33	600	2.2	2200	6500	18.3	600	1.2	2200	6500	
F 31 2_30.1	30.1	29.9	600	2.0	2200	6500	16.6	600	1.1	2200	6500	
F 31 2_34.4	34.4	26.2	600	1.7	2200	6500	14.6	600	0.96	2200	6500	
F 31 2_37.7	37.7	23.9	600	1.6	2200	6500	13.3	600	0.88	2200	6500	
F 31 2_40.4	40.4	22.3	600	1.5	2200	6500	12.4	600	0.82	2200	6500	
F 31 2_44.6	44.6	20.2	600	1.3	2200	6500	11.2	600	0.74	2200	6500	
F 31 3_47.5	47.5	18.9	600	1.3	2200	6500	10.5	600	0.71	2200	6500	
F 31 3_52.1	52.1	17.3	600	1.2	2200	6500	9.6	600	0.65	2200	6500	
F 31 3_62.8	62.8	14.3	600	0.97	2200	6500	8.0	600	0.54	2200	6500	
F 31 3_69.1	69.1	13.0	600	0.88	2200	6500	7.2	600	0.49	2200	6500	
F 31 3_78.9	78.9	11.4	600	0.77	2200	6500	6.3	600	0.43	2200	6500	
F 31 3_87.4	87.4	10.3	600	0.70	2200	6500	5.7	600	0.39	2200	6500	
F 31 3_101.9	101.9	8.8	600	0.60	2200	6500	4.9	600	0.33	2200	6500	
F 31 3_112.5	112.5	8.0	600	0.54	2200	6500	4.4	600	0.30	2200	6500	
F 31 3_128.4	128.4	7.0	600	0.47	2200	6500	3.9	600	0.26	2200	6500	
F 31 3_140.7	140.7	6.4	600	0.43	2200	6500	3.6	600	0.24	2200	6500	
F 31 3_150.8	150.8	6.0	600	0.40	2200	6500	3.3	600	0.22	2200	6500	
F 31 3_166.8	166.8	5.4	600	0.36	2200	6500	3.0	600	0.20	2200	6500	
F 31 3_185.4	185.4	4.9	600	0.33	2200	6500	2.7	600	0.18	2200	6500	
F 31 3_202.3	202.3	4.4	600	0.30	2200	6500	2.5	600	0.17	2200	6500	
F 31 3_228.2	228.2	3.9	600	0.27	2200	6500	2.2	600	0.15	2200	6500	
F 31 3_253.6	253.6	3.5	600	0.24	2200	6500	2.0	600	0.13	2200	6500	
F 31 3_293.8	293.8	3.1	600	0.21	2200	6500	1.7	600	0.11	2200	6500	
F 31 3_332.8	332.8	2.7	600	0.18	2200	6500	1.5	600	0.10	2200	6500	
F 31 3_374.4	374.4	2.4	600	0.16	2200	6500	1.3	600	0.09	2200	6500	
F 31 4_418.9	418.9	2.1	600	0.15	1300	6500	1.2	600	0.08	1300	6500	
F 31 4_462.6	462.6	1.9	600	0.14	1300	6500	1.1	600	0.08	1300	6500	
F 31 4_527.8	527.8	1.7	600	0.12	1300	6500	0.95	600	0.07	1300	6500	
F 31 4_578.6	578.6	1.6	600	0.11	1300	6500	0.86	600	0.06	1300	6500	
F 31 4_619.9	619.9	1.5	600	0.10	1300	6500	0.81	600	0.06	1300	6500	
F 31 4_685.6	685.6	1.3	600	0.09	1300	6500	0.73	600	0.05	1300	6500	
F 31 4_762.3	762.3	1.2	600	0.08	1300	6500	0.66	600	0.05	1300	6500	
F 31 4_831.6	831.6	1.1	600	0.08	1300	6500	0.60	600	0.04	1300	6500	
F 31 4_938.2	938.2	0.96	600	0.07	1300	6500	0.53	600	0.04	1300	6500	
F 31 4_1042	1042	0.86	600	0.06	1300	6500	0.48	600	0.03	1300	6500	
F 31 4_1208	1208	0.75	600	0.05	1300	6500	0.41	600	0.03	1300	6500	
F 31 4_1368	1368	0.66	600	0.05	1300	6500	0.37	600	0.03	1300	6500	
F 31 4_1539	1539	0.58	600	0.04	1300	6500	0.32	600	0.02	1300	6500	



# F 41 1100 Nm

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
<b>F 41 2_6.7</b>	6.7	416	460	21	—	3410	208	580	13.3	—	4290	
<b>F 41 2_9.1</b>	9.1	306	515	17.4	—	3750	153	650	11.0	—	4730	
<b>F 41 2_10.8</b>	10.8	260	715	21	—	3310	130	900	12.9	—	4170	
<b>F 41 2_14.6</b>	14.6	191	805	17.0	—	3620	96	1015	10.7	—	4560	
<b>F 41 2_17.1</b>	17.1	164	835	15.1	—	3860	82	1055	9.5	—	4850	
<b>F 41 2_18.9</b>	18.9	148	860	14.0	410	4000	74	1085	8.9	500	5030	
<b>F 41 2_24.1</b>	24.1	116	875	11.2	650	4540	58	1100	7.0	840	5730	
<b>F 41 2_30.1</b>	30.1	93	875	9.0	980	5130	46	1100	5.6	1260	6470	
<b>F 41 2_38.2</b>	38.2	73	875	7.1	1260	5810	37	1100	4.4	1600	7330	
<b>F 41 2_47.9</b>	47.9	58	850	5.5	1680	6600	29.2	1070	3.4	2120	8320	
<b>F 41 3_51.5</b>	51.5	54	880	5.4	3030	6750	27.2	1085	3.3	3500	8500	
<b>F 41 3_60.2</b>	60.2	46	930	4.9	3030	7100	23.2	1100	2.9	3500	8500	
<b>F 41 3_66.5</b>	66.5	42	980	4.6	3030	7280	21.1	1100	2.6	3500	8500	
<b>F 41 3_84.9</b>	84.9	33	1065	4.0	3030	7890	16.5	1100	2.0	3500	8500	
<b>F 41 3_106.0</b>	106.0	26.4	1100	3.3	3040	8500	13.2	1100	1.6	3500	8500	
<b>F 41 3_134.4</b>	134.4	20.8	1100	2.6	3050	8500	10.4	1100	1.3	3500	8500	
<b>F 41 3_168.7</b>	168.7	16.6	1100	2.1	3070	8500	8.3	1100	1.0	3500	8500	
<b>F 41 3_180.7</b>	180.7	15.5	1100	1.9	3070	8500	7.7	1100	0.96	3500	8500	
<b>F 41 3_198.9</b>	198.9	14.1	1100	1.7	3080	8500	7.0	1100	0.87	3500	8500	
<b>F 41 3_220.1</b>	220.1	12.7	1100	1.6	3090	8500	6.4	1100	0.79	3500	8500	
<b>F 41 3_240.1</b>	240.1	11.7	1100	1.4	3090	8500	5.8	1100	0.72	3500	8500	
<b>F 41 3_266.9</b>	266.9	10.5	1100	1.3	3090	8500	5.2	1100	0.65	3500	8500	
<b>F 41 3_296.6</b>	296.6	9.4	1100	1.2	3090	8500	4.7	1100	0.58	3500	8500	
<b>F 41 3_344.8</b>	344.8	8.1	1100	1.0	3100	8500	4.1	1100	0.50	3500	8500	
<b>F 41 4_433.7</b>	433.7	6.5	1100	0.83	1480	8500	3.2	1100	0.41	1910	8500	
<b>F 41 4_549.8</b>	549.8	5.1	1100	0.65	1520	8500	2.5	1100	0.33	1940	8500	
<b>F 41 4_690.1</b>	690.1	4.1	1100	0.52	1540	8500	2.0	1100	0.26	1970	8500	
<b>F 41 4_739.4</b>	739.4	3.8	1100	0.48	1550	8500	1.9	1100	0.24	1980	8500	
<b>F 41 4_813.8</b>	813.8	3.4	1100	0.44	1560	8500	1.7	1100	0.22	1990	8500	
<b>F 41 4_900.5</b>	900.5	3.1	1100	0.40	1570	8500	1.6	1100	0.20	2000	8500	
<b>F 41 4_982.4</b>	982.4	2.9	1100	0.36	1570	8500	1.4	1100	0.18	2000	8500	
<b>F 41 4_1092</b>	1092	2.6	1100	0.33	1580	8500	1.3	1100	0.16	2010	8500	
<b>F 41 4_1213</b>	1213	2.3	1100	0.30	1590	8500	1.2	1100	0.15	2020	8500	
<b>F 41 4_1411</b>	1411	2.0	1100	0.25	1600	8500	1.0	1100	0.13	2020	8500	



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(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)

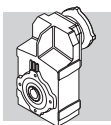


# F 41

# 1100 Nm



	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	$n_2$ min <sup>-1</sup>	$M_{n2}$ Nm	$P_{n1}$ kW	$R_{n1}$ N	$R_{n2}$ N	
F 41 2_6.7	6.7	134	670	9.9	—	4980	74	700	5.7	1760	6450	423
F 41 2_9.1	9.1	99	700	7.6	680	5660	55	700	4.2	2850	7410	
F 41 2_10.8	10.8	84	1025	9.4	480	4900	46	1100	5.6	1950	6480	
F 41 2_14.6	14.6	62	1100	7.5	860	5550	34	1100	4.1	3030	7590	
F 41 2_17.1	17.1	53	1100	6.4	1230	6060	29.2	1100	3.5	3400	8210	
F 41 2_18.9	18.9	48	1100	5.8	1760	6390	26.5	1100	3.2	3500	8500	
F 41 2_24.1	24.1	37	1100	4.5	2210	7260	20.7	1100	2.5	3500	8500	
F 41 2_30.1	30.1	29.9	1100	3.6	2630	8120	16.6	1100	2.0	3500	8500	
F 41 2_38.2	38.2	23.6	1100	2.9	2970	8500	13.1	1100	1.6	3500	8500	
F 41 2_47.9	47.9	18.8	1070	2.2	3490	8500	10.4	1070	1.2	3500	8500	
F 41 3_51.5	51.5	17.5	1100	2.2	3500	8500	9.7	1100	1.2	3500	8500	
F 41 3_60.2	60.2	14.9	1100	1.9	3500	8500	8.3	1100	1.0	3500	8500	
F 41 3_66.5	66.5	13.5	1100	1.7	3500	8500	7.5	1100	0.93	3500	8500	
F 41 3_84.9	84.9	10.6	1100	1.3	3500	8500	5.9	1100	0.73	3500	8500	
F 41 3_106.0	106.0	8.5	1100	1.1	3500	8500	4.7	1100	0.58	3500	8500	
F 41 3_134.4	134.4	6.7	1100	0.83	3500	8500	3.7	1100	0.46	3500	8500	
F 41 3_168.7	168.7	5.3	1100	0.66	3500	8500	3.0	1100	0.37	3500	8500	
F 41 3_180.7	180.7	5.0	1100	0.62	3500	8500	2.8	1100	0.34	3500	8500	
F 41 3_198.9	198.9	4.5	1100	0.56	3500	8500	2.5	1100	0.31	3500	8500	
F 41 3_220.1	220.1	4.1	1100	0.51	3500	8500	2.3	1100	0.28	3500	8500	
F 41 3_240.1	240.1	3.7	1100	0.46	3500	8500	2.1	1100	0.26	3500	8500	
F 41 3_266.9	266.9	3.4	1100	0.42	3500	8500	1.9	1100	0.23	3500	8500	
F 41 3_296.6	296.6	3.0	1100	0.38	3500	8500	1.7	1100	0.21	3500	8500	
F 41 3_344.8	344.8	2.6	1100	0.32	3500	8500	1.5	1100	0.18	3500	8500	
F 41 4_433.7	433.7	2.1	1100	0.27	2200	8500	1.2	1100	0.15	2200	8500	
F 41 4_549.8	549.8	1.6	1100	0.21	2200	8500	0.91	1100	0.12	2200	8500	
F 41 4_690.1	690.1	1.3	1100	0.17	2200	8500	0.72	1100	0.09	2200	8500	
F 41 4_739.4	739.4	1.2	1100	0.16	2200	8500	0.68	1100	0.09	2200	8500	
F 41 4_813.8	813.8	1.1	1100	0.14	2200	8500	0.61	1100	0.08	2200	8500	
F 41 4_900.5	900.5	1.0	1100	0.13	2200	8500	0.56	1100	0.07	2200	8500	
F 41 4_982.4	982.4	0.92	1100	0.12	2200	8500	0.51	1100	0.07	2200	8500	
F 41 4_1092	1092	0.82	1100	0.11	2200	8500	0.46	1100	0.06	2200	8500	
F 41 4_1213	1213	0.74	1100	0.09	2200	8500	0.41	1100	0.05	2200	8500	
F 41 4_1411	1411	0.64	1100	0.08	2200	8500	0.35	1100	0.05	2200	8500	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



# F 51

# 1800 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>F 51 2_7.2</b>	7.2	389	775	33	990	4170	195	975	21	1440	5260	427
<b>F 51 2_9.1</b>	9.1	309	875	30	890	4400	155	1100	18.8	1320	5550	
<b>F 51 2_11.1</b>	11.1	252	1055	29	1460	4530	126	1330	18.5	2010	5700	
<b>F 51 2_14.0</b>	14.0	200	1125	25	1580	4920	100	1420	15.7	2150	6200	
<b>F 51 2_18.8</b>	18.8	149	1225	20	1660	5480	74	1545	12.7	2240	6900	
<b>F 51 2_23.8</b>	23.8	118	1310	17.0	1710	5960	59	1650	10.7	2290	7520	
<b>F 51 2_30.0</b>	30.0	93	1350	13.9	1760	6610	47	1700	8.7	2330	8340	
<b>F 51 2_37.1</b>	37.1	75	1350	11.2	1910	7350	38	1700	7.1	2410	9260	
<b>F 51 3_48.9</b>	48.9	57	1505	9.7	2600	7800	28.6	1800	5.8	3310	10100	
<b>F 51 3_65.8</b>	65.8	43	1650	7.9	2610	8640	21.3	1800	4.3	3380	11600	
<b>F 51 3_83.2</b>	83.2	34	1770	6.7	2630	9380	16.8	1800	3.4	3440	12000	
<b>F 51 3_105.1</b>	105.1	26.6	1800	5.4	2650	10400	13.3	1800	2.7	3460	12000	
<b>F 51 3_129.9</b>	129.9	21.6	1800	4.4	2670	11600	10.8	1800	2.2	3490	12000	
<b>F 51 3_165.6</b>	165.6	16.9	1800	3.4	2700	12000	8.5	1800	1.7	3500	12000	
<b>F 51 3_202.4</b>	202.4	13.8	1800	2.8	2710	12000	6.9	1800	1.4	3500	12000	
<b>F 51 3_216.9</b>	216.9	12.9	1800	2.6	2710	12000	6.5	1800	1.3	3500	12000	
<b>F 51 3_239.8</b>	239.8	11.7	1800	2.4	2730	12000	5.8	1800	1.2	3500	12000	
<b>F 51 3_262.1</b>	262.1	10.7	1800	2.2	2730	12000	5.3	1800	1.1	3500	12000	
<b>F 51 3_285.9</b>	285.9	9.8	1800	2.0	2730	12000	4.9	1800	0.99	3500	12000	
<b>F 51 3_317.3</b>	317.3	8.8	1800	1.8	2740	12000	4.4	1800	0.89	3500	12000	
<b>F 51 3_352.5</b>	352.5	7.9	1800	1.6	2740	12000	4.0	1800	0.80	3500	12000	
<b>F 51 4_429.1</b>	429.1	6.5	1800	1.4	1930	12000	3.3	1800	0.68	2200	12000	
<b>F 51 4_530.5</b>	530.5	5.3	1800	1.1	1970	12000	2.6	1800	0.55	2200	12000	
<b>F 51 4_676.3</b>	676.3	4.1	1800	0.87	2020	12000	2.1	1800	0.43	2200	12000	
<b>F 51 4_826.4</b>	826.4	3.4	1800	0.71	2040	12000	1.7	1800	0.35	2200	12000	
<b>F 51 4_885.5</b>	885.5	3.2	1800	0.66	2050	12000	1.6	1800	0.33	2200	12000	
<b>F 51 4_979.4</b>	979.4	2.9	1800	0.60	2060	12000	1.4	1800	0.30	2200	12000	
<b>F 51 4_1070</b>	1070	2.6	1800	0.55	2070	12000	1.3	1800	0.27	2200	12000	
<b>F 51 4_1168</b>	1168	2.4	1800	0.50	2080	12000	1.2	1800	0.25	2200	12000	
<b>F 51 4_1296</b>	1296	2.2	1800	0.45	2090	12000	1.1	1800	0.23	2200	12000	
<b>F 51 4_1439</b>	1439	1.9	1800	0.41	2100	12000	1.0	1800	0.20	2200	12000	







# F 51

# 1800 Nm

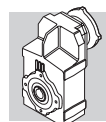
	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 51 2_7.2	7.2	125	1100	15.2	1940	6170	70	1100	8.4	3190	8140	427
F 51 2_9.1	9.1	99	1100	12.1	2450	6900	55	1100	6.7	3440	9030	
F 51 2_11.1	11.1	81	1520	13.6	2450	6660	45	1700	8.4	3190	8480	
F 51 2_14.0	14.0	64	1620	11.5	2550	7250	36	1700	6.7	3440	9500	
F 51 2_18.8	18.8	48	1700	9.0	2690	8230	26.6	1700	5.0	3500	10900	
F 51 2_23.8	23.8	38	1700	7.1	2870	9250	21.0	1700	3.9	3500	12000	
F 51 2_30.0	30.0	30	1700	5.6	2960	10300	16.6	1700	3.1	3500	12000	
F 51 2_37.1	37.1	24.2	1700	4.5	3040	11400	13.5	1700	2.5	3500	12000	
F 51 3_48.9	48.9	18.4	1800	3.7	3500	12000	10.2	1800	2.1	3500	12000	
F 51 3_65.8	65.8	13.7	1800	2.8	3500	12000	7.6	1800	1.5	3500	12000	
F 51 3_83.2	83.2	10.8	1800	2.2	3500	12000	6.0	1800	1.2	3500	12000	
F 51 3_105.1	105.1	8.6	1800	1.7	3500	12000	4.8	1800	0.96	3500	12000	
F 51 3_129.9	129.9	6.9	1800	1.4	3500	12000	3.8	1800	0.78	3500	12000	
F 51 3_165.6	165.6	5.4	1800	1.1	3500	12000	3.0	1800	0.61	3500	12000	
F 51 3_202.4	202.4	4.4	1800	0.90	3500	12000	2.5	1800	0.50	3500	12000	
F 51 3_216.9	216.9	4.2	1800	0.84	3500	12000	2.3	1800	0.47	3500	12000	
F 51 3_239.8	239.8	3.8	1800	0.76	3500	12000	2.1	1800	0.42	3500	12000	
F 51 3_262.1	262.1	3.4	1800	0.70	3500	12000	1.9	1800	0.39	3500	12000	
F 51 3_285.9	285.9	3.1	1800	0.64	3500	12000	1.7	1800	0.35	3500	12000	
F 51 3_317.3	317.3	2.8	1800	0.57	3500	12000	1.6	1800	0.32	3500	12000	
F 51 3_352.5	352.5	2.6	1800	0.52	3500	12000	1.4	1800	0.29	3500	12000	
F 51 4_429.1	429.1	2.1	1800	0.44	2200	12000	1.2	1800	0.24	2200	12000	
F 51 4_530.5	530.5	1.7	1800	0.36	2200	12000	0.94	1800	0.20	2200	12000	
F 51 4_676.3	676.3	1.3	1800	0.28	2200	12000	0.74	1800	0.15	2200	12000	
F 51 4_826.4	826.4	1.1	1800	0.23	2200	12000	0.61	1800	0.13	2200	12000	
F 51 4_885.5	885.5	1.0	1800	0.21	2200	12000	0.56	1800	0.12	2200	12000	
F 51 4_979.4	979.4	0.92	1800	0.19	2200	12000	0.51	1800	0.11	2200	12000	
F 51 4_1070	1070	0.84	1800	0.18	2200	12000	0.47	1800	0.10	2200	12000	
F 51 4_1168	1168	0.77	1800	0.16	2200	12000	0.43	1800	0.09	2200	12000	
F 51 4_1296	1296	0.69	1800	0.15	2200	12000	0.39	1800	0.08	2200	12000	
F 51 4_1439	1439	0.63	1800	0.13	2200	12000	0.35	1800	0.07	2200	12000	



# F 60 2900 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>F 60 3_9.0</b>	9.0	311	920	32	—	13300	156	1160	20	—	16500	431
<b>F 60 3_9.7</b>	9.7	289	1000	33	—	13600	144	1250	20	—	16700	
<b>F 60 3_11.8</b>	11.8	237	1030	28	—	14600	119	1300	17.4	—	17800	
<b>F 60 3_12.7</b>	12.7	220	1110	28	—	14700	110	1400	17.4	—	18000	
<b>F 60 3_14.5</b>	14.5	193	1110	24	—	15500	97	1400	15.3	—	19000	
<b>F 60 3_15.7</b>	15.7	178	1200	24	—	15600	89	1500	15.1	—	19200	
<b>F 60 3_19.1</b>	19.1	147	1200	19.9	—	16800	73	1500	12.4	—	20000	
<b>F 60 3_20.7</b>	20.7	135	1300	19.9	—	17000	68	1640	12.5	—	20000	
<b>F 60 3_23.5</b>	23.5	119	1260	17.0	—	17900	60	1590	10.7	—	20000	
<b>F 60 3_25.4</b>	25.4	110	1370	17.1	—	18100	55	1720	10.7	—	20000	
<b>F 60 3_29.6</b>	29.6	95	2750	29	820	15900	47	2900	15.5	2630	20000	
<b>F 60 3_32.1</b>	32.1	87	2800	28	1290	16200	44	2900	14.3	3260	20000	
<b>F 60 3_38.8</b>	38.8	72	2900	24	1260	17500	36	2900	11.8	3480	20000	
<b>F 60 3_42.1</b>	42.1	67	2900	22	1820	17900	33	2900	10.9	3720	20000	
<b>F 60 3_47.8</b>	47.8	59	2900	19.2	1770	19100	29.3	2900	9.6	3730	20000	
<b>F 60 3_51.8</b>	51.8	54	2900	17.7	2290	19500	27.0	2900	8.9	3830	20000	
<b>F 60 3_63.0</b>	63.0	44	2900	14.6	2310	20000	22.2	2900	7.3	3850	20000	
<b>F 60 3_68.3</b>	68.3	41	2900	13.4	2790	20000	20.5	2900	6.7	3940	20000	
<b>F 60 3_77.6</b>	77.6	36	2900	11.8	2620	20000	18.0	2900	5.9	3920	20000	
<b>F 60 3_84.0</b>	84.0	33	2900	10.9	2960	20000	16.7	2900	5.5	4010	20000	
<b>F 60 3_98.2</b>	98.2	28.5	2900	9.3	2910	20000	14.3	2900	4.7	3980	20000	
<b>F 60 3_106.4</b>	106.4	26.3	2900	8.6	3020	20000	13.2	2900	4.3	4070	20000	
<b>F 60 3_120.5</b>	120.5	23.2	2900	7.6	2970	20000	11.6	2900	3.8	4030	20000	
<b>F 60 3_130.5</b>	130.5	21.5	2900	7.0	3060	20000	10.7	2900	3.5	4110	20000	
<b>F 60 3_150.4</b>	150.4	18.6	2900	6.1	3010	20000	9.3	2900	3.0	4060	20000	
<b>F 60 3_162.9</b>	162.9	17.2	2900	5.6	3090	20000	8.6	2900	2.8	4140	20000	
<b>F 60 3_185.9</b>	185.9	15.1	2900	4.9	3050	20000	7.5	2900	2.5	4100	20000	
<b>F 60 3_201.4</b>	201.4	13.9	2900	4.6	3130	20000	7.0	2900	2.3	4180	20000	
<b>F 60 3_217.6</b>	217.6	12.9	2900	4.2	3070	20000	6.4	2900	2.1	4120	20000	
<b>F 60 3_235.8</b>	235.8	11.9	2900	3.9	3140	20000	5.9	2900	1.9	4190	20000	
<b>F 60 3_259.1</b>	259.1	10.8	2900	3.5	3080	20000	5.4	2900	1.8	4130	20000	
<b>F 60 3_280.7</b>	280.7	10.0	2900	3.3	3150	20000	5.0	2900	1.6	4200	20000	
<b>F 60 4_315.4</b>	315.4	8.9	2900	3.0	3500	20000	4.4	2900	1.5	3500	20000	
<b>F 60 4_341.7</b>	341.7	8.2	2900	2.8	3500	20000	4.1	2900	1.4	3500	20000	
<b>F 60 4_399.3</b>	399.3	7.0	2900	2.4	3500	20000	3.5	2900	1.2	3500	20000	
<b>F 60 4_432.6</b>	432.6	6.5	2900	2.2	3500	20000	3.2	2900	1.1	3500	20000	
<b>F 60 4_489.8</b>	489.8	5.7	2900	1.9	3500	20000	2.9	2900	0.96	3500	20000	
<b>F 60 4_530.7</b>	530.7	5.3	2900	1.8	3500	20000	2.6	2900	0.89	3500	20000	
<b>F 60 4_611.4</b>	611.4	4.6	2900	1.5	3500	20000	2.3	2900	0.77	3500	20000	
<b>F 60 4_662.4</b>	662.4	4.2	2900	1.4	3500	20000	2.1	2900	0.71	3500	20000	
<b>F 60 4_756.0</b>	756.0	3.7	2900	1.2	3500	20000	1.9	2900	0.62	3500	20000	
<b>F 60 4_819.0</b>	819.0	3.4	2900	1.1	3500	20000	1.7	2900	0.57	3500	20000	
<b>F 60 4_885.1</b>	885.1	3.2	2900	1.1	3500	20000	1.6	2900	0.53	3500	20000	
<b>F 60 4_958.9</b>	958.9	2.9	2900	0.98	3500	20000	1.5	2900	0.49	3500	20000	
<b>F 60 4_1054</b>	1054	2.7	2900	0.89	3500	20000	1.3	2900	0.45	3500	20000	
<b>F 60 4_1141</b>	1141	2.5	2900	0.83	3500	20000	1.2	2900	0.41	3500	20000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)

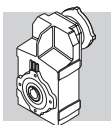


# F 60



# 2900 Nm

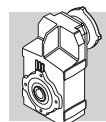
	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 60 3_9.0	9.0	100	1340	15.1	—	18800	56	1630	10.2	—	20000	431
F 60 3_9.7	9.7	93	1460	15.3	—	19000	52	1780	10.4	—	20000	
F 60 3_11.8	11.8	76	1500	12.9	—	20000	42	1830	8.8	—	20000	
F 60 3_12.7	12.7	71	1620	13.0	—	20000	39	1900	8.4	600	20000	
F 60 3_14.5	14.5	62	1620	11.4	—	20000	34	1900	7.4	490	20000	
F 60 3_15.7	15.7	57	1750	11.3	—	20000	32	1900	6.8	1630	20000	
F 60 3_19.1	19.1	47	1750	9.3	—	20000	26.2	1900	5.6	1660	20000	
F 60 3_20.7	20.7	43	1900	9.3	—	20000	24.2	1900	5.2	2700	20000	
F 60 3_23.5	23.5	38	1840	8.0	—	20000	21.3	1900	4.6	2340	20000	
F 60 3_25.4	25.4	35	1900	7.6	620	20000	19.7	1900	4.2	3330	20000	
F 60 3_29.6	29.6	30	2900	10.0	4220	20000	16.9	2900	5.5	4700	20000	
F 60 3_32.1	32.1	28.0	2900	9.2	4350	20000	15.6	2900	5.1	4700	20000	
F 60 3_38.8	38.8	23.2	2900	7.6	4420	20000	12.9	2900	4.2	4700	20000	
F 60 3_42.1	42.1	21.4	2900	7.0	4530	20000	11.9	2900	3.9	4700	20000	
F 60 3_47.8	47.8	18.8	2900	6.2	4530	20000	10.5	2900	3.4	4700	20000	
F 60 3_51.8	51.8	17.4	2900	5.7	4640	20000	9.7	2900	3.2	4700	20000	
F 60 3_63.0	63.0	14.3	2900	4.7	4660	20000	7.9	2900	2.6	4700	20000	
F 60 3_68.3	68.3	13.2	2900	4.3	4700	20000	7.3	2900	2.4	4700	20000	
F 60 3_77.6	77.6	11.6	2900	3.8	4700	20000	6.4	2900	2.1	4700	20000	
F 60 3_84.0	84.0	10.7	2900	3.5	4700	20000	6.0	2900	1.9	4700	20000	
F 60 3_98.2	98.2	9.2	2900	3.0	4700	20000	5.1	2900	1.7	4700	20000	
F 60 3_106.4	106.4	8.5	2900	2.8	4700	20000	4.7	2900	1.5	4700	20000	
F 60 3_120.5	120.5	7.5	2900	2.4	4700	20000	4.1	2900	1.4	4700	20000	
F 60 3_130.5	130.5	6.9	2900	2.3	4700	20000	3.8	2900	1.3	4700	20000	
F 60 3_150.4	150.4	6.0	2900	2.0	4700	20000	3.3	2900	1.1	4700	20000	
F 60 3_162.9	162.9	5.5	2900	1.8	4700	20000	3.1	2900	1.0	4700	20000	
F 60 3_185.9	185.9	4.8	2900	1.6	4700	20000	2.7	2900	0.88	4700	20000	
F 60 3_201.4	201.4	4.5	2900	1.5	4700	20000	2.5	2900	0.81	4700	20000	
F 60 3_217.6	217.6	4.1	2900	1.4	4700	20000	2.3	2900	0.75	4700	20000	
F 60 3_235.8	235.8	3.8	2900	1.3	4700	20000	2.1	2900	0.69	4700	20000	
F 60 3_259.1	259.1	3.5	2900	1.1	4700	20000	1.9	2900	0.63	4700	20000	
F 60 3_280.7	280.7	3.2	2900	1.1	4700	20000	1.8	2900	0.58	4700	20000	
F 60 4_315.4	315.4	2.9	2900	0.96	3500	20000	1.6	2900	0.53	3500	20000	
F 60 4_341.7	341.7	2.6	2900	0.89	3500	20000	1.5	2900	0.49	3500	20000	
F 60 4_399.3	399.3	2.3	2900	0.76	3500	20000	1.3	2900	0.42	3500	20000	
F 60 4_432.6	432.6	2.1	2900	0.70	3500	20000	1.2	2900	0.39	3500	20000	
F 60 4_489.8	489.8	1.8	2900	0.62	3500	20000	1.0	2900	0.34	3500	20000	
F 60 4_530.7	530.7	1.7	2900	0.57	3500	20000	0.94	2900	0.32	3500	20000	
F 60 4_611.4	611.4	1.5	2900	0.50	3500	20000	0.82	2900	0.28	3500	20000	
F 60 4_662.4	662.4	1.4	2900	0.46	3500	20000	0.75	2900	0.25	3500	20000	
F 60 4_756.0	756.0	1.2	2900	0.40	3500	20000	0.66	2900	0.22	3500	20000	
F 60 4_819.0	819.0	1.1	2900	0.37	3500	20000	0.61	2900	0.21	3500	20000	
F 60 4_885.1	885.1	1.0	2900	0.34	3500	20000	0.56	2900	0.19	3500	20000	
F 60 4_958.9	958.9	0.94	2900	0.32	3500	20000	0.52	2900	0.18	3500	20000	
F 60 4_1054	1054	0.85	2900	0.29	3500	20000	0.47	2900	0.16	3500	20000	
F 60 4_1141	1141	0.79	2900	0.27	3500	20000	0.44	2900	0.15	3500	20000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)





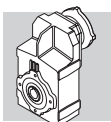
# F 70 5000 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>F 70 3_10.0</b>	10.0	280	2600	82	1410	14800	140	3200	51	1750	18200	435
<b>F 70 3_10.9</b>	10.9	257	2800	81	1510	14700	128	3450	50	1840	18100	
<b>F 70 3_12.8</b>	12.8	219	2900	72	860	15700	109	3600	44	880	19300	
<b>F 70 3_13.9</b>	13.9	201	3150	72	810	15600	101	3900	44	880	19100	
<b>F 70 3_16.3</b>	16.3	172	3250	63	570	16600	86	4000	39	710	20500	
<b>F 70 3_17.7</b>	17.7	158	3550	63	430	16400	79	4350	39	630	20200	
<b>F 70 3_20.9</b>	20.9	134	3450	52	690	18000	67	4000	30	2090	22700	
<b>F 70 3_22.6</b>	22.6	124	3750	52	640	17800	62	4350	30	2010	22500	
<b>F 70 3_24.6</b>	24.6	114	3550	46	560	19000	57	4000	26	2510	24200	
<b>F 70 3_27.7</b>	27.7	101	3750	43	5070	19600	51	4650	27	6410	24100	
<b>F 70 3_30.0</b>	30.0	93	4050	43	5080	19400	47	5000	26	6420	23900	
<b>F 70 3_35.4</b>	35.4	79	4150	37	5070	20900	40	5000	22	6440	25900	
<b>F 70 3_38.4</b>	38.4	73	4500	37	5060	20700	36	5000	21	6540	26500	
<b>F 70 3_45.2</b>	45.2	62	4600	32	5080	22200	31	5000	17.5	6590	28700	
<b>F 70 3_49.0</b>	49.0	57	4600	30	5170	22700	28.6	5000	16.1	6680	29300	
<b>F 70 3_57.7</b>	57.7	49	5000	27	5090	23800	24.3	5000	13.7	6680	31600	
<b>F 70 3_62.5</b>	62.5	45	5000	25	5170	24300	22.4	5000	12.7	6760	32300	
<b>F 70 3_67.9</b>	67.9	41	5000	23	5110	25500	20.6	5000	11.6	6710	33600	
<b>F 70 3_73.6</b>	73.6	38	5000	21	5190	26100	19.0	5000	10.7	6790	34400	
<b>F 70 3_85.4</b>	85.4	33	5000	18.5	5190	28000	16.4	5000	9.3	6780	35000	
<b>F 70 3_92.5</b>	92.5	30	5000	17.1	5260	28700	15.1	5000	8.5	6860	35000	
<b>F 70 3_101.2</b>	101.2	27.7	5000	15.6	5220	30000	13.8	5000	7.8	6820	35000	
<b>F 70 3_109.6</b>	109.6	25.5	5000	14.4	5290	30700	12.8	5000	7.2	6890	35000	
<b>F 70 3_122.7</b>	122.7	22.8	5000	12.9	5250	32300	11.4	5000	6.4	6850	35000	
<b>F 70 3_133.0</b>	133.0	21.1	5000	11.9	5320	33100	10.5	5000	5.9	6920	35000	
<b>F 70 3_153.8</b>	153.8	18.2	5000	10.3	5280	35000	9.1	5000	5.1	6880	35000	
<b>F 70 3_166.7</b>	166.7	16.8	5000	9.5	5350	35000	8.4	5000	4.7	6950	35000	
<b>F 70 3_180.9</b>	180.9	15.5	5000	8.7	5310	35000	7.7	5000	4.4	6910	35000	
<b>F 70 3_196.0</b>	196.0	14.3	5000	8.1	5370	35000	7.1	5000	4.0	6970	35000	
<b>F 70 4_216.5</b>	216.5	12.9	5000	7.5	2130	35000	6.5	5000	3.7	2860	35000	
<b>F 70 4_234.6</b>	234.6	11.9	5000	6.9	2130	35000	6.0	5000	3.5	2860	35000	
<b>F 70 4_280.9</b>	280.9	10.0	5000	5.8	2200	35000	5.0	5000	2.9	2940	35000	
<b>F 70 4_304.3</b>	304.3	9.2	5000	5.3	2200	35000	4.6	5000	2.7	2940	35000	
<b>F 70 4_372.5</b>	372.5	7.5	5000	4.4	2260	35000	3.8	5000	2.2	3000	35000	
<b>F 70 4_403.5</b>	403.5	6.9	5000	4.0	2260	35000	3.5	5000	2.0	3000	35000	
<b>F 70 4_471.2</b>	471.2	5.9	5000	3.4	2300	35000	3.0	5000	1.7	3040	35000	
<b>F 70 4_510.4</b>	510.4	5.5	5000	3.2	2300	35000	2.7	5000	1.6	3040	35000	
<b>F 70 4_606.8</b>	606.8	4.6	5000	2.7	2340	35000	2.3	5000	1.3	3070	35000	
<b>F 70 4_657.4</b>	657.4	4.3	5000	2.5	2340	35000	2.1	5000	1.2	3070	35000	
<b>F 70 4_759.0</b>	759.0	3.7	5000	2.1	2360	35000	1.8	5000	1.1	3090	35000	
<b>F 70 4_822.2</b>	822.2	3.4	5000	2.0	2360	35000	1.7	5000	1.0	3090	35000	
<b>F 70 4_899.4</b>	899.4	3.1	5000	1.8	2370	35000	1.6	5000	0.90	3110	35000	
<b>F 70 4_974.4</b>	974.4	2.9	5000	1.7	2370	35000	1.4	5000	0.83	3110	35000	
<b>F 70 4_1091</b>	1091	2.6	5000	1.5	2390	35000	1.3	5000	0.74	3120	35000	
<b>F 70 4_1182</b>	1182	2.4	5000	1.4	2390	35000	1.2	5000	0.69	3120	35000	
<b>F 70 4_1368</b>	1368	2.0	5000	1.2	2400	35000	1.0	5000	0.59	3130	35000	
<b>F 70 4_1481</b>	1481	1.9	5000	1.1	2400	35000	0.95	5000	0.55	3130	35000	
<b>F 70 4_1585</b>	1585	1.8	5000	1.0	2410	35000	0.88	5000	0.51	3140	35000	
<b>F 70 4_1717</b>	1717	1.6	5000	0.95	2410	35000	0.82	5000	0.47	3140	35000	
<b>F 70 4_2019</b>	2019	1.4	5000	0.80	2420	35000	0.69	5000	0.40	3150	35000	
<b>F 70 4_2188</b>	2188	1.3	5000	0.74	2420	35000	0.64	5000	0.37	3150	35000	





# F 70 5000 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 70 3_10.0	10.0	90	3200	33	4870	21700	50	3200	18.1	7000	27000	435
F 70 3_10.9	10.9	83	3450	32	4970	21700	46	3450	17.9	7000	27200	
F 70 3_12.8	12.8	70	3850	31	2540	22500	39	3600	15.9	7000	28300	
F 70 3_13.9	13.9	65	4200	31	2380	22400	36	3900	15.8	7000	28300	
F 70 3_16.3	16.3	55	4000	25	3830	24500	31	4000	13.9	7000	30700	
F 70 3_17.7	17.7	51	4350	25	3750	24400	28.2	4350	13.9	7000	30800	
F 70 3_20.9	20.9	43	4000	19.5	5210	27000	23.9	4000	10.8	7000	33700	
F 70 3_22.6	22.6	40	4350	19.6	5130	26900	22.1	4350	10.9	7000	33800	
F 70 3_24.6	24.6	37	4000	16.5	5630	28700	20.3	4000	9.2	7000	35000	
F 70 3_27.7	27.7	32	5000	18.4	7000	28100	18.1	4650	9.5	7000	35000	
F 70 3_30.0	30.0	30	5000	16.9	7000	28800	16.7	5000	9.4	7000	35000	
F 70 3_35.4	35.4	25.4	5000	14.4	7000	31000	14.1	5000	8.0	7000	35000	
F 70 3_38.4	38.4	23.4	5000	13.2	7000	31700	13.0	5000	7.4	7000	35000	
F 70 3_45.2	45.2	19.9	5000	11.2	7000	34100	11.1	5000	6.2	7000	35000	
F 70 3_49.0	49.0	18.4	5000	10.4	7000	34900	10.2	5000	5.8	7000	35000	
F 70 3_57.7	57.7	15.6	5000	8.8	7000	35000	8.7	5000	4.9	7000	35000	
F 70 3_62.5	62.5	14.4	5000	8.1	7000	35000	8.0	5000	4.5	7000	35000	
F 70 3_67.9	67.9	13.3	5000	7.5	7000	35000	7.4	5000	4.2	7000	35000	
F 70 3_73.6	73.6	12.2	5000	6.9	7000	35000	6.8	5000	3.8	7000	35000	
F 70 3_85.4	85.4	10.5	5000	6.0	7000	35000	5.9	5000	3.3	7000	35000	
F 70 3_92.5	92.5	9.7	5000	5.5	7000	35000	5.4	5000	3.1	7000	35000	
F 70 3_101.2	101.2	8.9	5000	5.0	7000	35000	4.9	5000	2.8	7000	35000	
F 70 3_109.6	109.6	8.2	5000	4.6	7000	35000	4.6	5000	2.6	7000	35000	
F 70 3_122.7	122.7	7.3	5000	4.1	7000	35000	4.1	5000	2.3	7000	35000	
F 70 3_133.0	133.0	6.8	5000	3.8	7000	35000	3.8	5000	2.1	7000	35000	
F 70 3_153.8	153.8	5.9	5000	3.3	7000	35000	3.3	5000	1.8	7000	35000	
F 70 3_166.7	166.7	5.4	5000	3.0	7000	35000	3.0	5000	1.7	7000	35000	
F 70 3_180.9	180.9	5.0	5000	2.8	7000	35000	2.8	5000	1.6	7000	35000	
F 70 3_196.0	196.0	4.6	5000	2.6	7000	35000	2.6	5000	1.4	7000	35000	
F 70 4_216.5	216.5	4.2	5000	2.4	3430	35000	2.3	5000	1.3	3500	35000	
F 70 4_234.6	234.6	3.8	5000	2.2	3430	35000	2.1	5000	1.2	3500	35000	
F 70 4_280.9	280.9	3.2	5000	1.9	3500	35000	1.8	5000	1.0	3500	35000	
F 70 4_304.3	304.3	3.0	5000	1.7	3500	35000	1.6	5000	0.95	3500	35000	
F 70 4_372.5	372.5	2.4	5000	1.4	3500	35000	1.3	5000	0.78	3500	35000	
F 70 4_403.5	403.5	2.2	5000	1.3	3500	35000	1.2	5000	0.72	3500	35000	
F 70 4_471.2	471.2	1.9	5000	1.1	3500	35000	1.1	5000	0.62	3500	35000	
F 70 4_510.4	510.4	1.8	5000	1.0	3500	35000	0.98	5000	0.57	3500	35000	
F 70 4_606.8	606.8	1.5	5000	0.86	3500	35000	0.82	5000	0.48	3500	35000	
F 70 4_657.4	657.4	1.4	5000	0.79	3500	35000	0.76	5000	0.44	3500	35000	
F 70 4_759.0	759.0	1.2	5000	0.69	3500	35000	0.66	5000	0.38	3500	35000	
F 70 4_822.2	822.2	1.1	5000	0.63	3500	35000	0.61	5000	0.35	3500	35000	
F 70 4_899.4	899.4	1.0	5000	0.58	3500	35000	0.56	5000	0.32	3500	35000	
F 70 4_974.4	974.4	0.92	5000	0.54	3500	35000	0.51	5000	0.30	3500	35000	
F 70 4_1091	1091	0.82	5000	0.48	3500	35000	0.46	5000	0.27	3500	35000	
F 70 4_1182	1182	0.76	5000	0.44	3500	35000	0.42	5000	0.25	3500	35000	
F 70 4_1368	1368	0.66	5000	0.38	3500	35000	0.37	5000	0.21	3500	35000	
F 70 4_1481	1481	0.61	5000	0.35	3500	35000	0.34	5000	0.20	3500	35000	
F 70 4_1585	1585	0.57	5000	0.33	3500	35000	0.32	5000	0.18	3500	35000	
F 70 4_1717	1717	0.52	5000	0.30	3500	35000	0.29	5000	0.17	3500	35000	
F 70 4_2019	2019	0.45	5000	0.26	3500	35000	0.25	5000	0.14	3500	35000	
F 70 4_2188	2188	0.41	5000	0.24	3500	35000	0.23	5000	0.13	3500	35000	





# F 80 8000 Nm

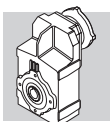
	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>F 80 3_10.3</b>	10.3	272	3250	100	610	17200	136	4100	63	220	21800	438
<b>F 80 3_11.2</b>	11.2	250	3520	99	620	17800	125	4440	63	230	21700	
<b>F 80 3_12.9</b>	12.9	217	3560	87	670	18900	109	4480	55	350	23100	
<b>F 80 3_14.0</b>	14.0	200	3850	87	700	18800	100	4860	55	310	23000	
<b>F 80 3_16.2</b>	16.2	173	3760	73	760	20300	86	4740	46	430	24800	
<b>F 80 3_17.6</b>	17.6	159	4000	72	730	20300	80	5140	46	410	24700	
<b>F 80 3_20.3</b>	20.3	138	4060	63	780	21700	69	5120	40	440	26500	
<b>F 80 3_22.0</b>	22.0	127	4400	63	780	21600	64	5540	40	470	26400	
<b>F 80 3_25.2</b>	25.2	111	4230	53	700	23300	56	5330	33	360	28500	
<b>F 80 3_28.8</b>	28.8	97	6550	72	4590	20500	49	8000	44	5890	25400	
<b>F 80 3_31.3</b>	31.3	89	7100	72	4590	20000	45	8000	40	6040	26000	
<b>F 80 3_36.0</b>	36.0	78	7250	64	4560	21500	39	8000	35	6110	28100	
<b>F 80 3_39.0</b>	39.0	72	6700	54	4890	23000	36	8000	32	6240	28800	
<b>F 80 3_45.3</b>	45.3	62	7900	55	4440	22700	31	8000	28	6240	31100	
<b>F 80 3_49.1</b>	49.1	57	8000	52	4750	23200	28.5	8000	26	6360	31900	
<b>F 80 3_56.7</b>	56.7	49	8000	45	4780	25200	24.7	8000	22	6390	34300	
<b>F 80 3_61.5</b>	61.5	46	8000	41	4890	25800	22.8	8000	21	6500	35100	
<b>F 80 3_70.4</b>	70.4	40	8000	36	4850	27800	19.9	8000	18.0	6460	37500	
<b>F 80 3_76.3</b>	76.3	37	8000	33	4950	28500	18.3	8000	16.6	6560	38400	
<b>F 80 3_85.2</b>	85.2	33	8000	30	4940	30300	16.4	8000	14.8	6550	40500	
<b>F 80 3_92.3</b>	92.3	30	8000	27	5040	31000	15.2	8000	13.7	6640	41500	
<b>F 80 3_105.0</b>	105.0	26.7	8000	24	5000	33200	13.3	8000	12.0	6610	44000	
<b>F 80 3_113.8</b>	113.8	24.6	8000	22	5090	34000	12.3	8000	11.1	6700	45000	
<b>F 80 3_122.5</b>	122.5	22.9	8000	21	5020	35400	11.4	8000	10.3	6630	45000	
<b>F 80 3_132.7</b>	132.7	21.1	8000	19.1	5110	36200	10.6	8000	9.5	6720	45000	
<b>F 80 3_147.9</b>	147.9	18.9	8000	17.1	5060	38200	9.5	8000	8.6	6660	45000	
<b>F 80 3_160.2</b>	160.2	17.5	8000	15.8	5140	39100	8.7	8000	7.9	6750	45000	
<b>F 80 3_184.6</b>	184.6	15.2	8000	13.7	5090	41800	7.6	8000	6.9	6700	45000	
<b>F 80 3_200.0</b>	200.0	14.0	8000	12.7	5180	42800	7.0	8000	6.3	6780	45000	
<b>F 80 4_218.5</b>	218.5	12.8	8000	11.9	1020	45000	6.4	8000	5.9	2400	45000	
<b>F 80 4_273.9</b>	273.9	10.2	8000	9.5	1470	45000	5.1	8000	4.7	2680	45000	
<b>F 80 4_296.7</b>	296.7	9.4	8000	8.8	1470	45000	4.7	8000	4.4	2680	45000	
<b>F 80 4_353.7</b>	353.7	7.9	8000	7.3	1850	45000	4.0	8000	3.7	2770	45000	
<b>F 80 4_383.2</b>	383.2	7.3	8000	6.8	1850	45000	3.7	8000	3.4	2770	45000	
<b>F 80 4_451.5</b>	451.5	6.2	8000	5.8	2040	45000	3.1	8000	2.9	2820	45000	
<b>F 80 4_489.1</b>	489.1	5.7	8000	5.3	2040	45000	2.9	8000	2.7	2820	45000	
<b>F 80 4_563.9</b>	563.9	5.0	8000	4.6	2130	45000	2.5	8000	2.3	2860	45000	
<b>F 80 4_610.9</b>	610.9	4.6	8000	4.3	2130	45000	2.3	8000	2.1	2860	45000	
<b>F 80 4_714.9</b>	714.9	3.9	8000	3.6	2160	45000	2.0	8000	1.8	2890	45000	
<b>F 80 4_774.4</b>	774.4	3.6	8000	3.4	2160	45000	1.8	8000	1.7	2890	45000	
<b>F 80 4_897.3</b>	897.3	3.1	8000	2.9	2200	45000	1.6	8000	1.4	2930	45000	
<b>F 80 4_972.0</b>	972.0	2.9	8000	2.7	2200	45000	1.4	8000	1.3	2930	45000	
<b>F 80 4_1058</b>	1058	2.6	8000	2.5	2210	45000	1.3	8000	1.2	2950	45000	
<b>F 80 4_1146</b>	1146	2.4	8000	2.3	2210	45000	1.2	8000	1.1	2950	45000	
<b>F 80 4_1277</b>	1277	2.2	8000	2.0	2230	45000	1.1	8000	1.0	2960	45000	
<b>F 80 4_1384</b>	1384	2.0	8000	1.9	2230	45000	1.0	8000	0.94	2960	45000	
<b>F 80 4_1578</b>	1578	1.8	8000	1.6	2240	45000	0.89	8000	0.82	2970	45000	
<b>F 80 4_1709</b>	1709	1.6	8000	1.5	2240	45000	0.82	8000	0.76	2970	45000	
<b>F 80 4_1834</b>	1834	1.5	8000	1.4	2250	45000	0.76	8000	0.71	2980	45000	
<b>F 80 4_1987</b>	1987	1.4	8000	1.3	2250	45000	0.70	8000	0.65	2980	45000	





# F 80 8000 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 80 3_10.3	10.3	87	4740	47	—	24700	49	5770	32	—	29300	438
F 80 3_11.2	11.2	80	5140	47	—	24600	45	6250	32	—	29200	
F 80 3_12.9	12.9	70	5200	41	—	26200	39	6320	28	—	31100	
F 80 3_14.0	14.0	64	5620	41	—	26100	36	6800	27	—	31000	
F 80 3_16.2	16.2	56	5490	34	—	28200	31	6250	22	1540	34200	
F 80 3_17.6	17.6	51	5960	34	—	28100	28.4	6800	22	1410	30000	
F 80 3_20.3	20.3	44	5930	30	—	30100	24.6	6250	17.4	3710	37300	
F 80 3_22.0	22.0	41	6420	30	—	30000	22.7	6800	17.5	3590	37200	
F 80 3_25.2	25.2	36	6175	25	—	32400	19.8	6250	14.0	4660	40500	
F 80 3_28.8	28.8	31	8000	28	7000	31000	17.4	8000	15.7	7000	39600	
F 80 3_31.3	31.3	28.8	8000	26	7000	31700	16.0	8000	14.4	7000	40600	
F 80 3_36.0	36.0	25.0	8000	23	7000	34100	13.9	8000	12.6	7000	43300	
F 80 3_39.0	39.0	23.1	8000	21	7000	34900	12.8	8000	11.6	7000	44300	
F 80 3_45.3	45.3	19.9	8000	18.0	7000	37500	11.0	8000	10.0	7000	45000	
F 80 3_49.1	49.1	18.3	8000	16.6	7000	38400	10.2	8000	9.2	7000	45000	
F 80 3_56.7	56.7	15.9	8000	14.3	7000	41100	8.8	8000	8.0	7000	45000	
F 80 3_61.5	61.5	14.6	8000	13.2	7000	42000	8.1	8000	7.3	7000	45000	
F 80 3_70.4	70.4	12.8	8000	11.6	7000	44700	7.1	8000	6.4	7000	45000	
F 80 3_76.3	76.3	11.8	8000	10.7	7000	45000	6.6	8000	5.9	7000	45000	
F 80 3_85.2	85.2	10.6	8000	9.5	7000	45000	5.9	8000	5.3	7000	45000	
F 80 3_92.3	92.3	9.8	8000	8.8	7000	45000	5.4	8000	4.9	7000	45000	
F 80 3_105.0	105.0	8.6	8000	7.7	7000	45000	4.8	8000	4.3	7000	45000	
F 80 3_113.8	113.8	7.9	8000	7.1	7000	45000	4.4	8000	4.0	7000	45000	
F 80 3_122.5	122.5	7.3	8000	6.6	7000	45000	4.1	8000	3.7	7000	45000	
F 80 3_132.7	132.7	6.8	8000	6.1	7000	45000	3.8	8000	3.4	7000	45000	
F 80 3_147.9	147.9	6.1	8000	5.5	7000	45000	3.4	8000	3.1	7000	45000	
F 80 3_160.2	160.2	5.6	8000	5.1	7000	45000	3.1	8000	2.8	7000	45000	
F 80 3_184.6	184.6	4.9	8000	4.4	7000	45000	2.7	8000	2.4	7000	45000	
F 80 3_200.0	200.0	4.5	8000	4.1	7000	45000	2.5	8000	2.3	7000	45000	
F 80 4_218.5	218.5	4.1	8000	3.8	3130	45000	2.3	8000	2.1	3500	45000	
F 80 4_273.9	273.9	3.3	8000	3.0	3240	45000	1.8	8000	1.7	3500	45000	
F 80 4_296.7	296.7	3.0	8000	2.8	3240	45000	1.7	8000	1.6	3500	45000	
F 80 4_353.7	353.7	2.5	8000	2.4	3330	45000	1.4	8000	1.3	3500	45000	
F 80 4_383.2	383.2	2.3	8000	2.2	3330	45000	1.3	8000	1.2	3500	45000	
F 80 4_451.5	451.5	2.0	8000	1.8	3380	45000	1.1	8000	1.0	3500	45000	
F 80 4_489.1	489.1	1.8	8000	1.7	3380	45000	1.0	8000	0.95	3500	45000	
F 80 4_563.9	563.9	1.6	8000	1.5	3420	45000	0.89	8000	0.82	3500	45000	
F 80 4_610.9	610.9	1.5	8000	1.4	3420	45000	0.82	8000	0.76	3500	45000	
F 80 4_714.9	714.9	1.3	8000	1.2	3460	45000	0.70	8000	0.65	3500	45000	
F 80 4_774.4	774.4	1.2	8000	1.1	3460	45000	0.65	8000	0.60	3500	45000	
F 80 4_897.3	897.3	1.0	8000	0.93	3490	45000	0.56	8000	0.52	3500	45000	
F 80 4_972.0	972.0	0.93	8000	0.86	3490	45000	0.51	8000	0.48	3500	45000	
F 80 4_1058	1058	0.85	8000	0.79	3500	45000	0.47	8000	0.44	3500	45000	
F 80 4_1146	1146	0.79	8000	0.73	3500	45000	0.44	8000	0.40	3500	45000	
F 80 4_1277	1277	0.70	8000	0.65	3500	45000	0.39	8000	0.36	3500	45000	
F 80 4_1384	1384	0.65	8000	0.60	3500	45000	0.36	8000	0.34	3500	45000	
F 80 4_1578	1578	0.57	8000	0.53	3500	45000	0.32	8000	0.29	3500	45000	
F 80 4_1709	1709	0.53	8000	0.49	3500	45000	0.29	8000	0.27	3500	45000	
F 80 4_1834	1834	0.49	8000	0.46	3500	45000	0.27	8000	0.25	3500	45000	
F 80 4_1987	1987	0.45	8000	0.42	3500	45000	0.25	8000	0.23	3500	45000	

(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)

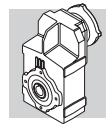


# F 90 14000 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
<b>F 90 3_10.3</b>	10.3	272	6500	200	5480	23800	136	8000	123	8000	29300	441
<b>F 90 3_11.1</b>	11.1	252	7150	204	5280	23300	126	8800	125	7770	28700	
<b>F 90 3_13.4</b>	13.4	209	7550	178	4880	25000	104	9300	110	7280	30700	
<b>F 90 3_14.5</b>	14.5	193	8100	177	5000	24700	97	10000	109	7400	30300	
<b>F 90 3_16.5</b>	16.5	170	8400	161	4540	26000	85	10300	99	6960	32000	
<b>F 90 3_17.9</b>	17.9	156	8950	158	4560	25700	78	11000	97	7180	31700	
<b>F 90 3_20.6</b>	20.6	136	9200	141	3980	27400	68	11300	87	6260	33700	
<b>F 90 3_22.3</b>	22.3	126	9750	138	4280	27100	63	12000	85	6590	33400	
<b>F 90 3_25.4</b>	25.4	110	10050	125	3620	28700	55	12000	75	6310	36000	
<b>F 90 3_28.6</b>	28.6	98	9750	108	9800	30900	49	12000	66	12400	38000	
<b>F 90 3_31.0</b>	31.0	90	10550	108	9800	30300	45	13000	66	12400	37300	
<b>F 90 3_37.4</b>	37.4	75	10950	93	9820	32800	37	13500	57	12400	40400	
<b>F 90 3_40.5</b>	40.5	69	11900	93	9820	32100	35	14000	55	12500	40600	
<b>F 90 3_46.1</b>	46.1	61	12050	83	9840	34300	30	14000	48	12600	43600	
<b>F 90 3_49.9</b>	49.9	56	13050	83	9840	33500	28.1	14000	44	12700	44700	
<b>F 90 3_57.3</b>	57.3	49	13050	72	9810	36300	24.4	14000	39	12700	48100	
<b>F 90 3_62.1</b>	62.1	45	14000	71	9830	35600	22.5	14000	36	12800	49300	
<b>F 90 3_70.8</b>	70.8	40	14000	63	9830	38500	19.8	14000	31	12800	52700	
<b>F 90 3_76.7</b>	76.7	37	14000	58	9960	39500	18.3	14000	29	13000	54000	
<b>F 90 3_88.4</b>	88.4	32	14000	50	9930	42800	15.8	14000	25	12900	55000	
<b>F 90 3_95.8</b>	95.8	29.2	14000	46	10100	43800	14.6	14000	23	13100	55000	
<b>F 90 3_103.3</b>	103.3	27.1	14000	43	9960	45900	13.6	14000	21	13000	55000	
<b>F 90 3_111.9</b>	111.9	25.0	14000	40	10100	47100	12.5	14000	19.8	13100	55000	
<b>F 90 3_126.8</b>	126.8	22.1	14000	35	10000	50300	11.0	14000	17.5	13000	55000	
<b>F 90 3_137.3</b>	137.3	20.4	14000	32	10100	51500	10.2	14000	16.1	13100	55000	
<b>F 90 3_150.3</b>	150.3	18.6	14000	29	10100	54000	9.3	14000	14.7	13100	55000	
<b>F 90 3_162.8</b>	162.8	17.2	14000	27	10200	55000	8.6	14000	13.6	13200	55000	
<b>F 90 3_179.2</b>	179.2	15.6	14000	25	10200	55000	7.8	14000	12.4	13100	55000	
<b>F 90 3_194.2</b>	194.2	14.4	14000	23	10200	55000	7.2	14000	11.4	13200	55000	
<b>F 90 4_213.6</b>	213.6	13.1	14000	21	—	55000	6.6	14000	10.6	—	55000	
<b>F 90 4_231.4</b>	231.4	12.1	14000	19.6	—	55000	6.1	14000	9.8	—	55000	
<b>F 90 4_268.7</b>	268.7	10.4	14000	16.9	—	55000	5.2	14000	8.5	420	55000	
<b>F 90 4_291.1</b>	291.1	9.6	14000	15.6	—	55000	4.8	14000	7.8	420	55000	
<b>F 90 4_361.8</b>	361.8	7.7	14000	12.6	—	55000	3.9	14000	6.3	990	55000	
<b>F 90 4_392.0</b>	392.0	7.1	14000	11.6	—	55000	3.6	14000	5.8	990	55000	
<b>F 90 4_457.5</b>	457.5	6.1	14000	9.9	—	55000	3.1	14000	5.0	1390	55000	
<b>F 90 4_495.6</b>	495.6	5.6	14000	9.2	—	55000	2.8	14000	4.6	1390	55000	
<b>F 90 4_577.5</b>	577.5	4.8	14000	7.9	—	55000	2.4	14000	3.9	1600	55000	
<b>F 90 4_625.6</b>	625.6	4.5	14000	7.3	—	55000	2.2	14000	3.6	1600	55000	
<b>F 90 4_714.0</b>	714.0	3.9	14000	6.4	—	55000	2.0	14000	3.2	1800	55000	
<b>F 90 4_773.4</b>	773.4	3.6	14000	5.9	—	55000	1.8	14000	2.9	1800	55000	
<b>F 90 4_910.2</b>	910.2	3.1	14000	5.0	—	55000	1.5	14000	2.5	2020	55000	
<b>F 90 4_986.0</b>	986.0	2.8	14000	4.6	—	55000	1.4	14000	2.3	2020	55000	
<b>F 90 4_1112</b>	1112	2.5	14000	4.1	—	55000	1.3	14000	2.0	2110	55000	
<b>F 90 4_1205</b>	1205	2.3	14000	3.8	—	55000	1.2	14000	1.9	2110	55000	
<b>F 90 4_1318</b>	1318	2.1	14000	3.4	—	55000	1.1	14000	1.7	2220	55000	
<b>F 90 4_1428</b>	1428	2.0	14000	3.2	—	55000	0.98	14000	1.6	2220	55000	
<b>F 90 4_1571</b>	1571	1.8	14000	2.9	—	55000	0.89	14000	1.4	2260	55000	
<b>F 90 4_1702</b>	1702	1.6	14000	2.7	—	55000	0.82	14000	1.3	2260	55000	
<b>F 90 4_1937</b>	1937	1.4	14000	2.3	—	55000	0.72	14000	1.2	2300	55000	
<b>F 90 4_2099</b>	2099	1.3	14000	2.2	—	55000	0.67	14000	1.1	2300	55000	

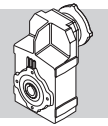
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)





# F 90 14000 Nm

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
F 90 3_10.3	10.3	87	9150	90	10000	33400	49	9600	53	15000	41900	441
F 90 3_11.1	11.1	81	10050	92	9780	32700	45	10400	53	15000	41600	
F 90 3_13.4	13.4	67	10600	80	9270	35100	37	12500	53	12700	42100	
F 90 3_14.5	14.5	62	11400	80	9390	34600	34	13550	53	12700	41400	
F 90 3_16.5	16.5	55	11750	72	8890	36600	30	12300	42	14600	46400	
F 90 3_17.9	17.9	50	12550	71	9140	36200	27.9	13150	41	14800	46200	
F 90 3_20.6	20.6	44	12200	60	9100	39700	24.3	12200	33	15000	51000	
F 90 3_22.3	22.3	40	13200	60	9120	39000	22.4	13200	33	15000	50700	
F 90 3_25.4	25.4	35	12000	48	10400	43800	19.7	12000	27	15000	55000	
F 90 3_28.6	28.6	31	13700	49	14400	43400	17.5	14000	28	15000	55000	
F 90 3_31.0	31.0	29.0	14000	46	14500	44000	16.1	14000	26	15000	55000	
F 90 3_37.4	37.4	24.1	14000	38	14700	48400	13.4	14000	21	15000	55000	
F 90 3_40.5	40.5	22.2	14000	35	14800	49600	12.3	14000	19.5	15000	55000	
F 90 3_46.1	46.1	19.5	14000	31	14900	53000	10.8	14000	17.2	15000	55000	
F 90 3_49.9	49.9	18.0	14000	29	15000	54200	10.0	14000	15.8	15000	55000	
F 90 3_57.3	57.3	15.7	14000	25	15000	55000	8.7	14000	13.8	15000	55000	
F 90 3_62.1	62.1	14.5	14000	23	15000	55000	8.1	14000	12.7	15000	55000	
F 90 3_70.8	70.8	12.7	14000	20	15000	55000	7.1	14000	11.2	15000	55000	
F 90 3_76.7	76.7	11.7	14000	18.6	15000	55000	6.5	14000	10.3	15000	55000	
F 90 3_88.4	88.4	10.2	14000	16.1	15000	55000	5.7	14000	8.9	15000	55000	
F 90 3_95.8	95.8	9.4	14000	14.9	15000	55000	5.2	14000	8.3	15000	55000	
F 90 3_103.3	103.3	8.7	14000	13.8	15000	55000	4.8	14000	7.7	15000	55000	
F 90 3_111.9	111.9	8.0	14000	12.7	15000	55000	4.5	14000	7.1	15000	55000	
F 90 3_126.8	126.8	7.1	14000	11.2	15000	55000	3.9	14000	6.2	15000	55000	
F 90 3_137.3	137.3	6.6	14000	10.4	15000	55000	3.6	14000	5.8	15000	55000	
F 90 3_150.3	150.3	6.0	14000	9.5	15000	55000	3.3	14000	5.3	15000	55000	
F 90 3_162.8	162.8	5.5	14000	8.7	15000	55000	3.1	14000	4.9	15000	55000	
F 90 3_179.2	179.2	5.0	14000	7.9	15000	55000	2.8	14000	4.4	15000	55000	
F 90 3_194.2	194.2	4.6	14000	7.3	15000	55000	2.6	14000	4.1	15000	55000	
F 90 4_213.6	213.6	4.2	14000	6.8	810	55000	2.3	14000	3.8	2350	55000	
F 90 4_231.4	231.4	3.9	14000	6.3	810	55000	2.2	14000	3.5	2350	55000	
F 90 4_268.7	268.7	3.3	14000	5.4	1390	55000	1.9	14000	3.0	2920	55000	
F 90 4_291.1	291.1	3.1	14000	5.0	1390	55000	1.7	14000	2.8	2920	55000	
F 90 4_361.8	361.8	2.5	14000	4.0	1960	55000	1.4	14000	2.2	3390	55000	
F 90 4_392.0	392.0	2.3	14000	3.7	1960	55000	1.3	14000	2.1	3390	55000	
F 90 4_457.5	457.5	2.0	14000	3.2	2360	55000	1.1	14000	1.8	3490	55000	
F 90 4_495.6	495.6	1.8	14000	2.9	2360	55000	1.0	14000	1.6	3490	55000	
F 90 4_577.5	577.5	1.6	14000	2.5	2570	55000	0.87	14000	1.4	3500	55000	
F 90 4_625.6	625.6	1.4	14000	2.3	2570	55000	0.80	14000	1.3	3500	55000	
F 90 4_714.0	714.0	1.3	14000	2.0	2770	55000	0.70	14000	1.1	3500	55000	
F 90 4_773.4	773.4	1.2	14000	1.9	2770	55000	0.65	14000	1.0	3500	55000	
F 90 4_910.2	910.2	0.99	14000	1.6	2840	55000	0.55	14000	0.89	3500	55000	
F 90 4_986.0	986.0	0.91	14000	1.5	2840	55000	0.51	14000	0.82	3500	55000	
F 90 4_1112	1112	0.81	14000	1.3	2860	55000	0.45	14000	0.73	3500	55000	
F 90 4_1205	1205	0.75	14000	1.2	2860	55000	0.41	14000	0.67	3500	55000	
F 90 4_1318	1318	0.68	14000	1.1	2890	55000	0.38	14000	0.62	3500	55000	
F 90 4_1428	1428	0.63	14000	1.0	2890	55000	0.35	14000	0.57	3500	55000	
F 90 4_1571	1571	0.57	14000	0.93	2900	55000	0.32	14000	0.52	3500	55000	
F 90 4_1702	1702	0.53	14000	0.86	2900	55000	0.29	14000	0.48	3500	55000	
F 90 4_1937	1937	0.46	14000	0.75	2910	55000	0.26	14000	0.42	3500	55000	
F 90 4_2099	2099	0.43	14000	0.70	2910	55000	0.24	14000	0.39	3500	55000	






## 61 MOTOR AVAILABILITY

Please be aware that motor-gearbox combinations resulting from the following charts are purely based on geometrical compatibility.

**When selecting a gearmotor, refer to procedure specified at paragraph 12 and observe particularly the condition  $S \geq f_s$ .**

(D 56)

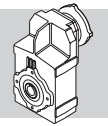
		IEC_    (IM B5)																									
		BN			BN BE BX			BN BE BX			BN BE BX			BN BE BX			BN BE BX			BN			IEC	IEC			
P <sub>n1</sub> (#) [kW]	2p	0.37	0.75	1.5	1.1	—	2.2	2.2	—	4	3	—	4	4	—	9.2	9.2	—	18.5	18.5	—	22	—	—	30	45	55
	4p	0.25	0.55	1.1	0.75	0.75	1.85	1.5	1.5	3	3	3	4	4	4	9.2	9.2	7.5	15	15	15	22	22	22	30	47	55
	6p	0.12	0.37	0.75	—	—	1.1	0.75	—	1.85	1.5	—	2.2	2.2	—	5.5	4	—	11	7.5	—	15	—	—	18.5	30	37
		P63 P71		P80			P90			P100			P112			P132			P160			P180			P200	P225	P250
F 10 2		7.4_127.1			7.4_91.5			7.4_91.5																			
F 20 2		8.7_132.2 ⊖ (14.8_18.1)			6.4_114.3			6.4_114.3																			
F 20 3		156.3_545.3			156.3_545.3			156.3_545.3																			
F 25 2		9.4_44.4 ⊖ (10.6_13.0)			6.9_44.4			6.9_44.4																			
F 25 3		50.8_333.1			45.6_288.1			45.6_288.1																			
F 25 4		393.9_1374			393.9_1374			393.9_1374																			
F 31 2		18.5_44.6			6.9_44.6			6.9_44.6			6.9_37.7																
F 31 3		69.1_374.4			47.5_374.4			47.5_374.4			47.5_140.7																
F 31 4		418.9_1539			418.9_1539			418.9_1539																			
F 41 2		24.1_47.9			6.7_47.9			6.7_47.9			6.7_47.9																
F 41 3		84.9_344.8			51.5_344.8			51.5_344.8			51.5_168.7																
F 41 4	i =	433.7_1411			433.7_1411			433.7_1411																			
F 51 2		30.0_37.1			7.2_37.1			7.2_37.1			7.2_37.1			7.2_37.1			7.2_37.1										
F 51 3		105.1_352.5			48.9_352.5			48.9_352.5			48.9_202.4			48.9_202.4			48.9_202.4										
F 51 4		429.1_1439			429.1_1439			429.1_1439																			
F 60 3		98.2_280.7			11.8_280.7 ⊖ (29.6_32.1)			11.8_280.7 ⊖ (29.6_32.1)			9.0_201.4			9.0_201.4			9.0_201.4										
F 60 4		315.4_1141			315.4_1141			315.4_1141																			
F 70 3					85.4_196.0			85.4_196.0			16.3_196.0 ⊖ (27.7_38.4)			10.0_196.0			10.0_196.0			10.0_49.0 ⊖ (20.9_24.6)							
F 70 4		372.5_2188			216.5_2188			216.5_2188			216.5_822.2																
F 80 3					105.0_200.0			105.0_200.0			20.3_200.0 ⊖ (28.8_49.1)			12.9_200.0 ⊖ (28.8_31.3)			10.3_200.0			10.3_132.7			10.3_132.7				
F 80 4		451.5_1987			218.5_1987			218.5_1987			218.5_972.0																
F 90 3					126.8_194.2			126.8_194.2			25.4_194.2 ⊖ (28.6_62.1)			20.6_194.2 ⊖ (28.6_49.9)			10.3_194.2			10.3_162.8			10.3_162.8	10.3_162.8			
F 90 4		577.5_2099			213.6_2099			213.6_2099			213.6_1205			213.6_1205			213.6_1205										

(#) P<sub>n1</sub> = maximum installable power on input P<sub>—</sub>



(D 57)

		M05	M1	ME2 - MX2	ME3 - MX3	ME4 - MX4	ME5 - MX5
F 10 2		7.4_127.1	7.4_71.1	7.4_91.5	7.4_91.5		
F 20 2		8.7_132.2 ⊖ (14.8_18.1)	8.7_90.4 ⊖ (14.8_18.1)	6.4_114.3	6.4_114.3		
F 20 3		156.3_545.3	156.3_545.3	156.3_545.3	156.3_545.3		
F 25 2		9.4_44.4 ⊖ (10.6_13.0)	9.4_44.4 ⊖ (10.6_13.0)	6.9_44.4	6.9_44.4		
F 25 3		50.8_333.1	50.8_227.8	45.6_288.1	45.6_288.1		
F 25 4		393.9_1374	393.9_1374	393.9_1374	393.9_1374		
F 31 2			18.5_44.6	6.9_44.6	6.9_44.6	6.9_37.7	
F 31 3			69.1_293.8	47.5_374.4	47.5_374.4	47.5_140.7	
F 31 4		418.9_1539	418.9_1539	418.9_1539	418.9_1539		
F 41 2			24.1_47.9	6.7_47.9	6.7_47.9	6.7_47.9	
F 41 3			84.9_344.8	51.5_344.8	51.5_344.8	51.5_168.7	
F 41 4	i =	433.7_1411	433.7_1411	433.7_1411	433.7_1411		
F 51 2			30.0_37.1	7.2_37.1	7.2_37.1	7.2_37.1	7.2_37.1
F 51 3			105.1_352.5	48.9_352.5	48.9_352.5	48.9_202.4	48.9_202.4
F 51 4			429.1_1439	429.1_1439	429.1_1439		
F 60 3				11.8_280.7 ⊖ (29.6_32.1)	11.8_280.7 ⊖ (29.6_32.1)	9_201.4	9_201.4
F 60 4			315.4_1141	315.4_1141	315.4_1141		
F 70 3				85.4_196.0	85.4_196.0	16.3_196.0 ⊖ (27.7_38.4)	16.3_196.0 ⊖ (27.7_38.4)
F 70 4			372.5_2188	216.5_2188	216.5_2188	216.5_822.2	
F 80 3					105.0_200.0	20.3_200.0 ⊖ (28.8_49.1)	20.3_200.0 ⊖ (28.8_49.1)
F 80 4			451.5_1987	218.5_1987	218.5_1987	218.5_972.0	
F 90 3					126.8_194.2	25.4_194.2 ⊖ (28.6_62.1)	25.4_194.2 ⊖ (28.6_62.1)
F 90 4				213.6_2099	213.6_2099	213.6_1205	



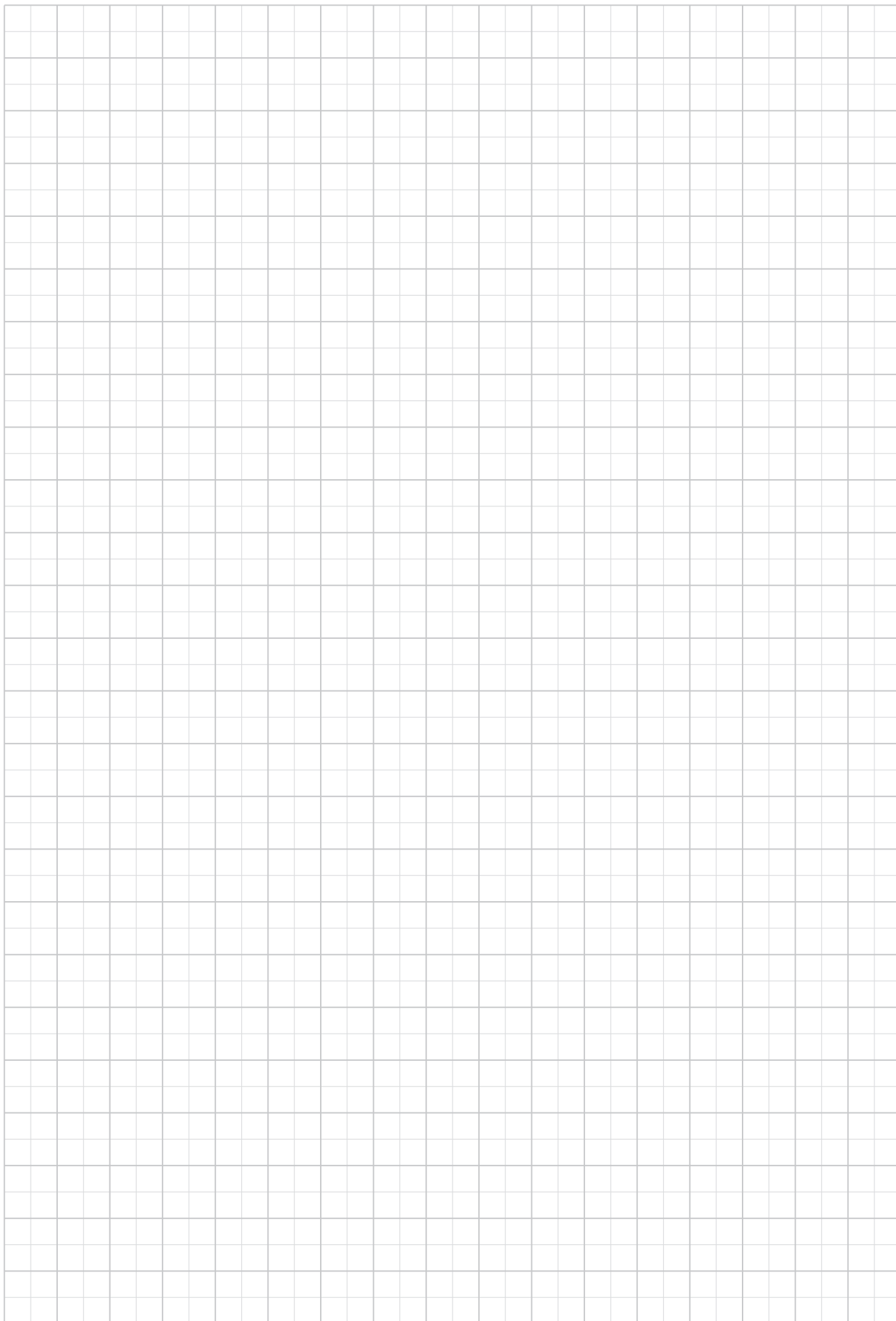
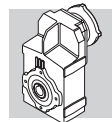
Motor adapters matching the most popular brands of servomotors are available for units size F 10 ... F 60. Dimensions of servomotor inputs are provided within the drawing section for each frame size. The code **SK** applies for inputs featuring a conventional keyway, while through the specification of the **SC** code the input shaft will feature a clamping device instead.

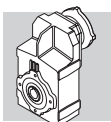
(D 58)

		SERVO INPUT							
		SK60A	SK60B	SK80A	SK80B	SK80C	SK95A	SK95B	SK95C
		SC60A	SC60B	SC80A	SC80B	SC80C	SC95A	SC95B	SC95C
<b>F 10 2</b>	i =	7.4_127.1	7.4_71.1	7.4_71.1		7.4_91.5	7.4_71.1	7.4_91.5	7.4_91.5
<b>F 20 2</b>		8.7_132.2 ⌀(14.8_18.1)	8.7_90.4 ⌀(14.8_18.1)	8.7_90.4 ⌀(14.8_18.1)		6.4_114.3	8.7_90.4 ⌀(14.8_18.1)	6.4_114.3	6.4_114.3
<b>F 20 3</b>		156.3_545.3	156.3_545.3	156.3_545.3		156.3_545.3	156.3_545.3	156.3_545.3	156.3_545.3
<b>F 25 2</b>		9.4_44.4 ⌀(10.6_13.0)	9.4_44.4 ⌀(10.6_13.0)	9.4_44.4 ⌀(10.6_13.0)		6.9_44.4	9.4_44.4 ⌀(10.6_13.0)	6.9_44.4	6.9_44.4
<b>F 25 3</b>		45.6_333.1	45.6_227.8	45.6_227.8		45.6_288.1	45.6_227.8	45.6_288.1	45.6_288.1
<b>F 25 4</b>		393.9_1374	393.9_1374	393.9_1374		393.9_1374	393.9_1374	393.9_1374	393.9_1374
<b>F 31 2</b>		18.5_44.6	18.5_44.6	18.5_44.6		6.9_44.6	18.5_44.6	6.9_44.6	6.9_44.6
<b>F 31 3</b>		69.1_374.4	69.1_293.8	69.1_293.8		47.5_374.4	69.1_293.8	47.5_374.4	47.5_374.4
<b>F 31 4</b>		418.9_1539	418.9_1539	418.9_1539		418.9_1539	418.9_1539	418.9_1539	418.9_1539
<b>F 41 2</b>					24.1_47.9	6.7_47.9	24.1_47.9	6.7_47.9	6.7_47.9
<b>F 41 3</b>					84.9_344.8	51.5_344.8	84.9_344.8	51.5_344.8	51.5_344.8
<b>F 41 4</b>		433.7_1411	433.7_1411	433.7_1411		433.7_1411	433.7_1411	433.7_1411	433.7_1411
<b>F 51 2</b>					30.0_37.1	7.2_37.1	30.0_37.1	7.2_37.1	7.2_37.1
<b>F 51 3</b>					105.1_352.5	48.9_352.5	105.1_352.5	48.9_352.5	48.9_352.5
<b>F 51 4</b>						429.1_1439	429.1_1439	429.1_1439	429.1_1439
<b>F 60 3</b>						11.8_280.7 ⌀(29.6_32.1)	106.4_280.7	11.8_280.7 ⌀(29.6_32.1)	11.8_280.7 ⌀(29.6_32.1)
<b>F 60 4</b>					315.4_1141	315.4_1141	315.4_1141	315.4_1141	315.4_1141

(D 59)

		SERVO INPUT					
		SK110A	SK110B	SK130A	SK130B	SK180A	SK180B
		SC110A	SC110B	SC130A	SC130B	SC180A	SC180B
<b>F 10 2</b>	i =	7.4_91.5	7.4_91.5				
<b>F 20 2</b>		6.4_114.3	6.4_114.3				
<b>F 20 3</b>		156.3_545.3	156.3_545.3				
<b>F 25 2</b>		6.9_44.4	6.9_44.4				
<b>F 25 3</b>		45.6_288.1	45.6_288.1				
<b>F 25 4</b>		393.9_1374	393.9_1374				
<b>F 31 2</b>		6.9_44.6	6.9_44.6	6.9_44.6			
<b>F 31 3</b>		47.5_374.4	47.5_374.4	47.5_374.4			
<b>F 31 4</b>		418.9_1539	418.9_1539				
<b>F 41 2</b>		6.7_47.9	6.7_47.9	6.7_47.9	6.7_47.9	6.7_47.9	6.7_47.9
<b>F 41 3</b>		51.5_344.8	51.5_344.8	51.5_344.8	51.5_168.7	51.5_168.7	51.5_168.7
<b>F 41 4</b>		433.7_1411	433.7_1411				
<b>F 51 2</b>		7.2_37.1	7.2_37.1	7.2_37.1	7.2_37.1	7.2_37.1	7.2_37.1
<b>F 51 3</b>		48.9_352.5	48.9_352.5	48.9_352.5	48.9_202.4	48.9_202.4	48.9_202.4
<b>F 51 4</b>		429.1_1439	429.1_1439	429.1_1439			
<b>F 60 3</b>		11.8_280.7 ⌀(29.6_32.1)	11.8_280.7 ⌀(29.6_32.1)	11.8_280.7 ⌀(29.6_32.1)	9.0_201.4	9.0_201.4	9.0_201.4
<b>F 60 4</b>		315.4_1141	315.4_1141	315.4_1141			





## 62 MOMENT OF INERTIA

The following charts indicate moment of inertia values  $J_r$  [kgm<sup>2</sup>] referred to the gear unit high speed shaft. A key to the symbols used follows:



Values under this icon refer to compact gear units, without motor. To obtain the overall moment of inertia for the gearmotor just add the value of the inertia for the specific compact motor, given in the relevant rating chart.



Values under this symbol refer to gearboxes with IEC motor adaptor (IEC size...).



This symbol refers to gearbox values.




Values under this symbol refer to gear unit with servomotor input adapter.

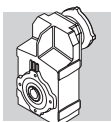
## F 10

	i	J (•10 <sup>-4</sup> ) [kgm <sup>2</sup> ]							
			63	71	80	90	100	112	
F 10 2_7.4	7.4	1.0	1.8	1.8	3.8	3.7	4.9	4.9	1.7
F 10 2_8.6	8.6	0.77	1.5	1.5	3.6	3.5	4.7	4.7	1.5
F 10 2_9.8	9.8	0.64	1.4	1.4	3.4	3.3	4.5	4.5	1.3
F 10 2_11.5	11.5	0.48	1.2	1.2	3.3	3.2	4.4	4.4	1.2
F 10 2_13.0	13.0	0.38	1.1	1.1	3.2	3.1	4.3	4.3	1.1
F 10 2_14.6	14.6	0.61	1.4	1.4	3.4	3.3	4.5	4.5	1.3
F 10 2_17.0	17.0	0.48	1.3	1.2	3.3	3.2	4.4	4.4	1.2
F 10 2_19.3	19.3	0.41	1.2	1.2	3.2	3.1	4.3	4.3	1.1
F 10 2_22.8	22.8	0.32	1.1	1.1	3.1	3.0	4.2	4.2	1.0
F 10 2_25.8	25.8	0.25	1.0	1.0	3.1	2.9	4.1	4.1	0.93
F 10 2_29.6	29.6	0.19	1.0	0.95	3.0	2.9	4.1	4.1	0.87
F 10 2_33.0	33.0	0.16	0.93	0.92	3.0	2.8	4.1	4.1	0.84
F 10 2_35.3	35.3	0.14	0.92	0.90	3.0	2.8	4.0	4.0	0.83
F 10 2_39.6	39.6	0.12	0.90	0.88	2.9	2.8	4.0	4.0	0.80
F 10 2_44.7	44.7	0.10	0.88	0.86	2.9	2.8	4.0	4.0	0.79
F 10 2_48.7	48.7	0.09	0.86	0.85	2.9	2.8	4.0	4.0	0.77
F 10 2_56.7	56.7	0.07	0.84	0.83	2.9	2.7	4.0	4.0	0.75
F 10 2_63.0	63.0	0.06	0.83	0.82	2.9	2.7	3.9	3.9	0.74
F 10 2_71.1	71.1	0.05	0.82	0.81	2.8	2.7	3.9	3.9	0.73
F 10 2_81.3	81.3	0.04	0.78	0.77	2.8	2.7	3.9	3.9	0.67
F 10 2_91.5	91.5	0.03	0.78	0.76	2.8	2.7	3.9	3.9	0.66
F 10 2_106.0	106.0	0.03	0.77	0.76	—	—	—	—	0.66
F 10 2_127.1	127.1	0.02	0.76	0.75	—	—	—	—	0.65




# F 10

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 SERVO									
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 10 2_7.4	7.4	1.3	1.5	1.3	1.7	3.8	4.3	3.8	4.3	3.7	4.7
F 10 2_8.6	8.6	1.0	1.3	1.1	1.5	3.6	4.0	3.6	4.1	3.5	4.5
F 10 2_9.8	9.8	0.91	1.2	0.93	1.4	3.5	3.9	3.4	3.9	3.3	4.3
F 10 2_11.5	11.5	0.75	1.0	0.77	1.2	3.3	3.7	3.3	3.8	3.2	4.2
F 10 2_13.0	13.0	0.65	0.91	0.67	1.1	3.2	3.6	3.2	3.7	3.1	4.1
F 10 2_14.6	14.6	0.88	1.1	0.91	1.3	3.4	3.9	3.4	3.9	3.3	4.3
F 10 2_17.0	17.0	0.75	1.0	0.77	1.2	3.3	3.7	3.3	3.8	3.2	4.2
F 10 2_19.3	19.3	0.68	0.94	0.70	1.1	3.2	3.7	3.2	3.7	3.1	4.1
F 10 2_22.8	22.8	0.59	0.85	0.61	1.0	3.1	3.6	3.1	3.6	3.0	4.0
F 10 2_25.8	25.8	0.52	0.78	0.54	0.98	3.1	3.5	3.1	3.6	2.9	3.9
F 10 2_29.6	29.6	0.46	0.72	0.48	0.92	3.0	3.4	3.0	3.5	2.9	3.9
F 10 2_33.0	33.0	0.43	0.69	0.45	0.89	3.0	3.4	3.0	3.5	2.8	3.8
F 10 2_35.3	35.3	0.41	0.67	0.43	0.87	3.0	3.4	3.0	3.5	2.8	3.8
F 10 2_39.6	39.6	0.39	0.65	0.41	0.85	2.9	3.3	2.9	3.4	2.8	3.8
F 10 2_44.7	44.7	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.8	3.8
F 10 2_48.7	48.7	0.36	0.62	0.38	0.82	2.9	3.3	2.9	3.4	2.8	3.8
F 10 2_56.7	56.7	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7
F 10 2_63.0	63.0	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.7	3.7
F 10 2_71.1	71.1	0.32	0.58	0.34	0.78	2.9	3.3	2.8	3.3	2.7	3.7
F 10 2_81.3	81.3	0.31	0.57	—	—	—	—	2.8	3.3	2.7	3.7
F 10 2_91.5	91.5	0.30	0.56	—	—	—	—	2.8	3.3	2.7	3.7
F 10 2_106.0	106.0	0.30	0.56	—	—	—	—	—	—	—	—
F 10 2_127.1	127.1	0.29	0.55	—	—	—	—	—	—	—	—




## F 20

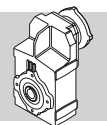
	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]							
			63	71	80	90	100	112	
F 20 2_6.4	6.4	2.2	—	—	5.0	4.8	6.0	6.0	3.9
F 20 2_7.8	7.8	1.5	—	—	4.3	4.2	5.4	5.4	3.3
F 20 2_8.7	8.7	1.3	2.0	2.0	4.1	3.9	5.2	5.2	3.0
F 20 2_10.0	10.0	1.0	1.8	1.7	3.8	3.7	4.9	4.9	2.7
F 20 2_11.2	11.2	0.88	1.6	1.6	3.6	3.5	4.7	4.7	2.6
F 20 2_14.8	14.8	1.2	—	—	4.0	3.9	5.1	5.1	2.9
F 20 2_18.1	18.1	0.90	—	—	3.7	3.5	4.7	4.7	2.6
F 20 2_20.2	20.2	0.78	1.5	1.5	3.5	3.4	4.6	4.6	2.5
F 20 2_23.1	23.1	0.64	1.4	1.3	3.4	3.3	4.5	4.5	2.4
F 20 2_25.9	25.9	0.57	1.3	1.3	3.3	3.2	4.4	4.4	2.3
F 20 2_30.4	30.4	0.41	1.1	1.1	3.2	3.0	4.3	4.3	2.1
F 20 2_33.1	33.1	0.36	1.1	1.1	3.1	3.0	4.2	4.2	2.1
F 20 2_37.9	37.9	0.30	1.0	1.0	3.1	2.9	4.1	4.1	2.0
F 20 2_41.8	41.8	0.27	1.0	1.0	3.0	2.9	4.1	4.1	2.0
F 20 2_44.8	44.8	0.24	1.0	1.0	3.0	2.9	4.1	4.1	2.0
F 20 2_50.7	50.7	0.21	0.93	0.92	3.0	2.8	4.1	4.1	1.9
F 20 2_56.7	56.7	0.18	0.91	0.90	2.9	2.8	4.0	4.0	1.9
F 20 2_61.9	61.9	0.16	0.89	0.88	2.9	2.8	4.0	4.0	1.9
F 20 2_69.1	69.1	0.14	0.87	0.86	2.9	2.8	4.0	4.0	1.8
F 20 2_76.8	76.8	0.12	0.86	0.85	2.9	2.8	4.0	4.0	1.8
F 20 2_90.4	90.4	0.10	0.84	0.82	2.9	2.7	3.9	3.9	1.8
F 20 2_101.6	101.6	0.09	0.80	0.79	2.8	2.7	3.9	3.9	1.8
F 20 2_114.3	114.3	0.08	0.79	0.77	2.8	2.7	3.9	3.9	1.8
F 20 2_132.2	132.2	0.03	0.78	0.77	—	—	—	—	1.8
F 20 3_156.3	156.3	0.04	0.81	0.80	2.8	2.7	3.9	3.9	0.72
F 20 3_172.6	172.6	0.04	0.81	0.80	2.8	2.7	3.9	3.9	0.72
F 20 3_184.9	184.9	0.04	0.81	0.80	2.8	2.7	3.9	3.9	0.72
F 20 3_209.3	209.3	0.03	0.81	0.79	2.8	2.7	3.9	3.9	0.72
F 20 3_234.0	234.0	0.03	0.81	0.79	2.8	2.7	3.9	3.9	0.71
F 20 3_255.3	255.3	0.03	0.80	0.79	2.8	2.7	3.9	3.9	0.71
F 20 3_285.2	285.2	0.03	0.80	0.79	2.8	2.7	3.9	3.9	0.71
F 20 3_316.9	316.9	0.03	0.80	0.79	2.8	2.7	3.9	3.9	0.71
F 20 3_372.9	372.9	0.03	0.80	0.79	2.8	2.7	3.9	3.9	0.71
F 20 3_419.3	419.3	0.03	0.80	0.79	2.8	2.7	3.9	3.9	0.66
F 20 3_471.7	471.7	0.03	0.80	0.79	2.8	2.7	3.9	3.9	0.66
F 20 3_545.3	545.3	0.03	0.80	0.79	2.8	2.7	3.9	3.9	0.66






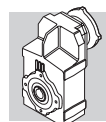
## F 20

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 SERVO									
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 20 2_6.4	6.4	—	—	—	—	—	—	5.0	5.5	4.8	5.8
F 20 2_7.8	7.8	—	—	—	—	—	—	4.3	4.8	4.2	5.2
F 20 2_8.7	8.7	1.6	1.8	1.6	2.0	4.1	4.6	4.1	4.6	3.9	4.9
F 20 2_10.0	10.0	1.3	1.5	1.3	1.7	3.8	4.3	3.8	4.3	3.7	4.7
F 20 2_11.2	11.2	1.2	1.4	1.2	1.6	3.7	4.1	3.6	4.1	3.5	4.5
F 20 2_14.8	14.8	—	—	—	—	—	—	4.0	4.5	3.9	4.9
F 20 2_18.1	18.1	—	—	—	—	—	—	3.7	4.2	3.5	4.5
F 20 2_20.2	20.2	1.1	1.3	1.1	1.5	3.6	4.0	3.5	4.0	3.4	4.4
F 20 2_23.1	23.1	0.91	1.2	0.93	1.4	3.5	3.9	3.4	3.9	3.3	4.3
F 20 2_25.9	25.9	0.84	1.1	0.86	1.3	3.4	3.8	3.3	3.8	3.2	4.2
F 20 2_30.4	30.4	0.68	0.94	0.70	1.1	3.2	3.7	3.2	3.7	3.0	4.0
F 20 2_33.1	33.1	0.63	0.89	0.65	1.1	3.2	3.6	3.1	3.6	3.0	4.0
F 20 2_37.9	37.9	0.47	0.83	0.59	1.0	3.1	3.6	3.1	3.6	2.9	3.9
F 20 2_41.8	41.8	0.44	0.80	0.56	1.0	3.1	3.5	3.0	3.5	2.9	3.9
F 20 2_44.8	44.8	0.41	0.77	0.53	0.97	3.1	3.5	3.0	3.5	2.9	3.9
F 20 2_50.7	50.7	0.48	0.74	0.50	0.94	3.0	3.5	3.0	3.5	2.8	3.8
F 20 2_56.7	56.7	0.45	0.71	0.47	0.91	3.0	3.4	2.9	3.4	2.8	3.8
F 20 2_61.9	61.9	0.43	0.69	0.45	0.89	3.0	3.4	2.9	3.4	2.8	3.8
F 20 2_69.1	69.1	0.41	0.67	0.43	0.87	3.0	3.4	2.9	3.4	2.8	3.8
F 20 2_76.8	76.8	0.39	0.65	0.41	0.85	2.9	3.4	2.9	3.4	2.8	3.8
F 20 2_90.4	90.4	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.7	3.7
F 20 2_101.6	101.6	0.36	0.62	—	—	—	—	2.8	3.3	2.7	3.7
F 20 2_114.3	114.3	0.35	0.61	—	—	—	—	2.8	3.3	2.7	3.7
F 20 2_132.2	132.2	0.30	0.56	—	—	—	—	—	—	—	—
F 20 3_156.3	156.3	0.31	0.57	0.33	0.77	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_172.6	172.6	0.31	0.57	0.33	0.77	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_184.9	184.9	0.31	0.57	0.33	0.77	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_209.3	209.3	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_234.0	234.0	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_255.3	255.3	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_285.2	285.2	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_316.9	316.9	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_372.9	372.9	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_419.3	419.3	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_471.7	471.7	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_545.3	545.3	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7




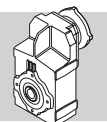
## F 25

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]							
			63	71	80	90	100	112	
F 25 2_6.9	6.9	2.7	—	—	5.4	5.3	6.5	6.5	4.4
F 25 2_8.4	8.4	1.9	—	—	4.6	4.5	5.7	5.7	3.6
F 25 2_9.4	9.4	1.6	2.3	2.3	4.3	4.2	5.4	5.4	3.3
F 25 2_10.6	10.6	1.9	—	—	4.6	4.5	5.7	5.7	3.6
F 25 2_13.0	13.0	1.3	—	—	4.1	4.0	5.2	5.2	3.0
F 25 2_14.5	14.5	1.1	1.8	1.8	3.9	3.8	5.0	5.0	2.8
F 25 2_16.6	16.6	0.90	1.6	1.6	3.7	3.5	4.7	4.7	2.6
F 25 2_18.6	18.6	0.77	1.5	1.5	3.5	3.4	4.6	4.6	2.5
F 25 2_21.8	21.8	0.57	1.3	1.3	3.3	3.2	4.4	4.4	2.3
F 25 2_23.8	23.8	0.48	1.2	1.2	3.2	3.1	4.3	4.3	2.2
F 25 2_27.2	27.2	0.40	1.1	1.1	3.2	3.0	4.2	4.2	2.1
F 25 2_30.0	30.0	0.35	1.1	1.1	3.1	3.0	4.2	4.2	2.1
F 25 2_32.2	32.2	0.31	1.0	1.0	3.1	2.9	4.2	4.2	2.0
F 25 2_36.4	36.4	0.26	1.0	1.0	3.0	2.9	4.1	4.1	2.0
F 25 2_40.7	40.7	0.22	1.0	0.94	3.0	2.9	4.1	4.1	1.9
F 25 2_44.4	44.4	0.20	0.93	0.92	3.0	2.8	4.0	4.0	1.9
F 25 3_45.6	45.6	0.79	—	—	3.6	3.4	4.6	4.6	2.5
F 25 3_50.8	50.8	0.70	1.4	1.4	3.5	3.3	4.5	4.5	2.4
F 25 3_58.3	58.3	0.58	1.3	1.3	3.3	3.2	4.4	4.4	2.3
F 25 3_65.3	65.3	0.52	1.2	1.2	3.3	3.1	4.4	4.4	2.2
F 25 3_76.6	76.6	0.38	1.1	1.1	3.1	3.0	4.2	4.2	2.1
F 25 3_83.4	83.4	0.32	1.0	1.0	3.1	3.0	4.2	4.2	2.0
F 25 3_95.5	95.5	0.28	1.0	1.0	3.0	2.9	4.1	4.1	2.0
F 25 3_105.4	105.4	0.25	1.0	1.0	3.0	2.9	4.1	4.1	2.0
F 25 3_113.0	113.0	0.23	0.95	0.94	3.0	2.9	4.1	4.1	1.9
F 25 3_127.8	127.8	0.20	0.92	0.91	3.0	2.8	4.0	4.0	1.9
F 25 3_143.0	143.0	0.17	0.90	0.89	2.9	2.8	4.0	4.0	1.9
F 25 3_155.9	155.9	0.15	0.88	0.87	2.9	2.8	4.0	4.0	1.9
F 25 3_174.2	174.2	0.13	0.87	0.86	2.9	2.8	4.0	4.0	1.8
F 25 3_193.6	193.6	0.12	0.85	0.84	2.9	2.7	4.0	4.0	1.8
F 25 3_227.8	227.8	0.10	0.83	0.82	2.9	2.7	3.9	3.9	1.8
F 25 3_256.1	256.1	0.09	0.79	0.78	2.8	2.7	3.9	3.9	1.8
F 25 3_288.1	288.1	0.08	0.78	0.77	2.8	2.7	3.9	3.9	1.8
F 25 3_333.1	333.1	0.03	0.78	0.76	—	—	—	—	1.8
F 25 4_393.9	393.9	0.02	0.80	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_434.9	434.9	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_466.0	466.0	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_527.3	527.3	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_589.7	589.7	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_643.3	643.3	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_718.7	718.7	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_798.5	798.5	0.01	0.79	0.77	2.8	2.7	3.9	3.9	0.70
F 25 4_939.8	939.8	0.01	0.79	0.77	2.8	2.7	3.9	3.9	0.69
F 25 4_1057	1057	0.01	0.79	0.77	2.8	2.7	3.9	3.9	0.64
F 25 4_1189	1189	0.01	0.78	0.77	2.8	2.7	3.9	3.9	0.64
F 25 4_1374	1374	0.01	0.78	0.77	2.8	2.7	3.9	3.9	0.64





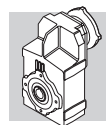
# F 25

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 SERVO									
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 25 2_6.9	6.9	—	—	—	—	—	—	5.4	5.9	5.3	6.3
F 25 2_8.4	8.4	—	—	—	—	—	—	4.6	5.1	4.5	5.5
F 25 2_9.4	9.4	1.9	2.1	1.9	2.3	4.4	4.9	4.3	4.8	4.2	5.2
F 25 2_10.6	10.6	—	—	—	—	—	—	4.6	5.1	4.5	5.5
F 25 2_13.0	13.0	—	—	—	—	—	—	4.1	4.6	4.0	5.0
F 25 2_14.5	14.5	1.4	1.6	1.4	1.8	3.9	4.4	3.9	4.4	3.8	4.8
F 25 2_16.6	16.6	1.2	1.4	1.2	1.6	3.7	4.2	3.7	4.2	3.5	4.5
F 25 2_18.6	18.6	1.0	1.3	1.1	1.5	3.6	4.0	3.5	4.0	3.4	4.4
F 25 2_21.8	21.8	0.84	1.1	0.86	1.3	3.4	3.8	3.3	3.8	3.2	4.2
F 25 2_23.8	23.8	0.75	1.0	0.77	1.2	3.3	3.7	3.2	3.7	3.1	4.1
F 25 2_27.2	27.2	0.67	0.93	0.69	1.1	3.2	3.7	3.2	3.7	3.0	4.0
F 25 2_30.0	30.0	0.62	0.88	0.64	1.1	3.2	3.6	3.1	3.6	3.0	4.0
F 25 2_32.2	32.2	0.58	0.84	1.4	1.8	3.1	3.6	3.1	3.6	2.9	3.9
F 25 2_36.4	36.4	0.53	0.79	0.55	0.99	3.1	3.5	3.0	3.5	2.9	3.9
F 25 2_40.7	40.7	0.49	0.75	0.51	0.95	3.0	3.5	3.0	3.5	2.9	3.9
F 25 2_44.4	44.4	0.47	0.73	0.49	0.93	3.0	3.5	3.0	3.5	2.8	3.8
F 25 3_45.6	45.6	1.1	1.3	1.1	1.5	3.6	4.0	3.6	4.1	3.4	4.4
F 25 3_50.8	50.8	0.97	1.2	0.99	1.4	3.5	4.0	3.5	4.0	3.3	4.3
F 25 3_58.3	58.3	0.85	1.1	0.87	1.3	3.4	3.8	3.3	3.8	3.2	4.2
F 25 3_65.3	65.3	0.79	1.1	0.84	1.2	3.3	3.8	3.3	3.8	3.1	4.1
F 25 3_76.6	76.6	0.65	0.91	0.67	1.1	3.2	3.6	3.1	3.6	3.0	4.0
F 25 3_83.4	83.4	0.59	0.85	0.61	1.0	3.1	3.6	3.1	3.6	3.0	4.0
F 25 3_95.5	95.5	0.55	0.81	0.57	1.0	3.1	3.5	3.0	3.5	2.9	3.9
F 25 3_105.4	105.4	0.52	0.78	0.54	0.98	3.1	3.5	3.0	3.5	2.9	3.9
F 25 3_113.0	113.0	0.50	0.76	0.52	0.96	3.1	3.5	3.0	3.5	2.9	3.9
F 25 3_127.8	127.8	0.47	0.73	0.49	0.93	3.0	3.5	3.0	3.5	2.8	3.8
F 25 3_143.0	143.0	0.44	0.70	0.46	0.90	3.0	3.4	2.9	3.4	2.8	3.8
F 25 3_155.9	155.9	0.42	0.68	0.44	0.88	3.0	3.4	2.9	3.4	2.8	3.8
F 25 3_174.2	174.2	0.40	0.66	0.42	0.86	3.0	3.4	2.9	3.4	2.8	3.8
F 25 3_193.6	193.6	0.39	0.65	0.41	0.85	2.9	3.4	2.9	3.4	2.7	3.7
F 25 3_227.8	227.8	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.7	3.7
F 25 3_256.1	256.1	0.36	0.62	—	—	—	—	2.8	3.3	2.7	3.7
F 25 3_288.1	288.1	0.35	0.61	—	—	—	—	2.8	3.3	2.7	3.7
F 25 3_333.1	333.1	0.30	0.56	—	—	—	—	—	—	—	—
F 25 4_393.9	393.9	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_434.9	434.9	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_466.0	466.0	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_527.3	527.3	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_589.7	589.7	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_643.3	643.3	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_718.7	718.7	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_798.5	798.5	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_939.8	939.8	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_1057	1057	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_1189	1189	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_1374	1374	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7




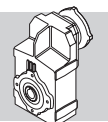
# F 31

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]								
			63	71	80	90 	100	112	132	
F 31 2_6.9	6.9	5.0	—	—	7.8	7.6	8.9	8.9	22	7.1
F 31 2_8.2	8.2	3.7	—	—	6.5	6.3	7.5	7.5	20	5.8
F 31 2_9.0	9.0	3.2	—	—	6.0	5.8	7.0	7.0	20	5.3
F 31 2_10.7	10.7	3.5	—	—	6.3	6.2	7.4	7.4	20	5.6
F 31 2_12.7	12.7	2.6	—	—	5.4	5.3	6.5	6.5	19	4.7
F 31 2_13.9	13.9	2.3	—	—	5.1	4.9	6.2	6.2	19	4.4
F 31 2_16.8	16.8	1.8	—	—	4.6	4.4	5.6	5.6	18	3.9
F 31 2_18.5	18.5	1.5	2.2	2.2	4.2	4.1	5.3	5.3	18	3.5
F 31 2_21.1	21.1	1.1	1.8	1.8	3.9	3.7	5.0	5.0	18	3.2
F 31 2_23.4	23.4	1.0	1.7	1.7	3.7	3.6	4.8	4.8	18	3.0
F 31 2_27.3	27.3	0.78	1.5	1.5	3.5	3.4	4.6	4.6	17	2.8
F 31 2_30.1	30.1	0.65	1.4	1.4	3.4	3.3	4.5	4.5	17	2.7
F 31 2_34.4	34.4	0.53	1.3	1.2	3.3	3.2	4.4	4.4	17	2.6
F 31 2_37.7	37.7	0.47	1.2	1.2	3.2	3.1	4.3	4.3	17	2.5
F 31 2_40.4	40.4	0.42	1.1	1.1	3.2	3.0	4.3	4.3	—	2.5
F 31 2_44.6	44.6	0.37	1.1	1.1	3.1	3.0	4.2	4.2	—	2.4
F 31 3_47.5	47.5	1.6	—	—	4.3	4.2	5.4	5.4	18	3.6
F 31 3_52.1	52.1	1.4	—	—	4.2	4.0	5.3	5.3	18	3.5
F 31 3_62.8	62.8	1.2	—	—	3.9	3.8	5.0	5.0	18	3.2
F 31 3_69.1	69.1	1.0	1.7	1.7	3.7	3.6	4.8	4.8	18	3.0
F 31 3_78.9	78.9	0.72	1.4	1.4	3.5	3.4	4.6	4.6	17	2.8
F 31 3_87.4	87.4	0.66	1.4	1.4	3.4	3.3	4.5	4.5	17	2.7
F 31 3_101.9	101.9	0.54	1.3	1.2	3.3	3.2	4.4	4.4	17	2.6
F 31 3_112.5	112.5	0.46	1.2	1.2	3.2	3.1	4.3	4.3	17	2.5
F 31 3_128.4	128.4	0.38	1.1	1.1	3.1	3.0	4.2	4.2	17	2.4
F 31 3_140.7	140.7	0.35	1.1	1.1	3.1	3.0	4.2	4.2	17	2.4
F 31 3_150.8	150.8	0.31	1.0	1.0	3.1	2.9	4.2	4.2	—	2.4
F 31 3_166.8	166.8	0.28	1.0	1.0	3.0	2.9	4.1	4.1	—	2.3
F 31 3_185.4	185.4	0.24	1.0	1.0	3.0	2.9	4.1	4.1	—	2.3
F 31 3_202.3	202.3	0.21	0.94	0.93	3.0	2.8	4.1	4.1	—	2.3
F 31 3_228.2	228.2	0.18	0.92	0.90	2.9	2.8	4.0	4.0	—	2.2
F 31 3_253.6	253.6	0.16	0.89	0.88	2.9	2.8	4.0	4.0	—	2.2
F 31 3_293.8	293.8	0.13	0.86	0.85	2.9	2.8	4.0	4.0	—	2.2
F 31 3_332.8	332.8	0.11	0.82	0.81	2.9	2.7	4.0	4.0	—	2.2
F 31 3_374.4	374.4	0.10	0.81	0.79	2.9	2.7	3.9	3.9	—	2.2
F 31 4_418.9	418.9	0.09	0.86	0.85	2.9	2.8	3.9	3.9	—	0.77
F 31 4_462.6	462.6	0.08	0.86	0.84	2.9	2.7	3.9	3.9	—	0.77
F 31 4_527.8	527.8	0.08	0.85	0.84	2.9	2.7	3.9	3.9	—	0.76
F 31 4_578.6	578.6	0.08	0.85	0.84	2.9	2.7	3.9	3.9	—	0.76
F 31 4_619.9	619.9	0.07	0.85	0.83	2.9	2.7	3.9	3.9	—	0.76
F 31 4_685.6	685.6	0.07	0.85	0.83	2.9	2.7	3.9	3.9	—	0.76
F 31 4_762.3	762.3	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75
F 31 4_831.6	831.6	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75
F 31 4_938.2	938.2	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75
F 31 4_1042	1042	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75
F 31 4_1208	1208	0.06	0.84	0.82	2.9	2.7	3.9	3.9	—	0.75
F 31 4_1368	1368	0.06	0.84	0.82	2.9	2.7	3.9	3.9	—	0.75
F 31 4_1539	1539	0.06	0.84	0.82	2.9	2.7	3.9	3.9	—	0.75





# F 31

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
													
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B		130A	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
		F 31 2_6.9	6.9	—	—	—	—	—	—	7.8	8.3	7.6	8.6
F 31 2_8.2	8.2	—	—	—	—	—	—	6.5	7.0	6.3	7.3	6.3	7.3
F 31 2_9.0	9.0	—	—	—	—	—	—	6.0	6.5	5.8	6.8	5.8	6.8
F 31 2_10.7	10.7	—	—	—	—	—	—	6.3	6.8	6.2	7.2	6.2	7.2
F 31 2_12.7	12.7	—	—	—	—	—	—	5.4	5.9	5.3	6.3	5.3	6.3
F 31 2_13.9	13.9	—	—	—	—	—	—	5.1	5.6	4.9	5.9	4.9	5.9
F 31 2_16.8	16.8	—	—	—	—	—	—	4.6	5.1	4.4	5.4	4.4	5.4
F 31 2_18.5	18.5	1.8	2.0	1.8	2.2	4.3	4.8	4.2	4.7	4.1	5.1	4.1	5.1
F 31 2_21.1	21.1	1.4	1.6	1.4	1.8	3.9	4.3	3.9	4.4	3.7	4.7	3.7	4.7
F 31 2_23.4	23.4	1.3	1.5	1.3	1.7	3.8	4.3	3.7	4.2	3.6	4.6	3.6	4.6
F 31 2_27.3	27.3	1.1	1.3	1.1	1.5	3.6	4.0	3.5	4.0	3.4	4.4	3.4	4.4
F 31 2_30.1	30.1	0.92	1.2	0.94	1.4	3.5	3.9	3.4	3.9	3.3	4.3	3.3	4.3
F 31 2_34.4	34.4	0.80	1.1	0.82	1.3	3.4	3.8	3.3	3.8	3.2	4.2	3.2	4.2
F 31 2_37.7	37.7	0.74	1.0	0.76	1.2	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1
F 31 2_40.4	40.4	0.69	0.95	0.71	1.1	3.2	3.7	3.2	3.7	3.0	4.0	3.0	4.0
F 31 2_44.6	44.6	0.64	0.90	0.66	1.1	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0
F 31 3_47.5	47.5	—	—	—	—	—	—	4.3	4.8	4.2	5.2	4.2	5.2
F 31 3_52.1	52.1	—	—	—	—	—	—	4.2	4.7	4.0	5.0	4.0	5.0
F 31 3_62.8	62.8	—	—	—	—	—	—	3.9	4.4	3.8	4.8	3.8	4.8
F 31 3_69.1	69.1	1.3	1.5	1.3	1.7	3.8	4.3	3.7	4.2	3.6	4.6	3.6	4.6
F 31 3_78.9	78.9	0.99	1.3	1.0	1.4	3.5	4.0	3.5	4.0	3.4	4.4	3.4	4.4
F 31 3_87.4	87.4	0.93	1.2	0.95	1.4	3.5	3.9	3.4	3.9	3.3	4.3	3.3	4.3
F 31 3_101.9	101.9	0.81	1.1	0.83	1.3	3.4	3.8	3.3	3.8	3.2	4.2	3.2	4.2
F 31 3_112.5	112.5	0.73	0.99	0.75	1.2	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1
F 31 3_128.4	128.4	0.65	0.91	0.67	1.1	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0
F 31 3_140.7	140.7	0.62	0.88	0.64	1.1	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0
F 31 3_150.8	150.8	0.58	0.84	0.60	1.0	3.1	3.6	3.1	3.6	2.9	3.9	2.9	3.9
F 31 3_166.8	166.8	0.55	0.81	0.57	1.0	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9
F 31 3_185.4	185.4	0.51	0.77	0.53	0.97	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9
F 31 3_202.3	202.3	0.48	0.74	0.50	0.93	3.0	3.5	3.0	3.5	2.8	3.8	2.8	3.8
F 31 3_228.2	228.2	0.45	0.71	0.47	0.91	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8
F 31 3_253.6	253.6	0.43	0.69	0.45	0.89	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8
F 31 3_293.8	293.8	0.40	0.66	0.42	0.86	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8
F 31 3_332.8	332.8	0.38	0.64	—	—	—	—	2.9	3.4	2.7	3.7	2.7	3.7
F 31 3_374.4	374.4	0.37	0.63	—	—	—	—	2.9	3.4	2.7	3.7	2.7	3.7
F 31 4_418.9	418.9	0.36	0.62	0.38	0.82	2.9	3.3	2.9	3.4	2.8	3.8	—	—
F 31 4_462.6	462.6	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_527.8	527.8	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_578.6	578.6	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_619.9	619.9	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_685.6	685.6	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_762.3	762.3	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_831.6	831.6	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_938.2	938.2	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_1042	1042	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_1208	1208	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_1368	1368	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_1539	1539	0.83	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.7	3.7	—	—




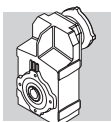
# F 41

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]								
			63	71	80	90 	100	112	132	
F 41 2_6.7	6.7	12	—	—	15	15	18	18	29	21
F 41 2_9.1	9.1	7.2	—	—	10	9.8	13	13	24	16
F 41 2_10.8	10.8	8.0	—	—	11	11	13	13	25	17
F 41 2_14.6	14.6	5.0	—	—	7.7	7.6	10	10	21	14
F 41 2_17.1	17.1	3.5	—	—	6.3	6.2	8.9	8.9	20	12
F 41 2_18.9	18.9	3.1	—	—	5.8	5.7	8.5	8.5	20	12
F 41 2_24.1	24.1	2.1	2.8	2.8	4.9	4.8	7.5	7.5	19	11
F 41 2_30.1	30.1	1.5	2.2	2.2	4.3	4.2	6.9	6.9	18	10
F 41 2_38.2	38.2	0.95	1.7	1.7	3.7	3.6	6.3	6.3	17	9.7
F 41 2_47.9	47.9	0.67	1.4	1.4	3.4	3.3	6.0	6.0	17	9.5
F 41 3_51.5	51.5	3.0	—	—	5.7	5.6	8.4	8.4	19	12
F 41 3_60.2	60.2	2.1	—	—	4.9	4.7	7.5	7.5	19	11
F 41 3_66.5	66.5	1.9	—	—	4.7	4.5	7.3	7.3	18	11
F 41 3_84.9	84.9	1.4	2.1	2.1	4.2	4.0	6.8	6.8	18	10
F 41 3_106.0	106.0	1.1	1.8	1.7	3.8	3.7	6.4	6.4	18	9.8
F 41 3_134.4	134.4	0.66	1.4	1.4	3.4	3.3	6.0	6.0	17	9.4
F 41 3_168.7	168.7	0.49	1.2	1.2	3.2	3.1	5.9	5.9	17	9.3
F 41 3_180.7	180.7	0.43	1.1	1.1	3.2	3.1	5.8	5.8	—	9.2
F 41 3_198.9	198.9	0.39	1.1	1.1	3.1	3.0	5.8	5.8	—	9.2
F 41 3_220.1	220.1	0.36	1.1	1.1	3.1	3.0	5.7	5.7	—	9.1
F 41 3_240.1	240.1	0.31	1.0	1.0	3.1	2.9	5.7	5.7	—	9.1
F 41 3_266.9	266.9	0.28	1.0	1.0	3.0	2.9	5.7	5.7	—	9.1
F 41 3_296.6	296.6	0.23	1.0	1.0	3.0	2.9	5.6	5.6	—	9.0
F 41 3_344.8	344.8	0.19	0.92	0.91	2.9	2.8	5.6	5.6	—	9.0
F 41 4_433.7	433.7	0.21	0.94	0.93	3.0	2.8	4.1	4.1	—	1.9
F 41 4_549.8	549.8	0.19	0.92	0.90	2.9	2.8	4.0	4.0	—	1.9
F 41 4_690.1	690.1	0.18	0.91	0.89	2.9	2.8	4.0	4.0	—	1.9
F 41 4_739.4	739.4	0.17	0.90	0.89	2.9	2.8	4.0	4.0	—	1.9
F 41 4_813.8	813.8	0.17	0.90	0.89	2.9	2.8	4.0	4.0	—	1.9
F 41 4_900.5	900.5	0.17	0.90	0.89	2.9	2.8	4.0	4.0	—	1.9
F 41 4_982.4	982.4	0.17	0.90	0.88	2.9	2.8	4.0	4.0	—	1.9
F 41 4_1092	1092	0.16	0.89	0.88	2.9	2.8	4.0	4.0	—	1.9
F 41 4_1213	1213	0.16	0.89	0.88	2.9	2.8	4.0	4.0	—	1.9
F 41 4_1411	1411	0.16	0.89	0.88	2.9	2.8	4.0	4.0	—	1.9






# F 41

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]																	
		 SERVO																	
	i	60A		60B 80A		80B		95A		80C 95B 110A		95C 110B		130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 41 2_6.7	6.7	—	—	—	—	—	—	—	—	15	16	15	16	15	16	29	31	29	34
F 41 2_9.1	9.1	—	—	—	—	—	—	—	—	10	11	9.8	11	9.8	11	24	27	24	29
F 41 2_10.8	10.8	—	—	—	—	—	—	—	—	11	12	11	12	11	12	25	27	25	30
F 41 2_14.6	14.6	—	—	—	—	—	—	—	—	7.7	8.2	7.6	8.6	7.6	8.6	22	24	21	26
F 41 2_17.1	17.1	—	—	—	—	—	—	—	—	6.3	6.8	6.2	7.2	6.2	7.2	20	23	20	25
F 41 2_18.9	18.9	—	—	—	—	—	—	—	—	5.8	6.3	5.7	6.7	5.7	6.7	20	23	20	25
F 41 2_24.1	24.1	—	—	—	—	4.9	5.4	4.9	5.4	4.9	5.4	4.8	5.8	4.8	5.8	19	22	19	24
F 41 2_30.1	30.1	—	—	—	—	4.3	4.8	4.3	4.8	4.3	4.8	4.2	5.2	4.2	5.2	18	21	18	23
F 41 2_38.2	38.2	—	—	—	—	3.8	4.2	3.8	4.2	3.7	4.2	3.6	4.6	3.6	4.6	18	20	17	22
F 41 2_47.9	47.9	—	—	—	—	3.5	3.9	3.5	3.9	3.4	3.9	3.3	4.3	3.3	4.3	18	20	17	22
F 41 3_51.5	51.5	—	—	—	—	—	—	—	—	5.7	6.2	5.6	6.6	5.6	6.6	20	22	19	24
F 41 3_60.2	60.2	—	—	—	—	—	—	—	—	4.9	5.4	4.7	5.7	4.7	5.7	19	22	19	24
F 41 3_66.5	66.5	—	—	—	—	—	—	—	—	4.7	5.2	4.5	5.5	4.5	5.5	19	21	18	23
F 41 3_84.9	84.9	—	—	—	—	4.2	4.7	4.2	4.7	4.2	4.7	4.0	5.0	4.0	5.0	18	21	18	23
F 41 3_106.0	106.0	—	—	—	—	3.9	4.4	3.9	4.4	3.8	4.3	3.7	4.7	3.7	4.7	18	21	18	23
F 41 3_134.4	134.4	—	—	—	—	3.5	3.9	3.5	3.9	3.4	3.9	3.3	4.3	3.3	4.3	18	20	17	22
F 41 3_168.7	168.7	—	—	—	—	3.3	3.7	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1	17	20	17	22
F 41 3_180.7	180.7	—	—	—	—	3.3	3.7	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
F 41 3_198.9	198.9	—	—	—	—	3.2	3.6	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0	—	—	—	—
F 41 3_220.1	220.1	—	—	—	—	3.2	3.6	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0	—	—	—	—
F 41 3_240.1	240.1	—	—	—	—	3.1	3.6	3.1	3.6	3.1	3.6	2.9	3.9	2.9	3.9	—	—	—	—
F 41 3_266.9	266.9	—	—	—	—	3.1	3.5	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9	—	—	—	—
F 41 3_296.6	296.6	—	—	—	—	3.1	3.5	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9	—	—	—	—
F 41 3_344.8	344.8	—	—	—	—	3.0	3.4	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8	—	—	—	—
F 41 4_433.7	433.7	0.48	0.74	0.50	0.94	—	—	3.0	3.5	3.0	3.5	2.8	3.8	—	—	—	—	—	—
F 41 4_549.8	549.8	0.46	0.72	0.48	0.92	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_690.1	690.1	0.45	0.71	0.47	0.91	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_739.4	739.4	0.44	0.70	0.46	0.90	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_813.8	813.8	0.44	0.70	0.46	0.90	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_900.5	900.5	0.44	0.70	0.46	0.90	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_982.4	982.4	0.44	0.70	0.46	0.90	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_1092	1092	0.43	0.69	0.45	0.89	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_1213	1213	0.43	0.69	0.45	0.89	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_1411	1411	0.43	0.69	0.45	0.89	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—




## F 51

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]										
			 IEC									
			63	71	80	90	100	112	132	160	180	
F 51 2_7.2	7.2	25	—	—	28	28	30	30	42	101	103	34
F 51 2_9.1	9.1	17	—	—	20	19	22	22	33	92	94	26
F 51 2_11.1	11.1	16	—	—	19	19	22	22	33	92	94	25
F 51 2_14.0	14.0	11	—	—	14	14	17	17	28	87	89	20
F 51 2_18.8	18.8	7.0	—	—	9.8	9.6	12	12	24	83	85	16
F 51 2_23.8	23.8	4.5	—	—	7.3	7.2	9.9	9.9	21	80	82	13
F 51 2_30.0	30.0	3.1	3.8	3.8	5.9	5.8	8.5	8.5	20	79	81	12
F 51 2_37.1	37.1	2.2	3.0	3.0	5.0	4.9	7.6	7.6	19	78	80	11
F 51 3_48.9	48.9	6.2	—	—	8.9	8.8	12	12	23	82	84	15
F 51 3_65.8	65.8	4.2	—	—	6.9	6.8	9.6	9.6	21	80	82	13
F 51 3_83.2	83.2	2.7	—	—	5.5	5.4	8.1	8.1	19	78	80	12
F 51 3_105.1	105.1	2.0	2.7	2.7	4.8	4.6	7.4	7.4	19	78	80	11
F 51 3_129.9	129.9	1.5	2.2	2.2	4.3	4.1	6.9	6.9	18	77	79	10
F 51 3_165.6	165.6	0.95	1.7	1.7	3.7	3.6	6.3	6.3	17	76	78	9.7
F 51 3_202.4	202.4	0.72	1.4	1.4	3.5	3.3	6.1	6.1	17	76	78	9.5
F 51 3_216.9	216.9	0.64	1.4	1.3	3.4	3.3	6.0	6.0	—	—	—	9.4
F 51 3_239.8	239.8	0.60	1.3	1.3	3.4	3.2	6.0	6.0	—	—	—	9.4
F 51 3_262.1	262.1	0.53	1.3	1.3	3.3	3.2	5.9	5.9	—	—	—	9.3
F 51 3_285.9	285.9	0.46	1.2	1.2	3.2	3.1	5.8	5.8	—	—	—	9.2
F 51 3_317.3	317.3	0.39	1.1	1.1	3.2	3.0	5.8	5.8	—	—	—	9.2
F 51 3_352.5	352.5	0.28	1.1	1.1	3.1	3.0	5.7	5.7	—	—	—	9.1
F 51 4_429.1	429.1	0.36	1.1	1.1	3.1	3.0	5.7	5.7	—	—	—	2.4
F 51 4_530.5	530.5	0.33	1.1	1.0	3.1	3.0	5.7	5.7	—	—	—	2.4
F 51 4_676.3	676.3	0.30	1.0	1.0	3.1	2.9	5.7	5.7	—	—	—	2.4
F 51 4_826.4	826.4	0.28	1.0	1.0	3.0	2.9	5.7	5.7	—	—	—	2.3
F 51 4_885.5	885.5	0.28	1.0	1.0	3.0	2.9	5.7	5.7	—	—	—	2.3
F 51 4_979.4	979.4	0.28	1.0	1.0	3.0	2.9	5.7	5.7	—	—	—	2.3
F 51 4_1070	1070	0.27	1.0	1.0	3.0	2.9	5.6	5.6	—	—	—	2.3
F 51 4_1168	1168	0.27	1.0	1.0	3.0	2.9	5.6	5.6	—	—	—	2.3
F 51 4_1296	1296	0.26	1.0	1.0	3.0	2.9	5.6	5.6	—	—	—	2.3
F 51 4_1439	1439	0.26	1.0	1.0	3.0	2.9	5.6	5.6	—	—	—	2.3








# F 51

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
i													
		80B		95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 51 2_7.2	7.2	—	—	—	—	28	29	28	23	42	44	42	47
F 51 2_9.1	9.1	—	—	—	—	20	21	19	20	34	36	33	38
F 51 2_11.1	11.1	—	—	—	—	19	20	19	20	33	35	33	38
F 51 2_14.0	14.0	—	—	—	—	14	15	14	15	28	30	28	33
F 51 2_18.8	18.8	—	—	—	—	9.8	10	9.6	11	24	26	24	29
F 51 2_23.8	23.8	—	—	—	—	7.3	7.8	7.2	8.2	21	24	21	26
F 51 2_30.0	30.0	5.9	6.4	5.9	6.4	5.9	6.4	5.8	6.8	20	23	20	25
F 51 2_37.1	37.1	5.0	5.5	5.0	5.5	5.0	5.5	4.9	5.9	19	22	19	24
F 51 3_48.9	48.9	—	—	—	—	8.9	9.4	8.8	9.8	23	26	23	28
F 51 3_65.8	65.8	—	—	—	—	6.9	7.4	6.8	7.8	21	24	21	26
F 51 3_83.2	83.2	—	—	—	—	5.5	6.0	5.4	6.4	20	22	19	24
F 51 3_105.1	105.1	4.8	5.3	4.8	5.3	4.8	5.3	4.6	5.6	19	21	19	24
F 51 3_129.9	129.9	4.3	4.8	4.3	4.8	4.3	4.8	4.1	5.1	18	21	18	23
F 51 3_165.6	165.6	3.8	4.2	3.8	4.2	3.7	4.2	3.6	4.6	18	20	17	22
F 51 3_202.4	202.4	3.5	4.0	3.5	4.0	3.5	4.0	3.3	4.3	18	20	17	22
F 51 3_216.9	216.9	3.5	3.9	3.5	3.9	3.4	3.9	3.3	4.3	—	—	—	—
F 51 3_239.8	239.8	3.4	3.9	3.4	3.9	3.4	3.9	3.2	4.2	—	—	—	—
F 51 3_262.1	262.1	3.4	3.8	3.4	3.8	3.3	3.8	3.2	4.2	—	—	—	—
F 51 3_285.9	285.9	3.3	3.7	3.3	3.7	3.2	3.7	3.1	4.1	—	—	—	—
F 51 3_317.3	317.3	3.2	3.6	3.2	3.6	3.2	3.7	3.0	4.0	—	—	—	—
F 51 3_352.5	352.5	3.1	3.5	3.1	3.5	3.1	3.6	3.0	4.0	—	—	—	—
F 51 4_429.1	429.1	—	—	3.2	3.6	3.1	3.6	3.0	4.0	—	—	—	—
F 51 4_530.5	530.5	—	—	3.2	3.6	3.1	3.6	3.0	4.0	—	—	—	—
F 51 4_676.3	676.3	—	—	3.1	3.6	3.1	3.6	2.9	3.9	—	—	—	—
F 51 4_826.4	826.4	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_885.5	885.5	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_979.4	979.4	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_1070	1070	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_1168	1168	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_1296	1296	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_1439	1439	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—




## F 60

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]										
			 IEC									
			63	71	80	90	100	112	132	160	180	
F 60 3_9.0	9.0	40	—	—	—	—	—	—	59	118	116	61
F 60 3_9.7	9.7	38	—	—	—	—	—	—	57	116	114	59
F 60 3_11.8	11.8	25	—	—	28	28	29	29	44	103	101	46
F 60 3_12.7	12.7	24	—	—	27	27	28	28	43	102	100	45
F 60 3_14.5	14.5	18	—	—	21	20	22	22	37	96	94	39
F 60 3_15.7	15.7	17	—	—	20	20	21	21	36	95	93	38
F 60 3_19.1	19.1	10	—	—	13	13	14	14	29	89	86	31
F 60 3_20.7	20.7	9.9	—	—	13	13	14	14	29	88	86	31
F 60 3_23.5	23.5	7.3	—	—	10	10	11	11	26	86	83	28
F 60 3_25.4	25.4	7.1	—	—	9.9	9.9	11	11	26	85	83	28
F 60 3_29.6	29.6	15	—	—	—	—	—	—	34	93	91	36
F 60 3_32.1	32.1	15	—	—	—	—	—	—	34	93	91	36
F 60 3_38.8	38.8	11	—	—	14	13	15	15	30	89	87	32
F 60 3_42.1	42.1	11	—	—	13	13	15	15	29	89	87	31
F 60 3_47.8	47.8	8.2	—	—	11	11	12	12	27	86	84	29
F 60 3_51.8	51.8	8.1	—	—	11	11	12	12	27	86	84	29
F 60 3_63.0	63.0	4.9	—	—	7.7	7.6	8.9	8.9	24	83	81	26
F 60 3_68.3	68.3	4.8	—	—	7.7	7.6	8.9	8.9	24	83	81	26
F 60 3_77.6	77.6	3.7	—	—	6.6	6.5	7.8	7.8	23	82	80	25
F 60 3_84.0	84.0	3.7	—	—	6.5	6.5	7.8	7.8	23	82	80	25
F 60 3_98.2	98.2	2.7	4.2	4.2	5.6	5.5	6.8	6.8	22	81	79	24
F 60 3_106.4	106.4	2.7	4.2	4.2	5.5	5.4	6.8	6.8	22	81	79	24
F 60 3_120.5	120.5	1.8	3.2	3.2	4.6	4.6	5.9	5.9	21	80	78	23
F 60 3_130.5	130.5	1.8	3.2	3.2	4.6	4.6	5.8	5.8	21	80	78	23
F 60 3_150.4	150.4	1.3	2.7	2.7	4.1	4.1	5.4	5.4	20	80	77	22
F 60 3_162.9	162.9	1.3	2.7	2.7	4.1	4.1	5.4	5.4	20	80	77	22
F 60 3_185.9	185.9	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	79	77	22
F 60 3_201.4	201.4	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	79	77	22
F 60 3_217.6	217.6	0.70	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	22
F 60 3_235.8	235.8	0.70	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	22
F 60 3_259.1	259.1	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	22
F 60 3_280.7	280.7	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	22

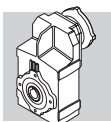
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.






## F 60

		J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
		 SERVO									
	i	95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 60 3_9.0	9.0	—	—	—	—	—	—	57	59	59	64
F 60 3_9.7	9.7	—	—	—	—	—	—	55	57	57	62
F 60 3_11.8	11.8	—	—	28	29	28	29	42	44	44	49
F 60 3_12.7	12.7	—	—	27	28	27	28	41	43	43	48
F 60 3_14.5	14.5	—	—	21	22	20	21	35	37	37	42
F 60 3_15.7	15.7	—	—	20	21	20	21	34	36	36	41
F 60 3_19.1	19.1	—	—	13	14	13	14	27	29	29	34
F 60 3_20.7	20.7	—	—	13	14	13	14	27	29	29	34
F 60 3_23.5	23.5	—	—	10	11	10	11	24	27	26	31
F 60 3_25.4	25.4	—	—	9.9	10	9.9	11	24	27	26	31
F 60 3_29.6	29.6	—	—	—	—	—	—	32	34	34	39
F 60 3_32.1	32.1	—	—	—	—	—	—	32	34	34	39
F 60 3_38.8	38.8	—	—	14	15	13	14	28	30	30	35
F 60 3_42.1	42.1	—	—	13	14	13	14	28	30	29	34
F 60 3_47.8	47.8	—	—	11	12	11	12	25	28	27	32
F 60 3_51.8	51.8	—	—	11	12	11	12	25	28	27	32
F 60 3_63.0	63.0	—	—	7.7	8.2	7.6	8.6	22	24	24	29
F 60 3_68.3	68.3	—	—	7.7	8.2	7.6	8.6	22	24	24	29
F 60 3_77.6	77.6	—	—	6.6	7.1	6.5	7.5	21	23	23	28
F 60 3_84.0	84.0	—	—	6.5	7.0	6.5	7.5	21	23	23	28
F 60 3_98.2	98.2	—	—	5.6	6.1	5.5	6.5	20	22	22	27
F 60 3_106.4	106.4	5.5	6.0	5.5	6.0	5.4	6.4	20	22	22	27
F 60 3_120.5	120.5	2.2	2.7	4.6	5.1	4.6	5.6	19	21	21	26
F 60 3_130.5	130.5	2.2	2.7	4.6	5.1	4.6	5.6	19	21	21	26
F 60 3_150.4	150.4	4.1	4.6	4.1	4.6	4.1	5.1	18	21	20	25
F 60 3_162.9	162.9	4.1	4.6	4.1	4.6	4.1	5.1	18	21	20	25
F 60 3_185.9	185.9	3.7	4.2	3.8	4.3	3.7	4.7	18	20	20	25
F 60 3_201.4	201.4	3.7	4.2	3.8	4.3	3.7	4.7	18	20	20	25
F 60 3_217.6	217.6	3.5	4.0	3.6	4.1	3.5	4.5	—	—	—	—
F 60 3_235.8	235.8	3.5	4.0	3.6	4.1	3.5	4.5	—	—	—	—
F 60 3_259.1	259.1	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
F 60 3_280.7	280.7	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—

For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.






## F 70

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]									
			 IEC								
		80	90	100	112	132	160	180	200		
F 70 3_10.0	10.0	—	—	—	—	—	169	167	176	133	
F 70 3_10.9	10.9	—	—	—	—	—	166	163	173	129	
F 70 3_12.8	12.8	—	—	—	—	—	139	137	146	102	
F 70 3_13.9	13.9	—	—	—	—	—	137	135	144	100	
F 70 3_16.3	16.3	39	—	—	—	58	117	115	124	80	
F 70 3_17.7	17.7	37	—	—	—	56	116	113	123	79	
F 70 3_20.9	20.9	26	—	—	—	45	105	102	—	68	
F 70 3_22.6	22.6	26	—	—	—	44	104	102	—	67	
F 70 3_24.6	24.6	21	—	—	—	40	99	97	—	62	
F 70 3_27.7	27.7	—	—	—	—	—	128	126	135	73	
F 70 3_30.0	30.0	—	—	—	—	—	127	125	134	73	
F 70 3_35.4	35.4	—	—	—	—	—	114	112	121	77	
F 70 3_38.4	38.4	—	—	—	—	—	114	111	121	77	
F 70 3_45.2	45.2	23	—	—	—	42	101	99	108	65	
F 70 3_49.0	49.0	23	—	—	—	42	101	99	108	65	
F 70 3_57.7	57.7	17	—	—	—	36	95	93	—	58	
F 70 3_62.5	62.5	17	—	—	—	36	95	93	—	58	
F 70 3_67.9	67.9	14	—	—	—	33	92	90	—	55	
F 70 3_73.6	73.6	14	—	—	—	33	92	90	—	55	
F 70 3_85.4	85.4	9.0	11	11	13	13	28	87	85	—	50
F 70 3_92.5	92.5	9.0	11	11	13	13	28	87	85	—	50
F 70 3_101.2	101.2	6.3	8.9	8.8	10	10	25	85	82	—	47
F 70 3_109.6	109.6	6.3	8.9	8.8	10	10	25	85	82	—	47
F 70 3_122.7	122.7	5.1	7.9	7.8	9.1	9.1	24	83	81	—	46
F 70 3_133.0	133.0	5.1	7.9	7.8	9.1	9.1	24	83	81	—	46
F 70 3_153.8	153.8	3.2	6.0	6.0	7.3	7.3	22	81	79	—	44
F 70 3_166.7	166.7	3.2	6.0	6.0	7.3	7.3	22	81	79	—	44
F 70 3_180.9	180.9	2.3	5.1	5.1	6.3	6.3	21	81	78	—	43
F 70 3_196.0	196.0	2.3	5.1	5.0	6.3	6.3	21	81	78	—	43

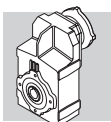
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.






## F 80

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]										
			 IEC									
		80	90	100	112	132	160	180	200	225		
F 80 3_10.3	10.3	—	—	—	—	—	—	286	300	578	252	
F 80 3_11.2	11.2	—	—	—	—	—	—	277	291	569	244	
F 80 3_12.9	12.9	—	—	—	—	—	—	217	218	231	509	
F 80 3_14.0	14.0	—	—	—	—	—	—	212	212	226	504	
F 80 3_16.2	16.2	—	—	—	—	—	—	173	171	180	464	
F 80 3_17.6	17.6	—	—	—	—	—	—	170	167	177	461	
F 80 3_20.3	20.3	60	—	—	—	79	139	136	146	431	102	
F 80 3_22.0	22.0	58	—	—	—	77	136	134	143	429	100	
F 80 3_25.2	25.2	43	—	—	—	62	121	119	150	413	84	
F 80 3_28.8	28.8	—	—	—	—	—	—	189	203	480	155	
F 80 3_31.3	31.3	—	—	—	—	—	—	188	201	479	154	
F 80 3_36.0	36.0	—	—	—	—	—	155	155	169	447	121	
F 80 3_39.0	39.0	—	—	—	—	—	154	154	168	446	121	
F 80 3_45.3	45.3	—	—	—	—	—	133	132	141	425	97	
F 80 3_49.1	49.1	—	—	—	—	—	133	131	140	425	97	
F 80 3_56.7	56.7	35	—	—	—	54	113	111	120	406	77	
F 80 3_61.5	61.5	35	—	—	—	54	113	111	120	406	76	
F 80 3_70.4	70.4	27	—	—	—	46	105	103	133	397	68	
F 80 3_76.3	76.3	27	—	—	—	45	105	103	133	396	68	
F 80 3_85.2	85.2	20	—	—	—	39	99	96	126	389	62	
F 80 3_92.3	92.3	20	—	—	—	39	99	96	126	389	61	
F 80 3_105.0	105.0	14	16	16	17	17	32	92	90	119	383	
F 80 3_113.8	113.8	14	16	16	17	17	32	92	90	119	382	
F 80 3_122.5	122.5	13	15	15	17	17	32	91	89	118	381	
F 80 3_132.7	132.7	13	15	15	16	16	31	91	89	118	381	
F 80 3_147.9	147.9	8.5	11	11	13	13	27	87	85	114	377	
F 80 3_160.2	160.2	8.5	11	11	13	13	27	87	84	—	—	
F 80 3_184.6	184.6	5.1	7.9	7.8	9.1	9.1	24	83	81	—	—	
F 80 3_200.0	200.0	5.0	7.9	7.8	9.1	9.1	24	83	81	—	—	

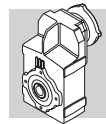
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



## F 90

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]											
			 IEC										
		80	90	100	112	132	160	180	200	225	250		
F 90 3_10.3	10.3	—	—	—	—	—	—	549	559	843	870	850	
F 90 3_11.1	11.1	—	—	—	—	—	—	529	539	823	850	830	
F 90 3_13.4	13.4	—	—	—	—	—	—	373	383	667	694	674	
F 90 3_14.5	14.5	—	—	—	—	—	—	361	371	655	682	662	
F 90 3_16.5	16.5	—	—	—	—	—	—	286	296	580	607	587	
F 90 3_17.9	17.9	—	—	—	—	—	—	278	288	572	599	579	
F 90 3_20.6	20.6	—	—	—	—	—	224	222	232	516	542	513	
F 90 3_22.3	22.3	—	—	—	—	—	220	217	227	511	537	508	
F 90 3_25.4	25.4	103	—	—	—	122	181	179	188	474	500	471	
F 90 3_28.6	28.6	—	—	—	—	—	—	291	301	585	613	593	
F 90 3_31.0	31.0	—	—	—	—	—	—	289	299	583	610	590	
F 90 3_37.4	37.4	—	—	—	—	—	—	222	232	516	543	523	
F 90 3_40.5	40.5	—	—	—	—	—	—	220	230	514	541	521	
F 90 3_46.1	46.1	—	—	—	—	—	—	186	196	480	507	487	
F 90 3_49.9	49.9	—	—	—	—	—	—	185	195	479	506	486	
F 90 3_57.3	57.3	—	—	—	—	—	161	158	168	452	479	450	
F 90 3_62.1	62.1	—	—	—	—	—	160	158	167	451	478	449	
F 90 3_70.8	70.8	61	—	—	—	80	139	137	146	432	458	429	
F 90 3_76.7	76.7	60	—	—	—	79	139	136	146	431	458	429	
F 90 3_88.4	88.4	44	—	—	—	63	123	120	151	414	441	412	
F 90 3_95.8	95.8	44	—	—	—	63	122	120	151	414	441	412	
F 90 3_103.3	103.3	41	—	—	—	59	119	117	146	410	436	408	
F 90 3_111.9	111.9	40	—	—	—	59	119	116	146	409	436	407	
F 90 3_126.8	126.8	26	29	29	30	30	45	105	102	132	395	422	393
F 90 3_137.3	137.3	26	29	29	30	30	45	104	102	132	395	422	393
F 90 3_150.3	150.3	21	24	24	25	25	40	100	97	127	390	417	388
F 90 3_162.8	162.8	21	24	24	25	25	40	100	97	127	390	417	388
F 90 3_179.2	179.2	14	16	16	18	18	33	92	90	—	—	—	381
F 90 3_194.2	194.2	14	16	16	17	17	33	92	90	—	—	—	381

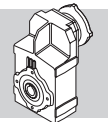
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



## 63 EXACT RATIOS

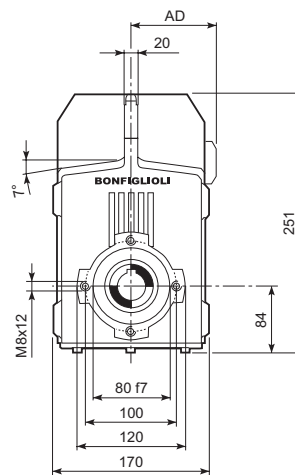
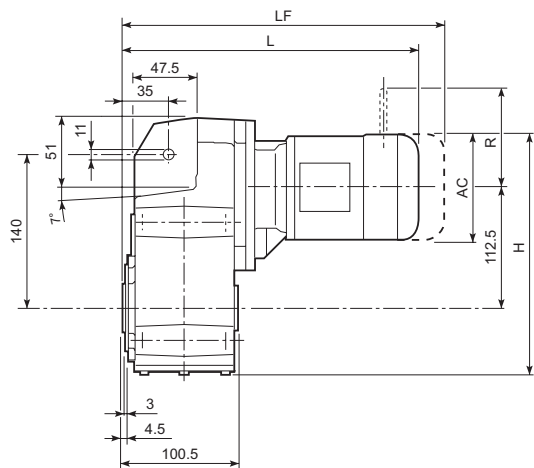
iN	F 10	F 20	F 25	F 31	F 41	F 51	F 60	F 70	F 80	F 90
6.3		6.41210								
7.1	7.40443		6.86957	6.94907	6.72727	7.19408				
8.0		7.83478	8.39375	8.22917						
9.0	8.58204	8.73227	9.35526	9.01630	9.13580	9.05114	8.96000			
10.0	9.76974	10.03069	10.62451	10.74747			9.70667	10.01538	10.33846	10.26577
11.2	11.53759	11.23370			10.77273	11.11005	11.75320	10.85000	11.20000	11.12125
12.5	13.02632		12.98182	12.72727		13.97796	12.73263	12.81731	12.90240	13.41346
14.0	14.64777	14.79842	14.46890	13.94466	14.62963		14.47385	13.88542	13.97760	14.53125
16.0	16.97738		16.62032	16.80000	17.11667		15.68000	16.34455	16.24615	16.52538
18.0		18.08182	18.61364	18.48804	18.89130	18.82155	19.06872	17.70660	17.60000	17.90250
20.0	19.32692	20.15311	21.81818	21.11230			20.65778	20.86538	20.33231	20.56731
22.4	22.82418	23.14973	23.75758	23.8636		23.79447	23.46381	22.60417	22.02667	22.28125
25.0	25.76923	25.92614	27.20455	27.27273	24.11579		25.41913	24.55695	25.22585	25.38622
28.0	29.63462	30.38961	30.03636	30.12121	30.11875	30.03828	29.61538	27.69231	28.84615	28.61169
31.5	32.98462	33.09091	32.18182	34.36364			32.08333	30.00000	31.25000	30.99600
35.5	35.34066	37.89205	36.41958	37.67273	38.18333	37.13636	38.84771	35.43956	36.00000	37.38462
40.0	39.64497	41.83636	40.72727	40.36364			42.08502	38.39286	39.00000	40.50000
45.0	44.66667	44.82468	45.56607	44.64336	47.92667		47.84024	45.19231	45.32967	46.05785
50.0	48.72727	50.72727	50.78571	47.54630	51.49270	48.89965	51.82692	48.95833	49.10714	49.89600
56.0	56.69231	56.72727	58.33718	52.09420	60.24646		63.02761	57.69231	56.73077	57.32308
63.0	62.99145	61.88430	65.33371	62.76111	66.49275	65.84416	68.27991	62.50000	61.45833	62.10000
71.0	71.12308	69.13636	76.58163	69.06725			77.55467	73.55769	70.38462	70.75385
80.0	81.31624	76.81818	83.38889	78.87092	84.88166	83.24111	84.01756	85.38462	76.25000	76.65000
90.0	91.48077	90.40909	95.48772	87.36632			98.19838	92.50000	92.30769	88.39385
100.0	106.02198	101.63636	105.42738	101.88492	106.01061	105.08407	106.38158	101.18343	105.00000	103.33491
112.2		114.34091	112.95791	112.52623			120.45488	109.61538	113.75000	111.94615
125.5	127.12821	132.19481	127.83242	128.37500	134.39596	129.91558	130.49279	122.72727	122.48521	126.77538
140.0		156.30469	142.95238	140.73704			150.35503	132.95455	132.69231	150.30533
160.0		172.57500	155.94805	166.77778	168.69010	165.62338	162.88462	166.66667	160.22727	162.83077
180.0		184.90179	174.22321	185.43056	180.73939	202.39481	185.89349	180.94406	184.61538	179.21958
200.0		209.25000	193.58135	202.28788	198.92028	216.85158	201.38462	196.02273	200.00000	194.15455
225.0		234.00000	227.83036	228.22222	220.13131	239.84416	217.64679	216.52422	218.49174	213.59178
250.0		255.27273	256.12302	253.58025	240.14325	262.11039	259.08284	234.56790	273.89277	231.39109
280.0		285.18750	288.13839	293.83611	266.93818	285.93861	280.67308	280.93645	296.71717	268.72770
315.0		316.87500	333.13010	332.82407	296.59798	317.26753	315.38899	304.34783	353.67893	291.12168
355.0		372.93750		374.42708	344.79515	352.51948	341.67140	372.46964	383.15217	361.84615
400.0		419.25000	393.88686	418.86023		429.09330	399.34008	403.50877	451.49061	392.00000
450.0		471.65625	434.88795	462.60785	433.67975		432.61842	471.15385	489.11483	457.45099
500.0			465.95137	527.76389			489.84985	510.41667	563.87675	495.57191
560.0		545.30357	527.30872	578.58560	549.80165	530.48864	530.67067	606.83761	610.86648	577.48888
630.0			589.67857	619.91314	690.09587	676.29545	611.44379	657.40741	714.86014	625.61296
710.0			643.28571	685.64198	739.38843	826.44545	755.96686	758.97436	774.43182	713.95030
800.0			718.67076	762.32562	813.76478	885.47727	818.96410	822.22222	897.27273	773.44615
900.0			798.52307	831.62795	900.53719	979.36364	885.09695	899.40828	972.04545	910.18225
1000.0			939.80022	938.24691	982.40421	1070.28409	958.85503	974.35897	1058.06885	986.03077
1125.0			1056.50744	1042.49657	1092.01983	1167.58264	1053.60355	1090.90909	1146.24126	1112.25941
1250.0			1188.57087	1207.99290	1213.35537	1295.50909	1141.40385	1181.81818	1277.33630	1204.94769
1400.0			1374.16167	1368.27675	1410.52562	1439.45455		1367.52137	1383.78099	1427.90059
1600.0				1539.31134				1584.61538	1577.62238	1571.37386
1800.0								1716.66667	1709.09091	1702.32168
2000.0								2019.23077	1833.98601	1937.26864
2250.0								2187.50000	1986.81818	2098.70769





## 64 DIMENSIONS

### F 10...M/ME/MX

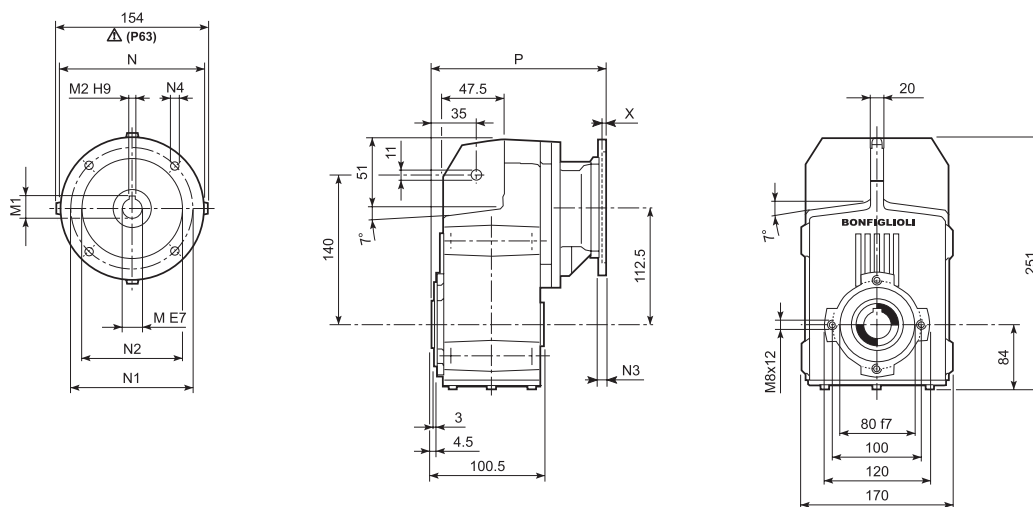


								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD
F 10 2	S05	M05	121	220.5	311.5	95	12	377.5	13	96	122	116	95
F 10 2	S1	M1	138	265.5	340.5	108	14	401.5	17	103	135	124	108
F 10 2	S2	ME2S	156	274.5	369.5	119	18	—	—	—	—	—	—
F 10 2	S2	MX2S	156	274.5	413.5	119	23	—	—	—	—	—	—
F 10 2	S3	ME3S	195	294	412.5	142	22	—	—	—	—	—	—
F 10 2	S3	MX3S	195	294	444.5	142	25	—	—	—	—	—	—
F 10 2	S3	ME3L	195	294	444.5	142	24	—	—	—	—	—	—
F 10 2	S3	MX3L	195	294	488.5	142	30	—	—	—	—	—	—



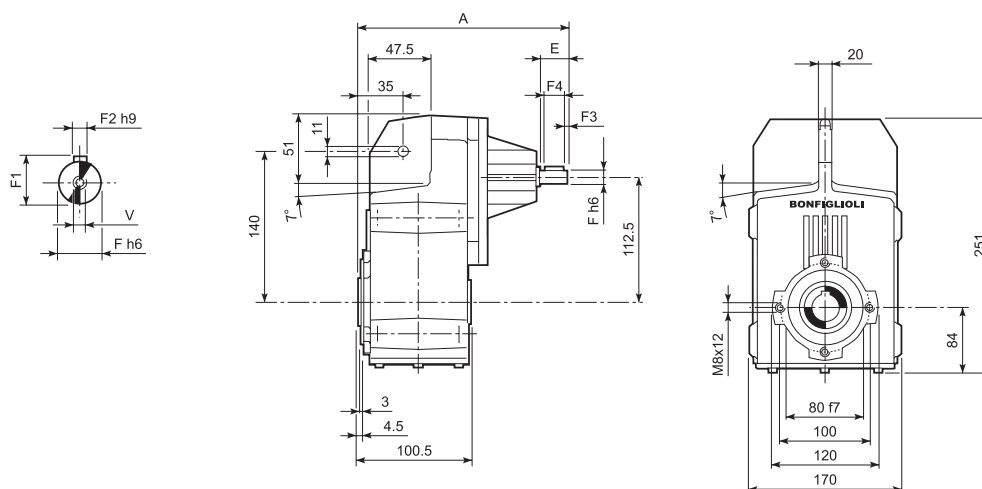


## F 10...P(IEC)

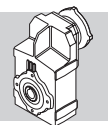


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg		
		F 10 2	P63	11	12.8	4	140	115	95	—	M8x19	4	185.5	8
		F 10 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	185.5	8
		F 10 2	P80	19	21.8	6	200	165	130	—	M10x14.5	4	205	9
		F 10 2	P90	24	27.3	8	200	165	130	—	M10x14.5	4	205	9
		F 10 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	215	13
		F 10 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	215	13

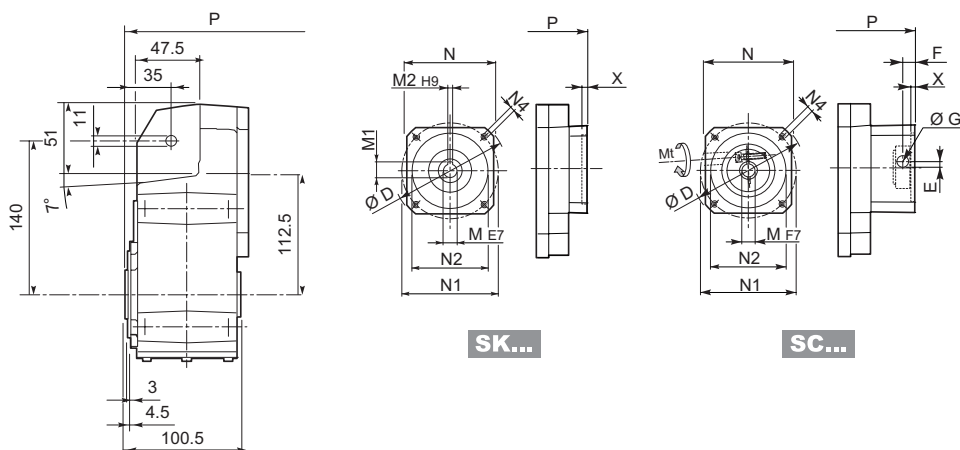
## F 10...HS



		A	E	F	F1	F2	F3	F4	V	Kg		
		F 10 2	HS	192	40	16	18	5	2.5	35	M6x16	7.5



## F 10...SK / SC



SK...

SC...

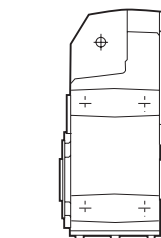
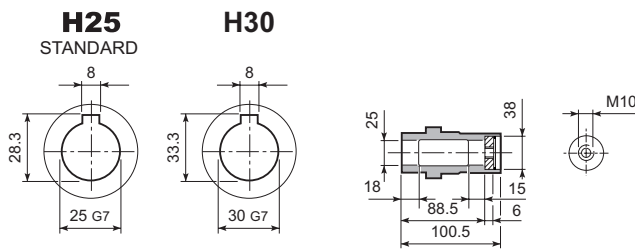
		D	M	M1	M2	N	N1	N2	N4	X	P	Kg
F 10 2	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	157	8
F 10 2	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	164	8
F 10 2	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	164	8
F 10 2	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	205	9
F 10 2	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	205	9
F 10 2	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	205	9
F 10 2	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	205	9
F 10 2	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	205	9
F 10 2	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	205	9

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P	Kg
F 10 2	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	184	8
F 10 2	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	184	9
F 10 2	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	184	9
F 10 2	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	228.5	10
F 10 2	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	228.5	10
F 10 2	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	228.5	10
F 10 2	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	228.5	10
F 10 2	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	228.5	11
F 10 2	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	228.5	11

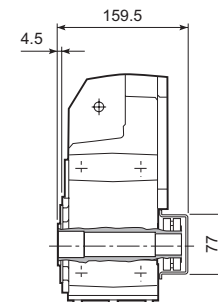
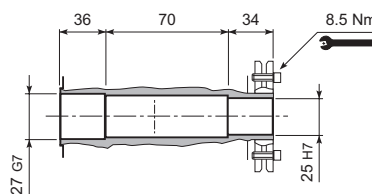


# F 10

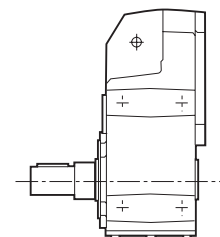
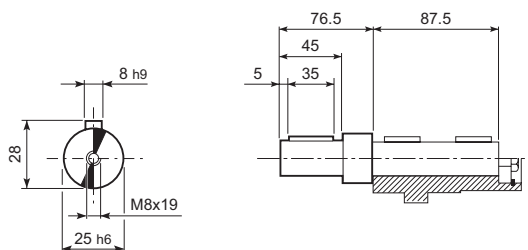
## F 10...H



## F 10...S

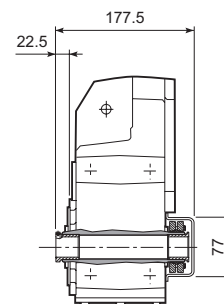
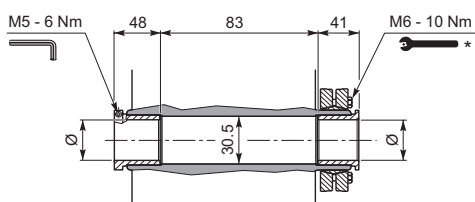


## F 10...R

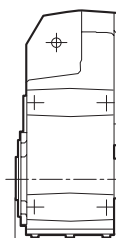
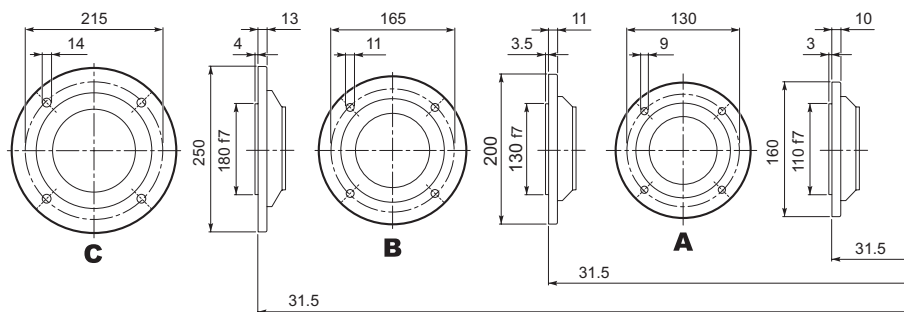


## F 10...QF

	Ø
QF25	25
QF30	30



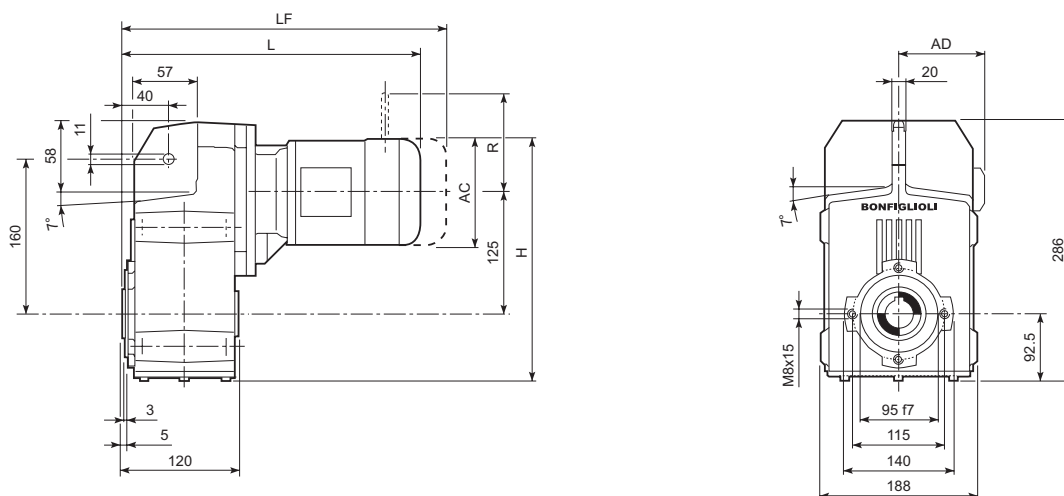
## F 10...F...



\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



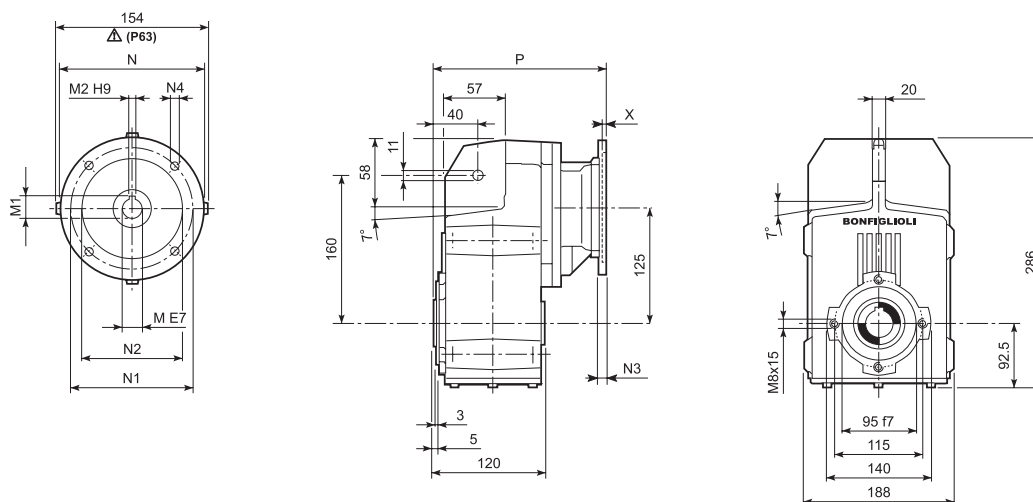
## F 20...M/ME/MX



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD
F 20 2	S05	M05	121	278.2	323.5	95	15	389.5	17	96	122	116	95
F 20 2	S1	M1	138	286.7	352.5	108	17	413.5	20	103	135	124	108
F 20 2	S2	ME2S	156	295.7	381.5	119	21	—	—	—	—	—	—
F 20 2	S2	MX2S	156	295.7	425.5	119	26	—	—	—	—	—	—
F 20 2	S3	ME3S	195	315.2	424.5	142	26	—	—	—	—	—	—
F 20 2	S3	MX3S	195	315.2	456.5	142	29	—	—	—	—	—	—
F 20 2	S3	ME3L	195	315.2	456.5	142	33	—	—	—	—	—	—
F 20 2	S3	MX3L	195	315.2	500.5	142	39	—	—	—	—	—	—
F 20 3	S05	M05	121	278.2	379	95	17	445	18	96	122	116	95
F 20 3	S1	M1	138	286.7	408	108	19	469	21	103	135	124	108
F 20 3	S2	ME2S	156	295.7	437	119	22	—	—	—	—	—	—
F 20 3	S2	MX2S	156	295.7	481	119	27	—	—	—	—	—	—
F 20 3	S3	ME3S	195	315.2	480	142	27	—	—	—	—	—	—
F 20 3	S3	MX3S	195	315.2	512	142	30	—	—	—	—	—	—
F 20 3	S3	ME3L	195	315.2	512	142	34	—	—	—	—	—	—
F 20 3	S3	MX3L	195	315.2	556	142	40	—	—	—	—	—	—

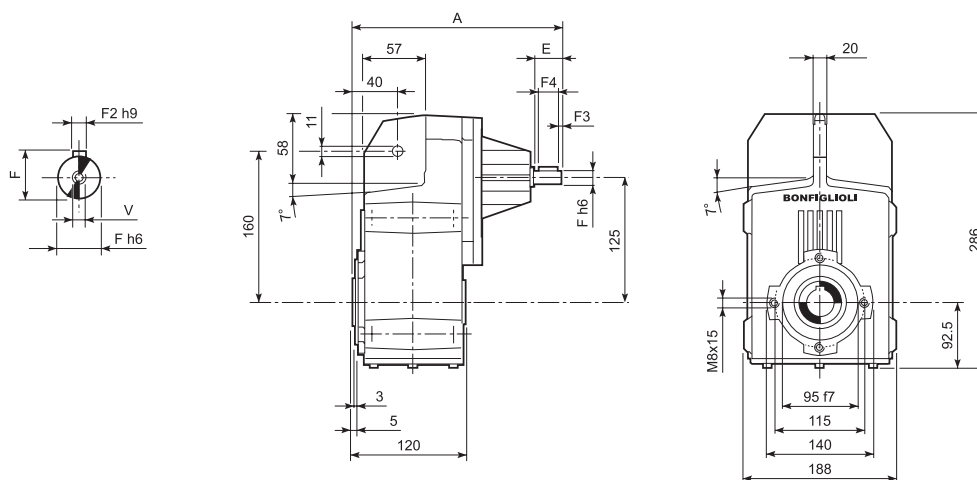


## F 20...P(IEC)

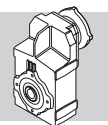


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 20 2	P63	11	12.8	4	140	115	95	—	M8x19	4	197.5	12
F 20 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	197.5	12
F 20 2	P80	19	21.8	6	200	165	130	—	M10x14.5	4	217	13
F 20 2	P90	24	27.3	8	200	165	130	—	M10x14.5	4	217	12
F 20 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	227	16
F 20 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	227	16
F 20 3	P63	11	12.8	4	140	115	95	—	M8x19	4	253	13
F 20 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	253	13
F 20 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	272.5	14
F 20 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	272.5	14
F 20 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	282.5	18
F 20 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	282.5	18

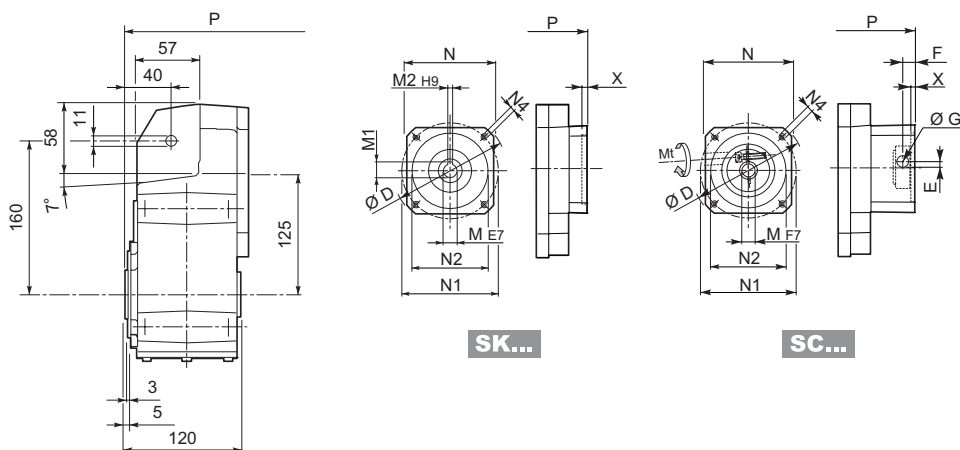
## F 20...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 20 2	HS	247.5	40	19	21.5	6	2.5	35	M6x16	11.5
F 20 3		260	40	16	18	5	2.5	35	M6x16	12.4



## F 20...SK / SC



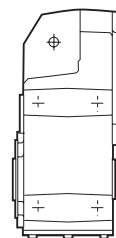
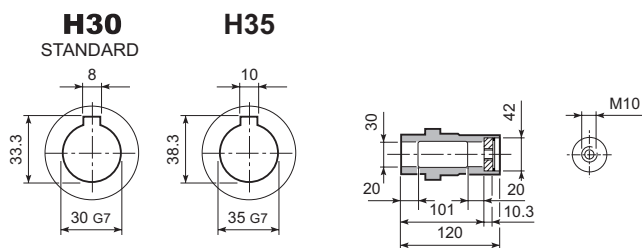
		D	M	M1	M2	N	N1	N2	N4	X	2x		3x	
											P	Kg	P	Kg
F 20 2/3	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	169	11	224.5	12
F 20 2/3	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	176	12	231.5	13
F 20 2/3	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	217	12	231.5	13
F 20 2/3	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	217	13	272.5	14
F 20 2/3	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	217	13	272.5	14
F 20 2/3	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	217	13	272.5	14
F 20 2/3	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	217	13	272.5	14
F 20 2/3	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	217	13	272.5	14
F 20 2/3	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	217	13	272.5	14

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2x		3x	
														P	Kg	P	Kg
F 20 2/3	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	196	12	251.5	13
F 20 2/3	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	196	13	251.5	14
F 20 2/3	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	196	13	251.5	14
F 20 2/3	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	240.5	14	296	15
F 20 2/3	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	240.5	14	296	15
F 20 2/3	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	240.5	14	296	15
F 20 2/3	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	240.5	14	296	15
F 20 2/3	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	240.5	15	296	16
F 20 2/3	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	240.5	15	296	16

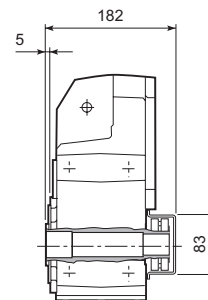
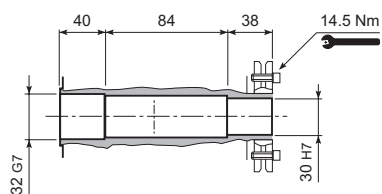


# F 20

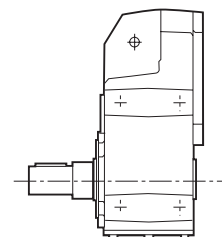
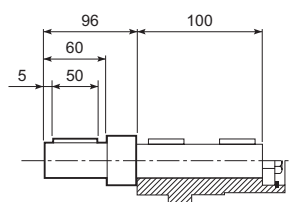
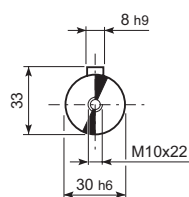
## F 20...H



## F 20...S

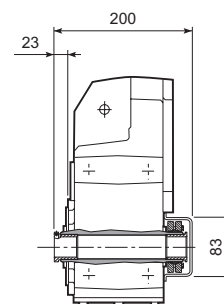
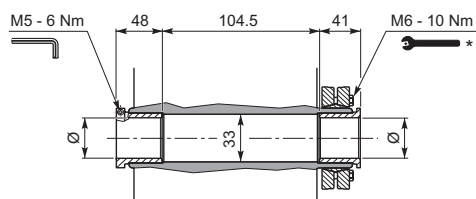


## F 20...R

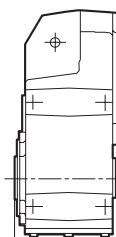
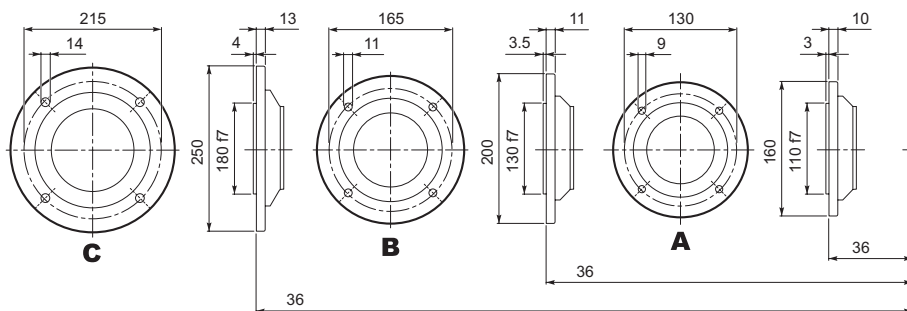


## F 20...QF

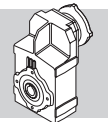
	Ø
QF25	25
QF30	30



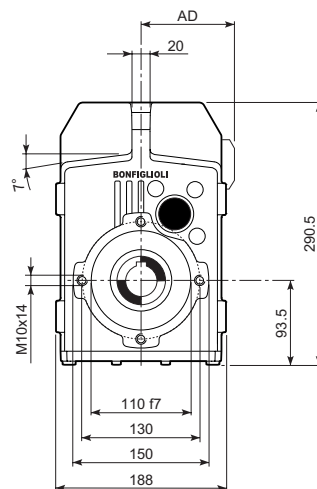
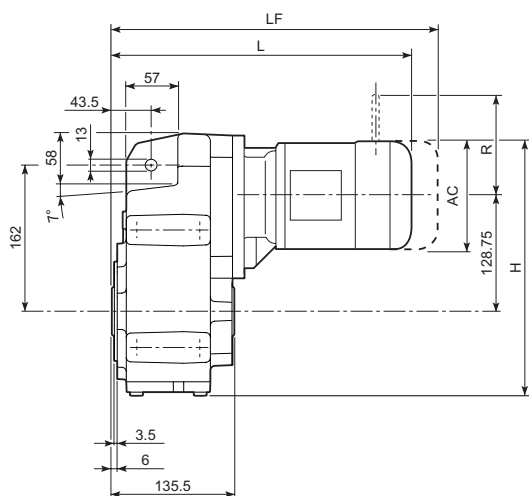
## F 20...F...



\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



## F 25...M/ME/MX

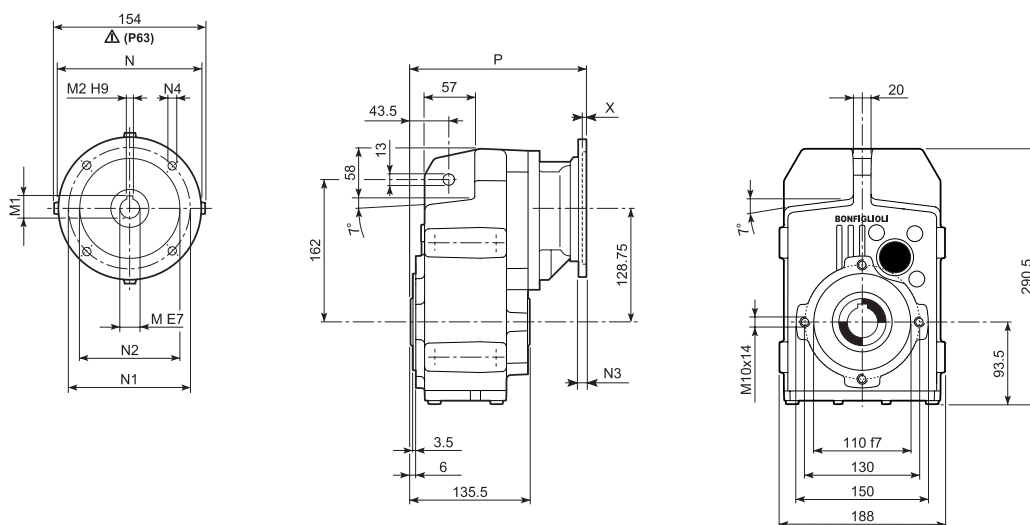


								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		R	AD	R	AD
F 25 2/3	S05	M05	121	283	339	95	15	405	17	96	122	116	95
F 25 2/3	S1	M1	138	291.5	368	108	17	429	20	103	135	124	108
F 25 2/3	S2	ME2S	156	300.5	397	119	21	—	—	—	—	—	—
F 25 2/3	S2	MX2S	156	300.5	441	119	26	—	—	—	—	—	—
F 25 2/3	S3	ME3S	195	320	440	142	26	—	—	—	—	—	—
F 25 2/3	S3	MX3S	195	320	472	142	29	—	—	—	—	—	—
F 25 2/3	S3	ME3L	195	320	472	142	33	—	—	—	—	—	—
F 25 2/3	S3	MX3L	195	320	516	142	39	—	—	—	—	—	—
F 25 4	S05	M05	121	283	394.5	95	17	460.5	18	96	122	116	95
F 25 4	S1	M1	138	291.5	423.5	108	19	484.5	21	103	135	124	108
F 25 4	S2	ME2S	156	300.5	452.5	119	22	—	—	—	—	—	—
F 25 4	S2	MX2S	156	300.5	496.5	119	27	—	—	—	—	—	—
F 25 4	S3	ME3S	195	320	495.5	142	27	—	—	—	—	—	—
F 25 4	S3	MX3S	195	320	527.5	142	30	—	—	—	—	—	—
F 25 4	S3	ME3L	195	320	527.5	142	34	—	—	—	—	—	—
F 25 4	S3	MX3L	195	320	571.5	142	40	—	—	—	—	—	—



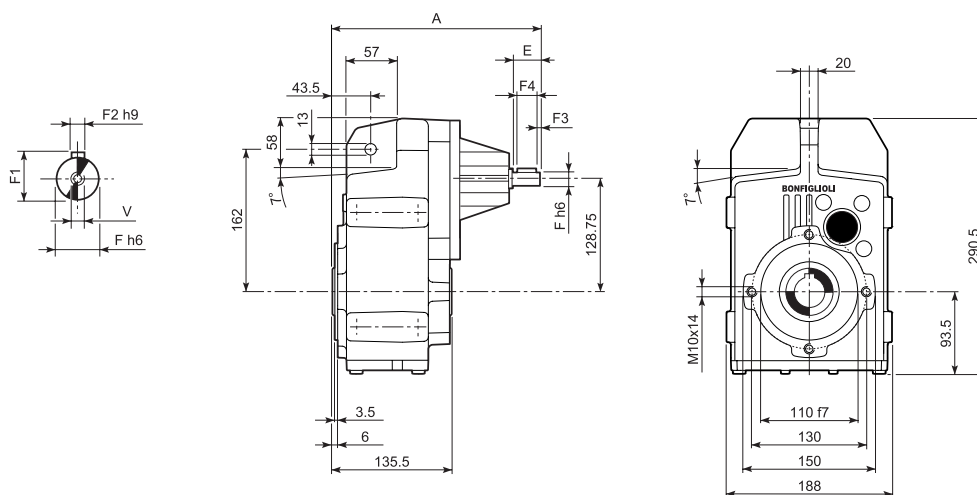


## F 25...P(IEC)

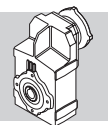


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 25 2/3	P63	11	12.8	4	140	115	95	—	M8x19	4	213	12
F 25 2/3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	213	12
F 25 2/3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	232.5	13
F 25 2/3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	232.5	13
F 25 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	242.5	16
F 25 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	242.5	16
F 25 4	P63	11	12.8	4	140	115	95	—	M8x19	4	268.5	13
F 25 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	268.5	13
F 25 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	288	14
F 25 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	288	14
F 25 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	298	18
F 25 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	298	18

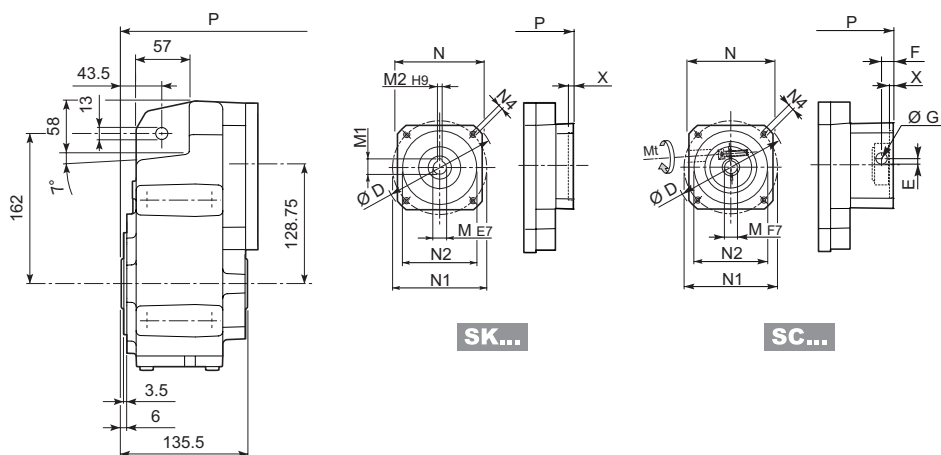
## F 25...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 25 2	HS	263	40	19	21.5	6	2.5	35	M6x16	11.5
F 25 3		263	40	19	21.5	6	2.5	35	M6x16	11.5
F 25 4		275.5	40	16	18	5	2.5	35	M6x16	12.5



## F 25...SK / SC



**SK...**

**SC...**

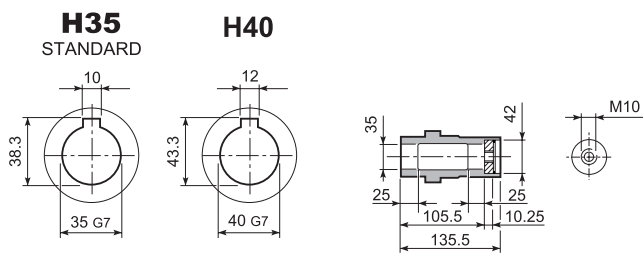
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x			
											P	Kg	P	Kg		
		F 25 2/3/4	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	184.5	11	240	12
		F 25 2/3/4	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	191.5	12	247	13
		F 25 2/3/4	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	191.5	12	247	13
		F 25 2/3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	232.5	13	288	14
		F 25 2/3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	232.5	13	288	14
		F 25 2/3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	232.5	13	288	14
		F 25 2/3/4	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	232.5	13	288	14
		F 25 2/3/4	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	232.5	13	288	14
		F 25 2/3/4	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	232.5	13	288	14

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x			
														P	Kg	P	Kg		
		F 25 2/3/4	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	211.5	12	267	13
		F 25 2/3/4	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	211.5	13	267	14
		F 25 2/3/4	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	211.5	13	267	14
		F 25 2/3/4	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	256	14	311.5	15
		F 25 2/3/4	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	256	14	311.5	15
		F 25 2/3/4	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	256	14	311.5	15
		F 25 2/3/4	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	256	14	311.5	15
		F 25 2/3/4	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	256	15	311.5	16
		F 25 2/3/4	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	256	15	311.5	16

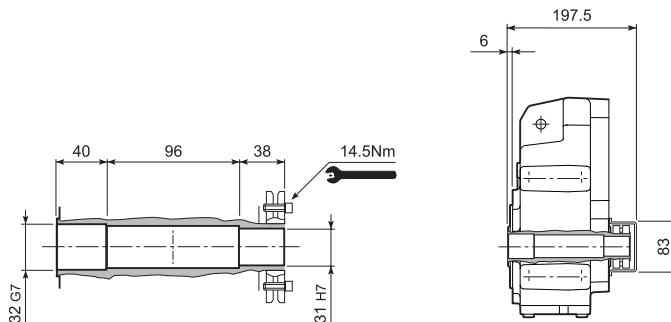


# F 25

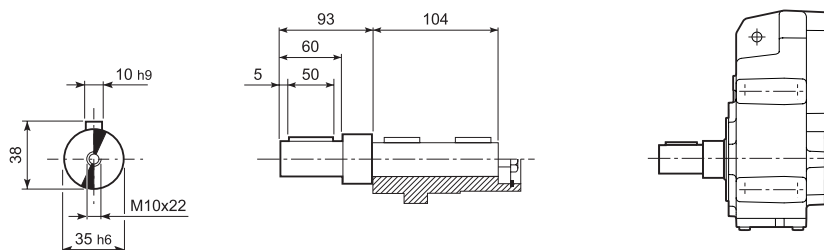
## F 25...H



## F 25...S



## F 25...R

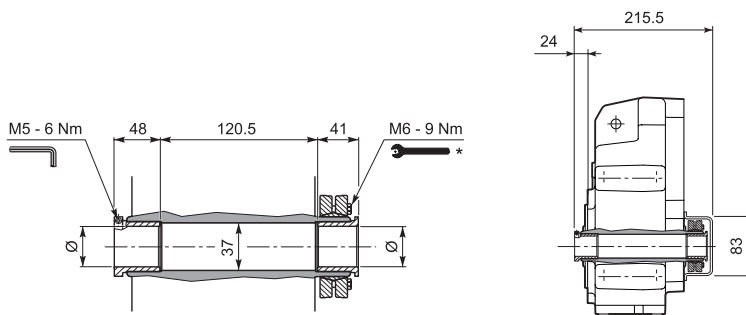


## F 25...QF

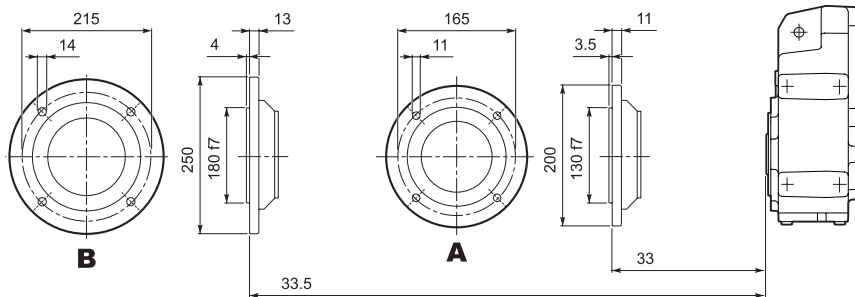
	Ø
QF30	30
QF32	32



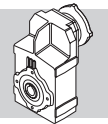
	M <sub>n2</sub> max [Nm]
F 25 QF30	350



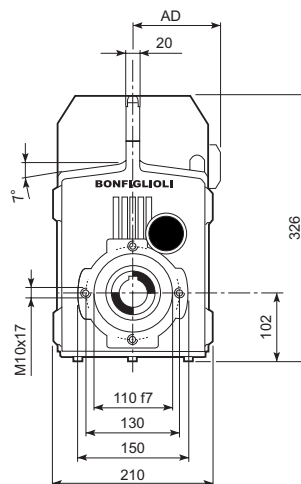
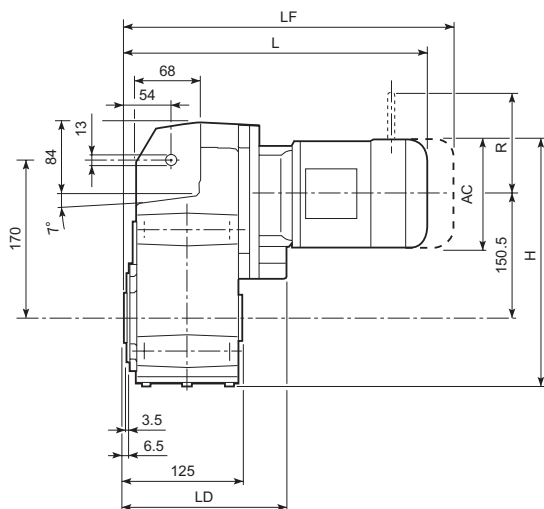
## F 25...F...



\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



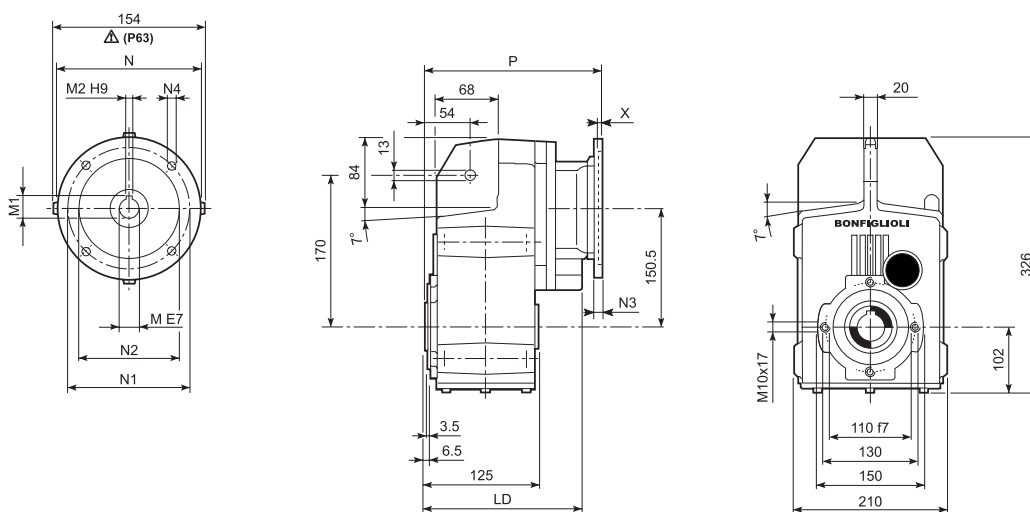
## F 31...M/ME/MX



										M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD		LF		R	AD	R	AD	
F 31 2/3	S1	M1	138	321.3	380.5	183.5	108	22	441.5	25	103	135	124	108	
F 31 2/3	S2	ME2S	156	330.3	409.5	195.5	119	26	—	—	—	—	—	—	
F 31 2/3	S2	MX2S	156	330.3	453.5	195.5	119	31	—	—	—	—	—	—	
F 31 2/3	S3	ME3S	195	349.8	452.5	205.5	142	31	—	—	—	—	—	—	
F 31 2/3	S3	MX3S	195	349.8	484.5	205.5	142	34	—	—	—	—	—	—	
F 31 2/3	S3	ME3L	195	349.8	484.5	205.5	142	40	—	—	—	—	—	—	
F 31 2/3	S3	MX3L	195	349.8	528.5	205.5	142	46	—	—	—	—	—	—	
F 31 2/3	S4	ME4	MX4	258	381.3	592.5	—	193	72	—	—	—	—	—	
F 31 2/3	S4	ME4LA	MX4LA	258	381.3	592.5	—	193	78	—	—	—	—	—	
F 31 4	S05	M05	121	312.8	409	—	95	20	475	22	96	122	116	95	
F 31 4	S1	M1	138	321.3	438	—	108	22	499	25	103	135	124	108	
F 31 4	S2	ME2S	156	330.3	467	—	119	26	—	—	—	—	—	—	
F 31 4	S2	MX2S	156	330.3	511	—	119	31	—	—	—	—	—	—	
F 31 4	S3	ME3S	195	349.8	510	—	142	31	—	—	—	—	—	—	
F 31 4	S3	MX3S	195	349.8	542	—	142	34	—	—	—	—	—	—	
F 31 4	S3	ME3L	195	349.8	542	—	142	41	—	—	—	—	—	—	
F 31 4	S3	MX3L	195	349.8	586	—	142	47	—	—	—	—	—	—	

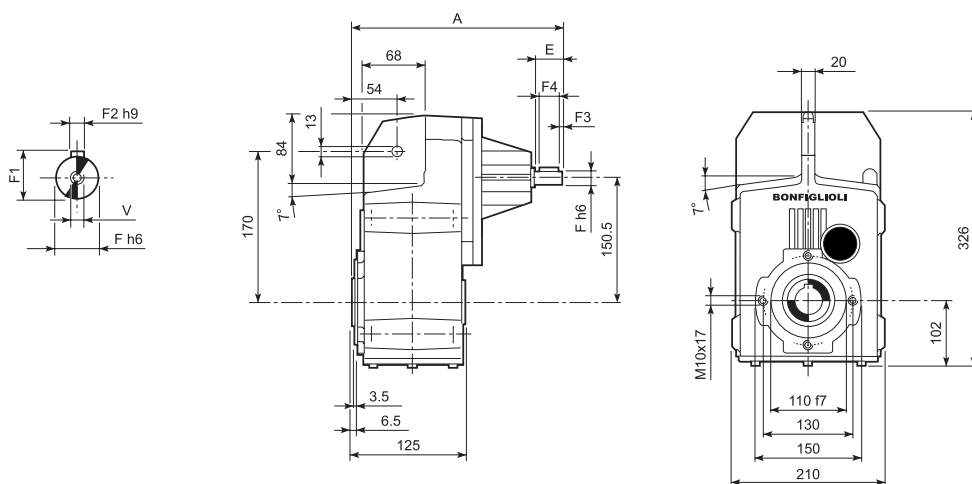


## F 31...P(IEC)

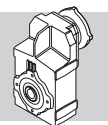


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 31 2/3	P63	195.5	11	12.8	4	140	115	95	—	M8x19	4	225.5	17
F 31 2/3	P71	195.5	14	16.3	5	160	130	110	—	M8x16	4.5	225.5	17
F 31 2/3	P80	205.5	19	21.8	6	200	165	130	—	M10x14.5	4	245	18
F 31 2/3	P90	205.5	24	27.3	8	200	165	130	—	M10x14.5	4	245	17
F 31 2/3	P100	205.5	28	31.3	8	250	215	180	—	M12x16	4.5	255	21
F 31 2/3	P112	205.5	28	31.3	8	250	215	180	—	M12x16	4.5	255	21
F 31 2/3	P132	—	38	41.3	10	300	265	230	—	14	5	291.5	24
F 31 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	283	17
F 31 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	283	17
F 31 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	302.5	18
F 31 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	302.5	18
F 31 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	312.5	22
F 31 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	312.5	22

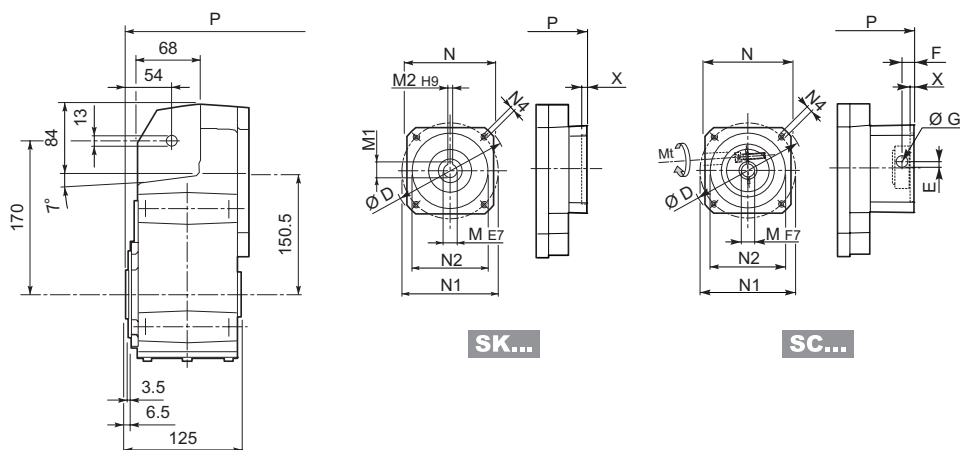
## F 31...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 31 2	HS	275.5	40	19	21.5	6	2.5	35	M6x16	16.7
F 31 3		275.5	40	19	21.5	6	2.5	35	M6x16	16.7
F 31 4		290	40	16	18	5	2.5	35	M6x16	16.5



## F 31...SK / SC



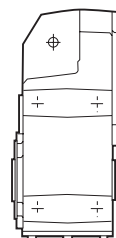
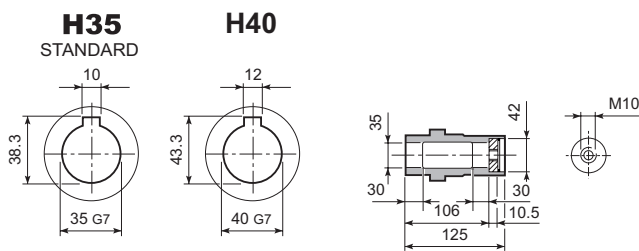
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P	Kg	P	Kg
	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	197	16	254.5	16
	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	204	17	261.5	17
	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	204	17	261.5	17
	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	245	18	302.5	18
	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	245	18	302.5	18
	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	245	18	302.5	18
	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	245	18	302.5	18
	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	245	18	302.5	18
	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	245	18	302.5	18
	SK 130A	188	24	27.3	8	142	165	130	M10x20	5	245	18	—	—

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P	Kg	P	Kg
	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	224	17	281.5	17
	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	224	18	281.5	18
	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	224	18	281.5	18
	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	268.5	19	326	19
	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	268.5	19	326	19
	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	268.5	19	326	19
	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	268.5	19	326	19
	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	268.5	20	326	20
	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	268.5	20	326	20
	SC 130A	M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	268.5	21	—	—

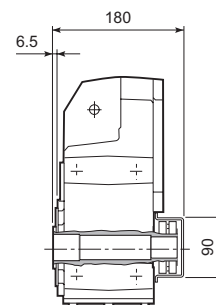
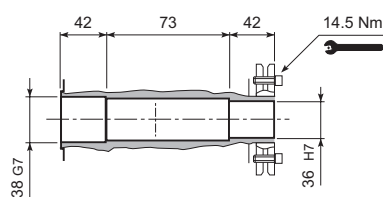


# F 31

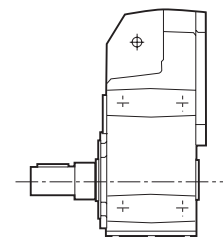
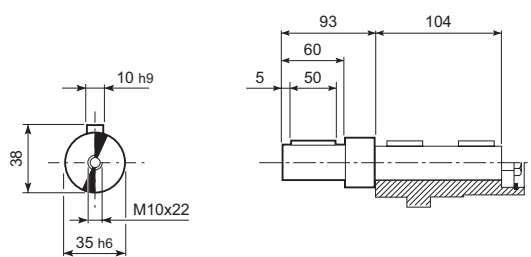
## F 31...H



## F 31...S

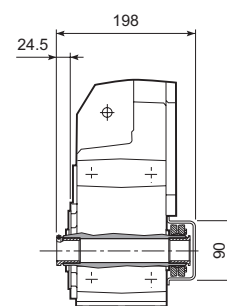
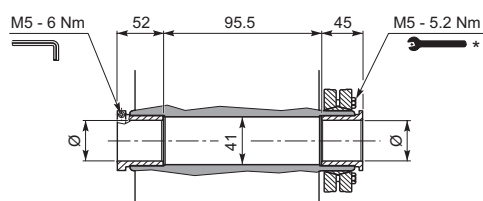


## F 31...R

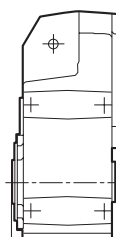
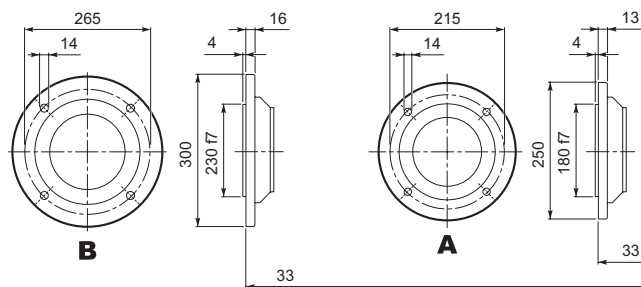


## F 31...QF

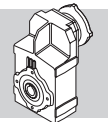
	Ø
QF35	35
QF40	40



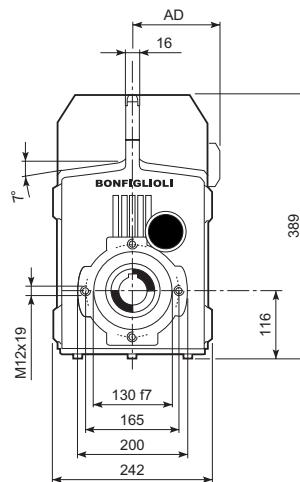
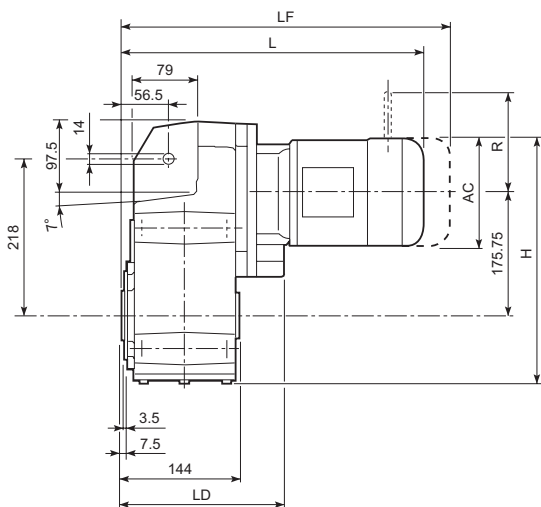
## F 31...F...



\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



## F 41...M/ME/MX

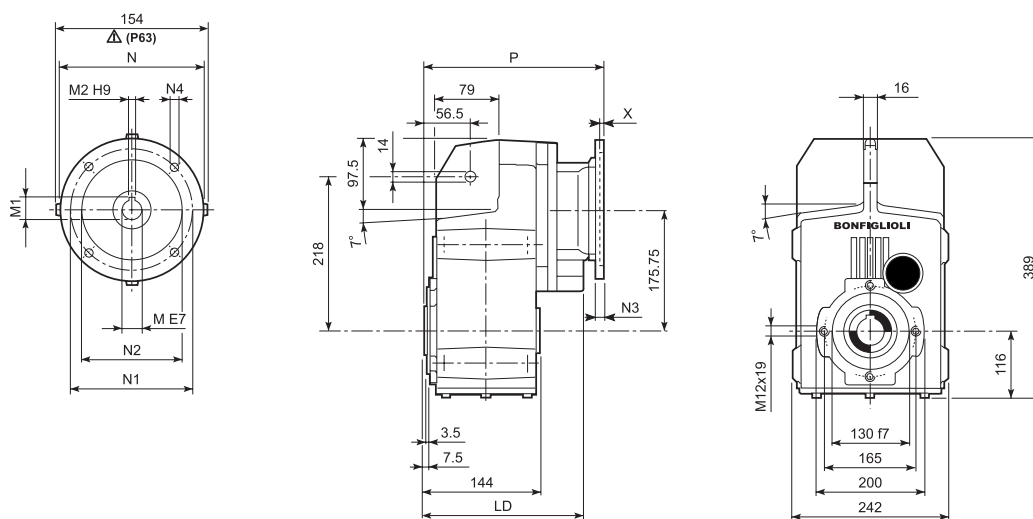


			AC	H	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
F 41 2/3	S1	M1	138	360.8	401	199.5	108	46	462	48	103	135	124	108
F 41 2/3	S2	ME2S	156	369.8	430	215	119	49	—	—	—	—	—	—
F 41 2/3	S2	MX2S	156	369.8	474	215	119	54	—	—	—	—	—	—
F 41 2/3	S3	ME3S	195	389.3	473	231	142	54	—	—	—	—	—	—
F 41 2/3	S3	MX3S	195	389.3	505	231	142	57	—	—	—	—	—	—
F 41 2/3	S3	ME3L	195	389.3	505	231	142	64	—	—	—	—	—	—
F 41 2/3	S3	MX3L	195	389.3	549	231	142	70	—	—	—	—	—	—
F 41 2/3	S4	ME4	258	420.8	613	—	193	96	—	—	—	—	—	—
F 41 2/3	S4	ME4LB	258	420.8	648	—	193	104	—	—	—	—	—	—
F 41 4	S05	M05	231	352.3	433.5	—	95	45	499.5	46	96	122	116	95
F 41 4	S1	M1	138	360.8	462.5	—	108	47	523.5	49	103	135	124	108
F 41 4	S2	ME2S	156	369.8	491.5	—	119	50	—	—	—	—	—	—
F 41 4	S2	MX2S	156	369.8	535.5	—	119	55	—	—	—	—	—	—
F 41 4	S3	ME3S	195	389.3	534.5	—	142	55	—	—	—	—	—	—
F 41 4	S3	MX3S	195	389.3	566.5	—	142	58	—	—	—	—	—	—
F 41 4	S3	ME3L	195	389.3	566.5	—	142	65	—	—	—	—	—	—
F 41 4	S3	MX3L	195	389.3	610.5	—	142	71	—	—	—	—	—	—



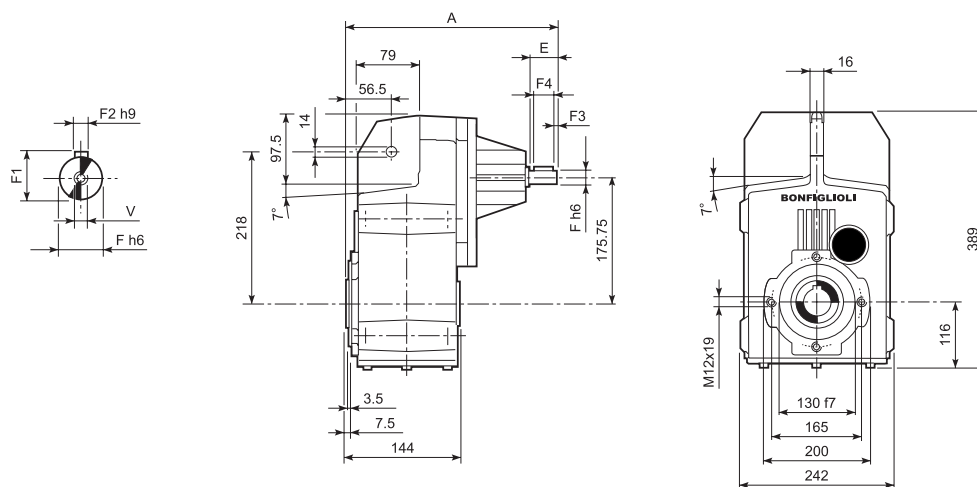


## F 41...P(IEC)

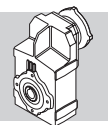


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	kg
F 41 2/3	P63	215	11	12.8	4	140	115	95	—	M8x19	4	246	42
F 41 2/3	P71	215	14	16.3	5	160	130	110	—	M8x16	4.5	246	42
F 41 2/3	P80	231	19	21.8	6	200	165	130	—	M10x14.5	4	265.5	43
F 41 2/3	P90	231	24	27.3	8	200	165	130	—	M10x14.5	4	265.5	43
F 41 2/3	P100	231	28	31.3	8	250	215	180	—	M12x16	4.5	275.5	47
F 41 2/3	P112	231	28	31.3	8	250	215	180	—	M12x16	4.5	275.5	47
F 41 2/3	P132	—	38	41.3	10	300	265	230	16	14	5	312	50
F 41 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	307.5	44
F 41 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	307.5	44
F 41 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	327	45
F 41 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	327	45
F 41 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	337	49
F 41 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	337	49

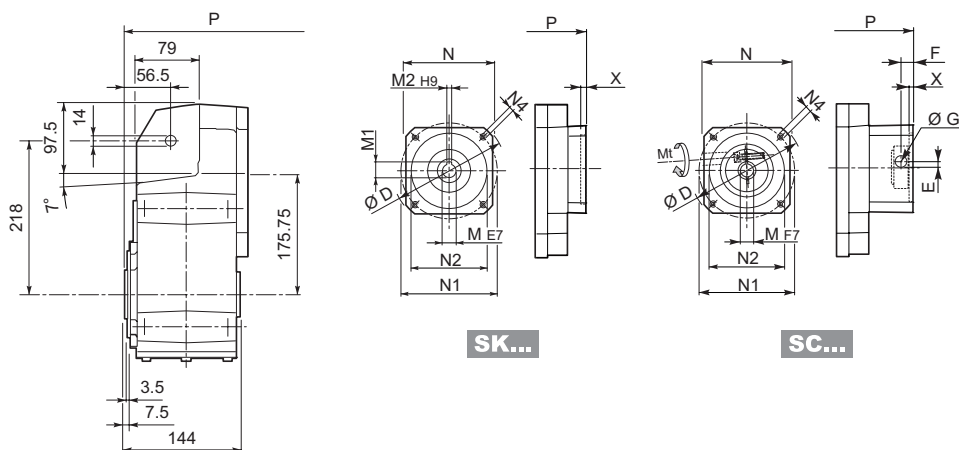
## F 41...HS



		A	E	F	F1	F2	F3	F4	V	kg
F 41 2	HS	335.5	50	24	27	8	2.5	45	M8x19	44.9
F 41 3		335.5	50	24	27	8	2.5	45	M8x19	46.4
F 41 4		357.5	40	19	21.5	6	2.5	35	M6x16	43.5



## F 41...SK / SC



SK...

SC...

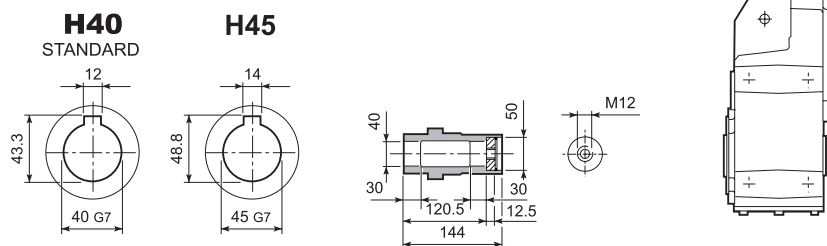
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P		P	
F 41 4	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	—	—	279	43
F 41 4	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	—	—	286	44
F 41 4	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	—	—	286	44
F 41 2/3	SK 80B	120	14	16.3	5	96	100	80	M6x12	4	265.5	43	—	—
F 41 2/3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	265.5	43	327	45
F 41 2/3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	265.5	43	327	45
F 41 2/3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	265.5	43	327	45
F 41 2/3/4	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	265.5	43	327	45
F 41 2/3/4	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	265.5	43	327	45
F 41 2/3/4	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	265.5	43	327	45
F 41 2/3	SK 130A	188	24	27.3	8	142	165	130	M10x20	5	265.5	45	—	—
F 41 2/3	SK 130B	189	32	35.3	10	160	165	130	M10x20	5	312	47	—	—
F 41 2/3	SK 180A	240	32	35.3	10	192	215	180	M12x19	5	312	47	—	—
F 41 2/3	SK 180B	240	38	41.3	10	192	215	180	M12x19	5	312	47	—	—

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P		P	
F 41 4	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	—	—	306	44
F 41 4	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	—	—	306	45
F 41 4	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	—	—	306	45
F 41 2/3	SC 80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	289	44	—	—
F 41 2/3/4	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	289	44	350.5	46
F 41 2/3/4	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	289	44	350.5	46
F 41 2/3/4	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	289	44	350.5	46
F 41 2/3/4	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	289	44	350.5	46
F 41 2/3/4	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	289	45	350.5	47
F 41 2/3/4	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	289	45	350.5	47
F 41 2/3	SC 130A	M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	289	46	—	—
F 41 2/3	SC 130B	M8	36	189	20	17	17.75	32	160	165	130	M10x20	5	335	50	—	—
F 41 2/3	SC 180A	M8	36	240	20	17.5	17.75	32	192	215	180	M12x24	5	339	50	—	—
F 41 2/3	SC 180B	M8	36	240	20	17.5	17.75	38	192	215	180	M12x24	5	339	50	—	—

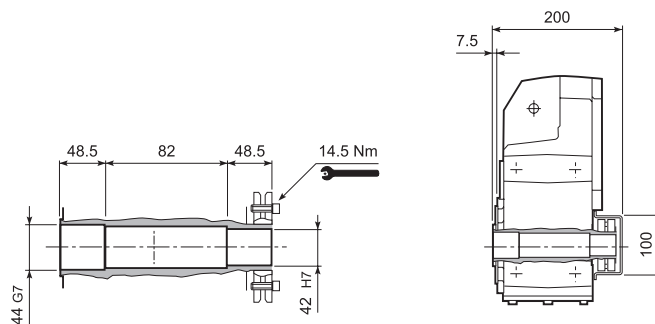


# F 41

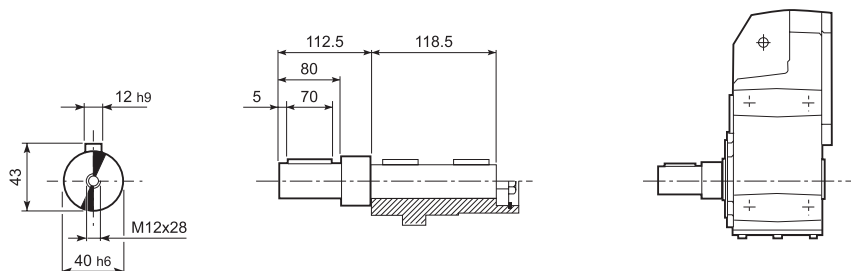
## F 41...H



## F 41...S



## F 41...R

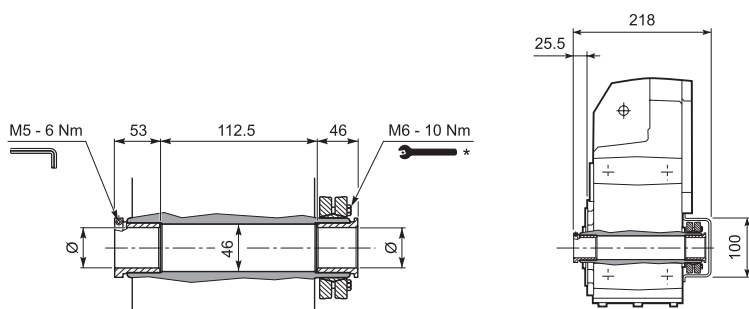


## F 41...QF

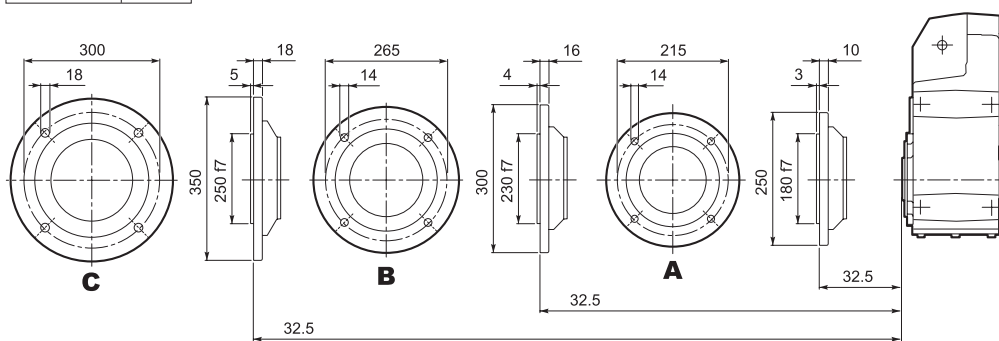
	Ø
QF42	42
QF45	45



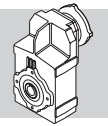
	M <sub>n2</sub> max [Nm]
F 41 QF42	850
F 41 QF45	1000



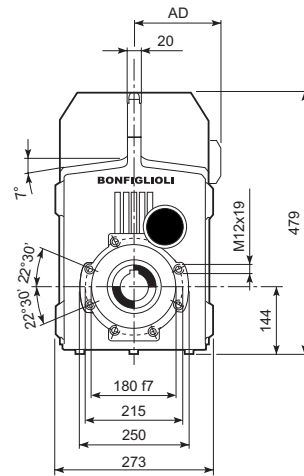
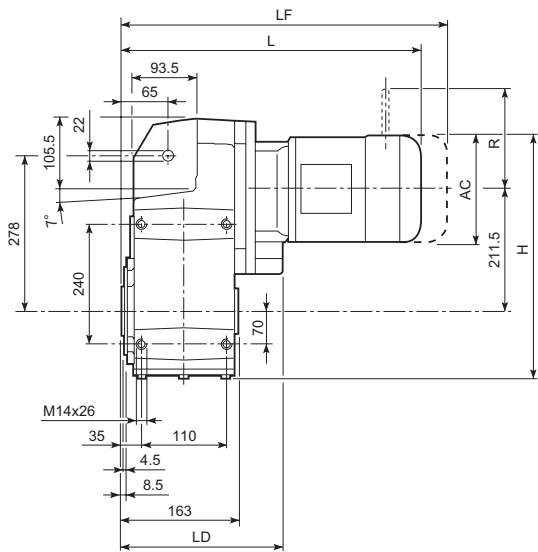
## F 41...F...



\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



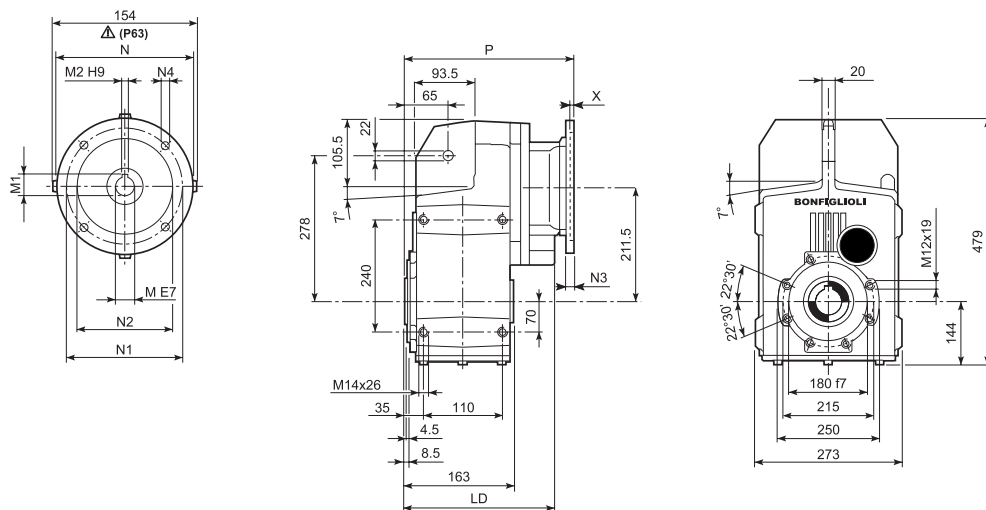
## F 51...M/ME/MX



				AC	H	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
										LF	Kg	R	AD	R	AD
F 51 2/3	S1	M1		138	424	423	—	108	73	484	76	103	135	124	108
F 51 2/3	S2	ME2S		156	433	452	238	119	73	—	—	—	—	—	—
F 51 2/3	S2	MX2S		156	433	496	238	119	78	—	—	—	—	—	—
F 51 2/3	S3	ME3S		195	452.5	495	253	142	77	—	—	—	—	—	—
F 51 2/3	S3	MX3S		195	452.5	527	253	142	80	—	—	—	—	—	—
F 51 2/3	S3	ME3L		195	452.5	527	253	142	87	—	—	—	—	—	—
F 51 2/3	S3	MX3L		195	452.5	571	253	142	93	—	—	—	—	—	—
F 51 2/3	S4	ME4	MX4	258	484	635	238	193	119	—	—	—	—	—	—
F 51 2/3	S4	ME4LB	MX4LA	258	484	670	238	193	127	—	—	—	—	—	—
F 51 2/3	S5	ME5S	MX5S	310	510	721.5	—	245	153	—	—	—	—	—	—
F 51 2/3	S5	ME5L	MX5L	310	510	765.5	—	245	169	—	—	—	—	—	—
F 51 4	S1	M1		138	424	494.5	—	108	75	555.5	78	103	135	124	108
F 51 4	S2	ME2S		156	433	523.5	—	119	79	—	—	—	—	—	—
F 51 4	S2	MX2S		156	433	567.5	—	119	79	—	—	—	—	—	—
F 51 4	S3	ME3S		195	452.5	566.5	—	142	84	—	—	—	—	—	—
F 51 4	S3	MX3S		195	452.5	598.5	—	142	84	—	—	—	—	—	—
F 51 4	S3	ME3L		195	452.5	598.5	—	142	93	—	—	—	—	—	—
F 51 4	S3	MX3L		195	452.5	642.5	—	142	93	—	—	—	—	—	—

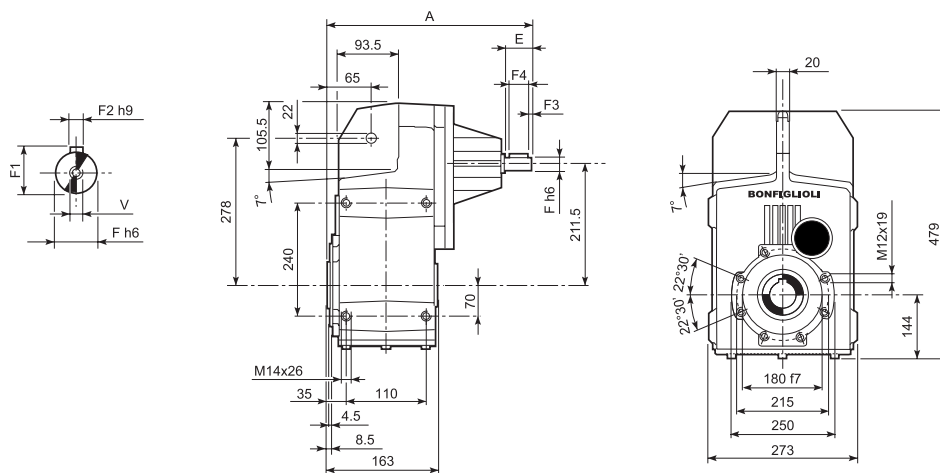


## F 51...P(IEC)

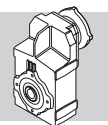


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 51 2/3	P63	238	11	12.8	4	140	115	95	—	M8x19	4	268	65
F 51 2/3	P71	238	14	16.3	5	160	130	110	—	M8x16	4.5	268	65
F 51 2/3	P80	253	19	21.8	6	200	165	130	—	M10x14.5	4	287.5	67
F 51 2/3	P90	253	24	27.3	8	200	165	130	—	M10x14.5	4	287.5	67
F 51 2/3	P100	238	28	31.3	8	250	215	180	—	M12x16	4.5	297.5	71
F 51 2/3	P112	238	28	31.3	8	250	215	180	—	M12x16	4.5	297.5	71
F 51 2/3	P132	238	38	41.3	10	300	265	230	16	14	5	334	74
F 51 2/3	P160	—	42	45.3	12	350	300	250	23	18	5.5	384.5	78
F 51 2/3	P180	—	48	51.8	14	350	300	250	23	18	5.5	384.5	78
F 51 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	339.5	70
F 51 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	339.5	70
F 51 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	359	71
F 51 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	359	71
F 51 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	369	75
F 51 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	369	75

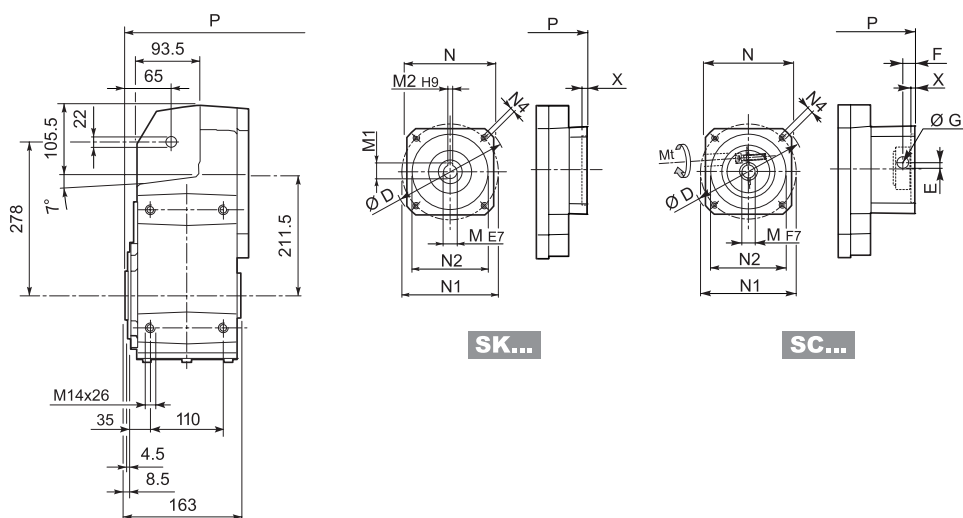
## F 51...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 51 2	HS	357.5	50	24	27	8	2.5	45	M8x19	65
F 51 3		357.5	50	24	27	8	2.5	45	M8x19	68
F 51 4		389.5	40	19	21.5	6	2.5	35	M6x16	70



## F 51...SK / SC



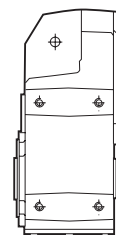
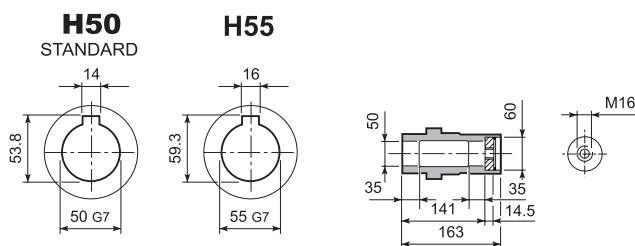
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P	Kg	P	Kg
F 51 2/3	SK 80B	120	14	16.3	5	96	100	80	M6x12	4	287.5	67	—	—
F 51 2/3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	287.5	67	359	71
F 51 2/3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	287.5	67	359	71
F 51 2/3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	287.5	67	359	71
F 51 2/3/4	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	287.5	67	359	71
F 51 2/3/4	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	287.5	67	359	71
F 51 2/3/4	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	287.5	67	359	71
F 51 2/3/4	SK 130A	188	24	27.3	8	142	165	130	M10x20	5	287.5	69	359	73
F 51 2/3	SK 130B	189	32	35.3	10	160	165	130	M10x20	5	334	75	—	—
F 51 2/3	SK 180A	240	32	35.3	10	192	215	180	M12x19	5	334	75	—	—
F 51 2/3	SK 180B	240	38	41.3	10	192	215	180	M12x19	5	334	75	—	—

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P	Kg	P	Kg
F 51 2/3	SC 80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	311	70	—	—
F 51 2/3/4	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	311	70	382.5	74
F 51 2/3/4	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	311	70	382.5	74
F 51 2/3/4	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	311	70	382.5	74
F 51 2/3/4	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	311	70	382.5	74
F 51 2/3/4	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	311	71	382.5	75
F 51 2/3/4	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	311	71	382.5	75
F 51 2/3/4	SC 130A	M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	311	72	382.5	76
F 51 2/3	SC 130B	M8	36	189	20	17	17.75	32	160	165	130	M10x20	5	357	75	—	—
F 51 2/3	SC 180A	M8	36	240	20	17.5	17.75	32	192	215	180	M12x24	5	361	75	—	—
F 51 2/3	SC 180B	M8	36	240	20	17.5	17.75	38	192	215	180	M12x24	5	361	75	—	—

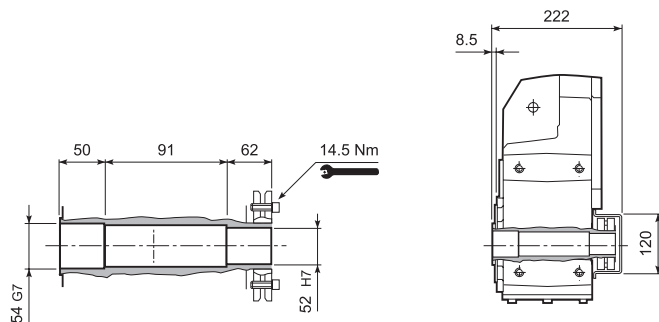


# F 51

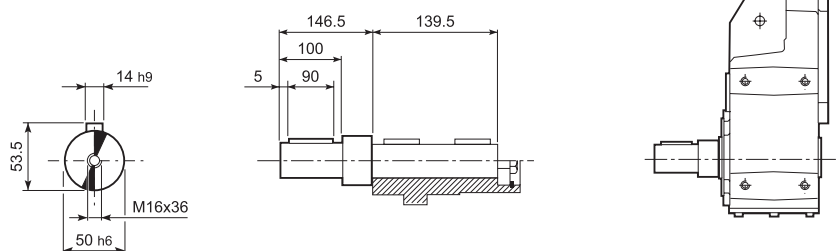
## F 51...H



## F 51...S



## F 51...R

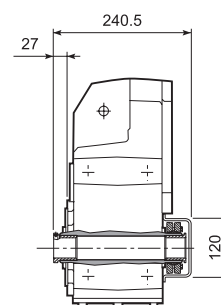
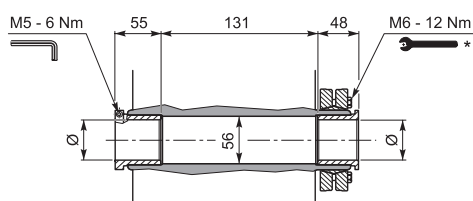


## F 51...QF

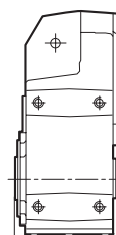
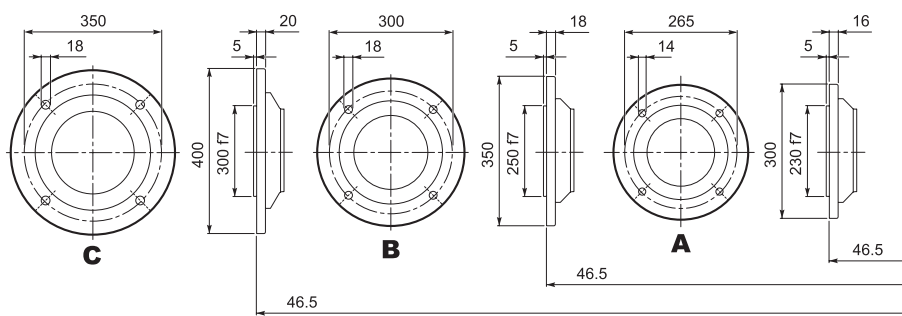
	Ø
QF50	50
QF55	55



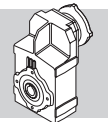
M <sub>n2</sub> max [Nm]	
F 51 QF50	1750



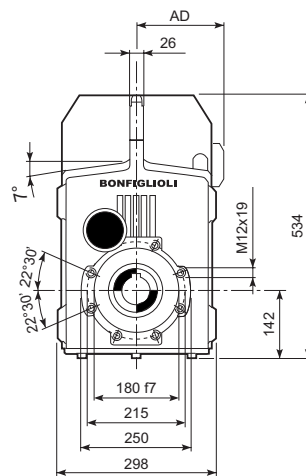
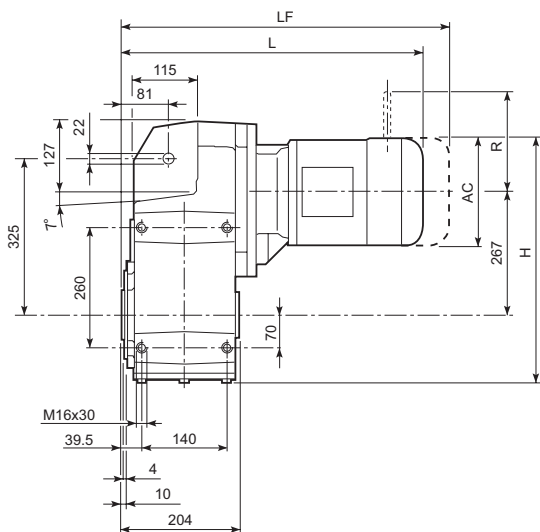
## F 51...F...



\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



## F 60...M/ME/MX

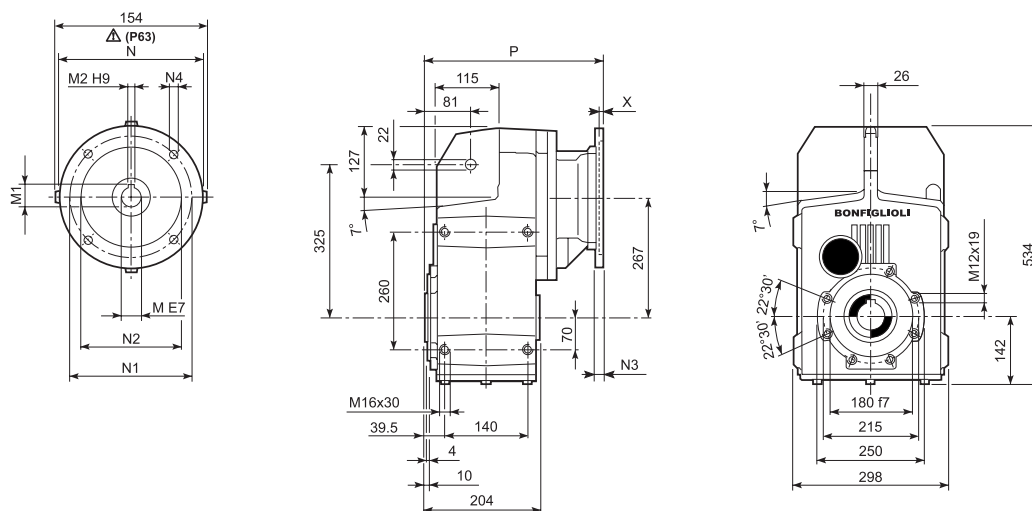


				AC	H	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
F 60 3	S2	ME2S		156	487	486.5	119	114	—	—	—	—	—	—
F 60 3	S2	MX2S		156	487	530.5	119	119	—	—	—	—	—	—
F 60 3	S3	ME3S		195	506.5	529.5	142	119	—	—	—	—	—	—
F 60 3	S3	MX3S		195	506.5	561.5	142	122	—	—	—	—	—	—
F 60 3	S3	ME3L		195	506.5	561.5	142	124	—	—	—	—	—	—
F 60 3	S3	MX3L		195	506.5	605.5	142	130	—	—	—	—	—	—
F 60 3	S4	ME4	MX4	258	538	669.5	193	156	—	—	—	—	—	—
F 60 3	S4	ME4LB	MX4LA	258	538	704.5	193	164	—	—	—	—	—	—
F 60 3	S5	ME5S	MX5S	310	564	756	245	184	—	—	—	—	—	—
F 60 3	S5	ME5L	MX5L	310	564	800	245	200	—	—	—	—	—	—
F 60 4	S1	M1		138	478	528	108	113	589	116	103	135	124	108
F 60 4	S2	ME2S		156	487	557	119	117	—	—	—	—	—	—
F 60 4	S2	MX2S		156	487	601	119	122	—	—	—	—	—	—
F 60 4	S3	ME3S		195	506.5	600	142	122	—	—	—	—	—	—
F 60 4	S3	MX3S		195	506.5	632	142	125	—	—	—	—	—	—
F 60 4	S3	ME3L		195	506.5	632	142	131	—	—	—	—	—	—
F 60 4	S3	MX3L		195	506.5	676	142	137	—	—	—	—	—	—
F 60 4	S4	ME4	MX4	258	538	740	193	156	—	—	—	—	—	—
F 60 4	S4	ME4LB	MX4LA	258	538	775	193	164	—	—	—	—	—	—



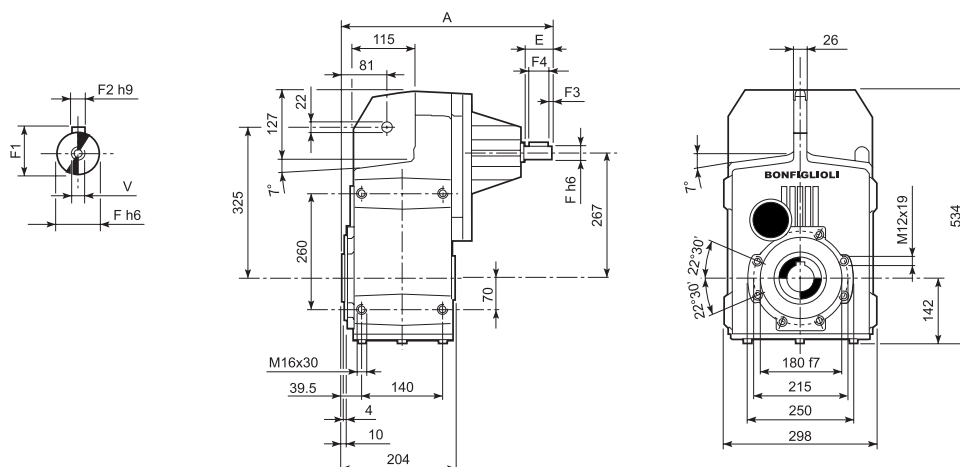


## F 60...P(IEC)

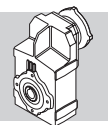


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 60 3	P63	11	12.8	4	140	115	95	—	M8x19	4	302.5	103
F 60 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	302.5	103
F 60 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	322	104
F 60 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	322	104
F 60 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	331	108
F 60 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	331	108
F 60 3	P132	38	41.3	10	300	265	230	16	14	5	367.5	111
F 60 3	P160	42	45.3	12	350	300	250	23	18	5.5	419	116
F 60 3	P180	48	51.8	14	350	300	250	23	18	5.5	419	116
F 60 4	P63	11	12.8	4	140	115	95	—	M8x19	4	373	108
F 60 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	373	108
F 60 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	392.5	110
F 60 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	392.5	110
F 60 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	402.5	114
F 60 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	402.5	114

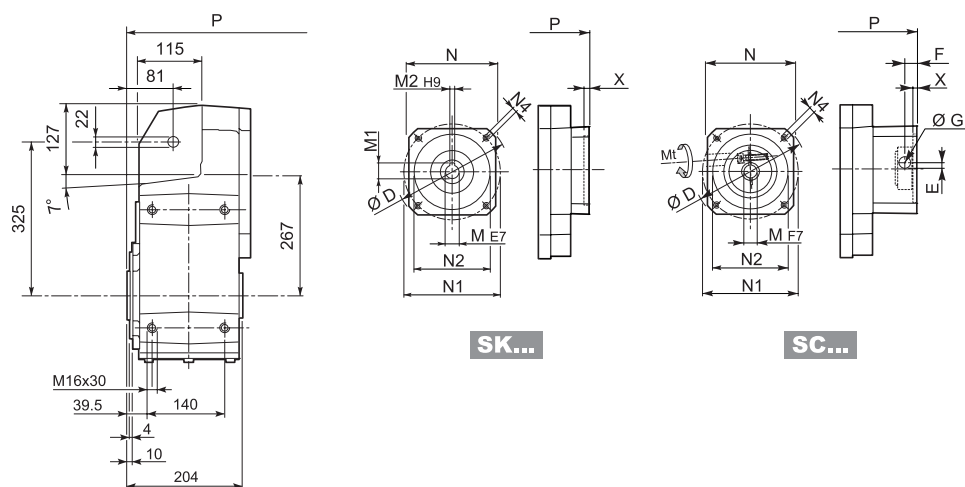
## F 60...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 60 3	HS	419	60	28	31	8	5.0	50	M10x22	108
F 60 4		462.5	50	24	27	8	2.5	45	M8x19	105



## F 60...SK / SC



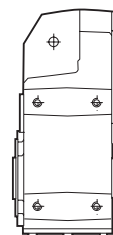
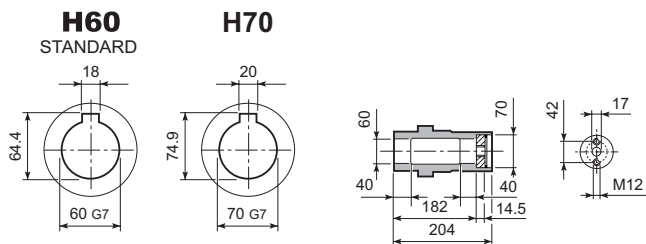
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P		P	
F 60 4	SK 80B	120	14	16.3	5	96	100	80	M6x12	4	—	—	392.5	109
F 60 3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	322	106	392.5	112
F 60 3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	322	106	392.5	112
F 60 3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	322	106	392.5	112
F 60 3/4	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	322	106	392.5	112
F 60 3/4	SK 110A	140	19	21.8	6	120	130	110	M8x12	5	322	106	392.5	112
F 60 3/4	SK 110B	140	24	27.3	8	120	130	110	M8x12	5	322	106	392.5	112
F 60 3/4	SK 130A	188	24	27.3	8	142	165	130	M10x20	5	322	108	392.5	112
F 60 3	SK 130B	189	32	35.3	10	160	165	130	M10x20	5	368.5	109	—	—
F 60 3	SK 180A	240	32	35.3	10	192	215	180	M12x19	5	368.5	109	—	—
F 60 3	SK 180B	240	38	41.3	10	192	215	180	M12x19	5	368.5	109	—	—

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P		P	
F 60 4	SC 80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	—	—	416	113
F 60 3/4	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	345.5	107	416	113
F 60 3/4	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	345.5	107	416	113
F 60 3/4	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	345.5	107	416	113
F 60 3/4	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	345.5	107	416	113
F 60 3/4	SC 110A	M6	15	140	16.5	16	17.75	19	120	130	110	M8x16	5	345.5	108	416	113
F 60 3/4	SC 110B	M6	15	140	16.5	16	17.75	24	120	130	110	M8x16	5	345.5	108	416	113
F 60 3/4	SC 130A	M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	345.5	109	416	115
F 60 3	SC 130B	M8	36	189	20	17	17.75	32	160	165	130	M10x20	5	390.5	112	—	—
F 60 3	SC 180A	M8	36	240	20	17.5	17.75	32	192	215	180	M12x24	5	394.5	112	—	—
F 60 3	SC 180B	M8	36	240	20	17.5	17.75	38	192	215	180	M12x24	5	394.5	112	—	—

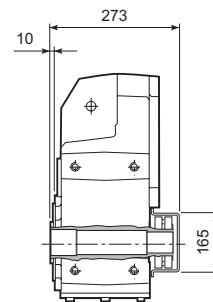
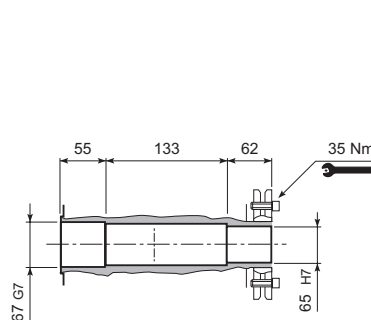


# F 60

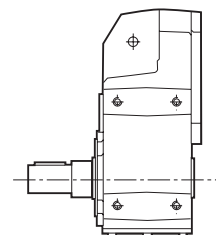
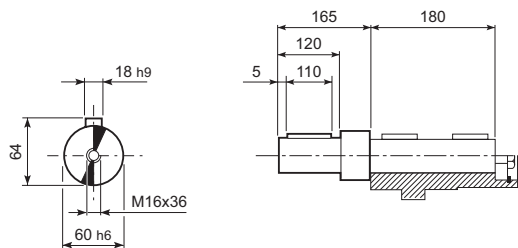
## F 60...H



## F 60...S

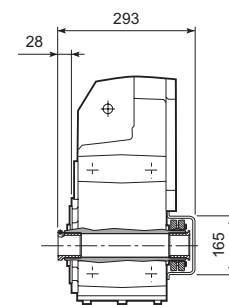
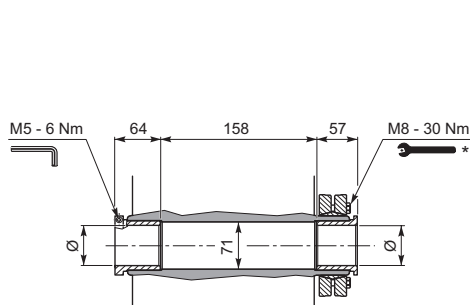


## F 60...R

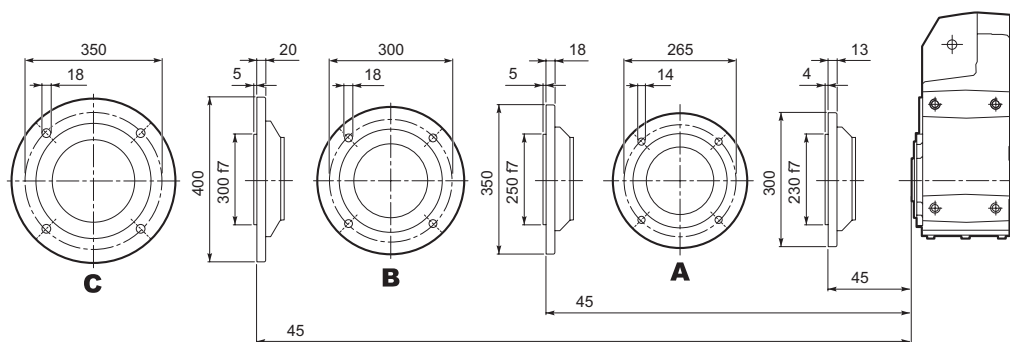


## F 60...QF

	Ø
QF60	60
QF65	65
QF70	70



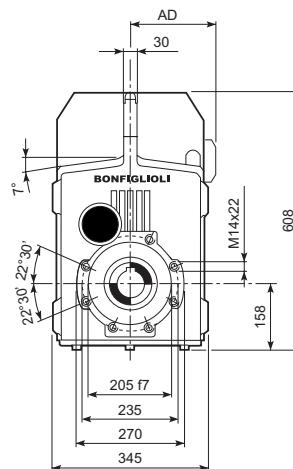
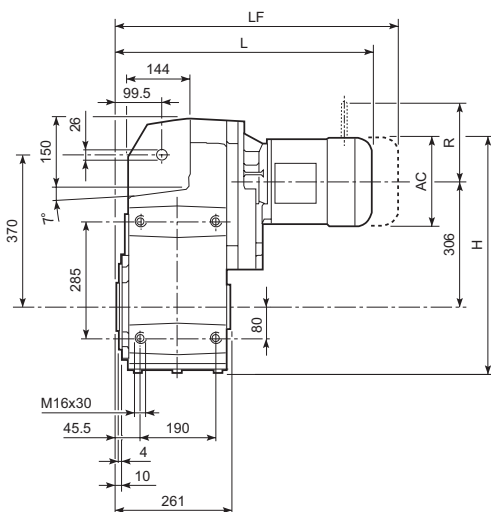
## F 60...F...



\* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



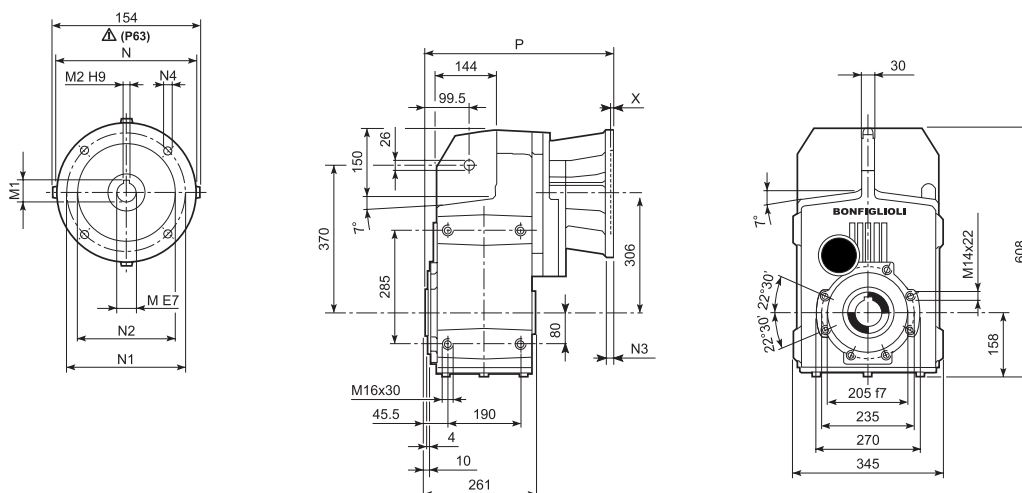
## F 70...M/ME/MX



			AC	H	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
								LF	Kg	R	AD	R	AD
F 70 3	S2	ME2S	156	542	552	119	173	—	—	—	—	—	—
F 70 3	S2	MX2S	156	542	596	119	178	—	—	—	—	—	—
F 70 3	S3	ME3S	195	561.5	595	142	178	—	—	—	—	—	—
F 70 3	S3	MX3S	195	561.5	627	142	181	—	—	—	—	—	—
F 70 3	S3	ME3L	195	561.5	627	142	188	—	—	—	—	—	—
F 70 3	S3	MX3L	195	561.5	671	142	194	—	—	—	—	—	—
F 70 3	S4	ME4	258	593	735	193	220	—	—	—	—	—	—
F 70 3	S4	ME4LB	258	593	770	193	228	—	—	—	—	—	—
F 70 3	S5	ME5S	310	619	821.5	245	248	—	—	—	—	—	—
F 70 3	S5	ME5L	310	619	865.5	245	264	—	—	—	—	—	—
F 70 4	S1	M1	138	533	574	108	173	635	176	103	135	124	108
F 70 4	S2	ME2S	156	542	603	119	177	—	—	—	—	—	—
F 70 4	S2	MX2S	156	542	647	119	182	—	—	—	—	—	—
F 70 4	S3	ME3S	195	561.5	646	142	181	—	—	—	—	—	—
F 70 4	S3	MX3S	195	561.5	678	142	184	—	—	—	—	—	—
F 70 4	S3	ME3L	195	561.5	678	142	191	—	—	—	—	—	—
F 70 4	S3	MX3L	195	561.5	722	142	197	—	—	—	—	—	—
F 70 4	S4	ME4	258	593	786	193	223	—	—	—	—	—	—
F 70 4	S4	ME4LB	258	593	821	193	231	—	—	—	—	—	—

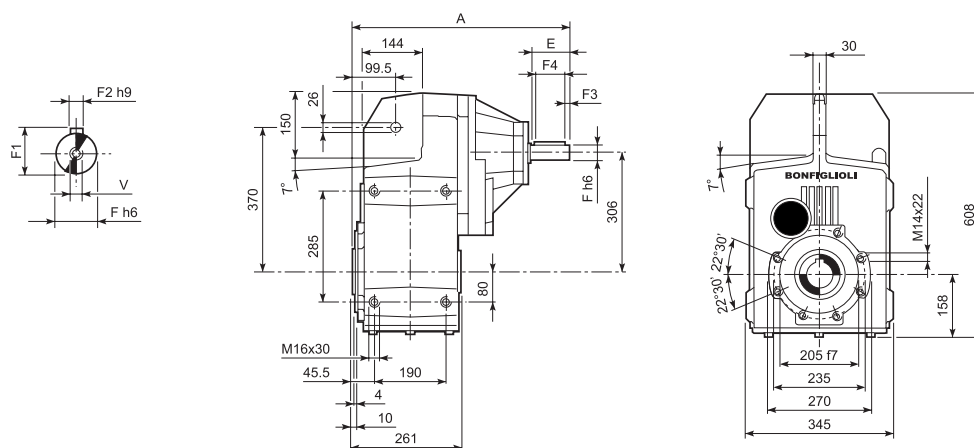


## F 70...P(IEC)

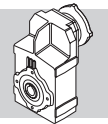


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 70 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	387.5	167
F 70 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	387.5	167
F 70 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	397.5	171
F 70 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	397.5	171
F 70 3	P132	38	41.3	10	300	265	230	16	14	5	434	173
F 70 3	P160	42	45.3	12	350	300	250	23	18	6	489.5	185
F 70 3	P180	48	51.8	14	350	300	250	23	18	6	489.5	185
F 70 3	P200	55	59.3	16	400	350	300	—	M16x25	7	514.5	206
F 70 4	P63	11	12.8	4	140	115	95	—	M8x19	4	419	168
F 70 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	419	168
F 70 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	438.5	170
F 70 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	438.5	170
F 70 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	446.5	174
F 70 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	446.5	174
F 70 4	P132	38	41.3	10	300	265	230	16	14	5	482	176

## F 70...HS

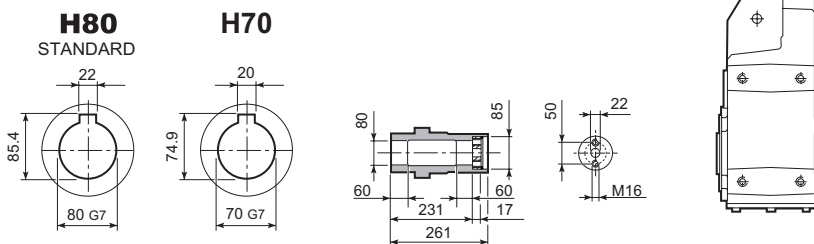


		A	E	F	F1	F2	F3	F4	V	Kg
F 70 3	HS	572	110	42	45	12	10	90	M12x28	186
F 70 4		508.5	50	24	27	8	2.5	45	M8x19	174

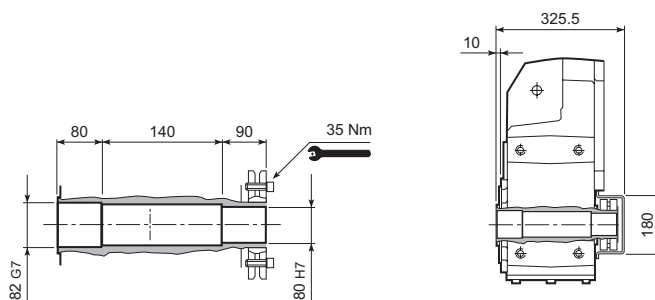


# F 70

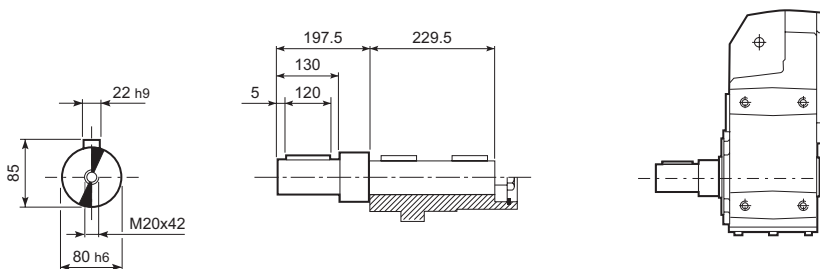
## F 70...H



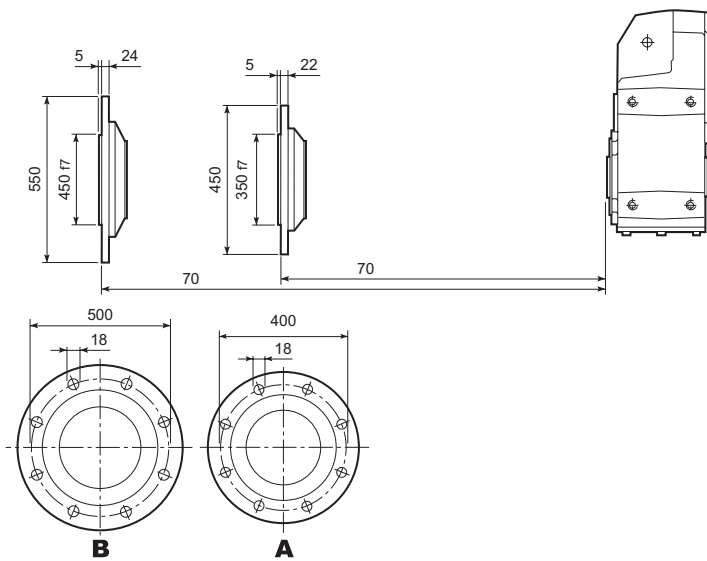
## F 70...S



## F 70...R

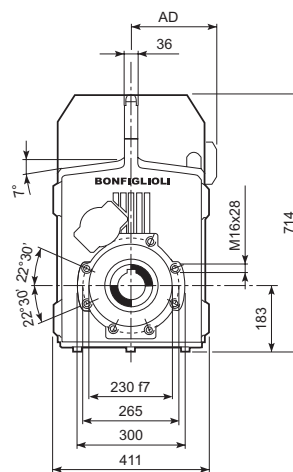
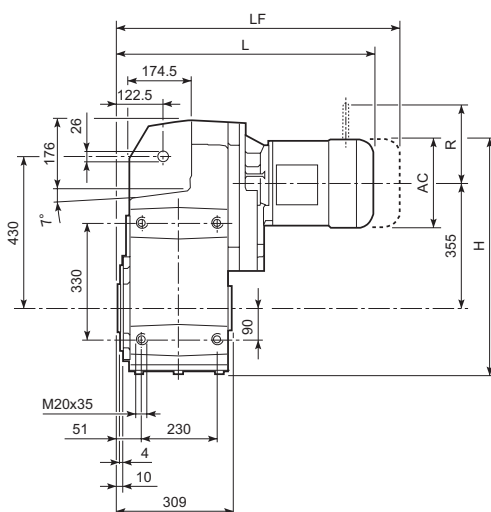


## F 70...F...

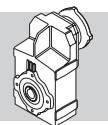




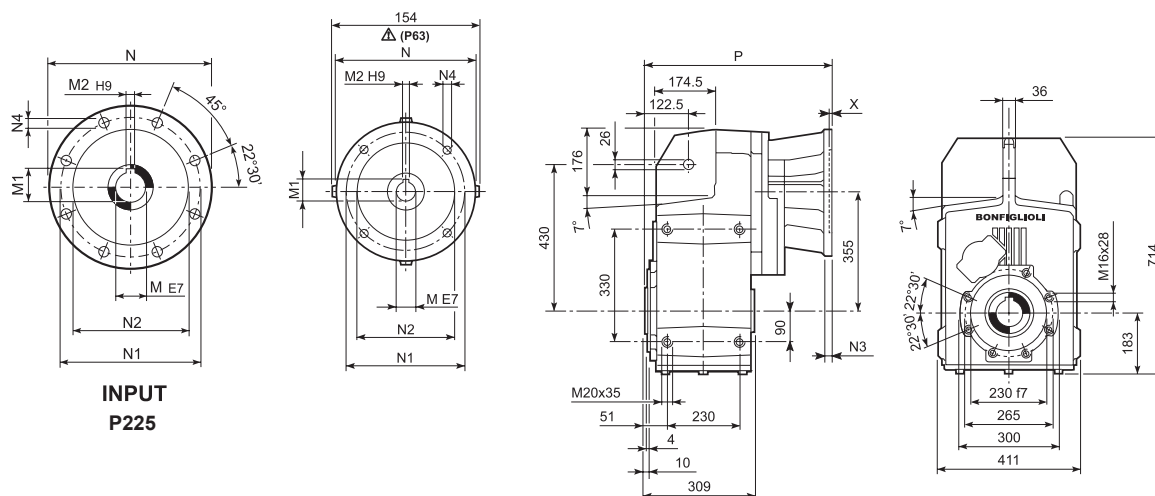
## F 80...M/ME/MX



									M...FD M...FA		M...FD		M...FA	
				AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD
F 80 3	S3	ME3S		195	635.5	653	142	266	—	—	—	—	—	—
F 80 3	S3	MX3S		195	635.5	685	142	269	—	—	—	—	—	—
F 80 3	S3	ME3L		195	635.5	685	142	275	—	—	—	—	—	—
F 80 3	S3	MX3L		195	635.5	729	142	281	—	—	—	—	—	—
F 80 3	S4	ME4	MX4	258	667	793	193	307	—	—	—	—	—	—
F 80 3	S4	ME4LB	MX4LA	258	667	828	193	315	—	—	—	—	—	—
F 80 3	S5	ME5S	MX5S	310	693	879.5	245	335	—	—	—	—	—	—
F 80 3	S5	ME5L	MX5L	310	693	923.5	245	351	—	—	—	—	—	—
F 80 4	S1	M1		138	607	644	108	262	705	265	103	135	124	108
F 80 4	S2	M2S		156	616	673	119	266	743	269	129	146	134	119
F 80 4	S2	ME2S		156	616	673	119	266	—	—	—	—	—	—
F 80 4	S2	MX2S		156	616	717	119	271	—	—	—	—	—	—
F 80 4	S3	ME3S		195	635.5	716	142	271	—	—	—	—	—	—
F 80 4	S3	MX3S		195	635.5	748	142	274	—	—	—	—	—	—
F 80 4	S3	ME3L		195	635.5	748	142	280	—	—	—	—	—	—
F 80 4	S3	MX3L		195	635.5	792	142	286	—	—	—	—	—	—
F 80 4	S4	ME4	MX4	258	667	856	193	312	—	—	—	—	—	—
F 80 4	S4	ME4LB	MX4LA	258	667	891	193	320	—	—	—	—	—	—

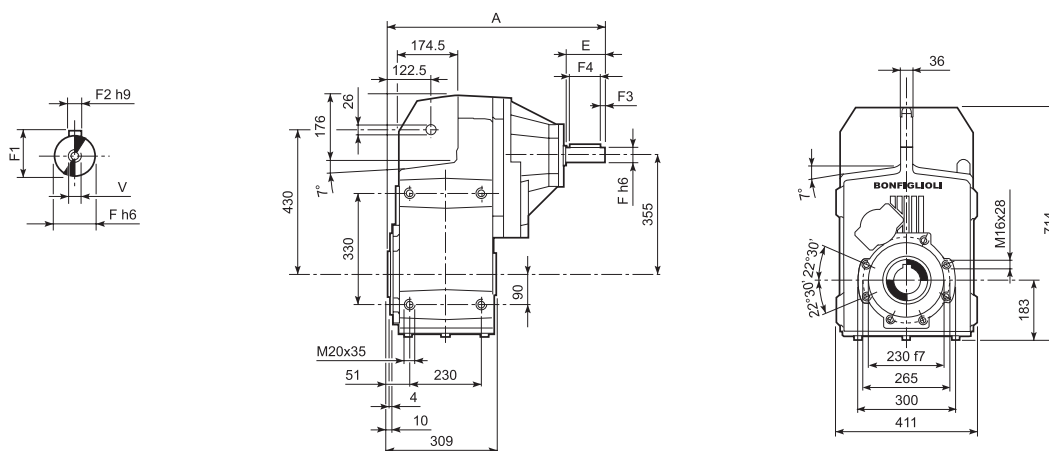


## F 80...P(IEC)



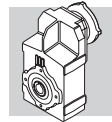
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 80 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	445.5	255
F 80 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	445.5	255
F 80 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	455.5	259
F 80 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	455.5	259
F 80 3	P132	38	41.3	10	300	265	230	16	14	5	492	261
F 80 3	P160	42	45.3	12	350	300	250	23	18	6	547.5	276
F 80 3	P180	48	51.8	14	350	300	250	23	18	6	547.5	276
F 80 3	P200	55	59.3	16	400	350	300	—	M16x25	7	572.5	298
F 80 3	P225	60	64.4	18	450	400	350	25	18	6	618	298
F 80 4	P63	11	12.8	4	140	115	95	—	M8x19	4	489	258
F 80 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	489	258
F 80 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	508.5	260
F 80 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	508.5	260
F 80 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	518.5	264
F 80 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	518.5	264
F 80 4	P132	38	41.3	10	300	265	230	16	14	5	552	266

## F 80...HS



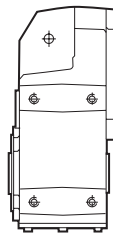
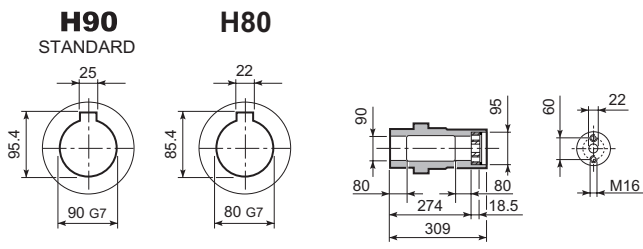
		A	E	F	F1	F2	F3	F4	V	Kg
F 80 3	HS	630	110	42	45	12	10	90	M12x28	273
F 80 4		575.5	50	24	27	8	2.5	45	M8x19	263



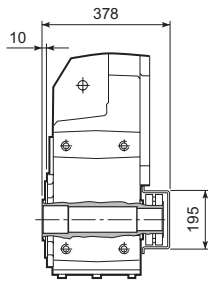
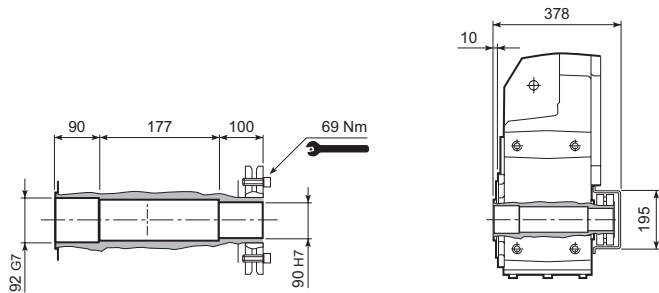


# F 80

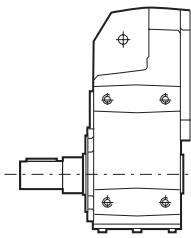
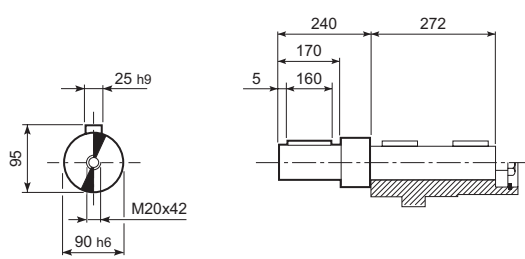
## F 80...H



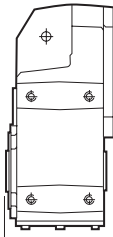
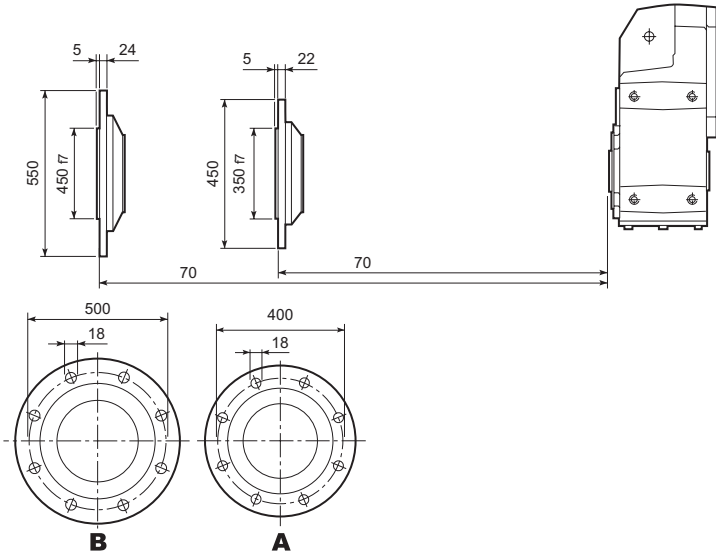
## F 80...S



## F 80...R

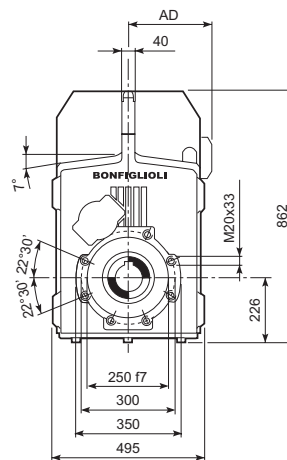
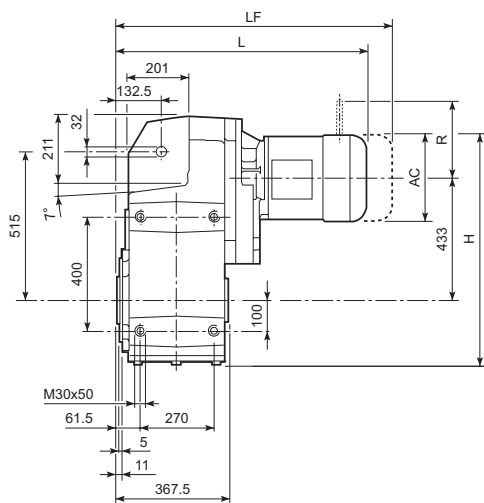


## F 80...F...





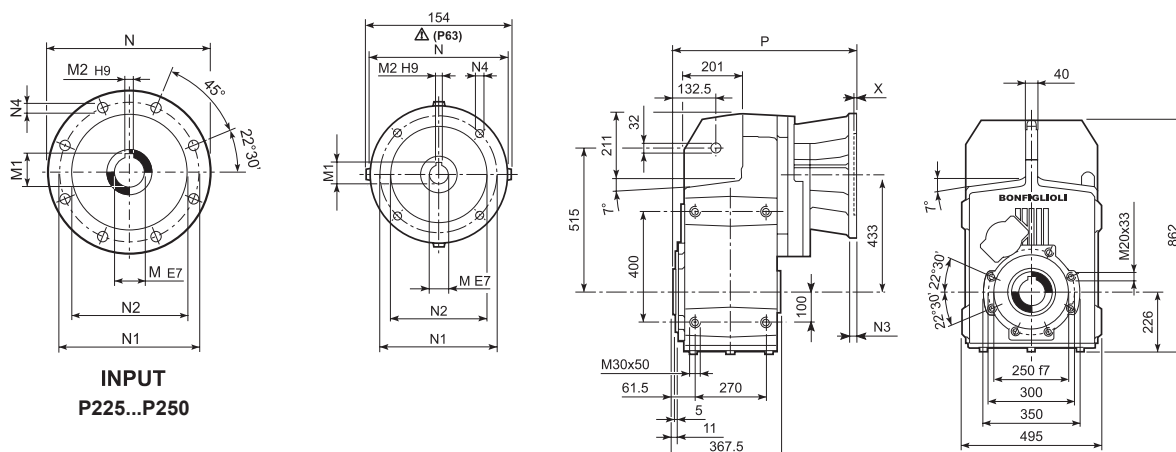
## F 90...M/ME/MX



				AC	H	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
F 90 3	S3	ME3S		195	756	728	142	453	—	—	—	—	—	—
F 90 3	S3	MX3S		195	756	760	142	456	—	—	—	—	—	—
F 90 3	S3	ME3L		195	756	760	142	462	—	—	—	—	—	—
F 90 3	S3	MX3L		195	756	804	142	468	—	—	—	—	—	—
F 90 3	S4	ME4	MX4	258	787.5	868	193	494	—	—	—	—	—	—
F 90 3	S5	ME5L	MX5L	310	813.5	998.5	245	538	—	—	—	—	—	—
F 90 4	S2	M2S		156	736.5	768	119	456	838	460	129	146	134	119
F 90 4	S2	ME2S		156	736.5	768	119	456	—	—	—	—	—	—
F 90 4	S2	MX2S		156	736.5	812	119	461	—	—	—	—	—	—
F 90 4	S3	ME3S		195	756	811	142	460	—	—	—	—	—	—
F 90 4	S3	MX3S		195	756	843	142	463	—	—	—	—	—	—
F 90 4	S3	ME3L		195	756	843	142	470	—	—	—	—	—	—
F 90 4	S3	MX3L		195	756	887	142	476	—	—	—	—	—	—
F 90 4	S4	ME4	MX4	258	787.5	951	193	502	—	—	—	—	—	—
F 90 4	S4	ME4LB	MX4LA	258	787.5	986	193	510	—	—	—	—	—	—



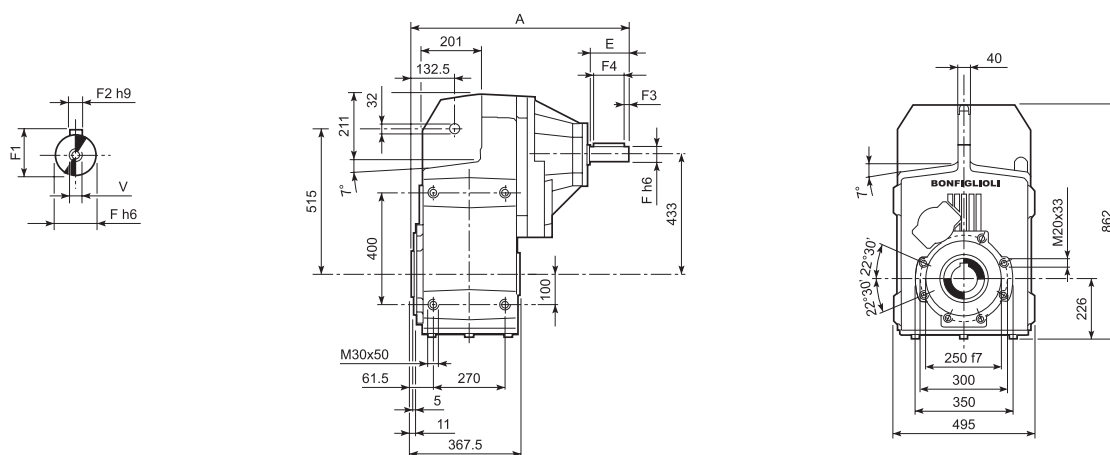
## F 90...P(IEC)



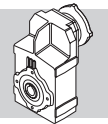
**INPUT**  
**P225...P250**

		M	M1	M2	N	N1	N2	N3	N4	X	P	
F 90 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	520.5	442
F 90 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	520.5	442
F 90 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	530.5	446
F 90 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	530.5	446
F 90 3	P132	38	41.3	10	300	265	230	16	14	5	567	449
F 90 3	P160	42	45.3	12	350	300	250	23	18	6	622.5	463
F 90 3	P180	48	51.8	14	350	300	250	23	18	6	622.5	463
F 90 3	P200	55	59.3	16	400	350	300	—	M16x25	7	647.5	485
F 90 3	P225	60	64.4	18	450	400	350	30	18	6	693	485
F 90 3	P250	65	69.4	18	550	500	450	30	18	6	723	507
F 90 4	P63	11	12.8	4	140	115	95	—	M8x19	4	584	448
F 90 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	584	448
F 90 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	603.5	450
F 90 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	603.5	450
F 90 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	613.5	454
F 90 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	613.5	454
F 90 4	P132	38	41.3	10	300	265	230	16	14	5	650	455
F 90 4	P160	42	45.3	12	350	300	250	23	18	5.5	700.5	461
F 90 4	P180	48	51.8	14	350	300	250	23	18	5.5	700.5	461

## F 90...HS

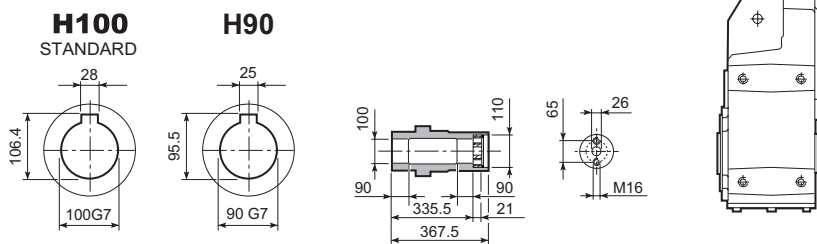


		A	E	F	F1	F2	F3	F4	V	
F 90 3	HS	806.5	140	60	64	18	10	120	M16x36	485
F 90 4		673.5	50	24	27	8	2.5	45	M8x19	452

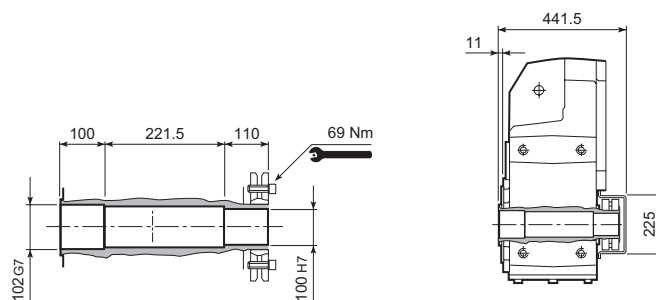


# F 90

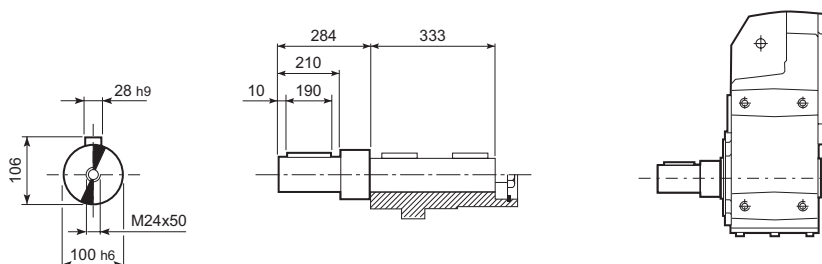
## F 90...H



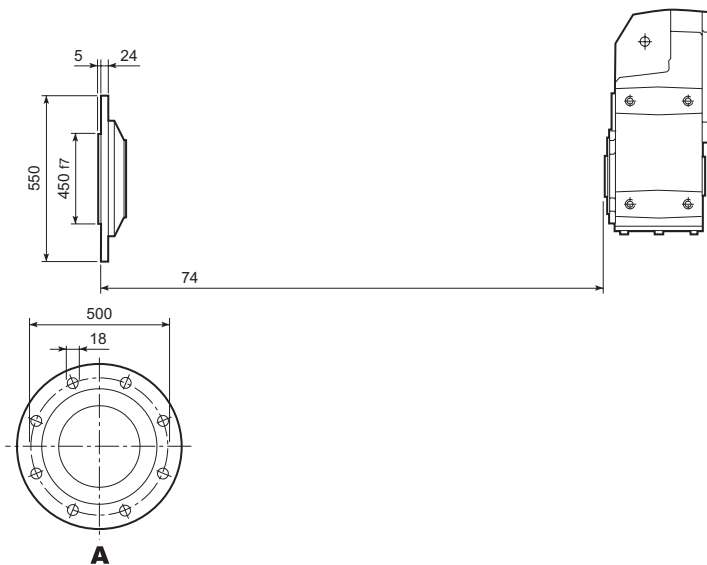
## F 90...S



## F 90...R



## F 90...F...



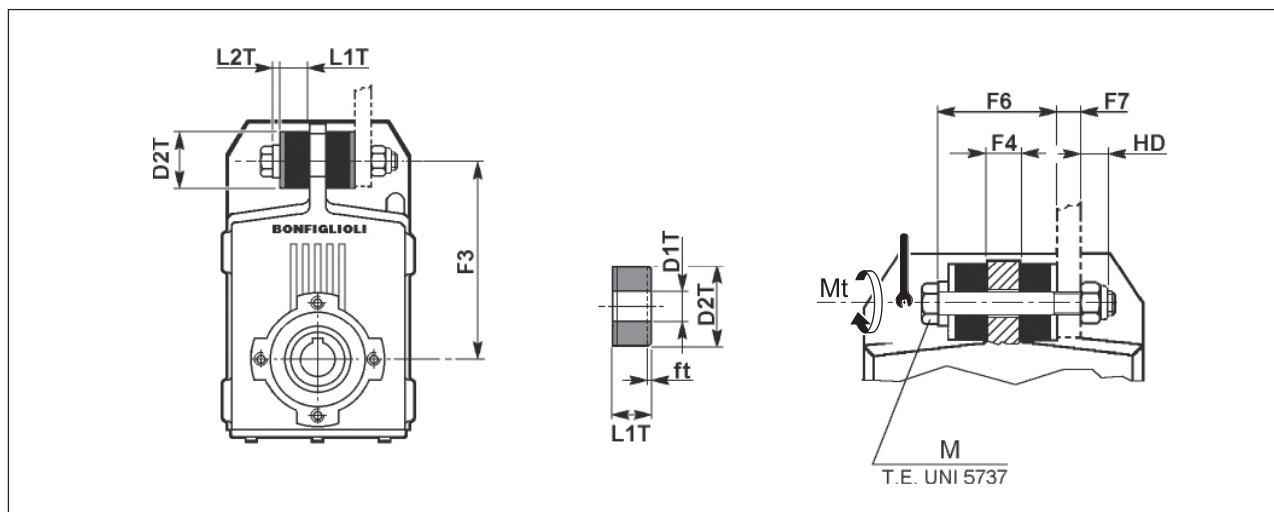
**A**



## 65 ACCESSORIES

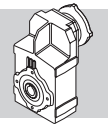
### Anti-vibration kit

The gearboxes of the F series are supplied with an anti-vibration kit at customer request. The kit includes all components required for shaft mounting (torque arm is out of scope). Dimensions are shown in the following table.



	F3	F4	F6	F7 (max.)	HD	L1T	L2T	D1T	D2T	M	Mt [Nm]	ft
<b>F 10</b>	140	20	55	10	12.3	15	5	11	30	M10x80	10	1.5
<b>F 20</b>	160	20	55	10	12.3	15	5	11	30	M10x80	10	1.5
<b>F 25</b>	162	20	65	20	14.8	20	5	12.5	40	M12x100	20	1.5
<b>F 31</b>	170	20	65	20	14.8	20	5	12.5	40	M12x100	20	1.5
<b>F 41</b>	218	16	61	24	14.8	20	5	12.5	40	M12x100	20	2.3
<b>F 51</b>	278	20	90	47	23	30	10	21	60	M20x160	50	3.0
<b>F 60</b>	325	26	96	41	23	30	10	21	60	M20x160	50	4.0
<b>F 70</b>	370	30	122	50	28	40	12	25	80	M24x200	100	4.0
<b>F 80</b>	430	36	128	44	28	40	12	25	80	M24x200	100	6.0
<b>F 90</b>	515	40	175	40	33.2	60	15	32	100	M30x260	200	9.0

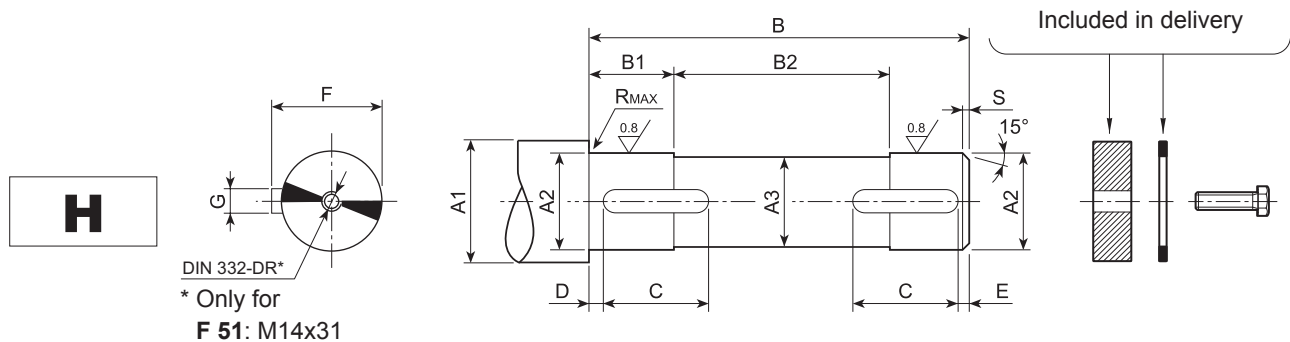
$f_t$  = shortening of the rubber buffer under rated torque transmission.





## 66 CUSTOMER' SHAFT

Make the driven shaft to be coupled to the gear unit's output shaft from a good quality steel, respecting the dimensions given in the table.

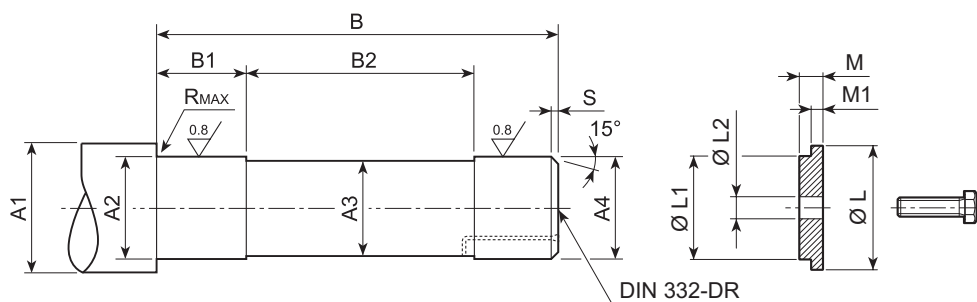
A device such as that illustrated below should also be installed to secure the shaft axially. Take care to verify and dimension the various components to suit the needs of the application.




	A1	A2	A3	B	B1	B2	C	D	E	F	G	R	S		
F 10	≥ 35	30 h7	29	87.5	15.5	56.5	20	2	2	33	8 h9	0.5	1.5	8x7x20 A	M8x25
	≥ 30	25 h7	24	87.5	15.5	56.5	20	2	2	28	8 h9	0.5	1.5	8x7x20 A	
F 20	≥ 42	35 h7	34	99	18	63	22	2	2	38	10 h9	0.5	1.5	10x8x22 A	M8x30
	≥ 35	30 h7	29	99	18	63	22	2	2	33	8 h9	0.5	1.5	8x7x22 A	
F 25	≥ 47	40 h7	39	104	23	58	30	2	2	43	12 h9	0.5	1.5	12x8x30 A	M8x30
	≥ 42	35 h7	34	104	23	58	30	2	2	38	10 h9	0.5	1.5	10x8x30 A	
F 31	≥ 47	40 h7	39	104	28	48	30	2	2	43	12 h9	0.5	1.5	12x8x30 A	M8x30
	≥ 42	35 h7	34	104	28	48	30	2	2	38	10 h9	0.5	1.5	10x8x30 A	
F 41	≥ 52	45 h7	44	118	27.5	63	45	2.5	2.5	48.5	14 h9	1	2.0	14x9x45 A	M10x30
	≥ 47	40 h7	39	118	27.5	63	45	2.5	2.5	43	12 h9	1	2.0	12x8x45 A	
F 51	≥ 63	55 h7	54	139	33	73	50	2.5	2.5	59	16 h9	1	2.0	16x10x50 A	M14x45
	≥ 57	50 h7	49	139	33	73	50	2.5	2.5	53.5	14 h9	1	2.0	14x9x50 A	
F 60	≥ 78	70 h7	69	180	38	104	70	2.5	2.5	74.5	20 h9	1	2.0	20x12x70 A	M16x45
	≥ 68	60 h7	59	180	38	104	70	2.5	2.5	64	18 h9	1	2.0	18x11x70 A	
F 70	≥ 89	80 h7	79	229	58	113	75	3	3	85	22 h9	2.5	2.5	22x14x75 A	M20x55
	≥ 78	70 h7	69	229	58	113	75	3	3	74.5	20 h9	2.5	2.5	20x12x75 A	
F 80	≥ 99	90 h7	89	272	78	116	100	3	3	95	25 h9	2.5	2.5	25x14x100 A	M20x55
	√ 89	80 h7	79	272	78	116	100	3	3	85	22 h9	2.5	2.5	22x14x100 A	
F 90	≥ 111	100 h7	99	333	87.5	158	110	3	3	106	28 h9	2.5	2.5	28x16x110 A	M24x65
	≥ 99	90 h7	89	333	87.5	158	110	3	3	95	25 h9	2.5	2.5	25x14x110 A	

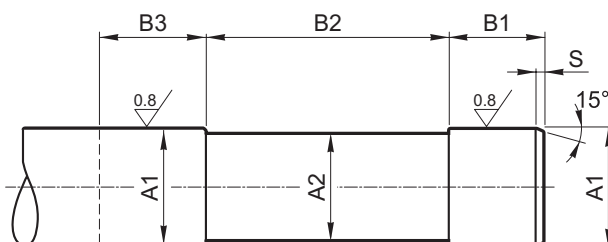


**S**

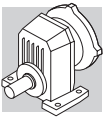


	A1	A2	A3	A4	B	B1	B2	R	S	L	L1	L2	M	M1	
<b>F 10</b>	≥ 36	27 h7	24	25 h6	138	34	70	0.5	1.5	29.5	25 d9	9	7	5.5	M8x25
<b>F 20</b>	≥ 42	32 h7	29	30 h6	160	38	84	0.5	1.5	35.5	30 d9	9	7	5.5	M8x25
<b>F 25</b>	≥ 42	32 h7	30	31 h6	172	38	96	0.5	1.5	35.5	31 d9	9	7	5.5	M8x25
<b>F 31</b>	≥ 50	38 h7	35	36 h6	155	40	73	1	2	43	36 d9	9	7	5.5	M8x25
<b>F 41</b>	≥ 58	44 h7	41	42 h6	177	46.5	82	1	2	49	42 d9	11	8.5	7	M10x30
<b>F 51</b>	≥ 68	54 h7	51	52 g6	201	48	91	1	2	61	52 d9	18	9	7.5	M16x45
<b>F 60</b>	≥ 84	67 h7	64	65 g6	248	53	133	1.5	2	80	65 d9	18	9	7.5	M16x45
<b>F 70</b>	≥ 104	82 h7	79	80 g6	308	78	140	2.5	2.5	95	80 d9	22	13.5	12	M20x55
<b>F 80</b>	≥ 114	92 h7	89	90 g6	365	88	177	2.5	2.5	105	90 d9	22	13.5	12	M20x55
<b>F 90</b>	≥ 126	102 h7	99	100 g6	429.5	98	221.5	2.5	2.5	120	100 d9	26	20	18.5	M24x70

**QF**



		A1	A2	B1	B2	B3	S
<b>F 10</b>	<b>QF25</b>	25 h6	24	41	83	≥ 50	1.5
	<b>QF30</b>	30 h6	29				
<b>F 20</b>	<b>QF25</b>	25 h6	24	41	104.5	≥ 50	1.5
	<b>QF30</b>	30 h6	29				
<b>F 25</b>	<b>QF30</b>	30 h6	29	41	120.5	≥ 50	1.5
	<b>QF32</b>	32 h6	31				
<b>F 31</b>	<b>QF35</b>	35 h6	34	45	95.5	≥ 54	1.5
	<b>QF40</b>	40 h6	39				
<b>F 41</b>	<b>QF42</b>	42 h6	41	46	112.5	≥ 55	2
	<b>QF45</b>	45 h6	44				
<b>F 51</b>	<b>QF50</b>	50 h6	49	48	131	≥ 57	2
	<b>QF55</b>	55 h6	54				
<b>F 60</b>	<b>QF60</b>	60 h6	59	57	158	≥ 66	2.5
	<b>QF65</b>	65 h6	64				
	<b>QF70</b>	70 h6	69				



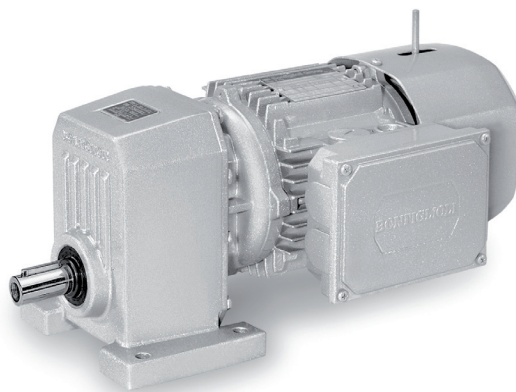
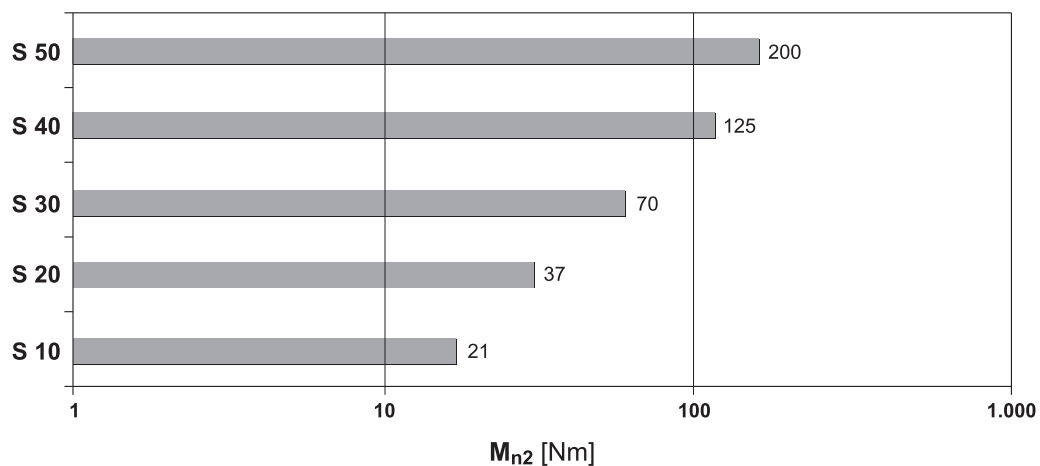
## SINGLE STAGE GEARBOXES SERIES S

### 67 DESIGN FEATURES

The main design characteristics are:

- modularity
- space effective
- high efficiency
- quiet operation
- gears in hardened and case-hardened steel
- bare aluminium housing for sizes 10, 20, 30, unpainted high strength painted cast-iron housings for larger frame sizes
- input and output shafts from high grade steel.

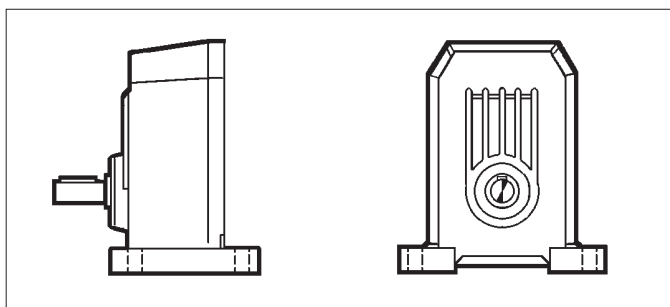
(E 60)







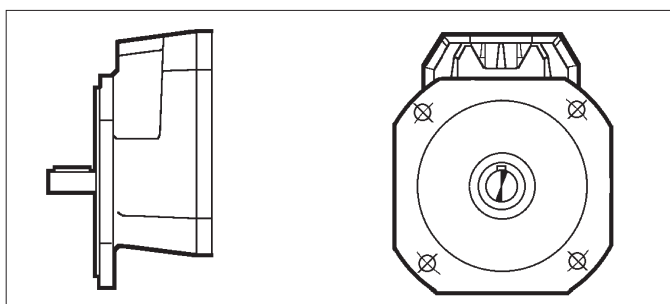
68 VERSIONS



**P**

Foot mount

S 10 ... S 50



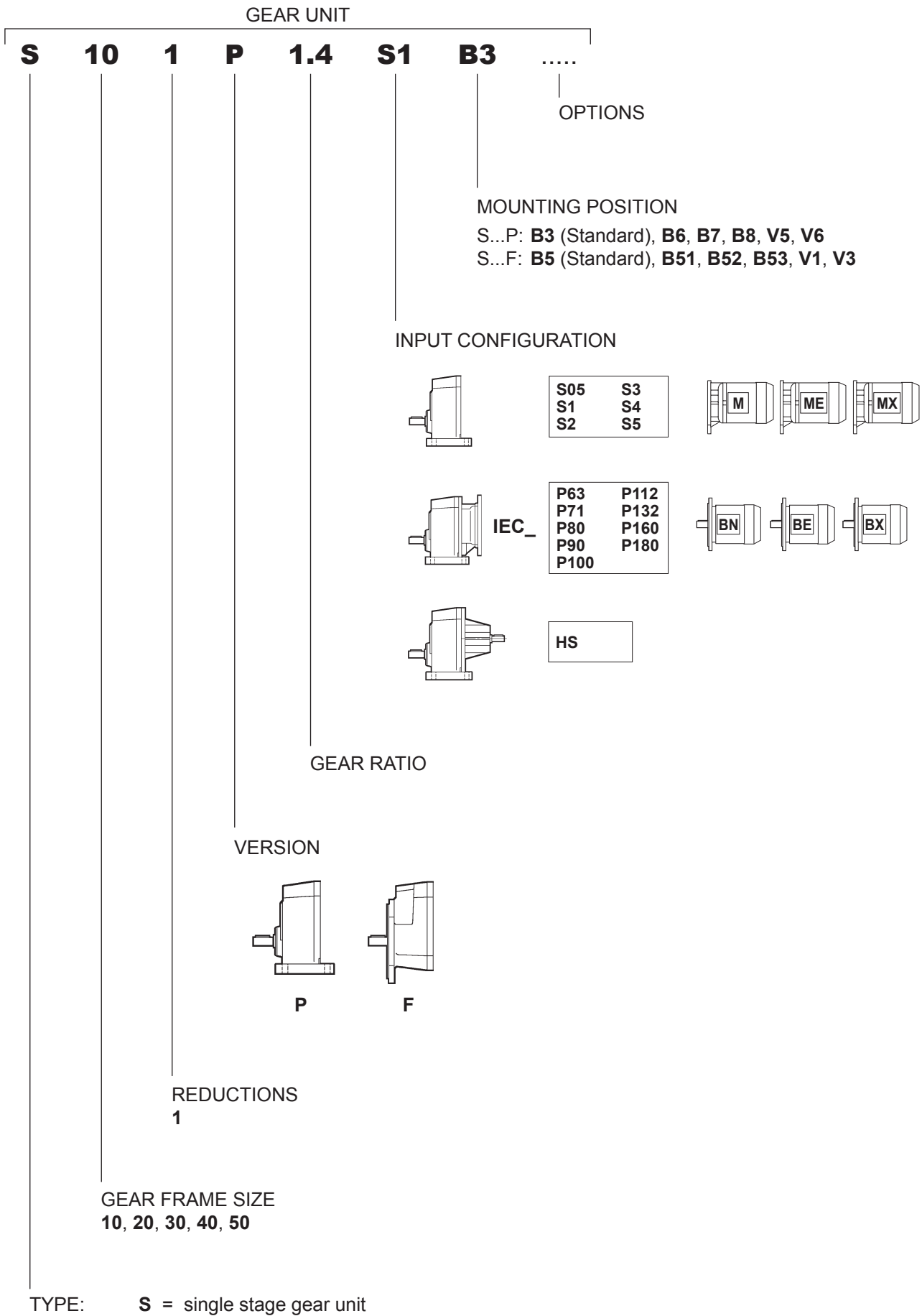
**F**

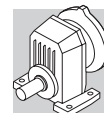
Flange mount

S 10 ... S 50



**69 DESIGNATION**





MOTOR

BRAKE

**M 1LA 4 230/400-50 IP54 CLF ..... W FD 7.5 R SB 220 SA .....**

OPTIONS

BRAKE  
SUPPLY

RECTIFIER TYPE  
AC/DC  
**NB, SB, NBR, SBR**

BRAKE HAND RELEASE  
**R, RM**

BRAKE TORQUE

BRAKE TYPE  
**FD** (d.c. brake)  
**FA** (a.c. brake)

TERMINAL BOX POSITION  
**W** (default), **N, E, S**

MOTOR MOUNTING  
— (compact motor)  
**B5** (IEC - motor)

INSULATION CLASS  
**CL F** standard  
**CL H** option

DEGREE OF PROTECTION  
**IP55** standard (IP54 - brake motor)

VOLTAGE - FREQUENCY

POLE NUMBER  
**2, 4, 6, 2/4, 2/6, 2/8, 2/12, 4/6, 4/8**

MOTOR SIZE  
**0B ... 5LA** (compact motor)  
**63A ... 280M** (IEC motor)

MOTOR TYPE

**MX** = compact 3-phase, class IE3  
**BX** = IEC 3-phase, class IE3

**ME** = compact 3-phase, class IE2  
**BE** = IEC 3-phase, class IE2

**M** = compact 3-phase  
**BN** = IEC 3-phase



## 69.1 Gearbox options

### SO

Gear units S10, S20, S30, S40, usually factory filled with oil, to be supplied unlubricated.

### LO

Gearbox S50, usually supplied without oil, to be supplied with synthetic oil currently used by BONFIGLIOLI RIDUTTORI and filled according to requested mounting position.

### DV

Dual oil seals on input shaft. (Available only for compact gearmotors).

### VV

Fluoro elastomer oil seal on input shaft.

### PV

All oil seals in Fluoro elastomer.

## SURFACE PROTECTION

When no specific protection class is requested, the painted (ferrous) surfaces of gearboxes are protected to at least corrosivity class C2 (UNI EN ISO 12944-2). For improved resistance to atmospheric corrosion, gearboxes can be delivered with **C3** and **C4** surface protection, obtained by painting the complete gearbox.

(E 61)

<b>SURFACE PROTECTION</b>	Typical environments	Maximum surface temperature	Corrosivity class according to UNI EN ISO 12944-2
<b>C3</b>	Urban and industrial environments with up to 100% relative humidity (medium air pollution)	120°C	C3
<b>C4</b>	Industrial areas, coastal areas, chemical plant, with up to 100% relative humidity (high air pollution)	120°C	C4

Gearboxes with optional protection to class **C3** or **C4** are available in a choice of colours.

If no specific colour is requested (see the "PAINTING" option) gearboxes are finished in RAL 7042.

Gearboxes can also be supplied with surface protection for corrosivity class **C5** according to UNI EN ISO 12944-2. Contact our Technical Service for further details.

## PAINTING

Gearboxes with optional protection to class C3 or C4 are available in the colours listed in the following table.



(E 62)

<b>PAINTING</b>	Colour	RAL number
<b>RAL7042*</b>	Traffic Grey A	7042
<b>RAL5010</b>	Gentian Blue	5010
<b>RAL9005</b>	Jet Black	9005
<b>RAL9006</b>	White Aluminium	9006
<b>RAL9010</b>	Pure White	9010

\* Gearboxes are supplied in this standard colour if no other colour is specified.

NOTE – “PAINTING” options can only be specified in conjunction with “SURFACE PROTECTION” options.

## CERTIFICATES

### AC - Certificate of compliance

The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

### CC - Inspection certificate

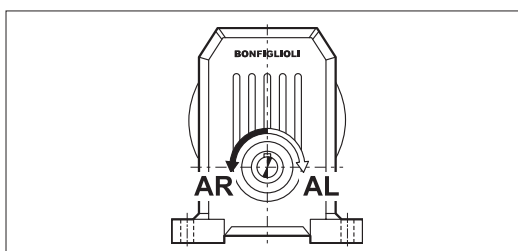
The document entails checking on order compliance, the visual inspection of external conditions and of mating dimensions. Checking on main functional parameters in unloaded conditions is also performed along with oil seal proofing, both in static and in running conditions. Units inspected are sampled within the shipping batch and marked individually.

## 69.2 Motor options

### AL, AR

A backstop device on the motor itself, as described in the electric motors section of this catalogue, is available for gearmotors with integral M, ME or MX Series motors. The following table shows the direction of free rotation of the gearbox, on the basis of which the correct option must be selected.

(E 63)



For further information on options, consult the electric motors section.



## 70 MOUNTING POSITION AND TERMINAL BOX ANGULAR LOCATION

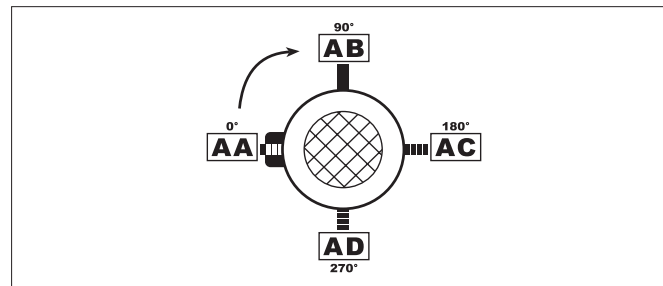
Location of motor terminal box can be specified by viewing the motor from the fan side; standard location is shown in black (W).

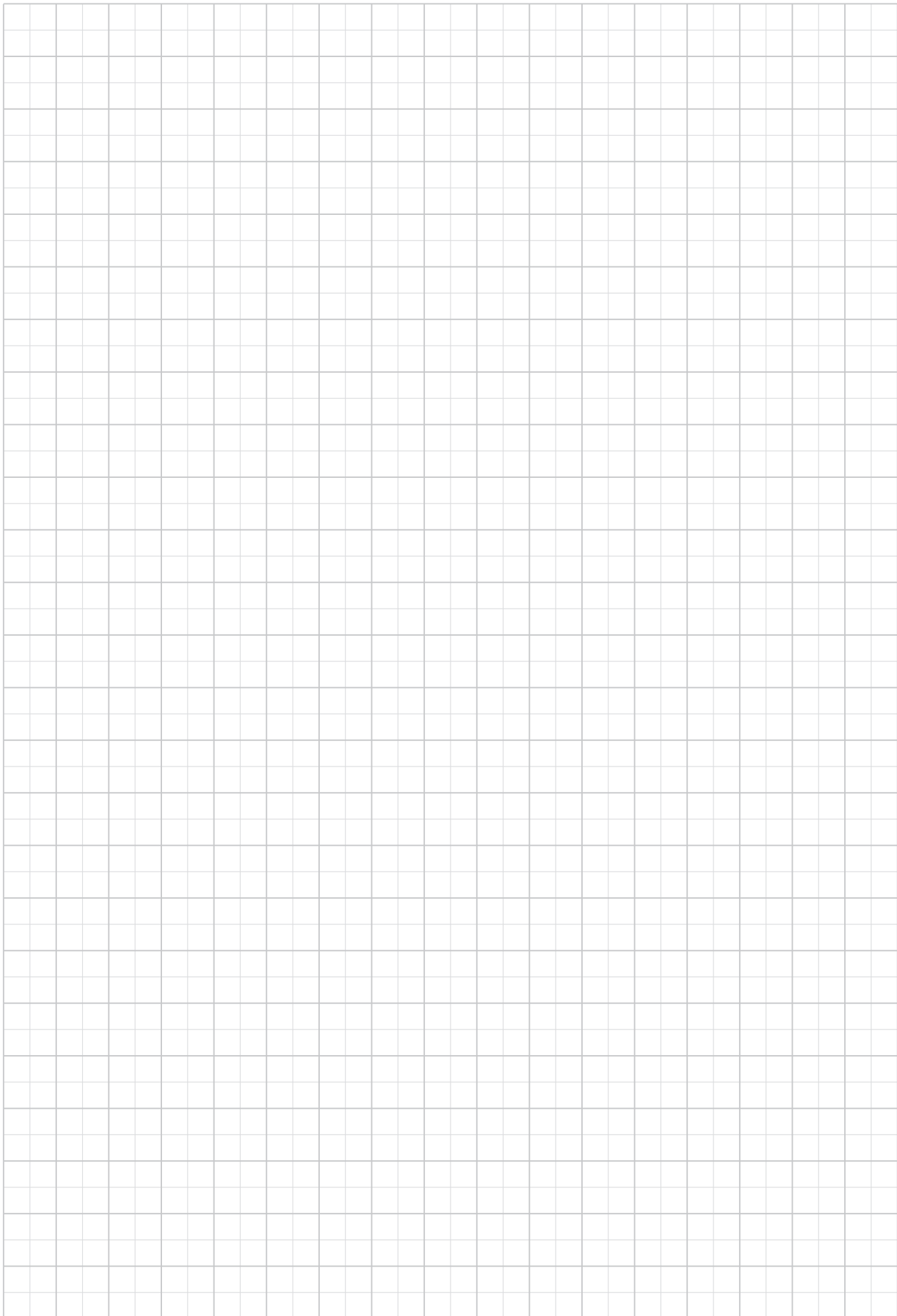
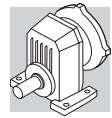
### Angular position of the brake release lever.

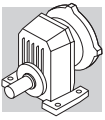
Unless otherwise specified, brake motors have the manual device side located, 90° apart from terminal box.

Different angles can be specified through the relevant options available.

(E 64)

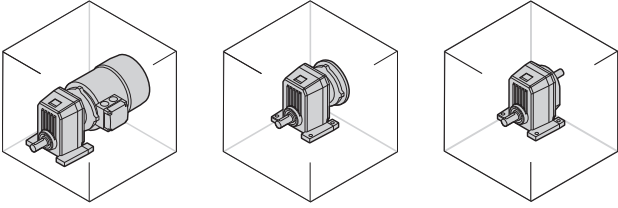






# S ... P

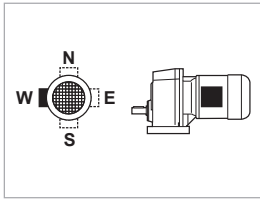
## B3



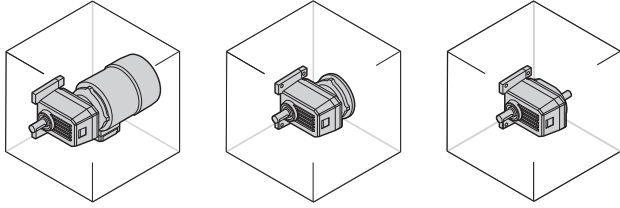
\_S

\_P(IEC)

\_HS



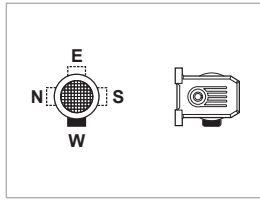
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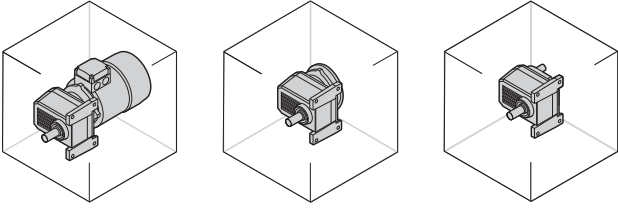
\_S

\_P(IEC)

\_HS



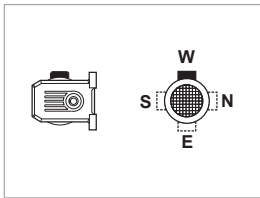
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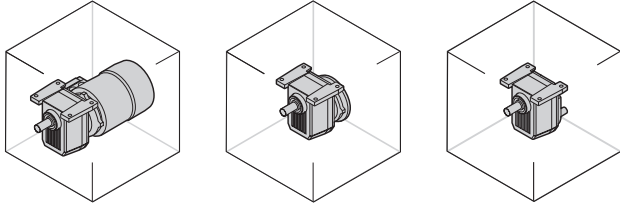
\_S

\_P(IEC)

\_HS



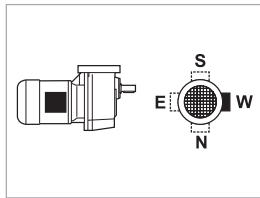
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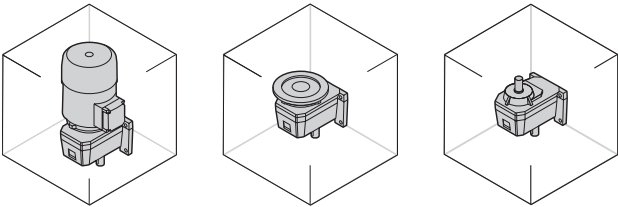
\_S

\_P(IEC)

\_HS



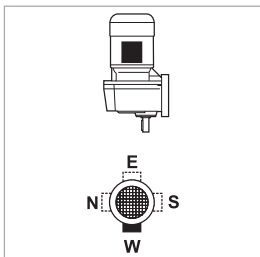
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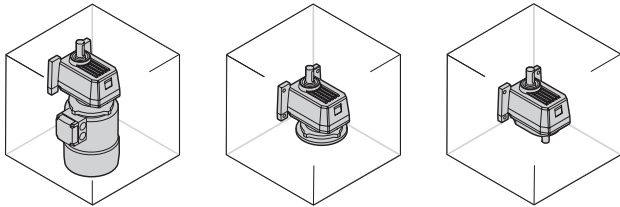
\_S

\_P(IEC)

\_HS



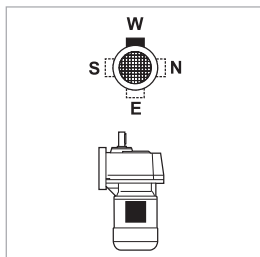
## V6



\_S

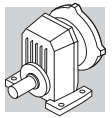
\_P(IEC)

\_HS



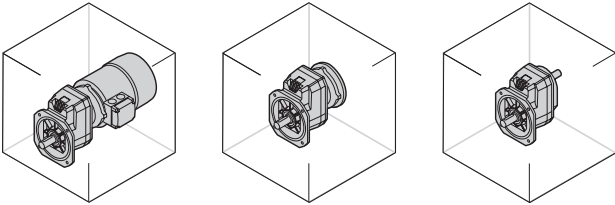
W = Default





# S ... F

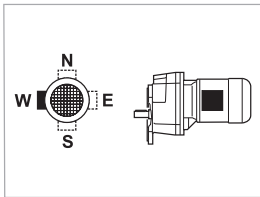
## B5



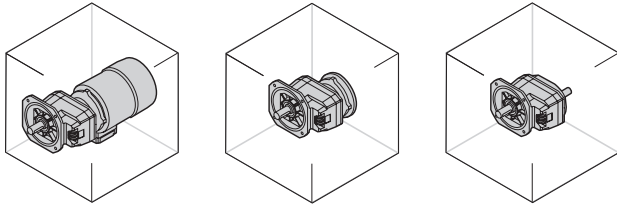
\_S

\_P(IEC)

\_HS



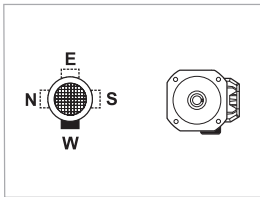
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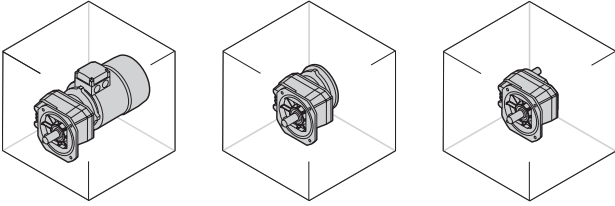
\_S

\_P(IEC)

\_HS



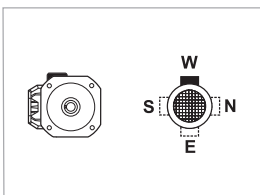
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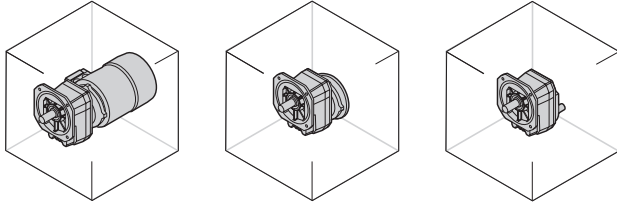
\_S

\_P(IEC)

\_HS



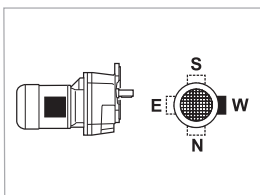
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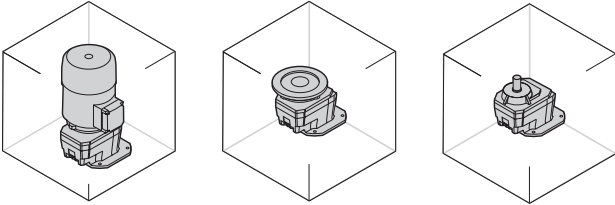
\_S

\_P(IEC)

\_HS



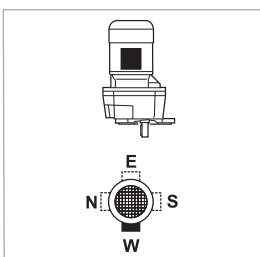
## V1



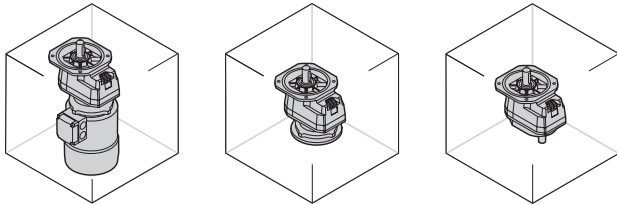
\_S

\_P(IEC)

\_HS



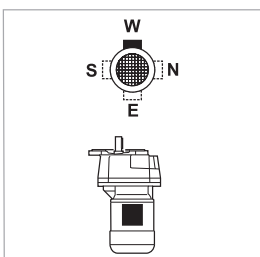
## V3



\_S

\_P(IEC)

\_HS



W = Default



## 71 OVERHUNG LOADS

External transmissions keyed onto input and/or output shaft generate loads that act radially onto same shaft.

Resulting shaft loading must be compatible with both the bearing and the shaft capacity. Namely shaft loading ( $R_{c1}$  for input shaft,  $R_{c2}$  for output shaft), must be equal or lower than admissible overhung load capacity for shaft under study ( $R_{n1}$  for input shaft,  $R_{n2}$  for output shaft). OHL capability listed in the rating chart section.

In the formulas given below, index (1) applies to parameters relating to input shaft, whereas index (2) refers to output shaft.

The load generated by an external transmission can be calculated with close approximation by the following equations:

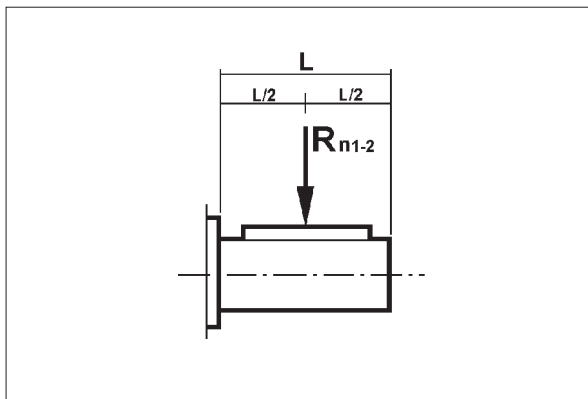
$$R_{c1} [N] = \frac{2000 \cdot M_1 [Nm] \cdot K_r}{d [mm]} \quad ; \quad R_{c2} [N] = \frac{2000 \cdot M_2 [Nm] \cdot K_r}{d [mm]} \quad (44)$$

(E 65)

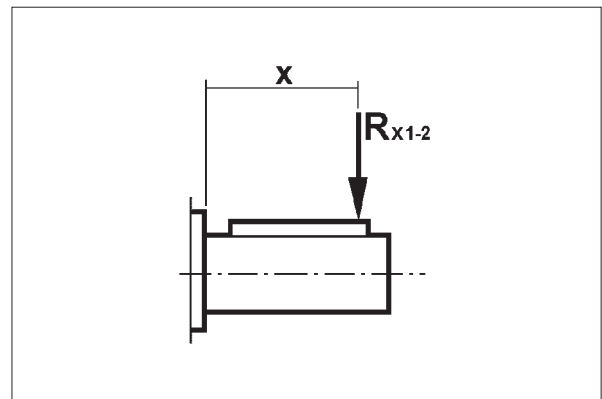
$M_1$ [Nm]	Torque applied to input shaft	$K_r = 1,25$	Gear transmission
$M_2$ [Nm]	Torque drawn at output shaft	$K_r = 1,5$	V-belt transmission
$d$ [mm]	Pitch diameter of element keyed onto shaft	$K_r = 2,0$	Flat belt transmission
$K_r = 1$	Chain transmission		

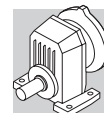
Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(E 66)



(E 67)





### a) Load applied at midpoint of shaft, tab. (E66)

A comparison of shaft loading with catalogue OHL ratings should verify the following condition:

$$R_{c1} \leq R_{n1} \quad [\text{input shaft}]$$

or

$$R_{c2} \leq R_{n2} \quad [\text{output shaft}]$$

### b) Load off the midpoint tab. (E67)

When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.

Revised permissible overhung loads  $R_{x1}$  (input) and  $R_{x2}$  (output) are calculated respectively from original rated values  $R_{n1}$  and  $R_{n2}$  through factor:

$$\frac{a}{b+x} \quad (45)$$

(E 68)

	Load location factors					
	Output shaft			Input shaft		
	a	b	c	a	b	c
<b>S 10 1</b>	61	46	200	21	1	300
<b>S 20 1</b>	73.5	53.5	270	40	20	350
<b>S 30 1</b>	91.5	66.5	380	38.5	18.5	350
<b>S 40 1</b>	126.5	96.5	600	49.5	24.5	450
<b>S 50 1</b>	153.5	113.5	680	49.5	24.5	450

Verification procedure is described here after.

### INPUT SHAFT

1. Calculate:

$$R_{x1} = R_{n1} \cdot \frac{a}{b+x} \quad (46)$$

N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (47)$$



Finally, the following condition must be verified:

$$R_{c1} \leq R_{x1} \quad (48)$$

## OUTPUT SHAFT

1. Calculate:

$$R_{x2} = R_{n2} \cdot \frac{a}{b+x} \quad (49)$$

N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (50)$$

Finally, the following condition must be verified:

$$R_{c2} \leq R_{x2} \quad (51)$$

## 72 THRUST LOADS, $A_{n1}$ , $A_{n2}$

Permissible thrust loads on input [ $A_{n1}$ ] and output [ $A_{n2}$ ] shafts are obtained from the radial loading for the shaft under consideration [ $R_{n1}$ ] and [ $R_{n2}$ ] through the following equation:

$$\begin{aligned} A_{n1} &= R_{n1} \cdot 0.2 \\ A_{n2} &= R_{n2} \cdot 0.2 \end{aligned} \quad (52)$$

The thrust loads calculated through these formulas apply to thrust forces occurring at the same time as rated radial loads.

In the only case that no overhung load acts on the shaft the value of the admissible thrust load [ $A_n$ ] amounts to 50% of rated OHL [ $R_n$ ] on same shaft.

Where thrust loads exceed permissible value or largely prevail over radial loads, contact Bonfiglioli Riduttori for an in-depth analysis of the application.







## 73 GEARMOTOR RATING CHARTS





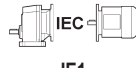

The selection of motors without brake takes into account the requirements of Regulation EC 640/2009 (see section **M** of this catalogue). When the motor rated power is above 0.75kW, BN/M motors can be provided.

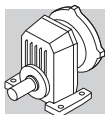
Considering that the Regulation EC 640/2009 shall not apply to the motors equipped with brake, the brakemotor selection takes into account BN/M motors only, without taking into account the rated power BX, BE, MX and ME brakemotors are available on request.

### 0.09 kW



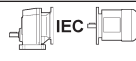

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1		 IE1	
69	12.1	2.9	13.1	2400			S301_13.1 P63 BN63A6	487
73	11.5	1.7	12.4	1500	S201_12.4 S05 M05A6	484	S201_12.4 P63 BN63A6	485
74	11.4	1.1	12.3	1160	S101_12.3 S05 M05A6	482	S101_12.3 P63 BN63A6	483
85	10.0	2.0	10.8	1500	S201_10.8 S05 M05A6	484	S201_10.8 P63 BN63A6	485
88	9.5	1.3	10.3	1100	S101_10.3 S05 M05A6	482	S101_10.3 P63 BN63A6	483
103	8.2	1.5	8.9	1060	S101_8.9 S05 M05A6	482	S101_8.9 P63 BN63A6	483
107	7.9	2.5	8.5	1500	S201_8.5 S05 M05A6	484	S201_8.5 P63 BN63A6	485
132	6.4	2.7	6.9	990	S101_6.9 S05 M05A6	482	S101_6.9 P63 BN63A6	483
149	5.7	3.0	6.1	960	S101_6.1 S05 M05A6	482	S101_6.1 P63 BN63A6	483
193	4.4	3.2	4.7	890	S101_4.7 S05 M05A6	482	S101_4.7 P63 BN63A6	483
237	3.6	3.9	3.8	830	S101_3.8 S05 M05A6	482	S101_3.8 P63 BN63A6	483
284	3.0	4.7	3.2	790	S101_3.2 S05 M05A6	482	S101_3.2 P63 BN63A6	483
364	2.3	5.2	2.5	730	S101_2.5 S05 M05A6	482	S101_2.5 P63 BN63A6	483
485	1.7	6.9	1.9	670	S101_1.9 S05 M05A6	482	S101_1.9 P63 BN63A6	483
640	1.3	9.1	1.4	610	S101_1.4 S05 M05A6	482	S101_1.4 P63 BN63A6	483

### 0.12 kW



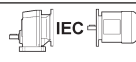

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1		 IE1	
69	16.2	2.2	13.1	2400			S301_13.1 P63 BN63A4	487
73	15.3	1.3	12.4	1500	S201_12.4 S05 M05B6	484	S201_12.4 P63 BN63B6	485
85	13.3	1.5	10.8	1500	S201_10.8 S05 M05B6	484	S201_10.8 P63 BN63B6	485
88	12.7	2.8	10.3	2400			S301_10.3 P63 BN63B6	487
88	12.7	0.9	10.3	1060	S101_10.3 S05 M05B6	482	S101_10.3 P63 BN63B6	483
102	11.0	3.2	8.9	2400			S301_8.9 P63 BN63B6	487
103	11.0	1.1	8.9	1030	S101_8.9 S05 M05B6	482	S101_8.9 P63 BN63B6	483
107	10.5	2.8	13.1	2400			S301_13.1 P63 BN63B6	487
107	10.5	1.9	8.5	1500	S201_8.5 S05 M05B6	484	S201_8.5 P63 BN63B6	485
113	10.0	1.7	12.4	1500	S201_12.4 S05 M05A4	484	S201_12.4 P63 BN63A4	485
114	9.9	1.0	12.3	1000	S101_12.3 S05 M05A4	482	S101_12.3 P63 BN63A4	483
126	8.9	3.4	7.2	1500	S201_7.2 S05 M05B6	484	S201_7.2 P63 BN63B6	485
130	8.6	2.0	10.8	1500	S201_10.8 S05 M05A4	484	S201_10.8 P63 BN63A4	485
132	8.5	2.0	6.9	960	S101_6.9 S05 M05B6	482	S101_6.9 P63 BN63B6	483
136	8.3	1.2	10.3	960	S101_10.3 S05 M05A4	482	S101_10.3 P63 BN63A4	483
149	7.5	2.3	6.1	940	S101_6.1 S05 M05B6	482	S101_6.1 P63 BN63B6	483

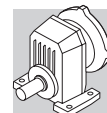


## 0.12 kW



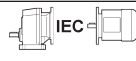

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1		 IE1	
158	7.1	1.4	8.9	920	S101_8.9 S05 M05A4	482	S101_8.9 P63 BN63A4	483
165	6.8	2.5	8.5	1500	S201_8.5 S05 M05A4	484	S201_8.5 P63 BN63A4	485
193	5.8	2.4	4.7	870	S101_4.7 S05 M05B6	482	S101_4.7 P63 BN63B6	483
203	5.5	2.7	6.9	860	S101_6.9 S05 M05A4	482	S101_6.9 P63 BN63A4	483
229	4.9	3.1	6.1	830	S101_6.1 S05 M05A4	482	S101_6.1 P63 BN63A4	483
237	4.7	2.9	3.8	820	S101_3.8 S05 M05B6	482	S101_3.8 P63 BN63B6	483
284	3.9	3.5	3.2	780	S101_3.2 S05 M05B6	482	S101_3.2 P63 BN63B6	483
296	3.8	3.2	4.7	770	S101_4.7 S05 M05A4	482	S101_4.7 P63 BN63A4	483
364	3.1	3.9	3.8	720	S101_3.8 S05 M05A4	482	S101_3.8 P63 BN63A4	483
364	3.1	3.9	2.5	720	S101_2.5 S05 M05B6	482	S101_2.5 P63 BN63B6	483
438	2.6	4.7	3.2	680	S101_3.2 S05 M05A4	482	S101_3.2 P63 BN63A4	483
485	2.3	5.2	1.9	660	S101_1.9 S05 M05B6	482	S101_1.9 P63 BN63B6	483
560	2.0	5.0	2.5	630	S101_2.5 S05 M05A4	482	S101_2.5 P63 BN63A4	483
640	1.8	6.8	1.4	600	S101_1.4 S05 M05B6	482	S101_1.4 P63 BN63B6	483
747	1.5	6.6	1.9	580	S101_1.9 S05 M05A4	482	S101_1.9 P63 BN63A4	483
985	1.1	8.8	1.4	530	S101_1.4 S05 M05A4	482	S101_1.4 P63 BN63A4	483

## 0.18 kW





$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1		 IE1	
69	24.6	1.4	13.1	2400		488	S301_13.1 P71 BN71A6	487
73	23.2	2.5	12.4	3800	S401_12.4 S1 M1SC6	488	S401_12.4 P71 BN71A6	489
84	20.1	1.0	10.8	1500		485	S201_10.8 P71 BN71A6	485
84	20.0	2.9	10.7	3800	S401_10.7 S1 M1SC6	488	S401_10.7 P71 BN71A6	489
87	19.3	1.8	10.3	2400	S301_10.3 S1 M1SC6	486	S301_10.3 P71 BN71A6	487
101	16.6	2.1	8.9	2400	S301_8.9 S1 M1SC6	486	S301_8.9 P71 BN71A6	487
106	15.9	1.3	8.5	1500	S201_8.5 S1 M1SC6	484	S201_8.5 P71 BN71A6	485
106	15.9	1.9	13.1	2400		487	S301_13.1 P63 BN63B4	487
112	15.1	1.1	12.4	1500	S201_12.4 S05 M05B4	484	S201_12.4 P63 BN63B4	485
112	15.0	3.3	12.4	3800		489	S401_12.4 P63 BN63B4	489
125	13.5	2.2	7.2	1500	S201_7.2 S1 M1SC6	484	S201_7.2 P71 BN71A6	485
129	13.0	1.3	10.8	1500	S201_10.8 S05 M05B4	484	S201_10.8 P63 BN63B4	485
130	12.9	1.3	6.9	910	S101_6.9 S1 M1SC6	482	S101_6.9 P71 BN71A6	483
135	12.5	2.4	10.3	2330		487	S301_10.3 P63 BN63B4	487
147	11.4	1.5	6.1	890	S101_6.1 S1 M1SC6	482	S101_6.1 P71 BN71A6	483
155	10.9	2.8	5.8	1500	S201_5.8 S1 M1SC6	484	S201_5.8 P71 BN71A6	485
156	10.8	2.8	8.9	2230		487	S301_8.9 P63 BN63B4	487
157	10.8	0.9	8.9	880	S101_8.9 S05 M05B4	482	S101_8.9 P63 BN63B4	483
164	10.3	1.7	8.5	1500	S201_8.5 S05 M05B4	484	S201_8.5 P63 BN63B4	485
189	8.9	3.4	4.8	1500	S201_4.8 S1 M1SC6	484	S201_4.8 P71 BN71A6	485
190	8.8	1.6	4.7	830	S101_4.7 S1 M1SC6	482	S101_4.7 P71 BN71A6	483
192	8.8	3.0	7.2	1500	S201_7.2 S05 M05B4	484	S201_7.2 P63 BN63B4	485
201	8.4	1.8	6.9	820	S101_6.9 S05 M05B4	482	S101_6.9 P63 BN63B4	483
214	7.9	3.1	13.1	2020		487	S301_13.1 P63 BN63A2	487
226	7.5	1.7	12.4	1480	S201_12.4 S05 M05A2	484	S201_12.4 P63 BN63A2	485
227	7.4	2.0	6.1	800	S101_6.1 S05 M05B4	482	S101_6.1 P63 BN63B4	483
228	7.4	1.1	12.3	800	S101_12.3 S05 M05A2	482	S101_12.3 P63 BN63A2	483
234	7.2	1.9	3.8	790	S101_3.8 S1 M1SC6	482	S101_3.8 P71 BN71A6	483
261	6.4	2.0	10.8	1420	S201_10.8 S05 M05A2	484	S201_10.8 P63 BN63A2	485
273	6.2	1.3	10.3	760	S101_10.3 S05 M05A2	482	S101_10.3 P63 BN63A2	483
281	6.0	2.3	3.2	750	S101_3.2 S1 M1SC6	482	S101_3.2 P71 BN71A6	483
294	5.7	2.1	4.7	750	S101_4.7 S05 M05B4	482	S101_4.7 P63 BN63B4	483
317	5.3	1.5	8.9	730	S101_8.9 S05 M05A2	482	S101_8.9 P63 BN63A2	483

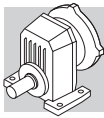


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

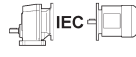

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	 IE1	
331	5.1	2.6	8.5	1320	S201_8.5 S05 M05A2	484	S201_8.5 P63 BN63A2	485
360	4.7	2.6	2.5	700	S101_2.5 S1 M1SC6	482	S101_2.5 P71 BN71A6	483
361	4.7	2.6	3.8	700	S101_3.8 S05 M05B4	482	S101_3.8 P63 BN63B4	483
407	4.1	2.9	6.9	680	S101_6.9 S05 M05A2	482	S101_6.9 P63 BN63A2	483
434	3.9	3.1	3.2	670	S101_3.2 S05 M05B4	482	S101_3.2 P63 BN63B4	483
460	3.7	3.3	6.1	660	S101_6.1 S05 M05A2	482		
480	3.5	3.4	1.9	640	S101_1.9 S1 M1SC6	482	S101_1.9 P71 BN71A6	483
556	3.0	3.3	2.5	620	S101_2.5 S05 M05B4	482	S101_2.5 P63 BN63B4	483
594	2.8	3.5	4.7	610	S101_4.7 S05 M05A2	482	S101_4.7 P63 BN63A2	483
633	2.7	4.5	1.4	590	S101_1.4 S1 M1SC6	482	S101_1.4 P71 BN71A6	483
731	2.3	4.3	3.8	570	S101_3.8 S05 M05A2	482	S101_3.8 P63 BN63A2	483
741	2.3	4.4	1.9	570	S101_1.9 S05 M05B4	482	S101_1.9 P63 BN63B4	483
878	1.9	5.2	3.2	540	S101_3.2 S05 M05A2	482	S101_3.2 P63 BN63A2	483
978	1.7	5.8	1.4	520	S101_1.4 S05 M05B4	482	S101_1.4 P63 BN63B4	483
1124	1.5	5.3	2.5	500	S101_2.5 S05 M05A2	482	S101_2.5 P63 BN63A2	483
1499	1.1	7.1	1.9	460	S101_1.9 S05 M05A2	482	S101_1.9 P63 BN63A2	483
1977	0.9	9.4	1.4	420	S101_1.4 S05 M05A2	482	S101_1.4 P63 BN63A2	483

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

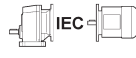

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	 IE1	
69	34.1	1.0	13.1	2400			S301_13.1 P71 BN71B6	487
70	33.5	3.0	12.9	6520	S501_12.9 S1 M1SD6	490	S501_12.9 P71 BN71B6	491
73	32.2	1.8	12.4	3800	S401_12.4 S1 M1SD6	488	S401_12.4 P71 BN71B6	489
84	27.7	2.1	10.7	3800	S401_10.7 S1 M1SD6	488	S401_10.7 P71 BN71B6	489
87	26.8	1.3	10.3	2400	S301_10.3 S1 M1SD6	486	S301_10.3 P71 BN71B6	487
101	23.1	1.5	8.9	2400	S301_8.9 S1 M1SD6	486	S301_8.9 P71 BN71B6	487
104	22.5	3.1	8.6	3800	S401_8.6 S1 M1SD6	488	S401_8.6 P71 BN71B6	489
105	22.3	1.3	13.1	2400			S301_13.1 P71 BN71A4	487
106	22.1	0.9	8.5	1500	S201_8.5 S1 M1SD6	484	S201_8.5 P71 BN71B6	485
111	21.1	2.4	12.4	3800			S401_12.4 P71 BN71A4	489
125	18.8	1.6	7.2	1500	S201_7.2 S1 M1SD6	484	S201_7.2 P71 BN71B6	485
127	18.4	3.1	7.1	2340	S301_7.1 S1 M1SD6	486	S301_7.1 P71 BN71B6	487
128	18.3	0.9	10.8	1500	S201_10.8 S05 M05C4	484	S201_10.8 P71 BN71A4	485
129	18.2	2.8	10.7	3800			S401_10.7 P71 BN71A4	489
130	17.9	0.9	6.9	850	S101_6.9 S1 M1SD6	482	S101_6.9 P71 BN71B6	483
133	17.5	1.7	10.3	2300			S301_10.3 P71 BN71A4	487
147	15.9	1.1	6.1	840	S101_6.1 S1 M1SD6	482	S101_6.1 P71 BN71B6	483
155	15.1	2.0	5.8	1500	S201_5.8 S1 M1SD6	484	S201_5.8 P71 BN71B6	485
155	15.1	2.0	8.9	2200			S301_8.9 P71 BN71A4	487
162	14.5	1.2	8.5	1500	S201_8.5 S05 M05C4	484	S201_8.5 P71 BN71A4	485
189	12.4	2.4	4.8	1500	S201_4.8 S1 M1SD6	484	S201_4.8 P71 BN71B6	485
190	12.3	1.1	4.7	790	S101_4.7 S1 M1SD6	482	S101_4.7 P71 BN71B6	483
190	12.3	2.1	7.2	1500	S201_7.2 S05 M05C4	484	S201_7.2 P71 BN71A4	485
199	11.7	1.3	6.9	780	S101_6.9 S05 M05C4	482	S101_6.9 P71 BN71A4	483
214	10.9	2.2	13.1	2000			S301_13.1 P63 BN63B2	487
225	10.4	1.4	6.1	770	S101_6.1 S05 M05C4	482	S101_6.1 P71 BN71A4	483
226	10.3	1.3	12.4	1450	S201_12.4 S05 M05B2	484	S201_12.4 P63 BN63B2	485
229	10.2	2.9	3.9	1440	S201_3.9 S1 M1SD6	484	S201_3.9 P71 BN71B6	485
234	10.0	1.4	3.8	750	S101_3.8 S1 M1SD6	482	S101_3.8 P71 BN71B6	483
236	9.9	2.6	5.8	1430	S201_5.8 S05 M05C4	484	S201_5.8 P71 BN71A4	485
261	9.0	1.5	10.8	1390	S201_10.8 S05 M05B2	484	S201_10.8 P63 BN63B2	485
273	8.6	2.8	10.3	1860			S301_10.3 P63 BN63B2	487



## 0.25 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	 IE1	
273	8.6	0.9	10.3	730	S101_10.3 S05 M05B2	482	S101_10.3 P63 BN63B2	483
281	8.3	1.7	3.2	720	S101_3.2 S1 M1SD6	482	S101_3.2 P71 BN71B6	483
288	8.1	3.2	4.8	1350	S201_4.8 S05 M05C4	484	S201_4.8 P71 BN71A4	485
291	8.0	1.5	4.7	720	S101_4.7 S05 M05C4	482	S101_4.7 P71 BN71A4	483
316	7.4	3.2	8.9	1770			S301_8.9 P63 BN63B2	487
317	7.4	1.1	8.9	710	S101_8.9 S05 M05B2	482	S101_8.9 P63 BN63B2	483
331	7.1	1.8	8.5	1300	S201_8.5 S05 M05B2	484	S201_8.5 P63 BN63B2	485
358	6.5	1.8	3.8	680	S101_3.8 S05 M05C4	482	S101_3.8 P71 BN71A4	483
360	6.5	1.8	2.5	680	S101_2.5 S1 M1SD6	482	S101_2.5 P71 BN71B6	483
389	6.0	3.5	7.2	1240	S201_7.2 S05 M05B2	484	S201_7.2 P63 BN63B2	485
407	5.7	2.1	6.9	660	S101_6.9 S05 M05B2	482	S101_6.9 P63 BN63B2	483
430	5.4	2.2	3.2	650	S101_3.2 S05 M05C4	482	S101_3.2 P71 BN71A4	483
460	5.1	2.4	6.1	640	S101_6.1 S05 M05B2	482	S101_6.1 P63 BN63B2	483
480	4.9	2.5	1.9	620	S101_1.9 S1 M1SD6	482	S101_1.9 P71 BN71B6	483
550	4.3	2.4	2.5	610	S101_2.5 S05 M05C4	482	S101_2.5 P71 BN71A4	483
594	3.9	2.5	4.7	600	S101_4.7 S05 M05B2	482	S101_4.7 P63 BN63B2	483
633	3.7	3.2	1.4	580	S101_1.4 S1 M1SD6	482	S101_1.4 P71 BN71B6	483
731	3.2	3.1	3.8	560	S101_3.8 S05 M05B2	482	S101_3.8 P63 BN63B2	483
733	3.2	3.1	1.9	560	S101_1.9 S05 M05C4	482	S101_1.9 P71 BN71A4	483
878	2.7	3.8	3.2	530	S101_3.2 S05 M05B2	482	S101_3.2 P63 BN63B2	483
968	2.4	4.1	1.4	510	S101_1.4 S05 M05C4	482	S101_1.4 P71 BN71A4	483
1124	2.1	3.8	2.5	500	S101_2.5 S05 M05B2	482	S101_2.5 P63 BN63B2	483
1499	1.6	5.1	1.9	450	S101_1.9 S05 M05B2	482	S101_1.9 P63 BN63B2	483
1977	1.2	6.8	1.4	420	S101_1.4 S05 M05B2	482	S101_1.4 P63 BN63B2	483



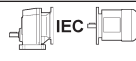

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$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	 IE1	
71	49.0	2.0	12.9	6420	S501_12.9 S1 M1LA6	490	S501_12.9 P80 BN80A6	491
73	47.2	1.2	12.4	3800	S401_12.4 S1 M1LA6	488	S401_12.4 P80 BN80A6	489
85	40.6	1.4	10.7	3800	S401_10.7 S1 M1LA6	488	S401_10.7 P80 BN80A6	489
87	39.8	2.9	10.5	6020	S501_10.5 S1 M1LA6	490	S501_10.5 P80 BN80A6	491
102	33.8	1.0	8.9	2400	S301_8.9 S1 M1LA6	486	S301_8.9 P80 BN80A6	487
104	33.2	0.9	13.1	2390			S301_13.1 P71 BN71B4	487
105	32.9	2.1	8.6	3800	S401_8.6 S1 M1LA6	488	S401_8.6 P80 BN80A6	489
106	32.6	3.1	12.9	5650	S501_12.9 S1 M1SD4	490	S501_12.9 P71 BN71B4	491
110	31.3	1.6	12.4	3800	S401_12.4 S1 M1SD4	488	S401_12.4 P71 BN71B4	489
126	27.5	1.1	7.2	1500	S201_7.2 S1 M1LA6	484	S201_7.2 P80 BN80A6	485
127	27.2	3.3	7.2	3800	S401_7.2 S1 M1LA6	488	S401_7.2 P80 BN80A6	489
128	27.0	2.1	7.1	2260	S301_7.1 S1 M1LA6	486	S301_7.1 P80 BN80A6	487
128	27.0	1.9	10.7	3800	S401_10.7 S1 M1SD4	488	S401_10.7 P71 BN71B4	489
133	26.0	1.2	10.3	2240	S301_10.3 S1 M1SD4	486	S301_10.3 P71 BN71B4	487
154	22.5	1.3	8.9	2150	S301_8.9 S1 M1SD4	486	S301_8.9 P71 BN71B4	487
156	22.2	2.6	5.8	2140	S301_5.8 S1 M1LA6	486	S301_5.8 P80 BN80A6	487
156	22.1	1.4	5.8	1500	S201_5.8 S1 M1LA6	484	S201_5.8 P80 BN80A6	485
159	21.8	2.7	8.6	3610	S401_8.6 S1 M1SD4	488	S401_8.6 P71 BN71B4	489
184	18.8	3.1	4.9	2040	S301_4.9 S1 M1LA6	486	S301_4.9 P80 BN80A6	487
190	18.3	1.4	7.2	1460	S201_7.2 S1 M1SD4	484	S201_7.2 P71 BN71B4	485
191	18.1	1.7	4.8	1460	S201_4.8 S1 M1LA6	484	S201_4.8 P80 BN80A6	485
193	17.9	2.8	7.1	2020	S301_7.1 S1 M1SD4	486	S301_7.1 P71 BN71B4	487
214	16.2	1.5	13.1	1960			S301_13.1 P71 BN71A2	487
224	15.4	1.0	6.1	710	S101_6.1 S1 M1SD4	482	S101_6.1 P71 BN71B4	483
227	15.3	2.6	12.4	3230			S401_12.4 P71 BN71A2	489







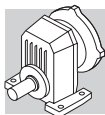


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

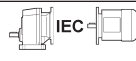

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	 IE1	
231	15.0	2.0	3.9	1380	S201_3.9 S1 M1LA6	484	S201_3.9 P80 BN80A6	485
234	14.8	3.4	5.8	1900	S301_5.8 S1 M1SD4	486	S301_5.8 P71 BN71B4	487
235	14.7	1.8	5.8	1390	S201_5.8 S1 M1SD4	484	S201_5.8 P71 BN71B4	485
237	14.6	1.0	3.8	690	S101_3.8 S1 M1LA6	482	S101_3.8 P80 BN80A6	483
261	13.2	1.0	10.8	1350	S201_10.8 S05 M05C2	484	S201_10.8 P71 BN71A2	485
263	13.1	3.0	10.7	3080			S401_10.7 P71 BN71A2	489
273	12.7	1.9	10.3	1820			S301_10.3 P71 BN71A2	487
284	12.2	1.1	3.2	670	S101_3.2 S1 M1LA6	482	S101_3.2 P80 BN80A6	483
287	12.1	2.2	4.8	1310	S201_4.8 S1 M1SD4	484	S201_4.8 P71 BN71B4	485
290	11.9	1.0	4.7	670	S101_4.7 S1 M1SD4	482	S101_4.7 P71 BN71B4	483
293	11.8	2.5	3.1	1300	S201_3.1 S1 M1LA6	484	S201_3.1 P80 BN80A6	485
316	11.0	2.2	8.9	1740			S301_8.9 P71 BN71A2	487
331	10.5	1.2	8.5	1270	S201_8.5 S05 M05C2	484	S201_8.5 P71 BN71A2	485
348	9.9	2.6	3.9	1240	S201_3.9 S1 M1SD4	484	S201_3.9 P71 BN71B4	485
356	9.7	1.2	3.8	640	S101_3.8 S1 M1SD4	482	S101_3.8 P71 BN71B4	483
364	9.5	1.3	2.5	630	S101_2.5 S1 M1LA6	482	S101_2.5 P80 BN80A6	483
373	9.3	3.2	2.4	1210	S201_2.4 S1 M1LA6	484	S201_2.4 P80 BN80A6	485
389	8.9	2.4	7.2	1210	S201_7.2 S05 M05C2	484	S201_7.2 P71 BN71A2	485
407	8.5	1.4	6.9	630	S101_6.9 S05 M05C2	482	S101_6.9 P71 BN71A2	483
428	8.1	1.5	3.2	620	S101_3.2 S1 M1SD4	482	S101_3.2 P71 BN71B4	483
440	7.9	3.3	3.1	1160	S201_3.1 S1 M1SD4	484	S201_3.1 P71 BN71B4	485
460	7.5	1.6	6.1	610	S101_6.1 S05 M05C2	482	S101_6.1 P71 BN71A2	483
480	7.2	2.8	1.9	1130	S201_1.9 S1 M1LA6	484	S201_1.9 P80 BN80A6	485
483	7.2	2.9	5.8	1130	S201_5.8 S05 M05C2	484	S201_5.8 P71 BN71A2	485
485	7.1	1.7	1.9	590	S101_1.9 S1 M1LA6	482	S101_1.9 P80 BN80A6	483
548	6.3	1.6	2.5	580	S101_2.5 S1 M1SD4	482	S101_2.5 P71 BN71B4	483
594	5.8	1.7	4.7	570	S101_4.7 S05 M05C2	482	S101_4.7 P71 BN71A2	483
640	5.4	2.2	1.4	550	S101_1.4 S1 M1LA6	482	S101_1.4 P80 BN80A6	483
731	4.7	2.1	3.8	540	S101_3.8 S05 M05C2	482	S101_3.8 P71 BN71A2	483
731	4.7	2.1	1.9	540	S101_1.9 S1 M1SD4	482	S101_1.9 P71 BN71B4	483
878	3.9	2.5	3.2	520	S101_3.2 S05 M05C2	482	S101_3.2 P71 BN71A2	483
964	3.6	2.8	1.4	500	S101_1.4 S1 M1SD4	482	S101_1.4 P71 BN71B4	483
1124	3.1	2.6	2.5	480	S101_2.5 S05 M05C2	482	S101_2.5 P71 BN71A2	483
1499	2.3	3.5	1.9	440	S101_1.9 S05 M05C2	482	S101_1.9 P71 BN71A2	483
1977	1.8	4.6	1.4	410	S101_1.4 S05 M05C2	482	S101_1.4 P71 BN71A2	483

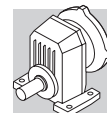
## 0.55 kW

$n_2$ min <sup>-1</sup>	$M_2$ Nm	S	i	$R_{n2}$ N	 IE1	 IE1	 IE1	
71	72.1	1.4	12.9	6290	S501_12.9 S2 M2SA6	490	S501_12.9 P80 BN80B6	491
86	59.7	1.0	10.7	3800	S401_10.7 S2 M2SA6	488	S401_10.7 P80 BN80B6	489
88	58.5	2.0	10.5	5910	S501_10.5 S2 M2SA6	490	S501_10.5 P80 BN80B6	491
105	49.1	2.5	8.8	5600	S501_8.8 S2 M2SA6	490	S501_8.8 P80 BN80B6	491
107	48.3	1.4	8.6	3800	S401_8.6 S2 M2SA6	488	S401_8.6 P80 BN80B6	489
107	48.1	2.1	12.9	5560	S501_12.9 S1 M1LA4	490	S501_12.9 P80 BN80A4	491
111	46.3	1.1	12.4	3800	S401_12.4 S1 M1LA4	488	S401_12.4 P80 BN80A4	489
124	41.4	3.4	7.4	5310	S501_7.4 S2 M2SA6	490	S501_7.4 P80 BN80B6	491
129	40.0	2.2	7.2	3780	S401_7.2 S2 M2SA6	488	S401_7.2 P80 BN80B6	489
129	39.8	1.3	10.7	3770	S401_10.7 S1 M1LA4	488	S401_10.7 P80 BN80A4	489
130	39.7	1.5	7.1	2150	S301_7.1 S2 M2SA6	486	S301_7.1 P80 BN80B6	487
132	39.0	2.8	10.5	5220	S501_10.5 S1 M1LA4	490	S501_10.5 P80 BN80A4	491
152	33.9	3.1	6.1	3600	S401_6.1 S2 M2SA6	488	S401_6.1 P80 BN80B6	489
155	33.2	0.9	8.9	2060	S301_8.9 S1 M1LA4	486	S301_8.9 P80 BN80A4	487





## 0.55 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N	 IE1		 IEC IE1	
157	32.7	1.8	5.8	2050	S301_5.8 S2 M2SA6	486	S301_5.8 P80 BN80B6	487
157	32.7	3.4	8.8	4940	S501_8.8 S1 M1LA4	490	S501_8.8 P80 BN80A4	491
158	32.6	0.9	5.8	1420	S201_5.8 S2 M2SA6	484	S201_5.8 P80 BN80B6	485
160	32.2	1.9	8.6	3540	S401_8.6 S1 M1LA4	488	S401_8.6 P80 BN80A4	489
186	27.6	2.1	4.9	1960	S301_4.9 S2 M2SA6	486	S301_4.9 P80 BN80B6	487
191	26.9	1.0	7.2	1370	S201_7.2 S1 M1LA4	484	S201_7.2 P80 BN80A4	485
193	26.7	1.1	4.8	1370	S201_4.8 S2 M2SA6	484	S201_4.8 P80 BN80B6	485
193	26.7	3.0	7.2	3350	S401_7.2 S1 M1LA4	488	S401_7.2 P80 BN80A4	489
195	26.4	1.9	7.1	1940	S301_7.1 S1 M1LA4	486	S301_7.1 P80 BN80A4	487
214	24.0	1.0	13.1	1900			S301_13.1 P71 BN71B2	487
218	23.6	3.4	12.9	4460	S501_12.9 S1 M1SD2	490	S501_12.9 P71 BN71B2	491
227	22.7	1.8	12.4	3190	S401_12.4 S1 M1SD2	488	S401_12.4 P71 BN71B2	489
233	22.1	2.6	3.9	1850	S301_3.9 S2 M2SA6	486	S301_3.9 P80 BN80B6	487
234	22.0	1.4	3.9	1300	S201_3.9 S2 M2SA6	484	S201_3.9 P80 BN80B6	485
236	21.8	2.3	5.8	1840	S301_5.8 S1 M1LA4	486	S301_5.8 P80 BN80A4	487
237	21.7	1.2	5.8	1310	S201_5.8 S1 M1LA4	484	S201_5.8 P80 BN80A4	485
263	19.5	2.0	10.7	3040	S401_10.7 S1 M1SD2	488	S401_10.7 P71 BN71B2	489
273	18.9	1.3	10.3	1780	S301_10.3 S1 M1SD2	486	S301_10.3 P71 BN71B2	487
280	18.4	2.7	4.9	1760	S301_4.9 S1 M1LA4	486	S301_4.9 P80 BN80A4	487
289	17.8	1.5	4.8	1250	S201_4.8 S1 M1LA4	484	S201_4.8 P80 BN80A4	485
296	17.4	1.7	3.1	1230	S201_3.1 S2 M2SA6	484	S201_3.1 P80 BN80B6	485
300	17.1	3.4	3.1	1720	S301_3.1 S2 M2SA6	486	S301_3.1 P80 BN80B6	487
316	16.3	1.5	8.9	1700	S301_8.9 S1 M1SD2	486	S301_8.9 P71 BN71B2	487
325	15.8	3.0	8.6	2850	S401_8.6 S1 M1SD2	488	S401_8.6 P71 BN71B2	489
350	14.7	3.4	3.9	1650	S301_3.9 S1 M1LA4	486	S301_3.9 P80 BN80A4	487
351	14.7	1.8	3.9	1190	S201_3.9 S1 M1LA4	484	S201_3.9 P80 BN80A4	485
377	13.6	2.2	2.4	1160	S201_2.4 S2 M2SA6	484	S201_2.4 P80 BN80B6	485
389	13.2	1.6	7.2	1160	S201_7.2 S1 M1SD2	484	S201_7.2 P71 BN71B2	485
396	13.0	3.1	7.1	1600	S301_7.1 S1 M1SD2	486	S301_7.1 P71 BN71B2	487
407	12.6	0.9	6.9	570	S101_6.9 S1 M1SD2	482	S101_6.9 P71 BN71B2	483
431	11.9	1.0	3.2	560	S101_3.2 S1 M1LA4	482	S101_3.2 P80 BN80A4	483
444	11.6	2.2	3.1	1120	S201_3.1 S1 M1LA4	484	S201_3.1 P80 BN80A4	485
460	11.2	1.1	6.1	570	S101_6.1 S1 M1SD2	482	S101_6.1 P71 BN71B2	483
483	10.7	2.0	5.8	1100	S201_5.8 S1 M1SD2	484	S201_5.8 P71 BN71B2	485
486	10.6	1.9	1.9	1080	S201_1.9 S2 M2SA6	484	S201_1.9 P80 BN80B6	485
491	10.5	1.1	1.9	540	S101_1.9 S2 M2SA6	482	S101_1.9 P80 BN80B6	483
504	10.2	3.4	1.8	1470	S301_1.8 S2 M2SA6	486	S301_1.8 P80 BN80B6	487
552	9.3	1.1	2.5	540	S101_2.5 S1 M1LA4	482	S101_2.5 P80 BN80A4	483
566	9.1	2.9	2.4	1050	S201_2.4 S1 M1LA4	484	S201_2.4 P80 BN80A4	485
589	8.7	2.4	4.8	1040	S201_4.8 S1 M1SD2	484	S201_4.8 P71 BN71B2	485
594	8.7	1.2	4.7	540	S101_4.7 S1 M1SD2	482	S101_4.7 P71 BN71B2	483
647	8.0	1.5	1.4	510	S101_1.4 S2 M2SA6	482	S101_1.4 P80 BN80B6	483
661	7.8	2.6	1.4	990	S201_1.4 S2 M2SA6	484	S201_1.4 P80 BN80B6	485
714	7.2	2.9	3.9	980	S201_3.9 S1 M1SD2	484	S201_3.9 P71 BN71B2	485
728	7.1	2.4	1.9	970	S201_1.9 S1 M1LA4	484	S201_1.9 P80 BN80A4	485
731	7.0	1.4	3.8	510	S101_3.8 S1 M1SD2	482	S101_3.8 P71 BN71B2	483
736	7.0	1.4	1.9	500	S101_1.9 S1 M1LA4	482	S101_1.9 P80 BN80A4	483
878	5.9	1.7	3.2	490	S101_3.2 S1 M1SD2	482	S101_3.2 P71 BN71B2	483
971	5.3	1.9	1.4	470	S101_1.4 S1 M1LA4	482	S101_1.4 P80 BN80A4	483
992	5.2	3.3	1.4	890			S201_1.4 P80 BN80A4	485
1124	4.6	1.7	2.5	460	S101_2.5 S1 M1SD2	482	S101_2.5 P71 BN71B2	483
1499	3.4	2.3	1.9	430	S101_1.9 S1 M1SD2	482	S101_1.9 P71 BN71B2	483
1977	2.6	3.1	1.4	390	S101_1.4 S1 M1SD2	482	S101_1.4 P71 BN71B2	483



## 0.75 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N					
					IE2	IE3	IE2	IE3	
73	96	1.0	12.9	6170	S501_12.9 S3 ME3SA6		490	S501_12.9 P90 BE90S6	491
90	78	1.5	10.5	5810	S501_10.5 S3 ME3SA6		490	S501_10.5 P90 BE90S6	491
107	65	1.9	8.8	5520	S501_8.8 S3 ME3SA6		490	S501_8.8 P90 BE90S6	491
111	63	1.6	12.9	5460	S501_12.9 S2 ME2SB4	S501_12.9 S2 MX2SB4	490	S501_12.9 P80 BE80B4	491
127	55	2.5	7.4	5240	S501_7.4 S3 ME3SA6		490	S501_7.4 P90 BE90S6	491
131	53	1.7	7.2	3700	S401_7.2 S3 ME3SA6		488	S401_7.2 P90 BE90S6	489
134	52	1.0	10.7	3670	S401_10.7 S2 ME2SB4	S401_10.7 S2 MX2SB4	488	S401_10.7 P80 BE80B4	489
137	51	2.1	10.5	5130	S501_10.5 S2 ME2SB4	S501_10.5 S2 MX2SB4	490	S501_10.5 P80 BE80B4	491
155	45	2.3	6.1	3530	S401_6.1 S3 ME3SA6		488	S401_6.1 P90 BE90S6	489
161	44	1.3	5.8	1960	S301_5.8 S3 ME3SA6		486	S301_5.8 P90 BE90S6	487
163	43	2.6	8.8	4870	S501_8.8 S2 ME2SB4	S501_8.8 S2 MX2SB4	490	S501_8.8 P80 BE80B4	491
166	42	1.4	8.6	3460	S401_8.6 S2 ME2SB4	S401_8.6 S2 MX2SB4	488	S401_8.6 P80 BE80B4	489
191	37	1.6	4.9	1880	S301_4.9 S3 ME3SA6		486	S301_4.9 P90 BE90S6	487
194	36	2.9	4.8	3300	S401_4.8 S3 ME3SA6		488	S401_4.8 P90 BE90S6	489
200	35	2.3	7.2	3280	S401_7.2 S2 ME2SB4	S401_7.2 S2 MX2SB4	488	S401_7.2 P80 BE80B4	489
202	35	1.4	7.1	1860	S301_7.1 S2 ME2SB4	S301_7.1 S2 MX2SB4	486	S301_7.1 P80 BE80B4	487
221	32	2.5	12.9	4420	S501_12.9 S2 ME2SA2		490	S501_12.9 P80 BE80A2	491
230	31	1.3	12.4	3150	S401_12.4 S2 ME2SA2		488	S401_12.4 P80 BE80A2	489
236	30	3.0	6.1	3120	S401_6.1 S2 ME2SB4	S401_6.1 S2 MX2SB4	488	S401_6.1 P80 BE80B4	489
238	29	2.0	3.9	1780	S301_3.9 S3 ME3SA6		486	S301_3.9 P90 BE90S6	487
245	29	1.7	5.8	1780	S301_5.8 S2 ME2SB4	S301_5.8 S2 MX2SB4	486	S301_5.8 P80 BE80B4	487
246	29	0.9	5.8	1160	S201_5.8 S2 ME2SB4	S201_5.8 S2 MX2SB4	484	S201_5.8 P80 BE80B4	485
267	26	1.5	10.7	3000	S401_10.7 S2 ME2SA2		488	S401_10.7 P80 BE80A2	489
273	26	3.3	10.5	4140	S501_10.5 S2 ME2SA2		490	S501_10.5 P80 BE80A2	491
277	25	0.9	10.3	1730	S301_10.3 S2 ME2SA2		486	S301_10.3 P80 BE80A2	487
290	24	2.1	4.9	1700	S301_4.9 S2 ME2SB4	S301_4.9 S2 MX2SB4	486	S301_4.9 P80 BE80B4	487
300	23	1.1	4.8	1180	S201_4.8 S2 ME2SB4	S201_4.8 S2 MX2SB4	484	S201_4.8 P80 BE80B4	485
302	23	1.3	3.1	1160	S201_3.1 S3 ME3SA6		484	S201_3.1 P90 BE90S6	485
307	23	2.5	3.1	1670	S301_3.1 S3 ME3SA6		486	S301_3.1 P90 BE90S6	487
321	22	1.1	8.9	1660	S301_8.9 S2 ME2SA2		486	S301_8.9 P80 BE80A2	487
330	21	2.3	8.6	2820	S401_8.6 S2 ME2SA2		488	S401_8.6 P80 BE80A2	489
363	19.3	2.6	3.9	1600	S301_3.9 S2 ME2SB4	S301_3.9 S2 MX2SB4	486	S301_3.9 P80 BE80B4	487
364	19.3	1.3	3.9	1130	S201_3.9 S2 ME2SB4	S201_3.9 S2 MX2SB4	484	S201_3.9 P80 BE80B4	485
386	18.2	1.6	2.4	1110	S201_2.4 S3 ME3SA6		484	S201_2.4 P90 BE90S6	485
388	18.1	3.2	2.4	1560	S301_2.4 S3 ME3SA6		486	S301_2.4 P90 BE90S6	487
395	17.8	1.2	7.2	1120	S201_7.2 S2 ME2SA2		484	S201_7.2 P80 BE80A2	485
402	17.5	2.3	7.1	1560	S301_7.1 S2 ME2SA2		486	S301_7.1 P80 BE80A2	487
460	15.2	1.7	3.1	1070	S201_3.1 S2 ME2SB4	S201_3.1 S2 MX2SB4	484	S201_3.1 P80 BE80B4	485
467	15.0	3.3	3.1	1490	S301_3.1 S2 ME2SB4	S301_3.1 S2 MX2SB4	486	S301_3.1 P80 BE80B4	487
488	14.4	2.8	5.8	1480	S301_5.8 S2 ME2SA2		486	S301_5.8 P80 BE80A2	487
490	14.3	1.5	5.8	1060	S201_5.8 S2 ME2SA2		484	S201_5.8 P80 BE80A2	485
496	14.1	1.4	1.9	1040	S201_1.9 S3 ME3SA6		484	S201_1.9 P90 BE90S6	485
515	13.6	2.6	1.8	1440	S301_1.8 S3 ME3SA6		486	S301_1.8 P90 BE90S6	487
578	12.1	3.3	4.9	1410	S301_4.9 S2 ME2SA2		486	S301_4.9 P80 BE80A2	487
587	11.9	2.2	2.4	1010	S201_2.4 S2 ME2SB4	S201_2.4 S2 MX2SB4	484	S201_2.4 P80 BE80B4	485
591	11.9	4.2	2.4	1380	S301_2.4 S2 ME2SB4	S301_2.4 S2 MX2SB4	486	S301_2.4 P80 BE80B4	487
598	11.7	1.8	4.8	1010	S201_4.8 S2 ME2SA2		484	S201_4.8 P80 BE80A2	485
661	10.6	1.1	1.4	460	S101_1.4 S3 ME3SA6		482	S101_1.4 P90 BE90S6	483
668	10.5	3.3	1.4	1330	S301_1.4 S3 ME3SA6		486	S301_1.4 P90 BE90S6	487
676	10.4	1.9	1.4	960	S201_1.4 S3 ME3SA6		484	S201_1.4 P90 BE90S6	485
725	9.7	2.2	3.9	960	S201_3.9 S2 ME2SA2		484	S201_3.9 P80 BE80A2	485
741	9.5	1.1	3.8	480	S101_3.8 S2 ME2SA2		482	S101_3.8 P80 BE80A2	483
755	9.3	1.8	1.9	940	S201_1.9 S2 ME2SB4	S201_1.9 S2 MX2SB4	484	S201_1.9 P80 BE80B4	485
763	9.2	1.1	1.9	460	S101_1.9 S2 ME2SB4	S101_1.9 S2 MX2SB4	482	S101_1.9 P80 BE80B4	483
783	8.9	3.4	1.8	1280	S301_1.8 S2 ME2SB4	S301_1.8 S2 MX2SB4	486	S301_1.8 P80 BE80B4	487
891	7.9	1.3	3.2	460	S101_3.2 S2 ME2SA2		482	S101_3.2 P80 BE80A2	483
916	7.7	2.7	3.1	900	S201_3.1 S2 ME2SA2		484	S201_3.1 P80 BE80A2	485

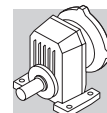


## 0.75 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
1006	7.0	1.4	1.4	440	S101_1.4 S2 ME2SB4	S101_1.4 S2 MX2SB4	482	S101_1.4 P80 BE80B4	S101_1.4 P80 BX80B4	483
1028	6.8	2.5	1.4	860	S201_1.4 S2 ME2SB4	S201_1.4 S2 MX2SB4	484	S201_1.4 P80 BE80B4	S201_1.4 P80 BX80B4	485
1140	6.2	1.3	2.5	440	S101_2.5 S2 ME2SA2		482	S101_2.5 P80 BE80A2		483
1169	6.0	3.5	2.4	840	S201_2.4 S2 ME2SA2		484	S201_2.4 P80 BE80A2		485
1504	4.7	2.8	1.9	780	S201_1.9 S2 ME2SA2		484	S201_1.9 P80 BE80A2		485
1520	4.6	1.7	1.9	410	S101_1.9 S2 ME2SA2		482	S101_1.9 P80 BE80A2		483
2006	3.5	2.3	1.4	380	S101_1.4 S2 ME2SA2		482	S101_1.4 P80 BE80A2		483

## 1.1 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
90	114	1.0	10.5	5650	S501_10.5 S3 ME3LA6		490	S501_10.5 P100 BE100M6		491
108	96	1.3	8.8	5380	S501_8.8 S3 ME3LA6		490	S501_8.8 P100 BE100M6		491
111	93	1.1	12.9	5320	S501_12.9 S3 ME3SA4	S501_12.9 S3 MX3SA4	490	S501_12.9 P90 BE90S4	S501_12.9 P90 BX90S4	491
128	81	1.7	7.4	5120	S501_7.4 S3 ME3LA6		490	S501_7.4 P100 BE100M6		491
132	78	1.2	7.2	3550	S401_7.2 S3 ME3LA6		488	S401_7.2 P100 BE100M6		489
137	76	1.5	10.5	5020	S501_10.5 S3 ME3SA4	S501_10.5 S3 MX3SA4	490	S501_10.5 P90 BE90S4	S501_10.5 P90 BX90S4	491
156	66	1.6	6.1	3400	S401_6.1 S3 ME3LA6		488	S401_6.1 P100 BE100M6		489
156	66	2.3	6.1	4840	S501_6.1 S3 ME3LA6		490	S501_6.1 P100 BE100M6		491
163	64	1.7	8.8	4770	S501_8.8 S3 ME3SA4	S501_8.8 S3 MX3SA4	490	S501_8.8 P90 BE90S4	S501_8.8 P90 BX90S4	491
166	63	1.0	8.6	3350	S401_8.6 S3 ME3SA4	S401_8.6 S3 MX3SA4	488	S401_8.6 P90 BE90S4	S401_8.6 P90 BX90S4	489
192	54	1.1	4.9	1740	S301_4.9 S3 ME3LA6		486	S301_4.9 P100 BE100M6		487
193	54	2.4	7.4	4530	S501_7.4 S3 ME3SA4	S501_7.4 S3 MX3SA4	490	S501_7.4 P90 BE90S4	S501_7.4 P90 BX90S4	491
196	53	2.0	4.8	3200	S401_4.8 S3 ME3LA6		488	S401_4.8 P100 BE100M6		489
200	52	1.5	7.2	3180	S401_7.2 S3 ME3SA4	S401_7.2 S3 MX3SA4	488	S401_7.2 P90 BE90S4	S401_7.2 P90 BX90S4	489
202	51	1.0	7.1	1730	S301_7.1 S3 ME3SA4	S301_7.1 S3 MX3SA4	486	S301_7.1 P90 BE90S4	S301_7.1 P90 BX90S4	487
220	47	1.7	12.9	4350	S501_12.9 S2 ME2SB2		490	S501_12.9 P90 BE90B2		491
236	44	2.0	6.1	3040	S401_6.1 S3 ME3SA4	S401_6.1 S3 MX3SA4	488	S401_6.1 P90 BE90S4	S401_6.1 P90 BX90S4	489
236	44	3.0	6.1	4270	S501_6.1 S3 ME3SA4	S501_6.1 S3 MX3SA4	490	S501_6.1 P90 BE90S4	S501_6.1 P90 BX90S4	491
240	43	1.3	3.9	1670	S301_3.9 S3 ME3LA6		486	S301_3.9 P100 BE100M6		487
245	42	1.2	5.8	1670	S301_5.8 S3 ME3SA4	S301_5.8 S3 MX3SA4	486	S301_5.8 P90 BE90S4	S301_5.8 P90 BX90S4	487
248	42	2.5	3.8	2990	S401_3.8 S3 ME3LA6		488	S401_3.8 P100 BE100M6		489
265	39	1.0	10.7	2930	S401_10.7 S2 ME2SB2		488	S401_10.7 P90 BE90B2		489
271	38	2.2	10.5	4090	S501_10.5 S2 ME2SB2		490	S501_10.5 P90 BE90B2		491
290	36	1.4	4.9	1610	S301_4.9 S3 ME3SA4	S301_4.9 S3 MX3SA4	486	S301_4.9 P90 BE90S4	S301_4.9 P90 BX90S4	487
296	35	2.6	4.8	2850	S401_4.8 S3 ME3SA4	S401_4.8 S3 MX3SA4	488	S401_4.8 P90 BE90S4	S401_4.8 P90 BX90S4	489
309	33	1.7	3.1	1580	S301_3.1 S3 ME3LA6		486	S301_3.1 P100 BE100M6		487
310	33	3.2	3.1	2810	S401_3.1 S3 ME3LA6		488	S401_3.1 P100 BE100M6		489
323	32	2.7	8.8	3870	S501_8.8 S2 ME2SB2		490	S501_8.8 P90 BE90B2		491
328	31	1.5	8.6	2760	S401_8.6 S2 ME2SB2		488	S401_8.6 P90 BE90B2		489
363	29	1.7	3.9	1530	S301_3.9 S3 ME3SA4	S301_3.9 S3 MX3SA4	486	S301_3.9 P90 BE90S4	S301_3.9 P90 BX90S4	487
364	29	0.9	3.9	950	S201_3.9 S3 ME3SA4	S201_3.9 S3 MX3SA4	484	S201_3.9 P90 BE90S4	S201_3.9 P90 BX90S4	485
375	28	3.3	3.8	2650	S401_3.8 S3 ME3SA4	S401_3.8 S3 MX3SA4	488	S401_3.8 P90 BE90S4	S401_3.8 P90 BX90S4	489
390	26	2.2	2.4	1490	S301_2.4 S3 ME3LA6		486	S301_2.4 P100 BE100M6		487
396	26	2.4	7.2	2610	S401_7.2 S2 ME2SB2		488	S401_7.2 P90 BE90B2		489
399	26	1.6	7.1	1500	S301_7.1 S2 ME2SB2		486	S301_7.1 P90 BE90B2		487
460	23	1.2	3.1	990	S201_3.1 S3 ME3SA4	S201_3.1 S3 MX3SA4	484	S201_3.1 P90 BE90S4	S201_3.1 P90 BX90S4	485
467	22	2.3	3.1	1430	S301_3.1 S3 ME3SA4	S301_3.1 S3 MX3SA4	486	S301_3.1 P90 BE90S4	S301_3.1 P90 BX90S4	487
484	21	1.9	5.8	1420	S301_5.8 S2 ME2SB2		486	S301_5.8 P90 BE90B2		487
499	21	1.0	1.9	960	S201_1.9 S3 ME3LA6		484	S201_1.9 P100 BE100M6		485
510	20	3.5	1.9	2420	S401_1.9 S3 ME3LA6		488	S401_1.9 P100 BE100M6		489
518	19.9	1.8	1.8	1380	S301_1.8 S3 ME3LA6		486	S301_1.8 P100 BE100M6		487
574	17.9	2.2	4.9	1360	S201_4.9 S2 ME2SB2		486	S201_4.9 P90 BE90B2		487
587	17.7	1.5	2.4	940	S201_2.4 S3 ME3SA4	S201_2.4 S3 MX3SA4	484	S201_2.4 P90 BE90S4	S201_2.4 P90 BX90S4	485



## 1.1 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
591	17.6	2.8	2.4	1340	S301_2.4 S3 ME3SA4	S301_2.4 S3 MX3SA4	486	S301_2.4 P90 BE90S4	S301_2.4 P90 BX90S4	487
593	17.3	1.2	4.8	950	S201_4.8 S2 ME2SB2		484	S201_4.8 P90 BE90B2		485
671	15.3	2.3	1.4	1290	S301_1.4 S3 ME3LA6		486	S301_1.4 P100 BE100M6		487
679	15.2	1.3	1.4	900	S201_1.4 S3 ME3LA6		484	S201_1.4 P100 BE100M6		485
717	14.3	2.8	3.9	1280	S301_3.9 S2 ME2SB2		486	S301_3.9 P90 BE90B2		487
719	14.3	1.5	3.9	910	S201_3.9 S2 ME2SB2		484	S201_3.9 P90 BE90B2		485
755	13.7	1.2	1.9	890	S201_1.9 S3 ME3SA4	S201_1.9 S3 MX3SA4	484	S201_1.9 P90 BE90S4	S201_1.9 P90 BX90S4	485
783	13.2	2.3	1.8	1240	S301_1.8 S3 ME3SA4	S301_1.8 S3 MX3SA4	486	S301_1.8 P90 BE90S4	S301_1.8 P90 BX90S4	487
910	11.3	1.9	3.1	860	S201_3.1 S2 ME2SB2		484	S201_3.1 P90 BE90B2		485
1006	10.3	1.0	1.4	390	S101_1.4 S3 ME3SA4	S101_1.4 S3 MX3SA4	482	S101_1.4 P90 BE90S4	S101_1.4 P90 BX90S4	483
1016	10.2	2.9	1.4	1150	S301_1.4 S3 ME3SA4	S301_1.4 S3 MX3SA4	486	S301_1.4 P90 BE90S4	S301_1.4 P90 BX90S4	487
1028	10.1	1.7	1.4	820	S201_1.4 S3 ME3SA4	S201_1.4 S3 MX3SA4	484	S201_1.4 P90 BE90S4	S201_1.4 P90 BX90S4	485
1161	8.9	2.4	2.4	810	S201_2.4 S2 ME2SB2		484	S201_2.4 P90 BE90B2		485
1494	6.9	1.9	1.9	750	S201_1.9 S2 ME2SB2		484	S201_1.9 P90 BE90B2		485
1509	6.8	1.2	1.9	380	S101_1.9 S2 ME2SB2		482	S101_1.9 P90 BE90B2		483
1991	5.2	1.5	1.4	350	S101_1.4 S2 ME2SB2		482	S101_1.4 P90 BE90B2		483
2034	5.1	2.6	1.4	690	S201_1.4 S2 ME2SB2		484	S201_1.4 P90 BE90B2		485

## 1.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N				IEC		
					IE2	IE3		IE2	IE3	
108	130	1.0	8.8	5190	S501_8.8 S3 ME3LB6		490	S501_8.8 P100 BE100LA6		491
128	110	1.3	7.4	4960	S501_7.4 S3 ME3LB6		490	S501_7.4 P100 BE100LA6		491
137	102	1.1	10.5	4880	S501_10.5 S3 ME3SB4	S501_10.5 S3 MX3SB4	490	S501_10.5 P90 BE90LA4	S501_10.5 P90 BX90LA4	491
156	90	1.7	6.1	4700	S501_6.1 S3 ME3LB6		490	S501_6.1 P100 BE100LA6		491
163	86	1.3	8.8	4660	S501_8.8 S3 ME3SB4	S501_8.8 S3 MX3SB4	490	S501_8.8 P90 BE90LA4	S501_8.8 P90 BX90LA4	491
193	73	1.8	7.4	4440	S501_7.4 S3 ME3SB4	S501_7.4 S3 MX3SB4	490	S501_7.4 P90 BE90LA4	S501_7.4 P90 BX90LA4	491
196	72	1.5	4.8	3070	S401_4.8 S3 ME3LB6		488	S401_4.8 P100 BE100LA6		489
199	71	2.5	4.8	4380	S501_4.8 S3 ME3LB6		490	S501_4.8 P100 BE100LA6		491
200	70	1.1	7.2	3070	S401_7.2 S3 ME3SB4	S401_7.2 S3 MX3SB4	488	S401_7.2 P90 BE90LA4	S401_7.2 P90 BX90LA4	489
222	63	1.3	12.9	4270	S501_12.9 S3 ME3SA2		490	S501_12.9 P90 BE90SA2		491
236	59	1.5	6.1	2940	S401_6.1 S3 ME3SB4	S401_6.1 S3 MX3SB4	488	S401_6.1 P90 BE90LA4	S401_6.1 P90 BX90LA4	489
236	59	2.2	6.1	4190	S501_6.1 S3 ME3SB4	S501_6.1 S3 MX3SB4	490	S501_6.1 P90 BE90LA4	S501_6.1 P90 BX90LA4	491
248	57	1.9	3.8	2880	S401_3.8 S3 ME3LB6		488	S401_3.8 P100 BE100LA6		489
273	51	1.7	10.5	4020	S501_10.5 S3 ME3SA2		490	S501_10.5 P90 BE90SA2		491
290	48	1.0	4.9	1500	S301_4.9 S3 ME3SB4	S301_4.9 S3 MX3SB4	486	S301_4.9 P90 BE90LA4	S301_4.9 P90 BX90LA4	487
296	47	1.9	4.8	2770	S401_4.8 S3 ME3SB4	S401_4.8 S3 MX3SB4	488	S401_4.8 P90 BE90LA4	S401_4.8 P90 BX90LA4	489
301	47	3.2	4.8	3890	S501_4.8 S3 ME3SB4	S501_4.8 S3 MX3SB4	490	S501_4.8 P90 BE90LA4	S501_4.8 P90 BX90LA4	491
309	45	1.3	3.1	1470	S301_3.1 S3 ME3LB6		486	S301_3.1 P100 BE100LA6		487
310	45	2.3	3.1	2720	S401_3.1 S3 ME3LB6		488	S401_3.1 P100 BE100LA6		489
326	43	2.0	8.8	3820	S501_8.8 S3 ME3SA2		490	S501_8.8 P90 BE90SA2		491
331	42	1.1	8.6	2700	S401_8.6 S3 ME3SA2		488	S401_8.6 P90 BE90SA2		489
363	39	1.3	3.9	1440	S301_3.9 S3 ME3SB4	S301_3.9 S3 MX3SB4	486	S301_3.9 P90 BE90LA4	S301_3.9 P90 BX90LA4	487
375	37	2.4	3.8	2590	S401_3.8 S3 ME3SB4	S401_3.8 S3 MX3SB4	488	S401_3.8 P90 BE90LA4	S401_3.8 P90 BX90LA4	489
386	36	2.7	7.4	3630	S501_7.4 S3 ME3SA2		490	S501_7.4 P90 BE90SA2		491
390	36	1.6	2.4	1400	S301_2.4 S3 ME3LB6		486	S301_2.4 P100 BE100LA6		487
395	36	3.0	2.4	2540	S401_2.4 S3 ME3LB6		488	S401_2.4 P100 BE100LA6		489
399	35	1.8	7.2	2560	S401_7.2 S3 ME3SA2		488	S401_7.2 P90 BE90SA2		489
403	35	1.1	7.1	1420	S301_7.1 S3 ME3SA2		486	S301_7.1 P90 BE90SA2		487
467	30	1.7	3.1	1360	S301_3.1 S3 ME3SB4	S301_3.1 S3 MX3SB4	486	S301_3.1 P90 BE90LA4	S301_3.1 P90 BX90LA4	487
468	30	3.0	3.1	2430	S401_3.1 S3 ME3SB4	S401_3.1 S3 MX3SB4	488	S401_3.1 P90 BE90LA4	S401_3.1 P90 BX90LA4	489
471	30	2.3	6.1	2440	S401_6.1 S3 ME3SA2		488	S401_6.1 P90 BE90SA2		489
488	29	1.4	5.8	1360	S301_5.8 S3 ME3SA2		486	S301_5.8 P90 BE90SA2		487

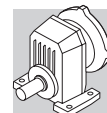


## 1.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
510	28	2.5	1.9	2350	S401_1.9 S3 ME3LB6		488	S401_1.9 P100 BE100LA6		489
518	27	1.3	1.8	1310	S301_1.8 S3 ME3LB6		486	S301_1.8 P100 BE100LA6		487
579	24	1.6	4.9	1310	S301_4.9 S3 ME3SA2		486	S301_4.9 P90 BE90SA2		487
587	24	1.1	2.4	870	S201_2.4 S3 ME3SB4	S201_2.4 S3 MX3SB4	484	S201_2.4 P90 BE90LA4	S201_2.4 P90 BX90LA4	485
591	24	2.1	2.4	1290	S301_2.4 S3 ME3SB4	S301_2.4 S3 MX3SB4	486	S301_2.4 P90 BE90LA4	S301_2.4 P90 BX90LA4	487
598	23	3.8	2.4	2200	S401_2.4 S3 ME3SB4	S401_2.4 S3 MX3SB4	488	S401_2.4 P90 BE90LA4	S401_2.4 P90 BX90LA4	489
671	21	1.7	1.4	1230	S301_1.4 S3 ME3LB6		486	S301_1.4 P100 BE100LA6		487
679	21	1.0	1.4	830	S201_1.4 S3 ME3LB6		484	S201_1.4 P100 BE100LA6		485
693	20	3.5	1.4	2150	S401_1.4 S3 ME3LB6		488	S401_1.4 P100 BE100LA6		489
724	19.4	2.1	3.9	1240	S301_3.9 S3 ME3SA2		486	S301_3.9 P90 BE90SA2		487
755	18.6	0.9	1.9	830	S201_1.9 S3 ME3SB4	S201_1.9 S3 MX3SB4	484	S201_1.9 P90 BE90LA4	S201_1.9 P90 BX90LA4	485
772	18.1	3.3	1.9	2090	S401_1.9 S3 ME3SB4	S401_1.9 S3 MX3SB4	488	S401_1.9 P90 BE90LA4	S401_1.9 P90 BX90LA4	489
783	17.9	1.7	1.8	1200	S301_1.8 S3 ME3SB4	S301_1.8 S3 MX3SB4	486	S301_1.8 P90 BE90LA4	S301_1.8 P90 BX90LA4	487
918	15.3	1.4	3.1	810	S201_3.1 S3 ME3SA2		484	S201_3.1 P90 BE90SA2		485
932	15.1	2.7	3.1	1160	S301_3.1 S3 ME3SA2		486	S301_3.1 P90 BE90SA2		487
1016	13.8	2.2	1.4	1110	S301_1.4 S3 ME3SB4	S301_1.4 S3 MX3SB4	486	S301_1.4 P90 BE90LA4	S301_1.4 P90 BX90LA4	487
1028	13.6	1.2	1.4	780	S201_1.4 S3 ME3SB4	S201_1.4 S3 MX3SB4	484	S201_1.4 P90 BE90LA4	S201_1.4 P90 BX90LA4	485
1171	12.0	1.8	2.4	770	S201_2.4 S3 ME3SA2		484	S201_2.4 P90 BE90SA2		485
1507	9.3	1.4	1.9	720	S201_1.9 S3 ME3SA2		484	S201_1.9 P90 BE90SA2		485
1563	9.0	2.7	1.8	1000	S301_1.8 S3 ME3SA2		486	S301_1.8 P90 BE90SA2		487
2009	7.0	1.1	1.4	320	S101_1.4 S3 ME3SA2		482	S101_1.4 P90 BE90SA2		483
2029	6.9	3.5	1.4	920	S301_1.4 S3 ME3SA2		486	S301_1.4 P90 BE90SA2		487
2052	6.8	1.9	1.4	670	S201_1.4 S3 ME3SA2		484	S201_1.4 P90 BE90SA2		485

## 2.2 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
158	131	1.1	6.1	4520	S501_6.1 S4 ME4SA6		490	S501_6.1 P112 BE112M6		491
193	107	1.2	7.4	4280	S501_7.4 S3 ME3LA4	S501_7.4 S3 MX3LA4	490	S501_7.4 P100 BE100LA4	S501_7.4 P100 BX100LA4	491
201	102	1.7	4.8	4230	S501_4.8 S4 ME4SA6		490	S501_4.8 P112 BE112M6		491
236	87	1.0	6.1	2790	S401_6.1 S3 ME3LA4	S401_6.1 S3 MX3LA4	488	S401_6.1 P100 BE100LA4	S401_6.1 P100 BX100LA4	489
236	87	1.5	6.1	4060	S501_6.1 S3 ME3LA4	S501_6.1 S3 MX3LA4	490	S501_6.1 P100 BE100LA4	S501_6.1 P100 BX100LA4	491
249	83	2.1	3.8	4000	S501_3.8 S4 ME4SA6		490	S501_3.8 P112 BE112M6		491
250	82	1.3	3.8	2730	S401_3.8 S4 ME4SA6		488	S401_3.8 P112 BE112M6		489
274	75	1.1	10.5	3910	S501_10.5 S3 ME3LA2		490	S501_10.5 P90 BE90L2		491
296	70	1.3	4.8	2640	S401_4.8 S3 ME3LA4	S401_4.8 S3 MX3LA4	488	S401_4.8 P100 BE100LA4	S401_4.8 P100 BX100LA4	489
301	68	2.2	4.8	3790	S501_4.8 S3 ME3LA4	S501_4.8 S3 MX3LA4	490	S501_4.8 P100 BE100LA4	S501_4.8 P100 BX100LA4	491
313	66	1.6	3.1	2590	S401_3.1 S4 ME4SA6		488	S401_3.1 P112 BE112M6		489
314	66	2.4	3.0	3750	S501_3.0 S4 ME4SA6		490	S501_3.0 P112 BE112M6		491
327	63	1.3	8.8	3730	S501_8.8 S3 ME3LA2		490	S501_8.8 P90 BE90L2		491
372	55	2.7	3.8	3570	S501_3.8 S3 ME3LA4	S501_3.8 S3 MX3LA4	490	S501_3.8 P100 BE100LA4	S501_3.8 P100 BX100LA4	491
375	55	1.6	3.8	2490	S401_3.8 S3 ME3LA4	S401_3.8 S3 MX3LA4	488	S401_3.8 P100 BE100LA4	S401_3.8 P100 BX100LA4	489
387	53	1.9	7.4	3540	S501_7.4 S3 ME3LA2		490	S501_7.4 P90 BE90L2		491
394	52	1.1	2.4	1260	S301_2.4 S4 ME4SA6		486	S301_2.4 P112 BE112M6		487
399	52	2.0	2.4	2450	S401_2.4 S4 ME4SA6		488	S401_2.4 P112 BE112M6		489
400	51	1.2	7.2	2460	S401_7.2 S3 ME3LA2		488	S401_7.2 P90 BE90L2		489
467	44	1.1	3.1	1240	S301_3.1 S3 ME3LA4	S301_3.1 S3 MX3LA4	486	S301_3.1 P100 BE100LA4	S301_3.1 P100 BX100LA4	487
468	44	2.0	3.1	2340	S401_3.1 S3 ME3LA4	S401_3.1 S3 MX3LA4	488	S401_3.1 P100 BE100LA4	S401_3.1 P100 BX100LA4	489
470	44	3.2	3.0	3340	S501_3.0 S3 ME3LA4	S501_3.0 S3 MX3LA4	490	S501_3.0 P100 BE100LA4	S501_3.0 P100 BX100LA4	491
472	44	1.6	6.1	2360	S401_6.1 S3 ME3LA2		488	S401_6.1 P90 BE90L2		489
473	44	2.3	6.1	3340	S501_6.1 S3 ME3LA2		490	S501_6.1 P90 BE90L2		491
490	42	1.0	5.8	1250	S301_5.8 S3 ME3LA2		486	S301_5.8 P90 BE90L2		487
516	40	1.8	1.9	2280	S401_1.9 S4 ME4SA6		488	S401_1.9 P112 BE112M6		489

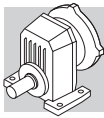


## 2.2 kW



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
534	39	3.2	1.8	3210	S501_1.8 S4 ME4SA6		490	S501_1.8 P112 BE112M6		491
581	35	1.1	4.9	1220	S301_4.9 S3 ME3LA2		486	S301_4.9 P90 BE90L2		487
591	35	1.4	2.4	1190	S301_2.4 S3 ME3LA4	S301_2.4 S3 MX3LA4	486	S301_2.4 P100 BE100LA4	S301_2.4 P100 BX100LA4	487
593	35	2.0	4.8	2210	S401_4.8 S3 ME3LA2		488	S401_4.8 P90 BE90L2		489
598	34	2.6	2.4	2200	S401_2.4 S3 ME3LA4	S401_2.4 S3 MX3LA4	488	S401_2.4 P100 BE100LA4	S401_2.4 P100 BX100LA4	489
679	30	1.2	1.4	1140	S301_1.4 S4 ME4SA6		486	S301_1.4 P112 BE112M6		487
700	29	2.4	1.4	2090	S401_1.4 S4 ME4SA6		488	S401_1.4 P112 BE112M6		489
726	28	1.4	3.9	1160	S301_3.9 S3 ME3LA2		486	S301_3.9 P90 BE90L2		487
751	27	2.6	3.8	2070	S401_3.8 S3 ME3LA2		488	S401_3.8 P90 BE90L2		489
772	27	2.2	1.9	2040	S401_1.9 S3 ME3LA4	S401_1.9 S3 MX3LA4	488	S401_1.9 P100 BE100LA4	S401_1.9 P100 BX100LA4	489
783	26	1.1	1.8	1120	S301_1.8 S3 ME3LA4	S301_1.8 S3 MX3LA4	486	S301_1.8 P100 BE100LA4	S301_1.8 P100 BX100LA4	487
921	22	0.9	3.1	730	S201_3.1 S3 ME3LA2		484	S201_3.1 P90 BE90L2		485
936	22	1.8	3.1	1100	S301_3.1 S3 ME3LA2		486	S301_3.1 P90 BE90L2		487
1016	20	1.5	1.4	1050	S301_1.4 S3 ME3LA4	S301_1.4 S3 MX3LA4	486	S301_1.4 P100 BE100LA4	S301_1.4 P100 BX100LA4	487
1049	19.6	3.1	1.4	1860	S401_1.4 S3 ME3LA4	S401_1.4 S3 MX3LA4	488	S401_1.4 P100 BE100LA4	S401_1.4 P100 BX100LA4	489
1175	17.5	1.2	2.4	710	S201_2.4 S3 ME3LA2		484	S201_2.4 P90 BE90L2		485
1183	17.4	2.3	2.4	1030	S301_2.4 S3 ME3LA2		486	S301_2.4 P90 BE90L2		487
1512	13.6	1.0	1.9	670	S201_1.9 S3 ME3LA2		484	S201_1.9 P90 BE90L2		485
1569	13.1	1.8	1.8	960	S301_1.8 S3 ME3LA2		486	S301_1.8 P90 BE90L2		487
2036	10.1	2.4	1.4	890	S301_1.4 S3 ME3LA2		486	S301_1.4 P90 BE90L2		487
2059	10.0	1.3	1.4	630	S201_1.4 S3 ME3LA2		484	S201_1.4 P90 BE90L2		485

## 3 kW



n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
201	140	1.3	4.8	4040	S501_4.8 S4 ME4SB6		490	S501_4.8 P132 BE132S6		491
238	119	1.1	6.1	3910	S501_6.1 S3 ME3LB4	S501_6.1 S3 MX3LB4	490	S501_6.1 P100 BE100LB4	S501_6.1 P100 BX100LB4	491
249	113	1.5	3.8	3840	S501_3.8 S4 ME4SB6		490	S501_3.8 P132 BE132S6		491
298	95	1.0	4.8	2490	S401_4.8 S3 ME3LB4	S401_4.8 S3 MX3LB4	488	S401_4.8 P100 BE100LB4	S401_4.8 P100 BX100LB4	489
303	93	1.6	4.8	3670	S501_4.8 S3 ME3LB4	S501_4.8 S3 MX3LB4	490	S501_4.8 P100 BE100LB4	S501_4.8 P100 BX100LB4	491
313	90	1.2	3.1	2440	S401_3.1 S4 ME4SB6		488	S401_3.1 P132 BE132S6		489
314	89	1.8	3.0	3630	S501_3.0 S4 ME4SB6		490	S501_3.0 P132 BE132S6		491
328	85	1.0	8.8	3600	S501_8.8 S3 ME3LB2		490	S501_8.8 P100 BE100L2		491
375	75	2.0	3.8	3470	S501_3.8 S3 ME3LB4	S501_3.8 S3 MX3LB4	490	S501_3.8 P100 BE100LB4	S501_3.8 P100 BX100LB4	491
378	75	1.2	3.8	2370	S401_3.8 S3 ME3LB4	S401_3.8 S3 MX3LB4	488	S401_3.8 P100 BE100LB4	S401_3.8 P100 BX100LB4	489
389	72	1.4	7.4	3440	S501_7.4 S3 ME3LB2		490	S501_7.4 P100 BE100L2		491
397	71	2.1	2.4	3390	S501_2.4 S4 ME4SB6		490	S501_2.4 P132 BE132S6		491
399	70	1.5	2.4	2320	S401_2.4 S4 ME4SB6		488	S401_2.4 P132 BE132S6		489
472	60	1.5	3.1	2250	S401_3.1 S3 ME3LB4	S401_3.1 S3 MX3LB4	488	S401_3.1 P100 BE100LB4	S401_3.1 P100 BX100LB4	489
473	60	2.3	3.0	3260	S501_3.0 S3 ME3LB4	S501_3.0 S3 MX3LB4	490	S501_3.0 P100 BE100LB4	S501_3.0 P100 BX100LB4	491
516	54	1.3	1.9	2170	S401_1.9 S4 ME4SB6		488	S401_1.9 P132 BE132S6		489
534	53	2.4	1.8	3120	S501_1.8 S4 ME4SB6		490	S501_1.8 P132 BE132S6		491
595	47	1.1	2.4	1080	S301_2.4 S3 ME3LB4	S301_2.4 S3 MX3LB4	486	S301_2.4 P100 BE100LB4	S301_2.4 P100 BX100LB4	487
596	47	1.5	4.8	2130	S401_4.8 S3 ME3LB2		488	S401_4.8 P100 BE100L2		489
598	47	2.8	2.4	3040	S501_2.4 S3 ME3LB4	S501_2.4 S3 MX3LB4	490	S501_2.4 P100 BE100LB4	S501_2.4 P100 BX100LB4	491
602	47	1.9	2.4	2120	S401_2.4 S3 ME3LB4	S401_2.4 S3 MX3LB4	488	S401_2.4 P100 BE100LB4	S401_2.4 P100 BX100LB4	489
606	46	2.6	4.8	3030	S501_4.8 S3 ME3LB2		490	S501_4.8 P100 BE100L2		491
672	42	3.0	1.4	2920	S501_1.4 S4 ME4SB6		490	S501_1.4 P132 BE132S6		491
700	40	1.7	1.4	2010	S401_1.4 S4 ME4SB6		488	S401_1.4 P132 BE132S6		489
730	38	1.0	3.9	1070	S301_3.9 S3 ME3LB2		486	S301_3.9 P100 BE100L2		487
755	37	1.9	3.8	2000	S401_3.8 S3 ME3LB2		488	S401_3.8 P100 BE100L2		489
778	36	1.7	1.9	1970	S401_1.9 S3 ME3LB4	S401_1.9 S3 MX3LB4	488	S401_1.9 P100 BE100LB4	S401_1.9 P100 BX100LB4	489
789	36	0.8	1.8	900	S301_1.8 S3 ME3LB4	S301_1.8 S3 MX3LB4	486	S301_1.8 P100 BE100LB4	S301_1.8 P100 BX100LB4	487



### 3 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3	IE2	IE3		
805	35	3.1	1.8	2780	S501_1.8 S3 ME3LB4	S501_1.8 S3 MX3LB4	490	S501_1.8 P100 BE100LB4	S501_1.8 P100 BX100LB4	491
940	30	1.3	3.1	1020	S301_3.1 S3 ME3LB2		486	S301_3.1 P100 BE100L2		487
943	30	2.4	3.1	1880	S401_3.1 S3 ME3LB2		488	S401_3.1 P100 BE100L2		489
1023	28	1.1	1.4	980	S301_1.4 S3 ME3LB4	S301_1.4 S3 MX3LB4	486	S301_1.4 P100 BE100LB4	S301_1.4 P100 BX100LB4	487
1056	27	2.2	1.4	1820	S401_1.4 S3 ME3LB4	S401_1.4 S3 MX3LB4	488	S401_1.4 P100 BE100LB4	S401_1.4 P100 BX100LB4	489
1190	24	1.7	2.4	980	S301_2.4 S3 ME3LB2		486	S301_2.4 P100 BE100L2		487
1204	23	3.0	2.4	1760	S401_2.4 S3 ME3LB2		488	S401_2.4 P100 BE100L2		489
1555	18.1	2.7	1.9	1630	S401_1.9 S3 ME3LB2		488	S401_1.9 P100 BE100L2		489
1577	17.8	1.3	1.8	910	S301_1.8 S3 ME3LB2		486	S301_1.8 P100 BE100L2		487
2046	13.7	1.7	1.4	850	S301_1.4 S3 ME3LB2		486	S301_1.4 P100 BE100L2		487
2070	13.6	1.0	1.4	580	S201_1.4 S3 ME3LB2		484	S201_1.4 P100 BE100L2		485

### 4 kW

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3	IE2	IE3		
203	184	0.9	4.8	3810	S501_4.8 S4 ME4LA6		490	S501_4.8 P132 BE132MA6		491
251	149	1.2	3.8	3650	S501_3.8 S4 ME4LA6		490	S501_3.8 P132 BE132MA6		491
303	126	1.2	4.8	3530	S501_4.8 S4 ME4SA4	S501_4.8 S4 MX4SA4	490	S501_4.8 P112 BE112M4	S501_4.8 P112 BX112M4	491
317	118	1.4	3.0	3470	S501_3.0 S4 ME4LA6		490	S501_3.0 P132 BE132MA6		491
375	102	1.5	3.8	3360	S501_3.8 S4 ME4SA4	S501_3.8 S4 MX4SA4	490	S501_3.8 P112 BE112M4	S501_3.8 P112 BX112M4	491
392	96	1.0	7.4	3320	S501_7.4 S4 ME4SA2		490	S501_7.4 P112 BE112M2		491
401	93	1.6	2.4	3270	S501_2.4 S4 ME4LA6		490	S501_2.4 P132 BE132MA6		491
472	81	1.1	3.1	2130	S401_3.1 S4 ME4SA4	S401_3.1 S4 MX4SA4	488	S401_3.1 P112 BE112M4	S401_3.1 P112 BX112M4	489
473	81	1.7	3.0	3170	S501_3.0 S4 ME4SA4	S501_3.0 S4 MX4SA4	490	S501_3.0 P112 BE112M4	S501_3.0 P112 BX112M4	491
479	78	1.3	6.1	3160	S501_6.1 S4 ME4SA2		490	S501_6.1 P112 BE112M2		491
521	72	1.0	1.9	2050	S401_1.9 S4 ME4LA6		488	S401_1.9 P132 BE132MA6		489
540	69	1.8	1.8	3020	S501_1.8 S4 ME4LA6		490	S501_1.8 P132 BE132MA6		491
598	64	2.0	2.4	2970	S501_2.4 S4 ME4SA4	S501_2.4 S4 MX4SA4	490	S501_2.4 P112 BE112M4	S501_2.4 P112 BX112M4	491
602	63	1.4	2.4	2030	S401_2.4 S4 ME4SA4	S401_2.4 S4 MX4SA4	488	S401_2.4 P112 BE112M4	S401_2.4 P112 BX112M4	489
611	61	2.0	4.8	2960	S501_4.8 S4 ME4SA2		490	S501_4.8 P112 BE112M2		491
679	55	2.3	1.4	2830	S501_1.4 S4 ME4LA6		490	S501_1.4 P132 BE132MA6		491
708	53	1.3	1.4	1920	S401_1.4 S4 ME4LA6		488	S401_1.4 P132 BE132MA6		489
755	50	2.4	3.8	2790	S501_3.8 S4 ME4SA2		490	S501_3.8 P112 BE112M2		491
761	49	1.4	3.8	1930	S401_3.8 S4 ME4SA2		488	S401_3.8 P112 BE112M2		489
778	49	1.2	1.9	1900	S401_1.9 S4 ME4SA4	S401_1.9 S4 MX4SA4	488	S401_1.9 P112 BE112M4	S401_1.9 P112 BX112M4	489
805	47	2.3	1.8	2730	S501_1.8 S4 ME4SA4	S501_1.8 S4 MX4SA4	490	S501_1.8 P112 BE112M4	S501_1.8 P112 BX112M4	491
953	39	2.8	3.0	2610	S501_3.0 S4 ME4SA2		490	S501_3.0 P112 BE112M2		491
950	39	1.8	3.1	1820	S401_3.1 S4 ME4SA2		488	S401_3.1 P112 BE112M2		489
1013	38	2.9	1.4	2560	S501_1.4 S4 ME4SA4	S501_1.4 S4 MX4SA4	490	S501_1.4 P112 BE112M4	S501_1.4 P112 BX112M4	491
1056	36	1.7	1.4	1760	S401_1.4 S4 ME4SA4	S401_1.4 S4 MX4SA4	488	S401_1.4 P112 BE112M4	S401_1.4 P112 BX112M4	489
1198	31	1.3	2.4	910	S301_2.4 S4 ME4SA2		486	S301_2.4 P112 BE112M2		487
1213	31	2.3	2.4	1710	S401_2.4 S4 ME4SA2		488	S401_2.4 P112 BE112M2		489
1566	24	2.0	1.9	1590	S401_1.9 S4 ME4SA2		488	S401_1.9 P112 BE112M2		489
1588	24	1.0	1.8	860	S301_1.8 S4 ME4SA2		486	S301_1.8 P112 BE112M2		487
2061	18.2	1.3	1.4	810	S301_1.4 S4 ME4SA2		486	S301_1.4 P112 BE112M2		487
2127	17.6	2.7	1.4	1460	S401_1.4 S4 ME4SA2		488	S401_1.4 P112 BE112M2		489



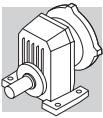


## 5.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
317	162	1.0	3.0	3260	S501_3.0 S5 ME5SA6		490	S501_3.0 P160 BE160MA6		491
380	136	1.1	3.8	3150	S501_3.8 S4 ME4SB4	S501_3.8 S4 MX4SB4	490	S501_3.8 P132 BE132S4	S501_3.8 P132 BX132S4	491
401	128	1.2	2.4	3090	S501_2.4 S5 ME5SA6		490	S501_2.4 P160 BE160MA6		491
480	107	1.3	3.0	3000	S501_3.0 S4 ME4SB4	S501_3.0 S4 MX4SB4	490	S501_3.0 P132 BE132S4	S501_3.0 P132 BX132S4	491
540	95	1.3	1.8	2880	S501_1.8 S5 ME5SA6		490	S501_1.8 P160 BE160MA6		491
606	85	1.5	2.4	2830	S501_2.4 S4 ME4SB4	S501_2.4 S4 MX4SB4	490	S501_2.4 P132 BE132S4	S501_2.4 P132 BX132S4	491
611	84	1.1	2.4	1870	S401_2.4 S4 ME4SB4	S401_2.4 S4 MX4SB4	488	S401_2.4 P132 BE132S4	S401_2.4 P132 BX132S4	489
616	84	1.4	4.8	2840	S501_4.8 S4 ME4SB2		490	S501_4.8 P132 BE132SA2		491
679	76	1.6	1.4	2720	S501_1.4 S5 ME5SA6		490	S501_1.4 P160 BE160MA6		491
708	73	1.0	1.4	1780				S401_1.4 P160 BE160MA6		489
761	68	1.8	3.8	2690	S501_3.8 S4 ME4SB2		490	S501_3.8 P132 BE132SA2		491
767	67	1.0	3.8	1810	S401_3.8 S4 ME4SB2		488	S401_3.8 P132 BE132SA2		489
788	65	0.9	1.9	1770	S401_1.9 S4 ME4SB4	S401_1.9 S4 MX4SB4	488	S401_1.9 P132 BE132S4	S401_1.9 P132 BX132S4	489
817	63	1.7	1.8	2610	S501_1.8 S4 ME4SB4	S501_1.8 S4 MX4SB4	490	S501_1.8 P132 BE132S4	S501_1.8 P132 BX132S4	491
958	54	1.3	3.1	1730	S401_3.1 S4 ME4SB2		488	S401_3.1 P132 BE132SA2		489
961	54	2.1	3.0	2530	S501_3.0 S4 ME4SB2		490	S501_3.0 P132 BE132SA2		491
1027	50	2.2	1.4	2450	S501_1.4 S4 ME4SB4	S501_1.4 S4 MX4SB4	490	S501_1.4 P132 BE132S4	S501_1.4 P132 BX132S4	491
1071	48	1.2	1.4	1660	S401_1.4 S4 ME4SB4	S401_1.4 S4 MX4SB4	488	S401_1.4 P132 BE132S4	S401_1.4 P132 BX132S4	489
1215	42	2.4	2.4	2370	S501_2.4 S4 ME4SB2		490	S501_2.4 P132 BE132SA2		491
1223	42	1.7	2.4	1640	S401_2.4 S4 ME4SB2		488	S401_2.4 P132 BE132SA2		489
1580	33	1.5	1.9	1530	S401_1.9 S4 ME4SB2		488	S401_1.9 P132 BE132SA2		489
1636	31	2.7	1.8	2170	S501_1.8 S4 ME4SB2		490	S501_1.8 P132 BE132SA2		491
2058	25	3.4	1.4	2030	S501_1.4 S4 ME4SB2		490	S501_1.4 P132 BE132SA2		491
2145	24	2.0	1.4	1410	S401_1.4 S4 ME4SB2		488	S401_1.4 P132 BE132SA2		489

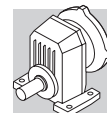
## 7.5 kW

n <sub>2</sub> min-1	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
478	146	1.0	3.0	2810	S501_3.0 S4 ME4LA4	S501_3.0 S4 MX4LA4	490	S501_3.0 P132 BE132MA4	S501_3.0 P132 BX132MA4	491
540	130	1.0	1.8	2690	S501_1.8 S5 ME5SB6		490	S501_1.8 P160 BE160MB6		491
604	116	1.1	2.4	2670	S501_2.4 S4 ME4LA4	S501_2.4 S4 MX4LA4	490	S501_2.4 P132 BE132MA4	S501_2.4 P132 BX132MA4	491
679	103	1.2	1.4	2560	S501_1.4 S5 ME5SB6		490	S501_1.4 P160 BE160MB6		491
761	92	1.3	3.8	2570	S501_3.8 S4 ME4LA2		490	S501_3.8 P132 BE132SB2		491
814	86	1.3	1.8	2490	S501_1.8 S4 ME4LA4	S501_1.8 S4 MX4LA4	490	S501_1.8 P132 BE132MA4	S501_1.8 P132 BX132MA4	491
958	73	1.0	3.1	1610	S401_3.1 S4 ME4LA2		488	S401_3.1 P132 BE132SB2		489
961	73	1.5	3.0	2440	S501_3.0 S4 ME4LA2		490	S501_3.0 P132 BE132SB2		491
1024	68	1.6	1.4	2350	S501_1.4 S4 ME4LA4	S501_1.4 S4 MX4LA4	490	S501_1.4 P132 BE132MA4	S501_1.4 P132 BX132MA4	491
1067	65	0.9	1.4	1540	S401_1.4 S4 ME4LA4	S401_1.4 S4 MX4LA4	488	S401_1.4 P132 BE132MA4	S401_1.4 P132 BX132MA4	489
1215	58	1.7	2.4	2290	S501_2.4 S4 ME4LA2		490	S501_2.4 P132 BE132SB2		491
1223	57	1.2	2.4	1540	S401_2.4 S4 ME4LA2		488	S401_2.4 P132 BE132SB2		489
1580	44	1.1	1.9	1450	S401_1.9 S4 ME4LA2		488	S401_1.9 P132 BE132SB2		489
1636	43	2.0	1.8	2110	S501_1.8 S4 ME4LA2		490	S501_1.8 P132 BE132SB2		491
2058	34	2.5	1.4	1980	S501_1.4 S4 ME4LA2		490	S501_1.4 P132 BE132SB2		491
2145	33	1.5	1.4	1350	S401_1.4 S4 ME4LA2		488	S401_1.4 P132 BE132SB2		489



## 9.2 kW

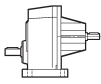

n <sub>2</sub> min <sup>-1</sup>	M <sub>2</sub> Nm	S	i	R <sub>n2</sub> N						
					IE2	IE3		IE2	IE3	
602	144	0.9	2.4	2530	S501_2.4 S4 ME4LB4	S501_2.4 S5 MX5SA4	490	S501_2.4 P132 BE132MB4	S501_2.4 P160 BX160MA4	491
760	113	1.1	3.8	2470	S501_3.8 S4 ME4LB2		490	S501_3.8 P132 BE132MB2		491
811	107	1.0	1.8	2390	S501_1.8 S4 ME4LB4	S501_1.8 S5 MX5SA4	490	S501_1.8 P132 BE132MB4	S501_1.8 P160 BX160MA4	491
959	90	1.2	3.0	2360	S501_3.0 S4 ME4LB2		490	S501_3.0 P132 BE132MB2		491
1020	85	1.3	1.4	2270	S501_1.4 S4 ME4LB4	S501_1.4 S5 MX5SA4	490	S501_1.4 P132 BE132MB4	S501_1.4 P160 BX160MA4	491
1213	71	1.4	2.4	2220	S501_2.4 S4 ME4LB2		490	S501_2.4 P132 BE132MB2		491
1221	71	1.0	2.4	1460	S401_2.4 S4 ME4LB2		488	S401_2.4 P132 BE132MB2		489
1633	53	1.6	1.8	2060	S501_1.8 S4 ME4LB2		490	S501_1.8 P132 BE132MB2		491
2055	42	2.0	1.4	1930	S501_1.4 S4 ME4LB2		490	S501_1.4 P132 BE132MB2		491
2141	40	1.2	1.4	1300	S401_1.4 S4 ME4LB2		488	S401_1.4 P132 BE132MB2		489

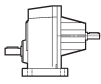



## 74 GEARBOX RATING CHARTS

# S 10

# 21 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 10 1_1.4	1.4	1972	8.0	1.7	800	310	986	10.0	1.1	800	390	483
S 10 1_1.9	1.9	1489	8.0	1.3	800	360	745	10.0	0.80	800	460	
S 10 1_2.5	2.5	1120	8.0	0.96	800	420	560	10.0	0.60	800	520	
S 10 1_3.2	3.2	875	10.0	0.93	800	440	438	12.0	0.56	800	560	
S 10 1_3.8	3.8	727	10.0	0.78	800	480	364	12.0	0.47	800	610	
S 10 1_4.7	4.7	592	10.0	0.63	800	520	296	12.0	0.38	800	660	
S 10 1_6.1	6.1	458	12.0	0.59	800	560	229	15.0	0.37	800	710	
S 10 1_6.9	6.9	406	12.0	0.52	800	580	203	15.0	0.33	800	740	
S 10 1_8.9	8.9	315	8.0	0.27	800	700	158	10.0	0.17	800	880	
S 10 1_10.3	10.3	272	8.0	0.23	800	740	136	10.0	0.15	800	930	
S 10 1_12.3	12.3	227	8.0	0.19	800	800	114	10.0	0.12	800	1000	



	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 10 1_1.4	1.4	634	12.0	0.81	800	450	352	14.0	0.53	800	560	483
S 10 1_1.9	1.9	479	12.0	0.61	800	520	266	14.0	0.40	800	640	
S 10 1_2.5	2.5	360	12.0	0.46	800	600	200	14.0	0.30	800	740	
S 10 1_3.2	3.2	281	14.0	0.42	800	650	156	17.0	0.28	800	790	
S 10 1_3.8	3.8	234	14.0	0.35	800	700	130	17.0	0.24	800	850	
S 10 1_4.7	4.7	190	14.0	0.28	800	770	106	17.0	0.19	800	930	
S 10 1_6.1	6.1	147	17.0	0.27	800	820	82	21	0.18	800	1000	
S 10 1_6.9	6.9	130	17.0	0.24	800	860	72	21	0.16	800	1040	
S 10 1_8.9	8.9	101	12.0	0.13	800	1020	56	14.0	0.08	800	1200	
S 10 1_10.3	10.3	87	12.0	0.11	800	1080	49	14.0	0.07	800	1200	
S 10 1_12.3	12.3	73	12.0	0.09	800	1160	41	14.0	0.06	800	1200	

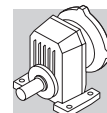


# S 20



# 37 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 20 1_1.4	1.4	2014	13.0	2.8	1000	590	1007	17.0	1.8	1000	740	485
S 20 1_1.9	1.9	1481	13.0	2.1	1000	680	741	17.0	1.3	1000	860	
S 20 1_2.4	2.4	1148	21	2.6	640	680	574	26	1.6	850	860	
S 20 1_3.1	3.1	900	21	2.0	730	750	450	26	1.3	960	950	
S 20 1_3.9	3.9	712	21	1.6	820	840	356	26	0.99	1000	1060	
S 20 1_4.8	4.8	587	21	1.3	910	920	294	26	0.82	1000	1160	
S 20 1_5.8	5.8	481	21	1.1	960	1000	241	26	0.67	1000	1260	
S 20 1_7.2	7.2	388	21	0.87	980	1090	194	26	0.54	1000	1370	
S 20 1_8.5	8.5	329	13.0	0.46	1000	1240	165	17.0	0.30	1000	1500	
S 20 1_10.8	10.8	260	13.0	0.36	1000	1350	130	17.0	0.24	1000	1500	
S 20 1_12.4	12.4	225	13.0	0.31	1000	1430	113	17.0	0.20	1000	1500	

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 20 1_1.4	1.4	647	20	1.4	1000	850	360	24	0.92	1000	1040	485
S 20 1_1.9	1.9	476	20	1.0	1000	990	265	24	0.68	1000	1210	
S 20 1_2.4	2.4	369	30	1.2	990	990	205	37	0.81	1000	1200	
S 20 1_3.1	3.1	289	30	0.93	1000	1110	161	37	0.64	1000	1340	
S 20 1_3.9	3.9	229	30	0.73	1000	1230	127	37	0.50	1000	1490	
S 20 1_4.8	4.8	189	30	0.60	1000	1350	105	37	0.41	1000	1500	
S 20 1_5.8	5.8	155	30	0.50	1000	1460	86	37	0.34	1000	1500	
S 20 1_7.2	7.2	125	30	0.40	1000	1500	69	37	0.27	1000	1500	
S 20 1_8.5	8.5	106	20	0.23	1000	1500	59	24	0.15	1000	1500	
S 20 1_10.8	10.8	84	20	0.18	1000	1500	47	24	0.12	1000	1500	
S 20 1_12.4	12.4	72	20	0.15	1000	1500	40	24	0.10	1000	1500	





# S 30 70 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 30 1_1.4	1.4	1986	24	5.1	1500	770	993	30	3.2	1500	970	487
S 30 1_1.8	1.8	1530	24	3.9	1500	870	765	30	2.5	1500	1090	
S 30 1_2.4	2.4	1157	40	4.9	1270	850	579	50	3.1	1500	1070	
S 30 1_3.1	3.1	915	40	3.9	1470	950	458	50	2.4	1500	1200	
S 30 1_3.9	3.9	711	40	3.0	1500	1070	355	50	1.9	1500	1360	
S 30 1_4.9	4.9	568	40	2.4	1500	1190	284	50	1.5	1500	1500	
S 30 1_5.8	5.8	479	40	2.0	1500	1280	239	50	1.3	1500	1610	
S 30 1_7.1	7.1	395	40	1.7	1500	1390	197	50	1.1	1500	1750	
S 30 1_8.9	8.9	315	24	0.81	1500	1650	157	30	0.50	1500	2080	
S 30 1_10.3	10.3	272	24	0.70	1500	1740	136	30	0.44	1500	2190	
S 30 1_13.1	13.1	213	24	0.55	1500	1900	107	30	0.34	1500	2400	

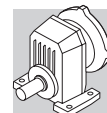
	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 30 1_1.4	1.4	638	35	2.4	1500	1120	355	42	1.6	1500	1360	487
S 30 1_1.8	1.8	492	35	1.8	1500	1260	273	42	1.2	1500	1540	
S 30 1_2.4	2.4	372	58	2.3	1500	1240	207	70	1.5	1500	1510	
S 30 1_3.1	3.1	294	58	1.8	1500	1390	163	70	1.2	1500	1700	
S 30 1_3.9	3.9	228	58	1.4	1500	1570	127	70	0.95	1500	1920	
S 30 1_4.9	4.9	183	58	1.1	1500	1740	101	70	0.76	1500	2120	
S 30 1_5.8	5.8	154	58	0.95	1500	1870	85	70	0.64	1500	2280	
S 30 1_7.1	7.1	127	58	0.79	1500	2030	71	62	0.47	1500	2400	
S 30 1_8.9	8.9	101	35	0.38	1500	2400	56	42	0.25	1500	2400	
S 30 1_10.3	10.3	87	35	0.33	1500	2400	49	42	0.22	1500	2400	
S 30 1_13.1	13.1	69	35	0.26	1500	2400	38	37	0.15	1500	2400	





# S 40 125 Nm



	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 40 1_1.4	1.4	2059	48	10.6	2000	1270	1029	60	6.6	2000	1600	489
S 40 1_1.9	1.9	1514	48	7.8	2000	1450	757	60	4.9	2000	1830	
S 40 1_2.4	2.4	1172	70	8.8	1860	1490	586	90	5.6	2000	1870	
S 40 1_3.1	3.1	918	70	6.9	2000	1660	459	90	4.4	2000	2080	
S 40 1_3.8	3.8	735	70	5.5	2000	1830	367	90	3.5	2000	2290	
S 40 1_4.8	4.8	580	70	4.3	2000	2020	290	90	2.8	2000	2530	
S 40 1_6.1	6.1	461	70	3.5	2000	2220	231	90	2.2	2000	2790	
S 40 1_7.2	7.2	392	63	2.6	2000	2410	196	80	1.7	2000	3030	
S 40 1_8.6	8.6	324	48	1.7	2000	2670	162	60	1.0	2000	3370	
S 40 1_10.7	10.7	262	40	1.1	2000	2930	131	50	0.70	2000	3690	
S 40 1_12.4	12.4	226	40	1.0	2000	3100	113	50	0.60	2000	3800	

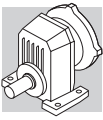
	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 40 1_1.4	1.4	662	70	4.9	2000	1850	368	85	3.3	2000	2250	489
S 40 1_1.9	1.9	486	70	3.6	2000	2120	270	85	2.5	2000	2580	
S 40 1_2.4	2.4	377	105	4.2	2000	2160	209	125	2.8	2000	2650	
S 40 1_3.1	3.1	295	105	3.3	2000	2400	164	125	2.2	2000	2940	
S 40 1_3.8	3.8	236	105	2.7	2000	2650	131	125	1.8	2000	3240	
S 40 1_4.8	4.8	186	105	2.1	2000	2930	104	125	1.4	2000	3580	
S 40 1_6.1	6.1	148	105	1.7	2000	3220	82	110	1.0	2000	3800	
S 40 1_7.2	7.2	126	90	1.2	2000	3530	70	90	0.67	2000	3800	
S 40 1_8.6	8.6	104	70	0.78	2000	3800	58	85	0.53	2000	3800	
S 40 1_10.7	10.7	84	58	0.52	2000	3800	47	70	0.35	2000	3800	
S 40 1_12.4	12.4	73	58	0.45	2000	3800	40	70	0.30	2000	3800	



# S 50 200 Nm

	i	n <sub>1</sub> = 2800 min <sup>-1</sup>					n <sub>1</sub> = 1400 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 50 1_1.4	1.4	1972	85	17.9	730	1720	986	110	11.6	730	2150	491
S 50 1_1.8	1.8	1564	85	14.2	1220	1920	782	110	9.2	1370	2400	
S 50 1_2.4	2.4	1162	100	12.4	930	2110	581	130	8.1	970	2640	
S 50 1_3.0	3.0	921	110	10.8	860	2300	461	140	6.9	1020	2880	
S 50 1_3.8	3.8	729	120	9.3	640	2480	365	150	5.8	860	3130	
S 50 1_4.8	4.8	589	120	7.6	880	2710	295	150	4.7	1160	3420	
S 50 1_6.1	6.1	462	100	4.9	1980	3100	231	130	3.2	2330	3880	
S 50 1_7.4	7.4	378	100	4.0	2060	3340	189	130	2.6	2400	4190	
S 50 1_8.8	8.8	319	85	2.9	2400	3640	160	110	1.9	2400	4570	
S 50 1_10.5	10.5	268	85	2.4	2400	3880	134	110	1.6	2400	4870	
S 50 1_12.9	12.9	217	80	1.9	2400	4200	109	100	1.2	2400	5300	

	i	n <sub>1</sub> = 900 min <sup>-1</sup>					n <sub>1</sub> = 500 min <sup>-1</sup>					
		n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	n <sub>2</sub> min <sup>-1</sup>	M <sub>n2</sub> Nm	P <sub>n1</sub> kW	R <sub>n1</sub> N	R <sub>n2</sub> N	
S 50 1_1.4	1.4	634	125	8.5	1010	2510	352	155	5.8	1040	3040	491
S 50 1_1.8	1.8	503	125	6.7	1730	2790	279	155	4.6	1940	3380	
S 50 1_2.4	2.4	373	150	6.0	1160	3060	207	180	4.0	1530	3730	
S 50 1_3.0	3.0	296	160	5.1	1290	3350	164	200	3.5	1310	4050	
S 50 1_3.8	3.8	234	175	4.4	940	3620	130	200	2.8	1740	4460	
S 50 1_4.8	4.8	189	175	3.5	1290	3960	105	180	2.0	2400	4970	
S 50 1_6.1	6.1	149	150	2.4	2400	4500	83	150	1.3	2400	5620	
S 50 1_7.4	7.4	122	140	1.8	2400	4900	68	140	1.0	2400	6100	
S 50 1_8.8	8.8	103	125	1.4	2400	5310	57	125	0.80	2400	6580	
S 50 1_10.5	10.5	86	115	1.1	2400	5700	48	115	0.60	2400	7050	
S 50 1_12.9	12.9	70	100	0.70	2400	6210	39	100	0.40	2400	7200	

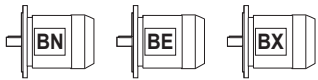


## 75 MOTOR AVAILABILITY

Please be aware that motor-gearbox combinations resulting from the following charts are purely based on geometrical compatibility.

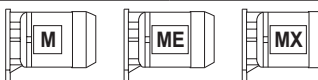
**When selecting a gearmotor, refer to procedure specified at paragraph 12 and observe particularly the condition  $S \geq f_s$ .**

(E 69)

		IEC_  (IM B5)																						
		BN		BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX	BN	BE	BX			
$P_{n1}^{(\#)}$ [kW]	2p	0.37	0.75	1.5	1.1	—	2.2	2.2	—	4	3	—	4	4	—	9.2	9.2	—	18.5	18.5	—	22	—	—
	4p	0.25	0.55	1.1	0.75	0.75	1.85	1.5	1.5	3	3	3	4	4	4	9.2	9.2	7.5	15	15	15	22	22	22
	6p	0.12	0.37	0.75	—	—	1.1	0.75	—	1.85	1.5	—	2.2	2.2	—	5.5	4	—	11	7.5	—	15	—	—
		P63	P71	P80		P90		P100		P112		P132		P160		P180								
S 10 1	i =	1.4_12.3	1.4_12.3	1.4_8.9		1.4_8.9		1.4_8.9		1.4_8.9														
S 20 1		1.9_12.4	1.9_12.4	1.4_10.8		1.4_10.8		1.4_10.8		1.4_10.8														
S 30 1		2.4_13.1	2.4_13.1	1.4_13.1		1.4_13.1		1.4_13.1		1.4_13.1		1.4_4.9												
S 40 1		3.1_12.4	3.1_12.4	1.4_12.4		1.4_12.4		1.4_12.4		1.4_12.4		1.4_6.1												
S 50 1		3.8_12.9	3.8_12.9	1.4_12.9		1.4_12.9		1.4_12.9		1.4_12.9		1.4_7.4		1.4_7.4		1.4_7.4								

(#)  $P_{n1}$  = maximum installable power on input  $P_-$

(E 70)

							
		M05	M1	ME2 - MX2	ME3 - MX3	ME4 - MX4	ME5 - MX5
S 10 1	i =	1.4_12.3	1.4_6.9	1.4_8.9	1.4_8.9		
S 20 1		1.9_12.4	1.9_8.5	1.4_10.8	1.4_10.8		
S 30 1			2.4_10.3	1.4_13.1	1.4_13.1	1.4_4.9	
S 40 1			3.1_12.4	1.4_12.4	1.4_12.4	1.4_6.1	
S 50 1			3.8_12.9	1.4_12.9	1.4_12.9	1.4_7.4	1.4_7.4





## 76 MOMENT OF INERTIA

The following charts indicate moment of inertia values  $J_r$  [kgm<sup>2</sup>] referred to the gear unit high speed shaft. A key to the symbols used follows:



Values under this icon refer to compact gear units, without motor. To obtain the overall moment of inertia for the gearmotor just add the value of the inertia for the specific compact motor, given in the relevant rating chart.




**IEC** Values under this symbol refer to gearboxes with IEC motor adaptor (IEC size...).






This symbol refers to gearbox values.

## S 10




	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]							
			63	71	80	90	100	112	
<b>S 10 1_1.4</b>	1.4	0.33	1.8	1.8	3.2	3.1	4.4	4.4	1.2
<b>S 10 1_1.9</b>	1.9	0.22	1.7	1.7	3.1	3.0	4.3	4.3	1.1
<b>S 10 1_2.5</b>	2.5	0.16	1.6	1.6	3.0	2.9	4.2	4.2	1.0
<b>S 10 1_3.2</b>	3.2	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.97
<b>S 10 1_3.9</b>	3.9	0.08	1.5	1.5	2.9	2.9	4.2	4.2	0.95
<b>S 10 1_4.7</b>	4.7	0.06	1.5	1.5	2.9	2.8	4.1	4.1	0.93
<b>S 10 1_6.1</b>	6.1	0.04	1.5	1.5	2.9	2.8	4.1	4.1	0.92
<b>S 10 1_6.9</b>	6.9	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.91
<b>S 10 1_8.9</b>	8.9	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.90
<b>S 10 1_10.3</b>	10.3	0.02	1.5	1.5	—	—	—	—	0.89
<b>S 10 1_12.3</b>	12.3	0.01	1.5	1.5	—	—	—	—	0.89



## S 20




	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]							
			IEC 						
			63	71	80	90	100	112	
<b>S 20 1_1.4</b>	1.4	0.73	—	—	3.6	3.5	4.8	4.8	2.7
<b>S 20 1_1.9</b>	1.9	0.48	1.9	1.9	3.3	3.3	4.6	4.6	2.4
<b>S 20 1_2.4</b>	2.4	0.34	1.8	1.8	3.2	3.1	4.4	4.4	2.3
<b>S 20 1_3.1</b>	3.1	0.20	1.7	1.7	3.0	3.0	4.3	4.3	2.1
<b>S 20 1_3.9</b>	3.9	0.14	1.6	1.6	3.0	2.9	4.2	4.2	2.1
<b>S 20 1_4.8</b>	4.8	0.12	1.6	1.6	3.0	2.9	4.2	4.2	2.0
<b>S 20 1_5.8</b>	5.8	0.08	1.6	1.5	2.9	2.9	4.2	4.2	2.0
<b>S 20 1_7.2</b>	7.2	0.06	1.5	1.5	2.9	2.8	4.1	4.1	2.0
<b>S 20 1_8.5</b>	8.5	0.05	1.5	1.5	2.9	2.8	4.1	4.1	2.0
<b>S 20 1_10.8</b>	10.8	0.03	1.5	1.5	2.9	2.8	4.1	4.1	1.9
<b>S 20 1_12.4</b>	12.4	0.02	1.5	1.5	—	—	—	—	1.9

## S 30




	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]								
			IEC 							
			63	71	80	90	100	112	132	
<b>S 30 1_1.4</b>	1.4	1.5	—	—	4.3	4.3	5.6	5.6	18	3.8
<b>S 30 1_1.8</b>	1.8	1.1	—	—	3.9	3.8	5.1	5.1	18	3.4
<b>S 30 1_2.4</b>	2.4	0.59	2.1	2.0	3.4	3.4	4.7	4.7	17	2.9
<b>S 30 1_3.1</b>	3.1	0.45	1.9	1.9	3.3	3.2	4.5	4.5	17	2.8
<b>S 30 1_3.9</b>	3.9	0.33	1.8	1.8	3.2	3.1	4.4	4.4	17	2.7
<b>S 30 1_4.9</b>	4.9	0.24	1.7	1.7	3.1	3.0	4.3	4.3	17	2.6
<b>S 30 1_5.8</b>	5.8	0.19	1.7	1.7	3.0	3.0	4.3	4.3	—	2.6
<b>S 30 1_7.1</b>	7.1	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	2.5
<b>S 30 1_8.9</b>	8.9	0.10	1.6	1.6	2.9	2.9	4.2	4.2	—	2.5
<b>S 30 1_10.3</b>	10.3	0.08	1.5	1.5	2.9	2.9	4.2	4.2	—	2.4
<b>S 30 1_13.1</b>	13.1	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	2.4



## S 40

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]								
			IEC 							
			63	71	80	90	100	112	132	
S 40 1_1.4	1.4	3.7	—	—	6.5	6.5	7.8	7.8	23	14
S 40 1_1.9	1.9	2.4	—	—	5.2	5.2	6.5	6.5	21	13
S 40 1_2.4	2.4	1.6	—	—	4.4	4.4	5.7	5.7	21	12
S 40 1_3.1	3.1	1.1	2.6	2.6	4.0	3.9	5.2	5.2	20	12
S 40 1_3.8	3.8	0.82	2.3	2.3	3.7	3.6	4.9	4.9	18	11
S 40 1_4.8	4.8	0.50	2.0	2.0	3.3	3.3	4.6	4.6	18	11
S 40 1_6.1	6.1	0.39	1.8	1.8	3.2	3.2	4.5	4.5	18	11
S 40 1_7.2	7.2	0.30	1.8	1.8	3.1	3.1	4.4	4.4	—	11
S 40 1_8.6	8.6	0.22	1.7	1.7	3.1	3.0	4.3	4.3	—	11
S 40 1_10.7	10.7	0.15	1.6	1.6	3.0	2.9	4.2	4.2	—	11
S 40 1_12.4	12.4	0.12	1.6	1.6	3.0	2.8	4.2	4.2	—	11

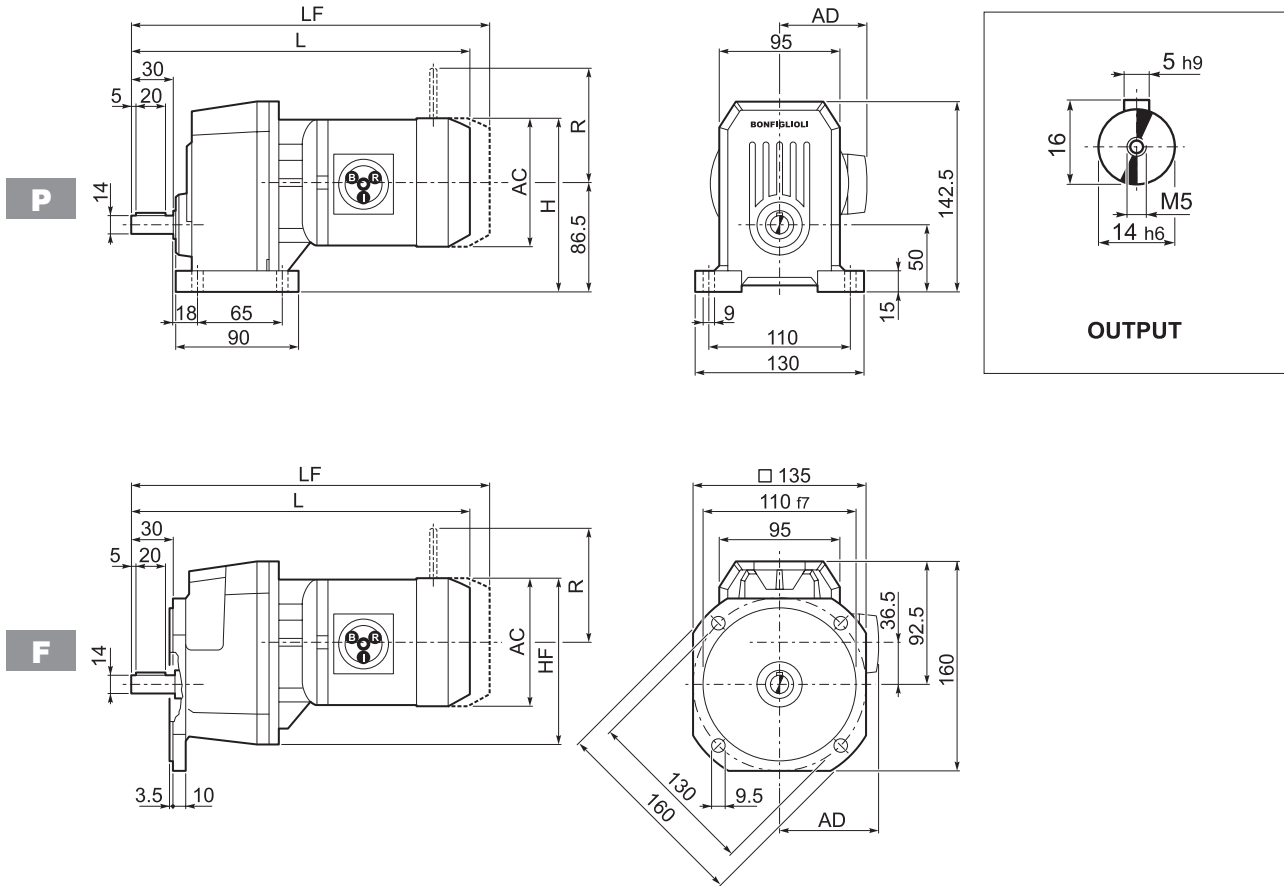
## S 50

	i	J ( $\cdot 10^{-4}$ ) [kgm <sup>2</sup> ]										
			IEC 									
			63	71	80	90	100	112	132	160	180	
S 50 1_1.4	1.4	8.2	—	—	11	11	12	12	27	86	84	19
S 50 1_1.8	1.8	5.9	—	—	8.8	8.7	10	10	25	84	82	16
S 50 1_2.4	2.4	3.9	—	—	6.8	6.7	8.0	8.0	23	82	80	14
S 50 1_3.0	3.0	2.7	—	—	5.5	5.5	6.8	6.8	22	81	79	13
S 50 1_3.8	3.8	1.9	3.3	3.3	4.7	4.6	5.9	5.9	21	80	78	12
S 50 1_4.8	4.8	1.4	2.8	2.8	4.2	4.1	5.4	5.4	21	79	77	12
S 50 1_6.1	6.1	0.89	2.4	2.4	3.7	3.7	5.0	5.0	21	79	77	11
S 50 1_7.4	7.4	0.63	2.1	2.1	3.5	3.4	4.7	4.7	20	79	77	11
S 50 1_8.8	8.8	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
S 50 1_10.5	10.5	0.36	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	11
S 50 1_12.9	12.9	0.25	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	11



77 DIMENSIONS

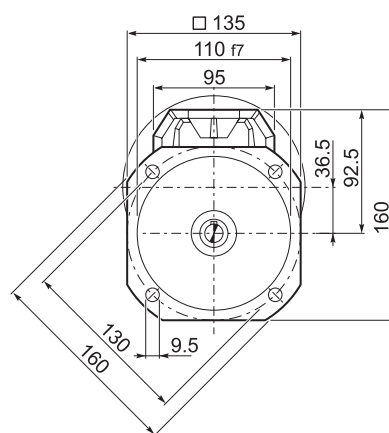
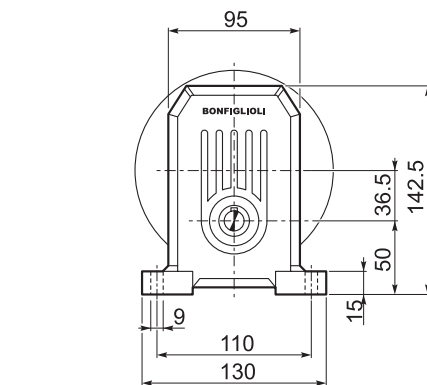
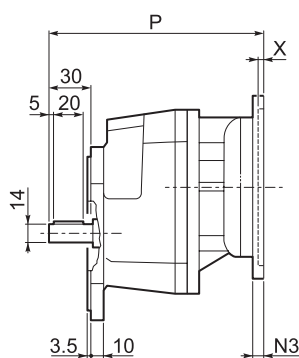
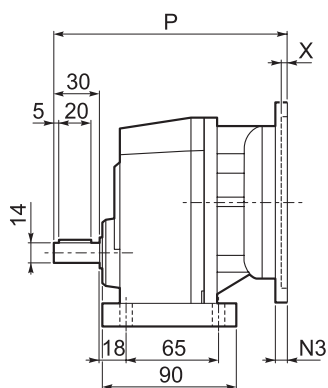
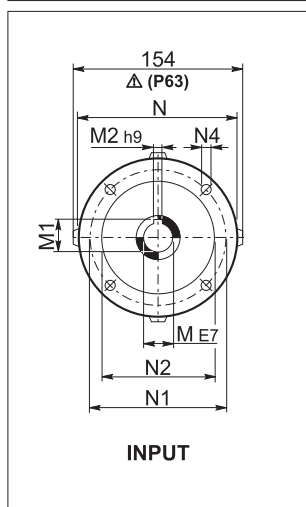
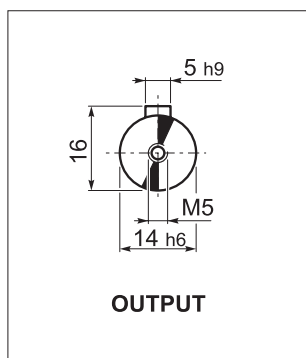
S 10...M/ME/MX



Icon 1	Icon 2	Icon 3	AC	H	HF	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
S 10 1	S05	M05	121	147	143	315	95	8	381	11	96	122	116	95
S 10 1	S1	M1	137	155	151	344	102	10	405	13	103	135	124	108
S 10 1	S2	M2S	156	164	160	367	111	13	443	17	129	146	134	119
S 10 1	S2	ME2S	156	164	160	367	111	13	—	—	—	—	—	—
S 10 1	S2	MX2S	156	164	160	411	111	18.1	—	—	—	—	—	—
S 10 1	S3	ME3S	195	184	180	416	135	20.5	—	—	—	—	—	—
S 10 1	S3	MX3S	195	184	180	448	135	23.5	—	—	—	—	—	—
S 10 1	S3	ME3L	195	184	180	448	135	21	—	—	—	—	—	—
S 10 1	S3	MX3L	195	184	180	492	135	27	—	—	—	—	—	—

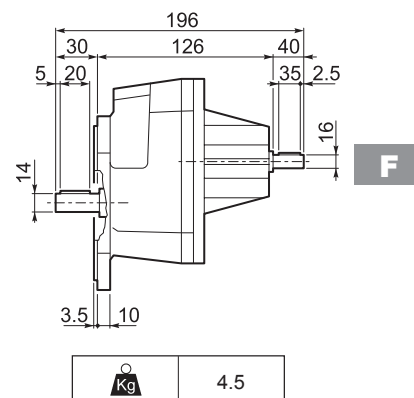
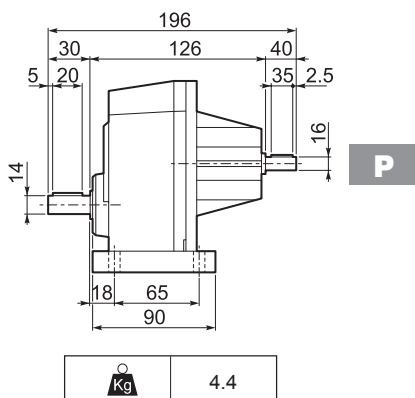
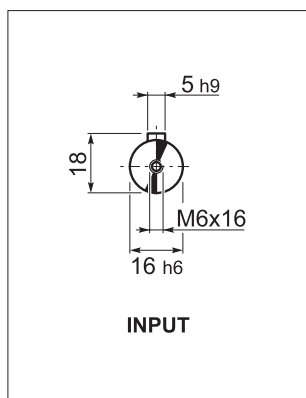


## S 10...P (IEC)



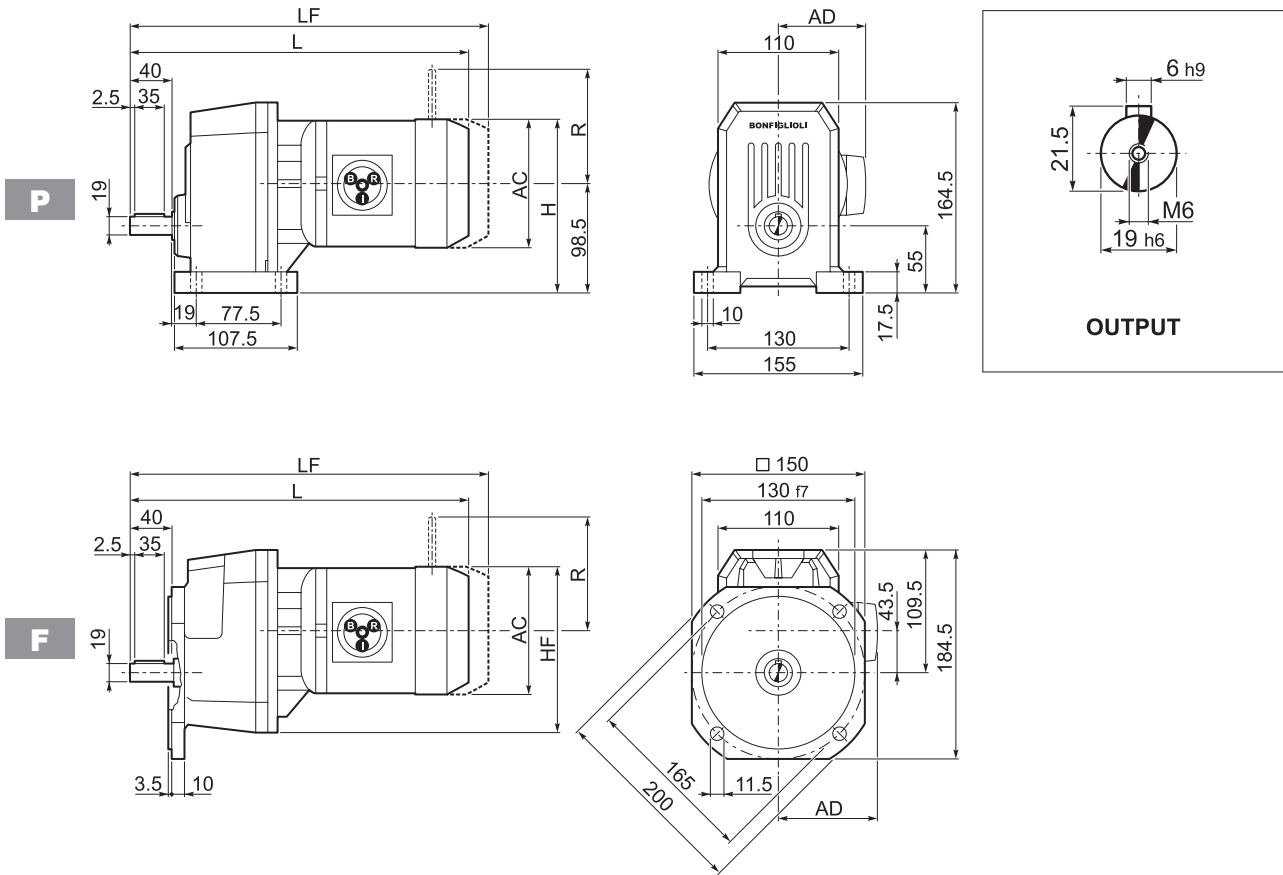
		M	M1	M2	N	N1	N2	N3	N4	P	X	kg
S 10 1	P63	11	12.8	4	140	115	95	—	M8x10	189	4	5
S 10 1	P71	14	16.3	5	160	130	110	—	M8x10	189	4.5	5
S 10 1	P80	19	21.8	6	200	165	130	—	M10x14.5	208	4	6
S 10 1	P90	24	27.3	8	200	165	130	—	M10x14.5	208	4	6
S 10 1	P100	28	31.3	8	250	215	180	—	M12x16	218	4.5	10
S 10 1	P112	28	31.3	8	250	215	180	—	M12x16	218	4.5	10

## S 10...HS

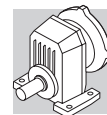




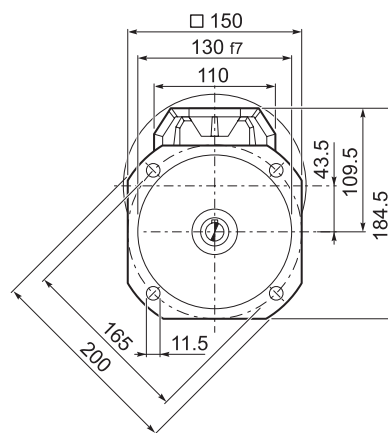
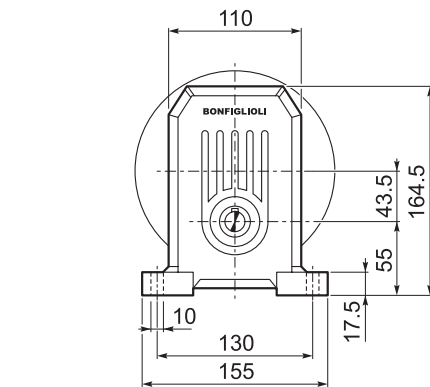
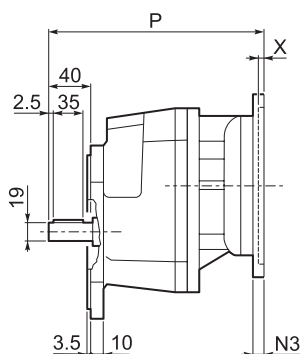
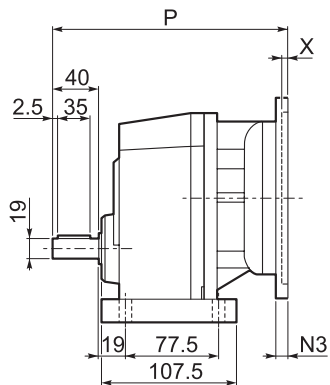
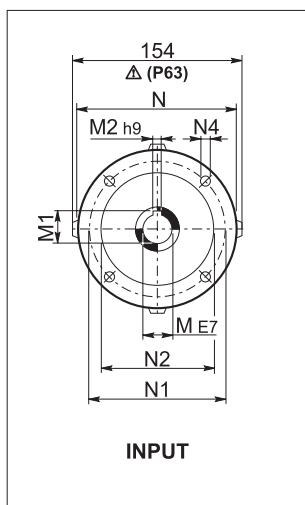
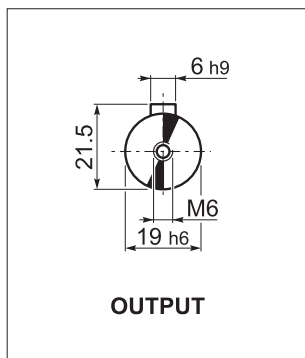
## S 20...M/ME/MX



S 20 1	S05	M05	AC	H	HF	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
									LF	Kg	R	AD	R	AD
S 20 1	S05	M05	121	159	153	333.5	95	10	399.5	12	96	122	116	95
S 20 1	S1	M1	137	167	161	362.5	102	12	423.5	14	103	135	124	108
S 20 1	S2	M2S	156	176	170	385.5	111	16	461.5	19	129	146	134	119
S 20 1	S2	ME2S	156	176	170	385.5	111	16	—	—	—	—	—	—
S 20 1	S2	MX2S	156	176	170	429.5	111	21.1	—	—	—	—	—	—
S 20 1	S3	ME3S	195	196	190	434.5	135	21.5	—	—	—	—	—	—
S 20 1	S3	MX3S	195	196	190	466.5	135	24.5	—	—	—	—	—	—
S 20 1	S3	ME3L	195	196	190	466.5	135	26	—	—	—	—	—	—
S 20 1	S3	MX3L	195	196	190	510.5	135	32	—	—	—	—	—	—

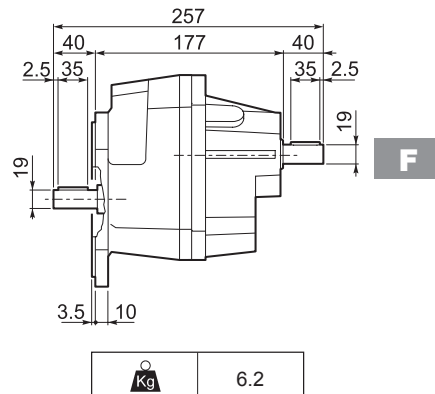
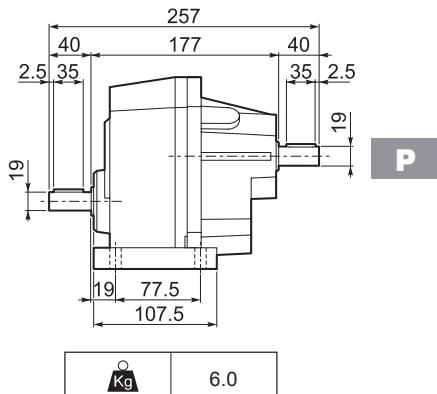
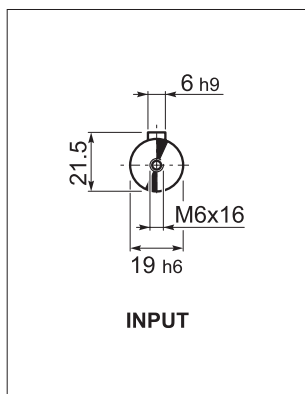


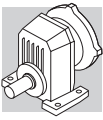
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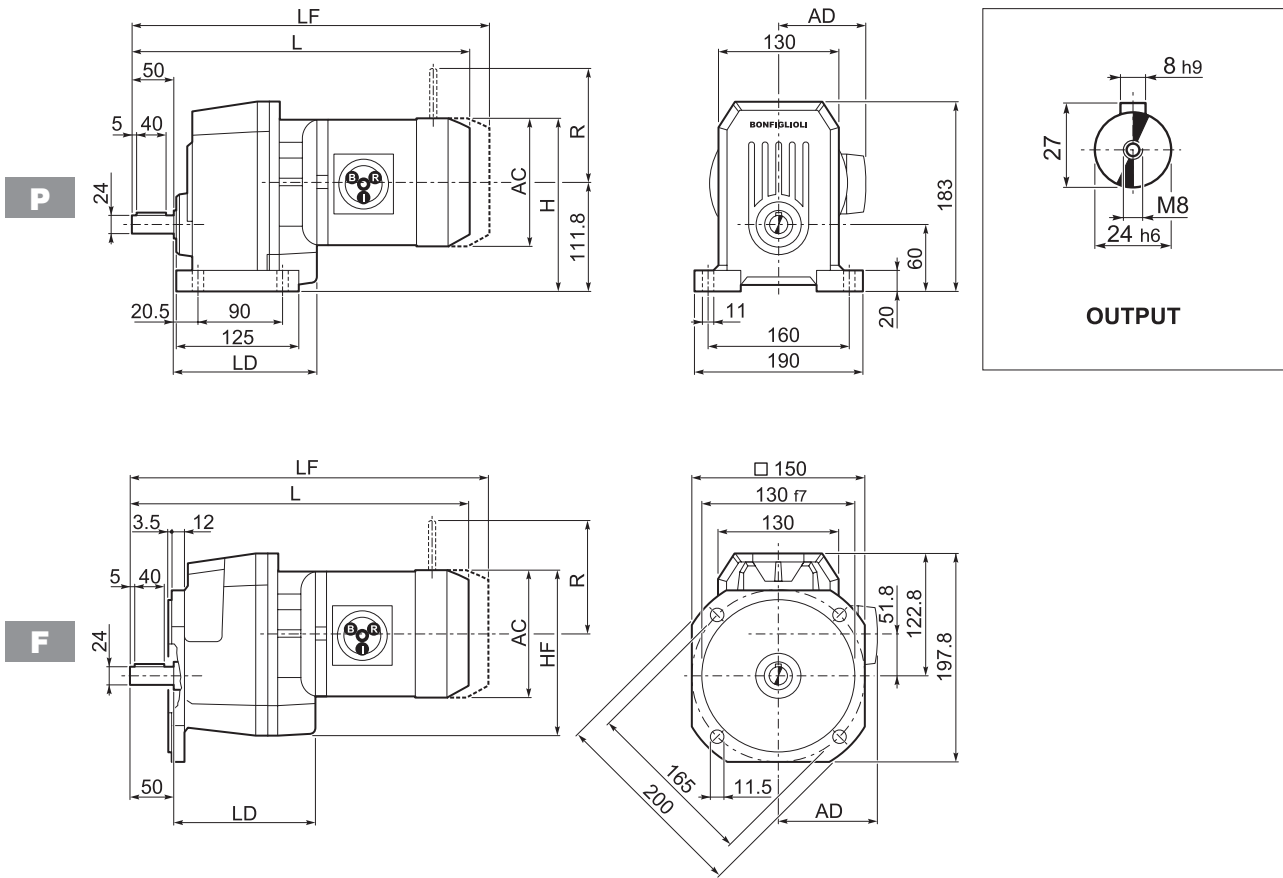
		M	M1	M2	N	N1	N2	N3	N4	P	X	kg
S 20 1	P63	11	12.8	4	140	115	95	—	M8x10	207	4	6
S 20 1	P71	14	16.3	5	160	130	110	—	M8x10	207	4.5	6
S 20 1	P80	19	21.8	6	200	165	130	—	M10x14.5	227	4	7
S 20 1	P90	24	27.3	8	200	165	130	—	M10x14.5	227	4	7
S 20 1	P100	28	31.3	8	250	215	180	—	M12x16	237	4.5	11
S 20 1	P112	28	31.3	8	250	215	180	—	M12x16	237	4.5	11

## S 20...HS





## S 30...M/ME/MX

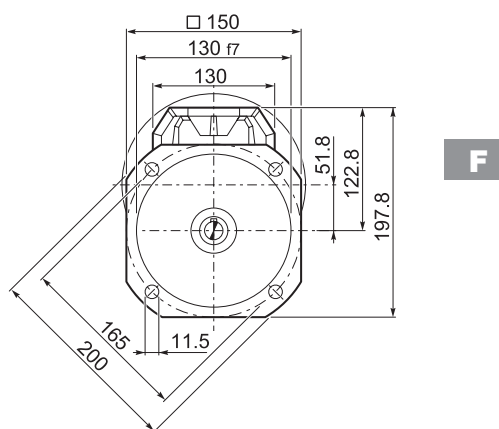
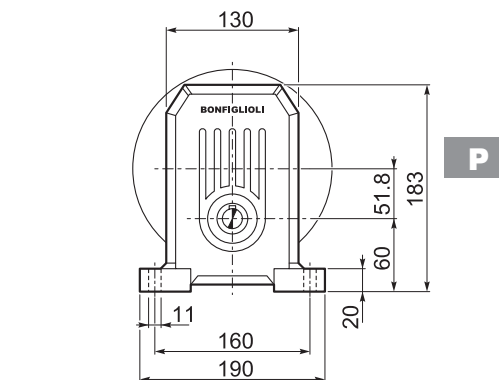
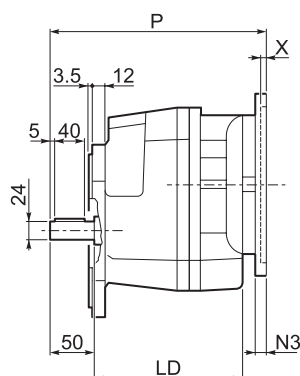
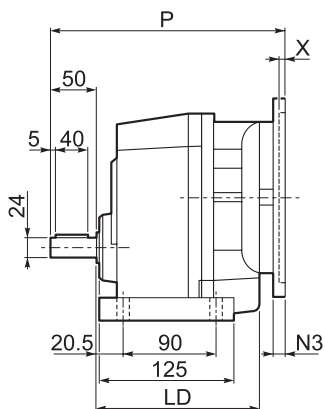
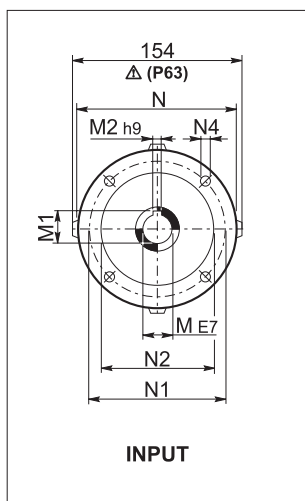
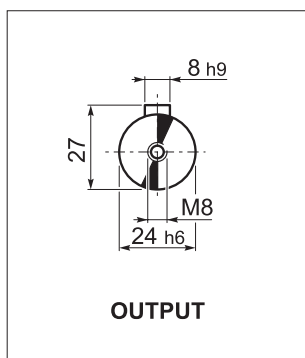


			AC	H	HF	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
										LF	Kg	R	AD	R	AD
S 30 1	S1	M1	137	180	177	387.5	140.5	102	14	448.5	16	103	135	124	108
S 30 1	S1	M2S	156	190	186	410.5	152.5	111	18	486.5	21	129	146	134	119
S 30 1	S2	ME2S	156	190	186	410.5	152.5	111	18	—	—	—	—	—	—
S 30 1	S2	MX2S	156	190	186	454.5	152.5	111	23.1	—	—	—	—	—	—
S 30 1	S3	ME3S	195	209	206	459.5	162.5	135	24.5	—	—	—	—	—	—
S 30 1	S3	MX3S	195	209	206	491.5	162.5	135	27.5	—	—	—	—	—	—
S 30 1	S3	ME3L	195	209	206	491.5	162.5	135	32	—	—	—	—	—	—
S 30 1	S3	MX3L	195	209	206	535.5	162.5	135	38	—	—	—	—	—	—
S 30 1	S4	ME4	258	240.8	237	599.5	—	193	71	—	—	—	—	—	—
S 30 1	S4	ME4LB	258	240.8	237	634.5	—	193	79	—	—	—	—	—	—



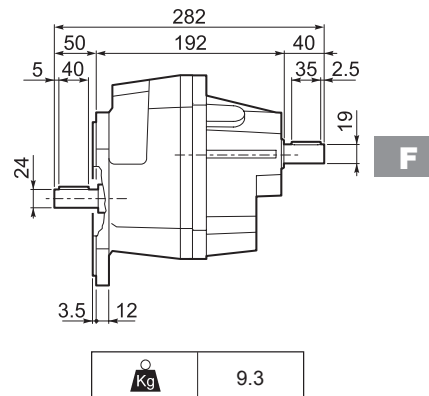
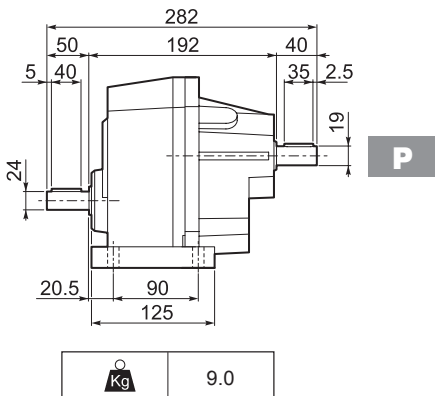
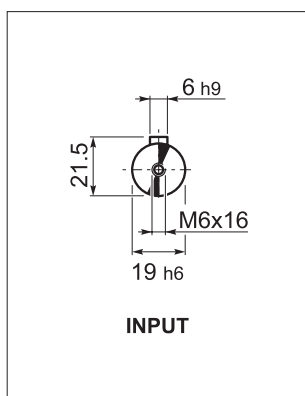


## S 30...P(IEC)



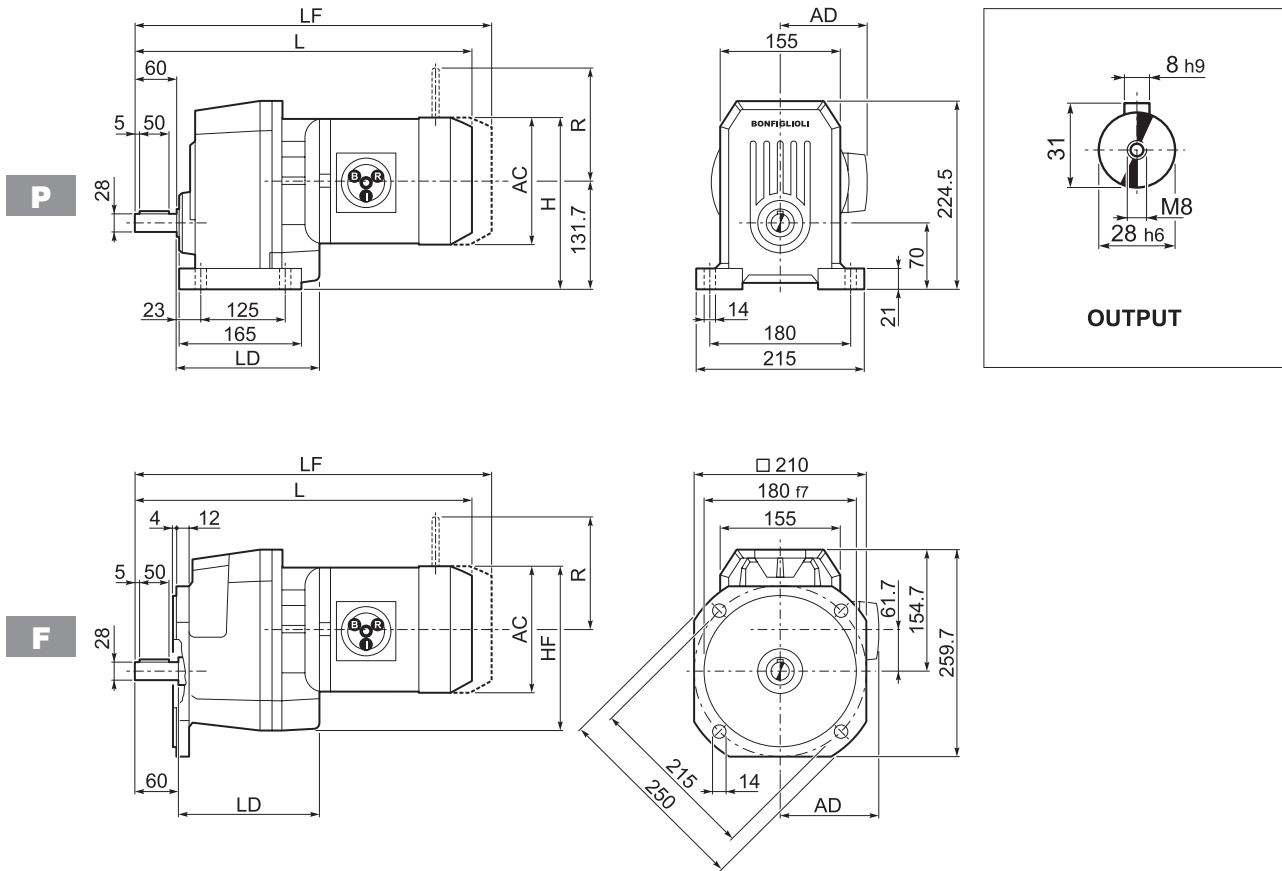
		LD	M	M1	M2	N	N1	N2	N3	N4	P	X	kg
S 30 1	P63	152.5	11	12.8	4	140	115	95	—	M8x10	232	4	8
S 30 1	P71	152.5	14	16.3	5	160	130	110	—	M8x10	232	4.5	8
S 30 1	P80	162.5	19	21.8	6	200	165	130	—	M10x14.5	252	4	9
S 30 1	P90	162.5	24	27.3	8	200	165	130	—	M10x14.5	252	4	9
S 30 1	P100	162.5	28	31.3	8	250	215	180	—	M12x16	262	4.5	13
S 30 1	P112	162.5	28	31.3	8	250	215	180	—	M12x16	262	4.5	13
S 30 1	P132	—	38	41.3	10	300	265	230	16	14	298.5	5	21

## S 30...HS





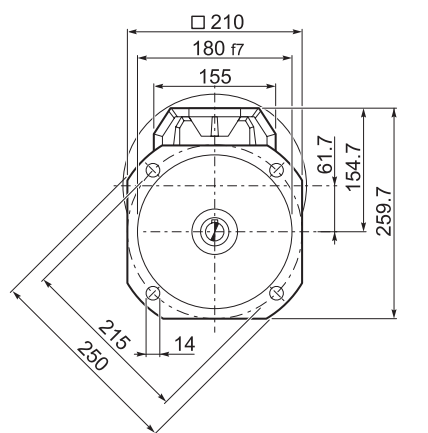
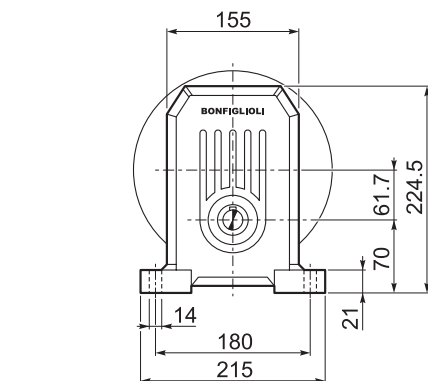
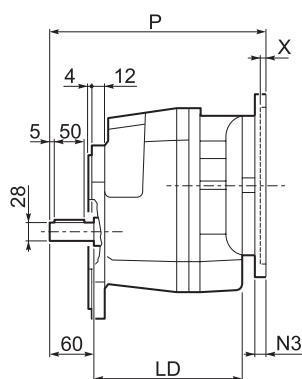
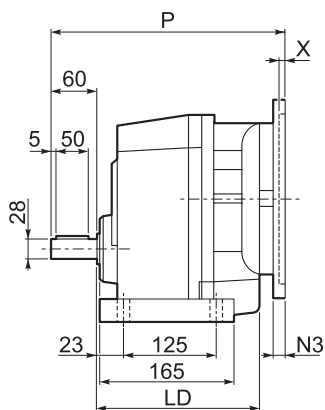
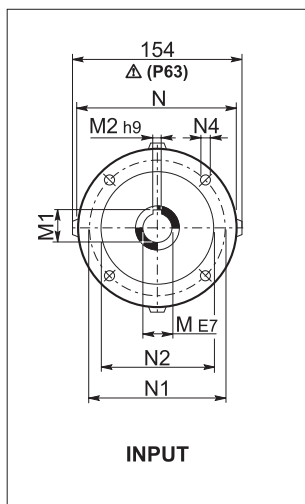
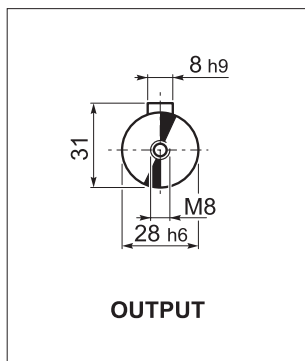
## S 40...M/ME/MX



				AC	H	HF	L	LD	AD	Kg	M...FD	Kg	M...FD		M...FA	
											M...FA		R	AD	R	AD
S 40 1	S1	M1		137	200	197	429.5	168	102	28	490.5	31	103	135	124	108
S 40 1	S2	M2S		156	210	206	452.5	183.5	111	34	528.5	37	129	146	134	119
S 40 1	S2	ME2S		156	210	206	452.5	183.5	111	34	—	—	—	—	—	—
S 40 1	S2	MX2S		156	210	206	496.5	183.5	111	39.1	—	—	—	—	—	—
S 40 1	S3	ME3S		195	229	226	501.5	199.5	135	40.5	—	—	—	—	—	—
S 40 1	S3	MX3S		195	229	226	533.5	199.5	135	43.5	—	—	—	—	—	—
S 40 1	S3	ME3L		195	229	226	533.5	199.5	135	48	—	—	—	—	—	—
S 40 1	S3	MX3L		195	229	226	577.5	199.5	135	54	—	—	—	—	—	—
S 40 1	S4	ME4	MX4	258	261	257	641.5	—	193	82	—	—	—	—	—	—
S 40 1	S4	ME4LB	MX4LA	258	261	257	676.5	—	193	90	—	—	—	—	—	—

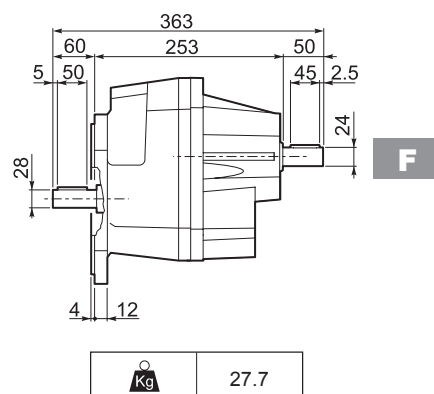
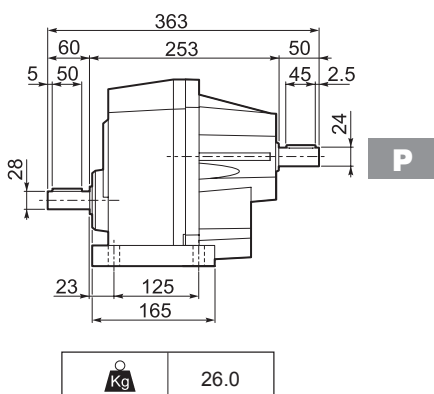
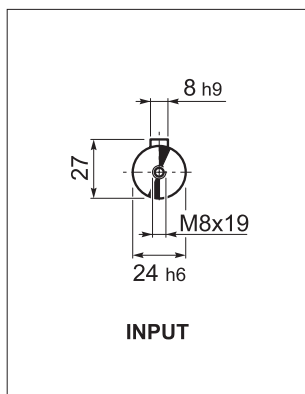


## S 40...P(IEC)



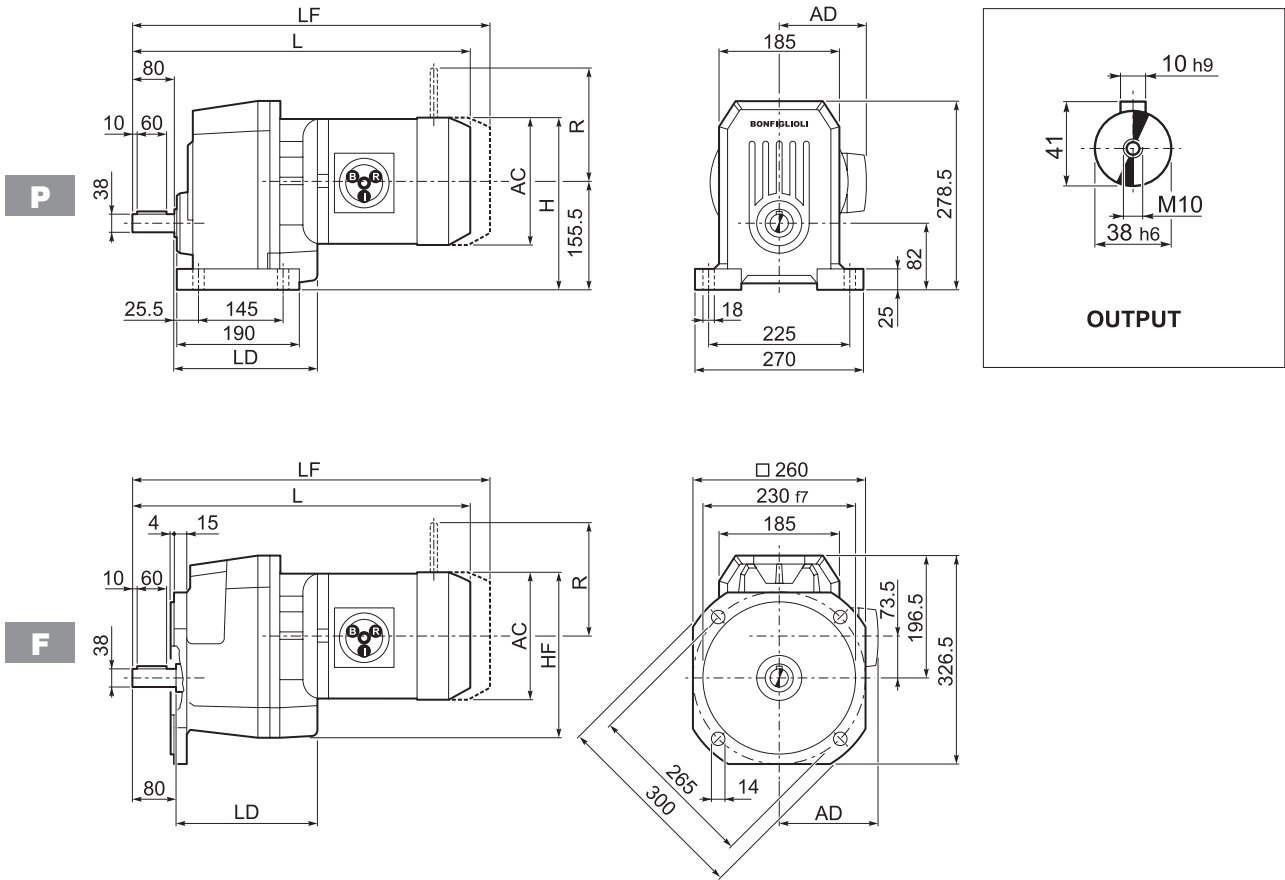
		LD	M	M1	M2	N	N1	N2	N3	N4	P	X	Kg
S 40 1	P63	183.5	11	12.8	4	140	115	95	—	M8x10	274	4	25
S 40 1	P71	183.5	14	16.3	5	160	130	110	—	M8x10	274	4.5	26
S 40 1	P80	199.5	19	21.8	6	200	165	130	—	M10x14.5	294	4	26
S 40 1	P90	199.5	24	27.3	8	200	165	130	—	M10x14.5	294	4	30
S 40 1	P100	—	28	31.3	8	250	215	180	—	M12x16	304	4.5	30
S 40 1	P112	—	28	31.3	8	250	215	180	—	M12x16	304	4.5	30
S 40 1	P132	—	38	41.3	10	300	265	230	16	14	340	5	32

## S 40...HS





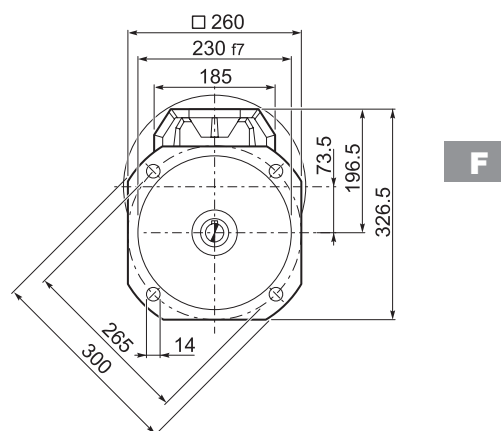
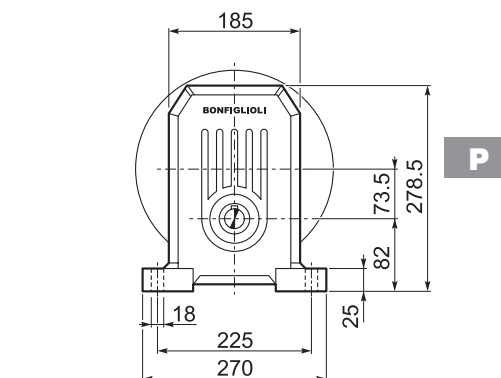
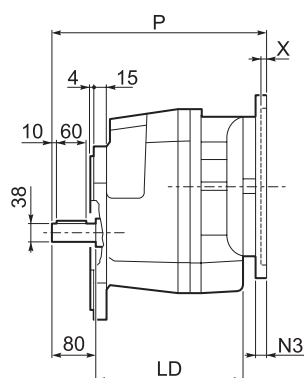
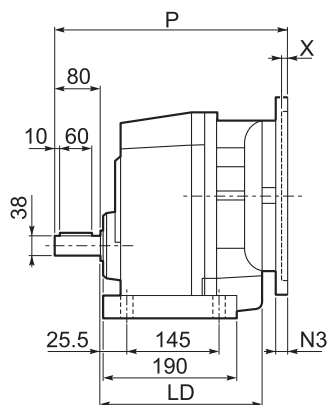
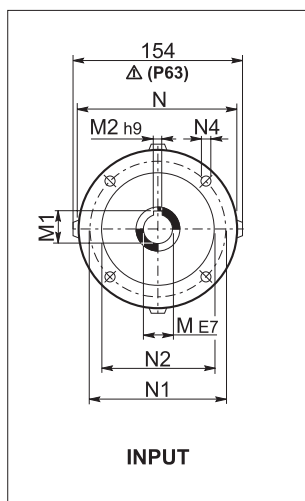
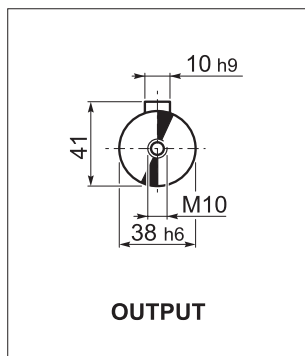
## S 50...M/ME/MX



			AC	H	HF	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
										LF	Kg	R	AD	R	AD
S 50 1	S1	M1	137	225	222	469	—	102	40	530	42	103	135	124	108
S 50 1	S2	M2S	156	233	230	492.5	204.5	111	44	568.5	47	129	146	134	119
S 50 1	S2	ME2S	156	233	230	492.5	204.5	111	44	—	—	—	—	—	—
S 50 1	S2	MX2S	156	233	230	536.5	204.5	111	49.1	—	—	—	—	—	—
S 50 1	S3	ME3S	195	253	250	541.5	219.5	135	52.5	—	—	—	—	—	—
S 50 1	S3	MX3S	195	253	250	573.5	219.5	135	55.5	—	—	—	—	—	—
S 50 1	S3	ME3L	195	253	250	573.5	219.5	135	60	—	—	—	—	—	—
S 50 1	S3	MX3L	195	253	250	617.5	219.5	135	66	—	—	—	—	—	—
S 50 1	S4	ME4	258	284	281	681.5	204.5	193	86	—	—	—	—	—	—
S 50 1	S4	ME4LB	258	284	281	716.5	204.5	193	94	—	—	—	—	—	—
S 50 1	S5	ME5S	310	310.5	307	768	—	245	114	—	—	—	—	—	—
S 50 1	S5	ME5L	310	310.5	307	812	—	245	130	—	—	—	—	—	—

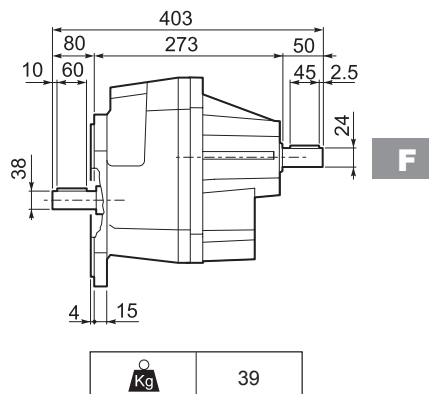
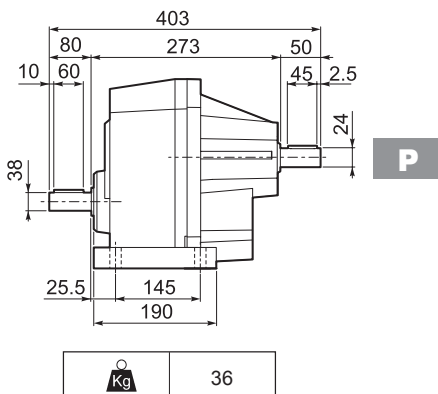
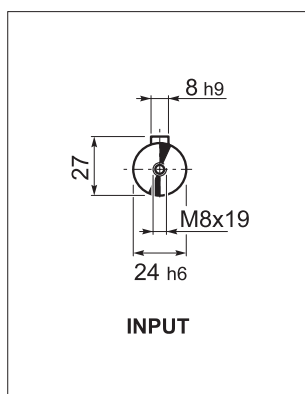


## S 50...P(IEC)



		LD	M	M1	M2	N	N1	N2	N3	N4	P	X	kg
S 50 1	P63	204.5	11	12.8	4	140	115	95	—	M8x10	314	4	35
S 50 1	P71	204.5	14	12.8	4	160	130	110	—	M8x10	314	4.5	35
S 50 1	P80	219.5	19	16.3	5	200	165	130	—	M10x14.5	314	4	37
S 50 1	P90	219.5	24	21.8	6	200	165	130	—	M10x14.5	334	4	37
S 50 1	P100	204.5	28	27.3	8	250	215	180	—	M12x16	344	4.5	41
S 50 1	P112	204.5	28	31.3	8	250	215	180	—	M12x16	344	4.5	41
S 50 1	P132	204.5	38	41.3	10	300	265	230	16	14	380	5	44
S 50 1	P160	—	42	45.3	12	350	300	250	23	18	431	5.5	48
S 50 1	P180	—	48	51.8	14	350	300	250	23	18	431	5.5	48

## S 50...HS

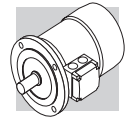




## ELECTRIC MOTORS

### M1 SYMBOLS AND UNITS OF MEASUREMENT

Symbols	Units of Measure	Description	Symbols	Units of Measure	Description
$\cos\varphi$	–	Power factor	$n$	[min <sup>-1</sup> ]	Rated speed
$\eta$	–	Efficiency	$P_B$	[W]	Power drawn by the brake at 20°C
$f_m$	–	Power adjusting factor	$P_n$	[kW]	Motor rated power
$I$	–	Cyclic duration factor	$P_r$	[kW]	Required power
$I_N$	[A]	Rated current	$t_1$	[ms]	Brake response time with one-way rectifier
$I_s$	[A]	Locked rotor current	$t_{1s}$	[ms]	Brake response time with electronic-controlled rectifier
$J_C$	[Kgm <sup>2</sup> ]	Load moment of inertia	$t_2$	[ms]	Brake reaction time with a.c. disconnect
$J_M$	[Kgm <sup>2</sup> ]	Moment of inertia	$t_{2c}$	[ms]	Brake reaction time with a.c. and d.c. disconnect
$K_c$	–	Torque factor	$t_a$	[°C]	Ambient temperature
$K_d$	–	Load factor	$t_f$	[min]	Work time at constant load
$K_J$	–	Inertia factor	$t_r$	[min]	Rest time
$M_A$	[Nm]	Mean breakaway torque	$W$	[J]	Braking work between service interval
$M_B$	[Nm]	Brake torque	$W_{max}$	[J]	Maximum brake work for each braking
$M_N$	[Nm]	Rated torque	$Z$	[1/h]	Permissible starting frequency, loaded
$M_L$	[Nm]	Counter-torque during acceleration	$Z_0$	[1/h]	Max. permissible unloaded starting frequency (I = 50%)
$M_S$	[Nm]	Starting torque			



## M2 INTRODUCTION

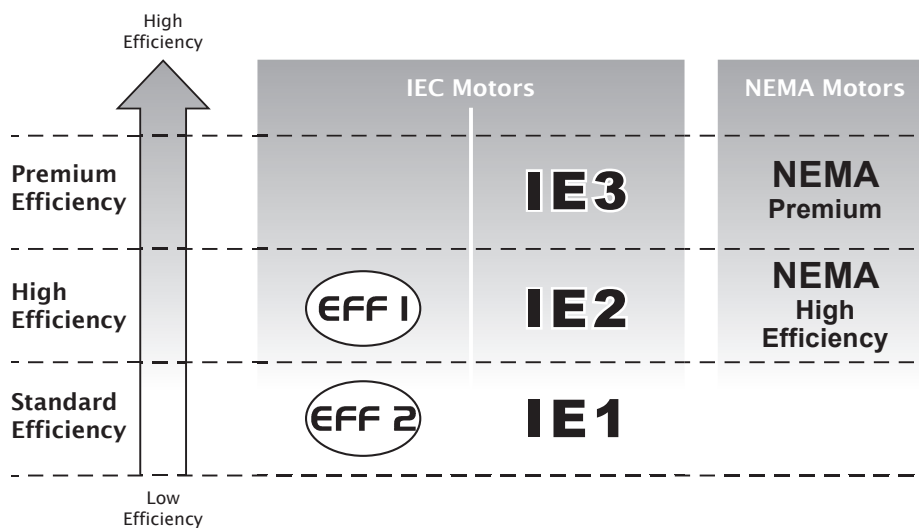
### Efficiency classes and test methods

Efficiency classes characterise the efficiency with which an electric motor converts electrical energy into mechanical energy. In Europe, the energy efficiency of low voltage electric motors used to be classified using the voluntary Eff1/Eff2/Eff3 system. Outside Europe, other countries used to apply their own national systems, often very different to the European system. This uncertainty in standards led manufacturers to develop a harmonised international standard, and push for the issue of IEC (International Electrotechnical Commission) standard IEC 60034-30-1, “Efficiency classes of single-speed, three-phase, cage-induction motors (IE code)”.

This new standard:

- defines new classes of efficiency
- **IE1** (standard efficiency)
- **IE2** (high efficiency)
- **IE3** (premium efficiency)
- provides a common, international reference system for the classification of electric motors
- and for national legislation
- introduces a new efficiency measurement method in conformity with standard IEC 60034-1-2:2007

The following table shows the correspondence among the main classes.





### European Commission regulation 640/2009

IEC standard 60034-30-1 establishes technical guidelines for efficiency classification but does not impose any legal requirements for the adoption of any particular efficiency class. These are laid down by European Directives and national laws.

The EC Regulation applying Directive 2005/32/EC was adopted on the 22nd July 2009. This establishes the legal requirements and eco-compatible design criteria for electric motors, and imposes minimum efficiency limits according to the following schedule:

- **16/06/2011:** Electric motors must have a minimum efficiency level equivalent to class **IE2**
- **01/01/2015:** Electric motors with a rated power output between 7.5 kW and 375 kW must have a minimum efficiency level corresponding to **IE3**, or to **IE2** if controlled by an inverter.
- **01/01/2017:** Electric motors with a rated power output between 0.75 kW and 375 kW must have a minimum efficiency level corresponding to **IE3**, or to **IE2** if controlled by an inverter.

### Scope and exclusions

EC Regulation 640/2009 applies to 2, 4, and 6 pole, single-speed, three-phase, 50 Hz or 60 Hz, cage-induction motors with rated outputs of 0.75 kW to 375 kW, and rated voltage up to 1000 V, designed for continuous duty (S1).

The regulation does not apply to:

- brakemotors
- motors designed to function immersed in liquid
- motors that are fully integrated in a product (like a gearbox, pump, fan), so that it is not possible to test the performance of the motor independently of that of the product.
- motors expressly designed to function:
  - <sup>a</sup> at altitudes above 4000 metres a.s.l.;
  - <sup>a</sup> in ambient temperatures above 60 °C;
  - <sup>a</sup> at maximum operating temperatures above 400 °C;
  - <sup>a</sup> in ambient temperatures below -30 °C (all motors) or below 0 °C (water-cooled motors);
  - <sup>a</sup> with incoming liquid coolants at temperatures below 0 °C or above 32 °C;
  - <sup>a</sup> in potentially explosive atmospheres as defined by Directive 2014/34/EU.





## M3 GENERAL CHARACTERISTICS

### M3.1 Production range

The asynchronous three-phase electric motors BX, BE, BN, MX, ME and M of BONFIGLIOLI RIDUTTORI's production, are available in basic design IMB5 and derived versions.

Motors are the enclosed type with outer fan and cage-type rotor for use in industrial environments. Standard versions of BX-BE/MX-ME motors are 230/400V  $\Delta/Y$  (400/690V  $\Delta/Y$  in sizes BX-BE 160 and BX- BE 180), 50 Hz motors, with a tolerance of  $\pm 10\%$ . Standard BN/M motors are designed to operate from a rated voltage 230/400V  $\Delta/Y$  (400/690V  $\Delta/Y$  for frame sizes BN 160 through BN 200) 50 Hz, with  $\pm 10\%$  tolerance.

### M3.2 Standards

The motors described in this catalogue are manufactured to the applicable standards shown in the following table.

(F01)

Title	CEI	IEC
General requirements for rotating electrical machines	CEI EN 60034-1	IEC 60034-1
Terminal markings and direction of rotation of rotating machines	CEI 2-8	IEC 60034-8
Methods of cooling for electrical machines	CEI EN 60034-6	IEC 60034-6
Dimensions and output ratings for rotating electrical machines	EN 50347	IEC 60072
Classification of degree of protection provided by enclosures for rotating machines	CEI EN 60034-5	IEC 60034-5
Noise limits	CEI EN 60034-9	IEC 60034-9
Classification of type of construction and mounting arrangements	CEI EN 60034-7	IEC 60034-7
Rated voltage for low voltage mains power	CEI 8-6	IEC 60038
Vibration level of electric machines	CEI EN 60034-14	IEC 60034-14
Efficiency classes of single-speed, three-phase, cage-induction motors (IE code)	CEI EN 60034-30-1	IEC 60034-30-1
Standard method for determining losses and efficiency from tests	CEI EN 60034-2-1	IEC 60034-2-1

The motors also comply with foreign standards adapted to IEC 60034-1 as shown here below.

(F02)

<b>DIN VDE 0530</b>	Germany
<b>BS5000 / BS4999</b>	Great Britain
<b>AS 1359</b>	Australia
<b>NBNC 51 - 101</b>	Belgium
<b>NEK - IEC 34</b>	Norway
<b>NF C 51</b>	France
<b>OEVE M 10</b>	Austria
<b>SEV 3009</b>	Switzerland
<b>NEN 3173</b>	Netherlands
<b>SS 426 01 01</b>	Sweden



### M3.3 Directives 2006/95/EC (LVD) and 2004/108/EC (EMC)

BX, BE, BN, MX, ME and M motors meet the requirements of Directives 2006/95/EC (Low Voltage Directive) and 2004/108/EC (Electromagnetic Compatibility Directive) and their name plates bear the CE mark.

As for the EMC Directive, construction is in accordance with standards CEI EN 60034-1, EN 61000-6-2, EN 61000-6-4.

Motors with FD brakes, when fitted with the suitable capacitive filter at rectifier input (option **CF**), meet the emission limits required by Standard EN 61000-6-3:2007 "Electromagnetic compatibility - Generic Emission Standard - Part 6-3 Residential, commercial and light industrial environment".

Motors also meet the requirements of standard CEI EN 60204-1 "Electrical equipment of machines". The responsibility for final product safety and compliance with applicable directives rests with the manufacturer or the assembler who incorporate the motors as component parts.

### M3.4 Tolerances

As per the Norms CEI EN 60034-1, applicable the tolerances here below apply to the following quantities.

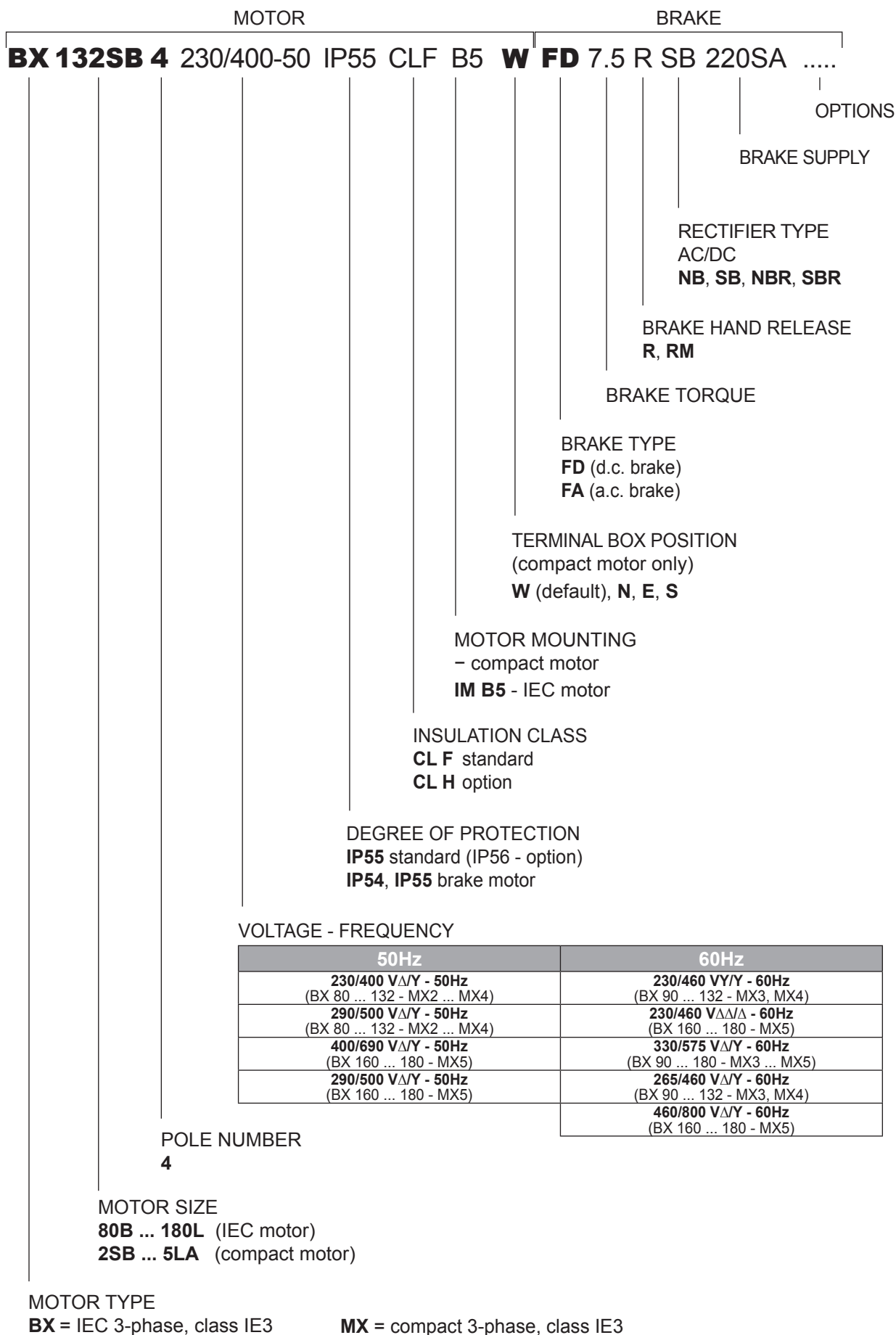
(F03)

$-0.15 (1 - \eta) \quad P \leq 50\text{kW}$	Efficiency
$-(1 - \cos\phi)/6 \quad \text{min } 0.02 \quad \text{max } 0.07$	Power factor
$\pm 20\% *$	Slip
+20%	Locked rotor current
-15% +25%	Locked rotor torque
-10%	Max. torque

(\*)  $\pm 30\%$  for motors with  $P_n < 1 \text{ kW}$

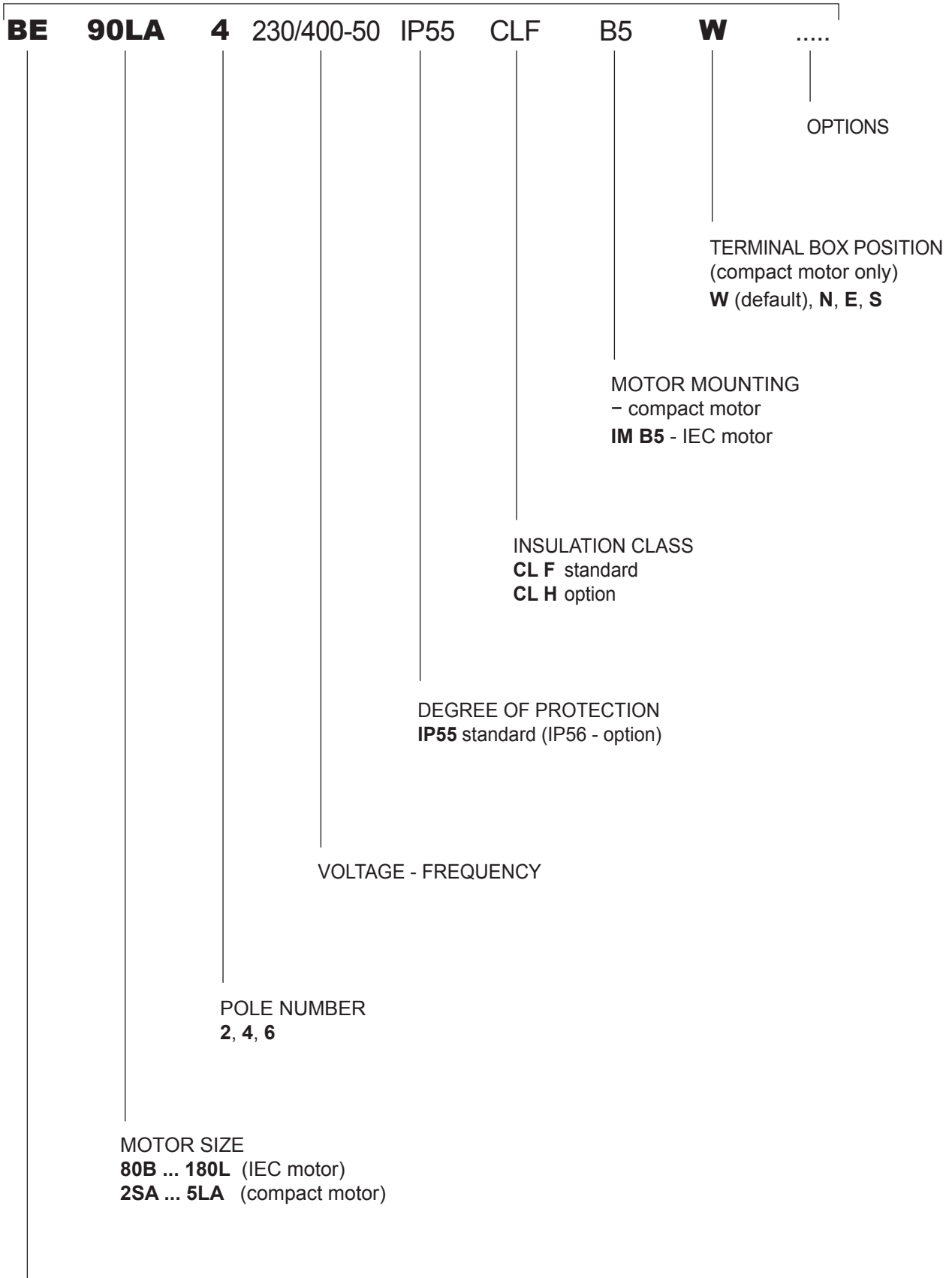


**M4 MOTOR DESIGNATION**





MOTOR



MOTOR TYPE

**BE** = IEC 3-phase, class IE2

**ME** = compact 3-phase, class IE2



MOTOR

BRAKE

**BN 90LA 4 230/400-50 IP55 CLF B5 W FD 7.5 R SB 220SA .....**

OPTIONS

BRAKE SUPPLY

RECTIFIER TYPE  
AC/DC  
**NB, SB, NBR, SBR**

BRAKE HAND RELEASE  
**R, RM**

BRAKE TORQUE

BRAKE TYPE  
**FD** (d.c. brake)  
**FA** (a.c. brake)

TERMINAL BOX POSITION  
(compact motor only)  
**W** (default), **N, E, S**

MOTOR MOUNTING  
- compact motor  
**IM B5** - IEC motor

INSULATION CLASS  
**CL F** standard  
**CL H** option

DEGREE OF PROTECTION  
**IP55** standard (IP56 - option)  
**IP54, IP55** brake motor

VOLTAGE - FREQUENCY

POLE NUMBER  
**2, 4, 6, 2/4, 2/6, 2/8, 2/12, 4/6, 4/8**

MOTOR SIZE  
**56A ... 200LA** (IEC motor)  
**0B ... 5SB** (compact motor)

MOTOR TYPE  
**BN** = IEC 3-phase    **M** = IEC compact 3-phase



## M5 VARIANTS AND OPTIONS

### M5.1 Variants

(F04)	Description	Default	Option	Page
	Voltage	230/400/50		506
	Protection class	BX - BE - BN - MX - ME - M IP 55	IP 56	503
		BX_FD - BX_FA - BN_FD - BN_FA MX_FD - MX_FA - M_FD - M_FA IP 54	IP 55	
	Insulation class	CLF	CLH	510
	Design version	BX - BE - BN	<b>B5</b> <b>B5 R</b>	502

Default values.

### M5.2 Options

(F05)	Description	Catalogue numbers						Availability	Page	
	Thermal protective devices	<b>D3</b>	<b>K1</b>	<b>E3</b>				BX - BE - BN MX - ME - M	524	525
	50 Hz normalized power	<b>PN</b>						BN M	508	
	Feedback devices	<b>EN1</b>	<b>EN2</b>	<b>EN3</b>	<b>EN4</b>	<b>EN5</b>	<b>EN6</b>	BX - BE - BN MX - ME - M	533	
	Anti-condensate heaters	<b>H1</b>	<b>NH1</b>					BX - BE - BN MX - ME - M	528	
	Tropicalized windings	<b>TP</b>						BX - BE - BN MX - ME - M	529	
	Double-extended shaft	<b>PS</b>						BX - BE - BN MX - ME - M	529	
	Rotor balancing grade B	<b>RV</b>						BX - BE - BN MX - ME - M	530	
	External mechanical protections	<b>RC</b>	<b>TC</b>					BX - BE - BN MX - ME - M	532	533
	Forced ventilation	<b>U1</b>	<b>U2*</b>					BX - BE - BN MX - ME - M	531	532
	Certification	<b>CUS</b>						BX - BE - BN MX - ME - M	508	
	China Compulsory Certification	<b>CCC</b>						BE - BN ME - M	510	
	Plug connector	<b>CON</b>						BX - BE - BN MX - ME - M	525	
	Surface protection	<b>C_</b>						BX - BE - BN MX - ME - M	535	
	Painting	<b>RAL</b>						BX - BE - BN MX - ME - M	535	
	Certificates	<b>ACM</b>						BX - BE - BN MX - ME - M	536	
	Inspection certificate	<b>CC</b>						BX - BE - BN MX - ME - M	536	
	Backstop device	<b>AL</b>	<b>AR</b>					MX - ME - M	529	
	Type of duty	<b>S2</b>	<b>S3</b>	<b>S9</b>				BN M	511	

\* Only for motors BN and M



### M5.3 Brake-related options

(F06)	Description	Catalogue numbers				Availability	Page
	Brake torque	Refer to the specific brake type					517 520
	Manual release lever	<b>R</b>	<b>RM</b>			BX - BN MX - M	522
	Release lever orientation	<b>AB</b>	<b>AA</b>	<b>AC</b>	<b>AD</b>	BX - BN MX - M	523
	DC brake rectifier	<b>NB</b>	<b>NBR</b>	<b>SB</b>	<b>SBR</b>	BX - BN MX - M	516
	Soft-start flywheel	<b>F1</b>				BN M	524
	Capacitive filter	<b>CF</b>				BX - BN MX - M	524
	Brake separate power supply (*)	<b>...SA</b>	<b>...SD</b>			BX - BN MX - M	523
	Brake functionality check	<b>MSW</b>				BX - BN MX - M	528
	Additional cable entry for brake motors	<b>IC</b>				BX - BN MX - M	528

(\*) Specify voltage.

 Default values.

### M5.4 Example of identification nameplate

<b>1</b>	IEC EN 60034	<b>Bonfiglioli</b> Riduttori	<b>CE</b>	<b>4</b>
	3~Mot BE 90LA 4		Cod. 8U09030001	
<b>2</b>	No 1003001 - 6954785	S 1	IM B 5 15,1 kg	<b>5</b>
	kW 1,5	CL F IP 55	Amb 40 °C	
	Hz	V ± 10%	A min <sup>-1</sup> cos φ	
<b>3</b>	50 ○	230/400 Δ/Y	6.1/3.5 1430 ○ 0.74	
	60	265/460 Δ/Y	5.4/3.1 1730 0.73	
	50Hz-IE2	83.5(100%) - 83.0(75%) - 80.0(50%)		<b>6</b>
	60Hz-IE2	84.5(100%) - 83.9(75%) - 80.7(50%)		

- ① BONFIGLIOLI  
Motor type
- ② Serial number
- ③ Rated voltage

- ④ Motor code
- ⑤ Type of duty: S1  
Continuous duty
- ⑥ IE Class, Efficiency at:  
4/4 - 3/4 - 2/4 load



## M6 MECHANICAL FEATURES

### M6.1 Versions

EC-normalised BX, BE and BN motors are available in the design versions as indicated in the table below here after as per Standards EN 60034-7 (BX/BE), CEI EN 60034-14 (BN).

Mounting versions are:

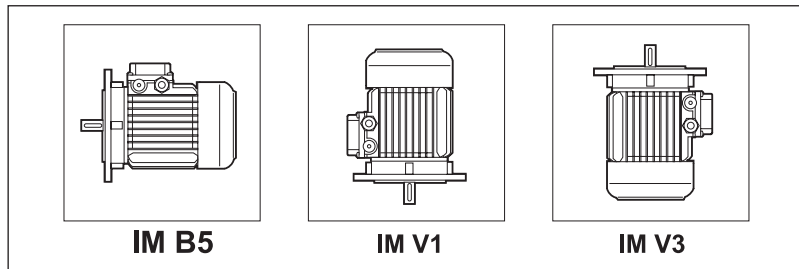
**IM B5** (basic)

IM V1, IM V3 (derived)

IM B5 design motors can be installed in positions IM V1 and IM V3; in such cases, the basic design IM B5 is indicated on the motor name plate.

In design versions with a vertically located motor and shaft downwards, it is recommended to request the drip cover (always necessary for brake motors). This facility, included in the option list should be specified when ordering as it does not come as a standard device

(F07)



Flange output motors are also available with reduced coupling dimensions, as indicated in the table below - executions **B5R**. Their use in combination with gearboxes must be however coherent with the maximum installable power on gearboxes themselves (see chapters "Motors availability"). In case this condition is not met need to contact the Technical Service for the checking of the combination.

(F08)

	BN 71	BX/BE/BN 80	BX/BE/BN 90	BX/BE/BN 100	BX/BE/BN 112	BX/BE/BN 132
	DxE - Ø					
<b>B5R<sup>(1)</sup></b>	11x23 - 140	14x30 - 160	19x40 - 200	24x50 - 200	24x50 - 200	28x60 - 250

(1) flange with through holes











## M6.2 Degree of protection










**IP..**

The following chart provides an overview of the degrees of protection available.

In addition to the degree of protection specified when ordering, motors to be installed outdoors require protection against direct sunlight and also – when they are to be installed vertically down – a drip cover to prevent the ingress of water and solid particles (option **RC**).

(F09)

		IP 54	IP 55	IP 56
<b>BX - BE - BN</b>	<b>MX - ME - M</b>		standard	 on request
<b>BX_FD</b> <b>BX_FA</b> <b>BN_FD</b> <b>BN_FA</b>	<b>MX_FD</b> <b>MX_FA</b> <b>M_FD</b> <b>M_FA</b>	standard	 on request	

<b>IP</b>		<b>5</b>	<b>5</b>
<b>0</b>		Not protected	<b>0</b>
<b>1</b>	 Ø 50 mm	Protected against extraneous solid bodies having Ø ≥ 50 mm	<b>1</b>
<b>2</b>	 Ø 12 mm	Protected against extraneous solid bodies having Ø ≥ 12.5 mm	<b>2</b>
<b>3</b>	 Ø 2.5 mm	Protected against extraneous solid bodies having Ø ≥ 2.5 mm	<b>3</b>
<b>4</b>	 Ø 1 mm	Protected against extraneous solid bodies having Ø ≥ 1.0 mm	<b>4</b>
<b>5</b>		Protected against dust	<b>5</b>
<b>6</b>		No dust ingress	<b>6</b>
<b>7</b>	 0.15 m	Protected against the effects of temporary immersion	<b>7</b>
<b>8</b>	 1 m	Protected against the effects of continuous immersion	<b>8</b>



### M6.3 Cooling

The motors are externally ventilated (IC 411 to CEI EN 60034-6) and are equipped with a plastic fan working in both directions.

The motors must be installed allowing sufficient space between fan cowl and the nearest wall to ensure free air intake and allow access for maintenance purposes on motor and brake, if supplied. Independent, forced air ventilation (IC 416) can be supplied on request (option **U1**).

This solution enables to increase the motor duty factor when driven by an inverter and operating at reduced speed.

### M6.4 Direction of rotation

Rotation is possible in both directions. If terminals U1, V1 and W1 are connected to line phases L1, L2 and L3, clockwise rotation (looking from drive end) is obtained. For counterclockwise rotation, switch two phases.

### M6.5 Noise



Noise levels, measured using the method prescribed by ISO 1680 Standards, are within the maximum levels specified by Standards CEI EN 60034-9.

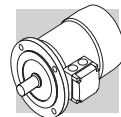
### M6.6 Vibrations and balancing

Rotor shafts are balanced with half key fitted and fall within the vibration class N, as per Standard CEI EN 60034-14.

### M6.7 Terminal box

Terminal board features 6 studs for eyelet terminal connection (9 studs execution for US voltage "Dual Voltage"). A ground terminal is also supplied for earthing of the equipment. Terminals number and type are shown in the following table. For brake power supply, please read par. 8 (brake FD), 9 (brake FA). Brakemotors house the a.c./d.c. rectifier (factory pre-wired) inside the terminal box. Wiring instructions are provided either in the box or in the user manual.



(F10)			No. of terminals	Terminal threads	Wiremax cross section area sq mm <sup>2</sup>
	<b>BX 80, BX 90</b> <b>BE 80, BE 90</b> <b>BN 56 ... BN 90</b>	<b>MX2, MX3</b> <b>ME2</b> <b>M05 ... M2</b>	6	M4	2.5
	<b>BX 100 ... BX 132</b> <b>BE 100 ... BE 132</b> <b>BN 100 ... BN 160MR</b>	<b>MX3, MX4</b> <b>ME3, ME4</b> <b>M3 ... M4</b>	6	M5	6
	<b>BX 160 - BE 160 ... BE 180M</b> <b>BN 160M ... BN 180M</b>	<b>ME5</b> <b>MX5 - M5</b>	6	M6	16
	<b>BX 180 - BE 180L</b> <b>BN 180L ... BN 200L</b>	– –	6	M8	25
	<b>BX 80 ... BX 132</b> <b>BE 80 ... BE 132</b> <b>BN 63 ... BN 160MR</b>	<b>MX2 ... MX4</b> <b>ME2 ... ME4</b> <b>M05 ... M4</b>	9	M4	6
	<b>BX 160 ... BX 180</b> <b>BE 160 ... BE 180</b> <b>BN 160M ... BN 200L</b>	<b>MX5</b> <b>ME5</b> <b>M5</b>	9	M6	16



## M6.8 Cable entry

The holes used to bring cables to terminal boxes use metric threads in accordance with standard EN 50262 as indicated in the table here after.

(F11)

		Cable gland and dimensions		Maximum cable diameter allowed [mm]
<b>BN 63</b>	<b>M05</b>	2 x M20 x 1.5	1 Hole on each side	13
<b>BN 71</b>	<b>M1</b>	2 x M25 x 1.5		17
<b>BX 80, BX 90 - BE 80, BE 90</b> <b>BN 80, BN 90</b>	<b>MX2, MX3 - ME2</b> <b>M2</b>	2 x M25 x 1.5		17
<b>BX 100, BX 112 - BE 100, BE 112</b> <b>BN 100</b>	<b>MX3, MX4 - ME3</b> <b>M3</b>	2 x M32 x 1.5	2 Holes on each side	21
		2 x M25 x 1.5		17
<b>BN 112</b>	-	2 x M32 x 1.5		21
		2 x M25 x 1.5		17
<b>BX 132 - BE 132</b> <b>BN 132...BN 160MR</b>	<b>MX4 - ME4</b> <b>M4</b>	4 x M32 x 1.5		21
<b>BX 160 - BE 160, BX 180 - BE 180</b> <b>BN 160M...BN 200L</b>	<b>MX5 - ME5</b> <b>M5</b>	2 x M40 x 1.5	Pivoting, 4 x 90°	28


## M6.9 Bearings


Life lubricated preloaded radial ball bearings are used, types are shown in the chart here under. Calculated endurance lifetime  $L_{10h}$ , as per ISO 281, in unloaded condition, exceeds 40000 hrs.

**DE** = drive end

**NDE** = non drive end

(F12)

	<b>DE</b>		<b>NDE</b>	
	<b>MX, ME, M</b>		<b>M</b>	<b>M_FD, M_FA</b>
<b>M05</b>	6004 2Z C3		6201 2Z C3	6201 2RS C3
<b>M1</b>	6004 2Z C3		6202 2Z C3	6202 2RS C3
<b>MX2 - ME2 - M2</b>	6007 2Z C3		6204 2Z C3	6204 2RS C3
<b>MX3 - ME3 - M3</b>	6207 2Z C3		6206 2Z C3	6206 2RS C3
<b>MX4 - ME4 - M4</b>	6309 2Z C3		6308 2Z C3	6308 2RS C3
<b>MX5 - ME5 - M5</b>	6309 2Z C3		6309 2Z C3	6309 2RS C3

	<b>DE</b>		<b>NDE</b>	
	<b>BX, BE, BN</b>		<b>BX, BE, BN</b>	<b>BN_FD</b> <b>BN_FA</b>
<b>BN 56</b>	6201 2Z C3		6201 2Z C3	-
<b>BN 63</b>	6201 2Z C3		6201 2Z C3	6201 2RS C3
<b>BN 71</b>	6202 2Z C3		6202 2Z C3	6202 2RS C3
<b>BX 80 - BE 80</b> <b>BN 80</b>	6204 2Z C3		6204 2Z C3	6204 2RS C3
<b>BX 90 - BE 90</b> <b>BN 90</b>	6205 2Z C3		6205 2Z C3	6305 2RS C3
<b>BX 100 - BE 100</b> <b>BN 100</b>	6206 2Z C3		6206 2Z C3	6206 2RS C3
<b>BX 112 - BE 112</b> <b>BN 112</b>	6306 2Z C3		6306 2Z C3	6306 2RS C3
<b>BX 132 - BE 132</b> <b>BN 132</b>	6308 2Z C3		6308 2Z C3	6308 2RS C3
<b>BN 160MR</b>	6309 2Z C3		6308 2Z C3	6308 2RS C3
<b>BX 160M/L</b> <b>BE 160M/L</b> <b>BN 160M/L</b>	6309 2Z C3		6309 2Z C3	6309 2RS C3
<b>BN 180M</b>	6310 2Z C3		6309 2Z C3	6309 2RS C3
<b>BX 180M/L</b> <b>BE 180M/L</b> <b>BN 180L</b>	6310 2Z C3		6310 2Z C3	6310 2RS C3
<b>BN 200L</b>	6312 2Z C3		6310 2Z C3	6310 2RS C3



## M7 ELECTRICAL CHARACTERISTICS

### M7.1 Voltage



Single speed motors are provided in standard execution either for nominal voltage 230 / 400 V  $\Delta/Y$ , 50 Hz, or 400 / 690 V  $\Delta/Y$ , 50 Hz, with a voltage tolerance of  $\pm 10\%$ , according to what is specified on the below table.

On all the motors BN and M, for which the voltage / frequency configuration is not included on the below table, the voltage tolerance is reduced down to  $\pm 5\%$ .

For the operation out of the tolerance boundaries, the temperature may exceed by 10 K the limit provided by the adopted insulation class.

The motors are suitable for operation on distribution European grid with voltage complying with the publication IEC 60038.

(F13)


Efficiency class			$V_{mot}$ $\pm 10\%$ 3~	Configuration
IE3	BX 80 ... BX 132	MX2 ... MX4	230 / 400 V - $\Delta/Y$ - 50 Hz	standard
	BX 160, BX 180	MX 5	400 / 690 V - $\Delta/Y$ - 50 Hz	standard
IE2	BE 80 ... 132	ME2 ... ME4	230 / 400 V - $\Delta/Y$ - 50 Hz	standard
			460 V Y - 60 Hz <sup>1</sup>	standard
	BE 160, BE 180	ME5	400 / 690 V - $\Delta/Y$ - 50 Hz	At request, carries no extra charge
			460 V $\Delta$ - 60 Hz <sup>1</sup>	standard
IE1	BN 56 ... BN 132	M0 ... M4	230 / 400 V - $\Delta/Y$ - 50 Hz	standard
			400 / 690 V - $\Delta/Y$ - 50 Hz	At request, carries no extra charge
	BN 160 ... BN 200	M5	460 V Y - 60 Hz	standard
			400 / 690 V - $\Delta/Y$ - 50 Hz	standard
			460 V $\Delta$ - 60 Hz	standard

<sup>1</sup> 4 pole motor only

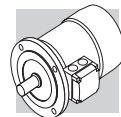
The only rated voltage for motors type et 50 Hz and all double speed motors is 400 V. Applicable tolerances as per CEI EN 60034-1.

The table below shows the wiring options available.

(F14)

Number of poles		Winding connection
2	BE 80 ... BE 160, BN 63 ... BN 200	$\Delta / Y$ <sup>(2)</sup>
4	BX 80 ... BX 180 BE 80 ... BE 180, BN 56 ... BN 200	
6	BE 90 ... BE 160, BN 63 ... BN 200	
8	BN 71 ... BN 132	
2/4	BN 63 ... BN 132	$\Delta / YY$ (Dahlander)
2/6	BN 71 ... BN 132	Y / Y (Two windings)
2/8	BN 71 ... BN 132	
2/12	BN 80 ... BN 132	
4/6	BN 71 ... BN 132	
4/8	BN 80 ... BN 132	$\Delta / YY$ (Dahlander)





<sup>(2)</sup> Motors with voltage in ratio 2 (ex. 230/460 - 60) will be equipped with a 9 pin terminal box with winding connection either  $\Delta \Delta / \Delta$  or  $YY / Y$  (except 6 pole BN 63  $\Delta / Y$ )



## M7.2 Frequency

Rated output power BN / M for 60 Hz operation is shown in the following diagram.

(F15)

		P <sub>n</sub> [kW]						P <sub>n</sub> [kW]			
		2P	4P	6P	8P (*)			2P	4P	6P	8P (*)
BN 56A	–	–	0.07	–	–	BN 100L	M3LA	3.5	–	–	–
BN 56B	M0B	–	0.1	–	–	BN 100LA	M3LA	–	2.5	1.8	0.9
BN 63A	M05A	0.21	0.14	0.1	–	BN 100LB	M3LB	4.7	3.5	2.2	1.3
BN 63B	M05B	0.3	0.21	0.14	–	BN 112M	–	4.7	4.7	2.5	1.8
BN 63C	M05C	0.45	0.3	–	–	–	M3LC	–	4.7	2.5	–
BN 71A	–	0.45	0.3	0.21	0.1	BN 132S	M4SA	–	6.5	3.5	2.5
–	M1SC	–	–	0.21	–	BN 132SA	M4SA	6.5	–	–	–
BN 71B	M05SD	0.65	0.45	0.3	0.14	BN 132SB	M4SB	8.7	–	–	–
BN 71C	M1LA	0.9	0.65	0.45	–	BN 132M	M4LA	11	–	–	3.5
BN 80A	–	0.9	0.65	0.45	0.21	BN 132MA	M4LA	–	8.7	4.6	–
BN 80B	M2SA	1.3	0.9	0.65	0.30	BN 132MB	M4LB	–	11	6.5	–
BN 80C	M2SB	1.8	1.3	0.9	–	BN 160MR	M4LC	12.5	12.5	–	–
BN 90S	–	–	1.3	0.9	0.45	BN 160M	M5SA	–	–	8.6	–
BN 90SA	–	1.8	–	–	–	BN 160MB	–	17.5	–	–	–
BN 90SB	–	2.2	–	–	–	–	M5SB	17.5	17.5	–	–
BN 90L	M3SA	2.5	–	1.3	0.65	BN 160L	–	21.5	17.5	12.6	–
BN 90LA		–	1.8	–	–	–	M5SC	21.5	–	–	–
BN 90LB	–	–	2.2	–	–	BN 180M	M5LA	24.5	21.5	–	–
						BN 180L	–	–	25.3	17.5	–
						BN 200L	–	–	34	–	–
						BN 200LA	–	34	–	22	–

(\*) Excluded M<sub>–</sub> motors

BX / BE / MX / ME motors are available at 60 Hz on a 4 pole configuration only, and their power rating is the same as their 50 Hz counterpart. Double speed BN / M motors supplied at 60 Hz will have an increase of nominal power, referred to 50 Hz, equal to 15%, whereas double speed BX / BE / MX / ME motors are not available. If a nominal power rating, equal to the normalised nominal power rating at 50 Hz, was requested to be on a nameplate of a motor meant to be voltage supplied at 60 Hz, the PN option shall be specified on the motor designation. Motors normally designed for a 50 Hz frequency may be used on a 60 Hz operating grid, but the related data shall be updated according to the following table. Motors designated for 50 Hz operation show on the nameplate also the values for 60 Hz operation (excluding motors in CUS execution and brake motors). See the following table.

(F16)

	50 Hz	60 Hz			
	V - 50 Hz	V - 60 Hz	P <sub>n</sub> - 60 Hz	M <sub>n</sub> , M <sub>a</sub> /M <sub>n</sub> - 60 Hz	n [min <sup>-1</sup> ] - 60 Hz
BX/MX BE/ME	230/400 Δ/Y	265 - 460 Δ Y	1	0.83	1.2
	400/690 Δ/Y	460 Δ			
BN/M	230/400 Δ/Y	220 - 240 Δ			
		380 - 415 Y			
	400/690 Δ/Y	380 - 415 Δ			
BN/M	230/400 Δ/Y	265 - 280 Δ			
		440 - 480 Y			
	400/690 Δ/Y	440 - 480 Δ			



### M7.3 Ambient temperature

Catalogue rating values are calculated for 50 Hz operation and for standard ambient conditions (temperature 40 °C; elevation ≤ 1000 m a.s.l.) as per the CEI EN 60034-1 Standards. The motors can be used within the 40 - 60 °C temperature range with rated power output adjusted by factors given in the table below.

(F17)

Ambient temperature (°C)	40°	45°	50°	55°	60°
Permitted power as a % of rated power	100%	95%	90%	85%	80%

Should a derating factor higher than 15% apply please consult factory.

### M7.4 50 HZ normalized power

**PN**

With this option, motor name plate includes 50 Hz normalized power information even when motor is designated for operation with 60 Hz power mains. For 60 Hz supplies along with voltages 230/460V and 575V the PN option is applied by default.

### M7.5 Motors for USA and Canada

**CUS**

CUS option is available in NEMA Design C execution for BN, BE, M, ME motors, and NEMA Design B for BX motors, with regards to the electrical features. Motors are certified in compliance with CSA (Canadian Standard) C22.2 N° 100 and UL (Underwriters Laboratory) UL 1004-1 standards, as stated on UL file E308649.

BN, BE, M, ME motors nameplates show the below marks:



BX, MX motors nameplates show the below marks and are certified in compliance with the energy efficiency standards in effect in the USA and Canada, respectively provided by DOE (10 CFR Part 431) and NRCAN (Energy Efficiency Regulations), tested according to CSA C390 standard.





**NOTES:**

- Starting from **June, 1st 2016**, CUS motors whose efficiency is below IE3 (i.e. “Premium Efficiency”) cannot be any longer sold in the USA and Canada, unless one or more of the following conditions apply:
  - Double speed motors;
  - Motors plated for a non - continuous duty (<80%);
  - Motors intended to be operated through variable frequency drive only (properly equipped with “Inverter Duty Only” label, or similar).

- BX 100, MX3LA and MX3LB motors are available for the USA only and not for Canada, and the related marks reported on the nameplates are the following:



The CUS option does not apply to servo-ventilated motors.  
 US power mains voltages and the corresponding rated voltages to be specified for the motor are indicated in the following table:

(F18)

Frequency	Mains voltage	V <sub>mot</sub>
60 Hz	208 V	<b>200 V</b>
	240 V	<b>230 V</b>
	480 V	<b>460 V</b>
	600 V	<b>575 V</b>

CUS option is applicable onto 50 Hz operating motors as well (motors BX, MX excluded).

Motors with voltage in ratio 2 (e.g. 230/460-60; 220/440-60) feature, as standard, a 9-stud terminal board. For some executions, as well as for 575V-60Hz supply, the nominal rating is coincident with the correspondent 50Hz rating.

For DC brake motors type FD, the rectifier is connected to a single-phase 230 VAC supply voltage in the motor terminal box.

Brake power supply for brake motors is as follows:

(F19)

BX_FD - BN_FD MX_FD - M_FD	BX_FA - BN_FA MX_FA - M_FA	Power supply
Connected to terminal box 1~230V c.a.	Separate power supply 230V Δ	230SA
	Separate power supply 460V Y	460SA



## M7.6 China Compulsory Certification

**CCC**

Electric motors destined for sale in the People's Republic of China have to be certified under the CCC (China Compulsory Certification) system. BN motors of up to 7 Nm in rated torque are available with CCC certification and a special nameplate bearing the mark shown below:



CCC option is not currently available for IE3 motors.  
CCC option is not currently available for servo - ventilated motors.

## M7.7 Insulation class

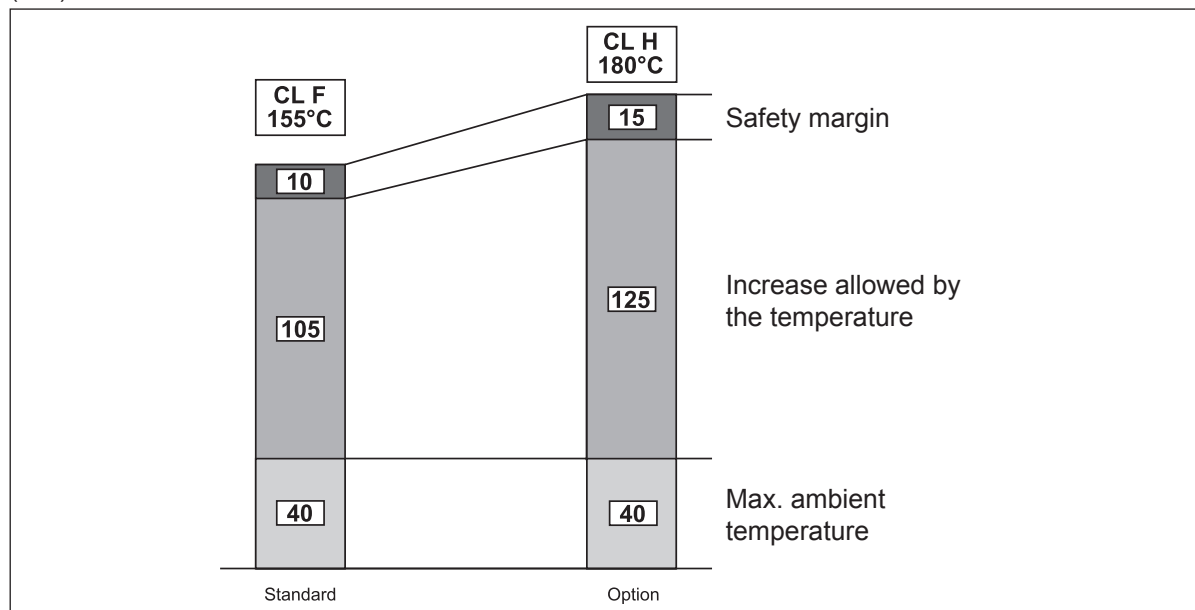
**CL F**

Bonfiglioli motors use class **F** insulating materials (enamelled wire, insulators, impregnation resins) as compare to the standard motor. In standard motors, stator windings over temperature normally stays below the 80 K limit corresponding to class B over temperature. A careful selection of insulating components makes the motors compatible with tropical climates and normal vibration. For applications involving the presence of aggressive chemicals or high humidity, contact Bonfiglioli Engineering for assistance with product selection.

**CL H**

Motors manufactured in insulation class **H** are available at request.  
Not available for motors in compliance with CSA e UL standards (CUS option).

(F20)







## M7.8 Type of duty

Unless otherwise specified, catalogue motor power refers to continuous duty S1. Any operating conditions other than S1 duty must be identified in accordance with duty cycle definitions laid down in standards CEI EN 60034-1. For duty cycles S2 and S3, the power increase co-efficient reported in the following table may be used. Please note that the table provided below applies to single-speed motors. As an alternative to S1 continuous duty, one of the following values can be specified at the product configuration stage (single speed motors only): S2, S3 or S9. The motor nameplate will be marked with an increased power rating to suit the type of duty, and with specific electrical data and a duty type of S2-30 min, S3-70% or S9 respectively. For further details, contact Bonfiglioli's Technical Service. Please contact Bonfiglioli Engineering for the power increase coefficients applicable to switch-pole motors.

(F21)

	Type of duty						Contact us
	S2			S3 *			
	Duration (min)			Intermittence (I)			
	10	30 (*)	60	25%	40%	70% (*)	
$f_m$	1.35	1.15	1.05	1.25	1.15	1.1	

\* Cycle duration must, in any event, be equal to or less than 10 minutes; if this time is exceeded, please contact our Technical Service.

(\*) Default values from options (tab. F05).

### M7.8.1 Cyclic duration factor:

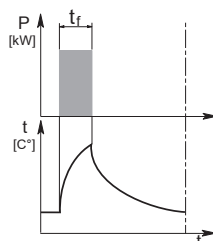
$$I = \frac{t_f}{t_f + t_r} \cdot 100 \quad (01)$$

$t_f$  = work time under constant load

$t_r$  = rest time

### M7.8.2 Limited duration duty S2

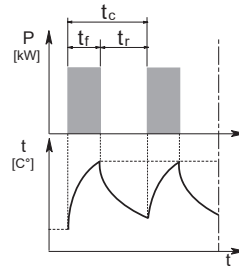
This type of duty is characterized by operation at constant load for a limited time, which is shorter than the time required to reach thermal equilibrium, followed by a rest period of sufficient duration to restore ambient temperature in the motor.



### M7.8.3 Periodical intermittent duty S3:

This type of duty is characterized by a sequence of identical operation cycles, each including a constant load operation period and a rest period.

For this type of duty, the starting current does not significantly influence overtemperature.

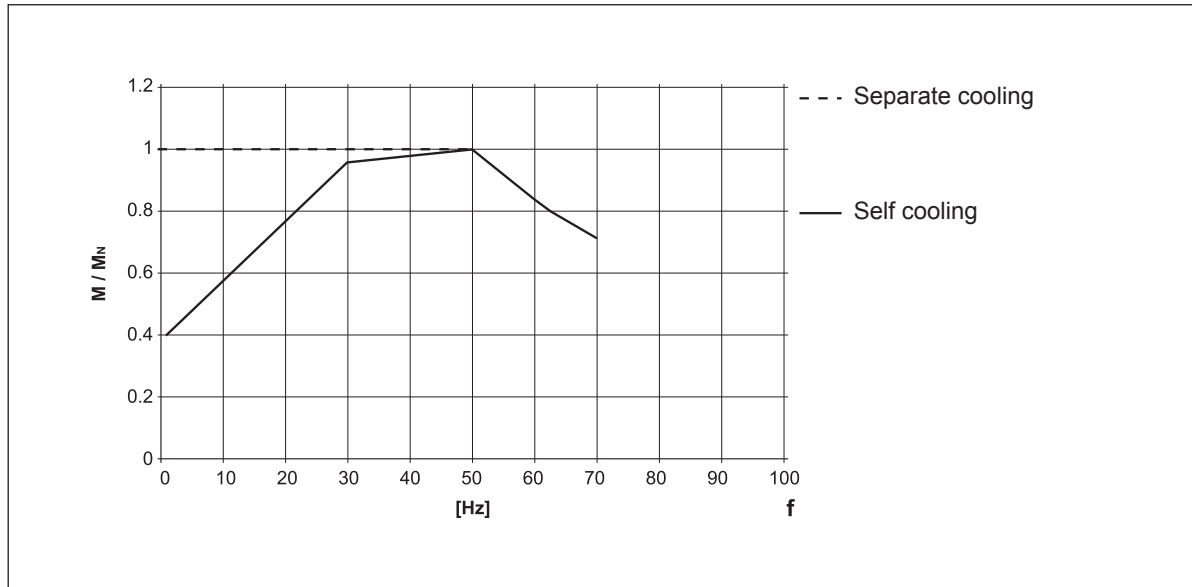


### M7.9 Inverter-controlled motors

The electric motors Bonfiglioli may be used in combination with PWM inverters with rated voltage at transformer input up to 500 V. Standard motors use a phase insulating system with separators, class 2 enamelled wire and class H impregnation resins (1600V peak-to-peak voltage pulse capacity and rise edge  $t_s > 0.1\mu s$  at motor terminals). Typical torque/speed curves referred to S1 duty for motors with base frequency  $f_b = 50$  Hz is reported in the table below. Because ventilation is somewhat impaired in operation at lower frequencies (about 30 Hz), standard motors with incorporated fan (IC411) require adequate torque derating or - alternately - the addition of a separate supply fan cooling.

Above base frequency, upon reaching the maximum output voltage of the inverter, the motor enters a steady-power field of operation, and shaft torque drops with ratio  $(f/f_b)$ . As motor maximum torque decreases with  $(f/f_b)^2$ , the allowed overloading must be reduced progressively.

(F22)



The following table reports the mechanical speed limit for motors operating above rated frequency:

(F23)

		n [min <sup>-1</sup> ]		
		2p	4p	6p
≤ BE 112 - BN 112	ME2, ME3 M05 ... M3	5200	4000	3000
≥ BE 132 - BN 132	ME4, ME5 M4, M5	4500	4000	3000
BX 80 ... BX 180	MX2 ... MX5		4000	



Above rated speed, motors generate increased mechanical vibration and fan noise. Class B rotor balancing is highly recommended in these applications. Installing a separate supply fan cooling may also be advisable. Remote-controlled fan and brake (if fitted) must always be connected direct to mains power supply.

### M7.10 Permissible starts per hour, Z

The rating charts of brakemotors lend the permitted number of starts  $Z_0$ , based on 50% intermittence and for unloaded operation. The catalogue value represents the maximum number of starts per hour for the motor without exceeding the rated temperature for the insulation class F.

To give a practical example for an application characterized by inertia  $J_c$ , drawing power  $P_r$  and requiring mean torque at start-up  $M_L$  the actual number of starts per hour for the motor can be calculated approximately through the following equation:

$$Z = \frac{Z_0 \cdot K_c \cdot K_d}{K_J} \quad (02)$$

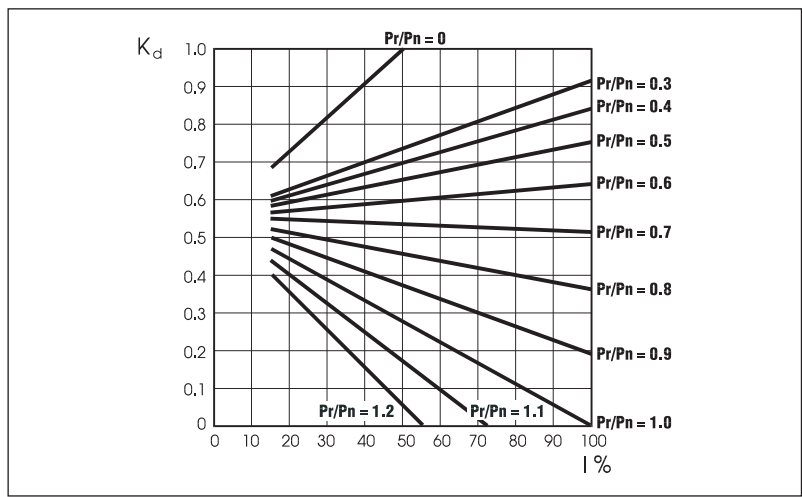
where:

$$K_J = \frac{J_m + J_c}{J_m} \quad \text{inertia factor}$$

$$K_c = \frac{M_a - M_L}{M_a} \quad \text{torque factor}$$

$$K_d = \quad \text{load factor, see the following table}$$

(F24)



If actual starts per hour is within permitted value (Z) it may be worth checking that braking work is compatible with brake (thermal) capacity  $W_{max}$  also given in tables (F31), (F39) and dependent on the number of switches (c/h).

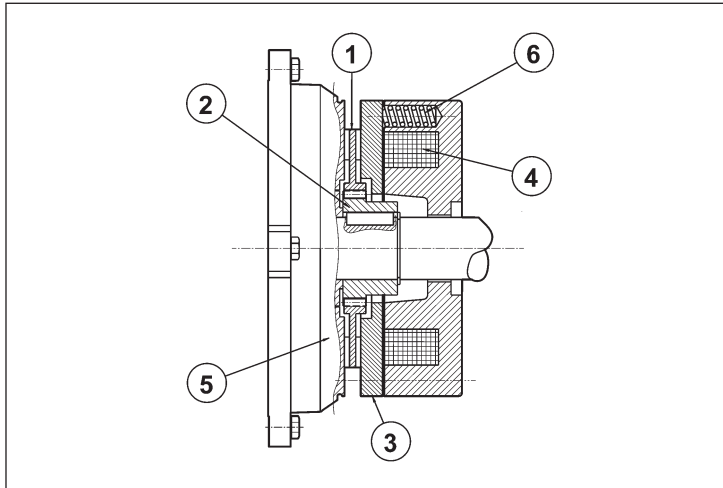


## M8 ASYNCHRONOUS BRAKE MOTORS

### M8.1 Operation

Versions with incorporated brake use spring-applied DC (FD option) or AC (FA options) brakes. All brakes are designed to provide fail-safe operation, meaning that they are applied by spring-action in the event of power failure.

(F25)



Key:

- ① brake disc
- ② disc carrier
- ③ pressure plate
- ④ brake coil
- ⑤ motor rear shield
- ⑥ brake springs

When voltage is interrupted, pressure springs push the armature plate against the brake disc. The disc becomes trapped between the armature plate and motor shield and stops the shaft from rotation.

When the coil is energized, a magnetic field strong enough to overcome spring action attracts the armature plate, so that the brake disc – which is integral with the motor shaft – is released.

### M8.2 Most significant features

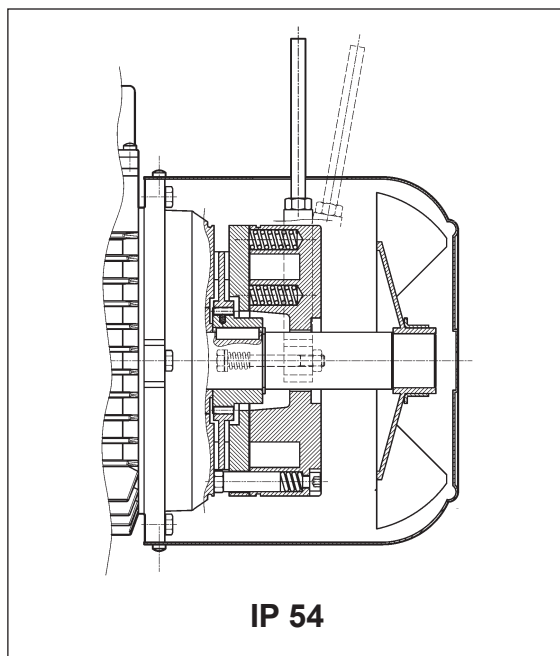
- High braking torques (normally  $M_b \approx 2 M_n$ ), braking torque adjustment.
- Steel brake disc with double friction lining (low-wear, asbestos-free lining).
- Hexagonal seat on motor shaft fan end (N.D.E.) for manual rotation (not compatible with options PS, RC, TC, U1, U2, EN1, EN2, EN3, EN4, EN5, EN6).
- Manual release lever (options **R** and **RM** for FD; option **R** for FA).
- Corrosion-proof treatment on all brake surfaces.
- Insulation class F.



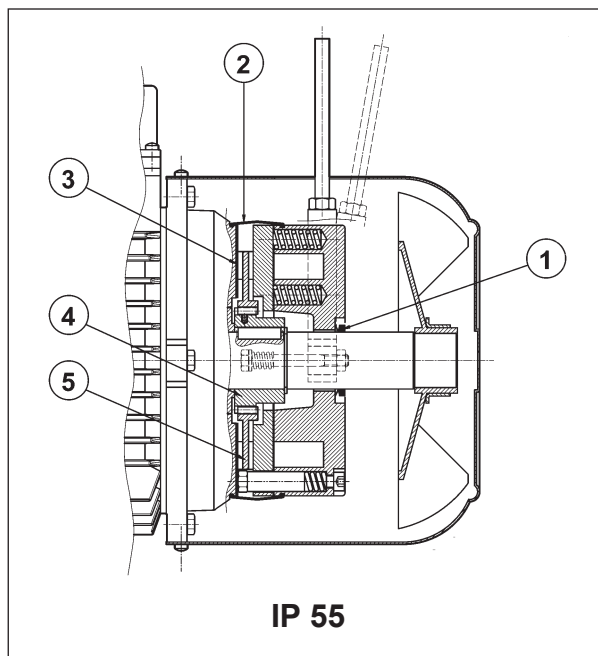
## M9 DC BRAKE MOTORS TYPE BX\_FD, BN\_FD, MX\_FD and M\_FD

Frame sizes: BX 80 ... BX 180L - BN 63 ... BN 200L / MX2SB ... MX5LA - M05 ... M5  
BE/ME motors may be available equipped with the FD brake, for further information please contact our Technical Department.

(F26)



(F27)



**Direct current** toroidal-coil electromagnetic brake bolted onto motor shield. Preloading springs provide axial positioning of magnet body.

Brake disc slides axially on steel hub shrunk onto motor shaft with anti-vibration device.

Brake torque factory setting is indicated in the corresponding motor rating charts. Braking torque may be modified by changing the type and/or number of springs.

At request, motors may be equipped with manual release lever with automatic return (**R**) or system for holding brake in the released position (**RM**).

See variant at paragraph "BRAKE RELEASE SYSTEMS" for available release lever locations.

FD brakes ensure excellent dynamic performance with low noise. DC brake operating characteristics may be optimized to meet application requirements by choosing from the various rectifier/power supply and wiring connection options available.

**For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli's Technical Service.**

### M9.1 Degree of protection

Standard protection class is IP54.

Brake motor FD is also available in protection class **IP55**, which mandates the following variants:

- ① V-ring at N.D.E. of motor shaft
- ② dust and water-proof rubber boot
- ③ stainless steel ring placed between motor shield and brake disc
- ④ stainless steel hub
- ⑤ stainless steel brake disc



## M9.2 FD brake power supply

A rectifier accommodated inside the terminal box feeds the DC brake coil. Wiring connection across rectifier and brake coil is performed at the factory. On all single-pole motors, rectifier is connected to the motor terminal board.

Rectifier standard power supply voltage  $V_B$  is as indicated in the following table, regardless of mains frequency:

2, 4, 6 P				1 speed	
		<b>BN_FD / M_FD</b> $V_{mot} \pm 10\%$ 3 ~		brake connected to terminal board power supply	separate power supply
<b>BX 80...BX 132</b> <b>BN 63...BN 132</b>	<b>MX2...MX4</b> <b>M05...M4LB</b>	230/400 V – 50 Hz	230 V	standard	specify $V_B$ SA o $V_B$ SD
<b>BX 160...BX 180</b> <b>BN 160...BN 200</b>	<b>MX5</b> <b>M4LC...M5</b>	400/690 V – 50 Hz	400 V	standard	specify $V_B$ SA o $V_B$ SD

Switch-pole motors feature a separate power supply line for the brake with rectifier input voltage  $V_B$  as indicated in the table below:

(F29)

2/4, 2/6, 2/8, 2/12, 4/6, 4/8 P				2 speed	
		<b>BN_FD / M_FD</b> $V_{mot} \pm 10\%$ 3 ~		brake connected to terminal board power supply	separate power supply
<b>BN 63...BN 132</b>	<b>M05...M4LB</b>	400 V – 50 Hz	230 V		specify $V_B$ SA o $V_B$ SD

The diode half-wave rectifier ( $V_{DC} \approx 0,45 \times V_{AC}$ ) is available in versions **NB**, **SB**, **NBR** e **SBR**, as detailed in the table below:

(F30)

		brake	standard	on request
<b>BN 63</b>	<b>M05</b>	<b>FD 02</b>		
<b>BN 71</b>	<b>M1</b>	<b>FD 03</b> <b>FD 53</b>		
<b>BX 80 - BN 80</b>	<b>MX2 - M2</b>	<b>FD 04</b>		
<b>BX 90S - BN 90S</b>	—	<b>FD 14</b>		
<b>BX 90L - BN 90L</b>	—	<b>FD 05</b>		
<b>BX 100 - BN 100</b>	<b>MX3 - M3</b>	<b>FD 15</b>		
—	—	<b>FD 55</b>		
<b>BX 112 - BN 112</b>	—	<b>FD 06S</b>		
<b>BX 132 - BN 132 - BN 160MR</b>	<b>MX4 - M4</b>	<b>FD 56</b> <b>FD 06</b> <b>FD 07</b>		
<b>BX 160 - BN 160L - BN 180M</b>	<b>MX5 - M5</b>	<b>FD 08</b>		
<b>BX 180 - BN 180L - BN 200M</b>	—	<b>FD 09</b>		

(\*)  $t_{2c} < t_{2r} < t_2$



Rectifier **SB** with electronic energizing control over-energizes the electromagnet upon power-up to cut brake release response time and then switches to normal half-wave operation once the brake has been released.

Use of the **SB** rectifier is mandatory in the event of:

- high number of operations per hour
- reduced brake release response time
- brake is exposed to extreme thermal stress

Rectifiers **NBR** or **SBR** are available for applications requiring quick brake intervention (braking condition reinstatement) response.

These rectifiers complement the **NB** and **SB** types as their electronic circuit incorporates a static switch that de-energizes the brake quickly in the event voltage is missing.

This arrangement ensures short brake release response time with no need for additional external wiring and contacts.

Optimum performance of rectifiers **NBR** and **SBR** is achieved with separate brake power supply.

**Versions available: 230Vac ±10%, 400Vac ± 10%, 50/60 Hz (with power supply); 100Vdc ±10%, 180Vdc ± 10% (with SD option).**

### M9.3 FD brake technical specifications

The table below reports the technical specifications of DC brakes FD.

(F31)

Brake	Brake torque $M_b$ [Nm]			Release		Braking		$W_{max}$ per brake operation			W	P
	springs			$t_1$	$t_{1s}$	$t_2$	$t_{2c}$	[ J ]				
	6	4	2	[ms]	[ms]	[ms]	[ms]	10 s/h	100 s/h	1000 s/h		
FD02	–	3.5	1.75	30	15	80	9	4500	1400	180	15	17
FD03	5	3.5	1.75	50	20	100	12	7000	1900	230	25	24
FD53	7.5	5	2.5	60	30	100	12					
FD04	15	10	5	80	35	140	15	10000	3100	350	30	33
FD14												
FD05	40	26	13	130	65	170	20	18000	4500	500	50	45
FD15	40	26	13	130	65	170	20					
FD55	55	37	18	–	65	170	20					
FD06S	60	40	20	–	80	220	25	20000	4800	550	70	55
FD56	–	75	37	–	90	250	20	29000	7400	800	80	65
FD06		100	50		100	250	20					
FD07	150	100	50	–	120	200	25	40000	9300	1000	130	65
FD08*	250	200	170	–	140	350	30	60000	14000	1500	230	100
FD09**	400	300	200	–	200	450	40	70000	15000	1700	230	120

\* brake torque values obtained with 9, 7 and 6 springs, respectively

\*\* brake torque values obtained with 12, 9 and 6 springs, respectively

$t_1$  = brake release time with half-wave rectifier

$t_{1s}$  = brake release time with over-energizing rectifier

$t_2$  = brake engagement time with AC line interruption and separate power supply

$t_{2c}$  = brake engagement time with AC and DC line interruption – Values for  $t_1$ ,  $t_{1s}$ ,  $t_2$ ,  $t_{2c}$  indicated in the tab. (F30) are referred to brake set at maximum torque, medium air gap and rated voltage

$W_{max}$  = max energy per brake operation

W = braking energy between two successive air gap adjustments

$P_b$  = brake power absorption at 20 °C

$M_b$  = static braking torque (±15%)

s/h = starts per hour



The brake pad wear depends on the operating/ambient conditions (temperature, humidity, angular speed, specific pressure); Therefore the declared wear rate must be considered as indicative.

#### M9.4 FD brake connections

On standard single-pole motors, the rectifier is connected to the motor terminal board at the factory. For switch-pole motors and where a separate brake power supply is required, connection to rectifier must comply with brake voltage VB stated in motor name plate.

**Because the load is of the inductive type, brake control and DC line interruption must use contacts from the usage class AC-3 to IEC 60947-4-1.**

Table (F32) – Brake power supply from motor terminals and AC line interruption  
Delayed stop time  $t_2$  and function of motor time constants.

Mandatory when soft-start/stops are required.

Table (F33) – Brake coil with separate power supply and AC line interruption

Normal stop time independent of motor.

Achieved stop times  $t_2$  are indicated in the table (F31).

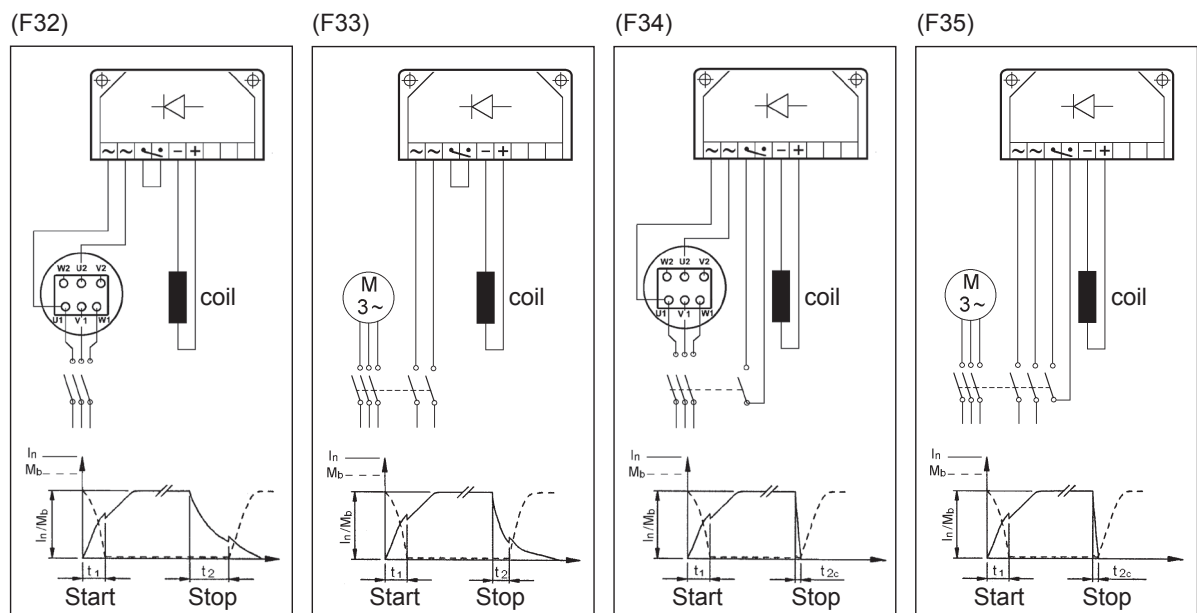
Table (F34) – Brake coil power supply from motor terminals and AC/DC line interruption.

Quick stop with operation times  $t_{2c}$  as per table (F31).

Table (F35) – Brake coil with separate power supply and AC/DC line interruption.

Stop time decreases by values  $t_{2c}$  indicated in the table (F31).

The brake may be voltage supplied directly from the motor terminal box (from tab. F32 to tab. F35) only if the nominal voltage of the brake is the same as the smaller voltage of the motor.



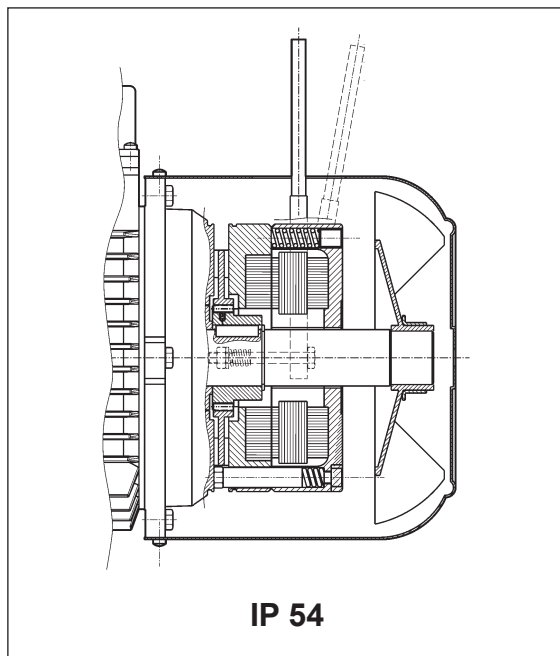




## M10 AC BRAKE MOTORS TYPE BX\_FA, BN\_FA, MX\_FA and M\_FA

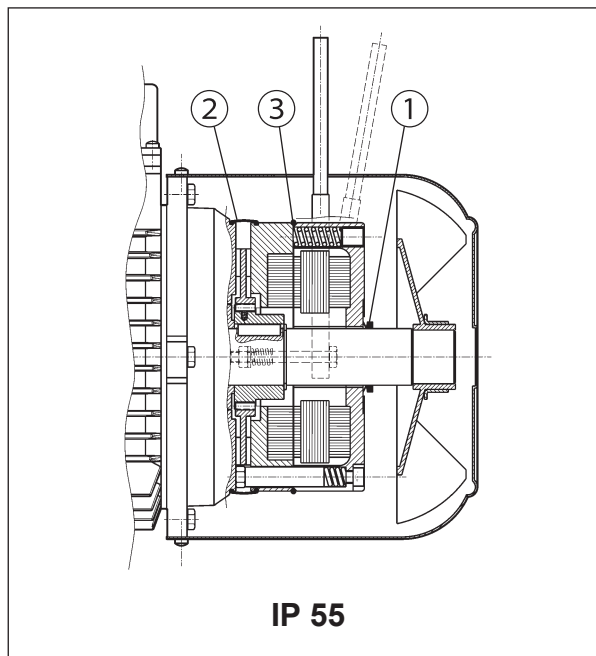
Frame sizes: BX 80 ... BX 160L - BN 63 ... BN 180M / MX2SB ... MX5LA - M05 ... M5

(F36)



IP 54

(F37)



IP 55

Electromagnetic brake operates from three-phase alternated current power supply and is bolted onto conveyor shield. Preloading springs provide axial positioning of magnet body. Steel brake disc slides axially on steel hub shrunk onto motor shaft with anti-vibration device. Brake torque factory setting is indicated in the corresponding motor rating charts. Spring preloading screws provide stepless braking torque adjustment. Torque adjustment range is  $30\% M_{bMAX} < M_b < M_{bMAX}$  (where  $M_{bMAX}$  is maximum braking torque as shown in tab. (F39).

Thanks to their high dynamic characteristics, FA brakes are ideal for heavy-duty applications as well as applications requiring frequent stop/starts and very fast response time.

Motors may be equipped with manual release lever with automatic return (R) at request. See variant at paragraph "BRAKE RELEASE SYSTEMS" for available release lever locations.

**For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli's Technical Service.**

### M10.1 Degree of protection

Standard protection class is IP54.

Brake motor FA is also available in protection class **IP55**, which mandates the following variants:

- ① V-ring at N.D.E. of motor shaft
- ② dust and water-proof rubber boot
- ③ O-ring



## M10.2 FA brake power supply

In single speed motors, power supply is brought to the brake coil direct from the motor terminal box. As a result, brake voltage and motor voltage are the same. In this case, brake voltage indication may be omitted in the designation.

Switch-pole motors and motors with separate brake power supply feature an auxiliary terminal board with 6 terminals for connection to brake line. In both cases, brake voltage indication in the designation is mandatory.

The following table reports standard AC brake power supply ratings for single- and switch-pole motors:

(F38)

single-pole motor	BX 80...BX 132 BN 63...BN 132	BX 160 BN 160...BN 180
	230Δ / 400Y V ±10% – 50 Hz	400Δ/ 690Y V ±10% – 50 Hz
	265Δ / 460Y ±10% - 60 Hz	460Y – 60 Hz

switch-pole motors (separate power supply line)	BN 63...BN 132
	230Δ / 400Y V ±10% – 50 Hz
	460Y - 60 Hz

Unless otherwise specified, standard brake power supply is 230Δ /400Y V - 50 Hz.

Special voltages in the 24...690 V, 50-60 Hz range are available at request.

## M10.3 Technical specifications of FA brakes

(F39)

Brake	Brake torque $M_b$ [Nm]	Release $t_1$ [ms]	Braking $t_2$ [ms]	$W_{max}$ [ J ]			W [MJ]	P [VA]
				10 s/h	100 s/h	1000 s/h		
FA 02	3.5	4	20	4500	1400	180	15	60
FA 03	7.5	4	40	7000	1900	230	25	80
FA 04	15	6	60	10000	3100	350	30	110
FA 14								
FA 05	40	8	90	18000	4500	500	50	250
FA 15								
FA 06S	60	16	120	20000	4800	550	70	470
FA 06	75	16	140	29000	7400	800	80	550
FA 07	150	16	180	40000	9300	1000	130	600
FA 08	250	20	200	60000	14000	1500	230	1200

- $M_b$  = max static braking torque ( $\pm 15\%$ )  
 $t_1$  = brake release time  
 $t_2$  = brake engagement time  
 $W_{max}$  = max energy per brake operation (brake thermal capacity)  
W = braking energy between two successive air gap adjustments  
 $P_b$  = power drawn by brake at 20° (50 Hz)  
s/h = starts per hour

NOTE  
Values  $t_1$  and  $t_2$  in the table refer to a brake set at rated torque, medium air gap and rated voltage.

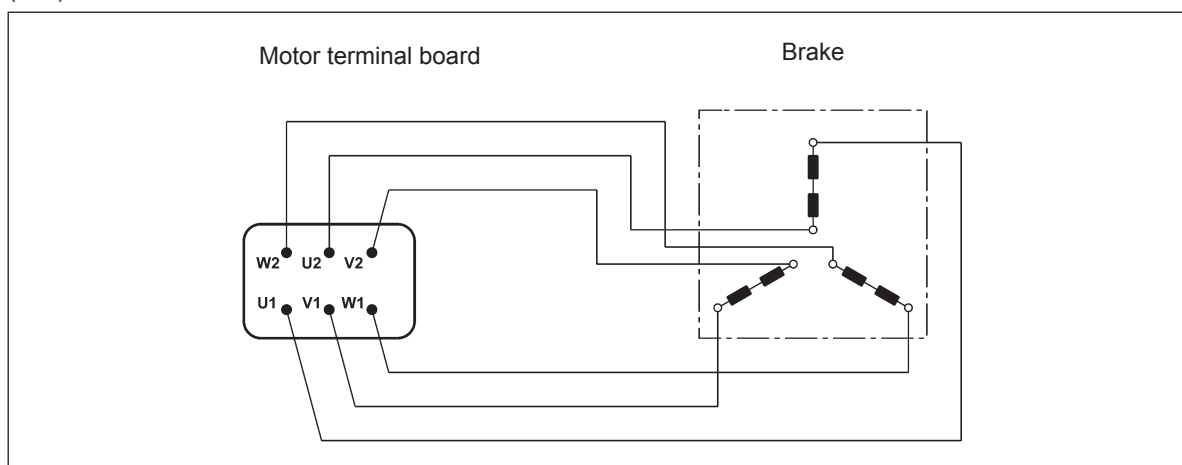


The brake pad wear depends on the operating/ambient conditions (temperature, humidity, angular speed, specific pressure); Therefore the declared wear rate must be considered as indicative.

#### M10.4 FA brake connections

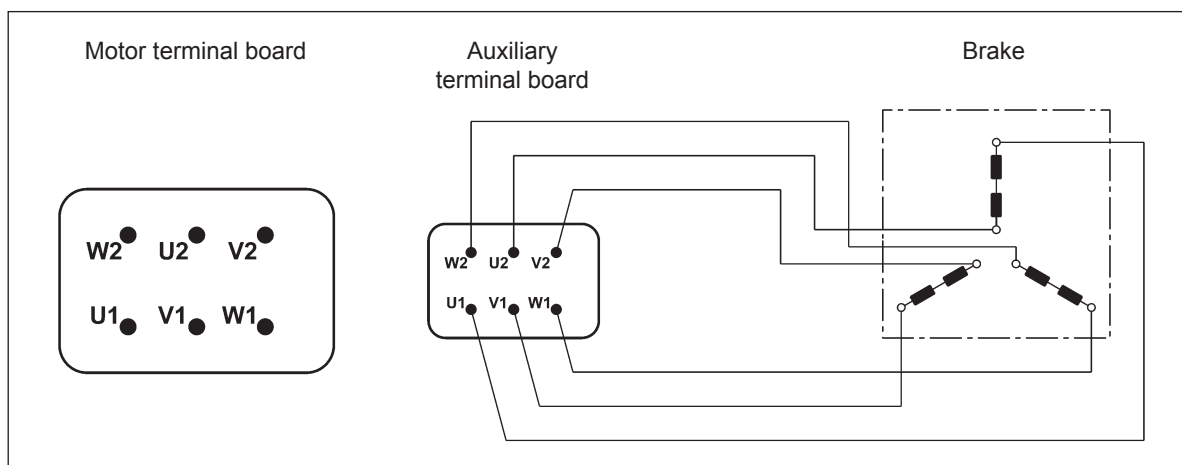
The diagram below shows the wiring when brake is connected directly to same power supply of the motor:

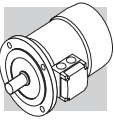
(F40)



Switch-pole motors and, at request, single-pole motors with separate power supply are equipped with an auxiliary terminal board with 6 terminals for brake connection. In this version, motors feature a larger terminal box. See diagram below:

(F41)



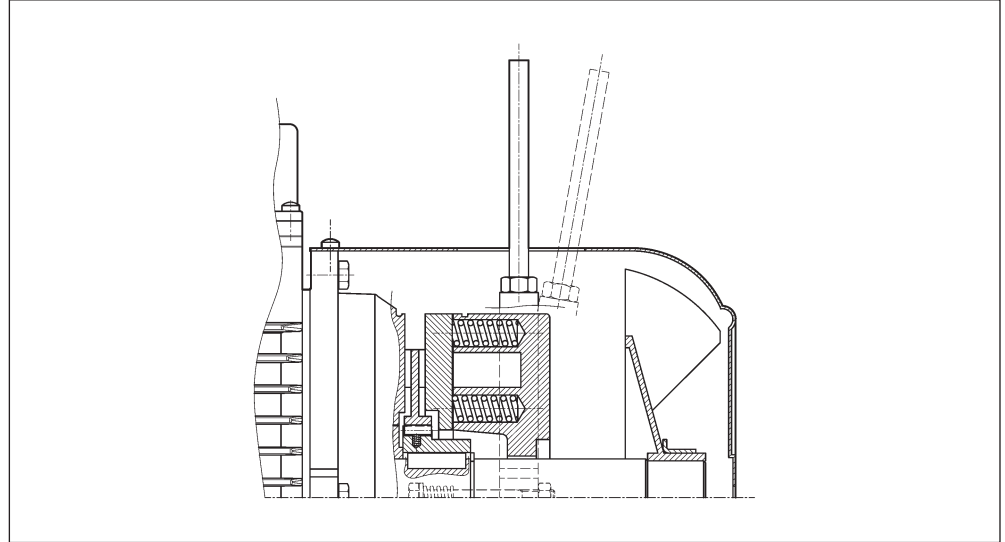


## M11 BRAKE RELEASE SYSTEMS

Spring-applied brakes type FD and FA may be equipped with optional manual release devices. These are typically used for manually releasing the brake before servicing any machine or plant parts operated by the motor.

**R**

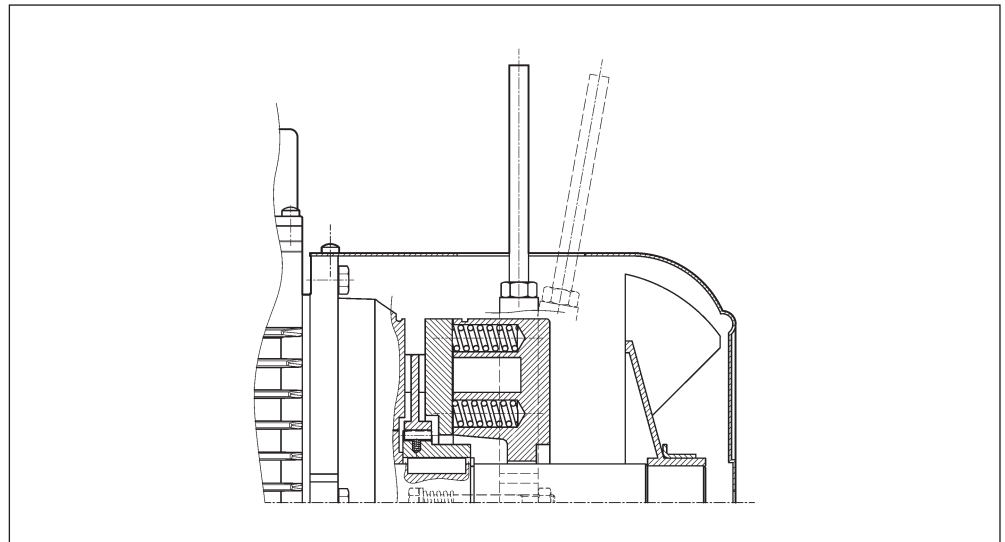
(F42)



A return spring brings the release lever back in the original position.

**RM**

(F43)



On brake motors type FD, if the option RM is specified, the release device may be locked in the "release" position by tightening the lever until its end becomes engaged with a brake housing projection.

The availability for the various disengagement devices is charted here below:



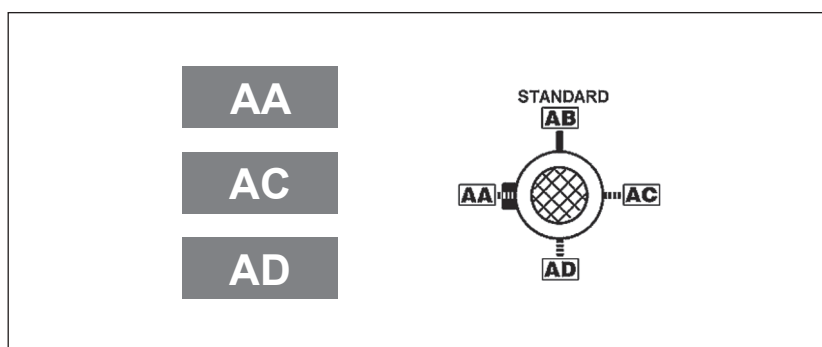
(F44)

	R	RM
BX_FD	BX 80 ... BX 180	BX 80 ... BX 132
BN_FD	BN 63 ... BN 200	BN 63 ... BN 132 FD07
MX_FD	MX2 ... MX5	MX2 ... MX4
M_FD	M05 ... M5	M05 ... M4LA
BX_FA	BX 80 ... BX 160	⊖
BN_FA	BN 63 ... BN 180M	⊖
MX_FA	MX2 ... MX5	⊖
M_FA	M05 ... M5	⊖

### M11.1 Release lever orientation

Unless otherwise specified, the release lever is located 90° away from the terminal box – identified by letters [AB] in the diagram below – in a clockwise direction on both options **R** and **RM**. Alternative lever positions [AA], [AC] and [AD] are also possible when the corresponding option is specified:

(F45)



### M11.2 Separate brake supply

**...SA**

The brake coil is directly fed through an independent line, separately from the motor. In this case the rated voltage for the coil must be specified, e.g. 230SA. The option is applicable to all motors with brake type FD and FA.

**...SD**

The brake coil is directly fed with DC current and the rectifier is out of the scope for supply. The rated voltage for the coil must be specified, e.g. 24SD.





## M12 OPTIONS

### M12.1 Soft-start / stop

#### F1

An optional flywheel - option F1 - is available for applications requiring soft starting or stopping. The flywheel's added inertia uses up kinetic energy during starting and returns it back during braking, thus catering for more progressive and gradual shock loads. The optional flywheel is available for brake motors type BN\_FD with specific characteristics as detailed in the table below:

(F46)

Main data for flywheel of motore type: BN_FD, M_FD			
		Fly-wheel weight [Kg]	Fly-wheel inertia [Kgm <sup>2</sup> ]
BN 63	M05	0.69	0.00063
BN 71	M1	1.13	0.00135
BN 80	M2	1.67	0.00270
BN 90 S - BN 90 L	–	2.51	0.00530
BN 100	M3	3.48	0.00840
BN 112	–	4.82	0.01483
BN 132 S - BN 132 M	M4	6.19	0.02580

### M12.2 Capacitive filter

#### CF

An optional capacitive filter is available for brake motors type FD only. When the suitable capacitive filter is installed upstream of the rectifier (option CF), motors comply with the emission limits required by standard EN61000-6-3:2007 Electromagnetic Compatibility Generic Emission Standard Part 6-3: Residential, commercial and light industrial environment.

### M12.3 Thermal protective devices

In addition to the standard protection provided by the magneto-thermal device, motors can be supplied with built-in thermal probes to protect the winding against overheating caused, by insufficient ventilation or by an intermittent duty.

This additional protection should always be specified for servoventilated motors (IC416).

### M12.4 Thermistors

#### E3

These are semi-conductors having rapid resistance variation when they are close to the rated switch off temperature (150 °C). Variations of the  $R = f(T)$  characteristic are specified under DIN 44081, IEC 34-11 Standards. Positive temperature coefficient thermistors are normally used (also known as PTC "cold conductor resistors"). Thermistors cannot control relays directly and must be connected to a suitable disconnect device. Thus protected, three PTCs connected in series are installed in the winding, the terminals of which are located on the auxiliary terminal-board.



## K1

The design characteristics of this sub-group of PTC thermistors allow them to be used as positive temperature coefficient sensors with variable resistance.

Functioning temperature range: 0°C ... +260°C.

Thermistors cannot control relays directly and must be connected to a suitable disconnect device.

Terminals (polarised) for 1 x KTY 84-130 are provided on an auxiliary terminal strip.

### M12.5 Bimetallic thermostates

## D3

These types of protective devices house a bimetal disk. When the rated switch off temperature (150 °C) is reached, the disk switches the contacts from their initial rest position.

As temperature falls, the disk and the contacts automatically return to rest position.

Three bimetallic thermostates connected in series are usually employed, with normally closed contacts. The terminals are located on an auxiliary terminal-board.

### M12.6 Plug connector

## CON

Three types of connectors (CON 1, CON 2, CON 3) are provided; they can be mounted in two different positions: right side of terminal box cover (C1D, C2D, C3D); left side of terminal box cover (C1S, C2S, C3S).

The option CON is applicable to single speed BN and M motors (2, 4, 6, 8 poles), and BX / BE and MX / ME motors on the sizes specified on the following table. All double speed motors are excluded.

The connectors CON 1 / CON 2 are available for BX-BE/MX-ME and BN/M motors without brake and for brakemotors equipped with DC brake type FD, for the motor sizes listed below.

**The male connector (with pins) is mounted on the motor, the female connector is not provided.**

**With CON option, the winding connection is always Y.**

With option U1 forced ventilation, the fan unit supply is available inside the separate terminal box fixed to fan cover.

With options EN1...EN6, the encoder connection is made by a cable not connected to the motor plug connector.

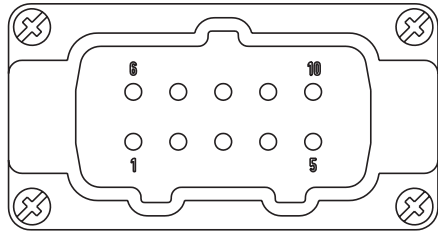
The CON option is not applicable to brakemotors equipped with AC brake type FA.

The CON option is not available when at least one of the next options are selected: the U2, CUS, IC.

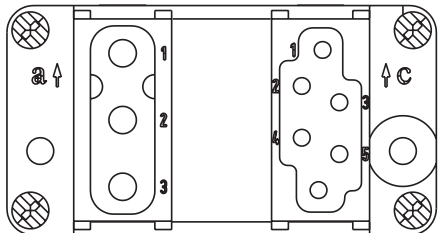


## Specifications

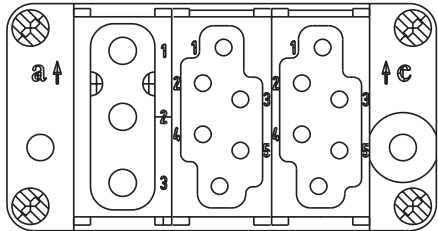
(F47)

Option	CON 1
Motor size	<b>BX 80 ... BX 112 / MX2, MX3 / BE 80 ... BE 112 / ME2, ME3 BN 63 ... BN 112 / M05 ... M3</b>
Connector view	
Type of connector	Harting Han 10ES
Housing	Han EMC 10B with 2 levers
Numbers of pins - nominal current	10 x 16A
Voltage	500 Vac
Contact connection	Screw terminals

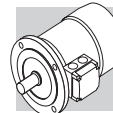
(F48)

Option	CON 2
Motor size	<b>BX 80 ... BX 132 / MX2, MX3 / BE 80 ... BE 132 / ME2 ... ME4 BN 63 ... BN 160MR / M05 ... M4</b>
Connector view	
Type of connector	Harting Han Modular
Housing	Han EMC 10B with 2 levers
Module type	Module C + Module E + Module E
Numbers of pins - nominal current	3 x 36A / 6 x 16A
Voltage	500 Vac
Contact connection	Crimping contacts

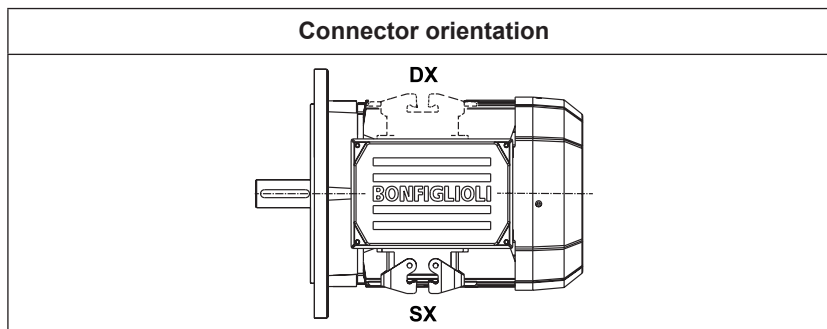
(F49)

Option	CON 3
Motor size	<b>BX 80 ... BX 132M / MX2, MX3 / BN 63 ... BN 160MR / M05 ... M4</b>
Connector view	
Type of connector	Harting Han Modular
Housing	Han EMC 10B with 2 levers
Module type	Module C + Module E + Module E
Numbers of pins - nominal current	3 x 36A / 6 + 6 x 16A
Voltage	500 Vac
Contact connection	Crimping contacts







(F50)

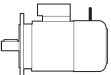
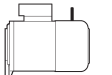


(F51)

Motors without brake dimensions						
		AD (mm)	AF (mm)	AH (mm)	LL (mm)	V <sup>(*)</sup> (mm)
						
<b>BN 63</b>	<b>M05</b>	136	110	45	165	4.5
<b>BN 71</b>	<b>M1</b>	149	110	45	165	15.5
<b>BX 80 - BE 80 - BN 80</b>	<b>MX2 - ME2 - M2</b>	160	110	45	165	16.5
<b>BX 90 - BE 90 - BN 90</b>	<b>MX3</b>	162	110	45	165	31.5
<b>BX 100 - BE 100 - BN 100</b>	<b>MX3 - ME3 - M3</b>	171	110	45	165	37.5
<b>BX 112 - BE 112 - BN 112</b>	<b>MX4</b>	186	110	45	165	39
<b>BX 132 - BE 132 - BN 132</b>	<b>MX4 - ME4 - M4</b>	210	140	45	188	45.5
<b>BN 160MR</b>	—	210	140	45	188	161

(\*) Dimension valid only for motors BX, BE and BN.

(F52)

Motors with FD brake dimensions						
		AD (mm)	AF (mm)	AH (mm)	LL (mm)	V <sup>(*)</sup> (mm)
						
<b>BN 63</b>	<b>M05</b>	136	110	45	165	4.5
<b>BN 71</b>	<b>M1</b>	149	110	45	165	1.5
<b>BX 80 - BN 80</b>	<b>MX2 - M2</b>	160	110	45	165	18.5
<b>BX 90 - BN 90</b>	—	162	110	45	165	39.5
<b>BX 100 - BN 100</b>	<b>MX3 - M3</b>	171	110	45	165	63.5
<b>BX 112 - BN 112</b>	—	186	110	45	165	75
<b>BX 132 - BN 132</b>	<b>MX4 - M4</b>	210	140	45	188	122
<b>BN 160MR</b>	—	210	140	45	188	161

(\*) Dimension valid only for motors BN and BX



## M12.7 Control of brake operation

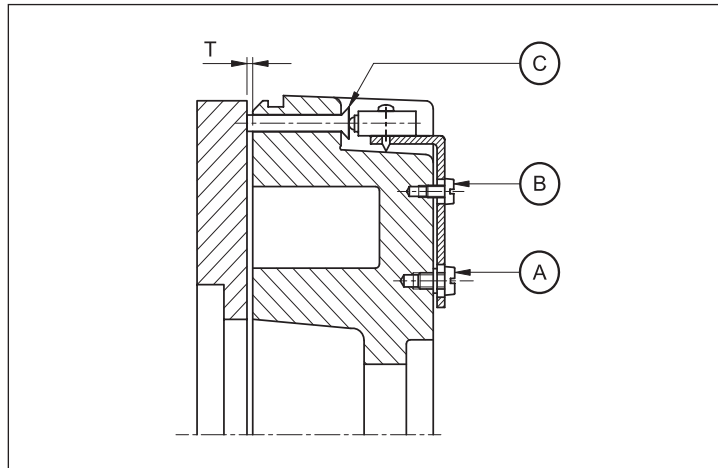
### MSW

The microswitch can be set in order to obtain from it a signal related to the attraction/release of anchor plate, or it can be set in order to give feedback when the air gap reaches the maximum value.

**MSW option is available for brakes FD03...FD09.**

The microswitch is provided with three lead wires (NC, NO, COM). The next figure shown the main components of the brake equipped with microswitch.

(F53)



- A: Plate fixing screws
- B: Setting screws
- C: Actuator control pin

## M12.8 Additional cable entry for brakemotors

### IC

The terminal box cover of brakemotors BX 80 ... BX 132 - BN 63...BN 160MR/ MX2...MX4 - M05...M4 is provided with two additional cable entry M16 x 1.5 (one cable entry per side).

The terminal box cover of brakemotors BX 160 ... BX 180 - BN 160...BN 200 / MX5 - M5 is provided with an additional cable entry M16 x 1.5 next to the cable entry used for the brake.

## M12.9 Anti-condensation heaters

### H1


### NH1

Where an application involves high humidity or extreme temperature fluctuation, motors may be equipped with an anti-condensate heater.

A single-phase power supply is available in the auxiliary terminal board inside the main terminal box. Values for the absorbed power are listed here below:



(F54)

	H1	NH1
	1~ 230V ± 10% P [W]	1~ 115V ± 10% P [W]
BX 80 BE 80 BN 56 ... BN 80	10	10
BX 90 ... BX 132 BE 90 ... BE 132MB BN 90 ... BN 160MR	25	25
BX 160, BX 180 BE 160, BE 180 BN 160, BN 200	50	50

**Warning!**

Always remove power supply to the anti-condensante heater before operating the motor.

**M12.10 Tropicalization**

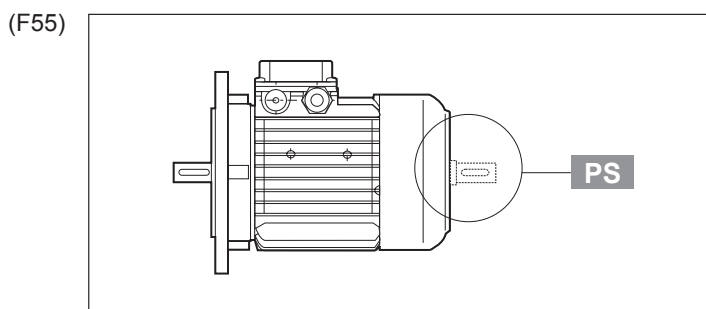
**TP**

When option **TP** is specified, motor windings receive additional protection for operation in high humidity and temperature conditions.

**M12.11 Second shaft extension**

**PS**

This option is not compatible with variants RC, TC, U1, U2, EN1, EN2, EN3, EN4, EN5, EN6. For shaft dimensions please see motor dimensions tables.




**M12.12 Backstop device**

**AL**   **AR**

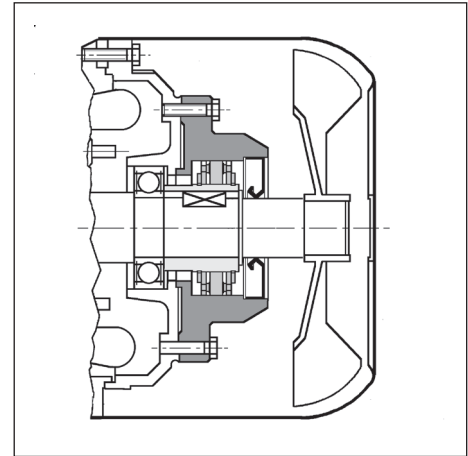
For applications where backdriving must be avoided, motors equipped with an anti run-back device can be used (available for the MX/ME and M series only). While allowing rotation in the direction required, this device operates instantaneously in case of a power failure, preventing the shaft from running back. The anti run-back device is life lubricated with special grease for this specific application. When ordering, customers should indicate the required rotation direction, AL or AR. Never use the anti run-back device to prevent reverse rotation caused by faulty electrical connection. Table (F56) shows rated and maximum locking torques for the anti run-back devices. A diagram of the device can be seen in Table (F57). Overall dimensis are same as the corresponding brake motor. The direction of free rotation is described in the “MOTOR OPTIONS” section of specifically dedicated sections to gear units.



(F56)

	Rated locking torque [Nm]	Max. locking torque [Nm]	Release speed [min <sup>-1</sup> ]
<b>M1</b>	6	10	750
<b>ME2 M2</b>	16	27	650
<b>ME3 M3</b>	54	92	520
<b>MX4 - ME4 M4</b>	110	205	430

(F57)



### M12.13 Rotor balancing

#### RV

Where low noise is a priority requirement, the option RV ensures reduced vibration in accordance with vibration class B.

The table below reports effective velocity of vibration for normal (A) and B grade balancing.

(F58)

Vibration level	Angular velocity n [min <sup>-1</sup> ]	Limits of the vibration velocity (mm/s) <b>BX 80 ≤ H ≤ BX 180L</b> <b>BE 80 ≤ H ≤ BE 180L</b> <b>BN 56 ≤ H ≤ BN 200</b>
<b>A</b>	600 < n < 3600	1.6
<b>B</b>	600 < n < 3600	0.70

Values are obtained from measurements on freely suspended motor during no-load operation; tolerance ±10%.

### M12.14 Ventilation

Motors are cooled through outer air blow (IC 411 according to CEI EN 60034-6) and are equipped with a plastic radial fan, which operates in both directions.

Ensure that fan cover is installed at a suitable distance from the closest wall so to allow air circulation and servicing of motor and brake, if fitted.

On request, motors can be supplied with independently power-supplied forced ventilation system starting from BN 71, M1, BE 80, ME2, BX 80 and MX2 size.

Motor is cooled by an axial fan with independent power supply and fitted on the fan cover (IC 416 cooling system).



This version is used in case of motor driven by inverter so that steady torque operation is possible even at low speed or when high starting frequencies are needed.

Brake motors of motors with rear shaft projection (PS option) are excluded.



This variant has two different models, called **U1** and **U2**, having the same longitudinal size. Longer side of fan cover (**DL**) is specified for both models in the table below. Overall dimension can be reckoned from motor size table.

(F59)

Extra length for servoventilated motors			
		$\Delta L_1$	$\Delta L_2$
<b>BN 71</b>	<b>M1</b>	93	32
<b>BX 80 - BE 80 - BN 80</b>	<b>MX2 - ME2 - M2</b>	127	55
<b>BX 90 - BE 90 - BN 90</b>	<b>MX3</b>	131	48
<b>BX 100 - BE 100 - BN 100</b>	<b>MX3 - ME3 - M3</b>	119	28
<b>BX 112 - BE 112 - BN 112</b>	<b>MX4</b>	130	31
<b>BX 132 - BE 132 - BN 132</b>	<b>MX4 - ME4 - M4</b>	161	51
<b>BX 160 - BE 160, BX 180 - BE 180</b>	<b>MX5 - ME5</b>	184	–

$\Delta L_1$  = extra length to LB value of corresponding standard motor.

$\Delta L_2$  = extra length to LB value of corresponding brake motor.  
Only for BN motors.

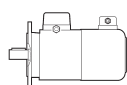
## U1



Fan wiring terminals are housed in a separate terminal box.

In brake motors of size BX 132 ... BX 160, BE 80 ... BE 160, MX 4 ... MX 5, ME 2 ... ME 5 - BN 71 ... BN 160MR, M1 ... M4L, with **U1** model, the release lever cannot be positioned to AA.

The option is not applicable to motors compliant with the CSA and UL norms (option CUS).

(F60)



		V a.c. $\pm 10\%$	Hz	P [W]	I [A]
<b>BN 71</b>	<b>M1</b>	1 ~ 230	50 / 60	22	0.12
<b>BX 80 - BE 80 BN 80</b>	<b>MX2 - ME2 M2</b>			22	0.12
<b>BX 90 - BE 90 BN 90</b>	<b>MX3</b>			40	0.30
<b>BX 100 - BE 100 BN 100</b>	<b>MX3 - ME3 M3</b>			50	0.25
<b>BX 112 - BE 112 BN 112</b>	<b>MX4</b>			50	0.26 / 0.15
<b>BX 132 - BE 132 BN 132 ... BN 160MR</b>	<b>MX4 - ME4 M4L</b>	3 ~ 230 $\Delta$ / 400Y	50	110	0.38 / 0.22
<b>BX 160 - BE 160 BN 160M ... BN 180M</b>	<b>MX5 - ME5 M5</b>			180	1.25 / 0.72
<b>BX 180 - BE 180 BN 180L ... BN 200L</b>	–			250	1.51 / 0.87

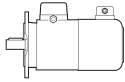




## U2

Fan terminals are wired in the motor terminal box.

The **U2** option does not apply to motors BX, BE, MX, ME and to motors with option CUS (compliant to norms CSA and UL).

(F61)



		V a.c. ±10%	Hz	P [W]	I [A]
<b>BN 71</b>	<b>M1</b>	1 ~ 230	50 / 60	22	0.12
<b>BN 80</b>	<b>M2</b>			22	0.12
<b>BN 90</b>	—			40	0.30
<b>BN 100</b>	<b>M3</b>	3 ~ 230Δ / 400Y		40	0.26 / 0.09
<b>BN 112</b>	—			50	0.26 / 0.15
<b>BN 132 ... BN 160MR</b>	<b>M4L</b>			110	0.38 / 0.22

### M12.15 Rain canopy



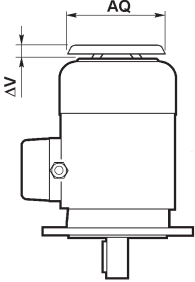
## RC

The rain canopy protects the motor from dripping and avoids the ingress of solid bodies. It is recommended when motor is installed in a vertical position with the shaft downwards.

Relevant dimensions are indicated in the table below.

The drip cover is not compatible with variants PS, EN1, EN2, EN3, EN4, EN5, EN6.

(F62)

		AQ	ΔV	
<b>BN 63</b>	<b>M05</b>	118	24	
<b>BN 71</b>	<b>M1</b>	134	27	
<b>BX 80 - BE 80</b> <b>BN 80</b>	<b>MX2 - ME2</b> <b>M2</b>	152	25	
<b>BX 90 - BE 90</b> <b>BN 90</b>	<b>MX3</b>	168	30	
<b>BX 100 - BE 100</b> <b>BN 100</b>	<b>MX3 - ME3</b> <b>M3</b>	190	28	
<b>BX 112 - BE 112</b> <b>BN 112</b>	<b>MX4</b>	211	32	
<b>BX 132 - BE 132</b> <b>BN 132...BN 160MR</b>	<b>MX4 - ME4</b> <b>M4</b>	254	32	
<b>BX 160 - BE 160</b> <b>BN 160M...BN 180M</b>	<b>MX5 - ME5</b> <b>M5</b>	302	36	
<b>BX 180 - BE 180</b> <b>BN 180L...BN 200L</b>	—	340	36	



## M12.16 Textile canopy

### TC

Option TC is a cover variant for textile industry environments, where lint may obstruct the fan grid and prevent a regular flow of cooling air.

This option is not compatible with variants EN1, EN2, EN3, EN4, EN5, EN6, PS, U1, U2.

Overall dimensions are the same as drip cover type RC.

TC option is not available for BX motors.

## M12.17 Feedback units

Motors may be combined with six different types of encoders to achieve feedback circuits.

Configurations with double-extended shaft (PS) and rain canopy (RC, TC) are not compatible with encoder installation.

### EN1

Incremental encoder,  $V_{IN} = 5$  V, line-driver output RS 422.

### EN2

Incremental encoder,  $V_{IN} = 10-30$  V, line-driver output RS 422.

### EN3

Incremental encoder,  $V_{IN} = 12-30$  V, push-pull output 12-30 V

### EN4

Encoder sin/cos,  $V_{IN} = 4.5-5.5$  V, output Sinus  $0.5V_{PP}$ .

### EN5

Absolute encoder singleturn, HIPERFACE® interface,  $V_{IN} = 7-12$  V.

### EN6

Absolute encoder multiturn, HIPERFACE® interface,  $V_{IN} = 7-12$  V.

(F63)

	EN1	EN2	EN3	EN4	EN5	EN6
Interface	TTL/RS 422	TTL/RS 422	HTL/push-pull	Sinus 0.5 V <sub>PP</sub>	HIPERFACE®	HIPERFACE®
Power supply voltage [V]	4...6	10...30	12...30	4.4...5.5	7...12	7...12
Output voltage [V]	5	5	12...30	—	—	—
No-load operating current [mA]	120	100	100	40	80	80
No. of pulses per revolution	1024					
Steps per revolution	—	—	—	—	15 bit	15 bit
Revolutions	—	—	—	—	—	12 bit
No. of signals	6 (A, B, Z + inverted signals)			6 (cos-, cos+, sin-, sin+, Z, Z̄)	—	—
Max. output frequency [kHz]	600			200		
Max. speed [min <sup>-1</sup> ]	6000 (9000 min <sup>-1</sup> for 10 s)					
Temperature range [°C]	-30 ... +100					
Protection class	IP 65					



(F64)

EN1, EN2, EN3, EN4, EN5, EN6	
BX 80 ... BX 180L	MX2 ... MX5L
BE 80 ... BE 180L	ME2S ... ME5L
BN 63 ... BN 200L	M05 ... M5
BX 80_FD ... BX 180_FD	MX2_FD ... MX5_FD
BN 63_FD ... BN 200L_FD	M05_FD ... M5_FD
BX 80_FA ... BX 160_FA	MX2_FA ... MX5_FA
BN 63_FA ... BN 200L_FA	M05_FA ... M5_FA

(F65)

EN_ + U1		
		<b>L3</b>
BX 160 - BE 160 - BN 160M...BN 180M	MX5 - ME5 - M5	72
BX 180 - BE 180 - BN 180L...BN 200L	-	82
BX 160_FD - BN 160M_FD...BN 180M_FD	MX5_FD - M5_FD	35
BX 180_FD - BN 180L_FD...BN 200L_FD	-	41

If the encoder device (option EN\_) is specified on motors BX 80 ... BX 132 - MX2 ... MX4 - BE 80 ... BE 132 - ME2 ... ME4 - BN 71 ... BN 160MR - M1 ... M4, along with the independent fan cooling (options U1, U2), the extra length of motor is coincident with that of the correspondent U1 and U2 execution.





## M12.18 Surface protection

**C**  
\_

When no specific protection class is requested, the painted (ferrous) surfaces of motors are protected to at least corrosivity class C2 (UNI EN ISO 12944-2). For improved resistance to atmospheric corrosion, motors can be delivered with C3 and C4 surface protection.

(F66)

<b>SURFACE PROTECTION</b>	Typical environments	Maximum surface temperature	Corrosivity class according to UNI EN ISO 12944-2
<b>C3</b>	Urban and industrial environments with up to 100% relative humidity (medium air pollution)	120°C	C3
<b>C4</b>	Industrial areas, coastal areas, chemical plant, with up to 100% relative humidity (high air pollution)	120°C	C4

Motors with optional protection to class C3 or C4 are available in a choice of colours. If no specific colour is requested (see the “PAINTING” option) motors are finished in RAL 7042.

Motors can also be supplied with surface protection for corrosivity class C5 according to UNI EN ISO 12944-2. Contact our Technical Service for further details.

## M12.19 Painting

**RAL**

Gearboxes with optional protection to class C3 or C4 are available in the colours listed in the following table.

(F67)

<b>PAINTING</b>	Colour	RAL number
<b>RAL7042*</b>	Traffic Grey A	7042
<b>RAL5010</b>	Gentian Blue	5010
<b>RAL9005</b>	Jet Black	9005
<b>RAL9006</b>	White Aluminium	9006
<b>RAL9010</b>	Pure White	9010

\* Gearboxes are supplied in this standard colour if no other colour is specified.

NOTE – “PAINTING” options can only be specified in conjunction with “SURFACE PROTECTION” options.



## M12.20 Certificates

### ACM

#### Certificate of compliance of motors

The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

### CC



#### Inspection certificate

The document entails checking on order compliance, the visual inspection of external conditions and instrumental testing of the electrical characteristics in unloaded conditions. Units inspected are sampled within the shipping batch and marked individually.

## M13 TABLES OF MOTORS CORRELATION



### M13.1 50 Hz Motors

(F68)



2 pole							
	Efficiency class	IE1	IE2	IE3	IE1	IE2	IE3
Pn [kW]	0.06						
	0.09						
	0.12						
	0.18	BN 63A 2			M 05A 2		
	0.25	BN 63B 2			M 05B 2		
	0.37	BN 71A 2			M 05C 2		
	0.55	BN 71B 2			M 1SD 2		
	0.75	BN 71C 2 BN 80A 2	BE 80A 2		M 1LA 2	ME 2SA 2	
	1.1	BN 80B 2	BE 80B 2		M 2SA 2	ME 2SB 2	
	1.5	BN 90SA 2	BE 90SA 2		M 2SB 2		
	1.85	BN 90SB 2					
	2.2	BN 90L 2	BE 90L 2		M 3SA 2		
	3	BN 100L 2	BE 100L 2		M 3LA 2	ME 3LB 2	
	4	BN 112M 2	BE 112M 2		M 3LB 2		
	5.5	BN 132SA 2	BE 132SA 2		M 4SA 2	ME 4SA 2	
	7.5	BN 132SB 2	BE 132SB 2		M 4SB 2	ME 4LA 2	
	9.2	BN 132M 2	BE 132MB 2		M 4LA 2	ME 4LB 2	
	11	BN 160MR 2 BN 160M 2	BE 160MA 2		M 4LC 2	ME 5SA 2	
	15	BN 160MB 2	BE 160MB 2		M 5SB 2	ME 5SB 2	
	18.5	BN 160L 2	BE 160L 2		M 5SC 2	ME 5LA 2	
22	BN 180M 2			M 5LA 2			
30	BN 200LA 2						



(F69)

4 pole							
Efficiency class	IE1	IE2	IE3	IE1	IE2	IE3	
Pn [kW]	0.06	BN 56A 4					
	0.09	BN 56B 4			M 0B 4		
	0.12	BN 63A 4			M 05A 4		
	0.18	BN 63B 4			M 05B 4		
	0.25	BN 63C 4			M 05C 4		
		BN 71A 4					
	0.37	BN 71B 4			M 1SD 4		
	0.55	BN 71C 4			M 1LA 4		
		BN 80A 4					
	0.75	BN 80B 4	BE 80B 4	BX 80B 4	M 2SA 4	ME 2SB 4	MX 2SB 4
	1.1	BN 80C 4	BE 90S 4	BX 90S 4	M 2SB 4	ME 3SA 4	MX 3SA 4
		BN 90S 4					
	1.5	BN 90LA 4	BE 90LA 4	BX 90LA 4	M 3SA 4	ME 3SB 4	MX 3SB 4
	1.85	BN 90LB 4					
	2.2	BN 100LA 4	BE 100LA 4	BX 100LA 4	M 3LA 4	ME 3LA 4	MX 3LA 4
	3	BN 100LB 4	BE 100LB 4	BX 100LB 4	M 3LB 4	ME 3LB 4	MX 3LB 4
	4	BN 112M 4	BE 112M 4	BX 112M 4	M 3LC 4	ME 4SA 4	MX 4SA 4
	5.5	BN 132S 4	BE 132S 4	BX 132SB 4	M 4SA 4	ME 4SB 4	MX 4SB 4
	7.5	BN 132MA 4	BE 132MA 4	BX 132MA 4	M 4LA 4	ME 4LA 4	MX 4LA 4
	9.2	BN 132MB 4	BE 132MB 4	BX 160MA 4	M 4LB 4	ME 4LB 4	MX 5SA 4
11	BN 160MR 4	BE 160M 4	BX 160MB 4	M 4LC 4	ME 5SA 4	MX 5SB 4	
	BN 160M 4						
15	BN 160L 4	BE 160L 4	BX 160L 4	M 5SB 4	ME 5LA 4	MX 5LA 4	
18.5	BN 180M 4	BE 180M 4	BX 180M 4	M 5LA 4			
22	BN 180L 4	BE 180L 4	BX 180L 4				
30	BN 200L 4						



(F70)

6 pole							
Efficiency class	IE1	IE2	IE3	IE1	IE2	IE3	
Pn [kW]	0.06						
	0.09	BN 63A 6			M 05A 6		
	0.12	BN 63B 6			M 05B 6		
	0.18	BN 71A 6			M 1SC 6		
	0.25	BN 71B 6			M 1SD 6		
		BN 71C 6					
	0.37	BN 80A 6			M 1LA 6		
	0.55	BN 80B 6			M 2SA 6		
	0.75	BN 80C 6	BE 90S 6		M 2SB 6		
		BN 90S 6					
	1.1	BN 90L 6	BE 100M 6		M 3SA 6	ME 3LA 6	
	1.5	BN 100LA 6	BE 100LA 6		M 3LA 6	ME 3LB 6	
	1.85	BN 100LB 6			M 3LB 6		
	2.2	BN 112M 6	BE 112M 6		M 3LC 6		
	3	BN 132S 6	BE 132S 6		M 4SA 6	ME 4SB 6	
	4	BN 132MA 6	BE 132MA 6		M 4LA 6	ME 4LA 6	
	5.5	BN 132MB 6	BE 160MA 6		M 4LB 6	ME 5SA 6	
	7.5	BN 160M 6	BE 160MB 6		M 5SA 6	ME 5SB 6	
	9.2						
	11	BN 160L 6			M 5SB 6		
15	BN 180L 6						
18.5	BN 200LA 6						
22							
30							





## M13.2 60 Hz Motors

(F71)



2 pole							
Efficiency class		IE1	IE2	IE3	IE1	IE2	IE3
Pn [kW]	0.06						
	0.09						
	0.12						
	0.18	BN 63A 2			M 05A 2		
	0.25	BN 63B 2			M 05B 2		
	0.37	BN 71A 2			M 05C 2		
	0.55	BN 71B 2			M 1SD 2		
	0.75	BN 71C 2 BN 80A 2			M 1LA 2		
	1.1	BN 80B 2			M 2SA 2		
	1.5	BN 90SA 2			M 2SB 2		
	1.85	BN 90SB 2					
	2.2	BN 90L 2			M 3SA 2		
	3	BN 100L 2			M 3LA 2		
	3.7	BN 112M 2			M 3LB 2		
	5.5	BN 132SA 2			M 4SA 2		
	7.5	BN 132SB 2			M 4SB 2		
	9.2	BN 132M 2			M 4LA 2		
	11	BN 160MR 2 BN 160M 2			M 4LC 2		
	15	BN 160MB 2			M 5SB 2		
18.5	BN 160L 2			M 5SC 2			
22	BN 180M 2			M 5LA 2			
30	BN 200LA 2						

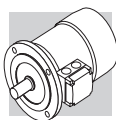
(F72)

4 pole							
Efficiency class		IE1	IE2	IE3	IE1	IE2	IE3
Pn [kW]	0.06	BN 56A 4					
	0.09	BN 56B 4			M 0B 4		
	0.12	BN 63A 4			M 05A 4		
	0.18	BN 63B 4			M 05B 4		
	0.25	BN 63C 4 BN 71A 4			M 05C 4		
	0.37	BN 71B 4			M 1SD 4		
	0.55	BN 71C 4 BN 80A 4			M 1LA 4		
	0.75	BN 80B 4	BE 80B 4	BX 90SR 4	M 2SA 4	ME 2SB 4	MX 2SB 4
	1.1	BN 80C 4 BN 90S 4	BE 90S 4	BX 90S 4	M 2SB 4	ME 3SA 4	MX 3SA 4
	1.5	BN 90LA 4	BE 90LA 4	BX 90LA 4	M 3SA 4	ME 3SB 4	MX 3SB 4
	1.85	BN 90LB 4					
	2.2	BN 100LA 4	BE 100LA 4	BX 100LA 4	M 3LA 4	ME 3LA 4	MX 3LA 4
	3	BN 100LB 4	BE 100LB 4	BX 100LB 4	M 3LB 4	ME 3LB 4	MX 3LB 4
	3.7	BN 112M 4	BE 112M 4	BX 112M 4	M 3LC 4	ME 4SA 4	MX 4SA 4
	5.5	BN 132S 4	BE 132S 4	BX 132SB 4	M 4SA 4	ME 4SB 4	MX 4SB 4
	7.5	BN 132MA 4	BE 132MA 4	BX 132MA 4	M 4LA 4	ME 4LA 4	MX 4LA 4
	9.2	BN 132MB 4	BE 132MB 4	BX 160MA 4	M 4LB 4	ME 4LB 4	MX 5SA 4
	11	BN 160MR 4 BN 160M 4	BE 160M 4	BX 160MB 4	M 4LC 4	ME 5SA 4	MX 5SB 4
	15	BN 160L 4	BE 160L 4	BX 160L 4	M 5SB 4	ME 5LA 4	MX 5LA 4
	18.5	BN 180M 4	BE 180M 4	BX 180M 4	M 5LA 4		
22	BN 180L 4	BE 180L 4	BX 180L 4				
30	BN 200L 4						







(F73)





6 pole							
Efficiency class		IE1	IE2	IE3	IE1	IE2	IE3
Pn [kW]	0.06						
	0.09	BN 63A 6			M 05A 6		
	0.12	BN 63B 6			M 05B 6		
	0.18	BN 71A 6			M 1SC 6		
	0.25	BN 71B 6			M 1SD 6		
		BN 71C 6					
	0.37	BN 80A 6			M 1LA 6		
	0.55	BN 80B 6			M 2SA 6		
	0.75	BN 80C 6			M 2SB 6		
		BN 90S 6					
	1.1	BN 90L 6			M 3SA 6		
	1.5	BN 100LA 6			M 3LA 6		
	1.85	BN 100LB 6			M 3LB 6		
	2.2	BN 112M 6			M 3LC 6		
	3	BN 132S 6			M 4SA 6		
	3.7	BN 132MA 6			M 4LA 6		
	5.5	BN 132MB 6			M 4LB 6		
	7.5	BN 160M 6			M 5SA 6		
	9.2						
	11	BN 160L 6			M 5SB 6		
15	BN 180L 6						
18.5	BN 200LA 6						
22							
30							

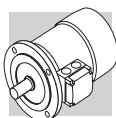


## M14 MOTOR RATING CHARTS BX-MX

P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η <sub>1</sub> %			cos φ	$\frac{I_s}{I_h}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	KVA code	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake			a.c. brake				
					100%	75%	50%								Mod	M <sub>b</sub> Nm	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	M <sub>b</sub> Nm	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 
					FD																	
0.75	<b>BX 80B</b>	4	1425	5.0	1.61	82.5	83.9	83.2	0.81	6.5	2.0	1.8	35	16	FD 04	15	37	19.9	FA 04	15	37	19.8
1.1	<b>BX 90S</b>	4	1425	7.4	2.44	84.1	84.1	82.0	0.77	6.9	3.4	2.2	27	16	FD 14	15	29	20.2	FA 14	15	29	20.1
1.5	<b>BX 90LA</b>	4	1420	10.1	3.3	85.3	86.2	84.9	0.78	6.3	3.1	1.9	31	17	FD 05	26	35	23	FA 05	26	35	23.7
2.2	<b>BX 100LA</b>	4	1445	14.5	5.1	86.7	86.2	84.0	0.72	7.2	3.6	2.4	58	24	FD 15	40	62	31	FA 15	40	62	31
3	<b>BX 100LB</b>	4	1445	19.8	6.7	87.7	87.7	86.0	0.74	7.6	3.9	2.6	73	29	FD 15	40	77	36	FA 15	40	77	36
4	<b>BX 112M</b>	4	1445	26	8.1	88.6	88.9	87.6	0.8	8.1	3.8	2.5	130	38	FD 06S	60	139	48	FA 06S	60	139	50
5.5	<b>BX 132SB</b>	4	1460	36	10.6	89.6	89.2	88.8	0.83	8.2	3.6	2.3	310	57	FD 56	75	320	70	FA 06	75	320	71
7.5	<b>BX 132MA</b>	4	1460	49	15.0	90.4	90.9	90.2	0.80	8.4	3.8	2.5	360	67	FD 06	100	370	80	FA 07	100	370	85
9.2	<b>BX 160MA</b>	4	1465	60	17.8	91.0	92.1	91.7	0.82	7.9	3.6	2.1	650	95	FD 08	170	725	125	FA 08	170	725	124
11	<b>BX 160MB</b>	4	1465	72	20.5	91.4	92.9	92.5	0.84	7.8	3.4	1.9	780	110	FD 08	170	855	140	FA 08	170	855	139
15	<b>BX 160L</b>	4	1465	98	28.1	92.1	93.2	92.6	0.82	9.0	4.1	2.3	890	121	FD 08	200	965	151	FA 08	200	965	150
18.5	<b>BX 180M</b>	4	1480	119	32.9	92.6	94.1	93.1	0.85	11.3	2.6	2.3	1560	155	FD 09	300	1760	195		300	1760	
22	<b>BX 180L</b>	4	1475	142	38.2	93.0	93.6	92.8	0.88	10.2	2.5	2.0	1660	163	FD 09	300	1860	203		300	1860	








4 P		1800 min <sup>-1</sup> - S1												60 Hz - IE3							
P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η%		cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	KVA code	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake			a.c. brake				
					100%	75%								FD			FA				
					Mod	M <sub>b</sub> Nm								J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	M <sub>b</sub> Nm	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 		
0.75	<b>BX 90SR</b>	4	1755	4.1	1.48	85.5	86.4	83.9	0.73	8.0	3.7	2.5	L	27	16	15	29	20.2	15	29	20.1
1.1	<b>BX 90S</b>	4	1740	6.0	2.15	86.5	85.9	83.0	0.74	8.2	4.1	2.8	K	27	16	15	29	20.2	15	29	20.1
1.5	<b>BX 90LA</b>	4	1735	8.3	2.91	86.5	86.5	84.4	0.75	7.4	3.6	2.5	K	31	17	26	35	23	26	35	23.7
2.2	<b>BX 100LA</b>	4	1760	11.9	4.4	89.5	88.6	86.2	0.71	9.9	4.8	3.6	N	73	29	40	77	36	40	77	36
3	<b>BX 100LB</b>	4	1750	16.4	5.9	89.5	88.9	86.7	0.71	9.1	4.4	3.3	M	73	29	40	77	36	40	77	36
3.7	<b>BX 112M</b>	4	1760	20	6.7	89.5	89.5	89.1	0.77	10.4	4.7	3.4	M	130	38	60	139	48	60	139	50
5.5	<b>BX 132SB</b>	4	1770	30	9.9	91.7	92.0	90.2	0.76	10.7	5.1	4.6	N	410	77	75	420	90	75	420	91
7.5	<b>BX 132MA</b>	4	1770	41	13.4	91.7	91.3	89.7	0.76	11.0	4.9	4.4	N	410	77	100	420	90	100	420	95
9.2	<b>BX 160MA</b>	4	1770	50	15.6	92.4	92.5	91.6	0.8	9.1	4.1	2.6	L	650	95	170	725	125	170	725	124
11	<b>BX 160MB</b>	4	1770	59	18.2	92.4	92.9	92.0	0.82	9.3	4.0	2.4	L	780	110	170	855	140	170	855	139
15	<b>BX 160L</b>	4	1770	81	24.5	93.0	93.5	92.5	0.81	10.9	4.8	2.8	M	890	121	200	965	151	200	965	150
18.5	<b>BX 180M</b>	4	1780	99	28.6	93.6	94.5	93.2	0.85	13.0	2.9	2.7	N	1560	155	300	1760	195	300	1760	195
22	<b>BX 180L</b>	4	1775	118	33.1	93.6	94.2	93.1	0.87	11.5	2.8	2.4	M	1660	163	300	1860	203	300	1860	203



4 P		1500 min <sup>-1</sup> - S1															50 Hz - IE3					
		d.c. brake															a.c. brake					
P <sub>n</sub>	kW	n	M <sub>n</sub>	I <sub>n</sub> 400V	η%			cos φ	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	KVA code	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	FD			FA				
					100%	75%	50%								Mod	M <sub>b</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	Mod	M <sub>b</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg
0.75		4	5.0	1.61	82.5	83.9	83.2	0.81	6.5	2.0	1.8	J	35	16	FD 04	15	37	19.9	FA 04	15	37	19.8
1.1		4	7.3	2.46	84.1	85.5	83.5	0.75	6.7	3.0	2.0	J	35	17	FD 15	15	39	24	FA 15	15	39	24
1.5		4	9.9	3.3	85.3	86.8	85.4	0.75	6.7	3.1	2.0	J	43	20	FD 15	26	47	27	FA 15	26	47	27
2.2		4	14.5	5.1	86.7	86.2	84.0	0.72	7.2	3.6	2.4	K	58	24	FD 15	40	62	31	FA 15	40	62	31
3		4	19.8	6.7	87.7	87.7	86.0	0.74	7.6	3.9	2.6	K	73	29	FD 15	40	77	36	FA 15	40	77	36
4		4	26	7.8	88.6	89.9	88.7	0.82	8.1	3.7	2.5	J	225	45	FD 56	75	235	58	FA 06	75	235	59
5.5		4	36	10.6	89.6	89.9	88.8	0.83	8.2	3.6	2.3	J	310	57	FD 56	75	320	70	FA 06	75	320	71
7.5		4	49	15.0	90.4	90.9	90.2	0.80	8.4	3.8	2.5	K	360	67	FD 06	100	370	80	FA 07	100	370	85
9.2		4	60	17.8	91.0	92.1	91.7	0.82	7.9	3.6	2.1	J	650	95	FD 08	170	725	125	FA 08	170	725	124
11		4	72	20.5	91.4	92.9	92.5	0.84	7.8	3.4	1.9	J	780	110	FD 08	170	855	140	FA 08	170	855	139
15		4	98	28.1	92.1	93.2	92.6	0.82	9.0	4.1	2.3	K	890	121	FD 08	200	965	151	FA 08	200	965	150





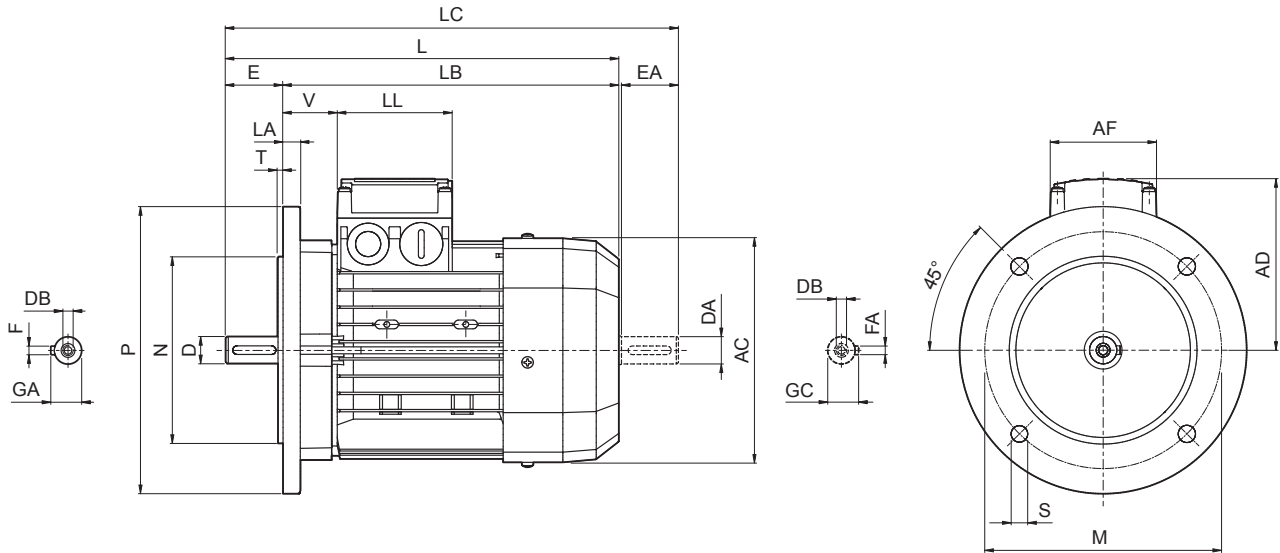
4 P		1800 min <sup>-1</sup> - S1											60 Hz - IE3									
P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	KVA code	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake				a.c. brake			
					100%	75%	50%								FD				FA			
					M <sub>b</sub> Nm	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 								Mod	M <sub>b</sub> Nm	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	M <sub>b</sub> Nm	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 
0.75	<b>MX 2SB</b>	4	1755	4.1	1.48	85.5	86.4	83.9	0.73	8.0	2.5	L	27	16	FD 14	15	29	20.2	FA 14	15	29	20.1
1.1	<b>MX 3SA</b>	4	1755	6.0	2.19	86.5	86.0	83.0	0.73	7.9	2.5	L	35	17	FD 15	15	39	24	FA 15	15	39	24
1.5	<b>MX 3SB</b>	4	1755	8.2	2.96	86.5	87.2	85.0	0.72	8.5	2.9	L	43	20	FD 15	26	47	27	FA 15	26	47	27
2.2	<b>MX 3LA</b>	4	1760	11.9	4.4	89.5	88.6	86.2	0.71	9.9	3.6	N	73	29	FD 15	40	77	36	FA 15	40	77	36
3	<b>MX 3LB</b>	4	1750	16.4	5.9	89.5	88.9	86.7	0.71	9.1	3.3	M	73	29	FD 15	40	77	36	FA 15	40	77	36
3.7	<b>MX 4SA</b>	4	1770	20.0	6.6	89.5	89.8	87.7	0.78	9.9	3.4	M	225	45	FD 56	75	235	58	FA 06	75	235	59
5.5	<b>MX 4SB</b>	4	1770	30	9.9	91.7	92.0	90.2	0.76	10.7	4.6	N	410	77	FD 56	75	420	90	FA 06	75	420	91
7.5	<b>MX 4LA</b>	4	1770	41	13.4	91.7	91.3	89.7	0.76	11.0	4.4	N	410	77	FD 06	100	420	90	FA 07	100	420	95
9.2	<b>MX 5SA</b>	4	1770	50	15.6	92.4	92.5	91.6	0.8	9.1	2.6	L	650	95	FD 08	170	725	125	FA 08	170	725	124
11	<b>MX 5SB</b>	4	1770	59	18.2	92.4	92.9	92.0	0.82	9.3	2.4	L	780	110	FD 08	170	855	140	FA 08	170	855	139
15	<b>MX 5LA</b>	4	1770	81	24.5	93.0	93.5	92.5	0.81	10.9	2.8	M	890	121	FD 08	200	965	151	FA 08	200	965	150



## M15 MOTORS DIMENSIONS BX-MX

### BX - IM B5

BX-MX



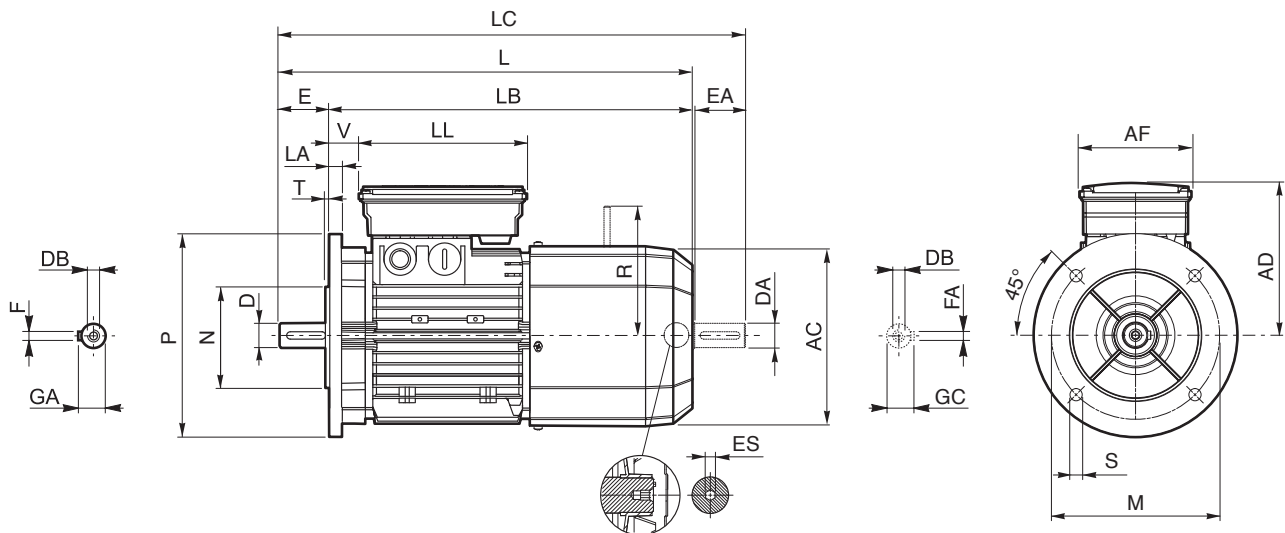
	Shaft					Flange						Motor							
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V
<b>BX 80 B</b>	19 14 <sup>(1)</sup>	40 30 <sup>(1)</sup>	M6 M5 <sup>(1)</sup>	21.5 16 <sup>(1)</sup>	6 5 <sup>(1)</sup>							156	320	280	351	119	74	80	38
<b>BX 90 S</b>	24 19 <sup>(1)</sup>	50 40 <sup>(1)</sup>	M8 M6 <sup>(1)</sup>	27 21.5 <sup>(1)</sup>	8 6 <sup>(1)</sup>	165	130	200	11.5	3.5	11.5	176	326	276	368	133			44
<b>BX 90 LA</b>																			
<b>BX 100 LA</b>																	98	98	
<b>BX 100 LB</b>	28 24 <sup>(1)</sup>	60 50 <sup>(1)</sup>	M10 M8 <sup>(1)</sup>	31 27 <sup>(1)</sup>	8 8 <sup>(1)</sup>	215	180	250			14	195	410	350	462	142			50
<b>BX 112 M</b>									14	4	15	219	430	370	482	157			52
<b>BX 132 SB</b>	38 28 <sup>(1)</sup>	80 60 <sup>(1)</sup>	M12 M10 <sup>(1)</sup>	41 31 <sup>(1)</sup>	10 8 <sup>(1)</sup>	265	230	300			20	258	493	413	556	193	118	118	58
<b>BX 132 MA</b>													528	448	591				
<b>BX 160 MA</b>													596	486	680				
<b>BX 160 MB</b>	42 38 <sup>(1)</sup>	110 80 <sup>(1)</sup>	M16 M12 <sup>(1)</sup>	45 41 <sup>(1)</sup>	12 10 <sup>(1)</sup>						15	310	640	530	724	245			51
<b>BX 160 L</b>						300	250	350	18.5	5							187	187	
<b>BX 180 M</b>	48 42 <sup>(1)</sup>	110 110 <sup>(1)</sup>	M16 M16 <sup>(1)</sup>	51.5 45 <sup>(1)</sup>	14 12 <sup>(1)</sup>						18	348	708	598	823	261			52
<b>BX 180 L</b>																			

N.B.:

1) These values refer to the rear shaft end (PS).



**BX\_FA/FD ; IM B5**



	Shaft					Flange						Motor											
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R		ES	
																				FD	FA	(2)	
<b>BX 80 B</b>	19 14 <sup>(1)</sup>	40 30 <sup>(1)</sup>	M6 M5 <sup>(1)</sup>	21.5 16 <sup>(1)</sup>	6 5 <sup>(1)</sup>							156	392	352	423	143	98	133	25		129	134	5
<b>BX 90 S</b>	24 19 <sup>(1)</sup>	50 40 <sup>(1)</sup>	M8 M6 <sup>(1)</sup>	27 21.5 <sup>(1)</sup>	8 6 <sup>(1)</sup>	165	130	200	11.5	3.5	11.5	176	410	360	452	146			32				
<b>BX 90 LA</b>																							
<b>BX 100 LA</b>											14	195	502	442	554	155	110	165		37	160	160	
<b>BX 100 LB</b>	28 24 <sup>(1)</sup>	60 50 <sup>(1)</sup>	M10 M8 <sup>(1)</sup>	31 27 <sup>(1)</sup>	8 8 <sup>(1)</sup>	215	180	250														6	
<b>BX 112 M</b>									14	4	15	219	527	467	579	170			39	199	198		
<b>BX 132 SB</b>	38 28 <sup>(1)</sup>	80 60 <sup>(1)</sup>	M12 M10 <sup>(1)</sup>	41 31 <sup>(1)</sup>	10 8 <sup>(1)</sup>	265	230	300			16	258	603	523	667		210	140	188	46	204	200	
<b>BX 132 MA</b>													627	547	690						226		
<b>BX 160 MA</b>													736	626	820								
<b>BX 160 MB</b>	42 38 <sup>(1)</sup>	110 80 <sup>(1)</sup>	M16 M12 <sup>(1)</sup>	45 41 <sup>(1)</sup>	12 10 <sup>(1)</sup>						15	310				245			51	266	247		
<b>BX 160 L</b>						300	250	350	18.5	5			780	670	864			187	187				
<b>BX 180 M</b>	48 42 <sup>(1)</sup>	110 110 <sup>(1)</sup>	M16 M16 <sup>(1)</sup>	51.5 45 <sup>(1)</sup>	14 12 <sup>(1)</sup>						18	348	866	756	981	261			52	305	—		
<b>BX 180 L</b>																							

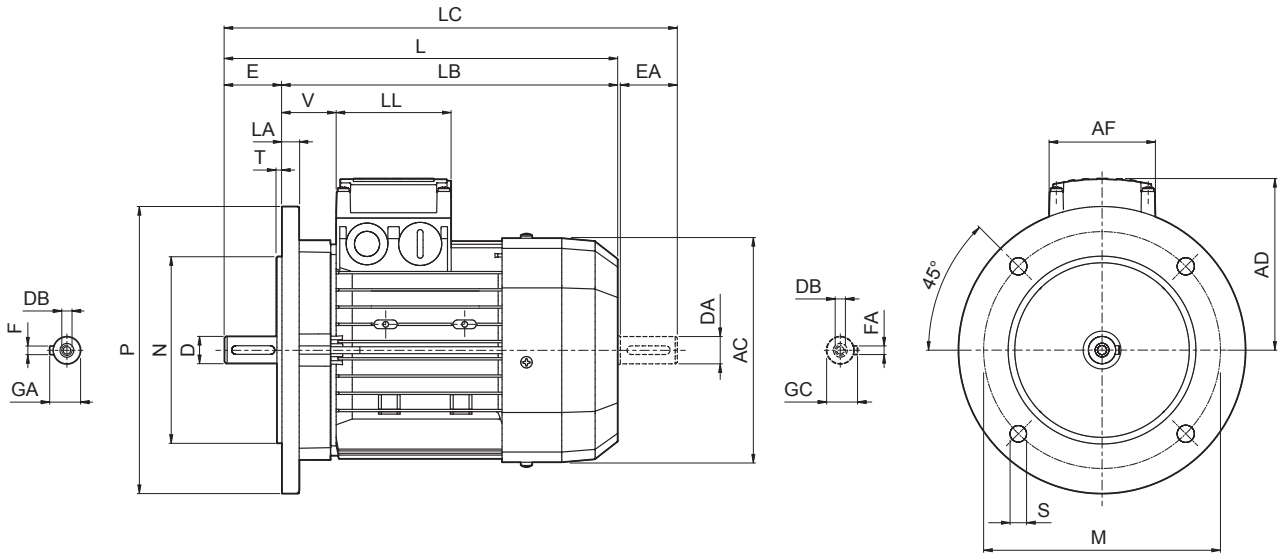
N.B.:

- 1) These values refer to the rear shaft end (PS).
- 2) "ES" hexagon is not present with PS option



# BX - CUS - IM B5

**BX-MX**



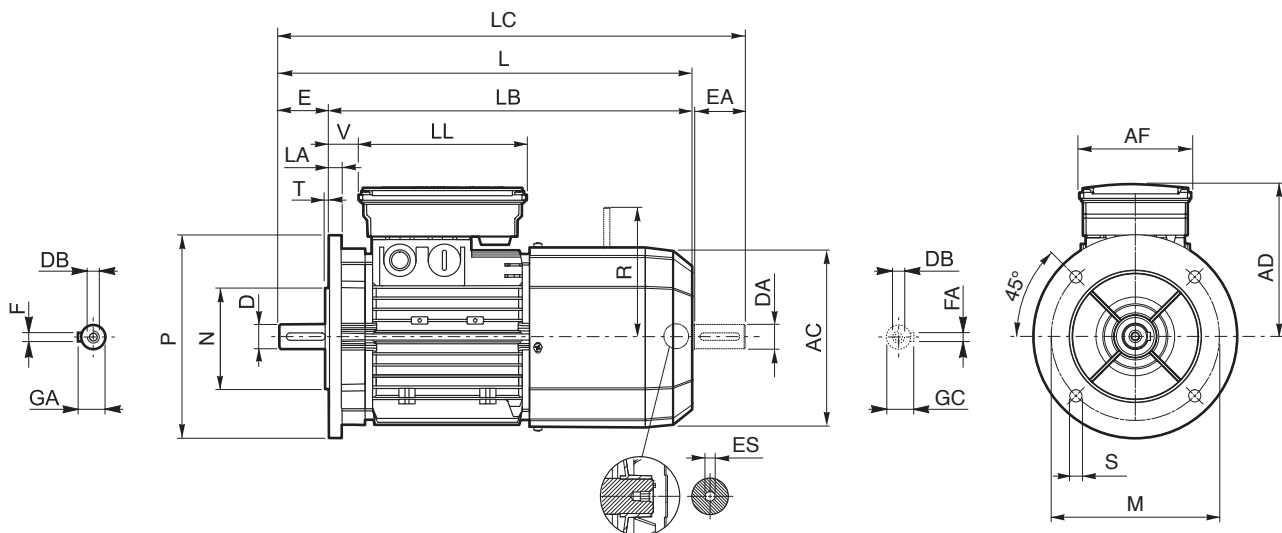
	Shaft					Flange						Motor							
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V
<b>BX 90 SR</b>	19 19 <sup>(1)</sup>	40 40 <sup>(1)</sup>	M6 M6 <sup>(1)</sup>	21.5 21.5 <sup>(1)</sup>	6 6 <sup>(1)</sup>								316		358				
<b>BX 90 S</b>	24 19 <sup>(1)</sup>	50 40 <sup>(1)</sup>	M8 M6 <sup>(1)</sup>	27 21.5 <sup>(1)</sup>	8 6 <sup>(1)</sup>	165	130	200	11.5	3.5	11.5	176	326	276	368	133	98	98	44
<b>BX 90 LA</b>																			
<b>BX 100 LA</b>	28 24 <sup>(1)</sup>	60 50 <sup>(1)</sup>	M10 M8 <sup>(1)</sup>	31 27 <sup>(1)</sup>	8 8 <sup>(1)</sup>	215	180	250	14	4	14	195	410	350	462	142	98	98	50
<b>BX 100 LB</b>																			
<b>BX 112 M</b>																			
<b>BX 132 SB</b>	38 28 <sup>(1)</sup>	80 60 <sup>(1)</sup>	M12 M10 <sup>(1)</sup>	41 31 <sup>(1)</sup>	10 8 <sup>(1)</sup>	265	230	300	14	4	15	219	430	370	482	157	118	118	58
<b>BX 132 MA</b>																			
<b>BX 160 MA</b>	42 38 <sup>(1)</sup>	110 80 <sup>(1)</sup>	M16 M12 <sup>(1)</sup>	45 41 <sup>(1)</sup>	12 10 <sup>(1)</sup>	300	250	350	18.5	5	15	310	596	486	680	245	187	187	51
<b>BX 160 MB</b>													640	530	724				
<b>BX 160 L</b>																			
<b>BX 180 M</b>	48 42 <sup>(1)</sup>	110 110 <sup>(1)</sup>	M16 M16 <sup>(1)</sup>	51.5 45 <sup>(1)</sup>	14 12 <sup>(1)</sup>						18	348	708	598	823	261			52
<b>BX 180 L</b>																			

N.B.:

1) These values refer to the rear shaft end (PS).



**BX\_FA/FD CUS ; IM B5**



	Shaft					Flange					Motor												
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R FD	FA	ES <sup>(2)</sup>	
<b>BX 90 SR</b>	19 19 <sup>(1)</sup>	40 40 <sup>(1)</sup>	M6 M6 <sup>(1)</sup>	21.5 21.5 <sup>(1)</sup>	6 6 <sup>(1)</sup>								400		442								
<b>BX 90 S</b>	24 19 <sup>(1)</sup>	50 40 <sup>(1)</sup>	M8 M6 <sup>(1)</sup>	27 21.5 <sup>(1)</sup>	8 6 <sup>(1)</sup>	165	130	200	11.5	3.5	11.5	176		360		146		32		129	134		
<b>BX 90 LA</b>													410		452		110	165					
<b>BX 100 LA</b>											14	195	502	442	554	155		37		160	160	6	
<b>BX 100 LB</b>	28 24 <sup>(1)</sup>	60 50 <sup>(1)</sup>	M10 M8 <sup>(1)</sup>	31 27 <sup>(1)</sup>	8 8 <sup>(1)</sup>	215	180	250															
<b>BX 112 M</b>									14	4	15	219	527	467	579	170		39	199	198			
<b>BX 132 SB</b>	38 28 <sup>(1)</sup>	80 60 <sup>(1)</sup>	M12 M10 <sup>(1)</sup>	41 31 <sup>(1)</sup>	10 8 <sup>(1)</sup>	265	230	300			16	258	661	581	724	210	140	188	46	204	200		
<b>BX 132 MA</b>																				226			
<b>BX 160 MA</b>													736	626	820								
<b>BX 160 MB</b>	42 38 <sup>(1)</sup>	110 80 <sup>(1)</sup>	M16 M12 <sup>(1)</sup>	45 41 <sup>(1)</sup>	12 10 <sup>(1)</sup>						15	310				245		51	266	247			
<b>BX 160 L</b>						300	250	350	18.5	5			780	670	864		187	187				—	
<b>BX 180 M</b>	48 42 <sup>(1)</sup>	110 110 <sup>(1)</sup>	M16 M16 <sup>(1)</sup>	51.5 45 <sup>(1)</sup>	14 12 <sup>(1)</sup>						18	348	866	756	981	261		52	305	—			
<b>BX 180 L</b>																							

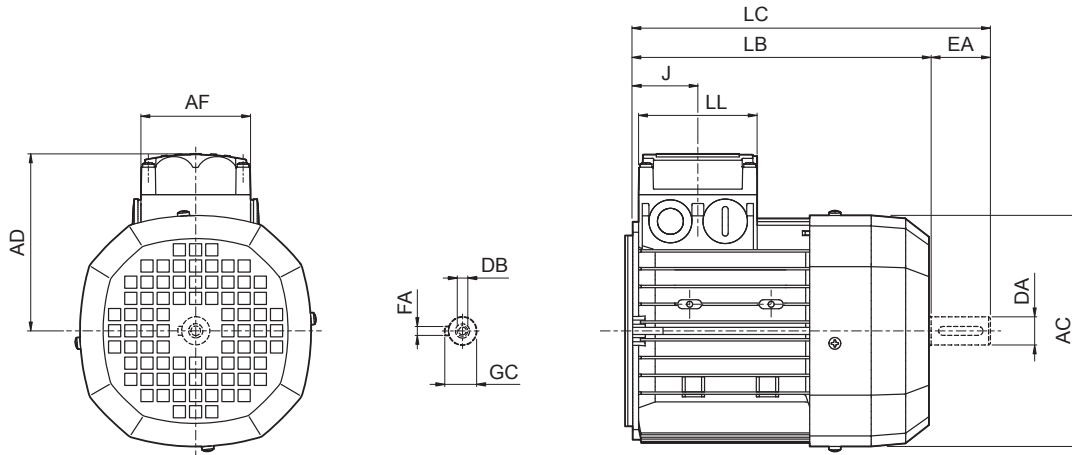
N.B.:

- 1) These values refer to the rear shaft end (PS).
- 2) "ES" hexagon is not present with PS option



# MX

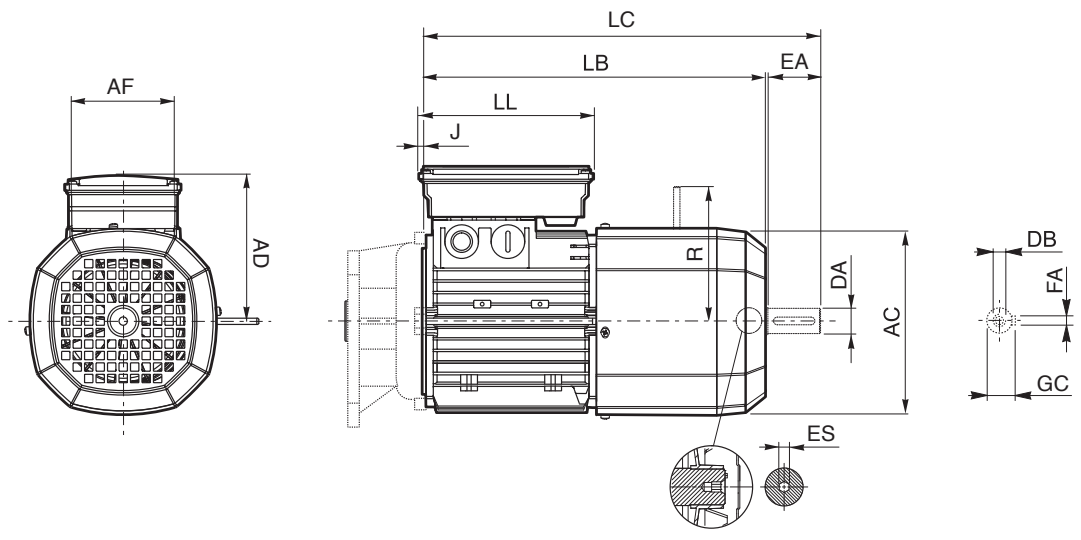
**BX-MX**



	Rear shaft end					Motor						
	DA	EA	DB	GC	FA	AC	LB	LC	AF	LL	J	AD
<b>MX 2SB</b>	14	30	M5	16	5	156	246	278	74	80	44	119
<b>MX 3SA</b>	24	50	M8	27	8	195	265	317	98	98	53.5	142
<b>MX 3SB</b>							305	357				
<b>MX 3LA</b>												
<b>MX 3LB</b>												
<b>MX 4SA</b>	28	60	M10	31		258	361	424	118	118	64.5	193
<b>MX 4SB</b>							396	459				
<b>MX 4LA</b>												
<b>MX 5SA</b>	38	80	M12	41	10	310	418	502	187	187	77	245
<b>MX 5SB</b>							462	546				
<b>MX 5LA</b>												



**MX\_FD/FA**



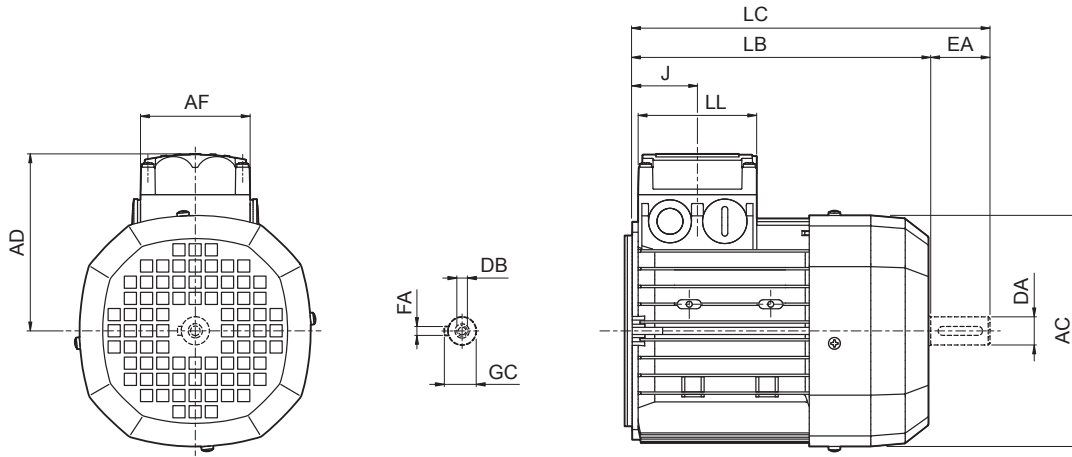
	Rear shaft end					Motor									
	DA	EA	DB	GC	FA	AC	LB	LC	AF	LL	J	AD	R FD FA		ES <sup>(1)</sup>
<b>MX 2SB</b>	14	30	M5	16	5	156	318	349	98	133	9	143	129	134	5
<b>MX 3SA</b>	24	50	M8	27	8	195	355	407	110	165	7	155	160	160	6
<b>MX 3SB</b>							397	450							
<b>MX 3LA</b>															
<b>MX 3LB</b>															
<b>MX 4SA</b>	28	60	M10	31	8	258	470	534	140	188	7	210	204	200	6
<b>MX 4SB</b>							494	558						226	
<b>MX 4LA</b>															
<b>MX 5SA</b>	38	80	M12	41	10	310	558	644	187	187	17	245	266	247	—
<b>MX 5SB</b>							602	686							
<b>MX 5LA</b>															

N.B.:  
1) "ES" hexagon is not present with PS option



# MX CUS

**BX-MX**

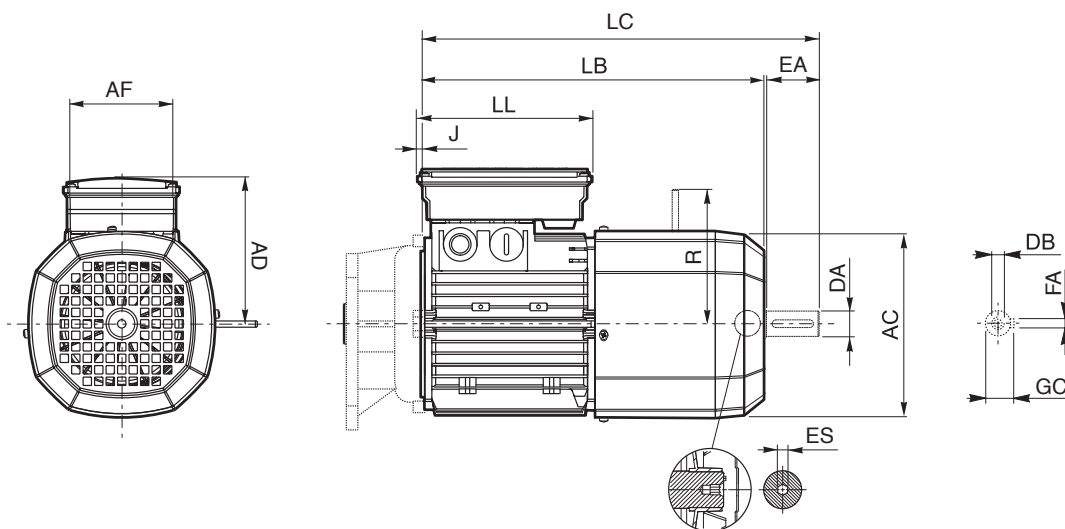


	Rear shaft end					Motor						
	DA	EA	DB	GC	FA	AC	LB	LC	AF	LL	J	AD
<b>MX 2SB</b>	14	30	M5	16	5	176	262	293	98	98	79	133
<b>MX 3SA</b>	24	50	M8	27	8	195	265	317				
<b>MX 3SB</b>							305	357				
<b>MX 3LA</b>												
<b>MX 3LB</b>												
<b>MX 4SA</b>	28	60	M10	31		258	361	424	118	118	64.5	193
<b>MX 4SB</b>							420	483				
<b>MX 4LA</b>												
<b>MX 5SA</b>	38	80	M12	41	10	310	418	502	187	187	77	245
<b>MX 5SB</b>							462	546				
<b>MX 5LA</b>												





**MX\_FD/FA\_CUS**





	Rear shaft end					Motor											
	DA	EA	DB	GC	FA	AC	LB	LC	AF	LL	J	AD	R FD FA		ES <sup>(1)</sup>		
<b>MX 2SB</b>	14	30	M5	16	5	176	347	379	110	165	-17	146	129	134	6		
<b>MX 3SA</b>	24	50	M8	27	195	355	407	140				188	7	210		204	200
<b>MX 3SB</b>						397	450										
<b>MX 3LA</b>																	
<b>MX 3LB</b>	8	470	534	258	528	592	187	187	17	245	266	247					
<b>MX 4SA</b>	28	60	M10		31	310							602	686		226	
<b>MX 4SB</b>																	
<b>MX 4LA</b>																	
<b>MX 5SA</b>	38	80	M12	41	10	310	558	644	187	187	17	245	266	247		—	
<b>MX 5SB</b>																	
<b>MX 5LA</b>																	



N.B.:  
1) "ES" hexagon is not present with PS option


**M16 MOTOR RATING CHARTS BE-ME**
**BE-ME**

<b>2 P</b>	<b>3000 min<sup>-1</sup> - S1</b>	<b>50 Hz - IE2</b>
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

P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	
					100%	75%	50%							
0.75	<b>BE 80A</b>	2	2860	2.5	1.65	80.0	79.6	76.4	0.83	6.8	3.8	3.5	9.0	9.5
1.1	<b>BE 80B</b>	2	2845	3.7	2.35	81.5	82.2	79.9	0.83	6.9	3.8	3.1	11.4	11.3
1.5	<b>BE 90SA</b>	2	2865	5.0	3.2	81.3	80.7	78.1	0.82	6.8	3.6	2.8	12.5	12.3
2.2	<b>BE 90L</b>	2	2870	7.3	4.7	83.2	83.1	80.8	0.82	6.9	3.1	2.9	16.7	14
3	<b>BE 100L</b>	2	2880	9.9	6.2	84.6	84.6	83.7	0.83	7.3	3.5	3.1	39	23
4	<b>BE 112M</b>	2	2920	13.1	8.2	85.8	85.5	84.3	0.82	7.9	3.5	3.1	57	28
5.5	<b>BE 132SA</b>	2	2925	18.0	10.6	87.0	85.0	81.7	0.86	8.5	3.6	3.3	145	42
7.5	<b>BE 132SB</b>	2	2935	24	14.3	88.1	87.4	84.7	0.86	8.8	3.9	3.6	178	53
9.2	<b>BE 132MB</b>	2	2920	30	16.4	88.8	86.5	84.2	0.91	8.4	3.7	3.3	210	65
11	<b>BE 160MA</b>	2	2940	36	20.0	89.4	89.5	88.0	0.89	8.1	3.0	2.9	340	84
15	<b>BE 160MB</b>	2	2950	49	27.2	90.5	90.5	89.5	0.88	8.5	3.0	2.8	420	97
18.5	<b>BE 160L</b>	2	2945	60	32	90.9	90.5	89.8	0.91	7.7	2.9	2.7	490	109

<b>4 P</b>	<b>1500 min<sup>-1</sup> - S1</b>	<b>50 Hz - IE2</b>
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P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	
					100%	75%	50%							
0.75	<b>BE 80B</b>	4	1430	5.0	1.65	81.0	80.5	78.0	0.81	6.1	3.2	3.0	28	12.2
1.1	<b>BE 90S</b>	4	1430	7.4	2.53	82.5	82.0	79.5	0.76	6.3	2.9	2.8	28	13.6
1.5	<b>BE 90LA</b>	4	1430	10.0	3.5	83.5	83.0	80.0	0.74	5.9	3.1	3.0	34	15.1
2.2	<b>BE 100LA</b>	4	1430	14.7	4.9	85.4	85.0	84.0	0.76	5.8	3.0	2.8	54	22
3	<b>BE 100LB</b>	4	1420	20	6.6	85.5	86.0	85.5	0.77	5.9	2.8	2.6	61	24
4	<b>BE 112M</b>	4	1440	27	8.3	87.0	87.0	86.0	0.80	6.5	2.8	2.8	105	32
5.5	<b>BE 132S</b>	4	1460	36	11.1	88.5	88.5	87.5	0.81	7.3	2.9	2.9	270	53
7.5	<b>BE 132MA</b>	4	1460	49	14.8	89.0	89.0	88.5	0.82	6.9	2.9	2.8	319	59
9.2	<b>BE 132MB</b>	4	1460	60	18.1	89.5	89.5	88.5	0.82	6.9	2.9	3.0	360	70
11	<b>BE 160M</b>	4	1465	72	21.5	91.0	91.3	90.5	0.81	6.5	2.8	2.6	650	99
15	<b>BE 160L</b>	4	1465	98	28.7	90.8	91.0	90.5	0.83	6.5	2.6	2.3	790	115
18.5	<b>BE 180M</b>	4	1465	121	35	91.6	92.0	91.3	0.83	6.5	2.6	2.5	1250	135
22	<b>BE 180L</b>	4	1465	143	41	91.6	91.8	91.4	0.84	6.8	2.7	2.6	1650	157



<b>6 P</b>	<b>1000 min<sup>-1</sup> - S1</b>	<b>50 Hz - IE2</b>
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P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5  Kg
					100%	75%	50%						
0.75	<b>BE 90S 6</b>	935	7.7	2.06	75.9	75.9	73.0	0.69	5.1	3.1	2.9	33	15
1.1	<b>BE 100M 6</b> (*)	945	11.1	2.75	78.1	76.2	73.0	0.74	4.9	2.2	1.9	82	22
1.5	<b>BE 100LA 6</b>	945	15.2	3.9	79.8	77.5	74.0	0.72	5.6	2.5	2.3	95	24
2.2	<b>BE 112M 6</b>	950	22	5.2	81.8	81.8	79.3	0.74	5.2	2.6	2.3	168	32
3	<b>BE 132S 6</b>	955	30	6.6	83.3	83.3	82.4	0.79	6.1	2.1	1.9	295	44
4	<b>BE 132MA 6</b>	965	40	8.7	84.6	85.0	83.1	0.79	6.9	2.2	2.0	383	56
5.5	<b>BE 160MA 6</b> (*)	965	54	11.6	87.0	87.0	86.4	0.79	6.6	2.5	2.3	740	83
7.5	<b>BE 160MB 6</b> (*)	965	74	15.0	88.0	88.0	87.2	0.82	6.6	2.3	2.1	970	103



(\*) Power /size relation not standardized

**BE-ME**





**BE-ME**

<b>2 P</b>	<b>3000 min<sup>-1</sup> - S1</b>	<b>50 Hz - IE2</b>
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

P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B9 	
					100%	75%	50%							
0.75	<b>ME 2SA</b>	2	2860	2.5	1.63	80.0	79.6	76.4	0.83	6.8	3.8	3.5	9.0	8.8
1.1	<b>ME 2SB</b>	2	2845	3.7	2.35	81.5	82.2	79.9	0.83	6.9	3.8	3.1	11.4	10.6
1.5	<b>ME 3SA</b>	2	2845	5.0	3.2	81.3	79.0	76.0	0.84	6.1	2.9	2.7	24	15.5
2.2	<b>ME 3LA</b>	2	2895	7.3	4.8	83.2	83.2	81.5	0.80	6.3	2.7	2.5	31	18.7
3	<b>ME 3LB</b>	2	2880	9.9	6.2	84.6	84.6	83.7	0.83	7.3	3.5	3.1	39	22
4	<b>ME 4SA</b>	2	2900	13.2	7.8	85.8	84.5	82.2	0.87	7.0	2.9	2.8	101	33
5.5	<b>ME 4SB</b>	2	2925	18.0	10.6	87.0	85.0	81.7	0.86	8.5	3.6	3.3	145	40
7.5	<b>ME 4LA</b>	2	2935	24	14.3	88.1	87.4	84.7	0.86	8.8	3.9	3.6	178	51
9.2	<b>ME 4LB</b>	2	2920	30	16.4	88.8	86.5	84.2	0.91	8.4	3.7	3.3	210	60
11	<b>ME 5SA</b>	2	2940	36	20.0	89.4	89.5	88.0	0.89	8.1	3.0	2.9	340	70
15	<b>ME 5SB</b>	2	2950	49	27.2	90.5	90.5	89.5	0.88	8.5	3	2.8	420	83
18.5	<b>ME 5LA</b>	2	2945	60	32	90.9	90.5	89.8	0.91	7.7	2.9	2.7	490	95

<b>4 P</b>	<b>1500 min<sup>-1</sup> - S1</b>	<b>50 Hz - IE2</b>
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P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B9 	
					100%	75%	50%							
0.75	<b>ME 2SB</b>	4	1430	5.0	1.65	81.0	80.5	78.0	0.81	6.1	3.2	3	28	10.9
1.1	<b>ME 3SA</b>	4	1430	7.4	2.60	82.5	82.0	79.0	0.74	5.5	2.5	2.8	34	15.5
1.5	<b>ME 3SB</b>	4	1420	10.1	3.48	84.0	84.0	83.0	0.74	6.2	2.9	2.9	40	17
2.2	<b>ME 3LA</b>	4	1430	14.7	4.89	85.4	85.0	84.0	0.76	5.8	3	2.8	54	21
3	<b>ME 3LB</b>	4	1420	20	6.58	85.5	86.0	85.5	0.77	5.9	2.8	2.6	61	23
4	<b>ME 4SA</b>	4	1440	27	8.25	87.5	86.8	84.0	0.80	7.1	3.0	3.1	213	42
5.5	<b>ME 4SB</b>	4	1460	36	11.07	88.5	88.5	87.5	0.81	7.3	2.9	2.9	270	51
7.5	<b>ME 4LA</b>	4	1460	49	14.83	89.0	89.0	88.5	0.82	6.9	2.9	2.8	319	57
9.2	<b>ME 4LB</b>	4	1460	60	18.09	89.5	89.5	88.5	0.82	6.9	2.9	3	360	65
11	<b>ME 5SA</b>	4	1465	72	21.54	91.0	91.3	90.5	0.81	6.5	2.8	2.6	650	85
15	<b>ME 5LA</b>	4	1465	98	28.73	90.8	91.0	90.5	0.83	6.5	2.6	2.3	790	101



<b>6 P</b>	<b>1000 min<sup>-1</sup> - S1</b>	<b>50 Hz - IE2</b>
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P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	I <sub>n</sub> 400V A	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B9 	
					100%	75%	50%							
0.75	<b>ME 3SA</b>	<b>6</b>	940	7.6	1.98	75.9	75.0	70.7	0.72	4.7	2.2	2.0	33	17
1.1	<b>ME 3LA</b>	<b>6 (*)</b>	945	11.1	2.75	78.1	76.2	73.0	0.74	4.9	2.2	1.9	82	21
1.5	<b>ME 3LB</b>	<b>6</b>	945	15.2	3.8	79.8	77.5	74.0	0.72	5.6	2.5	2.3	95	23
2.2	<b>ME 4SA</b>	<b>6</b>	955	22	4.9	81.8	81.8	80.0	0.80	5.7	1.9	1.7	216	34
3	<b>ME 4SB</b>	<b>6</b>	955	30	6.6	83.3	83.3	82.4	0.79	6.1	2.1	1.9	295	43
4	<b>ME 4LA</b>	<b>6</b>	965	40	8.6	84.6	85	83.1	0.79	6.9	2.2	2	383	54
5.5	<b>ME 5SA</b>	<b>6 (*)</b>	965	54	11.6	87.0	87.0	86.4	0.79	6.6	2.5	2.3	740	69
7.5	<b>ME 5SB</b>	<b>6 (*)</b>	965	74	15.0	88.0	88.0	87.2	0.82	6.6	2.3	2.1	970	89

(\*) Power /size relation not standardized

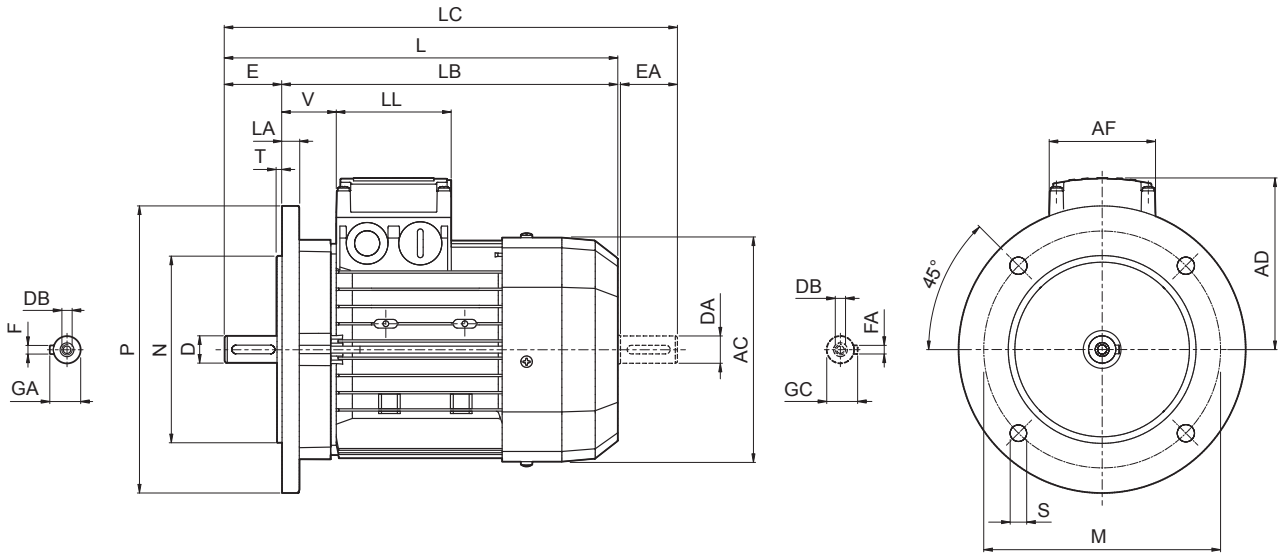
**BE-ME**



**M17 MOTORS DIMENSIONS BE-ME**

**BE - IM B5**

**BE-ME**



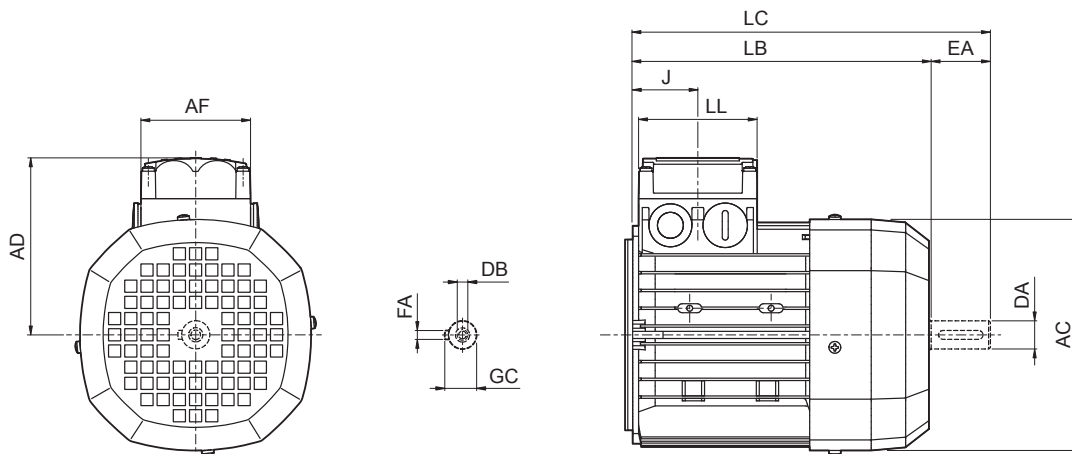
	Shaft					Flange					Motor									
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	
<b>BE 80</b>	19	40	M6	21.5	6							156	274	234	315	119	74	80	38	
<b>BE 90 S</b>	24	50	M8	27	8	165	130	200	11.5	3.5	11.5	176	326	276	378	133	98	98	44	
<b>BE 90 L</b>																				
<b>BE 100</b>	28	60	M10	31		215	180	250			14	195	367	307	429	142			50	
<b>BE 112</b>																				15
<b>BE 132 S</b>	38	80	M12	41	10	265	230	300	14	4	20	258	493	413	576	193	118	118	58	
<b>BE 132 MA</b>													528	448	611					
<b>BE 132 MB</b>																				
<b>BE 160 M</b>	42 38 <sup>(1)</sup>	110 80 <sup>(1)</sup>	M16 M12 <sup>(1)</sup>	45 41 <sup>(1)</sup>	12 10 <sup>(1)</sup>						15	310	596	486	680	245		187	187	
<b>BE 160 L</b>													640	530	724					
<b>BE 180 M</b>	48 42 <sup>(1)</sup>	110 110 <sup>(1)</sup>	M16 M16 <sup>(1)</sup>	51.5 45 <sup>(1)</sup>	14 12 <sup>(1)</sup>	300	250	350	18.5	5		18	348	708	598	823	261			52
<b>BE 180 L</b>																				

N.B.:

1) These values refer to the rear shaft end.

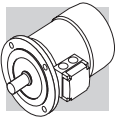


# ME



**BE-ME**

	Rear shaft end					Motor						
	DA	EA	DB	FA	GC	AC	LB	LC	AF	LL	J	AD
<b>ME 2S</b>	19	40	M6	6	21.5	156	202	245	74	80	44	119
<b>ME 3S</b>	28	60	M10	8	31	195	230	293	98	98	53.5	142
<b>ME 3L</b>							262	325				
<b>ME 4S</b>	38	80	M12	10	41	258	361	444	118	118	64.5	193
<b>ME 4L</b>							396	479				
<b>ME 4LB</b>												
<b>ME 5S</b>						310	418	502	187	187	77	245
<b>ME 5L</b>	462	546										

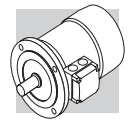


**M18 MOTOR RATING CHARTS BN-M**

2P		3000 min <sup>-1</sup> - S1														50 Hz									
		d.c. brake														a.c. brake									
		P <sub>n</sub> kW	Motor icon	n min <sup>-1</sup>	M <sub>n</sub> Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	Mod	M <sub>b</sub> Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	I <sub>Mod</sub>	M <sub>b</sub> Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>
FD	FA																								
0.18	BN 63A	2	2730	0.63	59.9	56.9	51.9	0.77	0.56	3.0	2.1	2.0	2.0	3.5	FD 02	1.75	3900	4800	2.6	5.2	FA 02	1.75	4800	2.6	5.0
0.25	BN 63B	2	2740	0.87	66.0	64.8	64.8	0.76	0.72	3.3	2.3	2.3	2.3	3.9	FD 02	1.75	3900	4800	3.0	5.6	FA 02	1.75	4800	3.0	5.4
0.37	BN 63C	2	2800	1.26	69.1	66.8	66.8	0.78	0.99	3.9	2.6	2.6	3.3	5.1	FD 02	3.5	3600	4500	3.9	6.8	FA 02	3.5	4500	3.9	6.6
0.37	BN 71A	2	2820	1.25	73.8	73.0	70.6	0.76	0.95	4.8	2.8	2.6	3.5	5.4	FD 03	3.5	3000	4100	4.6	8.1	FA 03	3.5	4200	4.6	7.8
0.55	BN 71B	2	2820	1.86	76.0	75.8	74.8	0.76	1.37	5.0	2.9	2.8	4.1	6.2	FD 03	5	2900	4200	5.3	8.9	FA 03	5	4200	5.3	8.6
0.75	BN 71C	2	2810	2.6	76.6	76.2	76.2	0.76	1.86	5.1	3.1	2.8	5.0	7.3	FD 03	5	1900	3300	6.1	10.0	FA 03	5	3600	6.1	9.7
0.75	BN 80A	2	2810	2.6	76.2	75.5	68.3	0.81	1.75	4.8	2.6	2.2	7.8	8.6	FD 04	5	1700	3200	9.4	12.5	FA 04	5	3200	9.4	12.4
1.1	BN 80B	2	2800	3.8	76.4	76.2	75.0	0.81	2.57	4.8	2.8	2.4	9.0	9.5	FD 04	10	1500	3000	10.6	13.4	FA 04	10	3000	10.6	13.3
1.5	BN 80C	2	2800	5.1	79.1	79.5	77.2	0.81	3.4	4.9	2.7	2.4	11.4	11.3	FD 04	15	1300	2600	13.0	15.2	FA 04	15	2600	13.0	15.1
1.5	BN 90SA	2	2870	5.0	82.0	81.5	78.1	0.80	3.4	5.9	2.7	2.6	12.5	12.3	FD 14	15	900	2200	14.1	16.5	FA 14	15	2200	14.1	16.4
1.85	BN 90SB	2	2880	6.1	82.5	82.0	75.4	0.80	4.0	6.2	2.9	2.6	16.7	14	FD 14	15	900	2200	18.3	18.2	FA 14	15	2200	18.3	18.1
2.2	BN 90L	2	2880	7.3	82.7	82.1	80.8	0.80	4.8	6.3	2.9	2.7	16.7	14	FD 05	26	900	2200	21	20	FA 05	26	2200	21	20.7
3	BN 100L	2	2860	10.0	81.5	81.3	77.4	0.79	6.7	5.6	2.6	2.2	31	20	FD 15	26	700	1600	35	26	FA 15	26	1600	35	27
4	BN 100LB	2	2870	13.3	83.1	83.0	77.8	0.80	8.7	5.8	2.7	2.5	39	23	FD 15	40	450	900	43	29	FA 15	40	1000	43	30
4	BN 112M	2	2900	13.2	85.5	84.5	83.0	0.82	8.2	6.9	3.0	2.9	57	28	FD 06S	40	—	950	66	39	FA 06S	40	950	66	40
5.5	BN 132SA	2	2890	18.2	84.7	84.5	81.2	0.84	11.2	5.9	2.6	2.2	101	35	FD 06	50	—	600	112	48	FA 06	50	600	112	49
7.5	BN 132SB	2	2900	25	86.5	86.3	84.4	0.85	14.7	6.4	2.6	2.2	145	42	FD 06	50	—	550	154	55	FA 06	50	550	154	56
9.2	BN 132M	2	2930	30	87.0	86.5	83.6	0.86	17.7	6.7	2.8	2.3	178	53	FD 06	75	—	430	189	66	FA 06	75	430	189	67
11	BN 160MR	2	2920	36	87.6	87.0	86.0	0.88	20.6	6.9	2.9	2.5	210	65	FD 06	50	—	600	112	48	FA 06	50	600	112	49
15	BN 160MB	2	2930	49	89.6	89.4	88.0	0.86	28.1	7.1	2.6	2.3	340	84	FD 06	50	—	550	154	55	FA 06	50	550	154	56
18.5	BN 160L	2	2930	60	90.4	90.1	89.0	0.86	34	7.6	2.7	2.3	420	97	FD 06	75	—	430	189	66	FA 06	75	430	189	67
22	BN 180M	2	2930	72	89.9	89.7	89.5	0.88	40	7.8	2.6	2.4	490	109	FD 06	75	—	430	189	66	FA 06	75	430	189	67
30	BN 200LA	2	2930	98	90.7	90.1	87.6	0.89	54	7.8	2.7	2.9	770	140	FD 06	75	—	430	189	66	FA 06	75	430	189	67

○ = n.a.    ● = IE1

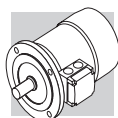




**4P** **1500 min<sup>-1</sup> - S1** **50 Hz**

P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake				a.c. brake							
															FD		FA		FD		FA					
															Mod	Mb Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	Mb Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 		
0.06	BN 56A	4	0.43	○	46.8	44.2	41.3	0.65	0.28	2.6	2.3	2.0	1.5	3.1												
0.09	BN 56B	4	0.64	○	51.7	47.6	42.9	0.60	0.42	2.6	2.5	2.4	1.5	3.1												
0.12	BN 63A	4	0.85	○	59.8	56.2	47.0	0.62	0.47	2.6	1.9	1.8	2.0	3.5	FD 02	1.75	13000	2.6	5.2	FA 02	1.75	13000	2.6	5.0		
0.18	BN 63B	4	1.30	○	54.8	52.9	52.5	0.67	0.71	2.6	2.2	2.0	2.3	3.9	FD 02	3.5	13000	3.0	5.6	FA 02	3.5	13000	3.0	5.4		
0.25	BN 63C	4	1.78	○	65.3	65.0	57.9	0.69	0.80	2.7	2.1	1.9	3.3	5.1	FD 02	3.5	10000	3.9	6.8	FA 02	3.5	10000	3.9	6.6		
0.25	BN 71A	4	1.73	○	63.7	62.2	59.1	0.73	0.78	3.3	1.9	1.7	5.8	5.1	FD 03	3.5	7700	6.9	7.8	FA 03	3.5	11000	6.9	7.5		
0.37	BN 71B	4	2.6	○	66.8	66.7	63.0	0.76	1.05	3.7	2.0	1.9	6.9	5.9	FD 03	5	6000	8.0	8.6	FA 03	5.0	9400	8.0	8.3		
0.55	BN 71C	4	3.8	○	69.0	68.9	68.8	0.74	1.55	4.1	2.3	2.3	9.1	7.3	FD 53	7.5	4300	10.2	10.0	FA 03	7.5	8700	10.2	9.7		
0.55	BN 80A	4	3.8	○	72.0	71.3	69.7	0.77	1.43	4.1	2.3	2.0	15	8.2	FD 04	10	4100	16.6	12.1	FA 04	10	8000	16.6	12.0		
0.75	BN 80B	4	5.1	●	75.0	74.5	69.3	0.78	1.85	4.9	2.7	2.5	20	9.9	FD 04	15	4100	22	13.8	FA 04	15	7800	22	13.7		
1.1	BN 80C	4	7.5	●	75.5	76.2	70.4	0.78	2.7	5.1	2.8	2.5	25	11.3	FD 04	15	2600	27	15.2	FA 04	15	5300	27	15.1		
1.1	BN 90S	4	7.6	●	76.5	76.2	72.2	0.77	2.70	4.6	2.6	2.2	21	12.2	FD 14	15	4800	23	16.4	FA 14	15	8000	23	16.3		
1.5	BN 90LA	4	10.2	●	78.7	78.5	74.9	0.77	3.6	5.3	2.8	2.4	28	13.6	FD 05	26	3400	32	19.6	FA 05	26	6000	32	20.3		
1.85	BN 90LB	4	12.7	●	78.6	78.9	77.2	0.79	4.3	5.1	2.8	2.6	30	15.1	FD 05	26	3200	34	21.1	FA 05	26	5900	34	21.8		
2.2	BN 100LA	4	14.9	●	81.1	81.4	79.9	0.75	5.2	4.5	2.2	2.0	40	18	FD 15	40	2600	44	25	FA 15	40	4700	44	25		
3	BN 100LB	4	20	●	82.6	83.8	83.7	0.77	6.8	5.0	2.3	2.2	54	22	FD 15	40	2400	58	28	FA 15	40	4400	58	29		
4	BN 112M	4	27	●	84.4	84.2	81.6	0.81	8.4	5.6	2.7	2.5	98	30	FD 06S	60	1400	107	40	FA 06S	60	2100	107	42		
5.5	BN 132S	4	36	●	84.7	84.8	82.5	0.81	11.6	5.5	2.3	2.2	213	44	FD 56	75	1050	223	57	FA 06	75	1200	223	58		
7.5	BN 132MA	4	50	●	86.0	86.3	85.3	0.81	15.5	5.7	2.5	2.4	270	53	FD 06	100	950	280	66	FA 07	100	1000	280	71		
9.2	BN 132MB	4	61	●	88.4	88.6	87.5	0.81	18.8	5.9	2.7	2.5	319	59	FD 07	150	900	342	75	FA 07	150	900	342	77		
11	BN 160MR	4	73	●	87.6	87.8	86.0	0.81	22.4	6.0	2.7	2.5	360	70	FD 07	150	850	382	86	FA 07	150	850	382	88		
15	BN 160L	4	98	●	88.7	88.5	88.4	0.81	30	6.0	2.3	2.1	650	99	FD 08	200	750	725	129	FA 08	200	750	710	128		
18.5	BN 180M	4	121	●	89.3	89.5	89.2	0.81	37	6.2	2.6	2.5	790	115	FD 08	250	700	865	145	FA 08	250	700	850	144		
22	BN 180L	4	144	●	89.9	90.0	90.0	0.80	44	6.4	2.5	2.5	1250	135	FD 09	300	400	1450	175	FA 08	250	700	850	144		
30	BN 200L	4	196	●	91.4	91.7	91.0	0.80	59	7.1	2.7	2.8	1650	157	FD 09	400	300	1850	197	FA 08	250	700	850	144		

○ = n.a. ● = IE1






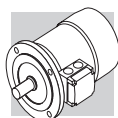
6P		1000 min <sup>-1</sup> - S1													50 Hz										
P <sub>n</sub> kW	Image	n min <sup>-1</sup>	M <sub>n</sub> Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	Is In %	Ms Mn %	Ma Mn %	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	d.c. brake					a.c. brake					
															FD		FA		FD		FA				
																Mod	Mb Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	Mod	Mb Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg
0.09	BN 63A	6	0.98	○	41.0	41.0	32.9	0.53	0.60	2.1	2.1	1.8	3.4	4.6	FD 02	3.5	9000	14000	4.0	6.3	FA 02	3.5	14000	4.0	6.1
0.12	BN 63B	6	1.32	○	45.0	44.0	41.8	0.60	0.64	2.1	1.9	1.7	3.7	4.9	FD 02	3.5	9000	14000	4.3	6.6	FA 02	3.5	14000	4.3	6.4
0.18	BN 71A	6	1.91	○	55.0	55.5	51.0	0.69	0.68	2.6	1.9	1.7	8.4	5.5	FD 03	5	8100	13500	9.5	8.2	FA 03	5.0	13500	9.5	7.9
0.25	BN 71B	6	2.70	○	62.0	58.5	51.4	0.71	0.82	2.6	1.9	1.7	10.9	6.7	FD 03	5	7800	13000	12	9.4	FA 03	5.0	13000	12	9.1
0.37	BN 71C	6	3.9	○	66.0	60.0	53.3	0.69	1.17	3.0	2.4	2.0	12.9	7.7	FD 53	7.5	5100	9500	14	10.4	FA 03	7.5	9500	14	10.1
0.37	BN 80A	6	3.9	○	68.0	67.4	63.3	0.68	1.15	3.2	2.2	2.0	21	9.9	FD 04	10	5200	8500	23	13.8	FA 04	10	8500	23	13.7
0.55	BN 80B	6	5.7	○	70.0	69.8	64.3	0.68	1.67	3.9	2.6	2.2	25	11.3	FD 04	15	4800	7200	27	15.2	FA 04	15	7200	27	15.1
0.75	BN 80C	6	7.8	●	70.0	70.0	64.4	0.65	2.38	3.8	2.5	2.2	28	12.2	FD 04	15	3400	6400	30	16.1	FA 04	15	6400	30	16.0
0.75	BN 90S	6	7.8	●	70.0	69.0	64.2	0.68	2.27	3.8	2.4	2.2	26	12.6	FD 14	15	3400	6500	28	16.8	FA 14	15	6500	28	16.7
1.1	BN 90L	6	11.4	●	72.9	72.6	69.1	0.69	3.2	3.9	2.3	2.0	33	15	FD 05	26	2700	5000	37	21	FA 05	26	5000	37	22
1.5	BN 100LA	6	15.2	●	75.2	74.2	70.3	0.72	4.0	4.1	2.1	2.0	82	22	FD 15	40	1900	4100	86	28	FA 15	40	4100	86	29
1.85	BN 100LB	6	19.0	●	76.6	72.8	62.6	0.73	4.8	4.6	2.1	2.0	95	24	FD 15	40	1700	3600	99	30	FA 15	40	3600	99	31
2.2	BN 112M	6	22	●	78.5	79.0	76.5	0.73	5.5	4.8	2.2	2.0	168	32	FD 06S	60	—	2100	177	42	FA 06S	60	2100	177	44
3	BN 132S	6	30	●	79.7	77.0	75.1	0.76	7.1	5.1	1.9	1.8	216	36	FD 56	75	—	1400	226	49	FA 06	75	1400	226	50
4	BN 132MA	6	40	●	81.4	81.5	79.5	0.77	9.2	5.5	2.0	1.8	295	45	FD 06	100	—	1200	305	58	FA 07	100	1200	318	63
5.5	BN 132MB	6	56	●	83.1	80.9	79.1	0.78	12.2	6.1	2.1	1.9	383	56	FD 07	150	—	1050	406	72	FA 07	150	1050	406	74
7.5	BN 160M	6	75	●	85.0	84.8	84.8	0.81	15.7	5.9	2.2	2.0	740	83	FD 08	170	—	900	815	112	FA 08	170	900	815	113
11	BN 160L	6	109	●	86.4	86.5	85.9	0.81	22.7	6.6	2.5	2.3	970	103	FD 08	200	—	800	1045	133	FA 08	200	800	1045	133
15	BN 180L	6	148	●	87.7	88.0	87.3	0.82	30	6.2	2.0	2.4	1550	130	FD 09	300	—	600	1750	170	FA 08	300	600	1750	170
18.5	BN 200LA	6	184	●	88.6	88.0	87.3	0.81	37	5.9	2.0	2.3	1700	145	FD 09	400	—	450	1900	185	FA 08	400	450	1900	185


○ = n.a.    ● = IE1



**8P**      **750 min-1 - S1**      **50 Hz**




P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	η %	cosφ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake						a.c. brake					
												FD			FA			FD			FA		
												Mod	Mb Nm	Z <sub>o</sub> 1/h	NB	SB	Mod	Mb Nm	Z <sub>o</sub> 1/h	IM B5 	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	Mod	Mb Nm
0.09	<b>BN 71A</b>	8	1.26	47	0.59	0.47	2.3	2.4	2.3	10.9	6.7	FD 03	3.5	9000	16000	12.0	9.4	FA 03	3.5	16000	12.0	9.1	
0.12	<b>BN 71B</b>	8	1.69	51	0.59	0.58	2.1	2.3	2.2	12.9	7.7	FD 03	5.0	9000	16000	14.0	10.4	FA 03	5.0	16000	14.0	10.1	
0.18	<b>BN 80A</b>	8	2.49	51	0.60	0.85	2.4	2.2	2.2	15	8.2	FD 04	5.0	6500	11000	16.6	12.1	FA 04	5.0	11000	16.6	12.0	
0.25	<b>BN 80B</b>	8	3.51	54	0.63	1.06	2.4	2.0	1.9	20	9.9	FD 04	10.0	6000	10000	22	13.8	FA 04	10.0	10000	23	13.7	
0.37	<b>BN 90S</b>	8	5.2	58	0.60	1.53	2.6	2.3	2.1	26	12.6	FD 14	15.0	4800	7500	28	16.8	FA 14	15.0	7500	28	16.7	
0.55	<b>BN 90L</b>	8	7.8	62	0.60	2.13	2.6	2.2	2.0	33	15	FD 05	26	4000	6400	37	21	FA 05	26	6400	37	22	
0.75	<b>BN 100LA</b>	8	10.2	68	0.63	2.53	3.4	1.9	1.7	82	22	FD 15	26	2800	4800	86	28	FA 15	26	4800	86	29	
1.1	<b>BN 100LB</b>	8	15.0	68	0.64	3.65	3.2	1.7	1.7	95	24	FD 15	40	2500	4000	99	30	FA 15	40	4000	99	31	
1.5	<b>BN 112M</b>	8	20.2	71	0.66	4.6	3.7	1.8	1.9	168	32	FD 06S	60	—	3000	177	42	FA 06S	60	3000	177	44	
2.2	<b>BN 132S</b>	8	29.6	75	0.66	6.4	3.8	1.8	2.0	295	45	FD 56	75	—	2300	305	58	FA 06	75	2300	305	56	
3	<b>BN 132MA</b>	8	40.4	76	0.69	8.3	3.9	1.6	1.8	370	53	FD 06	100	—	1900	394	69	FA 07	100	1900	406	74	

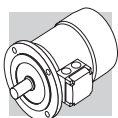






2/4P		3000/1500 min <sup>-1</sup> - S1														50 Hz													
		d.c. brake														a.c. brake													
		FD							FA							FD							FA						
P <sub>n</sub>		n	M <sub>n</sub>	η	cos φ	I <sub>n</sub>	I <sub>s</sub>	M <sub>s</sub>	M <sub>a</sub>	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>0</sub>	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>0</sub>	J <sub>m</sub>	IM B5								
kW		min <sup>-1</sup>	Nm	%		A	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	$\times 10^{-4}$ kgm <sup>2</sup>	$\frac{kg}{kg}$		Nm	1/h	$\times 10^{-4}$ kgm <sup>2</sup>	$\frac{kg}{kg}$		Nm	1/h	$\times 10^{-4}$ kgm <sup>2</sup>	$\frac{kg}{kg}$								
0.20	BN 63B	2	0.71	55	0.82	0.64	3.5	2.1	1.9	2.9	4.4	FD 02	3.5	2200	3.5	6.1	FA 02	3.5	2600	3.5	3.5	5.9							
0.15		4	1.350	49	0.67	0.66	2.6	1.8	1.7				4000	5100					5100										
0.28	BN 71A	2	0.99	56	0.82	0.88	2.9	1.9	1.7	4.7	4.4	FD 03	3.5	2100	5.8	7.1	FA 03	3.5	2400	5.8	5.8	6.8							
0.20		4	1.370	59	0.72	0.68	3.1	1.8	1.7				3800	4800					4800										
0.37	BN 71B	2	1.29	56	0.82	1.16	3.5	1.8	1.8	5.8	5.1	FD 03	5.0	1400	6.9	7.8	FA 03	5.0	2100	6.9	6.9	7.5							
0.25		4	1.390	60	0.73	0.82	3.3	2.0	1.9				2900	4200					4200										
0.45	BN 71C	2	1.55	63	0.85	1.21	3.8	1.8	1.8	6.9	5.9	FD 03	5.0	1400	8.0	8.6	FA 03	5.0	2100	8.0	8.0	8.3							
0.30		4	1.400	63	0.73	0.94	3.6	2.0	1.9				2800	4200					4200										
0.55	BN 80A	2	1.9	63	0.85	1.48	3.9	1.7	1.7	15	8.2	FD 04	5.0	1600	17	12.1	FA 04	5.0	2300	17	16.6	12.0							
0.37		4	1.400	67	0.79	1.01	4.1	1.8	1.9				3000	4000					4000										
0.75	BN 80B	2	2.6	65	0.85	1.96	3.8	1.9	1.8	20	9.9	FD 04	10	1400	22	13.8	FA 04	10	1600	22	22	13.7							
0.55		4	1.400	68	0.81	1.44	3.9	1.7	1.7				2700	3600					3600										
1.1	BN 90S	2	3.8	71	0.82	2.73	4.7	2.3	2.0	21	12.2	FD 14	10	1500	23	16.4	FA 14	10	1600	23	23	16.3							
0.75		4	1.390	66	0.79	2.08	4.6	2.4	2.2				2300	2800					2800										
1.5	BN 90L	2	5.2	70	0.85	3.64	4.5	2.4	2.1	28	14.0	FD 05	26	1050	32	20	FA 05	26	1200	32	32	21							
1.1		4	1.390	73	0.81	2.69	4.7	2.5	2.2				1600	2000					2000										
2.2	BN 100LA	2	7.5	72	0.85	5.2	4.5	2.0	1.9	40	18.3	FD 15	26	600	44	25	FA 15	26	900	44	44	25							
1.5		4	1.410	73	0.79	3.8	4.7	2.0	2.0				1300	2300					2300										
3.5	BN 100LB	2	11.7	80	0.84	7.5	5.4	2.2	2.1	61	25	FD 15	40	500	65	31	FA 15	40	900	65	65	32							
2.5		4	1.420	82	0.80	5.5	5.2	2.2	2.2				1000	2100					2100										
4	BN 112M	2	13.3	79	0.83	8.8	6.1	2.4	2.0	98	30	FD 06S	60	—	107	40	FA 06S	60	700	107	107	42							
3.3		4	1.420	80	0.80	7.4	5.1	2.1	2.0				—	1200					1200										
5.5	BN 132S	2	18.2	80	0.87	11.4	5.9	2.4	2.0	213	44	FD 56	75	—	223	57	FA 06	75	350	223	223	58							
4.4		4	1.440	82	0.84	9.2	5.3	2.2	2.0				—	900					900										
7.5	BN 132MA	2	25	82	0.87	15.2	6.5	2.4	2.0	270	53	FD 06	100	—	280	66	FA 07	100	350	280	293	71							
6		4	1.430	84	0.85	12.1	5.8	2.3	2.1				—	900					900										
9.2	BN 132MB	2	30	83	0.86	18.6	6.0	2.6	2.2	319	59	FD 07	150	—	342	75	FA 07	150	300	342	342	77							
7.3		4	1.440	85	0.85	14.6	5.5	2.3	2.1				—	800					800										

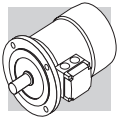


**2/6P**      **3000/1000 min<sup>-1</sup> - S3 60/40%**      **50 Hz**

P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	η %	cosφ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake						a.c. brake					
												FD			FA			FD			FA		
												Mod	Mb Nm	Z <sub>0</sub> 1/h	NB	SB	Mod	Mb Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	Mb Nm
0.25	<b>BN 71A</b>	2850	0.84	60	0.82	0.73	4.3	1.9	1.8	6.9	5.9	<b>FD 03</b>	1.75	1500	1700	8.0	8.6	<b>FA 03</b>	2.5	1700	8.0	8.3	
0.08		910	0.84	43	0.70	0.38	2.1	1.4	1.5					10000	13000								
0.37	<b>BN 71B</b>	2880	1.23	62	0.80	1.08	4.4	1.9	1.8	9.1	7.3	<b>FD 03</b>	3.5	1000	1300	10.2	10.0	<b>FA 03</b>	3.5	1300	10.2	9.7	
0.12		900	1.27	44	0.73	0.54	2.4	1.4	1.5					9000	11000								
0.55	<b>BN 80A</b>	2800	1.88	63	0.86	1.47	4.5	1.9	1.7	20	9.9	<b>FD 04</b>	5.0	1500	1800	22	13.8	<b>FA 04</b>	5.0	1800	22	13.7	
0.18		930	1.85	52	0.65	0.77	3.3	2.0	1.9					4100	6300								
0.75	<b>BN 80B</b>	2800	2.6	66	0.87	1.89	4.3	1.8	1.6	25	11.3	<b>FD 04</b>	5.0	1700	1900	27	15.2	<b>FA 04</b>	5.0	1900	27	15.1	
0.25		930	2.6	54	0.67	1.00	3.2	1.7	1.8					3800	6000								
1.10	<b>BN 90L</b>	2860	3.7	67	0.84	2.82	4.7	2.1	1.9	28	14.0	<b>FD 05</b>	13	1400	1600	32	20	<b>FA 05</b>	13	1600	32	21	
0.37		920	3.8	59	0.71	1.27	3.3	1.6	1.6					3400	5200								
1.5	<b>BN 100LA</b>	2880	5	73	0.84	3.53	5.1	1.9	2.0	40	18.3	<b>FD 15</b>	13	1000	1200	44	24	<b>FA 15</b>	13	1200	44	25	
0.55		940	5.6	64	0.67	1.85	3.5	1.7	1.8					2900	4000								
2.2	<b>BN 100LB</b>	2900	7.2	77	0.85	4.9	5.9	2.0	2.0	61	25	<b>FD 15</b>	26	700	900	65	31	<b>FA 15</b>	26	900	65	32	
0.75		950	7.5	67	0.64	2.5	3.3	1.9	1.8					2100	3000								
3	<b>BN 112M</b>	2900	9.9	78	0.87	6.4	6.3	2.0	2.1	98	30	<b>FD 06S</b>	40	—	1000	107	40	<b>FA 06S</b>	40	1000	107	32	
1.1		950	11.1	72	0.64	3.4	3.9	1.8	1.8					—	2600								
4.5	<b>BN 132S</b>	2910	14.8	78	0.84	9.9	5.8	1.9	1.8	213	44	<b>FD 66</b>	37	—	500	223	57	<b>FA 06</b>	37	500	223	58	
1.5		960	14.9	74	0.67	4.4	4.2	1.9	2.0					—	2100								
5.5	<b>BN 132M</b>	2920	18.0	78	0.87	11.7	6.2	2.1	1.9	270	53	<b>FD 66</b>	50	—	400	280	66	<b>FA 06</b>	50	400	280	67	
2.2		960	22	77	0.71	5.8	4.3	2.1	2.0					—	1900								

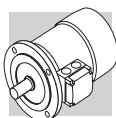


2/8P		3000/750 min <sup>-1</sup> - S3 60/40%														50 Hz						
		d.c. brake														a.c. brake						
		FD							FA							FA		FA				
P <sub>n</sub>		n	M <sub>n</sub>	η	cosφ	I <sub>n</sub>	I <sub>s</sub>	M <sub>s</sub>	M <sub>a</sub>	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>o</sub>	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>o</sub>	J <sub>m</sub>	IM B5	
kW		min <sup>-1</sup>	Nm	%		A	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	x 10 <sup>-4</sup> kgm <sup>2</sup>			Nm	1/h	kgm <sup>2</sup>			Nm	1/h	kgm <sup>2</sup>		
0.25	BN 71A	2	0.86	61	0.87	0.68	3.9	1.8	1.9	10.9	6.7	FD 03	1.75	1300	12	9.4	FA 03	2.5	1400	12	9.1	
0.06		8	0.84	31	0.61	0.46	2.0	1.8	1.9		10000			13000					13000			
0.37	BN 71B	2	1.26	63	0.86	0.99	3.9	1.8	1.9	12.9	7.7	FD 03	3.5	1200	14	10.4	FA 03	3.5	1300	14	10.1	
0.09		8	1.28	34	0.75	0.51	1.8	1.4	1.5		9500			13000					13000			
0.55	BN 80A	2	1.86	66	0.86	1.40	4.4	2.1	2.0	20	9.9	FD 04	5.0	1500	22	13.8	FA 04	5.0	1800	22	13.7	
0.13		8	1.80	41	0.64	0.72	2.3	1.6	1.7		5600			8000					8000			
0.75	BN 80B	2	2.6	68	0.88	1.81	4.6	2.1	2.0	25	11.3	FD 04	10	1700	27	15.2	FA 04	10	1900	27	15.1	
0.18		8	2.5	43	0.66	0.92	2.3	1.6	1.7		4800			7300					7300			
1.10	BN 90L	2	3.7	63	0.84	3.00	4.5	2.1	1.9	28	14.0	FD 05	13	1400	32	20	FA 05	13	1600	32	21	
0.28		8	3.9	48	0.63	1.34	2.4	1.8	1.9		3400			5100					5100			
1.5	BN 100LA	2	5.0	69	0.85	3.69	4.7	1.9	1.8	40	18.3	FD 15	13	1000	44	25	FA 15	13	1200	44	25	
0.37		8	5.1	46	0.63	1.84	2.1	1.6	1.6		3300			5000					5000			
2.4	BN 100LB	2	7.9	75	0.82	5.6	5.4	2.1	2.0	61	25	FD 15	26	550	65	31	FA 15	26	700	65	32	
0.55		8	7.5	54	0.58	2.5	2.6	1.8	1.8		2000			3500					3500			
3	BN 112M	2	9.9	76	0.87	6.5	6.3	2.1	1.9	98	30	FD 06S	40	—	107	40	FA 06S	40	900	107	42	
0.75		8	10.4	60	0.65	2.8	2.5	1.6	1.6		—			2900					2900			
4	BN 132S	2	13.3	73	0.84	9.4	5.6	2.3	2.4	213	44	FD 66	37	—	223	57	FA 06	37	500	223	58	
1		8	13.8	66	0.62	3.5	2.9	1.9	1.8		—			3500					3500			
5.5	BN 132M	2	18.3	75	0.84	12.6	6.1	2.4	2.5	270	53	FD 06	50	—	280	66	FA 06	50	400	280	67	
1.5		8	21	68	0.63	5.1	2.9	1.9	1.9		—			2400					2400			



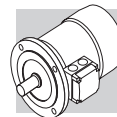
**2/12P**      **3000/500 min<sup>-1</sup> - S3 60/40%**      **50 Hz**

P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	η	cos φ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake							a.c. brake				
												FD				FA			FD				FA
												Mod	Mb Nm	Z <sub>o</sub> 1/h	NB	SB	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	Mb Nm	Z <sub>o</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 
0.55 0.09	<b>BN 80B</b>	2 12	1.86 2.0	64 30	0.89 0.63	1.39 0.69	4.2 1.8	1.6 1.9	1.7 1.8	25	11.3	<b>FD 04</b>	5.0	1000 8000	1300 12000	27	15.2	<b>FA 04</b>	5.0	1300 12000	27	15.1	
0.75 0.12	<b>BN 90L</b>	2 12	2.6 2.7	56 26	0.89 0.63	2.17 1.06	4.2 1.7	1.8 1.4	1.7 1.6	26	12.6	<b>FD 05</b>	13	1000 4600	1150 6300	30	18.6	<b>FA 05</b>	13	1150 6300	30	19.3	
1.10 0.18	<b>BN 100LA</b>	2 12	3.7 4.0	65 26	0.85 0.54	2.87 1.85	4.5 1.5	1.6 1.3	1.8 1.5	40	18.3	<b>FD 15</b>	13	700 4000	900 6000	44	25	<b>FA 15</b>	13	900 6000	44	25	
1.5 0.25	<b>BN 100LB</b>	2 12	4.9 5.4	67 36	0.86 0.46	3.76 2.18	5.6 1.8	1.9 1.7	1.9 1.8	54	22	<b>FD 15</b>	13	700 3800	900 5000	58	28	<b>FA 15</b>	13	900 5000	58	29	
2 0.3	<b>BN 112M</b>	2 12	6.6 6.2	74 46	0.88 0.43	4.43 2.19	6.5 2.0	2.1 2.1	2.0 2.0	98	30	<b>FD 06S</b>	20	— —	800 3400	— —	107	40	<b>FA 06S</b>	20	800 3400	107	42
3 0.5	<b>BN 132S</b>	2 12	9.8 10.2	74 51	0.87 0.43	6.7 3.3	6.8 2.0	2.3 1.7	1.9 1.6	213	44	<b>FD 56</b>	37	— —	450 3000	— —	223	57	<b>FA 06</b>	37	450 3000	223	58
4 0.7	<b>BN 132M</b>	2 12	13.1 14.5	75 53	0.89 0.44	8.6 4.3	5.9 1.9	2.4 1.7	2.3 1.6	270	53	<b>FD 56</b>	37	— —	400 2800	— —	280	66	<b>FA 06</b>	37	400 2800	280	67






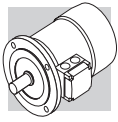
4/6P		1500/1000 min <sup>-1</sup> - S1														50 Hz										
		d.c. brake														a.c. brake										
		FD							FA							FA		FA								
P <sub>n</sub>	kW	P <sub>n</sub>	n	M <sub>n</sub>	η	cos φ	I <sub>n</sub>	I <sub>n</sub>	I <sub>s</sub>	M <sub>s</sub>	M <sub>a</sub>	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>0</sub>	1/h	SB	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>0</sub>	1/h	J <sub>m</sub>	IM B5
400V																										
0.22	0.13	4	1410	1.5	64	0.74	0.67	3.9	1.8	1.9	9.1	7.3	FD 03	3.5	2500	3500	3500	10.2	10.2	10.0	FA 03	3.5	3500	3500	10.2	10.2
		6	920	1.4	43	0.67	0.65	2.3	1.6	1.7					5000	9000	9000						9000			
0.30	0.20	4	1410	2.0	61	0.82	0.87	3.5	1.3	1.5	15	8.2	FD 04	5.0	2500	3100	3100	16.6	16.6	12.1	FA 04	5.0	3100	3100	16.6	16.6
		6	930	2.1	54	0.66	0.81	3.2	1.9	2.0					4000	6000	6000						6000			
0.40	0.26	4	1430	2.7	63	0.75	1.22	3.9	1.8	1.8	20	9.9	FD 04	10	1800	2300	2300	22	22	13.8	FA 04	10	2300	2300	22	22
		6	930	2.7	55	0.70	0.97	2.7	1.5	1.6					3600	5500	5500						5500			
0.55	0.33	4	1420	3.7	70	0.78	1.45	4.5	2.0	1.9	21	12.2	FD 14	10	1500	2100	2100	23	23	16.1	FA 14	10	2100	2100	23	23
		6	930	3.4	62	0.70	1.10	3.7	2.3	2.0					2500	4100	4100						4100			
0.75	0.45	4	1420	5.0	74	0.78	1.88	4.3	1.9	1.8	28	14	FD 05	13	1400	2000	2000	32	32	20	FA 05	13	2000	2000	32	32
		6	920	4.7	66	0.71	1.39	3.3	2.0	1.9					2300	3600	3600						3600			
1.1	0.8	4	1450	7.2	74	0.79	2.72	5.0	1.7	1.9	82	22	FD 15	26	1400	2000	2000	86	86	28	FA 15	26	2000	2000	86	86
		6	950	8.0	65	0.69	2.57	4.1	1.9	2.1					2100	3300	3300						3300			
1.5	1.1	4	1450	9.9	75	0.79	3.65	5.1	1.7	1.9	95	25	FD 15	26	1300	1800	1800	99	99	31	FA 15	26	1800	1800	99	99
		6	950	11.1	72	0.68	3.24	4.3	2.0	2.1					2000	3000	3000						3000			
2.3	1.5	4	1450	15.2	75	0.78	5.7	5.2	1.8	1.9	168	32	FD 06S	40	—	—	—	177	177	42	FA 06S	40	1600	1600	177	177
		6	960	14.9	73	0.72	4.1	4.9	2.0	2.0					—	—	—	2400	2400				2400			
3.1	2	4	1460	20	83	0.83	6.5	5.9	2.1	2.0	213	44	FD 06	37	—	—	—	223	223	57	FA 06	37	1200	1200	223	223
		6	960	20	77	0.75	4.9	4.5	2.1	2.1					—	—	—	1900	1900				1900			
4.2	2.6	4	1460	27	84	0.82	8.8	5.9	2.1	2.2	270	53	FD 06	50	—	—	—	280	280	66	FA 06	50	900	900	280	280
		6	960	26	79	0.72	6.6	4.3	2.0	2.0					—	—	—	1500	1500				1500			






**4/8P** **1500/750 min<sup>-1</sup> - S1** **50 Hz**

P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	η %	cos φ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	d.c. brake						a.c. brake					
											FD						FA					
											Mod	Mb Nm	Z <sub>0</sub> 1/h	NB	SB	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	Mb Nm	Z <sub>0</sub> 1/h	IM B5 	Mod
0.37	<b>BN 80A</b>	4	2.5	63	0.82	1.03	3.3	1.4	1.4	15	8.2	<b>FD 04</b>	10	2300	3500	16.6	12.1	<b>FA 04</b>	10	3500	16.6	12.0
0.18		8	2.5	44	0.60	0.98	2.2	1.5	1.6					4500	7000					7000		
0.55	<b>BN 80B</b>	4	3.8	65	0.86	1.42	3.8	1.7	1.6	20	9.9	<b>FD 04</b>	10	2200	2900	22	13.8	<b>FA 04</b>	10	2900	22	13.7
0.30		8	4.3	49	0.65	1.36	2.3	1.7	1.8					4200	6500					6500		
0.65	<b>BN 90S</b>	4	4.5	73	0.85	1.51	4.0	1.9	1.9	28	13.6	<b>FD 14</b>	15	2300	2800	30	17.8	<b>FA 14</b>	15	2800	30	17.7
0.35		8	4.8	49	0.57	1.81	2.5	2.1	2.2					3500	6000					6000		
0.9	<b>BN 90L</b>	4	6.3	73	0.87	2.05	3.8	1.8	1.8	30	15.1	<b>FD 05</b>	26	1700	2100	34	21	<b>FA 05</b>	26	2100	34	22
0.5		8	7.1	57	0.62	2.04	2.4	2.1	2.0					2500	4200					4200		
1.30	<b>BN 100LA</b>	4	8.7	72	0.83	3.14	4.3	1.7	1.8	82	22	<b>FD 15</b>	40	1300	1700	86	28	<b>FA 15</b>	40	1700	86	29
0.70		8	9.6	58	0.64	2.72	2.8	1.8	1.8					2000	3400					3400		
1.8	<b>BN 100LB</b>	4	12.1	69	0.87	4.3	4.2	1.6	1.7	95	25	<b>FD 15</b>	40	1200	1700	99	31	<b>FA 15</b>	40	1700	99	32
0.9		8	12.3	62	0.63	3.3	3.2	1.7	1.8					1600	2600					2600		
2.2	<b>BN 112M</b>	4	14.6	77	0.85	4.9	5.3	1.8	1.8	168	32	<b>FD 06S</b>	60	—	—	177	42	<b>FA 06S</b>	60	1200	177	43
1.2		8	16.1	70	0.63	3.9	3.3	1.9	1.8					—	—					2000		
3.6	<b>BN 132S</b>	4	24	80	0.82	7.9	6.5	2.1	1.9	295	45	<b>FD 56</b>	75	—	—	305	58	<b>FA 06</b>	75	1000	305	59
1.8		8	24	72	0.55	6.6	4.6	1.9	2.0					—	—					1400		
4.6	<b>BN 132M</b>	4	30	81	0.83	9.9	6.5	2.2	1.9	383	56	<b>FD 06</b>	100	—	—	393	69	<b>FA 07</b>	100	1000	393	74
2.3		8	31	73	0.54	8.4	4.4	2.3	2.0					—	—					1300		







2P		3000 min <sup>-1</sup> - S1																		50 Hz											
		d.c. brake																		a.c. brake											
		FD									IM B5									FA											
P <sub>n</sub>		n	M <sub>n</sub>	IE1	η (100%)	η (75%)	η (50%)	cosφ	In	In	Is	Ms	Mia	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>c</sub>	1/h	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>c</sub>	1/h	J <sub>m</sub>	IM B5				
kW		min <sup>-1</sup>	Nm		%	%	%		A	A				kgm <sup>2</sup>	kg		Nm			kgm <sup>2</sup>	kg		Nm			kgm <sup>2</sup>	kg				
0.18	M 05A	2	2730	0.63	○	59.9	56.9	51.9	0.77	0.56	3.0	2.1	2.0	2.0	3.2	FD 02	1.75	3900	4800	2.6	4.9	FA 02	1.75	4800	2.6	4.7					
0.25	M 05B	2	2740	0.87	○	66.0	64.8	64.8	0.76	0.72	3.3	2.3	2.3	2.3	3.6	FD 02	1.75	3900	4800	3.0	5.3	FA 02	1.75	4800	3.0	5.1					
0.37	M 05C	2	2800	1.26	○	69.1	66.8	66.8	0.78	0.99	3.9	2.6	2.6	3.3	4.8	FD 02	3.5	3600	4500	3.9	6.5	FA 02	3.5	4500	3.9	6.3					
0.55	M 15D	2	2820	1.86	○	76.0	75.8	74.8	0.76	1.37	5.0	2.9	2.8	4.1	5.8	FD 03	5	2900	4200	5.3	8.5	FA 03	5	4200	5.3	8.2					
0.75	M 15A	2	2810	2.6	○	76.6	76.2	76.2	0.76	1.86	5.1	3.1	2.8	5.0	6.9	FD 03	5	1900	3300	6.1	9.6	FA 03	5	3300	6.1	9.3					
1.1	M 25A	2	2800	3.8	●	76.4	76.2	75.0	0.81	2.57	4.8	2.8	2.4	9.0	8.8	FD 04	10	1500	3000	10.6	11.9	FA 04	10	3000	10.6	12.6					
1.5	M 25B	2	2800	5.1	●	79.1	79.5	77.2	0.81	3.4	4.9	2.7	2.4	11.4	10.6	FD 04	15	1300	2600	13.0	9.9	FA 04	15	2600	13.0	14.4					
2.2	M 35A	2	2880	7.3	●	82.7	82.1	81.0	0.80	4.8	6.3	2.9	2.7	24	15.5	FD 15	26	1100	2400	28	22	FA 15	26	2400	28	23					
3	M 35LA	2	2860	10.0	●	81.5	81.3	77.4	0.79	6.7	5.6	2.6	2.2	31	18.7	FD 15	26	700	1600	35	25	FA 15	26	1600	35	26					
4	M 35LB	2	2870	13.3	●	83.1	83.0	77.8	0.80	8.7	5.8	2.7	2.5	39	22	FD 15	40	450	900	43	28	FA 15	40	900	43	29					
5.5	M 45A	2	2890	18.2	●	84.7	84.5	81.2	0.84	11.2	5.9	2.6	2.2	101	33	FD 06	50	—	600	112	46	FA 06	50	600	112	47					
7.5	M 45B	2	2900	25	●	86.5	86.3	84.4	0.85	14.7	6.4	2.6	2.2	145	40	FD 06	50	—	550	154	53	FA 06	50	550	154	54					
9.2	M 45LA	2	2930	30	●	87.0	86.5	83.6	0.86	17.7	6.7	2.8	2.3	178	51	FD 06	75	—	430	189	64	FA 06	75	430	189	65					
11	M 45LC	2	2920	36	●	87.6	87.0	86.0	0.88	20.6	6.9	2.9	2.5	210	60	FD 06	75	—	—	—	—	—	—	—	—	—	—	—			
15	M 55B	2	2930	49	●	89.6	89.4	88.0	0.86	28.1	7.1	2.6	2.3	340	70	FD 06	75	—	—	—	—	—	—	—	—	—	—	—	—		
18.5	M 55C	2	2930	60	●	90.4	90.1	89.0	0.86	34	7.6	2.7	2.3	420	83	FD 06	75	—	—	—	—	—	—	—	—	—	—	—	—	—	
22	M 55LA	2	2930	72	●	89.9	89.7	89.5	0.88	40	7.8	2.6	2.4	490	95	FD 06	75	—	—	—	—	—	—	—	—	—	—	—	—	—	—

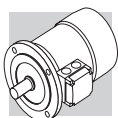
○ = n.a.    ● = IE1



**4P** **1500 min<sup>-1</sup> - S1** **50 Hz**

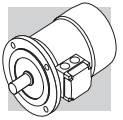
P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	Is In %	Ms Mn %	Ma Mn %	d.c. brake						a.c. brake								
													FD			FA			FD			FA					
													Mod	Mb Nm	Z <sub>c</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	Mb Nm	Z <sub>c</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	Mb Nm	Z <sub>c</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 
0.09	M 0B	4	1350	0.64	○	51.7	47.6	42.9	0.60	0.42	2.6	2.5	2.4	1.5	2.9	IM B5	FD 02	1.75	10000	13000	2.6	4.9	FA 02	1.75	13000	2.6	4.7
0.12	M 05A	4	1350	0.85	○	59.8	56.2	47.0	0.62	0.47	2.6	1.9	1.8	2.0	3.2	IM B5	FD 02	3.5	10000	13000	3.0	5.3	FA 02	3.5	13000	3.0	5.1
0.18	M 05B	4	1320	1.30	○	54.8	52.9	52.5	0.67	0.71	2.6	2.2	2.0	2.3	3.6	IM B5	FD 02	3.5	7800	10000	3.9	6.5	FA 02	3.5	10000	3.9	6.3
0.25	M 05C	4	1340	1.78	○	65.3	65.0	57.9	0.69	0.80	2.7	2.1	1.9	3.3	4.8	IM B5	FD 02	5	6000	9400	8.0	8.2	FA 03	5	9400	8.0	7.9
0.37	M 15D	4	1370	2.6	○	66.8	66.7	63.0	0.76	1.05	3.7	2.0	1.9	6.9	5.5	IM B5	FD 03	7.5	4300	8700	10.2	9.6	FA 03	7.5	8700	10.2	9.3
0.55	M 1LA	4	1380	3.8	○	69.0	68.9	68.8	0.74	1.55	4.1	2.3	2.3	9.1	6.9	IM B5	FD 53	15	4100	7800	22	13.1	FA 04	15	7800	22	13.0
0.75	M 25A	4	1400	5.1	●	75.0	74.5	69.3	0.78	1.85	4.9	2.7	2.5	20	9.2	IM B5	FD 04	15	2600	5300	27	14.5	FA 04	15	5300	27	14.4
1.1	M 25B	4	1400	7.5	●	76.4	76.2	70.4	0.78	2.66	5.1	2.8	2.5	25	10.6	IM B5	FD 04	26	2800	4900	38	22	FA 15	26	4900	38	23
1.5	M 35A	4	1410	10.2	●	79.6	80.5	79.3	0.77	3.5	4.6	2.1	2.1	34	15.5	IM B5	FD 15	40	2600	4700	44	24	FA 15	40	4700	44	24
2.2	M 3LA	4	1410	14.9	●	81.1	81.4	79.9	0.75	5.2	4.5	2.2	2.0	40	17	IM B5	FD 15	40	2400	4400	58	27	FA 15	40	4400	58	28
3	M 3LB	4	1410	20	●	82.6	83.8	83.7	0.77	6.8	5.0	2.3	2.2	54	21	IM B5	FD 15	55	—	1300	65	29	FA 15	40	1300	65	30
4	M 3LC	4	1400	27	○	82.7	83.1	80.5	0.78	9.0	4.7	2.3	2.2	61	23	IM B5	FD 55	75	—	1050	223	55	FA 06	75	1050	223	56
5.5	M 45A	4	1440	36	●	84.7	84.8	82.5	0.81	11.6	5.5	2.3	2.2	213	42	IM B5	FD 56	100	—	950	280	64	FA 07	100	950	280	65
7.5	M 4LA	4	1440	50	●	86.0	86.3	85.3	0.81	15.5	5.7	2.5	2.4	270	51	IM B5	FD 06	150	—	900	342	73	FA 07	150	900	342	75
9.2	M 4LB	4	1440	61	●	88.4	88.6	87.5	0.81	18.8	5.9	2.7	2.5	319	57	IM B5	FD 07	150	—	850	382	81	FA 07	150	850	382	83
11	M 4LC	4	1440	73	●	87.6	87.8	86.0	0.81	22.4	6.0	2.7	2.5	360	65	IM B5	FD 07	200	—	750	710	115	FA 08	200	750	710	114
15	M 55B	4	1460	98	●	88.7	88.5	88.4	0.81	30.1	6.0	2.3	2.1	650	85	IM B5	FD 08	250	—	700	865	131	FA 08	250	700	850	130
18.5	M 5LA	4	1460	121	●	89.3	89.5	89.2	0.81	37	6.2	2.6	2.5	790	101	IM B5	FD 08										

○ = n.a.      ● = IE1

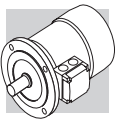



6P		1000 min <sup>-1</sup> - S1														50 Hz																										
P <sub>n</sub> kW	Image	n min <sup>-1</sup>	M <sub>n</sub> Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake														a.c. brake													
															FD							FA							FD							FA						
															Mod	M <sub>b</sub> Nm	Z <sub>0</sub> 1/h	NB	SB	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	M <sub>b</sub> Nm	Z <sub>0</sub> 1/h	IM B5 	Mod	M <sub>b</sub> Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	M <sub>b</sub> Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 							
0.09	M 05A	6	0.98	○	41.0	41.0	32.9	0.53	0.60	2.1	2.1	1.8	3.4	4.3	FD 02	3.5	9000	14000	—	—	4.0	6.0	FA 02	3.5	14000	4.0	5.8															
0.12	M 05B	6	1.32	○	45.0	44.0	41.8	0.60	0.64	2.1	1.9	1.7	3.7	4.6	FD 02	3.5	9000	14000	—	—	4.3	6.3	FA 02	3.5	14000	4.3	6.1															
0.18	M 15C	6	1.91	○	55.0	55.5	51.0	0.69	0.68	2.6	1.9	1.7	8.4	5.1	FD 03	5	8100	13500	—	—	9.5	7.8	FA 03	5	13500	9.5	7.5															
0.25	M 15D	6	2.7	○	62.0	58.5	51.4	0.71	0.82	2.6	1.9	1.7	10.9	6.3	FD 03	5	7600	13000	—	—	12	9.0	FA 03	5	13000	12	8.7															
0.37	M 1LA	6	3.9	○	66.0	60.0	53.3	0.69	1.17	3.0	2.4	2.0	12.9	7.3	FD 53	7.5	5100	9500	—	—	14	10.0	FA 03	7.5	9500	14	9.7															
0.55	M 25A	6	5.7	○	70.0	69.8	64.3	0.68	1.67	3.9	2.6	2.2	25	10.6	FD 04	15	4800	7200	—	—	27	14.5	FA 04	15	7200	27	14.4															
0.75	M 25B	6	7.8	●	70.0	70.0	64.4	0.65	2.38	3.8	2.5	2.2	28	11.5	FD 04	15	3400	6400	—	—	30	15.4	FA 04	15	6400	30	15.3															
1.1	M 35A	6	11.4	●	75.0	74.0	72.0	0.72	2.9	4.3	2.0	1.8	33	17	FD 15	26	2700	5000	—	—	37	23	FA 15	26	5000	37	24															
1.5	M 3LA	6	15.2	●	75.2	74.2	70.3	0.72	4.0	4.1	2.1	2.0	82	21	FD 15	40	1900	4100	—	—	86	27	FA 15	40	4100	86	28															
1.85	M 3LB	6	19.0	●	76.6	72.8	62.6	0.73	4.8	4.6	2.1	2.0	95	23	FD 15	40	1700	3600	—	—	99	29	FA 15	40	3600	99	30															
2.2	M 3LC	6	23	●	77.7	76.8	72.4	0.71	5.8	4.7	2.3	2.1	95	23	FD 55	55	—	1900	—	—	99	29	FA 15	40	1900	99	30															
3	M 45A	6	30	●	79.7	77.0	75.1	0.76	7.1	5.1	1.9	1.8	216	34	FD 56	75	—	1400	—	—	226	47	FA 06	75	1400	226	48															
4	M 4LA	6	40	●	81.4	81.5	79.5	0.77	9.2	5.5	2.0	1.8	295	43	FD 06	100	—	1200	—	—	305	56	FA 07	100	1200	305	57															
5.5	M 4LB	6	56	●	83.1	80.9	79.1	0.78	12.2	6.1	2.1	1.9	383	54	FD 07	150	—	1050	—	—	406	70	FA 07	150	1050	406	72															
7.5	M 55A	6	75	●	85.0	85.0	84.8	0.81	15.7	5.9	2.2	2.0	740	69	FD 08	170	—	900	—	—	815	98	FA 08	170	900	800	98															
11	M 55B	6	109	●	86.4	86.5	85.9	0.81	22.7	6.6	2.5	2.3	970	89	FD 08	200	—	800	—	—	1045	119	FA 08	200	800	1030	118															

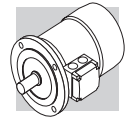
○ = n.a.    ● = IE1







2/4P		3000/1500 min <sup>-1</sup> - S1													50 Hz																						
		d.c. brake													a.c. brake																						
		P <sub>n</sub> kW	M <sub>n</sub> Nm	n min <sup>-1</sup>	η	cos φ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	Mod	Mb Nm	Z <sub>o</sub> 1/h	NB	SB	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	Mod	Mb Nm	Z <sub>o</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg													
FD 02	FD 03																								FD 03	FD 03	FD 03	FD 03	FD 04	FD 04	FD 04	FD 04	FD 15	FD 15	FD 15	FD 15	FD 06
0.20	M 05A	2	2700	0.71	55	0.82	0.64	3.5	2.1	1.9	2.9	4.1	FD 02	3.5	2200	2600	5100	3.5	5.8	FA 02	3.5	2600	5100	3.5	5.6												
0.15		4	1350	1.06	49	0.67	0.66	2.6	1.8	1.7				4000	5100																						
0.28	M 1SB	2	2700	0.99	56	0.82	0.88	2.9	1.9	1.7	4.7	4.0	FD 03	3.5	2100	2400	4800	5.8	6.7	FA 03	3.5	2400	4800	5.8	6.4												
0.20		4	1370	1.39	59	0.68	1.02	3.1	1.8	1.7				3800	4800																						
0.37	M 1SC	2	2740	1.29	56	0.82	1.16	3.5	1.8	1.8	5.8	4.7	FD 03	5	1400	2100	4200	6.9	7.4	FA 03	5	2100	4200	6.9	7.1												
0.25		4	1390	1.72	60	0.73	0.82	3.3	2.0	1.9				2900	4200																						
0.45	M 1SD	2	2780	1.55	63	0.85	1.21	3.8	1.8	1.8	6.9	5.5	FD 03	5	1400	2100	4200	8.0	8.2	FA 03	5	2100	4200	8.0	7.9												
0.30		4	1400	2.0	63	0.74	0.93	3.8	2.1	1.9				2800	4200																						
0.55	M 1LA	2	2800	1.9	73	0.79	1.38	4.2	2.0	1.8	9.1	6.9	FD 03	5	1600	2200	4600	10.2	9.6	FA 03	5	2200	4600	10.2	9.3												
0.37		4	1400	2.5	68	0.72	1.09	3.9	2.2	2.0				3300	4600																						
0.75	M 2SA	2	2780	2.6	65	0.85	1.96	3.8	1.9	1.8	20	9.2	FD 04	10	1400	1600	3600	22	13.1	FA 04	10	1600	3600	22	13.0												
0.55		4	1400	3.8	68	0.81	1.44	3.9	1.7	1.7				2700	3600																						
1.1	M 2SB	2	2730	3.9	65	0.86	2.84	3.9	2.0	1.9	25	10.7	FD 04	10	1200	1500	3100	27	14.5	FA 04	10	1500	3100	27	14.5												
0.75		4	1410	5.1	75	0.81	1.78	4.5	2.1	2.0				2300	3100																						
1.5	M 3SA	2	2830	5.1	74	0.83	3.5	4.7	2.1	2.0	34	15.5	FD 15	26	700	1000	2100	38	22	FA 15	26	1000	2100	38	23												
1.1		4	1420	7.4	77	0.78	2.6	4.3	2.1	2.0				1600	2600																						
2.2	M 3LA	2	2800	7.5	72	0.85	5.2	4.5	2.0	1.9	40	17	FD 15	26	600	900	2300	44	24	FA 15	26	900	2300	44	24												
1.5		4	1410	10.2	73	0.79	3.8	4.7	2.0	2.0				1300	2300																						
3.5	M 3LB	2	2850	11.7	80	0.84	7.5	5.4	2.2	2.1	61	23	FD 15	40	500	900	2100	65	29	FA 15	40	900	2100	65	30												
2.5		4	1420	16.8	82	0.80	5.5	5.2	2.2	2.2				1000	2100																						
4.8	M 4 SA	2	2900	15.8	81	0.88	9.7	6.0	2.0	1.9	213	42	FD 06	50	—	400	—	233	55	FA 06	50	400	—	233	56												
3.8		4	1430	25.4	81	0.84	8.1	5.2	2.1	2.1				—	—	950	—	233	55	FA 06	75	950	—	233	56												
5.5	M 4SB	2	2890	18.2	80	0.87	11.4	5.9	2.4	2.0	213	42	FD 06	75	—	350	—	223	55	FA 06	75	350	—	223	56												
4.4		4	1440	29	82	0.84	9.2	5.3	2.2	2.0				—	—	900	—	280	64	FA 07	100	900	—	280	65												
7.5	M 4LA	2	2900	25	82	0.87	15.2	6.5	2.4	2.0	270	51	FD 06	100	—	350	—	280	64	FA 07	100	350	—	280	65												
6		4	1430	40	84	0.85	12.1	5.8	2.3	2.1				—	—	950	—	342	73	FA 07	150	950	—	342	75												
9.2	M 4LB	2	2920	30	83	0.86	18.6	6.0	2.6	2.2	319	57	FD 07	150	—	300	—	342	73	FA 07	150	300	—	342	75												
7.3		4	1440	48	85	0.85	14.6	5.5	2.3	2.1				—	—	800	—	342	73	FA 07	150	800	—	342	75												

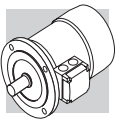


2/6P		3000/1000 min <sup>-1</sup> - S3 60/40%														50 Hz						
		d.c. brake														a.c. brake						
		FD							FA							FA						
P <sub>n</sub>		n	M <sub>n</sub>	η	cosφ	I <sub>n</sub>	I <sub>s</sub>	M <sub>s</sub>	M <sub>a</sub>	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>o</sub>	J <sub>m</sub>	IM B5	Mod	Mb	Z <sub>o</sub>	J <sub>m</sub>	IM B5	
kW		min <sup>-1</sup>	Nm	%		A	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	x 10 <sup>-4</sup> kgm <sup>2</sup>	$\frac{Kg}{Kg}$		Nm	1/h	x 10 <sup>-4</sup> kgm <sup>2</sup>	$\frac{Kg}{Kg}$		Nm	1/h	x 10 <sup>-4</sup> kgm <sup>2</sup>	$\frac{Kg}{Kg}$	
0.25	M 1SA	2	0.84	60	0.82	0.73	4.3	1.9	1.8	6.9	5.5	FD 03	1.75	1700	8.0	8.2	FA 03	1.75	1700	8.0	8.0	7.9
0.08		6	0.84	43	0.70	0.38	2.1	1.4	1.5		10000			13000					13000			
0.37	M 1LA	2	1.23	62	0.80	1.08	4.4	1.9	1.8	9.1	6.9	FD 03	3.5	1300	10.2	9.6	FA 03	3.5	1300	10.2	10.2	9.3
0.12		6	1.27	44	0.73	0.54	2.4	1.4	1.5		9000			11000					11000			
0.55	M 2SA	2	1.88	63	0.86	1.47	4.5	1.9	1.7	20	9.2	FD 04	5	1500	22	13.1	FA 04	5	1800	22	22	13.0
0.18		6	1.85	52	0.65	0.77	3.3	2.0	1.9		4100			6300					6300			
0.75	M 2SB	2	2.6	66	0.87	1.89	4.3	1.8	1.6	25	10.6	FD 04	5	1700	27	14.5	FA 04	5	1900	27	27	14.4
0.25		6	2.6	54	0.67	1.00	3.2	1.7	1.8		3800			6000					6000			
1.1	M 3SA	2	3.7	71	0.82	2.73	4.9	1.8	1.9	34	15.5	FD 15	13	1000	38	22	FA 15	13	1300	38	38	23
0.37		6	3.8	63	0.70	1.21	3.1	1.5	1.8		3500			5000					5000			
1.5	M 3LA	2	5.0	73	0.84	3.53	5.1	1.9	2.0	40	17	FD 15	13	1000	44	24	FA 15	13	1200	44	44	24
0.55		6	5.6	64	0.67	1.85	3.5	1.7	1.8		2900			4000					4000			
2.2	M 3LB	2	7.2	77	0.85	4.9	5.9	2.0	2.0	61	23	FD 15	26	700	65	29	FA 15	26	900	65	65	30
0.75		6	7.5	67	0.64	2.5	3.3	1.9	1.8		2100			3000					3000			
3	M 4SA	2	9.9	74	0.88	6.6	5.6	2.0	2.1	170	36	FD 56	37	—	182	48	FA 06	37	600	182	182	50
1.1		6	10.9	73	0.68	3.2	4.5	2.2	2.0		—			2200					2200			
4.5	M 4SB	2	14.8	78	0.84	9.9	5.8	1.9	1.8	213	42	FD 56	37	—	223	55	FA 06	37	500	223	223	56
1.5		6	14.9	74	0.67	4.4	4.2	1.9	2.0		—			2100					2100			
5.5	M 4LA	2	18.0	78	0.87	11.7	6.2	2.1	1.9	270	51	FD 06	50	—	280	64	FA 06	50	400	280	280	65
2.2		6	22	77	0.71	5.8	4.3	2.1	2.0		—			1900					1900			



**2/8P** **3000/750 min<sup>-1</sup> - S3 60/40%** **50 Hz**

P <sub>n</sub> kW		n min <sup>-1</sup>	M <sub>n</sub> Nm	η %	cos φ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	d.c. brake						a.c. brake					
												FD			FA			FD			FA		
												Mod	Mb Nm	Z <sub>0</sub> 1/h	NB	SB	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 	Mod	Mb Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 
0.37	M 1LA	2	1.26	63	0.86	0.99	3.9	1.8	1.9	12.9	7.3	FD 03	3.5	1200	1300	14	10.0	FA 03	3.5	1300	14	9.7	
0.09		8	1.28	34	0.75	0.51	1.8	1.4	1.5					9500	13000								
0.55	M 2SA	2	1.86	66	0.86	1.40	4.4	2.1	2.0	20	9.2	FD 04	5	1500	1800	22	13.1	FA 04	5	1800	22	13.0	
0.13		8	1.80	41	0.64	0.72	2.3	1.6	1.7					5600	8000								
0.75	M 2SB	2	2.6	68	0.88	1.81	4.6	2.1	2.0	25	10.6	FD 04	10	1700	1900	27	14.5	FA 04	10	1900	27	14.4	
0.18		8	2.5	43	0.66	0.92	2.3	1.6	1.7					4800	7300								
1.1	M 3SA	2	3.7	69	0.84	2.74	4.6	1.8	1.7	34	15.5	FD 15	13	1000	1300	38	22	FA 15	13	1300	38	23	
0.28		8	3.9	44	0.56	1.64	2.3	1.4	1.7					3400	5000								
1.5	M 3LA	2	5.0	69	0.85	3.69	4.7	1.9	1.8	40	17	FD 15	13	1000	1200	44	24	FA 15	13	1200	44	24	
0.37		8	5.1	46	0.63	1.84	2.1	1.6	1.6					3300	5000								
2.4	M 3LB	2	7.9	75	0.82	5.6	5.4	2.1	2.0	61	23	FD 15	26	550	700	65	29	FA 15	26	700	65	30	
0.55		8	7.5	54	0.58	2.5	2.6	1.8	1.8					2000	3500								
3	M 4SA	2	9.8	72	0.85	7.1	5.6	2.0	1.8	162	36	FD 56	37	—	600	182	48	FA 06	37	600	182	50	
0.75		8	10.1	61	0.64	2.8	3.0	1.7	1.8					—	3400								
4	M 4SB	2	13.3	73	0.84	9.4	5.6	2.3	2.4	213	42	FD 56	37	—	500	223	55	FA 06	37	500	223	56	
1		8	13.8	66	0.62	3.5	2.9	1.9	1.8					—	3500								
5.5	M 4LA	2	18.3	75	0.84	12.6	6.1	2.4	2.5	270	51	FD 06	50	—	400	280	64	FA 06	50	400	280	65	
1.5		8	21	68	0.63	5.1	2.9	1.9	1.9					—	2400								



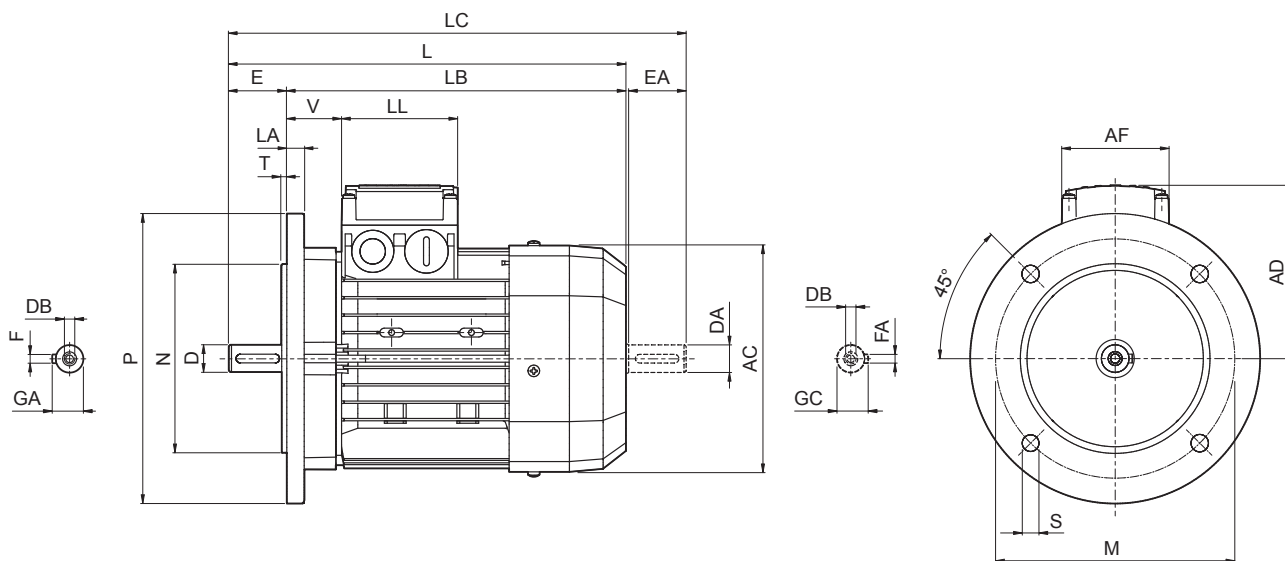
2/12P		3000/500 min <sup>-1</sup> - S3 60/40%														50 Hz																													
		d.c. brake														a.c. brake																													
		P <sub>n</sub> kW	M 2SA	M 3SA	M 3LA	M 3LB	M 3LC	M 4SA	M 4LA	n min <sup>-1</sup>	M <sub>n</sub> Nm	η %	cos φ	I <sub>n</sub> 400V A	I <sub>s</sub> I <sub>n</sub>	M <sub>s</sub> M <sub>n</sub>	M <sub>a</sub> M <sub>n</sub>	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	Mod	Mb Nm	Z <sub>0</sub> 1/h	NB	SB	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg	Mod	Mb Nm	Z <sub>0</sub> 1/h	J <sub>m</sub> x 10 <sup>-4</sup> kgm <sup>2</sup>	IM B5 Kg														
FD 04	FD 15																															FD 15	FD 15	FD 55	FD 56	FD 56	FD 56	FA 04	FA 15	FA 15	FA 15	FA 15	FA 06	FA 06	FA 06
0.55								2820	1.86	64	0.89	1.39	4.2	1.6	1.7	25	10.6					1000		1300		27		14.5						1300		27		14.4							
0.09								430	2.0	30	0.63	0.69	1.8	1.9	1.8		8000					8000		12000																					
0.75								2900	2.5	65	0.81	2.06	5.2	1.9	2.1	34	15.5					700		900		38		22																	
0.12								460	2.5	33	0.43	1.22	1.9	1.3	1.6		5000					5000		7000																					
1.1								2850	3.7	65	0.85	2.87	4.5	1.6	1.8	40	17					700		900		44		24																	
0.18								430	4.0	26	0.54	1.85	1.5	1.3	1.5		4000					4000		6000																					
1.5								2900	4.9	67	0.86	3.76	5.6	1.9	1.9	54	21					700		900		58		27																	
0.25								440	5.4	36	0.46	2.18	1.8	1.7	1.8		3800					3800		5000																					
2								2850	6.7	70	0.84	4.9	4.9	1.8	1.7	61	23					—		700		65		29																	
0.3								450	6.4	38	0.47	2.4	1.7	1.6	1.7		—				—		3500																						
3								2920	9.8	74	0.87	6.7	6.8	2.3	1.9	213	42					—		450		223		55																	
0.5								470	10.2	51	0.43	3.3	2.0	1.7	1.6		—				—		3000																						
4								2920	13.1	75	0.89	8.6	5.9	2.4	2.3	270	51					—		400		280		64																	
0.7								460	14.5	53	0.44	4.3	1.9	1.7	1.6		—				—		2800																						





**M19 MOTORS DIMENSIONS BN-M**

**BN - IM B5**



**BN-M**

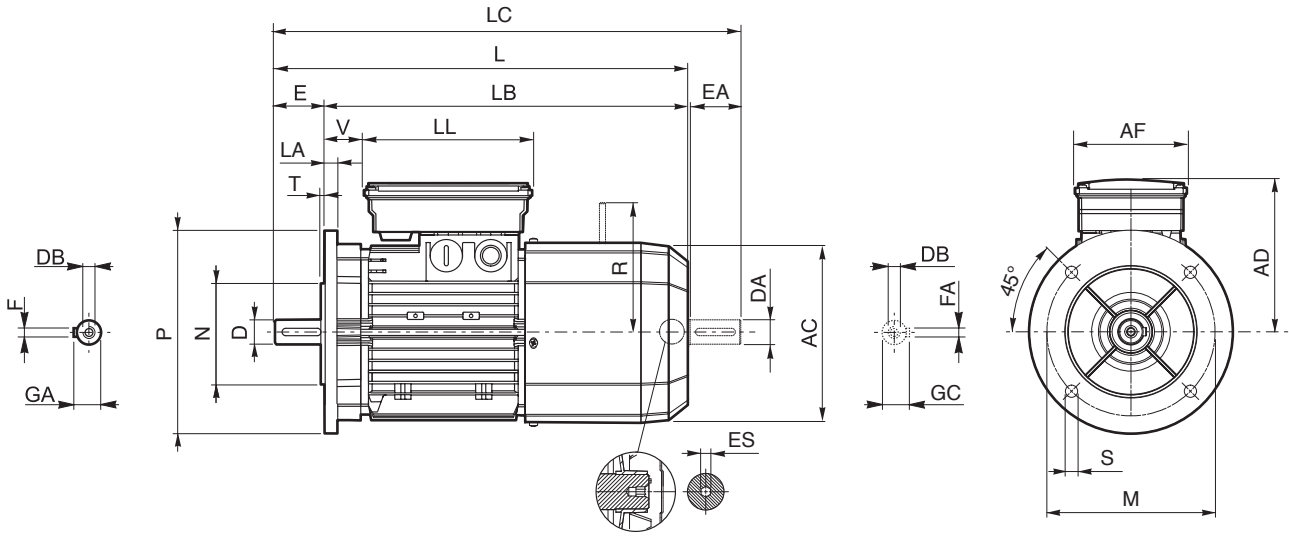
	Shaft					Flange					Motor								
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V
<b>BN 56</b>	9	20	M3	10.2	3	100	80	120	7	3	8	110	185	165	207	91	74	80	34
<b>BN 63</b>	11	23	M4	12.5	4	115	95	140	9.5		10	121	207	184	232	95			26
<b>BN 71</b>	14	30	M5	16	5	130	110	160			10	138	249	219	281	108			37
<b>BN 80</b>	19	40	M6	21.5	6	165	130	200	11.5	3.5	11.5	156	274	234	315	119	98	98	38
<b>BN 90</b>	24	50	M8	27	8						176	326	276	378	133	44			
<b>BN 100</b>	28	60	M10	31	8	215	180	250	14	4	14	195	367	307	429	142	118	118	50
<b>BN 112</b>											15	219	385	325	448	157			52
<b>BN 132</b>											20	258	493	413	576	193			58
<b>BN 160 MR</b>	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15	310	562	452	645	245	187	187	218
<b>BN 160 M</b>												310	596	486	680	51			
<b>BN 160 L</b>												310	640	530	724	51			
<b>BN 180 M</b>	48 38 (1)	110 110 (1)	M16 M12 (1)	51.5 41 (1)	14 10 (1)	350	300	400	18.5	5	18	348	708	598	823	261	187	187	52
<b>BN 180 L</b>	48 42 (1)		M16 M16 (1)	51.5 45 (1)	14 12 (1)							722	612	837	66				
<b>BN 200 L</b>	55 42 (1)		M20 M16 (1)	59 45 (1)	16 12 (1)							66							

NOTE:  
1) These values refer to the rear shaft end.



# BN\_FD ; IM B5

**BN-M**



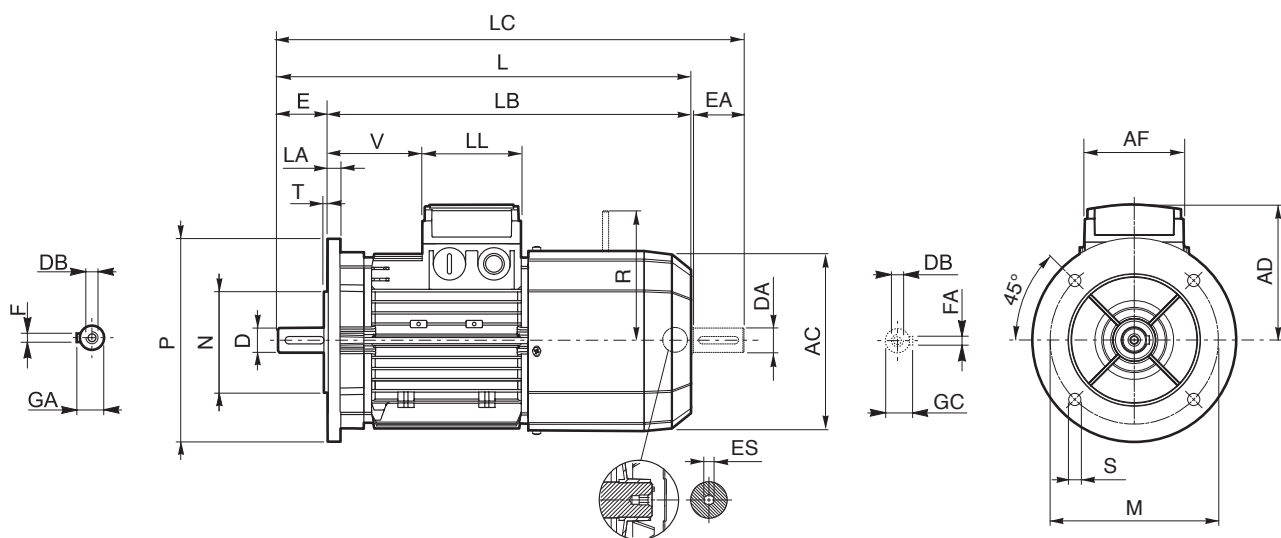
	Shaft					Flange					Motor										
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R	ES
<b>BN 63</b>	11	23	M4	12.5	4	115	95	140	9.5	3		121	272	249	297	122			14	96	
<b>BN 71</b>	14	30	M5	16	5	130	110	160	9.5		10	138	310	280	342	135	98	133	25	103	5
<b>BN 80</b>	19	40	M6	21.5	6						3.5	156	346	306	388	146			41	129	
<b>BN 90 S</b>	24	50	M8	27	8	165	130	200	11.5	11.5	11.5	176	409	359	461	149	110	165	39	160	6
<b>BN 90 L</b>																					
<b>BN 100</b>	28	60	M10	31	8	215	180	250	14	4	4	14	195	458	398	521	158	165	62	199	6
<b>BN 112</b>												15	219	484	424	547	173				
<b>BN 132</b>	38	80	M12	41	10	265	230	300			4	20	603	523	686	210	140	188	46	204 (2)	
<b>BN 160 MR</b>	42	110	M16	45	12							258	672	562	755	210	140	188	161	226	
<b>BN 160 M</b>	38 (1)	80 (1)	M12 (1)	41 (1)	10 (1)																
<b>BN 160 L</b>	42	110	M16	45	12	300	250	350	18.5		5	15	310	736	626	820	245		51	266	
<b>BN 180 M</b>	48	80 (1)	M12 (1)	51.5	14								780	670	864		187	187			
<b>BN 180 L</b>	48	110	M16	51.5	14														52	305	
<b>BN 200 L</b>	55	110 (1)	M20	59	16	350	300	400	18.5			18	348	866	756	981	261		64		
	42 (1)		M16 (1)	45 (1)	12 (1)									878	768	993					

NOTE:  
 1) These values refer to the rear shaft end.  
 2) For FD07 brake value R=226.

ES hexagon is not supplied with PS option.



# BN\_FA - IM B5



**BN-M**

	Shaft					Flange					Motor										
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R	ES
<b>BN 63</b>	11	23	M4	12.5	4	115	95	140	9.5	3	10	121	272	249	297	95	74	80	26	116	5
<b>BN 71</b>	14	30	M5	16	5	130	110	160				138	310	280	342	108			68	124	
<b>BN 80</b>	19	40	M6	21.5	6	165	130	200	11.5	3.5	11.5	156	346	306	388	119	98	98	83	134	6
<b>BN 90</b>	24	50	M8	27	176							409	359	461	133	95			160		
<b>BN 100</b>	28	60	M10	31	8	215	180	250	14	4	14	195	458	398	521	142	119	128	198	200 (2)	
<b>BN 112</b>												15	219	484	424	547					157
<b>BN 132</b>	38	80	M12	41	10	265	230	300	18.5	5	15	20	258	603	523	686	210	140	188	46	217
<b>BN 160 MR</b>	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350				18.5		5	15	258	672	562	755	193	118
<b>BN 160 M</b>									310	736	626		820			245	187	187	51	247	—
<b>BN 160 L</b>									310	736	626		820			245	187	187	51	247	—
<b>BN 180 M</b>									310	780	670		864			245	187	187	51	247	—

NOTE:

- 1) These values refer to the rear shaft end.
- 2) For FA07 brake value R=217.

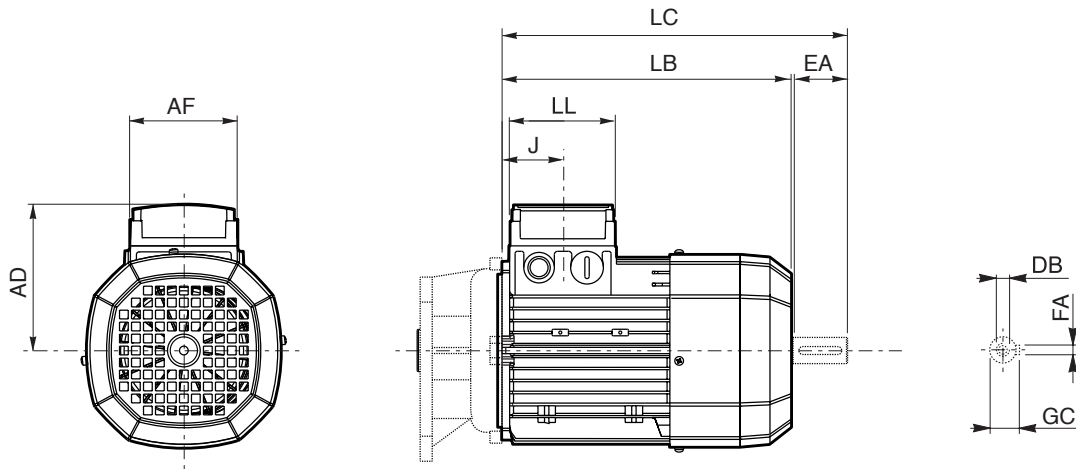
Dimensions AD, AF, LL and V, relevant to terminal box of motors BN...FA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size BN...FD motors

ES hexagon is not supplied with PS option.

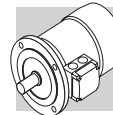


**M**

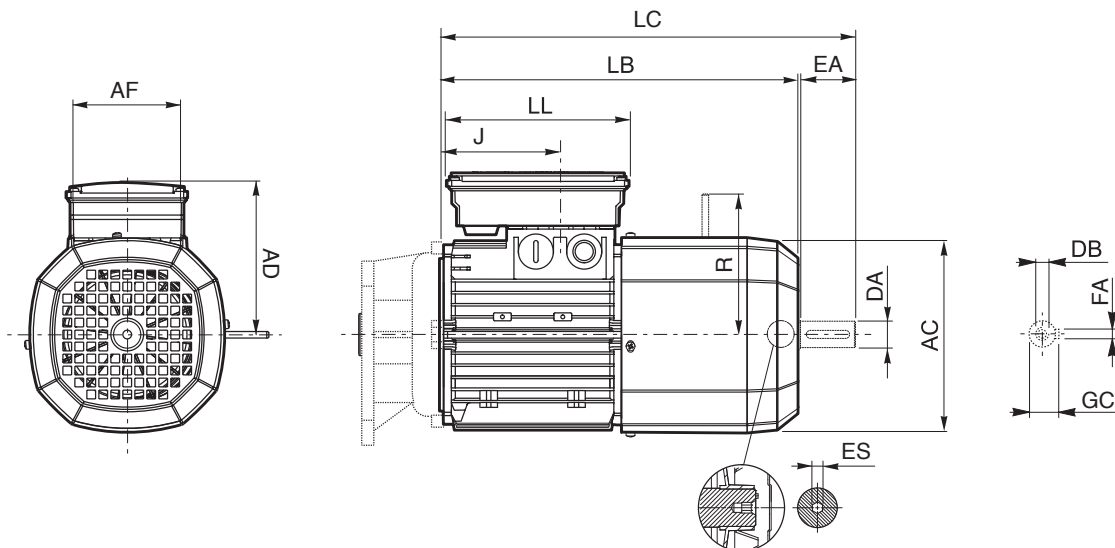
**BN-M**



	Rear shaft end					Motor						
	DA	EA	DB	FA	GC	AC	LB	LC	AF	LL	J	AD
<b>M 0</b>	9	20	M3	3	10.2	110	133	155	74	80	42	91
<b>M 05</b>	11	23	M4	4	12.5	121	165	191			48	95
<b>M 1</b>	14	30	M5	5	16	138	187	219			45	108
<b>M 2 S</b>	19	40	M6	6	21.5	156	202	245			44	119
<b>M 3 S</b>	28	60	M10	8	31	195	230	293	98	98	53.5	142
<b>M 3 L</b>							262	325				
<b>M 4</b>	38	80	M12	10	41	258	361	444	118	118	64.5	193
<b>M 4 LC</b>							396	479				
<b>M 5 S</b>						310	418	502	187	187	77	245
<b>M 5 L</b>							462	546				



# M\_FD



**BN-M**

	Rear shaft end					Motor								
	DA	EA	DB	FA	GC	AC	LB	LC	AF	LL	J	AD	R	ES
<b>M 05</b>	11	23	M4	4	12.5	121	231	256	98	133	48	122	96	5
<b>M 1</b>	14	30	M5	5	16	138	248	280			73	135	103	
<b>M 2 S</b>	19	40	M6	6	21.5	156	272	314			88	146	129	
<b>M 3 S</b>	28	60	M10	8	31	195	326	389	110	165	124.5	158	160	6
<b>M 3 L</b>							353	416						
<b>M 4</b>	38	80	M12	10	41	258	470	553	140	188	185.5	210	204 (1)	
<b>M 4 LC</b>							495	578			64.5		226	
<b>M 5 S</b>						310	602	686	187	187	77	245	266	—
<b>M 5 L</b>														

NOTE:

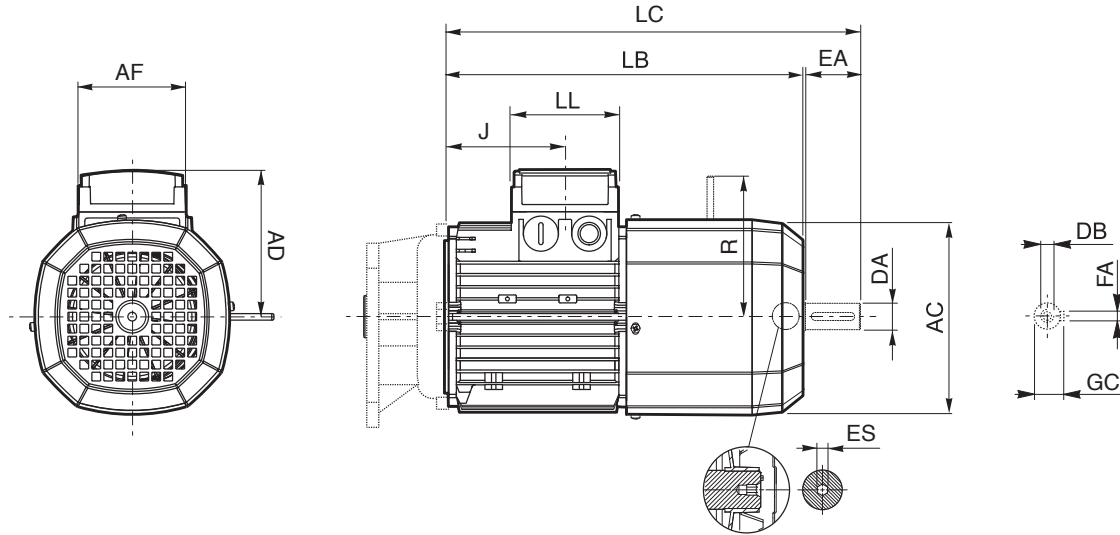
1) For FD07 brake value R=226.

ES hexagon is not supplied with PS option.



# M\_FA

**BN-M**



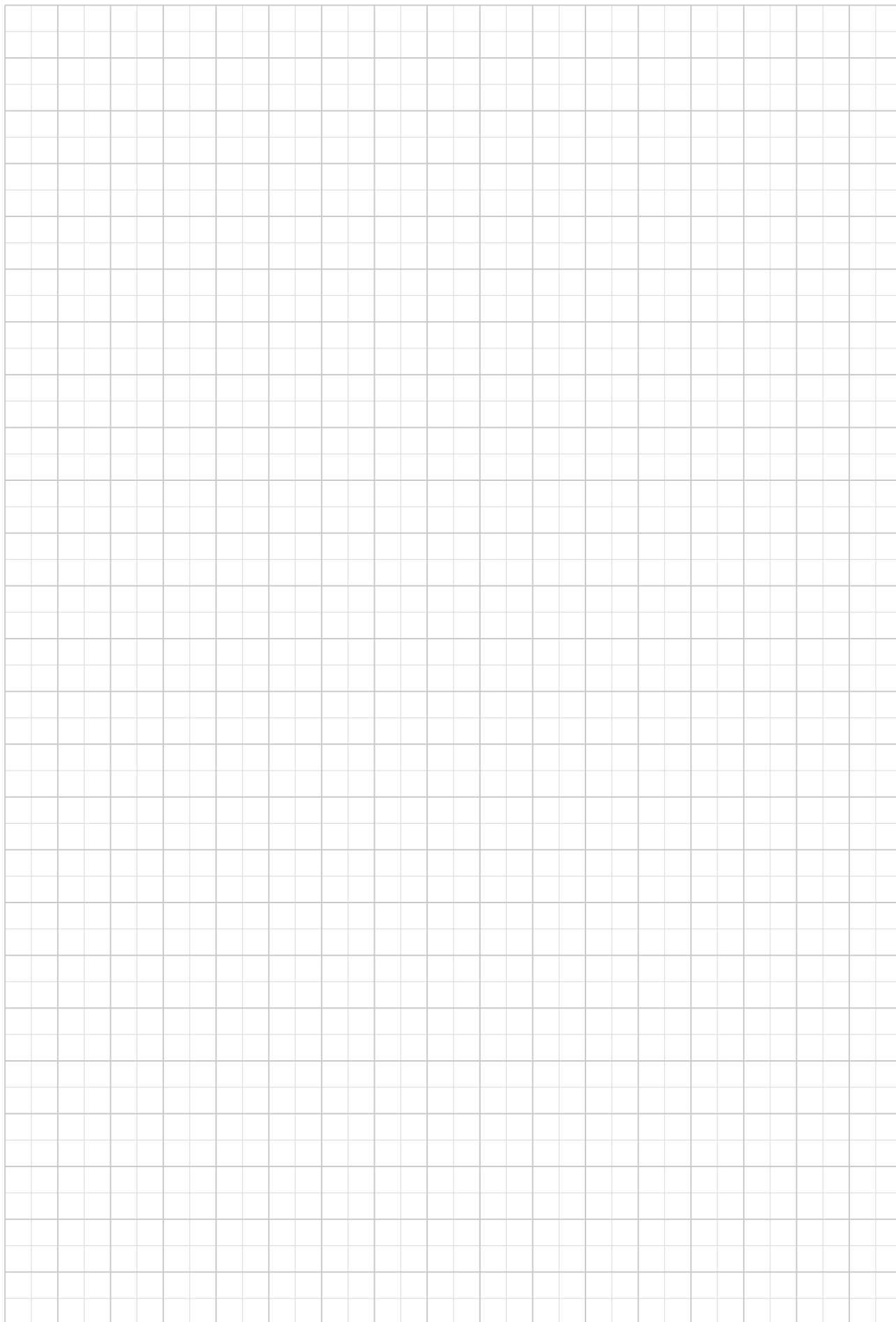
	Rear shaft end					Motor								
	DA	EA	DB	FA	GC	AC	LB	LC	AF	LL	J	AD	R	ES
<b>M 05</b>	11	23	M4	4	12.5	121	231	256	74	80	48	95	116	5
<b>M 1</b>	14	30	M5	5	16	138	248	280			73	108	124	
<b>M 2 S</b>	19	40	M6	6	21.5	156	272	314			88	119	134	
<b>M 3 S</b>	28	60	M10	8	31	195	326	389	98	98	124.5	142	160	6
<b>M 3 L</b>							353	416						
<b>M 4</b>	38	80	M14	10	41	258	470	553	140	188	185.5	210	200 (1)	
<b>M 4 LC</b>							495	578			64.5		217	
<b>M 5 S</b>			M12			310	558	642	187	187	77	245	247	—
<b>M 5 L</b>	602	686												

**NOTE:**

1) For FA07 brake value R=217.


Dimensions AD, AF, LL and V, relevant to terminal box of motors M...FA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size M...FD motors

ES hexagon is not supplied with PS option.





## INDEX OF REVISIONS

BR_CAT_CAFS_IE2-IE3_ENG_R09_3	
	Description
170	Amended drawings for the backstop option of serie A gearboxes.
...	Added the availability of brakes and CUS execution for BX motors.
...	Removed combinations of gearboxes C514 and F514 with inputs P132, ME4, MX4.
39...48	Updated 0.37 ; 0.55 ; 1.1 kW technical data for gearmotors series C.
204, 205	Updated 11 kW technical data for gearmotors series A.

2018.03.31

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We have a relentless commitment to excellence, innovation and sustainability. Our team creates, distributes and services world-class power transmission and drive solutions to keep the world in motion.



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