



Bonfiglioli

Riduttori

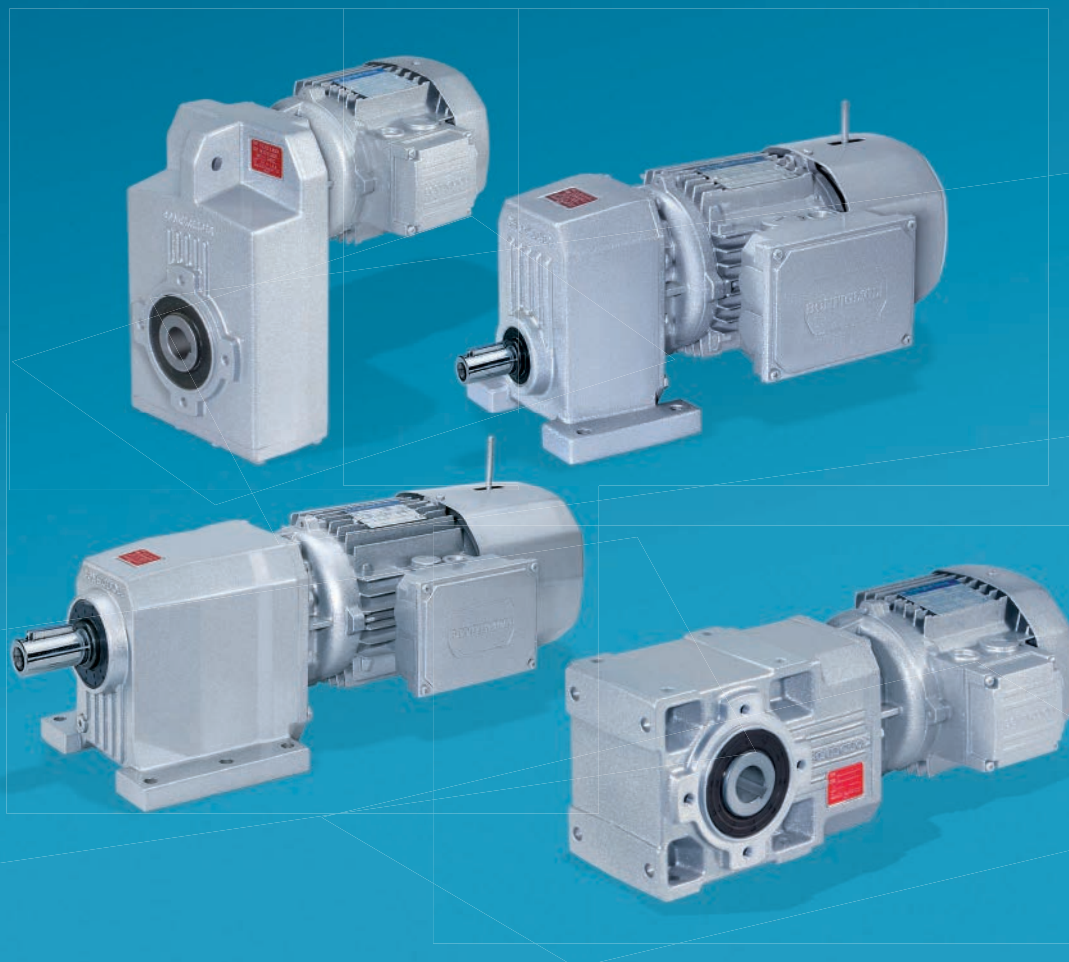
C-A-F-S series

Helical gear units C series

Helical bevel gear units A series

Shaft mounted gear units F series

Single stage gearboxes S series



Bonfiglioli

power, control and green solutions



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Revisions

Refer to page 534 for the catalogue revision index. Visit 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
$A_{N\ 1,2}$	[N]	Permissible axial force	$n_{1,2}$	[min ⁻¹]	Speed
f_s	—	Service factor	$P_{1,2}$	[kW]	Power
f_T	—	Thermal factor	$P_{N\ 1,2}$	[kW]	Rated power
f_{TP}	—	Temperature factor	$P_{R\ 1,2}$	[kW]	Power demand
i	—	Gear ratio	$R_{C\ 1,2}$	[N]	Calculated radial force
l	—	Cyclic duration factor	$R_{N\ 1,2}$	[N]	Permissible overhung load
J_C	[Kgm ²]	Mass moment of inertia to be driven	s	—	Safety factor
J_M	[Kgm ²]	Motor mass moment of inertia	t_a	[°C]	Ambient temperature
J_R	[Kgm ²]	Mass moment of inertia for the gear unit	t_f	[min]	Work time under constant load
K	—	Mass acceleration factor	t_r	[min]	Rest time
K_r	—	Transmission element factor	η_d	—	Dynamic efficiency
$M_{1,2}$	[Nm]	Torque	η_s	—	Static efficiency
$M_{c\ 1,2}$	[Nm]	Calculated torque	φ	—	Output shaft angular backlash (with locked input shaft)
$M_{n\ 1,2}$	[Nm]	Rated torque	₁ value applies to input shaft		
$M_{r\ 1,2}$	[Nm]	Torque demand	₂ 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).



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.

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 TORQUE

2.1 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.

2.2 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.

2.3 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:

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

3 POWER

3.1 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 $f_s = 1$.

4 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 min ⁻¹	n ₁ = 2800 min ⁻¹
C 05 2	—	—
C 11 2	—	—
C 21 2	—	—
C 31 2	—	4.5
C 35 2	6.5	5.0
C 41 2	8.0	6.0
C 51 2	11.0	7.8
C 61 2	14.0	10.0
C 70 2	21	16.0
C 80 2	32	24
C 90 2	43	32
C 100 2	59	42

P_t [kW] 20 °C		
	n ₁ = 1400 min ⁻¹	n ₁ = 2800 min ⁻¹
A 05 2	3.2	2.4
A 10 2	4.8	4.0
A 20 2	6.0	5.4
A 30 2	8.0	6.6
A 35 2	9.5	8.2
A 41 2	11.5	9.6
A 50 2	20	18.0
A 55 2	21	18.0
A 60 2	27	23
A 70 3	31	26
A 80 3	44	39
A 90 3	64	57

P_t [kW] 20 °C		
	n ₁ = 1400 min ⁻¹	n ₁ = 2800 min ⁻¹
F 10 2	3.8	2.7
F 20 2	9.1	6.5
F 25 2	10.2	7.4
F 31 2	11.7	8.5
F 41 2	14.3	10.4
F 51 2	21.5	15.0
F 60 3	26.0	18.9
F 70 3	36.4	26.0
F 80 3	52	36
F 90 3	75	53

P_t [kW] 20 °C		
	n ₁ = 1400 min ⁻¹	n ₁ = 2800 min ⁻¹
S 10 1	5.5	4.9
S 20 1	7.8	7.2
S 30 1	10.0	9.1
S 40 1	15.6	14.3
S 50 1	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:

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

5 EFFICIENCY

5.1 Dynamic efficiency η_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 
η_d	95%	93%	90%

	2 x 	3 x 	4 x 
η_d	94%	91%	89%

	2 x 	3 x 	4 x 
η_d	95%	93%	90%

	1 x 
η_d	98%



6 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 please consult Bonfiglioli's Technical Service.

7 ANGULAR VELOCITY

7.1 Input speed n_1 [min⁻¹]

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⁻¹, 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.

7.2 Output speed n_2 [min⁻¹]

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:

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

8 MOMENT OF INERTIA J_r [Kgm²]

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.



9 SERVICE FACTOR f_s

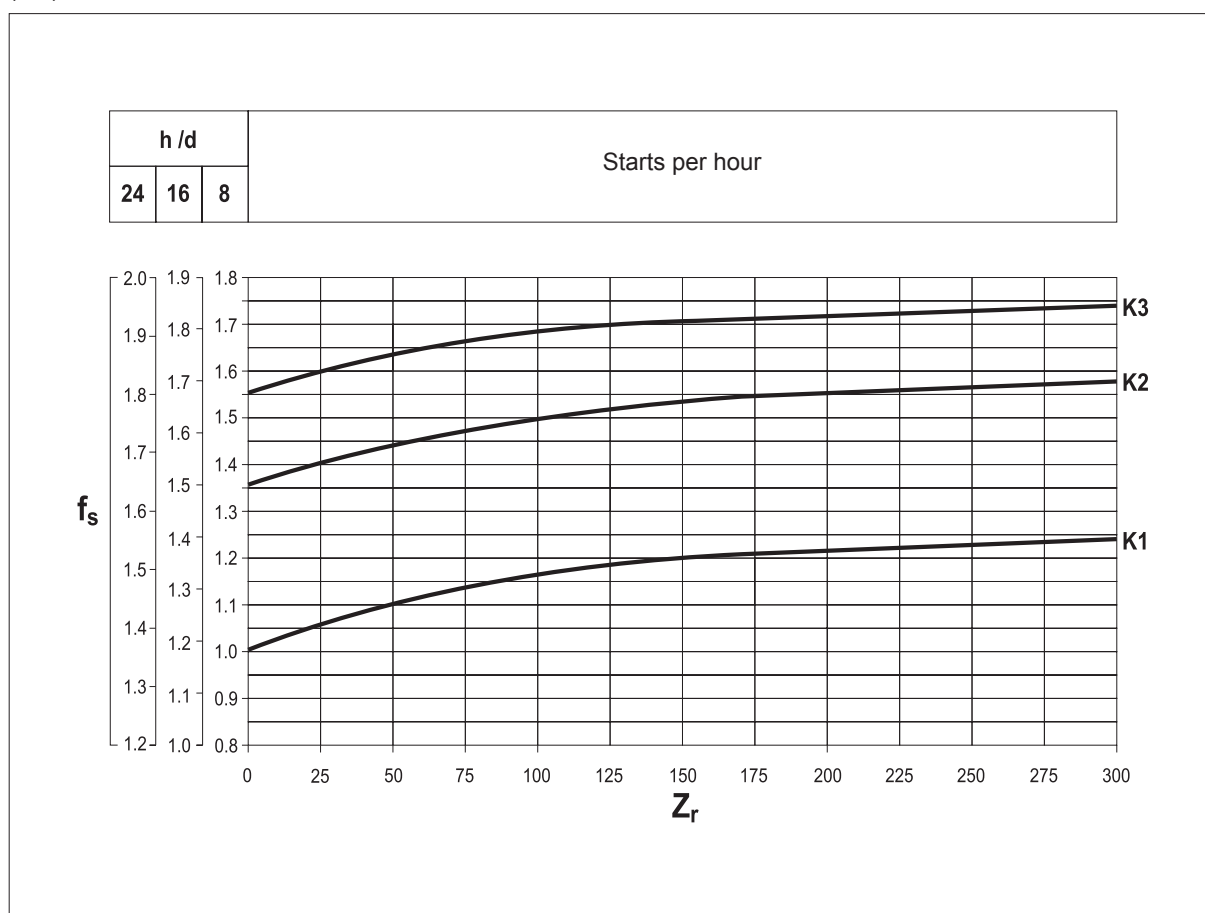
This factor is the numeric value describing reducer service duty. It takes into consideration, with unavoidable approximation, daily operating conditions, load variations and overloads connected with reducer application.

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)





9.1 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	$K \leq 0,25$	→ K1	Uniform load
			$0,25 < K \leq 3$	→ K2	Moderate shock load
			$3 < K \leq 10$	→ K3	Heavy shock load
		$J_m =$ Motor moment of inertia	$K > 10$	→	Please consult Bonfiglioli Technical Service

10 MAINTENANCE

Life lubricated gearboxes do not require any periodical oil changes.
For other types of gearboxes, the first oil change must take place after about 300 hours of operation, carefully flushing the gear unit using suitable detergents.
Do not mix mineral oils with synthetic oils.
Check oil level regularly and change oil at the intervals shown in the table (A6).

(A 6)

Oil temperature [°C]	Oil change interval [h]	
	Mineral oil	Synthetic oil
< 65	8000	25000
65 - 80	4000	15000
80 - 95	2000	12500



11 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 7)

Type of application	A_{c1} Thrust load on input shaft (+/-)(***) N
P_{r2} Output power at n_2 max kW	J_c Moment of inertia of the load Kgm ²
P_{r2}' Output power at n_2 min kW	t_a Ambient temperature C°
M_{r2} Output torque at n_2 max Nm	Altitude above sea level m
n₂ Max.output speed min ⁻¹	Duty type to IEC norms S...../.....%
n₂' Min.output speed min ⁻¹	Z Starting frequency 1/h
n₁ Max.input speed min ⁻¹	Motor voltage V
n₁' Min.input speed min ⁻¹	Brake voltage V
R_{c2} Radial load on output shaft N	Frequency Hz
x₂ Load application distance (*) mm	M_b Brake torque Nm
Load orientation at output 	Motor protection degree IP.....
Output shaft rotation direction (CW-CCW) (**)	Insulation class
R_{c1} Radial load on input shaft N	
x₁ Load application distance (*) mm	
Load orientation at input 	
Input shaft rotation direction (CW-CCW) (**)	
A_{c2} Thrust load on output shaft (+/-)(***) 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



11.1 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 η_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 η_d for the captioned gear unit can be sorted out from paragraph 5.

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 (A8).

11.2 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 8)

	DUTY					
	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⁻¹, base the selection on the gear unit nominal rating.

11.3 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".

12 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 6.

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.

13 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).

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



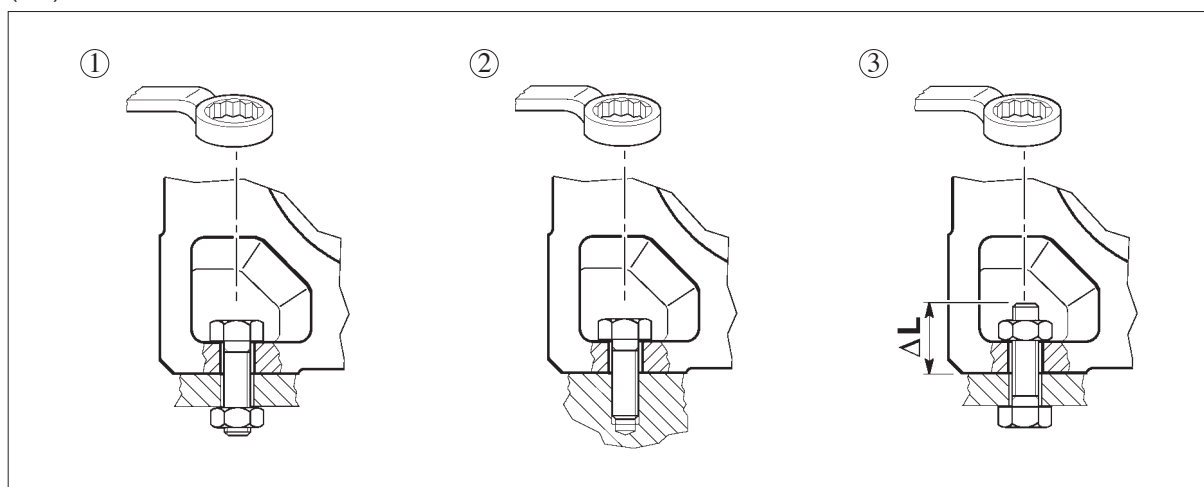
13.1 Fitting servomotors to gear heads featuring a clamping device (adapter type SC)

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.

14 INSTALLATION INSTRUCTIONS

Schemes in table (A9) show the 3 possible installation patterns for A gear units to the machine frame. For each of these circumstances, table (A10) 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 (A9).

(A 9)



(A 10)

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

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



15 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.

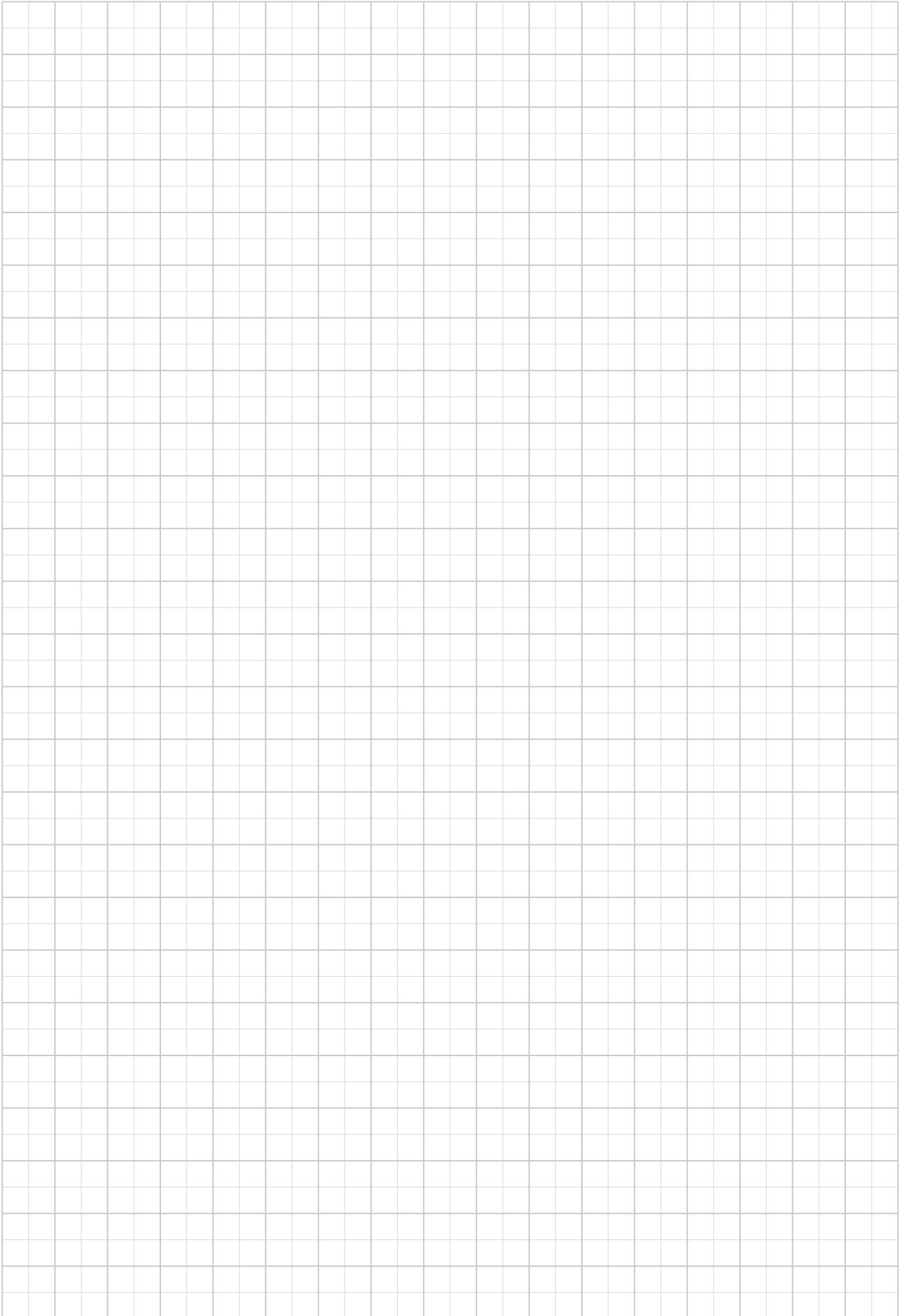
16 CONDITIONS OF SUPPLY

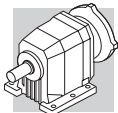
Gear units are supplied as follows:

- 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).

17 PAINT SPECIFICATIONS

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





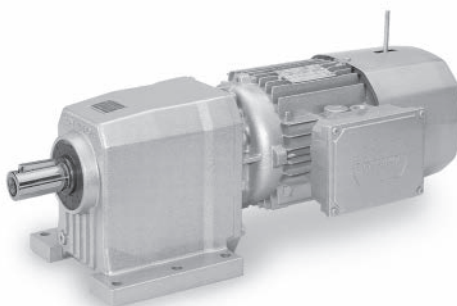
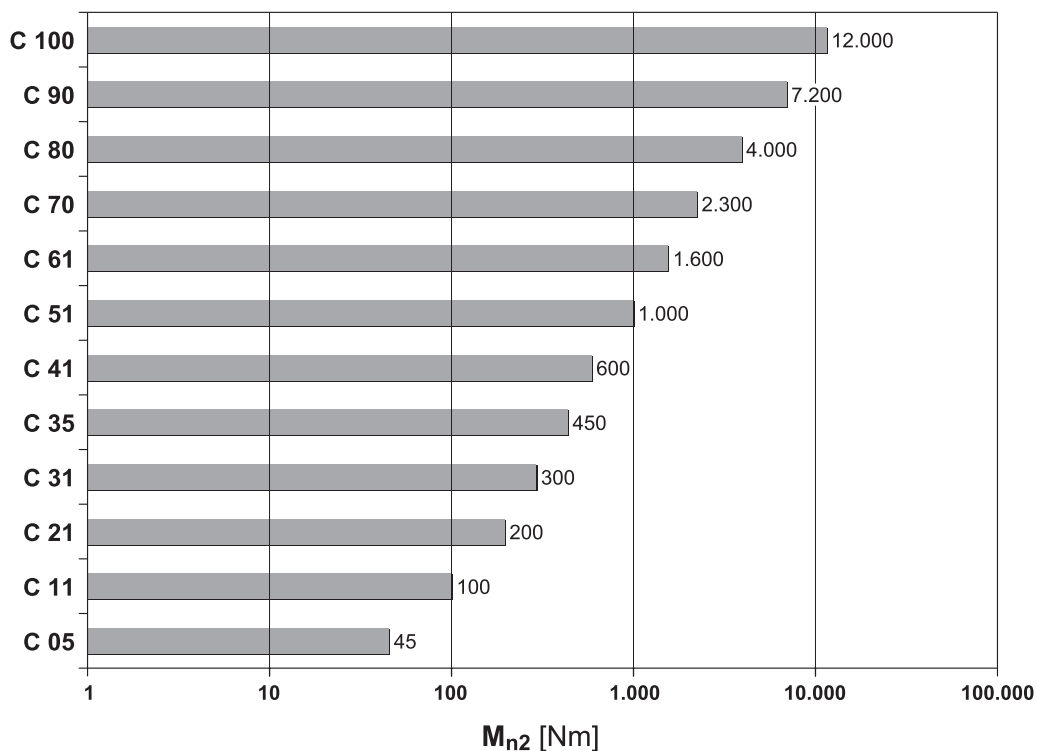
HELICAL GEAR UNITS SERIES C

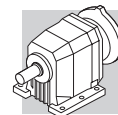
18 DESIGN FEATURES

The main design characteristics are:

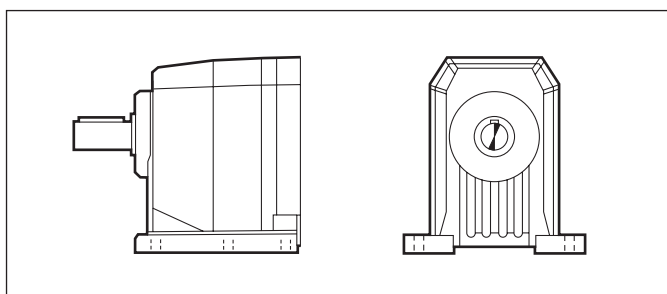
- modularity
- space effective
- universal mounting
- high efficiency
- quiet operation
- gears in hardened and case-hardened steel
- bare aluminium housing for sizes 05, 11, 21 and 31.
Larger frame sizes come in sturdy cast iron housings
- input and output shafts from high grade steel.

(B 11)





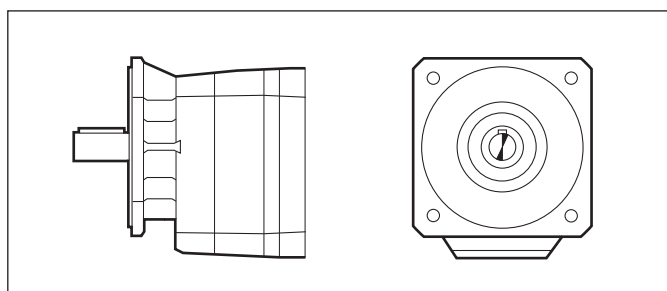
19 VERSIONS



P

Foot mount

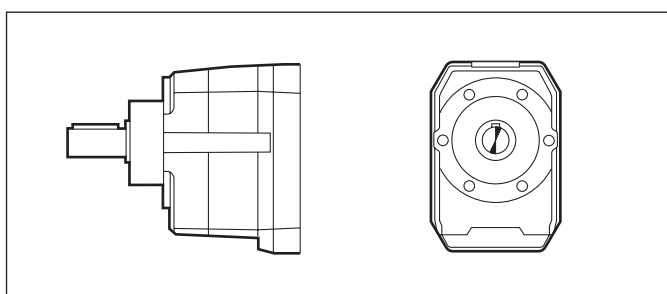
C 05 ... C 100



F

Flange mount

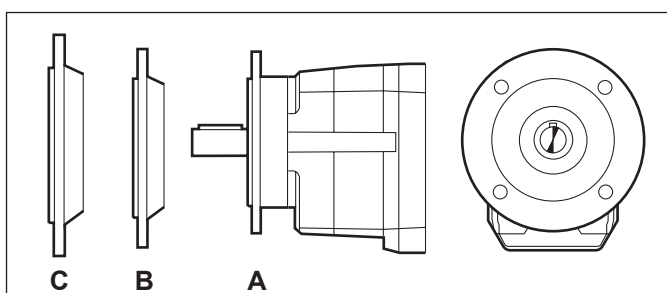
C 05 ... C 31
C 70 ... C 100



U

UNIBOX- universal housing

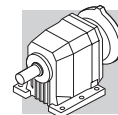
C 11 ... C 61



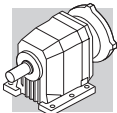
UF

UNIBOX bolt-on flange

C 11 ... C 61



MOTOR					BRAKE					
M	1LA 4	230/400-50	IP54	CLF		W	FD	7.5 R	SB 220 SA	
										OPTIONS 
									BRAKE SUPPLY	 479  484  489  492
									RECTIFIER TYPE AC/DC NB, SB, NBR, SBR	 480  485
									BRAKE HAND RELEASE R, RM	 494
									BRAKE TORQUE	 481  486  489  492
									BRAKE TYPE FD, AFD (d.c. brake) FA, BA (a.c. brake)	 478  483  488  491
									TERMINAL BOX POSITION W (default), N, E, S	 24
									MOTOR MOUNTING — (compact motor) B5 (IEC - motor)	
									INSULATION CLASS CL F standard CL H option	 472
									DEGREE OF PROTECTION IP55 standard (IP54 - brake motor)	 467
									VOLTAGE - FREQUENCY	 470
									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 M = compact 3-phase BN = IEC 3-phase	



20.1 Gearbox options

SO

Gear units C05, C11, C21, C31, C35, 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.

20.2 Motor options

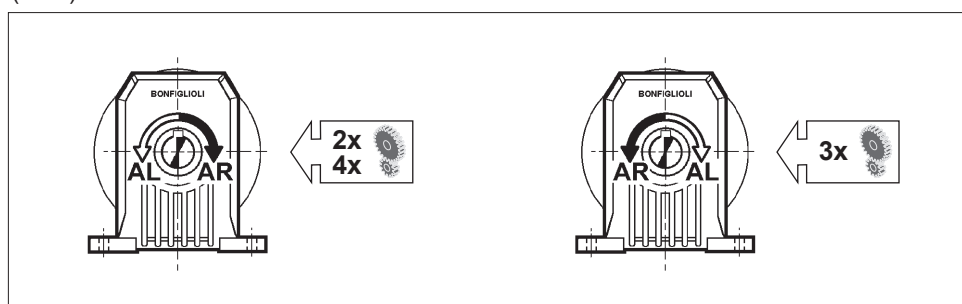
AA, AC, AD

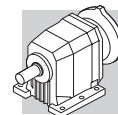
Mutual position of the brake release lever and terminal box. View is from the fan side. Standard position = 90° clockwise. AA = 0°, AC = 180°, AD = 90° counterclockwise.

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 Series motors. Table B12 shows the direction of free rotation of the gearbox, on the basis of which the correct option must be selected.

(B 12)



**CF**

Capacitive filter.

D3

3 bimetallic winding temperature sensors, calibrated at 150°C.

E3

3 winding temperature thermistors, calibrated at 150°C.

F1

Flywheel for soft start and stop.

H1

Anti condensate heaters. Standard voltage 1~ 230V $\pm 10\%$.

PN

60 Hz power corresponding to the normalized 50 Hz power.

PS

Double shaft extension (barring RC and U1 options).

RC

Drip cover (barring option PS).

RV

Rotor balancing in vibration class B.

TC

Option TC is a rain canopy variant for textile industry environments.

This option is not compatible with variants EN1, EN2, EN3 and will not fit motors equipped with a BA brake.

TP

Tropicalization.

U1

Forced cooling (barring options PS and CUS).

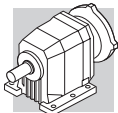
U2

Separate supply forced ventilation without terminal box. Cables are pre-wired. Configuration is not compatible with options PS and CUS. Available on motors;

BN 71... BN 132,

M1 ... M4.

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



21 LUBRICATION

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

Frame sizes C05, C11, C21, C31, C35 and C41 are supplied by the factory, or by the authorized dealers, already filled with oil.

Unless otherwise specified, units size C51 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).

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.

Operation of gear units is permitted at ambient temperatures between -20°C and $+40^{\circ}\text{C}$. However, for temperatures between -20°C and -10°C unit may only start up after it has been progressively and evenly pre-heated, or otherwise initially operated unloaded.

Load may then be connected to the output shaft when the gear unit has reached the temperature of -10°C , or higher.

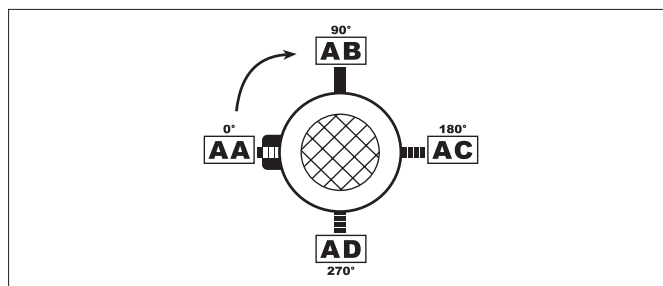
22 MOUNTING POSITION AND TERMINAL BOX ORIENTATION

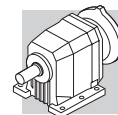
Location of motor terminal box can be specified by viewing the motor from the fan side; standard location is shown in black (W).

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.

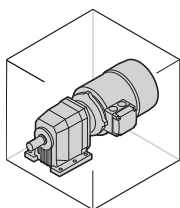
(B 13)



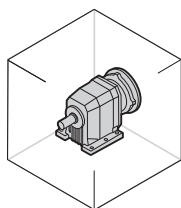


C ... P

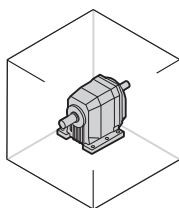
B3



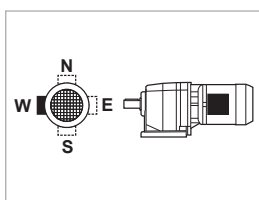
_S



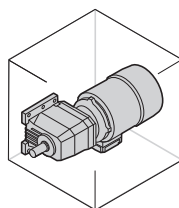
_P(IEC)



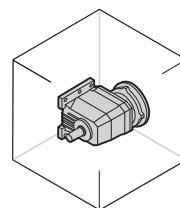
_HS



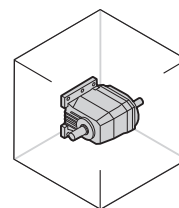
B6



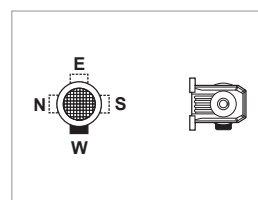
_S



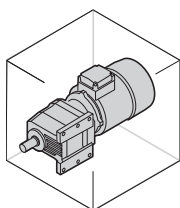
_P(IEC)



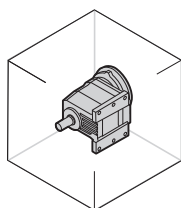
_HS



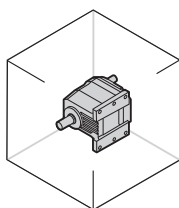
B7



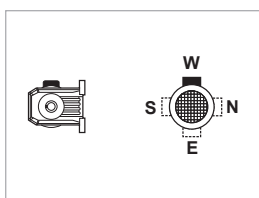
_S



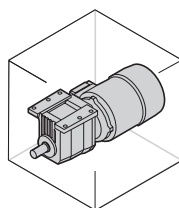
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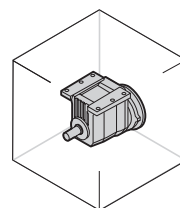
_HS



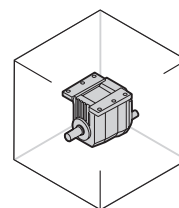
B8



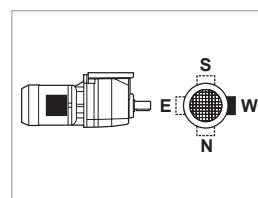
_S



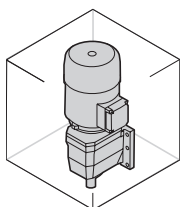
_P(IEC)



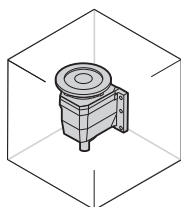
_HS



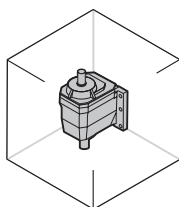
VA



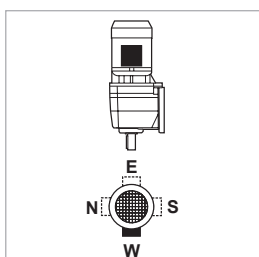
_S



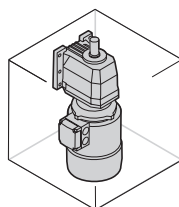
_P(IEC)



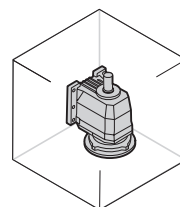
_HS



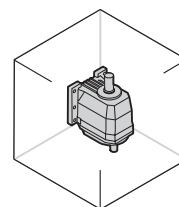
VB



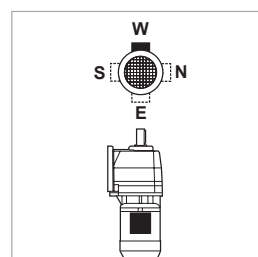
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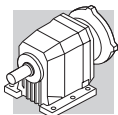
_P(IEC)



_HS

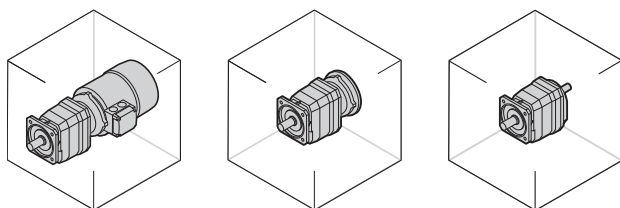


W = Default



C ... F

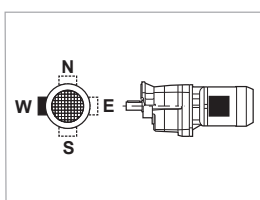
B5



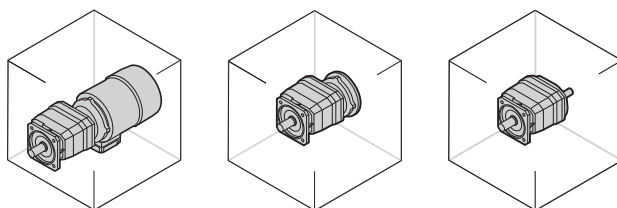
_S

_P(IEC)

_HS



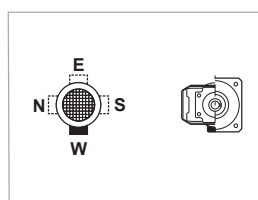
B51



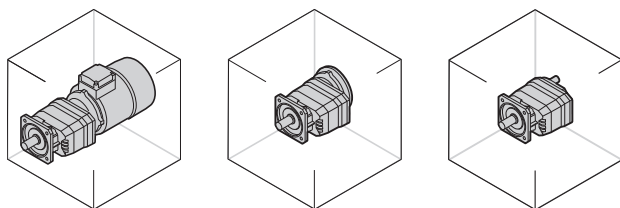
_S

_P(IEC)

_HS



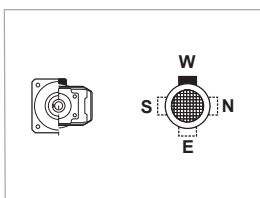
B53



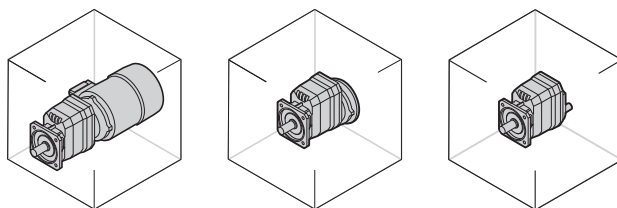
_S

_P(IEC)

_HS



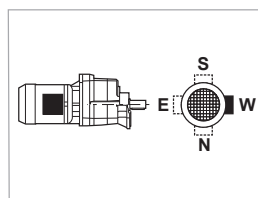
B52



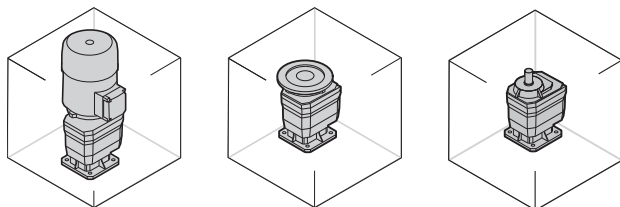
_S

_P(IEC)

_HS



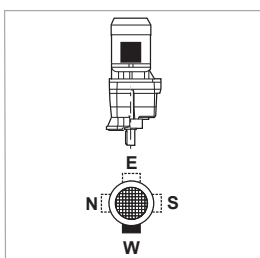
V1



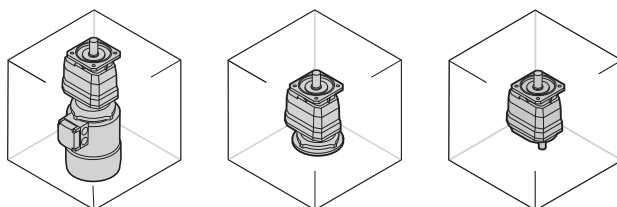
_S

_P(IEC)

_HS



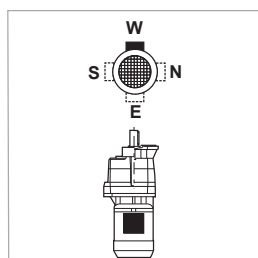
V3



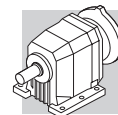
_S

_P(IEC)

_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:

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

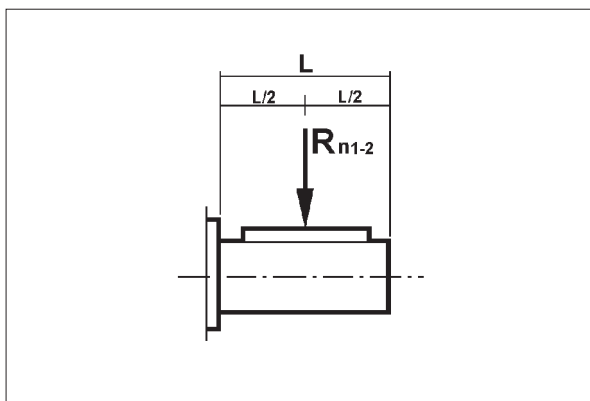
(B 14)

M₁ [Nm]	Torque applied to input shaft
M₂ [Nm]	Torque drawn at output shaft
d [mm]	Pitch diameter of element keyed onto shaft
K_r = 1	Chain transmission

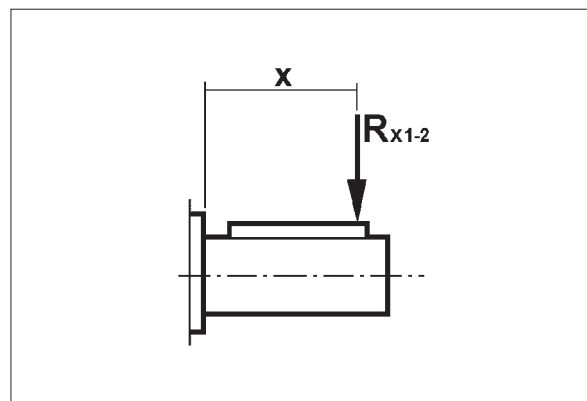
K_r = 1,25	Gear transmission
K_r = 1,5	V-belt transmission
K_r = 2,0	Flat belt transmission

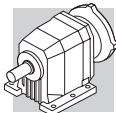
Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(B 15)



(B 16)





a) Load applied at midpoint of shaft, tab. (B15)

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. (B16)

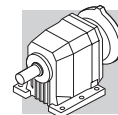
When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.

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:

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

(B 17)

	Load location factors					
	Output shaft			Input shaft		
	a	b	c	a	b	c
C 05 2	38	18	250	—	—	—
C 11 2	46	26	450	21	1	300
C 21 2	53	28	550	40	20	350
C 21 3	53	28	550	21	1	300
C 31 2	60.5	30.5	750	41.5	21.5	350
C 31 3	60.5	30.5	750	21	1	300
C 35 2 - C 35 3	69.5	34.5	800	51.5	26.5	450
C 35 4	69.5	34.5	800	21	1	300
C 41 2 - C 41 3	69.5	34.5	850	51.5	26.5	450
C 41 4	69.5	34.5	850	40	20	350
C 51 2 - C 51 3	76.5	36.5	900	51.5	26.5	450
C 51 4	76.5	36.5	900	41.5	21.5	350
C 61 2 - C 61 3	95.5	45.5	1000	57.5	27.5	450
C 61 4	95.5	45.5	1000	51.5	26.5	450
C 70 2 - C 70 3	114	54	1200	86	31	1000
C 70 4	114	54	1200	49.5	24.5	450
C 80 2 - C 80 3	131	61	1500	86	31	1000
C 80 4	131	61	1500	49.5	24.5	450
C 90 2 - C 90 3	161	76	2000	116	46	1400
C 90 4	161	76	2000	49.5	24.5	450
C 100 2 - C 100 3	163.5	58.5	2500	116	46	1400
C 100 4	163.5	58.5	2500	49.5	24.5	450



Verification procedure is described here after.

INPUT SHAFT

1. Calculate:

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

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:

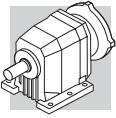
$$R_{x2} = R_{n2} \cdot \frac{a}{b+x} \quad (20)$$

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}

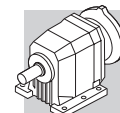
Permissible thrust loads on input [A_{n1}] and output [A_{n2}] shafts are obtained from the radial loading for the shaft under consideration [R_{n1}] and [R_{n2}] through the following equation:

$$\begin{aligned} A_{n1} &= R_{n1} \cdot 0,2 \\ A_{n2} &= R_{n2} \cdot 0,2 \end{aligned} \quad (23)$$

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

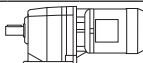
In the only case that no overhung load acts on the shaft the value of the admissible thrust load [A_n] amounts to 50% of rated OHL [R_n] on same shaft.

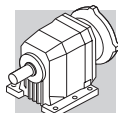
Where thrust loads exceed permissible value or largely prevail over radial loads, contact Bonfiglioli Riduttori for an in-depth analysis of the application.



25 GEARMOTOR RATING CHARTS

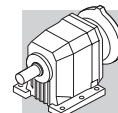
0.09 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
1.0	760	0.8	855.5	7000	C414_ 855.5 S05 M05A6	122	C414_ 855.5 P63 BN63A6	123
1.2	654	0.9	735.9	7000	C414_ 735.9 S05 M05A6	122	C414_ 735.9 P63 BN63A6	123
1.3	597	1.0	671.3	7000	C414_ 671.3 S05 M05A6	122	C414_ 671.3 P63 BN63A6	123
1.5	511	0.9	574.7	6500	C354_ 574.7 S05 M05A6	119	C354_ 574.7 P63 BN63A6	120
1.6	483	1.2	543.5	7000	C414_ 543.5 S05 M05A6	122	C414_ 543.5 P63 BN63A6	123
1.9	407	1.1	458.4	6500	C354_ 458.4 S05 M05A6	119	C354_ 458.4 P63 BN63A6	120
2.0	400	1.5	450.2	7000	C414_ 450.2 S05 M05A6	122	C414_ 450.2 P63 BN63A6	123
2.6	306	1.5	344.3	6500	C354_ 344.3 S05 M05A6	119	C354_ 344.3 P63 BN63A6	120
2.6	296	2.0	333.4	7000	C414_ 333.4 S05 M05A6	122	C414_ 333.4 P63 BN63A6	123
3.2	250	1.1	274.7	5500	C313_ 274.7 S05 M05A6	116	C313_ 274.7 P63 BN63A6	117
3.9	205	1.0	225.8	5000	C213_ 225.8 S05 M05A6	113	C213_ 225.8 P63 BN63A6	114
4.1	196	1.5	215.6	5500	C313_ 215.6 S05 M05A6	116	C313_ 215.6 P63 BN63A6	117
4.9	162	1.2	178.5	5000	C213_ 178.5 S05 M05A6	113	C213_ 178.5 P63 BN63A6	114
5.8	138	1.5	151.7	5000	C213_ 151.7 S05 M05A6	113	C213_ 151.7 P63 BN63A6	114
5.9	135	2.2	148.4	5500	C313_ 148.4 S05 M05A6	116	C313_ 148.4 P63 BN63A6	117
7.2	111	1.8	122.2	5000	C213_ 122.2 S05 M05A6	113	C213_ 122.2 P63 BN63A6	114
7.2	111	2.7	122.4	5500	C313_ 122.4 S05 M05A6	116	C313_ 122.4 P63 BN63A6	117
8.0	100	2.0	110.0	5000	C213_ 110.0 S05 M05A6	113	C213_ 110.0 P63 BN63A6	114
8.8	91	2.2	100.2	5000	C213_ 100.2 S05 M05A6	113	C213_ 100.2 P63 BN63A6	114
10.7	75	2.7	82.6	5000	C213_ 82.6 S05 M05A6	113	C213_ 82.6 P63 BN63A6	114
13.3	61	1.5	66.2	2000	C112_ 66.2 S05 M05A6	110	C112_ 66.2 P63 BN63A6	111
14.8	55	1.5	59.6	2000	C112_ 59.6 S05 M05A6	110	C112_ 59.6 P63 BN63A6	111
16.0	51	1.8	55.2	2000	C112_ 55.2 S05 M05A6	110	C112_ 55.2 P63 BN63A6	111
17.7	46	2.2	49.7	2000	C112_ 49.7 S05 M05A6	110	C112_ 49.7 P63 BN63A6	111
18.5	44	2.0	47.6	2000	C112_ 47.6 S05 M05A6	110	C112_ 47.6 P63 BN63A6	111
19.7	42	1.1	44.7	1170	C052_ 44.7 S05 M05A6	109	C112_ 37.0 P63 BN63A6	111
21.8	38	1.2	40.3	1150	C052_ 40.3 S05 M05A6	109		
23.8	34	2.6	37.0	2000	C112_ 37.0 S05 M05A6	110		
24.2	34	1.3	36.4	1140	C052_ 36.4 S05 M05A6	109		
26.8	31	1.5	32.8	1110	C052_ 32.8 S05 M05A6	109		
30	27	1.7	44.7	1170	C052_ 44.7 S0 M0B4	109		
33	25	1.8	40.3	990	C052_ 40.3 S0 M0B4	109		
37	22	2.0	36.4	980	C052_ 36.4 S0 M0B4	109		
41	20	2.3	32.8	960	C052_ 32.8 S0 M0B4	109		
42	19	2.3	21.0	1020	C052_ 21.0 S05 M05A6	109		
50	16	2.7	27.1	930	C052_ 27.1 S0 M0B4	109	C112_ 13.4 P63 BN63A6	111
56	15	3.1	15.6	950	C052_ 15.6 S05 M05A6	109		
66	12	6.5	13.4	2000	C112_ 13.4 S05 M05A6	110		
71	12	3.9	12.5	900	C052_ 12.5 S05 M05A6	109		
78	10	4.3	11.2	880	C052_ 11.2 S05 M05A6	109		
88	9	7.7	10.1	2000	C112_ 10.1 S05 M05A6	110	C112_ 10.1 P63 BN63A6	111
95	9	5.2	9.3	830	C052_ 9.3 S05 M05A6	109	C112_ 6.2 P63 BN63A6	111
119	7	6.5	7.4	780	C052_ 7.4 S05 M05A6	109		
132	6	7.3	6.7	760	C052_ 6.7 S05 M05A6	109		
146	6	10.9	6.2	1960	C112_ 6.2 S05 M05A6	110		
159	5	8.8	5.5	720	C052_ 5.5 S05 M05A6	109		
187	4	12.6	4.9	1810	C112_ 4.9 S05 M05A6	110	C112_ 4.9 P63 BN63A6	111
249	3	15.0	3.7	1650	C112_ 3.7 S05 M05A6	110	C112_ 3.7 P63 BN63A6	111
329	2	17.3	2.8	1510	C112_ 2.8 S05 M05A6	110	C112_ 2.8 P63 BN63A6	111



0.12 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
0.98	1061	0.9	884.9	10000			C514_ 884.9 P63 BN63B6	126
1.2	860	1.2	717.7	10000			C514_ 717.7 P63 BN63B6	126
1.5	681	0.9	855.5	7000	C414_ 855.5 S05 M05A4	122	C414_ 855.5 P63 BN63A4	123
1.6	643	1.6	808.0	10000			C514_ 808.0 P63 BN63A4	126
1.7	621	1.0	780.4	7000	C414_ 780.4 S05 M05A4	122	C414_ 780.4 P63 BN63A4	123
1.8	586	1.0	735.9	7000	C414_ 735.9 S05 M05A4	122	C414_ 735.9 P63 BN63A4	123
2.0	534	1.1	671.3	7000	C414_ 671.3 S05 M05A4	122	C414_ 671.3 P63 BN63A4	123
2.0	530	0.8	665.9	6500	C354_ 665.9 S05 M05A4	119	C354_ 665.9 P63 BN63A4	120
2.2	483	0.9	606.6	6500	C354_ 606.6 S05 M05A4	119	C354_ 606.6 P63 BN63A4	120
2.2	474	1.3	595.8	7000	C414_ 595.8 S05 M05A4	122	C414_ 595.8 P63 BN63A4	123
2.3	457	1.0	574.7	6500	C354_ 574.7 S05 M05A4	119	C354_ 574.7 P63 BN63A4	120
2.4	433	1.4	543.5	7000	C414_ 543.5 S05 M05A4	122	C414_ 543.5 P63 BN63A4	123
2.5	417	1.1	523.5	6500	C354_ 523.5 S05 M05A4	119	C354_ 523.5 P63 BN63A4	120
2.7	393	1.5	493.5	7000	C414_ 493.5 S05 M05A4	122	C414_ 493.5 P63 BN63A4	123
2.9	365	1.2	458.4	6500	C354_ 458.4 S05 M05A4	119	C354_ 458.4 P63 BN63A4	120
2.9	358	1.7	450.2	7000	C414_ 450.2 S05 M05A4	122	C414_ 450.2 P63 BN63A4	123
3.1	333	1.8	418.5	7000	C414_ 418.5 S05 M05A4	122	C414_ 418.5 P63 BN63A4	123
3.1	332	1.4	417.6	6500	C354_ 417.6 S05 M05A4	119	C354_ 417.6 P63 BN63A4	120
3.4	304	2.0	381.8	7000	C414_ 381.8 S05 M05A4	122	C414_ 381.8 P63 BN63A4	123
3.5	301	1.5	377.9	6500	C354_ 377.9 S05 M05A4	119	C354_ 377.9 P63 BN63A4	120
3.8	274	1.6	344.3	6500	C354_ 344.3 S05 M05A4	119	C354_ 344.3 P63 BN63A4	120
3.9	265	2.3	333.4	7000	C414_ 333.4 S05 M05A4	122	C414_ 333.4 P63 BN63A4	123
4.1	254	1.8	318.9	6500	C354_ 318.9 S05 M05A4	119	C354_ 318.9 P63 BN63A4	120
4.3	242	2.5	304.2	7000	C414_ 304.2 S05 M05A4	122	C414_ 304.2 P63 BN63A4	123
4.8	223	1.1	274.7	5500	C313_ 274.7 S05 M05A4	116	C313_ 274.7 P63 BN63A4	117
4.9	219	0.9	178.5	5000	C213_ 178.5 S05 M05B6	113	C213_ 178.5 P63 BN63B6	114
5.0	209	2.9	263.0	7000	C414_ 263.0 S05 M05A4	122	C414_ 263.0 P63 BN63A4	123
5.3	201	1.1	247.3	5500	C313_ 247.3 S05 M05A4	116	C313_ 247.3 P63 BN63A4	117
5.4	197	1.0	160.7	5000	C213_ 160.7 S05 M05B6	113	C213_ 160.7 P63 BN63B6	114
5.8	184	1.0	225.8	5000	C213_ 225.8 S05 M05A4	113	C213_ 225.8 P63 BN63A4	114
6.1	175	1.7	215.6	5500	C313_ 215.6 S05 M05A4	116	C313_ 215.6 P63 BN63A4	117
6.4	165	1.0	203.2	5000	C213_ 203.2 S05 M05A4	113	C213_ 203.2 P63 BN63A4	114
6.7	158	1.9	194.1	5500	C313_ 194.1 S05 M05A4	116	C313_ 194.1 P63 BN63A4	117
7.3	145	1.4	178.5	5000	C213_ 178.5 S05 M05A4	113	C213_ 178.5 P63 BN63A4	114
7.8	136	2.2	167.5	5500	C313_ 167.5 S05 M05A4	116	C313_ 167.5 P63 BN63A4	117
8.2	131	1.5	160.7	5000	C213_ 160.7 S05 M05A4	113	C213_ 160.7 P63 BN63A4	114
8.6	123	1.6	151.7	5000	C213_ 151.7 S05 M05A4	113	C213_ 151.7 P63 BN63A4	114
8.8	121	2.5	148.4	5500	C313_ 148.4 S05 M05A4	116	C313_ 148.4 P63 BN63A4	117
9.6	111	1.8	136.5	5000	C213_ 136.5 S05 M05A4	113	C213_ 136.5 P63 BN63A4	114
9.8	109	2.8	133.6	5500	C313_ 133.6 S05 M05A4	116	C313_ 133.6 P63 BN63A4	117
10.7	99	2.0	122.2	5000	C213_ 122.2 S05 M05A4	113	C213_ 122.2 P63 BN63A4	114
10.7	100	3.0	122.4	5500	C313_ 122.4 S05 M05A4	116	C313_ 122.4 P63 BN63A4	117
11.9	89	2.2	110.0	5000	C213_ 110.0 S05 M05A4	113	C213_ 110.0 P63 BN63A4	114
13.1	81	2.5	100.2	5000	C213_ 100.2 S05 M05A4	113	C213_ 100.2 P63 BN63A4	114
14.5	73	2.7	90.2	5000	C213_ 90.2 S05 M05A4	113	C213_ 90.2 P63 BN63A4	114
15.9	67	3.0	82.6	5000	C213_ 82.6 S05 M05A4	113	C213_ 82.6 P63 BN63A4	114
19.8	55	1.6	66.2	2000	C112_ 66.2 S05 M05A4	110	C112_ 66.2 P63 BN63A4	111
22.0	50	1.7	59.6	2000	C112_ 59.6 S05 M05A4	110	C112_ 59.6 P63 BN63A4	111
23.0	47	2.4	57.0	5000	C212_ 57.0 S05 M05A4	113	C212_ 57.0 P63 BN63A4	114
23.7	46	2.0	55.2	2000	C112_ 55.2 S05 M05A4	110	C112_ 55.2 P63 BN63A4	111
26.4	41	2.4	49.7	2000	C112_ 49.7 S05 M05A4	110	C112_ 49.7 P63 BN63A4	111

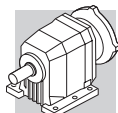


0.12 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
27.5	40	2.3	47.6	2000	C112_ 47.6 S05 M05A4	110	C112_ 47.6 P63 BN63A4	111
29.3	37	1.2	44.7	1010	C052_ 44.7 S05 M05A4	109		
31	36	2.8	42.9	2000	C112_ 42.9 S05 M05A4	110	C112_ 42.9 P63 BN63A4	111
33	34	1.3	40.3	990	C052_ 40.3 S05 M05A4	109		
35	31	2.9	37.0	2000	C112_ 37.0 S05 M05A4	110	C112_ 37.0 P63 BN63A4	111
36	30	1.5	36.4	980	C052_ 36.4 S05 M05A4	109		
39	28	3.6	33.4	2000	C112_ 33.4 S05 M05A4	110	C112_ 33.4 P63 BN63A4	111
40	27	1.6	32.8	960	C052_ 32.8 S05 M05A4	109		
48	23	2.0	27.1	930	C052_ 27.1 S05 M05A4	109		
56	20	2.3	15.6	900	C052_ 15.6 S05 M05B6	109		
62	18	2.6	21.0	890	C052_ 21.0 S05 M05A4	109		
69	16	2.5	18.9	860	C052_ 18.9 S05 M05A4	109		
78	14	3.2	11.2	850	C052_ 11.2 S05 M05B6	109		
84	13	3.1	15.6	820	C052_ 15.6 S05 M05A4	109		
105	10	3.8	12.5	780	C052_ 12.5 S05 M05A4	109		
117	9	4.3	11.2	760	C052_ 11.2 S05 M05A4	109		
130	8	5.4	6.7	740	C052_ 6.7 S05 M05B6	109		
141	8	3.9	9.3	720	C052_ 9.3 S05 M05A4	109		
177	6	4.8	7.4	680	C052_ 7.4 S05 M05A4	109		
196	6	5.4	6.7	660	C052_ 6.7 S05 M05A4	109		
225	5	10.9	6.2	1700	C112_ 6.2 S05 M05A4	110	C112_ 6.2 P63 BN63A4	111
288	4	12.7	4.9	1570	C112_ 4.9 S05 M05A4	110	C112_ 4.9 P63 BN63A4	111
383	3	14.8	3.7	1430	C112_ 3.7 S05 M05A4	110	C112_ 3.7 P63 BN63A4	111
506	2	17.2	2.8	1310	C112_ 2.8 S05 M05A4	110	C112_ 2.8 P63 BN63A4	111

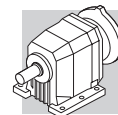
0.18 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
0.66	2367	1.0	1362	25000			C704_ 1362 P71 BN71A6	132
0.84	1858	1.2	1069	25000			C704_ 1069 P71 BN71A6	132
1.2	1262	1.3	726.3	16000	C614_ 726.3 S1 M1SC6	128	C614_ 726.3 P71 BN71A6	129
1.3	1248	0.8	717.7	10000	C514_ 717.7 S1 M1SC6	125	C514_ 717.7 P71 BN71A6	126
1.5	1049	1.0	884.9	10000			C514_ 884.9 P63 BN63B4	126
1.6	958	1.0	808.0	10000			C514_ 808.0 P63 BN63B4	126
1.6	955	1.0	549.7	10000	C514_ 549.7 S1 M1SC6	125	C514_ 549.7 P71 BN71A6	126
1.8	861	1.9	726.3	16000			C614_ 726.3 P63 BN63B4	129
1.8	851	1.2	717.7	10000			C514_ 717.7 P63 BN63B4	126
1.9	806	1.2	463.9	10000	C514_ 463.9 S1 M1SC6	125	C514_ 463.9 P71 BN71A6	126
1.9	803	2.0	462.0	16000	C614_ 462.0 S1 M1SC6	128	C614_ 462.0 P71 BN71A6	129
2.0	796	0.8	671.3	7000	C414_ 671.3 S05 M05B4	122	C414_ 671.3 P63 BN63B4	123
2.0	783	0.8	450.2	7000	C414_ 450.2 S1 M1SC6	122	C414_ 450.2 P71 BN71A6	123
2.0	777	1.3	655.4	10000			C514_ 655.4 P63 BN63B4	126
2.2	727	0.8	418.5	7000	C414_ 418.5 S1 M1SC6	122	C414_ 418.5 P71 BN71A6	123
2.2	723	1.4	415.7	10000	C514_ 415.7 S1 M1SC6	125	C514_ 415.7 P71 BN71A6	126
2.2	706	0.8	595.8	7000	C414_ 595.8 S05 M05B4	122	C414_ 595.8 P63 BN63B4	123
2.4	660	1.5	379.6	10000	C514_ 379.6 S1 M1SC6	125	C514_ 379.6 P71 BN71A6	126
2.4	644	0.9	543.5	7000	C414_ 543.5 S05 M05B4	122	C414_ 543.5 P63 BN63B4	123
2.6	598	0.8	344.3	6500	C354_ 344.3 S1 M1SC6	119	C354_ 344.3 P71 BN71A6	120



0.18 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
2.7	585	1.0	493.5	7000	C414_ 493.5 S05 M05B4	122	C414_ 493.5 P63 BN63B4	123
2.9	543	0.8	458.4	6500	C354_ 458.4 S05 M05B4	119	C354_ 458.4 P63 BN63B4	120
2.9	534	1.1	450.2	7000	C414_ 450.2 S05 M05B4	122	C414_ 450.2 P63 BN63B4	123
3.2	496	1.2	418.5	7000	C414_ 418.5 S05 M05B4	122	C414_ 418.5 P63 BN63B4	123
3.2	495	0.9	417.6	6500	C354_ 417.6 S05 M05B4	119	C354_ 417.6 P63 BN63B4	120
3.5	452	1.3	381.8	7000	C414_ 381.8 S05 M05B4	122	C414_ 381.8 P63 BN63B4	123
3.5	448	1.0	377.9	6500	C354_ 377.9 S05 M05B4	119	C354_ 377.9 P63 BN63B4	120
3.8	408	1.1	344.3	6500	C354_ 344.3 S05 M05B4	119	C354_ 344.3 P63 BN63B4	120
4.0	395	1.5	333.4	7000	C414_ 333.4 S05 M05B4	122	C414_ 333.4 P63 BN63B4	123
4.1	378	1.2	318.9	6500	C354_ 318.9 S05 M05B4	119	C354_ 318.9 P63 BN63B4	120
4.3	371	1.6	209.1	7000	C413_ 209.1 S1 M1SC6	122	C413_ 209.1 P71 BN71A6	123
4.3	360	1.7	304.2	7000	C414_ 304.2 S05 M05B4	122	C414_ 304.2 P63 BN63B4	123
4.5	344	1.3	290.6	6500	C354_ 290.6 S05 M05B4	119	C354_ 290.6 P63 BN63B4	120
4.7	339	1.8	190.8	7000	C413_ 190.8 S1 M1SC6	122	C413_ 190.8 P71 BN71A6	123
4.8	334	1.3	188.0	6500			C353_ 188.0 P71 BN71A6	120
4.8	330	0.9	186.0	5500	C313_ 186.0 S1 M1SC6	116	C313_ 186.0 P71 BN71A6	117
5.0	312	1.9	263.0	7000	C414_ 263.0 S05 M05B4	122	C414_ 263.0 P63 BN63B4	123
5.2	302	1.5	255.0	6500	C354_ 255.0 S05 M05B4	119	C354_ 255.0 P63 BN63B4	120
5.4	298	1.0	167.5	5500	C313_ 167.5 S1 M1SC6	116	C313_ 167.5 P71 BN71A6	117
5.7	275	1.6	232.3	6500	C354_ 232.3 S05 M05B4	119	C354_ 232.3 P63 BN63B4	120
6.1	262	1.7	147.6	6500	C353_ 147.6 S1 M1SC6	119	C353_ 147.6 P71 BN71A6	120
6.1	261	1.1	215.6	5500	C313_ 215.6 S05 M05B4	116	C313_ 215.6 P63 BN63B4	117
6.8	235	1.3	194.1	5500	C313_ 194.1 S05 M05B4	116	C313_ 194.1 P63 BN63B4	117
7.4	216	0.9	178.5	5000	C213_ 178.5 S05 M05B4	113	C213_ 178.5 P63 BN63B4	114
7.9	203	1.5	167.5	5500	C313_ 167.5 S05 M05B4	116	C313_ 167.5 P63 BN63B4	117
8.7	184	1.1	151.7	5000	C213_ 151.7 S05 M05B4	113	C213_ 151.7 P63 BN63B4	114
8.9	180	1.7	148.4	5500	C313_ 148.4 S05 M05B4	116	C313_ 148.4 P63 BN63B4	117
9.7	165	1.2	136.5	5000	C213_ 136.5 S05 M05B4	113	C213_ 136.5 P63 BN63B4	114
9.9	162	1.9	133.6	5500	C313_ 133.6 S05 M05B4	116	C313_ 133.6 P63 BN63B4	117
10.8	148	1.4	122.2	5000	C213_ 122.2 S05 M05B4	113	C213_ 122.2 P63 BN63B4	114
10.8	148	2.0	122.4	5500	C313_ 122.4 S05 M05B4	116	C313_ 122.4 P63 BN63B4	117
12.0	133	1.5	110.0	5000	C213_ 110.0 S05 M05B4	113	C213_ 110.0 P63 BN63B4	114
12.0	133	2.2	110.2	5500	C313_ 110.2 S05 M05B4	116	C313_ 110.2 P63 BN63B4	117
12.8	125	2.4	103.3	5500	C313_ 103.3 S05 M05B4	116	C313_ 103.3 P63 BN63B4	117
13.2	121	1.6	100.2	5000	C213_ 100.2 S05 M05B4	113	C213_ 100.2 P63 BN63B4	114
14.2	113	2.7	93.0	5500	C313_ 93.0 S05 M05B4	116	C313_ 93.0 P63 BN63B4	117
14.6	109	1.8	90.2	5000	C213_ 90.2 S05 M05B4	113	C213_ 90.2 P63 BN63B4	114
16.0	100	2.0	82.6	5000	C213_ 82.6 S05 M05B4	113	C213_ 82.6 P63 BN63B4	114
16.0	100	3.0	82.6	5500	C313_ 82.6 S05 M05B4	116	C313_ 82.6 P63 BN63B4	117
17.8	90	2.2	74.4	5000	C213_ 74.4 S05 M05B4	113	C213_ 74.4 P63 BN63B4	114
20.0	82	1.1	66.2	2000	C112_ 66.2 S05 M05B4	110	C112_ 66.2 P63 BN63B4	111
20.2	79	2.5	65.3	5000	C213_ 65.3 S05 M05B4	113	C213_ 65.3 P63 BN63B4	114
20.9	78	1.7	63.3	5000	C212_ 63.3 S05 M05B4	113	C212_ 63.3 P63 BN63B4	114
22.1	74	1.1	59.6	2000	C112_ 59.6 S05 M05B4	110	C112_ 59.6 P63 BN63B4	111
22.4	71	2.7	58.8	5000	C213_ 58.8 S05 M05B4	113	C213_ 58.8 P63 BN63B4	114
23.2	70	1.6	57.0	5000	C212_ 57.0 S05 M05B4	113	C212_ 57.0 P63 BN63B4	114
23.9	68	1.3	55.2	2000	C112_ 55.2 S05 M05B4	110	C112_ 55.2 P63 BN63B4	111
24.1	68	2.3	54.7	5000	C212_ 54.7 S05 M05B4	113	C212_ 54.7 P63 BN63B4	114
26.6	62	1.6	49.7	2000	C112_ 49.7 S05 M05B4	110	C112_ 49.7 P63 BN63B4	111
26.8	61	2.3	49.3	5000	C212_ 49.3 S05 M05B4	113	C212_ 49.3 P63 BN63B4	114
27.7	59	1.5	47.6	2000	C112_ 47.6 S05 M05B4	110	C112_ 47.6 P63 BN63B4	111

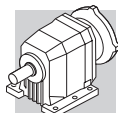


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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
31	53	1.9	42.9	2000	C112_ 42.9 S05 M05B4	110	C112_ 42.9 P63 BN63B4	111
33	50	0.9	40.3	850	C052_ 40.3 S05 M05B4	109		
36	45	1.0	36.4	850	C052_ 36.4 S05 M05B4	109		
36	46	2.0	37.0	2000	C112_ 37.0 S05 M05B4	110	C112_ 37.0 P63 BN63B4	111
40	41	1.1	32.8	840	C052_ 32.8 S05 M05B4	109		
40	41	2.4	33.4	2000	C112_ 33.4 S05 M05B4	110	C112_ 33.4 P63 BN63B4	111
45	37	2.5	29.5	2000	C112_ 29.5 S05 M05B4	110	C112_ 29.5 P63 BN63B4	111
49	34	1.3	27.1	820	C052_ 27.1 S05 M05B4	109		
52	31	2.8	25.4	2000	C112_ 25.4 S05 M05B4	110	C112_ 25.4 P63 BN63B4	111
58	28	3.0	22.8	2000	C112_ 22.8 S05 M05B4	110	C112_ 22.8 P63 BN63B4	111
63	26	1.7	21.0	810	C052_ 21.0 S05 M05B4	109		
64	26	3.2	20.6	2000	C112_ 20.6 S05 M05B4	110	C112_ 20.6 P63 BN63B4	111
70	23	1.7	18.9	790	C052_ 18.9 S05 M05B4	109		
71	23	3.4	18.6	2000	C112_ 18.6 S05 M05B4	110	C112_ 18.6 P63 BN63B4	111
77	21	3.6	17.2	2000	C112_ 17.2 S05 M05B4	110	C112_ 17.2 P63 BN63B4	111
85	19	2.1	15.6	760	C052_ 15.6 S05 M05B4	109		
106	15	2.6	12.5	740	C052_ 12.5 S05 M05B4	109		
118	14	2.9	11.2	720	C052_ 11.2 S05 M05B4	109		
142	11	2.6	9.3	690	C052_ 9.3 S05 M05B4	109		
178	9	3.3	7.4	650	C052_ 7.4 S05 M05B4	109		
197	8	3.6	6.7	640	C052_ 6.7 S05 M05B4	109		
223	7	7.2	6.2	1690	C112_ 6.2 S05 M05B4	110	C112_ 6.2 P63 BN63B4	111
223	7	7.3	12.1	1700	C112_ 12.1 S05 M05A2	110	C112_ 12.1 P63 BN63A2	111
240	7	4.4	5.5	600	C052_ 5.5 S05 M05B4	109		
268	6	8.1	10.1	1600	C112_ 10.1 S05 M05A2	110	C112_ 10.1 P63 BN63A2	111
286	6	8.4	4.9	1560	C112_ 4.9 S05 M05B4	110	C112_ 4.9 P63 BN63B4	111
298	5	8.8	9.1	1550	C112_ 9.1 S05 M05A2	110	C112_ 9.1 P63 BN63A2	111
354	5	9.8	7.6	1470	C112_ 7.6 S05 M05A2	110	C112_ 7.6 P63 BN63A2	111
381	4	9.8	3.7	1430	C112_ 3.7 S05 M05B4	110	C112_ 3.7 P63 BN63B4	111
393	4	10.4	6.9	1420	C112_ 6.9 S05 M05A2	110	C112_ 6.9 P63 BN63A2	111
502	3	11.4	2.8	1300	C112_ 2.8 S05 M05B4	110	C112_ 2.8 P63 BN63B4	111
577	3	13.4	4.9	1250	C112_ 4.9 S05 M05A2	110	C112_ 4.9 P63 BN63A2	111
770	2	16.0	3.7	1140	C112_ 3.7 S05 M05A2	110	C112_ 3.7 P63 BN63A2	111
1015	2	18.7	2.8	1040	C112_ 2.8 S05 M05A2	110	C112_ 2.8 P63 BN63A2	111

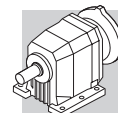
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
0.61	3575	1.1	1481	35000			C804_ 1481 P71 BN71B6	135
0.77	2820	1.4	1168	35000			C804_ 1168 P71 BN71B6	135
1.2	1753	0.9	726.3	16000	C614_ 726.3 S1 M1SD6	128	C614_ 726.3 P71 BN71B6	129
1.6	1330	0.8	808.0	10000			C514_ 808.0 P63 BN63C4	126
1.6	1327	0.8	549.7	10000	C514_ 549.7 S1 M1SD6	125	C514_ 549.7 P71 BN71B6	126
1.9	1134	0.9	717.7	10000			C514_ 717.7 P71 BN71A4	126
1.9	1120	0.9	463.9	10000	C514_ 463.9 S1 M1SD6	125	C514_ 463.9 P71 BN71B6	126
2.0	1101	1.5	668.8	16000			C614_ 668.8 P63 BN63C4	129
2.4	894	1.8	370.1	16000	C614_ 370.1 S1 M1SD6	128	C614_ 370.1 P71 BN71B6	129
2.5	869	1.2	549.7	10000			C514_ 549.7 P71 BN71A4	126



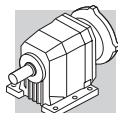
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
2.9	741	0.8	450.2	7000	C414_ 450.2 S05 M05C4	122	C414_ 450.2 P71 BN71A4	123
3.2	689	0.9	418.5	7000	C414_ 418.5 S05 M05C4	122	C414_ 418.5 P71 BN71A4	123
3.2	684	1.5	415.7	10000			C514_ 415.7 P71 BN71A4	126
3.5	628	1.0	381.8	7000	C414_ 381.8 S05 M05C4	122	C414_ 381.8 P71 BN71A4	123
3.5	625	1.6	379.6	10000			C514_ 379.6 P71 BN71A4	126
3.8	567	0.8	344.3	6500	C354_ 344.3 S05 M05C4	119	C354_ 344.3 P71 BN71A4	120
4.0	549	1.1	333.4	7000	C414_ 333.4 S05 M05C4	122	C414_ 333.4 P71 BN71A4	123
4.0	537	1.9	326.1	10000			C514_ 326.1 P71 BN71A4	126
4.1	525	0.9	318.9	6500	C354_ 318.9 S05 M05C4	119	C354_ 318.9 P71 BN71A4	120
4.3	501	1.2	304.2	7000	C414_ 304.2 S05 M05C4	122	C414_ 304.2 P71 BN71A4	123
4.4	490	2.0	297.8	10000			C514_ 297.8 P71 BN71A4	126
4.5	478	0.9	290.6	6500	C354_ 290.6 S05 M05C4	119	C354_ 290.6 P71 BN71A4	120
5.0	434	2.3	263.8	10000			C514_ 263.8 P71 BN71A4	126
5.0	433	1.4	263.0	7000	C414_ 263.0 S05 M05C4	122	C414_ 263.0 P71 BN71A4	123
5.2	420	1.1	255.0	6500	C354_ 255.0 S05 M05C4	119	C354_ 255.0 P71 BN71A4	120
5.5	395	1.5	239.9	7000	C414_ 239.9 S05 M05C4	122	C414_ 239.9 P71 BN71A4	123
5.7	382	1.2	232.3	6500	C354_ 232.3 S05 M05C4	119	C354_ 232.3 P71 BN71A4	120
6.3	350	2.9	216.7	10000			C513_ 216.7 P71 BN71A4	126
6.7	333	1.4	206.4	6500			C353_ 206.4 P71 BN71A4	120
6.8	326	0.9	194.1	5500	C313_ 194.1 S05 M05C4	116	C313_ 194.1 P71 BN71A4	117
7.2	308	1.9	190.8	7000			C413_ 190.8 P71 BN71A4	123
7.3	304	1.5	188.0	6500			C353_ 188.0 P71 BN71A4	120
7.9	282	1.1	167.5	5500	C313_ 167.5 S05 M05C4	116	C313_ 167.5 P71 BN71A4	117
8.4	265	2.3	164.1	7000			C413_ 164.1 P71 BN71A4	123
8.5	262	1.7	162.0	6500			C353_ 162.0 P71 BN71A4	120
8.9	250	1.2	148.4	5500	C313_ 148.4 S05 M05C4	116	C313_ 148.4 P71 BN71A4	117
9.3	238	1.9	147.6	6500			C353_ 147.6 P71 BN71A4	120
9.7	230	0.9	136.5	5000	C213_ 136.5 S05 M05C4	113	C213_ 136.5 P71 BN71A4	114
9.8	226	2.0	139.8	6500			C353_ 139.8 P71 BN71A4	120
10.3	215	2.8	132.9	7000			C413_ 132.9 P71 BN71A4	123
10.8	206	2.2	127.3	6500			C353_ 127.3 P71 BN71A4	120
10.8	206	1.0	122.2	5000	C213_ 122.2 S05 M05C4	113	C213_ 122.2 P71 BN71A4	114
10.8	206	1.5	122.4	5500	C313_ 122.4 S05 M05C4	116	C313_ 122.4 P71 BN71A4	117
12.0	185	1.1	110.0	5000	C213_ 110.0 S05 M05C4	113	C213_ 110.0 P71 BN71A4	114
12.0	185	1.6	110.2	5500	C313_ 110.2 S05 M05C4	116	C313_ 110.2 P71 BN71A4	117
12.3	180	2.5	111.5	6500			C353_ 111.5 P71 BN71A4	120
12.8	174	1.7	103.3	5500	C313_ 103.3 S05 M05C4	116	C313_ 103.3 P71 BN71A4	117
13.2	168	1.2	100.2	5000	C213_ 100.2 S05 M05C4	113	C213_ 100.2 P71 BN71A4	114
13.5	164	2.7	101.6	6500			C353_ 101.6 P71 BN71A4	120
14.2	156	1.9	93.0	5500	C313_ 93.0 S05 M05C4	116	C313_ 93.0 P71 BN71A4	117
14.6	152	1.3	90.2	5000	C213_ 90.2 S05 M05C4	113	C213_ 90.2 P71 BN71A4	114
15.0	148	3.0	91.9	6500			C353_ 91.9 P71 BN71A4	120
16.0	139	1.4	82.6	5000	C213_ 82.6 S05 M05C4	113	C213_ 82.6 P71 BN71A4	114
16.0	139	2.2	82.6	5500	C313_ 82.6 S05 M05C4	116	C313_ 82.6 P71 BN71A4	117
17.8	125	1.6	74.4	5000	C213_ 74.4 S05 M05C4	113	C213_ 74.4 P71 BN71A4	114
17.8	125	2.4	74.3	5500	C313_ 74.3 S05 M05C4	116	C313_ 74.3 P71 BN71A4	117
20.0	114	0.8	66.2	2000	C112_ 66.2 S05 M05C4	110	C112_ 66.2 P71 BN71A4	111
20.2	110	1.8	65.3	5000	C213_ 65.3 S05 M05C4	113	C213_ 65.3 P71 BN71A4	114
20.9	109	1.2	63.3	5000	C212_ 63.3 S05 M05C4	113	C212_ 63.3 P71 BN71A4	114
22.1	102	0.8	59.6	2000	C112_ 59.6 S05 M05C4	110	C112_ 59.6 P71 BN71A4	111
22.4	99	1.9	58.8	5000	C213_ 58.8 S05 M05C4	113	C213_ 58.8 P71 BN71A4	114

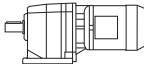


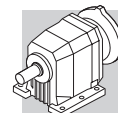
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
23.2	98	1.2	57.0	5000	C212_ 57.0 S05 M05C4	113	C212_ 57.0 P71 BN71A4	114
23.9	95	0.9	55.2	2000	C112_ 55.2 S05 M05C4	110	C112_ 55.2 P71 BN71A4	111
24.1	94	1.6	54.7	5000	C212_ 54.7 S05 M05C4	113	C212_ 54.7 P71 BN71A4	114
26.6	85	1.2	49.7	2000	C112_ 49.7 S05 M05C4	110	C112_ 49.7 P71 BN71A4	111
26.8	85	1.7	49.3	4910	C212_ 49.3 S05 M05C4	113	C212_ 49.3 P71 BN71A4	114
27.7	82	1.1	47.6	2000	C112_ 47.6 S05 M05C4	110	C112_ 47.6 P71 BN71A4	111
31	74	1.4	42.9	2000	C112_ 42.9 S05 M05C4	110	C112_ 42.9 P71 BN71A4	111
31	74	2.6	43.3	4750	C212_ 43.3 S05 M05C4	113	C212_ 43.3 P71 BN71A4	114
36	64	1.4	37.0	2000	C112_ 37.0 S05 M05C4	110	C112_ 37.0 P71 BN71A4	111
36	63	3.2	36.8	4540	C212_ 36.8 S05 M05C4	113	C212_ 36.8 P71 BN71A4	114
45	51	1.8	29.5	2000	C112_ 29.5 S05 M05C4	110	C112_ 29.5 P71 BN71A4	111
49	47	1.0	27.1	700	C052_ 27.1 S05 M05C4	109		
52	44	2.0	25.4	2000	C112_ 25.4 S05 M05C4	110	C112_ 25.4 P71 BN71A4	111
58	39	2.2	22.8	2000	C112_ 22.8 S05 M05C4	110	C112_ 22.8 P71 BN71A4	111
63	36	1.2	21.0	720	C052_ 21.0 S05 M05C4	109		
64	35	2.3	20.6	2000	C112_ 20.6 S05 M05C4	110	C112_ 20.6 P71 BN71A4	111
70	33	1.2	18.9	710	C052_ 18.9 S05 M05C4	109		
71	32	2.5	18.6	2000	C112_ 18.6 S05 M05C4	110	C112_ 18.6 P71 BN71A4	111
77	29	2.6	17.2	2000	C112_ 17.2 S05 M05C4	110	C112_ 17.2 P71 BN71A4	111
85	27	1.5	15.6	700	C052_ 15.6 S05 M05C4	109		
85	27	2.8	15.5	2000	C112_ 15.5 S05 M05C4	110	C112_ 15.5 P71 BN71A4	111
98	23	3.0	13.4	2000	C112_ 13.4 S05 M05C4	110	C112_ 13.4 P71 BN71A4	111
106	22	1.9	12.5	690	C052_ 12.5 S05 M05C4	109		
109	21	3.2	12.1	2000	C112_ 12.1 S05 M05C4	110	C112_ 12.1 P71 BN71A4	111
118	19	2.1	11.2	670	C052_ 11.2 S05 M05C4	109		
131	17	3.6	10.1	1980	C112_ 10.1 S05 M05C4	110	C112_ 10.1 P71 BN71A4	111
142	16	1.9	9.3	650	C052_ 9.3 S05 M05C4	109		
157	14	4.2	17.2	1870	C112_ 17.2 S05 M05B2	110	C112_ 17.2 P63 BN63B2	111
178	13	2.4	7.4	620	C052_ 7.4 S05 M05C4	109		
197	12	2.6	6.7	610	C052_ 6.7 S05 M05C4	109		
221	10	5.2	6.2	1680	C112_ 6.2 S05 M05C4	110	C112_ 6.2 P71 BN71A4	111
223	10	5.2	12.1	1680	C112_ 12.1 S05 M05B2	110	C112_ 12.1 P63 BN63B2	111
240	9	3.2	5.5	580	C052_ 5.5 S05 M05C4	109		
268	8	5.8	10.1	1590	C112_ 10.1 S05 M05B2	110	C112_ 10.1 P63 BN63B2	111
282	8	6.0	4.9	1550	C112_ 4.9 S05 M05C4	110	C112_ 4.9 P71 BN71A4	111
298	8	6.3	9.1	1540	C112_ 9.1 S05 M05B2	110	C112_ 9.1 P63 BN63B2	111
354	6	7.0	7.6	1460	C112_ 7.6 S05 M05B2	110	C112_ 7.6 P63 BN63B2	111
377	6	7.0	3.7	1420	C112_ 3.7 S05 M05C4	110	C112_ 3.7 P71 BN71A4	111
393	6	7.5	6.9	1410	C112_ 6.9 S05 M05B2	110	C112_ 6.9 P63 BN63B2	111
497	5	8.1	2.8	1300	C112_ 2.8 S05 M05C4	110	C112_ 2.8 P71 BN71A4	111
577	4	9.7	4.9	1240	C112_ 4.9 S05 M05B2	110	C112_ 4.9 P63 BN63B2	111
770	3	11.5	3.7	1130	C112_ 3.7 S05 M05B2	110	C112_ 3.7 P63 BN63B2	111

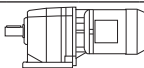


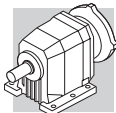
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
0.73	4382	1.6	1240	60000	C904_ 1240 S1 M1LA6	137	C904_ 1240 P80 BN80A6	138
0.78	4127	1.0	1168	35000			C804_ 1168 P80 BN80A6	135
0.93	3476	1.2	1481	35000			C804_ 1481 P71 BN71B4	135
1.2	2741	1.5	1168	35000			C804_ 1168 P71 BN71B4	135
1.4	2220	1.8	945.7	35000			C804_ 945.7 P71 BN71B4	135
1.5	2165	1.1	922.6	25000	C614_ 796.1 S1 M1SD4	128	C704_ 922.6 P71 BN71B4	132
1.7	1869	0.9	796.1	16000			C614_ 796.1 P71 BN71B4	129
2.0	1570	1.0	668.8	16000			C614_ 668.8 P71 BN71B4	129
2.1	1543	1.5	657.3	25000			C704_ 657.3 P71 BN71B4	132
2.4	1341	1.2	571.2	16000			C614_ 571.2 P71 BN71B4	129
2.5	1302	1.8	554.7	25000	C514_ 549.7 S1 M1SD4	125	C704_ 554.7 P71 BN71B4	132
2.5	1290	0.8	549.7	10000			C514_ 549.7 P71 BN71B4	126
2.6	1223	1.3	521.1	16000			C614_ 521.1 P71 BN71B4	129
3.3	989	1.6	421.5	16000			C614_ 421.5 P71 BN71B4	129
3.3	976	1.0	415.7	10000			C514_ 415.7 P71 BN71B4	126
3.3	961	2.4	409.4	25000	C514_ 379.6 S1 M1SD4	125	C704_ 409.4 P71 BN71B4	132
3.6	891	1.1	379.6	10000			C514_ 379.6 P71 BN71B4	126
3.7	869	1.8	370.1	16000			C614_ 370.1 P71 BN71B4	129
4.1	793	2.0	337.7	16000			C614_ 337.7 P71 BN71B4	129
4.1	783	0.8	333.4	7000			C414_ 333.4 P71 BN71B4	123
4.2	765	1.3	326.1	10000	C514_ 326.1 S1 M1SD4	125	C514_ 326.1 P71 BN71B4	126
4.6	699	1.4	297.8	10000			C514_ 297.8 P71 BN71B4	126
5.2	619	1.6	263.8	10000			C514_ 263.8 P71 BN71B4	126
5.2	617	1.0	263.0	7000			C414_ 263.0 P71 BN71B4	123
5.4	599	0.8	255.0	6500			C354_ 255.0 P71 BN71B4	120
5.9	545	0.8	232.3	6500	C354_ 232.3 S1 M1SD4	119	C354_ 232.3 P71 BN71B4	120
6.3	520	1.9	216.7	10000			C513_ 216.7 P71 BN71B4	126
6.6	502	1.2	209.1	7000			C413_ 209.1 P71 BN71B4	123
6.6	495	0.9	206.4	6500			C353_ 206.4 P71 BN71B4	120
6.9	475	2.1	197.9	10000			C513_ 197.9 P71 BN71B4	126
7.2	458	1.3	190.8	7000	C413_ 190.8 S1 M1SD4	122	C413_ 190.8 P71 BN71B4	123
7.3	451	1.0	188.0	6500			C353_ 188.0 P71 BN71B4	120
7.6	431	1.4	179.9	7000			C413_ 179.9 P71 BN71B4	123
7.8	422	2.4	175.8	10000			C513_ 175.8 P71 BN71B4	126
8.3	394	1.5	164.1	7000			C413_ 164.1 P71 BN71B4	123
8.5	389	1.2	162.0	6500	C353_ 162.0 S1 M1SD4	119	C353_ 162.0 P71 BN71B4	120
8.5	385	2.6	160.5	10000			C513_ 160.5 P71 BN71B4	126
9.3	354	1.3	147.6	6500			C353_ 147.6 P71 BN71B4	120
9.4	349	1.7	145.6	7000			C413_ 145.6 P71 BN71B4	123
9.8	335	1.3	139.8	6500			C353_ 139.8 P71 BN71B4	120
10.3	320	0.9	133.6	5500	C313_ 133.6 S1 M1SD4	116	C313_ 133.6 P71 BN71B4	117
10.3	319	1.9	132.9	7000			C413_ 132.9 P71 BN71B4	123
11.2	293	1.0	122.4	5500			C313_ 122.4 P71 BN71B4	117
11.4	289	2.1	120.6	7000			C413_ 120.6 P71 BN71B4	123
12.4	264	1.1	110.2	5500			C313_ 110.2 P71 BN71B4	117
12.4	264	2.3	110.1	7000	C413_ 110.1 S1 M1SD4	122	C413_ 110.1 P71 BN71B4	123
13.3	248	1.2	103.3	5500			C313_ 103.3 P71 BN71B4	117
13.4	245	2.4	102.3	7000			C413_ 102.3 P71 BN71B4	123
14.7	224	2.7	93.3	7000			C413_ 93.3 P71 BN71B4	123
14.7	223	1.3	93.0	5500			C313_ 93.0 P71 BN71B4	117
15.2	216	0.9	90.2	5000	C213_ 90.2 S1 M1SD4	113	C213_ 90.2 P71 BN71B4	114

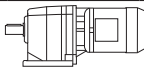


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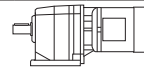
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
16.6	198	1.0	82.6	5000	C213_ 82.6 S1 M1SD4	113	C213_ 82.6 P71 BN71B4	114
16.6	198	1.5	82.6	5500	C313_ 82.6 S1 M1SD4	116	C313_ 82.6 P71 BN71B4	117
16.8	196	3.1	81.5	7000	C413_ 81.5 S1 M1SD4	122	C413_ 81.5 P71 BN71B4	123
18.4	178	1.1	74.4	5000	C213_ 74.4 S1 M1SD4	113	C213_ 74.4 P71 BN71B4	114
18.4	178	1.7	74.3	5500	C313_ 74.3 S1 M1SD4	116	C313_ 74.3 P71 BN71B4	117
18.4	178	3.4	74.4	7000	C413_ 74.4 S1 M1SD4	122	C413_ 74.4 P71 BN71B4	123
20.5	164	1.3	66.8	5500			C312_ 66.8 P71 BN71B4	117
21.0	157	1.3	65.3	5000	C213_ 65.3 S1 M1SD4	113	C213_ 65.3 P71 BN71B4	114
22.1	149	3.0	62.0	6500	C353_ 62.0 S1 M1SD4	119	C353_ 62.0 P71 BN71B4	120
23.3	141	1.3	58.8	4880	C213_ 58.8 S1 M1SD4	113	C213_ 58.8 P71 BN71B4	114
26.1	128	2.3	52.4	5500	C312_ 52.4 S1 M1SD4	116	C312_ 52.4 P71 BN71B4	117
27.6	122	0.8	49.7	2000			C112_ 49.7 P71 BN71B4	111
27.8	121	1.2	49.3	4660			C212_ 49.3 P71 BN71B4	114
29.0	116	2.6	47.2	5500	C312_ 47.2 S1 M1SD4	116	C312_ 47.2 P71 BN71B4	117
32	105	1.0	42.9	2000			C112_ 42.9 P71 BN71B4	111
32	106	1.8	43.3	4530	C212_ 43.3 S1 M1SD4	113	C212_ 43.3 P71 BN71B4	114
34	100	3.0	40.7	5500	C312_ 40.7 S1 M1SD4	116	C312_ 40.7 P71 BN71B4	117
35	95	1.8	39.0	4410	C212_ 39.0 S1 M1SD4	113	C212_ 39.0 P71 BN71B4	114
37	91	1.0	37.0	2000	C112_ 37.0 S1 M1SD4	110	C112_ 37.0 P71 BN71B4	111
37	90	2.2	36.8	4360	C212_ 36.8 S1 M1SD4	113	C212_ 36.8 P71 BN71B4	114
38	88	3.4	36.1	5500	C312_ 36.1 S1 M1SD4	116	C312_ 36.1 P71 BN71B4	117
41	82	1.2	33.4	2000	C112_ 33.4 S1 M1SD4	110	C112_ 33.4 P71 BN71B4	111
41	81	2.5	33.1	4240	C212_ 33.1 S1 M1SD4	113	C212_ 33.1 P71 BN71B4	114
42	80	1.1	32.8	2000	C112_ 32.8 S1 M1SD4	110	C112_ 32.8 P71 BN71B4	111
46	72	1.3	29.5	2000	C112_ 29.5 S1 M1SD4	110	C112_ 29.5 P71 BN71B4	111
46	73	2.8	29.6	4130	C212_ 29.6 S1 M1SD4	113	C212_ 29.6 P71 BN71B4	114
51	65	3.1	26.7	4010	C212_ 26.7 S1 M1SD4	113	C212_ 26.7 P71 BN71B4	114
54	62	1.4	25.4	2000	C112_ 25.4 S1 M1SD4	110	C112_ 25.4 P71 BN71B4	111
56	59	3.4	24.3	3920	C212_ 24.3 S1 M1SD4	113	C212_ 24.3 P71 BN71B4	114
60	56	1.5	22.8	2000	C112_ 22.8 S1 M1SD4	110	C112_ 22.8 P71 BN71B4	111
66	51	1.6	20.6	2000	C112_ 20.6 S1 M1SD4	110	C112_ 20.6 P71 BN71B4	111
74	46	1.7	18.6	2000	C112_ 18.6 S1 M1SD4	110	C112_ 18.6 P71 BN71B4	111
80	42	1.8	17.2	2000	C112_ 17.2 S1 M1SD4	110	C112_ 17.2 P71 BN71B4	111
88	39	1.0	15.6	580	C052_ 15.6 S1 M1SD4	109		
89	38	2.0	15.5	2000	C112_ 15.5 S1 M1SD4	110	C112_ 15.5 P71 BN71B4	111
102	33	2.1	13.4	2000	C112_ 13.4 S1 M1SD4	110	C112_ 13.4 P71 BN71B4	111
110	31	1.3	12.5	600	C052_ 12.5 S1 M1SD4	109		
113	30	2.3	12.1	2000	C112_ 12.1 S1 M1SD4	110	C112_ 12.1 P71 BN71B4	111
122	28	1.4	11.2	590	C052_ 11.2 S1 M1SD4	109		
136	25	2.6	10.1	1930	C112_ 10.1 S1 M1SD4	110	C112_ 10.1 P71 BN71B4	111
147	23	1.3	9.3	580	C052_ 9.3 S1 M1SD4	109		
151	22	2.7	9.1	1870	C112_ 9.1 S1 M1SD4	110	C112_ 9.1 P71 BN71B4	111
164	20	2.2	5.5	570	C052_ 5.5 S1 M1LA6	109		
180	19	3.0	7.6	1780	C112_ 7.6 S1 M1SD4	110	C112_ 7.6 P71 BN71B4	111
185	18	1.6	7.4	570	C052_ 7.4 S1 M1SD4	109		
199	17	3.2	6.9	1730	C112_ 6.9 S1 M1SD4	110	C112_ 6.9 P71 BN71B4	111
204	17	1.8	6.7	560	C052_ 6.7 S1 M1SD4	109		
220	15	3.5	6.2	1650	C112_ 6.2 S1 M1SD4	110	C112_ 6.2 P71 BN71B4	111
228	15	3.6	12.1	1650	C112_ 12.1 S05 M05C2	110	C112_ 12.1 P71 BN71A2	111
249	14	2.2	5.5	540	C052_ 5.5 S1 M1SD4	109		
273	12	4.0	10.1	1570	C112_ 10.1 S05 M05C2	110	C112_ 10.1 P71 BN71A2	111

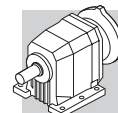


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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
281	12	4.0	4.9	1530	C112_ 4.9 S1 M1SD4	110	C112_ 4.9 P71 BN71B4	111
303	11	4.3	9.1	1520	C112_ 9.1 S05 M05C2	110	C112_ 9.1 P71 BN71A2	111
361	9	4.8	7.6	1440	C112_ 7.6 S05 M05C2	110	C112_ 7.6 P71 BN71A2	111
375	9	4.7	3.7	1400	C112_ 3.7 S1 M1SD4	110	C112_ 3.7 P71 BN71B4	111
400	8	5.1	6.9	1390	C112_ 6.9 S05 M05C2	110	C112_ 6.9 P71 BN71A2	111
495	7	5.5	2.8	1290	C112_ 2.8 S1 M1SD4	110	C112_ 2.8 P71 BN71B4	111
577	6	6.5	4.9	1230	C112_ 4.9 S05 M05C2	110	C112_ 4.9 P71 BN71A2	111
770	4	7.8	3.7	1120	C112_ 3.7 S05 M05C2	110	C112_ 3.7 P71 BN71A2	111
1015	3	9.1	2.8	1030	C112_ 2.8 S05 M05C2	110	C112_ 2.8 P71 BN71A2	111

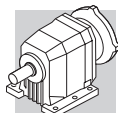
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
0.74	6442	1.1	1240	60000	C904_ 1240 S2 M2SA6	137	C904_ 1240 P80 BN80B6	138
0.85	5616	2.1	1081	85000	C1004_ 1081 S2 M2SA6	140	C1004_ 1081 P80 BN80B6	141
1.0	4792	1.5	922.3	60000	C904_ 922.3 S2 M2SA6	137	C904_ 922.3 P80 BN80B6	138
1.1	4381	0.9	1274	35000	C804_ 1274 S1 M1LA4	134	C804_ 1274 P80 BN80A4	135
1.1	4295	1.7	1240	60000	C904_ 1240 S1 M1LA4	137	C904_ 1240 P80 BN80A4	138
1.3	3549	1.1	1032	35000	C804_ 1032 S1 M1LA4	134	C804_ 1032 P80 BN80A4	135
1.4	3484	2.1	1006	60000	C904_ 1006 S1 M1LA4	137	C904_ 1006 P80 BN80A4	138
1.6	2939	1.4	854.6	35000	C804_ 854.6 S1 M1LA4	134	C804_ 854.6 P80 BN80A4	135
1.6	2923	2.5	844.0	65000	C904_ 844.0 S1 M1LA4	137	C904_ 844.0 P80 BN80A4	138
1.9	2531	0.9	736.0	25000	C704_ 736.0 S1 M1LA4	131	C704_ 736.0 P80 BN80A4	132
1.9	2492	1.6	724.7	35000	C804_ 724.7 S1 M1LA4	134	C804_ 724.7 P80 BN80A4	135
2.1	2284	1.8	664.3	35000	C804_ 664.3 S1 M1LA4	134	C804_ 664.3 P80 BN80A4	135
2.1	2260	1.0	657.3	25000	C704_ 657.3 S1 M1LA4	131	C704_ 657.3 P80 BN80A4	132
2.4	1978	0.8	571.2	16000	C614_ 571.2 S1 M1LA4	128	C614_ 571.2 P80 BN80A4	129
2.5	1907	1.2	554.7	25000	C704_ 554.7 S1 M1LA4	131	C704_ 554.7 P80 BN80A4	132
2.6	1820	2.2	529.3	35000	C804_ 529.3 S1 M1LA4	134	C804_ 529.3 P80 BN80A4	135
3.0	1600	1.0	462.0	16000	C614_ 462.0 S1 M1LA4	128	C614_ 462.0 P80 BN80A4	129
3.1	1566	2.6	455.4	35000	C804_ 455.4 S1 M1LA4	134	C804_ 455.4 P80 BN80A4	135
3.1	1525	1.5	443.5	25000	C704_ 443.5 S1 M1LA4	131	C704_ 443.5 P80 BN80A4	132
3.3	1460	1.1	421.5	16000	C614_ 421.5 S1 M1LA4	128	C614_ 421.5 P80 BN80A4	129
3.6	1315	0.8	379.6	10000	C514_ 379.6 S1 M1LA4	125	C514_ 379.6 P80 BN80A4	126
3.7	1282	1.2	370.1	16000	C614_ 370.1 S1 M1LA4	128	C614_ 370.1 P80 BN80A4	129
3.8	1254	3.2	364.7	35000	C804_ 364.7 S1 M1LA4	134	C804_ 364.7 P80 BN80A4	135
4.0	1184	1.9	344.3	25000	C704_ 344.3 S1 M1LA4	131	C704_ 344.3 P80 BN80A4	132
4.1	1170	1.4	337.7	16000	C614_ 337.7 S1 M1LA4	128	C614_ 337.7 P80 BN80A4	129
4.2	1130	0.9	326.1	10000	C514_ 326.1 S1 M1LA4	125	C514_ 326.1 P80 BN80A4	126
4.6	1031	1.0	297.8	10000	C514_ 297.8 S1 M1LA4	125	C514_ 297.8 P80 BN80A4	126
5.0	953	1.7	275.3	16000	C614_ 275.3 S1 M1LA4	128	C614_ 275.3 P80 BN80A4	129
5.1	936	2.5	272.2	25000	C704_ 272.2 S1 M1LA4	131	C704_ 272.2 P80 BN80A4	132
5.2	914	1.1	263.8	10000	C514_ 263.8 S1 M1LA4	125	C514_ 263.8 P80 BN80A4	126
5.7	834	1.2	240.9	10000	C514_ 240.9 S1 M1LA4	125	C514_ 240.9 P80 BN80A4	126
5.8	847	2.7	239.3	25000			C703_ 239.3 P80 BN80A4	132
5.8	825	1.9	238.3	16000	C614_ 238.3 S1 M1LA4	128	C614_ 238.3 P80 BN80A4	129
6.2	782	2.9	220.9	25000			C703_ 220.9 P80 BN80A4	132



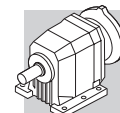
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
6.3	753	2.1	217.4	16000	C614_ 217.4 S1 M1LA4	128	C614_ 217.4 P80 BN80A4	129
6.4	767	1.3	216.7	10000	C513_ 216.7 S1 M1LA4	125	C513_ 216.7 P80 BN80A4	126
7.0	700	1.4	197.9	10000	C513_ 197.9 S1 M1LA4	125	C513_ 197.9 P80 BN80A4	126
7.0	693	2.3	195.8	16000			C613_ 195.8 P80 BN80A4	129
7.1	687	3.3	194.1	25000			C703_ 194.1 P80 BN80A4	132
7.7	637	0.9	179.9	7000	C413_ 179.9 S1 M1LA4	122	C413_ 179.9 P80 BN80A4	123
7.7	632	2.5	178.6	16000			C613_ 178.6 P80 BN80A4	129
7.9	622	1.6	175.8	10000	C513_ 175.8 S1 M1LA4	125	C513_ 175.8 P80 BN80A4	126
8.4	582	2.7	164.5	16000			C613_ 164.5 P80 BN80A4	129
8.4	581	1.0	164.1	7000	C413_ 164.1 S1 M1LA4	122	C413_ 164.1 P80 BN80A4	123
8.6	568	1.8	160.5	10000	C513_ 160.5 S1 M1LA4	125	C513_ 160.5 P80 BN80A4	126
9.2	531	3.0	150.0	16000			C613_ 150.0 P80 BN80A4	129
9.4	522	1.9	147.4	10000	C513_ 147.4 S1 M1LA4	125	C513_ 147.4 P80 BN80A4	126
9.5	516	1.2	145.6	7000	C413_ 145.6 S1 M1LA4	122	C413_ 145.6 P80 BN80A4	123
9.8	497	3.2	140.5	16000			C613_ 140.5 P80 BN80A4	129
9.9	495	0.9	139.8	6500	C353_ 139.8 S1 M1LA4	119	C353_ 139.8 P80 BN80A4	120
10.3	477	2.1	134.6	10000	C513_ 134.6 S1 M1LA4	125	C513_ 134.6 P80 BN80A4	126
10.4	470	1.3	132.9	7000	C413_ 132.9 S1 M1LA4	122	C413_ 132.9 P80 BN80A4	123
10.8	451	1.0	127.3	6500	C353_ 127.3 S1 M1LA4	119	C353_ 127.3 P80 BN80A4	120
11.1	440	2.3	124.4	10000	C513_ 124.4 S1 M1LA4	125	C513_ 124.4 P80 BN80A4	126
11.4	427	1.4	120.6	7000	C413_ 120.6 S1 M1LA4	122	C413_ 120.6 P80 BN80A4	123
12.1	402	2.5	113.6	10000	C513_ 113.6 S1 M1LA4	125	C513_ 113.6 P80 BN80A4	126
12.4	395	1.1	111.5	6500	C353_ 111.5 S1 M1LA4	119	C353_ 111.5 P80 BN80A4	120
12.5	390	1.5	110.1	7000	C413_ 110.1 S1 M1LA4	122	C413_ 110.1 P80 BN80A4	123
13.5	362	1.7	102.3	7000	C413_ 102.3 S1 M1LA4	122	C413_ 102.3 P80 BN80A4	123
13.6	360	2.8	101.8	10000	C513_ 101.8 S1 M1LA4	125	C513_ 101.8 P80 BN80A4	126
13.6	360	1.3	101.6	6500	C353_ 101.6 S1 M1LA4	119	C353_ 101.6 P80 BN80A4	120
14.8	330	1.8	93.3	7000	C413_ 93.3 S1 M1LA4	122	C413_ 93.3 P80 BN80A4	123
14.8	329	0.9	93.0	5500	C313_ 93.0 S1 M1LA4	116	C313_ 93.0 P80 BN80A4	117
14.8	329	3.0	93.0	10000	C513_ 93.0 S1 M1LA4	125	C513_ 93.0 P80 BN80A4	126
15.0	325	1.4	91.9	6500	C353_ 91.9 S1 M1LA4	119	C353_ 91.9 P80 BN80A4	120
16.5	296	1.5	83.8	6500	C353_ 83.8 S1 M1LA4	119	C353_ 83.8 P80 BN80A4	120
16.7	292	1.0	82.6	5500	C313_ 82.6 S1 M1LA4	116	C313_ 82.6 P80 BN80A4	117
16.9	289	2.1	81.5	7000	C413_ 81.5 S1 M1LA4	122	C413_ 81.5 P80 BN80A4	123
17.5	284	1.1	52.4	5500	C312_ 52.4 S2 M2SA6	116	C312_ 52.4 P80 BN80B6	117
17.8	275	1.6	77.6	6500	C353_ 77.6 S1 M1LA4	119	C353_ 77.6 P80 BN80A4	120
18.6	263	2.3	74.4	7000	C413_ 74.4 S1 M1LA4	122	C413_ 74.4 P80 BN80A4	123
18.6	263	1.1	74.3	5500	C313_ 74.3 S1 M1LA4	116	C313_ 74.3 P80 BN80A4	117
19.5	256	1.2	47.2	5500	C312_ 47.2 S2 M2SA6	116	C312_ 47.2 P80 BN80B6	117
19.5	250	1.8	70.7	6500	C353_ 70.7 S1 M1LA4	119	C353_ 70.7 P80 BN80A4	120
21.5	228	2.6	64.3	7000	C413_ 64.3 S1 M1LA4	122	C413_ 64.3 P80 BN80A4	123
22.2	220	2.0	62.0	6500	C353_ 62.0 S1 M1LA4	119	C353_ 62.0 P80 BN80A4	120
22.6	221	1.4	40.7	5500	C312_ 40.7 S2 M2SA6	116	C312_ 40.7 P80 BN80B6	117
23.5	208	0.9	58.8	4420	C213_ 58.8 S1 M1LA4	113	C213_ 58.8 P80 BN80A4	114
23.5	208	2.9	58.7	7000	C413_ 58.7 S1 M1LA4	122	C413_ 58.7 P80 BN80A4	123
24.4	200	2.2	56.5	6500	C353_ 56.5 S1 M1LA4	119	C353_ 56.5 P80 BN80A4	120
26.3	190	1.6	52.4	5500	C312_ 52.4 S1 M1LA4	116	C312_ 52.4 P80 BN80A4	117
26.8	182	3.3	51.5	7000	C413_ 51.5 S1 M1LA4	122	C413_ 51.5 P80 BN80A4	123
27.8	180	1.1	33.1	4270	C212_ 33.1 S2 M2SA6	113	C212_ 33.1 P80 BN80B6	114
28.7	170	2.6	48.2	6500	C353_ 48.2 S1 M1LA4	119	C353_ 48.2 P80 BN80A4	120
29.2	171	1.8	47.2	5500	C312_ 47.2 S1 M1LA4	116	C312_ 47.2 P80 BN80A4	117

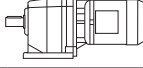


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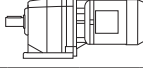
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
31	162	3.1	44.8	7000	C412_ 44.8 S1 M1LA4	122	C412_ 44.8 P80 BN80A4	123
31	155	2.9	43.9	6500	C353_ 43.9 S1 M1LA4	119	C353_ 43.9 P80 BN80A4	120
32	156	1.2	43.3	4190	C212_ 43.3 S1 M1LA4	113	C212_ 43.3 P80 BN80A4	114
34	147	2.0	40.7	5500	C312_ 40.7 S1 M1LA4	116	C312_ 40.7 P80 BN80A4	117
35	141	1.2	39.0	4100	C212_ 39.0 S1 M1LA4	113	C212_ 39.0 P80 BN80A4	114
36	135	3.3	38.1	6500	C353_ 38.1 S1 M1LA4	119	C353_ 38.1 P80 BN80A4	120
38	133	1.5	36.8	4070	C212_ 36.8 S1 M1LA4	113	C212_ 36.8 P80 BN80A4	114
38	131	2.3	36.1	5500	C312_ 36.1 S1 M1LA4	116	C312_ 36.1 P80 BN80A4	117
41	121	0.8	33.4	1550	C112_ 33.4 S1 M1LA4	110	C112_ 33.4 P80 BN80A4	111
42	118	1.7	33.1	3970	C212_ 33.1 S1 M1LA4	113	C212_ 33.1 P80 BN80A4	114
42	118	2.6	32.5	5500	C312_ 32.5 S1 M1LA4	116	C312_ 32.5 P80 BN80A4	117
46	108	2.8	29.8	5500	C312_ 29.8 S1 M1LA4	116	C312_ 29.8 P80 BN80A4	117
47	107	0.9	29.5	1820	C112_ 29.5 S1 M1LA4	110	C112_ 29.5 P80 BN80A4	111
47	107	1.9	29.6	3890	C212_ 29.6 S1 M1LA4	113	C212_ 29.6 P80 BN80A4	114
52	96	2.1	26.7	3800	C212_ 26.7 S1 M1LA4	113	C212_ 26.7 P80 BN80A4	114
52	97	3.1	26.8	5500	C312_ 26.8 S1 M1LA4	116	C312_ 26.8 P80 BN80A4	117
54	92	1.0	25.4	2000	C112_ 25.4 S1 M1LA4	110	C112_ 25.4 P80 BN80A4	111
55	91	3.3	25.1	5500	C312_ 25.1 S1 M1LA4	116	C312_ 25.1 P80 BN80A4	117
57	88	2.3	24.3	3720	C212_ 24.3 S1 M1LA4	113	C212_ 24.3 P80 BN80A4	114
60	83	1.0	22.8	2000	C112_ 22.8 S1 M1LA4	110	C112_ 22.8 P80 BN80A4	111
63	79	2.5	21.9	3630	C212_ 21.9 S1 M1LA4	113	C212_ 21.9 P80 BN80A4	114
67	75	1.1	20.6	2000	C112_ 20.6 S1 M1LA4	110	C112_ 20.6 P80 BN80A4	111
69	72	2.6	20.0	3560	C212_ 20.0 S1 M1LA4	113	C212_ 20.0 P80 BN80A4	114
74	67	1.2	18.6	2000	C112_ 18.6 S1 M1LA4	110	C112_ 18.6 P80 BN80A4	111
77	65	2.8	18.0	3460	C212_ 18.0 S1 M1LA4	113	C212_ 18.0 P80 BN80A4	114
80	62	1.2	17.2	2000	C112_ 17.2 S1 M1LA4	110	C112_ 17.2 P80 BN80A4	111
87	57	3.1	15.8	3350	C212_ 15.8 S1 M1LA4	113	C212_ 15.8 P80 BN80A4	114
89	56	1.3	15.5	2000	C112_ 15.5 S1 M1LA4	110	C112_ 15.5 P80 BN80A4	111
97	52	3.3	14.3	3260	C212_ 14.3 S1 M1LA4	113	C212_ 14.3 P80 BN80A4	114
103	48	1.4	13.4	1990	C112_ 13.4 S1 M1LA4	110	C112_ 13.4 P80 BN80A4	111
114	44	1.5	12.1	1930	C112_ 12.1 S1 M1LA4	110	C112_ 12.1 P80 BN80A4	111
121	41	1.6	7.6	1910	C112_ 7.6 S2 M2SA6	110	C112_ 7.6 P80 BN80B6	111
123	40	1.0	11.2	480	C052_ 11.2 S1 M1LA4	109		
137	36	1.7	10.1	1850	C112_ 10.1 S1 M1LA4	110	C112_ 10.1 P80 BN80A4	111
151	33	3.3	6.1	2860	C212_ 6.1 S2 M2SA6	113	C212_ 6.1 P80 BN80B6	114
152	33	1.9	9.1	1800	C112_ 9.1 S1 M1LA4	110	C112_ 9.1 P80 BN80A4	111
181	28	2.0	7.6	1720	C112_ 7.6 S1 M1LA4	110	C112_ 7.6 P80 BN80A4	111
186	27	1.1	7.4	460	C052_ 7.4 S1 M1LA4	109		
201	25	2.2	6.9	1670	C112_ 6.9 S1 M1LA4	110	C112_ 6.9 P80 BN80A4	111
206	24	1.2	6.7	450	C052_ 6.7 S1 M1LA4	109		
221	23	2.4	6.2	1590	C112_ 6.2 S1 M1LA4	110	C112_ 6.2 P80 BN80A4	111
233	21	2.5	12.1	1610	C112_ 12.1 S1 M1SD2	110	C112_ 12.1 P71 BN71B2	111
251	20	1.5	5.5	430	C052_ 5.5 S1 M1LA4	109		
279	18	2.7	10.1	1530	C112_ 10.1 S1 M1SD2	110	C112_ 10.1 P71 BN71B2	111
283	18	2.7	4.9	1490	C112_ 4.9 S1 M1LA4	110	C112_ 4.9 P80 BN80A4	111
310	16	3.0	9.1	1480	C112_ 9.1 S1 M1SD2	110	C112_ 9.1 P71 BN71B2	111
369	14	3.3	7.6	1410	C112_ 7.6 S1 M1SD2	110	C112_ 7.6 P71 BN71B2	111
378	13	3.2	3.7	1370	C112_ 3.7 S1 M1LA4	110	C112_ 3.7 P80 BN80A4	111
409	12	3.5	6.9	1370	C112_ 6.9 S1 M1SD2	110	C112_ 6.9 P71 BN71B2	111
451	11	3.8	6.2	1300	C112_ 6.2 S1 M1SD2	110	C112_ 6.2 P71 BN71B2	111
499	10	3.7	2.8	1260	C112_ 2.8 S1 M1LA4	110	C112_ 2.8 P80 BN80A4	111

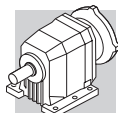


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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
577	9	4.4	4.9	1210	C112_ 4.9 S1 M1SD2	110	C112_ 4.9 P71 BN71B2	111
770	6	5.2	3.7	1110	C112_ 3.7 S1 M1SD2	110	C112_ 3.7 P71 BN71B2	111

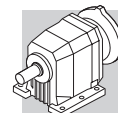
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
0.85	7659	1.6	1081	85000	C1004_ 1081 S2 M2SB6	140	C1004_ 1081 P90 BN90S6	141
0.91	7127	1.0	1006	60000	C904_ 1006 S2 M2SB6	137	C904_ 1006 P90 BN90S6	138
1.1	5773	1.2	1240	35000	C904_ 1240 S2 M2SA4	137	C904_ 1240 P80 BN80B4	138
1.5	4403	0.9	945.7	35000	C804_ 945.7 S2 M2SA4	134	C804_ 945.7 P80 BN80B4	135
1.5	4294	1.7	922.3	60000	C904_ 922.3 S2 M2SA4	137	C904_ 922.3 P80 BN80B4	138
1.8	3647	1.1	783.4	35000	C804_ 783.4 S2 M2SA4	134	C804_ 783.4 P80 BN80B4	135
1.8	3602	2.0	773.6	60000	C904_ 773.6 S2 M2SA4	137	C904_ 773.6 P80 BN80B4	138
2.1	3093	1.3	664.3	35000	C804_ 664.3 S2 M2SA4	134	C804_ 664.3 P80 BN80B4	135
2.1	3039	2.4	652.8	60000	C904_ 652.8 S2 M2SA4	137	C904_ 652.8 P80 BN80B4	138
2.6	2487	2.9	534.2	60000	C904_ 534.2 S2 M2SA4	137	C904_ 534.2 P80 BN80B4	138
2.6	2464	1.6	529.3	35000	C804_ 529.3 S2 M2SA4	134	C804_ 529.3 P80 BN80B4	135
3.1	2128	3.4	457.1	60000	C904_ 457.1 S2 M2SA4	137	C904_ 457.1 P80 BN80B4	138
3.1	2120	1.9	455.4	35000	C804_ 455.4 S2 M2SA4	134	C804_ 455.4 P80 BN80B4	135
3.2	2065	1.1	443.5	25000	C704_ 443.5 S2 M2SA4	131	C704_ 443.5 P80 BN80B4	132
3.3	1962	0.8	421.5	16000	C614_ 421.5 S2 M2SA4	128	C614_ 421.5 P80 BN80B4	129
3.4	1906	1.2	409.4	25000	C704_ 409.4 S2 M2SA4	131	C704_ 409.4 P80 BN80B4	132
3.8	1723	0.9	370.1	16000	C614_ 370.1 S2 M2SA4	128	C614_ 370.1 P80 BN80B4	129
3.8	1733	1.3	239.3	25000	C703_ 239.3 S2 M2SB6	131	C703_ 239.3 P90 BN90S6	132
4.1	1572	1.0	337.7	16000	C614_ 337.7 S2 M2SA4	128	C614_ 337.7 P80 BN80B4	129
4.3	1563	2.6	215.8	35000	C803_ 215.8 S2 M2SB6	134	C803_ 215.8 P90 BN90S6	135
4.4	1480	1.6	317.9	25000	C704_ 317.9 S2 M2SA4	131	C704_ 317.9 P80 BN80B4	132
4.6	1405	1.1	301.7	16000	C614_ 301.7 S2 M2SA4	128	C614_ 301.7 P80 BN80B4	129
4.7	1417	1.1	195.8	16000	C613_ 195.8 S2 M2SB6	128	C613_ 195.8 P90 BN90S6	129
5.1	1282	1.2	275.3	16000	C614_ 275.3 S2 M2SA4	128	C614_ 275.3 P80 BN80B4	129
5.1	1267	1.8	272.2	25000	C704_ 272.2 S2 M2SA4	131	C704_ 272.2 P80 BN80B4	132
5.2	1293	1.2	178.6	16000	C613_ 178.6 S2 M2SB6	128	C613_ 178.6 P90 BN90S6	129
5.3	1228	0.8	263.8	10000	C514_ 263.8 S2 M2SA4	125	C514_ 263.8 P80 BN80B4	126
5.6	1191	1.3	164.5	16000	C613_ 164.5 S2 M2SB6	128	C613_ 164.5 P90 BN90S6	129
5.8	1121	0.9	240.9	10000	C514_ 240.9 S2 M2SA4	125	C514_ 240.9 P80 BN80B4	126
5.8	1139	2.0	239.3	25000	C703_ 239.3 S2 M2SA4	131	C703_ 239.3 P80 BN80B4	132
6.3	1051	2.1	220.9	25000	C703_ 220.9 S2 M2SA4	131	C703_ 220.9 P80 BN80B4	132
6.4	1012	1.6	217.4	16000	C614_ 217.4 S2 M2SA4	128	C614_ 217.4 P80 BN80B4	129
6.5	1031	1.0	216.7	10000	C513_ 216.7 S2 M2SA4	125	C513_ 216.7 P80 BN80B4	126
7.1	941	1.1	197.9	10000	C513_ 197.9 S2 M2SA4	125	C513_ 197.9 P80 BN80B4	126
7.2	931	1.7	195.8	16000	C613_ 195.8 S2 M2SA4	128	C613_ 195.8 P80 BN80B4	129
7.2	924	2.5	194.1	25000	C703_ 194.1 S2 M2SA4	131	C703_ 194.1 P80 BN80B4	132
7.8	850	1.9	178.6	16000	C613_ 178.6 S2 M2SA4	128	C613_ 178.6 P80 BN80B4	129
8.0	836	1.2	175.8	10000	C513_ 175.8 S2 M2SA4	125	C513_ 175.8 P80 BN80B4	126
8.5	782	2.0	164.5	16000	C613_ 164.5 S2 M2SA4	128	C613_ 164.5 P80 BN80B4	129
8.6	775	3.0	162.8	25000	C703_ 162.8 S2 M2SA4	131	C703_ 162.8 P80 BN80B4	132
8.7	764	1.3	160.5	10000	C513_ 160.5 S2 M2SA4	125	C513_ 160.5 P80 BN80B4	126
9.3	714	2.2	150.0	16000	C613_ 150.0 S2 M2SA4	128	C613_ 150.0 P80 BN80B4	129



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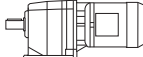
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
9.5	702	1.4	147.4	10000	C513_ 147.4 S2 M2SA4	125	C513_ 147.4 P80 BN80B4	126
10.0	668	2.4	140.5	16000	C613_ 140.5 S2 M2SA4	128	C613_ 140.5 P80 BN80B4	129
10.2	654	3.5	137.4	25000	C703_ 137.4 S2 M2SA4	131	C703_ 137.4 P80 BN80B4	132
10.4	641	1.6	134.6	10000	C513_ 134.6 S2 M2SA4	125	C513_ 134.6 P80 BN80B4	126
10.5	632	0.9	132.9	7000	C413_ 132.9 S2 M2SA4	122	C413_ 132.9 P80 BN80B4	123
10.9	610	2.6	128.1	16000	C613_ 128.1 S2 M2SA4	128	C613_ 128.1 P80 BN80B4	129
11.3	592	1.7	124.4	10000	C513_ 124.4 S2 M2SA4	125	C513_ 124.4 P80 BN80B4	126
11.6	574	1.0	120.6	7000	C413_ 120.6 S2 M2SA4	122	C413_ 120.6 P80 BN80B4	123
12.3	541	3.0	113.6	16000	C613_ 113.6 S2 M2SA4	128	C613_ 113.6 P80 BN80B4	129
12.3	541	1.9	113.6	10000	C513_ 113.6 S2 M2SA4	125	C513_ 113.6 P80 BN80B4	126
12.7	524	1.1	110.1	7000	C413_ 110.1 S2 M2SA4	122	C413_ 110.1 P80 BN80B4	123
13.5	493	3.2	103.6	16000	C613_ 103.6 S2 M2SA4	128	C613_ 103.6 P80 BN80B4	129
13.7	487	1.2	102.3	7000	C413_ 102.3 S2 M2SA4	122	C413_ 102.3 P80 BN80B4	123
13.8	484	2.1	101.8	10000	C513_ 101.8 S2 M2SA4	125	C513_ 101.8 P80 BN80B4	126
13.8	483	0.9	101.6	6500	C353_ 101.6 S2 M2SA4	119	C353_ 101.6 P80 BN80B4	120
15.0	444	1.4	93.3	7000	C413_ 93.3 S2 M2SA4	122	C413_ 93.3 P80 BN80B4	123
15.1	442	2.3	93.0	10000	C513_ 93.0 S2 M2SA4	125	C513_ 93.0 P80 BN80B4	126
15.2	437	1.0	91.9	6500	C353_ 91.9 S2 M2SA4	119	C353_ 91.9 P80 BN80B4	120
16.7	399	1.1	83.8	6500	C353_ 83.8 S2 M2SA4	119	C353_ 83.8 P80 BN80B4	120
17.2	388	1.5	81.5	7000	C413_ 81.5 S2 M2SA4	122	C413_ 81.5 P80 BN80B4	123
17.5	380	2.6	79.9	10000	C513_ 79.9 S2 M2SA4	125	C513_ 79.9 P80 BN80B4	126
18.0	369	1.2	77.6	6500	C353_ 77.6 S2 M2SA4	119	C353_ 77.6 P80 BN80B4	120
18.8	354	1.7	74.4	7000	C413_ 74.4 S2 M2SA4	122	C413_ 74.4 P80 BN80B4	123
19.2	347	2.9	72.9	10000	C513_ 72.9 S2 M2SA4	125	C513_ 72.9 P80 BN80B4	126
19.8	336	1.3	70.7	6500	C353_ 70.7 S2 M2SA4	119	C353_ 70.7 P80 BN80B4	120
21.7	307	3.3	64.6	10000	C513_ 64.6 S2 M2SA4	125	C513_ 64.6 P80 BN80B4	126
21.8	306	2.0	64.3	7000	C413_ 64.3 S2 M2SA4	122	C413_ 64.3 P80 BN80B4	123
22.6	295	1.5	62.0	6500	C353_ 62.0 S2 M2SA4	119	C353_ 62.0 P80 BN80B4	120
22.6	301	1.0	40.7	5500	C312_ 40.7 S2 M2SB6	116	C312_ 40.7 P90 BN90S6	117
23.9	279	2.1	58.7	7000	C413_ 58.7 S2 M2SA4	122	C413_ 58.7 P80 BN80B4	123
24.6	277	2.8	57.0	10000	C512_ 57.0 S2 M2SA4	125	C512_ 57.0 P80 BN80B4	126
24.8	269	1.7	56.5	6500	C353_ 56.5 S2 M2SA4	119	C353_ 56.5 P80 BN80B4	120
26.7	255	1.2	52.4	5500	C312_ 52.4 S2 M2SA4	116	C312_ 52.4 P80 BN80B4	117
27.2	245	2.4	51.5	7000	C413_ 51.5 S2 M2SA4	122	C413_ 51.5 P80 BN80B4	123
27.2	250	2.8	51.4	10000	C512_ 51.4 S2 M2SA4	125	C512_ 51.4 P80 BN80B4	126
29.1	229	2.0	48.2	6500	C353_ 48.2 S2 M2SA4	119	C353_ 48.2 P80 BN80B4	120
29.3	232	3.4	47.8	10000	C512_ 47.8 S2 M2SA4	125	C512_ 47.8 P80 BN80B4	126
29.7	229	1.3	47.2	5500	C312_ 47.2 S2 M2SA4	116	C312_ 47.2 P80 BN80B4	117
29.8	223	2.7	47.0	7000	C413_ 47.0 S2 M2SA4	122	C413_ 47.0 P80 BN80B4	123
31	220	1.4	45.3	5500	C312_ 45.3 S2 M2SA4	116	C312_ 45.3 P80 BN80B4	117
31	218	2.3	44.8	7000	C412_ 44.8 S2 M2SA4	122	C412_ 44.8 P80 BN80B4	123
32	210	0.9	43.3	3810	C212_ 43.3 S2 M2SA4	113	C212_ 43.3 P80 BN80B4	114
34	198	1.5	40.7	5500	C312_ 40.7 S2 M2SA4	116	C312_ 40.7 P80 BN80B4	117
35	192	3.1	40.3	7000	C413_ 40.3 S2 M2SA4	122	C413_ 40.3 P80 BN80B4	123
37	181	2.5	38.1	6500	C353_ 38.1 S2 M2SA4	119	C353_ 38.1 P80 BN80B4	120
38	180	2.8	37.1	7000	C412_ 37.1 S2 M2SA4	122	C412_ 37.1 P80 BN80B4	123
38	179	1.1	36.8	3750	C212_ 36.8 S2 M2SA4	113	C212_ 36.8 P80 BN80B4	114
39	175	1.7	36.1	5500	C312_ 36.1 S2 M2SA4	116	C312_ 36.1 P80 BN80B4	117
42	161	1.2	33.1	3680	C212_ 33.1 S2 M2SA4	113	C212_ 33.1 P80 BN80B4	114
43	158	1.9	32.5	5500	C312_ 32.5 S2 M2SA4	116	C312_ 32.5 P80 BN80B4	117
47	144	1.4	29.6	3630	C212_ 29.6 S2 M2SA4	113	C212_ 29.6 P80 BN80B4	114

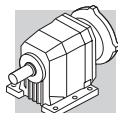


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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
47	145	2.1	29.8	5500	C312_ 29.8 S2 M2SA4	116	C312_ 29.8 P80 BN80B4	117
49	137	3.3	28.7	6490	C353_ 28.7 S2 M2SA4	119	C353_ 28.7 P80 BN80B4	120
52	130	1.5	26.7	3560	C212_ 26.7 S2 M2SA4	113	C212_ 26.7 P80 BN80B4	114
52	130	2.3	26.8	5500	C312_ 26.8 S2 M2SA4	116	C312_ 26.8 P80 BN80B4	117
56	122	2.5	25.1	5460	C312_ 25.1 S2 M2SA4	116	C312_ 25.1 P80 BN80B4	117
58	118	1.7	24.3	3510	C212_ 24.3 S2 M2SA4	113	C212_ 24.3 P80 BN80B4	114
62	110	2.7	22.6	5310	C312_ 22.6 S2 M2SA4	116	C312_ 22.6 P80 BN80B4	117
64	106	1.9	21.9	3430	C212_ 21.9 S2 M2SA4	113	C212_ 21.9 P80 BN80B4	114
68	100	0.8	20.6	1450	C112_ 20.6 S2 M2SA4	110	C112_ 20.6 P80 BN80B4	111
70	97	2.0	20.0	3380	C212_ 20.0 S2 M2SA4	113	C212_ 20.0 P80 BN80B4	114
70	98	3.0	20.1	5150	C312_ 20.1 S2 M2SA4	116	C312_ 20.1 P80 BN80B4	117
75	90	0.9	18.6	1580	C112_ 18.6 S2 M2SA4	110	C112_ 18.6 P80 BN80B4	111
77	88	3.2	18.1	5000	C312_ 18.1 S2 M2SA4	116	C312_ 18.1 P80 BN80B4	117
78	88	2.1	18.0	3290	C212_ 18.0 S2 M2SA4	113	C212_ 18.0 P80 BN80B4	114
82	83	0.9	17.2	1750	C112_ 17.2 S2 M2SA4	110	C112_ 17.2 P80 BN80B4	111
88	77	2.3	15.8	3210	C212_ 15.8 S2 M2SA4	113	C212_ 15.8 P80 BN80B4	114
91	75	1.0	15.5	1840	C112_ 15.5 S2 M2SA4	110	C112_ 15.5 P80 BN80B4	111
98	69	2.5	14.3	3120	C212_ 14.3 S2 M2SA4	113	C212_ 14.3 P80 BN80B4	114
104	65	1.1	13.4	1870	C112_ 13.4 S2 M2SA4	110	C112_ 13.4 P80 BN80B4	111
113	60	2.7	12.4	3030	C212_ 12.4 S2 M2SA4	113	C212_ 12.4 P80 BN80B4	114
116	59	1.1	12.1	1830	C112_ 12.1 S2 M2SA4	110	C112_ 12.1 P80 BN80B4	111
125	54	2.9	11.2	2940	C212_ 11.2 S2 M2SA4	113	C212_ 11.2 P80 BN80B4	114
139	49	1.3	10.1	1760	C112_ 10.1 S2 M2SA4	110	C112_ 10.1 P80 BN80B4	111
145	47	3.1	9.6	2840	C212_ 9.6 S2 M2SA4	113	C212_ 9.6 P80 BN80B4	114
154	44	1.4	9.1	1720	C112_ 9.1 S2 M2SA4	110	C112_ 9.1 P80 BN80B4	111
161	42	3.3	8.7	2760	C212_ 8.7 S2 M2SA4	113	C212_ 8.7 P80 BN80B4	114
184	37	1.5	7.6	1650	C112_ 7.6 S2 M2SA4	110	C112_ 7.6 P80 BN80B4	111
204	33	1.6	6.9	1610	C112_ 6.9 S2 M2SA4	110	C112_ 6.9 P80 BN80B4	111
225	30	1.7	6.2	1530	C112_ 6.2 S2 M2SA4	110	C112_ 6.2 P80 BN80B4	111
232	29	1.8	12.1	1560	C112_ 12.1 S1 M1LA2	110	C112_ 12.1 P80 BN80A2	111
278	24	2.0	10.1	1490	C112_ 10.1 S1 M1LA2	110	C112_ 10.1 P80 BN80A2	111
288	24	2.0	4.9	1440	C112_ 4.9 S2 M2SA4	110	C112_ 4.9 P80 BN80B4	111
309	22	2.2	9.1	1450	C112_ 9.1 S1 M1LA2	110	C112_ 9.1 P80 BN80A2	111
332	20	2.1	2.8	1390	C112_ 2.8 S2 M2SB6	110	C112_ 2.8 P90 BN90S6	111
367	19	2.4	7.6	1380	C112_ 7.6 S1 M1LA2	110	C112_ 7.6 P80 BN80A2	111
383	18	2.4	3.7	1330	C112_ 3.7 S2 M2SA4	110	C112_ 3.7 P80 BN80B4	111
408	17	2.6	6.9	1340	C112_ 6.9 S1 M1LA2	110	C112_ 6.9 P80 BN80A2	111
449	15	2.8	6.2	1280	C112_ 6.2 S1 M1LA2	110	C112_ 6.2 P80 BN80A2	111
506	13	2.8	2.8	1230	C112_ 2.8 S2 M2SA4	110	C112_ 2.8 P80 BN80B4	111
575	12	3.2	4.9	1190	C112_ 4.9 S1 M1LA2	110	C112_ 4.9 P80 BN80A2	111
767	9	3.8	3.7	1090	C112_ 3.7 S1 M1LA2	110	C112_ 3.7 P80 BN80A2	111
1012	7	4.5	2.8	1010	C112_ 2.8 S1 M1LA2	110	C112_ 2.8 P80 BN80A2	111

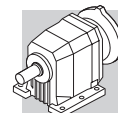
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
0.85	11232	1.1	1081	85000	C1004_1081 S3 M3SA6	140	C1004_1081 P90 BN90L6	141
1.0	9437	1.3	908.2	85000	C1004_908.2 S3 M3SA6	140	C1004_908.2 P90 BN90L6	141
1.2	7764	0.9	1137	60000	C904_1137 S2 M2SB4	137	C904_1137 P90 BN90S4	138



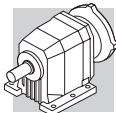
1.1 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
1.3	7381	1.6	1081	85000	C1004_1081 S2 M2SB4	140	C1004_1081 P90 BN90S4	141
1.4	6869	1.0	1006	60000	C904_1006 S2 M2SB4	137	C904_1006 P90 BN90S4	138
1.4	6856	1.8	1004	85000	C1004_1004 S2 M2SB4	140	C1004_1004 P90 BN90S4	141
1.7	5763	1.2	844.0	60000	C904_844.0 S2 M2SB4	137	C904_844.0 P90 BN90S4	138
1.7	5758	2.1	843.3	85000	C1004_843.3 S2 M2SB4	140	C1004_843.3 P90 BN90S4	141
2.1	4457	1.6	652.8	60000	C904_652.8 S2 M2SB4	137	C904_652.8 P90 BN90S4	138
2.2	4284	2.8	627.4	85000	C1004_627.4 S2 M2SB4	140	C1004_627.4 P90 BN90S4	141
2.6	3648	2.0	534.2	60000	C904_534.2 S2 M2SB4	137	C904_534.2 P90 BN90S4	138
2.6	3614	1.1	529.3	35000	C804_529.3 S2 M2SB4	134	C804_529.3 P90 BN90S4	135
3.3	2861	2.5	419.0	60000	C904_419.0 S2 M2SB4	137	C904_419.0 P90 BN90S4	138
3.4	2851	1.4	417.5	35000	C804_417.5 S2 M2SB4	134	C804_417.5 P90 BN90S4	135
3.8	2490	1.6	364.7	35000	C804_364.7 S2 M2SB4	134	C804_364.7 P90 BN90S4	135
4.1	2351	1.0	344.3	25000	C704_344.3 S2 M2SB4	131	C704_344.3 P90 BN90S4	132
4.2	2283	1.8	334.3	35000	C804_334.3 S2 M2SB4	134	C804_334.3 P90 BN90S4	135
4.4	2171	1.1	317.9	25000	C704_317.9 S2 M2SB4	131	C704_317.9 P90 BN90S4	132
4.6	2060	0.8	301.7	16000	C614_301.7 S2 M2SB4	128	C614_301.7 P90 BN90S4	129
4.9	1951	2.1	285.7	35000	C804_285.7 S2 M2SB4	134	C804_285.7 P90 BN90S4	135
5.1	1880	0.9	275.3	16000	C614_275.3 S2 M2SB4	128	C614_275.3 P90 BN90S4	129
5.1	1859	1.2	272.2	25000	C704_272.2 S2 M2SB4	131	C704_272.2 P90 BN90S4	132
5.6	1716	1.3	251.3	25000	C704_251.3 S2 M2SB4	131	C704_251.3 P90 BN90S4	132
5.6	1746	0.9	164.5	16000	C613_164.5 S3 M3SA6	128	C613_164.5 P90 BN90L6	129
6.1	1593	1.0	150.0	16000	C613_150.0 S3 M3SA6	128	C613_150.0 P90 BN90L6	129
6.3	1542	1.5	220.9	25000	C703_220.9 S2 M2SB4	131	C703_220.9 P90 BN90S4	132
7.2	1366	1.2	195.8	16000	C613_195.8 S2 M2SB4	128	C613_195.8 P90 BN90S4	129
7.8	1250	1.8	179.2	25000	C703_179.2 S2 M2SB4	131	C703_179.2 P90 BN90S4	132
7.8	1246	1.3	178.6	16000	C613_178.6 S2 M2SB4	128	C613_178.6 P90 BN90S4	129
8.5	1148	1.4	164.5	16000	C613_164.5 S2 M2SB4	128	C613_164.5 P90 BN90S4	129
9.3	1049	2.2	150.3	25000	C703_150.3 S2 M2SB4	131	C703_150.3 P90 BN90S4	132
9.3	1047	1.5	150.0	16000	C613_150.0 S2 M2SB4	128	C613_150.0 P90 BN90S4	129
9.5	1029	1.0	147.4	10000	C513_147.4 S2 M2SB4	125	C513_147.4 P90 BN90S4	126
10.0	980	1.6	140.5	16000	C613_140.5 S2 M2SB4	128	C613_140.5 P90 BN90S4	129
10.4	939	1.1	134.6	10000	C513_134.6 S2 M2SB4	125	C513_134.6 P90 BN90S4	126
10.9	894	1.8	128.1	16000	C613_128.1 S2 M2SB4	128	C613_128.1 P90 BN90S4	129
11.0	885	2.6	126.8	25000	C703_126.8 S2 M2SB4	131	C703_126.8 P90 BN90S4	132
11.3	868	1.2	124.4	10000	C513_124.4 S2 M2SB4	125	C513_124.4 P90 BN90S4	126
12.3	793	2.0	113.6	16000	C613_113.6 S2 M2SB4	128	C613_113.6 P90 BN90S4	129
12.3	793	1.3	113.6	10000	C513_113.6 S2 M2SB4	125	C513_113.6 P90 BN90S4	126
12.5	785	2.9	112.4	25000	C703_112.4 S2 M2SB4	131	C703_112.4 P90 BN90S4	132
13.5	723	2.2	103.6	16000	C613_103.6 S2 M2SB4	128	C613_103.6 P90 BN90S4	129
13.8	710	1.4	101.8	10000	C513_101.8 S2 M2SB4	125	C513_101.8 P90 BN90S4	126
15.0	651	0.9	93.3	7000	C413_93.3 S2 M2SB4	122	C413_93.3 P90 BN90S4	123
15.1	649	1.5	93.0	10000	C513_93.0 S2 M2SB4	125	C513_93.0 P90 BN90S4	126
15.4	635	2.5	91.0	16000	C613_91.0 S2 M2SB4	128	C613_91.0 P90 BN90S4	129
16.9	579	2.8	83.0	16000	C613_83.0 S2 M2SB4	128	C613_83.0 P90 BN90S4	129
17.2	569	1.1	81.5	7000	C413_81.5 S2 M2SB4	122	C413_81.5 P90 BN90S4	123
17.5	557	1.8	79.9	10000	C513_79.9 S2 M2SB4	125	C513_79.9 P90 BN90S4	126
18.8	519	1.2	74.4	7000	C413_74.4 S2 M2SB4	122	C413_74.4 P90 BN90S4	123
18.9	518	3.1	74.2	16000	C613_74.2 S2 M2SB4	128	C613_74.2 P90 BN90S4	129
19.2	509	2.0	72.9	10000	C513_72.9 S2 M2SB4	125	C513_72.9 P90 BN90S4	126
19.8	493	0.9	70.7	6500	C353_70.7 S2 M2SB4	119	C353_70.7 P90 BN90S4	120
20.7	472	3.4	67.7	16000	C613_67.7 S2 M2SB4	128	C613_67.7 P90 BN90S4	129



1.1 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
21.7	451	2.2	64.6	10000	C513_ 64.6 S2 M2SB4	125	C513_ 64.6 P90 BN90S4	126
21.8	449	1.3	64.3	7000	C413_ 64.3 S2 M2SB4	122	C413_ 64.3 P90 BN90S4	123
22.6	433	1.0	62.0	6500	C353_ 62.0 S2 M2SB4	119	C353_ 62.0 P90 BN90S4	120
23.7	412	2.4	59.0	10000	C513_ 59.0 S2 M2SB4	125	C513_ 59.0 P90 BN90S4	126
23.9	409	1.5	58.7	7000	C413_ 58.7 S2 M2SB4	122	C413_ 58.7 P90 BN90S4	123
24.6	406	1.9	57.0	10000	C512_ 57.0 S2 M2SB4	125	C512_ 57.0 P90 BN90S4	126
24.8	394	1.1	56.5	6500	C353_ 56.5 S2 M2SB4	119	C353_ 56.5 P90 BN90S4	120
27.2	359	1.7	51.5	7000	C413_ 51.5 S2 M2SB4	122	C413_ 51.5 P90 BN90S4	123
27.2	366	1.9	51.4	10000	C512_ 51.4 S2 M2SB4	125	C512_ 51.4 P90 BN90S4	126
27.4	357	2.8	51.2	10000	C513_ 51.2 S2 M2SB4	125	C513_ 51.2 P90 BN90S4	126
29.1	336	1.3	48.2	6500	C353_ 48.2 S2 M2SB4	119	C353_ 48.2 P90 BN90S4	120
29.3	341	2.3	47.8	10000	C512_ 47.8 S2 M2SB4	125	C512_ 47.8 P90 BN90S4	126
29.8	328	1.8	47.0	7000	C413_ 47.0 S2 M2SB4	122	C413_ 47.0 P90 BN90S4	123
30	326	3.1	46.7	10000	C513_ 46.7 S2 M2SB4	125	C513_ 46.7 P90 BN90S4	126
31	323	0.9	45.3	5500	C312_ 45.3 S2 M2SB4	116	C312_ 45.3 P90 BN90S4	117
31	319	1.6	44.8	7000	C412_ 44.8 S2 M2SB4	122	C412_ 44.8 P90 BN90S4	123
32	306	1.5	43.9	6500	C353_ 43.9 S2 M2SB4	119	C353_ 43.9 P90 BN90S4	120
32	307	2.5	43.1	10000	C512_ 43.1 S2 M2SB4	125	C512_ 43.1 P90 BN90S4	126
34	290	1.0	40.7	5500	C312_ 40.7 S2 M2SB4	116	C312_ 40.7 P90 BN90S4	117
35	288	2.8	40.4	10000	C512_ 40.4 S2 M2SB4	125	C512_ 40.4 P90 BN90S4	126
35	281	2.1	40.3	7000	C413_ 40.3 S2 M2SB4	122	C413_ 40.3 P90 BN90S4	123
37	266	1.7	38.1	6500	C353_ 38.1 S2 M2SB4	119	C353_ 38.1 P90 BN90S4	120
38	264	1.9	37.1	7000	C412_ 37.1 S2 M2SB4	122	C412_ 37.1 P90 BN90S4	123
38	257	2.3	36.8	7000	C413_ 36.8 S2 M2SB4	122	C413_ 36.8 P90 BN90S4	123
39	257	1.2	36.1	5500	C312_ 36.1 S2 M2SB4	116	C312_ 36.1 P90 BN90S4	117
40	242	1.9	34.7	6430	C353_ 34.7 S2 M2SB4	119	C353_ 34.7 P90 BN90S4	120
42	238	2.1	33.4	7000	C412_ 33.4 S2 M2SB4	122	C412_ 33.4 P90 BN90S4	123
43	232	1.3	32.5	5440	C312_ 32.5 S2 M2SB4	116	C312_ 32.5 P90 BN90S4	117
45	224	2.2	31.4	7000	C412_ 31.4 S2 M2SB4	122	C412_ 31.4 P90 BN90S4	123
45	218	2.6	31.2	7000	C413_ 31.2 S2 M2SB4	122	C413_ 31.2 P90 BN90S4	123
47	211	0.9	29.6	3190	C212_ 29.6 S2 M2SB4	113	C212_ 29.6 P90 BN90S4	114
47	212	1.4	29.8	5360	C312_ 29.8 S2 M2SB4	116	C312_ 29.8 P90 BN90S4	117
49	200	2.2	28.7	6190	C353_ 28.7 S2 M2SB4	119	C353_ 28.7 P90 BN90S4	120
49	199	2.8	28.5	7000	C413_ 28.5 S2 M2SB4	122	C413_ 28.5 P90 BN90S4	123
49	202	2.5	28.3	7000	C412_ 28.3 S2 M2SB4	122	C412_ 28.3 P90 BN90S4	123
52	190	1.1	26.7	3160	C212_ 26.7 S2 M2SB4	113	C212_ 26.7 P90 BN90S4	114
52	191	1.6	26.8	5230	C312_ 26.8 S2 M2SB4	116	C312_ 26.8 P90 BN90S4	117
56	179	1.7	25.1	5180	C312_ 25.1 S2 M2SB4	116	C312_ 25.1 P90 BN90S4	117
58	173	1.2	24.3	3150	C212_ 24.3 S2 M2SB4	113	C212_ 24.3 P90 BN90S4	114
62	161	1.9	22.6	5050	C312_ 22.6 S2 M2SB4	116	C312_ 22.6 P90 BN90S4	117
62	161	3.1	22.6	6810	C412_ 22.6 S2 M2SB4	122	C412_ 22.6 P90 BN90S4	123
64	156	1.3	21.9	3100	C212_ 21.9 S2 M2SB4	113	C212_ 21.9 P90 BN90S4	114
70	143	1.3	20.0	3080	C212_ 20.0 S2 M2SB4	113	C212_ 20.0 P90 BN90S4	114
70	143	2.1	20.1	4920	C312_ 20.1 S2 M2SB4	116	C312_ 20.1 P90 BN90S4	117
74	135	2.8	19.0	5580	C352_ 19.0 S2 M2SB4	109	C352_ 19.0 P90 BN90S4	120
77	129	2.2	18.1	4790	C312_ 18.1 S2 M2SB4	116	C312_ 18.1 P90 BN90S4	117
78	129	1.4	18.0	3020	C212_ 18.0 S2 M2SB4	113	C212_ 18.0 P90 BN90S4	114
82	122	3.1	17.1	5420	C352_ 17.1 S2 M2SB4	109	C352_ 17.1 P90 BN90S4	120
88	113	1.6	15.8	2970	C212_ 15.8 S2 M2SB4	113	C212_ 15.8 P90 BN90S4	114
90	111	2.4	15.6	4630	C312_ 15.6 S2 M2SB4	116	C312_ 15.6 P90 BN90S4	117
98	102	1.7	14.3	2910	C212_ 14.3 S2 M2SB4	113	C212_ 14.3 P90 BN90S4	114

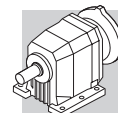


1.1 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
100	100	2.6	14.0	4500	C312_ 14.0 S2 M2SB4	116	C312_ 14.0 P90 BN90S4	117
113	88	1.8	12.4	2840	C212_ 12.4 S2 M2SB4	113	C212_ 12.4 P90 BN90S4	114
114	88	2.8	12.3	4350	C312_ 12.3 S2 M2SB4	116	C312_ 12.3 P90 BN90S4	117
125	80	1.9	11.2	2770	C212_ 11.2 S2 M2SB4	113	C212_ 11.2 P90 BN90S4	114
126	79	3.0	11.1	4230	C312_ 11.1 S2 M2SB4	116	C312_ 11.1 P90 BN90S4	117
139	72	0.9	10.1	1400	C112_ 10.1 S2 M2SB4	110	C112_ 10.1 P90 BN90S4	111
145	69	2.1	9.6	2700	C212_ 9.6 S2 M2SB4	113	C212_ 9.6 P90 BN90S4	114
151	66	3.3	9.3	4030	C312_ 9.3 S2 M2SB4	116	C312_ 9.3 P90 BN90S4	117
154	65	0.9	9.1	1480	C112_ 9.1 S2 M2SB4	110	C112_ 9.1 P90 BN90S4	111
161	62	2.3	8.7	2630	C212_ 8.7 S2 M2SB4	113	C212_ 8.7 P90 BN90S4	114
184	54	1.0	7.6	1550	C112_ 7.6 S2 M2SB4	110	C112_ 7.6 P90 BN90S4	111
198	50	2.6	7.1	2510	C212_ 7.1 S2 M2SB4	113	C212_ 7.1 P90 BN90S4	114
204	49	1.1	6.9	1510	C112_ 6.9 S2 M2SB4	110	C112_ 6.9 P90 BN90S4	111
220	45	2.7	6.4	2440	C212_ 6.4 S2 M2SB4	113	C212_ 6.4 P90 BN90S4	114
223	45	3.5	6.3	3560	C312_ 6.3 S2 M2SB4	116	C312_ 6.3 P90 BN90S4	117
225	44	1.2	6.2	1220	C112_ 6.2 S2 M2SB4	110	C112_ 6.2 P90 BN90S4	111
230	43	2.4	6.1	2380	C212_ 6.1 S2 M2SB4	113	C212_ 6.1 P90 BN90S4	114
232	43	1.2	12.1	1470	C112_ 12.1 S2 M2SA2	110	C112_ 12.1 P80 BN80B2	111
251	40	3.1	11.2	2360	C212_ 11.2 S2 M2SA2	113	C212_ 11.2 P80 BN80B2	114
252	40	1.2	3.7	1320	C112_ 3.7 S3 M3SA6	110	C112_ 3.7 P90 BN90L6	111
278	36	1.4	10.1	1420	C112_ 10.1 S2 M2SA2	110	C112_ 10.1 P80 BN80B2	111
288	35	1.4	4.9	1370	C112_ 4.9 S2 M2SB4	110	C112_ 4.9 P90 BN90S4	111
294	34	2.9	4.8	2240	C212_ 4.8 S2 M2SB4	113	C212_ 4.8 P90 BN90S4	114
309	32	1.5	9.1	1380	C112_ 9.1 S2 M2SA2	110	C112_ 9.1 P80 BN80B2	111
332	30	1.4	2.8	1320	C112_ 2.8 S3 M3SA6	110	C112_ 2.8 P90 BN90L6	111
338	30	3.2	2.7	2160	C212_ 2.7 S3 M3SA6	113	C212_ 2.7 P90 BN90L6	114
367	27	1.7	7.6	1330	C112_ 7.6 S2 M2SA2	110	C112_ 7.6 P80 BN80B2	111
378	26	3.4	3.7	2090	C212_ 3.7 S2 M2SB4	113	C212_ 3.7 P90 BN90S4	114
383	26	1.6	3.7	1280	C112_ 3.7 S2 M2SB4	110	C112_ 3.7 P90 BN90S4	111
408	24	1.8	6.9	1290	C112_ 6.9 S2 M2SA2	110	C112_ 6.9 P80 BN80B2	111
449	22	1.9	6.2	1230	C112_ 6.2 S2 M2SA2	110	C112_ 6.2 P80 BN80B2	111
506	20	1.9	2.8	1190	C112_ 2.8 S2 M2SB4	110	C112_ 2.8 P90 BN90S4	111
575	17	2.2	4.9	1150	C112_ 4.9 S2 M2SA2	110	C112_ 4.9 P80 BN80B2	111
767	13	2.6	3.7	1070	C112_ 3.7 S2 M2SA2	110	C112_ 3.7 P80 BN80B2	111
1012	10	3.0	2.8	980	C112_ 2.8 S2 M2SA2	110	C112_ 2.8 P80 BN80B2	111

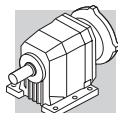
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
1.0	12595	1.0	908.2	85000	C1004_908.2 S3 M3LA6	140	C1004_908.2 P100 BN100LA6	141
1.3	9994	1.2	1081	85000	C1004_1081 S3 M3SA4	140	C1004_1081 P90 BN90LA4	141
1.6	8397	1.4	908.2	85000	C1004_908.2 S3 M3SA4	140	C1004_908.2 P90 BN90LA4	141
1.7	7803	0.9	844.0	60000	C904_ 844.0 S3 M3SA4	137	C904_ 844.0 P90 BN90LA4	138
2.0	6659	1.8	720.3	85000	C1004_720.3 S3 M3SA4	140	C1004_720.3 P90 BN90LA4	141
2.0	6584	1.1	712.2	60000	C904_ 712.2 S3 M3SA4	137	C904_ 712.2 P90 BN90LA4	138
2.6	4939	1.5	534.2	60000	C904_ 534.2 S3 M3SA4	137	C904_ 534.2 P90 BN90LA4	138
3.1	4226	1.7	457.1	60000	C904_ 457.1 S3 M3SA4	137	C904_ 457.1 P90 BN90LA4	138
3.1	4210	1.0	455.4	35000	C804_ 455.4 S3 M3SA4	134	C804_ 455.4 P90 BN90LA4	135



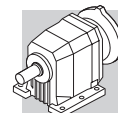
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
3.4	3874	1.9	419.0	60000	C904_ 419.0 S3 M3SA4	137	C904_ 419.0 P90 BN90LA4	138
3.4	3860	1.0	417.5	35000	C804_ 417.5 S3 M3SA4	134	C804_ 417.5 P90 BN90LA4	135
4.2	3134	2.3	339.0	60000	C904_ 339.0 S3 M3SA4	137	C904_ 339.0 P90 BN90LA4	138
4.2	3091	1.3	334.3	35000	C804_ 334.3 S3 M3SA4	134	C804_ 334.3 P90 BN90LA4	135
4.8	2708	2.7	292.9	60000	C904_ 292.9 S3 M3SA4	137	C904_ 292.9 P90 BN90LA4	138
4.9	2641	1.5	285.7	35000	C804_ 285.7 S3 M3SA4	134	C804_ 285.7 P90 BN90LA4	135
5.2	2517	0.9	272.2	25000	C704_ 272.2 S3 M3SA4	131	C704_ 272.2 P90 BN90LA4	132
5.4	2421	1.7	261.9	35000	C804_ 261.9 S3 M3SA4	134	C804_ 261.9 P90 BN90LA4	135
5.6	2323	1.0	251.3	25000	C704_ 251.3 S3 M3SA4	131	C704_ 251.3 P90 BN90LA4	132
5.9	2261	1.0	239.3	25000	C703_ 239.3 S3 M3SA4	131	C703_ 239.3 P90 BN90LA4	132
6.5	2010	0.8	217.4	16000	C614_ 217.4 S3 M3SA4	128	C614_ 217.4 P90 BN90LA4	129
6.5	2039	2.0	215.8	35000	C803_ 215.8 S3 M3SA4	134	C803_ 215.8 P90 BN90LA4	135
7.3	1834	1.3	194.1	25000	C703_ 194.1 S3 M3SA4	131	C703_ 194.1 P90 BN90LA4	132
7.9	1693	1.4	179.2	25000	C703_ 179.2 S3 M3SA4	131	C703_ 179.2 P90 BN90LA4	132
7.9	1687	0.9	178.6	16000	C613_ 178.6 S3 M3SA4	128	C613_ 178.6 P90 BN90LA4	129
8.3	1597	2.5	169.0	35000	C803_ 169.0 S3 M3SA4	134	C803_ 169.0 P90 BN90LA4	135
8.6	1554	1.0	164.5	16000	C613_ 164.5 S3 M3SA4	128	C613_ 164.5 P90 BN90LA4	129
9.4	1420	1.6	150.3	25000	C703_ 150.3 S3 M3SA4	131	C703_ 150.3 P90 BN90LA4	132
9.4	1418	1.1	150.0	16000	C613_ 150.0 S3 M3SA4	128	C613_ 150.0 P90 BN90LA4	129
9.5	1409	2.8	149.1	35000	C803_ 149.1 S3 M3SA4	134	C803_ 149.1 P90 BN90LA4	135
10.0	1327	1.2	140.5	16000	C613_ 140.5 S3 M3SA4	128	C613_ 140.5 P90 BN90LA4	129
10.3	1298	1.8	137.4	25000	C703_ 137.4 S3 M3SA4	131	C703_ 137.4 P90 BN90LA4	132
10.3	1291	3.1	136.7	35000	C803_ 136.7 S3 M3SA4	134	C803_ 136.7 P90 BN90LA4	135
11.0	1211	1.3	128.1	16000	C613_ 128.1 S3 M3SA4	128	C613_ 128.1 P90 BN90LA4	129
11.1	1198	1.9	126.8	25000	C703_ 126.8 S3 M3SA4	131	C703_ 126.8 P90 BN90LA4	132
12.4	1073	1.5	113.6	16000	C613_ 113.6 S3 M3SA4	128	C613_ 113.6 P90 BN90LA4	129
12.4	1073	0.9	113.6	10000	C513_ 113.6 S3 M3SA4	125	C513_ 113.6 P90 BN90LA4	126
13.6	981	2.3	103.8	25000	C703_ 103.8 S3 M3SA4	131	C703_ 103.8 P90 BN90LA4	132
13.6	979	1.6	103.6	16000	C613_ 103.6 S3 M3SA4	128	C613_ 103.6 P90 BN90LA4	129
13.8	962	1.0	101.8	10000	C513_ 101.8 S3 M3SA4	125	C513_ 101.8 P90 BN90LA4	126
15.2	878	1.1	93.0	10000	C513_ 93.0 S3 M3SA4	125	C513_ 93.0 P90 BN90LA4	126
15.5	860	1.9	91.0	16000	C613_ 91.0 S3 M3SA4	128	C613_ 91.0 P90 BN90LA4	129
16.0	833	2.8	88.2	25000	C703_ 88.2 S3 M3SA4	131	C703_ 88.2 P90 BN90LA4	132
16.5	826	1.0	57.0	10000	C512_ 57.0 S3 M3LA6	125	C512_ 57.0 P100 BN100LA6	126
17.0	785	2.0	83.0	16000	C613_ 83.0 S3 M3SA4	128	C613_ 83.0 P90 BN90LA4	129
17.3	769	3.0	81.4	25000	C703_ 81.4 S3 M3SA4	131	C703_ 81.4 P90 BN90LA4	132
17.7	755	1.3	79.9	10000	C513_ 79.9 S3 M3SA4	125	C513_ 79.9 P90 BN90LA4	126
18.3	744	1.0	51.4	10000	C512_ 51.4 S3 M3LA6	125	C512_ 51.4 P100 BN100LA6	126
19.0	701	2.3	74.2	16000	C613_ 74.2 S3 M3SA4	128	C613_ 74.2 P90 BN90LA4	129
19.3	689	1.5	72.9	10000	C513_ 72.9 S3 M3SA4	125	C513_ 72.9 P90 BN90LA4	126
19.7	692	1.2	47.8	10000	C512_ 47.8 S3 M3LA6	125	C512_ 47.8 P100 BN100LA6	126
19.8	674	3.4	71.3	25000	C703_ 71.3 S3 M3SA4	131	C703_ 71.3 P90 BN90LA4	132
20.8	640	2.5	67.7	16000	C613_ 67.7 S3 M3SA4	128	C613_ 67.7 P90 BN90LA4	129
21.8	624	1.3	43.1	10000	C512_ 43.1 S3 M3LA6	125	C512_ 43.1 P100 BN100LA6	126
21.8	610	1.6	64.6	10000	C513_ 64.6 S3 M3SA4	125	C513_ 64.6 P90 BN90LA4	126
21.9	607	1.0	64.3	7000	C413_ 64.3 S3 M3SA4	122	C413_ 64.3 P90 BN90LA4	123
23.9	557	1.8	59.0	10000	C513_ 59.0 S3 M3SA4	125	C513_ 59.0 P90 BN90LA4	126
24.0	554	1.1	58.7	7000	C413_ 58.7 S3 M3SA4	122	C413_ 58.7 P90 BN90LA4	123
24.1	554	2.9	58.6	16000	C613_ 58.6 S3 M3SA4	128	C613_ 58.6 P90 BN90LA4	129
24.7	550	1.4	57.0	10000	C512_ 57.0 S3 M3SA4	125	C512_ 57.0 P90 BN90LA4	126
26.4	505	3.2	53.5	16000	C613_ 53.5 S3 M3SA4	128	C613_ 53.5 P90 BN90LA4	129



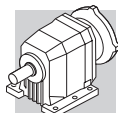
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
27.4	486	1.2	51.5	7000	C413_ 51.5 S3 M3SA4	122	C413_ 51.5 P90 BN90LA4	123
27.4	496	1.4	51.4	10000	C512_ 51.4 S3 M3SA4	125	C512_ 51.4 P90 BN90LA4	126
27.6	483	2.1	51.2	10000	C513_ 51.2 S3 M3SA4	125	C513_ 51.2 P90 BN90LA4	126
29.3	455	1.0	48.2	6290	C353_ 48.2 S3 M3SA4	119	C353_ 48.2 P90 BN90LA4	120
29.5	462	1.7	47.8	10000	C512_ 47.8 S3 M3SA4	125	C512_ 47.8 P90 BN90LA4	126
30	444	1.4	47.0	7000	C413_ 47.0 S3 M3SA4	122	C413_ 47.0 P90 BN90LA4	123
30	441	2.3	46.7	10000	C513_ 46.7 S3 M3SA4	125	C513_ 46.7 P90 BN90LA4	126
32	432	1.2	44.8	7000	C412_ 44.8 S3 M3SA4	122	C412_ 44.8 P90 BN90LA4	123
32	415	1.1	43.9	6190	C353_ 43.9 S3 M3SA4	119	C353_ 43.9 P90 BN90LA4	120
33	416	1.9	43.1	10000	C512_ 43.1 S3 M3SA4	125	C512_ 43.1 P90 BN90LA4	126
35	382	2.6	40.5	10000	C513_ 40.5 S3 M3SA4	125	C513_ 40.5 P90 BN90LA4	126
35	390	2.0	40.4	10000	C512_ 40.4 S3 M3SA4	125	C512_ 40.4 P90 BN90LA4	126
35	381	1.6	40.3	7000	C413_ 40.3 S3 M3SA4	122	C413_ 40.3 P90 BN90LA4	123
37	360	1.3	38.1	6110	C353_ 38.1 S3 M3SA4	119	C353_ 38.1 P90 BN90LA4	120
38	358	1.4	37.1	7000	C412_ 37.1 S3 M3SA4	122	C412_ 37.1 P90 BN90LA4	123
38	348	1.7	36.8	7000	C413_ 36.8 S3 M3SA4	122	C413_ 36.8 P90 BN90LA4	123
39	351	2.2	36.4	10000	C512_ 36.4 S3 M3SA4	125	C512_ 36.4 P90 BN90LA4	126
41	328	1.4	34.7	5990	C353_ 34.7 S3 M3SA4	119	C353_ 34.7 P90 BN90LA4	120
42	322	1.6	33.4	7000	C412_ 33.4 S3 M3SA4	122	C412_ 33.4 P90 BN90LA4	123
43	319	2.5	33.0	10000	C512_ 33.0 S3 M3SA4	125	C512_ 33.0 P90 BN90LA4	126
43	314	1.0	32.5	5000	C312_ 32.5 S3 M3SA4	116	C312_ 32.5 P90 BN90LA4	117
45	303	1.6	31.4	6990	C412_ 31.4 S3 M3SA4	122	C412_ 31.4 P90 BN90LA4	123
45	295	1.9	31.2	7000	C413_ 31.2 S3 M3SA4	122	C413_ 31.2 P90 BN90LA4	123
47	287	1.0	29.8	4970	C312_ 29.8 S3 M3SA4	116	C312_ 29.8 P90 BN90LA4	117
47	287	2.8	29.8	10000	C512_ 29.8 S3 M3SA4	125	C512_ 29.8 P90 BN90LA4	126
49	271	1.7	28.7	5830	C353_ 28.7 S3 M3SA4	119	C353_ 28.7 P90 BN90LA4	120
50	273	1.8	28.3	6830	C412_ 28.3 S3 M3SA4	122	C412_ 28.3 P90 BN90LA4	123
53	259	1.2	26.8	4870	C312_ 26.8 S3 M3SA4	116	C312_ 26.8 P90 BN90LA4	117
54	247	1.8	26.2	5710	C353_ 26.2 S3 M3SA4	119	C353_ 26.2 P90 BN90LA4	120
54	250	3.2	25.9	10000	C512_ 25.9 S3 M3SA4	125	C512_ 25.9 P90 BN90LA4	126
56	242	1.2	25.1	4840	C312_ 25.1 S3 M3SA4	116	C312_ 25.1 P90 BN90LA4	117
56	242	2.1	25.0	6680	C412_ 25.0 S3 M3SA4	122	C412_ 25.0 P90 BN90LA4	123
62	218	1.4	22.6	4740	C312_ 22.6 S3 M3SA4	116	C312_ 22.6 P90 BN90LA4	117
63	218	2.3	22.6	6510	C412_ 22.6 S3 M3SA4	122	C412_ 22.6 P90 BN90LA4	123
64	209	2.1	22.1	5530	C353_ 22.1 S3 M3SA4	119	C353_ 22.1 P90 BN90LA4	120
65	211	0.9	21.9	2560	C212_ 21.9 S3 M3SA4	113	C212_ 21.9 P90 BN90LA4	114
70	191	2.1	20.2	5410	C353_ 20.2 S3 M3SA4	119	C353_ 20.2 P90 BN90LA4	120
70	193	1.0	20.0	2740	C212_ 20.0 S3 M3SA4	113	C212_ 20.0 P90 BN90LA4	114
70	194	1.5	20.1	4650	C312_ 20.1 S3 M3SA4	116	C312_ 20.1 P90 BN90LA4	117
71	191	2.5	19.8	6330	C412_ 19.8 S3 M3SA4	122	C412_ 19.8 P90 BN90LA4	123
74	183	2.1	19.0	5330	C352_ 19.0 S3 M3SA4	109	C352_ 19.0 P90 BN90LA4	120
78	174	1.1	18.0	2710	C212_ 18.0 S3 M3SA4	113	C212_ 18.0 P90 BN90LA4	114
78	174	1.6	18.1	4540	C312_ 18.1 S3 M3SA4	116	C312_ 18.1 P90 BN90LA4	117
79	172	2.8	17.8	6160	C412_ 17.8 S3 M3SA4	122	C412_ 17.8 P90 BN90LA4	123
82	165	2.3	17.1	5190	C352_ 17.1 S3 M3SA4	109	C352_ 17.1 P90 BN90LA4	120
89	153	1.1	15.8	2700	C212_ 15.8 S3 M3SA4	113	C212_ 15.8 P90 BN90LA4	114
89	153	2.9	15.8	6000	C412_ 15.8 S3 M3SA4	122	C412_ 15.8 P90 BN90LA4	123
90	150	1.8	15.6	4410	C312_ 15.6 S3 M3SA4	116	C312_ 15.6 P90 BN90LA4	117
96	142	2.7	14.8	5030	C352_ 14.8 S3 M3SA4	109	C352_ 14.8 P90 BN90LA4	120
99	137	3.2	14.2	5830	C412_ 14.2 S3 M3SA4	122	C412_ 14.2 P90 BN90LA4	123
99	138	1.2	14.3	2660	C212_ 14.3 S3 M3SA4	113	C212_ 14.3 P90 BN90LA4	114



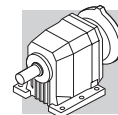
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
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106	128	3.0	13.3	4890	C352_ 13.3 S3 M3SA4	109	C352_ 13.3 P90 BN90LA4	120
114	120	1.3	12.4	2630	C212_ 12.4 S3 M3SA4	113	C212_ 12.4 P90 BN90LA4	114
114	119	2.1	12.3	4180	C312_ 12.3 S3 M3SA4	116	C312_ 12.3 P90 BN90LA4	117
121	113	3.4	11.7	4740	C352_ 11.7 S3 M3SA4	109	C352_ 11.7 P90 BN90LA4	120
126	108	1.4	11.2	2580	C212_ 11.2 S3 M3SA4	113	C212_ 11.2 P90 BN90LA4	114
127	107	2.2	11.1	4070	C312_ 11.1 S3 M3SA4	116	C312_ 11.1 P90 BN90LA4	117
146	93	1.6	9.6	2530	C212_ 9.6 S3 M3SA4	113	C212_ 9.6 P90 BN90LA4	114
152	90	2.5	9.3	3900	C312_ 9.3 S3 M3SA4	116	C312_ 9.3 P90 BN90LA4	117
162	84	1.7	8.7	2470	C212_ 8.7 S3 M3SA4	113	C212_ 8.7 P90 BN90LA4	114
168	81	2.7	8.4	3790	C312_ 8.4 S3 M3SA4	116	C312_ 8.4 P90 BN90LA4	117
177	77	1.8	15.8	2440	C212_ 15.8 S2 M2SB2	113	C212_ 15.8 P90 BN90SA2	114
190	72	2.3	5.0	3610	C312_ 5.0 S3 M3LA6	116	C312_ 5.0 P100 BN100LA6	117
197	69	2.9	7.2	3640	C312_ 7.2 S3 M3SA4	116	C312_ 7.2 P90 BN90LA4	117
199	68	1.9	7.1	2380	C212_ 7.1 S3 M3SA4	113	C212_ 7.1 P90 BN90LA4	114
203	67	3.0	4.6	4050	C352_ 4.6 S3 M3LA6	109	C352_ 4.6 P100 BN100LA6	120
205	66	0.8	6.9	1070	C112_ 6.9 S3 M3SA4	110	C112_ 6.9 P90 BN90LA4	111
219	62	3.1	6.5	3540	C312_ 6.5 S3 M3SA4	116	C312_ 6.5 P90 BN90LA4	117
221	62	2.0	6.4	2330	C212_ 6.4 S3 M3SA4	113	C212_ 6.4 P90 BN90LA4	114
225	60	2.6	6.3	3450	C312_ 6.3 S3 M3SA4	116	C312_ 6.3 P90 BN90LA4	117
232	59	0.9	12.1	1210	C112_ 12.1 S2 M2SB2	110	C112_ 12.1 P90 BN90SA2	111
232	59	1.8	6.1	2250	C212_ 6.1 S3 M3SA4	113	C212_ 6.1 P90 BN90LA4	114
254	54	2.0	3.7	2210	C212_ 3.7 S3 M3LA6	113	C212_ 3.7 P100 BN100LA6	114
278	49	1.0	10.1	1340	C112_ 10.1 S2 M2SB2	110	C112_ 10.1 P90 BN90SA2	111
285	48	3.2	5.0	3240	C312_ 5.0 S3 M3SA4	116	C312_ 5.0 P90 BN90LA4	117
290	47	1.0	4.9	840	C112_ 4.9 S3 M3SA4	110	C112_ 4.9 P90 BN90LA4	111
296	46	2.2	4.8	2140	C212_ 4.8 S3 M3SA4	113	C212_ 4.8 P90 BN90LA4	114
309	44	1.1	9.1	1310	C112_ 9.1 S2 M2SB2	110	C112_ 9.1 P90 BN90SA2	111
322	42	2.6	8.7	2130	C212_ 8.7 S2 M2SB2	113	C212_ 8.7 P90 BN90SA2	114
340	40	1.1	2.8	1000	C112_ 2.8 S3 M3LA6	110	C112_ 2.8 P100 BN100LA6	111
345	39	2.4	2.7	2060	C212_ 2.7 S3 M3LA6	113	C212_ 2.7 P100 BN100LA6	114
367	37	1.2	7.6	1270	C112_ 7.6 S2 M2SB2	110	C112_ 7.6 P90 BN90SA2	111
380	36	2.5	3.7	2020	C212_ 3.7 S3 M3SA4	113	C212_ 3.7 P90 BN90LA4	114
386	35	1.2	3.7	1100	C112_ 3.7 S3 M3SA4	110	C112_ 3.7 P90 BN90LA4	111
395	34	3.1	7.1	2030	C212_ 7.1 S2 M2SB2	113	C212_ 7.1 P90 BN90SA2	114
408	33	1.3	6.9	1230	C112_ 6.9 S2 M2SB2	110	C112_ 6.9 P90 BN90SA2	111
439	31	3.2	6.4	1970	C212_ 6.4 S2 M2SB2	113	C212_ 6.4 P90 BN90SA2	114
449	30	1.4	6.2	1180	C112_ 6.2 S2 M2SB2	110	C112_ 6.2 P90 BN90SA2	111
460	30	2.9	6.1	1920	C212_ 6.1 S2 M2SB2	113	C212_ 6.1 P90 BN90SA2	114
510	27	1.4	2.8	1140	C112_ 2.8 S3 M3SA4	110	C112_ 2.8 P90 BN90LA4	111
518	26	3.0	2.7	1870	C212_ 2.7 S3 M3SA4	113	C212_ 2.7 P90 BN90LA4	114
575	24	1.6	4.9	1110	C112_ 4.9 S2 M2SB2	110	C112_ 4.9 P90 BN90SA2	111
587	23	3.5	4.8	1810	C212_ 4.8 S2 M2SB2	113	C212_ 4.8 P90 BN90SA2	114
767	18	1.9	3.7	1030	C112_ 3.7 S2 M2SB2	110	C112_ 3.7 P90 BN90SA2	111
1012	13	2.2	2.8	960	C112_ 2.8 S2 M2SB2	110	C112_ 2.8 P90 BN90SA2	111



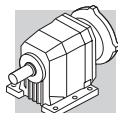
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
1.6	12315	1.0	908.2	85000	C1004_908.2 S3 M3LA4	140	C1004_908.2 P100 BN100LA4	141
2.0	9767	1.2	720.3	85000	C1004_720.3 S3 M3LA4	140	C1004_720.3 P100 BN100LA4	141
2.4	7900	1.5	582.6	85000	C1004_582.6 S3 M3LA4	140	C1004_582.6 P100 BN100LA4	141
2.6	7244	1.0	534.2	60000	C904_534.2 S3 M3LA4	137	C904_534.2 P100 BN100LA4	138
3.1	6198	1.2	457.1	60000	C904_457.1 S3 M3LA4	137	C904_457.1 P100 BN100LA4	138
3.7	5159	2.3	380.5	85000	C1004_380.5 S3 M3LA4	140	C1004_380.5 P100 BN100LA4	141
3.8	5014	1.4	369.8	60000	C904_369.8 S3 M3LA4	137	C904_369.8 P100 BN100LA4	138
4.8	3972	1.8	292.9	60000	C904_292.9 S3 M3LA4	137	C904_292.9 P100 BN100LA4	138
4.9	3874	1.0	285.7	35000	C804_285.7 S3 M3LA4	134	C804_285.7 P100 BN100LA4	135
5.4	3551	1.1	261.9	35000	C804_261.9 S3 M3LA4	134	C804_261.9 P100 BN100LA4	135
6.1	3142	2.3	231.7	60000	C904_231.7 S3 M3LA4	137	C904_231.7 P100 BN100LA4	138
6.5	2991	1.3	215.8	35000	C803_215.8 S3 M3LA4	134	C803_215.8 P100 BN100LA4	135
7.6	2555	1.6	184.4	35000	C803_184.4 S3 M3LA4	134	C803_184.4 P100 BN100LA4	135
7.9	2483	0.9	179.2	25000	C703_179.2 S3 M3LA4	131	C703_179.2 P100 BN100LA4	132
8.7	2256	1.0	162.8	25000	C703_162.8 S3 M3LA4	131	C703_162.8 P100 BN100LA4	132
10.3	1904	1.2	137.4	25000	C703_137.4 S3 M3LA4	131	C703_137.4 P100 BN100LA4	132
10.3	1894	2.1	136.7	35000	C803_136.7 S3 M3LA4	134	C803_136.7 P100 BN100LA4	135
11.0	1776	0.9	128.1	16000	C613_128.1 S3 M3LA4	128	C613_128.1 P100 BN100LA4	129
12.4	1574	1.0	113.6	16000	C613_113.6 S3 M3LA4	128	C613_113.6 P100 BN100LA4	129
12.5	1558	1.5	112.4	25000	C703_112.4 S3 M3LA4	131	C703_112.4 P100 BN100LA4	132
12.9	1517	2.6	109.5	35000	C803_109.5 S3 M3LA4	134	C803_109.5 P100 BN100LA4	135
13.6	1438	1.6	103.8	25000	C703_103.8 S3 M3LA4	131	C703_103.8 P100 BN100LA4	132
13.6	1436	1.1	103.6	16000	C613_103.6 S3 M3LA4	128	C613_103.6 P100 BN100LA4	129
14.5	1350	3.0	97.4	35000	C803_97.4 S3 M3LA4	134	C803_97.4 P100 BN100LA4	135
15.5	1261	1.3	91.0	16000	C613_91.0 S3 M3LA4	128	C613_91.0 P100 BN100LA4	129
15.8	1237	3.2	89.3	35000	C803_89.3 S3 M3LA4	134	C803_89.3 P100 BN100LA4	135
16.0	1222	1.9	88.2	25000	C703_88.2 S3 M3LA4	131	C703_88.2 P100 BN100LA4	132
17.0	1151	1.4	83.0	16000	C613_83.0 S3 M3LA4	128	C613_83.0 P100 BN100LA4	129
17.3	1128	2.0	81.4	25000	C703_81.4 S3 M3LA4	131	C703_81.4 P100 BN100LA4	132
17.7	1107	0.9	79.9	10000	C513_79.9 S3 M3LA4	125	C513_79.9 P100 BN100LA4	126
19.0	1028	1.6	74.2	16000	C613_74.2 S3 M3LA4	128	C613_74.2 P100 BN100LA4	129
19.3	1011	1.0	72.9	10000	C513_72.9 S3 M3LA4	125	C513_72.9 P100 BN100LA4	126
19.8	989	2.3	71.3	25000	C703_71.3 S3 M3LA4	131	C703_71.3 P100 BN100LA4	132
20.8	938	1.7	67.7	16000	C613_67.7 S3 M3LA4	128	C613_67.7 P100 BN100LA4	129
21.4	913	2.5	65.9	25000	C703_65.9 S3 M3LA4	131	C703_65.9 P100 BN100LA4	132
21.8	895	1.1	64.6	10000	C513_64.6 S3 M3LA4	125	C513_64.6 P100 BN100LA4	126
23.9	817	1.2	59.0	10000	C513_59.0 S3 M3LA4	125	C513_59.0 P100 BN100LA4	126
24.1	812	2.0	58.6	16000	C613_58.6 S3 M3LA4	128	C613_58.6 P100 BN100LA4	129
24.7	807	1.0	57.0	10000	C512_57.0 S3 M3LA4	125	C512_57.0 P100 BN100LA4	126
25.0	783	2.9	56.5	25000	C703_56.5 S3 M3LA4	131	C703_56.5 P100 BN100LA4	132
26.4	741	2.2	53.5	16000	C613_53.5 S3 M3LA4	128	C613_53.5 P100 BN100LA4	129
27.4	728	1.0	51.4	10000	C512_51.4 S3 M3LA4	125	C512_51.4 P100 BN100LA4	126
27.6	709	1.4	51.2	10000	C513_51.2 S3 M3LA4	125	C513_51.2 P100 BN100LA4	126
29.5	677	1.2	47.8	10000	C512_47.8 S3 M3LA4	125	C512_47.8 P100 BN100LA4	126
29.6	660	2.4	47.6	16000	C613_47.6 S3 M3LA4	128	C613_47.6 P100 BN100LA4	129
30	651	0.9	47.0	6440	C413_47.0 S3 M3LA4	122	C413_47.0 P100 BN100LA4	123
30	647	1.5	46.7	10000	C513_46.7 S3 M3LA4	125	C513_46.7 P100 BN100LA4	126
32	602	2.7	43.4	16000	C613_43.4 S3 M3LA4	128	C613_43.4 P100 BN100LA4	129
33	610	1.3	43.1	10000	C512_43.1 S3 M3LA4	125	C512_43.1 P100 BN100LA4	126
35	561	1.8	40.5	10000	C513_40.5 S3 M3LA4	125	C513_40.5 P100 BN100LA4	126
35	571	1.4	40.4	10000	C512_40.4 S3 M3LA4	125	C512_40.4 P100 BN100LA4	126



2.2 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
35	559	1.1	40.3	6460	C413_ 40.3 S3 M3LA4	122	C413_ 40.3 P100 BN100LA4	123
37	538	2.5	38.0	16000	C612_ 38.0 S3 M3LA4	128	C612_ 38.0 P100 BN100LA4	129
38	525	1.0	37.1	6370	C412_ 37.1 S3 M3LA4	122	C412_ 37.1 P100 BN100LA4	123
38	512	2.0	37.0	10000	C513_ 37.0 S3 M3LA4	125	C513_ 37.0 P100 BN100LA4	126
38	510	1.2	36.8	6390	C413_ 36.8 S3 M3LA4	122	C413_ 36.8 P100 BN100LA4	123
39	515	1.5	36.4	10000	C512_ 36.4 S3 M3LA4	125	C512_ 36.4 P100 BN100LA4	126
39	501	3.1	36.1	16000	C613_ 36.1 S3 M3LA4	128	C613_ 36.1 P100 BN100LA4	129
41	481	0.9	34.7	5240	C353_ 34.7 S3 M3LA4	119	C353_ 34.7 P100 BN100LA4	120
41	484	2.5	34.2	16000	C612_ 34.2 S3 M3LA4	128	C612_ 34.2 P100 BN100LA4	129
42	473	1.1	33.4	6290	C412_ 33.4 S3 M3LA4	122	C412_ 33.4 P100 BN100LA4	123
43	468	1.7	33.0	10000	C512_ 33.0 S3 M3LA4	125	C512_ 33.0 P100 BN100LA4	126
43	457	3.3	33.0	16000	C613_ 33.0 S3 M3LA4	128	C613_ 33.0 P100 BN100LA4	129
45	445	1.1	31.4	6290	C412_ 31.4 S3 M3LA4	122	C412_ 31.4 P100 BN100LA4	123
46	431	3.1	30.4	16000	C612_ 30.4 S3 M3LA4	128	C612_ 30.4 P100 BN100LA4	129
47	421	1.9	29.8	10000	C512_ 29.8 S3 M3LA4	125	C512_ 29.8 P100 BN100LA4	126
49	398	1.1	28.7	5220	C353_ 28.7 S3 M3LA4	119	C353_ 28.7 P100 BN100LA4	120
50	401	1.2	28.3	6190	C412_ 28.3 S3 M3LA4	122	C412_ 28.3 P100 BN100LA4	123
51	388	3.5	27.4	15900	C612_ 27.4 S3 M3LA4	128	C612_ 27.4 P100 BN100LA4	129
54	363	1.2	26.2	5140	C353_ 26.2 S3 M3LA4	119	C353_ 26.2 P100 BN100LA4	120
54	367	2.2	25.9	10000	C512_ 25.9 S3 M3LA4	125	C512_ 25.9 P100 BN100LA4	126
56	355	1.4	25.0	6120	C412_ 25.0 S3 M3LA4	122	C412_ 25.0 P100 BN100LA4	123
60	331	2.4	23.4	10000	C512_ 23.4 S3 M3LA4	125	C512_ 23.4 P100 BN100LA4	126
62	320	0.9	22.6	4220	C312_ 22.6 S3 M3LA4	116	C312_ 22.6 P100 BN100LA4	117
63	319	1.6	22.6	6000	C412_ 22.6 S3 M3LA4	122	C412_ 22.6 P100 BN100LA4	123
64	307	1.4	22.1	5060	C353_ 22.1 S3 M3LA4	119	C353_ 22.1 P100 BN100LA4	120
66	301	1.0	14.0	4200	C312_ 14.0 S3 M3LC6	116	C312_ 14.0 P112 BN112M6	117
67	297	2.7	21.0	10000	C512_ 21.0 S3 M3LA4	125	C512_ 21.0 P100 BN100LA4	126
70	279	1.4	20.2	4970	C353_ 20.2 S3 M3LA4	119	C353_ 20.2 P100 BN100LA4	120
70	284	1.0	20.1	4200	C312_ 20.1 S3 M3LA4	116	C312_ 20.1 P100 BN100LA4	117
71	280	1.7	19.8	5890	C412_ 19.8 S3 M3LA4	122	C412_ 19.8 P100 BN100LA4	123
74	269	1.4	19.0	4920	C352_ 19.0 S3 M3LA4	109	C352_ 19.0 P100 BN100LA4	120
75	267	3.0	18.9	10000	C512_ 18.9 S3 M3LA4	125	C512_ 18.9 P100 BN100LA4	126
78	256	1.1	18.1	4130	C312_ 18.1 S3 M3LA4	116	C312_ 18.1 P100 BN100LA4	117
79	252	1.9	17.8	5760	C412_ 17.8 S3 M3LA4	122	C412_ 17.8 P100 BN100LA4	123
82	242	1.6	17.1	4810	C352_ 17.1 S3 M3LA4	109	C352_ 17.1 P100 BN100LA4	120
84	238	1.2	11.1	4090	C312_ 11.1 S3 M3LC6	116	C312_ 11.1 P112 BN112M6	117
85	235	3.4	16.6	10000	C512_ 16.6 S3 M3LA4	125	C512_ 16.6 P100 BN100LA4	126
89	224	2.0	15.8	5650	C412_ 15.8 S3 M3LA4	122	C412_ 15.8 P100 BN100LA4	123
90	221	1.2	15.6	4060	C312_ 15.6 S3 M3LA4	116	C312_ 15.6 P100 BN100LA4	117
96	209	1.8	14.8	4710	C352_ 14.8 S3 M3LA4	109	C352_ 14.8 P100 BN100LA4	120
99	202	2.2	14.2	5510	C412_ 14.2 S3 M3LA4	122	C412_ 14.2 P100 BN100LA4	123
100	199	1.3	14.0	3980	C312_ 14.0 S3 M3LA4	116	C312_ 14.0 P100 BN100LA4	117
106	188	2.0	13.3	4590	C352_ 13.3 S3 M3LA4	109	C352_ 13.3 P100 BN100LA4	120
114	175	2.4	12.4	5360	C412_ 12.4 S3 M3LA4	122	C412_ 12.4 P100 BN100LA4	123
114	176	0.9	12.4	2270	C212_ 12.4 S3 M3LA4	113	C212_ 12.4 P100 BN100LA4	114
114	174	1.4	12.3	3900	C312_ 12.3 S3 M3LA4	116	C312_ 12.3 P100 BN100LA4	117
121	165	2.3	11.7	4490	C352_ 11.7 S3 M3LA4	109	C352_ 11.7 P100 BN100LA4	120
126	158	1.0	11.2	2250	C212_ 11.2 S3 M3LA4	113	C212_ 11.2 P100 BN100LA4	114
126	158	2.7	11.2	5220	C412_ 11.2 S3 M3LA4	122	C412_ 11.2 P100 BN100LA4	123
127	157	1.5	11.1	3820	C312_ 11.1 S3 M3LA4	116	C312_ 11.1 P100 BN100LA4	117
130	154	1.5	7.2	3810	C312_ 7.2 S3 M3LC6	116	C312_ 7.2 P112 BN112M6	117

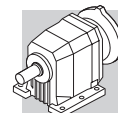


2.2 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
131	152	1.0	7.1	2260	C212_ 7.1 S3 M3LC6	113	C212_ 7.1 P112 BN112M6	114
134	149	2.6	10.5	4370	C352_ 10.5 S3 M3LA4	109	C352_ 10.5 P100 BN100LA4	120
146	137	1.1	9.6	2250	C212_ 9.6 S3 M3LA4	113	C212_ 9.6 P100 BN100LA4	114
147	136	2.9	9.6	5050	C412_ 9.6 S3 M3LA4	122	C412_ 9.6 P100 BN100LA4	123
152	132	1.7	9.3	3690	C312_ 9.3 S3 M3LA4	116	C312_ 9.3 P100 BN100LA4	117
160	125	3.1	8.8	4210	C352_ 8.8 S3 M3LA4	109	C352_ 8.8 P100 BN100LA4	120
162	123	1.1	8.7	2220	C212_ 8.7 S3 M3LA4	113	C212_ 8.7 P100 BN100LA4	114
168	118	1.8	8.4	3600	C312_ 8.4 S3 M3LA4	116	C312_ 8.4 P100 BN100LA4	117
177	113	1.2	15.8	2210	C212_ 15.8 S3 M3SA2	113	C212_ 15.8 P90 BN90L2	114
178	112	3.4	7.9	4090	C352_ 7.9 S3 M3LA4	109	C352_ 7.9 P100 BN100LA4	120
188	106	1.5	5.0	3410	C312_ 5.0 S3 M3LC6	116	C312_ 5.0 P112 BN112M6	117
197	101	2.0	7.2	3480	C312_ 7.2 S3 M3LA4	116	C312_ 7.2 P100 BN100LA4	117
199	100	1.3	7.1	2180	C212_ 7.1 S3 M3LA4	113	C212_ 7.1 P100 BN100LA4	114
219	91	2.1	6.5	3390	C312_ 6.5 S3 M3LA4	116	C312_ 6.5 P100 BN100LA4	117
221	90	1.4	6.4	2140	C212_ 6.4 S3 M3LA4	113	C212_ 6.4 P100 BN100LA4	114
232	86	1.2	6.1	2040	C212_ 6.1 S3 M3LA4	113	C212_ 6.1 P100 BN100LA4	114
241	83	2.4	5.8	3710	C352_ 5.8 S3 M3LA4	109	C352_ 5.8 P100 BN100LA4	120
285	70	2.2	5.0	3100	C312_ 5.0 S3 M3LA4	116	C312_ 5.0 P100 BN100LA4	117
296	68	1.5	4.8	1970	C212_ 4.8 S3 M3LA4	113	C212_ 4.8 P100 BN100LA4	114
302	66	2.7	9.3	3130	C312_ 9.3 S3 M3SA2	116	C312_ 9.3 P90 BN90L2	117
305	65	3.1	4.6	3490	C352_ 4.6 S3 M3LA4	109	C352_ 4.6 P100 BN100LA4	120
324	62	1.8	8.7	2000	C212_ 8.7 S3 M3SA2	113	C212_ 8.7 P90 BN90L2	114
336	59	2.9	8.4	3040	C312_ 8.4 S3 M3SA2	116	C312_ 8.4 P90 BN90L2	117
346	58	3.5	2.7	3380	C352_ 2.7 S3 M3LC6	109	C352_ 2.7 P112 BN112M6	120
369	54	0.8	7.6	930	C112_ 7.6 S3 M3SA2	110	C112_ 7.6 P90 BN90L2	111
377	53	2.8	3.7	2890	C312_ 3.7 S3 M3LA4	116	C312_ 3.7 P100 BN100LA4	117
380	52	1.7	3.7	1890	C212_ 3.7 S3 M3LA4	113	C212_ 3.7 P100 BN100LA4	114
392	51	3.1	7.2	2920	C312_ 7.2 S3 M3SA2	116	C312_ 7.2 P90 BN90L2	117
397	50	2.1	7.1	1920	C212_ 7.1 S3 M3SA2	113	C212_ 7.1 P90 BN90L2	114
409	49	0.9	6.9	990	C112_ 6.9 S3 M3SA2	110	C112_ 6.9 P90 BN90L2	111
436	46	3.4	6.5	2830	C312_ 6.5 S3 M3SA2	116	C312_ 6.5 P90 BN90L2	117
441	45	2.2	6.4	1870	C212_ 6.4 S3 M3SA2	113	C212_ 6.4 P90 BN90L2	114
449	44	3.4	6.3	2760	C312_ 6.3 S3 M3SA2	116	C312_ 6.3 P90 BN90L2	117
462	43	2.0	6.1	1820	C212_ 6.1 S3 M3SA2	113	C212_ 6.1 P90 BN90L2	114
490	41	3.2	2.9	2700	C312_ 2.9 S3 M3LA4	116	C312_ 2.9 P100 BN100LA4	117
510	39	0.9	2.8	690	C112_ 2.8 S3 M3LA4	110	C112_ 2.8 P100 BN100LA4	111
518	39	2.1	2.7	1770	C212_ 2.7 S3 M3LA4	113	C212_ 2.7 P100 BN100LA4	114
589	34	2.4	4.8	1720	C212_ 4.8 S3 M3SA2	113	C212_ 4.8 P90 BN90L2	114
758	26	2.7	3.7	1620	C212_ 3.7 S3 M3SA2	113	C212_ 3.7 P90 BN90L2	114
770	26	1.3	3.7	970	C112_ 3.7 S3 M3SA2	110	C112_ 3.7 P90 BN90L2	111
1015	20	1.5	2.8	920	C112_ 2.8 S3 M3SA2	110	C112_ 2.8 P90 BN90L2	111
1032	19	3.4	2.7	1490	C212_ 2.7 S3 M3SA2	113	C212_ 2.7 P90 BN90L2	114

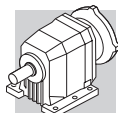
3 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
2.0	13319	0.9	720.3	85000	C1004_720.3 S3 M3LB4	140	C1004_720.3 P100 BN100LB4	141
2.4	10773	1.1	582.6	85000	C1004_582.6 S3 M3LB4	140	C1004_582.6 P100 BN100LB4	141
3.4	7747	0.9	419.0	60000	C904_ 419.0 S3 M3LB4	137	C904_ 419.0 P100 BN100LB4	138



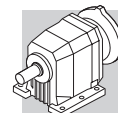
3 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
3.4	7577	1.6	409.8	85000	C1004_409.8 S3 M3LB4	140	C1004_409.8 P100 BN100LB4	141
4.2	6268	1.1	339.0	60000	C904_339.0 S3 M3LB4	137	C904_339.0 P100 BN100LB4	138
4.4	5984	2.0	323.6	85000	C1004_323.6 S3 M3LB4	140	C1004_323.6 P100 BN100LB4	141
5.3	4965	1.5	268.5	60000	C904_268.5 S3 M3LB4	137	C904_268.5 P100 BN100LB4	138
5.4	4863	2.5	263.0	85000	C1004_263.0 S3 M3LB4	140	C1004_263.0 P100 BN100LB4	141
6.5	4079	1.0	215.8	35000	C803_215.8 S3 M3LB4	134	C803_215.8 P100 BN100LB4	135
6.6	3927	1.8	212.4	60000	C904_212.4 S3 M3LB4	137	C904_212.4 P100 BN100LB4	138
7.1	3739	1.0	197.9	35000	C803_197.9 S3 M3LB4	134	C803_197.9 P100 BN100LB4	135
8.2	3252	2.2	172.1	60000	C903_172.1 S3 M3LB4	137	C903_172.1 P100 BN100LB4	138
8.3	3193	1.3	169.0	35000	C803_169.0 S3 M3LB4	134	C803_169.0 P100 BN100LB4	135
9.5	2818	1.4	149.1	35000	C803_149.1 S3 M3LB4	134	C803_149.1 P100 BN100LB4	135
9.6	2765	2.6	146.3	60000	C903_146.3 S3 M3LB4	137	C903_146.3 P100 BN100LB4	138
10.5	2535	2.8	134.1	60000	C903_134.1 S3 M3LB4	137	C903_134.1 P100 BN100LB4	138
12.1	2206	3.3	116.7	60000	C903_116.7 S3 M3LB4	137	C903_116.7 P100 BN100LB4	138
12.5	2125	1.1	112.4	25000	C703_112.4 S3 M3LB4	131	C703_112.4 P100 BN100LB4	132
12.9	2069	1.9	109.5	35000	C803_109.5 S3 M3LB4	134	C803_109.5 P100 BN100LB4	135
13.6	1961	1.2	103.8	25000	C703_103.8 S3 M3LB4	131	C703_103.8 P100 BN100LB4	132
14.5	1840	2.2	97.4	35000	C803_97.4 S3 M3LB4	134	C803_97.4 P100 BN100LB4	135
15.5	1720	0.9	91.0	16000	C613_91.0 S3 M3LB4	128	C613_91.0 P100 BN100LB4	129
15.8	1687	2.4	89.3	35000	C803_89.3 S3 M3LB4	134	C803_89.3 P100 BN100LB4	135
16.0	1667	1.4	88.2	25000	C703_88.2 S3 M3LB4	131	C703_88.2 P100 BN100LB4	132
17.0	1569	1.0	83.0	16000	C613_83.0 S3 M3LB4	128	C613_83.0 P100 BN100LB4	129
17.3	1538	1.5	81.4	25000	C703_81.4 S3 M3LB4	131	C703_81.4 P100 BN100LB4	132
18.3	1453	2.8	76.9	35000	C803_76.9 S3 M3LB4	134	C803_76.9 P100 BN100LB4	135
19.0	1402	1.1	74.2	16000	C613_74.2 S3 M3LB4	128	C613_74.2 P100 BN100LB4	129
19.8	1348	1.7	71.3	25000	C703_71.3 S3 M3LB4	131	C703_71.3 P100 BN100LB4	132
20.0	1332	3.0	70.5	35000	C803_70.5 S3 M3LB4	134	C803_70.5 P100 BN100LB4	135
20.8	1279	1.3	67.7	16000	C613_67.7 S3 M3LB4	128	C613_67.7 P100 BN100LB4	129
24.1	1107	1.4	58.6	16000	C613_58.6 S3 M3LB4	128	C613_58.6 P100 BN100LB4	129
25.0	1068	2.2	56.5	25000	C703_56.5 S3 M3LB4	131	C703_56.5 P100 BN100LB4	132
26.4	1010	1.6	53.5	16000	C613_53.5 S3 M3LB4	128	C613_53.5 P100 BN100LB4	129
27.6	967	1.0	51.2	10000	C513_51.2 S3 M3LB4	125	C513_51.2 P100 BN100LB4	126
29.6	900	1.8	47.6	16000	C613_47.6 S3 M3LB4	128	C613_47.6 P100 BN100LB4	129
30	883	1.1	46.7	10000	C513_46.7 S3 M3LB4	125	C513_46.7 P100 BN100LB4	126
32	845	2.7	44.7	25000	C703_44.7 S3 M3LB4	131	C703_44.7 P100 BN100LB4	132
32	821	1.9	43.4	16000	C613_43.4 S3 M3LB4	128	C613_43.4 P100 BN100LB4	129
33	832	0.9	43.1	10000	C512_43.1 S3 M3LB4	125	C512_43.1 P100 BN100LB4	126
34	780	2.9	41.3	25000	C703_41.3 S3 M3LB4	131	C703_41.3 P100 BN100LB4	132
35	765	1.3	40.5	10000	C513_40.5 S3 M3LB4	125	C513_40.5 P100 BN100LB4	126
35	779	1.0	40.4	10000	C512_40.4 S3 M3LB4	125	C512_40.4 P100 BN100LB4	126
37	734	1.8	38.0	16000	C612_38.0 S3 M3LB4	128	C612_38.0 P100 BN100LB4	129
38	698	1.4	37.0	10000	C513_37.0 S3 M3LB4	125	C513_37.0 P100 BN100LB4	126
39	702	1.1	36.4	10000	C512_36.4 S3 M3LB4	125	C512_36.4 P100 BN100LB4	126
39	683	2.3	36.1	16000	C613_36.1 S3 M3LB4	128	C613_36.1 P100 BN100LB4	129
41	661	1.9	34.2	16000	C612_34.2 S3 M3LB4	128	C612_34.2 P100 BN100LB4	129
43	638	1.2	33.0	10000	C512_33.0 S3 M3LB4	125	C512_33.0 P100 BN100LB4	126
43	623	2.4	33.0	16000	C613_33.0 S3 M3LB4	128	C613_33.0 P100 BN100LB4	129
45	590	1.0	31.2	5550	C413_31.2 S3 M3LB4	122	C413_31.2 P100 BN100LB4	123
46	588	2.3	30.4	15900	C612_30.4 S3 M3LB4	128	C612_30.4 P100 BN100LB4	129
47	575	1.4	29.8	10000	C512_29.8 S3 M3LB4	125	C512_29.8 P100 BN100LB4	126
50	546	0.9	28.3	5460	C412_28.3 S3 M3LB4	122	C412_28.3 P100 BN100LB4	123



3 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC	
51	519	1.9	27.4	10000	C513_ 27.4 S3 M3LB4	125	C513_ 27.4 P100 BN100LB4	126
51	529	2.6	27.4	15400	C612_ 27.4 S3 M3LB4	128	C612_ 27.4 P100 BN100LB4	129
54	494	0.9	26.2	4500	C353_ 26.2 S3 M3LB4	119	C353_ 26.2 P100 BN100LB4	120
54	500	1.6	25.9	10000	C512_ 25.9 S3 M3LB4	125	C512_ 25.9 P100 BN100LB4	126
56	483	1.0	25.0	5480	C412_ 25.0 S3 M3LB4	122	C412_ 25.0 P100 BN100LB4	123
57	479	2.8	24.8	15100	C612_ 24.8 S3 M3LB4	128	C612_ 24.8 P100 BN100LB4	129
59	451	2.0	23.9	10000	C513_ 23.9 S3 M3LB4	125	C513_ 23.9 P100 BN100LB4	126
60	451	1.8	23.4	10000	C512_ 23.4 S3 M3LB4	125	C512_ 23.4 P100 BN100LB4	126
63	435	1.1	22.6	5420	C412_ 22.6 S3 M3LB4	122	C412_ 22.6 P100 BN100LB4	123
63	431	3.1	22.4	14600	C612_ 22.4 S3 M3LB4	128	C612_ 22.4 P100 BN100LB4	129
64	418	1.0	22.1	4530	C353_ 22.1 S3 M3LB4	119	C353_ 22.1 P100 BN100LB4	120
65	412	2.2	21.8	10000	C513_ 21.8 S3 M3LB4	125	C513_ 21.8 P100 BN100LB4	126
67	405	2.0	21.0	10000	C512_ 21.0 S3 M3LB4	125	C512_ 21.0 P100 BN100LB4	126
70	381	1.0	20.2	4480	C353_ 20.2 S3 M3LB4	119	C353_ 20.2 P100 BN100LB4	120
71	381	1.3	19.8	5390	C412_ 19.8 S3 M3LB4	122	C412_ 19.8 P100 BN100LB4	123
74	367	1.0	19.0	4450	C352_ 19.0 S3 M3LB4	109	C352_ 19.0 P100 BN100LB4	120
75	365	2.2	18.9	10000	C512_ 18.9 S3 M3LB4	125	C512_ 18.9 P100 BN100LB4	126
79	343	1.4	17.8	5300	C412_ 17.8 S3 M3LB4	122	C412_ 17.8 P100 BN100LB4	123
82	330	1.2	17.1	4380	C352_ 17.1 S3 M3LB4	109	C352_ 17.1 P100 BN100LB4	120
85	320	2.5	16.6	9790	C512_ 16.6 S3 M3LB4	125	C512_ 16.6 P100 BN100LB4	126
89	305	1.5	15.8	5240	C412_ 15.8 S3 M3LB4	122	C412_ 15.8 P100 BN100LB4	123
94	289	2.8	15.0	9540	C512_ 15.0 S3 M3LB4	125	C512_ 15.0 P100 BN100LB4	126
96	285	1.3	14.8	4340	C352_ 14.8 S3 M3LB4	109	C352_ 14.8 P100 BN100LB4	120
99	275	1.6	14.2	5140	C412_ 14.2 S3 M3LB4	122	C412_ 14.2 P100 BN100LB4	123
100	271	1.0	14.0	3610	C312_ 14.0 S3 M3LB4	116	C312_ 14.0 P100 BN100LB4	117
106	256	1.5	13.3	4260	C352_ 13.3 S3 M3LB4	109	C352_ 13.3 P100 BN100LB4	120
107	253	3.0	13.1	9200	C512_ 13.1 S3 M3LB4	125	C512_ 13.1 P100 BN100LB4	126
114	239	1.8	12.4	5040	C412_ 12.4 S3 M3LB4	122	C412_ 12.4 P100 BN100LB4	123
114	238	1.0	12.3	3580	C312_ 12.3 S3 M3LB4	116	C312_ 12.3 P100 BN100LB4	117
119	228	3.4	11.8	8950	C512_ 11.8 S3 M3LB4	125	C512_ 11.8 P100 BN100LB4	126
121	225	1.7	11.7	4200	C352_ 11.7 S3 M3LB4	109	C352_ 11.7 P100 BN100LB4	120
126	215	1.9	11.2	4930	C412_ 11.2 S3 M3LB4	122	C412_ 11.2 P100 BN100LB4	123
127	214	1.1	11.1	3520	C312_ 11.1 S3 M3LB4	116	C312_ 11.1 P100 BN100LB4	117
134	203	1.9	10.5	4110	C352_ 10.5 S3 M3LB4	109	C352_ 10.5 P100 BN100LB4	120
142	191	1.2	20.1	3480	C312_ 20.1 S3 M3LA2	116	C312_ 20.1 P100 BN100L2	117
147	185	2.1	9.6	4800	C412_ 9.6 S3 M3LB4	122	C412_ 9.6 P100 BN100LB4	123
152	179	1.2	9.3	3450	C312_ 9.3 S3 M3LB4	116	C312_ 9.3 P100 BN100LB4	117
160	170	2.2	8.8	3990	C352_ 8.8 S3 M3LB4	109	C352_ 8.8 P100 BN100LB4	120
168	162	1.3	8.4	3380	C312_ 8.4 S3 M3LB4	116	C312_ 8.4 P100 BN100LB4	117
178	153	2.5	7.9	3890	C352_ 7.9 S3 M3LB4	109	C352_ 7.9 P100 BN100LB4	120
181	151	0.9	15.8	1940	C212_ 15.8 S3 M3LA2	113	C212_ 15.8 P100 BN100L2	114
183	148	1.4	15.6	3340	C312_ 15.6 S3 M3LA2	116	C312_ 15.6 P100 BN100L2	117
197	138	1.4	7.2	3300	C312_ 7.2 S3 M3LB4	116	C312_ 7.2 P100 BN100LB4	117
199	137	1.0	7.1	1940	C212_ 7.1 S3 M3LB4	113	C212_ 7.1 P100 BN100LB4	114
200	136	2.6	7.1	4490	C412_ 7.1 S3 M3LB4	122	C412_ 7.1 P100 BN100LB4	123
208	131	2.7	6.8	3780	C352_ 6.8 S3 M3LB4	109	C352_ 6.8 P100 BN100LB4	120
219	125	1.6	6.5	3220	C312_ 6.5 S3 M3LB4	116	C312_ 6.5 P100 BN100LB4	117
221	123	1.0	6.4	1920	C212_ 6.4 S3 M3LB4	113	C212_ 6.4 P100 BN100LB4	114
222	123	2.8	6.4	4370	C412_ 6.4 S3 M3LB4	122	C412_ 6.4 P100 BN100LB4	123
231	118	2.9	6.1	3680	C352_ 6.1 S3 M3LB4	109	C352_ 6.1 P100 BN100LB4	120
232	117	1.7	12.3	3190	C312_ 12.3 S3 M3LA2	116	C312_ 12.3 P100 BN100L2	117

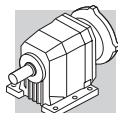


3 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC	
237	115	2.3	6.0	4090	C412_ 6.0 S3 M3LB4	122	C412_ 6.0 P100 BN100LB4	123
241	113	1.8	5.8	3530	C352_ 5.8 S3 M3LB4	109	C352_ 5.8 P100 BN100LB4	120
256	106	1.2	11.2	1900	C212_ 11.2 S3 M3LA2	113	C212_ 11.2 P100 BN100L2	114
258	106	1.8	11.1	3110	C312_ 11.1 S3 M3LA2	116	C312_ 11.1 P100 BN100L2	117
285	96	1.6	5.0	2950	C312_ 5.0 S3 M3LB4	116	C312_ 5.0 P100 BN100LB4	117
296	92	1.1	4.8	1780	C212_ 4.8 S3 M3LB4	113	C212_ 4.8 P100 BN100LB4	114
302	90	2.9	4.7	3880	C412_ 4.7 S3 M3LB4	122	C412_ 4.7 P100 BN100LB4	123
308	88	2.0	9.3	2990	C312_ 9.3 S3 M3LA2	116	C312_ 9.3 P100 BN100L2	117
329	83	1.3	8.7	1850	C212_ 8.7 S3 M3LA2	113	C212_ 8.7 P100 BN100L2	114
342	80	2.1	8.4	2910	C312_ 8.4 S3 M3LA2	116	C312_ 8.4 P100 BN100L2	117
377	72	2.1	3.7	2780	C312_ 3.7 S3 M3LB4	116	C312_ 3.7 P100 BN100LB4	117
380	72	1.3	3.7	1740	C212_ 3.7 S3 M3LB4	113	C212_ 3.7 P100 BN100LB4	114
399	68	2.3	7.2	2810	C312_ 7.2 S3 M3LA2	116	C312_ 7.2 P100 BN100L2	117
404	67	1.6	7.1	1800	C212_ 7.1 S3 M3LA2	113	C212_ 7.1 P100 BN100L2	114
404	67	3.0	3.5	3130	C352_ 3.5 S3 M3LB4	109	C352_ 3.5 P100 BN100LB4	120
443	61	2.5	6.5	2730	C312_ 6.5 S3 M3LA2	116	C312_ 6.5 P100 BN100L2	117
448	61	1.6	6.4	1760	C212_ 6.4 S3 M3LA2	113	C212_ 6.4 P100 BN100L2	114
457	60	2.5	6.3	2650	C312_ 6.3 S3 M3LA2	116	C312_ 6.3 P100 BN100L2	117
470	58	1.5	6.1	1690	C212_ 6.1 S3 M3LA2	113	C212_ 6.1 P100 BN100L2	114
490	56	2.3	2.9	2610	C312_ 2.9 S3 M3LB4	116	C312_ 2.9 P100 BN100LB4	117
518	53	1.5	2.7	1660	C212_ 2.7 S3 M3LB4	113	C212_ 2.7 P100 BN100LB4	114
578	47	2.9	5.0	2500	C312_ 5.0 S3 M3LA2	116	C312_ 5.0 P100 BN100L2	117
600	45	1.8	4.8	1620	C212_ 4.8 S3 M3LA2	113	C212_ 4.8 P100 BN100L2	114
766	36	3.4	3.7	2320	C312_ 3.7 S3 M3LA2	116	C312_ 3.7 P100 BN100L2	117
771	35	2.0	3.7	1540	C212_ 3.7 S3 M3LA2	113	C212_ 3.7 P100 BN100L2	114
783	35	1.0	3.7	560	C112_ 3.7 S3 M3LA2	110	C112_ 3.7 P100 BN100L2	111
1033	26	1.1	2.8	750	C112_ 2.8 S3 M3LA2	110	C112_ 2.8 P100 BN100L2	111
1051	26	2.5	2.7	1430	C212_ 2.7 S3 M3LA2	113	C212_ 2.7 P100 BN100L2	114

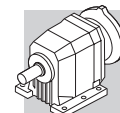
4 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC	
2.8	12569	1.0	502.6	85000	C1004_502.6 S3 M3LC4	140	C1004_502.6 P112 BN112M4	141
3.4	10249	1.2	409.8	85000	C1004_409.8 S3 M3LC4	140	C1004_409.8 P112 BN112M4	141
4.3	8093	1.5	323.6	85000	C1004_323.6 S3 M3LC4	140	C1004_323.6 P112 BN112M4	141
4.7	7325	1.0	292.9	60000	C904_ 292.9 S3 M3LC4	137	C904_ 292.9 P112 BN112M4	138
5.2	6715	1.1	268.5	60000	C904_ 268.5 S3 M3LC4	137	C904_ 268.5 P112 BN112M4	138
5.7	6107	2.0	244.2	85000	C1004_244.2 S3 M3LC4	140	C1004_244.2 P112 BN112M4	141
6.0	5795	1.2	231.7	60000	C904_ 231.7 S3 M3LC4	137	C904_ 231.7 P112 BN112M4	138
7.5	4637	2.6	185.4	85000	C1004_185.4 S3 M3LC4	140	C1004_185.4 P112 BN112M4	141
8.1	4399	1.6	172.1	60000	C903_ 172.1 S3 M3LC4	137	C903_ 172.1 P112 BN112M4	138
8.2	4319	0.9	169.0	35000	C803_ 169.0 S3 M3LC4	134	C803_ 169.0 P112 BN112M4	135
10.2	3493	1.1	136.7	35000	C803_ 136.7 S3 M3LC4	134	C803_ 136.7 P112 BN112M4	135
10.4	3428	2.1	134.1	60000	C903_ 134.1 S3 M3LC4	137	C903_ 134.1 P112 BN112M4	138
11.9	2983	2.4	116.7	60000	C903_ 116.7 S3 M3LC4	137	C903_ 116.7 P112 BN112M4	138
12.7	2799	1.4	109.5	35000	C803_ 109.5 S3 M3LC4	134	C803_ 109.5 P112 BN112M4	135
14.3	2489	1.6	97.4	35000	C803_ 97.4 S3 M3LC4	134	C803_ 97.4 P112 BN112M4	135
14.4	2460	2.9	96.2	60000	C903_ 96.2 S3 M3LC4	137	C903_ 96.2 P112 BN112M4	138



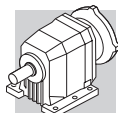
4 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
15.6	2282	1.8	89.3	35000	C803_ 89.3 S3 M3LC4	134	C803_ 89.3 P112 BN112M4	135
15.8	2254	1.0	88.2	25000	C703_ 88.2 S3 M3LC4	131	C703_ 88.2 P112 BN112M4	132
17.1	2081	1.1	81.4	25000	C703_ 81.4 S3 M3LC4	131	C703_ 81.4 P112 BN112M4	132
19.5	1823	1.3	71.3	25000	C703_ 71.3 S3 M3LC4	131	C703_ 71.3 P112 BN112M4	132
19.7	1802	2.2	70.5	35000	C803_ 70.5 S3 M3LC4	134	C803_ 70.5 P112 BN112M4	135
20.5	1730	0.9	67.7	16000	C613_ 67.7 S3 M3LC4	128	C613_ 67.7 P112 BN112M4	129
23.7	1498	1.1	58.6	16000	C613_ 58.6 S3 M3LC4	128	C613_ 58.6 P112 BN112M4	129
24.3	1464	2.7	57.3	35000	C803_ 57.3 S3 M3LC4	134	C803_ 57.3 P112 BN112M4	135
24.6	1444	1.6	56.5	25000	C703_ 56.5 S3 M3LC4	131	C703_ 56.5 P112 BN112M4	132
26.0	1366	1.2	53.5	16000	C613_ 53.5 S3 M3LC4	128	C613_ 53.5 P112 BN112M4	129
26.6	1333	1.7	52.2	25000	C703_ 52.2 S3 M3LC4	131	C703_ 52.2 P112 BN112M4	132
29.2	1217	1.3	47.6	16000	C613_ 47.6 S3 M3LC4	128	C613_ 47.6 P112 BN112M4	129
29.3	1213	3.1	47.4	35000	C803_ 47.4 S3 M3LC4	134	C803_ 47.4 P112 BN112M4	135
31	1142	2.0	44.7	25000	C703_ 44.7 S3 M3LC4	131	C703_ 44.7 P112 BN112M4	132
32	1112	3.4	43.5	35000	C803_ 43.5 S3 M3LC4	134	C803_ 43.5 P112 BN112M4	135
32	1110	1.4	43.4	16000	C613_ 43.4 S3 M3LC4	128	C613_ 43.4 P112 BN112M4	129
34	1055	2.2	41.3	25000	C703_ 41.3 S3 M3LC4	131	C703_ 41.3 P112 BN112M4	132
34	1035	1.0	40.5	10000	C513_ 40.5 S3 M3LC4	125	C513_ 40.5 P112 BN112M4	126
37	992	1.4	38.0	16000	C612_ 38.0 S3 M3LC4	128	C612_ 38.0 P112 BN112M4	129
38	945	1.1	37.0	10000	C513_ 37.0 S3 M3LC4	125	C513_ 37.0 P112 BN112M4	126
40	907	2.3	34.7	23400	C702_ 34.7 S3 M3LC4	131	C702_ 34.7 P112 BN112M4	132
41	893	1.4	34.2	15700	C612_ 34.2 S3 M3LC4	128	C612_ 34.2 P112 BN112M4	129
42	862	0.9	33.0	10000	C512_ 33.0 S3 M3LC4	125	C512_ 33.0 P112 BN112M4	126
46	795	1.7	30.4	15300	C612_ 30.4 S3 M3LC4	128	C612_ 30.4 P112 BN112M4	129
47	777	1.0	29.8	10000	C512_ 29.8 S3 M3LC4	125	C512_ 29.8 P112 BN112M4	126
50	724	2.9	27.7	22300	C702_ 27.7 S3 M3LC4	131	C702_ 27.7 P112 BN112M4	132
51	716	1.9	27.4	14900	C612_ 27.4 S3 M3LC4	128	C612_ 27.4 P112 BN112M4	129
54	676	1.2	25.9	10000	C512_ 25.9 S3 M3LC4	125	C512_ 25.9 P112 BN112M4	126
56	648	2.1	24.8	14600	C612_ 24.8 S3 M3LC4	128	C612_ 24.8 P112 BN112M4	129
60	610	1.3	23.4	10000	C512_ 23.4 S3 M3LC4	125	C512_ 23.4 P112 BN112M4	126
62	584	2.3	22.4	14200	C612_ 22.4 S3 M3LC4	128	C612_ 22.4 P112 BN112M4	129
66	547	1.5	21.0	9920	C512_ 21.0 S3 M3LC4	125	C512_ 21.0 P112 BN112M4	126
70	516	0.9	19.8	4760	C412_ 19.8 S3 M3LC4	122	C412_ 19.8 P112 BN112M4	123
71	512	2.6	19.6	13800	C612_ 19.6 S3 M3LC4	128	C612_ 19.6 P112 BN112M4	129
74	493	1.6	18.9	9730	C512_ 18.9 S3 M3LC4	125	C512_ 18.9 P112 BN112M4	126
78	465	1.0	17.8	4720	C412_ 17.8 S3 M3LC4	122	C412_ 17.8 P112 BN112M4	123
79	461	2.9	17.7	13400	C612_ 17.7 S3 M3LC4	128	C612_ 17.7 P112 BN112M4	129
84	433	1.8	16.6	9440	C512_ 16.6 S3 M3LC4	125	C512_ 16.6 P112 BN112M4	126
87	416	3.2	15.9	13100	C612_ 15.9 S3 M3LC4	128	C612_ 15.9 P112 BN112M4	129
88	413	1.1	15.8	4740	C412_ 15.8 S3 M3LC4	122	C412_ 15.8 P112 BN112M4	123
93	391	2.0	15.0	9230	C512_ 15.0 S3 M3LC4	125	C512_ 15.0 P112 BN112M4	126
94	385	1.0	14.8	3880	C352_ 14.8 S3 M3LC4	109	C352_ 14.8 P112 BN112M4	120
98	372	1.2	14.2	4690	C412_ 14.2 S3 M3LC4	122	C412_ 14.2 P112 BN112M4	123
105	346	1.1	13.3	3840	C352_ 13.3 S3 M3LC4	109	C352_ 13.3 P112 BN112M4	120
106	343	2.2	13.1	8930	C512_ 13.1 S3 M3LC4	125	C512_ 13.1 P112 BN112M4	126
112	324	1.3	12.4	4660	C412_ 12.4 S3 M3LC4	122	C412_ 12.4 P112 BN112M4	123
117	309	2.5	11.8	8720	C512_ 11.8 S3 M3LC4	125	C512_ 11.8 P112 BN112M4	126
119	305	1.2	11.7	3840	C352_ 11.7 S3 M3LC4	109	C352_ 11.7 P112 BN112M4	120
125	291	1.4	11.2	4580	C412_ 11.2 S3 M3LC4	122	C412_ 11.2 P112 BN112M4	123
132	274	1.4	10.5	3780	C352_ 10.5 S3 M3LC4	109	C352_ 10.5 P112 BN112M4	120
143	255	2.7	9.8	8290	C512_ 9.8 S3 M3LC4	125	C512_ 9.8 P112 BN112M4	126



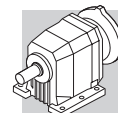
4 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
145	251	1.6	9.6	4510	C412_ 9.6 S3 M3LC4	122	C412_ 9.6 P112 BN112M4	123
150	243	0.9	9.3	3150	C312_ 9.3 S3 M3LC4	116	C312_ 9.3 P112 BN112M4	117
158	230	1.7	8.8	3720	C352_ 8.8 S3 M3LC4	109	C352_ 8.8 P112 BN112M4	120
158	229	3.0	8.8	8070	C512_ 8.8 S3 M3LC4	125	C512_ 8.8 P112 BN112M4	126
161	226	1.7	8.6	4420	C412_ 8.6 S3 M3LC4	122	C412_ 8.6 P112 BN112M4	123
166	219	1.0	8.4	3110	C312_ 8.4 S3 M3LC4	116	C312_ 8.4 P112 BN112M4	117
176	207	1.8	7.9	3650	C352_ 7.9 S3 M3LC4	109	C352_ 7.9 P112 BN112M4	120
179	202	3.2	7.8	7800	C512_ 7.8 S3 M3LC4	125	C512_ 7.8 P112 BN112M4	126
184	197	1.1	15.6	3090	C312_ 15.6 S3 M3LB2	116	C312_ 15.6 P112 BN112M2	117
194	187	1.1	7.2	3070	C312_ 7.2 S3 M3LC4	116	C312_ 7.2 P112 BN112M4	117
197	184	1.9	7.1	4280	C412_ 7.1 S3 M3LC4	122	C412_ 7.1 P112 BN112M4	123
199	182	3.5	7.0	7580	C512_ 7.0 S3 M3LC4	125	C512_ 7.0 P112 BN112M4	126
204	177	1.2	14.0	3030	C312_ 14.0 S3 M3LB2	116	C312_ 14.0 P112 BN112M2	117
205	177	2.0	6.8	3580	C352_ 6.8 S3 M3LC4	109	C352_ 6.8 P112 BN112M4	120
215	168	1.2	6.5	3010	C312_ 6.5 S3 M3LC4	116	C312_ 6.5 P112 BN112M4	117
218	166	2.1	6.4	4180	C412_ 6.4 S3 M3LC4	122	C412_ 6.4 P112 BN112M4	123
222	164	0.9	6.3	2840	C312_ 6.3 S3 M3LC4	116	C312_ 6.3 P112 BN112M4	117
228	159	2.2	6.1	3500	C352_ 6.1 S3 M3LC4	109	C352_ 6.1 P112 BN112M4	120
233	156	1.3	12.3	2990	C312_ 12.3 S3 M3LB2	116	C312_ 12.3 P112 BN112M2	117
234	155	1.7	6.0	3840	C412_ 6.0 S3 M3LC4	122	C412_ 6.0 P112 BN112M4	123
238	153	1.3	5.8	3310	C352_ 5.8 S3 M3LC4	109	C352_ 5.8 P112 BN112M4	120
247	147	3.0	5.6	7020	C512_ 5.6 S3 M3LC4	125	C512_ 5.6 P112 BN112M4	126
259	140	1.4	11.1	2930	C312_ 11.1 S3 M3LB2	116	C312_ 11.1 P112 BN112M2	117
281	129	1.2	5.0	2760	C312_ 5.0 S3 M3LC4	116	C312_ 5.0 P112 BN112M4	117
298	122	0.9	9.6	1680	C212_ 9.6 S3 M3LB2	113	C212_ 9.6 P112 BN112M2	114
301	121	1.7	4.6	3180	C352_ 4.6 S3 M3LC4	109	C352_ 4.6 P112 BN112M4	120
309	118	1.5	9.3	2840	C312_ 9.3 S3 M3LB2	116	C312_ 9.3 P112 BN112M2	117
330	110	1.0	8.7	1660	C212_ 8.7 S3 M3LB2	113	C212_ 8.7 P112 BN112M2	114
343	106	1.6	8.4	2780	C312_ 8.4 S3 M3LB2	116	C312_ 8.4 P112 BN112M2	117
372	98	1.5	3.7	2640	C312_ 3.7 S3 M3LC4	116	C312_ 3.7 P112 BN112M4	117
375	97	0.9	3.7	1560	C212_ 3.7 S3 M3LC4	113	C212_ 3.7 P112 BN112M4	114
399	91	2.2	3.5	3010	C352_ 3.5 S3 M3LC4	109	C352_ 3.5 P112 BN112M4	120
401	91	1.8	7.2	2690	C312_ 7.2 S3 M3LB2	116	C312_ 7.2 P112 BN112M2	117
405	90	1.2	7.1	1650	C212_ 7.1 S3 M3LB2	113	C212_ 7.1 P112 BN112M2	114
445	82	1.9	6.5	2620	C312_ 6.5 S3 M3LB2	116	C312_ 6.5 P112 BN112M2	117
450	81	1.2	6.4	1620	C212_ 6.4 S3 M3LB2	113	C212_ 6.4 P112 BN112M2	114
458	79	1.9	6.3	2530	C312_ 6.3 S3 M3LB2	116	C312_ 6.3 P112 BN112M2	117
471	77	1.1	6.1	1540	C212_ 6.1 S3 M3LB2	113	C212_ 6.1 P112 BN112M2	114
483	75	1.7	2.9	2500	C312_ 2.9 S3 M3LC4	116	C312_ 2.9 P112 BN112M4	117
511	71	1.1	2.7	1530	C212_ 2.7 S3 M3LC4	113	C212_ 2.7 P112 BN112M4	114
517	70	2.9	2.7	2840	C352_ 2.7 S3 M3LC4	109	C352_ 2.7 P112 BN112M4	120
580	63	2.2	5.0	2410	C312_ 5.0 S3 M3LB2	116	C312_ 5.0 P112 BN112M2	117
602	60	1.3	4.8	1500	C212_ 4.8 S3 M3LB2	113	C212_ 4.8 P112 BN112M2	114
621	58	3.4	4.6	2720	C352_ 4.6 S3 M3LB2	109	C352_ 4.6 P112 BN112M2	120
768	47	2.5	3.7	2250	C312_ 3.7 S3 M3LB2	116	C312_ 3.7 P112 BN112M2	119
774	47	1.5	3.7	1450	C212_ 3.7 S3 M3LB2	113	C212_ 3.7 P112 BN112M2	114
997	36	2.9	2.9	2100	C312_ 2.9 S3 M3LB2	116	C312_ 2.9 P112 BN112M2	117
1054	34	1.9	2.7	1370	C212_ 2.7 S3 M3LB2	113	C212_ 2.7 P112 BN112M2	114



5.5 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
3.8	12630	1.0	380.5	85000	C1004_380.5 S4 M4SA4	140	C1004_380.5 P132 BN132S4	141
4.4	10741	1.1	323.6	85000	C1004_323.6 S4 M4SA4	140	C1004_323.6 P132 BN132S4	141
4.8	9974	1.2	300.5	85000	C1004_300.5 S4 M4SA4	140	C1004_300.5 P132 BN132S4	141
5.5	8730	1.4	263.0	85000	C1004_263.0 S4 M4SA4	140	C1004_263.0 P132 BN132S4	141
5.9	8106	1.5	244.2	85000	C1004_244.2 S4 M4SA4	140	C1004_244.2 P132 BN132S4	141
6.2	7691	0.9	231.7	60000	C904_231.7 S4 M4SA4	137	C904_231.7 P132 BN132S4	138
6.8	7050	1.0	212.4	60000	C904_212.4 S4 M4SA4	137	C904_212.4 P132 BN132S4	138
7.2	6625	1.8	199.6	85000	C1004_199.6 S4 M4SA4	140	C1004_199.6 P132 BN132S4	141
8.4	5838	1.2	172.1	60000	C903_172.1 S4 M4SA4	137	C903_172.1 P132 BN132S4	138
9.6	5103	2.4	150.4	85000	C1003_150.4 S4 M4SA4	140	C1003_150.4 P132 BN132S4	141
9.8	4964	1.5	146.3	60000	C903_146.3 S4 M4SA4	137	C903_146.3 P132 BN132S4	138
12.1	4052	1.0	119.5	35000	C803_119.5 S4 M4SA4	134	C803_119.5 P132 BN132S4	135
12.3	3960	1.8	116.7	60000	C903_116.7 S4 M4SA4	137	C903_116.7 P132 BN132S4	138
14.8	3304	1.2	97.4	35000	C803_97.4 S4 M4SA4	134	C803_97.4 P132 BN132S4	135
15.0	3265	2.2	96.2	60000	C903_96.2 S4 M4SA4	137	C903_96.2 P132 BN132S4	138
17.7	2755	2.6	81.2	59100	C903_81.2 S4 M4SA4	137	C903_81.2 P132 BN132S4	138
18.7	2609	1.5	76.9	35000	C803_76.9 S4 M4SA4	134	C803_76.9 P132 BN132S4	135
20.2	2420	1.0	71.3	25000	C703_71.3 S4 M4SA4	131	C703_71.3 P132 BN132S4	132
20.4	2392	1.7	70.5	35000	C803_70.5 S4 M4SA4	134	C803_70.5 P132 BN132S4	135
21.9	2234	1.0	65.9	25000	C703_65.9 S4 M4SA4	131	C703_65.9 P132 BN132S4	132
25.1	1944	2.1	57.3	35000	C803_57.3 S4 M4SA4	134	C803_57.3 P132 BN132S4	135
25.5	1917	1.2	56.5	25000	C703_56.5 S4 M4SA4	131	C703_56.5 P132 BN132S4	132
27.6	1770	1.3	52.2	24700	C703_52.2 S4 M4SA4	131	C703_52.2 P132 BN132S4	132
30	1616	1.0	47.6	15300	C613_47.6 S4 M4SA4	128	C613_47.6 P132 BN132S4	129
30	1609	2.4	47.4	35000	C803_47.4 S4 M4SA4	134	C803_47.4 P132 BN132S4	135
32	1516	1.5	44.7	24100	C703_44.7 S4 M4SA4	131	C703_44.7 P132 BN132S4	132
33	1475	2.6	43.5	35000	C803_43.5 S4 M4SA4	134	C803_43.5 P132 BN132S4	135
33	1474	1.1	43.4	15000	C613_43.4 S4 M4SA4	128	C613_43.4 P132 BN132S4	129
35	1400	1.6	41.3	23800	C703_41.3 S4 M4SA4	131	C703_41.3 P132 BN132S4	132
37	1355	2.4	39.1	35000	C802_39.1 S4 M4SA4	134	C802_39.1 P132 BN132S4	135
38	1317	1.0	38.0	14800	C612_38.0 S4 M4SA4	128	C612_38.0 P132 BN132S4	129
41	1204	1.7	34.7	22100	C702_34.7 S4 M4SA4	131	C702_34.7 P132 BN132S4	132
42	1186	1.0	34.2	14500	C612_34.2 S4 M4SA4	128	C612_34.2 P132 BN132S4	129
46	1086	3.4	31.3	33400	C802_31.3 S4 M4SA4	134	C802_31.3 P132 BN132S4	135
47	1055	1.3	30.4	14300	C612_30.4 S4 M4SA4	128	C612_30.4 P132 BN132S4	129
48	1020	1.0	30.1	9610	C513_30.1 S4 M4SA4	125	C513_30.1 P132 BN132S4	126
52	961	2.2	27.7	21200	C702_27.7 S4 M4SA4	131	C702_27.7 P132 BN132S4	132
52	931	1.0	27.4	9490	C513_27.4 S4 M4SA4	125	C513_27.4 P132 BN132S4	126
53	950	1.4	27.4	13900	C612_27.4 S4 M4SA4	128	C612_27.4 P132 BN132S4	129
58	860	1.6	24.8	13700	C612_24.8 S4 M4SA4	128	C612_24.8 P132 BN132S4	129
62	809	1.0	23.4	9310	C512_23.4 S4 M4SA4	125	C512_23.4 P132 BN132S4	126
63	792	2.7	22.9	20400	C702_22.9 S4 M4SA4	131	C702_22.9 P132 BN132S4	132
64	775	1.7	22.4	13400	C612_22.4 S4 M4SA4	128	C612_22.4 P132 BN132S4	129
69	726	1.1	21.0	9150	C512_21.0 S4 M4SA4	125	C512_21.0 P132 BN132S4	126
73	679	2.0	19.6	13100	C612_19.6 S4 M4SA4	128	C612_19.6 P132 BN132S4	129
75	668	3.1	19.3	19700	C702_19.3 S4 M4SA4	131	C702_19.3 P132 BN132S4	132
76	655	1.2	18.9	9030	C512_18.9 S4 M4SA4	125	C512_18.9 P132 BN132S4	126
82	612	2.2	17.7	12700	C612_17.7 S4 M4SA4	128	C612_17.7 P132 BN132S4	129
87	575	1.4	16.6	8810	C512_16.6 S4 M4SA4	125	C512_16.6 P132 BN132S4	126
90	552	2.4	15.9	12500	C612_15.9 S4 M4SA4	128	C612_15.9 P132 BN132S4	129
96	519	1.5	15.0	8660	C512_15.0 S4 M4SA4	125	C512_15.0 P132 BN132S4	126

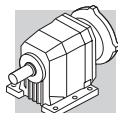


5.5 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
100	497	2.7	14.3	12100	C612_ 14.3 S4 M4SA4	128	C612_ 14.3 P132 BN132S4	129
101	494	0.9	14.2	4000	C412_ 14.2 S4 M4SA4	122	C412_ 14.2 P132 BN132S4	123
110	455	1.6	13.1	8420	C512_ 13.1 S4 M4SA4	125	C512_ 13.1 P132 BN132S4	126
116	429	1.0	12.4	4060	C412_ 12.4 S4 M4SA4	122	C412_ 12.4 P132 BN132S4	123
119	419	3.2	12.1	11600	C612_ 12.1 S4 M4SA4	128	C612_ 12.1 P132 BN132S4	129
122	410	1.9	11.8	8250	C512_ 11.8 S4 M4SA4	125	C512_ 11.8 P132 BN132S4	126
129	387	1.1	11.2	4030	C412_ 11.2 S4 M4SA4	122	C412_ 11.2 P132 BN132S4	123
148	338	2.0	9.8	7890	C512_ 9.8 S4 M4SA4	125	C512_ 9.8 P132 BN132S4	126
150	333	1.2	9.6	4030	C412_ 9.6 S4 M4SA4	122	C412_ 9.6 P132 BN132S4	123
164	305	2.2	8.8	7700	C512_ 8.8 S4 M4SA4	125	C512_ 8.8 P132 BN132S4	126
167	299	1.3	8.6	3980	C412_ 8.6 S4 M4SA4	122	C412_ 8.6 P132 BN132S4	123
186	269	2.4	7.8	7460	C512_ 7.8 S4 M4SA4	125	C512_ 7.8 P132 BN132S4	126
204	245	1.4	7.1	3920	C412_ 7.1 S4 M4SA4	122	C412_ 7.1 P132 BN132S4	123
206	242	2.6	7.0	7280	C512_ 7.0 S4 M4SA4	125	C512_ 7.0 P132 BN132S4	126
226	221	1.6	6.4	3840	C412_ 6.4 S4 M4SA4	122	C412_ 6.4 P132 BN132S4	123
240	208	3.2	6.0	9480	C612_ 6.0 S4 M4SA4	128	C612_ 6.0 P132 BN132S4	129
242	206	1.3	6.0	3430	C412_ 6.0 S4 M4SA4	122	C412_ 6.0 P132 BN132S4	123
256	195	2.2	5.6	6720	C512_ 5.6 S4 M4SA4	125	C512_ 5.6 P132 BN132S4	126
259	193	1.7	11.2	3770	C412_ 11.2 S4 M4SA2	122	C412_ 11.2 P132 BN132SA2	123
262	191	1.3	3.6	3410	C412_ 3.6 S4 M4LB6	122	C412_ 3.6 P132 BN132MB6	123
286	175	2.4	3.3	6530	C512_ 3.3 S4 M4LB6	125	C512_ 3.3 P132 BN132MB6	126
301	166	1.9	9.6	3680	C412_ 9.6 S4 M4SA2	122	C412_ 9.6 P132 BN132SA2	123
309	162	1.6	4.7	3360	C412_ 4.7 S4 M4SA4	122	C412_ 4.7 P132 BN132S4	123
323	154	2.8	4.5	6330	C512_ 4.5 S4 M4SA4	125	C512_ 4.5 P132 BN132S4	126
334	149	2.0	8.6	3600	C412_ 8.6 S4 M4SA2	122	C412_ 8.6 P132 BN132SA2	123
355	140	1.7	2.7	3300	C412_ 2.7 S4 M4LB6	122	C412_ 2.7 P132 BN132MB6	123
359	139	2.9	2.6	6150	C512_ 2.6 S4 M4LB6	125	C512_ 2.6 P132 BN132MB6	126
399	125	2.0	3.6	3240	C412_ 3.6 S4 M4SA4	122	C412_ 3.6 P132 BN132S4	123
409	122	2.3	7.1	3460	C412_ 7.1 S4 M4SA2	122	C412_ 7.1 P132 BN132SA2	123
454	110	2.5	6.4	3370	C412_ 6.4 S4 M4SA2	122	C412_ 6.4 P132 BN132SA2	123
485	103	2.5	6.0	3140	C412_ 6.0 S4 M4SA2	122	C412_ 6.0 P132 BN132SA2	123
542	92	2.7	2.7	3070	C412_ 2.7 S4 M4SA4	122	C412_ 2.7 P132 BN132S4	123
620	81	3.2	4.7	2990	C412_ 4.7 S4 M4SA2	122	C412_ 4.7 P132 BN132SA2	123

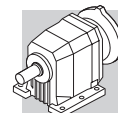
7.5 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
5.5	11904	1.0	263.0	85000	C1004_263.0 S4 M4LA4	140	C1004_263.0 P132 BN132MA4	141
7.2	9034	1.3	199.6	85000	C1004_199.6 S4 M4LA4	140	C1004_199.6 P132 BN132MA4	141
8.4	7961	0.9	172.1	60000	C903_ 172.1 S4 M4LA4	137	C903_ 172.1 P132 BN132MA4	138
9.6	6958	1.7	150.4	85000	C1003_150.4 S4 M4LA4	140	C1003_150.4 P132 BN132MA4	141
9.8	6769	1.1	146.3	59600	C903_ 146.3 S4 M4LA4	137	C903_ 146.3 P132 BN132MA4	138
12.3	5400	1.3	116.7	58600	C903_ 116.7 S4 M4LA4	137	C903_ 116.7 P132 BN132MA4	138
12.9	5176	2.3	111.9	85000	C1003_111.9 S4 M4LA4	140	C1003_111.9 P132 BN132MA4	141
16.1	4129	1.0	89.3	35000	C803_ 89.3 S4 M4LA4	134	C803_ 89.3 P132 BN132MA4	135
16.3	4081	1.7	88.2	56600	C903_ 88.2 S4 M4LA4	137	C903_ 88.2 P132 BN132MA4	138
16.8	3958	3.0	85.6	85000	C1003_85.6 S4 M4LA4	140	C1003_85.6 P132 BN132MA4	141
19.3	3444	2.1	74.4	55200	C903_ 74.4 S4 M4LA4	137	C903_ 74.4 P132 BN132MA4	138



7.5 kW

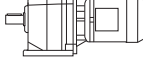
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
20.4	3261	1.2	70.5	35000	C803_ 70.5 S4 M4LA4	134	C803_ 70.5 P132 BN132MA4	135
23.0	2891	1.4	62.5	35000	C803_ 62.5 S4 M4LA4	134	C803_ 62.5 P132 BN132MA4	135
24.3	2738	2.6	59.2	53000	C903_ 59.2 S4 M4LA4	137	C903_ 59.2 P132 BN132MA4	138
27.6	2413	1.0	52.2	22900	C703_ 52.2 S4 M4LA4	131	C703_ 52.2 P132 BN132MA4	132
30	2195	1.7	47.4	35000	C803_ 47.4 S4 M4LA4	134	C803_ 47.4 P132 BN132MA4	135
32	2068	1.1	44.7	22500	C703_ 44.7 S4 M4LA4	131	C703_ 44.7 P132 BN132MA4	132
35	1909	1.2	41.3	22300	C703_ 41.3 S4 M4LA4	131	C703_ 41.3 P132 BN132MA4	132
37	1848	1.7	39.1	33600	C802_ 39.1 S4 M4LA4	134	C802_ 39.1 P132 BN132MA4	135
40	1672	0.9	36.1	13300	C613_ 36.1 S4 M4LA4	128	C613_ 36.1 P132 BN132MA4	129
41	1642	1.3	34.7	20500	C702_ 34.7 S4 M4LA4	131	C702_ 34.7 P132 BN132MA4	132
44	1525	1.0	33.0	13100	C613_ 33.0 S4 M4LA4	128	C613_ 33.0 P132 BN132MA4	129
46	1481	2.5	31.3	32200	C802_ 31.3 S4 M4LA4	134	C802_ 31.3 P132 BN132MA4	135
47	1439	0.9	30.4	13000	C612_ 30.4 S4 M4LA4	128	C612_ 30.4 P132 BN132MA4	129
49	1358	1.1	29.4	13100	C613_ 29.4 S4 M4LA4	128	C613_ 29.4 P132 BN132MA4	129
52	1310	1.6	27.7	20000	C702_ 27.7 S4 M4LA4	131	C702_ 27.7 P132 BN132MA4	132
53	1296	1.0	27.4	12800	C612_ 27.4 S4 M4LA4	128	C612_ 27.4 P132 BN132MA4	129
55	1226	3.0	25.9	31000	C802_ 25.9 S4 M4LA4	134	C802_ 25.9 P132 BN132MA4	135
58	1173	1.2	24.8	12700	C612_ 24.8 S4 M4LA4	128	C612_ 24.8 P132 BN132MA4	129
60	1132	3.1	24.0	30500	C802_ 24.0 S4 M4LA4	134	C802_ 24.0 P132 BN132MA4	135
63	1080	1.9	22.9	19400	C702_ 22.9 S4 M4LA4	131	C702_ 22.9 P132 BN132MA4	132
64	1056	1.3	22.4	12500	C612_ 22.4 S4 M4LA4	128	C612_ 22.4 P132 BN132MA4	129
65	1051	3.5	22.2	30000	C802_ 22.2 S4 M4LA4	134	C802_ 22.2 P132 BN132MA4	135
73	926	1.5	19.6	12300	C612_ 19.6 S4 M4LA4	128	C612_ 19.6 P132 BN132MA4	129
75	911	2.3	19.3	18900	C702_ 19.3 S4 M4LA4	131	C702_ 19.3 P132 BN132MA4	132
82	834	1.6	17.7	12000	C612_ 17.7 S4 M4LA4	128	C612_ 17.7 P132 BN132MA4	129
86	789	2.6	16.7	18200	C702_ 16.7 S4 M4LA4	131	C702_ 16.7 P132 BN132MA4	132
87	784	1.0	16.6	8070	C512_ 16.6 S4 M4LA4	125	C512_ 16.6 P132 BN132MA4	126
90	753	1.8	15.9	11800	C612_ 15.9 S4 M4LA4	128	C612_ 15.9 P132 BN132MA4	129
96	707	1.1	15.0	8000	C512_ 15.0 S4 M4LA4	125	C512_ 15.0 P132 BN132MA4	126
100	678	2.0	14.3	11500	C612_ 14.3 S4 M4LA4	128	C612_ 14.3 P132 BN132MA4	129
110	620	1.2	13.1	7840	C512_ 13.1 S4 M4LA4	125	C512_ 13.1 P132 BN132MA4	126
111	616	3.4	13.0	17500	C702_ 13.0 S4 M4LA4	131	C702_ 13.0 P132 BN132MA4	132
119	571	2.4	12.1	11100	C612_ 12.1 S4 M4LA4	128	C612_ 12.1 P132 BN132MA4	129
122	559	1.4	11.8	7730	C512_ 11.8 S4 M4LA4	125	C512_ 11.8 P132 BN132MA4	126
132	515	2.6	10.9	10900	C612_ 10.9 S4 M4LA4	128	C612_ 10.9 P132 BN132MA4	129
147	464	2.9	9.8	10600	C612_ 9.8 S4 M4LA4	128	C612_ 9.8 P132 BN132MA4	129
148	461	1.5	9.8	7450	C512_ 9.8 S4 M4LA4	125	C512_ 9.8 P132 BN132MA4	126
163	418	3.2	8.8	10300	C612_ 8.8 S4 M4LA4	128	C612_ 8.8 P132 BN132MA4	129
164	415	1.6	8.8	7320	C512_ 8.8 S4 M4LA4	125	C512_ 8.8 P132 BN132MA4	126
167	408	0.9	8.6	3430	C412_ 8.6 S4 M4LA4	122	C412_ 8.6 P132 BN132MA4	123
186	366	1.7	7.8	7120	C512_ 7.8 S4 M4LA4	125	C512_ 7.8 P132 BN132MA4	126
204	334	1.1	7.1	3470	C412_ 7.1 S4 M4LA4	122	C412_ 7.1 P132 BN132MA4	123
206	330	1.9	7.0	6970	C512_ 7.0 S4 M4LA4	125	C512_ 7.0 P132 BN132MA4	126
226	301	1.1	6.4	3440	C412_ 6.4 S4 M4LA4	122	C412_ 6.4 P132 BN132MA4	123
240	284	2.3	6.0	9180	C612_ 6.0 S4 M4LA4	128	C612_ 6.0 P132 BN132MA4	129
242	281	0.9	6.0	2920	C412_ 6.0 S4 M4LA4	122	C412_ 6.0 P132 BN132MA4	123
256	266	1.6	5.6	6410	C512_ 5.6 S4 M4LA4	125	C512_ 5.6 P132 BN132MA4	126
309	220	1.2	4.7	2960	C412_ 4.7 S4 M4LA4	122	C412_ 4.7 P132 BN132MA4	123
316	215	3.1	4.6	8550	C612_ 4.6 S4 M4LA4	128	C612_ 4.6 P132 BN132MA4	129
323	210	2.1	4.5	6090	C512_ 4.5 S4 M4LA4	125	C512_ 4.5 P132 BN132MA4	126
339	201	3.3	2.8	8390	C612_ 2.8 S5 M5SA6	128	C612_ 2.8 P160 BN160M6	129

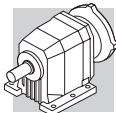


7.5 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
363	187	2.1	2.6	5920	C512_ 2.6 S5 M5SA6	125	C512_ 2.6 P160 BN160M6	126
399	171	1.5	3.6	2930	C412_ 3.6 S4 M4LA4	122	C412_ 3.6 P132 BN132MA4	123
410	166	1.7	7.1	3240	C412_ 7.1 S4 M4SB2	122	C412_ 7.1 P132 BN132SB2	123
435	156	2.7	3.3	5660	C512_ 3.3 S4 M4LA4	125	C512_ 3.3 P132 BN132MA4	126
456	149	1.8	6.4	3170	C412_ 6.4 S4 M4SB2	122	C412_ 6.4 P132 BN132SB2	123
487	140	1.9	6.0	2880	C412_ 6.0 S4 M4SB2	122	C412_ 6.0 P132 BN132SB2	123
515	132	3.1	5.6	5420	C512_ 5.6 S4 M4SB2	125	C512_ 5.6 P132 BN132SB2	126
542	126	1.9	2.7	2840	C412_ 2.7 S4 M4LA4	122	C412_ 2.7 P132 BN132MA4	123
548	124	3.2	2.6	5330	C512_ 2.6 S4 M4LA4	125	C512_ 2.6 P132 BN132MA4	126
622	109	2.4	4.7	2790	C412_ 4.7 S4 M4SB2	122	C412_ 4.7 P132 BN132SB2	123
803	85	3.0	3.6	2670	C412_ 3.6 S4 M4SB2	122	C412_ 3.6 P132 BN132SB2	123

9.2 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
7.2	11082	1.1	199.6	85000	C1004_ 199.6 S4 M4LB4	140	C1004_ 199.6 P132 BN132MB4	141
7.8	10294	1.2	185.4	85000	C1004_ 185.4 S4 M4LB4	140	C1004_ 185.4 P132 BN132MB4	141
9.6	8536	1.4	150.4	85000	C1003_ 150.4 S4 M4LB4	140	C1003_ 150.4 P132 BN132MB4	141
10.7	7611	0.9	134.1	54900	C903_ 134.1 S4 M4LB4	137	C903_ 134.1 P132 BN132MB4	138
13.5	6072	1.2	107.0	54600	C903_ 107.0 S4 M4LB4	137	C903_ 107.0 P132 BN132MB4	138
15.0	5461	1.3	96.2	54200	C903_ 96.2 S4 M4LB4	137	C903_ 96.2 P132 BN132MB4	138
15.5	5259	2.3	92.7	85000	C1003_ 92.7 S4 M4LB4	140	C1003_ 92.7 P132 BN132MB4	141
17.7	4608	1.6	81.2	53300	C903_ 81.2 S4 M4LB4	137	C903_ 81.2 P132 BN132MB4	138
19.3	4224	1.7	74.4	52700	C903_ 74.4 S4 M4LB4	137	C903_ 74.4 P132 BN132MB4	138
20.4	4001	1.0	70.5	35000	C803_ 70.5 S4 M4LB4	134	C803_ 70.5 P132 BN132MB4	135
24.3	3359	2.1	59.2	51100	C903_ 59.2 S4 M4LB4	137	C903_ 59.2 P132 BN132MB4	138
25.1	3251	1.2	57.3	35000	C803_ 57.3 S4 M4LB4	134	C803_ 57.3 P132 BN132MB4	135
28.6	2854	2.5	50.3	49700	C903_ 50.3 S4 M4LB4	137	C903_ 50.3 P132 BN132MB4	138
30	2692	1.4	47.4	34900	C803_ 47.4 S4 M4LB4	134	C803_ 47.4 P132 BN132MB4	135
32	2536	0.9	44.7	21100	C703_ 44.7 S4 M4LB4	131	C703_ 44.7 P132 BN132MB4	132
33	2468	1.5	43.5	34400	C803_ 43.5 S4 M4LB4	134	C803_ 43.5 P132 BN132MB4	135
35	2341	1.0	41.3	21000	C703_ 41.3 S4 M4LB4	131	C703_ 41.3 P132 BN132MB4	132
37	2267	1.4	39.1	32300	C802_ 39.1 S4 M4LB4	134	C802_ 39.1 P132 BN132MB4	135
41	2034	2.7	35.1	46200	C902_ 35.1 S4 M4LB4	137	C902_ 35.1 P132 BN132MB4	138
41	2014	1.0	34.7	19200	C702_ 34.7 S4 M4LB4	131	C702_ 34.7 P132 BN132MB4	132
46	1816	2.0	31.3	31100	C802_ 31.3 S4 M4LB4	134	C802_ 31.3 P132 BN132MB4	135
49	1706	3.5	29.4	44600	C902_ 29.4 S4 M4LB4	137	C902_ 29.4 P132 BN132MB4	138
52	1607	1.3	27.7	18900	C702_ 27.7 S4 M4LB4	131	C702_ 27.7 P132 BN132MB4	132
58	1439	0.9	24.8	11800	C612_ 24.8 S4 M4LB4	128	C612_ 24.8 P132 BN132MB4	129
63	1325	1.6	22.9	18500	C702_ 22.9 S4 M4LB4	131	C702_ 22.9 P132 BN132MB4	132
64	1296	1.0	22.4	11700	C612_ 22.4 S4 M4LB4	128	C612_ 22.4 P132 BN132MB4	129
65	1289	2.9	22.2	29200	C802_ 22.2 S4 M4LB4	134	C802_ 22.2 P132 BN132MB4	135
73	1136	1.2	19.6	11600	C612_ 19.6 S4 M4LB4	128	C612_ 19.6 P132 BN132MB4	129
75	1118	1.9	19.3	18100	C702_ 19.3 S4 M4LB4	131	C702_ 19.3 P132 BN132MB4	132
82	1023	1.3	17.7	11400	C612_ 17.7 S4 M4LB4	128	C612_ 17.7 P132 BN132MB4	129
86	968	2.1	16.7	17500	C702_ 16.7 S4 M4LB4	131	C702_ 16.7 P132 BN132MB4	132
90	923	1.5	15.9	11200	C612_ 15.9 S4 M4LB4	128	C612_ 15.9 P132 BN132MB4	129
94	889	2.4	15.3	17500	C702_ 15.3 S4 M4LB4	131	C702_ 15.3 P132 BN132MB4	132

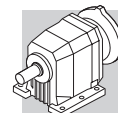


9.2 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
96	867	0.9	15.0	7430	C512_ 15.0 S4 M4LB4	125	C512_ 15.0 P132 BN132MB4	126
100	832	1.6	14.3	11000	C612_ 14.3 S4 M4LB4	128	C612_ 14.3 P132 BN132MB4	129
102	817	2.6	14.1	17000	C702_ 14.1 S4 M4LB4	131	C702_ 14.1 P132 BN132MB4	132
110	761	1.0	13.1	7340	C512_ 13.1 S4 M4LB4	125	C512_ 13.1 P132 BN132MB4	126
111	755	2.8	13.0	17000	C702_ 13.0 S4 M4LB4	131	C702_ 13.0 P132 BN132MB4	132
119	701	1.9	12.1	10700	C612_ 12.1 S4 M4LB4	128	C612_ 12.1 P132 BN132MB4	129
122	686	1.1	11.8	7280	C512_ 11.8 S4 M4LB4	125	C512_ 11.8 P132 BN132MB4	126
127	658	3.2	22.9	16500	C702_ 22.9 S4 M4LA2	131	C702_ 22.9 P132 BN132M2	132
132	631	2.1	10.9	10500	C612_ 10.9 S4 M4LB4	128	C612_ 10.9 P132 BN132MB4	129
147	569	2.4	9.8	10300	C612_ 9.8 S4 M4LB4	128	C612_ 9.8 P132 BN132MB4	129
148	565	1.2	9.8	7080	C512_ 9.8 S4 M4LB4	125	C512_ 9.8 P132 BN132MB4	126
163	513	2.6	8.8	10000	C612_ 8.8 S4 M4LB4	128	C612_ 8.8 P132 BN132MB4	129
164	510	1.3	8.8	6990	C512_ 8.8 S4 M4LB4	125	C512_ 8.8 P132 BN132MB4	126
186	449	1.4	7.8	6820	C512_ 7.8 S4 M4LB4	125	C512_ 7.8 P132 BN132MB4	126
192	434	3.1	7.5	9670	C612_ 7.5 S4 M4LB4	128	C612_ 7.5 P132 BN132MB4	129
206	405	1.6	7.0	6710	C512_ 7.0 S4 M4LB4	125	C512_ 7.0 P132 BN132MB4	126
214	391	3.5	6.7	9410	C612_ 6.7 S4 M4LB4	128	C612_ 6.7 P132 BN132MB4	129
226	369	0.9	6.4	3100	C412_ 6.4 S4 M4LB4	122	C412_ 6.4 P132 BN132MB4	123
240	348	1.9	6.0	8930	C612_ 6.0 S4 M4LB4	128	C612_ 6.0 P132 BN132MB4	129
256	326	1.3	5.6	6150	C512_ 5.6 S4 M4LB4	125	C512_ 5.6 P132 BN132MB4	126
260	321	1.0	11.2	3110	C412_ 11.2 S4 M4LA2	122	C412_ 11.2 P132 BN132M2	123
309	270	1.0	4.7	2620	C412_ 4.7 S4 M4LB4	122	C412_ 4.7 P132 BN132MB4	123
316	264	2.5	4.6	8360	C612_ 4.6 S4 M4LB4	128	C612_ 4.6 P132 BN132MB4	129
323	258	1.7	4.5	5880	C512_ 4.5 S4 M4LB4	125	C512_ 4.5 P132 BN132MB4	126
336	249	1.2	8.6	3090	C412_ 8.6 S4 M4LA2	122	C412_ 8.6 P132 BN132M2	123
374	223	2.3	7.8	5870	C512_ 7.8 S4 M4LA2	125	C512_ 7.8 P132 BN132M2	126
399	209	1.2	3.6	2670	C412_ 3.6 S4 M4LB4	122	C412_ 3.6 P132 BN132MB4	123
410	203	1.4	7.1	3050	C412_ 7.1 S4 M4LA2	122	C412_ 7.1 P132 BN132M2	123
415	201	2.5	7.0	5730	C512_ 7.0 S4 M4LA2	125	C512_ 7.0 P132 BN132M2	126
435	192	2.2	3.3	5510	C512_ 3.3 S4 M4LB4	125	C512_ 3.3 P132 BN132MB4	126
456	183	1.5	6.4	3000	C412_ 6.4 S4 M4LA2	122	C412_ 6.4 P132 BN132M2	123
487	171	1.5	6.0	2660	C412_ 6.0 S4 M4LA2	122	C412_ 6.0 P132 BN132M2	123
515	162	2.6	5.6	5290	C512_ 5.6 S4 M4LA2	125	C512_ 5.6 P132 BN132M2	126
542	154	1.6	2.7	2650	C412_ 2.7 S4 M4LB4	122	C412_ 2.7 P132 BN132MB4	123
548	152	2.6	2.6	5210	C512_ 2.6 S4 M4LB4	125	C512_ 2.6 P132 BN132MB4	126
622	134	1.9	4.7	2620	C412_ 4.7 S4 M4LA2	122	C412_ 4.7 P132 BN132M2	123
651	128	3.4	4.5	4980	C512_ 4.5 S4 M4LA2	125	C512_ 4.5 P132 BN132M2	126
803	104	2.5	3.6	2540	C412_ 3.6 S4 M4LA2	122	C412_ 3.6 P132 BN132M2	123
1091	77	3.2	2.7	2410	C412_ 2.7 S4 M4LA2	122	C412_ 2.7 P132 BN132M2	123

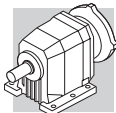
11 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
7.2	13251	0.9	199.6	85000	C1004_199.6 S4 M4LC4	140	C1004_199.6 P160 BN160MR4	141
9.6	10206	1.2	150.4	85000	C1003_150.4 S4 M4LC4	140	C1003_150.4 P160 BN160MR4	141
12.3	7920	0.9	116.7	50800	C903_116.7 S4 M4LC4	137	C903_116.7 P160 BN160MR4	138
12.9	7592	1.6	111.9	85000	C1003_111.9 S4 M4LC4	140	C1003_111.9 P160 BN160MR4	141
15.5	6287	1.9	92.7	85000	C1003_92.7 S4 M4LC4	140	C1003_92.7 P160 BN160MR4	141



11 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
16.3	5985	1.2	88.2	50700	C903_ 88.2 S4 M4LC4	137	C903_ 88.2 P160 BN160MR4	138
19.3	5051	1.4	74.4	50200	C903_ 74.4 S4 M4LC4	137	C903_ 74.4 P160 BN160MR4	138
20.7	4710	2.5	69.4	84800	C1003_ 69.4 S4 M4LC4	140	C1003_ 69.4 P160 BN160MR4	141
24.3	4016	1.8	59.2	49000	C903_ 59.2 S4 M4LC4	137	C903_ 59.2 P160 BN160MR4	138
25.1	3887	1.0	57.3	34200	C803_ 57.3 S4 M4LC4	134	C803_ 57.3 P160 BN160MR4	135
28.6	3413	2.1	50.3	48000	C903_ 50.3 S4 M4LC4	137	C903_ 50.3 P160 BN160MR4	138
30	3219	1.2	47.4	33500	C803_ 47.4 S4 M4LC4	134	C803_ 47.4 P160 BN160MR4	135
33	2951	1.3	43.5	33100	C803_ 43.5 S4 M4LC4	134	C803_ 43.5 P160 BN160MR4	135
37	2673	2.7	39.4	46100	C903_ 39.4 S4 M4LC4	137	C903_ 39.4 P160 BN160MR4	138
37	2711	1.2	39.1	30900	C802_ 39.1 S4 M4LC4	134	C802_ 39.1 P160 BN160MR4	135
41	2432	2.2	35.1	45000	C902_ 35.1 S4 M4LC4	137	C902_ 35.1 P160 BN160MR4	138
46	2172	1.7	31.3	30000	C802_ 31.3 S4 M4LC4	134	C802_ 31.3 P160 BN160MR4	135
52	1921	1.1	27.7	17800	C702_ 27.7 S4 M4LC4	131	C702_ 27.7 P160 BN160MR4	132
55	1798	2.1	25.9	29200	C802_ 25.9 S4 M4LC4	134	C802_ 25.9 P160 BN160MR4	135
63	1584	1.3	22.9	17600	C702_ 22.9 S4 M4LC4	131	C702_ 22.9 P160 BN160MR4	132
65	1542	2.4	22.2	28400	C802_ 22.2 S4 M4LC4	134	C802_ 22.2 P160 BN160MR4	135
70	1423	2.5	20.5	28000	C802_ 20.5 S4 M4LC4	134	C802_ 20.5 P160 BN160MR4	135
73	1358	1.0	19.6	10800	C612_ 19.6 S4 M4LC4	128	C612_ 19.6 P160 BN160MR4	129
75	1337	1.6	19.3	17300	C702_ 19.3 S4 M4LC4	131	C702_ 19.3 P160 BN160MR4	132
80	1251	3.0	18.1	27300	C802_ 18.1 S4 M4LC4	134	C802_ 18.1 P160 BN160MR4	135
82	1223	1.1	17.7	10700	C612_ 17.7 S4 M4LC4	128	C612_ 17.7 P160 BN160MR4	129
86	1158	1.8	16.7	16800	C702_ 16.7 S4 M4LC4	131	C702_ 16.7 P160 BN160MR4	132
86	1155	3.0	16.7	26900	C802_ 16.7 S4 M4LC4	134	C802_ 16.7 P160 BN160MR4	135
90	1104	1.2	15.9	10700	C612_ 15.9 S4 M4LC4	128	C612_ 15.9 P160 BN160MR4	129
94	1063	2.0	15.3	16800	C702_ 15.3 S4 M4LC4	131	C702_ 15.3 P160 BN160MR4	132
100	994	1.4	14.3	10500	C612_ 14.3 S4 M4LC4	128	C612_ 14.3 P160 BN160MR4	129
102	977	2.2	14.1	16400	C702_ 14.1 S4 M4LC4	131	C702_ 14.1 P160 BN160MR4	132
111	903	2.3	13.0	16400	C702_ 13.0 S4 M4LC4	131	C702_ 13.0 P160 BN160MR4	132
119	838	1.6	12.1	10300	C612_ 12.1 S4 M4LC4	128	C612_ 12.1 P160 BN160MR4	129
122	820	0.9	11.8	6810	C512_ 11.8 S4 M4LC4	125	C512_ 11.8 P160 BN160MR4	126
128	777	2.8	11.2	15800	C702_ 11.2 S4 M4LC4	131	C702_ 11.2 P160 BN160MR4	132
132	755	1.8	10.9	10100	C612_ 10.9 S4 M4LC4	128	C612_ 10.9 P160 BN160MR4	129
141	707	3.0	10.2	15700	C702_ 10.2 S4 M4LC4	131	C702_ 10.2 P160 BN160MR4	132
147	680	2.0	9.8	9910	C612_ 9.8 S4 M4LC4	128	C612_ 9.8 P160 BN160MR4	129
148	676	1.0	9.8	6690	C512_ 9.8 S4 M4LC4	125	C512_ 9.8 P160 BN160MR4	126
151	660	3.3	9.5	15400	C702_ 9.5 S4 M4LC4	131	C702_ 9.5 P160 BN160MR4	132
163	613	2.2	8.8	9690	C612_ 8.8 S4 M4LC4	128	C612_ 8.8 P160 BN160MR4	129
164	609	1.1	8.8	6640	C512_ 8.8 S4 M4LC4	125	C512_ 8.8 P160 BN160MR4	126
186	537	1.2	7.8	6510	C512_ 7.8 S4 M4LC4	125	C512_ 7.8 P160 BN160MR4	126
192	519	2.6	7.5	9390	C612_ 7.5 S4 M4LC4	128	C612_ 7.5 P160 BN160MR4	129
206	484	1.3	7.0	6430	C512_ 7.0 S4 M4LC4	125	C512_ 7.0 P160 BN160MR4	126
214	467	2.9	6.7	9150	C612_ 6.7 S4 M4LC4	128	C612_ 6.7 P160 BN160MR4	129
240	416	1.6	6.0	8670	C612_ 6.0 S4 M4LC4	128	C612_ 6.0 P160 BN160MR4	129
256	390	1.1	5.6	5880	C512_ 5.6 S4 M4LC4	125	C512_ 5.6 P160 BN160MR4	126
290	344	1.2	3.3	5770			C512_ 3.3 P160 BN160L6	126
316	316	2.1	4.6	8160	C612_ 4.6 S4 M4LC4	128	C612_ 4.6 P160 BN160MR4	129
323	309	1.4	4.5	5660	C512_ 4.5 S4 M4LC4	125	C512_ 4.5 P160 BN160MR4	126
338	295	1.0	8.6	2850	C412_ 8.6 S4 M4LC2	122		
365	273	1.5	2.6	5540			C512_ 2.6 P160 BN160L6	126
389	256	2.6	3.7	7760	C612_ 3.7 S4 M4LC4	128	C612_ 3.7 P160 BN160MR4	129
399	250	1.0	3.6	2390	C412_ 3.6 S4 M4LC4	122		

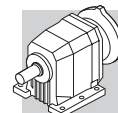


11 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
413	242	1.2	7.1	2860	C412_ 7.1 S4 M4LC2	122	C512_ 3.3 P160 BN160MR4	126
435	229	1.8	3.3	5340	C512_ 3.3 S4 M4LC4	125		
459	217	1.3	6.4	2820	C412_ 6.4 S4 M4LC2	122		
491	203	1.3	6.0	2440	C412_ 6.0 S4 M4LC2	122		
511	195	3.4	2.8	7240	C612_ 2.8 S4 M4LC4	128	C612_ 2.8 P160 BN160MR4	129
519	192	2.2	5.6	5140	C512_ 5.6 S4 M4LC2	125	C512_ 5.6 P160 BN160MA2	126
542	184	1.3	2.7	2440	C412_ 2.7 S4 M4LC4	122	C512_ 2.6 P160 BN160MR4	126
548	182	2.2	2.6	5080	C512_ 2.6 S4 M4LC4	125		
626	159	1.6	4.7	2440	C412_ 4.7 S4 M4LC2	122		
656	152	2.9	4.5	4870	C512_ 4.5 S4 M4LC2	125	C512_ 4.5 P160 BN160MA2	126
809	123	2.1	3.6	2400	C412_ 3.6 S4 M4LC2	122	C512_ 4.5 P160 BN160MA2	126
1098	91	2.7	2.7	2300	C412_ 2.7 S4 M4LC2	122		

15 kW

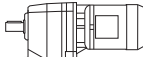
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
10.5	12728	0.9	92.7	83900	C1003_ 120.5 S5 M5SB4	140	C1003_ 92.7 P180 BN180L6	141
12.1	10997	1.1	120.5	83800			C1003_ 120.5 P160 BN160L4	141
15.2	8782	0.8	96.2	43600	C903_ 96.2 S5 M5SB4	137	C903_ 96.2 P160 BN160L4	138
15.8	8456	1.4	92.7	82400	C1003_ 92.7 S5 M5SB4	140	C1003_ 92.7 P160 BN160L4	141
18.0	7411	1.0	81.2	44300	C903_ 81.2 S5 M5SB4	137	C903_ 81.2 P160 BN160L4	138
18.4	7249	1.7	79.4	81000	C1003_ 79.4 S5 M5SB4	140	C1003_ 79.4 P160 BN160L4	141
24.7	5402	1.3	59.2	44400	C903_ 59.2 S5 M5SB4	137	C903_ 59.2 P160 BN160L4	138
25.5	5233	2.3	57.4	77400	C1003_ 57.4 S5 M5SB4	140	C1003_ 57.4 P160 BN160L4	141
29.0	4590	1.5	50.3	44100	C903_ 50.3 S5 M5SB4	137	C903_ 50.3 P160 BN160L4	138
32	4218	2.8	46.2	74500	C1003_ 46.2 S5 M5SB4	140	C1003_ 46.2 P160 BN160L4	141
34	3968	1.0	43.5	30300	C803_ 43.5 S5 M5SB4	134	C803_ 43.5 P160 BN160L4	135
37	3595	2.0	39.4	43000	C903_ 39.4 S5 M5SB4	137	C903_ 39.4 P160 BN160L4	138
42	3272	1.7	35.1	42200	C902_ 35.1 S5 M5SB4	137	C902_ 35.1 P160 BN160L4	138
47	2921	1.3	31.3	27500	C802_ 31.3 S5 M5SB4	134	C802_ 31.3 P160 BN160L4	135
54	2533	2.2	27.2	40700	C902_ 27.2 S5 M5SB4	137	C902_ 27.2 P160 BN160L4	138
56	2419	1.5	25.9	27100	C802_ 25.9 S5 M5SB4	134	C802_ 25.9 P160 BN160L4	135
64	2136	2.9	22.9	39500	C902_ 22.9 S5 M5SB4	137	C902_ 22.9 P160 BN160L4	138
66	2073	1.8	22.2	26600	C802_ 22.2 S5 M5SB4	134	C802_ 22.2 P160 BN160L4	135
76	1798	1.2	19.3	15600	C702_ 19.3 S5 M5SB4	131	C702_ 19.3 P160 BN160L4	132
81	1683	2.2	18.1	25800	C802_ 18.1 S5 M5SB4	134	C802_ 18.1 P160 BN160L4	135
92	1485	0.9	15.9	9350	C612_ 15.9 S5 M5SB4	128	C612_ 15.9 P160 BN160L4	129
95	1429	1.5	15.3	15400	C702_ 15.3 S5 M5SB4	131	C702_ 15.3 P160 BN160L4	132
98	1390	2.7	14.9	25000	C802_ 14.9 S5 M5SB4	134	C802_ 14.9 P160 BN160L4	135
102	1337	1.0	14.3	9280	C612_ 14.3 S5 M5SB4	128	C612_ 14.3 P160 BN160L4	129
112	1215	1.7	13.0	15200	C702_ 13.0 S5 M5SB4	131	C702_ 13.0 P160 BN160L4	132
121	1127	1.2	12.1	9270	C612_ 12.1 S5 M5SB4	128	C612_ 12.1 P160 BN160L4	129
121	1120	3.3	12.0	24000	C802_ 12.0 S5 M5SB4	134	C802_ 12.0 P160 BN160L4	135
130	1045	2.1	11.2	14700	C702_ 11.2 S5 M5SB4	131	C702_ 11.2 P160 BN160L4	132
134	1015	1.3	10.9	9140	C612_ 10.9 S5 M5SB4	128	C612_ 10.9 P160 BN160L4	129
149	915	1.5	9.8	9090	C612_ 9.8 S5 M5SB4	128	C612_ 9.8 P160 BN160L4	129
153	888	2.4	9.5	14400	C702_ 9.5 S5 M5SB4	131	C702_ 9.5 P160 BN160L4	132
165	824	1.6	8.8	8930	C612_ 8.8 S5 M5SB4	128	C612_ 8.8 P160 BN160L4	129

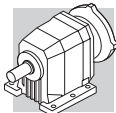


15 kW

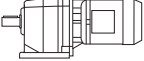
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
182	746	2.8	8.0	14200	C612_ 7.5 S5 M5SB4	128	C702_ 8.0 P160 BN160L4	132
195	698	1.9	7.5	8760			C612_ 7.5 P160 BN160L4	129
209	651	1.0	7.0	5810			C512_ 7.0 P160 BN160L4	126
217	628	2.1	6.7	8570	C612_ 6.7 S5 M5SB4	128	C612_ 6.7 P160 BN160L4	129
223	610	1.0	13.1	5760			C512_ 13.1 P160 BN160MB2	126
242	562	2.4	12.1	8430			C612_ 12.1 P160 BN160MB2	129
248	550	1.1	11.8	5720	C612_ 10.9 S5 M5SB2	128	C512_ 11.8 P160 BN160MB2	126
269	506	2.7	10.9	8230			C612_ 10.9 P160 BN160MB2	129
298	456	2.9	9.8	8090			C612_ 9.8 P160 BN160MB2	129
300	453	1.2	9.8	5570	C612_ 4.6 S5 M5SB4	128	C512_ 9.8 P160 BN160MB2	126
320	425	1.6	4.6	7690			C612_ 4.6 P160 BN160L4	129
328	415	1.0	4.5	5170			C512_ 4.5 P160 BN160L4	126
331	411	3.2	8.8	7880	C612_ 8.8 S5 M5SB2	128	C612_ 8.8 P160 BN160MB2	129
333	408	1.3	8.8	5490			C512_ 8.8 P160 BN160MB2	126
378	360	1.4	7.8	5370			C512_ 7.8 P160 BN160MB2	126
395	345	1.9	3.7	7370	C612_ 3.7 S5 M5SB4	128	C612_ 3.7 P160 BN160L4	129
419	325	1.5	7.0	5280			C512_ 7.0 P160 BN160MB2	126
441	308	1.4	3.3	4970			C512_ 3.3 P160 BN160L4	126
488	279	2.4	6.0	7030	C612_ 6.0 S5 M5SB2	128	C612_ 6.0 P160 BN160MB2	129
518	263	2.5	2.8	6940			C612_ 2.8 P160 BN160L4	129
520	262	1.6	5.6	4840			C512_ 5.6 P160 BN160MB2	126
555	245	1.6	2.6	4780	C612_ 4.6 S5 M5SB2	128	C512_ 2.6 P160 BN160L4	126
643	212	3.1	4.6	6580			C612_ 4.6 P160 BN160MB2	129
658	207	2.1	4.5	4630			C512_ 4.5 P160 BN160MB2	126
886	154	2.7	3.3	4330			C512_ 3.3 P160 BN160MB2	126
1115	122	3.3	2.6	4100			C512_ 2.6 P160 BN160MB2	126

18.5 kW

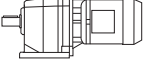
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
13.0	12594	1.0	111.9	76600	C1003_111.9 S5 M5LA4	140	C1003_111.9 P180 BN180M4	141
15.8	10429	1.2	92.7	76700	C1003_92.7 S5 M5LA4	140	C1003_92.7 P180 BN180M4	141
21.0	7813	1.5	69.4	75400	C1003_69.4 S5 M5LA4	140	C1003_69.4 P180 BN180M4	141
22.6	7268	1.0	64.6	40300	C903_ 64.6 S5 M5LA4	137	C903_ 64.6 P180 BN180M4	138
26.6	6175	1.2	54.9	40700	C903_ 54.9 S5 M5LA4	137	C903_ 54.9 P180 BN180M4	138
27.4	5993	2.0	53.3	73100	C1003_53.3 S5 M5LA4	140	C1003_53.3 P180 BN180M4	141
34	4837	1.5	43.0	40600	C903_ 43.0 S5 M5LA4	137	C903_ 43.0 P180 BN180M4	138
34	4831	2.5	42.9	70800	C1003_42.9 S5 M5LA4	140	C1003_42.9 P180 BN180M4	141
42	4035	1.3	35.1	39800	C902_ 35.1 S5 M5LA4	137	C902_ 35.1 P180 BN180M4	138
43	3860	3.0	34.3	68100	C1003_34.3 S5 M5LA4	140	C1003_34.3 P180 BN180M4	141
50	3384	1.7	29.4	39100	C902_ 29.4 S5 M5LA4	137	C902_ 29.4 P180 BN180M4	138
56	2983	1.2	25.9	25300	C802_ 25.9 S5 M5LA4	134	C802_ 25.9 P180 BN180M4	135
66	2557	1.4	22.2	25100	C802_ 22.2 S5 M5LA4	134	C802_ 22.2 P180 BN180M4	135
76	2217	0.9	19.3	14100	C702_ 19.3 S5 M5LA4	131	C702_ 19.3 P180 BN180M4	132
87	1920	1.1	16.7	13800	C702_ 16.7 S5 M5LA4	131	C702_ 16.7 P180 BN180M4	132
88	1916	1.8	16.7	24400	C802_ 16.7 S5 M5LA4	134	C802_ 16.7 P180 BN180M4	135
104	1620	1.3	14.1	13900	C702_ 14.1 S5 M5LA4	131	C702_ 14.1 P180 BN180M4	132
106	1582	2.2	13.8	23700	C802_ 13.8 S5 M5LA4	134	C802_ 13.8 P180 BN180M4	135

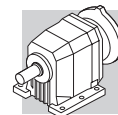


18.5 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
121	1390	1.0	12.1	8420	C612_ 12.1 S5 M5LA4	128	C612_ 12.1 P180 BN180M4	129
130	1289	1.7	11.2	13800	C702_ 11.2 S5 M5LA4	131	C702_ 11.2 P180 BN180M4	132
132	1275	2.7	11.1	22900	C802_ 11.1 S5 M5LA4	134	C802_ 11.1 P180 BN180M4	135
134	1252	1.1	10.9	8360	C612_ 10.9 S5 M5LA4	128	C612_ 10.9 P180 BN180M4	129
149	1129	1.2	9.8	8400	C612_ 9.8 S5 M5LA4	128	C612_ 9.8 P180 BN180M4	129
153	1095	2.0	9.5	13600	C702_ 9.5 S5 M5LA4	131	C702_ 9.5 P180 BN180M4	132
165	1019	3.4	8.9	21900	C802_ 8.9 S5 M5LA4	134	C802_ 8.9 P180 BN180M4	135
165	1016	1.3	8.8	8300	C612_ 8.8 S5 M5LA4	128	C612_ 8.8 P180 BN180M4	129
195	860	1.6	7.5	8230	C612_ 7.5 S5 M5LA4	128	C612_ 7.5 P180 BN180M4	129
217	775	1.7	6.7	8090	C612_ 6.7 S5 M5LA4	128	C612_ 6.7 P180 BN180M4	129
233	719	2.7	6.3	13100			C702_ 6.3 P180 BN180M4	132
243	690	1.0	6.0	7550	C612_ 6.0 S5 M5LA4	128	C612_ 6.0 P180 BN180M4	129
250	673	2.8	5.9	12800			C702_ 5.9 P180 BN180M4	132
269	624	2.2	10.9	7840	C612_ 10.9 S5 M5SC2	128	C612_ 10.9 P160 BN160L2	129
298	562	2.4	9.8	7740	C612_ 9.8 S5 M5SC2	128	C612_ 9.8 P160 BN160L2	129
300	559	1.0	9.8	5190			C512_ 9.8 P160 BN160L2	126
319	526	3.2	4.6	12300			C702_ 4.6 P180 BN180M4	132
320	524	1.3	4.6	7300	C612_ 4.6 S5 M5LA4	128	C612_ 4.6 P180 BN180M4	129
331	507	2.6	8.8	7570	C612_ 8.8 S5 M5SC2	128	C612_ 8.8 P160 BN160L2	129
333	504	1.1	8.8	5160			C512_ 8.8 P160 BN160L2	126
378	444	1.1	7.8	5070			C512_ 7.8 P160 BN160L2	126
391	429	2.9	7.5	7350	C612_ 7.5 S5 M5SC2	128	C612_ 7.5 P160 BN160L2	129
395	425	1.6	3.7	7060	C612_ 3.7 S5 M5LA4	128	C612_ 3.7 P180 BN180M4	129
419	400	1.2	7.0	5010			C512_ 7.0 P160 BN160L2	126
435	386	3.1	6.7	7170	C612_ 6.7 S5 M5SC2	128	C612_ 6.7 P160 BN160L2	129
441	380	1.1	3.3	4660			C512_ 3.3 P180 BN180M4	126
488	344	1.9	6.0	6780	C612_ 6.0 S5 M5SC2	128	C612_ 6.0 P160 BN160L2	129
518	324	2.1	2.8	6700	C612_ 2.8 S5 M5LA4	128	C612_ 2.8 P180 BN180M4	129
520	323	1.3	5.6	4580			C512_ 5.6 P160 BN160L2	126
555	302	1.3	2.6	4540			C512_ 2.6 P180 BN180M4	126
643	261	2.5	4.6	6390	C612_ 4.6 S5 M5SC2	128	C612_ 4.6 P160 BN160L2	129
658	255	1.7	4.5	4420			C512_ 4.5 P160 BN160L2	126
792	212	3.1	3.7	6080	C612_ 3.7 S5 M5SC2	128	C612_ 3.7 P160 BN160L2	129
886	189	2.2	3.3	4180			C512_ 3.3 P160 BN160L2	126
1115	151	2.7	2.6	3980			C512_ 2.6 P160 BN160L2	126

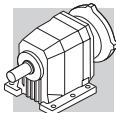
22 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
14.7	13266	0.9	99.8	70600			C1003_99.8 P180 BN180L4	141
18.5	10560	1.1	79.4	71200			C1003_79.4 P180 BN180L4	141
24.8	7869	0.9	59.2	36700			C903_ 59.2 P180 BN180L4	138
25.6	7623	1.6	57.4	70300			C1003_57.4 P180 BN180L4	141
29.2	6686	1.1	50.3	37400			C903_ 50.3 P180 BN180L4	138
32	6144	2.0	46.2	68800			C1003_46.2 P180 BN180L4	141
40	4909	2.4	36.9	66700			C1003_36.9 P180 BN180L4	141
42	4766	1.1	35.1	37400			C902_ 35.1 P180 BN180L4	138
50	4013	2.3	29.6	64100			C1002_29.6 P180 BN180L4	141



22 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
50	3997	1.5	29.4	37100			C902_ 29.4 P180 BN180L4	138
61	3252	1.1	24.0	23700			C802_ 24.0 P180 BN180L4	135
64	3112	2.0	22.9	36400			C902_ 22.9 P180 BN180L4	138
81	2451	1.5	18.1	23300			C802_ 18.1 P180 BN180L4	135
85	2350	2.8	17.3	34900			C902_ 17.3 P180 BN180L4	138
88	2268	0.9	16.7	12400			C702_ 16.7 P180 BN180L4	132
99	2025	1.8	14.9	22900			C802_ 14.9 P180 BN180L4	135
104	1914	1.1	14.1	12700			C702_ 14.1 P180 BN180L4	132
106	1881	3.2	13.9	33700			C902_ 13.9 P180 BN180L4	138
131	1522	1.4	11.2	12900			C702_ 11.2 P180 BN180L4	132
133	1506	2.3	11.1	22100			C802_ 11.1 P180 BN180L4	135
135	1478	0.9	10.9	7580			C612_ 10.9 P180 BN180L4	129
150	1333	1.0	9.8	7710			C612_ 9.8 P180 BN180L4	129
154	1293	1.7	9.5	12800			C702_ 9.5 P180 BN180L4	132
166	1204	2.9	8.9	21300			C802_ 8.9 P180 BN180L4	135
166	1201	1.1	8.8	7660			C612_ 8.8 P180 BN180L4	129
184	1085	1.2	15.9	7710			C612_ 15.9 P180 BN180M2	129
196	1016	1.3	7.5	7690			C612_ 7.5 P180 BN180L4	129
197	1013	2.0	7.5	12700			C702_ 7.5 P180 BN180L4	132
209	956	3.5	7.0	20400			C802_ 7.0 P180 BN180L4	135
218	915	1.5	6.7	7600			C612_ 6.7 P180 BN180L4	129
251	794	2.4	5.9	12300			C702_ 5.9 P180 BN180L4	132
269	742	1.8	10.9	7460			C612_ 10.9 P180 BN180M2	129
298	669	2.0	9.8	7390			C612_ 9.8 P180 BN180M2	129
322	621	2.7	4.6	11900			C702_ 4.6 P180 BN180L4	132
323	619	1.1	4.6	6910			C612_ 4.6 P180 BN180L4	129
331	602	2.2	8.8	7250			C612_ 8.8 P180 BN180M2	129
333	599	0.9	8.8	4820			C512_ 8.8 P180 BN180M2	126
378	528	1.0	7.8	4770			C512_ 7.8 P180 BN180M2	126
391	510	2.4	7.5	7080			C612_ 7.5 P180 BN180M2	129
397	502	1.3	3.7	6740			C612_ 3.7 P180 BN180L4	129
419	476	1.1	7.0	4740			C512_ 7.0 P180 BN180M2	126
435	459	2.6	6.7	6920			C612_ 6.7 P180 BN180M2	129
444	449	0.9	3.3	4350			C512_ 3.3 P180 BN180L4	126
488	409	1.6	6.0	6530			C612_ 6.0 P180 BN180M2	129
520	384	1.1	5.6	4310			C512_ 5.6 P180 BN180M2	126
521	383	1.7	2.8	6450			C612_ 2.8 P180 BN180L4	129
559	357	1.1	2.6	4290			C512_ 2.6 P180 BN180L4	126
643	310	2.1	4.6	6200			C612_ 4.6 P180 BN180M2	129
658	303	1.4	4.5	4210			C512_ 4.5 P180 BN180M2	126
792	252	2.6	3.7	5930			C612_ 3.7 P180 BN180M2	129
886	225	1.9	3.3	4030			C512_ 3.3 P180 BN180M2	126
1039	192	3.5	2.8	5560			C612_ 2.8 P180 BN180M2	129
1115	179	2.2	2.6	3860			C512_ 2.6 P180 BN180M2	126

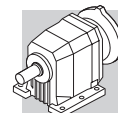


30 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
21.2	12584	1.0	69.4	61300			C1003_69.4 P200 BN200L4	141
25.6	10395	1.2	57.4	62200			C1003_57.4 P200 BN200L4	141
32	8379	1.4	46.2	62300			C1003_46.2 P200 BN200L4	141
37	7142	1.0	39.4	31900			C903_39.4 P200 BN200L4	138
50	5472	1.7	29.6	59800			C1002_29.6 P200 BN200L4	141
50	5450	1.1	29.4	32600			C902_29.4 P200 BN200L4	138
64	4243	1.5	22.9	32900			C902_22.9 P200 BN200L4	138
66	4119	2.4	22.2	57700			C1002_22.2 P200 BN200L4	141
79	3459	1.8	18.7	32600			C902_18.7 P200 BN200L4	138
79	3456	3.1	18.7	56000			C1002_18.7 P200 BN200L4	141
99	2761	1.3	14.9	20600			C802_14.9 P200 BN200L4	135
106	2566	2.4	13.9	31500			C902_13.9 P200 BN200L4	138
122	2225	1.7	12.0	20500			C802_12.0 P200 BN200L4	135
131	2079	2.7	11.2	30600			C902_11.2 P200 BN200L4	138
153	1778	2.1	9.6	20100			C802_9.6 P200 BN200L4	135
154	1763	1.2	9.5	11000			C702_9.5 P200 BN200L4	132
184	1482	1.4	8.0	11600			C702_8.0 P200 BN200L4	132
193	1412	2.4	7.6	19500			C802_7.6 P200 BN200L4	135
209	1303	2.6	7.0	19300			C802_7.0 P200 BN200L4	135
235	1158	1.7	6.3	11500			C702_6.3 P200 BN200L4	132
241	1131	2.8	6.1	18900			C802_6.1 P200 BN200L4	135
261	1044	3.0	5.6	18600			C802_5.6 P200 BN200L4	135
322	846	2.0	4.6	11000			C702_4.6 P200 BN200L4	132

37 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
25.8	12734	0.9	57.4	55300			C1003_57.4 P225 BN225S4	141
32	10264	1.2	46.2	56600			C1003_46.2 P225 BN225S4	141
40	8201	1.4	36.9	57000			C1003_36.9 P225 BN225S4	141
60	5631	1.2	24.8	29500			C902_24.8 P225 BN225S4	138
61	5467	2.0	24.1	55200			C1002_24.1 P225 BN225S4	141
79	4237	1.5	18.7	30100			C902_18.7 P225 BN225S4	138
79	4234	2.5	18.7	53600			C1002_18.7 P225 BN225S4	141
89	3779	0.9	16.7	18500			C802_16.7 P225 BN225S4	135
107	3143	1.9	13.9	29700			C902_13.9 P225 BN225S4	138
108	3122	1.1	13.8	18800			C802_13.8 P225 BN225S4	135
123	2726	1.4	12.0	18800			C802_12.0 P225 BN225S4	135
132	2546	2.2	11.2	29100			C902_11.2 P225 BN225S4	138
154	2178	1.7	9.6	18800			C802_9.6 P225 BN225S4	135
164	2046	2.5	9.0	28300			C902_9.0 P225 BN225S4	138
194	1730	2.0	7.6	18500			C802_7.6 P225 BN225S4	135
202	1661	2.9	7.3	27400			C902_7.3 P225 BN225S4	138
242	1386	2.3	6.1	18000			C802_6.1 P225 BN225S4	135
264	1271	3.5	5.6	26100			C902_5.6 P225 BN225S4	138
286	1173	3.7	5.2	25700			C902_5.2 P225 BN225S4	138



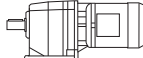
45 kW

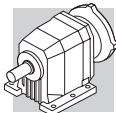
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
32	12483	1.0	46.2	50200			C1003_46.2 P225 BN225M4	141
40	9974	1.2	36.9	51900			C1003_36.9 P225 BN225M4	141
50	8153	1.1	29.6	51900			C1002_29.6 P225 BN225M4	141
65	6322	1.0	22.9	26400			C902_22.9 P225 BN225M4	138
67	6137	1.6	22.2	51700			C1002_22.2 P225 BN225M4	141
79	5153	1.2	18.7	27200			C902_18.7 P225 BN225M4	138
79	5149	2.1	18.7	51000			C1002_18.7 P225 BN225M4	141
107	3822	1.6	13.9	27600			C902_13.9 P225 BN225M4	138
108	3797	0.9	13.8	16700			C802_13.8 P225 BN225M4	135
123	3315	1.1	12.0	17000			C802_12.0 P225 BN225M4	135
132	3097	1.8	11.2	27400			C902_11.2 P225 BN225M4	138
154	2649	1.4	9.6	17300			C802_9.6 P225 BN225M4	135
164	2488	2.1	9.0	26900			C902_9.0 P225 BN225M4	138
194	2104	1.6	7.6	17300			C802_7.6 P225 BN225M4	135
202	2020	2.4	7.3	26300			C902_7.3 P225 BN225M4	138
262	1556	2.0	5.6	17000			C802_5.6 P225 BN225M4	135
264	1546	2.8	5.6	25200			C902_5.6 P225 BN225M4	138
279	1464	2.9	5.2	25200			C902_5.2 P225 BN225M4	138

55 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
40	12191	1.0	36.9	45400			C1003_36.9 P250 BN250M4	141
50	9965	0.9	29.6	46700			C1002_29.6 P250 BN250M4	141
61	8126	1.3	24.1	47500			C1002_24.1 P250 BN250M4	141
79	6298	1.0	18.7	22200			C902_18.7 P250 BN250M4	138
79	6294	1.7	18.7	47700			C1002_18.7 P250 BN250M4	141
107	4672	1.3	13.9	24900			C902_13.9 P250 BN250M4	138
110	4549	2.1	13.5	46500			C1002_13.5 P250 BN250M4	141
135	3686	2.4	10.9	45400			C1002_10.9 P250 BN250M4	141
164	3050	2.7	9.0	44100			C1002_9.0 P250 BN250M4	141
164	3041	1.7	9.0	25200			C902_9.0 P250 BN250M4	138
202	2468	2.0	7.3	24900			C902_7.3 P250 BN250M4	138
209	2383	3.2	7.1	42300			C1002_7.1 P250 BN250M4	141
264	1889	2.3	5.6	24200			C902_5.6 P250 BN250M4	138
286	1744	2.5	5.2	24000			C902_5.2 P250 BN250M4	138

75 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N			 IEC 	
62	11044	1.0	24.1	38100			C1002_24.1 P280 BN280S4	141
67	10194	1.0	22.2	40000			C1002_22.2 P280 BN280S4	141
73	9266	1.2	20.2	40500			C1002_20.2 P280 BN280S4	141
80	8553	1.3	18.7	41100			C1002_18.7 P280 BN280S4	141
90	7552	1.3	16.5	41400			C1002_16.5 P280 BN280S4	141

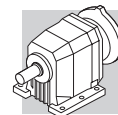


75 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
98	6971	1.4	15.2	41800			C1002_15.2 P280 BN280S4	141
110	6182	1.5	13.5	41700			C1002_13.5 P280 BN280S4	141
119	5707	1.6	12.5	41800			C1002_12.5 P280 BN280S4	141
136	5010	1.8	10.9	41500			C1002_10.9 P280 BN280S4	141
147	4624	1.9	10.1	41400			C1002_10.1 P280 BN280S4	141
164	4146	2.0	9.0	40900			C1002_9.0 P280 BN280S4	141
178	3827	2.1	8.4	40600			C1002_8.4 P280 BN280S4	141
210	3238	2.4	7.1	39700			C1002_7.1 P280 BN280S4	141
228	2989	2.5	6.5	39300			C1002_6.5 P280 BN280S4	141
278	2444	2.8	5.3	38100			C1002_5.3 P280 BN280S4	141
302	2256	3.0	4.9	37600			C1002_4.9 P280 BN280S4	141

90 kW

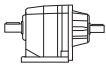
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
73	11119	1.0	20.2	30600			C1002_20.2 P280 BN280M4	141
80	10264	1.0	18.7	35500			C1002_18.7 P280 BN280M4	141
90	9062	1.1	16.5	37100			C1002_16.5 P280 BN280M4	141
98	8365	1.2	15.2	37800			C1002_15.2 P280 BN280M4	141
110	7419	1.3	13.5	38100			C1002_13.5 P280 BN280M4	141
119	6848	1.4	12.5	38500			C1002_12.5 P280 BN280M4	141
136	6012	1.5	10.9	38600			C1002_10.9 P280 BN280M4	141
147	5549	1.6	10.1	38700			C1002_10.1 P280 BN280M4	141
164	4975	1.7	9.0	38500			C1002_9.0 P280 BN280M4	141
178	4592	1.8	8.4	38400			C1002_8.4 P280 BN280M4	141
210	3886	2.0	7.1	37800			C1002_7.1 P280 BN280M4	141
228	3587	2.1	6.5	37600			C1002_6.5 P280 BN280M4	141
278	2933	2.4	5.3	36600			C1002_5.3 P280 BN280M4	141
302	2707	2.5	4.9	36300			C1002_4.9 P280 BN280M4	141

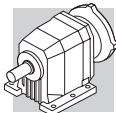


26 GEARBOX RATING CHARTS

C 11

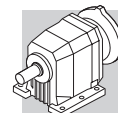
100 Nm

	i	$n_1 = 2800 \text{ min}^{-1}$					$n_1 = 1400 \text{ min}^{-1}$					
		n_2 min ⁻¹	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min ⁻¹	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 11 2_2.8	2.8	1011	30	3.3	750	600	505	37	2.1	990	790	112
C 11 2_3.7	3.7	767	34	2.9	720	610	384	42	1.8	960	800	
C 11 2_4.9	4.9	575	38	2.4	710	640	287	48	1.5	880	800	
C 11 2_6.2	6.2	449	42	2.1	650	660	225	53	1.3	810	830	
C 11 2_6.9	6.9	408	43	1.9	1120	1170	204	54	1.2	1300	1480	
C 11 2_7.6	7.6	367	45	1.8	1140	1220	184	56	1.1	1300	1540	
C 11 2_9.1	9.1	309	48	1.6	1120	1280	155	61	1.0	1300	1610	
C 11 2_10.1	10.1	278	49	1.5	1150	1340	139	63	0.97	1300	1680	
C 11 2_12.1	12.1	232	53	1.4	1120	1410	116	67	0.86	1300	1780	
C 11 2_13.4	13.4	209	55	1.3	1140	1460	104	70	0.81	1300	1840	
C 11 2_15.5	15.5	181	58	1.2	1100	1520	90	74	0.74	1300	1880	
C 11 2_17.2	17.2	163	60	1.1	1130	1590	82	76	0.68	1300	2000	
C 11 2_18.6	18.6	151	63	1.0	1090	1570	75	79	0.66	1300	1990	
C 11 2_20.6	20.6	136	65	0.97	1110	1670	68	82	0.61	1300	2000	
C 11 2_22.8	22.8	123	67	0.90	1080	1700	61	85	0.57	1300	2000	
C 11 2_25.4	25.4	110	69	0.84	1110	1800	55	88	0.54	1300	2000	
C 11 2_29.5	29.5	95	74	0.77	1060	1810	47	93	0.49	1300	2000	
C 11 2_32.8	32.8	85	75	0.71	1090	1970	43	90	0.42	1300	2000	
C 11 2_33.4	33.4	84	77	0.71	1030	1890	42	100	0.46	1286	2000	
C 11 2_37.0	37.0	76	79	0.66	1070	2000	38	90	0.38	1300	2000	
C 11 2_42.9	42.9	65	84	0.60	1010	2000	33	100	0.36	1300	2000	
C 11 2_47.6	47.6	59	85	0.55	1050	2000	29.4	90	0.29	1300	2000	
C 11 2_49.7	49.7	56	88	0.55	990	2000	28.2	100	0.31	1300	2000	
C 11 2_55.2	55.2	51	89	0.50	1030	2000	25.4	90	0.25	1300	2000	
C 11 2_59.6	59.6	47	78	0.40	1060	2000	23.5	82	0.21	1300	2000	
C 11 2_66.2	66.2	42	86	0.40	1060	2000	21.2	90	0.21	1300	2000	

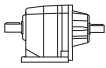


C 11 100 Nm

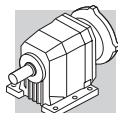
	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		n_2 min ⁻¹	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min ⁻¹	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 11 2_2.8	2.8	325	43	1.5	1140	910	187	53	1.1	1300	1080	112
C 11 2_3.7	3.7	247	49	1.3	1090	920	137	60	0.91	1300	1100	
C 11 2_4.9	4.9	185	55	1.1	1050	960	103	67	0.76	1280	1160	
C 11 2_6.2	6.2	144	61	0.97	960	980	80	70	0.62	1300	1390	
C 11 2_6.9	6.9	131	62	0.90	1300	1720	73	76	0.61	1300	2000	
C 11 2_7.6	7.6	118	65	0.85	1300	1780	66	79	0.57	1300	2000	
C 11 2_9.1	9.1	99	70	0.77	1300	1870	55	85	0.52	1300	2000	
C 11 2_10.1	10.1	89	72	0.71	1300	1950	50	88	0.48	1300	2000	
C 11 2_12.1	12.1	75	78	0.64	1300	2000	41	95	0.43	1300	2000	
C 11 2_13.4	13.4	67	81	0.60	1300	2000	37	90	0.37	1300	2000	
C 11 2_15.5	15.5	58	86	0.55	1300	2000	32	99	0.35	1300	2000	
C 11 2_17.2	17.2	52	88	0.51	1300	2000	29.1	90	0.29	1300	2000	
C 11 2_18.6	18.6	48	91	0.49	1300	2000	26.9	99	0.29	1300	2000	
C 11 2_20.6	20.6	44	89	0.43	1300	2000	24.2	89	0.24	1300	2000	
C 11 2_22.8	22.8	39	99	0.43	1300	2000	21.9	99	0.24	1300	2000	
C 11 2_25.4	25.4	35	89	0.35	1300	2000	19.7	89	0.19	1300	2000	
C 11 2_29.5	29.5	30	100	0.34	1300	2000	16.9	100	0.19	1300	2000	
C 11 2_32.8	32.8	27.5	90	0.27	1300	2000	15.3	90	0.15	1300	2000	
C 11 2_33.4	33.4	27.0	100	0.30	1300	2000	15.0	100	0.17	1300	2000	
C 11 2_37.0	37.0	24.3	90	0.24	1300	2000	13.5	90	0.13	1300	2000	
C 11 2_42.9	42.9	21.0	100	0.23	1300	2000	11.7	100	0.13	1300	2000	
C 11 2_47.6	47.6	18.9	90	0.19	1300	2000	10.5	90	0.10	1300	2000	
C 11 2_49.7	49.7	18.1	100	0.20	1300	2000	10.1	100	0.11	1300	2000	
C 11 2_55.2	55.2	16.3	90	0.16	1300	2000	9.1	90	0.09	1300	2000	
C 11 2_59.6	59.6	15.1	85	0.14	1300	2000	8.4	88	0.08	1300	2000	
C 11 2_66.2	66.2	13.6	90	0.13	1300	2000	7.6	90	0.07	1300	2000	



C 21 200 Nm

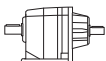
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 21 2_2.7	2.7	1029	65	7.4	—	1150	515	80	4.5	—	1460	115
C 21 2_3.7	3.7	755	70	5.8	—	1290	377	90	3.7	—	1610	
C 21 2_4.8	4.8	587	80	5.2	—	1370	294	100	3.2	—	1730	
C 21 2_6.1	6.1	460	85	4.3	—	1500	230	105	2.7	—	1900	
C 21 2_6.4	6.4	439	100	4.8	960	1510	219	125	3.0	1230	1910	
C 21 2_7.1	7.1	395	105	4.6	1090	1570	198	130	2.8	1420	1990	
C 21 2_8.7	8.7	323	110	3.9	1030	1680	161	140	2.5	1260	2110	
C 21 2_9.6	9.6	290	115	3.7	1160	1750	145	145	2.3	1460	2200	
C 21 2_11.2	11.2	251	125	3.5	930	1790	125	155	2.1	1220	2280	
C 21 2_12.4	12.4	226	125	3.1	1160	1900	113	160	2.0	1420	2380	
C 21 2_14.3	14.3	196	135	2.9	870	1950	98	170	1.8	1100	2460	
C 21 2_15.8	15.8	177	140	2.7	1030	2030	88	175	1.7	1320	2570	
C 21 2_18.0	18.0	155	145	2.5	840	2120	78	185	1.6	1010	2650	
C 21 2_20.0	20.0	140	150	2.3	1000	2210	70	190	1.5	1250	2770	
C 21 2_21.9	21.9	128	155	2.2	800	2250	64	200	1.4	940	2810	
C 21 2_24.3	24.3	115	160	2.0	980	2350	58	200	1.3	1250	2970	
C 21 2_26.7	26.7	105	170	2.0	660	2380	52	200	1.2	1040	3090	
C 21 2_29.6	29.6	95	175	1.8	850	2490	47	200	1.0	1350	3270	
C 21 2_33.1	33.1	85	180	1.7	550	2570	42	200	0.93	1100	3420	
C 21 2_36.8	36.8	76	185	1.6	750	2690	38	200	0.84	1400	3610	
C 21 2_39.0	39.0	72	165	1.3	860	2880	36	170	0.67	1630	3880	
C 21 2_43.3	43.3	65	185	1.3	830	2910	32	190	0.68	1610	3950	
C 21 2_49.3	49.3	57	135	0.85	1320	3410	28.4	140	0.44	1770	4490	
C 21 2_54.7	54.7	51	150	0.85	1320	3470	25.6	155	0.44	1770	4600	
C 21 2_57.0	57.0	49	110	0.60	1410	3780	24.6	115	0.31	1830	4920	
C 21 2_63.3	63.3	44	125	0.61	1400	3860	22.1	130	0.32	1820	5000	
C 21 3_58.8	58.8	48	180	0.96	880	3390	23.8	190	0.24	1240	4510	
C 21 3_65.3	65.3	43	200	0.97	880	3440	21.4	200	0.48	1270	4670	
C 21 3_74.4	74.4	38	200	0.85	960	3630	18.8	200	0.42	1300	4920	
C 21 3_82.6	82.6	34	200	0.76	1010	3820	16.9	200	0.38	1300	5000	
C 21 3_90.2	90.2	31	200	0.70	1050	3960	15.5	200	0.35	1300	5000	
C 21 3_100.2	100.2	28.0	200	0.63	1090	4160	14.0	200	0.31	1300	5000	
C 21 3_110.0	110.0	25.5	200	0.57	1130	4320	12.7	200	0.29	1300	5000	
C 21 3_122.2	122.2	22.9	200	0.52	1160	4540	11.5	200	0.26	1300	5000	
C 21 3_136.5	136.5	20.5	200	0.46	1190	4740	10.3	200	0.23	1300	5000	
C 21 3_151.7	151.7	18.5	200	0.42	1220	4980	9.2	200	0.21	1300	5000	
C 21 3_160.7	160.7	17.4	195	0.38	1240	5000	8.7	200	0.20	1300	5000	
C 21 3_178.5	178.5	15.7	200	0.35	1260	5000	7.8	200	0.18	1300	5000	
C 21 3_203.2	203.2	13.8	160	0.25	1300	5000	6.9	165	0.13	1300	5000	
C 21 3_225.8	225.8	12.4	180	0.25	1300	5000	6.2	185	0.13	1300	5000	
C 21 3_235.0	235.0	11.9	130	0.17	1300	5000	6.0	140	0.09	1300	5000	
C 21 3_261.0	261.0	10.7	145	0.18	1300	5000	5.4	155	0.09	1300	5000	

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

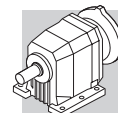


C 21

200 Nm

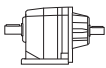
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 21 2_2.7	2.7	331	95	3.5	—	1670	184	100	2.0	400	2150	115
C 21 2_3.7	3.7	243	105	2.8	—	1850	135	105	1.6	800	2430	
C 21 2_4.8	4.8	189	105	2.2	170	2090	105	105	1.2	1200	2710	
C 21 2_6.1	6.1	148	110	1.8	200	2290	82	116	1.0	980	2930	
C 21 2_6.4	6.4	141	145	2.3	1420	2220	78	175	1.5	1760	2700	
C 21 2_7.1	7.1	127	150	2.1	1650	2310	71	180	1.4	2060	2820	
C 21 2_8.7	8.7	104	165	1.9	1410	2430	58	200	1.3	1730	2960	
C 21 2_9.6	9.6	93	170	1.7	1650	2530	52	200	1.1	2130	3130	
C 21 2_11.2	11.2	81	180	1.6	1400	2640	45	200	0.99	2060	3330	
C 21 2_12.4	12.4	73	185	1.5	1650	2760	40	200	0.89	2200	3520	
C 21 2_14.3	14.3	63	195	1.4	1310	2860	35	200	0.77	2200	3730	
C 21 2_15.8	15.8	57	200	1.3	1580	2990	32	200	0.70	2200	3920	
C 21 2_18.0	18.0	50	200	1.1	1420	3170	27.7	200	0.61	2200	4140	
C 21 2_20.0	20.0	45	200	0.99	1750	3340	25.0	200	0.55	2200	4350	
C 21 2_21.9	21.9	41	200	0.91	1590	3460	22.9	200	0.50	2200	4500	
C 21 2_24.3	24.3	37	200	0.82	1900	3650	20.6	200	0.45	2200	4720	
C 21 2_26.7	26.7	34	200	0.74	1700	3790	18.7	200	0.41	2200	4900	
C 21 2_29.6	29.6	30	200	0.67	1980	3990	16.9	200	0.37	2200	5000	
C 21 2_33.1	33.1	27.2	200	0.60	1750	4170	15.1	200	0.33	2200	5000	
C 21 2_36.8	36.8	24.5	200	0.54	1990	4390	13.6	200	0.30	2200	5000	
C 21 2_39.0	39.0	23.1	170	0.43	2020	4680	12.8	170	0.24	2200	5000	
C 21 2_43.3	43.3	20.8	190	0.44	2020	4770	11.6	190	0.24	2200	5000	
C 21 2_49.3	49.3	18.3	145	0.29	2080	5000	10.1	155	0.17	2200	5000	
C 21 2_54.7	54.7	16.4	160	0.29	2090	5000	9.1	170	0.17	2200	5000	
C 21 2_57.0	57.0	15.8	120	0.21	2140	5000	8.8	125	0.12	2200	5000	
C 21 2_63.3	63.3	14.2	135	0.21	2140	5000	7.9	140	0.12	2200	5000	
C 21 3_58.8	58.8	15.3	200	0.34	1300	5000	8.5	200	0.19	1300	5000	
C 21 3_65.3	65.3	13.8	200	0.31	1300	5000	7.7	200	0.17	1300	5000	
C 21 3_74.4	74.4	12.1	200	0.27	1300	5000	6.7	200	0.15	1300	5000	
C 21 3_82.6	82.6	10.9	200	0.25	1300	5000	6.1	200	0.14	1300	5000	
C 21 3_90.2	90.2	10.0	200	0.22	1300	5000	5.5	200	0.12	1300	5000	
C 21 3_100.2	100.2	9.0	200	0.20	1300	5000	5.0	200	0.11	1300	5000	
C 21 3_110.0	110.0	8.2	200	0.18	1300	5000	4.5	200	0.10	1300	5000	
C 21 3_122.2	122.2	7.4	200	0.17	1300	5000	4.1	200	0.09	1300	5000	
C 21 3_136.5	136.5	6.6	200	0.15	1300	5000	3.7	200	0.08	1300	5000	
C 21 3_151.7	151.7	5.9	200	0.13	1300	5000	3.3	200	0.07	1300	5000	
C 21 3_160.7	160.7	5.6	200	0.13	1300	5000	3.1	200	0.07	1300	5000	
C 21 3_178.5	178.5	5.0	200	0.11	1300	5000	2.8	200	0.06	1300	5000	
C 21 3_203.2	203.2	4.4	170	0.08	1300	5000	2.5	180	0.05	1300	5000	
C 21 3_225.8	225.8	4.0	195	0.09	1300	5000	2.2	200	0.05	1300	5000	
C 21 3_235.0	235.0	3.8	140	0.06	1300	5000	2.1	150	0.04	1300	5000	
C 21 3_261.0	261.0	3.4	160	0.06	1300	5000	1.9	165	0.04	1300	5000	

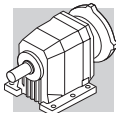
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



C 31

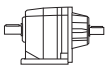
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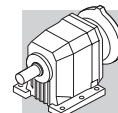
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		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 31 2_2.9	2.9	972	105	11.3	670	1710	486	130	7.0	940	2170	118
C 31 2_3.7	3.7	749	120	9.9	560	1830	374	150	6.2	750	2310	
C 31 2_5.0	5.0	566	135	8.4	470	1990	283	155	4.8	1100	2600	
C 31 2_6.3	6.3	447	150	7.4	300	2130	224	155	3.8	1450	2890	
C 31 2_6.5	6.5	434	155	7.4	1860	2270	217	195	4.7	2200	2870	
C 31 2_7.2	7.2	391	160	6.9	1890	2370	196	200	4.3	2200	2990	
C 31 2_8.4	8.4	335	170	6.3	1870	2480	167	215	4.0	2200	3110	
C 31 2_9.3	9.3	301	175	5.8	1910	2580	151	220	3.7	2200	3260	
C 31 2_11.1	11.1	252	190	5.3	1880	2700	126	240	3.3	2200	3400	
C 31 2_12.3	12.3	227	195	4.9	1910	2820	114	245	3.1	2200	3560	
C 31 2_14.0	14.0	199	205	4.5	1880	2930	100	260	2.9	2200	3680	
C 31 2_15.6	15.6	180	215	4.3	1900	3030	90	270	2.7	2200	3820	
C 31 2_18.1	18.1	155	225	3.8	1870	3170	77	285	2.4	2200	3990	
C 31 2_20.1	20.1	139	235	3.6	1900	3290	70	295	2.3	2200	4160	
C 31 2_22.6	22.6	124	245	3.3	1850	3410	62	300	2.0	2200	4330	
C 31 2_25.1	25.1	111	250	3.1	1890	3560	56	300	1.8	2200	4570	
C 31 2_26.8	26.8	105	260	3.0	1840	3600	52	300	1.7	2200	4680	
C 31 2_29.8	29.8	94	265	2.7	1880	3770	47	300	1.6	2200	4920	
C 31 2_32.5	32.5	86	275	2.6	1760	3850	43	300	1.4	2200	5090	
C 31 2_36.1	36.1	78	280	2.4	1870	4030	39	300	1.3	2200	5350	
C 31 2_40.7	40.7	69	295	2.2	1620	4160	34	300	1.1	2200	5500	
C 31 2_45.3	45.3	62	300	2.0	1860	4360	31	300	1.0	2200	5500	
C 31 2_47.2	47.2	59	300	2.0	1610	4420	29.7	300	0.98	2200	5500	
C 31 2_52.4	52.4	53	300	1.8	1860	4650	26.7	300	0.88	2200	5500	
C 31 2_60.2	60.2	47	180	0.92	2030	5500	23.3	190	0.49	2200	5500	
C 31 2_66.8	66.8	42	205	0.95	2020	5500	21.0	215	0.50	2200	5500	
C 31 3_74.3	74.3	38	275	1.2	790	5500	18.8	300	0.64	1170	5500	
C 31 3_82.6	82.6	34	300	1.1	820	5500	17.0	300	0.57	1240	5500	
C 31 3_93.0	93.0	30	290	0.98	940	5500	15.1	300	0.51	1300	5500	
C 31 3_103.3	103.3	27.1	300	0.92	980	5500	13.6	300	0.46	1300	5500	
C 31 3_110.2	110.2	25.4	300	0.86	1010	5500	12.7	300	0.43	1300	5500	
C 31 3_122.4	122.4	22.9	300	0.77	1060	5500	11.4	300	0.39	1300	5500	
C 31 3_133.6	133.6	21.0	300	0.71	1090	5500	10.5	300	0.35	1300	5500	
C 31 3_148.4	148.4	18.9	300	0.64	1130	5500	9.4	300	0.32	1300	5500	
C 31 3_167.5	167.5	16.7	300	0.56	1170	5500	8.4	300	0.28	1300	5500	
C 31 3_186.0	186.0	15.1	300	0.51	1200	5500	7.5	300	0.25	1300	5500	
C 31 3_194.1	194.1	14.4	280	0.45	1230	5500	7.2	295	0.24	1300	5500	
C 31 3_215.6	215.6	13.0	300	0.44	1240	5500	6.5	300	0.22	1300	5500	
C 31 3_247.3	247.3	11.3	215	0.27	1300	5500	5.7	225	0.14	1300	5500	
C 31 3_274.7	274.7	10.2	240	0.28	1300	5500	5.1	255	0.15	1300	5500	



C 31

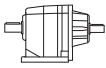
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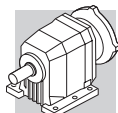
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		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 31 2_2.9	2.9	313	150	5.2	1120	2510	174	155	3.0	2200	3220	118
C 31 2_3.7	3.7	241	155	4.1	1570	2790	134	175	2.6	2200	3480	
C 31 2_5.0	5.0	182	162	3.2	1870	3120	101	198	2.2	2200	3790	
C 31 2_6.3	6.3	144	178	2.8	1730	3350	80	200	1.8	2200	4180	
C 31 2_6.5	6.5	140	225	3.5	2200	3330	78	275	2.3	2200	4040	
C 31 2_7.2	7.2	126	235	3.3	2200	3450	70	285	2.2	2200	4200	
C 31 2_8.4	8.4	108	250	3.0	2200	3600	60	300	2.0	2200	4410	
C 31 2_9.3	9.3	97	260	2.8	2200	3750	54	300	1.8	2200	4640	
C 31 2_11.1	11.1	81	280	2.5	2200	3930	45	300	1.5	2200	4990	
C 31 2_12.3	12.3	73	285	2.3	2200	4120	41	300	1.3	2200	5250	
C 31 2_14.0	14.0	64	300	2.1	2200	4270	36	300	1.2	2200	5500	
C 31 2_15.6	15.6	58	300	1.9	2200	4500	32	300	1.1	2200	5500	
C 31 2_18.1	18.1	50	300	1.6	2200	4780	27.7	300	0.91	2200	5500	
C 31 2_20.1	20.1	45	300	1.5	2200	5030	24.9	300	0.82	2200	5500	
C 31 2_22.6	22.6	40	300	1.3	2200	5270	22.1	300	0.73	2200	5500	
C 31 2_25.1	25.1	36	300	1.2	2200	5500	19.9	300	0.66	2200	5500	
C 31 2_26.8	26.8	34	300	1.1	2200	5500	18.7	300	0.62	2200	5500	
C 31 2_29.8	29.8	30	300	1.0	2200	5500	16.8	300	0.56	2200	5500	
C 31 2_32.5	32.5	27.7	300	0.92	2200	5500	15.4	300	0.51	2200	5500	
C 31 2_36.1	36.1	24.9	300	0.82	2200	5500	13.9	300	0.46	2200	5500	
C 31 2_40.7	40.7	22.1	300	0.73	2200	5500	12.3	300	0.41	2200	5500	
C 31 2_45.3	45.3	19.9	300	0.66	2200	5500	11.0	300	0.37	2200	5500	
C 31 2_47.2	47.2	19.1	300	0.63	2200	5500	10.6	300	0.35	2200	5500	
C 31 2_52.4	52.4	17.2	300	0.57	2200	5500	9.5	300	0.32	2200	5500	
C 31 2_60.2	60.2	15.0	200	0.33	2200	5500	8.3	205	0.19	2200	5500	
C 31 2_66.8	66.8	13.5	220	0.33	2200	5500	7.5	230	0.19	2200	5500	
C 31 3_74.3	74.3	12.1	300	0.41	1300	5500	6.7	300	0.23	1300	5500	
C 31 3_82.6	82.6	10.9	300	0.37	1300	5500	6.1	300	0.20	1300	5500	
C 31 3_93.0	93.0	9.7	300	0.33	1300	5500	5.4	300	0.18	1300	5500	
C 31 3_103.3	103.3	8.7	300	0.29	1300	5500	4.8	300	0.16	1300	5500	
C 31 3_110.2	110.2	8.2	300	0.28	1300	5500	4.5	300	0.15	1300	5500	
C 31 3_122.4	122.4	7.4	300	0.25	1300	5500	4.1	300	0.14	1300	5500	
C 31 3_133.6	133.6	6.7	300	0.23	1300	5500	3.7	300	0.13	1300	5500	
C 31 3_148.4	148.4	6.1	300	0.20	1300	5500	3.4	300	0.11	1300	5500	
C 31 3_167.5	167.5	5.4	300	0.18	1300	5500	3.0	300	0.10	1300	5500	
C 31 3_186.0	186.0	4.8	300	0.16	1300	5500	2.7	300	0.09	1300	5500	
C 31 3_194.1	194.1	4.6	300	0.16	1300	5500	2.6	300	0.09	1300	5500	
C 31 3_215.6	215.6	4.2	300	0.14	1300	5500	2.3	300	0.08	1300	5500	
C 31 3_247.3	247.3	3.6	235	0.10	1300	5500	2.0	245	0.06	1300	5500	
C 31 3_274.7	274.7	3.3	260	0.10	1300	5500	1.8	275	0.06	1300	5500	



C 35

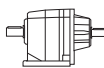
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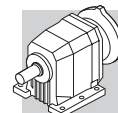
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C 35 2_2.7	2.7	1037	140	16.0	670	1750	519	170	9.7	1150	2240	121
C 35 2_3.5	3.5	800	150	13.2	910	1920	400	185	8.2	1320	2440	
C 35 2_4.6	4.6	609	165	11.1	920	2110	304	200	6.7	1470	2700	
C 35 2_5.8	5.8	483	170	9.0	1160	2330	241	200	5.3	1990	3020	
C 35 2_6.1	6.1	459	275	13.9	1580	2040	230	345	8.7	2020	2570	
C 35 2_6.8	6.8	412	285	12.9	1750	2130	206	355	8.1	2220	2710	
C 35 2_7.9	7.9	354	305	11.9	1590	2200	177	380	7.4	2090	2790	
C 35 2_8.8	8.8	318	310	10.9	1780	2330	159	380	6.7	2270	3000	
C 35 2_10.5	10.5	267	335	9.8	1610	2410	133	380	5.6	2270	3250	
C 35 2_11.7	11.7	239	340	9.0	1790	2560	120	380	5.0	2370	3460	
C 35 2_13.3	13.3	211	355	8.2	1660	2650	105	380	4.4	2340	3660	
C 35 2_14.8	14.8	189	360	7.5	1800	2810	95	380	4.0	2440	3890	
C 35 2_17.1	17.1	164	380	6.9	1640	2910	82	380	3.4	2410	4150	
C 35 2_19.0	19.0	147	380	6.2	1820	3110	74	380	3.1	2500	4400	
C 35 3_20.2	20.2	139	315	4.9	2300	3500	69	395	3.1	2900	4420	
C 35 3_22.1	22.1	127	340	4.9	2300	3570	63	430	3.1	2900	4490	
C 35 3_26.2	26.2	107	355	4.3	2300	3760	53	450	2.7	2890	4730	
C 35 3_28.7	28.7	98	385	4.2	2300	3820	49	450	2.5	2930	4980	
C 35 3_34.7	34.7	81	395	3.6	2300	4110	40	450	2.0	2930	5410	
C 35 3_38.1	38.1	73	435	3.6	2300	4140	37	450	1.9	2970	5690	
C 35 3_43.9	43.9	64	430	3.1	2300	4430	32	450	1.6	2960	6030	
C 35 3_48.2	48.2	58	450	2.9	2310	4580	29.0	450	1.5	2990	6330	
C 35 3_56.5	56.5	50	450	2.5	2300	4910	24.8	450	1.3	2990	6500	
C 35 3_62.0	62.0	45	450	2.3	2330	5170	22.6	450	1.1	3000	6500	
C 35 3_70.7	70.7	40	450	2.0	2320	5460	19.8	450	1.0	3000	6500	
C 35 3_77.6	77.6	36	450	1.8	2350	5740	18.0	450	0.91	3000	6500	
C 35 3_83.8	83.8	33	450	1.7	2330	5910	16.7	450	0.85	3000	6500	
C 35 3_91.9	91.9	30	450	1.5	2360	6200	15.2	450	0.77	3000	6500	
C 35 3_101.6	101.6	27.6	450	1.4	2340	6450	13.8	450	0.70	3000	6500	
C 35 3_111.5	111.5	25.1	450	1.3	2360	6500	12.6	450	0.64	3000	6500	
C 35 3_127.3	127.3	22.0	450	1.1	2350	6500	11.0	450	0.56	3000	6500	
C 35 3_139.8	139.8	20.0	450	1.0	2370	6500	10.0	450	0.51	3000	6500	
C 35 3_147.6	147.6	19.0	450	0.96	2350	6500	9.5	450	0.48	3000	6500	
C 35 3_162.0	162.0	17.3	450	0.88	2380	6500	8.6	450	0.44	3000	6500	
C 35 3_188.0	188.0	14.9	450	0.75	2360	6500	7.4	450	0.38	3000	6500	
C 35 3_206.4	206.4	13.6	450	0.69	2380	6500	6.8	450	0.34	3000	6500	
C 35 4_232.3	232.3	12.1	450	0.62	1170	6500	6.0	450	0.31	1300	6500	
C 35 4_255.0	255.0	11.0	450	0.57	1190	6500	5.5	450	0.28	1300	6500	
C 35 4_290.6	290.6	9.6	450	0.50	1220	6500	4.8	450	0.25	1300	6500	
C 35 4_318.9	318.9	8.8	450	0.45	1230	6500	4.4	450	0.23	1300	6500	
C 35 4_344.3	344.3	8.1	450	0.42	1240	6500	4.1	450	0.21	1300	6500	
C 35 4_377.9	377.9	7.4	450	0.38	1260	6500	3.7	450	0.19	1300	6500	
C 35 4_417.6	417.6	6.7	450	0.35	1270	6500	3.4	450	0.17	1300	6500	
C 35 4_458.4	458.4	6.1	450	0.32	1280	6500	3.1	450	0.16	1300	6500	
C 35 4_523.5	523.5	5.3	450	0.28	1290	6500	2.7	450	0.14	1300	6500	
C 35 4_574.7	574.7	4.9	450	0.25	1300	6500	2.4	450	0.13	1300	6500	
C 35 4_606.6	606.6	4.6	450	0.24	1300	6500	2.3	450	0.12	1300	6500	
C 35 4_665.9	665.9	4.2	450	0.22	1300	6500	2.1	450	0.11	1300	6500	
C 35 4_773.0	773.0	3.6	450	0.19	1300	6500	1.8	450	0.09	1300	6500	
C 35 4_848.5	848.5	3.3	450	0.17	1300	6500	1.6	450	0.09	1300	6500	



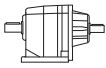
C 35

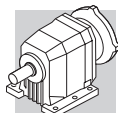
450 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 35 2_2.7	2.7	333	190	7.0	1670	2640	185	200	4.1	3000	3390	121
C 35 2_3.5	3.5	257	200	5.7	2160	2920	143	200	3.1	3000	3810	
C 35 2_4.6	4.6	196	200	4.3	2590	3320	109	200	2.4	3000	4300	
C 35 2_5.8	5.8	155	200	3.4	2680	3690	86	200	1.9	3000	4740	
C 35 2_6.1	6.1	148	380	6.2	2530	3080	82	380	3.4	3000	4150	
C 35 2_6.8	6.8	132	380	5.5	2660	3290	74	380	3.1	3000	4400	
C 35 2_7.9	7.9	114	380	4.8	2680	3530	63	380	2.7	3000	4690	
C 35 2_8.8	8.8	102	380	4.3	2790	3750	57	380	2.4	3000	4960	
C 35 2_10.5	10.5	86	380	3.6	2790	4060	48	380	2.0	3000	5340	
C 35 2_11.7	11.7	77	380	3.2	2900	4300	43	380	1.8	3000	5630	
C 35 2_13.3	13.3	68	380	2.8	2870	4540	38	380	1.6	3000	5930	
C 35 2_14.8	14.8	61	380	2.5	2970	4800	34	380	1.4	3000	6240	
C 35 2_17.1	17.1	53	380	2.2	2940	5110	29.2	380	1.2	3000	6500	
C 35 2_19.0	19.0	47	380	2.0	3000	5390	26.3	380	1.1	3000	6500	
C 35 3_20.2	20.2	45	450	2.3	3000	5160	24.8	450	1.3	3000	6500	
C 35 3_22.1	22.1	41	450	2.1	3000	5430	22.6	450	1.1	3000	6500	
C 35 3_26.2	26.2	34	450	1.7	3000	5830	19.1	450	0.97	3000	6500	
C 35 3_28.7	28.7	31	450	1.6	3000	6120	17.4	450	0.88	3000	6500	
C 35 3_34.7	34.7	25.9	450	1.3	3000	6500	14.4	450	0.73	3000	6500	
C 35 3_38.1	38.1	23.6	450	1.2	3000	6500	13.1	450	0.66	3000	6500	
C 35 3_43.9	43.9	20.5	450	1.0	3000	6500	11.4	450	0.58	3000	6500	
C 35 3_48.2	48.2	18.7	450	0.95	3000	6500	10.4	450	0.53	3000	6500	
C 35 3_56.5	56.5	15.9	450	0.81	3000	6500	8.8	450	0.45	3000	6500	
C 35 3_62.0	62.0	14.5	450	0.74	3000	6500	8.1	450	0.41	3000	6500	
C 35 3_70.7	70.7	12.7	450	0.64	3000	6500	7.1	450	0.36	3000	6500	
C 35 3_77.6	77.6	11.6	450	0.59	3000	6500	6.4	450	0.33	3000	6500	
C 35 3_83.8	83.8	10.7	450	0.54	3000	6500	6.0	450	0.30	3000	6500	
C 35 3_91.9	91.9	9.8	450	0.50	3000	6500	5.4	450	0.28	3000	6500	
C 35 3_101.6	101.6	8.9	450	0.45	3000	6500	4.9	450	0.25	3000	6500	
C 35 3_111.5	111.5	8.1	450	0.41	3000	6500	4.5	450	0.23	3000	6500	
C 35 3_127.3	127.3	7.1	450	0.36	3000	6500	3.9	450	0.20	3000	6500	
C 35 3_139.8	139.8	6.4	450	0.33	3000	6500	3.6	450	0.18	3000	6500	
C 35 3_147.6	147.6	6.1	450	0.31	3000	6500	3.4	450	0.17	3000	6500	
C 35 3_162.0	162.0	5.6	450	0.28	3000	6500	3.1	450	0.16	3000	6500	
C 35 3_188.0	188.0	4.8	450	0.24	3000	6500	2.7	450	0.13	3000	6500	
C 35 3_206.4	206.4	4.4	450	0.22	3000	6500	2.4	450	0.12	3000	6500	
C 35 4_232.3	232.3	3.9	450	0.20	1300	6500	2.2	450	0.11	1300	6500	
C 35 4_255.0	255.0	3.5	450	0.18	1300	6500	2.0	450	0.10	1300	6500	
C 35 4_290.6	290.6	3.1	450	0.16	1300	6500	1.7	450	0.09	1300	6500	
C 35 4_318.9	318.9	2.8	450	0.15	1300	6500	1.6	450	0.08	1300	6500	
C 35 4_344.3	344.3	2.6	450	0.14	1300	6500	1.5	450	0.08	1300	6500	
C 35 4_377.9	377.9	2.4	450	0.12	1300	6500	1.3	450	0.07	1300	6500	
C 35 4_417.6	417.6	2.2	450	0.11	1300	6500	1.2	450	0.06	1300	6500	
C 35 4_458.4	458.4	2.0	450	0.10	1300	6500	1.1	450	0.06	1300	6500	
C 35 4_523.5	523.5	1.7	450	0.09	1300	6500	1.0	450	0.05	1300	6500	
C 35 4_574.7	574.7	1.6	450	0.08	1300	6500	0.87	450	0.05	1300	6500	
C 35 4_606.6	606.6	1.5	450	0.08	1300	6500	0.82	450	0.04	1300	6500	
C 35 4_665.9	665.9	1.4	450	0.07	1300	6500	0.75	450	0.04	1300	6500	
C 35 4_773.0	773.0	1.2	450	0.06	1300	6500	0.65	450	0.03	1300	6500	
C 35 4_848.5	848.5	1.1	450	0.05	1300	6500	0.59	450	0.03	1300	6500	



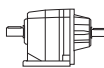
C 41 600 Nm

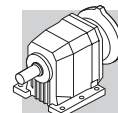
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		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 41 2_2.7	2.7	1037	245	28	980	1290	519	245	14.0	1390	2060	124
C 41 2_3.6	3.6	778	255	22	1070	1540	389	255	10.9	1650	2390	
C 41 2_4.7	4.7	596	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

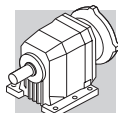
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 41 2_2.7	2.7	333	245	9.0	2560	2650	185	245	5.0	3500	3590	124
C 41 2_3.6	3.6	250	255	7.0	2710	3050	139	255	3.9	3500	4090	
C 41 2_4.7	4.7	191	260	5.5	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

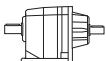
1000 Nm

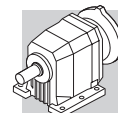
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 51 2_2.6	2.6	1077	315	37	980	3340	538	400	24	1390	4200	127
C 51 2_3.3	3.3	848	340	32	1070	3610	424	420	19.6	1650	4580	
C 51 2_4.5	4.5	622	370	25	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 ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 51 2_2.6	2.6	346	400	15.3	2560	5130	192	400	8.5	3500	6620	127
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	

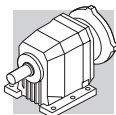


C 61

1600 Nm

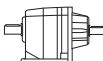
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 61 2_2.8	2.8	1000	445	49	—	4670	500	550	30	770	5930	130
C 61 2_3.7	3.7	757	530	44	—	4950	378	575	24	1730	6600	
C 61 2_4.6	4.6	609	575	39	—	5280	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	

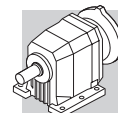
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



C 61

1600 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	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	130
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	

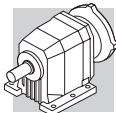


C 70

2300 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 70 2_4.6	4.6	613	1400	95	—	5590	306	1700	57	—	7100	133
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	

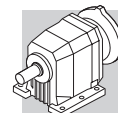
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



C 70

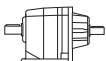
2300 Nm

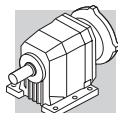
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 70 2_4.6	4.6	197	1800	39	650	9360	109	1800	22	5500	13900	133
C 70 2_5.9	5.9	154	1950	33	560	9980	85	2150	20	2890	13400	
C 70 2_6.3	6.3	144	2100	33	4260	10400	80	2100	18.5	7000	15500	
C 70 2_7.5	7.5	121	2100	28	1120	10800	67	2150	15.9	5400	15600	
C 70 2_8.0	8.0	113	2100	26	5800	12500	63	2100	14.5	7000	17800	
C 70 2_9.5	9.5	95	2150	22	2140	12400	53	2150	12.4	6990	18100	
C 70 2_10.2	10.2	88	2100	20	6870	14600	49	2100	11.3	7000	20200	
C 70 2_11.2	11.2	80	2150	19.0	2620	14000	45	2150	10.6	7000	19800	
C 70 2_13.0	13.0	69	2100	16.0	7000	16900	38	2100	8.9	7000	22800	
C 70 2_14.1	14.1	64	2150	15.1	3900	16000	35	2150	8.4	7000	22300	
C 70 2_15.3	15.3	59	2100	13.6	7000	18400	33	2100	7.5	7000	24600	
C 70 2_16.7	16.7	54	2050	12.2	5470	18500	29.9	2050	6.8	7000	25000	
C 70 2_19.3	19.3	47	2100	10.8	7000	20700	25.9	2100	6.0	7000	25000	
C 70 2_22.9	22.9	39	2100	9.1	7000	22500	21.9	2100	5.1	7000	25000	
C 70 2_27.7	27.7	32	2100	7.5	7000	24600	18.0	2100	4.2	7000	25000	
C 70 2_34.7	34.7	25.9	2100	6.0	7000	25000	14.4	2100	3.3	7000	25000	
C 70 3_41.3	41.3	21.8	2300	5.6	7000	25000	12.1	2300	3.1	7000	25000	
C 70 3_44.7	44.7	20.1	2300	5.2	7000	25000	11.2	2300	2.9	7000	25000	
C 70 3_52.2	52.2	17.3	2300	4.5	7000	25000	9.6	2300	2.5	7000	25000	
C 70 3_56.5	56.5	15.9	2300	4.1	7000	25000	8.8	2300	2.3	7000	25000	
C 70 3_65.9	65.9	13.7	2300	3.5	7000	25000	7.6	2300	2.0	7000	25000	
C 70 3_71.3	71.3	12.6	2300	3.3	7000	25000	7.0	2300	1.8	7000	25000	
C 70 3_81.4	81.4	11.1	2300	2.9	7000	25000	6.1	2300	1.6	7000	25000	
C 70 3_88.2	88.2	10.2	2300	2.6	7000	25000	5.7	2300	1.5	7000	25000	
C 70 3_103.8	103.8	8.7	2300	2.2	7000	25000	4.8	2300	1.2	7000	25000	
C 70 3_112.4	112.4	8.0	2300	2.1	7000	25000	4.4	2300	1.2	7000	25000	
C 70 3_126.8	126.8	7.1	2300	1.8	7000	25000	3.9	2300	1.0	7000	25000	
C 70 3_137.4	137.4	6.6	2300	1.7	7000	25000	3.6	2300	0.90	7000	25000	
C 70 3_150.3	150.3	6.0	2300	1.6	7000	25000	3.3	2300	0.90	7000	25000	
C 70 3_162.8	162.8	5.5	2300	1.4	7000	25000	3.1	2300	0.80	7000	25000	
C 70 3_179.2	179.2	5.0	2300	1.3	7000	25000	2.8	2300	0.70	7000	25000	
C 70 3_194.1	194.1	4.6	2300	1.2	7000	25000	2.6	2300	0.70	7000	25000	
C 70 3_220.9	220.9	4.1	2250	1.0	7000	25000	2.3	2250	0.60	7000	25000	
C 70 3_239.3	239.3	3.8	2300	1.0	7000	25000	2.1	2300	0.50	7000	25000	
C 70 4_251.3	251.3	3.6	2300	0.90	2000	25000	2.0	2300	0.50	2620	25000	
C 70 4_272.2	272.2	3.3	2300	0.90	2030	25000	1.8	2300	0.50	2650	25000	
C 70 4_317.9	317.9	2.8	2300	0.70	2030	25000	1.6	2300	0.40	2650	25000	
C 70 4_344.3	344.3	2.6	2300	0.70	2050	25000	1.5	2300	0.40	2670	25000	
C 70 4_409.4	409.4	2.2	2300	0.60	2050	25000	1.2	2300	0.30	2670	25000	
C 70 4_443.5	443.5	2.0	2300	0.50	2070	25000	1.1	2300	0.30	2700	25000	
C 70 4_512.0	512.0	1.8	2300	0.50	2070	25000	1.0	2300	0.30	2680	25000	
C 70 4_554.7	554.7	1.6	2300	0.40	2090	25000	0.90	2300	0.20	2710	25000	
C 70 4_606.8	606.8	1.5	2300	0.40	2080	25000	0.80	2300	0.20	2700	25000	
C 70 4_657.3	657.3	1.4	2300	0.40	2100	25000	0.80	2300	0.20	2720	25000	
C 70 4_736.0	736.0	1.2	2300	0.30	2090	25000	0.70	2300	0.20	2700	25000	
C 70 4_797.3	797.3	1.1	2300	0.30	2110	25000	0.60	2300	0.20	2720	25000	
C 70 4_922.6	922.6	1.0	2300	0.30	2100	25000	0.50	2300	0.10	2710	25000	
C 70 4_999.5	999.5	0.90	2300	0.20	2110	25000	0.50	2300	0.10	2730	25000	
C 70 4_1069	1069	0.80	2300	0.20	2100	25000	0.50	2300	0.10	2720	25000	
C 70 4_1158	1158	0.80	2300	0.20	2100	25000	0.40	2300	0.10	2800	25000	
C 70 4_1362	1362	0.70	2300	0.20	2100	25000	0.40	2300	0.10	2800	25000	
C 70 4_1476	1476	0.60	2300	0.20	2100	25000	0.30	2300	0.10	2800	25000	



C 80

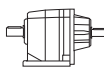
4000 Nm

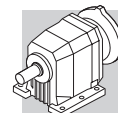
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 80 2_5.6	5.6	496	2400	131	370	10900	248	3100	85	690	12300	136
C 80 2_6.1	6.1	458	2450	124	890	11000	229	3150	80	1380	12700	
C 80 2_7.0	7.0	398	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_215.9	215.9	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 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	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	136
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_215.9	215.9	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	

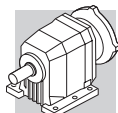


C 90

7200 Nm

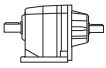
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 90 2_5.2	5.2	542	3500	209	1700	12800	271	4300	128	2170	15800	139
C 90 2_5.6	5.6	500	3600	198	3240	12800	250	4400	121	4250	16000	
C 90 2_6.8	6.8	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	

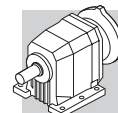
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



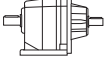
C 90

7200 Nm

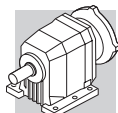
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 90 2_5.2	5.2	174	4900	94	2560	18200	97	5850	62	3010	21600	139
C 90 2_5.6	5.6	161	5050	89	4640	18100	89	6000	59	5720	21800	
C 90 2_6.8	6.8	133	5450	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	
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C 100 12000 Nm

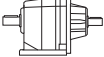
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		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 100 2_4.9	4.9	569	5500	345	1900	20600	285	6800	213	3790	25300	142
C 100 2_5.3	5.3	525	5650	327	2790	21000	263	6950	201	4940	25800	
C 100 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)

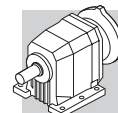


C 100

12000 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
C 100 2_4.9	4.9	183	7800	157	5310	28800	102	9300	104	6720	34400	142
C 100 2_5.3	5.3	169	7950	148	6680	29500	94	9450	98	9740	35200	
C 100 2_6.5	6.5	138	8600	131	5670	31000	77	10250	87	7540	37000	
C 100 2_7.1	7.1	127	8750	123	7050	31800	71	10450	81	10100	37800	
C 100 2_8.4	8.4	108	9350	111	5670	32600	60	10950	72	8530	40100	
C 100 2_9.0	9.0	99	9500	104	7080	33600	55	11350	69	10100	39900	
C 100 2_10.1	10.1	89	10000	98	5540	33600	50	10900	60	10600	44500	
C 100 2_10.9	10.9	82	10150	92	6980	34700	46	11500	58	11300	44300	
C 100 2_12.5	12.5	72	10700	85	3910	35400	40	10850	48	11700	49600	
C 100 2_13.5	13.5	67	10850	80	6440	36700	37	11450	47	12300	49500	
C 100 2_15.2	15.2	59	10800	70	5940	40800	33	10800	39	13000	54700	
C 100 2_16.5	16.5	55	11500	69	6320	39100	30	11500	38	13400	54500	
C 100 2_18.7	18.7	48	10900	58	6310	45100	26.8	10900	32	13400	59800	
C 100 2_20.2	20.2	45	11500	56	6890	45000	24.7	11500	31	14000	60100	
C 100 2_22.2	22.2	40	9850	44	9170	52200	22.5	9850	24	15000	67800	
C 100 2_24.1	24.1	37	10800	44	8930	51200	20.7	10800	25	15000	67200	
C 100 2_29.6	29.6	30	9100	31	12600	61400	16.9	9100	17.0	15000	78300	
C 100 3_34.3	34.3	26.2	11700	35	15000	57800	14.6	11700	19.2	15000	75500	
C 100 3_36.9	36.9	24.4	11800	32	15000	59600	13.5	11800	18.0	15000	77700	
C 100 3_42.9	42.9	21.0	12000	28	15000	63400	11.6	12000	15.7	15000	82300	
C 100 3_46.2	46.2	19.5	12000	26	15000	65600	10.8	12000	14.6	15000	84900	
C 100 3_53.3	53.3	16.9	12000	23	15000	69900	9.4	12000	12.7	15000	85000	
C 100 3_57.4	57.4	15.7	12000	21	15000	72300	8.7	12000	11.8	15000	85000	
C 100 3_64.5	64.5	14.0	12000	18.6	15000	76100	7.8	12000	10.5	15000	85000	
C 100 3_69.4	69.4	13.0	12000	17.5	15000	78600	7.2	12000	9.7	15000	85000	
C 100 3_79.4	79.4	11.3	12000	15.3	15000	83300	6.3	12000	8.5	15000	85000	
C 100 3_85.6	85.6	10.5	12000	14.2	15000	85000	5.8	12000	7.9	15000	85000	
C 100 3_92.7	92.7	9.7	12000	13.1	15000	85000	5.4	12000	7.3	15000	85000	
C 100 3_99.8	99.8	9.0	12000	12.2	15000	85000	5.0	12000	6.8	15000	85000	
C 100 3_111.9	111.9	8.0	12000	10.9	15000	85000	4.5	12000	6.0	15000	85000	
C 100 3_120.5	120.5	7.5	12000	10.1	15000	85000	4.1	12000	5.6	15000	85000	
C 100 3_139.7	139.7	6.4	11500	8.0	15000	85000	3.6	11050	4.5	15000	85000	
C 100 3_150.4	150.4	6.0	12000	8.1	15000	85000	3.3	12000	4.5	15000	85000	
C 100 4_162.1	162.1	5.6	12000	7.7	—	85000	3.1	12000	4.3	—	85000	
C 100 4_185.4	185.4	4.9	12000	6.7	—	85000	2.7	12000	3.7	920	85000	
C 100 4_199.6	199.6	4.5	12000	6.2	—	85000	2.5	12000	3.5	1430	85000	
C 100 4_244.2	244.2	3.7	12000	5.1	—	85000	2.0	12000	2.8	1490	85000	
C 100 4_263.0	263.0	3.4	12000	4.7	—	85000	1.9	12000	2.6	1950	85000	
C 100 4_300.5	300.5	3.0	12000	4.1	—	85000	1.7	12000	2.3	1840	85000	
C 100 4_323.6	323.6	2.8	12000	3.8	850	85000	1.5	12000	2.1	2280	85000	
C 100 4_380.5	380.5	2.4	12000	3.3	700	85000	1.3	12000	1.8	2130	85000	
C 100 4_409.8	409.8	2.2	12000	3.0	1120	85000	1.2	12000	1.7	2550	85000	
C 100 4_466.7	466.7	1.9	12000	2.7	910	85000	1.1	12000	1.5	2340	85000	
C 100 4_502.6	502.6	1.8	12000	2.5	1320	85000	1.0	12000	1.4	2740	85000	
C 100 4_582.6	582.6	1.5	12000	2.1	1100	85000	0.90	12000	1.2	2520	85000	
C 100 4_627.4	627.4	1.4	12000	2.0	1490	85000	0.80	12000	1.1	2910	85000	
C 100 4_720.3	720.3	1.2	12000	1.7	1270	85000	0.70	12000	1.0	2700	85000	
C 100 4_775.7	775.7	1.2	12000	1.6	1650	85000	0.60	12000	0.90	3070	85000	
C 100 4_843.3	843.3	1.1	12000	1.5	1360	85000	0.60	12000	0.80	2790	85000	
C 100 4_908.2	908.2	1.0	12000	1.4	1730	85000	0.60	12000	0.80	3160	85000	
C 100 4_1004	1004	0.90	12000	1.2	1400	85000	0.50	12000	0.70	2830	85000	
C 100 4_1081	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

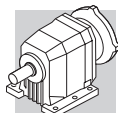
Please be aware that motor-gearbox combinations resulting from charts (B18) and (B20) are purely based on geometrical compatibility.

When selecting a gearmotor, refer to procedure specified at paragraph 11 and observe particularly the condition $S \geq f_s$.

(B 18)

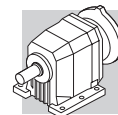
		IEC_  (IM B5)									
		P63 P71	P80 P90	P100 P112	P132	P160	P180	P200	P225	P250	P280
C 11 2	i =	2.8_66.2	2.8_47.6	2.8_47.6							
C 21 2		3.7_63.3 ⚙ (6.4_7.1)	2.7_54.7	2.7_54.7							
C 21 3		58.8_261.0	58.8_261.0	58.8_261.0							
C 31 2		5.0_66.8 ⚙ (6.5_9.3)	2.9_66.8	2.9_66.8	2.9_25.1						
C 31 3		74.3_274.7	74.3_274.7	74.3_274.7							
C 35 2		4.6_19.0 ⚙ (6.1_8.8)	2.7_19.0	2.7_19.0	2.7_19.0						
C 35 3		34.7_206.4	20.2_206.4	20.2_206.4	20.2_77.6						
C 35 4		232.3_848.5	232.3_848.5	232.3_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	240.9_508.0						
C 61 2		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_215.9	43.5_215.9	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					

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



(B 19)

								
		M0	M05	M1	M2	M3	M4	M5
C 05 2	i =	27.1_44.7	5.5_44.7	5.5_44.7				
C 11 2			2.8_66.2	2.8_37.0	2.8_47.7	2.8_47.7		
C 21 2			3.7_63.3 ⦿(6.4_7.1)	3.7_43.3 ⦿(6.4_7.1)	2.7_54.7	2.7_54.7		
C 21 3			58.8_261.0	58.8_261.0	58.8_261.0	58.8_261.0		
C 31 2				5.0_52.4 ⦿(6.5_9.3)	2.9_66.8	2.9_66.8	2.9_25.1	
C 31 3			74.3_274.7	74.3_274.7	74.3_274.7	74.3_274.7		
C 35 2				4.6_19.0 ⦿(6.1_8.8)	2.7_19.0	2.7_19.0	2.7_19.0	
C 35 3				34.7_162.0	20.2_206.4	20.2_206.4	20.2_77.6	
C 35 4			232.3_848.5	232.3_848.5	232.3_848.5	232.3_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	240.9_508.0	
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		

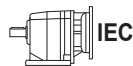


28 MOMENT OF INERTIA

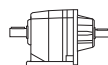
The following charts indicate moment of inertia values J_r [kgm²] referred to the gear unit high speed shaft. A key to the symbols used follows:



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.

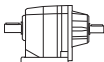


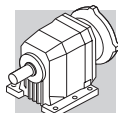
Values under this symbol refer to gearboxes with IEC motor adaptor (IEC size...).



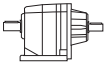
This symbol refers to gearbox values.

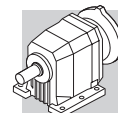
C 05

	i	J (•10 ⁻⁴) [kgm ²]							
			 IEC						
			63	71	80	90	100	112	
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	—	—	—	—	—	—	—

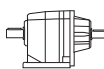


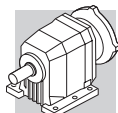
C 11

	i	J (•10 ⁻⁴) [kgm ²]							
			IEC 						
			63	71	80	90	100	112	
C 11 2_2.8	2.8	0.44	1.9	1.9	3.3	3.2	4.5	4.5	1.3
C 11 2_3.7	3.7	0.29	1.8	1.7	3.1	3.1	4.4	4.4	1.2
C 11 2_4.9	4.9	0.19	1.7	1.7	3.0	3.0	4.3	4.3	1.1
C 11 2_6.2	6.2	0.12	1.6	1.6	3.0	2.9	4.2	4.2	1.0
C 11 2_6.9	6.9	0.34	1.8	1.8	3.2	3.1	4.4	4.4	1.2
C 11 2_7.6	7.6	0.33	1.8	1.8	3.2	3.1	4.4	4.4	1.2
C 11 2_9.1	9.1	0.23	1.7	1.7	3.1	3.0	4.3	4.3	1.1
C 11 2_10.1	10.1	0.23	1.7	1.7	3.1	3.0	4.3	4.3	1.1
C 11 2_12.1	12.1	0.16	1.6	1.6	3.0	3.0	4.2	4.2	1.1
C 11 2_13.4	13.4	0.16	1.6	1.6	3.0	2.9	4.2	4.2	1.1
C 11 2_15.5	15.5	0.10	1.6	1.6	2.9	2.9	4.2	4.2	1.0
C 11 2_17.2	17.2	0.10	1.6	1.6	2.9	2.9	4.2	4.2	1.0
C 11 2_18.6	18.6	0.08	1.5	1.5	2.9	2.9	4.2	4.2	1.0
C 11 2_20.6	20.6	0.08	1.5	1.5	2.9	2.9	4.2	4.2	1.0
C 11 2_22.8	22.8	0.06	1.5	1.5	2.9	2.8	4.1	4.1	1.0
C 11 2_25.4	25.4	0.06	1.5	1.5	2.9	2.8	4.1	4.1	1.0
C 11 2_29.5	29.5	0.04	1.5	1.5	2.9	2.8	4.1	4.1	0.90
C 11 2_32.8	32.8	0.04	1.5	1.5	2.9	2.8	4.1	4.1	0.90
C 11 2_33.4	33.4	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.90
C 11 2_37.0	37.0	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.90
C 11 2_42.9	42.9	0.02	1.5	1.5	1.9	1.8	4.1	4.1	0.90
C 11 2_47.6	47.6	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.90
C 11 2_49.7	49.7	0.02	1.5	1.5	—	—	—	—	0.90
C 11 2_55.2	55.2	0.02	1.5	1.5	—	—	—	—	0.90
C 11 2_59.6	59.6	0.01	1.5	1.5	—	—	—	—	0.90
C 11 2_66.2	66.2	0.01	1.5	1.5	—	—	—	—	0.90



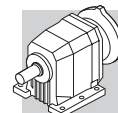
C 21

	i	J (•10 ⁻⁴) [kgm ²]							
			IEC 						
			63	71	80	90	100	112	
C 21 2_2.7	2.7	1.2	—	—	4.0	4.0	5.3	5.3	3.1
C 21 2_3.7	3.7	0.72	2.2	2.2	3.6	3.5	4.8	4.8	2.6
C 21 2_4.8	4.8	0.48	2.0	1.9	3.3	3.3	4.6	4.6	2.4
C 21 2_6.1	6.1	0.29	1.8	1.7	3.1	3.1	4.4	4.4	2.2
C 21 2_6.4	6.4	0.79	—	—	3.6	3.6	4.9	4.9	2.7
C 21 2_7.1	7.1	0.77	—	—	3.6	3.6	4.8	4.8	2.6
C 21 2_8.7	8.7	0.51	2.0	2.0	3.4	3.3	4.6	4.6	2.4
C 21 2_9.6	9.6	0.50	2.0	2.0	3.3	3.3	4.6	4.6	2.4
C 21 2_11.2	11.2	0.36	1.8	1.8	3.2	3.1	4.4	4.4	2.2
C 21 2_12.4	12.4	0.35	1.8	1.8	3.2	3.1	4.4	4.4	2.2
C 21 2_14.3	14.3	0.21	1.7	1.7	3.1	3.0	4.3	4.3	2.1
C 21 2_15.8	15.8	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.1
C 21 2_18.0	18.0	0.15	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 21 2_20.0	20.0	0.15	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 21 2_21.9	21.9	0.12	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 21 2_24.3	24.3	0.12	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 21 2_26.7	26.7	0.09	1.6	1.5	2.9	2.9	4.2	4.2	2.0
C 21 2_29.6	29.6	0.09	1.6	1.5	2.9	2.9	4.2	4.2	2.0
C 21 2_33.1	33.1	0.06	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 21 2_36.8	36.8	0.06	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 21 2_39.0	39.0	0.05	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 21 2_43.3	43.3	0.05	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 21 2_49.3	49.3	0.03	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 21 2_54.7	54.7	0.03	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 21 2_57.0	57.0	0.02	1.5	1.5	—	—	—	—	1.9
C 21 2_63.3	63.3	0.02	1.5	1.5	—	—	—	—	1.9
C 21 3_74.4	74.4	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 21 3_82.6	82.6	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 21 3_90.2	90.2	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 21 3_100.2	100.2	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 21 3_110.0	110.0	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 21 3_122.2	122.2	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 21 3_136.5	136.5	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 21 3_151.7	151.7	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 21 3_160.7	160.7	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 21 3_178.5	178.5	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 21 3_203.2	203.2	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 21 3_225.8	225.8	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 21 3_235.0	235.0	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 21 3_261.0	261.0	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92

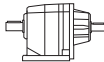


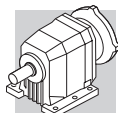
C 31

	i	J (•10 ⁻⁴) [kgm ²]								
			IEC 							
			63	71	80	90	100	112	132	
C 31 2_2.9	2.9	2.3	—	—	5.2	5.1	6.4	6.4	19	4.6
C 31 2_3.7	3.7	1.6	—	—	4.4	4.3	5.6	5.6	18	3.8
C 31 2_5.0	5.0	0.87	2.3	2.3	3.7	3.7	5.0	5.0	18	3.1
C 31 2_6.3	6.3	0.63	2.1	2.1	3.5	3.4	4.7	4.7	17	2.8
C 31 2_6.5	6.5	1.6	—	—	4.4	4.4	5.7	5.7	18	3.8
C 31 2_7.2	7.2	1.5	—	—	4.4	4.3	5.6	5.6	18	3.7
C 31 2_8.4	8.4	1.1	—	—	3.9	3.9	5.2	5.2	18	3.3
C 31 2_9.3	9.3	1.1	—	—	3.9	3.8	5.1	5.1	18	3.3
C 31 2_11.1	11.1	0.62	2.1	2.1	3.5	3.4	4.7	4.7	17	2.8
C 31 2_12.3	12.3	0.60	2.1	2.1	3.5	3.4	4.7	4.7	17	2.8
C 31 2_14.0	14.0	0.47	1.9	1.9	3.3	3.3	4.5	4.5	17	2.7
C 31 2_15.6	15.6	0.46	1.9	1.9	3.3	3.3	4.5	4.5	17	2.7
C 31 2_18.1	18.1	0.34	1.8	1.8	3.2	3.1	4.4	4.4	17	2.6
C 31 2_20.1	20.1	0.34	1.8	1.8	3.2	3.1	4.4	4.4	17	2.6
C 31 2_22.6	22.6	0.25	1.7	1.7	3.1	3.0	4.3	4.3	17	2.5
C 31 2_25.1	25.1	0.25	1.7	1.7	3.1	3.0	4.3	4.3	17	2.5
C 31 2_26.8	26.8	0.20	1.7	1.7	3.0	3.0	4.3	4.3	—	2.4
C 31 2_29.8	29.8	0.19	1.7	1.7	3.0	3.0	4.3	4.3	—	2.4
C 31 2_32.5	32.5	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	2.4
C 31 2_36.1	36.1	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	2.4
C 31 2_40.7	40.7	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.3
C 31 2_45.3	45.3	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.3
C 31 2_47.2	47.2	0.08	1.6	1.5	2.9	2.9	4.2	4.2	—	2.3
C 31 2_52.4	52.4	0.08	1.6	1.5	2.9	2.9	4.2	4.2	—	2.3
C 31 2_60.2	60.2	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	2.3
C 31 2_66.8	66.8	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	2.3
C 31 3_74.3	74.3	0.06	1.5	1.5	2.9	2.8	4.1	4.1	—	0.96
C 31 3_82.6	82.6	0.06	1.5	1.5	2.9	2.8	4.1	4.1	—	0.96
C 31 3_93.0	93.0	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 31 3_103.3	103.3	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 31 3_110.2	110.2	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 31 3_122.4	122.4	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 31 3_133.6	133.6	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 31 3_148.4	148.4	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 31 3_167.5	167.5	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
C 31 3_186.0	186.0	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
C 31 3_194.1	194.1	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
C 31 3_215.6	215.6	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
C 31 3_247.3	247.3	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
C 31 3_274.7	274.7	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94

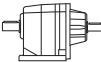


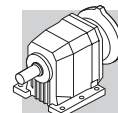
C 35

	i	J (•10 ⁻⁴) [kgm ²]								
			 IEC							
			63	71	80	90	100	112	132	
C 35 2_2.7	2.7	3.6	—	—	6.5	6.4	7.7	7.7	20	14
C 35 2_3.5	3.5	2.4	—	—	5.3	5.2	6.5	6.5	19	13
C 35 2_4.6	4.6	1.5	3.0	3.0	4.4	4.3	5.6	5.6	18	12
C 35 2_5.8	5.8	1.0	2.5	2.5	3.9	3.8	5.1	5.1	18	12
C 35 2_6.1	6.1	2.3	—	—	5.2	5.1	6.4	6.4	19	13
C 35 2_6.8	6.8	2.2	—	—	5.1	5.0	6.3	6.3	19	13
C 35 2_7.9	7.9	1.6	—	—	4.5	4.4	5.7	5.7	18	12
C 35 2_8.8	8.8	1.5	—	—	4.4	4.3	5.6	5.6	18	12
C 35 2_10.5	10.5	1.1	2.6	2.6	4.0	3.9	5.2	5.2	18	12
C 35 2_11.7	11.7	1.0	2.5	2.5	3.9	3.8	5.1	5.1	18	12
C 35 2_13.3	13.3	0.70	2.2	2.2	3.6	3.5	4.8	4.8	18	11
C 35 2_14.8	14.8	0.59	2.1	2.1	3.5	3.4	4.7	4.7	17	11
C 35 2_17.1	17.1	0.49	2.0	2.0	3.4	3.3	4.6	4.6	17	11
C 35 2_19.0	19.0	0.47	2.0	2.0	3.4	3.3	4.6	4.6	17	11
C 35 3_20.2	20.2	1.7	—	—	4.6	4.5	5.8	5.8	19	12
C 35 3_22.1	22.1	1.7	—	—	4.6	4.5	5.8	5.8	19	12
C 35 3_26.2	26.2	1.2	—	—	4.1	4.0	5.3	5.3	18	12
C 35 3_28.7	28.7	1.2	—	—	4.1	4.0	5.3	5.3	18	12
C 35 3_34.7	34.7	0.80	2.3	2.3	3.7	3.6	4.9	4.9	18	11
C 35 3_38.1	38.1	0.80	2.3	2.3	3.7	3.6	4.9	4.9	18	11
C 35 3_43.9	43.9	0.50	2.0	2.0	3.4	3.3	4.6	4.6	17	11
C 35 3_48.2	48.2	0.50	2.0	2.0	3.4	3.3	4.6	4.6	17	11
C 35 3_56.5	56.5	0.38	1.9	1.9	3.3	3.2	4.5	4.5	17	11
C 35 3_62.0	62.0	0.41	1.9	1.9	3.3	3.2	4.5	4.5	17	11
C 35 3_70.7	70.7	0.28	1.8	1.8	3.2	3.1	4.4	4.4	17	11
C 35 3_77.6	77.6	0.28	1.8	1.8	3.2	3.1	4.4	4.4	17	11
C 35 3_83.8	83.8	0.21	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 35 3_91.9	91.9	0.21	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 35 3_101.6	101.6	0.16	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 35 3_111.5	111.5	0.16	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 35 3_127.3	127.3	0.11	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 35 3_139.8	139.8	0.11	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 35 3_147.6	147.6	0.09	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 35 3_162.0	162.0	0.09	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 35 3_188.0	188.0	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 35 3_206.4	206.4	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 35 4_232.3	232.3	0.08	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_255.0	255.0	0.08	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_290.6	290.6	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_318.9	318.9	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_344.3	344.3	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_377.9	377.9	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_417.6	417.6	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_458.4	458.4	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_523.5	523.5	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_574.7	574.7	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_606.6	606.6	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_665.9	665.9	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_773.0	773.0	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 35 4_848.5	848.5	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90

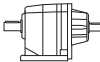


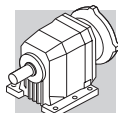
C 41

	i	J (•10 ⁻⁴) [kgm ²]								
			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

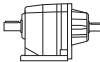


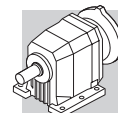
C 51

	i	J (•10 ⁻⁴) [kgm ²]										
			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	17	—	—	1.2
C 51 4_263.8	263.8	0.30	1.8	1.8	3.2	3.1	4.4	4.4	17	—	—	1.2
C 51 4_297.8	297.8	0.30	1.8	1.8	3.2	3.1	4.4	4.4	17	—	—	1.2
C 51 4_326.1	326.1	0.30	1.8	1.8	3.2	3.1	4.4	4.4	17	—	—	1.2
C 51 4_380.0	380.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	17	—	—	1.1
C 51 4_416.0	416.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	17	—	—	1.1
C 51 4_463.9	463.9	0.20	1.7	1.7	3.1	3.0	4.3	4.3	17	—	—	1.1
C 51 4_508.0	508.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	17	—	—	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



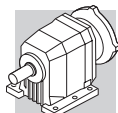
C 61

	i	J (•10 ⁻⁴) [kgm ²]										
			 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	41
C 61 2_4.6	4.6	14	—	—	17	17	18	18	33	78	76	36
C 61 2_6.0	6.0	8.8	—	—	12	12	13	13	28	78	76	31
C 61 2_6.7	6.7	14	—	—	—	—	—	—	33	78	76	36
C 61 2_7.5	7.5	13	—	—	—	—	—	—	32	78	76	35
C 61 2_8.8	8.8	13	—	—	16	16	17	17	32	78	76	35
C 61 2_9.8	9.8	12	—	—	15	15	16	16	31	78	76	34
C 61 2_10.9	10.9	9.6	—	—	13	12	14	14	29	78	76	31
C 61 2_12.1	12.1	9.2	—	—	12	12	13	13	28	78	76	31
C 61 2_14.3	14.3	5.8	—	—	8.7	8.6	9.9	9.9	25	78	76	28
C 61 2_15.9	15.9	5.6	—	—	8.5	8.4	9.7	9.7	25	78	76	27
C 61 2_17.7	17.7	4.4	—	—	7.3	7.2	8.5	8.5	23	78	76	26
C 61 2_19.6	19.6	4.3	—	—	7.2	7.1	8.4	8.4	23	78	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	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	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	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	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	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	23
C 61 3_26.8	26.8	10	—	—	13	13	14	14	29	78	76	32
C 61 3_29.4	29.4	10	—	—	13	13	14	14	29	78	76	32
C 61 3_33.0	33.0	8.1	—	—	11	11	12	12	27	78	76	30
C 61 3_36.1	36.1	8.1	—	—	11	11	12	12	27	78	76	30
C 61 3_43.4	43.4	5.0	—	—	7.9	7.8	9.1	9.1	24	78	76	27
C 61 3_47.6	47.6	5.0	—	—	7.9	7.8	9.1	9.1	24	78	76	27
C 61 3_53.5	53.5	3.9	—	—	6.8	6.7	8.0	8.0	23	78	76	26
C 61 3_58.6	58.6	3.8	—	—	6.7	6.6	7.9	7.9	23	78	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	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	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	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	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	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	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	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	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

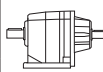


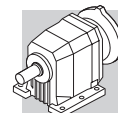
C 70

	i	J (•10-4) [kgm²]													
			 IEC												
			63	71	80	90	100 112	132	160	180	200	225	250		
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



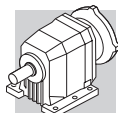
C 80

	i	J (•10-4) [kgm²]													
			 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

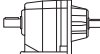


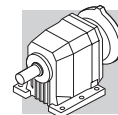
C 90

	i	J (•10 ⁻⁴) [kgm ²]													
			 IEC												
			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



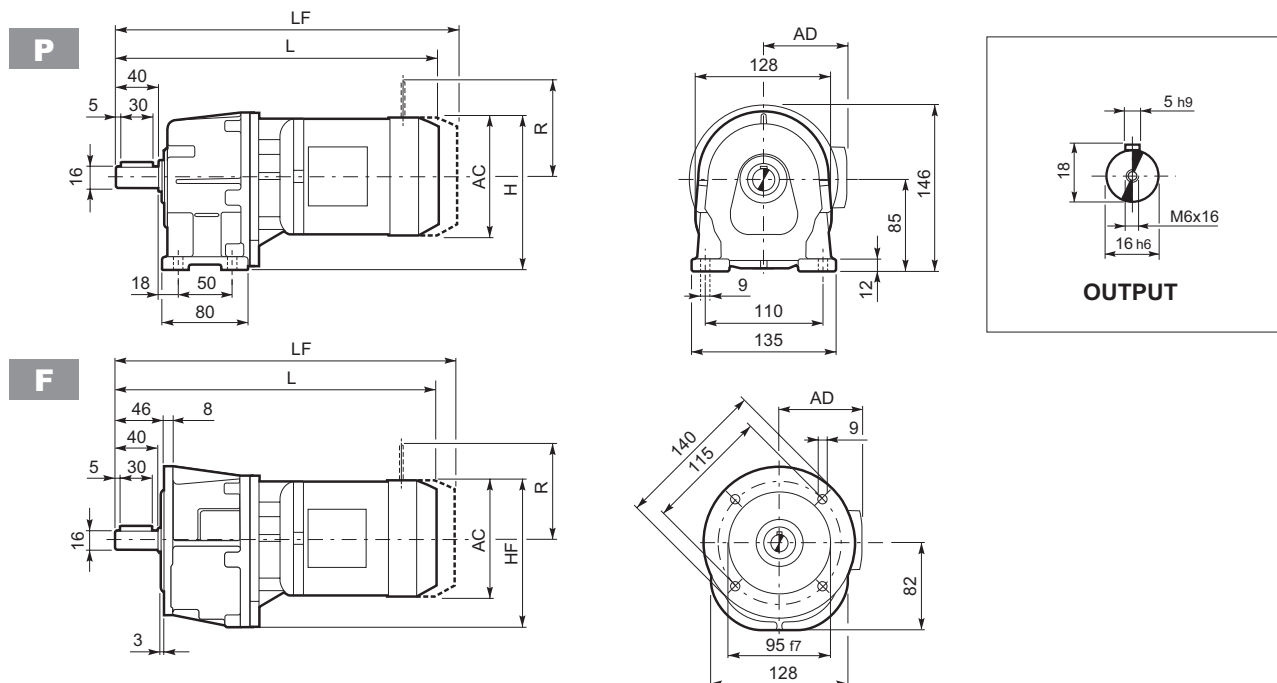
C 100

	i	J (•10 ⁻⁴) [kgm ²]													
			IEC 												
			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

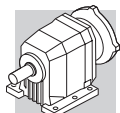


29 DIMENSIONS

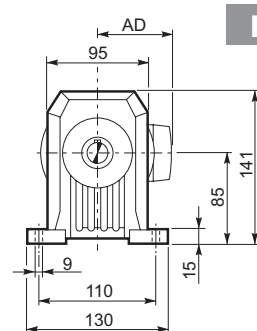
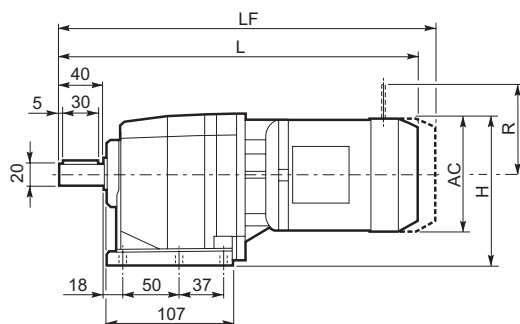
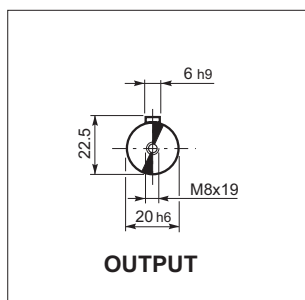
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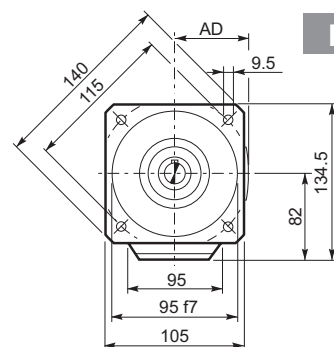
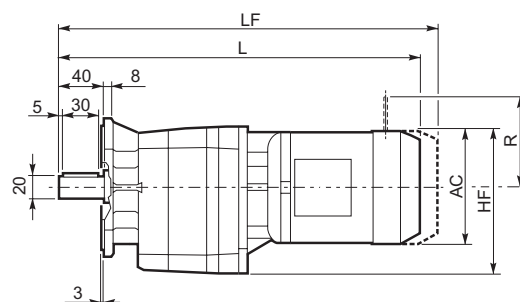
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	 Kg	LF	 Kg	R	AD	R	AD
C 05 2	S0	M0	110	140	137	287	91	7	—	—	—	—	—	—
C 05 2	S05	M05	121	145.5	142.5	332	95	8	398	10	96	122	116	95
C 05 2	S1	M1	138	154	151	360.5	108	11	423	13	103	135	124	108



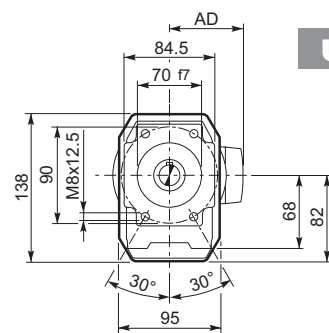
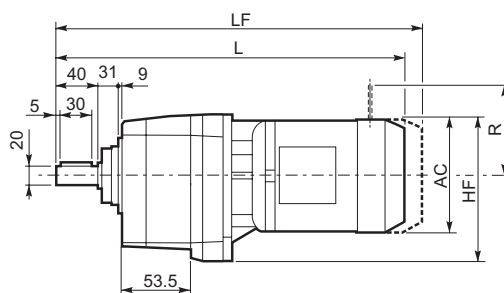
C 11...M



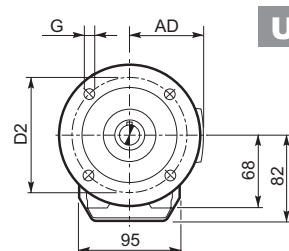
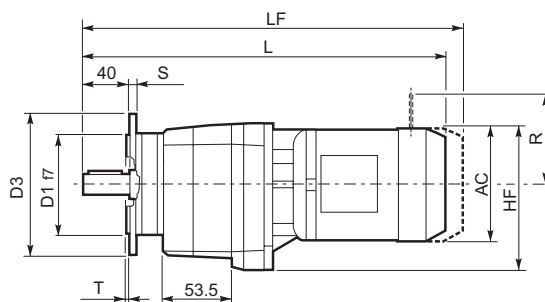
P



F



U

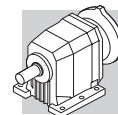


UF

C 11 2 _U

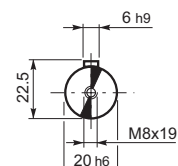
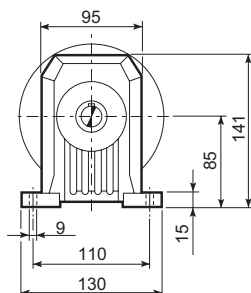
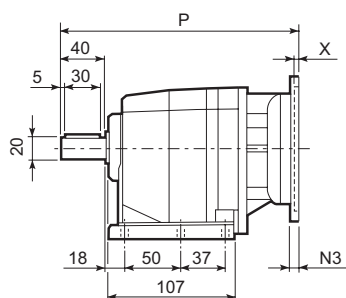
	D1	D2	D3	G	T	S
FA	80	100	120	7	3	8
FB	95	115	140	9	3	10
FC	110	130	160	9	3	10

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



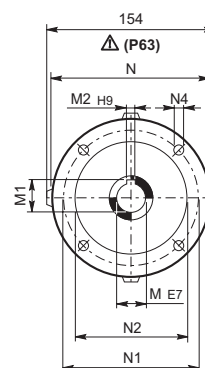
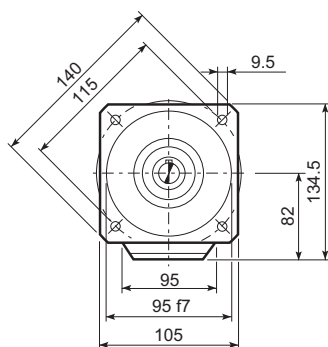
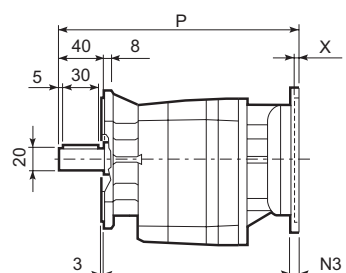
C 11...P (IEC)

P



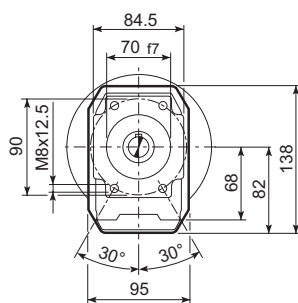
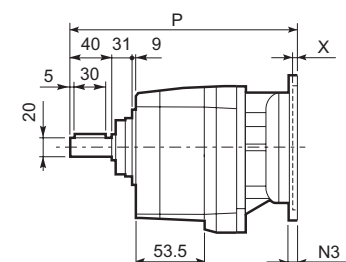
OUTPUT

F

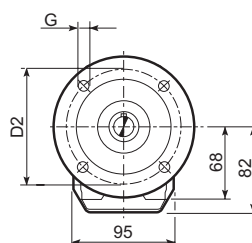
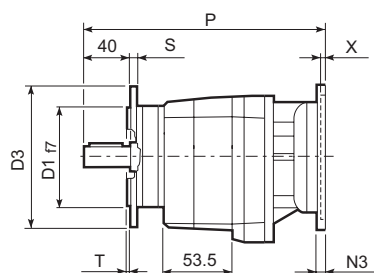


INPUT

U



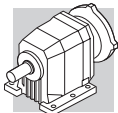
UF



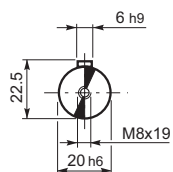
C 11 2 U

	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

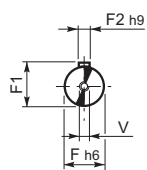
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 11 2	P63	11	12.8	4	140	115	95	—	M8x19	4	244.5	6
C 11 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	244.5	6
C 11 2	P80	19	21.8	6	200	165	130	—	M10x12	4	264	7
C 11 2	P90	24	27.3	8	200	165	130	—	M10x12	4	264	7
C 11 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	274	11
C 11 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	274	11



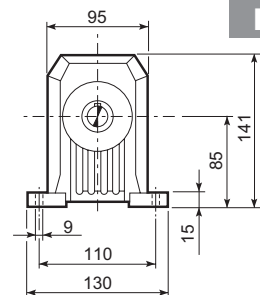
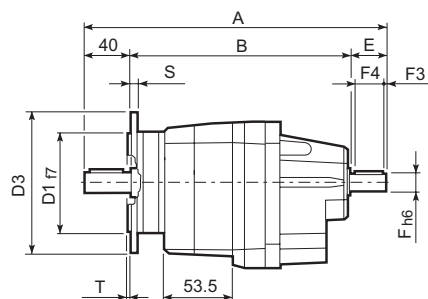
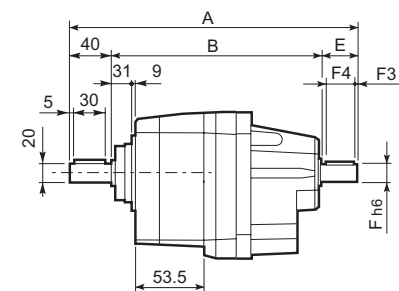
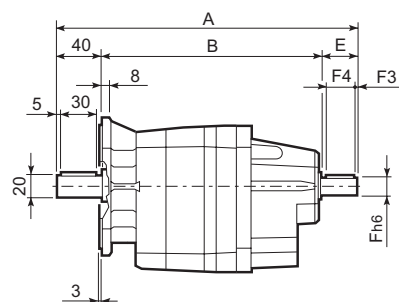
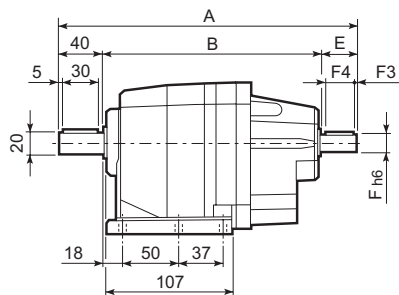
C 11...HS



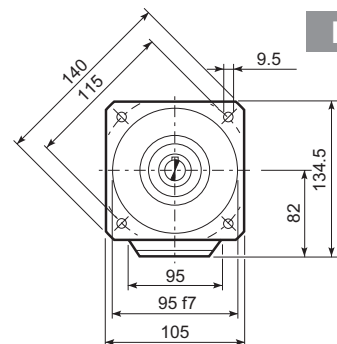
OUTPUT



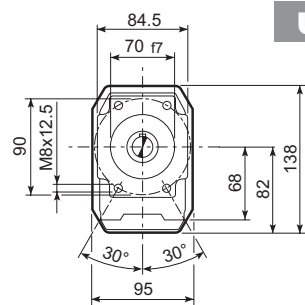
INPUT



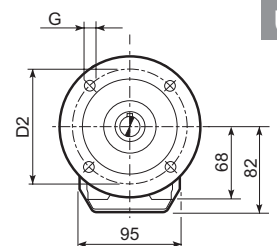
P



F



U

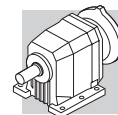


UF

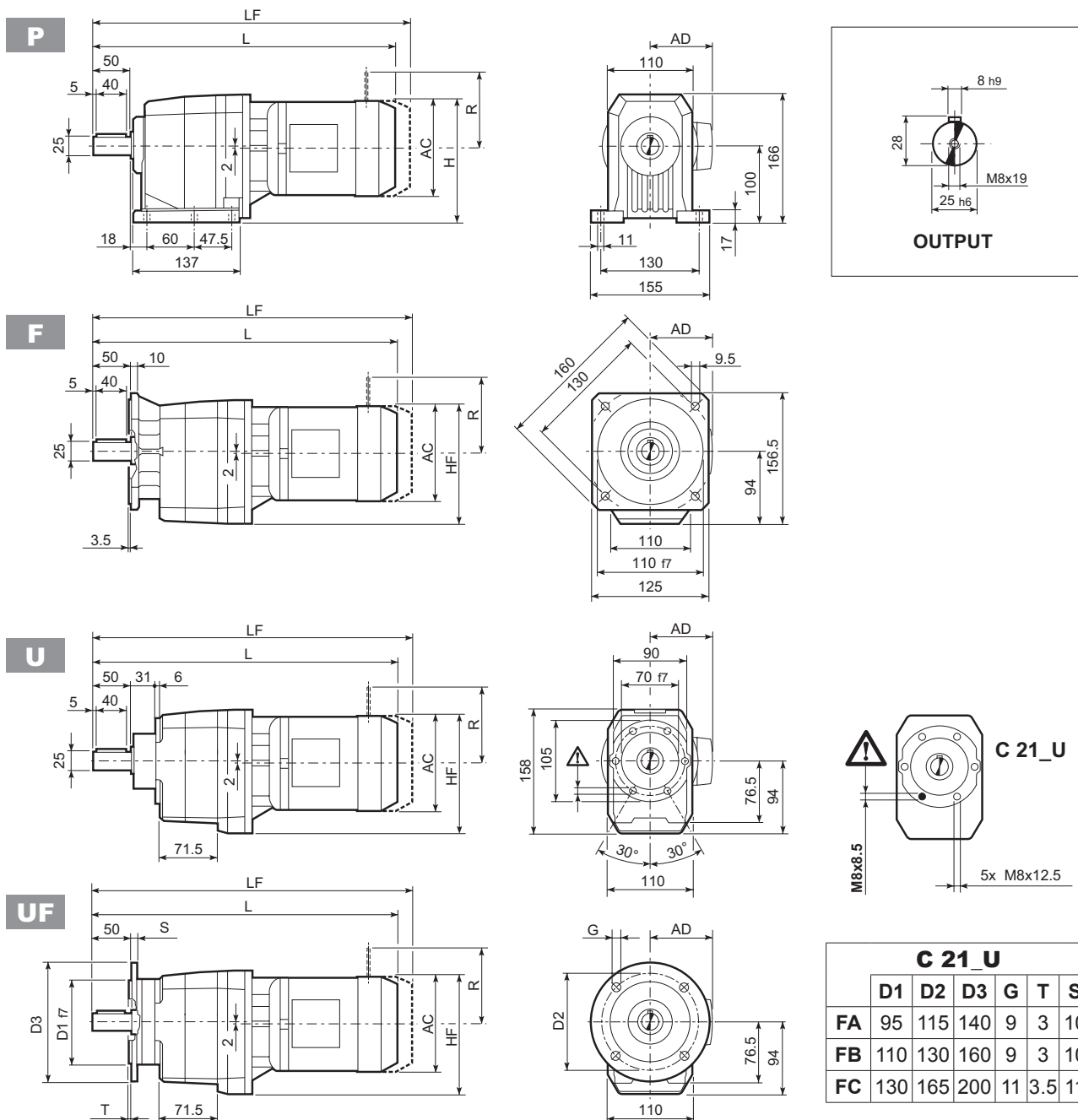
C 11 2_U

	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

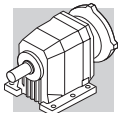
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 11 2	HS	251.5	171.5	40	16	18	5	2.5	35	M6x16	7.8



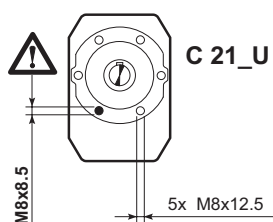
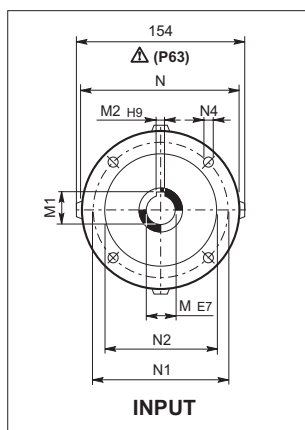
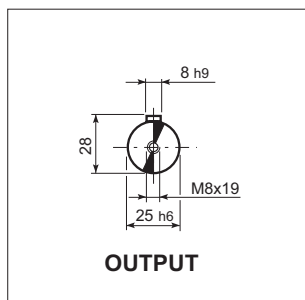
C 21...M



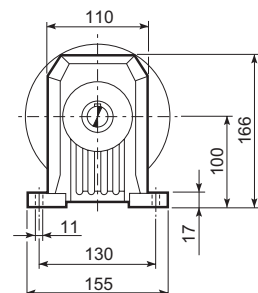
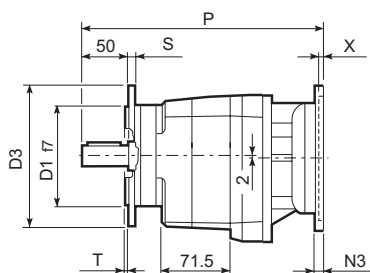
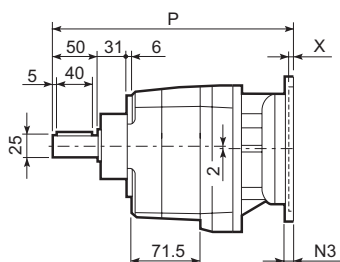
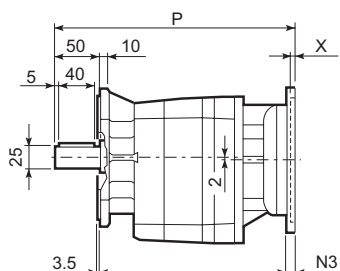
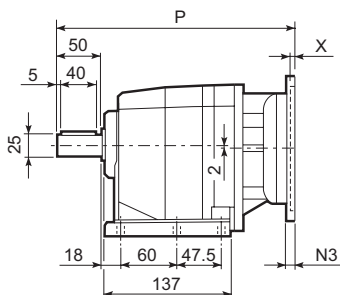
										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg		LF	Kg	R	AD	R	AD
C 21 2	S1	M1	138	169	163	428	108	11		489	14	103	135	124	108
C 21 2	S2	M2S	156	178	170	456	119	16		527	19	129	146	134	119
C 21 2	S3	M3S	195	197.5	191.5	500	142	21		596	26	160	158	160	142
C 21 2	S3	M3L	195	197.5	191.5	532	142	27		623	32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



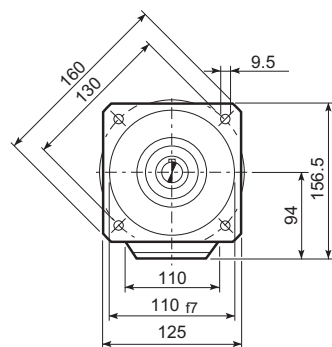
C 21...P(IEC)



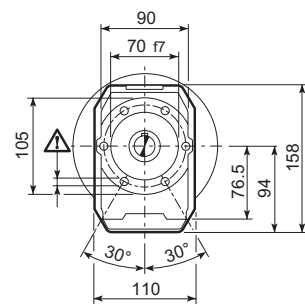
C 21_U						
	D1	D2	D3	G	T	S
FA	95	115	140	9	3	10
FB	110	130	160	9	3	10
FC	130	165	200	11	3.5	11



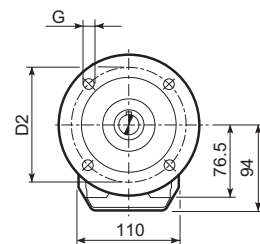
P



F

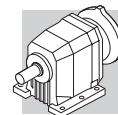


U



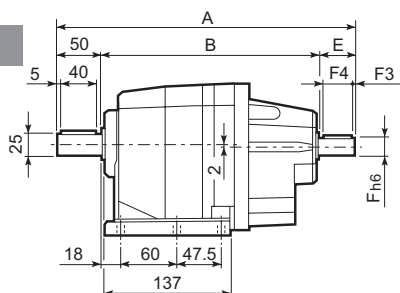
UF

		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 21 2	P63	11	12.8	4	140	115	95	—	M8x19	4	273	7
C 21 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	273	7
C 21 2	P80	19	21.8	6	200	165	130	—	M10x12	4	292.5	8
C 21 2	P90	24	27.3	8	200	165	130	—	M10x12	4	292.5	8
C 21 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	302.5	12
C 21 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	302.5	12
C 21 3	P63	11	12.8	4	140	115	95	—	M8x19	4	328.5	8
C 21 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	328.5	8
C 21 3	P80	19	21.8	6	200	165	130	—	M10x12	4	348	9
C 21 3	P90	24	27.3	8	200	165	130	—	M10x12	4	348	9
C 21 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	358	13
C 21 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	358	13

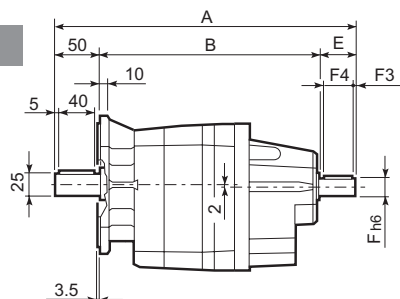


C 21...HS

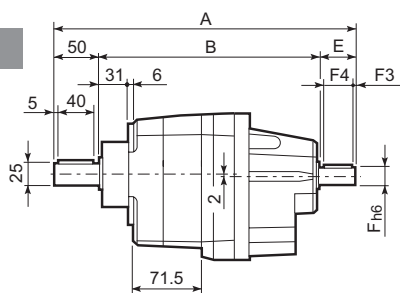
P



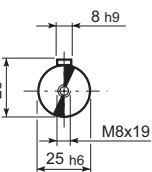
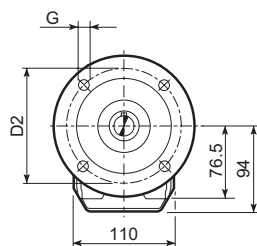
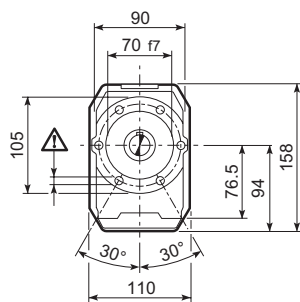
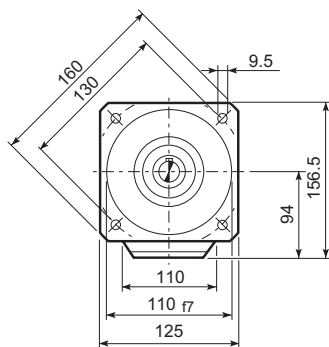
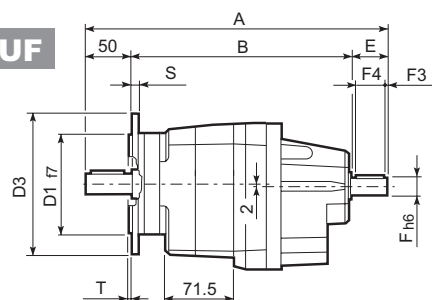
F



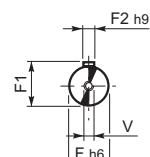
U



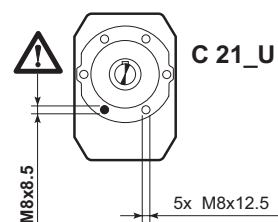
UF



OUTPUT



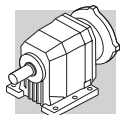
INPUT



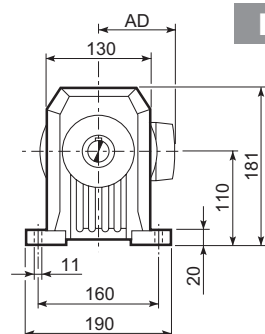
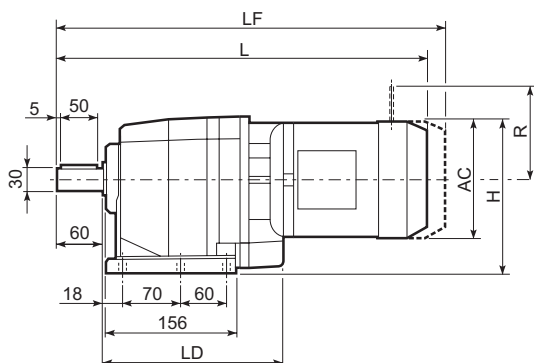
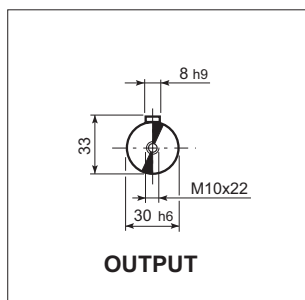
C 21_U

	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

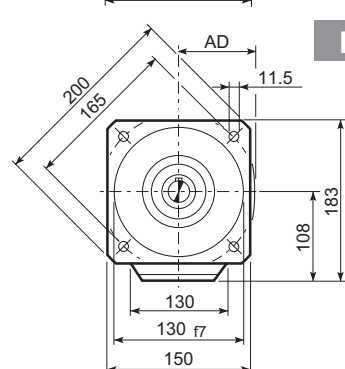
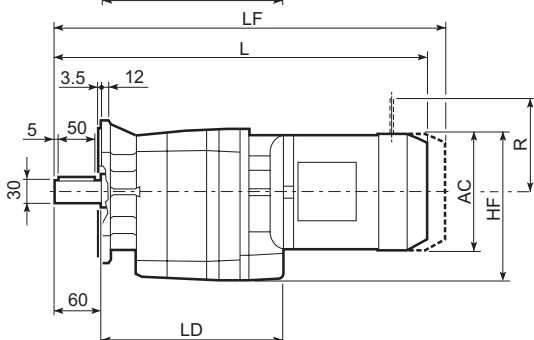
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 21 2	HS	323	233	40	19	21.5	6	2.5	35	M6x16	7.2
C 21 3		335.5	245.5	40	16	18	6	2.5	36	M6x16	7.5



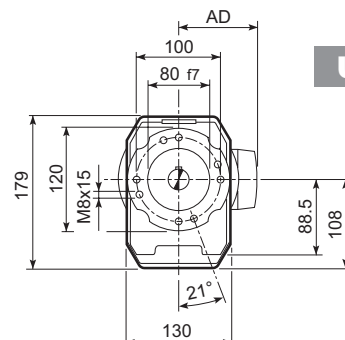
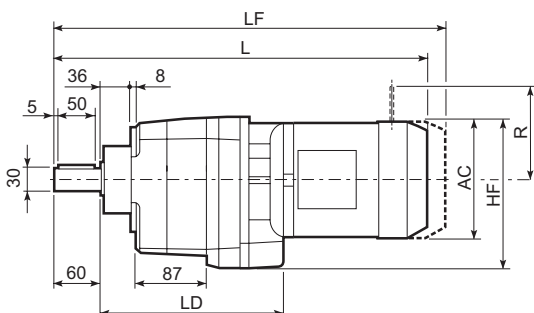
C 31...M



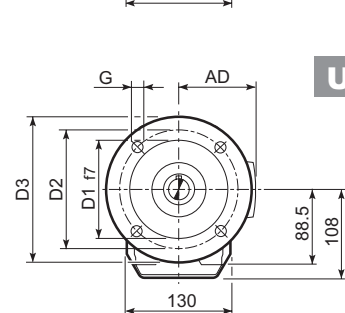
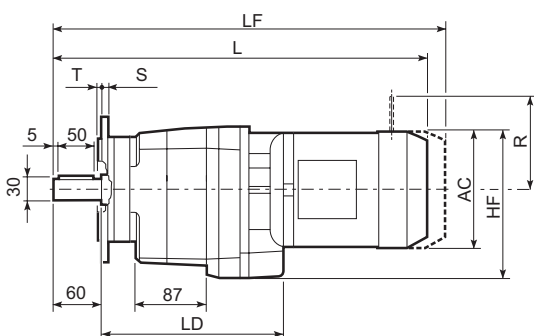
P



F



U

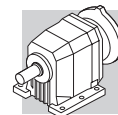


UF

C 31_U

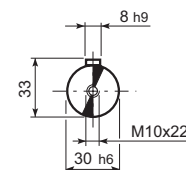
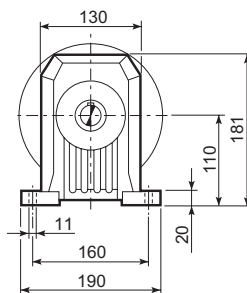
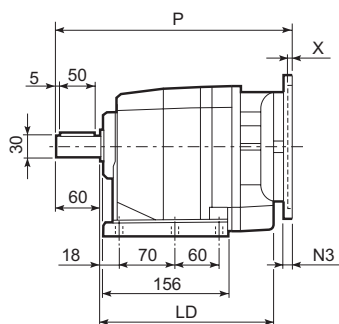
	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

			AC	H	HF	L	LD	AD	Kg	M...FD M...FA		M...FD		M...FA	
										LF	Kg	R	AD	R	AD
C 31 2	S1	M1	138	179	177	462.5	205.5	108	14	523.5	16	103	135	124	108
C 31 2	S2	M2S	156	188	186	490.5	217.5	119	18	561.5	21	129	146	134	119
C 31 2	S3	M3S	195	207.5	205.5	534.5	227.5	142	23	630.5	28	160	158	160	142
C 31 2	S3	M3L	195	207.5	205.5	566.5	227.5	142	32	657.5	37	160	158	160	142
C 31 2	S4	M4	258	239	237	674.5	—	193	66	738.5	82	226	210	217	193
C 31 2	S4	M4LC	258	239	237	709.5	—	193	74	763.5	90	226	210	217	193
C 31 3	S05	M05	121	170.5	168.5	491	—	95	13	557	15	96	122	116	95
C 31 3	S1	M1	138	179	177	520	—	108	15	581	17	103	135	124	108
C 31 3	S2	M2S	156	188	186	548	—	119	18	619	21	129	146	134	119



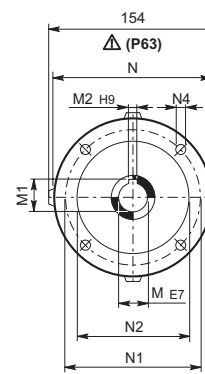
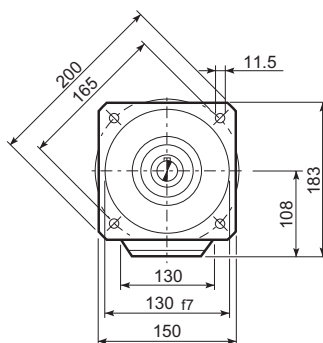
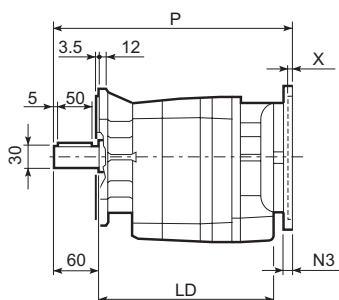
C 31...P(IEC)

P



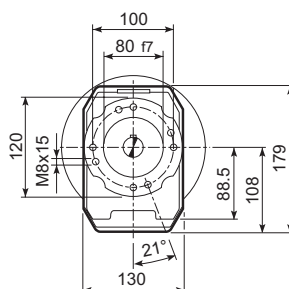
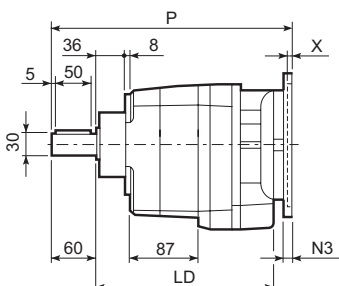
OUTPUT

F

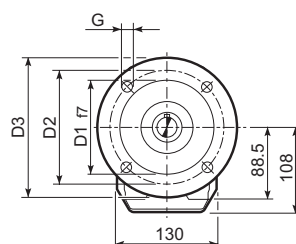
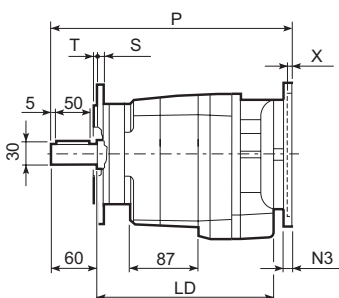


INPUT

U



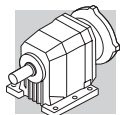
UF



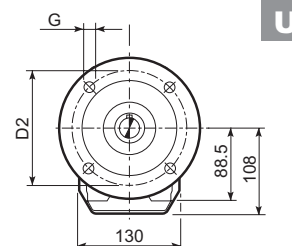
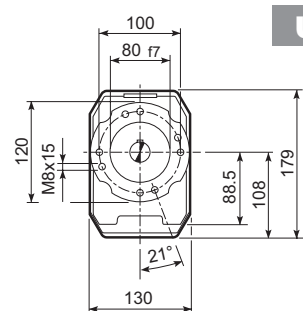
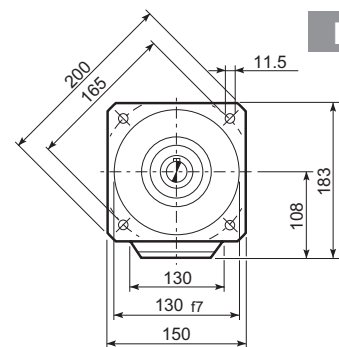
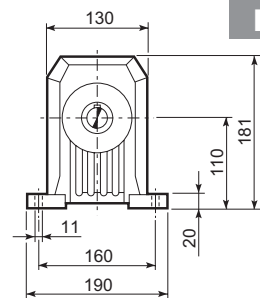
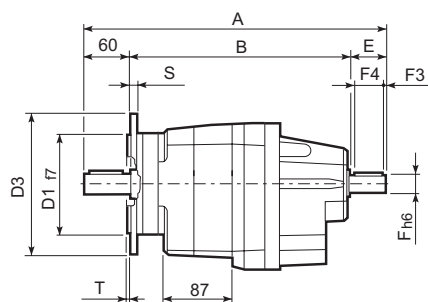
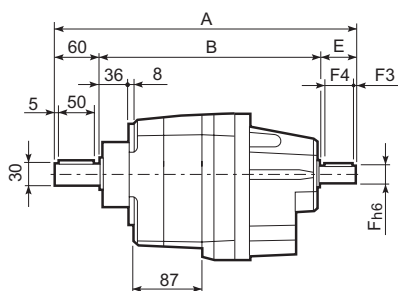
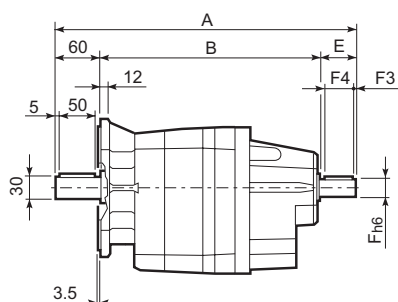
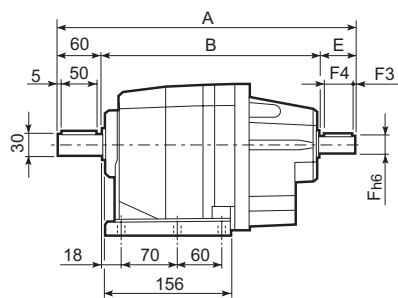
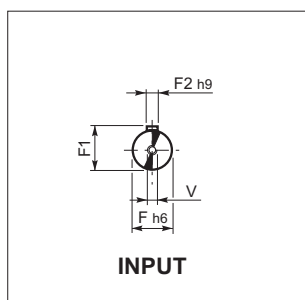
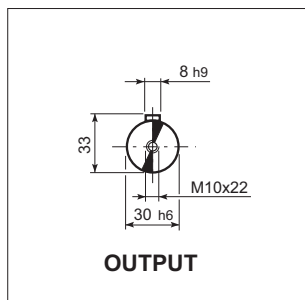
C 31_U

	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	Kg
C 31 2	P63	217.5	11	12.8	4	140	115	95	—	M8x19	4	307.5	9
C 31 2	P71	217.5	14	16.3	5	160	130	110	—	M8x16	4.5	307.5	9
C 31 2	P80	227.5	19	21.8	6	200	165	130	—	M10x12	4	327	10
C 31 2	P90	227.5	24	27.3	8	200	165	130	—	M10x12	4	327	10
C 31 2	P100	227.5	28	31.3	8	250	215	180	—	M12x16	4.5	337	14
C 31 2	P112	227.5	28	31.3	8	250	215	180	—	M12x16	4.5	337	14
C 31 2	P132	—	38	41.3	10	300	265	230	16	14	5	373	17
C 31 3	P63	—	11	12.8	4	140	115	95	—	M8x19	4	365	10
C 31 3	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	365	10
C 31 3	P80	—	19	21.8	6	200	165	130	—	M10x12	4	384.5	11
C 31 3	P90	—	24	27.3	8	200	165	130	—	M10x12	4	384.5	11
C 31 3	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	394.5	15
C 31 3	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	394.5	15

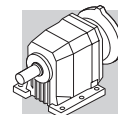


C 31...HS

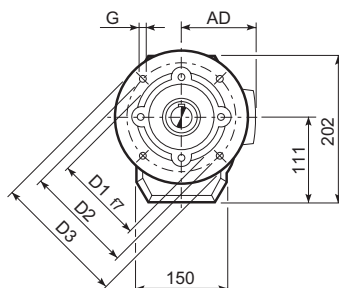
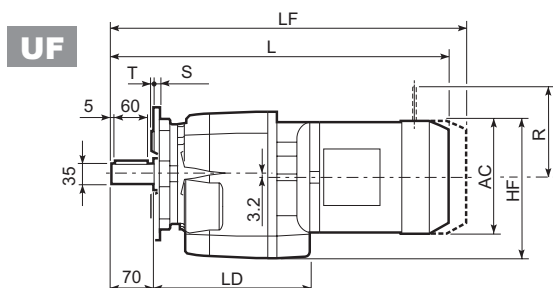
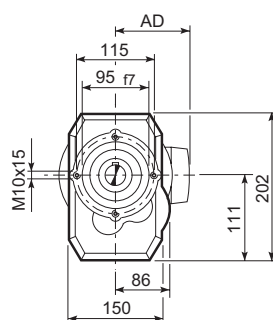
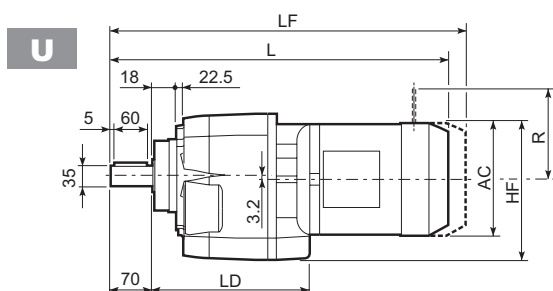
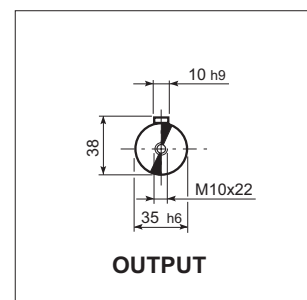
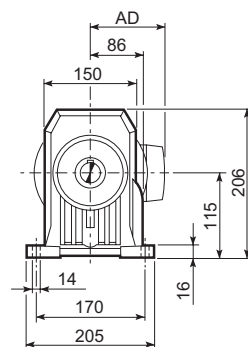
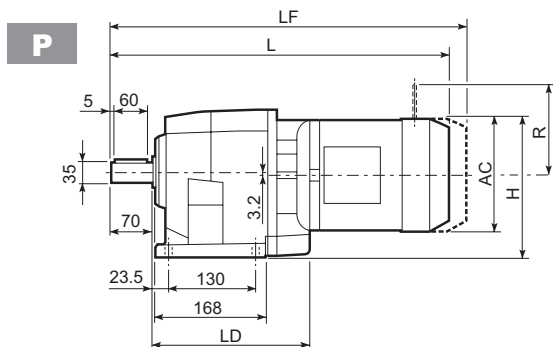


C 31_U						
	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

		A	B	E	F	F1	F2	F3	F4	V	Kg
C 31 2	HS	357.5	257.5	40	19	21.5	6	2.5	35	M6x16	11.1
C 31 3		372	272	40	16	18	5	2.5	36	M6x16	10.6

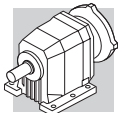


C 35...M

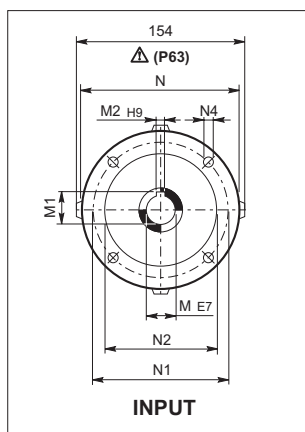
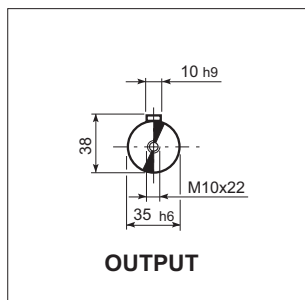


C 35_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14

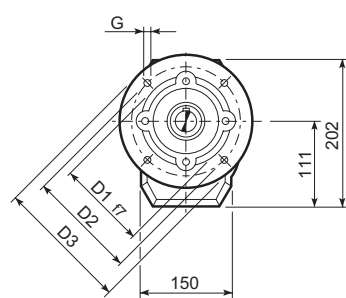
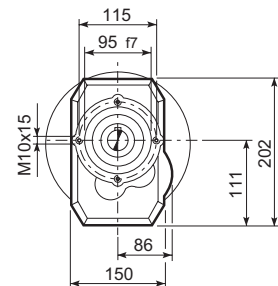
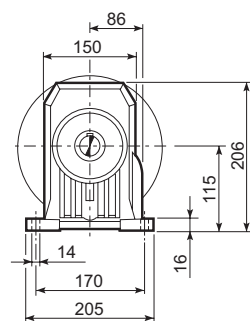
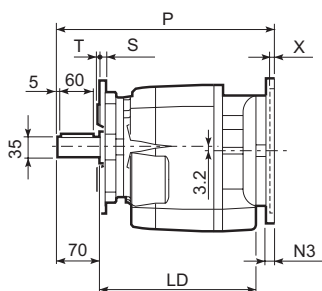
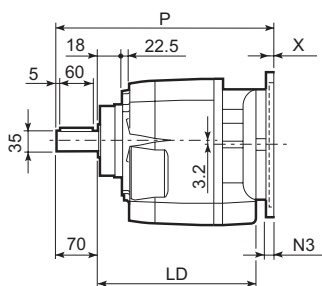
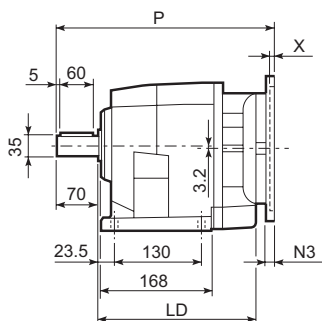
										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD		LF		R	AD	R	AD
C 35 2/3	S1	M1	138	184	177	481	214	108	20	542	21	103	135	124	108
C 35 2/3	S2	M2S	156	193	186	509	226	119	23	580	27	129	146	134	119
C 35 2/3	S3	M3S	195	212.5	205.5	553	236	142	28	649	33	160	158	160	142
C 35 2/3	S3	M3L	195	212.5	205.5	585	236	142	37	676	42	160	158	160	142
C 35 2/3	S4	M4	258	244	240	693.5	—	193	71	802.5	87	226	210	217	193
C 35 2/3	S4	M4LC	258	244	240	728.5	—	193	79	827.5	95	226	210	217	193
C 35 4	S05	M05	121	175.5	168.5	509.5	—	95	19	575.5	20	96	122	116	95
C 35 4	S1	M1	138	184	177	538.5	—	108	21	599.5	22	103	135	124	108
C 35 4	S2	M2S	156	193	186	566.5	—	119	24	637.5	28	129	146	134	119
C 35 4	S3	M3S	195	212.5	205.5	610.5	—	142	29	706.5	34	160	158	160	142
C 35 4	S3	M3L	195	212.5	205.5	642.5	—	142	38	733.5	43	160	158	160	142



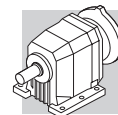
C 35...P(IEC)



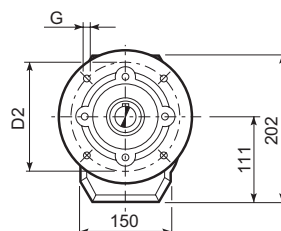
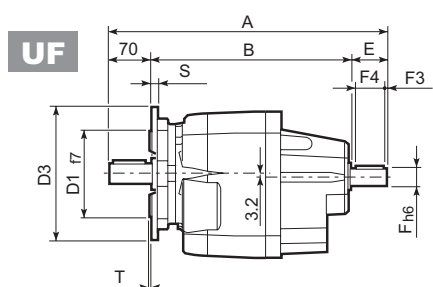
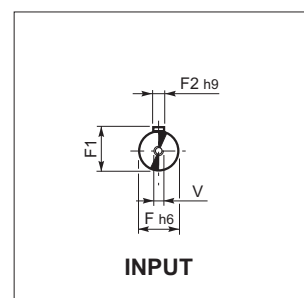
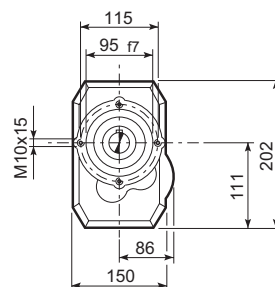
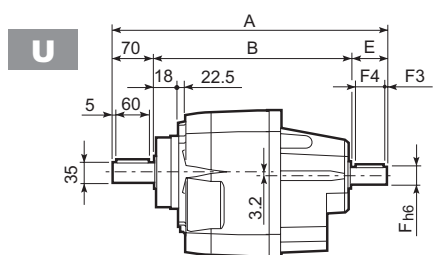
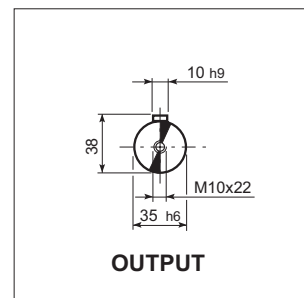
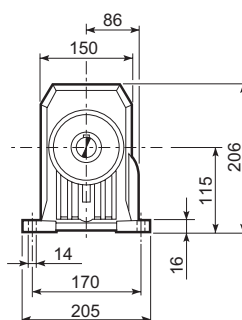
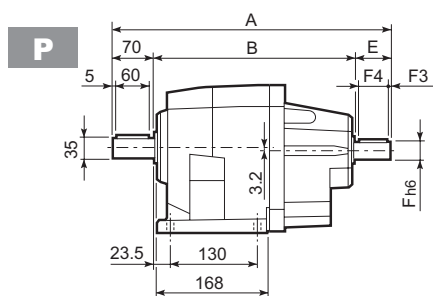
C 35 U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14



		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 35 2/3	P63	226	11	12.8	4	140	115	95	—	M8x19	4	326	17
C 35 2/3	P71	226	14	16.3	5	160	130	110	—	M8x16	4.5	326	17
C 35 2/3	P80	236	19	21.8	6	200	165	130	—	M10x12	4	345.5	18
C 35 2/3	P90	236	24	27.3	8	200	165	130	—	M10x12	4	345.5	18
C 35 2/3	P100	236	28	31.3	8	250	215	180	—	M12x16	4.5	355.5	22
C 35 2/3	P112	236	28	31.3	8	250	215	180	—	M12x16	4.5	355.5	22
C 35 2/3	P132	—	38	41.3	10	300	265	230	16	14	5	392.5	25
C 35 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	383.5	20
C 35 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	383.5	20
C 35 4	P80	—	19	21.8	6	200	165	130	—	M10x12	4	403	21
C 35 4	P90	—	24	27.3	8	200	165	130	—	M10x12	4	403	21
C 35 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	413	25
C 35 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	413	25

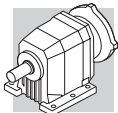


C 35...HS

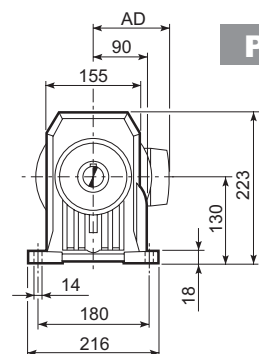
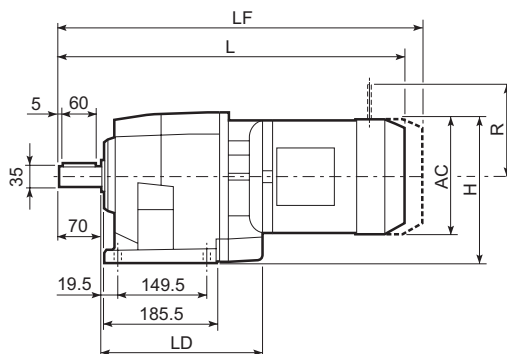
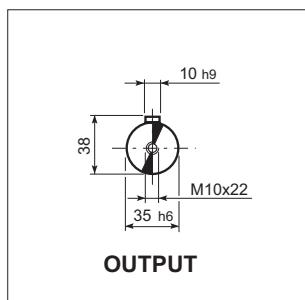


C 35_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14

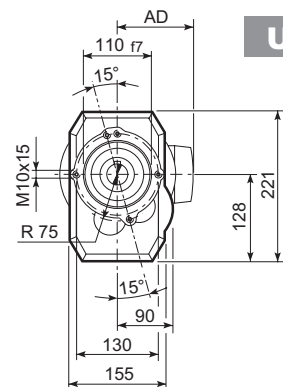
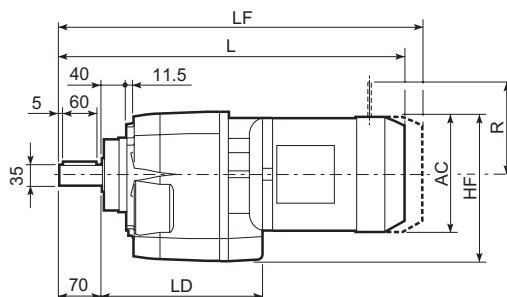
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 35 2	HS	415.5	295.5	50	24	27	8	2.5	45	M8x19	25.5
C 35 3		415.5	295.5	50	24	27	8	2.5	45	M8x19	25.5
C 35 4		390.5	280.5	40	16	18	5	2.5	36	M6x16	26.5



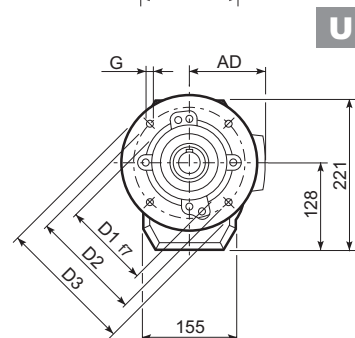
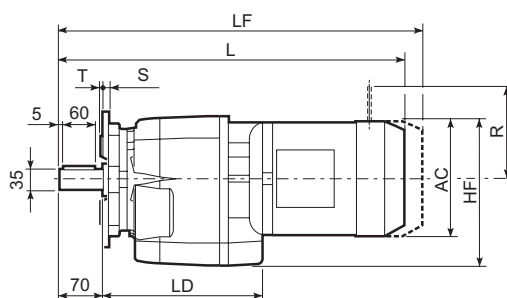
C 41...M



P



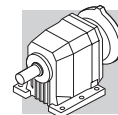
U



UF

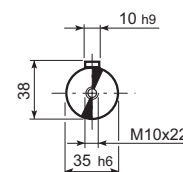
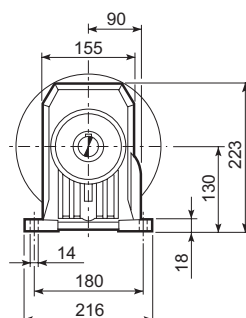
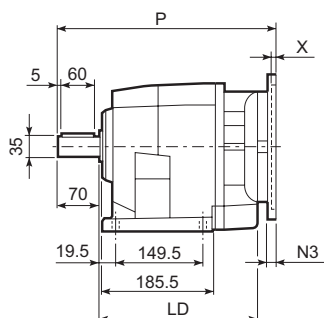
C 41_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	13

										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD	Kg	LF	Kg	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



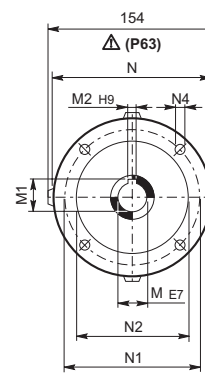
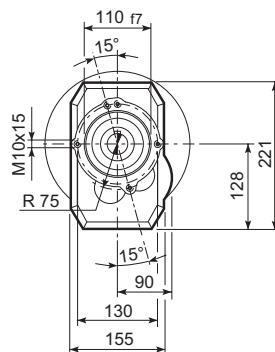
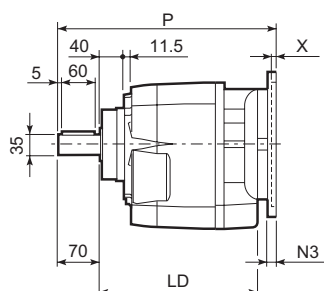
C 41...P(IEC)

P



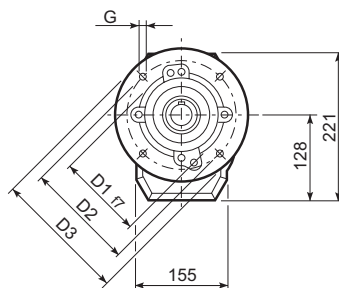
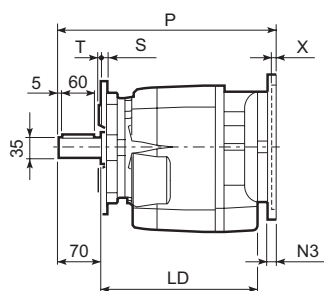
OUTPUT

U



INPUT

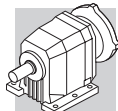
UF



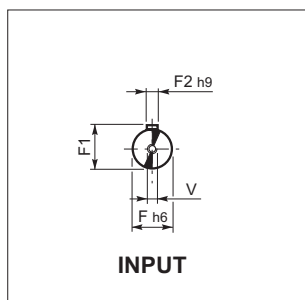
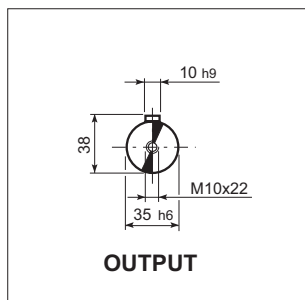
C 41_U

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

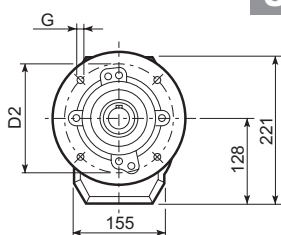
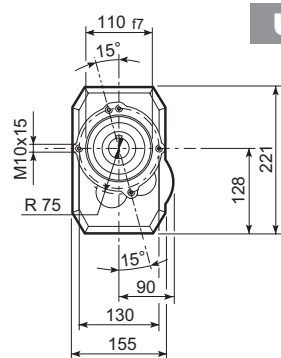
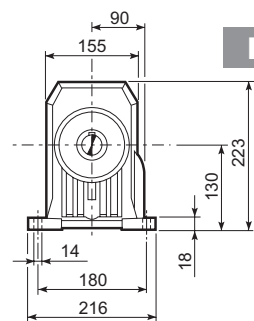
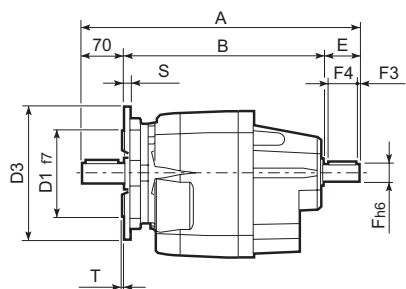
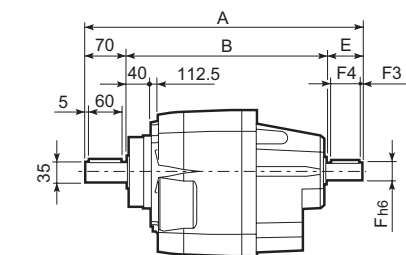
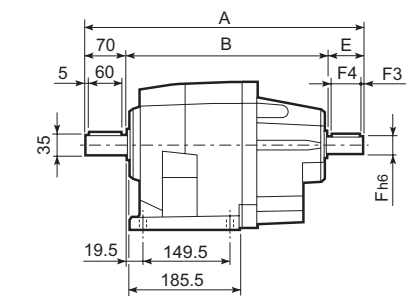
		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 41 2/3	P63	235.5	11	12.8	4	140	115	95	—	M8x19	4	336.5	27
C 41 2/3	P71	235.5	14	16.3	5	160	130	110	—	M8x16	4.5	336.5	28
C 41 2/3	P80	251.5	19	21.8	6	200	165	130	—	M10x12	4	356	29
C 41 2/3	P90	251.5	24	27.3	8	200	165	130	—	M10x12	4	356	29
C 41 2/3	P100	—	28	31.3	8	250	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	—	M10x12	4	414.5	32
C 41 4	P90	—	24	27.3	8	200	165	130	—	M10x12	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



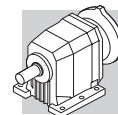
C 41...HS



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

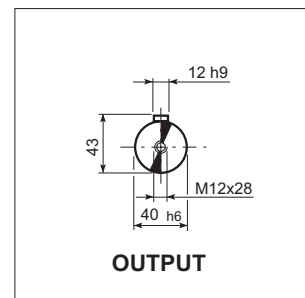
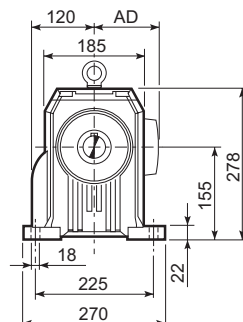
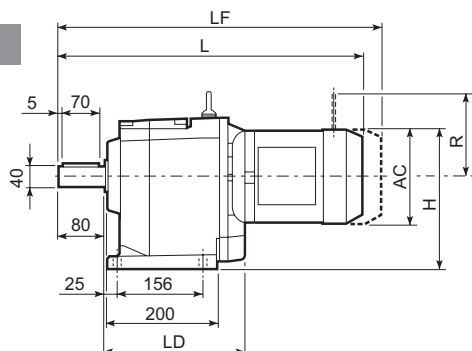


		A	B	E	F	F1	F2	F3	F4	V	Kg
C 41 2	HS	425.5	305.5	50	24	27	8	2.5	45	M8x19	30
C 41 3		425.5	305.5	50	24	27	8	2.5	45	M8x19	30
C 41 4		448	338	40	19	21.5	6	2.5	35	M6x16	33

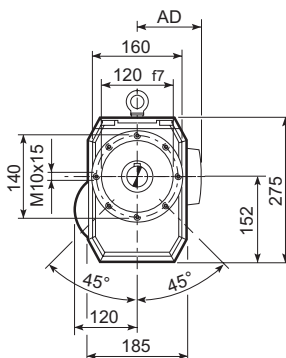
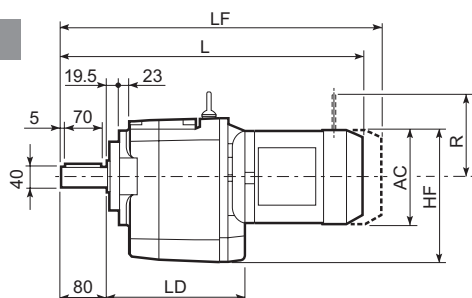


C 51...M

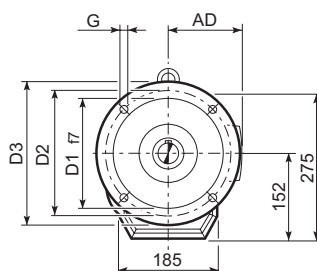
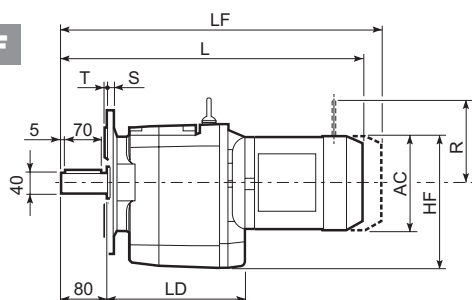
P



U



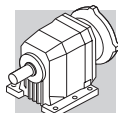
UF



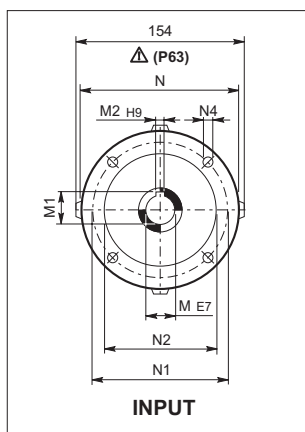
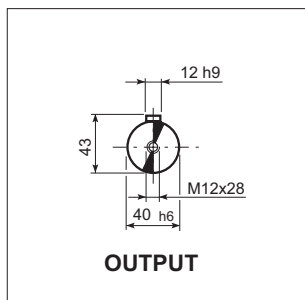
C 51_U

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

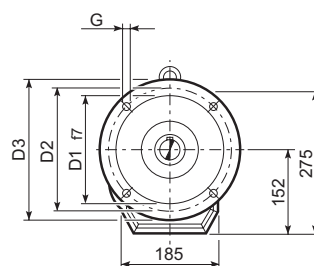
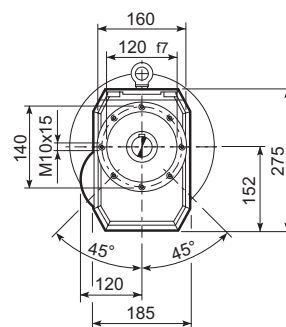
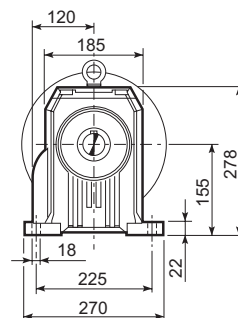
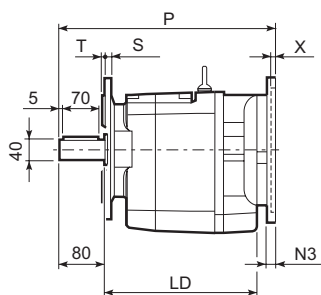
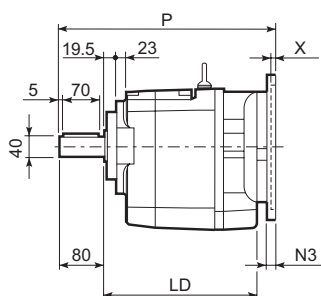
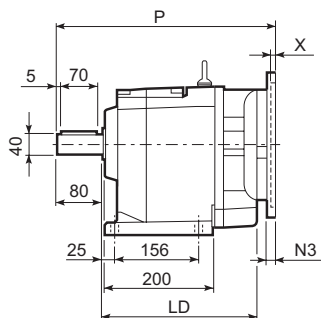
											M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD	 Kg	LF	 Kg	R	AD	R	AD	
C 51 2/3	S1	M1	138	224	221	517.5	—	108	49	578.5	52	103	135	124	108	
C 51 2/3	S2	M2S	156	233	230	545.5	252.5	119	53	616.5	57	129	146	134	119	
C 51 2/3	S3	M3S	195	252.5	249.5	589.5	267.5	142	58	685.5	65	160	158	160	142	
C 51 2/3	S3	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 4	S4	M4	258	284	281	801	—	193	98	910	111	226	210	217	193	
C 51 4	S4	M4LC	258	284	281	836	—	193	112	935	125	226	210	217	193	



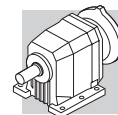
C 51...P(IEC)



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

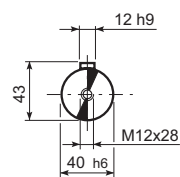
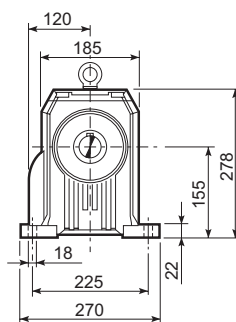
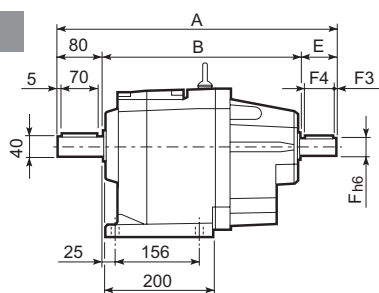


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 51 2/3	P63	252.5	11	12.8	4	140	115	95	—	M8x19	4	362.5	45
C 51 2/3	P71	252.5	14	16.3	5	160	130	110	—	M8x16	4.5	362.5	45
C 51 2/3	P80	267.5	19	21.8	6	200	165	130	—	M10x12	4	382	47
C 51 2/3	P90	267.5	24	27.3	8	200	165	130	—	M10x12	4	382	47
C 51 2/3	P100	252.5	28	31.3	8	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	—	M10x12	4	453.5	49
C 51 4	P90	—	24	27.3	8	200	165	130	—	M10x12	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 4	P132	—	38	41.3	10	300	265	230	16	14	5	500	62



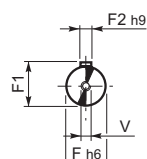
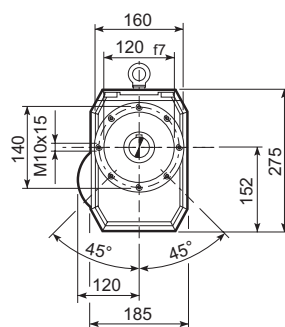
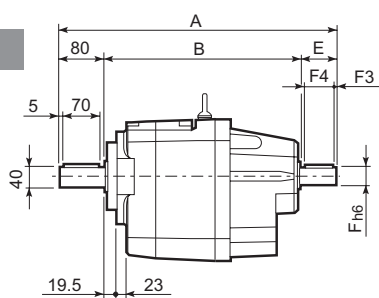
C 51...HS

P



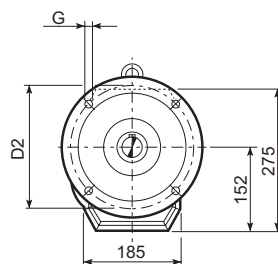
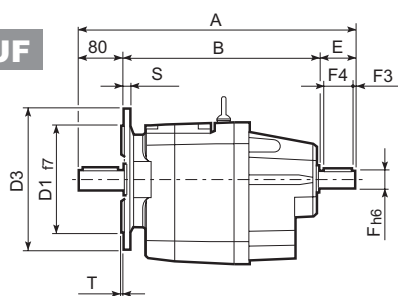
OUTPUT

U



INPUT

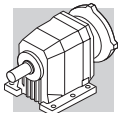
UF



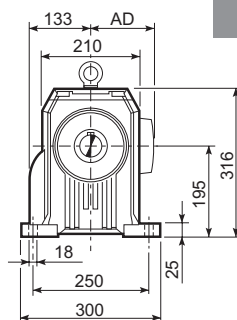
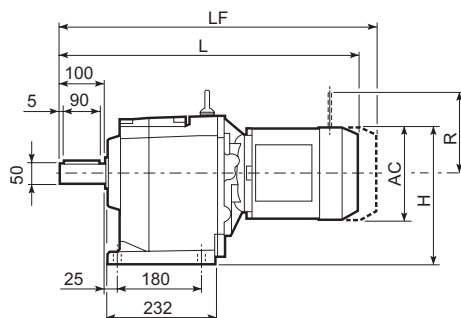
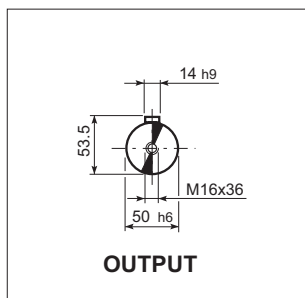
C 51_U

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

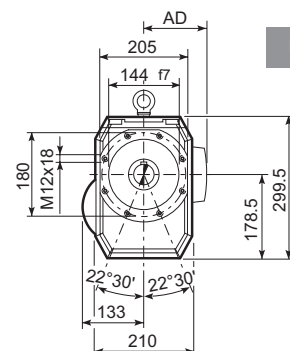
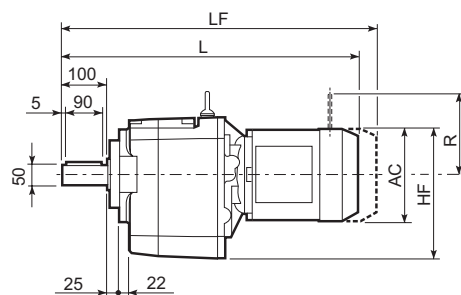
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 51 2	HS	451.5	322	50	24	24	8	2.5	45	M8x19	45
C 51 3		451.5	322	50	24	24	8	2.5	45	M8x19	45
C 51 4		484	364	40	19	21.5	6	2.5	35	M6x16	48



C 61...M

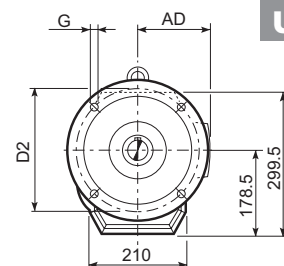
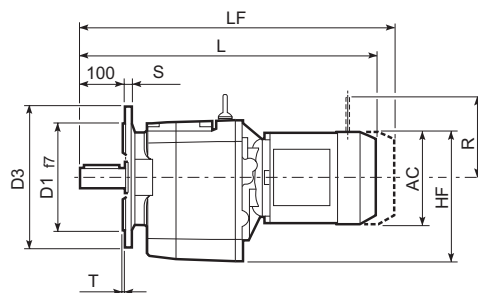


P



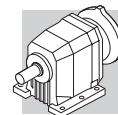
U

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



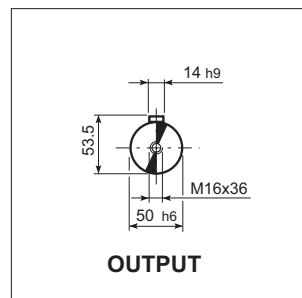
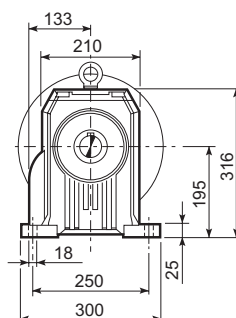
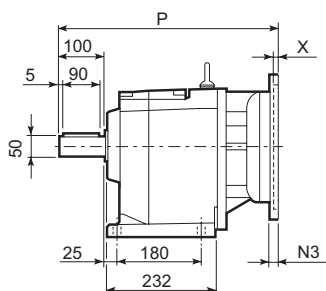
UF

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

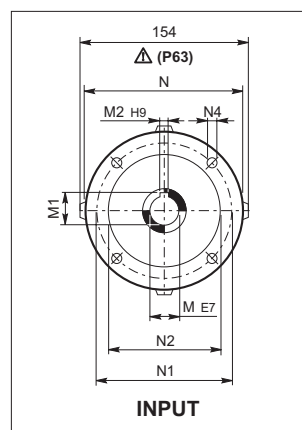
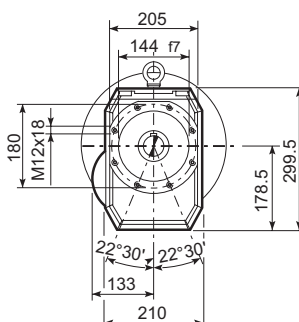
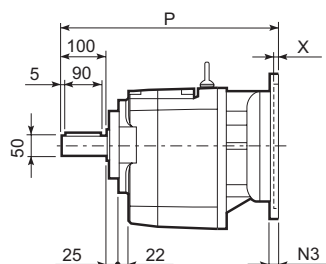


C 61...P(IEC)

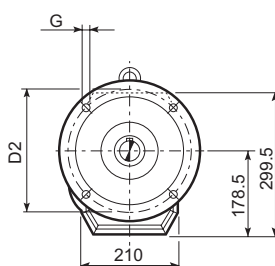
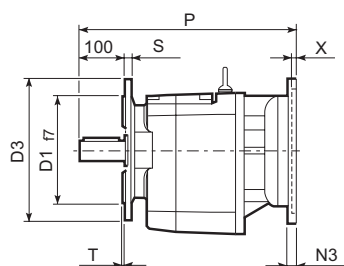
P



U



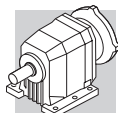
UF



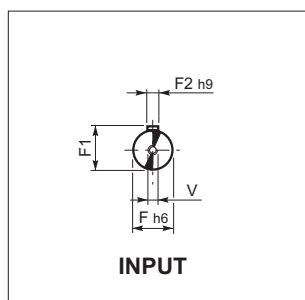
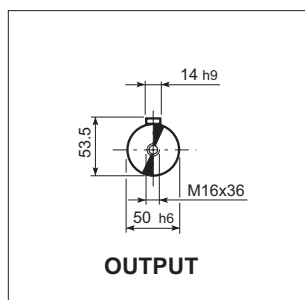
C 61_U

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

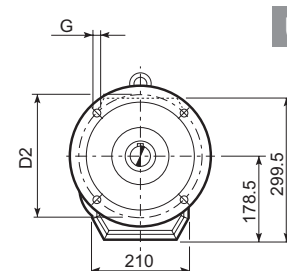
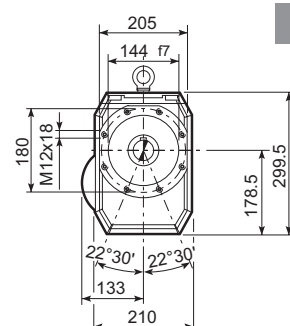
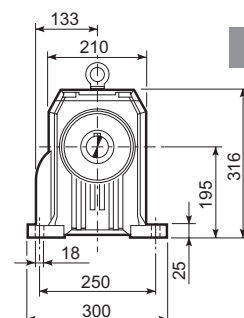
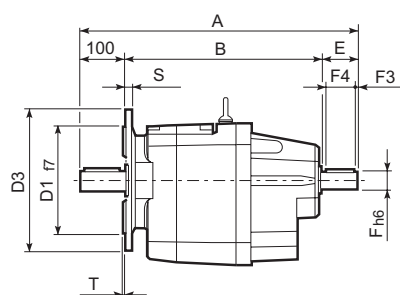
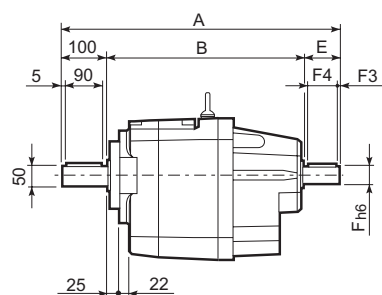
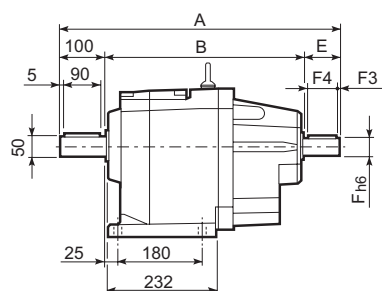
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 61 2/3	P63	11	12.8	4	140	115	95	—	M8x19	4	415.5	55
C 61 2/3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	415.5	57
C 61 2/3	P80	19	21.8	6	200	165	130	—	M10x12	4	435	61
C 61 2/3	P90	24	27.3	8	200	165	130	—	M10x12	4	435	61
C 61 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	444	65
C 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	—	M10x12	4	505.5	67
C 61 4	P90	24	27.3	8	200	165	130	—	M10x12	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



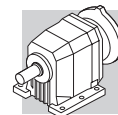
C 61...HS



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

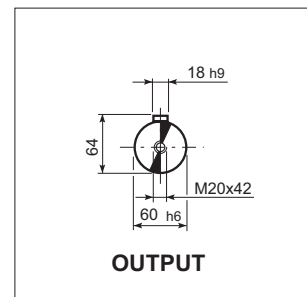
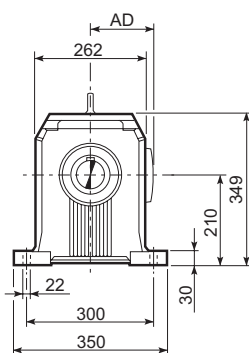
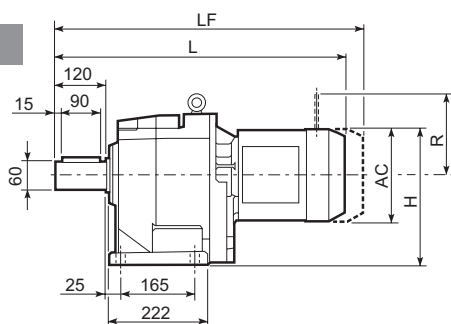


		A	B	E	F	F1	F2	F3	F4	V	Kg
C 61 2	HS	532	372	60	28	31	8	5	50	M10x22	66
C 61 3		532	372	60	28	31	8	5	50	M10x22	66
C 61 4		575	425	50	24	27	8	2.5	45	M8x19	72

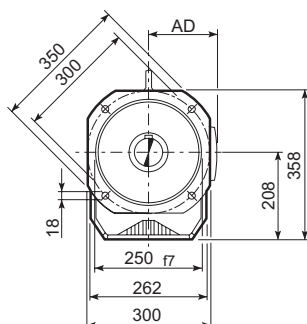
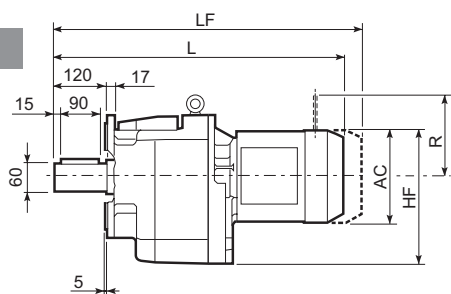


C 70...M

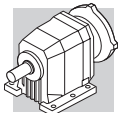
P



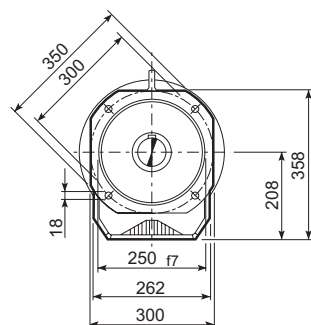
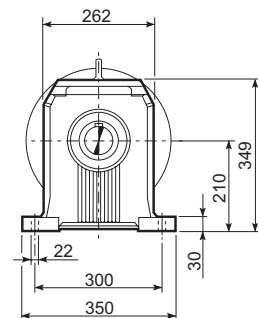
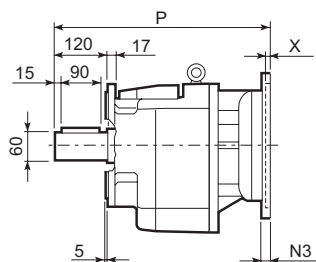
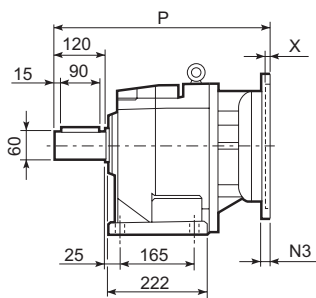
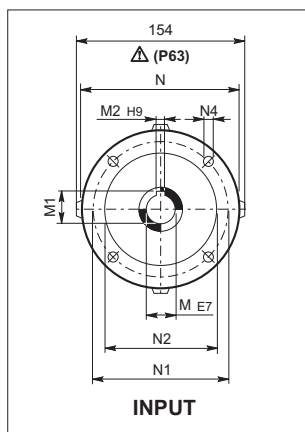
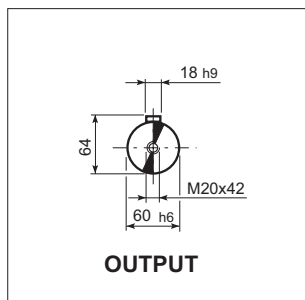
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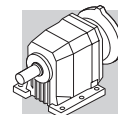
										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD			LF		R	AD	R	AD
C 70 2/3	S2	M2S	156	288	286	636.5	119	88		707.5	92	129	146	134	119
C 70 2/3	S3	M3S	195	307.5	305.5	680.5	142	93		776.5	101	160	158	160	142
C 70 2/3	S3	M3L	195	307.5	305.5	712.5	142	101		803.5	108	160	158	160	142
C 70 2/3	S4	M4	258	339	337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



C 70...P(IEC)

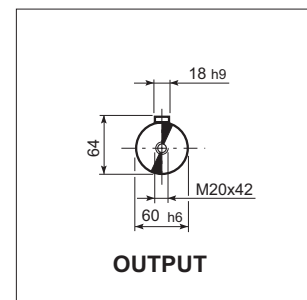
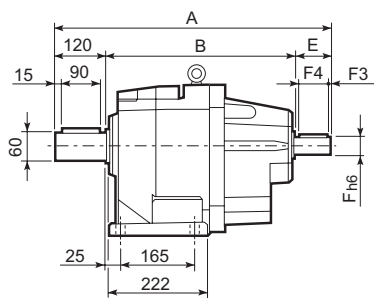


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 70 2/3	P80	19	21.8	6	200	165	130	—	M10x12	4	473	88
C 70 2/3	P90	24	27.3	8	200	165	130	—	M10x12	4	473	88
C 70 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	483	92
C 70 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	483	92
C 70 2/3	P132	38	41.3	10	300	265	230	16	14	5	519.5	95
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	—	M10x12	4	524	92
C 70 4	P90	24	27.3	8	200	165	130	—	M10x12	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

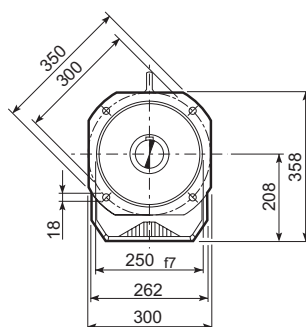
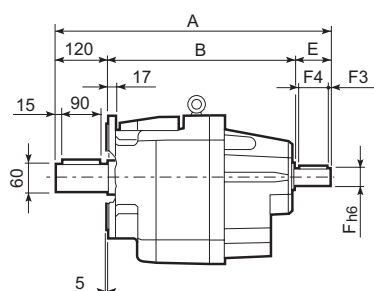


C 70...HS

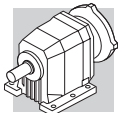
P



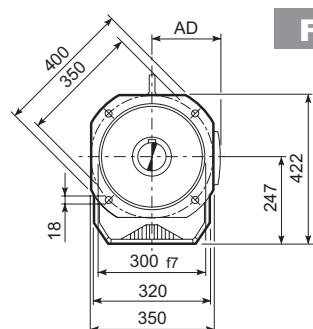
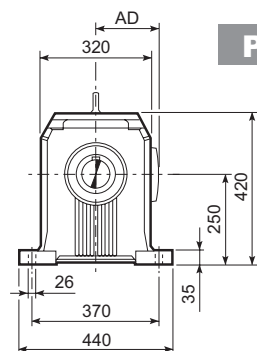
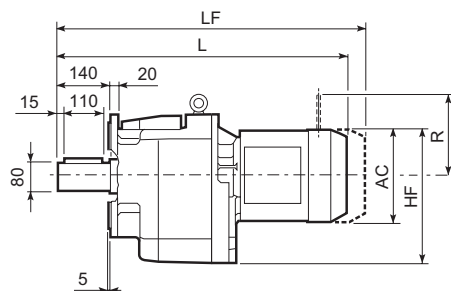
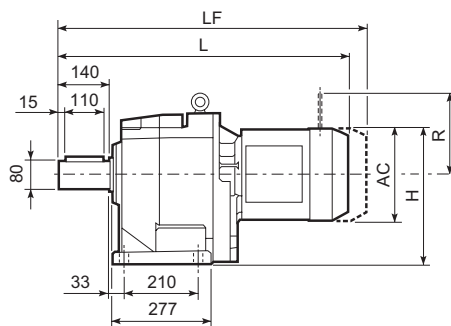
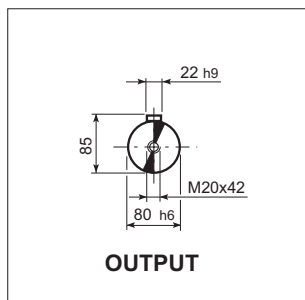
F



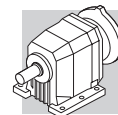
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 70 2	HS	657.5	427.5	110	42	45	12	10	90	M12x28	108
C 70 3		657.5	427.5	110	42	45	12	10	90	M12x28	108
C 70 4		593.5	423.5	50	24	27	8	2.5	45	M8x19	94



C 80...M

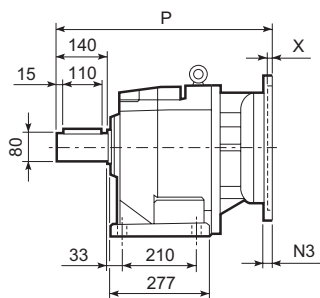


										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg		LF	Kg	R	AD	R	AD
C 80 2/3	S3	M3S	195	347.5	344.5	742.5	142	139		838.5	146	160	158	160	142
C 80 2/3	S3	M3L	195	347.5	344.5	774.5	142	146		865.5	153	160	158	160	142
C 80 2/3	S4	M4	258	379	376	882.5	193	180		991.5	196	226	210	217	193
C 80 2/3	S4	M4LC	258	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

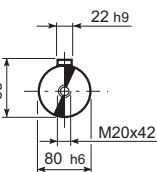
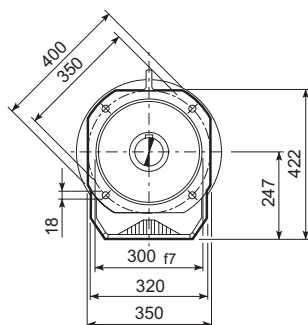
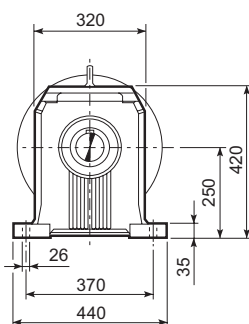
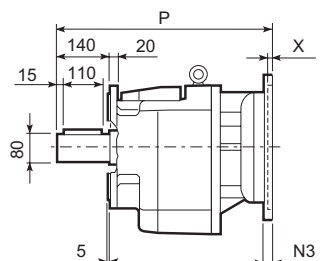


C 80...P(IEC)

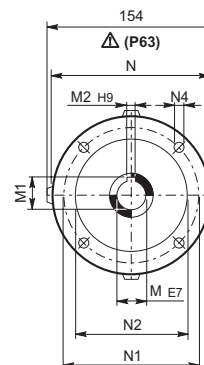
P



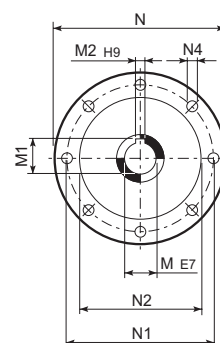
F



OUTPUT

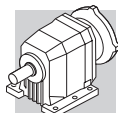


**INPUT
P63...P200**

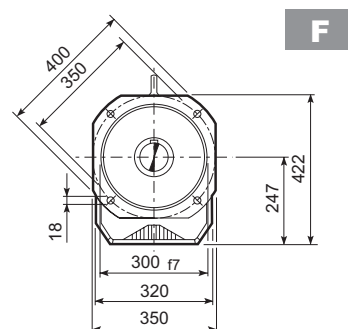
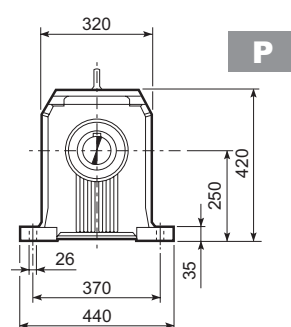
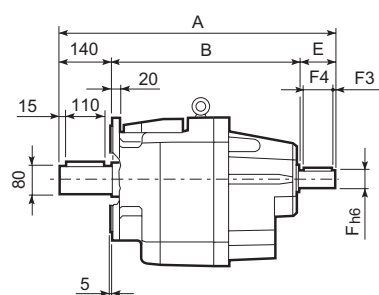
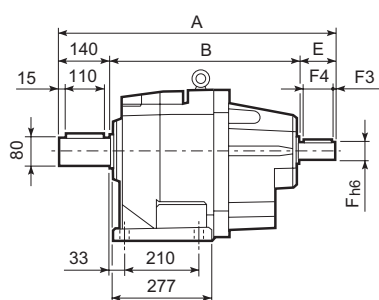
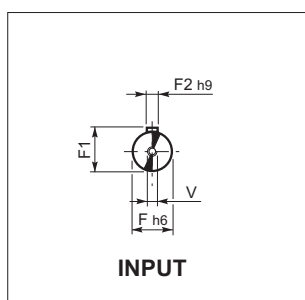
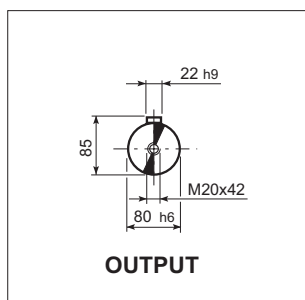


**INPUT
P225**

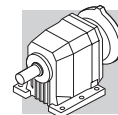
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 80 2/3	P80	19	21.8	6	200	165	130	—	M10x12	4	533	135
C 80 2/3	P90	24	27.3	8	200	165	130	—	M10x12	4	533	135
C 80 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	543	139
C 80 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	543	139
C 80 2/3	P132	38	41.3	10	300	265	230	16	14	5	579.5	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	—	M10x12	4	596	140
C 80 4	P90	24	27.3	8	200	165	130	—	M10x12	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



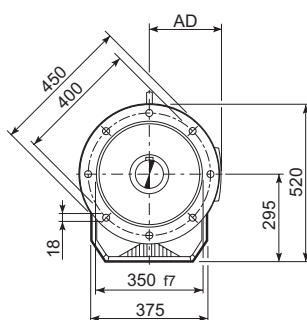
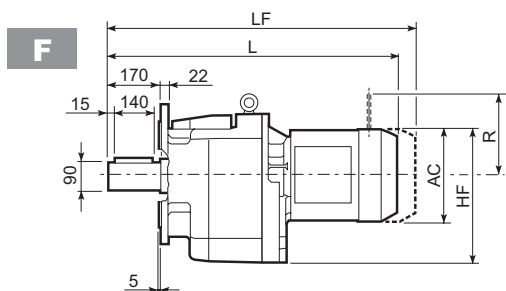
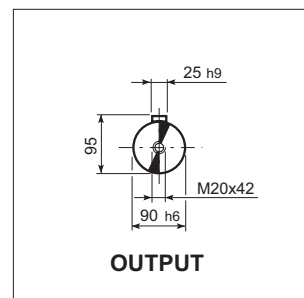
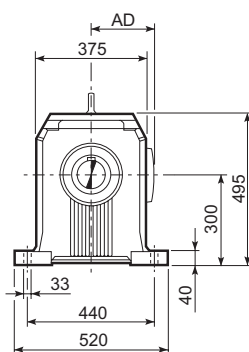
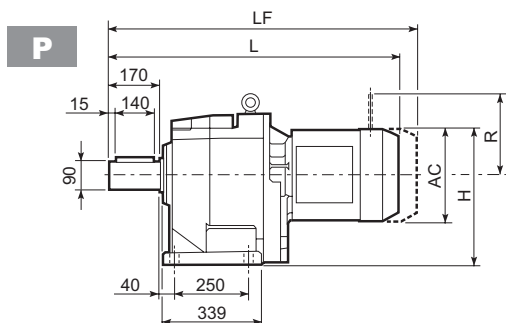
C 80...HS



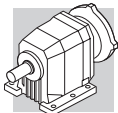
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 80 2	HS	718.5	468.5	110	42	45	12	10	90	M12x28	154
C 80 3		718.5	468.5	110	42	45	12	10	90	M12x28	154
C 80 4		666.5	476.5	50	24	27	8	2.5	45	M8x19	141



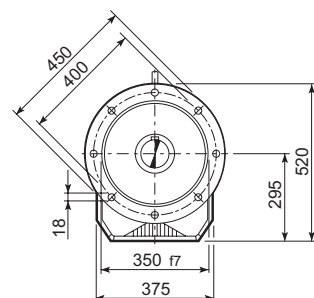
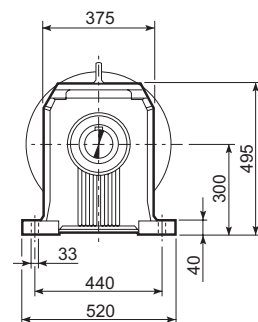
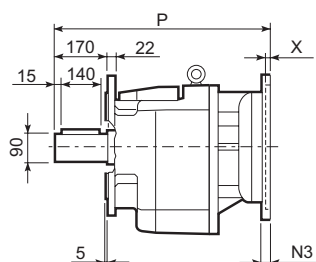
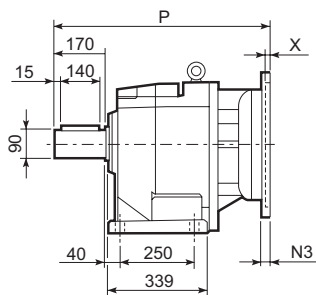
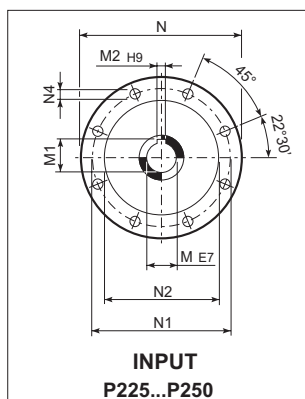
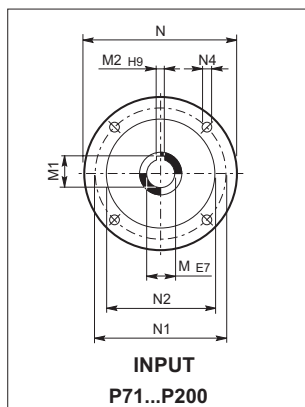
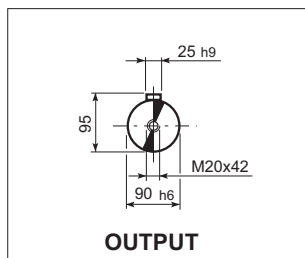
C 90...M



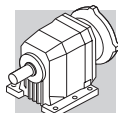
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD		LF		R	AD	R	AD
C 90 2/3	S3	M3S	195	397.5	392.5	852	142	228	948	236	160	158	160	142
C 90 2/3	S3	M3L	195	397.5	392.5	884	142	236	975	243	160	158	160	142
C 90 2/3	S4	M4	258	429	424	992	193	270	1101	288	226	210	217	193
C 90 2/3	S4	M4LC	258	429	424	1027	193	278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



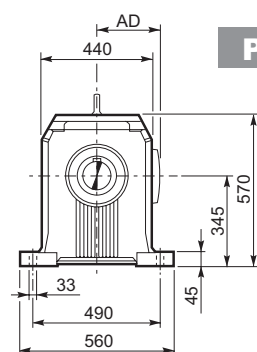
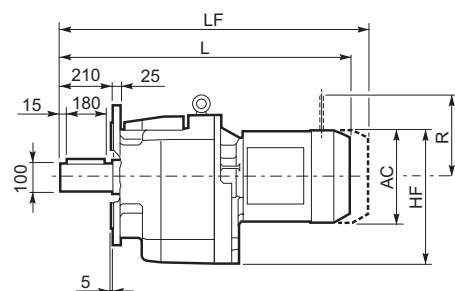
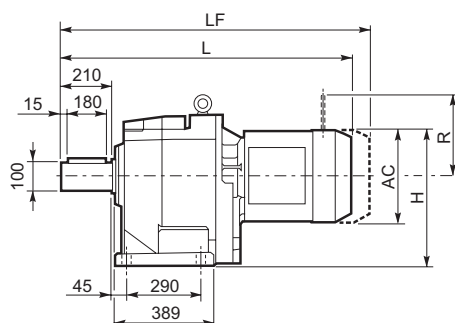
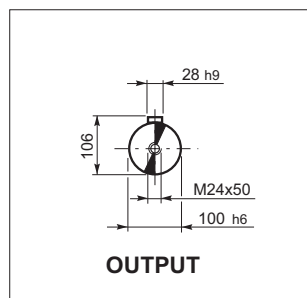
C 90...P(IEC)



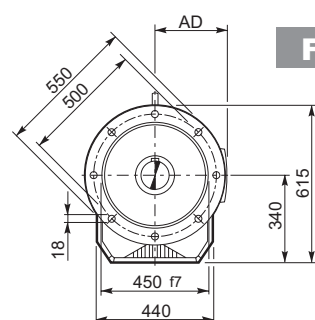
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 90 2/3	P80	19	21.8	6	200	165	130	—	M10x12	4	644.5	229
C 90 2/3	P90	24	27.3	8	200	165	130	—	M10x12	4	644.5	229
C 90 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	654.5	234
C 90 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	654.5	234
C 90 2/3	P132	38	41.3	10	300	265	230	16	14	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	—	M10x12	4	727	238
C 90 4	P90	24	27.3	8	200	165	130	—	M10x12	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 100...M

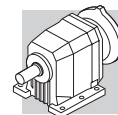


P



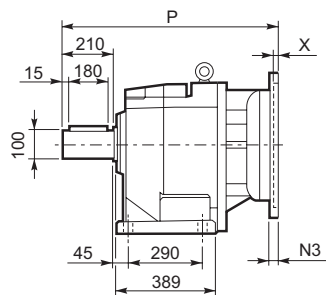
F

										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg		LF	Kg	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	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

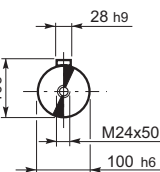
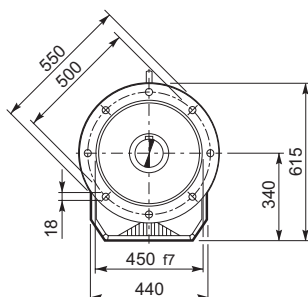
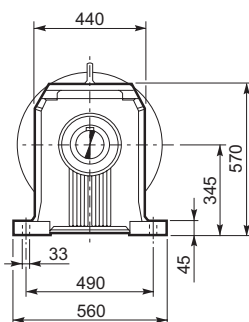
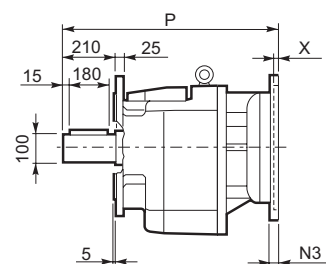


C 100...P(IEC)

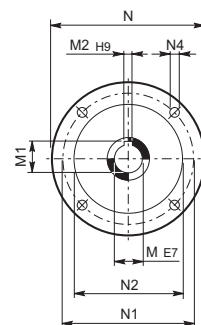
P



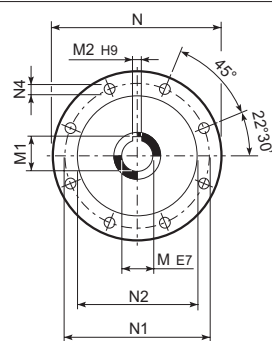
F



OUTPUT

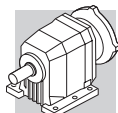


**INPUT
P80...P200**

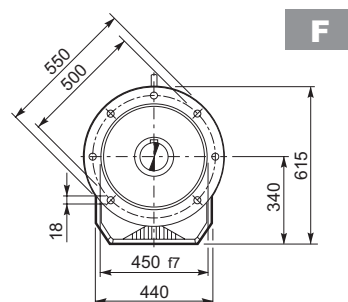
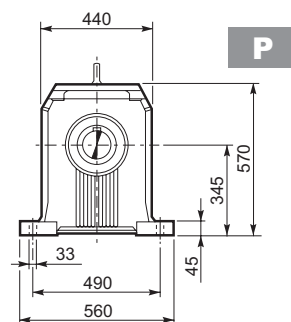
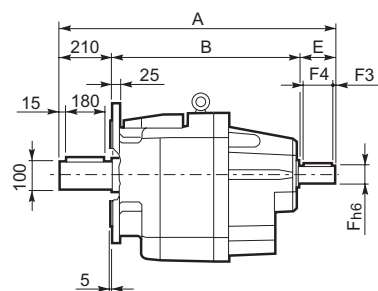
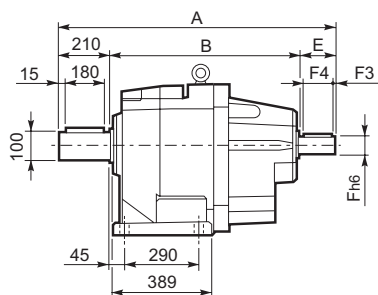
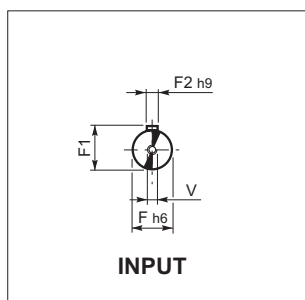
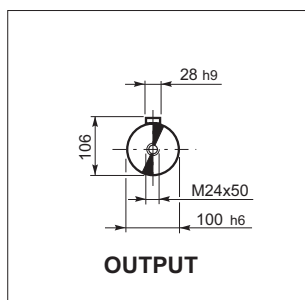


**INPUT
P225...P280**

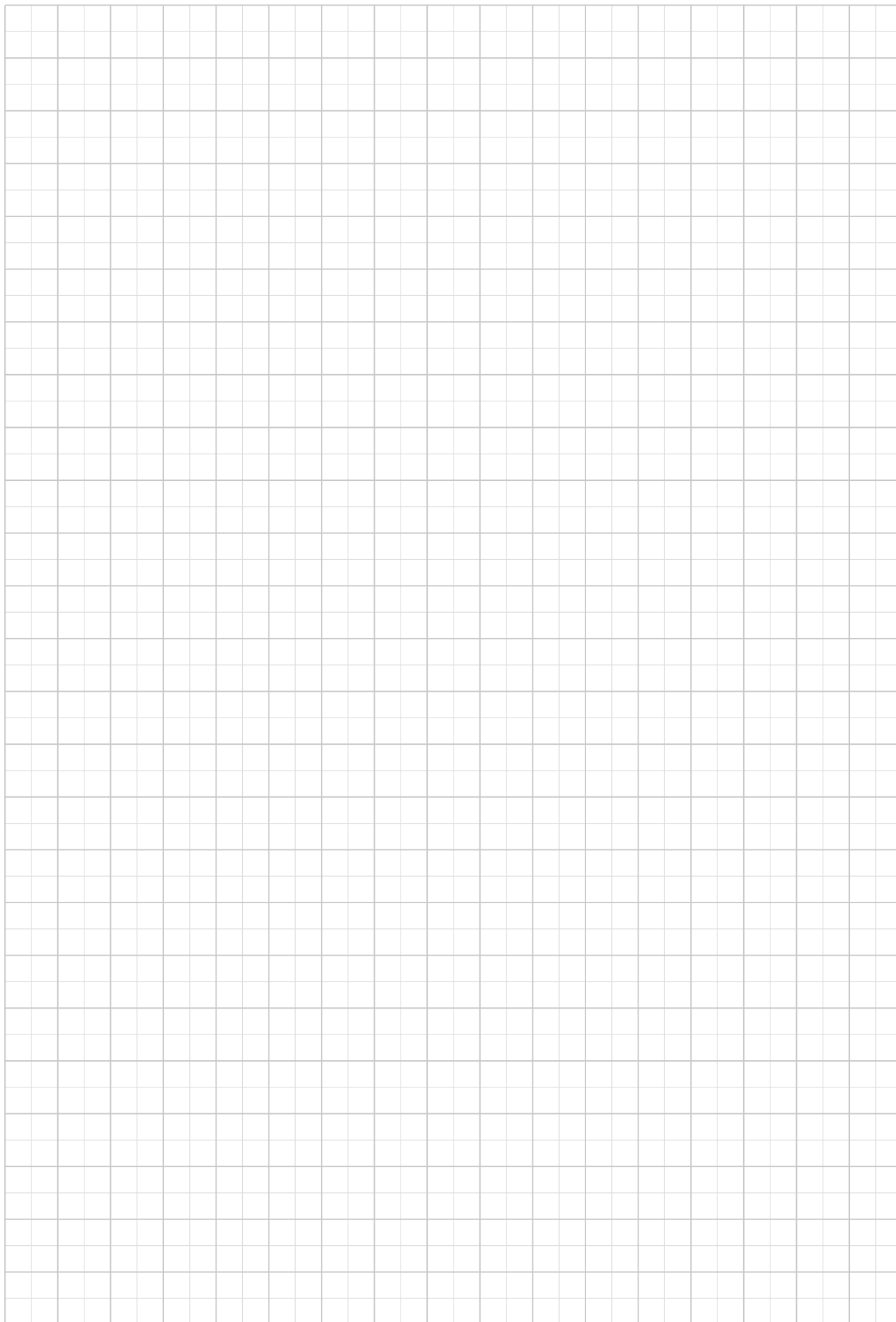
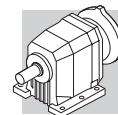
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 100 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	749.5	364
C 100 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	749.5	364
C 100 2/3	P132	38	41.3	10	300	265	230	16	14	5	786	367
C 100 2/3	P160	42	45.3	12	350	300	250	23	18	6	841.5	382
C 100 2/3	P180	48	51.8	14	350	300	250	23	18	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	—	M10x12	4	822.5	371
C 100 4	P90	24	27.3	8	200	165	130	—	M10x12	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

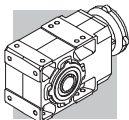


C 100...HS



		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





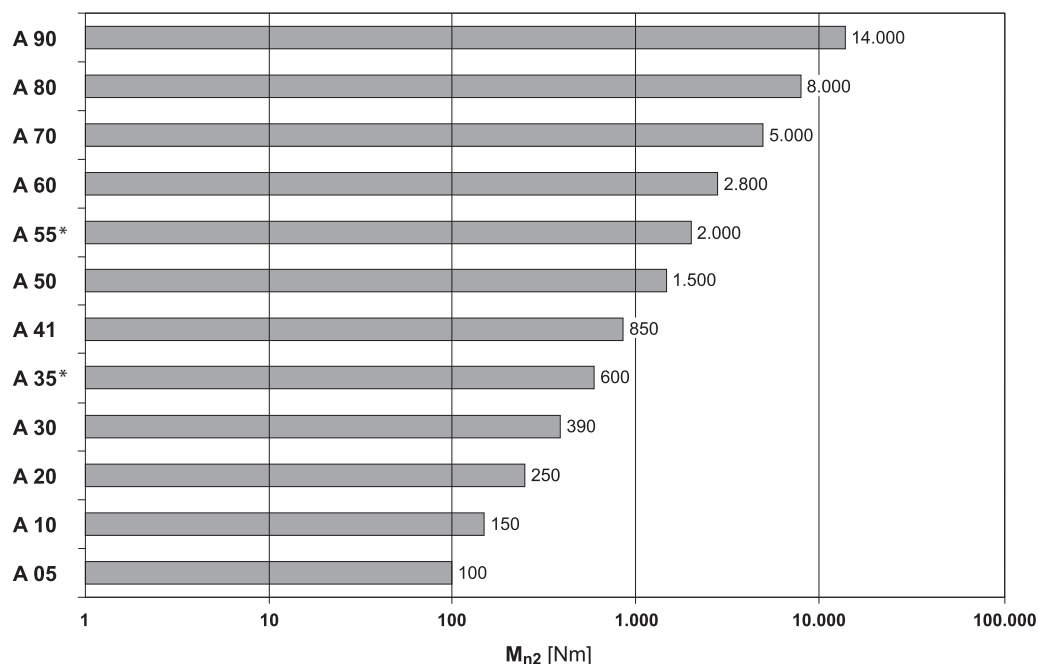
HELICAL BEVEL GEAR UNITS SERIES A

30 DESIGN FEATURES

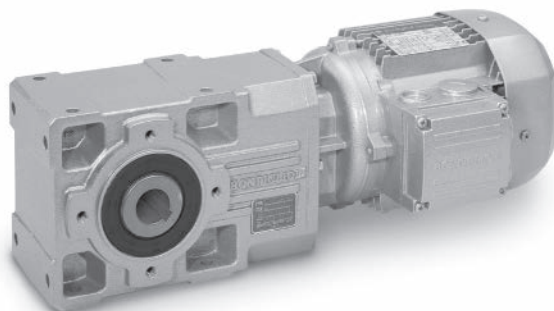
The main design characteristics are:

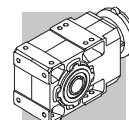
- modularity
- space effective
- universal mounting
- high efficiency
- quiet operation
- gears in hardened and case-hardened steel
- bare aluminium housing for sizes 05, 10, 20, 30, unpainted high strength painted cast-iron housings for larger frame sizes
- input and output shafts from high grade steel.

(C 20)

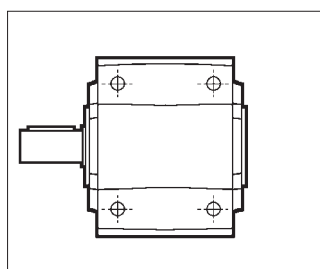


* For any limitations regarding construction type QF see the “VERSIONS” chapter.





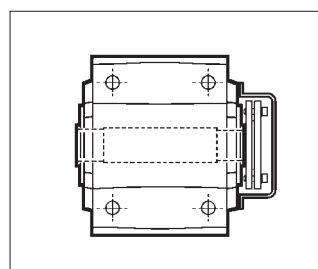
31 VERSIONS



UR

Single extension output shaft

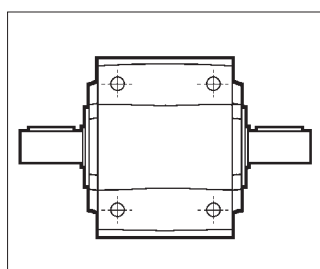
A 10 ... A 90



US

Hollow output shaft and shrink disc

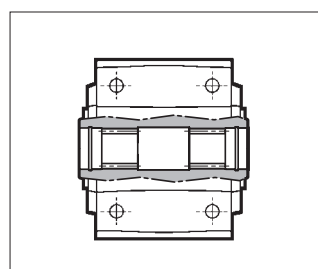
A 05 ... A 90



UD

Double extended output shaft

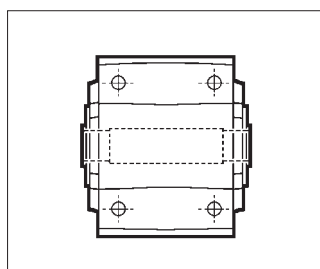
A 10 ... A 90



UV

Splined hollow shaft DIN 5480

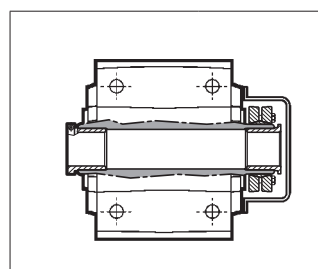
A 20 ... A 60



UH

Hollow output shaft and keyway

A 05 ... A 90



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...

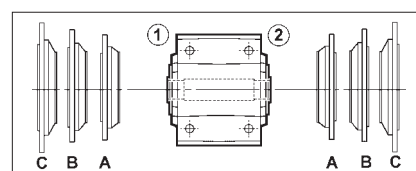
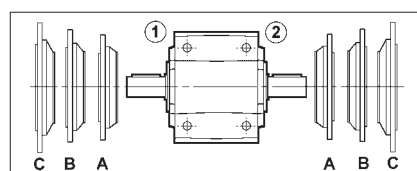
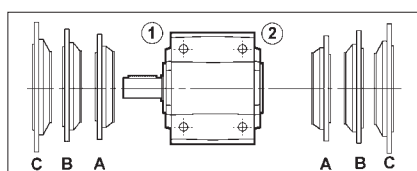
UR F2...

UD F1...

UD F2...

UH... F1...

UH... F2...



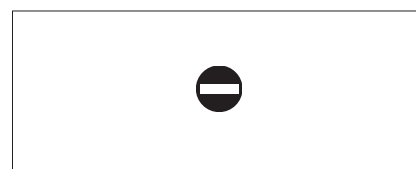
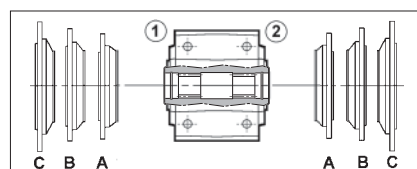
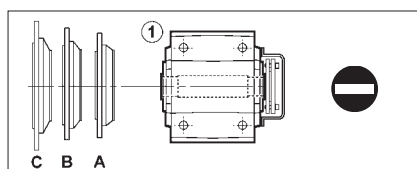
US F1...

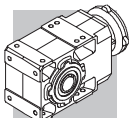
US F2...

UV F1...

UV F2...

QF...





32 DESIGNATION

GEAR UNIT

A 35 2 UH40 F1A 33.2 S3 VA

OPTIONS

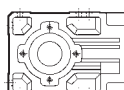
148

MOUNTING POSITION

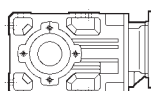
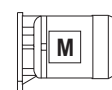
B3 (Standard), **B6, B7, B8, VA, VB**

152

INPUT CONFIGURATION

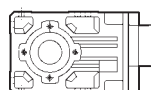
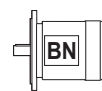


S05 ... S5



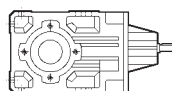
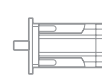
IEC_

P63 ... P250



SK_

SC_



HS

GEAR RATIO

OUTPUT FLANGE SIZE AND POSITION

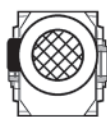
(specify only if requested)

F = Flanged version

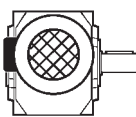
1, 2 = Flange position

A, B, C = Flange size

VERSION

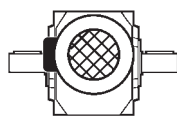


UH_



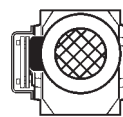
UR

(A 10...A 90)



UD

(A 10...A 90)



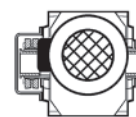
US

(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

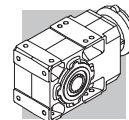
REDUCTIONS

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

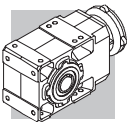
GEAR FRAME SIZE

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, AFD (d.c. brake) FA, BA (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 M = compact 3-phase BN = IEC 3-phase									



32.1 Gearbox options

AL, AR

Anti-run back device. Directions of rotation to be indicated and types of gearboxes in which the anti-run back device can be installed are listed in chapter 38.

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

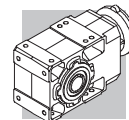
Certain gearboxes are available with increased overhung load ratings for use in applications characterised by high overhung loads beyond the capacity of the standard gearboxes. Specify the HDB option when ordering to obtain this increased overhung load capacity. The HDB option is available for gearbox 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 21)

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.

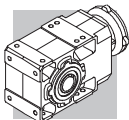
The following table specifies the corresponding figures of angular backlash.

(C 22)

		standard		RB	
A05	i =	5.5_12.3 - $\ominus$ (10.6)	10.6_91.6 - $\ominus$ (12.3)	—	
	φ	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)
	φ	27	17	12	8
A20	i =	5.4_12 - $\ominus$ (10.3)	10.3_380.8 - $\ominus$ (12)	5.4_12 - $\ominus$ (10.3)	10.3_380.8 - $\ominus$ (12)
	φ	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)
	φ	22	15	10	7
A35	i =	5.4_11.8	13.1_393.2	5.4_11.8	13.1_393.2
	φ	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)
	φ	19	13	9	6
A50	i =	7.7_778.2		7.7_778.2	
	φ	16		7	
A55	i =	4.9_19.2	23.8_793	4.9_19.2	23.8_793
	φ	17	11	8	6
A60	i =	7.9_20.6	25.7_755.4	7.9_20.6	25.7_755.4
	φ	12	9	5	4
A70	i =	9.4_21.3	23.5_1715	—	
	φ	14	12		
A80	i =	9.8_20.9	22.6_1558	—	
	φ	13	11		
A90	i =	9.7_21	22.3_1632	—	
	φ	12	10		

Accessories

See chapter 45 of this catalogue.



32.2 Motor options

AA, AC, AD

Angular position of the brake release lever with respect to the terminal box, looking from fan side.

Standard position = 90° clockwise.

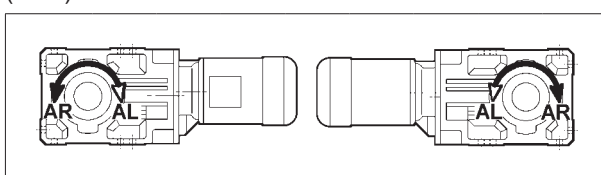
AA = 0°, AC = 180°,

AD = 90° counterclockwise.

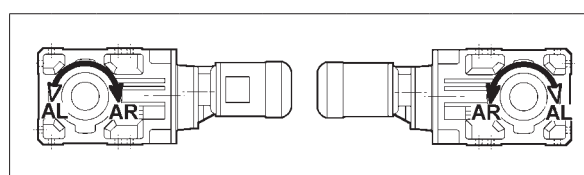
AL, AR

A backstop device on the motor itself, as described in the electric motors section of this catalogue, is available for gearmotors with integral M Series motors. Table C23 shows the direction of free rotation of the gearbox, on the basis of which the correct option must be selected.

(C 23)



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		

CF

Capacitive filter.

D3

3 bimetallic winding temperature sensors, calibrated at 150°C.

E3

3 winding temperature thermistors, calibrated at 150°C.

F1

Flywheel for soft start and stop.

H1

Anti condensate heaters. Standard voltage 1~ 230V ±10%.

PN

60 Hz power corresponding to the normalized 50 Hz power.

PS

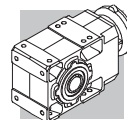
Double shaft extension (barring RC and U1 options).

RC

Drip cover (barring option PS).

RV

Rotor balancing in vibration class B.



TC

Option TC is a rain canopy variant for textile industry environments.

This option is not compatible with variants EN1, EN2, EN3 and will not fit motors equipped with a BA brake.

TP

Tropicalization.

U1

Forced cooling (barring options PS and CUS).

U2

Separate supply forced ventilation without terminal box. Cables are pre-wired. Configuration is not compatible with options PS and CUS. Available on motors;

BN 71 ... BN 132,

M1 ... M4.

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

33 LUBRICATION

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

Frame sizes A 05, A 10, A 20, A 30, A 35 and A 41 are supplied by the factory, or by the authorized dealers, already filled with oil.

Unless otherwise specified, units size A 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.

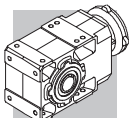
In both cases, depending on the version, prior to putting the gear unit into operation may need to replace the closed plug used for transportation purposes with breather plug supplied with.

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).

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

Operation of gear units is permitted at ambient temperatures between -20°C and +40°C. However, for temperatures between -20°C and -10°C unit may only start up after it has been progressively and evenly pre-heated, or otherwise initially operated unloaded.

Load may then be connected to the output shaft when the gear unit has reached the temperature of -10°C, or higher.



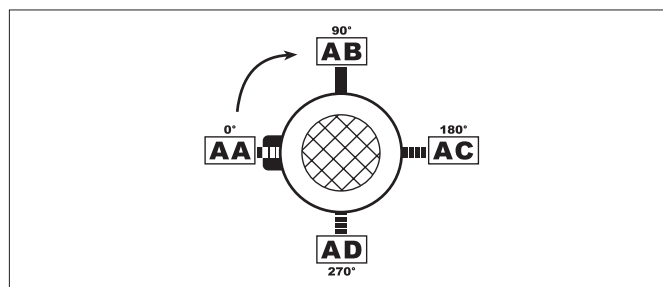
34 MOUNTING POSITION AND TERMINAL BOX ANGULAR LOCATION

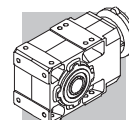
Location of motor terminal box can be specified by viewing the motor from the fan side; standard location is shown in black (W).

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.

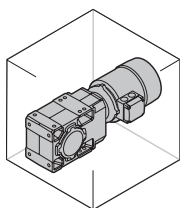
(C 24)



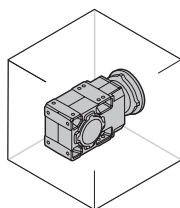


A ...

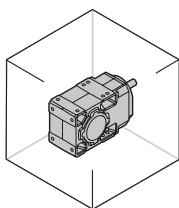
B3



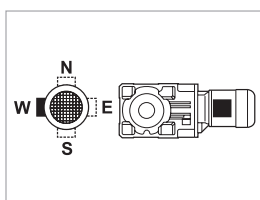
_S



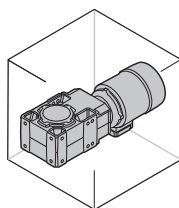
_P(IEC) _SK / _SC



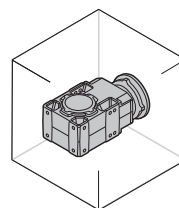
_HS



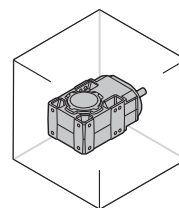
B6



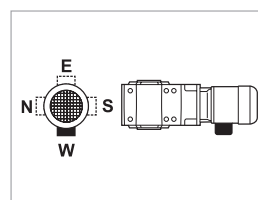
_S



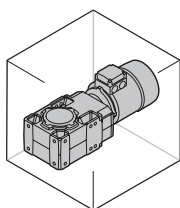
_P(IEC) _SK / _SC



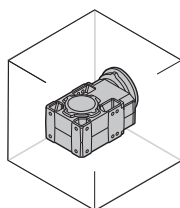
_HS



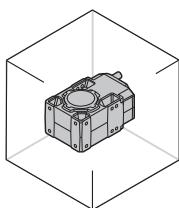
B7



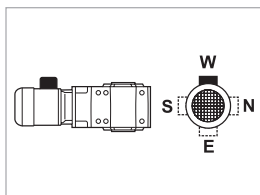
_S



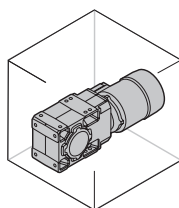
_P(IEC) _SK / _SC



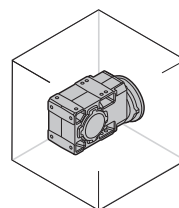
_HS



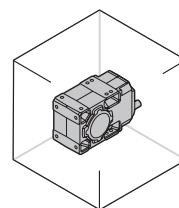
B8



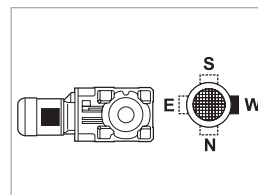
_S



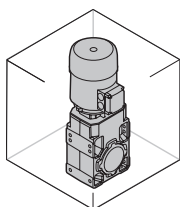
_P(IEC) _SK / _SC



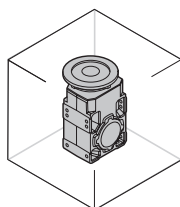
_HS



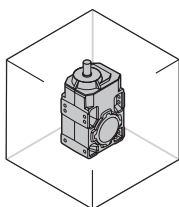
VA



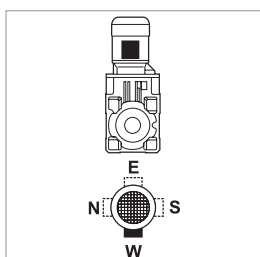
_S



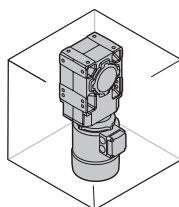
_P(IEC) _SK / _SC



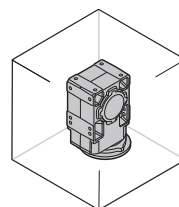
_HS



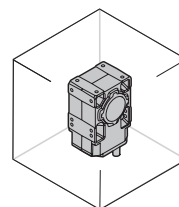
VB



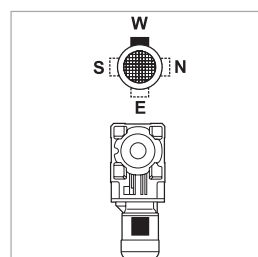
_S



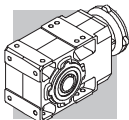
_P(IEC) _SK / _SC



_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:

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

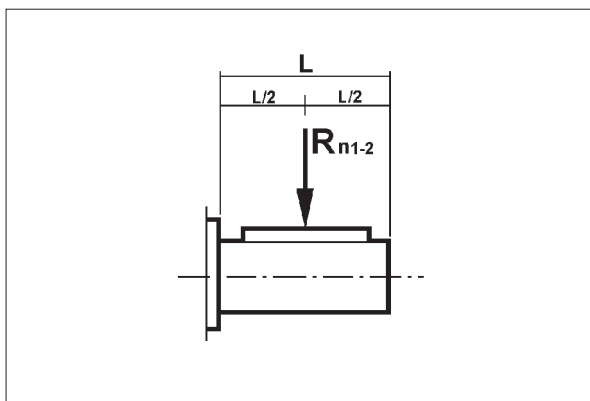
(C 25)

M₁ [Nm]	Torque applied to input shaft
M₂ [Nm]	Torque drawn at output shaft
d [mm]	Pitch diameter of element keyed onto shaft
K_r = 1	Chain transmission

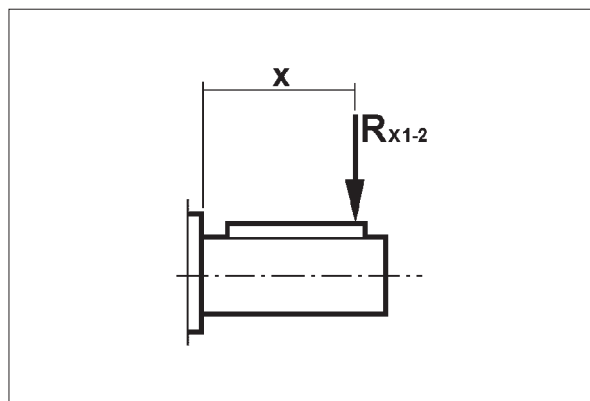
K_r = 1,25	Gear transmission
K_r = 1,5	V-belt transmission
K_r = 2,0	Flat belt transmission

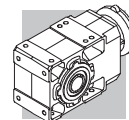
Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(C 26)



(C 27)





a) Load applied at midpoint of shaft, tab. (C26)

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. (C27)

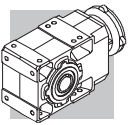
When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.

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 28)

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

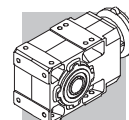
$$R_{x2} = R_{n2} \cdot \frac{a}{b+x} \quad (31)$$

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:

$$\begin{aligned} A_{n1} &= R_{n1} \cdot 0,2 \\ A_{n2} &= R_{n2} \cdot 0,2 \end{aligned} \quad (34)$$

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.

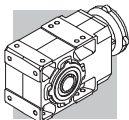
37 SHAFTS ARRANGEMENT

Table (C29) shows standard directions of rotation for 2, 3 and 4 stage helical-bevel gearboxes.

(C 29)

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 ANTI-RUN BACK DEVICE

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 – option AL/AR. Table C30 shows the gearboxes in which the anti-run back device can be installed.

(C 30)

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

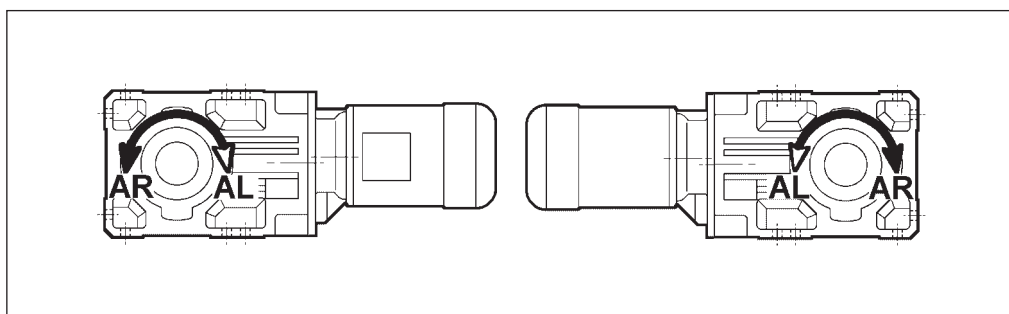
* The supply of the backstop will ban the configuration of servomotor adapters type S_60A, S_60B, S_80A.

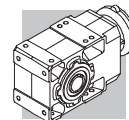
When ordering the gear unit, the direction of free rotation must be specified through either the AR or the AL option (Table C31).



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 31)





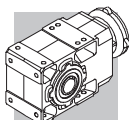
39 GEARMOTOR RATING CHARTS

0.09 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.51	1492	3.4	1715	50000			A704_1715 P63 BN63A6	276
1.1	677	2.2	778.2	20000			A504_778.2 P63 BN63A6	264
1.2	616	2.4	707.9	20000			A504_707.9 P63 BN63A6	264
1.4	549	2.7	631.2	20000			A504_631.2 P63 BN63A6	264
1.5	499	3.0	574.2	20000			A504_574.2 P63 BN63A6	264
1.7	461	3.3	529.5	20000			A504_529.5 P63 BN63A6	264
2.2	356	1.0	400.8	9600	A303_400.8 S05 M05A6	251	A303_400.8 P63 BN63A6	252
2.6	302	1.7	339.3	12000	A353_339.3 S05 M05A6	255	A353_339.3 P63 BN63A6	256
3.0	259	3.3	291.7	15000	A413_291.7 S05 M05A6	259	A413_291.7 P63 BN63A6	260
3.5	221	2.7	248.1	12000	A353_248.1 S05 M05A6	255	A353_248.1 P63 BN63A6	256
4.1	193	2.1	216.6	9600	A303_216.6 S05 M05A6	251	A303_216.6 P63 BN63A6	252
4.9	159	1.6	178.3	6200	A203_178.3 S05 M05A6	247	A203_178.3 P63 BN63A6	248
5.8	134	2.8	150.7	9600	A303_150.7 S05 M05A6	251	A303_150.7 P63 BN63A6	252
6.8	115	2.2	129.1	6200	A203_129.1 S05 M05A6	247	A203_129.1 P63 BN63A6	248
8.1	97	2.5	109.2	6200	A203_109.2 S05 M05A6	247	A203_109.2 P63 BN63A6	248
9.6	84	1.5	91.6	5500	A102_91.6 S05 M05A6	243	A102_91.6 P63 BN63A6	244
11.5	70	2.1	76.4	5500	A102_76.4 S05 M05A6	243	A102_76.4 P63 BN63A6	244
13.3	61	2.5	65.9	5500	A102_65.9 S05 M05A6	243	A102_65.9 P63 BN63A6	244
15.0	54	2.8	58.6	5500	A102_58.6 S05 M05A6	243	A102_58.6 P63 BN63A6	244
17.2	47	3.2	51.3	5500	A102_51.3 S05 M05A6	243	A102_51.3 P63 BN63A6	244
19.4	42	2.4	45.4	4250	A052_45.4 S05 M05A6	240	A052_45.4 P63 BN63A6	240
21.5	38	2.7	40.9	4120	A052_40.9 S05 M05A6	240	A052_40.9 P63 BN63A6	240
25.1	32	3.1	35.1	3950	A052_35.1 S05 M05A6	240	A052_35.1 P63 BN63A6	240
27.3	30	3.4	32.2	3850	A052_32.2 S05 M05A6	240	A052_32.2 P63 BN63A6	240
31	26	3.8	28.6	3720	A052_28.6 S05 M05A6	240	A052_28.6 P63 BN63A6	240
35	23	4.4	25.5	3590	A052_25.5 S05 M05A6	240	A052_25.5 P63 BN63A6	240
37	22	4.6	23.8	3520	A052_23.8 S05 M05A6	240	A052_23.8 P63 BN63A6	240
41	19.6	5.3	21.4	3410	A052_21.4 S05 M05A6	240	A052_21.4 P63 BN63A6	240
47	17.1	5.9	18.6	3270	A052_18.6 S05 M05A6	240	A052_18.6 P63 BN63A6	240
53	15.1	6.8	16.4	3150	A052_16.4 S05 M05A6	240	A052_16.4 P63 BN63A6	240
63	12.8	7.8	13.9	2990	A052_13.9 S05 M05A6	240	A052_13.9 P63 BN63A6	240
72	11.3	8.8	12.3	2880	A052_12.3 S05 M05A6	240	A052_12.3 P63 BN63A6	240
83	9.7	10.3	10.6	2740	A052_10.6 S05 M05A6	240	A052_10.6 P63 BN63A6	240
92	8.8	11.3	9.6	2670	A052_9.6 S05 M05A6	240	A052_9.6 P63 BN63A6	240
103	7.8	13.2	8.5	2570	A052_8.5 S05 M05A6	240	A052_8.5 P63 BN63A6	240
122	6.6	15.1	7.2	2440	A052_7.2 S05 M05A6	240	A052_7.2 P63 BN63A6	240
139	5.8	17.8	6.3	2340	A052_6.3 S05 M05A6	240	A052_6.3 P63 BN63A6	240
161	5.0	19.9	5.5	2230	A052_5.5 S05 M05A6	240	A052_5.5 P63 BN63A6	240

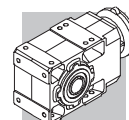
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.51	2012	2.5	1715	50000			A704_1715 P63 BN63B6	276
0.55	1857	2.7	1583	50000			A704_1583 P63 BN63B6	276
0.65	1579	3.2	1346	50000			A704_1346 P63 BN63B6	276
0.70	1457	3.4	1242	50000			A704_1242 P63 BN63B6	276



0.12 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
1.1	913	1.6	778.2	20000			A504_778.2 P63 BN63B6	264
1.2	818	3.4	697.3	30000			A604_697.3 P63 BN63B6	272
1.4	740	2.0	631.2	20000			A504_631.2 P63 BN63B6	264
1.6	621	2.4	529.5	20000			A504_529.5 P63 BN63B6	264
1.7	588	2.5	778.2	20000			A504_778.2 P63 BN63A4	264
1.9	535	2.8	707.9	20000			A504_707.9 P63 BN63A4	264
2.1	477	3.1	631.2	20000			A504_631.2 P63 BN63A4	264
2.4	434	3.5	574.2	20000			A504_574.2 P63 BN63A4	264
3.4	310	1.2	400.8	9600	A303_400.8 S05 M05A4	251	A303_400.8 P63 BN63A4	252
3.4	304	1.5	393.2	12000	A353_393.2 S05 M05A4	255	A353_393.2 P63 BN63A4	256
3.6	291	2.9	376.8	15000	A413_376.8 S05 M05A4	259	A413_376.8 P63 BN63A4	260
3.8	275	1.3	356.3	9600	A303_356.3 S05 M05A4	251	A303_356.3 P63 BN63A4	252
4.0	262	2.0	339.3	12000	A353_339.3 S05 M05A4	255	A353_339.3 P63 BN63A4	256
4.1	255	1.0	329.4	6200	A203_329.4 S05 M05A4	247	A203_329.4 P63 BN63A4	248
4.2	251	3.4	324.2	15000	A413_324.2 S05 M05A4	259	A413_324.2 P63 BN63A4	260
4.3	243	1.6	314.5	9600	A303_314.5 S05 M05A4	251	A303_314.5 P63 BN63A4	252
4.4	236	2.5	305.4	12000	A353_305.4 S05 M05A4	255	A353_305.4 P63 BN63A4	256
4.6	226	1.1	292.8	6200	A203_292.8 S05 M05A4	247	A203_292.8 P63 BN63A4	248
5.0	210	1.8	271.5	9600	A303_271.5 S05 M05A4	251	A303_271.5 P63 BN63A4	252
5.0	209	2.9	270.7	12000	A353_270.7 S05 M05A4	255	A353_270.7 P63 BN63A4	256
5.2	201	1.2	260.5	6200	A203_260.5 S05 M05A4	247	A203_260.5 P63 BN63A4	248
5.4	192	3.1	248.1	12000	A353_248.1 S05 M05A4	255	A353_248.1 P63 BN63A4	256
5.5	189	2.0	244.3	9600	A303_244.3 S05 M05A4	251	A303_244.3 P63 BN63A4	252
6.0	172	3.5	223.2	12000	A353_223.2 S05 M05A4	255	A353_223.2 P63 BN63A4	256
6.1	171	1.5	221.3	6200	A203_221.3 S05 M05A4	247	A203_221.3 P63 BN63A4	248
6.2	167	2.2	216.6	9600	A303_216.6 S05 M05A4	251	A303_216.6 P63 BN63A4	252
6.8	154	1.6	199.2	6200	A203_199.2 S05 M05A4	247	A203_199.2 P63 BN63A4	248
6.8	153	2.3	198.5	9600	A303_198.5 S05 M05A4	251	A303_198.5 P63 BN63A4	252
7.6	138	2.5	178.5	9600	A303_178.5 S05 M05A4	251	A303_178.5 P63 BN63A4	252
7.6	138	1.8	178.3	6200	A203_178.3 S05 M05A4	247	A203_178.3 P63 BN63A4	248
8.3	126	1.9	163.4	6200	A203_163.4 S05 M05A4	247	A203_163.4 P63 BN63A4	248
8.4	125	2.7	161.4	9600	A303_161.4 S05 M05A4	251	A303_161.4 P63 BN63A4	252
9.0	116	2.8	150.7	9600	A303_150.7 S05 M05A4	251	A303_150.7 P63 BN63A4	252
9.2	113	2.0	146.1	6200	A203_146.1 S05 M05A4	247	A203_146.1 P63 BN63A4	248
9.8	106	3.0	137.4	9600	A303_137.4 S05 M05A4	251	A303_137.4 P63 BN63A4	252
10.5	100	2.2	129.1	6200	A203_129.1 S05 M05A4	247	A203_129.1 P63 BN63A4	248
11.2	93	2.3	120.5	6200	A203_120.5 S05 M05A4	247	A203_120.5 P63 BN63A4	248
11.2	93	3.2	120.5	9600	A303_120.5 S05 M05A4	251	A303_120.5 P63 BN63A4	252
12.4	84	2.4	109.2	6200	A203_109.2 S05 M05A4	247	A203_109.2 P63 BN63A4	248
14.6	74	2.7	92.3	6200	A202_92.3 S05 M05A4	247	A202_92.3 P63 BN63A4	248
14.7	73	1.4	91.6	4420	A052_91.6 S05 M05A4	240	A052_91.6 P63 BN63A4	240
14.7	73	1.8	91.6	5500	A102_91.6 S05 M05A4	243	A102_91.6 P63 BN63A4	244
16.9	64	3.3	79.9	6200	A202_79.9 S05 M05A4	247	A202_79.9 P63 BN63A4	248
17.7	61	1.6	76.4	4230	A052_76.4 S05 M05A4	240	A052_76.4 P63 BN63A4	240
17.7	61	2.5	76.4	5500	A102_76.4 S05 M05A4	243	A102_76.4 P63 BN63A4	244
20.5	53	1.9	65.9	4070	A052_65.9 S05 M05A4	240	A052_65.9 P63 BN63A4	240
20.5	53	2.8	65.9	5500	A102_65.9 S05 M05A4	243	A102_65.9 P63 BN63A4	244
23.0	47	2.1	58.6	3950	A052_58.6 S05 M05A4	240	A052_58.6 P63 BN63A4	240
23.0	47	3.2	58.6	5500	A102_58.6 S05 M05A4	243	A102_58.6 P63 BN63A4	244
26.3	41	2.4	51.3	3810	A052_51.3 S05 M05A4	240	A052_51.3 P63 BN63A4	240
29.7	36	2.8	45.4	3680	A052_45.4 S05 M05A4	240	A052_45.4 P63 BN63A4	240

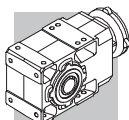


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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N		
33	33	3.1	40.9	3570	A052_40.9 S05 M05A4	240 A052_40.9 P63 BN63A4
38	28	3.6	35.1	3420	A052_35.1 S05 M05A4	240 A052_35.1 P63 BN63A4
42	26	3.9	32.2	3340	A052_32.2 S05 M05A4	240 A052_32.2 P63 BN63A4
47	23	4.4	28.6	3220	A052_28.6 S05 M05A4	240 A052_28.6 P63 BN63A4
53	20	4.9	25.5	3110	A052_25.5 S05 M05A4	240 A052_25.5 P63 BN63A4
57	19	5.3	23.8	3050	A052_23.8 S05 M05A4	240 A052_23.8 P63 BN63A4
62	17.3	5.8	13.9	2960	A052_13.9 S05 M05B6	240 A052_13.9 P63 BN63B6
63	17.1	5.9	21.4	2950	A052_21.4 S05 M05A4	240 A052_21.4 P63 BN63A4
73	14.8	6.7	18.6	2830	A052_18.6 S05 M05A4	240 A052_18.6 P63 BN63A4
82	13.1	7.6	16.4	2730	A052_16.4 S05 M05A4	240 A052_16.4 P63 BN63A4
90	11.9	8.4	9.6	2640	A052_9.6 S05 M05B6	240 A052_9.6 P63 BN63B6
97	11.1	9.0	13.9	2590	A052_13.9 S05 M05A4	240 A052_13.9 P63 BN63A4
110	9.8	10.2	12.3	2500	A052_12.3 S05 M05A4	240 A052_12.3 P63 BN63A4
121	8.9	11.2	7.2	2420	A052_7.2 S05 M05B6	240 A052_7.2 P63 BN63B6
128	8.4	11.9	10.6	2380	A052_10.6 S05 M05A4	240 A052_10.6 P63 BN63A4
140	7.7	13.0	9.6	2310	A052_9.6 S05 M05A4	240 A052_9.6 P63 BN63A4
159	6.8	14.7	8.5	2220	A052_8.5 S05 M05A4	240 A052_8.5 P63 BN63A4
187	5.8	17.4	7.2	2110	A052_7.2 S05 M05A4	240 A052_7.2 P63 BN63A4
213	5.1	19.8	6.3	2020	A052_6.3 S05 M05A4	240 A052_6.3 P63 BN63A4
247	4.4	21.8	5.5	1930	A052_5.5 S05 M05A4	240 A052_5.5 P63 BN63A4

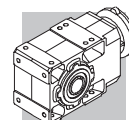
0.18 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N		
0.52	2917	1.7	1715	50000	A704_1715 S1 M1SC6	275 A704_1715 P71 BN71A6
0.58	2649	3.0	1558	65000	A804_1558 S1 M1SC6	278 A804_1558 P71 BN71A6
0.67	2279	3.5	1340	65000	A804_1340 S1 M1SC6	278 A804_1340 P71 BN71A6
0.77	1989	2.5	1715	50000		A704_1715 P63 BN63B4
0.83	1836	2.7	1583	50000		A704_1583 P63 BN63B4
0.98	1561	3.2	1346	50000		A704_1346 P63 BN63B4
1.1	1441	3.5	1242	50000		A704_1242 P63 BN63B4
1.3	1186	2.4	697.3	30000	A604_697.3 S1 M1SC6	271 A604_697.3 P71 BN71A6
1.5	996	2.8	585.8	30000	A604_585.8 S1 M1SC6	271 A604_585.8 P71 BN71A6
1.7	902	1.7	778.2	20000		A504_778.2 P63 BN63B4
1.7	876	3.2	755.4	30000		A604_755.4 P63 BN63B4
1.9	821	1.8	707.9	20000		A504_707.9 P63 BN63B4
1.9	809	3.5	697.3	30000		A604_697.3 P63 BN63B4
2.1	732	2.0	631.2	20000		A504_631.2 P63 BN63B4
2.3	666	2.3	574.2	20000		A504_574.2 P63 BN63B4
2.5	614	2.4	529.5	20000		A504_529.5 P63 BN63B4
2.7	559	2.7	481.6	20000		A504_481.6 P63 BN63B4
3.0	518	2.9	446.8	20000		A504_446.8 P63 BN63B4
3.2	471	3.2	406.4	20000		A504_406.4 P63 BN63B4
3.4	466	1.0	393.2	12000	A353_393.2 S05 M05B4	255 A353_393.2 P63 BN63B4
3.5	447	1.9	376.8	15000	A413_376.8 S05 M05B4	259 A413_376.8 P63 BN63B4
3.6	424	3.5	365.6	20000		A504_365.6 P63 BN63B4
3.7	422	0.9	356.3	9600	A303_356.3 S05 M05B4	251 A303_356.3 P63 BN63B4
3.9	402	1.3	339.3	12000	A353_339.3 S05 M05B4	255 A353_339.3 P63 BN63B4



0.18 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
4.1	384	2.2	324.2	15000	A413_324.2 S05 M05B4	259	A413_324.2 P63 BN63B4	260
4.2	373	1.0	314.5	9600	A303_314.5 S05 M05B4	251	A303_314.5 P63 BN63B4	252
4.3	362	1.7	305.4	12000	A353_305.4 S05 M05B4	255	A353_305.4 P63 BN63B4	256
4.5	346	2.5	291.7	15000	A413_291.7 S05 M05B4	259	A413_291.7 P63 BN63B4	260
4.9	322	1.2	271.5	9600	A303_271.5 S05 M05B4	251	A303_271.5 P63 BN63B4	252
4.9	321	1.9	270.7	12000	A353_270.7 S05 M05B4	255	A353_270.7 P63 BN63B4	256
5.0	311	2.7	262.5	15000	A413_262.5 S05 M05B4	259	A413_262.5 P63 BN63B4	260
5.3	294	2.0	248.1	12000	A353_248.1 S05 M05B4	255	A353_248.1 P63 BN63B4	256
5.4	290	1.3	244.3	9600	A303_244.3 S05 M05B4	251	A303_244.3 P63 BN63B4	252
5.5	285	3.0	240.6	15000	A413_240.6 S05 M05B4	259	A413_240.6 P63 BN63B4	260
5.9	265	2.3	223.2	12000	A353_223.2 S05 M05B4	255	A353_223.2 P63 BN63B4	256
6.0	262	1.0	221.3	6200	A203_221.3 S05 M05B4	247	A203_221.3 P63 BN63B4	248
6.1	258	3.3	217.4	15000	A413_217.4 S05 M05B4	259	A413_217.4 P63 BN63B4	260
6.1	257	1.4	216.6	9600	A303_216.6 S05 M05B4	251	A303_216.6 P63 BN63B4	252
6.5	239	2.5	201.8	12000	A353_201.8 S05 M05B4	255	A353_201.8 P63 BN63B4	256
6.6	236	1.1	199.2	6200	A203_199.2 S05 M05B4	247	A203_199.2 P63 BN63B4	248
6.6	235	1.5	198.5	9600	A303_198.5 S05 M05B4	251	A303_198.5 P63 BN63B4	252
7.0	223	2.7	188.3	12000	A353_188.3 S05 M05B4	255	A353_188.3 P63 BN63B4	256
7.4	212	1.6	178.5	9600	A303_178.5 S05 M05B4	251	A303_178.5 P63 BN63B4	252
7.4	211	1.2	178.3	6200	A203_178.3 S05 M05B4	247	A203_178.3 P63 BN63B4	248
7.7	204	2.9	171.8	12000	A353_171.8 S05 M05B4	255	A353_171.8 P63 BN63B4	256
8.1	194	1.2	163.4	6200	A203_163.4 S05 M05B4	247	A203_163.4 P63 BN63B4	248
8.2	191	1.8	161.4	9600	A303_161.4 S05 M05B4	251	A303_161.4 P63 BN63B4	252
8.8	179	1.8	150.7	9600	A303_150.7 S05 M05B4	251	A303_150.7 P63 BN63B4	252
8.8	179	3.4	150.6	12000	A353_150.6 S05 M05B4	255	A353_150.6 P63 BN63B4	256
9.0	173	1.3	146.1	6200	A203_146.1 S05 M05B4	247	A203_146.1 P63 BN63B4	248
9.6	163	1.9	137.4	9600	A303_137.4 S05 M05B4	251	A303_137.4 P63 BN63B4	252
10.2	153	1.4	129.1	6200	A203_129.1 S05 M05B4	247	A203_129.1 P63 BN63B4	248
11.0	143	1.5	120.5	6200	A203_120.5 S05 M05B4	247	A203_120.5 P63 BN63B4	248
11.0	143	2.1	120.5	9600	A303_120.5 S05 M05B4	251	A303_120.5 P63 BN63B4	252
12.1	129	1.6	109.2	6200	A203_109.2 S05 M05B4	247	A203_109.2 P63 BN63B4	248
12.1	129	2.3	109.1	9600	A303_109.1 S05 M05B4	251	A303_109.1 P63 BN63B4	252
13.5	119	2.5	97.5	9600			A302_97.5 P63 BN63B4	252
14.3	113	1.8	92.3	6200	A202_92.3 S05 M05B4	247	A202_92.3 P63 BN63B4	248
14.4	112	0.9	91.6	4120	A052_91.6 S05 M05B4	240	A052_91.6 P63 BN63B4	240
14.4	112	1.2	91.6	5500	A102_91.6 S05 M05B4	243	A102_91.6 P63 BN63B4	244
15.2	106	3.0	86.7	9600			A302_86.7 P63 BN63B4	252
16.5	98	2.1	79.9	6200	A202_79.9 S05 M05B4	247	A202_79.9 P63 BN63B4	248
17.3	94	1.1	76.4	3980	A052_76.4 S05 M05B4	240	A052_76.4 P63 BN63B4	240
17.3	94	1.6	76.4	5500	A102_76.4 S05 M05B4	243	A102_76.4 P63 BN63B4	244
18.6	87	2.4	71.0	6200	A202_71.0 S05 M05B4	247	A202_71.0 P63 BN63B4	248
20.0	81	1.2	65.9	3860	A052_65.9 S05 M05B4	240	A052_65.9 P63 BN63B4	240
20.0	81	1.9	65.9	5500	A102_65.9 S05 M05B4	243	A102_65.9 P63 BN63B4	244
20.9	77	3.2	63.1	6200	A202_63.1 S05 M05B4	247	A202_63.1 P63 BN63B4	248
22.5	72	1.4	58.6	3760	A052_58.6 S05 M05B4	240	A052_58.6 P63 BN63B4	240
22.5	72	2.1	58.6	5500	A102_58.6 S05 M05B4	243	A102_58.6 P63 BN63B4	244
25.8	63	1.6	51.3	3640	A052_51.3 S05 M05B4	240	A052_51.3 P63 BN63B4	240
25.8	63	2.4	51.3	5500	A102_51.3 S05 M05B4	243	A102_51.3 P63 BN63B4	244
29.1	56	1.8	45.4	3540	A052_45.4 S05 M05B4	240	A052_45.4 P63 BN63B4	240
29.1	56	2.7	45.4	5500	A102_45.4 S05 M05B4	243	A102_45.4 P63 BN63B4	244
32	50	2.0	40.9	3440	A052_40.9 S05 M05B4	240	A052_40.9 P63 BN63B4	240

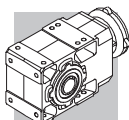


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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
32	50	3.0	40.9	5500	A102_40.9 S05 M05B4	243	A102_40.9 P63 BN63B4	244
38	43	2.3	35.1	3310	A052_35.1 S05 M05B4	240	A052_35.1 P63 BN63B4	240
38	43	3.5	35.1	5380	A102_35.1 S05 M05B4	243	A102_35.1 P63 BN63B4	244
41	39	2.5	32.2	3240	A052_32.2 S05 M05B4	240	A052_32.2 P63 BN63B4	240
46	35	2.9	28.6	3130	A052_28.6 S05 M05B4	240	A052_28.6 P63 BN63B4	240
52	31	3.2	25.5	3040	A052_25.5 S05 M05B4	240	A052_25.5 P63 BN63B4	240
56	29	3.4	23.8	2980	A052_23.8 S05 M05B4	240	A052_23.8 P63 BN63B4	240
62	26	3.8	21.4	2890	A052_21.4 S05 M05B4	240	A052_21.4 P63 BN63B4	240
71	23	4.4	18.6	2780	A052_18.6 S05 M05B4	240	A052_18.6 P63 BN63B4	240
80	20	5.0	16.4	2680	A052_16.4 S05 M05B4	240	A052_16.4 P63 BN63B4	240
95	17.1	5.9	13.9	2550	A052_13.9 S05 M05B4	240	A052_13.9 P63 BN63B4	240
107	15.1	6.6	12.3	2460	A052_12.3 S05 M05B4	240	A052_12.3 P63 BN63B4	240
125	12.9	7.7	10.6	2350	A052_10.6 S05 M05B4	240	A052_10.6 P63 BN63B4	240
137	11.8	8.5	9.6	2280	A052_9.6 S05 M05B4	240	A052_9.6 P63 BN63B4	240
142	11.4	8.8	6.3	2300	A052_6.3 S1 M1SC6	240	A052_6.3 P71 BN71A6	240
155	10.4	9.6	8.5	2200	A052_8.5 S05 M05B4	240	A052_8.5 P63 BN63B4	240
183	8.8	11.3	7.2	2090	A052_7.2 S05 M05B4	240	A052_7.2 P63 BN63B4	240
208	7.8	12.9	6.3	2010	A052_6.3 S05 M05B4	240	A052_6.3 P63 BN63B4	240
242	6.7	14.2	5.5	1920	A052_5.5 S05 M05B4	240	A052_5.5 P63 BN63B4	240
284	5.7	16.7	9.6	1830	A052_9.6 S05 M05A2	240	A052_9.6 P63 BN63A2	240
321	5.0	17.8	8.5	1770	A052_8.5 S05 M05A2	240	A052_8.5 P63 BN63A2	240
379	4.3	19.9	7.2	1670	A052_7.2 S05 M05A2	240	A052_7.2 P63 BN63A2	240
431	3.8	21.3	6.3	1610	A052_6.3 S05 M05A2	240	A052_6.3 P63 BN63A2	240
499	3.2	23.2	5.5	1530	A052_5.5 S05 M05A2	240	A052_5.5 P63 BN63A2	240

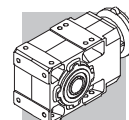
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
0.52	4051	1.2	1715	50000	A704_1715 S1 M1SD6	275	A704_1715 P71 BN71B6	276
0.58	3680	2.2	1558	65000	A804_1558 S1 M1SD6	278	A804_1558 P71 BN71B6	279
0.67	3165	2.5	1340	65000	A804_1340 S1 M1SD6	278	A804_1340 P71 BN71B6	279
0.80	2642	1.9	1715	50000			A704_1715 P71 BN71A4	276
0.87	2439	2.1	1583	50000			A704_1583 P71 BN71A4	276
0.89	2400	3.3	1558	65000			A804_1558 P71 BN71A4	279
1.0	2073	2.4	1346	50000			A704_1346 P71 BN71A4	276
1.1	1914	2.6	1242	50000			A704_1242 P71 BN71A4	276
1.2	1789	2.8	1161	50000			A704_1161 P71 BN71A4	276
1.3	1652	3.0	1072	50000			A704_1072 P71 BN71A4	276
1.5	1427	3.5	926.5	50000			A704_926.5 P71 BN71A4	276
1.8	1199	1.3	778.2	20000			A504_778.2 P71 BN71A4	264
1.8	1164	2.4	755.4	30000			A604_755.4 P71 BN71A4	272
1.9	1091	1.4	707.9	20000			A504_707.9 P71 BN71A4	264
2.0	1074	2.6	697.3	30000			A604_697.3 P71 BN71A4	272
2.2	978	2.9	634.6	30000			A604_634.6 P71 BN71A4	272
2.2	972	1.5	631.2	20000			A504_631.2 P71 BN71A4	264
2.4	902	3.1	585.8	30000			A604_585.8 P71 BN71A4	272
2.4	885	1.7	574.2	20000			A504_574.2 P71 BN71A4	264
2.5	835	3.4	542.0	30000			A604_542.0 P71 BN71A4	272



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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
2.6	816	1.8	529.5	20000	A413_376.8 S05 M05C4	259	A504_529.5 P71 BN71A4	264
2.9	742	2.0	481.6	20000			A504_481.6 P71 BN71A4	264
3.1	688	2.2	446.8	20000			A504_446.8 P71 BN71A4	264
3.4	626	2.4	406.4	20000			A504_406.4 P71 BN71A4	264
3.6	611	1.4	376.8	15000			A413_376.8 P71 BN71A4	260
3.8	563	2.7	365.6	20000	A353_339.3 S05 M05C4	255	A504_365.6 P71 BN71A4	264
3.9	550	0.9	339.3	12000			A353_339.3 P71 BN71A4	256
4.1	526	1.6	324.2	15000			A413_324.2 P71 BN71A4	260
4.1	512	2.9	332.6	20000			A504_332.6 P71 BN71A4	264
4.4	495	1.2	305.4	12000			A353_305.4 P71 BN71A4	256
4.7	460	1.8	291.7	15000	A413_291.7 S05 M05C4	259	A413_291.7 P71 BN71A4	260
4.8	442	3.4	286.8	20000	A303_271.5 S05 M05C4	251	A504_286.8 P71 BN71A4	264
4.9	440	0.9	271.5	9600			A303_271.5 P71 BN71A4	252
5.0	439	1.4	270.7	12000			A353_270.7 P71 BN71A4	256
5.1	426	2.0	262.5	15000			A413_262.5 P71 BN71A4	260
5.4	403	1.5	248.1	12000			A353_248.1 P71 BN71A4	256
5.6	385	1.0	244.3	9600	A303_244.3 S05 M05C4	251	A303_244.3 P71 BN71A4	252
5.7	379	2.2	240.6	15000	A413_240.6 S05 M05C4	259	A413_240.6 P71 BN71A4	260
6.0	362	1.7	223.2	12000	A353_223.2 S05 M05C4	255	A353_223.2 P71 BN71A4	256
6.2	353	2.4	217.4	15000	A413_217.4 S05 M05C4	259	A413_217.4 P71 BN71A4	260
6.2	351	1.0	216.6	9600	A303_216.6 S05 M05C4	251	A303_216.6 P71 BN71A4	252
6.6	327	1.8	201.8	12000	A353_201.8 S05 M05C4	255	A353_201.8 P71 BN71A4	256
7.0	313	1.1	198.5	9600	A303_198.5 S05 M05C4	251	A303_198.5 P71 BN71A4	252
7.0	311	2.7	197.5	15000	A413_197.5 S05 M05C4	259	A413_197.5 P71 BN71A4	260
7.1	306	2.0	188.3	12000	A353_188.3 S05 M05C4	255	A353_188.3 P71 BN71A4	256
7.3	299	2.8	184.4	15000	A413_184.4 S05 M05C4	259	A413_184.4 P71 BN71A4	260
7.5	290	1.2	178.5	9600	A303_178.5 S05 M05C4	251	A303_178.5 P71 BN71A4	252
7.8	279	2.2	171.8	12000	A353_171.8 S05 M05C4	255	A353_171.8 P71 BN71A4	256
8.4	257	0.9	163.4	6200	A203_163.4 S05 M05C4	247	A203_163.4 P71 BN71A4	248
8.5	254	1.3	161.4	9600	A303_161.4 S05 M05C4	251	A303_161.4 P71 BN71A4	252
8.9	244	1.4	150.7	9600	A303_150.7 S05 M05C4	251	A303_150.7 P71 BN71A4	252
8.9	244	2.5	150.6	12000	A353_150.6 S05 M05C4	255	A353_150.6 P71 BN71A4	256
9.2	237	1.0	146.1	6200	A203_146.1 S05 M05C4	247	A203_146.1 P71 BN71A4	248
9.8	221	2.6	136.3	12000	A353_136.3 S05 M05C4	255	A353_136.3 P71 BN71A4	256
10.0	216	1.5	137.4	9600	A303_137.4 S05 M05C4	251	A303_137.4 P71 BN71A4	252
10.7	203	1.1	129.1	6200	A203_129.1 S05 M05C4	247	A203_129.1 P71 BN71A4	248
11.1	196	1.1	120.5	6200	A203_120.5 S05 M05C4	247	A203_120.5 P71 BN71A4	248
11.1	195	1.5	120.5	9600	A303_120.5 S05 M05C4	251	A303_120.5 P71 BN71A4	252
11.5	190	3.0	116.9	12000	A353_116.9 S05 M05C4	255	A353_116.9 P71 BN71A4	256
12.6	172	1.2	109.2	6200	A203_109.2 S05 M05C4	247	A203_109.2 P71 BN71A4	248
12.7	172	1.7	109.1	9600	A303_109.1 S05 M05C4	251	A303_109.1 P71 BN71A4	252
12.7	171	3.1	105.5	12000	A353_105.5 S05 M05C4	255	A353_105.5 P71 BN71A4	256
14.2	159	1.9	97.5	9600	A202_92.3 S05 M05C4	247	A302_97.5 P71 BN71A4	252
14.4	156	3.5	95.6	12000			A352_95.6 P71 BN71A4	256
14.5	155	1.3	92.3	6200			A202_92.3 P71 BN71A4	248
15.9	141	2.3	86.7	9600			A302_86.7 P71 BN71A4	252
16.8	134	1.6	79.9	6200			A202_79.9 P71 BN71A4	248
17.5	128	1.2	76.4	5500	A102_76.4 S05 M05C4	243	A102_76.4 P71 BN71A4	244
18.0	125	2.8	76.5	9600	A202_71.0 S05 M05C4	247	A302_76.5 P71 BN71A4	252
19.4	116	1.8	71.0	6200			A202_71.0 P71 BN71A4	248
20.3	110	0.9	65.9	3610			A052_65.9 P71 BN71A4	240

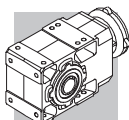


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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
20.3	110	1.4	65.9	5500	A102_65.9 S05 M05C4	243	A102_65.9 P71 BN71A4	244
21.2	106	2.3	63.1	6200	A202_63.1 S05 M05C4	247	A202_63.1 P71 BN71A4	248
22.9	98	1.0	58.6	3540	A052_58.6 S05 M05C4	240	A052_58.6 P71 BN71A4	240
23.5	95	1.6	58.6	5500	A102_58.6 S05 M05C4	243	A102_58.6 P71 BN71A4	244
25.0	90	2.8	53.7	6200	A202_53.7 S05 M05C4	247	A202_53.7 P71 BN71A4	248
26.1	86	1.2	51.3	3450	A052_51.3 S05 M05C4	240	A052_51.3 P71 BN71A4	240
26.1	86	1.7	51.3	5500	A102_51.3 S05 M05C4	243	A102_51.3 P71 BN71A4	244
28.6	79	3.2	48.3	6180	A202_48.3 S05 M05C4	247	A202_48.3 P71 BN71A4	248
29.5	76	1.3	45.4	3370	A052_45.4 S05 M05C4	240	A052_45.4 P71 BN71A4	240
29.5	76	2.0	45.4	5500	A102_45.4 S05 M05C4	243	A102_45.4 P71 BN71A4	244
33	68	1.5	40.9	3290	A052_40.9 S05 M05C4	240	A052_40.9 P71 BN71A4	240
34	66	2.3	40.9	5500	A102_40.9 S05 M05C4	243	A102_40.9 P71 BN71A4	244
38	59	1.7	35.1	3180	A052_35.1 S05 M05C4	240	A052_35.1 P71 BN71A4	240
38	59	2.5	35.1	5260	A102_35.1 S05 M05C4	243	A102_35.1 P71 BN71A4	244
42	54	1.9	32.2	3120	A052_32.2 S05 M05C4	240	A052_32.2 P71 BN71A4	240
43	52	2.9	32.2	5500	A102_32.2 S05 M05C4	243	A102_32.2 P71 BN71A4	244
47	48	2.1	28.6	3030	A052_28.6 S05 M05C4	240	A052_28.6 P71 BN71A4	240
47	48	3.1	28.6	4970	A102_28.6 S05 M05C4	243	A102_28.6 P71 BN71A4	244
53	43	2.3	25.5	2940	A052_25.5 S05 M05C4	240	A052_25.5 P71 BN71A4	240
56	40	2.5	23.8	2890	A052_23.8 S05 M05C4	240	A052_23.8 P71 BN71A4	240
63	36	2.8	21.4	2810	A052_21.4 S05 M05C4	240	A052_21.4 P71 BN71A4	240
72	31	3.2	18.6	2710	A052_18.6 S05 M05C4	240	A052_18.6 P71 BN71A4	240
84	27	3.7	16.4	2620	A052_16.4 S05 M05C4	240	A052_16.4 P71 BN71A4	240
99	23	4.4	13.9	2500	A052_13.9 S05 M05C4	240	A052_13.9 P71 BN71A4	240
112	20	5.0	12.3	2420	A052_12.3 S05 M05C4	240	A052_12.3 P71 BN71A4	240
131	17.2	5.8	10.6	2310	A052_10.6 S05 M05C4	240	A052_10.6 P71 BN71A4	240
144	15.7	6.4	9.6	2260	A052_9.6 S05 M05C4	240	A052_9.6 P71 BN71A4	240
162	13.9	7.2	8.5	2180	A052_8.5 S05 M05C4	240	A052_8.5 P71 BN71A4	240
191	11.7	8.5	7.2	2070	A052_7.2 S05 M05C4	240	A052_7.2 P71 BN71A4	240
218	10.3	9.7	6.3	1990	A052_6.3 S05 M05C4	240	A052_6.3 P71 BN71A4	240
252	8.9	10.7	5.5	1900	A052_5.5 S05 M05C4	240	A052_5.5 P71 BN71A4	240
285	7.9	12.1	9.6	1820	A052_9.6 S05 M05B2	240	A052_9.6 P63 BN63B2	240
322	7.0	12.9	8.5	1750	A052_8.5 S05 M05B2	240	A052_8.5 P63 BN63B2	240
380	5.9	14.4	7.2	1660	A052_7.2 S05 M05B2	240	A052_7.2 P63 BN63B2	240
433	5.2	15.4	6.3	1590	A052_6.3 S05 M05B2	240	A052_6.3 P63 BN63B2	240
501	4.5	16.7	5.5	1520	A052_5.5 S05 M05B2	240	A052_5.5 P63 BN63B2	240

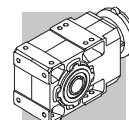
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0.63	4972	1.6	1438	65000	A804_1438 S1 M1LA6	278	A804_1438 P80 BN80A6	279
0.74	4226	3.3	1222	75000	A904_1222 S1 M1LA6	281	A904_1222 P80 BN80A6	282
0.80	3939	1.3	1715	50000	A704_1715 S1 M1SD4	275	A704_1715 P71 BN71B4	276
0.87	3636	1.4	1583	50000	A704_1583 S1 M1SD4	275	A704_1583 P71 BN71B4	276
0.88	3577	2.2	1558	65000	A804_1558 S1 M1SD4	278	A804_1558 P71 BN71B4	279
0.95	3302	2.4	1438	65000	A804_1438 S1 M1SD4	278	A804_1438 P71 BN71B4	279
1.0	3091	1.6	1346	50000	A704_1346 S1 M1SD4	275	A704_1346 P71 BN71B4	276



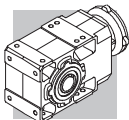
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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N			 IEC	
1.0	3077	2.6	1340	65000	A804_1340 S1 M1SD4	278	A804_1340 P71 BN71B4	279
1.1	2853	1.8	1242	50000	A704_1242 S1 M1SD4	275	A704_1242 P71 BN71B4	276
1.1	2841	2.8	1237	65000	A804_1237 S1 M1SD4	278	A804_1237 P71 BN71B4	279
1.2	2668	1.9	1161	50000	A704_1161 S1 M1SD4	275	A704_1161 P71 BN71B4	276
1.3	2492	3.2	1085	65000	A804_1085 S1 M1SD4	278	A804_1085 P71 BN71B4	279
1.3	2462	2.0	1072	50000	A704_1072 S1 M1SD4	275	A704_1072 P71 BN71B4	276
1.4	2300	3.5	1001	65000	A804_1001 S1 M1SD4	278	A804_1001 P71 BN71B4	279
1.5	2128	2.3	926.5	50000	A704_926.5 S1 M1SD4	275	A704_926.5 P71 BN71B4	276
1.6	1964	2.5	855.3	50000	A704_855.3 S1 M1SD4	275	A704_855.3 P71 BN71B4	276
1.8	1754	2.8	763.9	50000	A704_763.9 S1 M1SD4	275	A704_763.9 P71 BN71B4	276
1.8	1735	1.6	755.4	30000	A604_755.4 S1 M1SD4	271	A604_755.4 P71 BN71B4	272
1.9	1626	0.9	707.9	20000	A504_707.9 S1 M1SD4	263	A504_707.9 P71 BN71B4	264
1.9	1619	3.1	705.1	50000	A704_705.1 S1 M1SD4	275	A704_705.1 P71 BN71B4	276
2.0	1601	1.7	697.3	30000	A604_697.3 S1 M1SD4	271	A604_697.3 P71 BN71B4	272
2.1	1481	3.4	644.6	50000	A704_644.6 S1 M1SD4	275	A704_644.6 P71 BN71B4	276
2.2	1457	1.9	634.6	30000	A604_634.6 S1 M1SD4	271	A604_634.6 P71 BN71B4	272
2.2	1450	1.0	631.2	20000	A504_631.2 S1 M1SD4	263	A504_631.2 P71 BN71B4	264
2.3	1345	2.1	585.8	30000	A604_585.8 S1 M1SD4	271	A604_585.8 P71 BN71B4	272
2.4	1319	1.1	574.2	20000	A504_574.2 S1 M1SD4	263	A504_574.2 P71 BN71B4	264
2.5	1245	2.2	542.0	30000	A604_542.0 S1 M1SD4	271	A604_542.0 P71 BN71B4	272
2.6	1216	1.2	529.5	20000	A504_529.5 S1 M1SD4	263	A504_529.5 P71 BN71B4	264
2.7	1149	2.4	500.3	30000	A604_500.3 S1 M1SD4	271	A604_500.3 P71 BN71B4	272
2.8	1106	1.4	481.6	20000	A504_481.6 S1 M1SD4	263	A504_481.6 P71 BN71B4	264
3.1	1026	1.5	446.8	20000	A504_446.8 S1 M1SD4	263	A504_446.8 P71 BN71B4	264
3.1	1007	2.8	438.4	30000	A604_438.4 S1 M1SD4	271	A604_438.4 P71 BN71B4	272
3.4	933	1.6	406.4	20000	A504_406.4 S1 M1SD4	263	A504_406.4 P71 BN71B4	264
3.4	929	3.0	404.7	30000	A604_404.7 S1 M1SD4	271	A604_404.7 P71 BN71B4	272
3.6	885	1.0	376.8	15000	A413_376.8 S1 M1SD4	259	A413_376.8 P71 BN71B4	260
3.7	840	1.8	365.6	20000	A504_365.6 S1 M1SD4	263	A504_365.6 P71 BN71B4	264
3.9	807	3.5	351.2	30000	A604_351.2 S1 M1SD4	271	A604_351.2 P71 BN71B4	272
4.1	764	2.0	332.6	20000	A504_332.6 S1 M1SD4	263	A504_332.6 P71 BN71B4	264
4.2	761	1.1	324.2	15000	A413_324.2 S1 M1SD4	259	A413_324.2 P71 BN71B4	260
4.7	685	1.2	291.7	15000	A413_291.7 S1 M1SD4	259	A413_291.7 P71 BN71B4	260
4.8	659	2.3	286.8	20000	A504_286.8 S1 M1SD4	263	A504_286.8 P71 BN71B4	264
5.1	636	0.9	270.7	12000	A353_270.7 S1 M1SD4	255	A353_270.7 P71 BN71B4	256
5.2	616	1.4	262.5	15000	A413_262.5 S1 M1SD4	259	A413_262.5 P71 BN71B4	260
5.3	599	2.5	260.9	20000	A504_260.9 S1 M1SD4	263	A504_260.9 P71 BN71B4	264
5.5	583	1.0	248.1	12000	A353_248.1 S1 M1SD4	255	A353_248.1 P71 BN71B4	256
5.7	565	1.5	240.6	15000	A413_240.6 S1 M1SD4	259	A413_240.6 P71 BN71B4	260
5.9	533	2.8	232.0	20000	A504_232.0 S1 M1SD4	263	A504_232.0 P71 BN71B4	264
6.1	524	1.1	223.2	12000	A353_223.2 S1 M1SD4	255	A353_223.2 P71 BN71B4	256
6.3	511	1.7	217.4	15000	A413_217.4 S1 M1SD4	259	A413_217.4 P71 BN71B4	260
6.5	485	3.1	211.0	20000	A504_211.0 S1 M1SD4	263	A504_211.0 P71 BN71B4	264
6.8	474	1.3	201.8	12000	A353_201.8 S1 M1SD4	255	A353_201.8 P71 BN71B4	256
6.9	464	1.8	197.5	15000	A413_197.5 S1 M1SD4	259	A413_197.5 P71 BN71B4	260
7.2	448	3.4	190.6	20000	A503_190.6 S1 M1SD4	263	A503_190.6 P71 BN71B4	264
7.3	442	1.4	188.3	12000	A353_188.3 S1 M1SD4	255	A353_188.3 P71 BN71B4	256
7.4	433	2.0	184.4	15000	A413_184.4 S1 M1SD4	259	A413_184.4 P71 BN71B4	260
8.0	403	1.5	171.8	12000	A353_171.8 S1 M1SD4	255	A353_171.8 P71 BN71B4	256
9.1	354	0.9	150.7	9600	A303_150.7 S1 M1SD4	251	A303_150.7 P71 BN71B4	252
9.1	354	1.7	150.6	12000	A353_150.6 S1 M1SD4	255	A353_150.6 P71 BN71B4	256



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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N			 IEC 	
9.3	345	2.5	146.9	15000	A413_146.9 S1 M1SD4	259	A413_146.9 P71 BN71B4	260
10.0	323	1.0	137.4	9600	A303_137.4 S1 M1SD4	251	A303_137.4 P71 BN71B4	252
10.0	320	1.8	136.3	12000	A353_136.3 S1 M1SD4	255	A353_136.3 P71 BN71B4	256
11.4	283	1.1	120.5	9600	A303_120.5 S1 M1SD4	251	A303_120.5 P71 BN71B4	252
11.7	275	2.0	116.9	12000	A353_116.9 S1 M1SD4	255	A353_116.9 P71 BN71B4	256
11.8	272	3.1	115.9	15000	A413_115.9 S1 M1SD4	259	A413_115.9 P71 BN71B4	260
12.6	256	1.2	109.1	9600	A303_109.1 S1 M1SD4	251	A303_109.1 P71 BN71B4	252
13.0	248	2.1	105.5	12000	A353_105.5 S1 M1SD4	255	A353_105.5 P71 BN71B4	256
14.1	237	1.3	97.5	9600			A302_97.5 P71 BN71B4	252
14.3	232	2.3	95.6	12000	A352_95.6 S1 M1SD4	255	A352_95.6 P71 BN71B4	256
15.8	210	1.5	86.7	9600			A302_86.7 P71 BN71B4	252
16.6	200	3.0	82.5	12000	A352_82.5 S1 M1SD4	255	A352_82.5 P71 BN71B4	256
17.2	194	1.1	79.9	6200			A202_79.9 P71 BN71B4	248
17.9	186	1.9	76.5	9600	A302_76.5 S1 M1SD4	251	A302_76.5 P71 BN71B4	252
18.4	180	3.3	74.3	12000	A352_74.3 S1 M1SD4	255	A352_74.3 P71 BN71B4	256
19.3	172	1.2	71.0	6200			A202_71.0 P71 BN71B4	248
20.7	160	2.4	66.0	9350	A302_66.0 S1 M1SD4	251	A302_66.0 P71 BN71B4	252
20.8	160	0.9	65.9	5500			A102_65.9 P71 BN71B4	244
21.7	153	1.6	63.1	6200	A202_63.1 S1 M1SD4	247	A202_63.1 P71 BN71B4	248
23.1	144	2.8	59.4	9080	A302_59.4 S1 M1SD4	251	A302_59.4 P71 BN71B4	252
23.4	142	1.1	58.6	5500			A102_58.6 P71 BN71B4	244
25.5	130	1.9	53.7	6090	A202_53.7 S1 M1SD4	247	A202_53.7 P71 BN71B4	248
26.0	128	3.2	52.7	8790	A302_52.7 S1 M1SD4	251	A302_52.7 P71 BN71B4	252
26.7	124	1.2	51.3	5490	A102_51.3 S1 M1SD4	243	A102_51.3 P71 BN71B4	244
28.4	117	2.1	48.3	5940	A202_48.3 S1 M1SD4	247	A202_48.3 P71 BN71B4	248
28.4	117	3.5	48.3	8580	A302_48.3 S1 M1SD4	251	A302_48.3 P71 BN71B4	252
30	110	0.9	45.4	3060	A052_45.4 S1 M1SD4	240	A052_45.4 P71 BN71B4	240
30	110	1.4	45.4	5350	A102_45.4 S1 M1SD4	243	A102_45.4 P71 BN71B4	244
32	105	2.4	43.2	5780	A202_43.2 S1 M1SD4	247	A202_43.2 P71 BN71B4	248
34	99	1.0	40.9	3020	A052_40.9 S1 M1SD4	240	A052_40.9 P71 BN71B4	240
34	99	1.5	40.9	5500	A102_40.9 S1 M1SD4	243	A102_40.9 P71 BN71B4	244
35	96	2.6	39.6	5650	A202_39.6 S1 M1SD4	247	A202_39.6 P71 BN71B4	248
39	86	2.9	35.4	5480	A202_35.4 S1 M1SD4	247	A202_35.4 P71 BN71B4	248
39	85	1.2	35.1	2950	A052_35.1 S1 M1SD4	240	A052_35.1 P71 BN71B4	240
39	85	1.8	35.1	5040	A102_35.1 S1 M1SD4	243	A102_35.1 P71 BN71B4	244
43	78	1.3	32.2	2900	A052_32.2 S1 M1SD4	240	A052_32.2 P71 BN71B4	240
43	78	1.9	32.2	5500	A102_32.2 S1 M1SD4	243	A102_32.2 P71 BN71B4	244
44	76	3.3	31.3	5310	A202_31.3 S1 M1SD4	247	A202_31.3 P71 BN71B4	248
47	71	3.5	29.2	5210	A202_29.2 S1 M1SD4	247	A202_29.2 P71 BN71B4	248
48	69	1.4	28.6	2840	A052_28.6 S1 M1SD4	240	A052_28.6 P71 BN71B4	240
48	69	2.2	28.6	4790	A102_28.6 S1 M1SD4	243	A102_28.6 P71 BN71B4	244
54	62	1.6	25.5	2770	A052_25.5 S1 M1SD4	240	A052_25.5 P71 BN71B4	240
54	62	2.4	25.5	5500	A102_25.5 S1 M1SD4	243	A102_25.5 P71 BN71B4	244
58	58	1.7	23.8	2730	A052_23.8 S1 M1SD4	240	A052_23.8 P71 BN71B4	240
58	58	2.6	23.8	4570	A102_23.8 S1 M1SD4	243	A102_23.8 P71 BN71B4	244
64	52	1.9	21.4	2670	A052_21.4 S1 M1SD4	240	A052_21.4 P71 BN71B4	240
64	52	2.9	21.4	5270	A102_21.4 S1 M1SD4	243	A102_21.4 P71 BN71B4	244
74	45	2.2	18.6	2590	A052_18.6 S1 M1SD4	240	A052_18.6 P71 BN71B4	240
74	45	3.3	18.6	4270	A102_18.6 S1 M1SD4	243	A102_18.6 P71 BN71B4	244
83	40	2.5	16.4	2510	A052_16.4 S1 M1SD4	240	A052_16.4 P71 BN71B4	240
98	34	3.0	13.9	2410	A052_13.9 S1 M1SD4	240	A052_13.9 P71 BN71B4	240

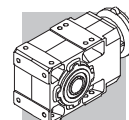


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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N			 IEC 	
111	30	3.3	12.3	2350	A052_12.3 S1 M1SD4	240	A052_12.3 P71 BN71B4	240
130	26	3.9	10.6	2240	A052_10.6 S1 M1SD4	240	A052_10.6 P71 BN71B4	240
142	23	4.3	9.6	2190	A052_9.6 S1 M1SD4	240	A052_9.6 P71 BN71B4	240
161	21	4.8	8.5	2120	A052_8.5 S1 M1SD4	240	A052_8.5 P71 BN71B4	240
190	17.5	5.7	7.2	2030	A052_7.2 S1 M1SD4	240	A052_7.2 P71 BN71B4	240
216	15.4	6.5	6.3	1950	A052_6.3 S1 M1SD4	240	A052_6.3 P71 BN71B4	240
228	14.6	6.8	12.3	1920	A052_12.3 S05 M05C2	240	A052_12.3 P71 BN71A2	240
251	13.3	7.2	5.5	1870	A052_5.5 S1 M1SD4	240	A052_5.5 P71 BN71B4	240
265	12.5	6.4	10.6	1830	A052_10.6 S05 M05C2	240	A052_10.6 P71 BN71A2	240
291	11.4	8.3	9.6	1790	A052_9.6 S05 M05C2	240	A052_9.6 P71 BN71A2	240
331	10.0	9.0	8.5	1720	A052_8.5 S05 M05C2	240	A052_8.5 P71 BN71A2	240
388	8.6	9.9	7.2	1640	A052_7.2 S05 M05C2	240	A052_7.2 P71 BN71A2	240
445	7.5	10.7	6.3	1570	A052_6.3 S05 M05C2	240	A052_6.3 P71 BN71A2	240
512	6.5	11.6	5.5	1500	A052_5.5 S05 M05C2	240		

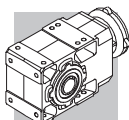
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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N			 IEC 	
0.56	8299	1.7	1632	75000	A904_1632 S2 M2SA6	281	A904_1632 P80 BN80B6	282
0.64	7310	1.1	1438	65000	A804_1438 S2 M2SA6	278	A804_1438 P80 BN80B6	279
0.75	6213	2.3	1222	75000	A904_1222 S2 M2SA6	281	A904_1222 P80 BN80B6	282
0.80	5813	0.9	1715	50000	A704_1715 S1 M1LA4	275	A704_1715 P80 BN80A4	276
0.85	5532	2.5	1632	75000	A904_1632 S1 M1LA4	281	A904_1632 P80 BN80A4	282
0.87	5365	0.9	1583	50000	A704_1583 S1 M1LA4	275	A704_1583 P80 BN80A4	276
0.89	5279	1.5	1558	65000	A804_1558 S1 M1LA4	278	A804_1558 P80 BN80A4	279
0.92	5070	2.8	1507	75000	A904_1507 S1 M1LA4	281	A904_1507 P80 BN80A4	282
0.96	4873	1.6	1438	65000	A804_1438 S1 M1LA4	278	A804_1438 P80 BN80A4	279
1.0	4561	1.1	1346	50000	A704_1346 S1 M1LA4	275	A704_1346 P80 BN80A4	276
1.0	4541	1.8	1340	65000	A804_1340 S1 M1LA4	278	A804_1340 P80 BN80A4	279
1.0	4455	3.1	1324	75000	A904_1324 S1 M1LA4	281	A904_1324 P80 BN80A4	282
1.1	4211	1.2	1242	50000	A704_1242 S1 M1LA4	275	A704_1242 P80 BN80A4	276
1.1	4192	1.9	1237	65000	A804_1237 S1 M1LA4	278	A804_1237 P80 BN80A4	279
1.1	4112	3.4	1222	75000	A904_1222 S1 M1LA4	281	A904_1222 P80 BN80A4	282
1.2	3937	1.3	1161	50000	A704_1161 S1 M1LA4	275	A704_1161 P80 BN80A4	276
1.3	3677	2.2	1085	65000	A804_1085 S1 M1LA4	278	A804_1085 P80 BN80A4	279
1.3	3634	1.4	1072	50000	A704_1072 S1 M1LA4	275	A704_1072 P80 BN80A4	276
1.4	3394	2.4	1001	65000	A804_1001 S1 M1LA4	278	A804_1001 P80 BN80A4	279
1.5	3140	1.6	926.5	50000	A704_926.5 S1 M1LA4	275	A704_926.5 P80 BN80A4	276
1.5	3046	2.6	898.7	65000	A804_898.7 S1 M1LA4	278	A804_898.7 P80 BN80A4	279
1.6	2899	1.7	855.3	50000	A704_855.3 S1 M1LA4	275	A704_855.3 P80 BN80A4	276
1.7	2811	2.8	829.5	65000	A804_829.5 S1 M1LA4	278	A804_829.5 P80 BN80A4	279
1.8	2589	1.9	763.9	50000	A704_763.9 S1 M1LA4	275	A704_763.9 P80 BN80A4	276
1.8	2583	3.1	762.1	65000	A804_762.1 S1 M1LA4	278	A804_762.1 P80 BN80A4	279
1.8	2560	1.1	755.4	30000	A604_755.4 S1 M1LA4	271	A604_755.4 P80 BN80A4	272
2.0	2390	2.1	705.1	50000	A704_705.1 S1 M1LA4	275	A704_705.1 P80 BN80A4	276
2.0	2384	3.4	703.5	65000	A804_703.5 S1 M1LA4	278	A804_703.5 P80 BN80A4	279
2.0	2363	1.2	697.3	30000	A604_697.3 S1 M1LA4	271	A604_697.3 P80 BN80A4	272
2.1	2185	2.3	644.6	50000	A704_644.6 S1 M1LA4	275	A704_644.6 P80 BN80A4	276



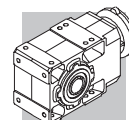
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
2.2	2151	1.3	634.6	30000	A604_634.6 S1 M1LA4	271	A604_634.6 P80 BN80A4	272
2.3	2017	2.5	595.0	50000	A704_595.0 S1 M1LA4	275	A704_595.0 P80 BN80A4	276
2.4	1985	1.4	585.8	30000	A604_585.8 S1 M1LA4	271	A604_585.8 P80 BN80A4	272
2.5	1837	1.5	542.0	30000	A604_542.0 S1 M1LA4	271	A604_542.0 P80 BN80A4	272
2.7	1747	2.9	515.4	50000	A704_515.4 S1 M1LA4	275	A704_515.4 P80 BN80A4	276
2.8	1696	1.7	500.3	30000	A604_500.3 S1 M1LA4	271	A604_500.3 P80 BN80A4	272
2.9	1632	0.9	481.6	20000	A504_481.6 S1 M1LA4	263	A504_481.6 P80 BN80A4	264
2.9	1612	3.1	475.8	50000	A704_475.8 S1 M1LA4	275	A704_475.8 P80 BN80A4	276
3.1	1514	1.0	446.8	20000	A504_446.8 S1 M1LA4	263	A504_446.8 P80 BN80A4	264
3.1	1486	1.9	438.4	30000	A604_438.4 S1 M1LA4	271	A604_438.4 P80 BN80A4	272
3.4	1378	1.1	406.4	20000	A504_406.4 S1 M1LA4	263	A504_406.4 P80 BN80A4	264
3.4	1372	2.0	404.7	30000	A604_404.7 S1 M1LA4	271	A604_404.7 P80 BN80A4	272
3.8	1239	1.2	365.6	20000	A504_365.6 S1 M1LA4	263	A504_365.6 P80 BN80A4	264
3.9	1190	2.4	351.2	30000	A604_351.2 S1 M1LA4	271	A604_351.2 P80 BN80A4	272
4.1	1127	1.3	332.6	20000	A504_332.6 S1 M1LA4	263	A504_332.6 P80 BN80A4	264
4.3	1099	2.5	324.2	30000	A604_324.2 S1 M1LA4	271	A604_324.2 P80 BN80A4	272
4.8	972	1.5	286.8	20000	A504_286.8 S1 M1LA4	263	A504_286.8 P80 BN80A4	264
4.8	970	2.9	286.3	30000	A604_286.3 S1 M1LA4	271	A604_286.3 P80 BN80A4	272
5.2	896	3.1	264.3	30000	A604_264.3 S1 M1LA4	271	A604_264.3 P80 BN80A4	272
5.3	910	0.9	262.5	15000	A413_262.5 S1 M1LA4	259	A413_262.5 P80 BN80A4	260
5.3	884	1.7	260.9	20000	A504_260.9 S1 M1LA4	263	A504_260.9 P80 BN80A4	264
5.7	834	1.0	240.6	15000	A413_240.6 S1 M1LA4	259	A413_240.6 P80 BN80A4	260
5.9	786	1.9	232.0	20000	A504_232.0 S1 M1LA4	263	A504_232.0 P80 BN80A4	264
6.3	753	1.1	217.4	15000	A413_217.4 S1 M1LA4	259	A413_217.4 P80 BN80A4	260
6.5	715	2.1	211.0	20000	A504_211.0 S1 M1LA4	263	A504_211.0 P80 BN80A4	264
7.0	685	1.2	197.5	15000	A413_197.5 S1 M1LA4	259	A413_197.5 P80 BN80A4	260
7.1	673	3.0	194.2	30000	A553_194.2 S1 M1LA4	267	A553_194.2 P80 BN80A4	268
7.2	660	2.3	190.6	20000	A503_190.6 S1 M1LA4	263	A503_190.6 P80 BN80A4	264
7.3	653	0.9	188.3	12000	A353_188.3 S1 M1LA4	255	A353_188.3 P80 BN80A4	256
7.5	639	1.3	184.4	15000	A413_184.4 S1 M1LA4	259	A413_184.4 P80 BN80A4	260
7.9	607	3.3	175.0	30000	A553_175.0 S1 M1LA4	267	A553_175.0 P80 BN80A4	268
8.0	601	2.5	173.4	20000	A503_173.4 S1 M1LA4	263	A503_173.4 P80 BN80A4	264
8.0	595	1.0	171.8	12000	A353_171.8 S1 M1LA4	255	A353_171.8 P80 BN80A4	256
9.0	532	2.8	154.6	20000	A503_154.6 S1 M1LA4	263	A503_154.6 P80 BN80A4	264
9.2	522	1.1	150.6	12000	A353_150.6 S1 M1LA4	255	A353_150.6 P80 BN80A4	256
9.4	509	1.7	146.9	15000	A413_146.9 S1 M1LA4	259	A413_146.9 P80 BN80A4	260
9.9	484	3.1	140.6	20000	A503_140.6 S1 M1LA4	263	A503_140.6 P80 BN80A4	264
10.1	472	1.2	136.3	12000	A353_136.3 S1 M1LA4	255	A353_136.3 P80 BN80A4	256
10.7	446	3.4	129.7	20000	A503_129.7 S1 M1LA4	263	A503_129.7 P80 BN80A4	264
11.8	405	1.4	116.9	12000	A353_116.9 S1 M1LA4	255	A353_116.9 P80 BN80A4	256
11.9	402	2.1	115.9	15000	A413_115.9 S1 M1LA4	259	A413_115.9 P80 BN80A4	260
13.1	366	1.4	105.5	12000	A353_105.5 S1 M1LA4	255	A353_105.5 P80 BN80A4	256
14.2	349	0.9	97.5	9600			A302_97.5 P80 BN80A4	252
14.4	342	1.6	95.6	12000	A352_95.6 S1 M1LA4	255	A352_95.6 P80 BN80A4	256
14.9	321	2.5	92.8	15000	A413_92.8 S1 M1LA4	259	A413_92.8 P80 BN80A4	260
15.9	310	1.0	86.7	9420			A302_86.7 P80 BN80A4	252
16.7	295	2.0	82.5	12000	A352_82.5 S1 M1LA4	255	A352_82.5 P80 BN80A4	256
17.4	284	3.0	79.2	15000	A412_79.2 S1 M1LA4	259	A412_79.2 P80 BN80A4	260
18.0	274	1.3	76.5	9180	A302_76.5 S1 M1LA4	251	A302_76.5 P80 BN80A4	252
18.6	266	2.3	74.3	12000	A352_74.3 S1 M1LA4	255	A352_74.3 P80 BN80A4	256
19.4	255	3.3	71.3	15000	A412_71.3 S1 M1LA4	259	A412_71.3 P80 BN80A4	260



0.55 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
20.9	236	1.6	66.0	8880	A302_66.0 S1 M1LA4	251	A302_66.0 P80 BN80A4	252
21.0	236	2.5	65.8	12000	A352_65.8 S1 M1LA4	255	A352_65.8 P80 BN80A4	256
21.9	226	1.1	63.1	5840	A202_63.1 S1 M1LA4	247	A202_63.1 P80 BN80A4	248
22.9	216	2.8	60.4	12000	A352_60.4 S1 M1LA4	255	A352_60.4 P80 BN80A4	256
23.2	213	1.9	59.4	8660	A302_59.4 S1 M1LA4	251	A302_59.4 P80 BN80A4	252
25.4	194	3.1	54.3	12000	A352_54.3 S1 M1LA4	255	A352_54.3 P80 BN80A4	256
25.7	192	1.3	53.7	5670	A202_53.7 S1 M1LA4	247	A202_53.7 P80 BN80A4	248
26.2	189	2.2	52.7	8410	A302_52.7 S1 M1LA4	251	A302_52.7 P80 BN80A4	252
28.1	176	3.4	49.1	12000	A352_49.1 S1 M1LA4	255	A352_49.1 P80 BN80A4	256
28.6	173	1.4	48.3	5560	A202_48.3 S1 M1LA4	247	A202_48.3 P80 BN80A4	248
28.6	173	2.4	48.3	8230	A302_48.3 S1 M1LA4	251	A302_48.3 P80 BN80A4	252
30	163	0.9	45.4	4910	A102_45.4 S1 M1LA4	243	A102_45.4 P80 BN80A4	244
32	155	2.6	43.4	8010	A302_43.4 S1 M1LA4	251	A302_43.4 P80 BN80A4	252
32	155	1.6	43.2	5440	A202_43.2 S1 M1LA4	247	A202_43.2 P80 BN80A4	248
34	146	1.0	40.9	5500	A102_40.9 S1 M1LA4	243	A102_40.9 P80 BN80A4	244
35	142	1.8	39.6	5340	A202_39.6 S1 M1LA4	247	A202_39.6 P80 BN80A4	248
35	141	2.9	39.3	7800	A302_39.3 S1 M1LA4	251	A302_39.3 P80 BN80A4	252
38	131	3.1	36.6	7660	A302_36.6 S1 M1LA4	251	A302_36.6 P80 BN80A4	252
39	127	2.0	35.4	5200	A202_35.4 S1 M1LA4	247	A202_35.4 P80 BN80A4	248
39	126	1.2	35.1	4700	A102_35.1 S1 M1LA4	243	A102_35.1 P80 BN80A4	244
41	120	3.4	33.4	7480	A302_33.4 S1 M1LA4	251	A302_33.4 P80 BN80A4	252
43	115	1.3	32.2	5490	A102_32.2 S1 M1LA4	243	A102_32.2 P80 BN80A4	244
44	112	2.2	31.3	5060	A202_31.3 S1 M1LA4	247	A202_31.3 P80 BN80A4	248
47	105	2.4	29.2	4970	A202_29.2 S1 M1LA4	247	A202_29.2 P80 BN80A4	248
48	102	1.0	28.6	2550	A052_28.6 S1 M1LA4	240	A052_28.6 P80 BN80A4	240
48	102	1.5	28.6	4510	A102_28.6 S1 M1LA4	243	A102_28.6 P80 BN80A4	244
52	95	2.6	26.5	4850	A202_26.5 S1 M1LA4	247	A202_26.5 P80 BN80A4	248
54	91	1.1	25.5	2510	A052_25.5 S1 M1LA4	240	A052_25.5 P80 BN80A4	240
54	91	1.6	25.5	5230	A102_25.5 S1 M1LA4	243	A102_25.5 P80 BN80A4	244
58	85	1.2	23.8	2490	A052_23.8 S1 M1LA4	240	A052_23.8 P80 BN80A4	240
58	85	1.8	23.8	4330	A102_23.8 S1 M1LA4	243	A102_23.8 P80 BN80A4	244
60	83	3.0	23.1	4690	A202_23.1 S1 M1LA4	247	A202_23.1 P80 BN80A4	248
65	76	1.3	21.4	2450	A052_21.4 S1 M1LA4	240	A052_21.4 P80 BN80A4	240
65	76	2.0	21.4	5020	A102_21.4 S1 M1LA4	243	A102_21.4 P80 BN80A4	244
65	76	3.3	21.2	4590	A202_21.2 S1 M1LA4	247	A202_21.2 P80 BN80A4	248
74	66	1.5	18.6	2400	A052_18.6 S1 M1LA4	240	A052_18.6 P80 BN80A4	240
74	66	2.3	18.6	4090	A102_18.6 S1 M1LA4	243	A102_18.6 P80 BN80A4	244
84	59	1.7	16.4	2340	A052_16.4 S1 M1LA4	240	A052_16.4 P80 BN80A4	240
84	59	2.5	16.4	4710	A102_16.4 S1 M1LA4	243	A102_16.4 P80 BN80A4	244
99	50	2.0	13.9	2270	A052_13.9 S1 M1LA4	240	A052_13.9 P80 BN80A4	240
99	50	3.0	13.9	3800	A102_13.9 S1 M1LA4	243	A102_13.9 P80 BN80A4	244
112	44	2.3	12.3	2220	A052_12.3 S1 M1LA4	240	A052_12.3 P80 BN80A4	240
112	44	3.2	12.3	3670	A102_12.3 S1 M1LA4	243	A102_12.3 P80 BN80A4	244
131	38	2.6	10.6	2130	A052_10.6 S1 M1LA4	240	A052_10.6 P80 BN80A4	240
144	34	2.9	9.6	2100	A052_9.6 S1 M1LA4	240	A052_9.6 P80 BN80A4	240
162	30	3.3	8.5	2030	A052_8.5 S1 M1LA4	240	A052_8.5 P80 BN80A4	240
171	29	3.1	16.4	2000	A052_16.4 S1 M1SD2	240	A052_16.4 P71 BN71B2	240
191	26	3.9	7.2	1950	A052_7.2 S1 M1LA4	240	A052_7.2 P80 BN80A4	240
218	23	4.4	6.3	1880	A052_6.3 S1 M1LA4	240	A052_6.3 P80 BN80A4	240
229	22	4.6	12.3	1860	A052_12.3 S1 M1SD2	240	A052_12.3 P71 BN71B2	240
252	19.6	4.9	5.5	1810	A052_5.5 S1 M1LA4	240	A052_5.5 P80 BN80A4	240

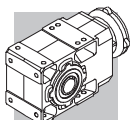


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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
267	18.5	4.3	10.6	1780	A052_10.6 S1 M1SD2	240	A052_10.6 P71 BN71B2	240
293	16.8	5.6	9.6	1740	A052_9.6 S1 M1SD2	240	A052_9.6 P71 BN71B2	240
331	14.9	6.0	8.5	1680	A052_8.5 S1 M1SD2	240	A052_8.5 P71 BN71B2	240
391	12.6	6.7	7.2	1600	A052_7.2 S1 M1SD2	240	A052_7.2 P71 BN71B2	240
445	11.1	7.2	6.3	1540	A052_6.3 S1 M1SD2	240	A052_6.3 P71 BN71B2	240
516	9.6	7.8	5.5	1480	A052_5.5 S1 M1SD2	240	A052_5.5 P71 BN71B2	240

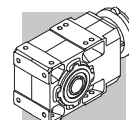
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.56	11316	1.2	1632	75000	A904_1632 S2 M2SB6	281	A904_1632 P90 BN90S6	282
0.61	10446	1.3	1507	75000	A904_1507 S2 M2SB6	281	A904_1507 P90 BN90S6	282
0.69	9179	1.5	1324	75000	A904_1324 S2 M2SB6	281	A904_1324 P90 BN90S6	282
0.75	8473	1.7	1222	75000	A904_1222 S2 M2SB6	281	A904_1222 P90 BN90S6	282
0.86	7436	1.9	1632	75000	A904_1632 S2 M2SA4	281	A904_1632 P80 BN80B4	282
0.90	7096	1.1	1558	65000	A804_1558 S2 M2SA4	278	A804_1558 P80 BN80B4	279
0.93	6864	2.0	1507	75000	A904_1507 S2 M2SA4	281	A904_1507 P80 BN80B4	282
0.97	6550	1.2	1438	65000	A804_1438 S2 M2SA4	278	A804_1438 P80 BN80B4	279
1.0	6104	1.3	1340	65000	A804_1340 S2 M2SA4	278	A804_1340 P80 BN80B4	279
1.1	6032	2.3	1324	75000	A904_1324 S2 M2SA4	281	A904_1324 P80 BN80B4	282
1.1	5660	0.9	1242	50000	A704_1242 S2 M2SA4	275	A704_1242 P80 BN80B4	276
1.1	5635	1.4	1237	65000	A804_1237 S2 M2SA4	278	A804_1237 P80 BN80B4	279
1.1	5568	2.5	1222	75000	A904_1222 S2 M2SA4	281	A904_1222 P80 BN80B4	282
1.2	5291	0.9	1161	50000	A704_1161 S2 M2SA4	275	A704_1161 P80 BN80B4	276
1.3	5060	2.8	1111	75000	A904_1111 S2 M2SA4	281	A904_1111 P80 BN80B4	282
1.3	4942	1.6	1085	65000	A804_1085 S2 M2SA4	278	A804_1085 P80 BN80B4	279
1.3	4884	1.0	1072	50000	A704_1072 S2 M2SA4	275	A704_1072 P80 BN80B4	276
1.4	4670	3.0	1025	75000	A904_1025 S2 M2SA4	281	A904_1025 P80 BN80B4	282
1.4	4562	1.8	1001	65000	A804_1001 S2 M2SA4	278	A804_1001 P80 BN80B4	279
1.5	4270	3.3	937.2	75000	A904_937.2 S2 M2SA4	281	A904_937.2 P80 BN80B4	282
1.5	4221	1.2	926.5	50000	A704_926.5 S2 M2SA4	275	A704_926.5 P80 BN80B4	276
1.6	4094	2.0	898.7	65000	A804_898.7 S2 M2SA4	278	A804_898.7 P80 BN80B4	279
1.6	3896	1.3	855.3	50000	A704_855.3 S2 M2SA4	275	A704_855.3 P80 BN80B4	276
1.7	3779	2.1	829.5	65000	A804_829.5 S2 M2SA4	278	A804_829.5 P80 BN80B4	279
1.8	3480	1.4	763.9	50000	A704_763.9 S2 M2SA4	275	A704_763.9 P80 BN80B4	276
1.8	3472	2.3	762.1	65000	A804_762.1 S2 M2SA4	278	A804_762.1 P80 BN80B4	279
2.0	3212	1.6	705.1	50000	A704_705.1 S2 M2SA4	275	A704_705.1 P80 BN80B4	276
2.0	3205	2.5	703.5	65000	A804_703.5 S2 M2SA4	278	A804_703.5 P80 BN80B4	279
2.0	3177	0.9	697.3	30000	A604_697.3 S2 M2SA4	271	A604_697.3 P80 BN80B4	272
2.2	2937	1.7	644.6	50000	A704_644.6 S2 M2SA4	275	A704_644.6 P80 BN80B4	276
2.2	2891	1.0	634.6	30000	A604_634.6 S2 M2SA4	271	A604_634.6 P80 BN80B4	272
2.3	2766	2.9	607.2	65000	A804_607.2 S2 M2SA4	278	A804_607.2 P80 BN80B4	279
2.4	2711	1.8	595.0	50000	A704_595.0 S2 M2SA4	275	A704_595.0 P80 BN80B4	276
2.4	2669	1.0	585.8	30000	A604_585.8 S2 M2SA4	271	A604_585.8 P80 BN80B4	272
2.5	2553	3.1	560.5	65000	A804_560.5 S2 M2SA4	278	A804_560.5 P80 BN80B4	279
2.6	2469	1.1	542.0	30000	A604_542.0 S2 M2SA4	271	A604_542.0 P80 BN80B4	272
2.7	2348	2.1	515.4	50000	A704_515.4 S2 M2SA4	275	A704_515.4 P80 BN80B4	276
2.8	2279	1.2	500.3	30000	A604_500.3 S2 M2SA4	271	A604_500.3 P80 BN80B4	272



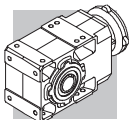
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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
2.9	2167	2.3	475.8	50000	A704_475.8 S2 M2SA4	275	A704_475.8 P80 BN80B4	276
3.2	1997	1.4	438.4	30000	A604_438.4 S2 M2SA4	271	A604_438.4 P80 BN80B4	272
3.5	1844	1.5	404.7	30000	A604_404.7 S2 M2SA4	271	A604_404.7 P80 BN80B4	272
3.5	1823	2.7	400.2	50000	A704_400.2 S2 M2SA4	275	A704_400.2 P80 BN80B4	276
3.8	1683	3.0	369.4	50000	A704_369.4 S2 M2SA4	275	A704_369.4 P80 BN80B4	276
3.8	1666	0.9	365.6	20000	A504_365.6 S2 M2SA4	263	A504_365.6 P80 BN80B4	264
4.0	1600	1.8	351.2	30000	A604_351.2 S2 M2SA4	271	A604_351.2 P80 BN80B4	272
4.2	1515	1.0	332.6	20000	A504_332.6 S2 M2SA4	263	A504_332.6 P80 BN80B4	264
4.3	1477	1.9	324.2	30000	A604_324.2 S2 M2SA4	271	A604_324.2 P80 BN80B4	272
4.4	1441	3.5	316.4	50000	A704_316.4 S2 M2SA4	275	A704_316.4 P80 BN80B4	276
4.9	1307	1.1	286.8	20000	A504_286.8 S2 M2SA4	263	A504_286.8 P80 BN80B4	264
4.9	1304	2.1	286.3	30000	A604_286.3 S2 M2SA4	271	A604_286.3 P80 BN80B4	272
5.3	1204	2.3	264.3	30000	A604_264.3 S2 M2SA4	271	A604_264.3 P80 BN80B4	272
5.4	1189	1.3	260.9	20000	A504_260.9 S2 M2SA4	263	A504_260.9 P80 BN80B4	264
6.0	1057	1.4	232.0	20000	A504_232.0 S2 M2SA4	263	A504_232.0 P80 BN80B4	264
6.2	1030	2.7	226.1	30000	A604_226.1 S2 M2SA4	271	A604_226.1 P80 BN80B4	272
6.6	961	1.6	211.0	20000	A504_211.0 S2 M2SA4	263	A504_211.0 P80 BN80B4	264
6.7	951	2.9	208.7	30000	A604_208.7 S2 M2SA4	271	A604_208.7 P80 BN80B4	272
7.1	920	0.9	197.5	15000	A413_197.5 S2 M2SA4	259	A413_197.5 P80 BN80B4	260
7.2	905	2.2	194.2	30000	A553_194.2 S2 M2SA4	267	A553_194.2 P80 BN80B4	268
7.3	888	1.7	190.6	20000	A503_190.6 S2 M2SA4	263	A503_190.6 P80 BN80B4	264
7.5	865	3.2	185.8	30000	A603_185.8 S2 M2SA4	271	A603_185.8 P80 BN80B4	272
7.6	859	1.0	184.4	15000	A413_184.4 S2 M2SA4	259	A413_184.4 P80 BN80B4	260
8.0	815	2.5	175.0	30000	A553_175.0 S2 M2SA4	267	A553_175.0 P80 BN80B4	268
8.1	808	1.9	173.4	20000	A503_173.4 S2 M2SA4	263	A503_173.4 P80 BN80B4	264
8.2	799	3.5	171.5	30000	A603_171.5 S2 M2SA4	271	A603_171.5 P80 BN80B4	272
8.7	747	2.7	160.4	30000	A553_160.4 S2 M2SA4	267	A553_160.4 P80 BN80B4	268
9.1	720	2.1	154.6	20000	A503_154.6 S2 M2SA4	263	A503_154.6 P80 BN80B4	264
9.5	684	1.2	146.9	15000	A413_146.9 S2 M2SA4	259	A413_146.9 P80 BN80B4	260
9.5	684	2.9	146.8	30000	A553_146.8 S2 M2SA4	267	A553_146.8 P80 BN80B4	268
10.0	655	2.3	140.6	20000	A503_140.6 S2 M2SA4	263	A503_140.6 P80 BN80B4	264
10.3	635	0.9	136.3	12000	A353_136.3 S2 M2SA4	255	A353_136.3 P80 BN80B4	256
10.5	618	3.2	132.7	30000	A553_132.7 S2 M2SA4	267	A553_132.7 P80 BN80B4	268
10.8	604	2.5	129.7	20000	A503_129.7 S2 M2SA4	263	A503_129.7 P80 BN80B4	264
11.3	577	3.5	123.9	30000	A553_123.9 S2 M2SA4	267	A553_123.9 P80 BN80B4	268
11.9	549	2.7	118.0	20000	A503_118.0 S2 M2SA4	263	A503_118.0 P80 BN80B4	264
12.0	545	1.0	116.9	12000	A353_116.9 S2 M2SA4	255	A353_116.9 P80 BN80B4	256
12.1	540	1.6	115.9	15000	A413_115.9 S2 M2SA4	259	A413_115.9 P80 BN80B4	260
12.8	510	2.9	109.4	20000	A503_109.4 S2 M2SA4	263	A503_109.4 P80 BN80B4	264
13.3	492	1.1	105.5	12000	A353_105.5 S2 M2SA4	255	A353_105.5 P80 BN80B4	256
14.1	464	3.2	99.5	20000	A503_99.5 S2 M2SA4	263	A503_99.5 P80 BN80B4	264
14.6	460	1.2	95.6	12000	A352_95.6 S2 M2SA4	255	A352_95.6 P80 BN80B4	256
15.1	432	1.9	92.8	15000	A413_92.8 S2 M2SA4	259	A413_92.8 P80 BN80B4	260
17.0	397	1.5	82.5	12000	A352_82.5 S2 M2SA4	255	A352_82.5 P80 BN80B4	256
17.7	381	2.2	79.2	15000	A412_79.2 S2 M2SA4	259	A412_79.2 P80 BN80B4	260
18.3	368	1.0	76.5	8580	A302_76.5 S2 M2SA4	251	A302_76.5 P80 BN80B4	252
18.8	357	1.7	74.3	12000	A352_74.3 S2 M2SA4	255	A352_74.3 P80 BN80B4	256
19.6	343	2.5	71.3	15000	A412_71.3 S2 M2SA4	259	A412_71.3 P80 BN80B4	260
21.2	318	1.2	66.0	8360	A302_66.0 S2 M2SA4	251	A302_66.0 P80 BN80B4	252
21.3	317	1.9	65.8	12000	A352_65.8 S2 M2SA4	255	A352_65.8 P80 BN80B4	256
21.8	309	2.8	64.2	15000	A412_64.2 S2 M2SA4	259	A412_64.2 P80 BN80B4	260



0.75 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N			 IEC 	
23.2	290	2.1	60.4	12000	A352_60.4 S2 M2SA4	255	A352_60.4 P80 BN80B4	256
23.6	286	1.4	59.4	8190	A302_59.4 S2 M2SA4	251	A302_59.4 P80 BN80B4	252
23.8	283	3.0	58.8	15000	A412_58.8 S2 M2SA4	259	A412_58.8 P80 BN80B4	260
25.8	261	2.3	54.3	12000	A352_54.3 S2 M2SA4	255	A352_54.3 P80 BN80B4	256
26.1	258	1.0	53.7	5210	A202_53.7 S2 M2SA4	247	A202_53.7 P80 BN80B4	248
26.3	256	3.3	53.1	15000	A412_53.1 S2 M2SA4	259	A412_53.1 P80 BN80B4	260
26.6	253	1.6	52.7	7990	A302_52.7 S2 M2SA4	251	A302_52.7 P80 BN80B4	252
28.5	236	2.5	49.1	12000	A352_49.1 S2 M2SA4	255	A352_49.1 P80 BN80B4	256
29.0	232	1.1	48.3	5140	A202_48.3 S2 M2SA4	247	A202_48.3 P80 BN80B4	248
29.0	232	1.8	48.3	7840	A302_48.3 S2 M2SA4	251	A302_48.3 P80 BN80B4	252
31	220	2.7	45.8	12000	A352_45.8 S2 M2SA4	255	A352_45.8 P80 BN80B4	256
32	209	2.0	43.4	7660	A302_43.4 S2 M2SA4	251	A302_43.4 P80 BN80B4	252
32	208	1.2	43.2	5060	A202_43.2 S2 M2SA4	247	A202_43.2 P80 BN80B4	248
34	201	3.0	41.8	11900	A352_41.8 S2 M2SA4	255	A352_41.8 P80 BN80B4	256
35	191	1.3	39.6	4990	A202_39.6 S2 M2SA4	247	A202_39.6 P80 BN80B4	248
36	189	2.2	39.3	7480	A302_39.3 S2 M2SA4	251	A302_39.3 P80 BN80B4	252
38	176	2.3	36.6	7360	A302_36.6 S2 M2SA4	251	A302_36.6 P80 BN80B4	252
38	176	3.4	36.6	11500	A352_36.6 S2 M2SA4	255	A352_36.6 P80 BN80B4	256
40	170	1.5	35.4	4890	A202_35.4 S2 M2SA4	247	A202_35.4 P80 BN80B4	248
40	169	0.9	35.1	4320	A102_35.1 S2 M2SA4	243	A102_35.1 P80 BN80B4	244
42	161	2.5	33.4	7200	A302_33.4 S2 M2SA4	251	A302_33.4 P80 BN80B4	252
43	155	1.0	32.2	5080	A102_32.2 S2 M2SA4	243	A102_32.2 P80 BN80B4	244
45	151	1.7	31.3	4780	A202_31.3 S2 M2SA4	247	A202_31.3 P80 BN80B4	248
48	141	2.9	29.3	6960	A302_29.3 S2 M2SA4	251	A302_29.3 P80 BN80B4	252
48	141	1.8	29.2	4710	A202_29.2 S2 M2SA4	247	A202_29.2 P80 BN80B4	248
49	137	1.1	28.6	4200	A102_28.6 S2 M2SA4	243	A102_28.6 P80 BN80B4	244
53	128	3.2	26.5	6790	A302_26.5 S2 M2SA4	251	A302_26.5 P80 BN80B4	252
53	127	2.0	26.5	4620	A202_26.5 S2 M2SA4	247	A202_26.5 P80 BN80B4	248
55	123	1.2	25.5	4900	A102_25.5 S2 M2SA4	243	A102_25.5 P80 BN80B4	244
59	114	1.3	23.8	4070	A102_23.8 S2 M2SA4	243	A102_23.8 P80 BN80B4	244
61	111	2.2	23.1	4480	A202_23.1 S2 M2SA4	247	A202_23.1 P80 BN80B4	248
66	103	1.0	21.4	2210	A052_21.4 S2 M2SA4	240	A052_21.4 P80 BN80B4	240
66	103	1.5	21.4	4740	A102_21.4 S2 M2SA4	243	A102_21.4 P80 BN80B4	244
66	102	2.4	21.2	4390	A202_21.2 S2 M2SA4	247	A202_21.2 P80 BN80B4	248
75	89	1.1	18.6	2190	A052_18.6 S2 M2SA4	240	A052_18.6 P80 BN80B4	240
75	89	1.7	18.6	3880	A102_18.6 S2 M2SA4	243	A102_18.6 P80 BN80B4	244
77	87	2.9	18.1	4230	A202_18.1 S2 M2SA4	247	A202_18.1 P80 BN80B4	248
85	79	1.3	16.4	2160	A052_16.4 S2 M2SA4	240	A052_16.4 P80 BN80B4	240
85	79	1.9	16.4	4490	A102_16.4 S2 M2SA4	243	A102_16.4 P80 BN80B4	244
87	78	3.2	16.2	4110	A202_16.2 S2 M2SA4	247	A202_16.2 P80 BN80B4	248
101	67	1.5	13.9	2110	A052_13.9 S2 M2SA4	240	A052_13.9 P80 BN80B4	240
101	67	2.2	13.9	3640	A102_13.9 S2 M2SA4	243	A102_13.9 P80 BN80B4	244
114	59	1.7	12.3	2080	A052_12.3 S2 M2SA4	240	A052_12.3 P80 BN80B4	240
114	59	2.4	12.3	3530	A102_12.3 S2 M2SA4	243	A102_12.3 P80 BN80B4	244
133	51	2.0	10.6	2010	A052_10.6 S2 M2SA4	240	A052_10.6 P80 BN80B4	240
133	51	3.0	10.6	3400	A102_10.6 S2 M2SA4	243	A102_10.6 P80 BN80B4	244
146	46	2.2	9.6	1990	A052_9.6 S2 M2SA4	240	A052_9.6 P80 BN80B4	240
146	46	3.0	9.6	3320	A102_9.6 S2 M2SA4	243	A102_9.6 P80 BN80B4	244
164	41	2.4	8.5	1940	A052_8.5 S2 M2SA4	240	A052_8.5 P80 BN80B4	240
164	41	3.4	8.5	3820	A102_8.5 S2 M2SA4	243	A102_8.5 P80 BN80B4	244
194	35	2.9	7.2	1870	A052_7.2 S2 M2SA4	240	A052_7.2 P80 BN80B4	240

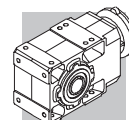


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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
221	30	3.3	6.3	1810	A052_6.3 S2 M2SA4	240	A052_6.3 P80 BN80B4	240
256	26	3.6	5.5	1750	A052_5.5 S2 M2SA4	240	A052_5.5 P80 BN80B4	240
266	25	3.2	10.6	1720	A052_10.6 S1 M1LA2	240	A052_10.6 P80 BN80A2	240
292	23	4.1	9.6	1690	A052_9.6 S1 M1LA2	240	A052_9.6 P80 BN80A2	240
330	20	4.4	8.5	1640	A052_8.5 S1 M1LA2	240	A052_8.5 P80 BN80A2	240
390	17.3	4.9	7.2	1570	A052_7.2 S1 M1LA2	240	A052_7.2 P80 BN80A2	240
444	15.2	5.3	6.3	1510	A052_6.3 S1 M1LA2	240	A052_6.3 P80 BN80A2	240
514	13.1	5.7	5.5	1450	A052_5.5 S1 M1LA2	240	A052_5.5 P80 BN80A2	240

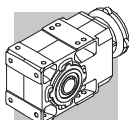
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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
0.61	15320	0.9	1507	75000	A904_1507 S3 M3SA6	281	A904_1507 P90 BN90L6	282
0.69	13462	1.0	1324	75000	A904_1324 S3 M3SA6	281	A904_1324 P90 BN90L6	282
0.75	12427	1.1	1222	75000	A904_1222 S3 M3SA6	281	A904_1222 P90 BN90L6	282
0.86	10907	1.3	1632	75000	A904_1632 S2 M2SB4	281	A904_1632 P90 BN90S4	282
0.93	10068	1.4	1507	75000	A904_1507 S2 M2SB4	281	A904_1507 P90 BN90S4	282
1.0	8953	0.9	1340	65000	A804_1340 S2 M2SB4	278	A804_1340 P90 BN90S4	279
1.1	8847	1.6	1324	75000	A904_1324 S2 M2SB4	281	A904_1324 P90 BN90S4	282
1.1	8264	1.0	1237	65000	A804_1237 S2 M2SB4	278	A804_1237 P90 BN90S4	279
1.1	8166	1.7	1222	75000	A904_1222 S2 M2SB4	281	A904_1222 P90 BN90S4	282
1.3	7421	1.9	1111	75000	A904_1111 S2 M2SB4	281	A904_1111 P90 BN90S4	282
1.3	7249	1.1	1085	65000	A804_1085 S2 M2SB4	278	A804_1085 P90 BN90S4	279
1.4	6850	2.0	1025	75000	A904_1025 S2 M2SB4	281	A904_1025 P90 BN90S4	282
1.4	6691	1.2	1001	65000	A804_1001 S2 M2SB4	278	A804_1001 P90 BN90S4	279
1.5	6262	2.2	937.2	75000	A904_937.2 S2 M2SB4	281	A904_937.2 P90 BN90S4	282
1.6	6005	1.3	898.7	65000	A804_898.7 S2 M2SB4	278	A804_898.7 P90 BN90S4	279
1.6	5780	2.4	865.1	75000	A904_865.1 S2 M2SB4	281	A904_865.1 P90 BN90S4	282
1.6	5715	0.9	855.3	50000	A704_855.3 S2 M2SB4	275	A704_855.3 P90 BN90S4	276
1.7	5543	1.4	829.5	65000	A804_829.5 S2 M2SB4	278	A804_829.5 P90 BN90S4	279
1.8	5124	2.7	766.9	75000	A904_766.9 S2 M2SB4	281	A904_766.9 P90 BN90S4	282
1.8	5104	1.0	763.9	50000	A704_763.9 S2 M2SB4	275	A704_763.9 P90 BN90S4	276
1.8	5092	1.6	762.1	65000	A804_762.1 S2 M2SB4	278	A804_762.1 P90 BN90S4	279
2.0	4730	3.0	707.9	75000	A904_707.9 S2 M2SB4	281	A904_707.9 P90 BN90S4	282
2.0	4711	1.1	705.1	50000	A704_705.1 S2 M2SB4	275	A704_705.1 P90 BN90S4	276
2.0	4700	1.7	703.5	65000	A804_703.5 S2 M2SB4	278	A804_703.5 P90 BN90S4	279
2.2	4307	1.2	644.6	50000	A704_644.6 S2 M2SB4	275	A704_644.6 P90 BN90S4	276
2.3	4057	2.0	607.2	65000	A804_607.2 S2 M2SB4	278	A804_607.2 P90 BN90S4	279
2.3	4019	3.5	601.6	75000	A904_601.6 S2 M2SB4	281	A904_601.6 P90 BN90S4	282
2.4	3976	1.3	595.0	50000	A704_595.0 S2 M2SB4	275	A704_595.0 P90 BN90S4	276
2.5	3745	2.1	560.5	65000	A804_560.5 S2 M2SB4	278	A804_560.5 P90 BN90S4	279
2.7	3444	1.5	515.4	50000	A704_515.4 S2 M2SB4	275	A704_515.4 P90 BN90S4	276
2.9	3200	2.5	478.9	65000	A804_478.9 S2 M2SB4	278	A804_478.9 P90 BN90S4	279
2.9	3179	1.6	475.8	50000	A704_475.8 S2 M2SB4	275	A704_475.8 P90 BN90S4	276
3.2	2954	2.7	442.1	65000	A804_442.1 S2 M2SB4	278	A804_442.1 P90 BN90S4	279
3.2	2929	1.0	438.4	30000	A604_438.4 S2 M2SB4	271	A604_438.4 P90 BN90S4	272
3.5	2704	1.0	404.7	30000	A604_404.7 S2 M2SB4	271	A604_404.7 P90 BN90S4	272
3.5	2674	1.9	400.2	50000	A704_400.2 S2 M2SB4	275	A704_400.2 P90 BN90S4	276



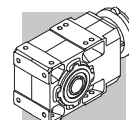
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n ₂ min-1	M ₂ Nm	S	i	R _{n2} N			 IEC 	
3.7	2562	3.1	383.5	65000	A804_383.5 S2 M2SB4	278	A804_383.5 P90 BN90S4	279
3.8	2468	2.0	369.4	50000	A704_369.4 S2 M2SB4	275	A704_369.4 P90 BN90S4	276
4.0	2365	3.4	354.0	65000	A804_354.0 S2 M2SB4	278	A804_354.0 P90 BN90S4	279
4.0	2347	1.2	351.2	30000	A604_351.2 S2 M2SB4	271	A604_351.2 P90 BN90S4	272
4.3	2166	1.3	324.2	30000	A604_324.2 S2 M2SB4	271	A604_324.2 P90 BN90S4	272
4.4	2114	2.4	316.4	50000	A704_316.4 S2 M2SB4	275	A704_316.4 P90 BN90S4	276
4.8	1951	2.6	292.0	50000	A704_292.0 S2 M2SB4	275	A704_292.0 P90 BN90S4	276
4.9	1913	1.5	286.3	30000	A604_286.3 S2 M2SB4	271	A604_286.3 P90 BN90S4	272
5.3	1766	1.6	264.3	30000	A604_264.3 S2 M2SB4	271	A604_264.3 P90 BN90S4	272
5.4	1743	0.9	260.9	20000	A504_260.9 S2 M2SB4	263	A504_260.9 P90 BN90S4	264
5.9	1594	3.1	238.6	50000	A704_238.6 S2 M2SB4	275	A704_238.6 P90 BN90S4	276
6.0	1550	1.0	232.0	20000	A504_232.0 S2 M2SB4	263	A504_232.0 P90 BN90S4	264
6.2	1511	1.9	226.1	30000	A604_226.1 S2 M2SB4	271	A604_226.1 P90 BN90S4	272
6.4	1472	3.4	220.3	50000	A704_220.3 S2 M2SB4	275	A704_220.3 P90 BN90S4	276
6.6	1410	1.1	211.0	20000	A504_211.0 S2 M2SB4	263	A504_211.0 P90 BN90S4	264
6.7	1395	2.0	208.7	30000	A604_208.7 S2 M2SB4	271	A604_208.7 P90 BN90S4	272
7.2	1327	1.5	194.2	30000	A553_194.2 S2 M2SB4	267	A553_194.2 P90 BN90S4	268
7.3	1302	1.2	190.6	20000	A503_190.6 S2 M2SB4	263	A503_190.6 P90 BN90S4	264
7.5	1269	2.2	185.8	30000	A603_185.8 S2 M2SB4	271	A603_185.8 P90 BN90S4	272
8.0	1196	1.7	175.0	30000	A553_175.0 S2 M2SB4	267	A553_175.0 P90 BN90S4	268
8.1	1184	1.3	173.4	20000	A503_173.4 S2 M2SB4	263	A503_173.4 P90 BN90S4	264
8.2	1171	2.4	171.5	30000	A603_171.5 S2 M2SB4	271	A603_171.5 P90 BN90S4	272
8.7	1096	1.8	160.4	30000	A553_160.4 S2 M2SB4	267	A553_160.4 P90 BN90S4	268
9.0	1066	2.6	156.0	30000	A603_156.0 S2 M2SB4	271	A603_156.0 P90 BN90S4	272
9.1	1056	1.4	154.6	20000	A503_154.6 S2 M2SB4	263	A503_154.6 P90 BN90S4	264
9.5	1003	2.0	146.8	30000	A553_146.8 S2 M2SB4	267	A553_146.8 P90 BN90S4	268
9.7	984	2.8	144.0	30000	A603_144.0 S2 M2SB4	271	A603_144.0 P90 BN90S4	272
10.0	961	1.6	140.6	20000	A503_140.6 S2 M2SB4	263	A503_140.6 P90 BN90S4	264
10.5	911	3.1	133.3	30000	A603_133.3 S2 M2SB4	271	A603_133.3 P90 BN90S4	272
10.5	907	2.2	132.7	30000	A553_132.7 S2 M2SB4	267	A553_132.7 P90 BN90S4	268
10.8	886	1.7	129.7	20000	A503_129.7 S2 M2SB4	263	A503_129.7 P90 BN90S4	264
11.3	846	2.4	123.9	30000	A553_123.9 S2 M2SB4	267	A553_123.9 P90 BN90S4	268
11.4	841	3.3	123.0	30000	A603_123.0 S2 M2SB4	271	A603_123.0 P90 BN90S4	272
11.9	806	1.9	118.0	20000	A503_118.0 S2 M2SB4	263	A503_118.0 P90 BN90S4	264
12.1	792	1.1	115.9	15000	A413_115.9 S2 M2SB4	259	A413_115.9 P90 BN90S4	260
12.8	748	2.0	109.4	20000	A503_109.4 S2 M2SB4	263	A503_109.4 P90 BN90S4	264
13.8	693	2.9	101.4	30000	A553_101.4 S2 M2SB4	267	A553_101.4 P90 BN90S4	268
14.1	680	2.2	99.5	20000	A503_99.5 S2 M2SB4	263	A503_99.5 P90 BN90S4	264
15.1	634	1.3	92.8	15000	A413_92.8 S2 M2SB4	259	A413_92.8 P90 BN90S4	260
15.6	612	2.5	89.5	20000	A503_89.5 S2 M2SB4	263	A503_89.5 P90 BN90S4	264
17.0	582	1.0	82.5	12000	A352_82.5 S2 M2SB4	255	A352_82.5 P90 BN90S4	256
17.2	556	2.7	81.5	20000	A503_81.5 S2 M2SB4	263	A503_81.5 P90 BN90S4	264
17.7	559	1.5	79.2	15000	A412_79.2 S2 M2SB4	259	A412_79.2 P90 BN90S4	260
18.8	524	1.1	74.3	12000	A352_74.3 S2 M2SB4	255	A352_74.3 P90 BN90S4	256
19.6	503	1.7	71.3	15000	A412_71.3 S2 M2SB4	259	A412_71.3 P90 BN90S4	260
19.9	480	3.1	70.2	20000	A503_70.2 S2 M2SB4	263	A503_70.2 P90 BN90S4	264
21.3	465	1.3	65.8	12000	A352_65.8 S2 M2SB4	255	A352_65.8 P90 BN90S4	256
21.8	453	1.9	64.2	15000	A412_64.2 S2 M2SB4	259	A412_64.2 P90 BN90S4	260
21.9	436	3.4	63.9	20000	A503_63.9 S2 M2SB4	263	A503_63.9 P90 BN90S4	264
23.2	426	1.4	60.4	12000	A352_60.4 S2 M2SB4	255	A352_60.4 P90 BN90S4	256
23.6	419	1.0	59.4	7420	A302_59.4 S2 M2SB4	251	A302_59.4 P90 BN90S4	252



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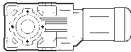
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23.8	415	2.0	58.8	15000	A412_58.8 S2 M2SB4	259	A412_58.8 P90 BN90S4	260
25.8	383	1.6	54.3	12000	A352_54.3 S2 M2SB4	255	A352_54.3 P90 BN90S4	256
26.3	375	2.3	53.1	15000	A412_53.1 S2 M2SB4	259	A412_53.1 P90 BN90S4	260
26.6	372	1.1	52.7	7310	A302_52.7 S2 M2SB4	251	A302_52.7 P90 BN90S4	252
28.5	346	1.7	49.1	11800	A352_49.1 S2 M2SB4	255	A352_49.1 P90 BN90S4	256
29.0	341	1.2	48.3	7220	A302_48.3 S2 M2SB4	251	A302_48.3 P90 BN90S4	252
29.0	341	2.5	48.3	15000	A412_48.3 S2 M2SB4	259	A412_48.3 P90 BN90S4	260
31	323	1.9	45.8	11700	A352_45.8 S2 M2SB4	255	A352_45.8 P90 BN90S4	256
31	318	2.6	45.1	15000	A412_45.1 S2 M2SB4	259	A412_45.1 P90 BN90S4	260
32	306	1.3	43.4	7100	A302_43.4 S2 M2SB4	251	A302_43.4 P90 BN90S4	252
34	295	2.0	41.8	11400	A352_41.8 S2 M2SB4	255	A352_41.8 P90 BN90S4	256
36	277	1.5	39.3	6970	A302_39.3 S2 M2SB4	251	A302_39.3 P90 BN90S4	252
38	259	1.6	36.6	6880	A302_36.6 S2 M2SB4	251	A302_36.6 P90 BN90S4	252
38	258	2.3	36.6	11100	A352_36.6 S2 M2SB4	255	A352_36.6 P90 BN90S4	256
39	253	3.1	35.9	14300	A412_35.9 S2 M2SB4	259	A412_35.9 P90 BN90S4	260
40	250	1.0	35.4	4380	A202_35.4 S2 M2SB4	247	A202_35.4 P90 BN90S4	248
42	236	1.7	33.4	6760	A302_33.4 S2 M2SB4	251	A302_33.4 P90 BN90S4	252
42	234	2.6	33.2	10800	A352_33.2 S2 M2SB4	255	A352_33.2 P90 BN90S4	256
45	221	1.1	31.3	4320	A202_31.3 S2 M2SB4	247	A202_31.3 P90 BN90S4	248
48	207	2.0	29.3	6580	A302_29.3 S2 M2SB4	251	A302_29.3 P90 BN90S4	252
48	206	1.2	29.2	4290	A202_29.2 S2 M2SB4	247	A202_29.2 P90 BN90S4	248
49	201	3.0	28.4	10400	A352_28.4 S2 M2SB4	255	A352_28.4 P90 BN90S4	256
53	187	2.2	26.5	6440	A302_26.5 S2 M2SB4	251	A302_26.5 P90 BN90S4	252
53	187	1.3	26.5	4230	A202_26.5 S2 M2SB4	247	A202_26.5 P90 BN90S4	248
55	181	3.3	25.7	10100	A352_25.7 S2 M2SB4	255	A352_25.7 P90 BN90S4	256
59	168	0.9	23.8	3640	A102_23.8 S2 M2SB4	243	A102_23.8 P90 BN90S4	244
61	163	1.5	23.1	4140	A202_23.1 S2 M2SB4	247	A202_23.1 P90 BN90S4	248
62	161	2.6	22.8	6220	A302_22.8 S2 M2SB4	251	A302_22.8 P90 BN90S4	252
66	151	1.0	21.4	4280	A102_21.4 S2 M2SB4	243	A102_21.4 P90 BN90S4	244
66	150	1.7	21.2	4080	A202_21.2 S2 M2SB4	247	A202_21.2 P90 BN90S4	248
68	145	2.8	20.5	6070	A302_20.5 S2 M2SB4	251	A302_20.5 P90 BN90S4	252
75	131	1.1	18.6	3540	A102_18.6 S2 M2SB4	243	A102_18.6 P90 BN90S4	244
77	128	2.0	18.1	3970	A202_18.1 S2 M2SB4	247	A202_18.1 P90 BN90S4	248
78	127	3.2	18.0	5880	A302_18.0 S2 M2SB4	251	A302_18.0 P90 BN90S4	252
85	116	1.3	16.4	4130	A102_16.4 S2 M2SB4	243	A102_16.4 P90 BN90S4	244
86	115	3.3	16.3	5740	A302_16.3 S2 M2SB4	251	A302_16.3 P90 BN90S4	252
87	114	2.2	16.2	3880	A202_16.2 S2 M2SB4	247	A202_16.2 P90 BN90S4	248
99	99	2.5	14.1	3770	A202_14.1 S2 M2SB4	247	A202_14.1 P90 BN90S4	248
101	98	1.0	13.9	1840	A052_13.9 S2 M2SB4	240	A102_13.9 P90 BN90S4	244
101	98	1.5	13.9	3380	A102_13.9 S2 M2SB4	243		
114	87	1.2	12.3	1850	A052_12.3 S2 M2SB4	240		
114	87	1.6	12.3	3300	A102_12.3 S2 M2SB4	243	A102_12.3 P90 BN90S4	244
117	84	2.5	12.0	3620	A202_12.0 S2 M2SB4	247	A202_12.0 P90 BN90S4	248
133	75	1.3	10.6	1810	A052_10.6 S2 M2SB4	240	A102_10.6 P90 BN90S4	244
133	75	2.0	10.6	3210	A102_10.6 S2 M2SB4	243		
135	73	3.1	10.3	3510	A202_10.3 S2 M2SB4	247	A202_10.3 P90 BN90S4	248
146	68	1.5	9.6	1810	A052_9.6 S2 M2SB4	240	A102_9.6 P90 BN90S4	244
146	68	2.1	9.6	3140	A102_9.6 S2 M2SB4	243		
149	66	3.2	9.4	3420	A202_9.4 S2 M2SB4	247	A202_9.4 P90 BN90S4	248
164	60	1.7	8.5	1780	A052_8.5 S2 M2SB4	240	A102_8.5 P90 BN90S4	244
164	60	2.3	8.5	3630	A102_8.5 S2 M2SB4	243		

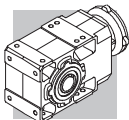


1.1 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
194	51	2.0	7.2	1730	A052_7.2 S2 M2SB4	240		
194	51	2.8	7.2	2940	A102_7.2 S2 M2SB4	243	A102_7.2 P90 BN90S4	244
221	45	2.2	6.3	1690	A052_6.3 S2 M2SB4	240		
221	45	3.1	6.3	3390	A102_6.3 S2 M2SB4	243	A102_6.3 P90 BN90S4	244
228	43	3.2	12.3	2830	A102_12.3 S2 M2SA2	243	A102_12.3 P80 BN80B2	244
256	39	2.5	5.5	1640	A052_5.5 S2 M2SB4	240		
291	34	2.8	9.6	1600	A052_9.6 S2 M2SA2	240	A052_9.6 P80 BN80B2	240
329	30	3.0	8.5	1560	A052_8.5 S2 M2SA2	240	A052_8.5 P80 BN80B2	240
388	25	3.3	7.2	1500	A052_7.2 S2 M2SA2	240	A052_7.2 P80 BN80B2	240
442	22	3.6	6.3	1450	A052_6.3 S2 M2SA2	240	A052_6.3 P80 BN80B2	240
512	19.3	3.9	5.5	1400	A052_5.5 S2 M2SA2	240	A052_5.5 P80 BN80B2	240

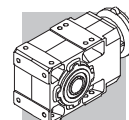
1.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.86	14767	0.9	1632	75000	A904_1632 S3 M3SA4	281	A904_1632 P90 BN90LA4	282
0.94	13631	1.0	1507	75000	A904_1507 S3 M3SA4	281	A904_1507 P90 BN90LA4	282
1.1	11978	1.2	1324	75000	A904_1324 S3 M3SA4	281	A904_1324 P90 BN90LA4	282
1.2	11057	1.3	1222	75000	A904_1222 S3 M3SA4	281	A904_1222 P90 BN90LA4	282
1.3	10047	1.4	1111	75000	A904_1111 S3 M3SA4	281	A904_1111 P90 BN90LA4	282
1.4	9274	1.5	1025	75000	A904_1025 S3 M3SA4	281	A904_1025 P90 BN90LA4	282
1.4	9060	0.9	1001	65000	A804_1001 S3 M3SA4	278	A804_1001 P90 BN90LA4	279
1.5	8478	1.7	937.2	75000	A904_937.2 S3 M3SA4	281	A904_937.2 P90 BN90LA4	282
1.6	8130	1.0	898.7	65000	A804_898.7 S3 M3SA4	278	A804_898.7 P90 BN90LA4	279
1.6	7826	1.8	865.1	75000	A904_865.1 S3 M3SA4	281	A904_865.1 P90 BN90LA4	282
1.7	7505	1.1	829.5	65000	A804_829.5 S3 M3SA4	278	A804_829.5 P90 BN90LA4	279
1.8	6938	2.0	766.9	75000	A904_766.9 S3 M3SA4	281	A904_766.9 P90 BN90LA4	282
1.9	6894	1.2	762.1	65000	A804_762.1 S3 M3SA4	278	A804_762.1 P90 BN90LA4	279
2.0	6404	2.2	707.9	75000	A904_707.9 S3 M3SA4	281	A904_707.9 P90 BN90LA4	282
2.0	6364	1.3	703.5	65000	A804_703.5 S3 M3SA4	278	A804_703.5 P90 BN90LA4	279
2.2	5832	0.9	644.6	50000	A704_644.6 S3 M3SA4	275	A704_644.6 P90 BN90LA4	276
2.3	5493	1.5	607.2	65000	A804_607.2 S3 M3SA4	278	A804_607.2 P90 BN90LA4	279
2.3	5442	2.6	601.6	75000	A904_601.6 S3 M3SA4	281	A904_601.6 P90 BN90LA4	282
2.4	5383	0.9	595.0	50000	A704_595.0 S3 M3SA4	275	A704_595.0 P90 BN90LA4	276
2.5	5070	1.6	560.5	65000	A804_560.5 S3 M3SA4	278	A804_560.5 P90 BN90LA4	279
2.5	5024	2.8	555.3	75000	A904_555.3 S3 M3SA4	281	A904_555.3 P90 BN90LA4	282
2.7	4663	1.1	515.4	50000	A704_515.4 S3 M3SA4	275	A704_515.4 P90 BN90LA4	276
2.9	4402	3.2	486.6	75000	A904_486.6 S3 M3SA4	281	A904_486.6 P90 BN90LA4	282
2.9	4333	1.8	478.9	65000	A804_478.9 S3 M3SA4	278	A804_478.9 P90 BN90LA4	279
3.0	4304	1.2	475.8	50000	A704_475.8 S3 M3SA4	275	A704_475.8 P90 BN90LA4	276
3.1	4063	3.4	449.2	75000	A904_449.2 S3 M3SA4	281	A904_449.2 P90 BN90LA4	282
3.2	3999	2.0	442.1	65000	A804_442.1 S3 M3SA4	278	A804_442.1 P90 BN90LA4	279
3.5	3620	1.4	400.2	50000	A704_400.2 S3 M3SA4	275	A704_400.2 P90 BN90LA4	276
3.7	3469	2.3	383.5	65000	A804_383.5 S3 M3SA4	278	A804_383.5 P90 BN90LA4	279
3.8	3342	1.5	369.4	50000	A704_369.4 S3 M3SA4	275	A704_369.4 P90 BN90LA4	276
4.0	3202	2.5	354.0	65000	A804_354.0 S3 M3SA4	278	A804_354.0 P90 BN90LA4	279
4.0	3177	0.9	351.2	30000	A604_351.2 S3 M3SA4	271	A604_351.2 P90 BN90LA4	272
4.3	2933	1.0	324.2	30000	A604_324.2 S3 M3SA4	271	A604_324.2 P90 BN90LA4	272



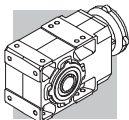
1.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
4.5	2862	1.7	316.4	50000	A704_316.4 S3 M3SA4	275	A704_316.4 P90 BN90LA4	276
4.7	2718	2.9	300.4	65000	A804_300.4 S3 M3SA4	278	A804_300.4 P90 BN90LA4	279
4.8	2642	1.9	292.0	50000	A704_292.0 S3 M3SA4	275	A704_292.0 P90 BN90LA4	276
4.9	2590	1.1	286.3	30000	A604_286.3 S3 M3SA4	271	A604_286.3 P90 BN90LA4	272
5.1	2509	3.2	277.3	65000	A804_277.3 S3 M3SA4	278	A804_277.3 P90 BN90LA4	279
5.3	2391	1.2	264.3	30000	A604_264.3 S3 M3SA4	271	A604_264.3 P90 BN90LA4	272
5.9	2159	2.3	238.6	50000	A704_238.6 S3 M3SA4	275	A704_238.6 P90 BN90LA4	276
6.2	2046	1.4	226.1	30000	A604_226.1 S3 M3SA4	271	A604_226.1 P90 BN90LA4	272
6.4	1993	2.5	220.3	50000	A704_220.3 S3 M3SA4	275	A704_220.3 P90 BN90LA4	276
6.8	1888	1.5	208.7	30000	A604_208.7 S3 M3SA4	271	A604_208.7 P90 BN90LA4	272
7.3	1796	1.1	194.2	30000	A553_194.2 S3 M3SA4	267	A553_194.2 P90 BN90LA4	268
7.6	1718	1.6	185.8	30000	A603_185.8 S3 M3SA4	271	A603_185.8 P90 BN90LA4	272
7.7	1664	3.0	183.9	50000	A704_183.9 S3 M3SA4	275	A704_183.9 P90 BN90LA4	276
8.1	1619	1.2	175.0	30000	A553_175.0 S3 M3SA4	267	A553_175.0 P90 BN90LA4	268
8.1	1604	0.9	173.4	20000	A503_173.4 S3 M3SA4	263	A503_173.4 P90 BN90LA4	264
8.2	1586	1.8	171.5	30000	A603_171.5 S3 M3SA4	271	A603_171.5 P90 BN90LA4	272
8.3	1536	3.3	169.8	50000	A704_169.8 S3 M3SA4	275	A704_169.8 P90 BN90LA4	276
8.8	1484	1.3	160.4	30000	A553_160.4 S3 M3SA4	267	A553_160.4 P90 BN90LA4	268
9.0	1443	1.9	156.0	30000	A603_156.0 S3 M3SA4	271	A603_156.0 P90 BN90LA4	272
9.1	1430	1.0	154.6	20000	A503_154.6 S3 M3SA4	263	A503_154.6 P90 BN90LA4	264
9.2	1422	2.8	153.7	50000	A703_153.7 S3 M3SA4	275	A703_153.7 P90 BN90LA4	276
9.6	1358	1.5	146.8	30000	A553_146.8 S3 M3SA4	267	A553_146.8 P90 BN90LA4	268
9.8	1332	2.1	144.0	30000	A603_144.0 S3 M3SA4	271	A603_144.0 P90 BN90LA4	272
10.0	1301	1.2	140.6	20000	A503_140.6 S3 M3SA4	263	A503_140.6 P90 BN90LA4	264
10.6	1233	2.3	133.3	30000	A603_133.3 S3 M3SA4	271	A603_133.3 P90 BN90LA4	272
10.6	1228	1.6	132.7	30000	A553_132.7 S3 M3SA4	267	A553_132.7 P90 BN90LA4	268
10.9	1199	1.3	129.7	20000	A503_129.7 S3 M3SA4	263	A503_129.7 P90 BN90LA4	264
11.4	1146	1.7	123.9	30000	A553_123.9 S3 M3SA4	267	A553_123.9 P90 BN90LA4	268
11.5	1138	2.5	123.0	30000	A603_123.0 S3 M3SA4	271	A603_123.0 P90 BN90LA4	272
12.0	1091	1.4	118.0	20000	A503_118.0 S3 M3SA4	263	A503_118.0 P90 BN90LA4	264
12.9	1012	1.5	109.4	20000	A503_109.4 S3 M3SA4	263	A503_109.4 P90 BN90LA4	264
13.1	997	2.8	107.8	30000	A603_107.8 S3 M3SA4	271	A603_107.8 P90 BN90LA4	272
13.9	938	2.1	101.4	30000	A553_101.4 S3 M3SA4	267	A553_101.4 P90 BN90LA4	268
14.2	921	1.6	99.5	20000	A503_99.5 S3 M3SA4	263	A503_99.5 P90 BN90LA4	264
14.2	920	3.0	99.5	30000	A603_99.5 S3 M3SA4	271	A603_99.5 P90 BN90LA4	272
15.2	858	0.9	92.8	15000	A413_92.8 S3 M3SA4	259	A413_92.8 P90 BN90LA4	260
15.7	828	1.8	89.5	20000	A503_89.5 S3 M3SA4	263	A503_89.5 P90 BN90LA4	264
16.3	799	3.5	86.4	30000	A603_86.4 S3 M3SA4	271	A603_86.4 P90 BN90LA4	272
17.3	753	2.0	81.5	20000	A503_81.5 S3 M3SA4	263	A503_81.5 P90 BN90LA4	264
17.7	736	2.7	79.5	30000	A553_79.5 S3 M3SA4	267	A553_79.5 P90 BN90LA4	268
17.8	757	1.1	79.2	15000	A412_79.2 S3 M3SA4	259	A412_79.2 P90 BN90LA4	260
19.8	681	1.2	71.3	15000	A412_71.3 S3 M3SA4	259	A412_71.3 P90 BN90LA4	260
20.1	650	2.3	70.2	20000	A503_70.2 S3 M3SA4	263	A503_70.2 P90 BN90LA4	264
21.4	629	1.0	65.8	11600	A352_65.8 S3 M3SA4	255	A352_65.8 P90 BN90LA4	256
21.9	595	3.4	64.3	30000	A553_64.3 S3 M3SA4	267	A553_64.3 P90 BN90LA4	268
22.0	613	1.4	64.2	15000	A412_64.2 S3 M3SA4	259	A412_64.2 P90 BN90LA4	260
22.1	591	2.5	63.9	20000	A503_63.9 S3 M3SA4	263	A503_63.9 P90 BN90LA4	264
23.4	577	1.0	60.4	11500	A352_60.4 S3 M3SA4	255	A352_60.4 P90 BN90LA4	256
24.0	562	1.5	58.8	15000	A412_58.8 S3 M3SA4	259	A412_58.8 P90 BN90LA4	260
24.8	526	2.9	56.8	20000	A503_56.8 S3 M3SA4	263	A503_56.8 P90 BN90LA4	264
26.0	519	1.2	54.3	11300	A352_54.3 S3 M3SA4	255	A352_54.3 P90 BN90LA4	256

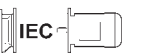


1.5 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N			 IEC 	
26.5	508	1.7	53.1	15000	A412_53.1 S3 M3SA4	259	A412_53.1 P90 BN90LA4	260
27.3	478	3.1	51.7	19700	A503_51.7 S3 M3SA4	263	A503_51.7 P90 BN90LA4	264
28.7	469	1.3	49.1	11100	A352_49.1 S3 M3SA4	255	A352_49.1 P90 BN90LA4	256
29.2	461	1.8	48.3	14900	A412_48.3 S3 M3SA4	259	A412_48.3 P90 BN90LA4	260
31	438	1.4	45.8	11000	A352_45.8 S3 M3SA4	255	A352_45.8 P90 BN90LA4	256
31	431	1.9	45.1	14600	A412_45.1 S3 M3SA4	259	A412_45.1 P90 BN90LA4	260
32	415	1.0	43.4	6450	A302_43.4 S3 M3SA4	251	A302_43.4 P90 BN90LA4	252
34	399	1.5	41.8	10800	A352_41.8 S3 M3SA4	255	A352_41.8 P90 BN90LA4	256
36	375	1.1	39.3	6380	A302_39.3 S3 M3SA4	251	A302_39.3 P90 BN90LA4	252
38	350	1.2	36.6	6330	A302_36.6 S3 M3SA4	251	A302_36.6 P90 BN90LA4	252
38	350	1.7	36.6	10500	A352_36.6 S3 M3SA4	255	A352_36.6 P90 BN90LA4	256
39	343	2.3	35.9	13800	A412_35.9 S3 M3SA4	259	A412_35.9 P90 BN90LA4	260
42	319	1.3	33.4	6260	A302_33.4 S3 M3SA4	251	A302_33.4 P90 BN90LA4	252
43	317	1.9	33.2	10300	A352_33.2 S3 M3SA4	255	A352_33.2 P90 BN90LA4	256
48	280	1.5	29.3	6140	A302_29.3 S3 M3SA4	251	A302_29.3 P90 BN90LA4	252
50	272	2.2	28.4	9940	A352_28.4 S3 M3SA4	255	A352_28.4 P90 BN90LA4	256
50	271	2.7	28.3	13000	A412_28.3 S3 M3SA4	259	A412_28.3 P90 BN90LA4	260
53	254	1.6	26.5	6040	A302_26.5 S3 M3SA4	251	A302_26.5 P90 BN90LA4	252
53	253	1.0	26.5	3790	A202_26.5 S3 M3SA4	247	A202_26.5 P90 BN90LA4	248
55	245	2.4	25.7	9710	A352_25.7 S3 M3SA4	255	A352_25.7 P90 BN90LA4	256
61	221	1.1	23.1	3760	A202_23.1 S3 M3SA4	247	A202_23.1 P90 BN90LA4	248
62	217	1.9	22.8	5870	A302_22.8 S3 M3SA4	251	A302_22.8 P90 BN90LA4	252
62	217	3.1	22.7	12200	A412_22.7 S3 M3SA4	259	A412_22.7 P90 BN90LA4	260
63	215	2.8	22.5	9400	A352_22.5 S3 M3SA4	255	A352_22.5 P90 BN90LA4	256
66	203	1.2	21.2	3730	A202_21.2 S3 M3SA4	247	A202_21.2 P90 BN90LA4	248
69	196	2.1	20.5	5760	A302_20.5 S3 M3SA4	251	A302_20.5 P90 BN90LA4	252
69	195	3.1	20.4	9170	A352_20.4 S3 M3SA4	255	A352_20.4 P90 BN90LA4	256
78	173	1.4	18.1	3660	A202_18.1 S3 M3SA4	247	A202_18.1 P90 BN90LA4	248
78	172	2.3	18.0	5600	A302_18.0 S3 M3SA4	251	A302_18.0 P90 BN90LA4	252
86	157	1.0	16.4	3720	A102_16.4 S3 M3SA4	243	A102_16.4 P90 BN90LA4	244
86	156	2.5	16.3	5480	A302_16.3 S3 M3SA4	251	A302_16.3 P90 BN90LA4	252
87	154	1.6	16.2	3600	A202_16.2 S3 M3SA4	247	A202_16.2 P90 BN90LA4	248
100	134	1.8	14.1	3530	A202_14.1 S3 M3SA4	247	A202_14.1 P90 BN90LA4	248
101	133	1.1	13.9	3090	A102_13.9 S3 M3SA4	243	A102_13.9 P90 BN90LA4	244
104	130	2.9	13.6	5250	A302_13.6 S3 M3SA4	251	A302_13.6 P90 BN90LA4	252
115	118	1.2	12.3	3040	A102_12.3 S3 M3SA4	243	A102_12.3 P90 BN90LA4	244
118	114	1.8	12.0	3420	A202_12.0 S3 M3SA4	247	A202_12.0 P90 BN90LA4	248
120	113	2.7	11.8	5060	A302_11.8 S3 M3SA4	251	A302_11.8 P90 BN90LA4	252
123	109	3.2	22.8	5040	A302_22.8 S2 M2SB2	251	A302_22.8 P90 BN90SA2	252
134	101	1.5	10.6	2990	A102_10.6 S3 M3SA4	243	A102_10.6 P90 BN90LA4	244
135	100	3.4	10.5	4930	A302_10.5 S3 M3SA4	251	A302_10.5 P90 BN90LA4	252
136	99	2.3	10.3	3330	A202_10.3 S3 M3SA4	247	A202_10.3 P90 BN90LA4	248
147	92	1.5	9.6	2940	A102_9.6 S3 M3SA4	243	A102_9.6 P90 BN90LA4	244
150	90	2.3	9.4	3250	A202_9.4 S3 M3SA4	247	A202_9.4 P90 BN90LA4	248
151	89	3.4	9.3	4770	A302_9.3 S3 M3SA4	251	A302_9.3 P90 BN90LA4	252
166	81	1.7	8.5	3420	A102_8.5 S3 M3SA4	243	A102_8.5 P90 BN90LA4	244
168	80	2.6	8.4	3180	A202_8.4 S3 M3SA4	247	A202_8.4 P90 BN90LA4	248
193	70	3.0	7.3	3080	A202_7.3 S3 M3SA4	247	A202_7.3 P90 BN90LA4	248
196	69	2.0	7.2	2790	A102_7.2 S3 M3SA4	243	A102_7.2 P90 BN90LA4	244
216	62	3.4	6.5	3000	A202_6.5 S3 M3SA4	247	A202_6.5 P90 BN90LA4	248
223	61	2.3	6.3	3220	A102_6.3 S3 M3SA4	243	A102_6.3 P90 BN90LA4	244

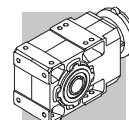


1.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
258	52	2.7	5.5	2630	A102_5.5 S3 M3SA4	243	A102_5.5 P90 BN90LA4	244
291	46	3.0	9.6	2560	A102_9.6 S2 M2SB2	243	A102_9.6 P90 BN90SA2	244
329	41	3.4	8.5	2950	A102_8.5 S2 M2SB2	243	A102_8.5 P90 BN90SA2	244
388	35	2.4	7.2	1420	A052_7.2 S2 M2SB2	240		
442	30	2.6	6.3	1380	A052_6.3 S2 M2SB2	240		
512	26	2.9	5.5	1340	A052_5.5 S2 M2SB2	240		

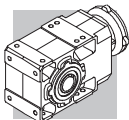
2.2 kW

n2 min ⁻¹	M2 Nm	S	i	Rn2 N			 IEC 	
1.2	16217	0.9	1222	75000	A904_1222 S3 M3LA4	281	A904_1222 P100 BN100LA4	282
1.3	14736	1.0	1111	75000	A904_1111 S3 M3LA4	281	A904_1111 P100 BN100LA4	282
1.4	13602	1.0	1025	75000	A904_1025 S3 M3LA4	281	A904_1025 P100 BN100LA4	282
1.5	12435	1.1	937.2	75000	A904_937.2 S3 M3LA4	281	A904_937.2 P100 BN100LA4	282
1.6	11479	1.2	865.1	75000	A904_865.1 S3 M3LA4	281	A904_865.1 P100 BN100LA4	282
1.8	10176	1.4	766.9	75000	A904_766.9 S3 M3LA4	281	A904_766.9 P100 BN100LA4	282
2.0	9393	1.5	707.9	75000	A904_707.9 S3 M3LA4	281	A904_707.9 P100 BN100LA4	282
2.0	9334	0.9	703.5	65000	A804_703.5 S3 M3LA4	278	A804_703.5 P100 BN100LA4	279
2.3	8056	1.0	607.2	65000	A804_607.2 S3 M3LA4	278	A804_607.2 P100 BN100LA4	279
2.3	7982	1.8	601.6	75000	A904_601.6 S3 M3LA4	281	A904_601.6 P100 BN100LA4	282
2.5	7436	1.1	560.5	65000	A804_560.5 S3 M3LA4	278	A804_560.5 P100 BN100LA4	279
2.5	7368	1.9	555.3	75000	A904_555.3 S3 M3LA4	281	A904_555.3 P100 BN100LA4	282
2.9	6456	2.2	486.6	75000	A904_486.6 S3 M3LA4	281	A904_486.6 P100 BN100LA4	282
2.9	6355	1.3	478.9	65000	A804_478.9 S3 M3LA4	278	A804_478.9 P100 BN100LA4	279
3.1	5960	2.3	449.2	75000	A904_449.2 S3 M3LA4	281	A904_449.2 P100 BN100LA4	282
3.2	5866	1.4	442.1	65000	A804_442.1 S3 M3LA4	278	A804_442.1 P100 BN100LA4	279
3.5	5310	0.9	400.2	50000	A704_400.2 S3 M3LA4	275	A704_400.2 P100 BN100LA4	276
3.7	5114	2.7	385.4	75000	A904_385.4 S3 M3LA4	281	A904_385.4 P100 BN100LA4	282
3.7	5088	1.6	383.5	65000	A804_383.5 S3 M3LA4	278	A804_383.5 P100 BN100LA4	279
3.8	4901	1.0	369.4	50000	A704_369.4 S3 M3LA4	275	A704_369.4 P100 BN100LA4	276
4.0	4721	3.0	355.8	75000	A904_355.8 S3 M3LA4	281	A904_355.8 P100 BN100LA4	282
4.0	4697	1.7	354.0	65000	A804_354.0 S3 M3LA4	278	A804_354.0 P100 BN100LA4	279
4.5	4198	1.2	316.4	50000	A704_316.4 S3 M3LA4	275	A704_316.4 P100 BN100LA4	276
4.6	4045	3.5	304.9	75000	A904_304.9 S3 M3LA4	281	A904_304.9 P100 BN100LA4	282
4.7	3986	2.0	300.4	65000	A804_300.4 S3 M3LA4	278	A804_300.4 P100 BN100LA4	279
4.8	3875	1.3	292.0	50000	A704_292.0 S3 M3LA4	275	A704_292.0 P100 BN100LA4	276
5.1	3679	2.2	277.3	65000	A804_277.3 S3 M3LA4	278	A804_277.3 P100 BN100LA4	279
5.9	3166	1.6	238.6	50000	A704_238.6 S3 M3LA4	275	A704_238.6 P100 BN100LA4	276
6.1	3087	2.6	232.6	65000	A804_232.6 S3 M3LA4	278	A804_232.6 P100 BN100LA4	279
6.2	3000	0.9	226.1	30000	A604_226.1 S3 M3LA4	271	A604_226.1 P100 BN100LA4	272
6.4	2922	1.7	220.3	50000	A704_220.3 S3 M3LA4	275	A704_220.3 P100 BN100LA4	276
6.6	2849	2.8	214.7	65000	A804_214.7 S3 M3LA4	278	A804_214.7 P100 BN100LA4	279
6.8	2770	1.0	208.7	30000	A604_208.7 S3 M3LA4	271	A604_208.7 P100 BN100LA4	272
7.6	2520	1.1	185.8	30000	A603_185.8 S3 M3LA4	271	A603_185.8 P100 BN100LA4	272
7.7	2440	2.0	183.9	50000	A704_183.9 S3 M3LA4	275	A704_183.9 P100 BN100LA4	276
8.2	2326	1.2	171.5	30000	A603_171.5 S3 M3LA4	271	A603_171.5 P100 BN100LA4	272
8.2	2273	3.5	171.3	65000	A804_171.3 S3 M3LA4	278	A804_171.3 P100 BN100LA4	279
8.3	2252	2.2	169.8	50000	A704_169.8 S3 M3LA4	275	A704_169.8 P100 BN100LA4	276



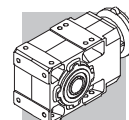
2.2 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N			 IEC 	
8.8	2177	0.9	160.4	30000	A553_160.4 S3 M3LA4	267	A553_160.4 P100 BN100LA4	268
9.0	2117	1.3	156.0	30000	A603_156.0 S3 M3LA4	271	A603_156.0 P100 BN100LA4	272
9.2	2085	1.9	153.7	50000	A703_153.7 S3 M3LA4	275	A703_153.7 P100 BN100LA4	276
9.6	1992	1.0	146.8	30000	A553_146.8 S3 M3LA4	267	A553_146.8 P100 BN100LA4	268
9.8	1954	1.4	144.0	30000	A603_144.0 S3 M3LA4	271	A603_144.0 P100 BN100LA4	272
9.9	1925	2.6	141.9	50000	A703_141.9 S3 M3LA4	275	A703_141.9 P100 BN100LA4	276
10.6	1808	1.5	133.3	30000	A603_133.3 S3 M3LA4	271	A603_133.3 P100 BN100LA4	272
10.6	1801	1.1	132.7	30000	A553_132.7 S3 M3LA4	267	A553_132.7 P100 BN100LA4	268
10.8	1773	2.8	130.7	50000	A703_130.7 S3 M3LA4	275	A703_130.7 P100 BN100LA4	276
11.4	1681	1.2	123.9	30000	A553_123.9 S3 M3LA4	267	A553_123.9 P100 BN100LA4	268
11.5	1669	1.7	123.0	30000	A603_123.0 S3 M3LA4	271	A603_123.0 P100 BN100LA4	272
11.7	1636	3.1	120.6	50000	A703_120.6 S3 M3LA4	275	A703_120.6 P100 BN100LA4	276
12.0	1600	0.9	118.0	20000	A503_118.0 S3 M3LA4	263	A503_118.0 P100 BN100LA4	264
12.9	1485	1.0	109.4	20000	A503_109.4 S3 M3LA4	263	A503_109.4 P100 BN100LA4	264
13.1	1463	1.9	107.8	30000	A603_107.8 S3 M3LA4	271	A603_107.8 P100 BN100LA4	272
13.5	1414	3.5	104.2	50000	A703_104.2 S3 M3LA4	275	A703_104.2 P100 BN100LA4	276
13.9	1375	1.5	101.4	30000	A553_101.4 S3 M3LA4	267	A553_101.4 P100 BN100LA4	268
14.2	1350	1.1	99.5	20000	A503_99.5 S3 M3LA4	263	A503_99.5 P100 BN100LA4	264
14.2	1350	2.1	99.5	30000	A603_99.5 S3 M3LA4	271	A603_99.5 P100 BN100LA4	272
15.7	1215	1.2	89.5	19800	A503_89.5 S3 M3LA4	263	A503_89.5 P100 BN100LA4	264
16.3	1172	2.4	86.4	30000	A603_86.4 S3 M3LA4	271	A603_86.4 P100 BN100LA4	272
17.3	1105	1.4	81.5	19600	A503_81.5 S3 M3LA4	263	A503_81.5 P100 BN100LA4	264
17.7	1082	2.6	79.7	30000	A603_79.7 S3 M3LA4	271	A603_79.7 P100 BN100LA4	272
17.7	1079	1.9	79.5	30000	A553_79.5 S3 M3LA4	267	A553_79.5 P100 BN100LA4	268
20.0	955	2.9	70.4	30000	A603_70.4 S3 M3LA4	271	A603_70.4 P100 BN100LA4	272
20.1	953	1.6	70.2	19300	A503_70.2 S3 M3LA4	263	A503_70.2 P100 BN100LA4	264
21.7	882	3.2	65.0	30000	A603_65.0 S3 M3LA4	271	A603_65.0 P100 BN100LA4	272
21.9	873	2.3	64.3	30000	A553_64.3 S3 M3LA4	267	A553_64.3 P100 BN100LA4	268
22.0	899	0.9	64.2	14500	A412_64.2 S3 M3LA4	259	A412_64.2 P100 BN100LA4	260
22.1	867	1.7	63.9	19000	A503_63.9 S3 M3LA4	263	A503_63.9 P100 BN100LA4	264
24.0	824	1.0	58.8	14400	A412_58.8 S3 M3LA4	259	A412_58.8 P100 BN100LA4	260
24.8	771	1.9	56.8	18600	A503_56.8 S3 M3LA4	263	A503_56.8 P100 BN100LA4	264
26.5	745	1.1	53.1	14100	A412_53.1 S3 M3LA4	259	A412_53.1 P100 BN100LA4	260
27.3	701	2.1	51.7	18300	A503_51.7 S3 M3LA4	263	A503_51.7 P100 BN100LA4	264
27.7	691	2.9	51.0	30000	A553_51.0 S3 M3LA4	267	A553_51.0 P100 BN100LA4	268
28.7	688	0.9	49.1	9900	A352_49.1 S3 M3LA4	255	A352_49.1 P100 BN100LA4	256
29.2	677	1.3	48.3	13900	A412_48.3 S3 M3LA4	259	A412_48.3 P100 BN100LA4	260
31	642	0.9	45.8	9840	A352_45.8 S3 M3LA4	255	A352_45.8 P100 BN100LA4	256
31	632	1.3	45.1	13700	A412_45.1 S3 M3LA4	259	A412_45.1 P100 BN100LA4	260
31	611	2.5	45.0	17900	A503_45.0 S3 M3LA4	263	A503_45.0 P100 BN100LA4	264
34	586	1.0	41.8	9750	A352_41.8 S3 M3LA4	255	A352_41.8 P100 BN100LA4	256
34	555	2.7	40.9	17500	A503_40.9 S3 M3LA4	263	A503_40.9 P100 BN100LA4	264
38	513	1.2	36.6	9600	A352_36.6 S3 M3LA4	255	A352_36.6 P100 BN100LA4	256
39	503	1.6	35.9	13100	A412_35.9 S3 M3LA4	259	A412_35.9 P100 BN100LA4	260
40	483	3.1	35.6	17000	A503_35.6 S3 M3LA4	263	A503_35.6 P100 BN100LA4	264
43	465	1.3	33.2	9460	A352_33.2 S3 M3LA4	255	A352_33.2 P100 BN100LA4	256
44	439	3.4	32.4	16600	A503_32.4 S3 M3LA4	263	A503_32.4 P100 BN100LA4	264
48	411	1.0	29.3	5380	A302_29.3 S3 M3LA4	251	A302_29.3 P100 BN100LA4	252
50	399	1.5	28.4	9230	A352_28.4 S3 M3LA4	255	A352_28.4 P100 BN100LA4	256
50	397	1.8	28.3	12400	A412_28.3 S3 M3LA4	259	A412_28.3 P100 BN100LA4	260
53	372	1.1	26.5	5350	A302_26.5 S3 M3LA4	251	A302_26.5 P100 BN100LA4	252



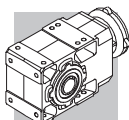
2.2 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
55	360	1.7	25.7	9070	A352_25.7 S3 M3LA4	255	A352_25.7 P100 BN100LA4	256
62	319	1.3	22.8	5290	A302_22.8 S3 M3LA4	251	A302_22.8 P100 BN100LA4	252
62	318	2.1	22.7	11700	A412_22.7 S3 M3LA4	259	A412_22.7 P100 BN100LA4	260
63	315	1.9	22.5	8840	A352_22.5 S3 M3LA4	255	A352_22.5 P100 BN100LA4	256
69	288	1.4	20.5	5230	A302_20.5 S3 M3LA4	251	A302_20.5 P100 BN100LA4	252
69	286	2.1	20.4	8660	A352_20.4 S3 M3LA4	255	A352_20.4 P100 BN100LA4	256
78	254	1.0	18.1	3140	A202_18.1 S3 M3LA4	247	A202_18.1 P100 BN100LA4	248
78	252	1.6	18.0	5140	A302_18.0 S3 M3LA4	251	A302_18.0 P100 BN100LA4	252
79	249	2.5	17.8	11000	A412_17.8 S3 M3LA4	259	A412_17.8 P100 BN100LA4	260
83	238	2.5	17.0	8320	A352_17.0 S3 M3LA4	255	A352_17.0 P100 BN100LA4	256
86	229	1.7	16.3	5060	A302_16.3 S3 M3LA4	251	A302_16.3 P100 BN100LA4	252
87	227	1.1	16.2	3140	A202_16.2 S3 M3LA4	247	A202_16.2 P100 BN100LA4	248
88	226	2.7	16.1	10800	A412_16.1 S3 M3LA4	259	A412_16.1 P100 BN100LA4	260
91	217	2.8	15.5	8150	A352_15.5 S3 M3LA4	255	A352_15.5 P100 BN100LA4	256
100	197	1.2	14.1	3120	A202_14.1 S3 M3LA4	247	A202_14.1 P100 BN100LA4	248
102	193	3.0	13.8	10300	A412_13.8 S3 M3LA4	259	A412_13.8 P100 BN100LA4	260
104	190	1.9	13.6	4900	A302_13.6 S3 M3LA4	251	A302_13.6 P100 BN100LA4	252
108	183	3.3	13.1	7820	A352_13.1 S3 M3LA4	255	A352_13.1 P100 BN100LA4	256
118	168	1.3	12.0	3070	A202_12.0 S3 M3LA4	247	A202_12.0 P100 BN100LA4	248
120	165	1.8	11.8	4750	A302_11.8 S3 M3LA4	251	A302_11.8 P100 BN100LA4	252
120	165	2.4	11.8	7710	A352_11.8 S3 M3LA4	255	A352_11.8 P100 BN100LA4	256
120	165	3.3	11.7	9870	A412_11.7 S3 M3LA4	259	A412_11.7 P100 BN100LA4	260
123	160	2.0	23.1	3070	A202_23.1 S3 M3SA2	247	A202_23.1 P90 BN90L2	248
133	149	2.7	10.6	7510	A352_10.6 S3 M3LA4	255	A352_10.6 P100 BN100LA4	256
134	148	1.0	10.6	2600	A102_10.6 S3 M3LA4	243	A102_10.6 P100 BN100LA4	244
135	147	2.3	10.5	4660	A302_10.5 S3 M3LA4	251	A302_10.5 P100 BN100LA4	252
136	145	1.6	10.3	3030	A202_10.3 S3 M3LA4	247	A202_10.3 P100 BN100LA4	248
147	135	1.0	9.6	2580	A102_9.6 S3 M3LA4	243	A102_9.6 P100 BN100LA4	244
150	131	1.6	9.4	2980	A202_9.4 S3 M3LA4	247	A202_9.4 P100 BN100LA4	248
151	130	2.3	9.3	4530	A302_9.3 S3 M3LA4	251	A302_9.3 P100 BN100LA4	252
151	130	3.1	9.3	7240	A352_9.3 S3 M3LA4	255	A352_9.3 P100 BN100LA4	256
166	119	1.2	8.5	3050	A102_8.5 S3 M3LA4	243	A102_8.5 P100 BN100LA4	244
167	119	2.5	8.5	4430	A302_8.5 S3 M3LA4	251	A302_8.5 P100 BN100LA4	252
167	119	3.2	8.5	7060	A352_8.5 S3 M3LA4	255	A352_8.5 P100 BN100LA4	256
168	117	1.8	8.4	2930	A202_8.4 S3 M3LA4	247	A202_8.4 P100 BN100LA4	248
193	102	2.1	7.3	2860	A202_7.3 S3 M3LA4	247	A202_7.3 P100 BN100LA4	248
196	101	1.4	7.2	2520	A102_7.2 S3 M3LA4	243	A102_7.2 P100 BN100LA4	244
201	98	3.0	7.0	4240	A302_7.0 S3 M3LA4	251	A302_7.0 P100 BN100LA4	252
216	92	2.3	6.5	2810	A202_6.5 S3 M3LA4	247	A202_6.5 P100 BN100LA4	248
220	90	3.3	6.4	4150	A302_6.4 S3 M3LA4	251	A302_6.4 P100 BN100LA4	252
223	89	1.6	6.3	2950	A102_6.3 S3 M3LA4	243	A102_6.3 P100 BN100LA4	244
258	77	1.8	5.5	2430	A102_5.5 S3 M3LA4	243	A102_5.5 P100 BN100LA4	244
263	75	2.8	5.4	2700	A202_5.4 S3 M3LA4	247	A202_5.4 P100 BN100LA4	248
304	65	3.2	9.4	2620	A202_9.4 S3 M3SA2	247	A202_9.4 P90 BN90L2	248



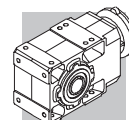
3.0 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
1.6	15653	0.9	865.1	75000	A904_865.1 S3 M3LB4	281	A904_865.1 P100 BN100LB4	282
1.8	13876	1.0	766.9	75000	A904_766.9 S3 M3LB4	281	A904_766.9 P100 BN100LB4	282
2.0	12809	1.1	707.9	75000	A904_707.9 S3 M3LB4	281	A904_707.9 P100 BN100LB4	282
2.3	10885	1.3	601.6	75000	A904_601.6 S3 M3LB4	281	A904_601.6 P100 BN100LB4	282
2.5	10047	1.4	555.3	75000	A904_555.3 S3 M3LB4	281	A904_555.3 P100 BN100LB4	282
2.9	8804	1.6	486.6	75000	A904_486.6 S3 M3LB4	281	A904_486.6 P100 BN100LB4	282
2.9	8665	0.9	478.9	65000	A804_478.9 S3 M3LB4	278	A804_478.9 P100 BN100LB4	279
3.1	8127	1.7	449.2	75000	A904_449.2 S3 M3LB4	281	A904_449.2 P100 BN100LB4	282
3.2	7999	1.0	442.1	65000	A804_442.1 S3 M3LB4	278	A804_442.1 P100 BN100LB4	279
3.7	6974	2.0	385.4	75000	A904_385.4 S3 M3LB4	281	A904_385.4 P100 BN100LB4	282
3.7	6938	1.2	383.5	65000	A804_383.5 S3 M3LB4	278	A804_383.5 P100 BN100LB4	279
4.0	6438	2.2	355.8	75000	A904_355.8 S3 M3LB4	281	A904_355.8 P100 BN100LB4	282
4.0	6405	1.2	354.0	65000	A804_354.0 S3 M3LB4	278	A804_354.0 P100 BN100LB4	279
4.5	5724	0.9	316.4	50000	A704_316.4 S3 M3LB4	275	A704_316.4 P100 BN100LB4	276
4.6	5517	2.5	304.9	75000	A904_304.9 S3 M3LB4	281	A904_304.9 P100 BN100LB4	282
4.7	5435	1.5	300.4	65000	A804_300.4 S3 M3LB4	278	A804_300.4 P100 BN100LB4	279
4.8	5284	0.9	292.0	50000	A704_292.0 S3 M3LB4	275	A704_292.0 P100 BN100LB4	276
5.0	5092	2.7	281.4	75000	A904_281.4 S3 M3LB4	281	A904_281.4 P100 BN100LB4	282
5.1	5017	1.6	277.3	65000	A804_277.3 S3 M3LB4	278	A804_277.3 P100 BN100LB4	279
5.9	4317	1.2	238.6	50000	A704_238.6 S3 M3LB4	275	A704_238.6 P100 BN100LB4	276
6.1	4209	1.9	232.6	65000	A804_232.6 S3 M3LB4	278	A804_232.6 P100 BN100LB4	279
6.2	4097	3.4	226.4	75000	A904_226.4 S3 M3LB4	281	A904_226.4 P100 BN100LB4	282
6.4	3985	1.3	220.3	50000	A704_220.3 S3 M3LB4	275	A704_220.3 P100 BN100LB4	276
6.6	3885	2.1	214.7	65000	A804_214.7 S3 M3LB4	278	A804_214.7 P100 BN100LB4	279
7.7	3327	1.5	183.9	50000	A704_183.9 S3 M3LB4	275	A704_183.9 P100 BN100LB4	276
8.2	3172	0.9	171.5	30000	A603_171.5 S3 M3LB4	271	A603_171.5 P100 BN100LB4	272
8.2	3099	2.6	171.3	65000	A804_171.3 S3 M3LB4	278	A804_171.3 P100 BN100LB4	279
8.3	3071	1.6	169.8	50000	A704_169.8 S3 M3LB4	275	A704_169.8 P100 BN100LB4	276
9.0	2901	2.8	156.8	65000	A803_156.8 S3 M3LB4	278	A803_156.8 P100 BN100LB4	279
9.0	2887	1.0	156.0	30000	A603_156.0 S3 M3LB4	271	A603_156.0 P100 BN100LB4	272
9.2	2843	1.4	153.7	50000	A703_153.7 S3 M3LB4	275	A703_153.7 P100 BN100LB4	276
9.7	2678	3.0	144.7	65000	A803_144.7 S3 M3LB4	278	A803_144.7 P100 BN100LB4	279
9.8	2665	1.1	144.0	30000	A603_144.0 S3 M3LB4	271	A603_144.0 P100 BN100LB4	272
9.9	2624	1.9	141.9	50000	A703_141.9 S3 M3LB4	275	A703_141.9 P100 BN100LB4	276
10.6	2466	1.1	133.3	30000	A603_133.3 S3 M3LB4	271	A603_133.3 P100 BN100LB4	272
10.8	2417	2.1	130.7	50000	A703_130.7 S3 M3LB4	275	A703_130.7 P100 BN100LB4	276
11.2	2324	3.4	125.6	65000	A803_125.6 S3 M3LB4	278	A803_125.6 P100 BN100LB4	279
11.5	2276	1.2	123.0	30000	A603_123.0 S3 M3LB4	271	A603_123.0 P100 BN100LB4	272
11.7	2231	2.2	120.6	50000	A703_120.6 S3 M3LB4	275	A703_120.6 P100 BN100LB4	276
13.1	1994	1.4	107.8	30000	A603_107.8 S3 M3LB4	271	A603_107.8 P100 BN100LB4	272
13.5	1928	2.6	104.2	50000	A703_104.2 S3 M3LB4	275	A703_104.2 P100 BN100LB4	276
13.9	1876	1.1	101.4	30000	A553_101.4 S3 M3LB4	267	A553_101.4 P100 BN100LB4	268
14.2	1841	1.5	99.5	30000	A603_99.5 S3 M3LB4	271	A603_99.5 P100 BN100LB4	272
14.7	1780	2.8	96.2	50000	A703_96.2 S3 M3LB4	275	A703_96.2 P100 BN100LB4	276
15.7	1657	0.9	89.5	17100	A503_89.5 S3 M3LB4	263	A503_89.5 P100 BN100LB4	264
16.3	1598	1.8	86.4	30000	A603_86.4 S3 M3LB4	271	A603_86.4 P100 BN100LB4	272
16.4	1590	3.1	85.9	50000	A703_85.9 S3 M3LB4	275	A703_85.9 P100 BN100LB4	276
17.3	1507	1.0	81.5	17200	A503_81.5 S3 M3LB4	263	A503_81.5 P100 BN100LB4	264
17.7	1475	1.9	79.7	30000	A603_79.7 S3 M3LB4	271	A603_79.7 P100 BN100LB4	272
17.7	1471	1.4	79.5	30000	A553_79.5 S3 M3LB4	267	A553_79.5 P100 BN100LB4	268
17.8	1468	3.4	79.3	50000	A703_79.3 S3 M3LB4	275	A703_79.3 P100 BN100LB4	276



3.0 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
20.0	1303	2.1	70.4	30000	A603_70.4 S3 M3LB4	271	A603_70.4 P100 BN100LB4	272
20.1	1299	1.2	70.2	17200	A503_70.2 S3 M3LB4	263	A503_70.2 P100 BN100LB4	264
21.7	1202	2.3	65.0	30000	A603_65.0 S3 M3LB4	271	A603_65.0 P100 BN100LB4	272
21.9	1190	1.7	64.3	30000	A553_64.3 S3 M3LB4	267	A553_64.3 P100 BN100LB4	268
22.1	1182	1.3	63.9	17100	A503_63.9 S3 M3LB4	263	A503_63.9 P100 BN100LB4	264
24.8	1051	1.4	56.8	17000	A503_56.8 S3 M3LB4	263	A503_56.8 P100 BN100LB4	264
25.4	1029	2.7	55.6	30000	A603_55.6 S3 M3LB4	271	A603_55.6 P100 BN100LB4	272
27.3	956	1.6	51.7	16800	A503_51.7 S3 M3LB4	263	A503_51.7 P100 BN100LB4	264
27.5	950	2.9	51.3	30000	A603_51.3 S3 M3LB4	271	A603_51.3 P100 BN100LB4	272
27.7	943	2.1	51.0	30000	A553_51.0 S3 M3LB4	267	A553_51.0 P100 BN100LB4	268
29.2	923	0.9	48.3	12700	A412_48.3 S3 M3LB4	259	A412_48.3 P100 BN100LB4	260
31	861	1.0	45.1	12600	A412_45.1 S3 M3LB4	259	A412_45.1 P100 BN100LB4	260
31	836	3.3	45.2	30000	A603_45.2 S3 M3LB4	271	A603_45.2 P100 BN100LB4	272
31	833	1.8	45.0	16500	A503_45.0 S3 M3LB4	263	A503_45.0 P100 BN100LB4	264
34	757	2.0	40.9	16300	A503_40.9 S3 M3LB4	263	A503_40.9 P100 BN100LB4	264
35	746	2.7	40.3	30000	A553_40.3 S3 M3LB4	267	A553_40.3 P100 BN100LB4	268
38	700	0.9	36.6	8550	A352_36.6 S3 M3LB4	255	A352_36.6 P100 BN100LB4	256
39	686	1.1	35.9	12200	A412_35.9 S3 M3LB4	259	A412_35.9 P100 BN100LB4	260
40	659	2.3	35.6	16000	A503_35.6 S3 M3LB4	263	A503_35.6 P100 BN100LB4	264
43	634	0.9	33.2	8520	A352_33.2 S3 M3LB4	255	A352_33.2 P100 BN100LB4	256
44	599	2.5	32.4	15700	A503_32.4 S3 M3LB4	263	A503_32.4 P100 BN100LB4	264
50	543	1.1	28.4	8420	A352_28.4 S3 M3LB4	255	A352_28.4 P100 BN100LB4	256
50	541	1.3	28.3	11700	A412_28.3 S3 M3LB4	259	A412_28.3 P100 BN100LB4	260
53	489	3.1	26.4	15100	A503_26.4 S3 M3LB4	263	A503_26.4 P100 BN100LB4	264
55	491	1.2	25.7	8330	A352_25.7 S3 M3LB4	255	A352_25.7 P100 BN100LB4	256
59	445	3.4	24.0	14800	A503_24.0 S3 M3LB4	263	A503_24.0 P100 BN100LB4	264
62	435	0.9	22.8	4610	A302_22.8 S3 M3LB4	251	A302_22.8 P100 BN100LB4	252
62	433	1.6	22.7	11200	A412_22.7 S3 M3LB4	259	A412_22.7 P100 BN100LB4	260
63	430	1.4	22.5	8190	A352_22.5 S3 M3LB4	255	A352_22.5 P100 BN100LB4	256
67	400	3.0	20.9	15500	A502_20.9 S3 M3LB4	263	A502_20.9 P100 BN100LB4	264
69	392	1.0	20.5	4620	A302_20.5 S3 M3LB4	251	A302_20.5 P100 BN100LB4	252
69	390	1.5	20.4	8080	A352_20.4 S3 M3LB4	255	A352_20.4 P100 BN100LB4	256
78	344	1.2	18.0	4600	A302_18.0 S3 M3LB4	251	A302_18.0 P100 BN100LB4	252
79	339	1.9	17.8	10600	A412_17.8 S3 M3LB4	259	A412_17.8 P100 BN100LB4	260
83	324	1.9	17.0	7830	A352_17.0 S3 M3LB4	255	A352_17.0 P100 BN100LB4	256
86	312	1.2	16.3	4580	A302_16.3 S3 M3LB4	251	A302_16.3 P100 BN100LB4	252
88	308	2.0	16.1	10400	A412_16.1 S3 M3LB4	259	A412_16.1 P100 BN100LB4	260
91	296	2.0	15.5	7700	A352_15.5 S3 M3LB4	255	A352_15.5 P100 BN100LB4	256
100	269	0.9	14.1	2650	A202_14.1 S3 M3LB4	247	A202_14.1 P100 BN100LB4	248
102	263	2.2	13.8	9990	A412_13.8 S3 M3LB4	259	A412_13.8 P100 BN100LB4	260
104	259	1.4	13.6	4500	A302_13.6 S3 M3LB4	251	A302_13.6 P100 BN100LB4	252
108	250	2.4	13.1	7450	A352_13.1 S3 M3LB4	255	A352_13.1 P100 BN100LB4	256
118	229	0.9	12.0	2670	A202_12.0 S3 M3LB4	247	A202_12.0 P100 BN100LB4	248
120	225	1.3	11.8	4400	A302_11.8 S3 M3LB4	251	A302_11.8 P100 BN100LB4	252
120	225	1.8	11.8	7410	A352_11.8 S3 M3LB4	255	A352_11.8 P100 BN100LB4	256
120	224	2.5	11.7	9580	A412_11.7 S3 M3LB4	259	A412_11.7 P100 BN100LB4	260
124	218	1.5	23.1	2690	A202_23.1 S3 M3LA2	247	A202_23.1 P100 BN100L2	248
133	203	2.0	10.6	7230	A352_10.6 S3 M3LB4	255	A352_10.6 P100 BN100LB4	256
135	200	1.7	10.5	4350	A302_10.5 S3 M3LB4	251	A302_10.5 P100 BN100LB4	252
136	198	1.1	10.3	2690	A202_10.3 S3 M3LB4	247	A202_10.3 P100 BN100LB4	248
139	194	2.8	10.1	9230	A412_10.1 S3 M3LB4	259	A412_10.1 P100 BN100LB4	260

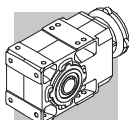


3.0 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
150	179	1.2	9.4	2670	A202_9.4 S3 M3LB4	247	A202_9.4 P100 BN100LB4	248
151	178	1.7	9.3	4240	A302_9.3 S3 M3LB4	251	A302_9.3 P100 BN100LB4	252
151	178	2.2	9.3	7000	A352_9.3 S3 M3LB4	255	A352_9.3 P100 BN100LB4	256
153	176	3.1	9.2	8980	A412_9.2 S3 M3LB4	259	A412_9.2 P100 BN100LB4	260
167	162	1.9	8.5	4170	A302_8.5 S3 M3LB4	251	A302_8.5 P100 BN100LB4	252
167	162	2.4	8.5	6840	A352_8.5 S3 M3LB4	255	A352_8.5 P100 BN100LB4	256
168	160	1.3	8.4	2650	A202_8.4 S3 M3LB4	247	A202_8.4 P100 BN100LB4	248
169	159	3.5	8.3	8740	A412_8.3 S3 M3LB4	259	A412_8.3 P100 BN100LB4	260
193	139	1.5	7.3	2620	A202_7.3 S3 M3LB4	247	A202_7.3 P100 BN100LB4	248
196	138	1.0	7.2	2220	A102_7.2 S3 M3LB4	243	A102_7.2 P100 BN100LB4	244
201	134	2.2	7.0	4030	A302_7.0 S3 M3LB4	251	A302_7.0 P100 BN100LB4	252
201	134	2.8	7.0	6520	A352_7.0 S3 M3LB4	255	A352_7.0 P100 BN100LB4	256
216	125	1.7	6.5	2590	A202_6.5 S3 M3LB4	247	A202_6.5 P100 BN100LB4	248
220	123	2.4	6.4	3950	A302_6.4 S3 M3LB4	251	A302_6.4 P100 BN100LB4	252
220	123	2.9	6.4	6360	A352_6.4 S3 M3LB4	255	A352_6.4 P100 BN100LB4	256
223	121	1.2	6.3	2640	A102_6.3 S3 M3LB4	243	A102_6.3 P100 BN100LB4	244
243	111	2.7	11.8	3870	A302_11.8 S3 M3LA2	251	A302_11.8 P100 BN100L2	252
258	104	1.3	5.5	2200	A102_5.5 S3 M3LB4	243	A102_5.5 P100 BN100LB4	244
260	103	2.9	5.4	3810	A302_5.4 S3 M3LB4	251	A302_5.4 P100 BN100LB4	252
260	103	3.3	5.4	6070	A352_5.4 S3 M3LB4	255	A352_5.4 P100 BN100LB4	256
263	102	2.1	5.4	2520	A202_5.4 S3 M3LB4	247	A202_5.4 P100 BN100LB4	248
277	97	1.9	10.3	2500	A202_10.3 S3 M3LA2	247	A202_10.3 P100 BN100L2	248
307	88	3.4	9.3	3670	A302_9.3 S3 M3LA2	251	A302_9.3 P100 BN100L2	252
342	79	2.7	8.4	2410	A202_8.4 S3 M3LA2	247	A202_8.4 P100 BN100L2	248
397	68	2.1	7.2	2090	A102_7.2 S3 M3LA2	243	A102_7.2 P100 BN100L2	244
451	60	2.3	6.3	2430	A102_6.3 S3 M3LA2	243	A102_6.3 P100 BN100L2	244
523	51	2.6	5.5	1990	A102_5.5 S3 M3LA2	243	A102_5.5 P100 BN100L2	244

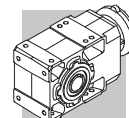
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
2.3	14616	1.0	601.6	75000	A904_601.6 S3 M3LC4	281	A904_601.6 P112 BN112M4	282
2.5	13492	1.0	555.3	75000	A904_555.3 S3 M3LC4	281	A904_555.3 P112 BN112M4	282
2.9	11823	1.2	486.6	75000	A904_486.6 S3 M3LC4	281	A904_486.6 P112 BN112M4	282
3.1	10913	1.3	449.2	75000	A904_449.2 S3 M3LC4	281	A904_449.2 P112 BN112M4	282
3.6	9365	1.5	385.4	75000	A904_385.4 S3 M3LC4	281	A904_385.4 P112 BN112M4	282
3.7	9317	0.9	383.5	65000	A804_383.5 S3 M3LC4	278	A804_383.5 P112 BN112M4	279
3.9	8645	1.6	355.8	75000	A904_355.8 S3 M3LC4	281	A904_355.8 P112 BN112M4	282
4.0	8600	0.9	354.0	65000	A804_354.0 S3 M3LC4	278	A804_354.0 P112 BN112M4	279
4.6	7408	1.9	304.9	75000	A904_304.9 S3 M3LC4	281	A904_304.9 P112 BN112M4	282
4.7	7299	1.1	300.4	65000	A804_300.4 S3 M3LC4	278	A804_300.4 P112 BN112M4	279
5.0	6838	2.0	281.4	75000	A904_281.4 S3 M3LC4	281	A904_281.4 P112 BN112M4	282
5.0	6737	1.2	277.3	65000	A804_277.3 S3 M3LC4	278	A804_277.3 P112 BN112M4	279
5.9	5797	0.9	238.6	50000	A704_238.6 S3 M3LC4	275	A704_238.6 P112 BN112M4	276
6.0	5652	1.4	232.6	65000	A804_232.6 S3 M3LC4	278	A804_232.6 P112 BN112M4	279
6.2	5502	2.5	226.4	75000	A904_226.4 S3 M3LC4	281	A904_226.4 P112 BN112M4	282
6.4	5352	0.9	220.3	50000	A704_220.3 S3 M3LC4	275	A704_220.3 P112 BN112M4	276
6.5	5217	1.5	214.7	65000	A804_214.7 S3 M3LC4	278	A804_214.7 P112 BN112M4	279



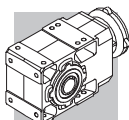
4.0 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
6.7	5078	2.8	209.0	75000	A904_209.0 S3 M3LC4	281	A904_209.0 P112 BN112M4	282
7.6	4468	1.1	183.9	50000	A704_183.9 S3 M3LC4	275	A704_183.9 P112 BN112M4	276
7.8	4373	3.2	180.0	75000	A904_180.0 S3 M3LC4	281	A904_180.0 P112 BN112M4	282
8.2	4162	1.9	171.3	65000	A804_171.3 S3 M3LC4	278	A804_171.3 P112 BN112M4	279
8.2	4125	1.2	169.8	50000	A704_169.8 S3 M3LC4	275	A704_169.8 P112 BN112M4	276
8.4	4036	3.5	166.1	75000	A904_166.1 S3 M3LC4	281	A904_166.1 P112 BN112M4	282
8.9	3895	2.1	156.8	65000	A803_156.8 S3 M3LC4	278	A803_156.8 P112 BN112M4	279
9.1	3818	1.1	153.7	50000	A703_153.7 S3 M3LC4	275	A703_153.7 P112 BN112M4	276
9.7	3596	2.2	144.7	65000	A803_144.7 S3 M3LC4	278	A803_144.7 P112 BN112M4	279
9.9	3524	1.4	141.9	50000	A703_141.9 S3 M3LC4	275	A703_141.9 P112 BN112M4	276
10.7	3246	1.5	130.7	50000	A703_130.7 S3 M3LC4	275	A703_130.7 P112 BN112M4	276
11.1	3121	2.6	125.6	65000	A803_125.6 S3 M3LC4	278	A803_125.6 P112 BN112M4	279
11.4	3056	0.9	123.0	30000	A603_123.0 S3 M3LC4	271	A603_123.0 P112 BN112M4	272
11.6	2996	1.7	120.6	50000	A703_120.6 S3 M3LC4	275	A703_120.6 P112 BN112M4	276
12.1	2881	2.8	116.0	65000	A803_116.0 S3 M3LC4	278	A803_116.0 P112 BN112M4	279
13.0	2678	1.0	107.8	30000	A603_107.8 S3 M3LC4	271	A603_107.8 P112 BN112M4	272
13.4	2590	1.9	104.2	50000	A703_104.2 S3 M3LC4	275	A703_104.2 P112 BN112M4	276
13.5	2584	3.1	104.0	65000	A803_104.0 S3 M3LC4	278	A803_104.0 P112 BN112M4	279
14.1	2472	1.1	99.5	30000	A603_99.5 S3 M3LC4	271	A603_99.5 P112 BN112M4	272
14.6	2390	2.1	96.2	50000	A703_96.2 S3 M3LC4	275	A703_96.2 P112 BN112M4	276
14.6	2386	3.4	96.0	65000	A803_96.0 S3 M3LC4	278	A803_96.0 P112 BN112M4	279
16.2	2146	1.3	86.4	30000	A603_86.4 S3 M3LC4	271	A603_86.4 P112 BN112M4	272
16.3	2135	2.3	85.9	50000	A703_85.9 S3 M3LC4	275	A703_85.9 P112 BN112M4	276
17.6	1980	1.4	79.7	30000	A603_79.7 S3 M3LC4	271	A603_79.7 P112 BN112M4	272
17.6	1976	1.0	79.5	30000	A553_79.5 S3 M3LC4	267	A553_79.5 P112 BN112M4	268
17.6	1971	2.5	79.3	50000	A703_79.3 S3 M3LC4	275	A703_79.3 P112 BN112M4	276
19.3	1802	2.8	72.5	50000	A703_72.5 S3 M3LC4	275	A703_72.5 P112 BN112M4	276
19.9	1749	1.6	70.4	30000	A603_70.4 S3 M3LC4	271	A603_70.4 P112 BN112M4	272
20.9	1663	3.0	66.9	50000	A703_66.9 S3 M3LC4	275	A703_66.9 P112 BN112M4	276
21.5	1615	1.7	65.0	30000	A603_65.0 S3 M3LC4	271	A603_65.0 P112 BN112M4	272
21.8	1598	1.3	64.3	30000	A553_64.3 S3 M3LC4	267	A553_64.3 P112 BN112M4	268
21.9	1587	0.9	63.9	14700	A503_63.9 S3 M3LC4	263	A503_63.9 P112 BN112M4	264
24.6	1411	1.1	56.8	14800	A503_56.8 S3 M3LC4	263	A503_56.8 P112 BN112M4	264
25.2	1381	2.0	55.6	30000	A603_55.6 S3 M3LC4	271	A603_55.6 P112 BN112M4	272
27.1	1284	1.2	51.7	14900	A503_51.7 S3 M3LC4	263	A503_51.7 P112 BN112M4	264
27.3	1275	2.2	51.3	30000	A603_51.3 S3 M3LC4	271	A603_51.3 P112 BN112M4	272
28	1266	1.6	51.0	30000	A553_51.0 S3 M3LC4	267	A553_51.0 P112 BN112M4	268
31	1123	2.5	45.2	30000	A603_45.2 S3 M3LC4	271	A603_45.2 P112 BN112M4	272
31	1118	1.3	45.0	14900	A503_45.0 S3 M3LC4	263	A503_45.0 P112 BN112M4	264
34	1036	2.7	41.7	30000	A603_41.7 S3 M3LC4	271	A603_41.7 P112 BN112M4	272
34	1017	1.5	40.9	14800	A503_40.9 S3 M3LC4	263	A503_40.9 P112 BN112M4	264
35	1001	2.0	40.3	30000	A553_40.3 S3 M3LC4	267	A553_40.3 P112 BN112M4	268
39	884	1.7	35.6	14700	A503_35.6 S3 M3LC4	263	A503_35.6 P112 BN112M4	264
41	852	3.3	34.3	30000	A603_34.3 S3 M3LC4	271	A603_34.3 P112 BN112M4	272
43	804	1.9	32.4	14500	A503_32.4 S3 M3LC4	263	A503_32.4 P112 BN112M4	264
47	744	2.7	29.9	30000	A553_29.9 S3 M3LC4	267	A553_29.9 P112 BN112M4	268
49	727	1.0	28.3	10900	A412_28.3 S3 M3LC4	259	A412_28.3 P112 BN112M4	260
53	657	2.3	26.4	14100	A503_26.4 S3 M3LC4	263	A503_26.4 P112 BN112M4	264
55	659	0.9	25.7	7420	A352_25.7 S3 M3LC4	255	A352_25.7 P112 BN112M4	256
58	597	2.5	24.0	13900	A503_24.0 S3 M3LC4	263	A503_24.0 P112 BN112M4	264
59	591	3.3	23.8	30000	A553_23.8 S3 M3LC4	267	A553_23.8 P112 BN112M4	268



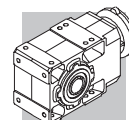
4.0 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
62	582	1.2	22.7	10500	A412_22.7 S3 M3LC4	259	A412_22.7 P112 BN112M4	260
62	577	1.0	22.5	7400	A352_22.5 S3 M3LC4	255	A352_22.5 P112 BN112M4	256
67	537	2.2	20.9	15100	A502_20.9 S3 M3LC4	263	A502_20.9 P112 BN112M4	264
69	524	1.1	20.4	7360	A352_20.4 S3 M3LC4	255	A352_20.4 P112 BN112M4	256
78	462	0.9	18.0	3930	A302_18.0 S3 M3LC4	251	A302_18.0 P112 BN112M4	252
79	456	1.4	17.8	10100	A412_17.8 S3 M3LC4	259	A412_17.8 P112 BN112M4	260
83	435	1.4	17.0	7240	A352_17.0 S3 M3LC4	255	A352_17.0 P112 BN112M4	256
84	425	2.8	16.6	14200	A502_16.6 S3 M3LC4	263	A502_16.6 P112 BN112M4	264
86	419	0.9	16.3	3970	A302_16.3 S3 M3LC4	251	A302_16.3 P112 BN112M4	252
87	413	1.5	16.1	9940	A412_16.1 S3 M3LC4	259	A412_16.1 P112 BN112M4	260
90	397	1.5	15.5	7160	A352_15.5 S3 M3LC4	255	A352_15.5 P112 BN112M4	256
102	353	1.7	13.8	9610	A412_13.8 S3 M3LC4	259	A412_13.8 P112 BN112M4	260
103	348	1.1	13.6	4000	A302_13.6 S3 M3LC4	251	A302_13.6 P112 BN112M4	252
107	336	3.3	13.1	13300	A502_13.1 S3 M3LC4	263	A502_13.1 P112 BN112M4	264
107	335	1.8	13.1	7000	A352_13.1 S3 M3LC4	255	A352_13.1 P112 BN112M4	256
119	302	1.0	11.8	3960	A302_11.8 S3 M3LC4	251	A302_11.8 P112 BN112M4	252
119	302	1.3	11.8	7050	A352_11.8 S3 M3LC4	255	A352_11.8 P112 BN112M4	256
119	301	1.8	11.7	9260	A412_11.7 S3 M3LC4	259	A412_11.7 P112 BN112M4	260
126	285	1.2	22.8	3980	A302_22.8 S3 M3LB2	251	A302_22.8 P112 BN112M2	252
132	273	1.5	10.6	6910	A352_10.6 S3 M3LC4	255	A352_10.6 P112 BN112M4	256
134	268	1.3	10.5	3970	A302_10.5 S3 M3LC4	251	A302_10.5 P112 BN112M4	252
138	260	2.1	10.1	8960	A412_10.1 S3 M3LC4	259	A412_10.1 P112 BN112M4	260
150	239	1.3	9.3	3900	A302_9.3 S3 M3LC4	251	A302_9.3 P112 BN112M4	252
150	239	1.7	9.3	6730	A352_9.3 S3 M3LC4	255	A352_9.3 P112 BN112M4	256
152	236	2.3	9.2	8740	A412_9.2 S3 M3LC4	259	A412_9.2 P112 BN112M4	260
165	217	1.4	8.5	3860	A302_8.5 S3 M3LC4	251	A302_8.5 P112 BN112M4	252
165	217	1.8	8.5	6590	A352_8.5 S3 M3LC4	255	A352_8.5 P112 BN112M4	256
167	215	1.0	8.4	2300	A202_8.4 S3 M3LC4	247	A202_8.4 P112 BN112M4	248
168	214	2.6	8.3	8520	A412_8.3 S3 M3LC4	259	A412_8.3 P112 BN112M4	260
192	187	1.1	7.3	2310	A202_7.3 S3 M3LC4	247	A202_7.3 P112 BN112M4	248
197	183	3.0	7.1	8180	A412_7.1 S3 M3LC4	259	A412_7.1 P112 BN112M4	260
199	180	1.7	7.0	3770	A302_7.0 S3 M3LC4	251	A302_7.0 P112 BN112M4	252
199	180	2.1	7.0	6310	A352_7.0 S3 M3LC4	255	A352_7.0 P112 BN112M4	256
214	168	1.3	6.5	2310	A202_6.5 S3 M3LC4	247	A202_6.5 P112 BN112M4	248
218	165	1.8	6.4	3720	A302_6.4 S3 M3LC4	251	A302_6.4 P112 BN112M4	252
218	165	2.1	6.4	6180	A352_6.4 S3 M3LC4	255	A352_6.4 P112 BN112M4	256
256	140	1.0	5.5	1910	A102_5.5 S3 M3LC4	243	A102_5.5 P112 BN112M4	244
259	139	2.2	5.4	3610	A302_5.4 S3 M3LC4	251	A302_5.4 P112 BN112M4	252
259	139	2.4	5.4	5920	A352_5.4 S3 M3LC4	255	A352_5.4 P112 BN112M4	256
262	137	1.5	5.4	2300	A202_5.4 S3 M3LC4	247	A202_5.4 P112 BN112M4	248
270	133	3.0	10.6	5850	A352_10.6 S3 M3LB2	255	A352_10.6 P112 BN112M2	256
308	117	3.4	9.3	5650	A352_9.3 S3 M3LB2	255	A352_9.3 P112 BN112M2	256
343	105	2.1	8.4	2230	A202_8.4 S3 M3LB2	247	A202_8.4 P112 BN112M2	248
409	88	3.4	7.0	3280	A302_7.0 S3 M3LB2	251	A302_7.0 P112 BN112M2	252
453	79	1.7	6.3	2240	A102_6.3 S3 M3LB2	243	A102_6.3 P112 BN112M2	244
536	67	2.8	5.4	2080	A202_5.4 S3 M3LB2	247	A202_5.4 P112 BN112M2	248



5.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
3.0	15805	0.9	486.6	75000	A904_486.6 S4 M4SA4	281	A904_486.6 P132 BN132S4	282
3.2	14589	1.0	449.2	75000	A904_449.2 S4 M4SA4	281	A904_449.2 P132 BN132S4	282
3.7	12519	1.1	385.4	75000	A904_385.4 S4 M4SA4	281	A904_385.4 P132 BN132S4	282
4.0	11556	1.2	355.8	75000	A904_355.8 S4 M4SA4	281	A904_355.8 P132 BN132S4	282
4.7	9903	1.4	304.9	75000	A904_304.9 S4 M4SA4	281	A904_304.9 P132 BN132S4	282
5.1	9141	1.5	281.4	75000	A904_281.4 S4 M4SA4	281	A904_281.4 P132 BN132S4	282
5.2	9006	0.9	277.3	65000	A804_277.3 S4 M4SA4	278	A804_277.3 P132 BN132S4	279
6.2	7556	1.1	232.6	65000	A804_232.6 S4 M4SA4	278	A804_232.6 P132 BN132S4	279
6.4	7354	1.9	226.4	75000	A904_226.4 S4 M4SA4	281	A904_226.4 P132 BN132S4	282
6.7	6975	1.1	214.7	65000	A804_214.7 S4 M4SA4	278	A804_214.7 P132 BN132S4	279
6.9	6789	2.1	209.0	75000	A904_209.0 S4 M4SA4	281	A904_209.0 P132 BN132S4	282
8.0	5846	2.4	180.0	75000	A904_180.0 S4 M4SA4	281	A904_180.0 P132 BN132S4	282
8.4	5564	1.4	171.3	65000	A804_171.3 S4 M4SA4	278	A804_171.3 P132 BN132S4	279
8.5	5514	0.9	169.8	50000	A704_169.8 S4 M4SA4	275	A704_169.8 P132 BN132S4	276
8.7	5396	2.6	166.1	75000	A904_166.1 S4 M4SA4	281	A904_166.1 P132 BN132S4	282
9.2	5207	1.5	156.8	65000	A803_156.8 S4 M4SA4	278	A803_156.8 P132 BN132S4	279
9.5	5015	2.8	151.0	75000	A903_151.0 S4 M4SA4	281	A903_151.0 P132 BN132S4	282
9.9	4807	1.7	144.7	65000	A803_144.7 S4 M4SA4	278	A803_144.7 P132 BN132S4	279
10.2	4711	1.1	141.9	50000	A703_141.9 S4 M4SA4	275	A703_141.9 P132 BN132S4	276
10.3	4629	2.8	139.4	75000	A903_139.4 S4 M4SA4	281	A903_139.4 P132 BN132S4	282
11.0	4339	1.2	130.7	50000	A703_130.7 S4 M4SA4	275	A703_130.7 P132 BN132S4	276
11.4	4206	3.1	126.6	75000	A903_126.6 S4 M4SA4	281	A903_126.6 P132 BN132S4	282
11.5	4172	1.9	125.6	65000	A803_125.6 S4 M4SA4	278	A803_125.6 P132 BN132S4	279
11.9	4006	1.2	120.6	50000	A703_120.6 S4 M4SA4	275	A703_120.6 P132 BN132S4	276
12.4	3851	2.1	116.0	65000	A803_116.0 S4 M4SA4	278	A803_116.0 P132 BN132S4	279
13.8	3462	1.4	104.2	50000	A703_104.2 S4 M4SA4	275	A703_104.2 P132 BN132S4	276
13.8	3455	2.3	104.0	65000	A803_104.0 S4 M4SA4	278	A803_104.0 P132 BN132S4	279
15.0	3195	1.6	96.2	50000	A703_96.2 S4 M4SA4	275	A703_96.2 P132 BN132S4	276
15.0	3189	2.5	96.0	65000	A803_96.0 S4 M4SA4	278	A803_96.0 P132 BN132S4	279
16.1	2962	2.7	89.2	65000	A803_89.2 S4 M4SA4	278	A803_89.2 P132 BN132S4	279
16.7	2868	1.0	86.4	30000	A603_86.4 S4 M4SA4	271	A603_86.4 P132 BN132S4	272
16.8	2854	1.8	85.9	50000	A703_85.9 S4 M4SA4	275	A703_85.9 P132 BN132S4	276
17.5	2734	2.9	82.3	65000	A803_82.3 S4 M4SA4	278	A803_82.3 P132 BN132S4	279
18.1	2648	1.1	79.7	30000	A603_79.7 S4 M4SA4	271	A603_79.7 P132 BN132S4	272
18.2	2635	1.9	79.3	50000	A703_79.3 S4 M4SA4	275	A703_79.3 P132 BN132S4	276
19.9	2408	2.1	72.5	50000	A703_72.5 S4 M4SA4	275	A703_72.5 P132 BN132S4	276
19.9	2403	3.3	72.4	65000	A803_72.4 S4 M4SA4	278	A803_72.4 P132 BN132S4	279
20.5	2338	1.2	70.4	30000	A603_70.4 S4 M4SA4	271	A603_70.4 P132 BN132S4	272
21.5	2223	2.2	66.9	50000	A703_66.9 S4 M4SA4	275	A703_66.9 P132 BN132S4	276
22.2	2158	1.3	65.0	30000	A603_65.0 S4 M4SA4	271	A603_65.0 P132 BN132S4	272
22.4	2136	0.9	64.3	30000	A553_64.3 S4 M4SA4	267	A553_64.3 P132 BN132S4	268
25.0	1915	2.6	57.7	50000	A703_57.7 S4 M4SA4	275	A703_57.7 P132 BN132S4	276
25.9	1847	1.5	55.6	30000	A603_55.6 S4 M4SA4	271	A603_55.6 P132 BN132S4	272
27.1	1768	2.8	53.2	50000	A703_53.2 S4 M4SA4	275	A703_53.2 P132 BN132S4	276
28.1	1705	1.6	51.3	30000	A603_51.3 S4 M4SA4	271	A603_51.3 P132 BN132S4	272
28.3	1692	1.2	51.0	30000	A553_51.0 S4 M4SA4	267	A553_51.0 P132 BN132S4	268
29.4	1627	3.1	49.0	50000	A703_49.0 S4 M4SA4	275	A703_49.0 P132 BN132S4	276
32	1502	3.2	45.2	50000	A703_45.2 S4 M4SA4	275	A703_45.2 P132 BN132S4	276
32	1501	1.9	45.2	30000	A603_45.2 S4 M4SA4	271	A603_45.2 P132 BN132S4	272
32	1495	1.0	45.0	12400	A503_45.0 S4 M4SA4	263	A503_45.0 P132 BN132S4	264
35	1385	2.0	41.7	30000	A603_41.7 S4 M4SA4	271	A603_41.7 P132 BN132S4	272

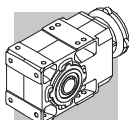


5.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
35	1360	1.1	40.9	12600	A503_40.9 S4 M4SA4	263	A503_40.9 P132 BN132S4	264
36	1338	1.5	40.3	30000	A553_40.3 S4 M4SA4	267	A553_40.3 P132 BN132S4	268
40	1182	1.3	35.6	12700	A503_35.6 S4 M4SA4	263	A503_35.6 P132 BN132S4	264
42	1139	2.5	34.3	30000	A603_34.3 S4 M4SA4	271	A603_34.3 P132 BN132S4	272
44	1075	1.4	32.4	12700	A503_32.4 S4 M4SA4	263	A503_32.4 P132 BN132S4	264
45	1051	2.7	31.7	30000	A603_31.7 S4 M4SA4	271	A603_31.7 P132 BN132S4	272
48	994	2.0	29.9	30000	A553_29.9 S4 M4SA4	267	A553_29.9 P132 BN132S4	268
52	925	3.0	27.9	30000	A603_27.9 S4 M4SA4	271	A603_27.9 P132 BN132S4	272
54	878	1.7	26.4	12600	A503_26.4 S4 M4SA4	263	A503_26.4 P132 BN132S4	264
56	854	3.3	25.7	30000	A603_25.7 S4 M4SA4	271	A603_25.7 P132 BN132S4	272
60	799	1.9	24.0	12500	A503_24.0 S4 M4SA4	263	A503_24.0 P132 BN132S4	264
61	790	2.5	23.8	29800	A553_23.8 S4 M4SA4	267	A553_23.8 P132 BN132S4	268
69	718	1.7	20.9	14400	A502_20.9 S4 M4SA4	263	A502_20.9 P132 BN132S4	264
70	706	2.8	20.6	30000	A602_20.6 S4 M4SA4	271	A602_20.6 P132 BN132S4	272
75	660	2.7	19.2	29300	A552_19.2 S4 M4SA4	267	A552_19.2 P132 BN132S4	268
81	609	1.0	17.8	9280	A412_17.8 S4 M4SA4	259	A412_17.8 P132 BN132S4	260
86	574	3.5	16.7	30000	A602_16.7 S4 M4SA4	271	A602_16.7 P132 BN132S4	272
87	568	2.1	16.6	13600	A502_16.6 S4 M4SA4	263	A502_16.6 P132 BN132S4	264
89	552	1.1	16.1	9160	A412_16.1 S4 M4SA4	259	A412_16.1 P132 BN132S4	260
92	538	3.3	15.7	27700	A552_15.7 S4 M4SA4	267	A552_15.7 P132 BN132S4	268
105	472	1.2	13.8	8940	A412_13.8 S4 M4SA4	259	A412_13.8 P132 BN132S4	260
110	450	2.4	13.1	12800	A502_13.1 S4 M4SA4	263	A502_13.1 P132 BN132S4	264
122	404	1.0	11.8	6450	A352_11.8 S4 M4SA4	255	A352_11.8 P132 BN132S4	256
123	403	1.4	11.7	8670	A412_11.7 S4 M4SA4	259	A412_11.7 P132 BN132S4	260
135	365	1.1	10.6	6360	A352_10.6 S4 M4SA4	255	A352_10.6 P132 BN132S4	256
142	348	1.5	10.1	8440	A412_10.1 S4 M4SA4	259	A412_10.1 P132 BN132S4	260
148	334	3.0	9.7	11800	A502_9.7 S4 M4SA4	263	A502_9.7 P132 BN132S4	264
155	319	1.3	9.3	6240	A352_9.3 S4 M4SA4	255	A352_9.3 P132 BN132S4	256
157	316	1.7	9.2	8250	A412_9.2 S4 M4SA4	259	A412_9.2 P132 BN132S4	260
170	290	1.3	8.5	6140	A352_8.5 S4 M4SA4	255	A352_8.5 P132 BN132S4	256
173	286	1.9	8.3	8080	A412_8.3 S4 M4SA4	259	A412_8.3 P132 BN132S4	260
202	244	2.3	7.1	7790	A412_7.1 S4 M4SA4	259	A412_7.1 P132 BN132S4	260
205	241	1.5	7.0	5930	A352_7.0 S4 M4SA4	255	A352_7.0 P132 BN132S4	256
225	220	1.6	6.4	5820	A352_6.4 S4 M4SA4	255	A352_6.4 P132 BN132S4	256
246	201	2.7	11.7	7430	A412_11.7 S4 M4SA2	259	A412_11.7 P132 BN132SA2	260
266	186	1.8	5.4	5610	A352_5.4 S4 M4SA4	255	A352_5.4 P132 BN132S4	256
275	180	3.1	5.2	7230	A412_5.2 S4 M4SA4	259	A412_5.2 P132 BN132S4	260
285	173	2.5	10.1	7170	A412_10.1 S4 M4SA2	259	A412_10.1 P132 BN132SA2	260
411	120	3.1	7.0	5060	A352_7.0 S4 M4SA2	255	A352_7.0 P132 BN132SA2	256

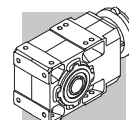
7.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
4.0	15759	0.9	355.8	75000	A904_355.8 S4 M4LA4	281	A904_355.8 P132 BN132MA4	282
4.7	13504	1.0	304.9	75000	A904_304.9 S4 M4LA4	281	A904_304.9 P132 BN132MA4	282
5.1	12465	1.1	281.4	75000	A904_281.4 S4 M4LA4	281	A904_281.4 P132 BN132MA4	282
6.4	10029	1.4	226.4	75000	A904_226.4 S4 M4LA4	281	A904_226.4 P132 BN132MA4	282
6.9	9257	1.5	209.0	75000	A904_209.0 S4 M4LA4	281	A904_209.0 P132 BN132MA4	282



7.5 kW

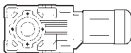
n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
8.0	7971	1.8	180.0	75000	A904_180.0 S4 M4LA4	281	A904_180.0 P132 BN132MA4	282
8.4	7587	1.1	171.3	65000	A804_171.3 S4 M4LA4	278	A804_171.3 P132 BN132MA4	279
8.7	7358	1.9	166.1	75000	A904_166.1 S4 M4LA4	281	A904_166.1 P132 BN132MA4	282
9.2	7101	1.1	156.8	65000	A803_156.8 S4 M4LA4	278	A803_156.8 P132 BN132MA4	279
9.5	6839	2.0	151.0	75000	A903_151.0 S4 M4LA4	281	A903_151.0 P132 BN132MA4	282
9.9	6555	1.2	144.7	65000	A803_144.7 S4 M4LA4	278	A803_144.7 P132 BN132MA4	279
10.3	6313	2.0	139.4	75000	A903_139.4 S4 M4LA4	281	A903_139.4 P132 BN132MA4	282
11.4	5735	2.3	126.6	75000	A903_126.6 S4 M4LA4	281	A903_126.6 P132 BN132MA4	282
11.5	5689	1.4	125.6	65000	A803_125.6 S4 M4LA4	278	A803_125.6 P132 BN132MA4	279
11.9	5462	0.9	120.6	50000	A703_120.6 S4 M4LA4	275	A703_120.6 P132 BN132MA4	276
12.3	5294	2.6	116.9	75000	A903_116.9 S4 M4LA4	281	A903_116.9 P132 BN132MA4	282
12.4	5251	1.5	116.0	65000	A803_116.0 S4 M4LA4	278	A803_116.0 P132 BN132MA4	279
13.5	4838	2.9	106.8	75000	A903_106.8 S4 M4LA4	281	A903_106.8 P132 BN132MA4	282
13.8	4721	1.1	104.2	50000	A703_104.2 S4 M4LA4	275	A703_104.2 P132 BN132MA4	276
13.8	4711	1.7	104.0	65000	A803_104.0 S4 M4LA4	278	A803_104.0 P132 BN132MA4	279
14.6	4465	3.1	98.6	75000	A903_98.6 S4 M4LA4	281	A903_98.6 P132 BN132MA4	282
15.0	4357	1.1	96.2	50000	A703_96.2 S4 M4LA4	275	A703_96.2 P132 BN132MA4	276
15.0	4349	1.8	96.0	65000	A803_96.0 S4 M4LA4	278	A803_96.0 P132 BN132MA4	279
16.1	4039	2.0	89.2	65000	A803_89.2 S4 M4LA4	278	A803_89.2 P132 BN132MA4	279
16.8	3892	1.3	85.9	50000	A703_85.9 S4 M4LA4	275	A703_85.9 P132 BN132MA4	276
17.5	3728	2.1	82.3	65000	A803_82.3 S4 M4LA4	278	A803_82.3 P132 BN132MA4	279
18.2	3593	1.4	79.3	50000	A703_79.3 S4 M4LA4	275	A703_79.3 P132 BN132MA4	276
19.9	3284	1.5	72.5	50000	A703_72.5 S4 M4LA4	275	A703_72.5 P132 BN132MA4	276
19.9	3277	2.4	72.4	65000	A803_72.4 S4 M4LA4	278	A803_72.4 P132 BN132MA4	279
20.5	3188	0.9	70.4	30000	A603_70.4 S4 M4LA4	271	A603_70.4 P132 BN132MA4	272
21.5	3032	1.6	66.9	50000	A703_66.9 S4 M4LA4	275	A703_66.9 P132 BN132MA4	276
21.6	3025	2.6	66.8	65000	A803_66.8 S4 M4LA4	278	A803_66.8 P132 BN132MA4	279
22.2	2943	1.0	65.0	30000	A603_65.0 S4 M4LA4	271	A603_65.0 P132 BN132MA4	272
24.1	2707	3.0	59.8	63800	A803_59.8 S4 M4LA4	278	A803_59.8 P132 BN132MA4	279
25.0	2612	1.9	57.7	50000	A703_57.7 S4 M4LA4	275	A703_57.7 P132 BN132MA4	276
25.9	2518	1.1	55.6	30000	A603_55.6 S4 M4LA4	271	A603_55.6 P132 BN132MA4	272
26.1	2499	3.2	55.2	62600	A803_55.2 S4 M4LA4	278	A803_55.2 P132 BN132MA4	279
27.1	2411	2.1	53.2	50000	A703_53.2 S4 M4LA4	275	A703_53.2 P132 BN132MA4	276
28.1	2324	1.2	51.3	30000	A603_51.3 S4 M4LA4	271	A603_51.3 P132 BN132MA4	272
29.4	2219	2.3	49.0	50000	A703_49.0 S4 M4LA4	275	A703_49.0 P132 BN132MA4	276
32	2048	2.3	45.2	50000	A703_45.2 S4 M4LA4	275	A703_45.2 P132 BN132MA4	276
32	2046	1.4	45.2	30000	A603_45.2 S4 M4LA4	271	A603_45.2 P132 BN132MA4	272
35	1889	1.5	41.7	30000	A603_41.7 S4 M4LA4	271	A603_41.7 P132 BN132MA4	272
36	1825	1.1	40.3	30000	A553_40.3 S4 M4LA4	267	A553_40.3 P132 BN132MA4	268
38	1738	2.8	38.4	50000	A703_38.4 S4 M4LA4	275	A703_38.4 P132 BN132MA4	276
40	1612	0.9	35.6	10100	A503_35.6 S4 M4LA4	263	A503_35.6 P132 BN132MA4	264
41	1605	2.8	35.4	50000	A703_35.4 S4 M4LA4	275	A703_35.4 P132 BN132MA4	276
42	1553	1.8	34.3	30000	A603_34.3 S4 M4LA4	271	A603_34.3 P132 BN132MA4	272
44	1466	1.0	32.4	10300	A503_32.4 S4 M4LA4	263	A503_32.4 P132 BN132MA4	264
45	1434	2.0	31.7	30000	A603_31.7 S4 M4LA4	271	A603_31.7 P132 BN132MA4	272
48	1355	1.5	29.9	30000	A553_29.9 S4 M4LA4	267	A553_29.9 P132 BN132MA4	268
52	1261	2.2	27.9	30000	A603_27.9 S4 M4LA4	271	A603_27.9 P132 BN132MA4	272
54	1197	1.3	26.4	10700	A503_26.4 S4 M4LA4	263	A503_26.4 P132 BN132MA4	264
56	1164	2.4	25.7	30000	A603_25.7 S4 M4LA4	271	A603_25.7 P132 BN132MA4	272
60	1089	1.4	24.0	10800	A503_24.0 S4 M4LA4	263	A503_24.0 P132 BN132MA4	264
61	1077	1.8	23.8	28800	A553_23.8 S4 M4LA4	267	A553_23.8 P132 BN132MA4	268

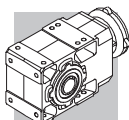


7.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
69	979	1.2	20.9	13700	A502_20.9 S4 M4LA4	263	A502_20.9 P132 BN132MA4	264
70	963	2.1	20.6	30000	A602_20.6 S4 M4LA4	271	A602_20.6 P132 BN132MA4	272
75	900	2.0	19.2	28800	A552_19.2 S4 M4LA4	267	A552_19.2 P132 BN132MA4	268
86	783	2.6	16.7	30000	A602_16.7 S4 M4LA4	271	A602_16.7 P132 BN132MA4	272
87	775	1.5	16.6	13000	A502_16.6 S4 M4LA4	263	A502_16.6 P132 BN132MA4	264
92	734	2.5	15.7	27300	A552_15.7 S4 M4LA4	267	A552_15.7 P132 BN132MA4	268
105	644	0.9	13.8	8130	A412_13.8 S4 M4LA4	259	A412_13.8 P132 BN132MA4	260
110	613	1.8	13.1	12300	A502_13.1 S4 M4LA4	263	A502_13.1 P132 BN132MA4	264
110	612	2.9	13.1	26100	A552_13.1 S4 M4LA4	267	A552_13.1 P132 BN132MA4	268
113	594	3.4	12.7	30000	A602_12.7 S4 M4LA4	271	A602_12.7 P132 BN132MA4	272
123	549	1.0	11.7	7970	A412_11.7 S4 M4LA4	259	A412_11.7 P132 BN132MA4	260
142	474	1.1	10.1	7850	A412_10.1 S4 M4LA4	259	A412_10.1 P132 BN132MA4	260
148	455	2.2	9.7	11500	A502_9.7 S4 M4LA4	263	A502_9.7 P132 BN132MA4	264
155	436	0.9	9.3	5650	A352_9.3 S4 M4LA4	255	A352_9.3 P132 BN132MA4	256
157	430	1.3	9.2	7710	A412_9.2 S4 M4LA4	259	A412_9.2 P132 BN132MA4	260
170	396	1.0	8.5	5600	A352_8.5 S4 M4LA4	255	A352_8.5 P132 BN132MA4	256
173	390	1.4	8.3	7590	A412_8.3 S4 M4LA4	259	A412_8.3 P132 BN132MA4	260
186	362	2.6	7.7	10800	A502_7.7 S4 M4LA4	263	A502_7.7 P132 BN132MA4	264
202	333	1.7	7.1	7370	A412_7.1 S4 M4LA4	259	A412_7.1 P132 BN132MA4	260
205	329	1.1	7.0	5490	A352_7.0 S4 M4LA4	255	A352_7.0 P132 BN132MA4	256
225	300	1.2	6.4	5420	A352_6.4 S4 M4LA4	255	A352_6.4 P132 BN132MA4	256
266	253	1.3	5.4	5270	A352_5.4 S4 M4LA4	255	A352_5.4 P132 BN132MA4	256
275	245	2.2	5.2	6920	A412_5.2 S4 M4LA4	259	A412_5.2 P132 BN132MA4	260
315	214	2.5	9.2	6710	A412_9.2 S4 M4SB2	259	A412_9.2 P132 BN132SB2	260
348	194	2.6	8.3	6550	A412_8.3 S4 M4SB2	259	A412_8.3 P132 BN132SB2	260
413	163	2.3	7.0	4830	A352_7.0 S4 M4SB2	255	A352_7.0 P132 BN132SB2	256
536	126	2.7	5.4	4550	A352_5.4 S4 M4SB2	255	A352_5.4 P132 BN132SB2	256

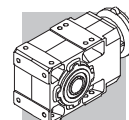
9.2 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
5.1	15291	0.9	281.4	75000	A904_281.4 S4 M4LB4	281	A904_281.4 P132 BN132MB4	282
6.4	12302	1.1	226.4	75000	A904_226.4 S4 M4LB4	281	A904_226.4 P132 BN132MB4	282
6.9	11356	1.2	209.0	75000	A904_209.0 S4 M4LB4	281	A904_209.0 P132 BN132MB4	282
8.0	9778	1.4	180.0	75000	A904_180.0 S4 M4LB4	281	A904_180.0 P132 BN132MB4	282
8.4	9307	0.9	171.3	65000	A804_171.3 S4 M4LB4	278	A804_171.3 P132 BN132MB4	279
8.7	9026	1.6	166.1	75000	A904_166.1 S4 M4LB4	281	A904_166.1 P132 BN132MB4	282
9.2	8711	0.9	156.8	65000	A803_156.8 S4 M4LB4	278	A803_156.8 P132 BN132MB4	279
9.5	8389	1.6	151.0	75000	A903_151.0 S4 M4LB4	281	A903_151.0 P132 BN132MB4	282
9.9	8040	1.0	144.7	65000	A803_144.7 S4 M4LB4	278	A803_144.7 P132 BN132MB4	279
10.3	7744	1.6	139.4	75000	A903_139.4 S4 M4LB4	281	A903_139.4 P132 BN132MB4	282
11.4	7035	1.9	126.6	75000	A903_126.6 S4 M4LB4	281	A903_126.6 P132 BN132MB4	282
11.5	6978	1.1	125.6	65000	A803_125.6 S4 M4LB4	278	A803_125.6 P132 BN132MB4	279
12.3	6494	2.2	116.9	75000	A903_116.9 S4 M4LB4	281	A903_116.9 P132 BN132MB4	282
12.4	6442	1.2	116.0	65000	A803_116.0 S4 M4LB4	278	A803_116.0 P132 BN132MB4	279
13.5	5934	2.4	106.8	75000	A903_106.8 S4 M4LB4	281	A903_106.8 P132 BN132MB4	282
13.8	5779	1.4	104.0	65000	A803_104.0 S4 M4LB4	278	A803_104.0 P132 BN132MB4	279
14.6	5478	2.6	98.6	75000	A903_98.6 S4 M4LB4	281	A903_98.6 P132 BN132MB4	282



9.2 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
15.0	5345	0.9	96.2	50000	A703_96.2 S4 M4LB4	275	A703_96.2 P132 BN132MB4	276
15.0	5335	1.5	96.0	65000	A803_96.0 S4 M4LB4	278	A803_96.0 P132 BN132MB4	279
16.1	4954	1.6	89.2	65000	A803_89.2 S4 M4LB4	278	A803_89.2 P132 BN132MB4	279
16.5	4837	2.9	87.1	75000	A903_87.1 S4 M4LB4	281	A903_87.1 P132 BN132MB4	282
16.8	4774	1.0	85.9	50000	A703_85.9 S4 M4LB4	275	A703_85.9 P132 BN132MB4	276
17.5	4573	1.7	82.3	65000	A803_82.3 S4 M4LB4	278	A803_82.3 P132 BN132MB4	279
17.9	4465	3.1	80.4	75000	A903_80.4 S4 M4LB4	281	A903_80.4 P132 BN132MB4	282
18.2	4407	1.1	79.3	50000	A703_79.3 S4 M4LB4	275	A703_79.3 P132 BN132MB4	276
19.3	4137	3.4	74.5	75000	A903_74.5 S4 M4LB4	281	A903_74.5 P132 BN132MB4	282
19.9	4029	1.2	72.5	50000	A703_72.5 S4 M4LB4	275	A703_72.5 P132 BN132MB4	276
19.9	4020	2.0	72.4	65000	A803_72.4 S4 M4LB4	278	A803_72.4 P132 BN132MB4	279
21.5	3719	1.3	66.9	50000	A703_66.9 S4 M4LB4	275	A703_66.9 P132 BN132MB4	276
21.6	3711	2.2	66.8	63800	A803_66.8 S4 M4LB4	278	A803_66.8 P132 BN132MB4	279
24.1	3321	2.4	59.8	62400	A803_59.8 S4 M4LB4	278	A803_59.8 P132 BN132MB4	279
25.0	3204	1.6	57.7	50000	A703_57.7 S4 M4LB4	275	A703_57.7 P132 BN132MB4	276
25.9	3089	0.9	55.6	30000	A603_55.6 S4 M4LB4	271	A603_55.6 P132 BN132MB4	272
26.1	3065	2.6	55.2	61300	A803_55.2 S4 M4LB4	278	A803_55.2 P132 BN132MB4	279
27.1	2957	1.7	53.2	50000	A703_53.2 S4 M4LB4	275	A703_53.2 P132 BN132MB4	276
28.1	2851	1.0	51.3	30000	A603_51.3 S4 M4LB4	271	A603_51.3 P132 BN132MB4	272
29.4	2722	1.8	49.0	50000	A703_49.0 S4 M4LB4	275	A703_49.0 P132 BN132MB4	276
30	2677	3.0	48.2	59500	A803_48.2 S4 M4LB4	278	A803_48.2 P132 BN132MB4	279
32	2513	1.9	45.2	50000	A703_45.2 S4 M4LB4	275	A703_45.2 P132 BN132MB4	276
32	2510	1.1	45.2	30000	A603_45.2 S4 M4LB4	271	A603_45.2 P132 BN132MB4	272
32	2471	3.0	44.5	58400	A803_44.5 S4 M4LB4	278	A803_44.5 P132 BN132MB4	279
35	2317	1.2	41.7	30000	A603_41.7 S4 M4LB4	271	A603_41.7 P132 BN132MB4	272
38	2132	2.3	38.4	50000	A703_38.4 S4 M4LB4	275	A703_38.4 P132 BN132MB4	276
41	1968	2.3	35.4	50000	A703_35.4 S4 M4LB4	275	A703_35.4 P132 BN132MB4	276
42	1905	1.5	34.3	30000	A603_34.3 S4 M4LB4	271	A603_34.3 P132 BN132MB4	272
45	1759	1.6	31.7	30000	A603_31.7 S4 M4LB4	271	A603_31.7 P132 BN132MB4	272
48	1663	1.2	29.9	29100	A553_29.9 S4 M4LB4	267	A553_29.9 P132 BN132MB4	268
52	1547	1.8	27.9	30000	A603_27.9 S4 M4LB4	271	A603_27.9 P132 BN132MB4	272
54	1469	1.0	26.4	9130	A503_26.4 S4 M4LB4	263	A503_26.4 P132 BN132MB4	264
56	1428	2.0	25.7	30000	A603_25.7 S4 M4LB4	271	A603_25.7 P132 BN132MB4	272
60	1336	1.1	24.0	9370	A503_24.0 S4 M4LB4	263	A503_24.0 P132 BN132MB4	264
61	1322	1.5	23.8	27900	A553_23.8 S4 M4LB4	267	A553_23.8 P132 BN132MB4	268
68	1183	3.4	21.3	46000	A703_21.3 S4 M4LB4	275	A703_21.3 P132 BN132MB4	276
69	1200	1.0	20.9	13000	A502_20.9 S4 M4LB4	263	A502_20.9 P132 BN132MB4	264
70	1182	1.7	20.6	30000	A602_20.6 S4 M4LB4	271	A602_20.6 P132 BN132MB4	272
73	1092	3.4	19.7	45100	A703_19.7 S4 M4LB4	275	A703_19.7 P132 BN132MB4	276
75	1104	1.6	19.2	28400	A552_19.2 S4 M4LB4	267	A552_19.2 P132 BN132MB4	268
86	960	2.1	16.7	30000	A602_16.7 S4 M4LB4	271	A602_16.7 P132 BN132MB4	272
87	951	1.3	16.6	12500	A502_16.6 S4 M4LB4	263	A502_16.6 P132 BN132MB4	264
92	900	2.0	15.7	27000	A552_15.7 S4 M4LB4	267	A552_15.7 P132 BN132MB4	268
110	752	1.5	13.1	11900	A502_13.1 S4 M4LB4	263	A502_13.1 P132 BN132MB4	264
110	750	2.4	13.1	25800	A552_13.1 S4 M4LB4	267	A552_13.1 P132 BN132MB4	268
113	729	2.7	12.7	30000	A602_12.7 S4 M4LB4	271	A602_12.7 P132 BN132MB4	272
123	650	2.5	23.8	24100	A553_23.8 S4 M4LA2	267	A553_23.8 P132 BN132M2	268
139	594	3.0	10.4	24200	A552_10.4 S4 M4LB4	267	A552_10.4 P132 BN132MB4	268
140	592	3.4	10.3	30000	A602_10.3 S4 M4LB4	271	A602_10.3 P132 BN132MB4	272
142	581	0.9	10.1	7340	A412_10.1 S4 M4LB4	259	A412_10.1 P132 BN132MB4	260
148	559	1.8	9.7	11200	A502_9.7 S4 M4LB4	263	A502_9.7 P132 BN132MB4	264

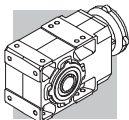


9.2 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
157	528	1.0	9.2	7250	A412_9.2 S4 M4LB4	259	A412_9.2 P132 BN132MB4	260
173	478	1.2	8.3	7170	A412_8.3 S4 M4LB4	259	A412_8.3 P132 BN132MB4	260
186	444	2.1	7.7	10600	A502_7.7 S4 M4LB4	263	A502_7.7 P132 BN132MB4	264
202	409	1.3	7.1	7020	A412_7.1 S4 M4LB4	259	A412_7.1 P132 BN132MB4	260
205	403	0.9	7.0	5110	A352_7.0 S4 M4LB4	255	A352_7.0 P132 BN132MB4	256
225	368	1.0	6.4	5070	A352_6.4 S4 M4LB4	255	A352_6.4 P132 BN132MB4	256
266	311	1.1	5.4	4980	A352_5.4 S4 M4LB4	255	A352_5.4 P132 BN132MB4	256
275	301	1.8	5.2	6660	A412_5.2 S4 M4LB4	259	A412_5.2 P132 BN132MB4	260
319	259	2.0	9.2	6480	A412_9.2 S4 M4LA2	259	A412_9.2 P132 BN132M2	260
379	218	3.4	7.7	8780	A502_7.7 S4 M4LA2	263	A502_7.7 P132 BN132M2	264
541	153	2.2	5.4	4410	A352_5.4 S4 M4LA2	255	A352_5.4 P132 BN132M2	256
559	148	3.0	5.2	5690	A412_5.2 S4 M4LA2	259	A412_5.2 P132 BN132M2	260

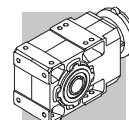
11 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
6.4	14709	1.0	226.4	75000	A904_226.4 S4 M4LC4	281	A904_226.4 P160 BN160MR4	282
6.9	13577	1.0	209.0	75000	A904_209.0 S4 M4LC4	281	A904_209.0 P160 BN160MR4	282
8.0	11691	1.2	180.0	75000	A904_180.0 S4 M4LC4	281	A904_180.0 P160 BN160MR4	282
8.7	10792	1.3	166.1	75000	A904_166.1 S4 M4LC4	281	A904_166.1 P160 BN160MR4	282
9.5	10030	1.4	151.0	75000	A903_151.0 S4 M4LC4	281	A903_151.0 P160 BN160MR4	282
10.3	9259	1.4	139.4	75000	A903_139.4 S4 M4LC4	281	A903_139.4 P160 BN160MR4	282
11.4	8412	1.6	126.6	75000	A903_126.6 S4 M4LC4	281	A903_126.6 P160 BN160MR4	282
11.5	8344	1.0	125.6	65000	A803_125.6 S4 M4LC4	278	A803_125.6 P160 BN160MR4	279
12.3	7765	1.8	116.9	75000	A903_116.9 S4 M4LC4	281	A903_116.9 P160 BN160MR4	282
12.4	7702	1.0	116.0	65000	A803_116.0 S4 M4LC4	278	A803_116.0 P160 BN160MR4	279
13.5	7095	2.0	106.8	75000	A903_106.8 S4 M4LC4	281	A903_106.8 P160 BN160MR4	282
13.8	6910	1.2	104.0	65000	A803_104.0 S4 M4LC4	278	A803_104.0 P160 BN160MR4	279
14.6	6549	2.1	98.6	75000	A903_98.6 S4 M4LC4	281	A903_98.6 P160 BN160MR4	282
15.0	6378	1.3	96.0	65000	A803_96.0 S4 M4LC4	278	A803_96.0 P160 BN160MR4	279
16.1	5923	1.4	89.2	65000	A803_89.2 S4 M4LC4	278	A803_89.2 P160 BN160MR4	279
16.5	5783	2.4	87.1	75000	A903_87.1 S4 M4LC4	281	A903_87.1 P160 BN160MR4	282
17.5	5468	1.5	82.3	64500	A803_82.3 S4 M4LC4	278	A803_82.3 P160 BN160MR4	279
17.9	5338	2.6	80.4	75000	A903_80.4 S4 M4LC4	281	A903_80.4 P160 BN160MR4	282
18.2	5269	0.9	79.3	50000	A703_79.3 S4 M4LC4	275	A703_79.3 P160 BN160MR4	276
19.3	4947	2.8	74.5	75000	A903_74.5 S4 M4LC4	281	A903_74.5 P160 BN160MR4	282
19.9	4817	1.0	72.5	50000	A703_72.5 S4 M4LC4	275	A703_72.5 P160 BN160MR4	276
19.9	4807	1.7	72.4	63200	A803_72.4 S4 M4LC4	278	A803_72.4 P160 BN160MR4	279
20.9	4566	3.1	68.8	75000	A903_68.8 S4 M4LC4	281	A903_68.8 P160 BN160MR4	282
21.5	4446	1.1	66.9	50000	A703_66.9 S4 M4LC4	275	A703_66.9 P160 BN160MR4	276
21.6	4437	1.8	66.8	62200	A803_66.8 S4 M4LC4	278	A803_66.8 P160 BN160MR4	279
24.1	3971	2.0	59.8	60900	A803_59.8 S4 M4LC4	278	A803_59.8 P160 BN160MR4	279
24.2	3960	3.5	59.6	75000	A903_59.6 S4 M4LC4	281	A903_59.6 P160 BN160MR4	282
25.0	3830	1.3	57.7	50000	A703_57.7 S4 M4LC4	275	A703_57.7 P160 BN160MR4	276
26.1	3665	2.2	55.2	59900	A803_55.2 S4 M4LC4	278	A803_55.2 P160 BN160MR4	279
27.1	3536	1.4	53.2	50000	A703_53.2 S4 M4LC4	275	A703_53.2 P160 BN160MR4	276
29.4	3255	1.5	49.0	50000	A703_49.0 S4 M4LC4	275	A703_49.0 P160 BN160MR4	276
30	3200	2.5	48.2	58300	A803_48.2 S4 M4LC4	278	A803_48.2 P160 BN160MR4	279



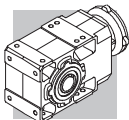
11 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
32	3004	1.6	45.2	50000	A703_45.2 S4 M4LC4	275	A703_45.2 P160 BN160MR4	276
32	3001	0.9	45.2	30000	A603_45.2 S4 M4LC4	271	A603_45.2 P160 BN160MR4	272
32	2954	2.5	44.5	57300	A803_44.5 S4 M4LC4	278	A803_44.5 P160 BN160MR4	279
35	2771	1.0	41.7	30000	A603_41.7 S4 M4LC4	271	A603_41.7 P160 BN160MR4	272
37	2557	3.0	38.5	55500	A703_38.4 S4 M4LC4	275	A803_38.5 P160 BN160MR4	279
38	2549	1.9	38.4	50000			A703_38.4 P160 BN160MR4	276
41	2360	3.0	35.5	54500			A803_35.5 P160 BN160MR4	279
41	2353	1.9	35.4	50000			A703_35.4 P160 BN160MR4	276
42	2278	1.2	34.3	30000	A603_34.3 S4 M4LC4	271	A603_34.3 P160 BN160MR4	272
45	2103	1.3	31.7	30000	A603_31.7 S4 M4LC4	271	A603_31.7 P160 BN160MR4	272
47	2031	3.2	30.6	52600			A803_30.6 P160 BN160MR4	279
48	1999	2.3	30.1	49400			A703_30.1 P160 BN160MR4	276
51	1875	3.5	28.2	51600			A803_28.2 P160 BN160MR4	279
52	1850	1.5	27.9	30000	A603_27.9 S4 M4LC4	271	A603_27.9 P160 BN160MR4	272
52	1845	2.3	27.8	48500	A603_25.7 S4 M4LC4 A503_24.0 S4 M4LC4	271 263	A703_27.8 P160 BN160MR4	276
56	1708	1.6	25.7	30000			A603_25.7 P160 BN160MR4	272
60	1597	0.9	24.0	7800			A503_24.0 P160 BN160MR4	264
61	1562	2.8	23.5	46600			A703_23.5 P160 BN160MR4	276
68	1415	2.8	21.3	45500	A703_21.3 S4 M4LC4	275	A703_21.3 P160 BN160MR4	276
70	1413	1.4	20.6	30000	A602_20.6 S4 M4LC4	271	A602_20.6 P160 BN160MR4	272
73	1306	2.8	19.7	44500	A703_19.7 S4 M4LC4	275	A703_19.7 P160 BN160MR4	276
75	1319	1.4	19.2	27900	A552_19.2 S4 M4LC4	267	A552_19.2 P160 BN160MR4	268
86	1148	1.7	16.7	30000	A602_16.7 S4 M4LC4	271	A602_16.7 P160 BN160MR4	272
87	1137	1.1	16.6	12000	A502_16.6 S4 M4LC4	263	A502_16.6 P160 BN160MR4	264
92	1076	1.7	15.7	26600	A552_15.7 S4 M4LC4	267	A552_15.7 P160 BN160MR4	268
110	899	1.2	13.1	11500	A502_13.1 S4 M4LC4	263	A502_13.1 P160 BN160MR4	264
110	897	2.0	13.1	25400	A552_13.1 S4 M4LC4	267	A552_13.1 P160 BN160MR4	268
113	872	2.3	12.7	30000	A602_12.7 S4 M4LC4	271	A602_12.7 P160 BN160MR4	272
123	779	2.1	23.8	23600	A553_23.8 S4 M4LC2	267	A553_23.8 P160 BN160MR2	268
139	710	2.5	10.4	24000	A552_10.4 S4 M4LC4	267	A552_10.4 P160 BN160MR4	268
140	708	2.8	10.3	30000	A602_10.3 S4 M4LC4	271	A602_10.3 P160 BN160MR4	272
148	668	1.5	9.7	10800	A502_9.7 S4 M4LC4	263	A502_9.7 P160 BN160MR4	264
170	581	3.1	8.5	22800	A552_8.5 S4 M4LC4	267	A552_8.5 P160 BN160MR4	268
186	531	1.8	7.7	10300	A502_7.7 S4 M4LC4	263	A502_7.7 P160 BN160MR4	264
202	489	1.1	7.1	6640	A412_7.1 S4 M4LC4	259	A502_13.1 P160 BN160MR2	264
223	443	2.0	13.1	9920	A502_13.1 S4 M4LC2	263		
248	399	1.0	11.8	4690	A352_11.8 S4 M4LC2	255		
275	360	1.1	10.6	4660	A352_10.6 S4 M4LC2	255		
317	311	1.7	9.2	6230	A412_9.2 S4 M4LC2	259	A502_7.7 P160 BN160MR2	264
377	262	2.8	7.7	8650	A502_7.7 S4 M4LC2	263		
416	238	1.6	7.0	4440	A352_7.0 S4 M4LC2	255		
456	217	1.6	6.4	4380	A352_6.4 S4 M4LC2	255		
539	183	1.9	5.4	4250	A352_5.4 S4 M4LC2	255		

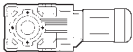


15 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
8.1	15724	0.9	180.0	75000			A904_180.0 P160 BN160L4	282
8.8	14514	1.0	166.1	75000			A904_166.1 P160 BN160L4	282
9.7	13490	1.0	151.0	75000	A903_151.0 S5 M5SB4	281	A903_151.0 P160 BN160L4	282
10.5	12452	1.0	139.4	75000	A903_139.4 S5 M5SB4	281	A903_139.4 P160 BN160L4	282
11.5	11314	1.2	126.6	75000	A903_126.6 S5 M5SB4	281	A903_126.6 P160 BN160L4	282
12.5	10443	1.3	116.9	75000	A903_116.9 S5 M5SB4	281	A903_116.9 P160 BN160L4	282
13.7	9543	1.5	106.8	75000	A903_106.8 S5 M5SB4	281	A903_106.8 P160 BN160L4	282
14.8	8808	1.6	98.6	75000	A903_98.6 S5 M5SB4	281	A903_98.6 P160 BN160L4	282
15.2	8578	0.9	96.0	60600	A803_96.0 S5 M5SB4	278	A803_96.0 P160 BN160L4	279
16.4	7967	1.0	89.2	60400	A803_89.2 S5 M5SB4	278	A803_89.2 P160 BN160L4	279
16.8	7778	1.8	87.1	75000	A903_87.1 S5 M5SB4	281	A903_87.1 P160 BN160L4	282
17.7	7354	1.1	82.3	59800	A803_82.3 S5 M5SB4	278	A803_82.3 P160 BN160L4	279
18.2	7180	1.9	80.4	75000	A903_80.4 S5 M5SB4	281	A903_80.4 P160 BN160L4	282
19.6	6654	2.1	74.5	75000	A903_74.5 S5 M5SB4	281	A903_74.5 P160 BN160L4	282
20.2	6465	1.2	72.4	59100	A803_72.4 S5 M5SB4	278	A803_72.4 P160 BN160L4	279
21.2	6142	2.3	68.8	75000	A903_68.8 S5 M5SB4	281	A903_68.8 P160 BN160L4	282
21.9	5968	1.3	66.8	58300	A803_66.8 S5 M5SB4	278	A803_66.8 P160 BN160L4	279
24.4	5340	1.5	59.8	57500	A803_59.8 S5 M5SB4	278	A803_59.8 P160 BN160L4	279
24.5	5326	2.6	59.6	75000	A903_59.6 S5 M5SB4	281	A903_59.6 P160 BN160L4	282
25.3	5152	1.0	57.7	50000	A703_57.7 S5 M5SB4	275	A703_57.7 P160 BN160L4	276
26.5	4930	1.6	55.2	56700	A803_55.2 S5 M5SB4	278	A803_55.2 P160 BN160L4	279
26.5	4916	2.8	55.0	75000	A903_55.0 S5 M5SB4	281	A903_55.0 P160 BN160L4	282
27.4	4755	1.1	53.2	50000	A703_53.2 S5 M5SB4	275	A703_53.2 P160 BN160L4	276
29.8	4377	1.1	49.0	50000	A703_49.0 S5 M5SB4	275	A703_49.0 P160 BN160L4	276
30	4315	3.2	48.3	74900			A903_48.3 P160 BN160L4	282
30	4304	1.9	48.2	55500	A803_48.2 S5 M5SB4	278	A803_48.2 P160 BN160L4	279
32	4041	1.2	45.2	50000	A703_45.2 S5 M5SB4	275	A703_45.2 P160 BN160L4	276
33	3983	3.5	44.6	73500			A903_44.6 P160 BN160L4	282
33	3973	1.9	44.5	54700	A803_44.5 S5 M5SB4	278	A803_44.5 P160 BN160L4	279
38	3439	2.2	38.5	53200			A803_38.5 P160 BN160L4	279
38	3429	1.4	38.4	49900	A703_38.4 S5 M5SB4	275	A703_38.4 P160 BN160L4	276
41	3175	2.2	35.5	52300			A803_35.5 P160 BN160L4	279
41	3165	1.4	35.4	49100	A703_35.4 S5 M5SB4	275	A703_35.4 P160 BN160L4	276
43	3064	0.9	34.3	30000	A603_34.3 S5 M5SB4	271	A603_34.3 P160 BN160L4	272
46	2828	1.0	31.7	30000	A603_31.7 S5 M5SB4	271	A603_31.7 P160 BN160L4	272
48	2731	2.4	30.6	50800			A803_30.6 P160 BN160L4	279
49	2689	1.7	30.1	47600			A703_30.1 P160 BN160L4	276
52	2521	2.6	28.2	49900			A803_28.2 P160 BN160L4	279
52	2488	1.1	27.9	30000	A603_27.9 S5 M5SB4	271	A603_27.9 P160 BN160L4	272
53	2482	1.7	27.8	46700			A703_27.8 P160 BN160L4	276
57	2297	1.2	25.7	30000	A603_25.7 S5 M5SB4	271	A603_25.7 P160 BN160L4	272
61	2125	0.9	23.8	25000	A553_23.8 S5 M5SB4	267	A553_23.8 P160 BN160L4	268
62	2101	2.0	23.5	45100	A703_23.5 S5 M5SB4	275	A703_23.5 P160 BN160L4	276
69	1903	2.1	21.3	44100	A703_21.3 S5 M5SB4	275	A703_21.3 P160 BN160L4	276
70	1871	3.5	20.9	46600	A803_20.9 S5 M5SB4	278	A803_20.9 P160 BN160L4	279
71	1900	1.1	20.6	30000	A602_20.6 S5 M5SB4	271	A602_20.6 P160 BN160L4	272
74	1757	2.1	19.7	43300	A703_19.7 S5 M5SB4	275	A703_19.7 P160 BN160L4	276
75	1728	3.5	19.3	45700	A803_19.3 S5 M5SB4	278	A803_19.3 P160 BN160L4	279
76	1775	1.0	19.2	26800	A552_19.2 S5 M5SB4	267	A552_19.2 P160 BN160L4	268
87	1544	1.3	16.7	30000	A602_16.7 S5 M5SB4	271	A602_16.7 P160 BN160L4	272
87	1491	2.7	16.7	41600	A703_16.7 S5 M5SB4	275	A703_16.7 P160 BN160L4	276

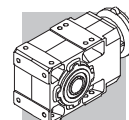


15 kW

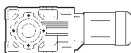
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
93	1447	1.2	15.7	25700	A552_15.7 S5 M5SB4	267	A552_15.7 P160 BN160L4	268
95	1376	2.7	15.4	40800	A703_15.4 S5 M5SB4	275	A703_15.4 P160 BN160L4	276
111	1209	0.9	13.1	10500			A502_13.1 P160 BN160L4	264
112	1207	1.5	13.1	24700	A552_13.1 S5 M5SB4	267	A552_13.1 P160 BN160L4	268
112	1169	3.3	13.1	39200	A703_13.1 S5 M5SB4	275	A703_13.1 P160 BN160L4	276
115	1172	1.7	12.7	30000	A602_12.7 S5 M5SB4	271	A602_12.7 P160 BN160L4	272
121	1079	3.3	12.1	38400	A703_12.1 S5 M5SB4	275	A703_12.1 P160 BN160L4	276
123	1059	1.5	23.8	22600	A553_23.8 S5 M5SB4	267	A553_23.8 P160 BN160L4	268
141	956	1.9	10.4	23400	A552_10.4 S5 M5SB4	267	A552_10.4 P160 BN160L4	268
142	952	2.1	10.3	30000	A602_10.3 S5 M5SB4	271	A602_10.3 P160 BN160L4	272
150	898	1.1	9.7	10100			A502_9.7 P160 BN160L4	264
173	781	2.3	8.5	22200	A552_8.5 S5 M5SB4	267	A552_8.5 P160 BN160L4	268
186	726	2.8	7.9	28300	A602_7.9 S5 M5SB4	271	A602_7.9 P160 BN160L4	272
189	714	1.3	7.7	9750		263	A502_7.7 P160 BN160L4	264
228	592	2.9	6.4	20700	A552_6.4 S5 M5SB4	267	A552_6.4 P160 BN160L4	268
295	456	3.5	4.9	19400	A552_4.9 S5 M5SB4	267	A552_4.9 P160 BN160L4	268
301	448	1.8	9.7	8830			A502_9.7 P160 BN160MB2	264
352	383	1.3	8.3	5630			A412_8.3 P160 BN160MB2	260
379	356	2.1	7.7	8350			A502_7.7 P160 BN160MB2	264

18.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
11.5	13954	0.9	126.6	75000	A903_126.6 S5 M5LA4	281	A903_126.6 P180 BN180M4	282
12.5	12880	1.1	116.9	75000	A903_116.9 S5 M5LA4	281	A903_116.9 P180 BN180M4	282
13.7	11769	1.2	106.8	75000	A903_106.8 S5 M5LA4	281	A903_106.8 P180 BN180M4	282
14.8	10864	1.3	98.6	75000	A903_98.6 S5 M5LA4	281	A903_98.6 P180 BN180M4	282
16.8	9593	1.5	87.1	75000	A903_87.1 S5 M5LA4	281	A903_87.1 P180 BN180M4	282
18.2	8855	1.6	80.4	75000	A903_80.4 S5 M5LA4	281	A903_80.4 P180 BN180M4	282
19.6	8206	1.7	74.5	75000	A903_74.5 S5 M5LA4	281	A903_74.5 P180 BN180M4	282
20.2	7973	1.0	72.4	55600	A803_72.4 S5 M5LA4	278	A803_72.4 P180 BN180M4	279
21.2	7575	1.8	68.8	75000	A903_68.8 S5 M5LA4	281	A903_68.8 P180 BN180M4	282
21.9	7360	1.1	66.8	55100			A803_66.8 P180 BN180M4	279
24.4	6586	1.2	59.8	54700	A803_59.8 S5 M5LA4	278	A803_59.8 P180 BN180M4	279
24.5	6568	2.1	59.6	75000	A903_59.6 S5 M5LA4	281	A903_59.6 P180 BN180M4	282
26.5	6080	1.3	55.2	54100	A803_55.2 S5 M5LA4	278	A803_55.2 P180 BN180M4	279
26.5	6063	2.3	55.0	74900	A903_55.0 S5 M5LA4	281	A903_55.0 P180 BN180M4	282
29.8	5399	0.9	49.0	49600	A703_49.0 S5 M5LA4	275	A703_49.0 P180 BN180M4	276
30	5322	2.6	48.3	73100			A903_48.3 P180 BN180M4	282
30	5309	1.5	48.2	53200	A803_48.2 S5 M5LA4	278	A803_48.2 P180 BN180M4	279
32	4983	1.0	45.2	49000	A703_45.2 S5 M5LA4	275	A703_45.2 P180 BN180M4	276
33	4912	2.9	44.6	71800			A903_44.6 P180 BN180M4	282
33	4900	1.5	44.5	52500	A803_44.5 S5 M5LA4	278	A803_44.5 P180 BN180M4	279
38	4276	3.3	38.8	69700			A903_38.8 P180 BN180M4	282
38	4242	1.8	38.5	51400			A803_38.5 P180 BN180M4	279
38	4229	1.1	38.4	48000	A703_38.4 S5 M5LA4	275	A703_38.4 P180 BN180M4	276
41	3947	3.5	35.8	68500			A903_35.8 P180 BN180M4	282
41	3916	1.8	35.5	50600			A803_35.5 P180 BN180M4	279

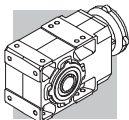


18.5 kW

n2 min-1	M2 Nm	S	i	Rn2 N			 IEC 	
41	3904	1.2	35.4	47300	A703_35.4 S5 M5LA4	275	A703_35.4 P180 BN180M4	276
48	3369	1.9	30.6	49300			A803_30.6 P180 BN180M4	279
49	3316	1.4	30.1	46100			A703_30.1 P180 BN180M4	276
52	3110	2.1	28.2	48500			A803_28.2 P180 BN180M4	279
52	3069	0.9	27.9	30000			A603_27.9 P180 BN180M4	272
53	3061	1.4	27.8	45300	A603_25.7 S5 M5LA4	271	A703_27.8 P180 BN180M4	276
57	2833	1.0	25.7	30000			A603_25.7 P180 BN180M4	272
60	2699	2.5	24.5	47200			A803_24.5 P180 BN180M4	279
62	2591	1.7	23.5	43900			A703_23.5 P180 BN180M4	276
65	2492	2.5	22.6	46300			A803_22.6 P180 BN180M4	279
69	2347	1.7	21.3	43000	A703_21.3 S5 M5LA4	275	A703_21.3 P180 BN180M4	276
70	2308	2.8	20.9	45600	A803_20.9 S5 M5LA4	278	A803_20.9 P180 BN180M4	279
74	2167	1.7	19.7	42300	A703_19.7 S5 M5LA4	275	A703_19.7 P180 BN180M4	276
75	2131	2.8	19.3	44800	A803_19.3 S5 M5LA4	278	A803_19.3 P180 BN180M4	279
87	1905	1.0	16.7	30000	A602_16.7 S5 M5LA4	271	A602_16.7 P180 BN180M4	272
87	1839	2.2	16.7	40800	A703_16.7 S5 M5LA4	275	A703_16.7 P180 BN180M4	276
93	1785	1.0	15.7	25000	A552_15.7 S5 M5LA4	267	A552_15.7 P180 BN180M4	268
95	1697	2.2	15.4	40100	A703_15.4 S5 M5LA4	275	A703_15.4 P180 BN180M4	276
112	1488	1.2	13.1	24100	A552_13.1 S5 M5LA4	267	A552_13.1 P180 BN180M4	268
112	1442	2.7	13.1	38600	A703_13.1 S5 M5LA4	275	A703_13.1 P180 BN180M4	276
115	1446	1.4	12.7	30000	A602_12.7 S5 M5LA4	271	A602_12.7 P180 BN180M4	272
121	1331	2.7	12.1	37800	A703_12.1 S5 M5LA4	275	A703_12.1 P180 BN180M4	276
123	1306	1.2	23.8	21600	A553_23.8 S5 M5SC2	267	A553_23.8 P160 BN160L2	268
141	1179	1.5	10.4	22900	A552_10.4 S5 M5LA4	267	A552_10.4 P180 BN180M4	268
142	1174	1.7	10.3	29900	A602_10.3 S5 M5LA4	271	A602_10.3 P180 BN180M4	272
143	1127	2.9	10.2	36300	A703_10.2 S5 M5LA4	275	A703_10.2 P180 BN180M4	276
150	1108	0.9	9.7	9530	A502_9.7 S5 M5LA4	263	A502_9.7 P180 BN180M4	264
155	1040	2.9	9.4	35600	A703_9.4 S5 M5LA4	275	A703_9.4 P180 BN180M4	276
173	963	1.9	8.5	21900	A552_8.5 S5 M5LA4	267	A552_8.5 P180 BN180M4	268
186	895	2.2	7.9	27900	A602_7.9 S5 M5LA4	271	A602_7.9 P180 BN180M4	272
189	881	1.1	7.7	9260	A552_6.4 S5 M5LA4	267	A502_7.7 P180 BN180M4	264
228	730	2.3	6.4	20400			A552_6.4 P180 BN180M4	268
295	563	2.8	4.9	19100			A552_4.9 P180 BN180M4	268
379	439	1.7	7.7	8100			A502_7.7 P160 BN160L2	264

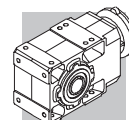
22 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
12.5	15317	0.9	116.9	75000			A903_116.9 P180 BN180L4	282
13.7	13996	1.0	106.8	75000			A903_106.8 P180 BN180L4	282
14.8	12919	1.1	98.6	75000			A903_98.6 P180 BN180L4	282
16.8	11408	1.2	87.1	75000			A903_87.1 P180 BN180L4	282
18.2	10530	1.3	80.4	75000			A903_80.4 P180 BN180L4	282
19.6	9758	1.4	74.5	75000			A903_74.5 P180 BN180L4	282
21.2	9008	1.6	68.8	75000			A903_68.8 P180 BN180L4	282
21.9	8753	0.9	66.8	51900			A803_66.8 P180 BN180L4	279
24.4	7832	1.0	59.8	51800			A803_59.8 P180 BN180L4	279
24.5	7811	1.8	59.6	73800			A903_59.6 P180 BN180L4	282



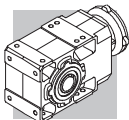
22 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
26.5	7230	1.1	55.2	51400			A803_55.2 P180 BN180L4	279
26.5	7210	1.9	55.0	72700			A903_55.0 P180 BN180L4	282
30	6328	2.2	48.3	71100			A903_48.3 P180 BN180L4	282
30	6313	1.3	48.2	50900			A803_48.2 P180 BN180L4	279
33	5842	2.4	44.6	70000			A903_44.6 P180 BN180L4	282
33	5827	1.3	44.5	50300			A803_44.5 P180 BN180L4	279
38	5085	2.8	38.8	68100			A903_38.8 P180 BN180L4	282
38	5044	1.5	38.5	49500			A803_38.5 P180 BN180L4	279
38	5029	1.0	38.4	46000			A703_38.4 P180 BN180L4	276
41	4694	2.9	35.8	67000			A903_35.8 P180 BN180L4	282
41	4656	1.5	35.5	48900			A803_35.5 P180 BN180L4	279
41	4642	1.0	35.4	45500			A703_35.4 P180 BN180L4	276
46	4127	3.4	31.5	65200			A903_31.5 P180 BN180L4	282
48	4006	1.6	30.6	47800			A803_30.6 P180 BN180L4	279
49	3944	1.2	30.1	44500			A703_30.1 P180 BN180L4	276
50	3810	3.4	29.1	64000			A903_29.1 P180 BN180L4	282
52	3698	1.8	28.2	47100			A803_28.2 P180 BN180L4	279
53	3640	1.2	27.8	43900			A703_27.8 P180 BN180L4	276
60	3210	2.1	24.5	45900			A803_24.5 P180 BN180L4	279
62	3082	1.4	23.5	42700			A703_23.5 P180 BN180L4	276
65	2963	2.1	22.6	45200			A803_22.6 P180 BN180L4	279
69	2791	1.4	21.3	41900			A703_21.3 P180 BN180L4	276
70	2745	2.4	20.9	44600			A803_20.9 P180 BN180L4	279
74	2577	1.4	19.7	41200			A703_19.7 P180 BN180L4	276
75	2534	2.4	19.3	43800			A803_19.3 P180 BN180L4	279
87	2193	3.0	16.7	42500			A803_16.7 P180 BN180L4	279
87	2187	1.8	16.7	39900			A703_16.7 P180 BN180L4	276
94	2024	3.0	15.5	41700			A803_15.5 P180 BN180L4	279
95	2018	1.8	15.4	39200			A703_15.4 P180 BN180L4	276
112	1770	1.0	13.1	23500			A552_13.1 P180 BN180L4	268
112	1715	2.2	13.1	37900			A703_13.1 P180 BN180L4	276
115	1719	1.2	12.7	30000			A602_12.7 P180 BN180L4	272
121	1583	2.2	12.1	37200			A703_12.1 P180 BN180L4	276
123	1553	1.0	23.8	20900	A553_23.8 S5 M5LA2	267	A553_23.8 P180 BN180M2	268
141	1401	1.3	10.4	22400			A552_10.4 P180 BN180L4	268
142	1396	1.4	10.3	29300			A602_10.3 P180 BN180L4	272
143	1340	2.4	10.2	35800			A703_10.2 P180 BN180L4	276
155	1237	2.4	9.4	35100			A703_9.4 P180 BN180L4	276
173	1145	1.6	8.5	21400			A552_8.5 P180 BN180L4	268
186	1064	1.9	7.9	27500			A602_7.9 P180 BN180L4	272
189	1047	0.9	7.7	8760			A502_7.7 P180 BN180L4	264
228	868	2.0	6.4	20100			A552_6.4 P180 BN180L4	268
283	698	2.6	10.4	19100	A552_10.4 S5 M5LA2	267	A552_10.4 P180 BN180M2	268
295	669	2.4	4.9	18900			A552_4.9 P180 BN180L4	268
346	571	3.0	8.5	18200	A552_8.5 S5 M5LA2	267	A552_8.5 P180 BN180M2	268
379	522	1.4	7.7	7860			A502_7.7 P180 BN180M2	264



30 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
16.8	15556	0.9	87.1	70100			A903_87.1 P200 BN200L4	282
18.2	14360	1.0	80.4	70000			A903_80.4 P200 BN200L4	282
19.6	13307	1.1	74.5	69700			A903_74.5 P200 BN200L4	282
21.2	12283	1.1	68.8	69200			A903_68.8 P200 BN200L4	282
24.5	10651	1.3	59.6	68500			A903_59.6 P200 BN200L4	282
26.5	9832	1.4	55.0	67800			A903_55.0 P200 BN200L4	282
30.0	8630	1.6	48.3	66900			A903_48.3 P200 BN200L4	282
30	8609	0.9	48.2	45700			A803_48.2 P200 BN200L4	279
33	7966	1.8	44.6	66000			A903_44.6 P200 BN200L4	282
33	7946	0.9	44.5	45500			A803_44.5 P200 BN200L4	279
38	6934	2.0	38.8	64700			A903_38.8 P200 BN200L4	282
38	6879	1.1	38.5	45300			A803_38.5 P200 BN200L4	279
41	6400	2.1	35.8	63800			A903_35.8 P200 BN200L4	282
41	6349	1.1	35.5	45000			A803_35.5 P200 BN200L4	279
46	5628	2.5	31.5	62400			A903_31.5 P200 BN200L4	282
48	5463	1.2	30.6	44500			A803_30.6 P200 BN200L4	279
50	5195	2.5	29.1	61400			A903_29.1 P200 BN200L4	282
52	5043	1.3	28.2	44000			A803_28.2 P200 BN200L4	279
60	4377	1.5	24.5	43300			A803_24.5 P200 BN200L4	279
61	4307	3.1	24.1	59200			A903_24.1 P200 BN200L4	282
62	4202	1.0	23.5	40100			A703_23.5 P200 BN200L4	276
65	4041	1.5	22.6	42700			A803_22.6 P200 BN200L4	279
66	3976	3.1	22.3	58200			A903_22.3 P200 BN200L4	282
70	3752	3.3	21.0	57500			A903_21.0 P200 BN200L4	282
70	3743	1.7	20.9	42300			A803_20.9 P200 BN200L4	279
75	3463	3.3	19.4	56500			A903_19.4 P200 BN200L4	282
75	3455	1.8	19.3	41700			A803_19.3 P200 BN200L4	279
87	2991	2.2	16.7	40700			A803_16.7 P200 BN200L4	279
87	2982	1.3	16.7	38100			A703_16.7 P200 BN200L4	276
94	2761	2.2	15.5	40000			A803_15.5 P200 BN200L4	279
95	2752	1.3	15.4	37500			A703_15.4 P200 BN200L4	276
110	2375	2.8	13.3	38900			A803_13.3 P200 BN200L4	279
112	2338	1.6	13.1	36400			A703_13.1 P200 BN200L4	276
119	2192	2.8	12.3	38200			A803_12.3 P200 BN200L4	279
121	2158	1.6	12.1	35800			A703_12.1 P200 BN200L4	276
125	2094	1.7	23.5	35600			A703_23.5 P200 BN200LA2	276
137	1903	3.4	10.7	37100			A803_10.7 P200 BN200L4	279
143	1827	1.8	10.2	34600			A703_10.2 P200 BN200L4	276
148	1757	3.4	9.8	36500			A803_9.8 P200 BN200L4	279
155	1687	1.8	9.4	34000			A703_9.4 P200 BN200L4	276
176	1486	2.3	16.7	33100			A703_16.7 P200 BN200LA2	276
190	1371	2.3	15.4	32500			A703_15.4 P200 BN200LA2	276
224	1165	2.7	13.1	31300			A703_13.1 P200 BN200LA2	276
243	1075	2.7	12.1	30600			A703_12.1 P200 BN200LA2	276
287	910	3.2	10.2	29400			A703_10.2 P200 BN200LA2	276
310	840	3.2	9.4	28800			A703_9.4 P200 BN200LA2	276

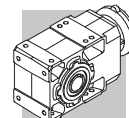


37 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
21.5	14945	0.9	68.8	63900			A903_68.8 P225 BN225S4	282
24.8	12959	1.1	59.6	63900			A903_59.6 P225 BN225S4	282
26.9	11962	1.2	55.0	63600			A903_55.0 P225 BN225S4	282
31	10499	1.3	48.3	63100			A903_48.3 P225 BN225S4	282
33	9692	1.4	44.6	62500			A903_44.6 P225 BN225S4	282
38	8436	1.7	38.8	61700			A903_38.8 P225 BN225S4	282
38	8369	0.9	38.5	41700			A803_38.5 P225 BN225S4	279
41	7787	1.8	35.8	61000			A903_35.8 P225 BN225S4	282
42	7725	0.9	35.5	41600			A803_35.5 P225 BN225S4	279
47	6847	2.0	31.5	59900			A903_31.5 P225 BN225S4	282
48	6647	1.0	30.6	41600			A803_30.6 P225 BN225S4	279
51	6321	2.1	29.1	59100			A903_29.1 P225 BN225S4	282
52	6135	1.1	28.2	41300			A803_28.2 P225 BN225S4	279
60	5326	1.3	24.5	40900			A803_24.5 P225 BN225S4	279
61	5241	2.5	24.1	57300			A903_24.1 P225 BN225S4	282
65	4916	1.3	22.6	40500			A803_22.6 P225 BN225S4	279
67	4837	2.5	22.3	56400			A903_22.3 P225 BN225S4	282
70	4565	2.7	21.0	55900			A903_21.0 P225 BN225S4	282
71	4554	1.4	20.9	40300			A803_20.9 P225 BN225S4	279
76	4214	2.7	19.4	54900			A903_19.4 P225 BN225S4	282
77	4204	1.4	19.3	39800			A803_19.3 P225 BN225S4	279
88	3668	3.2	16.9	53400			A903_16.9 P225 BN225S4	282
88	3639	1.8	16.7	39100			A803_16.7 P225 BN225S4	279
95	3386	3.2	15.6	52500			A903_15.6 P225 BN225S4	282
96	3359	1.8	15.5	38500			A803_15.5 P225 BN225S4	279
111	2890	2.3	13.3	37600			A803_13.3 P225 BN225S4	279
121	2667	2.3	12.3	37000			A803_12.3 P225 BN225S4	279
139	2316	2.8	10.7	36100			A803_10.7 P225 BN225S4	279
151	2137	2.8	9.8	35500			A803_9.8 P225 BN225S4	279

45 kW

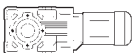
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
26.9	14549	1.0	55.0	58700			A903_55.0 P225 BN225M4	282
31	12769	1.1	48.3	58900			A903_48.3 P225 BN225M4	282
33	11787	1.2	44.6	58600			A903_44.6 P225 BN225M4	282
38	10260	1.4	38.8	58300			A903_38.8 P225 BN225M4	282
41	9471	1.5	35.8	57800			A903_35.8 P225 BN225M4	282
47	8328	1.7	31.5	57200			A903_31.5 P225 BN225M4	282
51	7687	1.7	29.1	56600			A903_29.1 P225 BN225M4	282
60	6477	1.0	24.5	38300			A803_24.5 P225 BN225M4	279
61	6374	2.1	24.1	55200			A903_24.1 P225 BN225M4	282
65	5979	1.0	22.6	38100			A803_22.6 P225 BN225M4	279
67	5883	2.1	22.3	54500			A903_22.3 P225 BN225M4	282
70	5552	2.2	21.0	54000			A903_21.0 P225 BN225M4	282
71	5539	1.2	20.9	38000			A803_20.9 P225 BN225M4	279
76	5125	2.3	19.4	53200			A903_19.4 P225 BN225M4	282
77	5112	1.2	19.3	37700			A803_19.3 P225 BN225M4	279

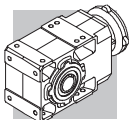


45 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
88	4461	2.7	16.9	52000			A903_16.9 P225 BN225M4	282
88	4425	1.5	16.7	37300			A803_16.7 P225 BN225M4	279
95	4118	2.7	15.6	51100			A903_15.6 P225 BN225M4	282
96	4085	1.5	15.5	36900			A803_15.5 P225 BN225M4	279
108	3621	3.1	13.7	49900			A903_13.7 P225 BN225M4	282
111	3515	1.9	13.3	36200			A803_13.3 P225 BN225M4	279
117	3342	3.1	12.6	49000			A903_12.6 P225 BN225M4	282
121	3244	1.9	12.3	35700			A803_12.3 P225 BN225M4	279
139	2816	2.3	10.7	34900			A803_10.7 P225 BN225M4	279
141	2771	3.5	10.5	47100			A903_10.5 P225 BN225M4	282
151	2600	2.3	9.8	34400			A803_9.8 P225 BN225M4	279
153	2558	3.5	9.7	46200			A903_9.7 P225 BN225M4	282

55 kW

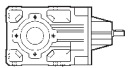
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
33	14406	1.0	44.6	53900			A903_44.6 P250 BN250M4	282
38	12540	1.1	38.8	54100			A903_38.8 P250 BN250M4	282
41	11575	1.2	35.8	54000			A903_35.8 P250 BN250M4	282
47	10179	1.4	31.5	53800			A903_31.5 P250 BN250M4	282
51	9396	1.4	29.1	53400			A903_29.1 P250 BN250M4	282
61	7790	1.7	24.1	52600			A903_24.1 P250 BN250M4	282
67	7191	1.7	22.3	52000			A903_22.3 P250 BN250M4	282
70	6786	1.8	21.0	51700			A903_21.0 P250 BN250M4	282
76	6264	1.8	19.4	51100			A903_19.4 P250 BN250M4	282
88	5452	2.2	16.9	50100			A903_16.9 P250 BN250M4	282
95	5033	2.2	15.6	49400			A903_15.6 P250 BN250M4	282
108	4425	2.5	13.7	48400			A903_13.7 P250 BN250M4	282
117	4085	2.6	12.6	47600			A903_12.6 P250 BN250M4	282
141	3387	2.9	10.5	45900			A903_10.5 P250 BN250M4	282
153	3126	2.9	9.7	45100			A903_9.7 P250 BN250M4	282



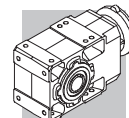
40 GEARBOX RATING CHARTS

A 10

150 Nm

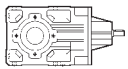
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 10 2_5.5	5.5	512	73	4.2	—	1830	256	73	2.1	960	2460	244
A 10 2_6.3	6.3	442	80	3.9	—	1900	221	80	2.0	830	2560	
A 10 2_7.2	7.2	388	92	4.0	—	1910	194	93	2.0	630	2600	
A 10 2_8.5	8.5	329	92	3.4	—	2060	164	93	1.7	720	2790	
A 10 2_9.6	9.6	291	102	3.3	—	2090	146	128	2.1	—	2650	
A 10 2_10.6	10.6	265	125	3.7	540	2010	133	150	2.2	810	2590	
A 10 2_12.3	12.3	228	110	2.8	—	2280	114	138	1.7	—	2880	
A 10 2_13.9	13.9	201	135	3.0	620	2220	101	150	1.7	1080	2960	
A 10 2_16.4	16.4	170	140	2.7	610	2370	85	150	1.4	1140	3200	
A 10 2_18.6	18.6	151	147	2.5	650	2460	75	150	1.3	1180	3380	
A 10 2_21.4	21.4	131	150	2.2	650	2610	66	150	1.1	1200	3600	
A 10 2_23.8	23.8	118	150	2.0	750	2750	59	150	0.98	1220	3780	
A 10 2_25.5	25.5	110	150	1.8	750	2840	55	150	0.92	1220	3900	
A 10 2_28.6	28.6	98	150	1.6	830	3000	49	150	0.82	1250	4100	
A 10 2_32.2	32.2	87	150	1.5	880	3170	43	150	0.73	1270	4310	
A 10 2_35.1	35.1	80	150	1.3	880	3300	40	150	0.67	1270	4470	
A 10 2_40.9	40.9	69	150	1.1	910	3530	34	150	0.57	1300	4770	
A 10 2_45.4	45.4	62	150	1.0	910	3700	31	150	0.52	1300	4980	
A 10 2_51.3	51.3	55	150	0.91	910	3910	27.3	150	0.46	1290	5240	
A 10 2_58.6	58.6	48	150	0.80	920	4140	23.9	150	0.40	1300	5500	
A 10 2_65.9	65.9	42	150	0.71	920	4360	21.2	150	0.35	1300	5500	
A 10 2_76.4	76.4	37	150	0.61	930	4640	18.3	150	0.31	1300	5500	
A 10 2_91.6	91.6	31	130	0.44	1020	5160	15.3	130	0.22	1300	5500	

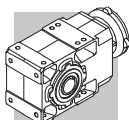
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



A 10

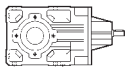
150 Nm

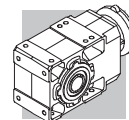
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 10 2_5.5	5.5	165	73	1.3	1300	2950	91	73	0.74	1300	3720	244
A 10 2_6.3	6.3	142	80	1.3	1300	3070	79	80	0.70	1300	4100	
A 10 2_7.2	7.2	125	93	1.3	1160	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

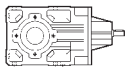
250 Nm

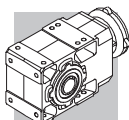
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 20 2_5.4	5.4	523	96	5.6	610	1910	262	121	3.5	770	2400	248
A 20 2_6.5	6.5	428	107	5.1	490	2010	214	135	3.2	610	2530	
A 20 2_7.3	7.3	384	113	4.8	510	2070	192	143	3.1	630	2600	
A 20 2_8.4	8.4	334	116	4.3	510	2180	167	146	2.7	650	2750	
A 20 2_9.4	9.4	299	122	4.1	530	2260	149	154	2.6	660	2840	
A 20 2_10.3	10.3	271	183	5.5	650	1970	135	225	3.4	890	2520	
A 20 2_12.0	12.0	234	128	3.3	550	2280	117	161	2.1	690	3120	
A 20 2_14.1	14.1	199	199	4.4	750	2210	99	245	2.7	960	2820	
A 20 2_16.2	16.2	173	209	4.0	700	2310	87	250	2.4	1040	2990	
A 20 2_18.1	18.1	155	216	3.7	760	2400	77	250	2.2	1210	3170	
A 20 2_21.2	21.2	132	226	3.3	710	2540	66	250	1.8	1290	3430	
A 20 2_23.1	23.1	121	232	3.1	710	2620	61	250	1.7	1360	3580	
A 20 2_26.5	26.5	106	241	2.8	660	2750	53	250	1.5	1410	3820	
A 20 2_29.2	29.2	96	249	2.7	670	2850	48	250	1.3	1510	4000	
A 20 2_31.3	31.3	89	250	2.5	660	2940	45	250	1.2	1510	4130	
A 20 2_35.4	35.4	79	250	2.2	800	3140	40	250	1.1	1650	4380	
A 20 2_39.6	39.6	71	250	2.0	880	3320	35	250	0.98	1710	4600	
A 20 2_43.2	43.2	65	250	1.8	880	3460	32	250	0.90	1710	4790	
A 20 2_48.3	48.3	58	250	1.6	920	3650	29.0	250	0.81	1720	5030	
A 20 2_53.7	53.7	52	250	1.5	920	3840	26.1	250	0.73	1720	5270	
A 20 2_63.1	63.1	44	245	1.2	1040	4180	22.2	245	0.61	1740	5680	
A 20 2_71.0	71.0	39	210	0.92	1360	4640	19.7	210	0.46	1790	6200	
A 20 2_79.9	79.9	35	210	0.82	1360	4880	17.5	210	0.41	1790	6200	
A 20 2_92.3	92.3	30	200	0.68	1380	5250	15.2	200	0.34	1810	6200	
A 20 3_109.2	109.2	25.6	165	0.49	1180	5900	12.8	205	0.30	1300	6200	
A 20 3_120.5	120.5	23.2	168	0.45	1130	6110	11.6	210	0.28	1300	6200	
A 20 3_129.1	129.1	21.7	175	0.44	1210	6200	10.8	215	0.27	1300	6200	
A 20 3_146.1	146.1	19.2	183	0.40	1160	6200	9.6	230	0.25	1300	6200	
A 20 3_163.4	163.4	17.1	190	0.37	1240	6200	8.6	235	0.23	1300	6200	
A 20 3_178.3	178.3	15.7	195	0.35	1200	6200	7.9	245	0.22	1300	6200	
A 20 3_199.2	199.2	14.1	200	0.32	1270	6200	7.0	250	0.20	1300	6200	
A 20 3_221.3	221.3	12.7	203	0.30	1240	6200	6.3	250	0.18	1300	6200	
A 20 3_260.5	260.5	10.8	214	0.26	1270	6200	5.4	250	0.15	1300	6200	
A 20 3_292.8	292.8	9.6	218	0.24	1300	6200	4.8	250	0.14	1300	6200	
A 20 3_329.4	329.4	8.5	221	0.22	1300	6200	4.3	250	0.12	1300	6200	
A 20 3_380.8	380.8	7.4	226	0.19	1300	6200	3.7	250	0.11	1300	6200	



A 20

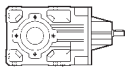
250 Nm

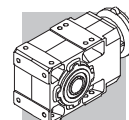
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 20 2_5.4	5.4	168	140	2.6	900	2780	93	170	1.8	1100	3390	248
A 20 2_6.5	6.5	138	156	2.4	720	2930	76	190	1.6	860	3570	
A 20 2_7.3	7.3	123	165	2.3	740	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_380.8	380.8	2.4	250	0.07	1300	6200	1.3	250	0.04	1300	6200	



A 30

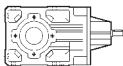
410 Nm

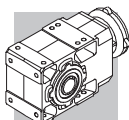
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 30 2_5.4	5.4	517	175	10.1	1130	2480	259	220	6.3	1430	3130	252
A 30 2_6.4	6.4	437	185	9.0	1120	2630	218	230	5.6	1470	3330	
A 30 2_7.0	7.0	399	194	8.6	1140	2690	199	245	5.4	1430	3380	
A 30 2_8.5	8.5	331	200	7.4	1220	2900	165	250	4.6	1570	3660	
A 30 2_9.3	9.3	301	214	7.2	1140	2950	150	270	4.5	1440	3710	
A 30 2_10.5	10.5	268	278	8.3	1800	2770	134	340	5.1	2200	3550	
A 30 2_11.8	11.8	238	230	6.1	1130	3200	119	290	3.8	1420	4030	
A 30 2_13.6	13.6	206	301	6.9	1830	3030	103	370	4.3	2200	3870	
A 30 2_16.3	16.3	171	318	6.1	1830	3240	86	385	3.7	2200	4170	
A 30 2_18.0	18.0	156	327	5.7	1840	3350	78	400	3.5	2200	4290	
A 30 2_20.5	20.5	136	340	5.2	1830	3510	68	410	3.1	2200	4530	
A 30 2_22.8	22.8	123	351	4.8	1850	3640	62	410	2.8	2200	4770	
A 30 2_26.5	26.5	106	367	4.3	1840	3850	53	410	2.4	2200	5150	
A 30 2_29.3	29.3	96	378	4.0	1847	3980	48	410	2.2	2200	5400	
A 30 2_33.4	33.4	84	393	3.7	1840	4170	42	410	1.9	2200	5750	
A 30 2_36.6	36.6	76	404	3.4	1840	4310	38	410	1.7	2200	6010	
A 30 2_39.3	39.3	71	410	3.3	1810	4430	36	410	1.6	2200	6200	
A 30 2_43.4	43.4	64	410	2.9	1850	4660	32	410	1.5	2200	6490	
A 30 2_48.3	48.3	58	410	2.6	1860	4920	29.0	410	1.3	2200	6810	
A 30 2_52.7	52.7	53	410	2.4	1860	5130	26.6	410	1.2	2200	7080	
A 30 2_59.4	59.4	47	400	2.1	1890	5500	23.6	400	1.0	2200	7530	
A 30 2_66.0	66.0	42	390	1.8	1900	5840	21.2	390	0.92	2200	7940	
A 30 2_76.5	76.5	37	350	1.4	1950	6480	18.3	350	0.71	2200	8690	
A 30 2_86.7	86.7	32	320	1.2	2000	7010	16.2	320	0.58	2200	9310	
A 30 2_97.5	97.5	28.7	300	0.96	2020	7480	14.4	300	0.48	2200	9600	
A 30 3_109.1	109.1	25.7	240	0.71	1300	8240	12.8	300	0.44	1300	9600	
A 30 3_120.5	120.5	23.2	243	0.65	1120	8540	11.6	300	0.40	1300	9600	
A 30 3_137.4	137.4	20.4	250	0.59	1300	8950	10.2	315	0.37	1300	9600	
A 30 3_150.7	150.7	18.6	261	0.56	1170	9210	9.3	330	0.35	1300	9600	
A 30 3_161.4	161.4	17.3	270	0.54	1300	9410	8.7	340	0.34	1300	9600	
A 30 3_178.6	178.5	15.7	274	0.49	1210	9600	7.8	345	0.31	1300	9600	
A 30 3_198.5	198.5	14.1	280	0.45	1300	9600	7.1	350	0.28	1300	9600	
A 30 3_216.6	216.6	12.9	287	0.43	1240	9600	6.5	360	0.27	1300	9600	
A 30 3_244.3	244.3	11.5	295	0.39	1300	9600	5.7	370	0.24	1300	9600	
A 30 3_271.5	271.5	10.3	301	0.36	1280	9600	5.2	380	0.23	1300	9600	
A 30 3_314.6	314.5	8.9	309	0.32	1300	9600	4.5	390	0.20	1300	9600	
A 30 3_356.3	356.3	7.9	320	0.29	1300	9600	3.9	370	0.17	1300	9600	
A 30 3_400.8	400.8	7.0	320	0.26	1300	9600	3.5	360	0.14	1300	9600	



A 30

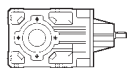
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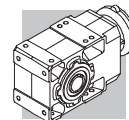
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A 30 2_5.4	5.4	166	255	4.7	1660	3630	92	300	3.1	2200	4470	252
A 30 2_6.4	6.4	140	270	4.2	1630	3830	78	300	2.6	2200	4830	
A 30 2_7.0	7.0	128	284	4.1	1650	3920	71	300	2.4	2200	5040	
A 30 2_8.5	8.5	106	290	3.4	1810	4240	59	300	2.0	2200	5470	
A 30 2_9.3	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_178.6	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_314.6	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

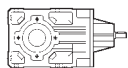
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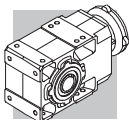
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A 35 2_5.4	5.4	517	246	14.2	1420	4000	259	310	8.9	1790	5050	256
A 35 2_6.4	6.4	437	262	12.7	1420	4230	218	330	8.0	1790	5330	
A 35 2_7.0	7.0	399	278	12.3	1410	4320	199	350	7.8	1790	5440	
A 35 2_8.5	8.5	331	286	10.5	1450	4650	165	360	6.6	1830	5850	
A 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

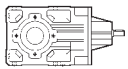
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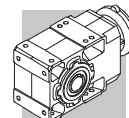
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A 35 2_5.4	5.4	166	340	6.3	2150	5940	92	340	3.5	2200	7600	256
A 35 2_6.4	6.4	140	350	5.5	2190	6340	78	350	3.0	2200	8090	
A 35 2_7.0	7.0	128	370	5.3	2200	6490	71	370	2.9	2200	8290	
A 35 2_8.5	8.5	106	380	4.5	2200	6970	59	380	2.5	2200	8890	
A 35 2_9.3	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

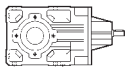
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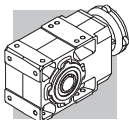
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A 41 2_5.2	5.2	534	450	27	1790	4350	267	550	16.4	2450	5560	260
A 41 2_7.1	7.1	393	490	22	1890	4850	197	550	12.0	2670	6430	
A 41 2_8.3	8.3	336	510	19.1	1900	5140	168	550	10.3	2750	6920	
A 41 2_9.2	9.2	304	530	18.0	1980	5300	152	550	9.3	2860	7240	
A 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

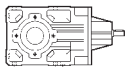
850 Nm

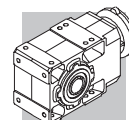
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		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 41 2_5.2	5.2	172	550	10.5	3140	6850	95	550	5.8	3500	8900	260
A 41 2_7.1	7.1	126	550	7.7	3360	7870	70	550	4.3	3500	10100	
A 41 2_8.3	8.3	108	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	



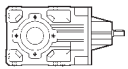
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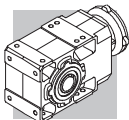
1500 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 50 2_7.7	7.7	362	550	22	2300	7920	181	700	14.1	2890	9960	264
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	



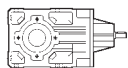
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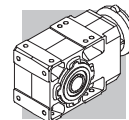
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		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 50 2_7.7	7.7	116	770	10.0	3430	11700	65	900	6.5	3500	14300	264
A 50 2_9.7	9.7	92	830	8.5	3490	12600	51	1000	5.7	3500	15300	
A 50 2_13.1	13.1	69	830	6.3	3500	14200	38	1000	4.2	3500	17300	
A 50 2_16.6	16.6	54	880	5.3	3500	15400	30	1000	3.4	3500	18900	
A 50 2_20.9	20.9	43	880	4.2	3500	16800	23.9	1000	2.7	3500	20000	
A 50 3_24.0	24.0	37	1500	6.5	3480	11300	20.8	1500	3.6	3500	15700	
A 50 3_26.4	26.4	34	1500	5.9	3500	12000	18.9	1500	3.3	3500	16500	
A 50 3_32.4	32.4	27.8	1500	4.8	3500	13400	15.4	1500	2.7	3500	18300	
A 50 3_35.6	35.6	25.3	1500	4.4	3500	14200	14.0	1500	2.4	3500	19200	
A 50 3_40.9	40.9	22.0	1500	3.8	3500	15300	12.2	1500	2.1	3500	20000	
A 50 3_45.0	45.0	20.0	1500	3.5	3500	16000	11.1	1500	1.9	3500	20000	
A 50 3_51.7	51.7	17.4	1500	3.0	3450	17200	9.7	1500	1.7	3500	20000	
A 50 3_56.8	56.8	15.8	1500	2.7	3500	18100	8.8	1500	1.5	3500	20000	
A 50 3_63.9	63.9	14.1	1500	2.4	3500	19200	7.8	1500	1.4	3500	20000	
A 50 3_70.2	70.2	12.8	1500	2.2	3500	20000	7.1	1500	1.2	3500	20000	
A 50 3_81.5	81.5	11.0	1500	1.9	3500	20000	6.1	1500	1.1	3500	20000	
A 50 3_89.5	89.5	10.1	1500	1.7	3500	20000	5.6	1500	0.96	3500	20000	
A 50 3_99.5	99.5	9.0	1500	1.6	3500	20000	5.0	1500	0.87	3500	20000	
A 50 3_109.4	109.4	8.2	1500	1.4	3500	20000	4.6	1500	0.79	3500	20000	
A 50 3_118.0	118.0	7.6	1500	1.3	3500	20000	4.2	1500	0.73	3500	20000	
A 50 3_129.7	129.7	6.9	1500	1.2	3500	20000	3.9	1500	0.67	3500	20000	
A 50 3_140.6	140.6	6.4	1500	1.1	3500	20000	3.6	1500	0.61	3500	20000	
A 50 3_154.6	154.6	5.8	1500	1.0	3500	20000	3.2	1500	0.56	3500	20000	
A 50 3_173.4	173.4	5.2	1500	0.90	3500	20000	2.9	1500	0.50	3500	20000	
A 50 3_190.6	190.6	4.7	1500	0.82	3500	20000	2.6	1500	0.45	3500	20000	
A 50 4_211.0	211.0	4.3	1500	0.75	2200	20000	2.4	1500	0.42	2200	20000	
A 50 4_232.0	232.0	3.9	1500	0.68	2200	20000	2.2	1500	0.38	2200	20000	
A 50 4_260.9	260.9	3.4	1500	0.61	2200	20000	1.9	1500	0.34	2200	20000	
A 50 4_286.8	286.8	3.1	1500	0.55	2200	20000	1.7	1500	0.31	2200	20000	
A 50 4_332.6	332.6	2.7	1500	0.48	2200	20000	1.5	1500	0.27	2200	20000	
A 50 4_365.6	365.6	2.5	1500	0.43	2200	20000	1.4	1500	0.24	2200	20000	
A 50 4_406.4	406.4	2.2	1500	0.39	2200	20000	1.2	1500	0.22	2200	20000	
A 50 4_446.8	446.8	2.0	1500	0.36	2200	20000	1.1	1500	0.20	2200	20000	
A 50 4_481.6	481.6	1.9	1500	0.33	2200	20000	1.0	1500	0.18	2200	20000	
A 50 4_529.5	529.5	1.7	1500	0.30	2200	20000	0.94	1500	0.17	2200	20000	
A 50 4_574.2	574.2	1.6	1500	0.28	2200	20000	0.87	1500	0.15	2200	20000	
A 50 4_631.2	631.2	1.4	1500	0.25	2200	20000	0.79	1500	0.14	2200	20000	
A 50 4_707.9	707.9	1.3	1500	0.22	2200	20000	0.71	1500	0.12	2200	20000	
A 50 4_778.2	778.2	1.2	1500	0.20	2200	20000	0.64	1500	0.11	2200	20000	



A 55

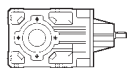
2000 Nm

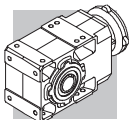
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A 55 2_4.9	4.9	571	760	48	1320	15100	286	900	28	2150	18700	268
A 55 2_6.4	6.4	438	800	39	1950	16400	219	950	23	2860	20300	
A 55 2_8.5	8.5	329	800	30	2810	18000	165	950	17.5	3500	22200	
A 55 2_10.4	10.4	269	840	25	2900	19100	135	1000	15.1	3500	23600	
A 55 2_13.1	13.1	214	840	20	3230	20600	107	1000	11.9	3500	25500	
A 55 2_15.7	15.7	178	840	16.7	3440	21900	89	1000	9.9	3500	27000	
A 55 2_19.2	19.2	146	925	15.0	3160	23200	73	1100	8.9	3500	28600	
A 55 3_23.8	23.8	118	1600	22	2050	21000	59	1950	13.2	2640	26000	
A 55 3_29.9	29.9	94	1700	18.3	2110	22500	47	2000	10.8	2770	28200	
A 55 3_40.3	40.3	69	1850	14.8	2150	24800	35	2000	8.0	2930	30000	
A 55 3_51.0	51.0	55	2000	12.6	2170	26500	27.5	2000	6.3	3050	30000	
A 55 3_64.3	64.3	44	2000	10.0	2230	29000	21.8	2000	5.0	3110	30000	
A 55 3_79.5	79.5	35	2000	8.1	1040	30000	17.6	2000	4.1	2820	30000	
A 55 3_101.4	101.4	27.6	2000	6.4	1340	30000	13.8	2000	3.2	3130	30000	
A 55 3_123.9	123.9	22.6	2000	5.2	1450	30000	11.3	2000	2.6	3230	30000	
A 55 3_132.7	132.7	21.1	2000	4.9	1450	30000	10.6	2000	2.4	3240	30000	
A 55 3_146.8	146.8	19.1	2000	4.4	1610	30000	9.5	2000	2.2	3290	30000	
A 55 3_160.4	160.4	17.5	2000	4.0	1660	30000	8.7	2000	2.0	3300	30000	
A 55 3_175.0	175.0	16.0	2000	3.7	1660	30000	8.0	2000	1.8	3300	30000	
A 55 3_194.2	194.2	14.4	2000	3.3	1710	30000	7.2	2000	1.7	3310	30000	
A 55 4_208.1	208.1	13.5	1600	2.5	1890	30000	6.7	1950	1.5	2200	30000	
A 55 4_262.6	262.6	10.7	1650	2.1	1980	30000	5.3	2000	1.3	2200	30000	
A 55 4_324.7	324.7	8.6	1750	1.8	2030	30000	4.3	2000	1.0	2200	30000	
A 55 4_414.0	414.0	6.8	1850	1.5	2080	30000	3.4	2000	0.80	2200	30000	
A 55 4_505.9	505.9	5.5	1900	1.2	2120	30000	2.8	2000	0.65	2200	30000	
A 55 4_542.0	542.0	5.2	1900	1.2	2140	30000	2.6	2000	0.61	2200	30000	
A 55 4_599.5	599.5	4.7	1950	1.1	2150	30000	2.3	2000	0.55	2200	30000	
A 55 4_655.1	655.1	4.3	1950	1.0	2180	30000	2.1	2000	0.50	2200	30000	
A 55 4_714.7	714.7	3.9	1950	0.90	2200	30000	2.0	2000	0.46	2200	30000	
A 55 4_793.0	793.0	3.5	2000	0.83	2200	30000	1.8	2000	0.42	2200	30000	



A 55

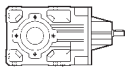
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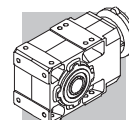
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		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 55 2_4.9	4.9	184	1000	20	2850	21400	102	1160	13.1	3500	25600	268
A 55 2_6.4	6.4	141	1060	16.6	3500	23200	78	1230	10.7	3500	27700	
A 55 2_8.5	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	
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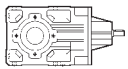
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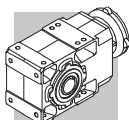
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A 60 2_10.3	10.3	271	950	29	2970	24600	136	1200	18.1	3740	30000	
A 60 2_12.7	12.7	220	1000	25	3020	26200	110	1250	15.3	3810	30000	
A 60 2_16.7	16.7	167	1050	19.6	3080	28600	84	1300	12.1	3910	30000	
A 60 2_20.6	20.6	136	1100	16.7	3100	30000	68	1400	10.6	3890	30000	
A 60 3_25.7	25.7	109	2760	35	2380	26900	54	2800	17.5	3800	30000	
A 60 3_27.9	27.9	101	2800	32	2780	27700	50	2800	16.2	3930	30000	
A 60 3_31.7	31.7	88	2800	29	2790	29000	44	2800	14.2	3940	30000	
A 60 3_34.3	34.3	82	2800	26	2920	30000	41	2800	13.2	4060	30000	
A 60 3_41.7	41.7	67	2800	22	2940	30000	34	2800	10.8	4090	30000	
A 60 3_45.2	45.2	62	2800	20	3060	30000	31	2800	10.0	4200	30000	
A 60 3_51.3	51.3	55	2800	17.6	3030	30000	27.3	2800	8.8	4180	30000	
A 60 3_55.6	55.6	50	2800	16.2	3140	30000	25.2	2800	8.1	4280	30000	
A 60 3_65.0	65.0	43	2800	13.9	3110	30000	21.5	2800	6.9	4260	30000	
A 60 3_70.4	70.4	40	2800	12.8	3210	30000	19.9	2800	6.4	4360	30000	
A 60 3_79.7	79.7	35	2800	11.3	3160	30000	17.6	2800	5.7	4310	30000	
A 60 3_86.4	86.4	32	2800	10.4	3260	30000	16.2	2800	5.2	4410	30000	
A 60 3_99.5	99.5	28.1	2800	9.1	3210	30000	14.1	2800	4.5	4360	30000	
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A 60 3_123.0	123.0	22.8	2800	7.3	3250	30000	11.4	2800	3.7	4400	30000	
A 60 3_133.3	133.3	21.0	2800	6.8	3340	30000	10.5	2800	3.4	4490	30000	
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A 60 3_156.0	156.0	17.9	2800	5.8	3360	30000	9.0	2800	2.9	4510	30000	
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A 60 4_208.7	208.7	13.4	2800	4.4	2720	30000	6.7	2800	2.2	3500	30000	
A 60 4_226.1	226.1	12.4	2800	4.1	2770	30000	6.2	2800	2.0	3500	30000	
A 60 4_264.3	264.3	10.6	2800	3.5	2860	30000	5.3	2800	1.7	3500	30000	
A 60 4_286.3	286.3	9.8	2800	3.2	2900	30000	4.9	2800	1.6	3500	30000	
A 60 4_324.2	324.2	8.6	2800	2.8	2960	30000	4.3	2800	1.4	3500	30000	
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A 60 4_438.4	438.4	6.4	2800	2.1	3070	30000	3.2	2800	1.1	3500	30000	
A 60 4_500.3	500.3	5.6	2800	1.8	3110	30000	2.8	2800	0.92	3500	30000	
A 60 4_542.0	542.0	5.2	2800	1.7	3140	30000	2.6	2800	0.85	3500	30000	
A 60 4_585.8	585.8	4.8	2800	1.6	3150	30000	2.4	2800	0.79	3500	30000	
A 60 4_634.6	634.6	4.4	2800	1.5	3170	30000	2.2	2800	0.73	3500	30000	
A 60 4_697.3	697.3	4.0	2800	1.3	3190	30000	2.0	2800	0.66	3500	30000	
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A 60

2800 Nm

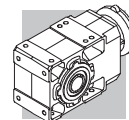
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A 60 3_79.7	79.7	11.3	2800	3.6	4700	30000	6.3	2800	2.0	4700	30000	
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A 60 3_185.8	185.8	4.8	2800	1.6	4700	30000	2.7	2800	0.87	4700	30000	
A 60 4_208.7	208.7	4.3	2800	1.4	3500	30000	2.4	2800	0.79	3500	30000	
A 60 4_226.1	226.1	4.0	2800	1.3	3500	30000	2.2	2800	0.73	3500	30000	
A 60 4_264.3	264.3	3.4	2800	1.1	3500	30000	1.9	2800	0.62	3500	30000	
A 60 4_286.3	286.3	3.1	2800	1.0	3500	30000	1.7	2800	0.58	3500	30000	
A 60 4_324.2	324.2	2.8	2800	0.91	3500	30000	1.5	2800	0.51	3500	30000	
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A 60 4_438.4	438.4	2.1	2800	0.68	3500	30000	1.1	2800	0.38	3500	30000	
A 60 4_500.3	500.3	1.8	2800	0.59	3500	30000	1.0	2800	0.33	3500	30000	
A 60 4_542.0	542.0	1.7	2800	0.55	3500	30000	0.92	2800	0.30	3500	30000	
A 60 4_585.8	585.8	1.5	2800	0.51	3500	30000	0.85	2800	0.28	3500	30000	
A 60 4_634.6	634.6	1.4	2800	0.47	3500	30000	0.79	2800	0.26	3500	30000	
A 60 4_697.3	697.3	1.3	2800	0.43	3500	30000	0.72	2800	0.24	3500	30000	
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A 70

5000 Nm

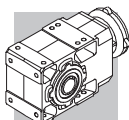
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A 70 3_13.1	13.1	214	2600	64	2420	28400	107	3350	41	2100	34600	
A 70 3_15.4	15.4	182	2700	56	2100	29900	91	3350	35	2430	36700	
A 70 3_16.7	16.7	168	2850	55	2500	30400	84	3600	35	2590	37200	
A 70 3_19.7	19.7	142	2900	48	2030	32100	71	3700	30	1790	39300	
A 70 3_21.3	21.3	131	3000	45	2750	32900	66	4000	30	1830	39800	
A 70 3_23.5	23.5	119	3500	48	4930	32900	60	4300	30	6250	40500	
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A 70 3_30.1	30.1	93	3700	40	4970	35600	47	4550	24	6300	43900	
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A 70 3_38.4	38.4	73	3950	33	5040	38400	36	4850	20	6380	47300	
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A 70 3_66.9	66.9	42	4350	21	5050	46000	20.9	5000	12.0	6480	50000	
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A 70 3_79.3	79.3	35	4600	18.7	5020	48400	17.6	5000	10.2	6520	50000	
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A 70 4_183.9	183.9	15.2	5000	9.0	1450	50000	7.6	5000	4.5	2670	50000	
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A 70 4_292.0	292.0	9.6	5000	5.6	1900	50000	4.8	5000	2.8	2790	50000	
A 70 4_316.4	316.4	8.9	5000	5.2	2110	50000	4.4	5000	2.6	2850	50000	
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A 70 4_855.3	855.3	3.3	5000	1.9	2220	50000	1.6	5000	0.96	2960	50000	
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A 70 4_1072	1072	2.6	5000	1.5	2240	50000	1.3	5000	0.77	2970	50000	
A 70 4_1161	1161	2.4	5000	1.4	2280	50000	1.2	5000	0.71	3020	50000	
A 70 4_1242	1242	2.3	5000	1.3	2250	50000	1.1	5000	0.66	2980	50000	
A 70 4_1346	1346	2.1	5000	1.2	2290	50000	1.0	5000	0.61	3030	50000	
A 70 4_1583	1583	1.8	5000	1.0	2260	50000	0.88	5000	0.52	2990	50000	
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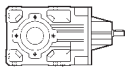
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A 70 3_12.1	12.1	75	3650	31	1620	38700	41	3650	17.4	6470	47900	
A 70 3_13.1	13.1	69	3950	31	1650	39200	38	3950	17.4	6500	48600	
A 70 3_15.4	15.4	58	3700	25	3510	42200	32	3700	13.8	7000	50000	
A 70 3_16.7	16.7	54	4000	25	3560	42800	30	4000	13.8	7000	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	

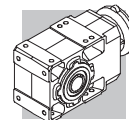


A 80

8000 Nm

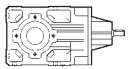
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 80 3_9.8	9.8	285	3100	102	—	26300	142	3900	64	—	32100	279
A 80 3_10.7	10.7	263	3450	104	—	26300	131	4300	65	—	32300	
A 80 3_12.3	12.3	228	3450	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)

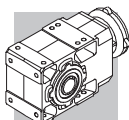


A 80

8000 Nm

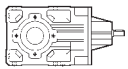
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		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 80 3_9.8	9.8	92	4450	47	—	36700	51	5300	31	—	43800	279
A 80 3_10.7	10.7	84	4900	48	—	36900	47	5850	32	—	44000	
A 80 3_12.3	12.3	73	4900	41	—	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	
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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)

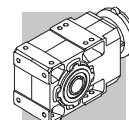


A 90

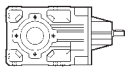
14000 Nm

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

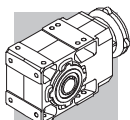
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



A 90 14000 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
A 90 3_9.7	9.7	93	9050	97	9800	42300	52	9050	54	15000	53700	282
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)



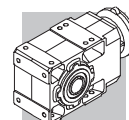
41 MOTOR AVAILABILITY

Please be aware that motor-gearbox combinations resulting from charts (C32) and (C33) are purely based on geometrical compatibility.

When selecting a gearmotor, refer to procedure specified at paragraph 11 and observe particularly the condition $S \geq f_s$.

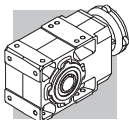
(C 32)

		IEC_  (IM B5)											
		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_380.8	109.2_380.8	109.2_380.8	109.2_380.8	109.2_380.8	109.2_380.8						
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_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_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_126.6	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			



(C 33)

							
		M05	M1	M2	M3	M4	M5
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_380.8	109.2_380.8	109.2_380.8	109.2_380.8		
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 ⊖ (22.6_38.5)	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		



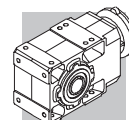
Motor adapters matching the most popular brands of servomotors are available for units size A05... A60. Dimensions of servomotor inputs are provided within the drawing section for each frame size. The code **SK** applies for inputs featuring a conventional keyway, while through the specification of the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

(C 34)

		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_380.8	109.2_380.8	109.2_380.8		109.2_380.8
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 35)

		SERVO INPUT							
		SK95A	SK95B	SK95C	SK110A	SK110B	SK130A	SK130B	SK180A
		SC95A	SC95B	SC95C	SC110A	SC110B	SC130A	SC130B	SC180A
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_380.8	109.2_380.8	109.2_380.8	109.2_380.8	109.2_380.8			
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
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
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
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
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_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	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
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_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	208.7_755.4	208.7_755.4	208.7_755.4		



42 MOMENT OF INERTIA

The following charts indicate moment of inertia values J_r [kgm²] 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.



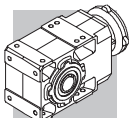
Values under this symbol refer to gearboxes with IEC motor adaptor (IEC size...).



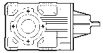
This symbol refers to gearbox values.

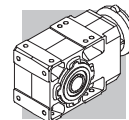
A 05

	i	J (•10 ⁻⁴) [kgm ²]				
			IEC			
			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	—	—	—



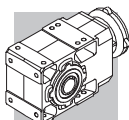
A 10

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

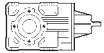


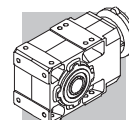
A 20

	i	J (•10 ⁻⁴) [kgm ²]							
			 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_380.8	380.8	0.01	1.5	1.5	2.9	2.8	4.1	4.1	0.90

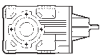


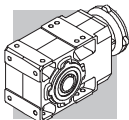
A 30

	i	J (•10 ⁻⁴) [kgm ²]							
			 IEC						
			63	71	80	90	100	112	
A 30 2_5.4	5.4	4.5	—	—	7.4	7.3	8.6	8.6	6.9
A 30 2_6.4	6.4	3.4	—	—	6.6	6.6	7.8	7.8	6.0
A 30 2_7.0	7.0	2.9	—	—	5.8	5.8	7.0	7.0	5.2
A 30 2_8.5	8.5	2.2	—	—	5.1	5.1	6.3	6.3	4.6
A 30 2_9.3	9.3	1.6	3.1	3.1	4.5	4.4	5.7	5.7	4.0
A 30 2_10.5	10.5	2.3	—	—	5.2	5.1	6.4	6.4	4.6
A 30 2_11.8	11.8	1.1	2.6	2.6	4.0	3.9	5.2	5.2	3.4
A 30 2_13.6	13.6	1.5	—	—	4.4	4.3	5.6	5.6	3.9
A 30 2_16.3	16.3	1.2	—	—	4.1	4.0	5.3	5.3	3.5
A 30 2_18.0	18.0	0.90	2.4	2.4	3.8	3.7	5.0	5.0	3.2
A 30 2_20.5	20.5	0.70	2.2	2.2	3.6	3.5	4.8	4.8	3.1
A 30 2_22.8	22.8	0.60	2.1	2.1	3.5	3.4	4.7	4.7	3.0
A 30 2_26.5	26.5	0.50	2.0	2.0	3.4	3.3	4.6	4.6	2.9
A 30 2_29.3	29.3	0.40	1.9	1.9	3.3	3.2	4.5	4.5	2.8
A 30 2_33.4	33.4	0.35	1.8	1.8	3.2	3.1	4.4	4.4	2.7
A 30 2_36.6	36.6	0.30	1.8	1.8	3.2	3.1	4.4	4.4	2.7
A 30 2_39.3	39.3	0.25	1.7	1.7	3.1	3.0	4.3	4.3	2.6
A 30 2_43.4	43.4	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.6
A 30 2_48.3	48.3	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.6
A 30 2_52.7	52.7	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.5
A 30 2_59.4	59.4	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.5
A 30 2_66.0	66.0	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.5
A 30 2_76.5	76.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.5
A 30 2_86.7	86.7	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.5
A 30 2_97.5	97.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.4
A 30 3_109.1	109.1	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_120.5	120.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_137.4	137.4	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_150.7	150.7	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_161.4	161.4	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_178.6	178.6	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_198.5	198.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_216.6	216.6	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_244.3	244.3	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_271.5	271.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_314.6	314.6	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_356.3	356.3	0.06	1.6	1.6	3.0	2.9	4.2	4.2	0.90
A 30 3_400.8	400.8	0.04	1.5	1.6	2.9	2.8	4.1	4.1	0.90



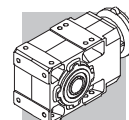
A 35

	i	J (•10 ⁻⁴) [kgm ²]								
			 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 41

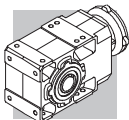
	i	J (•10-4) [kgm ²]								
			 IEC							
			63	71	80	90	100	112		132
A 41 2_5.2	5.2	13	—	—	16	16	17	17	32	23
A 41 2_7.1	7.1	7.3	—	—	10	10	11	11	26	18
A 41 2_8.3	8.3	5.9	—	—	8.8	8.7	10	10	25	16
A 41 2_9.2	9.2	4.5	—	—	7.4	7.3	8.6	8.6	23	15
A 41 2_10.1	10.1	5.9	—	—	8.8	8.7	10	10	25	16
A 41 2_11.7	11.7	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



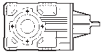
A 50

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

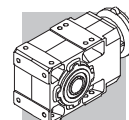
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



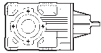
A 55

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

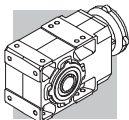
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



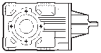
A 60

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

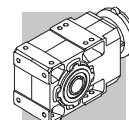
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A 70

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

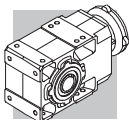
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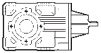
A 80

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

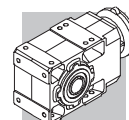
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



A 90

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

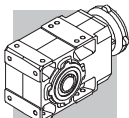
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



43 EXACT RATIOS

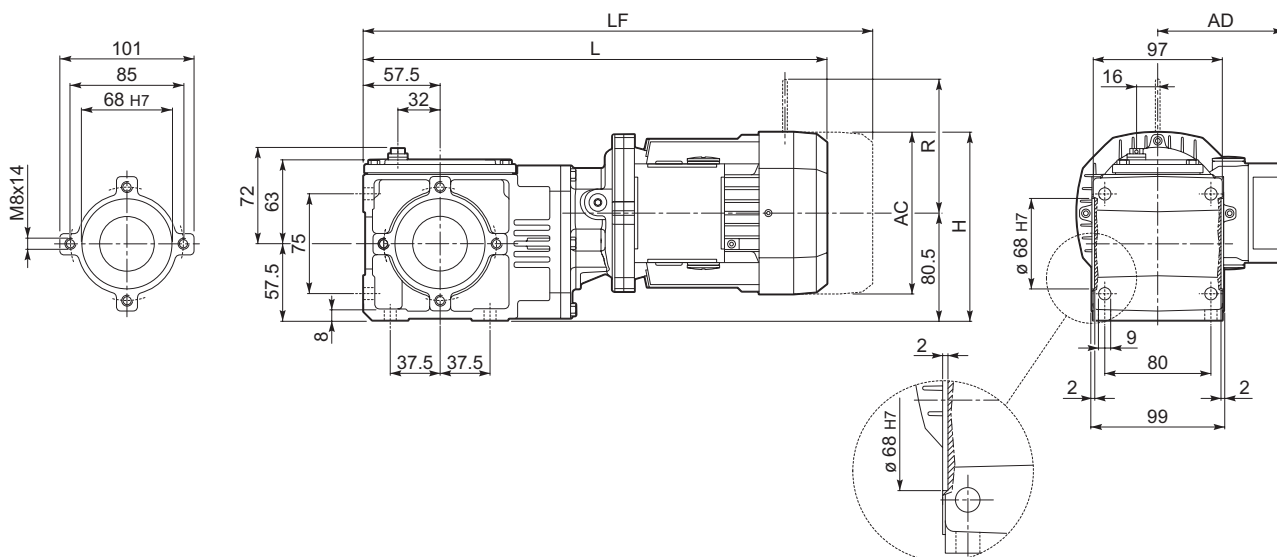
i _N	A 05	A 10	A 20	A 30	A 35	A 41	A 50	A 55	A 60	A 70	A 80	A 90
5.0								4.94505				
5.6	5.46559	5.46559	5.35117	5.41311	5.41311	5.24476						
6.3	6.33484	6.33484	6.53846	6.41026	6.41026			6.41026				
7.1	7.21154	7.21154	7.28745	7.02341	7.02341	7.12251						
8.0	8.51648	8.51648	8.37104	8.46154	8.46154	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	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	855.27273	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





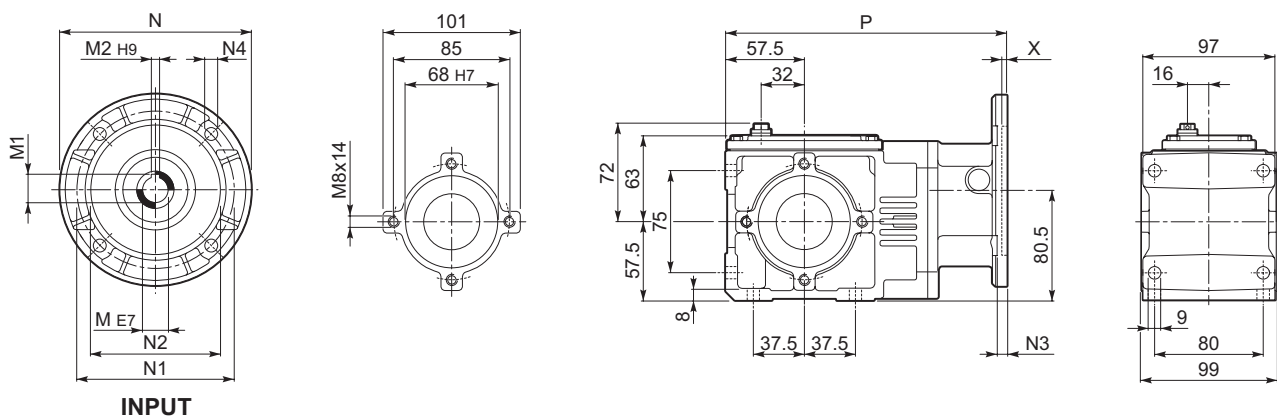
44 DIMENSIONS

A 05...M



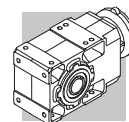
			AC	H	L	AD		LF		M...FD		M...FA	
										R	AD	R	AD
A 05 2	S05	M05	121	141	360.5	95	7.5	426.5	9	96	122	116	95
A 05 2	S1	M1	138	149.5	389.5	108	11.5	450.5	14	103	135	124	108
A 05 2	S2	M2S	156	158.5	418.5	119	15.5	488.5	19	129	146	134	119

A 05...P(IEC)

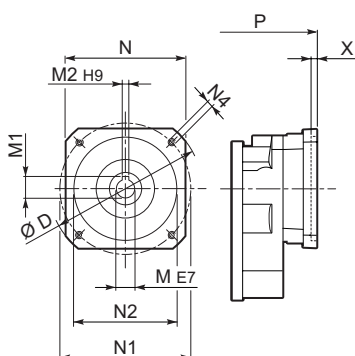
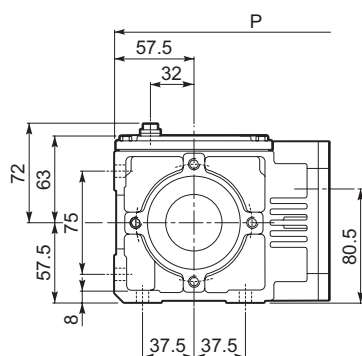


		M	M1	M2	N	N1	N2	N3	N4	X	P	
A 05 2	P63	11	12.8	4	140	115	95	7	9.5	3.5	206	5
A 05 2	P71	14	16.3	5	160	130	110	7	9.5	4	213	5
A 05 2	P80	19	20.8#	6	200	165	130	7	11.5	4	223	5.5

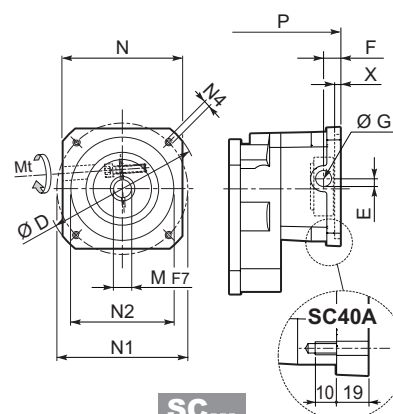
Lowered key of Bonfiglioli supply



A 05...SK / SC



SK...

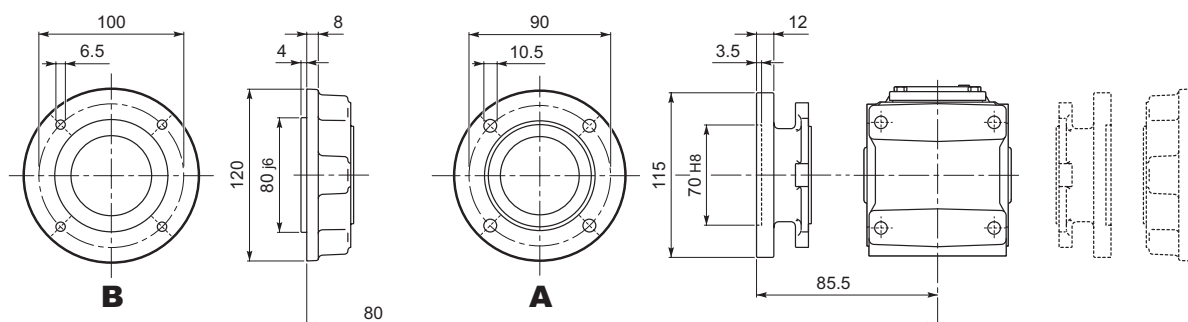


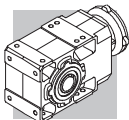
SC...

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

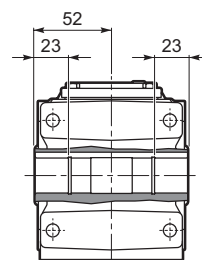
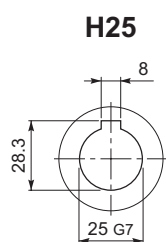
A 05...F...



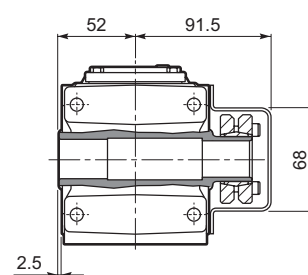
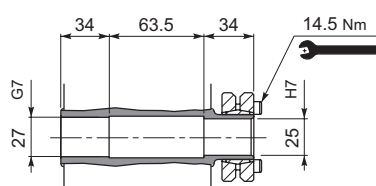


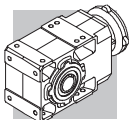
A 05

A 05...UH

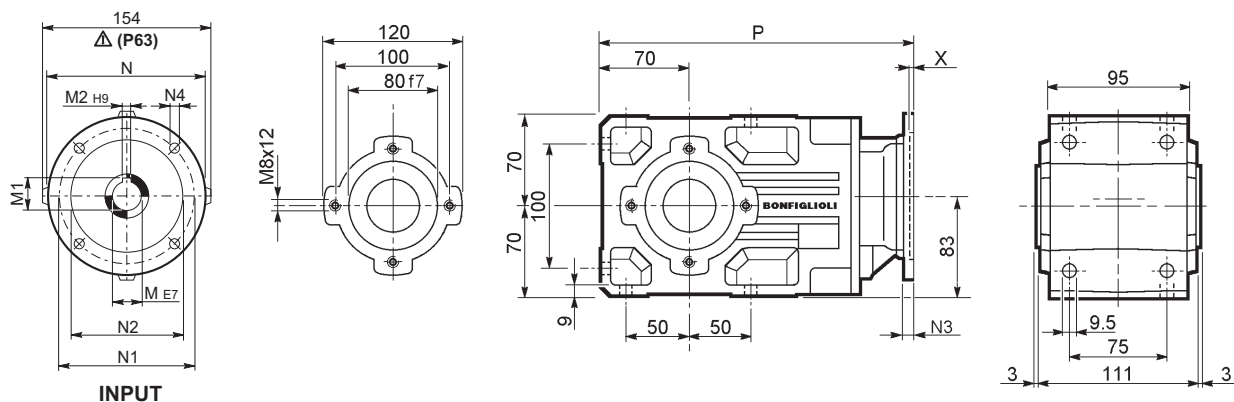


A 05...US



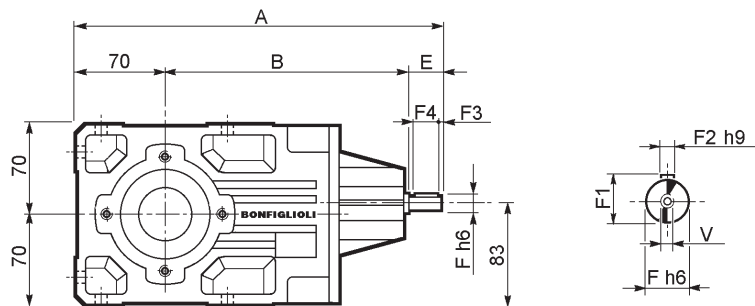


A 10...P(IEC)

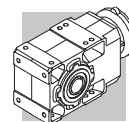


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		11	12.8	4	140	115	95	—	M8x10	4	282.5	8
		14	16.3	5	160	130	110	—	M8x10	4.5	282.5	9
		19	21.8	6	200	165	130	—	M10x12	4	302	9
		24	27.3	8	200	165	130	—	M10x12	4	302	9
		28	31.3	8	250	215	180	—	M12x16	4.5	312	13
		28	31.3	8	250	215	180	—	M12x16	4.5	312	13

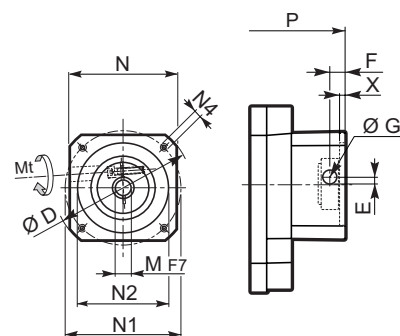
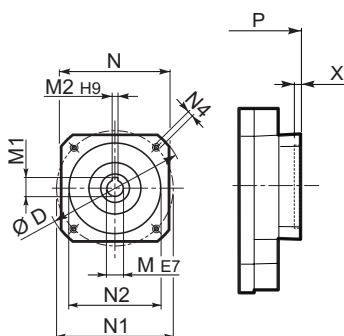
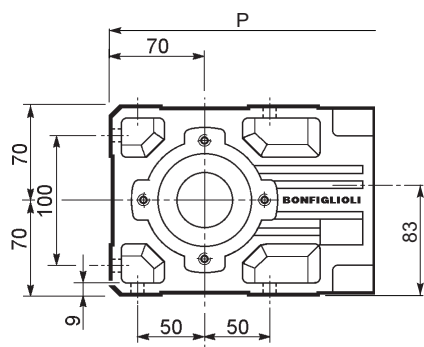
A 10...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
		289.5	179.5	40	16	18	5	2.5	35	M6x16	7.8



A 10...SK / SC



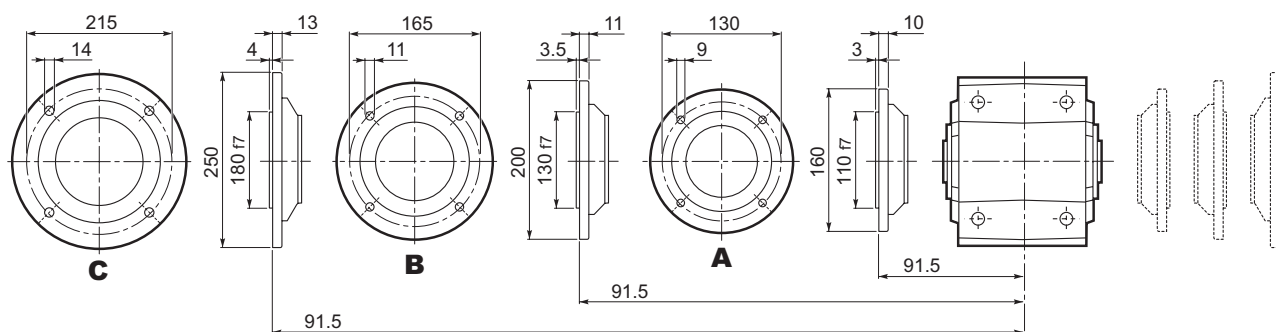
SK...

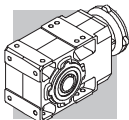
SC...

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

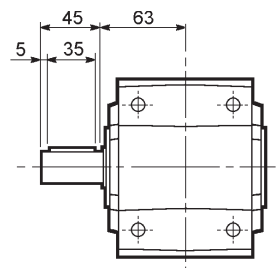
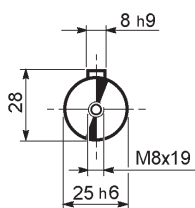
A 10...F...



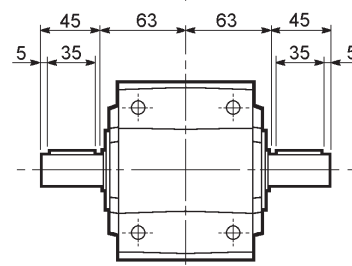
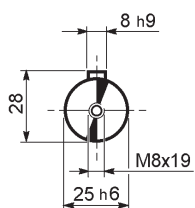


A 10

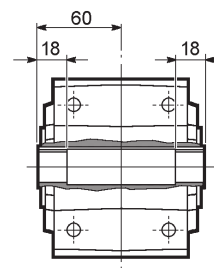
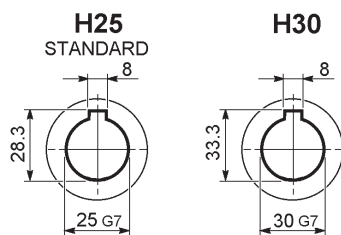
A 10...UR



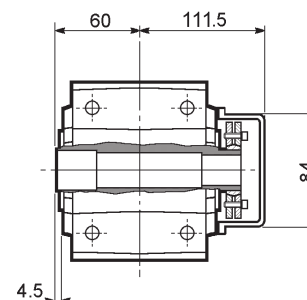
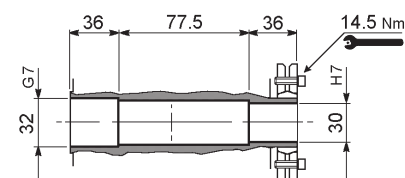
A 10...UD



A 10...UH

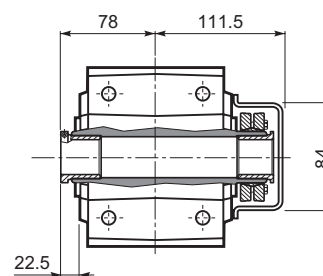
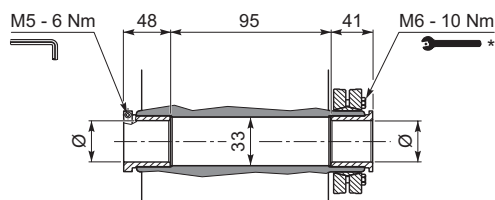


A 10...US

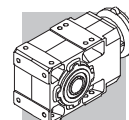


A 10...QF

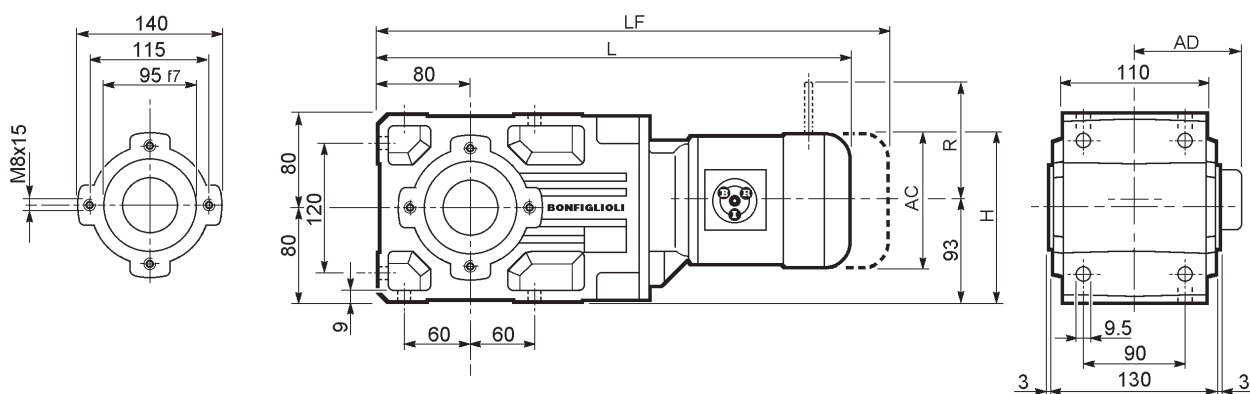
	Ø
QF25	25
QF30	30



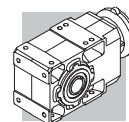
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



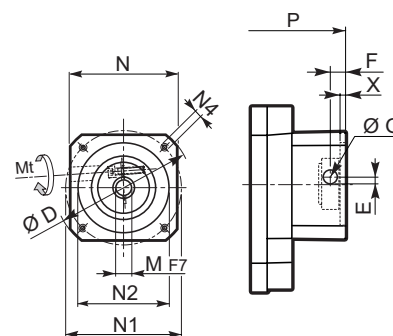
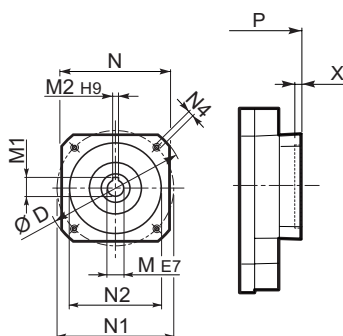
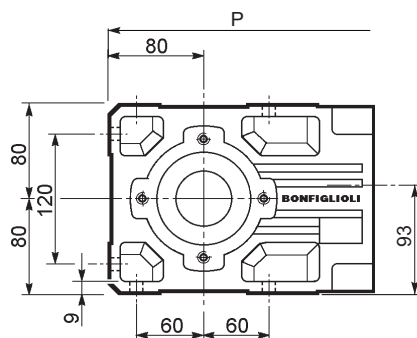
A 20...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	 Kg	LF	 Kg	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	M2S	156	161	490	119	22	560	26	129	146	134	119
A 20 2	S3	M3S	195	180.5	533	142	27	629	34	160	158	160	142
A 20 2	S3	M3L	195	180.5	565	142	34	656	41	160	158	160	142
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	M2S	156	161	545.5	119	23	615.5	27	129	146	134	119
A 20 3	S3	M3S	195	180.5	588.5	142	28	684.5	35	160	158	160	142
A 20 3	S3	M3L	195	180.5	620.5	142	35	711.5	42	160	158	160	142



A 20...SK / SC



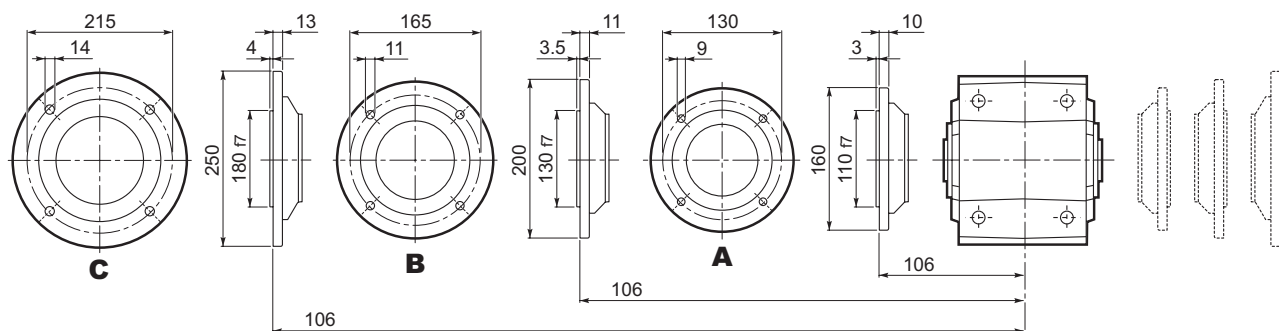
SK...

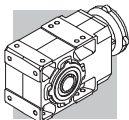
SC...

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

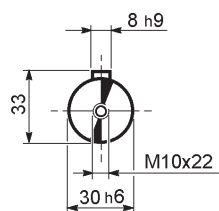
A 20...F...



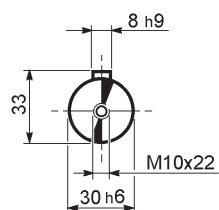


A 20

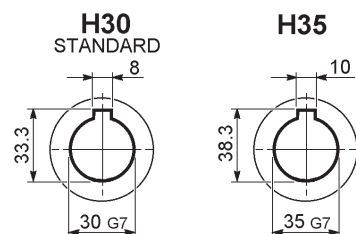
A 20...UR



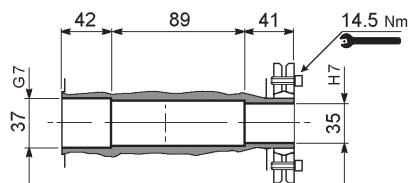
A 20...UD



A 20...UH

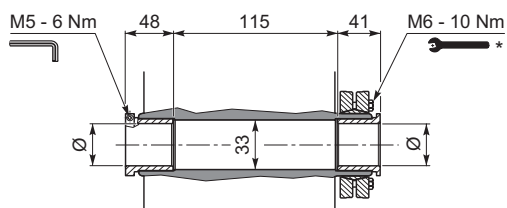


A 20...US

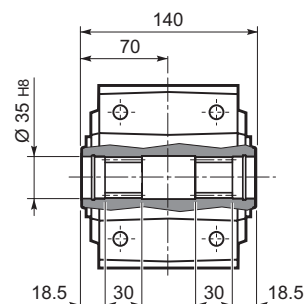
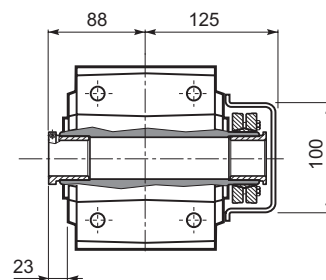
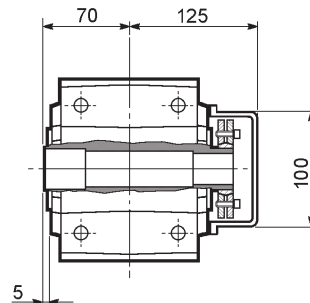
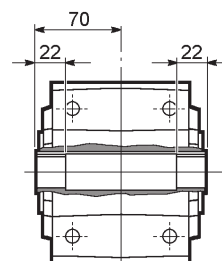
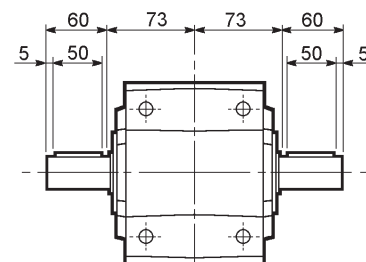
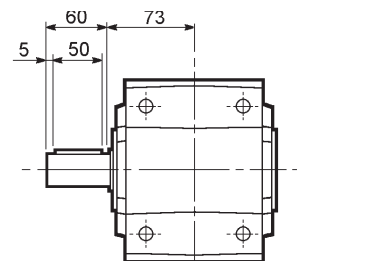


A 20...QF

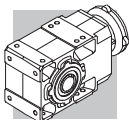
	Ø
QF25	25
QF30	30



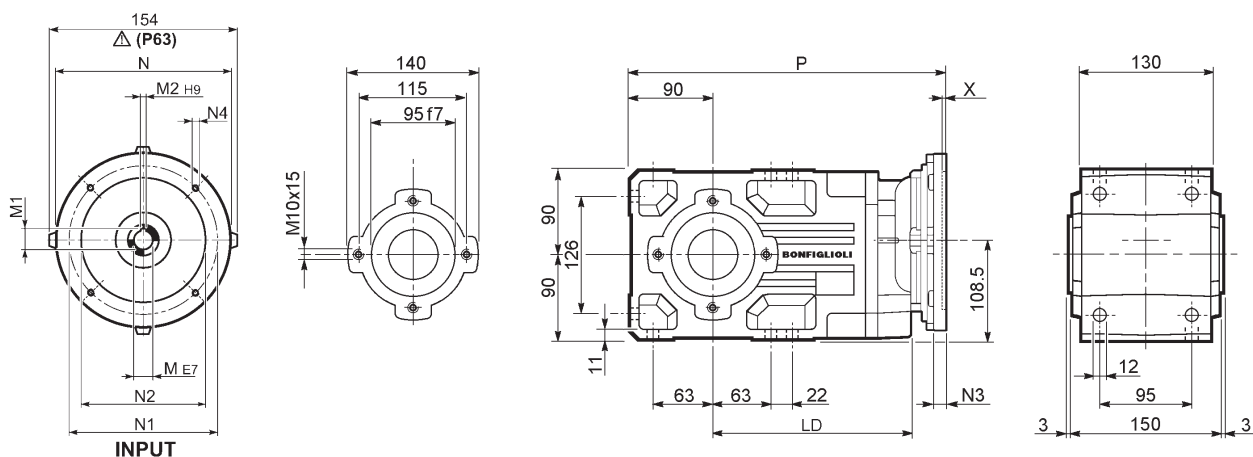
A 20...UV



* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.

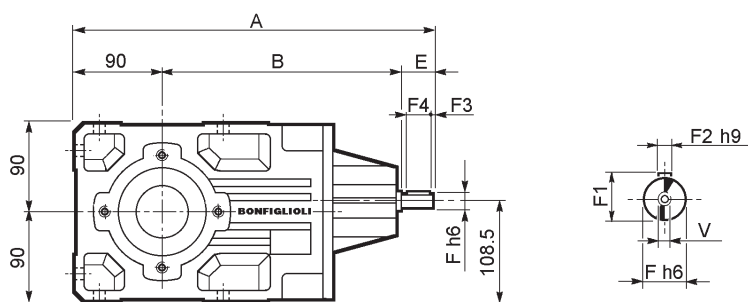


A 30...P(IEC)

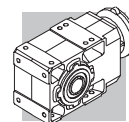


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 30 2	P63	213	11	12.8	4	140	115	95	—	M8x19	4	333	16
A 30 2	P71	213	14	16.3	5	160	130	110	—	M8x16	4.5	333	16
A 30 2	P80	223	19	21.8	6	200	165	130	—	M10x12	4	352.5	17
A 30 2	P90	223	24	27.3	8	200	165	130	—	M10x12	4	352.5	17
A 30 2	P100	223	28	31.3	8	250	215	180	—	M12x16	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	—	M10x12	4	410	18
A 30 3	P90	—	24	27.3	8	200	165	130	—	M10x12	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

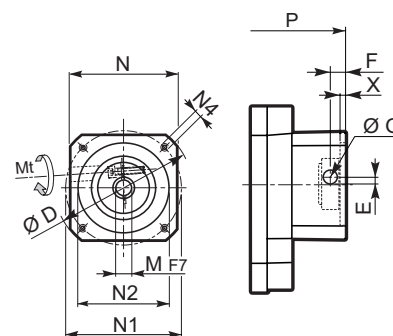
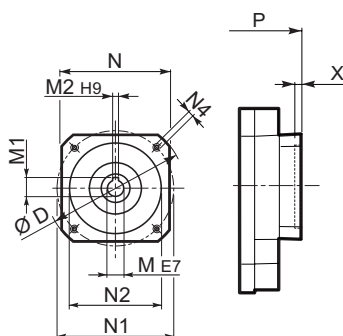
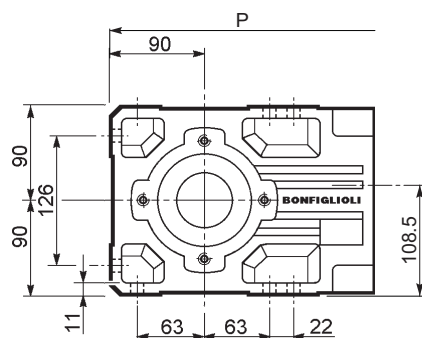
A 30...HS



		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



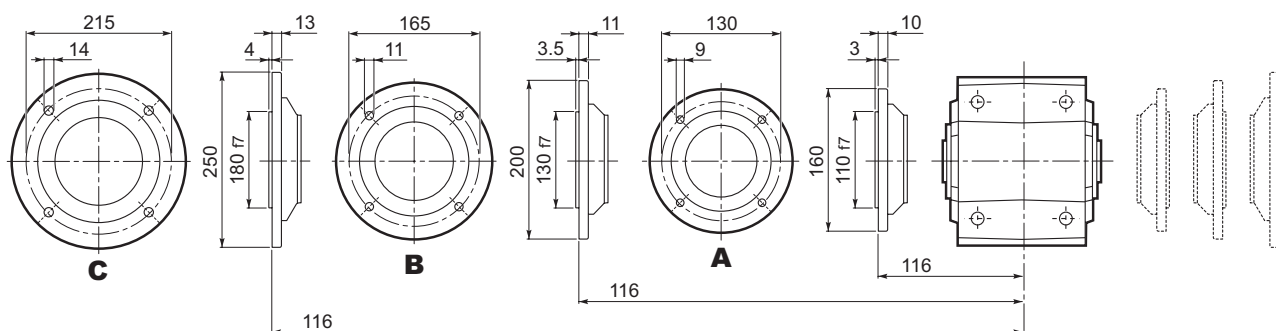
SK...

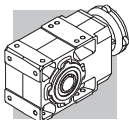
SC...

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

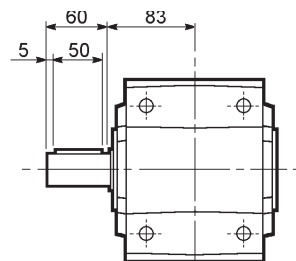
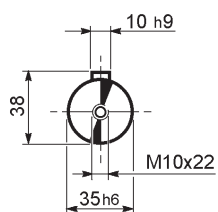
A 30...F...



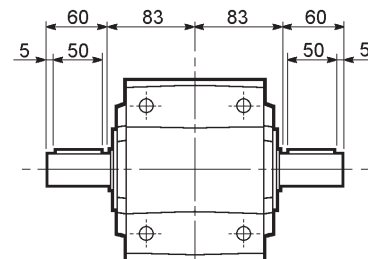
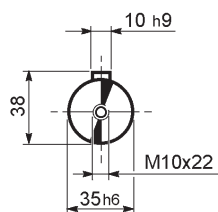


A 30

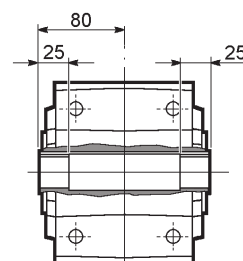
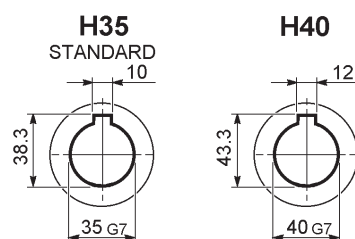
A 30...UR



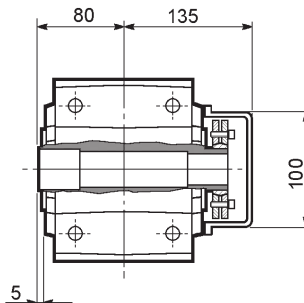
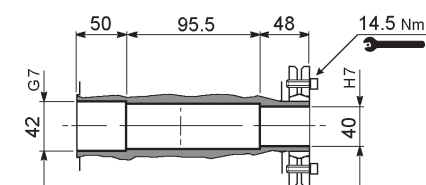
A 30...UD



A 30...UH

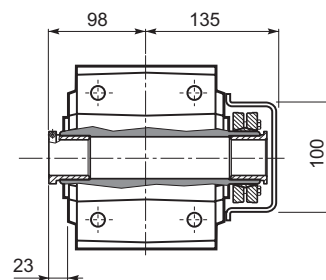
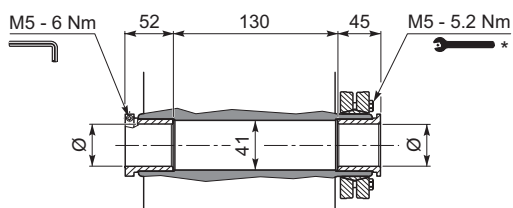


A 30...US

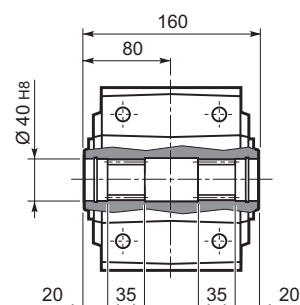


A 30...QF

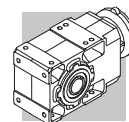
	Ø
QF35	35
QF40	40



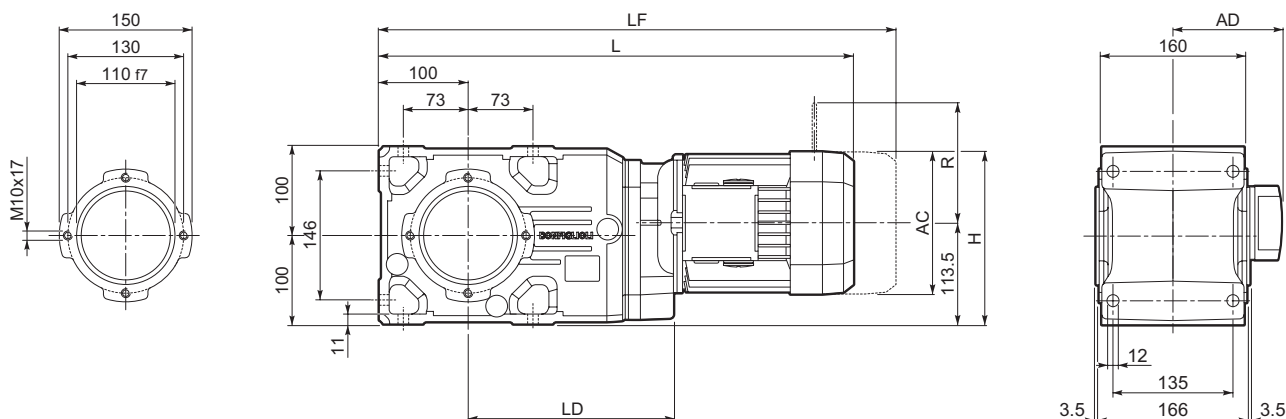
A 30...UV



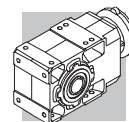
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



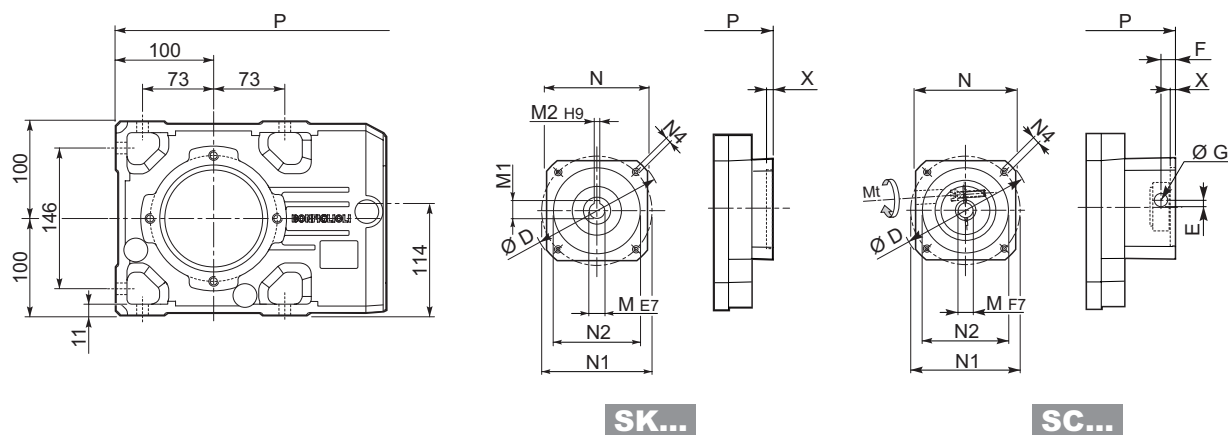
A 35...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD	Kg		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	M2S	156	191.5	543.5	229.5	119	37		613.5	41	129	146	134	119
A 35 2	S3	M3S	195	211	586.5	239.5	142	42		682.5	50	160	158	160	142
A 35 2	S3	M3L	195	211	618.5	239.5	142	50		709.5	57	160	158	160	142
A 35 2	S4	M4S	258	242.5	726.5	—	193	89		835.5	107	226	210	217	193
A 35 2	S4	M4L	258	242.5	761.5	—	193	97		860.5	115	226	210	217	193
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	M2S	156	191.5	601	—	119	37		671	41	129	146	134	119
A 35 3	S3	M3S	195	211	644	—	142	42		740	50	160	158	160	142
A 35 3	S3	M3L	195	211	676	—	142	50		767	57	160	158	160	142



A 35...SK / SC



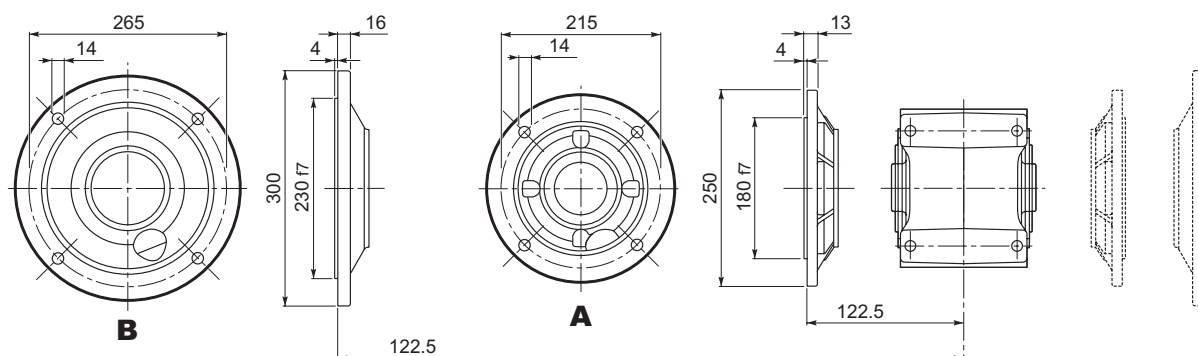
SK...

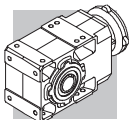
SC...

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

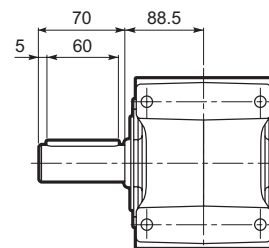
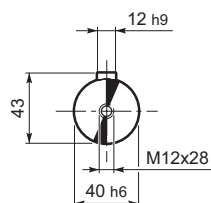
A 35...F...



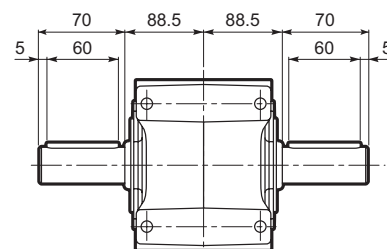
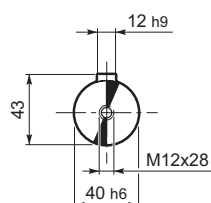


A 35

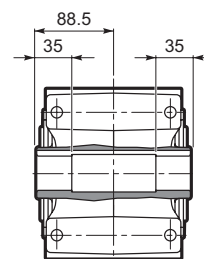
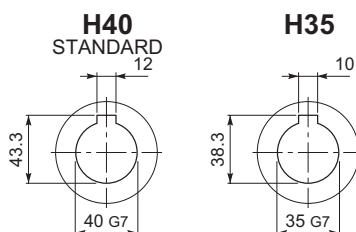
A 35...UR



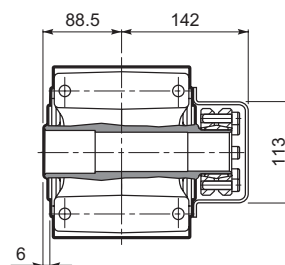
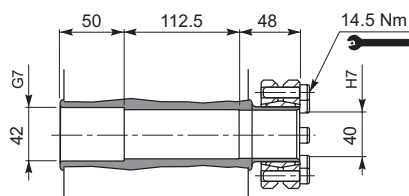
A 35...UD



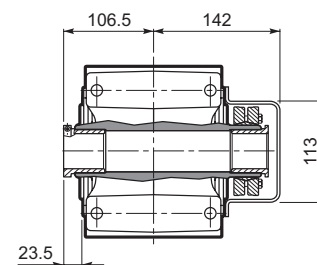
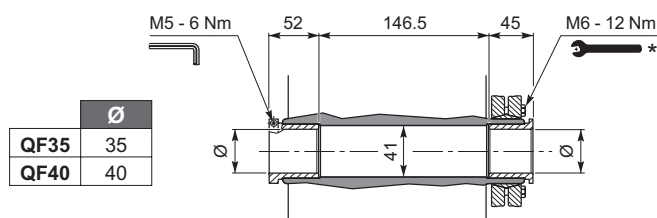
A 35...UH



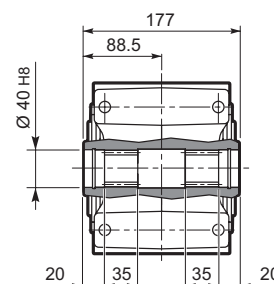
A 35...US



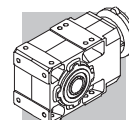
A 35...QF



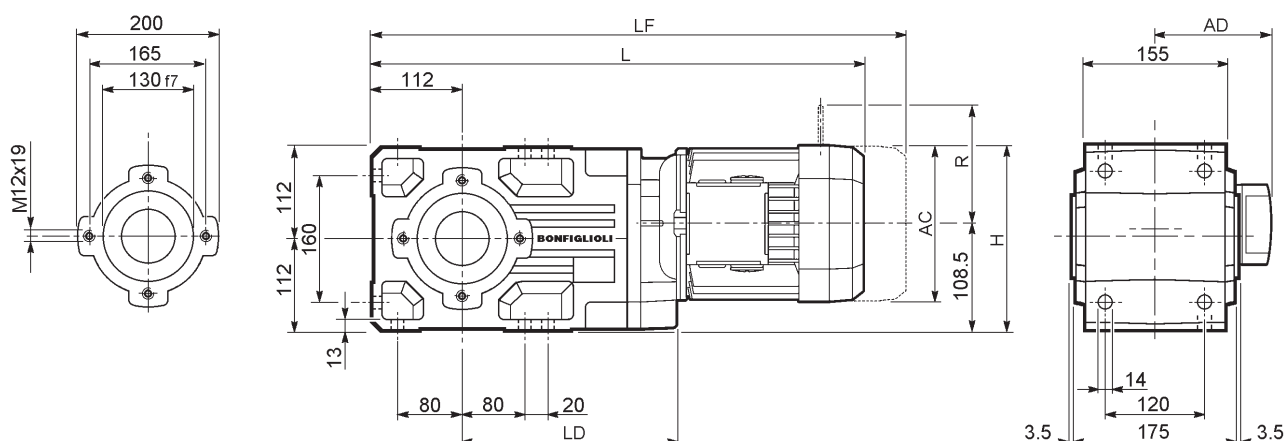
A 35...UV



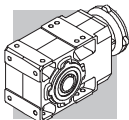
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



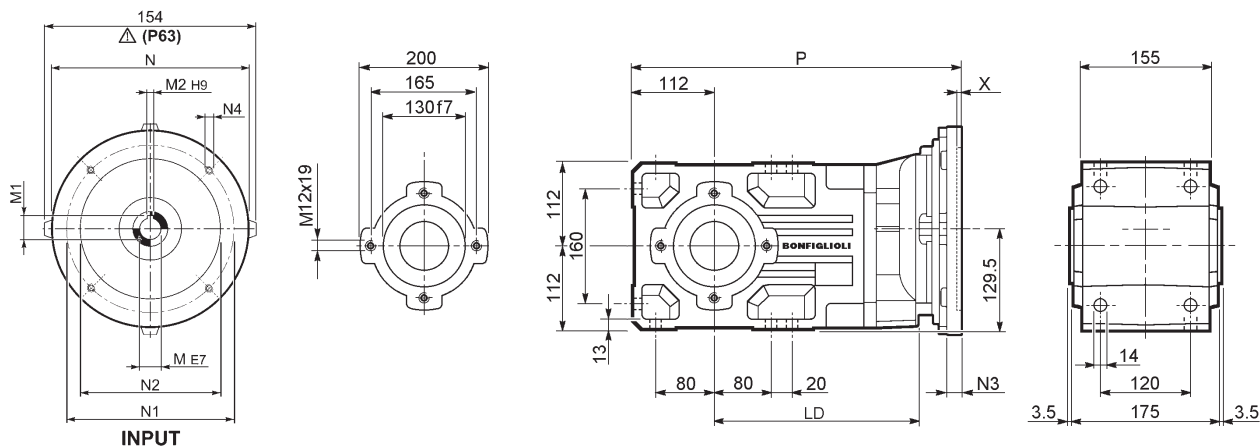
A 41...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD	Kg		LF	Kg	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	M2S	156	207.5	559	232	119	45		629	49	129	146	134	119
A 41 2	S3	M3S	195	227	602	248	142	50		698	58	160	158	160	142
A 41 2	S3	M3L	195	227	634	248	142	58		725	65	160	158	160	142
A 41 2	S4	M4	258	258.5	742	—	193	92		851	110	226	210	217	193
A 41 2	S4	M4LC	258	258.5	777	—	193	100		876	118	226	210	217	193
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	M2S	156	207.5	620.5	—	119	50		690.5	58	129	146	134	119
A 41 3	S3	M3S	195	227	663.5	—	142	55		759.5	62	160	158	160	142
A 41 3	S3	M3L	195	227	695.5	—	142	61		786.5	68	160	158	160	142

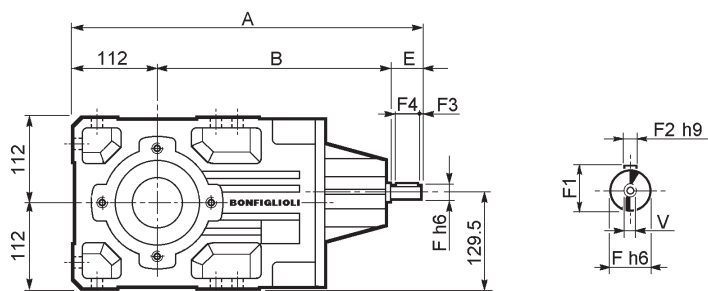


A 41...P(IEC)

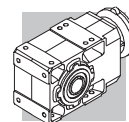


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 41 2	P63	232	11	12.8	4	140	115	95	—	M8x19	4	375	37
A 41 2	P71	232	14	16.3	5	160	130	110	—	M8x16	4.5	375	38
A 41 2	P80	248	19	21.8	6	200	165	130	—	M10x12	4	394.5	39
A 41 2	P90	248	24	27.3	8	200	165	130	—	M10x12	4	394.5	39
A 41 2	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	404.5	43
A 41 2	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	404.5	43
A 41 2	P132	—	38	41.3	10	300	265	230	16	14	5	441	46
A 41 3	P63	—	11	12.8	4	140	115	95	—	M8x19	4	436.5	39
A 41 3	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	436.5	39
A 41 3	P80	—	19	21.8	6	200	165	130	—	M10x12	4	456	40
A 41 3	P90	—	24	27.3	8	200	165	130	—	M10x12	4	456	40
A 41 3	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	466	44
A 41 3	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	466	44

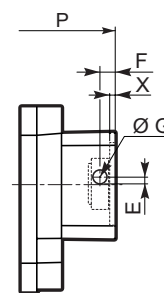
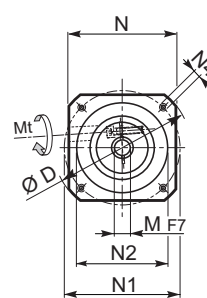
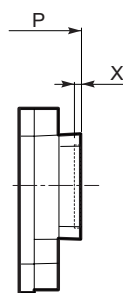
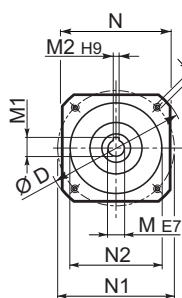
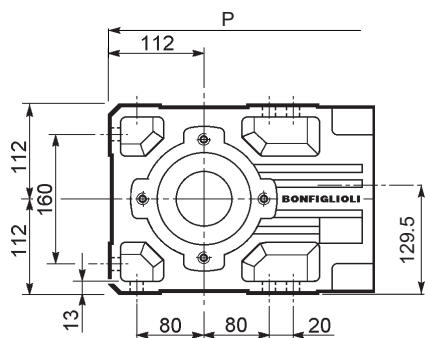
A 41...HS



		A	B	E	F	F1	F2	F3	F4	V	Kg
A 41 2	HS	464	302.5	50	24	27	8	2.5	45	M8x19	40.7
A 41 3		486.5	334.5	40	19	21.5	6	2.5	35	M6x16	39.5



A 41...SK / SC



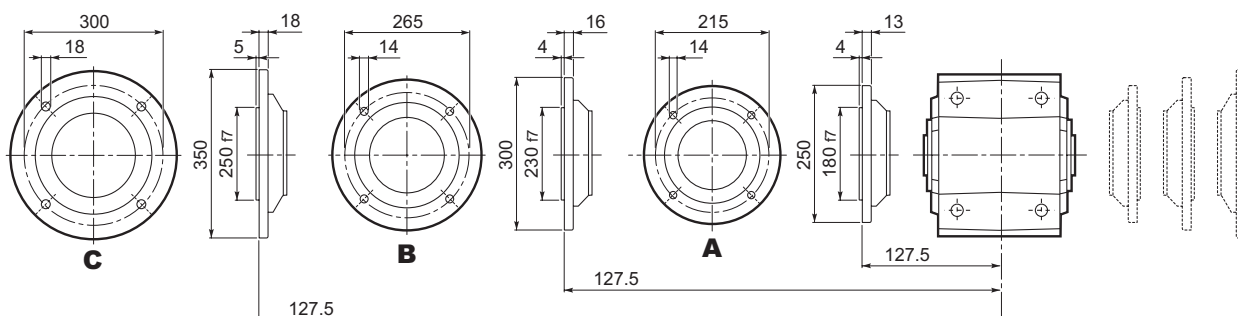
SK...

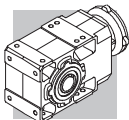
SC...

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

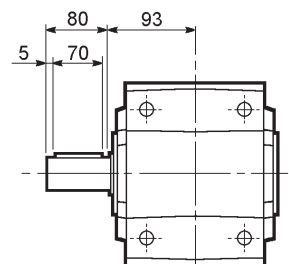
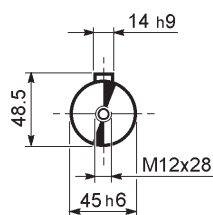
A 41...F...



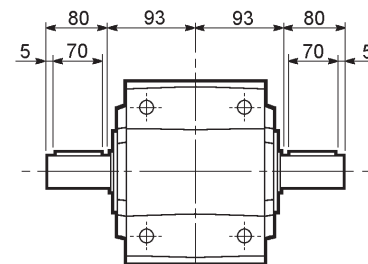
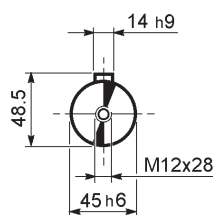


A 41

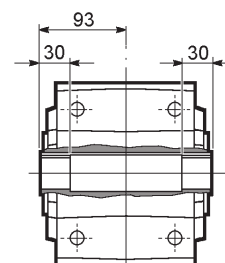
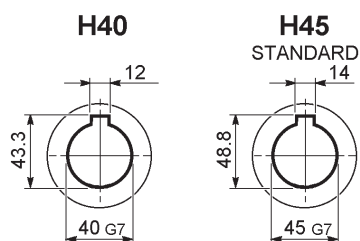
A 41...UR



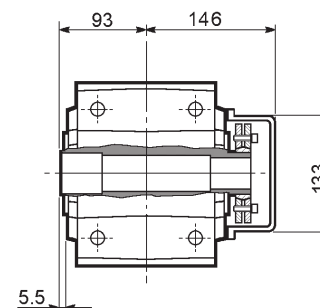
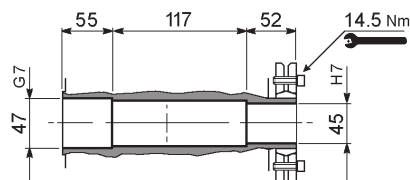
A 41...UD



A 41...UH

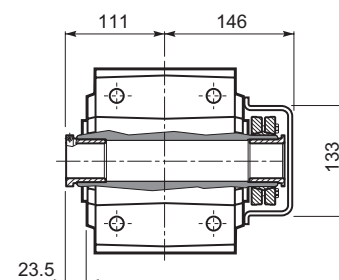
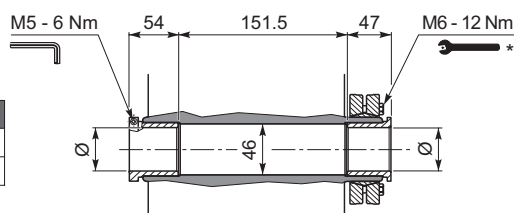


A 41...US

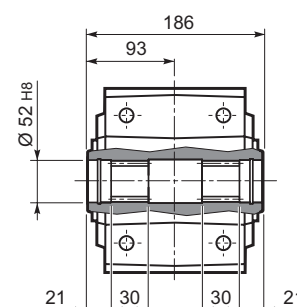


A 41...QF

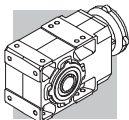
	Ø
QF40	40
QF45	45



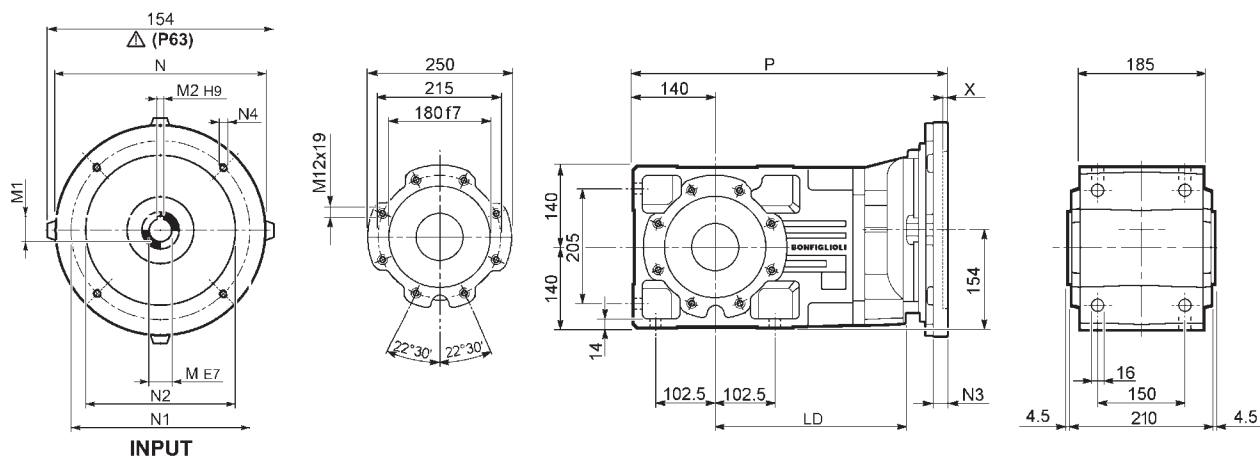
A 41...UV



* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.

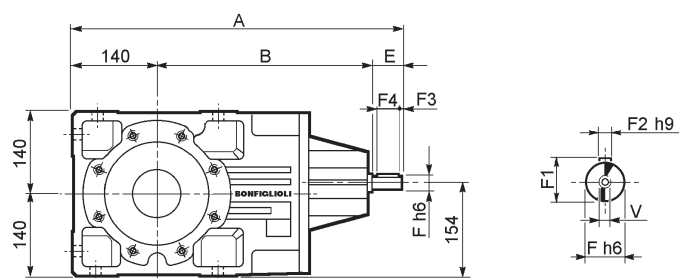


A 50...P(IEC)

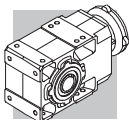


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 50 2/3	P63	284.5	11	12.8	4	140	115	95	—	M8x19	4	454.5	60
A 50 2/3	P71	284.5	14	16.3	5	160	130	110	—	M8x16	4.5	454.5	60
A 50 2/3	P80	299.5	19	21.8	6	200	165	130	—	M10x12	4	474	61
A 50 2/3	P90	299.5	24	27.3	8	200	165	130	—	M10x12	4	474	61
A 50 2/3	P100	284.5	28	31.3	8	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	—	M10x12	4	545.5	63
A 50 4	P90	—	24	27.3	8	200	165	130	—	M10x12	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

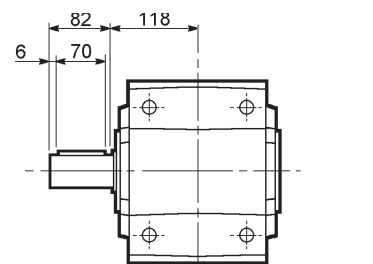
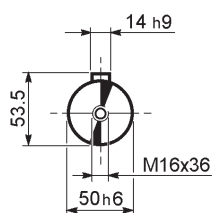


		A	B	E	F	F1	F2	F3	F4	V	Kg
A 50 2	HS	543.5	353.5	50	24	27	8	2.5	45	M8x19	72
A 50 3		543.5	353.5	50	24	27	8	2.5	45	M8x19	76
A 50 4		576	396	40	19	21.5	6	2.5	35	M6x16	77

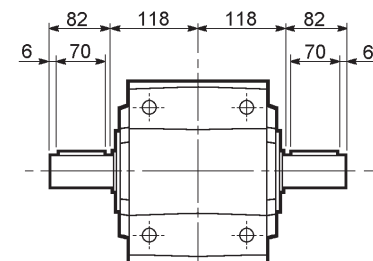
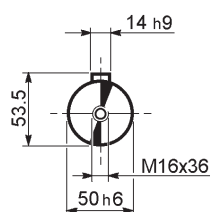


A 50

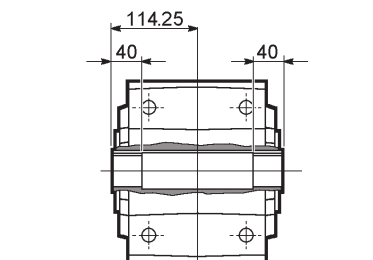
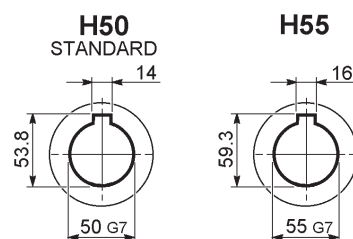
A 50...UR



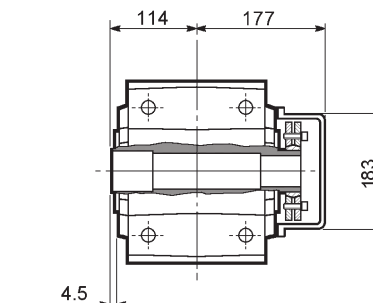
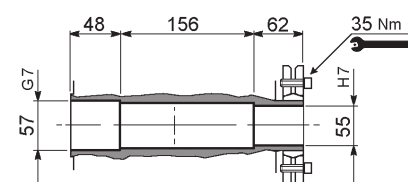
A 50...UD



A 50...UH

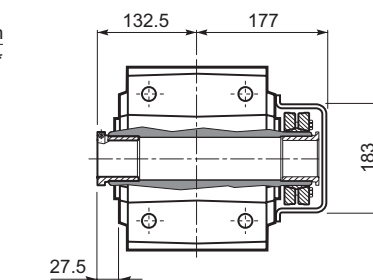
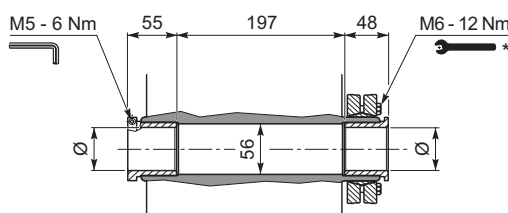


A 50...US

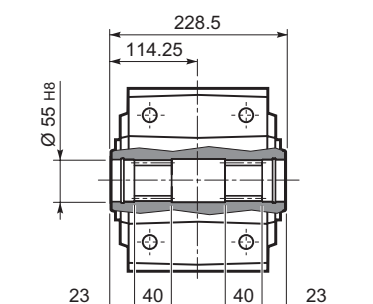


A 50...QF

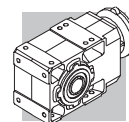
	Ø
QF50	50
QF55	55



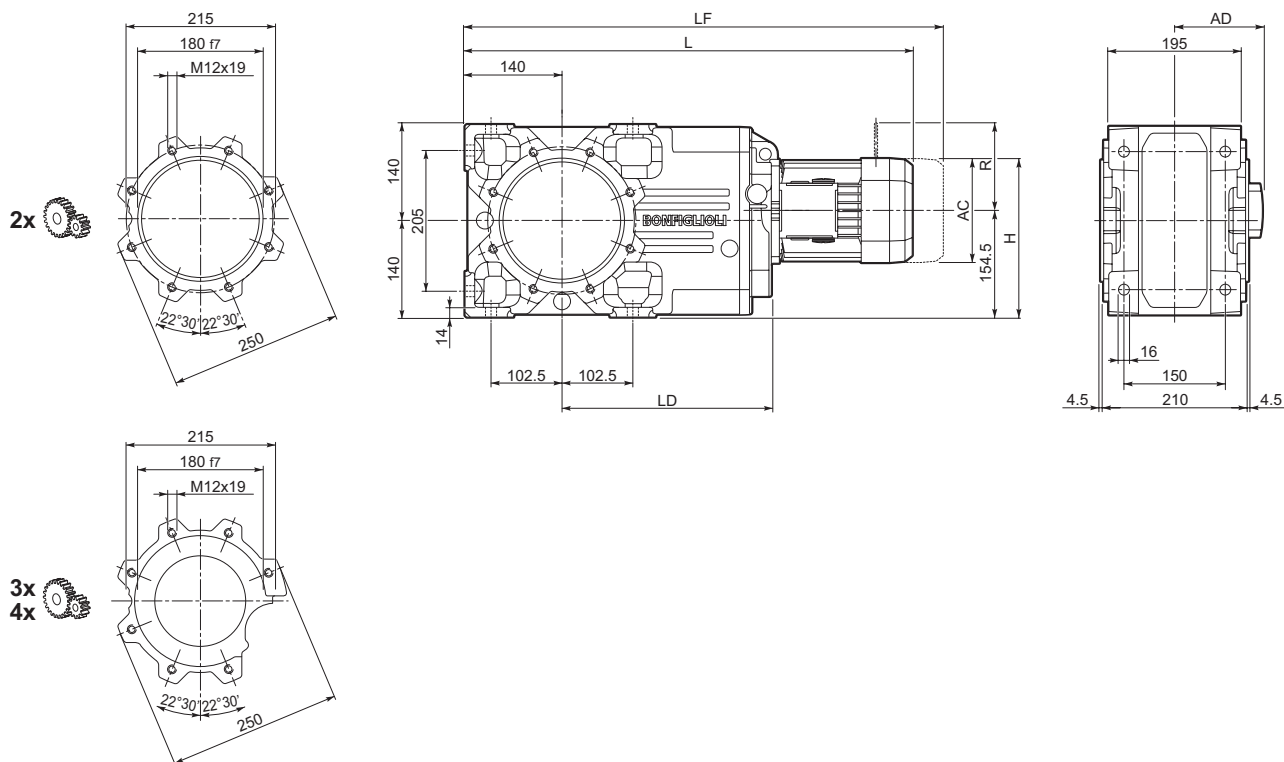
A 50...UV



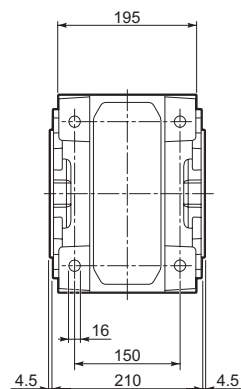
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



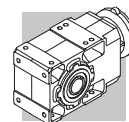
A 55...M



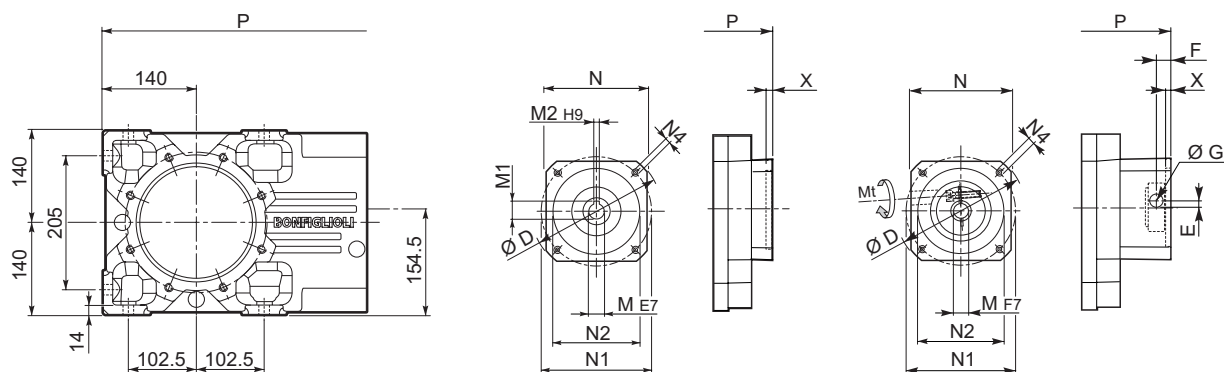
										M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD	Kg		LF	Kg	R	AD	R	AD
A 55 3	S1	M1	138	198.5	627.5	—	108	81		688.5	84	103	135	124	108
A 55 2/3	S2	M2S	156	232	656.5	302.5	119	88		726.5	92	129	146	134	119
A 55 2/3	S3	M3S	195	251	699.5	317.5	142	93		795.5	99	160	158	160	142
A 55 2/3	S3	M3L	195	251	731.5	317.5	142	101		822.5	108	160	158	160	142
A 55 2/3	S4	M4	258	283	839.5	302.5	193	135		948.5	153	226	210	217	193
A 55 2/3	S4	M4LC	258	283	874.5	302.5	193	143		973.5	161	226	210	217	193
A 55 2/3	S5	M5S	310	309.5	926	—	245	163		1066	193	266	245	247	245
A 55 2/3	S5	M5L	310	309.5	970	—	245	179		1110	209	266	245	247	245
A 55 4	S1	M1	138	223	699	—	108	82		760	85	103	135	124	108
A 55 4	S2	M2S	156	232	728	—	119	86		798	90	129	146	134	119
A 55 4	S3	M3S	195	251.5	771	—	142	91		867	98	160	158	160	142
A 55 4	S3	M3L	195	251.5	803	—	142	98		894	105	160	158	160	142



A 55...HS



A 55...SK / SC



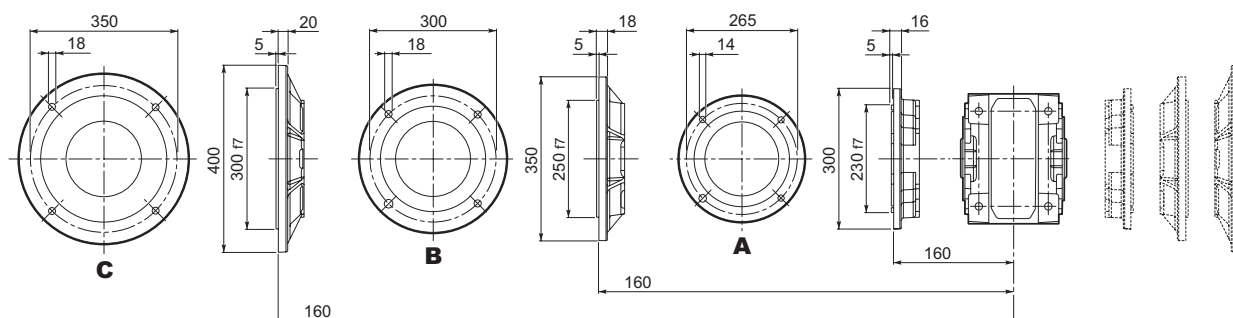
SK...

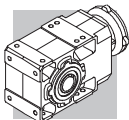
SC...

		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
A 55 3	SK80B	120	14	16.3	5	96	100	80	M6x12	4	492	—	81
A 55 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	492	563.5	81/81/77
A 55 3/4	SK95A	130	14	16.3	5	102	115	95	M8x12	4	492	563.5	81/81/77
A 55 2/3/4	SK95B	130	19	21.8	6	102	115	95	M8x12	4	492	563.5	81/81/77
A 55 2/3/4	SK95C	130	24	27.3	8	102	115	95	M8x12	4	492	563.5	81/81/77
A 55 2/3/4	SK110A	150	19	21.8	6	120	130	110	M8x12	5	492	593	81/81/78
A 55 2/3/4	SK110B	150	24	27.3	8	120	130	110	M8x12	5	492	593	81/81/78
A 55 2/3/4	SK130A	188	24	27.3	8	142	165	130	M10x20	5	492	593	83/83/79
A 55 2/3	SK130B	189	32	35.3	10	160	165	130	M10x20	5	538.5	—	90/90
A 55 2/3	SK180A	240	32	35.3	10	192	215	180	M12x19	5	538.5	—	90/90
A 55 2/3	SK180B	240	38	41.3	10	192	215	180	M12x19	5	538.5	—	90/90

		Mt	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2/3x	3x	
A 55 3	SC80B	M6 15 Nm	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	515.5	—	82
A 55 2/3/4	SC80C	M6 15 Nm	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	515.5	587	82/82/78
A 55 3/4	SC95A	M6 15 Nm	130	16.5	15	17.75	14	102	115	95	M8x16	4	515.5	587	82/82/78
A 55 2/3/4	SC95B	M6 15 Nm	130	16.5	15	17.75	19	102	115	95	M8x16	4	515.5	587	82/82/78
A 55 2/3/4	SC95C	M6 15 Nm	130	16.5	15	17.75	24	102	115	95	M8x16	4	515.5	587	82/82/78
A 55 2/3/4	SC110A	M6 15 Nm	150	16.5	16	17.75	19	120	130	110	M8x16	5	515.5	587	83/83/79
A 55 2/3/4	SC110B	M6 15 Nm	150	16.5	16	17.75	24	120	130	110	M8x16	5	515.5	587	83/83/79
A 55 2/3/4	SC130A	M6 15 Nm	188	19	16	17.75	24	142	165	130	M10x20	5	515.5	587	84/84/80
A 55 2/3	SC130B	M8 36 Nm	189	20	17	17.75	32	160	165	130	M10x20	5	561.5	—	93/93
A 55 2/3	SC180A	M8 36 Nm	240	20	17.5	17.75	32	192	215	180	M12x24	5	565.5	—	93/93
A 55 2/3	SC180B	M8 36 Nm	240	20	17.5	17.75	38	192	215	180	M12x24	5	565.5	—	93/93

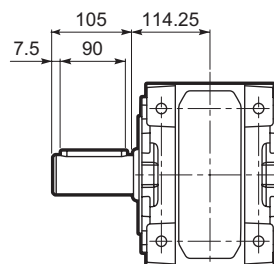
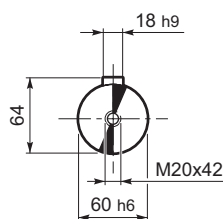
A 55...F...



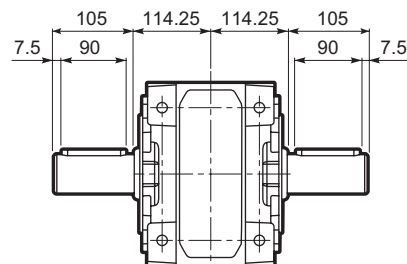
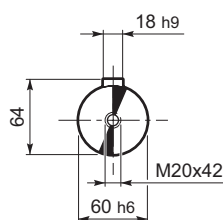


A 55

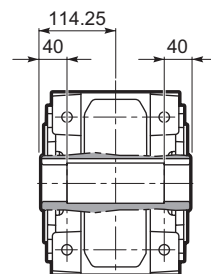
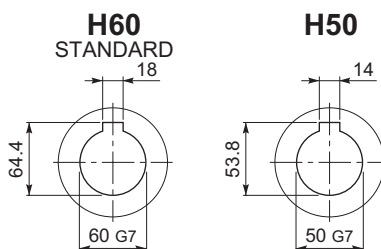
A 55...UR



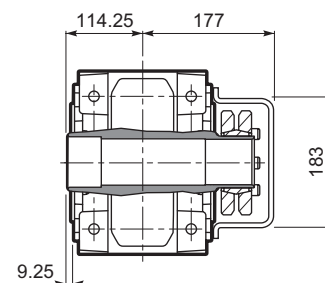
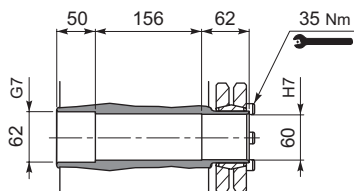
A 55...UD



A 55...UH

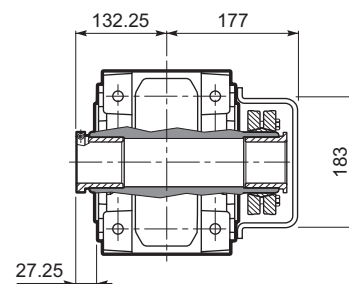
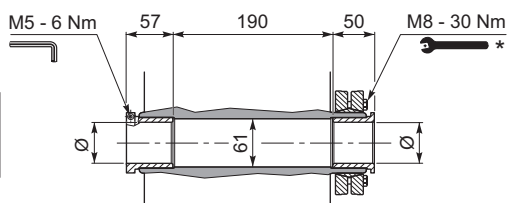


A 55...US

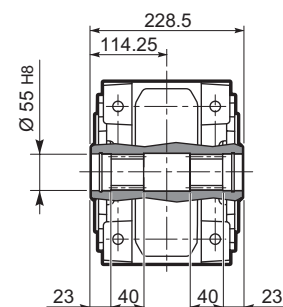


A 55...QF

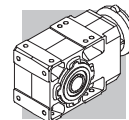
	Ø
QF55	55
QF60	60



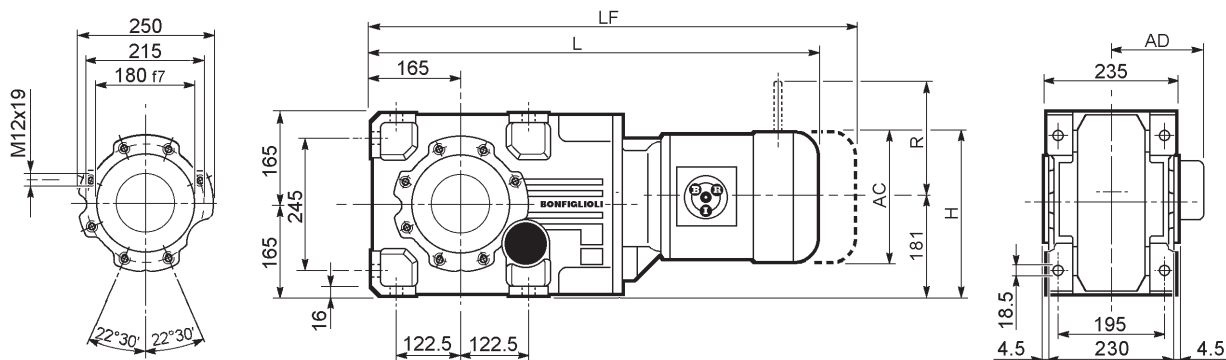
A 55...UV



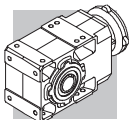
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



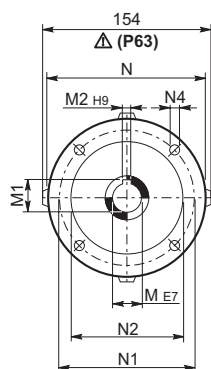
A 60...M



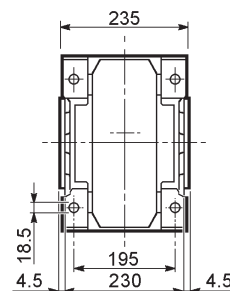
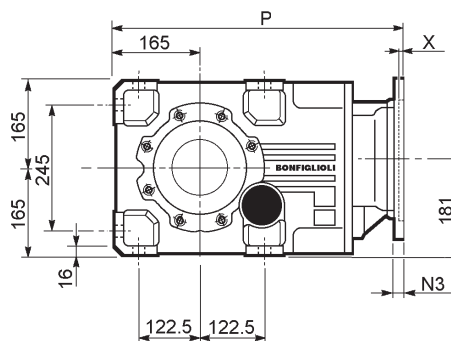
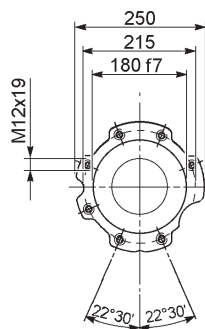
			AC	H	L	AD	Kg	M...FD M...FA		M...FD		M...FA	
								LF	Kg	R	AD	R	AD
A 60 2/3	S2	M2S	156	256.5	700.5	119	98	770.5	102	129	146	134	119
A 60 2/3	S3	M3S	195	276	743.5	142	103	839.5	111	160	158	160	142
A 60 2/3	S3	M3L	195	276	775.5	142	111	866.5	118	160	158	160	142
A 60 2/3	S4	M4	258	307.5	883.5	193	145	992.5	163	226	210	217	193
A 60 2/3	S4	M4LC	258	307.5	918.5	193	153	1017.5	171	226	210	217	193
A 60 2/3	S5	M5S	310	333.5	970	245	173	1110	203	266	245	247	245
A 60 2/3	S5	M5L	310	333.5	1014	245	189	1154	219	266	245	247	245
A 60 4	S1	M1	138	247.5	742	108	100	803	103	103	135	124	108
A 60 4	S2	M2S	156	256.5	771	119	104	841	108	129	146	134	119
A 60 4	S3	M3S	195	276	814	142	109	910	117	160	158	160	142
A 60 4	S3	M3L	195	276	846	142	117	937	124	160	158	160	142



A 60...P(IEC)

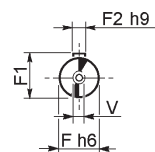
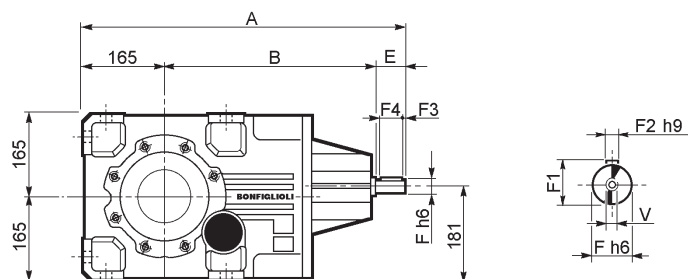


INPUT

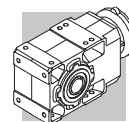


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		11	12.8	4	140	115	95	—	M8x19	4	516.5	90
		14	16.3	5	160	130	110	—	M8x16	4.5	516.5	90
		19	21.8	6	200	165	130	—	M10x12	4	536	91
		24	27.3	8	200	165	130	—	M10x12	4	536	91
		28	31.3	8	250	215	180	—	M12x16	4.5	546	95
		28	31.3	8	250	215	180	—	M12x16	4.5	546	95
		38	41.3	10	300	265	230	16	14	5	582.5	104
		42	45.3	12	350	300	250	23	18	5.5	633	121
		48	51.8	14	350	300	250	23	18	5.5	633	121
		11	12.8	4	140	115	95	—	M8x19	4	587	88
		14	16.3	5	160	130	110	—	M8x16	4.5	587	88
		19	21.8	6	200	165	130	—	M10x12	4	606.5	90
		24	27.3	8	200	165	130	—	M10x12	4	606.5	90
		28	31.3	8	250	215	180	—	M12x16	4.5	616.5	94
		28	31.3	8	250	215	180	—	M12x16	4.5	616.5	94

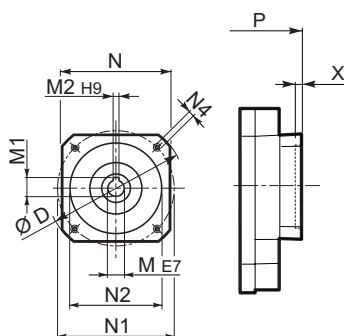
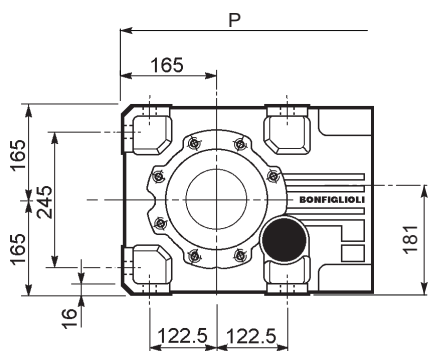
A 60...HS



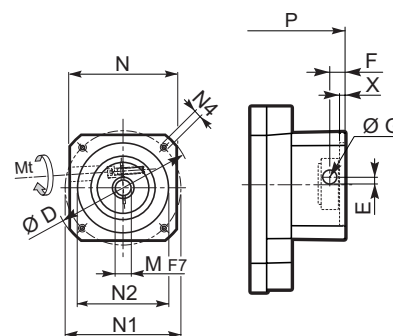
		A	B	E	F	F1	F2	F3	F4	V	Kg
		633	408	60	28	31	8	5.0	50	M10x22	106
		633	408	60	28	31	8	5.0	50	M10x22	106
		676	461	50	24	27	8	2.5	45	M8x19	112



A 60...SK / SC



SK...

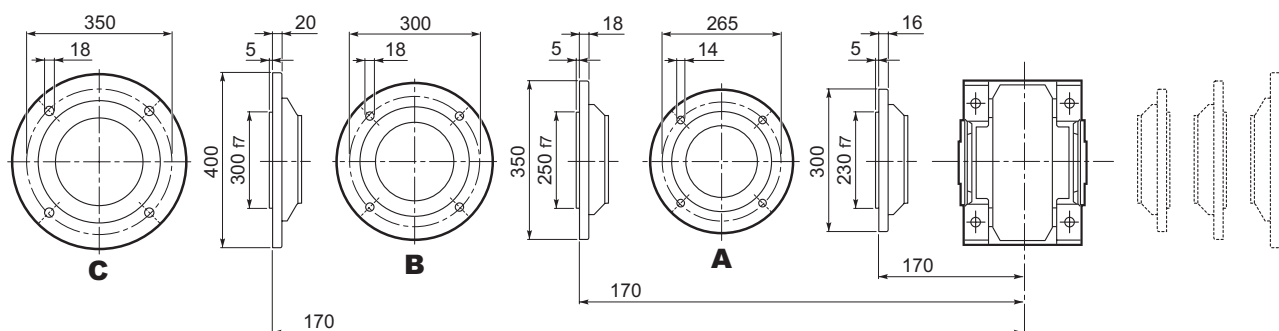


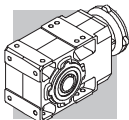
SC...

		D	M	M1	M2	N	N1	N2	N4	X	P		Kg
											2/3x	4x	
A 60 4	SK80B	120	14	16.3	5	96	100	80	M6x12	4	—	606.5	89
A 60 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	536	606.5	93/93/92
A 60 2/3/4	SK95A	130	14	16.3	5	102	115	95	M8x12	4	536	606.5	93/93/92
A 60 2/3/4	SK95B	130	19	21.8	6	102	115	95	M8x12	4	536	606.5	93/93/92
A 60 2/3/4	SK95C	130	24	27.3	8	102	115	95	M8x12	4	536	606.5	93/93/92
A 60 2/3/4	SK110A	140	19	21.8	6	120	130	110	M8x12	5	536	606.5	93/93/92
A 60 2/3/4	SK110B	140	24	27.3	8	120	130	110	M8x12	5	536	606.5	93/93/92
A 60 2/3/4	SK130A	188	24	27.3	8	142	165	130	M10x20	5	536	606.5	97/97/103
A 60 2/3	SK130B	189	32	35.3	10	160	165	130	M10x20	5	582.5	—	102/102
A 60 2/3	SK180A	240	32	35.3	10	192	215	180	M12x19	5	582.5	—	102/102
A 60 2/3	SK180B	240	38	41.3	10	192	215	180	M12x19	5	582.5	—	102/102

		Mt	D	E	F	G	M	N	N1	N2	N4	X	P		Kg
													2/3x	3x	
A 60 4	SC80B	M6 15 Nm	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	—	630	90
A 60 2/3/4	SC80C	M6 15 Nm	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	559.5	630	94/94/93
A 60 2/3/4	SC95A	M6 15 Nm	130	16.5	15	17.75	14	102	115	95	M8x16	4	559.5	630	94/94/93
A 60 2/3/4	SC95B	M6 15 Nm	130	16.5	15	17.75	19	102	115	95	M8x16	4	559.5	630	94/94/93
A 60 2/3/4	SC95C	M6 15 Nm	130	16.5	15	17.75	24	102	115	95	M8x16	4	559.5	630	94/94/93
A 60 2/3/4	SC110A	M6 15 Nm	140	16.5	16	17.75	19	120	130	110	M8x16	5	559.5	630	95/95/93
A 60 2/3/4	SC110B	M6 15 Nm	140	16.5	16	17.75	24	120	130	110	M8x16	5	559.5	630	95/95/93
A 60 2/3/4	SC130A	M6 15 Nm	188	19	16	17.75	24	142	165	130	M10x20	5	559.5	630	96/96/104
A 60 2/3	SC130B	M8 36 Nm	189	20	17	17.75	32	160	165	130	M10x20	5	605.5	—	105/105
A 60 2/3	SC180A	M8 36 Nm	240	20	17.5	17.75	32	192	215	180	M12x24	5	609.5	—	105/105
A 60 2/3	SC180B	M8 36 Nm	240	20	17.5	17.75	38	192	215	180	M12x24	5	609.5	—	105/105

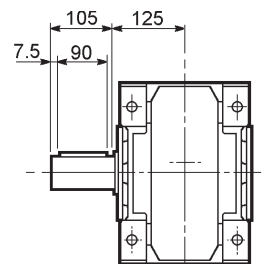
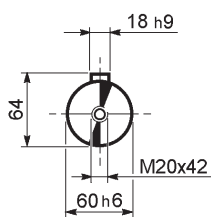
A 60...F...



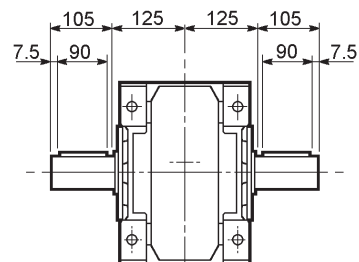
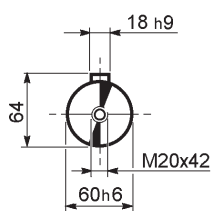


A 60

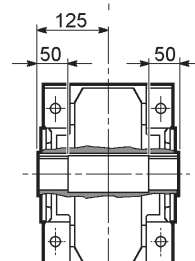
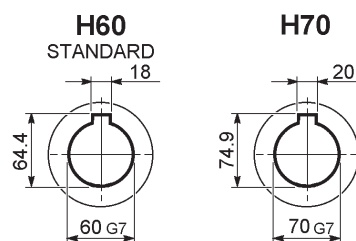
A 60...UR



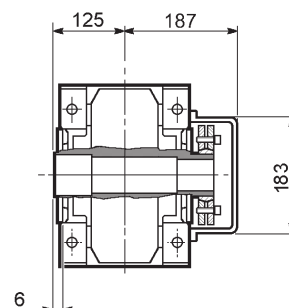
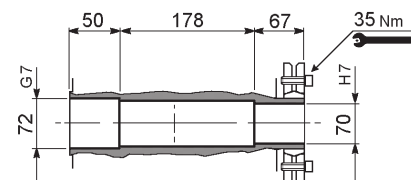
A 60...UD



A 60...UH

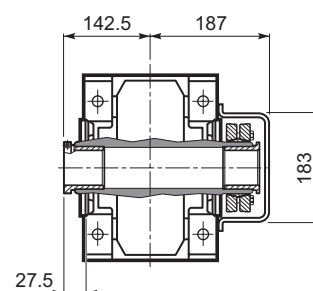
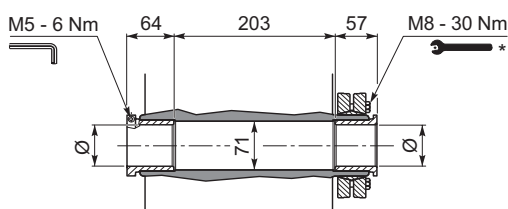


A 60...US

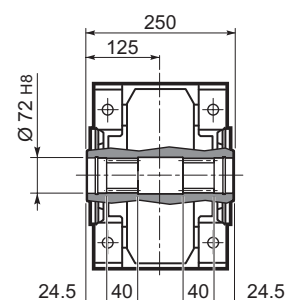


A 60...QF

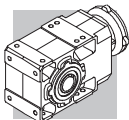
	Ø
QF60	60
QF65	65
QF70	70



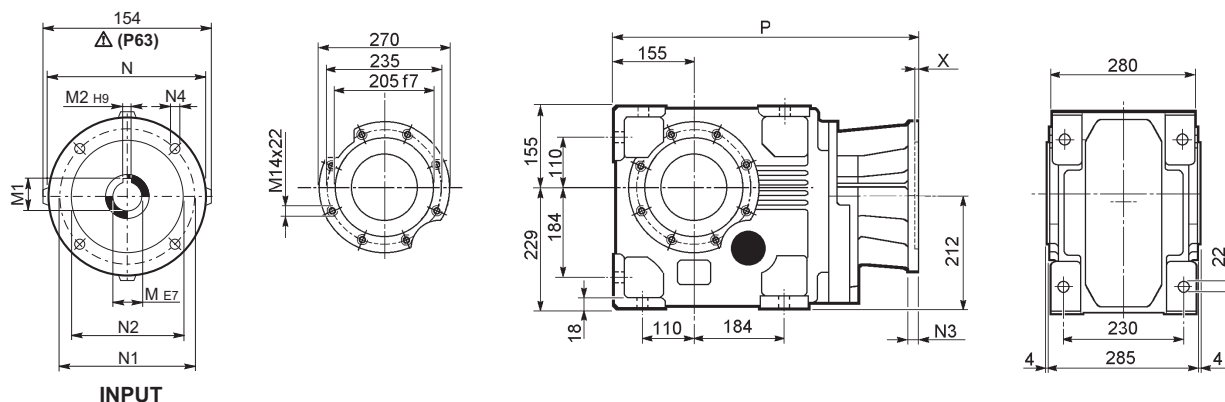
A 60...UV



* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.

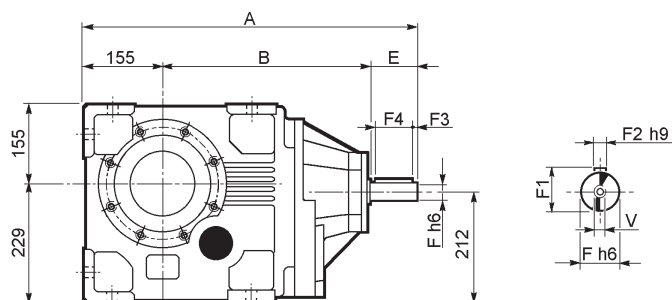


A 70...P(IEC)

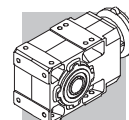


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 70 3	P80	19	21.8	6	200	165	130	—	M10x12	4	524	144
A 70 3	P90	24	27.3	8	200	165	130	—	M10x12	4	524	144
A 70 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	534	146
A 70 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	534	146
A 70 3	P132	38	41.3	10	300	265	230	16	14	5	570.5	154
A 70 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	—	M10x12	4	575	147
A 70 4	P90	24	27.3	8	200	165	130	—	M10x12	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

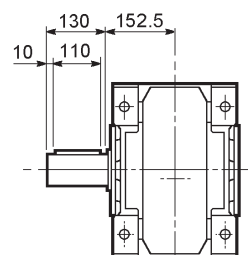
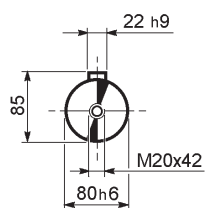


		A	B	E	F	F1	F2	F3	F4	V	Kg
A 70 3	HS	708.5	443.5	110	42	45	12	10	90	M12x28	165
A 70 4		644.5	439.5	50	24	27	8	2.5	45	M8x19	149

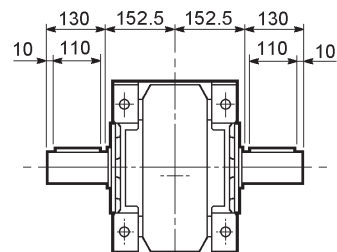
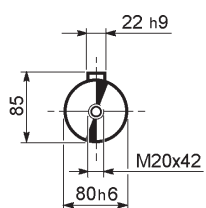


A 70

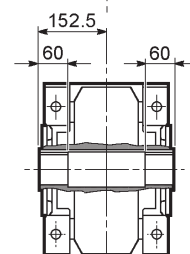
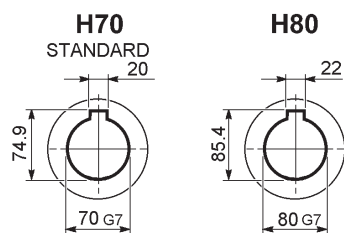
A 70...UR



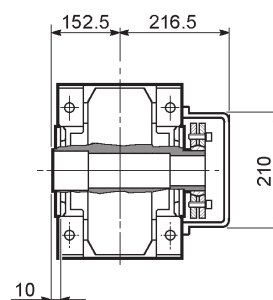
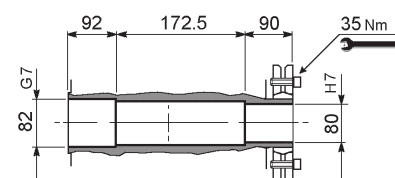
A 70...UD



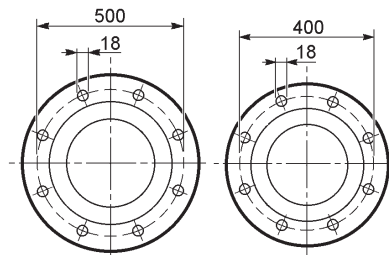
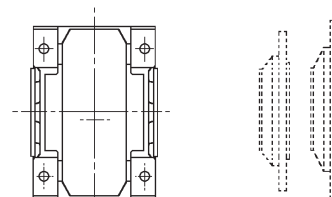
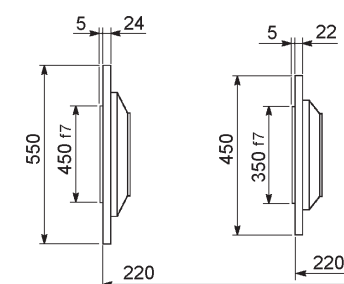
A 70...UH



A 70...US

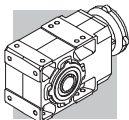


A 70...F...

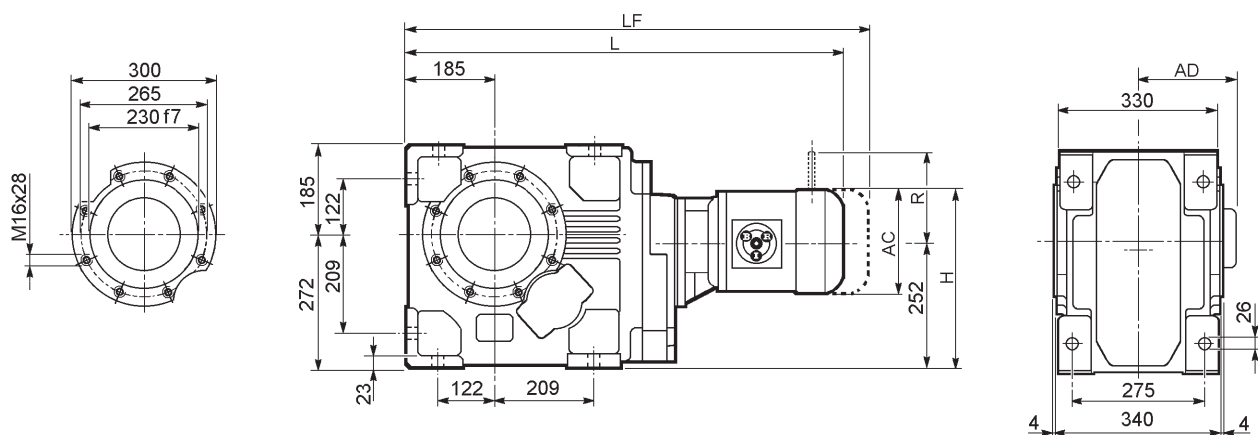


B

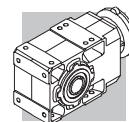
A



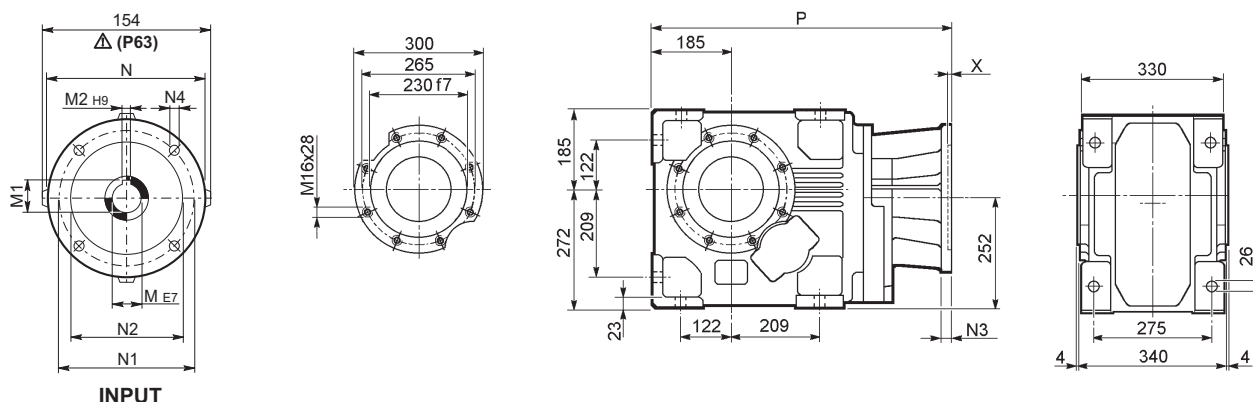
A 80...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		R	AD	R	AD
A 80 3	S3	M3S	195	349.5	809.5	142	256	905.5	264	160	158	160	142
A 80 3	S3	M3L	195	349.5	841.5	142	264	932.5	271	160	158	160	142
A 80 3	S4	M4	258	381	949.5	193	298	1058.5	316	226	210	217	193
A 80 3	S4	M4LC	258	381	984.5	193	306	1083.5	324	226	210	217	193
A 80 3	S5	M5S	310	407	1036	245	326	1176	356	266	245	247	245
A 80 3	S5	M5L	310	407	1080	245	342	1220	372	266	245	247	245
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	S3	M3S	195	349.5	872.5	142	255	968.5	262	160	158	160	142
A 80 4	S3	M3L	195	349.5	904.5	142	262	995.5	269	160	158	160	142
A 80 4	S4	M4	258	381	1012.5	193	296	1121.5	314	226	210	217	193
A 80 4	S4	M4LC	258	381	1047.5	193	304	1146.5	322	226	210	217	193

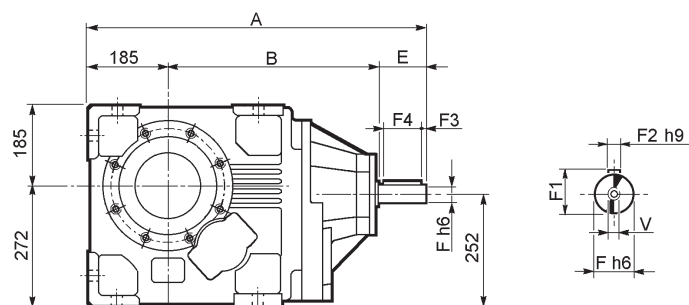


A 80...P(IEC)

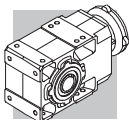


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
A 80 3	P80	19	21.8	6	200	165	130	—	M10x12	4	602	243
A 80 3	P90	24	27.3	8	200	165	130	—	M10x12	4	602	243
A 80 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	612	245
A 80 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	612	245
A 80 3	P132	38	41.3	10	300	265	230	16	14	5	648.5	253
A 80 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	—	M10x12	4	665	249
A 80 4	P90	24	27.3	8	200	165	130	—	M10x12	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

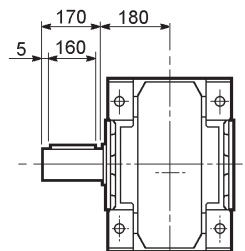
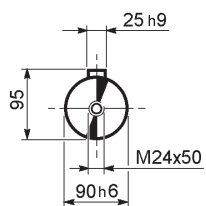


		A	B	E	F	F1	F2	F3	F4	V	Kg
A 80 3	HS	786.5	491.5	110	42	45	12	10	90	M12x28	265
A 80 4		735	499	50	24	27	8	2.5	45	M8x19	250

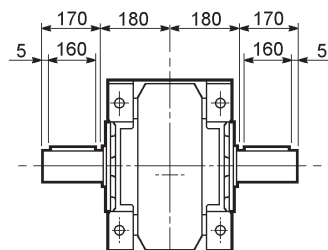
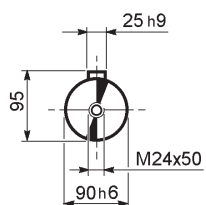


A 80

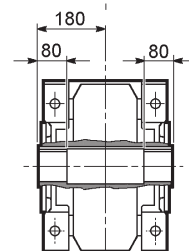
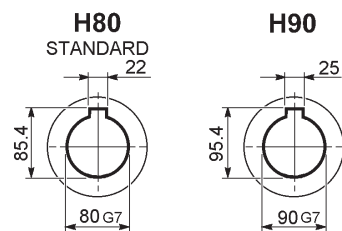
A 80...UR



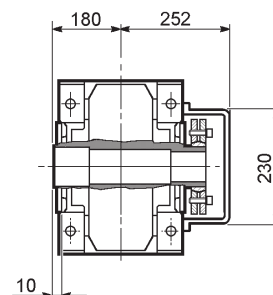
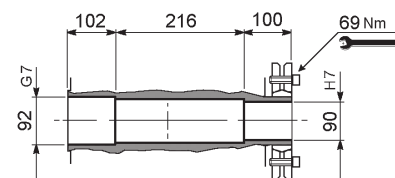
A 80...UD



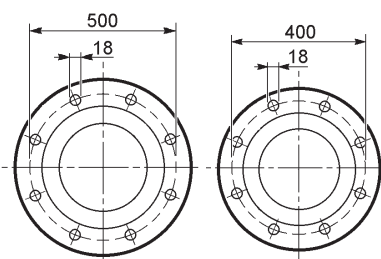
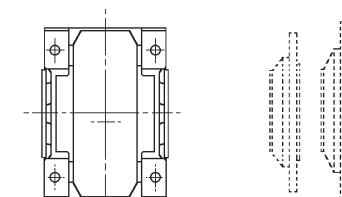
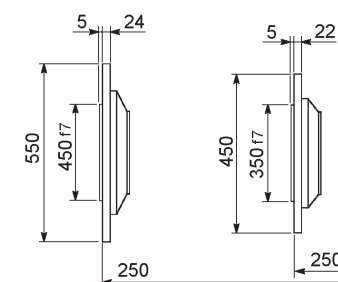
A 80...UH



A 80...US

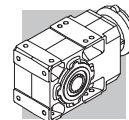


A 80...F...

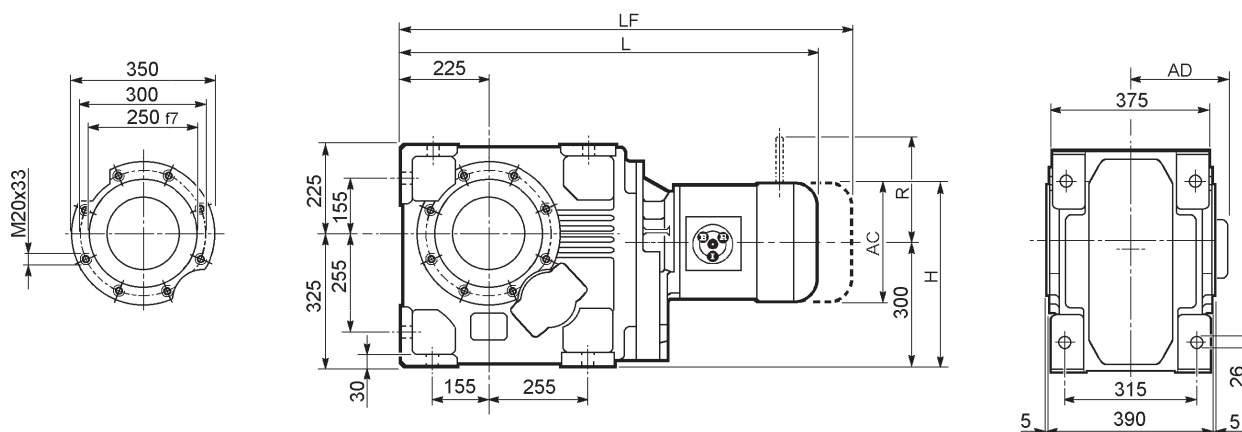


B

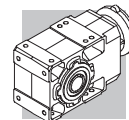
A



A 90...M

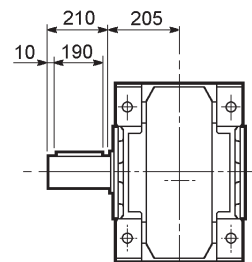
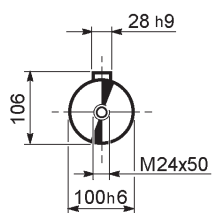


								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	 Kg	LF	 Kg	R	AD	R	AD
A 90 3	S3	M3S	195	397.5	930.5	142	413	1026.5	420	160	158	160	142
A 90 3	S3	M3L	195	397.5	962.5	142	420	1053.5	427	160	158	160	142
A 90 3	S4	M4	258	429	1070.5	193	454	1179.5	472	226	210	217	193
A 90 3	S4	M4LC	258	429	1105.5	193	462	1204.5	480	226	210	217	193
A 90 3	S5	M5S	310	455	1157	245	482	1297	512	266	245	247	245
A 90 3	S5	M5L	310	455	1201	245	498	1341	528	266	245	247	245
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	S3	M3S	195	397.5	1013.5	142	427	1109.5	434	160	158	160	142
A 90 4	S3	M3L	195	397.5	1045.5	142	434	1136.5	441	160	158	160	142
A 90 4	S4	M4	258	429	1153.5	193	468	1262.5	486	226	210	217	193
A 90 4	S4	M4LC	258	429	1188.5	193	476	1287.5	494	226	210	217	193

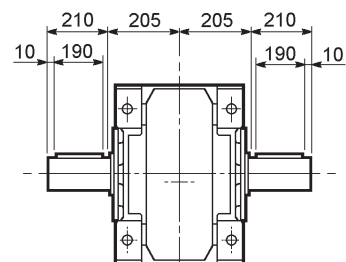
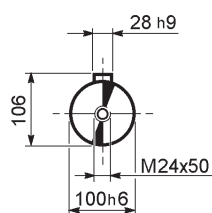


A 90

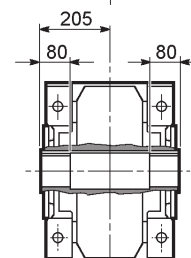
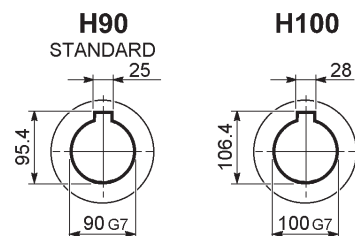
A 90...UR



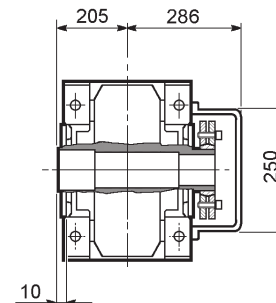
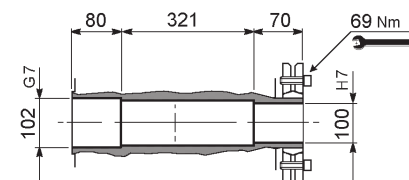
A 90...UD



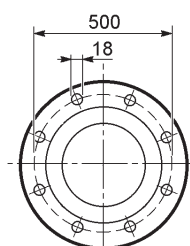
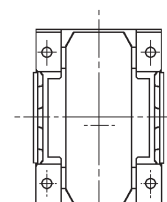
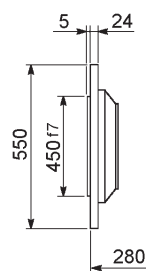
A 90...UH



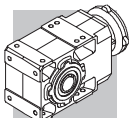
A 90...US



A 90...F...



A



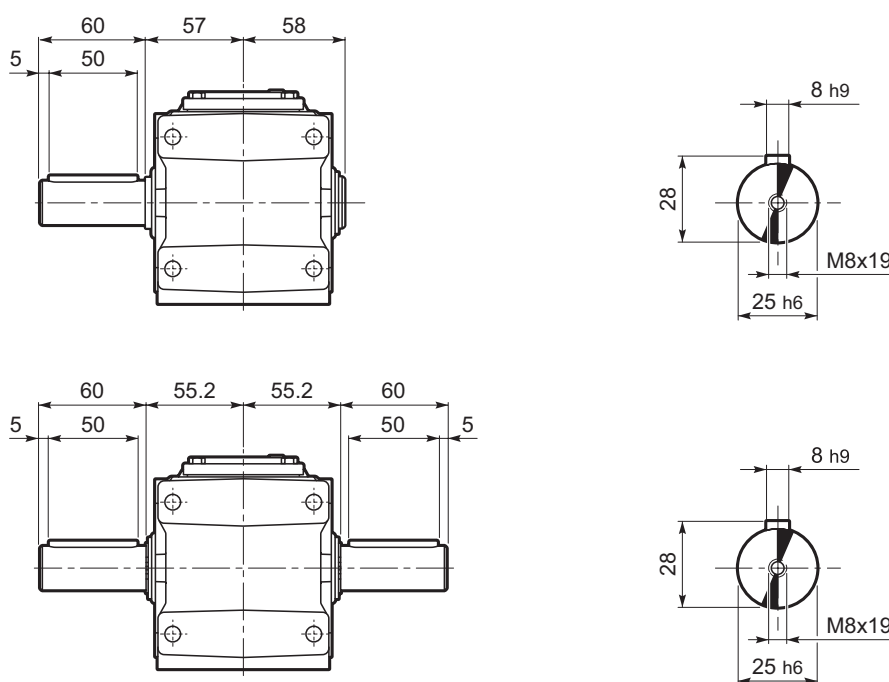
45 ACCESSORIES

45.1 A05 plug-in solid output shaft

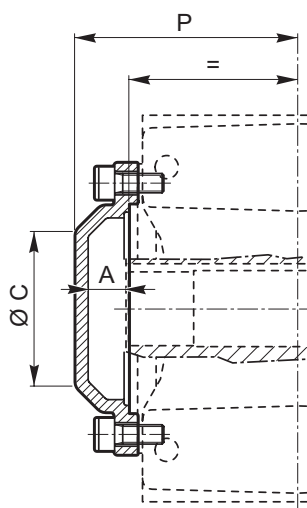
For gear unit A 05 a plug-in solid shaft is available as a mounting kit including shaft, snap ring, washer and parallel

keys in both the single (**A 05 single o/p shaft**) and the double extension (**A 05 double o/p shaft**) configuration.

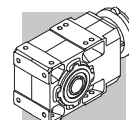
Shaft can be configured as either left- or right-hand and does not require any particular tooling.



45.2 Safety cover

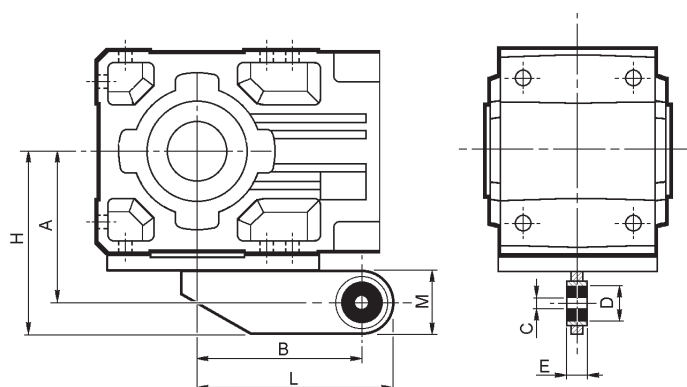


	A	Ø C	P
A 05	17.5	36	73.5
A 10	20.5	60	84.5
A 20	20	75	94
A 30	20	75	104
A 35	19.5	80	114
A 41	21	110	120
A 50	26	100	148.5
A 55	27	100	149
A 60	25	100	158
A 70	33.5	120	193.5
A 80	38	140	228
A 90	43	152	258

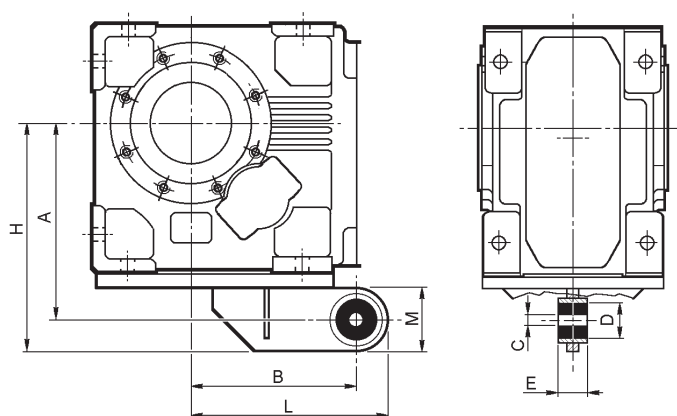


45.3 Torque arm

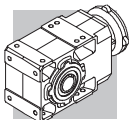
Torque arm comes complete with fastening bolts.



	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



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

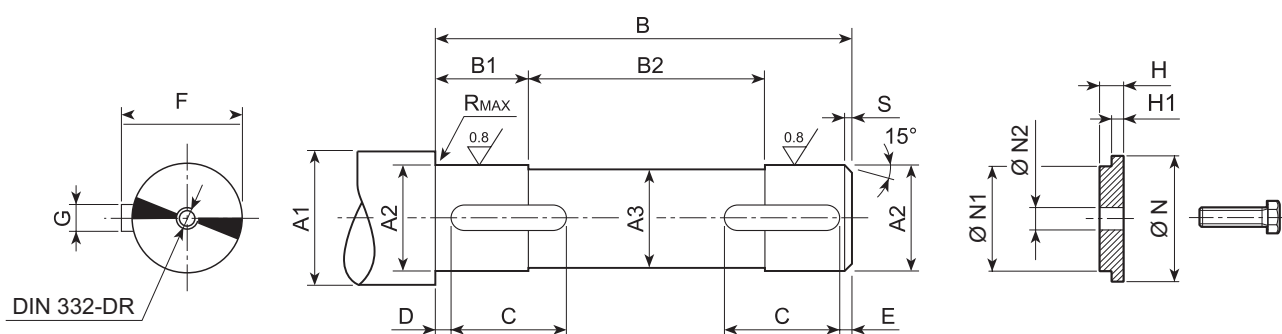


46 CUSTOMER' SHAFT

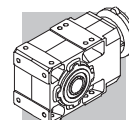
Make the driven shaft to be coupled to the gear unit's output shaft from a good quality steel, respecting the dimensions given in the table.

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.

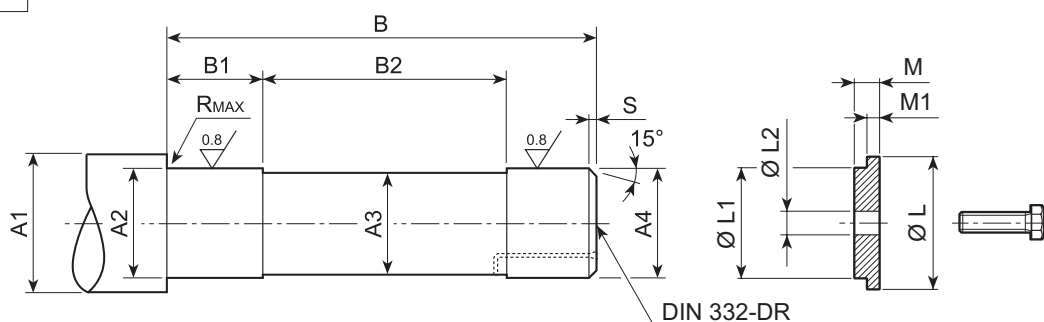
UH_



	A1	A2	A3	B	B1	B2	C	D	E	F	G	R	S		N	N1	N2	H	H1	
														UNI 6604						UNI 5739
A05 UH25	≥ 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
A10 UH30	≥ 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
A10 UH25	≥ 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
A20 UH35	≥ 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
A20 UH30	≥ 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
A30 UH40	≥ 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
A30 UH35	≥ 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
A35 UH40	≥ 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
A35 UH35	≥ 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
A41 UH45	≥ 52	45 h7	44	184	28	128	45	2.5	2.5	49.5	14 h9	1	2	14x9x45 A	52	45 d9	14	8.5	7	M12x35
A41 UH40	≥ 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
A50 UH55	≥ 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
A50 UH50	≥ 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
A55 UH60	≥ 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
A55 UH50	≥ 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
A60 UH70	≥ 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
A60 UH60	≥ 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
A70 UH80	≥ 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
A70 UH70	≥ 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
A80 UH90	≥ 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
A80 UH80	≥ 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
A90 UH100	≥ 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
A90 UH90	≥ 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

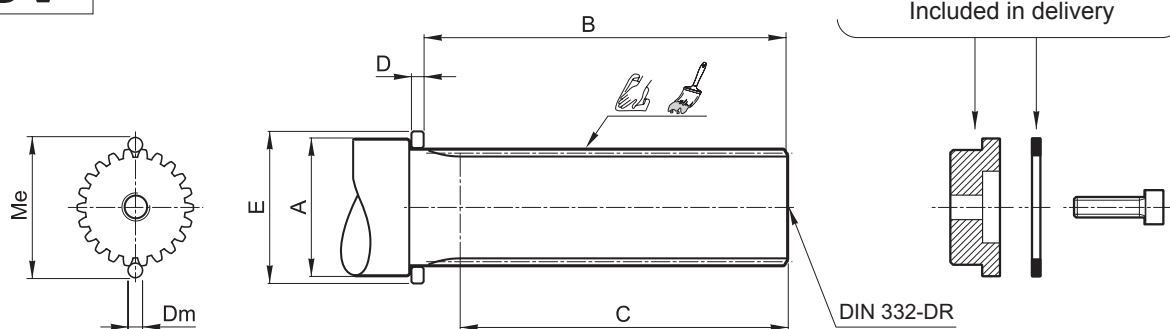


US

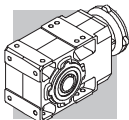


	A1	A2	A3	A4	B	B1	B2	R	S	L	L1	L2	M	M1	 UNI 5739
A 05	≥ 35	27 h7	24	25 h6	129.5	32	63.5	0.5	1.5	29.5	25 d9	11	8.5	7	M10x30
A 10	≥ 42	32 h7	29	30 h6	147.5	34	77.5	0.5	1.5	35.5	30 d9	11	8.5	7	M10x30
A 20	≥ 48	37 h7	34	35 h6	170	40	89	0.5	1.5	43	35 d9	14	8.5	7	M12x35
A 30	≥ 54	42 h7	39	40 h6	191.5	48	95.5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

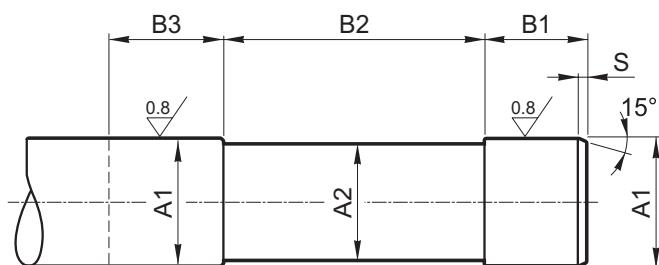
UV



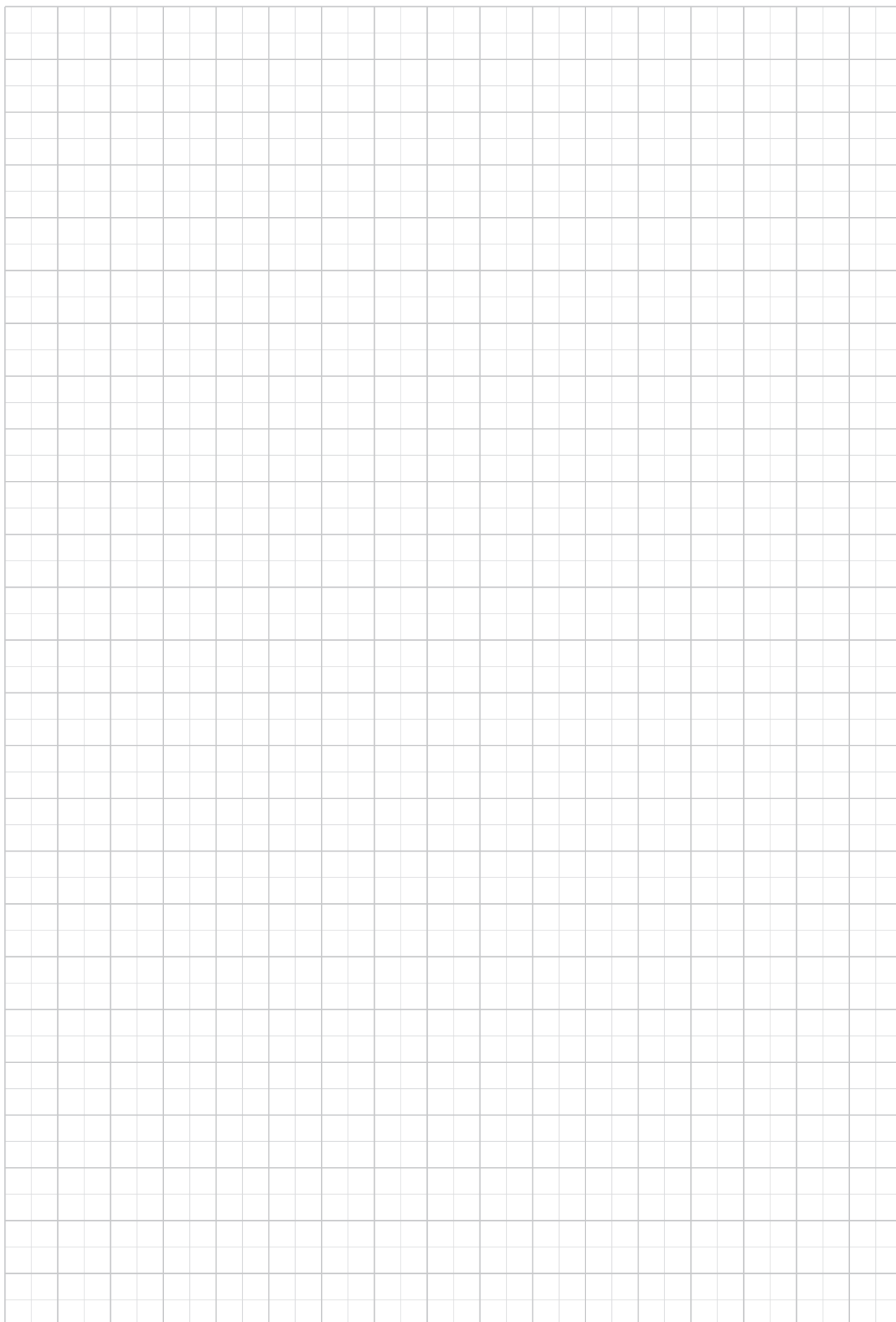
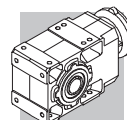
	 DIN 5480	Me	Dm	A	B	C	D	E	 ISO 4762
A 20	30x1.25x30x22	33.04 +0/-0.04	2.75	≥ 40	111.5	≥ 95	7	45	M10x35
A 30	35x2x30x16	38.93 +0/-0.04	4	≥ 45	130.5	≥ 112	7	50	M12x40
A 35	35x2x30x16	38.93 +0/-0.04	4	≥ 45	147.5	≥ 129	7	50	M12x40
A 41	45x2x30x21	48.86 +0/-0.04	4	≥ 55	155.5	≥ 136	7	60	M16x45
A 50	50x2x30x24	54.14 +0/-0.05	4	≥ 60	196	≥ 175	7	65	M16x45
A 55	50x2x30x24	54.14 +0/-0.05	4	≥ 60	196	≥ 175	7	65	M16x45
A 60	65x2x30x31	68.97 +0/-0.05	4	≥ 75	213.5	≥ 191	7	80	M20x55

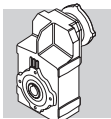


QF



		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				





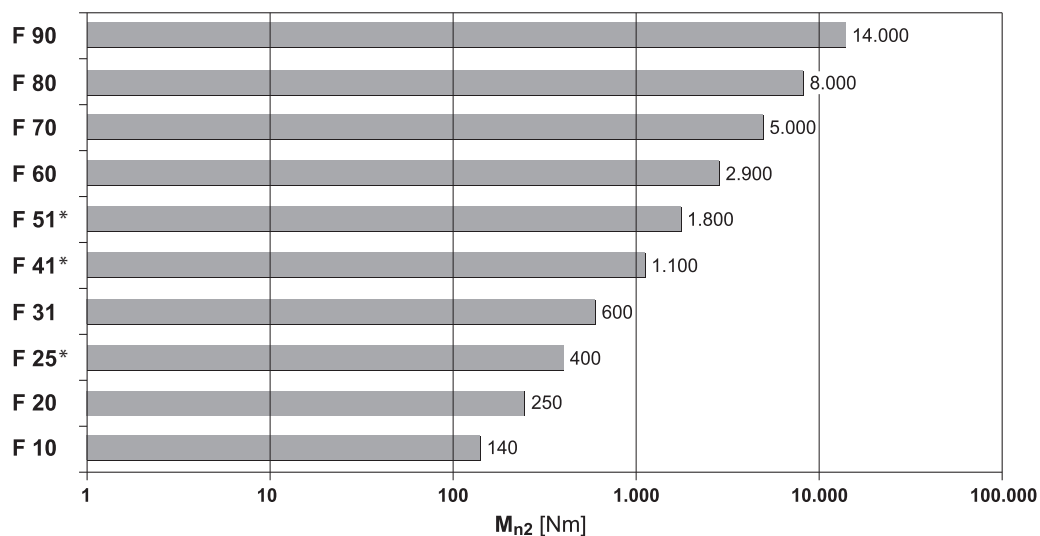
SHAFT MOUNTED GEAR UNITS SERIES F

47 DESIGN FEATURES

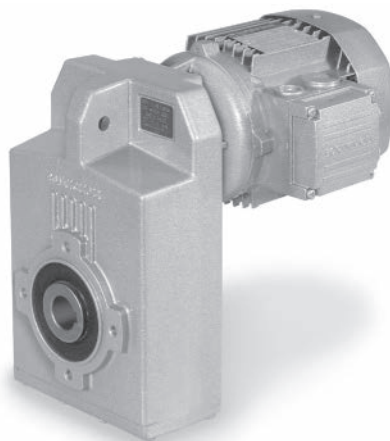
The main design characteristics are:

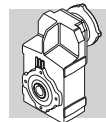
- modularity
- space effectiveness
- universal mounting
- high efficiency
- quiet operation
- gears in hardened and case-hardened steel
- bare aluminium housing for sizes 10, 20 and 25,
high strength painted cast-iron housings for larger frame sizes.

(D 36)

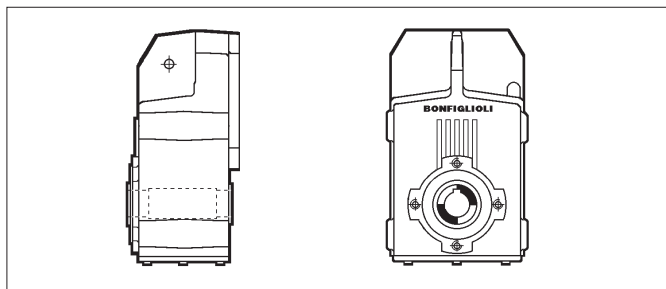


* For any limitations regarding construction type QF see the “VERSIONS” chapter.





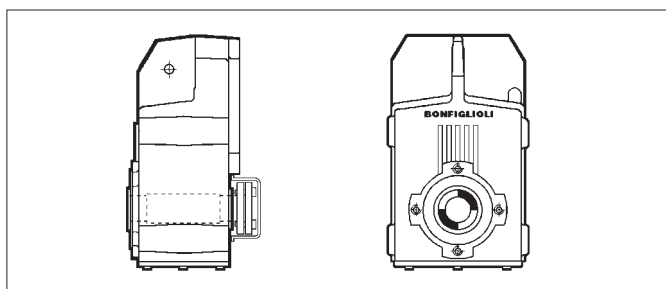
48 VERSIONS



H

Hollow output shaft and keyway

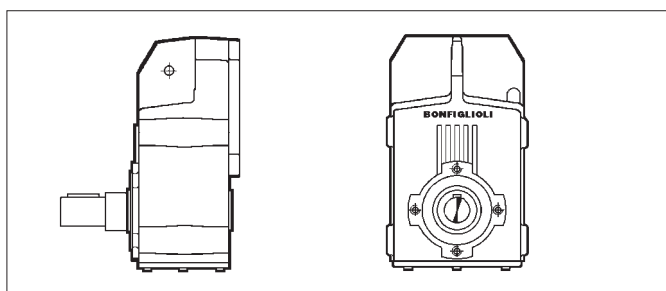
F 10 ... F 90



S

Hollow output shaft and shrink disc

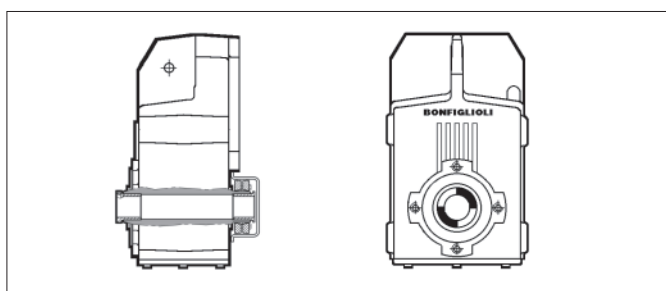
F 10 ... F 90



R

Solid output shaft

F 10 ... F 90



QF (Quick-fit)

Hollow shaft with adapter bushings and shrink disc

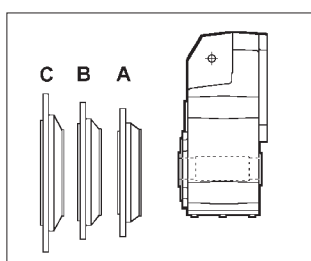
F 10 ... F 60

$M_{n2 \max}$ [Nm]	
F 25 QF30	350
F 41 QF42	850
F 41 QF45	1000
F 51 QF50	1750

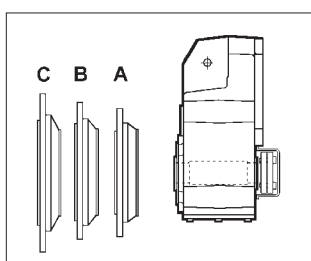
Basic versions with bolted flange

The sketches show the applicable flanges to the basic versions.

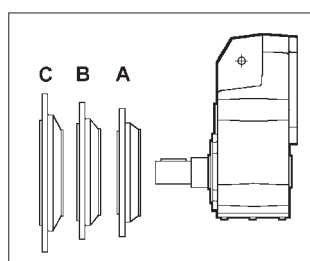
H... F...



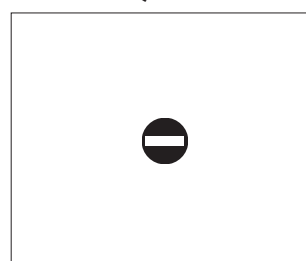
S F...

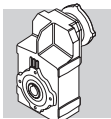


R F...



QF...





49 DESIGNATION

GEAR UNIT

F 10 2 H30 FA 48.7 S1 H5

OPTIONS

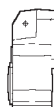
294

MOUNTING POSITION

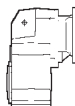
H1 (Default), **H2**, **H3**, **H4**, **H5**, **H6**

296

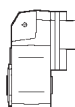
INPUT CONFIGURATION



S05 ... S5



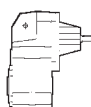
IEC_ P63 ... P250



SK_



SC_



HS

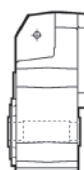
GEAR RATIO

OUTPUT FLANGE SIZE AND POSITION (specify only if requested)

F = Flanged version

A, B, C = Flange size

VERSION



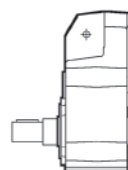
H

	F 10	F 20	F 25	F 31	F 41	F 51	F 60	F 70	F 80	F 90
Standard	H25	H30	H35	H35	H40	H50	H60	H80	H90	H100
Alternative	H30	H35	H40	H40	H45	H55	H70	H70	H80	H90



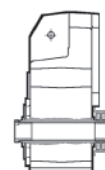
S

(F 10...F 90)



R

(F 10...F 90)



QF

(F 10...F 60)

Alternative diameters available on request

REDUCTIONS

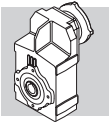
2 (F 10...F 51), **3** (F 20...F 90), **4** (F 31...F 90)

GEAR FRAME SIZE

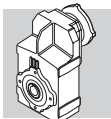
10, 20, 25, 31, 41, 51, 60, 70, 80, 90

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, AFD (d.c. brake) FA, BA (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 M = compact 3-phase BN = IEC 3-phase				



49.1 Gearbox options

AL, AR

Anti-run back device. Directions of rotation to be indicated and types of gearboxes in which the anti-run back device can be installed are listed in chapter 54.

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

Machined and drilled flats for side mounting (F 10 through F 41). (Default for F 51 through F 90).

Accessories

See chapter 62 of this catalogue.

49.2 Motor options

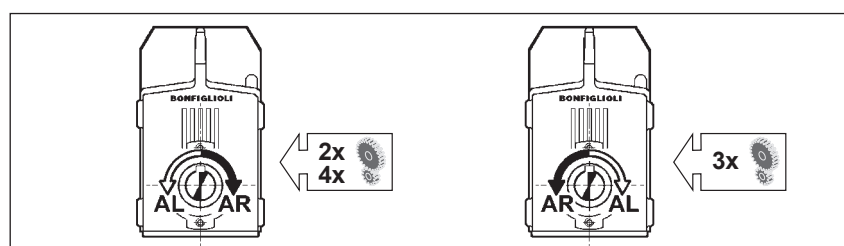
AA, AC, AD

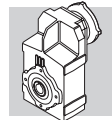
Angular position of the brake release lever with respect to the terminal box, looking from fan side. Standard position = 90° clockwise. AA = 0°, AC = 180°, AD = 90° counterclockwise.

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 Series motors. Table D37 shows the direction of free rotation of the gearbox, on the basis of which the correct option must be selected.

(D 37)



**CF**

Capacitive filter.

D3

3 bimetallic winding temperature sensors, calibrated at 150°C.

E3

3 winding temperature thermistors, calibrated at 150°C.

F1

Flywheel for soft start and stop.

H1

Anti condensate heaters. Standard voltage 1~ 230V $\pm 10\%$.

PN

60 Hz power corresponding to the normalized 50 Hz power.

PS

Double shaft extension (barring RC and U1 options).

RC

Drip cover (barring option PS).

RV

Rotor balancing in vibration class B.

TC

Option TC is a rain canopy variant for textile industry environments.

This option is not compatible with variants EN1, EN2, EN3 and will not fit motors equipped with a BA brake.

TP

Tropicalization.

U1

Forced cooling (barring options PS and CUS).

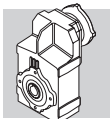
U2

Separate supply forced ventilation without terminal box. Cables are pre-wired. Configuration is not compatible with options PS and CUS. Available on motors;

BN 71 ... BN 132,

M1 ... M4.

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



50 LUBRICATION

The inner parts of Bonfiglioli gear units are oil-bath and splash lubricated. Frame sizes F 10 through F 41 are supplied by the factory, or by the authorized dealers, already filled with oil.

Unless otherwise specified, units size F 51 and larger are usually supplied unlubricated as it will be the customer's 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 the 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).

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

Operation of gear units is permitted at ambient temperatures between -20°C and $+40^{\circ}\text{C}$. However, for temperatures between -20°C and -10°C unit may only start up after it has been progressively and evenly pre-heated, or otherwise initially operated unloaded.

Load may then be connected to the output shaft when the gear unit has reached the temperature of -10°C , or higher.

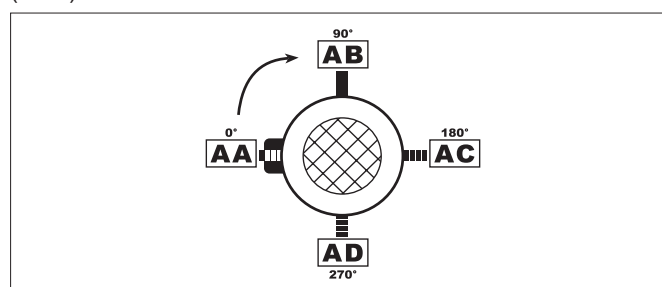
51 MOUNTING POSITION AND TERMINAL BOX ANGULAR LOCATION

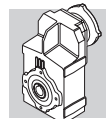
Location of motor terminal box can be specified by viewing the motor from the fan side; standard location is shown in black (W).

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.

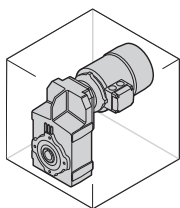
(D 38)



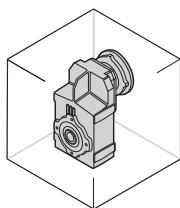


F ...

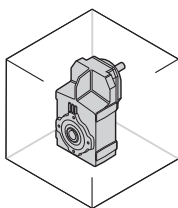
H1



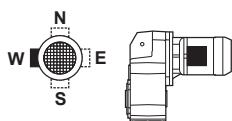
_S



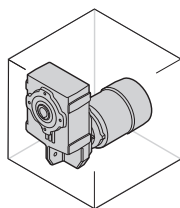
_P(IEC) _SK / _SC



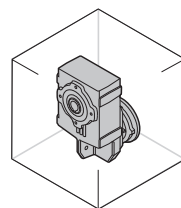
_HS



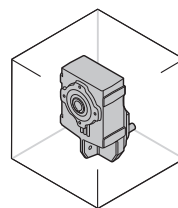
H2



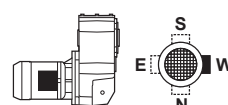
_S



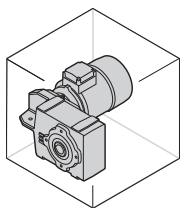
_P(IEC) _SK / _SC



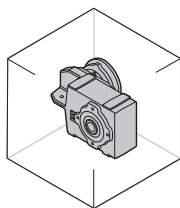
_HS



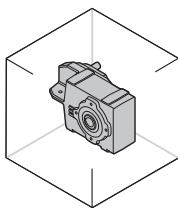
H3



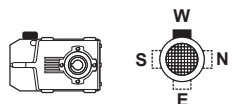
_S



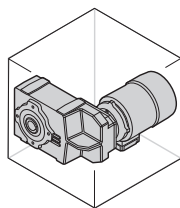
_P(IEC) _SK / _SC



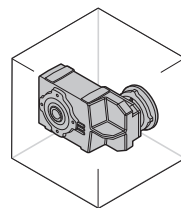
_HS



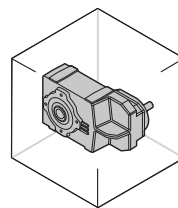
H4



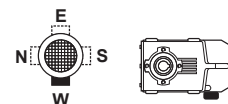
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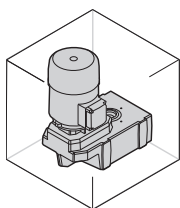
_P(IEC) _SK / _SC



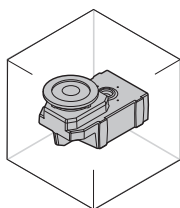
_HS



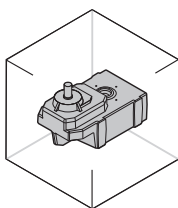
H5



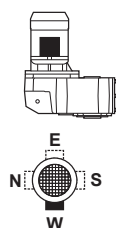
_S



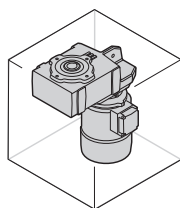
_P(IEC) _SK / _SC



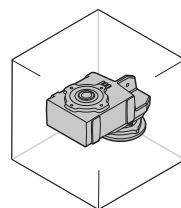
_HS



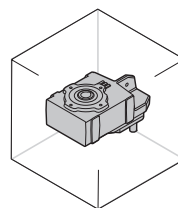
H6



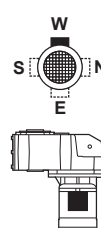
_S



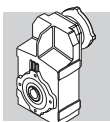
_P(IEC) _SK / _SC



_HS



W = Default



52 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:

$$R_{c1} [N] = \frac{2000 \cdot M_1 [Nm] \cdot K_r}{d [mm]} \quad ; \quad R_{c2} [N] = \frac{2000 \cdot M_2 [Nm] \cdot K_r}{d [mm]} \quad (35)$$

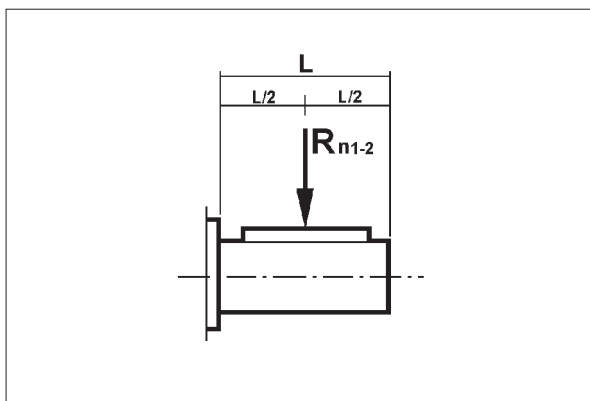
(D 39)

M₁ [Nm]	Torque applied to input shaft
M₂ [Nm]	Torque drawn at output shaft
d [mm]	Pitch diameter of element keyed onto shaft
K_r = 1	Chain transmission

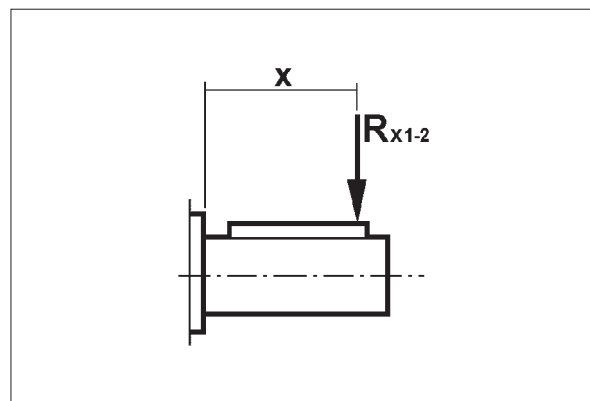
K_r = 1,25	Gear transmission
K_r = 1,5	V-belt transmission
K_r = 2,0	Flat belt transmission

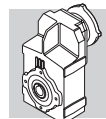
Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(D 40)



(D 41)





a) Load applied at midpoint of shaft, tab. (D40)

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. (D41)

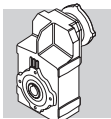
When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.

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 42)

	Load location factors					
	Output shaft			Input shaft		
	a	b	c	a	b	c
F 10 2	123	100.5	450	21	1	300
F 20 2	145	115	600	40	20	350
F 20 3	145	115	600	21	1	300
F 25 2 - F 25 3	157.5	127.5	800	40	20	350
F 25 4	157.5	127.5	800	21	1	300
F 31 2 - F 31 3	165	135	850	38.5	18.5	350
F 31 4	165	135	850	21	1	300
F 41 2 - F 41 3	191.5	151.5	1000	49.5	24.5	450
F 41 4	191.5	151.5	1000	40	20	350
F 51 2 - F 51 3	233.5	183.5	1300	49.5	24.5	450
F 51 4	233.5	183.5	1300	38.5	18.5	350
F 60 3	258.5	198.5	1100	55.5	25.5	600
F 60 4	258.5	198.5	1100	49.5	24.5	450
F 70 3	342	277	1600	86	31	1000
F 70 4	342	277	1600	49.5	24.5	450
F 80 3	386.5	301.5	1800	86	31	1000
F 80 4	386.5	301.5	1800	49.5	24.5	450
F 90 3	458.5	353.5	2400	116	46	1400
F 90 4	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:

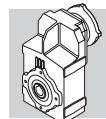
$$R_{x2} = R_{n2} \cdot \frac{a}{b+x} \quad (40)$$

N.B. Subject to condition:

$$\frac{L}{2} \leq x \leq c \quad (41)$$

Finally, the following condition must be verified:

$$R_{c2} \leq R_{x2} \quad (42)$$



53 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.

54 ANTI-RUN BACK DEVICE

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 – option AL/AR.

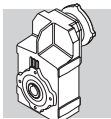
Table D43 shows the gearboxes in which the anti-run back device can be installed.

(D 43)

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

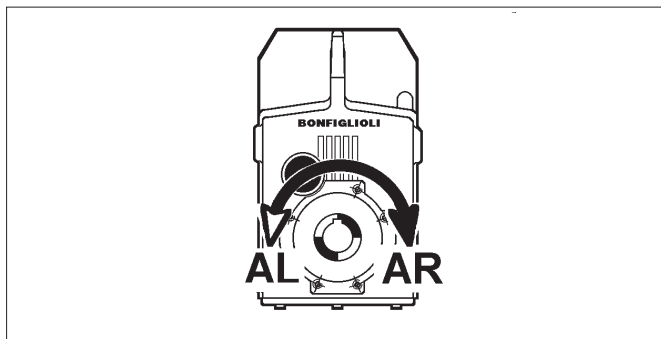
* The supply of the backstop will ban the configuration of servomotor adapters type S_60A, S_60B, S_80A.

When ordering the gear unit, the direction of free rotation must be specified through either the AR or the AL option (Table D44).



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 44)



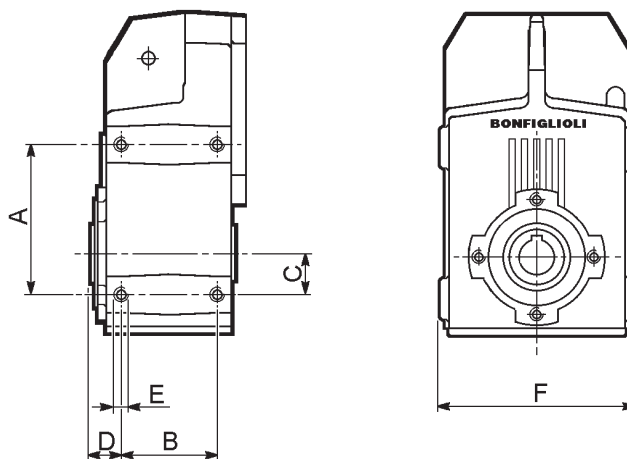
55 OPTIONS AND SPECIAL VERSIONS

Side flats (FL Option)

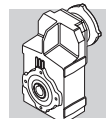
F gear units can be side machined and tapped by specifying the FL option.

Mounting dimensions relevant to the FL option are given in the chart (D45) here after. Gear units type F 51 through F 90 are side machined and tapped as standard.

(D 45)



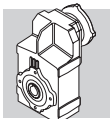
	A	B	C	D	E	F
F 10	115	60	35	21.25	M8x16	163
F 20	130	70	40	26.5	M10x20	181
F 25	130	70	40	27.5	M10x20	181
F 31	147	80	45	30	M12x20	203
F 41	190	95	60	32.5	M12x22	235



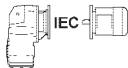
56 GEARMOTOR RATING CHARTS

0.09 kW

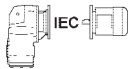
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.40	1945	2.6	2188	35000			F704_2188 P63 BN63A6	404
0.50	1526	3.4	1717	35000			F704_1717 P63 BN63A6	404
0.62	1254	0.9	1411	8500	F414_1411 S05 M05A6	391	F414_1411 P63 BN63A6	392
0.73	1079	1.0	1213	8500	F414_1213 S05 M05A6	391	F414_1213 P63 BN63A6	392
0.81	971	1.1	1092	8500	F414_1092 S05 M05A6	391	F414_1092 P63 BN63A6	392
0.90	874	1.3	982.4	8500	F414_982.4 S05 M05A6	391	F414_982.4 P63 BN63A6	392
0.98	801	1.4	900.5	8500	F414_900.5 S05 M05A6	391	F414_900.5 P63 BN63A6	392
1.1	724	1.5	813.8	8500	F414_813.8 S05 M05A6	391	F414_813.8 P63 BN63A6	392
1.2	678	0.9	762.3	6500	F314_762.3 S05 M05A6	387	F314_762.3 P63 BN63A6	388
1.2	658	1.7	739.4	8500	F414_739.4 S05 M05A6	391	F414_739.4 P63 BN63A6	392
1.3	610	1.0	685.6	6500	F314_685.6 S05 M05A6	387	F314_685.6 P63 BN63A6	388
1.3	614	1.8	690.1	8500	F414_690.1 S05 M05A6	391	F414_690.1 P63 BN63A6	392
1.4	551	1.1	619.9	6500	F314_619.9 S05 M05A6	387	F314_619.9 P63 BN63A6	388
1.5	515	1.2	578.6	6500	F314_578.6 S05 M05A6	387	F314_578.6 P63 BN63A6	388
1.6	489	2.2	549.8	8500	F414_549.8 S05 M05A6	391	F414_549.8 P63 BN63A6	392
1.7	469	0.9	527.3	6500	F254_527.3 S05 M05A6	383	F254_527.3 P63 BN63A6	384
1.7	469	1.3	527.8	6500	F314_527.8 S05 M05A6	387	F314_527.8 P63 BN63A6	388
1.9	414	1.0	466.0	6500	F254_466.0 S05 M05A6	383	F254_466.0 P63 BN63A6	384
1.9	411	1.5	462.6	6500	F314_462.6 S05 M05A6	387	F314_462.6 P63 BN63A6	388
2.0	387	1.0	434.9	6500	F254_434.9 S05 M05A6	383	F254_434.9 P63 BN63A6	384
2.0	386	2.9	433.7	8500	F414_433.7 S05 M05A6	391	F414_433.7 P63 BN63A6	392
2.1	372	1.6	418.9	6500	F314_418.9 S05 M05A6	387	F314_418.9 P63 BN63A6	388
2.2	350	1.1	393.9	6500	F254_393.9 S05 M05A6	383	F254_393.9 P63 BN63A6	384
2.4	340	1.8	374.4	6500			F313_374.4 P63 BN63A6	388
2.6	302	2.0	332.8	6500			F313_332.8 P63 BN63A6	388
2.6	313	3.5	344.8	8500			F413_344.8 P63 BN63A6	392
2.8	288	0.9	316.9	4000	F203_316.9 S05 M05A6	379	F203_316.9 P63 BN63A6	380
3.0	267	2.2	293.8	6500			F313_293.8 P63 BN63A6	388
3.1	259	1.0	285.2	4000	F203_285.2 S05 M05A6	379	F203_285.2 P63 BN63A6	380
3.4	232	1.1	255.3	4000	F203_255.3 S05 M05A6	379	F203_255.3 P63 BN63A6	380
3.5	230	2.6	253.6	6500			F313_253.6 P63 BN63A6	388
3.9	207	2.9	228.2	6500			F313_228.2 P63 BN63A6	388
4.2	190	1.3	209.3	4000	F203_209.3 S05 M05A6	379	F203_209.3 P63 BN63A6	380
4.4	184	3.3	202.3	6500			F313_202.3 P63 BN63A6	388
4.8	168	1.5	184.9	4000	F203_184.9 S05 M05A6	379	F203_184.9 P63 BN63A6	380
5.1	157	1.6	172.6	4000	F203_172.6 S05 M05A6	379	F203_172.6 P63 BN63A6	380
5.6	142	1.8	156.3	4000	F203_156.3 S05 M05A6	379	F203_156.3 P63 BN63A6	380
6.7	123	2.0	132.2	4000	F202_132.2 S05 M05A6	379	F202_132.2 P63 BN63A6	380
6.9	118	1.2	127.1	2800	F102_127.1 S05 M05A6	375	F102_127.1 P63 BN63A6	376
7.7	106	2.4	114.3	4000	F202_114.3 S05 M05A6	379	F202_114.3 P63 BN63A6	380
8.3	98	1.4	106.0	2800	F102_106.0 S05 M05A6	375	F102_106.0 P63 BN63A6	376
8.7	94	2.6	101.6	4000	F202_101.6 S05 M05A6	379	F202_101.6 P63 BN63A6	380
9.6	85	1.6	91.5	2800	F102_91.5 S05 M05A6	375	F102_91.5 P63 BN63A6	376
9.7	84	3.0	90.4	4000	F202_90.4 S05 M05A6	379	F202_90.4 P63 BN63A6	380
10.8	75	1.9	81.3	2800	F102_81.3 S05 M05A6	375	F102_81.3 P63 BN63A6	376
11.5	71	3.5	76.8	4000	F202_76.8 S05 M05A6	379	F202_76.8 P63 BN63A6	380
12.4	66	2.1	71.1	2800	F102_71.1 S05 M05A6	375	F102_71.1 P63 BN63A6	376
14.0	58	2.4	63.0	2800	F102_63.0 S05 M05A6	375	F102_63.0 P63 BN63A6	376

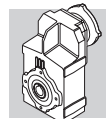


0.09 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
15.5	53	2.7	56.7	2800	F102_56.7 S05 M05A6	375	F102_56.7 P63 BN63A6	376
18.1	45	3.1	48.7	2800	F102_48.7 S05 M05A6	375	F102_48.7 P63 BN63A6	376
19.7	41	3.4	44.7	2800	F102_44.7 S05 M05A6	375	F102_44.7 P63 BN63A6	376
22.2	37	3.8	39.6	2800	F102_39.6 S05 M05A6	375	F102_39.6 P63 BN63A6	376
24.9	33	4.3	35.3	2800	F102_35.3 S05 M05A6	375	F102_35.3 P63 BN63A6	376
26.7	31	4.6	33.0	2800	F102_33.0 S05 M05A6	375	F102_33.0 P63 BN63A6	376
29.7	28	5.1	29.6	2800	F102_29.6 S05 M05A6	375	F102_29.6 P63 BN63A6	376
34	24	5.9	25.8	2800	F102_25.8 S05 M05A6	375	F102_25.8 P63 BN63A6	376
39	21	6.6	22.8	2800	F102_22.8 S05 M05A6	375	F102_22.8 P63 BN63A6	376
46	18	7.8	19.3	2800	F102_19.3 S05 M05A6	375	F102_19.3 P63 BN63A6	376
52	16	8.9	17.0	2800	F102_17.0 S05 M05A6	375	F102_17.0 P63 BN63A6	376
60	14	10.1	14.6	2700	F102_14.6 S05 M05A6	375	F102_14.6 P63 BN63A6	376
68	12	10.3	13.0	2600	F102_13.0 S05 M05A6	375	F102_13.0 P63 BN63A6	376
76	11	10.3	11.5	2500	F102_11.5 S05 M05A6	375	F102_11.5 P63 BN63A6	376
90	9	11.8	9.8	2370	F102_9.8 S05 M05A6	375	F102_9.8 P63 BN63A6	376
103	8	11.8	8.6	2270	F102_8.6 S05 M05A6	375	F102_8.6 P63 BN63A6	376
119	7	13.2	7.4	2160	F102_7.4 S05 M05A6	375	F102_7.4 P63 BN63A6	376

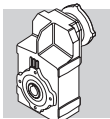
0.12 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.40	2623	1.9	2188	35000			F704_2188 P63 BN63B6	404
0.51	2058	2.5	1717	35000			F704_1717 P63 BN63B6	404
0.60	1742	2.9	2188	35000			F704_2188 P63 BN63A4	404
0.65	1607	3.1	2019	35000			F704_2019 P63 BN63A4	404
0.76	1368	2.1	1141	20000			F604_1141 P63 BN63B6	400
0.89	1178	0.9	982.4	8500	F414_982.4 S05 M05B6	391	F414_982.4 P63 BN63B6	392
0.96	1090	1.0	1411	8500	F414_1411 S05 M05A4	391	F414_1411 P63 BN63A4	392
1.1	938	1.2	1213	8500	F414_1213 S05 M05A4	391	F414_1213 P63 BN63A4	392
1.2	844	1.3	1092	8500	F414_1092 S05 M05A4	391	F414_1092 P63 BN63A4	392
1.4	759	1.4	982.4	8500	F414_982.4 S05 M05A4	391	F414_982.4 P63 BN63A4	392
1.5	696	1.6	900.5	8500	F414_900.5 S05 M05A4	391	F414_900.5 P63 BN63A4	392
1.6	643	0.9	831.6	6500	F314_831.6 S05 M05A4	387	F314_831.6 P63 BN63A4	388
1.7	629	1.7	813.8	8500	F414_813.8 S05 M05A4	391	F414_813.8 P63 BN63A4	392
1.8	589	1.0	762.3	6500	F314_762.3 S05 M05A4	387	F314_762.3 P63 BN63A4	388
1.8	571	1.9	739.4	8500	F414_739.4 S05 M05A4	391	F414_739.4 P63 BN63A4	392
2.0	530	1.1	685.6	6500	F314_685.6 S05 M05A4	387	F314_685.6 P63 BN63A4	388
2.0	533	2.1	690.1	8500	F414_690.1 S05 M05A4	391	F414_690.1 P63 BN63A4	392
2.2	479	1.3	619.9	6500	F314_619.9 S05 M05A4	387	F314_619.9 P63 BN63A4	388
2.3	456	0.9	589.7	6500	F254_589.7 S05 M05A4	383	F254_589.7 P63 BN63A4	384
2.3	447	1.3	578.6	6500	F314_578.6 S05 M05A4	387	F314_578.6 P63 BN63A4	388
2.5	425	2.6	549.8	8500	F414_549.8 S05 M05A4	391	F414_549.8 P63 BN63A4	392
2.6	408	1.0	527.3	6500	F254_527.3 S05 M05A4	383	F254_527.3 P63 BN63A4	384
2.6	408	1.5	527.8	6500	F314_527.8 S05 M05A4	387	F314_527.8 P63 BN63A4	388
2.9	360	1.1	466.0	6500	F254_466.0 S05 M05A4	383	F254_466.0 P63 BN63A4	384
2.9	358	1.7	462.6	6500	F314_462.6 S05 M05A4	387	F314_462.6 P63 BN63A4	388
3.1	336	1.2	434.9	6500	F254_434.9 S05 M05A4	383	F254_434.9 P63 BN63A4	384
3.1	335	3.3	433.7	8500	F414_433.7 S05 M05A4	391	F414_433.7 P63 BN63A4	392

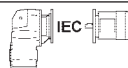


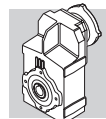
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
3.2	324	1.9	418.9	6500	F314_418.9 S05 M05A4	387	F314_418.9 P63 BN63A4	388
3.4	304	1.3	393.9	6500	F254_393.9 S05 M05A4	383	F254_393.9 P63 BN63A4	384
3.6	296	2.0	374.4	6500			F313_374.4 P63 BN63A4	388
4.1	263	1.5	333.1	6500	F253_333.1 S05 M05A4	383	F253_333.1 P63 BN63A4	384
4.1	263	2.3	332.8	6500			F313_332.8 P63 BN63A4	388
4.3	250	1.0	316.9	4000	F203_316.9 S05 M05A4	379	F203_316.9 P63 BN63A4	380
4.6	232	2.6	293.8	6500			F313_293.8 P63 BN63A4	388
4.7	225	1.1	285.2	4000	F203_285.2 S05 M05A4	379	F203_285.2 P63 BN63A4	380
4.7	228	1.8	288.1	6500	F253_288.1 S05 M05A4	383	F253_288.1 P63 BN63A4	384
5.3	202	1.2	255.3	4000	F203_255.3 S05 M05A4	379	F203_255.3 P63 BN63A4	380
5.3	202	2.0	256.1	6500	F253_256.1 S05 M05A4	383	F253_256.1 P63 BN63A4	384
5.3	200	3.0	253.6	6500			F313_253.6 P63 BN63A4	388
5.9	180	2.2	227.8	6500	F253_227.8 S05 M05A4	383	F253_227.8 P63 BN63A4	384
5.9	180	3.3	228.2	6500			F313_228.2 P63 BN63A4	388
6.5	165	1.5	209.3	4000	F203_209.3 S05 M05A4	379	F203_209.3 P63 BN63A4	380
7.0	153	2.6	193.6	6500	F253_193.6 S05 M05A4	383	F253_193.6 P63 BN63A4	384
7.3	146	1.7	184.9	4000	F203_184.9 S05 M05A4	379	F203_184.9 P63 BN63A4	380
7.7	138	2.9	174.2	6500	F253_174.2 S05 M05A4	383	F253_174.2 P63 BN63A4	384
7.8	136	1.8	172.6	4000	F203_172.6 S05 M05A4	379	F203_172.6 P63 BN63A4	380
8.6	123	2.0	156.3	4000	F203_156.3 S05 M05A4	379	F203_156.3 P63 BN63A4	380
8.7	123	3.2	155.9	6500	F253_155.9 S05 M05A4	383	F253_155.9 P63 BN63A4	384
9.4	113	3.5	143.0	6500	F253_143.0 S05 M05A4	383	F253_143.0 P63 BN63A4	384
10.2	107	2.3	132.2	4000	F202_132.2 S05 M05A4	379	F202_132.2 P63 BN63A4	380
10.6	103	1.4	127.1	2800	F102_127.1 S05 M05A4	375	F102_127.1 P63 BN63A4	376
11.8	92	2.7	114.3	4000	F202_114.3 S05 M05A4	379	F202_114.3 P63 BN63A4	380
12.7	86	1.6	106.0	2800	F102_106.0 S05 M05A4	375	F102_106.0 P63 BN63A4	376
13.3	82	3.0	101.6	4000	F202_101.6 S05 M05A4	379	F202_101.6 P63 BN63A4	380
14.8	74	1.9	91.5	2800	F102_91.5 S05 M05A4	375	F102_91.5 P63 BN63A4	376
14.9	73	3.4	90.4	4000	F202_90.4 S05 M05A4	379	F202_90.4 P63 BN63A4	380
16.6	66	2.1	81.3	2800	F102_81.3 S05 M05A4	375	F102_81.3 P63 BN63A4	376
19.0	57	2.4	71.1	2800	F102_71.1 S05 M05A4	375	F102_71.1 P63 BN63A4	376
21.4	51	2.8	63.0	2800	F102_63.0 S05 M05A4	375	F102_63.0 P63 BN63A4	376
23.8	46	3.1	56.7	2800	F102_56.7 S05 M05A4	375	F102_56.7 P63 BN63A4	376
27.7	39	3.6	48.7	2800	F102_48.7 S05 M05A4	375	F102_48.7 P63 BN63A4	376
30	36	3.9	44.7	2800	F102_44.7 S05 M05A4	375	F102_44.7 P63 BN63A4	376
34	32	4.4	39.6	2800	F102_39.6 S05 M05A4	375	F102_39.6 P63 BN63A4	376
38	29	4.9	35.3	2800	F102_35.3 S05 M05A4	375	F102_35.3 P63 BN63A4	376
41	27	5.3	33	2800	F102_33.0 S05 M05A4	375	F102_33.0 P63 BN63A4	376
46	24	5.9	29.6	2800	F102_29.6 S05 M05A4	375	F102_29.6 P63 BN63A4	376
52	21	6.7	25.8	2800	F102_25.8 S05 M05A4	375	F102_25.8 P63 BN63A4	376
59	18	7.6	22.8	2700	F102_22.8 S05 M05A4	375	F102_22.8 P63 BN63A4	376
70	16	8.7	19.3	2560	F102_19.3 S05 M05A4	375	F102_19.3 P63 BN63A4	376
80	14	9.3	17.0	2450	F102_17.0 S05 M05A4	375	F102_17.0 P63 BN63A4	376
92	12	10.1	14.6	2340	F102_14.6 S05 M05A4	375	F102_14.6 P63 BN63A4	376
104	11	9.9	13.0	2250	F102_13.0 S05 M05A4	375	F102_13.0 P63 BN63A4	376
117	9	10.3	11.5	2160	F102_11.5 S05 M05A4	375	F102_11.5 P63 BN63A4	376
138	8	11.3	9.8	2050	F102_9.8 S05 M05A4	375	F102_9.8 P63 BN63A4	376
157	7	11.8	8.6	1970	F102_8.6 S05 M05A4	375	F102_8.6 P63 BN63A4	376
182	6	12.7	7.4	1870	F102_7.4 S05 M05A4	375	F102_7.4 P63 BN63A4	376

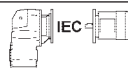


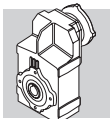
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0.45	3511	1.4	2019	35000	F704_2019 S1 M1SC6	403	F704_2019 P71 BN71A6	404
0.45	3455	2.3	1987	45000	F804_1987 S1 M1SC6	406	F804_1987 P71 BN71A6	407
0.49	3189	2.5	1834	45000	F804_1834 S1 M1SC6	406	F804_1834 P71 BN71A6	407
0.52	2985	1.7	1717	35000	F704_1717 S1 M1SC6	403	F704_1717 P71 BN71A6	404
0.53	2972	2.7	1709	45000	F804_1709 S1 M1SC6	406	F804_1709 P71 BN71A6	407
0.57	2756	1.8	1585	35000	F704_1585 S1 M1SC6	403	F704_1585 P71 BN71A6	404
0.57	2744	2.9	1578	45000	F804_1578 S1 M1SC6	406	F804_1578 P71 BN71A6	407
0.61	2576	1.9	1481	35000	F704_1481 S1 M1SC6	403	F704_1481 P71 BN71A6	404
0.65	2406	3.3	1384	45000	F804_1384 S1 M1SC6	406	F804_1384 P71 BN71A6	407
0.66	2378	2.1	1368	35000	F704_1368 S1 M1SC6	403	F704_1368 P71 BN71A6	404
0.76	2055	2.4	1182	35000	F704_1182 S1 M1SC6	403	F704_1182 P71 BN71A6	404
0.77	2030	0.9	1168	12000	F514_1168 S1 M1SC6	395	F514_1168 P71 BN71A6	396
0.79	1985	1.5	1141	20000	F604_1141 S1 M1SC6	399	F604_1141 P71 BN71A6	400
0.83	1897	2.6	1091	35000	F704_1091 S1 M1SC6	403	F704_1091 P71 BN71A6	404
0.84	1861	1.0	1070	12000	F514_1070 S1 M1SC6	395	F514_1070 P71 BN71A6	396
0.85	1832	1.6	1054	20000	F604_1054 S1 M1SC6	399	F604_1054 P71 BN71A6	400
0.92	1703	1.1	979.4	12000	F514_979.4 S1 M1SC6	395	F514_979.4 P71 BN71A6	396
0.92	1694	3.0	974.4	35000	F704_974.4 S1 M1SC6	403	F704_974.4 P71 BN71A6	404
0.94	1667	1.7	958.9	20000	F604_958.9 S1 M1SC6	399	F604_958.9 P71 BN71A6	400
1.0	1540	1.2	885.5	12000	F514_885.5 S1 M1SC6	395	F514_885.5 P71 BN71A6	396
1.0	1539	1.9	885.1	20000	F604_885.1 S1 M1SC6	399	F604_885.1 P71 BN71A6	400
1.0	1564	3.2	899.4	35000	F704_899.4 S1 M1SC6	403	F704_899.4 P71 BN71A6	404
1.1	1437	1.3	826.4	12000	F514_826.4 S1 M1SC6	395	F514_826.4 P71 BN71A6	396
1.1	1430	3.5	822.2	35000	F704_822.2 S1 M1SC6	403	F704_822.2 P71 BN71A6	404
1.2	1286	0.9	739.4	8500	F414_739.4 S1 M1SC6	391	F414_739.4 P71 BN71A6	392
1.2	1286	0.9	739.4	8500	F414_739.4 S1 M1SC6	391	F414_739.4 P71 BN71A6	392
1.3	1200	0.9	690.1	8500	F414_690.1 S1 M1SC6	391	F414_690.1 P71 BN71A6	392
1.3	1200	0.9	690.1	8500	F414_690.1 S1 M1SC6	391	F414_690.1 P71 BN71A6	392
1.3	1165	0.9	982.4	8500	F414_982.4 S05 M05B4	391	F414_982.4 P63 BN63B4	392
1.5	1068	1.0	900.5	8500	F414_900.5 S05 M05B4	391	F414_900.5 P63 BN63B4	392
1.6	965	1.1	813.8	8500	F414_813.8 S05 M05B4	391	F414_813.8 P63 BN63B4	392
1.8	877	1.3	739.4	8500	F414_739.4 S05 M05B4	391	F414_739.4 P63 BN63B4	392
1.9	818	1.3	690.1	8500	F414_690.1 S05 M05B4	391	F414_690.1 P63 BN63B4	392
2.3	686	0.9	578.6	6500	F314_578.6 S05 M05B4	387	F314_578.6 P63 BN63B4	388
2.4	652	1.7	549.8	8500	F414_549.8 S05 M05B4	391	F414_549.8 P63 BN63B4	392
2.5	626	1.0	527.8	6500	F314_527.8 S05 M05B4	387	F314_527.8 P63 BN63B4	388
2.9	549	1.1	462.6	6500	F314_462.6 S05 M05B4	387	F314_462.6 P63 BN63B4	388
3.0	514	2.1	433.7	8500	F414_433.7 S05 M05B4	391	F414_433.7 P63 BN63B4	392
3.2	497	1.2	418.9	6500	F314_418.9 S05 M05B4	387	F314_418.9 P63 BN63B4	388
3.4	467	0.9	393.9	6500	F254_393.9 S05 M05B4	383	F254_393.9 P63 BN63B4	384
3.5	454	1.3	374.4	6500			F313_374.4 P63 BN63B4	388
3.8	418	2.6	344.8	8500			F413_344.8 P63 BN63B4	392
4.0	404	1.0	333.1	6500	F253_333.1 S05 M05B4	383	F253_333.1 P63 BN63B4	384
4.0	403	1.5	332.8	6500			F313_332.8 P63 BN63B4	388
4.5	356	1.7	293.8	6500			F313_293.8 P63 BN63B4	388
4.5	359	3.1	296.6	8500			F413_296.6 P63 BN63B4	392
4.6	349	1.1	288.1	6500	F253_288.1 S05 M05B4	383	F253_288.1 P63 BN63B4	384
4.9	323	3.4	266.9	8500			F413_266.9 P63 BN63B4	392
5.2	310	1.3	256.1	6500	F253_256.1 S05 M05B4	383	F253_256.1 P63 BN63B4	384
5.2	307	2.0	253.6	6500			F313_253.6 P63 BN63B4	388



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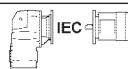
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
5.8	276	1.4	227.8	6500	F253_227.8 S05 M05B4	383	F253_227.8 P63 BN63B4	384
5.8	277	2.2	228.2	6500			F313_228.2 P63 BN63B4	388
6.3	254	1.0	209.3	4000	F203_209.3 S05 M05B4	379	F203_209.3 P63 BN63B4	380
6.5	245	2.4	202.3	6500			F313_202.3 P63 BN63B4	388
6.8	235	1.7	193.6	6500	F253_193.6 S05 M05B4	383	F253_193.6 P63 BN63B4	384
7.1	224	1.1	184.9	4000	F203_184.9 S05 M05B4	379	F203_184.9 P63 BN63B4	380
7.1	225	2.7	185.4	6500			F313_185.4 P63 BN63B4	388
7.6	209	1.2	172.6	4000	F203_172.6 S05 M05B4	379	F203_172.6 P63 BN63B4	380
7.6	211	1.9	174.2	6500	F253_174.2 S05 M05B4	383	F253_174.2 P63 BN63B4	384
7.9	202	3.0	166.8	6500			F313_166.8 P63 BN63B4	388
8.4	189	1.3	156.3	4000	F203_156.3 S05 M05B4	379	F203_156.3 P63 BN63B4	380
8.5	189	2.1	155.9	6500	F253_155.9 S05 M05B4	383	F253_155.9 P63 BN63B4	384
8.8	183	3.3	150.8	6500			F313_150.8 P63 BN63B4	388
9.2	173	2.3	143.0	6500	F253_143.0 S05 M05B4	383	F253_143.0 P63 BN63B4	384
9.4	171	3.5	140.7	6500			F313_140.7 P63 BN63B4	388
10.0	164	1.5	132.2	4000	F202_132.2 S05 M05B4	379	F202_132.2 P63 BN63B4	380
10.3	155	2.6	127.8	6500	F253_127.8 S05 M05B4	383	F253_127.8 P63 BN63B4	384
10.4	157	0.9	127.1	2800	F102_127.1 S05 M05B4	375	F102_127.1 P63 BN63B4	376
11.5	142	1.8	114.3	4000	F202_114.3 S05 M05B4	379	F202_114.3 P63 BN63B4	380
11.7	137	2.9	113.0	6500	F253_113.0 S05 M05B4	383	F253_113.0 P63 BN63B4	384
12.5	131	1.1	106.0	2800	F102_106.0 S05 M05B4	375	F102_106.0 P63 BN63B4	376
12.5	128	3.1	105.4	6500	F253_105.4 S05 M05B4	383	F253_105.4 P63 BN63B4	384
13.0	126	2.0	101.6	4000	F202_101.6 S05 M05B4	379	F202_101.6 P63 BN63B4	380
13.8	116	3.5	95.5	6500	F253_95.5 S05 M05B4	383	F253_95.5 P63 BN63B4	384
14.4	113	1.2	91.5	2800	F102_91.5 S05 M05B4	375	F102_91.5 P63 BN63B4	376
14.6	112	2.2	90.4	4000	F202_90.4 S05 M05B4	379	F202_90.4 P63 BN63B4	380
16.2	101	1.4	81.3	2800	F102_81.3 S05 M05B4	375	F102_81.3 P63 BN63B4	376
17.2	95	2.6	76.8	4000	F202_76.8 S05 M05B4	379	F202_76.8 P63 BN63B4	380
18.6	88	1.6	71.1	2800	F102_71.1 S05 M05B4	375	F102_71.1 P63 BN63B4	376
19.1	86	2.9	69.1	4000	F202_69.1 S05 M05B4	379	F202_69.1 P63 BN63B4	380
21.0	78	1.8	63.0	2800	F102_63.0 S05 M05B4	375	F102_63.0 P63 BN63B4	376
21.3	77	3.3	61.9	4000	F202_61.9 S05 M05B4	379	F202_61.9 P63 BN63B4	380
23.3	70	2.0	56.7	2800	F102_56.7 S05 M05B4	375	F102_56.7 P63 BN63B4	376
27.1	60	2.3	48.7	2800	F102_48.7 S05 M05B4	375	F102_48.7 P63 BN63B4	376
29.6	55	2.5	44.7	2800	F102_44.7 S05 M05B4	375	F102_44.7 P63 BN63B4	376
33	49	2.9	39.6	2800	F102_39.6 S05 M05B4	375	F102_39.6 P63 BN63B4	376
37	44	3.2	35.3	2800	F102_35.3 S05 M05B4	375	F102_35.3 P63 BN63B4	376
40	41	3.4	33.0	2800	F102_33.0 S05 M05B4	375	F102_33.0 P63 BN63B4	376
45	37	3.8	29.6	2800	F102_29.6 S05 M05B4	375	F102_29.6 P63 BN63B4	376
51	32	4.4	25.8	2780	F102_25.8 S05 M05B4	375	F102_25.8 P63 BN63B4	376
58	28	5.0	22.8	2680	F102_22.8 S05 M05B4	375	F102_22.8 P63 BN63B4	376
68	24	5.7	19.3	2540	F102_19.3 S05 M05B4	375	F102_19.3 P63 BN63B4	376
78	21	6.1	17.0	2440	F102_17.0 S05 M05B4	375	F102_17.0 P63 BN63B4	376
90	18	6.6	14.6	2330	F102_14.6 S05 M05B4	375	F102_14.6 P63 BN63B4	376
101	16	6.4	13.0	2240	F102_13.0 S05 M05B4	375	F102_13.0 P63 BN63B4	376
114	14	6.7	11.5	2150	F102_11.5 S05 M05B4	375	F102_11.5 P63 BN63B4	376
135	12	7.4	9.8	2040	F102_9.8 S05 M05B4	375	F102_9.8 P63 BN63B4	376
154	11	7.7	8.6	1960	F102_8.6 S05 M05B4	375	F102_8.6 P63 BN63B4	376
178	9	8.3	7.4	1870	F102_7.4 S05 M05B4	375	F102_7.4 P63 BN63B4	376
186	9	10.7	14.6	1860	F102_14.6 S05 M05A2	375	F102_14.6 P63 BN63A2	376
210	8	10.9	13.0	1790	F102_13.0 S05 M05A2	375	F102_13.0 P63 BN63A2	376

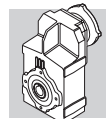


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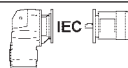
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
237	7	11.3	11.5	1720	F102_11.5 S05 M05A2	375	F102_11.5 P63 BN63A2	376
279	6	12.5	9.8	1630	F102_9.8 S05 M05A2	375	F102_9.8 P63 BN63A2	376
318	5	13.0	8.6	1560	F102_8.6 S05 M05A2	375	F102_8.6 P63 BN63A2	376
369	4	14.2	7.4	1490	F102_7.4 S05 M05A2	375	F102_7.4 P63 BN63A2	376

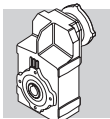
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.41	5283	0.9	2188	35000	F704_2188 S1 M1SD6	403	F704_2188 P71 BN71B6	404
0.45	4877	1.0	2019	35000	F704_2019 S1 M1SD6	403	F704_2019 P71 BN71B6	404
0.45	4799	1.7	1987	45000	F804_1987 S1 M1SD6	406	F804_1987 P71 BN71B6	407
0.49	4430	1.8	1834	45000	F804_1834 S1 M1SD6	406	F804_1834 P71 BN71B6	407
0.52	4146	1.2	1717	35000	F704_1717 S1 M1SD6	403	F704_1717 P71 BN71B6	404
0.53	4128	1.9	1709	45000	F804_1709 S1 M1SD6	406	F804_1709 P71 BN71B6	407
0.57	3827	1.3	1585	35000	F704_1585 S1 M1SD6	403	F704_1585 P71 BN71B6	404
0.57	3810	2.1	1578	45000	F804_1578 S1 M1SD6	406	F804_1578 P71 BN71B6	407
0.61	3578	1.4	1481	35000	F704_1481 S1 M1SD6	403	F704_1481 P71 BN71B6	404
0.65	3342	2.4	1384	45000	F804_1384 S1 M1SD6	406	F804_1384 P71 BN71B6	407
0.66	3303	1.5	1368	35000	F704_1368 S1 M1SD6	403	F704_1368 P71 BN71B6	404
0.70	3085	2.6	1277	45000	F804_1277 S1 M1SD6	406	F804_1277 P71 BN71B6	407
0.76	2854	1.8	1182	35000	F704_1182 S1 M1SD6	403	F704_1182 P71 BN71B6	404
0.79	2757	1.1	1141	20000	F604_1141 S1 M1SD6	399	F604_1141 P71 BN71B6	400
0.79	2769	2.9	1146	45000	F804_1146 S1 M1SD6	406	F804_1146 P71 BN71B6	407
0.83	2635	1.9	1091	35000	F704_1091 S1 M1SD6	403	F704_1091 P71 BN71B6	404
0.85	2545	1.1	1054	20000	F604_1054 S1 M1SD6	399	F604_1054 P71 BN71B6	400
0.85	2556	3.1	1058	45000	F804_1058 S1 M1SD6	406	F804_1058 P71 BN71B6	407
0.92	2353	2.1	974.4	35000	F704_974.4 S1 M1SD6	403	F704_974.4 P71 BN71B6	404
0.94	2316	1.3	958.9	20000	F604_958.9 S1 M1SD6	399	F604_958.9 P71 BN71B6	400
1.0	2138	1.4	885.1	20000	F604_885.1 S1 M1SD6	399	F604_885.1 P71 BN71B6	400
1.0	2172	2.3	899.4	35000	F704_899.4 S1 M1SD6	403	F704_899.4 P71 BN71B6	404
1.1	1996	0.9	826.4	12000	F514_826.4 S1 M1SD6	395	F514_826.4 P71 BN71B6	396
1.1	1986	2.5	822.2	35000	F704_822.2 S1 M1SD6	403	F704_822.2 P71 BN71B6	404
1.3	1633	1.1	676.3	12000	F514_676.3 S1 M1SD6	395	F514_676.3 P71 BN71B6	396
1.4	1600	1.8	662.4	20000	F604_662.4 S1 M1SD6	399	F604_662.4 P71 BN71B6	400
1.4	1588	3.1	657.4	35000	F704_657.4 S1 M1SD6	403	F704_657.4 P71 BN71B6	404
1.5	1477	2.0	611.4	20000	F604_611.4 S1 M1SD6	399	F604_611.4 P71 BN71B6	400
1.5	1466	3.4	606.8	35000	F704_606.8 S1 M1SD6	403	F704_606.8 P71 BN71B6	404
1.7	1282	0.9	813.8	8500	F414_813.8 S05 M05C4	391	F414_813.8 P71 BN71A4	392
1.8	1199	0.9	739.4	8500	F414_739.4 S05 M05C4	391	F414_739.4 P71 BN71A4	392
1.9	1119	1.0	690.1	8500	F414_690.1 S05 M05C4	391	F414_690.1 P71 BN71A4	392
2.4	892	1.2	549.8	8500	F414_549.8 S05 M05C4	391	F414_549.8 P71 BN71A4	392
2.8	783	2.3	317.3	12000	F513_317.3 S1 M1SD6	395	F513_317.3 P71 BN71B6	396
3.1	704	1.6	433.7	8500	F414_433.7 S05 M05C4	391	F414_433.7 P71 BN71A4	392
3.2	679	0.9	418.9	6500	F314_418.9 S05 M05C4	387	F314_418.9 P71 BN71A4	388
3.7	603	1.0	374.4	6500			F313_374.4 P71 BN71A4	388
4.0	555	2.0	344.8	8500			F413_344.8 P71 BN71A4	392
4.1	536	1.1	332.8	6500			F313_332.8 P71 BN71A4	388
4.7	473	1.3	293.8	6500			F313_293.8 P71 BN71A4	388

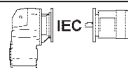


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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
4.7	477	2.3	296.6	8500	F253_256.1 S05 M05C4	383	F413_296.6 P71 BN71A4	392
5.2	425	0.9	256.1	6500			F253_256.1 P71 BN71A4	384
5.2	430	2.6	266.9	8500			F413_266.9 P71 BN71A4	392
5.4	408	1.5	253.6	6500			F313_253.6 P71 BN71A4	388
5.7	387	2.8	240.1	8500			F413_240.1 P71 BN71A4	392
5.9	378	1.1	227.8	6500	F253_227.8 S05 M05C4	383	F253_227.8 P71 BN71A4	384
6.0	367	1.6	228.2	6500			F313_228.2 P71 BN71A4	388
6.3	354	3.1	220.1	8500			F413_220.1 P71 BN71A4	392
6.8	326	1.8	202.3	6500			F313_202.3 P71 BN71A4	388
6.9	321	1.2	193.6	6500			F253_193.6 P71 BN71A4	384
6.9	320	3.4	198.9	8500	F253_174.2 S05 M05C4 F203_172.6 S05 M05C4	383 379	F413_198.9 P71 BN71A4	392
7.4	299	2.0	185.4	6500			F313_185.4 P71 BN71A4	388
7.7	289	1.4	174.2	6500			F253_174.2 P71 BN71A4	384
8.0	278	0.9	172.6	4000			F203_172.6 P71 BN71A4	380
8.3	268	2.2	166.8	6500			F313_166.8 P71 BN71A4	388
8.6	259	1.0	156.3	4000	F203_156.3 S05 M05C4	379	F203_156.3 P71 BN71A4	380
8.6	259	1.5	155.9	6500	F253_155.9 S05 M05C4	383	F253_155.9 P71 BN71A4	384
9.2	243	2.5	150.8	6500	F253_143.0 S05 M05C4	383	F313_150.8 P71 BN71A4	388
9.7	230	1.7	143.0	6500			F253_143.0 P71 BN71A4	384
9.8	227	2.6	140.7	6500			F313_140.7 P71 BN71A4	388
10.1	224	1.1	132.2	4000	F202_132.2 S05 M05C4	379	F202_132.2 P71 BN71A4	380
10.5	212	1.9	127.8	6500	F253_127.8 S05 M05C4	383	F253_127.8 P71 BN71A4	384
10.7	207	2.9	128.4	6500	F202_114.3 S05 M05C4 F253_113.0 S05 M05C4	379 383	F313_128.4 P71 BN71A4	388
11.7	194	1.3	114.3	4000			F202_114.3 P71 BN71A4	380
12.2	182	2.2	113.0	6500			F253_113.0 P71 BN71A4	384
12.3	181	3.3	112.5	6500			F313_112.5 P71 BN71A4	388
12.7	175	2.3	105.4	6500	F253_105.4 S05 M05C4	383	F253_105.4 P71 BN71A4	384
13.2	172	1.5	101.6	4000	F202_101.6 S05 M05C4	379	F202_101.6 P71 BN71A4	380
14.0	158	2.5	95.5	6500	F253_95.5 S05 M05C4	383	F253_95.5 P71 BN71A4	384
14.6	155	0.9	91.5	2800	F102_91.5 S05 M05C4	375	F102_91.5 P71 BN71A4	376
14.8	153	1.6	90.4	4000	F202_90.4 S05 M05C4	379	F202_90.4 P71 BN71A4	380
16.1	138	2.9	83.4	6500	F253_83.4 S05 M05C4	383	F253_83.4 P71 BN71A4	384
16.5	138	1.0	81.3	2800	F102_81.3 S05 M05C4	375	F102_81.3 P71 BN71A4	376
17.4	130	1.9	76.8	4000	F202_76.8 S05 M05C4	379	F202_76.8 P71 BN71A4	380
17.5	127	3.2	76.6	6420	F253_76.6 S05 M05C4	383	F253_76.6 P71 BN71A4	384
18.8	120	1.2	71.1	2800	F102_71.1 S05 M05C4	375	F102_71.1 P71 BN71A4	376
19.4	117	2.1	69.1	4000	F202_69.1 S05 M05C4	379	F202_69.1 P71 BN71A4	380
21.3	107	1.3	63.0	2800	F102_63.0 S05 M05C4	375	F102_63.0 P71 BN71A4	376
21.7	105	2.4	61.9	4000	F202_61.9 S05 M05C4	379	F202_61.9 P71 BN71A4	380
23.6	96	1.5	56.7	2800	F102_56.7 S05 M05C4	375	F102_56.7 P71 BN71A4	376
23.6	96	2.6	56.7	4000	F202_56.7 S05 M05C4	379	F202_56.7 P71 BN71A4	380
26.4	86	2.9	50.7	4000	F202_50.7 S05 M05C4	379	F202_50.7 P71 BN71A4	380
27.5	83	1.7	48.7	2800	F102_48.7 S05 M05C4	375	F102_48.7 P71 BN71A4	376
29.9	76	3.3	44.8	3870	F202_44.8 S05 M05C4	379	F202_44.8 P71 BN71A4	380
30.0	76	1.9	44.7	2800	F102_44.7 S05 M05C4	375	F102_44.7 P71 BN71A4	376
34	67	2.1	39.6	2800	F102_39.6 S05 M05C4	375	F102_39.6 P71 BN71A4	376
38	60	2.3	35.3	2800	F102_35.3 S05 M05C4	375	F102_35.3 P71 BN71A4	376
41	56	2.5	33.0	2800	F102_33.0 S05 M05C4	375	F102_33.0 P71 BN71A4	376
45	50	2.8	29.6	2800	F102_29.6 S05 M05C4	375	F102_29.6 P71 BN71A4	376
52	44	3.2	25.8	2750	F102_25.8 S05 M05C4	375	F102_25.8 P71 BN71A4	376
59	39	3.6	22.8	2650	F102_22.8 S05 M05C4	375	F102_22.8 P71 BN71A4	376

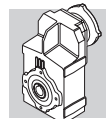


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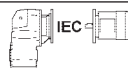
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
69	33	4.2	19.3	2520	F102_19.3 S05 M05C4	375	F102_19.3 P71 BN71A4	376
81	28	4.6	17.0	2420	F102_17.0 S05 M05C4	375	F102_17.0 P71 BN71A4	376
91	25	4.8	14.6	2310	F102_14.6 S05 M05C4	375	F102_14.6 P71 BN71A4	376
103	22	4.7	13.0	2230	F102_13.0 S05 M05C4	375	F102_13.0 P71 BN71A4	376
120	19	5.1	11.5	2140	F102_11.5 S05 M05C4	375	F102_11.5 P71 BN71A4	376
137	17	5.4	9.8	2030	F102_9.8 S05 M05C4	375	F102_9.8 P71 BN71A4	376
161	14	5.8	8.6	1950	F102_8.6 S05 M05C4	375	F102_8.6 P71 BN71A4	376
181	13	6.1	7.4	1860	F102_7.4 S05 M05C4	375	F102_7.4 P71 BN71A4	376
187	12	7.7	14.6	1850	F102_14.6 S05 M05B2	375	F102_14.6 P63 BN63B2	376
210	11	7.9	13.0	1780	F102_13.0 S05 M05B2	375	F102_13.0 P63 BN63B2	376
237	10	8.2	11.5	1710	F102_11.5 S05 M05B2	375	F102_11.5 P63 BN63B2	376
280	8	9.0	9.8	1620	F102_9.8 S05 M05B2	375	F102_9.8 P63 BN63B2	376
319	7	9.4	8.6	1550	F102_8.6 S05 M05B2	375	F102_8.6 P63 BN63B2	376
370	6	10.3	7.4	1480	F102_7.4 S05 M05B2	375	F102_7.4 P63 BN63B2	376

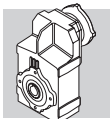
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.46	7024	1.1	1987	45000	F804_1987 S1 M1LA6	406	F804_1987 P80 BN80A6	407
0.50	6484	1.2	1834	45000	F804_1834 S1 M1LA6	406	F804_1834 P80 BN80A6	407
0.53	6042	1.3	1709	45000	F804_1709 S1 M1LA6	406	F804_1709 P80 BN80A6	407
0.57	5602	0.9	1585	35000	F704_1585 S1 M1LA6	403	F704_1585 P80 BN80A6	404
0.58	5577	1.4	1578	45000	F804_1578 S1 M1LA6	406	F804_1578 P80 BN80A6	407
0.61	5238	1.0	1481	35000	F704_1481 S1 M1LA6	403	F704_1481 P80 BN80A6	404
0.63	5137	1.0	2188	35000	F704_2188 S1 M1SD4	403	F704_2188 P71 BN71B4	404
0.68	4742	1.1	2019	35000	F704_2019 S1 M1SD4	403	F704_2019 P71 BN71B4	404
0.69	4666	1.7	1987	45000	F804_1987 S1 M1SD4	406	F804_1987 P71 BN71B4	407
0.75	4307	1.9	1834	45000	F804_1834 S1 M1SD4	406	F804_1834 P71 BN71B4	407
0.80	4031	1.2	1717	35000	F704_1717 S1 M1SD4	403	F704_1717 P71 BN71B4	404
0.80	4013	2.0	1709	45000	F804_1709 S1 M1SD4	406	F804_1709 P71 BN71B4	407
0.86	3721	1.3	1585	35000	F704_1585 S1 M1SD4	403	F704_1585 P71 BN71B4	404
0.87	3705	2.2	1578	45000	F804_1578 S1 M1SD4	406	F804_1578 P71 BN71B4	407
0.92	3479	1.4	1481	35000	F704_1481 S1 M1SD4	403	F704_1481 P71 BN71B4	404
0.99	3250	2.5	1384	45000	F804_1384 S1 M1SD4	406	F804_1384 P71 BN71B4	407
1.0	3211	1.6	1368	35000	F704_1368 S1 M1SD4	403	F704_1368 P71 BN71B4	404
1.1	3000	2.7	1277	45000	F804_1277 S1 M1SD4	406	F804_1277 P71 BN71B4	407
1.2	2680	1.1	1141	20000	F604_1141 S1 M1SD4	399	F604_1141 P71 BN71B4	400
1.2	2775	1.8	1182	35000	F704_1182 S1 M1SD4	403	F704_1182 P71 BN71B4	404
1.2	2692	3.0	1146	45000	F804_1146 S1 M1SD4	406	F804_1146 P71 BN71B4	407
1.3	2474	1.2	1054	20000	F604_1054 S1 M1SD4	399	F604_1054 P71 BN71B4	400
1.3	2562	2.0	1091	35000	F704_1091 S1 M1SD4	403	F704_1091 P71 BN71B4	404
1.3	2485	3.2	1058	45000	F804_1058 S1 M1SD4	406	F804_1058 P71 BN71B4	407
1.4	2252	1.3	958.9	20000	F604_958.9 S1 M1SD4	399	F604_958.9 P71 BN71B4	400
1.4	2288	2.2	974.4	35000	F704_974.4 S1 M1SD4	403	F704_974.4 P71 BN71B4	404
1.5	2079	0.9	885.5	12000	F514_885.5 S1 M1SD4	395	F514_885.5 P71 BN71B4	396
1.5	2078	1.4	885.1	20000	F604_885.1 S1 M1SD4	399	F604_885.1 P71 BN71B4	400
1.5	2112	2.4	899.4	35000	F704_899.4 S1 M1SD4	403	F704_899.4 P71 BN71B4	404
1.7	1941	0.9	826.4	12000	F514_826.4 S1 M1SD4	395	F514_826.4 P71 BN71B4	396



0.37 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
1.7	1931	2.6	822.2	35000	F704_822.2 S1 M1SD4	403	F704_822.2 P71 BN71B4	404
2.0	1588	1.1	676.3	12000	F514_676.3 S1 M1SD4	395	F514_676.3 P71 BN71B4	396
2.1	1556	1.9	662.4	20000	F604_662.4 S1 M1SD4	399	F604_662.4 P71 BN71B4	400
2.1	1544	3.2	657.4	35000	F704_657.4 S1 M1SD4	403	F704_657.4 P71 BN71B4	404
2.2	1436	2.0	611.4	20000	F604_611.4 S1 M1SD4	399	F604_611.4 P71 BN71B4	400
2.3	1425	3.5	606.8	35000	F704_606.8 S1 M1SD4	403	F704_606.8 P71 BN71B4	404
2.5	1291	0.9	549.8	8500	F414_549.8 S1 M1SD4	391	F414_549.8 P71 BN71B4	392
2.6	1246	1.4	530.5	12000	F514_530.5 S1 M1SD4	395	F514_530.5 P71 BN71B4	396
2.6	1246	2.3	530.7	20000	F604_530.7 S1 M1SD4	399	F604_530.7 P71 BN71B4	400
2.8	1150	2.5	489.8	20000	F604_489.8 S1 M1SD4	399	F604_489.8 P71 BN71B4	400
3.2	1018	1.1	433.7	8500	F414_433.7 S1 M1SD4	391	F414_433.7 P71 BN71B4	392
3.2	1008	1.8	429.1	12000	F514_429.1 S1 M1SD4	395	F514_429.1 P71 BN71B4	396
3.2	1016	2.9	432.6	20000	F604_432.6 S1 M1SD4	399	F604_432.6 P71 BN71B4	400
3.4	938	3.1	399.3	20000	F604_399.3 S1 M1SD4	399	F604_399.3 P71 BN71B4	400
3.9	846	2.1	352.5	12000	F513_352.5 S1 M1SD4	395	F513_352.5 P71 BN71B4	396
4.0	827	1.3	344.8	8500	F413_344.8 S1 M1SD4	391	F413_344.8 P71 BN71B4	392
4.3	761	2.4	317.3	12000	F513_317.3 S1 M1SD4	395	F513_317.3 P71 BN71B4	396
4.6	712	1.5	296.6	8500	F413_296.6 S1 M1SD4	391	F413_296.6 P71 BN71B4	392
4.8	686	2.6	285.9	12000	F513_285.9 S1 M1SD4	395	F513_285.9 P71 BN71B4	396
5.1	641	1.7	266.9	8500	F413_266.9 S1 M1SD4	391	F413_266.9 P71 BN71B4	392
5.2	629	2.9	262.1	12000	F513_262.1 S1 M1SD4	395	F513_262.1 P71 BN71B4	396
5.4	609	1.0	253.6	6500	F313_253.6 S1 M1SD4	387	F313_253.6 P71 BN71B4	388
5.7	576	1.9	240.1	8500	F413_240.1 S1 M1SD4	391	F413_240.1 P71 BN71B4	392
5.7	576	3.1	239.8	12000	F513_239.8 S1 M1SD4	395	F513_239.8 P71 BN71B4	396
6.0	548	1.1	228.2	6500	F313_228.2 S1 M1SD4	387	F313_228.2 P71 BN71B4	388
6.2	528	2.1	220.1	8500	F413_220.1 S1 M1SD4	391	F413_220.1 P71 BN71B4	392
6.3	520	3.5	216.9	12000	F513_216.9 S1 M1SD4	395	F513_216.9 P71 BN71B4	396
6.8	485	1.2	202.3	6500	F313_202.3 S1 M1SD4	387	F313_202.3 P71 BN71B4	388
6.9	477	2.3	198.9	8500	F413_198.9 S1 M1SD4	391	F413_198.9 P71 BN71B4	392
7.4	445	1.3	185.4	6500	F313_185.4 S1 M1SD4	387	F313_185.4 P71 BN71B4	388
7.6	434	2.5	180.7	8500	F413_180.7 S1 M1SD4	391	F413_180.7 P71 BN71B4	392
7.9	418	1.0	174.2	6500	F253_174.2 S1 M1SD4	383	F253_174.2 P71 BN71B4	384
8.1	405	2.7	168.7	8500	F413_168.7 S1 M1SD4	391	F413_168.7 P71 BN71B4	392
8.2	400	1.5	166.8	6500	F313_166.8 S1 M1SD4	387	F313_166.8 P71 BN71B4	388
8.8	374	1.1	155.9	6500	F253_155.9 S1 M1SD4	383	F253_155.9 P71 BN71B4	384
9.1	362	1.7	150.8	6500	F313_150.8 S1 M1SD4	387	F313_150.8 P71 BN71B4	388
9.6	343	1.2	143.0	6500	F253_143.0 S1 M1SD4	383	F253_143.0 P71 BN71B4	384
9.7	338	1.8	140.7	6500	F313_140.7 S1 M1SD4	387	F313_140.7 P71 BN71B4	388
10.2	323	3.4	134.4	8500	F413_134.4 S1 M1SD4	391	F413_134.4 P71 BN71B4	392
10.7	307	1.3	127.8	6500	F253_127.8 S1 M1SD4	383	F253_127.8 P71 BN71B4	384
10.7	308	1.9	128.4	6500	F313_128.4 S1 M1SD4	387	F313_128.4 P71 BN71B4	388
12.1	271	1.5	113.0	6500	F253_113.0 S1 M1SD4	383	F253_113.0 P71 BN71B4	384
12.2	270	2.2	112.5	6500	F313_112.5 S1 M1SD4	387	F313_112.5 P71 BN71B4	388
13.0	253	1.6	105.4	6500	F253_105.4 S1 M1SD4	383	F253_105.4 P71 BN71B4	384
13.4	245	2.5	101.9	6500	F313_101.9 S1 M1SD4	387	F313_101.9 P71 BN71B4	388
13.5	249	1.0	101.6	4000			F202_101.6 P71 BN71B4	380
14.3	229	1.7	95.5	6490	F253_95.5 S1 M1SD4	383	F253_95.5 P71 BN71B4	384
15.2	222	1.1	90.4	4000	F202_90.4 S1 M1SD4	379	F202_90.4 P71 BN71B4	380
15.7	210	2.9	87.4	6500	F313_87.4 S1 M1SD4	387	F313_87.4 P71 BN71B4	388
16.4	200	2.0	83.4	6280	F253_83.4 S1 M1SD4	383	F253_83.4 P71 BN71B4	384
17.4	189	3.2	78.9	6500	F313_78.9 S1 M1SD4	387	F313_78.9 P71 BN71B4	388

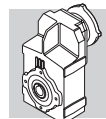


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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
17.8	188	1.3	76.8	4000	F202_76.8 S1 M1SD4	379	F202_76.8 P71 BN71B4	380
17.9	184	2.2	76.6	6160	F253_76.6 S1 M1SD4	383	F253_76.6 P71 BN71B4	384
19.8	169	1.5	69.1	4000	F202_69.1 S1 M1SD4	379	F202_69.1 P71 BN71B4	380
21.0	157	2.6	65.3	5920	F253_65.3 S1 M1SD4	383	F253_65.3 P71 BN71B4	384
21.7	154	0.9	63.0	2800	F102_63.0 S1 M1SD4	375	F102_63.0 P71 BN71B4	376
22.1	152	1.6	61.9	4000	F202_61.9 S1 M1SD4	379	F202_61.9 P71 BN71B4	380
23.5	140	2.9	58.3	5750	F253_58.3 S1 M1SD4	383	F253_58.3 P71 BN71B4	384
24.2	139	1.0	56.7	2800	F102_56.7 S1 M1SD4	375	F102_56.7 P71 BN71B4	376
24.2	139	1.8	56.7	4000	F202_56.7 S1 M1SD4	379	F202_56.7 P71 BN71B4	380
27.0	124	2.0	50.7	3900	F202_50.7 S1 M1SD4	379	F202_50.7 P71 BN71B4	380
27.0	122	3.3	50.8	5540	F253_50.8 S1 M1SD4	383	F253_50.8 P71 BN71B4	384
28.1	119	1.2	48.7	2800	F102_48.7 S1 M1SD4	375	F102_48.7 P71 BN71B4	376
31	110	1.3	44.7	2800	F102_44.7 S1 M1SD4	375	F102_44.7 P71 BN71B4	376
31	110	2.3	44.8	3770	F202_44.8 S1 M1SD4	379	F202_44.8 P71 BN71B4	380
31	109	3.5	44.4	5370	F252_44.4 S1 M1SD4	383	F252_44.4 P71 BN71B4	384
33	103	2.4	41.8	3700	F202_41.8 S1 M1SD4	379	F202_41.8 P71 BN71B4	380
35	97	1.4	39.6	2800	F102_39.6 S1 M1SD4	375	F102_39.6 P71 BN71B4	376
36	93	2.7	37.9	3600	F202_37.9 S1 M1SD4	379	F202_37.9 P71 BN71B4	380
39	87	1.6	35.3	2800	F102_35.3 S1 M1SD4	375	F102_35.3 P71 BN71B4	376
41	81	3.1	33.1	3460	F202_33.1 S1 M1SD4	379	F202_33.1 P71 BN71B4	380
42	81	1.7	33.0	2800	F102_33.0 S1 M1SD4	375	F102_33.0 P71 BN71B4	376
45	75	3.4	30.4	3380	F202_30.4 S1 M1SD4	379	F202_30.4 P71 BN71B4	380
46	73	1.9	29.6	2800	F102_29.6 S1 M1SD4	375	F102_29.6 P71 BN71B4	376
53	63	2.2	25.8	2690	F102_25.8 S1 M1SD4	375	F102_25.8 P71 BN71B4	376
60	56	2.5	22.8	2600	F102_22.8 S1 M1SD4	375	F102_22.8 P71 BN71B4	376
71	47	2.9	19.3	2470	F102_19.3 S1 M1SD4	375	F102_19.3 P71 BN71B4	376
81	42	3.1	17.0	2380	F102_17.0 S1 M1SD4	375	F102_17.0 P71 BN71B4	376
94	36	3.3	14.6	2280	F102_14.6 S1 M1SD4	375	F102_14.6 P71 BN71B4	376
105	32	3.3	13.0	2200	F102_13.0 S1 M1SD4	375	F102_13.0 P71 BN71B4	376
119	28	3.4	11.5	2120	F102_11.5 S1 M1SD4	375	F102_11.5 P71 BN71B4	376
140	24	3.7	9.8	2010	F102_9.8 S1 M1SD4	375	F102_9.8 P71 BN71B4	376
160	21	3.9	8.6	1930	F102_8.6 S1 M1SD4	375	F102_8.6 P71 BN71B4	376
185	18	4.2	7.4	1850	F102_7.4 S1 M1SD4	375	F102_7.4 P71 BN71B4	376
193	17	5.4	14.6	1830	F102_14.6 S05 M05C2	375	F102_14.6 P71 BN71A2	376
216	16	5.5	13.0	1760	F102_13.0 S05 M05C2	375	F102_13.0 P71 BN71A2	376
244	14	5.7	11.5	1690	F102_11.5 S05 M05C2	375	F102_11.5 P71 BN71A2	376
289	12	6.3	9.8	1610	F102_9.8 S05 M05C2	375	F102_9.8 P71 BN71A2	376
329	10	6.6	8.6	1540	F102_8.6 S05 M05C2	375	F102_8.6 P71 BN71A2	376
381	9	7.1	7.4	1470	F102_7.4 S05 M05C2	375	F102_7.4 P71 BN71A2	376

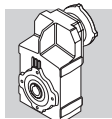
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n ₂	M ₂	S	i	R _{n2}				
0.44	10909	1.3	2099	55000	F904_2099 S2 M2SA6	409	F904_2099 P80 BN80B6	410
0.47	10070	1.4	1937	55000	F904_1937 S2 M2SA6	409	F904_1937 P80 BN80B6	410
0.54	8884	0.9	1709	45000	F804_1709 S2 M2SA6	406	F804_1709 P80 BN80B6	407
0.54	8849	1.6	1702	55000	F904_1702 S2 M2SA6	409	F904_1702 P80 BN80B6	410
0.58	8201	1.0	1578	45000	F804_1578 S2 M2SA6	406	F804_1578 P80 BN80B6	407

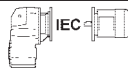


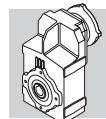
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n ₂	M ₂	S	i	R _{n2}				
0.59	8168	1.7	1571	55000	F904_1571 S2 M2SA6	409	F904_1571 P80 BN80B6	410
0.64	7422	1.9	1428	55000	F904_1428 S2 M2SA6	409	F904_1428 P80 BN80B6	410
0.66	7193	1.1	1384	45000	F804_1384 S2 M2SA6	406	F804_1384 P80 BN80B6	407
0.69	6885	1.2	1987	45000	F804_1987 S1 M1LA4	406	F804_1987 P80 BN80A4	407
0.75	6356	1.3	1834	45000	F804_1834 S1 M1LA4	406	F804_1834 P80 BN80A4	407
0.81	5923	1.4	1709	45000	F804_1709 S1 M1LA4	406	F804_1709 P80 BN80A4	407
0.87	5491	0.9	1585	35000	F704_1585 S1 M1LA4	403	F704_1585 P80 BN80A4	404
0.87	5467	1.5	1578	45000	F804_1578 S1 M1LA4	406	F804_1578 P80 BN80A4	407
0.93	5134	1.0	1481	35000	F704_1481 S1 M1LA4	403	F704_1481 P80 BN80A4	404
1.0	4739	1.1	1368	35000	F704_1368 S1 M1LA4	403	F704_1368 P80 BN80A4	404
1.0	4795	1.7	1384	45000	F804_1384 S1 M1LA4	406	F804_1384 P80 BN80A4	407
1.1	4427	1.8	1277	45000	F804_1277 S1 M1LA4	406	F804_1277 P80 BN80A4	407
1.2	4095	1.2	1182	35000	F704_1182 S1 M1LA4	403	F704_1182 P80 BN80A4	404
1.2	3972	2.0	1146	45000	F804_1146 S1 M1LA4	406	F804_1146 P80 BN80A4	407
1.3	3780	1.3	1091	35000	F704_1091 S1 M1LA4	403	F704_1091 P80 BN80A4	404
1.3	3667	2.2	1058	45000	F804_1058 S1 M1LA4	406	F804_1058 P80 BN80A4	407
1.4	3323	0.9	958.9	20000	F604_958.9 S1 M1LA4	399	F604_958.9 P80 BN80A4	400
1.4	3377	1.5	974.4	35000	F704_974.4 S1 M1LA4	403	F704_974.4 P80 BN80A4	404
1.5	3117	1.6	899.4	35000	F704_899.4 S1 M1LA4	403	F704_899.4 P80 BN80A4	404
1.5	3109	2.6	897.3	45000	F804_897.3 S1 M1LA4	406	F804_897.3 P80 BN80A4	407
1.6	3067	0.9	885.1	20000	F604_885.1 S1 M1LA4	399	F604_885.1 P80 BN80A4	400
1.7	2849	1.8	822.2	35000	F704_822.2 S1 M1LA4	403	F704_822.2 P80 BN80A4	404
1.8	2684	3.0	774.4	45000	F804_774.4 S1 M1LA4	406	F804_774.4 P80 BN80A4	407
1.9	2477	3.2	714.9	45000	F804_714.9 S1 M1LA4	406	F804_714.9 P80 BN80A4	407
2.1	2295	1.3	662.4	20000	F604_662.4 S1 M1LA4	399	F604_662.4 P80 BN80A4	400
2.1	2278	2.2	657.4	35000	F704_657.4 S1 M1LA4	403	F704_657.4 P80 BN80A4	404
2.3	2119	1.4	611.4	20000	F604_611.4 S1 M1LA4	399	F604_611.4 P80 BN80A4	400
2.3	2103	2.4	606.8	35000	F704_606.8 S1 M1LA4	403	F704_606.8 P80 BN80A4	404
2.6	1838	1.0	530.5	12000	F514_530.5 S1 M1LA4	395	F514_530.5 P80 BN80A4	396
2.6	1839	1.6	530.7	20000	F604_530.7 S1 M1LA4	399	F604_530.7 P80 BN80A4	400
2.7	1769	2.8	510.4	35000	F704_510.4 S1 M1LA4	403	F704_510.4 P80 BN80A4	404
2.8	1698	1.7	489.8	20000	F604_489.8 S1 M1LA4	399	F604_489.8 P80 BN80A4	400
2.9	1633	3.1	471.2	35000	F704_471.2 S1 M1LA4	403	F704_471.2 P80 BN80A4	404
3.2	1487	1.2	429.1	12000	F514_429.1 S1 M1LA4	395	F514_429.1 P80 BN80A4	396
3.2	1499	1.9	432.6	20000	F604_432.6 S1 M1LA4	399	F604_432.6 P80 BN80A4	400
3.5	1384	2.1	399.3	20000	F604_399.3 S1 M1LA4	399	F604_399.3 P80 BN80A4	400
3.9	1248	1.4	352.5	12000	F513_352.5 S1 M1LA4	395	F513_352.5 P80 BN80A4	396
4.0	1221	0.9	344.8	8500	F413_344.8 S1 M1LA4	391	F413_344.8 P80 BN80A4	392
4.0	1184	2.4	341.7	20000	F604_341.7 S1 M1LA4	399	F604_341.7 P80 BN80A4	400
4.3	1124	1.6	317.3	12000	F513_317.3 S1 M1LA4	395	F513_317.3 P80 BN80A4	396
4.4	1093	2.7	315.4	20000	F604_315.4 S1 M1LA4	399	F604_315.4 P80 BN80A4	400
4.7	1050	1.0	296.6	8500	F413_296.6 S1 M1LA4	391	F413_296.6 P80 BN80A4	392
4.8	1013	1.8	285.9	12000	F513_285.9 S1 M1LA4	395	F513_285.9 P80 BN80A4	396
5.2	945	1.2	266.9	8500	F413_266.9 S1 M1LA4	391	F413_266.9 P80 BN80A4	392
5.3	928	1.9	262.1	12000	F513_262.1 S1 M1LA4	395	F513_262.1 P80 BN80A4	396
5.7	850	1.3	240.1	8500	F413_240.1 S1 M1LA4	391	F413_240.1 P80 BN80A4	392
5.8	849	2.1	239.8	12000	F513_239.8 S1 M1LA4	395	F513_239.8 P80 BN80A4	396
6.3	780	1.4	220.1	8500	F413_220.1 S1 M1LA4	391	F413_220.1 P80 BN80A4	392
6.4	768	2.3	216.9	12000	F513_216.9 S1 M1LA4	395	F513_216.9 P80 BN80A4	396
6.8	717	2.5	202.4	12000	F513_202.4 S1 M1LA4	395	F513_202.4 P80 BN80A4	396
6.9	704	1.6	198.9	8500	F413_198.9 S1 M1LA4	391	F413_198.9 P80 BN80A4	392



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n ₂	M ₂	S	i	R _{n2}				
7.4	657	0.9	185.4	6500	F313_185.4 S1 M1LA4	387	F313_185.4 P80 BN80A4	388
7.6	640	1.7	180.7	8500	F413_180.7 S1 M1LA4	391	F413_180.7 P80 BN80A4	392
8.2	597	1.8	168.7	8500	F413_168.7 S1 M1LA4	391	F413_168.7 P80 BN80A4	392
8.3	591	1.0	166.8	6500	F313_166.8 S1 M1LA4	387	F313_166.8 P80 BN80A4	388
8.3	587	3.1	165.6	12000	F513_165.6 S1 M1LA4	395	F513_165.6 P80 BN80A4	396
9.2	534	1.1	150.8	6500	F313_150.8 S1 M1LA4	387	F313_150.8 P80 BN80A4	388
9.8	498	1.2	140.7	6500	F313_140.7 S1 M1LA4	387	F313_140.7 P80 BN80A4	388
10.3	476	2.3	134.4	8500	F413_134.4 S1 M1LA4	391	F413_134.4 P80 BN80A4	392
10.7	455	1.3	128.4	6500	F313_128.4 S1 M1LA4	387	F313_128.4 P80 BN80A4	388
12.2	400	1.0	113.0	6130	F253_113.0 S1 M1LA4	383	F253_113.0 P80 BN80A4	384
12.3	399	1.5	112.5	6500	F313_112.5 S1 M1LA4	387	F313_112.5 P80 BN80A4	388
13.0	375	2.9	106.0	8500	F413_106.0 S1 M1LA4	391	F413_106.0 P80 BN80A4	392
13.1	373	1.1	105.4	6070	F253_105.4 S1 M1LA4	383	F253_105.4 P80 BN80A4	384
13.5	361	1.7	101.9	6500	F313_101.9 S1 M1LA4	387	F313_101.9 P80 BN80A4	388
14.5	338	1.2	95.5	5980	F253_95.5 S1 M1LA4	383	F253_95.5 P80 BN80A4	384
15.8	309	1.9	87.4	6500	F313_87.4 S1 M1LA4	387	F313_87.4 P80 BN80A4	388
16.5	295	1.4	83.4	5840	F253_83.4 S1 M1LA4	383	F253_83.4 P80 BN80A4	384
17.5	279	2.1	78.9	6500	F313_78.9 S1 M1LA4	387	F313_78.9 P80 BN80A4	388
18.0	278	0.9	76.8	4000	F202_76.8 S1 M1LA4	379	F202_76.8 P80 BN80A4	380
18.0	271	1.5	76.6	5750	F253_76.6 S1 M1LA4	383	F253_76.6 P80 BN80A4	384
20.0	250	1.0	69.1	3980	F202_69.1 S1 M1LA4	379	F202_69.1 P80 BN80A4	380
20.0	245	2.5	69.1	6500	F313_69.1 S1 M1LA4	387	F313_69.1 P80 BN80A4	388
21.1	231	1.7	65.3	5570	F253_65.3 S1 M1LA4	383	F253_65.3 P80 BN80A4	384
22.1	221	2.7	62.8	6500			F313_62.8 P80 BN80A4	388
22.3	224	1.1	61.9	3890	F202_61.9 S1 M1LA4	379	F202_61.9 P80 BN80A4	380
23.7	207	1.9	58.3	5430	F253_58.3 S1 M1LA4	383	F253_58.3 P80 BN80A4	384
24.3	205	1.2	56.7	3810	F202_56.7 S1 M1LA4	379	F202_56.7 P80 BN80A4	380
26.7	183	3.3	52.1	6500			F313_52.1 P80 BN80A4	388
27.2	184	1.4	50.7	3720	F202_50.7 S1 M1LA4	379	F202_50.7 P80 BN80A4	380
27.2	180	2.2	50.8	5270	F253_50.8 S1 M1LA4	383	F253_50.8 P80 BN80A4	384
29.2	167	3.5	47.5	6500			F313_47.5 P80 BN80A4	388
31	162	1.5	44.8	3610	F202_44.8 S1 M1LA4	379	F202_44.8 P80 BN80A4	380
31	161	2.4	44.4	5140	F252_44.4 S1 M1LA4	383	F252_44.4 P80 BN80A4	384
31	160	2.5	45.6	5130			F253_45.6 P80 BN80A4	384
33	151	1.7	41.8	3550	F202_41.8 S1 M1LA4	379	F202_41.8 P80 BN80A4	380
34	147	2.5	40.7	5030	F252_40.7 S1 M1LA4	383	F252_40.7 P80 BN80A4	384
35	143	1.0	39.6	2800	F102_39.6 S1 M1LA4	375	F102_39.6 P80 BN80A4	376
36	137	1.8	37.9	3460	F202_37.9 S1 M1LA4	379	F202_37.9 P80 BN80A4	380
38	132	3.0	36.4	4890	F252_36.4 S1 M1LA4	383	F252_36.4 P80 BN80A4	384
39	128	1.1	35.3	2800	F102_35.3 S1 M1LA4	375	F102_35.3 P80 BN80A4	376
42	119	1.2	33.0	2750	F102_33.0 S1 M1LA4	375	F102_33.0 P80 BN80A4	376
42	120	2.1	33.1	3340	F202_33.1 S1 M1LA4	379	F202_33.1 P80 BN80A4	380
43	116	3.4	32.2	4730	F252_32.2 S1 M1LA4	383	F252_32.2 P80 BN80A4	384
45	110	2.3	30.4	3260	F202_30.4 S1 M1LA4	379	F202_30.4 P80 BN80A4	380
47	107	1.3	29.6	2680	F102_29.6 S1 M1LA4	375	F102_29.6 P80 BN80A4	376
53	94	2.6	25.9	3130	F202_25.9 S1 M1LA4	379	F202_25.9 P80 BN80A4	380
54	93	1.5	25.8	2590	F102_25.8 S1 M1LA4	375	F102_25.8 P80 BN80A4	376
60	83	1.7	22.8	2510	F102_22.8 S1 M1LA4	375	F102_22.8 P80 BN80A4	376
60	84	2.8	23.1	3030	F202_23.1 S1 M1LA4	379	F202_23.1 P80 BN80A4	380
68	73	3.1	20.2	2910	F202_20.2 S1 M1LA4	379	F202_20.2 P80 BN80A4	380
71	70	1.9	19.3	2400	F102_19.3 S1 M1LA4	375	F102_19.3 P80 BN80A4	376

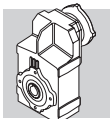


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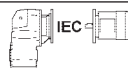
n ₂	M ₂	S	i	R _{n2}				
77	65	3.3	18.1	2820	F202_18.1 S1 M1LA4	379	F202_18.1 P80 BN80A4	380
81	61	2.1	17.0	2310	F102_17.0 S1 M1LA4	375	F102_17.0 P80 BN80A4	376
94	53	2.2	14.6	2220	F102_14.6 S1 M1LA4	375	F102_14.6 P80 BN80A4	376
106	47	2.2	13.0	2140	F102_13.0 S1 M1LA4	375	F102_13.0 P80 BN80A4	376
120	42	2.3	11.5	2070	F102_11.5 S1 M1LA4	375	F102_11.5 P80 BN80A4	376
141	35	2.5	9.8	1970	F102_9.8 S1 M1LA4	375	F102_9.8 P80 BN80A4	376
161	31	2.6	8.6	1890	F102_8.6 S1 M1LA4	375	F102_8.6 P80 BN80A4	376
186	27	2.8	7.4	1810	F102_7.4 S1 M1LA4	375	F102_7.4 P80 BN80A4	376
193	26	3.6	14.6	1800	F102_14.6 S1 M1SD2	375	F102_14.6 P71 BN71B2	376
216	23	3.7	13.0	1730	F102_13.0 S1 M1SD2	375	F102_13.0 P71 BN71B2	376
244	20	3.8	11.5	1670	F102_11.5 S1 M1SD2	375	F102_11.5 P71 BN71B2	376
289	17	4.2	9.8	1590	F102_9.8 S1 M1SD2	375	F102_9.8 P71 BN71B2	376
329	15	4.4	8.6	1530	F102_8.6 S1 M1SD2	375	F102_8.6 P71 BN71B2	376
381	13	4.8	7.4	1460	F102_7.4 S1 M1SD2	375	F102_7.4 P71 BN71B2	376

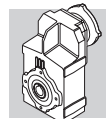
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.44	14876	0.9	2099	55000	F904_2099 S2 M2SB6	409	F904_2099 P90 BN90S6	410
0.47	13732	1.0	1937	55000	F904_1937 S2 M2SB6	409	F904_1937 P90 BN90S6	410
0.54	12067	1.2	1702	55000	F904_1702 S2 M2SB6	409	F904_1702 P90 BN90S6	410
0.59	11138	1.3	1571	55000	F904_1571 S2 M2SB6	409	F904_1571 P90 BN90S6	410
0.64	10121	1.4	1428	55000	F904_1428 S2 M2SB6	409	F904_1428 P90 BN90S6	410
0.67	9776	1.4	2099	55000	F904_2099 S2 M2SA4	409	F904_2099 P80 BN80B4	410
0.70	9255	0.9	1987	45000	F804_1987 S2 M2SA4	406	F804_1987 P80 BN80B4	407
0.72	9024	1.6	1937	55000	F904_1937 S2 M2SA4	409	F904_1937 P80 BN80B4	410
0.76	8543	0.9	1834	45000	F804_1834 S2 M2SA4	406	F804_1834 P80 BN80B4	407
0.82	7961	1.0	1709	45000	F804_1709 S2 M2SA4	406	F804_1709 P80 BN80B4	407
0.82	7930	1.8	1702	55000	F904_1702 S2 M2SA4	409	F904_1702 P80 BN80B4	410
0.89	7349	1.1	1578	45000	F804_1578 S2 M2SA4	406	F804_1578 P80 BN80B4	407
0.89	7320	1.9	1571	55000	F904_1571 S2 M2SA4	409	F904_1571 P80 BN80B4	410
0.98	6651	2.1	1428	55000	F904_1428 S2 M2SA4	409	F904_1428 P80 BN80B4	410
1.0	6446	1.2	1384	45000	F804_1384 S2 M2SA4	406	F804_1384 P80 BN80B4	407
1.1	5950	1.3	1277	45000	F804_1277 S2 M2SA4	406	F804_1277 P80 BN80B4	407
1.1	6140	2.3	1318	55000	F904_1318 S2 M2SA4	409	F904_1318 P80 BN80B4	410
1.2	5505	0.9	1182	35000	F704_1182 S2 M2SA4	403	F704_1182 P80 BN80B4	404
1.2	5339	1.5	1146	45000	F804_1146 S2 M2SA4	406	F804_1146 P80 BN80B4	407
1.2	5613	2.5	1205	55000	F904_1205 S2 M2SA4	409	F904_1205 P80 BN80B4	410
1.3	5082	1.0	1091	35000	F704_1091 S2 M2SA4	403	F704_1091 P80 BN80B4	404
1.3	4929	1.6	1058	45000	F804_1058 S2 M2SA4	406	F804_1058 P80 BN80B4	407
1.3	5181	2.7	1112	55000	F904_1112 S2 M2SA4	409	F904_1112 P80 BN80B4	410
1.4	4539	1.1	974.4	35000	F704_974.4 S2 M2SA4	403	F704_974.4 P80 BN80B4	404
1.5	4240	3.3	910.2	55000	F904_910.2 S2 M2SA4	409	F904_910.2 P80 BN80B4	410
1.6	4190	1.2	899.4	35000	F704_899.4 S2 M2SA4	403	F704_899.4 P80 BN80B4	404
1.6	4180	1.9	897.3	45000	F804_897.3 S2 M2SA4	406	F804_897.3 P80 BN80B4	407
1.7	3830	1.3	822.2	35000	F704_822.2 S2 M2SA4	403	F704_822.2 P80 BN80B4	404
1.8	3607	2.2	774.4	45000	F804_774.4 S2 M2SA4	406	F804_774.4 P80 BN80B4	407
2.0	3330	2.4	714.9	45000	F804_714.9 S2 M2SA4	406	F804_714.9 P80 BN80B4	407

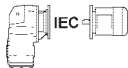


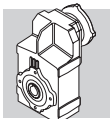
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
2.1	3085	0.9	662.4	20000	F604_662.4 S2 M2SA4	399	F604_662.4 P80 BN80B4	400
2.1	3062	1.6	657.4	35000	F704_657.4 S2 M2SA4	403	F704_657.4 P80 BN80B4	404
2.3	2848	1.0	611.4	20000	F604_611.4 S2 M2SA4	399	F604_611.4 P80 BN80B4	400
2.3	2827	1.8	606.8	35000	F704_606.8 S2 M2SA4	403	F704_606.8 P80 BN80B4	404
2.3	2845	2.8	610.9	45000	F804_610.9 S2 M2SA4	406	F804_610.9 P80 BN80B4	407
2.5	2627	3.0	563.9	45000	F804_563.9 S2 M2SA4	406	F804_563.9 P80 BN80B4	407
2.6	2472	1.2	530.7	20000	F604_530.7 S2 M2SA4	399	F604_530.7 P80 BN80B4	400
2.7	2378	2.1	510.4	35000	F704_510.4 S2 M2SA4	403	F704_510.4 P80 BN80B4	404
2.9	2282	1.3	489.8	20000	F604_489.8 S2 M2SA4	399	F604_489.8 P80 BN80B4	400
2.9	2278	3.5	489.1	45000	F804_489.1 S2 M2SA4	406	F804_489.1 P80 BN80B4	407
3.0	2195	2.3	471.2	35000	F704_471.2 S2 M2SA4	403	F704_471.2 P80 BN80B4	404
3.2	2015	1.4	432.6	20000	F604_432.6 S2 M2SA4	399	F604_432.6 P80 BN80B4	400
3.3	1999	0.9	429.1	12000	F514_429.1 S2 M2SA4	395	F514_429.1 P80 BN80B4	396
3.5	1860	1.6	399.3	20000	F604_399.3 S2 M2SA4	399	F604_399.3 P80 BN80B4	400
3.5	1880	2.7	403.5	35000	F704_403.5 S2 M2SA4	403	F704_403.5 P80 BN80B4	404
3.8	1735	2.9	372.5	35000	F704_372.5 S2 M2SA4	403	F704_372.5 P80 BN80B4	404
4.0	1678	1.1	352.5	12000	F513_352.5 S2 M2SA4	395	F513_352.5 P80 BN80B4	396
4.1	1592	1.8	341.7	20000	F604_341.7 S2 M2SA4	399	F604_341.7 P80 BN80B4	400
4.4	1510	1.2	317.3	12000	F513_317.3 S2 M2SA4	395	F513_317.3 P80 BN80B4	396
4.4	1469	2.0	315.4	20000	F604_315.4 S2 M2SA4	399	F604_315.4 P80 BN80B4	400
4.6	1418	3.5	304.3	35000	F704_304.3 S2 M2SA4	403	F704_304.3 P80 BN80B4	404
4.9	1361	1.3	285.9	12000	F513_285.9 S2 M2SA4	395	F513_285.9 P80 BN80B4	396
5.0	1335	2.2	280.7	20000	F603_280.7 S2 M2SA4	399	F603_280.7 P80 BN80B4	400
5.3	1248	1.4	262.1	12000	F513_262.1 S2 M2SA4	395	F513_262.1 P80 BN80B4	396
5.4	1233	2.4	259.1	20000	F603_259.1 S2 M2SA4	399	F603_259.1 P80 BN80B4	400
5.8	1143	1.0	240.1	8500	F413_240.1 S2 M2SA4	391	F413_240.1 P80 BN80B4	392
5.8	1142	1.6	239.8	12000	F513_239.8 S2 M2SA4	395	F513_239.8 P80 BN80B4	396
5.9	1122	2.6	235.8	20000	F603_235.8 S2 M2SA4	399	F603_235.8 P80 BN80B4	400
6.4	1048	1.0	220.1	8500	F413_220.1 S2 M2SA4	391	F413_220.1 P80 BN80B4	392
6.4	1036	2.8	217.6	20000	F603_217.6 S2 M2SA4	399	F603_217.6 P80 BN80B4	400
6.5	1032	1.7	216.9	12000	F513_216.9 S2 M2SA4	395	F513_216.9 P80 BN80B4	396
6.9	963	1.9	202.4	12000	F513_202.4 S2 M2SA4	395	F513_202.4 P80 BN80B4	396
7.0	958	3.0	201.4	20000	F603_201.4 S2 M2SA4	399	F603_201.4 P80 BN80B4	400
7.0	947	1.2	198.9	8500	F413_198.9 S2 M2SA4	391	F413_198.9 P80 BN80B4	392
7.5	885	3.3	185.9	20000	F603_185.9 S2 M2SA4	399	F603_185.9 P80 BN80B4	400
7.7	860	1.3	180.7	8500	F413_180.7 S2 M2SA4	391	F413_180.7 P80 BN80B4	392
8.3	803	1.4	168.7	8500	F413_168.7 S2 M2SA4	391	F413_168.7 P80 BN80B4	392
8.5	788	2.3	165.6	12000	F513_165.6 S2 M2SA4	395	F513_165.6 P80 BN80B4	396
8.6	775	3.7	162.9	20000	F603_162.9 S2 M2SA4	399	F603_162.9 P80 BN80B4	400
10.4	640	1.7	134.4	8500	F413_134.4 S2 M2SA4	391	F413_134.4 P80 BN80B4	392
10.8	618	2.9	129.9	12000	F513_129.9 S2 M2SA4	395	F513_129.9 P80 BN80B4	396
10.9	611	1.0	128.4	6500	F313_128.4 S2 M2SA4	387	F313_128.4 P80 BN80B4	388
12.4	536	1.1	112.5	6500	F313_112.5 S2 M2SA4	387	F313_112.5 P80 BN80B4	388
13.2	505	2.2	106.0	8500	F413_106.0 S2 M2SA4	391	F413_106.0 P80 BN80B4	392
13.7	485	1.2	101.9	6500	F313_101.9 S2 M2SA4	387	F313_101.9 P80 BN80B4	388
16.0	416	1.4	87.4	6500	F313_87.4 S2 M2SA4	387	F313_87.4 P80 BN80B4	388
16.5	404	2.7	84.9	8500	F413_84.9 S2 M2SA4	391	F413_84.9 P80 BN80B4	392
16.8	397	1.0	83.4	5350	F253_83.4 S2 M2SA4	383	F253_83.4 P80 BN80B4	384
17.8	375	1.6	78.9	6500	F313_78.9 S2 M2SA4	387	F313_78.9 P80 BN80B4	388
18.3	365	1.1	76.6	5300	F253_76.6 S2 M2SA4	383	F253_76.6 P80 BN80B4	384
20.3	329	1.8	69.1	6500	F313_69.1 S2 M2SA4	387	F313_69.1 P80 BN80B4	388

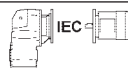


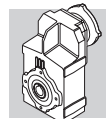
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
21.1	317	3.5	66.5	8500	F413_66.5 S2 M2SA4	391	F413_66.5 P80 BN80B4	392
21.4	311	1.3	65.3	5180	F253_65.3 S2 M2SA4	383	F253_65.3 P80 BN80B4	384
22.3	299	2.0	62.8	6500	F313_62.8 S2 M2SA4	387	F313_62.8 P80 BN80B4	388
24.0	278	1.4	58.3	5080	F253_58.3 S2 M2SA4	383	F253_58.3 P80 BN80B4	384
24.7	276	0.9	56.7	3590	F202_56.7 S2 M2SA4	379	F202_56.7 P80 BN80B4	380
26.9	248	2.4	52.1	6500	F313_52.1 S2 M2SA4	387	F313_52.1 P80 BN80B4	388
27.6	247	1.0	50.7	3510	F202_50.7 S2 M2SA4	379	F202_50.7 P80 BN80B4	380
27.6	242	1.7	50.8	4960	F253_50.8 S2 M2SA4	383	F253_50.8 P80 BN80B4	384
29.4	226	2.6	47.5	6500	F313_47.5 S2 M2SA4	387	F313_47.5 P80 BN80B4	388
31	218	1.1	44.8	3420	F202_44.8 S2 M2SA4	379	F202_44.8 P80 BN80B4	380
31	217	1.8	45.6	4860	F253_45.6 S2 M2SA4	383	F253_45.6 P80 BN80B4	384
31	217	2.8	44.6	6500	F312_44.6 S2 M2SA4	387	F312_44.6 P80 BN80B4	388
32	216	1.8	44.4	4890	F252_44.4 S2 M2SA4	383	F252_44.4 P80 BN80B4	384
33	203	1.2	41.8	3370	F202_41.8 S2 M2SA4	379	F202_41.8 P80 BN80B4	380
34	198	1.9	40.7	4790	F252_40.7 S2 M2SA4	383	F252_40.7 P80 BN80B4	384
35	196	3.1	40.4	6500	F312_40.4 S2 M2SA4	387	F312_40.4 P80 BN80B4	388
37	184	1.4	37.9	3300	F202_37.9 S2 M2SA4	379	F202_37.9 P80 BN80B4	380
37	183	3.3	37.7	6500	F312_37.7 S2 M2SA4	387	F312_37.7 P80 BN80B4	388
38	177	2.3	36.4	4680	F252_36.4 S2 M2SA4	383	F252_36.4 P80 BN80B4	384
42	161	1.6	33.1	3200	F202_33.1 S2 M2SA4	379	F202_33.1 P80 BN80B4	380
44	156	2.6	32.2	4540	F252_32.2 S2 M2SA4	383	F252_32.2 P80 BN80B4	384
46	148	1.7	30.4	3140	F202_30.4 S2 M2SA4	379	F202_30.4 P80 BN80B4	380
47	144	1.0	29.6	2550	F102_29.6 S2 M2SA4	375	F102_29.6 P80 BN80B4	376
47	146	2.7	30.0	4470	F252_30.0 S2 M2SA4	383	F252_30.0 P80 BN80B4	384
51	132	3	27.2	4360	F252_27.2 S2 M2SA4	383	F252_27.2 P80 BN80B4	384
54	125	1.1	25.8	2470	F102_25.8 S2 M2SA4	375	F102_25.8 P80 BN80B4	376
54	126	1.9	25.9	3020	F202_25.9 S2 M2SA4	379	F202_25.9 P80 BN80B4	380
59	116	3.5	23.8	4210	F252_23.8 S2 M2SA4	383	F252_23.8 P80 BN80B4	384
60	113	2.1	23.1	2930	F202_23.1 S2 M2SA4	379	F202_23.1 P80 BN80B4	380
61	111	1.3	22.8	2400	F102_22.8 S2 M2SA4	375	F102_22.8 P80 BN80B4	376
69	98	2.3	20.2	2830	F202_20.2 S2 M2SA4	379	F202_20.2 P80 BN80B4	380
72	94	1.4	19.3	2310	F102_19.3 S2 M2SA4	375	F102_19.3 P80 BN80B4	376
77	88	2.4	18.1	2740	F202_18.1 S2 M2SA4	379	F202_18.1 P80 BN80B4	380
82	83	1.6	17.0	2230	F102_17.0 S2 M2SA4	375	F102_17.0 P80 BN80B4	376
95	72	2.8	14.8	2600	F202_14.8 S2 M2SA4	379	F202_14.8 P80 BN80B4	380
96	71	1.7	14.6	2150	F102_14.6 S2 M2SA4	375	F102_14.6 P80 BN80B4	376
107	63	1.6	13.0	2070	F102_13.0 S2 M2SA4	375	F102_13.0 P80 BN80B4	376
121	56	1.7	11.5	2010	F102_11.5 S2 M2SA4	375	F102_11.5 P80 BN80B4	376
125	55	3.2	11.2	2390	F202_11.2 S2 M2SA4	379	F202_11.2 P80 BN80B4	380
143	48	1.9	9.8	1920	F102_9.8 S2 M2SA4	375	F102_9.8 P80 BN80B4	376
163	42	2.0	8.6	1850	F102_8.6 S2 M2SA4	375	F102_8.6 P80 BN80B4	376
189	36	2.1	7.4	1770	F102_7.4 S2 M2SA4	375	F102_7.4 P80 BN80B4	376
192	35	2.6	14.6	1770	F102_14.6 S1 M1LA2	375	F102_14.6 P80 BN80A2	376
216	32	2.7	13.0	1710	F102_13.0 S1 M1LA2	375	F102_13.0 P80 BN80A2	376
244	28	2.8	11.5	1650	F102_11.5 S1 M1LA2	375	F102_11.5 P80 BN80A2	376
288	24	3.1	9.8	1570	F102_9.8 S1 M1LA2	375	F102_9.8 P80 BN80A2	376
327	21	3.2	8.6	1510	F102_8.6 S1 M1LA2	375	F102_8.6 P80 BN80A2	376
380	18	3.5	7.4	1440	F102_7.4 S1 M1LA2	375	F102_7.4 P80 BN80A2	376



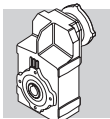
1.1 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.59	16336	0.9	1571	55000	F904_1571 S3 M3SA6	409	F904_1571 P90 BN90L6	410
0.64	14845	0.9	1428	55000	F904_1428 S3 M3SA6	409	F904_1428 P90 BN90L6	410
0.67	14338	1.0	2099	55000	F904_2099 S2 M2SB4	409	F904_2099 P90 BN90S4	410
0.72	13235	1.1	1937	55000	F904_1937 S2 M2SB4	409	F904_1937 P90 BN90S4	410
0.82	11630	1.2	1702	55000	F904_1702 S2 M2SB4	409	F904_1702 P90 BN90S4	410
0.89	10735	1.3	1571	55000	F904_1571 S2 M2SB4	409	F904_1571 P90 BN90S4	410
0.98	9755	1.4	1428	55000	F904_1428 S2 M2SB4	409	F904_1428 P90 BN90S4	410
1.1	8727	0.9	1277	45000	F804_1277 S2 M2SB4	406	F804_1277 P90 BN90S4	407
1.1	9005	1.6	1318	55000	F904_1318 S2 M2SB4	409	F904_1318 P90 BN90S4	410
1.2	7831	1.0	1146	45000	F804_1146 S2 M2SB4	406	F804_1146 P90 BN90S4	407
1.2	8232	1.7	1205	55000	F904_1205 S2 M2SB4	409	F904_1205 P90 BN90S4	410
1.3	7229	1.1	1058	45000	F804_1058 S2 M2SB4	406	F804_1058 P90 BN90S4	407
1.3	7599	1.8	1112	55000	F904_1112 S2 M2SB4	409	F904_1112 P90 BN90S4	410
1.5	6218	2.3	910.2	55000	F904_910.2 S2 M2SB4	409	F904_910.2 P90 BN90S4	410
1.6	6130	1.3	897.3	45000	F804_897.3 S2 M2SB4	406	F804_897.3 P90 BN90S4	407
1.7	5617	0.9	822.2	35000	F704_822.2 S2 M2SB4	403	F704_822.2 P90 BN90S4	404
1.8	5291	1.5	774.4	45000	F804_774.4 S2 M2SB4	406	F804_774.4 P90 BN90S4	407
1.8	5284	2.6	773.4	55000	F904_773.4 S2 M2SB4	409	F904_773.4 P90 BN90S4	410
1.9	5085	1.6	489.1	45000	F804_489.1 S3 M3SA6	406	F804_489.1 P90 BN90L6	407
1.9	5152	2.7	495.6	55000	F904_495.6 S3 M3SA6	409	F904_495.6 P90 BN90L6	410
2.0	4898	1.0	471.2	35000	F704_471.2 S3 M3SA6	403	F704_471.2 P90 BN90L6	404
2.0	4694	1.7	451.5	45000	F804_451.5 S3 M3SA6	406	F804_451.5 P90 BN90L6	407
2.0	4884	1.6	714.9	45000	F804_714.9 S2 M2SB4	406	F804_714.9 P90 BN90S4	407
2.1	4491	1.1	657.4	35000	F704_657.4 S2 M2SB4	403	F704_657.4 P90 BN90S4	404
2.2	4274	3.3	625.6	55000	F904_625.6 S2 M2SB4	409	F904_625.6 P90 BN90S4	410
2.3	4146	1.2	606.8	35000	F704_606.8 S2 M2SB4	403	F704_606.8 P90 BN90S4	404
2.3	4173	1.9	610.9	45000	F804_610.9 S2 M2SB4	406	F804_610.9 P90 BN90S4	407
2.4	3945	3.5	577.5	55000	F904_577.5 S2 M2SB4	409	F904_577.5 P90 BN90S4	410
2.5	3852	2.1	563.9	45000	F804_563.9 S2 M2SB4	406	F804_563.9 P90 BN90S4	407
2.7	3487	1.4	510.4	35000	F704_510.4 S2 M2SB4	403	F704_510.4 P90 BN90S4	404
2.9	3347	0.9	489.8	20000	F604_489.8 S2 M2SB4	399	F604_489.8 P90 BN90S4	400
2.9	3342	2.4	489.1	45000	F804_489.1 S2 M2SB4	406	F804_489.1 P90 BN90S4	407
3.0	3219	1.6	471.2	35000	F704_471.2 S2 M2SB4	403	F704_471.2 P90 BN90S4	404
3.1	3085	2.6	451.5	45000	F804_451.5 S2 M2SB4	406	F804_451.5 P90 BN90S4	407
3.2	2956	1.0	432.6	20000	F604_432.6 S2 M2SB4	399	F604_432.6 P90 BN90S4	400
3.5	2728	1.1	399.3	20000	F604_399.3 S2 M2SB4	399	F604_399.3 P90 BN90S4	400
3.5	2757	1.8	403.5	35000	F704_403.5 S2 M2SB4	403	F704_403.5 P90 BN90S4	404
3.7	2618	3.1	383.2	45000	F804_383.2 S2 M2SB4	406	F804_383.2 P90 BN90S4	407
3.8	2545	2.0	372.5	35000	F704_372.5 S2 M2SB4	403	F704_372.5 P90 BN90S4	404
4.0	2416	3.3	353.7	45000	F804_353.7 S2 M2SB4	406	F804_353.7 P90 BN90S4	407
4.1	2334	1.2	341.7	20000	F604_341.7 S2 M2SB4	399	F604_341.7 P90 BN90S4	400
4.4	2155	1.3	315.4	20000	F604_315.4 S2 M2SB4	399	F604_315.4 P90 BN90S4	400
4.6	2079	2.4	304.3	35000	F704_304.3 S2 M2SB4	403	F704_304.3 P90 BN90S4	404
4.9	1996	0.9	285.9	12000	F513_285.9 S2 M2SB4	395	F513_285.9 P90 BN90S4	396
5.0	1960	1.5	280.7	20000	F603_280.7 S2 M2SB4	399	F603_280.7 P90 BN90S4	400
5.0	1919	2.6	280.9	35000	F704_280.9 S2 M2SB4	403	F704_280.9 P90 BN90S4	404
5.3	1830	1.0	262.1	12000	F513_262.1 S2 M2SB4	395	F513_262.1 P90 BN90S4	396
5.8	1675	1.1	239.8	12000	F513_239.8 S2 M2SB4	395	F513_239.8 P90 BN90S4	396
6.0	1603	3.1	234.6	35000	F704_234.6 S2 M2SB4	403	F704_234.6 P90 BN90S4	404
6.5	1514	1.2	216.9	12000	F513_216.9 S2 M2SB4	395	F513_216.9 P90 BN90S4	396
6.5	1479	3.4	216.5	35000	F704_216.5 S2 M2SB4	403	F704_216.5 P90 BN90S4	404



1.1 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
6.9	1413	1.3	202.4	12000	F513_202.4 S2 M2SB4	395	F513_202.4 P90 BN90S4	396
8.3	1178	0.9	168.7	8500	F413_168.7 S2 M2SB4	391	F413_168.7 P90 BN90S4	392
8.5	1156	1.6	165.6	12000	F513_165.6 S2 M2SB4	395	F513_165.6 P90 BN90S4	396
10.4	938	1.2	134.4	8500	F413_134.4 S2 M2SB4	391	F413_134.4 P90 BN90S4	392
10.8	907	2.0	129.9	12000	F513_129.9 S2 M2SB4	395	F513_129.9 P90 BN90S4	396
13.2	740	1.5	106.0	8500	F413_106.0 S2 M2SB4	391	F413_106.0 P90 BN90S4	392
13.3	734	2.5	105.1	12000	F513_105.1 S2 M2SB4	395	F513_105.1 P90 BN90S4	396
16.0	610	1.0	87.4	6500	F313_87.4 S2 M2SB4	387	F313_87.4 P90 BN90S4	388
16.5	593	1.9	84.9	8500	F413_84.9 S2 M2SB4	391	F413_84.9 P90 BN90S4	392
16.8	581	3.1	83.2	12000	F513_83.2 S2 M2SB4	395	F513_83.2 P90 BN90S4	396
17.8	551	1.1	78.9	6500	F313_78.9 S2 M2SB4	387	F313_78.9 P90 BN90S4	388
20.3	482	1.2	69.1	6500	F313_69.1 S2 M2SB4	387	F313_69.1 P90 BN90S4	388
21.1	464	2.4	66.5	8500	F413_66.5 S2 M2SB4	391	F413_66.5 P90 BN90S4	392
22.3	438	1.4	62.8	6500	F313_62.8 S2 M2SB4	387	F313_62.8 P90 BN90S4	388
23.2	421	2.6	60.2	8500	F413_60.2 S2 M2SB4	391	F413_60.2 P90 BN90S4	392
24.0	407	1.0	58.3	4500	F253_58.3 S2 M2SB4	383	F253_58.3 P90 BN90S4	384
26.9	364	1.6	52.1	6500	F313_52.1 S2 M2SB4	387	F313_52.1 P90 BN90S4	388
27.2	360	3.0	51.5	8500	F413_51.5 S2 M2SB4	391	F413_51.5 P90 BN90S4	392
27.6	355	1.1	50.8	4450	F253_50.8 S2 M2SB4	383	F253_50.8 P90 BN90S4	384
29.2	342	3.1	47.9	8500	F412_47.9 S2 M2SB4	391	F412_47.9 P90 BN90S4	392
29.4	332	1.7	47.5	6500	F313_47.5 S2 M2SB4	387	F313_47.5 P90 BN90S4	388
31	318	1.3	45.6	4400	F253_45.6 S2 M2SB4	383	F253_45.6 P90 BN90S4	384
31	318	1.9	44.6	6500	F312_44.6 S2 M2SB4	387	F312_44.6 P90 BN90S4	388
32	317	1.2	44.4	4470	F252_44.4 S2 M2SB4	383	F252_44.4 P90 BN90S4	384
34	290	1.3	40.7	4410	F252_40.7 S2 M2SB4	383	F252_40.7 P90 BN90S4	384
35	288	2.1	40.4	6500	F312_40.4 S2 M2SB4	387	F312_40.4 P90 BN90S4	388
37	270	0.9	37.9	3050	F202_37.9 S2 M2SB4	379	F202_37.9 P90 BN90S4	380
37	269	2.2	37.7	6500	F312_37.7 S2 M2SB4	387	F312_37.7 P90 BN90S4	388
38	260	1.5	36.4	4330	F252_36.4 S2 M2SB4	383	F252_36.4 P90 BN90S4	384
41	245	2.4	34.4	6500	F312_34.4 S2 M2SB4	387	F312_34.4 P90 BN90S4	388
42	236	1.1	33.1	2980	F202_33.1 S2 M2SB4	379	F202_33.1 P90 BN90S4	380
44	230	1.7	32.2	4240	F252_32.2 S2 M2SB4	383	F252_32.2 P90 BN90S4	384
46	217	1.2	30.4	2930	F202_30.4 S2 M2SB4	379	F202_30.4 P90 BN90S4	380
46	215	2.8	30.1	6500	F312_30.1 S2 M2SB4	387	F312_30.1 P90 BN90S4	388
47	214	1.9	30.0	4190	F252_30.0 S2 M2SB4	383	F252_30.0 P90 BN90S4	384
51	194	2.1	27.2	4100	F252_27.2 S2 M2SB4	383	F252_27.2 P90 BN90S4	384
51	195	3.1	27.3	6500	F312_27.3 S2 M2SB4	387	F312_27.3 P90 BN90S4	388
54	185	1.3	25.9	2840	F202_25.9 S2 M2SB4	379	F202_25.9 P90 BN90S4	380
59	169	2.4	23.8	3990	F252_23.8 S2 M2SB4	383	F252_23.8 P90 BN90S4	384
60	165	1.4	23.1	2780	F202_23.1 S2 M2SB4	379	F202_23.1 P90 BN90S4	380
64	156	2.6	21.8	3920	F252_21.8 S2 M2SB4	383	F252_21.8 P90 BN90S4	384
69	144	1.6	20.2	2690	F202_20.2 S2 M2SB4	379	F202_20.2 P90 BN90S4	380
72	138	1.0	19.3	2170	F102_19.3 S2 M2SB4	375	F102_19.3 P90 BN90S4	376
75	133	3.0	18.6	3780	F252_18.6 S2 M2SB4	383	F252_18.6 P90 BN90S4	384
77	129	1.7	18.1	2620	F202_18.1 S2 M2SB4	379	F202_18.1 P90 BN90S4	380
82	121	1.1	17.0	2110	F102_17.0 S2 M2SB4	375	F102_17.0 P90 BN90S4	376
84	119	3.4	16.6	3670	F252_16.6 S2 M2SB4	383	F252_16.6 P90 BN90S4	384
95	106	1.9	14.8	2500	F202_14.8 S2 M2SB4	379	F202_14.8 P90 BN90S4	380
96	104	1.1	14.6	2050	F102_14.6 S2 M2SB4	375	F102_14.6 P90 BN90S4	376
107	93	1.1	13.0	1980	F102_13.0 S2 M2SB4	375	F102_13.0 P90 BN90S4	376
121	82	1.2	11.5	1920	F102_11.5 S2 M2SB4	375	F102_11.5 P90 BN90S4	376

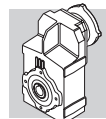


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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
125	80	2.2	11.2	2310	F202_11.2 S2 M2SB4	379	F202_11.2 P90 BN90S4	380
143	70	1.3	9.8	1840	F102_9.8 S2 M2SB4	375	F102_9.8 P90 BN90S4	376
160	62	2.5	8.7	2160	F202_8.7 S2 M2SB4	379	F202_8.7 P90 BN90S4	380
163	61	1.3	8.6	1780	F102_8.6 S2 M2SB4	375	F102_8.6 P90 BN90S4	376
179	56	2.6	7.8	2100	F202_7.8 S2 M2SB4	379	F202_7.8 P90 BN90S4	380
189	53	1.4	7.4	1720	F102_7.4 S2 M2SB4	375	F102_7.4 P90 BN90S4	376
218	46	2.8	6.4	1980	F202_6.4 S2 M2SB4	379	F202_6.4 P90 BN90S4	380
243	41	1.9	11.5	1600	F102_11.5 S2 M2SA2	375	F102_11.5 P80 BN80B2	376
249	40	3.5	11.2	1910	F202_11.2 S2 M2SA2	379	F202_11.2 P80 BN80B2	380
287	35	2.1	9.8	1530	F102_9.8 S2 M2SA2	375	F102_9.8 P80 BN80B2	376
326	31	2.2	8.6	1480	F102_8.6 S2 M2SA2	375	F102_8.6 P80 BN80B2	376
378	26	2.4	7.4	1410	F102_7.4 S2 M2SA2	375	F102_7.4 P80 BN80B2	376

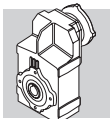
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.83	15747	0.9	1702	55000	F904_1702 S3 M3SA4	409	F904_1702 P90 BN90LA4	410
0.90	14535	1.0	1571	55000	F904_1571 S3 M3SA4	409	F904_1571 P90 BN90LA4	410
0.99	13208	1.1	1428	55000	F904_1428 S3 M3SA4	409	F904_1428 P90 BN90LA4	410
1.1	12192	1.1	1318	55000	F904_1318 S3 M3SA4	409	F904_1318 P90 BN90LA4	410
1.2	11146	1.3	1205	55000	F904_1205 S3 M3SA4	409	F904_1205 P90 BN90LA4	410
1.3	10288	1.4	1112	55000	F904_1112 S3 M3SA4	409	F904_1112 P90 BN90LA4	410
1.5	8419	1.7	910.2	55000	F904_910.2 S3 M3SA4	409	F904_910.2 P90 BN90LA4	410
1.6	8300	1.0	897.3	45000	F804_897.3 S3 M3SA4	406	F804_897.3 P90 BN90LA4	407
1.8	7164	1.1	774.4	45000	F804_774.4 S3 M3SA4	406	F804_774.4 P90 BN90LA4	407
1.8	7154	2.0	773.4	55000	F904_773.4 S3 M3SA4	409	F904_773.4 P90 BN90LA4	410
2.0	6612	1.2	714.9	45000	F804_714.9 S3 M3SA4	406	F804_714.9 P90 BN90LA4	407
2.3	5613	0.9	606.8	35000	F704_606.8 S3 M3SA4	403	F704_606.8 P90 BN90LA4	404
2.3	5651	1.4	610.9	45000	F804_610.9 S3 M3SA4	406	F804_610.9 P90 BN90LA4	407
2.3	5787	2.4	625.6	55000	F904_625.6 S3 M3SA4	409	F904_625.6 P90 BN90LA4	410
2.4	5342	2.6	577.5	55000	F904_577.5 S3 M3SA4	409	F904_577.5 P90 BN90LA4	410
2.5	5216	1.5	563.9	45000	F804_563.9 S3 M3SA4	406	F804_563.9 P90 BN90LA4	407
2.8	4721	1.1	510.4	35000	F704_510.4 S3 M3SA4	403	F704_510.4 P90 BN90LA4	404
2.8	4584	3.1	495.6	55000	F904_495.6 S3 M3SA4	409	F904_495.6 P90 BN90LA4	410
2.9	4524	1.8	489.1	45000	F804_489.1 S3 M3SA4	406	F804_489.1 P90 BN90LA4	407
3.0	4358	1.1	471.2	35000	F704_471.2 S3 M3SA4	403	F704_471.2 P90 BN90LA4	404
3.1	4176	1.9	451.5	45000	F804_451.5 S3 M3SA4	406	F804_451.5 P90 BN90LA4	407
3.1	4231	3.3	457.5	55000	F904_457.5 S3 M3SA4	409	F904_457.5 P90 BN90LA4	410
3.5	3732	1.3	403.5	35000	F704_403.5 S3 M3SA4	403	F704_403.5 P90 BN90LA4	404
3.7	3544	2.3	383.2	45000	F804_383.2 S3 M3SA4	406	F804_383.2 P90 BN90LA4	407
3.8	3445	1.5	372.5	35000	F704_372.5 S3 M3SA4	403	F704_372.5 P90 BN90LA4	404
4.0	3272	2.4	353.7	45000	F804_353.7 S3 M3SA4	406	F804_353.7 P90 BN90LA4	407
4.1	3160	0.9	341.7	20000	F604_341.7 S3 M3SA4	399	F604_341.7 P90 BN90LA4	400
4.5	2917	1.0	315.4	20000	F604_315.4 S3 M3SA4	399	F604_315.4 P90 BN90LA4	400
4.6	2815	1.8	304.3	35000	F704_304.3 S3 M3SA4	403	F704_304.3 P90 BN90LA4	404
4.8	2745	2.9	296.7	45000	F804_296.7 S3 M3SA4	406	F804_296.7 P90 BN90LA4	407
5.0	2653	1.1	280.7	20000	F603_280.7 S3 M3SA4	399	F603_280.7 P90 BN90LA4	400
5.0	2599	1.9	280.9	35000	F704_280.9 S3 M3SA4	403	F704_280.9 P90 BN90LA4	404

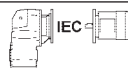


1.5 kW

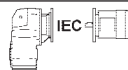
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
5.1	2534	3.2	273.9	45000	F804_273.9 S3 M3SA4	406	F804_273.9 P90 BN90LA4	407
5.4	2449	1.2	259.1	20000	F603_259.1 S3 M3SA4	399	F603_259.1 P90 BN90LA4	400
6.0	2229	1.3	235.8	20000	F603_235.8 S3 M3SA4	399	F603_235.8 P90 BN90LA4	400
6.0	2170	2.3	234.6	35000	F704_234.6 S3 M3SA4	403	F704_234.6 P90 BN90LA4	404
6.5	2057	1.4	217.6	20000	F603_217.6 S3 M3SA4	399	F603_217.6 P90 BN90LA4	400
6.5	2003	2.5	216.5	35000	F704_216.5 S3 M3SA4	403	F704_216.5 P90 BN90LA4	404
7.0	1913	0.9	202.4	12000	F513_202.4 S3 M3SA4	395	F513_202.4 P90 BN90LA4	396
7.0	1904	1.5	201.4	20000	F603_201.4 S3 M3SA4	399	F603_201.4 P90 BN90LA4	400
7.2	1853	2.7	196.0	35000	F703_196.0 S3 M3SA4	403	F703_196.0 P90 BN90LA4	404
7.6	1757	1.7	185.9	20000	F603_185.9 S3 M3SA4	399	F603_185.9 P90 BN90LA4	400
7.8	1711	2.9	180.9	35000	F703_180.9 S3 M3SA4	403	F703_180.9 P90 BN90LA4	404
8.5	1566	1.1	165.6	12000	F513_165.6 S3 M3SA4	395	F513_165.6 P90 BN90LA4	396
8.5	1576	3.2	166.7	35000	F703_166.7 S3 M3SA4	403	F703_166.7 P90 BN90LA4	404
8.7	1540	1.9	162.9	20000	F603_162.9 S3 M3SA4	399	F603_162.9 P90 BN90LA4	400
9.2	1454	3.4	153.8	35000	F703_153.8 S3 M3SA4	403	F703_153.8 P90 BN90LA4	404
9.4	1421	2.0	150.4	20000	F603_150.4 S3 M3SA4	399	F603_150.4 P90 BN90LA4	400
10.8	1234	2.4	130.5	20000	F603_130.5 S3 M3SA4	399	F603_130.5 P90 BN90LA4	400
10.9	1228	1.5	129.9	12000	F513_129.9 S3 M3SA4	395	F513_129.9 P90 BN90LA4	396
11.7	1139	2.5	120.5	20000	F603_120.5 S3 M3SA4	399	F603_120.5 P90 BN90LA4	400
13.3	1002	1.1	106.0	8500	F413_106.0 S3 M3SA4	391	F413_106.0 P90 BN90LA4	392
13.3	1006	2.9	106.4	20000	F603_106.4 S3 M3SA4	399	F603_106.4 P90 BN90LA4	400
13.4	993	1.8	105.1	12000	F513_105.1 S3 M3SA4	395	F513_105.1 P90 BN90LA4	396
14.4	928	3.1	98.2	20000	F603_98.2 S3 M3SA4	399	F603_98.2 P90 BN90LA4	400
16.6	802	1.4	84.9	8500	F413_84.9 S3 M3SA4	391	F413_84.9 P90 BN90LA4	392
16.9	787	2.3	83.2	12000	F513_83.2 S3 M3SA4	395	F513_83.2 P90 BN90LA4	396
20.4	653	0.9	69.1	6500	F313_69.1 S3 M3SA4	387	F313_69.1 P90 BN90LA4	388
21.2	629	1.7	66.5	8500	F413_66.5 S3 M3SA4	391	F413_66.5 P90 BN90LA4	392
21.4	622	2.9	65.8	12000	F513_65.8 S3 M3SA4	395	F513_65.8 P90 BN90LA4	396
22.5	593	1.0	62.8	6500	F313_62.8 S3 M3SA4	387	F313_62.8 P90 BN90LA4	388
23.4	570	1.9	60.2	8500	F413_60.2 S3 M3SA4	391	F413_60.2 P90 BN90LA4	392
27.1	492	1.2	52.1	6500	F313_52.1 S3 M3SA4	387	F313_52.1 P90 BN90LA4	388
27.4	487	2.2	51.5	8500	F413_51.5 S3 M3SA4	391	F413_51.5 P90 BN90LA4	392
29.4	463	2.3	47.9	8500	F412_47.9 S3 M3SA4	391	F412_47.9 P90 BN90LA4	392
29.7	449	1.3	47.5	6500	F313_47.5 S3 M3SA4	387	F313_47.5 P90 BN90LA4	388
31	431	0.9	45.6	3880	F253_45.6 S3 M3SA4	383	F253_45.6 P90 BN90LA4	384
32	431	1.4	44.6	6500	F312_44.6 S3 M3SA4	387	F312_44.6 P90 BN90LA4	388
35	393	1.0	40.7	3970	F252_40.7 S3 M3SA4	383	F252_40.7 P90 BN90LA4	384
35	390	1.5	40.4	6500	F312_40.4 S3 M3SA4	387	F312_40.4 P90 BN90LA4	388
37	364	1.6	37.7	6500	F312_37.7 S3 M3SA4	387	F312_37.7 P90 BN90LA4	388
37	369	3.0	38.2	8500	F412_38.2 S3 M3SA4	391	F412_38.2 P90 BN90LA4	392
39	352	1.1	36.4	3940	F252_36.4 S3 M3SA4	383	F252_36.4 P90 BN90LA4	384
41	332	1.8	34.4	6500	F312_34.4 S3 M3SA4	387	F312_34.4 P90 BN90LA4	388
44	311	1.3	32.2	3890	F252_32.2 S3 M3SA4	383	F252_32.2 P90 BN90LA4	384
47	290	1.4	30.0	3860	F252_30.0 S3 M3SA4	383	F252_30.0 P90 BN90LA4	384
47	291	2.1	30.1	6500	F312_30.1 S3 M3SA4	387	F312_30.1 P90 BN90LA4	388
52	263	1.5	27.2	3810	F252_27.2 S3 M3SA4	383	F252_27.2 P90 BN90LA4	384
52	263	2.3	27.3	6500	F312_27.3 S3 M3SA4	387	F312_27.3 P90 BN90LA4	388
54	250	1.0	25.9	2640	F202_25.9 S3 M3SA4	379	F202_25.9 P90 BN90LA4	380
59	229	1.7	23.8	3730	F252_23.8 S3 M3SA4	383	F252_23.8 P90 BN90LA4	384
60	226	2.7	23.4	6480	F312_23.4 S3 M3SA4	387	F312_23.4 P90 BN90LA4	388
61	224	1.1	23.1	2600	F202_23.1 S3 M3SA4	379	F202_23.1 P90 BN90LA4	380

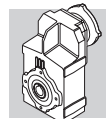


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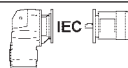
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
65	211	1.9	21.8	3680	F252_21.8 S3 M3SA4	383	F252_21.8 P90 BN90LA4	384
67	204	2.9	21.1	6320	F312_21.1 S3 M3SA4	387	F312_21.1 P90 BN90LA4	388
70	195	1.1	20.2	2530	F202_20.2 S3 M3SA4	379	F202_20.2 P90 BN90LA4	380
76	180	2.2	18.6	3570	F252_18.6 S3 M3SA4	383	F252_18.6 P90 BN90LA4	384
76	179	3.4	18.5	6110	F312_18.5 S3 M3SA4	387	F312_18.5 P90 BN90LA4	388
78	175	1.2	18.1	2480	F202_18.1 S3 M3SA4	379	F202_18.1 P90 BN90LA4	380
85	161	2.5	16.6	3490	F252_16.6 S3 M3SA4	383	F252_16.6 P90 BN90LA4	384
95	143	1.4	14.8	2380	F202_14.8 S3 M3SA4	379	F202_14.8 P90 BN90LA4	380
97	140	2.9	14.5	3390	F252_14.5 S3 M3SA4	383	F252_14.5 P90 BN90LA4	384
109	125	3.2	13	3310	F252_13.0 S3 M3SA4	383	F252_13.0 P90 BN90LA4	384
126	108	1.6	11.2	2220	F202_11.2 S3 M3SA4	379	F202_11.2 P90 BN90LA4	380
144	94	0.9	9.8	1760	F102_9.8 S3 M3SA4	375	F102_9.8 P90 BN90LA4	376
151	90	2.9	9.4	3070	F252_9.4 S3 M3SA4	383	F252_9.4 P90 BN90LA4	384
161	84	1.8	8.7	2090	F202_8.7 S3 M3SA4	379	F202_8.7 P90 BN90LA4	380
164	83	1.0	8.6	1710	F102_8.6 S3 M3SA4	375	F102_8.6 P90 BN90LA4	376
168	81	3.2	8.4	2980	F252_8.4 S3 M3SA4	383	F252_8.4 P90 BN90LA4	384
180	76	1.9	7.8	2030	F202_7.8 S3 M3SA4	379	F202_7.8 P90 BN90LA4	380
190	72	1.1	7.4	1650	F102_7.4 S3 M3SA4	375	F102_7.4 P90 BN90LA4	376
220	62	2.1	6.4	1930	F202_6.4 S3 M3SA4	379	F202_6.4 P90 BN90LA4	380
243	56	1.4	11.5	1560	F102_11.5 S2 M2SB2	375	F102_11.5 P90 BN90SA2	376
249	55	2.6	11.2	1860	F202_11.2 S2 M2SB2	379	F202_11.2 P90 BN90SA2	380
287	48	1.5	9.8	1490	F102_9.8 S2 M2SB2	375	F102_9.8 P90 BN90SA2	376
321	42	2.9	8.7	1740	F202_8.7 S2 M2SB2	379	F202_8.7 P90 BN90SA2	380
326	42	1.6	8.6	1440	F102_8.6 S2 M2SB2	375	F102_8.6 P90 BN90SA2	376
357	38	3.0	7.8	1680	F202_7.8 S2 M2SB2	379	F202_7.8 P90 BN90SA2	380
378	36	1.7	7.4	1380	F102_7.4 S2 M2SB2	375	F102_7.4 P90 BN90SA2	376
437	31	3.3	6.4	1590	F202_6.4 S2 M2SB2	379	F202_6.4 P90 BN90SA2	380

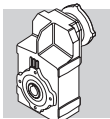
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
1.2	16347	0.9	1205	55000	F904_1205 S3 M3LA4	409	F904_1205 P100 BN100LA4	410
1.3	15090	0.9	1112	55000	F904_1112 S3 M3LA4	409	F904_1112 P100 BN100LA4	410
1.5	12348	1.1	910.2	55000	F904_910.2 S3 M3LA4	409	F904_910.2 P100 BN100LA4	410
1.8	10493	1.3	773.4	55000	F904_773.4 S3 M3LA4	409	F904_773.4 P100 BN100LA4	410
2.3	8287	1.0	610.9	45000	F804_610.9 S3 M3LA4	406	F804_610.9 P100 BN100LA4	407
2.3	8488	1.6	625.6	55000	F904_625.6 S3 M3LA4	409	F904_625.6 P100 BN100LA4	410
2.4	7835	1.8	577.5	55000	F904_577.5 S3 M3LA4	409	F904_577.5 P100 BN100LA4	410
2.5	7650	1.0	563.9	45000	F804_563.9 S3 M3LA4	406	F804_563.9 P100 BN100LA4	407
2.8	6723	2.1	495.6	55000	F904_495.6 S3 M3LA4	409	F904_495.6 P100 BN100LA4	410
2.9	6636	1.2	489.1	45000	F804_489.1 S3 M3LA4	406	F804_489.1 P100 BN100LA4	407
3.1	6125	1.3	451.5	45000	F804_451.5 S3 M3LA4	406	F804_451.5 P100 BN100LA4	407
3.1	6206	2.3	457.5	55000	F904_457.5 S3 M3LA4	409	F904_457.5 P100 BN100LA4	410
3.5	5474	0.9	403.5	35000	F704_403.5 S3 M3LA4	403	F704_403.5 P100 BN100LA4	404
3.7	5198	1.5	383.2	45000	F804_383.2 S3 M3LA4	406	F804_383.2 P100 BN100LA4	407
3.8	5053	1.0	372.5	35000	F704_372.5 S3 M3LA4	403	F704_372.5 P100 BN100LA4	404
3.9	4909	2.9	361.8	55000	F904_361.8 S3 M3LA4	409	F904_361.8 P100 BN100LA4	410
4.0	4798	1.7	353.7	45000	F804_353.7 S3 M3LA4	406	F804_353.7 P100 BN100LA4	407

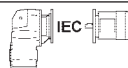


2.2 kW

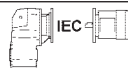
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
4.6	4129	1.2	304.3	35000	F704_304.3 S3 M3LA4	403	F704_304.3 P100 BN100LA4	404
4.8	4025	2.0	296.7	45000	F804_296.7 S3 M3LA4	406	F804_296.7 P100 BN100LA4	407
4.8	3950	3.5	291.1	55000	F904_291.1 S3 M3LA4	409	F904_291.1 P100 BN100LA4	410
5.0	3811	1.3	280.9	35000	F704_280.9 S3 M3LA4	403	F704_280.9 P100 BN100LA4	404
5.1	3716	2.2	273.9	45000	F804_273.9 S3 M3LA4	406	F804_273.9 P100 BN100LA4	407
6.0	3182	1.6	234.6	35000	F704_234.6 S3 M3LA4	403	F704_234.6 P100 BN100LA4	404
6.5	3018	1.0	217.6	20000	F603_217.6 S3 M3LA4	399	F603_217.6 P100 BN100LA4	400
6.5	2938	1.7	216.5	35000	F704_216.5 S3 M3LA4	403	F704_216.5 P100 BN100LA4	404
6.5	2964	2.7	218.5	45000	F804_218.5 S3 M3LA4	406	F804_218.5 P100 BN100LA4	407
7.0	2792	1.0	201.4	20000	F603_201.4 S3 M3LA4	399	F603_201.4 P100 BN100LA4	400
7.2	2718	1.8	196.0	35000	F703_196.0 S3 M3LA4	403	F703_196.0 P100 BN100LA4	404
7.6	2577	1.1	185.9	20000	F603_185.9 S3 M3LA4	399	F603_185.9 P100 BN100LA4	400
7.6	2560	3.1	184.6	45000	F704_184.6 S3 M3LA4		F803_184.6 P100 BN100LA4	407
7.8	2509	2.0	180.9	35000	F703_180.9 S3 M3LA4	403	F703_180.9 P100 BN100LA4	404
8.5	2311	2.2	166.7	35000	F703_166.7 S3 M3LA4	403	F703_166.7 P100 BN100LA4	404
8.7	2258	1.3	162.9	20000	F603_162.9 S3 M3LA4	399	F603_162.9 P100 BN100LA4	400
9.2	2133	2.3	153.8	35000	F703_153.8 S3 M3LA4	403	F703_153.8 P100 BN100LA4	404
9.4	2085	1.4	150.4	20000	F603_150.4 S3 M3LA4	399	F603_150.4 P100 BN100LA4	400
10.6	1843	2.7	133.0	35000	F703_133.0 S3 M3LA4	403	F703_133.0 P100 BN100LA4	404
10.8	1809	1.6	130.5	20000	F603_130.5 S3 M3LA4	399	F603_130.5 P100 BN100LA4	400
10.9	1801	1.0	129.9	12000	F513_129.9 S3 M3LA4	395	F513_129.9 P100 BN100LA4	396
11.5	1702	2.9	122.7	35000	F703_122.7 S3 M3LA4	403	F703_122.7 P100 BN100LA4	404
11.7	1670	1.7	120.5	20000	F603_120.5 S3 M3LA4	399	F603_120.5 P100 BN100LA4	400
12.9	1520	3.3	109.6	35000	F703_109.6 S3 M3LA4	403	F703_109.6 P100 BN100LA4	404
13.3	1475	2.0	106.4	20000	F603_106.4 S3 M3LA4	399	F603_106.4 P100 BN100LA4	400
13.4	1457	1.2	105.1	12000	F513_105.1 S3 M3LA4	395	F513_105.1 P100 BN100LA4	396
14.4	1362	2.1	98.2	20000	F603_98.2 S3 M3LA4	399	F603_98.2 P100 BN100LA4	400
16.6	1177	0.9	84.9	8500	F413_84.9 S3 M3LA4	391	F413_84.9 P100 BN100LA4	392
16.8	1165	2.5	84.0	20000	F603_84.0 S3 M3LA4	399	F603_84.0 P100 BN100LA4	400
16.9	1154	1.6	83.2	12000	F513_83.2 S3 M3LA4	395	F513_83.2 P100 BN100LA4	396
18.2	1075	2.7	77.6	20000	F603_77.6 S3 M3LA4	399	F603_77.6 P100 BN100LA4	400
20.7	947	3.1	68.3	20000	F603_68.3 S3 M3LA4	399	F603_68.3 P100 BN100LA4	400
21.2	922	1.2	66.5	8500	F413_66.5 S3 M3LA4	391	F413_66.5 P100 BN100LA4	392
21.4	913	2.0	65.8	12000	F513_65.8 S3 M3LA4	395	F513_65.8 P100 BN100LA4	396
22.4	874	3.3	63.0	20000	F603_63.0 S3 M3LA4	399	F603_63.0 P100 BN100LA4	400
23.4	835	1.3	60.2	8500	F413_60.2 S3 M3LA4	391	F413_60.2 P100 BN100LA4	392
27.4	714	1.5	51.5	8500	F413_51.5 S3 M3LA4	391	F413_51.5 P100 BN100LA4	392
28.8	678	2.7	48.9	12000	F513_48.9 S3 M3LA4	395	F513_48.9 P100 BN100LA4	396
29.4	679	1.6	47.9	8500	F412_47.9 S3 M3LA4	391	F412_47.9 P100 BN100LA4	392
32	632	0.9	44.6	6500	F312_44.6 S3 M3LA4	387	F312_44.6 P100 BN100LA4	388
35	572	1.0	40.4	6500	F312_40.4 S3 M3LA4	387	F312_40.4 P100 BN100LA4	388
37	534	1.1	37.7	6500	F312_37.7 S3 M3LA4	387	F312_37.7 P100 BN100LA4	388
37	541	2.0	38.2	8500	F412_38.2 S3 M3LA4	391	F412_38.2 P100 BN100LA4	392
38	526	3.2	37.1	12000	F512_37.1 S3 M3LA4	395	F512_37.1 P100 BN100LA4	396
41	487	1.2	34.4	6490	F312_34.4 S3 M3LA4	387	F312_34.4 P100 BN100LA4	388
47	425	0.9	30.0	3300	F252_30.0 S3 M3LA4	383	F252_30.0 P100 BN100LA4	384
47	427	1.4	30.1	6360	F312_30.1 S3 M3LA4	387	F312_30.1 P100 BN100LA4	388
47	427	2.6	30.1	8500	F412_30.1 S3 M3LA4	391	F412_30.1 P100 BN100LA4	392
52	385	1.0	27.2	3300	F252_27.2 S3 M3LA4	383	F252_27.2 P100 BN100LA4	384
52	386	1.6	27.3	6250	F312_27.3 S3 M3LA4	387	F312_27.3 P100 BN100LA4	388
58	342	3.2	24.1	8400	F412_24.1 S3 M3LA4	391	F412_24.1 P100 BN100LA4	392

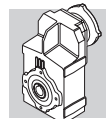


2.2 kW

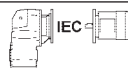
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
59	336	1.2	23.8	3290	F252_23.8 S3 M3LA4	383	F252_23.8 P100 BN100LA4	384
60	331	1.8	23.4	6080	F312_23.4 S3 M3LA4	387	F312_23.4 P100 BN100LA4	388
65	309	1.3	21.8	3270	F252_21.8 S3 M3LA4	383	F252_21.8 P100 BN100LA4	384
67	299	2.0	21.1	5960	F312_21.1 S3 M3LA4	387	F312_21.1 P100 BN100LA4	388
76	264	1.5	18.6	3220	F252_18.6 S3 M3LA4	383	F252_18.6 P100 BN100LA4	384
76	262	2.3	18.5	5790	F312_18.5 S3 M3LA4	387	F312_18.5 P100 BN100LA4	388
84	238	2.5	16.8	5670	F312_16.8 S3 M3LA4	387	F312_16.8 P100 BN100LA4	388
85	235	1.7	16.6	3180	F252_16.6 S3 M3LA4	383	F252_16.6 P100 BN100LA4	384
95	210	1.0	14.8	2190	F202_14.8 S3 M3LA4	379	F202_14.8 P100 BN100LA4	380
97	205	2.0	14.5	3120	F252_14.5 S3 M3LA4	383	F252_14.5 P100 BN100LA4	384
101	198	3.0	13.9	5430	F312_13.9 S3 M3LA4	387	F312_13.9 P100 BN100LA4	388
109	184	2.2	13.0	3070	F252_13.0 S3 M3LA4	383	F252_13.0 P100 BN100LA4	384
111	180	3.3	12.7	5310	F312_12.7 S3 M3LA4	387	F312_12.7 P100 BN100LA4	388
126	159	1.1	11.2	2060	F202_11.2 S3 M3LA4	379	F202_11.2 P100 BN100LA4	380
133	150	2.6	10.6	2960	F252_10.6 S3 M3LA4	383	F252_10.6 P100 BN100LA4	384
151	133	2.0	9.4	2900	F252_9.4 S3 M3LA4	383	F252_9.4 P100 BN100LA4	384
156	128	3.1	9.0	4830	F312_9.0 S3 M3LA4	387	F312_9.0 P100 BN100LA4	388
161	124	1.3	8.7	1960	F202_8.7 S3 M3LA4	379	F202_8.7 P100 BN100LA4	380
168	119	2.2	8.4	2830	F252_8.4 S3 M3LA4	383	F252_8.4 P100 BN100LA4	384
171	117	3.3	8.2	4720	F312_8.2 S3 M3LA4	387	F312_8.2 P100 BN100LA4	388
180	111	1.3	7.8	1920	F202_7.8 S3 M3LA4	379	F202_7.8 P100 BN100LA4	380
205	97	2.6	6.9	2710	F252_6.9 S3 M3LA4	383	F252_6.9 P100 BN100LA4	384
220	91	1.4	6.4	1840	F202_6.4 S3 M3LA4	379	F202_6.4 P100 BN100LA4	380
247	81	1.0	11.5	1470	F102_11.5 S3 M3SA2	375	F102_11.5 P90 BN90L2	376
254	79	1.8	11.2	1780	F202_11.2 S3 M3SA2	379	F202_11.2 P90 BN90L2	380
292	68	1.1	9.8	1410	F102_9.8 S3 M3SA2	375	F102_9.8 P90 BN90L2	376
326	61	2.0	8.7	1670	F202_8.7 S3 M3SA2	379	F202_8.7 P90 BN90L2	380
332	60	1.1	8.6	1370	F102_8.6 S3 M3SA2	375	F102_8.6 P90 BN90L2	376
364	55	2.1	7.8	1630	F202_7.8 S3 M3SA2	379	F202_7.8 P90 BN90L2	380
385	52	1.2	7.4	1330	F102_7.4 S3 M3SA2	375	F102_7.4 P90 BN90L2	376
444	45	2.3	6.4	1540	F202_6.4 S3 M3SA2	379	F202_6.4 P90 BN90L2	380

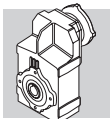
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
1.8	14309	1.0	773.4	55000	F904_773.4 S3 M3LB4	409	F904_773.4 P100 BN100LB4	410
2.3	11574	1.2	625.6	55000	F904_625.6 S3 M3LB4	409	F904_625.6 P100 BN100LB4	410
2.4	10684	1.3	577.5	55000	F904_577.5 S3 M3LB4	409	F904_577.5 P100 BN100LB4	410
2.8	9168	1.5	495.6	55000	F904_495.6 S3 M3LB4	409	F904_495.6 P100 BN100LB4	410
2.9	9049	0.9	489.1	45000	F804_489.1 S3 M3LB4	406	F804_489.1 P100 BN100LB4	407
3.1	8353	1.0	451.5	45000	F804_451.5 S3 M3LB4	406	F804_451.5 P100 BN100LB4	407
3.1	8463	1.7	457.5	55000	F904_457.5 S3 M3LB4	409	F904_457.5 P100 BN100LB4	410
3.7	7088	1.1	383.2	45000	F804_383.2 S3 M3LB4	406	F804_383.2 P100 BN100LB4	407
3.9	6694	2.1	361.8	55000	F904_361.8 S3 M3LB4	409	F904_361.8 P100 BN100LB4	410
4.0	6543	1.2	353.7	45000	F804_353.7 S3 M3LB4	406	F804_353.7 P100 BN100LB4	407
4.6	5630	0.9	304.3	35000	F704_304.3 S3 M3LB4	403	F704_304.3 P100 BN100LB4	404
4.8	5489	1.5	296.7	45000	F804_296.7 S3 M3LB4	406	F804_296.7 P100 BN100LB4	407
4.8	5386	2.6	291.1	55000	F904_291.1 S3 M3LB4	409	F904_291.1 P100 BN100LB4	410

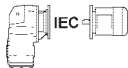


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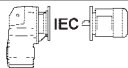
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
5.0	5197	1.0	280.9	35000	F704_280.9 S3 M3LB4	403	F704_280.9 P100 BN100LB4	404
5.1	5067	1.6	273.9	45000	F804_273.9 S3 M3LB4	406	F804_273.9 P100 BN100LB4	407
5.2	4971	2.8	268.7	55000	F904_268.7 S3 M3LB4	409	F904_268.7 P100 BN100LB4	410
6.0	4340	1.2	234.6	35000	F704_234.6 S3 M3LB4	403	F704_234.6 P100 BN100LB4	404
6.1	4281	3.3	231.4	55000	F904_231.4 S3 M3LB4	409	F904_231.4 P100 BN100LB4	410
6.5	4006	1.2	216.5	35000	F704_216.5 S3 M3LB4	403	F704_216.5 P100 BN100LB4	404
6.5	4042	2.0	218.5	45000	F804_218.5 S3 M3LB4	406	F804_218.5 P100 BN100LB4	407
6.6	3951	3.5	213.6	55000	F904_213.6 S3 M3LB4	409	F904_213.6 P100 BN100LB4	410
7.2	3706	1.3	196.0	35000	F703_196.0 S3 M3LB4	403	F703_196.0 P100 BN100LB4	404
7.6	3490	2.3	184.6	45000			F803_184.6 P100 BN100LB4	407
7.8	3421	1.5	180.9	35000	F703_180.9 S3 M3LB4	403	F703_180.9 P100 BN100LB4	404
8.5	3151	1.6	166.7	35000	F703_166.7 S3 M3LB4	403	F703_166.7 P100 BN100LB4	404
8.7	3080	0.9	162.9	20000	F603_162.9 S3 M3LB4	399	F603_162.9 P100 BN100LB4	400
8.8	3029	2.6	160.2	45000			F803_160.2 P100 BN100LB4	407
9.2	2909	1.7	153.8	35000	F703_153.8 S3 M3LB4	403	F703_153.8 P100 BN100LB4	404
9.4	2843	1.0	150.4	20000	F603_150.4 S3 M3LB4	399	F603_150.4 P100 BN100LB4	400
9.5	2796	2.9	147.9	45000			F803_147.9 P100 BN100LB4	407
10.6	2514	2.0	133.0	35000	F703_133.0 S3 M3LB4	403	F703_133.0 P100 BN100LB4	404
10.6	2509	3.2	132.7	45000			F803_132.7 P100 BN100LB4	407
10.8	2467	1.2	130.5	20000	F603_130.5 S3 M3LB4	399	F603_130.5 P100 BN100LB4	400
11.5	2320	2.2	122.7	35000	F703_122.7 S3 M3LB4	403	F703_122.7 P100 BN100LB4	404
11.5	2316	3.5	122.5	45000			F803_122.5 P100 BN100LB4	407
11.7	2277	1.3	120.5	20000	F603_120.5 S3 M3LB4	399	F603_120.5 P100 BN100LB4	400
12.9	2072	2.4	109.6	35000	F703_109.6 S3 M3LB4	403	F703_109.6 P100 BN100LB4	404
13.3	2011	1.4	106.4	20000	F603_106.4 S3 M3LB4	399	F603_106.4 P100 BN100LB4	400
13.4	1987	0.9	105.1	12000	F513_105.1 S3 M3LB4	395	F513_105.1 P100 BN100LB4	396
13.9	1913	2.6	101.2	35000	F703_101.2 S3 M3LB4	403	F703_101.2 P100 BN100LB4	404
14.4	1857	1.6	98.2	20000	F603_98.2 S3 M3LB4	399	F603_98.2 P100 BN100LB4	400
15.2	1749	2.9	92.5	35000	F703_92.5 S3 M3LB4	403	F703_92.5 P100 BN100LB4	404
16.5	1614	3.1	85.4	35000	F703_85.4 S3 M3LB4	403	F703_85.4 P100 BN100LB4	404
16.8	1588	1.8	84.0	20000	F603_84.0 S3 M3LB4	399	F603_84.0 P100 BN100LB4	400
16.9	1574	1.1	83.2	12000	F513_83.2 S3 M3LB4	395	F513_83.2 P100 BN100LB4	396
18.2	1466	2.0	77.6	20000	F603_77.6 S3 M3LB4	399	F603_77.6 P100 BN100LB4	400
20.7	1291	2.2	68.3	20000	F603_68.3 S3 M3LB4	399	F603_68.3 P100 BN100LB4	400
21.4	1245	1.4	65.8	12000	F513_65.8 S3 M3LB4	395	F513_65.8 P100 BN100LB4	396
22.4	1192	2.4	63.0	20000	F603_63.0 S3 M3LB4	399	F603_63.0 P100 BN100LB4	400
23.4	1139	1.0	60.2	8500	F413_60.2 S3 M3LB4	391	F413_60.2 P100 BN100LB4	392
27.2	980	3.0	51.8	20000	F603_51.8 S3 M3LB4	399	F603_51.8 P100 BN100LB4	400
27.4	974	1.1	51.5	8500	F413_51.5 S3 M3LB4	391	F413_51.5 P100 BN100LB4	392
28.8	925	1.9	48.9	12000	F513_48.9 S3 M3LB4	395	F513_48.9 P100 BN100LB4	396
29.4	926	1.2	47.9	8500	F412_47.9 S3 M3LB4	391	F412_47.9 P100 BN100LB4	392
29.5	905	3.2	47.8	20000	F603_47.8 S3 M3LB4	399	F603_47.8 P100 BN100LB4	400
37	737	1.5	38.2	8500	F412_38.2 S3 M3LB4	391	F412_38.2 P100 BN100LB4	392
38	717	2.4	37.1	11800	F512_37.1 S3 M3LB4	395	F512_37.1 P100 BN100LB4	396
41	664	0.9	34.4	5810	F312_34.4 S3 M3LB4	387	F312_34.4 P100 BN100LB4	388
47	582	1.0	30.1	5770	F312_30.1 S3 M3LB4	387	F312_30.1 P100 BN100LB4	388
47	582	1.9	30.1	8290	F412_30.1 S3 M3LB4	391	F412_30.1 P100 BN100LB4	392
47	580	2.9	30.0	11200	F512_30.0 S3 M3LB4	395	F512_30.0 P100 BN100LB4	396
52	527	1.1	27.3	5720	F312_27.3 S3 M3LB4	387	F312_27.3 P100 BN100LB4	388
58	466	2.4	24.1	7960	F412_24.1 S3 M3LB4	391	F412_24.1 P100 BN100LB4	392
60	452	1.3	23.4	5620	F312_23.4 S3 M3LB4	387	F312_23.4 P100 BN100LB4	388

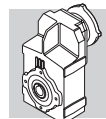


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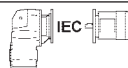
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
65	421	0.9	21.8	2800	F252_21.8 S3 M3LB4	383	F252_21.8 P100 BN100LB4	384
67	408	1.5	21.1	5540	F312_21.1 S3 M3LB4	387	F312_21.1 P100 BN100LB4	388
75	365	3.0	18.9	7560	F412_18.9 S3 M3LB4	391	F412_18.9 P100 BN100LB4	392
76	359	1.1	18.6	2830	F252_18.6 S3 M3LB4	383	F252_18.6 P100 BN100LB4	384
76	357	1.7	18.5	5430	F312_18.5 S3 M3LB4	387	F312_18.5 P100 BN100LB4	388
82	331	3.2	17.1	7400	F412_17.1 S3 M3LB4	391	F412_17.1 P100 BN100LB4	392
84	324	1.8	16.8	5340	F312_16.8 S3 M3LB4	387	F312_16.8 P100 BN100LB4	388
85	321	1.2	16.6	2830	F252_16.6 S3 M3LB4	383	F252_16.6 P100 BN100LB4	384
97	279	1.4	14.5	2810	F252_14.5 S3 M3LB4	383	F252_14.5 P100 BN100LB4	384
101	269	2.2	13.9	5150	F312_13.9 S3 M3LB4	387	F312_13.9 P100 BN100LB4	388
109	251	1.6	13	2790	F252_13.0 S3 M3LB4	383	F252_13.0 P100 BN100LB4	384
111	246	2.4	12.7	5060	F312_12.7 S3 M3LB4	387	F312_12.7 P100 BN100LB4	388
131	208	2.9	10.7	4880	F312_10.7 S3 M3LB4	387	F312_10.7 P100 BN100LB4	388
133	205	1.9	10.6	2730	F252_10.6 S3 M3LB4	383	F252_10.6 P100 BN100LB4	384
151	181	1.5	9.4	2710	F252_9.4 S3 M3LB4	383	F252_9.4 P100 BN100LB4	384
156	174	2.2	9.0	4650	F312_9.0 S3 M3LB4	387	F312_9.0 P100 BN100LB4	388
161	169	0.9	8.7	1820	F202_8.7 S3 M3LB4	379	F202_8.7 P100 BN100LB4	380
168	162	1.6	8.4	2660	F252_8.4 S3 M3LB4	383	F252_8.4 P100 BN100LB4	384
171	159	2.5	8.2	4550	F312_8.2 S3 M3LB4	387	F312_8.2 P100 BN100LB4	388
180	151	1.0	7.8	1790	F202_7.8 S3 M3LB4	379	F202_7.8 P100 BN100LB4	380
203	134	2.9	6.9	4360	F312_6.9 S3 M3LB4	387	F312_6.9 P100 BN100LB4	388
205	133	1.9	6.9	2560	F252_6.9 S3 M3LB4	383	F252_6.9 P100 BN100LB4	384
220	124	1.0	6.4	1730	F202_6.4 S3 M3LB4	379	F202_6.4 P100 BN100LB4	380
220	124	2.9	13.0	2510	F252_13.0 S3 M3LA2	383	F252_13.0 P100 BN100L2	384
255	107	1.3	11.2	1680	F202_11.2 S3 M3LA2	379	F202_11.2 P100 BN100L2	380
269	101	3.2	10.6	2410	F252_10.6 S3 M3LA2	383	F252_10.6 P100 BN100L2	384
306	89	3.0	9.4	2350	F252_9.4 S3 M3LA2	383	F252_9.4 P100 BN100L2	384
328	83	1.5	8.7	1600	F202_8.7 S3 M3LA2	379	F202_8.7 P100 BN100L2	380
341	80	3.3	8.4	2290	F252_8.4 S3 M3LA2	383	F252_8.4 P100 BN100L2	384
365	75	1.5	7.8	1560	F202_7.8 S3 M3LA2	379	F202_7.8 P100 BN100L2	380
446	61	1.7	6.4	1480	F202_6.4 S3 M3LA2	379	F202_6.4 P100 BN100L2	380

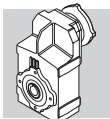
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
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2.4	14347	1.0	577.5	55000	F904_577.5 S3 M3LC4	409	F904_577.5 P112 BN112M4	410
2.8	12311	1.1	495.6	55000	F904_495.6 S3 M3LC4	409	F904_495.6 P112 BN112M4	410
3.1	11364	1.2	457.5	55000	F904_457.5 S3 M3LC4	409	F904_457.5 P112 BN112M4	410
3.9	8989	1.6	361.8	55000	F904_361.8 S3 M3LC4	409	F904_361.8 P112 BN112M4	410
4.0	8786	0.9	353.7	45000	F804_353.7 S3 M3LC4	406	F804_353.7 P112 BN112M4	407
4.7	7371	1.1	296.7	45000	F804_296.7 S3 M3LC4	406	F804_296.7 P112 BN112M4	407
4.8	7232	1.9	291.1	55000	F904_291.1 S3 M3LC4	409	F904_291.1 P112 BN112M4	410
5.1	6804	1.2	273.9	45000	F804_273.9 S3 M3LC4	406	F804_273.9 P112 BN112M4	407
5.2	6676	2.1	268.7	55000	F904_268.7 S3 M3LC4	409	F904_268.7 P112 BN112M4	410
6.0	5827	0.9	234.6	35000	F704_234.6 S3 M3LC4	403	F704_234.6 P112 BN112M4	404
6.1	5748	2.4	231.4	55000	F904_231.4 S3 M3LC4	409	F904_231.4 P112 BN112M4	410
6.4	5428	1.5	218.5	45000	F804_218.5 S3 M3LC4	406	F804_218.5 P112 BN112M4	407



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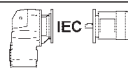
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
6.5	5379	0.9	216.5	35000	F704_216.5 S3 M3LC4	403	F704_216.5 P112 BN112M4	404
6.6	5306	2.6	213.6	55000	F904_213.6 S3 M3LC4	409	F904_213.6 P112 BN112M4	410
7.1	4977	1.0	196.0	35000	F703_196.0 S3 M3LC4	403	F703_196.0 P112 BN112M4	404
7.2	4929	2.8	194.2	55000			F903_194.2 P112 BN112M4	410
7.6	4687	1.7	184.6	45000			F803_184.6 P112 BN112M4	407
7.7	4594	1.1	180.9	35000	F703_180.9 S3 M3LC4	403	F703_180.9 P112 BN112M4	404
7.8	4550	3.1	179.2	55000			F903_179.2 P112 BN112M4	410
8.4	4232	1.2	166.7	35000	F703_166.7 S3 M3LC4	403	F703_166.7 P112 BN112M4	404
8.6	4134	3.4	162.8	55000			F903_162.8 P112 BN112M4	410
8.7	4068	2.0	160.2	45000			F803_160.2 P112 BN112M4	407
9.1	3906	1.3	153.8	35000	F703_153.8 S3 M3LC4	403	F703_153.8 P112 BN112M4	404
9.5	3755	2.1	147.9	45000			F803_147.9 P112 BN112M4	407
10.5	3376	1.5	133.0	35000	F703_133.0 S3 M3LC4	403	F703_133.0 P112 BN112M4	404
10.6	3369	2.4	132.7	45000			F803_132.7 P112 BN112M4	407
11.4	3116	1.6	122.7	35000	F703_122.7 S3 M3LC4	403	F703_122.7 P112 BN112M4	404
11.4	3110	2.6	122.5	45000			F803_122.5 P112 BN112M4	407
11.6	3058	0.9	120.5	20000	F603_120.5 S3 M3LC4	399	F603_120.5 P112 BN112M4	400
12.3	2888	2.8	113.8	45000			F803_113.8 P112 BN112M4	407
12.8	2783	1.8	109.6	35000	F703_109.6 S3 M3LC4	403	F703_109.6 P112 BN112M4	404
13.2	2701	1.1	106.4	20000	F603_106.4 S3 M3LC4	399	F603_106.4 P112 BN112M4	400
13.8	2569	1.9	101.2	35000	F703_101.2 S3 M3LC4	403	F703_101.2 P112 BN112M4	404
14.3	2493	1.2	98.2	20000	F603_98.2 S3 M3LC4	399	F603_98.2 P112 BN112M4	400
15.1	2348	2.1	92.5	35000	F703_92.5 S3 M3LC4	403	F703_92.5 P112 BN112M4	404
16.4	2168	2.3	85.4	35000	F703_85.4 S3 M3LC4	403	F703_85.4 P112 BN112M4	404
16.7	32133	1.4	84.0	20000	F603_84.0 S3 M3LC4	399	F603_84.0 P112 BN112M4	400
18.1	1969	1.5	77.6	20000	F603_77.6 S3 M3LC4	399	F603_77.6 P112 BN112M4	400
20.5	1734	1.7	68.3	20000	F603_68.3 S3 M3LC4	399	F603_68.3 P112 BN112M4	400
21.3	1672	1.1	65.8	12000	F513_65.8 S3 M3LC4	395	F513_65.8 P112 BN112M4	396
22.2	1600	1.8	63.0	20000	F603_63.0 S3 M3LC4	399	F603_63.0 P112 BN112M4	400
27.0	1316	2.2	51.8	20000	F603_51.8 S3 M3LC4	399	F603_51.8 P112 BN112M4	400
28.6	1242	1.4	48.9	11600	F513_48.9 S3 M3LC4	395	F513_48.9 P112 BN112M4	396
29.3	1215	2.4	47.8	20000	F603_47.8 S3 M3LC4	399	F603_47.8 P112 BN112M4	400
33	1069	2.7	42.1	20000	F603_42.1 S3 M3LC4	399	F603_42.1 P112 BN112M4	400
36	986	2.9	38.8	20000	F603_38.8 S3 M3LC4	399	F603_38.8 P112 BN112M4	400
37	990	1.1	38.2	7720	F412_38.2 S3 M3LC4	391	F412_38.2 P112 BN112M4	392
38	963	1.8	37.1	11200	F512_37.1 S3 M3LC4	395	F512_37.1 P112 BN112M4	396
46	781	1.4	30.1	7610	F412_30.1 S3 M3LC4	391	F412_30.1 P112 BN112M4	392
47	779	2.2	30.0	10700	F512_30.0 S3 M3LC4	395	F512_30.0 P112 BN112M4	396
55	645	2.9	25.4	20000	F603_25.4 S3 M3LC4	399	F603_25.4 P112 BN112M4	400
58	625	1.8	24.1	7420	F412_24.1 S3 M3LC4	391	F412_24.1 P112 BN112M4	392
59	617	2.7	23.8	10200	F512_23.8 S3 M3LC4	395	F512_23.8 P112 BN112M4	396
60	607	1.0	23.4	5040	F312_23.4 S3 M3LC4	387	F312_23.4 P112 BN112M4	388
60	596	3.2	23.5	20000	F603_23.5 S3 M3LC4	399	F603_23.5 P112 BN112M4	400
66	548	1.1	21.1	5020	F312_21.1 S3 M3LC4	387	F312_21.1 P112 BN112M4	388
74	490	2.2	18.9	7150	F412_18.9 S3 M3LC4	391	F412_18.9 P112 BN112M4	392
74	488	3.2	18.8	9640	F512_18.8 S3 M3LC4	395	F512_18.8 P112 BN112M4	396
76	479	1.3	18.5	4980	F312_18.5 S3 M3LC4	387	F312_18.5 P112 BN112M4	388
82	444	2.4	17.1	7030	F412_17.1 S3 M3LC4	391	F412_17.1 P112 BN112M4	392
83	436	1.4	16.8	4930	F312_16.8 S3 M3LC4	387	F312_16.8 P112 BN112M4	388
84	431	0.9	16.6	2380	F252_16.6 S3 M3LC4	383	F252_16.6 P112 BN112M4	384
96	379	2.7	14.6	6820	F412_14.6 S3 M3LC4	391	F412_14.6 P112 BN112M4	392

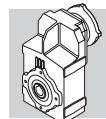


4.0 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
97	375	1.1	14.5	2420	F252_14.5 S3 M3LC4	383	F252_14.5 P112 BN112M4	384
100	362	1.7	13.9	4820	F312_13.9 S3 M3LC4	387	F312_13.9 P112 BN112M4	388
108	337	1.2	13.0	2440	F252_13.0 S3 M3LC4	383	F252_13.0 P112 BN112M4	384
110	330	1.8	12.7	4750	F312_12.7 S3 M3LC4	387	F312_12.7 P112 BN112M4	388
130	279	2.2	10.7	4620	F312_10.7 S3 M3LC4	387	F312_10.7 P112 BN112M4	388
130	279	3.2	10.8	6380	F412_10.8 S3 M3LC4	391	F412_10.8 P112 BN112M4	392
132	276	1.4	10.6	2450	F252_10.6 S3 M3LC4	383	F252_10.6 P112 BN112M4	384
150	243	1.1	9.4	2470	F252_9.4 S3 M3LC4	383	F252_9.4 P112 BN112M4	384
153	237	3.0	9.1	6160	F412_9.1 S3 M3LC4	391	F412_9.1 P112 BN112M4	392
155	234	1.7	9.0	4420	F312_9.0 S3 M3LC4	387	F312_9.0 P112 BN112M4	388
167	218	1.2	8.4	2450	F252_8.4 S3 M3LC4	383	F252_8.4 P112 BN112M4	384
170	213	1.8	8.2	4350	F312_8.2 S3 M3LC4	387	F312_8.2 P112 BN112M4	388
201	180	2.2	6.9	4200	F312_6.9 S3 M3LC4	387	F312_6.9 P112 BN112M4	388
204	178	1.4	6.9	2390	F252_6.9 S3 M3LC4	383	F252_6.9 P112 BN112M4	384
206	176	3.2	13.9	4200	F312_13.9 S3 M3LB2	387	F312_13.9 P100 BN100LB2	388
221	164	2.2	13.0	2340	F252_13.0 S3 M3LB2	383	F252_13.0 P112 BN112M2	384
226	161	3.4	12.7	4120	F312_12.7 S3 M3LB2	387	F312_12.7 P100 BN100LB2	388
255	142	1.0	11.2	1570	F202_11.2 S3 M3LB2	379	F202_11.2 P100 BN100LB2	380
270	134	2.4	10.6	2270	F252_10.6 S3 M3LB2	383	F252_10.6 P112 BN112M2	384
307	118	2.2	9.4	2230	F252_9.4 S3 M3LB2	383	F252_9.4 P112 BN112M2	384
318	114	3.4	9.0	3760	F312_9.0 S3 M3LB2	387	F312_9.0 P100 BN100LB2	388
329	110	1.1	8.7	1510	F202_8.7 S3 M3LB2	379	F202_8.7 P100 BN100LB2	380
342	106	2.4	8.4	2190	F252_8.4 S3 M3LB2	383	F252_8.4 P112 BN112M2	384
366	99	1.2	7.8	1480	F202_7.8 S3 M3LB2	379	F202_7.8 P100 BN100LB2	380
418	87	2.7	6.9	2090	F252_6.9 S3 M3LB2	383	F252_6.9 P112 BN112M2	384
448	81	1.3	6.4	1420	F202_6.4 S3 M3LB2	379	F202_6.4 P100 BN100LB2	380

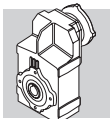
5.5 kW

n ₂ min-1	M ₂ Nm	S	i	R _{n2} N				
2.9	16458	0.9	495.6	55000	F904_495.6 S4 M4SA4	409	F904_495.6 P132 BN132S4	410
3.1	15192	0.9	457.5	55000	F904_457.5 S4 M4SA4	409	F904_457.5 P132 BN132S4	410
4.0	12017	1.2	361.8	55000	F904_361.8 S4 M4SA4	409	F904_361.8 P132 BN132S4	410
4.9	9668	1.4	291.1	55000	F904_291.1 S4 M4SA4	409	F904_291.1 P132 BN132S4	410
5.3	9096	0.9	273.9	45000	F804_273.9 S4 M4SA4	406	F804_273.9 P132 BN132S4	407
5.4	8925	1.6	268.7	55000	F904_268.7 S4 M4SA4	409	F904_268.7 P132 BN132S4	410
6.2	7685	1.8	231.4	55000	F904_231.4 S4 M4SA4	409	F904_231.4 P132 BN132S4	410
6.6	7256	1.1	218.5	45000	F804_218.5 S4 M4SA4	406	F804_218.5 P132 BN132S4	407
6.7	7093	2	213.6	55000	F904_213.6 S4 M4SA4	409	F904_213.6 P132 BN132S4	410
7.4	6590	2.1	194.2	55000	F903_194.2 S4 M4SA4	409	F903_194.2 P132 BN132S4	410
7.8	6266	1.3	184.6	45000	F803_184.6 S4 M4SA4	406	F803_184.6 P132 BN132S4	407
8.0	6083	2.3	179.2	55000	F903_179.2 S4 M4SA4	409	F903_179.2 P132 BN132S4	410
8.8	5527	2.5	162.8	55000	F903_162.8 S4 M4SA4	409	F903_162.8 P132 BN132S4	410
9.0	5438	1.5	160.2	45000	F803_160.2 S4 M4SA4	406	F803_160.2 P132 BN132S4	407
9.4	5222	1.0	153.8	35000	F703_153.8 S4 M4SA4	403	F703_153.8 P132 BN132S4	404
9.6	5101	2.7	150.3	55000	F903_150.3 S4 M4SA4	409	F903_150.3 P132 BN132S4	410
9.7	5020	1.6	147.9	45000	F803_147.9 S4 M4SA4	406	F803_147.9 P132 BN132S4	407
10.5	4661	3.0	137.3	55000	F903_137.3 S4 M4SA4	409	F903_137.3 P132 BN132S4	410



5.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
10.8	4513	1.1	133	35000	F703_133.0 S4 M4SA4	403	F703_133.0 P132 BN132S4	404
10.9	4504	1.8	132.7	45000	F803_132.7 S4 M4SA4	406	F803_132.7 P132 BN132S4	407
11.4	4303	3.3	126.8	55000	F903_126.8 S4 M4SA4	409	F903_126.8 P132 BN132S4	410
11.7	4165	1.2	122.7	35000	F703_122.7 S4 M4SA4	403	F703_122.7 P132 BN132S4	404
11.8	4157	1.9	122.5	45000	F803_122.5 S4 M4SA4	406	F803_122.5 P132 BN132S4	407
12.7	3861	2.1	113.8	45000	F803_113.8 S4 M4SA4	406	F803_113.8 P132 BN132S4	407
13.1	3720	1.3	109.6	35000	F703_109.6 S4 M4SA4	403	F703_109.6 P132 BN132S4	404
14.2	3434	1.5	101.2	35000	F703_101.2 S4 M4SA4	403	F703_101.2 P132 BN132S4	404
15.6	3139	1.6	92.5	35000	F703_92.5 S4 M4SA4	403	F703_92.5 P132 BN132S4	404
15.6	3133	2.6	92.3	45000	F803_92.3 S4 M4SA4	406	F803_92.3 P132 BN132S4	407
16.9	2898	1.7	85.4	35000	F703_85.4 S4 M4SA4	403	F703_85.4 P132 BN132S4	404
16.9	2892	2.8	85.2	45000	F803_85.2 S4 M4SA4	406	F803_85.2 P132 BN132S4	407
17.1	2852	1.0	84	20000	F603_84.0 S4 M4SA4	399	F603_84.0 P132 BN132S4	400
18.6	2632	1.1	77.6	20000	F603_77.6 S4 M4SA4	399	F603_77.6 P132 BN132S4	400
18.9	2588	3.1	76.3	45000	F803_76.3 S4 M4SA4	406	F803_76.3 P132 BN132S4	407
19.6	2497	2.0	73.6	35000	F703_73.6 S4 M4SA4	403	F703_73.6 P132 BN132S4	404
20.5	2389	3.3	70.4	45000	F803_70.4 S4 M4SA4	406	F803_70.4 P132 BN132S4	407
21.1	2317	1.3	68.3	20000	F603_68.3 S4 M4SA4	399	F603_68.3 P132 BN132S4	400
21.2	2305	2.2	67.9	35000	F703_67.9 S4 M4SA4	403	F703_67.9 P132 BN132S4	404
22.8	2139	1.4	63	20000	F603_63.0 S4 M4SA4	399	F603_63.0 P132 BN132S4	400
23.0	2121	2.4	62.5	35000	F703_62.5 S4 M4SA4	403	F703_62.5 P132 BN132S4	404
25.0	1958	2.6	57.7	35000	F703_57.7 S4 M4SA4	403	F703_57.7 P132 BN132S4	404
27.8	1759	1.6	51.8	20000	F603_51.8 S4 M4SA4	399	F603_51.8 P132 BN132S4	400
29.4	1660	1.1	48.9	10300	F513_48.9 S4 M4SA4	395	F513_48.9 P132 BN132S4	396
29.4	1662	3	49.0	35000	F703_49.0 S4 M4SA4	403	F703_49.0 P132 BN132S4	404
30.0	1624	1.8	47.8	20000	F603_47.8 S4 M4SA4	399	F603_47.8 P132 BN132S4	400
32	1534	3.3	45.2	34300	F703_45.2 S4 M4SA4	403	F703_45.2 P132 BN132S4	404
34	1428	2.0	42.1	20000	F603_42.1 S4 M4SA4	399	F603_42.1 P132 BN132S4	400
37	1319	2.2	38.8	20000	F603_38.8 S4 M4SA4	399	F603_38.8 P132 BN132S4	400
39	1288	1.3	37.1	10300	F512_37.1 S4 M4SA4	395	F512_37.1 P132 BN132S4	396
45	1089	2.7	32.1	20000	F603_32.1 S4 M4SA4	399	F603_32.1 P132 BN132S4	400
48	1044	1.1	30.1	6580	F412_30.1 S4 M4SA4	391	F412_30.1 P132 BN132S4	392
48	1041	1.6	30	9950	F512_30.0 S4 M4SA4	395	F512_30.0 P132 BN132S4	396
49	1005	2.9	29.6	20000	F603_29.6 S4 M4SA4	399	F603_29.6 P132 BN132S4	400
57	863	2.2	25.4	20000	F603_25.4 S4 M4SA4	399	F603_25.4 P132 BN132S4	400
60	836	1.3	24.1	6580	F412_24.1 S4 M4SA4	391	F412_24.1 P132 BN132S4	392
61	825	2.0	23.8	9560	F512_23.8 S4 M4SA4	395	F512_23.8 P132 BN132S4	396
61	796	2.4	23.5	20000	F603_23.5 S4 M4SA4	399	F603_23.5 P132 BN132S4	400
70	701	2.7	20.7	20000	F603_20.7 S4 M4SA4	399	F603_20.7 P132 BN132S4	400
76	655	1.7	18.9	6480	F412_18.9 S4 M4SA4	391	F412_18.9 P132 BN132S4	392
76	647	2.9	19.1	20000	F603_19.1 S4 M4SA4	399	F603_19.1 P132 BN132S4	400
77	653	2.4	18.8	9110	F512_18.8 S4 M4SA4	395	F512_18.8 P132 BN132S4	396
84	593	1.8	17.1	6410	F412_17.1 S4 M4SA4	391	F412_17.1 P132 BN132S4	392
98	507	2.0	14.6	6280	F412_14.6 S4 M4SA4	391	F412_14.6 P132 BN132S4	392
103	485	2.9	14.0	8520	F512_14.0 S4 M4SA4	395	F512_14.0 P132 BN132S4	396
130	385	3.5	11.1	8050	F512_11.1 S4 M4SA4	395	F512_11.1 P132 BN132S4	396
134	373	2.4	10.8	5970	F412_10.8 S4 M4SA4	391	F412_10.8 P132 BN132S4	392
158	317	2.2	9.1	5810	F412_9.1 S4 M4SA4	391	F412_9.1 P132 BN132S4	392
159	314	3.5	9.1	7590	F512_9.1 S4 M4SA4	395	F512_9.1 P132 BN132S4	396
198	253	3.3	14.6	5510	F412_14.6 S4 M4SA2	391	F412_14.6 P132 BN132SA2	392
214	233	2.7	6.7	5430	F412_6.7 S4 M4SA4	391	F412_6.7 P132 BN132S4	392

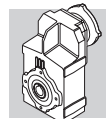


5.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
268	186	3.9	10.8	5120	F412_10.8 S4 M4SA2	391	F412_10.8 P132 BN132SA2	392
316	158	3.9	9.1	4930	F412_9.1 S4 M4SA2	391	F412_9.1 P132 BN132SA2	392

7.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
4.0	16387	0.9	361.8	55000	F904_361.8 S4 M4LA4	409	F904_361.8 P132 BN132MA4	410
4.9	13184	1.1	291.1	55000	F904_291.1 S4 M4LA4	409	F904_291.1 P132 BN132MA4	410
5.4	12170	1.2	268.7	55000	F904_268.7 S4 M4LA4	409	F904_268.7 P132 BN132MA4	410
6.2	10479	1.3	231.4	55000	F904_231.4 S4 M4LA4	409	F904_231.4 P132 BN132MA4	410
6.7	9673	1.4	213.6	55000	F904_213.6 S4 M4LA4	409	F904_213.6 P132 BN132MA4	410
7.4	8986	1.6	194.2	55000	F903_194.2 S4 M4LA4	409	F903_194.2 P132 BN132MA4	410
7.8	8544	0.9	184.6	45000	F803_184.6 S4 M4LA4	406	F803_184.6 P132 BN132MA4	407
8.0	8295	1.7	179.2	55000	F903_179.2 S4 M4LA4	409	F903_179.2 P132 BN132MA4	410
8.8	7536	1.9	162.8	55000	F903_162.8 S4 M4LA4	409	F903_162.8 P132 BN132MA4	410
9.0	7416	1.1	160.2	45000	F803_160.2 S4 M4LA4	406	F803_160.2 P132 BN132MA4	407
9.6	6956	2	150.3	55000	F903_150.3 S4 M4LA4	409	F903_150.3 P132 BN132MA4	410
9.7	6845	1.2	147.9	45000	F803_147.9 S4 M4LA4	406	F803_147.9 P132 BN132MA4	407
10.5	6356	2.2	137.3	55000	F903_137.3 S4 M4LA4	409	F903_137.3 P132 BN132MA4	410
10.9	6141	1.3	132.7	45000	F803_132.7 S4 M4LA4	406	F803_132.7 P132 BN132MA4	407
11.4	5867	2.4	126.8	55000	F903_126.8 S4 M4LA4	409	F903_126.8 P132 BN132MA4	410
11.8	5669	1.4	122.5	45000	F803_122.5 S4 M4LA4	406	F803_122.5 P132 BN132MA4	407
12.7	5265	1.5	113.8	45000	F803_113.8 S4 M4LA4	406	F803_113.8 P132 BN132MA4	407
12.9	5181	2.7	111.9	55000	F903_111.9 S4 M4LA4	409	F903_111.9 P132 BN132MA4	410
13.1	5073	1.0	109.6	35000	F703_109.6 S4 M4LA4	403	F703_109.6 P132 BN132MA4	404
13.9	4783	2.9	103.3	55000	F903_103.3 S4 M4LA4	409	F903_103.3 P132 BN132MA4	410
14.2	4683	1.1	101.2	35000	F703_101.2 S4 M4LA4	403	F703_101.2 P132 BN132MA4	404
15.0	4432	3.2	95.8	55000	F903_95.8 S4 M4LA4	409	F903_95.8 P132 BN132MA4	410
15.6	4281	1.2	92.5	35000	F703_92.5 S4 M4LA4	403	F703_92.5 P132 BN132MA4	404
15.6	4272	1.9	92.3	45000	F803_92.3 S4 M4LA4	406	F803_92.3 P132 BN132MA4	407
16.3	4091	3.4	88.4	55000	F903_88.4 S4 M4LA4	409	F903_88.4 P132 BN132MA4	410
16.9	3952	1.3	85.4	35000	F703_85.4 S4 M4LA4	403	F703_85.4 P132 BN132MA4	404
16.9	3944	2.0	85.2	45000	F803_85.2 S4 M4LA4	406	F803_85.2 P132 BN132MA4	407
18.9	3529	2.3	76.3	45000	F803_76.3 S4 M4LA4	406	F803_76.3 P132 BN132MA4	407
19.6	3404	1.5	73.6	35000	F703_73.6 S4 M4LA4	403	F703_73.6 P132 BN132MA4	404
20.5	3258	2.5	70.4	44700	F803_70.4 S4 M4LA4	406	F803_70.4 P132 BN132MA4	407
21.1	3160	0.9	68.3	20000	F603_68.3 S4 M4LA4	399	F603_68.3 P132 BN132MA4	400
21.2	3143	1.6	67.9	35000	F703_67.9 S4 M4LA4	403	F703_67.9 P132 BN132MA4	404
22.8	2917	1.0	63.0	20000	F603_63.0 S4 M4LA4	399	F603_63.0 P132 BN132MA4	400
23.0	2893	1.7	62.5	35000	F703_62.5 S4 M4LA4	403	F703_62.5 P132 BN132MA4	404
23.4	2844	2.8	61.5	43500	F803_61.5 S4 M4LA4	406	F803_61.5 P132 BN132MA4	407
25.0	2670	1.9	57.7	34900	F703_57.7 S4 M4LA4	403	F703_57.7 P132 BN132MA4	404
25.4	2626	3.0	56.7	42600	F803_56.7 S4 M4LA4	406	F803_56.7 P132 BN132MA4	407
27.8	2399	1.2	51.8	20000	F603_51.8 S4 M4LA4	399	F603_51.8 P132 BN132MA4	400
29.4	2266	2.2	49.0	33800	F703_49.0 S4 M4LA4	403	F703_49.0 P132 BN132MA4	404
30.0	2214	1.3	47.8	20000	F603_47.8 S4 M4LA4	399	F603_47.8 P132 BN132MA4	400
32	2092	2.4	45.2	33200	F703_45.2 S4 M4LA4	403	F703_45.2 P132 BN132MA4	404
34	1948	1.5	42.1	20000	F603_42.1 S4 M4LA4	399	F603_42.1 P132 BN132MA4	400

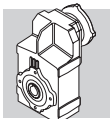


7.5 kW

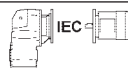
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
37	1798	1.6	38.8	20000	F603_38.8 S4 M4LA4	399	F603_38.8 P132 BN132MA4	400
39	1756	1.0	37.1	9090	F512_37.1 S4 M4LA4	395	F512_37.1 P132 BN132MA4	396
45	1485	2.0	32.1	20000	F603_32.1 S4 M4LA4	399	F603_32.1 P132 BN132MA4	400
48	1420	1.2	30.0	9010	F512_30.0 S4 M4LA4	395	F512_30.0 P132 BN132MA4	396
49	1371	2.1	29.6	20000	F603_29.6 S4 M4LA4	399	F603_29.6 P132 BN132MA4	400
57	1176	1.6	25.4	20000	F603_25.4 S4 M4LA4	399	F603_25.4 P132 BN132MA4	400
59	1137	3.5	24.6	28800	F703_24.6 S4 M4LA4	403	F703_24.6 P132 BN132MA4	404
60	1140	1.0	24.1	5500	F412_24.1 S4 M4LA4	391	F412_24.1 P132 BN132MA4	392
61	1125	1.5	23.8	8810	F512_23.8 S4 M4LA4	395	F512_23.8 P132 BN132MA4	396
61	1086	1.7	23.5	20000	F603_23.5 S4 M4LA4	399	F603_23.5 P132 BN132MA4	400
70	956	2.0	20.7	20000	F603_20.7 S4 M4LA4	399	F603_20.7 P132 BN132MA4	400
76	893	1.2	18.9	5630	F412_18.9 S4 M4LA4	391	F412_18.9 P132 BN132MA4	392
76	883	2.2	19.1	20000	F603_19.1 S4 M4LA4	399	F603_19.1 P132 BN132MA4	400
77	890	1.7	18.8	8520	F512_18.8 S4 M4LA4	395	F512_18.8 P132 BN132MA4	396
84	809	1.3	17.1	5650	F412_17.1 S4 M4LA4	391	F412_17.1 P132 BN132MA4	392
92	726	2.6	15.7	20000	F603_15.7 S4 M4LA4	399	F603_15.7 P132 BN132MA4	400
98	692	1.5	14.6	5630	F412_14.6 S4 M4LA4	391	F412_14.6 P132 BN132MA4	392
99	670	2.8	14.5	20000	F603_14.5 S4 M4LA4	399	F603_14.5 P132 BN132MA4	400
103	661	2.1	14.0	8080	F512_14.0 S4 M4LA4	395	F512_14.0 P132 BN132MA4	396
113	589	3.2	12.7	19900	F603_12.7 S4 M4LA4	399	F603_12.7 P132 BN132MA4	400
123	544	3.5	11.8	19500	F603_11.8 S4 M4LA4	399	F603_11.8 P132 BN132MA4	400
130	525	2.5	11.1	7700	F512_11.1 S4 M4LA4	395	F512_11.1 P132 BN132MA4	396
134	509	1.8	10.8	5490	F412_10.8 S4 M4LA4	391	F412_10.8 P132 BN132MA4	392
158	432	1.6	9.1	5410	F412_9.1 S4 M4LA4	391	F412_9.1 P132 BN132MA4	392
159	428	2.6	9.1	7290	F512_9.1 S4 M4LA4	395	F512_9.1 P132 BN132MA4	396
200	340	2.9	7.2	6900	F512_7.2 S4 M4LA4	395	F512_7.2 P132 BN132MA4	396
214	318	2.0	6.7	5140	F412_6.7 S4 M4LA4	391	F412_6.7 P132 BN132MA4	392
269	253	2.9	10.8	4880	F412_10.8 S4 M4SB2	391	F412_10.8 P132 BN132SB2	392
317	214	2.8	9.1	4730	F412_9.1 S4 M4SB2	391	F412_9.1 P132 BN132SB2	392
431	158	3.3	6.7	4390	F412_6.7 S4 M4SB2	391	F412_6.7 P132 BN132SB2	392

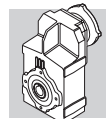
9.2 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
4.9	16172	0.9	291.1	55000	F904_291.1 S4 M4LB4	409	F904_291.1 P132 BN132MB4	410
5.4	14928	0.9	268.7	55000	F904_268.7 S4 M4LB4	409	F904_268.7 P132 BN132MB4	410
6.2	12854	1.1	231.4	55000	F904_231.4 S4 M4LB4	409	F904_231.4 P132 BN132MB4	410
6.7	11865	1.2	213.6	55000	F904_213.6 S4 M4LB4	409	F904_213.6 P132 BN132MB4	410
7.4	11023	1.3	194.2	55000	F903_194.2 S4 M4LB4	409	F903_194.2 P132 BN132MB4	410
8.0	10175	1.4	179.2	55000	F903_179.2 S4 M4LB4	409	F903_179.2 P132 BN132MB4	410
8.8	9244	1.5	162.8	55000	F903_162.8 S4 M4LB4	409	F903_162.8 P132 BN132MB4	410
9.6	8533	1.6	150.3	55000	F903_150.3 S4 M4LB4	409	F903_150.3 P132 BN132MB4	410
9.7	8397	1.0	147.9	45000	F803_147.9 S4 M4LB4	406	F803_147.9 P132 BN132MB4	407
10.5	7797	1.8	137.3	55000	F903_137.3 S4 M4LB4	409	F903_137.3 P132 BN132MB4	410
10.9	7533	1.1	132.7	45000	F803_132.7 S4 M4LB4	406	F803_132.7 P132 BN132MB4	407
11.4	7197	1.9	126.8	55000	F903_126.8 S4 M4LB4	409	F903_126.8 P132 BN132MB4	410
11.8	6954	1.2	122.5	45000	F803_122.5 S4 M4LB4	406	F803_122.5 P132 BN132MB4	407
12.7	6458	1.2	113.8	45000	F803_113.8 S4 M4LB4	406	F803_113.8 P132 BN132MB4	407

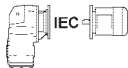


9.2 kW

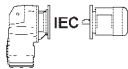
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
12.9	6355	2.2	111.9	55000	F903_111.9 S4 M4LB4	409	F903_111.9 P132 BN132MB4	410
13.9	5867	2.4	103.3	55000	F903_103.3 S4 M4LB4	409	F903_103.3 P132 BN132MB4	410
15.0	5437	2.6	95.8	55000	F903_95.8 S4 M4LB4	409	F903_95.8 P132 BN132MB4	410
15.6	5251	1.0	92.5	35000	F703_92.5 S4 M4LB4	403	F703_92.5 P132 BN132MB4	404
15.6	5241	1.5	92.3	45000	F803_92.3 S4 M4LB4	406	F803_92.3 P132 BN132MB4	407
16.3	5018	2.8	88.4	55000	F903_88.4 S4 M4LB4	409	F903_88.4 P132 BN132MB4	410
16.9	4848	1.0	85.4	35000	F703_85.4 S4 M4LB4	403	F703_85.4 P132 BN132MB4	404
16.9	4837	1.7	85.2	45000	F803_85.2 S4 M4LB4	406	F803_85.2 P132 BN132MB4	407
18.8	4352	3.2	76.7	55000	F903_76.7 S4 M4LB4	409	F903_76.7 P132 BN132MB4	410
18.9	4329	1.8	76.3	44100	F803_76.3 S4 M4LB4	406	F803_76.3 P132 BN132MB4	407
19.6	4176	1.2	73.6	35000	F703_73.6 S4 M4LB4	403	F703_73.6 P132 BN132MB4	404
20.4	4017	3.5	70.8	55000	F903_70.8 S4 M4LB4	409	F903_70.8 P132 BN132MB4	410
20.5	3996	2.0	70.4	43700	F803_70.4 S4 M4LB4	406	F803_70.4 P132 BN132MB4	407
21.2	3855	1.3	67.9	34600	F703_67.9 S4 M4LB4	403	F703_67.9 P132 BN132MB4	404
23.0	3548	1.4	62.5	34200	F703_62.5 S4 M4LB4	403	F703_62.5 P132 BN132MB4	404
23.4	3489	2.3	61.5	42200	F803_61.5 S4 M4LB4	406	F803_61.5 P132 BN132MB4	407
25.0	3275	1.5	57.7	33700	F703_57.7 S4 M4LB4	403	F703_57.7 P132 BN132MB4	404
25.4	3221	2.5	56.7	41400	F803_56.7 S4 M4LB4	406	F803_56.7 P132 BN132MB4	407
27.8	2942	1.0	51.8	20000	F603_51.8 S4 M4LB4	399	F603_51.8 P132 BN132MB4	400
29.4	2779	1.8	49.0	32800	F703_49.0 S4 M4LB4	403	F703_49.0 P132 BN132MB4	404
30.0	2716	1.1	47.8	20000	F603_47.8 S4 M4LB4	399	F603_47.8 P132 BN132MB4	400
32	2566	1.9	45.2	32300	F703_45.2 S4 M4LB4	403	F703_45.2 P132 BN132MB4	404
34	2389	1.2	42.1	20000	F603_42.1 S4 M4LB4	399	F603_42.1 P132 BN132MB4	400
37	2205	1.3	38.8	20000	F603_38.8 S4 M4LB4	399	F603_38.8 P132 BN132MB4	400
45	1821	1.6	32.1	20000	F603_32.1 S4 M4LB4	399	F603_32.1 P132 BN132MB4	400
48	1742	1.0	30.0	8210	F512_30.0 S4 M4LB4	395	F512_30.0 P132 BN132MB4	396
49	1681	1.7	29.6	20000	F603_29.6 S4 M4LB4	399	F603_29.6 P132 BN132MB4	400
57	1443	1.3	25.4	20000	F603_25.4 S4 M4LB4	399	F603_25.4 P132 BN132MB4	400
59	1394	2.9	24.6	28300	F703_24.6 S4 M4LB4	403	F703_24.6 P132 BN132MB4	404
61	1380	1.2	23.8	8170	F512_23.8 S4 M4LB4	395	F512_23.8 P132 BN132MB4	396
61	1332	1.4	23.5	20000	F603_23.5 S4 M4LB4	399	F603_23.5 P132 BN132MB4	400
64	1283	3.4	22.6	27800	F703_22.6 S4 M4LB4	403	F703_22.6 P132 BN132MB4	404
69	1185	3.4	20.9	27200	F703_20.9 S4 M4LB4	403	F703_20.9 P132 BN132MB4	404
70	1173	1.6	20.7	20000	F603_20.7 S4 M4LB4	399	F603_20.7 P132 BN132MB4	400
76	1096	1.0	18.9	4920	F412_18.9 S4 M4LB4	391	F412_18.9 P132 BN132MB4	392
76	1083	1.8	19.1	20000	F603_19.1 S4 M4LB4	399	F603_19.1 P132 BN132MB4	400
77	1092	1.4	18.8	8020	F512_18.8 S4 M4LB4	395	F512_18.8 P132 BN132MB4	396
84	993	1.1	17.1	5000	F412_17.1 S4 M4LB4	391	F412_17.1 P132 BN132MB4	392
92	890	2.1	15.7	20000	F603_15.7 S4 M4LB4	399	F603_15.7 P132 BN132MB4	400
98	848	1.2	14.6	5070	F412_14.6 S4 M4LB4	391	F412_14.6 P132 BN132MB4	392
99	822	2.3	14.5	20000	F603_14.5 S4 M4LB4	399	F603_14.5 P132 BN132MB4	400
103	811	1.8	14.0	7700	F512_14.0 S4 M4LB4	395	F512_14.0 P132 BN132MB4	396
113	723	2.6	12.7	19700	F603_12.7 S4 M4LB4	399	F603_12.7 P132 BN132MB4	400
123	667	2.8	11.8	19300	F603_11.8 S4 M4LB4	399	F603_11.8 P132 BN132MB4	400
130	644	2.1	11.1	7400	F512_11.1 S4 M4LB4	395	F512_11.1 P132 BN132MB4	396
134	625	1.4	10.8	5080	F412_10.8 S4 M4LB4	391	F412_10.8 P132 BN132MB4	392
148	551	3.4	9.7	18400	F603_9.7 S4 M4LB4	399	F603_9.7 P132 BN132MB4	400
158	530	1.3	9.1	5080	F412_9.1 S4 M4LB4	391	F412_9.1 P132 BN132MB4	392
159	525	2.1	9.1	7040	F512_9.1 S4 M4LB4	395	F512_9.1 P132 BN132MB4	396
200	417	2.3	7.2	6700	F512_7.2 S4 M4LB4	395	F512_7.2 P132 BN132MB4	396
214	390	1.6	6.7	4890	F412_6.7 S4 M4LB4	391	F412_6.7 P132 BN132MB4	392

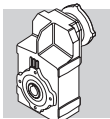


9.2 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
264	317	3.4	11.1	6340	F512_11.1 S4 M4LA2	395	F512_11.1 P132 BN132M2	396
272	307	2.4	10.8	4680	F412_10.8 S4 M4LA2	391	F412_10.8 P132 BN132M2	392
321	260	2.3	9.1	4560	F412_9.1 S4 M4LA2	391	F412_9.1 P132 BN132M2	392
324	258	3.5	9.1	5980	F512_9.1 S4 M4LA2	395	F512_9.1 P132 BN132M2	396
436	192	2.7	6.7	4270	F412_6.7 S4 M4LA2	391	F412_6.7 P132 BN132M2	392

11 kW

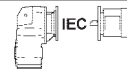
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
6.2	15369	0.9	231.4	55000	F904_231.4 S4 M4LC4	409	F904_231.4 P160 BN160MR4	410
6.7	14187	1.0	213.6	55000	F904_213.6 S4 M4LC4	409	F904_213.6 P160 BN160MR4	410
7.4	13179	1.1	194.2	55000	F903_194.2 S4 M4LC4	409	F903_194.2 P160 BN160MR4	410
8.0	12165	1.2	179.2	55000	F903_179.2 S4 M4LC4	409	F903_179.2 P160 BN160MR4	410
8.8	11053	1.3	162.8	55000	F903_162.8 S4 M4LC4	409	F903_162.8 P160 BN160MR4	410
9.6	10203	1.4	150.3	55000	F903_150.3 S4 M4LC4	409	F903_150.3 P160 BN160MR4	410
10.5	9323	1.5	137.3	55000	F903_137.3 S4 M4LC4	409	F903_137.3 P160 BN160MR4	410
11.4	8606	1.6	126.8	55000	F903_126.8 S4 M4LC4	409	F903_126.8 P160 BN160MR4	410
11.8	8314	1.0	122.5	45000	F803_122.5 S4 M4LC4	406	F803_122.5 P160 BN160MR4	407
12.7	7721	1.0	113.8	45000	F803_113.8 S4 M4LC4	406	F803_113.8 P160 BN160MR4	407
12.9	7599	1.8	111.9	55000	F903_111.9 S4 M4LC4	409	F903_111.9 P160 BN160MR4	410
13.9	7014	2.0	103.3	55000	F903_103.3 S4 M4LC4	409	F903_103.3 P160 BN160MR4	410
15.0	6500	2.2	95.8	55000	F903_95.8 S4 M4LC4	409	F903_95.8 P160 BN160MR4	410
15.6	6266	1.3	92.3	44100	F803_92.3 S4 M4LC4	406	F803_92.3 P160 BN160MR4	407
16.3	6000	2.3	88.4	55000	F903_88.4 S4 M4LC4	409	F903_88.4 P160 BN160MR4	410
16.9	5784	1.4	85.2	44000	F803_85.2 S4 M4LC4	406	F803_85.2 P160 BN160MR4	407
18.8	5203	2.7	76.7	55000	F903_76.7 S4 M4LC4	409	F903_76.7 P160 BN160MR4	410
18.9	5176	1.5	76.3	42800	F803_76.3 S4 M4LC4	406	F803_76.3 P160 BN160MR4	407
19.6	4993	1.0	73.6	33500	F703_73.6 S4 M4LC4	403	F703_73.6 P160 BN160MR4	404
20.4	4803	2.9	70.8	55000	F903_70.8 S4 M4LC4	409	F903_70.8 P160 BN160MR4	410
20.5	4778	1.7	70.4	42500	F803_70.4 S4 M4LC4	406	F803_70.4 P160 BN160MR4	407
21.2	4609	1.1	67.9	33100	F703_67.9 S4 M4LC4	403	F703_67.9 P160 BN160MR4	404
23.0	4243	1.2	62.5	32900	F703_62.5 S4 M4LC4	403	F703_62.5 P160 BN160MR4	404
23.2	4215	3.3	62.1	55000			F903_62.1 P160 BN160MR4	410
23.4	4172	1.9	61.5	41100	F803_61.5 S4 M4LC4	406	F803_61.5 P160 BN160MR4	407
25.0	3916	1.3	57.7	32500	F703_57.7 S4 M4LC4	403	F703_57.7 P160 BN160MR4	404
25.4	3851	2.1	56.7	40800	F803_56.7 S4 M4LC4	406	F803_56.7 P160 BN160MR4	407
29.3	3333	2.4	49.1	39300			F803_49.1 P160 BN160MR4	407
29.4	3323	1.5	49.0	31800	F703_49.0 S4 M4LC4	403	F703_49.0 P160 BN160MR4	404
32	3068	1.6	45.2	31300	F703_45.2 S4 M4LC4	403	F703_45.2 P160 BN160MR4	404
32	3077	2.6	45.3	38900			F803_45.3 P160 BN160MR4	407
34	2857	1.0	42.1	20000	F603_42.1 S4 M4LC4	399	F603_42.1 P160 BN160MR4	400
37	2637	1.1	38.8	20000	F603_38.8 S4 M4LC4	399	F603_38.8 P160 BN160MR4	400
38	2606	1.9	38.4	30500			F703_38.4 P160 BN160MR4	404
41	2406	2.1	35.4	30000			F703_35.4 P160 BN160MR4	404
45	2178	1.3	32.1	20000	F603_32.1 S4 M4LC4	399	F603_32.1 P160 BN160MR4	400
49	2010	1.4	29.6	20000	F603_29.6 S4 M4LC4	399	F603_29.6 P160 BN160MR4	400
52	1880	2.5	27.7	28500			F703_27.7 P160 BN160MR4	404
57	1725	1.1	25.4	20000	F603_25.4 S4 M4LC4	399	F603_25.4 P160 BN160MR4	400

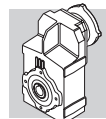


11 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
59	1667	2.4	24.6	27800	F703_24.6 S4 M4LC4	403	F703_24.6 P160 BN160MR4	404
61	1650	1.0	23.8	7500	F512_23.8 S4 M4LC4	395	F512_23.8 P160 BN160MR4	396
61	1593	1.2	23.5	20000	F603_23.5 S4 M4LC4	399	F603_23.5 P160 BN160MR4	400
64	1534	2.8	22.6	27300	F703_22.6 S4 M4LC4	403	F703_22.6 P160 BN160MR4	404
69	1416	2.8	20.9	26800	F703_20.9 S4 M4LC4	403	F703_20.9 P160 BN160MR4	404
70	1402	1.4	20.7	20000	F603_20.7 S4 M4LC4	399	F603_20.7 P160 BN160MR4	400
76	1294	1.5	19.1	20000	F603_19.1 S4 M4LC4	399	F603_19.1 P160 BN160MR4	400
77	1305	1.2	18.8	7490	F512_18.8 S4 M4LC4	395	F512_18.8 P160 BN160MR4	396
92	1064	1.8	15.7	20000	F603_15.7 S4 M4LC4	399	F603_15.7 P160 BN160MR4	400
98	1014	1.0	14.6	4490	F412_14.6 S4 M4LC4	391		
99	982	1.9	14.5	20000	F603_14.5 S4 M4LC4	399	F603_14.5 P160 BN160MR4	400
103	969	1.5	14.0	7310	F512_14.0 S4 M4LC4	395	F512_14.0 P160 BN160MR4	396
113	864	2.2	12.7	19400	F603_12.7 S4 M4LC4	399	F603_12.7 P160 BN160MR4	400
123	798	2.4	11.8	19000	F603_11.8 S4 M4LC4	399	F603_11.8 P160 BN160MR4	400
130	770	1.7	11.1	7090	F512_11.1 S4 M4LC4	395	F512_11.1 P160 BN160MR4	396
134	747	1.2	10.8	4650	F412_10.8 S4 M4LC4	391		
148	659	2.9	9.7	18200	F603_9.7 S4 M4LC4	399	F603_9.7 P160 BN160MR4	400
158	633	1.1	9.1	4720	F412_9.1 S4 M4LC4	391		
159	628	1.8	9.1	6770	F512_9.1 S4 M4LC4	395	F512_9.1 P160 BN160MR4	396
161	608	3.1	9.0	17800	F603_9.0 S4 M4LC4	399	F603_9.0 P160 BN160MR4	400
200	499	2.0	7.2	6490	F512_7.2 S4 M4LC4	395	F512_7.2 P160 BN160MR4	396
214	466	1.4	6.7	4630	F412_6.7 S4 M4LC4	391		
263	380	2.8	11.1	6170	F512_11.1 S4 M4LC2	395	F512_11.1 P160 BN160MR2	396
271	368	2.0	10.8	4460	F412_10.8 S4 M4LC2	391		
320	312	2.0	9.1	4380	F412_9.1 S4 M4LC2	391		
323	310	2.9	9.1	5840	F512_9.1 S4 M4LC2	395	F512_9.1 P160 BN160MR2	396
406	246	3.2	7.2	5510	F512_7.2 S4 M4LC2	395	F512_7.2 P160 BN160MR2	396
434	230	2.3	6.7	4130	F412_6.7 S4 M4LC2	391		

15 kW

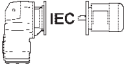
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
8.1	16362	0.9	179.2	55000	F903_179.2 S5 M5SB4	409	F903_179.2 P160 BN160L4	410
9.0	14866	0.9	162.8	55000	F903_162.8 S5 M5SB4	409	F903_162.8 P160 BN160L4	410
9.7	13722	1.0	150.3	55000	F903_150.3 S5 M5SB4	409	F903_150.3 P160 BN160L4	410
10.6	12539	1.1	137.3	55000	F903_137.3 S5 M5SB4	409	F903_137.3 P160 BN160L4	410
11.5	11574	1.2	126.8	55000	F903_126.8 S5 M5SB4	409	F903_126.8 P160 BN160L4	410
13.0	10220	1.4	111.9	55000	F903_111.9 S5 M5SB4	409	F903_111.9 P160 BN160L4	410
14.1	9434	1.5	103.3	55000	F903_103.3 S5 M5SB4	409	F903_103.3 P160 BN160L4	410
15.2	8743	1.6	95.8	55000	F903_95.8 S5 M5SB4	409	F903_95.8 P160 BN160L4	410
15.8	8427	0.9	92.3	41300	F803_92.3 S5 M5SB4	406	F803_92.3 P160 BN160L4	407
16.5	8070	1.7	88.4	55000	F903_88.4 S5 M5SB4	409	F903_88.4 P160 BN160L4	410
17.1	7779	1.0	85.2	40800	F803_85.2 S5 M5SB4	406	F803_85.2 P160 BN160L4	407
19.0	6998	2.0	76.7	55000	F903_76.7 S5 M5SB4	409	F903_76.7 P160 BN160L4	410
19.1	6961	1.1	76.3	40500	F803_76.3 S5 M5SB4	406	F803_76.3 P160 BN160L4	407
20.6	6460	2.2	70.8	55000	F903_70.8 S5 M5SB4	409	F903_70.8 P160 BN160L4	410
20.7	6426	1.2	70.4	39900	F803_70.4 S5 M5SB4	406	F803_70.4 P160 BN160L4	407
23.5	5669	2.5	62.1	55000			F903_62.1 P160 BN160L4	410

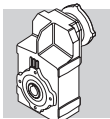


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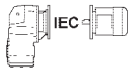
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
23.8	5611	1.4	61.5	38700	F803_61.5 S5 M5SB4	406	F803_61.5 P160 BN160L4	407
25.3	5267	0.9	57.7	29700	F703_57.7 S5 M5SB4	403	F703_57.7 P160 BN160L4	404
25.5	5233	2.7	57.3	55000			F903_57.3 P160 BN160L4	410
25.7	5179	1.5	56.7	38600	F803_56.7 S5 M5SB4	406	F803_56.7 P160 BN160L4	407
29.7	4483	1.8	49.1	37800			F803_49.1 P160 BN160L4	407
29.8	4470	1.1	49.0	29400	F703_49.0 S5 M5SB4	403	F703_49.0 P160 BN160L4	404
32	4126	1.2	45.2	29100	F703_45.2 S5 M5SB4	403	F703_45.2 P160 BN160L4	404
32	4138	1.9	45.3	37200			F803_45.3 P160 BN160L4	407
38	3505	1.4	38.4	28600			F703_38.4 P160 BN160L4	404
41	3235	1.5	35.4	28200			F703_35.4 P160 BN160L4	404
46	2929	1.0	32.1	20000	F603_32.1 S5 M5SB4	399	F603_32.1 P160 BN160L4	400
49	2704	1.1	29.6	20000	F603_29.6 S5 M5SB4	399	F603_29.6 P160 BN160L4	400
53	2528	1.8	27.7	27100			F703_27.7 P160 BN160L4	404
58	2303	2.7	25.2	32900	F803_25.2 S5 M5SB4	406	F803_25.2 P160 BN160L4	407
59	2242	1.8	24.6	26500	F703_24.6 S5 M5SB4	403	F703_24.6 P160 BN160L4	404
65	2064	2.1	22.6	26200	F703_22.6 S5 M5SB4	403	F703_22.6 P160 BN160L4	404
66	2011	3.4	22.0	31900	F803_22.0 S5 M5SB4	406	F803_22.0 P160 BN160L4	407
70	1905	2.1	20.9	25700	F703_20.9 S5 M5SB4	403	F703_20.9 P160 BN160L4	404
71	1886	1.0	20.7	20000	F603_20.7 S5 M5SB4	399	F603_20.7 P160 BN160L4	400
72	1856	3.4	20.3	31300	F803_20.3 S5 M5SB4	406	F803_20.3 P160 BN160L4	407
77	1741	1.1	19.1	20000	F603_19.1 S5 M5SB4	399	F603_19.1 P160 BN160L4	400
82	1617	2.7	17.7	24900	F703_17.7 S5 M5SB4	403	F703_17.7 P160 BN160L4	404
89	1492	2.7	16.3	24400	F703_16.3 S5 M5SB4	403	F703_16.3 P160 BN160L4	404
93	1432	1.3	15.7	19600	F603_15.7 S5 M5SB4	399	F603_15.7 P160 BN160L4	400
101	1321	1.4	14.5	19200	F603_14.5 S5 M5SB4	399	F603_14.5 P160 BN160L4	400
105	1268	3.1	13.9	23600	F703_13.9 S5 M5SB4	403	F703_13.9 P160 BN160L4	404
114	1170	3.1	12.8	23100	F703_12.8 S5 M5SB4	403	F703_12.8 P160 BN160L4	404
115	1162	1.6	12.7	18800	F603_12.7 S5 M5SB4	399	F603_12.7 P160 BN160L4	400
124	1073	1.8	11.8	18400	F603_11.8 S5 M5SB4	399	F603_11.8 P160 BN160L4	400
135	991	3.5	10.9	22300	F703_10.9 S5 M5SB4	403	F703_10.9 P160 BN160L4	404
146	914	3.5	10.0	21800	F703_10.0 S5 M5SB4	403	F703_10.0 P160 BN160L4	404
150	886	2.1	9.7	17700	F603_9.7 S5 M5SB4	399	F603_9.7 P160 BN160L4	400
163	818	2.3	9.0	17300	F603_9.0 S5 M5SB4	399	F603_9.0 P160 BN160L4	400

18.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
10.6	15456	0.9	137.3	55000	F903_137.3 S5 M5LA4	409	F903_137.3 P180 BN180M4	410
11.5	14267	1.0	126.8	55000	F903_126.8 S5 M5LA4	409	F903_126.8 P180 BN180M4	410
13.0	12598	1.1	111.9	55000	F903_111.9 S5 M5LA4	409	F903_111.9 P180 BN180M4	410
14.1	11629	1.2	103.3	55000	F903_103.3 S5 M5LA4	409	F903_103.3 P180 BN180M4	410
15.2	10777	1.3	95.8	55000	F903_95.8 S5 M5LA4	409	F903_95.8 P180 BN180M4	410
16.5	9948	1.4	88.4	55000	F903_88.4 S5 M5LA4	409	F903_88.4 P180 BN180M4	410
19.0	8626	1.6	76.7	55000	F903_76.7 S5 M5LA4	409	F903_76.7 P180 BN180M4	410
19.1	8581	0.9	76.3	38100	F803_76.3 S5 M5LA4	406	F803_76.3 P180 BN180M4	407
20.6	7963	1.8	70.8	55000	F903_70.8 S5 M5LA4	409	F903_70.8 P180 BN180M4	410
20.7	7921	1.0	70.4	37600	F803_70.4 S5 M5LA4	406	F803_70.4 P180 BN180M4	407
23.5	6989	2.0	62.1	55000			F903_62.1 P180 BN180M4	410

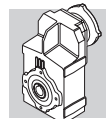


18.5 kW

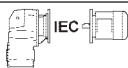
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
23.8	6916	1.1	61.5	37400	F803_61.5 S5 M5LA4	406	F803_61.5 P180 BN180M4	407
25.5	6451	2.2	57.3	55000			F903_57.3 P180 BN180M4	410
25.7	6384	1.3	56.7	36800	F803_56.7 S5 M5LA4	406	F803_56.7 P180 BN180M4	407
29.3	5615	2.5	49.9	55000			F903_49.9 P180 BN180M4	410
29.7	5526	1.4	49.1	35800			F803_49.1 P180 BN180M4	407
29.8	5510	0.9	49.0	27400	F703_49.0 S5 M5LA4	403	F703_49.0 P180 BN180M4	404
32	5183	2.7	46.1	55000			F903_46.1 P180 BN180M4	410
32	5101	1.6	45.3	35700			F803_45.3 P180 BN180M4	407
32	5086	1.0	45.2	27200	F703_45.2 S5 M5LA4	403	F703_45.2 P180 BN180M4	404
36	4558	3.1	40.5	53700			F903_40.5 P180 BN180M4	410
37	4389	1.8	39.0	35000			F803_39.0 P180 BN180M4	407
38	4321	1.2	38.4	27000			F703_38.4 P180 BN180M4	404
39	4207	3.2	37.4	52700			F903_37.4 P180 BN180M4	410
41	4051	2.0	36.0	34400			F803_36.0 P180 BN180M4	407
41	3988	1.3	35.4	26700			F703_35.4 P180 BN180M4	404
47	3517	2.3	31.3	33600			F803_31.3 P180 BN180M4	407
49	3376	1.5	30.0	26300			F703_30.0 P180 BN180M4	404
51	3246	2.5	28.8	33000			F803_28.8 P180 BN180M4	407
53	3116	1.5	27.7	26000			F703_27.7 P180 BN180M4	404
58	2839	2.2	25.2	32100	F803_25.2 S5 M5LA4	406	F803_25.2 P180 BN180M4	407
59	2764	1.4	24.6	25500	F703_24.6 S5 M5LA4	403	F703_24.6 P180 BN180M4	404
65	2544	1.7	22.6	25200	F703_22.6 S5 M5LA4	403	F703_22.6 P180 BN180M4	404
66	2479	2.7	22.0	31300	F803_22.0 S5 M5LA4	406	F803_22.0 P180 BN180M4	407
70	2348	1.7	20.9	24900	F703_20.9 S5 M5LA4	403	F703_20.9 P180 BN180M4	404
72	2288	2.7	20.3	30600	F803_20.3 S5 M5LA4	406	F803_20.3 P180 BN180M4	407
82	1993	2.2	17.7	24200	F703_17.7 S5 M5LA4	403	F703_17.7 P180 BN180M4	404
83	1981	3.4	17.6	29700	F803_17.6 S5 M5LA4	406	F803_17.6 P180 BN180M4	407
89	1839	2.2	16.3	23800	F703_16.3 S5 M5LA4	403	F703_16.3 P180 BN180M4	404
90	1828	3.4	16.2	29100	F803_16.2 S5 M5LA4	406	F803_16.2 P180 BN180M4	407
93	1765	1.1	15.7	18700	F603_15.7 S5 M5LA4	399	F603_15.7 P180 BN180M4	400
101	1629	1.2	14.5	18600	F603_14.5 S5 M5LA4	399	F603_14.5 P180 BN180M4	400
105	1563	2.5	13.9	23000	F703_13.9 S5 M5LA4	403	F703_13.9 P180 BN180M4	404
114	1442	2.5	12.8	22600	F703_12.8 S5 M5LA4	403	F703_12.8 P180 BN180M4	404
115	1433	1.3	12.7	18300	F603_12.7 S5 M5LA4	399	F603_12.7 P180 BN180M4	400
124	1323	1.4	11.8	17900	F603_11.8 S5 M5LA4	399	F603_11.8 P180 BN180M4	400
135	1221	2.8	10.9	21800	F703_10.9 S5 M5LA4	403	F703_10.9 P180 BN180M4	404
146	1127	2.8	10.0	21400	F703_10.0 S5 M5LA4	403	F703_10.0 P180 BN180M4	404
150	1092	1.7	9.7	17300	F603_9.7 S5 M5LA4	399	F603_9.7 P180 BN180M4	400
163	1008	1.9	9.0	16900	F603_9.0 S5 M5LA4	399	F603_9.0 P180 BN180M4	400

22 kW

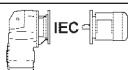
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC 	
13.1	14880	0.9	111.9	55000			F903_111.9 P180 BN180L4	410
14.2	13735	1.0	103.3	55000			F903_103.3 P180 BN180L4	410
15.4	12728	1.1	95.8	55000			F903_95.8 P180 BN180L4	410
16.6	11749	1.2	88.4	55000			F903_88.4 P180 BN180L4	410
19.2	10188	1.4	76.7	55000			F903_76.7 P180 BN180L4	410

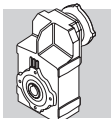


22 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC	
20.8	9405	1.5	70.8	55000			F903_70.8 P180 BN180L4	410
23.7	8254	1.7	62.1	55000			F903_62.1 P180 BN180L4	410
23.9	8169	1.0	61.5	35400			F803_61.5 P180 BN180L4	407
25.6	7619	1.8	57.3	55000			F903_57.3 P180 BN180L4	410
25.9	7541	1.1	56.7	35000			F803_56.7 P180 BN180L4	407
29.5	6632	2.1	49.9	54400			F903_49.9 P180 BN180L4	410
29.9	6527	1.2	49.1	34100			F803_49.1 P180 BN180L4	407
32	6122	2.3	46.1	53500			F903_46.1 P180 BN180L4	410
32	6025	1.3	45.3	34300			F803_45.3 P180 BN180L4	407
36	5383	2.6	40.5	52300			F903_40.5 P180 BN180L4	410
38	5184	1.5	39.0	33300			F803_39.0 P180 BN180L4	407
38	5103	1	38.4	25400			F703_38.4 P180 BN180L4	404
39	4969	2.7	37.4	51400			F903_37.4 P180 BN180L4	410
41	4785	1.7	36.0	33200			F803_36.0 P180 BN180L4	407
41	4711	1.1	35.4	25300			F703_35.4 P180 BN180L4	404
47	4154	1.9	31.3	32600			F803_31.3 P180 BN180L4	407
47	4120	3.2	31.0	49500			F903_31.0 P180 BN180L4	410
49	3988	1.3	30.0	25100			F703_30.0 P180 BN180L4	404
51	3834	2.1	28.8	32000			F803_28.8 P180 BN180L4	407
51	3803	3.2	28.6	48600			F903_28.6 P180 BN180L4	410
53	3681	1.3	27.7	24800			F703_27.7 P180 BN180L4	404
58	3353	1.9	25.2	31300			F803_25.2 P180 BN180L4	407
60	3264	1.2	24.6	24500			F703_24.6 P180 BN180L4	404
65	3005	1.4	22.6	24300			F703_22.6 P180 BN180L4	404
67	2928	2.3	22	30200			F803_22.0 P180 BN180L4	407
70	2773	1.4	20.9	24000			F703_20.9 P180 BN180L4	404
72	2703	2.3	20.3	29900			F803_20.3 P180 BN180L4	407
83	2354	1.8	17.7	23400			F703_17.7 P180 BN180L4	404
84	2339	2.9	17.6	29100			F803_17.6 P180 BN180L4	407
90	2173	1.8	16.3	23100			F703_16.3 P180 BN180L4	404
90	2159	2.9	16.2	28500			F803_16.2 P180 BN180L4	407
106	1846	2.1	13.9	22400			F703_13.9 P180 BN180L4	404
115	1704	2.1	12.8	22100			F703_12.8 P180 BN180L4	404
115	1692	1.1	12.7	17700			F603_12.7 P180 BN180L4	400
125	1562	1.2	11.8	17400			F603_11.8 P180 BN180L4	400
135	1442	2.4	10.9	21400			F703_10.9 P180 BN180L4	404
147	1331	2.4	10.0	21000			F703_10.0 P180 BN180L4	404
151	1290	1.5	9.7	16900			F603_9.7 P180 BN180L4	400
164	1191	1.6	9.0	16500			F603_9.0 P180 BN180L4	400

30 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N			 IEC	
16.6	16022	0.9	88.4	52200			F903_88.4 P200 BN200L4	410
19.2	13893	1.0	76.7	52400			F903_76.7 P200 BN200L4	410
20.8	12825	1.1	70.8	52100			F903_70.8 P200 BN200L4	410
23.7	11256	1.2	62.1	51800			F903_62.1 P200 BN200L4	410

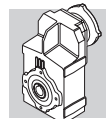


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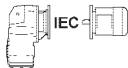
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
25.6	10390	1.3	57.3	51400			F903_57.3 P200 BN200L4	410
29.5	9044	1.5	49.9	50800			F903_49.9 P200 BN200L4	410
32	8348	1.7	46.1	50200			F903_46.1 P200 BN200L4	410
32	8216	1.0	45.3	30900			F803_45.3 P200 BN200L4	407
36	7341	1.9	40.5	49400			F903_40.5 P200 BN200L4	410
38	7069	1.1	39.0	31000			F803_39.0 P200 BN200L4	407
39	6776	2.0	37.4	48700			F903_37.4 P200 BN200L4	410
41	6525	1.2	36.0	30600			F803_36.0 P200 BN200L4	407
47	5664	1.4	31.3	29900			F803_31.3 P200 BN200L4	407
47	5618	2.3	31.0	47300			F903_31.0 P200 BN200L4	410
49	5438	0.9	30.0	22300			F703_30.0 P200 BN200L4	404
51	5229	1.5	28.8	29500			F803_28.8 P200 BN200L4	407
51	5186	2.3	28.6	46600			F903_28.6 P200 BN200L4	410
53	5019	0.9	27.7	22200			F703_27.7 P200 BN200L4	404
58	4601	2.6	25.4	45500			F903_25.4 P200 BN200L4	410
58	4572	1.2	25.2	29500			F803_25.2 P200 BN200L4	407
66	4039	3.0	22.3	44400			F903_22.3 P200 BN200L4	410
67	3992	1.7	22.0	29000			F803_22.0 P200 BN200L4	407
71	3728	3.0	20.6	43600			F903_20.6 P200 BN200L4	410
72	3685	1.7	20.3	28500			F803_20.3 P200 BN200L4	407
83	3209	1.4	17.7	21800			F703_17.7 P200 BN200L4	404
84	3190	2.1	17.6	27900			F803_17.6 P200 BN200L4	407
90	2963	1.4	16.3	21500			F703_16.3 P200 BN200L4	404
90	2945	2.1	16.2	27400			F803_16.2 P200 BN200L4	407
105	2534	2.7	14.0	26700			F803_14.0 P200 BN200L4	407
106	2517	1.5	13.9	21100			F703_13.9 P200 BN200L4	404
114	2339	2.7	12.9	26200			F803_12.9 P200 BN200L4	407
115	2323	1.5	12.8	20900			F703_12.8 P200 BN200L4	404
135	1967	1.8	10.9	20300			F703_10.9 P200 BN200L4	404
142	1874	3.0	10.3	24900			F803_10.3 P200 BN200L4	407
147	1815	1.8	10.0	20000			F703_10.0 P200 BN200L4	404

37 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
20.9	15710	0.9	70.8	47600			F903_70.8 P225 BN225S4	410
25.8	12728	1.1	57.3	47700			F903_57.3 P225 BN225S4	410
29.7	11079	1.3	49.9	47600			F903_49.9 P225 BN225S4	410
32	10227	1.4	46.1	47200			F903_46.1 P225 BN225S4	410
37	8993	1.6	40.5	46800			F903_40.5 P225 BN225S4	410
38	8659	0.9	39.0	28500			F803_39.0 P225 BN225S4	407
40	8301	1.6	37.4	46300			F903_37.4 P225 BN225S4	410
41	7993	1.0	36.0	28300			F803_36.0 P225 BN225S4	407
47	6939	1.2	31.3	28400			F803_31.3 P225 BN225S4	407
48	6882	1.9	31.0	45300			F903_31.0 P225 BN225S4	410
51	6405	1.2	28.8	28100			F803_28.8 P225 BN225S4	407
52	6353	1.9	28.6	44700			F903_28.6 P225 BN225S4	410
58	5637	2.1	25.4	43900			F903_25.4 P225 BN225S4	410

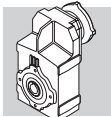


37 kW

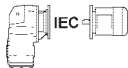
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
59	5601	1.1	25.2	27800			F803_25.2 P225 BN225S4	407
66	4947	2.4	22.3	43000			F903_22.3 P225 BN225S4	410
67	4891	1.1	22.0	27600			F803_22.0 P225 BN225S4	407
72	4567	2.5	20.6	42300			F903_20.6 P225 BN225S4	410
73	4515	1.1	20.3	27200			F803_20.3 P225 BN225S4	407
83	3975	2.8	17.9	41200			F903_17.9 P225 BN225S4	410
84	3908	1.7	17.6	26800			F803_17.6 P225 BN225S4	407
90	3669	2.8	16.5	40500			F903_16.5 P225 BN225S4	410
91	3607	1.7	16.2	26300			F803_16.2 P225 BN225S4	407
102	3226	3.1	14.5	39500			F903_14.5 P225 BN225S4	410
106	3104	2.2	14.0	25800			F803_14.0 P225 BN225S4	407
110	2978	3.1	13.4	38700			F903_13.4 P225 BN225S4	410
115	2865	2.2	12.9	25300			F803_12.9 P225 BN225S4	407
132	2487	2.4	11.2	24500			F803_11.2 P225 BN225S4	407
143	2296	2.4	10.3	24300			F803_10.3 P225 BN225S4	407

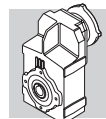
45 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
32	12438	1.1	46.1	43900			F903_46.1 P225 BN225M4	410
37	10937	1.3	40.5	43900			F903_40.5 P225 BN225M4	410
40	10096	1.3	37.4	43600			F903_37.4 P225 BN225M4	410
47	8439	0.9	31.3	26100			F803_31.3 P225 BN225M4	407
48	8370	1.6	31.0	43100			F903_31.0 P225 BN225M4	410
51	7790	1.0	28.8	26000			F803_28.8 P225 BN225M4	407
52	7726	1.6	28.6	42600			F903_28.6 P225 BN225M4	410
58	6855	1.8	25.4	42000			F903_25.4 P225 BN225M4	410
66	6017	2.0	22.3	41400			F903_22.3 P225 BN225M4	410
67	5948	1.1	22.0	26000			F803_22.0 P225 BN225M4	407
72	5554	2.0	20.6	40800			F903_20.6 P225 BN225M4	410
73	5491	1.1	20.3	25700			F803_20.3 P225 BN225M4	407
83	4834	2.3	17.9	39900			F903_17.9 P225 BN225M4	410
84	4753	1.4	17.6	25500			F803_17.6 P225 BN225M4	407
90	4463	2.3	16.5	39300			F903_16.5 P225 BN225M4	410
91	4387	1.4	16.2	25200			F803_16.2 P225 BN225M4	407
102	3924	2.5	14.5	38400			F903_14.5 P225 BN225M4	410
106	3775	1.8	14.0	24800			F803_14.0 P225 BN225M4	407
110	3622	2.6	13.4	37800			F903_13.4 P225 BN225M4	410
115	3484	1.8	12.9	24100			F803_12.9 P225 BN225M4	407
132	3025	1.5	11.2	24000			F803_11.2 P225 BN225M4	407
133	3003	2.9	11.1	36400			F903_11.1 P225 BN225M4	410
143	2792	2.0	10.3	23500			F803_10.3 P225 BN225M4	407



55 kW

n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
32	15202	0.9	46.1	39700			F903_46.1 P250 BN250M4	410
37	13367	1.0	40.5	40300			F903_40.5 P250 BN250M4	410
40	12339	1.1	37.4	40200			F903_37.4 P250 BN250M4	410
48	10230	1.3	31.0	40300			F903_31.0 P250 BN250M4	410
52	9443	1.3	28.6	40100			F903_28.6 P250 BN250M4	410
58	8379	1.4	25.4	39700			F903_25.4 P250 BN250M4	410
66	7354	1.6	22.3	39400			F903_22.3 P250 BN250M4	410
72	6788	1.7	20.6	38900			F903_20.6 P250 BN250M4	410
83	5909	1.9	17.9	38300			F903_17.9 P250 BN250M4	410
90	5454	1.9	16.5	37800			F903_16.5 P250 BN250M4	410
102	4796	2.1	14.5	37100			F903_14.5 P250 BN250M4	410
110	4427	2.1	13.4	36600			F903_13.4 P250 BN250M4	410
133	3671	2.4	11.1	35400			F903_11.1 P250 BN250M4	410
144	3388	2.4	10.3	34800			F903_10.3 P250 BN250M4	410

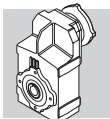


57 GEARBOX RATING CHARTS

F 10

140 Nm

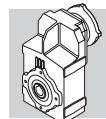
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 10 2_7.4	7.4	378	63	2.6	1000	1290	189	76	1.6	1290	1640	376
F 10 2_8.6	8.6	326	67	2.4	980	1350	163	82	1.5	1260	1710	
F 10 2_9.8	9.8	287	73	2.3	980	1410	143	89	1.4	1250	1780	
F 10 2_11.5	11.5	243	78	2.1	950	1480	121	96	1.3	1220	1870	
F 10 2_13.0	13.0	215	85	2.0	940	1530	107	104	1.2	1210	1940	
F 10 2_14.6	14.6	191	94	2.0	1120	1590	96	119	1.3	1300	2000	
F 10 2_17.0	17.0	165	104	1.9	1090	1650	82	128	1.2	1300	2090	
F 10 2_19.3	19.3	145	108	1.7	1100	1730	72	136	1.1	1300	2180	
F 10 2_22.8	22.8	123	119	1.6	1080	1810	61	140	0.95	1300	2310	
F 10 2_25.8	25.8	109	123	1.5	1090	1890	54	140	0.84	1300	2430	
F 10 2_29.6	29.6	94	132	1.4	1060	1970	47	140	0.73	1300	2560	
F 10 2_33.0	33.0	85	137	1.3	1070	2040	42	140	0.65	1300	2670	
F 10 2_35.3	35.3	79	140	1.2	1060	2090	40	140	0.61	1300	2740	
F 10 2_39.6	39.6	71	140	1.1	1080	2190	35	140	0.54	1300	2800	
F 10 2_44.7	44.7	63	140	0.97	1080	2290	31	140	0.48	1300	2800	
F 10 2_48.7	48.7	57	140	0.89	1090	2370	28.7	140	0.44	1300	2800	
F 10 2_56.7	56.7	49	140	0.76	1100	2520	24.7	140	0.38	1300	2800	
F 10 2_63.0	63.0	44	140	0.69	1110	2620	22.2	140	0.34	1300	2800	
F 10 2_71.1	71.1	39	140	0.61	1000	2750	19.7	140	0.30	1300	2800	
F 10 2_81.3	81.3	34	140	0.53	1110	2800	17.2	140	0.27	1300	2800	
F 10 2_91.5	91.5	31	140	0.47	1110	2800	15.3	140	0.24	1300	2800	
F 10 2_106.0	106.0	26.4	140	0.41	1120	2800	13.2	140	0.20	1300	2800	
F 10 2_127.1	127.1	22.0	140	0.34	1130	2800	11.0	140	0.17	1300	2800	



F 10

140 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 10 2_7.4	7.4	122	91	1.2	1300	1890	68	111	0.83	1300	2300	376
F 10 2_8.6	8.6	105	94	1.1	1300	1970	58	112	0.72	1300	2430	
F 10 2_9.8	9.8	92	107	1.1	1300	2050	51	130	0.73	1300	2490	
F 10 2_11.5	11.5	78	110	0.95	1300	2180	43	131	0.63	1300	2660	
F 10 2_13.0	13.0	69	124	0.94	1300	2240	38	140	0.59	1300	2800	
F 10 2_14.6	14.6	61	138	0.93	1300	2320	34	140	0.53	1300	2800	
F 10 2_17.0	17.0	53	140	0.82	1300	2450	29.5	140	0.46	1300	2800	
F 10 2_19.3	19.3	47	140	0.72	1300	2580	25.9	140	0.40	1300	2800	
F 10 2_22.8	22.8	39	140	0.61	1300	2750	21.9	140	0.34	1300	2800	
F 10 2_25.8	25.8	35	140	0.54	1300	2800	19.4	140	0.30	1300	2800	
F 10 2_29.6	29.6	30	140	0.47	1300	2800	16.9	140	0.26	1300	2800	
F 10 2_33.0	33.0	27.3	140	0.42	1300	2800	15.2	140	0.23	1300	2800	
F 10 2_35.3	35.3	25.5	140	0.39	1300	2800	14.1	140	0.22	1300	2800	
F 10 2_39.6	39.6	22.7	140	0.35	1300	2800	12.6	140	0.19	1300	2800	
F 10 2_44.7	44.7	20.1	140	0.31	1300	2800	11.2	140	0.17	1300	2800	
F 10 2_48.7	48.7	18.5	140	0.29	1300	2800	10.3	140	0.16	1300	2800	
F 10 2_56.7	56.7	15.9	140	0.24	1300	2800	8.8	140	0.14	1300	2800	
F 10 2_63.0	63.0	14.3	140	0.22	1300	2800	7.9	140	0.12	1300	2800	
F 10 2_71.1	71.1	12.7	140	0.20	1300	2800	7.0	140	0.11	1300	2800	
F 10 2_81.3	81.3	11.1	140	0.17	1300	2800	6.1	140	0.09	1300	2800	
F 10 2_91.5	91.5	9.8	140	0.15	1300	2800	5.5	140	0.08	1300	2800	
F 10 2_106.0	106.0	8.5	140	0.13	1300	2800	4.7	140	0.07	1300	2800	
F 10 2_127.1	127.1	7.1	140	0.11	1300	2800	3.9	140	0.06	1300	2800	

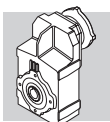


F 20

250 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 20 2_6.4	6.4	437	103	5.0	—	1370	218	130	3.1	—	1720	380
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)

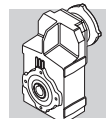


F 20

250 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 20 2_6.4	6.4	140	150	2.3	—	1990	218	183	4.4	—	2420	380
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)

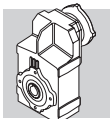


F 25

400 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 25 2_6.9	6.9	408	155	7.0	—	1840	204	195	4.4	—	2320	384
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)

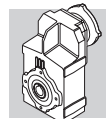


F 25

400 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 25 2_6.9	6.9	131	225	3.2	—	2690	73	255	2.0	370	3350	384
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	

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

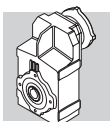


F 31

600 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 31 2_6.9	6.9	403	295	13.1	—	2710	201	360	8.0	—	3460	388
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	

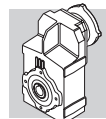
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



F 31

600 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 31 2_6.9	6.9	130	390	5.6	640	4120	72	390	3.1	2200	5350	388
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	

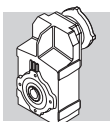


F 41

1100 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 41 2_6.7	6.7	416	460	21	—	3410	208	580	13.3	—	4290	392
F 41 2_9.1	9.1	306	515	17.4	—	3750	153	650	11.0	—	4730	
F 41 2_10.8	10.8	260	715	21	—	3310	130	900	12.9	—	4170	
F 41 2_14.6	14.6	191	805	17.0	—	3620	96	1015	10.7	—	4560	
F 41 2_17.1	17.1	164	835	15.1	—	3860	82	1055	9.5	—	4850	
F 41 2_18.9	18.9	148	860	14.0	410	4000	74	1085	8.9	500	5030	
F 41 2_24.1	24.1	116	875	11.2	650	4540	58	1100	7.0	840	5730	
F 41 2_30.1	30.1	93	875	9.0	980	5130	46	1100	5.6	1260	6470	
F 41 2_38.2	38.2	73	875	7.1	1260	5810	37	1100	4.4	1600	7330	
F 41 2_47.9	47.9	58	850	5.5	1680	6600	29.2	1070	3.4	2120	8320	
F 41 3_51.5	51.5	54	880	5.4	3030	6750	27.2	1085	3.3	3500	8500	
F 41 3_60.2	60.2	46	930	4.9	3030	7100	23.2	1100	2.9	3500	8500	
F 41 3_66.5	66.5	42	980	4.6	3030	7280	21.1	1100	2.6	3500	8500	
F 41 3_84.9	84.9	33	1065	4.0	3030	7890	16.5	1100	2.0	3500	8500	
F 41 3_106.0	106.0	26.4	1100	3.3	3040	8500	13.2	1100	1.6	3500	8500	
F 41 3_134.4	134.4	20.8	1100	2.6	3050	8500	10.4	1100	1.3	3500	8500	
F 41 3_168.7	168.7	16.6	1100	2.1	3070	8500	8.3	1100	1.0	3500	8500	
F 41 3_180.7	180.7	15.5	1100	1.9	3070	8500	7.7	1100	0.96	3500	8500	
F 41 3_198.9	198.9	14.1	1100	1.7	3080	8500	7.0	1100	0.87	3500	8500	
F 41 3_220.1	220.1	12.7	1100	1.6	3090	8500	6.4	1100	0.79	3500	8500	
F 41 3_240.1	240.1	11.7	1100	1.4	3090	8500	5.8	1100	0.72	3500	8500	
F 41 3_266.9	266.9	10.5	1100	1.3	3090	8500	5.2	1100	0.65	3500	8500	
F 41 3_296.6	296.6	9.4	1100	1.2	3090	8500	4.7	1100	0.58	3500	8500	
F 41 3_344.8	344.8	8.1	1100	1.0	3100	8500	4.1	1100	0.50	3500	8500	
F 41 4_433.7	433.7	6.5	1100	0.83	1480	8500	3.2	1100	0.41	1910	8500	
F 41 4_549.8	549.8	5.1	1100	0.65	1520	8500	2.5	1100	0.33	1940	8500	
F 41 4_690.1	690.1	4.1	1100	0.52	1540	8500	2.0	1100	0.26	1970	8500	
F 41 4_739.4	739.4	3.8	1100	0.48	1550	8500	1.9	1100	0.24	1980	8500	
F 41 4_813.8	813.8	3.4	1100	0.44	1560	8500	1.7	1100	0.22	1990	8500	
F 41 4_900.5	900.5	3.1	1100	0.40	1570	8500	1.6	1100	0.20	2000	8500	
F 41 4_982.4	982.4	2.9	1100	0.36	1570	8500	1.4	1100	0.18	2000	8500	
F 41 4_1092	1092	2.6	1100	0.33	1580	8500	1.3	1100	0.16	2010	8500	
F 41 4_1213	1213	2.3	1100	0.30	1590	8500	1.2	1100	0.15	2020	8500	
F 41 4_1411	1411	2.0	1100	0.25	1600	8500	1.0	1100	0.13	2020	8500	

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

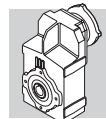


F 41

1100 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	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	392
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	

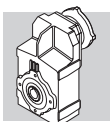
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



F 51

1800 Nm

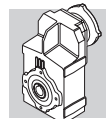
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 51 2_7.2	7.2	389	775	33	990	4170	195	975	21	1440	5260	396
F 51 2_9.1	9.1	309	875	30	890	4400	155	1100	18.8	1320	5550	
F 51 2_11.1	11.1	252	1055	29	1460	4530	126	1330	18.5	2010	5700	
F 51 2_14.0	14.0	200	1125	25	1580	4920	100	1420	15.7	2150	6200	
F 51 2_18.8	18.8	149	1225	20	1660	5480	74	1545	12.7	2240	6900	
F 51 2_23.8	23.8	118	1310	17.0	1710	5960	59	1650	10.7	2290	7520	
F 51 2_30.0	30.0	93	1350	13.9	1760	6610	47	1700	8.7	2330	8340	
F 51 2_37.1	37.1	75	1350	11.2	1910	7350	38	1700	7.1	2410	9260	
F 51 3_48.9	48.9	57	1505	9.7	2600	7800	28.6	1800	5.8	3310	10100	
F 51 3_65.8	65.8	43	1650	7.9	2610	8640	21.3	1800	4.3	3380	11600	
F 51 3_83.2	83.2	34	1770	6.7	2630	9380	16.8	1800	3.4	3440	12000	
F 51 3_105.1	105.1	26.6	1800	5.4	2650	10400	13.3	1800	2.7	3460	12000	
F 51 3_129.9	129.9	21.6	1800	4.4	2670	11600	10.8	1800	2.2	3490	12000	
F 51 3_165.6	165.6	16.9	1800	3.4	2700	12000	8.5	1800	1.7	3500	12000	
F 51 3_202.4	202.4	13.8	1800	2.8	2710	12000	6.9	1800	1.4	3500	12000	
F 51 3_216.9	216.9	12.9	1800	2.6	2710	12000	6.5	1800	1.3	3500	12000	
F 51 3_239.8	239.8	11.7	1800	2.4	2730	12000	5.8	1800	1.2	3500	12000	
F 51 3_262.1	262.1	10.7	1800	2.2	2730	12000	5.3	1800	1.1	3500	12000	
F 51 3_285.9	285.9	9.8	1800	2.0	2730	12000	4.9	1800	0.99	3500	12000	
F 51 3_317.3	317.3	8.8	1800	1.8	2740	12000	4.4	1800	0.89	3500	12000	
F 51 3_352.5	352.5	7.9	1800	1.6	2740	12000	4.0	1800	0.80	3500	12000	
F 51 4_429.1	429.1	6.5	1800	1.4	1930	12000	3.3	1800	0.68	2200	12000	
F 51 4_530.5	530.5	5.3	1800	1.1	1970	12000	2.6	1800	0.55	2200	12000	
F 51 4_676.3	676.3	4.1	1800	0.87	2020	12000	2.1	1800	0.43	2200	12000	
F 51 4_826.4	826.4	3.4	1800	0.71	2040	12000	1.7	1800	0.35	2200	12000	
F 51 4_885.5	885.5	3.2	1800	0.66	2050	12000	1.6	1800	0.33	2200	12000	
F 51 4_979.4	979.4	2.9	1800	0.60	2060	12000	1.4	1800	0.30	2200	12000	
F 51 4_1070	1070	2.6	1800	0.55	2070	12000	1.3	1800	0.27	2200	12000	
F 51 4_1168	1168	2.4	1800	0.50	2080	12000	1.2	1800	0.25	2200	12000	
F 51 4_1296	1296	2.2	1800	0.45	2090	12000	1.1	1800	0.23	2200	12000	
F 51 4_1439	1439	1.9	1800	0.41	2100	12000	1.0	1800	0.20	2200	12000	



F 51

1800 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 51 2_7.2	7.2	125	1100	15.2	1940	6170	70	1100	8.4	3190	8140	396
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	

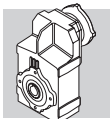


F 60

2900 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 60 3_9.0	9.0	311	920	32	—	13300	156	1160	20	—	16500	400
F 60 3_9.7	9.7	289	1000	33	—	13600	144	1250	20	—	16700	
F 60 3_11.8	11.8	237	1030	28	—	14600	119	1300	17.4	—	17800	
F 60 3_12.7	12.7	220	1110	28	—	14700	110	1400	17.4	—	18000	
F 60 3_14.5	14.5	193	1110	24	—	15500	97	1400	15.3	—	19000	
F 60 3_15.7	15.7	178	1200	24	—	15600	89	1500	15.1	—	19200	
F 60 3_19.1	19.1	147	1200	19.9	—	16800	73	1500	12.4	—	20000	
F 60 3_20.7	20.7	135	1300	19.9	—	17000	68	1640	12.5	—	20000	
F 60 3_23.5	23.5	119	1260	17.0	—	17900	60	1590	10.7	—	20000	
F 60 3_25.4	25.4	110	1370	17.1	—	18100	55	1720	10.7	—	20000	
F 60 3_29.6	29.6	95	2750	29	820	15900	47	2900	15.5	2630	20000	
F 60 3_32.1	32.1	87	2800	28	1290	16200	44	2900	14.3	3260	20000	
F 60 3_38.8	38.8	72	2900	24	1260	17500	36	2900	11.8	3480	20000	
F 60 3_42.1	42.1	67	2900	22	1820	17900	33	2900	10.9	3720	20000	
F 60 3_47.8	47.8	59	2900	19.2	1770	19100	29.3	2900	9.6	3730	20000	
F 60 3_51.8	51.8	54	2900	17.7	2290	19500	27.0	2900	8.9	3830	20000	
F 60 3_63.0	63.0	44	2900	14.6	2310	20000	22.2	2900	7.3	3850	20000	
F 60 3_68.3	68.3	41	2900	13.4	2790	20000	20.5	2900	6.7	3940	20000	
F 60 3_77.6	77.6	36	2900	11.8	2620	20000	18.0	2900	5.9	3920	20000	
F 60 3_84.0	84.0	33	2900	10.9	2960	20000	16.7	2900	5.5	4010	20000	
F 60 3_98.2	98.2	28.5	2900	9.3	2910	20000	14.3	2900	4.7	3980	20000	
F 60 3_106.4	106.4	26.3	2900	8.6	3020	20000	13.2	2900	4.3	4070	20000	
F 60 3_120.5	120.5	23.2	2900	7.6	2970	20000	11.6	2900	3.8	4030	20000	
F 60 3_130.5	130.5	21.5	2900	7.0	3060	20000	10.7	2900	3.5	4110	20000	
F 60 3_150.4	150.4	18.6	2900	6.1	3010	20000	9.3	2900	3.0	4060	20000	
F 60 3_162.9	162.9	17.2	2900	5.6	3090	20000	8.6	2900	2.8	4140	20000	
F 60 3_185.9	185.9	15.1	2900	4.9	3050	20000	7.5	2900	2.5	4100	20000	
F 60 3_201.4	201.4	13.9	2900	4.6	3130	20000	7.0	2900	2.3	4180	20000	
F 60 3_217.6	217.6	12.9	2900	4.2	3070	20000	6.4	2900	2.1	4120	20000	
F 60 3_235.8	235.8	11.9	2900	3.9	3140	20000	5.9	2900	1.9	4190	20000	
F 60 3_259.1	259.1	10.8	2900	3.5	3080	20000	5.4	2900	1.8	4130	20000	
F 60 3_280.7	280.7	10.0	2900	3.3	3150	20000	5.0	2900	1.6	4200	20000	
F 60 4_315.4	315.4	8.9	2900	3.0	3500	20000	4.4	2900	1.5	3500	20000	
F 60 4_341.7	341.7	8.2	2900	2.8	3500	20000	4.1	2900	1.4	3500	20000	
F 60 4_399.3	399.3	7.0	2900	2.4	3500	20000	3.5	2900	1.2	3500	20000	
F 60 4_432.6	432.6	6.5	2900	2.2	3500	20000	3.2	2900	1.1	3500	20000	
F 60 4_489.8	489.8	5.7	2900	1.9	3500	20000	2.9	2900	0.96	3500	20000	
F 60 4_530.7	530.7	5.3	2900	1.8	3500	20000	2.6	2900	0.89	3500	20000	
F 60 4_611.4	611.4	4.6	2900	1.5	3500	20000	2.3	2900	0.77	3500	20000	
F 60 4_662.4	662.4	4.2	2900	1.4	3500	20000	2.1	2900	0.71	3500	20000	
F 60 4_756.0	756.0	3.7	2900	1.2	3500	20000	1.9	2900	0.62	3500	20000	
F 60 4_819.0	819.0	3.4	2900	1.1	3500	20000	1.7	2900	0.57	3500	20000	
F 60 4_885.1	885.1	3.2	2900	1.1	3500	20000	1.6	2900	0.53	3500	20000	
F 60 4_958.9	958.9	2.9	2900	0.98	3500	20000	1.5	2900	0.49	3500	20000	
F 60 4_1054	1054	2.7	2900	0.89	3500	20000	1.3	2900	0.45	3500	20000	
F 60 4_1141	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)

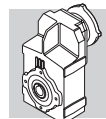


F 60

2900 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 60 3_9.0	9.0	100	1340	15.1	—	18800	56	1630	10.2	—	20000	400
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	

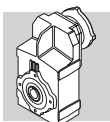
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



F 70

5000 Nm

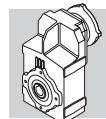
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 70 3_10.0	10.0	280	2600	82	1410	14800	140	3200	51	1750	18200	404
F 70 3_10.9	10.9	257	2800	81	1510	14700	128	3450	50	1840	18100	
F 70 3_12.8	12.8	219	2900	72	860	15700	109	3600	44	880	19300	
F 70 3_13.9	13.9	201	3150	72	810	15600	101	3900	44	880	19100	
F 70 3_16.3	16.3	172	3250	63	570	16600	86	4000	39	710	20500	
F 70 3_17.7	17.7	158	3550	63	430	16400	79	4350	39	630	20200	
F 70 3_20.9	20.9	134	3450	52	690	18000	67	4000	30	2090	22700	
F 70 3_22.6	22.6	124	3750	52	640	17800	62	4350	30	2010	22500	
F 70 3_24.6	24.6	114	3550	46	560	19000	57	4000	26	2510	24200	
F 70 3_27.7	27.7	101	3750	43	5070	19600	51	4650	27	6410	24100	
F 70 3_30.0	30.0	93	4050	43	5080	19400	47	5000	26	6420	23900	
F 70 3_35.4	35.4	79	4150	37	5070	20900	40	5000	22	6440	25900	
F 70 3_38.4	38.4	73	4500	37	5060	20700	36	5000	21	6540	26500	
F 70 3_45.2	45.2	62	4600	32	5080	22200	31	5000	17.5	6590	28700	
F 70 3_49.0	49.0	57	4600	30	5170	22700	28.6	5000	16.1	6680	29300	
F 70 3_57.7	57.7	49	5000	27	5090	23800	24.3	5000	13.7	6680	31600	
F 70 3_62.5	62.5	45	5000	25	5170	24300	22.4	5000	12.7	6760	32300	
F 70 3_67.9	67.9	41	5000	23	5110	25500	20.6	5000	11.6	6710	33600	
F 70 3_73.6	73.6	38	5000	21	5190	26100	19.0	5000	10.7	6790	34400	
F 70 3_85.4	85.4	33	5000	18.5	5190	28000	16.4	5000	9.3	6780	35000	
F 70 3_92.5	92.5	30	5000	17.1	5260	28700	15.1	5000	8.5	6860	35000	
F 70 3_101.2	101.2	27.7	5000	15.6	5220	30000	13.8	5000	7.8	6820	35000	
F 70 3_109.6	109.6	25.5	5000	14.4	5290	30700	12.8	5000	7.2	6890	35000	
F 70 3_122.7	122.7	22.8	5000	12.9	5250	32300	11.4	5000	6.4	6850	35000	
F 70 3_133.0	133.0	21.1	5000	11.9	5320	33100	10.5	5000	5.9	6920	35000	
F 70 3_153.8	153.8	18.2	5000	10.3	5280	35000	9.1	5000	5.1	6880	35000	
F 70 3_166.7	166.7	16.8	5000	9.5	5350	35000	8.4	5000	4.7	6950	35000	
F 70 3_180.9	180.9	15.5	5000	8.7	5310	35000	7.7	5000	4.4	6910	35000	
F 70 3_196.0	196.0	14.3	5000	8.1	5370	35000	7.1	5000	4.0	6970	35000	
F 70 4_216.5	216.5	12.9	5000	7.5	2130	35000	6.5	5000	3.7	2860	35000	
F 70 4_234.6	234.6	11.9	5000	6.9	2130	35000	6.0	5000	3.5	2860	35000	
F 70 4_280.9	280.9	10.0	5000	5.8	2200	35000	5.0	5000	2.9	2940	35000	
F 70 4_304.3	304.3	9.2	5000	5.3	2200	35000	4.6	5000	2.7	2940	35000	
F 70 4_372.5	372.5	7.5	5000	4.4	2260	35000	3.8	5000	2.2	3000	35000	
F 70 4_403.5	403.5	6.9	5000	4.0	2260	35000	3.5	5000	2.0	3000	35000	
F 70 4_471.2	471.2	5.9	5000	3.4	2300	35000	3.0	5000	1.7	3040	35000	
F 70 4_510.4	510.4	5.5	5000	3.2	2300	35000	2.7	5000	1.6	3040	35000	
F 70 4_606.8	606.8	4.6	5000	2.7	2340	35000	2.3	5000	1.3	3070	35000	
F 70 4_657.4	657.4	4.3	5000	2.5	2340	35000	2.1	5000	1.2	3070	35000	
F 70 4_759.0	759.0	3.7	5000	2.1	2360	35000	1.8	5000	1.1	3090	35000	
F 70 4_822.2	822.2	3.4	5000	2.0	2360	35000	1.7	5000	1.0	3090	35000	
F 70 4_899.4	899.4	3.1	5000	1.8	2370	35000	1.6	5000	0.90	3110	35000	
F 70 4_974.4	974.4	2.9	5000	1.7	2370	35000	1.4	5000	0.83	3110	35000	
F 70 4_1091	1091	2.6	5000	1.5	2390	35000	1.3	5000	0.74	3120	35000	
F 70 4_1182	1182	2.4	5000	1.4	2390	35000	1.2	5000	0.69	3120	35000	
F 70 4_1368	1368	2.0	5000	1.2	2400	35000	1.0	5000	0.59	3130	35000	
F 70 4_1481	1481	1.9	5000	1.1	2400	35000	0.95	5000	0.55	3130	35000	
F 70 4_1585	1585	1.8	5000	1.0	2410	35000	0.88	5000	0.51	3140	35000	
F 70 4_1717	1717	1.6	5000	0.95	2410	35000	0.82	5000	0.47	3140	35000	
F 70 4_2019	2019	1.4	5000	0.80	2420	35000	0.69	5000	0.40	3150	35000	
F 70 4_2188	2188	1.3	5000	0.74	2420	35000	0.64	5000	0.37	3150	35000	



F 70

5000 Nm

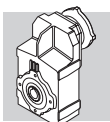
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 70 3_10.0	10.0	90	3200	33	4870	21700	50	3200	18.1	7000	27000	404
F 70 3_10.9	10.9	83	3450	32	4970	21700	46	3450	17.9	7000	27200	
F 70 3_12.8	12.8	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 ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 80 3_10.3	10.3	272	3250	100	610	17200	136	4100	63	220	21800	407
F 80 3_11.2	11.2	250	3520	99	620	17800	125	4440	63	230	21700	
F 80 3_12.9	12.9	217	3560	87	670	18900	109	4480	55	350	23100	
F 80 3_14.0	14.0	200	3850	87	700	18800	100	4860	55	310	23000	
F 80 3_16.2	16.2	173	3760	73	760	20300	86	4740	46	430	24800	
F 80 3_17.6	17.6	159	4000	72	730	20300	80	5140	46	410	24700	
F 80 3_20.3	20.3	138	4060	63	780	21700	69	5120	40	440	26500	
F 80 3_22.0	22.0	127	4400	63	780	21600	64	5540	40	470	26400	
F 80 3_25.2	25.2	111	4230	53	700	23300	56	5330	33	360	28500	
F 80 3_28.8	28.8	97	6550	72	4590	20500	49	8000	44	5890	25400	
F 80 3_31.3	31.3	89	7100	72	4590	20000	45	8000	40	6040	26000	
F 80 3_36.0	36.0	78	7250	64	4560	21500	39	8000	35	6110	28100	
F 80 3_39.0	39.0	72	6700	54	4890	23000	36	8000	32	6240	28800	
F 80 3_45.3	45.3	62	7900	55	4440	22700	31	8000	28	6240	31100	
F 80 3_49.1	49.1	57	8000	52	4750	23200	28.5	8000	26	6360	31900	
F 80 3_56.7	56.7	49	8000	45	4780	25200	24.7	8000	22	6390	34300	
F 80 3_61.5	61.5	46	8000	41	4890	25800	22.8	8000	21	6500	35100	
F 80 3_70.4	70.4	40	8000	36	4850	27800	19.9	8000	18.0	6460	37500	
F 80 3_76.3	76.3	37	8000	33	4950	28500	18.3	8000	16.6	6560	38400	
F 80 3_85.2	85.2	33	8000	30	4940	30300	16.4	8000	14.8	6550	40500	
F 80 3_92.3	92.3	30	8000	27	5040	31000	15.2	8000	13.7	6640	41500	
F 80 3_105.0	105.0	26.7	8000	24	5000	33200	13.3	8000	12.0	6610	44000	
F 80 3_113.8	113.8	24.6	8000	22	5090	34000	12.3	8000	11.1	6700	45000	
F 80 3_122.5	122.5	22.9	8000	21	5020	35400	11.4	8000	10.3	6630	45000	
F 80 3_132.7	132.7	21.1	8000	19.1	5110	36200	10.6	8000	9.5	6720	45000	
F 80 3_147.9	147.9	18.9	8000	17.1	5060	38200	9.5	8000	8.6	6660	45000	
F 80 3_160.2	160.2	17.5	8000	15.8	5140	39100	8.7	8000	7.9	6750	45000	
F 80 3_184.6	184.6	15.2	8000	13.7	5090	41800	7.6	8000	6.9	6700	45000	
F 80 3_200.0	200.0	14.0	8000	12.7	5180	42800	7.0	8000	6.3	6780	45000	
F 80 4_218.5	218.5	12.8	8000	11.9	1020	45000	6.4	8000	5.9	2400	45000	
F 80 4_273.9	273.9	10.2	8000	9.5	1470	45000	5.1	8000	4.7	2680	45000	
F 80 4_296.7	296.7	9.4	8000	8.8	1470	45000	4.7	8000	4.4	2680	45000	
F 80 4_353.7	353.7	7.9	8000	7.3	1850	45000	4.0	8000	3.7	2770	45000	
F 80 4_383.2	383.2	7.3	8000	6.8	1850	45000	3.7	8000	3.4	2770	45000	
F 80 4_451.5	451.5	6.2	8000	5.8	2040	45000	3.1	8000	2.9	2820	45000	
F 80 4_489.1	489.1	5.7	8000	5.3	2040	45000	2.9	8000	2.7	2820	45000	
F 80 4_563.9	563.9	5.0	8000	4.6	2130	45000	2.5	8000	2.3	2860	45000	
F 80 4_610.9	610.9	4.6	8000	4.3	2130	45000	2.3	8000	2.1	2860	45000	
F 80 4_714.9	714.9	3.9	8000	3.6	2160	45000	2.0	8000	1.8	2890	45000	
F 80 4_774.4	774.4	3.6	8000	3.4	2160	45000	1.8	8000	1.7	2890	45000	
F 80 4_897.3	897.3	3.1	8000	2.9	2200	45000	1.6	8000	1.4	2930	45000	
F 80 4_972.0	972.0	2.9	8000	2.7	2200	45000	1.4	8000	1.3	2930	45000	
F 80 4_1058	1058	2.6	8000	2.5	2210	45000	1.3	8000	1.2	2950	45000	
F 80 4_1146	1146	2.4	8000	2.3	2210	45000	1.2	8000	1.1	2950	45000	
F 80 4_1277	1277	2.2	8000	2.0	2230	45000	1.1	8000	1.0	2960	45000	
F 80 4_1384	1384	2.0	8000	1.9	2230	45000	1.0	8000	0.94	2960	45000	
F 80 4_1578	1578	1.8	8000	1.6	2240	45000	0.89	8000	0.82	2970	45000	
F 80 4_1709	1709	1.6	8000	1.5	2240	45000	0.82	8000	0.76	2970	45000	
F 80 4_1834	1834	1.5	8000	1.4	2250	45000	0.76	8000	0.71	2980	45000	
F 80 4_1987	1987	1.4	8000	1.3	2250	45000	0.70	8000	0.65	2980	45000	

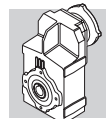


F 80

8000 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 80 3_10.3	10.3	87	4740	47	—	24700	49	5770	32	—	29300	407
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)

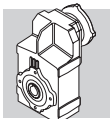


F 90

14000 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 90 3_10.3	10.3	272	6500	200	5480	23800	136	8000	123	8000	29300	410
F 90 3_11.1	11.1	252	7150	204	5280	23300	126	8800	125	7770	28700	
F 90 3_13.4	13.4	209	7550	178	4880	25000	104	9300	110	7280	30700	
F 90 3_14.5	14.5	193	8100	177	5000	24700	97	10000	109	7400	30300	
F 90 3_16.5	16.5	170	8400	161	4540	26000	85	10300	99	6960	32000	
F 90 3_17.9	17.9	156	8950	158	4560	25700	78	11000	97	7180	31700	
F 90 3_20.6	20.6	136	9200	141	3980	27400	68	11300	87	6260	33700	
F 90 3_22.3	22.3	126	9750	138	4280	27100	63	12000	85	6590	33400	
F 90 3_25.4	25.4	110	10050	125	3620	28700	55	12000	75	6310	36000	
F 90 3_28.6	28.6	98	9750	108	9800	30900	49	12000	66	12400	38000	
F 90 3_31.0	31.0	90	10550	108	9800	30300	45	13000	66	12400	37300	
F 90 3_37.4	37.4	75	10950	93	9820	32800	37	13500	57	12400	40400	
F 90 3_40.5	40.5	69	11900	93	9820	32100	35	14000	55	12500	40600	
F 90 3_46.1	46.1	61	12050	83	9840	34300	30	14000	48	12600	43600	
F 90 3_49.9	49.9	56	13050	83	9840	33500	28.1	14000	44	12700	44700	
F 90 3_57.3	57.3	49	13050	72	9810	36300	24.4	14000	39	12700	48100	
F 90 3_62.1	62.1	45	14000	71	9830	35600	22.5	14000	36	12800	49300	
F 90 3_70.8	70.8	40	14000	63	9830	38500	19.8	14000	31	12800	52700	
F 90 3_76.7	76.7	37	14000	58	9960	39500	18.3	14000	29	13000	54000	
F 90 3_88.4	88.4	32	14000	50	9930	42800	15.8	14000	25	12900	55000	
F 90 3_95.8	95.8	29.2	14000	46	10100	43800	14.6	14000	23	13100	55000	
F 90 3_103.3	103.3	27.1	14000	43	9960	45900	13.6	14000	21	13000	55000	
F 90 3_111.9	111.9	25.0	14000	40	10100	47100	12.5	14000	19.8	13100	55000	
F 90 3_126.8	126.8	22.1	14000	35	10000	50300	11.0	14000	17.5	13000	55000	
F 90 3_137.3	137.3	20.4	14000	32	10100	51500	10.2	14000	16.1	13100	55000	
F 90 3_150.3	150.3	18.6	14000	29	10100	54000	9.3	14000	14.7	13100	55000	
F 90 3_162.8	162.8	17.2	14000	27	10200	55000	8.6	14000	13.6	13200	55000	
F 90 3_179.2	179.2	15.6	14000	25	10200	55000	7.8	14000	12.4	13100	55000	
F 90 3_194.2	194.2	14.4	14000	23	10200	55000	7.2	14000	11.4	13200	55000	
F 90 4_213.6	213.6	13.1	14000	21	—	55000	6.6	14000	10.6	—	55000	
F 90 4_231.4	231.4	12.1	14000	19.6	—	55000	6.1	14000	9.8	—	55000	
F 90 4_268.7	268.7	10.4	14000	16.9	—	55000	5.2	14000	8.5	420	55000	
F 90 4_291.1	291.1	9.6	14000	15.6	—	55000	4.8	14000	7.8	420	55000	
F 90 4_361.8	361.8	7.7	14000	12.6	—	55000	3.9	14000	6.3	990	55000	
F 90 4_392.0	392.0	7.1	14000	11.6	—	55000	3.6	14000	5.8	990	55000	
F 90 4_457.5	457.5	6.1	14000	9.9	—	55000	3.1	14000	5.0	1390	55000	
F 90 4_495.6	495.6	5.6	14000	9.2	—	55000	2.8	14000	4.6	1390	55000	
F 90 4_577.5	577.5	4.8	14000	7.9	—	55000	2.4	14000	3.9	1600	55000	
F 90 4_625.6	625.6	4.5	14000	7.3	—	55000	2.2	14000	3.6	1600	55000	
F 90 4_714.0	714.0	3.9	14000	6.4	—	55000	2.0	14000	3.2	1800	55000	
F 90 4_773.4	773.4	3.6	14000	5.9	—	55000	1.8	14000	2.9	1800	55000	
F 90 4_910.2	910.2	3.1	14000	5.0	—	55000	1.5	14000	2.5	2020	55000	
F 90 4_986.0	986.0	2.8	14000	4.6	—	55000	1.4	14000	2.3	2020	55000	
F 90 4_1112	1112	2.5	14000	4.1	—	55000	1.3	14000	2.0	2110	55000	
F 90 4_1205	1205	2.3	14000	3.8	—	55000	1.2	14000	1.9	2110	55000	
F 90 4_1318	1318	2.1	14000	3.4	—	55000	1.1	14000	1.7	2220	55000	
F 90 4_1428	1428	2.0	14000	3.2	—	55000	0.98	14000	1.6	2220	55000	
F 90 4_1571	1571	1.8	14000	2.9	—	55000	0.89	14000	1.4	2260	55000	
F 90 4_1702	1702	1.6	14000	2.7	—	55000	0.82	14000	1.3	2260	55000	
F 90 4_1937	1937	1.4	14000	2.3	—	55000	0.72	14000	1.2	2300	55000	
F 90 4_2099	2099	1.3	14000	2.2	—	55000	0.67	14000	1.1	2300	55000	

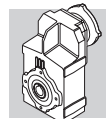
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



F 90

14000 Nm

	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 90 3_10.3	10.3	87	9150	90	10000	33400	49	9600	53	15000	41900	410
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	



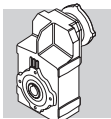
58 MOTOR AVAILABILITY

Please be aware that motor-gearbox combinations resulting from charts (D46) and (D47) are purely based on geometrical compatibility.

When selecting a gearmotor, refer to procedure specified at paragraph 11 and observe particularly the condition $S \geq f_s$.

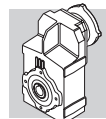
(D 46)

		IEC_  (IM B5)								
		P63 P71	P80 P90	P100 P112	P132	P160	P180	P200	P225	P250
F 10 2	i =	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		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	429.1_826.4					
F 60 3		98.2_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			
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 ● (28.8_49.1)	12.9_200 ● (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					
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			



(D 47)

							
		M05	M1	M2	M3	M4	M5
F 10 2	i =	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		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	429.1_826.4	
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	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 ⊖ (28.8_49.1)	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 ⊖ (28.6_62.1)	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		



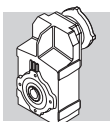
Motor adapters matching the most popular brands of servomotors are available for units size F 10 ... F 60. Dimensions of servomotor inputs are provided within the drawing section for each frame size. The code **SK** applies for inputs featuring a conventional keyway, while through the specification of the **SC** code the input shaft will feature a clamping device instead.

(D 48)

		SERVO INPUT							
		SK60A	SK60B	SK80A	SK80B	SK80C	SK95A	SK95B	SK95C
		SC60A	SC60B	SC80A	SC80B	SC80C	SC95A	SC95B	SC95C
F 10 2	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
F 20 2		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
F 20 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	156.3_545.3
F 25 2		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
F 25 3		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
F 25 4		393.9_1374	393.9_1374	393.9_1374		393.9_1374	393.9_1374	393.9_1374	393.9_1374
F 31 2		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
F 31 3		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
F 31 4		418.9_1539	418.9_1539	418.9_1539		418.9_1539	418.9_1539	418.9_1539	418.9_1539
F 41 2					24.1_47.9	6.7_47.9	24.1_47.9	6.7_47.9	6.7_47.9
F 41 3					84.9_344.8	51.5_344.8	84.9_344.8	51.5_344.8	51.5_344.8
F 41 4		433.7_1411	433.7_1411	433.7_1411		433.7_1411	433.7_1411	433.7_1411	433.7_1411
F 51 2					30.0_37.1	7.2_37.1	30.0_37.1	7.2_37.1	7.2_37.1
F 51 3					105.1_352.5	48.9_352.5	105.1_352.5	48.9_352.5	48.9_352.5
F 51 4						429.1_1439	429.1_1439	429.1_1439	429.1_1439
F 60 3						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)
F 60 4					315.4_1141	315.4_1141	315.4_1141	315.4_1141	315.4_1141

(D 49)

		SERVO INPUT					
		SK110A	SK110B	SK130A	SK130B	SK180A	SK180B
		SC110A	SC110B	SC130A	SC130B	SC180A	SC180B
F 10 2	i =	7.4_91.5	7.4_91.5				
F 20 2		6.4_114.3	6.4_114.3				
F 20 3		156.3_545.3	156.3_545.3				
F 25 2		6.9_44.4	6.9_44.4				
F 25 3		45.6_288.1	45.6_288.1				
F 25 4		393.9_1374	393.9_1374				
F 31 2		6.9_44.6	6.9_44.6	6.9_44.6			
F 31 3		47.5_374.4	47.5_374.4	47.5_374.4			
F 31 4		418.9_1539	418.9_1539				
F 41 2		6.7_47.9	6.7_47.9	6.7_47.9	6.7_47.9	6.7_47.9	6.7_47.9
F 41 3		51.5_344.8	51.5_344.8	51.5_344.8	51.5_168.7	51.5_168.7	51.5_168.7
F 41 4		433.7_1411	433.7_1411				
F 51 2		7.2_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		48.9_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		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
F 60 4		315.4_1141	315.4_1141	315.4_1141			



59 MOMENT OF INERTIA

The following charts indicate moment of inertia values J_r [kgm²] 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.



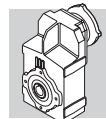
Values under this symbol refer to gearboxes with IEC motor adaptor (IEC size...).



This symbol refers to gearbox values.

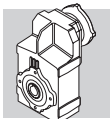
F 10

	i	J (•10 ⁻⁴) [kgm ²]							
			IEC						
			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



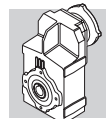
F 20

	i	J ($\cdot 10^{-4}$) [kgm ²]							
			 IEC						
			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



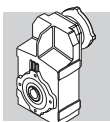
F 25

	i	J (•10 ⁻⁴) [kgm ²]							
			 IEC						
			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



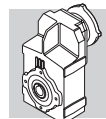
F 31

	i	J (•10 ⁻⁴) [kgm ²]								
			 IEC							
			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



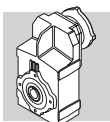
F 41

	i	J (•10-4) [kgm2]								
			 IEC							
			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 51

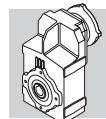
	i	J (•10 ⁻⁴) [kgm ²]										
			 IEC									
			63	71	80	90	100	112	132	160	180	
F 51 2_7.2	7.2	25	—	—	28	28	30	30	42	101	103	34
F 51 2_9.1	9.1	17	—	—	20	19	22	22	33	92	94	26
F 51 2_11.1	11.1	16	—	—	19	19	22	22	33	92	94	25
F 51 2_14.0	14.0	11	—	—	14	14	17	17	28	87	89	20
F 51 2_18.8	18.8	7.0	—	—	9.8	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	18	—	—	2.4
F 51 4_530.5	530.5	0.33	1.1	1.0	3.1	3.0	5.7	5.7	18	—	—	2.4
F 51 4_676.3	676.3	0.30	1.0	1.0	3.1	2.9	5.7	5.7	18	—	—	2.4
F 51 4_826.4	826.4	0.28	1.0	1.0	3.0	2.9	5.7	5.7	18	—	—	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 60

	i	J (•10 ⁻⁴) [kgm ²]										
			 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

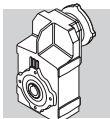
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



F 70

	i	J (•10 ⁻⁴) [kgm ²]									
			 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

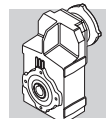
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F 80

	i	J (•10 ⁻⁴) [kgm ²]										
			 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	184
F 80 3_14.0	14.0	—	—	—	—	—	—	212	212	226	504	178
F 80 3_16.2	16.2	—	—	—	—	—	—	173	171	180	464	136
F 80 3_17.6	17.6	—	—	—	—	—	—	170	167	177	461	133
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	55
F 80 3_113.8	113.8	14	16	16	17	17	32	92	90	119	382	55
F 80 3_122.5	122.5	13	15	15	17	17	32	91	89	118	381	54
F 80 3_132.7	132.7	13	15	15	16	16	31	91	89	118	381	54
F 80 3_147.9	147.9	8.5	11	11	13	13	27	87	85	114	377	50
F 80 3_160.2	160.2	8.5	11	11	13	13	27	87	84	—	—	50
F 80 3_184.6	184.6	5.1	7.9	7.8	9.1	9.1	24	83	81	—	—	46
F 80 3_200.0	200.0	5.0	7.9	7.8	9.1	9.1	24	83	81	—	—	46

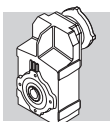
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F 90

	i	J (•10 ⁻⁴) [kgm ²]											
			 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

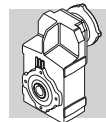
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.



60 EXACT RATIOS

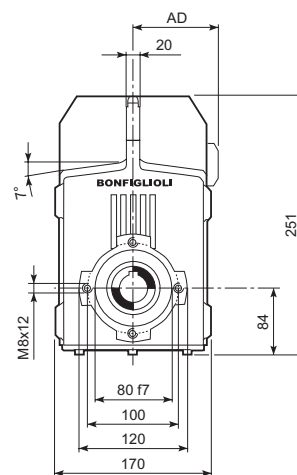
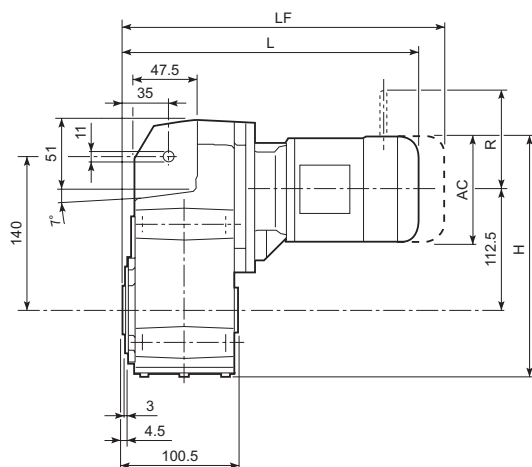
iN	F 10	F 20	F 25	F 31	F 41	F 51	F 60	F 70	F 80	F 90
6.3		6.41210								
7.1	7.40443		6.86957	6.94907	6.72727	7.19408				
8.0		7.83478	8.39375	8.22917						
9.0	8.58204	8.73227	9.35526	9.01630	9.13580	9.05114	8.96000			
10.0	9.76974	10.03069	10.62451	10.74747			9.70667	10.01538	10.33846	10.26577
11.2	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	23.38636		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



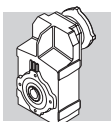


61 DIMENSIONS

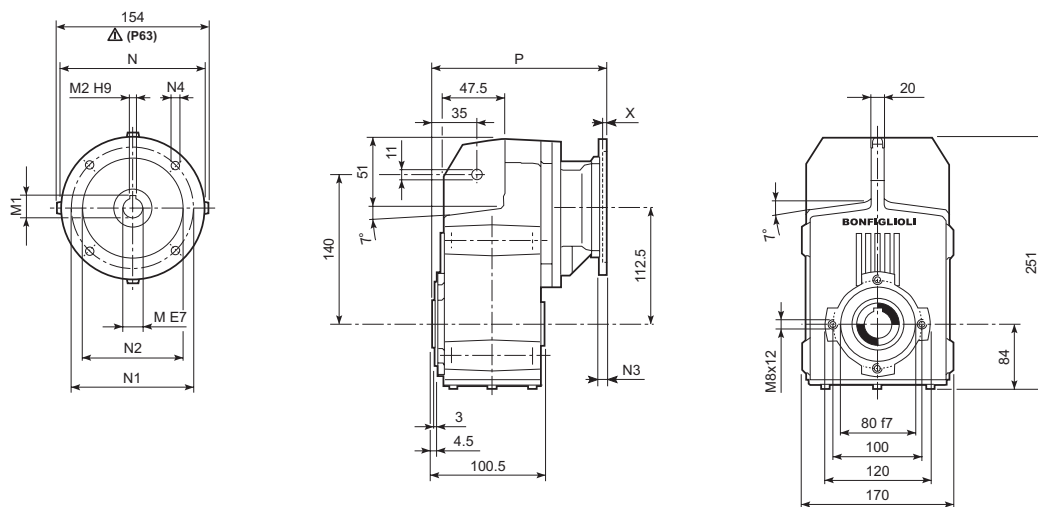
F 10...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		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	M2S	156	274.5	369.5	119	18	439.5	21	129	146	134	119
F 10 2	S3	M3S	195	294	412.5	142	22	508.5	30	160	158	160	142
F 10 2	S3	M3L	195	294	444.5	142	24	535.5	31	160	158	160	142

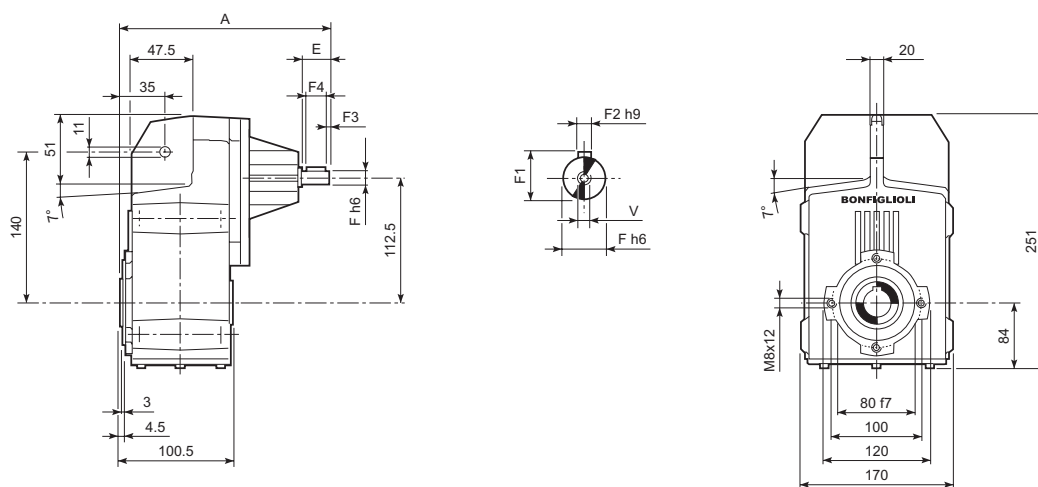


F 10...P(IEC)

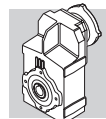


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 10 2	P63	11	12.8	4	140	115	95	—	M8x19	4	185.5	8
F 10 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	185.5	8
F 10 2	P80	19	21.8	6	200	165	130	—	M10x12	4	205	9
F 10 2	P90	24	27.3	8	200	165	130	—	M10x12	4	205	9
F 10 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	215	13
F 10 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	215	13

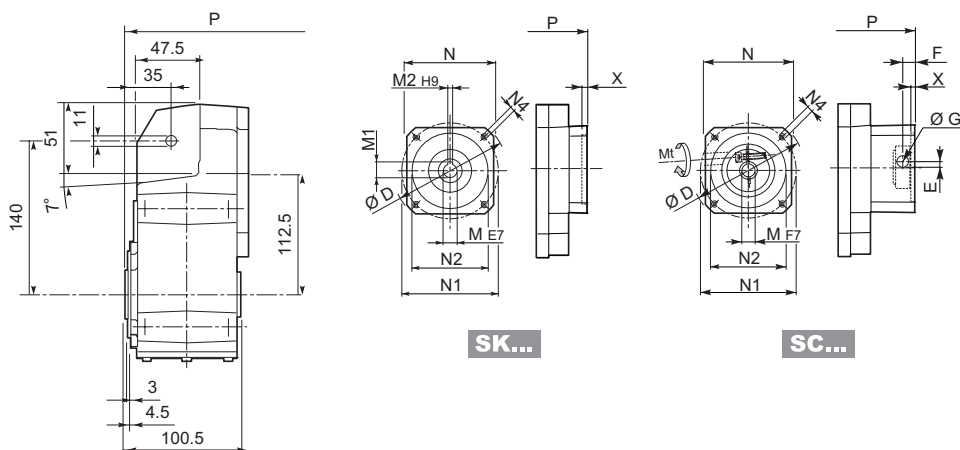
F 10...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 10 2	HS	192	40	16	18	5	2.5	35	M6x16	7.5

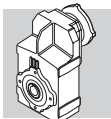


F 10...SK / SC



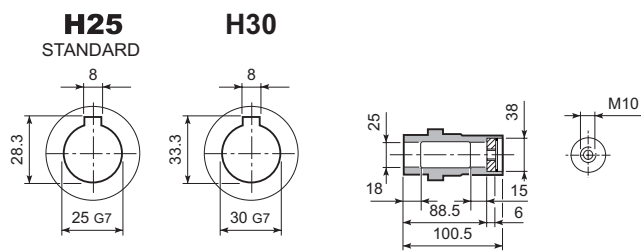
		D	M	M1	M2	N	N1	N2	N4	X	P	Kg
F 10 2	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	157	8
F 10 2	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	164	8
F 10 2	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	164	8
F 10 2	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	205	9
F 10 2	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	205	9
F 10 2	SK 95B	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	D	E	F	G	M	N	N1	N2	N4	X	P	Kg
F 10 2	SC 60A	M6 15 Nm	102	7	12.5	12.5	11	82	75	60	M5x10	4	184	8
F 10 2	SC 60B	M6 15 Nm	102	7	12.5	12.5	14	82	75	60	M5x10	4	184	9
F 10 2	SC 80A	M6 15 Nm	115	6	12.5	12.5	14	90	100	80	M6x12	4	184	9
F 10 2	SC 80C	M6 15 Nm	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	228.5	10
F 10 2	SC 95A	M6 15 Nm	130	16.5	15	17.75	14	102	115	95	M8x16	4	228.5	10
F 10 2	SC 95B	M6 15 Nm	130	16.5	15	17.75	19	102	115	95	M8x16	4	228.5	10
F 10 2	SC 95C	M6 15 Nm	130	16.5	15	17.75	24	102	115	95	M8x16	4	228.5	10
F 10 2	SC 110A	M6 15 Nm	150	16.5	16	17.75	19	120	130	110	M8x16	5	228.5	11
F 10 2	SC 110B	M6 15 Nm	150	16.5	16	17.75	24	120	130	110	M8x16	5	228.5	11

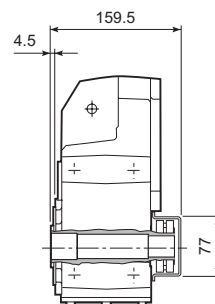
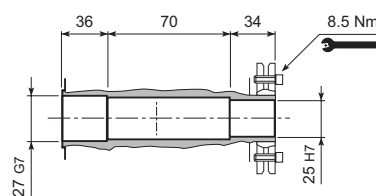


F 10

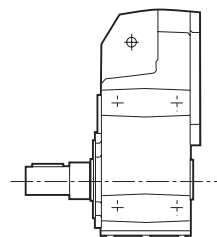
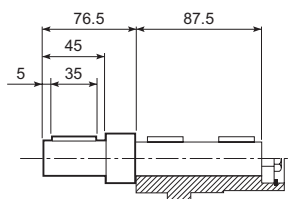
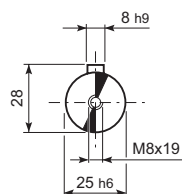
F 10...H



F 10...S

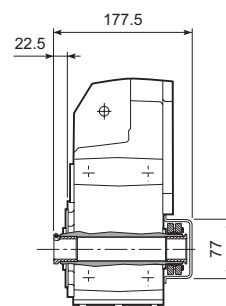
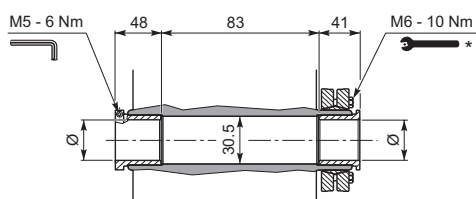


F 10...R

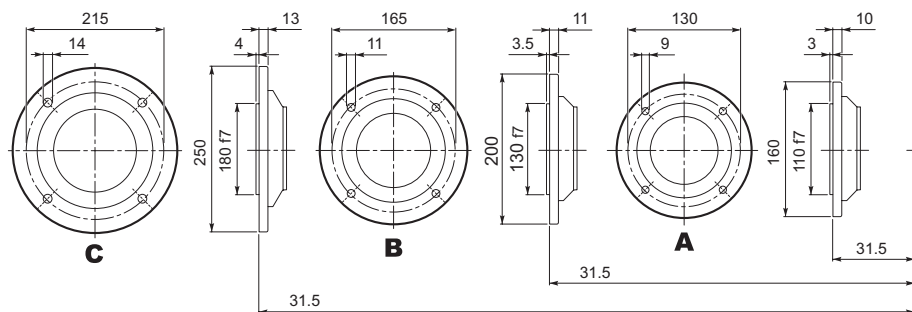


F 10...QF

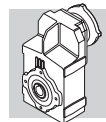
	Ø
QF25	25
QF30	30



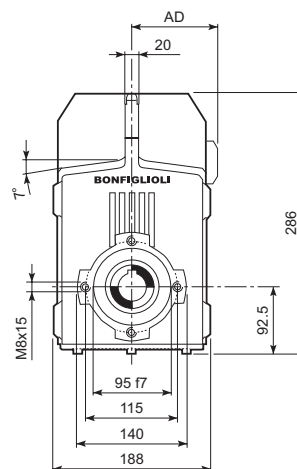
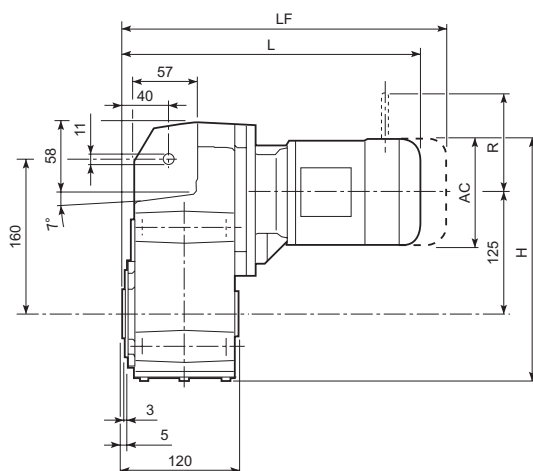
F 10...F...



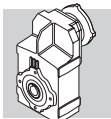
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



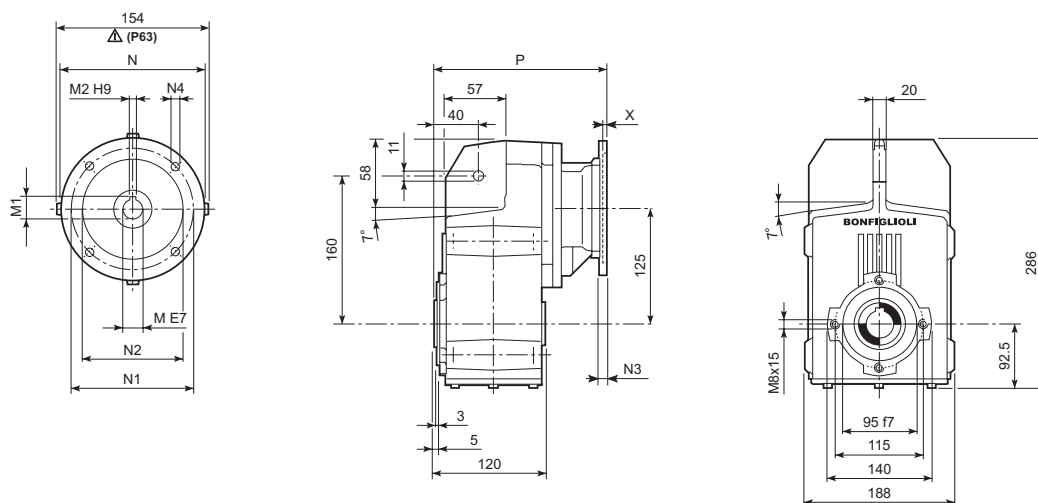
F 20...M



									M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD			LF		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	M2S	156	295.7	381.5	119	21		451.5	25	129	146	134	119
F 20 2	S3	M3S	195	315.2	424.5	142	26		520.5	33	160	158	160	142
F 20 2	S3	M3L	195	315.2	456.5	142	31		547.5	38	160	158	160	142
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	M2S	156	295.7	437	119	22		507	26	129	146	134	119
F 20 3	S3	M3S	195	315.2	480	142	27		576	34	160	158	160	142
F 20 3	S3	M3L	195	315.2	512	142	32		603	39	160	158	160	142

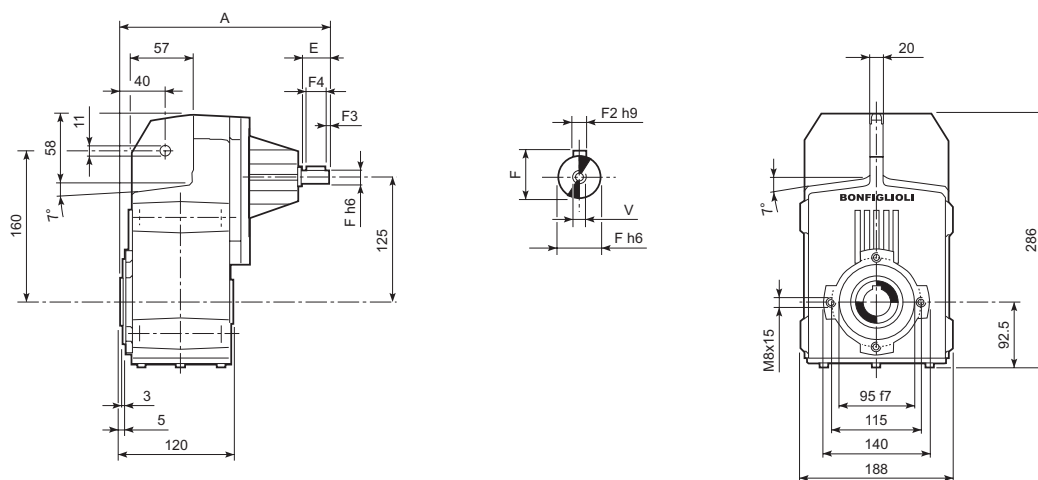


F 20...P(IEC)

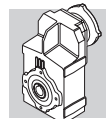


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 20 2	P63	11	12.8	4	140	115	95	—	M8x19	4	197.5	12
F 20 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	197.5	12
F 20 2	P80	19	21.8	6	200	165	130	—	M10x12	4	217	13
F 20 2	P90	24	27.3	8	200	165	130	—	M10x12	4	217	12
F 20 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	227	16
F 20 2	P112	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	—	M10x12	4	272.5	14
F 20 3	P90	24	27.3	8	200	165	130	—	M10x12	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

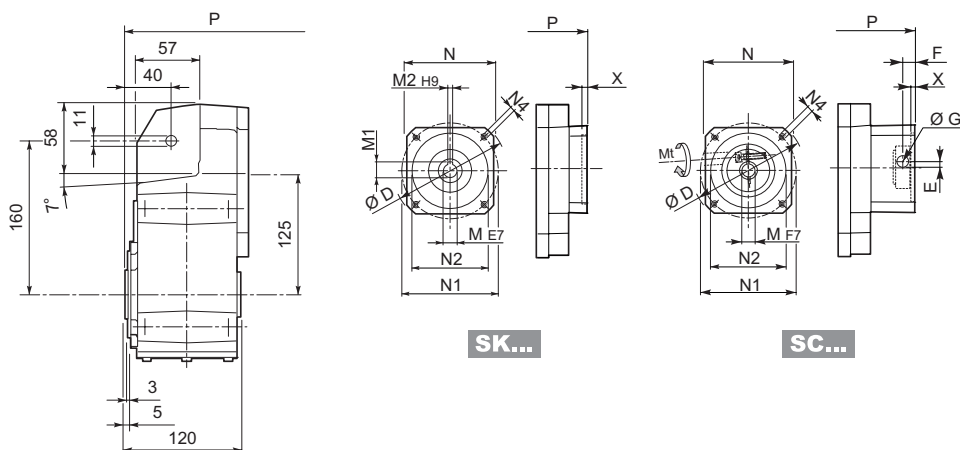
F 20...HS



		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	HS	260	40	16	18	5	2.5	35	M6x16	12.4



F 20...SK / SC

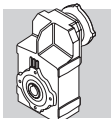


SK...

SC...

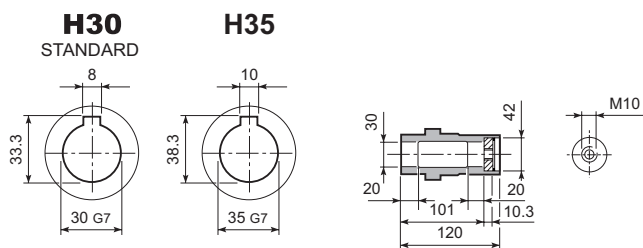
		D	M	M1	M2	N	N1	N2	N4	X	2x	Kg	3x	Kg
F 20 2/3	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	169	11	224.5	12
F 20 2/3	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	176	12	231.5	13
F 20 2/3	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	217	12	231.5	13
F 20 2/3	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	217	13	272.5	14
F 20 2/3	SK 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	D	E	F	G	M	N	N1	N2	N4	X	2x	Kg	3x	Kg
F 20 2/3	SC 60A	M6	15 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	150	16.5	16	17.75	24	120	130	110	M8x16	5	240.5	15	296	16

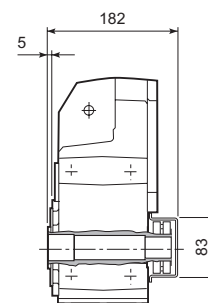
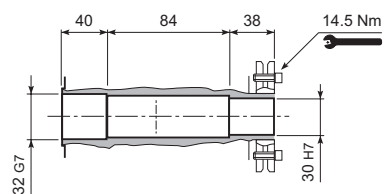


F 20

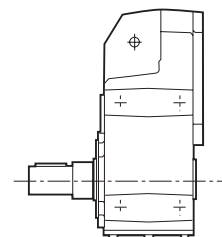
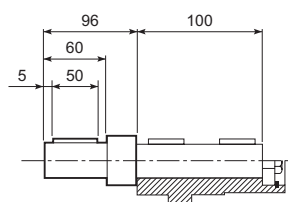
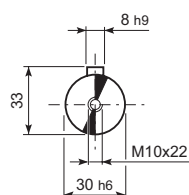
F 20...H



F 20...S

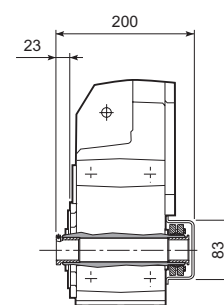
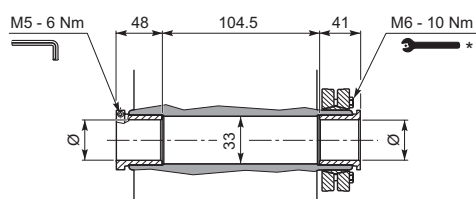


F 20...R

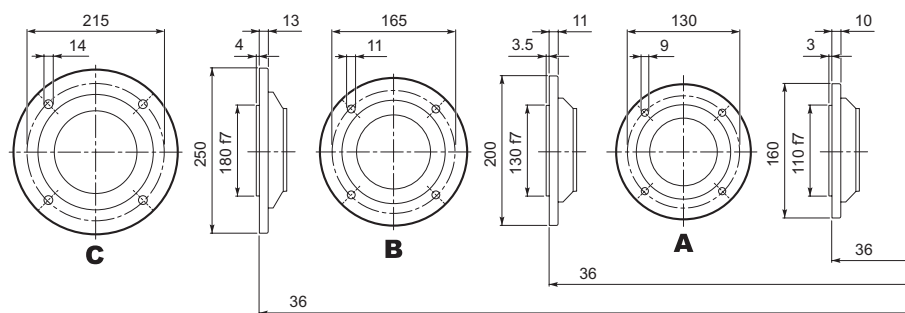


F 20...QF

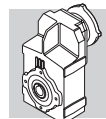
	Ø
QF25	25
QF30	30



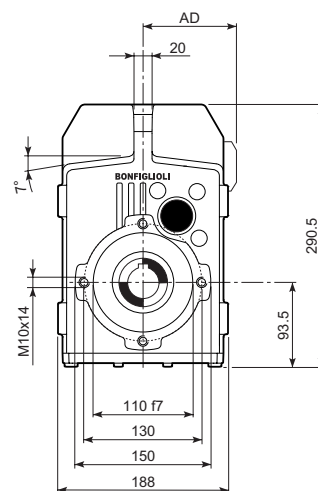
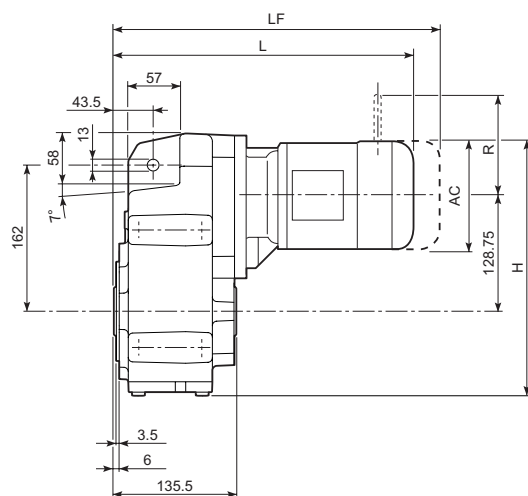
F 20...F...



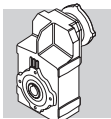
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



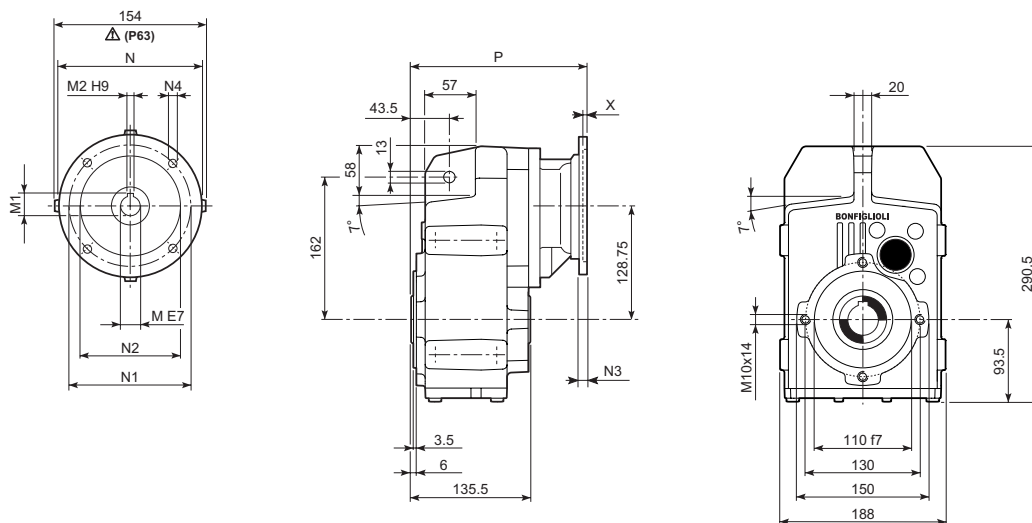
F 25...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		R	AD	R	AD
			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	M2S	156	300.5	397	119	21	467	25	129	146	134	119
F 25 2/3	S3	M3S	195	320	440	142	26	536	33	160	158	160	142
F 25 2/3	S3	M3L	195	320	472	142	31	563	38	160	158	160	142
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	M2S	156	300.5	452.5	119	22	522.5	26	129	146	134	119
F 25 4	S3	M3S	195	320	495.5	142	27	591.5	34	160	158	160	142
F 25 4	S3	M3L	195	320	527.5	142	32	618.5	39	160	158	160	142

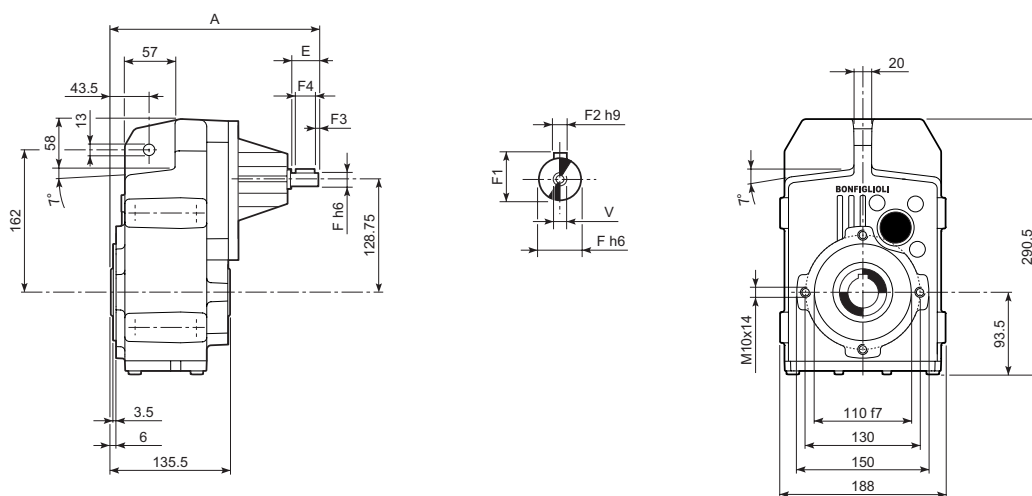


F 25...P(IEC)

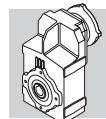


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 25 2/3	P63	11	12.8	4	140	115	95	—	M8x19	4	213	12
F 25 2/3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	213	12
F 25 2/3	P80	19	21.8	6	200	165	130	—	M10x12	4	232.5	13
F 25 2/3	P90	24	27.3	8	200	165	130	—	M10x12	4	232.5	13
F 25 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	242.5	16
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	—	M10x12	4	288	14
F 25 4	P90	24	27.3	8	200	165	130	—	M10x12	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

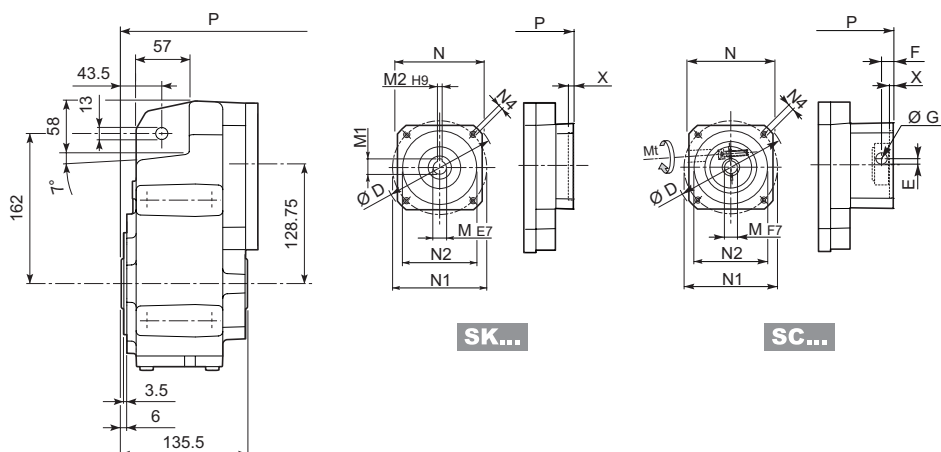
F 25...HS



		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

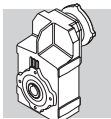


F 25...SK / SC



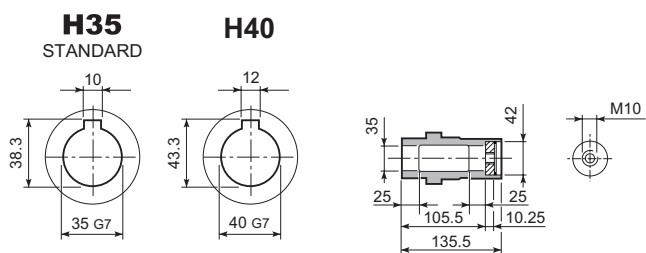
											2/3x		4x	
		D	M	M1	M2	N	N1	N2	N4	X	P		P	
F 25 2/3/4	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	184.5	11	240	12
F 25 2/3/4	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	191.5	12	247	13
F 25 2/3/4	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	191.5	12	247	13
F 25 2/3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	232.5	13	288	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

														2/3x		4x	
			Mt	D	E	F	G	M	N	N1	N2	N4	X	P		P	
F 25 2/3/4	SC 60A	M6	15 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	150	16.5	16	17.75	24	120	130	110	M8x16	5	256	15	311.5	16

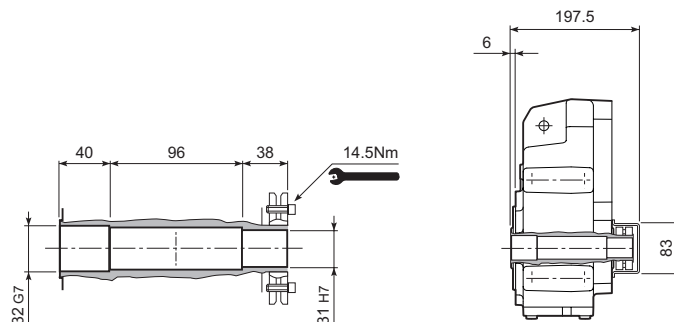


F 25

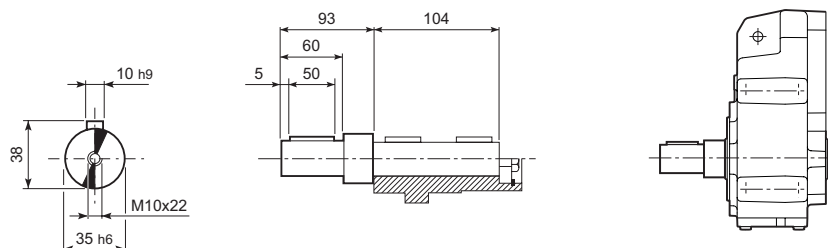
F 25...H



F 25...S

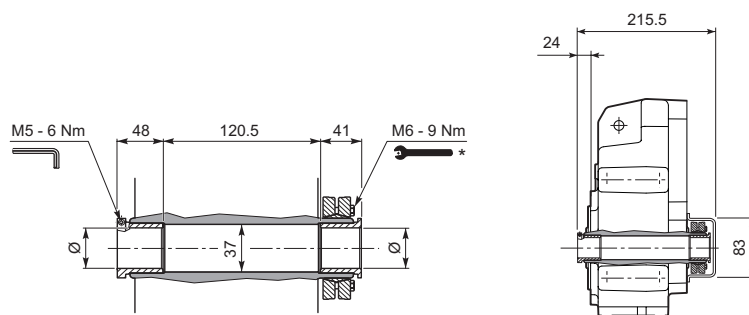


F 25...R

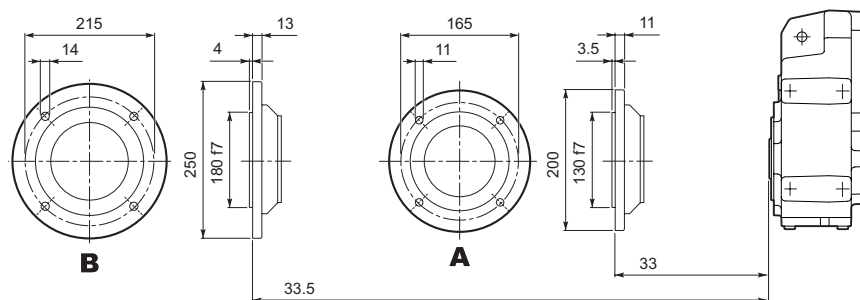


F 25...QF

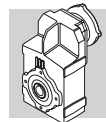
	Ø
QF30	30
QF32	32



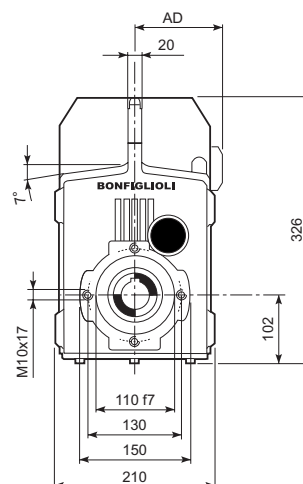
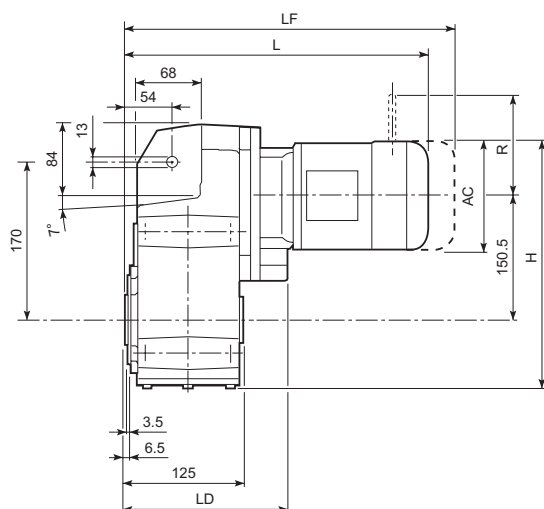
F 25...F...



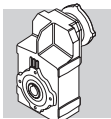
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



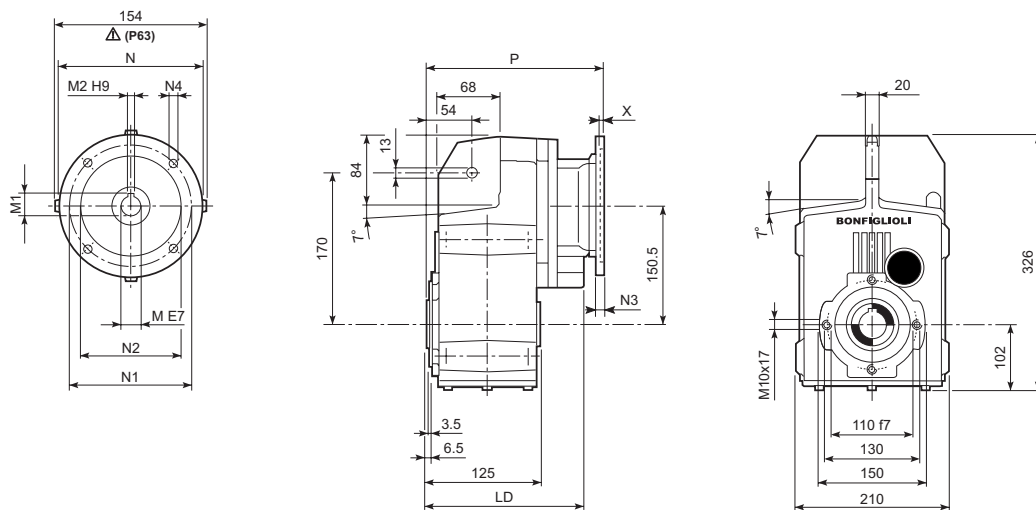
F 31...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD	Kg		LF	Kg	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	M2S	156	330.3	409.5	195.5	119	26		479.5	30	129	146	134	119
F 31 2/3	S3	M3S	195	349.8	452.5	205.5	142	31		548.5	38	160	158	160	142
F 31 2/3	S3	M3L	195	349.8	484.5	205.5	142	38		575.5	45	160	158	160	142
F 31 2/3	S4	M4	258	381.3	592.5	—	193	72		701.5	79	204	210	200	193
F 31 2/3	S4	M4L	258	381.3	592.5	—	193	78		701.5	85	204	210	200	193
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	M2S	156	330.3	467	—	119	26		537	31	129	146	134	119
F 31 4	S3	M3S	195	349.8	510	—	142	31		606	39	160	158	160	142
F 31 4	S3	M3L	195	349.8	542	—	142	38		633	46	160	158	160	142

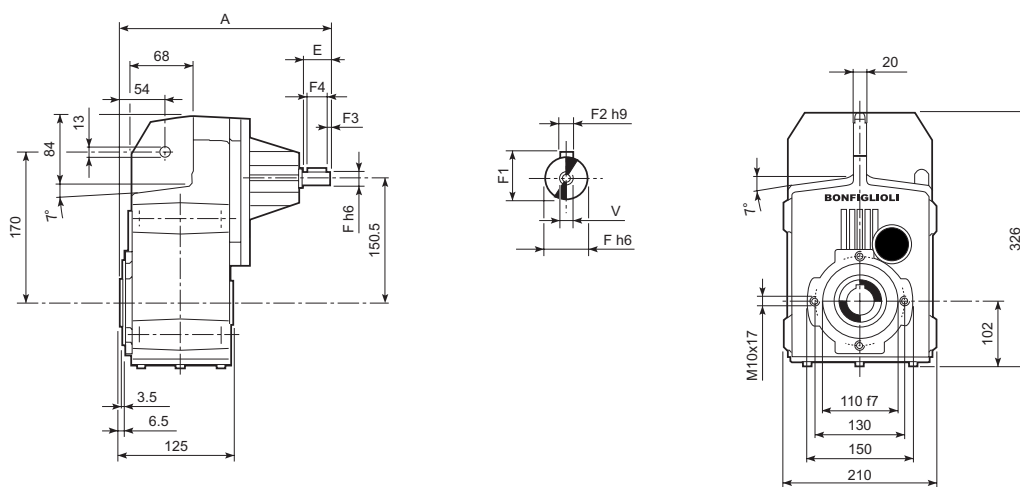


F 31...P(IEC)

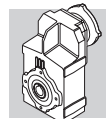


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 31 2/3	P63	195.5	11	12.8	4	140	115	95	—	M8x19	4	225.5	17
F 31 2/3	P71	195.5	14	16.3	5	160	130	110	—	M8x16	4.5	225.5	17
F 31 2/3	P80	205.5	19	21.8	6	200	165	130	—	M10x12	4	245	18
F 31 2/3	P90	205.5	24	27.3	8	200	165	130	—	M10x12	4	245	17
F 31 2/3	P100	205.5	28	31.3	8	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	—	M10x12	4	302.5	18
F 31 4	P90	—	24	27.3	8	200	165	130	—	M10x12	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

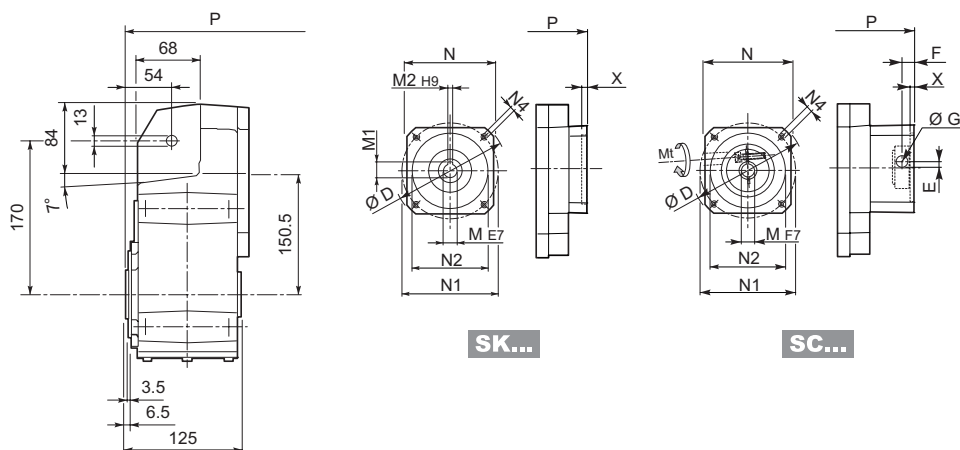
F 31...HS



		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

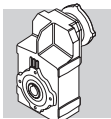


F 31...SK / SC



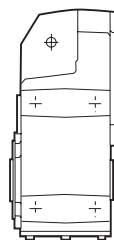
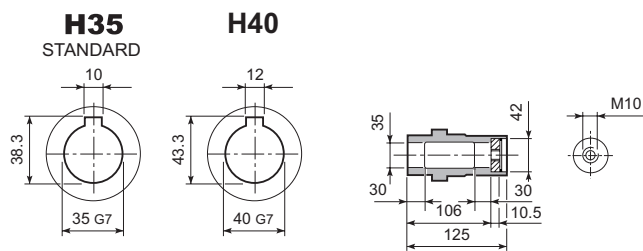
											2/3x		4x	
		D	M	M1	M2	N	N1	N2	N4	X	P		P	
F 31 2/3/4	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	197	16	254.5	16
F 31 2/3/4	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	204	17	261.5	17
F 31 2/3/4	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	204	17	261.5	17
F 31 2/3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	245	18	302.5	18
F 31 2/3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	245	18	302.5	18
F 31 2/3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	245	18	302.5	18
F 31 2/3/4	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	245	18	302.5	18
F 31 2/3/4	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	245	18	302.5	18
F 31 2/3/4	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	245	18	302.5	18
F 31 2/3	SK 130A	188	24	27.3	8	142	165	130	M10x20	5	245	18	—	—

			Mt											2/3x		4x	
				D	E	F	G	M	N	N1	N2	N4	X	P		P	
F 31 2/3/4	SC 60A	M6	15 Nm	102	7	12.5	12.5	11	82	75	60	M5x10	4	224	17	281.5	17
F 31 2/3/4	SC 60B	M6	15 Nm	102	7	12.5	12.5	14	82	75	60	M5x10	4	224	18	281.5	18
F 31 2/3/4	SC 80A	M6	15 Nm	115	6	12.5	12.5	14	90	100	80	M6x12	4	224	18	281.5	18
F 31 2/3/4	SC 80C	M6	15 Nm	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	268.5	19	326	19
F 31 2/3/4	SC 95A	M6	15 Nm	130	16.5	15	17.75	14	102	115	95	M8x16	4	268.5	19	326	19
F 31 2/3/4	SC 95B	M6	15 Nm	130	16.5	15	17.75	19	102	115	95	M8x16	4	268.5	19	326	19
F 31 2/3/4	SC 95C	M6	15 Nm	130	16.5	15	17.75	24	102	115	95	M8x16	4	268.5	19	326	19
F 31 2/3/4	SC 110A	M6	15 Nm	150	16.5	16	17.75	19	120	130	110	M8x16	5	268.5	20	326	20
F 31 2/3/4	SC 110B	M6	15 Nm	150	16.5	16	17.75	24	120	130	110	M8x16	5	268.5	20	326	20
F 31 2/3	SC 130A	M6	15 Nm	188	19	16	17.75	24	142	165	130	M10x20	5	268.5	21	—	—

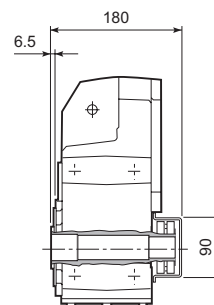
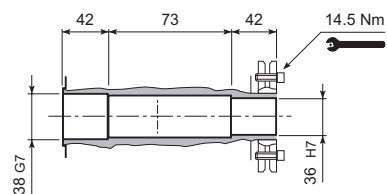


F 31

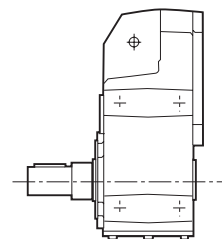
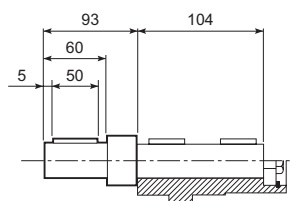
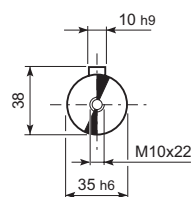
F 31...H



F 31...S

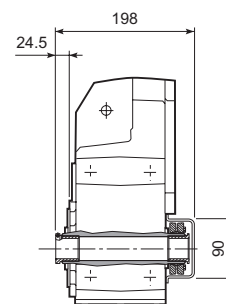
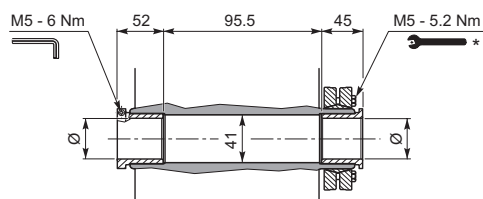


F 31...R

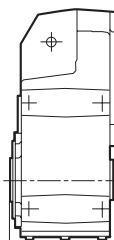
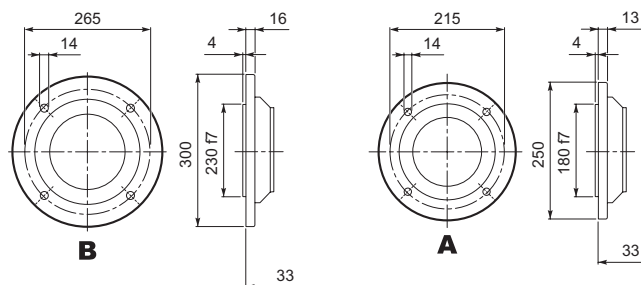


F 31...QF

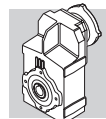
	Ø
QF35	35
QF40	40



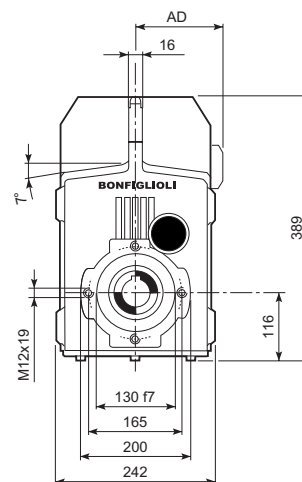
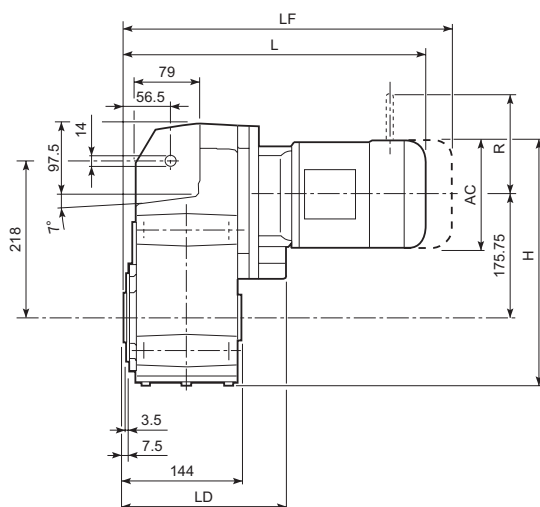
F 31...F...



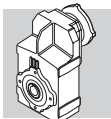
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



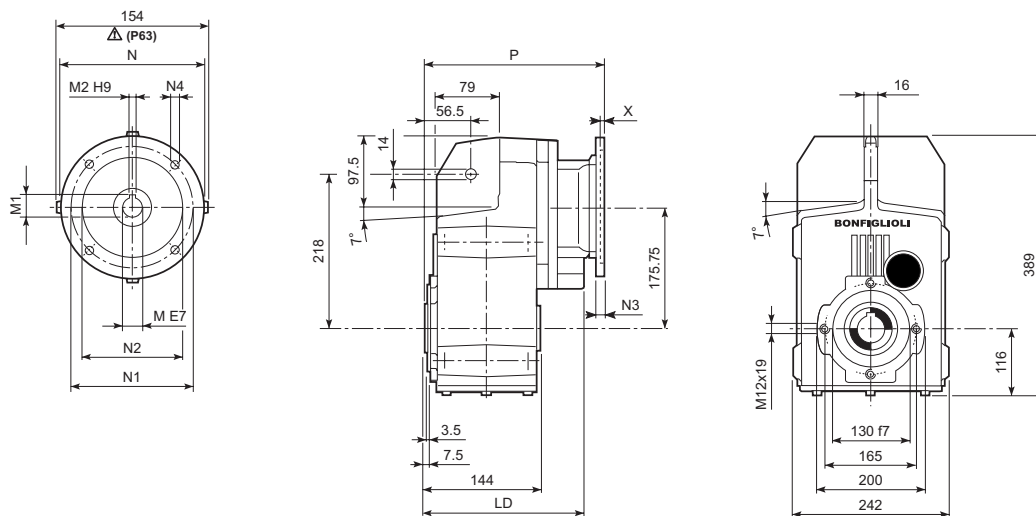
F 41...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD	Kg		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	M2S	156	369.8	430	215	119	49		500	53	129	146	134	119
F 41 2/3	S3	M3S	195	389.3	473	231	142	54		569	62	160	158	160	142
F 41 2/3	S3	M3L	195	389.3	505	231	142	62		596	69	160	158	160	142
F 41 2/3	S4	M4	258	420.8	613	—	193	96		722	114	226	210	217	193
F 41 2/3	S4	M4LC	258	420.8	648	—	193	104		747	122	226	210	217	193
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	M2S	156	369.8	491.5	—	119	50		561.5	58	129	146	134	119
F 41 4	S3	M3S	195	389.3	534.5	—	142	55		630.5	62	160	158	160	142
F 41 4	S3	M3L	195	389.3	566.5	—	142	63		657.5	70	160	158	160	142

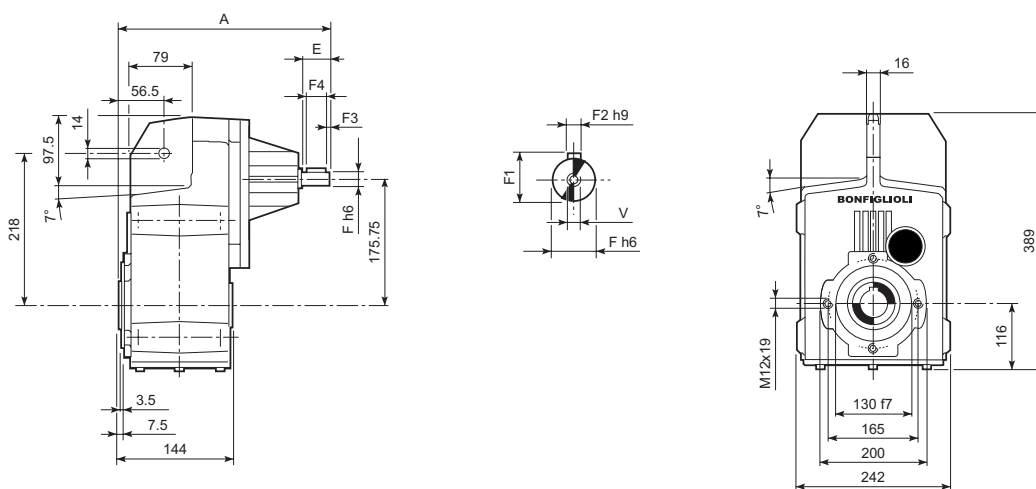


F 41...P(IEC)

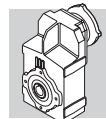


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 41 2/3	P63	215	11	12.8	4	140	115	95	—	M8x19	4	246	42
F 41 2/3	P71	215	14	16.3	5	160	130	110	—	M8x16	4.5	246	42
F 41 2/3	P80	231	19	21.8	6	200	165	130	—	M10x12	4	265.5	43
F 41 2/3	P90	231	24	27.3	8	200	165	130	—	M10x12	4	265.5	43
F 41 2/3	P100	231	28	31.3	8	250	215	180	—	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	—	M10x12	4	327	45
F 41 4	P90	—	24	27.3	8	200	165	130	—	M10x12	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

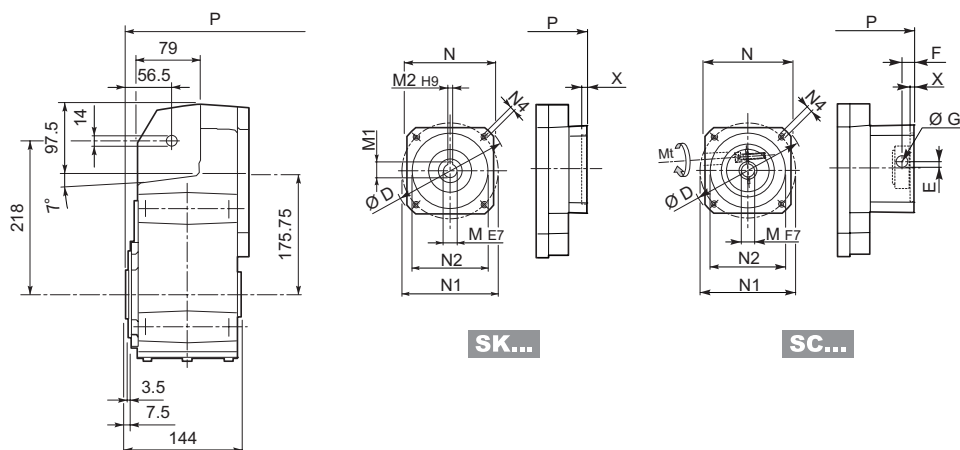
F 41...HS



		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

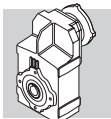


F 41...SK / SC



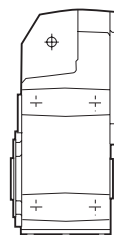
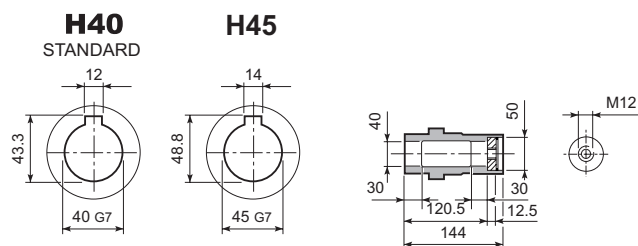
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
F 41 4	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	—	—	279	43
F 41 4	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	—	—	286	44
F 41 4	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	—	—	286	44
F 41 2/3	SK 80B	120	14	16.3	5	96	100	80	M6x12	4	265.5	43	—	—
F 41 2/3/4	SK 80C	120	19	21.8	6	96	100	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	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
F 41 4	SC 60A	M6	15 Nm	102	7	12.5	12.5	11	82	75	60	M5x10	4	—	—	306	44
F 41 4	SC 60B	M6	15 Nm	102	7	12.5	12.5	14	82	75	60	M5x10	4	—	—	306	45
F 41 4	SC 80A	M6	15 Nm	115	6	12.5	12.5	14	90	100	80	M6x12	4	—	—	306	45
F 41 2/3	SC 80B	M6	15 Nm	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	289	44	—	—
F 41 2/3/4	SC 80C	M6	15 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	188	19	16	17.75	24	142	165	130	M10x20	5	289	46	—	—
F 41 2/3	SC 130B	M8	36 Nm	189	20	17	17.75	32	160	165	130	M10x20	5	335	50	—	—
F 41 2/3	SC 180A	M8	36 Nm	240	20	17.5	17.75	32	192	215	180	M12x24	5	339	50	—	—
F 41 2/3	SC 180B	M8	36 Nm	240	20	17.5	17.75	38	192	215	180	M12x24	5	339	50	—	—

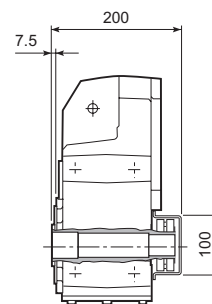
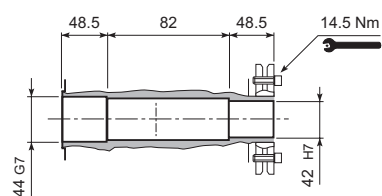


F 41

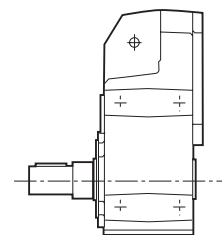
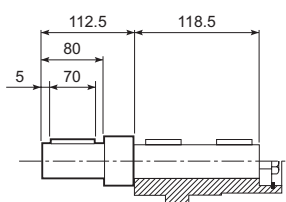
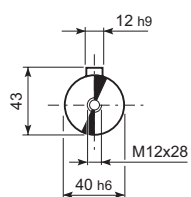
F 41...H



F 41...S

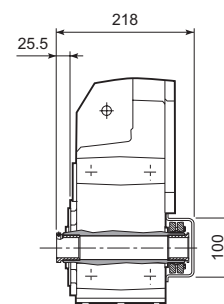
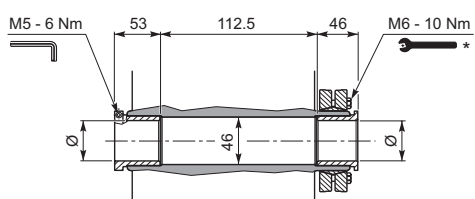


F 41...R

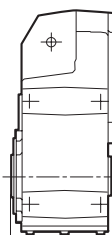
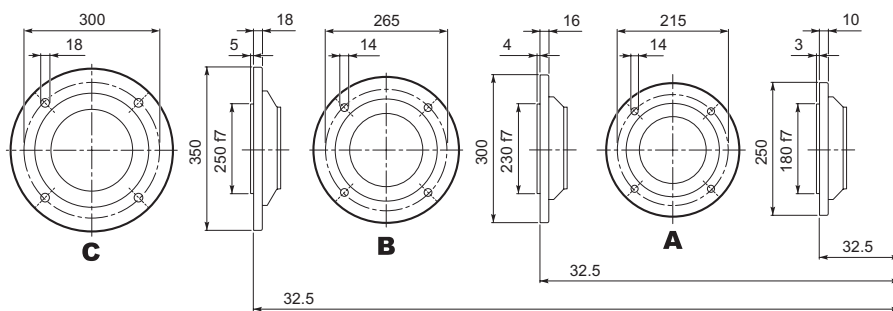


F 41...QF

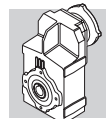
	Ø
QF42	42
QF45	45



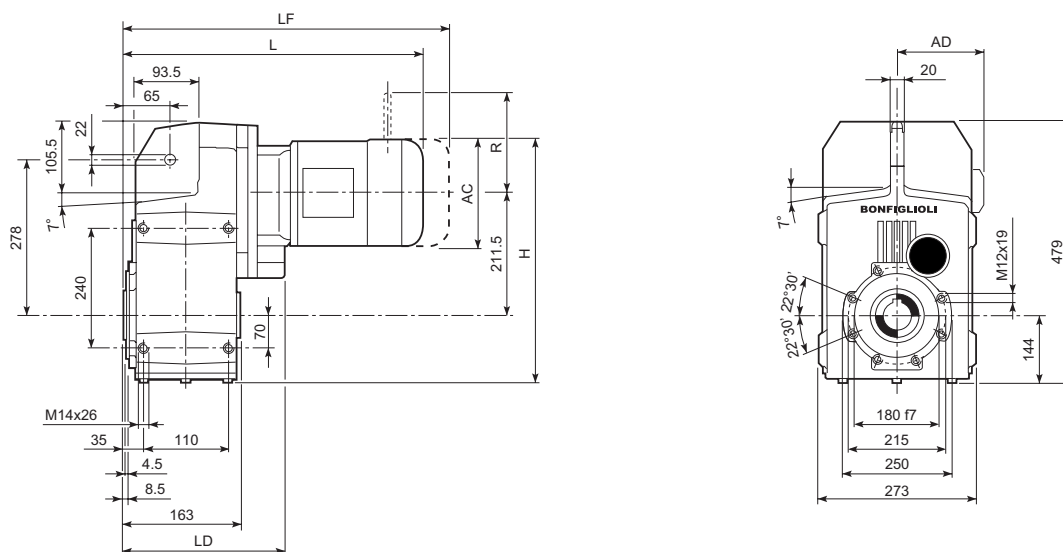
F 41...F...



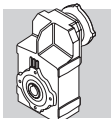
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



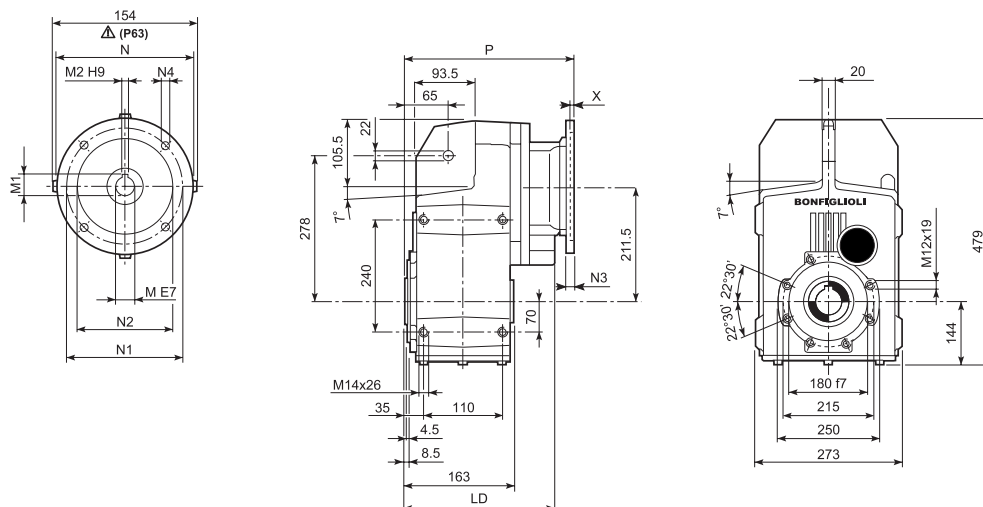
F 51...M



									M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD	Kg	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	M2S	156	433	452	238	119	73	522	76	129	146	134	119
F 51 2/3	S3	M3S	195	452.5	495	253	142	77	591	85	160	158	160	142
F 51 2/3	S3	M3L	195	452.5	527	253	142	85	618	92	160	158	160	142
F 51 2/3	S4	M4	258	484	635	238	193	119	744	137	226	210	217	193
F 51 2/3	S4	M4LC	258	484	670	238	193	127	769	145	226	210	217	193
F 51 2/3	S5	M5S	310	510	721.5	—	245	153	861.5	188	266	245	247	245
F 51 2/3	S5	M5L	310	510	765.5	—	245	169	905.5	204	266	245	247	245
F 51 4	S1	M1	138	424	494.5	—	108	75	555.5	78	103	135	124	108
F 51 4	S2	M2S	156	433	523.5	—	119	79	593.5	83	129	146	134	119
F 51 4	S3	M3S	195	452.5	566.5	—	142	84	662.5	91	160	158	160	142
F 51 4	S3	M3L	195	452.5	598.5	—	142	91	689.5	98	160	158	160	142

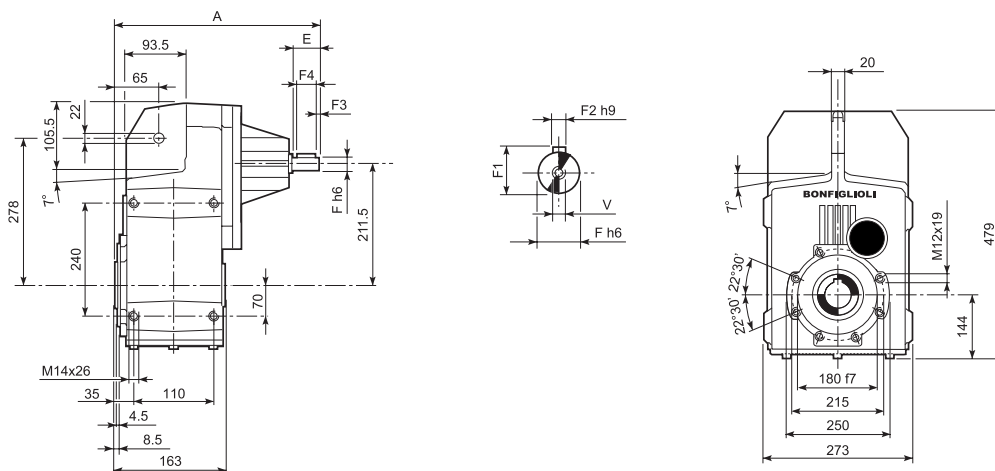


F 51...P(IEC)

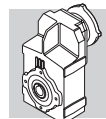


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		238	11	12.8	4	140	115	95	—	M8x19	4	268	65
		238	14	16.3	5	160	130	110	—	M8x16	4.5	268	65
		253	19	21.8	6	200	165	130	—	M10x12	4	287.5	67
		253	24	27.3	8	200	165	130	—	M10x12	4	287.5	67
		238	28	31.3	8	250	215	180	—	M12x16	4.5	297.5	71
		238	28	31.3	8	250	215	180	—	M12x16	4.5	297.5	71
		238	38	41.3	10	300	265	230	16	14	5	334	74
		—	42	45.3	12	350	300	250	23	18	5.5	384.5	78
		—	48	51.8	14	350	300	250	23	18	5.5	384.5	78
		—	11	12.8	4	140	115	95	—	M8x19	4	339.5	70
		—	14	16.3	5	160	130	110	—	M8x16	4.5	339.5	70
		—	19	21.8	6	200	165	130	—	M10x12	4	359	71
		—	24	27.3	8	200	165	130	—	M10x12	4	359	71
		—	28	31.3	8	250	215	180	—	M12x16	4.5	369	75
		—	28	31.3	8	250	215	180	—	M12x16	4.5	369	75
		—	38	41.3	10	300	265	230	16	14	5	405.5	78

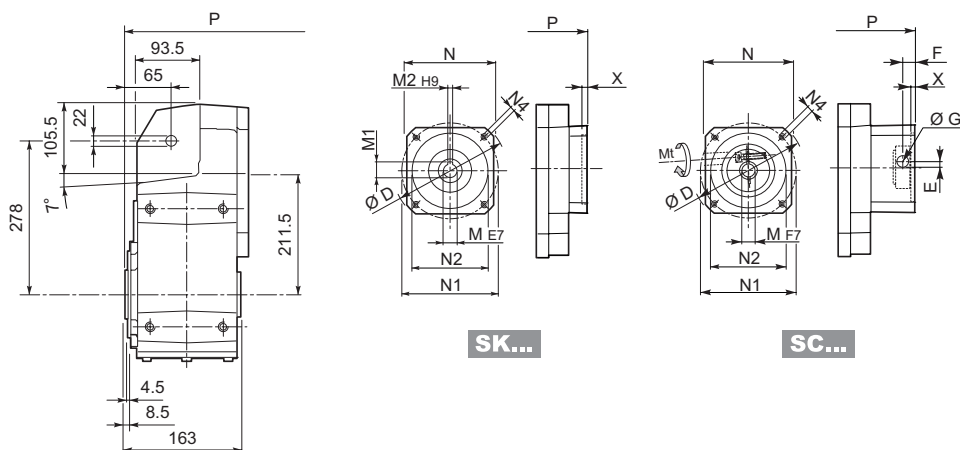
F 51...HS



		A	E	F	F1	F2	F3	F4	V	Kg
		357.5	50	24	27	8	2.5	45	M8x19	65
		357.5	50	24	27	8	2.5	45	M8x19	68
		389.5	40	19	21.5	6	2.5	35	M6x16	70

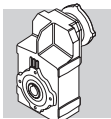


F 51...SK / SC



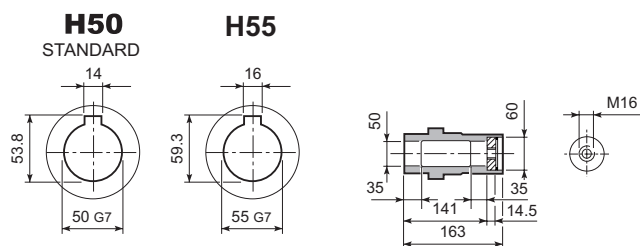
		D	M	M1	M2	N	N1	N2	N4	X	2/3x	Kg	4x	Kg
F 51 2/3	SK 80B	120	14	16.3	5	96	100	80	M6x12	4	287.5	67	—	—
F 51 2/3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	287.5	67	359	71
F 51 2/3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	287.5	67	359	71
F 51 2/3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	287.5	67	359	71
F 51 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	D	E	F	G	M	N	N1	N2	N4	X	2/3x	Kg	4x	Kg
F 51 2/3	SC 80B	M6	15 Nm	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	311	70	—	—
F 51 2/3/4	SC 80C	M6	15 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	188	19	16	17.75	24	142	165	130	M10x20	5	311	72	382.5	76
F 51 2/3	SC 130B	M8	36 Nm	189	20	17	17.75	32	160	165	130	M10x20	5	357	75	—	—
F 51 2/3	SC 180A	M8	36 Nm	240	20	17.5	17.75	32	192	215	180	M12x24	5	361	75	—	—
F 51 2/3	SC 180B	M8	36 Nm	240	20	17.5	17.75	38	192	215	180	M12x24	5	361	75	—	—

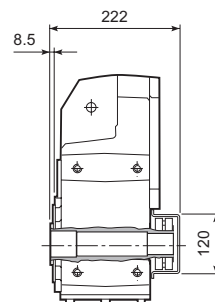
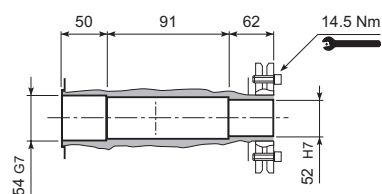


F 51

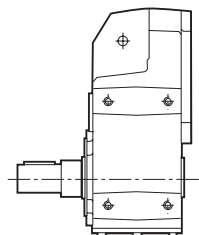
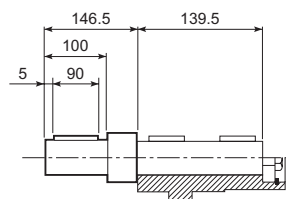
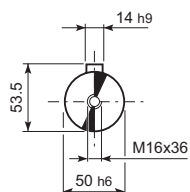
F 51...H



F 51...S

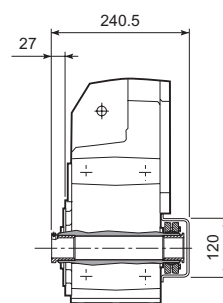
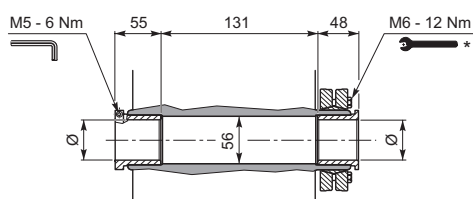


F 51...R

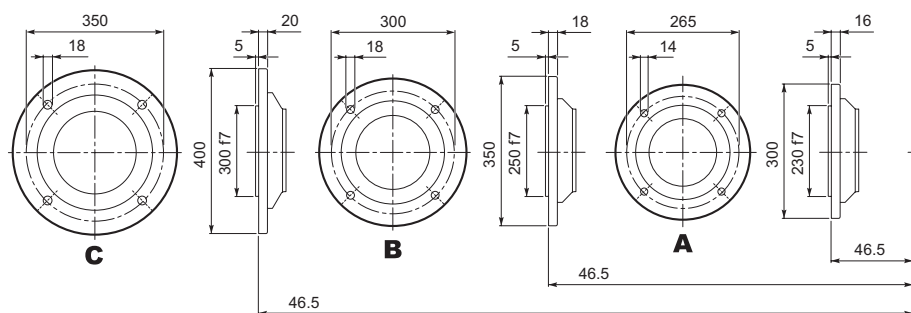


F 51...QF

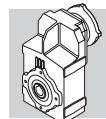
	Ø
QF50	50
QF55	55



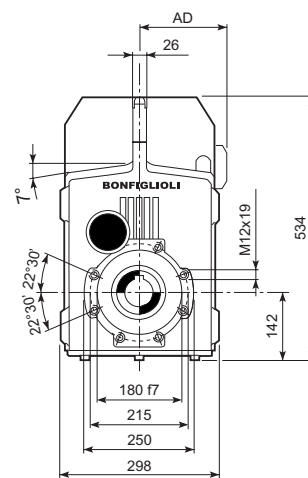
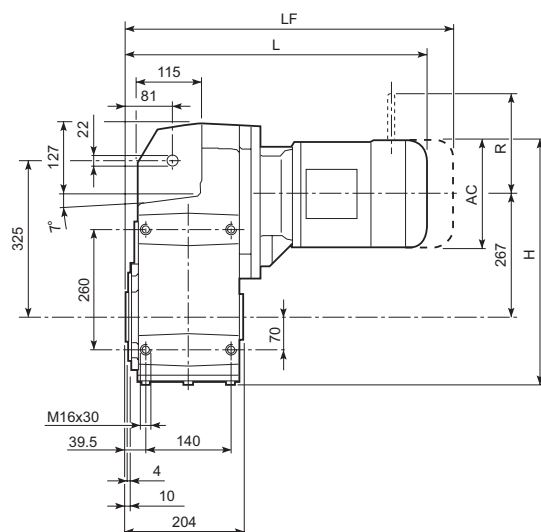
F 51...F...



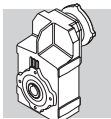
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



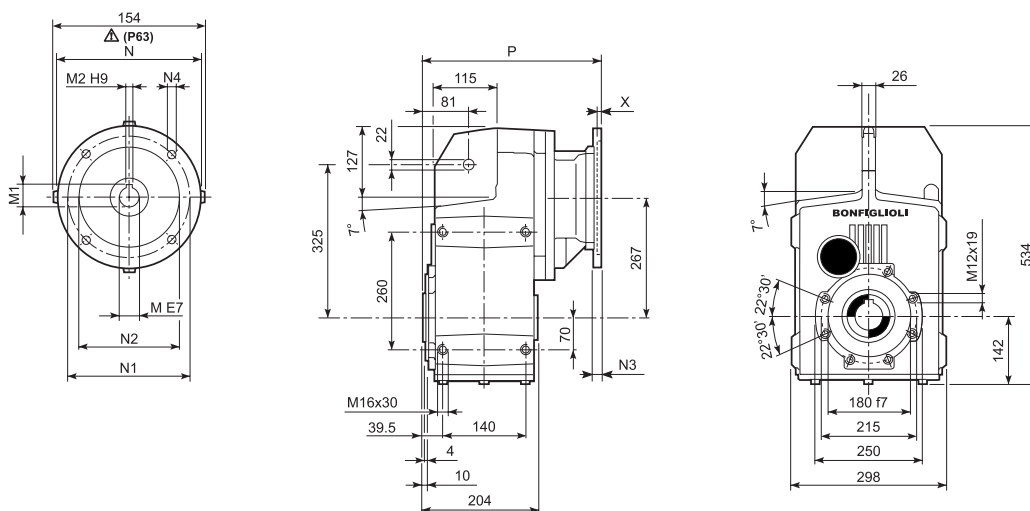
F 60...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD	Kg	LF	Kg	R	AD	R	AD
F 60 3	S2	M2S	156	487	486.5	119	114	556.5	121	129	146	134	119
F 60 3	S3	M3S	195	506.5	529.5	142	114	625.5	122	160	158	160	142
F 60 3	S3	M3L	195	506.5	561.5	142	122	652.5	129	160	158	160	142
F 60 3	S4	M4	258	538	669.5	193	156	777.5	174	226	210	217	193
F 60 3	S4	M4LC	258	538	704.5	193	164	802.5	182	226	210	217	193
F 60 3	S5	M5S	310	564	756	245	184	896	214	266	245	247	245
F 60 3	S5	M5L	310	564	800	245	200	940	230	266	245	247	245
F 60 4	S1	M1	138	478	528	108	113	589	116	103	135	124	108
F 60 4	S2	M2S	156	487	557	119	117	627	121	129	146	134	119
F 60 4	S3	M3S	195	506.5	600	142	122	696	129	160	158	160	142
F 60 4	S3	M3L	195	506.5	632	142	129	723	136	160	158	160	142
F 60 4	S4	M4	258	538	740	193	156	849	174	226	210	217	193
F 60 4	S4	M4LC	258	538	775	193	164	874	182	226	210	217	193

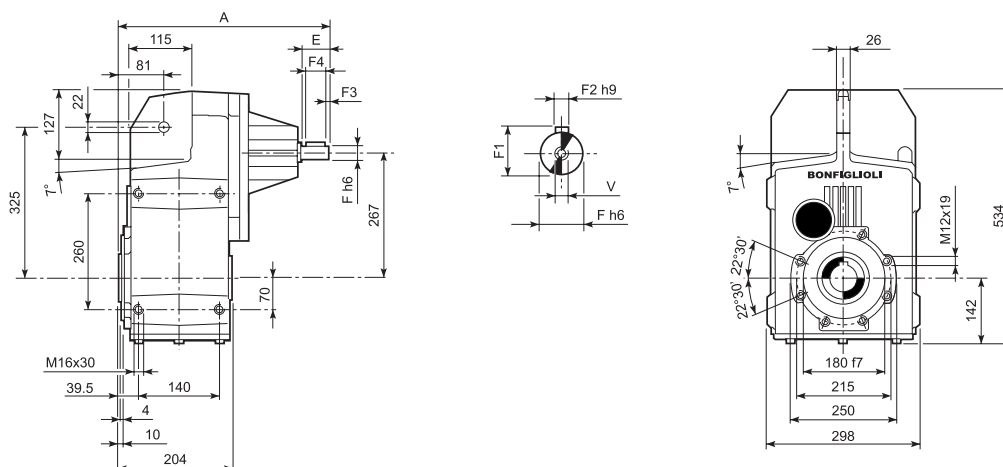


F 60...P(IEC)

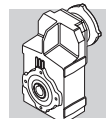


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 60 3	P63	11	12.8	4	140	115	95	—	M8x19	4	302.5	103
F 60 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	302.5	103
F 60 3	P80	19	21.8	6	200	165	130	—	M10x12	4	322	104
F 60 3	P90	24	27.3	8	200	165	130	—	M10x12	4	322	104
F 60 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	331	108
F 60 3	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	—	M10x12	4	392.5	110
F 60 4	P90	24	27.3	8	200	165	130	—	M10x12	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

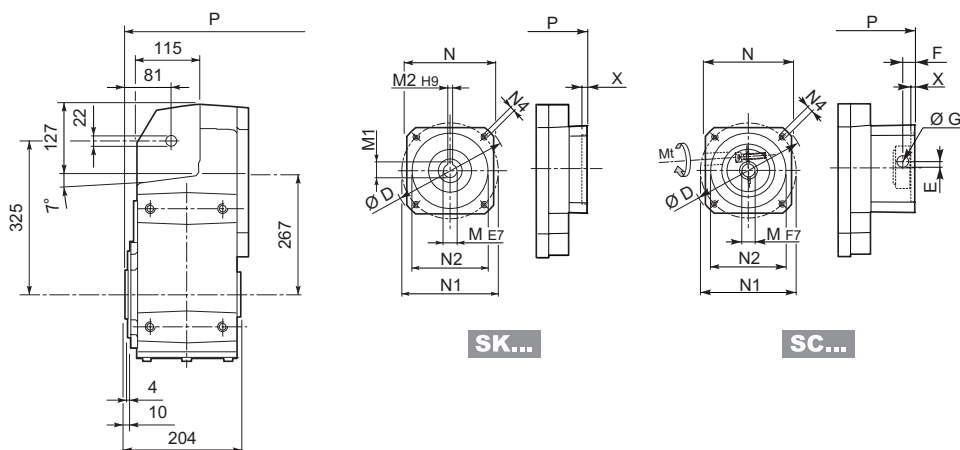
F 60...HS



		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

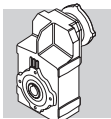


F 60...SK / SC



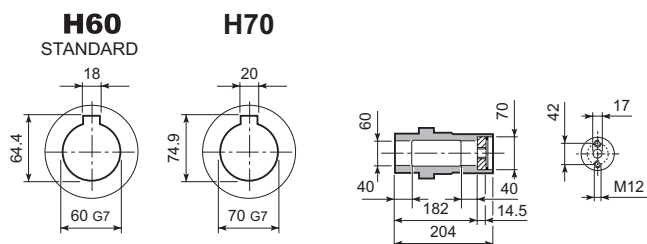
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P	Kg	P	Kg
F 60 4	SK 80B	120	14	16.3	5	96	100	80	M6x12	4	—	—	392.5	109
F 60 3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	322	106	392.5	112
F 60 3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	322	106	392.5	112
F 60 3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	322	106	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	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P	Kg	P	Kg
F 60 4	SC 80B	M6	15 Nm	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	—	—	416	113
F 60 3/4	SC 80C	M6	15 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	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 Nm	188	19	16	17.75	24	142	165	130	M10x20	5	345.5	109	416	115
F 60 3	SC 130B	M8	36 Nm	189	20	17	17.75	32	160	165	130	M10x20	5	390.5	112	—	—
F 60 3	SC 180A	M8	36 Nm	240	20	17.5	17.75	32	192	215	180	M12x24	5	394.5	112	—	—
F 60 3	SC 180B	M8	36 Nm	240	20	17.5	17.75	38	192	215	180	M12x24	5	394.5	112	—	—

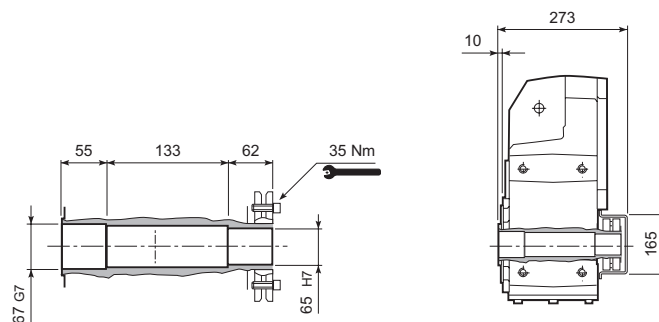


F 60

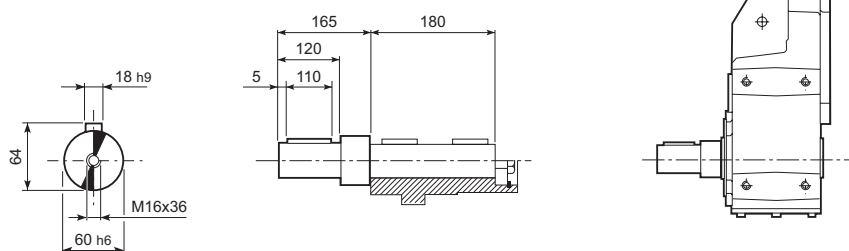
F 60...H



F 60...S

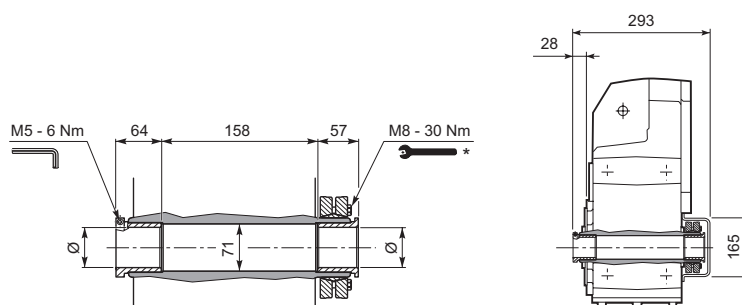


F 60...R

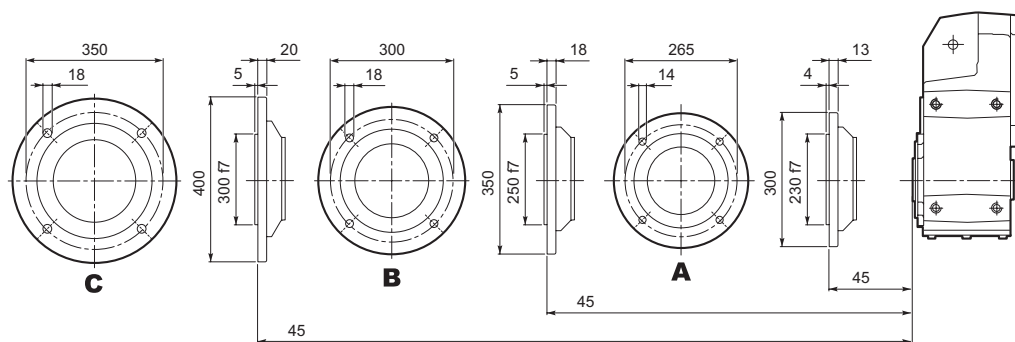


F 60...QF

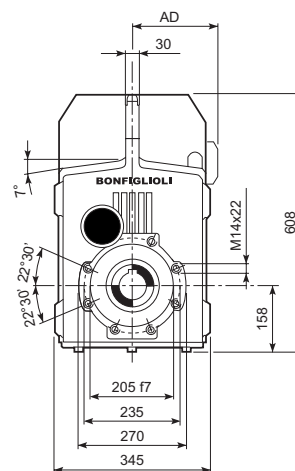
	Ø
QF60	60
QF65	65
QF70	70

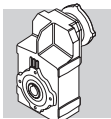


F 60...F...

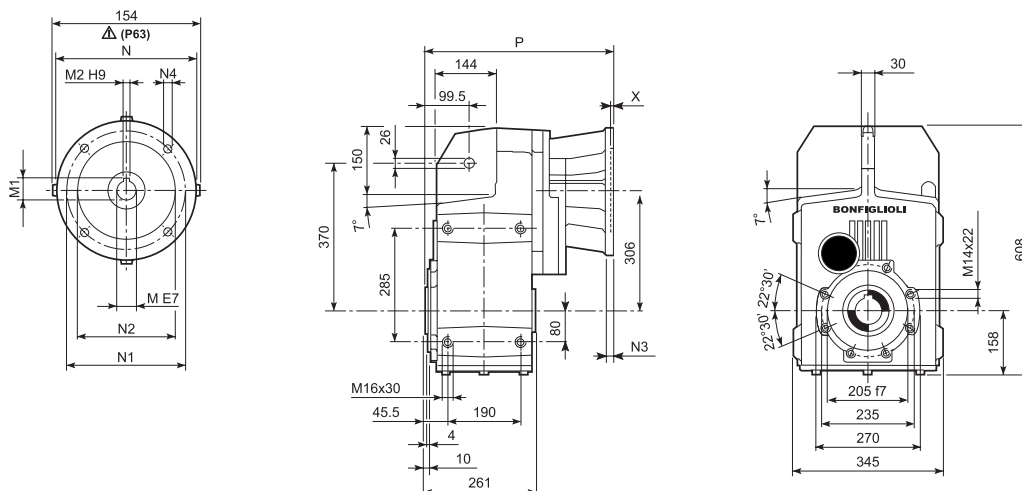


* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.

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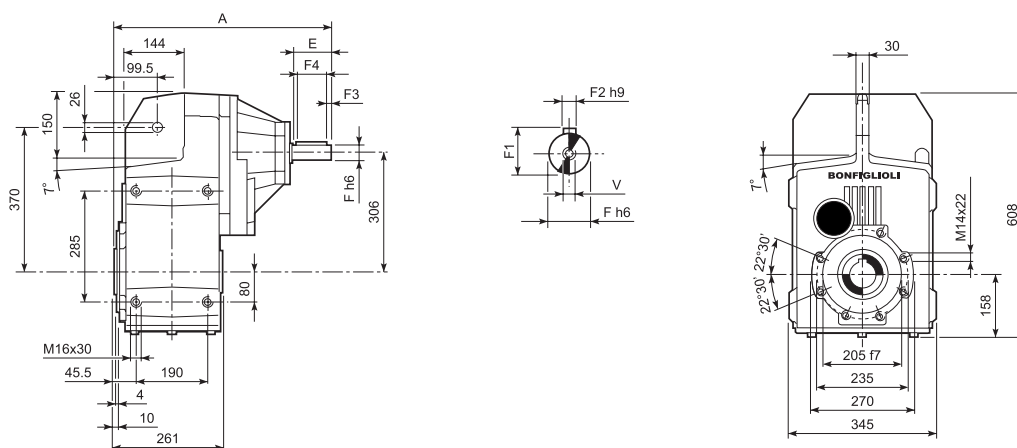


F 70...P(IEC)

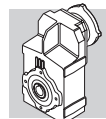


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 70 3	P80	19	21.8	6	200	165	130	—	M10x12	4	387.5	167
F 70 3	P90	24	27.3	8	200	165	130	—	M10x12	4	387.5	167
F 70 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	397.5	171
F 70 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	397.5	171
F 70 3	P132	38	41.3	10	300	265	230	16	14	5	434	173
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	—	M10x12	4	438.5	170
F 70 4	P90	24	27.3	8	200	165	130	—	M10x12	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

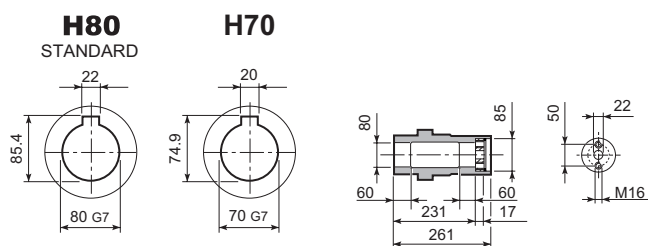


		A	E	F	F1	F2	F3	F4	V	Kg
F 70 3	HS	572	110	42	45	12	10	90	M12x28	186
F 70 4	HS	508.5	50	24	27	8	2.5	45	M8x19	174

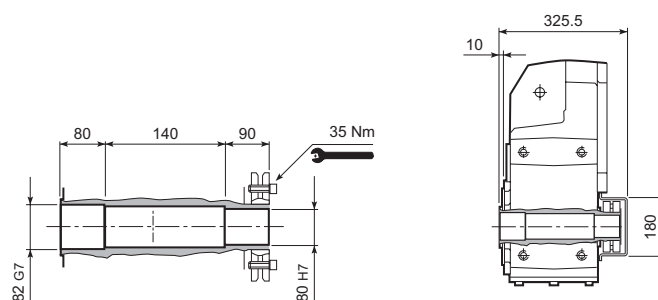


F 70

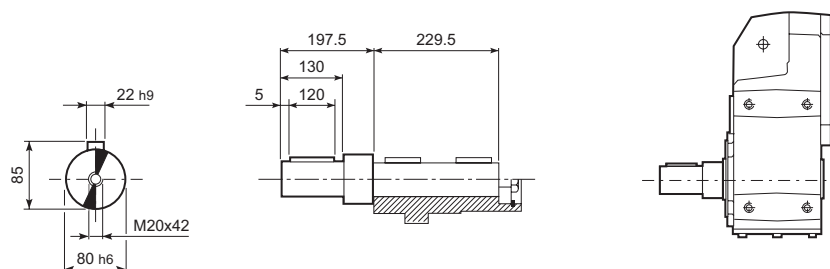
F 70...H



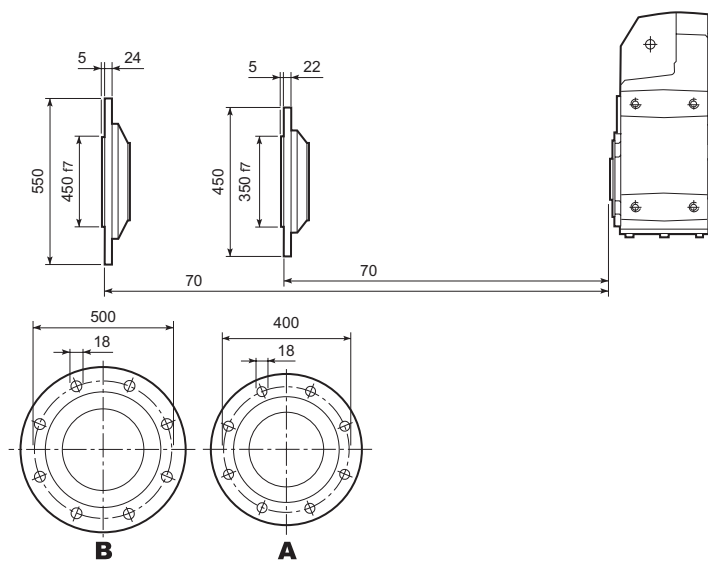
F 70...S

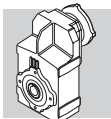


F 70...R

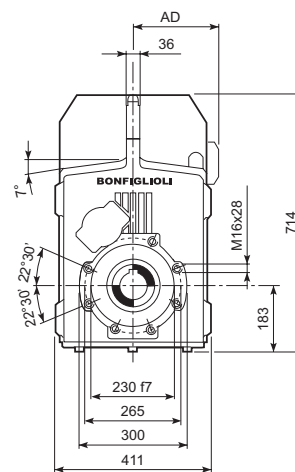
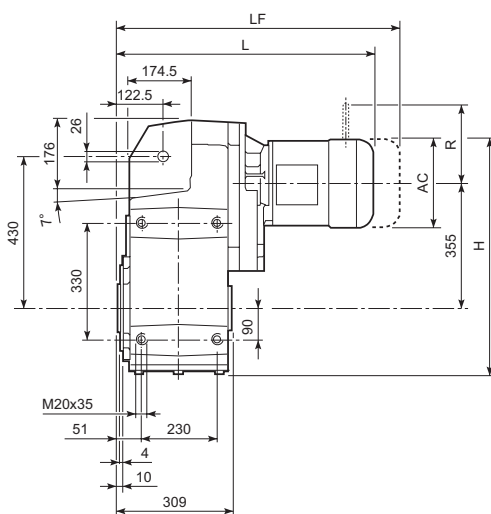


F 70...F...

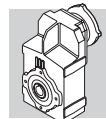




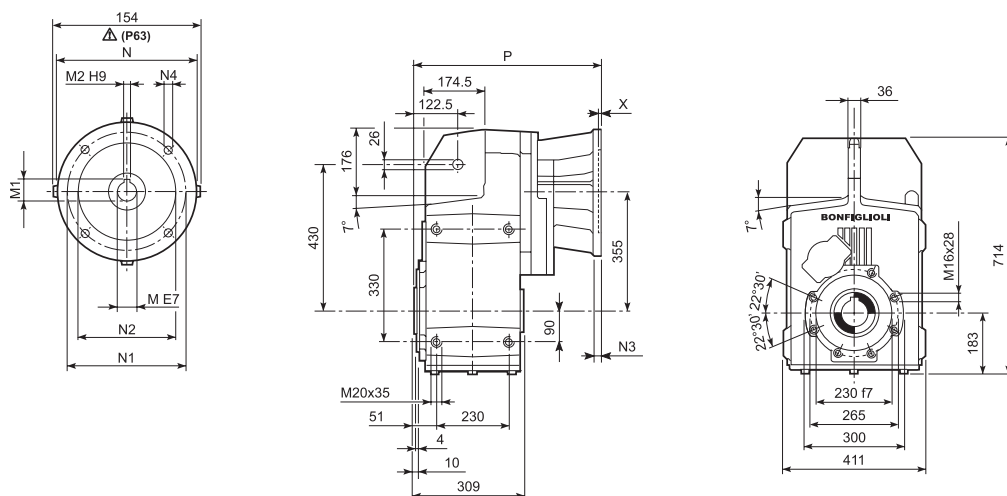
F 80...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		R	AD	R	AD
F 80 3	S3	M3S	195	635.5	653	142	266	749	273	160	158	160	142
F 80 3	S3	M3L	195	635.5	685	142	273	776	280	160	158	160	142
F 80 3	S4	M4	258	667	793	193	307	902	325	226	210	217	193
F 80 3	S4	M4LC	258	667	828	193	315	927	333	226	210	217	193
F 80 3	S5	M5S	310	693	879.5	245	335	1019.5	365	266	245	247	245
F 80 3	S5	M5L	310	693	923.5	245	351	1063.5	381	266	245	247	245
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	S3	M3S	195	635.5	716	142	271	812	278	160	158	160	142
F 80 4	S3	M3L	195	635.5	748	142	278	839	285	160	158	160	142
F 80 4	S4	M4	258	667	856	193	312	965	330	226	210	217	193
F 80 4	S4	M4LC	258	667	891	193	320	990	338	226	210	217	193

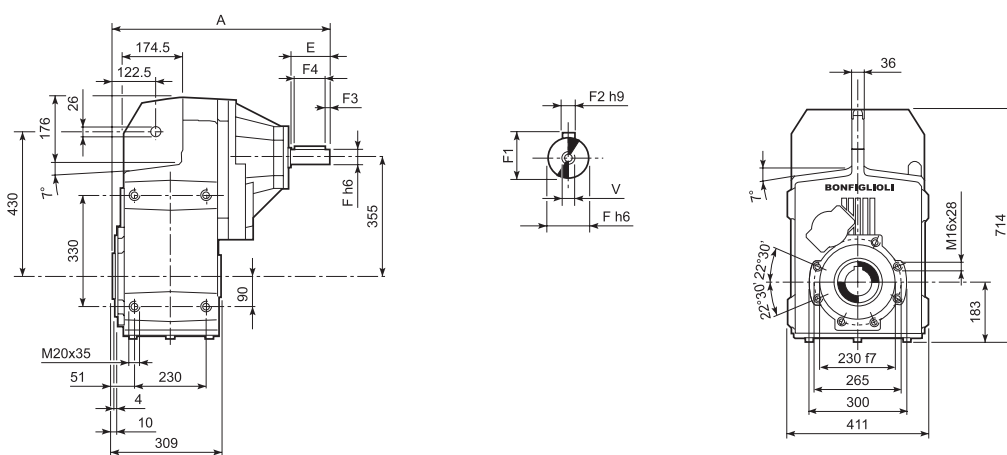


F 80...P(IEC)

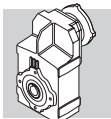


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 80 3	P80	19	21.8	6	200	165	130	—	M10x12	4	445.5	255
F 80 3	P90	24	27.3	8	200	165	130	—	M10x12	4	445.5	255
F 80 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	455.5	259
F 80 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	455.5	259
F 80 3	P132	38	41.3	10	300	265	230	16	14	5	492	261
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	—	M10x12	4	508.5	260
F 80 4	P90	24	27.3	8	200	165	130	—	M10x12	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

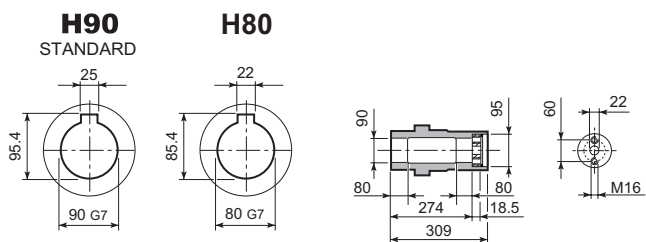


		A	E	F	F1	F2	F3	F4	V	Kg
F 80 3	HS	630	110	42	45	12	10	90	M12x28	273
F 80 4		575.5	50	24	27	8	2.5	45	M8x19	263

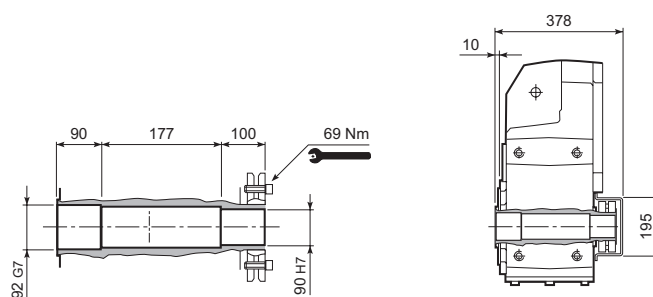


F 80

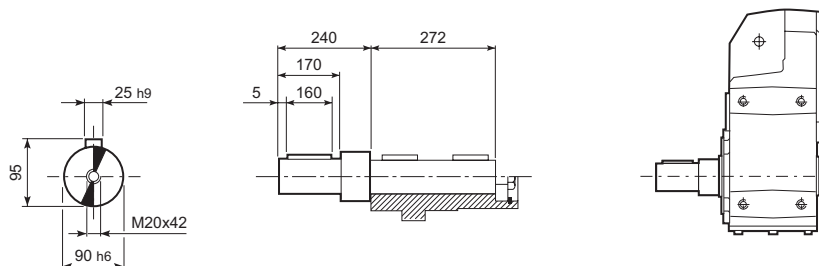
F 80...H



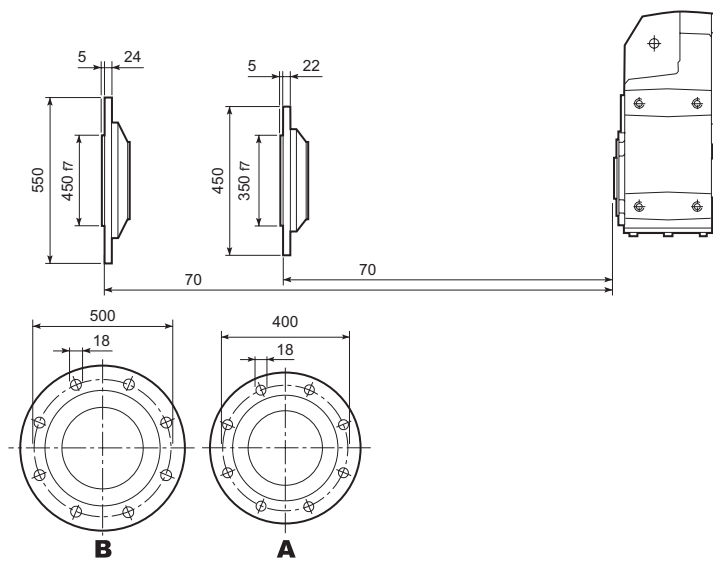
F 80...S

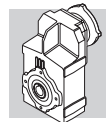


F 80...R

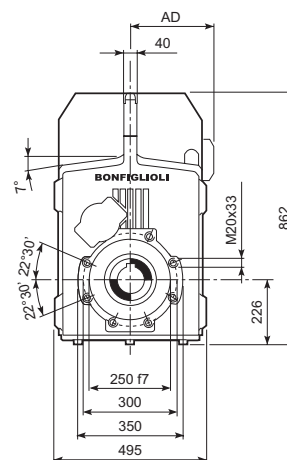
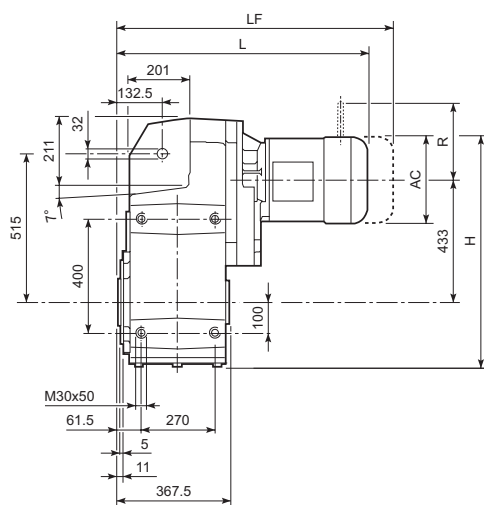


F 80...F...

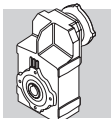




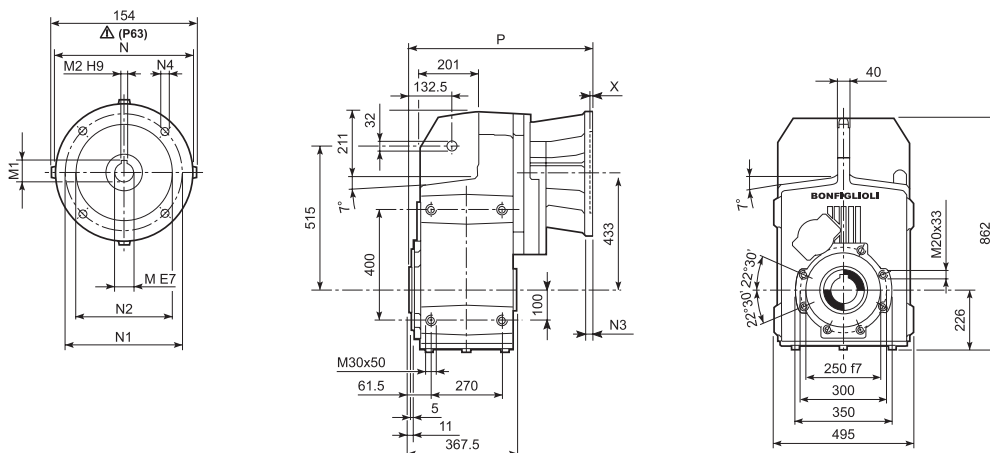
F 90...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		R	AD	R	AD
F 90 3	S3	M3S	195	756	728	142	453	824	460	160	158	160	142
F 90 3	S3	M3L	195	756	760	142	460	851	467	160	158	160	142
F 90 3	S4	M4	258	787.5	868	193	494	977	512	226	210	217	193
F 90 3	S5	M5L	310	813.5	998.5	245	538	1138.5	568	266	245	247	245
F 90 4	S2	M2S	156	736.5	768	119	456	838	460	129	146	134	119
F 90 4	S3	M3S	195	756	811	142	460	907	468	160	158	160	142
F 90 4	S3	M3L	195	756	843	142	468	934	475	160	158	160	142
F 90 4	S4	M4	258	787.5	951	193	502	1060	520	226	210	217	193
F 90 4	S4	M4LC	258	787.5	986	193	510	1085	528	226	210	217	193

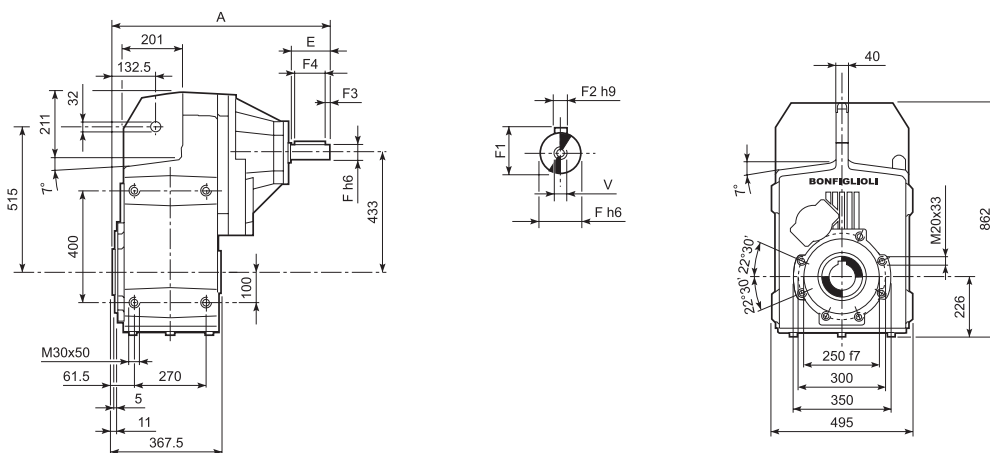


F 90...P(IEC)

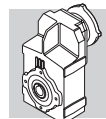


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 90 3	P80	19	21.8	6	200	165	130	—	M10x12	4	520.5	442
F 90 3	P90	24	27.3	8	200	165	130	—	M10x12	4	520.5	442
F 90 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	530.5	446
F 90 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	530.5	446
F 90 3	P132	38	41.3	10	300	265	230	16	14	5	567	449
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	—	M10x12	4	603.5	450
F 90 4	P90	24	27.3	8	200	165	130	—	M10x12	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

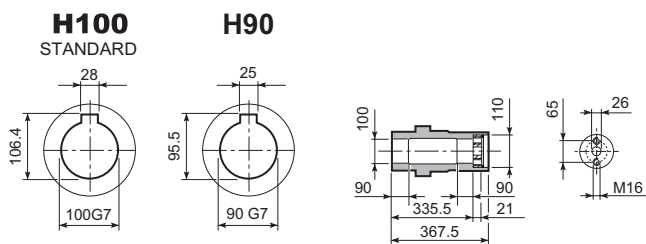


		A	E	F	F1	F2	F3	F4	V	Kg
F 90 3	HS	806.5	140	60	64	18	10	120	M16x36	485
F 90 4	HS	673.5	50	24	27	8	2.5	45	M8x19	452

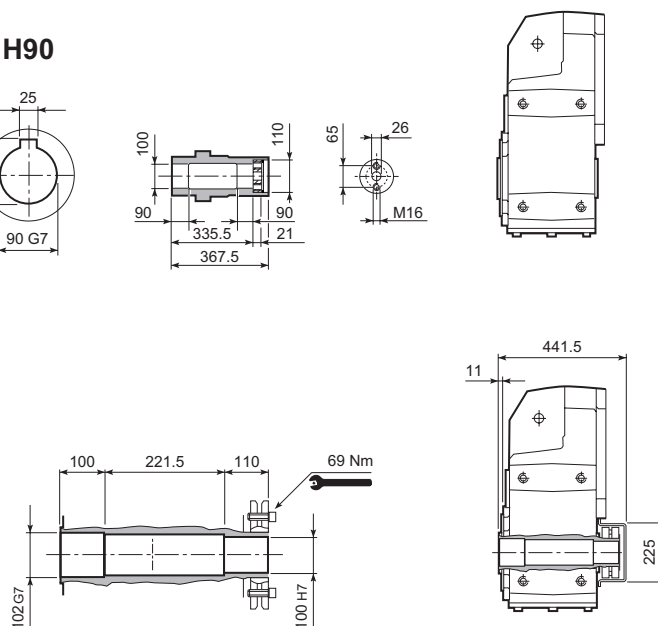


F 90

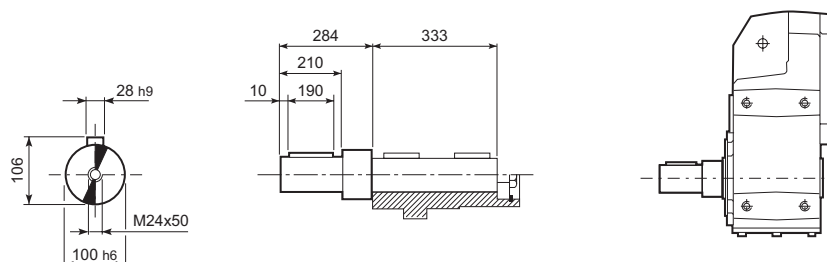
F 90...H



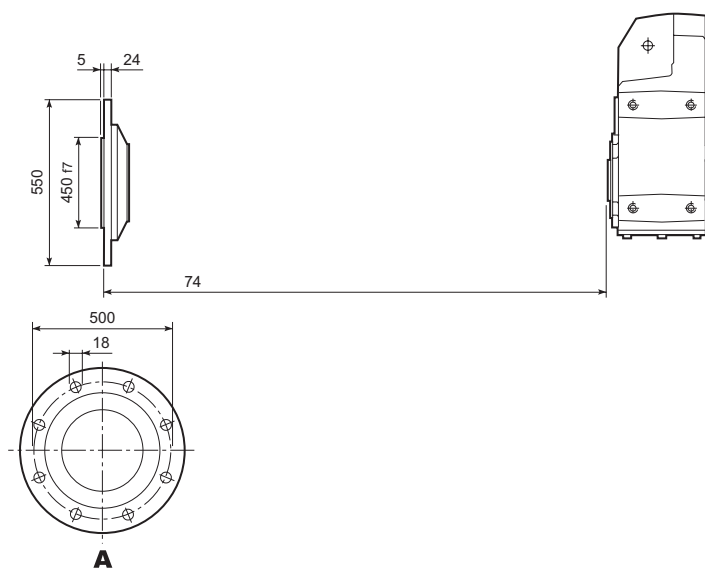
F 90...S

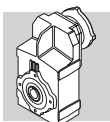


F 90...R



F 90...F...



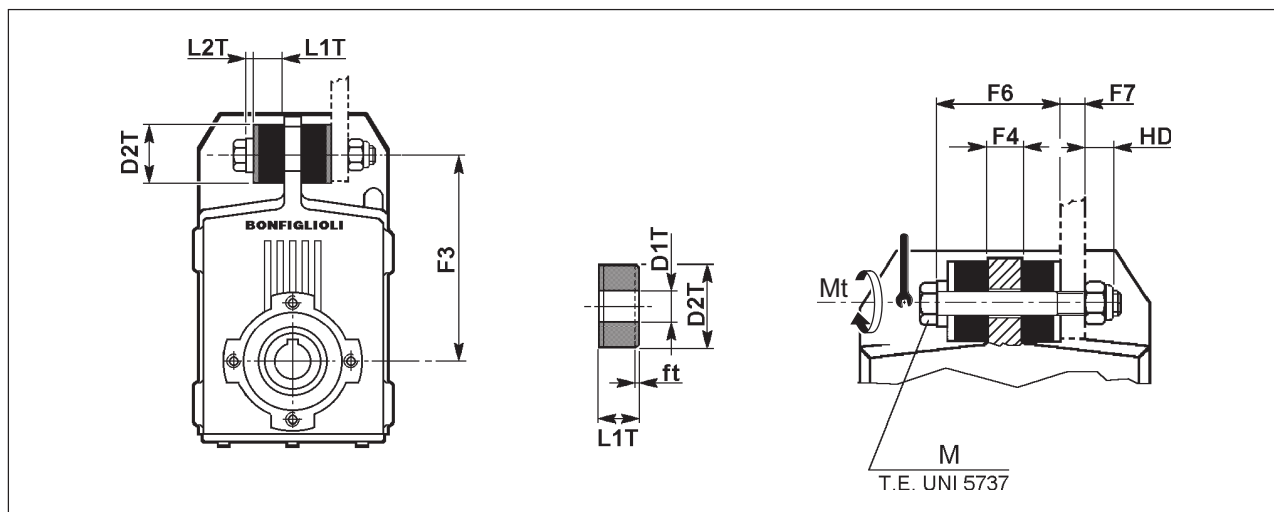


62 ACCESSORIES

Anti-vibration kit

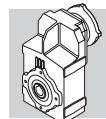
The gearboxes of the F series are supplied with an anti-vibration kit at customer request.

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
F 10	140	20	55	10	12.3	15	5	11	30	M10x80	10	1.5
F 20	160	20	55	10	12.3	15	5	11	30	M10x80	10	1.5
F 25	162	20	65	20	14.8	20	5	12.5	40	M12x100	20	1.5
F 31	170	20	65	20	14.8	20	5	12.5	40	M12x100	20	1.5
F 41	218	16	61	24	14.8	20	5	12.5	40	M12x100	20	2.3
F 51	278	20	90	47	23	30	10	21	60	M20x160	50	3.0
F 60	325	26	96	41	23	30	10	21	60	M20x160	50	4.0
F 70	370	30	122	50	28	40	12	25	80	M24x200	100	4.0
F 80	430	36	128	44	28	40	12	25	80	M24x200	100	6.0
F 90	515	40	175	40	33.2	60	15	32	100	M30x260	200	9.0

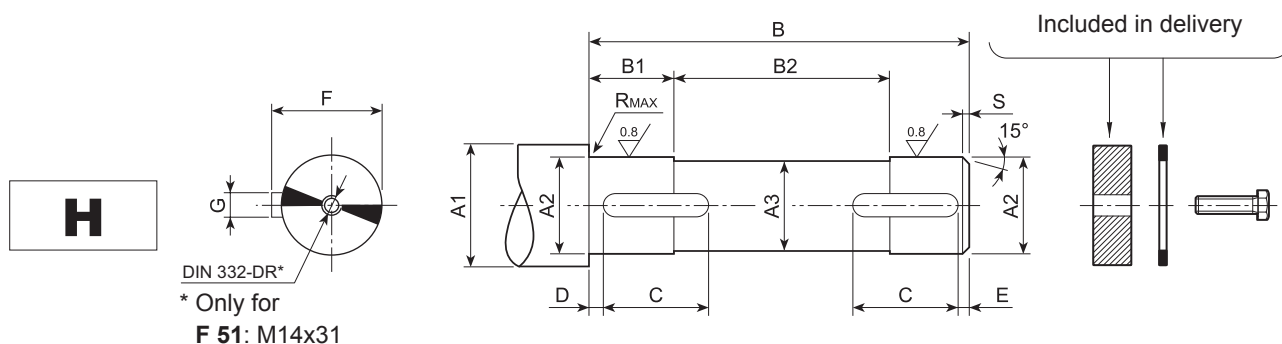
f_t = shortening of the rubber buffer under rated torque transmission.



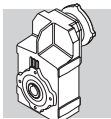
63 CUSTOMER' SHAFT

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.

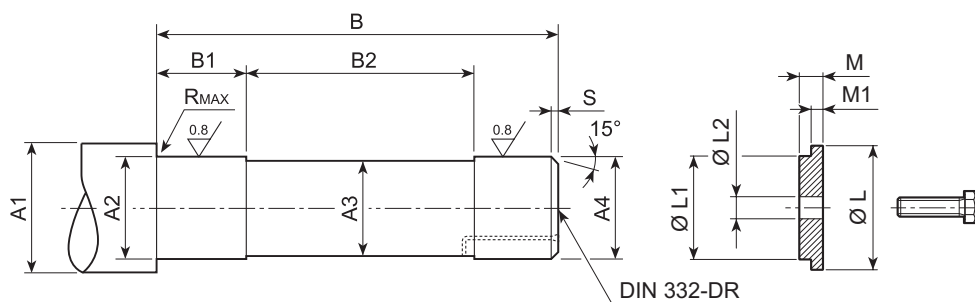
A device such as that illustrated below should also be installed to secure the shaft axially. Take care to verify and dimension the various components to suit the needs of the application.



	A1	A2	A3	B	B1	B2	C	D	E	F	G	R	S	UNI 6604	UNI 5739
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	49.5	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	

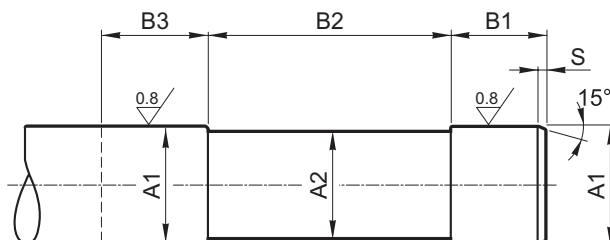


S

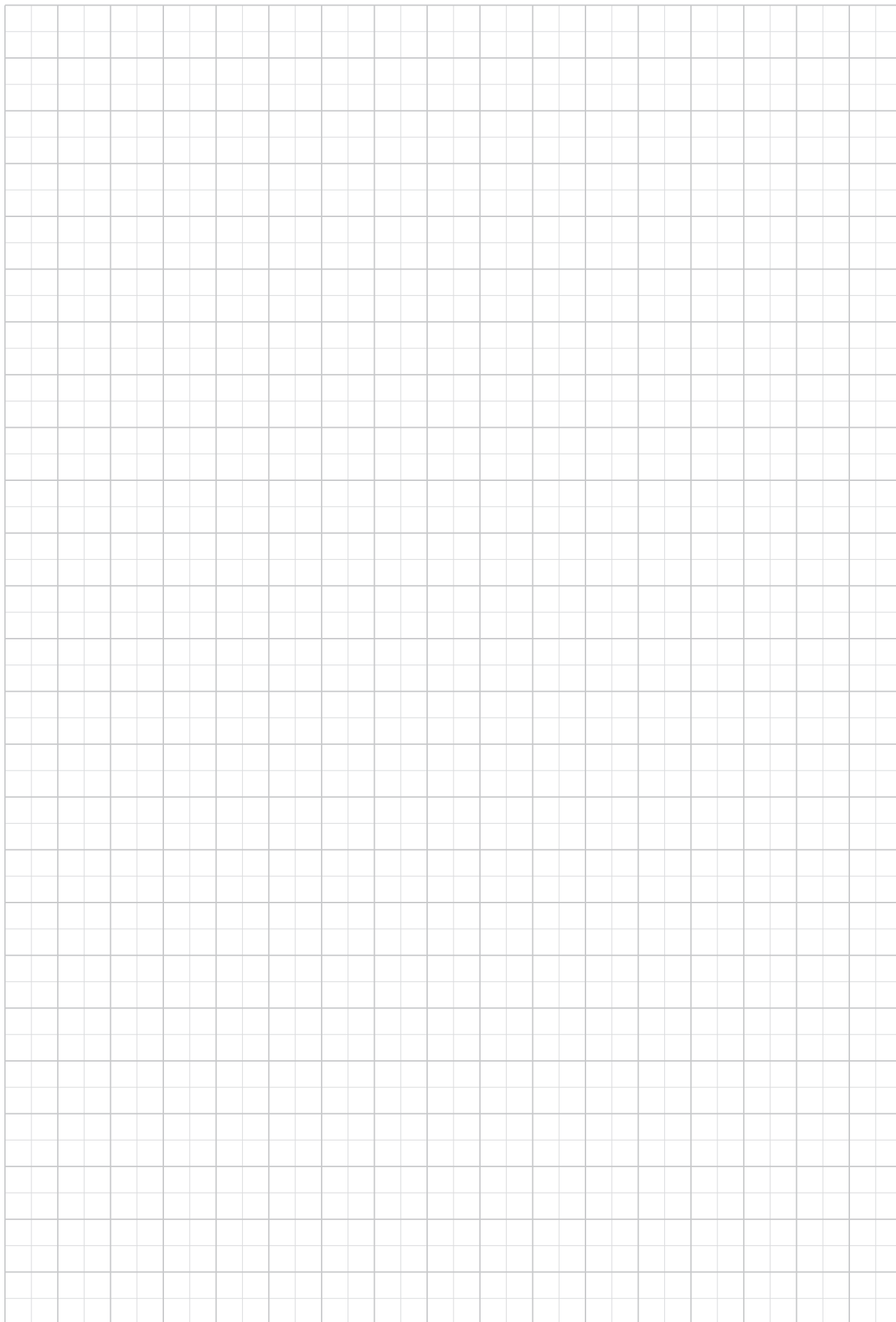
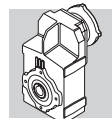


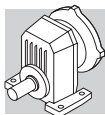
	A1	A2	A3	A4	B	B1	B2	R	S	L	L1	L2	M	M1	UNI 5739
F 10	≥ 36	27 h7	24	25 h6	138	34	70	0.5	1.5	29.5	25 d9	9	7	5.5	M8x25
F 20	≥ 42	32 h7	29	30 h6	160	38	84	0.5	1.5	35.5	30 d9	9	7	5.5	M8x25
F 25	≥ 42	32 h7	30	31 h6	172	38	96	0.5	1.5	35.5	31 d9	9	7	5.5	M8x25
F 31	≥ 50	38 h7	35	36 h6	155	40	73	1	2	43	36 d9	9	7	5.5	M8x25
F 41	≥ 58	44 h7	41	42 h6	177	46.5	82	1	2	49	42 d9	11	8.5	7	M10x30
F 51	≥ 68	54 h7	51	52 g6	201	48	91	1	2	61	52 d9	18	9	7.5	M16x45
F 60	≥ 84	67 h7	64	65 g6	248	53	133	1.5	2	80	65 d9	18	9	7.5	M16x45
F 70	≥ 104	82 h7	79	80 g6	308	78	140	2.5	2.5	95	80 d9	22	13.5	12	M20x55
F 80	≥ 114	92 h7	89	90 g6	365	88	177	2.5	2.5	105	90 d9	22	13.5	12	M20x55
F 90	≥ 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
F 10	QF25	25 h6	24	41	83	≥ 50	1.5
	QF30	30 h6	29				
F 20	QF25	25 h6	24	41	104.5	≥ 50	1.5
	QF30	30 h6	29				
F 25	QF30	30 h6	29	41	120.5	≥ 50	1.5
	QF32	32 h6	31				
F 31	QF35	35 h6	34	45	95.5	≥ 54	1.5
	QF40	40 h6	39				
F 41	QF42	42 h6	41	46	112.5	≥ 55	2
	QF45	45 h6	44				
F 51	QF50	50 h6	49	48	131	≥ 57	2
	QF55	55 h6	54				
F 60	QF60	60 h6	59	57	158	≥ 66	2.5
	QF65	65 h6	64				
	QF70	70 h6	69				





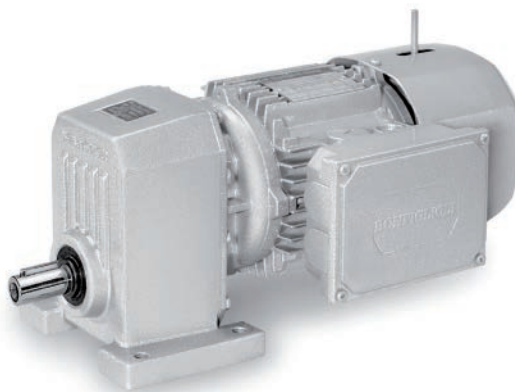
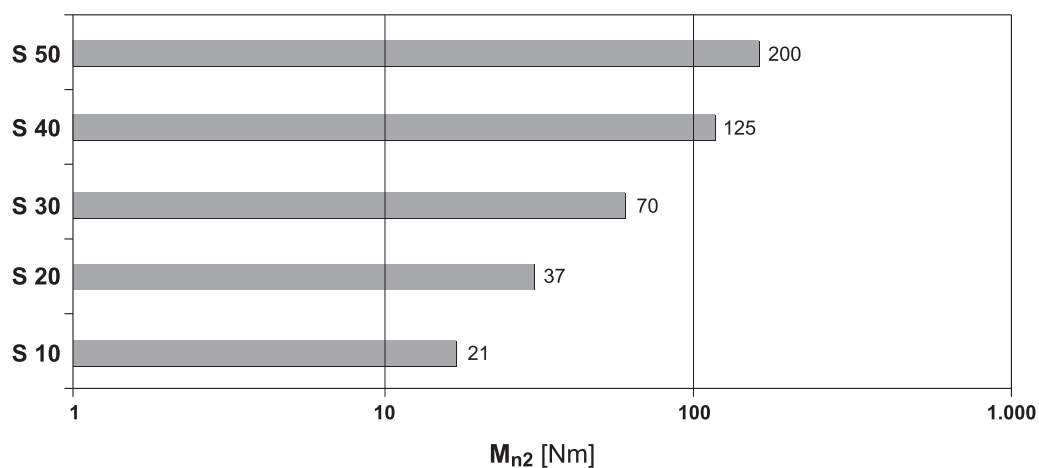
SINGLE STAGE GEARBOXES SERIES S

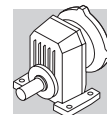
64 DESIGN FEATURES

The main design characteristics are:

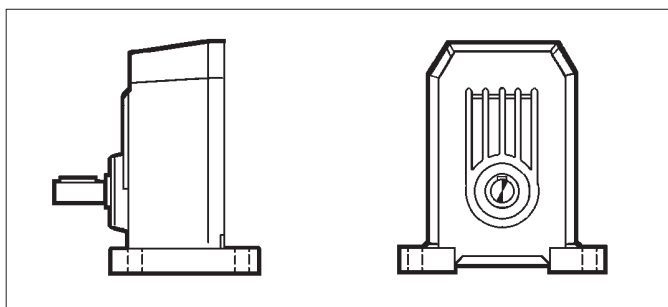
- modularity
- space effective
- high efficiency
- quiet operation
- gears in hardened and case-hardened steel
- bare aluminium housing for sizes 10, 20, 30, unpainted high strength painted cast-iron housings for larger frame sizes
- input and output shafts from high grade steel.

(E 50)





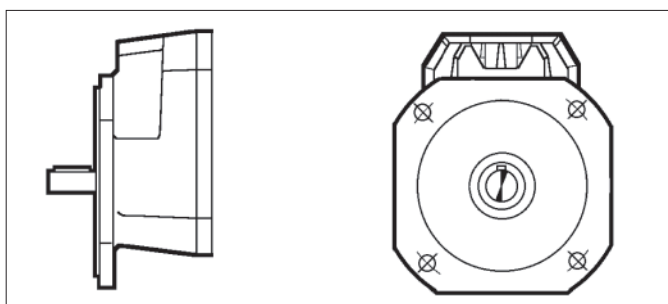
65 VERSIONS



P

Foot mount

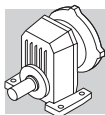
S 10 ... S 50



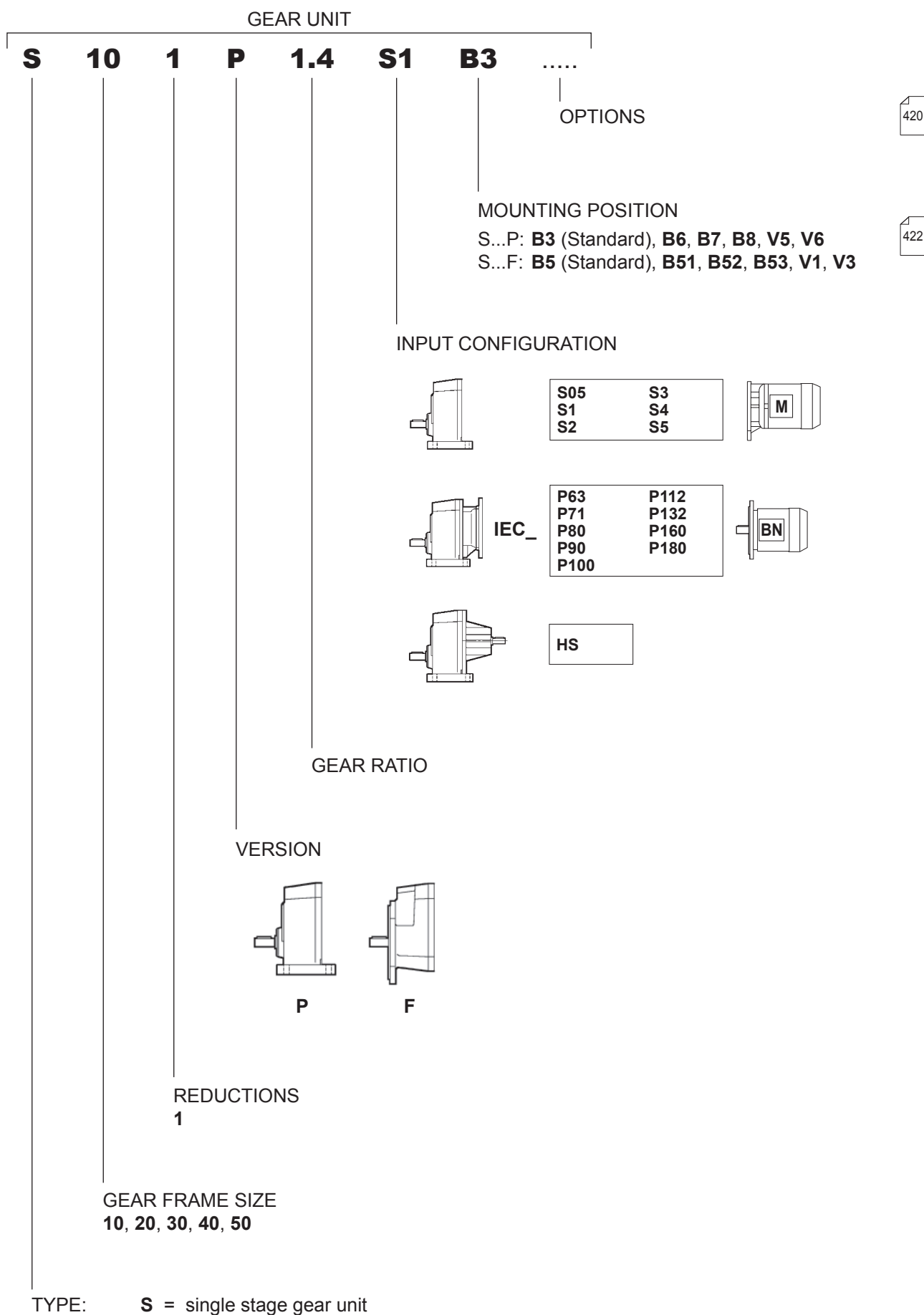
F

Flange mount

S 10 ... S 50

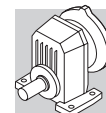


66 DESIGNATION

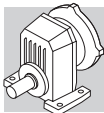


420

422



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, AFD (d.c. brake)     FA, BA (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 M = compact 3-phase BN = IEC 3-phase



66.1 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.

66.2 Motor options

AA, AC, AD

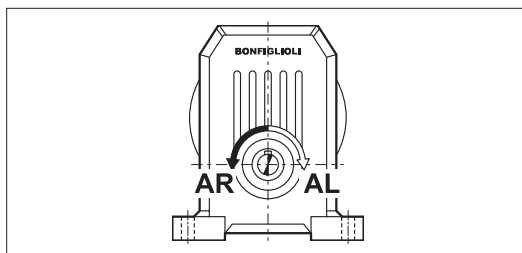
Mutual position of the brake release lever and terminal box. View is from the fan side.

Standard position = 90° clockwise. AA = 0°, AC = 180°, AD = 90° counterclockwise.

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 Series motors. Table E51 shows the direction of free rotation of the gearbox, on the basis of which the correct option must be selected.

(E 51)



CF

Capacitive filter.

D3

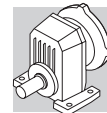
3 bimetallic winding temperature sensors, calibrated at 150°C.

E3

3 winding temperature thermistors, calibrated at 150°C.

F1

Flywheel for soft start and stop.

**H1**

Anti condensate heaters. Standard voltage 1~ 230V $\pm 10\%$.

PN

60 Hz power corresponding to the normalized 50 Hz power.

PS

Double shaft extension (barring RC and U1 options).

RC

Drip cover (barring option PS).

RV

Rotor balancing in vibration class B.

TC

Option TC is a rain canopy variant for textile industry environments.

This option is not compatible with variants EN1, EN2, EN3 and will not fit motors equipped with a BA brake.

TP

Tropicalization.

U1

Forced cooling (barring options PS and CUS).

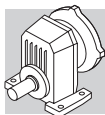
U2

Separate supply forced ventilation without terminal box. Cables are pre-wired. Configuration is not compatible with options PS and CUS. Available on motors;

BN 71 ... BN 132,

M1 ... M4.

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



67 LUBRICATION

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

Frame sizes S10, S20, S30 and S40 are supplied by the factory, or by the authorized dealers, already filled with oil.

Unless otherwise specified, units size S50 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).

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

Operation of gear units is permitted at ambient temperatures between -20°C and $+40^{\circ}\text{C}$. However, for temperatures between -20°C and -10°C unit may only start up after it has been progressively and evenly pre-heated, or otherwise initially operated unloaded.

Load may then be connected to the output shaft when the gear unit has reached the temperature of -10°C , or higher.

68 MOUNTING POSITION AND TERMINAL BOX ANGULAR LOCATION

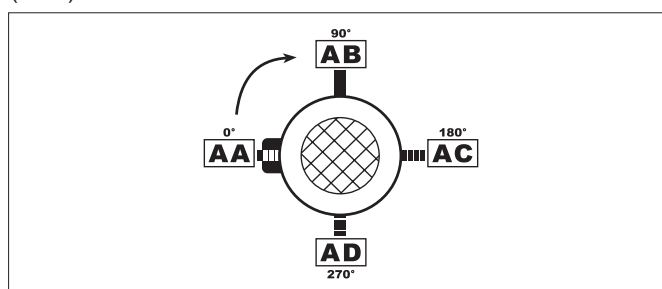
Location of motor terminal box can be specified by viewing the motor from the fan side; standard location is shown in black (W).

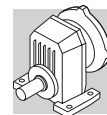
Angular position of the brake release lever.

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.

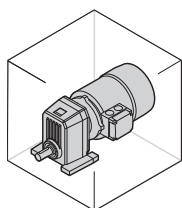
(E 52)



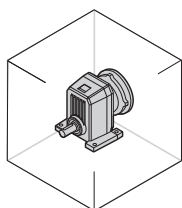


S ... P

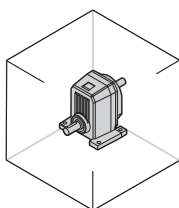
B3



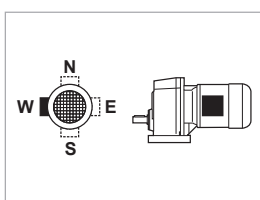
_S



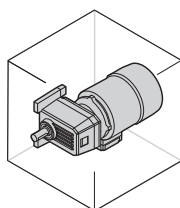
_P(IEC)



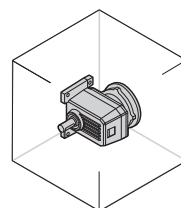
_HS



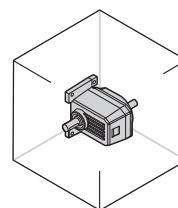
B6



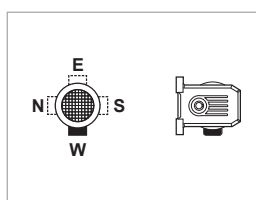
_S



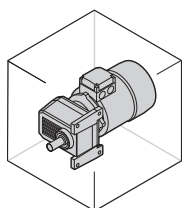
_P(IEC)



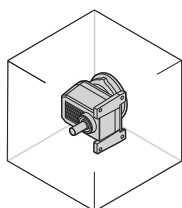
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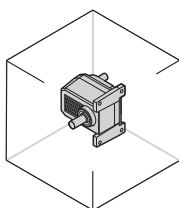
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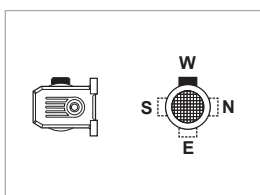
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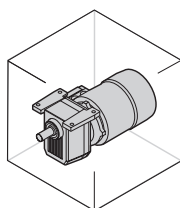
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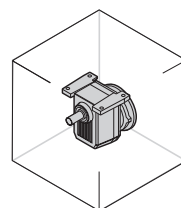
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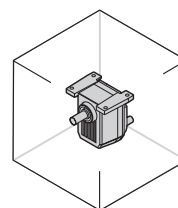
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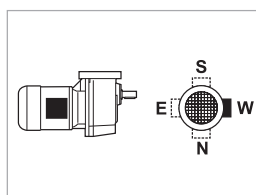
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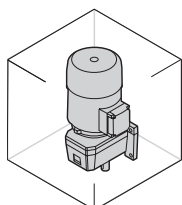
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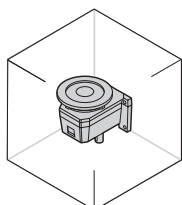
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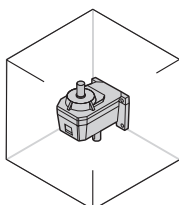
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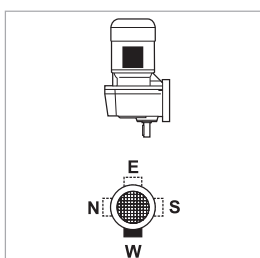
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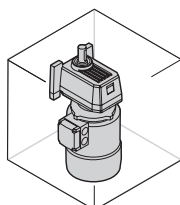
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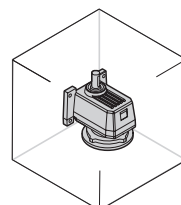
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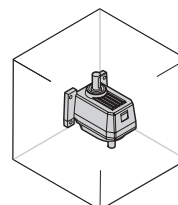
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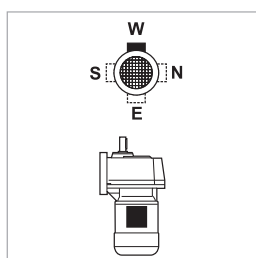
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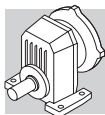
_P(IEC)



_HS

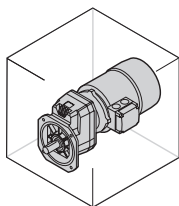


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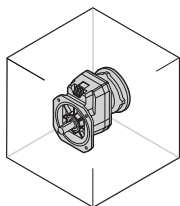


S ... F

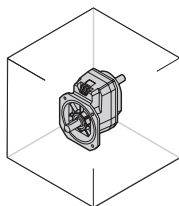
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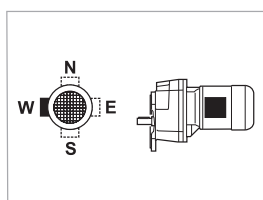
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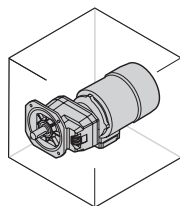
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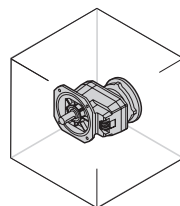
_HS



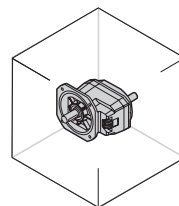
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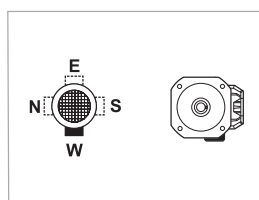
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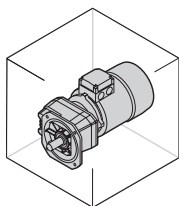
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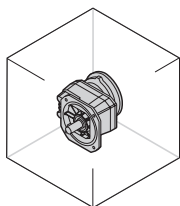
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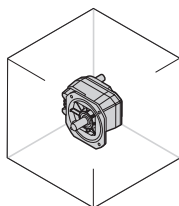
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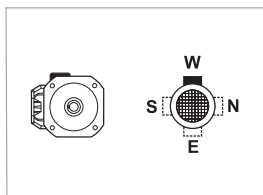
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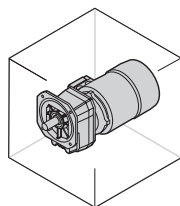
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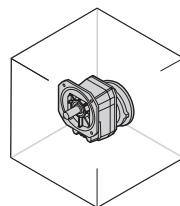
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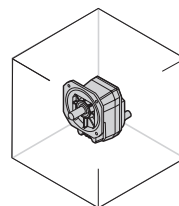
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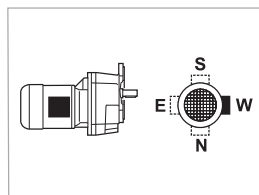
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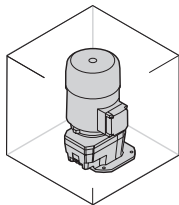
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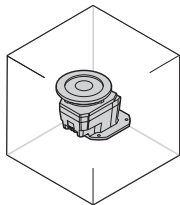
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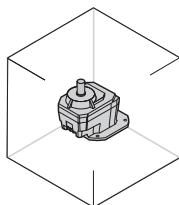
V1



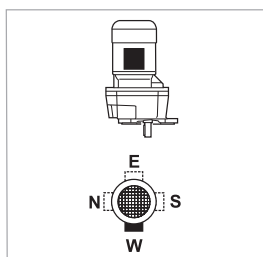
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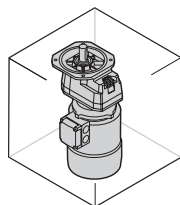
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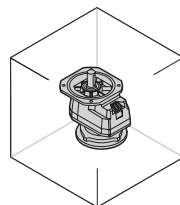
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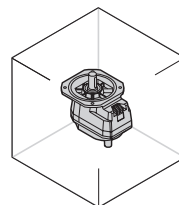
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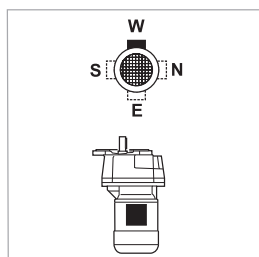
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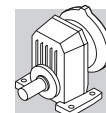
_P(IEC)



_HS



W = Default



69 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:

$$R_{c1} [N] = \frac{2000 \cdot M_1 [Nm] \cdot K_r}{d [mm]} \quad ; \quad R_{c2} [N] = \frac{2000 \cdot M_2 [Nm] \cdot K_r}{d [mm]} \quad (44)$$

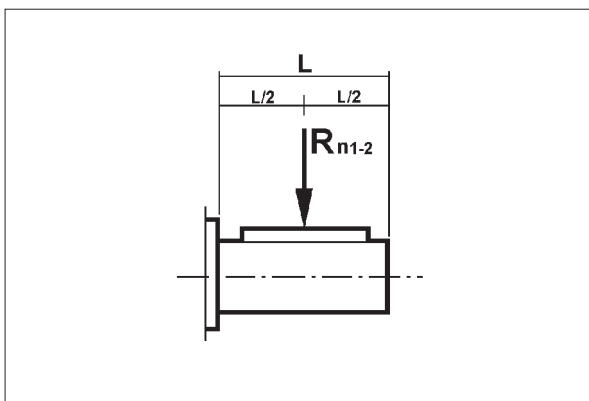
(E 53)

M₁ [Nm]	Torque applied to input shaft
M₂ [Nm]	Torque drawn at output shaft
d [mm]	Pitch diameter of element keyed onto shaft
K_r = 1	Chain transmission

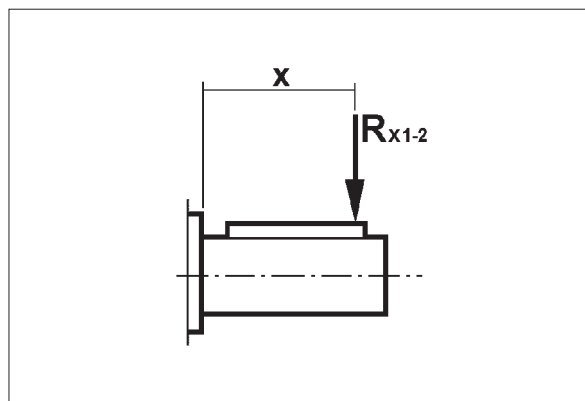
K_r = 1,25	Gear transmission
K_r = 1,5	V-belt transmission
K_r = 2,0	Flat belt transmission

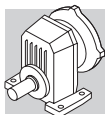
Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(E 54)



(E 55)





a) Load applied at midpoint of shaft, tab. (E54)

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. (E55)

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 56)

	Load location factors					
	Output shaft			Input shaft		
	a	b	c	a	b	c
S 10 1	61	46	200	21	1	300
S 20 1	73.5	53.5	270	40	20	350
S 30 1	91.5	66.5	380	38.5	18.5	350
S 40 1	126.5	96.5	600	49.5	24.5	450
S 50 1	153.5	113.5	680	49.5	24.5	450

Verification procedure is described here after.

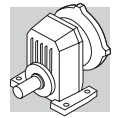
INPUT SHAFT

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:

$$R_{c2} \leq R_{x2} \quad (51)$$

70 THRUST LOADS, A_{n1} , A_{n2}

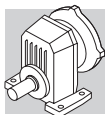
Permissible thrust loads on input $[A_{n1}]$ and output $[A_{n2}]$ shafts are obtained from the radial loading for the shaft under consideration $[R_{n1}]$ and $[R_{n2}]$ through the following equation:

$$\begin{aligned} A_{n1} &= R_{n1} \cdot 0,2 \\ A_{n2} &= R_{n2} \cdot 0,2 \end{aligned} \quad (52)$$

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.



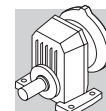
71 GEARMOTOR RATING CHARTS

0.09 kW

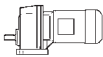
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
69	12.1	2.9	13.1	2400			S301_13.1 P63 BN63A6	457
73	11.5	1.7	12.4	1500	S201_12.4 S05 M05A6	454	S201_12.4 P63 BN63A6	455
74	11.4	1.1	12.3	1160	S101_12.3 S05 M05A6	452	S101_12.3 P63 BN63A6	453
85	10.0	2.0	10.8	1500	S201_10.8 S05 M05A6	454	S201_10.8 P63 BN63A6	455
88	9.5	1.3	10.3	1100	S101_10.3 S05 M05A6	452	S101_10.3 P63 BN63A6	453
103	8.2	1.5	8.9	1060	S101_8.9 S05 M05A6	452	S101_8.9 P63 BN63A6	453
107	7.9	2.5	8.5	1500	S201_8.5 S05 M05A6	454	S201_8.5 P63 BN63A6	455
132	6.4	2.7	6.9	990	S101_6.9 S05 M05A6	452	S101_6.9 P63 BN63A6	453
149	5.7	3.0	6.1	960	S101_6.1 S05 M05A6	452	S101_6.1 P63 BN63A6	453
193	4.4	3.2	4.7	890	S101_4.7 S05 M05A6	452	S101_4.7 P63 BN63A6	453
237	3.6	3.9	3.8	830	S101_3.8 S05 M05A6	452	S101_3.8 P63 BN63A6	453
284	3.0	4.7	3.2	790	S101_3.2 S05 M05A6	452	S101_3.2 P63 BN63A6	453
364	2.3	5.2	2.5	730	S101_2.5 S05 M05A6	452	S101_2.5 P63 BN63A6	453
485	1.7	6.9	1.9	670	S101_1.9 S05 M05A6	452	S101_1.9 P63 BN63A6	453
640	1.3	9.1	1.4	610	S101_1.4 S05 M05A6	452	S101_1.4 P63 BN63A6	453

0.12 kW

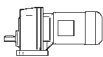
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
69	16.2	2.2	13.1	2400			S301_13.1 P63 BN63A4	457
73	15.3	1.3	12.4	1500	S201_12.4 S05 M05B6	454	S201_12.4 P63 BN63B6	455
85	13.3	1.5	10.8	1500	S201_10.8 S05 M05B6	454	S201_10.8 P63 BN63B6	455
88	12.7	2.8	10.3	2400			S301_10.3 P63 BN63B6	457
88	12.7	0.9	10.3	1060	S101_10.3 S05 M05B6	452	S101_10.3 P63 BN63B6	453
102	11.0	3.2	8.9	2400			S301_8.9 P63 BN63B6	457
103	11.0	1.1	8.9	1030	S101_8.9 S05 M05B6	452	S101_8.9 P63 BN63B6	453
107	10.5	2.8	13.1	2400			S301_13.1 P63 BN63B6	457
107	10.5	1.9	8.5	1500	S201_8.5 S05 M05B6	454	S201_8.5 P63 BN63B6	455
113	10.0	1.7	12.4	1500	S201_12.4 S05 M05A4	454	S201_12.4 P63 BN63A4	455
114	9.9	1.0	12.3	1000	S101_12.3 S05 M05A4	452	S101_12.3 P63 BN63A4	453
126	8.9	3.4	7.2	1500	S201_7.2 S05 M05B6	454	S201_7.2 P63 BN63B6	455
130	8.6	2.0	10.8	1500	S201_10.8 S05 M05A4	454	S201_10.8 P63 BN63A4	455
132	8.5	2.0	6.9	960	S101_6.9 S05 M05B6	452	S101_6.9 P63 BN63B6	453
136	8.3	1.2	10.3	960	S101_10.3 S05 M05A4	452	S101_10.3 P63 BN63A4	453
149	7.5	2.3	6.1	940	S101_6.1 S05 M05B6	452	S101_6.1 P63 BN63B6	453
158	7.1	1.4	8.9	920	S101_8.9 S05 M05A4	452	S101_8.9 P63 BN63A4	453
165	6.8	2.5	8.5	1500	S201_8.5 S05 M05A4	454	S201_8.5 P63 BN63A4	455
193	5.8	2.4	4.7	870	S101_4.7 S05 M05B6	452	S101_4.7 P63 BN63B6	453
203	5.5	2.7	6.9	860	S101_6.9 S05 M05A4	452	S101_6.9 P63 BN63A4	453
229	4.9	3.1	6.1	830	S101_6.1 S05 M05A4	452	S101_6.1 P63 BN63A4	453
237	4.7	2.9	3.8	820	S101_3.8 S05 M05B6	452	S101_3.8 P63 BN63B6	453
284	3.9	3.5	3.2	780	S101_3.2 S05 M05B6	452	S101_3.2 P63 BN63B6	453
296	3.8	3.2	4.7	770	S101_4.7 S05 M05A4	452	S101_4.7 P63 BN63A4	453
364	3.1	3.9	3.8	720	S101_3.8 S05 M05A4	452	S101_3.8 P63 BN63A4	453
364	3.1	3.9	2.5	720	S101_2.5 S05 M05B6	452	S101_2.5 P63 BN63B6	453
438	2.6	4.7	3.2	680	S101_3.2 S05 M05A4	452	S101_3.2 P63 BN63A4	453

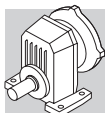


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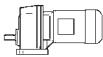
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
485	2.3	5.2	1.9	660	S101_1.9 S05 M05B6	452	S101_1.9 P63 BN63B6	453
560	2.0	5.0	2.5	630	S101_2.5 S05 M05A4	452	S101_2.5 P63 BN63A4	453
640	1.8	6.8	1.4	600	S101_1.4 S05 M05B6	452	S101_1.4 P63 BN63B6	453
747	1.5	6.6	1.9	580	S101_1.9 S05 M05A4	452	S101_1.9 P63 BN63A4	453
985	1.1	8.8	1.4	530	S101_1.4 S05 M05A4	452	S101_1.4 P63 BN63A4	453

0.18 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
69	24.6	1.4	13.1	2400	S401_12.4 S1 M1SC6	458	S301_13.1 P71 BN71A6	457
73	23.2	2.5	12.4	3800			S401_12.4 P71 BN71A6	459
84	20.1	1.0	10.8	1500			S201_10.8 P71 BN71A6	455
84	20.0	2.9	10.7	3800	S401_10.7 S1 M1SC6	458	S401_10.7 P71 BN71A6	459
87	19.3	1.8	10.3	2400	S301_10.3 S1 M1SC6	456	S301_10.3 P71 BN71A6	457
101	16.6	2.1	8.9	2400	S301_8.9 S1 M1SC6	456	S301_8.9 P71 BN71A6	457
106	15.9	1.3	8.5	1500	S201_8.5 S1 M1SC6	454	S201_8.5 P71 BN71A6	455
106	15.9	1.9	13.1	2400	S201_12.4 S05 M05B4	454	S301_13.1 P63 BN63B4	457
112	15.1	1.1	12.4	1500			S201_12.4 P63 BN63B4	455
112	15.0	3.3	12.4	3800			S401_12.4 P63 BN63B4	459
125	13.5	2.2	7.2	1500	S201_7.2 S1 M1SC6	454	S201_7.2 P71 BN71A6	455
129	13.0	1.3	10.8	1500	S201_10.8 S05 M05B4	454	S201_10.8 P63 BN63B4	455
130	12.9	1.3	6.9	910	S101_6.9 S1 M1SC6	452	S101_6.9 P71 BN71A6	453
135	12.5	2.4	10.3	2330	S101_6.1 S1 M1SC6	452	S301_10.3 P63 BN63B4	457
147	11.4	1.5	6.1	890			S101_6.1 P71 BN71A6	453
155	10.9	2.8	5.8	1500			S201_5.8 P71 BN71A6	455
156	10.8	2.8	8.9	2230	S101_8.9 S05 M05B4	452	S301_8.9 P63 BN63B4	457
157	10.8	0.9	8.9	880			S101_8.9 P63 BN63B4	453
164	10.3	1.7	8.5	1500			S201_8.5 P63 BN63B4	455
189	8.9	3.4	4.8	1500	S201_4.8 S1 M1SC6	454	S201_4.8 P71 BN71A6	455
190	8.8	1.6	4.7	830	S101_4.7 S1 M1SC6	452	S101_4.7 P71 BN71A6	453
192	8.8	3.0	7.2	1500	S201_7.2 S05 M05B4	454	S201_7.2 P63 BN63B4	455
201	8.4	1.8	6.9	820	S101_6.9 S05 M05B4	452	S101_6.9 P63 BN63B4	453
214	7.9	3.1	13.1	2020	S201_12.4 S05 M05A2	454	S301_13.1 P63 BN63A2	457
226	7.5	1.7	12.4	1480			S201_12.4 P63 BN63A2	455
227	7.4	2.0	6.1	800			S101_6.1 P63 BN63B4	453
228	7.4	1.1	12.3	800	S101_12.3 S05 M05A2	452	S101_12.3 P63 BN63A2	453
234	7.2	1.9	3.8	790	S101_3.8 S1 M1SC6	452	S101_3.8 P71 BN71A6	453
261	6.4	2.0	10.8	1420	S201_10.8 S05 M05A2	454	S201_10.8 P63 BN63A2	455
273	6.2	1.3	10.3	760	S101_10.3 S05 M05A2	452	S101_10.3 P63 BN63A2	453
281	6.0	2.3	3.2	750	S101_3.2 S1 M1SC6	452	S101_3.2 P71 BN71A6	453
294	5.7	2.1	4.7	750	S101_4.7 S05 M05B4	452	S101_4.7 P63 BN63B4	453
317	5.3	1.5	8.9	730	S101_8.9 S05 M05A2	452	S101_8.9 P63 BN63A2	453
331	5.1	2.6	8.5	1320	S201_8.5 S05 M05A2	454	S201_8.5 P63 BN63A2	455
360	4.7	2.6	2.5	700	S101_2.5 S1 M1SC6	452	S101_2.5 P71 BN71A6	453
361	4.7	2.6	3.8	700	S101_3.8 S05 M05B4	452	S101_3.8 P63 BN63B4	453
407	4.1	2.9	6.9	680	S101_6.9 S05 M05A2	452	S101_6.9 P63 BN63A2	453
434	3.9	3.1	3.2	670	S101_3.2 S05 M05B4	452	S101_3.2 P63 BN63B4	453
460	3.7	3.3	6.1	660	S101_6.1 S05 M05A2	452	S101_6.1 P63 BN63A2	453

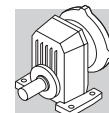


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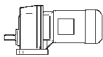
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
480	3.5	3.4	1.9	640	S101_1.9 S1 M1SC6	452	S101_1.9 P71 BN71A6	453
556	3.0	3.3	2.5	620	S101_2.5 S05 M05B4	452	S101_2.5 P63 BN63B4	453
594	2.8	3.5	4.7	610	S101_4.7 S05 M05A2	452	S101_4.7 P63 BN63A2	453
633	2.7	4.5	1.4	590	S101_1.4 S1 M1SC6	452	S101_1.4 P71 BN71A6	453
731	2.3	4.3	3.8	570	S101_3.8 S05 M05A2	452	S101_3.8 P63 BN63A2	453
741	2.3	4.4	1.9	570	S101_1.9 S05 M05B4	452	S101_1.9 P63 BN63B4	453
878	1.9	5.2	3.2	540	S101_3.2 S05 M05A2	452	S101_3.2 P63 BN63A2	453
978	1.7	5.8	1.4	520	S101_1.4 S05 M05B4	452	S101_1.4 P63 BN63B4	453
1124	1.5	5.3	2.5	500	S101_2.5 S05 M05A2	452	S101_2.5 P63 BN63A2	453
1499	1.1	7.1	1.9	460	S101_1.9 S05 M05A2	452	S101_1.9 P63 BN63A2	453
1977	0.9	9.4	1.4	420	S101_1.4 S05 M05A2	452	S101_1.4 P63 BN63A2	453

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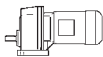
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
69	34.1	1.0	13.1	2400			S301_13.1 P71 BN71B6	457
70	33.5	3.0	12.9	6520	S501_12.9 S1 M1SD6	460	S501_12.9 P71 BN71B6	461
73	32.2	1.8	12.4	3800	S401_12.4 S1 M1SD6	458	S401_12.4 P71 BN71B6	459
84	27.7	2.1	10.7	3800	S401_10.7 S1 M1SD6	458	S401_10.7 P71 BN71B6	459
87	26.8	1.3	10.3	2400	S301_10.3 S1 M1SD6	456	S301_10.3 P71 BN71B6	457
101	23.1	1.5	8.9	2400	S301_8.9 S1 M1SD6	456	S301_8.9 P71 BN71B6	457
104	22.5	3.1	8.6	3800	S401_8.6 S1 M1SD6	458	S401_8.6 P71 BN71B6	459
105	22.3	1.3	13.1	2400			S301_13.1 P71 BN71A4	457
106	22.1	0.9	8.5	1500	S201_8.5 S1 M1SD6	454	S201_8.5 P71 BN71B6	455
111	21.1	2.4	12.4	3800			S401_12.4 P71 BN71A4	459
125	18.8	1.6	7.2	1500	S201_7.2 S1 M1SD6	454	S201_7.2 P71 BN71B6	455
127	18.4	3.1	7.1	2340	S301_7.1 S1 M1SD6	456	S301_7.1 P71 BN71B6	457
128	18.3	0.9	10.8	1500	S201_10.8 S05 M05C4	454	S201_10.8 P71 BN71A4	455
129	18.2	2.8	10.7	3800			S401_10.7 P71 BN71A4	459
130	17.9	0.9	6.9	850	S101_6.9 S1 M1SD6	452	S101_6.9 P71 BN71B6	453
133	17.5	1.7	10.3	2300			S301_10.3 P71 BN71A4	457
147	15.9	1.1	6.1	840	S101_6.1 S1 M1SD6	452	S101_6.1 P71 BN71B6	453
155	15.1	2.0	5.8	1500	S201_5.8 S1 M1SD6	454	S201_5.8 P71 BN71B6	455
155	15.1	2.0	8.9	2200			S301_8.9 P71 BN71A4	457
162	14.5	1.2	8.5	1500	S201_8.5 S05 M05C4	454	S201_8.5 P71 BN71A4	455
189	12.4	2.4	4.8	1500	S201_4.8 S1 M1SD6	454	S201_4.8 P71 BN71B6	455
190	12.3	1.1	4.7	790	S101_4.7 S1 M1SD6	452	S101_4.7 P71 BN71B6	453
190	12.3	2.1	7.2	1500	S201_7.2 S05 M05C4	454	S201_7.2 P71 BN71A4	455
199	11.7	1.3	6.9	780	S101_6.9 S05 M05C4	452	S101_6.9 P71 BN71A4	453
214	10.9	2.2	13.1	2000			S301_13.1 P63 BN63B2	457
225	10.4	1.4	6.1	770	S101_6.1 S05 M05C4	452	S101_6.1 P71 BN71A4	453
226	10.3	1.3	12.4	1450	S201_12.4 S05 M05B2	454	S201_12.4 P63 BN63B2	455
229	10.2	2.9	3.9	1440	S201_3.9 S1 M1SD6	454	S201_3.9 P71 BN71B6	455
234	10.0	1.4	3.8	750	S101_3.8 S1 M1SD6	452	S101_3.8 P71 BN71B6	453
236	9.9	2.6	5.8	1430	S201_5.8 S05 M05C4	454	S201_5.8 P71 BN71A4	455
261	9.0	1.5	10.8	1390	S201_10.8 S05 M05B2	454	S201_10.8 P63 BN63B2	455
273	8.6	2.8	10.3	1860			S301_10.3 P63 BN63B2	457
273	8.6	0.9	10.3	730	S101_10.3 S05 M05B2	452	S101_10.3 P63 BN63B2	453

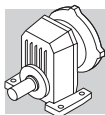


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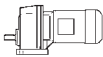
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
281	8.3	1.7	3.2	720	S101_3.2 S1 M1SD6	452	S101_3.2 P71 BN71B6	453
288	8.1	3.2	4.8	1350	S201_4.8 S05 M05C4	454	S201_4.8 P71 BN71A4	455
291	8.0	1.5	4.7	720	S101_4.7 S05 M05C4	452	S101_4.7 P71 BN71A4	453
316	7.4	3.2	8.9	1770			S301_8.9 P63 BN63B2	457
317	7.4	1.1	8.9	710	S101_8.9 S05 M05B2	452	S101_8.9 P63 BN63B2	453
331	7.1	1.8	8.5	1300	S201_8.5 S05 M05B2	454	S201_8.5 P63 BN63B2	455
358	6.5	1.8	3.8	680	S101_3.8 S05 M05C4	452	S101_3.8 P71 BN71A4	453
360	6.5	1.8	2.5	680	S101_2.5 S1 M1SD6	452	S101_2.5 P71 BN71B6	453
389	6.0	3.5	7.2	1240	S201_7.2 S05 M05B2	454	S201_7.2 P63 BN63B2	455
407	5.7	2.1	6.9	660	S101_6.9 S05 M05B2	452	S101_6.9 P63 BN63B2	453
430	5.4	2.2	3.2	650	S101_3.2 S05 M05C4	452	S101_3.2 P71 BN71A4	453
460	5.1	2.4	6.1	640	S101_6.1 S05 M05B2	452	S101_6.1 P63 BN63B2	453
480	4.9	2.5	1.9	620	S101_1.9 S1 M1SD6	452	S101_1.9 P71 BN71B6	453
550	4.3	2.4	2.5	610	S101_2.5 S05 M05C4	452	S101_2.5 P71 BN71A4	453
594	3.9	2.5	4.7	600	S101_4.7 S05 M05B2	452	S101_4.7 P63 BN63B2	453
633	3.7	3.2	1.4	580	S101_1.4 S1 M1SD6	452	S101_1.4 P71 BN71B6	453
731	3.2	3.1	3.8	560	S101_3.8 S05 M05B2	452	S101_3.8 P63 BN63B2	453
733	3.2	3.1	1.9	560	S101_1.9 S05 M05C4	452	S101_1.9 P71 BN71A4	453
878	2.7	3.8	3.2	530	S101_3.2 S05 M05B2	452	S101_3.2 P63 BN63B2	453
968	2.4	4.1	1.4	510	S101_1.4 S05 M05C4	452	S101_1.4 P71 BN71A4	453
1124	2.1	3.8	2.5	500	S101_2.5 S05 M05B2	452	S101_2.5 P63 BN63B2	453
1499	1.6	5.1	1.9	450	S101_1.9 S05 M05B2	452	S101_1.9 P63 BN63B2	453
1977	1.2	6.8	1.4	420	S101_1.4 S05 M05B2	452	S101_1.4 P63 BN63B2	453

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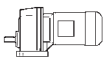
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
71	49.0	2.0	12.9	6420	S501_12.9 S1 M1LA6	460	S501_12.9 P80 BN80A6	461
73	47.2	1.2	12.4	3800	S401_12.4 S1 M1LA6	458	S401_12.4 P80 BN80A6	459
85	40.6	1.4	10.7	3800	S401_10.7 S1 M1LA6	458	S401_10.7 P80 BN80A6	459
87	39.8	2.9	10.5	6020	S501_10.5 S1 M1LA6	460	S501_10.5 P80 BN80A6	461
102	33.8	1.0	8.9	2400	S301_8.9 S1 M1LA6	456	S301_8.9 P80 BN80A6	457
104	33.2	0.9	13.1	2390			S301_13.1 P71 BN71B4	457
105	32.9	2.1	8.6	3800	S401_8.6 S1 M1LA6	458	S401_8.6 P80 BN80A6	459
106	32.6	3.1	12.9	5650	S501_12.9 S1 M1SD4	460	S501_12.9 P71 BN71B4	461
110	31.3	1.6	12.4	3800	S401_12.4 S1 M1SD4	458	S401_12.4 P71 BN71B4	459
126	27.5	1.1	7.2	1500	S201_7.2 S1 M1LA6	454	S201_7.2 P80 BN80A6	455
127	27.2	3.3	7.2	3800	S401_7.2 S1 M1LA6	458	S401_7.2 P80 BN80A6	459
128	27.0	2.1	7.1	2260	S301_7.1 S1 M1LA6	456	S301_7.1 P80 BN80A6	457
128	27.0	1.9	10.7	3800	S401_10.7 S1 M1SD4	458	S401_10.7 P71 BN71B4	459
133	26.0	1.2	10.3	2240	S301_10.3 S1 M1SD4	456	S301_10.3 P71 BN71B4	457
154	22.5	1.3	8.9	2150	S301_8.9 S1 M1SD4	456	S301_8.9 P71 BN71B4	457
156	22.2	2.6	5.8	2140	S301_5.8 S1 M1LA6	456	S301_5.8 P80 BN80A6	457
156	22.1	1.4	5.8	1500	S201_5.8 S1 M1LA6	454	S201_5.8 P80 BN80A6	455
159	21.8	2.7	8.6	3610	S401_8.6 S1 M1SD4	458	S401_8.6 P71 BN71B4	459
184	18.8	3.1	4.9	2040	S301_4.9 S1 M1LA6	456	S301_4.9 P80 BN80A6	457
190	18.3	1.4	7.2	1460	S201_7.2 S1 M1SD4	454	S201_7.2 P71 BN71B4	455
191	18.1	1.7	4.8	1460	S201_4.8 S1 M1LA6	454	S201_4.8 P80 BN80A6	455

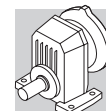


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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
193	17.9	2.8	7.1	2020	S301_7.1 S1 M1SD4	456	S301_7.1 P71 BN71B4	457
214	16.2	1.5	13.1	1960			S301_13.1 P71 BN71A2	457
224	15.4	1.0	6.1	710	S101_6.1 S1 M1SD4	452	S101_6.1 P71 BN71B4	453
227	15.3	2.6	12.4	3230			S401_12.4 P71 BN71A2	459
231	15.0	2.0	3.9	1380	S201_3.9 S1 M1LA6	454	S201_3.9 P80 BN80A6	455
234	14.8	3.4	5.8	1900	S301_5.8 S1 M1SD4	456	S301_5.8 P71 BN71B4	457
235	14.7	1.8	5.8	1390	S201_5.8 S1 M1SD4	454	S201_5.8 P71 BN71B4	455
237	14.6	1.0	3.8	690	S101_3.8 S1 M1LA6	452	S101_3.8 P80 BN80A6	453
261	13.2	1.0	10.8	1350	S201_10.8 S05 M05C2	454	S201_10.8 P71 BN71A2	455
263	13.1	3.0	10.7	3080			S401_10.7 P71 BN71A2	459
273	12.7	1.9	10.3	1820			S301_10.3 P71 BN71A2	457
284	12.2	1.1	3.2	670	S101_3.2 S1 M1LA6	452	S101_3.2 P80 BN80A6	453
287	12.1	2.2	4.8	1310	S201_4.8 S1 M1SD4	454	S201_4.8 P71 BN71B4	455
290	11.9	1.0	4.7	670	S101_4.7 S1 M1SD4	452	S101_4.7 P71 BN71B4	453
293	11.8	2.5	3.1	1300	S201_3.1 S1 M1LA6	454	S201_3.1 P80 BN80A6	455
316	11.0	2.2	8.9	1740			S301_8.9 P71 BN71A2	457
331	10.5	1.2	8.5	1270	S201_8.5 S05 M05C2	454	S201_8.5 P71 BN71A2	455
348	9.9	2.6	3.9	1240	S201_3.9 S1 M1SD4	454	S201_3.9 P71 BN71B4	455
356	9.7	1.2	3.8	640	S101_3.8 S1 M1SD4	452	S101_3.8 P71 BN71B4	453
364	9.5	1.3	2.5	630	S101_2.5 S1 M1LA6	452	S101_2.5 P80 BN80A6	453
373	9.3	3.2	2.4	1210	S201_2.4 S1 M1LA6	454	S201_2.4 P80 BN80A6	455
389	8.9	2.4	7.2	1210	S201_7.2 S05 M05C2	454	S201_7.2 P71 BN71A2	455
407	8.5	1.4	6.9	630	S101_6.9 S05 M05C2	452	S101_6.9 P71 BN71A2	453
428	8.1	1.5	3.2	620	S101_3.2 S1 M1SD4	452	S101_3.2 P71 BN71B4	453
440	7.9	3.3	3.1	1160	S201_3.1 S1 M1SD4	454	S201_3.1 P71 BN71B4	455
460	7.5	1.6	6.1	610	S101_6.1 S05 M05C2	452	S101_6.1 P71 BN71A2	453
480	7.2	2.8	1.9	1130	S201_1.9 S1 M1LA6	454	S201_1.9 P80 BN80A6	455
483	7.2	2.9	5.8	1130	S201_5.8 S05 M05C2	454	S201_5.8 P71 BN71A2	455
485	7.1	1.7	1.9	590	S101_1.9 S1 M1LA6	452	S101_1.9 P80 BN80A6	453
548	6.3	1.6	2.5	580	S101_2.5 S1 M1SD4	452	S101_2.5 P71 BN71B4	453
594	5.8	1.7	4.7	570	S101_4.7 S05 M05C2	452	S101_4.7 P71 BN71A2	453
640	5.4	2.2	1.4	550	S101_1.4 S1 M1LA6	452	S101_1.4 P80 BN80A6	453
731	4.7	2.1	3.8	540	S101_3.8 S05 M05C2	452	S101_3.8 P71 BN71A2	453
731	4.7	2.1	1.9	540	S101_1.9 S1 M1SD4	452	S101_1.9 P71 BN71B4	453
878	3.9	2.5	3.2	520	S101_3.2 S05 M05C2	452	S101_3.2 P71 BN71A2	453
964	3.6	2.8	1.4	500	S101_1.4 S1 M1SD4	452	S101_1.4 P71 BN71B4	453
1124	3.1	2.6	2.5	480	S101_2.5 S05 M05C2	452	S101_2.5 P71 BN71A2	453
1499	2.3	3.5	1.9	440	S101_1.9 S05 M05C2	452	S101_1.9 P71 BN71A2	453
1977	1.8	4.6	1.4	410	S101_1.4 S05 M05C2	452	S101_1.4 P71 BN71A2	453

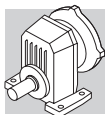
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
71	72.1	1.4	12.9	6290	S501_12.9 S2 M2SA6	460	S501_12.9 P80 BN80B6	461
86	59.7	1.0	10.7	3800	S401_10.7 S2 M2SA6	458	S401_10.7 P80 BN80B6	459
88	58.5	2.0	10.5	5910	S501_10.5 S2 M2SA6	460	S501_10.5 P80 BN80B6	461
105	49.1	2.5	8.8	5600	S501_8.8 S2 M2SA6	460	S501_8.8 P80 BN80B6	461
107	48.3	1.4	8.6	3800	S401_8.6 S2 M2SA6	458	S401_8.6 P80 BN80B6	459

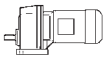


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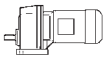
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
107	48.1	2.1	12.9	5560	S501_12.9 S1 M1LA4	460	S501_12.9 P80 BN80A4	461
111	46.3	1.1	12.4	3800	S401_12.4 S1 M1LA4	458	S401_12.4 P80 BN80A4	459
124	41.4	3.4	7.4	5310	S501_7.4 S2 M2SA6	460	S501_7.4 P80 BN80B6	461
129	40.0	2.2	7.2	3780	S401_7.2 S2 M2SA6	458	S401_7.2 P80 BN80B6	459
129	39.8	1.3	10.7	3770	S401_10.7 S1 M1LA4	458	S401_10.7 P80 BN80A4	459
130	39.7	1.5	7.1	2150	S301_7.1 S2 M2SA6	456	S301_7.1 P80 BN80B6	457
132	39.0	2.8	10.5	5220	S501_10.5 S1 M1LA4	460	S501_10.5 P80 BN80A4	461
152	33.9	3.1	6.1	3600	S401_6.1 S2 M2SA6	458	S401_6.1 P80 BN80B6	459
155	33.2	0.9	8.9	2060	S301_8.9 S1 M1LA4	456	S301_8.9 P80 BN80A4	457
157	32.7	1.8	5.8	2050	S301_5.8 S2 M2SA6	456	S301_5.8 P80 BN80B6	457
157	32.7	3.4	8.8	4940	S501_8.8 S1 M1LA4	460	S501_8.8 P80 BN80A4	461
158	32.6	0.9	5.8	1420	S201_5.8 S2 M2SA6	454	S201_5.8 P80 BN80B6	455
160	32.2	1.9	8.6	3540	S401_8.6 S1 M1LA4	458	S401_8.6 P80 BN80A4	459
186	27.6	2.1	4.9	1960	S301_4.9 S2 M2SA6	456	S301_4.9 P80 BN80B6	457
191	26.9	1.0	7.2	1370	S201_7.2 S1 M1LA4	454	S201_7.2 P80 BN80A4	455
193	26.7	1.1	4.8	1370	S201_4.8 S2 M2SA6	454	S201_4.8 P80 BN80B6	455
193	26.7	3.0	7.2	3350	S401_7.2 S1 M1LA4	458	S401_7.2 P80 BN80A4	459
195	26.4	1.9	7.1	1940	S301_7.1 S1 M1LA4	456	S301_7.1 P80 BN80A4	457
214	24.0	1.0	13.1	1900			S301_13.1 P71 BN71B2	457
218	23.6	3.4	12.9	4460	S501_12.9 S1 M1SD2	460	S501_12.9 P71 BN71B2	461
227	22.7	1.8	12.4	3190	S401_12.4 S1 M1SD2	458	S401_12.4 P71 BN71B2	459
233	22.1	2.6	3.9	1850	S301_3.9 S2 M2SA6	456	S301_3.9 P80 BN80B6	457
234	22.0	1.4	3.9	1300	S201_3.9 S2 M2SA6	454	S201_3.9 P80 BN80B6	455
236	21.8	2.3	5.8	1840	S301_5.8 S1 M1LA4	456	S301_5.8 P80 BN80A4	457
237	21.7	1.2	5.8	1310	S201_5.8 S1 M1LA4	454	S201_5.8 P80 BN80A4	455
263	19.5	2.0	10.7	3040	S401_10.7 S1 M1SD2	458	S401_10.7 P71 BN71B2	459
273	18.9	1.3	10.3	1780	S301_10.3 S1 M1SD2	456	S301_10.3 P71 BN71B2	457
280	18.4	2.7	4.9	1760	S301_4.9 S1 M1LA4	456	S301_4.9 P80 BN80A4	457
289	17.8	1.5	4.8	1250	S201_4.8 S1 M1LA4	454	S201_4.8 P80 BN80A4	455
296	17.4	1.7	3.1	1230	S201_3.1 S2 M2SA6	454	S201_3.1 P80 BN80B6	455
300	17.1	3.4	3.1	1720	S301_3.1 S2 M2SA6	456	S301_3.1 P80 BN80B6	457
316	16.3	1.5	8.9	1700	S301_8.9 S1 M1SD2	456	S301_8.9 P71 BN71B2	457
325	15.8	3.0	8.6	2850	S401_8.6 S1 M1SD2	458	S401_8.6 P71 BN71B2	459
350	14.7	3.4	3.9	1650	S301_3.9 S1 M1LA4	456	S301_3.9 P80 BN80A4	457
351	14.7	1.8	3.9	1190	S201_3.9 S1 M1LA4	454	S201_3.9 P80 BN80A4	455
377	13.6	2.2	2.4	1160	S201_2.4 S2 M2SA6	454	S201_2.4 P80 BN80B6	455
389	13.2	1.6	7.2	1160	S201_7.2 S1 M1SD2	454	S201_7.2 P71 BN71B2	455
396	13.0	3.1	7.1	1600	S301_7.1 S1 M1SD2	456	S301_7.1 P71 BN71B2	457
407	12.6	0.9	6.9	570	S101_6.9 S1 M1SD2	452	S101_6.9 P71 BN71B2	453
431	11.9	1.0	3.2	560	S101_3.2 S1 M1LA4	452	S101_3.2 P80 BN80A4	453
444	11.6	2.2	3.1	1120	S201_3.1 S1 M1LA4	454	S201_3.1 P80 BN80A4	455
460	11.2	1.1	6.1	570	S101_6.1 S1 M1SD2	452	S101_6.1 P71 BN71B2	453
483	10.7	2.0	5.8	1100	S201_5.8 S1 M1SD2	454	S201_5.8 P71 BN71B2	455
486	10.6	1.9	1.9	1080	S201_1.9 S2 M2SA6	454	S201_1.9 P80 BN80B6	455
491	10.5	1.1	1.9	540	S101_1.9 S2 M2SA6	452	S101_1.9 P80 BN80B6	453
504	10.2	3.4	1.8	1470	S301_1.8 S2 M2SA6	456	S301_1.8 P80 BN80B6	457
552	9.3	1.1	2.5	540	S101_2.5 S1 M1LA4	452	S101_2.5 P80 BN80A4	453
566	9.1	2.9	2.4	1050	S201_2.4 S1 M1LA4	454	S201_2.4 P80 BN80A4	455
589	8.7	2.4	4.8	1040	S201_4.8 S1 M1SD2	454	S201_4.8 P71 BN71B2	455
594	8.7	1.2	4.7	540	S101_4.7 S1 M1SD2	452	S101_4.7 P71 BN71B2	453
647	8.0	1.5	1.4	510	S101_1.4 S2 M2SA6	452	S101_1.4 P80 BN80B6	453

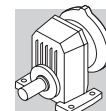


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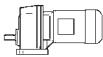
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
661	7.8	2.6	1.4	990	S201_1.4 S2 M2SA6	454	S201_1.4 P80 BN80B6	455
714	7.2	2.9	3.9	980	S201_3.9 S1 M1SD2	454	S201_3.9 P71 BN71B2	455
728	7.1	2.4	1.9	970	S201_1.9 S1 M1LA4	454	S201_1.9 P80 BN80A4	455
731	7.0	1.4	3.8	510	S101_3.8 S1 M1SD2	452	S101_3.8 P71 BN71B2	453
736	7.0	1.4	1.9	500	S101_1.9 S1 M1LA4	452	S101_1.9 P80 BN80A4	453
878	5.9	1.7	3.2	490	S101_3.2 S1 M1SD2	452	S101_3.2 P71 BN71B2	453
971	5.3	1.9	1.4	470	S101_1.4 S1 M1LA4	452	S101_1.4 P80 BN80A4	453
992	5.2	3.3	1.4	890			S201_1.4 P80 BN80A4	455
1124	4.6	1.7	2.5	460	S101_2.5 S1 M1SD2	452	S101_2.5 P71 BN71B2	453
1499	3.4	2.3	1.9	430	S101_1.9 S1 M1SD2	452	S101_1.9 P71 BN71B2	453
1977	2.6	3.1	1.4	390	S101_1.4 S1 M1SD2	452	S101_1.4 P71 BN71B2	453

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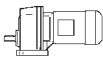
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
71	98.3	1.0	12.9	6170	S501_12.9 S2 M2SB6	460	S501_12.9 P90 BN90S6	461
88	79.8	1.4	10.5	5810	S501_10.5 S2 M2SB6	460	S501_10.5 P90 BN90S6	461
105	66.9	1.9	8.8	5520	S501_8.8 S2 M2SB6	460	S501_8.8 P90 BN90S6	461
107	65.9	1.1	8.6	3800	S401_8.6 S2 M2SB6	458	S401_8.6 P90 BN90S6	459
109	64.6	1.5	12.9	5460	S501_12.9 S2 M2SA4	460	S501_12.9 P80 BN80B4	461
124	56.5	2.5	7.4	5240	S501_7.4 S2 M2SB6	460	S501_7.4 P90 BN90S6	461
129	54.6	1.6	7.2	3700	S401_7.2 S2 M2SB6	458	S401_7.2 P90 BN90S6	459
130	54.1	1.1	7.1	2040	S301_7.1 S2 M2SB6	456	S301_7.1 P90 BN90S6	457
131	53.5	0.9	10.7	3670	S401_10.7 S2 M2SA4	458	S401_10.7 P80 BN80B4	459
134	52.4	2.1	10.5	5130	S501_10.5 S2 M2SA4	460	S501_10.5 P80 BN80B4	461
152	46.3	2.3	6.1	3530	S401_6.1 S2 M2SB6	458	S401_6.1 P90 BN90S6	459
152	46.2	3.2	6.1	4940	S501_6.1 S2 M2SB6	460	S501_6.1 P90 BN90S6	461
157	44.6	1.3	5.8	1960	S301_5.8 S2 M2SB6	456	S301_5.8 P90 BN90S6	457
160	44.0	2.5	8.8	4870	S501_8.8 S2 M2SA4	460	S501_8.8 P80 BN80B4	461
162	43.3	1.4	8.6	3460	S401_8.6 S2 M2SA4	458	S401_8.6 P80 BN80B4	459
186	37.6	1.5	4.9	1880	S301_4.9 S2 M2SB6	456	S301_4.9 P90 BN90S6	457
190	36.9	2.8	4.8	3300	S401_4.8 S2 M2SB6	458	S401_4.8 P90 BN90S6	459
196	35.9	2.2	7.2	3280	S401_7.2 S2 M2SA4	458	S401_7.2 P80 BN80B4	459
197	35.6	1.4	7.1	1860	S301_7.1 S2 M2SA4	456	S301_7.1 P80 BN80B4	457
217	32.3	2.5	12.9	4420	S501_12.9 S1 M1LA2	460	S501_12.9 P80 BN80A2	461
226	31.1	1.3	12.4	3150	S401_12.4 S1 M1LA2	458	S401_12.4 P80 BN80A2	459
231	30.4	3.0	6.1	3120	S401_6.1 S2 M2SA4	458	S401_6.1 P80 BN80B4	459
233	30.1	1.9	3.9	1780	S301_3.9 S2 M2SB6	456	S301_3.9 P90 BN90S6	457
234	30.0	1.0	3.9	1220	S201_3.9 S2 M2SB6	454	S201_3.9 P90 BN90S6	455
239	29.3	1.7	5.8	1780	S301_5.8 S2 M2SA4	456	S301_5.8 P80 BN80B4	457
263	26.7	1.5	10.7	3000	S401_10.7 S1 M1LA2	458	S401_10.7 P80 BN80A2	459
268	26.2	3.2	10.5	4140	S501_10.5 S1 M1LA2	460	S501_10.5 P80 BN80A2	461
272	25.8	0.9	10.3	1730	S301_10.3 S1 M1LA2	456	S301_10.3 P80 BN80A2	457
284	24.7	2.0	4.9	1700	S301_4.9 S2 M2SA4	456	S301_4.9 P80 BN80B4	457
294	23.9	1.1	4.8	1180	S201_4.8 S2 M2SA4	454	S201_4.8 P80 BN80B4	455
296	23.7	1.3	3.1	1160	S201_3.1 S2 M2SB6	454	S201_3.1 P90 BN90S6	455
300	23.4	2.5	3.1	1670	S301_3.1 S2 M2SB6	456	S301_3.1 P90 BN90S6	457
315	22.3	1.1	8.9	1660	S301_8.9 S1 M1LA2	456	S301_8.9 P80 BN80A2	457

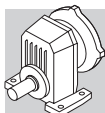


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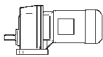
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
324	21.7	2.2	8.6	2820	S401_8.6 S1 M1LA2	458	S401_8.6 P80 BN80A2	459
355	19.8	2.5	3.9	1600	S301_3.9 S2 M2SA4	456	S301_3.9 P80 BN80B4	457
356	19.7	1.3	3.9	1130	S201_3.9 S2 M2SA4	454	S201_3.9 P80 BN80B4	455
377	18.6	1.6	2.4	1110	S201_2.4 S2 M2SB6	454	S201_2.4 P90 BN90S6	455
380	18.5	3.1	2.4	1560	S301_2.4 S2 M2SB6	456	S301_2.4 P90 BN90S6	457
388	18.1	1.2	7.2	1120	S201_7.2 S1 M1LA2	454	S201_7.2 P80 BN80A2	455
395	17.8	2.3	7.1	1560	S301_7.1 S1 M1LA2	456	S301_7.1 P80 BN80A2	457
450	15.6	1.7	3.1	1070	S201_3.1 S2 M2SA4	454	S201_3.1 P80 BN80B4	455
457	15.4	3.3	3.1	1490	S301_3.1 S2 M2SA4	456	S301_3.1 P80 BN80B4	457
479	14.7	2.7	5.8	1480	S301_5.8 S1 M1LA2	456	S301_5.8 P80 BN80A2	457
481	14.6	1.4	5.8	1060	S201_5.8 S1 M1LA2	454	S201_5.8 P80 BN80A2	455
486	14.5	1.4	1.9	1040	S201_1.9 S2 M2SB6	454	S201_1.9 P90 BN90S6	455
504	13.9	2.5	1.8	1440	S301_1.8 S2 M2SB6	456	S301_1.8 P90 BN90S6	457
568	12.4	3.2	4.9	1410	S301_4.9 S1 M1LA2	456	S301_4.9 P80 BN80A2	457
574	12.2	2.1	2.4	1010	S201_2.4 S2 M2SA4	454	S201_2.4 P80 BN80B4	455
587	12.0	1.8	4.8	1010	S201_4.8 S1 M1LA2	454	S201_4.8 P80 BN80A2	455
647	10.8	1.1	1.4	460	S101_1.4 S2 M2SB6	452	S101_1.4 P90 BN90S6	453
654	10.7	3.3	1.4	1330	S301_1.4 S2 M2SB6	456	S301_1.4 P90 BN90S6	457
661	10.6	1.9	1.4	960	S201_1.4 S2 M2SB6	454	S201_1.4 P90 BN90S6	455
712	9.9	2.1	3.9	960	S201_3.9 S1 M1LA2	454	S201_3.9 P80 BN80A2	455
728	9.6	1.0	3.8	480	S101_3.8 S1 M1LA2	452	S101_3.8 P80 BN80A2	453
739	9.5	1.8	1.9	940	S201_1.9 S2 M2SA4	454	S201_1.9 P80 BN80B4	455
747	9.4	1.1	1.9	460	S101_1.9 S2 M2SA4	452	S101_1.9 P80 BN80B4	453
767	9.2	3.3	1.8	1280	S301_1.8 S2 M2SA4	456	S301_1.8 P80 BN80B4	457
875	8.0	1.2	3.2	460	S101_3.2 S1 M1LA2	452	S101_3.2 P80 BN80A2	453
900	7.8	2.7	3.1	900	S201_3.1 S1 M1LA2	454	S201_3.1 P80 BN80A2	455
985	7.1	1.4	1.4	440	S101_1.4 S2 M2SA4	452	S101_1.4 P80 BN80B4	453
1006	7.0	2.4	1.4	860	S201_1.4 S2 M2SA4	454	S201_1.4 P80 BN80B4	455
1120	6.3	1.3	2.5	440	S101_2.5 S1 M1LA2	452	S101_2.5 P80 BN80A2	453
1149	6.1	3.4	2.4	840	S201_2.4 S1 M1LA2	454	S201_2.4 P80 BN80A2	455
1478	4.7	2.7	1.9	780	S201_1.9 S1 M1LA2	454	S201_1.9 P80 BN80A2	455
1493	4.7	1.7	1.9	410	S101_1.9 S1 M1LA2	452	S101_1.9 P80 BN80A2	453
1970	3.6	2.2	1.4	380	S101_1.4 S1 M1LA2	452	S101_1.4 P80 BN80A2	453

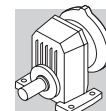
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
88	117.0	1.0	10.5	5650	S501_10.5 S3 M3SA6	460	S501_10.5 P90 BN90L6	461
105	98.1	1.3	8.8	5380	S501_8.8 S3 M3SA6	460	S501_8.8 P90 BN90L6	461
109	94.8	1.1	12.9	5320	S501_12.9 S2 M2SB4	460	S501_12.9 P90 BN90S4	461
124	82.8	1.7	7.4	5120	S501_7.4 S3 M3SA6	460	S501_7.4 P90 BN90L6	461
129	80.1	1.1	7.2	3550	S401_7.2 S3 M3SA6	458	S401_7.2 P90 BN90L6	459
134	76.9	1.4	10.5	5020	S501_10.5 S2 M2SB4	460	S501_10.5 P90 BN90S4	461
152	67.9	1.5	6.1	3400	S401_6.1 S3 M3SA6	458	S401_6.1 P90 BN90L6	459
152	67.8	2.2	6.1	4840	S501_6.1 S3 M3SA6	460	S501_6.1 P90 BN90L6	461
160	64.5	1.7	8.8	4770	S501_8.8 S2 M2SB4	460	S501_8.8 P90 BN90S4	461
162	63.5	0.9	8.6	3350	S401_8.6 S2 M2SB4	458	S401_8.6 P90 BN90S4	459
186	55.2	1.1	4.9	1740	S301_4.9 S3 M3SA6	456	S301_4.9 P90 BN90L6	457



1.1 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
189	54.4	2.4	7.4	4530	S501_7.4 S2 M2SB4	460	S501_7.4 P90 BN90S4	461
190	54.1	1.9	4.8	3200	S401_4.8 S3 M3SA6	458	S401_4.8 P90 BN90L6	459
194	53.2	3.3	4.8	4500	S501_4.8 S3 M3SA6	460	S501_4.8 P90 BN90L6	461
196	52.6	1.5	7.2	3180	S401_7.2 S2 M2SB4	458	S401_7.2 P90 BN90S4	459
197	52.1	1.0	7.1	1730	S301_7.1 S2 M2SB4	456	S301_7.1 P90 BN90S4	457
217	47.4	1.7	12.9	4350	S501_12.9 S2 M2SA2	460	S501_12.9 P80 BN80B2	461
231	44.6	2.0	6.1	3040	S401_6.1 S2 M2SB4	458	S401_6.1 P90 BN90S4	459
231	44.5	2.9	6.1	4270	S501_6.1 S2 M2SB4	460	S501_6.1 P90 BN90S4	461
233	44.1	1.3	3.9	1670	S301_3.9 S3 M3SA6	456	S301_3.9 P90 BN90L6	457
239	43.0	1.2	5.8	1670	S301_5.8 S2 M2SB4	456	S301_5.8 P90 BN90S4	457
241	42.7	2.5	3.8	2990	S401_3.8 S3 M3SA6	458	S401_3.8 P90 BN90L6	459
263	39.2	1.0	10.7	2930	S401_10.7 S2 M2SA2	458	S401_10.7 P80 BN80B2	459
268	38.4	2.2	10.5	4090	S501_10.5 S2 M2SA2	460	S501_10.5 P80 BN80B2	461
284	36.3	1.4	4.9	1610	S301_4.9 S2 M2SB4	456	S301_4.9 P90 BN90S4	457
290	35.5	2.5	4.8	2850	S401_4.8 S2 M2SB4	458	S401_4.8 P90 BN90S4	459
300	34.3	1.7	3.1	1580	S301_3.1 S3 M3SA6	456	S301_3.1 P90 BN90L6	457
301	34.2	3.1	3.1	2810	S401_3.1 S3 M3SA6	458	S401_3.1 P90 BN90L6	459
319	32.2	2.6	8.8	3870	S501_8.8 S2 M2SA2	460	S501_8.8 P80 BN80B2	461
324	31.8	1.5	8.6	2760	S401_8.6 S2 M2SA2	458	S401_8.6 P80 BN80B2	459
355	29.0	1.7	3.9	1530	S301_3.9 S2 M2SB4	456	S301_3.9 P90 BN90S4	457
367	28.0	3.2	3.8	2650	S401_3.8 S2 M2SB4	458	S401_3.8 P90 BN90S4	459
377	27.3	1.1	2.4	1010	S201_2.4 S3 M3SA6	454	S201_2.4 P90 BN90L6	455
380	27.1	2.1	2.4	1490	S301_2.4 S3 M3SA6	456	S301_2.4 P90 BN90L6	457
391	26.3	2.4	7.2	2610	S401_7.2 S2 M2SA2	458	S401_7.2 P80 BN80B2	459
395	26.1	1.5	7.1	1500	S301_7.1 S2 M2SA2	456	S301_7.1 P80 BN80B2	457
450	22.9	1.1	3.1	990	S201_3.1 S2 M2SB4	454	S201_3.1 P90 BN90S4	455
457	22.5	2.2	3.1	1430	S301_3.1 S2 M2SB4	456	S301_3.1 P90 BN90S4	457
462	22.3	3.1	6.1	2490	S401_6.1 S2 M2SA2	458	S401_6.1 P80 BN80B2	459
479	21.5	1.9	5.8	1420	S301_5.8 S2 M2SA2	456	S301_5.8 P80 BN80B2	457
481	21.4	1.0	5.8	990	S201_5.8 S2 M2SA2	454	S201_5.8 P80 BN80B2	455
486	21.2	0.9	1.9	960	S201_1.9 S3 M3SA6	454	S201_1.9 P90 BN90L6	455
497	20.7	3.4	1.9	2420	S401_1.9 S3 M3SA6	458	S401_1.9 P90 BN90L6	459
504	20.4	1.7	1.8	1380	S301_1.8 S3 M3SA6	456	S301_1.8 P90 BN90L6	457
568	18.1	2.2	4.9	1360	S301_4.9 S2 M2SA2	456	S301_4.9 P80 BN80B2	457
574	17.9	1.5	2.4	940	S201_2.4 S2 M2SB4	454	S201_2.4 P90 BN90S4	455
578	17.8	2.8	2.4	1340	S301_2.4 S2 M2SB4	456	S301_2.4 P90 BN90S4	457
587	17.5	1.2	4.8	950	S201_4.8 S2 M2SA2	454	S201_4.8 P80 BN80B2	455
654	15.7	2.2	1.4	1290	S301_1.4 S3 M3SA6	456	S301_1.4 P90 BN90L6	457
661	15.6	1.3	1.4	900	S201_1.4 S3 M3SA6	454	S201_1.4 P90 BN90L6	455
710	14.5	2.8	3.9	1280	S301_3.9 S2 M2SA2	456	S301_3.9 P80 BN80B2	457
712	14.5	1.5	3.9	910	S201_3.9 S2 M2SA2	454	S201_3.9 P80 BN80B2	455
739	13.9	1.2	1.9	890	S201_1.9 S2 M2SB4	454	S201_1.9 P90 BN90S4	455
767	13.4	2.2	1.8	1240	S301_1.8 S2 M2SB4	456	S301_1.8 P90 BN90S4	457
900	11.4	1.8	3.1	860	S201_3.1 S2 M2SA2	454	S201_3.1 P80 BN80B2	455
985	10.4	1.0	1.4	390	S101_1.4 S2 M2SB4	452	S101_1.4 P90 BN90S4	453
995	10.3	2.9	1.4	1150	S301_1.4 S2 M2SB4	456	S301_1.4 P90 BN90S4	457
1006	10.2	1.7	1.4	820	S201_1.4 S2 M2SB4	454	S201_1.4 P90 BN90S4	455
1149	9.0	2.3	2.4	810	S201_2.4 S2 M2SA2	454	S201_2.4 P80 BN80B2	455
1478	7.0	1.9	1.9	750	S201_1.9 S2 M2SA2	454	S201_1.9 P80 BN80B2	455
1493	6.9	1.2	1.9	380	S101_1.9 S2 M2SA2	452	S101_1.9 P80 BN80B2	453
1970	5.2	1.5	1.4	350	S101_1.4 S2 M2SA2	452	S101_1.4 P80 BN80B2	453

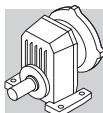


1.1 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
2013	5.1	2.5	1.4	690	S201_1.4 S2 M2SA2	454	S201_1.4 P80 BN80B2	455

1.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
88	117.0	1.0	10.5	5650	S501_10.5 S3 M3SA6	460	S501_10.5 P90 BN90L6	461
105	98.1	1.3	8.8	5380	S501_8.8 S3 M3SA6	460	S501_8.8 P90 BN90L6	461
109	94.8	1.1	12.9	5320	S501_12.9 S2 M2SB4	460	S501_12.9 P90 BN90S4	461
124	82.8	1.7	7.4	5120	S501_7.4 S3 M3SA6	460	S501_7.4 P90 BN90L6	461
129	80.1	1.1	7.2	3550	S401_7.2 S3 M3SA6	458	S401_7.2 P90 BN90L6	459
134	76.9	1.4	10.5	5020	S501_10.5 S2 M2SB4	460	S501_10.5 P90 BN90S4	461
152	67.9	1.5	6.1	3400	S401_6.1 S3 M3SA6	458	S401_6.1 P90 BN90L6	459
152	67.8	2.2	6.1	4840	S501_6.1 S3 M3SA6	460	S501_6.1 P90 BN90L6	461
160	64.5	1.7	8.8	4770	S501_8.8 S2 M2SB4	460	S501_8.8 P90 BN90S4	461
162	63.5	0.9	8.6	3350	S401_8.6 S2 M2SB4	458	S401_8.6 P90 BN90S4	459
186	55.2	1.1	4.9	1740	S301_4.9 S3 M3SA6	456	S301_4.9 P90 BN90L6	457
189	54.4	2.4	7.4	4530	S501_7.4 S2 M2SB4	460	S501_7.4 P90 BN90S4	461
190	54.1	1.9	4.8	3200	S401_4.8 S3 M3SA6	458	S401_4.8 P90 BN90L6	459
194	53.2	3.3	4.8	4500	S501_4.8 S3 M3SA6	460	S501_4.8 P90 BN90L6	461
196	52.6	1.5	7.2	3180	S401_7.2 S2 M2SB4	458	S401_7.2 P90 BN90S4	459
197	52.1	1.0	7.1	1730	S301_7.1 S2 M2SB4	456	S301_7.1 P90 BN90S4	457
217	47.4	1.7	12.9	4350	S501_12.9 S2 M2SA2	460	S501_12.9 P80 BN80B2	461
231	44.6	2.0	6.1	3040	S401_6.1 S2 M2SB4	458	S401_6.1 P90 BN90S4	459
231	44.5	2.9	6.1	4270	S501_6.1 S2 M2SB4	460	S501_6.1 P90 BN90S4	461
233	44.1	1.3	3.9	1670	S301_3.9 S3 M3SA6	456	S301_3.9 P90 BN90L6	457
239	43.0	1.2	5.8	1670	S301_5.8 S2 M2SB4	456	S301_5.8 P90 BN90S4	457
241	42.7	2.5	3.8	2990	S401_3.8 S3 M3SA6	458	S401_3.8 P90 BN90L6	459
263	39.2	1.0	10.7	2930	S401_10.7 S2 M2SA2	458	S401_10.7 P80 BN80B2	459
268	38.4	2.2	10.5	4090	S501_10.5 S2 M2SA2	460	S501_10.5 P80 BN80B2	461
284	36.3	1.4	4.9	1610	S301_4.9 S2 M2SB4	456	S301_4.9 P90 BN90S4	457
290	35.5	2.5	4.8	2850	S401_4.8 S2 M2SB4	458	S401_4.8 P90 BN90S4	459
300	34.3	1.7	3.1	1580	S301_3.1 S3 M3SA6	456	S301_3.1 P90 BN90L6	457
301	34.2	3.1	3.1	2810	S401_3.1 S3 M3SA6	458	S401_3.1 P90 BN90L6	459
319	32.2	2.6	8.8	3870	S501_8.8 S2 M2SA2	460	S501_8.8 P80 BN80B2	461
324	31.8	1.5	8.6	2760	S401_8.6 S2 M2SA2	458	S401_8.6 P80 BN80B2	459
355	29.0	1.7	3.9	1530	S301_3.9 S2 M2SB4	456	S301_3.9 P90 BN90S4	457
367	28.0	3.2	3.8	2650	S401_3.8 S2 M2SB4	458	S401_3.8 P90 BN90S4	459
377	27.3	1.1	2.4	1010	S201_2.4 S3 M3SA6	454	S201_2.4 P90 BN90L6	455
380	27.1	2.1	2.4	1490	S301_2.4 S3 M3SA6	456	S301_2.4 P90 BN90L6	457
391	26.3	2.4	7.2	2610	S401_7.2 S2 M2SA2	458	S401_7.2 P80 BN80B2	459
395	26.1	1.5	7.1	1500	S301_7.1 S2 M2SA2	456	S301_7.1 P80 BN80B2	457
450	22.9	1.1	3.1	990	S201_3.1 S2 M2SB4	454	S201_3.1 P90 BN90S4	455
457	22.5	2.2	3.1	1430	S301_3.1 S2 M2SB4	456	S301_3.1 P90 BN90S4	457
462	22.3	3.1	6.1	2490	S401_6.1 S2 M2SA2	458	S401_6.1 P80 BN80B2	459
479	21.5	1.9	5.8	1420	S301_5.8 S2 M2SA2	456	S301_5.8 P80 BN80B2	457
481	21.4	1.0	5.8	990	S201_5.8 S2 M2SA2	454	S201_5.8 P80 BN80B2	455
486	21.2	0.9	1.9	960	S201_1.9 S3 M3SA6	454	S201_1.9 P90 BN90L6	455
497	20.7	3.4	1.9	2420	S401_1.9 S3 M3SA6	458	S401_1.9 P90 BN90L6	459

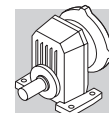


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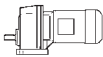
n2 min-1	M2 Nm	S	i	Rn2 N				
504	20.4	1.7	1.8	1380	S301_1.8 S3 M3SA6	456	S301_1.8 P90 BN90L6	457
568	18.1	2.2	4.9	1360	S301_4.9 S2 M2SA2	456	S301_4.9 P80 BN80B2	457
574	17.9	1.5	2.4	940	S201_2.4 S2 M2SB4	454	S201_2.4 P90 BN90S4	455
578	17.8	2.8	2.4	1340	S301_2.4 S2 M2SB4	456	S301_2.4 P90 BN90S4	457
587	17.5	1.2	4.8	950	S201_4.8 S2 M2SA2	454	S201_4.8 P80 BN80B2	455
654	15.7	2.2	1.4	1290	S301_1.4 S3 M3SA6	456	S301_1.4 P90 BN90L6	457
661	15.6	1.3	1.4	900	S201_1.4 S3 M3SA6	454	S201_1.4 P90 BN90L6	455
710	14.5	2.8	3.9	1280	S301_3.9 S2 M2SA2	456	S301_3.9 P80 BN80B2	457
712	14.5	1.5	3.9	910	S201_3.9 S2 M2SA2	454	S201_3.9 P80 BN80B2	455
739	13.9	1.2	1.9	890	S201_1.9 S2 M2SB4	454	S201_1.9 P90 BN90S4	455
767	13.4	2.2	1.8	1240	S301_1.8 S2 M2SB4	456	S301_1.8 P90 BN90S4	457
900	11.4	1.8	3.1	860	S201_3.1 S2 M2SA2	454	S201_3.1 P80 BN80B2	455
985	10.4	1.0	1.4	390	S101_1.4 S2 M2SB4	452	S101_1.4 P90 BN90S4	453
995	10.3	2.9	1.4	1150	S301_1.4 S2 M2SB4	456	S301_1.4 P90 BN90S4	457
1006	10.2	1.7	1.4	820	S201_1.4 S2 M2SB4	454	S201_1.4 P90 BN90S4	455
1149	9.0	2.3	2.4	810	S201_2.4 S2 M2SA2	454	S201_2.4 P80 BN80B2	455
1478	7.0	1.9	1.9	750	S201_1.9 S2 M2SA2	454	S201_1.9 P80 BN80B2	455
1493	6.9	1.2	1.9	380	S101_1.9 S2 M2SA2	452	S101_1.9 P80 BN80B2	453
1970	5.2	1.5	1.4	350	S101_1.4 S2 M2SA2	452	S101_1.4 P80 BN80B2	453
2013	5.1	2.5	1.4	690	S201_1.4 S2 M2SA2	454	S201_1.4 P80 BN80B2	455

2.2 kW

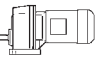
n2 min-1	M2 Nm	S	i	Rn2 N				
154	134.1	1.1	6.1	4520	S501_6.1 S3 M3LC6	460	S501_6.1 P112 BN112M6	461
191	108.1	1.2	7.4	4280	S501_7.4 S3 M3LA4	460	S501_7.4 P100 BN100LA4	461
192	107.0	1.0	4.8	2880	S401_4.8 S3 M3LC6	458	S401_4.8 P112 BN112M6	459
196	105.2	1.7	4.8	4230	S501_4.8 S3 M3LC6	460	S501_4.8 P112 BN112M6	461
232	88.6	1.0	6.1	2790	S401_6.1 S3 M3LA4	458	S401_6.1 P100 BN100LA4	459
233	88.4	1.5	6.1	4060	S501_6.1 S3 M3LA4	460	S501_6.1 P100 BN100LA4	461
242	85.1	2.1	3.8	4000	S501_3.8 S3 M3LC6	460	S501_3.8 P112 BN112M6	461
244	84.4	1.2	3.8	2730	S401_3.8 S3 M3LC6	458	S401_3.8 P112 BN112M6	459
269	76.6	1.1	10.5	3910	S501_10.5 S3 M3SA2	460	S501_10.5 P90 BN90L2	461
292	70.6	1.3	4.8	2640	S401_4.8 S3 M3LA4	458	S401_4.8 P100 BN100LA4	459
297	69.4	2.2	4.8	3790	S501_4.8 S3 M3LA4	460	S501_4.8 P100 BN100LA4	461
305	67.6	1.6	3.1	2590	S401_3.1 S3 M3LC6	458	S401_3.1 P112 BN112M6	459
306	67.4	2.4	3.0	3750	S501_3.0 S3 M3LC6	460	S501_3.0 P112 BN112M6	461
320	64.3	1.3	8.8	3730	S501_8.8 S3 M3SA2	460	S501_8.8 P90 BN90L2	461
367	56.1	2.7	3.8	3570	S501_3.8 S3 M3LA4	460	S501_3.8 P100 BN100LA4	461
370	55.7	1.6	3.8	2490	S401_3.8 S3 M3LA4	458	S401_3.8 P100 BN100LA4	459
380	54.2	1.8	7.4	3540	S501_7.4 S3 M3SA2	460	S501_7.4 P90 BN90L2	461
384	53.6	1.1	2.4	1260	S301_2.4 S3 M3LC6	456	S301_2.4 P112 BN112M6	457
386	53.3	2.8	2.4	3500	S501_2.4 S3 M3LC6	460	S501_2.4 P112 BN112M6	461
389	52.9	2.0	2.4	2450	S401_2.4 S3 M3LC6	458	S401_2.4 P112 BN112M6	459
393	52.4	1.2	7.2	2460	S401_7.2 S3 M3SA2	458	S401_7.2 P90 BN90L2	459
460	44.7	1.1	3.1	1240	S301_3.1 S3 M3LA4	456	S301_3.1 P100 BN100LA4	457
462	44.6	2.0	3.1	2340	S401_3.1 S3 M3LA4	458	S401_3.1 P100 BN100LA4	459
463	44.5	1.6	6.1	2360	S401_6.1 S3 M3SA2	458	S401_6.1 P90 BN90L2	459

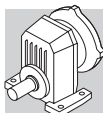


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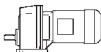
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
463	44.4	3.2	3.0	3340	S501_3.0 S3 M3LA4	460	S501_3.0 P100 BN100LA4	461
464	44.4	2.3	6.1	3340	S501_6.1 S3 M3SA2	460	S501_6.1 P90 BN90L2	461
481	42.8	0.9	5.8	1250	S301_5.8 S3 M3SA2	456	S301_5.8 P90 BN90L2	457
502	41.0	1.7	1.9	2280	S401_1.9 S3 M3LC6	458	S401_1.9 P112 BN112M6	459
520	39.6	3.2	1.8	3210	S501_1.8 S3 M3LC6	460	S501_1.8 P112 BN112M6	461
570	36.1	1.1	4.9	1220	S301_4.9 S3 M3SA2	456	S301_4.9 P90 BN90L2	457
581	35.4	2.0	4.8	2210	S401_4.8 S3 M3SA2	458	S401_4.8 P90 BN90L2	459
582	35.4	1.4	2.4	1190	S301_2.4 S3 M3LA4	456	S301_2.4 P100 BN100LA4	457
590	34.9	2.6	2.4	2200	S401_2.4 S3 M3LA4	458	S401_2.4 P100 BN100LA4	459
592	34.8	3.4	4.8	3110	S501_4.8 S3 M3SA2	460	S501_4.8 P90 BN90L2	461
661	31.2	1.1	1.4	1140	S301_1.4 S3 M3LC6	456	S301_1.4 P112 BN112M6	457
682	30.2	2.3	1.4	2090	S401_1.4 S3 M3LC6	458	S401_1.4 P112 BN112M6	459
712	28.9	1.4	3.9	1160	S301_3.9 S3 M3SA2	456	S301_3.9 P90 BN90L2	457
737	27.9	2.5	3.8	2070	S401_3.8 S3 M3SA2	458	S401_3.8 P90 BN90L2	459
761	27.0	2.2	1.9	2040	S401_1.9 S3 M3LA4	458	S401_1.9 P100 BN100LA4	459
772	26.7	1.1	1.8	1120	S301_1.8 S3 M3LA4	456	S301_1.8 P100 BN100LA4	457
903	22.8	0.9	3.1	730	S201_3.1 S3 M3SA2	454	S201_3.1 P90 BN90L2	455
918	22.4	1.8	3.1	1100	S301_3.1 S3 M3SA2	456	S301_3.1 P90 BN90L2	457
921	22.4	3.1	3.1	1940	S401_3.1 S3 M3SA2	458	S401_3.1 P90 BN90L2	459
1002	20.6	1.5	1.4	1050	S301_1.4 S3 M3LA4	456	S301_1.4 P100 BN100LA4	457
1034	19.9	3.0	1.4	1860	S401_1.4 S3 M3LA4	458	S401_1.4 P100 BN100LA4	459
1153	17.9	1.2	2.4	710	S201_2.4 S3 M3SA2	454	S201_2.4 P90 BN90L2	455
1161	17.7	2.3	2.4	1030	S301_2.4 S3 M3SA2	456	S301_2.4 P90 BN90L2	457
1483	13.9	0.9	1.9	670	S201_1.9 S3 M3SA2	454	S201_1.9 P90 BN90L2	455
1539	13.4	1.8	1.8	960	S301_1.8 S3 M3SA2	456	S301_1.8 P90 BN90L2	457
1997	10.3	2.3	1.4	890	S301_1.4 S3 M3SA2	456	S301_1.4 P90 BN90L2	457
2020	10.2	1.3	1.4	630	S201_1.4 S3 M3SA2	454	S201_1.4 P90 BN90L2	455

3.0 kW

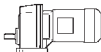
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
198	141.9	1.2	4.8	4040	S501_4.8 S4 M4SA6	460	S501_4.8 P132 BN132S6	461
233	120.6	1.1	6.1	3910	S501_6.1 S3 M3LB4	460	S501_6.1 P100 BN100LB4	461
245	114.8	1.5	3.8	3840	S501_3.8 S4 M4SA6	460	S501_3.8 P132 BN132S6	461
247	113.9	0.9	3.8	2550	S401_3.8 S4 M4SA6	458	S401_3.8 P132 BN132S6	459
292	96.2	0.9	4.8	2490	S401_4.8 S3 M3LB4	458	S401_4.8 P100 BN100LB4	459
297	94.6	1.6	4.8	3670	S501_4.8 S3 M3LB4	460	S501_4.8 P100 BN100LB4	461
308	91.2	1.2	3.1	2440	S401_3.1 S4 M4SA6	458	S401_3.1 P132 BN132S6	459
309	90.9	1.8	3.0	3630	S501_3.0 S4 M4SA6	460	S501_3.0 P132 BN132S6	461
326	86.1	1.0	8.8	3600	S501_8.8 S3 M3LA2	460	S501_8.8 P100 BN100L2	461
367	76.5	2.0	3.8	3470	S501_3.8 S3 M3LB4	460	S501_3.8 P100 BN100LB4	461
370	75.9	1.2	3.8	2370	S401_3.8 S3 M3LB4	458	S401_3.8 P100 BN100LB4	459
386	72.6	1.4	7.4	3440	S501_7.4 S3 M3LA2	460	S501_7.4 P100 BN100L2	461
390	71.9	2.1	2.4	3390	S501_2.4 S4 M4SA6	460	S501_2.4 P132 BN132S6	461
393	71.4	1.5	2.4	2320	S401_2.4 S4 M4SA6	458	S401_2.4 P132 BN132S6	459
462	60.8	1.5	3.1	2250	S401_3.1 S3 M3LB4	458	S401_3.1 P100 BN100LB4	459
463	60.6	2.3	3.0	3260	S501_3.0 S3 M3LB4	460	S501_3.0 P100 BN100LB4	461
471	59.6	1.2	6.1	2260	S401_6.1 S3 M3LA2	458	S401_6.1 P100 BN100L2	459

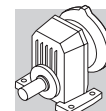


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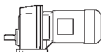
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
472	59.4	1.7	6.1	3260	S501_6.1 S3 M3LA2	460	S501_6.1 P100 BN100L2	461
508	55.3	1.3	1.9	2170	S401_1.9 S4 M4SA6	458	S401_1.9 P132 BN132S6	459
526	53.4	2.3	1.8	3120	S501_1.8 S4 M4SA6	460	S501_1.8 P132 BN132S6	461
582	48.2	1.0	2.4	1080	S301_2.4 S3 M3LB4	456	S301_2.4 P100 BN100LB4	457
586	47.9	2.7	2.4	3040	S501_2.4 S3 M3LB4	460	S501_2.4 P100 BN100LB4	461
590	47.6	1.9	2.4	2120	S401_2.4 S3 M3LB4	458	S401_2.4 P100 BN100LB4	459
592	47.4	1.5	4.8	2130	S401_4.8 S3 M3LA2	458	S401_4.8 P100 BN100L2	459
602	46.6	2.6	4.8	3030	S501_4.8 S3 M3LA2	460	S501_4.8 P100 BN100L2	461
661	42.4	2.9	1.4	2920	S501_1.4 S4 M4SA6	460	S501_1.4 P132 BN132S6	461
689	40.7	1.7	1.4	2010	S401_1.4 S4 M4SA6	458	S401_1.4 P132 BN132S6	459
725	38.7	1.0	3.9	1070	S301_3.9 S3 M3LA2	456	S301_3.9 P100 BN100L2	457
744	37.7	3.2	3.8	2850	S501_3.8 S3 M3LA2	460	S501_3.8 P100 BN100L2	461
750	37.4	1.9	3.8	2000	S401_3.8 S3 M3LA2	458	S401_3.8 P100 BN100L2	459
761	36.9	1.6	1.9	1970	S401_1.9 S3 M3LB4	458	S401_1.9 P100 BN100LB4	459
789	35.6	3.1	1.8	2780	S501_1.8 S3 M3LB4	460	S501_1.8 P100 BN100LB4	461
934	30.1	1.3	3.1	1020	S301_3.1 S3 M3LA2	456	S301_3.1 P100 BN100L2	457
937	30.0	2.3	3.1	1880	S401_3.1 S3 M3LA2	458	S401_3.1 P100 BN100L2	459
1002	28.0	1.1	1.4	980	S301_1.4 S3 M3LB4	456	S301_1.4 P100 BN100LB4	457
1034	27.2	2.2	1.4	1820	S401_1.4 S3 M3LB4	458	S401_1.4 P100 BN100LB4	459
1181	23.8	1.7	2.4	980	S301_2.4 S3 M3LA2	456	S301_2.4 P100 BN100L2	457
1196	23.5	3.0	2.4	1760	S401_2.4 S3 M3LA2	458	S401_2.4 P100 BN100L2	459
1544	18.2	2.6	1.9	1630	S401_1.9 S3 M3LA2	458	S401_1.9 P100 BN100L2	459
1566	17.9	1.3	1.8	910	S301_1.8 S3 M3LA2	456	S301_1.8 P100 BN100L2	457
2032	13.8	1.7	1.4	850	S301_1.4 S3 M3LA2	456	S301_1.4 P100 BN100L2	457
2056	13.7	1.0	1.4	580	S201_1.4 S3 M3LA2	454	S201_1.4 P100 BN100L2	455

4.0 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
200	187.2	0.9	4.8	3810	S501_4.8 S4 M4LA6	460	S501_4.8 P132 BN132MA6	461
247	151.4	1.2	3.8	3650	S501_3.8 S4 M4LA6	460	S501_3.8 P132 BN132MA6	461
293	127.9	1.2	4.8	3530	S501_4.8 S3 M3LC4	460	S501_4.8 P112 BN112M4	461
312	119.9	1.3	3.0	3470	S501_3.0 S4 M4LA6	460	S501_3.0 P132 BN132MA6	461
362	103.5	1.4	3.8	3360	S501_3.8 S3 M3LC4	460	S501_3.8 P112 BN112M4	461
388	96.5	1.0	7.4	3320	S501_7.4 S3 M3LB2	460	S501_7.4 P112 BN112M2	461
395	94.9	1.6	2.4	3270	S501_2.4 S4 M4LA6	460	S501_2.4 P132 BN132MA6	461
397	94.2	1.1	2.4	2180	S401_2.4 S4 M4LA6	458	S401_2.4 P132 BN132MA6	459
455	82.2	1.1	3.1	2130	S401_3.1 S3 M3LC4	458	S401_3.1 P112 BN112M4	459
457	82.0	1.7	3.0	3170	S501_3.0 S3 M3LC4	460	S501_3.0 P112 BN112M4	461
474	79.0	1.3	6.1	3160	S501_6.1 S3 M3LB2	460	S501_6.1 P112 BN112M2	461
513	73.0	1.0	1.9	2050	S401_1.9 S4 M4LA6	458	S401_1.9 P132 BN132MA6	459
531	70.5	1.8	1.8	3020	S501_1.8 S4 M4LA6	460	S501_1.8 P132 BN132MA6	461
577	64.8	2.0	2.4	2970	S501_2.4 S3 M3LC4	460	S501_2.4 P112 BN112M4	461
581	64.4	1.4	2.4	2030	S401_2.4 S3 M3LC4	458	S401_2.4 P112 BN112M4	459
594	63.0	1.1	4.8	2040	S401_4.8 S3 M3LB2	458	S401_4.8 P112 BN112M2	459
604	62.0	1.9	4.8	2960	S501_4.8 S3 M3LB2	460	S501_4.8 P112 BN112M2	461
669	56.0	2.2	1.4	2830	S501_1.4 S4 M4LA6	460	S501_1.4 P132 BN132MA6	461
697	53.7	1.3	1.4	1920	S401_1.4 S4 M4LA6	458	S401_1.4 P132 BN132MA6	459

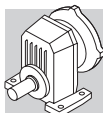


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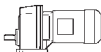
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
747	50.1	2.4	3.8	2790	S501_3.8 S3 M3LB2	460	S501_3.8 P112 BN112M2	461
751	49.9	1.2	1.9	1900	S401_1.9 S3 M3LC4	458	S401_1.9 P112 BN112M4	459
753	49.7	1.4	3.8	1930	S401_3.8 S3 M3LB2	458	S401_3.8 P112 BN112M2	459
777	48.2	2.3	1.8	2730	S501_1.8 S3 M3LC4	460	S501_1.8 P112 BN112M4	461
937	39.9	1.0	3.1	940	S301_3.1 S3 M3LB2	456	S301_3.1 P112 BN112M2	457
940	39.8	1.8	3.1	1820	S401_3.1 S3 M3LB2	458	S401_3.1 P112 BN112M2	459
943	39.7	2.8	3.0	2610	S501_3.0 S3 M3LB2	460	S501_3.0 P112 BN112M2	461
978	38.3	2.9	1.4	2560	S501_1.4 S3 M3LC4	460	S501_1.4 P112 BN112M4	461
1019	36.7	1.6	1.4	1760	S401_1.4 S3 M3LC4	458	S401_1.4 P112 BN112M4	459
1185	31.6	1.3	2.4	910	S301_2.4 S3 M3LB2	456	S301_2.4 P112 BN112M2	457
1192	31.4	3.2	2.4	2430	S501_2.4 S3 M3LB2	460	S501_2.4 P112 BN112M2	461
1200	31.2	2.2	2.4	1710	S401_2.4 S3 M3LB2	458	S401_2.4 P112 BN112M2	459
1550	24.2	2.0	1.9	1590	S401_1.9 S3 M3LB2	458	S401_1.9 P112 BN112M2	459
1572	23.8	1.0	1.8	860	S301_1.8 S3 M3LB2	456	S301_1.8 P112 BN112M2	457
2039	18.4	1.3	1.4	810	S301_1.4 S3 M3LB2	456	S301_1.4 P112 BN112M2	457
2105	17.8	2.7	1.4	1460	S401_1.4 S3 M3LB2	458	S401_1.4 P112 BN112M2	459

5.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
311	165.8	1.0	3.0	3260	S501_3.0 S4 M4LB6	460	S501_3.0 P132 BN132MB6	461
375	137.3	1.1	3.8	3150	S501_3.8 S4 M4SA4	460	S501_3.8 P132 BN132S4	461
393	131.1	1.1	2.4	3090	S501_2.4 S4 M4LB6	460	S501_2.4 P132 BN132MB6	461
473	108.8	1.3	3.0	3000	S501_3.0 S4 M4SA4	460	S501_3.0 P132 BN132S4	461
477	107.9	0.9	6.1	3020	S501_6.1 S4 M4SA2	460	S501_6.1 P132 BN132SA2	461
529	97.4	1.3	1.8	2880	S501_1.8 S4 M4LB6	460	S501_1.8 P132 BN132MB6	461
598	86.1	1.5	2.4	2830	S501_2.4 S4 M4SA4	460	S501_2.4 P132 BN132S4	461
602	85.5	1.1	2.4	1870	S401_2.4 S4 M4SA4	458	S401_2.4 P132 BN132S4	459
608	84.6	1.4	4.8	2840	S501_4.8 S4 M4SA2	460	S501_4.8 P132 BN132SA2	461
665	77.4	1.6	1.4	2720	S501_1.4 S4 M4LB6	460	S501_1.4 P132 BN132MB6	461
693	74.3	0.9	1.4	1780	S401_1.4 S4 M4LB6	458	S401_1.4 P132 BN132MB6	459
752	68.4	1.8	3.8	2690	S501_3.8 S4 M4SA2	460	S501_3.8 P132 BN132SA2	461
758	67.9	1.0	3.8	1810	S401_3.8 S4 M4SA2	458	S401_3.8 P132 BN132SA2	459
778	66.2	0.9	1.9	1770	S401_1.9 S4 M4SA4	458	S401_1.9 P132 BN132S4	459
805	63.9	1.7	1.8	2610	S501_1.8 S4 M4SA4	460	S501_1.8 P132 BN132S4	461
947	54.4	1.3	3.1	1730	S401_3.1 S4 M4SA2	458	S401_3.1 P132 BN132SA2	459
950	54.2	2.0	3.0	2530	S501_3.0 S4 M4SA2	460	S501_3.0 P132 BN132SA2	461
1013	50.8	2.2	1.4	2450	S501_1.4 S4 M4SA4	460	S501_1.4 P132 BN132S4	461
1056	48.7	1.2	1.4	1660	S401_1.4 S4 M4SA4	458	S401_1.4 P132 BN132S4	459
1200	42.9	2.3	2.4	2370	S501_2.4 S4 M4SA2	460	S501_2.4 P132 BN132SA2	461
1209	42.6	1.6	2.4	1640	S401_2.4 S4 M4SA2	458	S401_2.4 P132 BN132SA2	459
1561	33.0	1.5	1.9	1530	S401_1.9 S4 M4SA2	458	S401_1.9 P132 BN132SA2	459
1616	31.8	2.7	1.8	2170	S501_1.8 S4 M4SA2	460	S501_1.8 P132 BN132SA2	461
2034	25.3	3.4	1.4	2030	S501_1.4 S4 M4SA2	460	S501_1.4 P132 BN132SA2	461
2119	24.3	2.0	1.4	1410	S401_1.4 S4 M4SA2	458	S401_1.4 P132 BN132SA2	459

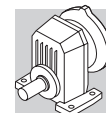


7.5 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N		
473	148.4	0.9	3.0	2810	S501_3.0 S4 M4LA4	S501_3.0 P132 BN132MA4
534	131.4	1.0	1.8	2690		S501_1.8 P160 BN160M6
598	117.3	1.1	2.4	2670	S501_2.4 S4 M4LA4	S501_2.4 P132 BN132MA4
611	115.0	1.0	4.8	2690	S501_4.8 S4 M4SB2	S501_4.8 P132 BN132SB2
672	104.4	1.2	1.4	2560		S501_1.4 P160 BN160M6
755	93.0	1.3	3.8	2570	S501_3.8 S4 M4SB2	S501_3.8 P132 BN132SB2
805	87.1	1.3	1.8	2490	S501_1.8 S4 M4LA4	S501_1.8 P132 BN132MA4
950	73.9	0.9	3.1	1610	S401_3.1 S4 M4SB2	S401_3.1 P132 BN132SB2
953	73.7	1.5	3.0	2440	S501_3.0 S4 M4SB2	S501_3.0 P132 BN132SB2
1013	69.3	1.6	1.4	2350	S501_1.4 S4 M4LA4	S501_1.4 P132 BN132MA4
1056	66.5	0.9	1.4	1540	S401_1.4 S4 M4LA4	S401_1.4 P132 BN132MA4
1205	58.3	1.7	2.4	2290	S501_2.4 S4 M4SB2	S501_2.4 P132 BN132SB2
1213	57.9	1.2	2.4	1540	S401_2.4 S4 M4SB2	S401_2.4 P132 BN132SB2
1566	44.8	1.1	1.9	1450	S401_1.9 S4 M4SB2	S401_1.9 P132 BN132SB2
1622	43.3	2.0	1.8	2110	S501_1.8 S4 M4SB2	S501_1.8 P132 BN132SB2
2041	34.4	2.5	1.4	1980	S501_1.4 S4 M4SB2	S501_1.4 P132 BN132SB2
2127	33.0	1.5	1.4	1350	S401_1.4 S4 M4SB2	S401_1.4 P132 BN132SB2

9.2 kW

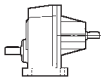
n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N		
598	143.9	0.9	2.4	2530	S501_2.4 S4 M4LB4	S501_2.4 P132 BN132MB4
755	114.1	1.1	3.8	2470	S501_3.8 S4 M4LA2	S501_3.8 P132 BN132M2
805	106.9	1.0	1.8	2390	S501_1.8 S4 M4LB4	S501_1.8 P132 BN132MB4
953	90.4	1.2	3.0	2360	S501_3.0 S4 M4LA2	S501_3.0 P132 BN132M2
1013	85.0	1.3	1.4	2270	S501_1.4 S4 M4LB4	S501_1.4 P132 BN132MB4
1205	71.5	1.4	2.4	2220	S501_2.4 S4 M4LA2	S501_2.4 P132 BN132M2
1213	71.0	1.0	2.4	1460	S401_2.4 S4 M4LA2	S401_2.4 P132 BN132M2
1622	53.1	1.6	1.8	2060	S501_1.8 S4 M4LA2	S501_1.8 P132 BN132M2
2041	42.2	2.0	1.4	1930	S501_1.4 S4 M4LA2	S501_1.4 P132 BN132M2
2127	40.5	1.2	1.4	1300	S401_1.4 S4 M4LA2	S401_1.4 P132 BN132M2

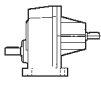


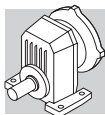
72 GEARBOX RATING CHARTS

S 10

21 Nm

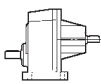
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 10 1_1.4	1.4	1972	8.0	1.7	800	310	986	10.0	1.1	800	390	453
S 10 1_1.9	1.9	1489	8.0	1.3	800	360	745	10.0	0.80	800	460	
S 10 1_2.5	2.5	1120	8.0	0.96	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	

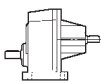
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 10 1_1.4	1.4	634	12.0	0.81	800	450	352	14.0	0.53	800	560	453
S 10 1_1.9	1.9	479	12.0	0.61	800	520	266	14.0	0.40	800	640	
S 10 1_2.5	2.5	360	12.0	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	

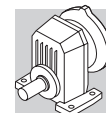


S 20

37 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 20 1_1.4	1.4	2014	13.0	2.8	1000	590	1007	17.0	1.8	1000	740	455
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 ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 20 1_1.4	1.4	647	20	1.4	1000	850	360	24	0.92	1000	1040	455
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	

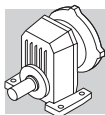


S 30

70 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 30 1_1.4	1.4	1986	24	5.1	1500	770	993	30	3.2	1500	970	457
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 ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 30 1_1.4	1.4	638	35	2.4	1500	1120	355	42	1.6	1500	1360	457
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	

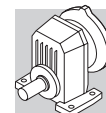


S 40

125 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 40 1_1.4	1.4	2059	48	10.6	2000	1270	1029	60	6.6	2000	1600	459
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 ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 40 1_1.4	1.4	662	70	4.9	2000	1850	368	85	3.3	2000	2250	459
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	

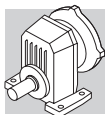


S 50

200 Nm

	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 50 1_1.4	1.4	1972	85	17.9	730	1720	986	110	11.6	730	2150	461
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 ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
S 50 1_1.4	1.4	634	125	8.5	1010	2510	352	155	5.8	1040	3040	461
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	



73 MOTOR AVAILABILITY

Please be aware that motor-gearbox combinations resulting from charts (E57) and (E58) are purely based on geometrical compatibility.

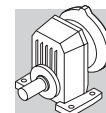
When selecting a gearmotor, refer to procedure specified at paragraph 11 and observe particularly the condition $S \geq f_s$.

(E 57)

		IEC_  (IM B5)								
		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

(E 58)

							
		M05	M1	M2	M3	M4	M5
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



74 MOMENT OF INERTIA

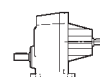
The following charts indicate moment of inertia values J_r [kgm²] referred to the gear unit high speed shaft. A key to the symbols used follows:



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.



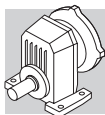
IEC Values under this symbol refer to gearboxes with IEC motor adaptor (IEC size...).



This symbol refers to gearbox values.

S 10

	i	J (•10 ⁻⁴) [kgm ²]							
			IEC						
			63	71	80	90	100	112	
S 10 1_1.4	1.4	0.33	1.8	1.8	3.2	3.1	4.4	4.4	1.2
S 10 1_1.9	1.9	0.22	1.7	1.7	3.1	3.0	4.3	4.3	1.1
S 10 1_2.5	2.5	0.16	1.6	1.6	3.0	2.9	4.2	4.2	1.0
S 10 1_3.2	3.2	0.10	1.6	1.6	3.0	2.9	4.2	4.2	0.97
S 10 1_3.9	3.9	0.08	1.5	1.5	2.9	2.9	4.2	4.2	0.95
S 10 1_4.7	4.7	0.06	1.5	1.5	2.9	2.8	4.1	4.1	0.93
S 10 1_6.1	6.1	0.04	1.5	1.5	2.9	2.8	4.1	4.1	0.92
S 10 1_6.9	6.9	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.91
S 10 1_8.9	8.9	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.90
S 10 1_10.3	10.3	0.02	1.5	1.5	—	—	—	—	0.89
S 10 1_12.3	12.3	0.01	1.5	1.5	—	—	—	—	0.89

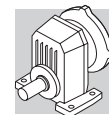


S 20

	i	J ($\cdot 10^{-4}$) [kgm ²]							
			 IEC						
			63	71	80	90	100	112	
S 20 1_1.4	1.4	0.73	—	—	3.6	3.5	4.8	4.8	2.7
S 20 1_1.9	1.9	0.48	1.9	1.9	3.3	3.3	4.6	4.6	2.4
S 20 1_2.4	2.4	0.34	1.8	1.8	3.2	3.1	4.4	4.4	2.3
S 20 1_3.1	3.1	0.20	1.7	1.7	3.0	3.0	4.3	4.3	2.1
S 20 1_3.9	3.9	0.14	1.6	1.6	3.0	2.9	4.2	4.2	2.1
S 20 1_4.8	4.8	0.12	1.6	1.6	3.0	2.9	4.2	4.2	2.0
S 20 1_5.8	5.8	0.08	1.6	1.5	2.9	2.9	4.2	4.2	2.0
S 20 1_7.2	7.2	0.06	1.5	1.5	2.9	2.8	4.1	4.1	2.0
S 20 1_8.5	8.5	0.05	1.5	1.5	2.9	2.8	4.1	4.1	2.0
S 20 1_10.8	10.8	0.03	1.5	1.5	2.9	2.8	4.1	4.1	1.9
S 20 1_12.4	12.4	0.02	1.5	1.5	—	—	—	—	1.9

S 30

	i	J ($\cdot 10^{-4}$) [kgm ²]							
			 IEC						
			63	71	80	90	100	112	132
S 30 1_1.4	1.4	1.5	—	—	4.3	4.3	5.6	5.6	18
S 30 1_1.8	1.8	1.1	—	—	3.9	3.8	5.1	5.1	18
S 30 1_2.4	2.4	0.59	2.1	2.0	3.4	3.4	4.7	4.7	17
S 30 1_3.1	3.1	0.45	1.9	1.9	3.3	3.2	4.5	4.5	17
S 30 1_3.9	3.9	0.33	1.8	1.8	3.2	3.1	4.4	4.4	17
S 30 1_4.9	4.9	0.24	1.7	1.7	3.1	3.0	4.3	4.3	17
S 30 1_5.8	5.8	0.19	1.7	1.7	3.0	3.0	4.3	4.3	—
S 30 1_7.1	7.1	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—
S 30 1_8.9	8.9	0.10	1.6	1.6	2.9	2.9	4.2	4.2	—
S 30 1_10.3	10.3	0.08	1.5	1.5	2.9	2.9	4.2	4.2	—
S 30 1_13.1	13.1	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—

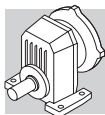


S 40

	i	J (•10 ⁻⁴) [kgm ²]								
			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

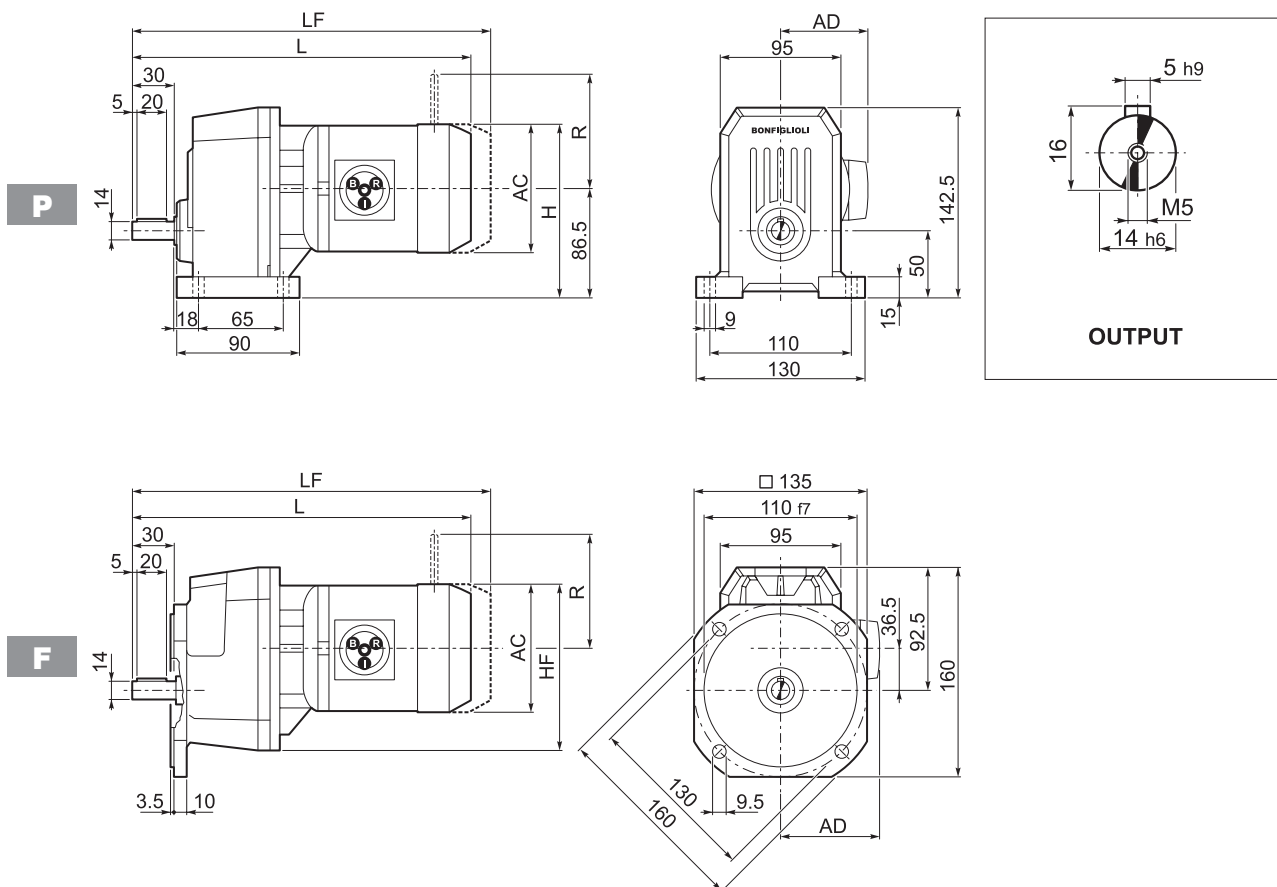
S 50

	i	J (•10 ⁻⁴) [kgm ²]										
			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

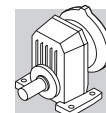


75 DIMENSIONS

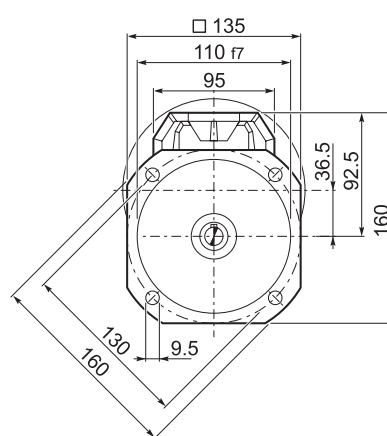
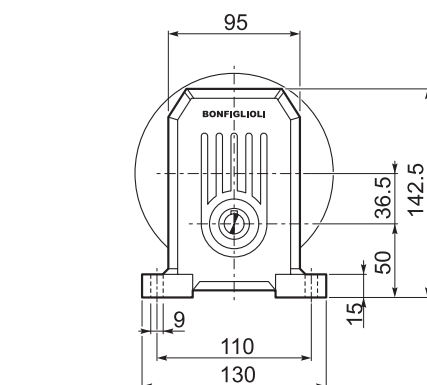
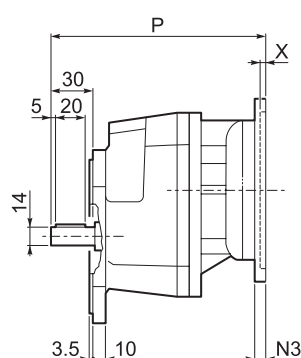
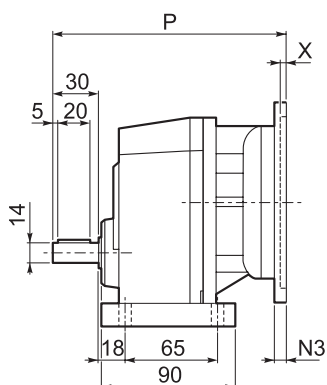
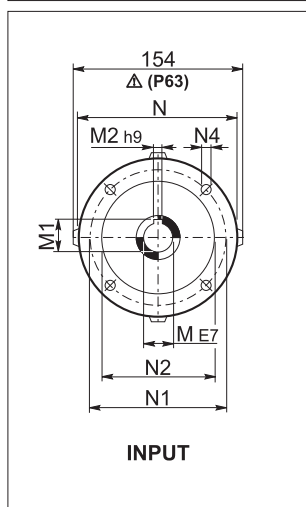
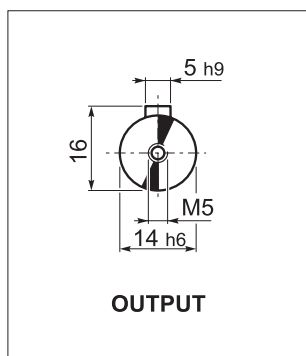
S 10...M



									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	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	S3	M3S	195	184	180	416	135	19	512	24	160	158	160	142
S 10 1	S3	M3L	195	184	180	448	135	21	539	26	160	158	160	142



S 10...P (IEC)

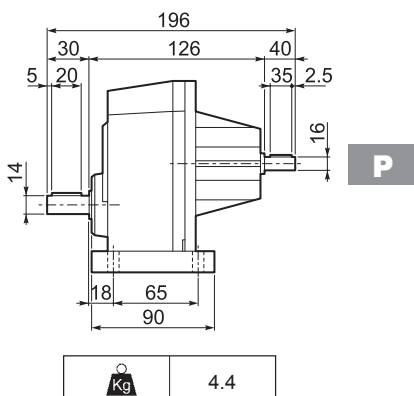
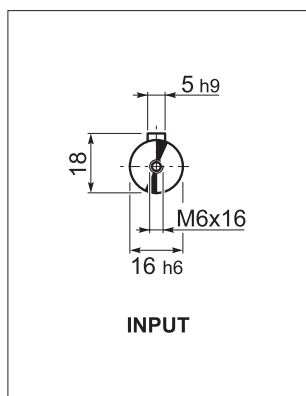


P

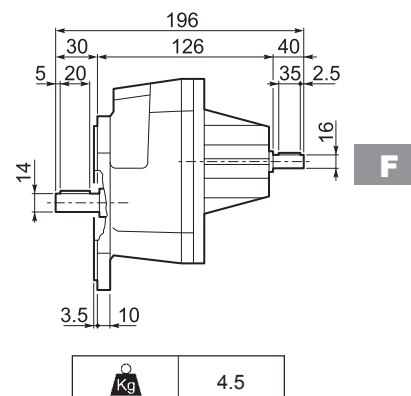
F

		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		11	12.8	4	140	115	95	—	M8x10	189	4	5
		14	16.3	5	160	130	110	—	M8x10	189	4.5	5
		19	21.8	6	200	165	130	—	M10x12	208	4	6
		24	27.3	8	200	165	130	—	M10x12	208	4	6
		28	31.3	8	250	215	180	—	M12x16	218	4.5	10
		28	31.3	8	250	215	180	—	M12x16	218	4.5	10

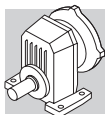
S 10...HS



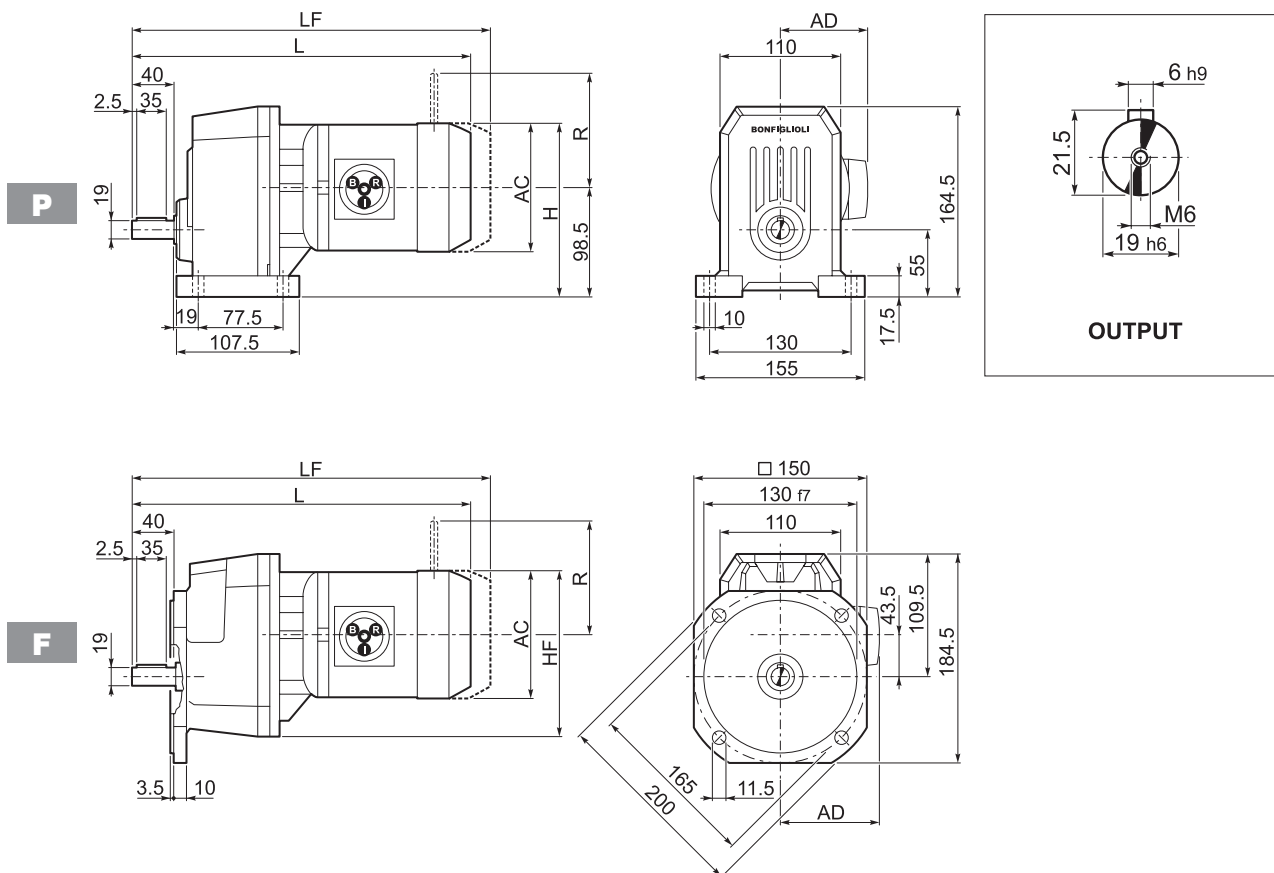
	4.4



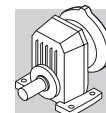
	4.5



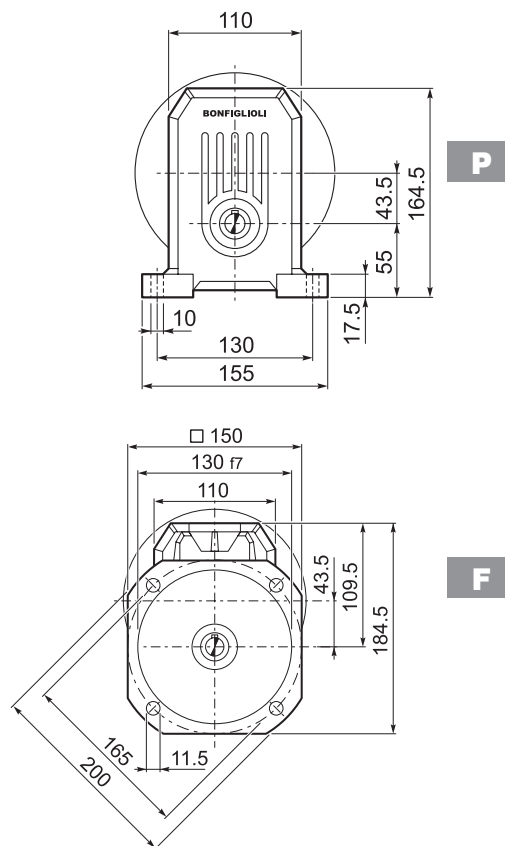
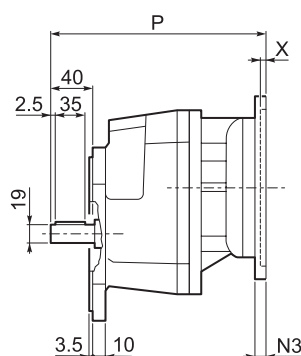
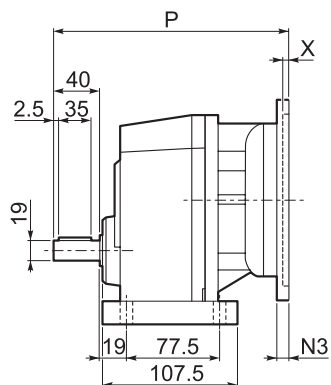
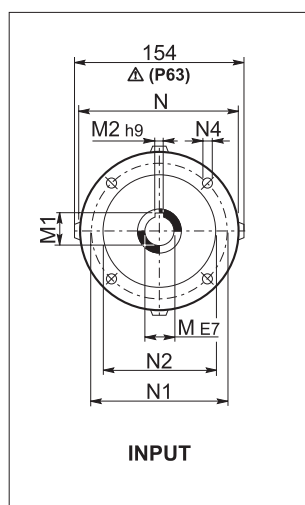
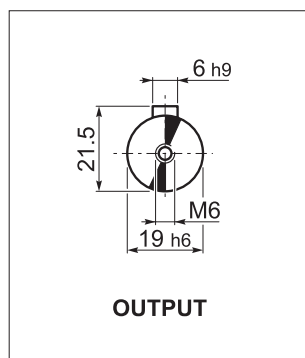
S 20...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg		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	S3	M3S	195	196	190	434.5	135	20		530.5	25	160	158	160	142
S 20 1	S3	M3L	195	196	190	466.5	135	26		557.5	31	160	158	160	142

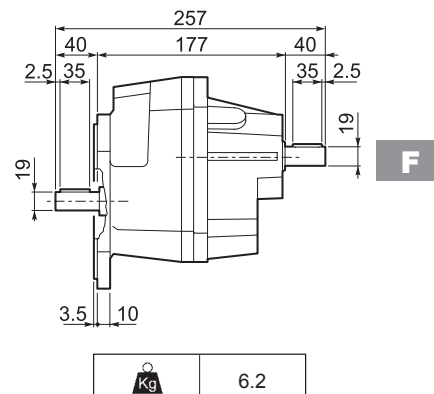
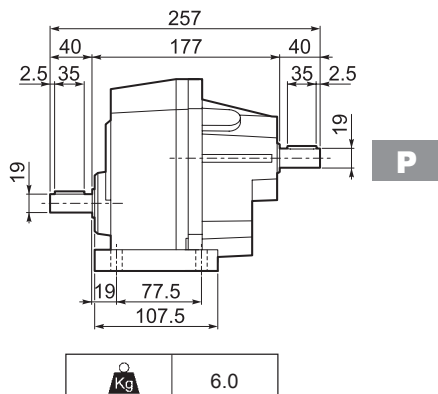
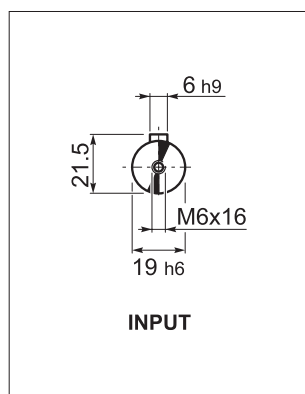


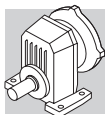
S 20...P(IEC)



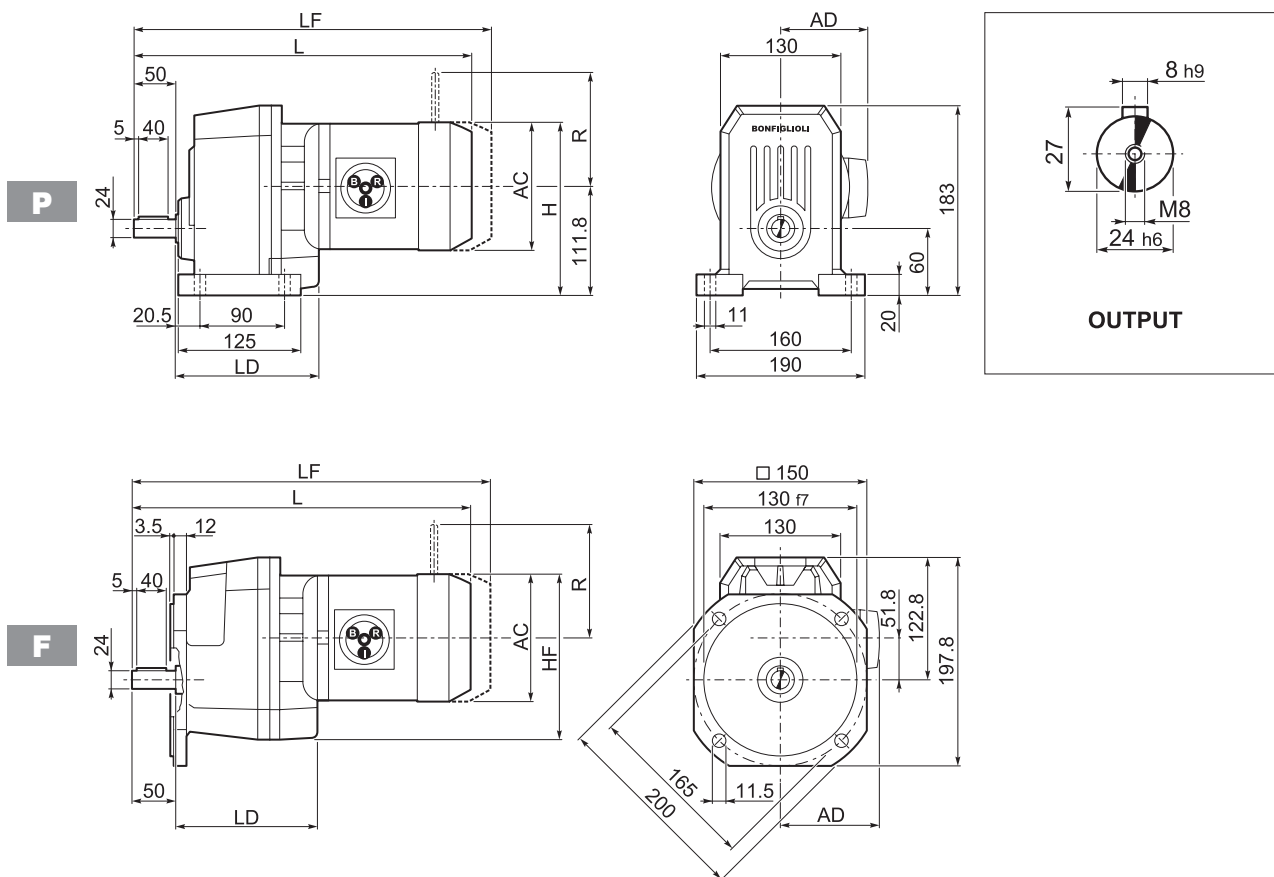
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
S 20 1	P63	11	12.8	4	140	115	95	—	M8x10	207	4	6
S 20 1	P71	14	16.3	5	160	130	110	—	M8x10	207	4.5	6
S 20 1	P80	19	21.8	6	200	165	130	—	M10x12	227	4	7
S 20 1	P90	24	27.3	8	200	165	130	—	M10x12	227	4	7
S 20 1	P100	28	31.3	8	250	215	180	—	M12x16	237	4.5	11
S 20 1	P112	28	31.3	8	250	215	180	—	M12x16	237	4.5	11

S 20...HS

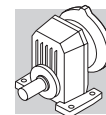




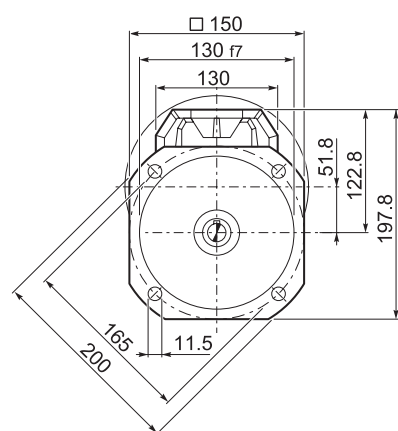
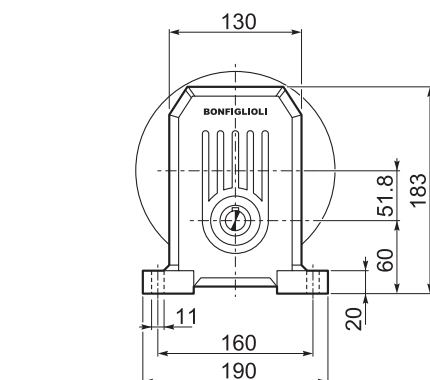
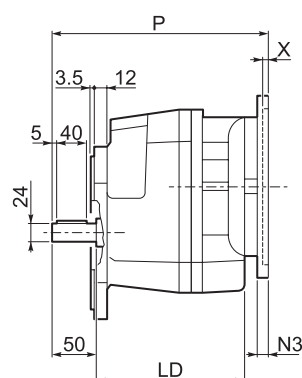
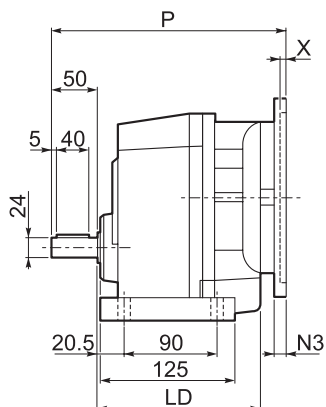
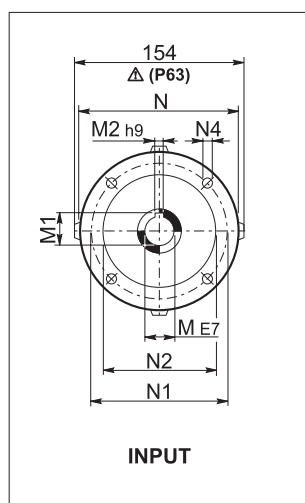
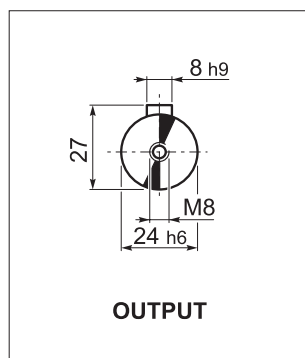
S 30...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD	Kg	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	S2	M2S	156	190	186	410.5	152.5	111	18	486.5	21	129	146	134	119
S 30 1	S3	M3S	195	209	206	459.5	162.5	135	23	555.5	28	160	158	160	142
S 30 1	S3	M3L	195	209	206	491.5	162.5	135	32	582.5	37	160	158	160	142
S 30 1	S4	M4	258	240.8	237	599.5	—	193	71	708.5	87	226	210	217	193
S 30 1	S4	M4LC	258	240.8	237	634.5	—	193	79	733.5	95	226	210	217	193



S 30...P(IEC)

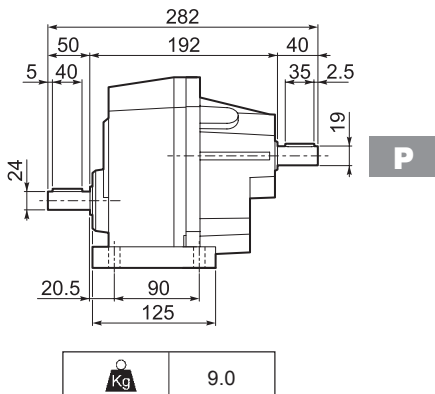
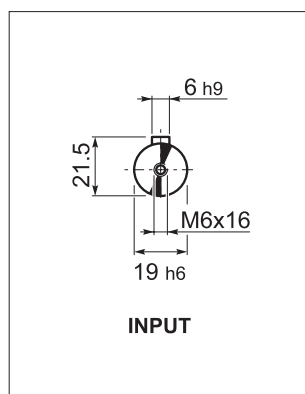


P

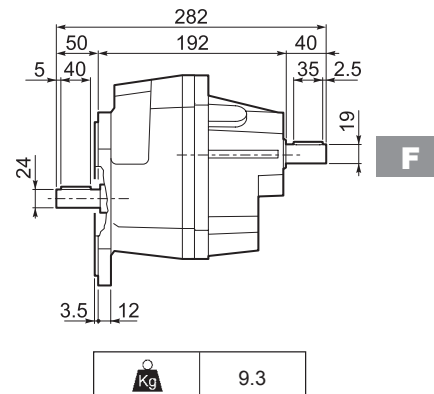
F

		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	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	—	M10x12	252	4	9
S 30 1	P90	162.5	24	27.3	8	200	165	130	—	M10x12	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

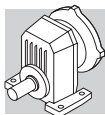
S 30...HS



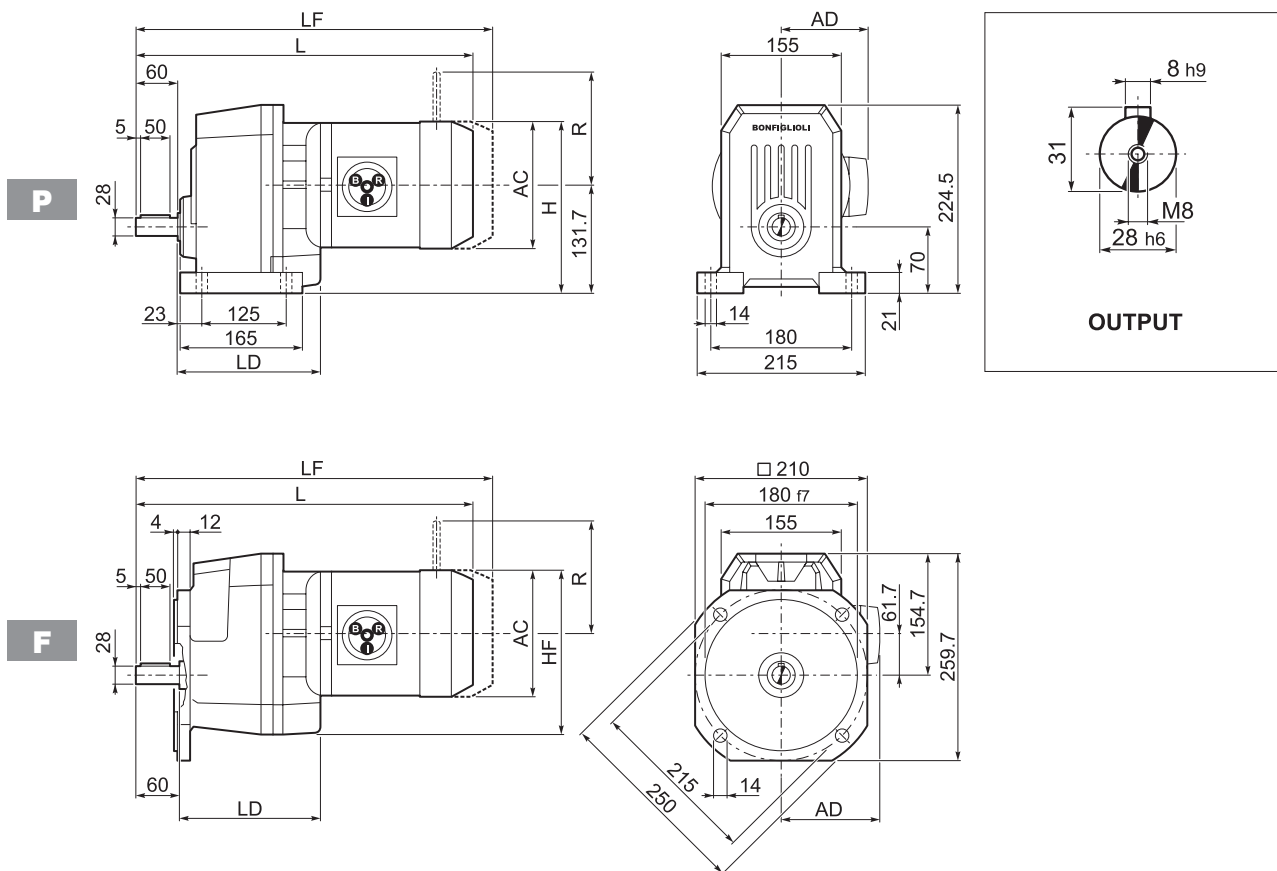
Kg	9.0



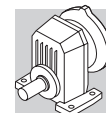
Kg	9.3



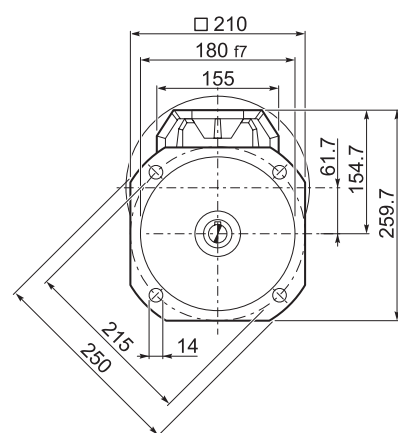
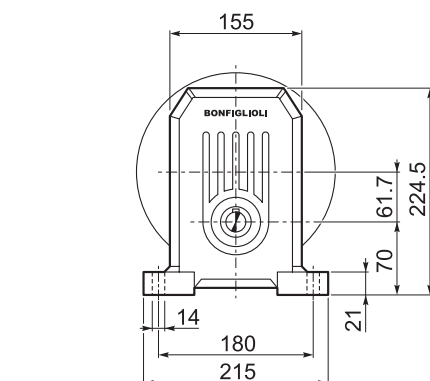
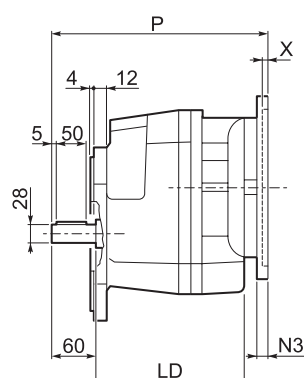
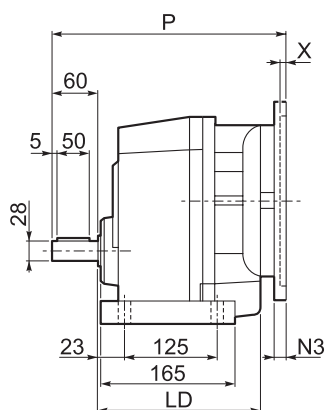
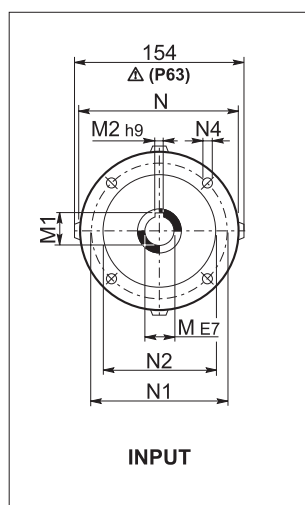
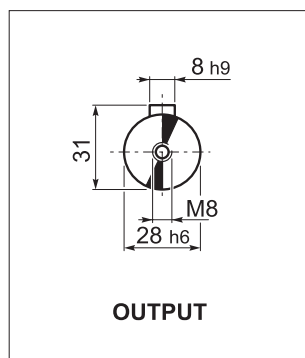
S 40...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD	Kg	LF	Kg	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	S3	M3S	195	229	226	501.5	199.5	135	39	597.5	44	160	158	160	142
S 40 1	S3	M3L	195	229	226	533.5	199.5	135	48	624.5	53	160	158	160	142
S 40 1	S4	M4	258	261	257	641.5	—	193	74	750.5	86	226	210	217	193
S 40 1	S4	M4LC	258	261	257	676.5	—	193	90	775.5	106	226	210	217	193



S 40...P(IEC)

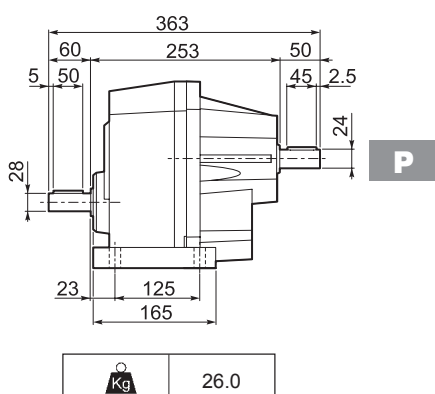
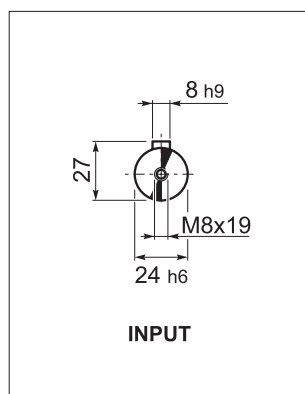


P

F

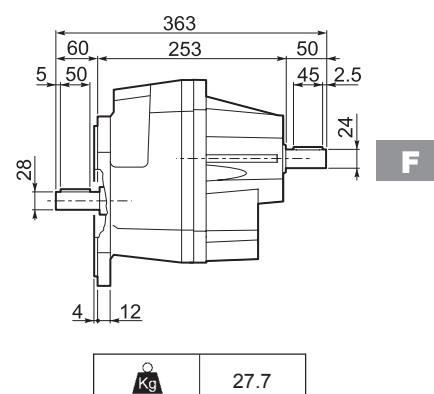
		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		183.5	11	12.8	4	140	115	95	—	M8x10	274	4	25
		183.5	14	16.3	5	160	130	110	—	M8x10	274	4.5	26
		199.5	19	21.8	6	200	165	130	—	M10x12	294	4	26
		199.5	24	27.3	8	200	165	130	—	M10x12	294	4	30
		—	28	31.3	8	250	215	180	—	M12x16	304	4.5	30
		—	28	31.3	8	250	215	180	—	M12x16	304	4.5	30
		—	38	41.3	10	300	265	230	16	14	340	5	32

S 40...HS



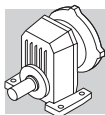
P

	26.0

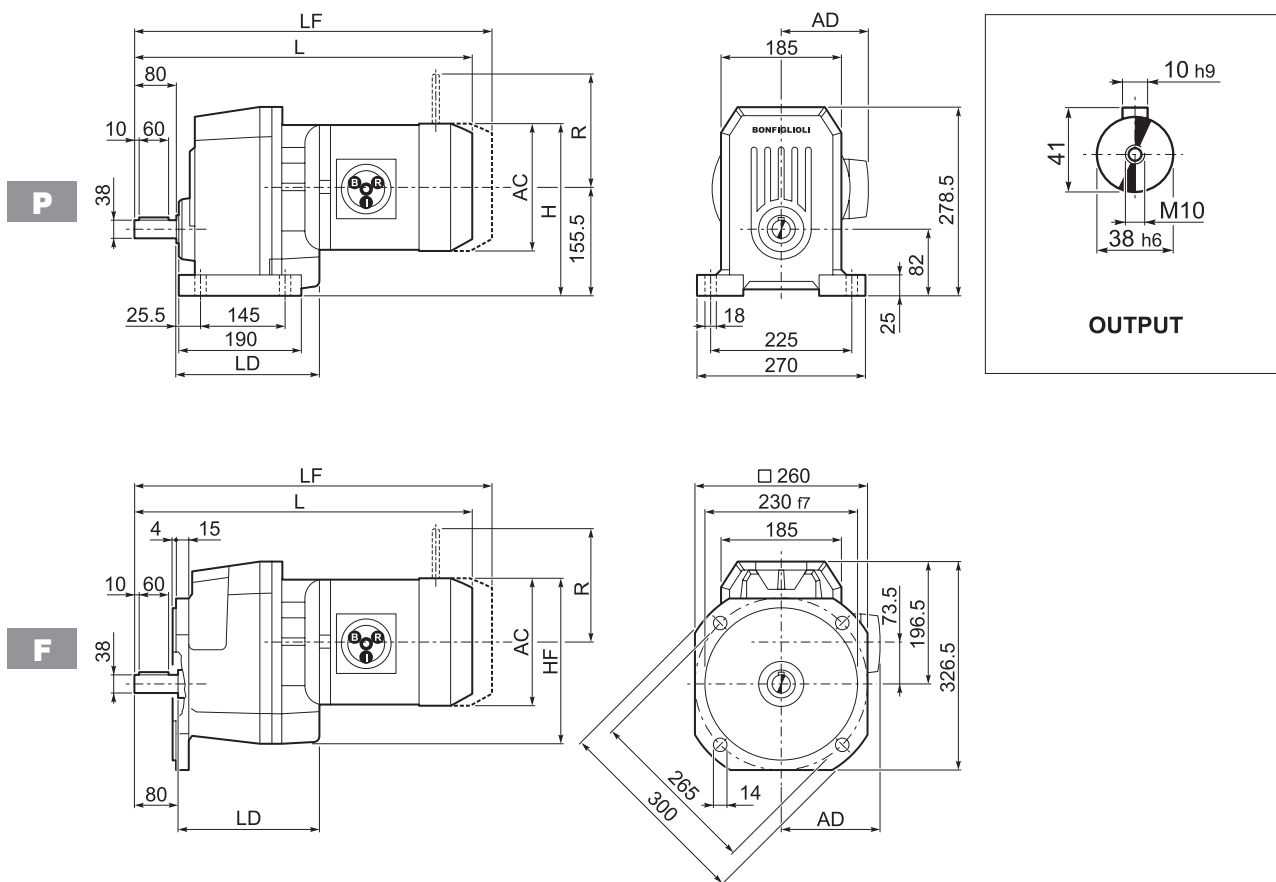


F

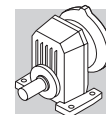
	27.7



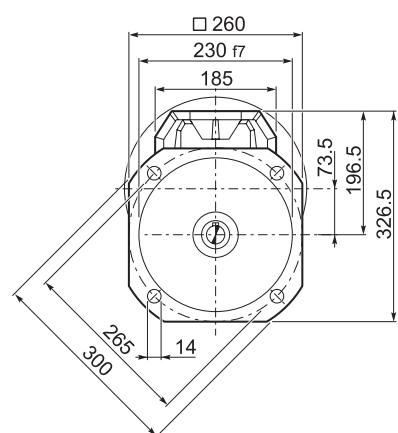
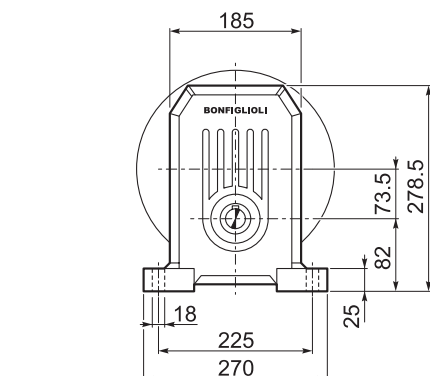
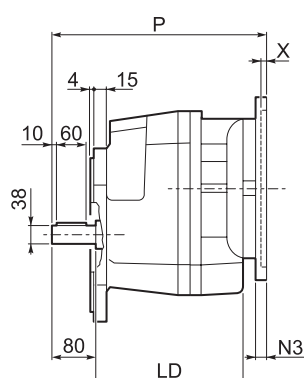
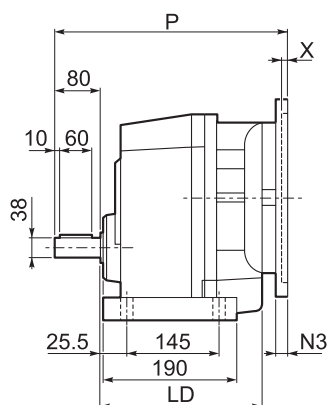
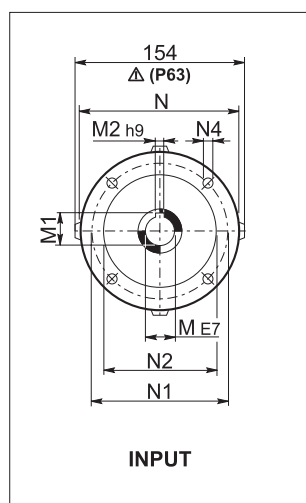
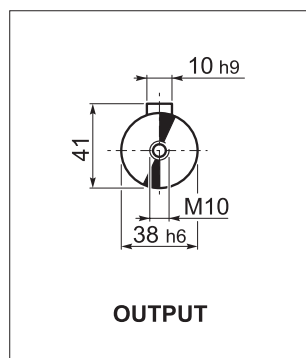
S 50...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD		LF		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	S3	M3S	195	253	250	541.5	219.5	135	51	637.5	56	160	158	160	142
S 50 1	S3	M3L	195	253	250	573.5	219.5	135	60	664.5	65	160	158	160	142
S 50 1	S4	M4	258	284	281	681.5	204.5	193	86	790.5	98	226	210	217	193
S 50 1	S4	M4LC	258	284	281	716.5	204.5	193	94	815.5	106	226	210	217	193
S 50 1	S5	M5S	310	310.5	307	768	—	245	114	908	138	266	245	247	245
S 50 1	S5	M5L	310	310.5	307	812	—	245	130	952	154	266	245	247	245

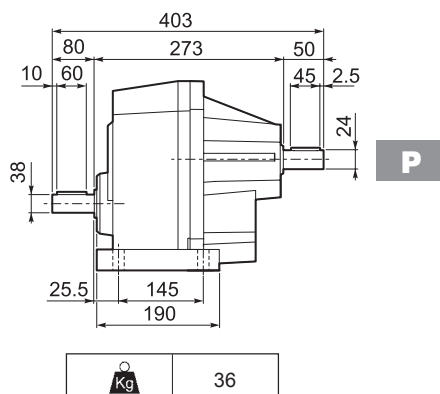
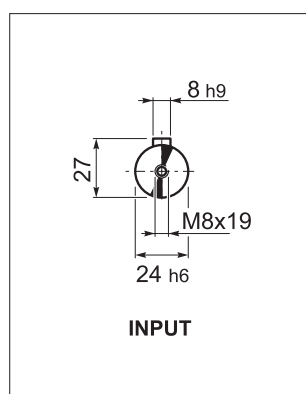


S 50...P(IEC)

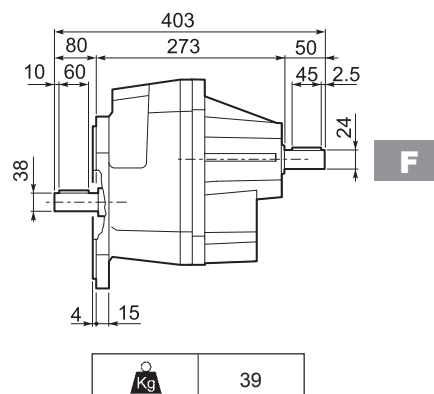


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		204.5	11	12.8	4	140	115	95	—	M8x10	314	4	35
		204.5	14	12.8	4	160	130	110	—	M8x10	314	4.5	35
		219.5	19	16.3	5	200	165	130	—	M10x12	314	4	37
		219.5	24	21.8	6	200	165	130	—	M10x12	334	4	37
		204.5	28	27.3	8	250	215	180	—	M12x16	344	4.5	41
		204.5	28	31.3	8	250	215	180	—	M12x16	344	4.5	41
		204.5	38	41.3	10	300	265	230	16	14	380	5	44
		—	42	45.3	12	350	300	250	23	18	431	5.5	48
		—	48	51.8	14	350	300	250	23	18	431	5.5	48

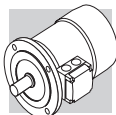
S 50...HS



	36



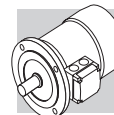
	39



ELECTRIC MOTORS

M1 SYMBOLS AND UNITS OF MEASUREMENT

Symbols	Units of Measure	Description	Symbols	Units of Measure	Description
$\cos\varphi$	–	Power factor	n	$[\text{min}^{-1}]$	Rated speed
η	–	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 ²]	Load moment of inertia	t_2	[ms]	Brake reaction time with a.c. disconnect
J_M	[Kgm ²]	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 GENERAL CHARACTERISTICS

M2.1 Production range

The asynchronous three-phase electric motors of BONFIGLIOLI RIDUTTORI's production, are available in basic designs IMB5 and IMB14 and derived versions, with the following polarities: 2, 4, 6, 2/4, 2/6, 2/8, 2/12.

The technical characteristics of compact motors, M type, are also supplied in this manual.

M2.2 Standards

The motors described in this catalogue are manufactured to the applicable standards shown in the following table.

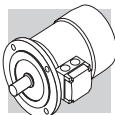
(F 1)

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

The motors also comply with foreign standards adapted to IEC 60034-1 as shown here below.

(F 2)

DIN VDE 0530	Germany
BS5000 / BS4999	Great Britain
AS 1359	Australia
NBNC 51 - 101	Belgium
NEK - IEC 34	Norway
NF C 51	France
OEVE M 10	Austria
SEV 3009	Switzerland
NEN 3173	Netherlands
SS 426 01 01	Sweden



M2.3 Motors for USA and Canada

CUS

BN and M motors are available in NEMA Design C configuration (concerning electrical characteristics), in compliance with CSA (Canadian standard) C22.2 No. 100 and UL (Underwriters Laboratory) UL 1004-1. By specifying the option CUS the name plate is marked with both symbols shown here below.



US power mains voltages and the corresponding rated voltages to be specified for the motor are indicated in the following table:

(F 3)

Frequency	Mains voltage	V _{mot}
60 Hz	208 V	200 V
	240 V	230 V
	480 V	460 V
	600 V	575 V

Motors with YY/Y connection (e.g. 230/460-60; 220/440-60) feature, as standard, a 9-stud terminal board. For same executions, as well as for 575V-60Hz tions, as well as for 575V-60Hz supply, the nominal rating is coincident with the correspondent 50Hz rating.

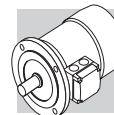
For DC brake motors type BN/M_FD and BN/M_AFD, the rectifier is connected to a single-phase 230 VAC supply voltage in the motor terminal box.

Brake power supply for brake motors is as follows:

(F 4)

BN_FD ; BN_AFD M_FD ; M_AFD	BN_FA ; BN_BA M_FA	Specify
Wired to terminal box 1~230V a.c.	Separate power supply 230V Δ - 60Hz	230SA
	Separate power supply 460V Y - 60Hz	460SA

The CUS option does not apply to servo-ventilated motors or motors with the AFD brake.



M2.4 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:



The CCC option does not apply to motors with the AFD brake.

M2.5 Directives 2006/95/EC (LVD) and 2004/108/EC (EMC)

BN 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 and AFD 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.

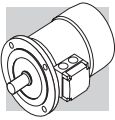
M2.6 Tolerances

As per the Norms applicable the tolerances here below apply to the following quantities.

(F 5)

$-0.15 (1 - \eta) \quad P \leq 50\text{kW}$	Efficiency
$-(1 - \cos\phi)/6 \quad \text{min } 0.02 \quad \text{max } 0.07$	Power factor
$\pm 20\% *$	Slip
$+20\%$	Locked rotor current
$-15\% \quad +25\%$	Locked rotor torque
-10%	Max. torque

* $\pm 30\%$ for motors with $P_n < 1 \text{ kW}$



M3 MECHANICAL FEATURES

M3.1 Versions

EC-normalised BN motors are available in the design versions indicated in table (F6) as per Standards CEI EN 60034-14.

Mounting versions are:

IM B5 (basic)

IM V1, IM V3 (derived)

IM B14 (basic)

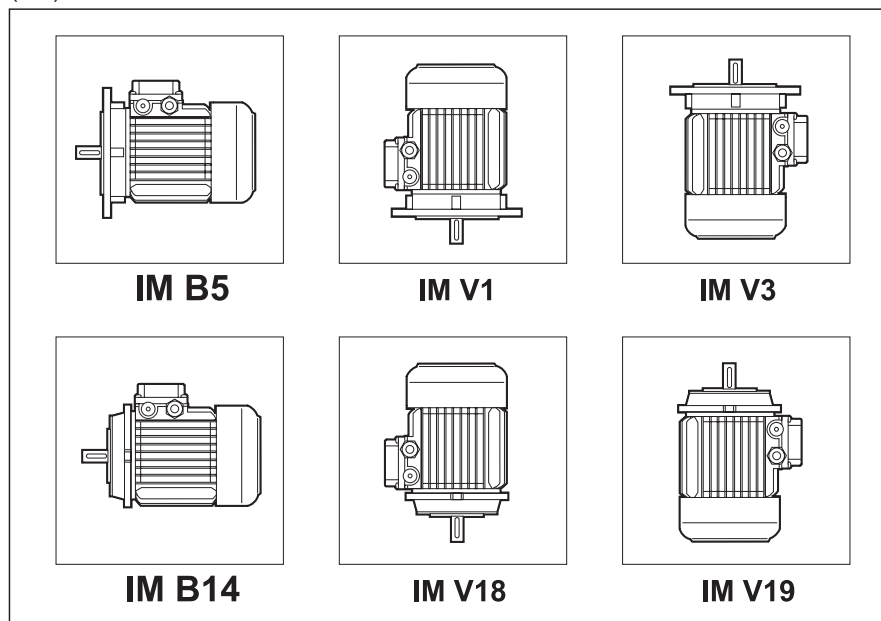
IM V18, IM V19 (derived)

IM B5 design motors can be installed in positions IM V1 and IM V3; IM B14 design motors can be installed in positions IM V18 and IM V19.

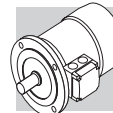
In such cases, the basic design IM B5 or IM B14 is indicated on the motor name plate.

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

(F 6)



Flanged motors can be supplied with a reduced mounting interface, as shown in chart (F7) below.



(F 7)

	BN 71	BN 80	BN 90	BN 100	BN 112	BN 132
	DxE - Ø					
B5R ⁽¹⁾	11x23 - 140	14x30 - 160	19x40 - 200	24x50 - 200	24x50 - 200	28x60 - 250
B14R ⁽²⁾	11x23 - 90	14x30 - 105	19x40 - 120	24x50 - 140	—	—

- (1) flange with through holes
(2) flange with threaded holes

M3.2 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**).

(F 8)

		IP 54	IP 55	IP 56
BN	M		standard	
BN_FD BN_AFD BN_FA	M_FD M_AFD M_FA	standard		
BN_BA	—		standard	

M3.3 Cooling

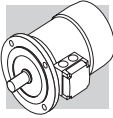
The motors are externally ventilated (IC 411 to CEI EN 60034-6) and are equipped with a plastic fan working in both directions.

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.



M3.4 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.

M3.5 Noise

Noise levels, measured using the method prescribed by ISO 1680 Standards, are within the maximum levels specified by Standards CEI EN 60034-9.

M3.6 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.

If a further reduced noise level is required improved balancing carequired improved balancing can be optionally requested (class B).

Table below shows the value for the vibration velocity for standard (A) and improved (B) balancing.

(F 9)

Vibration class	Angular velocity n [min ⁻¹]	Limits of the vibration velocity [mm/s] BN 56 ≤ H ≤ BN 200 M05 ≤ H ≤ M5
A	600 < n < 3600	1.6
B	600 < n < 3600	0.70

Values refer to measures with freely suspended motor in unloaded conditions.

M3.7 Terminal box

Terminal board features 6 studs for eyelet terminal connection.

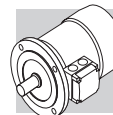
A ground terminal is also supplied for earthing of the equipment.

Terminals number and type are shown in the following table.

For brake power supply, please read par. M6, M7 (brake FD and AFD), M8, M9 (brake FA and BA).

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.



(F 10)

		No. of terminals	Terminal threads	Wire max cross section area mm ²
BN 56...BN 71	M05, M1	6	M4	2.5
BN 80, BN 90	M2	6	M4	2.5
BN 100...BN 112	M3	6	M5	6
BN 132...BN 160MR	M4	6	M5	6
BN 160M...BN 180M	M5	6	M6	16
BN 180L...BN 200L	—	6	M8	25

M3.8 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.

(F 11)

		Cable entry	Max. cable diameter allowed [mm]
BN 63	M05	2 x M20 x 1.5	13
BN 71	M1	2 x M25 x 1.5	17
BN 80 - BN 90	M2	2 x M25 x 1.5	17
BN 100	M3	2 x M32 x 1.5	21
		2 x M25 x 1.5	17
BN 112	—	2 x M32 x 1.5	17
		4 x M25 x 1.5	
BN 132...BN 160MR	M4	4 x M32 x 1.5	21
BN 160M...BN 200L	M5	2 x M40 x 1.5	29

M3.9 Bearings

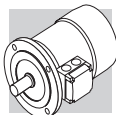
Life lubricated preloaded radial ball bearings are used, types are shown in the chart here under. Calculated endurance lifetime L_{10h} , as per ISO 281, in unloaded condition, exceeds 40000 hrs.

DE = drive end

NDE = non drive end

(F 12)

	DE	NDE	
	M, M_FD, M_AFD, M_FA	M	M_FD, M_AFD, M_FA
M05	6004 2Z C3	6201 2Z C3	6201 2RS C3
M1	6004 2Z C3	6202 2Z C3	6202 2RS C3
M2	6007 2Z C3	6204 2Z C3	6204 2RS C3
M3	6207 2Z C3	6206 2Z C3	6206 2RS C3
M4	6309 2Z C3	6308 2Z C3	6308 2RS C3
M5	6309 2Z C3	6309 2Z C3	6309 2RS C3



(F 13)

	DE	NDE	
	BN, BN_FD, BN_AFD, BN_FA, BN_BA	BN, BN_BA	BN_FD, BN_AFD, BN_FA
BN 56		6201 2Z C3	–
BN 63	6201 2Z C3	6201 2Z C3	6201 2RS C3
BN 71	6202 2Z C3	6202 2Z C3	6202 2RS C3
BN 80	6204 2Z C3	6204 2Z C3	6204 2RS C3
BN 90	6205 2Z C3	6205 2Z C3	6305 2RS C3
BN 100	6206 2Z C3	6206 2Z C3	6206 2RS C3
BN 112	6306 2Z C3	6306 2Z C3	6306 2RS C3
BN 132	6308 2Z C3	6308 2Z C3	6308 2RS C3
BN 160MR	6309 2Z C3	6308 2Z C3	6308 2RS C3
BN 160M/L	6309 2Z C3	6309 2Z C3	6309 2RS C3
BN 180M	6310 2Z C3	6309 2Z C3	6309 2RS C3
BN 180L	6310 2Z C3	6310 2Z C3	6310 2RS C3
BN 200L	6312 2Z C3	6310 2Z C3	6310 2RS C3

M4 ELECTRICAL CHARACTERISTICS

M4.1 Voltage

Single speed motors are rated for 230/400 V - 50 Hz.

A tolerance of $\pm 10\%$ applies to nominal voltage, with the exception of motors type M3LC4 and M3LC6.

In addition to nominal voltage-frequency values the name plate also shows voltage ranges the motor can operate under, e.g.:

220-240V Δ - 50 Hz

380-415V Y - 50 Hz

As per Norms CEI EN 60034-1 on above voltage values the $\pm 5\%$ tolerance applies.

When operating close to the tolerance limit values the winding temperature can exceed by 10 K the rated temperature for the given insulation class.

With the exception of BN/M_FD and BN/M_AFD brakemotors, the rated voltage values for operation under 60 Hz mains are also shown on the nameplate, e.g. 460Y-60 Hz along with related tolerance field, e.g. 440-480V Y-60 Hz.

For brakemotors, FD and AFD type, rated voltage is:

220-240V Δ - 50 Hz

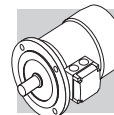
380-415V Y - 50 Hz

Brake supply is a.c. 230V $\pm 10\%$ single phase.

Chart below shows standard and optional wiring of motors.

(F 14)

		BN M	BN_FD ; BN_AFD M_FD ; M_AFD		BN_FA ; BN_BA M_FA		Configuration
		V_{mot} $\pm 10\%$ 3 ~	V_{mot} $\pm 10\%$ 3 ~	V_B $\pm 10\%$ 1 ~	V_{mot} $\pm 10\%$ 3 ~	V_B $\pm 10\%$ 3 ~	
BN 56 - BN 132	M05...M4	230/400 - 50 Hz 460 - 60 Hz	230/400V Δ /Y- 50 Hz	230V	230/400V Δ /Y- 50 Hz 460V Y - 60Hz	230/400V Δ /Y- 50 Hz 460V Y - 60Hz	Standard
BN 100 - BN 132	M3 - M4	400/690 - 50 Hz 460 - 60Hz	400/690V Δ /Y- 50 Hz	400V	400/690V Δ /Y- 50 Hz 460V Y - 60Hz	400/690V Δ /Y- 50 Hz 460V Y - 60Hz	On request at no extra charge



The only rated voltage for motors type 400V/50Hz and all double speed motors is 400V.
Applicable tolerances as per CEI EN 60034-1.

The table below shows the wiring options available.

(F 15)

		Pole	Wiring options
BN 56...BN 200	M05...M5	2, 4, 6	Δ / Y
		2/4	Δ / YY (Dahlander)
		2/6, 2/8, 2/12	Y / Y (Two windings)

M4.2 Frequency

With the exception of brakemotors FD and AFD, name plate of standard single speed motors shows, besides the 50 Hz voltage ratings, also the rated power output for 60 Hz operation in the 440-480 V range.

Power output is increased by approx 20%.

Rated output power for 60 Hz operation is shown in the following diagram.

(F 16)

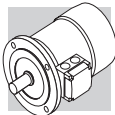
		2P	4P	6P			2P	4P	6P
		P_n [kW]					P_n [kW]		
BN 56A	—	—	0.06	—	BN 112M	M3LB	4.7	4.7	2.5
BN 56B	M0B	—	0.10	—		M3LC	—	4.7	2.5
BN 63A	M05A	0.21	0.14	0.10	BN 132S	M4SA	—	6.5	3.5
BN 63B	M05B	0.30	0.21	0.14	BN 132SA	M4SA	6.3	—	—
BN 71A	M05C	0.45	0.30	0.21	BN 132SB	M4SB	8.7	—	—
BN 71B	M1SD	0.65	0.45	0.30	BN 132M	M4LA	11	—	—
BN 80A	M1LA	0.90	0.65	0.45	BN 132MA	M4LA	—	8.7	4.6
BN 80B	M2SA	1.30	0.90	0.65	BN 132MB	M4LB	—	11	6.5
BN 90S	M2SB	—	1.30	0.90	BN 160MR	M4LC	12.5	12.5	—
BN 90SA	M2SB	1.8	—	—	BN 160MB	M5SB	17.5	—	—
BN 90L	M3SA	2.5	—	1.3	BN 160M	M5SA	—	—	8.6
BN 90LA	M3SA	—	1.8	—	BN 160L	M5S	21.5	17.5	12.6
BN 100L	M3LA	3.5	—	—	BN 180M	M5LA	24.5	21.5	—
BN 100LA	M3LA	—	2.5	1.8	BN 180L	—	—	25.3	17.5
BN 100LB	M3LB	4.7	3.5	2.2	BN 200L	—	34	34	22

For two-speed motors operated under 60 Hz supply the rated power output is increased by 15% as compared to same motor with 50 Hz supply.

If same IEC-normalised 50 Hz power rating value is desired on name plate of a 60 Hz operated motor specify option PN in the ordering code.

Standard motors wound for 50 Hz supply can be operated under 60 Hz with main data corrected as per chart below:

Brakes, if fitted, must be supplied with the voltage value V_b that is stated on the nameplate.



(F 17)

50 Hz	60 Hz			
V - 50 Hz	V - 60 Hz	P _n - 60 Hz	M _n , M _a /M _n - 60 Hz	n [min ⁻¹] - 60 Hz
230/400 Δ/Y	220 - 240 Δ	1	0.83	1.2
	380 - 415 Y			
400/690 Δ/Y	380 - 415 Δ	1.15	1	1.2
230/400 Δ/Y	265 - 280 Δ			
	440 - 480 Y			
400/690 Δ/Y	440 - 480 Δ			

M4.3 Rated power

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 following charts.

(F 18)

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.

M4.4 Insulation class

CL F

Bonfiglioli motors use class **F** insulating materials (enamelled wire, insulators, impregnation resins) as compare to the standard motor.

CL H

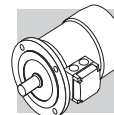
Motors manufactured in insulation class **H** are available at request.

In standard motors, stator windings over temperature normally stays below the 80 K limit corresponding to class B over temperature.

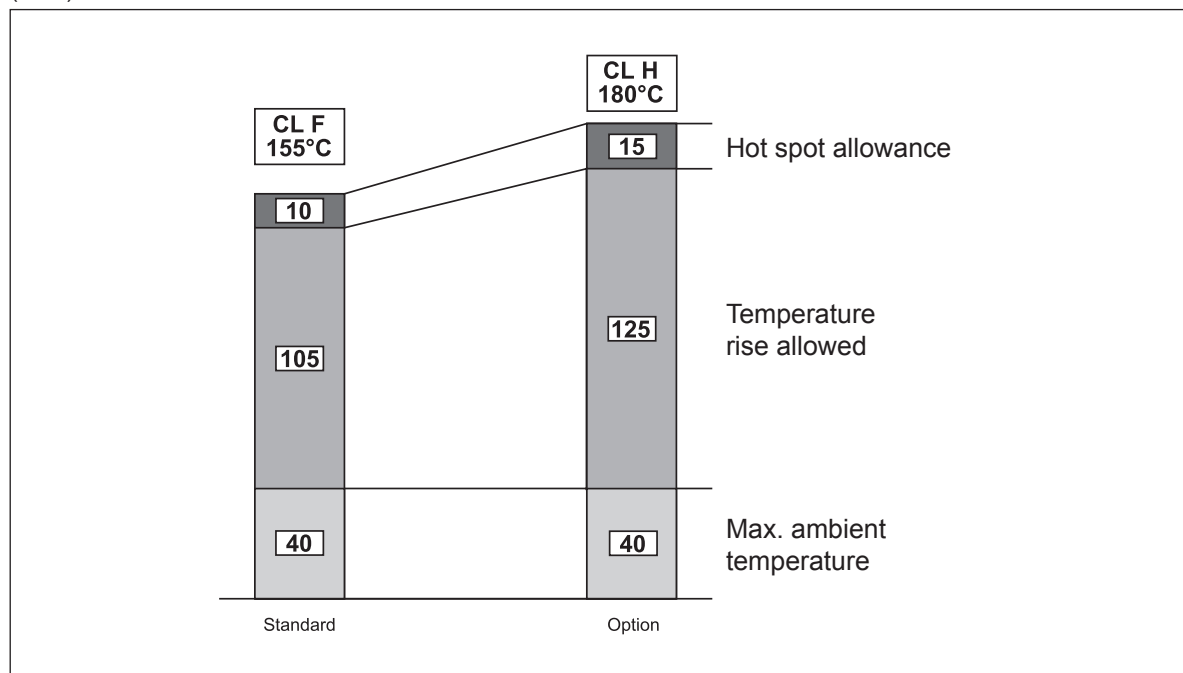
A careful selection of insulating components makes the motors compatible with tropical climates and normal vibration.

For applications involving the presence of aggressive chemicals or high humidity, contact Bonfiglioli Engineering for assistance with product selection.

Not available for motors in compliance with CSA e UL standards (CUS option).



(F 19)



M4.5 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: 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.

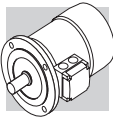
For further details, contact Bonfiglioli's Technical Service.

Please contact Bonfiglioli Engineering for the power increase coefficients applicable to switch-pole motors.

(F 20)

	Duty						
	S2			S3 *			S4 - S9
	Cycle duration (min)			Cyclic duration factor (I)			Consult factory
	10	20	60	25%	40%	60%	
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.



M4.5.1 Cyclic duration factor:

$$I = \frac{t_f}{t_f + t_r} \cdot 100 \quad (23)$$

t_f = work time under constant load

t_r = rest time

M4.5.2 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.

M4.5.3 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.

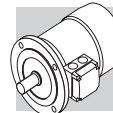
M4.6 Inverter-controlled motors

The electric motors of series BN and M 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). Table (F30) shows the typical torque/speed curves referred to S1 duty for motors with base frequency $f_b = 50$ Hz.

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.



(F 21)

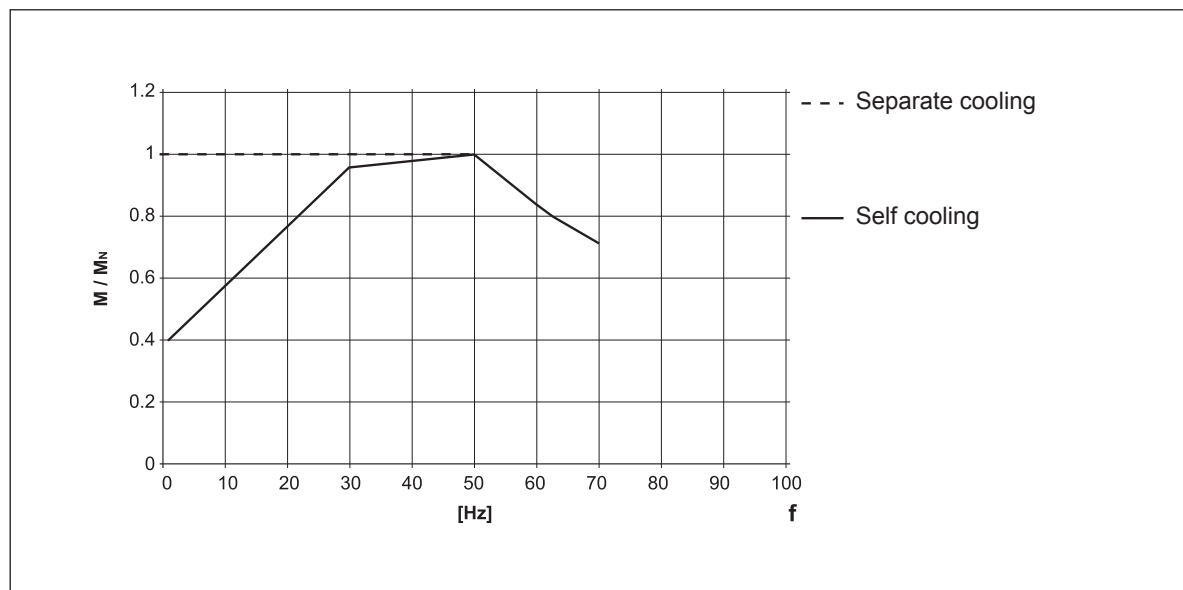


Table (F22) reports the mechanical limit speed for motor operation above rated frequency:

(F 22)

		n [min ⁻¹]		
		2p	4p	6p
≤ BN 112	M05...M3	5200	4000	3000
BN 132...BN 200L	M4, M5	4500	4000	3000

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.

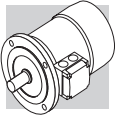
Remote-controlled fan and brake (if fitted) must always be connected direct to mains power supply.

M4.7 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:



$$Z = \frac{Z_0 \cdot K_c \cdot K_d}{K_J} \quad (24)$$

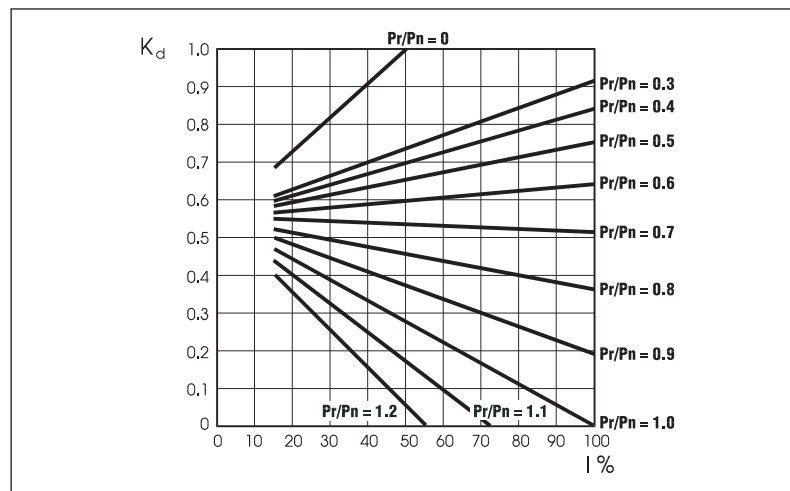
where:

$$K_J = \frac{J_m + J_c}{J_m} \quad \text{inertia factor}$$

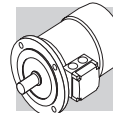
$$K_c = \frac{M_a - M_L}{M_a} \quad \text{torque factor}$$

$$K_d = \quad \text{load factor see table (F23)}$$

(F 23)



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 table (F30) and dependent on the number of switches (c/h).



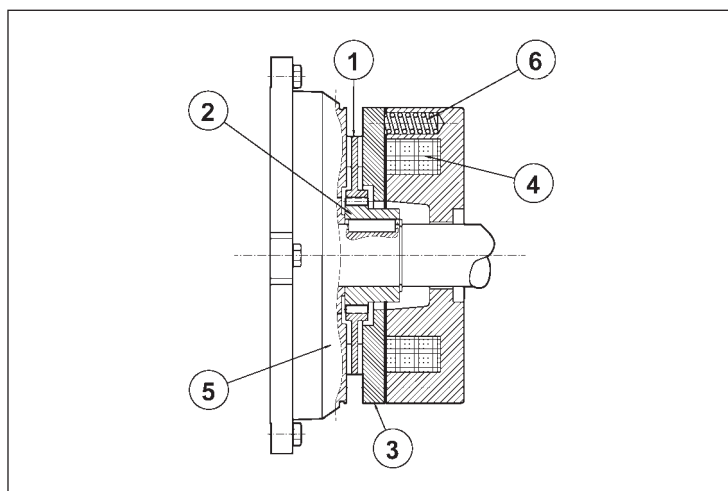
M5 ASYNCHRONOUS BRAKE MOTORS

M5.1 Operation

Versions with incorporated brake use spring-applied DC (FD, AFD option) or AC (FA, BA 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.

(F 24)



Key:

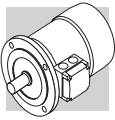
- ① brake disc
- ② disc carrier
- ③ pressure plate
- ④ brake coil
- ⑤ motor rear shield
- ⑥ brake springs

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.

M5.2 Most significant features

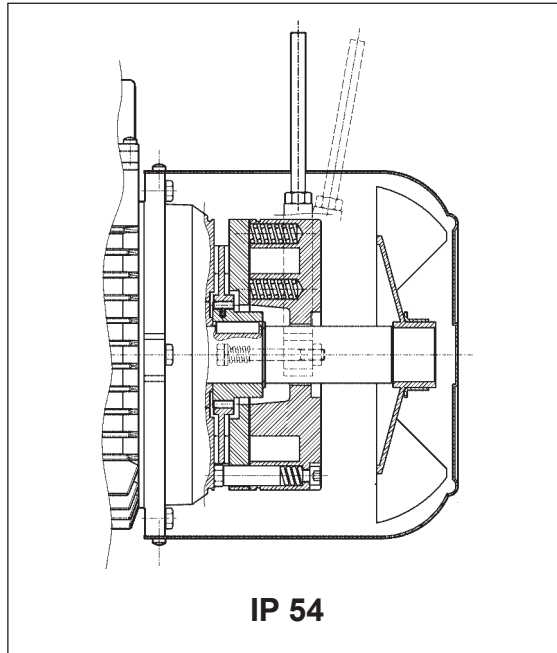
- High braking torques (normally $M_b \approx 2 M_n$), braking torque adjustment.
- Steel brake disc with double friction lining (low-wear, asbestos-free lining).
- Hexagonal seat on motor shaft fan end (N.D.E.) for manual rotation (not compatible with options PS, RC, TC, U1, U2, EN1, EN2, EN3, EN4, EN5, EN6).
- Manual release lever (options **R** and **RM** for BN/M_FD; option **R** for BN/M_FA).
- Manual mechanical release (option **R** for BN/M_AFD).
- Corrosion-proof treatment on all brake surfaces.
- Insulation class F.



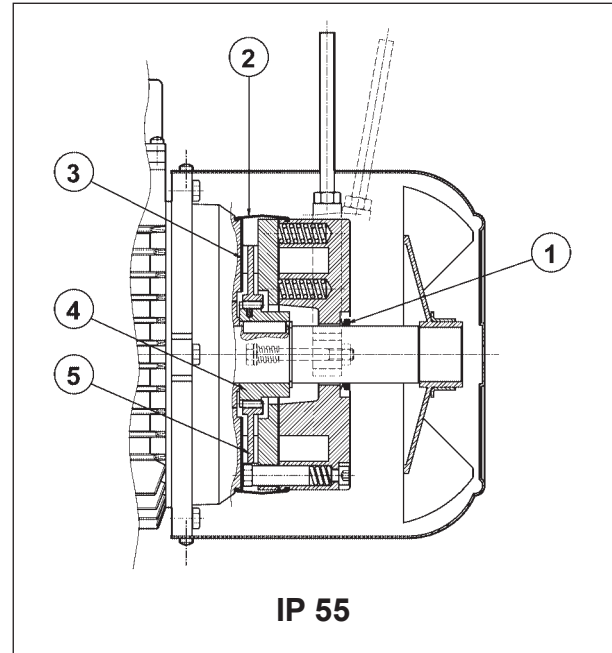
M6 DC BRAKE MOTORS TYPE BN_FD and M_FD

Frame sizes: BN 63 ... BN 200L / M05 ... M5

(F 25)



(F 26)



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.

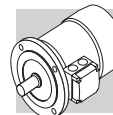
FD brakes ensure excellent dynamic performance with low noise. DC brake operating characteristics may be optimized to meet application requirements by choosing from the various rectifier/power supply and wiring connection options available.

For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli's Technical Service.

M6.1 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

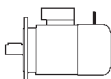
M6.2 FD brake power supply

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.

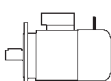
Rectifier standard power supply voltage V_B is as indicated in the following table, regardless of mains frequency:

(F 27)

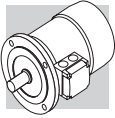
2, 4, 6 P				1 speed	
		BN_FD / M_FD		brake connected to terminal board power supply	separate power supply
		V_{mot} $\pm 10\%$ 3 ~	V_B $\pm 10\%$ 1 ~		
BN 63...BN 132	M05...M4LB	230/400 V – 50 Hz	230 V	standard	specify V_B SA o V_B SD
BN 160...BN 200	M4LC...M5	400/690 V – 50 Hz	400 V	standard	specify 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:

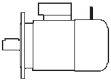
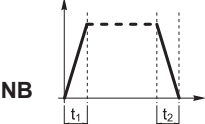
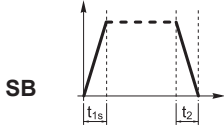
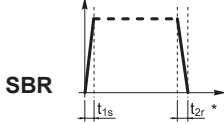
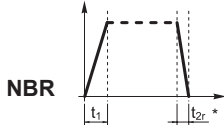
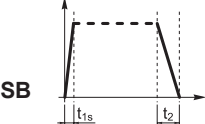
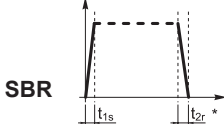
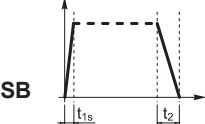
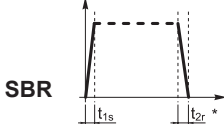
(F 28)

2/4, 2/6, 2/8, 2/12, 4/6, 4/8 P				2 speed	
		BN_FD / M_FD		brake connected to terminal board power supply	separate power supply
		V_{mot} $\pm 10\%$ 3 ~	V_B $\pm 10\%$ 1 ~		
BN 63...BN 132	M05...M4LB	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:



(F 29)

		brake		
			standard	at request
BN 63	M05	FD 02		
BN 71	M1	FD 03		
		FD 53		
BN 80	M2	FD 04		
BN 90S	—	FD 14		
BN 90L	—	FD 05		
BN 100	M3	FD 15		
—		FD 55		
BN 112	—	FD 06S		
BN 132...160MR	M4	FD 56		
BN 160L - BN 180M	M5	FD 06		
BN 180L - NM 200L	—	FD 07		

(*) $t_{2c} < t_{2r} < t_2$

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 release 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.

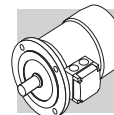
This arrangement ensures short brake release response time with no need for additional external wiring and contacts.

Optimum performance of rectifiers **NBR** and **SBR** is achieved with separate brake power supply.

Available voltages: 230V $\pm$ 10%, 400V $\pm$ 10%, 50/60 Hz.

M6.3 FD brake technical specifications

The table below reports the technical specifications of DC brakes FD.



(F 30)

Brake	Brake torque M _b [Nm]			Release		Braking		W _{max} per brake operation			W	P
	springs			t ₁	t _{1 s}	t ₂	t _{2c}	[J]				
	6	4	2	[ms]	[ms]	[ms]	[ms]	10 s/h	100 s/h	1000 s/h	[MJ]	[W]
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 ($\pm 15\%$)
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.

M6.4 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.

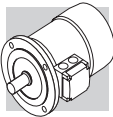


Table (F31) – Brake power supply from motor terminals and AC line interruption

Delayed stop time t_2 and function of motor time constants.

Mandatory when soft-start/stops are required.

Table (F32) – 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 (F30).

Table (F33) – Brake coil power supply from motor terminals and AC/DC line interruption.

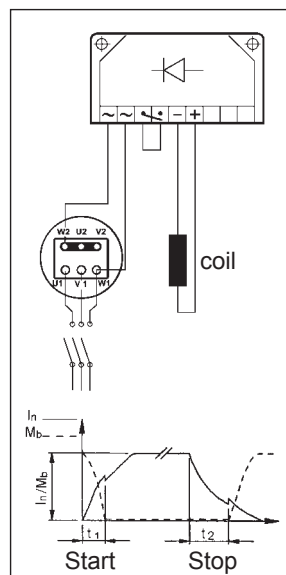
Quick stop with operation times t_{2c} as per table (F30).

Table (F34) – Brake coil with separate power supply and AC/DC line interruption.

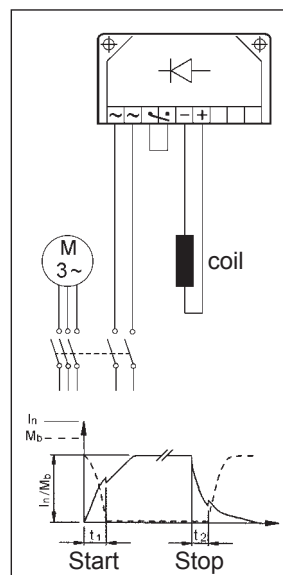
Stop time decreases by values t_{2c} indicated in the table (F30).

Tables (F31) through (F34) show the typical connection diagrams for 400 V power supply, star-connected 230/400V motors and 230 V brake.

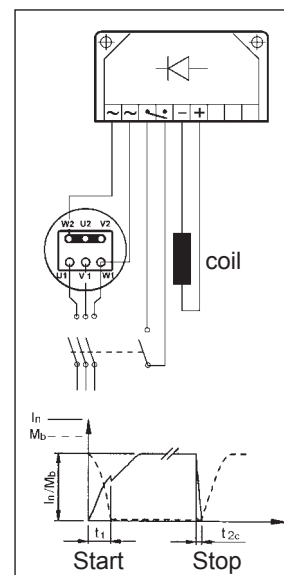
(F 31)



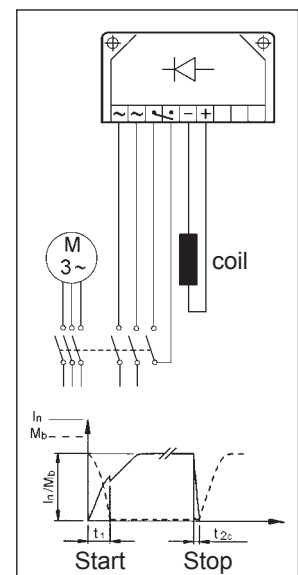
(F 32)

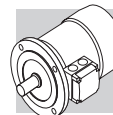


(F 33)



(F 34)

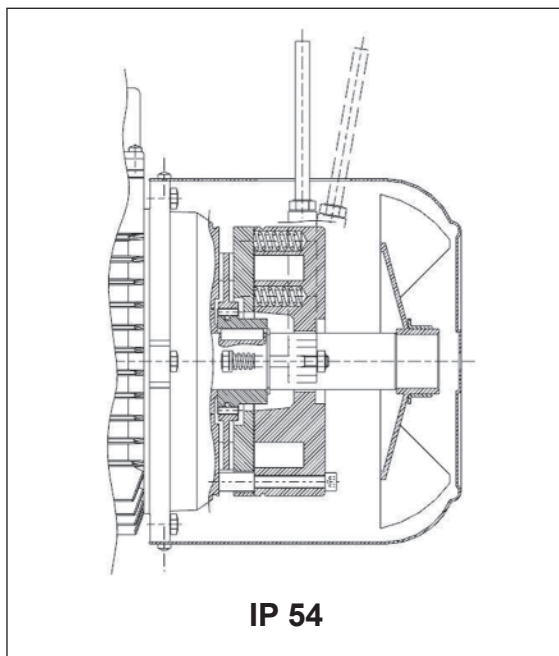




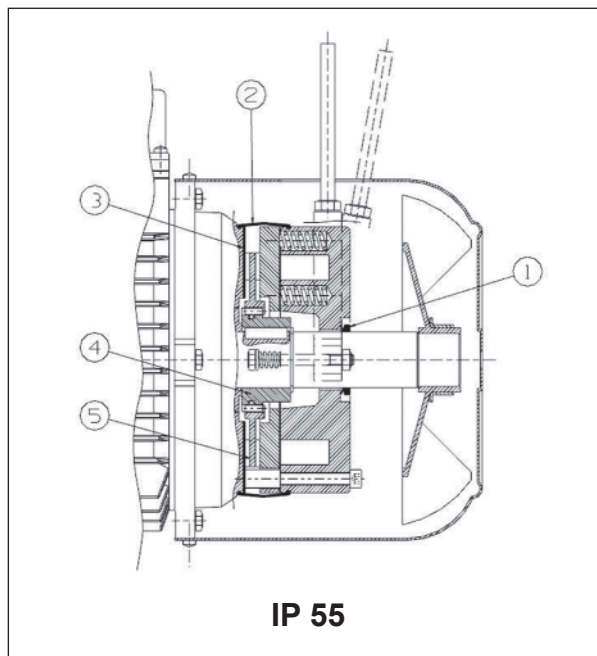
M7 DC BRAKE MOTORS TYPE BN_AFD and M_AFD

Frame sizes: BN 63 ... BN 200L / M05 ... M5

(F 35)



(F 36)



Maintenance free up to the maximum permissible wear of brake disc. The air gap of AFD brakes is preset and it does not have to be set

Direct current toroidal-coil electromagnetic brake bolted onto motor shield.

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**) see variant at paragraph "BRAKE RELEASE SYSTEMS" for available release lever locations.

AFD 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.

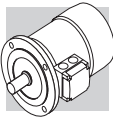
The AFD brake is recommended for applications in which it is used as a holding brake.

For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli's Technical Service.

M7.1 Degree of protection

Standard protection class is IP54.

Brake motor AFD 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

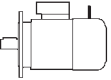
M7.2 AFD brake power supply

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.

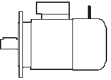
Rectifier standard power supply voltage V_B is as indicated in the following table, regardless of mains frequency:

(F 37)

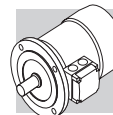
2, 4, 6 P				1 speed	
		BN_AFD / M_AFD $V_{mot} \pm 10\%$ 3 ~		$V_B \pm 10\%$ 1 ~	brake connected to terminal board power supply
BN 63...BN 132	M05...M4LB	230/400 V – 50 Hz	230 V	standard	separate power supply
BN 160MR	M4LC	400/690 V – 50 Hz	400 V	standard	specify V_B SA o V_B SD

Switch-pole motors feature a separate power supply line for the brake with rectifier input voltage V_B as indicated in the table below:

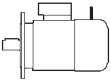
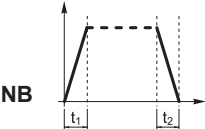
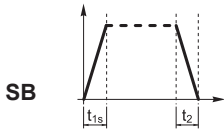
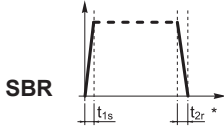
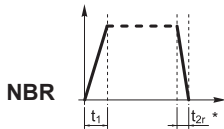
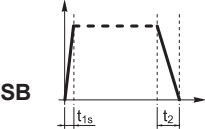
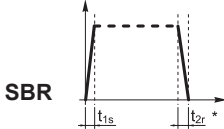
(F 38)

2/4, 2/6, 2/8, 2/12, 4/6, 4/8 P				2 speed	
		BN_AFD / M_AFD $V_{mot} \pm 10\%$ 3 ~		$V_B \pm 10\%$ 1 ~	brake connected to terminal board power supply
BN 63...BN 132	M05...M4LB	400 V – 50 Hz	230 V		separate power supply
					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:



(F 39)

		brake		
			standard	at request
BN 63	M05	AFD 02		
BN 71	M1	AFD 03		
BN 80	M2	AFD 04		
BN 90S	—	AFD 14		
BN 90L	—	AFD 05		
BN 100	M3	AFD 15		
BN 112	—	AFD 06S		
BN 132...160MR	M4	AFD 06		
		AFD 07		

(*) $t_{2c} < t_{2r} < t_2$

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 release 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.

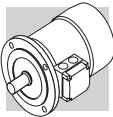
This arrangement ensures short brake release response time with no need for additional external wiring and contacts.

Optimum performance of rectifiers **NBR** and **SBR** is achieved with separate brake power supply.

Versions available: 230 V ac $\pm 10\%$, 400 V ac $\pm 10\%$, 50/60 Hz (with power supply); 100 V dc $\pm 10\%$, 180 V dc $\pm 10\%$ (with SD option).

M7.3 AFD brake technical specifications

The table below reports the technical specifications of DC brakes AFD.



(F 40)

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		
AFD 02	—	3.5	1.75	40	20	110	112	4500	1400	180	40	13
AFD 03	7.5	5	2.5	80	35	140	15	7000	1900	230	60	17
AFD 04	15	10	5	120	55	180	20	10000	3100	350	75	23
AFD 14												
AFD 05	40	26	13	200	85	250	30	18000	4500	500	125	32
AFD 15												
AFD 06S	60	40	20	—	110	280	35	20000	4800	550	175	40
AFD 06	100	75(*) / 62(*)	37	—	130	330	45	29000	7400	800	200	45
AFD 07	150	100	50	—	170	400	50	40000	9300	1000	320	50

(*) depending on the type of springs

- 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 = dissipatable braking energy before replacement of brake disc
- P_b = brake power absorption at 20 °C
- M_b = static braking torque ($\pm 15\%$)
- 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.

M7.4 AFD 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 (F41) – 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 (F42) – Brake coil with separate power supply and AC line interruption

Normal stop time independent of motor.

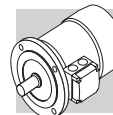
Achieved stop times t_2 are indicated in the table (F40).

Table (F43) – Brake coil power supply from motor terminals and AC/DC line interruption.

Quick stop with operation times t_{2c} as per table (F40).

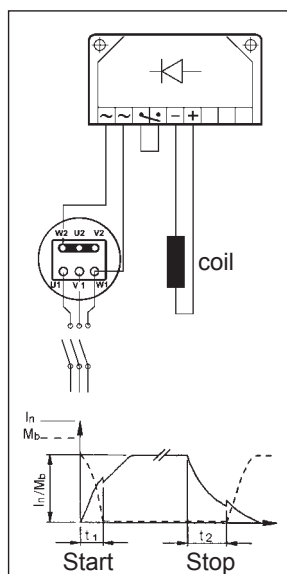
Table (F44) – Brake coil with separate power supply and AC/DC line interruption.

Stop time decreases by values t_{2c} indicated in the table (F40).

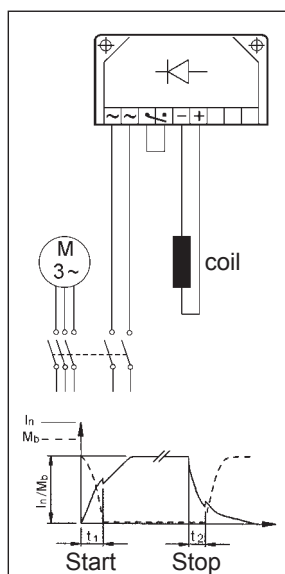


Tables (F41) through (F44) show the typical connection diagrams for 400 V power supply, star-connected 230/400V motors and 230 V brake.

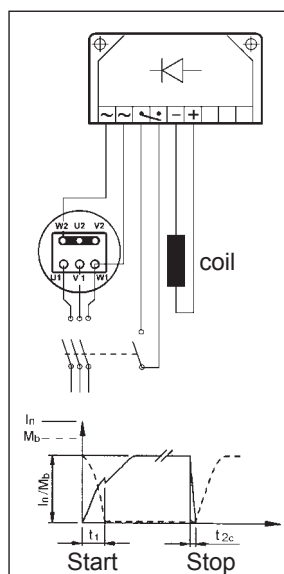
(F 41)



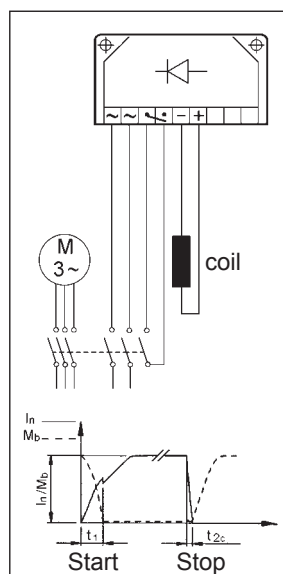
(F 42)

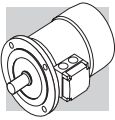


(F 43)



(F 44)

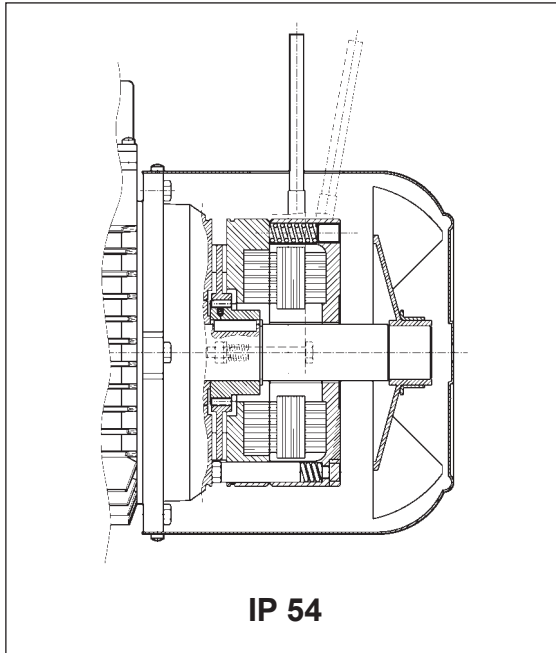




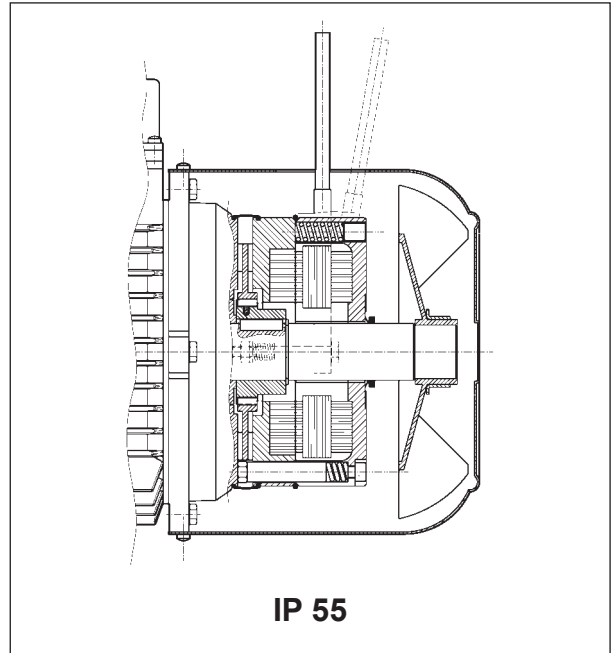
M8 AC BRAKE MOTORS TYPE BN_FA and M_FA

Frame sizes: BN 63 ... BN 180M / M05 ... M5

(F 45)



(F 46)



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. (F48).

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.

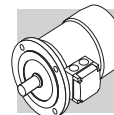
For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli's Technical Service.

M8.1 Degree of protection

Standard protection class is IP54.

Brake motor BN_FA is also available in protection class **IP55**, which mandates the following variants:

- V-ring at N.D.E. of motor shaft
- rubber protection sleeve
- O-ring



M8.2 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:

(F 47)

single-pole motor	BN 63...BN 132	BN 160...BN 180
	M05...M4LB	M4LC...M5
	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
	M05...M4
	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.

M8.3 Technical specifications of FA brakes

(F 48)

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 (±15%)

t_1 = brake release time

t_2 = brake engagement time

W_{max} = max energy per brake operation (brake thermal capacity)

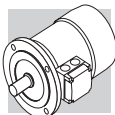
W = braking energy between two successive air gap adjustments

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.

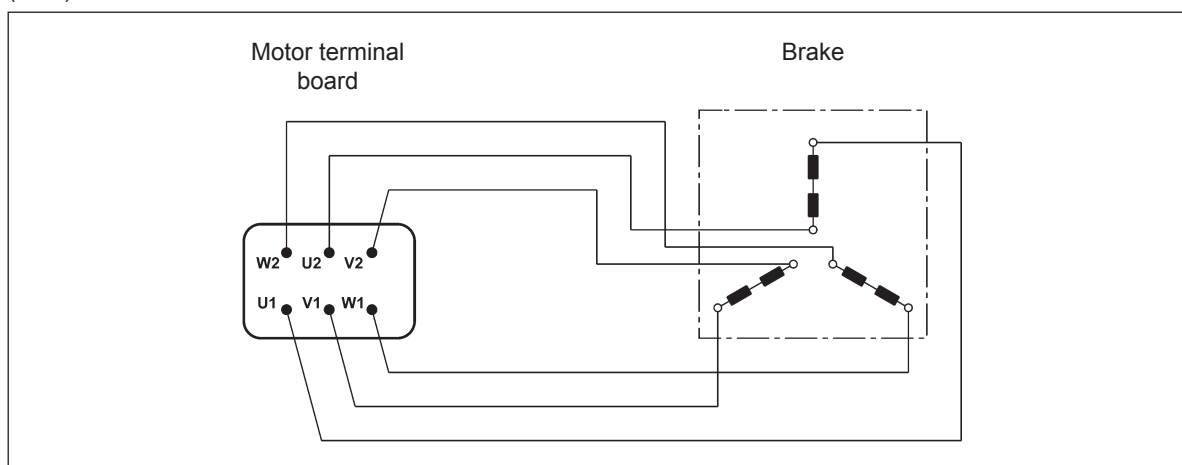


The brake pad wear depends on the operating/ambient conditions (temperature, humidity, angular speed, specific pressure); Therefore the declared wear rate must be considered as indicative.

M8.4 FA brake connections

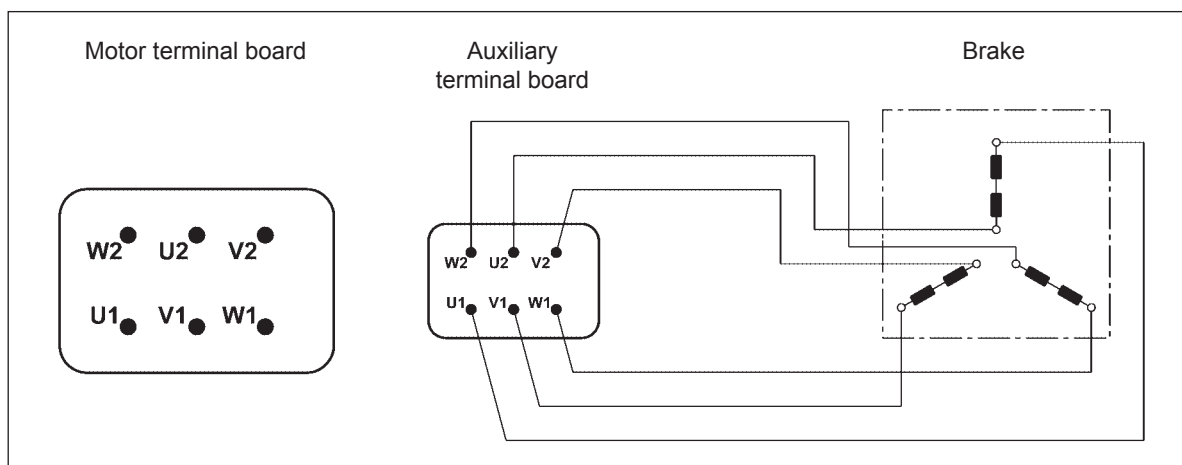
The diagram (F49) shows the wiring when brake is connected directly to same power supply of the motor:

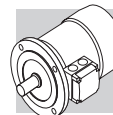
(F 49)



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 (F50):

(F 50)

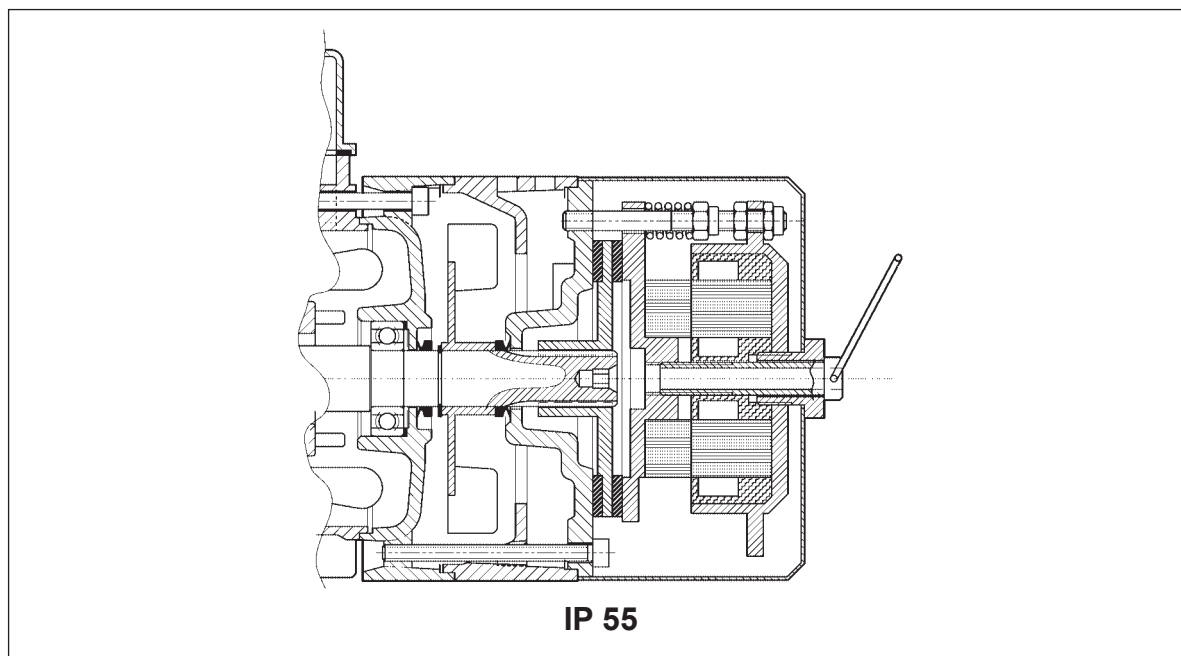




M9 AC BRAKE MOTORS TYPE BN_BA

Frame sizes: BN 63 ... BN 132M

(F 51)



Electromagnetic brake operates from three-phase **alternated current** power supply and is bolted onto conveyor shield.

Steel brake disc slides axially on splined motor shaft (steel drive hub is shrunk onto shaft on frame size 244).

Factory setting is maximum brake torque.

Step less braking torque adjustment by screws which compress the brake springs. Allowed adjustment range is $30\% M_{bMAX} < M_b < M_{bMAX}$ (where M_{bMAX} is maximum braking torque as shown in tab. (F53).

Motors are supplied complete with manual brake release screw as standard. Screw may be locked in the release position to allow for motor shaft rotation.

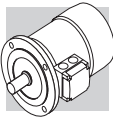
The brake release screw must be removed after use to ensure proper brake operation and avoid potentially dangerous conditions.

In addition to the high dynamic characteristics typical of AC brakes, a sturdy design and increased braking energy make the BA brake ideal for heavy-duty applications as well as applications requiring frequent stop/starts and very fast response time.

For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli's Technical Service.

M9.1 Protection class

Only available in protection class IP55.



M9.2 A 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:

(F 52)

single-pole motor	BN 63 ... BN 132
	230Δ / 400Y V ±10% – 50 Hz
	265Δ / 460Y ±10% - 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.

M9.3 BA brake technical specifications

The table below reports the technical specifications for AC brakes type BA.

(F 53)

Brake	Brake torque M_b [Nm]	Release t_1 [ms]	Braking t_2 [ms]	W_{max} [J]			W [MJ]	P_B [VA]
				10 s/h	100 s/h	1000 s/h		
BA 60	5	5	20	4000	1500	180	30	60
BA 70	8	6	25	7000	2700	300	60	75
BA 80	18	6	25	10000	3100	350	80	110
BA 90	35	8	35	13000	3600	400	88	185
BA 100	50	8	35	18000	4500	500	112	225
BA 110	75	8	35	28000	6800	750	132	270
BA 140	150	15	60	60000	14000	1500	240	530

M_b = max static braking torque (±15%)

t_1 = brake release time

t_2 = brake engagement time

W_{max} = max energy per brake operation (brake thermal capacity)

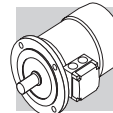
W = braking energy between two successive air gap adjustments

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.

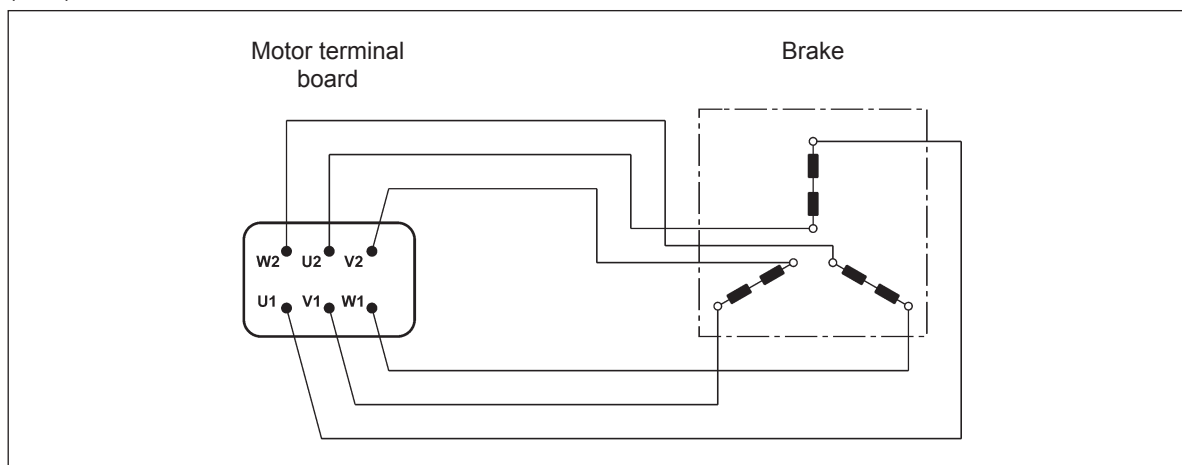


The brake pad wear depends on the operating/ambient conditions (temperature, humidity, angular speed, specific pressure); Therefore the declared wear rate must be considered as indicative.

M9.4 BA brake connections

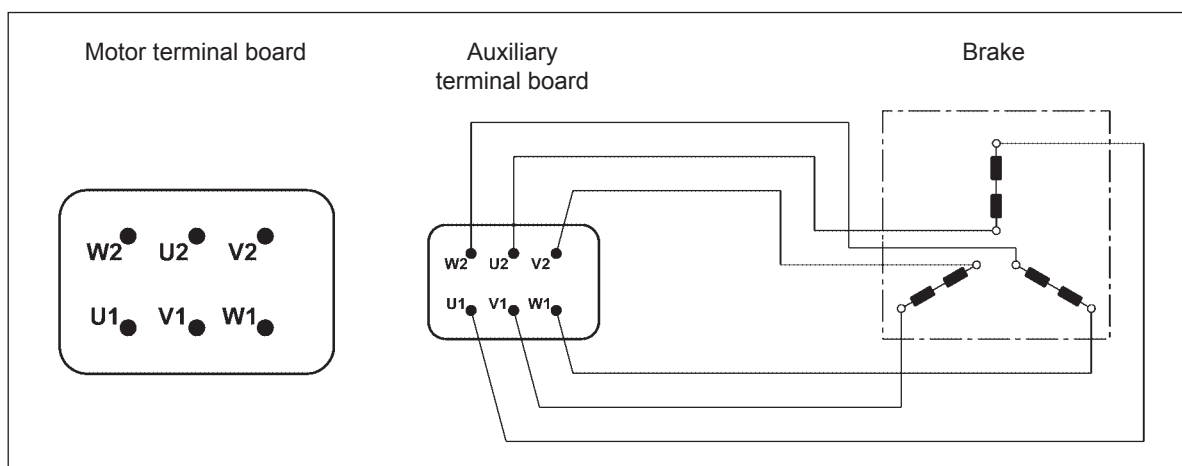
The diagram (F54) shows the required connections to terminal box when brake is to be connected directly to motor power supply:

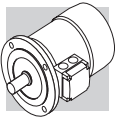
(F 54)



Switch-pole motors and, at request, single-pole motors with separate power supply line are equipped with an auxiliary terminal board with 6 terminals for brake connection. In this version, motors feature a larger terminal box. See diagram (F55):

(F 55)



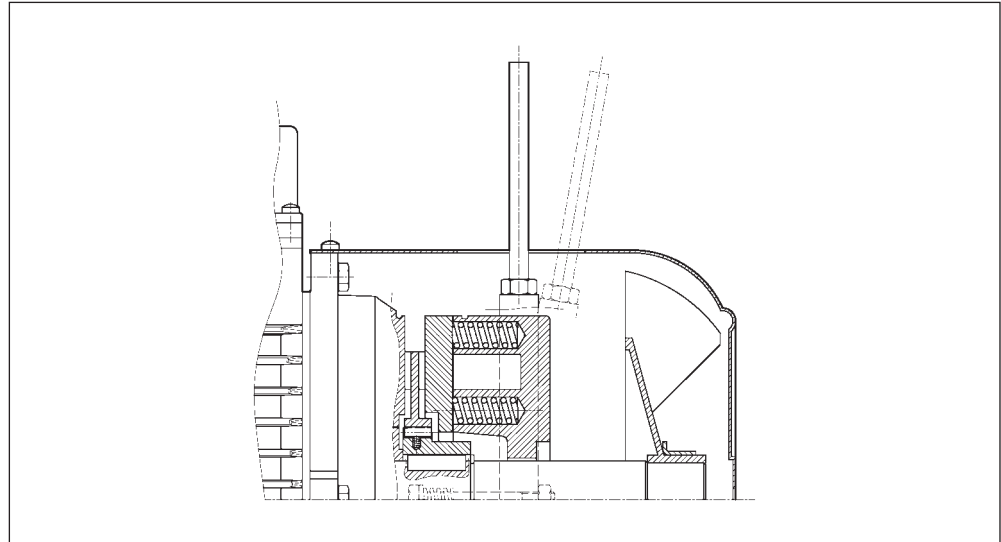


M10 BRAKE RELEASE SYSTEMS

Spring-applied brakes type FD, AFD 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.

(F 56)

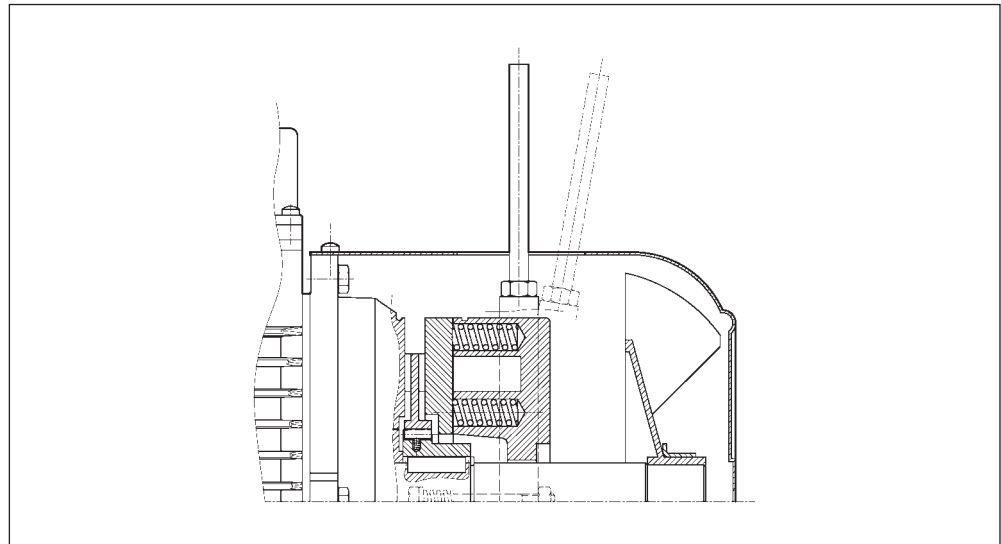
R



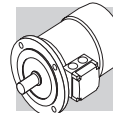
A return spring brings the release lever back in the original position.

(F 57)

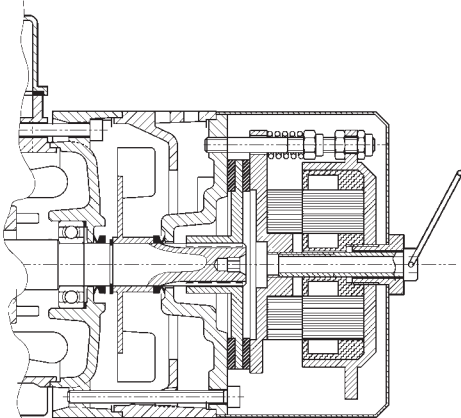
RM



On motors type BN_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:



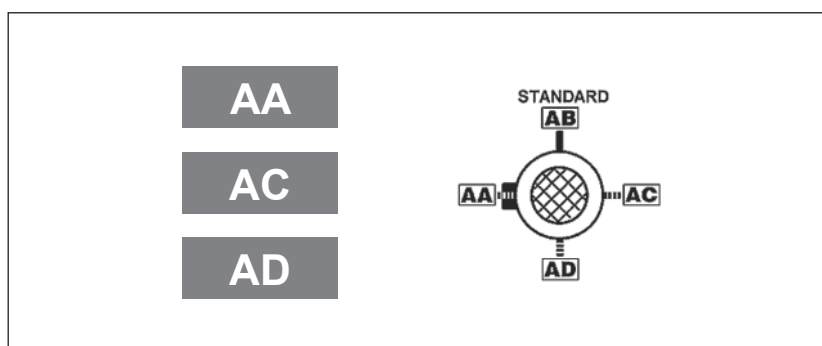
(F 58)

	R	RM
BN_FD	BN 63...BN 200	2p 63A2 ≤ H ≤ 132M2 4p 63A4 ≤ H ≤ 132MA4 6p 63A6 ≤ H ≤ 132MA6
BN_AFD	BN 63...BN 160MR	⊖
M_FD	M 05...M 5	M 05...M 4LA
M_AFD	M 05...M 4LC	⊖
BN_FA	BN 63...BN 180M	⊖
M_FA	M 05...M 5	
BN_BA	 Standard Supply	

M10.1 Release lever orientation

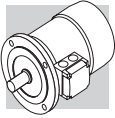
Unless otherwise specified, the release lever is located 90° away from the terminal box – identified by letters **[AB]** in the diagram below – in a clockwise direction on both options **R** and **RM**. Alternative lever positions **[AA]**, **[AC]** and **[AD]** are also possible when the corresponding option is specified:

(F 59)



M10.2 Fly-wheel data (F1)

The table below shows values of weight and inertia of flywheel (option F1). Overall dimensions of motors remain unchanged.



(F 60)

Main data for flywheel of motore type: BN_FD, BN_AFD, M_FD, M_AFD			
		Fly-wheel weight [Kg]	Fly-wheel inertia [Kgm ²]
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

M11 OPTIONS

M11.1 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 servoven-tilated motors (IC416).

M11.2 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.

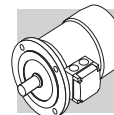
K1

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.



M11.3 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.

M11.4 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 it is not applicable to switch-pole motors. More details about the motor sizes are available in the next table.

The connectors CON 1 / CON 2 are available for BN and M motors without brake and for BN and M brakemotors equipped with DC brake type FD or AFD, 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.

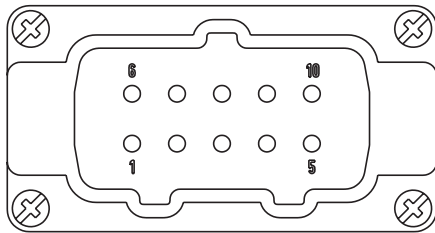
With options EN1...EN6, the encoder connection is made by a cable not connected to the motor plug connector.

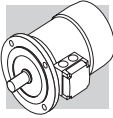
The CON option is not applicable to brakemotors equipped with AC brake type FA or BA.

The CON option is not available when at least one of the next options are selected: the U2, CUS, IC.

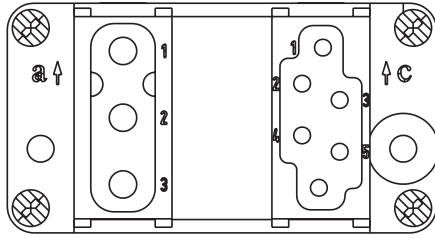
Specifications

(F 61)

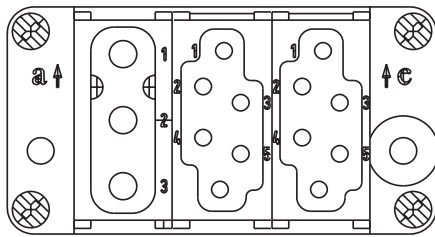
Option	CON 1
Motor size	BN63...BN112 / M05...M3
Connector view	
Type of connector	Harting Han 10ES
Housing	Han EMC 10B with 2 levers
Numbers of pins - nominal current	10 x 16A
Voltage	500 Vac
Contact connection	Screw terminals



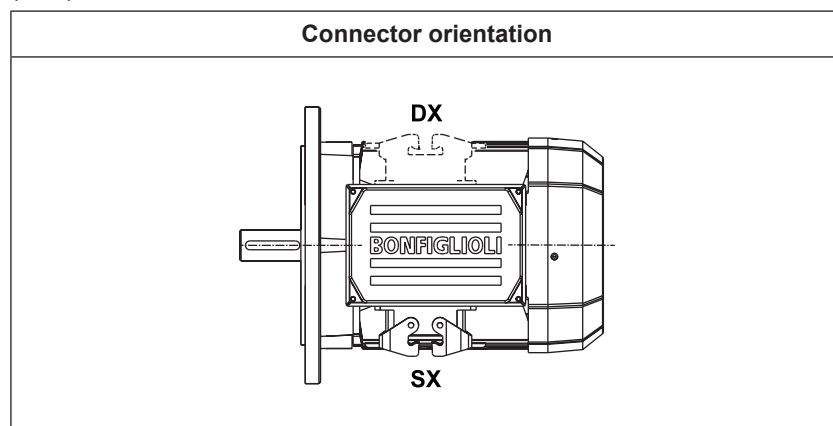
(F 62)

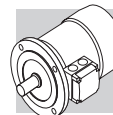
Option	CON 2
Motor size	BN63...BN160MR / M05...M4LC
Connector view	
Type of connector	Harting Han Modular
Housing	Han EMC 10B with 2 levers
Module type	Module C + Empty module + Module E
Numbers of pins - nominal current	3 x 36A / 6 x 16A
Voltage	500 Vac
Contact connection	Crimping contacts

(F 63)

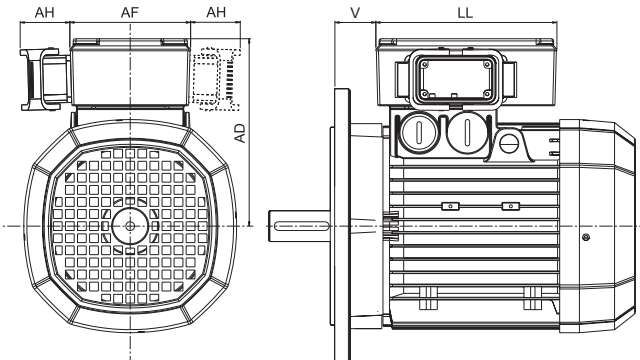
Option	CON 3
Motor size	BN63...BN160MR / M05...M4LC
Connector view	
Type of connector	Harting Han Modular
Housing	Han EMC 10B with 2 levers
Module type	Module C + Module E + Module E
Numbers of pins - nominal current	3 x 36A / 6 + 6 x 16A
Voltage	500 Vac
Contact connection	Crimping contacts

(F 64)



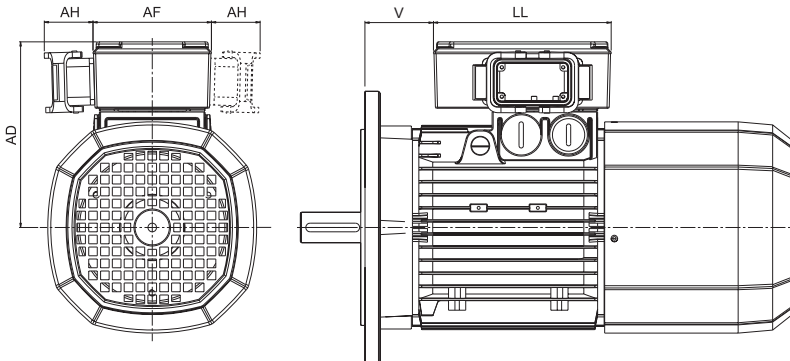
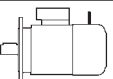


(F 65)

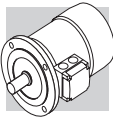
Motors without brake dimensions						
						
		AD (mm)	AF (mm)	AH (mm)	LL (mm)	V ^(*) (mm)
						
BN63	M05	136	110	45	165	4.5
BN71	M1	149	110	45	165	15.5
BN80	M2	160	110	45	165	16.5
BN90	—	162	110	45	165	31.5
BN100	M3	171	110	45	165	37.5
BN112	—	186	110	45	165	39
BN132	M4	210	140	45	188	45.5
BN160MR	—	210	140	45	188	161

(*) Dimension valid only for motors BN.

(F 66)

Motors with FD brake dimensions						
						
		AD (mm)	AF (mm)	AH (mm)	LL (mm)	V ^(*) (mm)
						
BN63	M05	136	110	45	165	4.5
BN71	M1	149	110	45	165	1.5
BN80	M2	160	110	45	165	18.5
BN90	—	162	110	45	165	39.5
BN100	M3	171	110	45	165	63.5
BN112	—	186	110	45	165	75
BN132	M4	210	140	45	188	122
BN160MR	—	210	140	45	188	161

(*) Dimension valid only for motors BN.



M11.5 Control of brake operation

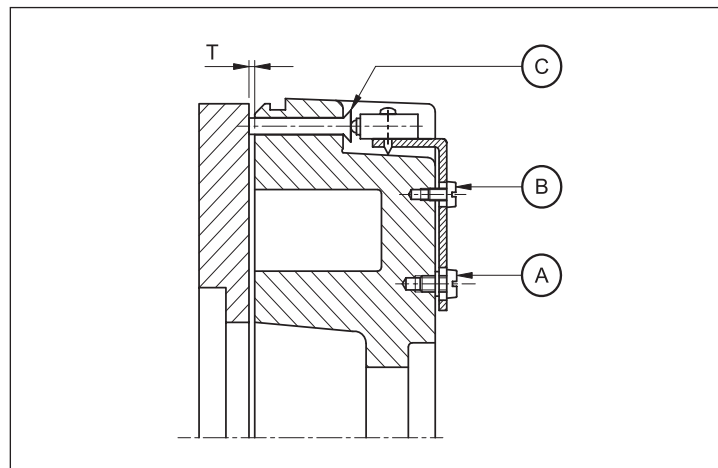
MSW

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 and AFD03...AFD07.

The microswitch is provided with three lead wires (NC, NO, COM). The next figure shown the main components of the brake equipped with microswitch.

(F 67)



- A: Plate fixing screws
- B: Setting screws
- C: Actuator control pin

M11.6 Additional cable entry for brakemotors

IC

The terminal box cover of brakemotors BN63...BN160MR / M05...M4 is provided with two additional cable entry M16 x 1.5 (one cable entry per side).

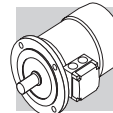
The terminal box cover of brakemotors BN160...BN200 / M5 is provided with an additional cable entry M16 x 1.5 next to the cable entry used for the brake.

M11.7 Anti-condensation heaters

H1

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:



(F 68)

		H1
		1~ 230V ± 10% P [W]
BN 56...BN 80	M0...M2	10
BN 90...BN 160MR	M3 - M4	25
BN 160M...BN 180M	M5	50
BN 180L...BN 200L	—	50

Warning!

Always remove power supply to the anti-condensante heater before operating the motor.

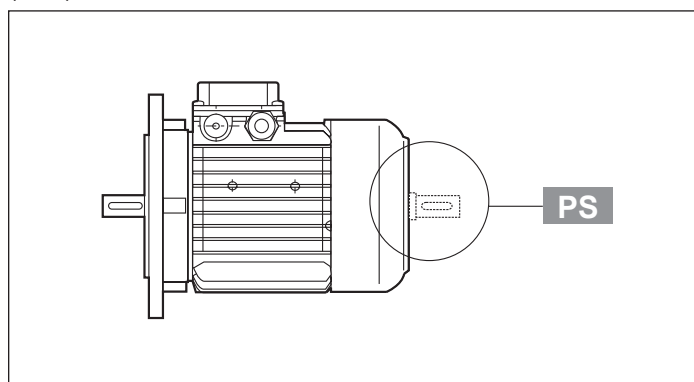
M11.8 Second shaft extension

PS

This option is not compatible with variants RC, TC, U1, U2, EN1, EN2, EN3, EN4, EN5, EN6 – and is not feasible on motors equipped with BA brake.

For shaft dimensions please see motor dimensions tables.

(F 69)



M11.9 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 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.

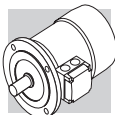
When ordering, customers should indicate the required rotation direction, AL or AR.

Never use the anti run-back device to prevent reverse rotation caused by faulty electrical connection.

Table (F70) shows rated and maximum locking torques for the anti run-back devices.

A diagram of the device can be seen in Table (F71). Overall dimensions are same as the corresponding brake motor.

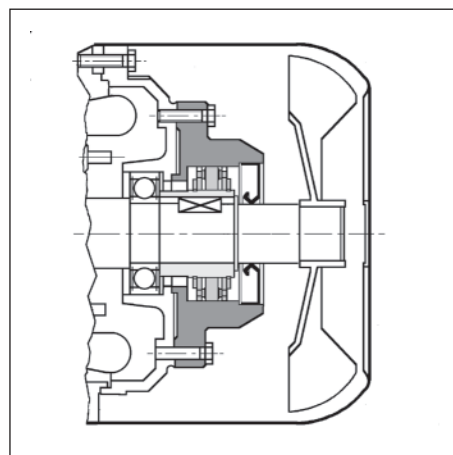
The direction of free rotation is described in the “MOTOR OPTIONS” section of specifically dedicated sections to gear units.



(F 70)

	Rated locking torque [Nm]	Max. locking torque [Nm]	Release speed [min ⁻¹]
M1	6	10	750
M2	16	27	650
M3	54	92	520
M4	110	205	430

(F 71)



M11.10 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 or M1 size.

Motor is cooled by an axial fan with independent power supply and fitted on the fan cover (IC 416 cooling system).

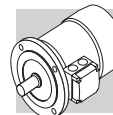
This version is used in case of motor driven by inverter so that steady torque operation is possible even at low speed or when high starting frequencies are needed.

Brake motors of BN_BA type and all motors with rear shaft projection (PS option) are excluded.

(F 72)

Power supply					
		V a.c. ± 10%	Hz	P [W]	I [A]
BN 71	M1	1~ 230	50 / 60	22	0.12
BN 80	M2			22	0.12
BN 90	—			40	0.30
BN 100 (*)	M3			50	0.25
BN 112	—			50	0.26 / 0.15
BN 132S	M4S	3~ 230 Δ / 400Y	50	110	0.38 / 0.22
BN 132M...BN 160MR	M4L				
BN 160...BN 180M	M5			180	1.25 / 0.72

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.



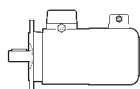
(F 73)

Extra length for servoventilated motors			
		ΔL_1	ΔL_2
BN 71	M1	93	32
BN 80	M2	127	55
BN 90	—	131	48
BN 100	M3	119	28
BN 112	—	130	31
BN 132S	M4S	161	51
BN 132M	M4L	161	51

ΔL_1 = extra length to LB value of corresponding standard motor

ΔL_2 = extra length to LB value of corresponding brake motor

U1

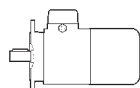


Fan wiring terminals are housed in a separate terminal box.

In brake motors of size BN 71...BN 160MR, 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).

U2



Fan terminals are wired in the motor terminal box.

The **U2** option does not apply to motors BN 160 through BN 200L, with the only exception of motor BN 160MR for which the option is available instead and to motors with option CUS (compliant to norms CSA and UL).

(F 74)

(*)			V a.c. $\pm 10\%$	Hz	P [W]	I [A]
	BN 100_U2	M3	3~ 230 Δ / 400Y	50 / 60	40	0.12 / 0.09

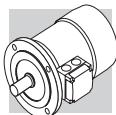
M11.11 Rain canopy

RC

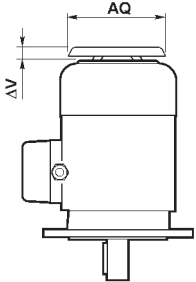
The rain canopy protects the motor from dripping and avoids the ingress of solid bodies. It is recommended when motor is installed in a vertical position with the shaft downwards.

Relevant dimensions are indicated in the table below.

The drip cover is not compatible with variants PS, EN1, EN2, EN3, EN4, EN5, EN6 and will not fit motors equipped with a BA brake.



(F 75)

		AQ	ΔV	
BN 63	M05	118	24	
BN 71	M1	134	27	
BN 80	M2	152	25	
BN 90	—	168	30	
BN 100	M3	190	28	
BN 112	—	211	32	
BN 132...BN 160MR	M4	254	32	
BN 160M...BN 180M	M5	302	36	
BN 180L...BN 200L	—	340	36	

M11.12 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 and will not fit motors equipped with a BA brake.

Overall dimensions are the same as drip cover type RC.

M11.13 Feedback units

Motors may be combined with three 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.

Also not compatible are motors equipped with a.c. brakes, type BA.

EN1

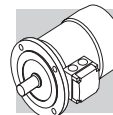
Incremental encoder, $V_{IN} = 5\text{ V}$, line-driver output RS 422.

EN2

Incremental encoder, $V_{IN} = 10\text{-}30\text{ V}$, line-driver output RS 422.

EN3

Incremental encoder, $V_{IN} = 12\text{-}30\text{ V}$, push-pull output 12-30 V



EN4

Encoder sin/cos, $V_{IN} = 4.5-5.5$ V, output Sinus $0.5V_{PP}$.

EN5

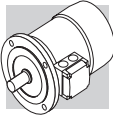
Absolute encoder singleturn, HIPERFACE® interface, $V_{IN} = 7-12$ V.

EN6

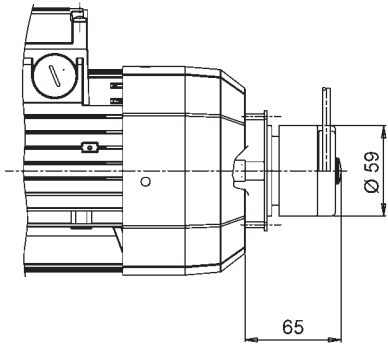
Absolute encoder multiturn, HIPERFACE® interface, $V_{IN} = 7-12$ V.

(F 76)

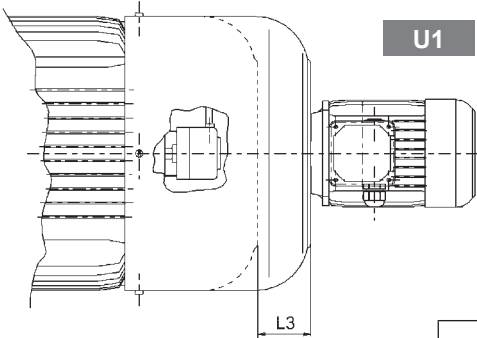
	EN1	EN2	EN3	EN4	EN5	EN6
Interface	TTL/RS 422	TTL/RS 422	HTL/push-pull	Sinus 0.5 VPP	HIPERFACE®	HIPERFACE®
Power supply voltage [V]	4...6	10...30	12...30	4.4...5.5	7...12	7...12
Output voltage [V]	5	5	12...30	—	—	—
No-load operating current [mA]	120	100	100	40	80	80
No. of pulses per revolution	1024					
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, $\bar{Z}$)	—	—
Max. output frequency [kHz]	600			200		
Max. speed [min ⁻¹]	6000 (9000 min ⁻¹ for 10 s)					
Working temperature range [°C]	-30 ... +100					
Protection class	IP 65					



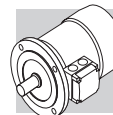
(F 78)

EN1, EN2, EN3, EN4, EN5, EN6	
	
BN 63...BN 200L	M05...M5
BN 63_FD...BN 200L_FD	M05_FD...M5_FD
BN 63_AFD...BN 160MR_AFD	M05_AFD...M4LC_AFD
BN 63_FA...BN 200L_FA	M05_FA...M5_FA

(F 77)

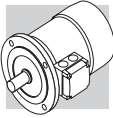
EN_ + U1		
		
BN 160M...BN 180M	M5	L3 72
BN 180L...BN 200L	-	82
BN 160M_FD...BN 180M_FD	M5_FD	35
BN 180L_FD...BN 200L_FD	-	41

If the encoder device (option EN_) is specified on motors BN71...BN160MR / 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.



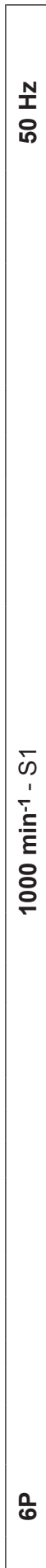
M12 MOTOR RATING CHARTS

2P			3000 min ⁻¹ - S1														50 Hz																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
d.c. brake														d.c. brake with fixed air gap														a.c. brake																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
P _n kW		n min ⁻¹	M _n Nm	IE1	η (100%)	η (75%)	η (50%)	cosφ	In 400V	Is In	Ms Mn	Ma Mn	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 	AFD					FA					BA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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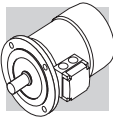
1500 min ⁻¹ - S1														50 Hz																											
d.c. brake														d.c. brake with fixed air gap														a.c. brake													
														FD						AFD				FA				BA													
P _n		n	M _n	IE1	η	η	η	cosφ	In	Is	Ms	Ma	J _m	IM B5	Mod	Mb	Z ₀	J _m	IM B5	Mod	Mb	Z ₀	J _m	IM B5	Mod	Mb	Z ₀	J _m	IM B5												
kW		min ⁻¹	Nm		%	(100%)	(75%)	%	%	400V	In	A	kgm ²	kg		Nm	1/h	SB	kgm ²	kg		Nm	1/h	kgm ²	kg		Nm	1/h	kgm ²												
0.06	BN 56A	4	1340	0.43	○	46.8	44.2	0.65	0.28	2.6	2.3	2.0	1.5	3.1																											
0.09	BN 56B	4	1350	0.64	○	51.7	47.6	0.60	0.42	2.6	2.5	2.4	1.5	3.1																											
0.12	BN 63A	4	1350	0.85	○	59.8	56.2	0.62	0.47	2.6	1.9	1.8	2.0	3.5	FD 02	1.75	10000	13000	2.6	5.2	AFD 02	1.75	10000	13000	2.6	5.0	FA 02	1.75	13000	2.6	5.0	BA 60	5.0	9000	4.0	5.8					
0.18	BN 63B	4	1320	1.30	○	54.8	52.9	0.67	0.71	2.6	2.2	2.0	2.3	3.9	FD 02	3.5	10000	13000	3.0	5.6	AFD 02	3.5	10000	13000	3.0	5.4	FA 02	3.5	13000	3.0	5.4	BA 60	5.0	9000	4.3	6.2					
0.25	BN 63C	4	1340	1.78	○	65.3	65.0	0.69	0.80	2.7	2.1	1.9	3.3	5.1	FD 02	3.5	7800	10000	3.9	6.8	AFD 02	3.5	7800	10000	3.9	6.6	FA 02	3.5	10000	3.9	6.6	BA 60	5.0	8500	5.3	7.4					
0.25	BN 71A	4	1380	1.73	○	63.7	62.2	0.73	0.78	3.3	1.9	1.7	5.8	5.1	FD 03	3.5	7700	11000	6.9	7.8	AFD 03	5	7700	11000	6.9	7.5	FA 03	3.5	11000	6.9	7.5	BA 70	8.0	9700	7.8	9.0					
0.37	BN 71B	4	1370	2.6	○	66.8	66.7	0.76	1.05	3.7	2.0	1.9	6.9	5.9	FD 03	5	6000	9400	8.0	8.6	AFD 03	5	6000	9400	8.0	8.3	FA 03	5.0	9400	8.0	8.3	BA 70	8.0	8500	8.9	9.8					
0.55	BN 71C	4	1380	3.8	○	69.0	68.9	0.74	1.55	4.1	2.3	2.3	9.1	7.3	FD 53	7.5	4300	8700	10.2	10.0	AFD 03	7.5	4300	8700	10.2	9.7	FA 03	7.5	8700	10.2	9.7	BA 70	8.0	8000	11.1	11.2					
0.55	BN 80A	4	1390	3.8	○	72.0	71.3	0.77	1.43	4.1	2.3	2.0	15	8.2	FD 04	10	4100	8000	16.6	12.1	AFD 04	10	4100	8000	16.6	11.7	FA 04	10	8000	16.6	12.0	BA 80	18	7400	18	13.5					
0.75	BN 80B	4	1400	5.1	●	75.0	74.5	0.78	1.85	4.9	2.7	2.5	20	9.9	FD 04	15	4100	7800	22	13.8	AFD 04	15	4100	7800	22	13.4	FA 04	15	7800	22	13.7	BA 80	18	7400	23	15.2					
1.1	BN 80C	4	1400	7.5	●	75.5	76.2	0.78	2.7	5.1	2.8	2.5	25	11.3	FD 04	15	2600	5300	27	15.2	AFD 04	15	2600	5300	27	14.8	FA 04	15	5300	27	15.1	BA 80	18	5100	28	16.6					
1.1	BN 90S	4	1390	7.6	●	76.5	76.2	0.77	2.70	4.6	2.6	2.2	21	12.2	FD 14	15	4800	8000	23	16.4	AFD 14	15	4800	8000	23	16	FA 14	15	8000	23	16.3	BA 90	35	6500	28	19.5					
1.5	BN 90LA	4	1410	10.2	●	78.7	78.5	0.77	3.6	5.3	2.8	2.4	28	13.6	FD 05	26	3400	6000	32	19.6	AFD 05	26	3400	6000	32	19	FA 05	26	6000	32	20.3	BA 90	35	5400	35	21.0					
1.85	BN 90LB	4	1390	12.7	●	78.6	78.9	0.77	4.3	5.1	2.8	2.6	30	15.1	FD 05	26	3200	5900	34	21.1	AFD 05	26	3200	5900	34	20.5	FA 05	26	5900	34	21.8	BA 90	35	5400	37	22.5					
2.2	BN 100LA	4	1410	14.9	●	81.1	81.4	0.75	5.2	4.5	2.2	2.0	40	18	FD 15	40	2600	4700	44	25	AFD 15	40	2600	4700	44	24.4	FA 15	40	4700	44	25	BA 100	50	4000	52	29					
3	BN 100LB	4	1410	20	●	82.6	83.8	0.77	6.8	5.0	2.3	2.2	54	22	FD 15	40	2400	4400	58	28	AFD 15	40	2400	4400	58	27	FA 15	40	4400	58	29	BA 100	50	3800	66	32					
4	BN 112M	4	1430	27	●	84.4	84.2	0.81	8.4	5.6	2.7	2.5	98	30	FD 06S	60	—	—	107	40	AFD 06S	60	—	—	1400	107	39	FA 06S	60	2100	107	42	BA 110	75	2000	114	43				
5.5	BN 132S	4	1440	36	●	84.7	84.8	0.81	11.6	5.5	2.3	2.2	213	44	FD 56	75	—	—	223	57	AFD 06	75	—	—	1050	223	56	FA 06	75	1200	223	58	BA 140	150	1200	263	76				
7.5	BN 132MA	4	1440	50	●	86.0	86.3	0.81	15.5	5.7	2.5	2.4	270	53	FD 06	100	—	—	280	66	AFD 06	100	—	—	950	280	65	FA 07	100	1000	280	71	BA 140	150	1000	320	85				
9.2	BN 132MB	4	1440	61	●	88.4	88.6	0.81	18.8	5.9	2.7	2.5	319	59	FD 07	150	—	—	342	75	AFD 07	150	—	—	900	342	73	FA 07	150	900	342	77	BA 140	150	900	369	91				
11	BN 160MR	4	1440	73	●	87.6	87.8	0.81	22.4	6.0	2.7	2.5	360	70	FD 07	150	—	—	382	86	AFD 07	150	—	—	850	382	84	FA 07	150	850	382	88									
15	BN 160L	4	1460	98	●	88.7	88.5	0.81	30	6.0	2.3	2.1	650	99	FD 08	200	—	—	725	129					750	710		FA 08	200	750	710	128									
18.5	BN 180M	4	1460	121	●	89.3	89.5	0.81	37	6.2	2.6	2.5	790	115	FD 08	250	—	—	865	145					700	850															
22	BN 180L	4	1460	144	●	89.9	90.0	0.80	44	6.4	2.5	2.5	1250	135	FD 09	300	—	—	1450	175					400	850															
30	BN 200L	4	1460	196	●	91.4	91.7	0.80	59	7.1	2.7	2.8	1650	157	FD 09	400	—	—	1850	197					300	850															

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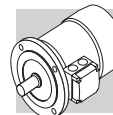


d.c. brake														d.c. brake with fixed air gap										a.c. brake																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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P _n		n	M _n	IE1	η	η	η	cosφ	In	Is	Ms	Ma	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
kW		min ⁻¹	Nm		%	(75%)	(100%)	%	400V	A		$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm	NB	SB	1/h	x 10 ⁻⁴	$\frac{Kg}{Kg}$	Nm</

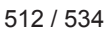
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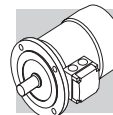
2/4P												3000/1500 min ⁻¹ - S1												50 Hz											
d.c. brake												d.c. brake with fixed air gap												a.c. brake											
												FD						FD						FA						BA					
P _n		n	M _n	η	cosφ	In	Is	Ms	Ma	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z _o 1/h NB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z _o 1/h NB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z _o 1/h NB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Z _o 1/h	Mb	Mod	J _m x 10 ⁻⁴ kgm ²	IM B5 				
0.20	BN 63B	2	2700	0.71	55	0.82	0.64	3.5	2.1	1.9	4.4	FD 02	3.5	2200	2600	3.5	6.1	AFD 02	3.5	2200	2600	3.5	5.9	FA 02	3.5	2600	5100	3.5	5.9	BA 60	5.0	2000	4.9	6.7	
0.15		4	1350	1.06	49	0.67	0.66	2.6	1.8	1.7				4000	5100				4000	5100															
0.28	BN 71A	2	2700	0.99	56	0.82	0.88	2.9	1.9	1.7	4.4	FD 03	3.5	2100	2400	5.8	7.1	AFD 03	5	2100	2400	5.8	6.8	FA 03	3.5	2400									
0.20		4	1370	1.39	59	0.72	0.68	3.1	1.8	1.7				3800	4800				3800	4800															
0.37	BN 71B	2	2740	1.29	56	0.82	1.16	3.5	1.8	1.8	5.8	FD 03	5.0	1400	2100	6.9	7.8	AFD 03	5	1400	2100	6.9	7.5	FA 03	5.0	2100									
0.25		4	1390	1.72	60	0.73	0.82	3.3	2.0	1.9				2900	4200				2900	4200															
0.45	BN 71C	2	2780	1.55	63	0.85	1.21	3.8	1.8	1.8	6.9	FD 03	5.0	1400	2100	8.0	8.6	AFD 03	5	1400	2100	8.0	8.3	FA 03	5.0	2100									
0.30		4	1400	2.0	63	0.73	0.94	3.6	2.0	1.9				2900	4200				2900	4200															
0.55	BN 80A	2	2800	1.9	63	0.85	1.48	3.9	1.7	1.7	8.2	FD 04	5.0	1600	2300	17	12.1	AFD 04	5	1600	2300	17	11.7	FA 04	5.0	2300									
0.37		4	1400	2.5	67	0.79	1.01	4.1	1.8	1.9				3000	4000				3000	4000															
0.75	BN 80B	2	2780	2.6	65	0.85	1.96	3.8	1.9	1.8	20	FD 04	10	1400	1600	22	13.8	AFD 04	10	1400	1600	22	13.4	FA 04	10	1600									
0.55		4	1400	3.8	68	0.81	1.44	3.9	1.7	1.7				2700	3600				2700	3600															
1.1	BN 90S	2	2790	3.8	71	0.82	2.73	4.7	2.3	2.0	21	FD 14	10	1500	1600	23	16.4	AFD 14	10	1500	1600	23	16	FA 14	10	1600									
0.75		4	1390	5.2	66	0.79	2.08	4.6	2.4	2.2				2300	2800				2300	2800															
1.5	BN 90L	2	2780	5.2	70	0.85	3.64	4.5	2.4	2.1	28	FD 05	26	1050	1200	32	20	AFD 05	26	1050	1200	32	19.4	FA 05	26	1200									
1.1		4	1390	7.6	73	0.81	2.69	4.7	2.5	2.2				1600	2000				1600	2000															
2.2	BN 100LA	2	2800	7.5	72	0.85	5.2	4.5	2.0	1.9	40	FD 15	26	600	900	44	25	AFD 15	26	600	900	44	24.4	FA 15	26	900									
1.5		4	1410	10.2	73	0.79	3.8	4.7	2.0	2.0				1300	2300				1300	2300															
3.5	BN 100LB	2	2850	11.7	80	0.84	7.5	5.4	2.2	2.1	61	FD 15	40	500	900	65	31	AFD 15	40	500	900	65	30	FA 15	40	900									
2.5		4	1420	16.8	82	0.80	5.5	5.2	2.2	2.2				1000	2100				1000	2100															
4	BN 112M	2	2880	13.3	79	0.83	8.8	6.1	2.4	2.0	98	FD 06S	60	—	700	107	40	AFD 06S	60	—	700	107	39	FA 06S	60	700									
3.3		4	1420	22.2	80	0.80	7.4	5.1	2.1	2.0				—	1200				—	1200															
5.5	BN 132S	2	2890	18.2	80	0.87	11.4	5.9	2.4	2.0	213	FD 56	75	—	350	223	57	AFD 06	75	—	350	223	56	FA 06	75	350									
4.4		4	1440	29	82	0.84	9.2	5.3	2.2	2.0				—	900				—	900															
7.5	BN 132MA	2	2900	25	82	0.87	15.2	6.5	2.4	2.0	270	FD 06	100	—	350	280	66	AFD 06	100	—	350	280	65	FA 07	100	350									
6		4	1430	40	84	0.85	12.1	5.8	2.3	2.1				—	900				—	900															
9.2	BN 132MB	2	2920	30	83	0.86	18.6	6.0	2.6	2.2	319	FD 07	150	—	300	342	75	AFD 07	150	—	300	342	73	FA 07	150	300									
7.3		4	1440	48	85	0.85	14.6	5.5	2.3	2.1				—	800				—	800															



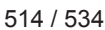
2/6P														3000/1000 min ⁻¹ - S3 60/40%														50 Hz													
d.c. brake														d.c. brake with fixed air gap														a.c. brake													
														FD							FD							FA							BA						
P _n		n	M _n	η	cosφ	In	Is	Ms	Ma	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5										
kW		min ⁻¹	Nm	%		400V	A	Mn	Mn	x 10 ⁻⁴			Nm	1/h	SB	kgm ²			Nm	1/h	NB	SB	kgm ²		Nm	1/h	NB	SB	kgm ²		Nm	1/h	kgm ²								
0.25	BN 71A	2	0.84	60	0.82	0.73	4.3	1.9	1.8	6.9	5.9	FD 03	1.75	1500	1700	8.0	8.6	AFD 03	2.5	1500	1700	8.0	8.3	FA 03	2.5	1700	8.0	8.3	BA 70	8.0	1500	8.9	9.8								
0.08	6	910	0.84	43	0.70	0.38	2.1	1.4	1.5	10000	13000		10000	13000						13000										11000											
0.37	BN 71B	2	1.23	62	0.80	1.08	4.4	1.9	1.8	9.1	7.3	FD 03	3.5	1000	1300	10.2	10.0	AFD 03	5	1000	1300	10.2	9.7	FA 03	3.5	1300	10.2	9.7	BA 70	8.0	1200	11.1	11.2								
0.12	6	900	1.27	44	0.73	0.54	2.4	1.4	1.5	9000	11000		9000	11000						11000										10000											
0.55	BN 80A	2	1.88	63	0.86	1.47	4.5	1.9	1.7	20	9.9	FD 04	5.0	1500	1800	22	13.8	AFD 04	5	1500	1800	22	13.4	FA 04	5.0	1800	22	13.7	BA 80	18	1700	23	15.2								
0.18	6	930	1.85	52	0.65	0.77	3.3	2.0	1.9	4100	6300		4100	6300						6300										6000											
0.75	BN 80B	2	2.6	66	0.87	1.89	4.3	1.8	1.6	25	11.3	FD 04	5.0	1700	1900	27	15.2	AFD 04	5	1700	1900	27	14.8	FA 04	5.0	1900	27	15.1	BA 80	18	1800	28	16.6								
0.25	6	930	2.6	54	0.67	1.00	3.2	1.7	1.8	3800	6000		3800	6000						6000										5600											
1.10	BN 90L	2	3.7	67	0.84	2.82	4.7	2.1	1.9	28	14.0	FD 05	13	1400	1600	32	20	AFD 05	13	1400	1600	32	19.4	FA 05	13	1600	32	21	BA 90	35	1500	35	21								
0.37	6	920	3.8	59	0.71	1.27	3.3	1.6	1.6	3400	5200		3400	5200						5200										4700											
1.5	BN 100LA	2	5	73	0.84	3.53	5.1	1.9	2.0	40	18.3	FD 15	13	1000	1200	44	24	AFD 15	13	1000	1200	44	23.4	FA 15	13	1200	44	25	BA 100	50	1050	51	29								
0.55	6	940	5.6	64	0.67	1.85	3.5	1.7	1.8	2900	4000		2900	4000						4000										3500											
2.2	BN 100LB	2	7.2	77	0.85	4.9	5.9	2.0	2.0	61	25	FD 15	26	700	900	65	31	AFD 15	26	700	900	65	30	FA 15	26	900	65	32	BA 100	50	800	72	36								
0.75	6	950	7.5	67	0.64	2.5	3.3	1.9	1.8	2100	3000		2100	3000						3000										2700											
3	BN 112M	2	9.9	78	0.87	6.4	6.3	2.0	2.1	98	30	FD 06S	40	—	1000	107	40	AFD 06S	40	—	1000	107	39	FA 06S	40	1000	107	32	BA 110	75	930	114	43								
1.1	6	950	11.1	72	0.64	3.4	3.9	1.8	1.8	—	2600		—	2600						2600										2400											
4.5	BN 132S	2	14.8	78	0.84	9.9	5.8	1.9	1.8	213	44	FD 56	37	—	500	223	57	AFD 06	37	—	500	223	56	FA 06	37	500	223	58	BA 140	150	400	263	76								
1.5	6	960	14.9	74	0.67	4.4	4.2	1.9	2.0	—	2100		—	2100						2100										1700											
5.5	BN 132M	2	18.0	78	0.87	11.7	6.2	2.1	1.9	270	53	FD 56	50	—	400	280	66	AFD 06	62	—	400	280	65	FA 06	50	400	280	67	BA 140	150	350	320	85								
2.2	6	960	22	77	0.71	5.8	4.3	2.1	2.0	—	1900		—	1900						1900										1600											



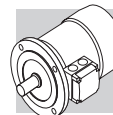
 **Bonfiglioli**
Riduttori



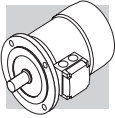
2/12P												3000/500 min ⁻¹ - S3 60/40%												50 Hz											
d.c. brake												d.c. brake with fixed air gap												a.c. brake											
FD												FD												FA						BA					
P _n		n	M _n	η	cosφ	I _n	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 				
0.55	BN 80B	2	2820	1.86	0.89	1.39	4.2	1.6	1.7	25	11.3	FD 04	5.0	1000	1300	27	15.2	AFD 04	5	1000	1300	27	14.8	FA 04	5.0	1300	27	15.1	BA 80	18	1200	28	16.6		
0.09		12	430	2.0	0.63	0.69	1.8	1.9	1.8					8000	12000				8000	12000					12000					11000					
0.75	BN 90L	2	2790	2.6	0.89	2.17	4.2	1.8	1.7	26	12.6	FD 05	13	1000	1150	30	18.6	AFD 05	13	1000	1150	30	18.0	FA 05	13	1150	30	19.3	BA 90	35	1050	33	19.9		
0.12		12	430	2.7	0.63	1.06	1.7	1.4	1.6					4600	6300				4600	6300					6300					5700					
1.10	BN 100LA	2	2850	3.7	0.85	2.87	4.5	1.6	1.8	40	18.3	FD 15	13	700	900	44	25	AFD 15	13	700	900	44	24.4	FA 15	13	900	44	25	BA 100	50	750	52	29		
0.18		12	430	4.0	0.54	1.85	1.5	1.3	1.5					4000	6000				4000	6000					6000					5000					
1.5	BN 100LB	2	2900	4.9	0.86	3.76	5.6	1.9	1.9	54	22	FD 15	13	700	900	58	28	AFD 15	13	700	900	58	27	FA 15	13	900	58	29	BA 100	50	800	66	32		
0.25		12	440	5.4	0.46	2.18	1.8	1.7	1.8					3800	5000				3800	5000					5000					4300					
2	BN 112M	2	2900	6.6	0.88	4.43	6.5	2.1	2.0	98	30	FD 06S	20	—	800	107	40	AFD 06S	20	—	800	107	39	FA 06S	20	800	107	42	BA 110	75	750	114	43		
0.3		12	460	6.2	0.43	2.19	2.0	2.1	2.0					—	3400				—	3400					3400					3200					
3	BN 132S	2	2920	9.8	0.87	6.7	6.8	2.3	1.9	213	44	FD 56	37	—	450	223	57	AFD 06	37	—	450	223	56	FA 06	37	450	223	58	BA 140	150	380	263	76		
0.5		12	470	10.2	0.43	3.3	2.0	1.7	1.6					—	3000				—	3000					3000					2500					
4	BN 132M	2	2920	13.1	0.89	8.6	5.9	2.4	2.3	270	53	FD 56	37	—	400	280	66	AFD 06	37	—	400	280	65	FA 06	37	400	280	67	BA 140	150	350	320	85		
0.7		12	460	14.5	0.44	4.3	1.9	1.7	1.6					—	2800				—	2800					2800					2500					



 Bonfiglioli
Riduttori

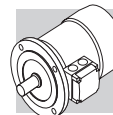


4/8P		1500/750 min ⁻¹ - S1												50 Hz																							
d.c. brake												d.c. brake with fixed air gap										a.c. brake															
FD												FD										FA										BA					
P _n kW		n min ⁻¹	M _n Nm	η	cosφ	In 400V A	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	NB	SB	NB	SB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb max.	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 		
												FD 04	Nm	NB	SB	FD 04	Nm	Nm	NB	SB	SB	SB	IM B5 	FA 04	Nm	Nm	1/h	kgm ²	FA 04	Nm	1/h	kgm ²	BA 80	Nm	1/h	kgm ²	
0.37	BN 80A	4	1400	2.5	63	0.82	1.03	3.3	1.4	1.4	8.2	FD 04	10	2300	3500	16.6	12.1	AFD 04	10	2300	3500	16.6	11.7	FA 04	10	3500	16.6	12.0	BA 80	18	3200	18	13.5				
0.18		8	690	2.5	44	0.60	0.98	2.2	1.5	1.6				4500	7000				4500	7000					7000						6500						
0.55	BN 80B	4	1390	3.8	65	0.86	1.42	3.8	1.7	1.6	9.9	FD 04	10	2200	2900	22	13.8	AFD 04	10	2200	2900	22	13.4	FA 04	10	2900	22	13.7	BA 80	18	2500	23	15.2				
0.30		8	670	4.3	49	0.65	1.36	2.3	1.7	1.8				4200	6500				4200	6500					6500						5600						
0.65	BN 90S	4	1390	4.5	73	0.85	1.51	4.0	1.9	1.9	13.6	FD 14	15	2300	2800	30	17.8	AFD 14	15	2300	2800	30	17.4	FA 14	15	2800	30	17.7	BA 90	35	2400	35	21				
0.35		8	690	4.8	49	0.57	1.81	2.5	2.1	2.2				3500	6000				3500	6000					6000						5100						
0.9	BN 90L	4	1370	6.3	73	0.87	2.05	3.8	1.8	1.8	15.1	FD 05	26	1700	2100	34	21	AFD 05	26	1700	2100	34	20.4	FA 05	26	2100	34	22	BA 90	35	1900	37	22				
0.5		8	670	7.1	57	0.62	2.04	2.4	2.1	2.0				2500	4200				2500	4200					4200						3800						
1.30	BN 100LA	4	1420	8.7	72	0.83	3.14	4.3	1.7	1.8	22	FD 15	40	1300	1700	86	28	AFD 15	40	1300	1700	86	27	FA 15	40	1700	86	29	BA 100	50	1500	94	32				
0.70		8	700	9.6	58	0.64	2.72	2.8	1.8	1.8				2000	3400				2000	3400					3400						3100						
1.8	BN 100LB	4	1420	12.1	69	0.87	4.3	4.2	1.6	1.7	25	FD 15	40	1200	1700	99	31	AFD 15	40	1200	1700	99	30	FA 15	40	1700	99	32	BA 100	50	1500	107	34				
0.9		8	700	12.3	62	0.63	3.3	3.2	1.7	1.8				1600	2600				1600	2600					2600						2400						
2.2	BN 112M	4	1440	14.6	77	0.85	4.9	5.3	1.8	1.8	32	FD 06S	60	—	1200	177	42	AFD 06S	60	—	1200	177	41	FA 06S	60	1200	177	43	BA 110	75	1100	184	45				
1.2		8	710	16.1	70	0.63	3.9	3.3	1.9	1.8				—	2000				—	2000					2000						1900						
3.6	BN 132S	4	1440	24	80	0.82	7.9	6.5	2.1	1.9	45	FD 56	75	—	1000	305	58	AFD 06	75	—	1000	305	57	FA 06	75	1000	305	59	BA 140	150	900	345	77				
1.8		8	720	24	72	0.55	6.6	4.6	1.9	2.0				—	1400				—	1400					1400						1200						
4.6	BN 132M	4	1450	30	81	0.83	9.9	6.5	2.2	1.9	56	FD 06	100	—	1000	393	69	AFD 06	100	—	1000	393	68	FA 07	100	1000	406	74	BA 140	150	900	433	88				
2.3		8	720	31	73	0.54	8.4	4.4	2.3	2.0				—	1300				—	1300					1300						1200						



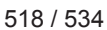
3000 min ⁻¹ - S1															50 Hz																
P _n  kW	n min ⁻¹	M _n Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	I _n 400V A	I _s I _n	M _s M _n	M _a M _n	J _m x 10 ⁻⁴ kgm ²	IM B5 	d.c. brake						d.c. brake with fixed air gap						a.c. brake					
														FD						AFD						FA					
														Mod	Mb	Z ₀ 1/h	NB	SB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	NB	SB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	NB
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	AFD 02	1.75	3900	4800	2.6	4.7	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	AFD 02	1.75	3900	4800	3.0	5.1	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	AFD 02	3.5	3600	4500	3.9	6.3	FA 02	3.5	4500	3.9	6.3
0.55	M 1SD 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	AFD 03	5	2900	4200	5.3	8.2	FA 03	5	4200	5.3	8.2
0.75	M 1LA 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	AFD 03	7.5	1900	3300	6.1	9.3	FA 03	5	3300	6.1	9.3
1.1	M 2SA 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	AFD 04	10	1500	3000	10.6	11.5	FA 04	10	3000	10.6	12.6
1.5	M 2SB 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	AFD 04	15	1300	2600	13.0	9.5	FA 04	15	2600	13.0	14.4
2.2	M 3SA 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	AFD 15	26	1100	2400	28	21.4	FA 15	26	2400	28	23
3	M 3LA 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	AFD 15	26	700	1600	35	24.4	FA 15	26	1600	35	26
4	M 3LB 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	AFD 15	40	450	900	43	27	FA 15	40	900	43	29
5.5	M 4SA 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	AFD 06	62	—	600	112	45	FA 06	50	600	112	47
7.5	M 4SB 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	AFD 06	62	—	550	154	52	FA 06	50	550	154	54
9.2	M 4LA 2	2930	30	●	87.0	86.5	83.6	0.86	17.7	6.7	2.8	2.3	178	51	FD 56	75	—	430	189	64	AFD 06	75	—	430	189	63	FA 06	75	430	189	65
11	M 4LC 2	2920	36	●	87.6	87.0	86.0	0.88	20.6	6.9	2.9	2.5	210	60																	
15	M 5SB 2	2930	49	●	89.6	89.4	88.0	0.86	28.1	7.1	2.6	2.3	340	70																	
18.5	M 5SC 2	2930	60	●	90.4	90.1	89.0	0.86	34	7.6	2.7	2.3	420	83																	
22	M 5LA 2	2930	72	●	89.9	89.7	89.5	0.88	40	7.8	2.6	2.4	490	95																	

○ = n.a. ● = IE1

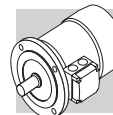


4P		1500 min ⁻¹ - S1										50 Hz																			
d.c. brake															d.c. brake with fixed air gap										a.c. brake						
FD															AFD					FA											
P _n		n	M _n	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V	Is In	Ms Mn	Ma Mn	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h NB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h NB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	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																	
0.12	M 0SA 4	1350	0.85	○	59.8	56.2	47.0	0.62	0.47	2.6	1.9	1.8	2.0	3.2	FD 02	1.75	10000	13000	2.6	4.9	AFD 02	1.75	10000	13000	2.6	4.7	FA 02	1.75	13000	2.6	4.7
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	FD 02	3.5	10000	13000	3.0	5.3	AFD 02	3.5	10000	13000	3.0	5.1	FA 02	3.5	13000	3.0	5.1
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	FD 02	3.5	7800	10000	3.9	6.5	AFD 02	3.5	7800	10000	3.9	6.3	FA 02	3.5	10000	3.9	6.3
0.37	M 1SD 4	1370	2.6	○	66.8	66.7	63.0	0.76	1.05	3.7	2.0	1.9	6.9	5.5	FD 03	5	6000	9400	8.0	8.2	AFD 03	7.5	6000	9400	8.0	7.9	FA 03	5	9400	8.0	7.9
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	FD 53	7.5	4300	8700	10.2	9.6	AFD 03	7.5	4300	8700	10.2	9.3	FA 03	7.5	8700	10.2	9.3
0.75	M 2SA 4	1400	5.1	●	75.0	74.5	69.3	0.78	1.85	4.9	2.7	2.5	20	9.2	FD 04	15	4100	7800	22	13.1	AFD 04	15	4100	7800	22	12.7	FA 04	15	7800	22	13.0
1.1	M 2SB 4	1400	7.5	●	76.4	76.2	70.4	0.78	2.66	5.1	2.8	2.5	25	10.6	FD 04	15	2600	5300	27	14.5	AFD 04	15	2600	5300	27	14.1	FA 04	15	5300	27	14.4
1.5	M 3SA 4	1410	10.2	●	79.6	80.5	79.3	0.77	3.5	4.6	2.1	2.1	34	15.5	FD 15	26	2800	4900	38	22	AFD 15	26	2800	4900	38	21.4	FA 15	26	4900	38	23
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	FD 15	40	2600	4700	44	24	AFD 15	40	2600	4700	44	23.4	FA 15	40	4700	44	24
3	M 3LB 4	1410	20	●	82.6	83.8	83.7	0.77	6.8	5.0	2.3	2.2	54	21	FD 15	40	2400	4400	58	27	AFD 15	40	2400	4400	58	26	FA 15	40	4400	58	28
4	M 3LC 4	1400	27	○	82.7	83.1	80.5	0.78	9.0	4.7	2.3	2.2	61	23	FD 55	55	—	1300	65	29	—	—	—	—	—	—	FA 15	40	1300	65	30
5.5	M 4SA 4	1440	36	●	84.7	84.8	82.5	0.81	11.6	5.5	2.3	2.2	213	42	FD 56	75	—	1050	223	55	AFD 06	75	—	1050	223	54	FA 06	75	1050	223	56
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	FD 06	100	—	950	280	64	AFD 06	100	—	950	280	63	FA 07	100	950	280	65
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	FD 07	150	—	900	342	73	AFD 07	150	—	900	342	71	FA 07	150	900	342	75
11	M 4LC 4	1440	73	●	87.6	87.8	86.0	0.81	22.4	6.0	2.7	2.5	360	65	FD 07	150	—	850	382	81	AFD 07	150	—	850	382	79	FA 07	150	850	382	83
15	M 5SB 4	1460	98	●	88.7	88.5	88.4	0.81	30.1	6.0	2.3	2.1	650	85	FD 08	200	—	750	725	115							FA 08	200	750	710	114
18.5	M 5LA 4	1460	121	●	89.3	89.5	89.2	0.81	37	6.2	2.6	2.5	790	101	FD 08	250	—	700	865	131							FA 08	250	700	850	130

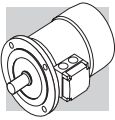
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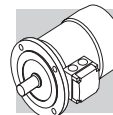
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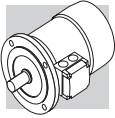
2/4P		3000/1500 min ⁻¹ - S1										50 Hz																	
d.c. brake												d.c. brake with fixed air gap												a.c. brake					
FD												AFD												FA					
P _n		n	M _n	η	cosφ	In	Is	Ms	Ma	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h SB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h SB	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb	Z ₀ 1/h	J _m x 10 ⁻⁴ kgm ²	IM B5 			
0.20	M 05A	2	2700	0.71	0.82	0.64	3.5	2.1	1.9	2.9	4.1	FD 02	3.5	2200 4000 5100	3.5	5.8	AFD 02	3.5	2200 4000 5100	3.5	5.6	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																				
0.28	M 15B	2	2700	0.99	0.82	0.88	2.9	1.9	1.7	4.7	4.0	FD 03	3.5	2100 3800 4800	5.8	6.7	AFD 03	5	2100 3800 4800	5.8	6.4	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																				
0.37	M 15C	2	2740	1.29	0.82	1.16	3.5	1.8	1.8	5.8	4.7	FD 03	5	1400 2100 2900 4200	6.9	7.4	AFD 03	5	1400 2100 2900 4200	6.9	7.1	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																				
0.45	M 15D	2	2780	1.55	0.85	1.21	3.8	1.8	1.8	6.9	5.5	FD 03	5	1400 2100 2900 4200	8.0	8.2	AFD 03	5	1400 2100 2900 4200	8.0	7.9	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																				
0.55	M 15A	2	2800	1.9	0.79	1.38	4.2	2.0	1.8	9.1	6.9	FD 03	5	1600 2200 3300 4600	10.2	9.6	AFD 03	5	1600 2200 3300 4600	10.2	9.3	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																				
0.75	M 25A	2	2780	2.6	0.85	1.96	3.8	1.9	1.8	20	9.2	FD 04	10	1400 2700 3600	22	13.1	AFD 04	10	1400 2700 3600	22	12.7	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																				
1.1	M 25B	2	2730	3.9	0.86	2.84	3.9	2.0	1.9	25	10.7	FD 04	10	1200 1500 2300 3100	27	14.5	AFD 04	10	1200 1500 2300 3100	27	14.1	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																				
1.5	M 35A	2	2830	5.1	0.83	3.5	4.7	2.1	2.0	34	15.5	FD 15	26	700 1600 2600	38	22	AFD 15	26	700 1600 2600	38	21.4	FA 15	26	1000 2600	38	23			
1.1	4	1420	7.4	77	0.78	2.6	4.3	2.1	2.0																				
2.2	M 35A	2	2800	7.5	0.85	5.2	4.5	2.0	1.9	40	17	FD 15	26	600 900 1300 2300	44	24	AFD 15	26	600 900 1300 2300	44	23.4	FA 15	26	900 2300	44	24			
1.5	4	1410	10.2	73	0.79	3.8	4.7	2.0	2.0																				
3.5	M 35B	2	2850	11.7	0.84	7.5	5.4	2.2	2.1	61	23	FD 15	40	500 900 1000 2100	65	29	AFD 15	40	500 900 1000 2100	65	28	FA 15	40	900 2100	65	30			
2.5	4	1420	16.8	82	0.80	5.5	5.2	2.2	2.2																				
4.8	M 45A	2	2900	15.8	0.88	9.7	6.0	2.0	1.9	213	42	FD 06	50	— — —	233	55	AFD 06	62	— — —	233	54	FA 06	50	400 950	233	56			
3.8	4	1430	25.4	81	0.84	8.1	5.2	2.1	2.1																				
5.5	M 45B	2	2890	18.2	0.87	11.4	5.9	2.4	2.0	213	42	FD 06	75	— — —	223	55	AFD 06	75	— — —	223	54	FA 06	75	350 900	223	56			
4.4	4	1440	29	82	0.84	9.2	5.3	2.2	2.0																				
7.5	M 45A	2	2900	25	0.87	15.2	6.5	2.4	2.0	270	51	FD 06	100	— — —	280	64	AFD 06	100	— — —	280	63	FA 07	100	350 950	280	65			
6	4	1430	40	84	0.85	12.1	5.8	2.3	2.1																				
9.2	M 45B	2	2920	30	0.86	18.6	6.0	2.6	2.2	319	57	FD 07	150	— — —	342	73	AFD 07	150	— — —	342	71	FA 07	150	300 800	342	75			
7.3	4	1440	48	85	0.85	14.6	5.5	2.3	2.1																				



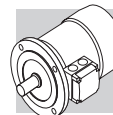
2/6P		3000/1000 min ⁻¹ - S3 60/40%															50 Hz									
d.c. brake															d.c. brake with fixed air gap					a.c. brake						
P _n kW		n min ⁻¹	M _n Nm	η	cosφ	I _n 400V A	I _s I _n	M _s M _n	M _a M _n	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb Nm	FD				IM B5 	Mod	Mb Nm	Z _o 1/h		J _m x 10 ⁻⁴ kgm ²	IM B5 	FA	IM B5 
														NB	SB	NB	SB				NB	SB				
0.25	M 1SA 2	2850	0.84	60	0.82	0.73	4.3	1.9	1.8	6.9	5.5	FD 03	1.75	1500	1700	13000	AFD 03	2.5	1500	1700	13000	FA 03	1.75	1700	8.0	7.9
0.08	6	910	0.84	43	0.70	0.38	2.1	1.4	1.5					10000	13000				10000	13000				13000		
0.37	M 1LA 2	2880	1.23	62	0.80	1.08	4.4	1.9	1.8	9.1	6.9	FD 03	3.5	1000	1300	11000	AFD 03	5	1000	1300	11000	FA 03	3.5	1300	10.2	9.3
0.12	6	900	1.27	44	0.73	0.54	2.4	1.4	1.5					9000	11000				9000	11000				11000		
0.55	M 2SA 2	2800	1.88	63	0.86	1.47	4.5	1.9	1.7	20	9.2	FD 04	5	1500	1800	6300	AFD 04	5	1500	1800	6300	FA 04	5	1800	22	13.0
0.18	6	930	1.85	52	0.65	0.77	3.3	2.0	1.9					4100	6300				4100	6300				6300		
0.75	M 2SB 2	2800	2.6	66	0.87	1.89	4.3	1.8	1.6	25	10.6	FD 04	5	1700	1900	6000	AFD 04	5	1700	1900	6000	FA 04	5	1900	27	14.4
0.25	6	930	2.6	54	0.67	1.00	3.2	1.7	1.8					3800	6000				3800	6000				6000		
1.1	M 3SA 2	2870	3.7	71	0.82	2.73	4.9	1.8	1.9	34	15.5	FD 15	13	1000	1300	5000	AFD 15	13	1000	1300	5000	FA 15	13	1300	38	23
0.37	6	930	3.8	63	0.70	1.21	3.1	1.5	1.8					3500	5000				3500	5000				5000		
1.5	M 3LA 2	2880	5.0	73	0.84	3.53	5.1	1.9	2.0	40	17	FD 15	13	1000	1200	4000	AFD 15	13	1000	1200	4000	FA 15	13	1200	44	24
0.55	6	940	5.6	64	0.67	1.85	3.5	1.7	1.8					2900	4000				2900	4000				4000		
2.2	M 3LB 2	2900	7.2	77	0.85	4.9	5.9	2.0	2.0	61	23	FD 15	26	700	900	3000	AFD 15	26	700	900	3000	FA 15	26	900	65	30
0.75	6	950	7.5	67	0.64	2.5	3.3	1.9	1.8					2100	3000				2100	3000				3000		
3	M 4SA 2	2910	9.9	74	0.88	6.6	5.6	2.0	2.1	170	36	FD 56	37	—	600	182	AFD 06	37	—	600	182	FA 06	37	600	182	50
1.1	6	960	10.9	73	0.68	3.2	4.5	2.2	2.0					2200					2200					2200		
4.5	M 4SB 2	2910	14.8	78	0.84	9.9	5.8	1.9	1.8	213	42	FD 56	37	—	500	223	AFD 06	37	—	500	223	FA 06	37	500	223	56
1.5	6	960	14.9	74	0.67	4.4	4.2	1.9	2.0					2100					2100					2100		
5.5	M 4LA 2	2920	18.0	78	0.87	11.7	6.2	2.1	1.9	270	51	FD 06	50	—	400	280	AFD 06	62	—	400	280	FA 06	50	400	280	65
2.2	6	960	22	77	0.71	5.8	4.3	2.1	2.0					1900					1900					1900		



2/8P														3000/750 min ⁻¹ - S3 60/40%														50 Hz			
d.c. brake														d.c. brake with fixed air gap														a.c. brake			
FD														AFD														FA			
P _n		n	M _n	η	cosφ	In	Is	Ms	Ma	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5	Mod	Mb	Z _o	J _m	IM B5					
kW		min ⁻¹	Nm	%		A		Mn	Mn	kgm ²	kg		Nm	1/h	kgm ²	kg		Nm	1/h	kgm ²	kg		Nm	1/h	kgm ²	kg					
0.37	M 1LA 2	2800	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	AFD 03	5	1200	1300	14	9.7	FA 03	3.5	1300	14	9.7			
0.09	8	670	1.28	34	0.75	0.51	1.8	1.4	1.5	13000				9500	13000					9500	13000			13000							
0.55	M 2SA 2	2830	1.86	66	0.86	1.40	4.4	2.1	2.0	20	9.2	FD 04	5	1500	1800	22	13.1	AFD 04	5	1500	1800	22	12.7	FA 04	5	1800	22	13.0			
0.13	8	690	1.80	41	0.64	0.72	2.3	1.6	1.7	8000				5600	8000					5600	8000			8000							
0.75	M 2SB 2	2800	2.6	68	0.88	1.81	4.6	2.1	2.0	25	10.6	FD 04	10	1700	1900	27	14.5	AFD 04	10	1700	1900	27	14.1	FA 04	10	1900	27	14.4			
0.18	8	690	2.5	43	0.66	0.92	2.3	1.6	1.7	7300				4800	7300					4800	7300			7300							
1.1	M 3SA 2	2870	3.7	69	0.84	2.74	4.6	1.8	1.7	34	15.5	FD 15	13	1000	1300	38	22	AFD 15	13	1000	1300	38	21.4	FA 15	13	1300	38	23			
0.28	8	690	3.9	44	0.56	1.64	2.3	1.4	1.7	5000				3400	5000					3400	5000			5000							
1.5	M 3LA 2	2880	5.0	69	0.85	3.69	4.7	1.9	1.8	40	17	FD 15	13	1000	1200	44	24	AFD 15	13	1000	1200	44	23.4	FA 15	13	1200	44	24			
0.37	8	690	5.1	46	0.63	1.84	2.1	1.6	1.6	5000				3300	5000					3300	5000			5000							
2.4	M 3LB 2	2900	7.9	75	0.82	5.6	5.4	2.1	2.0	61	23	FD 15	26	550	700	65	29	AFD 15	26	550	700	65	28	FA 15	26	700	65	30			
0.55	8	700	7.5	54	0.58	2.5	2.6	1.8	1.8	3500				2000	3500					2000	3500			3500							
3	M 4SA 2	2920	9.8	72	0.85	7.1	5.6	2.0	1.8	162	36	FD 56	37	—	600	182	48	AFD 06	37	—	600	182	47	FA 06	37	600	182	50			
0.75	8	710	10.1	61	0.64	2.8	3.0	1.7	1.8	3400				—	3400					—	3400			3400							
4	M 4SB 2	2870	13.3	73	0.84	9.4	5.6	2.3	2.4	213	42	FD 56	37	—	500	223	55	AFD 06	37	—	500	223	54	FA 06	37	500	223	56			
1	8	690	13.8	66	0.62	3.5	2.9	1.9	1.8					—	3500					—	3500			3500							
5.5	M 4LA 2	2870	18.3	75	0.84	12.6	6.1	2.4	2.5	270	51	FD 06	50	—	400	280	64	AFD 06	62	—	400	280	63	FA 06	50	400	280	65			
1.5	8	690	21	68	0.63	5.1	2.9	1.9	1.9	2400				—	2400					—	2400			2400							

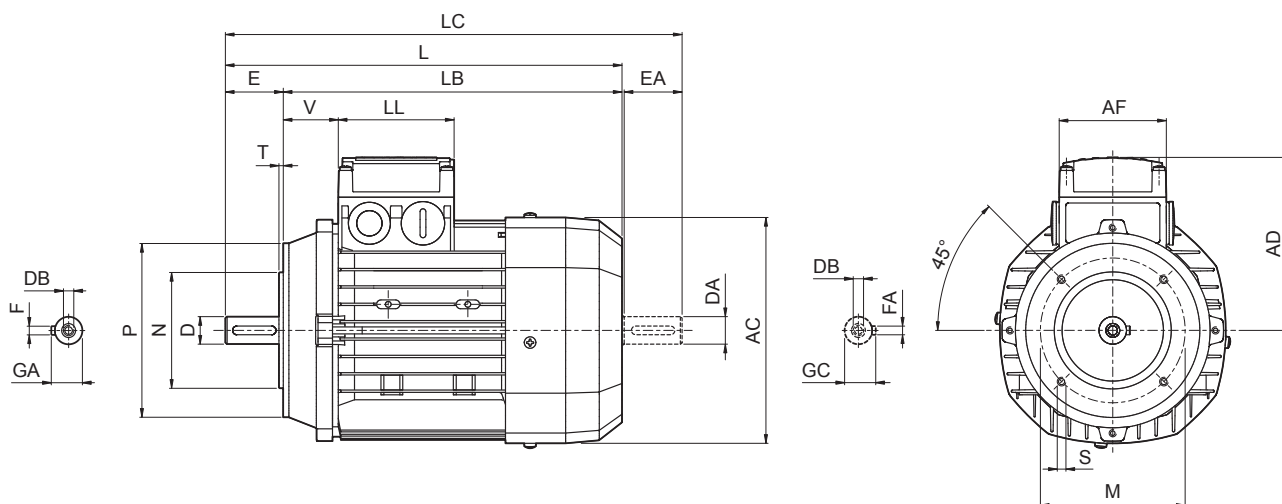


2/12P		3000/500 min ⁻¹ - S3 60/40%															50 Hz												
d.c. brake															d.c. brake with fixed air gap					a.c. brake									
P _n kW		n min ⁻¹	M _n Nm	η %	cosφ	In 400V A	Is In	Ms Mn	Ma Mn	J _m x 10 ⁻⁴ kgm ²	IM B5 	Mod	Mb Nm	FD			IM B5 	J _m x 10 ⁻⁴ kgm ²	Z ₀ 1/h	SB	Mod	Mb Nm	IM B5 	J _m x 10 ⁻⁴ kgm ²	Z ₀ 1/h	SB	Mod	Mb Nm	IM B5 
														NB	1/h	SB													
0.55	M 2SA 2	2820	1.86	64	0.89	1.39	4.2	1.6	1.7	25	10.6	FD 04	5	1000	1300	1300	27	14.5	1000	1300	1300	27	14.1	FA 04	5	1300	27	14.4	
0.09	12	430	2.0	30	0.63	0.69	1.8	1.9	1.8					8000	12000				8000	12000					12000				
0.75	M 3SA 2	2900	2.5	65	0.81	2.06	5.2	1.9	2.1	34	15.5	FD 15	13	700	900	900	38	22	700	900	900	38	21.4	FA 15	13	900	38	23	
0.12	12	460	2.5	33	0.43	1.22	1.9	1.3	1.6					5000	7000				5000	7000					7000				
1.1	M 3LA 2	2850	3.7	65	0.85	2.87	4.5	1.6	1.8	40	17	FD 15	13	700	900	900	44	24	700	900	900	44	23.4	FA 15	13	900	44	24	
0.18	12	430	4.0	26	0.54	1.85	1.5	1.3	1.5					4000	6000				4000	6000					6000				
1.5	M 3LB 2	2900	4.9	67	0.86	3.76	5.6	1.9	1.9	54	21	FD 15	13	700	900	900	58	27	700	900	900	58	26	FA 15	13	900	58	28	
0.25	12	440	5.4	36	0.46	2.18	1.8	1.7	1.8					3800	5000				3800	5000					5000				
2	M 3LC 2	2850	6.7	70	0.84	4.9	4.9	1.8	1.7	61	23	FD 55	18	—	700	65	65	29	—	700	65	65	28	FA 15	18	700	65	30	
0.3	12	450	6.4	38	0.47	2.4	1.7	1.6	1.7					—	3500				—	3500				FA 15	3500				
3	M 4SA 2	2920	9.8	74	0.87	6.7	6.8	2.3	1.9	213	42	FD 56	37	—	450	223	55	AFD 06	—	450	223	54	FA 06	37	450	223	56		
0.5	12	470	10.2	51	0.43	3.3	2.0	1.7	1.6					—	3000			—	3000				FA 06	3000					
4	M 4LA 2	2920	13.1	75	0.89	8.6	5.9	2.4	2.3	270	51	FD 56	37	—	400	280	64	AFD 06	—	400	280	63	FA 06	37	400	280	65		
0.7	12	460	14.5	53	0.44	4.3	1.9	1.7	1.6					—	2800			—	2800				FA 06	2800					

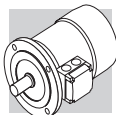


M13 MOTORS DIMENSIONS

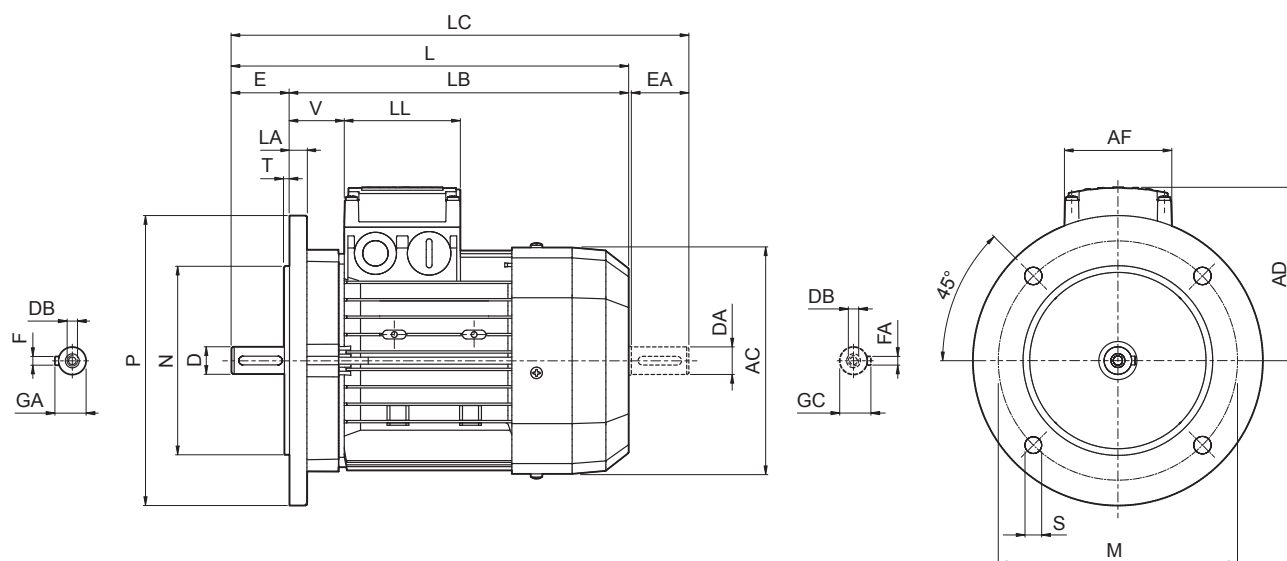
BN - IM B14



	Shaft					Flange					Motor							
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	AC	L	LB	LC	AD	AF	LL	V
BN 56	9	20	M3	10.2	3	65	50	80	M5	2.5	110	185	165	207	91	74	80	34
BN 63	11	23	M4	12.5	4	75	60	90	M5	2.5	121	207	184	232	95	74	80	26
BN 71	14	30	M5	16	5	85	70	105	M6	2.5	138	249	219	281	108	74	80	37
BN 80	19	40	M6	21.5	6	100	80	120	M6	3	156	274	234	315	119	74	80	38
BN 90	24	50	M8	27	8	115	95	140	M8	3	176	326	276	378	133	98	98	44
BN 100	28	60	M10	31	8	130	110	160	M8	3.5	195	367	307	429	142	98	98	50
BN 112	28	60	M10	31	8	130	110	160	M8	3.5	219	385	325	448	157	98	98	52
BN 132	38	80	M12	41	10	165	130	200	M10	4	258	493	413	576	193	118	118	58



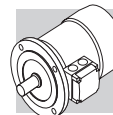
BN - IM B5



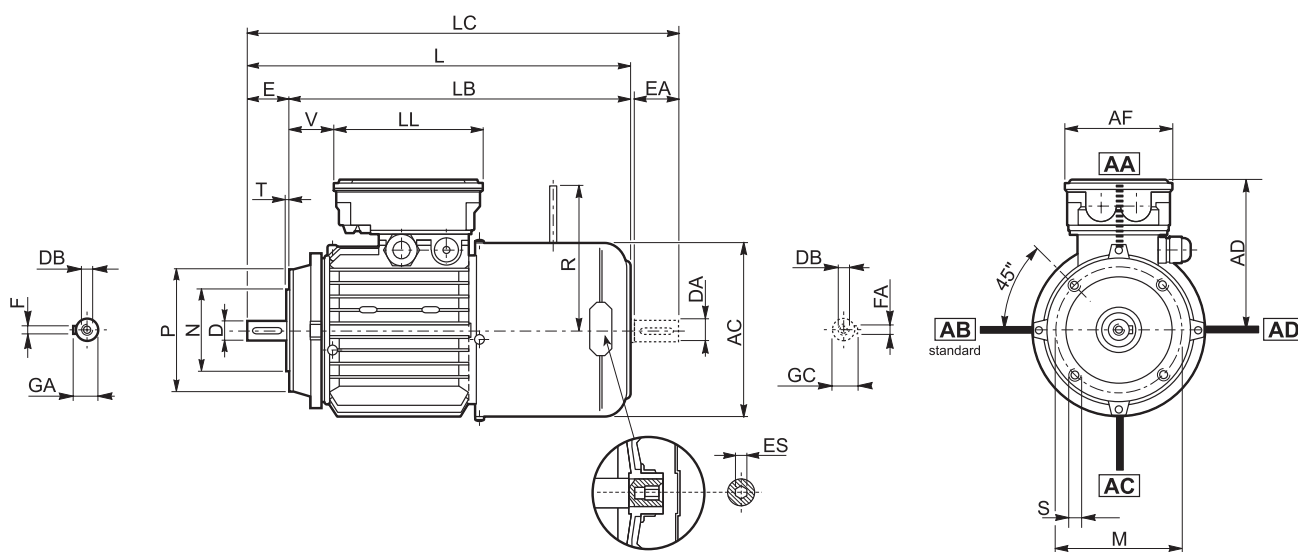
	Shaft					Flange						Motor							
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V
BN 56	9	20	M3	10.2	3	100	80	120	7	3	8	110	185	165	207	91	74	80	34
BN 63	11	23	M4	12.5	4	115	95	140	9.5	3	10	121	207	184	232	95	74	80	26
BN 71	14	30	M5	16	5	130	110	160	9.5	3	10	138	249	219	281	108	74	80	37
BN 80	19	40	M6	21.5	6	165	130	200	11.5	3.5	11.5	156	274	234	315	119	74	80	38
BN 90	24	50	M8	27	8	165	130	200	11.5	3.5	11.5	176	326	276	378	133	98	98	44
BN 100	28	60	M10	31	8	215	180	250	14	4	14	195	367	307	429	142	98	98	50
BN 112	28	60	M10	31	8	215	180	250	14	4	15	219	385	325	448	157	98	98	52
BN 132	38	80	M12	41	10	265	230	300	14	4	20	258	493	413	576	193	118	118	58
BN 160 MR	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15	258	562	452	645	193	118	118	218
BN 160 M	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15	310	596	486	680	245	187	187	51
BN 160 L	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15	310	596	486	680	245	187	187	51
BN 180 M	48 38 (1)	110 110 (1)	M16 M12 (1)	51.5 41 (1)	14 10 (1)	300	250	350	18.5	5	15	310	640	530	724	245	187	187	51
BN 180 L	48 42 (1)	110 110 (1)	M16 M16 (1)	51.5 45 (1)	14 12 (1)	300	250	350	18.5	5	18	348	708	598	823	261	187	187	52
BN 200 L	55 42 (1)	110 110 (1)	M20 M16 (1)	59 45 (1)	16 12 (1)	350	300	400	18.5	5	18	348	722	612	837	261	187	187	66

NOTE:

1) These values refer to the rear shaft end.



BN_FD ; BN_AFD - IM B14

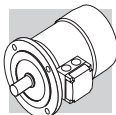


	Shaft					Flange					Motor									
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	AC	L	LB	LC	AD	AF	LL	V	R	ES
BN 63	11	23	M4	12.5	4	75	60	90	M5	2.5	121	272	249	297	122	98	133	14	96	5
BN 71	14	30	M5	16	5	85	70	105	M6	2.5	138	310	280	342	135	98	133	25	103	5
BN 80	19	40	M6	21.5	6	100	80	120	M6	3	156	346	306	388	146	98	133	41	129	5
BN 90 S	24	50	M8	27	8	115	95	140	M8	3	176	409	359	461	149	110	165	39	129	6
BN 90 L	24	50	M8	27	8	115	95	140	M8	3	176	409	359	461	146	110	165	39	160	6
BN 100	28	60	M10	31	8	130	110	160	M8	3.5	195	458	398	521	158	110	165	62	160	6
BN 112	28	60	M10	31	8	130	110	160	M8	3.5	219	484	424	547	173	110	165	73	199	6
BN 132	38	80	M12	41	10	165	130	200	M10	4	258	603	523	686	210	140	188	122	204 (1)	6

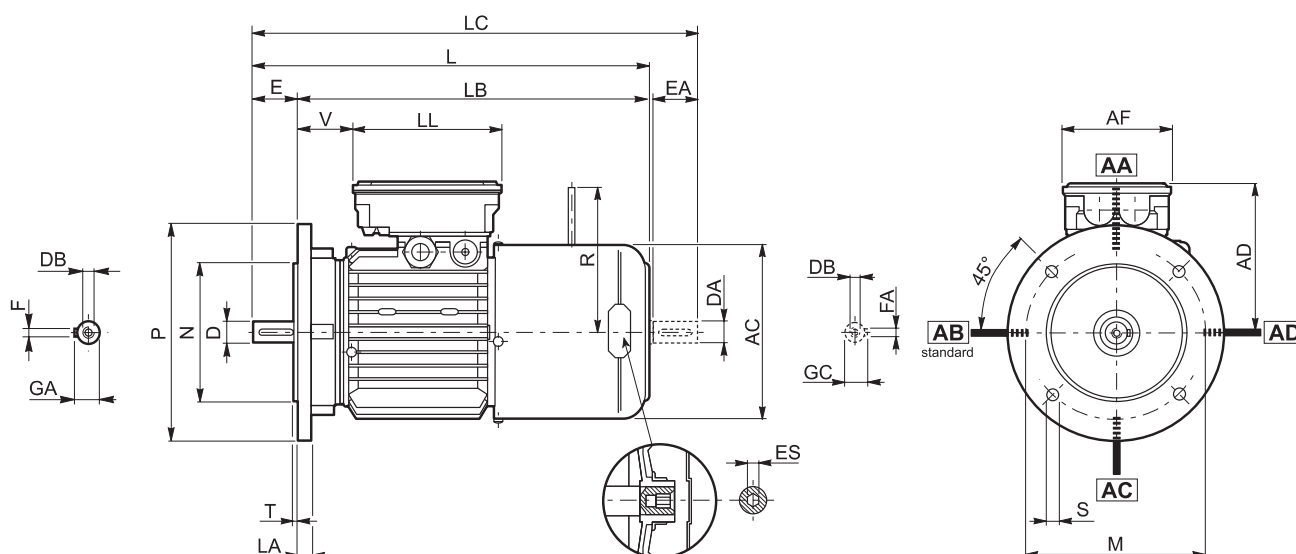
NOTE:

1) For FD07 and AFD07 brake value R=226.

ES hexagon is not supplied with PS option.



BN_FD ; BN_AFD - IM B5



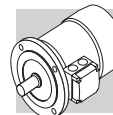
	Shaft					Flange						Motor									
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R	ES
BN 63	11	23	M4	12.5	4	115	95	140	9.5	3	10	121	272	249	297	122	98	133	14	96	5
BN 71	14	30	M5	16	5	130	110	160	9.5	3.5	10	138	310	280	342	135	98	133	25	103	5
BN 80	19	40	M6	21.5	6	165	130	200	11.5	3.5	11.5	156	346	306	388	146	98	133	41	129	5
BN 90 S	24	50	M8	27	8	165	130	200	11.5	3.5	11.5	176	409	359	461	149	110	165	39	129	6
BN 90 L	24	50	M8	27	8	165	130	200	11.5	3.5	11.5	176	409	359	461	146	110	165	39	160	6
BN 100	28	60	M10	31	8	215	180	250	14	4	14	195	458	398	521	158	110	165	62	160	6
BN 112	28	60	M10	31	8	215	180	250	14	4	15	219	484	424	547	173	110	165	73	199	6
BN 132	38	80	M12	41	10	265	230	300	14	4	20	258	603	523	686	210	140	188	122	204 (2)	6
BN 160 MR	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	210	140	188	161	226	6
BN 160 M	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15	310	736	626	820	245	187	187	51	266	—
BN 160 L	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15	310	736	626	820	245	187	187	51	266	—
BN 180 M	48 38 (1)	110 80 (1)	M16 M12 (1)	51.5 41 (1)	14 10 (1)	300	250	350	18.5	5	15	310	780	670	864	245	187	187	51	266	—
BN 180 L	48 42 (1)	110 110 (1)	M16 M16 (1)	51.5 45 (1)	14 12 (1)	300	250	350	18.5	5	18	348	866	756	981	261	187	187	52	305	—
BN 200 L	55 42 (1)	110 110 (1)	M20 M16 (1)	59 45 (1)	16 12 (1)	350	300	400	18.5	5	18	348	878	768	993	261	187	187	64	305	—

NOTE:

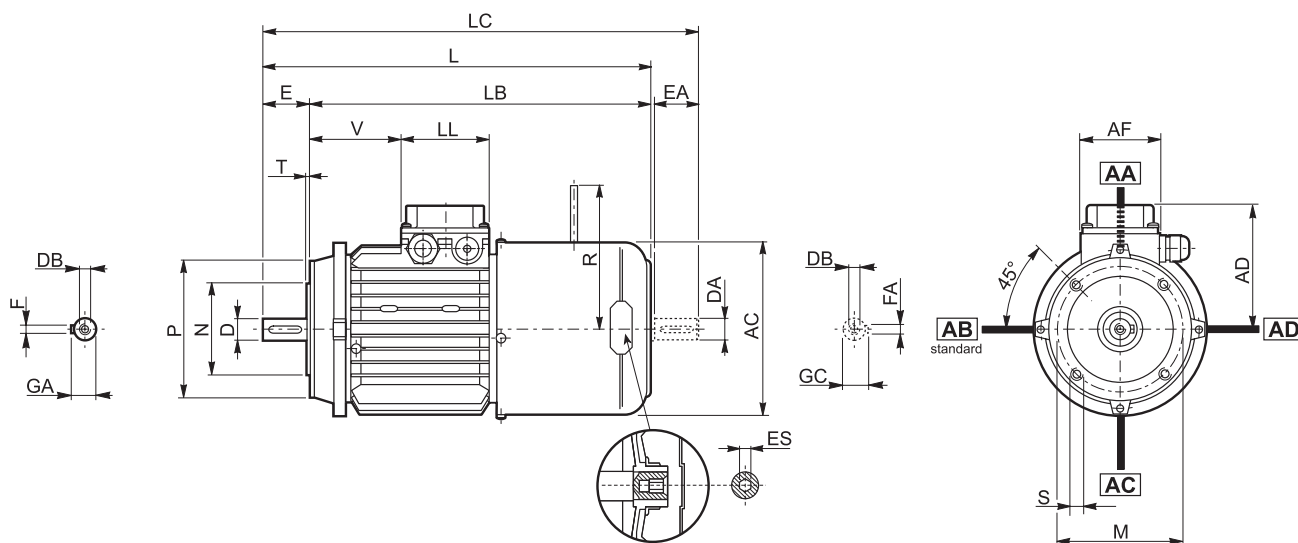
1) These values refer to the rear shaft end.

2) For FD07 and AFD07 brake value R=226.

ES hexagon is not supplied with PS option.



BN_FA - IM B14



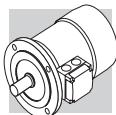
	Shaft					Flange					Motor									
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	AC	L	LB	LC	AD	AF	LL	V	R	ES
BN 63	11	23	M4	12.5	4	75	60	90	M5	2.5	121	272	249	119	95	74	80	26	116	5
BN 71	14	30	M5	16	5	85	70	105	M6	2.5	138	310	280	342	108	74	80	68	124	5
BN 80	19	40	M6	21.5	6	100	80	120	M6	3	156	346	306	388	119	74	80	83	134	5
BN 90	24	50	M8	27	8	115	95	140	M8	3	176	409	359	461	133	98	98	95	160	6
BN 100	28	60	M10	31	8	130	110	160	M8	3.5	195	458	398	521	142	98	98	119	160	6
BN 112	28	60	M10	31	8	130	110	160	M8	3.5	219	484	424	547	157	98	98	128	198	6
BN 132	38	80	M12	41	10	165	130	200	M10	4	258	603	523	686	193	118	118	180	200 (1)	6

NOTE:

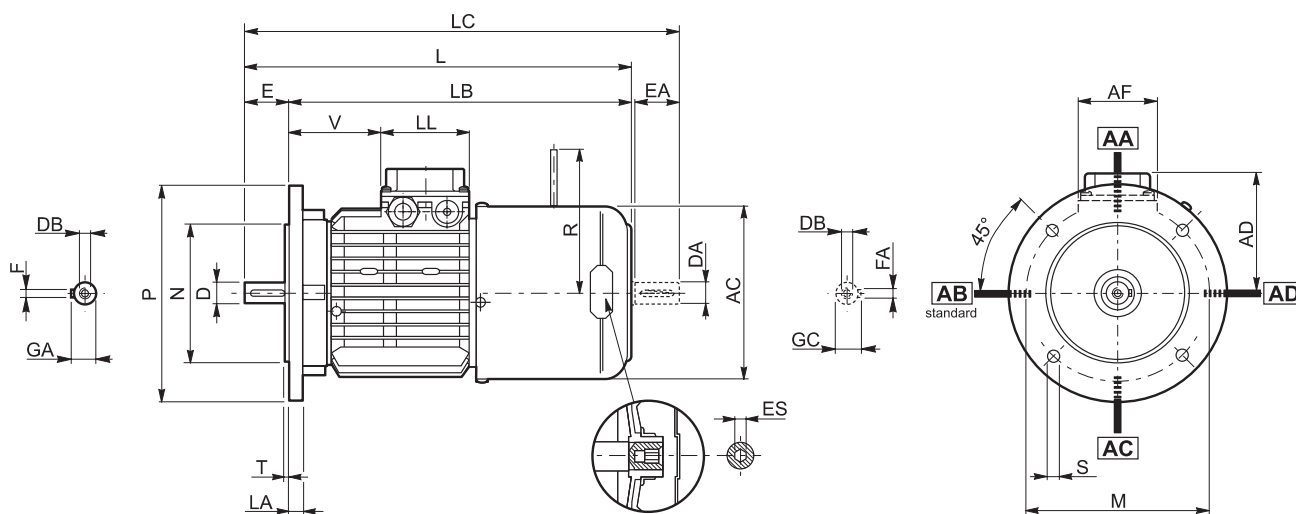
1) For FA07 brake value R=217.

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 and AFD motors.

ES hexagon is not supplied with PS option.



BN_FA - IM B5



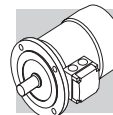
	Shaft					Flange						Motor									
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R	ES
BN 63	11	23	M4	12.5	4	115	95	140	9.5	3	10	121	272	249	297	95	74	80	26	116	5
BN 71	14	30	M5	16	5	130	110	160	9.5	3.5	10	138	310	280	342	108	74	80	68	124	5
BN 80	19	40	M6	21.5	6	165	130	200	11.5	3.5	11.5	156	346	306	388	119	74	80	83	134	5
BN 90	24	50	M8	27	8	165	130	200	11.5	3.5	11.5	176	409	359	461	133	98	98	95	160	6
BN 100	28	60	M10	31	8	215	180	250	14	4	14	195	458	398	521	142	98	98	119	160	6
BN 112	28	60	M10	31	8	215	180	250	14	4	15	219	484	424	547	157	98	98	128	198	6
BN 132	38	80	M12	41	10	265	230	300	14	4	20	258	603	523	686	193	118	118	180	200 (2)	6
BN 160 MR	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	118	218	217	6
BN 160 M	42 38 (1)	110-80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15	310	736	626	820	245	187	187	51	247	—
BN 160 L	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15	310	736	626	820	245	187	187	51	247	—
BN 180 M	48 38 (1)	110 80 (1)	M16 M12 (1)	51.5 41 (1)	14 10 (1)	300	250	350	18.5	5	15	310	780	670	864	245	187	187	51	247	—

NOTE:

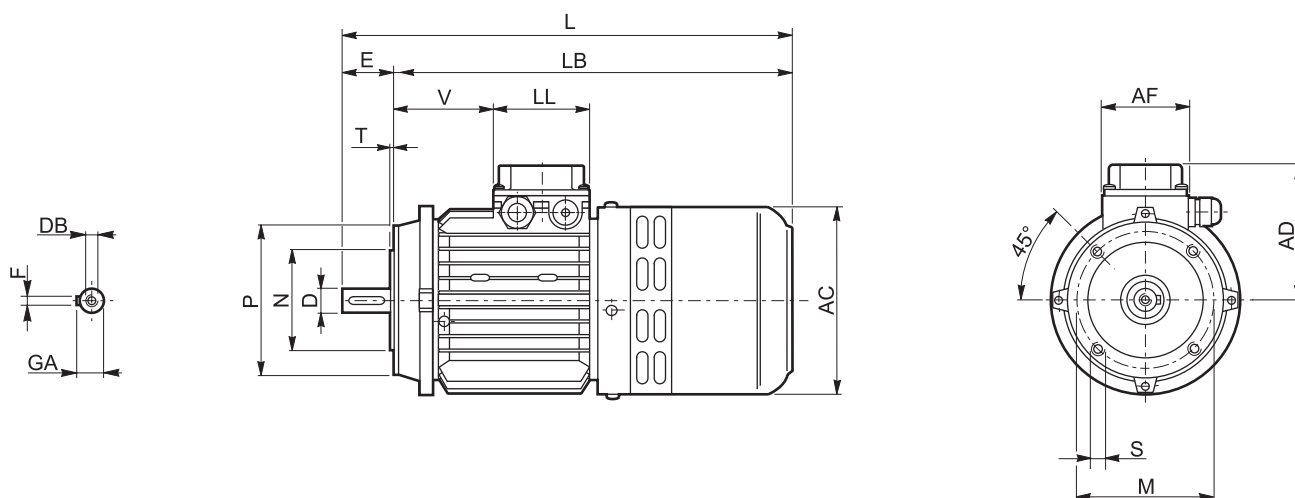
- 1) These values refer to the rear shaft end.
- 2) For FA07 brake value R=217.

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 and AFD motors.

ES hexagon is not supplied with PS option.



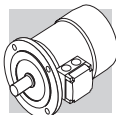
BN_BA - IM B14



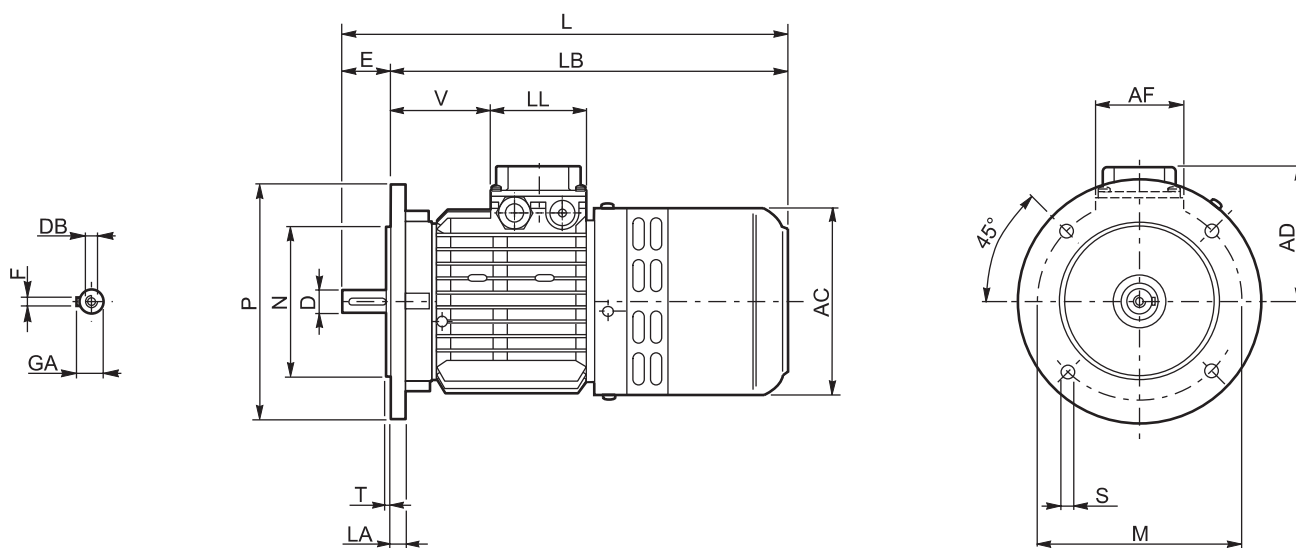
	Shaft					Flange					Motor							
	D	E	DB	GA	F	M	N	P	S	T	AC	L	LB	LC	AD	AF	LL	V
BN 63	11	23	M4	12.5	4	75	60	90	M5	2.5	124	298	275	95	74	80	28	34
BN 71	14	30	M5	16	5	85	70	105	M6	2.5	138	327	297	108	74	80	68	26
BN 80	19	40	M6	21.5	6	100	80	120	M6	3	156	372	332	119	74	80	83	37
BN 90	24	50	M8	27	8	115	95	140	M8	3	176	425	375	133	98	98	95	38
BN 100	28	60	M10	31	8	130	110	160	M8	3.5	195	477	417	142	98	98	119	44
BN 112	28	60	M10	31	8	130	110	160	M8	3.5	219	500	440	157	98	98	128	50
BN 132	38	80	M12	41	10	165	130	200	M10	4	258	638	558	193	118	118	180	52

NOTE:

Dimensions AD, AF, LL and V, relevant to terminal box of motors BN...BA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size BN...FD and AFD motors.



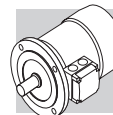
BN_BA - IM B5



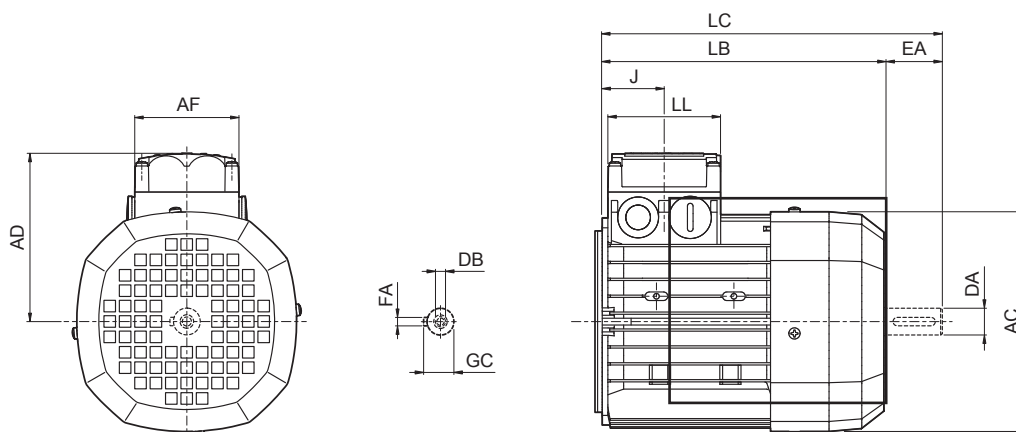
	Shaft					Flange						Motor								
	D	E	DB	GA	F	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	
BN 63	11	23	M4	12.5	4	115	95	140	9.5	3	10	124	298	275	95	74	80	28	34	
BN 71	14	30	M5	16	5	130	110	160	9.5	3.5	10	138	327	297	108	74	80	68	26	
BN 80	19	40	M6	21.5	6	165	130	200	11.5	3.5	11.5	156	372	332	119	74	80	83	37	
BN 90	24	50	M8	27	8	165	130	200	11.5	3.5	11.5	176	425	375	133	98	98	95	38	
BN 100	28	60	M10	31	8	215	180	250	14	4	14	195	477	417	142	98	98	119	44	
BN 112	28	60	M10	31	8	215	180	250	14	4	15	219	500	440	157	98	98	128	50	
BN 132	38	80	M12	41	10	265	230	300	14	4	20	258	638	558	193	118	118	180	52	

NOTE:

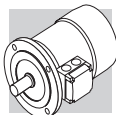
Dimensions AD, AF, LL and V, relevant to terminal box of motors BN...BA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size BN...FD and AFD motors.



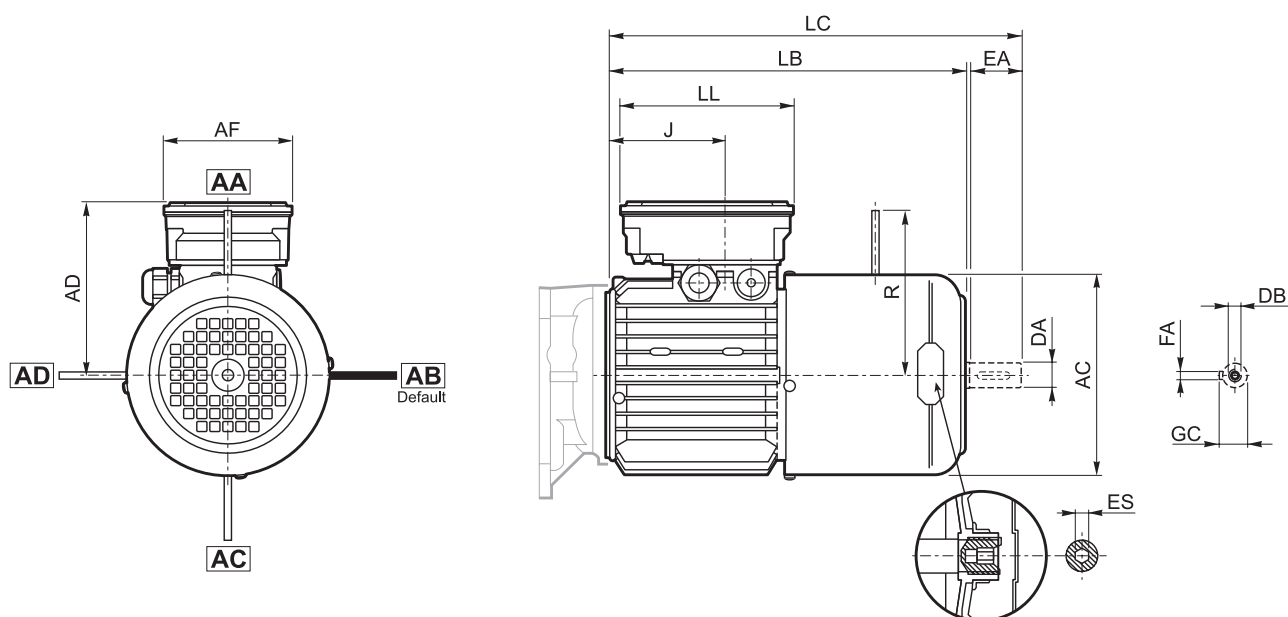
M



	Rear shaft end					Motor						
	DA	EA	DB	FA	GC	AC	LB	LC	AF	LL	J	AD
M 0	9	20	M3	3	10.2	110	133	155	74	80	42	91
M 05	11	23	M4	4	12.5	121	165	191	74	80	48	95
M 1	14	30	M5	5	16	138	187	219	74	80	45	108
M 2 S	19	40	M6	6	21.5	156	202	245	74	80	44	119
M 3 S	28	60	M10	8	31	195	230	293	98	98	53.5	142
M 3 L	28	60	M10	8	31	195	262	325	98	98	53.5	142
M 4	38	80	M12	10	41	258	361	444	118	118	64.5	193
M 4 LC	38	80	M12	10	41	258	396	479	118	118	64.5	193
M 5 S	38	80	M12	10	41	310	418	502	187	187	77	245
M 5 L	38	80	M12	10	41	310	462	546	187	187	77	245



M_FD ; M_AFD

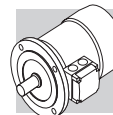


	Rear shaft end					Motor								
	DA	EA	DB	FA	GC	AC	LB	LC	AF	LL	J	AD	R	ES
M 05	11	23	M4	4	12.5	121	231	256	98	133	48	122	96	5
M 1	14	30	M5	5	16	138	248	280	98	133	73	135	103	5
M 2 S	19	40	M6	6	21.5	156	272	314	98	133	88	146	129	5
M 3 S	28	60	M10	8	31	195	326	389	110	165	124.5	158	160	6
M 3 L	28	60	M10	8	31	195	353	416	110	165	124.5	158	160	6
M 4	38	80	M12	10	41	258	470	553	140	188	185.5	210	204 (1)	6
M 4 LC	38	80	M12	10	41	258	495	578	140	188	64.5	210	226	6
M 5 S	38	80	M12	10	41	310	558	642	187	187	77	245	266	—
M 5 L	38	80	M12	10	41	310	602	686	187	187	77	245	266	—

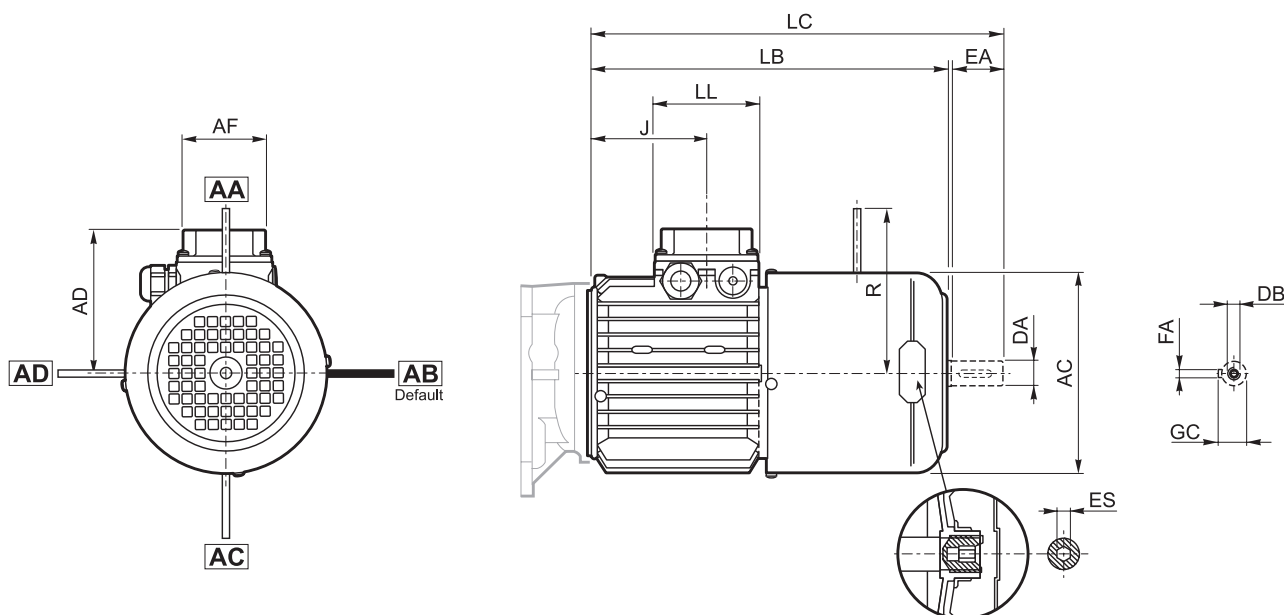
NOTE:

1) For FD07 and AFD07 brake value R=226.

ES hexagon is not supplied with PS option.



M_FA



	Rear shaft end					Motor								
	DA	EA	DB	FA	GC	AC	LB	LC	AF	LL	J	AD	R	ES
M 05	11	23	M4	4	12.5	121	231	256	74	80	48	95	116	5
M 1	14	30	M5	5	16	138	248	280	74	80	73	108	124	5
M 2 S	19	40	M6	6	21.5	156	272	314	74	80	88	119	134	5
M 3 S	28	60	M10	8	31	195	326	389	98	98	124.5	142	160	6
M 3 L	28	60	M10	8	31	195	353	416	98	98	124.5	142	160	6
M 4	38	80	M14	10	41	258	470	553	118	118	185.5	193	200 (1)	6
M 4 LC	38	80	M14	10	41	258	495	578	118	118	64.5	193	217	6
M 5 S	38	80	M12	10	41	310	558	642	187	187	77	245	247	—
M 5 L	38	80	M12	10	41	310	602	686	187	187	77	245	247	—

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 and AFD motors.

ES hexagon is not supplied with PS option.



INDEX OF REVISIONS

BR_CAT_CAFS_STD_ENG_R01_0	
	Description
...	Removed installation instructions for shrink disc and QF bushings (available on the IOM Manual).
149	Added option RB for gearboxes series A.
462-533	Added d.c. brakes type AFD for electric motors BN and M.
462-533	Added options K1, CON, MSW, IC, EN4, EN5, EN6 for electric motors BN and M.

2013 06 25

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