

Bonfiglioli **Riduttori**

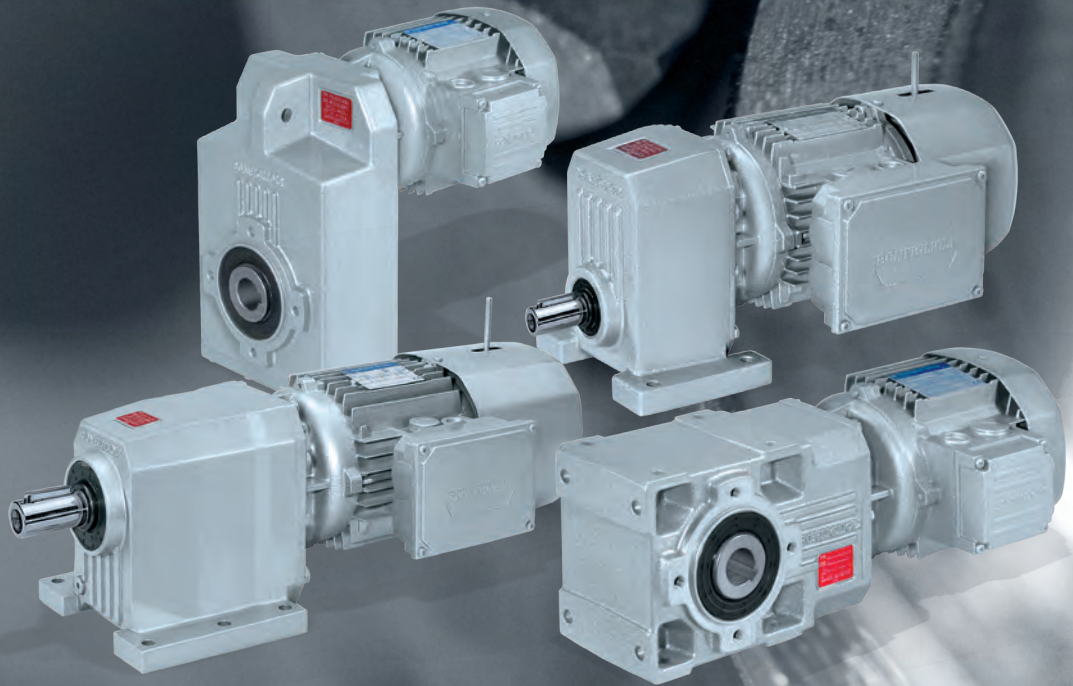
C-A-F-S series

Helical gear units C

Helical bevel gear units A

Shaft mounted gear units F

Single stage gearboxes S



PRODUCT

 **Bonfiglioli**
Forever Forward

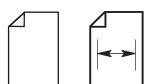


GENERAL INFORMATION

1 SYMBOLS AND UNITS OF MEASURE

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

₁ value applies to input shaft
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).



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



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



IMPORTANT
This symbol indicates important technical information.



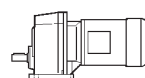
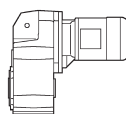
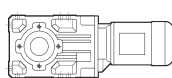
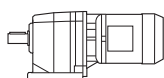
Apply to equipment complying with "ATEX" Directive.

Series C

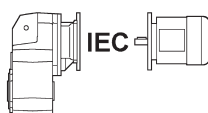
Series A

Series F

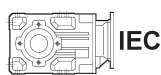
Series S



Gearmotor with compact motor.



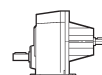
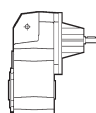
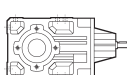
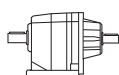
Gearmotor with IEC motor.



Gear unit with IEC motor interface.



Gear unit with servomotor input adapter.




Speed reducer with solid input shaft.




2 ALLOWED TEMPERATURE LIMITS

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

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

(@) = Continuous operation it is not advised if t_s and t_o range is 80°C to 95°C .

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



3 TORQUE

3.1 Rated torque M_{n2} [Nm]

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

3.2 Required torque M_{r2} [Nm]

The torque demand based on application requirement.
It must always be equal to or less than torque M_{n2} the gearbox under study is rated for.

3.3 Calculated torque M_{c2} [Nm]

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

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

4 POWER

4.1 Rated power P_{n1} [kW]

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

5 THERMAL CAPACITY P_t [kW]

P_t is the power that can be transmitted through the gear unit, under a continuous duty and an ambient temperature of 20 °C, without resulting into damage of the inner parts or degradation of the lubricant properties. Refer to chart (A1) for specific kW ratings.


In case of intermittent duty, or an operating ambient temperature other than the rated 20°C, the P_t value should be adjusted through the factor f_t , obtained from chart (A2), as per the following equation:


$$P_t' = P_t \times f_t$$





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

(A 1)

P_t [kW] 20 °C		
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$
C 05 2	—	—
C 12 2	—	—
C 22 2	—	—
C 32 2	—	4.5
C 36 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		
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$
A 05 2	2.0	1.5
A 10 2	2.1	1.5
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	24
A 80 3	44	33
A 90 3	64	48

P_t [kW] 20 °C		
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$
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		
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$
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:

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















6 EFFICIENCY

6.1 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 		2 x 	3 x 	4 x 
η_d	95%	93%	90%	η_d	94%	91%	89%
	2 x 	3 x 	4 x 		1 x 		
η_d	95%	93%	90%	η_d	98%		



7 GEAR RATIO i

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

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

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

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

8 ANGULAR VELOCITY

8.1 Input speed n_1 [min^{-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.

8.2 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:

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

9 MOMENT OF INERTIA J_r [Kgm^2]

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

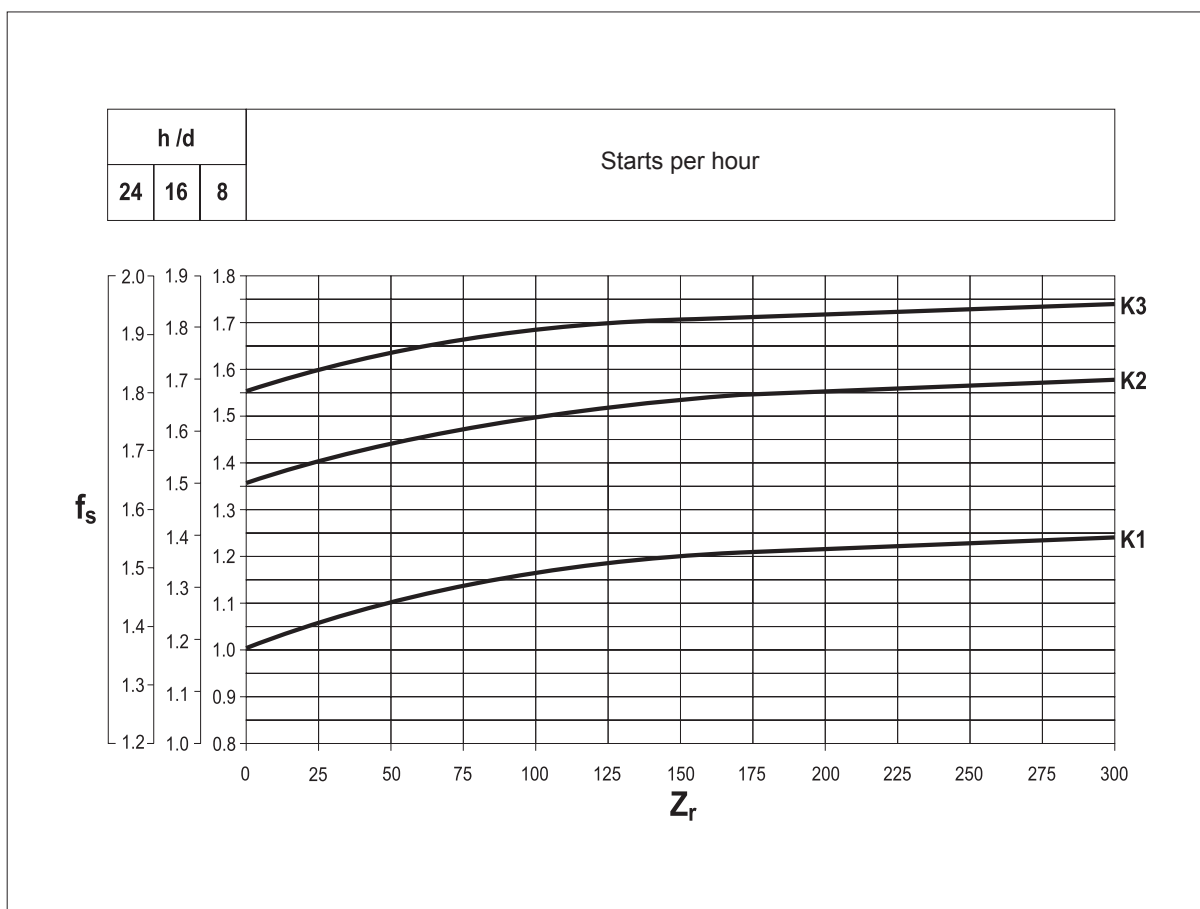
They are therefore related to motor speed, in the case of direct motor mounting.



10 SERVICE FACTOR f_s

This factor is the numeric value describing reducer service duty. It takes into consideration, with unavoidable approximation, daily operating conditions, load variations and overloads connected with reducer application. In the graph (A4) below, after selecting proper “daily working hours” column, the service factor is given by intersecting the number of starts per hour and one of the K1, K2 or K3 curves. K_ curves are linked with the service nature (approximately: uniform, medium and heavy) through the acceleration factor of masses K, connected to the ratio between driven masses and motor inertia values. Regardless of the value given for the service factor, we would like to remind that in some applications, which for example involve lifting of parts, failure of the reducer may expose the operators to the risk of injuries. If in doubt, please contact our Technical Service Department.

(A 4)



10.1 Acceleration factor of masses K

This parameter serves for selecting the right curve for the type of load. The value is given by the following ratio:

(A 5)

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



11 LUBRICATION

Life lubricated gearboxes do not require any periodical oil changes.

Refer to the User's Manual available at www.bonfiglioli.com for indications about checking the oil level and its replacement for other types of gearboxes.

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

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

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

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

(A 6)

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

Recommended operating limits

Allowed operating limits. ☎

Forbidden operating limits.

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

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



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

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

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

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

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

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

11.3 Lubrication for A-EX (Atex) gearboxes


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

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

(A 7)

A 05	A 10	A 20	A 30	A 35	A 41	A 50	A 55 ¹⁾	A 60 2 ²⁾	A 60 3 ¹⁾	A 60 4 ¹⁾	A 70 ¹⁾	A 80 ¹⁾	A 90 ¹⁾
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 Gearbox pre-filled with a synthetic “for life” lubricant

 Gearbox pre-filled with a synthetic lubricant

⁽¹⁾ Without lubricant for mounting positions B6 and B7

⁽²⁾ Without lubricant for mounting positions B6, B7 and VB

Gearboxes are fitted with sealed filler plugs for transport purposes. Depending on version, they may be supplied with a vented plug which the user must fit before putting the gearbox into service. Refer to the installation, operation and maintenance manual to replace the filler plug correctly. (These manuals are available in a number of languages and can be downloaded in pdf format from the website www.bonfiglioli.com.)

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



12 SELECTION

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

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

(A 8)

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



For the selection of Series A gear units in ATEX configuration, see also the specific chapter on page 322.

12.1 Selection of a gearmotor

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

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

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

Value of η_d for the captioned gear unit can be sorted out from paragraph 6.

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

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

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

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

Accordingly the following condition must be satisfied:

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

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

12.2 Intermittence ratio

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

t_f = work time at constant load

t_r = rest time



(A 9)

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

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

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

The safety factor is so defined:

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

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

Should the drive speed be different from 2800, 1400 or 900 min⁻¹, base the selection on the gear unit nominal rating.

12.3 Selection of speed reducer and gearbox with IEC motor adapter

a) Determine service factor f_s .

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

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

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

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



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

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

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

13 VERIFICATION

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

a) Thermal capacity

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

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

b) Maximum torque

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

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

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

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

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

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

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

c) Radial loads

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

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

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

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

Please refer to the paragraphs relating to radial loads.



d) Thrust loads

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

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

e) Starts per hour

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

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

14 INSTALLATION

The following installation instructions must be observed:

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

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

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

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

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

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

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

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

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



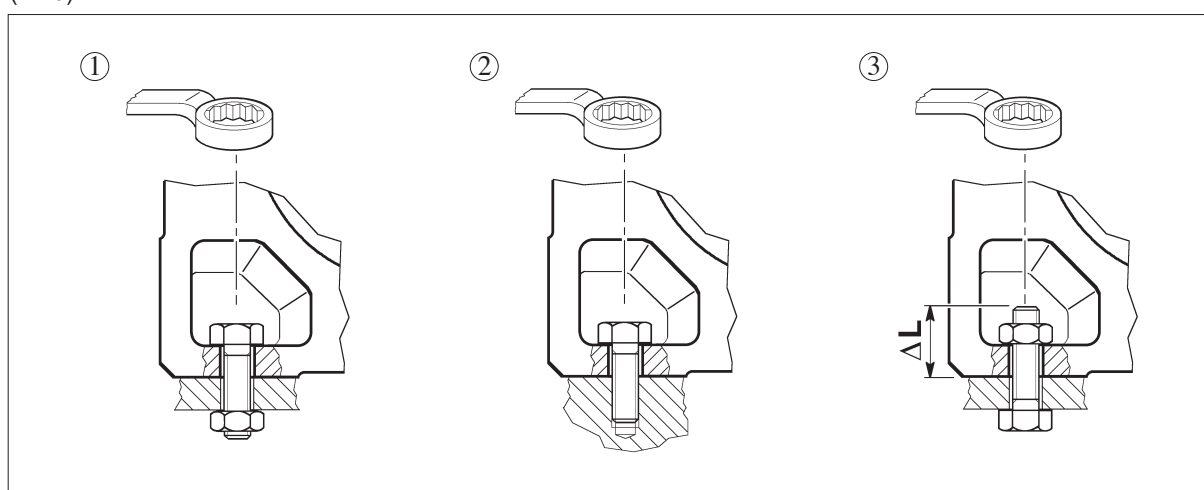
14.1 Fitting servomotors to gear heads featuring a clamping device (adapter type SC)

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

15 INSTALLATION INSTRUCTIONS

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

(A 10)



(A 11)

	Bolt type			
	①	②	③	ΔL (mm)
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



16 STORAGE

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

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

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

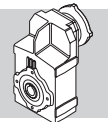
17 CONDITIONS OF SUPPLY

Gear units are supplied as follows:

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

18 PAINT SPECIFICATIONS

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



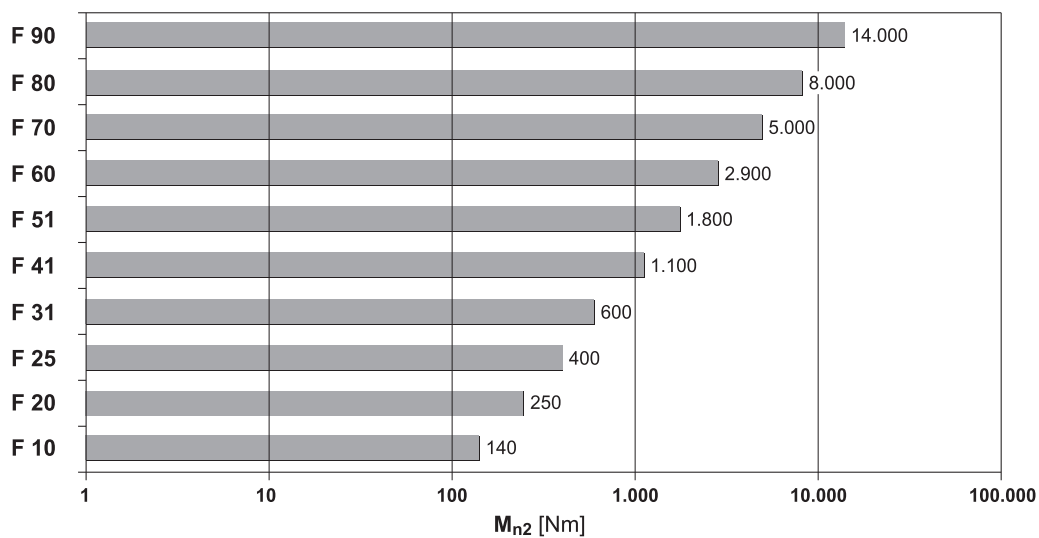
SHAFT MOUNTED GEAR UNITS SERIES F

53 DESIGN FEATURES

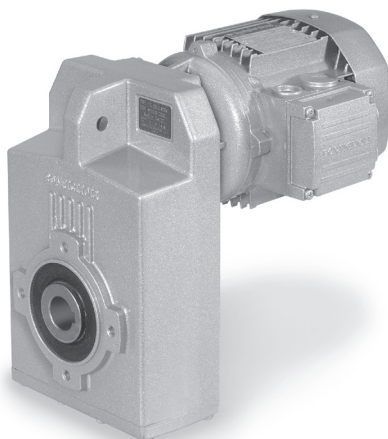
The main design characteristics are:

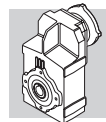
- modularity
- space effectiveness
- universal mounting
- high efficiency
- quiet operation
- gears in hardened and case-hardened steel
- bare aluminium housing for sizes 10, 20 and 25,
high strength painted cast-iron housings for larger frame sizes.

(D 44)

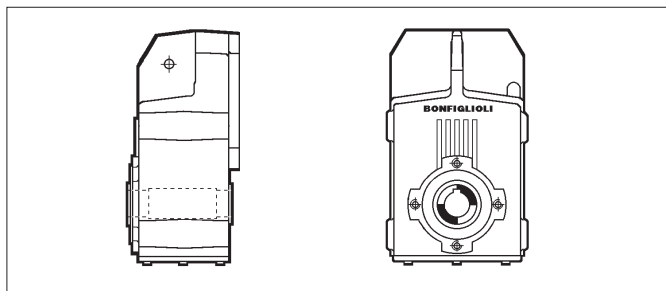


* For any limitations regarding construction type QF see the “VERSIONS” chapter.





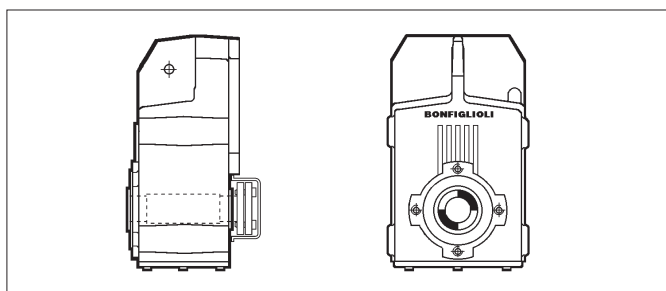
54 VERSIONS



H

Hollow output shaft and keyway

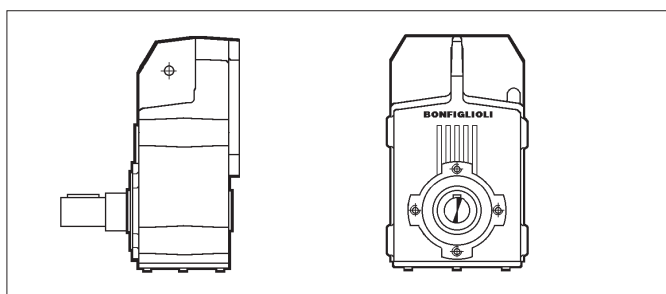
F 10 ... F 90



S

Hollow output shaft and shrink disc

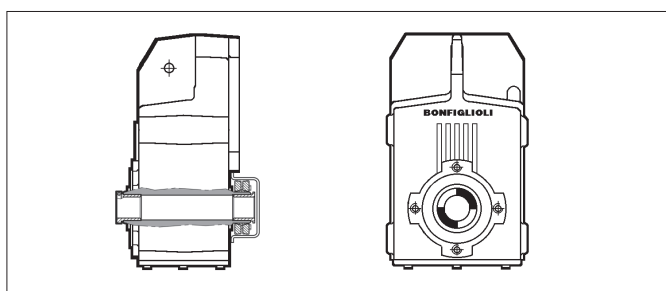
F 10 ... F 90



R

Solid output shaft

F 10 ... F 90



QF (Quick-fit)

Hollow shaft with adapter bushings and shrink disc

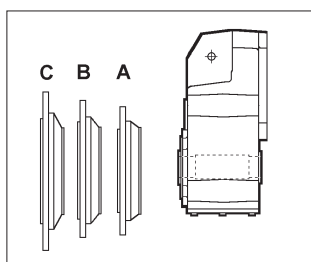
F 10 ... F 60

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

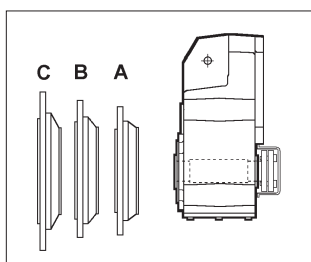
Basic versions with bolted flange

The sketches show the applicable flanges to the basic versions.

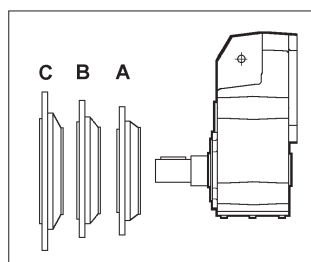
H... F...



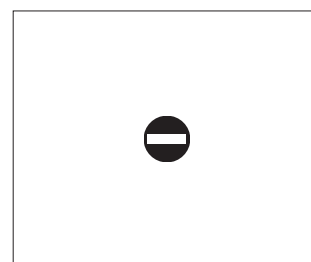
S F...

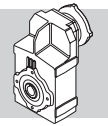


R F...



QF...





55 DESIGNATION

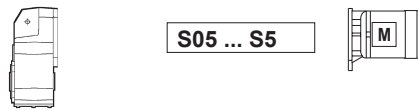
GEAR UNIT

F 10 2 H30 FA 48.7 S1 H5

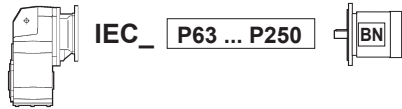
OPTIONS

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

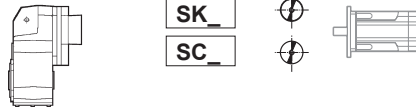
INPUT CONFIGURATION



S05 ... S5

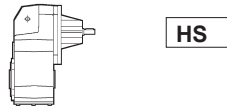


IEC_ P63 ... P250



SK_

SC_



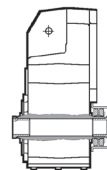
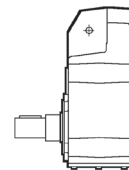
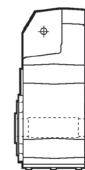
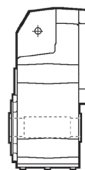
HS

GEAR RATIO

OUTPUT FLANGE SIZE AND POSITION (specify only if requested)

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

VERSION



S

R

QF

(F 10...F 90)

(F 10...F 90)

(F 10...F 60)

	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	← Alternative diameters available on request

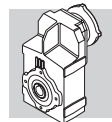
REDUCTIONS

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

GEAR FRAME SIZE

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

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



MOTOR

BRAKE

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

OPTIONS

BRAKE
SUPPLY

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

BRAKE HAND RELEASE
R, RM

BRAKE TORQUE

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

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

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

INSULATION CLASS
CL F standard
CL H option

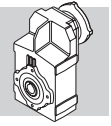
DEGREE OF PROTECTION
IP55 standard (IP54 - brake motor)

VOLTAGE - FREQUENCY

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

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

MOTOR TYPE
M = compact 3-phase
BN = IEC 3-phase



55.1 Gearbox options

AL, AR

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

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

(D 45)

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

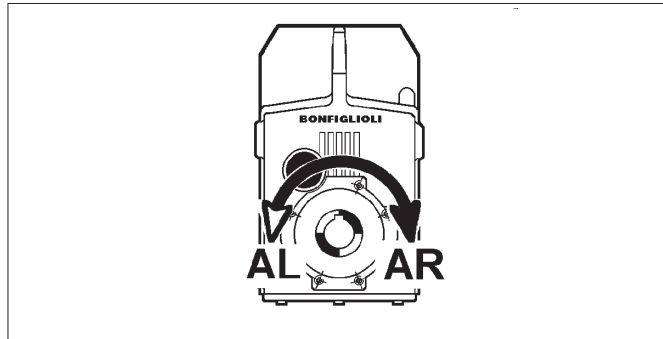
* The supply of the backstop will ban the configuration of servomotor adapters type S_60A, S_60B, S_80A.

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



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

(D 46)



SO

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

LO

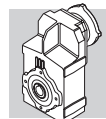
Gearboxes F 51 through F 90, usually supplied without oil, to be supplied with synthetic oil currently used by BONFIGLIOLI RIDUTTORI and filled according to the mounting position specified.

DV

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

VV

Oil seal in Fluoro elastomer compound on input shaft.



PV

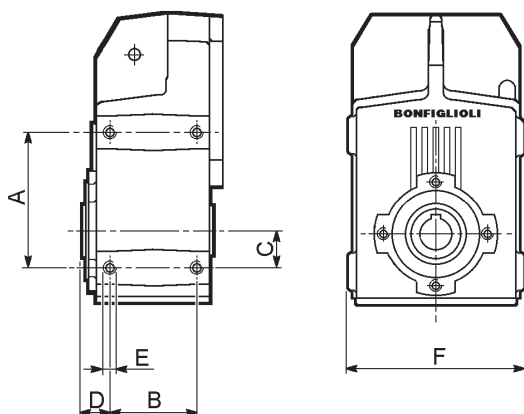
Both input and output shafts feature oil seal in Fluoro elastomer compound.

FL

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

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

(D 47)



	A	B	C	D	E	F
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

SURFACE PROTECTION

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

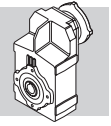
(D 48)

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

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

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

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



PAINTING

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

(D 49)

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

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

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

CERTIFICATES

AC - Certificate of compliance

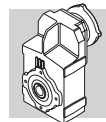
The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

CC - Inspection certificate

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

55.2 Accessories

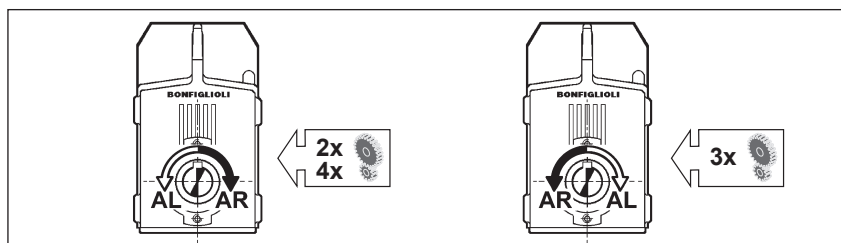
See chapter 65 of this catalogue.



55.3 Motor options

AL, AR

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



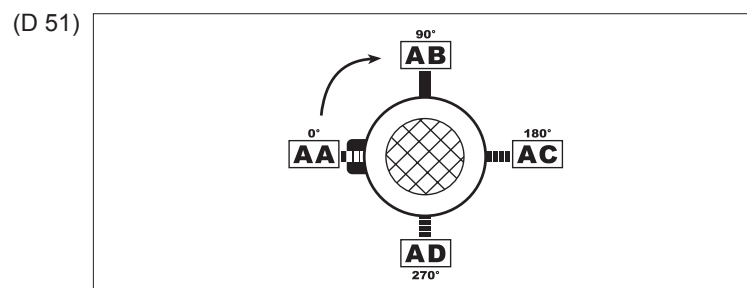
For further information on options, consult the electric motors section.

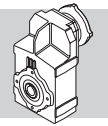
56 MOUNTING POSITION AND TERMINAL BOX ANGULAR LOCATION

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

Angular location of the brake release lever.

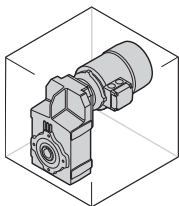
Unless otherwise specified, brake motors have the manual device side located, 90° apart from terminal box. Different angles can be specified through the relevant options available.



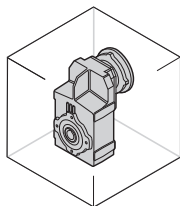


F ...

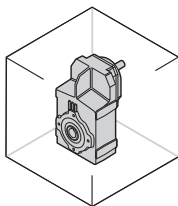
H1



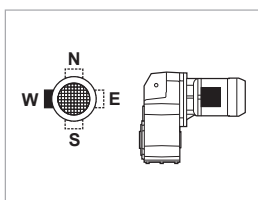
_S



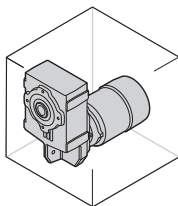
_P(IEC) _SK / _SC



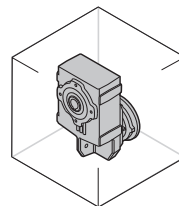
_HS



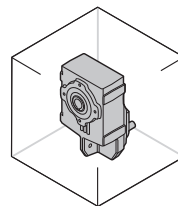
H2



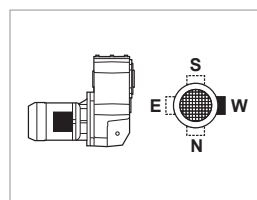
_S



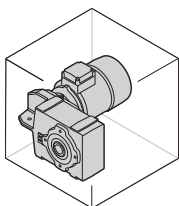
_P(IEC) _SK / _SC



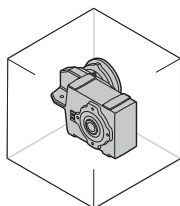
_HS



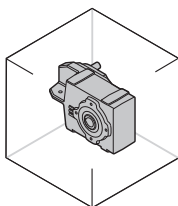
H3



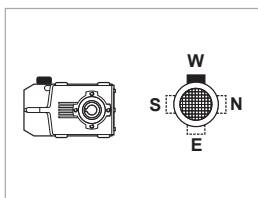
_S



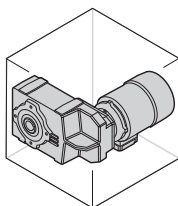
_P(IEC) _SK / _SC



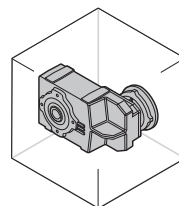
_HS



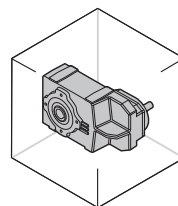
H4



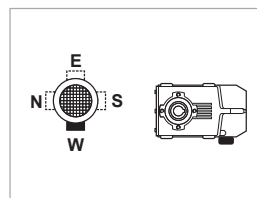
_S



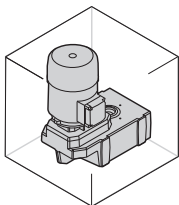
_P(IEC) _SK / _SC



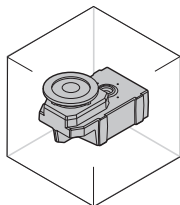
_HS



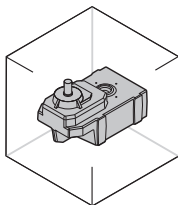
H5



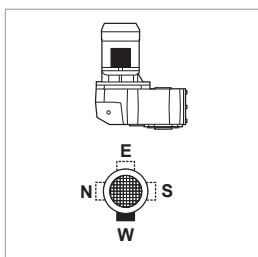
_S



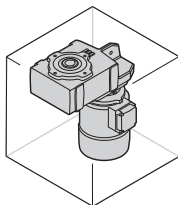
_P(IEC) _SK / _SC



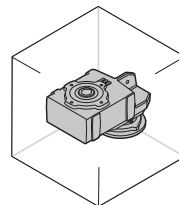
_HS



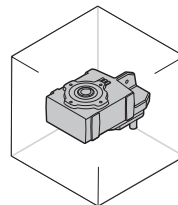
H6



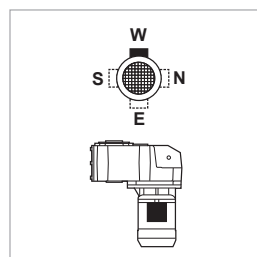
_S



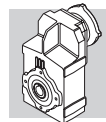
_P(IEC) _SK / _SC



_HS



W = Default



57 OVERHUNG LOADS

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

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

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

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

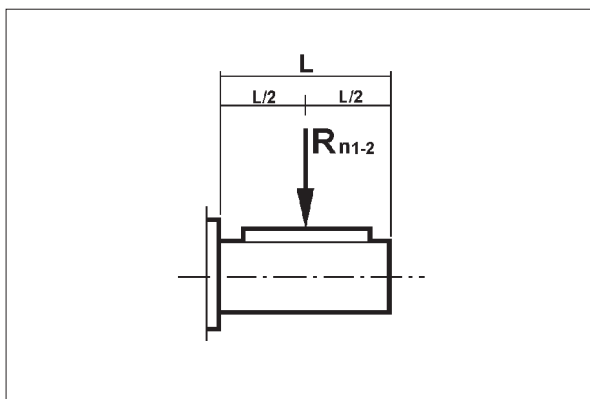
$$R_{c1} [N] = \frac{2000 \cdot M_1 [Nm] \cdot K_r}{d [mm]} \quad ; \quad R_{c2} [N] = \frac{2000 \cdot M_2 [Nm] \cdot K_r}{d [mm]} \quad (35)$$

(D 52)

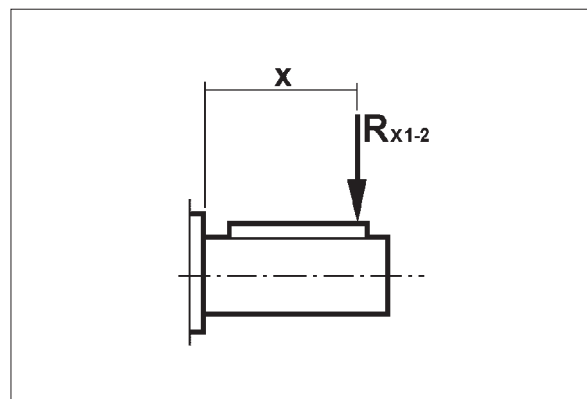
M_1 [Nm]	Torque applied to input shaft	$K_r = 1,25$	Gear transmission
M_2 [Nm]	Torque drawn at output shaft	$K_r = 1,5$	V-belt transmission
d [mm]	Pitch diameter of element keyed onto shaft	$K_r = 2,0$	Flat belt transmission
$K_r = 1$	Chain transmission		

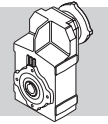
Verification of OHL capability varies depending on whether load applies at midpoint of shaft or it is shifted further out:

(D 53)



(D 54)





a) Load applied at midpoint of shaft, tab. (D53)

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

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

or

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

b) Load off the midpoint tab. (D54)

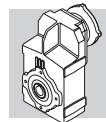
When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.

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

$$\frac{a}{b+x} \quad (36)$$

(D 55)

	Load location factors					
	Output shaft			Input shaft		
	a	b	c	a	b	c
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:

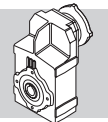
$$R_{x2} = R_{n2} \cdot \frac{a}{b+x} \quad (40)$$

N.B. Subject to condition:

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

Finally, the following condition must be verified:

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



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

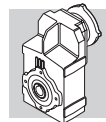
Permissible thrust loads on input [A_{n1}] and output [A_{n2}] shafts are obtained from the radial loading for the shaft under consideration [R_{n1}] and [R_{n2}] through the following equation:

$$\begin{aligned} A_{n1} &= R_{n1} \cdot 0.2 \\ A_{n2} &= R_{n2} \cdot 0.2 \end{aligned} \quad (43)$$



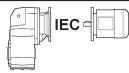

The thrust loads calculated through these formulas apply to thrust forces occurring at the same time as rated radial loads.

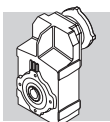
In the only case that no overhung load acts on the shaft the value of the admissible thrust load [A_n] amounts to 50% of rated OHL [R_n] on same shaft.

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



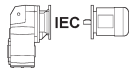



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

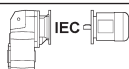

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.40	1945	2.6	2188	35000			F704_2188 P63 BN63A6	453
0.50	1526	3.4	1717	35000			F704_1717 P63 BN63A6	453
0.62	1254	0.9	1411	8500	F414_1411 S05 M05A6	440	F414_1411 P63 BN63A6	441
0.73	1079	1.0	1213	8500	F414_1213 S05 M05A6	440	F414_1213 P63 BN63A6	441
0.81	971	1.1	1092	8500	F414_1092 S05 M05A6	440	F414_1092 P63 BN63A6	441
0.90	874	1.3	982.4	8500	F414_982.4 S05 M05A6	440	F414_982.4 P63 BN63A6	441
0.98	801	1.4	900.5	8500	F414_900.5 S05 M05A6	440	F414_900.5 P63 BN63A6	441
1.1	724	1.5	813.8	8500	F414_813.8 S05 M05A6	440	F414_813.8 P63 BN63A6	441
1.2	678	0.9	762.3	6500	F314_762.3 S05 M05A6	436	F314_762.3 P63 BN63A6	437
1.2	658	1.7	739.4	8500	F414_739.4 S05 M05A6	440	F414_739.4 P63 BN63A6	441
1.3	610	1.0	685.6	6500	F314_685.6 S05 M05A6	436	F314_685.6 P63 BN63A6	437
1.3	614	1.8	690.1	8500	F414_690.1 S05 M05A6	440	F414_690.1 P63 BN63A6	441
1.4	551	1.1	619.9	6500	F314_619.9 S05 M05A6	436	F314_619.9 P63 BN63A6	437
1.5	515	1.2	578.6	6500	F314_578.6 S05 M05A6	436	F314_578.6 P63 BN63A6	437
1.6	489	2.2	549.8	8500	F414_549.8 S05 M05A6	440	F414_549.8 P63 BN63A6	441
1.7	469	0.9	527.3	6500	F254_527.3 S05 M05A6	432	F254_527.3 P63 BN63A6	433
1.7	469	1.3	527.8	6500	F314_527.8 S05 M05A6	436	F314_527.8 P63 BN63A6	437
1.9	414	1.0	466.0	6500	F254_466.0 S05 M05A6	432	F254_466.0 P63 BN63A6	433
1.9	411	1.5	462.6	6500	F314_462.6 S05 M05A6	436	F314_462.6 P63 BN63A6	437
2.0	387	1.0	434.9	6500	F254_434.9 S05 M05A6	432	F254_434.9 P63 BN63A6	433
2.0	386	2.9	433.7	8500	F414_433.7 S05 M05A6	440	F414_433.7 P63 BN63A6	441
2.1	372	1.6	418.9	6500	F314_418.9 S05 M05A6	436	F314_418.9 P63 BN63A6	437
2.2	350	1.1	393.9	6500	F254_393.9 S05 M05A6	432	F254_393.9 P63 BN63A6	433
2.4	340	1.8	374.4	6500			F313_374.4 P63 BN63A6	437
2.6	302	2.0	332.8	6500			F313_332.8 P63 BN63A6	437
2.6	313	3.5	344.8	8500			F413_344.8 P63 BN63A6	441
2.8	288	0.9	316.9	4000	F203_316.9 S05 M05A6	428	F203_316.9 P63 BN63A6	429
3.0	267	2.2	293.8	6500			F313_293.8 P63 BN63A6	437
3.1	259	1.0	285.2	4000	F203_285.2 S05 M05A6	428	F203_285.2 P63 BN63A6	429
3.4	232	1.1	255.3	4000	F203_255.3 S05 M05A6	428	F203_255.3 P63 BN63A6	429
3.5	230	2.6	253.6	6500			F313_253.6 P63 BN63A6	437
3.9	207	2.9	228.2	6500			F313_228.2 P63 BN63A6	437
4.2	190	1.3	209.3	4000	F203_209.3 S05 M05A6	428	F203_209.3 P63 BN63A6	429
4.4	184	3.3	202.3	6500			F313_202.3 P63 BN63A6	437
4.8	168	1.5	184.9	4000	F203_184.9 S05 M05A6	428	F203_184.9 P63 BN63A6	429
5.1	157	1.6	172.6	4000	F203_172.6 S05 M05A6	428	F203_172.6 P63 BN63A6	429
5.6	142	1.8	156.3	4000	F203_156.3 S05 M05A6	428	F203_156.3 P63 BN63A6	429
6.7	123	2.0	132.2	4000	F202_132.2 S05 M05A6	428	F202_132.2 P63 BN63A6	429
6.9	118	1.2	127.1	2800	F102_127.1 S05 M05A6	424	F102_127.1 P63 BN63A6	425
7.7	106	2.4	114.3	4000	F202_114.3 S05 M05A6	428	F202_114.3 P63 BN63A6	429
8.3	98	1.4	106.0	2800	F102_106.0 S05 M05A6	424	F102_106.0 P63 BN63A6	425
8.7	94	2.6	101.6	4000	F202_101.6 S05 M05A6	428	F202_101.6 P63 BN63A6	429
9.6	85	1.6	91.5	2800	F102_91.5 S05 M05A6	424	F102_91.5 P63 BN63A6	425
9.7	84	3.0	90.4	4000	F202_90.4 S05 M05A6	428	F202_90.4 P63 BN63A6	429
10.8	75	1.9	81.3	2800	F102_81.3 S05 M05A6	424	F102_81.3 P63 BN63A6	425
11.5	71	3.5	76.8	4000	F202_76.8 S05 M05A6	428	F202_76.8 P63 BN63A6	429
12.4	66	2.1	71.1	2800	F102_71.1 S05 M05A6	424	F102_71.1 P63 BN63A6	425
14.0	58	2.4	63.0	2800	F102_63.0 S05 M05A6	424	F102_63.0 P63 BN63A6	425

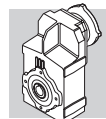


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

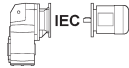

n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
15.5	53	2.7	56.7	2800	F102_56.7 S05 M05A6	424	F102_56.7 P63 BN63A6	425
18.1	45	3.1	48.7	2800	F102_48.7 S05 M05A6	424	F102_48.7 P63 BN63A6	425
19.7	41	3.4	44.7	2800	F102_44.7 S05 M05A6	424	F102_44.7 P63 BN63A6	425
22.2	37	3.8	39.6	2800	F102_39.6 S05 M05A6	424	F102_39.6 P63 BN63A6	425
24.9	33	4.3	35.3	2800	F102_35.3 S05 M05A6	424	F102_35.3 P63 BN63A6	425
26.7	31	4.6	33.0	2800	F102_33.0 S05 M05A6	424	F102_33.0 P63 BN63A6	425
29.7	28	5.1	29.6	2800	F102_29.6 S05 M05A6	424	F102_29.6 P63 BN63A6	425
34	24	5.9	25.8	2800	F102_25.8 S05 M05A6	424	F102_25.8 P63 BN63A6	425
39	21	6.6	22.8	2800	F102_22.8 S05 M05A6	424	F102_22.8 P63 BN63A6	425
46	18	7.8	19.3	2800	F102_19.3 S05 M05A6	424	F102_19.3 P63 BN63A6	425
52	16	8.9	17.0	2800	F102_17.0 S05 M05A6	424	F102_17.0 P63 BN63A6	425
60	14	10.1	14.6	2700	F102_14.6 S05 M05A6	424	F102_14.6 P63 BN63A6	425
68	12	10.3	13.0	2600	F102_13.0 S05 M05A6	424	F102_13.0 P63 BN63A6	425
76	11	10.3	11.5	2500	F102_11.5 S05 M05A6	424	F102_11.5 P63 BN63A6	425
90	9	11.8	9.8	2370	F102_9.8 S05 M05A6	424	F102_9.8 P63 BN63A6	425
103	8	11.8	8.6	2270	F102_8.6 S05 M05A6	424	F102_8.6 P63 BN63A6	425
119	7	13.2	7.4	2160	F102_7.4 S05 M05A6	424	F102_7.4 P63 BN63A6	425

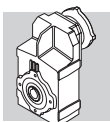
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n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
0.40	2623	1.9	2188	35000			F704_2188 P63 BN63B6	453
0.51	2058	2.5	1717	35000			F704_1717 P63 BN63B6	453
0.60	1742	2.9	2188	35000			F704_2188 P63 BN63A4	453
0.65	1607	3.1	2019	35000			F704_2019 P63 BN63A4	453
0.76	1368	2.1	1141	20000			F604_1141 P63 BN63B6	449
0.89	1178	0.9	982.4	8500	F414_982.4 S05 M05B6	440	F414_982.4 P63 BN63B6	441
0.96	1090	1.0	1411	8500	F414_1411 S05 M05A4	440	F414_1411 P63 BN63A4	441
1.1	938	1.2	1213	8500	F414_1213 S05 M05A4	440	F414_1213 P63 BN63A4	441
1.2	844	1.3	1092	8500	F414_1092 S05 M05A4	440	F414_1092 P63 BN63A4	441
1.4	759	1.4	982.4	8500	F414_982.4 S05 M05A4	440	F414_982.4 P63 BN63A4	441
1.5	696	1.6	900.5	8500	F414_900.5 S05 M05A4	440	F414_900.5 P63 BN63A4	441
1.6	643	0.9	831.6	6500	F314_831.6 S05 M05A4	436	F314_831.6 P63 BN63A4	437
1.7	629	1.7	813.8	8500	F414_813.8 S05 M05A4	440	F414_813.8 P63 BN63A4	441
1.8	589	1.0	762.3	6500	F314_762.3 S05 M05A4	436	F314_762.3 P63 BN63A4	437
1.8	571	1.9	739.4	8500	F414_739.4 S05 M05A4	440	F414_739.4 P63 BN63A4	441
2.0	530	1.1	685.6	6500	F314_685.6 S05 M05A4	436	F314_685.6 P63 BN63A4	437
2.0	533	2.1	690.1	8500	F414_690.1 S05 M05A4	440	F414_690.1 P63 BN63A4	441
2.2	479	1.3	619.9	6500	F314_619.9 S05 M05A4	436	F314_619.9 P63 BN63A4	437
2.3	456	0.9	589.7	6500	F254_589.7 S05 M05A4	432	F254_589.7 P63 BN63A4	433
2.3	447	1.3	578.6	6500	F314_578.6 S05 M05A4	436	F314_578.6 P63 BN63A4	437
2.5	425	2.6	549.8	8500	F414_549.8 S05 M05A4	440	F414_549.8 P63 BN63A4	441
2.6	408	1.0	527.3	6500	F254_527.3 S05 M05A4	432	F254_527.3 P63 BN63A4	433
2.6	408	1.5	527.8	6500	F314_527.8 S05 M05A4	436	F314_527.8 P63 BN63A4	437
2.9	360	1.1	466.0	6500	F254_466.0 S05 M05A4	432	F254_466.0 P63 BN63A4	433
2.9	358	1.7	462.6	6500	F314_462.6 S05 M05A4	436	F314_462.6 P63 BN63A4	437
3.1	336	1.2	434.9	6500	F254_434.9 S05 M05A4	432	F254_434.9 P63 BN63A4	433
3.1	335	3.3	433.7	8500	F414_433.7 S05 M05A4	440	F414_433.7 P63 BN63A4	441



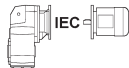



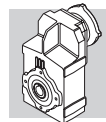
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n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
3.2	324	1.9	418.9	6500	F314_418.9 S05 M05A4	436	F314_418.9 P63 BN63A4	437
3.4	304	1.3	393.9	6500	F254_393.9 S05 M05A4	432	F254_393.9 P63 BN63A4	433
3.6	296	2.0	374.4	6500			F313_374.4 P63 BN63A4	437
4.1	263	1.5	333.1	6500	F253_333.1 S05 M05A4	432	F253_333.1 P63 BN63A4	433
4.1	263	2.3	332.8	6500			F313_332.8 P63 BN63A4	437
4.3	250	1.0	316.9	4000	F203_316.9 S05 M05A4	428	F203_316.9 P63 BN63A4	429
4.6	232	2.6	293.8	6500			F313_293.8 P63 BN63A4	437
4.7	225	1.1	285.2	4000	F203_285.2 S05 M05A4	428	F203_285.2 P63 BN63A4	429
4.7	228	1.8	288.1	6500	F253_288.1 S05 M05A4	432	F253_288.1 P63 BN63A4	433
5.3	202	1.2	255.3	4000	F203_255.3 S05 M05A4	428	F203_255.3 P63 BN63A4	429
5.3	202	2.0	256.1	6500	F253_256.1 S05 M05A4	432	F253_256.1 P63 BN63A4	433
5.3	200	3.0	253.6	6500			F313_253.6 P63 BN63A4	437
5.9	180	2.2	227.8	6500	F253_227.8 S05 M05A4	432	F253_227.8 P63 BN63A4	433
5.9	180	3.3	228.2	6500			F313_228.2 P63 BN63A4	437
6.5	165	1.5	209.3	4000	F203_209.3 S05 M05A4	428	F203_209.3 P63 BN63A4	429
7.0	153	2.6	193.6	6500	F253_193.6 S05 M05A4	432	F253_193.6 P63 BN63A4	433
7.3	146	1.7	184.9	4000	F203_184.9 S05 M05A4	428	F203_184.9 P63 BN63A4	429
7.7	138	2.9	174.2	6500	F253_174.2 S05 M05A4	432	F253_174.2 P63 BN63A4	433
7.8	136	1.8	172.6	4000	F203_172.6 S05 M05A4	428	F203_172.6 P63 BN63A4	429
8.6	123	2.0	156.3	4000	F203_156.3 S05 M05A4	428	F203_156.3 P63 BN63A4	429
8.7	123	3.2	155.9	6500	F253_155.9 S05 M05A4	432	F253_155.9 P63 BN63A4	433
9.4	113	3.5	143.0	6500	F253_143.0 S05 M05A4	432	F253_143.0 P63 BN63A4	433
10.2	107	2.3	132.2	4000	F202_132.2 S05 M05A4	428	F202_132.2 P63 BN63A4	429
10.6	103	1.4	127.1	2800	F102_127.1 S05 M05A4	424	F102_127.1 P63 BN63A4	425
11.8	92	2.7	114.3	4000	F202_114.3 S05 M05A4	428	F202_114.3 P63 BN63A4	429
12.7	86	1.6	106.0	2800	F102_106.0 S05 M05A4	424	F102_106.0 P63 BN63A4	425
13.3	82	3.0	101.6	4000	F202_101.6 S05 M05A4	428	F202_101.6 P63 BN63A4	429
14.8	74	1.9	91.5	2800	F102_91.5 S05 M05A4	424	F102_91.5 P63 BN63A4	425
14.9	73	3.4	90.4	4000	F202_90.4 S05 M05A4	428	F202_90.4 P63 BN63A4	429
16.6	66	2.1	81.3	2800	F102_81.3 S05 M05A4	424	F102_81.3 P63 BN63A4	425
19.0	57	2.4	71.1	2800	F102_71.1 S05 M05A4	424	F102_71.1 P63 BN63A4	425
21.4	51	2.8	63.0	2800	F102_63.0 S05 M05A4	424	F102_63.0 P63 BN63A4	425
23.8	46	3.1	56.7	2800	F102_56.7 S05 M05A4	424	F102_56.7 P63 BN63A4	425
27.7	39	3.6	48.7	2800	F102_48.7 S05 M05A4	424	F102_48.7 P63 BN63A4	425
30	36	3.9	44.7	2800	F102_44.7 S05 M05A4	424	F102_44.7 P63 BN63A4	425
34	32	4.4	39.6	2800	F102_39.6 S05 M05A4	424	F102_39.6 P63 BN63A4	425
38	29	4.9	35.3	2800	F102_35.3 S05 M05A4	424	F102_35.3 P63 BN63A4	425
41	27	5.3	33	2800	F102_33.0 S05 M05A4	424	F102_33.0 P63 BN63A4	425
46	24	5.9	29.6	2800	F102_29.6 S05 M05A4	424	F102_29.6 P63 BN63A4	425
52	21	6.7	25.8	2800	F102_25.8 S05 M05A4	424	F102_25.8 P63 BN63A4	425
59	18	7.6	22.8	2700	F102_22.8 S05 M05A4	424	F102_22.8 P63 BN63A4	425
70	16	8.7	19.3	2560	F102_19.3 S05 M05A4	424	F102_19.3 P63 BN63A4	425
80	14	9.3	17.0	2450	F102_17.0 S05 M05A4	424	F102_17.0 P63 BN63A4	425
92	12	10.1	14.6	2340	F102_14.6 S05 M05A4	424	F102_14.6 P63 BN63A4	425
104	11	9.9	13.0	2250	F102_13.0 S05 M05A4	424	F102_13.0 P63 BN63A4	425
117	9	10.3	11.5	2160	F102_11.5 S05 M05A4	424	F102_11.5 P63 BN63A4	425
138	8	11.3	9.8	2050	F102_9.8 S05 M05A4	424	F102_9.8 P63 BN63A4	425
157	7	11.8	8.6	1970	F102_8.6 S05 M05A4	424	F102_8.6 P63 BN63A4	425
182	6	12.7	7.4	1870	F102_7.4 S05 M05A4	424	F102_7.4 P63 BN63A4	425



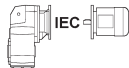



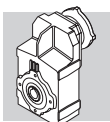
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.41	3804	1.3	2188	35000	F704_2188 S1 M1SC6	452	F704_2188 P71 BN71A6	453
0.45	3511	1.4	2019	35000	F704_2019 S1 M1SC6	452	F704_2019 P71 BN71A6	453
0.45	3455	2.3	1987	45000	F804_1987 S1 M1SC6	455	F804_1987 P71 BN71A6	456
0.49	3189	2.5	1834	45000	F804_1834 S1 M1SC6	455	F804_1834 P71 BN71A6	456
0.52	2985	1.7	1717	35000	F704_1717 S1 M1SC6	452	F704_1717 P71 BN71A6	453
0.53	2972	2.7	1709	45000	F804_1709 S1 M1SC6	455	F804_1709 P71 BN71A6	456
0.57	2756	1.8	1585	35000	F704_1585 S1 M1SC6	452	F704_1585 P71 BN71A6	453
0.57	2744	2.9	1578	45000	F804_1578 S1 M1SC6	455	F804_1578 P71 BN71A6	456
0.61	2576	1.9	1481	35000	F704_1481 S1 M1SC6	452	F704_1481 P71 BN71A6	453
0.65	2406	3.3	1384	45000	F804_1384 S1 M1SC6	455	F804_1384 P71 BN71A6	456
0.66	2378	2.1	1368	35000	F704_1368 S1 M1SC6	452	F704_1368 P71 BN71A6	453
0.76	2055	2.4	1182	35000	F704_1182 S1 M1SC6	452	F704_1182 P71 BN71A6	453
0.77	2030	0.9	1168	12000	F514_1168 S1 M1SC6	444	F514_1168 P71 BN71A6	445
0.79	1985	1.5	1141	20000	F604_1141 S1 M1SC6	448	F604_1141 P71 BN71A6	449
0.83	1897	2.6	1091	35000	F704_1091 S1 M1SC6	452	F704_1091 P71 BN71A6	453
0.84	1861	1.0	1070	12000	F514_1070 S1 M1SC6	444	F514_1070 P71 BN71A6	445
0.85	1832	1.6	1054	20000	F604_1054 S1 M1SC6	448	F604_1054 P71 BN71A6	449
0.92	1703	1.1	979.4	12000	F514_979.4 S1 M1SC6	444	F514_979.4 P71 BN71A6	445
0.92	1694	3.0	974.4	35000	F704_974.4 S1 M1SC6	452	F704_974.4 P71 BN71A6	453
0.94	1667	1.7	958.9	20000	F604_958.9 S1 M1SC6	448	F604_958.9 P71 BN71A6	449
1.0	1540	1.2	885.5	12000	F514_885.5 S1 M1SC6	444	F514_885.5 P71 BN71A6	445
1.0	1539	1.9	885.1	20000	F604_885.1 S1 M1SC6	448	F604_885.1 P71 BN71A6	449
1.0	1564	3.2	899.4	35000	F704_899.4 S1 M1SC6	452	F704_899.4 P71 BN71A6	453
1.1	1437	1.3	826.4	12000	F514_826.4 S1 M1SC6	444	F514_826.4 P71 BN71A6	445
1.1	1430	3.5	822.2	35000	F704_822.2 S1 M1SC6	452	F704_822.2 P71 BN71A6	453
1.2	1286	0.9	739.4	8500	F414_739.4 S1 M1SC6	440	F414_739.4 P71 BN71A6	441
1.2	1286	0.9	739.4	8500	F414_739.4 S1 M1SC6	440	F414_739.4 P71 BN71A6	441
1.3	1200	0.9	690.1	8500	F414_690.1 S1 M1SC6	440	F414_690.1 P71 BN71A6	441
1.3	1200	0.9	690.1	8500	F414_690.1 S1 M1SC6	440	F414_690.1 P71 BN71A6	441
1.3	1165	0.9	982.4	8500	F414_982.4 S05 M05B4	440	F414_982.4 P63 BN63B4	441
1.5	1068	1.0	900.5	8500	F414_900.5 S05 M05B4	440	F414_900.5 P63 BN63B4	441
1.6	965	1.1	813.8	8500	F414_813.8 S05 M05B4	440	F414_813.8 P63 BN63B4	441
1.8	877	1.3	739.4	8500	F414_739.4 S05 M05B4	440	F414_739.4 P63 BN63B4	441
1.9	818	1.3	690.1	8500	F414_690.1 S05 M05B4	440	F414_690.1 P63 BN63B4	441
2.3	686	0.9	578.6	6500	F314_578.6 S05 M05B4	436	F314_578.6 P63 BN63B4	437
2.4	652	1.7	549.8	8500	F414_549.8 S05 M05B4	440	F414_549.8 P63 BN63B4	441
2.5	626	1.0	527.8	6500	F314_527.8 S05 M05B4	436	F314_527.8 P63 BN63B4	437
2.9	549	1.1	462.6	6500	F314_462.6 S05 M05B4	436	F314_462.6 P63 BN63B4	437
3.0	514	2.1	433.7	8500	F414_433.7 S05 M05B4	440	F414_433.7 P63 BN63B4	441
3.2	497	1.2	418.9	6500	F314_418.9 S05 M05B4	436	F314_418.9 P63 BN63B4	437
3.4	467	0.9	393.9	6500	F254_393.9 S05 M05B4	432	F254_393.9 P63 BN63B4	433
3.5	454	1.3	374.4	6500			F313_374.4 P63 BN63B4	437
3.8	418	2.6	344.8	8500			F413_344.8 P63 BN63B4	441
4.0	404	1.0	333.1	6500	F253_333.1 S05 M05B4	432	F253_333.1 P63 BN63B4	433
4.0	403	1.5	332.8	6500			F313_332.8 P63 BN63B4	437
4.5	356	1.7	293.8	6500			F313_293.8 P63 BN63B4	437
4.5	359	3.1	296.6	8500			F413_296.6 P63 BN63B4	441
4.6	349	1.1	288.1	6500	F253_288.1 S05 M05B4	432	F253_288.1 P63 BN63B4	433
4.9	323	3.4	266.9	8500			F413_266.9 P63 BN63B4	441
5.2	310	1.3	256.1	6500	F253_256.1 S05 M05B4	432	F253_256.1 P63 BN63B4	433
5.2	307	2.0	253.6	6500			F313_253.6 P63 BN63B4	437







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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	432	F253_227.8 P63 BN63B4	433
5.8	277	2.2	228.2	6500			F313_228.2 P63 BN63B4	437
6.3	254	1.0	209.3	4000	F203_209.3 S05 M05B4	428	F203_209.3 P63 BN63B4	429
6.5	245	2.4	202.3	6500			F313_202.3 P63 BN63B4	437
6.8	235	1.7	193.6	6500	F253_193.6 S05 M05B4	432	F253_193.6 P63 BN63B4	433
7.1	224	1.1	184.9	4000	F203_184.9 S05 M05B4	428	F203_184.9 P63 BN63B4	429
7.1	225	2.7	185.4	6500			F313_185.4 P63 BN63B4	437
7.6	209	1.2	172.6	4000	F203_172.6 S05 M05B4	428	F203_172.6 P63 BN63B4	429
7.6	211	1.9	174.2	6500	F253_174.2 S05 M05B4	432	F253_174.2 P63 BN63B4	433
7.9	202	3.0	166.8	6500			F313_166.8 P63 BN63B4	437
8.4	189	1.3	156.3	4000	F203_156.3 S05 M05B4	428	F203_156.3 P63 BN63B4	429
8.5	189	2.1	155.9	6500	F253_155.9 S05 M05B4	432	F253_155.9 P63 BN63B4	433
8.8	183	3.3	150.8	6500			F313_150.8 P63 BN63B4	437
9.2	173	2.3	143.0	6500	F253_143.0 S05 M05B4	432	F253_143.0 P63 BN63B4	433
9.4	171	3.5	140.7	6500			F313_140.7 P63 BN63B4	437
10.0	164	1.5	132.2	4000	F202_132.2 S05 M05B4	428	F202_132.2 P63 BN63B4	429
10.3	155	2.6	127.8	6500	F253_127.8 S05 M05B4	432	F253_127.8 P63 BN63B4	433
10.4	157	0.9	127.1	2800	F102_127.1 S05 M05B4	424	F102_127.1 P63 BN63B4	425
11.5	142	1.8	114.3	4000	F202_114.3 S05 M05B4	428	F202_114.3 P63 BN63B4	429
11.7	137	2.9	113.0	6500	F253_113.0 S05 M05B4	432	F253_113.0 P63 BN63B4	433
12.5	131	1.1	106.0	2800	F102_106.0 S05 M05B4	424	F102_106.0 P63 BN63B4	425
12.5	128	3.1	105.4	6500	F253_105.4 S05 M05B4	432	F253_105.4 P63 BN63B4	433
13.0	126	2.0	101.6	4000	F202_101.6 S05 M05B4	428	F202_101.6 P63 BN63B4	429
13.8	116	3.5	95.5	6500	F253_95.5 S05 M05B4	432	F253_95.5 P63 BN63B4	433
14.4	113	1.2	91.5	2800	F102_91.5 S05 M05B4	424	F102_91.5 P63 BN63B4	425
14.6	112	2.2	90.4	4000	F202_90.4 S05 M05B4	428	F202_90.4 P63 BN63B4	429
16.2	101	1.4	81.3	2800	F102_81.3 S05 M05B4	424	F102_81.3 P63 BN63B4	425
17.2	95	2.6	76.8	4000	F202_76.8 S05 M05B4	428	F202_76.8 P63 BN63B4	429
18.6	88	1.6	71.1	2800	F102_71.1 S05 M05B4	424	F102_71.1 P63 BN63B4	425
19.1	86	2.9	69.1	4000	F202_69.1 S05 M05B4	428	F202_69.1 P63 BN63B4	429
21.0	78	1.8	63.0	2800	F102_63.0 S05 M05B4	424	F102_63.0 P63 BN63B4	425
21.3	77	3.3	61.9	4000	F202_61.9 S05 M05B4	428	F202_61.9 P63 BN63B4	429
23.3	70	2.0	56.7	2800	F102_56.7 S05 M05B4	424	F102_56.7 P63 BN63B4	425
27.1	60	2.3	48.7	2800	F102_48.7 S05 M05B4	424	F102_48.7 P63 BN63B4	425
29.6	55	2.5	44.7	2800	F102_44.7 S05 M05B4	424	F102_44.7 P63 BN63B4	425
33	49	2.9	39.6	2800	F102_39.6 S05 M05B4	424	F102_39.6 P63 BN63B4	425
37	44	3.2	35.3	2800	F102_35.3 S05 M05B4	424	F102_35.3 P63 BN63B4	425
40	41	3.4	33.0	2800	F102_33.0 S05 M05B4	424	F102_33.0 P63 BN63B4	425
45	37	3.8	29.6	2800	F102_29.6 S05 M05B4	424	F102_29.6 P63 BN63B4	425
51	32	4.4	25.8	2780	F102_25.8 S05 M05B4	424	F102_25.8 P63 BN63B4	425
58	28	5.0	22.8	2680	F102_22.8 S05 M05B4	424	F102_22.8 P63 BN63B4	425
68	24	5.7	19.3	2540	F102_19.3 S05 M05B4	424	F102_19.3 P63 BN63B4	425
78	21	6.1	17.0	2440	F102_17.0 S05 M05B4	424	F102_17.0 P63 BN63B4	425
90	18	6.6	14.6	2330	F102_14.6 S05 M05B4	424	F102_14.6 P63 BN63B4	425
101	16	6.4	13.0	2240	F102_13.0 S05 M05B4	424	F102_13.0 P63 BN63B4	425
114	14	6.7	11.5	2150	F102_11.5 S05 M05B4	424	F102_11.5 P63 BN63B4	425
135	12	7.4	9.8	2040	F102_9.8 S05 M05B4	424	F102_9.8 P63 BN63B4	425
154	11	7.7	8.6	1960	F102_8.6 S05 M05B4	424	F102_8.6 P63 BN63B4	425
178	9	8.3	7.4	1870	F102_7.4 S05 M05B4	424	F102_7.4 P63 BN63B4	425
186	9	10.7	14.6	1860	F102_14.6 S05 M05A2	424	F102_14.6 P63 BN63A2	425
210	8	10.9	13.0	1790	F102_13.0 S05 M05A2	424	F102_13.0 P63 BN63A2	425

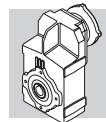


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

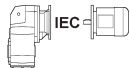

n₂ min-1	M₂ Nm	S	i	R_{n2} N				
237	7	11.3	11.5	1720	F102_11.5 S05 M05A2	424	F102_11.5 P63 BN63A2	425
279	6	12.5	9.8	1630	F102_9.8 S05 M05A2	424	F102_9.8 P63 BN63A2	425
318	5	13.0	8.6	1560	F102_8.6 S05 M05A2	424	F102_8.6 P63 BN63A2	425
369	4	14.2	7.4	1490	F102_7.4 S05 M05A2	424	F102_7.4 P63 BN63A2	425

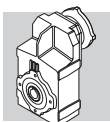
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n₂ min-1	M₂ Nm	S	i	R_{n2} N				
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0.45	4877	1.0	2019	35000	F704_2019 S1 M1SD6	452	F704_2019 P71 BN71B6	453
0.45	4799	1.7	1987	45000	F804_1987 S1 M1SD6	455	F804_1987 P71 BN71B6	456
0.49	4430	1.8	1834	45000	F804_1834 S1 M1SD6	455	F804_1834 P71 BN71B6	456
0.52	4146	1.2	1717	35000	F704_1717 S1 M1SD6	452	F704_1717 P71 BN71B6	453
0.53	4128	1.9	1709	45000	F804_1709 S1 M1SD6	455	F804_1709 P71 BN71B6	456
0.57	3827	1.3	1585	35000	F704_1585 S1 M1SD6	452	F704_1585 P71 BN71B6	453
0.57	3810	2.1	1578	45000	F804_1578 S1 M1SD6	455	F804_1578 P71 BN71B6	456
0.61	3578	1.4	1481	35000	F704_1481 S1 M1SD6	452	F704_1481 P71 BN71B6	453
0.65	3342	2.4	1384	45000	F804_1384 S1 M1SD6	455	F804_1384 P71 BN71B6	456
0.66	3303	1.5	1368	35000	F704_1368 S1 M1SD6	452	F704_1368 P71 BN71B6	453
0.70	3085	2.6	1277	45000	F804_1277 S1 M1SD6	455	F804_1277 P71 BN71B6	456
0.76	2854	1.8	1182	35000	F704_1182 S1 M1SD6	452	F704_1182 P71 BN71B6	453
0.79	2757	1.1	1141	20000	F604_1141 S1 M1SD6	448	F604_1141 P71 BN71B6	449
0.79	2769	2.9	1146	45000	F804_1146 S1 M1SD6	455	F804_1146 P71 BN71B6	456
0.83	2635	1.9	1091	35000	F704_1091 S1 M1SD6	452	F704_1091 P71 BN71B6	453
0.85	2545	1.1	1054	20000	F604_1054 S1 M1SD6	448	F604_1054 P71 BN71B6	449
0.85	2556	3.1	1058	45000	F804_1058 S1 M1SD6	455	F804_1058 P71 BN71B6	456
0.92	2353	2.1	974.4	35000	F704_974.4 S1 M1SD6	452	F704_974.4 P71 BN71B6	453
0.94	2316	1.3	958.9	20000	F604_958.9 S1 M1SD6	448	F604_958.9 P71 BN71B6	449
1.0	2138	1.4	885.1	20000	F604_885.1 S1 M1SD6	448	F604_885.1 P71 BN71B6	449
1.0	2172	2.3	899.4	35000	F704_899.4 S1 M1SD6	452	F704_899.4 P71 BN71B6	453
1.1	1996	0.9	826.4	12000	F514_826.4 S1 M1SD6	444	F514_826.4 P71 BN71B6	445
1.1	1986	2.5	822.2	35000	F704_822.2 S1 M1SD6	452	F704_822.2 P71 BN71B6	453
1.3	1633	1.1	676.3	12000	F514_676.3 S1 M1SD6	444	F514_676.3 P71 BN71B6	445
1.4	1600	1.8	662.4	20000	F604_662.4 S1 M1SD6	448	F604_662.4 P71 BN71B6	449
1.4	1588	3.1	657.4	35000	F704_657.4 S1 M1SD6	452	F704_657.4 P71 BN71B6	453
1.5	1477	2.0	611.4	20000	F604_611.4 S1 M1SD6	448	F604_611.4 P71 BN71B6	449
1.5	1466	3.4	606.8	35000	F704_606.8 S1 M1SD6	452	F704_606.8 P71 BN71B6	453
1.7	1282	0.9	813.8	8500	F414_813.8 S05 M05C4	440	F414_813.8 P71 BN71A4	441
1.8	1199	0.9	739.4	8500	F414_739.4 S05 M05C4	440	F414_739.4 P71 BN71A4	441
1.9	1119	1.0	690.1	8500	F414_690.1 S05 M05C4	440	F414_690.1 P71 BN71A4	441
2.4	892	1.2	549.8	8500	F414_549.8 S05 M05C4	440	F414_549.8 P71 BN71A4	441
2.8	783	2.3	317.3	12000	F513_317.3 S1 M1SD6	444	F513_317.3 P71 BN71B6	445
3.1	704	1.6	433.7	8500	F414_433.7 S05 M05C4	440	F414_433.7 P71 BN71A4	441
3.2	679	0.9	418.9	6500	F314_418.9 S05 M05C4	436	F314_418.9 P71 BN71A4	437
3.7	603	1.0	374.4	6500			F313_374.4 P71 BN71A4	437
4.0	555	2.0	344.8	8500			F413_344.8 P71 BN71A4	441
4.1	536	1.1	332.8	6500			F313_332.8 P71 BN71A4	437
4.7	473	1.3	293.8	6500			F313_293.8 P71 BN71A4	437



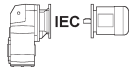



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

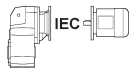

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
4.7	477	2.3	296.6	8500			F413_296.6 P71 BN71A4	441
5.2	425	0.9	256.1	6500	F253_256.1 S05 M05C4	432	F253_256.1 P71 BN71A4	433
5.2	430	2.6	266.9	8500			F413_266.9 P71 BN71A4	441
5.4	408	1.5	253.6	6500			F313_253.6 P71 BN71A4	437
5.7	387	2.8	240.1	8500			F413_240.1 P71 BN71A4	441
5.9	378	1.1	227.8	6500			F253_227.8 S05 M05C4	432
6.0	367	1.6	228.2	6500			F313_228.2 P71 BN71A4	437
6.3	354	3.1	220.1	8500			F413_220.1 P71 BN71A4	441
6.8	326	1.8	202.3	6500			F313_202.3 P71 BN71A4	437
6.9	321	1.2	193.6	6500	F253_193.6 S05 M05C4	432	F253_193.6 P71 BN71A4	433
6.9	320	3.4	198.9	8500			F413_198.9 P71 BN71A4	441
7.4	299	2.0	185.4	6500			F313_185.4 P71 BN71A4	437
7.7	289	1.4	174.2	6500	F253_174.2 S05 M05C4	432	F253_174.2 P71 BN71A4	433
8.0	278	0.9	172.6	4000	F203_172.6 S05 M05C4	428	F203_172.6 P71 BN71A4	429
8.3	268	2.2	166.8	6500			F313_166.8 P71 BN71A4	437
8.6	259	1.0	156.3	4000	F203_156.3 S05 M05C4	428	F203_156.3 P71 BN71A4	429
8.6	259	1.5	155.9	6500	F253_155.9 S05 M05C4	432	F253_155.9 P71 BN71A4	433
9.2	243	2.5	150.8	6500			F313_150.8 P71 BN71A4	437
9.7	230	1.7	143.0	6500	F253_143.0 S05 M05C4	432	F253_143.0 P71 BN71A4	433
9.8	227	2.6	140.7	6500			F313_140.7 P71 BN71A4	437
10.1	224	1.1	132.2	4000	F202_132.2 S05 M05C4	428	F202_132.2 P71 BN71A4	429
10.5	212	1.9	127.8	6500	F253_127.8 S05 M05C4	432	F253_127.8 P71 BN71A4	433
10.7	207	2.9	128.4	6500			F313_128.4 P71 BN71A4	437
11.7	194	1.3	114.3	4000	F202_114.3 S05 M05C4	428	F202_114.3 P71 BN71A4	429
12.2	182	2.2	113.0	6500	F253_113.0 S05 M05C4	432	F253_113.0 P71 BN71A4	433
12.3	181	3.3	112.5	6500			F313_112.5 P71 BN71A4	437
12.7	175	2.3	105.4	6500	F253_105.4 S05 M05C4	432	F253_105.4 P71 BN71A4	433
13.2	172	1.5	101.6	4000	F202_101.6 S05 M05C4	428	F202_101.6 P71 BN71A4	429
14.0	158	2.5	95.5	6500	F253_95.5 S05 M05C4	432	F253_95.5 P71 BN71A4	433
14.6	155	0.9	91.5	2800	F102_91.5 S05 M05C4	424	F102_91.5 P71 BN71A4	425
14.8	153	1.6	90.4	4000	F202_90.4 S05 M05C4	428	F202_90.4 P71 BN71A4	429
16.1	138	2.9	83.4	6500	F253_83.4 S05 M05C4	432	F253_83.4 P71 BN71A4	433
16.5	138	1.0	81.3	2800	F102_81.3 S05 M05C4	424	F102_81.3 P71 BN71A4	425
17.4	130	1.9	76.8	4000	F202_76.8 S05 M05C4	428	F202_76.8 P71 BN71A4	429
17.5	127	3.2	76.6	6420	F253_76.6 S05 M05C4	432	F253_76.6 P71 BN71A4	433
18.8	120	1.2	71.1	2800	F102_71.1 S05 M05C4	424	F102_71.1 P71 BN71A4	425
19.4	117	2.1	69.1	4000	F202_69.1 S05 M05C4	428	F202_69.1 P71 BN71A4	429
21.3	107	1.3	63.0	2800	F102_63.0 S05 M05C4	424	F102_63.0 P71 BN71A4	425
21.7	105	2.4	61.9	4000	F202_61.9 S05 M05C4	428	F202_61.9 P71 BN71A4	429
23.6	96	1.5	56.7	2800	F102_56.7 S05 M05C4	424	F102_56.7 P71 BN71A4	425
23.6	96	2.6	56.7	4000	F202_56.7 S05 M05C4	428	F202_56.7 P71 BN71A4	429
26.4	86	2.9	50.7	4000	F202_50.7 S05 M05C4	428	F202_50.7 P71 BN71A4	429
27.5	83	1.7	48.7	2800	F102_48.7 S05 M05C4	424	F102_48.7 P71 BN71A4	425
29.9	76	3.3	44.8	3870	F202_44.8 S05 M05C4	428	F202_44.8 P71 BN71A4	429
30.0	76	1.9	44.7	2800	F102_44.7 S05 M05C4	424	F102_44.7 P71 BN71A4	425
34	67	2.1	39.6	2800	F102_39.6 S05 M05C4	424	F102_39.6 P71 BN71A4	425
38	60	2.3	35.3	2800	F102_35.3 S05 M05C4	424	F102_35.3 P71 BN71A4	425
41	56	2.5	33.0	2800	F102_33.0 S05 M05C4	424	F102_33.0 P71 BN71A4	425
45	50	2.8	29.6	2800	F102_29.6 S05 M05C4	424	F102_29.6 P71 BN71A4	425
52	44	3.2	25.8	2750	F102_25.8 S05 M05C4	424	F102_25.8 P71 BN71A4	425
59	39	3.6	22.8	2650	F102_22.8 S05 M05C4	424	F102_22.8 P71 BN71A4	425

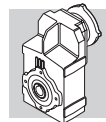


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

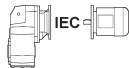

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
69	33	4.2	19.3	2520	F102_19.3 S05 M05C4	424	F102_19.3 P71 BN71A4	425
81	28	4.6	17.0	2420	F102_17.0 S05 M05C4	424	F102_17.0 P71 BN71A4	425
91	25	4.8	14.6	2310	F102_14.6 S05 M05C4	424	F102_14.6 P71 BN71A4	425
103	22	4.7	13.0	2230	F102_13.0 S05 M05C4	424	F102_13.0 P71 BN71A4	425
120	19	5.1	11.5	2140	F102_11.5 S05 M05C4	424	F102_11.5 P71 BN71A4	425
137	17	5.4	9.8	2030	F102_9.8 S05 M05C4	424	F102_9.8 P71 BN71A4	425
161	14	5.8	8.6	1950	F102_8.6 S05 M05C4	424	F102_8.6 P71 BN71A4	425
181	13	6.1	7.4	1860	F102_7.4 S05 M05C4	424	F102_7.4 P71 BN71A4	425
187	12	7.7	14.6	1850	F102_14.6 S05 M05B2	424	F102_14.6 P63 BN63B2	425
210	11	7.9	13.0	1780	F102_13.0 S05 M05B2	424	F102_13.0 P63 BN63B2	425
237	10	8.2	11.5	1710	F102_11.5 S05 M05B2	424	F102_11.5 P63 BN63B2	425
280	8	9.0	9.8	1620	F102_9.8 S05 M05B2	424	F102_9.8 P63 BN63B2	425
319	7	9.4	8.6	1550	F102_8.6 S05 M05B2	424	F102_8.6 P63 BN63B2	425
370	6	10.3	7.4	1480	F102_7.4 S05 M05B2	424	F102_7.4 P63 BN63B2	425

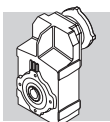
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
0.46	7024	1.1	1987	45000	F804_1987 S1 M1LA6	455	F804_1987 P80 BN80A6	456
0.50	6484	1.2	1834	45000	F804_1834 S1 M1LA6	455	F804_1834 P80 BN80A6	456
0.53	6042	1.3	1709	45000	F804_1709 S1 M1LA6	455	F804_1709 P80 BN80A6	456
0.57	5602	0.9	1585	35000	F704_1585 S1 M1LA6	452	F704_1585 P80 BN80A6	453
0.58	5577	1.4	1578	45000	F804_1578 S1 M1LA6	455	F804_1578 P80 BN80A6	456
0.61	5238	1.0	1481	35000	F704_1481 S1 M1LA6	452	F704_1481 P80 BN80A6	453
0.63	5137	1.0	2188	35000	F704_2188 S1 M1SD4	452	F704_2188 P71 BN71B4	453
0.68	4742	1.1	2019	35000	F704_2019 S1 M1SD4	452	F704_2019 P71 BN71B4	453
0.69	4666	1.7	1987	45000	F804_1987 S1 M1SD4	455	F804_1987 P71 BN71B4	456
0.75	4307	1.9	1834	45000	F804_1834 S1 M1SD4	455	F804_1834 P71 BN71B4	456
0.80	4031	1.2	1717	35000	F704_1717 S1 M1SD4	452	F704_1717 P71 BN71B4	453
0.80	4013	2.0	1709	45000	F804_1709 S1 M1SD4	455	F804_1709 P71 BN71B4	456
0.86	3721	1.3	1585	35000	F704_1585 S1 M1SD4	452	F704_1585 P71 BN71B4	453
0.87	3705	2.2	1578	45000	F804_1578 S1 M1SD4	455	F804_1578 P71 BN71B4	456
0.92	3479	1.4	1481	35000	F704_1481 S1 M1SD4	452	F704_1481 P71 BN71B4	453
0.99	3250	2.5	1384	45000	F804_1384 S1 M1SD4	455	F804_1384 P71 BN71B4	456
1.0	3211	1.6	1368	35000	F704_1368 S1 M1SD4	452	F704_1368 P71 BN71B4	453
1.1	3000	2.7	1277	45000	F804_1277 S1 M1SD4	455	F804_1277 P71 BN71B4	456
1.2	2680	1.1	1141	20000	F604_1141 S1 M1SD4	448	F604_1141 P71 BN71B4	449
1.2	2775	1.8	1182	35000	F704_1182 S1 M1SD4	452	F704_1182 P71 BN71B4	453
1.2	2692	3.0	1146	45000	F804_1146 S1 M1SD4	455	F804_1146 P71 BN71B4	456
1.3	2474	1.2	1054	20000	F604_1054 S1 M1SD4	448	F604_1054 P71 BN71B4	449
1.3	2562	2.0	1091	35000	F704_1091 S1 M1SD4	452	F704_1091 P71 BN71B4	453
1.3	2485	3.2	1058	45000	F804_1058 S1 M1SD4	455	F804_1058 P71 BN71B4	456
1.4	2252	1.3	958.9	20000	F604_958.9 S1 M1SD4	448	F604_958.9 P71 BN71B4	449
1.4	2288	2.2	974.4	35000	F704_974.4 S1 M1SD4	452	F704_974.4 P71 BN71B4	453
1.5	2079	0.9	885.5	12000	F514_885.5 S1 M1SD4	444	F514_885.5 P71 BN71B4	445
1.5	2078	1.4	885.1	20000	F604_885.1 S1 M1SD4	448	F604_885.1 P71 BN71B4	449
1.5	2112	2.4	899.4	35000	F704_899.4 S1 M1SD4	452	F704_899.4 P71 BN71B4	453
1.7	1941	0.9	826.4	12000	F514_826.4 S1 M1SD4	444	F514_826.4 P71 BN71B4	445



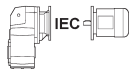



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

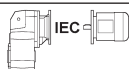

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
1.7	1931	2.6	822.2	35000	F704_822.2 S1 M1SD4	452	F704_822.2 P71 BN71B4	453
2.0	1588	1.1	676.3	12000	F514_676.3 S1 M1SD4	444	F514_676.3 P71 BN71B4	445
2.1	1556	1.9	662.4	20000	F604_662.4 S1 M1SD4	448	F604_662.4 P71 BN71B4	449
2.1	1544	3.2	657.4	35000	F704_657.4 S1 M1SD4	452	F704_657.4 P71 BN71B4	453
2.2	1436	2.0	611.4	20000	F604_611.4 S1 M1SD4	448	F604_611.4 P71 BN71B4	449
2.3	1425	3.5	606.8	35000	F704_606.8 S1 M1SD4	452	F704_606.8 P71 BN71B4	453
2.5	1291	0.9	549.8	8500	F414_549.8 S1 M1SD4	440	F414_549.8 P71 BN71B4	441
2.6	1246	1.4	530.5	12000	F514_530.5 S1 M1SD4	444	F514_530.5 P71 BN71B4	445
2.6	1246	2.3	530.7	20000	F604_530.7 S1 M1SD4	448	F604_530.7 P71 BN71B4	449
2.8	1150	2.5	489.8	20000	F604_489.8 S1 M1SD4	448	F604_489.8 P71 BN71B4	449
3.2	1018	1.1	433.7	8500	F414_433.7 S1 M1SD4	440	F414_433.7 P71 BN71B4	441
3.2	1008	1.8	429.1	12000	F514_429.1 S1 M1SD4	444	F514_429.1 P71 BN71B4	445
3.2	1016	2.9	432.6	20000	F604_432.6 S1 M1SD4	448	F604_432.6 P71 BN71B4	449
3.4	938	3.1	399.3	20000	F604_399.3 S1 M1SD4	448	F604_399.3 P71 BN71B4	449
3.9	846	2.1	352.5	12000	F513_352.5 S1 M1SD4	444	F513_352.5 P71 BN71B4	445
4.0	827	1.3	344.8	8500	F413_344.8 S1 M1SD4	440	F413_344.8 P71 BN71B4	441
4.3	761	2.4	317.3	12000	F513_317.3 S1 M1SD4	444	F513_317.3 P71 BN71B4	445
4.6	712	1.5	296.6	8500	F413_296.6 S1 M1SD4	440	F413_296.6 P71 BN71B4	441
4.8	686	2.6	285.9	12000	F513_285.9 S1 M1SD4	444	F513_285.9 P71 BN71B4	445
5.1	641	1.7	266.9	8500	F413_266.9 S1 M1SD4	440	F413_266.9 P71 BN71B4	441
5.2	629	2.9	262.1	12000	F513_262.1 S1 M1SD4	444	F513_262.1 P71 BN71B4	445
5.4	609	1.0	253.6	6500	F313_253.6 S1 M1SD4	436	F313_253.6 P71 BN71B4	437
5.7	576	1.9	240.1	8500	F413_240.1 S1 M1SD4	440	F413_240.1 P71 BN71B4	441
5.7	576	3.1	239.8	12000	F513_239.8 S1 M1SD4	444	F513_239.8 P71 BN71B4	445
6.0	548	1.1	228.2	6500	F313_228.2 S1 M1SD4	436	F313_228.2 P71 BN71B4	437
6.2	528	2.1	220.1	8500	F413_220.1 S1 M1SD4	440	F413_220.1 P71 BN71B4	441
6.3	520	3.5	216.9	12000	F513_216.9 S1 M1SD4	444	F513_216.9 P71 BN71B4	445
6.8	485	1.2	202.3	6500	F313_202.3 S1 M1SD4	436	F313_202.3 P71 BN71B4	437
6.9	477	2.3	198.9	8500	F413_198.9 S1 M1SD4	440	F413_198.9 P71 BN71B4	441
7.4	445	1.3	185.4	6500	F313_185.4 S1 M1SD4	436	F313_185.4 P71 BN71B4	437
7.6	434	2.5	180.7	8500	F413_180.7 S1 M1SD4	440	F413_180.7 P71 BN71B4	441
7.9	418	1.0	174.2	6500	F253_174.2 S1 M1SD4	432	F253_174.2 P71 BN71B4	433
8.1	405	2.7	168.7	8500	F413_168.7 S1 M1SD4	440	F413_168.7 P71 BN71B4	441
8.2	400	1.5	166.8	6500	F313_166.8 S1 M1SD4	436	F313_166.8 P71 BN71B4	437
8.8	374	1.1	155.9	6500	F253_155.9 S1 M1SD4	432	F253_155.9 P71 BN71B4	433
9.1	362	1.7	150.8	6500	F313_150.8 S1 M1SD4	436	F313_150.8 P71 BN71B4	437
9.6	343	1.2	143.0	6500	F253_143.0 S1 M1SD4	432	F253_143.0 P71 BN71B4	433
9.7	338	1.8	140.7	6500	F313_140.7 S1 M1SD4	436	F313_140.7 P71 BN71B4	437
10.2	323	3.4	134.4	8500	F413_134.4 S1 M1SD4	440	F413_134.4 P71 BN71B4	441
10.7	307	1.3	127.8	6500	F253_127.8 S1 M1SD4	432	F253_127.8 P71 BN71B4	433
10.7	308	1.9	128.4	6500	F313_128.4 S1 M1SD4	436	F313_128.4 P71 BN71B4	437
12.1	271	1.5	113.0	6500	F253_113.0 S1 M1SD4	432	F253_113.0 P71 BN71B4	433
12.2	270	2.2	112.5	6500	F313_112.5 S1 M1SD4	436	F313_112.5 P71 BN71B4	437
13.0	253	1.6	105.4	6500	F253_105.4 S1 M1SD4	432	F253_105.4 P71 BN71B4	433
13.4	245	2.5	101.9	6500	F313_101.9 S1 M1SD4	436	F313_101.9 P71 BN71B4	437
13.5	249	1.0	101.6	4000			F202_101.6 P71 BN71B4	429
14.3	229	1.7	95.5	6490	F253_95.5 S1 M1SD4	432	F253_95.5 P71 BN71B4	433
15.2	222	1.1	90.4	4000	F202_90.4 S1 M1SD4	428	F202_90.4 P71 BN71B4	429
15.7	210	2.9	87.4	6500	F313_87.4 S1 M1SD4	436	F313_87.4 P71 BN71B4	437
16.4	200	2.0	83.4	6280	F253_83.4 S1 M1SD4	432	F253_83.4 P71 BN71B4	433
17.4	189	3.2	78.9	6500	F313_78.9 S1 M1SD4	436	F313_78.9 P71 BN71B4	437

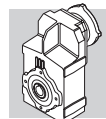


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


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	428	F202_76.8 P71 BN71B4	429
17.9	184	2.2	76.6	6160	F253_76.6 S1 M1SD4	432	F253_76.6 P71 BN71B4	433
19.8	169	1.5	69.1	4000	F202_69.1 S1 M1SD4	428	F202_69.1 P71 BN71B4	429
21.0	157	2.6	65.3	5920	F253_65.3 S1 M1SD4	432	F253_65.3 P71 BN71B4	433
21.7	154	0.9	63.0	2800	F102_63.0 S1 M1SD4	424	F102_63.0 P71 BN71B4	425
22.1	152	1.6	61.9	4000	F202_61.9 S1 M1SD4	428	F202_61.9 P71 BN71B4	429
23.5	140	2.9	58.3	5750	F253_58.3 S1 M1SD4	432	F253_58.3 P71 BN71B4	433
24.2	139	1.0	56.7	2800	F102_56.7 S1 M1SD4	424	F102_56.7 P71 BN71B4	425
24.2	139	1.8	56.7	4000	F202_56.7 S1 M1SD4	428	F202_56.7 P71 BN71B4	429
27.0	124	2.0	50.7	3900	F202_50.7 S1 M1SD4	428	F202_50.7 P71 BN71B4	429
27.0	122	3.3	50.8	5540	F253_50.8 S1 M1SD4	432	F253_50.8 P71 BN71B4	433
28.1	119	1.2	48.7	2800	F102_48.7 S1 M1SD4	424	F102_48.7 P71 BN71B4	425
31	110	1.3	44.7	2800	F102_44.7 S1 M1SD4	424	F102_44.7 P71 BN71B4	425
31	110	2.3	44.8	3770	F202_44.8 S1 M1SD4	428	F202_44.8 P71 BN71B4	429
31	109	3.5	44.4	5370	F252_44.4 S1 M1SD4	432	F252_44.4 P71 BN71B4	433
33	103	2.4	41.8	3700	F202_41.8 S1 M1SD4	428	F202_41.8 P71 BN71B4	429
35	97	1.4	39.6	2800	F102_39.6 S1 M1SD4	424	F102_39.6 P71 BN71B4	425
36	93	2.7	37.9	3600	F202_37.9 S1 M1SD4	428	F202_37.9 P71 BN71B4	429
39	87	1.6	35.3	2800	F102_35.3 S1 M1SD4	424	F102_35.3 P71 BN71B4	425
41	81	3.1	33.1	3460	F202_33.1 S1 M1SD4	428	F202_33.1 P71 BN71B4	429
42	81	1.7	33.0	2800	F102_33.0 S1 M1SD4	424	F102_33.0 P71 BN71B4	425
45	75	3.4	30.4	3380	F202_30.4 S1 M1SD4	428	F202_30.4 P71 BN71B4	429
46	73	1.9	29.6	2800	F102_29.6 S1 M1SD4	424	F102_29.6 P71 BN71B4	425
53	63	2.2	25.8	2690	F102_25.8 S1 M1SD4	424	F102_25.8 P71 BN71B4	425
60	56	2.5	22.8	2600	F102_22.8 S1 M1SD4	424	F102_22.8 P71 BN71B4	425
71	47	2.9	19.3	2470	F102_19.3 S1 M1SD4	424	F102_19.3 P71 BN71B4	425
81	42	3.1	17.0	2380	F102_17.0 S1 M1SD4	424	F102_17.0 P71 BN71B4	425
94	36	3.3	14.6	2280	F102_14.6 S1 M1SD4	424	F102_14.6 P71 BN71B4	425
105	32	3.3	13.0	2200	F102_13.0 S1 M1SD4	424	F102_13.0 P71 BN71B4	425
119	28	3.4	11.5	2120	F102_11.5 S1 M1SD4	424	F102_11.5 P71 BN71B4	425
140	24	3.7	9.8	2010	F102_9.8 S1 M1SD4	424	F102_9.8 P71 BN71B4	425
160	21	3.9	8.6	1930	F102_8.6 S1 M1SD4	424	F102_8.6 P71 BN71B4	425
185	18	4.2	7.4	1850	F102_7.4 S1 M1SD4	424	F102_7.4 P71 BN71B4	425
193	17	5.4	14.6	1830	F102_14.6 S05 M05C2	424	F102_14.6 P71 BN71A2	425
216	16	5.5	13.0	1760	F102_13.0 S05 M05C2	424	F102_13.0 P71 BN71A2	425
244	14	5.7	11.5	1690	F102_11.5 S05 M05C2	424	F102_11.5 P71 BN71A2	425
289	12	6.3	9.8	1610	F102_9.8 S05 M05C2	424	F102_9.8 P71 BN71A2	425
329	10	6.6	8.6	1540	F102_8.6 S05 M05C2	424	F102_8.6 P71 BN71A2	425
381	9	7.1	7.4	1470	F102_7.4 S05 M05C2	424	F102_7.4 P71 BN71A2	425

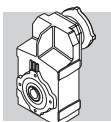
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n ₂	M ₂	S	i	R _{n2}				
0.44	10909	1.3	2099	55000	F904_2099 S2 M2SA6	458	F904_2099 P80 BN80B6	459
0.47	10070	1.4	1937	55000	F904_1937 S2 M2SA6	458	F904_1937 P80 BN80B6	459
0.54	8884	0.9	1709	45000	F804_1709 S2 M2SA6	455	F804_1709 P80 BN80B6	456
0.54	8849	1.6	1702	55000	F904_1702 S2 M2SA6	458	F904_1702 P80 BN80B6	459
0.58	8201	1.0	1578	45000	F804_1578 S2 M2SA6	455	F804_1578 P80 BN80B6	456



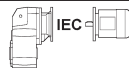


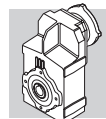
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n ₂	M ₂	S	i	R _{n2}				
0.59	8168	1.7	1571	55000	F904_1571 S2 M2SA6	458	F904_1571 P80 BN80B6	459
0.64	7422	1.9	1428	55000	F904_1428 S2 M2SA6	458	F904_1428 P80 BN80B6	459
0.66	7193	1.1	1384	45000	F804_1384 S2 M2SA6	455	F804_1384 P80 BN80B6	456
0.69	6885	1.2	1987	45000	F804_1987 S1 M1LA4	455	F804_1987 P80 BN80A4	456
0.75	6356	1.3	1834	45000	F804_1834 S1 M1LA4	455	F804_1834 P80 BN80A4	456
0.81	5923	1.4	1709	45000	F804_1709 S1 M1LA4	455	F804_1709 P80 BN80A4	456
0.87	5491	0.9	1585	35000	F704_1585 S1 M1LA4	452	F704_1585 P80 BN80A4	453
0.87	5467	1.5	1578	45000	F804_1578 S1 M1LA4	455	F804_1578 P80 BN80A4	456
0.93	5134	1.0	1481	35000	F704_1481 S1 M1LA4	452	F704_1481 P80 BN80A4	453
1.0	4739	1.1	1368	35000	F704_1368 S1 M1LA4	452	F704_1368 P80 BN80A4	453
1.0	4795	1.7	1384	45000	F804_1384 S1 M1LA4	455	F804_1384 P80 BN80A4	456
1.1	4427	1.8	1277	45000	F804_1277 S1 M1LA4	455	F804_1277 P80 BN80A4	456
1.2	4095	1.2	1182	35000	F704_1182 S1 M1LA4	452	F704_1182 P80 BN80A4	453
1.2	3972	2.0	1146	45000	F804_1146 S1 M1LA4	455	F804_1146 P80 BN80A4	456
1.3	3780	1.3	1091	35000	F704_1091 S1 M1LA4	452	F704_1091 P80 BN80A4	453
1.3	3667	2.2	1058	45000	F804_1058 S1 M1LA4	455	F804_1058 P80 BN80A4	456
1.4	3323	0.9	958.9	20000	F604_958.9 S1 M1LA4	448	F604_958.9 P80 BN80A4	449
1.4	3377	1.5	974.4	35000	F704_974.4 S1 M1LA4	452	F704_974.4 P80 BN80A4	453
1.5	3117	1.6	899.4	35000	F704_899.4 S1 M1LA4	452	F704_899.4 P80 BN80A4	453
1.5	3109	2.6	897.3	45000	F804_897.3 S1 M1LA4	455	F804_897.3 P80 BN80A4	456
1.6	3067	0.9	885.1	20000	F604_885.1 S1 M1LA4	448	F604_885.1 P80 BN80A4	449
1.7	2849	1.8	822.2	35000	F704_822.2 S1 M1LA4	452	F704_822.2 P80 BN80A4	453
1.8	2684	3.0	774.4	45000	F804_774.4 S1 M1LA4	455	F804_774.4 P80 BN80A4	456
1.9	2477	3.2	714.9	45000	F804_714.9 S1 M1LA4	455	F804_714.9 P80 BN80A4	456
2.1	2295	1.3	662.4	20000	F604_662.4 S1 M1LA4	448	F604_662.4 P80 BN80A4	449
2.1	2278	2.2	657.4	35000	F704_657.4 S1 M1LA4	452	F704_657.4 P80 BN80A4	453
2.3	2119	1.4	611.4	20000	F604_611.4 S1 M1LA4	448	F604_611.4 P80 BN80A4	449
2.3	2103	2.4	606.8	35000	F704_606.8 S1 M1LA4	452	F704_606.8 P80 BN80A4	453
2.6	1838	1.0	530.5	12000	F514_530.5 S1 M1LA4	444	F514_530.5 P80 BN80A4	445
2.6	1839	1.6	530.7	20000	F604_530.7 S1 M1LA4	448	F604_530.7 P80 BN80A4	449
2.7	1769	2.8	510.4	35000	F704_510.4 S1 M1LA4	452	F704_510.4 P80 BN80A4	453
2.8	1698	1.7	489.8	20000	F604_489.8 S1 M1LA4	448	F604_489.8 P80 BN80A4	449
2.9	1633	3.1	471.2	35000	F704_471.2 S1 M1LA4	452	F704_471.2 P80 BN80A4	453
3.2	1487	1.2	429.1	12000	F514_429.1 S1 M1LA4	444	F514_429.1 P80 BN80A4	445
3.2	1499	1.9	432.6	20000	F604_432.6 S1 M1LA4	448	F604_432.6 P80 BN80A4	449
3.5	1384	2.1	399.3	20000	F604_399.3 S1 M1LA4	448	F604_399.3 P80 BN80A4	449
3.9	1248	1.4	352.5	12000	F513_352.5 S1 M1LA4	444	F513_352.5 P80 BN80A4	445
4.0	1221	0.9	344.8	8500	F413_344.8 S1 M1LA4	440	F413_344.8 P80 BN80A4	441
4.0	1184	2.4	341.7	20000	F604_341.7 S1 M1LA4	448	F604_341.7 P80 BN80A4	449
4.3	1124	1.6	317.3	12000	F513_317.3 S1 M1LA4	444	F513_317.3 P80 BN80A4	445
4.4	1093	2.7	315.4	20000	F604_315.4 S1 M1LA4	448	F604_315.4 P80 BN80A4	449
4.7	1050	1.0	296.6	8500	F413_296.6 S1 M1LA4	440	F413_296.6 P80 BN80A4	441
4.8	1013	1.8	285.9	12000	F513_285.9 S1 M1LA4	444	F513_285.9 P80 BN80A4	445
5.2	945	1.2	266.9	8500	F413_266.9 S1 M1LA4	440	F413_266.9 P80 BN80A4	441
5.3	928	1.9	262.1	12000	F513_262.1 S1 M1LA4	444	F513_262.1 P80 BN80A4	445
5.7	850	1.3	240.1	8500	F413_240.1 S1 M1LA4	440	F413_240.1 P80 BN80A4	441
5.8	849	2.1	239.8	12000	F513_239.8 S1 M1LA4	444	F513_239.8 P80 BN80A4	445
6.3	780	1.4	220.1	8500	F413_220.1 S1 M1LA4	440	F413_220.1 P80 BN80A4	441
6.4	768	2.3	216.9	12000	F513_216.9 S1 M1LA4	444	F513_216.9 P80 BN80A4	445
6.8	717	2.5	202.4	12000	F513_202.4 S1 M1LA4	444	F513_202.4 P80 BN80A4	445
6.9	704	1.6	198.9	8500	F413_198.9 S1 M1LA4	440	F413_198.9 P80 BN80A4	441






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

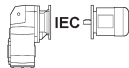

n ₂	M ₂	S	i	R _{n2}				
7.4	657	0.9	185.4	6500	F313_185.4 S1 M1LA4	436	F313_185.4 P80 BN80A4	437
7.6	640	1.7	180.7	8500	F413_180.7 S1 M1LA4	440	F413_180.7 P80 BN80A4	441
8.2	597	1.8	168.7	8500	F413_168.7 S1 M1LA4	440	F413_168.7 P80 BN80A4	441
8.3	591	1.0	166.8	6500	F313_166.8 S1 M1LA4	436	F313_166.8 P80 BN80A4	437
8.3	587	3.1	165.6	12000	F513_165.6 S1 M1LA4	444	F513_165.6 P80 BN80A4	445
9.2	534	1.1	150.8	6500	F313_150.8 S1 M1LA4	436	F313_150.8 P80 BN80A4	437
9.8	498	1.2	140.7	6500	F313_140.7 S1 M1LA4	436	F313_140.7 P80 BN80A4	437
10.3	476	2.3	134.4	8500	F413_134.4 S1 M1LA4	440	F413_134.4 P80 BN80A4	441
10.7	455	1.3	128.4	6500	F313_128.4 S1 M1LA4	436	F313_128.4 P80 BN80A4	437
12.2	400	1.0	113.0	6130	F253_113.0 S1 M1LA4	432	F253_113.0 P80 BN80A4	433
12.3	399	1.5	112.5	6500	F313_112.5 S1 M1LA4	436	F313_112.5 P80 BN80A4	437
13.0	375	2.9	106.0	8500	F413_106.0 S1 M1LA4	440	F413_106.0 P80 BN80A4	441
13.1	373	1.1	105.4	6070	F253_105.4 S1 M1LA4	432	F253_105.4 P80 BN80A4	433
13.5	361	1.7	101.9	6500	F313_101.9 S1 M1LA4	436	F313_101.9 P80 BN80A4	437
14.5	338	1.2	95.5	5980	F253_95.5 S1 M1LA4	432	F253_95.5 P80 BN80A4	433
15.8	309	1.9	87.4	6500	F313_87.4 S1 M1LA4	436	F313_87.4 P80 BN80A4	437
16.5	295	1.4	83.4	5840	F253_83.4 S1 M1LA4	432	F253_83.4 P80 BN80A4	433
17.5	279	2.1	78.9	6500	F313_78.9 S1 M1LA4	436	F313_78.9 P80 BN80A4	437
18.0	278	0.9	76.8	4000	F202_76.8 S1 M1LA4	428	F202_76.8 P80 BN80A4	429
18.0	271	1.5	76.6	5750	F253_76.6 S1 M1LA4	432	F253_76.6 P80 BN80A4	433
20.0	250	1.0	69.1	3980	F202_69.1 S1 M1LA4	428	F202_69.1 P80 BN80A4	429
20.0	245	2.5	69.1	6500	F313_69.1 S1 M1LA4	436	F313_69.1 P80 BN80A4	437
21.1	231	1.7	65.3	5570	F253_65.3 S1 M1LA4	432	F253_65.3 P80 BN80A4	433
22.1	221	2.7	62.8	6500			F313_62.8 P80 BN80A4	437
22.3	224	1.1	61.9	3890	F202_61.9 S1 M1LA4	428	F202_61.9 P80 BN80A4	429
23.7	207	1.9	58.3	5430	F253_58.3 S1 M1LA4	432	F253_58.3 P80 BN80A4	433
24.3	205	1.2	56.7	3810	F202_56.7 S1 M1LA4	428	F202_56.7 P80 BN80A4	429
26.7	183	3.3	52.1	6500			F313_52.1 P80 BN80A4	437
27.2	184	1.4	50.7	3720	F202_50.7 S1 M1LA4	428	F202_50.7 P80 BN80A4	429
27.2	180	2.2	50.8	5270	F253_50.8 S1 M1LA4	432	F253_50.8 P80 BN80A4	433
29.2	167	3.5	47.5	6500			F313_47.5 P80 BN80A4	437
31	162	1.5	44.8	3610	F202_44.8 S1 M1LA4	428	F202_44.8 P80 BN80A4	429
31	161	2.4	44.4	5140	F252_44.4 S1 M1LA4	432	F252_44.4 P80 BN80A4	433
31	160	2.5	45.6	5130			F253_45.6 P80 BN80A4	433
33	151	1.7	41.8	3550	F202_41.8 S1 M1LA4	428	F202_41.8 P80 BN80A4	429
34	147	2.5	40.7	5030	F252_40.7 S1 M1LA4	432	F252_40.7 P80 BN80A4	433
35	143	1.0	39.6	2800	F102_39.6 S1 M1LA4	424	F102_39.6 P80 BN80A4	425
36	137	1.8	37.9	3460	F202_37.9 S1 M1LA4	428	F202_37.9 P80 BN80A4	429
38	132	3.0	36.4	4890	F252_36.4 S1 M1LA4	432	F252_36.4 P80 BN80A4	433
39	128	1.1	35.3	2800	F102_35.3 S1 M1LA4	424	F102_35.3 P80 BN80A4	425
42	119	1.2	33.0	2750	F102_33.0 S1 M1LA4	424	F102_33.0 P80 BN80A4	425
42	120	2.1	33.1	3340	F202_33.1 S1 M1LA4	428	F202_33.1 P80 BN80A4	429
43	116	3.4	32.2	4730	F252_32.2 S1 M1LA4	432	F252_32.2 P80 BN80A4	433
45	110	2.3	30.4	3260	F202_30.4 S1 M1LA4	428	F202_30.4 P80 BN80A4	429
47	107	1.3	29.6	2680	F102_29.6 S1 M1LA4	424	F102_29.6 P80 BN80A4	425
53	94	2.6	25.9	3130	F202_25.9 S1 M1LA4	428	F202_25.9 P80 BN80A4	429
54	93	1.5	25.8	2590	F102_25.8 S1 M1LA4	424	F102_25.8 P80 BN80A4	425
60	83	1.7	22.8	2510	F102_22.8 S1 M1LA4	424	F102_22.8 P80 BN80A4	425
60	84	2.8	23.1	3030	F202_23.1 S1 M1LA4	428	F202_23.1 P80 BN80A4	429
68	73	3.1	20.2	2910	F202_20.2 S1 M1LA4	428	F202_20.2 P80 BN80A4	429
71	70	1.9	19.3	2400	F102_19.3 S1 M1LA4	424	F102_19.3 P80 BN80A4	425

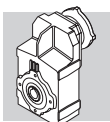


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

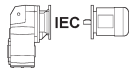

n ₂	M ₂	S	i	R _{n2}				
77	65	3.3	18.1	2820	F202_18.1 S1 M1LA4	428	F202_18.1 P80 BN80A4	429
81	61	2.1	17.0	2310	F102_17.0 S1 M1LA4	424	F102_17.0 P80 BN80A4	425
94	53	2.2	14.6	2220	F102_14.6 S1 M1LA4	424	F102_14.6 P80 BN80A4	425
106	47	2.2	13.0	2140	F102_13.0 S1 M1LA4	424	F102_13.0 P80 BN80A4	425
120	42	2.3	11.5	2070	F102_11.5 S1 M1LA4	424	F102_11.5 P80 BN80A4	425
141	35	2.5	9.8	1970	F102_9.8 S1 M1LA4	424	F102_9.8 P80 BN80A4	425
161	31	2.6	8.6	1890	F102_8.6 S1 M1LA4	424	F102_8.6 P80 BN80A4	425
186	27	2.8	7.4	1810	F102_7.4 S1 M1LA4	424	F102_7.4 P80 BN80A4	425
193	26	3.6	14.6	1800	F102_14.6 S1 M1SD2	424	F102_14.6 P71 BN71B2	425
216	23	3.7	13.0	1730	F102_13.0 S1 M1SD2	424	F102_13.0 P71 BN71B2	425
244	20	3.8	11.5	1670	F102_11.5 S1 M1SD2	424	F102_11.5 P71 BN71B2	425
289	17	4.2	9.8	1590	F102_9.8 S1 M1SD2	424	F102_9.8 P71 BN71B2	425
329	15	4.4	8.6	1530	F102_8.6 S1 M1SD2	424	F102_8.6 P71 BN71B2	425
381	13	4.8	7.4	1460	F102_7.4 S1 M1SD2	424	F102_7.4 P71 BN71B2	425

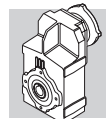
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.44	14876	0.9	2099	55000	F904_2099 S2 M2SB6	458	F904_2099 P90 BN90S6	459
0.47	13732	1.0	1937	55000	F904_1937 S2 M2SB6	458	F904_1937 P90 BN90S6	459
0.54	12067	1.2	1702	55000	F904_1702 S2 M2SB6	458	F904_1702 P90 BN90S6	459
0.59	11138	1.3	1571	55000	F904_1571 S2 M2SB6	458	F904_1571 P90 BN90S6	459
0.64	10121	1.4	1428	55000	F904_1428 S2 M2SB6	458	F904_1428 P90 BN90S6	459
0.67	9776	1.4	2099	55000	F904_2099 S2 M2SA4	458	F904_2099 P80 BN80B4	459
0.70	9255	0.9	1987	45000	F804_1987 S2 M2SA4	455	F804_1987 P80 BN80B4	456
0.72	9024	1.6	1937	55000	F904_1937 S2 M2SA4	458	F904_1937 P80 BN80B4	459
0.76	8543	0.9	1834	45000	F804_1834 S2 M2SA4	455	F804_1834 P80 BN80B4	456
0.82	7961	1.0	1709	45000	F804_1709 S2 M2SA4	455	F804_1709 P80 BN80B4	456
0.82	7930	1.8	1702	55000	F904_1702 S2 M2SA4	458	F904_1702 P80 BN80B4	459
0.89	7349	1.1	1578	45000	F804_1578 S2 M2SA4	455	F804_1578 P80 BN80B4	456
0.89	7320	1.9	1571	55000	F904_1571 S2 M2SA4	458	F904_1571 P80 BN80B4	459
0.98	6651	2.1	1428	55000	F904_1428 S2 M2SA4	458	F904_1428 P80 BN80B4	459
1.0	6446	1.2	1384	45000	F804_1384 S2 M2SA4	455	F804_1384 P80 BN80B4	456
1.1	5950	1.3	1277	45000	F804_1277 S2 M2SA4	455	F804_1277 P80 BN80B4	456
1.1	6140	2.3	1318	55000	F904_1318 S2 M2SA4	458	F904_1318 P80 BN80B4	459
1.2	5505	0.9	1182	35000	F704_1182 S2 M2SA4	452	F704_1182 P80 BN80B4	453
1.2	5339	1.5	1146	45000	F804_1146 S2 M2SA4	455	F804_1146 P80 BN80B4	456
1.2	5613	2.5	1205	55000	F904_1205 S2 M2SA4	458	F904_1205 P80 BN80B4	459
1.3	5082	1.0	1091	35000	F704_1091 S2 M2SA4	452	F704_1091 P80 BN80B4	453
1.3	4929	1.6	1058	45000	F804_1058 S2 M2SA4	455	F804_1058 P80 BN80B4	456
1.3	5181	2.7	1112	55000	F904_1112 S2 M2SA4	458	F904_1112 P80 BN80B4	459
1.4	4539	1.1	974.4	35000	F704_974.4 S2 M2SA4	452	F704_974.4 P80 BN80B4	453
1.5	4240	3.3	910.2	55000	F904_910.2 S2 M2SA4	458	F904_910.2 P80 BN80B4	459
1.6	4190	1.2	899.4	35000	F704_899.4 S2 M2SA4	452	F704_899.4 P80 BN80B4	453
1.6	4180	1.9	897.3	45000	F804_897.3 S2 M2SA4	455	F804_897.3 P80 BN80B4	456
1.7	3830	1.3	822.2	35000	F704_822.2 S2 M2SA4	452	F704_822.2 P80 BN80B4	453
1.8	3607	2.2	774.4	45000	F804_774.4 S2 M2SA4	455	F804_774.4 P80 BN80B4	456
2.0	3330	2.4	714.9	45000	F804_714.9 S2 M2SA4	455	F804_714.9 P80 BN80B4	456



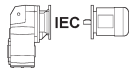



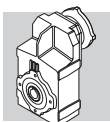
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
2.1	3085	0.9	662.4	20000	F604_662.4 S2 M2SA4	448	F604_662.4 P80 BN80B4	449
2.1	3062	1.6	657.4	35000	F704_657.4 S2 M2SA4	452	F704_657.4 P80 BN80B4	453
2.3	2848	1.0	611.4	20000	F604_611.4 S2 M2SA4	448	F604_611.4 P80 BN80B4	449
2.3	2827	1.8	606.8	35000	F704_606.8 S2 M2SA4	452	F704_606.8 P80 BN80B4	453
2.3	2845	2.8	610.9	45000	F804_610.9 S2 M2SA4	455	F804_610.9 P80 BN80B4	456
2.5	2627	3.0	563.9	45000	F804_563.9 S2 M2SA4	455	F804_563.9 P80 BN80B4	456
2.6	2472	1.2	530.7	20000	F604_530.7 S2 M2SA4	448	F604_530.7 P80 BN80B4	449
2.7	2378	2.1	510.4	35000	F704_510.4 S2 M2SA4	452	F704_510.4 P80 BN80B4	453
2.9	2282	1.3	489.8	20000	F604_489.8 S2 M2SA4	448	F604_489.8 P80 BN80B4	449
2.9	2278	3.5	489.1	45000	F804_489.1 S2 M2SA4	455	F804_489.1 P80 BN80B4	456
3.0	2195	2.3	471.2	35000	F704_471.2 S2 M2SA4	452	F704_471.2 P80 BN80B4	453
3.2	2015	1.4	432.6	20000	F604_432.6 S2 M2SA4	448	F604_432.6 P80 BN80B4	449
3.3	1999	0.9	429.1	12000	F514_429.1 S2 M2SA4	444	F514_429.1 P80 BN80B4	445
3.5	1860	1.6	399.3	20000	F604_399.3 S2 M2SA4	448	F604_399.3 P80 BN80B4	449
3.5	1880	2.7	403.5	35000	F704_403.5 S2 M2SA4	452	F704_403.5 P80 BN80B4	453
3.8	1735	2.9	372.5	35000	F704_372.5 S2 M2SA4	452	F704_372.5 P80 BN80B4	453
4.0	1678	1.1	352.5	12000	F513_352.5 S2 M2SA4	444	F513_352.5 P80 BN80B4	445
4.1	1592	1.8	341.7	20000	F604_341.7 S2 M2SA4	448	F604_341.7 P80 BN80B4	449
4.4	1510	1.2	317.3	12000	F513_317.3 S2 M2SA4	444	F513_317.3 P80 BN80B4	445
4.4	1469	2.0	315.4	20000	F604_315.4 S2 M2SA4	448	F604_315.4 P80 BN80B4	449
4.6	1418	3.5	304.3	35000	F704_304.3 S2 M2SA4	452	F704_304.3 P80 BN80B4	453
4.9	1361	1.3	285.9	12000	F513_285.9 S2 M2SA4	444	F513_285.9 P80 BN80B4	445
5.0	1335	2.2	280.7	20000	F603_280.7 S2 M2SA4	448	F603_280.7 P80 BN80B4	449
5.3	1248	1.4	262.1	12000	F513_262.1 S2 M2SA4	444	F513_262.1 P80 BN80B4	445
5.4	1233	2.4	259.1	20000	F603_259.1 S2 M2SA4	448	F603_259.1 P80 BN80B4	449
5.8	1143	1.0	240.1	8500	F413_240.1 S2 M2SA4	440	F413_240.1 P80 BN80B4	441
5.8	1142	1.6	239.8	12000	F513_239.8 S2 M2SA4	444	F513_239.8 P80 BN80B4	445
5.9	1122	2.6	235.8	20000	F603_235.8 S2 M2SA4	448	F603_235.8 P80 BN80B4	449
6.4	1048	1.0	220.1	8500	F413_220.1 S2 M2SA4	440	F413_220.1 P80 BN80B4	441
6.4	1036	2.8	217.6	20000	F603_217.6 S2 M2SA4	448	F603_217.6 P80 BN80B4	449
6.5	1032	1.7	216.9	12000	F513_216.9 S2 M2SA4	444	F513_216.9 P80 BN80B4	445
6.9	963	1.9	202.4	12000	F513_202.4 S2 M2SA4	444	F513_202.4 P80 BN80B4	445
7.0	958	3.0	201.4	20000	F603_201.4 S2 M2SA4	448	F603_201.4 P80 BN80B4	449
7.0	947	1.2	198.9	8500	F413_198.9 S2 M2SA4	440	F413_198.9 P80 BN80B4	441
7.5	885	3.3	185.9	20000	F603_185.9 S2 M2SA4	448	F603_185.9 P80 BN80B4	449
7.7	860	1.3	180.7	8500	F413_180.7 S2 M2SA4	440	F413_180.7 P80 BN80B4	441
8.3	803	1.4	168.7	8500	F413_168.7 S2 M2SA4	440	F413_168.7 P80 BN80B4	441
8.5	788	2.3	165.6	12000	F513_165.6 S2 M2SA4	444	F513_165.6 P80 BN80B4	445
8.6	775	3.7	162.9	20000	F603_162.9 S2 M2SA4	448	F603_162.9 P80 BN80B4	449
10.4	640	1.7	134.4	8500	F413_134.4 S2 M2SA4	440	F413_134.4 P80 BN80B4	441
10.8	618	2.9	129.9	12000	F513_129.9 S2 M2SA4	444	F513_129.9 P80 BN80B4	445
10.9	611	1.0	128.4	6500	F313_128.4 S2 M2SA4	436	F313_128.4 P80 BN80B4	437
12.4	536	1.1	112.5	6500	F313_112.5 S2 M2SA4	436	F313_112.5 P80 BN80B4	437
13.2	505	2.2	106.0	8500	F413_106.0 S2 M2SA4	440	F413_106.0 P80 BN80B4	441
13.7	485	1.2	101.9	6500	F313_101.9 S2 M2SA4	436	F313_101.9 P80 BN80B4	437
16.0	416	1.4	87.4	6500	F313_87.4 S2 M2SA4	436	F313_87.4 P80 BN80B4	437
16.5	404	2.7	84.9	8500	F413_84.9 S2 M2SA4	440	F413_84.9 P80 BN80B4	441
16.8	397	1.0	83.4	5350	F253_83.4 S2 M2SA4	432	F253_83.4 P80 BN80B4	433
17.8	375	1.6	78.9	6500	F313_78.9 S2 M2SA4	436	F313_78.9 P80 BN80B4	437
18.3	365	1.1	76.6	5300	F253_76.6 S2 M2SA4	432	F253_76.6 P80 BN80B4	433
20.3	329	1.8	69.1	6500	F313_69.1 S2 M2SA4	436	F313_69.1 P80 BN80B4	437



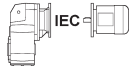



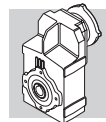
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
21.1	317	3.5	66.5	8500	F413_66.5 S2 M2SA4	440	F413_66.5 P80 BN80B4	441
21.4	311	1.3	65.3	5180	F253_65.3 S2 M2SA4	432	F253_65.3 P80 BN80B4	433
22.3	299	2.0	62.8	6500	F313_62.8 S2 M2SA4	436	F313_62.8 P80 BN80B4	437
24.0	278	1.4	58.3	5080	F253_58.3 S2 M2SA4	432	F253_58.3 P80 BN80B4	433
24.7	276	0.9	56.7	3590	F202_56.7 S2 M2SA4	428	F202_56.7 P80 BN80B4	429
26.9	248	2.4	52.1	6500	F313_52.1 S2 M2SA4	436	F313_52.1 P80 BN80B4	437
27.6	247	1.0	50.7	3510	F202_50.7 S2 M2SA4	428	F202_50.7 P80 BN80B4	429
27.6	242	1.7	50.8	4960	F253_50.8 S2 M2SA4	432	F253_50.8 P80 BN80B4	433
29.4	226	2.6	47.5	6500	F313_47.5 S2 M2SA4	436	F313_47.5 P80 BN80B4	437
31	218	1.1	44.8	3420	F202_44.8 S2 M2SA4	428	F202_44.8 P80 BN80B4	429
31	217	1.8	45.6	4860	F253_45.6 S2 M2SA4	432	F253_45.6 P80 BN80B4	433
31	217	2.8	44.6	6500	F312_44.6 S2 M2SA4	436	F312_44.6 P80 BN80B4	437
32	216	1.8	44.4	4890	F252_44.4 S2 M2SA4	432	F252_44.4 P80 BN80B4	433
33	203	1.2	41.8	3370	F202_41.8 S2 M2SA4	428	F202_41.8 P80 BN80B4	429
34	198	1.9	40.7	4790	F252_40.7 S2 M2SA4	432	F252_40.7 P80 BN80B4	433
35	196	3.1	40.4	6500	F312_40.4 S2 M2SA4	436	F312_40.4 P80 BN80B4	437
37	184	1.4	37.9	3300	F202_37.9 S2 M2SA4	428	F202_37.9 P80 BN80B4	429
37	183	3.3	37.7	6500	F312_37.7 S2 M2SA4	436	F312_37.7 P80 BN80B4	437
38	177	2.3	36.4	4680	F252_36.4 S2 M2SA4	432	F252_36.4 P80 BN80B4	433
42	161	1.6	33.1	3200	F202_33.1 S2 M2SA4	428	F202_33.1 P80 BN80B4	429
44	156	2.6	32.2	4540	F252_32.2 S2 M2SA4	432	F252_32.2 P80 BN80B4	433
46	148	1.7	30.4	3140	F202_30.4 S2 M2SA4	428	F202_30.4 P80 BN80B4	429
47	144	1.0	29.6	2550	F102_29.6 S2 M2SA4	424	F102_29.6 P80 BN80B4	425
47	146	2.7	30.0	4470	F252_30.0 S2 M2SA4	432	F252_30.0 P80 BN80B4	433
51	132	3	27.2	4360	F252_27.2 S2 M2SA4	432	F252_27.2 P80 BN80B4	433
54	125	1.1	25.8	2470	F102_25.8 S2 M2SA4	424	F102_25.8 P80 BN80B4	425
54	126	1.9	25.9	3020	F202_25.9 S2 M2SA4	428	F202_25.9 P80 BN80B4	429
59	116	3.5	23.8	4210	F252_23.8 S2 M2SA4	432	F252_23.8 P80 BN80B4	433
60	113	2.1	23.1	2930	F202_23.1 S2 M2SA4	428	F202_23.1 P80 BN80B4	429
61	111	1.3	22.8	2400	F102_22.8 S2 M2SA4	424	F102_22.8 P80 BN80B4	425
69	98	2.3	20.2	2830	F202_20.2 S2 M2SA4	428	F202_20.2 P80 BN80B4	429
72	94	1.4	19.3	2310	F102_19.3 S2 M2SA4	424	F102_19.3 P80 BN80B4	425
77	88	2.4	18.1	2740	F202_18.1 S2 M2SA4	428	F202_18.1 P80 BN80B4	429
82	83	1.6	17.0	2230	F102_17.0 S2 M2SA4	424	F102_17.0 P80 BN80B4	425
95	72	2.8	14.8	2600	F202_14.8 S2 M2SA4	428	F202_14.8 P80 BN80B4	429
96	71	1.7	14.6	2150	F102_14.6 S2 M2SA4	424	F102_14.6 P80 BN80B4	425
107	63	1.6	13.0	2070	F102_13.0 S2 M2SA4	424	F102_13.0 P80 BN80B4	425
121	56	1.7	11.5	2010	F102_11.5 S2 M2SA4	424	F102_11.5 P80 BN80B4	425
125	55	3.2	11.2	2390	F202_11.2 S2 M2SA4	428	F202_11.2 P80 BN80B4	429
143	48	1.9	9.8	1920	F102_9.8 S2 M2SA4	424	F102_9.8 P80 BN80B4	425
163	42	2.0	8.6	1850	F102_8.6 S2 M2SA4	424	F102_8.6 P80 BN80B4	425
189	36	2.1	7.4	1770	F102_7.4 S2 M2SA4	424	F102_7.4 P80 BN80B4	425
192	35	2.6	14.6	1770	F102_14.6 S1 M1LA2	424	F102_14.6 P80 BN80A2	425
216	32	2.7	13.0	1710	F102_13.0 S1 M1LA2	424	F102_13.0 P80 BN80A2	425
244	28	2.8	11.5	1650	F102_11.5 S1 M1LA2	424	F102_11.5 P80 BN80A2	425
288	24	3.1	9.8	1570	F102_9.8 S1 M1LA2	424	F102_9.8 P80 BN80A2	425
327	21	3.2	8.6	1510	F102_8.6 S1 M1LA2	424	F102_8.6 P80 BN80A2	425
380	18	3.5	7.4	1440	F102_7.4 S1 M1LA2	424	F102_7.4 P80 BN80A2	425



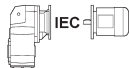



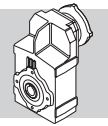
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n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
0.59	16336	0.9	1571	55000	F904_1571 S3 M3SA6	458	F904_1571 P90 BN90L6	459
0.64	14845	0.9	1428	55000	F904_1428 S3 M3SA6	458	F904_1428 P90 BN90L6	459
0.67	14338	1.0	2099	55000	F904_2099 S2 M2SB4	458	F904_2099 P90 BN90S4	459
0.72	13235	1.1	1937	55000	F904_1937 S2 M2SB4	458	F904_1937 P90 BN90S4	459
0.82	11630	1.2	1702	55000	F904_1702 S2 M2SB4	458	F904_1702 P90 BN90S4	459
0.89	10735	1.3	1571	55000	F904_1571 S2 M2SB4	458	F904_1571 P90 BN90S4	459
0.98	9755	1.4	1428	55000	F904_1428 S2 M2SB4	458	F904_1428 P90 BN90S4	459
1.1	8727	0.9	1277	45000	F804_1277 S2 M2SB4	455	F804_1277 P90 BN90S4	456
1.1	9005	1.6	1318	55000	F904_1318 S2 M2SB4	458	F904_1318 P90 BN90S4	459
1.2	7831	1.0	1146	45000	F804_1146 S2 M2SB4	455	F804_1146 P90 BN90S4	456
1.2	8232	1.7	1205	55000	F904_1205 S2 M2SB4	458	F904_1205 P90 BN90S4	459
1.3	7229	1.1	1058	45000	F804_1058 S2 M2SB4	455	F804_1058 P90 BN90S4	456
1.3	7599	1.8	1112	55000	F904_1112 S2 M2SB4	458	F904_1112 P90 BN90S4	459
1.5	6218	2.3	910.2	55000	F904_910.2 S2 M2SB4	458	F904_910.2 P90 BN90S4	459
1.6	6130	1.3	897.3	45000	F804_897.3 S2 M2SB4	455	F804_897.3 P90 BN90S4	456
1.7	5617	0.9	822.2	35000	F704_822.2 S2 M2SB4	452	F704_822.2 P90 BN90S4	453
1.8	5291	1.5	774.4	45000	F804_774.4 S2 M2SB4	455	F804_774.4 P90 BN90S4	456
1.8	5284	2.6	773.4	55000	F904_773.4 S2 M2SB4	458	F904_773.4 P90 BN90S4	459
1.9	5085	1.6	489.1	45000	F804_489.1 S3 M3SA6	455	F804_489.1 P90 BN90L6	456
1.9	5152	2.7	495.6	55000	F904_495.6 S3 M3SA6	458	F904_495.6 P90 BN90L6	459
2.0	4898	1.0	471.2	35000	F704_471.2 S3 M3SA6	452	F704_471.2 P90 BN90L6	453
2.0	4694	1.7	451.5	45000	F804_451.5 S3 M3SA6	455	F804_451.5 P90 BN90L6	456
2.0	4884	1.6	714.9	45000	F804_714.9 S2 M2SB4	455	F804_714.9 P90 BN90S4	456
2.1	4491	1.1	657.4	35000	F704_657.4 S2 M2SB4	452	F704_657.4 P90 BN90S4	453
2.2	4274	3.3	625.6	55000	F904_625.6 S2 M2SB4	458	F904_625.6 P90 BN90S4	459
2.3	4146	1.2	606.8	35000	F704_606.8 S2 M2SB4	452	F704_606.8 P90 BN90S4	453
2.3	4173	1.9	610.9	45000	F804_610.9 S2 M2SB4	455	F804_610.9 P90 BN90S4	456
2.4	3945	3.5	577.5	55000	F904_577.5 S2 M2SB4	458	F904_577.5 P90 BN90S4	459
2.5	3852	2.1	563.9	45000	F804_563.9 S2 M2SB4	455	F804_563.9 P90 BN90S4	456
2.7	3487	1.4	510.4	35000	F704_510.4 S2 M2SB4	452	F704_510.4 P90 BN90S4	453
2.9	3347	0.9	489.8	20000	F604_489.8 S2 M2SB4	448	F604_489.8 P90 BN90S4	449
2.9	3342	2.4	489.1	45000	F804_489.1 S2 M2SB4	455	F804_489.1 P90 BN90S4	456
3.0	3219	1.6	471.2	35000	F704_471.2 S2 M2SB4	452	F704_471.2 P90 BN90S4	453
3.1	3085	2.6	451.5	45000	F804_451.5 S2 M2SB4	455	F804_451.5 P90 BN90S4	456
3.2	2956	1.0	432.6	20000	F604_432.6 S2 M2SB4	448	F604_432.6 P90 BN90S4	449
3.5	2728	1.1	399.3	20000	F604_399.3 S2 M2SB4	448	F604_399.3 P90 BN90S4	449
3.5	2757	1.8	403.5	35000	F704_403.5 S2 M2SB4	452	F704_403.5 P90 BN90S4	453
3.7	2618	3.1	383.2	45000	F804_383.2 S2 M2SB4	455	F804_383.2 P90 BN90S4	456
3.8	2545	2.0	372.5	35000	F704_372.5 S2 M2SB4	452	F704_372.5 P90 BN90S4	453
4.0	2416	3.3	353.7	45000	F804_353.7 S2 M2SB4	455	F804_353.7 P90 BN90S4	456
4.1	2334	1.2	341.7	20000	F604_341.7 S2 M2SB4	448	F604_341.7 P90 BN90S4	449
4.4	2155	1.3	315.4	20000	F604_315.4 S2 M2SB4	448	F604_315.4 P90 BN90S4	449
4.6	2079	2.4	304.3	35000	F704_304.3 S2 M2SB4	452	F704_304.3 P90 BN90S4	453
4.9	1996	0.9	285.9	12000	F513_285.9 S2 M2SB4	444	F513_285.9 P90 BN90S4	445
5.0	1960	1.5	280.7	20000	F603_280.7 S2 M2SB4	448	F603_280.7 P90 BN90S4	449
5.0	1919	2.6	280.9	35000	F704_280.9 S2 M2SB4	452	F704_280.9 P90 BN90S4	453
5.3	1830	1.0	262.1	12000	F513_262.1 S2 M2SB4	444	F513_262.1 P90 BN90S4	445
5.8	1675	1.1	239.8	12000	F513_239.8 S2 M2SB4	444	F513_239.8 P90 BN90S4	445
6.0	1603	3.1	234.6	35000	F704_234.6 S2 M2SB4	452	F704_234.6 P90 BN90S4	453
6.5	1514	1.2	216.9	12000	F513_216.9 S2 M2SB4	444	F513_216.9 P90 BN90S4	445
6.5	1479	3.4	216.5	35000	F704_216.5 S2 M2SB4	452	F704_216.5 P90 BN90S4	453



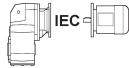



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

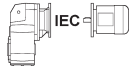

n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
6.9	1413	1.3	202.4	12000	F513_202.4 S2 M2SB4	444	F513_202.4 P90 BN90S4	445
8.3	1178	0.9	168.7	8500	F413_168.7 S2 M2SB4	440	F413_168.7 P90 BN90S4	441
8.5	1156	1.6	165.6	12000	F513_165.6 S2 M2SB4	444	F513_165.6 P90 BN90S4	445
10.4	938	1.2	134.4	8500	F413_134.4 S2 M2SB4	440	F413_134.4 P90 BN90S4	441
10.8	907	2.0	129.9	12000	F513_129.9 S2 M2SB4	444	F513_129.9 P90 BN90S4	445
13.2	740	1.5	106.0	8500	F413_106.0 S2 M2SB4	440	F413_106.0 P90 BN90S4	441
13.3	734	2.5	105.1	12000	F513_105.1 S2 M2SB4	444	F513_105.1 P90 BN90S4	445
16.0	610	1.0	87.4	6500	F313_87.4 S2 M2SB4	436	F313_87.4 P90 BN90S4	437
16.5	593	1.9	84.9	8500	F413_84.9 S2 M2SB4	440	F413_84.9 P90 BN90S4	441
16.8	581	3.1	83.2	12000	F513_83.2 S2 M2SB4	444	F513_83.2 P90 BN90S4	445
17.8	551	1.1	78.9	6500	F313_78.9 S2 M2SB4	436	F313_78.9 P90 BN90S4	437
20.3	482	1.2	69.1	6500	F313_69.1 S2 M2SB4	436	F313_69.1 P90 BN90S4	437
21.1	464	2.4	66.5	8500	F413_66.5 S2 M2SB4	440	F413_66.5 P90 BN90S4	441
22.3	438	1.4	62.8	6500	F313_62.8 S2 M2SB4	436	F313_62.8 P90 BN90S4	437
23.2	421	2.6	60.2	8500	F413_60.2 S2 M2SB4	440	F413_60.2 P90 BN90S4	441
24.0	407	1.0	58.3	4500	F253_58.3 S2 M2SB4	432	F253_58.3 P90 BN90S4	433
26.9	364	1.6	52.1	6500	F313_52.1 S2 M2SB4	436	F313_52.1 P90 BN90S4	437
27.2	360	3.0	51.5	8500	F413_51.5 S2 M2SB4	440	F413_51.5 P90 BN90S4	441
27.6	355	1.1	50.8	4450	F253_50.8 S2 M2SB4	432	F253_50.8 P90 BN90S4	433
29.2	342	3.1	47.9	8500	F412_47.9 S2 M2SB4	440	F412_47.9 P90 BN90S4	441
29.4	332	1.7	47.5	6500	F313_47.5 S2 M2SB4	436	F313_47.5 P90 BN90S4	437
31	318	1.3	45.6	4400	F253_45.6 S2 M2SB4	432	F253_45.6 P90 BN90S4	433
31	318	1.9	44.6	6500	F312_44.6 S2 M2SB4	436	F312_44.6 P90 BN90S4	437
32	317	1.2	44.4	4470	F252_44.4 S2 M2SB4	432	F252_44.4 P90 BN90S4	433
34	290	1.3	40.7	4410	F252_40.7 S2 M2SB4	432	F252_40.7 P90 BN90S4	433
35	288	2.1	40.4	6500	F312_40.4 S2 M2SB4	436	F312_40.4 P90 BN90S4	437
37	270	0.9	37.9	3050	F202_37.9 S2 M2SB4	428	F202_37.9 P90 BN90S4	429
37	269	2.2	37.7	6500	F312_37.7 S2 M2SB4	436	F312_37.7 P90 BN90S4	437
38	260	1.5	36.4	4330	F252_36.4 S2 M2SB4	432	F252_36.4 P90 BN90S4	433
41	245	2.4	34.4	6500	F312_34.4 S2 M2SB4	436	F312_34.4 P90 BN90S4	437
42	236	1.1	33.1	2980	F202_33.1 S2 M2SB4	428	F202_33.1 P90 BN90S4	429
44	230	1.7	32.2	4240	F252_32.2 S2 M2SB4	432	F252_32.2 P90 BN90S4	433
46	217	1.2	30.4	2930	F202_30.4 S2 M2SB4	428	F202_30.4 P90 BN90S4	429
46	215	2.8	30.1	6500	F312_30.1 S2 M2SB4	436	F312_30.1 P90 BN90S4	437
47	214	1.9	30.0	4190	F252_30.0 S2 M2SB4	432	F252_30.0 P90 BN90S4	433
51	194	2.1	27.2	4100	F252_27.2 S2 M2SB4	432	F252_27.2 P90 BN90S4	433
51	195	3.1	27.3	6500	F312_27.3 S2 M2SB4	436	F312_27.3 P90 BN90S4	437
54	185	1.3	25.9	2840	F202_25.9 S2 M2SB4	428	F202_25.9 P90 BN90S4	429
59	169	2.4	23.8	3990	F252_23.8 S2 M2SB4	432	F252_23.8 P90 BN90S4	433
60	165	1.4	23.1	2780	F202_23.1 S2 M2SB4	428	F202_23.1 P90 BN90S4	429
64	156	2.6	21.8	3920	F252_21.8 S2 M2SB4	432	F252_21.8 P90 BN90S4	433
69	144	1.6	20.2	2690	F202_20.2 S2 M2SB4	428	F202_20.2 P90 BN90S4	429
72	138	1.0	19.3	2170	F102_19.3 S2 M2SB4	424	F102_19.3 P90 BN90S4	425
75	133	3.0	18.6	3780	F252_18.6 S2 M2SB4	432	F252_18.6 P90 BN90S4	433
77	129	1.7	18.1	2620	F202_18.1 S2 M2SB4	428	F202_18.1 P90 BN90S4	429
82	121	1.1	17.0	2110	F102_17.0 S2 M2SB4	424	F102_17.0 P90 BN90S4	425
84	119	3.4	16.6	3670	F252_16.6 S2 M2SB4	432	F252_16.6 P90 BN90S4	433
95	106	1.9	14.8	2500	F202_14.8 S2 M2SB4	428	F202_14.8 P90 BN90S4	429
96	104	1.1	14.6	2050	F102_14.6 S2 M2SB4	424	F102_14.6 P90 BN90S4	425
107	93	1.1	13.0	1980	F102_13.0 S2 M2SB4	424	F102_13.0 P90 BN90S4	425
121	82	1.2	11.5	1920	F102_11.5 S2 M2SB4	424	F102_11.5 P90 BN90S4	425

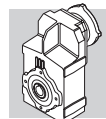


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

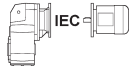

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
125	80	2.2	11.2	2310	F202_11.2 S2 M2SB4	428	F202_11.2 P90 BN90S4	429
143	70	1.3	9.8	1840	F102_9.8 S2 M2SB4	424	F102_9.8 P90 BN90S4	425
160	62	2.5	8.7	2160	F202_8.7 S2 M2SB4	428	F202_8.7 P90 BN90S4	429
163	61	1.3	8.6	1780	F102_8.6 S2 M2SB4	424	F102_8.6 P90 BN90S4	425
179	56	2.6	7.8	2100	F202_7.8 S2 M2SB4	428	F202_7.8 P90 BN90S4	429
189	53	1.4	7.4	1720	F102_7.4 S2 M2SB4	424	F102_7.4 P90 BN90S4	425
218	46	2.8	6.4	1980	F202_6.4 S2 M2SB4	428	F202_6.4 P90 BN90S4	429
243	41	1.9	11.5	1600	F102_11.5 S2 M2SA2	424	F102_11.5 P80 BN80B2	425
249	40	3.5	11.2	1910	F202_11.2 S2 M2SA2	428	F202_11.2 P80 BN80B2	429
287	35	2.1	9.8	1530	F102_9.8 S2 M2SA2	424	F102_9.8 P80 BN80B2	425
326	31	2.2	8.6	1480	F102_8.6 S2 M2SA2	424	F102_8.6 P80 BN80B2	425
378	26	2.4	7.4	1410	F102_7.4 S2 M2SA2	424	F102_7.4 P80 BN80B2	425

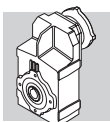
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n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
0.83	15747	0.9	1702	55000	F904_1702 S3 M3SA4	458	F904_1702 P90 BN90LA4	459
0.90	14535	1.0	1571	55000	F904_1571 S3 M3SA4	458	F904_1571 P90 BN90LA4	459
0.99	13208	1.1	1428	55000	F904_1428 S3 M3SA4	458	F904_1428 P90 BN90LA4	459
1.1	12192	1.1	1318	55000	F904_1318 S3 M3SA4	458	F904_1318 P90 BN90LA4	459
1.2	11146	1.3	1205	55000	F904_1205 S3 M3SA4	458	F904_1205 P90 BN90LA4	459
1.3	10288	1.4	1112	55000	F904_1112 S3 M3SA4	458	F904_1112 P90 BN90LA4	459
1.5	8419	1.7	910.2	55000	F904_910.2 S3 M3SA4	458	F904_910.2 P90 BN90LA4	459
1.6	8300	1.0	897.3	45000	F804_897.3 S3 M3SA4	455	F804_897.3 P90 BN90LA4	456
1.8	7164	1.1	774.4	45000	F804_774.4 S3 M3SA4	455	F804_774.4 P90 BN90LA4	456
1.8	7154	2.0	773.4	55000	F904_773.4 S3 M3SA4	458	F904_773.4 P90 BN90LA4	459
2.0	6612	1.2	714.9	45000	F804_714.9 S3 M3SA4	455	F804_714.9 P90 BN90LA4	456
2.3	5613	0.9	606.8	35000	F704_606.8 S3 M3SA4	452	F704_606.8 P90 BN90LA4	453
2.3	5651	1.4	610.9	45000	F804_610.9 S3 M3SA4	455	F804_610.9 P90 BN90LA4	456
2.3	5787	2.4	625.6	55000	F904_625.6 S3 M3SA4	458	F904_625.6 P90 BN90LA4	459
2.4	5342	2.6	577.5	55000	F904_577.5 S3 M3SA4	458	F904_577.5 P90 BN90LA4	459
2.5	5216	1.5	563.9	45000	F804_563.9 S3 M3SA4	455	F804_563.9 P90 BN90LA4	456
2.8	4721	1.1	510.4	35000	F704_510.4 S3 M3SA4	452	F704_510.4 P90 BN90LA4	453
2.8	4584	3.1	495.6	55000	F904_495.6 S3 M3SA4	458	F904_495.6 P90 BN90LA4	459
2.9	4524	1.8	489.1	45000	F804_489.1 S3 M3SA4	455	F804_489.1 P90 BN90LA4	456
3.0	4358	1.1	471.2	35000	F704_471.2 S3 M3SA4	452	F704_471.2 P90 BN90LA4	453
3.1	4176	1.9	451.5	45000	F804_451.5 S3 M3SA4	455	F804_451.5 P90 BN90LA4	456
3.1	4231	3.3	457.5	55000	F904_457.5 S3 M3SA4	458	F904_457.5 P90 BN90LA4	459
3.5	3732	1.3	403.5	35000	F704_403.5 S3 M3SA4	452	F704_403.5 P90 BN90LA4	453
3.7	3544	2.3	383.2	45000	F804_383.2 S3 M3SA4	455	F804_383.2 P90 BN90LA4	456
3.8	3445	1.5	372.5	35000	F704_372.5 S3 M3SA4	452	F704_372.5 P90 BN90LA4	453
4.0	3272	2.4	353.7	45000	F804_353.7 S3 M3SA4	455	F804_353.7 P90 BN90LA4	456
4.1	3160	0.9	341.7	20000	F604_341.7 S3 M3SA4	448	F604_341.7 P90 BN90LA4	449
4.5	2917	1.0	315.4	20000	F604_315.4 S3 M3SA4	448	F604_315.4 P90 BN90LA4	449
4.6	2815	1.8	304.3	35000	F704_304.3 S3 M3SA4	452	F704_304.3 P90 BN90LA4	453
4.8	2745	2.9	296.7	45000	F804_296.7 S3 M3SA4	455	F804_296.7 P90 BN90LA4	456
5.0	2653	1.1	280.7	20000	F603_280.7 S3 M3SA4	448	F603_280.7 P90 BN90LA4	449
5.0	2599	1.9	280.9	35000	F704_280.9 S3 M3SA4	452	F704_280.9 P90 BN90LA4	453



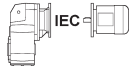



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



n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
5.1	2534	3.2	273.9	45000	F804_273.9 S3 M3SA4	455	F804_273.9 P90 BN90LA4	456
5.4	2449	1.2	259.1	20000	F603_259.1 S3 M3SA4	448	F603_259.1 P90 BN90LA4	449
6.0	2229	1.3	235.8	20000	F603_235.8 S3 M3SA4	448	F603_235.8 P90 BN90LA4	449
6.0	2170	2.3	234.6	35000	F704_234.6 S3 M3SA4	452	F704_234.6 P90 BN90LA4	453
6.5	2057	1.4	217.6	20000	F603_217.6 S3 M3SA4	448	F603_217.6 P90 BN90LA4	449
6.5	2003	2.5	216.5	35000	F704_216.5 S3 M3SA4	452	F704_216.5 P90 BN90LA4	453
7.0	1913	0.9	202.4	12000	F513_202.4 S3 M3SA4	444	F513_202.4 P90 BN90LA4	445
7.0	1904	1.5	201.4	20000	F603_201.4 S3 M3SA4	448	F603_201.4 P90 BN90LA4	449
7.2	1853	2.7	196.0	35000	F703_196.0 S3 M3SA4	452	F703_196.0 P90 BN90LA4	453
7.6	1757	1.7	185.9	20000	F603_185.9 S3 M3SA4	448	F603_185.9 P90 BN90LA4	449
7.8	1711	2.9	180.9	35000	F703_180.9 S3 M3SA4	452	F703_180.9 P90 BN90LA4	453
8.5	1566	1.1	165.6	12000	F513_165.6 S3 M3SA4	444	F513_165.6 P90 BN90LA4	445
8.5	1576	3.2	166.7	35000	F703_166.7 S3 M3SA4	452	F703_166.7 P90 BN90LA4	453
8.7	1540	1.9	162.9	20000	F603_162.9 S3 M3SA4	448	F603_162.9 P90 BN90LA4	449
9.2	1454	3.4	153.8	35000	F703_153.8 S3 M3SA4	452	F703_153.8 P90 BN90LA4	453
9.4	1421	2.0	150.4	20000	F603_150.4 S3 M3SA4	448	F603_150.4 P90 BN90LA4	449
10.8	1234	2.4	130.5	20000	F603_130.5 S3 M3SA4	448	F603_130.5 P90 BN90LA4	449
10.9	1228	1.5	129.9	12000	F513_129.9 S3 M3SA4	444	F513_129.9 P90 BN90LA4	445
11.7	1139	2.5	120.5	20000	F603_120.5 S3 M3SA4	448	F603_120.5 P90 BN90LA4	449
13.3	1002	1.1	106.0	8500	F413_106.0 S3 M3SA4	440	F413_106.0 P90 BN90LA4	441
13.3	1006	2.9	106.4	20000	F603_106.4 S3 M3SA4	448	F603_106.4 P90 BN90LA4	449
13.4	993	1.8	105.1	12000	F513_105.1 S3 M3SA4	444	F513_105.1 P90 BN90LA4	445
14.4	928	3.1	98.2	20000	F603_98.2 S3 M3SA4	448	F603_98.2 P90 BN90LA4	449
16.6	802	1.4	84.9	8500	F413_84.9 S3 M3SA4	440	F413_84.9 P90 BN90LA4	441
16.9	787	2.3	83.2	12000	F513_83.2 S3 M3SA4	444	F513_83.2 P90 BN90LA4	445
20.4	653	0.9	69.1	6500	F313_69.1 S3 M3SA4	436	F313_69.1 P90 BN90LA4	437
21.2	629	1.7	66.5	8500	F413_66.5 S3 M3SA4	440	F413_66.5 P90 BN90LA4	441
21.4	622	2.9	65.8	12000	F513_65.8 S3 M3SA4	444	F513_65.8 P90 BN90LA4	445
22.5	593	1.0	62.8	6500	F313_62.8 S3 M3SA4	436	F313_62.8 P90 BN90LA4	437
23.4	570	1.9	60.2	8500	F413_60.2 S3 M3SA4	440	F413_60.2 P90 BN90LA4	441
27.1	492	1.2	52.1	6500	F313_52.1 S3 M3SA4	436	F313_52.1 P90 BN90LA4	437
27.4	487	2.2	51.5	8500	F413_51.5 S3 M3SA4	440	F413_51.5 P90 BN90LA4	441
29.4	463	2.3	47.9	8500	F412_47.9 S3 M3SA4	440	F412_47.9 P90 BN90LA4	441
29.7	449	1.3	47.5	6500	F313_47.5 S3 M3SA4	436	F313_47.5 P90 BN90LA4	437
31	431	0.9	45.6	3880	F253_45.6 S3 M3SA4	432	F253_45.6 P90 BN90LA4	433
32	431	1.4	44.6	6500	F312_44.6 S3 M3SA4	436	F312_44.6 P90 BN90LA4	437
35	393	1.0	40.7	3970	F252_40.7 S3 M3SA4	432	F252_40.7 P90 BN90LA4	433
35	390	1.5	40.4	6500	F312_40.4 S3 M3SA4	436	F312_40.4 P90 BN90LA4	437
37	364	1.6	37.7	6500	F312_37.7 S3 M3SA4	436	F312_37.7 P90 BN90LA4	437
37	369	3.0	38.2	8500	F412_38.2 S3 M3SA4	440	F412_38.2 P90 BN90LA4	441
39	352	1.1	36.4	3940	F252_36.4 S3 M3SA4	432	F252_36.4 P90 BN90LA4	433
41	332	1.8	34.4	6500	F312_34.4 S3 M3SA4	436	F312_34.4 P90 BN90LA4	437
44	311	1.3	32.2	3890	F252_32.2 S3 M3SA4	432	F252_32.2 P90 BN90LA4	433
47	290	1.4	30.0	3860	F252_30.0 S3 M3SA4	432	F252_30.0 P90 BN90LA4	433
47	291	2.1	30.1	6500	F312_30.1 S3 M3SA4	436	F312_30.1 P90 BN90LA4	437
52	263	1.5	27.2	3810	F252_27.2 S3 M3SA4	432	F252_27.2 P90 BN90LA4	433
52	263	2.3	27.3	6500	F312_27.3 S3 M3SA4	436	F312_27.3 P90 BN90LA4	437
54	250	1.0	25.9	2640	F202_25.9 S3 M3SA4	428	F202_25.9 P90 BN90LA4	429
59	229	1.7	23.8	3730	F252_23.8 S3 M3SA4	432	F252_23.8 P90 BN90LA4	433
60	226	2.7	23.4	6480	F312_23.4 S3 M3SA4	436	F312_23.4 P90 BN90LA4	437
61	224	1.1	23.1	2600	F202_23.1 S3 M3SA4	428	F202_23.1 P90 BN90LA4	429

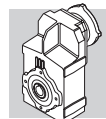


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

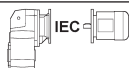

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
65	211	1.9	21.8	3680	F252_21.8 S3 M3SA4	432	F252_21.8 P90 BN90LA4	433
67	204	2.9	21.1	6320	F312_21.1 S3 M3SA4	436	F312_21.1 P90 BN90LA4	437
70	195	1.1	20.2	2530	F202_20.2 S3 M3SA4	428	F202_20.2 P90 BN90LA4	429
76	180	2.2	18.6	3570	F252_18.6 S3 M3SA4	432	F252_18.6 P90 BN90LA4	433
76	179	3.4	18.5	6110	F312_18.5 S3 M3SA4	436	F312_18.5 P90 BN90LA4	437
78	175	1.2	18.1	2480	F202_18.1 S3 M3SA4	428	F202_18.1 P90 BN90LA4	429
85	161	2.5	16.6	3490	F252_16.6 S3 M3SA4	432	F252_16.6 P90 BN90LA4	433
95	143	1.4	14.8	2380	F202_14.8 S3 M3SA4	428	F202_14.8 P90 BN90LA4	429
97	140	2.9	14.5	3390	F252_14.5 S3 M3SA4	432	F252_14.5 P90 BN90LA4	433
109	125	3.2	13	3310	F252_13.0 S3 M3SA4	432	F252_13.0 P90 BN90LA4	433
126	108	1.6	11.2	2220	F202_11.2 S3 M3SA4	428	F202_11.2 P90 BN90LA4	429
144	94	0.9	9.8	1760	F102_9.8 S3 M3SA4	424	F102_9.8 P90 BN90LA4	425
151	90	2.9	9.4	3070	F252_9.4 S3 M3SA4	432	F252_9.4 P90 BN90LA4	433
161	84	1.8	8.7	2090	F202_8.7 S3 M3SA4	428	F202_8.7 P90 BN90LA4	429
164	83	1.0	8.6	1710	F102_8.6 S3 M3SA4	424	F102_8.6 P90 BN90LA4	425
168	81	3.2	8.4	2980	F252_8.4 S3 M3SA4	432	F252_8.4 P90 BN90LA4	433
180	76	1.9	7.8	2030	F202_7.8 S3 M3SA4	428	F202_7.8 P90 BN90LA4	429
190	72	1.1	7.4	1650	F102_7.4 S3 M3SA4	424	F102_7.4 P90 BN90LA4	425
220	62	2.1	6.4	1930	F202_6.4 S3 M3SA4	428	F202_6.4 P90 BN90LA4	429
243	56	1.4	11.5	1560	F102_11.5 S2 M2SB2	424	F102_11.5 P90 BN90SA2	425
249	55	2.6	11.2	1860	F202_11.2 S2 M2SB2	428	F202_11.2 P90 BN90SA2	429
287	48	1.5	9.8	1490	F102_9.8 S2 M2SB2	424	F102_9.8 P90 BN90SA2	425
321	42	2.9	8.7	1740	F202_8.7 S2 M2SB2	428	F202_8.7 P90 BN90SA2	429
326	42	1.6	8.6	1440	F102_8.6 S2 M2SB2	424	F102_8.6 P90 BN90SA2	425
357	38	3.0	7.8	1680	F202_7.8 S2 M2SB2	428	F202_7.8 P90 BN90SA2	429
378	36	1.7	7.4	1380	F102_7.4 S2 M2SB2	424	F102_7.4 P90 BN90SA2	425
437	31	3.3	6.4	1590	F202_6.4 S2 M2SB2	428	F202_6.4 P90 BN90SA2	429

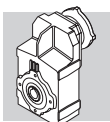
2.2 kW

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
1.2	16347	0.9	1205	55000	F904_1205 S3 M3LA4	458	F904_1205 P100 BN100LA4	459
1.3	15090	0.9	1112	55000	F904_1112 S3 M3LA4	458	F904_1112 P100 BN100LA4	459
1.5	12348	1.1	910.2	55000	F904_910.2 S3 M3LA4	458	F904_910.2 P100 BN100LA4	459
1.8	10493	1.3	773.4	55000	F904_773.4 S3 M3LA4	458	F904_773.4 P100 BN100LA4	459
2.3	8287	1.0	610.9	45000	F804_610.9 S3 M3LA4	455	F804_610.9 P100 BN100LA4	456
2.3	8488	1.6	625.6	55000	F904_625.6 S3 M3LA4	458	F904_625.6 P100 BN100LA4	459
2.4	7835	1.8	577.5	55000	F904_577.5 S3 M3LA4	458	F904_577.5 P100 BN100LA4	459
2.5	7650	1.0	563.9	45000	F804_563.9 S3 M3LA4	455	F804_563.9 P100 BN100LA4	456
2.8	6723	2.1	495.6	55000	F904_495.6 S3 M3LA4	458	F904_495.6 P100 BN100LA4	459
2.9	6636	1.2	489.1	45000	F804_489.1 S3 M3LA4	455	F804_489.1 P100 BN100LA4	456
3.1	6125	1.3	451.5	45000	F804_451.5 S3 M3LA4	455	F804_451.5 P100 BN100LA4	456
3.1	6206	2.3	457.5	55000	F904_457.5 S3 M3LA4	458	F904_457.5 P100 BN100LA4	459
3.5	5474	0.9	403.5	35000	F704_403.5 S3 M3LA4	452	F704_403.5 P100 BN100LA4	453
3.7	5198	1.5	383.2	45000	F804_383.2 S3 M3LA4	455	F804_383.2 P100 BN100LA4	456
3.8	5053	1.0	372.5	35000	F704_372.5 S3 M3LA4	452	F704_372.5 P100 BN100LA4	453
3.9	4909	2.9	361.8	55000	F904_361.8 S3 M3LA4	458	F904_361.8 P100 BN100LA4	459
4.0	4798	1.7	353.7	45000	F804_353.7 S3 M3LA4	455	F804_353.7 P100 BN100LA4	456



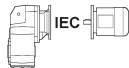



2.2 kW



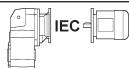

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
4.6	4129	1.2	304.3	35000	F704_304.3 S3 M3LA4	452	F704_304.3 P100 BN100LA4	453
4.8	4025	2.0	296.7	45000	F804_296.7 S3 M3LA4	455	F804_296.7 P100 BN100LA4	456
4.8	3950	3.5	291.1	55000	F904_291.1 S3 M3LA4	458	F904_291.1 P100 BN100LA4	459
5.0	3811	1.3	280.9	35000	F704_280.9 S3 M3LA4	452	F704_280.9 P100 BN100LA4	453
5.1	3716	2.2	273.9	45000	F804_273.9 S3 M3LA4	455	F804_273.9 P100 BN100LA4	456
6.0	3182	1.6	234.6	35000	F704_234.6 S3 M3LA4	452	F704_234.6 P100 BN100LA4	453
6.5	3018	1.0	217.6	20000	F603_217.6 S3 M3LA4	448	F603_217.6 P100 BN100LA4	449
6.5	2938	1.7	216.5	35000	F704_216.5 S3 M3LA4	452	F704_216.5 P100 BN100LA4	453
6.5	2964	2.7	218.5	45000	F804_218.5 S3 M3LA4	455	F804_218.5 P100 BN100LA4	456
7.0	2792	1.0	201.4	20000	F603_201.4 S3 M3LA4	448	F603_201.4 P100 BN100LA4	449
7.2	2718	1.8	196.0	35000	F703_196.0 S3 M3LA4	452	F703_196.0 P100 BN100LA4	453
7.6	2577	1.1	185.9	20000	F603_185.9 S3 M3LA4	448	F603_185.9 P100 BN100LA4	449
7.6	2560	3.1	184.6	45000	F803_184.6 S3 M3LA4	455	F803_184.6 P100 BN100LA4	456
7.8	2509	2.0	180.9	35000	F703_180.9 S3 M3LA4	452	F703_180.9 P100 BN100LA4	453
8.5	2311	2.2	166.7	35000	F703_166.7 S3 M3LA4	452	F703_166.7 P100 BN100LA4	453
8.7	2258	1.3	162.9	20000	F603_162.9 S3 M3LA4	448	F603_162.9 P100 BN100LA4	449
9.2	2133	2.3	153.8	35000	F703_153.8 S3 M3LA4	452	F703_153.8 P100 BN100LA4	453
9.4	2085	1.4	150.4	20000	F603_150.4 S3 M3LA4	448	F603_150.4 P100 BN100LA4	449
10.6	1843	2.7	133.0	35000	F703_133.0 S3 M3LA4	452	F703_133.0 P100 BN100LA4	453
10.8	1809	1.6	130.5	20000	F603_130.5 S3 M3LA4	448	F603_130.5 P100 BN100LA4	449
10.9	1801	1.0	129.9	12000	F513_129.9 S3 M3LA4	444	F513_129.9 P100 BN100LA4	445
11.5	1702	2.9	122.7	35000	F703_122.7 S3 M3LA4	452	F703_122.7 P100 BN100LA4	453
11.7	1670	1.7	120.5	20000	F603_120.5 S3 M3LA4	448	F603_120.5 P100 BN100LA4	449
12.9	1520	3.3	109.6	35000	F703_109.6 S3 M3LA4	452	F703_109.6 P100 BN100LA4	453
13.3	1475	2.0	106.4	20000	F603_106.4 S3 M3LA4	448	F603_106.4 P100 BN100LA4	449
13.4	1457	1.2	105.1	12000	F513_105.1 S3 M3LA4	444	F513_105.1 P100 BN100LA4	445
14.4	1362	2.1	98.2	20000	F603_98.2 S3 M3LA4	448	F603_98.2 P100 BN100LA4	449
16.6	1177	0.9	84.9	8500	F413_84.9 S3 M3LA4	440	F413_84.9 P100 BN100LA4	441
16.8	1165	2.5	84.0	20000	F603_84.0 S3 M3LA4	448	F603_84.0 P100 BN100LA4	449
16.9	1154	1.6	83.2	12000	F513_83.2 S3 M3LA4	444	F513_83.2 P100 BN100LA4	445
18.2	1075	2.7	77.6	20000	F603_77.6 S3 M3LA4	448	F603_77.6 P100 BN100LA4	449
20.7	947	3.1	68.3	20000	F603_68.3 S3 M3LA4	448	F603_68.3 P100 BN100LA4	449
21.2	922	1.2	66.5	8500	F413_66.5 S3 M3LA4	440	F413_66.5 P100 BN100LA4	441
21.4	913	2.0	65.8	12000	F513_65.8 S3 M3LA4	444	F513_65.8 P100 BN100LA4	445
22.4	874	3.3	63.0	20000	F603_63.0 S3 M3LA4	448	F603_63.0 P100 BN100LA4	449
23.4	835	1.3	60.2	8500	F413_60.2 S3 M3LA4	440	F413_60.2 P100 BN100LA4	441
27.4	714	1.5	51.5	8500	F413_51.5 S3 M3LA4	440	F413_51.5 P100 BN100LA4	441
28.8	678	2.7	48.9	12000	F513_48.9 S3 M3LA4	444	F513_48.9 P100 BN100LA4	445
29.4	679	1.6	47.9	8500	F412_47.9 S3 M3LA4	440	F412_47.9 P100 BN100LA4	441
32	632	0.9	44.6	6500	F312_44.6 S3 M3LA4	436	F312_44.6 P100 BN100LA4	437
35	572	1.0	40.4	6500	F312_40.4 S3 M3LA4	436	F312_40.4 P100 BN100LA4	437
37	534	1.1	37.7	6500	F312_37.7 S3 M3LA4	436	F312_37.7 P100 BN100LA4	437
37	541	2.0	38.2	8500	F412_38.2 S3 M3LA4	440	F412_38.2 P100 BN100LA4	441
38	526	3.2	37.1	12000	F512_37.1 S3 M3LA4	444	F512_37.1 P100 BN100LA4	445
41	487	1.2	34.4	6490	F312_34.4 S3 M3LA4	436	F312_34.4 P100 BN100LA4	437
47	425	0.9	30.0	3300	F252_30.0 S3 M3LA4	432	F252_30.0 P100 BN100LA4	433
47	427	1.4	30.1	6360	F312_30.1 S3 M3LA4	436	F312_30.1 P100 BN100LA4	437
47	427	2.6	30.1	8500	F412_30.1 S3 M3LA4	440	F412_30.1 P100 BN100LA4	441
52	385	1.0	27.2	3300	F252_27.2 S3 M3LA4	432	F252_27.2 P100 BN100LA4	433
52	386	1.6	27.3	6250	F312_27.3 S3 M3LA4	436	F312_27.3 P100 BN100LA4	437
58	342	3.2	24.1	8400	F412_24.1 S3 M3LA4	440	F412_24.1 P100 BN100LA4	441

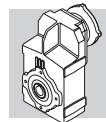


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

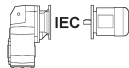

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
59	336	1.2	23.8	3290	F252_23.8 S3 M3LA4	432	F252_23.8 P100 BN100LA4	433
60	331	1.8	23.4	6080	F312_23.4 S3 M3LA4	436	F312_23.4 P100 BN100LA4	437
65	309	1.3	21.8	3270	F252_21.8 S3 M3LA4	432	F252_21.8 P100 BN100LA4	433
67	299	2.0	21.1	5960	F312_21.1 S3 M3LA4	436	F312_21.1 P100 BN100LA4	437
76	264	1.5	18.6	3220	F252_18.6 S3 M3LA4	432	F252_18.6 P100 BN100LA4	433
76	262	2.3	18.5	5790	F312_18.5 S3 M3LA4	436	F312_18.5 P100 BN100LA4	437
84	238	2.5	16.8	5670	F312_16.8 S3 M3LA4	436	F312_16.8 P100 BN100LA4	437
85	235	1.7	16.6	3180	F252_16.6 S3 M3LA4	432	F252_16.6 P100 BN100LA4	433
95	210	1.0	14.8	2190	F202_14.8 S3 M3LA4	428	F202_14.8 P100 BN100LA4	429
97	205	2.0	14.5	3120	F252_14.5 S3 M3LA4	432	F252_14.5 P100 BN100LA4	433
101	198	3.0	13.9	5430	F312_13.9 S3 M3LA4	436	F312_13.9 P100 BN100LA4	437
109	184	2.2	13.0	3070	F252_13.0 S3 M3LA4	432	F252_13.0 P100 BN100LA4	433
111	180	3.3	12.7	5310	F312_12.7 S3 M3LA4	436	F312_12.7 P100 BN100LA4	437
126	159	1.1	11.2	2060	F202_11.2 S3 M3LA4	428	F202_11.2 P100 BN100LA4	429
133	150	2.6	10.6	2960	F252_10.6 S3 M3LA4	432	F252_10.6 P100 BN100LA4	433
151	133	2.0	9.4	2900	F252_9.4 S3 M3LA4	432	F252_9.4 P100 BN100LA4	433
156	128	3.1	9.0	4830	F312_9.0 S3 M3LA4	436	F312_9.0 P100 BN100LA4	437
161	124	1.3	8.7	1960	F202_8.7 S3 M3LA4	428	F202_8.7 P100 BN100LA4	429
168	119	2.2	8.4	2830	F252_8.4 S3 M3LA4	432	F252_8.4 P100 BN100LA4	433
171	117	3.3	8.2	4720	F312_8.2 S3 M3LA4	436	F312_8.2 P100 BN100LA4	437
180	111	1.3	7.8	1920	F202_7.8 S3 M3LA4	428	F202_7.8 P100 BN100LA4	429
205	97	2.6	6.9	2710	F252_6.9 S3 M3LA4	432	F252_6.9 P100 BN100LA4	433
220	91	1.4	6.4	1840	F202_6.4 S3 M3LA4	428	F202_6.4 P100 BN100LA4	429
247	81	1.0	11.5	1470	F102_11.5 S3 M3SA2	424	F102_11.5 P90 BN90L2	425
254	79	1.8	11.2	1780	F202_11.2 S3 M3SA2	428	F202_11.2 P90 BN90L2	429
292	68	1.1	9.8	1410	F102_9.8 S3 M3SA2	424	F102_9.8 P90 BN90L2	425
326	61	2.0	8.7	1670	F202_8.7 S3 M3SA2	428	F202_8.7 P90 BN90L2	429
332	60	1.1	8.6	1370	F102_8.6 S3 M3SA2	424	F102_8.6 P90 BN90L2	425
364	55	2.1	7.8	1630	F202_7.8 S3 M3SA2	428	F202_7.8 P90 BN90L2	429
385	52	1.2	7.4	1330	F102_7.4 S3 M3SA2	424	F102_7.4 P90 BN90L2	425
444	45	2.3	6.4	1540	F202_6.4 S3 M3SA2	428	F202_6.4 P90 BN90L2	429

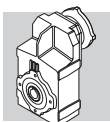
3.0 kW

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	458	F904_773.4 P100 BN100LB4	459
2.3	11574	1.2	625.6	55000	F904_625.6 S3 M3LB4	458	F904_625.6 P100 BN100LB4	459
2.4	10684	1.3	577.5	55000	F904_577.5 S3 M3LB4	458	F904_577.5 P100 BN100LB4	459
2.8	9168	1.5	495.6	55000	F904_495.6 S3 M3LB4	458	F904_495.6 P100 BN100LB4	459
2.9	9049	0.9	489.1	45000	F804_489.1 S3 M3LB4	455	F804_489.1 P100 BN100LB4	456
3.1	8353	1.0	451.5	45000	F804_451.5 S3 M3LB4	455	F804_451.5 P100 BN100LB4	456
3.1	8463	1.7	457.5	55000	F904_457.5 S3 M3LB4	458	F904_457.5 P100 BN100LB4	459
3.7	7088	1.1	383.2	45000	F804_383.2 S3 M3LB4	455	F804_383.2 P100 BN100LB4	456
3.9	6694	2.1	361.8	55000	F904_361.8 S3 M3LB4	458	F904_361.8 P100 BN100LB4	459
4.0	6543	1.2	353.7	45000	F804_353.7 S3 M3LB4	455	F804_353.7 P100 BN100LB4	456
4.6	5630	0.9	304.3	35000	F704_304.3 S3 M3LB4	452	F704_304.3 P100 BN100LB4	453
4.8	5489	1.5	296.7	45000	F804_296.7 S3 M3LB4	455	F804_296.7 P100 BN100LB4	456
4.8	5386	2.6	291.1	55000	F904_291.1 S3 M3LB4	458	F904_291.1 P100 BN100LB4	459



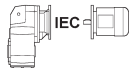



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

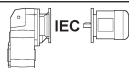

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
5.0	5197	1.0	280.9	35000	F704_280.9 S3 M3LB4	452	F704_280.9 P100 BN100LB4	453
5.1	5067	1.6	273.9	45000	F804_273.9 S3 M3LB4	455	F804_273.9 P100 BN100LB4	456
5.2	4971	2.8	268.7	55000	F904_268.7 S3 M3LB4	458	F904_268.7 P100 BN100LB4	459
6.0	4340	1.2	234.6	35000	F704_234.6 S3 M3LB4	452	F704_234.6 P100 BN100LB4	453
6.1	4281	3.3	231.4	55000	F904_231.4 S3 M3LB4	458	F904_231.4 P100 BN100LB4	459
6.5	4006	1.2	216.5	35000	F704_216.5 S3 M3LB4	452	F704_216.5 P100 BN100LB4	453
6.5	4042	2.0	218.5	45000	F804_218.5 S3 M3LB4	455	F804_218.5 P100 BN100LB4	456
6.6	3951	3.5	213.6	55000	F904_213.6 S3 M3LB4	458	F904_213.6 P100 BN100LB4	459
7.2	3706	1.3	196.0	35000	F703_196.0 S3 M3LB4	452	F703_196.0 P100 BN100LB4	453
7.6	3490	2.3	184.6	45000	F803_184.6 S3 M3LB4	455	F803_184.6 P100 BN100LB4	456
7.8	3421	1.5	180.9	35000	F703_180.9 S3 M3LB4	452	F703_180.9 P100 BN100LB4	453
8.5	3151	1.6	166.7	35000	F703_166.7 S3 M3LB4	452	F703_166.7 P100 BN100LB4	453
8.7	3080	0.9	162.9	20000	F603_162.9 S3 M3LB4	448	F603_162.9 P100 BN100LB4	449
8.8	3029	2.6	160.2	45000	F803_160.2 S3 M3LB4	455	F803_160.2 P100 BN100LB4	456
9.2	2909	1.7	153.8	35000	F703_153.8 S3 M3LB4	452	F703_153.8 P100 BN100LB4	453
9.4	2843	1.0	150.4	20000	F603_150.4 S3 M3LB4	448	F603_150.4 P100 BN100LB4	449
9.5	2796	2.9	147.9	45000	F803_147.9 S3 M3LB4	455	F803_147.9 P100 BN100LB4	456
10.6	2514	2.0	133.0	35000	F703_133.0 S3 M3LB4	452	F703_133.0 P100 BN100LB4	453
10.6	2509	3.2	132.7	45000	F803_132.7 S3 M3LB4	455	F803_132.7 P100 BN100LB4	456
10.8	2467	1.2	130.5	20000	F603_130.5 S3 M3LB4	448	F603_130.5 P100 BN100LB4	449
11.5	2320	2.2	122.7	35000	F703_122.7 S3 M3LB4	452	F703_122.7 P100 BN100LB4	453
11.5	2316	3.5	122.5	45000	F803_122.5 S3 M3LB4	455	F803_122.5 P100 BN100LB4	456
11.7	2277	1.3	120.5	20000	F603_120.5 S3 M3LB4	448	F603_120.5 P100 BN100LB4	449
12.9	2072	2.4	109.6	35000	F703_109.6 S3 M3LB4	452	F703_109.6 P100 BN100LB4	453
13.3	2011	1.4	106.4	20000	F603_106.4 S3 M3LB4	448	F603_106.4 P100 BN100LB4	449
13.4	1987	0.9	105.1	12000	F513_105.1 S3 M3LB4	444	F513_105.1 P100 BN100LB4	445
13.9	1913	2.6	101.2	35000	F703_101.2 S3 M3LB4	452	F703_101.2 P100 BN100LB4	453
14.4	1857	1.6	98.2	20000	F603_98.2 S3 M3LB4	448	F603_98.2 P100 BN100LB4	449
15.2	1749	2.9	92.5	35000	F703_92.5 S3 M3LB4	452	F703_92.5 P100 BN100LB4	453
16.5	1614	3.1	85.4	35000	F703_85.4 S3 M3LB4	452	F703_85.4 P100 BN100LB4	453
16.8	1588	1.8	84.0	20000	F603_84.0 S3 M3LB4	448	F603_84.0 P100 BN100LB4	449
16.9	1574	1.1	83.2	12000	F513_83.2 S3 M3LB4	444	F513_83.2 P100 BN100LB4	445
18.2	1466	2.0	77.6	20000	F603_77.6 S3 M3LB4	448	F603_77.6 P100 BN100LB4	449
20.7	1291	2.2	68.3	20000	F603_68.3 S3 M3LB4	448	F603_68.3 P100 BN100LB4	449
21.4	1245	1.4	65.8	12000	F513_65.8 S3 M3LB4	444	F513_65.8 P100 BN100LB4	445
22.4	1192	2.4	63.0	20000	F603_63.0 S3 M3LB4	448	F603_63.0 P100 BN100LB4	449
23.4	1139	1.0	60.2	8500	F413_60.2 S3 M3LB4	440	F413_60.2 P100 BN100LB4	441
27.2	980	3.0	51.8	20000	F603_51.8 S3 M3LB4	448	F603_51.8 P100 BN100LB4	449
27.4	974	1.1	51.5	8500	F413_51.5 S3 M3LB4	440	F413_51.5 P100 BN100LB4	441
28.8	925	1.9	48.9	12000	F513_48.9 S3 M3LB4	444	F513_48.9 P100 BN100LB4	445
29.4	926	1.2	47.9	8500	F412_47.9 S3 M3LB4	440	F412_47.9 P100 BN100LB4	441
29.5	905	3.2	47.8	20000	F603_47.8 S3 M3LB4	448	F603_47.8 P100 BN100LB4	449
37	737	1.5	38.2	8500	F412_38.2 S3 M3LB4	440	F412_38.2 P100 BN100LB4	441
38	717	2.4	37.1	11800	F512_37.1 S3 M3LB4	444	F512_37.1 P100 BN100LB4	445
41	664	0.9	34.4	5810	F312_34.4 S3 M3LB4	436	F312_34.4 P100 BN100LB4	437
47	582	1.0	30.1	5770	F312_30.1 S3 M3LB4	436	F312_30.1 P100 BN100LB4	437
47	582	1.9	30.1	8290	F412_30.1 S3 M3LB4	440	F412_30.1 P100 BN100LB4	441
47	580	2.9	30.0	11200	F512_30.0 S3 M3LB4	444	F512_30.0 P100 BN100LB4	445
52	527	1.1	27.3	5720	F312_27.3 S3 M3LB4	436	F312_27.3 P100 BN100LB4	437
58	466	2.4	24.1	7960	F412_24.1 S3 M3LB4	440	F412_24.1 P100 BN100LB4	441
60	452	1.3	23.4	5620	F312_23.4 S3 M3LB4	436	F312_23.4 P100 BN100LB4	437

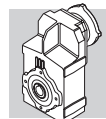


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

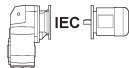

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
65	421	0.9	21.8	2800	F252_21.8 S3 M3LB4	432	F252_21.8 P100 BN100LB4	433
67	408	1.5	21.1	5540	F312_21.1 S3 M3LB4	436	F312_21.1 P100 BN100LB4	437
75	365	3.0	18.9	7560	F412_18.9 S3 M3LB4	440	F412_18.9 P100 BN100LB4	441
76	359	1.1	18.6	2830	F252_18.6 S3 M3LB4	432	F252_18.6 P100 BN100LB4	433
76	357	1.7	18.5	5430	F312_18.5 S3 M3LB4	436	F312_18.5 P100 BN100LB4	437
82	331	3.2	17.1	7400	F412_17.1 S3 M3LB4	440	F412_17.1 P100 BN100LB4	441
84	324	1.8	16.8	5340	F312_16.8 S3 M3LB4	436	F312_16.8 P100 BN100LB4	437
85	321	1.2	16.6	2830	F252_16.6 S3 M3LB4	432	F252_16.6 P100 BN100LB4	433
97	279	1.4	14.5	2810	F252_14.5 S3 M3LB4	432	F252_14.5 P100 BN100LB4	433
101	269	2.2	13.9	5150	F312_13.9 S3 M3LB4	436	F312_13.9 P100 BN100LB4	437
109	251	1.6	13	2790	F252_13.0 S3 M3LB4	432	F252_13.0 P100 BN100LB4	433
111	246	2.4	12.7	5060	F312_12.7 S3 M3LB4	436	F312_12.7 P100 BN100LB4	437
131	208	2.9	10.7	4880	F312_10.7 S3 M3LB4	436	F312_10.7 P100 BN100LB4	437
133	205	1.9	10.6	2730	F252_10.6 S3 M3LB4	432	F252_10.6 P100 BN100LB4	433
151	181	1.5	9.4	2710	F252_9.4 S3 M3LB4	432	F252_9.4 P100 BN100LB4	433
156	174	2.2	9.0	4650	F312_9.0 S3 M3LB4	436	F312_9.0 P100 BN100LB4	437
161	169	0.9	8.7	1820	F202_8.7 S3 M3LB4	428	F202_8.7 P100 BN100LB4	429
168	162	1.6	8.4	2660	F252_8.4 S3 M3LB4	432	F252_8.4 P100 BN100LB4	433
171	159	2.5	8.2	4550	F312_8.2 S3 M3LB4	436	F312_8.2 P100 BN100LB4	437
180	151	1.0	7.8	1790	F202_7.8 S3 M3LB4	428	F202_7.8 P100 BN100LB4	429
203	134	2.9	6.9	4360	F312_6.9 S3 M3LB4	436	F312_6.9 P100 BN100LB4	437
205	133	1.9	6.9	2560	F252_6.9 S3 M3LB4	432	F252_6.9 P100 BN100LB4	433
220	124	1.0	6.4	1730	F202_6.4 S3 M3LB4	428	F202_6.4 P100 BN100LB4	429
220	124	2.9	13.0	2510	F252_13.0 S3 M3LA2	432	F252_13.0 P100 BN100L2	433
255	107	1.3	11.2	1680	F202_11.2 S3 M3LA2	428	F202_11.2 P100 BN100L2	429
269	101	3.2	10.6	2410	F252_10.6 S3 M3LA2	432	F252_10.6 P100 BN100L2	433
306	89	3.0	9.4	2350	F252_9.4 S3 M3LA2	432	F252_9.4 P100 BN100L2	433
328	83	1.5	8.7	1600	F202_8.7 S3 M3LA2	428	F202_8.7 P100 BN100L2	429
341	80	3.3	8.4	2290	F252_8.4 S3 M3LA2	432	F252_8.4 P100 BN100L2	433
365	75	1.5	7.8	1560	F202_7.8 S3 M3LA2	428	F202_7.8 P100 BN100L2	429
446	61	1.7	6.4	1480	F202_6.4 S3 M3LA2	428	F202_6.4 P100 BN100L2	429

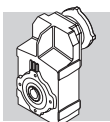
4.0 kW

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
2.2	15542	0.9	625.6	55000	F904_625.6 S3 M3LC4	458	F904_625.6 P112 BN112M4	459
2.4	14347	1.0	577.5	55000	F904_577.5 S3 M3LC4	458	F904_577.5 P112 BN112M4	459
2.8	12311	1.1	495.6	55000	F904_495.6 S3 M3LC4	458	F904_495.6 P112 BN112M4	459
3.1	11364	1.2	457.5	55000	F904_457.5 S3 M3LC4	458	F904_457.5 P112 BN112M4	459
3.9	8989	1.6	361.8	55000	F904_361.8 S3 M3LC4	458	F904_361.8 P112 BN112M4	459
4.0	8786	0.9	353.7	45000	F804_353.7 S3 M3LC4	455	F804_353.7 P112 BN112M4	456
4.7	7371	1.1	296.7	45000	F804_296.7 S3 M3LC4	455	F804_296.7 P112 BN112M4	456
4.8	7232	1.9	291.1	55000	F904_291.1 S3 M3LC4	458	F904_291.1 P112 BN112M4	459
5.1	6804	1.2	273.9	45000	F804_273.9 S3 M3LC4	455	F804_273.9 P112 BN112M4	456
5.2	6676	2.1	268.7	55000	F904_268.7 S3 M3LC4	458	F904_268.7 P112 BN112M4	459
6.0	5827	0.9	234.6	35000	F704_234.6 S3 M3LC4	452	F704_234.6 P112 BN112M4	453
6.1	5748	2.4	231.4	55000	F904_231.4 S3 M3LC4	458	F904_231.4 P112 BN112M4	459
6.4	5428	1.5	218.5	45000	F804_218.5 S3 M3LC4	455	F804_218.5 P112 BN112M4	456



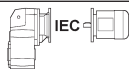



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

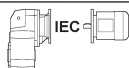

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
6.5	5379	0.9	216.5	35000	F704_216.5 S3 M3LC4	452	F704_216.5 P112 BN112M4	453
6.6	5306	2.6	213.6	55000	F904_213.6 S3 M3LC4	458	F904_213.6 P112 BN112M4	459
7.1	4977	1.0	196.0	35000	F703_196.0 S3 M3LC4	452	F703_196.0 P112 BN112M4	453
7.2	4929	2.8	194.2	55000	F903_194.2 S3 M3LC4	458	F903_194.2 P112 BN112M4	459
7.6	4687	1.7	184.6	45000	F803_184.6 S3 M3LC4	455	F803_184.6 P112 BN112M4	456
7.7	4594	1.1	180.9	35000	F703_180.9 S3 M3LC4	452	F703_180.9 P112 BN112M4	453
7.8	4550	3.1	179.2	55000	F903_179.2 S3 M3LC4	458	F903_179.2 P112 BN112M4	459
8.4	4232	1.2	166.7	35000	F703_166.7 S3 M3LC4	452	F703_166.7 P112 BN112M4	453
8.6	4134	3.4	162.8	55000	F903_162.8 S3 M3LC4	458	F903_162.8 P112 BN112M4	459
8.7	4068	2.0	160.2	45000	F803_160.2 S3 M3LC4	455	F803_160.2 P112 BN112M4	456
9.1	3906	1.3	153.8	35000	F703_153.8 S3 M3LC4	452	F703_153.8 P112 BN112M4	453
9.5	3755	2.1	147.9	45000	F803_147.9 S3 M3LC4	455	F803_147.9 P112 BN112M4	456
10.5	3376	1.5	133.0	35000	F703_133.0 S3 M3LC4	452	F703_133.0 P112 BN112M4	453
10.6	3369	2.4	132.7	45000	F803_132.7 S3 M3LC4	455	F803_132.7 P112 BN112M4	456
11.4	3116	1.6	122.7	35000	F703_122.7 S3 M3LC4	452	F703_122.7 P112 BN112M4	453
11.4	3110	2.6	122.5	45000	F803_122.5 S3 M3LC4	455	F803_122.5 P112 BN112M4	456
11.6	3058	0.9	120.5	20000	F603_120.5 S3 M3LC4	448	F603_120.5 P112 BN112M4	449
12.3	2888	2.8	113.8	45000	F803_113.8 S3 M3LC4	455	F803_113.8 P112 BN112M4	456
12.8	2783	1.8	109.6	35000	F703_109.6 S3 M3LC4	452	F703_109.6 P112 BN112M4	453
13.2	2701	1.1	106.4	20000	F603_106.4 S3 M3LC4	448	F603_106.4 P112 BN112M4	449
13.8	2569	1.9	101.2	35000	F703_101.2 S3 M3LC4	452	F703_101.2 P112 BN112M4	453
14.3	2493	1.2	98.2	20000	F603_98.2 S3 M3LC4	448	F603_98.2 P112 BN112M4	449
15.1	2348	2.1	92.5	35000	F703_92.5 S3 M3LC4	452	F703_92.5 P112 BN112M4	453
16.4	2168	2.3	85.4	35000	F703_85.4 S3 M3LC4	452	F703_85.4 P112 BN112M4	453
16.7	2133	1.4	84.0	20000	F603_84.0 S3 M3LC4	448	F603_84.0 P112 BN112M4	449
18.1	1969	1.5	77.6	20000	F603_77.6 S3 M3LC4	448	F603_77.6 P112 BN112M4	449
20.5	1734	1.7	68.3	20000	F603_68.3 S3 M3LC4	448	F603_68.3 P112 BN112M4	449
21.3	1672	1.1	65.8	12000	F513_65.8 S3 M3LC4	444	F513_65.8 P112 BN112M4	445
22.2	1600	1.8	63.0	20000	F603_63.0 S3 M3LC4	448	F603_63.0 P112 BN112M4	449
27.0	1316	2.2	51.8	20000	F603_51.8 S3 M3LC4	448	F603_51.8 P112 BN112M4	449
28.6	1242	1.4	48.9	11600	F513_48.9 S3 M3LC4	444	F513_48.9 P112 BN112M4	445
29.3	1215	2.4	47.8	20000	F603_47.8 S3 M3LC4	448	F603_47.8 P112 BN112M4	449
33	1069	2.7	42.1	20000	F603_42.1 S3 M3LC4	448	F603_42.1 P112 BN112M4	449
36	986	2.9	38.8	20000	F603_38.8 S3 M3LC4	448	F603_38.8 P112 BN112M4	449
37	990	1.1	38.2	7720	F412_38.2 S3 M3LC4	440	F412_38.2 P112 BN112M4	441
38	963	1.8	37.1	11200	F512_37.1 S3 M3LC4	444	F512_37.1 P112 BN112M4	445
46	781	1.4	30.1	7610	F412_30.1 S3 M3LC4	440	F412_30.1 P112 BN112M4	441
47	779	2.2	30.0	10700	F512_30.0 S3 M3LC4	444	F512_30.0 P112 BN112M4	445
55	645	2.9	25.4	20000	F603_25.4 S3 M3LC4	448	F603_25.4 P112 BN112M4	449
58	625	1.8	24.1	7420	F412_24.1 S3 M3LC4	440	F412_24.1 P112 BN112M4	441
59	617	2.7	23.8	10200	F512_23.8 S3 M3LC4	444	F512_23.8 P112 BN112M4	445
60	607	1.0	23.4	5040	F312_23.4 S3 M3LC4	436	F312_23.4 P112 BN112M4	437
60	596	3.2	23.5	20000	F603_23.5 S3 M3LC4	448	F603_23.5 P112 BN112M4	449
66	548	1.1	21.1	5020	F312_21.1 S3 M3LC4	436	F312_21.1 P112 BN112M4	437
74	490	2.2	18.9	7150	F412_18.9 S3 M3LC4	440	F412_18.9 P112 BN112M4	441
74	488	3.2	18.8	9640	F512_18.8 S3 M3LC4	444	F512_18.8 P112 BN112M4	445
76	479	1.3	18.5	4980	F312_18.5 S3 M3LC4	436	F312_18.5 P112 BN112M4	437
82	444	2.4	17.1	7030	F412_17.1 S3 M3LC4	440	F412_17.1 P112 BN112M4	441
83	436	1.4	16.8	4930	F312_16.8 S3 M3LC4	436	F312_16.8 P112 BN112M4	437
84	431	0.9	16.6	2380	F252_16.6 S3 M3LC4	432	F252_16.6 P112 BN112M4	433
96	379	2.7	14.6	6820	F412_14.6 S3 M3LC4	440	F412_14.6 P112 BN112M4	441

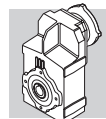


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

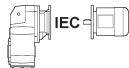

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
97	375	1.1	14.5	2420	F252_14.5 S3 M3LC4	432	F252_14.5 P112 BN112M4	433
100	362	1.7	13.9	4820	F312_13.9 S3 M3LC4	436	F312_13.9 P112 BN112M4	437
108	337	1.2	13.0	2440	F252_13.0 S3 M3LC4	432	F252_13.0 P112 BN112M4	433
110	330	1.8	12.7	4750	F312_12.7 S3 M3LC4	436	F312_12.7 P112 BN112M4	437
130	279	2.2	10.7	4620	F312_10.7 S3 M3LC4	436	F312_10.7 P112 BN112M4	437
130	279	3.2	10.8	6380	F412_10.8 S3 M3LC4	440	F412_10.8 P112 BN112M4	441
132	276	1.4	10.6	2450	F252_10.6 S3 M3LC4	432	F252_10.6 P112 BN112M4	433
150	243	1.1	9.4	2470	F252_9.4 S3 M3LC4	432	F252_9.4 P112 BN112M4	433
153	237	3.0	9.1	6160	F412_9.1 S3 M3LC4	440	F412_9.1 P112 BN112M4	441
155	234	1.7	9.0	4420	F312_9.0 S3 M3LC4	436	F312_9.0 P112 BN112M4	437
167	218	1.2	8.4	2450	F252_8.4 S3 M3LC4	432	F252_8.4 P112 BN112M4	433
170	213	1.8	8.2	4350	F312_8.2 S3 M3LC4	436	F312_8.2 P112 BN112M4	437
201	180	2.2	6.9	4200	F312_6.9 S3 M3LC4	436	F312_6.9 P112 BN112M4	437
204	178	1.4	6.9	2390	F252_6.9 S3 M3LC4	432	F252_6.9 P112 BN112M4	433
206	176	3.2	13.9	4200	F312_13.9 S3 M3LB2	436	F312_13.9 P100 BN100LB2	437
221	164	2.2	13.0	2340	F252_13.0 S3 M3LB2	432	F252_13.0 P112 BN112M2	433
226	161	3.4	12.7	4120	F312_12.7 S3 M3LB2	436	F312_12.7 P100 BN100LB2	437
255	142	1.0	11.2	1570	F202_11.2 S3 M3LB2	428	F202_11.2 P100 BN100LB2	429
270	134	2.4	10.6	2270	F252_10.6 S3 M3LB2	432	F252_10.6 P112 BN112M2	433
307	118	2.2	9.4	2230	F252_9.4 S3 M3LB2	432	F252_9.4 P112 BN112M2	433
318	114	3.4	9.0	3760	F312_9.0 S3 M3LB2	436	F312_9.0 P100 BN100LB2	437
329	110	1.1	8.7	1510	F202_8.7 S3 M3LB2	428	F202_8.7 P100 BN100LB2	429
342	106	2.4	8.4	2190	F252_8.4 S3 M3LB2	432	F252_8.4 P112 BN112M2	433
366	99	1.2	7.8	1480	F202_7.8 S3 M3LB2	428	F202_7.8 P100 BN100LB2	429
418	87	2.7	6.9	2090	F252_6.9 S3 M3LB2	432	F252_6.9 P112 BN112M2	433
448	81	1.3	6.4	1420	F202_6.4 S3 M3LB2	428	F202_6.4 P100 BN100LB2	429

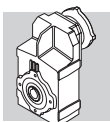
5.5 kW

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	458	F904_495.6 P132 BN132S4	459
3.1	15192	0.9	457.5	55000	F904_457.5 S4 M4SA4	458	F904_457.5 P132 BN132S4	459
4.0	12017	1.2	361.8	55000	F904_361.8 S4 M4SA4	458	F904_361.8 P132 BN132S4	459
4.9	9668	1.4	291.1	55000	F904_291.1 S4 M4SA4	458	F904_291.1 P132 BN132S4	459
5.3	9096	0.9	273.9	45000	F804_273.9 S4 M4SA4	455	F804_273.9 P132 BN132S4	456
5.4	8925	1.6	268.7	55000	F904_268.7 S4 M4SA4	458	F904_268.7 P132 BN132S4	459
6.2	7685	1.8	231.4	55000	F904_231.4 S4 M4SA4	458	F904_231.4 P132 BN132S4	459
6.6	7256	1.1	218.5	45000	F804_218.5 S4 M4SA4	455	F804_218.5 P132 BN132S4	456
6.7	7093	2	213.6	55000	F904_213.6 S4 M4SA4	458	F904_213.6 P132 BN132S4	459
7.4	6590	2.1	194.2	55000	F903_194.2 S4 M4SA4	458	F903_194.2 P132 BN132S4	459
7.8	6266	1.3	184.6	45000	F803_184.6 S4 M4SA4	455	F803_184.6 P132 BN132S4	456
8.0	6083	2.3	179.2	55000	F903_179.2 S4 M4SA4	458	F903_179.2 P132 BN132S4	459
8.8	5527	2.5	162.8	55000	F903_162.8 S4 M4SA4	458	F903_162.8 P132 BN132S4	459
9.0	5438	1.5	160.2	45000	F803_160.2 S4 M4SA4	455	F803_160.2 P132 BN132S4	456
9.4	5222	1.0	153.8	35000	F703_153.8 S4 M4SA4	452	F703_153.8 P132 BN132S4	453
9.6	5101	2.7	150.3	55000	F903_150.3 S4 M4SA4	458	F903_150.3 P132 BN132S4	459
9.7	5020	1.6	147.9	45000	F803_147.9 S4 M4SA4	455	F803_147.9 P132 BN132S4	456
10.5	4661	3.0	137.3	55000	F903_137.3 S4 M4SA4	458	F903_137.3 P132 BN132S4	459



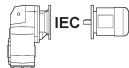



5.5 kW



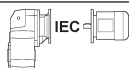

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
10.8	4513	1.1	133	35000	F703_133.0 S4 M4SA4	452	F703_133.0 P132 BN132S4	453
10.9	4504	1.8	132.7	45000	F803_132.7 S4 M4SA4	455	F803_132.7 P132 BN132S4	456
11.4	4303	3.3	126.8	55000	F903_126.8 S4 M4SA4	458	F903_126.8 P132 BN132S4	459
11.7	4165	1.2	122.7	35000	F703_122.7 S4 M4SA4	452	F703_122.7 P132 BN132S4	453
11.8	4157	1.9	122.5	45000	F803_122.5 S4 M4SA4	455	F803_122.5 P132 BN132S4	456
12.7	3861	2.1	113.8	45000	F803_113.8 S4 M4SA4	455	F803_113.8 P132 BN132S4	456
13.1	3720	1.3	109.6	35000	F703_109.6 S4 M4SA4	452	F703_109.6 P132 BN132S4	453
14.2	3434	1.5	101.2	35000	F703_101.2 S4 M4SA4	452	F703_101.2 P132 BN132S4	453
15.6	3139	1.6	92.5	35000	F703_92.5 S4 M4SA4	452	F703_92.5 P132 BN132S4	453
15.6	3133	2.6	92.3	45000	F803_92.3 S4 M4SA4	455	F803_92.3 P132 BN132S4	456
16.9	2898	1.7	85.4	35000	F703_85.4 S4 M4SA4	452	F703_85.4 P132 BN132S4	453
16.9	2892	2.8	85.2	45000	F803_85.2 S4 M4SA4	455	F803_85.2 P132 BN132S4	456
17.1	2852	1.0	84	20000	F603_84.0 S4 M4SA4	448	F603_84.0 P132 BN132S4	449
18.6	2632	1.1	77.6	20000	F603_77.6 S4 M4SA4	448	F603_77.6 P132 BN132S4	449
18.9	2588	3.1	76.3	45000	F803_76.3 S4 M4SA4	455	F803_76.3 P132 BN132S4	456
19.6	2497	2.0	73.6	35000	F703_73.6 S4 M4SA4	452	F703_73.6 P132 BN132S4	453
20.5	2389	3.3	70.4	45000	F803_70.4 S4 M4SA4	455	F803_70.4 P132 BN132S4	456
21.1	2317	1.3	68.3	20000	F603_68.3 S4 M4SA4	448	F603_68.3 P132 BN132S4	449
21.2	2305	2.2	67.9	35000	F703_67.9 S4 M4SA4	452	F703_67.9 P132 BN132S4	453
22.8	2139	1.4	63	20000	F603_63.0 S4 M4SA4	448	F603_63.0 P132 BN132S4	449
23.0	2121	2.4	62.5	35000	F703_62.5 S4 M4SA4	452	F703_62.5 P132 BN132S4	453
25.0	1958	2.6	57.7	35000	F703_57.7 S4 M4SA4	452	F703_57.7 P132 BN132S4	453
27.8	1759	1.6	51.8	20000	F603_51.8 S4 M4SA4	448	F603_51.8 P132 BN132S4	449
29.4	1660	1.1	48.9	10300	F513_48.9 S4 M4SA4	444	F513_48.9 P132 BN132S4	445
29.4	1662	3	49.0	35000	F703_49.0 S4 M4SA4	452	F703_49.0 P132 BN132S4	453
30.0	1624	1.8	47.8	20000	F603_47.8 S4 M4SA4	448	F603_47.8 P132 BN132S4	449
32	1534	3.3	45.2	34300	F703_45.2 S4 M4SA4	452	F703_45.2 P132 BN132S4	453
34	1428	2.0	42.1	20000	F603_42.1 S4 M4SA4	448	F603_42.1 P132 BN132S4	449
37	1319	2.2	38.8	20000	F603_38.8 S4 M4SA4	448	F603_38.8 P132 BN132S4	449
39	1288	1.3	37.1	10300	F512_37.1 S4 M4SA4	444	F512_37.1 P132 BN132S4	445
45	1089	2.7	32.1	20000	F603_32.1 S4 M4SA4	448	F603_32.1 P132 BN132S4	449
48	1044	1.1	30.1	6580	F412_30.1 S4 M4SA4	440	F412_30.1 P132 BN132S4	441
48	1041	1.6	30	9950	F512_30.0 S4 M4SA4	444	F512_30.0 P132 BN132S4	445
49	1005	2.9	29.6	20000	F603_29.6 S4 M4SA4	448	F603_29.6 P132 BN132S4	449
57	863	2.2	25.4	20000	F603_25.4 S4 M4SA4	448	F603_25.4 P132 BN132S4	449
60	836	1.3	24.1	6580	F412_24.1 S4 M4SA4	440	F412_24.1 P132 BN132S4	441
61	825	2.0	23.8	9560	F512_23.8 S4 M4SA4	444	F512_23.8 P132 BN132S4	445
61	796	2.4	23.5	20000	F603_23.5 S4 M4SA4	448	F603_23.5 P132 BN132S4	449
70	701	2.7	20.7	20000	F603_20.7 S4 M4SA4	448	F603_20.7 P132 BN132S4	449
76	655	1.7	18.9	6480	F412_18.9 S4 M4SA4	440	F412_18.9 P132 BN132S4	441
76	647	2.9	19.1	20000	F603_19.1 S4 M4SA4	448	F603_19.1 P132 BN132S4	449
77	653	2.4	18.8	9110	F512_18.8 S4 M4SA4	444	F512_18.8 P132 BN132S4	445
84	593	1.8	17.1	6410	F412_17.1 S4 M4SA4	440	F412_17.1 P132 BN132S4	441
98	507	2.0	14.6	6280	F412_14.6 S4 M4SA4	440	F412_14.6 P132 BN132S4	441
103	485	2.9	14.0	8520	F512_14.0 S4 M4SA4	444	F512_14.0 P132 BN132S4	445
130	385	3.5	11.1	8050	F512_11.1 S4 M4SA4	444	F512_11.1 P132 BN132S4	445
134	373	2.4	10.8	5970	F412_10.8 S4 M4SA4	440	F412_10.8 P132 BN132S4	441
158	317	2.2	9.1	5810	F412_9.1 S4 M4SA4	440	F412_9.1 P132 BN132S4	441
159	314	3.5	9.1	7590	F512_9.1 S4 M4SA4	444	F512_9.1 P132 BN132S4	445
198	253	3.3	14.6	5510	F412_14.6 S4 M4SA2	440	F412_14.6 P132 BN132SA2	441
214	233	2.7	6.7	5430	F412_6.7 S4 M4SA4	440	F412_6.7 P132 BN132S4	441

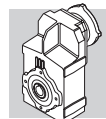


5.5 kW



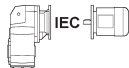

n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
268	186	3.9	10.8	5120	F412_10.8 S4 M4SA2	440	F412_10.8 P132 BN132SA2	441
316	158	3.9	9.1	4930	F412_9.1 S4 M4SA2	440	F412_9.1 P132 BN132SA2	441

7.5 kW



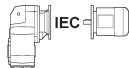

n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
4.0	16387	0.9	361.8	55000	F904_361.8 S4 M4LA4	458	F904_361.8 P132 BN132MA4	459
4.9	13184	1.1	291.1	55000	F904_291.1 S4 M4LA4	458	F904_291.1 P132 BN132MA4	459
5.4	12170	1.2	268.7	55000	F904_268.7 S4 M4LA4	458	F904_268.7 P132 BN132MA4	459
6.2	10479	1.3	231.4	55000	F904_231.4 S4 M4LA4	458	F904_231.4 P132 BN132MA4	459
6.7	9673	1.4	213.6	55000	F904_213.6 S4 M4LA4	458	F904_213.6 P132 BN132MA4	459
7.4	8986	1.6	194.2	55000	F903_194.2 S4 M4LA4	458	F903_194.2 P132 BN132MA4	459
7.8	8544	0.9	184.6	45000	F803_184.6 S4 M4LA4	455	F803_184.6 P132 BN132MA4	456
8.0	8295	1.7	179.2	55000	F903_179.2 S4 M4LA4	458	F903_179.2 P132 BN132MA4	459
8.8	7536	1.9	162.8	55000	F903_162.8 S4 M4LA4	458	F903_162.8 P132 BN132MA4	459
9.0	7416	1.1	160.2	45000	F803_160.2 S4 M4LA4	455	F803_160.2 P132 BN132MA4	456
9.6	6956	2	150.3	55000	F903_150.3 S4 M4LA4	458	F903_150.3 P132 BN132MA4	459
9.7	6845	1.2	147.9	45000	F803_147.9 S4 M4LA4	455	F803_147.9 P132 BN132MA4	456
10.5	6356	2.2	137.3	55000	F903_137.3 S4 M4LA4	458	F903_137.3 P132 BN132MA4	459
10.9	6141	1.3	132.7	45000	F803_132.7 S4 M4LA4	455	F803_132.7 P132 BN132MA4	456
11.4	5867	2.4	126.8	55000	F903_126.8 S4 M4LA4	458	F903_126.8 P132 BN132MA4	459
11.8	5669	1.4	122.5	45000	F803_122.5 S4 M4LA4	455	F803_122.5 P132 BN132MA4	456
12.7	5265	1.5	113.8	45000	F803_113.8 S4 M4LA4	455	F803_113.8 P132 BN132MA4	456
12.9	5181	2.7	111.9	55000	F903_111.9 S4 M4LA4	458	F903_111.9 P132 BN132MA4	459
13.1	5073	1.0	109.6	35000	F703_109.6 S4 M4LA4	452	F703_109.6 P132 BN132MA4	453
13.9	4783	2.9	103.3	55000	F903_103.3 S4 M4LA4	458	F903_103.3 P132 BN132MA4	459
14.2	4683	1.1	101.2	35000	F703_101.2 S4 M4LA4	452	F703_101.2 P132 BN132MA4	453
15.0	4432	3.2	95.8	55000	F903_95.8 S4 M4LA4	458	F903_95.8 P132 BN132MA4	459
15.6	4281	1.2	92.5	35000	F703_92.5 S4 M4LA4	452	F703_92.5 P132 BN132MA4	453
15.6	4272	1.9	92.3	45000	F803_92.3 S4 M4LA4	455	F803_92.3 P132 BN132MA4	456
16.3	4091	3.4	88.4	55000	F903_88.4 S4 M4LA4	458	F903_88.4 P132 BN132MA4	459
16.9	3952	1.3	85.4	35000	F703_85.4 S4 M4LA4	452	F703_85.4 P132 BN132MA4	453
16.9	3944	2.0	85.2	45000	F803_85.2 S4 M4LA4	455	F803_85.2 P132 BN132MA4	456
18.9	3529	2.3	76.3	45000	F803_76.3 S4 M4LA4	455	F803_76.3 P132 BN132MA4	456
19.6	3404	1.5	73.6	35000	F703_73.6 S4 M4LA4	452	F703_73.6 P132 BN132MA4	453
20.5	3258	2.5	70.4	44700	F803_70.4 S4 M4LA4	455	F803_70.4 P132 BN132MA4	456
21.1	3160	0.9	68.3	20000	F603_68.3 S4 M4LA4	448	F603_68.3 P132 BN132MA4	449
21.2	3143	1.6	67.9	35000	F703_67.9 S4 M4LA4	452	F703_67.9 P132 BN132MA4	453
22.8	2917	1.0	63.0	20000	F603_63.0 S4 M4LA4	448	F603_63.0 P132 BN132MA4	449
23.0	2893	1.7	62.5	35000	F703_62.5 S4 M4LA4	452	F703_62.5 P132 BN132MA4	453
23.4	2844	2.8	61.5	43500	F803_61.5 S4 M4LA4	455	F803_61.5 P132 BN132MA4	456
25.0	2670	1.9	57.7	34900	F703_57.7 S4 M4LA4	452	F703_57.7 P132 BN132MA4	453
25.4	2626	3.0	56.7	42600	F803_56.7 S4 M4LA4	455	F803_56.7 P132 BN132MA4	456
27.8	2399	1.2	51.8	20000	F603_51.8 S4 M4LA4	448	F603_51.8 P132 BN132MA4	449
29.4	2266	2.2	49.0	33800	F703_49.0 S4 M4LA4	452	F703_49.0 P132 BN132MA4	453
30.0	2214	1.3	47.8	20000	F603_47.8 S4 M4LA4	448	F603_47.8 P132 BN132MA4	449
32	2092	2.4	45.2	33200	F703_45.2 S4 M4LA4	452	F703_45.2 P132 BN132MA4	453
34	1948	1.5	42.1	20000	F603_42.1 S4 M4LA4	448	F603_42.1 P132 BN132MA4	449

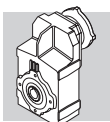


7.5 kW



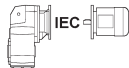

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
37	1798	1.6	38.8	20000	F603_38.8 S4 M4LA4	448	F603_38.8 P132 BN132MA4	449
39	1756	1.0	37.1	9090	F512_37.1 S4 M4LA4	444	F512_37.1 P132 BN132MA4	445
45	1485	2.0	32.1	20000	F603_32.1 S4 M4LA4	448	F603_32.1 P132 BN132MA4	449
48	1420	1.2	30.0	9010	F512_30.0 S4 M4LA4	444	F512_30.0 P132 BN132MA4	445
49	1371	2.1	29.6	20000	F603_29.6 S4 M4LA4	448	F603_29.6 P132 BN132MA4	449
57	1176	1.6	25.4	20000	F603_25.4 S4 M4LA4	448	F603_25.4 P132 BN132MA4	449
59	1137	3.5	24.6	28800	F703_24.6 S4 M4LA4	452	F703_24.6 P132 BN132MA4	453
60	1140	1.0	24.1	5500	F412_24.1 S4 M4LA4	440	F412_24.1 P132 BN132MA4	441
61	1125	1.5	23.8	8810	F512_23.8 S4 M4LA4	444	F512_23.8 P132 BN132MA4	445
61	1086	1.7	23.5	20000	F603_23.5 S4 M4LA4	448	F603_23.5 P132 BN132MA4	449
70	956	2.0	20.7	20000	F603_20.7 S4 M4LA4	448	F603_20.7 P132 BN132MA4	449
76	893	1.2	18.9	5630	F412_18.9 S4 M4LA4	440	F412_18.9 P132 BN132MA4	441
76	883	2.2	19.1	20000	F603_19.1 S4 M4LA4	448	F603_19.1 P132 BN132MA4	449
77	890	1.7	18.8	8520	F512_18.8 S4 M4LA4	444	F512_18.8 P132 BN132MA4	445
84	809	1.3	17.1	5650	F412_17.1 S4 M4LA4	440	F412_17.1 P132 BN132MA4	441
92	726	2.6	15.7	20000	F603_15.7 S4 M4LA4	448	F603_15.7 P132 BN132MA4	449
98	692	1.5	14.6	5630	F412_14.6 S4 M4LA4	440	F412_14.6 P132 BN132MA4	441
99	670	2.8	14.5	20000	F603_14.5 S4 M4LA4	448	F603_14.5 P132 BN132MA4	449
103	661	2.1	14.0	8080	F512_14.0 S4 M4LA4	444	F512_14.0 P132 BN132MA4	445
113	589	3.2	12.7	19900	F603_12.7 S4 M4LA4	448	F603_12.7 P132 BN132MA4	449
123	544	3.5	11.8	19500	F603_11.8 S4 M4LA4	448	F603_11.8 P132 BN132MA4	449
130	525	2.5	11.1	7700	F512_11.1 S4 M4LA4	444	F512_11.1 P132 BN132MA4	445
134	509	1.8	10.8	5490	F412_10.8 S4 M4LA4	440	F412_10.8 P132 BN132MA4	441
158	432	1.6	9.1	5410	F412_9.1 S4 M4LA4	440	F412_9.1 P132 BN132MA4	441
159	428	2.6	9.1	7290	F512_9.1 S4 M4LA4	444	F512_9.1 P132 BN132MA4	445
200	340	2.9	7.2	6900	F512_7.2 S4 M4LA4	444	F512_7.2 P132 BN132MA4	445
214	318	2.0	6.7	5140	F412_6.7 S4 M4LA4	440	F412_6.7 P132 BN132MA4	441
269	253	2.9	10.8	4880	F412_10.8 S4 M4SB2	440	F412_10.8 P132 BN132SB2	441
317	214	2.8	9.1	4730	F412_9.1 S4 M4SB2	440	F412_9.1 P132 BN132SB2	441
431	158	3.3	6.7	4390	F412_6.7 S4 M4SB2	440	F412_6.7 P132 BN132SB2	441

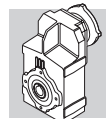
9.2 kW

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	458	F904_291.1 P132 BN132MB4	459
5.4	14928	0.9	268.7	55000	F904_268.7 S4 M4LB4	458	F904_268.7 P132 BN132MB4	459
6.2	12854	1.1	231.4	55000	F904_231.4 S4 M4LB4	458	F904_231.4 P132 BN132MB4	459
6.7	11865	1.2	213.6	55000	F904_213.6 S4 M4LB4	458	F904_213.6 P132 BN132MB4	459
7.4	11023	1.3	194.2	55000	F903_194.2 S4 M4LB4	458	F903_194.2 P132 BN132MB4	459
8.0	10175	1.4	179.2	55000	F903_179.2 S4 M4LB4	458	F903_179.2 P132 BN132MB4	459
8.8	9244	1.5	162.8	55000	F903_162.8 S4 M4LB4	458	F903_162.8 P132 BN132MB4	459
9.6	8533	1.6	150.3	55000	F903_150.3 S4 M4LB4	458	F903_150.3 P132 BN132MB4	459
9.7	8397	1.0	147.9	45000	F803_147.9 S4 M4LB4	455	F803_147.9 P132 BN132MB4	456
10.5	7797	1.8	137.3	55000	F903_137.3 S4 M4LB4	458	F903_137.3 P132 BN132MB4	459
10.9	7533	1.1	132.7	45000	F803_132.7 S4 M4LB4	455	F803_132.7 P132 BN132MB4	456
11.4	7197	1.9	126.8	55000	F903_126.8 S4 M4LB4	458	F903_126.8 P132 BN132MB4	459
11.8	6954	1.2	122.5	45000	F803_122.5 S4 M4LB4	455	F803_122.5 P132 BN132MB4	456
12.7	6458	1.2	113.8	45000	F803_113.8 S4 M4LB4	455	F803_113.8 P132 BN132MB4	456



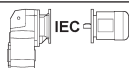



9.2 kW



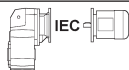

n ₂ min ⁻¹	M ₂ Nm	S	i	R _{n2} N				
12.9	6355	2.2	111.9	55000	F903_111.9 S4 M4LB4	458	F903_111.9 P132 BN132MB4	459
13.9	5867	2.4	103.3	55000	F903_103.3 S4 M4LB4	458	F903_103.3 P132 BN132MB4	459
15.0	5437	2.6	95.8	55000	F903_95.8 S4 M4LB4	458	F903_95.8 P132 BN132MB4	459
15.6	5251	1.0	92.5	35000	F703_92.5 S4 M4LB4	452	F703_92.5 P132 BN132MB4	453
15.6	5241	1.5	92.3	45000	F803_92.3 S4 M4LB4	455	F803_92.3 P132 BN132MB4	456
16.3	5018	2.8	88.4	55000	F903_88.4 S4 M4LB4	458	F903_88.4 P132 BN132MB4	459
16.9	4848	1.0	85.4	35000	F703_85.4 S4 M4LB4	452	F703_85.4 P132 BN132MB4	453
16.9	4837	1.7	85.2	45000	F803_85.2 S4 M4LB4	455	F803_85.2 P132 BN132MB4	456
18.8	4352	3.2	76.7	55000	F903_76.7 S4 M4LB4	458	F903_76.7 P132 BN132MB4	459
18.9	4329	1.8	76.3	44100	F803_76.3 S4 M4LB4	455	F803_76.3 P132 BN132MB4	456
19.6	4176	1.2	73.6	35000	F703_73.6 S4 M4LB4	452	F703_73.6 P132 BN132MB4	453
20.4	4017	3.5	70.8	55000	F903_70.8 S4 M4LB4	458	F903_70.8 P132 BN132MB4	459
20.5	3996	2.0	70.4	43700	F803_70.4 S4 M4LB4	455	F803_70.4 P132 BN132MB4	456
21.2	3855	1.3	67.9	34600	F703_67.9 S4 M4LB4	452	F703_67.9 P132 BN132MB4	453
23.0	3548	1.4	62.5	34200	F703_62.5 S4 M4LB4	452	F703_62.5 P132 BN132MB4	453
23.4	3489	2.3	61.5	42200	F803_61.5 S4 M4LB4	455	F803_61.5 P132 BN132MB4	456
25.0	3275	1.5	57.7	33700	F703_57.7 S4 M4LB4	452	F703_57.7 P132 BN132MB4	453
25.4	3221	2.5	56.7	41400	F803_56.7 S4 M4LB4	455	F803_56.7 P132 BN132MB4	456
27.8	2942	1.0	51.8	20000	F603_51.8 S4 M4LB4	448	F603_51.8 P132 BN132MB4	449
29.4	2779	1.8	49.0	32800	F703_49.0 S4 M4LB4	452	F703_49.0 P132 BN132MB4	453
30.0	2716	1.1	47.8	20000	F603_47.8 S4 M4LB4	448	F603_47.8 P132 BN132MB4	449
32	2566	1.9	45.2	32300	F703_45.2 S4 M4LB4	452	F703_45.2 P132 BN132MB4	453
34	2389	1.2	42.1	20000	F603_42.1 S4 M4LB4	448	F603_42.1 P132 BN132MB4	449
37	2205	1.3	38.8	20000	F603_38.8 S4 M4LB4	448	F603_38.8 P132 BN132MB4	449
45	1821	1.6	32.1	20000	F603_32.1 S4 M4LB4	448	F603_32.1 P132 BN132MB4	449
48	1742	1.0	30.0	8210	F512_30.0 S4 M4LB4	444	F512_30.0 P132 BN132MB4	445
49	1681	1.7	29.6	20000	F603_29.6 S4 M4LB4	448	F603_29.6 P132 BN132MB4	449
57	1443	1.3	25.4	20000	F603_25.4 S4 M4LB4	448	F603_25.4 P132 BN132MB4	449
59	1394	2.9	24.6	28300	F703_24.6 S4 M4LB4	452	F703_24.6 P132 BN132MB4	453
61	1380	1.2	23.8	8170	F512_23.8 S4 M4LB4	444	F512_23.8 P132 BN132MB4	445
61	1332	1.4	23.5	20000	F603_23.5 S4 M4LB4	448	F603_23.5 P132 BN132MB4	449
64	1283	3.4	22.6	27800	F703_22.6 S4 M4LB4	452	F703_22.6 P132 BN132MB4	453
69	1185	3.4	20.9	27200	F703_20.9 S4 M4LB4	452	F703_20.9 P132 BN132MB4	453
70	1173	1.6	20.7	20000	F603_20.7 S4 M4LB4	448	F603_20.7 P132 BN132MB4	449
76	1096	1.0	18.9	4920	F412_18.9 S4 M4LB4	440	F412_18.9 P132 BN132MB4	441
76	1083	1.8	19.1	20000	F603_19.1 S4 M4LB4	448	F603_19.1 P132 BN132MB4	449
77	1092	1.4	18.8	8020	F512_18.8 S4 M4LB4	444	F512_18.8 P132 BN132MB4	445
84	993	1.1	17.1	5000	F412_17.1 S4 M4LB4	440	F412_17.1 P132 BN132MB4	441
92	890	2.1	15.7	20000	F603_15.7 S4 M4LB4	448	F603_15.7 P132 BN132MB4	449
98	848	1.2	14.6	5070	F412_14.6 S4 M4LB4	440	F412_14.6 P132 BN132MB4	441
99	822	2.3	14.5	20000	F603_14.5 S4 M4LB4	448	F603_14.5 P132 BN132MB4	449
103	811	1.8	14.0	7700	F512_14.0 S4 M4LB4	444	F512_14.0 P132 BN132MB4	445
113	723	2.6	12.7	19700	F603_12.7 S4 M4LB4	448	F603_12.7 P132 BN132MB4	449
123	667	2.8	11.8	19300	F603_11.8 S4 M4LB4	448	F603_11.8 P132 BN132MB4	449
130	644	2.1	11.1	7400	F512_11.1 S4 M4LB4	444	F512_11.1 P132 BN132MB4	445
134	625	1.4	10.8	5080	F412_10.8 S4 M4LB4	440	F412_10.8 P132 BN132MB4	441
148	551	3.4	9.7	18400	F603_9.7 S4 M4LB4	448	F603_9.7 P132 BN132MB4	449
158	530	1.3	9.1	5080	F412_9.1 S4 M4LB4	440	F412_9.1 P132 BN132MB4	441
159	525	2.1	9.1	7040	F512_9.1 S4 M4LB4	444	F512_9.1 P132 BN132MB4	445
200	417	2.3	7.2	6700	F512_7.2 S4 M4LB4	444	F512_7.2 P132 BN132MB4	445
214	390	1.6	6.7	4890	F412_6.7 S4 M4LB4	440	F412_6.7 P132 BN132MB4	441

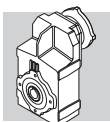


9.2 kW



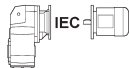

n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
264	317	3.4	11.1	6340	F512_11.1 S4 M4LA2	444	F512_11.1 P132 BN132M2	445
272	307	2.4	10.8	4680	F412_10.8 S4 M4LA2	440	F412_10.8 P132 BN132M2	441
321	260	2.3	9.1	4560	F412_9.1 S4 M4LA2	440	F412_9.1 P132 BN132M2	441
324	258	3.5	9.1	5980	F512_9.1 S4 M4LA2	444	F512_9.1 P132 BN132M2	445
436	192	2.7	6.7	4270	F412_6.7 S4 M4LA2	440	F412_6.7 P132 BN132M2	441

11 kW



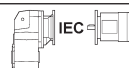

n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
6.2	15369	0.9	231.4	55000	F904_231.4 S4 M4LC4	458	F904_231.4 P160 BN160MR4	459
6.7	14187	1.0	213.6	55000	F904_213.6 S4 M4LC4	458	F904_213.6 P160 BN160MR4	459
7.4	13179	1.1	194.2	55000	F903_194.2 S4 M4LC4	458	F903_194.2 P160 BN160MR4	459
8.0	12165	1.2	179.2	55000	F903_179.2 S4 M4LC4	458	F903_179.2 P160 BN160MR4	459
8.8	11053	1.3	162.8	55000	F903_162.8 S4 M4LC4	458	F903_162.8 P160 BN160MR4	459
9.6	10203	1.4	150.3	55000	F903_150.3 S4 M4LC4	458	F903_150.3 P160 BN160MR4	459
10.5	9323	1.5	137.3	55000	F903_137.3 S4 M4LC4	458	F903_137.3 P160 BN160MR4	459
11.4	8606	1.6	126.8	55000	F903_126.8 S4 M4LC4	458	F903_126.8 P160 BN160MR4	459
11.8	8314	1.0	122.5	45000	F803_122.5 S4 M4LC4	455	F803_122.5 P160 BN160MR4	456
12.7	7721	1.0	113.8	45000	F803_113.8 S4 M4LC4	455	F803_113.8 P160 BN160MR4	456
12.9	7599	1.8	111.9	55000	F903_111.9 S4 M4LC4	458	F903_111.9 P160 BN160MR4	459
13.9	7014	2.0	103.3	55000	F903_103.3 S4 M4LC4	458	F903_103.3 P160 BN160MR4	459
15.0	6500	2.2	95.8	55000	F903_95.8 S4 M4LC4	458	F903_95.8 P160 BN160MR4	459
15.6	6266	1.3	92.3	44100	F803_92.3 S4 M4LC4	455	F803_92.3 P160 BN160MR4	456
16.3	6000	2.3	88.4	55000	F903_88.4 S4 M4LC4	458	F903_88.4 P160 BN160MR4	459
16.9	5784	1.4	85.2	44000	F803_85.2 S4 M4LC4	455	F803_85.2 P160 BN160MR4	456
18.8	5203	2.7	76.7	55000	F903_76.7 S4 M4LC4	458	F903_76.7 P160 BN160MR4	459
18.9	5176	1.5	76.3	42800	F803_76.3 S4 M4LC4	455	F803_76.3 P160 BN160MR4	456
19.6	4993	1.0	73.6	33500	F703_73.6 S4 M4LC4	452	F703_73.6 P160 BN160MR4	453
20.4	4803	2.9	70.8	55000	F903_70.8 S4 M4LC4	458	F903_70.8 P160 BN160MR4	459
20.5	4778	1.7	70.4	42500	F803_70.4 S4 M4LC4	455	F803_70.4 P160 BN160MR4	456
21.2	4609	1.1	67.9	33100	F703_67.9 S4 M4LC4	452	F703_67.9 P160 BN160MR4	453
23.0	4243	1.2	62.5	32900	F703_62.5 S4 M4LC4	452	F703_62.5 P160 BN160MR4	453
23.2	4215	3.3	62.1	55000			F903_62.1 P160 BN160MR4	459
23.4	4172	1.9	61.5	41100	F803_61.5 S4 M4LC4	455	F803_61.5 P160 BN160MR4	456
25.0	3916	1.3	57.7	32500	F703_57.7 S4 M4LC4	452	F703_57.7 P160 BN160MR4	453
25.4	3851	2.1	56.7	40800	F803_56.7 S4 M4LC4	455	F803_56.7 P160 BN160MR4	456
29.3	3333	2.4	49.1	39300			F803_49.1 P160 BN160MR4	456
29.4	3323	1.5	49.0	31800	F703_49.0 S4 M4LC4	452	F703_49.0 P160 BN160MR4	453
32	3068	1.6	45.2	31300	F703_45.2 S4 M4LC4	452	F703_45.2 P160 BN160MR4	453
32	3077	2.6	45.3	38900			F803_45.3 P160 BN160MR4	456
34	2857	1.0	42.1	20000	F603_42.1 S4 M4LC4	448	F603_42.1 P160 BN160MR4	449
37	2637	1.1	38.8	20000	F603_38.8 S4 M4LC4	448	F603_38.8 P160 BN160MR4	449
38	2606	1.9	38.4	30500			F703_38.4 P160 BN160MR4	453
41	2406	2.1	35.4	30000			F703_35.4 P160 BN160MR4	453
45	2178	1.3	32.1	20000	F603_32.1 S4 M4LC4	448	F603_32.1 P160 BN160MR4	449
49	2010	1.4	29.6	20000	F603_29.6 S4 M4LC4	448	F603_29.6 P160 BN160MR4	449
52	1880	2.5	27.7	28500			F703_27.7 P160 BN160MR4	453
57	1725	1.1	25.4	20000	F603_25.4 S4 M4LC4	448	F603_25.4 P160 BN160MR4	449

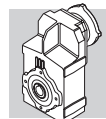


11 kW





n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
59	1667	2.4	24.6	27800	F703_24.6 S4 M4LC4	452	F703_24.6 P160 BN160MR4	453
61	1650	1.0	23.8	7500	F512_23.8 S4 M4LC4	444	F512_23.8 P160 BN160MR4	445
61	1593	1.2	23.5	20000	F603_23.5 S4 M4LC4	448	F603_23.5 P160 BN160MR4	449
64	1534	2.8	22.6	27300	F703_22.6 S4 M4LC4	452	F703_22.6 P160 BN160MR4	453
69	1416	2.8	20.9	26800	F703_20.9 S4 M4LC4	452	F703_20.9 P160 BN160MR4	453
70	1402	1.4	20.7	20000	F603_20.7 S4 M4LC4	448	F603_20.7 P160 BN160MR4	449
76	1294	1.5	19.1	20000	F603_19.1 S4 M4LC4	448	F603_19.1 P160 BN160MR4	449
77	1305	1.2	18.8	7490	F512_18.8 S4 M4LC4	444	F512_18.8 P160 BN160MR4	445
92	1064	1.8	15.7	20000	F603_15.7 S4 M4LC4	448	F603_15.7 P160 BN160MR4	449
98	1014	1.0	14.6	4490	F412_14.6 S4 M4LC4	440		
99	982	1.9	14.5	20000	F603_14.5 S4 M4LC4	448	F603_14.5 P160 BN160MR4	449
103	969	1.5	14.0	7310	F512_14.0 S4 M4LC4	444	F512_14.0 P160 BN160MR4	445
113	864	2.2	12.7	19400	F603_12.7 S4 M4LC4	448	F603_12.7 P160 BN160MR4	449
123	798	2.4	11.8	19000	F603_11.8 S4 M4LC4	448	F603_11.8 P160 BN160MR4	449
130	770	1.7	11.1	7090	F512_11.1 S4 M4LC4	444	F512_11.1 P160 BN160MR4	445
134	747	1.2	10.8	4650	F412_10.8 S4 M4LC4	440		
148	659	2.9	9.7	18200	F603_9.7 S4 M4LC4	448	F603_9.7 P160 BN160MR4	449
158	633	1.1	9.1	4720	F412_9.1 S4 M4LC4	440		
159	628	1.8	9.1	6770	F512_9.1 S4 M4LC4	444	F512_9.1 P160 BN160MR4	445
161	608	3.1	9.0	17800	F603_9.0 S4 M4LC4	448	F603_9.0 P160 BN160MR4	449
200	499	2.0	7.2	6490	F512_7.2 S4 M4LC4	444	F512_7.2 P160 BN160MR4	445
214	466	1.4	6.7	4630	F412_6.7 S4 M4LC4	440		
263	380	2.8	11.1	6170	F512_11.1 S4 M4LC2	444	F512_11.1 P160 BN160MR2	445
271	368	2.0	10.8	4460	F412_10.8 S4 M4LC2	440		
320	312	2.0	9.1	4380	F412_9.1 S4 M4LC2	440		
323	310	2.9	9.1	5840	F512_9.1 S4 M4LC2	444	F512_9.1 P160 BN160MR2	445
406	246	3.2	7.2	5510	F512_7.2 S4 M4LC2	444	F512_7.2 P160 BN160MR2	445
434	230	2.3	6.7	4130	F412_6.7 S4 M4LC2	440		

15 kW





n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
8.1	16362	0.9	179.2	55000	F903_179.2 S5 M5SB4	458	F903_179.2 P160 BN160L4	459
9.0	14866	0.9	162.8	55000	F903_162.8 S5 M5SB4	458	F903_162.8 P160 BN160L4	459
9.7	13722	1.0	150.3	55000	F903_150.3 S5 M5SB4	458	F903_150.3 P160 BN160L4	459
10.6	12539	1.1	137.3	55000	F903_137.3 S5 M5SB4	458	F903_137.3 P160 BN160L4	459
11.5	11574	1.2	126.8	55000	F903_126.8 S5 M5SB4	458	F903_126.8 P160 BN160L4	459
13.0	10220	1.4	111.9	55000	F903_111.9 S5 M5SB4	458	F903_111.9 P160 BN160L4	459
14.1	9434	1.5	103.3	55000	F903_103.3 S5 M5SB4	458	F903_103.3 P160 BN160L4	459
15.2	8743	1.6	95.8	55000	F903_95.8 S5 M5SB4	458	F903_95.8 P160 BN160L4	459
15.8	8427	0.9	92.3	41300	F803_92.3 S5 M5SB4	455	F803_92.3 P160 BN160L4	456
16.5	8070	1.7	88.4	55000	F903_88.4 S5 M5SB4	458	F903_88.4 P160 BN160L4	459
17.1	7779	1.0	85.2	40800	F803_85.2 S5 M5SB4	455	F803_85.2 P160 BN160L4	456
19.0	6998	2.0	76.7	55000	F903_76.7 S5 M5SB4	458	F903_76.7 P160 BN160L4	459
19.1	6961	1.1	76.3	40500	F803_76.3 S5 M5SB4	455	F803_76.3 P160 BN160L4	456
20.6	6460	2.2	70.8	55000	F903_70.8 S5 M5SB4	458	F903_70.8 P160 BN160L4	459
20.7	6426	1.2	70.4	39900	F803_70.4 S5 M5SB4	455	F803_70.4 P160 BN160L4	456
23.5	5669	2.5	62.1	55000			F903_62.1 P160 BN160L4	459

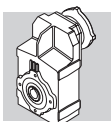


15 kW



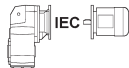

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
23.8	5611	1.4	61.5	38700	F803_61.5 S5 M5SB4	455	F803_61.5 P160 BN160L4	456
25.3	5267	0.9	57.7	29700	F703_57.7 S5 M5SB4	452	F703_57.7 P160 BN160L4	453
25.5	5233	2.7	57.3	55000			F903_57.3 P160 BN160L4	459
25.7	5179	1.5	56.7	38600	F803_56.7 S5 M5SB4	455	F803_56.7 P160 BN160L4	456
29.7	4483	1.8	49.1	37800			F803_49.1 P160 BN160L4	456
29.8	4470	1.1	49.0	29400	F703_49.0 S5 M5SB4	452	F703_49.0 P160 BN160L4	453
32	4126	1.2	45.2	29100	F703_45.2 S5 M5SB4	452	F703_45.2 P160 BN160L4	453
32	4138	1.9	45.3	37200			F803_45.3 P160 BN160L4	456
38	3505	1.4	38.4	28600			F703_38.4 P160 BN160L4	453
41	3235	1.5	35.4	28200			F703_35.4 P160 BN160L4	453
46	2929	1.0	32.1	20000	F603_32.1 S5 M5SB4	448	F603_32.1 P160 BN160L4	449
49	2704	1.1	29.6	20000	F603_29.6 S5 M5SB4	448	F603_29.6 P160 BN160L4	449
53	2528	1.8	27.7	27100			F703_27.7 P160 BN160L4	453
58	2303	2.7	25.2	32900	F803_25.2 S5 M5SB4	455	F803_25.2 P160 BN160L4	456
59	2242	1.8	24.6	26500	F703_24.6 S5 M5SB4	452	F703_24.6 P160 BN160L4	453
65	2064	2.1	22.6	26200	F703_22.6 S5 M5SB4	452	F703_22.6 P160 BN160L4	453
66	2011	3.4	22.0	31900	F803_22.0 S5 M5SB4	455	F803_22.0 P160 BN160L4	456
70	1905	2.1	20.9	25700	F703_20.9 S5 M5SB4	452	F703_20.9 P160 BN160L4	453
71	1886	1.0	20.7	20000	F603_20.7 S5 M5SB4	448	F603_20.7 P160 BN160L4	449
72	1856	3.4	20.3	31300	F803_20.3 S5 M5SB4	455	F803_20.3 P160 BN160L4	456
77	1741	1.1	19.1	20000	F603_19.1 S5 M5SB4	448	F603_19.1 P160 BN160L4	449
82	1617	2.7	17.7	24900	F703_17.7 S5 M5SB4	452	F703_17.7 P160 BN160L4	453
89	1492	2.7	16.3	24400	F703_16.3 S5 M5SB4	452	F703_16.3 P160 BN160L4	453
93	1432	1.3	15.7	19600	F603_15.7 S5 M5SB4	448	F603_15.7 P160 BN160L4	449
101	1321	1.4	14.5	19200	F603_14.5 S5 M5SB4	448	F603_14.5 P160 BN160L4	449
105	1268	3.1	13.9	23600	F703_13.9 S5 M5SB4	452	F703_13.9 P160 BN160L4	453
114	1170	3.1	12.8	23100	F703_12.8 S5 M5SB4	452	F703_12.8 P160 BN160L4	453
115	1162	1.6	12.7	18800	F603_12.7 S5 M5SB4	448	F603_12.7 P160 BN160L4	449
124	1073	1.8	11.8	18400	F603_11.8 S5 M5SB4	448	F603_11.8 P160 BN160L4	449
135	991	3.5	10.9	22300	F703_10.9 S5 M5SB4	452	F703_10.9 P160 BN160L4	453
146	914	3.5	10.0	21800	F703_10.0 S5 M5SB4	452	F703_10.0 P160 BN160L4	453
150	886	2.1	9.7	17700	F603_9.7 S5 M5SB4	448	F603_9.7 P160 BN160L4	449
163	818	2.3	9.0	17300	F603_9.0 S5 M5SB4	448	F603_9.0 P160 BN160L4	449

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	458	F903_137.3 P180 BN180M4	459
11.5	14267	1.0	126.8	55000	F903_126.8 S5 M5LA4	458	F903_126.8 P180 BN180M4	459
13.0	12598	1.1	111.9	55000	F903_111.9 S5 M5LA4	458	F903_111.9 P180 BN180M4	459
14.1	11629	1.2	103.3	55000	F903_103.3 S5 M5LA4	458	F903_103.3 P180 BN180M4	459
15.2	10777	1.3	95.8	55000	F903_95.8 S5 M5LA4	458	F903_95.8 P180 BN180M4	459
16.5	9948	1.4	88.4	55000	F903_88.4 S5 M5LA4	458	F903_88.4 P180 BN180M4	459
19.0	8626	1.6	76.7	55000	F903_76.7 S5 M5LA4	458	F903_76.7 P180 BN180M4	459
19.1	8581	0.9	76.3	38100	F803_76.3 S5 M5LA4	455	F803_76.3 P180 BN180M4	456
20.6	7963	1.8	70.8	55000	F903_70.8 S5 M5LA4	458	F903_70.8 P180 BN180M4	459
20.7	7921	1.0	70.4	37600	F803_70.4 S5 M5LA4	455	F803_70.4 P180 BN180M4	456
23.5	6989	2.0	62.1	55000			F903_62.1 P180 BN180M4	459

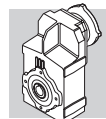


18.5 kW



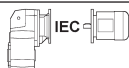

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
23.8	6916	1.1	61.5	37400	F803_61.5 S5 M5LA4	455	F803_61.5 P180 BN180M4	456
25.5	6451	2.2	57.3	55000			F903_57.3 P180 BN180M4	459
25.7	6384	1.3	56.7	36800	F803_56.7 S5 M5LA4	455	F803_56.7 P180 BN180M4	456
29.3	5615	2.5	49.9	55000			F903_49.9 P180 BN180M4	459
29.7	5526	1.4	49.1	35800	F703_49.0 S5 M5LA4	452	F803_49.1 P180 BN180M4	456
29.8	5510	0.9	49.0	27400			F703_49.0 P180 BN180M4	453
32	5183	2.7	46.1	55000			F903_46.1 P180 BN180M4	459
32	5101	1.6	45.3	35700			F803_45.3 P180 BN180M4	456
32	5086	1.0	45.2	27200			F703_45.2 P180 BN180M4	453
36	4558	3.1	40.5	53700			F903_40.5 P180 BN180M4	459
37	4389	1.8	39.0	35000			F803_39.0 P180 BN180M4	456
38	4321	1.2	38.4	27000			F703_38.4 P180 BN180M4	453
39	4207	3.2	37.4	52700			F903_37.4 P180 BN180M4	459
41	4051	2.0	36.0	34400			F803_36.0 P180 BN180M4	456
41	3988	1.3	35.4	26700			F703_35.4 P180 BN180M4	453
47	3517	2.3	31.3	33600			F803_31.3 P180 BN180M4	456
49	3376	1.5	30.0	26300			F703_30.0 P180 BN180M4	453
51	3246	2.5	28.8	33000			F803_28.8 P180 BN180M4	456
53	3116	1.5	27.7	26000			F703_27.7 P180 BN180M4	453
58	2839	2.2	25.2	32100	F803_25.2 S5 M5LA4	455	F803_25.2 P180 BN180M4	456
59	2764	1.4	24.6	25500	F703_24.6 S5 M5LA4	452	F703_24.6 P180 BN180M4	453
65	2544	1.7	22.6	25200	F703_22.6 S5 M5LA4	452	F703_22.6 P180 BN180M4	453
66	2479	2.7	22.0	31300	F803_22.0 S5 M5LA4	455	F803_22.0 P180 BN180M4	456
70	2348	1.7	20.9	24900	F703_20.9 S5 M5LA4	452	F703_20.9 P180 BN180M4	453
72	2288	2.7	20.3	30600	F803_20.3 S5 M5LA4	455	F803_20.3 P180 BN180M4	456
82	1993	2.2	17.7	24200	F703_17.7 S5 M5LA4	452	F703_17.7 P180 BN180M4	453
83	1981	3.4	17.6	29700	F803_17.6 S5 M5LA4	455	F803_17.6 P180 BN180M4	456
89	1839	2.2	16.3	23800	F703_16.3 S5 M5LA4	452	F703_16.3 P180 BN180M4	453
90	1828	3.4	16.2	29100	F803_16.2 S5 M5LA4	455	F803_16.2 P180 BN180M4	456
93	1765	1.1	15.7	18700	F603_15.7 S5 M5LA4	448	F603_15.7 P180 BN180M4	449
101	1629	1.2	14.5	18600	F603_14.5 S5 M5LA4	448	F603_14.5 P180 BN180M4	449
105	1563	2.5	13.9	23000	F703_13.9 S5 M5LA4	452	F703_13.9 P180 BN180M4	453
114	1442	2.5	12.8	22600	F703_12.8 S5 M5LA4	452	F703_12.8 P180 BN180M4	453
115	1433	1.3	12.7	18300	F603_12.7 S5 M5LA4	448	F603_12.7 P180 BN180M4	449
124	1323	1.4	11.8	17900	F603_11.8 S5 M5LA4	448	F603_11.8 P180 BN180M4	449
135	1221	2.8	10.9	21800	F703_10.9 S5 M5LA4	452	F703_10.9 P180 BN180M4	453
146	1127	2.8	10.0	21400	F703_10.0 S5 M5LA4	452	F703_10.0 P180 BN180M4	453
150	1092	1.7	9.7	17300	F603_9.7 S5 M5LA4	448	F603_9.7 P180 BN180M4	449
163	1008	1.9	9.0	16900	F603_9.0 S5 M5LA4	448	F603_9.0 P180 BN180M4	449

22 kW





n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
13.1	14880	0.9	111.9	55000			F903_111.9 P180 BN180L4	459
14.2	13735	1.0	103.3	55000			F903_103.3 P180 BN180L4	459
15.4	12728	1.1	95.8	55000			F903_95.8 P180 BN180L4	459
16.6	11749	1.2	88.4	55000			F903_88.4 P180 BN180L4	459
19.2	10188	1.4	76.7	55000			F903_76.7 P180 BN180L4	459

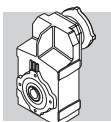


22 kW



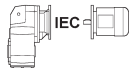

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
20.8	9405	1.5	70.8	55000			F903_70.8 P180 BN180L4	459
23.7	8254	1.7	62.1	55000			F903_62.1 P180 BN180L4	459
23.9	8169	1.0	61.5	35400			F803_61.5 P180 BN180L4	456
25.6	7619	1.8	57.3	55000			F903_57.3 P180 BN180L4	459
25.9	7541	1.1	56.7	35000			F803_56.7 P180 BN180L4	456
29.5	6632	2.1	49.9	54400			F903_49.9 P180 BN180L4	459
29.9	6527	1.2	49.1	34100			F803_49.1 P180 BN180L4	456
32	6122	2.3	46.1	53500			F903_46.1 P180 BN180L4	459
32	6025	1.3	45.3	34300			F803_45.3 P180 BN180L4	456
36	5383	2.6	40.5	52300			F903_40.5 P180 BN180L4	459
38	5184	1.5	39.0	33300			F803_39.0 P180 BN180L4	456
38	5103	1	38.4	25400			F703_38.4 P180 BN180L4	453
39	4969	2.7	37.4	51400			F903_37.4 P180 BN180L4	459
41	4785	1.7	36.0	33200			F803_36.0 P180 BN180L4	456
41	4711	1.1	35.4	25300			F703_35.4 P180 BN180L4	453
47	4154	1.9	31.3	32600			F803_31.3 P180 BN180L4	456
47	4120	3.2	31.0	49500			F903_31.0 P180 BN180L4	459
49	3988	1.3	30.0	25100			F703_30.0 P180 BN180L4	453
51	3834	2.1	28.8	32000			F803_28.8 P180 BN180L4	456
51	3803	3.2	28.6	48600			F903_28.6 P180 BN180L4	459
53	3681	1.3	27.7	24800			F703_27.7 P180 BN180L4	453
58	3353	1.9	25.2	31300			F803_25.2 P180 BN180L4	456
60	3264	1.2	24.6	24500			F703_24.6 P180 BN180L4	453
65	3005	1.4	22.6	24300			F703_22.6 P180 BN180L4	453
67	2928	2.3	22	30200			F803_22.0 P180 BN180L4	456
70	2773	1.4	20.9	24000			F703_20.9 P180 BN180L4	453
72	2703	2.3	20.3	29900			F803_20.3 P180 BN180L4	456
83	2354	1.8	17.7	23400			F703_17.7 P180 BN180L4	453
84	2339	2.9	17.6	29100			F803_17.6 P180 BN180L4	456
90	2173	1.8	16.3	23100			F703_16.3 P180 BN180L4	453
90	2159	2.9	16.2	28500			F803_16.2 P180 BN180L4	456
106	1846	2.1	13.9	22400			F703_13.9 P180 BN180L4	453
115	1704	2.1	12.8	22100			F703_12.8 P180 BN180L4	453
115	1692	1.1	12.7	17700			F603_12.7 P180 BN180L4	449
125	1562	1.2	11.8	17400			F603_11.8 P180 BN180L4	449
135	1442	2.4	10.9	21400			F703_10.9 P180 BN180L4	453
147	1331	2.4	10.0	21000			F703_10.0 P180 BN180L4	453
151	1290	1.5	9.7	16900			F603_9.7 P180 BN180L4	449
164	1191	1.6	9.0	16500			F603_9.0 P180 BN180L4	449

30 kW



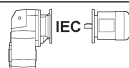

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
16.6	16022	0.9	88.4	52200			F903_88.4 P200 BN200L4	459
19.2	13893	1.0	76.7	52400			F903_76.7 P200 BN200L4	459
20.8	12825	1.1	70.8	52100			F903_70.8 P200 BN200L4	459
23.7	11256	1.2	62.1	51800			F903_62.1 P200 BN200L4	459

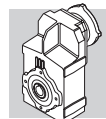


30 kW



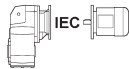

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
25.6	10390	1.3	57.3	51400			F903_57.3 P200 BN200L4	459
29.5	9044	1.5	49.9	50800			F903_49.9 P200 BN200L4	459
32	8348	1.7	46.1	50200			F903_46.1 P200 BN200L4	459
32	8216	1.0	45.3	30900			F803_45.3 P200 BN200L4	456
36	7341	1.9	40.5	49400			F903_40.5 P200 BN200L4	459
38	7069	1.1	39.0	31000			F803_39.0 P200 BN200L4	456
39	6776	2.0	37.4	48700			F903_37.4 P200 BN200L4	459
41	6525	1.2	36.0	30600			F803_36.0 P200 BN200L4	456
47	5664	1.4	31.3	29900			F803_31.3 P200 BN200L4	456
47	5618	2.3	31.0	47300			F903_31.0 P200 BN200L4	459
49	5438	0.9	30.0	22300			F703_30.0 P200 BN200L4	453
51	5229	1.5	28.8	29500			F803_28.8 P200 BN200L4	456
51	5186	2.3	28.6	46600			F903_28.6 P200 BN200L4	459
53	5019	0.9	27.7	22200			F703_27.7 P200 BN200L4	453
58	4601	2.6	25.4	45500			F903_25.4 P200 BN200L4	459
58	4572	1.2	25.2	29500			F803_25.2 P200 BN200L4	456
66	4039	3.0	22.3	44400			F903_22.3 P200 BN200L4	459
67	3992	1.7	22.0	29000			F803_22.0 P200 BN200L4	456
71	3728	3.0	20.6	43600			F903_20.6 P200 BN200L4	459
72	3685	1.7	20.3	28500			F803_20.3 P200 BN200L4	456
83	3209	1.4	17.7	21800			F703_17.7 P200 BN200L4	453
84	3190	2.1	17.6	27900			F803_17.6 P200 BN200L4	456
90	2963	1.4	16.3	21500			F703_16.3 P200 BN200L4	453
90	2945	2.1	16.2	27400			F803_16.2 P200 BN200L4	456
105	2534	2.7	14.0	26700			F803_14.0 P200 BN200L4	456
106	2517	1.5	13.9	21100			F703_13.9 P200 BN200L4	453
114	2339	2.7	12.9	26200			F803_12.9 P200 BN200L4	456
115	2323	1.5	12.8	20900			F703_12.8 P200 BN200L4	453
135	1967	1.8	10.9	20300			F703_10.9 P200 BN200L4	453
142	1874	3.0	10.3	24900			F803_10.3 P200 BN200L4	456
147	1815	1.8	10.0	20000			F703_10.0 P200 BN200L4	453

37 kW



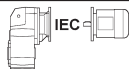

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
20.9	15710	0.9	70.8	47600			F903_70.8 P225 BN225S4	459
25.8	12728	1.1	57.3	47700			F903_57.3 P225 BN225S4	459
29.7	11079	1.3	49.9	47600			F903_49.9 P225 BN225S4	459
32	10227	1.4	46.1	47200			F903_46.1 P225 BN225S4	459
37	8993	1.6	40.5	46800			F903_40.5 P225 BN225S4	459
38	8659	0.9	39.0	28500			F803_39.0 P225 BN225S4	456
40	8301	1.6	37.4	46300			F903_37.4 P225 BN225S4	459
41	7993	1.0	36.0	28300			F803_36.0 P225 BN225S4	456
47	6939	1.2	31.3	28400			F803_31.3 P225 BN225S4	456
48	6882	1.9	31.0	45300			F903_31.0 P225 BN225S4	459
51	6405	1.2	28.8	28100			F803_28.8 P225 BN225S4	456
52	6353	1.9	28.6	44700			F903_28.6 P225 BN225S4	459
58	5637	2.1	25.4	43900			F903_25.4 P225 BN225S4	459

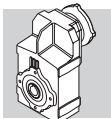


37 kW



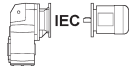

n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
59	5601	1.1	25.2	27800			F803_25.2 P225 BN225S4	456
66	4947	2.4	22.3	43000			F903_22.3 P225 BN225S4	459
67	4891	1.1	22.0	27600			F803_22.0 P225 BN225S4	456
72	4567	2.5	20.6	42300			F903_20.6 P225 BN225S4	459
73	4515	1.1	20.3	27200			F803_20.3 P225 BN225S4	456
83	3975	2.8	17.9	41200			F903_17.9 P225 BN225S4	459
84	3908	1.7	17.6	26800			F803_17.6 P225 BN225S4	456
90	3669	2.8	16.5	40500			F903_16.5 P225 BN225S4	459
91	3607	1.7	16.2	26300			F803_16.2 P225 BN225S4	456
102	3226	3.1	14.5	39500			F903_14.5 P225 BN225S4	459
106	3104	2.2	14.0	25800			F803_14.0 P225 BN225S4	456
110	2978	3.1	13.4	38700			F903_13.4 P225 BN225S4	459
115	2865	2.2	12.9	25300			F803_12.9 P225 BN225S4	456
132	2487	2.4	11.2	24500			F803_11.2 P225 BN225S4	456
143	2296	2.4	10.3	24300			F803_10.3 P225 BN225S4	456

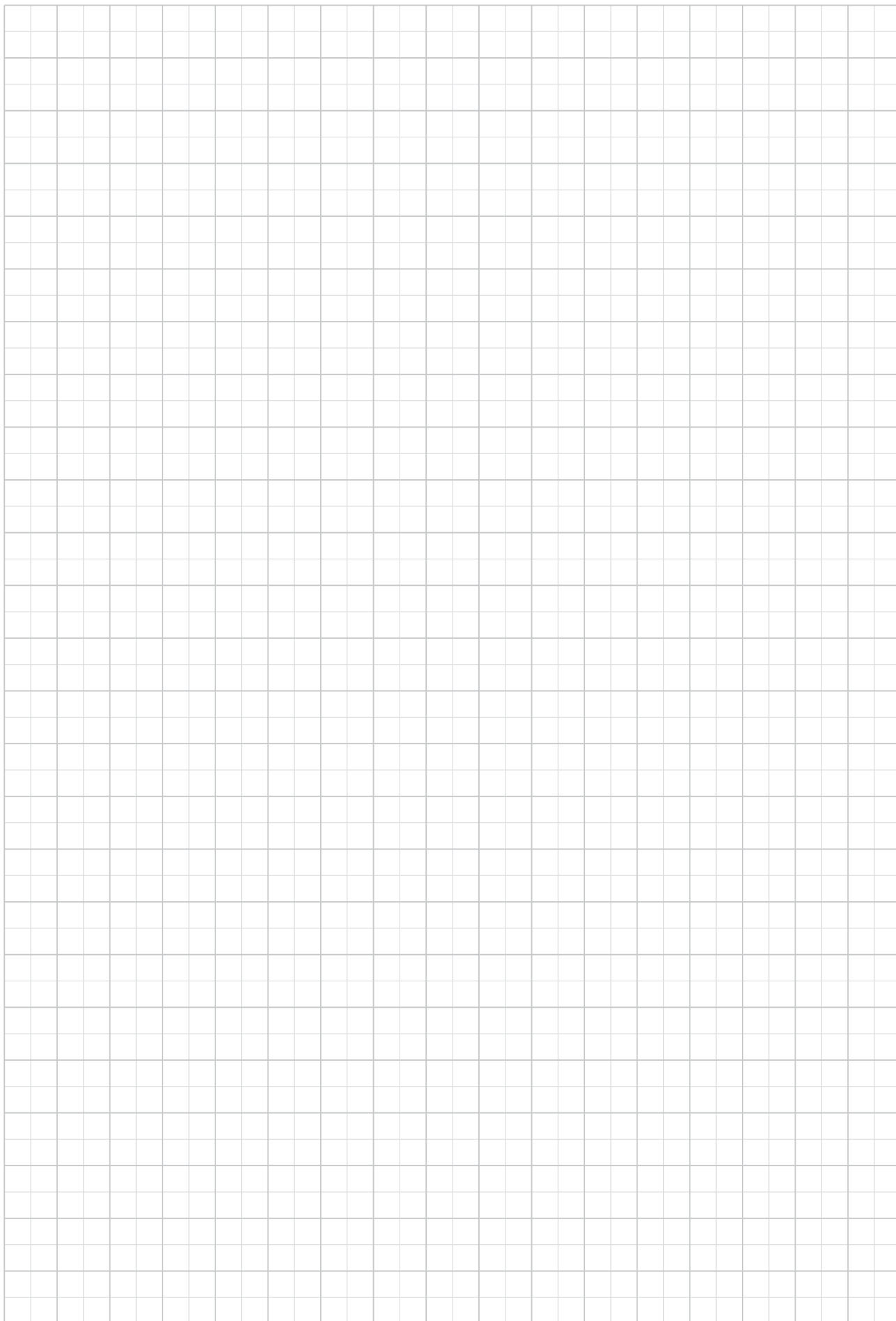
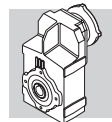
45 kW

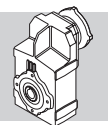
n_2 min ⁻¹	M_2 Nm	S	i	R_{n2} N				
32	12438	1.1	46.1	43900			F903_46.1 P225 BN225M4	459
37	10937	1.3	40.5	43900			F903_40.5 P225 BN225M4	459
40	10096	1.3	37.4	43600			F903_37.4 P225 BN225M4	459
47	8439	0.9	31.3	26100			F803_31.3 P225 BN225M4	456
48	8370	1.6	31.0	43100			F903_31.0 P225 BN225M4	459
51	7790	1.0	28.8	26000			F803_28.8 P225 BN225M4	456
52	7726	1.6	28.6	42600			F903_28.6 P225 BN225M4	459
58	6855	1.8	25.4	42000			F903_25.4 P225 BN225M4	459
66	6017	2.0	22.3	41400			F903_22.3 P225 BN225M4	459
67	5948	1.1	22.0	26000			F803_22.0 P225 BN225M4	456
72	5554	2.0	20.6	40800			F903_20.6 P225 BN225M4	459
73	5491	1.1	20.3	25700			F803_20.3 P225 BN225M4	456
83	4834	2.3	17.9	39900			F903_17.9 P225 BN225M4	459
84	4753	1.4	17.6	25500			F803_17.6 P225 BN225M4	456
90	4463	2.3	16.5	39300			F903_16.5 P225 BN225M4	459
91	4387	1.4	16.2	25200			F803_16.2 P225 BN225M4	456
102	3924	2.5	14.5	38400			F903_14.5 P225 BN225M4	459
106	3775	1.8	14.0	24800			F803_14.0 P225 BN225M4	456
110	3622	2.6	13.4	37800			F903_13.4 P225 BN225M4	459
115	3484	1.8	12.9	24100			F803_12.9 P225 BN225M4	456
132	3025	1.5	11.2	24000			F803_11.2 P225 BN225M4	456
133	3003	2.9	11.1	36400			F903_11.1 P225 BN225M4	459
143	2792	2.0	10.3	23500			F803_10.3 P225 BN225M4	456





55 kW

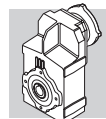
n₂ min ⁻¹	M₂ Nm	S	i	R_{n2} N				
32	15202	0.9	46.1	39700			F903_46.1 P250 BN250M4	459
37	13367	1.0	40.5	40300			F903_40.5 P250 BN250M4	459
40	12339	1.1	37.4	40200			F903_37.4 P250 BN250M4	459
48	10230	1.3	31.0	40300			F903_31.0 P250 BN250M4	459
52	9443	1.3	28.6	40100			F903_28.6 P250 BN250M4	459
58	8379	1.4	25.4	39700			F903_25.4 P250 BN250M4	459
66	7354	1.6	22.3	39400			F903_22.3 P250 BN250M4	459
72	6788	1.7	20.6	38900			F903_20.6 P250 BN250M4	459
83	5909	1.9	17.9	38300			F903_17.9 P250 BN250M4	459
90	5454	1.9	16.5	37800			F903_16.5 P250 BN250M4	459
102	4796	2.1	14.5	37100			F903_14.5 P250 BN250M4	459
110	4427	2.1	13.4	36600			F903_13.4 P250 BN250M4	459
133	3671	2.4	11.1	35400			F903_11.1 P250 BN250M4	459
144	3388	2.4	10.3	34800			F903_10.3 P250 BN250M4	459







F 10 **140 Nm**

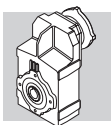
	i	n ₁ = 2800 min ⁻¹					n ₁ = 1400 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 10 2_7.4	7.4	378	63	2.6	1000	1290	189	76	1.6	1290	1640	417
F 10 2_8.6	8.6	326	67	2.4	980	1350	163	82	1.5	1260	1710	
F 10 2_9.8	9.8	287	73	2.3	980	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

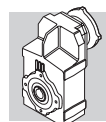
	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		n_2 min ⁻¹	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min ⁻¹	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
F 10 2_7.4	7.4	122	91	1.2	1300	1890	68	111	0.83	1300	2300	417
F 10 2_8.6	8.6	105	94	1.1	1300	1970	58	112	0.72	1300	2430	
F 10 2_9.8	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	421
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)

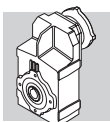


F 20

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	421
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	

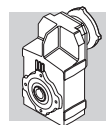
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



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	425
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)

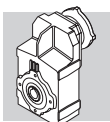


F 25



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	425
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	

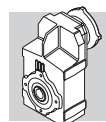
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



F 31 600 Nm



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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	
F 31 2_6.9	6.9	403	295	13.1	—	2710	201	360	8.0	—	3460	429
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	

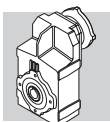
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)





F 31

600 Nm

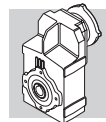
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 31 2_6.9	6.9	130	390	5.6	640	4120	72	390	3.1	2200	5350	429
F 31 2_8.2	8.2	109	390	4.7	990	4450	61	390	2.6	2200	5760	
F 31 2_9.0	9.0	100	390	4.3	1320	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	431
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)

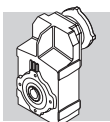


F 41

1100 Nm



	i	$n_1 = 900 \text{ min}^{-1}$					$n_1 = 500 \text{ min}^{-1}$					
		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	
F 41 2_6.7	6.7	134	670	9.9	—	4980	74	700	5.7	1760	6450	431
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	

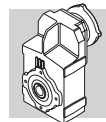
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)





F 51

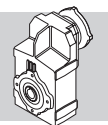
1800 Nm

	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	437
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	437
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	



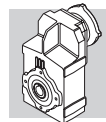
F 60

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	
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	

441

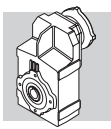
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)





F 60 2900 Nm

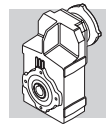
	i	n ₁ = 900 min ⁻¹					n ₁ = 500 min ⁻¹					
		n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	n ₂ min ⁻¹	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N	
F 60 3_9.0	9.0	100	1340	15.1	—	18800	56	1630	10.2	—	20000	441
F 60 3_9.7	9.7	93	1460	15.3	—	19000	52	1780	10.4	—	20000	
F 60 3_11.8	11.8	76	1500	12.9	—	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	445
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	

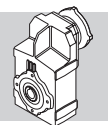


F 70

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	
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	

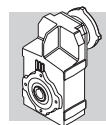
445



F 80 8000 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	
F 80 3_10.3	10.3	272	3250	100	610	17200	136	4100	63	220	21800	
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	

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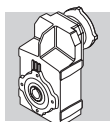


F 80

8000 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	
F 80 3_10.3	10.3	87	4740	47	—	24700	49	5770	32	—	29300	448
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)

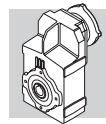


F 90 14000 Nm

	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	
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	

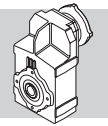
451

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



F 90 14000 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	
F 90 3_10.3	10.3	87	9150	90	10000	33400	49	9600	53	15000	41900	451
F 90 3_11.1	11.1	81	10050	92	9780	32700	45	10400	53	15000	41600	
F 90 3_13.4	13.4	67	10600	80	9270	35100	37	12500	53	12700	42100	
F 90 3_14.5	14.5	62	11400	80	9390	34600	34	13550	53	12700	41400	
F 90 3_16.5	16.5	55	11750	72	8890	36600	30	12300	42	14600	46400	
F 90 3_17.9	17.9	50	12550	71	9140	36200	27.9	13150	41	14800	46200	
F 90 3_20.6	20.6	44	12200	60	9100	39700	24.3	12200	33	15000	51000	
F 90 3_22.3	22.3	40	13200	60	9120	39000	22.4	13200	33	15000	50700	
F 90 3_25.4	25.4	35	12000	48	10400	43800	19.7	12000	27	15000	55000	
F 90 3_28.6	28.6	31	13700	49	14400	43400	17.5	14000	28	15000	55000	
F 90 3_31.0	31.0	29.0	14000	46	14500	44000	16.1	14000	26	15000	55000	
F 90 3_37.4	37.4	24.1	14000	38	14700	48400	13.4	14000	21	15000	55000	
F 90 3_40.5	40.5	22.2	14000	35	14800	49600	12.3	14000	19.5	15000	55000	
F 90 3_46.1	46.1	19.5	14000	31	14900	53000	10.8	14000	17.2	15000	55000	
F 90 3_49.9	49.9	18.0	14000	29	15000	54200	10.0	14000	15.8	15000	55000	
F 90 3_57.3	57.3	15.7	14000	25	15000	55000	8.7	14000	13.8	15000	55000	
F 90 3_62.1	62.1	14.5	14000	23	15000	55000	8.1	14000	12.7	15000	55000	
F 90 3_70.8	70.8	12.7	14000	20	15000	55000	7.1	14000	11.2	15000	55000	
F 90 3_76.7	76.7	11.7	14000	18.6	15000	55000	6.5	14000	10.3	15000	55000	
F 90 3_88.4	88.4	10.2	14000	16.1	15000	55000	5.7	14000	8.9	15000	55000	
F 90 3_95.8	95.8	9.4	14000	14.9	15000	55000	5.2	14000	8.3	15000	55000	
F 90 3_103.3	103.3	8.7	14000	13.8	15000	55000	4.8	14000	7.7	15000	55000	
F 90 3_111.9	111.9	8.0	14000	12.7	15000	55000	4.5	14000	7.1	15000	55000	
F 90 3_126.8	126.8	7.1	14000	11.2	15000	55000	3.9	14000	6.2	15000	55000	
F 90 3_137.3	137.3	6.6	14000	10.4	15000	55000	3.6	14000	5.8	15000	55000	
F 90 3_150.3	150.3	6.0	14000	9.5	15000	55000	3.3	14000	5.3	15000	55000	
F 90 3_162.8	162.8	5.5	14000	8.7	15000	55000	3.1	14000	4.9	15000	55000	
F 90 3_179.2	179.2	5.0	14000	7.9	15000	55000	2.8	14000	4.4	15000	55000	
F 90 3_194.2	194.2	4.6	14000	7.3	15000	55000	2.6	14000	4.1	15000	55000	
F 90 4_213.6	213.6	4.2	14000	6.8	810	55000	2.3	14000	3.8	2350	55000	
F 90 4_231.4	231.4	3.9	14000	6.3	810	55000	2.2	14000	3.5	2350	55000	
F 90 4_268.7	268.7	3.3	14000	5.4	1390	55000	1.9	14000	3.0	2920	55000	
F 90 4_291.1	291.1	3.1	14000	5.0	1390	55000	1.7	14000	2.8	2920	55000	
F 90 4_361.8	361.8	2.5	14000	4.0	1960	55000	1.4	14000	2.2	3390	55000	
F 90 4_392.0	392.0	2.3	14000	3.7	1960	55000	1.3	14000	2.1	3390	55000	
F 90 4_457.5	457.5	2.0	14000	3.2	2360	55000	1.1	14000	1.8	3490	55000	
F 90 4_495.6	495.6	1.8	14000	2.9	2360	55000	1.0	14000	1.6	3490	55000	
F 90 4_577.5	577.5	1.6	14000	2.5	2570	55000	0.87	14000	1.4	3500	55000	
F 90 4_625.6	625.6	1.4	14000	2.3	2570	55000	0.80	14000	1.3	3500	55000	
F 90 4_714.0	714.0	1.3	14000	2.0	2770	55000	0.70	14000	1.1	3500	55000	
F 90 4_773.4	773.4	1.2	14000	1.9	2770	55000	0.65	14000	1.0	3500	55000	
F 90 4_910.2	910.2	0.99	14000	1.6	2840	55000	0.55	14000	0.89	3500	55000	
F 90 4_986.0	986.0	0.91	14000	1.5	2840	55000	0.51	14000	0.82	3500	55000	
F 90 4_1112	1112	0.81	14000	1.3	2860	55000	0.45	14000	0.73	3500	55000	
F 90 4_1205	1205	0.75	14000	1.2	2860	55000	0.41	14000	0.67	3500	55000	
F 90 4_1318	1318	0.68	14000	1.1	2890	55000	0.38	14000	0.62	3500	55000	
F 90 4_1428	1428	0.63	14000	1.0	2890	55000	0.35	14000	0.57	3500	55000	
F 90 4_1571	1571	0.57	14000	0.93	2900	55000	0.32	14000	0.52	3500	55000	
F 90 4_1702	1702	0.53	14000	0.86	2900	55000	0.29	14000	0.48	3500	55000	
F 90 4_1937	1937	0.46	14000	0.75	2910	55000	0.26	14000	0.42	3500	55000	
F 90 4_2099	2099	0.43	14000	0.70	2910	55000	0.24	14000	0.39	3500	55000	



61 MOTOR AVAILABILITY

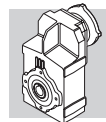
Please be aware that motor-gearbox combinations resulting from the following charts are purely based on geometrical compatibility.

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


(D 56)

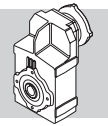
													
		BN										IEC	
P _{n1} (#) [kW]	2p	0.37	0.75	1.5	2.2	4	4	9.2	18.5	22	30	45	55
	4p	0.25	0.55	1.1	1.85	3	4	9.2	15	22	30	47	55
	6p	0.12	0.37	0.75	1.1	1.85	2.2	5.5	11	15	18.5	30	37
		P63	P71	P80	P90	P100	P112	P132	P160	P180	P200	P225	P250
F 10 2	i =	7.4_127.1		7.4_91.5		7.4_91.5							
F 20 2		8.7_132.2 ⊖(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_200.0 ⊖(28.8_49.1)	12.9_200.0 ⊖(28.8_31.3)	10.3_200.0	10.3_132.7	10.3_132.7	
F 80 4	451.5_1987		218.5_1987		218.5_1987		218.5_972.0						
F 90 3			126.8_194.2		126.8_194.2		25.4_194.2 ⊖(28.6_62.1)	20.6_194.2 ⊖(28.6_49.9)	10.3_194.2	10.3_162.8	10.3_162.8	10.3_162.8	
F 90 4	577.5_2099		213.6_2099		213.6_2099		213.6_1205	213.6_1205	213.6_1205				

(#) P_{n1} = maximum installable power on input P₋



(D 57)

							
		M05	M1	M2	M3	M4	M5
F 10 2		7.4_127.1	7.4_71.1	7.4_91.5	7.4_91.5		
F 20 2		8.7_132.2 ⊖ (14.8_18.1)	8.7_90.4 ⊖ (14.8_18.1)	6.4_114.3	6.4_114.3		
F 20 3		156.3_545.3	156.3_545.3	156.3_545.3	156.3_545.3		
F 25 2		9.4_44.4 ⊖ (10.6_13.0)	9.4_44.4 ⊖ (10.6_13.0)	6.9_44.4	6.9_44.4		
F 25 3		50.8_333.1	50.8_227.8	45.6_288.1	45.6_288.1		
F 25 4		393.9_1374	393.9_1374	393.9_1374	393.9_1374		
F 31 2			18.5_44.6	6.9_44.6	6.9_44.6	6.9_37.7	
F 31 3			69.1_293.8	47.5_374.4	47.5_374.4	47.5_140.7	
F 31 4		418.9_1539	418.9_1539	418.9_1539	418.9_1539		
F 41 2			24.1_47.9	6.7_47.9	6.7_47.9	6.7_47.9	
F 41 3			84.9_344.8	51.5_344.8	51.5_344.8	51.5_168.7	
F 41 4	i =	433.7_1411	433.7_1411	433.7_1411	433.7_1411		
F 51 2			30.0_37.1	7.2_37.1	7.2_37.1	7.2_37.1	7.2_37.1
F 51 3			105.1_352.5	48.9_352.5	48.9_352.5	48.9_202.4	48.9_202.4
F 51 4			429.1_1439	429.1_1439	429.1_1439	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		
F 70 3				85.4_196.0	85.4_196.0	16.3_196.0 ⊖ (27.7_38.4)	16.3_196.0 ⊖ (27.7_38.4)
F 70 4			372.5_2188	216.5_2188	216.5_2188	216.5_822.2	
F 80 3					105.0_200.0	20.3_200.0 ⊖ (28.8_49.1)	20.3_200.0 ⊖ (28.8_49.1)
F 80 4			451.5_1987	218.5_1987	218.5_1987	218.5_972.0	
F 90 3					126.8_194.2	25.4_194.2 ⊖ (28.6_62.1)	25.4_194.2 ⊖ (28.6_62.1)
F 90 4				213.6_2099	213.6_2099	213.6_1205	



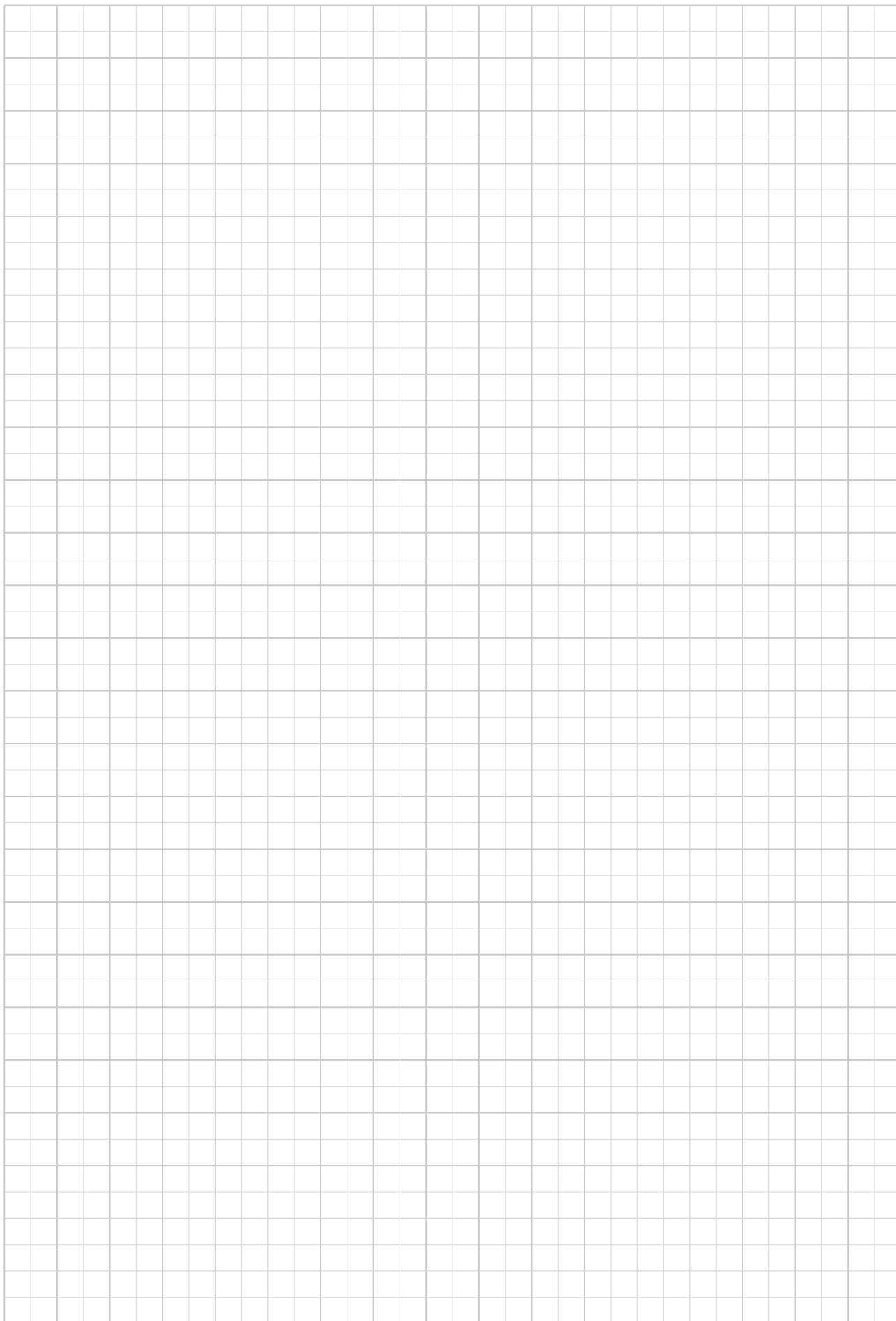
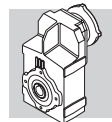
Motor adapters matching the most popular brands of servomotors are available for units size F 10 ... F 60. Dimensions of servomotor inputs are provided within the drawing section for each frame size. The code **SK** applies for inputs featuring a conventional keyway, while through the specification of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

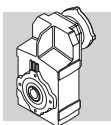
(D 58)

		SERVO INPUT							
		SK60A	SK60B	SK80A	SK80B	SK80C	SK95A	SK95B	SK95C
		SC60A	SC60B	SC80A	SC80B	SC80C	SC95A	SC95B	SC95C
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 59)

		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			





62 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...).



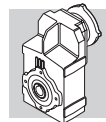
This symbol refers to gearbox values.




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

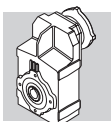
F 10

	i	J (•10 ⁻⁴) [kgm ²]							
			63	71	80	90	100	112	
F 10 2_7.4	7.4	1.0	1.8	1.8	3.8	3.7	4.9	4.9	1.7
F 10 2_8.6	8.6	0.77	1.5	1.5	3.6	3.5	4.7	4.7	1.5
F 10 2_9.8	9.8	0.64	1.4	1.4	3.4	3.3	4.5	4.5	1.3
F 10 2_11.5	11.5	0.48	1.2	1.2	3.3	3.2	4.4	4.4	1.2
F 10 2_13.0	13.0	0.38	1.1	1.1	3.2	3.1	4.3	4.3	1.1
F 10 2_14.6	14.6	0.61	1.4	1.4	3.4	3.3	4.5	4.5	1.3
F 10 2_17.0	17.0	0.48	1.3	1.2	3.3	3.2	4.4	4.4	1.2
F 10 2_19.3	19.3	0.41	1.2	1.2	3.2	3.1	4.3	4.3	1.1
F 10 2_22.8	22.8	0.32	1.1	1.1	3.1	3.0	4.2	4.2	1.0
F 10 2_25.8	25.8	0.25	1.0	1.0	3.1	2.9	4.1	4.1	0.93
F 10 2_29.6	29.6	0.19	1.0	0.95	3.0	2.9	4.1	4.1	0.87
F 10 2_33.0	33.0	0.16	0.93	0.92	3.0	2.8	4.1	4.1	0.84
F 10 2_35.3	35.3	0.14	0.92	0.90	3.0	2.8	4.0	4.0	0.83
F 10 2_39.6	39.6	0.12	0.90	0.88	2.9	2.8	4.0	4.0	0.80
F 10 2_44.7	44.7	0.10	0.88	0.86	2.9	2.8	4.0	4.0	0.79
F 10 2_48.7	48.7	0.09	0.86	0.85	2.9	2.8	4.0	4.0	0.77
F 10 2_56.7	56.7	0.07	0.84	0.83	2.9	2.7	4.0	4.0	0.75
F 10 2_63.0	63.0	0.06	0.83	0.82	2.9	2.7	3.9	3.9	0.74
F 10 2_71.1	71.1	0.05	0.82	0.81	2.8	2.7	3.9	3.9	0.73
F 10 2_81.3	81.3	0.04	0.78	0.77	2.8	2.7	3.9	3.9	0.67
F 10 2_91.5	91.5	0.03	0.78	0.76	2.8	2.7	3.9	3.9	0.66
F 10 2_106.0	106.0	0.03	0.77	0.76	—	—	—	—	0.66
F 10 2_127.1	127.1	0.02	0.76	0.75	—	—	—	—	0.65






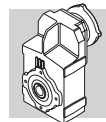
F 10

		J ($\cdot 10^{-4}$) [kgm ²]									
											
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 10 2_7.4	7.4	1.3	1.5	1.3	1.7	3.8	4.3	3.8	4.3	3.7	4.7
F 10 2_8.6	8.6	1.0	1.3	1.1	1.5	3.6	4.0	3.6	4.1	3.5	4.5
F 10 2_9.8	9.8	0.91	1.2	0.93	1.4	3.5	3.9	3.4	3.9	3.3	4.3
F 10 2_11.5	11.5	0.75	1.0	0.77	1.2	3.3	3.7	3.3	3.8	3.2	4.2
F 10 2_13.0	13.0	0.65	0.91	0.67	1.1	3.2	3.6	3.2	3.7	3.1	4.1
F 10 2_14.6	14.6	0.88	1.1	0.91	1.3	3.4	3.9	3.4	3.9	3.3	4.3
F 10 2_17.0	17.0	0.75	1.0	0.77	1.2	3.3	3.7	3.3	3.8	3.2	4.2
F 10 2_19.3	19.3	0.68	0.94	0.70	1.1	3.2	3.7	3.2	3.7	3.1	4.1
F 10 2_22.8	22.8	0.59	0.85	0.61	1.0	3.1	3.6	3.1	3.6	3.0	4.0
F 10 2_25.8	25.8	0.52	0.78	0.54	0.98	3.1	3.5	3.1	3.6	2.9	3.9
F 10 2_29.6	29.6	0.46	0.72	0.48	0.92	3.0	3.4	3.0	3.5	2.9	3.9
F 10 2_33.0	33.0	0.43	0.69	0.45	0.89	3.0	3.4	3.0	3.5	2.8	3.8
F 10 2_35.3	35.3	0.41	0.67	0.43	0.87	3.0	3.4	3.0	3.5	2.8	3.8
F 10 2_39.6	39.6	0.39	0.65	0.41	0.85	2.9	3.3	2.9	3.4	2.8	3.8
F 10 2_44.7	44.7	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.8	3.8
F 10 2_48.7	48.7	0.36	0.62	0.38	0.82	2.9	3.3	2.9	3.4	2.8	3.8
F 10 2_56.7	56.7	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7
F 10 2_63.0	63.0	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.7	3.7
F 10 2_71.1	71.1	0.32	0.58	0.34	0.78	2.9	3.3	2.8	3.3	2.7	3.7
F 10 2_81.3	81.3	0.31	0.57	—	—	—	—	2.8	3.3	2.7	3.7
F 10 2_91.5	91.5	0.30	0.56	—	—	—	—	2.8	3.3	2.7	3.7
F 10 2_106.0	106.0	0.30	0.56	—	—	—	—	—	—	—	—
F 10 2_127.1	127.1	0.29	0.55	—	—	—	—	—	—	—	—




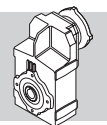
F 20

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




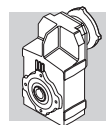
F 20

		J ($\cdot 10^{-4}$) [kgm ²]									
		 SERVO									
i		60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 20 2_6.4	6.4	—	—	—	—	—	—	5.0	5.5	4.8	5.8
F 20 2_7.8	7.8	—	—	—	—	—	—	4.3	4.8	4.2	5.2
F 20 2_8.7	8.7	1.6	1.8	1.6	2.0	4.1	4.6	4.1	4.6	3.9	4.9
F 20 2_10.0	10.0	1.3	1.5	1.3	1.7	3.8	4.3	3.8	4.3	3.7	4.7
F 20 2_11.2	11.2	1.2	1.4	1.2	1.6	3.7	4.1	3.6	4.1	3.5	4.5
F 20 2_14.8	14.8	—	—	—	—	—	—	4.0	4.5	3.9	4.9
F 20 2_18.1	18.1	—	—	—	—	—	—	3.7	4.2	3.5	4.5
F 20 2_20.2	20.2	1.1	1.3	1.1	1.5	3.6	4.0	3.5	4.0	3.4	4.4
F 20 2_23.1	23.1	0.91	1.2	0.93	1.4	3.5	3.9	3.4	3.9	3.3	4.3
F 20 2_25.9	25.9	0.84	1.1	0.86	1.3	3.4	3.8	3.3	3.8	3.2	4.2
F 20 2_30.4	30.4	0.68	0.94	0.70	1.1	3.2	3.7	3.2	3.7	3.0	4.0
F 20 2_33.1	33.1	0.63	0.89	0.65	1.1	3.2	3.6	3.1	3.6	3.0	4.0
F 20 2_37.9	37.9	0.47	0.83	0.59	1.0	3.1	3.6	3.1	3.6	2.9	3.9
F 20 2_41.8	41.8	0.44	0.80	0.56	1.0	3.1	3.5	3.0	3.5	2.9	3.9
F 20 2_44.8	44.8	0.41	0.77	0.53	0.97	3.1	3.5	3.0	3.5	2.9	3.9
F 20 2_50.7	50.7	0.48	0.74	0.50	0.94	3.0	3.5	3.0	3.5	2.8	3.8
F 20 2_56.7	56.7	0.45	0.71	0.47	0.91	3.0	3.4	2.9	3.4	2.8	3.8
F 20 2_61.9	61.9	0.43	0.69	0.45	0.89	3.0	3.4	2.9	3.4	2.8	3.8
F 20 2_69.1	69.1	0.41	0.67	0.43	0.87	3.0	3.4	2.9	3.4	2.8	3.8
F 20 2_76.8	76.8	0.39	0.65	0.41	0.85	2.9	3.4	2.9	3.4	2.8	3.8
F 20 2_90.4	90.4	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.7	3.7
F 20 2_101.6	101.6	0.36	0.62	—	—	—	—	2.8	3.3	2.7	3.7
F 20 2_114.3	114.3	0.35	0.61	—	—	—	—	2.8	3.3	2.7	3.7
F 20 2_132.2	132.2	0.30	0.56	—	—	—	—	—	—	—	—
F 20 3_156.3	156.3	0.31	0.57	0.33	0.77	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_172.6	172.6	0.31	0.57	0.33	0.77	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_184.9	184.9	0.31	0.57	0.33	0.77	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_209.3	209.3	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_234.0	234.0	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_255.3	255.3	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_285.2	285.2	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_316.9	316.9	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_372.9	372.9	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_419.3	419.3	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_471.7	471.7	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7
F 20 3_545.3	545.3	0.30	0.56	0.32	0.76	2.9	3.3	2.8	3.3	2.7	3.7




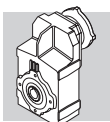
F 25

	i	J ($\cdot 10^{-4}$) [kgm ²]							
			63	71	80	90	100	112	
F 25 2_6.9	6.9	2.7	—	—	5.4	5.3	6.5	6.5	4.4
F 25 2_8.4	8.4	1.9	—	—	4.6	4.5	5.7	5.7	3.6
F 25 2_9.4	9.4	1.6	2.3	2.3	4.3	4.2	5.4	5.4	3.3
F 25 2_10.6	10.6	1.9	—	—	4.6	4.5	5.7	5.7	3.6
F 25 2_13.0	13.0	1.3	—	—	4.1	4.0	5.2	5.2	3.0
F 25 2_14.5	14.5	1.1	1.8	1.8	3.9	3.8	5.0	5.0	2.8
F 25 2_16.6	16.6	0.90	1.6	1.6	3.7	3.5	4.7	4.7	2.6
F 25 2_18.6	18.6	0.77	1.5	1.5	3.5	3.4	4.6	4.6	2.5
F 25 2_21.8	21.8	0.57	1.3	1.3	3.3	3.2	4.4	4.4	2.3
F 25 2_23.8	23.8	0.48	1.2	1.2	3.2	3.1	4.3	4.3	2.2
F 25 2_27.2	27.2	0.40	1.1	1.1	3.2	3.0	4.2	4.2	2.1
F 25 2_30.0	30.0	0.35	1.1	1.1	3.1	3.0	4.2	4.2	2.1
F 25 2_32.2	32.2	0.31	1.0	1.0	3.1	2.9	4.2	4.2	2.0
F 25 2_36.4	36.4	0.26	1.0	1.0	3.0	2.9	4.1	4.1	2.0
F 25 2_40.7	40.7	0.22	1.0	0.94	3.0	2.9	4.1	4.1	1.9
F 25 2_44.4	44.4	0.20	0.93	0.92	3.0	2.8	4.0	4.0	1.9
F 25 3_45.6	45.6	0.79	—	—	3.6	3.4	4.6	4.6	2.5
F 25 3_50.8	50.8	0.70	1.4	1.4	3.5	3.3	4.5	4.5	2.4
F 25 3_58.3	58.3	0.58	1.3	1.3	3.3	3.2	4.4	4.4	2.3
F 25 3_65.3	65.3	0.52	1.2	1.2	3.3	3.1	4.4	4.4	2.2
F 25 3_76.6	76.6	0.38	1.1	1.1	3.1	3.0	4.2	4.2	2.1
F 25 3_83.4	83.4	0.32	1.0	1.0	3.1	3.0	4.2	4.2	2.0
F 25 3_95.5	95.5	0.28	1.0	1.0	3.0	2.9	4.1	4.1	2.0
F 25 3_105.4	105.4	0.25	1.0	1.0	3.0	2.9	4.1	4.1	2.0
F 25 3_113.0	113.0	0.23	0.95	0.94	3.0	2.9	4.1	4.1	1.9
F 25 3_127.8	127.8	0.20	0.92	0.91	3.0	2.8	4.0	4.0	1.9
F 25 3_143.0	143.0	0.17	0.90	0.89	2.9	2.8	4.0	4.0	1.9
F 25 3_155.9	155.9	0.15	0.88	0.87	2.9	2.8	4.0	4.0	1.9
F 25 3_174.2	174.2	0.13	0.87	0.86	2.9	2.8	4.0	4.0	1.8
F 25 3_193.6	193.6	0.12	0.85	0.84	2.9	2.7	4.0	4.0	1.8
F 25 3_227.8	227.8	0.10	0.83	0.82	2.9	2.7	3.9	3.9	1.8
F 25 3_256.1	256.1	0.09	0.79	0.78	2.8	2.7	3.9	3.9	1.8
F 25 3_288.1	288.1	0.08	0.78	0.77	2.8	2.7	3.9	3.9	1.8
F 25 3_333.1	333.1	0.03	0.78	0.76	—	—	—	—	1.8
F 25 4_393.9	393.9	0.02	0.80	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_434.9	434.9	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_466.0	466.0	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_527.3	527.3	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_589.7	589.7	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_643.3	643.3	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_718.7	718.7	0.02	0.79	0.78	2.8	2.7	3.9	3.9	0.70
F 25 4_798.5	798.5	0.01	0.79	0.77	2.8	2.7	3.9	3.9	0.70
F 25 4_939.8	939.8	0.01	0.79	0.77	2.8	2.7	3.9	3.9	0.69
F 25 4_1057	1057	0.01	0.79	0.77	2.8	2.7	3.9	3.9	0.64
F 25 4_1189	1189	0.01	0.78	0.77	2.8	2.7	3.9	3.9	0.64
F 25 4_1374	1374	0.01	0.78	0.77	2.8	2.7	3.9	3.9	0.64





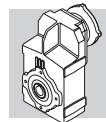
F 25

		J ($\cdot 10^{-4}$) [kgm ²]									
		 SERVO									
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 25 2_6.9	6.9	—	—	—	—	—	—	5.4	5.9	5.3	6.3
F 25 2_8.4	8.4	—	—	—	—	—	—	4.6	5.1	4.5	5.5
F 25 2_9.4	9.4	1.9	2.1	1.9	2.3	4.4	4.9	4.3	4.8	4.2	5.2
F 25 2_10.6	10.6	—	—	—	—	—	—	4.6	5.1	4.5	5.5
F 25 2_13.0	13.0	—	—	—	—	—	—	4.1	4.6	4.0	5.0
F 25 2_14.5	14.5	1.4	1.6	1.4	1.8	3.9	4.4	3.9	4.4	3.8	4.8
F 25 2_16.6	16.6	1.2	1.4	1.2	1.6	3.7	4.2	3.7	4.2	3.5	4.5
F 25 2_18.6	18.6	1.0	1.3	1.1	1.5	3.6	4.0	3.5	4.0	3.4	4.4
F 25 2_21.8	21.8	0.84	1.1	0.86	1.3	3.4	3.8	3.3	3.8	3.2	4.2
F 25 2_23.8	23.8	0.75	1.0	0.77	1.2	3.3	3.7	3.2	3.7	3.1	4.1
F 25 2_27.2	27.2	0.67	0.93	0.69	1.1	3.2	3.7	3.2	3.7	3.0	4.0
F 25 2_30.0	30.0	0.62	0.88	0.64	1.1	3.2	3.6	3.1	3.6	3.0	4.0
F 25 2_32.2	32.2	0.58	0.84	1.4	1.8	3.1	3.6	3.1	3.6	2.9	3.9
F 25 2_36.4	36.4	0.53	0.79	0.55	0.99	3.1	3.5	3.0	3.5	2.9	3.9
F 25 2_40.7	40.7	0.49	0.75	0.51	0.95	3.0	3.5	3.0	3.5	2.9	3.9
F 25 2_44.4	44.4	0.47	0.73	0.49	0.93	3.0	3.5	3.0	3.5	2.8	3.8
F 25 3_45.6	45.6	1.1	1.3	1.1	1.5	3.6	4.0	3.6	4.1	3.4	4.4
F 25 3_50.8	50.8	0.97	1.2	0.99	1.4	3.5	4.0	3.5	4.0	3.3	4.3
F 25 3_58.3	58.3	0.85	1.1	0.87	1.3	3.4	3.8	3.3	3.8	3.2	4.2
F 25 3_65.3	65.3	0.79	1.1	0.84	1.2	3.3	3.8	3.3	3.8	3.1	4.1
F 25 3_76.6	76.6	0.65	0.91	0.67	1.1	3.2	3.6	3.1	3.6	3.0	4.0
F 25 3_83.4	83.4	0.59	0.85	0.61	1.0	3.1	3.6	3.1	3.6	3.0	4.0
F 25 3_95.5	95.5	0.55	0.81	0.57	1.0	3.1	3.5	3.0	3.5	2.9	3.9
F 25 3_105.4	105.4	0.52	0.78	0.54	0.98	3.1	3.5	3.0	3.5	2.9	3.9
F 25 3_113.0	113.0	0.50	0.76	0.52	0.96	3.1	3.5	3.0	3.5	2.9	3.9
F 25 3_127.8	127.8	0.47	0.73	0.49	0.93	3.0	3.5	3.0	3.5	2.8	3.8
F 25 3_143.0	143.0	0.44	0.70	0.46	0.90	3.0	3.4	2.9	3.4	2.8	3.8
F 25 3_155.9	155.9	0.42	0.68	0.44	0.88	3.0	3.4	2.9	3.4	2.8	3.8
F 25 3_174.2	174.2	0.40	0.66	0.42	0.86	3.0	3.4	2.9	3.4	2.8	3.8
F 25 3_193.6	193.6	0.39	0.65	0.41	0.85	2.9	3.4	2.9	3.4	2.7	3.7
F 25 3_227.8	227.8	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.7	3.7
F 25 3_256.1	256.1	0.36	0.62	—	—	—	—	2.8	3.3	2.7	3.7
F 25 3_288.1	288.1	0.35	0.61	—	—	—	—	2.8	3.3	2.7	3.7
F 25 3_333.1	333.1	0.30	0.56	—	—	—	—	—	—	—	—
F 25 4_393.9	393.9	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_434.9	434.9	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_466.0	466.0	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_527.3	527.3	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_589.7	589.7	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_643.3	643.3	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_718.7	718.7	0.29	0.55	0.31	0.75	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_798.5	798.5	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_939.8	939.8	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_1057	1057	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_1189	1189	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7
F 25 4_1374	1374	0.28	0.54	0.30	0.74	2.8	3.3	2.8	3.3	2.7	3.7




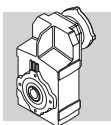
F 31

	i	J (•10 ⁻⁴) [kgm ²]								
			63	71	80	90 	100	112	132	
F 31 2_6.9	6.9	5.0	—	—	7.8	7.6	8.9	8.9	22	7.1
F 31 2_8.2	8.2	3.7	—	—	6.5	6.3	7.5	7.5	20	5.8
F 31 2_9.0	9.0	3.2	—	—	6.0	5.8	7.0	7.0	20	5.3
F 31 2_10.7	10.7	3.5	—	—	6.3	6.2	7.4	7.4	20	5.6
F 31 2_12.7	12.7	2.6	—	—	5.4	5.3	6.5	6.5	19	4.7
F 31 2_13.9	13.9	2.3	—	—	5.1	4.9	6.2	6.2	19	4.4
F 31 2_16.8	16.8	1.8	—	—	4.6	4.4	5.6	5.6	18	3.9
F 31 2_18.5	18.5	1.5	2.2	2.2	4.2	4.1	5.3	5.3	18	3.5
F 31 2_21.1	21.1	1.1	1.8	1.8	3.9	3.7	5.0	5.0	18	3.2
F 31 2_23.4	23.4	1.0	1.7	1.7	3.7	3.6	4.8	4.8	18	3.0
F 31 2_27.3	27.3	0.78	1.5	1.5	3.5	3.4	4.6	4.6	17	2.8
F 31 2_30.1	30.1	0.65	1.4	1.4	3.4	3.3	4.5	4.5	17	2.7
F 31 2_34.4	34.4	0.53	1.3	1.2	3.3	3.2	4.4	4.4	17	2.6
F 31 2_37.7	37.7	0.47	1.2	1.2	3.2	3.1	4.3	4.3	17	2.5
F 31 2_40.4	40.4	0.42	1.1	1.1	3.2	3.0	4.3	4.3	—	2.5
F 31 2_44.6	44.6	0.37	1.1	1.1	3.1	3.0	4.2	4.2	—	2.4
F 31 3_47.5	47.5	1.6	—	—	4.3	4.2	5.4	5.4	18	3.6
F 31 3_52.1	52.1	1.4	—	—	4.2	4.0	5.3	5.3	18	3.5
F 31 3_62.8	62.8	1.2	—	—	3.9	3.8	5.0	5.0	18	3.2
F 31 3_69.1	69.1	1.0	1.7	1.7	3.7	3.6	4.8	4.8	18	3.0
F 31 3_78.9	78.9	0.72	1.4	1.4	3.5	3.4	4.6	4.6	17	2.8
F 31 3_87.4	87.4	0.66	1.4	1.4	3.4	3.3	4.5	4.5	17	2.7
F 31 3_101.9	101.9	0.54	1.3	1.2	3.3	3.2	4.4	4.4	17	2.6
F 31 3_112.5	112.5	0.46	1.2	1.2	3.2	3.1	4.3	4.3	17	2.5
F 31 3_128.4	128.4	0.38	1.1	1.1	3.1	3.0	4.2	4.2	17	2.4
F 31 3_140.7	140.7	0.35	1.1	1.1	3.1	3.0	4.2	4.2	17	2.4
F 31 3_150.8	150.8	0.31	1.0	1.0	3.1	2.9	4.2	4.2	—	2.4
F 31 3_166.8	166.8	0.28	1.0	1.0	3.0	2.9	4.1	4.1	—	2.3
F 31 3_185.4	185.4	0.24	1.0	1.0	3.0	2.9	4.1	4.1	—	2.3
F 31 3_202.3	202.3	0.21	0.94	0.93	3.0	2.8	4.1	4.1	—	2.3
F 31 3_228.2	228.2	0.18	0.92	0.90	2.9	2.8	4.0	4.0	—	2.2
F 31 3_253.6	253.6	0.16	0.89	0.88	2.9	2.8	4.0	4.0	—	2.2
F 31 3_293.8	293.8	0.13	0.86	0.85	2.9	2.8	4.0	4.0	—	2.2
F 31 3_332.8	332.8	0.11	0.82	0.81	2.9	2.7	4.0	4.0	—	2.2
F 31 3_374.4	374.4	0.10	0.81	0.79	2.9	2.7	3.9	3.9	—	2.2
F 31 4_418.9	418.9	0.09	0.86	0.85	2.9	2.8	3.9	3.9	—	0.77
F 31 4_462.6	462.6	0.08	0.86	0.84	2.9	2.7	3.9	3.9	—	0.77
F 31 4_527.8	527.8	0.08	0.85	0.84	2.9	2.7	3.9	3.9	—	0.76
F 31 4_578.6	578.6	0.08	0.85	0.84	2.9	2.7	3.9	3.9	—	0.76
F 31 4_619.9	619.9	0.07	0.85	0.83	2.9	2.7	3.9	3.9	—	0.76
F 31 4_685.6	685.6	0.07	0.85	0.83	2.9	2.7	3.9	3.9	—	0.76
F 31 4_762.3	762.3	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75
F 31 4_831.6	831.6	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75
F 31 4_938.2	938.2	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75
F 31 4_1042	1042	0.07	0.84	0.83	2.9	2.7	3.9	3.9	—	0.75
F 31 4_1208	1208	0.06	0.84	0.82	2.9	2.7	3.9	3.9	—	0.75
F 31 4_1368	1368	0.06	0.84	0.82	2.9	2.7	3.9	3.9	—	0.75
F 31 4_1539	1539	0.06	0.84	0.82	2.9	2.7	3.9	3.9	—	0.75





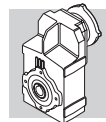
F 31

		J ($\cdot 10^{-4}$) [kgm ²]											
													
	i	60A		60B 80A		95A		80C 95B 110A		95C 110B		130A	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
		F 31 2_6.9	6.9	—	—	—	—	—	—	7.8	8.3	7.6	8.6
F 31 2_8.2	8.2	—	—	—	—	—	—	6.5	7.0	6.3	7.3	6.3	7.3
F 31 2_9.0	9.0	—	—	—	—	—	—	6.0	6.5	5.8	6.8	5.8	6.8
F 31 2_10.7	10.7	—	—	—	—	—	—	6.3	6.8	6.2	7.2	6.2	7.2
F 31 2_12.7	12.7	—	—	—	—	—	—	5.4	5.9	5.3	6.3	5.3	6.3
F 31 2_13.9	13.9	—	—	—	—	—	—	5.1	5.6	4.9	5.9	4.9	5.9
F 31 2_16.8	16.8	—	—	—	—	—	—	4.6	5.1	4.4	5.4	4.4	5.4
F 31 2_18.5	18.5	1.8	2.0	1.8	2.2	4.3	4.8	4.2	4.7	4.1	5.1	4.1	5.1
F 31 2_21.1	21.1	1.4	1.6	1.4	1.8	3.9	4.3	3.9	4.4	3.7	4.7	3.7	4.7
F 31 2_23.4	23.4	1.3	1.5	1.3	1.7	3.8	4.3	3.7	4.2	3.6	4.6	3.6	4.6
F 31 2_27.3	27.3	1.1	1.3	1.1	1.5	3.6	4.0	3.5	4.0	3.4	4.4	3.4	4.4
F 31 2_30.1	30.1	0.92	1.2	0.94	1.4	3.5	3.9	3.4	3.9	3.3	4.3	3.3	4.3
F 31 2_34.4	34.4	0.80	1.1	0.82	1.3	3.4	3.8	3.3	3.8	3.2	4.2	3.2	4.2
F 31 2_37.7	37.7	0.74	1.0	0.76	1.2	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1
F 31 2_40.4	40.4	0.69	0.95	0.71	1.1	3.2	3.7	3.2	3.7	3.0	4.0	3.0	4.0
F 31 2_44.6	44.6	0.64	0.90	0.66	1.1	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0
F 31 3_47.5	47.5	—	—	—	—	—	—	4.3	4.8	4.2	5.2	4.2	5.2
F 31 3_52.1	52.1	—	—	—	—	—	—	4.2	4.7	4.0	5.0	4.0	5.0
F 31 3_62.8	62.8	—	—	—	—	—	—	3.9	4.4	3.8	4.8	3.8	4.8
F 31 3_69.1	69.1	1.3	1.5	1.3	1.7	3.8	4.3	3.7	4.2	3.6	4.6	3.6	4.6
F 31 3_78.9	78.9	0.99	1.3	1.0	1.4	3.5	4.0	3.5	4.0	3.4	4.4	3.4	4.4
F 31 3_87.4	87.4	0.93	1.2	0.95	1.4	3.5	3.9	3.4	3.9	3.3	4.3	3.3	4.3
F 31 3_101.9	101.9	0.81	1.1	0.83	1.3	3.4	3.8	3.3	3.8	3.2	4.2	3.2	4.2
F 31 3_112.5	112.5	0.73	0.99	0.75	1.2	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1
F 31 3_128.4	128.4	0.65	0.91	0.67	1.1	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0
F 31 3_140.7	140.7	0.62	0.88	0.64	1.1	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0
F 31 3_150.8	150.8	0.58	0.84	0.60	1.0	3.1	3.6	3.1	3.6	2.9	3.9	2.9	3.9
F 31 3_166.8	166.8	0.55	0.81	0.57	1.0	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9
F 31 3_185.4	185.4	0.51	0.77	0.53	0.97	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9
F 31 3_202.3	202.3	0.48	0.74	0.50	0.93	3.0	3.5	3.0	3.5	2.8	3.8	2.8	3.8
F 31 3_228.2	228.2	0.45	0.71	0.47	0.91	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8
F 31 3_253.6	253.6	0.43	0.69	0.45	0.89	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8
F 31 3_293.8	293.8	0.40	0.66	0.42	0.86	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8
F 31 3_332.8	332.8	0.38	0.64	—	—	—	—	2.9	3.4	2.7	3.7	2.7	3.7
F 31 3_374.4	374.4	0.37	0.63	—	—	—	—	2.9	3.4	2.7	3.7	2.7	3.7
F 31 4_418.9	418.9	0.36	0.62	0.38	0.82	2.9	3.3	2.9	3.4	2.8	3.8	—	—
F 31 4_462.6	462.6	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_527.8	527.8	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_578.6	578.6	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_619.9	619.9	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_685.6	685.6	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_762.3	762.3	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_831.6	831.6	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_938.2	938.2	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_1042	1042	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_1208	1208	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_1368	1368	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.7	3.7	—	—
F 31 4_1539	1539	0.83	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.7	3.7	—	—




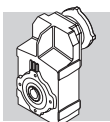
F 41

	i	J ($\cdot 10^{-4}$) [kgm ²]								
			63	71	80	90 	100	112	132	
F 41 2_6.7	6.7	12	—	—	15	15	18	18	29	21
F 41 2_9.1	9.1	7.2	—	—	10	9.8	13	13	24	16
F 41 2_10.8	10.8	8.0	—	—	11	11	13	13	25	17
F 41 2_14.6	14.6	5.0	—	—	7.7	7.6	10	10	21	14
F 41 2_17.1	17.1	3.5	—	—	6.3	6.2	8.9	8.9	20	12
F 41 2_18.9	18.9	3.1	—	—	5.8	5.7	8.5	8.5	20	12
F 41 2_24.1	24.1	2.1	2.8	2.8	4.9	4.8	7.5	7.5	19	11
F 41 2_30.1	30.1	1.5	2.2	2.2	4.3	4.2	6.9	6.9	18	10
F 41 2_38.2	38.2	0.95	1.7	1.7	3.7	3.6	6.3	6.3	17	9.7
F 41 2_47.9	47.9	0.67	1.4	1.4	3.4	3.3	6.0	6.0	17	9.5
F 41 3_51.5	51.5	3.0	—	—	5.7	5.6	8.4	8.4	19	12
F 41 3_60.2	60.2	2.1	—	—	4.9	4.7	7.5	7.5	19	11
F 41 3_66.5	66.5	1.9	—	—	4.7	4.5	7.3	7.3	18	11
F 41 3_84.9	84.9	1.4	2.1	2.1	4.2	4.0	6.8	6.8	18	10
F 41 3_106.0	106.0	1.1	1.8	1.7	3.8	3.7	6.4	6.4	18	9.8
F 41 3_134.4	134.4	0.66	1.4	1.4	3.4	3.3	6.0	6.0	17	9.4
F 41 3_168.7	168.7	0.49	1.2	1.2	3.2	3.1	5.9	5.9	17	9.3
F 41 3_180.7	180.7	0.43	1.1	1.1	3.2	3.1	5.8	5.8	—	9.2
F 41 3_198.9	198.9	0.39	1.1	1.1	3.1	3.0	5.8	5.8	—	9.2
F 41 3_220.1	220.1	0.36	1.1	1.1	3.1	3.0	5.7	5.7	—	9.1
F 41 3_240.1	240.1	0.31	1.0	1.0	3.1	2.9	5.7	5.7	—	9.1
F 41 3_266.9	266.9	0.28	1.0	1.0	3.0	2.9	5.7	5.7	—	9.1
F 41 3_296.6	296.6	0.23	1.0	1.0	3.0	2.9	5.6	5.6	—	9.0
F 41 3_344.8	344.8	0.19	0.92	0.91	2.9	2.8	5.6	5.6	—	9.0
F 41 4_433.7	433.7	0.21	0.94	0.93	3.0	2.8	4.1	4.1	—	1.9
F 41 4_549.8	549.8	0.19	0.92	0.90	2.9	2.8	4.0	4.0	—	1.9
F 41 4_690.1	690.1	0.18	0.91	0.89	2.9	2.8	4.0	4.0	—	1.9
F 41 4_739.4	739.4	0.17	0.90	0.89	2.9	2.8	4.0	4.0	—	1.9
F 41 4_813.8	813.8	0.17	0.90	0.89	2.9	2.8	4.0	4.0	—	1.9
F 41 4_900.5	900.5	0.17	0.90	0.89	2.9	2.8	4.0	4.0	—	1.9
F 41 4_982.4	982.4	0.17	0.90	0.88	2.9	2.8	4.0	4.0	—	1.9
F 41 4_1092	1092	0.16	0.89	0.88	2.9	2.8	4.0	4.0	—	1.9
F 41 4_1213	1213	0.16	0.89	0.88	2.9	2.8	4.0	4.0	—	1.9
F 41 4_1411	1411	0.16	0.89	0.88	2.9	2.8	4.0	4.0	—	1.9




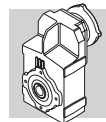
F 41

		J ($\cdot 10^{-4}$) [kgm ²]																	
		 SERVO																	
	i	60A		60B 80A		80B		95A		80C 95B 110A		95C 110B		130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 41 2_6.7	6.7	—	—	—	—	—	—	—	—	15	16	15	16	15	16	29	31	29	34
F 41 2_9.1	9.1	—	—	—	—	—	—	—	—	10	11	9.8	11	9.8	11	24	27	24	29
F 41 2_10.8	10.8	—	—	—	—	—	—	—	—	11	12	11	12	11	12	25	27	25	30
F 41 2_14.6	14.6	—	—	—	—	—	—	—	—	7.7	8.2	7.6	8.6	7.6	8.6	22	24	21	26
F 41 2_17.1	17.1	—	—	—	—	—	—	—	—	6.3	6.8	6.2	7.2	6.2	7.2	20	23	20	25
F 41 2_18.9	18.9	—	—	—	—	—	—	—	—	5.8	6.3	5.7	6.7	5.7	6.7	20	23	20	25
F 41 2_24.1	24.1	—	—	—	—	4.9	5.4	4.9	5.4	4.9	5.4	4.8	5.8	4.8	5.8	19	22	19	24
F 41 2_30.1	30.1	—	—	—	—	4.3	4.8	4.3	4.8	4.3	4.8	4.2	5.2	4.2	5.2	18	21	18	23
F 41 2_38.2	38.2	—	—	—	—	3.8	4.2	3.8	4.2	3.7	4.2	3.6	4.6	3.6	4.6	18	20	17	22
F 41 2_47.9	47.9	—	—	—	—	3.5	3.9	3.5	3.9	3.4	3.9	3.3	4.3	3.3	4.3	18	20	17	22
F 41 3_51.5	51.5	—	—	—	—	—	—	—	—	5.7	6.2	5.6	6.6	5.6	6.6	20	22	19	24
F 41 3_60.2	60.2	—	—	—	—	—	—	—	—	4.9	5.4	4.7	5.7	4.7	5.7	19	22	19	24
F 41 3_66.5	66.5	—	—	—	—	—	—	—	—	4.7	5.2	4.5	5.5	4.5	5.5	19	21	18	23
F 41 3_84.9	84.9	—	—	—	—	4.2	4.7	4.2	4.7	4.2	4.7	4.0	5.0	4.0	5.0	18	21	18	23
F 41 3_106.0	106.0	—	—	—	—	3.9	4.4	3.9	4.4	3.8	4.3	3.7	4.7	3.7	4.7	18	21	18	23
F 41 3_134.4	134.4	—	—	—	—	3.5	3.9	3.5	3.9	3.4	3.9	3.3	4.3	3.3	4.3	18	20	17	22
F 41 3_168.7	168.7	—	—	—	—	3.3	3.7	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1	17	20	17	22
F 41 3_180.7	180.7	—	—	—	—	3.3	3.7	3.3	3.7	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
F 41 3_198.9	198.9	—	—	—	—	3.2	3.6	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0	—	—	—	—
F 41 3_220.1	220.1	—	—	—	—	3.2	3.6	3.2	3.6	3.1	3.6	3.0	4.0	3.0	4.0	—	—	—	—
F 41 3_240.1	240.1	—	—	—	—	3.1	3.6	3.1	3.6	3.1	3.6	2.9	3.9	2.9	3.9	—	—	—	—
F 41 3_266.9	266.9	—	—	—	—	3.1	3.5	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9	—	—	—	—
F 41 3_296.6	296.6	—	—	—	—	3.1	3.5	3.1	3.5	3.0	3.5	2.9	3.9	2.9	3.9	—	—	—	—
F 41 3_344.8	344.8	—	—	—	—	3.0	3.4	3.0	3.4	2.9	3.4	2.8	3.8	2.8	3.8	—	—	—	—
F 41 4_433.7	433.7	0.48	0.74	0.50	0.94	—	—	3.0	3.5	3.0	3.5	2.8	3.8	—	—	—	—	—	—
F 41 4_549.8	549.8	0.46	0.72	0.48	0.92	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_690.1	690.1	0.45	0.71	0.47	0.91	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_739.4	739.4	0.44	0.70	0.46	0.90	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_813.8	813.8	0.44	0.70	0.46	0.90	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_900.5	900.5	0.44	0.70	0.46	0.90	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_982.4	982.4	0.44	0.70	0.46	0.90	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_1092	1092	0.43	0.69	0.45	0.89	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_1213	1213	0.43	0.69	0.45	0.89	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—
F 41 4_1411	1411	0.43	0.69	0.45	0.89	—	—	3.0	3.4	2.9	3.4	2.8	3.8	—	—	—	—	—	—




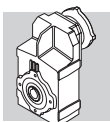
F 51

	i	J ($\cdot 10^{-4}$) [kgm ²]										
			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 51

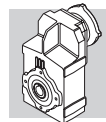
		J ($\cdot 10^{-4}$) [kgm ²]											
		 SERVO											
	i	80B		95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 51 2_7.2	7.2	—	—	—	—	28	29	28	23	42	44	42	47
F 51 2_9.1	9.1	—	—	—	—	20	21	19	20	34	36	33	38
F 51 2_11.1	11.1	—	—	—	—	19	20	19	20	33	35	33	38
F 51 2_14.0	14.0	—	—	—	—	14	15	14	15	28	30	28	33
F 51 2_18.8	18.8	—	—	—	—	9.8	10	9.6	11	24	26	24	29
F 51 2_23.8	23.8	—	—	—	—	7.3	7.8	7.2	8.2	21	24	21	26
F 51 2_30.0	30.0	5.9	6.4	5.9	6.4	5.9	6.4	5.8	6.8	20	23	20	25
F 51 2_37.1	37.1	5.0	5.5	5.0	5.5	5.0	5.5	4.9	5.9	19	22	19	24
F 51 3_48.9	48.9	—	—	—	—	8.9	9.4	8.8	9.8	23	26	23	28
F 51 3_65.8	65.8	—	—	—	—	6.9	7.4	6.8	7.8	21	24	21	26
F 51 3_83.2	83.2	—	—	—	—	5.5	6.0	5.4	6.4	20	22	19	24
F 51 3_105.1	105.1	4.8	5.3	4.8	5.3	4.8	5.3	4.6	5.6	19	21	19	24
F 51 3_129.9	129.9	4.3	4.8	4.3	4.8	4.3	4.8	4.1	5.1	18	21	18	23
F 51 3_165.6	165.6	3.8	4.2	3.8	4.2	3.7	4.2	3.6	4.6	18	20	17	22
F 51 3_202.4	202.4	3.5	4.0	3.5	4.0	3.5	4.0	3.3	4.3	18	20	17	22
F 51 3_216.9	216.9	3.5	3.9	3.5	3.9	3.4	3.9	3.3	4.3	—	—	—	—
F 51 3_239.8	239.8	3.4	3.9	3.4	3.9	3.4	3.9	3.2	4.2	—	—	—	—
F 51 3_262.1	262.1	3.4	3.8	3.4	3.8	3.3	3.8	3.2	4.2	—	—	—	—
F 51 3_285.9	285.9	3.3	3.7	3.3	3.7	3.2	3.7	3.1	4.1	—	—	—	—
F 51 3_317.3	317.3	3.2	3.6	3.2	3.6	3.2	3.7	3.0	4.0	—	—	—	—
F 51 3_352.5	352.5	3.1	3.5	3.1	3.5	3.1	3.6	3.0	4.0	—	—	—	—
F 51 4_429.1	429.1	—	—	3.2	3.6	3.1	3.6	3.0	4.0	—	—	—	—
F 51 4_530.5	530.5	—	—	3.2	3.6	3.1	3.6	3.0	4.0	—	—	—	—
F 51 4_676.3	676.3	—	—	3.1	3.6	3.1	3.6	2.9	3.9	—	—	—	—
F 51 4_826.4	826.4	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_885.5	885.5	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_979.4	979.4	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_1070	1070	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_1168	1168	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_1296	1296	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—
F 51 4_1439	1439	—	—	3.1	3.5	3.0	3.5	2.9	3.9	—	—	—	—




F 60

	i	J ($\cdot 10^{-4}$) [kgm ²]										
												
		63	71	80	90	100	112	132	160	180		
F 60 3_9.0	9.0	40	—	—	—	—	—	—	59	118	116	61
F 60 3_9.7	9.7	38	—	—	—	—	—	—	57	116	114	59
F 60 3_11.8	11.8	25	—	—	28	28	29	29	44	103	101	46
F 60 3_12.7	12.7	24	—	—	27	27	28	28	43	102	100	45
F 60 3_14.5	14.5	18	—	—	21	20	22	22	37	96	94	39
F 60 3_15.7	15.7	17	—	—	20	20	21	21	36	95	93	38
F 60 3_19.1	19.1	10	—	—	13	13	14	14	29	89	86	31
F 60 3_20.7	20.7	9.9	—	—	13	13	14	14	29	88	86	31
F 60 3_23.5	23.5	7.3	—	—	10	10	11	11	26	86	83	28
F 60 3_25.4	25.4	7.1	—	—	9.9	9.9	11	11	26	85	83	28
F 60 3_29.6	29.6	15	—	—	—	—	—	—	34	93	91	36
F 60 3_32.1	32.1	15	—	—	—	—	—	—	34	93	91	36
F 60 3_38.8	38.8	11	—	—	14	13	15	15	30	89	87	32
F 60 3_42.1	42.1	11	—	—	13	13	15	15	29	89	87	31
F 60 3_47.8	47.8	8.2	—	—	11	11	12	12	27	86	84	29
F 60 3_51.8	51.8	8.1	—	—	11	11	12	12	27	86	84	29
F 60 3_63.0	63.0	4.9	—	—	7.7	7.6	8.9	8.9	24	83	81	26
F 60 3_68.3	68.3	4.8	—	—	7.7	7.6	8.9	8.9	24	83	81	26
F 60 3_77.6	77.6	3.7	—	—	6.6	6.5	7.8	7.8	23	82	80	25
F 60 3_84.0	84.0	3.7	—	—	6.5	6.5	7.8	7.8	23	82	80	25
F 60 3_98.2	98.2	2.7	4.2	4.2	5.6	5.5	6.8	6.8	22	81	79	24
F 60 3_106.4	106.4	2.7	4.2	4.2	5.5	5.4	6.8	6.8	22	81	79	24
F 60 3_120.5	120.5	1.8	3.2	3.2	4.6	4.6	5.9	5.9	21	80	78	23
F 60 3_130.5	130.5	1.8	3.2	3.2	4.6	4.6	5.8	5.8	21	80	78	23
F 60 3_150.4	150.4	1.3	2.7	2.7	4.1	4.1	5.4	5.4	20	80	77	22
F 60 3_162.9	162.9	1.3	2.7	2.7	4.1	4.1	5.4	5.4	20	80	77	22
F 60 3_185.9	185.9	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	79	77	22
F 60 3_201.4	201.4	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	79	77	22
F 60 3_217.6	217.6	0.70	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	22
F 60 3_235.8	235.8	0.70	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	22
F 60 3_259.1	259.1	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	22
F 60 3_280.7	280.7	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	22

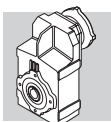
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.






F 60

		J ($\cdot 10^{-4}$) [kgm ²]									
											
	i	95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
F 60 3_9.0	9.0	—	—	—	—	—	—	57	59	59	64
F 60 3_9.7	9.7	—	—	—	—	—	—	55	57	57	62
F 60 3_11.8	11.8	—	—	28	29	28	29	42	44	44	49
F 60 3_12.7	12.7	—	—	27	28	27	28	41	43	43	48
F 60 3_14.5	14.5	—	—	21	22	20	21	35	37	37	42
F 60 3_15.7	15.7	—	—	20	21	20	21	34	36	36	41
F 60 3_19.1	19.1	—	—	13	14	13	14	27	29	29	34
F 60 3_20.7	20.7	—	—	13	14	13	14	27	29	29	34
F 60 3_23.5	23.5	—	—	10	11	10	11	24	27	26	31
F 60 3_25.4	25.4	—	—	9.9	10	9.9	11	24	27	26	31
F 60 3_29.6	29.6	—	—	—	—	—	—	32	34	34	39
F 60 3_32.1	32.1	—	—	—	—	—	—	32	34	34	39
F 60 3_38.8	38.8	—	—	14	15	13	14	28	30	30	35
F 60 3_42.1	42.1	—	—	13	14	13	14	28	30	29	34
F 60 3_47.8	47.8	—	—	11	12	11	12	25	28	27	32
F 60 3_51.8	51.8	—	—	11	12	11	12	25	28	27	32
F 60 3_63.0	63.0	—	—	7.7	8.2	7.6	8.6	22	24	24	29
F 60 3_68.3	68.3	—	—	7.7	8.2	7.6	8.6	22	24	24	29
F 60 3_77.6	77.6	—	—	6.6	7.1	6.5	7.5	21	23	23	28
F 60 3_84.0	84.0	—	—	6.5	7.0	6.5	7.5	21	23	23	28
F 60 3_98.2	98.2	—	—	5.6	6.1	5.5	6.5	20	22	22	27
F 60 3_106.4	106.4	5.5	6.0	5.5	6.0	5.4	6.4	20	22	22	27
F 60 3_120.5	120.5	2.2	2.7	4.6	5.1	4.6	5.6	19	21	21	26
F 60 3_130.5	130.5	2.2	2.7	4.6	5.1	4.6	5.6	19	21	21	26
F 60 3_150.4	150.4	4.1	4.6	4.1	4.6	4.1	5.1	18	21	20	25
F 60 3_162.9	162.9	4.1	4.6	4.1	4.6	4.1	5.1	18	21	20	25
F 60 3_185.9	185.9	3.7	4.2	3.8	4.3	3.7	4.7	18	20	20	25
F 60 3_201.4	201.4	3.7	4.2	3.8	4.3	3.7	4.7	18	20	20	25
F 60 3_217.6	217.6	3.5	4.0	3.6	4.1	3.5	4.5	—	—	—	—
F 60 3_235.8	235.8	3.5	4.0	3.6	4.1	3.5	4.5	—	—	—	—
F 60 3_259.1	259.1	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
F 60 3_280.7	280.7	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—

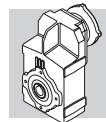
For the values of the moment of inertia of 4-stage gearboxes, please contact our Technical Service department.






F 70

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

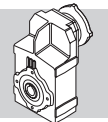
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

F 80

	i	J ($\cdot 10^{-4}$) [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	
F 80 3_14.0	14.0	—	—	—	—	—	—	212	212	226	504	
F 80 3_16.2	16.2	—	—	—	—	—	—	173	171	180	464	
F 80 3_17.6	17.6	—	—	—	—	—	—	170	167	177	461	
F 80 3_20.3	20.3	60	—	—	—	79	139	136	146	431	102	
F 80 3_22.0	22.0	58	—	—	—	77	136	134	143	429	100	
F 80 3_25.2	25.2	43	—	—	—	62	121	119	150	413	84	
F 80 3_28.8	28.8	—	—	—	—	—	—	189	203	480	155	
F 80 3_31.3	31.3	—	—	—	—	—	—	188	201	479	154	
F 80 3_36.0	36.0	—	—	—	—	—	155	155	169	447	121	
F 80 3_39.0	39.0	—	—	—	—	—	154	154	168	446	121	
F 80 3_45.3	45.3	—	—	—	—	—	133	132	141	425	97	
F 80 3_49.1	49.1	—	—	—	—	—	133	131	140	425	97	
F 80 3_56.7	56.7	35	—	—	—	54	113	111	120	406	77	
F 80 3_61.5	61.5	35	—	—	—	54	113	111	120	406	76	
F 80 3_70.4	70.4	27	—	—	—	46	105	103	133	397	68	
F 80 3_76.3	76.3	27	—	—	—	45	105	103	133	396	68	
F 80 3_85.2	85.2	20	—	—	—	39	99	96	126	389	62	
F 80 3_92.3	92.3	20	—	—	—	39	99	96	126	389	61	
F 80 3_105.0	105.0	14	16	16	17	17	32	92	90	119	383	
F 80 3_113.8	113.8	14	16	16	17	17	32	92	90	119	382	
F 80 3_122.5	122.5	13	15	15	17	17	32	91	89	118	381	
F 80 3_132.7	132.7	13	15	15	16	16	31	91	89	118	381	
F 80 3_147.9	147.9	8.5	11	11	13	13	27	87	85	114	377	
F 80 3_160.2	160.2	8.5	11	11	13	13	27	87	84	—	—	
F 80 3_184.6	184.6	5.1	7.9	7.8	9.1	9.1	24	83	81	—	—	
F 80 3_200.0	200.0	5.0	7.9	7.8	9.1	9.1	24	83	81	—	—	

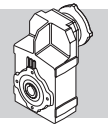
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F 90

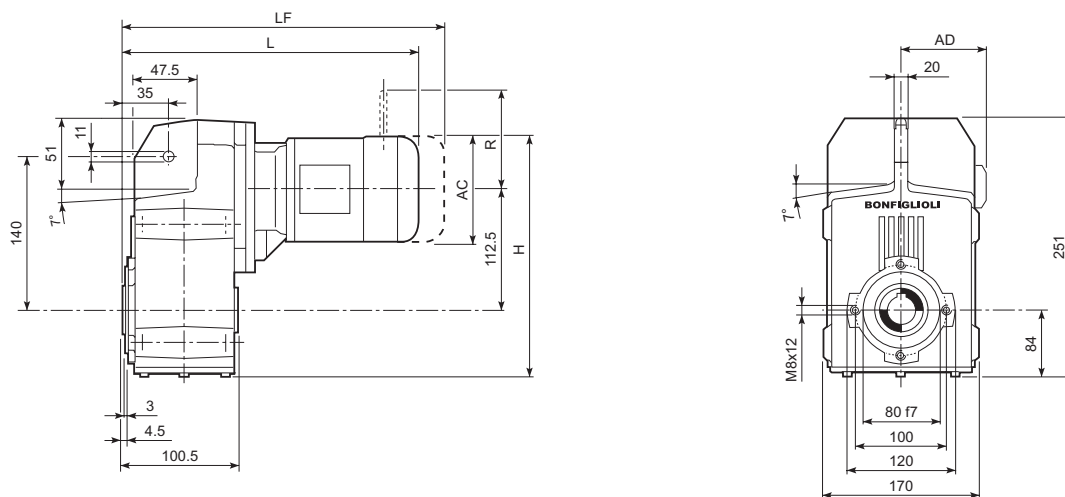
	i	J ($\cdot 10^{-4}$) [kgm ²]											
			 IEC										
		80	90	100	112	132	160	180	200	225	250		
F 90 3_10.3	10.3	—	—	—	—	—	—	549	559	843	870	850	
F 90 3_11.1	11.1	—	—	—	—	—	—	529	539	823	850	830	
F 90 3_13.4	13.4	—	—	—	—	—	—	373	383	667	694	674	
F 90 3_14.5	14.5	—	—	—	—	—	—	361	371	655	682	662	
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.

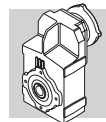


64 DIMENSIONS

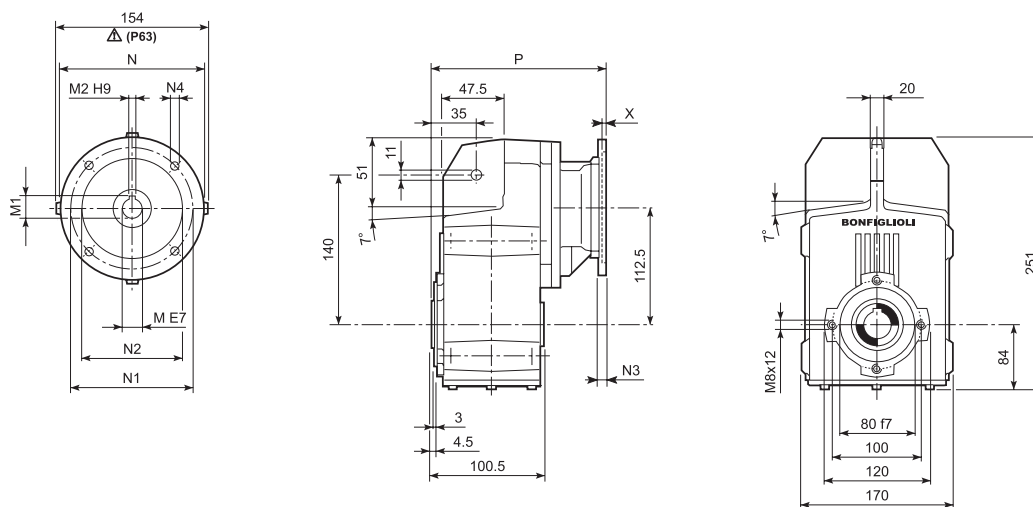
F 10...M



								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

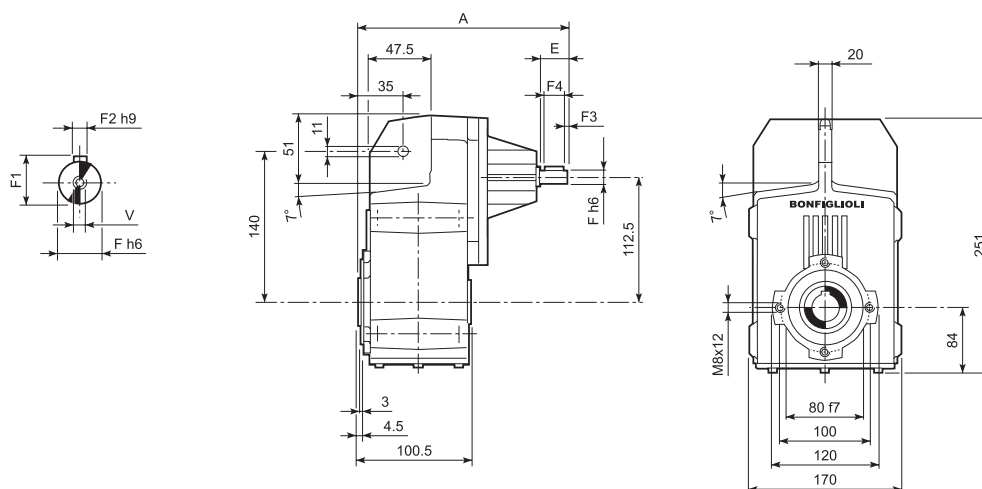


F 10...P(IEC)

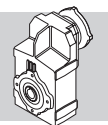


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg		
		F 10 2	P63	11	12.8	4	140	115	95	—	M8x19	4	185.5	8
		F 10 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	185.5	8
		F 10 2	P80	19	21.8	6	200	165	130	—	M10x14.5	4	205	9
		F 10 2	P90	24	27.3	8	200	165	130	—	M10x14.5	4	205	9
		F 10 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	215	13
		F 10 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	215	13

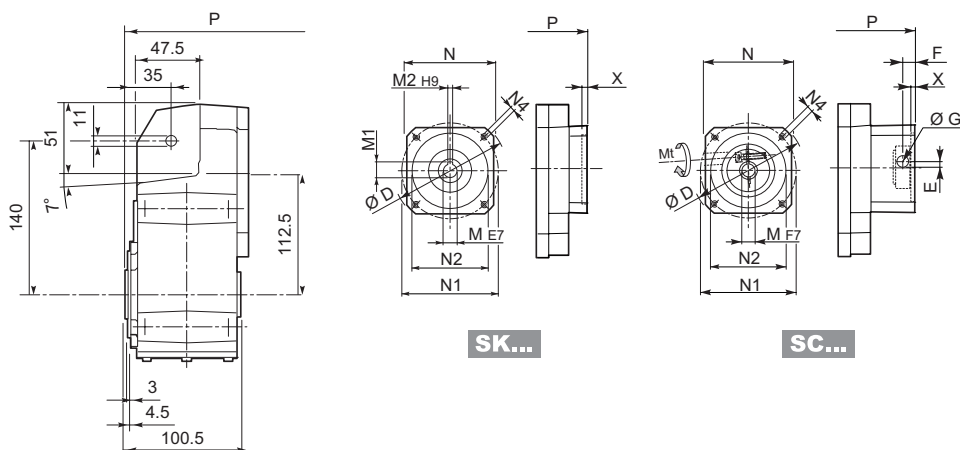
F 10...HS



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



F 10...SK / SC

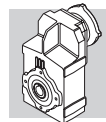


SK...

SC...

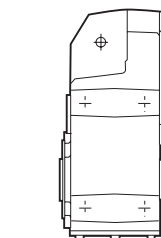
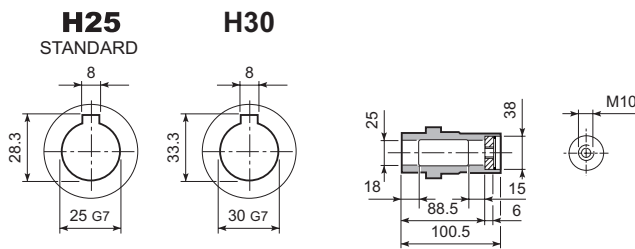
		D	M	M1	M2	N	N1	N2	N4	X	P	kg
		102	11	12.8	4	82	75	60	M5x10	3.5	157	8
F 10 2	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	157	8
F 10 2	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	164	8
F 10 2	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	164	8
F 10 2	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	205	9
F 10 2	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	205	9
F 10 2	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	205	9
F 10 2	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	205	9
F 10 2	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	205	9
F 10 2	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	205	9

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P	kg
		M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	184	8
F 10 2	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	184	8
F 10 2	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	184	9
F 10 2	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	184	9
F 10 2	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	228.5	10
F 10 2	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	228.5	10
F 10 2	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	228.5	10
F 10 2	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	228.5	10
F 10 2	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	228.5	11
F 10 2	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	228.5	11

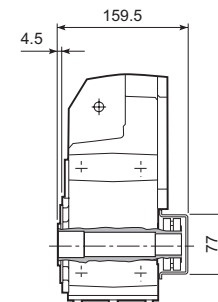
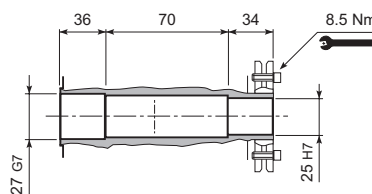


F 10

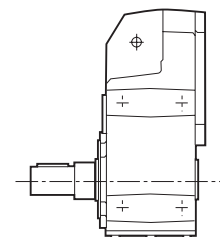
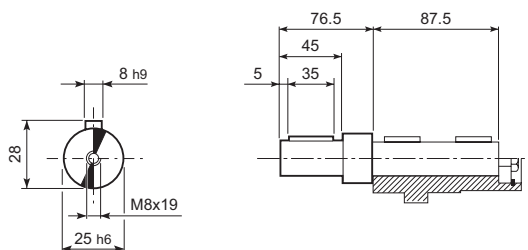
F 10...H



F 10...S

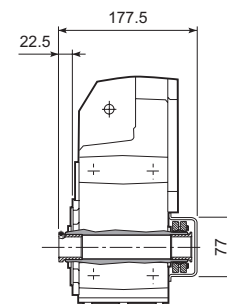
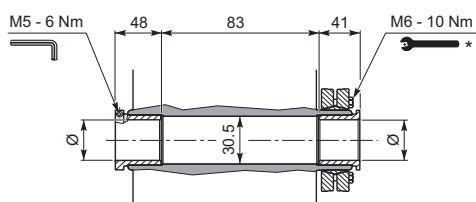


F 10...R

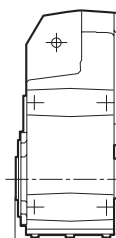
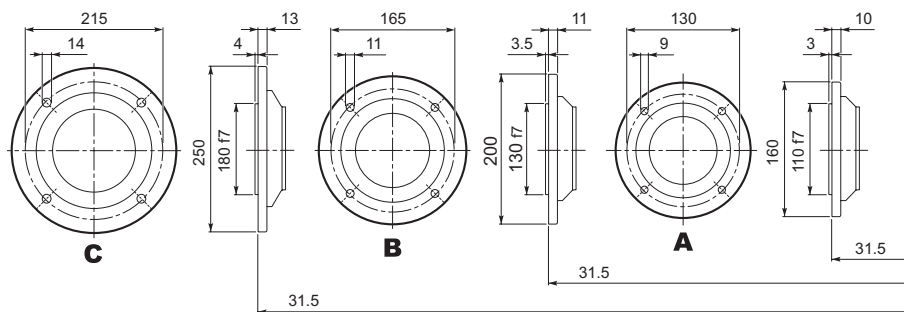


F 10...QF

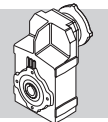
	Ø
QF25	25
QF30	30



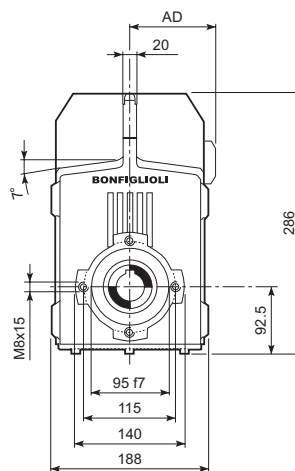
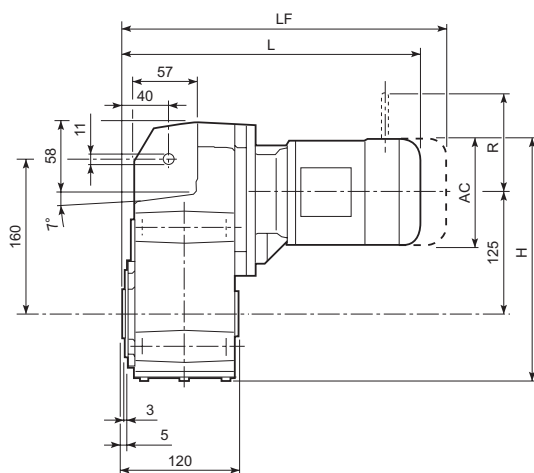
F 10...F...



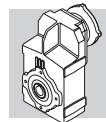
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



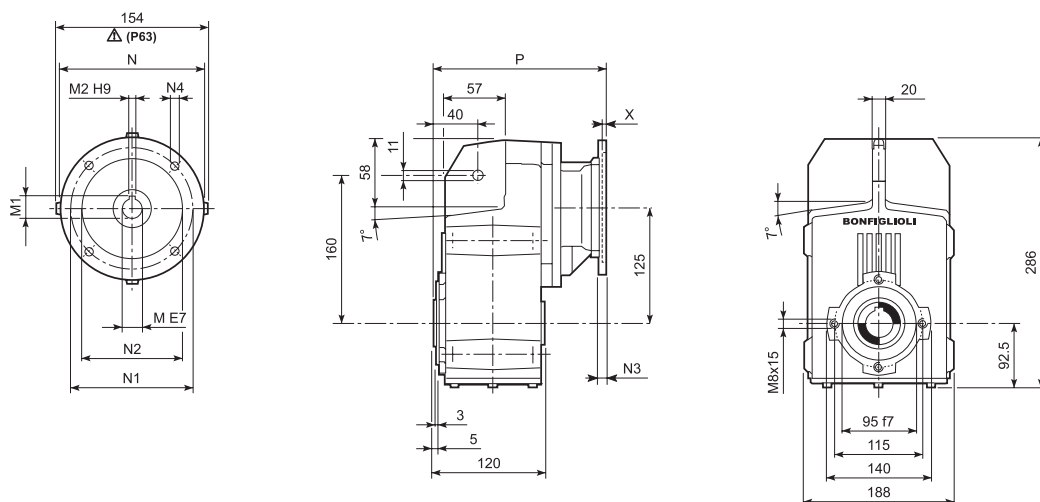
F 20...M



								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

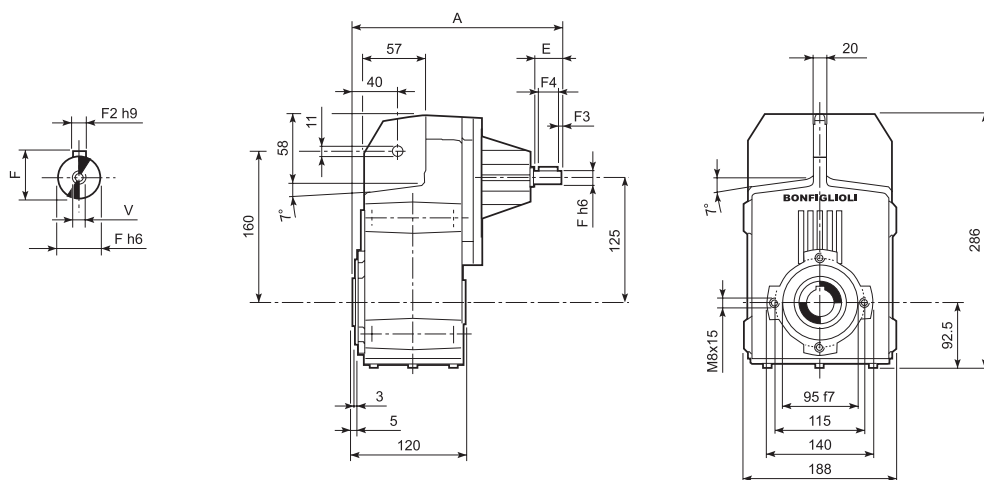


F 20...P(IEC)

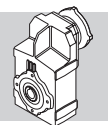


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 20 2	P63	11	12.8	4	140	115	95	—	M8x19	4	197.5	12
F 20 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	197.5	12
F 20 2	P80	19	21.8	6	200	165	130	—	M10x14.5	4	217	13
F 20 2	P90	24	27.3	8	200	165	130	—	M10x14.5	4	217	12
F 20 2	P100	28	31.3	8	250	215	180	—	M12x16	4.5	227	16
F 20 2	P112	28	31.3	8	250	215	180	—	M12x16	4.5	227	16
F 20 3	P63	11	12.8	4	140	115	95	—	M8x19	4	253	13
F 20 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	253	13
F 20 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	272.5	14
F 20 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	272.5	14
F 20 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	282.5	18
F 20 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	282.5	18

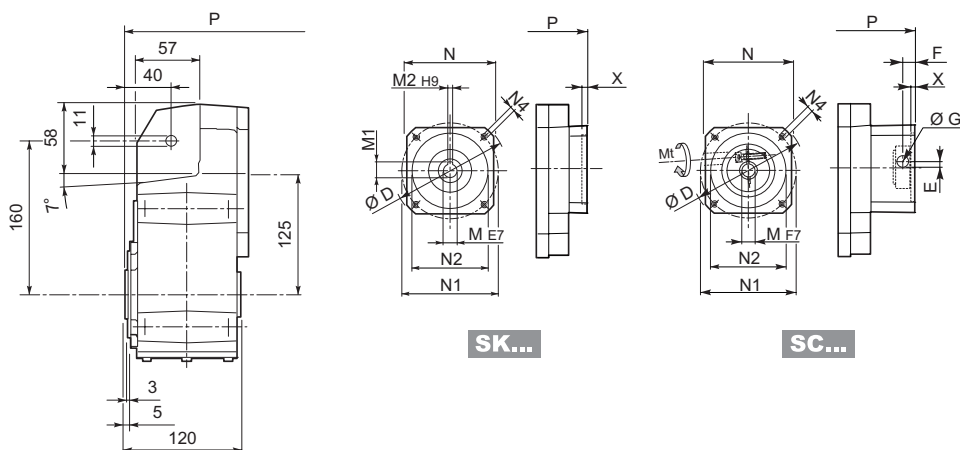
F 20...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 20 2	HS	247.5	40	19	21.5	6	2.5	35	M6x16	11.5
F 20 3		260	40	16	18	5	2.5	35	M6x16	12.4

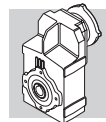


F 20...SK / SC



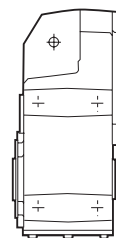
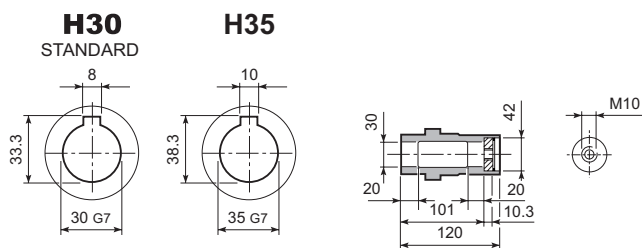
		D	M	M1	M2	N	N1	N2	N4	X	2x		3x	
											P	Kg	P	Kg
F 20 2/3	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	169	11	224.5	12
F 20 2/3	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	176	12	231.5	13
F 20 2/3	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	217	12	231.5	13
F 20 2/3	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	217	13	272.5	14
F 20 2/3	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	217	13	272.5	14
F 20 2/3	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	217	13	272.5	14
F 20 2/3	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	217	13	272.5	14
F 20 2/3	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	217	13	272.5	14
F 20 2/3	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	217	13	272.5	14

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2x		3x	
														P	Kg	P	Kg
F 20 2/3	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	196	12	251.5	13
F 20 2/3	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	196	13	251.5	14
F 20 2/3	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	196	13	251.5	14
F 20 2/3	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	240.5	14	296	15
F 20 2/3	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	240.5	14	296	15
F 20 2/3	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	240.5	14	296	15
F 20 2/3	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	240.5	14	296	15
F 20 2/3	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	240.5	15	296	16
F 20 2/3	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	240.5	15	296	16

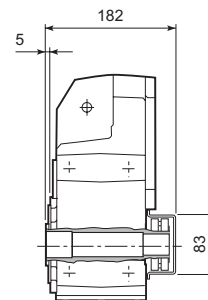
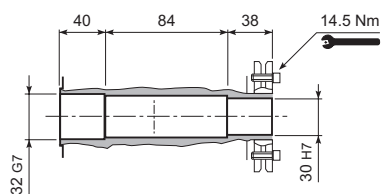


F 20

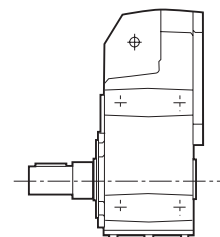
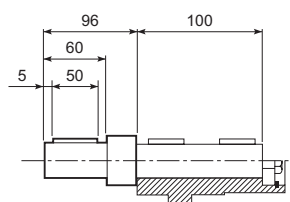
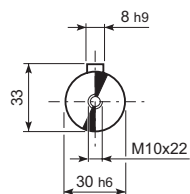
F 20...H



F 20...S

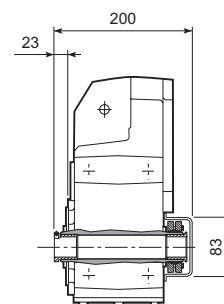
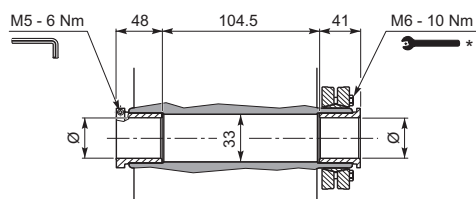


F 20...R

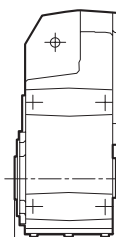
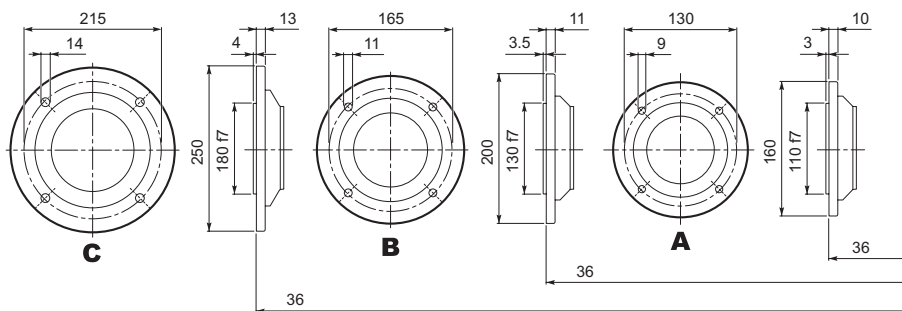


F 20...QF

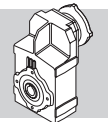
	Ø
QF25	25
QF30	30



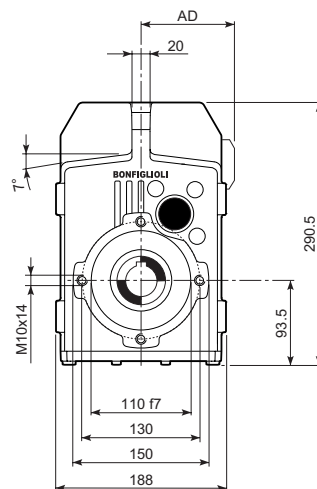
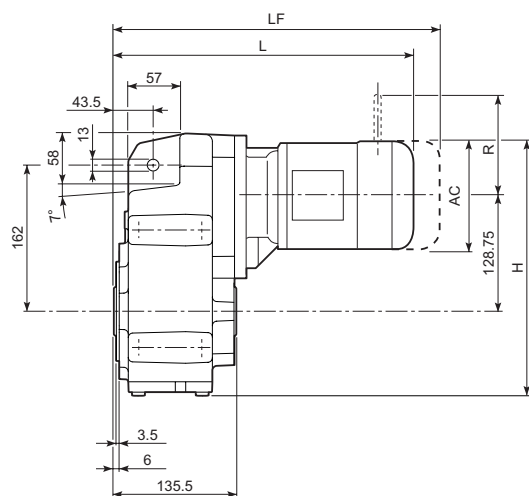
F 20...F...



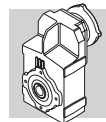
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



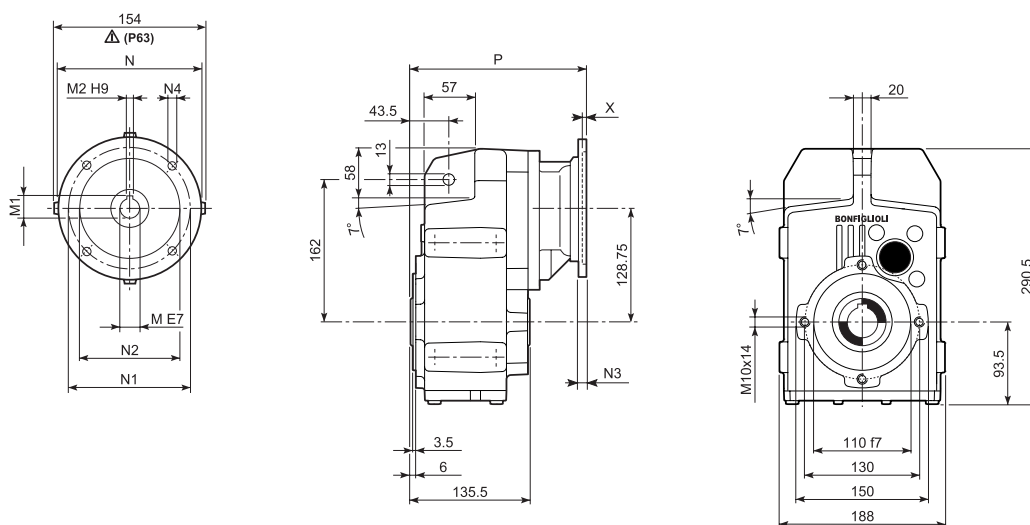
F 25...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		R	AD	R	AD
F 25 2/3	S05	M05	121	283	339	95	15	405	17	96	122	116	95
F 25 2/3	S1	M1	138	291.5	368	108	17	429	20	103	135	124	108
F 25 2/3	S2	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

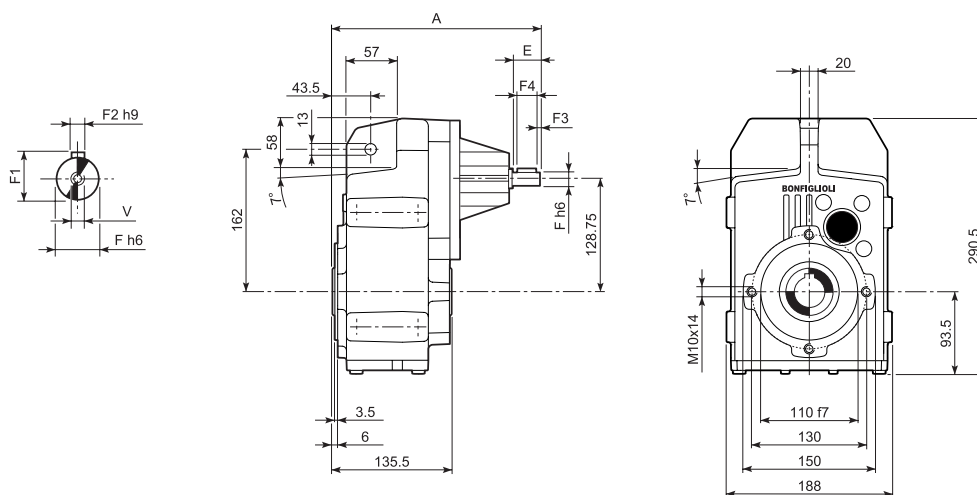


F 25...P(IEC)

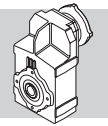


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 25 2/3	P63	11	12.8	4	140	115	95	—	M8x19	4	213	12
F 25 2/3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	213	12
F 25 2/3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	232.5	13
F 25 2/3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	232.5	13
F 25 2/3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	242.5	16
F 25 2/3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	242.5	16
F 25 4	P63	11	12.8	4	140	115	95	—	M8x19	4	268.5	13
F 25 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	268.5	13
F 25 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	288	14
F 25 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	288	14
F 25 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	298	18
F 25 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	298	18

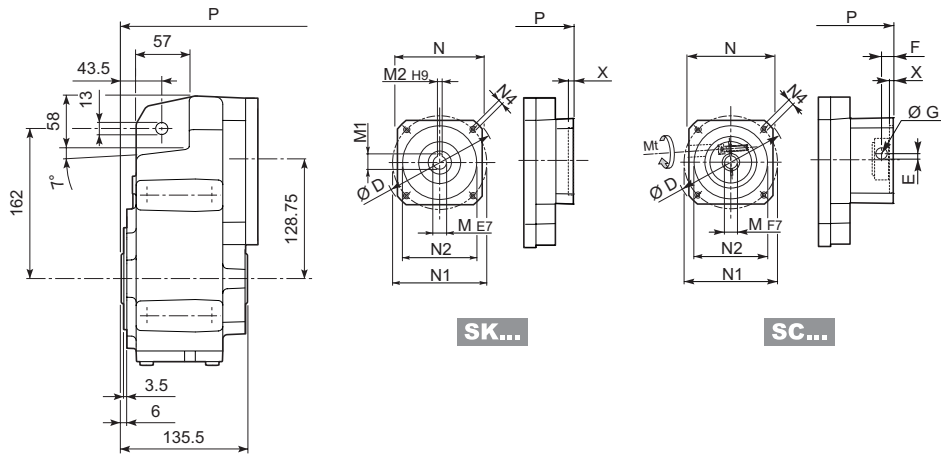
F 25...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 25 2	HS	263	40	19	21.5	6	2.5	35	M6x16	11.5
F 25 3		263	40	19	21.5	6	2.5	35	M6x16	11.5
F 25 4		275.5	40	16	18	5	2.5	35	M6x16	12.5



F 25...SK / SC

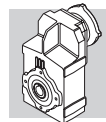


SK...

SC...

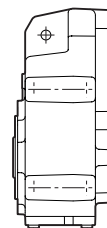
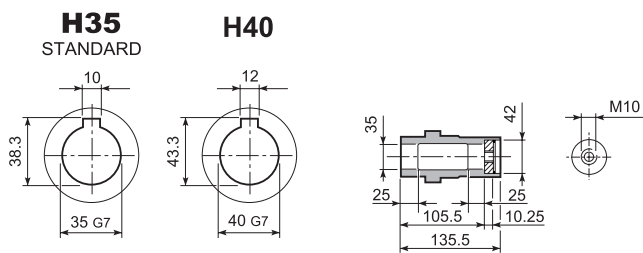
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P		P	
F 25 2/3/4	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	184.5	11	240	12
F 25 2/3/4	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	191.5	12	247	13
F 25 2/3/4	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	191.5	12	247	13
F 25 2/3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	232.5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

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P		P	
F 25 2/3/4	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	211.5	12	267	13
F 25 2/3/4	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	211.5	13	267	14
F 25 2/3/4	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	211.5	13	267	14
F 25 2/3/4	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	256	14	311.5	15
F 25 2/3/4	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	256	14	311.5	15
F 25 2/3/4	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	256	14	311.5	15
F 25 2/3/4	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	256	14	311.5	15
F 25 2/3/4	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	256	15	311.5	16
F 25 2/3/4	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	256	15	311.5	16

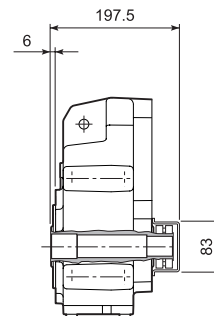
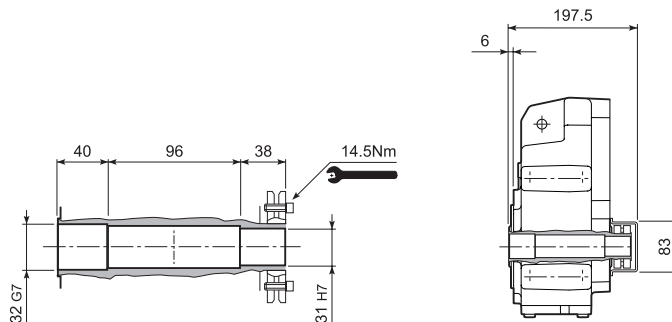


F 25

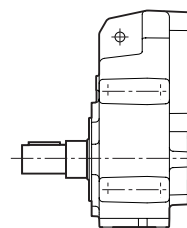
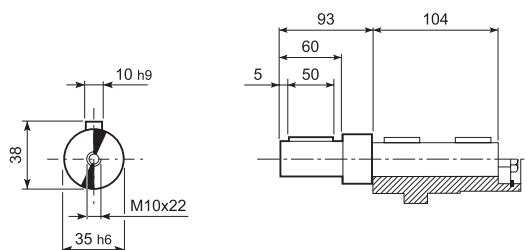
F 25...H



F 25...S



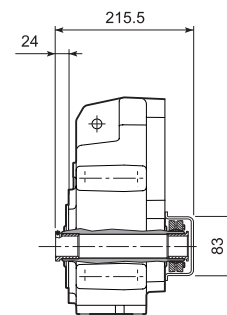
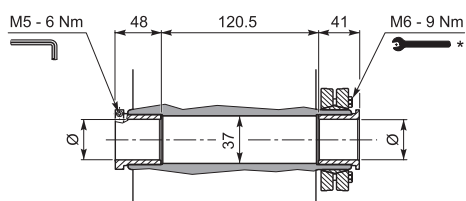
F 25...R



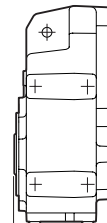
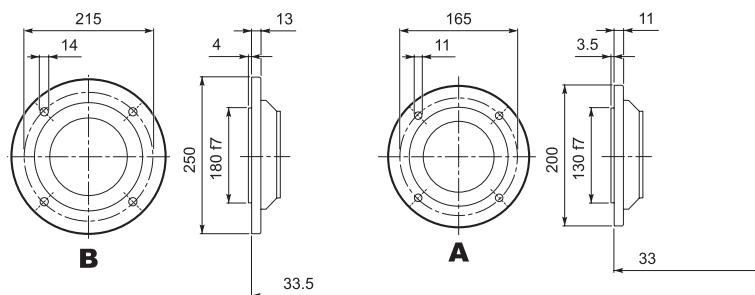
F 25...QF

	Ø
QF30	30
QF32	32

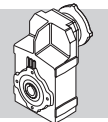
	M _{n2} max [Nm]
F 25 QF30	350



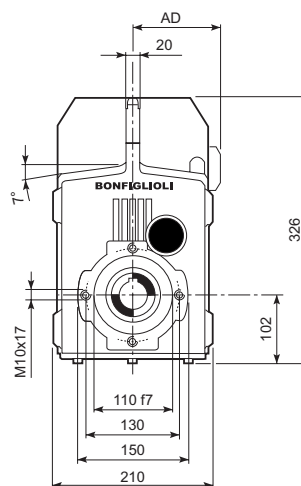
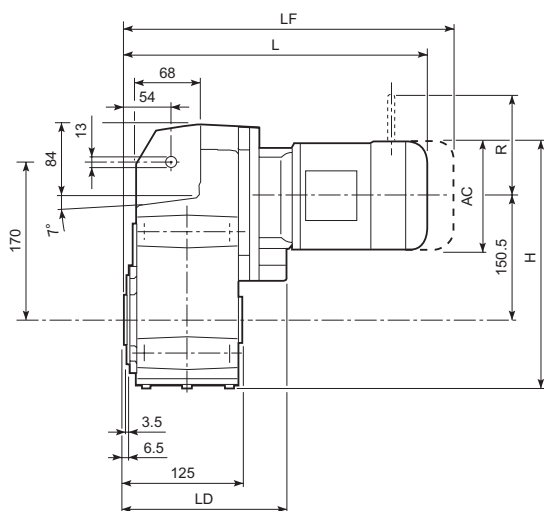
F 25...F...



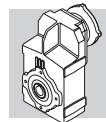
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



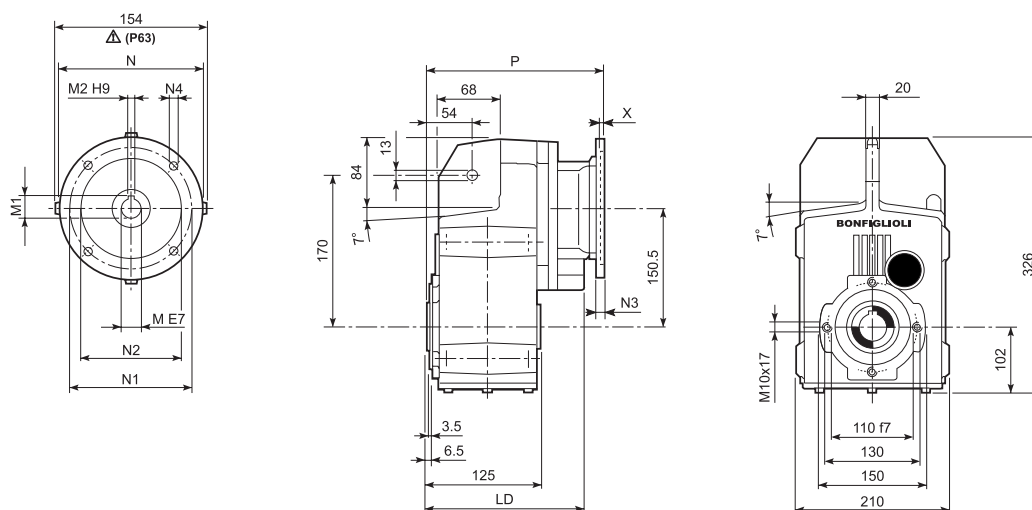
F 31...M



										M...FD M...FA		M...FD		M...FA	
			AC	H	L	LD	AD		LF		R	AD	R	AD	
F 31 2/3	S1	M1	138	321.3	380.5	183.5	108	22	441.5	25	103	135	124	108	
F 31 2/3	S2	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	

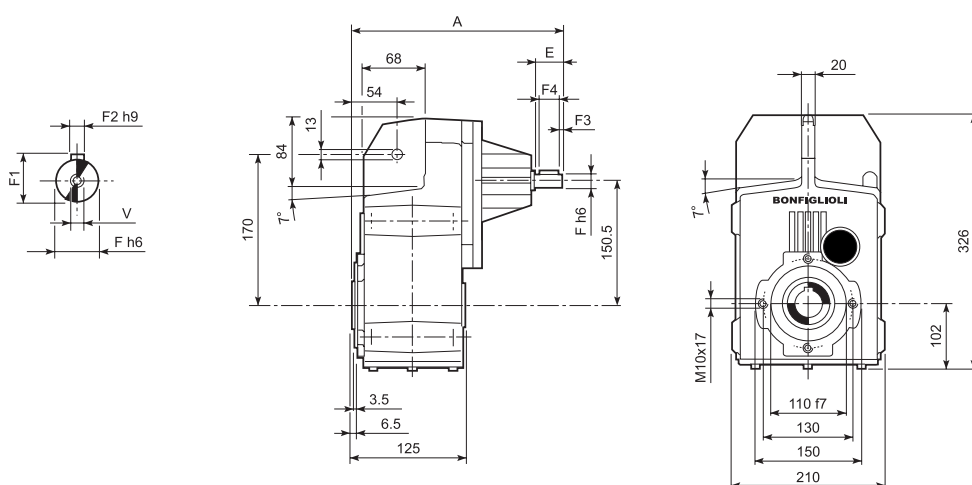


F 31...P(IEC)

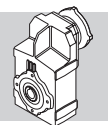


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
		195.5	11	12.8	4	140	115	95	—	M8x19	4	225.5	17
		195.5	14	16.3	5	160	130	110	—	M8x16	4.5	225.5	17
		205.5	19	21.8	6	200	165	130	—	M10x14.5	4	245	18
		205.5	24	27.3	8	200	165	130	—	M10x14.5	4	245	17
		205.5	28	31.3	8	250	215	180	—	M12x16	4.5	255	21
		205.5	28	31.3	8	250	215	180	—	M12x16	4.5	255	21
		—	38	41.3	10	300	265	230	—	14	5	291.5	24
		—	11	12.8	4	140	115	95	—	M8x19	4	283	17
		—	14	16.3	5	160	130	110	—	M8x16	4.5	283	17
		—	19	21.8	6	200	165	130	—	M10x14.5	4	302.5	18
		—	24	27.3	8	200	165	130	—	M10x14.5	4	302.5	18
		—	28	31.3	8	250	215	180	—	M12x16	4.5	312.5	22
		—	28	31.3	8	250	215	180	—	M12x16	4.5	312.5	22

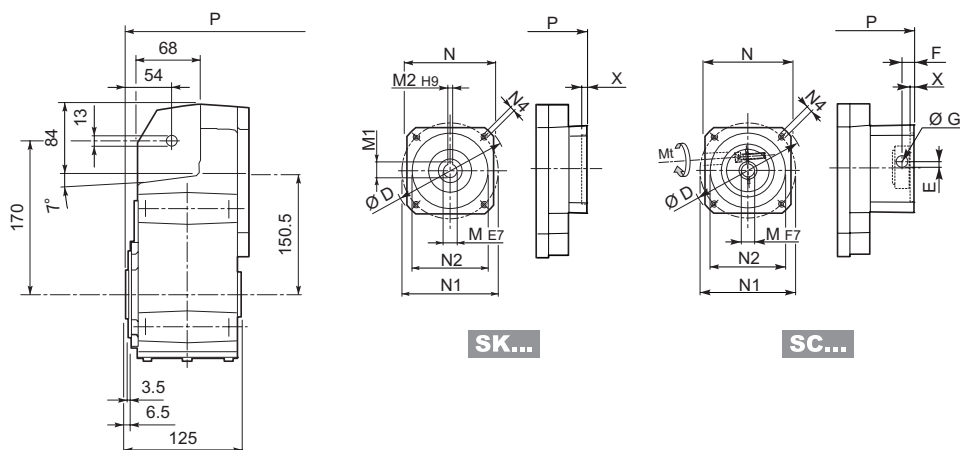
F 31...HS



		A	E	F	F1	F2	F3	F4	V	Kg
		275.5	40	19	21.5	6	2.5	35	M6x16	16.7
		275.5	40	19	21.5	6	2.5	35	M6x16	16.7
		290	40	16	18	5	2.5	35	M6x16	16.5



F 31...SK / SC

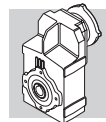


SK...

SC...

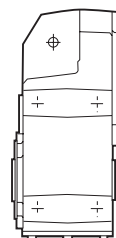
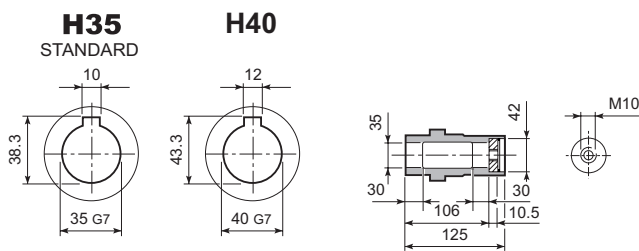
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P	Kg	P	Kg
	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	197	16	254.5	16
	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	204	17	261.5	17
	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	204	17	261.5	17
	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	245	18	302.5	18
	SK 95A	130	14	16.3	5	102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

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

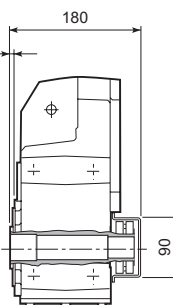
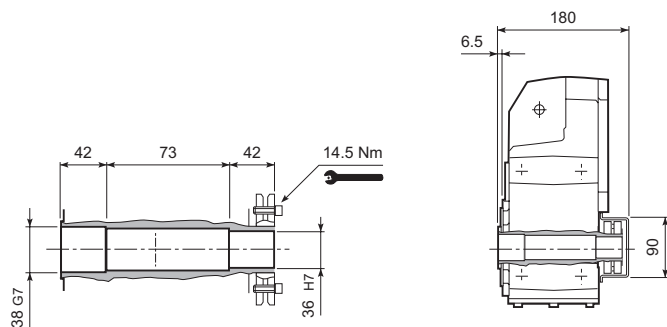


F 31

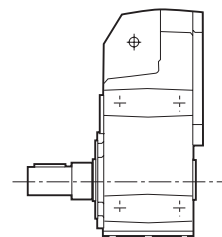
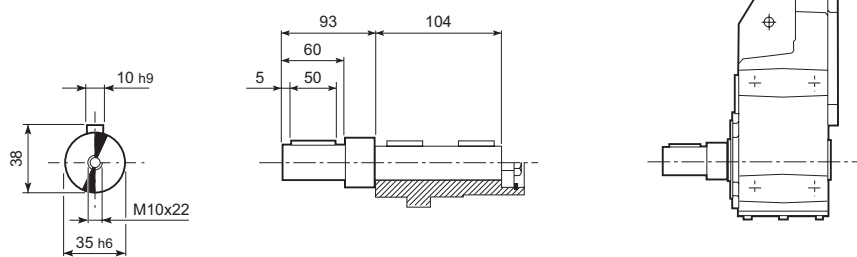
F 31...H



F 31...S

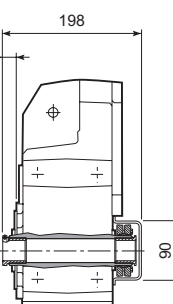
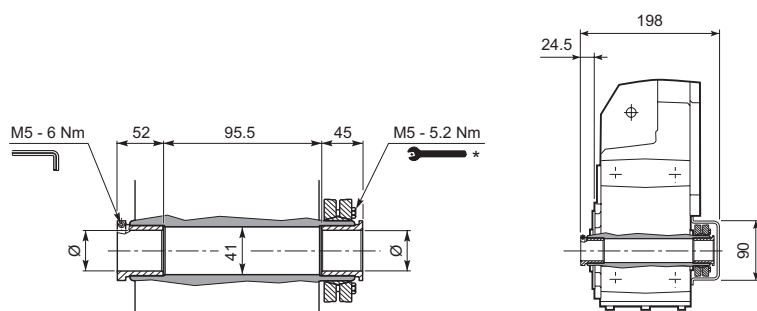


F 31...R

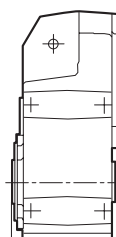
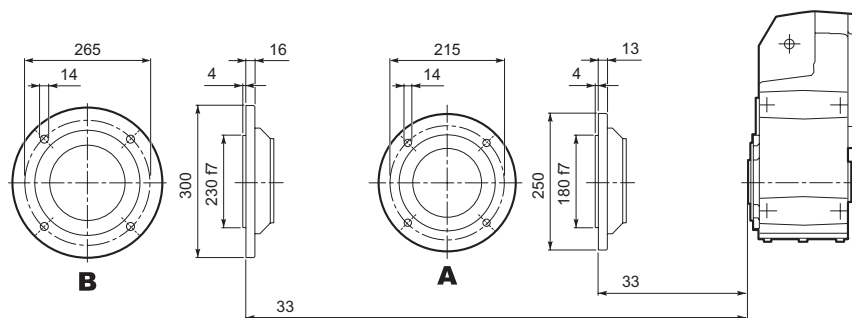


F 31...QF

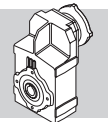
	Ø
QF35	35
QF40	40



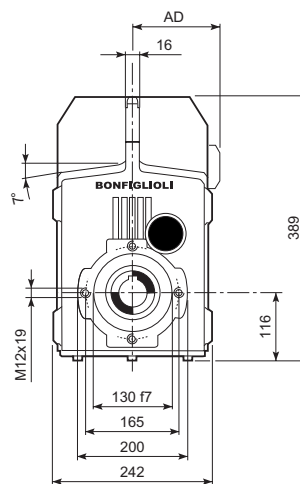
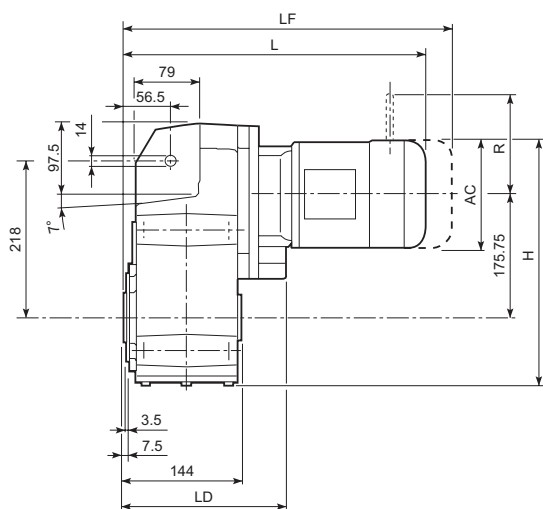
F 31...F...



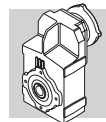
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



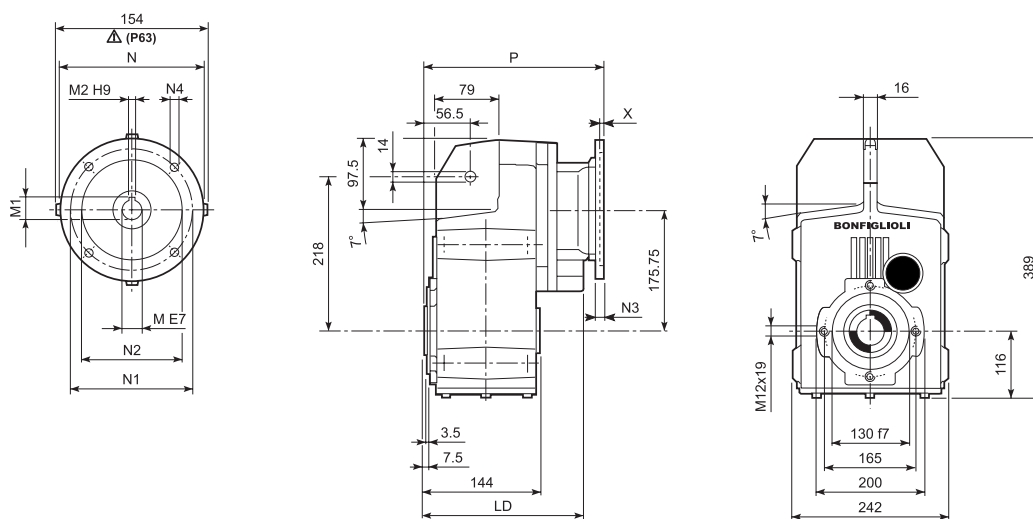
F 41...M



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

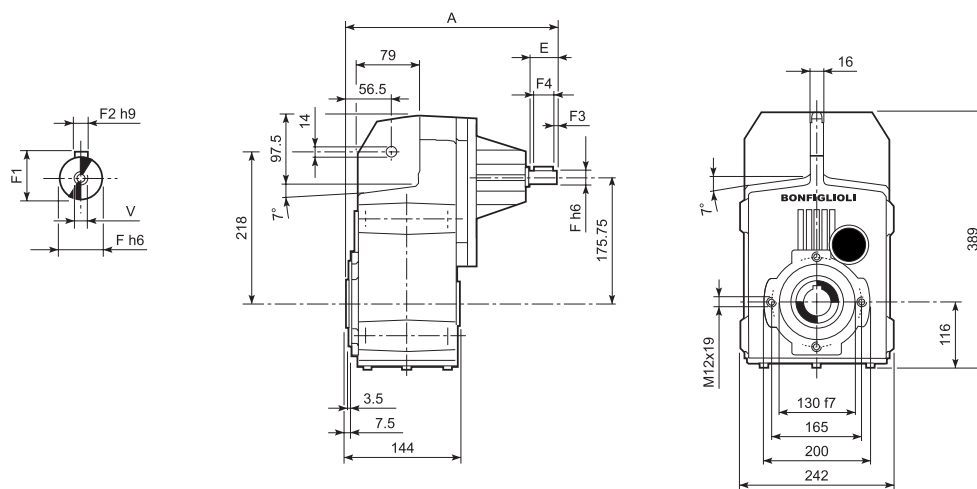


F 41...P(IEC)

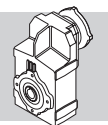


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 41 2/3	P63	215	11	12.8	4	140	115	95	—	M8x19	4	246	42
F 41 2/3	P71	215	14	16.3	5	160	130	110	—	M8x16	4.5	246	42
F 41 2/3	P80	231	19	21.8	6	200	165	130	—	M10x14.5	4	265.5	43
F 41 2/3	P90	231	24	27.3	8	200	165	130	—	M10x14.5	4	265.5	43
F 41 2/3	P100	231	28	31.3	8	250	215	180	—	M12x16	4.5	275.5	47
F 41 2/3	P112	231	28	31.3	8	250	215	180	—	M12x16	4.5	275.5	47
F 41 2/3	P132	—	38	41.3	10	300	265	230	16	14	5	312	50
F 41 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	307.5	44
F 41 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	307.5	44
F 41 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	327	45
F 41 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	327	45
F 41 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	337	49
F 41 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	337	49

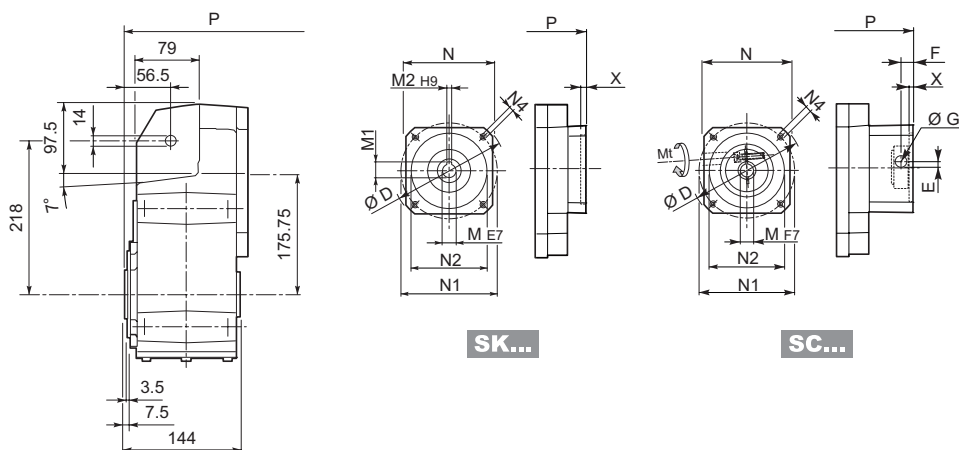
F 41...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 41 2	HS	335.5	50	24	27	8	2.5	45	M8x19	44.9
F 41 3		335.5	50	24	27	8	2.5	45	M8x19	46.4
F 41 4		357.5	40	19	21.5	6	2.5	35	M6x16	43.5



F 41...SK / SC

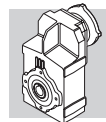


SK...

SC...

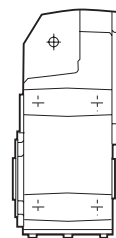
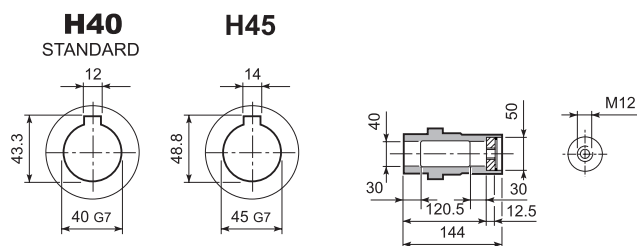
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P		P	
F 41 4	SK 60A	102	11	12.8	4	82	75	60	M5x10	3.5	—	—	279	43
F 41 4	SK 60B	102	14	16.3	5	82	75	60	M5x10	4	—	—	286	44
F 41 4	SK 80A	115	14	16.3	5	90	100	80	M6x12	4	—	—	286	44
F 41 2/3	SK 80B	120	14	16.3	5	96	100	80	M6x12	4	265.5	43	—	—
F 41 2/3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	265.5	43	327	45
F 41 2/3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	265.5	43	327	45
F 41 2/3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	265.5	43	327	45
F 41 2/3/4	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	265.5	43	327	45
F 41 2/3/4	SK 110A	150	19	21.8	6	120	130	110	M8x12	5	265.5	43	327	45
F 41 2/3/4	SK 110B	150	24	27.3	8	120	130	110	M8x12	5	265.5	43	327	45
F 41 2/3	SK 130A	188	24	27.3	8	142	165	130	M10x20	5	265.5	45	—	—
F 41 2/3	SK 130B	189	32	35.3	10	160	165	130	M10x20	5	312	47	—	—
F 41 2/3	SK 180A	240	32	35.3	10	192	215	180	M12x19	5	312	47	—	—
F 41 2/3	SK 180B	240	38	41.3	10	192	215	180	M12x19	5	312	47	—	—

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P		P	
F 41 4	SC 60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	—	—	306	44
F 41 4	SC 60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	—	—	306	45
F 41 4	SC 80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	—	—	306	45
F 41 2/3	SC 80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	289	44	—	—
F 41 2/3/4	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	289	44	350.5	46
F 41 2/3/4	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	289	44	350.5	46
F 41 2/3/4	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	289	44	350.5	46
F 41 2/3/4	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	289	44	350.5	46
F 41 2/3/4	SC 110A	M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	289	45	350.5	47
F 41 2/3/4	SC 110B	M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	289	45	350.5	47
F 41 2/3	SC 130A	M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	289	46	—	—
F 41 2/3	SC 130B	M8	36	189	20	17	17.75	32	160	165	130	M10x20	5	335	50	—	—
F 41 2/3	SC 180A	M8	36	240	20	17.5	17.75	32	192	215	180	M12x24	5	339	50	—	—
F 41 2/3	SC 180B	M8	36	240	20	17.5	17.75	38	192	215	180	M12x24	5	339	50	—	—

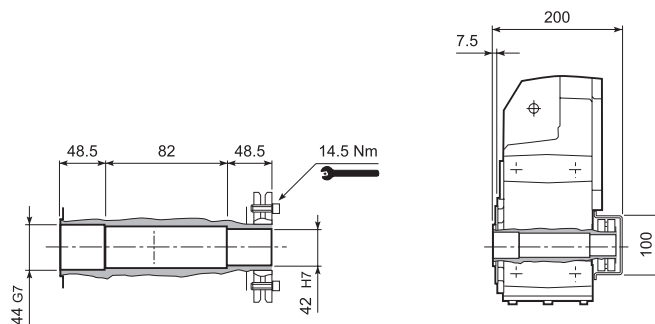


F 41

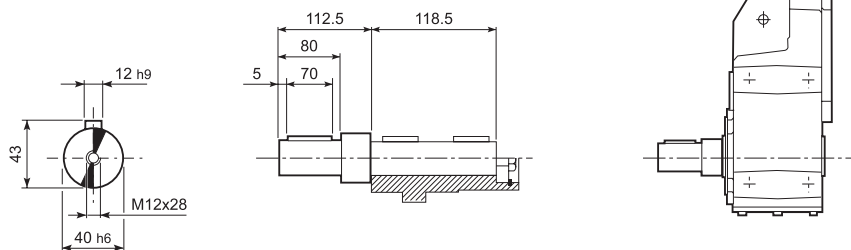
F 41...H



F 41...S



F 41...R

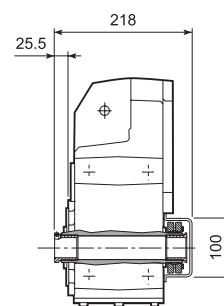
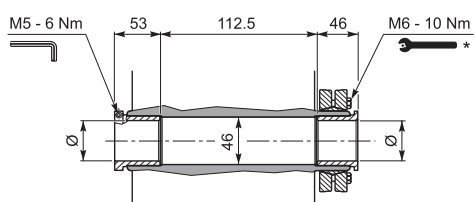


F 41...QF

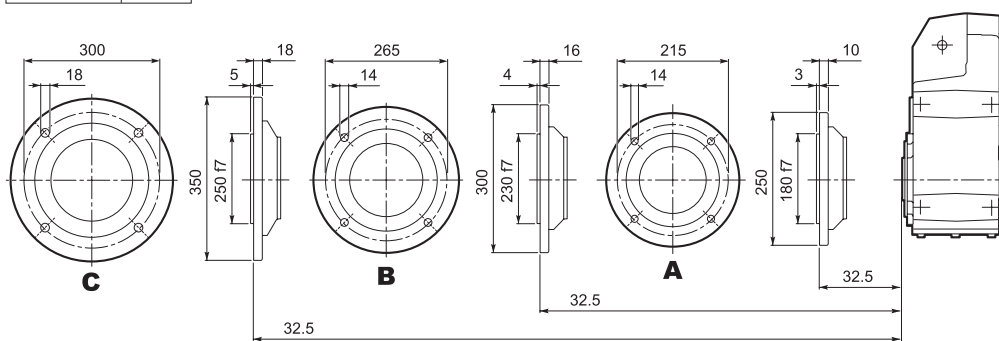
	Ø
QF42	42
QF45	45



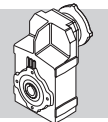
	M _{n2} max [Nm]
F 41 QF42	850
F 41 QF45	1000



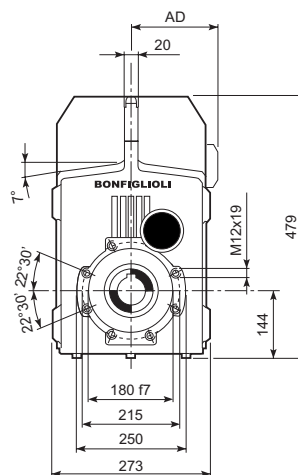
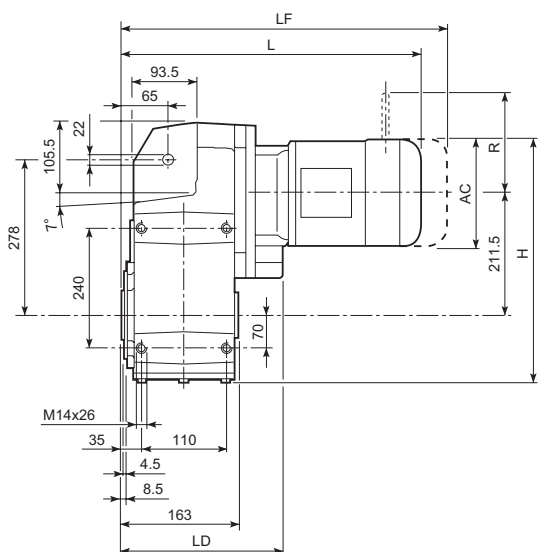
F 41...F...



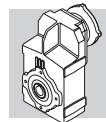
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



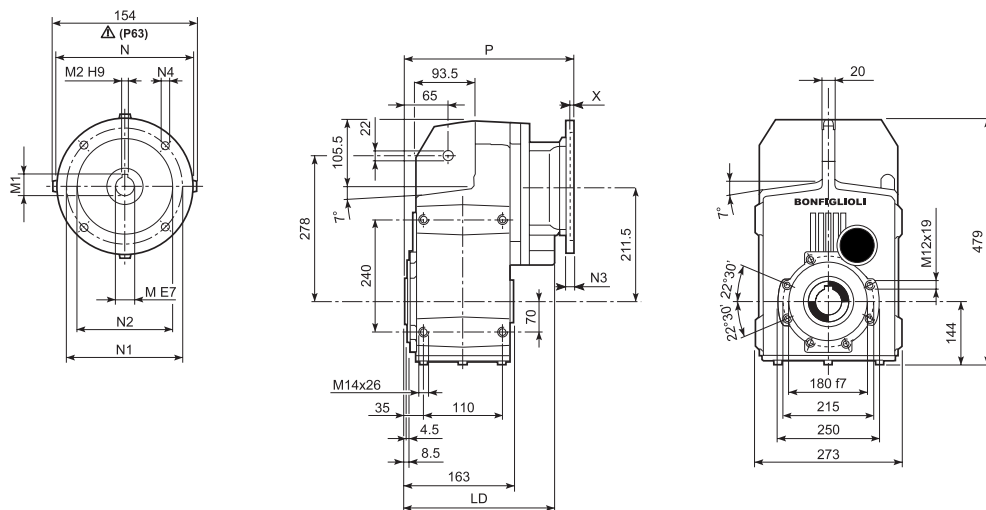
F 51...M



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

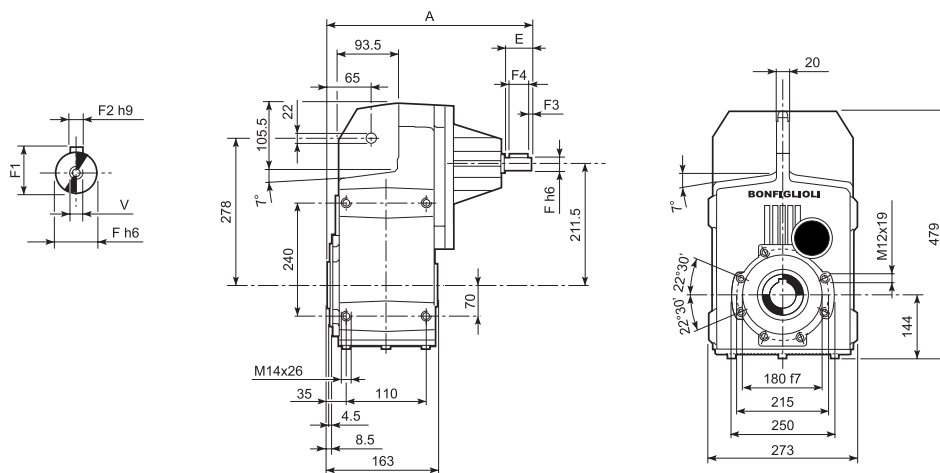


F 51...P(IEC)

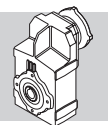


		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 51 2/3	P63	238	11	12.8	4	140	115	95	—	M8x19	4	268	65
F 51 2/3	P71	238	14	16.3	5	160	130	110	—	M8x16	4.5	268	65
F 51 2/3	P80	253	19	21.8	6	200	165	130	—	M10x14.5	4	287.5	67
F 51 2/3	P90	253	24	27.3	8	200	165	130	—	M10x14.5	4	287.5	67
F 51 2/3	P100	238	28	31.3	8	250	215	180	—	M12x16	4.5	297.5	71
F 51 2/3	P112	238	28	31.3	8	250	215	180	—	M12x16	4.5	297.5	71
F 51 2/3	P132	238	38	41.3	10	300	265	230	16	14	5	334	74
F 51 2/3	P160	—	42	45.3	12	350	300	250	23	18	5.5	384.5	78
F 51 2/3	P180	—	48	51.8	14	350	300	250	23	18	5.5	384.5	78
F 51 4	P63	—	11	12.8	4	140	115	95	—	M8x19	4	339.5	70
F 51 4	P71	—	14	16.3	5	160	130	110	—	M8x16	4.5	339.5	70
F 51 4	P80	—	19	21.8	6	200	165	130	—	M10x14.5	4	359	71
F 51 4	P90	—	24	27.3	8	200	165	130	—	M10x14.5	4	359	71
F 51 4	P100	—	28	31.3	8	250	215	180	—	M12x16	4.5	369	75
F 51 4	P112	—	28	31.3	8	250	215	180	—	M12x16	4.5	369	75
F 51 4	P132	—	38	41.3	10	300	265	230	16	14	5	405.5	78

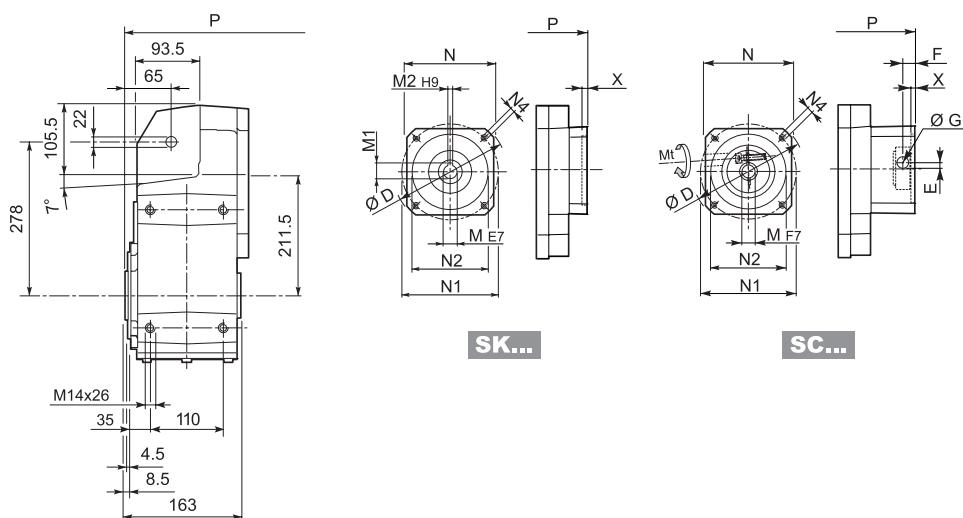
F 51...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 51 2	HS	357.5	50	24	27	8	2.5	45	M8x19	65
F 51 3		357.5	50	24	27	8	2.5	45	M8x19	68
F 51 4		389.5	40	19	21.5	6	2.5	35	M6x16	70

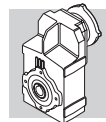


F 51...SK / SC



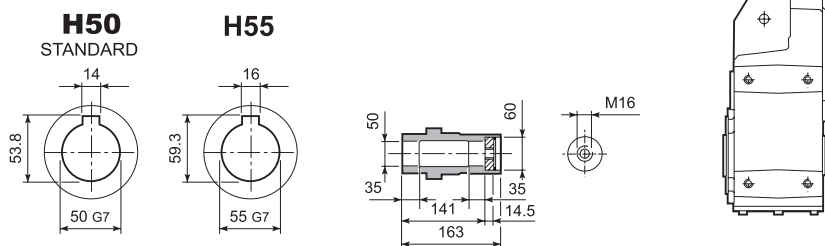
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P	Kg	P	Kg
		120	14	16.3	5	96	100	80	M6x12	4	287.5	67	—	—
		120	19	21.8	6	96	100	80	M6x12	4	287.5	67	359	71
		130	14	16.3	5	102	115	95	M8x12	4	287.5	67	359	71
		130	19	21.8	6	102	115	95	M8x12	4	287.5	67	359	71
		130	24	27.3	8	102	115	95	M8x12	4	287.5	67	359	71
		150	19	21.8	6	120	130	110	M8x12	5	287.5	67	359	71
		150	24	27.3	8	120	130	110	M8x12	5	287.5	67	359	71
		188	24	27.3	8	142	165	130	M10x20	5	287.5	69	359	73
		189	32	35.3	10	160	165	130	M10x20	5	334	75	—	—
		240	32	35.3	10	192	215	180	M12x19	5	334	75	—	—
		240	38	41.3	10	192	215	180	M12x19	5	334	75	—	—

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P	Kg	P	Kg
		M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	311	70	—	—
		M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	311	70	382.5	74
		M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	311	70	382.5	74
		M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	311	70	382.5	74
		M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	311	70	382.5	74
		M6	15	150	16.5	16	17.75	19	120	130	110	M8x16	5	311	71	382.5	75
		M6	15	150	16.5	16	17.75	24	120	130	110	M8x16	5	311	71	382.5	75
		M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	311	72	382.5	76
		M8	36	189	20	17	17.75	32	160	165	130	M10x20	5	357	75	—	—
		M8	36	240	20	17.5	17.75	32	192	215	180	M12x24	5	361	75	—	—
		M8	36	240	20	17.5	17.75	38	192	215	180	M12x24	5	361	75	—	—

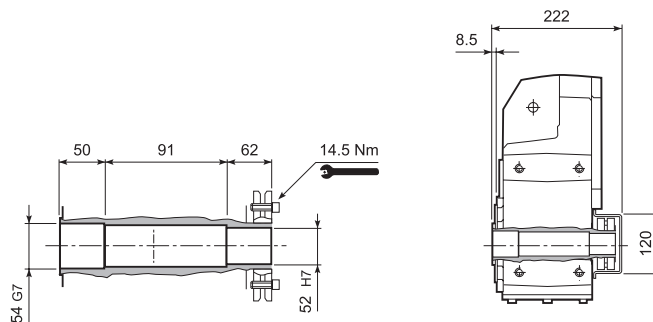


F 51

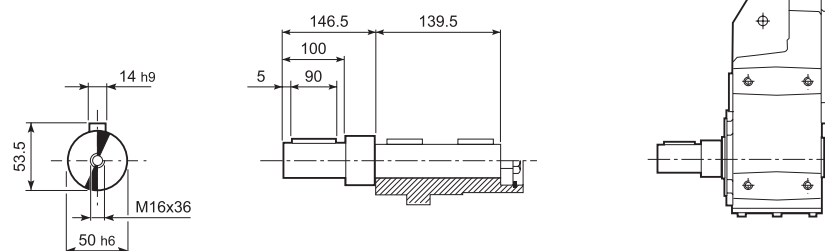
F 51...H



F 51...S



F 51...R

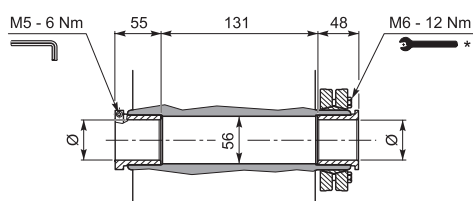


F 51...QF

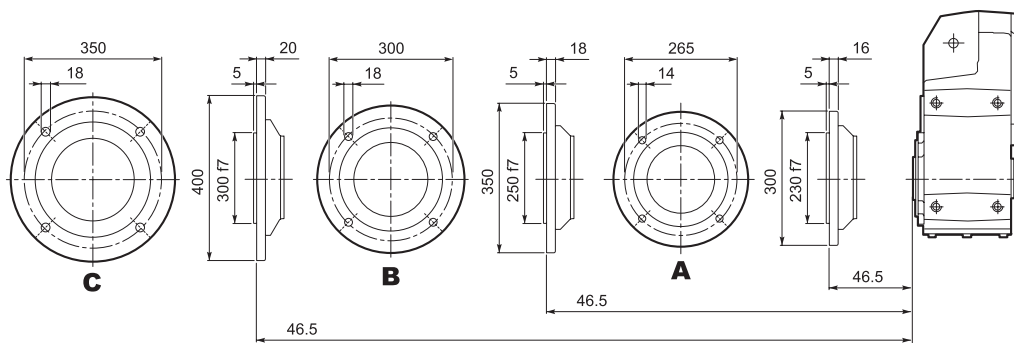
	Ø
QF50	50
QF55	55



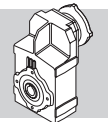
	M _{n2} max [Nm]
F 51 QF50	1750



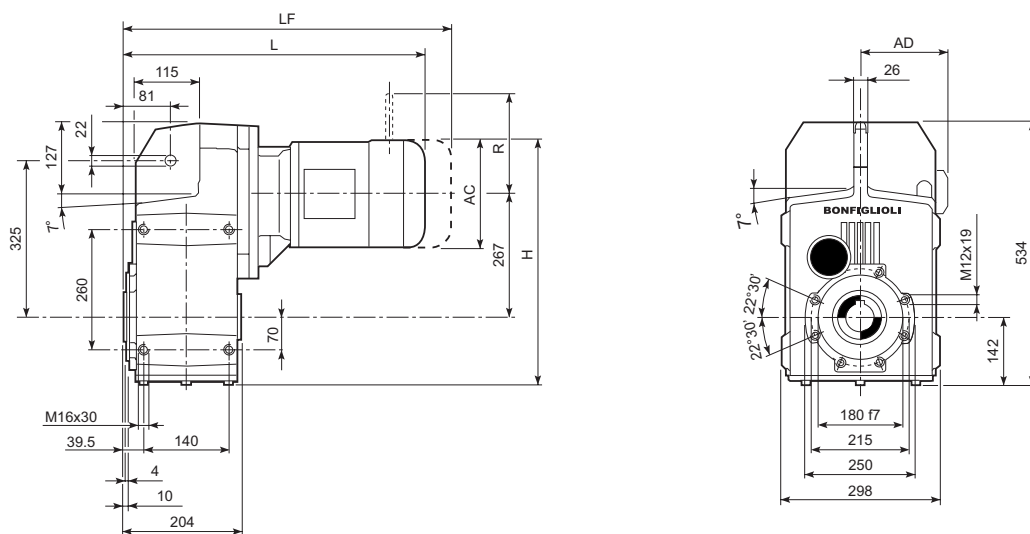
F 51...F...



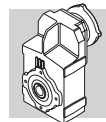
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



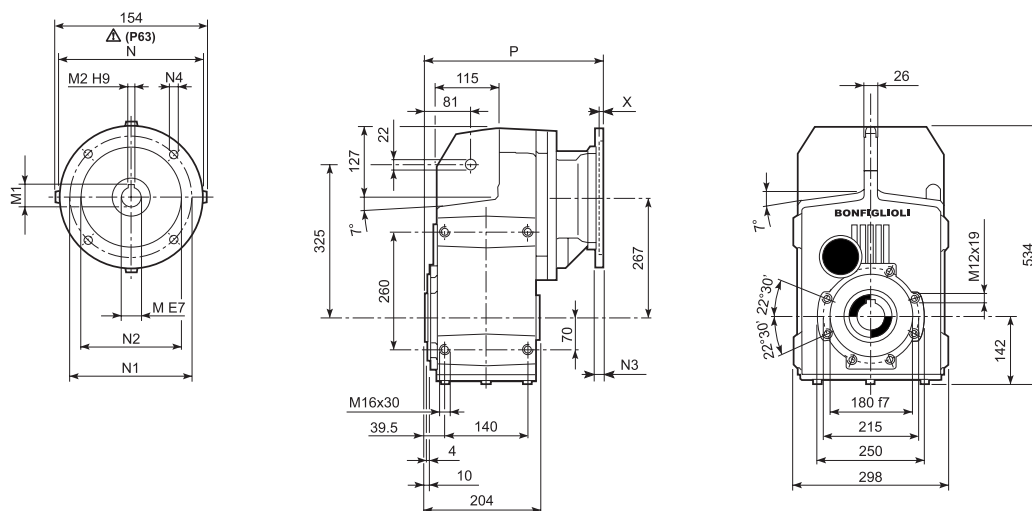
F 60...M



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

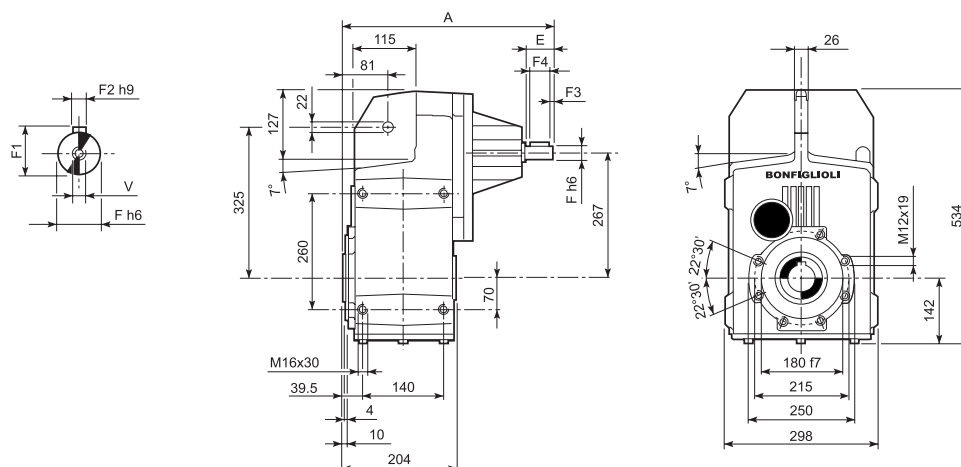


F 60...P(IEC)

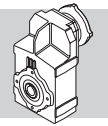


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 60 3	P63	11	12.8	4	140	115	95	—	M8x19	4	302.5	103
F 60 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	302.5	103
F 60 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	322	104
F 60 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	322	104
F 60 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	331	108
F 60 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	331	108
F 60 3	P132	38	41.3	10	300	265	230	16	14	5	367.5	111
F 60 3	P160	42	45.3	12	350	300	250	23	18	5.5	419	116
F 60 3	P180	48	51.8	14	350	300	250	23	18	5.5	419	116
F 60 4	P63	11	12.8	4	140	115	95	—	M8x19	4	373	108
F 60 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	373	108
F 60 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	392.5	110
F 60 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	392.5	110
F 60 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	402.5	114
F 60 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	402.5	114

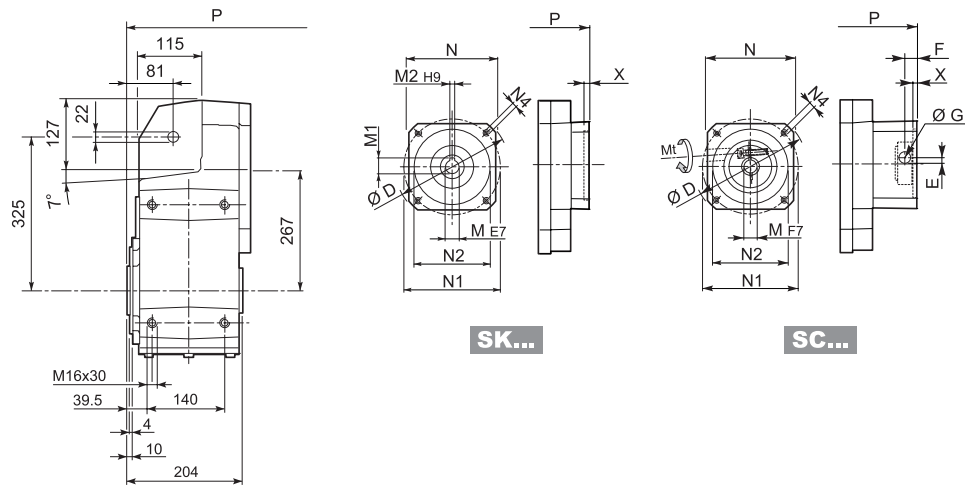
F 60...HS



		A	E	F	F1	F2	F3	F4	V	Kg
F 60 3	HS	419	60	28	31	8	5.0	50	M10x22	108
F 60 4		462.5	50	24	27	8	2.5	45	M8x19	105

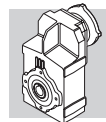


F 60...SK / SC



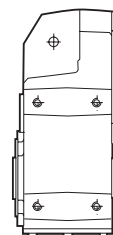
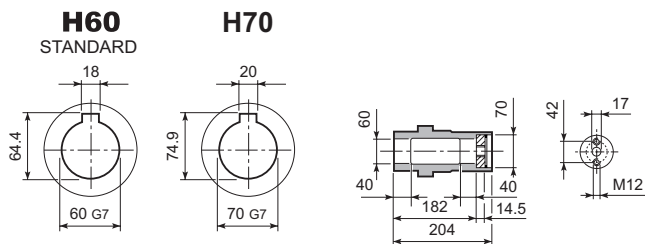
		D	M	M1	M2	N	N1	N2	N4	X	2/3x		4x	
											P		P	
F 60 4	SK 80B	120	14	16.3	5	96	100	80	M6x12	4	—	—	392.5	109
F 60 3/4	SK 80C	120	19	21.8	6	96	100	80	M6x12	4	322	106	392.5	112
F 60 3/4	SK 95A	130	14	16.3	5	102	115	95	M8x12	4	322	106	392.5	112
F 60 3/4	SK 95B	130	19	21.8	6	102	115	95	M8x12	4	322	106	392.5	112
F 60 3/4	SK 95C	130	24	27.3	8	102	115	95	M8x12	4	322	106	392.5	112
F 60 3/4	SK 110A	140	19	21.8	6	120	130	110	M8x12	5	322	106	392.5	112
F 60 3/4	SK 110B	140	24	27.3	8	120	130	110	M8x12	5	322	106	392.5	112
F 60 3/4	SK 130A	188	24	27.3	8	142	165	130	M10x20	5	322	108	392.5	112
F 60 3	SK 130B	189	32	35.3	10	160	165	130	M10x20	5	368.5	109	—	—
F 60 3	SK 180A	240	32	35.3	10	192	215	180	M12x19	5	368.5	109	—	—
F 60 3	SK 180B	240	38	41.3	10	192	215	180	M12x19	5	368.5	109	—	—

			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	2/3x		4x	
														P		P	
F 60 4	SC 80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	—	—	416	113
F 60 3/4	SC 80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	345.5	107	416	113
F 60 3/4	SC 95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	345.5	107	416	113
F 60 3/4	SC 95B	M6	15	130	16.5	15	17.75	19	102	115	95	M8x16	4	345.5	107	416	113
F 60 3/4	SC 95C	M6	15	130	16.5	15	17.75	24	102	115	95	M8x16	4	345.5	107	416	113
F 60 3/4	SC 110A	M6	15	140	16.5	16	17.75	19	120	130	110	M8x16	5	345.5	108	416	113
F 60 3/4	SC 110B	M6	15	140	16.5	16	17.75	24	120	130	110	M8x16	5	345.5	108	416	113
F 60 3/4	SC 130A	M6	15	188	19	16	17.75	24	142	165	130	M10x20	5	345.5	109	416	115
F 60 3	SC 130B	M8	36	189	20	17	17.75	32	160	165	130	M10x20	5	390.5	112	—	—
F 60 3	SC 180A	M8	36	240	20	17.5	17.75	32	192	215	180	M12x24	5	394.5	112	—	—
F 60 3	SC 180B	M8	36	240	20	17.5	17.75	38	192	215	180	M12x24	5	394.5	112	—	—

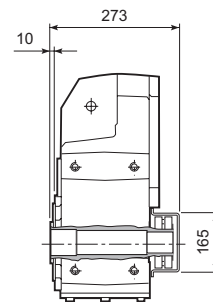
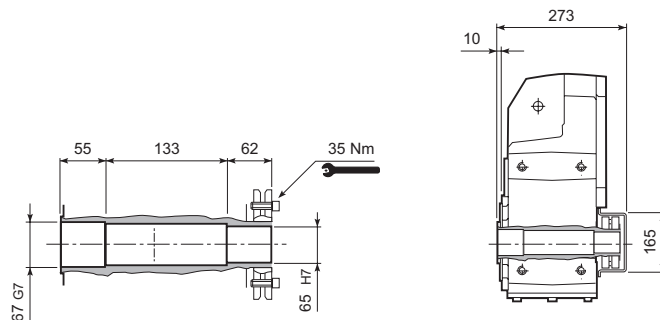


F 60

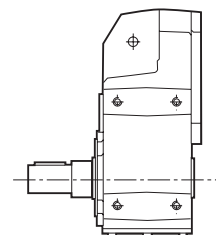
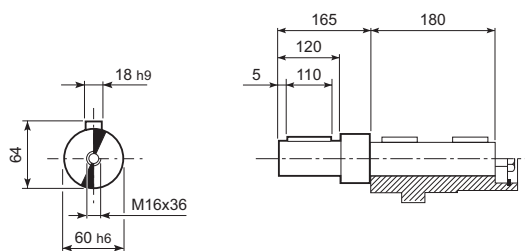
F 60...H



F 60...S

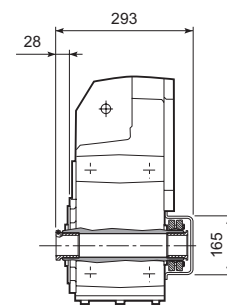
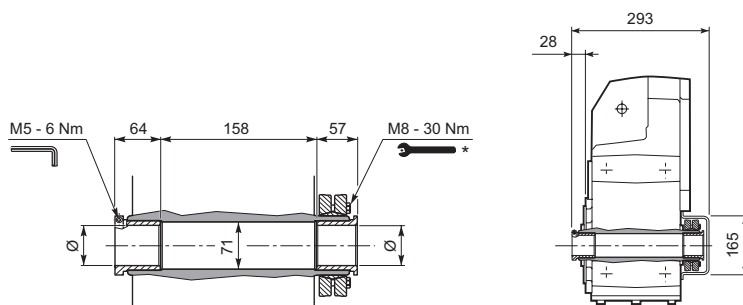


F 60...R

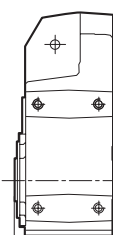
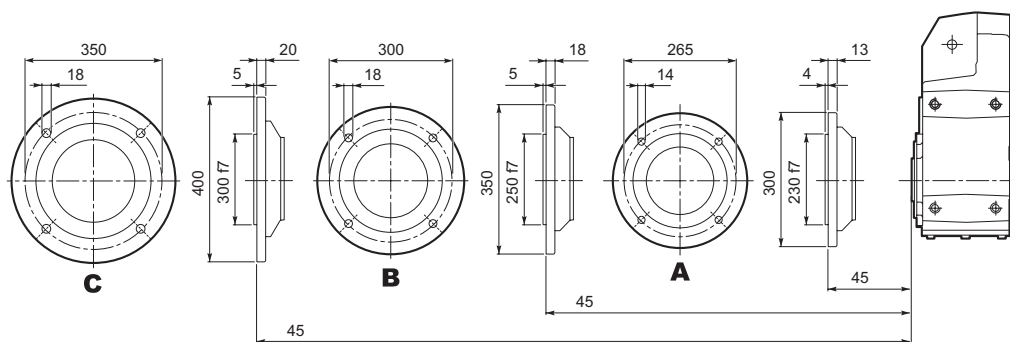


F 60...QF

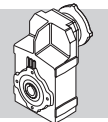
	Ø
QF60	60
QF65	65
QF70	70



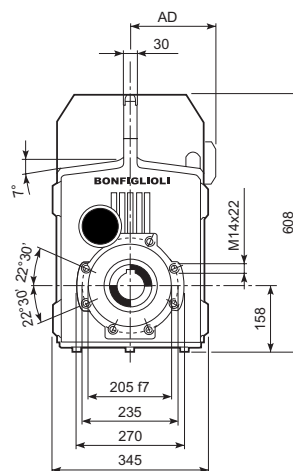
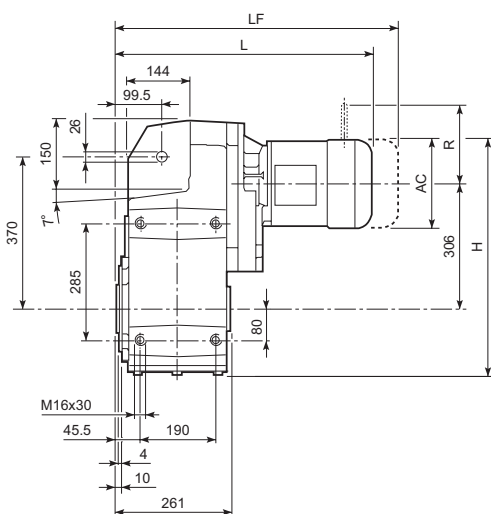
F 60...F...



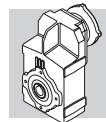
* Follow the MOUNTING INSTRUCTIONS supplied with the gearbox.



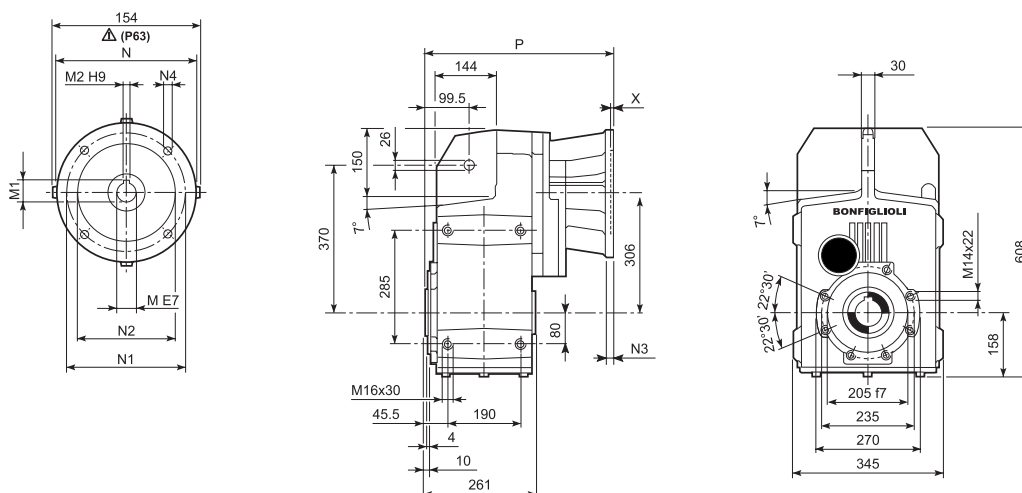
F 70...M



								M...FD M...FA		M...FD		M...FA	
			AC	H	L	AD		LF		R	AD	R	AD
F 70 3	S2	M2S	156	542	552	119	173	622	177	129	146	134	119
F 70 3	S3	M3S	195	561.5	595	142	178	691	186	160	158	160	142
F 70 3	S3	M3L	195	561.5	627	142	186	718	193	160	158	160	142
F 70 3	S4	M4	258	593	735	193	220	844	238	226	210	217	193
F 70 3	S4	M4LC	258	593	770	193	228	869	246	226	210	217	193
F 70 3	S5	M5S	310	619	821.5	245	248	961.5	278	266	245	247	245
F 70 3	S5	M5L	310	619	865.5	245	264	1005.5	294	266	245	247	245
F 70 4	S1	M1	138	533	574	108	173	635	176	103	135	124	108
F 70 4	S2	M2S	156	542	603	119	177	673	180	129	146	134	119
F 70 4	S3	M3S	195	561.5	646	142	181	742	189	160	158	160	142
F 70 4	S3	M3L	195	561.5	678	142	189	769	196	160	158	160	142
F 70 4	S4	M4	258	593	786	193	223	895	241	226	210	217	193
F 70 4	S4	M4LC	258	593	821	193	231	920	249	226	210	217	193

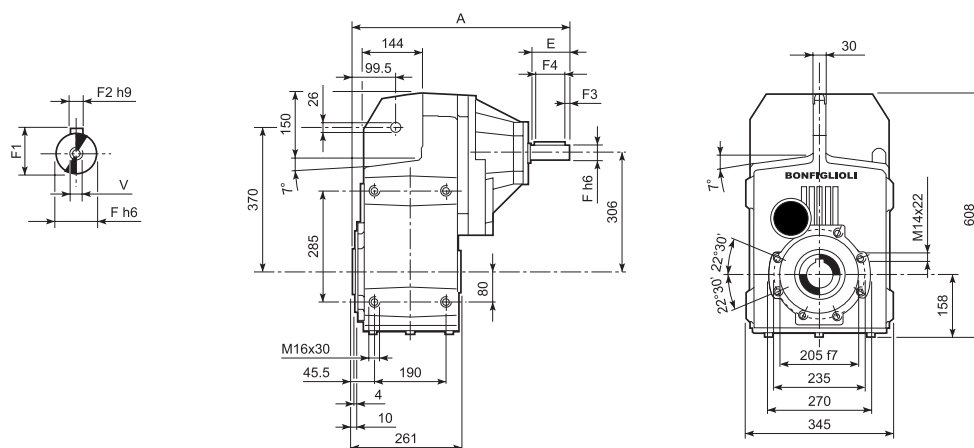


F 70...P(IEC)

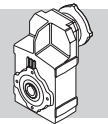


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 70 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	387.5	167
F 70 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	387.5	167
F 70 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	397.5	171
F 70 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	397.5	171
F 70 3	P132	38	41.3	10	300	265	230	16	14	5	434	173
F 70 3	P160	42	45.3	12	350	300	250	23	18	6	489.5	185
F 70 3	P180	48	51.8	14	350	300	250	23	18	6	489.5	185
F 70 3	P200	55	59.3	16	400	350	300	—	M16x25	7	514.5	206
F 70 4	P63	11	12.8	4	140	115	95	—	M8x19	4	419	168
F 70 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	419	168
F 70 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	438.5	170
F 70 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	438.5	170
F 70 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	446.5	174
F 70 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	446.5	174
F 70 4	P132	38	41.3	10	300	265	230	16	14	5	482	176

F 70...HS

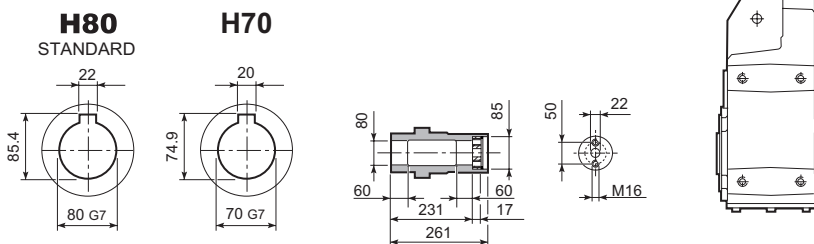


		A	E	F	F1	F2	F3	F4	V	Kg
F 70 3	HS	572	110	42	45	12	10	90	M12x28	186
F 70 4		508.5	50	24	27	8	2.5	45	M8x19	174

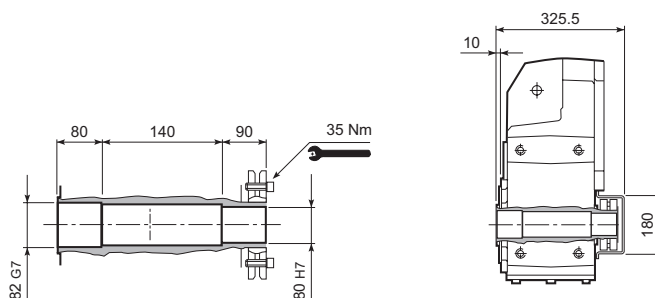


F 70

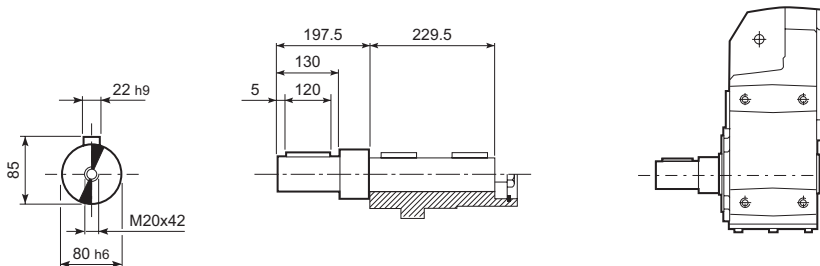
F 70...H



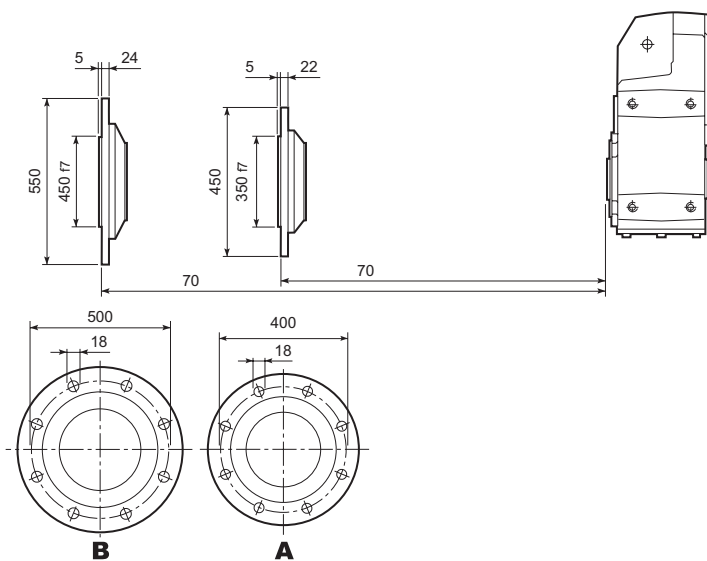
F 70...S

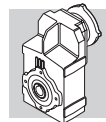


F 70...R

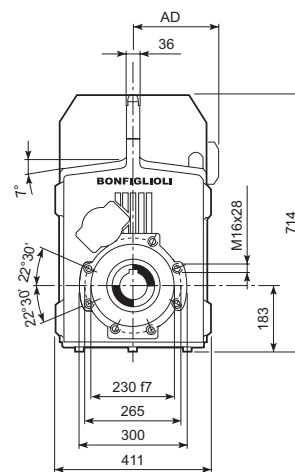
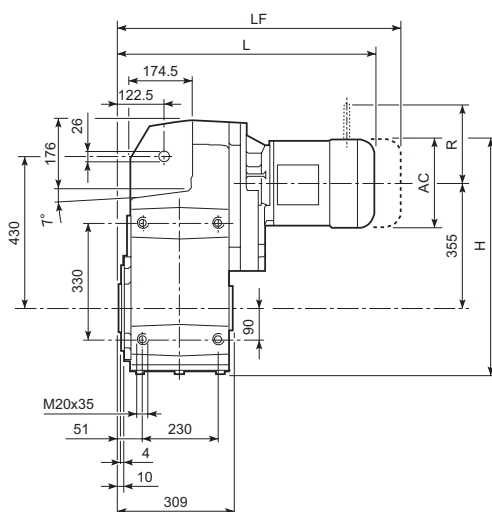


F 70...F...

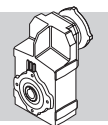




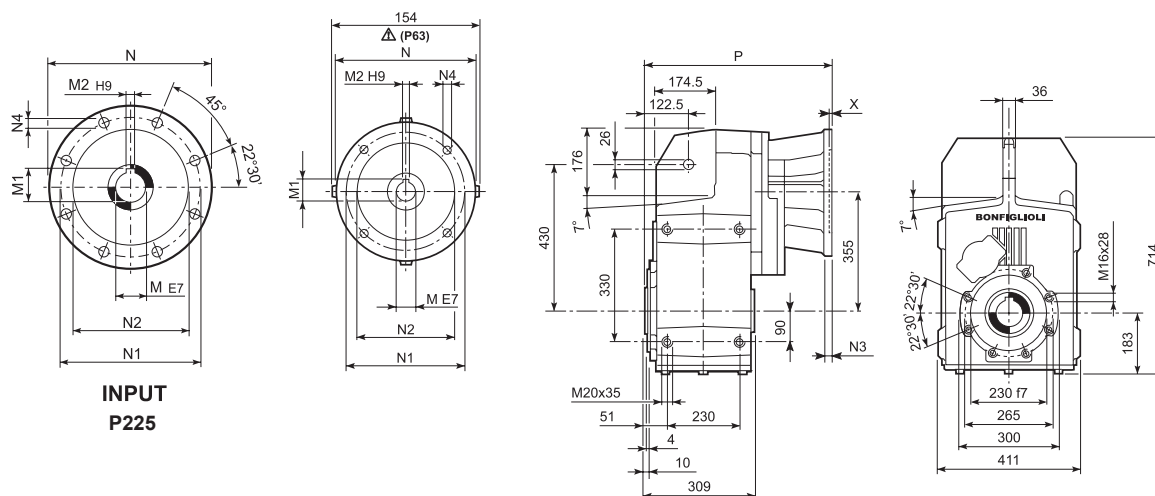
F 80...M



								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



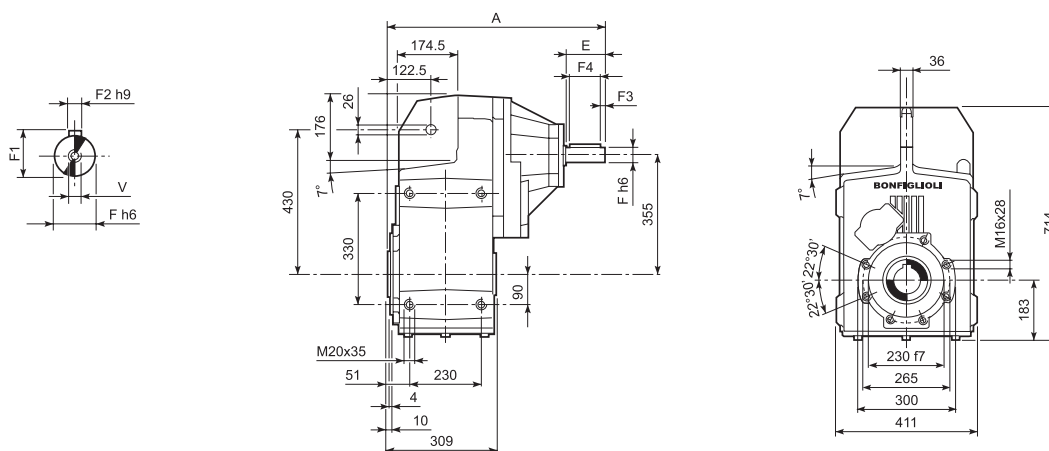
F 80...P(IEC)



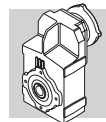
INPUT
P225

		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 80 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	445.5	255
F 80 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	445.5	255
F 80 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	455.5	259
F 80 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	455.5	259
F 80 3	P132	38	41.3	10	300	265	230	16	14	5	492	261
F 80 3	P160	42	45.3	12	350	300	250	23	18	6	547.5	276
F 80 3	P180	48	51.8	14	350	300	250	23	18	6	547.5	276
F 80 3	P200	55	59.3	16	400	350	300	—	M16x25	7	572.5	298
F 80 3	P225	60	64.4	18	450	400	350	25	18	6	618	298
F 80 4	P63	11	12.8	4	140	115	95	—	M8x19	4	489	258
F 80 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	489	258
F 80 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	508.5	260
F 80 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	508.5	260
F 80 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	518.5	264
F 80 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	518.5	264
F 80 4	P132	38	41.3	10	300	265	230	16	14	5	552	266

F 80...HS

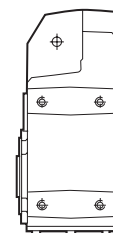
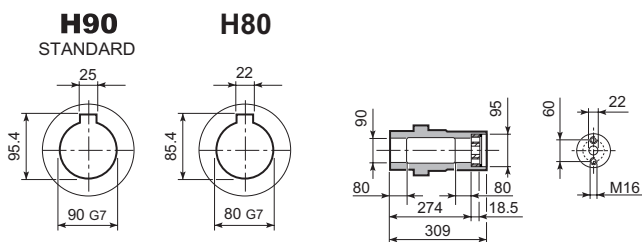


		A	E	F	F1	F2	F3	F4	V	Kg
F 80 3	HS	630	110	42	45	12	10	90	M12x28	273
F 80 4		575.5	50	24	27	8	2.5	45	M8x19	263

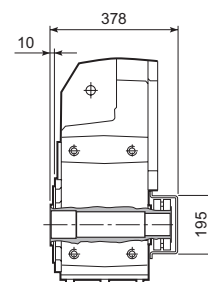
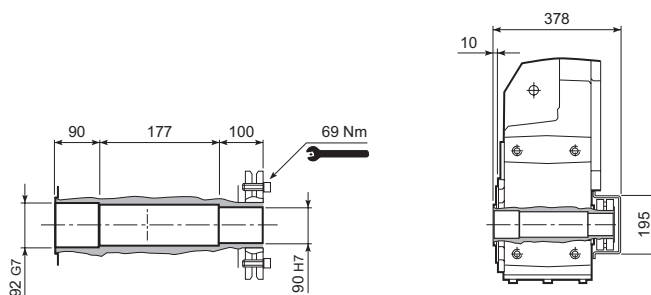


F 80

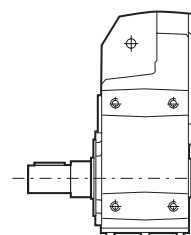
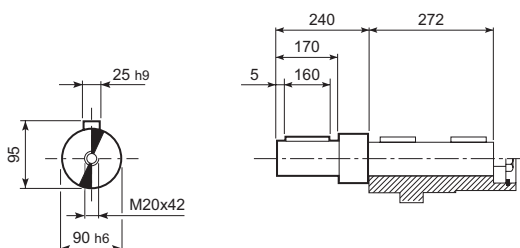
F 80...H



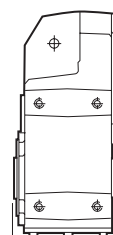
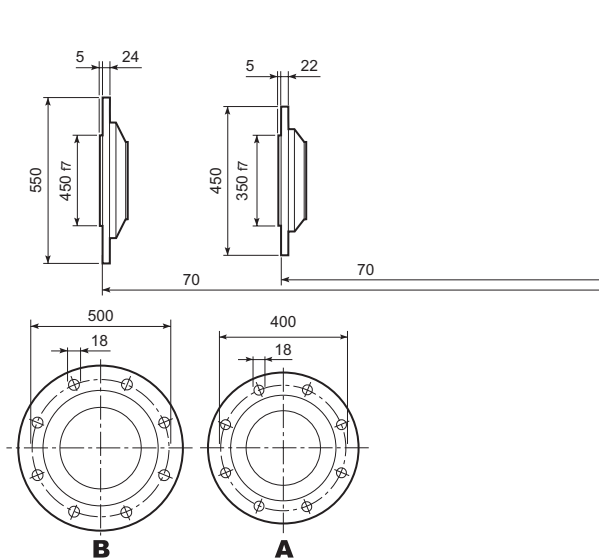
F 80...S

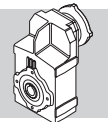


F 80...R

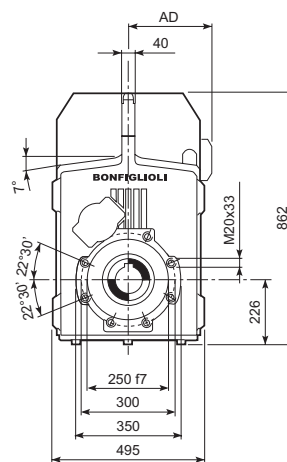
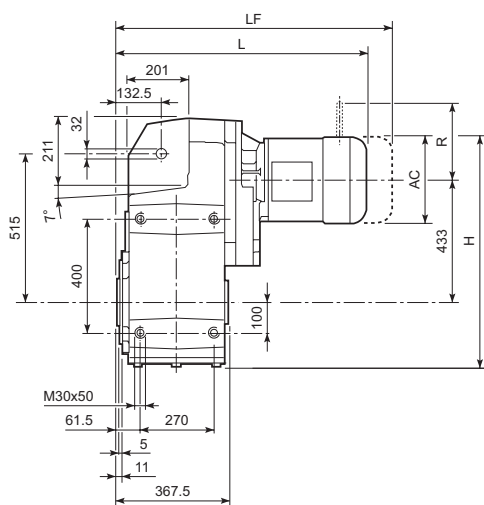


F 80...F...

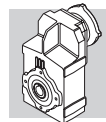




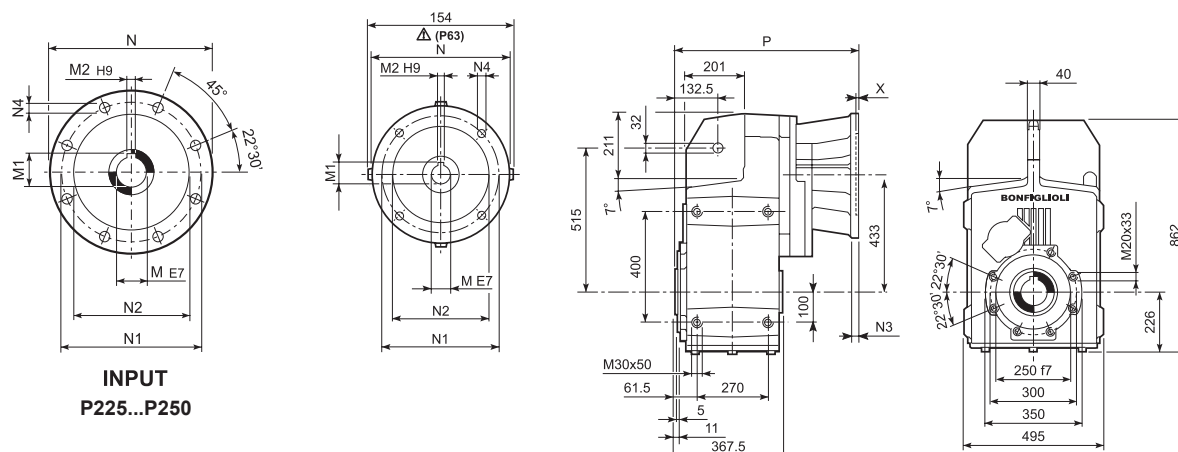
F 90...M



								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



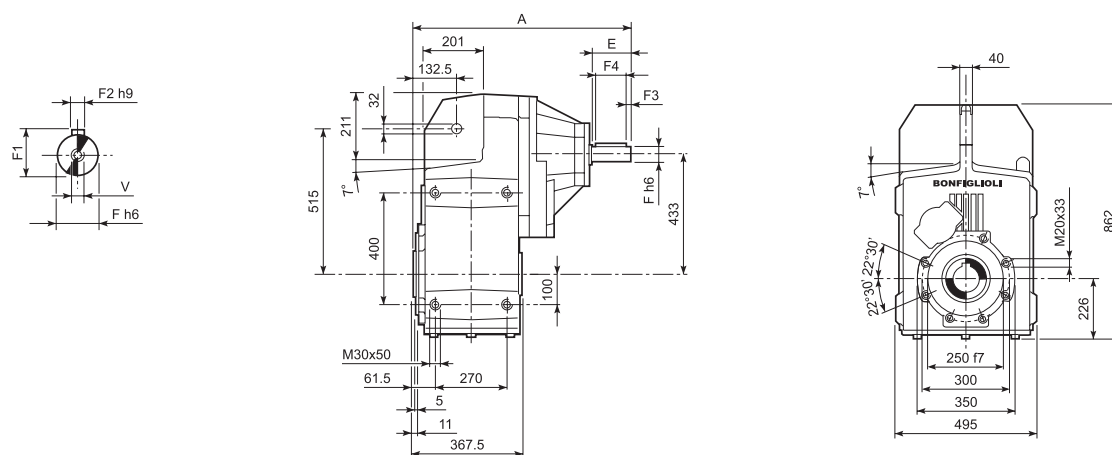
F 90...P(IEC)



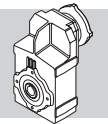
INPUT
P225...P250

		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
F 90 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	520.5	442
F 90 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	520.5	442
F 90 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	530.5	446
F 90 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	530.5	446
F 90 3	P132	38	41.3	10	300	265	230	16	14	5	567	449
F 90 3	P160	42	45.3	12	350	300	250	23	18	6	622.5	463
F 90 3	P180	48	51.8	14	350	300	250	23	18	6	622.5	463
F 90 3	P200	55	59.3	16	400	350	300	—	M16x25	7	647.5	485
F 90 3	P225	60	64.4	18	450	400	350	30	18	6	693	485
F 90 3	P250	65	69.4	18	550	500	450	30	18	6	723	507
F 90 4	P63	11	12.8	4	140	115	95	—	M8x19	4	584	448
F 90 4	P71	14	16.3	5	160	130	110	—	M8x16	4.5	584	448
F 90 4	P80	19	21.8	6	200	165	130	—	M10x14.5	4	603.5	450
F 90 4	P90	24	27.3	8	200	165	130	—	M10x14.5	4	603.5	450
F 90 4	P100	28	31.3	8	250	215	180	—	M12x16	4.5	613.5	454
F 90 4	P112	28	31.3	8	250	215	180	—	M12x16	4.5	613.5	454
F 90 4	P132	38	41.3	10	300	265	230	16	14	5	650	455
F 90 4	P160	42	45.3	12	350	300	250	23	18	5.5	700.5	461
F 90 4	P180	48	51.8	14	350	300	250	23	18	5.5	700.5	461

F 90...HS

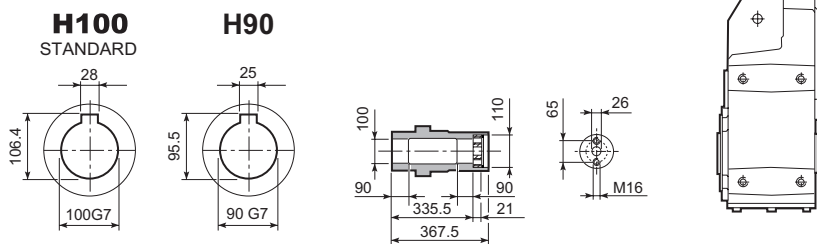


		A	E	F	F1	F2	F3	F4	V	Kg
F 90 3	HS	806.5	140	60	64	18	10	120	M16x36	485
F 90 4		673.5	50	24	27	8	2.5	45	M8x19	452

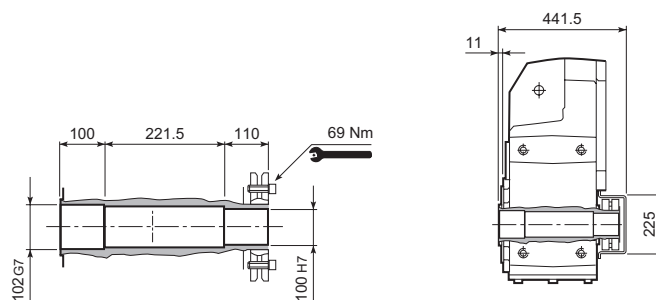


F 90

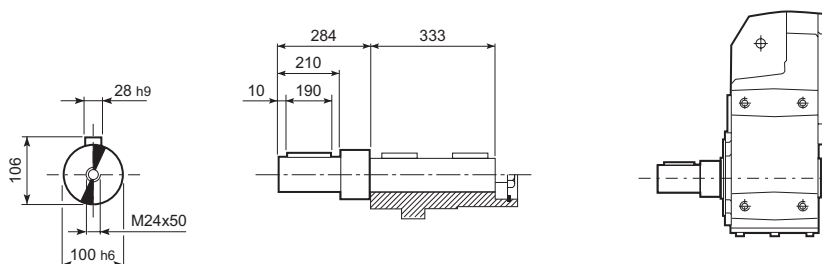
F 90...H



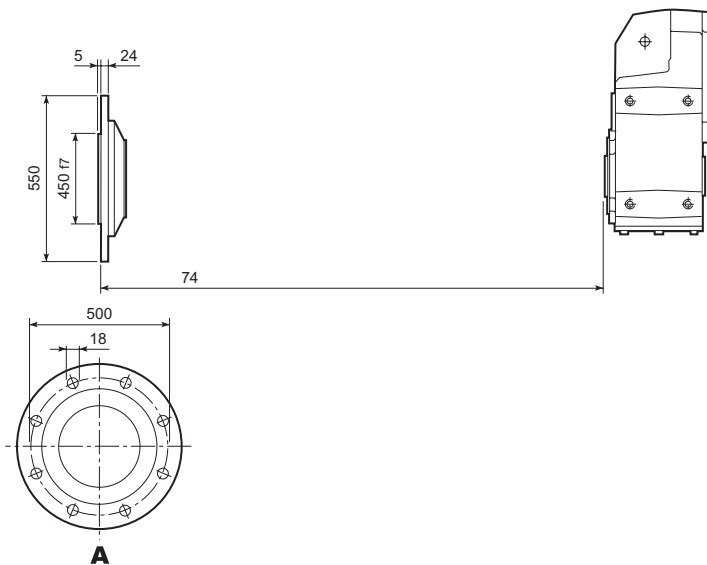
F 90...S



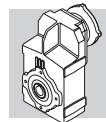
F 90...R



F 90...F...



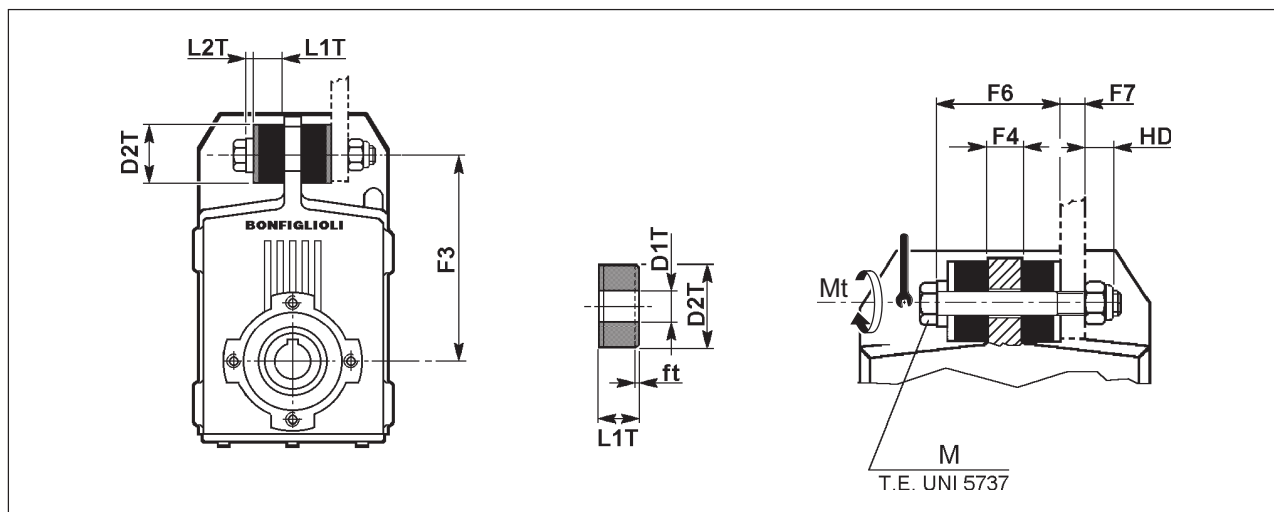
A



65 ACCESSORIES

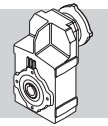
Anti-vibration kit

The gearboxes of the F series are supplied with an anti-vibration kit at customer request. The kit includes all components required for shaft mounting (torque arm is out of scope). Dimensions are shown in the following table.



	F3	F4	F6	F7 (max.)	HD	L1T	L2T	D1T	D2T	M	Mt [Nm]	ft
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

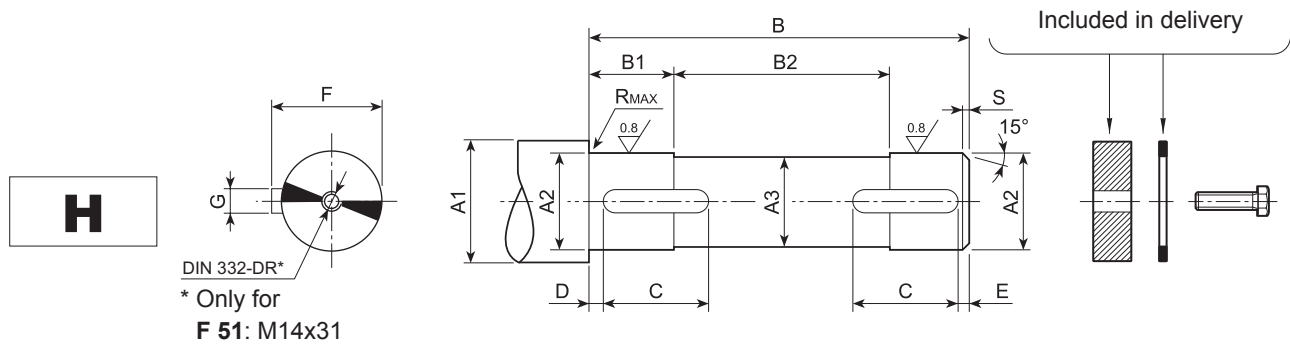
f_t = shortening of the rubber buffer under rated torque transmission.





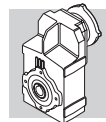
66 CUSTOMER' SHAFT

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

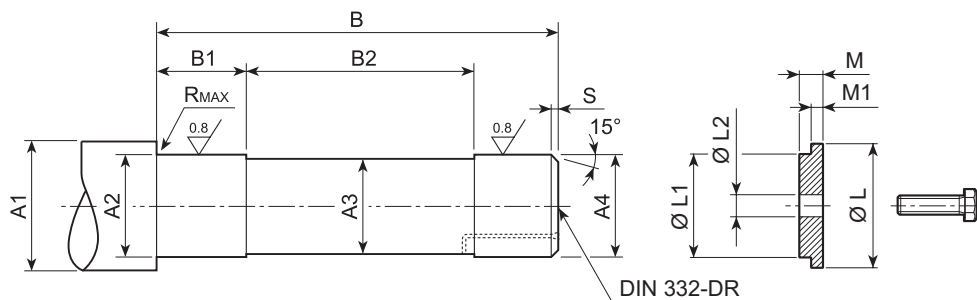
A device such as that illustrated below should also be installed to secure the shaft axially. Take care to verify and dimension the various components to suit the needs of the application.



	A1	A2	A3	B	B1	B2	C	D	E	F	G	R	S		
F 10	≥ 35	30 h7	29	87.5	15.5	56.5	20	2	2	33	8 h9	0.5	1.5	8x7x20 A	M8x25
	≥ 30	25 h7	24	87.5	15.5	56.5	20	2	2	28	8 h9	0.5	1.5	8x7x20 A	
F 20	≥ 42	35 h7	34	99	18	63	22	2	2	38	10 h9	0.5	1.5	10x8x22 A	M8x30
	≥ 35	30 h7	29	99	18	63	22	2	2	33	8 h9	0.5	1.5	8x7x22 A	
F 25	≥ 47	40 h7	39	104	23	58	30	2	2	43	12 h9	0.5	1.5	12x8x30 A	M8x30
	≥ 42	35 h7	34	104	23	58	30	2	2	38	10 h9	0.5	1.5	10x8x30 A	
F 31	≥ 47	40 h7	39	104	28	48	30	2	2	43	12 h9	0.5	1.5	12x8x30 A	M8x30
	≥ 42	35 h7	34	104	28	48	30	2	2	38	10 h9	0.5	1.5	10x8x30 A	
F 41	≥ 52	45 h7	44	118	27.5	63	45	2.5	2.5	48.5	14 h9	1	2.0	14x9x45 A	M10x30
	≥ 47	40 h7	39	118	27.5	63	45	2.5	2.5	43	12 h9	1	2.0	12x8x45 A	
F 51	≥ 63	55 h7	54	139	33	73	50	2.5	2.5	59	16 h9	1	2.0	16x10x50 A	M14x45
	≥ 57	50 h7	49	139	33	73	50	2.5	2.5	53.5	14 h9	1	2.0	14x9x50 A	
F 60	≥ 78	70 h7	69	180	38	104	70	2.5	2.5	74.5	20 h9	1	2.0	20x12x70 A	M16x45
	≥ 68	60 h7	59	180	38	104	70	2.5	2.5	64	18 h9	1	2.0	18x11x70 A	
F 70	≥ 89	80 h7	79	229	58	113	75	3	3	85	22 h9	2.5	2.5	22x14x75 A	M20x55
	≥ 78	70 h7	69	229	58	113	75	3	3	74.5	20 h9	2.5	2.5	20x12x75 A	
F 80	≥ 99	90 h7	89	272	78	116	100	3	3	95	25 h9	2.5	2.5	25x14x100 A	M20x55
	√ 89	80 h7	79	272	78	116	100	3	3	85	22 h9	2.5	2.5	22x14x100 A	
F 90	≥ 111	100 h7	99	333	87.5	158	110	3	3	106	28 h9	2.5	2.5	28x16x110 A	M24x65
	≥ 99	90 h7	89	333	87.5	158	110	3	3	95	25 h9	2.5	2.5	25x14x110 A	

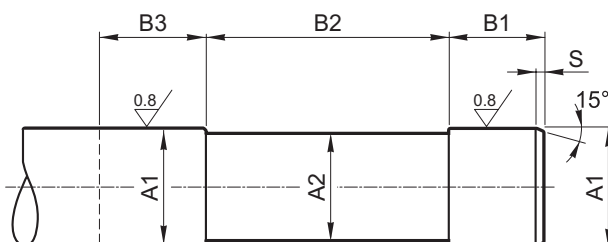


S



	A1	A2	A3	A4	B	B1	B2	R	S	L	L1	L2	M	M1	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				