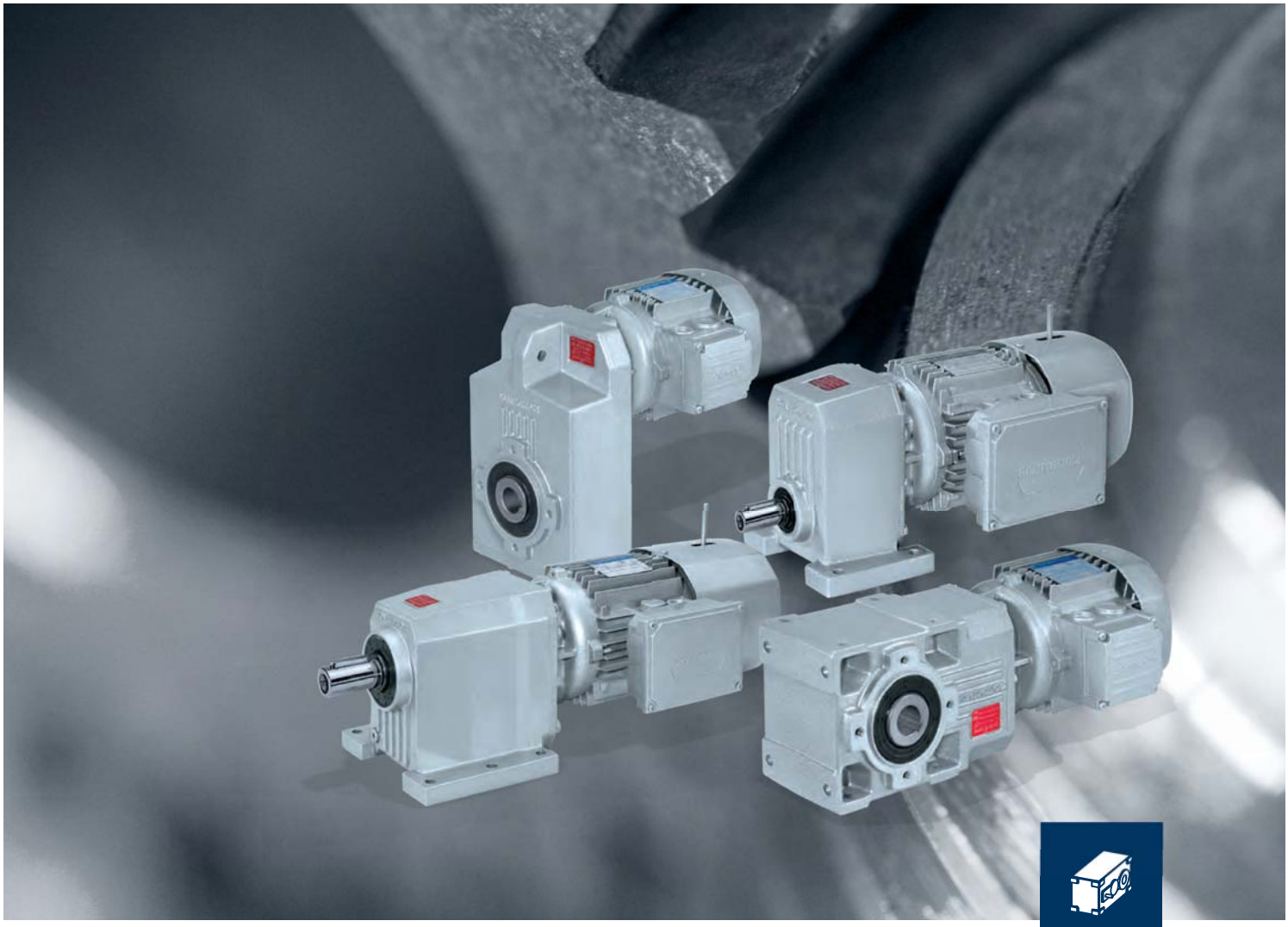
Bonfiglioli
Riduttori

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
$A_{N\,1,2}$	[N]	Permissible axial force
f_s	–	Service factor
f_T	–	Thermal factor
f_{TP}	–	Temperature factor
i	–	Gear ratio
I	–	Cyclic duration factor
J_C	[Kgm^2]	Mass moment of inertia to be driven
J_M	[Kgm^2]	Motor mass moment of inertia
J_R	[Kgm^2]	Mass moment of inertia for the gear unit
K	–	Mass acceleration factor
K_r	–	Transmission element factor
$M_{1,2}$	[Nm]	Torque
$M_{c\,1,2}$	[Nm]	Calculated torque
$M_{n\,1,2}$	[Nm]	Rated torque
$M_{r\,1,2}$	[Nm]	Torque demand
$n_{1,2}$	[min^{-1}]	Speed

Symbols	Units of Measure	Description
$P_{1,2}$	[kW]	Power
$P_{N\,1,2}$	[kW]	Rated power
$P_{R\,1,2}$	[kW]	Power demand
$R_{C\,1,2}$	[N]	Calculated radial force
$R_{N\,1,2}$	[N]	Permissible overhung load
S	–	Safety factor
t_a	[°C]	Ambient temperature
t_s	[°C]	Surface temperature
t_o	[°C]	Oil temperature
t_f	[min]	Work time under constant load
t_r	[min]	Rest time
η_d	–	Dynamic efficiency
η_s	–	Static efficiency
φ	[']	Output shaft angular backlash (with locked input shaft)

$_1$ 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).

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.

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

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.
IEC	IEC	IEC	IEC	Gearmotor with IEC motor.
IEC	IEC	IEC	IEC	Gear unit with IEC motor interface.
SERVO	SERVO	SERVO		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		
$t_{au\ min}$	Minimum operating ambient temperature	**-30°C**	**-10°C**
$t_{au\ Max}$	Maximum operating ambient temperature	**+50°C**	**+40°C**
$t_{as\ min}$	Minimum storage ambient temperature	**-40°C**	**-10°C**
$t_{as\ Max}$	Maximum storage ambient temperature	**+50°C**	**+50°C**
t_s	Surface temperature		
$t_{s\ min}$	Minimum gearbox surface temperature starting with partial load (#)	**-25°C**	**-10°C**
$t_{sc\ min}$	Minimum gearbox surface temperature starting with full load	**-10°C**	**-5°C**
$t_{s\ Max}$	Maximum casing surface temperature during continuous operation (measured next to the gearbox input)	**+100°C**	**+100°C** (@)
t_o	Oil temperature		
$t_{o\ Max}$	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°C and t_s, t_o > 80 °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 fs , 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 min^{-1}	n_1 = 2800 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 min^{-1}	n_1 = 2800 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 min^{-1}	n_1 = 2800 min^{-1}
F 10 2	3.8	2.7
F 20 2	9.1	6.5
F 25 2	10.2	7.4
F 31 2	11.7	8.5
F 41 2	14.3	10.4
F 51 2	21.5	15.0
F 60 3	26.0	18.9
F 70 3	36.4	26.0
F 80 3	52	36
F 90 3	75	53

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

(A 2)

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

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

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

The condition to be verified is:

$$P_{r1} \leq P_t \ x \ f_t \qquad (3)$$

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:

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

(A 3)

	**2 x**	**3 x**	**4 x**
η_d	95%	93%	90%

	**2 x**	**3 x**	**4 x**
η_d	94%	91%	89%

	**2 x**	**3 x**	**4 x**
η_d	95%	93%	90%

	**1 x**
η_d	98%

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:

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

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:

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

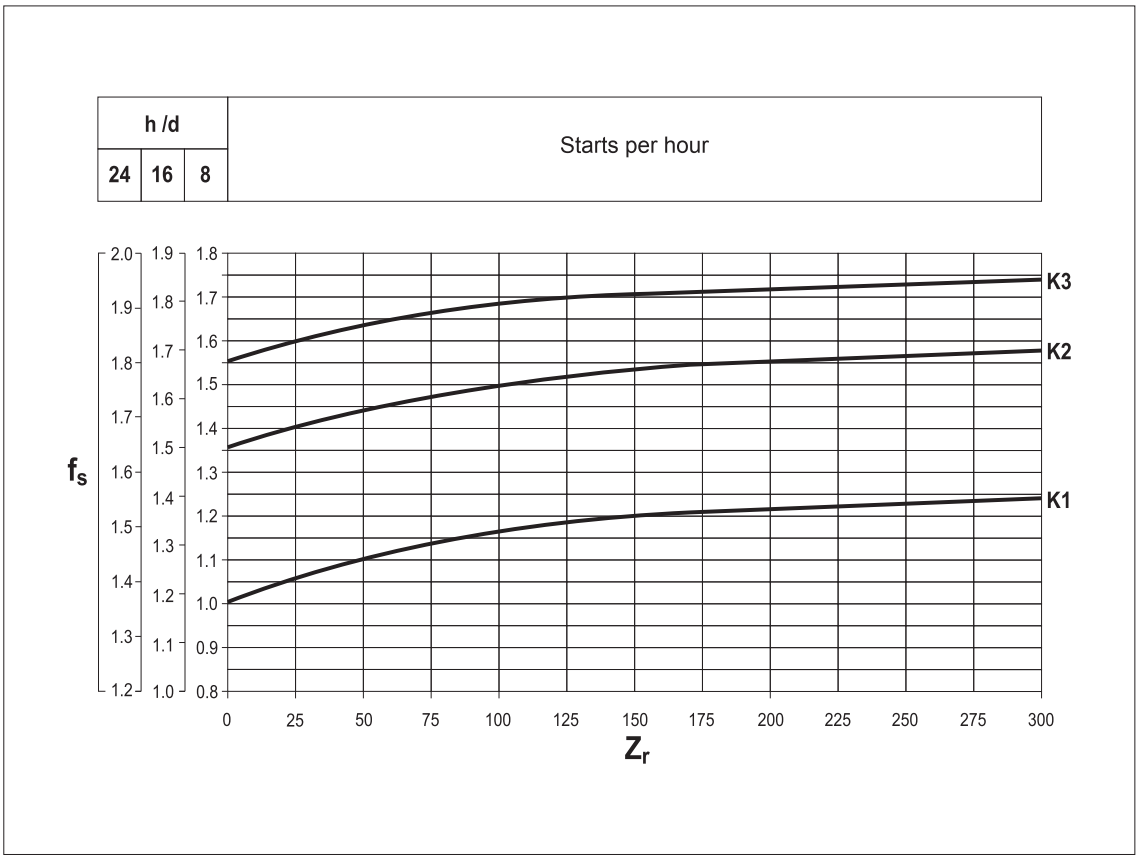
9 MOMENT OF INERTIA J_r [Kgm^2]

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
	J_m =	Motor moment of inertia

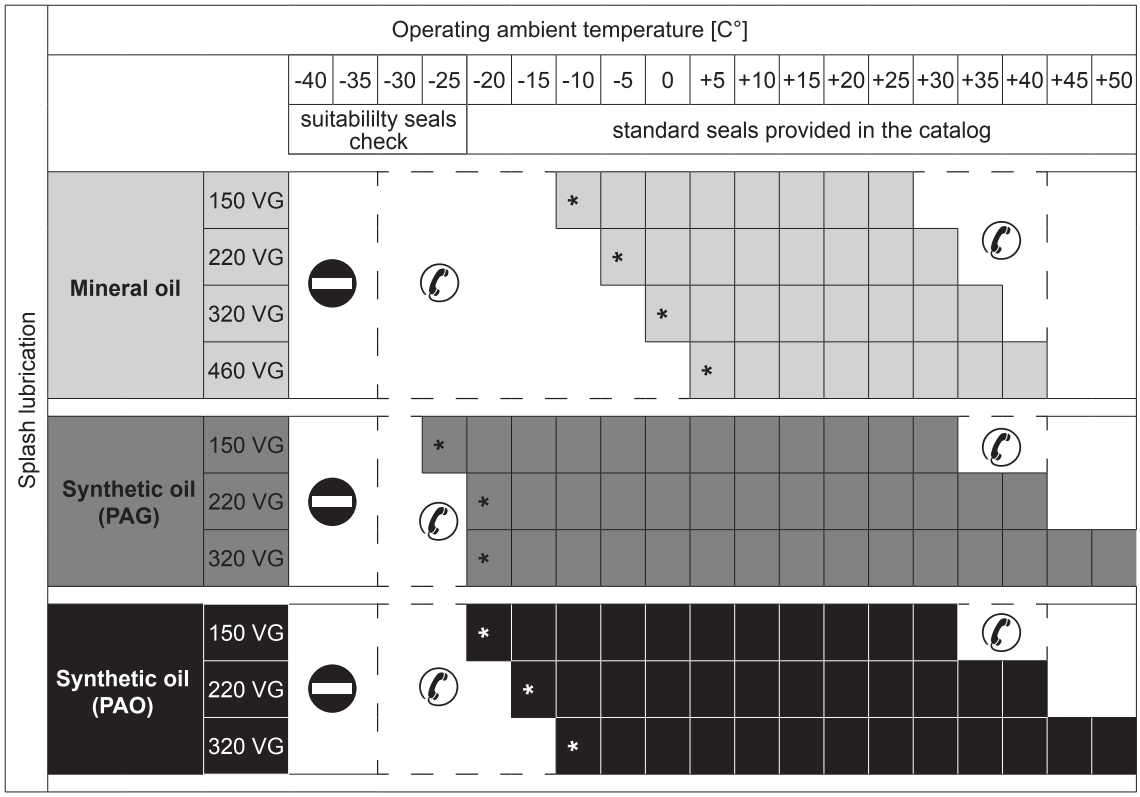
K ≤ 0,25	→	**K1**	Uniform load
0,25 < K ≤ 3	→	**K2**	Moderate shock load
3 < K ≤ 10	→	**K3**	Heavy shock load
K > 10	→		Please consult Bonfiglioli Technical Service

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)



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” poliglycol-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]

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	
P_{r2}	Output power at n_2 max	.....kW
P_{r2}'	Output power at n_2 min	.....kW
M_{r2}	Output torque at n_2 max	.....Nm
n_2	Max.output speed	.....min^{-1}
n_2'	Min.output speed	.....min^{-1}
n_1	Max.input speed	.....min^{-1}
n_1'	Min.input speed	.....min^{-1}
R_{c2}	Radial load on output shaft	.....N
x_2	Load application distance (*)	.....mm
	Load orientation at output	..... 
	Output shaft rotation direction (CW-CCW) (**)	.....
R_{c1}	Radial load on input shaft	.....N
x_1	Load application distance (*)	.....mm
	Load orientation at input	..... 
	Input shaft rotation direction (CW-CCW) (**)	.....
A_{c2}	Thrust load on output shaft (+/–)(***)	.....N

A_{c1}	Thrust load on input shaft (+/–)(***)	.....N
J_c	Moment of inertia of the load	.....Kgm^2
t_a	Ambient temperature	.....C°
	Altitude above sea level	.....m
	Duty type to IEC norms	S...../.....%
Z	Starting frequency	.....1/h
	Motor voltage	V
	Brake voltage	V
	Frequency	.....Hz
M_b	Brake torque	.....Nm
	Motor protection degree	IP.....
	Insulation class	.....

(*) 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						
	S2			**S3***			**S4 - S8**
	Cycle duration [min]			Cyclic duration factor (I)			Please contact us
	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 $\mathbf{P_n}$ section within the gearmotor selection charts and locate the unit that features the desired output speed $\mathbf{n_2}$, or closest to, along with a safety factor **S** that meets or exceeds the applicable service factor $\mathbf{f_s}$.

The safety factor is so defined:

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

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:

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

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

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

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.

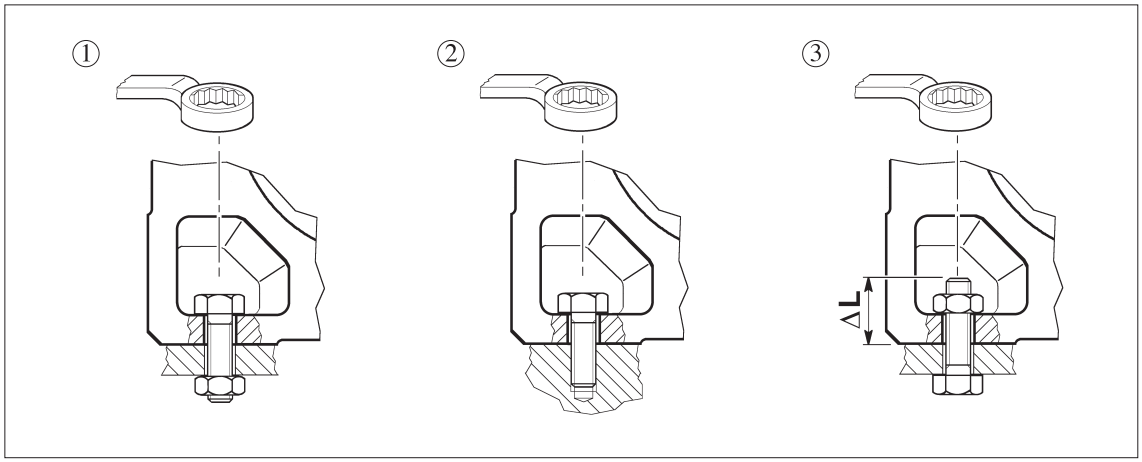
14.1 Fitting servomotors to gear heads featuring a clamping device (adapter type SC)

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).

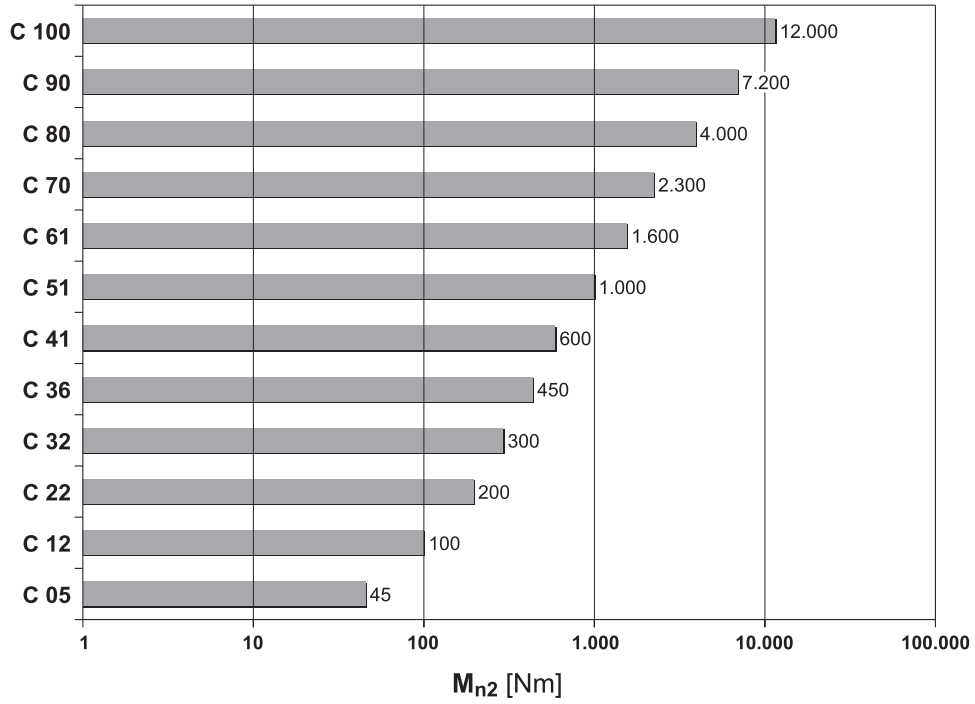
18 PAINT SPECIFICATIONS

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

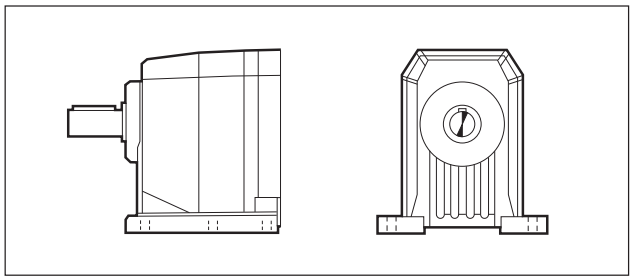
19 DESIGN FEATURES

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

(B 12)



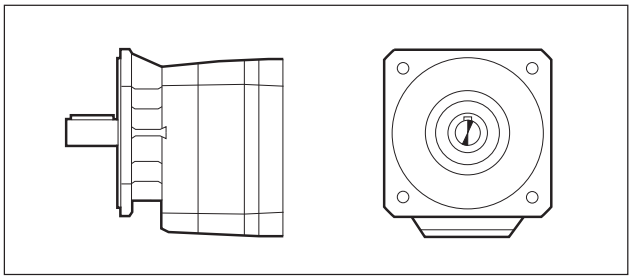
20 VERSIONS



P

Foot mount

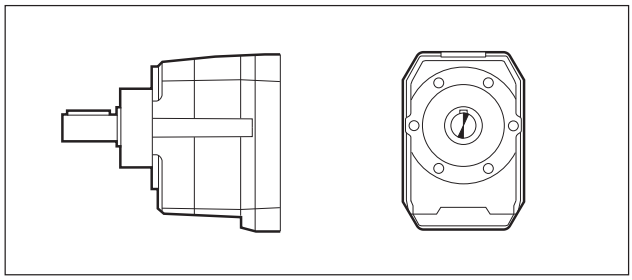
C 05 ... C 100



F

Flange mount

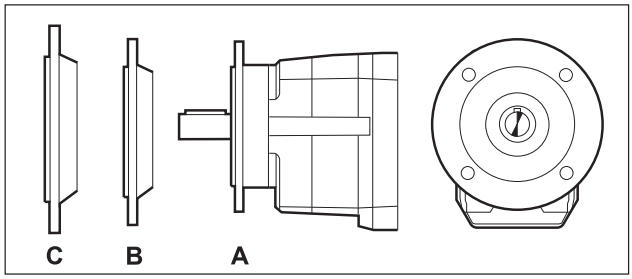
C 05 ... C 32
C 70 ... C 100



U

UNIBOX- universal housing

C 12 ... C 61



UF

UNIBOX bolt-on flange

C 12 ... C 61

21 DESIGNATION

GEAR UNIT

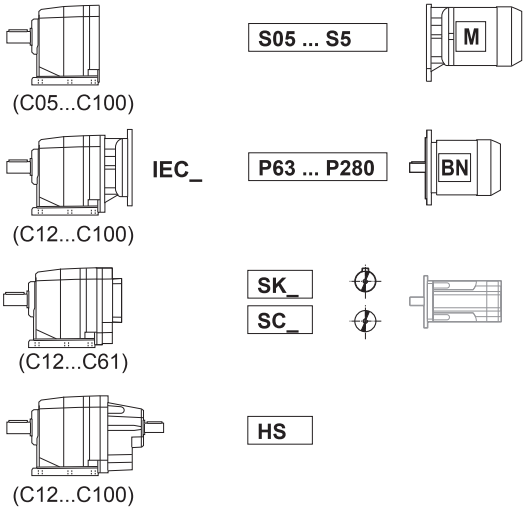
C 32 2 F 52.4 S1 B5 .....

OPTIONS

MOUNTING POSITION

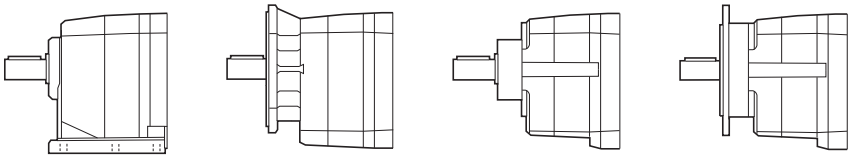
C...P: **B3** (Standard), B6, B7, B8, V5, V6
C...F/U/UF: **B5** (Standard), B51, B53, B52, V1, V3

INPUT CONFIGURATION



GEAR RATIO

VERSION



P (C05...C100)

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

U (C12...C61)

UFA UFB UFC (C12...C61)

REDUCTIONS
2, **3**, **4**

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

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

MOTOR | BRAKE

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

OPTIONS

BRAKE SUPPLY

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

BRAKE HAND RELEASE
R, **RM**

BRAKE TORQUE

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

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

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

INSULATION CLASS
CL F standard
CL H option

DEGREE OF PROTECTION
IP55 standard (IP54 - brake motor)

VOLTAGE - FREQUENCY

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

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

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

21.1 Gearbox options

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

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

DL
The output shaft features a dual oil seal.

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

VV
Fluoro elastomer oil seal on input shaft.

PV
Both input and output shafts feature Fluoro elastomer oil seals.

RB
Gear units C12, C22, C32, C36, C41, C51 and C61, usually supplied with standard values of angular backlash, are, in this case, supplied with reduced angular backlash values.
The following table specifies the corresponding figures of angular backlash.

(B 13)

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

For the delivery timeframe contact the Bonfiglioli’s sales network

SURFACE PROTECTION

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

(B 14)

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.

(B 15)

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

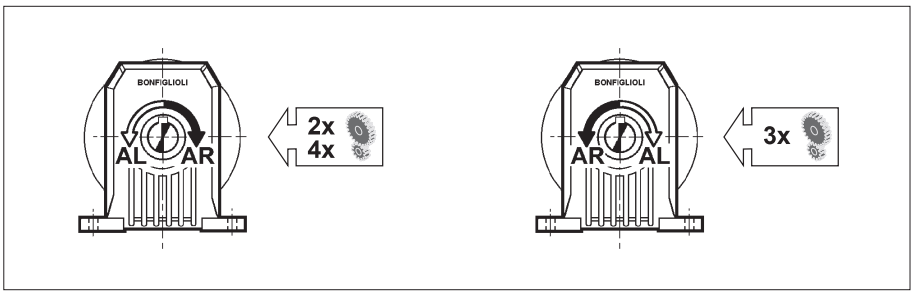
AC - Certificate of compliance
The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

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.

21.2 Motor options

AL, AR
A backstop device on the motor itself, as described in the electric motors section of this catalogue, is available for gearmotors with integral M 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.

(B 16)



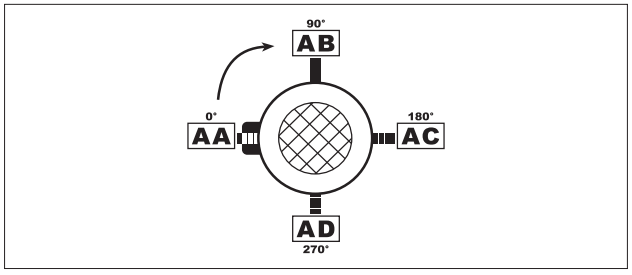
For further information on options, consult the electric motors section.

22 MOUNTING POSITION AND TERMINAL BOX ORIENTATION

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

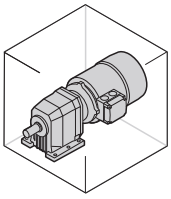
Angular position of the brake release lever.
Unless otherwise specified, brake motors have the manual device side located, 90° apart from terminal box. Different angles can be specified through the relevant options available.

(B 17)



C ... P

B3



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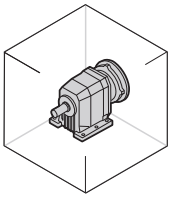

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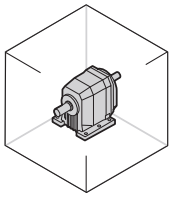

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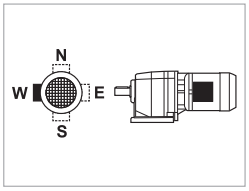
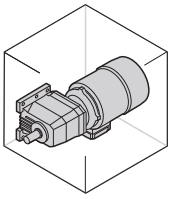


B6



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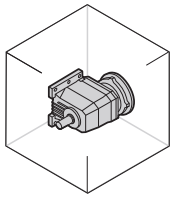

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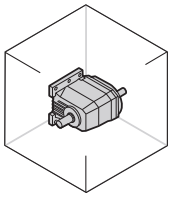

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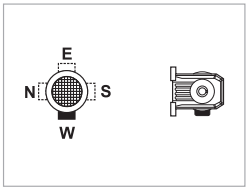
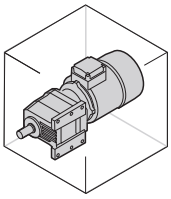


B7



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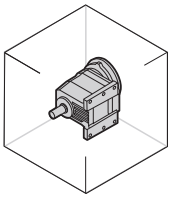

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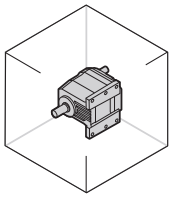

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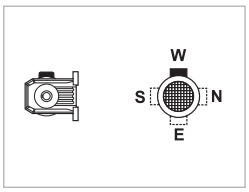
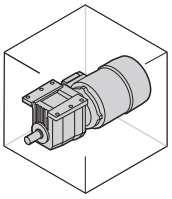


B8



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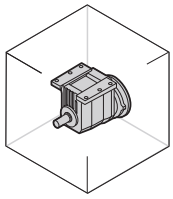

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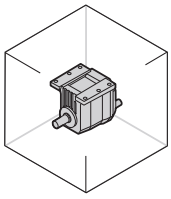

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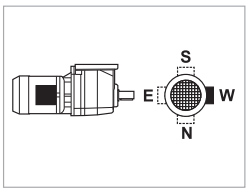
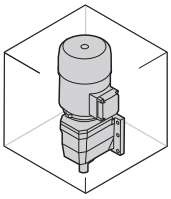


V5



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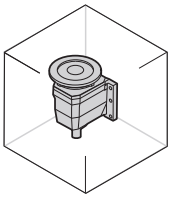

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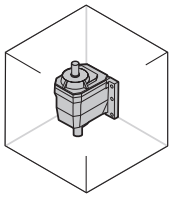

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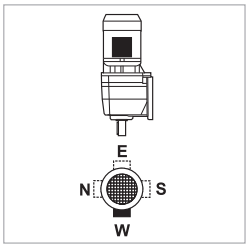
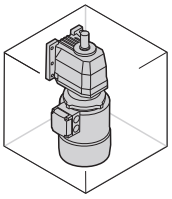


V6



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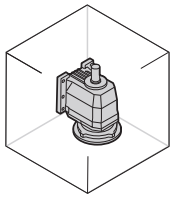

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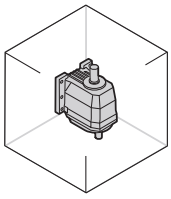

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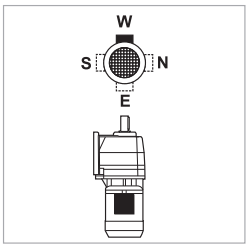

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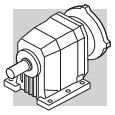
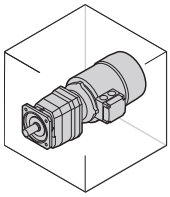


C ... F C ... U C ... UF

B5



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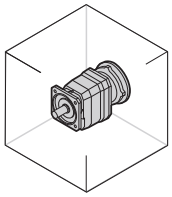
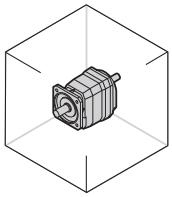


_P(IEC) _SK / _SC



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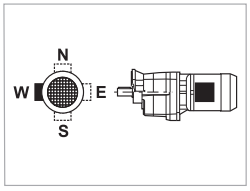
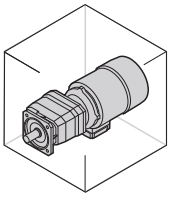


B51



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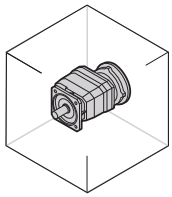

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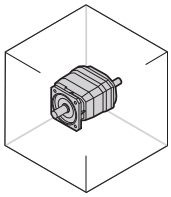

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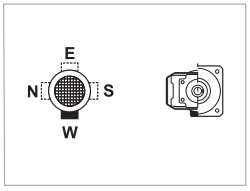
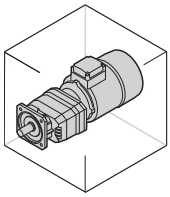


B53



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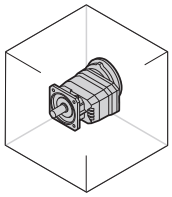
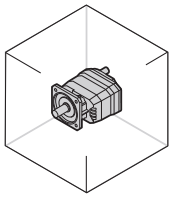


_P(IEC) _SK / _SC



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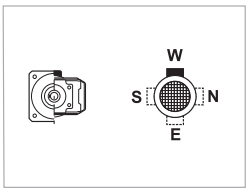
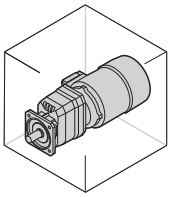


B52



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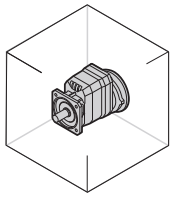

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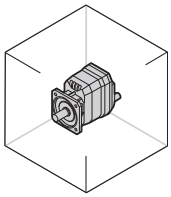
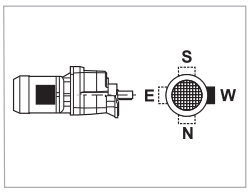
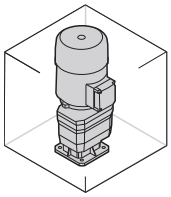


_HS



V1



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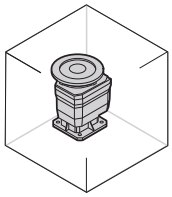

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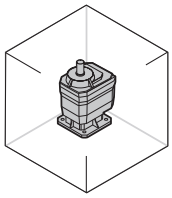
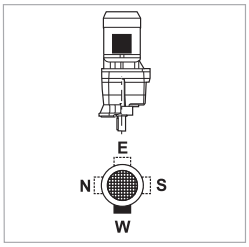
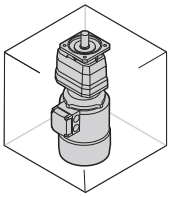


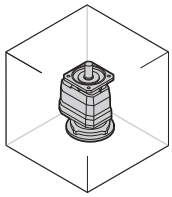
_HS



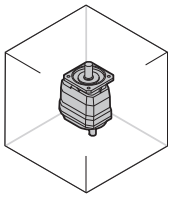
V3



_S



_P(IEC) _SK / _SC



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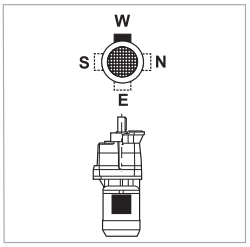


W = Default

23 OVERHUNG LOADS

External transmissions keyed onto input and/or output shaft generate loads that act radially onto same shaft.
Resulting shaft loading must be compatible with both the bearing and the shaft capacity. Namely shaft loading (R_{c1} for input shaft, R_{c2} for output shaft), must be equal or lower than admissible overhung load capacity for shaft under study (R_{n1} for input shaft, R_{n2} for output shaft). OHL capability listed in the rating chart section.
In the formulas given below, index (1) applies to parameters relating to input shaft, whereas index (2) refers to output shaft.
The load generated by an external transmission can be calculated with close approximation by the following equations:

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

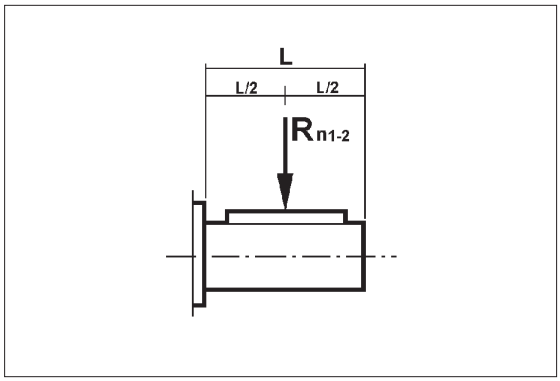
(B 18)

M_1 [Nm]	Torque applied to input shaft
M_2 [Nm]	Torque drawn at output shaft
d [mm]	Pitch diameter of element keyed onto shaft
K_r = 1	Chain transmission

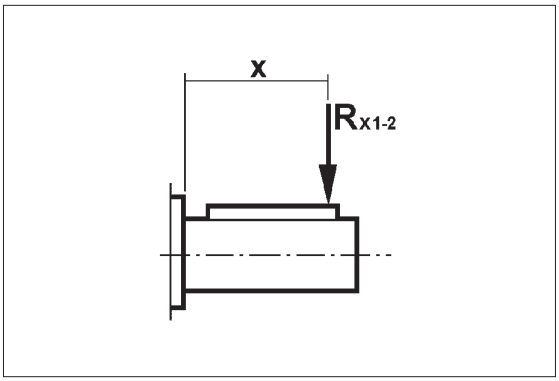
K_r = 1,25	Gear transmission
K_r = 1,5	V-belt transmission
K_r = 2,0	Flat belt transmission

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

(B 19)



(B 20)



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

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

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

or

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

b) Load off the midpoint tab. (B20)

When load is shifted at an “x” distance from shaft shoulder, permissible load must be calculated for that distance.
Revised permissible overhung loads R_{x1} (input) and R_{x2} (output) are calculated respectively from original rated values R_{n1} and R_{n2} through factor:

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

(B 21)

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

Verification procedure is described here after.

INPUT SHAFT

1. Calculate:

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

N.B. Subject to condition:

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

Finally, the following condition must be verified:

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

OUTPUT SHAFT

1. Calculate:

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

N.B. Subject to condition:

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

Finally, the following condition must be verified:

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

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

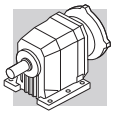
Permissible thrust loads on input [A_{n1}] and output [A_{n2}] shafts are obtained from the radial loading for the shaft under consideration [R_{n1}] and [R_{n2}] through the following equation:

$$A_{n1} = R_{n1} \cdot 0.2$$
$$A_{n2} = R_{n2} \cdot 0.2 \qquad (23)$$

The thrust loads calculated through these formulas apply to thrust forces occurring at the same time as rated radial loads.
In the only case that no overhung load acts on the shaft the value of the admissible thrust load [A_n] amounts to 50% of rated OHL [R_n] on same shaft.
Where thrust loads exceed permissible value or largely prevail over radial loads, contact Bonfiglioli Riduttori for an in-depth analysis of the application.

0.09 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
1.0	760	0.8	855.5	7000	**C414_855.5 S05 M05A6**	142	**C414_855.5 P63 BN63A6**	143
1.2	654	0.9	735.9	7000	**C414_735.9 S05 M05A6**	142	**C414_735.9 P63 BN63A6**	143
1.3	597	1.0	671.3	7000	**C414_671.3 S05 M05A6**	142	**C414_671.3 P63 BN63A6**	143
1.5	511	0.9	574.7	6500	**C364_574.7 S05 M05A6**	138	**C364_574.7 P63 BN63A6**	139
1.6	483	1.2	543.5	7000	**C414_543.5 S05 M05A6**	142	**C414_543.5 P63 BN63A6**	143
1.9	407	1.1	458.4	6500	**C364_458.4 S05 M05A6**	138	**C364_458.4 P63 BN63A6**	139
2.0	400	1.5	450.2	7000	**C414_450.2 S05 M05A6**	142	**C414_450.2 P63 BN63A6**	143
2.6	301	1.5	341.7	6500	**C364_341.7 S05 M05A6**	138	**C364_341.7 P63 BN63A6**	139
2.6	296	2.0	333.4	7000	**C414_333.4 S05 M05A6**	142	**C414_333.4 P63 BN63A6**	143
3.2	250	1.1	274.7	5500	**C323_274.7 S05 M05A6**	134	**C323_274.7 P63 BN63A6**	135
3.9	205	1.0	225.8	5000	**C223_225.8 S05 M05A6**	130	**C223_225.8 P63 BN63A6**	131
4.1	196	1.5	215.6	5500	**C323_215.6 S05 M05A6**	134	**C323_215.6 P63 BN63A6**	135
4.9	162	1.2	178.5	5000	**C223_178.5 S05 M05A6**	130	**C223_178.5 P63 BN63A6**	131
5.8	138	1.5	151.7	5000	**C223_151.7 S05 M05A6**	130	**C223_151.7 P63 BN63A6**	131
5.9	135	2.2	148.4	5500	**C323_148.4 S05 M05A6**	134	**C323_148.4 P63 BN63A6**	135
7.2	111	1.8	122.2	5000	**C223_122.2 S05 M05A6**	130	**C223_122.2 P63 BN63A6**	131
7.2	111	2.7	122.4	5500	**C323_122.4 S05 M05A6**	134	**C323_122.4 P63 BN63A6**	135
7.9	102	2.0	112.0	5000	**C223_112.0 S05 M05A6**	130	**C223_112.0 P63 BN63A6**	131
8.8	91	2.2	100.2	5000	**C223_100.2 S05 M05A6**	130	**C223_100.2 P63 BN63A6**	131
10.7	75	2.7	82.6	5000	**C223_82.6 S05 M05A6**	130	**C223_82.6 P63 BN63A6**	131
13.3	61	1.5	66.2	2000	**C122_66.2 S05 M05A6**	126	**C122_66.2 P63 BN63A6**	127
16.0	51	1.8	55.2	2000	**C122_55.2 S05 M05A6**	126	**C122_55.2 P63 BN63A6**	127
18.5	44	2.0	47.6	2000	**C122_47.6 S05 M05A6**	126	**C122_47.6 P63 BN63A6**	127
19.7	42	1.1	44.7	1170	**C052_44.7 S05 M05A6**	125		
20.8	39	2.3	42.3	2000	**C122_42.3 S05 M05A6**	126	**C122_42.3 P63 BN63A6**	127
21.8	38	1.2	40.3	1150	**C052_40.3 S05 M05A6**	125		
23.8	34	2.6	37.0	2000	**C122_37.0 S05 M05A6**	126	**C122_37.0 P63 BN63A6**	127
24.2	34	1.3	36.4	1140	**C052_36.4 S05 M05A6**	125		
26.8	31	1.5	32.8	1110	**C052_32.8 S05 M05A6**	125		
26.8	31	2.9	32.8	2000	**C122_32.8 S05 M05A6**	126	**C122_32.8 P63 BN63A6**	127
30	27	1.7	44.7	1170	**C052_44.7 S0 M0B4**	125		
33	25	1.8	40.3	990	**C052_40.3 S0 M0B4**	125		
37	22	2.0	36.4	980	**C052_36.4 S0 M0B4**	125		
41	20	2.3	32.8	960	**C052_32.8 S0 M0B4**	125		
42	19	2.3	21.0	1020	**C052_21.0 S05 M05A6**	125		
50	16	2.7	27.1	930	**C052_27.1 S0 M0B4**	125		
56	15	3.1	15.6	950	**C052_15.6 S05 M05A6**	125		
66	12	6.5	13.4	2000	**C122_13.4 S05 M05A6**	126	**C122_13.4 P63 BN63A6**	127
71	12	3.9	12.5	900	**C052_12.5 S05 M05A6**	125		
74	11	7.0	11.9	2000	**C122_11.9 S05 M05A6**	126	**C122_11.9 P63 BN63A6**	127
78	10	4.3	11.2	880	**C052_11.2 S05 M05A6**	125		
88	9	7.7	10.1	2000	**C122_10.1 S05 M05A6**	126	**C122_10.1 P63 BN63A6**	127

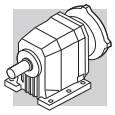


0.09 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
95	9	5.2	9.3	830	**C052_9.3 S05 M05A6**	125		
100	8	8.4	8.8	2000	**C122_8.8 S05 M05A6**	126	**C122_8.8 P63 BN63A6**	127
119	7	6.5	7.4	780	**C052_7.4 S05 M05A6**	125		
132	6	7.3	6.7	760	**C052_6.7 S05 M05A6**	125		
146	6	10.9	6.2	1960	**C122_6.2 S05 M05A6**	126	**C122_6.2 P63 BN63A6**	127
157	5	11.1	5.6	1850	**C122_5.6 S05 M05A6**	126	**C122_5.6 P63 BN63A6**	127
159	5	8.8	5.5	720	**C052_5.5 S05 M05A6**	125		
187	4	12.6	4.9	1810	**C122_4.9 S05 M05A6**	126	**C122_4.9 P63 BN63A6**	127
205	4	13.0	4.3	1730	**C122_4.3 S05 M05A6**	126	**C122_4.3 P63 BN63A6**	127
249	3	15.0	3.7	1650	**C122_3.7 S05 M05A6**	126	**C122_3.7 P63 BN63A6**	127
275	3	15.4	3.2	1580	**C122_3.2 S05 M05A6**	126	**C122_3.2 P63 BN63A6**	127
329	2	17.3	2.8	1510	**C122_2.8 S05 M05A6**	126	**C122_2.8 P63 BN63A6**	127

0.12 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
0.98	1061	0.9	884.9	10000			**C514_884.9 P63 BN63B6**	147
1.2	860	1.2	717.7	10000			**C514_717.7 P63 BN63B6**	147
1.5	681	0.9	855.5	7000	**C414_855.5 S05 M05A4**	142	**C414_855.5 P63 BN63A4**	143
1.6	643	1.6	808.0	10000			**C514_808.0 P63 BN63A4**	147
1.7	621	1.0	780.4	7000	**C414_780.4 S05 M05A4**	142	**C414_780.4 P63 BN63A4**	143
1.8	586	1.0	735.9	7000	**C414_735.9 S05 M05A4**	142	**C414_735.9 P63 BN63A4**	143
2.0	534	1.1	671.3	7000	**C414_671.3 S05 M05A4**	142	**C414_671.3 P63 BN63A4**	143
2.0	509	0.9	665.9	6500	**C364_665.9 S05 M05A4**	138	**C364_665.9 P63 BN63A4**	139
2.2	474	1.3	595.8	7000	**C414_595.8 S05 M05A4**	142	**C414_595.8 P63 BN63A4**	143
2.3	440	1.0	574.7	6500	**C364_574.7 S05 M05A4**	138	**C364_574.7 P63 BN63A4**	139
2.4	433	1.4	543.5	7000	**C414_543.5 S05 M05A4**	142	**C414_543.5 P63 BN63A4**	143
2.6	396	1.1	517.2	6500	**C364_517.2 S05 M05A4**	138	**C364_517.2 P63 BN63A4**	139
2.7	393	1.5	493.5	7000	**C414_493.5 S05 M05A4**	142	**C414_493.5 P63 BN63A4**	143
2.9	351	1.3	458.4	6500	**C364_458.4 S05 M05A4**	138	**C364_458.4 P63 BN63A4**	139
2.9	358	1.7	450.2	7000	**C414_450.2 S05 M05A4**	142	**C414_450.2 P63 BN63A4**	143
3.1	333	1.8	418.5	7000	**C414_418.5 S05 M05A4**	142	**C414_418.5 P63 BN63A4**	143
3.2	321	1.4	420.2	6500	**C364_420.2 S05 M05A4**	138	**C364_420.2 P63 BN63A4**	139
3.4	304	2.0	381.8	7000	**C414_381.8 S05 M05A4**	142	**C414_381.8 P63 BN63A4**	143
3.6	289	1.6	377.9	6500	**C364_377.9 S05 M05A4**	138	**C364_377.9 P63 BN63A4**	139
3.9	265	2.3	333.4	7000	**C414_333.4 S05 M05A4**	142	**C414_333.4 P63 BN63A4**	143
4.0	261	1.7	341.7	6500	**C364_341.7 S05 M05A4**	138	**C364_341.7 P63 BN63A4**	139
4.2	244	1.8	318.9	6500	**C364_318.9 S05 M05A4**	138	**C364_318.9 P63 BN63A4**	139
4.3	242	2.5	304.2	7000	**C414_304.2 S05 M05A4**	142	**C414_304.2 P63 BN63A4**	143
4.6	223	2.0	290.9	6500	**C364_290.9 S05 M05A4**	138	**C364_290.9 P63 BN63A4**	139
4.9	219	0.9	178.5	5000	**C223_178.5 S05 M05B6**	130	**C223_178.5 P63 BN63B6**	131
4.9	217	1.2	274.7	5500	**C323_274.7 S05 M05A4**	134	**C323_274.7 P63 BN63A4**	135
5.0	209	2.9	263.0	7000	**C414_263.0 S05 M05A4**	142	**C414_263.0 P63 BN63A4**	143



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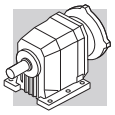
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
5.3	195	2.3	255.0	6500	**C364_255.0 S05 M05A4**	138	**C364_255.0 P63 BN63A4**	139
5.5	193	1.3	244.2	5500	**C323_244.2 S05 M05A4**	134	**C323_244.2 P63 BN63A4**	135
5.8	177	2.5	230.9	6500	**C364_230.9 S05 M05A4**	138	**C364_230.9 P63 BN63A4**	139
6.0	178	1.0	225.8	5000	**C223_225.8 S05 M05A4**	130	**C223_225.8 P63 BN63A4**	131
6.3	170	1.8	215.6	5500	**C323_215.6 S05 M05A4**	134	**C323_215.6 P63 BN63A4**	135
6.5	163	2.8	206.4	6500	**C363_206.4 S05 M05A4**	138	**C363_206.4 P63 BN63A4**	139
6.7	159	1.2	200.7	5000	**C223_200.7 S05 M05A4**	130	**C223_200.7 P63 BN63A4**	131
7.3	147	2.0	186.0	5500	**C323_186.0 S05 M05A4**	134	**C323_186.0 P63 BN63A4**	135
7.4	145	3.1	183.5	6500	**C363_183.5 S05 M05A4**	138	**C363_183.5 P63 BN63A4**	139
7.6	141	1.4	178.5	5000	**C223_178.5 S05 M05A4**	130	**C223_178.5 P63 BN63A4**	131
8.1	132	2.3	167.4	5500	**C323_167.4 S05 M05A4**	134	**C323_167.4 P63 BN63A4**	135
8.9	120	1.7	151.7	5000	**C223_151.7 S05 M05A4**	130	**C223_151.7 P63 BN63A4**	131
9.1	117	2.6	148.4	5500	**C323_148.4 S05 M05A4**	134	**C323_148.4 P63 BN63A4**	135
9.9	108	1.9	136.5	5000	**C223_136.5 S05 M05A4**	130	**C223_136.5 P63 BN63A4**	131
9.9	108	2.8	136.0	5500	**C323_136.0 S05 M05A4**	134	**C323_136.0 P63 BN63A4**	135
11.0	97	3.1	122.4	5500	**C323_122.4 S05 M05A4**	134	**C323_122.4 P63 BN63A4**	135
11.0	97	2.1	122.2	5000	**C223_122.2 S05 M05A4**	130	**C223_122.2 P63 BN63A4**	131
12.1	89	2.3	112.0	5000	**C223_112.0 S05 M05A4**	130	**C223_112.0 P63 BN63A4**	131
13.5	79	2.5	100.2	5000	**C223_100.2 S05 M05A4**	130	**C223_100.2 P63 BN63A4**	131
15.3	70	2.9	88.5	5000	**C223_88.5 S05 M05A4**	130	**C223_88.5 P63 BN63A4**	131
16.3	65	3.1	82.6	5000	**C223_82.6 S05 M05A4**	130	**C223_82.6 P63 BN63A4**	131
20.4	53	1.7	66.2	2000	**C122_66.2 S05 M05A4**	126	**C122_66.2 P63 BN63A4**	127
21.3	51	2.5	63.3	5000	**C222_63.3 S05 M05A4**	130	**C222_63.3 P63 BN63A4**	131
24.5	45	2.0	55.2	2000	**C122_55.2 S05 M05A4**	126	**C122_55.2 P63 BN63A4**	127
24.7	44	3.5	54.7	5000	**C222_54.7 S05 M05A4**	130	**C222_54.7 P63 BN63A4**	131
28.4	38	2.3	47.6	2000	**C122_47.6 S05 M05A4**	126	**C122_47.6 P63 BN63A4**	127
29.3	37	1.2	44.7	1010	**C052_44.7 S05 M05A4**	125		
32	34	2.6	42.3	2000	**C122_42.3 S05 M05A4**	126	**C122_42.3 P63 BN63A4**	127
33	34	1.3	40.3	990	**C052_40.3 S05 M05A4**	125		
36	30	1.5	36.4	980	**C052_36.4 S05 M05A4**	125		
36	30	3.0	37.0	2000	**C122_37.0 S05 M05A4**	126	**C122_37.0 P63 BN63A4**	127
40	27	1.6	32.8	960	**C052_32.8 S05 M05A4**	125		
41	26	3.4	32.8	2000	**C122_32.8 S05 M05A4**	126	**C122_32.8 P63 BN63A4**	127
48	23	2.0	27.1	930	**C052_27.1 S05 M05A4**	125		
56	20	2.3	15.6	900	**C052_15.6 S05 M05B6**	125		
62	18	2.6	21.0	890	**C052_21.0 S05 M05A4**	125		
69	16	2.5	18.9	860	**C052_18.9 S05 M05A4**	125		
78	14	3.2	11.2	850	**C052_11.2 S05 M05B6**	125		
84	13	3.1	15.6	820	**C052_15.6 S05 M05A4**	125		
105	10	3.8	12.5	780	**C052_12.5 S05 M05A4**	125		
117	9	4.3	11.2	760	**C052_11.2 S05 M05A4**	125		
130	8	5.4	6.7	740	**C052_6.7 S05 M05B6**	125		
141	8	3.9	9.3	720	**C052_9.3 S05 M05A4**	125		
177	6	4.8	7.4	680	**C052_7.4 S05 M05A4**	125		
196	6	5.4	6.7	660	**C052_6.7 S05 M05A4**	125		



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n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
0.66	2367	1.0	1362	25000			**C704_1362 P71 BN71A6**	155
0.84	1858	1.2	1069	25000			**C704_1069 P71 BN71A6**	155
1.2	1262	1.3	726.3	16000	**C614_726.3 S1 M1SC6**	150	**C614_726.3 P71 BN71A6**	151
1.3	1248	0.8	717.7	10000	**C514_717.7 S1 M1SC6**	146	**C514_717.7 P71 BN71A6**	147
1.5	1049	1.0	884.9	10000			**C514_884.9 P63 BN63B4**	147
1.6	958	1.0	808.0	10000			**C514_808.0 P63 BN63B4**	147
1.6	955	1.0	549.7	10000	**C514_549.7 S1 M1SC6**	146	**C514_549.7 P71 BN71A6**	147
1.8	861	1.9	726.3	16000			**C614_726.3 P63 BN63B4**	151
1.8	851	1.2	717.7	10000			**C514_717.7 P63 BN63B4**	147
1.9	806	1.2	463.9	10000	**C514_463.9 S1 M1SC6**	146	**C514_463.9 P71 BN71A6**	147
1.9	803	2.0	462.0	16000	**C614_462.0 S1 M1SC6**	150	**C614_462.0 P71 BN71A6**	151
2.0	796	0.8	671.3	7000	**C414_671.3 S05 M05B4**	142	**C414_671.3 P63 BN63B4**	143
2.0	783	0.8	450.2	7000	**C414_450.2 S1 M1SC6**	142	**C414_450.2 P71 BN71A6**	143
2.0	777	1.3	655.4	10000			**C514_655.4 P63 BN63B4**	147
2.2	727	0.8	418.5	7000	**C414_418.5 S1 M1SC6**	142	**C414_418.5 P71 BN71A6**	143
2.2	723	1.4	415.7	10000	**C514_415.7 S1 M1SC6**	146	**C514_415.7 P71 BN71A6**	147
2.2	706	0.8	595.8	7000	**C414_595.8 S05 M05B4**	142	**C414_595.8 P63 BN63B4**	143
2.4	660	1.5	379.6	10000	**C514_379.6 S1 M1SC6**	146	**C514_379.6 P71 BN71A6**	147
2.4	644	0.9	543.5	7000	**C414_543.5 S05 M05B4**	142	**C414_543.5 P63 BN63B4**	143
2.6	587	0.8	341.7	6300	**C364_341.7 S1 M1SC6**	138	**C364_341.7 P71 BN71A6**	139
2.7	585	1.0	493.5	7000	**C414_493.5 S05 M05B4**	142	**C414_493.5 P63 BN63B4**	143
2.9	534	1.1	450.2	7000	**C414_450.2 S05 M05B4**	142	**C414_450.2 P63 BN63B4**	143
2.9	536	0.8	458.4	6500	**C364_458.4 S05 M05B4**	138	**C364_458.4 P63 BN63B4**	139
3.1	492	0.9	420.2	6500	**C364_420.2 S05 M05B4**	138	**C364_420.2 P63 BN63B4**	139
3.2	496	1.2	418.5	7000	**C414_418.5 S05 M05B4**	142	**C414_418.5 P63 BN63B4**	143
3.5	452	1.3	381.8	7000	**C414_381.8 S05 M05B4**	142	**C414_381.8 P63 BN63B4**	143
3.5	442	1.0	377.9	6500	**C364_377.9 S05 M05B4**	138	**C364_377.9 P63 BN63B4**	139
3.9	400	1.1	341.7	6500	**C364_341.7 S05 M05B4**	138	**C364_341.7 P63 BN63B4**	139
4.0	395	1.5	333.4	7000	**C414_333.4 S05 M05B4**	142	**C414_333.4 P63 BN63B4**	143
4.1	373	1.2	318.9	6500	**C364_318.9 S05 M05B4**	138	**C364_318.9 P63 BN63B4**	139
4.3	371	1.6	209.1	7000	**C413_209.1 S1 M1SC6**	142	**C413_209.1 P71 BN71A6**	143
4.3	360	1.7	304.2	7000	**C414_304.2 S05 M05B4**	142	**C414_304.2 P63 BN63B4**	143
4.5	340	1.3	290.9	6500	**C364_290.9 S05 M05B4**	138	**C364_290.9 P63 BN63B4**	139
4.7	339	1.8	190.8	7000	**C413_190.8 S1 M1SC6**	142	**C413_190.8 P71 BN71A6**	143
4.8	330	0.9	186.0	5500	**C323_186.0 S1 M1SC6**	134	**C323_186.0 P71 BN71A6**	135
5.0	312	1.9	263.0	7000	**C414_263.0 S05 M05B4**	142	**C414_263.0 P63 BN63B4**	143
5.2	298	1.5	255.0	6500	**C364_255.0 S05 M05B4**	138	**C364_255.0 P63 BN63B4**	139
5.4	297	1.0	167.4	5500	**C323_167.4 S1 M1SC6**	134	**C323_167.4 P71 BN71A6**	135
5.4	295	0.9	244.2	5500	**C323_244.2 S05 M05B4**	134	**C323_244.2 P63 BN63B4**	135
5.7	270	1.7	230.9	6500	**C364_230.9 S05 M05B4**	138	**C364_230.9 P63 BN63B4**	139
6.1	261	1.2	215.6	5500	**C323_215.6 S05 M05B4**	134	**C323_215.6 P63 BN63B4**	135
6.4	250	1.8	206.4	6500	**C363_206.4 S05 M05B4**	138	**C363_206.4 P63 BN63B4**	139
7.1	225	1.3	186.0	5500	**C323_186.0 S05 M05B4**	134	**C323_186.0 P63 BN63B4**	135
7.2	222	2.0	183.5	6500	**C363_183.5 S05 M05B4**	138	**C363_183.5 P63 BN63B4**	139
7.4	216	0.9	178.5	5000	**C223_178.5 S05 M05B4**	130	**C223_178.5 P63 BN63B4**	131
7.9	202	1.5	167.4	5500	**C323_167.4 S05 M05B4**	134	**C323_167.4 P63 BN63B4**	135

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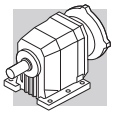
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
8.1	196	2.3	162.0	6500	**C363_162.0 S05 M05B4**	138	**C363_162.0 P63 BN63B4**	139
8.7	183	1.1	151.7	5000	**C223_151.7 S05 M05B4**	130	**C223_151.7 P63 BN63B4**	131
8.9	179	1.7	148.4	5500	**C323_148.4 S05 M05B4**	134	**C323_148.4 P63 BN63B4**	135
9.4	169	2.7	139.8	6500	**C363_139.8 S05 M05B4**	138	**C363_139.8 P63 BN63B4**	139
9.7	165	1.2	136.5	5000	**C223_136.5 S05 M05B4**	130	**C223_136.5 P63 BN63B4**	131
9.7	164	1.8	136.0	5500	**C323_136.0 S05 M05B4**	134	**C323_136.0 P63 BN63B4**	135
10.5	152	3.0	125.8	6500	**C363_125.8 S05 M05B4**	138	**C363_125.8 P63 BN63B4**	139
10.8	148	2.0	122.4	5500	**C323_122.4 S05 M05B4**	134	**C323_122.4 P63 BN63B4**	135
10.8	148	1.4	122.2	5000	**C223_122.2 S05 M05B4**	130	**C223_122.2 P63 BN63B4**	131
11.8	135	1.5	112.0	5000	**C223_112.0 S05 M05B4**	130	**C223_112.0 P63 BN63B4**	131
11.8	135	3.3	111.5	6500	**C363_111.5 S05 M05B4**	138	**C363_111.5 P63 BN63B4**	139
11.9	134	2.2	110.6	5500	**C323_110.6 S05 M05B4**	134	**C323_110.6 P63 BN63B4**	135
12.8	125	2.4	103.3	5500	**C323_103.3 S05 M05B4**	134	**C323_103.3 P63 BN63B4**	135
12.9	124	3.6	102.2	6500	**C363_102.2 S05 M05B4**	138	**C363_102.2 P63 BN63B4**	139
13.2	121	1.7	100.2	5000	**C223_100.2 S05 M05B4**	130	**C223_100.2 P63 BN63B4**	131
14.0	114	2.6	94.2	5500	**C323_94.2 S05 M05B4**	134	**C323_94.2 P63 BN63B4**	135
14.9	107	1.9	88.5	5000	**C223_88.5 S05 M05B4**	130	**C223_88.5 P63 BN63B4**	131
16.0	100	2.0	82.6	5000	**C223_82.6 S05 M05B4**	130	**C223_82.6 P63 BN63B4**	131
16.0	100	3.0	82.6	5500	**C323_82.6 S05 M05B4**	134	**C323_82.6 P63 BN63B4**	135
17.6	90	2.2	74.8	5000	**C223_74.8 S05 M05B4**	130	**C223_74.8 P63 BN63B4**	131
17.7	90	3.2	74.7	5500	**C323_74.7 S05 M05B4**	134	**C323_74.7 P63 BN63B4**	135
19.8	83	2.6	66.8	5500	**C322_66.8 S05 M05B4**	134	**C322_66.8 P63 BN63B4**	135
20.0	82	1.1	66.2	2000	**C122_66.2 S05 M05B4**	126	**C122_66.2 P63 BN63B4**	127
20.2	79	2.5	65.3	5000	**C223_65.3 S05 M05B4**	130	**C223_65.3 P63 BN63B4**	131
20.9	78	1.7	63.3	5000	**C222_63.3 S05 M05B4**	130	**C222_63.3 P63 BN63B4**	131
22.0	73	2.6	60.0	5000	**C223_60.0 S05 M05B4**	130	**C223_60.0 P63 BN63B4**	131
22.2	73	2.9	59.4	5500	**C322_59.4 S05 M05B4**	134	**C322_59.4 P63 BN63B4**	135
23.9	68	1.3	55.2	2000	**C122_55.2 S05 M05B4**	126	**C122_55.2 P63 BN63B4**	127
24.1	68	2.3	54.7	5000	**C222_54.7 S05 M05B4**	130	**C222_54.7 P63 BN63B4**	131
27.1	60	2.6	48.6	5000	**C222_48.6 S05 M05B4**	130	**C222_48.6 P63 BN63B4**	131
27.7	59	1.5	47.6	2000	**C122_47.6 S05 M05B4**	126	**C122_47.6 P63 BN63B4**	127
31	53	3.6	43.3	5000	**C222_43.3 S05 M05B4**	130	**C222_43.3 P63 BN63B4**	131
31	52	1.7	42.3	2000	**C122_42.3 S05 M05B4**	126	**C122_42.3 P63 BN63B4**	127
33	50	0.9	40.3	850	**C052_40.3 S05 M05B4**	125		
36	45	1.0	36.4	850	**C052_36.4 S05 M05B4**	125		
36	46	2.0	37.0	2000	**C122_37.0 S05 M05B4**	126	**C122_37.0 P63 BN63B4**	127
40	40	2.2	32.8	2000	**C122_32.8 S05 M05B4**	126	**C122_32.8 P63 BN63B4**	127
40	41	1.1	32.8	840	**C052_32.8 S05 M05B4**	125		
45	36	2.5	29.5	2000	**C122_29.5 S05 M05B4**	126	**C122_29.5 P63 BN63B4**	127
49	34	1.3	27.1	820	**C052_27.1 S05 M05B4**	125		
52	31	2.8	25.4	2000	**C122_25.4 S05 M05B4**	126	**C122_25.4 P63 BN63B4**	127
57	29	3.0	23.2	2000	**C122_23.2 S05 M05B4**	126	**C122_23.2 P63 BN63B4**	127
63	26	1.7	21.0	810	**C052_21.0 S05 M05B4**	125		
64	25	3.2	20.6	2000	**C122_20.6 S05 M05B4**	126	**C122_20.6 P63 BN63B4**	127
70	23	1.7	18.9	790	**C052_18.9 S05 M05B4**	125		
72	23	3.4	18.4	2000	**C122_18.4 S05 M05B4**	126	**C122_18.4 P63 BN63B4**	127



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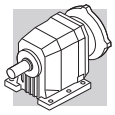
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
77	21	3.6	17.2	2000	**C122_17.2 S05 M05B4**	126	**C122_17.2 P63 BN63B4**	127
85	19	2.1	15.6	760	**C052_15.6 S05 M05B4**	125		
106	15	2.6	12.5	740	**C052_12.5 S05 M05B4**	125		
118	14	2.9	11.2	720	**C052_11.2 S05 M05B4**	125		
142	11	2.6	9.3	690	**C052_9.3 S05 M05B4**	125		
178	9	3.3	7.4	650	**C052_7.4 S05 M05B4**	125		
197	8	3.6	6.7	640	**C052_6.7 S05 M05B4**	125		
229	7	7.4	11.9	1670	**C122_11.9 S05 M05A2**	126	**C122_11.9 P63 BN63A2**	127
240	7	4.4	5.5	600	**C052_5.5 S05 M05B4**	125		
268	6	8.1	10.1	1600	**C122_10.1 S05 M05A2**	126	**C122_10.1 P63 BN63A2**	127
310	5	8.9	8.8	1530	**C122_8.8 S05 M05A2**	126	**C122_8.8 P63 BN63A2**	127
354	5	9.8	7.6	1470	**C122_7.6 S05 M05A2**	126	**C122_7.6 P63 BN63A2**	127
440	4	11.3	6.2	1390	**C122_6.2 S05 M05A2**	126	**C122_6.2 P63 BN63A2**	127
488	3	11.9	5.6	1300	**C122_5.6 S05 M05A2**	126	**C122_5.6 P63 BN63A2**	127
577	3	13.4	4.9	1250	**C122_4.9 S05 M05A2**	126	**C122_4.9 P63 BN63A2**	127
635	3	14.0	4.3	1190	**C122_4.3 S05 M05A2**	126	**C122_4.3 P63 BN63A2**	127
770	2	16.0	3.7	1140	**C122_3.7 S05 M05A2**	126	**C122_3.7 P63 BN63A2**	127
853	2	16.7	3.2	1090	**C122_3.2 S05 M05A2**	126	**C122_3.2 P63 BN63A2**	127
1015	2	18.7	2.8	1040	**C122_2.8 S05 M05A2**	126	**C122_2.8 P63 BN63A2**	127

0.25 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
0.61	3575	1.1	1481	35000			**C804_1481 P71 BN71B6**	158
0.77	2820	1.4	1168	35000			**C804_1168 P71 BN71B6**	158
1.2	1753	0.9	726.3	16000	**C614_726.3 S1 M1SD6**	150	**C614_726.3 P71 BN71B6**	151
1.6	1330	0.8	808.0	10000			**C514_808.0 P63 BN63C4**	147
1.6	1327	0.8	549.7	10000	**C514_549.7 S1 M1SD6**	146	**C514_549.7 P71 BN71B6**	147
1.9	1134	0.9	717.7	10000			**C514_717.7 P71 BN71A4**	147
1.9	1120	0.9	463.9	10000	**C514_463.9 S1 M1SD6**	146	**C514_463.9 P71 BN71B6**	147
2.0	1101	1.5	668.8	16000			**C614_668.8 P63 BN63C4**	151
2.4	894	1.8	370.1	16000	**C614_370.1 S1 M1SD6**	150	**C614_370.1 P71 BN71B6**	151
2.5	869	1.2	549.7	10000			**C514_549.7 P71 BN71A4**	147
2.9	741	0.8	450.2	7000	**C414_450.2 S05 M05C4**	142	**C414_450.2 P71 BN71A4**	143
3.2	689	0.9	418.5	7000	**C414_418.5 S05 M05C4**	142	**C414_418.5 P71 BN71A4**	143
3.2	684	1.5	415.7	10000			**C514_415.7 P71 BN71A4**	147
3.5	628	1.0	381.8	7000	**C414_381.8 S05 M05C4**	142	**C414_381.8 P71 BN71A4**	143
3.5	625	1.6	379.6	10000			**C514_379.6 P71 BN71A4**	147
3.8	567	0.8	344.3	6500	**C364_344.3 S05 M05C4**	138	**C364_344.3 P71 BN71A4**	139
4.0	549	1.1	333.4	7000	**C414_333.4 S05 M05C4**	142	**C414_333.4 P71 BN71A4**	143
4.0	537	1.9	326.1	10000			**C514_326.1 P71 BN71A4**	147
4.2	511	0.9	318.9	6500	**C364_318.9 S05 M05C4**	138	**C364_318.9 P71 BN71A4**	139
4.3	501	1.2	304.2	7000	**C414_304.2 S05 M05C4**	142	**C414_304.2 P71 BN71A4**	143
4.4	490	2.0	297.8	10000			**C514_297.8 P71 BN71A4**	147
4.6	466	1.0	290.9	6500	**C364_290.9 S05 M05C4**	138	**C364_290.9 P71 BN71A4**	139



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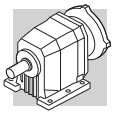
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
5.0	434	2.3	263.8	10000			**C514_263.8 P71 BN71A4**	147
5.0	433	1.4	263.0	7000	**C414_263.0 S05 M05C4**	142	**C414_263.0 P71 BN71A4**	143
5.3	409	1.1	255.0	6500	**C364_255.0 S05 M05C4**	138	**C364_255.0 P71 BN71A4**	139
5.5	395	1.5	239.9	7000	**C414_239.9 S05 M05C4**	142	**C414_239.9 P71 BN71A4**	143
5.8	370	1.2	230.9	6500	**C364_230.9 S05 M05C4**	138	**C364_230.9 P71 BN71A4**	139
6.3	350	2.9	216.7	10000			**C513_216.7 P71 BN71A4**	147
6.5	342	1.3	206.4	6500	**C363_206.4 S05 M05C4**	138	**C363_206.4 P71 BN71A4**	139
7.2	308	1.9	190.8	7000			**C413_190.8 P71 BN71A4**	143
7.2	308	1.0	186.0	5500	**C323_186.0 S05 M05C4**	134	**C323_186.0 P71 BN71A4**	135
7.3	304	1.5	183.5	6500	**C363_183.5 S05 M05C4**	138	**C363_183.5 P71 BN71A4**	139
8.0	277	1.1	167.4	5500	**C323_167.4 S05 M05C4**	134	**C323_167.4 P71 BN71A4**	135
8.3	268	1.7	162.0	6500	**C363_162.0 S05 M05C4**	138	**C363_162.0 P71 BN71A4**	139
8.4	265	2.3	164.1	7000			**C413_164.1 P71 BN71A4**	143
9.0	246	1.2	148.4	5500	**C323_148.4 S05 M05C4**	134	**C323_148.4 P71 BN71A4**	135
9.6	231	1.9	139.8	6500	**C363_139.8 S05 M05C4**	138	**C363_139.8 P71 BN71A4**	139
9.8	226	0.9	136.5	5000	**C223_136.5 S05 M05C4**	130	**C223_136.5 P71 BN71A4**	131
9.9	225	1.3	136.0	5500	**C323_136.0 S05 M05C4**	134	**C323_136.0 P71 BN71A4**	135
10.3	215	2.8	132.9	7000			**C413_132.9 P71 BN71A4**	143
10.7	208	2.2	125.8	6500	**C363_125.8 S05 M05C4**	138	**C363_125.8 P71 BN71A4**	139
11.0	203	1.5	122.4	5500	**C323_122.4 S05 M05C4**	134	**C323_122.4 P71 BN71A4**	135
11.0	202	1.0	122.2	5000	**C223_122.2 S05 M05C4**	130	**C223_122.2 P71 BN71A4**	131
12.0	185	1.1	112.0	5000	**C223_112.0 S05 M05C4**	130	**C223_112.0 P71 BN71A4**	131
12.0	185	2.4	111.5	6500	**C363_111.5 S05 M05C4**	138	**C363_111.5 P71 BN71A4**	139
12.1	183	1.6	110.6	5500	**C323_110.6 S05 M05C4**	134	**C323_110.6 P71 BN71A4**	135
13.0	171	1.8	103.3	5500	**C323_103.3 S05 M05C4**	134	**C323_103.3 P71 BN71A4**	135
13.1	169	2.7	102.2	6500	**C363_102.2 S05 M05C4**	138	**C363_102.2 P71 BN71A4**	139
13.4	166	1.2	100.2	5000	**C223_100.2 S05 M05C4**	130	**C223_100.2 P71 BN71A4**	131
14.2	156	1.9	94.2	5500	**C323_94.2 S05 M05C4**	134	**C323_94.2 P71 BN71A4**	135
14.6	152	3.0	91.9	6500	**C363_91.9 S05 M05C4**	138	**C363_91.9 P71 BN71A4**	139
15.1	147	1.4	88.5	5000	**C223_88.5 S05 M05C4**	130	**C223_88.5 P71 BN71A4**	131
16.2	137	1.5	82.6	5000	**C223_82.6 S05 M05C4**	130	**C223_82.6 P71 BN71A4**	131
16.2	137	2.2	82.6	5500	**C323_82.6 S05 M05C4**	134	**C323_82.6 P71 BN71A4**	135
17.9	124	1.6	74.8	5000	**C223_74.8 S05 M05C4**	130	**C223_74.8 P71 BN71A4**	131
17.9	124	2.3	74.7	5500	**C323_74.7 S05 M05C4**	134	**C323_74.7 P71 BN71A4**	135
20.1	113	1.9	66.8	5500	**C322_66.8 S05 M05C4**	134	**C322_66.8 P71 BN71A4**	135
20.3	112	0.8	66.2	2000	**C122_66.2 S05 M05C4**	126	**C122_66.2 P71 BN71A4**	127
20.5	108	1.8	65.3	5000	**C223_65.3 S05 M05C4**	130	**C223_65.3 P71 BN71A4**	131
21.2	107	1.2	63.3	5000	**C222_63.3 S05 M05C4**	130	**C222_63.3 P71 BN71A4**	131
22.3	99	1.9	60.0	5000	**C223_60.0 S05 M05C4**	130	**C223_60.0 P71 BN71A4**	131
22.6	100	2.1	59.4	5500	**C322_59.4 S05 M05C4**	134	**C322_59.4 P71 BN71A4**	135
24.3	93	1.0	55.2	2000	**C122_55.2 S05 M05C4**	126	**C122_55.2 P71 BN71A4**	127
24.5	93	1.7	54.7	5000	**C222_54.7 S05 M05C4**	130	**C222_54.7 P71 BN71A4**	131
25.6	89	3.4	52.4	5500	**C322_52.4 S05 M05C4**	134	**C322_52.4 P71 BN71A4**	135
27.5	82	1.9	48.6	5000	**C222_48.6 S05 M05C4**	130	**C222_48.6 P71 BN71A4**	131
28.1	80	1.1	47.6	2000	**C122_47.6 S05 M05C4**	126	**C122_47.6 P71 BN71A4**	127
31	73	2.6	43.3	4750	**C222_43.3 S05 M05C4**	130	**C222_43.3 P71 BN71A4**	131
32	72	1.3	42.3	2000	**C122_42.3 S05 M05C4**	126	**C122_42.3 P71 BN71A4**	127
36	63	1.4	37.0	2000	**C122_37.0 S05 M05C4**	126	**C122_37.0 P71 BN71A4**	127



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n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
36	62	3.2	36.8	4540	**C222_36.8 S05 M05C4**	130	**C222_36.8 P71 BN71A4**	131
40	56	3.6	33.1	4500	**C222_33.1 S05 M05C4**	130	**C222_33.1 P71 BN71A4**	131
41	55	1.6	32.8	2000	**C122_32.8 S05 M05C4**	126	**C122_32.8 P71 BN71A4**	127
45	50	1.8	29.5	2000	**C122_29.5 S05 M05C4**	126	**C122_29.5 P71 BN71A4**	127
49	47	1.0	27.1	700	**C052_27.1 S05 M05C4**	125		
53	43	2.1	25.4	2000	**C122_25.4 S05 M05C4**	126	**C122_25.4 P71 BN71A4**	127
58	39	2.2	23.2	2000	**C122_23.2 S05 M05C4**	126	**C122_23.2 P71 BN71A4**	127
63	36	1.2	21.0	720	**C052_21.0 S05 M05C4**	125		
65	35	2.4	20.6	2000	**C122_20.6 S05 M05C4**	126	**C122_20.6 P71 BN71A4**	127
70	33	1.2	18.9	710	**C052_18.9 S05 M05C4**	125		
73	31	2.5	18.4	2000	**C122_18.4 S05 M05C4**	126	**C122_18.4 P71 BN71A4**	127
78	29	2.6	17.2	2000	**C122_17.2 S05 M05C4**	126	**C122_17.2 P71 BN71A4**	127
85	27	1.5	15.6	700	**C052_15.6 S05 M05C4**	125		
87	26	2.8	15.4	2000	**C122_15.4 S05 M05C4**	126	**C122_15.4 P71 BN71A4**	127
100	23	3.1	13.4	2000	**C122_13.4 S05 M05C4**	126	**C122_13.4 P71 BN71A4**	127
106	22	1.9	12.5	690	**C052_12.5 S05 M05C4**	125		
113	20	3.3	11.9	2000	**C122_11.9 S05 M05C4**	126	**C122_11.9 P71 BN71A4**	127
118	19	2.1	11.2	670	**C052_11.2 S05 M05C4**	125		
133	17	3.7	10.1	1980	**C122_10.1 S05 M05C4**	126	**C122_10.1 P71 BN71A4**	127
142	16	1.9	9.3	650	**C052_9.3 S05 M05C4**	125		
157	14	4.2	17.2	1870	**C122_17.2 S05 M05B2**	126	**C122_17.2 P63 BN63B2**	127
178	13	2.4	7.4	620	**C052_7.4 S05 M05C4**	125		
197	12	2.6	6.7	610	**C052_6.7 S05 M05C4**	125		
204	11	5.0	13.4	1710	**C122_13.4 S05 M05B2**	126	**C122_13.4 P63 BN63B2**	127
230	10	5.4	11.9	1660	**C122_11.9 S05 M05B2**	126	**C122_11.9 P63 BN63B2**	127
240	9	3.2	5.5	580	**C052_5.5 S05 M05C4**	125		
268	8	5.8	10.1	1590	**C122_10.1 S05 M05B2**	126	**C122_10.1 P63 BN63B2**	127
311	7	6.5	8.8	1510	**C122_8.8 S05 M05B2**	126	**C122_8.8 P63 BN63B2**	127
354	6	7.0	7.6	1460	**C122_7.6 S05 M05B2**	126	**C122_7.6 P63 BN63B2**	127
442	5	8.2	6.2	1350	**C122_6.2 S05 M05B2**	126	**C122_6.2 P63 BN63B2**	127
489	5	8.6	5.6	1290	**C122_5.6 S05 M05B2**	126	**C122_5.6 P63 BN63B2**	127
577	4	9.7	4.9	1240	**C122_4.9 S05 M05B2**	126	**C122_4.9 P63 BN63B2**	127
637	4	10.1	4.3	1180	**C122_4.3 S05 M05B2**	126	**C122_4.3 P63 BN63B2**	127
770	3	11.5	3.7	1130	**C122_3.7 S05 M05B2**	126	**C122_3.7 P63 BN63B2**	127
856	3	12.1	3.2	1080	**C122_3.2 S05 M05B2**	126	**C122_3.2 P63 BN63B2**	127
979	2	13.0	2.8	1030	**C122_2.8 S05 M05B2**	126	**C122_2.8 P63 BN63B2**	127

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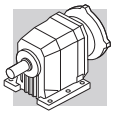
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
0.73	4382	1.6	1240	60000	**C904_1240 S1 M1LA6**	160	**C904_1240 P80 BN80A6**	161
0.78	4127	1.0	1168	35000			**C804_1168 P80 BN80A6**	158
0.93	3476	1.2	1481	35000			**C804_1481 P71 BN71B4**	158
1.2	2741	1.5	1168	35000			**C804_1168 P71 BN71B4**	158
1.4	2220	1.8	945.7	35000			**C804_945.7 P71 BN71B4**	158
1.5	2165	1.1	922.6	25000			**C704_922.6 P71 BN71B4**	155

0.37 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
1.7	1869	0.9	796.1	16000	**C614_796.1 S1 M1SD4**	150	**C614_796.1 P71 BN71B4**	151
2.0	1570	1.0	668.8	16000	**C614_668.8 S1 M1SD4**	150	**C614_668.8 P71 BN71B4**	151
2.1	1543	1.5	657.3	25000			**C704_657.3 P71 BN71B4**	155
2.4	1341	1.2	571.2	16000	**C614_571.2 S1 M1SD4**	150	**C614_571.2 P71 BN71B4**	151
2.5	1302	1.8	554.7	25000			**C704_554.7 P71 BN71B4**	155
2.5	1290	0.8	549.7	10000	**C514_549.7 S1 M1SD4**	146	**C514_549.7 P71 BN71B4**	147
2.6	1223	1.3	521.1	16000	**C614_521.1 S1 M1SD4**	150	**C614_521.1 P71 BN71B4**	151
3.3	989	1.6	421.5	16000	**C614_421.5 S1 M1SD4**	150	**C614_421.5 P71 BN71B4**	151
3.3	976	1.0	415.7	10000	**C514_415.7 S1 M1SD4**	146	**C514_415.7 P71 BN71B4**	147
3.3	961	2.4	409.4	25000			**C704_409.4 P71 BN71B4**	155
3.6	891	1.1	379.6	10000	**C514_379.6 S1 M1SD4**	146	**C514_379.6 P71 BN71B4**	147
3.7	869	1.8	370.1	16000	**C614_370.1 S1 M1SD4**	150	**C614_370.1 P71 BN71B4**	151
4.1	793	2.0	337.7	16000	**C614_337.7 S1 M1SD4**	150	**C614_337.7 P71 BN71B4**	151
4.1	783	0.8	333.4	7000	**C414_333.4 S1 M1SD4**	142	**C414_333.4 P71 BN71B4**	143
4.2	765	1.3	326.1	10000	**C514_326.1 S1 M1SD4**	146	**C514_326.1 P71 BN71B4**	147
4.6	699	1.4	297.8	10000	**C514_297.8 S1 M1SD4**	146	**C514_297.8 P71 BN71B4**	147
5.2	619	1.6	263.8	10000	**C514_263.8 S1 M1SD4**	146	**C514_263.8 P71 BN71B4**	147
5.2	617	1.0	263.0	7000	**C414_263.0 S1 M1SD4**	142	**C414_263.0 P71 BN71B4**	143
5.9	540	0.8	230.9	6300	**C364_230.9 S1 M1SD4**	138	**C364_230.9 P71 BN71B4**	139
6.3	520	1.9	216.7	10000	**C513_216.7 S1 M1SD4**	146	**C513_216.7 P71 BN71B4**	147
6.6	502	1.2	209.1	7000	**C413_209.1 S1 M1SD4**	142	**C413_209.1 P71 BN71B4**	143
6.6	499	0.9	206.4	6500			**C363_206.4 P71 BN71B4**	139
6.9	475	2.1	197.9	10000	**C513_197.9 S1 M1SD4**	146	**C513_197.9 P71 BN71B4**	147
7.2	458	1.3	190.8	7000	**C413_190.8 S1 M1SD4**	142	**C413_190.8 P71 BN71B4**	143
7.5	444	1.0	183.5	6500			**C363_183.5 P71 BN71B4**	139
7.6	431	1.4	179.9	7000	**C413_179.9 S1 M1SD4**	142	**C413_179.9 P71 BN71B4**	143
7.8	422	2.4	175.8	10000	**C513_175.8 S1 M1SD4**	146	**C513_175.8 P71 BN71B4**	147
8.3	394	1.5	164.1	7000	**C413_164.1 S1 M1SD4**	142	**C413_164.1 P71 BN71B4**	143
8.5	385	2.6	160.5	10000	**C513_160.5 S1 M1SD4**	146	**C513_160.5 P71 BN71B4**	147
8.5	392	1.1	162.0	6500	**C363_162.0 S1 M1SD4**	138	**C363_162.0 P71 BN71B4**	139
9.4	349	1.7	145.6	7000	**C413_145.6 S1 M1SD4**	142	**C413_145.6 P71 BN71B4**	143
9.8	338	1.3	139.8	6500	**C363_139.8 S1 M1SD4**	138	**C363_139.8 P71 BN71B4**	139
10.1	329	0.9	136.0	5500	**C323_136.0 S1 M1SD4**	134	**C323_136.0 P71 BN71B4**	135
10.3	319	1.9	132.9	7000	**C413_132.9 S1 M1SD4**	142	**C413_132.9 P71 BN71B4**	143
10.9	304	1.5	125.8	6500	**C363_125.8 S1 M1SD4**	138	**C363_125.8 P71 BN71B4**	139
11.2	296	1.0	122.4	5500	**C323_122.4 S1 M1SD4**	134	**C323_122.4 P71 BN71B4**	135
11.4	289	2.1	120.6	7000	**C413_120.6 S1 M1SD4**	142	**C413_120.6 P71 BN71B4**	143
12.3	270	1.7	111.5	6500	**C363_111.5 S1 M1SD4**	138	**C363_111.5 P71 BN71B4**	139
12.4	264	2.3	110.1	7000	**C413_110.1 S1 M1SD4**	142	**C413_110.1 P71 BN71B4**	143
12.4	267	1.1	110.6	5500	**C323_110.6 S1 M1SD4**	134	**C323_110.6 P71 BN71B4**	135
13.3	250	1.2	103.3	5500	**C323_103.3 S1 M1SD4**	134	**C323_103.3 P71 BN71B4**	135
13.4	245	2.4	102.3	7000	**C413_102.3 S1 M1SD4**	142	**C413_102.3 P71 BN71B4**	143
13.4	247	1.8	102.2	6500	**C363_102.2 S1 M1SD4**	138	**C363_102.2 P71 BN71B4**	139
14.5	228	1.3	94.2	5500	**C323_94.2 S1 M1SD4**	134	**C323_94.2 P71 BN71B4**	135
14.7	224	2.7	93.3	7000	**C413_93.3 S1 M1SD4**	142	**C413_93.3 P71 BN71B4**	143
14.9	222	2.0	91.9	6500	**C363_91.9 S1 M1SD4**	138	**C363_91.9 P71 BN71B4**	139
15.5	214	0.9	88.5	4850	**C223_88.5 S1 M1SD4**	130	**C223_88.5 P71 BN71B4**	131
16.5	201	2.2	83.1	6500	**C363_83.1 S1 M1SD4**	138	**C363_83.1 P71 BN71B4**	139
16.6	200	1.0	82.6	5000	**C223_82.6 S1 M1SD4**	130	**C223_82.6 P71 BN71B4**	131
16.6	200	1.5	82.6	5500	**C323_82.6 S1 M1SD4**	134	**C323_82.6 P71 BN71B4**	135
16.8	196	3.1	81.5	7000	**C413_81.5 S1 M1SD4**	142	**C413_81.5 P71 BN71B4**	143



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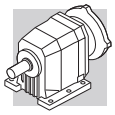
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
17.7	188	2.4	77.6	6500	**C363_77.6 S1 M1SD4**	138	**C363_77.6 P71 BN71B4**	139
18.3	181	1.1	74.8	5000	**C223_74.8 S1 M1SD4**	130	**C223_74.8 P71 BN71B4**	131
18.3	181	1.6	74.7	5500	**C323_74.7 S1 M1SD4**	134	**C323_74.7 P71 BN71B4**	135
18.4	178	3.4	74.4	7000	**C413_74.4 S1 M1SD4**	142	**C413_74.4 P71 BN71B4**	143
19.4	171	2.6	70.8	6500	**C363_70.8 S1 M1SD4**	138	**C363_70.8 P71 BN71B4**	139
20.5	165	1.3	66.8	5500			**C322_66.8 P71 BN71B4**	135
21.0	158	1.3	65.3	5000	**C223_65.3 S1 M1SD4**	130	**C223_65.3 P71 BN71B4**	131
21.7	156	0.8	63.3	4850			**C222_63.3 P71 BN71B4**	131
22.1	150	3.0	62.0	6500	**C363_62.0 S1 M1SD4**	138	**C363_62.0 P71 BN71B4**	139
22.8	145	1.3	60.0	5000	**C223_60.0 S1 M1SD4**	130	**C223_60.0 P71 BN71B4**	131
23.1	147	1.5	59.4	5500	**C322_59.4 S1 M1SD4**	134	**C322_59.4 P71 BN71B4**	135
25.0	135	1.1	54.7	5000			**C222_54.7 P71 BN71B4**	131
26.1	130	2.3	52.4	5500	**C322_52.4 S1 M1SD4**	134	**C322_52.4 P71 BN71B4**	135
28.2	120	1.3	48.6	4850		130	**C222_48.6 P71 BN71B4**	131
30	112	2.7	45.3	5500	**C322_45.3 S1 M1SD4**	134	**C322_45.3 P71 BN71B4**	135
32	107	1.8	43.3	4530	**C222_43.3 S1 M1SD4**	130	**C222_43.3 P71 BN71B4**	131
34	101	3.0	40.7	5500	**C322_40.7 S1 M1SD4**	134	**C322_40.7 P71 BN71B4**	135
37	91	1.0	37.0	2000	**C122_37.0 S1 M1SD4**	126	**C122_37.0 P71 BN71B4**	127
37	91	2.2	36.8	4360	**C222_36.8 S1 M1SD4**	130	**C222_36.8 P71 BN71B4**	131
38	89	3.4	36.1	5500	**C322_36.1 S1 M1SD4**	134	**C322_36.1 P71 BN71B4**	135
41	82	2.4	33.1	4240	**C222_33.1 S1 M1SD4**	130	**C222_33.1 P71 BN71B4**	131
42	81	1.1	32.8	2000	**C122_32.8 S1 M1SD4**	126	**C122_32.8 P71 BN71B4**	127
46	73	2.7	29.6	4130	**C222_29.6 S1 M1SD4**	130	**C222_29.6 P71 BN71B4**	131
46	73	1.2	29.5	2000	**C122_29.5 S1 M1SD4**	126	**C122_29.5 P71 BN71B4**	127
50	67	3.0	27.2	4100	**C222_27.2 S1 M1SD4**	130	**C222_27.2 P71 BN71B4**	131
54	63	1.4	25.4	2000	**C122_25.4 S1 M1SD4**	126	**C122_25.4 P71 BN71B4**	127
56	60	3.3	24.3	3920	**C222_24.3 S1 M1SD4**	130	**C222_24.3 P71 BN71B4**	131
59	57	1.5	23.2	2000	**C122_23.2 S1 M1SD4**	126	**C122_23.2 P71 BN71B4**	127
66	51	1.6	20.6	2000	**C122_20.6 S1 M1SD4**	126	**C122_20.6 P71 BN71B4**	127
74	45	1.7	18.4	2000	**C122_18.4 S1 M1SD4**	126	**C122_18.4 P71 BN71B4**	127
80	42	1.8	17.2	2000	**C122_17.2 S1 M1SD4**	126	**C122_17.2 P71 BN71B4**	127
88	39	1.0	15.6	580	**C052_15.6 S1 M1SD4**	125		
89	38	1.9	15.4	2000	**C122_15.4 S1 M1SD4**	126	**C122_15.4 P71 BN71B4**	127
102	33	2.1	13.4	2000	**C122_13.4 S1 M1SD4**	126	**C122_13.4 P71 BN71B4**	127
110	31	1.3	12.5	600	**C052_12.5 S1 M1SD4**	125		
115	29	2.3	11.9	2000	**C122_11.9 S1 M1SD4**	126	**C122_11.9 P71 BN71B4**	127
122	28	1.4	11.2	590	**C052_11.2 S1 M1SD4**	125		
136	25	2.5	10.1	1930	**C122_10.1 S1 M1SD4**	126	**C122_10.1 P71 BN71B4**	127
147	23	1.3	9.3	580	**C052_9.3 S1 M1SD4**	125		
155	22	2.7	8.8	1850	**C122_8.8 S1 M1SD4**	126	**C122_8.8 P71 BN71B4**	127
164	20	2.2	5.5	570	**C052_5.5 S1 M1LA6**	125		
180	19	3.0	7.6	1780	**C122_7.6 S1 M1SD4**	126	**C122_7.6 P71 BN71B4**	127
185	18	1.6	7.4	570	**C052_7.4 S1 M1SD4**	125		
204	17	1.8	6.7	560	**C052_6.7 S1 M1SD4**	125		
220	15	3.4	6.2	1650	**C122_6.2 S1 M1SD4**	126	**C122_6.2 P71 BN71B4**	127
235	14	3.7	11.9	1610	**C122_11.9 S05 M05C2**	126	**C122_11.9 P71 BN71A2**	127
249	14	2.2	5.5	540	**C052_5.5 S1 M1SD4**	125		
273	12	4.0	10.1	1570	**C122_10.1 S05 M05C2**	126	**C122_10.1 P71 BN71A2**	127
318	11	4.5	8.8	1500	**C122_8.8 S05 M05C2**	126	**C122_8.8 P71 BN71A2**	127
361	9	4.8	7.6	1440	**C122_7.6 S05 M05C2**	126	**C122_7.6 P71 BN71A2**	127
452	7	5.7	6.2	1350	**C122_6.2 S05 M05C2**	126	**C122_6.2 P71 BN71A2**	127



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n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
500	7	6.0	5.6	1290	**C122_5.6 S05 M05C2**	126	**C122_5.6 P71 BN71A2**	127
577	6	6.5	4.9	1230	**C122_4.9 S05 M05C2**	126	**C122_4.9 P71 BN71A2**	127
651	5	7.0	4.3	1180	**C122_3.2 S05 M05C2**	126	**C122_3.2 P71 BN71A2**	127
770	4	7.8	3.7	1120	**C122_3.7 S05 M05C2**	126	**C122_3.7 P71 BN71A2**	127
875	4	8.4	3.2	1080	**C122_3.2 S05 M05C2**	126	**C122_3.2 P71 BN71A2**	127
1015	3	9.1	2.8	1030	**C122_2.8 S05 M05C2**	126	**C122_2.8 P71 BN71A2**	127

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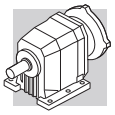
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
0.74	6442	1.1	1240	60000	**C904_1240 S2 M2SA6**	160	**C904_1240 P80 BN80B6**	161
0.85	5616	2.1	1081	85000	**C1004_1081 S2 M2SA6**	163	**C1004_1081 P80 BN80B6**	164
1.0	4792	1.5	922.3	60000	**C904_922.3 S2 M2SA6**	160	**C904_922.3 P80 BN80B6**	161
1.1	4381	0.9	1274	35000	**C804_1274 S1 M1LA4**	157	**C804_1274 P80 BN80A4**	158
1.1	4295	1.7	1240	60000	**C904_1240 S1 M1LA4**	160	**C904_1240 P80 BN80A4**	161
1.3	3549	1.1	1032	35000	**C804_1032 S1 M1LA4**	157	**C804_1032 P80 BN80A4**	158
1.4	3484	2.1	1006	60000	**C904_1006 S1 M1LA4**	160	**C904_1006 P80 BN80A4**	161
1.6	2939	1.4	854.6	35000	**C804_854.6 S1 M1LA4**	157	**C804_854.6 P80 BN80A4**	158
1.6	2923	2.5	844.0	65000	**C904_844.0 S1 M1LA4**	160	**C904_844.0 P80 BN80A4**	161
1.9	2531	0.9	736.0	25000	**C704_736.0 S1 M1LA4**	154	**C704_736.0 P80 BN80A4**	155
1.9	2492	1.6	724.7	35000	**C804_724.7 S1 M1LA4**	157	**C804_724.7 P80 BN80A4**	158
2.1	2284	1.8	664.3	35000	**C804_664.3 S1 M1LA4**	157	**C804_664.3 P80 BN80A4**	158
2.1	2260	1.0	657.3	25000	**C704_657.3 S1 M1LA4**	154	**C704_657.3 P80 BN80A4**	155
2.4	1978	0.8	571.2	16000	**C614_571.2 S1 M1LA4**	150	**C614_571.2 P80 BN80A4**	151
2.5	1907	1.2	554.7	25000	**C704_554.7 S1 M1LA4**	154	**C704_554.7 P80 BN80A4**	155
2.6	1820	2.2	529.3	35000	**C804_529.3 S1 M1LA4**	157	**C804_529.3 P80 BN80A4**	158
3.0	1600	1.0	462.0	16000	**C614_462.0 S1 M1LA4**	150	**C614_462.0 P80 BN80A4**	151
3.1	1566	2.6	455.4	35000	**C804_455.4 S1 M1LA4**	157	**C804_455.4 P80 BN80A4**	158
3.1	1525	1.5	443.5	25000	**C704_443.5 S1 M1LA4**	154	**C704_443.5 P80 BN80A4**	155
3.3	1460	1.1	421.5	16000	**C614_421.5 S1 M1LA4**	150	**C614_421.5 P80 BN80A4**	151
3.6	1315	0.8	379.6	10000	**C514_379.6 S1 M1LA4**	146	**C514_379.6 P80 BN80A4**	147
3.7	1282	1.2	370.1	16000	**C614_370.1 S1 M1LA4**	150	**C614_370.1 P80 BN80A4**	151
3.8	1254	3.2	364.7	35000	**C804_364.7 S1 M1LA4**	157	**C804_364.7 P80 BN80A4**	158
4.0	1184	1.9	344.3	25000	**C704_344.3 S1 M1LA4**	154	**C704_344.3 P80 BN80A4**	155
4.1	1170	1.4	337.7	16000	**C614_337.7 S1 M1LA4**	150	**C614_337.7 P80 BN80A4**	151
4.2	1130	0.9	326.1	10000	**C514_326.1 S1 M1LA4**	146	**C514_326.1 P80 BN80A4**	147
4.6	1031	1.0	297.8	10000	**C514_297.8 S1 M1LA4**	146	**C514_297.8 P80 BN80A4**	147
5.0	953	1.7	275.3	16000	**C614_275.3 S1 M1LA4**	150	**C614_275.3 P80 BN80A4**	151
5.1	936	2.5	272.2	25000	**C704_272.2 S1 M1LA4**	154	**C704_272.2 P80 BN80A4**	155
5.2	914	1.1	263.8	10000	**C514_263.8 S1 M1LA4**	146	**C514_263.8 P80 BN80A4**	147
5.7	834	1.2	240.9	10000	**C514_240.9 S1 M1LA4**	146	**C514_240.9 P80 BN80A4**	147
5.8	847	2.7	239.3	25000			**C703_239.3 P80 BN80A4**	155
5.8	825	1.9	238.3	16000	**C614_238.3 S1 M1LA4**	150	**C614_238.3 P80 BN80A4**	151
6.2	782	2.9	220.9	25000			**C703_220.9 P80 BN80A4**	155
6.3	753	2.1	217.4	16000	**C614_217.4 S1 M1LA4**	150	**C614_217.4 P80 BN80A4**	151
6.4	767	1.3	216.7	10000	**C513_216.7 S1 M1LA4**	146	**C513_216.7 P80 BN80A4**	147
7.0	700	1.4	197.9	10000	**C513_197.9 S1 M1LA4**	146	**C513_197.9 P80 BN80A4**	147
7.0	693	2.3	195.8	16000			**C613_195.8 P80 BN80A4**	151



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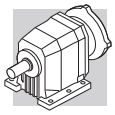
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
7.1	687	3.3	194.1	25000			**C703_194.1 P80 BN80A4**	155
7.7	637	0.9	179.9	7000	**C413_179.9 S1 M1LA4**	142	**C413_179.9 P80 BN80A4**	143
7.7	632	2.5	178.6	16000			**C613_178.6 P80 BN80A4**	151
7.9	622	1.6	175.8	10000	**C513_175.8 S1 M1LA4**	146	**C513_175.8 P80 BN80A4**	147
8.4	582	2.7	164.5	16000			**C613_164.5 P80 BN80A4**	151
8.4	581	1.0	164.1	7000	**C413_164.1 S1 M1LA4**	142	**C413_164.1 P80 BN80A4**	143
8.6	568	1.8	160.5	10000	**C513_160.5 S1 M1LA4**	146	**C513_160.5 P80 BN80A4**	147
9.2	531	3.0	150.0	16000			**C613_150.0 P80 BN80A4**	151
9.4	522	1.9	147.4	10000	**C513_147.4 S1 M1LA4**	146	**C513_147.4 P80 BN80A4**	147
9.5	516	1.2	145.6	7000	**C413_145.6 S1 M1LA4**	142	**C413_145.6 P80 BN80A4**	143
9.8	497	3.2	140.5	16000			**C613_140.5 P80 BN80A4**	151
9.9	494	0.9	139.8	6500	**C363_139.8 S1 M1LA4**	138	**C363_139.8 P80 BN80A4**	139
10.3	477	2.1	134.6	10000	**C513_134.6 S1 M1LA4**	146	**C513_134.6 P80 BN80A4**	147
10.4	470	1.3	132.9	7000	**C413_132.9 S1 M1LA4**	142	**C413_132.9 P80 BN80A4**	143
11.0	445	1.0	125.8	6500	**C363_125.8 S1 M1LA4**	138	**C363_125.8 P80 BN80A4**	139
11.1	440	2.3	124.4	10000	**C513_124.4 S1 M1LA4**	146	**C513_124.4 P80 BN80A4**	147
11.4	427	1.4	120.6	7000	**C413_120.6 S1 M1LA4**	142	**C413_120.6 P80 BN80A4**	143
12.1	402	2.5	113.6	10000	**C513_113.6 S1 M1LA4**	146	**C513_113.6 P80 BN80A4**	147
12.4	394	1.1	111.5	6500	**C363_111.5 S1 M1LA4**	138	**C363_111.5 P80 BN80A4**	139
12.5	390	1.5	110.1	7000	**C413_110.1 S1 M1LA4**	142	**C413_110.1 P80 BN80A4**	143
13.5	362	1.7	102.3	7000	**C413_102.3 S1 M1LA4**	142	**C413_102.3 P80 BN80A4**	143
13.5	361	1.2	102.2	6500	**C363_102.2 S1 M1LA4**	138	**C363_102.2 P80 BN80A4**	139
13.6	360	2.8	101.8	10000	**C513_101.8 S1 M1LA4**	146	**C513_101.8 P80 BN80A4**	147
14.7	333	0.9	94.2	5500	**C323_94.2 S1 M1LA4**	134	**C323_94.2 P80 BN80A4**	135
14.8	330	1.8	93.3	7000	**C413_93.3 S1 M1LA4**	142	**C413_93.3 P80 BN80A4**	143
14.8	329	3.0	93.0	10000	**C513_93.0 S1 M1LA4**	146	**C513_93.0 P80 BN80A4**	147
15.0	325	1.4	91.9	6500	**C363_91.9 S1 M1LA4**	138	**C363_91.9 P80 BN80A4**	139
16.6	294	1.5	83.1	6500	**C363_83.1 S1 M1LA4**	138	**C363_83.1 P80 BN80A4**	139
16.7	292	1.0	82.6	5500	**C323_82.6 S1 M1LA4**	134	**C323_82.6 P80 BN80A4**	135
16.9	289	2.1	81.5	7000	**C413_81.5 S1 M1LA4**	142	**C413_81.5 P80 BN80A4**	143
17.5	284	1.1	52.4	5500	**C322_52.4 S2 M2SA6**	134	**C322_52.4 P80 BN80B6**	135
17.8	274	1.6	77.6	6500	**C363_77.6 S1 M1LA4**	138	**C363_77.6 P80 BN80A4**	139
18.5	264	1.1	74.7	5500	**C323_74.7 S1 M1LA4**	134	**C323_74.7 P80 BN80A4**	135
18.6	263	2.3	74.4	7000	**C413_74.4 S1 M1LA4**	142	**C413_74.4 P80 BN80A4**	143
19.5	250	1.8	70.8	6500	**C363_70.8 S1 M1LA4**	138	**C363_70.8 P80 BN80A4**	139
20.7	241	0.9	66.8	5500			**C322_66.8 P80 BN80A4**	135
21.5	228	2.6	64.3	7000	**C413_64.3 S1 M1LA4**	142	**C413_64.3 P80 BN80A4**	143
22.2	219	2.1	62.0	6500	**C363_62.0 S1 M1LA4**	138	**C363_62.0 P80 BN80A4**	139
22.6	221	1.4	40.7	5500	**C322_40.7 S2 M2SA6**	134	**C322_40.7 P80 BN80B6**	135
23.0	212	0.9	60.0	4280	**C223_60.0 S1 M1LA4**	130	**C223_60.0 P80 BN80A4**	131
23.2	214	1.0	59.4	5500	**C322_59.4 S1 M1LA4**	134	**C322_59.4 P80 BN80A4**	135
23.5	208	2.9	58.7	7000	**C413_58.7 S1 M1LA4**	142	**C413_58.7 P80 BN80A4**	143
24.6	198	2.3	56.2	6500	**C363_56.2 S1 M1LA4**	138	**C363_56.2 P80 BN80A4**	139
26.3	189	1.6	52.4	5500	**C322_52.4 S1 M1LA4**	134	**C322_52.4 P80 BN80A4**	135
26.8	182	3.3	51.5	7000	**C413_51.5 S1 M1LA4**	142	**C413_51.5 P80 BN80A4**	143
27.8	180	1.1	33.1	4270	**C222_33.1 S2 M2SA6**	130	**C222_33.1 P80 BN80B6**	131
28.7	170	2.6	48.2	6500	**C363_48.2 S1 M1LA4**	138	**C363_48.2 P80 BN80A4**	139
30	163	1.8	45.3	5500	**C322_45.3 S1 M1LA4**	134	**C322_45.3 P80 BN80A4**	135
31	162	3.1	44.8	7000	**C412_44.8 S1 M1LA4**	142	**C412_44.8 P80 BN80A4**	143
32	154	2.9	43.5	6500	**C363_43.5 S1 M1LA4**	138	**C363_43.5 P80 BN80A4**	139
32	156	1.2	43.3	4190	**C222_43.3 S1 M1LA4**	130	**C222_43.3 P80 BN80A4**	131



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n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
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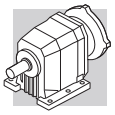
36	135	3.3	38.1	6500	**C363_38.1 S1 M1LA4**	138	**C363_38.1 P80 BN80A4**	139
38	133	1.5	36.8	4070	**C222_36.8 S1 M1LA4**	130	**C222_36.8 P80 BN80A4**	131
38	130	2.3	36.1	5500	**C322_36.1 S1 M1LA4**	134	**C322_36.1 P80 BN80A4**	135
42	119	1.7	33.1	3970	**C222_33.1 S1 M1LA4**	130	**C222_33.1 P80 BN80A4**	131
42	119	2.5	33.1	5500	**C322_33.1 S1 M1LA4**	134	**C322_33.1 P80 BN80A4**	135
46	107	2.8	29.8	5500	**C322_29.8 S1 M1LA4**	134	**C322_29.8 P80 BN80A4**	135
47	107	1.9	29.6	3890	**C222_29.6 S1 M1LA4**	130	**C222_29.6 P80 BN80A4**	131
47	106	0.8	29.5	1820	**C122_29.5 S1 M1LA4**	126	**C122_29.5 P80 BN80A4**	127
51	98	2.0	27.2	3860	**C222_27.2 S1 M1LA4**	130	**C222_27.2 P80 BN80A4**	131
51	97	3.1	26.9	5500	**C322_26.9 S1 M1LA4**	134	**C322_26.9 P80 BN80A4**	135
54	92	1.0	25.4	2000	**C122_25.4 S1 M1LA4**	126	**C122_25.4 P80 BN80A4**	127
55	91	3.3	25.1	5500	**C322_25.1 S1 M1LA4**	134	**C322_25.1 P80 BN80A4**	135
57	88	2.3	24.3	3720	**C222_24.3 S1 M1LA4**	130	**C222_24.3 P80 BN80A4**	131
59	84	1.0	23.2	2000	**C122_23.2 S1 M1LA4**	126	**C122_23.2 P80 BN80A4**	127
64	77	2.5	21.5	3700	**C222_21.5 S1 M1LA4**	130	**C222_21.5 P80 BN80A4**	131
67	74	1.1	20.6	2000	**C122_20.6 S1 M1LA4**	126	**C122_20.6 P80 BN80A4**	127
69	72	2.6	20.0	3560	**C222_20.0 S1 M1LA4**	130	**C222_20.0 P80 BN80A4**	131
75	66	1.2	18.4	2000	**C122_18.4 S1 M1LA4**	126	**C122_18.4 P80 BN80A4**	127
76	65	2.8	18.1	3500	**C222_18.1 S1 M1LA4**	130	**C222_18.1 P80 BN80A4**	131
80	62	1.2	17.2	2000	**C122_17.2 S1 M1LA4**	126	**C122_17.2 P80 BN80A4**	127
87	57	3.1	15.8	3350	**C222_15.8 S1 M1LA4**	130	**C222_15.8 P80 BN80A4**	131
89	56	1.3	15.4	2000	**C122_15.4 S1 M1LA4**	126	**C122_15.4 P80 BN80A4**	127
95	53	3.2	14.5	3300	**C222_14.5 S1 M1LA4**	130	**C222_14.5 P80 BN80A4**	131
103	48	1.4	13.4	1990	**C122_13.4 S1 M1LA4**	126	**C122_13.4 P80 BN80A4**	127
116	43	1.6	11.9	1920	**C122_11.9 S1 M1LA4**	126	**C122_11.9 P80 BN80A4**	127
121	41	1.6	7.6	1910	**C122_7.6 S2 M2SA6**	126	**C122_7.6 P80 BN80B6**	127
123	40	1.0	11.2	480	**C052_11.2 S1 M1LA4**	125		
137	36	1.7	10.1	1850	**C122_10.1 S1 M1LA4**	126	**C122_10.1 P80 BN80A4**	127
151	33	3.3	6.1	2860	**C222_6.1 S2 M2SA6**	130	**C222_6.1 P80 BN80B6**	131
156	32	1.9	8.8	1780	**C122_8.8 S1 M1LA4**	126	**C122_8.8 P80 BN80A4**	127
181	28	2.0	7.6	1720	**C122_7.6 S1 M1LA4**	126	**C122_7.6 P80 BN80A4**	127
186	27	1.1	7.4	460	**C052_7.4 S1 M1LA4**	125		
206	24	1.2	6.7	450	**C052_6.7 S1 M1LA4**	125		
221	22	2.4	6.2	1590	**C122_6.2 S1 M1LA4**	126	**C122_6.2 P80 BN80A4**	127
237	21	2.5	11.9	1580	**C122_11.9 S1 M1SD2**	126	**C122_11.9 P71 BN71B2**	127
246	20	2.5	5.6	1540	**C122_5.6 S1 M1LA4**	126	**C122_5.6 P80 BN80A4**	127
251	20	1.5	5.5	430	**C052_5.5 S1 M1LA4**	125		
279	18	2.7	10.1	1530	**C122_10.1 S1 M1SD2**	126	**C122_10.1 P71 BN71B2**	127
283	18	2.7	4.9	1490	**C122_4.9 S1 M1LA4**	126	**C122_4.9 P80 BN80A4**	127
320	16	3.0	8.8	1470	**C122_8.8 S1 M1SD2**	126	**C122_8.8 P71 BN71B2**	127
320	16	2.9	4.3	1420	**C122_4.3 S1 M1LA4**	126	**C122_4.3 P80 BN80A4**	127
369	14	3.3	7.6	1410	**C122_7.6 S1 M1SD2**	126	**C122_7.6 P71 BN71B2**	127
378	13	3.2	3.7	1370	**C122_3.7 S1 M1LA4**	126	**C122_3.7 P80 BN80A4**	127
451	11	3.8	6.2	1300	**C122_6.2 S1 M1SD2**	126	**C122_6.2 P71 BN71B2**	127
504	10	4.0	5.6	1260	**C122_5.6 S1 M1SD2**	126	**C122_5.6 P71 BN71B2**	127
577	9	4.4	4.9	1210	**C122_4.9 S1 M1SD2**	126	**C122_4.9 P71 BN71B2**	127
656	8	4.7	4.3	1170	**C122_4.3 S1 M1SD2**	126	**C122_4.3 P71 BN71B2**	127
770	6	5.2	3.7	1110	**C122_3.7 S1 M1SD2**	126	**C122_3.7 P71 BN71B2**	127
881	6	5.7	3.2	990	**C122_3.2 S1 M1SD2**	126	**C122_3.2 P71 BN71B2**	127
1007	5	6.1	2.8	950	**C122_2.8 S1 M1SD2**	126	**C122_2.8 P71 BN71B2**	127



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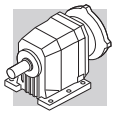
0.91	7127	1.0	1006	60000	**C904_1006 S2 M2SB6**	160	**C904_1006 P90 BN90S6**	161
1.1	5773	1.2	1240	35000	**C904_1240 S2 M2SA4**	160	**C904_1240 P80 BN80B4**	161
1.5	4403	0.9	945.7	35000	**C804_945.7 S2 M2SA4**	157	**C804_945.7 P80 BN80B4**	158
1.5	4294	1.7	922.3	60000	**C904_922.3 S2 M2SA4**	160	**C904_922.3 P80 BN80B4**	161
1.8	3647	1.1	783.4	35000	**C804_783.4 S2 M2SA4**	157	**C804_783.4 P80 BN80B4**	158
1.8	3602	2.0	773.6	60000	**C904_773.6 S2 M2SA4**	160	**C904_773.6 P80 BN80B4**	161
2.1	3093	1.3	664.3	35000	**C804_664.3 S2 M2SA4**	157	**C804_664.3 P80 BN80B4**	158
2.1	3039	2.4	652.8	60000	**C904_652.8 S2 M2SA4**	160	**C904_652.8 P80 BN80B4**	161
2.6	2487	2.9	534.2	60000	**C904_534.2 S2 M2SA4**	160	**C904_534.2 P80 BN80B4**	161
2.6	2464	1.6	529.3	35000	**C804_529.3 S2 M2SA4**	157	**C804_529.3 P80 BN80B4**	158
3.1	2128	3.4	457.1	60000	**C904_457.1 S2 M2SA4**	160	**C904_457.1 P80 BN80B4**	161
3.1	2120	1.9	455.4	35000	**C804_455.4 S2 M2SA4**	157	**C804_455.4 P80 BN80B4**	158
3.2	2065	1.1	443.5	25000	**C704_443.5 S2 M2SA4**	154	**C704_443.5 P80 BN80B4**	155
3.3	1962	0.8	421.5	16000	**C614_421.5 S2 M2SA4**	150	**C614_421.5 P80 BN80B4**	151
3.4	1906	1.2	409.4	25000	**C704_409.4 S2 M2SA4**	154	**C704_409.4 P80 BN80B4**	155
3.8	1723	0.9	370.1	16000	**C614_370.1 S2 M2SA4**	150	**C614_370.1 P80 BN80B4**	151
3.8	1733	1.3	239.3	25000	**C703_239.3 S2 M2SB6**	154	**C703_239.3 P90 BN90S6**	155
4.1	1572	1.0	337.7	16000	**C614_337.7 S2 M2SA4**	150	**C614_337.7 P80 BN80B4**	151
4.3	1563	2.6	215.8	35000	**C803_215.8 S2 M2SB6**	157	**C803_215.8 P90 BN90S6**	158
4.4	1480	1.6	317.9	25000	**C704_317.9 S2 M2SA4**	154	**C704_317.9 P80 BN80B4**	155
4.6	1405	1.1	301.7	16000	**C614_301.7 S2 M2SA4**	150	**C614_301.7 P80 BN80B4**	151
4.7	1417	1.1	195.8	16000	**C613_195.8 S2 M2SB6**	150	**C613_195.8 P90 BN90S6**	151
5.1	1282	1.2	275.3	16000	**C614_275.3 S2 M2SA4**	150	**C614_275.3 P80 BN80B4**	151
5.1	1267	1.8	272.2	25000	**C704_272.2 S2 M2SA4**	154	**C704_272.2 P80 BN80B4**	155
5.2	1293	1.2	178.6	16000	**C613_178.6 S2 M2SB6**	150	**C613_178.6 P90 BN90S6**	151
5.3	1228	0.8	263.8	10000	**C514_263.8 S2 M2SA4**	146	**C514_263.8 P80 BN80B4**	147
5.6	1191	1.3	164.5	16000	**C613_164.5 S2 M2SB6**	150	**C613_164.5 P90 BN90S6**	151
5.8	1121	0.9	240.9	10000	**C514_240.9 S2 M2SA4**	146	**C514_240.9 P80 BN80B4**	147
5.8	1139	2.0	239.3	25000	**C703_239.3 S2 M2SA4**	154	**C703_239.3 P80 BN80B4**	155
6.3	1051	2.1	220.9	25000	**C703_220.9 S2 M2SA4**	154	**C703_220.9 P80 BN80B4**	155
6.4	1012	1.6	217.4	16000	**C614_217.4 S2 M2SA4**	150	**C614_217.4 P80 BN80B4**	151
6.5	1031	1.0	216.7	10000	**C513_216.7 S2 M2SA4**	146	**C513_216.7 P80 BN80B4**	147
7.1	941	1.1	197.9	10000	**C513_197.9 S2 M2SA4**	146	**C513_197.9 P80 BN80B4**	147
7.2	931	1.7	195.8	16000	**C613_195.8 S2 M2SA4**	150	**C613_195.8 P80 BN80B4**	151
7.2	924	2.5	194.1	25000	**C703_194.1 S2 M2SA4**	154	**C703_194.1 P80 BN80B4**	155
7.8	850	1.9	178.6	16000	**C613_178.6 S2 M2SA4**	150	**C613_178.6 P80 BN80B4**	151
8.0	836	1.2	175.8	10000	**C513_175.8 S2 M2SA4**	146	**C513_175.8 P80 BN80B4**	147
8.5	782	2.0	164.5	16000	**C613_164.5 S2 M2SA4**	150	**C613_164.5 P80 BN80B4**	151
8.6	775	3.0	162.8	25000	**C703_162.8 S2 M2SA4**	154	**C703_162.8 P80 BN80B4**	155
8.7	764	1.3	160.5	10000	**C513_160.5 S2 M2SA4**	146	**C513_160.5 P80 BN80B4**	147
9.3	714	2.2	150.0	16000	**C613_150.0 S2 M2SA4**	150	**C613_150.0 P80 BN80B4**	151
9.5	702	1.4	147.4	10000	**C513_147.4 S2 M2SA4**	146	**C513_147.4 P80 BN80B4**	147
10.0	668	2.4	140.5	16000	**C613_140.5 S2 M2SA4**	150	**C613_140.5 P80 BN80B4**	151
10.2	654	3.5	137.4	25000	**C703_137.4 S2 M2SA4**	154	**C703_137.4 P80 BN80B4**	155
10.4	641	1.6	134.6	10000	**C513_134.6 S2 M2SA4**	146	**C513_134.6 P80 BN80B4**	147
10.5	632	0.9	132.9	7000	**C413_132.9 S2 M2SA4**	142	**C413_132.9 P80 BN80B4**	143
10.9	610	2.6	128.1	16000	**C613_128.1 S2 M2SA4**	150	**C613_128.1 P80 BN80B4**	151
11.3	592	1.7	124.4	10000	**C513_124.4 S2 M2SA4**	146	**C513_124.4 P80 BN80B4**	147
11.6	574	1.0	120.6	7000	**C413_120.6 S2 M2SA4**	142	**C413_120.6 P80 BN80B4**	143
12.3	541	3.0	113.6	16000	**C613_113.6 S2 M2SA4**	150	**C613_113.6 P80 BN80B4**	151



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n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
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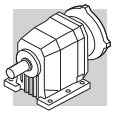
12.7	524	1.1	110.1	7000	**C413_110.1 S2 M2SA4**	142	**C413_110.1 P80 BN80B4**	143
13.5	493	3.2	103.6	16000	**C613_103.6 S2 M2SA4**	150	**C613_103.6 P80 BN80B4**	151
13.7	487	1.2	102.3	7000	**C413_102.3 S2 M2SA4**	142	**C413_102.3 P80 BN80B4**	143
13.7	485	0.9	102.2	6500	**C363_102.2 S2 M2SA4**	138	**C363_102.2 P80 BN80B4**	139
13.8	484	2.1	101.8	10000	**C513_101.8 S2 M2SA4**	146	**C513_101.8 P80 BN80B4**	147
15.0	444	1.4	93.3	7000	**C413_93.3 S2 M2SA4**	142	**C413_93.3 P80 BN80B4**	143
15.1	442	2.3	93.0	10000	**C513_93.0 S2 M2SA4**	146	**C513_93.0 P80 BN80B4**	147
15.2	436	1.0	91.9	6500	**C363_91.9 S2 M2SA4**	138	**C363_91.9 P80 BN80B4**	139
16.8	394	1.1	83.1	6500	**C363_83.1 S2 M2SA4**	138	**C363_83.1 P80 BN80B4**	139
17.2	388	1.5	81.5	7000	**C413_81.5 S2 M2SA4**	142	**C413_81.5 P80 BN80B4**	143
17.5	380	2.6	79.9	10000	**C513_79.9 S2 M2SA4**	146	**C513_79.9 P80 BN80B4**	147
18.0	368	1.2	77.6	6500	**C363_77.6 S2 M2SA4**	138	**C363_77.6 P80 BN80B4**	139
18.8	354	1.7	74.4	7000	**C413_74.4 S2 M2SA4**	142	**C413_74.4 P80 BN80B4**	143
19.2	347	2.9	72.9	10000	**C513_72.9 S2 M2SA4**	146	**C513_72.9 P80 BN80B4**	147
19.8	336	1.3	70.8	6500	**C363_70.8 S2 M2SA4**	138	**C363_70.8 P80 BN80B4**	139
21.7	307	3.3	64.6	10000	**C513_64.6 S2 M2SA4**	146	**C513_64.6 P80 BN80B4**	147
21.8	306	2.0	64.3	7000	**C413_64.3 S2 M2SA4**	142	**C413_64.3 P80 BN80B4**	143
22.6	294	1.5	62.0	6500	**C363_62.0 S2 M2SA4**	138	**C363_62.0 P80 BN80B4**	139
22.6	301	1.0	40.7	5500	**C322_40.7 S2 M2SB6**	134	**C322_40.7 P90 BN90S6**	135
23.9	279	2.1	58.7	7000	**C413_58.7 S2 M2SA4**	142	**C413_58.7 P80 BN80B4**	143
24.6	277	2.8	57.0	10000	**C512_57.0 S2 M2SA4**	146	**C512_57.0 P80 BN80B4**	147
24.9	266	1.7	56.2	6500	**C363_56.2 S2 M2SA4**	138	**C363_56.2 P80 BN80B4**	139
26.7	254	1.2	52.4	5500	**C322_52.4 S2 M2SA4**	134	**C322_52.4 P80 BN80B4**	135
27.2	245	2.4	51.5	7000	**C413_51.5 S2 M2SA4**	142	**C413_51.5 P80 BN80B4**	143
27.2	250	2.8	51.4	10000	**C512_51.4 S2 M2SA4**	146	**C512_51.4 P80 BN80B4**	147
29.1	228	2.0	48.2	6500	**C363_48.2 S2 M2SA4**	138	**C363_48.2 P80 BN80B4**	139
29.3	232	3.4	47.8	10000	**C512_47.8 S2 M2SA4**	146	**C512_47.8 P80 BN80B4**	147
30	223	2.7	47.0	7000	**C413_47.0 S2 M2SA4**	142	**C413_47.0 P80 BN80B4**	143
31	218	2.3	44.8	7000	**C412_44.8 S2 M2SA4**	142	**C412_44.8 P80 BN80B4**	143
31	219	1.4	45.3	5500	**C322_45.3 S2 M2SA4**	134	**C322_45.3 P80 BN80B4**	135
32	206	2.2	43.5	6500	**C363_43.5 S2 M2SA4**	138	**C363_43.5 P80 BN80B4**	139
32	210	0.9	43.3	3810	**C222_43.3 S2 M2SA4**	130	**C222_43.3 P80 BN80B4**	131
34	197	1.5	40.7	5500	**C322_40.7 S2 M2SA4**	134	**C322_40.7 P80 BN80B4**	135
35	192	3.1	40.3	7000	**C413_40.3 S2 M2SA4**	142	**C413_40.3 P80 BN80B4**	143
37	181	2.5	38.1	6500	**C363_38.1 S2 M2SA4**	138	**C363_38.1 P80 BN80B4**	139
38	180	2.8	37.1	7000	**C412_37.1 S2 M2SA4**	142	**C412_37.1 P80 BN80B4**	143
38	178	1.1	36.8	3750	**C222_36.8 S2 M2SA4**	130	**C222_36.8 P80 BN80B4**	131
39	175	1.7	36.1	5500	**C322_36.1 S2 M2SA4**	134	**C322_36.1 P80 BN80B4**	135
40	164	2.7	34.6	6500	**C363_34.6 S2 M2SA4**	138	**C363_34.6 P80 BN80B4**	139
42	160	1.2	33.1	3680	**C222_33.1 S2 M2SA4**	130	**C222_33.1 P80 BN80B4**	131
42	160	1.9	33.1	5500	**C322_33.1 S2 M2SA4**	134	**C322_33.1 P80 BN80B4**	135
47	144	2.1	29.8	5500	**C322_29.8 S2 M2SA4**	134	**C322_29.8 P80 BN80B4**	135
47	144	1.4	29.6	3630	**C222_29.6 S2 M2SA4**	130	**C222_29.6 P80 BN80B4**	131
49	136	3.3	28.7	6490	**C363_28.7 S2 M2SA4**	138	**C363_28.7 P80 BN80B4**	139
52	132	1.5	27.2	3600	**C222_27.2 S2 M2SA4**	130	**C222_27.2 P80 BN80B4**	131
52	130	2.3	26.9	5500	**C322_26.9 S2 M2SA4**	134	**C322_26.9 P80 BN80B4**	135
56	122	2.5	25.1	5460	**C322_25.1 S2 M2SA4**	134	**C322_25.1 P80 BN80B4**	135
58	118	1.7	24.3	3510	**C222_24.3 S2 M2SA4**	130	**C222_24.3 P80 BN80B4**	131
61	111	2.7	22.9	5300	**C322_22.9 S2 M2SA4**	134	**C322_22.9 P80 BN80B4**	135
65	104	1.9	21.5	3480	**C222_21.5 S2 M2SA4**	130	**C222_21.5 P80 BN80B4**	131



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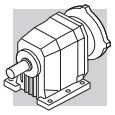
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
70	97	3.0	20.1	5150	**C322_20.1 S2 M2SA4**	134	**C322_20.1 P80 BN80B4**	135
70	97	2.0	20.0	3380	**C222_20.0 S2 M2SA4**	130	**C222_20.0 P80 BN80B4**	131
77	88	2.1	18.1	3350	**C222_18.1 S2 M2SA4**	130	**C222_18.1 P80 BN80B4**	131
82	83	0.9	17.2	1750	**C122_17.2 S2 M2SA4**	126	**C122_17.2 P80 BN80B4**	127
88	77	2.3	15.8	3210	**C222_15.8 S2 M2SA4**	130	**C222_15.8 P80 BN80B4**	131
91	75	1.0	15.4	1920	**C122_15.4 S2 M2SA4**	126	**C122_15.4 P80 BN80B4**	127
96	70	2.4	14.5	3200	**C222_14.5 S2 M2SA4**	130	**C222_14.5 P80 BN80B4**	131
104	65	1.1	13.4	1870	**C122_13.4 S2 M2SA4**	126	**C122_13.4 P80 BN80B4**	127
113	60	2.7	12.4	3030	**C222_12.4 S2 M2SA4**	130	**C222_12.4 P80 BN80B4**	131
118	58	1.2	11.9	1780	**C122_11.9 S2 M2SA4**	126	**C122_11.9 P80 BN80B4**	127
126	54	2.9	11.1	2980	**C222_11.1 S2 M2SA4**	130	**C222_11.1 P80 BN80B4**	131
139	49	1.3	10.1	1760	**C122_10.1 S2 M2SA4**	126	**C122_10.1 P80 BN80B4**	127
145	47	3.1	9.6	2840	**C222_9.6 S2 M2SA4**	130	**C222_9.6 P80 BN80B4**	131
158	43	1.4	8.8	1700	**C122_8.8 S2 M2SA4**	126	**C122_8.8 P80 BN80B4**	127
162	42	3.3	8.7	2760	**C222_8.7 S2 M2SA4**	130	**C222_8.7 P80 BN80B4**	131
184	37	1.5	7.6	1650	**C122_7.6 S2 M2SA4**	126	**C122_7.6 P80 BN80B4**	127
225	30	1.8	6.2	1530	**C122_6.2 S2 M2SA4**	126	**C122_6.2 P80 BN80B4**	127
236	29	1.8	11.9	1520	**C122_11.9 S1 M1LA2**	126	**C122_11.9 P80 BN80A2**	127
250	27	1.9	5.6	1470	**C122_5.6 S2 M2SA4**	126	**C122_5.6 P80 BN80B4**	127
278	24	2.0	10.1	1490	**C122_10.1 S1 M1LA2**	126	**C122_10.1 P80 BN80A2**	127
288	24	2.0	4.9	1440	**C122_4.9 S2 M2SA4**	126	**C122_4.9 P80 BN80B4**	127
319	22	2.2	8.8	1420	**C122_8.8 S1 M1LA2**	126	**C122_8.8 P80 BN80A2**	127
325	21	2.2	4.3	1370	**C122_4.3 S2 M2SA4**	126	**C122_4.3 P80 BN80B4**	127
332	20	2.1	2.8	1390	**C122_2.8 S2 M2SB6**	126	**C122_2.8 P90 BN90S6**	127
367	19	2.4	7.6	1380	**C122_7.6 S1 M1LA2**	126	**C122_7.6 P80 BN80A2**	127
383	18	2.4	3.7	1330	**C122_3.7 S2 M2SA4**	126	**C122_3.7 P80 BN80B4**	127
436	16	2.6	3.2	1280	**C122_3.2 S2 M2SA4**	126	**C122_3.2 P80 BN80B4**	127
449	15	2.8	6.2	1280	**C122_6.2 S1 M1LA2**	126	**C122_6.2 P80 BN80A2**	127
506	13	2.8	2.8	1230	**C122_2.8 S2 M2SA4**	126	**C122_2.8 P80 BN80B4**	127
502	14	2.9	5.6	1240	**C122_5.6 S1 M1LA2**	126	**C122_5.6 P80 BN80A2**	127
575	12	3.2	4.9	1190	**C122_4.9 S1 M1LA2**	126	**C122_4.9 P80 BN80A2**	127
653	11	3.4	4.3	1050	**C122_4.3 S1 M1LA2**	126	**C122_4.3 P80 BN80A2**	127
767	9	3.8	3.7	1090	**C122_3.7 S1 M1LA2**	126	**C122_3.7 P80 BN80A2**	127
878	8	4.0	3.2	1050	**C122_3.2 S1 M1LA2**	126	**C122_3.2 P80 BN80A2**	127
1012	7	4.5	2.8	1010	**C122_2.8 S1 M1LA2**	126	**C122_2.8 P80 BN80A2**	127

1.1 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
0.85	11232	1.1	1081	85000	**C1004_1081 S3 M3SA6**	163	**C1004_1081 P90 BN90L6**	164
1.0	9437	1.3	908.2	85000	**C1004_908.2 S3 M3SA6**	163	**C1004_908.2 P90 BN90L6**	164
1.2	7764	0.9	1137	60000	**C904_1137 S2 M2SB4**	160	**C904_1137 P90 BN90S4**	161
1.3	7381	1.6	1081	85000	**C1004_1081 S2 M2SB4**	163	**C1004_1081 P90 BN90S4**	164
1.4	6869	1.0	1006	60000	**C904_1006 S2 M2SB4**	160	**C904_1006 P90 BN90S4**	161
1.4	6856	1.8	1004	85000	**C1004_1004 S2 M2SB4**	163	**C1004_1004 P90 BN90S4**	164
1.7	5763	1.2	844.0	60000	**C904_844.0 S2 M2SB4**	160	**C904_844.0 P90 BN90S4**	161
1.7	5758	2.1	843.3	85000	**C1004_843.3 S2 M2SB4**	163	**C1004_843.3 P90 BN90S4**	164
2.1	4457	1.6	652.8	60000	**C904_652.8 S2 M2SB4**	160	**C904_652.8 P90 BN90S4**	161

1.1 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
2.2	4284	2.8	627.4	85000	**C1004_627.4 S2 M2SB4**	163	**C1004_627.4 P90 BN90S4**	164
2.6	3648	2.0	534.2	60000	**C904_534.2 S2 M2SB4**	160	**C904_534.2 P90 BN90S4**	161
2.6	3614	1.1	529.3	35000	**C804_529.3 S2 M2SB4**	157	**C804_529.3 P90 BN90S4**	158
3.3	2861	2.5	419.0	60000	**C904_419.0 S2 M2SB4**	160	**C904_419.0 P90 BN90S4**	161
3.4	2851	1.4	417.5	35000	**C804_417.5 S2 M2SB4**	157	**C804_417.5 P90 BN90S4**	158
3.8	2490	1.6	364.7	35000	**C804_364.7 S2 M2SB4**	157	**C804_364.7 P90 BN90S4**	158
4.1	2351	1.0	344.3	25000	**C704_344.3 S2 M2SB4**	154	**C704_344.3 P90 BN90S4**	155
4.2	2283	1.8	334.3	35000	**C804_334.3 S2 M2SB4**	157	**C804_334.3 P90 BN90S4**	158
4.4	2171	1.1	317.9	25000	**C704_317.9 S2 M2SB4**	154	**C704_317.9 P90 BN90S4**	155
4.6	2060	0.8	301.7	16000	**C614_301.7 S2 M2SB4**	150	**C614_301.7 P90 BN90S4**	151
4.9	1951	2.1	285.7	35000	**C804_285.7 S2 M2SB4**	157	**C804_285.7 P90 BN90S4**	158
5.1	1880	0.9	275.3	16000	**C614_275.3 S2 M2SB4**	150	**C614_275.3 P90 BN90S4**	151
5.1	1859	1.2	272.2	25000	**C704_272.2 S2 M2SB4**	154	**C704_272.2 P90 BN90S4**	155
5.6	1716	1.3	251.3	25000	**C704_251.3 S2 M2SB4**	154	**C704_251.3 P90 BN90S4**	155
5.6	1746	0.9	164.5	16000	**C613_164.5 S3 M3SA6**	150	**C613_164.5 P90 BN90L6**	151
6.1	1593	1.0	150.0	16000	**C613_150.0 S3 M3SA6**	150	**C613_150.0 P90 BN90L6**	151
6.3	1542	1.5	220.9	25000	**C703_220.9 S2 M2SB4**	154	**C703_220.9 P90 BN90S4**	155
7.2	1366	1.2	195.8	16000	**C613_195.8 S2 M2SB4**	150	**C613_195.8 P90 BN90S4**	151
7.8	1250	1.8	179.2	25000	**C703_179.2 S2 M2SB4**	154	**C703_179.2 P90 BN90S4**	155
7.8	1246	1.3	178.6	16000	**C613_178.6 S2 M2SB4**	150	**C613_178.6 P90 BN90S4**	151
8.5	1148	1.4	164.5	16000	**C613_164.5 S2 M2SB4**	150	**C613_164.5 P90 BN90S4**	151
9.3	1049	2.2	150.3	25000	**C703_150.3 S2 M2SB4**	154	**C703_150.3 P90 BN90S4**	155
9.3	1047	1.5	150.0	16000	**C613_150.0 S2 M2SB4**	150	**C613_150.0 P90 BN90S4**	151
9.5	1029	1.0	147.4	10000	**C513_147.4 S2 M2SB4**	146	**C513_147.4 P90 BN90S4**	147
10.0	980	1.6	140.5	16000	**C613_140.5 S2 M2SB4**	150	**C613_140.5 P90 BN90S4**	151
10.4	939	1.1	134.6	10000	**C513_134.6 S2 M2SB4**	146	**C513_134.6 P90 BN90S4**	147
10.9	894	1.8	128.1	16000	**C613_128.1 S2 M2SB4**	150	**C613_128.1 P90 BN90S4**	151
11.0	885	2.6	126.8	25000	**C703_126.8 S2 M2SB4**	154	**C703_126.8 P90 BN90S4**	155
11.3	868	1.2	124.4	10000	**C513_124.4 S2 M2SB4**	146	**C513_124.4 P90 BN90S4**	147
12.3	793	2.0	113.6	16000	**C613_113.6 S2 M2SB4**	150	**C613_113.6 P90 BN90S4**	151
12.3	793	1.3	113.6	10000	**C513_113.6 S2 M2SB4**	146	**C513_113.6 P90 BN90S4**	147
12.5	785	2.9	112.4	25000	**C703_112.4 S2 M2SB4**	154	**C703_112.4 P90 BN90S4**	155
13.5	723	2.2	103.6	16000	**C613_103.6 S2 M2SB4**	150	**C613_103.6 P90 BN90S4**	151
13.8	710	1.4	101.8	10000	**C513_101.8 S2 M2SB4**	146	**C513_101.8 P90 BN90S4**	147
15.0	651	0.9	93.3	7000	**C413_93.3 S2 M2SB4**	142	**C413_93.3 P90 BN90S4**	143
15.1	649	1.5	93.0	10000	**C513_93.0 S2 M2SB4**	146	**C513_93.0 P90 BN90S4**	147
15.4	635	2.5	91.0	16000	**C613_91.0 S2 M2SB4**	150	**C613_91.0 P90 BN90S4**	151
16.9	579	2.8	83.0	16000	**C613_83.0 S2 M2SB4**	150	**C613_83.0 P90 BN90S4**	151
17.2	569	1.1	81.5	7000	**C413_81.5 S2 M2SB4**	142	**C413_81.5 P90 BN90S4**	143
17.5	557	1.8	79.9	10000	**C513_79.9 S2 M2SB4**	146	**C513_79.9 P90 BN90S4**	147
18.8	519	1.2	74.4	7000	**C413_74.4 S2 M2SB4**	142	**C413_74.4 P90 BN90S4**	143
18.9	518	3.1	74.2	16000	**C613_74.2 S2 M2SB4**	150	**C613_74.2 P90 BN90S4**	151
19.2	509	2.0	72.9	10000	**C513_72.9 S2 M2SB4**	146	**C513_72.9 P90 BN90S4**	147
19.8	494	0.9	70.8	6500	**C363_70.8 S2 M2SB4**	138	**C363_70.8 P90 BN90S4**	139
20.7	472	3.4	67.7	16000	**C613_67.7 S2 M2SB4**	150	**C613_67.7 P90 BN90S4**	151
21.7	451	2.2	64.6	10000	**C513_64.6 S2 M2SB4**	146	**C513_64.6 P90 BN90S4**	147
21.8	449	1.3	64.3	7000	**C413_64.3 S2 M2SB4**	142	**C413_64.3 P90 BN90S4**	143
22.6	433	1.0	62.0	6500	**C363_62.0 S2 M2SB4**	138	**C363_62.0 P90 BN90S4**	139
23.7	412	2.4	59.0	10000	**C513_59.0 S2 M2SB4**	146	**C513_59.0 P90 BN90S4**	147
23.9	409	1.5	58.7	7000	**C413_58.7 S2 M2SB4**	142	**C413_58.7 P90 BN90S4**	143
24.6	406	1.9	57.0	10000	**C512_57.0 S2 M2SB4**	146	**C512_57.0 P90 BN90S4**	147



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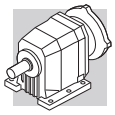
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
24.9	392	1.1	56.2	6500	**C363_56.2 S2 M2SB4**	138	**C363_56.2 P90BN90S4**	139
27.2	359	1.7	51.5	7000	**C413_51.5 S2 M2SB4**	142	**C413_51.5 P90 BN90S4**	143
27.2	366	1.9	51.4	10000	**C512_51.4 S2 M2SB4**	146	**C512_51.4 P90 BN90S4**	147
27.4	357	2.8	51.2	10000	**C513_51.2 S2 M2SB4**	146	**C513_51.2 P90 BN90S4**	147
29.1	336	1.3	48.2	6500	**C363_48.2 S2 M2SB4**	138	**C363_48.2 P90 BN90S4**	139
29.3	341	2.3	47.8	10000	**C512_47.8 S2 M2SB4**	146	**C512_47.8 P90 BN90S4**	147
29.8	328	1.8	47.0	7000	**C413_47.0 S2 M2SB4**	142	**C413_47.0 P90 BN90S4**	143
30	326	3.1	46.7	10000	**C513_46.7 S2 M2SB4**	146	**C513_46.7 P90 BN90S4**	147
31	319	1.6	44.8	7000	**C412_44.8 S2 M2SB4**	142	**C412_44.8 P90 BN90S4**	143
31	322	0.9	45.3	5500	**C322_45.3 S2 M2SB4**	134	**C322_45.3 P90 BN90S4**	135
32	307	2.5	43.1	10000	**C512_43.1 S2 M2SB4**	146	**C512_43.1 P90 BN90S4**	147
32	303	1.5	43.5	6500	**C363_43.5 S2 M2SB4**	138	**C363_43.5 P90 BN90S4**	139
34	290	1.0	40.7	5500	**C322_40.7 S2 M2SB4**	134	**C322_40.7 P90 BN90S4**	135
35	288	2.8	40.4	10000	**C512_40.4 S2 M2SB4**	146	**C512_40.4 P90 BN90S4**	147
35	281	2.1	40.3	7000	**C413_40.3 S2 M2SB4**	142	**C413_40.3 P90 BN90S4**	143
37	266	1.7	38.1	6500	**C363_38.1 S2 M2SB4**	138	**C363_38.1 P90 BN90S4**	139
38	257	2.3	36.8	7000	**C413_36.8 S2 M2SB4**	142	**C413_36.8 P90 BN90S4**	143
38	264	1.9	37.1	7000	**C412_37.1 S2 M2SB4**	142	**C412_37.1 P90 BN90S4**	143
39	257	1.2	36.1	5500	**C322_36.1 S2 M2SB4**	134	**C322_36.1 P90 BN90S4**	135
40	241	1.9	34.6	6300	**C363_34.6 S2 M2SB4**	138	**C363_34.6 P90 BN90S4**	139
42	238	2.1	33.4	7000	**C412_33.4 S2 M2SB4**	142	**C412_33.4 P90 BN90S4**	143
42	236	1.3	33.1	5420	**C322_33.1 S2 M2SB4**	134	**C322_33.1 P90 BN90S4**	135
45	224	2.2	31.4	7000	**C412_31.4 S2 M2SB4**	142	**C412_31.4 P90 BN90S4**	143
45	218	2.6	31.2	7000	**C413_31.2 S2 M2SB4**	142	**C413_31.2 P90 BN90S4**	143
47	212	1.4	29.8	5360	**C322_29.8 S2 M2SB4**	134	**C322_29.8 P90 BN90S4**	135
47	211	0.9	29.6	3190	**C222_29.6 S2 M2SB4**	130	**C222_29.6 P90 BN90S4**	131
49	199	2.8	28.5	7000	**C413_28.5 S2 M2SB4**	142	**C413_28.5 P90 BN90S4**	143
49	202	2.5	28.3	7000	**C412_28.3 S2 M2SB4**	142	**C412_28.3 P90 BN90S4**	143
49	200	2.2	28.7	6190	**C363_28.7 S2 M2SB4**	138	**C363_28.7 P90 BN90S4**	139
52	193	1.0	27.2	3160	**C222_27.2 S2 M2SB4**	130	**C222_27.2 P90 BN90S4**	131
52	192	1.6	26.9	5220	**C322_26.9 S2 M2SB4**	134	**C322_26.9 P90 BN90S4**	135
53	183	2.4	26.2	5930	**C363_26.2 S2 M2SB4**	138	**C363_26.2 P90 BN90S4**	139
56	179	1.7	25.1	5180	**C322_25.1 S2 M2SB4**	134	**C322_25.1 P90 BN90S4**	135
58	173	1.2	24.3	3150	**C222_24.3 S2 M2SB4**	130	**C222_24.3 P90 BN90S4**	131
61	163	1.8	22.9	5050	**C322_22.9 S2 M2SB4**	134	**C322_22.9 P90 BN90S4**	135
62	161	3.1	22.6	6810	**C412_22.6 S2 M2SB4**	142	**C412_22.6 P90 BN90S4**	143
63	154	2.8	22.1	5680	**C363_22.1 S2 M2SB4**	138	**C363_22.1 P90 BN90S4**	139
65	153	1.3	21.5	3120	**C222_21.5 S2 M2SB4**	130	**C222_21.5 P90 BN90S4**	131
70	143	2.1	20.1	4920	**C322_20.1 S2 M2SB4**	134	**C322_20.1 P90 BN90S4**	135
70	143	1.3	20.0	3080	**C222_20.0 S2 M2SB4**	130	**C222_20.0 P90 BN90S4**	131
74	135	2.8	19.0	5580	**C362_19.0 S2 M2SB4**	138	**C362_19.0 P90 BN90S4**	139
77	130	2.1	18.2	4760	**C322_18.2 S2 M2SB4**	134	**C322_18.2 P90 BN90S4**	135
77	129	1.4	18.1	3020	**C222_18.1 S2 M2SB4**	130	**C222_18.1 P90 BN90S4**	131
81	123	3.1	17.2	5300	**C362_17.2 S2 M2SB4**	138	**C362_17.2 P90 BN90S4**	139
88	113	1.6	15.8	2970	**C222_15.8 S2 M2SB4**	130	**C222_15.8 P90 BN90S4**	131
90	111	2.4	15.6	4630	**C322_15.6 S2 M2SB4**	134	**C322_15.6 P90 BN90S4**	135
96	104	1.6	14.5	2940	**C222_14.5 S2 M2SB4**	130	**C222_14.5 P90 BN90S4**	131
99	100	2.5	14.1	4480	**C322_14.1 S2 M2SB4**	134	**C322_14.1 P90 BN90S4**	135
113	88	1.8	12.4	2840	**C222_12.4 S2 M2SB4**	130	**C222_12.4 P90 BN90S4**	131
114	88	2.8	12.3	4350	**C322_12.3 S2 M2SB4**	134	**C322_12.3 P90 BN90S4**	135
125	80	2.9	11.2	4200	**C322_11.2 S2 M2SB4**	134	**C322_11.2 P90 BN90S4**	135

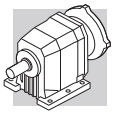


1.1 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
126	79	1.9	11.1	2800	**C222_11.1 S2 M2SB4**	130	**C222_11.1 P90 BN90S4**	131
139	72	0.9	10.1	1400	**C122_10.1 S2 M2SB4**	126	**C122_10.1 P90 BN90S4**	127
145	69	2.1	9.6	2700	**C222_9.6 S2 M2SB4**	130	**C222_9.6 P90 BN90S4**	131
151	66	3.3	9.3	4030	**C322_9.3 S2 M2SB4**	134	**C322_9.3 P90 BN90S4**	135
158	63	0.9	8.8	1560	**C122_8.8 S2 M2SB4**	126	**C122_8.8 P90 BN90S4**	127
162	62	2.2	8.7	2630	**C222_8.7 S2 M2SB4**	130	**C222_8.7 P90 BN90S4**	131
184	54	1.0	7.6	1550	**C122_7.6 S2 M2SB4**	126	**C122_7.6 P90 BN90S4**	127
198	50	2.6	7.1	2510	**C222_7.1 S2 M2SB4**	130	**C222_7.1 P90 BN90S4**	131
225	44	1.2	6.2	1220	**C122_6.2 S2 M2SB4**	126	**C122_6.2 P90 BN90S4**	127
230	43	2.4	6.1	2380	**C222_6.1 S2 M2SB4**	130	**C222_6.1 P90 BN90S4**	131
235	43	1.2	11.9	1420	**C122_11.9 S2 M2SA2**	126	**C122_11.9 P80 BN80B2**	127
250	40	1.3	5.6	1270	**C122_5.6 S2 M2SB4**	126	**C122_5.6 P90 BN90S4**	127
250	40	2.6	5.6	2350	**C222_5.6 S2 M2SB4**	130	**C222_5.6 P90 BN90S4**	131
252	40	3.0	11.1	2980	**C222_11.1 S2 M2SA2**	130	**C222_11.1 P80 BN80B2**	131
252	40	1.2	3.7	1320	**C122_3.7 S3 M3SA6**	126	**C122_3.7 P90 BN90L6**	127
278	36	1.4	10.1	1420	**C122_10.1 S2 M2SA2**	126	**C122_10.1 P80 BN80B2**	127
288	35	1.4	4.9	1370	**C122_4.9 S2 M2SB4**	126	**C122_4.9 P90 BN90S4**	127
294	34	2.9	4.8	2240	**C222_4.8 S2 M2SB4**	130	**C222_4.8 P90 BN90S4**	131
318	32	1.5	8.8	1370	**C122_8.8 S2 M2SA2**	126	**C122_8.8 P80 BN80B2**	127
325	31	1.5	4.3	1320	**C122_4.3 S2 M2SB4**	126	**C122_4.3 P90 BN90S4**	127
329	30	3.1	4.3	2200	**C222_4.3 S2 M2SB4**	130	**C222_4.3 P90 BN90S4**	131
332	30	1.4	2.8	1320	**C122_2.8 S3 M3SA6**	126	**C122_2.8 P90 BN90L6**	127
338	30	3.2	2.7	2160	**C222_2.7 S3 M3SA6**	130	**C222_2.7 P90 BN90L6**	131
367	27	1.7	7.6	1330	**C122_7.6 S2 M2SA2**	126	**C122_7.6 P80 BN80B2**	127
378	26	3.4	3.7	2090	**C222_3.7 S2 M2SB4**	130	**C222_3.7 P90 BN90S4**	131
383	26	1.6	3.7	1280	**C122_3.7 S2 M2SB4**	126	**C122_3.7 P90 BN90S4**	127
436	23	1.8	3.2	1230	**C122_3.2 S2 M2SB4**	126	**C122_3.2 P90 BN90S4**	127
449	22	1.9	6.2	1230	**C122_6.2 S2 M2SA2**	126	**C122_6.2 P80 BN80B2**	127
500	20	2.0	5.6	1190	**C122_5.6 S2 M2SA2**	126	**C122_5.6 P80 BN80B2**	127
506	20	1.9	2.8	1190	**C122_2.8 S2 M2SB4**	126	**C122_2.8 P90 BN90S4**	127
575	17	2.2	4.9	1150	**C122_4.9 S2 M2SA2**	126	**C122_4.9 P80 BN80B2**	127
651	16	2.3	4.3	1110	**C122_4.3 S2 M2SA2**	126	**C122_4.3 P80 BN80B2**	127
767	13	2.6	3.7	1070	**C122_3.7 S2 M2SA2**	126	**C122_3.7 P80 BN80B2**	127
875	12	1.5	3.2	1020	**C122_3.2 S2 M2SA2**	126	**C122_3.2 P80 BN80B2**	127
1012	10	3.0	2.8	980	**C122_2.8 S2 M2SA2**	126	**C122_2.8 P80 BN80B2**	127

1.5 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
1.0	12595	1.0	908.2	85000	**C1004_908.2 S3 M3LA6**	163	**C1004_908.2 P100 BN100LA6**	164
1.3	9994	1.2	1081	85000	**C1004_1081 S3 M3SA4**	163	**C1004_1081 P90 BN90LA4**	164
1.6	8397	1.4	908.2	85000	**C1004_908.2 S3 M3SA4**	163	**C1004_908.2 P90 BN90LA4**	164
1.7	7803	0.9	844.0	60000	**C904_844.0 S3 M3SA4**	160	**C904_844.0 P90 BN90LA4**	161
2.0	6659	1.8	720.3	85000	**C1004_720.3 S3 M3SA4**	163	**C1004_720.3 P90 BN90LA4**	164
2.0	6584	1.1	712.2	60000	**C904_712.2 S3 M3SA4**	160	**C904_712.2 P90 BN90LA4**	161
2.6	4939	1.5	534.2	60000	**C904_534.2 S3 M3SA4**	160	**C904_534.2 P90 BN90LA4**	161
3.1	4226	1.7	457.1	60000	**C904_457.1 S3 M3SA4**	160	**C904_457.1 P90 BN90LA4**	161
3.1	4210	1.0	455.4	35000	**C804_455.4 S3 M3SA4**	157	**C804_455.4 P90 BN90LA4**	158



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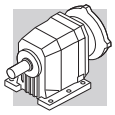
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
3.4	3874	1.9	419.0	60000	**C904_419.0 S3 M3SA4**	160	**C904_419.0 P90 BN90LA4**	161
3.4	3860	1.0	417.5	35000	**C804_417.5 S3 M3SA4**	157	**C804_417.5 P90 BN90LA4**	158
4.2	3134	2.3	339.0	60000	**C904_339.0 S3 M3SA4**	160	**C904_339.0 P90 BN90LA4**	161
4.2	3091	1.3	334.3	35000	**C804_334.3 S3 M3SA4**	157	**C804_334.3 P90 BN90LA4**	158
4.8	2708	2.7	292.9	60000	**C904_292.9 S3 M3SA4**	160	**C904_292.9 P90 BN90LA4**	161
4.9	2641	1.5	285.7	35000	**C804_285.7 S3 M3SA4**	157	**C804_285.7 P90 BN90LA4**	158
5.2	2517	0.9	272.2	25000	**C704_272.2 S3 M3SA4**	154	**C704_272.2 P90 BN90LA4**	155
5.4	2421	1.7	261.9	35000	**C804_261.9 S3 M3SA4**	157	**C804_261.9 P90 BN90LA4**	158
5.6	2323	1.0	251.3	25000	**C704_251.3 S3 M3SA4**	154	**C704_251.3 P90 BN90LA4**	155
5.9	2261	1.0	239.3	25000	**C703_239.3 S3 M3SA4**	154	**C703_239.3 P90 BN90LA4**	155
6.5	2010	0.8	217.4	16000	**C614_217.4 S3 M3SA4**	150	**C614_217.4 P90 BN90LA4**	151
6.5	2039	2.0	215.8	35000	**C803_215.8 S3 M3SA4**	157	**C803_215.8 P90 BN90LA4**	158
7.3	1834	1.3	194.1	25000	**C703_194.1 S3 M3SA4**	154	**C703_194.1 P90 BN90LA4**	155
7.9	1693	1.4	179.2	25000	**C703_179.2 S3 M3SA4**	154	**C703_179.2 P90 BN90LA4**	155
7.9	1687	0.9	178.6	16000	**C613_178.6 S3 M3SA4**	150	**C613_178.6 P90 BN90LA4**	151
8.3	1597	2.5	169.0	35000	**C803_169.0 S3 M3SA4**	157	**C803_169.0 P90 BN90LA4**	158
8.6	1554	1.0	164.5	16000	**C613_164.5 S3 M3SA4**	150	**C613_164.5 P90 BN90LA4**	151
9.4	1420	1.6	150.3	25000	**C703_150.3 S3 M3SA4**	154	**C703_150.3 P90 BN90LA4**	155
9.4	1418	1.1	150.0	16000	**C613_150.0 S3 M3SA4**	150	**C613_150.0 P90 BN90LA4**	151
9.5	1409	2.8	149.1	35000	**C803_149.1 S3 M3SA4**	157	**C803_149.1 P90 BN90LA4**	158
10.0	1327	1.2	140.5	16000	**C613_140.5 S3 M3SA4**	150	**C613_140.5 P90 BN90LA4**	151
10.3	1298	1.8	137.4	25000	**C703_137.4 S3 M3SA4**	154	**C703_137.4 P90 BN90LA4**	155
10.3	1291	3.1	136.7	35000	**C803_136.7 S3 M3SA4**	157	**C803_136.7 P90 BN90LA4**	158
11.0	1211	1.3	128.1	16000	**C613_128.1 S3 M3SA4**	150	**C613_128.1 P90 BN90LA4**	151
11.1	1198	1.9	126.8	25000	**C703_126.8 S3 M3SA4**	154	**C703_126.8 P90 BN90LA4**	155
12.4	1073	1.5	113.6	16000	**C613_113.6 S3 M3SA4**	150	**C613_113.6 P90 BN90LA4**	151
12.4	1073	0.9	113.6	10000	**C513_113.6 S3 M3SA4**	146	**C513_113.6 P90 BN90LA4**	147
13.6	981	2.3	103.8	25000	**C703_103.8 S3 M3SA4**	154	**C703_103.8 P90 BN90LA4**	155
13.6	979	1.6	103.6	16000	**C613_103.6 S3 M3SA4**	150	**C613_103.6 P90 BN90LA4**	151
13.8	962	1.0	101.8	10000	**C513_101.8 S3 M3SA4**	146	**C513_101.8 P90 BN90LA4**	147
15.2	878	1.1	93.0	10000	**C513_93.0 S3 M3SA4**	146	**C513_93.0 P90 BN90LA4**	147
15.5	860	1.9	91.0	16000	**C613_91.0 S3 M3SA4**	150	**C613_91.0 P90 BN90LA4**	151
16.0	833	2.8	88.2	25000	**C703_88.2 S3 M3SA4**	154	**C703_88.2 P90 BN90LA4**	155
16.5	826	1.0	57.0	10000	**C512_57.0 S3 M3LA6**	146	**C512_57.0 P100 BN100LA6**	147
17.0	785	2.0	83.0	16000	**C613_83.0 S3 M3SA4**	150	**C613_83.0 P90 BN90LA4**	151
17.3	769	3.0	81.4	25000	**C703_81.4 S3 M3SA4**	154	**C703_81.4 P90 BN90LA4**	155
17.7	755	1.3	79.9	10000	**C513_79.9 S3 M3SA4**	146	**C513_79.9 P90 BN90LA4**	147
18.3	744	1.0	51.4	10000	**C512_51.4 S3 M3LA6**	146	**C512_51.4 P100 BN100LA6**	147
19.0	701	2.3	74.2	16000	**C613_74.2 S3 M3SA4**	150	**C613_74.2 P90 BN90LA4**	151
19.3	689	1.5	72.9	10000	**C513_72.9 S3 M3SA4**	146	**C513_72.9 P90 BN90LA4**	147
19.7	692	1.2	47.8	10000	**C512_47.8 S3 M3LA6**	146	**C512_47.8 P100 BN100LA6**	147
19.8	674	3.4	71.3	25000	**C703_71.3 S3 M3SA4**	154	**C703_71.3 P90 BN90LA4**	155
20.8	640	2.5	67.7	16000	**C613_67.7 S3 M3SA4**	150	**C613_67.7 P90 BN90LA4**	151
21.8	624	1.3	43.1	10000	**C512_43.1 S3 M3LA6**	146	**C512_43.1 P100 BN100LA6**	147
21.8	610	1.6	64.6	10000	**C513_64.6 S3 M3SA4**	146	**C513_64.6 P90 BN90LA4**	147
21.9	607	1.0	64.3	7000	**C413_64.3 S3 M3SA4**	142	**C413_64.3 P90 BN90LA4**	143
23.9	557	1.8	59.0	10000	**C513_59.0 S3 M3SA4**	146	**C513_59.0 P90 BN90LA4**	147
24.0	554	1.1	58.7	7000	**C413_58.7 S3 M3SA4**	142	**C413_58.7 P90 BN90LA4**	143
24.1	554	2.9	58.6	16000	**C613_58.6 S3 M3SA4**	150	**C613_58.6 P90 BN90LA4**	151
24.7	550	1.4	57.0	10000	**C512_57.0 S3 M3SA4**	146	**C512_57.0 P90 BN90LA4**	147
26.4	505	3.2	53.5	16000	**C613_53.5 S3 M3SA4**	150	**C613_53.5 P90 BN90LA4**	151



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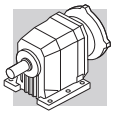
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
27.4	486	1.2	51.5	7000	**C413_51.5 S3 M3SA4**	142	**C413_51.5 P90 BN90LA4**	143
27.4	496	1.4	51.4	10000	**C512_51.4 S3 M3SA4**	146	**C512_51.4 P90 BN90LA4**	147
27.6	483	2.1	51.2	10000	**C513_51.2 S3 M3SA4**	146	**C513_51.2 P90 BN90LA4**	147
29.3	457	1.0	48.2	6290	**C363_48.2 S3 M3SA4**	138	**C363_48.2 P90 BN90LA4**	139
29.5	462	1.7	47.8	10000	**C512_47.8 S3 M3SA4**	146	**C512_47.8 P90 BN90LA4**	147
30	444	1.4	47.0	7000	**C413_47.0 S3 M3SA4**	142	**C413_47.0 P90 BN90LA4**	143
30	441	2.3	46.7	10000	**C513_46.7 S3 M3SA4**	146	**C513_46.7 P90 BN90LA4**	147
32	432	1.2	44.8	7000	**C412_44.8 S3 M3SA4**	142	**C412_44.8 P90 BN90LA4**	143
32	412	1.1	43.5	6110	**C363_43.5 S3 M3SA4**	138	**C363_43.5 P90 BN90LA4**	139
33	416	1.9	43.1	10000	**C512_43.1 S3 M3SA4**	146	**C512_43.1 P90 BN90LA4**	147
35	382	2.6	40.5	10000	**C513_40.5 S3 M3SA4**	146	**C513_40.5 P90 BN90LA4**	147
35	390	2.0	40.4	10000	**C512_40.4 S3 M3SA4**	146	**C512_40.4 P90 BN90LA4**	147
35	381	1.6	40.3	7000	**C413_40.3 S3 M3SA4**	142	**C413_40.3 P90 BN90LA4**	143
37	361	1.2	38.1	6110	**C363_38.1 S3 M3SA4**	138	**C363_38.1 P90 BN90LA4**	139
38	358	1.4	37.1	7000	**C412_37.1 S3 M3SA4**	142	**C412_37.1 P90 BN90LA4**	143
38	348	1.7	36.8	7000	**C413_36.8 S3 M3SA4**	142	**C413_36.8 P90 BN90LA4**	143
39	351	2.2	36.4	10000	**C512_36.4 S3 M3SA4**	146	**C512_36.4 P90 BN90LA4**	147
39	350	0.9	36.1	5100	**C322_36.1 S3 M3SA4**	134	**C322_36.1 P90 BN90LA4**	135
41	328	1.4	34.6	5950	**C363_34.6 S3 M3SA4**	138	**C363_34.6 P90 BN90LA4**	139
42	322	1.6	33.4	7000	**C412_33.4 S3 M3SA4**	142	**C412_33.4 P90 BN90LA4**	143
43	319	2.5	33.0	10000	**C512_33.0 S3 M3SA4**	146	**C512_33.0 P90 BN90LA4**	147
43	321	0.9	33.1	5050	**C322_33.1 S3 M3SA4**	134	**C322_33.1 P90 BN90LA4**	135
45	303	1.6	31.4	6990	**C412_31.4 S3 M3SA4**	142	**C412_31.4 P90 BN90LA4**	143
45	295	1.9	31.2	7000	**C413_31.2 S3 M3SA4**	142	**C413_31.2 P90 BN90LA4**	143
47	287	2.8	29.8	10000	**C512_29.8 S3 M3SA4**	146	**C512_29.8 P90 BN90LA4**	147
47	288	1.0	29.8	4970	**C322_29.8 S3 M3SA4**	134	**C322_29.8 P90 BN90LA4**	135
49	272	1.7	28.7	5830	**C363_28.7 S3 M3SA4**	138	**C363_28.7 P90 BN90LA4**	139
50	273	1.8	28.3	6830	**C412_28.3 S3 M3SA4**	142	**C412_28.3 P90 BN90LA4**	143
52	261	1.2	26.9	4890	**C322_26.9 S3 M3SA4**	134	**C322_26.9 P90 BN90LA4**	135
54	250	3.2	25.9	10000	**C512_25.9 S3 M3SA4**	146	**C512_25.9 P90 BN90LA4**	147
54	249	1.8	26.2	5710	**C363_26.2 S3 M3SA4**	138	**C363_26.2 P90 BN90LA4**	139
56	242	2.1	25.0	6680	**C412_25.0 S3 M3SA4**	142	**C412_25.0 P90 BN90LA4**	143
56	243	1.2	25.1	4840	**C322_25.1 S3 M3SA4**	134	**C322_25.1 P90 BN90LA4**	135
62	222	1.3	22.9	4750	**C322_22.9 S3 M3SA4**	134	**C322_22.9 P90 BN90LA4**	135
63	218	2.3	22.6	6510	**C412_22.6 S3 M3SA4**	142	**C412_22.6 P90 BN90LA4**	143
64	210	2.0	22.1	5530	**C363_22.1 S3 M3SA4**	138	**C363_22.1 P90 BN90LA4**	139
66	208	0.9	21.5	2600	**C222_21.5 S3 M3SA4**	130	**C222_21.5 P90 BN90LA4**	131
70	195	1.5	20.1	4650	**C322_20.1 S3 M3SA4**	134	**C322_20.1 P90 BN90LA4**	135
70	194	1.0	20.0	2740	**C222_20.0 S3 M3SA4**	130	**C222_20.0 P90 BN90LA4**	131
71	191	2.5	19.8	6330	**C412_19.8 S3 M3SA4**	142	**C412_19.8 P90 BN90LA4**	143
74	184	2.1	19.0	5330	**C362_19.0 S3 M3SA4**	138	**C362_19.0 P90 BN90LA4**	139
78	176	1.6	18.2	4520	**C322_18.2 S3 M3SA4**	134	**C322_18.2 P90 BN90LA4**	135
78	176	1.0	18.1	2700	**C222_18.1 S3 M3SA4**	130	**C222_18.1 P90 BN90LA4**	131
79	172	2.8	17.8	6160	**C412_17.8 S3 M3SA4**	142	**C412_17.8 P90 BN90LA4**	143
82	167	2.3	17.2	5140	**C362_17.2 S3 M3SA4**	138	**C362_17.2 P90 BN90LA4**	139
89	153	2.9	15.8	6000	**C412_15.8 S3 M3SA4**	142	**C412_15.8 P90 BN90LA4**	143
89	153	1.1	15.8	2700	**C222_15.8 S3 M3SA4**	130	**C222_15.8 P90 BN90LA4**	131
90	151	1.8	15.6	4410	**C322_15.6 S3 M3SA4**	134	**C322_15.6 P90 BN90LA4**	135
96	143	2.7	14.8	5030	**C362_14.8 S3 M3SA4**	138	**C362_14.8 P90 BN90LA4**	139
97	141	1.2	14.5	2700	**C222_14.5 S3 M3SA4**	130	**C222_14.5 P90 BN90LA4**	131
99	137	3.2	14.2	5830	**C412_14.2 S3 M3SA4**	142	**C412_14.2 P90 BN90LA4**	143



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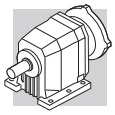
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
100	136	1.8	14.1	4280	**C322_14.1 S3 M3SA4**	134	**C322_14.1 P90 BN90LA4**	135
106	129	2.9	13.3	4890	**C362_13.3 S3 M3SA4**	138	**C362_13.3 P90 BN90LA4**	139
114	120	1.3	12.4	2630	**C222_12.4 S3 M3SA4**	130	**C222_12.4 P90 BN90LA4**	131
114	119	2.1	12.3	4180	**C322_12.3 S3 M3SA4**	134	**C322_12.3 P90 BN90LA4**	135
121	113	3.4	11.7	4740	**C362_11.7 S3 M3SA4**	138	**C362_11.7 P90 BN90LA4**	139
126	109	2.1	11.2	4050	**C322_11.2 S3 M3SA4**	134	**C322_11.2 P90 BN90LA4**	135
127	107	1.4	11.1	2600	**C222_11.1 S3 M3SA4**	130	**C222_11.1 P90 BN90LA4**	131
146	93	1.6	9.6	2530	**C222_9.6 S3 M3SA4**	130	**C222_9.6 P90 BN90LA4**	131
152	90	2.4	9.3	3900	**C322_9.3 S3 M3SA4**	134	**C322_9.3 P90 BN90LA4**	135
163	84	1.6	8.7	2470	**C222_8.7 S3 M3SA4**	130	**C222_8.7 P90 BN90LA4**	131
166	82	2.5	8.5	3790	**C322_8.5 S3 M3SA4**	134	**C322_8.5 P90 BN90LA4**	135
177	77	1.8	15.8	2440	**C222_15.8 S2 M2SB2**	130	**C222_15.8 P90 BN90SA2**	131
190	72	2.3	5.0	3610	**C322_5.0 S3 M3LA6**	134	**C322_5.0 P100 BN100LA6**	135
197	69	2.9	7.2	3640	**C322_7.2 S3 M3SA4**	134	**C322_7.2 P90 BN90LA4**	135
199	69	1.9	7.1	2380	**C222_7.1 S3 M3SA4**	130	**C222_7.1 P90 BN90LA4**	131
203	67	3.0	4.6	4050	**C362_4.6 S3 M3LA6**	138	**C362_4.6 P100 BN100LA6**	139
225	61	2.6	6.3	3450	**C322_6.3 S3 M3SA4**	134	**C322_6.3 P90 BN90LA4**	135
226	60	0.9	6.2	600	**C122_6.2 S3 M3SA4**	126	**C122_6.2 P90 BN90LA4**	127
232	59	1.8	6.1	2250	**C222_6.1 S3 M3SA4**	130	**C222_6.1 P90 BN90LA4**	131
235	58	0.9	11.9	1250	**C122_11.9 S2 M2SB2**	126	**C122_11.9 P90 BN90SA2**	127
249	55	2.8	5.7	3320	**C322_5.7 S3 M3SA4**	134	**C322_5.7 P90 BN90LA4**	135
252	54	0.9	5.6	720	**C122_5.6 S3 M3SA4**	126	**C122_5.6 P90 BN90LA4**	127
252	54	1.9	5.6	2200	**C222_5.6 S3 M3SA4**	130	**C222_5.6 P90 BN90LA4**	131
254	54	2.0	3.7	2210	**C222_3.7 S3 M3LA6**	130	**C222_3.7 P100 BN100LA6**	131
278	49	1.0	10.1	1340	**C122_10.1 S2 M2SB2**	126	**C122_10.1 P90 BN90SA2**	127
285	48	3.2	5.0	3240	**C322_5.0 S3 M3SA4**	134	**C322_5.0 P90 BN90LA4**	135
285	48	2.1	3.3	2120	**C222_3.7 S3 M3LA6**	130	**C222_3.7 P100 BN100LA6**	131
290	47	1.0	4.9	840	**C122_4.9 S3 M3SA4**	126	**C122_4.9 P90 BN90LA4**	127
296	46	2.2	4.8	2140	**C222_4.8 S3 M3SA4**	130	**C222_4.8 P90 BN90LA4**	131
318	43	1.1	8.8	1300	**C122_8.8 S2 M2SB2**	126	**C122_8.8 P90 BN90SA2**	127
322	42	2.6	8.7	2130	**C222_8.7 S2 M2SB2**	130	**C222_8.7 P90 BN90SA2**	131
327	42	1.1	4.3	930	**C122_4.3 S3 M3SA4**	126	**C122_4.3 P90 BN90LA4**	127
331	41	2.3	4.3	2100	**C222_4.3 S3 M3SA4**	130	**C222_4.3 P90 BN90LA4**	131
340	40	1.1	2.8	1000	**C122_2.8 S3 M3LA6**	126	**C122_2.8 P100 BN100LA6**	127
345	39	2.4	2.7	2060	**C222_2.7 S3 M3LA6**	130	**C222_2.7 P100 BN100LA6**	131
367	37	1.2	7.6	1270	**C122_7.6 S2 M2SB2**	126	**C122_7.6 P90 BN90SA2**	127
380	36	2.5	3.7	2020	**C222_3.7 S3 M3SA4**	130	**C222_3.7 P90 BN90LA4**	131
386	35	1.2	3.7	1100	**C122_3.7 S3 M3SA4**	126	**C122_3.7 P90 BN90LA4**	127
395	34	3.1	7.1	2030	**C222_7.1 S2 M2SB2**	130	**C222_7.1 P90 BN90SA2**	131
424	32	2.6	3.3	2000	**C222_3.3 S3 M3SA4**	130	**C222_3.3 P90 BN90LA4**	131
440	31	1.3	3.2	1120	**C122_3.2 S3 M3SA4**	126	**C122_3.2 P90 BN90LA4**	127
449	30	1.4	6.2	1180	**C122_6.2 S2 M2SB2**	126	**C122_6.2 P90 BN90SA2**	127
460	30	2.9	6.1	1920	**C222_6.1 S2 M2SB2**	130	**C222_6.1 P90 BN90SA2**	131
500	27	3.0	5.6	1860	**C222_5.6 S2 M2SB2**	130	**C222_5.6 P90 BN90SA2**	131
500	27	1.5	5.6	1140	**C122_5.6 S2 M2SB2**	126	**C122_5.6 P90 BN90SA2**	127
510	27	1.4	2.8	1140	**C122_2.8 S3 M3SA4**	126	**C122_2.8 P90 BN90LA4**	127
518	26	3.0	2.7	1870	**C222_2.7 S3 M3SA4**	130	**C222_2.7 P90 BN90LA4**	131
575	24	1.6	4.9	1110	**C122_4.9 S2 M2SB2**	126	**C122_4.9 P90 BN90SA2**	127
587	23	3.5	4.8	1810	**C222_4.8 S2 M2SB2**	130	**C222_4.8 P90 BN90SA2**	131
651	21	1.7	4.3	1070	**C122_4.3 S2 M2SB2**	126	**C122_4.3 P90 BN90SA2**	127
767	18	1.9	3.7	1030	**C122_3.7 S2 M2SB2**	126	**C122_3.7 P90 BN90SA2**	127



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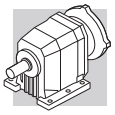
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
875	16	2.1	3.2	990	**C122_3.2 S2 M2SB2**	126	**C122_3.2 P90 BN90SA2**	127
1012	13	2.2	2.8	960	**C122_2.8 S2 M2SB2**	126	**C122_2.8 P90 BN90SA2**	127

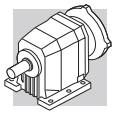
2.2 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
1.6	12315	1.0	908.2	85000	**C1004_908.2 S3 M3LA4**	163	**C1004_908.2 P100 BN100LA4**	164
2.0	9767	1.2	720.3	85000	**C1004_720.3 S3 M3LA4**	163	**C1004_720.3 P100 BN100LA4**	164
2.4	7900	1.5	582.6	85000	**C1004_582.6 S3 M3LA4**	163	**C1004_582.6 P100 BN100LA4**	164
2.6	7244	1.0	534.2	60000	**C904_534.2 S3 M3LA4**	160	**C904_534.2 P100 BN100LA4**	161
3.1	6198	1.2	457.1	60000	**C904_457.1 S3 M3LA4**	160	**C904_457.1 P100 BN100LA4**	161
3.7	5159	2.3	380.5	85000	**C1004_380.5 S3 M3LA4**	163	**C1004_380.5 P100 BN100LA4**	164
3.8	5014	1.4	369.8	60000	**C904_369.8 S3 M3LA4**	160	**C904_369.8 P100 BN100LA4**	161
4.8	3972	1.8	292.9	60000	**C904_292.9 S3 M3LA4**	160	**C904_292.9 P100 BN100LA4**	161
4.9	3874	1.0	285.7	35000	**C804_285.7 S3 M3LA4**	157	**C804_285.7 P100 BN100LA4**	158
5.4	3551	1.1	261.9	35000	**C804_261.9 S3 M3LA4**	157	**C804_261.9 P100 BN100LA4**	158
6.1	3142	2.3	231.7	60000	**C904_231.7 S3 M3LA4**	160	**C904_231.7 P100 BN100LA4**	161
6.5	2991	1.3	215.8	35000	**C803_215.8 S3 M3LA4**	157	**C803_215.8 P100 BN100LA4**	158
7.6	2555	1.6	184.4	35000	**C803_184.4 S3 M3LA4**	157	**C803_184.4 P100 BN100LA4**	158
7.9	2483	0.9	179.2	25000	**C703_179.2 S3 M3LA4**	154	**C703_179.2 P100 BN100LA4**	155
8.7	2256	1.0	162.8	25000	**C703_162.8 S3 M3LA4**	154	**C703_162.8 P100 BN100LA4**	155
10.3	1904	1.2	137.4	25000	**C703_137.4 S3 M3LA4**	154	**C703_137.4 P100 BN100LA4**	155
10.3	1894	2.1	136.7	35000	**C803_136.7 S3 M3LA4**	157	**C803_136.7 P100 BN100LA4**	158
11.0	1776	0.9	128.1	16000	**C613_128.1 S3 M3LA4**	150	**C613_128.1 P100 BN100LA4**	151
12.4	1574	1.0	113.6	16000	**C613_113.6 S3 M3LA4**	150	**C613_113.6 P100 BN100LA4**	151
12.5	1558	1.5	112.4	25000	**C703_112.4 S3 M3LA4**	154	**C703_112.4 P100 BN100LA4**	155
12.9	1517	2.6	109.5	35000	**C803_109.5 S3 M3LA4**	157	**C803_109.5 P100 BN100LA4**	158
13.6	1438	1.6	103.8	25000	**C703_103.8 S3 M3LA4**	154	**C703_103.8 P100 BN100LA4**	155
13.6	1436	1.1	103.6	16000	**C613_103.6 S3 M3LA4**	150	**C613_103.6 P100 BN100LA4**	151
14.5	1350	3.0	97.4	35000	**C803_97.4 S3 M3LA4**	157	**C803_97.4 P100 BN100LA4**	158
15.5	1261	1.3	91.0	16000	**C613_91.0 S3 M3LA4**	150	**C613_91.0 P100 BN100LA4**	151
15.8	1237	3.2	89.3	35000	**C803_89.3 S3 M3LA4**	157	**C803_89.3 P100 BN100LA4**	158
16.0	1222	1.9	88.2	25000	**C703_88.2 S3 M3LA4**	154	**C703_88.2 P100 BN100LA4**	155
17.0	1151	1.4	83.0	16000	**C613_83.0 S3 M3LA4**	150	**C613_83.0 P100 BN100LA4**	151
17.3	1128	2.0	81.4	25000	**C703_81.4 S3 M3LA4**	154	**C703_81.4 P100 BN100LA4**	155
17.7	1107	0.9	79.9	10000	**C513_79.9 S3 M3LA4**	146	**C513_79.9 P100 BN100LA4**	147
19.0	1028	1.6	74.2	16000	**C613_74.2 S3 M3LA4**	150	**C613_74.2 P100 BN100LA4**	151
19.3	1011	1.0	72.9	10000	**C513_72.9 S3 M3LA4**	146	**C513_72.9 P100 BN100LA4**	147
19.8	989	2.3	71.3	25000	**C703_71.3 S3 M3LA4**	154	**C703_71.3 P100 BN100LA4**	155
20.8	938	1.7	67.7	16000	**C613_67.7 S3 M3LA4**	150	**C613_67.7 P100 BN100LA4**	151
21.4	913	2.5	65.9	25000	**C703_65.9 S3 M3LA4**	154	**C703_65.9 P100 BN100LA4**	155
21.8	895	1.1	64.6	10000	**C513_64.6 S3 M3LA4**	146	**C513_64.6 P100 BN100LA4**	147
23.9	817	1.2	59.0	10000	**C513_59.0 S3 M3LA4**	146	**C513_59.0 P100 BN100LA4**	147
24.1	812	2.0	58.6	16000	**C613_58.6 S3 M3LA4**	150	**C613_58.6 P100 BN100LA4**	151
24.7	807	1.0	57.0	10000	**C512_57.0 S3 M3LA4**	146	**C512_57.0 P100 BN100LA4**	147
25.0	783	2.9	56.5	25000	**C703_56.5 S3 M3LA4**	154	**C703_56.5 P100 BN100LA4**	155
26.4	741	2.2	53.5	16000	**C613_53.5 S3 M3LA4**	150	**C613_53.5 P100 BN100LA4**	151
27.4	728	1.0	51.4	10000	**C512_51.4 S3 M3LA4**	146	**C512_51.4 P100 BN100LA4**	147



2.2 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
27.6	709	1.4	51.2	10000	**C513_51.2 S3 M3LA4**	146	**C513_51.2 P100 BN100LA4**	147
29.5	677	1.2	47.8	10000	**C512_47.8 S3 M3LA4**	146	**C512_47.8 P100 BN100LA4**	147
29.6	660	2.4	47.6	16000	**C613_47.6 S3 M3LA4**	150	**C613_47.6 P100 BN100LA4**	151
30	651	0.9	47.0	6440	**C413_47.0 S3 M3LA4**	142	**C413_47.0 P100 BN100LA4**	143
30	647	1.5	46.7	10000	**C513_46.7 S3 M3LA4**	146	**C513_46.7 P100 BN100LA4**	147
32	602	2.7	43.4	16000	**C613_43.4 S3 M3LA4**	150	**C613_43.4 P100 BN100LA4**	151
33	610	1.3	43.1	10000	**C512_43.1 S3 M3LA4**	146	**C512_43.1 P100 BN100LA4**	147
35	561	1.8	40.5	10000	**C513_40.5 S3 M3LA4**	146	**C513_40.5 P100 BN100LA4**	147
35	571	1.4	40.4	10000	**C512_40.4 S3 M3LA4**	146	**C512_40.4 P100 BN100LA4**	147
35	559	1.1	40.3	6460	**C413_40.3 S3 M3LA4**	142	**C413_40.3 P100 BN100LA4**	143
37	538	2.5	38.0	16000	**C612_38.0 S3 M3LA4**	150	**C612_38.0 P100 BN100LA4**	151
38	525	1.0	37.1	6370	**C412_37.1 S3 M3LA4**	142	**C412_37.1 P100 BN100LA4**	143
38	512	2.0	37.0	10000	**C513_37.0 S3 M3LA4**	146	**C513_37.0 P100 BN100LA4**	147
38	510	1.2	36.8	6390	**C413_36.8 S3 M3LA4**	142	**C413_36.8 P100 BN100LA4**	143
39	515	1.5	36.4	10000	**C512_36.4 S3 M3LA4**	146	**C512_36.4 P100 BN100LA4**	147
39	501	3.1	36.1	16000	**C613_36.1 S3 M3LA4**	150	**C613_36.1 P100 BN100LA4**	151
41	484	2.5	34.2	16000	**C612_34.2 S3 M3LA4**	150	**C612_34.2 P100 BN100LA4**	151
41	479	0.9	34.6	5350	**C363_34.6 S3 M3LA4**	138	**C363_34.6 P100 BN100LA4**	139
42	473	1.1	33.4	6290	**C412_33.4 S3 M3LA4**	142	**C412_33.4 P100 BN100LA4**	143
43	468	1.7	33.0	10000	**C512_33.0 S3 M3LA4**	146	**C512_33.0 P100 BN100LA4**	147
43	457	3.3	33.0	16000	**C613_33.0 S3 M3LA4**	150	**C613_33.0 P100 BN100LA4**	151
45	445	1.1	31.4	6290	**C412_31.4 S3 M3LA4**	142	**C412_31.4 P100 BN100LA4**	143
46	431	3.1	30.4	16000	**C612_30.4 S3 M3LA4**	150	**C612_30.4 P100 BN100LA4**	151
47	421	1.9	29.8	10000	**C512_29.8 S3 M3LA4**	146	**C512_29.8 P100 BN100LA4**	147
49	398	1.1	28.7	5220	**C363_28.7 S3 M3LA4**	138	**C363_28.7 P100 BN100LA4**	139
50	401	1.2	28.3	6190	**C412_28.3 S3 M3LA4**	142	**C412_28.3 P100 BN100LA4**	143
51	388	3.5	27.4	15900	**C612_27.4 S3 M3LA4**	150	**C612_27.4 P100 BN100LA4**	151
54	367	2.2	25.9	10000	**C512_25.9 S3 M3LA4**	146	**C512_25.9 P100 BN100LA4**	147
54	363	1.2	26.2	5140	**C363_26.2 S3 M3LA4**	138	**C363_26.2 P100 BN100LA4**	139
56	355	0.8	25.1	4270	**C322_25.1 S3 M3LA4**	134	**C322_25.1 P100 BN100LA4**	135
56	355	1.4	25.0	6120	**C412_25.0 S3 M3LA4**	142	**C412_25.0 P100 BN100LA4**	143
60	331	2.4	23.4	10000	**C512_23.4 S3 M3LA4**	146	**C512_23.4 P100 BN100LA4**	147
62	324	0.9	22.9	4240	**C322_22.9 S3 M3LA4**	134	**C322_22.9 P100 BN100LA4**	135
63	319	1.6	22.6	6000	**C412_22.6 S3 M3LA4**	142	**C412_22.6 P100 BN100LA4**	143
64	307	1.4	22.1	5060	**C363_22.1 S3 M3LA4**	138	**C363_22.1 P100 BN100LA4**	139
66	308	0.9	14.1	4170	**C322_14.1 S3 M3LC6**	134	**C322_14.1 P112 BN112M6**	135
67	297	2.7	21.0	10000	**C512_21.0 S3 M3LA4**	146	**C512_21.0 P100 BN100LA4**	147
70	284	1.0	20.1	4200	**C322_20.1 S3 M3LA4**	134	**C322_20.1 P100 BN100LA4**	135
71	280	1.7	19.8	5890	**C412_19.8 S3 M3LA4**	142	**C412_19.8 P100 BN100LA4**	143
74	269	1.4	19.0	4920	**C362_19.0 S3 M3LA4**	138	**C362_19.0 P100 BN100LA4**	139
75	267	3.0	18.9	10000	**C512_18.9 S3 M3LA4**	146	**C512_18.9 P100 BN100LA4**	147
76	269	1.1	12.3	4100	**C322_12.3 S3 M3LC6**	134	**C322_12.3 P112 BN112M6**	135
78	257	1.1	18.2	4120	**C322_18.2 S3 M3LA4**	134	**C322_18.2 P100 BN100LA4**	135
79	252	1.9	17.8	5760	**C412_17.8 S3 M3LA4**	142	**C412_17.8 P100 BN100LA4**	143
82	244	1.6	17.2	4800	**C362_17.2 S3 M3LA4**	138	**C362_17.2 P100 BN100LA4**	139
83	245	1.1	11.2	4060	**C322_11.2 S3 M3LC6**	134	**C322_11.2 P112 BN112M6**	135
85	235	3.4	16.6	10000	**C512_16.6 S3 M3LA4**	146	**C512_16.6 P100 BN100LA4**	147
89	224	2.0	15.8	5650	**C412_15.8 S3 M3LA4**	142	**C412_15.8 P100 BN100LA4**	143
90	221	1.2	15.6	4060	**C322_15.6 S3 M3LA4**	134	**C322_15.6 P100 BN100LA4**	135
96	209	1.8	14.8	4710	**C362_14.8 S3 M3LA4**	138	**C362_14.8 P100 BN100LA4**	139
99	202	2.2	14.2	5510	**C412_14.2 S3 M3LA4**	142	**C412_14.2 P100 BN100LA4**	143



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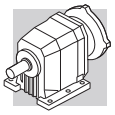
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
100	203	1.3	9.3	3960	**C322_9.3 S3 M3LC6**	134	**C322_9.3 P112 BN112M6**	135
100	199	1.3	14.1	3980	**C322_14.1 S3 M3LA4**	134	**C322_14.1 P100 BN100LA4**	135
106	189	2.0	13.3	4590	**C362_13.3 S3 M3LA4**	138	**C362_13.3 P100 BN100LA4**	139
114	175	2.4	12.4	5360	**C412_12.4 S3 M3LA4**	142	**C412_12.4 P100 BN100LA4**	143
114	176	0.9	12.4	2270	**C222_12.4 S3 M3LA4**	130	**C222_12.4 P100 BN100LA4**	131
114	174	1.4	12.3	3900	**C322_12.3 S3 M3LA4**	134	**C322_12.3 P100 BN100LA4**	135
109	186	1.3	8.5	3890	**C322_8.5 S3 M3LC6**	134	**C322_8.5 P112 BN112M6**	135
121	165	2.3	11.7	4490	**C362_11.7 S3 M3LA4**	138	**C362_11.7 P100BN100LA4**	139
126	158	2.7	11.2	5220	**C412_11.2 S3 M3LA4**	142	**C412_11.2 P100 BN100LA4**	143
126	159	1.5	11.2	3800	**C322_11.2 S3 M3LA4**	134	**C322_11.2 P100 BN100LA4**	135
127	157	1.0	11.1	2250	**C222_11.1 S3 M3LA4**	130	**C222_11.1 P100 BN100LA4**	131
130	154	1.5	7.2	3810	**C322_7.2 S3 M3LC6**	134	**C322_7.2 P112 BN112M6**	135
131	152	1.0	7.1	2260	**C222_7.1 S3 M3LC6**	130	**C222_7.1 P112 BN112M6**	131
133	150	2.5	10.6	4320	**C362_10.6 S3 M3LA4**	138	**C362_10.6 P100 BN100LA4**	139
146	137	1.1	9.6	2250	**C222_9.6 S3 M3LA4**	130	**C222_9.6 P100 BN100LA4**	131
147	136	2.9	9.6	5050	**C412_9.6 S3 M3LA4**	142	**C412_9.6 P100 BN100LA4**	143
148	138	1.3	6.3	3510	**C322_6.3 S3 M3LC6**	134	**C322_6.3 P112 BN112M6**	135
152	132	1.7	9.3	3690	**C322_9.3 S3 M3LA4**	134	**C322_9.3 P100 BN100LA4**	135
160	125	3.1	8.8	4210	**C362_8.8 S3 M3LA4**	138	**C362_8.8 P100 BN100LA4**	139
163	123	1.1	8.7	2220	**C222_8.7 S3 M3LA4**	130	**C222_8.7 P100 BN100LA4**	131
163	125	1.4	5.7	3450	**C322_5.7 S3 M3LC6**	134	**C322_5.7 P112 BN112M6**	135
166	120	1.7	8.5	3600	**C322_8.5 S3 M3LA4**	134	**C322_8.5 P100 BN100LA4**	135
188	106	1.5	5.0	3410	**C322_5.0 S3 M3LC6**	134	**C322_5.0 P112 BN112M6**	135
197	101	2.0	7.2	3480	**C322_7.2 S3 M3LA4**	134	**C322_7.2 P100 BN100LA4**	135
199	100	1.3	7.1	2180	**C222_7.1 S3 M3LA4**	130	**C222_7.1 P100 BN100LA4**	131
225	89	1.7	6.3	3250	**C322_6.3 S3 M3LA4**	134	**C322_6.3 P100 BN100LA4**	135
232	86	1.2	6.1	2040	**C222_6.1 S3 M3LA4**	130	**C222_6.1 P100 BN100LA4**	131
241	83	2.4	5.8	3710	**C362_5.8 S3 M3LA4**	138	**C362_5.8 P100 BN100LA4**	139
249	80	1.9	5.7	3180	**C322_5.7 S3 M3LA4**	134	**C322_5.7 P100 BN100LA4**	135
252	79	1.3	5.6	2050	**C222_5.6 S3 M3LA4**	130	**C222_5.6 P100 BN100LA4**	131
267	75	2.7	5.3	3550	**C362_5.3 S3 M3LA4**	138	**C362_5.3 P100 BN100LA4**	139
285	70	2.2	5.0	3100	**C322_5.0 S3 M3LA4**	134	**C322_5.0 P100 BN100LA4**	135
296	68	1.5	4.8	1970	**C222_4.8 S3 M3LA4**	130	**C222_4.8 P100 BN100LA4**	131
302	66	2.7	9.3	3130	**C322_9.3 S3 M3SA2**	134	**C322_9.3 P90 BN90L2**	135
305	65	3.1	4.6	3490	**C362_4.6 S3 M3LA4**	138	**C362_4.6 P100 BN100LA4**	139
313	64	2.4	4.5	3000	**C322_4.5 S3 M3LA4**	134	**C322_4.5 P100 BN100LA4**	135
328	61	1.8	8.7	2000	**C222_8.7 S3 M3SA2**	130	**C222_8.7 P90 BN90L2**	131
331	60	1.6	4.3	1970	**C222_4.3 S3 M3LA4**	130	**C222_4.3 P100 BN100LA4**	131
335	60	2.8	8.5	3010	**C322_8.5 S3 M3SA2**	134	**C322_8.5 P90 BN90L2**	135
346	58	3.5	2.7	3380	**C362_2.7 S3 M3LC6**	138	**C362_2.7 P112 BN112M6**	139
369	54	0.8	7.6	930	**C122_7.6 S3 M3SA2**	126	**C122_7.6 P90 BN90L2**	127
377	53	2.8	3.7	2890	**C322_3.7 S3 M3LA4**	134	**C322_3.7 P100 BN100LA4**	135
380	52	1.7	3.7	1890	**C222_3.7 S3 M3LA4**	130	**C222_3.7 P100 BN100LA4**	131
392	51	3.1	7.2	2920	**C322_7.2 S3 M3SA2**	134	**C322_7.2 P90 BN90L2**	135
397	50	2.1	7.1	1920	**C222_7.1 S3 M3SA2**	130	**C222_7.1 P90 BN90L2**	131
414	48	2.9	3.4	2800	**C322_3.4 S3 M3LA4**	134	**C322_3.4 P100 BN100LA4**	135
424	47	1.8	3.3	1890	**C222_3.3 S3 M3LA4**	130	**C222_3.3 P100 BN100LA4**	131
440	45	0.9	3.2	580	**C122_3.2 S3 M3LA4**	126	**C122_3.2 P100 BN100LA4**	127
449	44	3.4	6.3	2760	**C322_6.3 S3 M3SA2**	134	**C322_6.3 P90 BN90L2**	135
462	43	2.0	6.1	1820	**C222_6.1 S3 M3SA2**	130	**C222_6.1 P90 BN90L2**	131
663	30	2.1	5.6	1770	**C222_5.6 S3 M3SA2**	130	**C222_5.6 P90 BN90L2**	131



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n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
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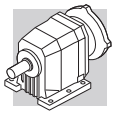
510	39	0.9	2.8	690	**C122_2.8 S3 M3LA4**	126	**C122_2.8 P100 BN100LA4**	127
518	39	2.1	2.7	1770	**C222_2.7 S3 M3LA4**	130	**C222_2.7 P100 BN100LA4**	131
589	34	2.4	4.8	1720	**C222_4.8 S3 M3SA2**	130	**C222_4.8 P90 BN90L2**	131
663	30	2.5	4.3	1670	**C222_4.3 S3 M3SA2**	130	**C222_4.3 P90 BN90L2**	131
758	26	2.7	3.7	1620	**C222_3.7 S3 M3SA2**	130	**C222_3.7 P90 BN90L2**	131
770	26	1.3	3.7	970	**C122_3.7 S3 M3SA2**	126	**C122_3.7 P90 BN90L2**	127
864	23	2.9	3.3	1550	**C222_3.3 S3 M3SA2**	130	**C222_3.3 P90 BN90L2**	131
891	22	1.4	3.2	940	**C122_3.2 S3 M3SA2**	126	**C122_3.2 P90 BN90L2**	127
1015	20	1.5	2.8	920	**C122_2.8 S3 M3SA2**	126	**C122_2.8 P90 BN90L2**	127
1032	19	3.4	2.7	1490	**C222_2.7 S3 M3SA2**	130	**C222_2.7 P90 BN90L2**	131

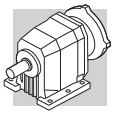
3 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
2.0	13319	0.9	720.3	85000	**C1004_720.3 S3 M3LB4**	163	**C1004_720.3 P100 BN100LB4**	164
2.4	10773	1.1	582.6	85000	**C1004_582.6 S3 M3LB4**	163	**C1004_582.6 P100 BN100LB4**	164
3.4	7747	0.9	419.0	60000	**C904_419.0 S3 M3LB4**	160	**C904_419.0 P100 BN100LB4**	161
3.4	7577	1.6	409.8	85000	**C1004_409.8 S3 M3LB4**	163	**C1004_409.8 P100 BN100LB4**	164
4.2	6268	1.1	339.0	60000	**C904_339.0 S3 M3LB4**	160	**C904_339.0 P100 BN100LB4**	161
4.4	5984	2.0	323.6	85000	**C1004_323.6 S3 M3LB4**	163	**C1004_323.6 P100 BN100LB4**	164
5.3	4965	1.5	268.5	60000	**C904_268.5 S3 M3LB4**	160	**C904_268.5 P100 BN100LB4**	161
5.4	4863	2.5	263.0	85000	**C1004_263.0 S3 M3LB4**	163	**C1004_263.0 P100 BN100LB4**	164
6.5	4079	1.0	215.8	35000	**C803_215.8 S3 M3LB4**	157	**C803_215.8 P100 BN100LB4**	158
6.6	3927	1.8	212.4	60000	**C904_212.4 S3 M3LB4**	160	**C904_212.4 P100 BN100LB4**	161
7.1	3739	1.0	197.9	35000	**C803_197.9 S3 M3LB4**	157	**C803_197.9 P100 BN100LB4**	158
8.2	3252	2.2	172.1	60000	**C903_172.1 S3 M3LB4**	160	**C903_172.1 P100 BN100LB4**	161
8.3	3193	1.3	169.0	35000	**C803_169.0 S3 M3LB4**	157	**C803_169.0 P100 BN100LB4**	158
9.5	2818	1.4	149.1	35000	**C803_149.1 S3 M3LB4**	157	**C803_149.1 P100 BN100LB4**	158
9.6	2765	2.6	146.3	60000	**C903_146.3 S3 M3LB4**	160	**C903_146.3 P100 BN100LB4**	161
10.5	2535	2.8	134.1	60000	**C903_134.1 S3 M3LB4**	160	**C903_134.1 P100 BN100LB4**	161
12.1	2206	3.3	116.7	60000	**C903_116.7 S3 M3LB4**	160	**C903_116.7 P100 BN100LB4**	161
12.5	2125	1.1	112.4	25000	**C703_112.4 S3 M3LB4**	154	**C703_112.4 P100 BN100LB4**	155
12.9	2069	1.9	109.5	35000	**C803_109.5 S3 M3LB4**	157	**C803_109.5 P100 BN100LB4**	158
13.6	1961	1.2	103.8	25000	**C703_103.8 S3 M3LB4**	154	**C703_103.8 P100 BN100LB4**	155
14.5	1840	2.2	97.4	35000	**C803_97.4 S3 M3LB4**	157	**C803_97.4 P100 BN100LB4**	158
15.5	1720	0.9	91.0	16000	**C613_91.0 S3 M3LB4**	150	**C613_91.0 P100 BN100LB4**	151
15.8	1687	2.4	89.3	35000	**C803_89.3 S3 M3LB4**	157	**C803_89.3 P100 BN100LB4**	158
16.0	1667	1.4	88.2	25000	**C703_88.2 S3 M3LB4**	154	**C703_88.2 P100 BN100LB4**	155
17.0	1569	1.0	83.0	16000	**C613_83.0 S3 M3LB4**	150	**C613_83.0 P100 BN100LB4**	151
17.3	1538	1.5	81.4	25000	**C703_81.4 S3 M3LB4**	154	**C703_81.4 P100 BN100LB4**	155
18.3	1453	2.8	76.9	35000	**C803_76.9 S3 M3LB4**	157	**C803_76.9 P100 BN100LB4**	158
19.0	1402	1.1	74.2	16000	**C613_74.2 S3 M3LB4**	150	**C613_74.2 P100 BN100LB4**	151
19.8	1348	1.7	71.3	25000	**C703_71.3 S3 M3LB4**	154	**C703_71.3 P100 BN100LB4**	155
20.0	1332	3.0	70.5	35000	**C803_70.5 S3 M3LB4**	157	**C803_70.5 P100 BN100LB4**	158
20.8	1279	1.3	67.7	16000	**C613_67.7 S3 M3LB4**	150	**C613_67.7 P100 BN100LB4**	151
24.1	1107	1.4	58.6	16000	**C613_58.6 S3 M3LB4**	150	**C613_58.6 P100 BN100LB4**	151
25.0	1068	2.2	56.5	25000	**C703_56.5 S3 M3LB4**	154	**C703_56.5 P100 BN100LB4**	155



3 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
26.4	1010	1.6	53.5	16000	**C613_53.5 S3 M3LB4**	150	**C613_53.5 P100 BN100LB4**	151
27.6	967	1.0	51.2	10000	**C513_51.2 S3 M3LB4**	146	**C513_51.2 P100 BN100LB4**	147
29.6	900	1.8	47.6	16000	**C613_47.6 S3 M3LB4**	150	**C613_47.6 P100 BN100LB4**	151
30	883	1.1	46.7	10000	**C513_46.7 S3 M3LB4**	146	**C513_46.7 P100 BN100LB4**	147
32	845	2.7	44.7	25000	**C703_44.7 S3 M3LB4**	154	**C703_44.7 P100 BN100LB4**	155
32	821	1.9	43.4	16000	**C613_43.4 S3 M3LB4**	150	**C613_43.4 P100 BN100LB4**	151
33	832	0.9	43.1	10000	**C512_43.1 S3 M3LB4**	146	**C512_43.1 P100 BN100LB4**	147
34	780	2.9	41.3	25000	**C703_41.3 S3 M3LB4**	154	**C703_41.3 P100 BN100LB4**	155
35	765	1.3	40.5	10000	**C513_40.5 S3 M3LB4**	146	**C513_40.5 P100 BN100LB4**	147
35	779	1.0	40.4	10000	**C512_40.4 S3 M3LB4**	146	**C512_40.4 P100 BN100LB4**	147
37	734	1.8	38.0	16000	**C612_38.0 S3 M3LB4**	150	**C612_38.0 P100 BN100LB4**	151
38	698	1.4	37.0	10000	**C513_37.0 S3 M3LB4**	146	**C513_37.0 P100 BN100LB4**	147
39	702	1.1	36.4	10000	**C512_36.4 S3 M3LB4**	146	**C512_36.4 P100 BN100LB4**	147
39	683	2.3	36.1	16000	**C613_36.1 S3 M3LB4**	150	**C613_36.1 P100 BN100LB4**	151
41	661	1.9	34.2	16000	**C612_34.2 S3 M3LB4**	150	**C612_34.2 P100 BN100LB4**	151
43	638	1.2	33.0	10000	**C512_33.0 S3 M3LB4**	146	**C512_33.0 P100 BN100LB4**	147
43	623	2.4	33.0	16000	**C613_33.0 S3 M3LB4**	150	**C613_33.0 P100 BN100LB4**	151
45	590	1.0	31.2	5550	**C413_31.2 S3 M3LB4**	142	**C413_31.2 P100 BN100LB4**	143
46	588	2.3	30.4	15900	**C612_30.4 S3 M3LB4**	150	**C612_30.4 P100 BN100LB4**	151
47	575	1.4	29.8	10000	**C512_29.8 S3 M3LB4**	146	**C512_29.8 P100 BN100LB4**	147
50	546	0.9	28.3	5460	**C412_28.3 S3 M3LB4**	142	**C412_28.3 P100 BN100LB4**	143
51	519	1.9	27.4	10000	**C513_27.4 S3 M3LB4**	146	**C513_27.4 P100 BN100LB4**	147
51	529	2.6	27.4	15400	**C612_27.4 S3 M3LB4**	150	**C612_27.4 P100 BN100LB4**	151
54	500	1.6	25.9	10000	**C512_25.9 S3 M3LB4**	146	**C512_25.9 P100 BN100LB4**	147
54	487	0.9	26.2	4500	**C363_26.2 S3 M3LB4**	138	**C363_26.2 P100 BN100LB4**	139
56	483	1.0	25.0	5480	**C412_25.0 S3 M3LB4**	142	**C412_25.0 P100 BN100LB4**	143
57	479	2.8	24.8	15100	**C612_24.8 S3 M3LB4**	150	**C612_24.8 P100 BN100LB4**	151
59	451	2.0	23.9	10000	**C513_23.9 S3 M3LB4**	146	**C513_23.9 P100 BN100LB4**	147
60	451	1.8	23.4	10000	**C512_23.4 S3 M3LB4**	146	**C512_23.4 P100 BN100LB4**	147
63	435	1.1	22.6	5420	**C412_22.6 S3 M3LB4**	142	**C412_22.6 P100 BN100LB4**	143
63	431	3.1	22.4	14600	**C612_22.4 S3 M3LB4**	150	**C612_22.4 P100 BN100LB4**	151
64	412	1.0	22.1	4530	**C363_22.1 S3 M3LB4**	138	**C363_22.1 P100 BN100LB4**	139
65	412	2.2	21.8	10000	**C513_21.8 S3 M3LB4**	146	**C513_21.8 P100 BN100LB4**	147
67	405	2.0	21.0	10000	**C512_21.0 S3 M3LB4**	146	**C512_21.0 P100 BN100LB4**	147
71	381	1.3	19.8	5390	**C412_19.8 S3 M3LB4**	142	**C412_19.8 P100 BN100LB4**	143
74	361	1.1	19.0	4450	**C362_19.0 S3 M3LB4**	138	**C362_19.0 P100 BN100LB4**	139
75	365	2.2	18.9	10000	**C512_18.9 S3 M3LB4**	146	**C512_18.9 P100 BN100LB4**	147
79	343	1.4	17.8	5300	**C412_17.8 S3 M3LB4**	142	**C412_17.8 P100 BN100LB4**	143
82	327	1.2	17.2	4400	**C362_17.2 S3 M3LB4**	138	**C362_17.2 P100 BN100LB4**	139
85	320	2.5	16.6	9790	**C512_16.6 S3 M3LB4**	146	**C512_16.6 P100 BN100LB4**	147
89	305	1.5	15.8	5240	**C412_15.8 S3 M3LB4**	142	**C412_15.8 P100 BN100LB4**	143
90	296	0.9	15.6	3680	**C322_15.6 S3 M3LB4**	134	**C322_15.6 P100 BN100LB4**	135
94	289	2.8	15.0	9540	**C512_15.0 S3 M3LB4**	146	**C512_15.0 P100 BN100LB4**	147
96	280	1.4	14.8	4340	**C362_14.8 S3 M3LB4**	138	**C362_14.8 P100 BN100LB4**	139
99	275	1.6	14.2	5140	**C412_14.2 S3 M3LB4**	142	**C412_14.2 P100 BN100LB4**	143
100	267	0.9	14.1	3650	**C322_14.1 S3 M3LB4**	134	**C322_14.1 P100 BN100LB4**	135
106	253	1.5	13.3	4260	**C362_13.3 S3 M3LB4**	138	**C362_13.3 P100 BN100LB4**	139
107	253	3.0	13.1	9200	**C512_13.1 S3 M3LB4**	146	**C512_13.1 P100 BN100LB4**	147
114	239	1.8	12.4	5040	**C412_12.4 S3 M3LB4**	142	**C412_12.4 P100 BN100LB4**	143
114	234	1.0	12.3	3580	**C322_12.3 S3 M3LB4**	134	**C322_12.3 P100 BN100LB4**	135
119	228	3.4	11.8	8950	**C512_11.8 S3 M3LB4**	146	**C512_11.8 P100 BN100LB4**	147



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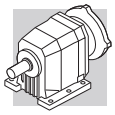
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
121	222	1.7	11.7	4200	**C362_11.7 S3 M3LB4**	138	**C362_11.7 P100 BN100LB4**	139
126	215	1.9	11.2	4930	**C412_11.2 S3 M3LB4**	142	**C412_11.2 P100 BN100LB4**	143
126	213	1.1	11.2	3520	**C322_11.2 S3 M3LB4**	134	**C322_11.2 P100 BN100LB4**	135
133	201	1.9	10.6	4100	**C362_10.6 S3 M3LB4**	138	**C362_10.6 P100 BN100LB4**	139
142	191	1.2	20.1	3480	**C322_20.1 S3 M3LA2**	134	**C322_20.1 P100 BN100L2**	135
147	185	2.1	9.6	4800	**C412_9.6 S3 M3LB4**	142	**C412_9.6 P100 BN100LB4**	143
152	177	1.2	9.3	3450	**C322_9.3 S3 M3LB4**	134	**C322_9.3 P100 BN100LB4**	135
157	173	1.3	18.2	3410	**C322_18.2 S3 M3LA2**	134	**C322_18.2 P100 BN100L2**	135
160	167	2.3	8.8	3990	**C362_8.8 S3 M3LB4**	138	**C362_8.8 P100 BN100LB4**	139
166	161	1.3	8.5	3400	**C322_8.5 S3 M3LB4**	134	**C322_8.5 P100 BN100LB4**	135
176	153	2.4	8.0	3840	**C362_8.0 S3 M3LB4**	138	**C362_8.0 P100 BN100LB4**	139
181	151	0.9	15.8	1940	**C222_15.8 S3 M3LA2**	130	**C222_15.8 P100 BN100L2**	131
183	148	1.4	15.6	3340	**C322_15.6 S3 M3LA2**	134	**C322_15.6 P100 BN100L2**	135
197	136	1.5	7.2	3300	**C322_7.2 S3 M3LB4**	134	**C322_7.2 P100 BN100LB4**	135
199	135	1.0	7.1	1940	**C222_7.1 S3 M3LB4**	130	**C222_7.1 P100 BN100LB4**	131
200	136	2.6	7.1	4490	**C412_7.1 S3 M3LB4**	142	**C412_7.1 P100 BN100LB4**	143
203	134	1.5	14.1	3250	**C322_14.1 S3 M3LA2**	134	**C322_14.1 P100 BN100L2**	135
208	129	2.8	6.8	3780	**C362_6.8 S3 M3LB4**	138	**C362_6.8 P100 BN100LB4**	139
222	123	2.8	6.4	4370	**C412_6.4 S3 M3LB4**	142	**C412_6.4 P100 BN100LB4**	143
225	119	1.3	6.3	3100	**C322_6.3 S3 M3LB4**	134	**C322_6.3 P100 BN100LB4**	135
232	117	1.7	12.3	3190	**C322_12.3 S3 M3LA2**	134	**C322_12.3 P100 BN100L2**	135
232	116	0.9	6.1	1600	**C222_6.1 S3 M3LB4**	130	**C222_6.1 P100 BN100LB4**	131
237	115	2.3	6.0	4090	**C412_6.0 S3 M3LB4**	142	**C412_6.0 P100 BN100LB4**	143
241	111	1.8	5.8	3530	**C362_5.8 S3 M3LB4**	138	**C362_5.8 P100 BN100LB4**	139
249	107	1.4	5.7	3040	**C322_5.7 S3 M3LB4**	134	**C322_5.7 P100 BN100LB4**	135
252	106	1.0	5.6	1750	**C222_5.6 S3 M3LB4**	130	**C222_5.6 P100 BN100LB4**	131
258	105	1.1	11.1	1850	**C222_11.1 S3 M3LA2**	130	**C222_11.1 P100 BN100L2**	131
255	106	1.8	11.2	3090	**C322_11.2 S3 M3LA2**	134	**C322_11.2 P100 BN100L2**	135
267	100	2.0	5.3	3380	**C362_5.3 S3 M3LB4**	138	**C362_5.3 P100 BN100LB4**	139
285	94	1.6	5.0	2950	**C322_5.0 S3 M3LB4**	134	**C322_5.0 P100 BN100LB4**	135
296	91	1.1	4.8	1780	**C222_4.8 S3 M3LB4**	130	**C222_4.8 P100 BN100LB4**	131
298	91	1.3	9.6	1880	**C222_9.6 S3 M3LA2**	130	**C222_9.6 P100 BN100L2**	131
302	90	2.9	4.7	3880	**C412_4.7 S3 M3LB4**	142	**C412_4.7 P100 BN100LB4**	143
305	88	2.3	4.6	3270	**C362_4.6 S3 M3LB4**	138	**C362_4.6 P100 BN100LB4**	139
308	88	2.0	9.3	2990	**C322_9.3 S3 M3LA2**	134	**C322_9.3 P100 BN100L2**	135
313	85	1.8	4.5	2880	**C322_4.5 S3 M3LB4**	134	**C322_4.5 P100 BN100LB4**	135
329	83	1.3	8.7	1840	**C222_8.7 S3 M3LA2**	130	**C222_8.7 P100 BN100L2**	131
331	81	1.2	4.3	1800	**C222_4.3 S3 M3LB4**	130	**C222_4.3 P100 BN100LB4**	131
336	80	2.5	4.2	3190	**C362_4.2 S3 M3LB4**	138	**C362_4.2 P100 BN100LB4**	139
336	81	2.1	8.5	2900	**C322_8.5 S3 M3LA2**	134	**C322_8.5 P100 BN100L2**	135
377	71	2.1	3.7	2780	**C322_3.7 S3 M3LB4**	134	**C322_3.7 P100 BN100LB4**	135
380	70	1.3	3.7	1740	**C222_3.7 S3 M3LB4**	130	**C222_3.7 P100 BN100LB4**	131
399	68	2.3	7.2	2810	**C322_7.2 S3 M3LA2**	134	**C322_7.2 P100 BN100L2**	135
404	66	3.0	3.5	3130	**C362_3.5 S3 M3LB4**	138	**C362_3.5 P100 BN100LB4**	139
404	67	1.6	7.1	1800	**C222_7.1 S3 M3LA2**	130	**C222_7.1 P100 BN100L2**	131
414	65	2.1	3.4	2690	**C322_3.4 S3 M3LB4**	134	**C322_3.4 P100 BN100LB4**	135
424	63	1.3	3.3	1740	**C222_3.3 S3 M3LB4**	130	**C222_3.3 P100 BN100LB4**	131
457	60	2.5	6.3	2650	**C322_6.3 S3 M3LA2**	134	**C322_6.3 P100 BN100L2**	135
470	58	1.5	6.1	1690	**C222_6.1 S3 M3LA2**	130	**C222_6.1 P100 BN100L2**	131
490	55	2.4	2.9	2610	**C322_2.9 S3 M3LB4**	134	**C322_2.9 P100 BN100LB4**	135
502	54	2.6	5.7	2570	**C322_5.7 S3 M3LA2**	134	**C322_5.7 P100 BN100L2**	135



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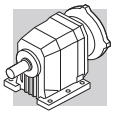
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
511	53	1.5	5.6	1650	**C222_5.6 S3 M3LA2**	130	**C222_5.6 P100 BN100L2**	131
518	52	1.5	2.7	1660	**C222_2.7 S3 M3LB4**	130	**C222_2.7 P100 BN100LB4**	131
578	47	2.9	5.0	2500	**C322_5.0 S3 M3LA2**	134	**C322_5.0 P100 BN100L2**	135
636	54	2.4	4.5	2400	**C322_4.5 S3 M3LA2**	134	**C322_4.5 P100 BN100L2**	135
600	45	1.8	4.8	1620	**C222_4.8 S3 M3LA2**	130	**C222_4.8 P100 BN100L2**	131
665	41	1.8	4.3	1580	**C222_4.3 S3 M3LA2**	130	**C222_4.3 P100 BN100L2**	131
766	36	3.4	3.7	2320	**C322_3.7 S3 M3LA2**	134	**C322_3.7 P100 BN100L2**	135
771	35	2.0	3.7	1540	**C222_3.7 S3 M3LA2**	130	**C222_3.7 P100 BN100L2**	131
783	35	1.0	3.7	560	**C122_3.7 S3 M3LA2**	126	**C122_3.7 P100 BN100L2**	127
867	83	2.2	3.3	1480	**C222_3.3 S3 M3LA2**	130	**C222_3.3 P100 BN100L2**	131
894	30	1.1	3.2	630	**C122_3.2 S3 M3LA2**	126	**C122_3.2 P100 BN100L2**	127
1033	26	1.1	2.8	750	**C122_2.8 S3 M3LA2**	126	**C122_2.8 P100 BN100L2**	127
1051	26	2.5	2.7	1430	**C222_2.7 S3 M3LA2**	130	**C222_2.7 P100 BN100L2**	131

4 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
2.8	12569	1.0	502.6	85000	**C1004_502.6 S3 M3LC4**	163	**C1004_502.6 P112 BN112M4**	164
3.4	10249	1.2	409.8	85000	**C1004_409.8 S3 M3LC4**	163	**C1004_409.8 P112 BN112M4**	164
4.3	8093	1.5	323.6	85000	**C1004_323.6 S3 M3LC4**	163	**C1004_323.6 P112 BN112M4**	164
4.7	7325	1.0	292.9	60000	**C904_292.9 S3 M3LC4**	160	**C904_292.9 P112 BN112M4**	161
5.2	6715	1.1	268.5	60000	**C904_268.5 S3 M3LC4**	160	**C904_268.5 P112 BN112M4**	161
5.7	6107	2.0	244.2	85000	**C1004_244.2 S3 M3LC4**	163	**C1004_244.2 P112 BN112M4**	164
6.0	5795	1.2	231.7	60000	**C904_231.7 S3 M3LC4**	160	**C904_231.7 P112 BN112M4**	161
7.5	4637	2.6	185.4	85000	**C1004_185.4 S3 M3LC4**	163	**C1004_185.4 P112 BN112M4**	164
8.1	4399	1.6	172.1	60000	**C903_172.1 S3 M3LC4**	160	**C903_172.1 P112 BN112M4**	161
8.2	4319	0.9	169.0	35000	**C803_169.0 S3 M3LC4**	157	**C803_169.0 P112 BN112M4**	158
10.2	3493	1.1	136.7	35000	**C803_136.7 S3 M3LC4**	157	**C803_136.7 P112 BN112M4**	158
10.4	3428	2.1	134.1	60000	**C903_134.1 S3 M3LC4**	160	**C903_134.1 P112 BN112M4**	161
11.9	2983	2.4	116.7	60000	**C903_116.7 S3 M3LC4**	160	**C903_116.7 P112 BN112M4**	161
12.7	2799	1.4	109.5	35000	**C803_109.5 S3 M3LC4**	157	**C803_109.5 P112 BN112M4**	158
14.3	2489	1.6	97.4	35000	**C803_97.4 S3 M3LC4**	157	**C803_97.4 P112 BN112M4**	158
14.4	2460	2.9	96.2	60000	**C903_96.2 S3 M3LC4**	160	**C903_96.2 P112 BN112M4**	161
15.6	2282	1.8	89.3	35000	**C803_89.3 S3 M3LC4**	157	**C803_89.3 P112 BN112M4**	158
15.8	2254	1.0	88.2	25000	**C703_88.2 S3 M3LC4**	154	**C703_88.2 P112 BN112M4**	155
17.1	2081	1.1	81.4	25000	**C703_81.4 S3 M3LC4**	154	**C703_81.4 P112 BN112M4**	155
19.5	1823	1.3	71.3	25000	**C703_71.3 S3 M3LC4**	154	**C703_71.3 P112 BN112M4**	155
19.7	1802	2.2	70.5	35000	**C803_70.5 S3 M3LC4**	157	**C803_70.5 P112 BN112M4**	158
20.5	1730	0.9	67.7	16000	**C613_67.7 S3 M3LC4**	150	**C613_67.7 P112 BN112M4**	151
23.7	1498	1.1	58.6	16000	**C613_58.6 S3 M3LC4**	150	**C613_58.6 P112 BN112M4**	151
24.3	1464	2.7	57.3	35000	**C803_57.3 S3 M3LC4**	157	**C803_57.3 P112 BN112M4**	158
24.6	1444	1.6	56.5	25000	**C703_56.5 S3 M3LC4**	154	**C703_56.5 P112 BN112M4**	155
26.0	1366	1.2	53.5	16000	**C613_53.5 S3 M3LC4**	150	**C613_53.5 P112 BN112M4**	151
26.6	1333	1.7	52.2	25000	**C703_52.2 S3 M3LC4**	154	**C703_52.2 P112 BN112M4**	155
29.2	1217	1.3	47.6	16000	**C613_47.6 S3 M3LC4**	150	**C613_47.6 P112 BN112M4**	151
29.3	1213	3.1	47.4	35000	**C803_47.4 S3 M3LC4**	157	**C803_47.4 P112 BN112M4**	158
31	1142	2.0	44.7	25000	**C703_44.7 S3 M3LC4**	154	**C703_44.7 P112 BN112M4**	155
32	1112	3.4	43.5	35000	**C803_43.5 S3 M3LC4**	157	**C803_43.5 P112 BN112M4**	158



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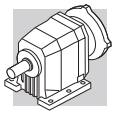
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
32	1110	1.4	43.4	16000	**C613_43.4 S3 M3LC4**	150	**C613_43.4 P112 BN112M4**	151
34	1055	2.2	41.3	25000	**C703_41.3 S3 M3LC4**	154	**C703_41.3 P112 BN112M4**	155
34	1035	1.0	40.5	10000	**C513_40.5 S3 M3LC4**	146	**C513_40.5 P112 BN112M4**	147
37	992	1.4	38.0	16000	**C612_38.0 S3 M3LC4**	150	**C612_38.0 P112 BN112M4**	151
38	945	1.1	37.0	10000	**C513_37.0 S3 M3LC4**	146	**C513_37.0 P112 BN112M4**	147
40	907	2.3	34.7	23400	**C702_34.7 S3 M3LC4**	154	**C702_34.7 P112 BN112M4**	155
41	893	1.4	34.2	15700	**C612_34.2 S3 M3LC4**	150	**C612_34.2 P112 BN112M4**	151
42	862	0.9	33.0	10000	**C512_33.0 S3 M3LC4**	146	**C512_33.0 P112 BN112M4**	147
46	795	1.7	30.4	15300	**C612_30.4 S3 M3LC4**	150	**C612_30.4 P112 BN112M4**	151
47	777	1.0	29.8	10000	**C512_29.8 S3 M3LC4**	146	**C512_29.8 P112 BN112M4**	147
50	724	2.9	27.7	22300	**C702_27.7 S3 M3LC4**	154	**C702_27.7 P112 BN112M4**	155
51	716	1.9	27.4	14900	**C612_27.4 S3 M3LC4**	150	**C612_27.4 P112 BN112M4**	151
54	676	1.2	25.9	10000	**C512_25.9 S3 M3LC4**	146	**C512_25.9 P112 BN112M4**	147
56	648	2.1	24.8	14600	**C612_24.8 S3 M3LC4**	150	**C612_24.8 P112 BN112M4**	151
60	610	1.3	23.4	10000	**C512_23.4 S3 M3LC4**	146	**C512_23.4 P112 BN112M4**	147
62	584	2.3	22.4	14200	**C612_22.4 S3 M3LC4**	150	**C612_22.4 P112 BN112M4**	151
66	547	1.5	21.0	9920	**C512_21.0 S3 M3LC4**	146	**C512_21.0 P112 BN112M4**	147
70	516	0.9	19.8	4760	**C412_19.8 S3 M3LC4**	142	**C412_19.8 P112 BN112M4**	143
71	512	2.6	19.6	13800	**C612_19.6 S3 M3LC4**	150	**C612_19.6 P112 BN112M4**	151
74	493	1.6	18.9	9730	**C512_18.9 S3 M3LC4**	146	**C512_18.9 P112 BN112M4**	147
78	465	1.0	17.8	4720	**C412_17.8 S3 M3LC4**	142	**C412_17.8 P112 BN112M4**	143
79	461	2.9	17.7	13400	**C612_17.7 S3 M3LC4**	150	**C612_17.7 P112 BN112M4**	151
84	433	1.8	16.6	9440	**C512_16.6 S3 M3LC4**	146	**C512_16.6 P112 BN112M4**	147
87	416	3.2	15.9	13100	**C612_15.9 S3 M3LC4**	150	**C612_15.9 P112 BN112M4**	151
88	413	1.1	15.8	4740	**C412_15.8 S3 M3LC4**	142	**C412_15.8 P112 BN112M4**	143
93	391	2.0	15.0	9230	**C512_15.0 S3 M3LC4**	146	**C512_15.0 P112 BN112M4**	147
95	378	1.0	14.8	3880	**C362_14.8 S3 M3LC4**	138	**C362_14.8 P112 BN112M4**	139
98	372	1.2	14.2	4690	**C412_14.2 S3 M3LC4**	142	**C412_14.2 P112 BN112M4**	143
105	342	1.1	13.3	3840	**C362_13.3 S3 M3LC4**	138	**C362_13.3 P112 BN112M4**	139
106	343	2.2	13.1	8930	**C512_13.1 S3 M3LC4**	146	**C512_13.1 P112 BN112M4**	147
112	324	1.3	12.4	4660	**C412_12.4 S3 M3LC4**	142	**C412_12.4 P112 BN112M4**	143
117	309	2.5	11.8	8720	**C512_11.8 S3 M3LC4**	146	**C512_11.8 P112 BN112M4**	147
120	299	1.3	11.7	3840	**C362_11.7 S3 M3LC4**	138	**C362_11.7 P112 BN112M4**	139
125	291	1.4	11.2	4580	**C412_11.2 S3 M3LC4**	142	**C412_11.2 P112 BN112M4**	143
132	272	1.4	10.6	3780	**C362_10.6 S3 M3LC4**	138	**C362_10.6 P112 BN112M4**	139
143	255	2.7	9.8	8290	**C512_9.8 S3 M3LC4**	146	**C512_9.8 P112 BN112M4**	147
145	251	1.6	9.6	4510	**C412_9.6 S3 M3LC4**	142	**C412_9.6 P112 BN112M4**	143
151	238	0.9	9.3	3150	**C322_9.3 S3 M3LC4**	134	**C322_9.3 P112 BN112M4**	135
158	229	3.0	8.8	8070	**C512_8.8 S3 M3LC4**	146	**C512_8.8 P112 BN112M4**	147
159	226	1.7	8.8	3720	**C362_8.8 S3 M3LC4**	138	**C362_8.8 P112 BN112M4**	139
161	226	1.7	8.6	4420	**C412_8.6 S3 M3LC4**	142	**C412_8.6 P112 BN112M4**	143
165	218	1.0	8.5	3110	**C322_8.5 S3 M3LC4**	134	**C322_8.5 P112 BN112M4**	135
174	206	1.8	8.0	3650	**C362_8.0 S3 M3LC4**	138	**C362_8.0 P112 BN112M4**	139
179	202	3.2	7.8	7800	**C512_7.8 S3 M3LC4**	146	**C512_7.8 P112 BN112M4**	147
184	197	1.1	15.6	3090	**C322_15.6 S3 M3LB2**	134	**C322_15.6 P112 BN112M2**	135
195	184	1.1	7.2	3070	**C322_7.2 S3 M3LC4**	134	**C322_7.2 P112 BN112M4**	135
197	184	1.9	7.1	4280	**C412_7.1 S3 M3LC4**	142	**C412_7.1 P112 BN112M4**	143
199	182	3.5	7.0	7580	**C512_7.0 S3 M3LC4**	146	**C512_7.0 P112 BN112M4**	147
204	178	1.2	14.1	3040	**C322_14.1 S3 M3LB2**	134	**C322_14.1 P112 BN112M2**	135
206	174	2.0	6.8	3580	**C362_6.8 S3 M3LC4**	138	**C362_6.8 P112 BN112M4**	139
218	166	2.1	6.4	4180	**C412_6.4 S3 M3LC4**	142	**C412_6.4 P112 BN112M4**	143



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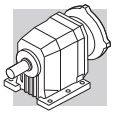
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
223	161	1.0	6.3	2840	**C322_6.3 S3 M3LC4**	134	**C322_6.3 P112 BN112M4**	135
233	156	1.3	12.3	2990	**C322_12.3 S3 M3LB2**	134	**C322_12.3 P112 BN112M2**	135
234	155	1.7	6.0	3840	**C412_6.0 S3 M3LC4**	142	**C412_6.0 P112 BN112M4**	143
239	150	1.3	5.8	3310	**C362_5.8 S3 M3LC4**	138	**C362_5.8 P112 BN112M4**	139
248	145	1.1	5.7	2780	**C322_5.7 S3 M3LC4**	134	**C322_5.7 P112 BN112M4**	135
256	142	1.3	11.2	2900	**C322_11.2 S3 M3LB2**	134	**C322_11.2 P112 BN112M2**	135
265	135	1.5	5.3	3200	**C362_5.3 S3 M3LC4**	138	**C362_5.3 P112 BN112M4**	139
283	127	1.2	5.0	2760	**C322_5.0 S3 M3LC4**	134	**C322_5.0 P112 BN112M4**	135
298	122	0.9	9.6	1680	**C222_9.6 S3 M3LB2**	130	**C222_9.6 P112 BN112M2**	131
303	119	1.7	4.6	3180	**C362_4.6 S3 M3LC4**	138	**C362_4.6 P112 BN112M4**	139
309	118	1.5	9.3	2840	**C322_9.3 S3 M3LB2**	134	**C322_9.3 P112 BN112M2**	135
311	115	1.3	4.5	2690	**C322_4.5 S3 M3LC4**	134	**C322_4.5 P112 BN112M4**	135
330	110	1.0	8.7	1660	**C222_8.7 S3 M3LB2**	130	**C222_8.7 P112 BN112M2**	131
333	108	1.9	4.2	3060	**C362_4.2 S3 M3LC4**	138	**C362_4.2 P112 BN112M4**	139
336	109	0.9	4.3	1300	**C222_4.3 S3 M3LC4**	130	**C222_4.3 P112 BN112M4**	131
338	107	1.6	8.5	2750	**C322_8.5 S3 M3LB2**	134	**C322_8.5 P112 BN112M2**	135
375	96	1.6	3.7	2640	**C322_3.7 S3 M3LC4**	134	**C322_3.7 P112 BN112M4**	135
378	95	0.9	3.7	1560	**C222_3.7 S3 M3LC4**	130	**C222_3.7 P112 BN112M4**	131
401	91	1.8	7.2	2690	**C322_7.2 S3 M3LB2**	134	**C322_7.2 P112 BN112M2**	135
402	89	2.2	3.5	3010	**C362_3.5 S3 M3LC4**	138	**C362_3.5 P112 BN112M4**	139
405	90	1.2	7.1	1650	**C222_7.1 S3 M3LB2**	130	**C222_7.1 P112 BN112M2**	131
411	87	1.6	3.4	2580	**C322_3.4 S3 M3LC4**	134	**C322_3.4 P112 BN112M4**	135
421	85	1.0	3.3	1540	**C222_3.3 S3 M3LC4**	130	**C222_3.3 P112 BN112M4**	131
440	82	2.5	3.2	2890	**C362_3.2 S3 M3LC4**	138	**C362_3.2 P112 BN112M4**	139
458	79	1.9	6.3	2530	**C322_6.3 S3 M3LB2**	134	**C322_6.3 P112 BN112M2**	135
471	77	1.1	6.1	1540	**C222_6.1 S3 M3LB2**	130	**C222_6.1 P112 BN112M2**	131
486	74	1.8	2.9	2500	**C322_2.9 S3 M3LC4**	134	**C322_2.9 P112 BN112M4**	135
513	54	1.5	5.6	1520	**C222_5.6 S3 M3LB2**	130	**C222_5.6 P112 BN112M2**	131
514	70	1.1	2.7	1530	**C222_2.7 S3 M3LC4**	130	**C222_2.7 P112 BN112M4**	131
521	69	2.9	2.7	2840	**C362_2.7 S3 M3LC4**	138	**C362_2.7 P112 BN112M4**	139
580	63	2.2	5.0	2410	**C322_5.0 S3 M3LB2**	134	**C322_5.0 P112 BN112M2**	135
602	60	1.3	4.8	1500	**C222_4.8 S3 M3LB2**	130	**C222_4.8 P112 BN112M2**	131
638	56	2.3	4.5	2330	**C322_4.5 S3 M3LB2**	134	**C322_4.5 P112 BN112M2**	135
667	54	1.4	4.3	1470	**C222_4.3 S3 M3LB2**	130	**C222_4.3 P112 BN112M2**	131
768	47	2.5	3.7	2250	**C322_3.7 S3 M3LB2**	134	**C322_3.7 P112 BN112M2**	135
774	47	1.5	3.7	1450	**C222_3.7 S3 M3LB2**	130	**C222_3.7 P112 BN112M2**	131
844	43	2.7	3.4	2170	**C322_3.4 S3 M3LB2**	134	**C322_3.4 P112 BN112M2**	135
870	42	1.6	3.3	1410	**C222_3.3 S3 M3LB2**	130	**C222_3.3 P112 BN112M2**	131
997	36	2.9	2.9	2100	**C322_2.9 S3 M3LB2**	134	**C322_2.9 P112 BN112M2**	135
1054	34	1.9	2.7	1370	**C222_2.7 S3 M3LB2**	130	**C222_2.7 P112 BN112M2**	131

5.5 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
3.8	12630	1.0	380.5	85000	**C1004_380.5 S4 M4SA4**	163	**C1004_380.5 P132 BN132S4**	164
4.4	10741	1.1	323.6	85000	**C1004_323.6 S4 M4SA4**	163	**C1004_323.6 P132 BN132S4**	164
4.8	9974	1.2	300.5	85000	**C1004_300.5 S4 M4SA4**	163	**C1004_300.5 P132 BN132S4**	164
5.5	8730	1.4	263.0	85000	**C1004_263.0 S4 M4SA4**	163	**C1004_263.0 P132 BN132S4**	164



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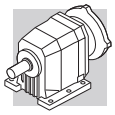
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
5.9	8106	1.5	244.2	85000	**C1004_244.2 S4 M4SA4**	163	**C1004_244.2 P132 BN132S4**	164
6.2	7691	0.9	231.7	60000	**C904_231.7 S4 M4SA4**	160	**C904_231.7 P132 BN132S4**	161
6.8	7050	1.0	212.4	60000	**C904_212.4 S4 M4SA4**	160	**C904_212.4 P132 BN132S4**	161
7.2	6625	1.8	199.6	85000	**C1004_199.6 S4 M4SA4**	163	**C1004_199.6 P132 BN132S4**	164
8.4	5838	1.2	172.1	60000	**C903_172.1 S4 M4SA4**	160	**C903_172.1 P132 BN132S4**	161
9.6	5103	2.4	150.4	85000	**C1003_150.4 S4 M4SA4**	163	**C1003_150.4 P132 BN132S4**	164
9.8	4964	1.5	146.3	60000	**C903_146.3 S4 M4SA4**	160	**C903_146.3 P132 BN132S4**	161
12.1	4052	1.0	119.5	35000	**C803_119.5 S4 M4SA4**	157	**C803_119.5 P132 BN132S4**	158
12.3	3960	1.8	116.7	60000	**C903_116.7 S4 M4SA4**	160	**C903_116.7 P132 BN132S4**	161
14.8	3304	1.2	97.4	35000	**C803_97.4 S4 M4SA4**	157	**C803_97.4 P132 BN132S4**	158
15.0	3265	2.2	96.2	60000	**C903_96.2 S4 M4SA4**	160	**C903_96.2 P132 BN132S4**	161
17.7	2755	2.6	81.2	59100	**C903_81.2 S4 M4SA4**	160	**C903_81.2 P132 BN132S4**	161
18.7	2609	1.5	76.9	35000	**C803_76.9 S4 M4SA4**	157	**C803_76.9 P132 BN132S4**	158
20.2	2420	1.0	71.3	25000	**C703_71.3 S4 M4SA4**	154	**C703_71.3 P132 BN132S4**	155
20.4	2392	1.7	70.5	35000	**C803_70.5 S4 M4SA4**	157	**C803_70.5 P132 BN132S4**	158
21.9	2234	1.0	65.9	25000	**C703_65.9 S4 M4SA4**	154	**C703_65.9 P132 BN132S4**	155
25.1	1944	2.1	57.3	35000	**C803_57.3 S4 M4SA4**	157	**C803_57.3 P132 BN132S4**	158
25.5	1917	1.2	56.5	25000	**C703_56.5 S4 M4SA4**	154	**C703_56.5 P132 BN132S4**	155
27.6	1770	1.3	52.2	24700	**C703_52.2 S4 M4SA4**	154	**C703_52.2 P132 BN132S4**	155
30	1616	1.0	47.6	15300	**C613_47.6 S4 M4SA4**	150	**C613_47.6 P132 BN132S4**	151
30	1609	2.4	47.4	35000	**C803_47.4 S4 M4SA4**	157	**C803_47.4 P132 BN132S4**	158
32	1516	1.5	44.7	24100	**C703_44.7 S4 M4SA4**	154	**C703_44.7 P132 BN132S4**	155
33	1475	2.6	43.5	35000	**C803_43.5 S4 M4SA4**	157	**C803_43.5 P132 BN132S4**	158
33	1474	1.1	43.4	15000	**C613_43.4 S4 M4SA4**	150	**C613_43.4 P132 BN132S4**	151
35	1400	1.6	41.3	23800	**C703_41.3 S4 M4SA4**	154	**C703_41.3 P132 BN132S4**	155
37	1355	2.4	39.1	35000	**C802_39.1 S4 M4SA4**	157	**C802_39.1 P132 BN132S4**	158
38	1317	1.0	38.0	14800	**C612_38.0 S4 M4SA4**	150	**C612_38.0 P132 BN132S4**	151
41	1204	1.7	34.7	22100	**C702_34.7 S4 M4SA4**	154	**C702_34.7 P132 BN132S4**	155
42	1186	1.0	34.2	14500	**C612_34.2 S4 M4SA4**	150	**C612_34.2 P132 BN132S4**	151
46	1086	3.4	31.3	33400	**C802_31.3 S4 M4SA4**	157	**C802_31.3 P132 BN132S4**	158
47	1055	1.3	30.4	14300	**C612_30.4 S4 M4SA4**	150	**C612_30.4 P132 BN132S4**	151
48	1020	1.0	30.1	9610	**C513_30.1 S4 M4SA4**	146	**C513_30.1 P132 BN132S4**	147
52	961	2.2	27.7	21200	**C702_27.7 S4 M4SA4**	154	**C702_27.7 P132 BN132S4**	155
52	931	1.0	27.4	9490	**C513_27.4 S4 M4SA4**	146	**C513_27.4 P132 BN132S4**	147
53	950	1.4	27.4	13900	**C612_27.4 S4 M4SA4**	150	**C612_27.4 P132 BN132S4**	151
58	860	1.6	24.8	13700	**C612_24.8 S4 M4SA4**	150	**C612_24.8 P132 BN132S4**	151
62	809	1.0	23.4	9310	**C512_23.4 S4 M4SA4**	146	**C512_23.4 P132 BN132S4**	147
63	792	2.7	22.9	20400	**C702_22.9 S4 M4SA4**	154	**C702_22.9 P132 BN132S4**	155
64	775	1.7	22.4	13400	**C612_22.4 S4 M4SA4**	150	**C612_22.4 P132 BN132S4**	151
69	726	1.1	21.0	9150	**C512_21.0 S4 M4SA4**	146	**C512_21.0 P132 BN132S4**	147
73	679	2.0	19.6	13100	**C612_19.6 S4 M4SA4**	150	**C612_19.6 P132 BN132S4**	151
75	668	3.1	19.3	19700	**C702_19.3 S4 M4SA4**	154	**C702_19.3 P132 BN132S4**	155
76	655	1.2	18.9	9030	**C512_18.9 S4 M4SA4**	146	**C512_18.9 P132 BN132S4**	147
82	612	2.2	17.7	12700	**C612_17.7 S4 M4SA4**	150	**C612_17.7 P132 BN132S4**	151
87	575	1.4	16.6	8810	**C512_16.6 S4 M4SA4**	146	**C512_16.6 P132 BN132S4**	147
90	552	2.4	15.9	12500	**C612_15.9 S4 M4SA4**	150	**C612_15.9 P132 BN132S4**	151
96	519	1.5	15.0	8660	**C512_15.0 S4 M4SA4**	146	**C512_15.0 P132 BN132S4**	147
100	497	2.7	14.3	12100	**C612_14.3 S4 M4SA4**	150	**C612_14.3 P132 BN132S4**	151
101	494	0.9	14.2	4000	**C412_14.2 S4 M4SA4**	142	**C412_14.2 P132 BN132S4**	143
110	455	1.6	13.1	8420	**C512_13.1 S4 M4SA4**	146	**C512_13.1 P132 BN132S4**	147
116	429	1.0	12.4	4060	**C412_12.4 S4 M4SA4**	142	**C412_12.4 P132 BN132S4**	143



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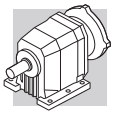
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
119	419	3.2	12.1	11600	**C612_12.1 S4 M4SA4**	150	**C612_12.1 P132 BN132S4**	151
122	410	1.9	11.8	8250	**C512_11.8 S4 M4SA4**	146	**C512_11.8 P132 BN132S4**	147
123	399	1.0	11.7	3380	**C362_11.7 S4 M4SA4**	138	**C362_11.7 P132 BN132S4**	139
129	387	1.1	11.2	4030	**C412_11.2 S4 M4SA4**	142	**C412_11.2 P132 BN132S4**	143
136	363	1.0	10.6	3350	**C362_10.6 S4 M4SA4**	138	**C362_10.6 P132 BN132S4**	139
148	338	2.0	9.8	7890	**C512_9.8 S4 M4SA4**	146	**C512_9.8 P132 BN132S4**	147
150	333	1.2	9.6	4030	**C412_9.6 S4 M4SA4**	142	**C412_9.6 P132 BN132S4**	143
164	305	2.2	8.8	7700	**C512_8.8 S4 M4SA4**	146	**C512_8.8 P132 BN132S4**	147
164	301	1.3	8.8	3350	**C362_8.8 S4 M4SA4**	138	**C362_8.8 P132 BN132S4**	139
167	299	1.3	8.6	3980	**C412_8.6 S4 M4SA4**	142	**C412_8.6 P132 BN132S4**	143
179	275	1.3	8.0	3330	**C362_8.0 S4 M4SA4**	138	**C362_8.0 P132 BN132S4**	139
186	269	2.4	7.8	7460	**C512_7.8 S4 M4SA4**	146	**C512_7.8 P132 BN132S4**	147
204	245	1.4	7.1	3920	**C412_7.1 S4 M4SA4**	142	**C412_7.1 P132 BN132S4**	143
206	242	2.6	7.0	7280	**C512_7.0 S4 M4SA4**	146	**C512_7.0 P132 BN132S4**	147
212	232	1.5	6.8	3280	**C362_6.8 S4 M4SA4**	138	**C362_6.8 P132 BN132S4**	139
226	221	1.6	6.4	3840	**C412_6.4 S4 M4SA4**	142	**C412_6.4 P132 BN132S4**	143
240	208	3.2	6.0	9480	**C612_6.0 S4 M4SA4**	150	**C612_6.0 P132 BN132S4**	151
242	206	1.3	6.0	3430	**C412_6.0 S4 M4SA4**	142	**C412_6.0 P132 BN132S4**	143
246	200	1.0	5.8	3020	**C362_5.8 S4 M4SA4**	138	**C362_5.8 P132 BN132S4**	139
256	195	2.2	5.6	6720	**C512_5.6 S4 M4SA4**	146	**C512_5.6 P132 BN132S4**	147
259	193	1.7	11.2	3770	**C412_11.2 S4 M4SA2**	142	**C412_11.2 P132 BN132SA2**	143
262	191	1.3	3.6	3410	**C412_3.6 S4 M4LB6**	142	**C412_3.6 P132 BN132MB6**	143
273	181	1.1	5.3	2930	**C362_5.3 S4 M4SA4**	138	**C362_5.3 P132 BN132S4**	139
286	175	2.4	3.3	6530	**C512_3.3 S4 M4LB6**	146	**C512_3.3 P132 BN132MB6**	147
291	169	0.9	5.0	2480	**C322_5.0 S4 M4SA4**	134	**C322_5.0 P132 BN132S4**	135
301	166	1.9	9.6	3680	**C412_9.6 S4 M4SA2**	142	**C412_9.6 P132 BN132SA2**	143
309	162	1.6	4.7	3360	**C412_4.7 S4 M4SA4**	142	**C412_4.7 P132 BN132S4**	143
312	158	1.3	4.6	2860	**C362_4.6 S4 M4SA4**	138	**C362_4.6 P132 BN132S4**	139
320	154	1.0	4.5	2500	**C322_4.5 S4 M4SA4**	134	**C322_4.5 P132 BN132S4**	135
323	154	2.8	4.5	6330	**C512_4.5 S4 M4SA4**	146	**C512_4.5 P132 BN132S4**	147
334	149	2.0	8.6	3600	**C412_8.6 S4 M4SA2**	142	**C412_8.6 P132 BN132SA2**	143
343	144	1.4	4.2	2830	**C362_4.2 S4 M4SA4**	138	**C362_4.2 P132 BN132S4**	139
355	140	1.7	2.7	3300	**C412_2.7 S4 M4LB6**	142	**C412_2.7 P132 BN132MB6**	143
359	139	2.9	2.6	6150	**C512_2.6 S4 M4LB6**	146	**C512_2.6 P132 BN132MB6**	147
361	138	2.1	8.0	2850	**C362_8.0 S4 M4SA2**	138	**C362_8.0 P132 BN132SA2**	139
386	128	1.2	3.7	2410	**C322_3.7 S4 M4SA4**	134	**C322_3.7 P132 BN132S4**	135
399	125	2.0	3.6	3240	**C412_3.6 S4 M4SA4**	142	**C412_3.6 P132 BN132S4**	143
409	122	2.3	7.1	3460	**C412_7.1 S4 M4SA2**	142	**C412_7.1 P132 BN132SA2**	143
413	119	1.7	3.5	2750	**C362_3.5 S4 M4SA4**	138	**C362_3.5 P132 BN132S4**	139
422	117	1.2	3.4	2370	**C322_3.4 S4 M4SA4**	134	**C322_3.4 P132 BN132S4**	135
425	118	2.4	6.8	2750	**C362_6.8 S4 M4SA2**	138	**C362_6.8 P132 BN132SA2**	139
453	109	1.8	3.2	2700	**C362_3.2 S4 M4SA4**	138	**C362_3.2 P132 BN132S4**	139
454	110	2.5	6.4	3370	**C412_6.4 S4 M4SA2**	142	**C412_6.4 P132 BN132SA2**	143
485	103	2.5	6.0	3140	**C412_6.0 S4 M4SA2**	142	**C412_6.0 P132 BN132SA2**	143
498	100	2.0	5.8	2620	**C362_5.8 S4 M4SA2**	138	**C362_5.8 P132 BN132SA2**	139
500	98	1.3	2.9	2310	**C322_2.9 S4 M4SA4**	134	**C322_2.9 P132 BN132S4**	135
536	92	2.2	2.7	2620	**C362_2.7 S4 M4SA4**	138	**C362_2.7 P132 BN132S4**	139
542	92	2.7	2.7	3070	**C412_2.7 S4 M4SA4**	142	**C412_2.7 P132 BN132S4**	143
545	92	2.2	5.3	2550	**C362_5.3 S4 M4SA2**	138	**C362_5.3 P132 BN132SA2**	139
578	86	1.6	5.0	2230	**C322_5.0 S4 M4SA2**	134	**C322_5.0 P132 BN132SA2**	135
620	81	3.2	4.7	2990	**C412_4.7 S4 M4SA2**	142	**C412_4.7 P132 BN132SA2**	143

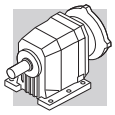


5.5 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
642	78	1.7	4.5	2190	**C322_4.5 S4 M4SA2**	134	**C322_4.5 P132 BN132SA2**	135
781	64	1.9	3.7	2120	**C322_3.7 S4 M4SA2**	134	**C322_3.7 P132 BN132SA2**	135
850	59	2.0	3.4	2080	**C322_3.4 S4 M4SA2**	134	**C322_3.4 P132 BN132SA2**	135
1004	50	2.1	2.9	2000	**C322_2.9 S4 M4SA2**	134	**C322_2.9 P132 BN132SA2**	135

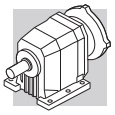
7.5 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
5.5	11904	1.0	263.0	85000	**C1004_263.0 S4 M4LA4**	163	**C1004_263.0 P132 BN132MA4**	164
7.2	9034	1.3	199.6	85000	**C1004_199.6 S4 M4LA4**	163	**C1004_199.6 P132 BN132MA4**	164
8.4	7961	0.9	172.1	60000	**C903_172.1 S4 M4LA4**	160	**C903_172.1 P132 BN132MA4**	161
9.6	6958	1.7	150.4	85000	**C1003_150.4 S4 M4LA4**	163	**C1003_150.4 P132 BN132MA4**	164
9.8	6769	1.1	146.3	59600	**C903_146.3 S4 M4LA4**	160	**C903_146.3 P132 BN132MA4**	161
12.3	5400	1.3	116.7	58600	**C903_116.7 S4 M4LA4**	160	**C903_116.7 P132 BN132MA4**	161
12.9	5176	2.3	111.9	85000	**C1003_111.9 S4 M4LA4**	163	**C1003_111.9 P132 BN132MA4**	164
16.1	4129	1.0	89.3	35000	**C803_89.3 S4 M4LA4**	157	**C803_89.3 P132 BN132MA4**	158
16.3	4081	1.7	88.2	56600	**C903_88.2 S4 M4LA4**	160	**C903_88.2 P132 BN132MA4**	161
16.8	3958	3.0	85.6	85000	**C1003_85.6 S4 M4LA4**	163	**C1003_85.6 P132 BN132MA4**	164
19.3	3444	2.1	74.4	55200	**C903_74.4 S4 M4LA4**	160	**C903_74.4 P132 BN132MA4**	161
20.4	3261	1.2	70.5	35000	**C803_70.5 S4 M4LA4**	157	**C803_70.5 P132 BN132MA4**	158
23.0	2891	1.4	62.5	35000	**C803_62.5 S4 M4LA4**	157	**C803_62.5 P132 BN132MA4**	158
24.3	2738	2.6	59.2	53000	**C903_59.2 S4 M4LA4**	160	**C903_59.2 P132 BN132MA4**	161
27.6	2413	1.0	52.2	22900	**C703_52.2 S4 M4LA4**	154	**C703_52.2 P132 BN132MA4**	155
30	2195	1.7	47.4	35000	**C803_47.4 S4 M4LA4**	157	**C803_47.4 P132 BN132MA4**	158
32	2068	1.1	44.7	22500	**C703_44.7 S4 M4LA4**	154	**C703_44.7 P132 BN132MA4**	155
35	1909	1.2	41.3	22300	**C703_41.3 S4 M4LA4**	154	**C703_41.3 P132 BN132MA4**	155
37	1848	1.7	39.1	33600	**C802_39.1 S4 M4LA4**	157	**C802_39.1 P132 BN132MA4**	158
40	1672	0.9	36.1	13300	**C613_36.1 S4 M4LA4**	150	**C613_36.1 P132 BN132MA4**	151
41	1642	1.3	34.7	20500	**C702_34.7 S4 M4LA4**	154	**C702_34.7 P132 BN132MA4**	155
44	1525	1.0	33.0	13100	**C613_33.0 S4 M4LA4**	150	**C613_33.0 P132 BN132MA4**	151
46	1481	2.5	31.3	32200	**C802_31.3 S4 M4LA4**	157	**C802_31.3 P132 BN132MA4**	158
47	1439	0.9	30.4	13000	**C612_30.4 S4 M4LA4**	150	**C612_30.4 P132 BN132MA4**	151
49	1358	1.1	29.4	13100	**C613_29.4 S4 M4LA4**	150	**C613_29.4 P132 BN132MA4**	151
52	1310	1.6	27.7	20000	**C702_27.7 S4 M4LA4**	154	**C702_27.7 P132 BN132MA4**	155
53	1296	1.0	27.4	12800	**C612_27.4 S4 M4LA4**	150	**C612_27.4 P132 BN132MA4**	151
55	1226	3.0	25.9	31000	**C802_25.9 S4 M4LA4**	157	**C802_25.9 P132 BN132MA4**	158
58	1173	1.2	24.8	12700	**C612_24.8 S4 M4LA4**	150	**C612_24.8 P132 BN132MA4**	151
60	1132	3.1	24.0	30500	**C802_24.0 S4 M4LA4**	157	**C802_24.0 P132 BN132MA4**	158
63	1080	1.9	22.9	19400	**C702_22.9 S4 M4LA4**	154	**C702_22.9 P132 BN132MA4**	155
64	1056	1.3	22.4	12500	**C612_22.4 S4 M4LA4**	150	**C612_22.4 P132 BN132MA4**	151
65	1051	3.5	22.2	30000	**C802_22.2 S4 M4LA4**	157	**C802_22.2 P132 BN132MA4**	158
73	926	1.5	19.6	12300	**C612_19.6 S4 M4LA4**	150	**C612_19.6 P132 BN132MA4**	151
75	911	2.3	19.3	18900	**C702_19.3 S4 M4LA4**	154	**C702_19.3 P132 BN132MA4**	155
82	834	1.6	17.7	12000	**C612_17.7 S4 M4LA4**	150	**C612_17.7 P132 BN132MA4**	151
86	789	2.6	16.7	18200	**C702_16.7 S4 M4LA4**	154	**C702_16.7 P132 BN132MA4**	155
87	784	1.0	16.6	8070	**C512_16.6 S4 M4LA4**	146	**C512_16.6 P132 BN132MA4**	147
90	753	1.8	15.9	11800	**C612_15.9 S4 M4LA4**	150	**C612_15.9 P132 BN132MA4**	151
96	707	1.1	15.0	8000	**C512_15.0 S4 M4LA4**	146	**C512_15.0 P132 BN132MA4**	147



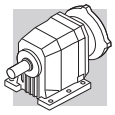
7.5 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
100	678	2.0	14.3	11500	**C612_14.3 S4 M4LA4**	150	**C612_14.3 P132 BN132MA4**	151
110	620	1.2	13.1	7840	**C512_13.1 S4 M4LA4**	146	**C512_13.1 P132 BN132MA4**	147
111	616	3.4	13.0	17500	**C702_13.0 S4 M4LA4**	154	**C702_13.0 P132 BN132MA4**	155
119	571	2.4	12.1	11100	**C612_12.1 S4 M4LA4**	150	**C612_12.1 P132 BN132MA4**	151
122	559	1.4	11.8	7730	**C512_11.8 S4 M4LA4**	146	**C512_11.8 P132 BN132MA4**	147
132	515	2.6	10.9	10900	**C612_10.9 S4 M4LA4**	150	**C612_10.9 P132 BN132MA4**	151
147	464	2.9	9.8	10600	**C612_9.8 S4 M4LA4**	150	**C612_9.8 P132 BN132MA4**	151
148	461	1.5	9.8	7450	**C512_9.8 S4 M4LA4**	146	**C512_9.8 P132 BN132MA4**	147
163	418	3.2	8.8	10300	**C612_8.8 S4 M4LA4**	150	**C612_8.8 P132 BN132MA4**	151
164	415	1.6	8.8	7320	**C512_8.8 S4 M4LA4**	146	**C512_8.8 P132 BN132MA4**	147
164	418	0.9	8.8	2880	**C362_8.8 S4 M4LA4**	138	**C362_8.8 P132 BN132MA4**	139
167	408	0.9	8.6	3430	**C412_8.6 S4 M4LA4**	142	**C412_8.6 P132 BN132MA4**	143
179	381	1.0	8.0	2900	**C362_8.0 S4 M4LA4**	138	**C362_8.0 P132 BN132MA4**	139
186	366	1.7	7.8	7120	**C512_7.8 S4 M4LA4**	146	**C512_7.8 P132 BN132MA4**	147
204	334	1.1	7.1	3470	**C412_7.1 S4 M4LA4**	142	**C412_7.1 P132 BN132MA4**	143
206	330	1.9	7.0	6970	**C512_7.0 S4 M4LA4**	146	**C512_7.0 P132 BN132MA4**	147
212	322	1.1	6.8	2900	**C362_6.8 S4 M4LA4**	138	**C362_6.8 P132 BN132MA4**	139
226	301	1.1	6.4	3440	**C412_6.4 S4 M4LA4**	142	**C412_6.4 P132 BN132MA4**	143
240	284	2.3	6.0	9180	**C612_6.0 S4 M4LA4**	150	**C612_6.0 P132 BN132MA4**	151
242	281	0.9	6.0	2920	**C412_6.0 S4 M4LA4**	142	**C412_6.0 P132 BN132MA4**	143
256	266	1.6	5.6	6410	**C512_5.6 S4 M4LA4**	146	**C512_5.6 P132 BN132MA4**	147
309	220	1.2	4.7	2960	**C412_4.7 S4 M4LA4**	142	**C412_4.7 P132 BN132MA4**	143
312	220	0.9	4.6	2600	**C362_4.6 S4 M4LA4**	138	**C362_4.6 P132 BN132MA4**	139
316	215	3.1	4.6	8550	**C612_4.6 S4 M4LA4**	150	**C612_4.6 P132 BN132MA4**	151
323	210	2.1	4.5	6090	**C512_4.5 S4 M4LA4**	146	**C512_4.5 P132 BN132MA4**	147
339	201	3.3	2.8	8390	**C612_2.8 S5 M5SA6**	150	**C612_2.8 P160 BN160M6**	151
343	199	1.0	4.2	2550	**C362_4.2 S4 M4LA4**	138	**C362_4.2 P132 BN132MA4**	139
363	187	2.1	2.6	5920	**C512_2.6 S5 M5SA6**	146	**C512_2.6 P160 BN160M6**	147
399	171	1.5	3.6	2930	**C412_3.6 S4 M4LA4**	142	**C412_3.6 P132 BN132MA4**	143
410	166	1.7	7.1	3240	**C412_7.1 S4 M4SB2**	142	**C412_7.1 P132 BN132SB2**	143
413	166	1.2	3.5	2500	**C362_3.5 S4 M4LA4**	138	**C362_3.5 P132 BN132MA4**	139
435	156	2.7	3.3	5660	**C512_3.3 S4 M4LA4**	146	**C512_3.3 P132 BN132MA4**	147
453	151	1.3	3.2	2500	**C362_3.2 S4 M4LA4**	138	**C362_3.2 P132 BN132MA4**	139
456	149	1.8	6.4	3170	**C412_6.4 S4 M4SB2**	142	**C412_6.4 P132 BN132SB2**	143
487	140	1.9	6.0	2880	**C412_6.0 S4 M4SB2**	142	**C412_6.0 P132 BN132SB2**	143
500	137	1.0	2.9	2100	**C322_2.9 S4 M4LA4**	134	**C322_2.9 P132 BN132MA4**	135
515	132	3.1	5.6	5420	**C512_5.6 S4 M4SB2**	146	**C512_5.6 P132 BN132SB2**	147
536	128	1.6	2.7	2440	**C362_2.7 S4 M4LA4**	138	**C362_2.7 P132 BN132MA4**	139
542	126	1.9	2.7	2840	**C412_2.7 S4 M4LA4**	142	**C412_2.7 P132 BN132MA4**	143
547	126	1.6	5.3	2370	**C362_5.3 S4 M4SB2**	138	**C362_5.3 P132 BN132SB2**	139
548	124	3.2	2.6	5330	**C512_2.6 S4 M4LA4**	146	**C512_2.6 P132 BN132MA4**	147
622	109	2.4	4.7	2790	**C412_4.7 S4 M4SB2**	142	**C412_4.7 P132 BN132SB2**	143
630	109	1.8	4.6	2330	**C362_4.6 S4 M4SB2**	138	**C362_4.6 P132 BN132SB2**	139
690	100	2.0	4.2	2290	**C362_4.2 S4 M4SB2**	138	**C362_4.2 P132 BN132SB2**	139
803	85	3.0	3.6	2670	**C412_3.6 S4 M4SB2**	142	**C412_3.6 P132 BN132SB2**	143
829	83	2.4	3.5	2210	**C362_3.5 S4 M4SB2**	138	**C362_3.5 P132 BN132SB2**	139
906	76	2.6	3.2	2170	**C362_3.2 S4 M4SB2**	138	**C362_3.2 P132 BN132SB2**	139
1074	64	3.1	2.7	2100	**C362_2.7 S4 M4SB2**	138	**C362_2.7 P132 BN132SB2**	139



9.2 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
7.2	11082	1.1	199.6	85000	**C1004_199.6 S4 M4LB4**	163	**C1004_199.6 P132 BN132MB4**	164
7.8	10294	1.2	185.4	85000	**C1004_185.4 S4 M4LB4**	163	**C1004_185.4 P132 BN132MB4**	164
9.6	8536	1.4	150.4	85000	**C1003_150.4 S4 M4LB4**	163	**C1003_150.4 P132 BN132MB4**	164
10.7	7611	0.9	134.1	54900	**C903_134.1 S4 M4LB4**	160	**C903_134.1 P132 BN132MB4**	161
13.5	6072	1.2	107.0	54600	**C903_107.0 S4 M4LB4**	160	**C903_107.0 P132 BN132MB4**	161
15.0	5461	1.3	96.2	54200	**C903_96.2 S4 M4LB4**	160	**C903_96.2 P132 BN132MB4**	161
15.5	5259	2.3	92.7	85000	**C1003_92.7 S4 M4LB4**	163	**C1003_92.7 P132 BN132MB4**	164
17.7	4608	1.6	81.2	53300	**C903_81.2 S4 M4LB4**	160	**C903_81.2 P132 BN132MB4**	161
19.3	4224	1.7	74.4	52700	**C903_74.4 S4 M4LB4**	160	**C903_74.4 P132 BN132MB4**	161
20.4	4001	1.0	70.5	35000	**C803_70.5 S4 M4LB4**	157	**C803_70.5 P132 BN132MB4**	158
24.3	3359	2.1	59.2	51100	**C903_59.2 S4 M4LB4**	160	**C903_59.2 P132 BN132MB4**	161
25.1	3251	1.2	57.3	35000	**C803_57.3 S4 M4LB4**	157	**C803_57.3 P132 BN132MB4**	158
28.6	2854	2.5	50.3	49700	**C903_50.3 S4 M4LB4**	160	**C903_50.3 P132 BN132MB4**	161
30	2692	1.4	47.4	34900	**C803_47.4 S4 M4LB4**	157	**C803_47.4 P132 BN132MB4**	158
32	2536	0.9	44.7	21100	**C703_44.7 S4 M4LB4**	154	**C703_44.7 P132 BN132MB4**	155
33	2468	1.5	43.5	34400	**C803_43.5 S4 M4LB4**	157	**C803_43.5 P132 BN132MB4**	158
35	2341	1.0	41.3	21000	**C703_41.3 S4 M4LB4**	154	**C703_41.3 P132 BN132MB4**	155
37	2267	1.4	39.1	32300	**C802_39.1 S4 M4LB4**	157	**C802_39.1 P132 BN132MB4**	158
41	2034	2.7	35.1	46200	**C902_35.1 S4 M4LB4**	160	**C902_35.1 P132 BN132MB4**	161
41	2014	1.0	34.7	19200	**C702_34.7 S4 M4LB4**	154	**C702_34.7 P132 BN132MB4**	155
46	1816	2.0	31.3	31100	**C802_31.3 S4 M4LB4**	157	**C802_31.3 P132 BN132MB4**	158
49	1706	3.5	29.4	44600	**C902_29.4 S4 M4LB4**	160	**C902_29.4 P132 BN132MB4**	161
52	1607	1.3	27.7	18900	**C702_27.7 S4 M4LB4**	154	**C702_27.7 P132 BN132MB4**	155
58	1439	0.9	24.8	11800	**C612_24.8 S4 M4LB4**	150	**C612_24.8 P132 BN132MB4**	151
63	1325	1.6	22.9	18500	**C702_22.9 S4 M4LB4**	154	**C702_22.9 P132 BN132MB4**	155
64	1296	1.0	22.4	11700	**C612_22.4 S4 M4LB4**	150	**C612_22.4 P132 BN132MB4**	151
65	1289	2.9	22.2	29200	**C802_22.2 S4 M4LB4**	157	**C802_22.2 P132 BN132MB4**	158
73	1136	1.2	19.6	11600	**C612_19.6 S4 M4LB4**	150	**C612_19.6 P132 BN132MB4**	151
75	1118	1.9	19.3	18100	**C702_19.3 S4 M4LB4**	154	**C702_19.3 P132 BN132MB4**	155
82	1023	1.3	17.7	11400	**C612_17.7 S4 M4LB4**	150	**C612_17.7 P132 BN132MB4**	151
86	968	2.1	16.7	17500	**C702_16.7 S4 M4LB4**	154	**C702_16.7 P132 BN132MB4**	155
90	923	1.5	15.9	11200	**C612_15.9 S4 M4LB4**	150	**C612_15.9 P132 BN132MB4**	151
94	889	2.4	15.3	17500	**C702_15.3 S4 M4LB4**	154	**C702_15.3 P132 BN132MB4**	155
96	867	0.9	15.0	7430	**C512_15.0 S4 M4LB4**	146	**C512_15.0 P132 BN132MB4**	147
100	832	1.6	14.3	11000	**C612_14.3 S4 M4LB4**	150	**C612_14.3 P132 BN132MB4**	151
102	817	2.6	14.1	17000	**C702_14.1 S4 M4LB4**	154	**C702_14.1 P132 BN132MB4**	155
110	761	1.0	13.1	7340	**C512_13.1 S4 M4LB4**	146	**C512_13.1 P132 BN132MB4**	147
111	755	2.8	13.0	17000	**C702_13.0 S4 M4LB4**	154	**C702_13.0 P132 BN132MB4**	155
119	701	1.9	12.1	10700	**C612_12.1 S4 M4LB4**	150	**C612_12.1 P132 BN132MB4**	151
122	686	1.1	11.8	7280	**C512_11.8 S4 M4LB4**	146	**C512_11.8 P132 BN132MB4**	147
127	658	3.2	22.9	16500	**C702_22.9 S4 M4LA2**	154	**C702_22.9 P132 BN132M2**	155
132	631	2.1	10.9	10500	**C612_10.9 S4 M4LB4**	150	**C612_10.9 P132 BN132MB4**	151
147	569	2.4	9.8	10300	**C612_9.8 S4 M4LB4**	150	**C612_9.8 P132 BN132MB4**	151
148	565	1.2	9.8	7080	**C512_9.8 S4 M4LB4**	146	**C512_9.8 P132 BN132MB4**	147
163	513	2.6	8.8	10000	**C612_8.8 S4 M4LB4**	150	**C612_8.8 P132 BN132MB4**	151
164	510	1.3	8.8	6990	**C512_8.8 S4 M4LB4**	146	**C512_8.8 P132 BN132MB4**	147
186	449	1.4	7.8	6820	**C512_7.8 S4 M4LB4**	146	**C512_7.8 P132 BN132MB4**	147
192	434	3.1	7.5	9670	**C612_7.5 S4 M4LB4**	150	**C612_7.5 P132 BN132MB4**	151
206	405	1.6	7.0	6710	**C512_7.0 S4 M4LB4**	146	**C512_7.0 P132 BN132MB4**	147
212	393	0.9	6.8	2600	**C362_6.8 S4 M4LB4**	138	**C362_6.8 P132 BN132MB4**	139
214	391	3.5	6.7	9410	**C612_6.7 S4 M4LB4**	150	**C612_6.7 P132 BN132MB4**	151

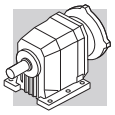


9.2 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
226	369	0.9	6.4	3100	**C412_6.4 S4 M4LB4**	142	**C412_6.4 P132 BN132MB4**	143
240	348	1.9	6.0	8930	**C612_6.0 S4 M4LB4**	150	**C612_6.0 P132 BN132MB4**	151
256	326	1.3	5.6	6150	**C512_5.6 S4 M4LB4**	146	**C512_5.6 P132 BN132MB4**	147
260	321	1.0	11.2	3110	**C412_11.2 S4 M4LA2**	142	**C412_11.2 P132 BN132M2**	143
309	270	1.0	4.7	2620	**C412_4.7 S4 M4LB4**	142	**C412_4.7 P132 BN132MB4**	143
316	264	2.5	4.6	8360	**C612_4.6 S4 M4LB4**	150	**C612_4.6 P132 BN132MB4**	151
323	258	1.7	4.5	5880	**C512_4.5 S4 M4LB4**	146	**C512_4.5 P132 BN132MB4**	147
336	249	1.2	8.6	3090	**C412_8.6 S4 M4LA2**	142	**C412_8.6 P132 BN132M2**	143
374	223	2.3	7.8	5870	**C512_7.8 S4 M4LA2**	146	**C512_7.8 P132 BN132M2**	147
399	209	1.2	3.6	2670	**C412_3.6 S4 M4LB4**	142	**C412_3.6 P132 BN132MB4**	143
410	203	1.4	7.1	3050	**C412_7.1 S4 M4LA2**	142	**C412_7.1 P132 BN132M2**	143
413	202	1.0	3.5	2300	**C362_3.5 S4 M4LB4**	138	**C362_3.5 P132 BN132MB4**	139
415	201	2.5	7.0	5730	**C512_7.0 S4 M4LA2**	146	**C512_7.0 P132 BN132M2**	147
435	192	2.2	3.3	5510	**C512_3.3 S4 M4LB4**	146	**C512_3.3 P132 BN132MB4**	147
453	184	1.1	3.2	2300	**C362_3.2 S4 M4LB4**	138	**C362_3.2 P132 BN132MB4**	139
456	183	1.5	6.4	3000	**C412_6.4 S4 M4LA2**	142	**C412_6.4 P132 BN132M2**	143
487	171	1.5	6.0	2660	**C412_6.0 S4 M4LA2**	142	**C412_6.0 P132 BN132M2**	143
515	162	2.6	5.6	5290	**C512_5.6 S4 M4LA2**	146	**C512_5.6 P132 BN132M2**	147
536	156	1.3	2.7	2280	**C362_2.7 S4 M4LB4**	138	**C362_2.7 P132 BN132MB4**	139
542	154	1.6	2.7	2650	**C412_2.7 S4 M4LB4**	142	**C412_2.7 P132 BN132MB4**	143
548	152	2.6	2.6	5210	**C512_2.6 S4 M4LB4**	146	**C512_2.6 P132 BN132MB4**	147
622	134	1.9	4.7	2620	**C412_4.7 S4 M4LA2**	142	**C412_4.7 P132 BN132M2**	143
651	128	3.4	4.5	4980	**C512_4.5 S4 M4LA2**	146	**C512_4.5 P132 BN132M2**	147
698	120	1.7	4.2	2180	**C362_4.2 S4 M4LA2**	138	**C362_4.2 P132 BN132M2**	139
803	104	2.5	3.6	2540	**C412_3.6 S4 M4LA2**	142	**C412_3.6 P132 BN132M2**	143
837	100	2.0	3.5	2120	**C362_3.5 S4 M4LA2**	138	**C362_3.5 P132 BN132M2**	139
916	91	2.2	3.2	2090	**C362_3.2 S4 M4LA2**	138	**C362_3.2 P132 BN132M2**	139
1091	77	3.2	2.7	2410	**C412_2.7 S4 M4LA2**	142	**C412_2.7 P132 BN132M2**	143
1091	77	2.6	2.7	2020	**C362_2.7 S4 M4LA2**	138	**C362_2.7 P132 BN132M2**	139

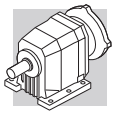
11 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
7.2	13251	0.9	199.6	85000	**C1004_199.6 S4 M4LC4**	163	**C1004_199.6 P160 BN160MR4**	164
9.6	10206	1.2	150.4	85000	**C1003_150.4 S4 M4LC4**	163	**C1003_150.4 P160 BN160MR4**	164
12.3	7920	0.9	116.7	50800	**C903_116.7 S4 M4LC4**	160	**C903_116.7 P160 BN160MR4**	161
12.9	7592	1.6	111.9	85000	**C1003_111.9 S4 M4LC4**	163	**C1003_111.9 P160 BN160MR4**	164
15.5	6287	1.9	92.7	85000	**C1003_92.7 S4 M4LC4**	163	**C1003_92.7 P160 BN160MR4**	164
16.3	5985	1.2	88.2	50700	**C903_88.2 S4 M4LC4**	160	**C903_88.2 P160 BN160MR4**	161
19.3	5051	1.4	74.4	50200	**C903_74.4 S4 M4LC4**	160	**C903_74.4 P160 BN160MR4**	161
20.7	4710	2.5	69.4	84800	**C1003_69.4 S4 M4LC4**	163	**C1003_69.4 P160 BN160MR4**	164
24.3	4016	1.8	59.2	49000	**C903_59.2 S4 M4LC4**	160	**C903_59.2 P160 BN160MR4**	161
25.1	3887	1.0	57.3	34200	**C803_57.3 S4 M4LC4**	157	**C803_57.3 P160 BN160MR4**	158
28.6	3413	2.1	50.3	48000	**C903_50.3 S4 M4LC4**	160	**C903_50.3 P160 BN160MR4**	161
30	3219	1.2	47.4	33500	**C803_47.4 S4 M4LC4**	157	**C803_47.4 P160 BN160MR4**	158
33	2951	1.3	43.5	33100	**C803_43.5 S4 M4LC4**	157	**C803_43.5 P160 BN160MR4**	158
37	2673	2.7	39.4	46100	**C903_39.4 S4 M4LC4**	160	**C903_39.4 P160 BN160MR4**	161
37	2711	1.2	39.1	30900	**C802_39.1 S4 M4LC4**	157	**C802_39.1 P160 BN160MR4**	158



11 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
41	2432	2.2	35.1	45000	**C902_35.1 S4 M4LC4**	160	**C902_35.1 P160 BN160MR4**	161
46	2172	1.7	31.3	30000	**C802_31.3 S4 M4LC4**	157	**C802_31.3 P160 BN160MR4**	158
52	1921	1.1	27.7	17800	**C702_27.7 S4 M4LC4**	154	**C702_27.7 P160 BN160MR4**	155
55	1798	2.1	25.9	29200	**C802_25.9 S4 M4LC4**	157	**C802_25.9 P160 BN160MR4**	158
63	1584	1.3	22.9	17600	**C702_22.9 S4 M4LC4**	154	**C702_22.9 P160 BN160MR4**	155
65	1542	2.4	22.2	28400	**C802_22.2 S4 M4LC4**	157	**C802_22.2 P160 BN160MR4**	158
70	1423	2.5	20.5	28000	**C802_20.5 S4 M4LC4**	157	**C802_20.5 P160 BN160MR4**	158
73	1358	1.0	19.6	10800	**C612_19.6 S4 M4LC4**	150	**C612_19.6 P160 BN160MR4**	151
75	1337	1.6	19.3	17300	**C702_19.3 S4 M4LC4**	154	**C702_19.3 P160 BN160MR4**	155
80	1251	3.0	18.1	27300	**C802_18.1 S4 M4LC4**	157	**C802_18.1 P160 BN160MR4**	158
82	1223	1.1	17.7	10700	**C612_17.7 S4 M4LC4**	150	**C612_17.7 P160 BN160MR4**	151
86	1158	1.8	16.7	16800	**C702_16.7 S4 M4LC4**	154	**C702_16.7 P160 BN160MR4**	155
86	1155	3.0	16.7	26900	**C802_16.7 S4 M4LC4**	157	**C802_16.7 P160 BN160MR4**	158
90	1104	1.2	15.9	10700	**C612_15.9 S4 M4LC4**	150	**C612_15.9 P160 BN160MR4**	151
94	1063	2.0	15.3	16800	**C702_15.3 S4 M4LC4**	154	**C702_15.3 P160 BN160MR4**	155
100	994	1.4	14.3	10500	**C612_14.3 S4 M4LC4**	150	**C612_14.3 P160 BN160MR4**	151
102	977	2.2	14.1	16400	**C702_14.1 S4 M4LC4**	154	**C702_14.1 P160 BN160MR4**	155
111	903	2.3	13.0	16400	**C702_13.0 S4 M4LC4**	154	**C702_13.0 P160 BN160MR4**	155
119	838	1.6	12.1	10300	**C612_12.1 S4 M4LC4**	150	**C612_12.1 P160 BN160MR4**	151
122	820	0.9	11.8	6810	**C512_11.8 S4 M4LC4**	146	**C512_11.8 P160 BN160MR4**	147
128	777	2.8	11.2	15800	**C702_11.2 S4 M4LC4**	154	**C702_11.2 P160 BN160MR4**	155
132	755	1.8	10.9	10100	**C612_10.9 S4 M4LC4**	150	**C612_10.9 P160 BN160MR4**	151
141	707	3.0	10.2	15700	**C702_10.2 S4 M4LC4**	154	**C702_10.2 P160 BN160MR4**	155
147	680	2.0	9.8	9910	**C612_9.8 S4 M4LC4**	150	**C612_9.8 P160 BN160MR4**	151
148	676	1.0	9.8	6690	**C512_9.8 S4 M4LC4**	146	**C512_9.8 P160 BN160MR4**	147
151	660	3.3	9.5	15400	**C702_9.5 S4 M4LC4**	154	**C702_9.5 P160 BN160MR4**	155
163	613	2.2	8.8	9690	**C612_8.8 S4 M4LC4**	150	**C612_8.8 P160 BN160MR4**	151
164	609	1.1	8.8	6640	**C512_8.8 S4 M4LC4**	146	**C512_8.8 P160 BN160MR4**	147
186	537	1.2	7.8	6510	**C512_7.8 S4 M4LC4**	146	**C512_7.8 P160 BN160MR4**	147
192	519	2.6	7.5	9390	**C612_7.5 S4 M4LC4**	150	**C612_7.5 P160 BN160MR4**	151
206	484	1.3	7.0	6430	**C512_7.0 S4 M4LC4**	146	**C512_7.0 P160 BN160MR4**	147
214	467	2.9	6.7	9150	**C612_6.7 S4 M4LC4**	150	**C612_6.7 P160 BN160MR4**	151
240	416	1.6	6.0	8670	**C612_6.0 S4 M4LC4**	150	**C612_6.0 P160 BN160MR4**	151
256	390	1.1	5.6	5880	**C512_5.6 S4 M4LC4**	146	**C512_5.6 P160 BN160MR4**	147
290	344	1.2	3.3	5770	**C512_3.3 S5 M5SA6**	146	**C512_3.3 P160 BN160L6**	147
316	316	2.1	4.6	8160	**C612_4.6 S4 M4LC4**	150	**C612_4.6 P160 BN160MR4**	151
323	309	1.4	4.5	5660	**C512_4.5 S4 M4LC4**	146	**C512_4.5 P160 BN160MR4**	147
338	295	1.0	8.6	2850	**C412_8.6 S4 M4LC2**	142		
365	273	1.5	2.6	5540	**C512_2.6 S5 M5SA6**	146	**C512_2.6 P160 BN160L6**	147
389	256	2.6	3.7	7760	**C612_3.7 S4 M4LC4**	150	**C612_3.7 P160 BN160MR4**	151
399	250	1.0	3.6	2390	**C412_3.6 S4 M4LC4**	142		
413	242	1.2	7.1	2860	**C412_7.1 S4 M4LC2**	142		
435	229	1.8	3.3	5340	**C512_3.3 S4 M4LC4**	146	**C512_3.3 P160 BN160MR4**	147
459	217	1.3	6.4	2820	**C412_6.4 S4 M4LC2**	142		
491	203	1.3	6.0	2440	**C412_6.0 S4 M4LC2**	142		
511	195	3.4	2.8	7240	**C612_2.8 S4 M4LC4**	150	**C612_2.8 P160 BN160MR4**	151
519	192	2.2	5.6	5140	**C512_5.6 S4 M4LC2**	146	**C512_5.6 P160 BN160MA2**	147
542	184	1.3	2.7	2440	**C412_2.7 S4 M4LC4**	142		
548	182	2.2	2.6	5080	**C512_2.6 S4 M4LC4**	146	**C512_2.6 P160 BN160MR4**	147
626	159	1.6	4.7	2440	**C412_4.7 S4 M4LC2**	142		
656	152	2.9	4.5	4870	**C512_4.5 S4 M4LC2**	146	**C512_4.5 P160 BN160MA2**	147

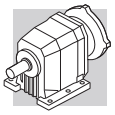


11 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
809	123	2.1	3.6	2400	**C412_3.6 S4 M4LC2**	142		
1098	91	2.7	2.7	2300	**C412_2.7 S4 M4LC2**	142		

15 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
10.5	12728	0.9	92.7	83900			**C1003_92.7 P180 BN180L6**	164
12.1	10997	1.1	120.5	83800	**C1003_120.5 S5 M5SB4**	163	**C1003_120.5 P160 BN160L4**	164
15.2	8782	0.8	96.2	43600	**C903_96.2 S5 M5SB4**	160	**C903_96.2 P160 BN160L4**	161
15.8	8456	1.4	92.7	82400	**C1003_92.7 S5 M5SB4**	163	**C1003_92.7 P160 BN160L4**	164
18.0	7411	1.0	81.2	44300	**C903_81.2 S5 M5SB4**	160	**C903_81.2 P160 BN160L4**	161
18.4	7249	1.7	79.4	81000	**C1003_79.4 S5 M5SB4**	163	**C1003_79.4 P160 BN160L4**	164
24.7	5402	1.3	59.2	44400	**C903_59.2 S5 M5SB4**	160	**C903_59.2 P160 BN160L4**	161
25.5	5233	2.3	57.4	77400	**C1003_57.4 S5 M5SB4**	163	**C1003_57.4 P160 BN160L4**	164
29.0	4590	1.5	50.3	44100	**C903_50.3 S5 M5SB4**	160	**C903_50.3 P160 BN160L4**	161
32	4218	2.8	46.2	74500	**C1003_46.2 S5 M5SB4**	163	**C1003_46.2 P160 BN160L4**	164
34	3968	1.0	43.5	30300	**C803_43.5 S5 M5SB4**	157	**C803_43.5 P160 BN160L4**	158
37	3595	2.0	39.4	43000	**C903_39.4 S5 M5SB4**	160	**C903_39.4 P160 BN160L4**	161
42	3272	1.7	35.1	42200	**C902_35.1 S5 M5SB4**	160	**C902_35.1 P160 BN160L4**	161
47	2921	1.3	31.3	27500	**C802_31.3 S5 M5SB4**	157	**C802_31.3 P160 BN160L4**	158
54	2533	2.2	27.2	40700	**C902_27.2 S5 M5SB4**	160	**C902_27.2 P160 BN160L4**	161
56	2419	1.5	25.9	27100	**C802_25.9 S5 M5SB4**	157	**C802_25.9 P160 BN160L4**	158
64	2136	2.9	22.9	39500	**C902_22.9 S5 M5SB4**	160	**C902_22.9 P160 BN160L4**	161
66	2073	1.8	22.2	26600	**C802_22.2 S5 M5SB4**	157	**C802_22.2 P160 BN160L4**	158
76	1798	1.2	19.3	15600	**C702_19.3 S5 M5SB4**	154	**C702_19.3 P160 BN160L4**	155
81	1683	2.2	18.1	25800	**C802_18.1 S5 M5SB4**	157	**C802_18.1 P160 BN160L4**	158
92	1485	0.9	15.9	9350	**C612_15.9 S5 M5SB4**	150	**C612_15.9 P160 BN160L4**	151
95	1429	1.5	15.3	15400	**C702_15.3 S5 M5SB4**	154	**C702_15.3 P160 BN160L4**	155
98	1390	2.7	14.9	25000	**C802_14.9 S5 M5SB4**	157	**C802_14.9 P160 BN160L4**	158
102	1337	1.0	14.3	9280	**C612_14.3 S5 M5SB4**	150	**C612_14.3 P160 BN160L4**	151
112	1215	1.7	13.0	15200	**C702_13.0 S5 M5SB4**	154	**C702_13.0 P160 BN160L4**	155
121	1127	1.2	12.1	9270	**C612_12.1 S5 M5SB4**	150	**C612_12.1 P160 BN160L4**	151
121	1120	3.3	12.0	24000	**C802_12.0 S5 M5SB4**	157	**C802_12.0 P160 BN160L4**	158
130	1045	2.1	11.2	14700	**C702_11.2 S5 M5SB4**	154	**C702_11.2 P160 BN160L4**	155
134	1015	1.3	10.9	9140	**C612_10.9 S5 M5SB4**	150	**C612_10.9 P160 BN160L4**	151
149	915	1.5	9.8	9090	**C612_9.8 S5 M5SB4**	150	**C612_9.8 P160 BN160L4**	151
153	888	2.4	9.5	14400	**C702_9.5 S5 M5SB4**	154	**C702_9.5 P160 BN160L4**	155
165	824	1.6	8.8	8930	**C612_8.8 S5 M5SB4**	150	**C612_8.8 P160 BN160L4**	151
182	746	2.8	8.0	14200			**C702_8.0 P160 BN160L4**	155
195	698	1.9	7.5	8760	**C612_7.5 S5 M5SB4**	150	**C612_7.5 P160 BN160L4**	151
209	651	1.0	7.0	5810			**C512_7.0 P160 BN160L4**	147
217	628	2.1	6.7	8570	**C612_6.7 S5 M5SB4**	150	**C612_6.7 P160 BN160L4**	151
223	610	1.0	13.1	5760			**C512_13.1 P160 BN160MB2**	147
242	562	2.4	12.1	8430	**C612_12.1 S5 M5SB2**	150	**C612_12.1 P160 BN160MB2**	151
248	550	1.1	11.8	5720			**C512_11.8 P160 BN160MB2**	147
269	506	2.7	10.9	8230	**C612_10.9 S5 M5SB2**	150	**C612_10.9 P160 BN160MB2**	151
298	456	2.9	9.8	8090	**C612_9.8 S5 M5SB2**	150	**C612_9.8 P160 BN160MB2**	151
300	453	1.2	9.8	5570			**C512_9.8 P160 BN160MB2**	147

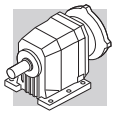


15 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
320	425	1.6	4.6	7690	**C612_4.6 S5 M5SB4**	150	**C612_4.6 P160 BN160L4**	151
328	415	1.0	4.5	5170			**C512_4.5 P160 BN160L4**	147
331	411	3.2	8.8	7880	**C612_8.8 S5 M5SB2**	150	**C612_8.8 P160 BN160MB2**	151
333	408	1.3	8.8	5490			**C512_8.8 P160 BN160MB2**	147
378	360	1.4	7.8	5370			**C512_7.8 P160 BN160MB2**	147
395	345	1.9	3.7	7370	**C612_3.7 S5 M5SB4**	150	**C612_3.7 P160 BN160L4**	151
419	325	1.5	7.0	5280			**C512_7.0 P160 BN160MB2**	147
441	308	1.4	3.3	4970			**C512_3.3 P160 BN160L4**	147
488	279	2.4	6.0	7030	**C612_6.0 S5 M5SB2**	150	**C612_6.0 P160 BN160MB2**	151
518	263	2.5	2.8	6940	**C612_2.8 S5 M5SB4**	150	**C612_2.8 P160 BN160L4**	151
520	262	1.6	5.6	4840			**C512_5.6 P160 BN160MB2**	147
555	245	1.6	2.6	4780			**C512_2.6 P160 BN160L4**	147
643	212	3.1	4.6	6580	**C612_4.6 S5 M5SB2**	150	**C612_4.6 P160 BN160MB2**	151
658	207	2.1	4.5	4630			**C512_4.5 P160 BN160MB2**	147
886	154	2.7	3.3	4330			**C512_3.3 P160 BN160MB2**	147
1115	122	3.3	2.6	4100			**C512_2.6 P160 BN160MB2**	147

18.5 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
13.0	12594	1.0	111.9	76600	**C1003_111.9 S5 M5LA4**	163	**C1003_111.9 P180 BN180M4**	164
15.8	10429	1.2	92.7	76700	**C1003_92.7 S5 M5LA4**	163	**C1003_92.7 P180 BN180M4**	164
21.0	7813	1.5	69.4	75400	**C1003_69.4 S5 M5LA4**	163	**C1003_69.4 P180 BN180M4**	164
22.6	7268	1.0	64.6	40300	**C903_64.6 S5 M5LA4**	160	**C903_64.6 P180 BN180M4**	161
26.6	6175	1.2	54.9	40700	**C903_54.9 S5 M5LA4**	160	**C903_54.9 P180 BN180M4**	161
27.4	5993	2.0	53.3	73100	**C1003_53.3 S5 M5LA4**	163	**C1003_53.3 P180 BN180M4**	164
34	4837	1.5	43.0	40600	**C903_43.0 S5 M5LA4**	160	**C903_43.0 P180 BN180M4**	161
34	4831	2.5	42.9	70800	**C1003_42.9 S5 M5LA4**	163	**C1003_42.9 P180 BN180M4**	164
42	4035	1.3	35.1	39800	**C902_35.1 S5 M5LA4**	160	**C902_35.1 P180 BN180M4**	161
43	3860	3.0	34.3	68100	**C1003_34.3 S5 M5LA4**	163	**C1003_34.3 P180 BN180M4**	164
50	3384	1.7	29.4	39100	**C902_29.4 S5 M5LA4**	160	**C902_29.4 P180 BN180M4**	161
56	2983	1.2	25.9	25300	**C802_25.9 S5 M5LA4**	157	**C802_25.9 P180 BN180M4**	158
66	2557	1.4	22.2	25100	**C802_22.2 S5 M5LA4**	157	**C802_22.2 P180 BN180M4**	158
76	2217	0.9	19.3	14100	**C702_19.3 S5 M5LA4**	154	**C702_19.3 P180 BN180M4**	155
87	1920	1.1	16.7	13800	**C702_16.7 S5 M5LA4**	154	**C702_16.7 P180 BN180M4**	155
88	1916	1.8	16.7	24400	**C802_16.7 S5 M5LA4**	157	**C802_16.7 P180 BN180M4**	158
104	1620	1.3	14.1	13900	**C702_14.1 S5 M5LA4**	154	**C702_14.1 P180 BN180M4**	155
106	1582	2.2	13.8	23700	**C802_13.8 S5 M5LA4**	157	**C802_13.8 P180 BN180M4**	158
121	1390	1.0	12.1	8420	**C612_12.1 S5 M5LA4**	150	**C612_12.1 P180 BN180M4**	151
130	1289	1.7	11.2	13800	**C702_11.2 S5 M5LA4**	154	**C702_11.2 P180 BN180M4**	155
132	1275	2.7	11.1	22900	**C802_11.1 S5 M5LA4**	157	**C802_11.1 P180 BN180M4**	158
134	1252	1.1	10.9	8360	**C612_10.9 S5 M5LA4**	150	**C612_10.9 P180 BN180M4**	151
149	1129	1.2	9.8	8400	**C612_9.8 S5 M5LA4**	150	**C612_9.8 P180 BN180M4**	151
153	1095	2.0	9.5	13600	**C702_9.5 S5 M5LA4**	154	**C702_9.5 P180 BN180M4**	155
165	1019	3.4	8.9	21900	**C802_8.9 S5 M5LA4**	157	**C802_8.9 P180 BN180M4**	158
165	1016	1.3	8.8	8300	**C612_8.8 S5 M5LA4**	150	**C612_8.8 P180 BN180M4**	151
195	860	1.6	7.5	8230	**C612_7.5 S5 M5LA4**	150	**C612_7.5 P180 BN180M4**	151
217	775	1.7	6.7	8090	**C612_6.7 S5 M5LA4**	150	**C612_6.7 P180 BN180M4**	151

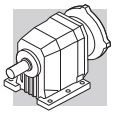


18.5 kW

n_2 min-1	M_2 Nm	S	i	R_{n2} N			IEC	
233	719	2.7	6.3	13100			**C702_6.3 P180 BN180M4**	155
243	690	1.0	6.0	7550	**C612_6.0 S5 M5LA4**	150	**C612_6.0 P180 BN180M4**	151
250	673	2.8	5.9	12800			**C702_5.9 P180 BN180M4**	155
269	624	2.2	10.9	7840	**C612_10.9 S5 M5SC2**	150	**C612_10.9 P160BN160L2**	151
298	562	2.4	9.8	7740	**C612_9.8 S5 M5SC2**	150	**C612_9.8 P160BN160L2**	151
300	559	1.0	9.8	5190			**C512_9.8 P160BN160L2**	147
319	526	3.2	4.6	12300			**C702_4.6 P180 BN180M4**	155
320	524	1.3	4.6	7300	**C612_4.6 S5 M5LA4**	150	**C612_4.6 P180 BN180M4**	151
331	507	2.6	8.8	7570	**C612_8.8 S5 M5SC2**	150	**C612_8.8 P160BN160L2**	151
333	504	1.1	8.8	5160			**C512_8.8 P160BN160L2**	147
378	444	1.1	7.8	5070			**C512_7.8 P160BN160L2**	147
391	429	2.9	7.5	7350	**C612_7.5 S5 M5SC2**	150	**C612_7.5 P160BN160L2**	151
395	425	1.6	3.7	7060	**C612_3.7 S5 M5LA4**	150	**C612_3.7 P180 BN180M4**	151
419	400	1.2	7.0	5010			**C512_7.0 P160BN160L2**	147
435	386	3.1	6.7	7170	**C612_6.7 S5 M5SC2**	150	**C612_6.7 P160BN160L2**	151
441	380	1.1	3.3	4660			**C512_3.3 P180 BN180M4**	147
488	344	1.9	6.0	6780	**C612_6.0 S5 M5SC2**	150	**C612_6.0 P160BN160L2**	151
518	324	2.1	2.8	6700	**C612_2.8 S5 M5LA4**	150	**C612_2.8 P180 BN180M4**	151
520	323	1.3	5.6	4580			**C512_5.6 P160BN160L2**	147
555	302	1.3	2.6	4540			**C512_2.6 P180 BN180M4**	147
643	261	2.5	4.6	6390	**C612_4.6 S5 M5SC2**	150	**C612_4.6 P160BN160L2**	151
658	255	1.7	4.5	4420			**C512_4.5 P160BN160L2**	147
792	212	3.1	3.7	6080	**C612_3.7 S5 M5SC2**	150	**C612_3.7 P160BN160L2**	151
886	189	2.2	3.3	4180			**C512_3.3 P160BN160L2**	147
1115	151	2.7	2.6	3980			**C512_2.6 P160BN160L2**	147

22 kW

n_2 min-1	M_2 Nm	S	i	R_{n2} N			IEC	
14.7	13266	0.9	99.8	70600			**C1003_99.8 P180 BN180L4**	164
18.5	10560	1.1	79.4	71200			**C1003_79.4 P180 BN180L4**	164
24.8	7869	0.9	59.2	36700			**C903_59.2 P180 BN180L4**	161
25.6	7623	1.6	57.4	70300			**C1003_57.4 P180 BN180L4**	164
29.2	6686	1.1	50.3	37400			**C903_50.3 P180 BN180L4**	161
32	6144	2.0	46.2	68800			**C1003_46.2 P180 BN180L4**	164
40	4909	2.4	36.9	66700			**C1003_36.9 P180 BN180L4**	164
42	4766	1.1	35.1	37400			**C902_35.1 P180 BN180L4**	161
50	4013	2.3	29.6	64100			**C1002_29.6 P180 BN180L4**	164
50	3997	1.5	29.4	37100			**C902_29.4 P180 BN180L4**	161
61	3252	1.1	24.0	23700			**C802_24.0 P180 BN180L4**	158
64	3112	2.0	22.9	36400			**C902_22.9 P180 BN180L4**	161
81	2451	1.5	18.1	23300			**C802_18.1 P180 BN180L4**	158
85	2350	2.8	17.3	34900			**C902_17.3 P180 BN180L4**	161
88	2268	0.9	16.7	12400			**C702_16.7 P180 BN180L4**	155
99	2025	1.8	14.9	22900			**C802_14.9 P180 BN180L4**	158
104	1914	1.1	14.1	12700			**C702_14.1 P180 BN180L4**	155
106	1881	3.2	13.9	33700			**C902_13.9 P180 BN180L4**	161
131	1522	1.4	11.2	12900			**C702_11.2 P180 BN180L4**	155

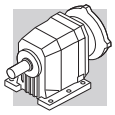


22 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
133	1506	2.3	11.1	22100			**C802_11.1 P180 BN180L4**	158
135	1478	0.9	10.9	7580			**C612_10.9 P180 BN180L4**	151
150	1333	1.0	9.8	7710			**C612_9.8 P180 BN180L4**	151
154	1293	1.7	9.5	12800			**C702_9.5 P180 BN180L4**	155
166	1204	2.9	8.9	21300			**C802_8.9 P180 BN180L4**	158
166	1201	1.1	8.8	7660			**C612_8.8 P180 BN180L4**	151
184	1085	1.2	15.9	7710			**C612_15.9 P180 BN180M2**	151
196	1016	1.3	7.5	7690			**C612_7.5 P180 BN180L4**	151
197	1013	2.0	7.5	12700			**C702_7.5 P180 BN180L4**	155
209	956	3.5	7.0	20400			**C802_7.0 P180 BN180L4**	158
218	915	1.5	6.7	7600			**C612_6.7 P180 BN180L4**	151
251	794	2.4	5.9	12300			**C702_5.9 P180 BN180L4**	155
269	742	1.8	10.9	7460			**C612_10.9 P180 BN180M2**	151
298	669	2.0	9.8	7390			**C612_9.8 P180 BN180M2**	151
322	621	2.7	4.6	11900			**C702_4.6 P180 BN180L4**	155
323	619	1.1	4.6	6910			**C612_4.6 P180 BN180L4**	151
331	602	2.2	8.8	7250			**C612_8.8 P180 BN180M2**	151
333	599	0.9	8.8	4820			**C512_8.8 P180 BN180M2**	147
378	528	1.0	7.8	4770			**C512_7.8 P180 BN180M2**	147
391	510	2.4	7.5	7080			**C612_7.5 P180 BN180M2**	151
397	502	1.3	3.7	6740			**C612_3.7 P180 BN180L4**	151
419	476	1.1	7.0	4740			**C512_7.0 P180 BN180M2**	147
435	459	2.6	6.7	6920			**C612_6.7 P180 BN180M2**	151
444	449	0.9	3.3	4350			**C512_3.3 P180 BN180L4**	147
488	409	1.6	6.0	6530			**C612_6.0 P180 BN180M2**	151
520	384	1.1	5.6	4310			**C512_5.6 P180 BN180M2**	147
521	383	1.7	2.8	6450			**C612_2.8 P180 BN180L4**	151
559	357	1.1	2.6	4290			**C512_2.6 P180 BN180L4**	147
643	310	2.1	4.6	6200			**C612_4.6 P180 BN180M2**	151
658	303	1.4	4.5	4210			**C512_4.5 P180 BN180M2**	147
792	252	2.6	3.7	5930			**C612_3.7 P180 BN180M2**	151
886	225	1.9	3.3	4030			**C512_3.3 P180 BN180M2**	147
1039	192	3.5	2.8	5560			**C612_2.8 P180 BN180M2**	151
1115	179	2.2	2.6	3860			**C512_2.6 P180 BN180M2**	147

30 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
21.2	12584	1.0	69.4	61300			**C1003_69.4 P200 BN200L4**	164
25.6	10395	1.2	57.4	62200			**C1003_57.4 P200 BN200L4**	164
32	8379	1.4	46.2	62300			**C1003_46.2 P200 BN200L4**	164
37	7142	1.0	39.4	31900			**C903_39.4 P200 BN200L4**	161
50	5472	1.7	29.6	59800			**C1002_29.6 P200 BN200L4**	164
50	5450	1.1	29.4	32600			**C902_29.4 P200 BN200L4**	161
64	4243	1.5	22.9	32900			**C902_22.9 P200 BN200L4**	161
66	4119	2.4	22.2	57700			**C1002_22.2 P200 BN200L4**	164
79	3459	1.8	18.7	32600			**C902_18.7 P200 BN200L4**	161
79	3456	3.1	18.7	56000			**C1002_18.7 P200 BN200L4**	164



30 kW

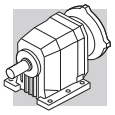
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
99	2761	1.3	14.9	20600			**C802_14.9 P200 BN200L4**	158
106	2566	2.4	13.9	31500			**C902_13.9 P200 BN200L4**	161
122	2225	1.7	12.0	20500			**C802_12.0 P200 BN200L4**	158
131	2079	2.7	11.2	30600			**C902_11.2 P200 BN200L4**	161
153	1778	2.1	9.6	20100			**C802_9.6 P200 BN200L4**	158
154	1763	1.2	9.5	11000			**C702_9.5 P200 BN200L4**	155
184	1482	1.4	8.0	11600			**C702_8.0 P200 BN200L4**	155
193	1412	2.4	7.6	19500			**C802_7.6 P200 BN200L4**	158
209	1303	2.6	7.0	19300			**C802_7.0 P200 BN200L4**	158
235	1158	1.7	6.3	11500			**C702_6.3 P200 BN200L4**	155
241	1131	2.8	6.1	18900			**C802_6.1 P200 BN200L4**	158
261	1044	3.0	5.6	18600			**C802_5.6 P200 BN200L4**	158
322	846	2.0	4.6	11000			**C702_4.6 P200 BN200L4**	155

37 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
25.8	12734	0.9	57.4	55300			**C1003_57.4 P225 BN225S4**	164
32	10264	1.2	46.2	56600			**C1003_46.2 P225 BN225S4**	164
40	8201	1.4	36.9	57000			**C1003_36.9 P225 BN225S4**	164
60	5631	1.2	24.8	29500			**C902_24.8 P225 BN225S4**	161
61	5467	2.0	24.1	55200			**C1002_24.1 P225 BN225S4**	164
79	4237	1.5	18.7	30100			**C902_18.7 P225 BN225S4**	161
79	4234	2.5	18.7	53600			**C1002_18.7 P225 BN225S4**	164
89	3779	0.9	16.7	18500			**C802_16.7 P225 BN225S4**	158
107	3143	1.9	13.9	29700			**C902_13.9 P225 BN225S4**	161
108	3122	1.1	13.8	18800			**C802_13.8 P225 BN225S4**	158
123	2726	1.4	12.0	18800			**C802_12.0 P225 BN225S4**	158
132	2546	2.2	11.2	29100			**C902_11.2 P225 BN225S4**	161
154	2178	1.7	9.6	18800			**C802_9.6 P225 BN225S4**	158
164	2046	2.5	9.0	28300			**C902_9.0 P225 BN225S4**	161
194	1730	2.0	7.6	18500			**C802_7.6 P225 BN225S4**	158
202	1661	2.9	7.3	27400			**C902_7.3 P225 BN225S4**	161
242	1386	2.3	6.1	18000			**C802_6.1 P225 BN225S4**	158
264	1271	3.5	5.6	26100			**C902_5.6 P225 BN225S4**	161
286	1173	3.7	5.2	25700			**C902_5.2 P225 BN225S4**	161

45 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
32	12483	1.0	46.2	50200			**C1003_46.2 P225 BN225M4**	164
40	9974	1.2	36.9	51900			**C1003_36.9 P225 BN225M4**	164
50	8153	1.1	29.6	51900			**C1002_29.6 P225 BN225M4**	164
65	6322	1.0	22.9	26400			**C902_22.9 P225 BN225M4**	161
67	6137	1.6	22.2	51700			**C1002_22.2 P225 BN225M4**	164



45 kW

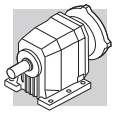
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
79	5153	1.2	18.7	27200			**C902_18.7 P225 BN225M4**	161
79	5149	2.1	18.7	51000			**C1002_18.7 P225 BN225M4**	164
107	3822	1.6	13.9	27600			**C902_13.9 P225 BN225M4**	161
108	3797	0.9	13.8	16700			**C802_13.8 P225 BN225M4**	158
123	3315	1.1	12.0	17000			**C802_12.0 P225 BN225M4**	158
132	3097	1.8	11.2	27400			**C902_11.2 P225 BN225M4**	161
154	2649	1.4	9.6	17300			**C802_9.6 P225 BN225M4**	158
164	2488	2.1	9.0	26900			**C902_9.0 P225 BN225M4**	161
194	2104	1.6	7.6	17300			**C802_7.6 P225 BN225M4**	158
202	2020	2.4	7.3	26300			**C902_7.3 P225 BN225M4**	161
262	1556	2.0	5.6	17000			**C802_5.6 P225 BN225M4**	158
264	1546	2.8	5.6	25200			**C902_5.6 P225 BN225M4**	161
279	1464	2.9	5.2	25200			**C902_5.2 P225 BN225M4**	161

55 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
40	12191	1.0	36.9	45400			**C1003_36.9 P250 BN250M4**	164
50	9965	0.9	29.6	46700			**C1002_29.6 P250 BN250M4**	164
61	8126	1.3	24.1	47500			**C1002_24.1 P250 BN250M4**	164
79	6298	1.0	18.7	22200			**C902_18.7 P250 BN250M4**	161
79	6294	1.7	18.7	47700			**C1002_18.7 P250 BN250M4**	164
107	4672	1.3	13.9	24900			**C902_13.9 P250 BN250M4**	161
110	4549	2.1	13.5	46500			**C1002_13.5 P250 BN250M4**	164
135	3686	2.4	10.9	45400			**C1002_10.9 P250 BN250M4**	164
164	3050	2.7	9.0	44100			**C1002_9.0 P250 BN250M4**	164
164	3041	1.7	9.0	25200			**C902_9.0 P250 BN250M4**	161
202	2468	2.0	7.3	24900			**C902_7.3 P250 BN250M4**	161
209	2383	3.2	7.1	42300			**C1002_7.1 P250 BN250M4**	164
264	1889	2.3	5.6	24200			**C902_5.6 P250 BN250M4**	161
286	1744	2.5	5.2	24000			**C902_5.2 P250 BN250M4**	161

75 kW

n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
62	11044	1.0	24.1	38100			**C1002_ 24.1 P280 BN280S4**	164
67	10194	1.0	22.2	40000			**C1002_ 22.2 P280 BN280S4**	164
73	9266	1.2	20.2	40500			**C1002_ 20.2 P280 BN280S4**	164
80	8553	1.3	18.7	41100			**C1002_ 18.7 P280 BN280S4**	164
90	7552	1.3	16.5	41400			**C1002_ 16.5 P280 BN280S4**	164
98	6971	1.4	15.2	41800			**C1002_ 15.2 P280 BN280S4**	164
110	6182	1.5	13.5	41700			**C1002_ 13.5 P280 BN280S4**	164
119	5707	1.6	12.5	41800			**C1002_ 12.5 P280 BN280S4**	164
136	5010	1.8	10.9	41500			**C1002_ 10.9 P280 BN280S4**	164
147	4624	1.9	10.1	41400			**C1002_ 10.1 P280 BN280S4**	164



75 kW

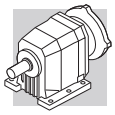
n_2 min^{-1}	M_2 Nm	S	i	R_{n2} N			IEC	
164	4146	2.0	9.0	40900			**C1002_ 9.0 P280 BN280S4**	164
178	3827	2.1	8.4	40600			**C1002_ 8.4 P280 BN280S4**	164
210	3238	2.4	7.1	39700			**C1002_ 7.1 P280 BN280S4**	164
228	2989	2.5	6.5	39300			**C1002_ 6.5 P280 BN280S4**	164
278	2444	2.8	5.3	38100			**C1002_ 5.3 P280 BN280S4**	164
302	2256	3.0	4.9	37600			**C1002_ 4.9 P280 BN280S4**	164

90 kW

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

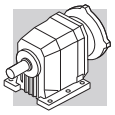
C 12 — 100 Nm

	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 12 2_2.8	2.8	1012	30	3.3	750	600	506	37	2.1	990	790	129
C 12 2_3.2	3.2	873	32	3.1	730	600	436	40	1.9	960	790	
C 12 2_3.7	3.7	767	34	2.9	720	610	383	42	1.8	960	800	
C 12 2_4.3	4.3	649	36	2.6	710	630	325	45	1.6	890	800	
C 12 2_4.9	4.9	575	38	2.4	710	640	288	48	1.5	880	800	
C 12 2_5.6	5.6	500	40	2.2	680	650	250	51	1.4	840	810	
C 12 2_6.2	6.2	449	42	2.1	650	660	225	53	1.3	810	830	
C 12 2_7.6	7.6	367	45	1.8	1140	1220	184	56	1.1	1300	1540	
C 12 2_8.8	8.8	317	47	1.6	1140	1280	158	59	1.0	1300	1620	
C 12 2_10.1	10.1	278	49	1.5	1150	1340	139	63	0.97	1300	1680	
C 12 2_11.9	11.9	236	53	1.4	1140	1390	118	67	0.87	1300	1760	
C 12 2_13.4	13.4	209	55	1.3	1140	1460	104	70	0.81	1300	1840	
C 12 2_15.4	15.4	182	58	1.2	1130	1500	91	73	0.73	1300	1930	
C 12 2_17.2	17.2	163	60	1.1	1130	1590	82	76	0.68	1300	2000	
C 12 2_18.4	18.4	152	62	1.0	1120	1620	76	78	0.65	1300	2000	
C 12 2_20.6	20.6	136	65	1.0	1110	1670	68	82	0.61	1300	2000	
C 12 2_23.2	23.2	120	67	0.89	1110	1720	60	85	0.56	1300	2000	
C 12 2_25.4	25.4	110	69	0.84	1110	1800	55	88	0.54	1300	2000	
C 12 2_29.5	29.5	95	74	0.77	1100	1880	47	93	0.49	1300	2000	
C 12 2_32.8	32.8	85	75	0.71	1090	1970	43	90	0.42	1300	2000	
C 12 2_37.0	37.0	76	79	0.66	1070	2000	38	90	0.38	1300	2000	
C 12 2_42.3	42.3	66	84	0.61	1060	2000	33	100	0.36	1300	2000	
C 12 2_47.6	47.6	59	85	0.55	1050	2000	29.4	90	0.29	1300	2000	
C 12 2_55.2	55.2	51	89	0.50	1030	2000	25.4	90	0.25	1300	2000	
C 12 2_66.2	66.2	42	86	0.40	1060	2000	21.2	90	0.21	1300	2000	



C 12 — 100 Nm

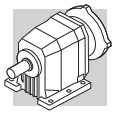
	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 12 2_2.8	2.8	325	43	1.5	1140	910	181	53	1.1	1300	1080	
C 12 2_3.2	3.2	281	46	1.4	1100	910	156	57	1.0	1300	1080	
C 12 2_3.7	3.7	246	49	1.3	1090	920	137	60	0.91	1300	1100	
C 12 2_4.3	4.3	209	52	1.2	1050	920	116	64	0.82	1280	1100	
C 12 2_4.9	4.9	185	55	1.1	1050	960	103	67	0.76	1280	1160	
C 12 2_5.6	5.6	161	58	1.0	1000	980	89	69	0.68	1300	1280	
C 12 2_6.2	6.2	144	61	1.0	960	980	80	70	0.62	1300	1390	
C 12 2_7.6	7.6	118	65	0.85	1300	1780	66	79	0.57	1300	2000	
C 12 2_8.8	8.8	102	69	0.77	1300	1830	57	84	0.52	1300	2000	
C 12 2_10.1	10.1	89	72	0.71	1300	1950	50	88	0.48	1300	2000	
C 12 2_11.9	11.9	76	77	0.64	1300	2000	42	89	0.41	1300	2000	
C 12 2_13.4	13.4	67	81	0.60	1300	2000	37	90	0.37	1300	2000	
C 12 2_15.4	15.4	58	85	0.55	1300	2000	32	89	0.32	1300	2000	129
C 12 2_17.2	17.2	52	88	0.51	1300	2000	29.1	90	0.29	1300	2000	
C 12 2_18.4	18.4	49	88	0.47	1300	2000	27.2	89	0.27	1300	2000	
C 12 2_20.6	20.6	44	89	0.43	1300	2000	24.2	89	0.24	1300	2000	
C 12 2_23.2	23.2	39	89	0.38	1300	2000	21.5	89	0.21	1300	2000	
C 12 2_25.4	25.4	35	89	0.35	1300	2000	19.7	89	0.19	1300	2000	
C 12 2_29.5	29.5	31	100	0.34	1300	2000	16.9	100	0.19	1300	2000	
C 12 2_32.8	32.8	27.5	90	0.27	1300	2000	15.3	90	0.15	1300	2000	
C 12 2_37.0	37.0	24.3	90	0.24	1300	2000	13.5	90	0.13	1300	2000	
C 12 2_42.3	42.3	21.3	100	0.23	1300	2000	11.8	100	0.13	1300	2000	
C 12 2_47.6	47.6	18.9	90	0.19	1300	2000	10.5	90	0.10	1300	2000	
C 12 2_55.2	55.2	16.3	90	0.16	1300	2000	9.1	90	0.09	1300	2000	
C 12 2_66.2	66.2	13.6	90	0.13	1300	2000	7.6	90	0.07	1300	2000	



C 22 — 200 Nm

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

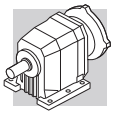
(—) Contact our technical service department advising radial load data (rotation direction, orientation, position)



C 22 — 200 Nm

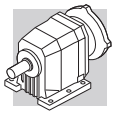
	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 22 2_2.7	2.7	331	95	3.5	—	1670	184	100	2.0	400	2150	
C 22 2_3.3	3.3	271	100	3.0	—	1760	150	103	1.7	570	2300	
C 22 2_3.7	3.7	243	105	2.8	—	1850	135	105	1.6	800	2430	
C 22 2_4.3	4.3	211	105	2.4	—	1980	117	105	1.4	940	2550	
C 22 2_4.8	4.8	189	105	2.2	170	2090	105	105	1.2	1200	2710	
C 22 2_5.6	5.6	161	105	1.9	200	2250	89	112	1.1	1020	2850	
C 22 2_6.1	6.1	148	110	1.8	200	2290	82	116	1.1	980	2930	
C 22 2_7.1	7.1	127	150	2.1	1650	2310	71	180	1.4	2060	2820	
C 22 2_8.7	8.7	104	160	1.8	1650	2440	58	190	1.2	2100	3000	
C 22 2_9.6	9.6	93	170	1.7	1650	2530	52	200	1.1	2130	3130	
C 22 2_11.1	11.1	81	176	1.6	1640	2650	45	200	0.99	2170	3270	
C 22 2_12.4	12.4	73	185	1.5	1650	2760	40	200	0.89	2200	3520	
C 22 2_14.5	14.5	62	193	1.3	1610	2850	34	200	0.76	2200	3670	
C 22 2_15.8	15.8	57	200	1.3	1580	2990	32	200	0.70	2200	3920	
C 22 2_18.1	18.1	50	200	1.1	1650	3150	27.6	200	0.61	2200	4200	
C 22 2_20.0	20.0	45	200	0.99	1750	3340	25.0	200	0.55	2200	4350	
C 22 2_21.5	21.5	42	200	0.92	1760	3450	23.3	200	0.51	2200	4550	
C 22 2_24.3	24.3	37	200	0.82	1900	3650	20.6	200	0.45	2200	4720	
C 22 2_27.2	27.2	33	200	0.73	1950	3820	18.4	200	0.41	2200	5000	
C 22 2_29.6	29.6	30	200	0.67	1980	3990	16.9	200	0.37	2200	5000	
C 22 2_33.1	33.1	27.2	200	0.60	1970	4200	15.1	200	0.33	2200	5000	133
C 22 2_36.8	36.8	24.5	200	0.54	1990	4390	13.6	200	0.30	2200	5000	
C 22 2_43.3	43.3	20.8	190	0.44	2020	4770	11.6	190	0.24	2200	5000	
C 22 2_48.6	48.6	18.5	160	0.33	2050	5000	10.3	170	0.19	2200	5000	
C 22 2_54.7	54.7	16.4	160	0.29	2090	5000	9.1	170	0.17	2200	5000	
C 22 2_63.3	63.3	14.2	135	0.21	2140	5000	7.9	140	0.12	2200	5000	
C 22 3_60.0	60.0	15.0	190	0.31	1300	5000	8.3	200	0.18	1300	5000	
C 22 3_65.3	65.3	13.8	200	0.31	1300	5000	7.7	200	0.17	1300	5000	
C 22 3_74.8	74.8	12.0	200	0.27	1300	5000	6.7	200	0.15	1300	5000	
C 22 3_82.6	82.6	10.9	200	0.25	1300	5000	6.1	200	0.14	1300	5000	
C 22 3_88.5	88.5	10.2	200	0.22	1300	5000	5.6	200	0.12	1300	5000	
C 22 3_100.2	100.2	9.0	200	0.20	1300	5000	5.0	200	0.11	1300	5000	
C 22 3_112.0	112.0	8.0	200	0.18	1300	5000	4.5	200	0.10	1300	5000	
C 22 3_122.2	122.2	7.4	200	0.17	1300	5000	4.1	200	0.09	1300	5000	
C 22 3_136.5	136.5	6.6	200	0.15	1300	5000	3.7	200	0.08	1300	5000	
C 22 3_151.7	151.7	5.9	200	0.13	1300	5000	3.3	200	0.07	1300	5000	
C 22 3_178.5	178.5	5.0	200	0.11	1300	5000	2.8	200	0.06	1300	5000	
C 22 3_200.7	200.7	4.5	195	0.10	1300	5000	2.5	200	0.05	1300	5000	
C 22 3_225.8	225.8	4.0	195	0.09	1300	5000	2.2	200	0.05	1300	5000	
C 22 3_261.0	261.0	3.4	160	0.06	1300	5000	1.9	165	0.04	1300	5000	

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



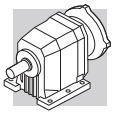
C 32 — 300 Nm

	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 32 2_2.9	2.9	973	105	11.3	670	1710	486	130	7.0	940	2170	
C 32 2_3.4	3.4	821	116	10.5	480	1770	411	138	6.2	900	2280	
C 32 2_3.7	3.7	750	120	9.9	560	1830	375	150	6.2	750	2310	
C 32 2_4.5	4.5	622	129	8.8	450	1930	311	152	5.2	970	2500	
C 32 2_5.0	5.0	565	135	8.4	470	1990	283	155	4.8	1100	2600	
C 32 2_5.7	5.7	495	141	7.7	380	2080	248	155	4.2	1250	2760	
C 32 2_6.3	6.3	447	150	7.4	300	2130	223	155	3.8	1450	2890	
C 32 2_7.2	7.2	391	160	6.9	1890	2370	195	200	4.3	2200	2990	
C 32 2_8.5	8.5	330	168	6.1	1900	2510	165	209	3.8	2200	3180	
C 32 2_9.3	9.3	301	175	5.8	1910	2580	151	220	3.7	2200	3260	
C 32 2_11.2	11.2	250	187	5.2	1910	2740	125	231	3.2	2200	3480	
C 32 2_12.3	12.3	227	195	4.9	1910	2820	114	245	3.1	2200	3560	
C 32 2_14.1	14.1	199	205	4.5	1900	2940	99	251	2.8	2200	3750	
C 32 2_15.6	15.6	180	215	4.3	1900	3030	90	270	2.7	2200	3820	
C 32 2_18.2	18.2	154	223	3.8	1900	3210	77	275	2.3	2200	4070	
C 32 2_20.1	20.1	139	235	3.6	1900	3290	70	295	2.3	2200	4160	
C 32 2_22.9	22.9	122	240	3.2	1880	3470	61	295	2.0	2200	4400	
C 32 2_25.1	25.1	111	250	3.1	1890	3560	56	300	1.8	2200	4570	
C 32 2_26.9	26.9	104	255	2.9	1880	3650	52	300	1.7	2200	4700	
C 32 2_29.8	29.8	94	265	2.7	1880	3770	47	300	1.6	2200	4920	
C 32 2_33.1	33.1	85	270	2.5	1880	3920	42	300	1.4	2200	5150	137
C 32 2_36.1	36.1	78	280	2.4	1870	4030	39	300	1.3	2200	5350	
C 32 2_40.7	40.7	69	290	2.2	1860	4200	34	300	1.1	2200	5500	
C 32 2_45.3	45.3	62	300	2.0	1860	4360	31	300	1.0	2200	5500	
C 32 2_52.4	52.4	53	300	1.8	1860	4650	26.7	300	0.88	2200	5500	
C 32 2_59.4	59.4	47	205	1.1	2020	5000	23.6	215	0.56	2200	5500	
C 32 2_66.8	66.8	42	205	0.95	2020	5500	21.0	215	0.50	2200	5500	
C 32 3_74.7	74.7	37	280	1.2	750	5500	18.7	290	0.60	1170	5500	
C 32 3_82.6	82.6	34	300	1.1	820	5500	17.0	300	0.56	1240	5500	
C 32 3_94.2	94.2	29.7	300	0.98	900	5500	14.9	300	0.49	1270	5500	
C 32 3_103.3	103.3	27.1	300	0.90	980	5500	13.6	300	0.45	1300	5500	
C 32 3_110.6	110.6	25.3	300	0.84	1000	5500	12.7	300	0.42	1300	5500	
C 32 3_122.4	122.4	22.9	300	0.76	1060	5500	11.4	300	0.38	1300	5500	
C 32 3_136.0	136.0	20.6	300	0.68	1110	5500	10.3	300	0.34	1300	5500	
C 32 3_148.4	148.4	18.9	300	0.62	1130	5500	9.4	300	0.31	1300	5500	
C 32 3_167.4	167.4	16.7	300	0.55	1180	5500	8.4	300	0.28	1300	5500	
C 32 3_186.0	186.0	15.1	300	0.50	1200	5500	7.5	300	0.25	1300	5500	
C 32 3_215.6	215.6	13.0	300	0.43	1240	5500	6.5	300	0.21	1300	5500	
C 32 3_244.2	244.2	11.5	240	0.30	1280	5500	5.7	255	0.16	1300	5500	
C 32 3_274.7	274.7	10.2	240	0.27	1300	5500	5.1	255	0.14	1300	5500	



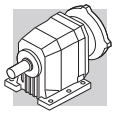
C 32 — 300 Nm

	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 32 2_2.9	2.9	313	150	5.2	1120	2510	174	155	3.0	2200	3220	
C 32 2_3.4	3.4	264	152	4.4	1390	2690	147	167	2.7	2200	3390	
C 32 2_3.7	3.7	241	155	4.1	1570	2790	134	175	2.6	2200	3480	
C 32 2_4.5	4.5	200	158	3.5	1750	3010	111	188	2.3	2200	3690	
C 32 2_5.0	5.0	182	162	3.2	1870	3120	101	198	2.2	2200	3790	
C 32 2_5.7	5.7	159	171	3.0	1730	3250	88	198	1.9	2200	4010	
C 32 2_6.3	6.3	144	178	2.8	1730	3350	80	200	1.8	2200	4180	
C 32 2_7.2	7.2	126	235	3.3	2200	3450	70	285	2.2	2200	4200	
C 32 2_8.5	8.5	106	246	2.9	2200	3660	59	288	1.9	2200	4520	
C 32 2_9.3	9.3	97	260	2.8	2200	3750	54	300	1.8	2200	4640	
C 32 2_11.2	11.2	80	272	2.4	2200	4010	45	300	1.5	2200	5030	
C 32 2_12.3	12.3	73	285	2.3	2200	4120	41	300	1.3	2200	5250	
C 32 2_14.1	14.1	64	290	2.0	2200	4340	36	300	1.2	2200	5500	
C 32 2_15.6	15.6	58	300	1.9	2200	4500	32	300	1.1	2200	5500	
C 32 2_18.2	18.2	50	300	1.6	2200	4810	27.5	300	0.91	2200	5500	
C 32 2_20.1	20.1	45	300	1.5	2200	5030	24.9	300	0.82	2200	5500	
C 32 2_22.9	22.9	39	300	1.3	2200	5300	21.8	300	0.72	2200	5500	
C 32 2_25.1	25.1	36	300	1.2	2200	5500	19.9	300	0.66	2200	5500	
C 32 2_26.9	26.9	33	300	1.1	2200	5500	18.6	300	0.61	2200	5500	
C 32 2_29.8	29.8	30	300	1.0	2200	5500	16.8	300	0.56	2200	5500	
C 32 2_33.1	33.1	27.2	300	0.90	2200	5500	15.1	300	0.50	2200	5500	137
C 32 2_36.1	36.1	24.9	300	0.82	2200	5500	13.9	300	0.46	2200	5500	
C 32 2_40.7	40.7	22.1	300	0.73	2200	5500	12.3	300	0.41	2200	5500	
C 32 2_45.3	45.3	19.9	300	0.66	2200	5500	11.0	300	0.37	2200	5500	
C 32 2_52.4	52.4	17.2	300	0.57	2200	5500	9.5	300	0.32	2200	5500	
C 32 2_59.4	59.4	15.2	220	0.37	2200	5500	8.4	230	0.21	2200	5500	
C 32 2_66.8	66.8	13.5	220	0.33	2200	5500	7.5	230	0.19	2200	5500	
C 32 3_74.7	74.7	12.0	290	0.38	1300	5500	6.7	300	0.22	1300	5500	
C 32 3_82.6	82.6	10.9	300	0.36	1300	5500	6.1	300	0.20	1300	5500	
C 32 3_94.2	94.2	9.6	300	0.32	1300	5500	5.3	300	0.18	1300	5500	
C 32 3_103.3	103.3	8.7	300	0.29	1300	5500	4.8	300	0.16	1300	5500	
C 32 3_110.6	110.6	8.1	300	0.27	1300	5500	4.5	300	0.15	1300	5500	
C 32 3_122.4	122.4	7.4	300	0.24	1300	5500	4.1	300	0.14	1300	5500	
C 32 3_136.0	136.0	6.6	300	0.22	1300	5500	3.7	300	0.12	1300	5500	
C 32 3_148.4	148.4	6.1	300	0.20	1300	5500	3.4	300	0.11	1300	5500	
C 32 3_167.4	167.4	5.4	300	0.18	1300	5500	3.0	300	0.10	1300	5500	
C 32 3_186.0	186.0	4.8	300	0.16	1300	5500	2.7	300	0.09	1300	5500	
C 32 3_215.6	215.6	4.2	300	0.14	1300	5500	2.3	300	0.08	1300	5500	
C 32 3_244.2	244.2	3.7	260	0.11	1300	5500	2.0	275	0.06	1300	5500	
C 32 3_274.7	274.7	3.3	260	0.09	1300	5500	1.8	275	0.06	1300	5500	



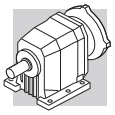
C 36 — 450 Nm

	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 36 2_2.7	2.7	1042	140	16.1	670	1750	521	170	9.8	1150	2240	
C 36 2_3.2	3.2	880	145	14.1	790	1870	440	177	8.6	1240	2380	
C 36 2_3.5	3.5	803	150	13.3	910	1920	402	185	8.2	1320	2440	
C 36 2_4.2	4.2	667	157	11.5	920	2050	333	192	7.1	1410	2620	
C 36 2_4.6	4.6	606	165	11.0	920	2110	303	200	6.7	1470	2700	
C 36 2_5.3	5.3	530	167	9.8	990	2230	265	200	5.8	1650	2870	
C 36 2_5.8	5.8	479	170	9.0	1160	2330	239	200	5.3	1990	3020	
C 36 2_6.8	6.8	413	285	13.0	1750	2130	206	355	8.1	2220	2710	
C 36 2_8.0	8.0	349	297	11.4	1770	2270	174	365	7.0	2250	2910	
C 36 2_8.8	8.8	318	310	10.9	1780	2330	159	380	6.7	2270	3000	
C 36 2_10.6	10.6	264	325	9.5	1790	2500	132	380	5.5	2320	3290	
C 36 2_11.7	11.7	240	340	9.0	1790	2560	120	380	5.0	2370	3460	
C 36 2_13.3	13.3	210	350	8.1	1800	2700	105	380	4.4	2400	3670	
C 36 2_14.8	14.8	190	360	7.5	1800	2810	95	380	4.0	2440	3890	
C 36 2_17.2	17.2	163	370	6.6	1810	3000	81	380	3.4	2460	4200	
C 36 2_19.0	19.0	147	380	6.2	1820	3110	74	380	3.1	2500	4400	
C 36 3_22.1	22.1	127	340	4.7	2300	3570	63	430	3.0	2900	4490	
C 36 3_26.2	26.2	107	355	4.2	2300	3790	53	440	2.6	2910	4810	
C 36 3_28.7	28.7	98	385	4.1	2300	3820	49	450	2.4	2930	4980	
C 36 3_34.6	34.6	81	400	3.6	2300	4100	40	450	2.0	2950	5420	
C 36 3_38.1	38.1	74	435	3.5	2300	4140	37	450	1.8	2970	5690	
C 36 3_43.5	43.5	64	440	3.1	2300	4450	32	450	1.6	2980	6050	
C 36 3_48.2	48.2	58	450	2.9	2310	4580	29.1	450	1.4	2990	6330	
C 36 3_56.2	56.2	50	450	2.5	2320	4970	24.9	450	1.2	2990	6500	
C 36 3_62.0	62.0	45	450	2.2	2330	5170	22.6	450	1.1	3000	6500	141
C 36 3_70.8	70.8	40	450	2.0	2340	5520	19.8	450	0.98	3000	6500	
C 36 3_77.6	77.6	36	450	1.8	2350	5740	18.0	450	0.90	3000	6500	
C 36 3_83.1	83.1	34	450	1.7	2350	5930	16.8	450	0.84	3000	6500	
C 36 3_91.9	91.9	30	450	1.5	2360	6200	15.2	450	0.76	3000	6500	
C 36 3_102.2	102.2	27.4	450	1.4	2360	6400	13.7	450	0.68	3000	6500	
C 36 3_111.5	111.5	25.1	450	1.2	2360	6500	12.6	450	0.62	3000	6500	
C 36 3_125.8	125.8	22.3	450	1.1	2370	6500	11.1	450	0.55	3000	6500	
C 36 3_139.8	139.8	20.0	450	0.99	2370	6500	10.0	450	0.50	3000	6500	
C 36 3_162.0	162.0	17.3	450	0.86	2380	6500	8.6	450	0.43	3000	6500	
C 36 3_183.5	183.5	15.3	450	0.76	2380	6500	7.6	450	0.38	3000	6500	
C 36 3_206.4	206.4	13.6	450	0.67	2380	6500	6.8	450	0.34	3000	6500	
C 36 4_230.9	230.9	12.1	450	0.60	1150	6500	6.1	450	0.30	1300	6500	
C 36 4_255.0	255.0	11.0	450	0.54	1190	6500	5.5	450	0.27	1300	6500	
C 36 4_290.9	290.9	9.6	450	0.48	1210	6500	4.8	450	0.24	1300	6500	
C 36 4_318.9	318.9	8.8	450	0.44	1230	6500	4.4	450	0.22	1300	6500	
C 36 4_341.7	341.7	8.2	450	0.41	1240	6500	4.1	450	0.20	1300	6500	
C 36 4_377.9	377.9	7.4	450	0.37	1260	6500	3.7	450	0.18	1300	6500	
C 36 4_420.2	420.2	6.7	450	0.33	1270	6500	3.3	450	0.17	1300	6500	
C 36 4_458.4	458.4	6.1	450	0.30	1280	6500	3.1	450	0.15	1300	6500	
C 36 4_517.2	517.2	5.4	450	0.27	1300	6500	2.7	450	0.13	1300	6500	
C 36 4_574.7	574.7	4.9	450	0.24	1300	6500	2.4	450	0.12	1300	6500	
C 36 4_665.9	665.9	4.2	450	0.21	1300	6500	2.1	450	0.10	1300	6500	
C 36 4_754.2	754.2	3.7	450	0.18	1300	6500	1.9	450	0.09	1300	6500	
C 36 4_848.5	848.5	3.3	450	0.16	1300	6500	1.6	450	0.08	1300	6500	



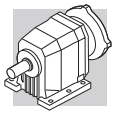
C 36 — 450 Nm

	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 36 2_2.7	2.7	335	190	7.0	1670	2640	186	200	4.1	3000	3390	
C 36 2_3.2	3.2	283	190	5.9	2080	2790	157	200	3.5	3000	3650	
C 36 2_3.5	3.5	258	200	5.7	2160	2920	143	200	3.2	3000	3810	
C 36 2_4.2	4.2	214	200	4.7	2410	3170	119	200	2.6	3000	4100	
C 36 2_4.6	4.6	195	200	4.3	2590	3320	108	200	2.4	3000	4300	
C 36 2_5.3	5.3	171	200	3.8	2630	3500	95	200	2.1	3000	4520	
C 36 2_5.8	5.8	154	200	3.4	2680	3690	86	200	1.9	3000	4740	
C 36 2_6.8	6.8	133	380	5.6	2660	3290	74	380	3.1	3000	4400	
C 36 2_8.0	8.0	112	380	4.7	2720	3580	62	380	2.6	3000	4750	
C 36 2_8.8	8.8	102	380	4.3	2790	3750	57	380	2.4	3000	4960	
C 36 2_10.6	10.6	85	380	3.6	2850	4110	47	380	2.0	3000	5360	
C 36 2_11.7	11.7	77	380	3.2	2900	4300	43	380	1.8	3000	5630	
C 36 2_13.3	13.3	68	380	2.8	2930	4590	38	380	1.6	3000	5930	
C 36 2_14.8	14.8	61	380	2.6	2970	4800	34	380	1.4	3000	6240	
C 36 2_17.2	17.2	52	380	2.2	2980	5100	29.1	380	1.2	3000	6330	
C 36 2_19.0	19.0	47	380	2.0	3000	5390	26.3	380	1.1	3000	6500	
C 36 3_22.1	22.1	41	450	2.0	3000	5430	22.6	450	1.1	3000	6500	
C 36 3_26.2	26.2	34	450	1.7	3000	5850	19.1	450	0.95	3000	6500	
C 36 3_28.7	28.7	31	450	1.6	3000	6120	17.4	450	0.86	3000	6500	
C 36 3_34.6	34.6	26.0	450	1.3	3000	6500	14.5	450	0.72	3000	6500	
C 36 3_38.1	38.1	23.6	450	1.2	3000	6500	13.1	450	0.65	3000	6500	
C 36 3_43.5	43.5	20.7	450	1.0	3000	6500	11.5	450	0.57	3000	6500	
C 36 3_48.2	48.2	18.7	450	0.93	3000	6500	10.4	450	0.52	3000	6500	
C 36 3_56.2	56.2	16.0	450	0.79	3000	6500	8.9	450	0.44	3000	6500	
C 36 3_62.0	62.0	14.5	450	0.72	3000	6500	8.1	450	0.40	3000	6500	141
C 36 3_70.8	70.8	12.7	450	0.63	3000	6500	7.1	450	0.35	3000	6500	
C 36 3_77.6	77.6	11.6	450	0.58	3000	6500	6.4	450	0.32	3000	6500	
C 36 3_83.1	83.1	10.8	450	0.54	3000	6500	6.0	450	0.30	3000	6500	
C 36 3_91.9	91.9	9.8	450	0.49	3000	6500	5.4	450	0.27	3000	6500	
C 36 3_102.2	102.2	8.8	450	0.44	3000	6500	4.9	450	0.24	3000	6500	
C 36 3_111.5	111.5	8.1	450	0.40	3000	6500	4.5	450	0.22	3000	6500	
C 36 3_125.8	125.8	7.2	450	0.35	3000	6500	4.0	450	0.20	3000	6500	
C 36 3_139.8	139.8	6.4	450	0.32	3000	6500	3.6	450	0.18	3000	6500	
C 36 3_162.0	162.0	5.6	450	0.28	3000	6500	3.1	450	0.15	3000	6500	
C 36 3_183.5	183.5	4.9	450	0.24	3000	6500	2.7	450	0.14	3000	6500	
C 36 3_206.4	206.4	4.4	450	0.22	3000	6500	2.4	450	0.12	3000	6500	
C 36 4_230.9	230.9	3.9	450	0.19	1300	6500	2.2	450	0.11	1300	6500	
C 36 4_255.0	255.0	3.5	450	0.18	1300	6500	2.0	450	0.10	1300	6500	
C 36 4_290.9	290.9	3.1	450	0.15	1300	6500	1.7	450	0.09	1300	6500	
C 36 4_318.9	318.9	2.8	450	0.14	1300	6500	1.6	450	0.08	1300	6500	
C 36 4_341.7	341.7	2.6	450	0.13	1300	6500	1.5	450	0.07	1300	6500	
C 36 4_377.9	377.9	2.4	450	0.12	1300	6500	1.3	450	0.07	1300	6500	
C 36 4_420.2	420.2	2.1	450	0.11	1300	6500	1.2	450	0.06	1300	6500	
C 36 4_458.4	458.4	2.0	450	0.10	1300	6500	1.1	450	0.05	1300	6500	
C 36 4_517.2	517.2	1.7	450	0.09	1300	6500	1.0	450	0.05	1300	6500	
C 36 4_574.7	574.7	1.6	450	0.08	1300	6500	0.9	450	0.04	1300	6500	
C 36 4_665.9	665.9	1.4	450	0.07	1300	6500	0.8	450	0.04	1300	6500	
C 36 4_754.2	754.2	1.2	450	0.06	1300	6500	0.7	450	0.03	1300	6500	
C 36 4_848.5	848.5	1.1	450	0.05	1300	6500	0.6	450	0.03	1300	6500	



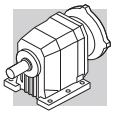
C 41 — 600 Nm

	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 41 2_2.7	2.7	1037	245	28	980	1290	519	245	14.0	1390	2060	
C 41 2_3.6	3.6	778	255	22	1070	1540	389	255	10.9	1650	2390	
C 41 2_4.7	4.7	596	260	17.1	1170	1800	298	260	8.5	2010	2730	
C 41 2_6.0	6.0	467	260	13.4	1290	2100	233	260	6.7	2400	3110	
C 41 2_6.4	6.4	438	275	13.3	2270	2590	219	345	8.3	2860	3260	
C 41 2_7.1	7.1	394	285	12.4	2360	2700	197	355	7.7	2980	3420	
C 41 2_8.6	8.6	326	305	10.9	2300	2860	163	385	6.9	2900	3600	
C 41 2_9.6	9.6	292	310	10.0	2410	3010	146	390	6.3	3030	3800	
C 41 2_11.2	11.2	250	335	9.2	2310	3100	125	420	5.8	2910	3920	
C 41 2_12.4	12.4	226	340	8.5	2440	3270	113	425	5.3	3070	4140	
C 41 2_14.2	14.2	197	355	7.7	2330	3410	99	445	4.8	2980	4300	
C 41 2_15.8	15.8	177	360	7.0	2460	3590	89	450	4.4	3120	4540	
C 41 2_17.8	17.8	157	380	6.6	2330	3680	79	480	4.2	3050	4630	
C 41 2_19.8	19.8	141	385	6.0	2460	3880	71	485	3.8	3180	4890	
C 41 2_22.6	22.6	124	410	5.6	2320	3990	62	500	3.4	3110	5110	
C 41 2_25.0	25.0	112	415	5.1	2460	4210	56	500	3.1	3230	5420	
C 41 2_28.3	28.3	99	445	4.9	2310	4290	49	500	2.7	3180	5710	
C 41 2_31.4	31.4	89	445	4.4	2440	4550	45	500	2.5	3300	6040	
C 41 2_33.4	33.4	84	465	4.3	2390	4560	42	500	2.3	3220	6170	
C 41 2_37.1	37.1	75	470	3.9	2440	4810	38	500	2.1	3320	6520	
C 41 2_44.8	44.8	63	500	3.4	2660	5130	31	500	1.7	3500	7000	
C 41 3_28.5	28.5	98	445	4.9	3060	4300	49	560	3.1	3500	5420	
C 41 3_31.2	31.2	90	450	4.5	3090	4510	45	570	2.9	3500	5670	
C 41 3_36.8	36.8	76	480	4.1	3070	4710	38	600	2.6	3500	5960	
C 41 3_40.3	40.3	69	485	3.8	3100	4940	35	600	2.3	3500	6280	
C 41 3_47.0	47.0	60	515	3.5	3070	5140	29.8	600	2.0	3500	6720	
C 41 3_51.5	51.5	54	525	3.2	3090	5360	27.2	600	1.8	3500	7000	
C 41 3_58.7	58.7	48	550	3.0	3070	5550	23.9	600	1.6	3500	7000	145
C 41 3_64.3	64.3	44	560	2.7	3090	5800	21.8	600	1.5	3500	7000	
C 41 3_74.4	74.4	38	590	2.5	3060	6040	18.8	600	1.3	3500	7000	
C 41 3_81.5	81.5	34	600	2.3	3090	6310	17.2	600	1.2	3500	7000	
C 41 3_93.3	93.3	30	600	2.0	3080	6700	15.0	600	1.0	3500	7000	
C 41 3_102.3	102.3	27.4	600	1.8	3110	7000	13.7	600	0.92	3500	7000	
C 41 3_110.1	110.1	25.4	600	1.7	3090	7000	12.7	600	0.86	3500	7000	
C 41 3_120.6	120.6	23.2	600	1.6	3110	7000	11.6	600	0.78	3500	7000	
C 41 3_132.9	132.9	21.1	600	1.4	3090	7000	10.5	600	0.71	3500	7000	
C 41 3_145.6	145.6	19.2	600	1.3	3120	7000	9.6	600	0.65	3500	7000	
C 41 3_164.1	164.1	17.1	600	1.2	3100	7000	8.5	600	0.58	3500	7000	
C 41 3_179.9	179.9	15.6	600	1.1	3120	7000	7.8	600	0.53	3500	7000	
C 41 3_190.8	190.8	14.7	600	0.99	3110	7000	7.3	600	0.50	3500	7000	
C 41 3_209.1	209.1	13.4	600	0.90	3130	7000	6.7	600	0.45	3500	7000	
C 41 4_239.9	239.9	11.7	600	0.81	1480	7000	5.8	600	0.40	1910	7000	
C 41 4_263.0	263.0	10.6	600	0.74	1500	7000	5.3	600	0.37	1920	7000	
C 41 4_304.2	304.2	9.2	600	0.64	1520	7000	4.6	600	0.32	1950	7000	
C 41 4_333.4	333.4	8.4	600	0.58	1530	7000	4.2	600	0.29	1960	7000	
C 41 4_381.8	381.8	7.3	600	0.51	1540	7000	3.7	600	0.25	1970	7000	
C 41 4_418.5	418.5	6.7	600	0.46	1550	7000	3.3	600	0.23	1980	7000	
C 41 4_450.2	450.2	6.2	600	0.43	1560	7000	3.1	600	0.21	1990	7000	
C 41 4_493.5	493.5	5.7	600	0.39	1570	7000	2.8	600	0.20	2000	7000	
C 41 4_543.5	543.5	5.2	600	0.36	1570	7000	2.6	600	0.18	2000	7000	
C 41 4_595.8	595.8	4.7	600	0.32	1580	7000	2.3	600	0.16	2010	7000	
C 41 4_671.3	671.3	4.2	600	0.29	1590	7000	2.1	600	0.14	2020	7000	
C 41 4_735.9	735.9	3.8	600	0.26	1590	7000	1.9	600	0.13	2020	7000	
C 41 4_780.4	780.4	3.6	600	0.25	1600	7000	1.8	600	0.12	2030	7000	
C 41 4_855.5	855.5	3.3	600	0.23	1600	7000	1.6	600	0.11	2030	7000	



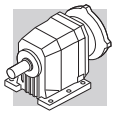
C 41 — 600 Nm

	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 41 2_2.7	2.7	333	245	9.0	2560	2650	185	245	5.0	3500	3590	
C 41 2_3.6	3.6	250	255	7.0	2710	3050	139	255	3.9	3500	4090	
C 41 2_4.7	4.7	191	260	5.5	2900	3440	106	260	3.0	3500	4570	
C 41 2_6.0	6.0	150	260	4.3	3080	3890	83	260	2.4	3500	5110	
C 41 2_6.4	6.4	141	400	6.2	3310	3780	78	490	4.2	3500	4580	
C 41 2_7.1	7.1	127	415	5.8	3460	3940	70	500	3.9	3500	4820	
C 41 2_8.6	8.6	105	445	5.1	3360	4180	58	500	3.2	3500	5290	
C 41 2_9.6	9.6	94	450	4.7	3500	4410	52	500	2.9	3500	5600	
C 41 2_11.2	11.2	80	490	4.3	3500	4520	45	500	2.5	3500	5980	
C 41 2_12.4	12.4	73	495	4.0	3500	4780	40	500	2.2	3500	6320	
C 41 2_14.2	14.2	63	500	3.5	3500	5060	35	500	1.9	3500	6700	
C 41 2_15.8	15.8	57	500	3.1	3500	5370	32	500	1.7	3500	7000	
C 41 2_17.8	17.8	51	500	2.8	3500	5650	28.1	500	1.5	3500	7000	
C 41 2_19.8	19.8	45	500	2.5	3500	5970	25.3	500	1.4	3500	7000	
C 41 2_22.6	22.6	40	500	2.2	3500	6320	22.1	500	1.2	3500	7000	
C 41 2_25.0	25.0	36	500	2.0	3500	6670	20.0	500	1.1	3500	7000	
C 41 2_28.3	28.3	32	500	1.8	3500	7000	17.7	500	0.97	3500	7000	
C 41 2_31.4	31.4	28.7	500	1.6	3500	7000	15.9	500	0.88	3500	7000	
C 41 2_33.4	33.4	26.9	500	1.5	3500	7000	15.0	500	0.83	3500	7000	
C 41 2_37.1	37.1	24.3	500	1.3	3500	7000	13.5	500	0.74	3500	7000	
C 41 2_44.8	44.8	20.1	500	1.1	3500	7000	11.2	500	0.62	3500	7000	
C 41 3_28.5	28.5	32	600	2.1	3500	6530	17.5	600	1.2	3500	7000	
C 41 3_31.2	31.2	28.8	600	1.9	3500	6870	16.0	600	1.1	3500	7000	
C 41 3_36.8	36.8	24.5	600	1.7	3500	7000	13.6	600	0.92	3500	7000	
C 41 3_40.3	40.3	22.3	600	1.5	3500	7000	12.4	600	0.84	3500	7000	
C 41 3_47.0	47.0	19.1	600	1.3	3500	7000	10.6	600	0.72	3500	7000	
C 41 3_51.5	51.5	17.5	600	1.2	3500	7000	9.7	600	0.66	3500	7000	
C 41 3_58.7	58.7	15.3	600	1.0	3500	7000	8.5	600	0.58	3500	7000	145
C 41 3_64.3	64.3	14.0	600	0.95	3500	7000	7.8	600	0.53	3500	7000	
C 41 3_74.4	74.4	12.1	600	0.82	3500	7000	6.7	600	0.45	3500	7000	
C 41 3_81.5	81.5	11.0	600	0.75	3500	7000	6.1	600	0.41	3500	7000	
C 41 3_93.3	93.3	9.6	600	0.65	3500	7000	5.4	600	0.36	3500	7000	
C 41 3_102.3	102.3	8.8	600	0.59	3500	7000	4.9	600	0.33	3500	7000	
C 41 3_110.1	110.1	8.2	600	0.55	3500	7000	4.5	600	0.31	3500	7000	
C 41 3_120.6	120.6	7.5	600	0.50	3500	7000	4.1	600	0.28	3500	7000	
C 41 3_132.9	132.9	6.8	600	0.46	3500	7000	3.8	600	0.25	3500	7000	
C 41 3_145.6	145.6	6.2	600	0.42	3500	7000	3.4	600	0.23	3500	7000	
C 41 3_164.1	164.1	5.5	600	0.37	3500	7000	3.0	600	0.21	3500	7000	
C 41 3_179.9	179.9	5.0	600	0.34	3500	7000	2.8	600	0.19	3500	7000	
C 41 3_190.8	190.8	4.7	600	0.32	3500	7000	2.6	600	0.18	3500	7000	
C 41 3_209.1	209.1	4.3	600	0.29	3500	7000	2.4	600	0.16	3500	7000	
C 41 4_239.9	239.9	3.8	600	0.26	2200	7000	2.1	600	0.14	2200	7000	
C 41 4_263.0	263.0	3.4	600	0.24	2200	7000	1.9	600	0.13	2200	7000	
C 41 4_304.2	304.2	3.0	600	0.20	2200	7000	1.6	600	0.11	2200	7000	
C 41 4_333.4	333.4	2.7	600	0.19	2200	7000	1.5	600	0.10	2200	7000	
C 41 4_381.8	381.8	2.4	600	0.16	2200	7000	1.3	600	0.09	2200	7000	
C 41 4_418.5	418.5	2.2	600	0.15	2200	7000	1.2	600	0.08	2200	7000	
C 41 4_450.2	450.2	2.0	600	0.14	2200	7000	1.1	600	0.08	2200	7000	
C 41 4_493.5	493.5	1.8	600	0.13	2200	7000	1.0	600	0.07	2200	7000	
C 41 4_543.5	543.5	1.7	600	0.11	2200	7000	0.92	600	0.06	2200	7000	
C 41 4_595.8	595.8	1.5	600	0.10	2200	7000	0.84	600	0.06	2200	7000	
C 41 4_671.3	671.3	1.3	600	0.09	2200	7000	0.74	600	0.05	2200	7000	
C 41 4_735.9	735.9	1.2	600	0.08	2200	7000	0.68	600	0.05	2200	7000	
C 41 4_780.4	780.4	1.2	600	0.08	2200	7000	0.64	600	0.04	2200	7000	
C 41 4_855.5	855.5	1.1	600	0.07	2200	7000	0.58	600	0.04	2200	7000	



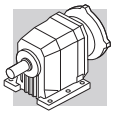
C 51 — 1000 Nm

	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 51 2_2.6	2.6	1077	315	37	980	3340	538	400	24	1390	4200	
C 51 2_3.3	3.3	848	340	32	1070	3610	424	420	19.6	1650	4580	
C 51 2_4.5	4.5	622	370	25	1170	4010	311	435	14.9	2010	5180	
C 51 2_5.6	5.6	500	390	21	1290	4380	250	435	12.0	2400	5760	
C 51 2_7.0	7.0	400	500	22	2270	4760	200	630	13.9	2860	6000	
C 51 2_7.8	7.8	359	510	20	2360	4940	179	640	12.7	2980	6230	
C 51 2_8.8	8.8	318	545	19.1	2300	5120	159	685	12.0	2900	6450	
C 51 2_9.8	9.8	286	545	17.2	2410	5350	143	685	10.8	3030	6750	
C 51 2_11.8	11.8	237	610	16.0	2310	5620	119	770	10.1	2910	7080	
C 51 2_13.1	13.1	214	595	14.0	2440	5930	107	750	8.8	3070	7470	
C 51 2_15.0	15.0	187	660	13.6	2330	6080	93	800	8.2	2980	7770	
C 51 2_16.6	16.6	169	640	11.9	2460	6420	84	795	7.4	3120	8130	
C 51 2_18.9	18.9	148	695	11.3	2330	6630	74	800	6.5	3050	8620	
C 51 2_21.0	21.0	133	675	9.9	2460	7000	67	795	5.8	3180	9020	
C 51 2_23.4	23.4	120	735	9.7	2320	7160	60	800	5.3	3110	9460	
C 51 2_25.9	25.9	108	715	8.5	2460	7550	54	795	4.7	3230	9890	
C 51 2_29.8	29.8	94	795	8.2	2310	7770	47	800	4.1	3180	10000	
C 51 2_33.0	33.0	85	775	7.2	2440	8190	42	795	3.7	3300	10000	
C 51 2_36.4	36.4	77	750	6.4	2390	8660	38	790	3.3	3220	10000	
C 51 2_40.4	40.4	69	795	6.1	2440	8870	35	795	3.0	3320	10000	
C 51 2_43.1	43.1	65	730	5.2	2450	9380	32	770	2.8	3280	10000	
C 51 2_47.8	47.8	59	800	5.2	2460	9530	29.3	800	2.6	3350	10000	
C 51 2_51.4	51.4	54	665	4.0	2550	10000	27.2	700	2.1	3390	10000	
C 51 2_57.0	57.0	49	745	4.0	2540	10000	24.6	785	2.1	3380	10000	
C 51 3_21.8	21.8	128	720	10.4	2870	6940	64	905	6.5	3500	8750	
C 51 3_23.9	23.9	117	730	9.6	2910	7230	59	920	6.1	3500	9110	
C 51 3_27.4	27.4	102	770	8.9	2890	7510	51	970	5.6	3500	9470	
C 51 3_30.1	30.1	93	780	8.2	2930	7830	47	1000	5.2	3500	9810	
C 51 3_37.0	37.0	76	840	7.2	2910	8330	38	1000	4.3	3500	10000	
C 51 3_40.5	40.5	69	855	6.7	2940	8670	35	1000	3.9	3500	10000	
C 51 3_46.7	46.7	60	905	6.1	2920	9020	30	1000	3.4	3500	10000	149
C 51 3_51.2	51.2	55	920	5.7	2950	9390	27.3	1000	3.1	3500	10000	
C 51 3_59.0	59.0	47	970	5.2	2910	9780	23.7	1000	2.7	3500	10000	
C 51 3_64.6	64.6	43	1000	4.9	2940	10000	21.7	1000	2.4	3500	10000	
C 51 3_72.9	72.9	38	1000	4.3	2920	10000	19.2	1000	2.2	3500	10000	
C 51 3_79.9	79.9	35	1000	3.9	2960	10000	17.5	1000	2.0	3500	10000	
C 51 3_93.0	93.0	30	1000	3.4	2950	10000	15.1	1000	1.7	3500	10000	
C 51 3_101.8	101.8	27.5	1000	3.1	2990	10000	13.8	1000	1.5	3500	10000	
C 51 3_113.6	113.6	24.6	1000	2.8	2960	10000	12.3	1000	1.4	3500	10000	
C 51 3_124.4	124.4	22.5	1000	2.5	3000	10000	11.3	1000	1.3	3500	10000	
C 51 3_134.6	134.6	20.8	1000	2.3	2970	10000	10.4	1000	1.2	3500	10000	
C 51 3_147.4	147.4	19.0	1000	2.1	3010	10000	9.5	1000	1.1	3500	10000	
C 51 3_160.5	160.5	17.4	1000	2.0	2980	10000	8.7	1000	0.98	3500	10000	
C 51 3_175.8	175.8	15.9	1000	1.8	3020	10000	8.0	1000	0.90	3500	10000	
C 51 3_197.9	197.9	14.1	1000	1.6	2980	10000	7.1	1000	0.80	3500	10000	
C 51 3_216.7	216.7	12.9	1000	1.5	3020	10000	6.5	1000	0.73	3500	10000	
C 51 4_240.9	240.9	11.6	1000	1.3	2100	10000	5.8	1000	0.67	2200	10000	
C 51 4_263.8	263.8	10.6	1000	1.2	2120	10000	5.3	1000	0.61	2200	10000	
C 51 4_297.8	297.8	9.4	1000	1.1	2140	10000	4.7	1000	0.54	2200	10000	
C 51 4_326.1	326.1	8.6	1000	0.99	2160	10000	4.3	1000	0.49	2200	10000	
C 51 4_379.6	379.6	7.4	1000	0.85	2190	10000	3.7	1000	0.42	2200	10000	
C 51 4_415.7	415.7	6.7	1000	0.78	2200	10000	3.4	1000	0.39	2200	10000	
C 51 4_463.9	463.9	6.0	1000	0.69	2200	10000	3.0	1000	0.35	2200	10000	
C 51 4_508.0	508.0	5.5	1000	0.63	2200	10000	2.8	1000	0.32	2200	10000	
C 51 4_549.7	549.7	5.1	1000	0.59	2200	10000	2.5	1000	0.29	2200	10000	
C 51 4_602.0	602.0	4.7	1000	0.54	2200	10000	2.3	1000	0.27	2200	10000	
C 51 4_655.4	655.4	4.3	1000	0.49	2200	10000	2.1	1000	0.25	2200	10000	
C 51 4_717.7	717.7	3.9	1000	0.45	2200	10000	2.0	1000	0.22	2200	10000	
C 51 4_808.0	808.0	3.5	1000	0.40	2200	10000	1.7	1000	0.20	2200	10000	
C 51 4_884.9	884.9	3.2	1000	0.36	2200	10000	1.6	1000	0.18	2200	10000	



C 51 — 1000 Nm

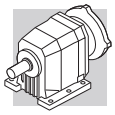
	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 51 2_2.6	2.6	346	400	15.3	2560	5130	192	400	8.5	3500	6620	149
C 51 2_3.3	3.3	273	420	12.6	2710	5590	152	420	7.0	3500	7200	
C 51 2_4.5	4.5	200	435	9.6	2900	6300	111	435	5.3	3500	8070	
C 51 2_5.6	5.6	161	435	7.7	3080	6970	89	435	4.3	3500	8880	
C 51 2_7.0	7.0	129	730	10.3	3310	6950	71	800	6.3	3500	8760	
C 51 2_7.8	7.8	115	740	9.4	3460	7220	64	800	5.7	3500	9140	
C 51 2_8.8	8.8	102	795	9.0	3360	7470	57	800	5.0	3500	9680	
C 51 2_9.8	9.8	92	800	8.1	3500	7790	51	800	4.5	3500	10000	
C 51 2_11.8	11.8	76	800	6.7	3500	8530	42	800	3.7	3500	10000	
C 51 2_13.1	13.1	69	800	6.1	3500	8900	38	800	3.4	3500	10000	
C 51 2_15.0	15.0	60	800	5.3	3500	9450	33	800	2.9	3500	10000	
C 51 2_16.6	16.6	54	800	4.8	3500	9850	30	800	2.7	3500	10000	
C 51 2_18.9	18.9	48	800	4.2	3500	10000	26.5	800	2.3	3500	10000	
C 51 2_21.0	21.0	43	800	3.8	3500	10000	23.8	800	2.1	3500	10000	
C 51 2_23.4	23.4	38	800	3.4	3500	10000	21.4	800	1.9	3500	10000	
C 51 2_25.9	25.9	35	800	3.1	3500	10000	19.3	800	1.7	3500	10000	
C 51 2_29.8	29.8	30	800	2.7	3500	10000	16.8	800	1.5	3500	10000	
C 51 2_33.0	33.0	27.3	800	2.4	3500	10000	15.2	800	1.3	3500	10000	
C 51 2_36.4	36.4	24.7	800	2.2	3500	10000	13.7	800	1.2	3500	10000	
C 51 2_40.4	40.4	22.3	800	2.0	3500	10000	12.4	800	1.1	3500	10000	
C 51 2_43.1	43.1	20.9	800	1.8	3500	10000	11.6	800	1.0	3500	10000	
C 51 2_47.8	47.8	18.8	800	1.7	3500	10000	10.5	800	0.92	3500	10000	
C 51 2_51.4	51.4	17.5	725	1.4	3500	10000	9.7	755	0.81	3500	10000	
C 51 2_57.0	57.0	15.8	795	1.4	3500	10000	8.8	795	0.77	3500	10000	
C 51 3_21.8	21.8	41	1000	4.6	3500	10000	22.9	1000	2.6	3500	10000	
C 51 3_23.9	23.9	38	1000	4.2	3500	10000	20.9	1000	2.4	3500	10000	
C 51 3_27.4	27.4	33	1000	3.7	3500	10000	18.2	1000	2.1	3500	10000	
C 51 3_30.1	30.1	29.9	1000	3.4	3500	10000	16.6	1000	1.9	3500	10000	
C 51 3_37.0	37.0	24.3	1000	2.7	3500	10000	13.5	1000	1.5	3500	10000	
C 51 3_40.5	40.5	22.2	1000	2.5	3500	10000	12.3	1000	1.4	3500	10000	
C 51 3_46.7	46.7	19.3	1000	2.2	3500	10000	10.7	1000	1.2	3500	10000	
C 51 3_51.2	51.2	17.6	1000	2.0	3500	10000	9.8	1000	1.1	3500	10000	
C 51 3_59.0	59.0	15.3	1000	1.7	3500	10000	8.5	1000	0.95	3500	10000	
C 51 3_64.6	64.6	13.9	1000	1.6	3500	10000	7.7	1000	0.87	3500	10000	
C 51 3_72.9	72.9	12.3	1000	1.4	3500	10000	6.9	1000	0.77	3500	10000	
C 51 3_79.9	79.9	11.3	1000	1.3	3500	10000	6.3	1000	0.70	3500	10000	
C 51 3_93.0	93.0	9.7	1000	1.1	3500	10000	5.4	1000	0.61	3500	10000	
C 51 3_101.8	101.8	8.8	1000	1.0	3500	10000	4.9	1000	0.55	3500	10000	
C 51 3_113.6	113.6	7.9	1000	0.89	3500	10000	4.4	1000	0.50	3500	10000	
C 51 3_124.4	124.4	7.2	1000	0.81	3500	10000	4.0	1000	0.45	3500	10000	
C 51 3_134.6	134.6	6.7	1000	0.75	3500	10000	3.7	1000	0.42	3500	10000	
C 51 3_147.4	147.4	6.1	1000	0.69	3500	10000	3.4	1000	0.38	3500	10000	
C 51 3_160.5	160.5	5.6	1000	0.63	3500	10000	3.1	1000	0.35	3500	10000	
C 51 3_175.8	175.8	5.1	1000	0.58	3500	10000	2.8	1000	0.32	3500	10000	
C 51 3_197.9	197.9	4.5	1000	0.51	3500	10000	2.5	1000	0.28	3500	10000	
C 51 3_216.7	216.7	4.2	1000	0.47	3500	10000	2.3	1000	0.26	3500	10000	
C 51 4_240.9	240.9	3.7	1000	0.43	2200	10000	2.1	1000	0.24	2200	10000	
C 51 4_263.8	263.8	3.4	1000	0.39	2200	10000	1.9	1000	0.22	2200	10000	
C 51 4_297.8	297.8	3.0	1000	0.35	2200	10000	1.7	1000	0.19	2200	10000	
C 51 4_326.1	326.1	2.8	1000	0.32	2200	10000	1.5	1000	0.18	2200	10000	
C 51 4_379.6	379.6	2.4	1000	0.27	2200	10000	1.3	1000	0.15	2200	10000	
C 51 4_415.7	415.7	2.2	1000	0.25	2200	10000	1.2	1000	0.14	2200	10000	
C 51 4_463.9	463.9	1.9	1000	0.22	2200	10000	1.1	1000	0.12	2200	10000	
C 51 4_508.0	508.0	1.8	1000	0.20	2200	10000	1.0	1000	0.11	2200	10000	
C 51 4_549.7	549.7	1.6	1000	0.19	2200	10000	0.91	1000	0.10	2200	10000	
C 51 4_602.0	602.0	1.5	1000	0.17	2200	10000	0.83	1000	0.10	2200	10000	
C 51 4_655.4	655.4	1.4	1000	0.16	2200	10000	0.76	1000	0.09	2200	10000	
C 51 4_717.7	717.7	1.3	1000	0.14	2200	10000	0.70	1000	0.08	2200	10000	
C 51 4_808.0	808.0	1.1	1000	0.13	2200	10000	0.62	1000	0.07	2200	10000	
C 51 4_884.9	884.9	1.0	1000	0.12	2200	10000	0.57	1000	0.07	2200	10000	



C 61 — 1600 Nm

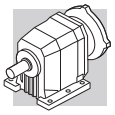
	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 61 2_2.8	2.8	1000	445	49	—	4670	500	550	30	770	5930	153
C 61 2_3.7	3.7	757	530	44	—	4950	378	575	24	1730	6600	
C 61 2_4.6	4.6	609	575	39	—	5280	304	600	20	2150	7130	
C 61 2_6.0	6.0	467	575	30	—	6000	233	625	16.1	2700	7950	
C 61 2_6.7	6.7	418	900	41	2230	5600	209	1130	26	2850	7060	
C 61 2_7.5	7.5	373	1000	41	2220	5620	187	1250	26	2900	7110	
C 61 2_8.8	8.8	318	1000	35	2290	6080	159	1250	22	2980	7690	
C 61 2_9.8	9.8	286	1100	35	2380	6140	143	1350	21	3330	7850	
C 61 2_10.9	10.9	257	1050	30	2530	6590	128	1350	19.1	2940	8210	
C 61 2_12.1	12.1	231	1150	29	2670	6670	116	1350	17.2	3600	8730	
C 61 2_14.3	14.3	196	1150	25	2450	7220	98	1350	14.6	3590	9430	
C 61 2_15.9	15.9	176	1250	24	2660	7350	88	1350	13.1	3780	9990	
C 61 2_17.7	17.7	158	1200	21	2540	7850	79	1350	11.8	3700	10400	
C 61 2_19.6	19.6	143	1300	20	2780	8000	71	1350	10.6	3890	11000	
C 61 2_22.4	22.4	125	1250	17.2	2630	8650	63	1350	9.3	3810	11600	
C 61 2_24.8	24.8	113	1350	16.8	2840	8840	56	1350	8.4	3980	12300	
C 61 2_27.4	27.4	102	1300	14.6	2600	9390	51	1350	7.6	3880	12800	
C 61 2_30.4	30.4	92	1350	13.7	2900	9770	46	1350	6.9	4050	13500	
C 61 2_34.2	34.2	82	1165	10.5	3020	10900	41	1225	5.5	4090	14500	
C 61 2_38.0	38.0	74	1280	10.4	3030	11100	37	1350	5.5	4100	14800	
C 61 3_26.8	26.8	104	1140	13.4	3740	9810	52	1435	8.4	4700	12400	
C 61 3_29.4	29.4	95	1160	12.4	3780	10200	48	1465	7.9	4700	12900	
C 61 3_33.0	33.0	85	1210	11.6	3750	10600	42	1525	7.3	4700	13300	
C 61 3_36.1	36.1	78	1235	10.8	3800	11000	39	1555	6.8	4700	13800	
C 61 3_43.4	43.4	65	1315	9.6	3760	11600	32	1600	5.8	4700	14800	
C 61 3_47.6	47.6	59	1340	8.9	3810	12100	29.4	1600	5.3	4700	15500	
C 61 3_53.5	53.5	52	1400	8.2	3760	12500	26.2	1600	4.7	4700	16000	
C 61 3_58.6	58.6	48	1430	7.7	3810	13000	23.9	1600	4.3	4700	16000	
C 61 3_67.7	67.7	41	1505	7.0	3750	13500	20.7	1600	3.7	4700	16000	
C 61 3_74.2	74.2	38	1535	6.5	3800	14100	18.9	1600	3.4	4700	16000	
C 61 3_83.0	83.0	34	1600	6.1	3740	14500	16.9	1600	3.0	4700	16000	
C 61 3_91.0	91.0	31	1600	5.5	3800	15200	15.4	1600	2.8	4700	16000	
C 61 3_103.6	103.6	27.0	1600	4.9	3760	16000	13.5	1600	2.4	4700	16000	
C 61 3_113.6	113.6	24.6	1600	4.4	3820	16000	12.3	1600	2.2	4700	16000	
C 61 3_128.1	128.1	21.9	1600	3.9	3790	16000	10.9	1600	2.0	4700	16000	
C 61 3_140.5	140.5	19.9	1600	3.6	3840	16000	10.0	1600	1.8	4700	16000	
C 61 3_150.0	150.0	18.7	1600	3.4	3800	16000	9.3	1600	1.7	4700	16000	
C 61 3_164.5	164.5	17.0	1600	3.1	3850	16000	8.5	1600	1.5	4700	16000	
C 61 3_178.6	178.6	15.7	1600	2.8	3800	16000	7.8	1600	1.4	4700	16000	
C 61 3_195.8	195.8	14.3	1600	2.6	3860	16000	7.2	1600	1.3	4700	16000	
C 61 4_217.4	217.4	12.9	1600	2.4	3020	16000	6.4	1600	1.2	3500	16000	
C 61 4_238.3	238.3	11.7	1600	2.2	3060	16000	5.9	1600	1.1	3500	16000	
C 61 4_275.3	275.3	10.2	1600	1.9	3100	16000	5.1	1600	0.94	3500	16000	
C 61 4_301.7	301.7	9.3	1600	1.7	3130	16000	4.6	1600	0.85	3500	16000	
C 61 4_337.7	337.7	8.3	1600	1.5	3160	16000	4.1	1600	0.76	3500	16000	
C 61 4_370.1	370.1	7.6	1600	1.4	3180	16000	3.8	1600	0.70	3500	16000	
C 61 4_421.5	421.5	6.6	1600	1.2	3200	16000	3.3	1600	0.61	3500	16000	
C 61 4_462.0	462.0	6.1	1600	1.1	3220	16000	3.0	1600	0.56	3500	16000	
C 61 4_521.1	521.1	5.4	1600	0.99	3240	16000	2.7	1600	0.49	3500	16000	
C 61 4_571.2	571.2	4.9	1600	0.90	3250	16000	2.5	1600	0.45	3500	16000	
C 61 4_610.1	610.1	4.6	1600	0.84	3260	16000	2.3	1600	0.42	3500	16000	
C 61 4_668.8	668.8	4.2	1600	0.77	3280	16000	2.1	1600	0.39	3500	16000	
C 61 4_726.3	726.3	3.9	1600	0.71	3290	16000	1.9	1600	0.35	3500	16000	
C 61 4_796.1	796.1	3.5	1600	0.65	3300	16000	1.8	1600	0.32	3500	16000	

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



C 61 — 1600 Nm

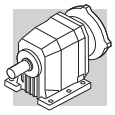
	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 61 2_2.8	2.8	321	565	20	2840	7150	179	665	13.1	4050	8790	153
C 61 2_3.7	3.7	243	625	16.8	3000	7800	135	665	9.9	4700	9860	
C 61 2_4.6	4.6	196	665	14.3	3170	8380	109	665	8.0	4700	10760	
C 61 2_6.0	6.0	150	665	11.0	4120	9440	83	665	6.1	4700	12000	
C 61 2_6.7	6.7	134	1350	20	2850	8050	75	1350	11.1	4700	10800	
C 61 2_7.5	7.5	120	1350	17.9	4010	8560	67	1350	9.9	4700	11400	
C 61 2_8.8	8.8	102	1350	15.2	4070	9240	57	1350	8.5	4700	12200	
C 61 2_9.8	9.8	92	1350	13.7	4310	9790	51	1350	7.6	4700	12900	
C 61 2_10.9	10.9	83	1350	12.3	4270	10200	46	1350	6.8	4700	13400	
C 61 2_12.1	12.1	74	1350	11.1	4480	10800	41	1350	6.1	4700	14100	
C 61 2_14.3	14.3	63	1350	9.4	4470	11600	35	1350	5.2	4700	15100	
C 61 2_15.9	15.9	57	1350	8.4	4660	12300	31	1350	4.7	4700	15900	
C 61 2_17.7	17.7	51	1350	7.6	4580	12800	28.2	1350	4.2	4700	16000	
C 61 2_19.6	19.6	46	1350	6.8	4700	13500	25.5	1350	3.8	4700	16000	
C 61 2_22.4	22.4	40	1350	6.0	4690	14200	22.3	1350	3.3	4700	16000	
C 61 2_24.8	24.8	36	1350	5.4	4700	14900	20.2	1350	3.0	4700	16000	
C 61 2_27.4	27.4	33	1350	4.9	4700	15500	18.2	1350	2.7	4700	16000	
C 61 2_30.4	30.4	29.6	1350	4.4	4700	16000	16.4	1350	2.4	4700	16000	
C 61 2_34.2	34.2	26.3	1265	3.7	4700	16000	14.6	1325	2.1	4700	16000	
C 61 2_38.0	38.0	23.7	1350	3.5	4700	16000	13.2	1350	2.0	4700	16000	
C 61 3_26.8	26.8	34	1600	6.0	4700	14500	18.7	1600	3.4	4700	16000	
C 61 3_29.4	29.4	31	1600	5.5	4700	15200	17.0	1600	3.1	4700	16000	
C 61 3_33.0	33.0	27.3	1600	4.9	4700	15900	15.2	1600	2.7	4700	16000	
C 61 3_36.1	36.1	24.9	1600	4.5	4700	16000	13.9	1600	2.5	4700	16000	
C 61 3_43.4	43.4	20.7	1600	3.7	4700	16000	11.5	1600	2.1	4700	16000	
C 61 3_47.6	47.6	18.9	1600	3.4	4700	16000	10.5	1600	1.9	4700	16000	
C 61 3_53.5	53.5	16.8	1600	3.0	4700	16000	9.3	1600	1.7	4700	16000	
C 61 3_58.6	58.6	15.4	1600	2.8	4700	16000	8.5	1600	1.5	4700	16000	
C 61 3_67.7	67.7	13.3	1600	2.4	4700	16000	7.4	1600	1.3	4700	16000	
C 61 3_74.2	74.2	12.1	1600	2.2	4700	16000	6.7	1600	1.2	4700	16000	
C 61 3_83.0	83.0	10.8	1600	2.0	4700	16000	6.0	1600	1.1	4700	16000	
C 61 3_91.0	91.0	9.9	1600	1.8	4700	16000	5.5	1600	0.99	4700	16000	
C 61 3_103.6	103.6	8.7	1600	1.6	4700	16000	4.8	1600	0.87	4700	16000	
C 61 3_113.6	113.6	7.9	1600	1.4	4700	16000	4.4	1600	0.79	4700	16000	
C 61 3_128.1	128.1	7.0	1600	1.3	4700	16000	3.9	1600	0.70	4700	16000	
C 61 3_140.5	140.5	6.4	1600	1.2	4700	16000	3.6	1600	0.64	4700	16000	
C 61 3_150.0	150.0	6.0	1600	1.1	4700	16000	3.3	1600	0.60	4700	16000	
C 61 3_164.5	164.5	5.5	1600	0.99	4700	16000	3.0	1600	0.55	4700	16000	
C 61 3_178.6	178.6	5.0	1600	0.91	4700	16000	2.8	1600	0.50	4700	16000	
C 61 3_195.8	195.8	4.6	1600	0.83	4700	16000	2.6	1600	0.46	4700	16000	
C 61 4_217.4	217.4	4.1	1600	0.76	3500	16000	2.3	1600	0.42	3500	16000	
C 61 4_238.3	238.3	3.8	1600	0.70	3500	16000	2.1	1600	0.39	3500	16000	
C 61 4_275.3	275.3	3.3	1600	0.60	3500	16000	1.8	1600	0.33	3500	16000	
C 61 4_301.7	301.7	3.0	1600	0.55	3500	16000	1.7	1600	0.31	3500	16000	
C 61 4_337.7	337.7	2.7	1600	0.49	3500	16000	1.5	1600	0.27	3500	16000	
C 61 4_370.1	370.1	2.4	1600	0.45	3500	16000	1.4	1600	0.25	3500	16000	
C 61 4_421.5	421.5	2.1	1600	0.39	3500	16000	1.2	1600	0.22	3500	16000	
C 61 4_462.0	462.0	1.9	1600	0.36	3500	16000	1.1	1600	0.20	3500	16000	
C 61 4_521.1	521.1	1.7	1600	0.32	3500	16000	1.0	1600	0.18	3500	16000	
C 61 4_571.2	571.2	1.6	1600	0.29	3500	16000	0.88	1600	0.16	3500	16000	
C 61 4_610.1	610.1	1.5	1600	0.27	3500	16000	0.82	1600	0.15	3500	16000	
C 61 4_668.8	668.8	1.3	1600	0.25	3500	16000	0.75	1600	0.14	3500	16000	
C 61 4_726.3	726.3	1.2	1600	0.23	3500	16000	0.69	1600	0.13	3500	16000	
C 61 4_796.1	796.1	1.1	1600	0.21	3500	16000	0.63	1600	0.12	3500	16000	



C 70 — 2300 Nm

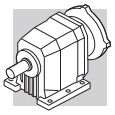
	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 70 2_4.6	4.6	613	1400	95	—	5590	306	1700	57	—	7100	156
C 70 2_5.9	5.9	479	1550	82	—	5610	239	1900	50	—	6990	
C 70 2_6.3	6.3	448	1600	79	1980	6570	224	1950	48	2630	8250	
C 70 2_7.5	7.5	375	1550	64	—	7130	188	1950	40	—	8400	
C 70 2_8.0	8.0	350	1750	68	1760	6840	175	2100	41	2670	8880	
C 70 2_9.5	9.5	294	1600	52	770	8260	147	2000	32	620	9910	
C 70 2_10.2	10.2	274	1900	57	2000	7200	137	2100	32	4470	10800	
C 70 2_11.2	11.2	250	1600	44	1130	9350	125	2000	28	1070	11300	
C 70 2_13.0	13.0	215	2050	49	1860	7700	107	2100	25	5600	12900	
C 70 2_14.1	14.1	199	1700	37	1100	10100	99	2100	23	1280	12400	
C 70 2_15.3	15.3	183	2100	42	1810	8540	91	2100	21	5860	14300	
C 70 2_16.7	16.7	168	1700	31	1570	11400	84	2050	18.9	2350	14300	
C 70 2_19.3	19.3	145	2100	34	2730	10400	73	2100	16.8	6000	16300	
C 70 2_22.9	22.9	123	2100	28	3160	11800	61	2100	14.2	6060	18000	
C 70 2_27.7	27.7	101	2100	23	3570	13400	51	2100	11.7	6120	19900	
C 70 2_34.7	34.7	81	2100	18.7	3960	15400	40	2100	9.3	6180	22200	
C 70 3_41.3	41.3	68	1900	14.5	5670	18400	34	2300	8.8	7000	22800	
C 70 3_44.7	44.7	63	1900	13.4	5700	19100	31	2300	8.1	7000	23800	
C 70 3_52.2	52.2	54	2050	12.4	5680	19600	26.8	2300	7.0	7000	25000	
C 70 3_56.5	56.5	50	2050	11.4	5710	20400	24.8	2300	6.4	7000	25000	
C 70 3_65.9	65.9	43	2200	10.5	5670	21000	21.3	2300	5.5	7000	25000	
C 70 3_71.3	71.3	39	2200	9.7	5710	21900	19.6	2300	5.1	7000	25000	
C 70 3_81.4	81.4	34	2300	8.9	5680	22700	17.2	2300	4.5	7000	25000	
C 70 3_88.2	88.2	32	2300	8.2	5710	23600	15.9	2300	4.1	7000	25000	
C 70 3_103.8	103.8	27.0	2300	7.0	5700	25000	13.5	2300	3.5	7000	25000	
C 70 3_112.4	112.4	24.9	2300	6.4	5740	25000	12.5	2300	3.2	7000	25000	
C 70 3_126.8	126.8	22.1	2300	5.7	5720	25000	11.0	2300	2.9	7000	25000	
C 70 3_137.4	137.4	20.4	2300	5.3	5750	25000	10.2	2300	2.6	7000	25000	
C 70 3_150.3	150.3	18.6	2300	4.8	5730	25000	9.3	2300	2.4	7000	25000	
C 70 3_162.8	162.8	17.2	2300	4.5	5760	25000	8.6	2300	2.2	7000	25000	
C 70 3_179.2	179.2	15.6	2300	4.0	5740	25000	7.8	2300	2.0	7000	25000	
C 70 3_194.1	194.1	14.4	2300	3.7	5770	25000	7.2	2300	1.9	7000	25000	
C 70 3_220.9	220.9	12.7	2250	3.2	5750	25000	6.3	2250	1.6	7000	25000	
C 70 3_239.3	239.3	11.7	2300	3.0	5770	25000	5.8	2300	1.5	7000	25000	
C 70 4_251.3	251.3	11.1	2300	2.9	2000	25000	5.6	2300	1.5	2620	25000	
C 70 4_272.2	272.2	10.3	2300	2.7	2030	25000	5.1	2300	1.4	2650	25000	
C 70 4_317.9	317.9	8.8	2300	2.3	2030	25000	4.4	2300	1.2	2650	25000	
C 70 4_344.3	344.3	8.1	2300	2.2	2050	25000	4.1	2300	1.1	2670	25000	
C 70 4_409.4	409.4	6.8	2300	1.8	2050	25000	3.4	2300	0.90	2670	25000	
C 70 4_443.5	443.5	6.3	2300	1.7	2070	25000	3.2	2300	0.80	2700	25000	
C 70 4_512.0	512.0	5.5	2300	1.4	2070	25000	2.7	2300	0.70	2680	25000	
C 70 4_554.7	554.7	5.0	2300	1.3	2090	25000	2.5	2300	0.70	2710	25000	
C 70 4_606.8	606.8	4.6	2300	1.2	2080	25000	2.3	2300	0.60	2700	25000	
C 70 4_657.3	657.3	4.3	2300	1.1	2100	25000	2.1	2300	0.60	2720	25000	
C 70 4_736.0	736.0	3.8	2300	1.0	2090	25000	1.9	2300	0.50	2700	25000	
C 70 4_797.3	797.3	3.5	2300	0.90	2110	25000	1.8	2300	0.50	2720	25000	
C 70 4_922.6	922.6	3.0	2300	0.80	2100	25000	1.5	2300	0.40	2710	25000	
C 70 4_999.5	999.5	2.8	2300	0.70	2110	25000	1.4	2300	0.40	2730	25000	
C 70 4_1069	1069	2.6	2300	0.70	2100	25000	1.3	2300	0.30	2720	25000	
C 70 4_1158	1158	2.4	2300	0.60	2100	25000	1.2	2300	0.30	2800	25000	
C 70 4_1362	1362	2.1	2300	0.50	2100	25000	1.0	2300	0.30	2800	25000	
C 70 4_1476	1476	1.9	2300	0.50	2100	25000	0.90	2300	0.30	2800	25000	

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



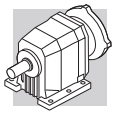
C 70 — 2300 Nm

	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 70 2_4.6	4.6	197	1800	39	650	9360	109	1800	22	5500	13900	156
C 70 2_5.9	5.9	154	1950	33	560	9980	85	2150	20	2890	13400	
C 70 2_6.3	6.3	144	2100	33	4260	10400	80	2100	18.5	7000	15500	
C 70 2_7.5	7.5	121	2100	28	1120	10800	67	2150	15.9	5400	15600	
C 70 2_8.0	8.0	113	2100	26	5800	12500	63	2100	14.5	7000	17800	
C 70 2_9.5	9.5	95	2150	22	2140	12400	53	2150	12.4	6990	18100	
C 70 2_10.2	10.2	88	2100	20	6870	14600	49	2100	11.3	7000	20200	
C 70 2_11.2	11.2	80	2150	19.0	2620	14000	45	2150	10.6	7000	19800	
C 70 2_13.0	13.0	69	2100	16.0	7000	16900	38	2100	8.9	7000	22800	
C 70 2_14.1	14.1	64	2150	15.1	3900	16000	35	2150	8.4	7000	22300	
C 70 2_15.3	15.3	59	2100	13.6	7000	18400	33	2100	7.5	7000	24600	
C 70 2_16.7	16.7	54	2050	12.2	5470	18500	29.9	2050	6.8	7000	25000	
C 70 2_19.3	19.3	47	2100	10.8	7000	20700	25.9	2100	6.0	7000	25000	
C 70 2_22.9	22.9	39	2100	9.1	7000	22500	21.9	2100	5.1	7000	25000	
C 70 2_27.7	27.7	32	2100	7.5	7000	24600	18.0	2100	4.2	7000	25000	
C 70 2_34.7	34.7	25.9	2100	6.0	7000	25000	14.4	2100	3.3	7000	25000	
C 70 3_41.3	41.3	21.8	2300	5.6	7000	25000	12.1	2300	3.1	7000	25000	
C 70 3_44.7	44.7	20.1	2300	5.2	7000	25000	11.2	2300	2.9	7000	25000	
C 70 3_52.2	52.2	17.3	2300	4.5	7000	25000	9.6	2300	2.5	7000	25000	
C 70 3_56.5	56.5	15.9	2300	4.1	7000	25000	8.8	2300	2.3	7000	25000	
C 70 3_65.9	65.9	13.7	2300	3.5	7000	25000	7.6	2300	2.0	7000	25000	
C 70 3_71.3	71.3	12.6	2300	3.3	7000	25000	7.0	2300	1.8	7000	25000	
C 70 3_81.4	81.4	11.1	2300	2.9	7000	25000	6.1	2300	1.6	7000	25000	
C 70 3_88.2	88.2	10.2	2300	2.6	7000	25000	5.7	2300	1.5	7000	25000	
C 70 3_103.8	103.8	8.7	2300	2.2	7000	25000	4.8	2300	1.2	7000	25000	
C 70 3_112.4	112.4	8.0	2300	2.1	7000	25000	4.4	2300	1.2	7000	25000	
C 70 3_126.8	126.8	7.1	2300	1.8	7000	25000	3.9	2300	1.0	7000	25000	
C 70 3_137.4	137.4	6.6	2300	1.7	7000	25000	3.6	2300	0.90	7000	25000	
C 70 3_150.3	150.3	6.0	2300	1.6	7000	25000	3.3	2300	0.90	7000	25000	
C 70 3_162.8	162.8	5.5	2300	1.4	7000	25000	3.1	2300	0.80	7000	25000	
C 70 3_179.2	179.2	5.0	2300	1.3	7000	25000	2.8	2300	0.70	7000	25000	
C 70 3_194.1	194.1	4.6	2300	1.2	7000	25000	2.6	2300	0.70	7000	25000	
C 70 3_220.9	220.9	4.1	2250	1.0	7000	25000	2.3	2250	0.60	7000	25000	
C 70 3_239.3	239.3	3.8	2300	1.0	7000	25000	2.1	2300	0.50	7000	25000	
C 70 4_251.3	251.3	3.6	2300	0.90	2000	25000	2.0	2300	0.50	2620	25000	
C 70 4_272.2	272.2	3.3	2300	0.90	2030	25000	1.8	2300	0.50	2650	25000	
C 70 4_317.9	317.9	2.8	2300	0.70	2030	25000	1.6	2300	0.40	2650	25000	
C 70 4_344.3	344.3	2.6	2300	0.70	2050	25000	1.5	2300	0.40	2670	25000	
C 70 4_409.4	409.4	2.2	2300	0.60	2050	25000	1.2	2300	0.30	2670	25000	
C 70 4_443.5	443.5	2.0	2300	0.50	2070	25000	1.1	2300	0.30	2700	25000	
C 70 4_512.0	512.0	1.8	2300	0.50	2070	25000	1.0	2300	0.30	2680	25000	
C 70 4_554.7	554.7	1.6	2300	0.40	2090	25000	0.90	2300	0.20	2710	25000	
C 70 4_606.8	606.8	1.5	2300	0.40	2080	25000	0.80	2300	0.20	2700	25000	
C 70 4_657.3	657.3	1.4	2300	0.40	2100	25000	0.80	2300	0.20	2720	25000	
C 70 4_736.0	736.0	1.2	2300	0.30	2090	25000	0.70	2300	0.20	2700	25000	
C 70 4_797.3	797.3	1.1	2300	0.30	2110	25000	0.60	2300	0.20	2720	25000	
C 70 4_922.6	922.6	1.0	2300	0.30	2100	25000	0.50	2300	0.10	2710	25000	
C 70 4_999.5	999.5	0.90	2300	0.20	2110	25000	0.50	2300	0.10	2730	25000	
C 70 4_1069	1069	0.80	2300	0.20	2100	25000	0.50	2300	0.10	2720	25000	
C 70 4_1158	1158	0.80	2300	0.20	2100	25000	0.40	2300	0.10	2800	25000	
C 70 4_1362	1362	0.70	2300	0.20	2100	25000	0.40	2300	0.10	2800	25000	
C 70 4_1476	1476	0.60	2300	0.20	2100	25000	0.30	2300	0.10	2800	25000	



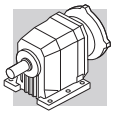
C 80 — 4000 Nm

	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 80 2_5.6	5.6	496	2400	131	370	10900	248	3100	85	690	12300	159
C 80 2_6.1	6.1	458	2450	124	890	11000	229	3150	80	1380	12700	
C 80 2_7.0	7.0	398	2650	116	350	11000	199	3350	73	910	12900	
C 80 2_7.6	7.6	367	2700	109	890	11300	183	3400	69	1600	13300	
C 80 2_8.9	8.9	316	2800	98	420	12100	158	3500	61	1120	14500	
C 80 2_9.6	9.6	292	3000	96	520	11300	146	3700	59	1380	13900	
C 80 2_11.1	11.1	252	2800	78	1110	14200	126	3500	49	1950	17100	
C 80 2_12.0	12.0	233	3000	77	1200	13500	116	3700	48	2190	16600	
C 80 2_13.8	13.8	203	2800	63	1420	16400	102	3500	39	2330	19800	
C 80 2_14.9	14.9	188	3000	62	1510	15800	94	3700	38	2560	19300	
C 80 2_16.7	16.7	168	2800	52	1840	18500	84	3500	32	2840	22300	
C 80 2_18.1	18.1	155	3000	50	1930	17900	78	3700	32	3060	22000	
C 80 2_20.5	20.5	136	2850	43	2000	20500	68	3550	27	3060	24800	
C 80 2_22.2	22.2	126	3000	42	2210	20300	63	3700	26	3400	24900	
C 80 2_24.0	24.0	117	2850	37	2090	22400	58	3550	23	3180	27000	
C 80 2_25.9	25.9	108	3000	36	2300	22300	54	3700	22	3510	27200	
C 80 2_31.3	31.3	89	3000	30	2480	24700	45	3700	18.2	3730	30000	
C 80 2_39.1	39.1	72	2500	19.7	3820	31000	36	3200	12.6	5060	35000	
C 80 3_43.5	43.5	64	3100	23	5610	28700	32	3800	13.8	7000	34800	
C 80 3_47.4	47.4	59	3100	21	5660	30000	29.5	3800	12.6	7000	35000	
C 80 3_57.3	57.3	49	3400	18.7	5620	30500	24.4	4000	11.0	7000	35000	
C 80 3_62.5	62.5	45	3400	17.1	5670	31800	22.4	4000	10.1	7000	35000	
C 80 3_70.5	70.5	40	3650	16.3	5620	32200	19.9	4000	8.9	7000	35000	
C 80 3_76.9	76.9	36	3600	14.8	5670	33900	18.2	4000	8.2	7000	35000	
C 80 3_89.3	89.3	31	3900	13.8	5620	34700	15.7	4000	7.1	7000	35000	
C 80 3_97.4	97.4	28.7	3900	12.6	5670	35000	14.4	4000	6.5	7000	35000	
C 80 3_109.5	109.5	25.5	4000	11.5	5630	35000	12.8	4000	5.8	7000	35000	
C 80 3_119.5	119.5	23.4	4000	10.6	5680	35000	11.7	4000	5.3	7000	35000	
C 80 3_136.7	136.7	20.5	4000	9.2	5660	35000	10.2	4000	4.6	7000	35000	
C 80 3_149.1	149.1	18.8	4000	8.5	5700	35000	9.4	4000	4.2	7000	35000	
C 80 3_169.0	169.0	16.6	4000	7.5	5680	35000	8.3	4000	3.7	7000	35000	
C 80 3_184.4	184.4	15.2	4000	6.8	5720	35000	7.6	4000	3.4	7000	35000	
C 80 3_197.9	197.9	14.2	3800	6.1	5710	35000	7.1	3800	3.0	7000	35000	
C 80 3_215.8	215.8	13.0	4000	5.8	5730	35000	6.5	4000	2.9	7000	35000	
C 80 4_261.9	261.9	10.7	4000	4.9	1850	35000	5.3	4000	2.5	2470	35000	
C 80 4_285.7	285.7	9.8	4000	4.5	1890	35000	4.9	4000	2.3	2510	35000	
C 80 4_334.3	334.3	8.4	4000	3.9	1880	35000	4.2	4000	1.9	2500	35000	
C 80 4_364.7	364.7	7.7	4000	3.5	1920	35000	3.8	4000	1.8	2540	35000	
C 80 4_417.5	417.5	6.7	4000	3.1	1910	35000	3.4	4000	1.5	2530	35000	
C 80 4_455.4	455.4	6.1	4000	2.8	1950	35000	3.1	4000	1.4	2570	35000	
C 80 4_529.3	529.3	5.3	4000	2.4	1940	35000	2.6	4000	1.2	2550	35000	
C 80 4_577.4	577.4	4.8	4000	2.2	1970	35000	2.4	4000	1.1	2590	35000	
C 80 4_664.3	664.3	4.2	4000	1.9	1960	35000	2.1	4000	1.0	2570	35000	
C 80 4_724.7	724.7	3.9	4000	1.8	1990	35000	1.9	4000	0.90	2610	35000	
C 80 4_783.4	783.4	3.6	4000	1.6	1970	35000	1.8	4000	0.80	2590	35000	
C 80 4_854.6	854.6	3.3	4000	1.5	2000	35000	1.6	4000	0.80	2620	35000	
C 80 4_945.7	945.7	3.0	4000	1.4	1980	35000	1.5	4000	0.70	2600	35000	
C 80 4_1032	1032	2.7	4000	1.2	2010	35000	1.4	4000	0.60	2630	35000	
C 80 4_1168	1168	2.4	4000	1.1	1980	35000	1.2	4000	0.60	2600	35000	
C 80 4_1274	1274	2.2	4000	1.0	2020	35000	1.1	4000	0.50	2640	35000	
C 80 4_1358	1358	2.1	4000	0.90	1990	35000	1.0	4000	0.50	2610	35000	
C 80 4_1481	1481	1.9	4000	0.90	2030	35000	0.90	4000	0.40	2640	35000	



C 80 — 4000 Nm

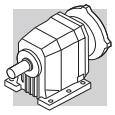
	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 80 2_5.6	5.6	160	3500	62	1480	14400	89	3500	34	4970	21600	
C 80 2_6.1	6.1	147	3600	58	2100	14400	82	3700	33	5270	21200	
C 80 2_7.0	7.0	128	3500	49	2630	17000	71	3500	27	6130	24600	
C 80 2_7.6	7.6	118	3650	47	3060	16800	66	3650	26	6550	24600	
C 80 2_8.9	8.9	102	3500	39	3330	19900	56	3500	22	6800	27800	
C 80 2_9.6	9.6	94	3700	38	3590	19400	52	3700	21	7000	27700	
C 80 2_11.1	11.1	81	3500	31	4160	22800	45	3500	17.4	7000	31200	
C 80 2_12.0	12.0	75	3700	31	4400	22500	42	3700	17.0	7000	31200	
C 80 2_13.8	13.8	65	3500	25	4540	25700	36	3500	14.0	7000	34700	
C 80 2_14.9	14.9	60	3700	25	4770	25500	34	3700	13.7	7000	34700	
C 80 2_16.7	16.7	54	3500	21	5050	28500	30	3500	11.6	7000	35000	
C 80 2_18.1	18.1	50	3700	20	5280	28400	27.7	3700	11.3	7000	35000	
C 80 2_20.5	20.5	44	3550	17.2	5270	31400	24.4	3550	9.5	7000	35000	
C 80 2_22.2	22.2	40	3700	16.5	5610	31600	22.5	3700	9.2	7000	35000	
C 80 2_24.0	24.0	38	3550	14.7	5390	33800	20.9	3550	8.2	7000	35000	
C 80 2_25.9	25.9	35	3700	14.1	5730	34200	19.3	3700	7.9	7000	35000	
C 80 2_31.3	31.3	28.7	3700	11.7	5940	35000	16.0	3700	6.5	7000	35000	
C 80 2_39.1	39.1	23.0	3200	8.1	7000	35000	12.8	3200	4.5	7000	35000	
C 80 3_43.5	43.5	20.7	4000	9.3	7000	35000	11.5	4000	5.2	7000	35000	
C 80 3_47.4	47.4	19.0	4000	8.5	7000	35000	10.5	4000	4.7	7000	35000	
C 80 3_57.3	57.3	15.7	4000	7.1	7000	35000	8.7	4000	3.9	7000	35000	
C 80 3_62.5	62.5	14.4	4000	6.5	7000	35000	8.0	4000	3.6	7000	35000	
C 80 3_70.5	70.5	12.8	4000	5.7	7000	35000	7.1	4000	3.2	7000	35000	
C 80 3_76.9	76.9	11.7	4000	5.3	7000	35000	6.5	4000	2.9	7000	35000	
C 80 3_89.3	89.3	10.1	4000	4.5	7000	35000	5.6	4000	2.5	7000	35000	
C 80 3_97.4	97.4	9.2	4000	4.2	7000	35000	5.1	4000	2.3	7000	35000	
C 80 3_109.5	109.5	8.2	4000	3.7	7000	35000	4.6	4000	2.1	7000	35000	159
C 80 3_119.5	119.5	7.5	4000	3.4	7000	35000	4.2	4000	1.9	7000	35000	
C 80 3_136.7	136.7	6.6	4000	3.0	7000	35000	3.7	4000	1.6	7000	35000	
C 80 3_149.1	149.1	6.0	4000	2.7	7000	35000	3.4	4000	1.5	7000	35000	
C 80 3_169.0	169.0	5.3	4000	2.4	7000	35000	3.0	4000	1.3	7000	35000	
C 80 3_184.4	184.4	4.9	4000	2.2	7000	35000	2.7	4000	1.2	7000	35000	
C 80 3_197.9	197.9	4.5	3800	1.9	7000	35000	2.5	3800	1.1	7000	35000	
C 80 3_215.8	215.8	4.2	4000	1.9	7000	35000	2.3	4000	1.0	7000	35000	
C 80 4_261.9	261.9	3.4	4000	1.6	2950	35000	1.9	4000	0.90	3500	35000	
C 80 4_285.7	285.7	3.2	4000	1.4	2990	35000	1.8	4000	0.80	3500	35000	
C 80 4_334.3	334.3	2.7	4000	1.2	2980	35000	1.5	4000	0.70	3500	35000	
C 80 4_364.7	364.7	2.5	4000	1.1	3020	35000	1.4	4000	0.60	3500	35000	
C 80 4_417.5	417.5	2.2	4000	1.0	3000	35000	1.2	4000	0.60	3500	35000	
C 80 4_455.4	455.4	2.0	4000	0.90	3050	35000	1.1	4000	0.50	3500	35000	
C 80 4_529.3	529.3	1.7	4000	0.80	3030	35000	0.90	4000	0.40	3500	35000	
C 80 4_577.4	577.4	1.6	4000	0.70	3070	35000	0.90	4000	0.40	3500	35000	
C 80 4_664.3	664.3	1.4	4000	0.60	3050	35000	0.80	4000	0.30	3500	35000	
C 80 4_724.7	724.7	1.2	4000	0.60	3090	35000	0.70	4000	0.30	3500	35000	
C 80 4_783.4	783.4	1.1	4000	0.50	3060	35000	0.60	4000	0.30	3500	35000	
C 80 4_854.6	854.6	1.1	4000	0.50	3100	35000	0.60	4000	0.30	3500	35000	
C 80 4_945.7	945.7	1.0	4000	0.40	3070	35000	0.50	4000	0.20	3500	35000	
C 80 4_1032	1032	0.90	4000	0.40	3110	35000	0.50	4000	0.20	3500	35000	
C 80 4_1168	1168	0.80	4000	0.40	3080	35000	0.40	4000	0.20	3500	35000	
C 80 4_1274	1274	0.70	4000	0.30	3110	35000	0.40	4000	0.20	3500	35000	
C 80 4_1358	1358	0.70	4000	0.30	3090	35000	0.40	4000	0.20	3500	35000	
C 80 4_1481	1481	0.60	4000	0.30	3120	35000	0.30	4000	0.20	3500	35000	



C 90 — 7200 Nm

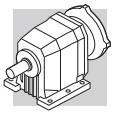
	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 90 2_5.2	5.2	542	3500	209	1700	12800	271	4300	128	2170	15800	
C 90 2_5.6	5.6	500	3600	198	3240	12800	250	4400	121	4250	16000	
C 90 2_6.8	6.8	414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

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



C 90 — 7200 Nm

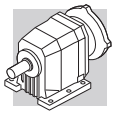
	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 90 2_5.2	5.2	174	4900	94	2560	18200	97	5850	62	3010	21600	
C 90 2_5.6	5.6	161	5050	89	4640	18100	89	6000	59	5720	21800	
C 90 2_6.8	6.8	133	5450	80	2310	18500	74	6200	51	5130	24600	
C 90 2_7.3	7.3	123	5550	75	4890	18900	68	6550	49	6340	23200	
C 90 2_8.3	8.3	108	5850	70	2700	19300	60	6200	41	8870	27800	
C 90 2_9.0	9.0	100	5950	65	5300	19800	55	6600	40	9660	27600	
C 90 2_10.4	10.4	87	6200	59	2250	21000	48	6200	33	11000	31000	
C 90 2_11.2	11.2	80	6450	57	3960	20400	45	6600	32	11700	30800	
C 90 2_12.8	12.8	70	6250	48	4500	25300	39	6250	27	13200	34100	
C 90 2_13.9	13.9	65	6550	47	5830	24400	36	6550	26	14600	34300	
C 90 2_16.0	16.0	56	6200	38	6570	28700	31	6200	21	15000	38000	
C 90 2_17.3	17.3	52	6550	38	7530	28600	28.9	6550	21	15000	38100	
C 90 2_18.7	18.7	48	6200	33	7120	31000	26.7	6200	18.3	15000	40700	
C 90 2_20.2	20.2	44	6600	32	7780	30800	24.8	6600	18.0	15000	40700	
C 90 2_22.9	22.9	39	6200	27	8310	34200	21.8	6200	14.9	15000	44500	
C 90 2_24.8	24.8	36	6600	26	8950	34100	20.2	6600	14.6	15000	44600	
C 90 2_27.2	27.2	33	5500	20	13400	39200	18.4	5500	11.2	15000	50000	
C 90 2_29.4	29.4	31	5900	19.9	13700	39100	17.0	5900	11.0	15000	50200	
C 90 2_35.1	35.1	25.6	5400	15.3	14100	43800	14.2	5400	8.5	15000	55500	
C 90 3_39.4	39.4	22.8	7100	18.3	15000	40600	12.7	7100	10.1	15000	40600	
C 90 3_43.0	43.0	20.9	7200	17.0	15000	42000	11.6	7200	9.4	15000	42000	
C 90 3_50.3	50.3	17.9	7100	14.3	15000	45400	9.9	7100	7.9	15000	45400	
C 90 3_54.9	54.9	16.4	7200	13.3	15000	46900	9.1	7200	7.4	15000	46900	
C 90 3_59.2	59.2	15.2	7100	12.2	15000	48800	8.4	7100	6.8	15000	48800	
C 90 3_64.6	64.6	13.9	7200	11.3	15000	50400	7.7	7200	6.3	15000	50400	
C 90 3_74.4	74.4	12.1	7100	9.7	15000	53800	6.7	7100	5.4	15000	53800	
C 90 3_81.2	81.2	11.1	7200	9.0	15000	55500	6.2	7200	5.0	15000	55500	162
C 90 3_88.2	88.2	10.2	7100	8.2	15000	57800	5.7	7100	4.5	15000	57800	
C 90 3_96.2	96.2	9.4	7200	7.6	15000	59600	5.2	7200	4.2	15000	59600	
C 90 3_107.0	107.0	8.4	7100	6.7	15000	60000	4.7	7100	3.7	15000	60000	
C 90 3_116.7	116.7	7.7	7200	6.3	15000	60000	4.3	7200	3.5	15000	60000	
C 90 3_134.1	134.1	6.7	7100	5.4	15000	60000	3.7	7100	3.0	15000	60000	
C 90 3_146.3	146.3	6.2	7200	5.0	15000	60000	3.4	7200	2.8	15000	60000	
C 90 3_157.8	157.8	5.7	7100	4.6	15000	60000	3.2	7100	2.5	15000	60000	
C 90 3_172.1	172.1	5.2	7200	4.2	15000	60000	2.9	7200	2.4	15000	60000	
C 90 4_212.4	212.4	4.2	7200	3.5	2090	60000	2.4	7200	2.0	3210	60000	
C 90 4_231.7	231.7	3.9	7200	3.2	2460	60000	2.2	7200	1.8	3290	60000	
C 90 4_268.5	268.5	3.4	7200	2.8	2440	60000	1.9	7200	1.5	3300	60000	
C 90 4_292.9	292.9	3.1	7200	2.5	2620	60000	1.7	7200	1.4	3370	60000	
C 90 4_339.0	339.0	2.7	7200	2.2	2590	60000	1.5	7200	1.2	3340	60000	
C 90 4_369.8	369.8	2.4	7200	2.0	2660	60000	1.4	7200	1.1	3420	60000	
C 90 4_419.0	419.0	2.1	7200	1.8	2630	60000	1.2	7200	1.0	3390	60000	
C 90 4_457.1	457.1	2.0	7200	1.6	2700	60000	1.1	7200	0.90	3460	60000	
C 90 4_534.2	534.2	1.7	7200	1.4	2680	60000	0.90	7200	0.80	3380	60000	
C 90 4_582.8	582.8	1.5	7200	1.3	2750	60000	0.90	7200	0.70	3500	60000	
C 90 4_652.8	652.8	1.4	7200	1.1	2700	60000	0.80	7200	0.60	3450	60000	
C 90 4_712.2	712.2	1.3	7200	1.0	2760	60000	0.70	7200	0.60	3500	60000	
C 90 4_773.6	773.6	1.2	7200	1.0	2720	60000	0.60	7200	0.50	3480	60000	
C 90 4_844.0	844.0	1.1	7200	0.90	2790	60000	0.60	7200	0.50	3500	60000	
C 90 4_922.3	922.3	1.0	7200	0.80	2730	60000	0.50	7200	0.40	3490	60000	
C 90 4_1006	1006	0.90	7200	0.70	2800	60000	0.50	7200	0.40	3500	60000	
C 90 4_1137	1137	0.80	7200	0.70	2740	60000	0.40	7200	0.40	3500	60000	
C 90 4_1240	1240	0.70	7200	0.60	2800	60000	0.40	7200	0.30	3500	60000	



C 100 — 12000 Nm

	i	n_1 = 2800 min^{-1}					n_1 = 1400 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 100 2_4.9	4.9	569	5500	345	1900	20600	285	6800	213	3790	25300	165
C 100 2_5.3	5.3	525	5650	327	2790	21000	263	6950	201	4940	25800	
C 100 2_6.5	6.5	429	6150	291	1920	21800	215	7550	179	3950	27000	
C 100 2_7.1	7.1	396	6200	271	3100	22700	198	7650	167	5270	27900	
C 100 2_8.4	8.4	335	6700	248	1870	22800	168	8200	152	3970	28500	
C 100 2_9.0	9.0	309	6800	232	2950	23500	155	8350	142	5190	29200	
C 100 2_10.1	10.1	278	7100	217	1930	24100	139	8750	134	3900	29500	
C 100 2_10.9	10.9	256	7100	200	3240	25700	128	8750	124	5460	31600	
C 100 2_12.5	12.5	225	7650	190	1360	24900	112	9400	117	3260	30800	
C 100 2_13.5	13.5	208	7700	176	2600	26300	104	9500	109	4680	32100	
C 100 2_15.2	15.2	184	8100	164	1270	26600	92	10000	101	2680	32500	
C 100 2_16.5	16.5	170	8250	154	2320	27200	85	10150	95	4420	33600	
C 100 2_18.7	18.7	150	8200	136	1500	30800	75	10000	83	3600	38000	
C 100 2_20.2	20.2	138	8100	124	3047	32200	69	10000	76	5210	39600	
C 100 2_22.2	22.2	126	7500	104	3570	35800	63	9200	64	5960	44100	
C 100 2_24.1	24.1	116	8100	104	3620	35200	58	10000	64	5900	43300	
C 100 2_29.6	29.6	95	6900	72	6380	42400	47	8500	44	9220	52200	
C 100 3_34.3	34.3	82	10350	95	9790	33300	41	11700	54	13000	46400	
C 100 3_36.9	36.9	76	10650	91	10200	34500	38	11800	50	13100	48000	
C 100 3_42.9	42.9	65	11350	83	9640	33200	33	12000	44	13100	51200	
C 100 3_46.2	46.2	61	11700	80	10100	33100	30	12000	41	13300	53100	
C 100 3_53.3	53.3	53	12000	71	9450	36400	26.3	12000	36	13200	56900	
C 100 3_57.4	57.4	49	12000	66	10200	39500	24.4	12000	33	13400	59000	
C 100 3_64.5	64.5	43	12000	59	9950	44100	21.7	12000	29	13400	62300	
C 100 3_69.4	69.4	40	12000	54	10400	45900	20.2	12000	27	13500	64500	
C 100 3_79.4	79.4	35	12000	48	10300	49200	17.6	12000	24	13500	68600	
C 100 3_85.6	85.6	33	12000	44	10400	51100	16.4	12000	22	13600	70900	
C 100 3_92.7	92.7	30	12000	41	10400	53200	15.1	12000	20	13500	73500	
C 100 3_99.8	99.8	28.1	12000	38	10500	55200	14.0	12000	19.0	13600	75900	
C 100 3_111.9	111.9	25.0	12000	34	10400	58300	12.5	12000	16.9	13500	79800	
C 100 3_120.5	120.5	23.2	12000	31	10500	60400	11.6	12000	15.7	13700	82400	
C 100 3_139.7	139.7	20.0	11050	25	10600	67400	10.0	11050	12.5	13700	85000	
C 100 3_150.4	150.4	18.6	12000	25	10600	66900	9.3	12000	12.6	13700	85000	
C 100 4_162.1	162.1	17.3	12000	24	—	85000	8.6	12000	11.9	—	85000	
C 100 4_185.4	185.4	15.1	12000	21	—	85000	7.6	12000	10.4	—	85000	
C 100 4_199.6	199.6	14.0	12000	19.4	—	85000	7.0	12000	9.7	—	85000	
C 100 4_244.2	244.2	11.5	12000	15.8	—	85000	5.7	12000	7.9	—	85000	
C 100 4_263.0	263.0	10.6	12000	14.7	—	85000	5.3	12000	7.4	—	85000	
C 100 4_300.5	300.5	9.3	12000	12.9	—	85000	4.7	12000	6.4	—	85000	
C 100 4_323.6	323.6	8.7	12000	11.9	—	85000	4.3	12000	6.0	—	85000	
C 100 4_380.5	380.5	7.4	12000	10.2	—	85000	3.7	12000	5.1	—	85000	
C 100 4_409.8	409.8	6.8	12000	9.4	—	85000	3.4	12000	4.7	—	85000	
C 100 4_466.7	466.7	6.0	12000	8.3	—	85000	3.0	12000	4.1	—	85000	
C 100 4_502.6	502.6	5.6	12000	7.7	—	85000	2.8	12000	3.8	—	85000	
C 100 4_582.6	582.6	4.8	12000	6.6	—	85000	2.4	12000	3.3	—	85000	
C 100 4_627.4	627.4	4.5	12000	6.2	—	85000	2.2	12000	3.1	—	85000	
C 100 4_720.3	720.3	3.9	12000	5.4	—	85000	1.9	12000	2.7	—	85000	
C 100 4_775.7	775.7	3.6	12000	5.0	—	85000	1.8	12000	2.5	—	85000	
C 100 4_843.3	843.3	3.3	12000	4.6	—	85000	1.7	12000	2.3	—	85000	
C 100 4_908.2	908.2	3.1	12000	4.3	—	85000	1.5	12000	2.1	830	85000	
C 100 4_1004	1004	2.8	12000	3.9	—	85000	1.4	12000	1.9	—	85000	
C 100 4_1081	1081	2.6	12000	3.6	—	85000	1.3	12000	1.8	870	85000	

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



C 100 — 12000 Nm

	i	n_1 = 900 min^{-1}					n_1 = 500 min^{-1}					
		n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	n_2 min^{-1}	M_{n2} Nm	P_{n1} kW	R_{n1} N	R_{n2} N	
C 100 2_4.9	4.9	183	7800	157	5310	28800	102	9300	104	6720	34400	165
C 100 2_5.3	5.3	169	7950	148	6680	29500	94	9450	98	9740	35200	
C 100 2_6.5	6.5	138	8600	131	5670	31000	77	10250	87	7540	37000	
C 100 2_7.1	7.1	127	8750	123	7050	31800	71	10450	81	10100	37800	
C 100 2_8.4	8.4	108	9350	111	5670	32600	60	10950	72	8530	40100	
C 100 2_9.0	9.0	99	9500	104	7080	33600	55	11350	69	10100	39900	
C 100 2_10.1	10.1	89	10000	98	5540	33600	50	10900	60	10600	44500	
C 100 2_10.9	10.9	82	10150	92	6980	34700	46	11500	58	11300	44300	
C 100 2_12.5	12.5	72	10700	85	3910	35400	40	10850	48	11700	49600	
C 100 2_13.5	13.5	67	10850	80	6440	36700	37	11450	47	12300	49500	
C 100 2_15.2	15.2	59	10800	70	5940	40800	33	10800	39	13000	54700	
C 100 2_16.5	16.5	55	11500	69	6320	39100	30	11500	38	13400	54500	
C 100 2_18.7	18.7	48	10900	58	6310	45100	26.8	10900	32	13400	59800	
C 100 2_20.2	20.2	45	11500	56	6890	45000	24.7	11500	31	14000	60100	
C 100 2_22.2	22.2	40	9850	44	9170	52200	22.5	9850	24	15000	67800	
C 100 2_24.1	24.1	37	10800	44	8930	51200	20.7	10800	25	15000	67200	
C 100 2_29.6	29.6	30	9100	31	12600	61400	16.9	9100	17.0	15000	78300	
C 100 3_34.3	34.3	26.2	11700	35	15000	57800	14.6	11700	19.2	15000	75500	
C 100 3_36.9	36.9	24.4	11800	32	15000	59600	13.5	11800	18.0	15000	77700	
C 100 3_42.9	42.9	21.0	12000	28	15000	63400	11.6	12000	15.7	15000	82300	
C 100 3_46.2	46.2	19.5	12000	26	15000	65600	10.8	12000	14.6	15000	84900	
C 100 3_53.3	53.3	16.9	12000	23	15000	69900	9.4	12000	12.7	15000	85000	
C 100 3_57.4	57.4	15.7	12000	21	15000	72300	8.7	12000	11.8	15000	85000	
C 100 3_64.5	64.5	14.0	12000	18.6	15000	76100	7.8	12000	10.5	15000	85000	
C 100 3_69.4	69.4	13.0	12000	17.5	15000	78600	7.2	12000	9.7	15000	85000	
C 100 3_79.4	79.4	11.3	12000	15.3	15000	83300	6.3	12000	8.5	15000	85000	
C 100 3_85.6	85.6	10.5	12000	14.2	15000	85000	5.8	12000	7.9	15000	85000	
C 100 3_92.7	92.7	9.7	12000	13.1	15000	85000	5.4	12000	7.3	15000	85000	
C 100 3_99.8	99.8	9.0	12000	12.2	15000	85000	5.0	12000	6.8	15000	85000	
C 100 3_111.9	111.9	8.0	12000	10.9	15000	85000	4.5	12000	6.0	15000	85000	
C 100 3_120.5	120.5	7.5	12000	10.1	15000	85000	4.1	12000	5.6	15000	85000	
C 100 3_139.7	139.7	6.4	11500	8.0	15000	85000	3.6	11050	4.5	15000	85000	
C 100 3_150.4	150.4	6.0	12000	8.1	15000	85000	3.3	12000	4.5	15000	85000	
C 100 4_162.1	162.1	5.6	12000	7.7	—	85000	3.1	12000	4.3	—	85000	
C 100 4_185.4	185.4	4.9	12000	6.7	—	85000	2.7	12000	3.7	920	85000	
C 100 4_199.6	199.6	4.5	12000	6.2	—	85000	2.5	12000	3.5	1430	85000	
C 100 4_244.2	244.2	3.7	12000	5.1	—	85000	2.0	12000	2.8	1490	85000	
C 100 4_263.0	263.0	3.4	12000	4.7	—	85000	1.9	12000	2.6	1950	85000	
C 100 4_300.5	300.5	3.0	12000	4.1	—	85000	1.7	12000	2.3	1840	85000	
C 100 4_323.6	323.6	2.8	12000	3.8	850	85000	1.5	12000	2.1	2280	85000	
C 100 4_380.5	380.5	2.4	12000	3.3	700	85000	1.3	12000	1.8	2130	85000	
C 100 4_409.8	409.8	2.2	12000	3.0	1120	85000	1.2	12000	1.7	2550	85000	
C 100 4_466.7	466.7	1.9	12000	2.7	910	85000	1.1	12000	1.5	2340	85000	
C 100 4_502.6	502.6	1.8	12000	2.5	1320	85000	1.0	12000	1.4	2740	85000	
C 100 4_582.6	582.6	1.5	12000	2.1	1100	85000	0.90	12000	1.2	2520	85000	
C 100 4_627.4	627.4	1.4	12000	2.0	1490	85000	0.80	12000	1.1	2910	85000	
C 100 4_720.3	720.3	1.2	12000	1.7	1270	85000	0.70	12000	1.0	2700	85000	
C 100 4_775.7	775.7	1.2	12000	1.6	1650	85000	0.60	12000	0.90	3070	85000	
C 100 4_843.3	843.3	1.1	12000	1.5	1360	85000	0.60	12000	0.80	2790	85000	
C 100 4_908.2	908.2	1.0	12000	1.4	1730	85000	0.60	12000	0.80	3160	85000	
C 100 4_1004	1004	0.90	12000	1.2	1400	85000	0.50	12000	0.70	2830	85000	
C 100 4_1081	1081	0.90	12000	1.1	1770	85000	0.50	12000	0.60	3170	85000	

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

27 MOTOR AVAILABILITY

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

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

(B 22)

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

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

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

(B 23)

		M0	M05	M1	M2	M3	M4	M5
C 05 2		27.1_44.7	5.5_44.7	5.5_44.7				
C 12 2			2.8_66.2	2.8_37.0	2.8_47.7	2.8_47.7		
C 22 2			3.7_63.3 ⛔ (7.1_8.7)	3.7_43.3 ⛔ (7.1_8.7)	2.7_54.7	2.7_54.7		
C 22 3			60.0_261.0	60.0_261.0	60.0_261.0	60.0_261.0		
C 32 2				5.0_52.4 ⛔ (7.2_11.2)	2.9_66.8	2.9_66.8	2.9_25.1	
C 32 3			74.7_274.7	74.7_274.7	74.7_274.7	74.7_274.7		
C 36 2				4.6_19.0 ⛔ (6.8_10.6)	2.7_19.0	2.7_19.0	2.7_19.0	
C 36 3				38.1_162.0	22.1_206.4	22.1_206.4	22.1_77.6	
C 36 4			230.9_848.5	230.9_848.5	230.9_848.5	230.9_848.5		
C 41 2				14.2_44.8	2.7_44.8	2.7_44.8	2.7_31.4	
C 41 3				47.0_209.1	28.5_209.1	28.5_209.1	28.5_102.3	
C 41 4			239.9_855.5	239.9_855.5	239.9_855.5	239.9_855.5		
C 51 2				18.9_57.0	2.6_57.0	2.6_57.0	2.6_40.4	2.6_40.4
C 51 3				59.0_216.7	21.8_216.7	21.8_216.7	21.8_124.4	21.8_124.4
C 51 4	**i =**			240.9_884.9	240.9_884.9	240.9_884.9		
C 61 2					3.7_38.0 ⛔ (6.7_7.5)	3.7_38.0 ⛔ (6.7_7.5)	2.8_38.0	2.8_38.0
C 61 3					26.8_195.8	26.8_195.8	26.8_140.5	26.8_140.5
C 61 4				217.4_796.1	217.4_796.1	217.4_796.1		
C 70 2					14.1_34.7 ⛔ (15.3)	14.1_34.7 ⛔ (15.3)	7.5_34.7 ⛔ (8.0)	7.5_34.7 ⛔ (8.0)
C 70 3					41.3_239.3	41.3_239.3	41.3_137.4	41.3_137.4
C 70 4				251.3_1476	251.3_1476	251.3_1476	251.3_554.7	
C 80 2						20.5_39.1	11.1_39.1	11.1_39.1
C 80 3						43.5_215.8	43.5_184.4	43.5_184.4
C 80 4				334.3_1481	261.9_1481	261.9_1481	261.9_724.7	
C 90 2						22.9_35.1	12.8_35.1	12.8_35.1
C 90 3						74.4_172.1	39.4_172.1	39.4_172.1
C 90 4				339.0_1240	212.4_1240	212.4_1240	212.4_712.2	
C 100 2							15.2_29.6	15.2_29.6
C 100 3							42.9_150.4	42.9_150.4
C 100 4				380.5_1081	162.1_1081	162.1_1081	162.1_775.7	

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

(B 24)

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

(B 25)

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

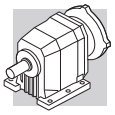
28 MOMENT OF INERTIA

The following charts indicate moment of inertia values Jr [kgm^2] referred to the gear unit high speed shaft. A key to the symbols used follows:

	Values under this icon refer to compact gear units, without motor. To obtain the overall moment of inertia for the gearmotor just add the value of the inertia for the specific compact motor, given in the relevant rating chart.
IEC	Values under this symbol refer to gearboxes with IEC motor adaptor (IEC size...).
	This symbol refers to gearbox values.
SERVO	Values under this symbol refer to gear unit with servomotor input adapter.

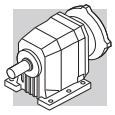
C 05

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



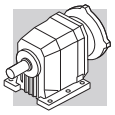
C 12

	i	J (•10-4) [kgm2]							
			IEC						
			63	71	80	90	100	112	
C 12 2_2.8	2.8	0.44	1.9	1.9	3.3	3.2	4.5	4.5	1.3
C 12 2_3.2	3.2	0.34	1.8	1.8	3.2	3.1	4.4	4.4	1.2
C 12 2_3.7	3.7	0.29	1.8	1.7	3.1	3.1	4.4	4.4	1.2
C 12 2_4.3	4.3	0.21	1.7	1.7	3.1	3.0	4.3	4.3	1.1
C 12 2_4.9	4.9	0.19	1.7	1.7	3.0	3.0	4.3	4.3	1.1
C 12 2_5.6	5.6	0.15	1.6	1.6	3.0	2.9	4.2	4.2	1.0
C 12 2_6.2	6.2	0.12	1.6	1.6	3.0	2.9	4.2	4.2	1.0
C 12 2_7.6	7.6	0.33	1.8	1.8	3.2	3.1	4.4	4.4	1.2
C 12 2_8.8	8.8	0.32	1.8	1.8	3.2	3.1	4.4	4.4	1.2
C 12 2_10.1	10.1	0.23	1.7	1.7	3.1	3.0	4.3	4.3	1.1
C 12 2_11.9	11.9	0.17	1.6	1.6	3.0	3.0	4.2	4.2	1.1
C 12 2_13.4	13.4	0.16	1.6	1.6	3.0	2.9	4.2	4.2	1.1
C 12 2_15.4	15.4	0.12	1.6	1.6	3.0	2.9	4.2	4.2	1.0
C 12 2_17.2	17.2	0.10	1.6	1.6	2.9	2.9	4.2	4.2	1.0
C 12 2_18.4	18.4	0.08	1.6	1.5	2.9	2.9	4.2	4.2	0.98
C 12 2_20.6	20.6	0.08	1.5	1.5	2.9	2.9	4.2	4.2	0.98
C 12 2_23.2	23.2	0.07	1.5	1.5	2.9	2.9	4.1	4.1	0.97
C 12 2_25.4	25.4	0.06	1.5	1.5	2.9	2.8	4.1	4.1	0.96
C 12 2_29.5	29.5	0.05	1.5	1.5	2.9	2.8	4.1	4.1	0.95
C 12 2_32.8	32.8	0.04	1.5	1.5	2.9	2.8	4.1	4.1	0.94
C 12 2_37.0	37.0	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 12 2_42.3	42.3	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 12 2_47.6	47.6	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 12 2_55.2	55.2	0.02	1.5	1.5	—	—	—	—	0.92
C 12 2_66.2	66.2	0.01	1.5	1.5	—	—	—	—	0.91



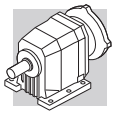
C 12

	i	J (•10-4) [kgm2]									
		SERVO									
		60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 12 2_2.8	2.8	0.71	0.97	0.73	1.2	3.3	3.7	3.3	3.8	3.2	4.2
C 12 2_3.2	3.2	0.61	0.87	0.63	1.1	3.2	3.6	3.2	3.7	3.1	4.1
C 12 2_3.7	3.7	0.56	0.82	0.58	1.0	3.1	3.5	3.1	3.6	3.1	4.1
C 12 2_4.3	4.3	0.48	0.74	0.50	0.94	3.0	3.5	3.1	3.6	3.0	4.0
C 12 2_4.9	4.9	0.46	0.72	0.48	0.92	3.0	3.4	3.0	3.5	3.0	4.0
C 12 2_5.6	5.6	0.42	0.68	0.44	0.88	3.0	3.4	3.0	3.5	2.9	3.9
C 12 2_6.2	6.2	0.39	0.65	0.41	0.85	2.9	3.4	3.0	3.5	2.9	3.9
C 12 2_7.6	7.6	0.60	0.86	0.62	1.1	3.2	3.6	3.2	3.7	3.1	4.1
C 12 2_8.8	8.8	0.59	0.85	0.61	1.0	3.1	3.6	3.2	3.7	3.1	4.1
C 12 2_10.1	10.1	0.50	0.76	0.52	0.96	3.1	3.5	3.1	3.6	3.0	4.0
C 12 2_11.9	11.9	0.44	0.70	0.46	0.90	3.0	3.4	3.0	3.5	3.0	4.0
C 12 2_13.4	13.4	0.43	0.69	0.45	0.83	3.0	3.4	3.0	3.5	2.9	3.9
C 12 2_15.4	15.4	0.39	0.65	0.41	0.85	2.9	3.4	3.0	3.5	2.9	3.9
C 12 2_17.2	17.2	0.37	0.63	0.39	0.83	2.9	3.4	2.9	3.4	2.9	3.9
C 12 2_18.4	18.4	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.9	3.9
C 12 2_20.6	20.6	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.9	3.9
C 12 2_23.2	23.2	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.9	3.9
C 12 2_25.4	25.4	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.8	3.8
C 12 2_29.5	29.5	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8
C 12 2_32.8	32.8	0.34	0.60	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8
C 12 2_37.0	37.0	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 12 2_42.3	42.3	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 12 2_47.6	47.6	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 12 2_55.2	55.2	0.29	0.55	0.31	0.75	2.8	3.3	—	—	—	—
C 12 2_66.2	66.2	0.28	0.54	0.30	0.74	2.8	3.3	—	—	—	—



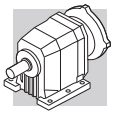
C 22

	i	J (•10-4) [kgm2]							
			IEC						
			63	71	80	90	100	112	
C 22 2_2.7	2.7	1.2	—	—	4.0	4.0	5.3	5.3	3.1
C 22 2_3.3	3.3	0.83	—	—	3.7	3.6	4.9	4.9	2.7
C 22 2_3.7	3.7	0.72	2.2	2.2	3.6	3.5	4.8	4.8	2.6
C 22 2_4.3	4.3	0.56	2.0	2.0	3.4	3.3	4.6	4.6	2.4
C 22 2_4.8	4.8	0.48	2.0	1.9	3.3	3.3	4.6	4.6	2.4
C 22 2_5.6	5.6	0.36	1.8	1.8	3.2	3.2	4.4	4.4	2.2
C 22 2_6.1	6.1	0.29	1.8	1.7	3.1	3.1	4.4	4.4	2.2
C 22 2_7.1	7.1	0.77	—	—	3.6	3.6	4.8	4.8	2.6
C 22 2_8.7	8.7	0.55	—	—	3.4	3.3	4.6	4.6	2.4
C 22 2_9.6	9.6	0.50	2.0	2.0	3.3	3.3	4.6	4.6	2.4
C 22 2_11.1	11.1	0.39	1.9	1.8	3.2	3.2	4.5	4.5	2.3
C 22 2_12.4	12.4	0.35	1.8	1.8	3.2	3.1	4.4	4.4	2.2
C 22 2_14.5	14.5	0.36	1.7	1.7	3.1	3.1	4.3	4.3	2.1
C 22 2_15.8	15.8	0.20	1.7	1.7	3.1	3.0	4.3	4.3	2.1
C 22 2_18.1	18.1	0.18	1.6	1.6	3.0	3.0	4.3	4.3	2.0
C 22 2_20.0	20.0	0.15	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 22 2_21.5	21.5	0.13	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 22 2_24.3	24.3	0.12	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 22 2_27.2	27.2	0.10	1.6	1.6	3.0	2.9	4.2	4.2	2.0
C 22 2_29.6	29.6	0.09	1.6	1.5	2.9	2.9	4.2	4.2	2.0
C 22 2_33.1	33.1	0.07	1.5	1.5	2.9	2.9	4.2	4.2	1.9
C 22 2_36.8	36.8	0.06	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 22 2_43.3	43.3	0.05	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 22 2_48.6	48.6	0.04	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 22 2_54.7	54.7	0.03	1.5	1.5	2.9	2.8	4.1	4.1	1.9
C 22 2_63.3	63.3	0.02	1.5	1.5	—	—	—	—	1.9
C 22 3_60.0	60.0	0.04	1.5	1.5	2.9	2.8	4.1	4.1	0.94
C 22 3_65.3	65.3	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_74.8	74.8	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_82.6	82.6	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_88.5	88.5	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_100.2	100.2	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_112.0	112.0	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_122.2	122.2	0.03	1.5	1.5	2.9	2.8	4.1	4.1	0.93
C 22 3_136.5	136.5	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_151.7	151.7	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_178.5	178.5	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_200.7	200.7	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_225.8	225.8	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92
C 22 3_261.0	261.0	0.02	1.5	1.5	2.9	2.8	4.1	4.1	0.92



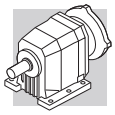
C 22

	i	J (•10-4) [kgm2]									
		SERVO									
		60A		60B 80A		95A		80C 95B 110A		95C 110B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 22 2_2.7	2.7	—	—	—	—	—	—	4.0	4.5	4.0	5.0
C 22 2_3.3	3.3	—	—	—	—	—	—	3.7	4.2	3.6	4.6
C 22 2_3.7	3.7	0.99	1.3	1.0	1.4	3.5	4.0	3.6	4.1	3.5	4.5
C 22 2_4.3	4.3	0.83	1.1	0.85	1.3	3.4	3.8	3.4	3.9	3.3	4.3
C 22 2_4.8	4.8	0.75	1.0	0.77	1.2	3.3	3.7	3.3	3.8	3.3	4.3
C 22 2_5.6	5.6	0.63	0.89	0.65	1.1	3.2	3.6	3.2	3.7	3.2	4.2
C 22 2_6.1	6.1	0.56	0.82	0.58	1.0	3.1	3.5	3.1	3.6	3.1	4.1
C 22 2_7.1	7.1	—	—	—	—	—	—	3.6	4.1	3.6	4.6
C 22 2_8.7	8.7	—	—	—	—	—	—	3.4	3.9	3.3	4.3
C 22 2_9.6	9.6	0.77	1.0	0.79	1.2	3.3	3.8	3.3	3.8	3.3	4.3
C 22 2_11.1	11.1	0.66	0.92	0.68	1.1	3.2	3.6	3.2	3.7	3.2	4.2
C 22 2_12.4	12.4	0.62	0.88	0.64	1.1	3.2	3.6	3.2	3.7	3.1	4.1
C 22 2_14.5	14.5	0.63	0.89	0.65	1.1	3.2	3.6	3.1	3.6	3.1	4.1
C 22 2_15.8	15.8	0.47	0.73	0.49	0.93	3.0	3.5	3.1	3.6	3.0	4.0
C 22 2_18.1	18.1	0.45	0.71	0.47	0.91	3.0	3.4	3.0	3.5	3.0	4.0
C 22 2_20.0	20.0	0.42	0.68	0.44	0.88	3.0	3.4	3.0	3.5	2.9	3.9
C 22 2_21.5	21.5	0.40	0.66	0.42	0.86	3.0	3.4	3.0	3.5	2.9	3.9
C 22 2_24.3	24.3	0.39	0.65	0.41	0.85	2.9	3.4	3.0	3.5	2.9	3.9
C 22 2_27.2	27.2	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9
C 22 2_29.6	29.6	0.36	0.62	0.38	0.82	2.9	3.3	2.9	3.4	2.9	3.9
C 22 2_33.1	33.1	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.9	3.9
C 22 2_36.8	36.8	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.8	3.8
C 22 2_43.3	43.3	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8
C 22 2_48.6	48.6	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8
C 22 2_54.7	54.7	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 2_63.3	63.3	0.29	0.55	0.31	0.75	2.8	3.3	—	—	—	—
C 22 3_60.0	60.0	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_65.3	65.3	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_74.8	74.8	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_82.6	82.6	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_88.5	88.5	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_100.2	100.2	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_112.0	112.0	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_122.2	122.2	0.30	0.56	0.32	0.76	2.9	3.3	2.9	3.4	2.8	3.8
C 22 3_136.5	136.5	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_151.7	151.7	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_178.5	178.5	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_200.7	200.7	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_225.8	225.8	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8
C 22 3_261.0	261.0	0.29	0.55	0.31	0.75	2.8	3.3	2.9	3.4	2.8	3.8



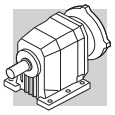
C 32

	i	J (•10-4) [kgm2]								
			IEC							
			63	71	80	90	100	112	132	
C 32 2_2.9	2.9	2.3	—	—	5.2	5.1	6.4	6.4	20	4.6
C 32 2_3.4	3.4	1.8	—	—	4.6	4.6	5.9	5.9	20	4.0
C 32 2_3.7	3.7	1.6	—	—	4.4	4.3	5.6	5.6	20	3.8
C 32 2_4.5	4.5	1.2	—	—	4.0	4.0	5.2	5.2	19	3.4
C 32 2_5.0	5.0	0.87	2.3	2.3	3.7	3.7	5.0	5.0	19	3.1
C 32 2_5.7	5.7	0.82	2.3	2.3	3.7	3.6	4.9	4.9	19	3.0
C 32 2_6.3	6.3	0.63	2.1	2.1	3.5	3.4	4.7	4.7	18	2.8
C 32 2_7.2	7.2	1.5	—	—	4.4	4.3	5.6	5.6	19	3.7
C 32 2_8.5	8.5	1.2	—	—	4.1	4.0	5.3	5.3	19	3.4
C 32 2_9.3	9.3	1.1	—	—	3.9	3.9	5.1	5.1	19	3.3
C 32 2_11.2	11.2	0.83	—	—	3.7	3.6	4.9	4.9	19	3.0
C 32 2_12.3	12.3	0.60	2.1	2.1	3.4	3.4	4.7	4.7	18	2.8
C 32 2_14.1	14.1	0.61	2.1	2.1	3.5	3.4	4.7	4.7	18	2.8
C 32 2_15.6	15.6	0.46	1.9	1.9	3.3	3.2	4.5	4.5	18	2.7
C 32 2_18.2	18.2	0.42	1.9	1.9	3.3	3.2	4.5	4.5	18	2.6
C 32 2_20.1	20.1	0.34	1.8	1.8	3.2	3.1	4.4	4.4	18	2.6
C 32 2_22.9	22.9	0.31	1.8	1.8	3.2	3.1	4.4	4.4	17	2.5
C 32 2_25.1	25.1	0.25	1.7	1.7	3.1	3.0	4.3	4.3	17	2.5
C 32 2_26.9	26.9	0.24	1.7	1.7	3.1	3.0	4.3	4.3	—	2.5
C 32 2_29.8	29.8	0.19	1.7	1.7	3.0	3.0	4.3	4.3	—	2.4
C 32 2_33.1	33.1	0.19	1.7	1.7	3.0	3.0	4.3	4.3	—	2.4
C 32 2_36.1	36.1	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	2.4
C 32 2_40.7	40.7	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	2.4
C 32 2_45.3	45.3	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.3
C 32 2_52.4	52.4	0.08	1.6	1.6	2.9	2.9	4.2	4.2	—	2.3
C 32 2_59.4	59.4	0.07	1.5	1.5	2.9	2.9	4.2	4.2	—	2.3
C 32 2_66.8	66.8	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	2.3
C 32 3_74.7	74.7	0.06	1.5	1.5	2.9	2.9	4.1	4.1	—	0.96
C 32 3_82.6	82.6	0.06	1.5	1.5	2.9	2.8	4.1	4.1	—	0.96
C 32 3_94.2	94.2	0.06	1.5	1.5	2.9	2.8	4.1	4.1	—	0.96
C 32 3_103.3	103.3	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 32 3_110.6	110.6	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 32 3_122.4	122.4	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 32 3_136.0	136.0	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 32 3_148.4	148.4	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 32 3_167.4	167.4	0.05	1.5	1.5	2.9	2.8	4.1	4.1	—	0.95
C 32 3_186.0	186.0	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
C 32 3_215.6	215.6	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
C 32 3_244.2	244.2	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94
C 32 3_274.7	274.7	0.04	1.5	1.5	2.9	2.8	4.1	4.1	—	0.94



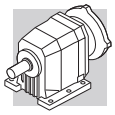
C 32

	i	J (•10-4) [kgm2]											
		SERVO											
		60A		60B 80A		95A		80C 95B 110A		95C 110B		130A	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 32 2_2.9	2.9	—	—	—	—	—	—	5.2	5.7	5.1	6.1	5.1	6.1
C 32 2_3.4	3.4	—	—	—	—	—	—	4.6	5.1	4.6	5.6	4.6	5.6
C 32 2_3.7	3.7	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
C 32 2_4.5	4.5	—	—	—	—	—	—	4.0	4.5	4.0	5.0	4.0	5.0
C 32 2_5.0	5.0	1.1	1.4	1.2	1.6	3.7	4.1	3.7	4.2	3.7	4.7	3.7	4.7
C 32 2_5.7	5.7	1.1	1.4	1.1	1.5	3.6	4.1	3.7	4.2	3.6	4.6	3.6	4.6
C 32 2_6.3	6.3	0.90	1.2	0.92	1.4	3.5	3.9	3.5	4.0	3.4	4.4	3.4	4.4
C 32 2_7.2	7.2	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
C 32 2_8.5	8.5	—	—	—	—	—	—	4.1	4.6	4.0	5.0	4.0	5.0
C 32 2_9.3	9.3	—	—	—	—	—	—	3.9	4.4	3.9	4.9	3.9	4.9
C 32 2_11.2	11.2	—	—	—	—	—	—	3.7	4.2	3.6	4.6	3.6	4.6
C 32 2_12.3	12.3	0.87	1.1	0.89	1.3	3.4	3.9	3.4	3.9	3.4	4.4	3.4	4.4
C 32 2_14.1	14.1	0.88	1.1	0.90	1.3	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4
C 32 2_15.6	15.6	0.73	0.99	0.75	1.2	3.3	3.7	3.3	3.8	3.2	4.2	3.2	4.2
C 32 2_18.2	18.2	0.69	0.95	0.71	1.1	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2
C 32 2_20.1	20.1	0.61	0.87	0.63	1.1	3.2	3.6	3.2	3.7	3.1	4.1	3.1	4.1
C 32 2_22.9	22.9	0.58	0.84	0.60	1.0	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1
C 32 2_25.1	25.1	0.52	0.78	0.54	0.98	3.1	3.5	3.1	3.6	3.0	4.0	3.0	4.0
C 32 2_26.9	26.9	0.51	0.77	0.53	0.97	3.1	3.5	3.1	3.6	3.0	4.0	3.0	4.0
C 32 2_29.8	29.8	0.46	0.72	0.48	0.92	3.0	3.4	3.0	3.5	3.0	4.0	3.0	4.0
C 32 2_33.1	33.1	0.46	0.72	0.48	0.92	3.0	3.4	3.0	3.5	3.0	4.0	3.0	4.0
C 32 2_36.1	36.1	0.41	0.67	0.43	0.87	3.0	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 32 2_40.7	40.7	0.41	0.67	0.43	0.87	3.0	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 32 2_45.3	45.3	0.37	0.63	0.39	0.83	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 32 2_52.4	52.4	0.35	0.61	0.37	0.81	2.9	3.3	2.9	3.4	2.9	3.9	2.9	3.9
C 32 2_59.4	59.4	0.34	0.60	0.36	0.80	2.9	3.3	2.9	3.4	2.9	3.9	2.9	3.9
C 32 2_66.8	66.8	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	2.8	3.8
C 32 3_74.7	74.7	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.9	3.9	—	—
C 32 3_82.6	82.6	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_94.2	94.2	0.33	0.59	0.35	0.79	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_103.3	103.3	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_110.6	110.6	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_122.4	122.4	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_136.0	136.0	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_148.4	148.4	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_167.4	167.4	0.32	0.58	0.34	0.78	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_186.0	186.0	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_215.6	215.6	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_244.2	244.2	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—
C 32 3_274.7	274.7	0.31	0.57	0.33	0.77	2.9	3.3	2.9	3.4	2.8	3.8	—	—



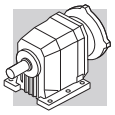
C 36

	i	J (•10-4) [kgm2]								
			IEC							
			63	71	80	90	100	112	132	
C 36 2_2.7	2.7	3.6	—	—	6.5	6.4	7.7	7.7	22	14
C 36 2_3.2	3.2	2.5	—	—	5.4	5.3	6.6	6.6	21	13
C 36 2_3.5	3.5	2.4	—	—	5.3	5.2	6.5	6.5	20	13
C 36 2_4.2	4.2	1.6	—	—	4.5	4.4	5.7	5.7	20	12
C 36 2_4.6	4.6	1.5	3.0	3.0	4.4	4.3	5.6	5.6	19	12
C 36 2_5.3	5.3	1.1	2.6	2.6	4.0	3.9	5.2	5.2	19	12
C 36 2_5.8	5.8	0.98	2.5	2.5	3.9	3.8	5.1	5.1	19	12
C 36 2_6.8	6.8	2.2	—	—	5.1	5.0	6.3	6.3	20	13
C 36 2_8.0	8.0	1.6	—	—	4.4	4.3	5.6	5.6	20	12
C 36 2_8.8	8.8	1.5	—	—	4.4	4.3	5.6	5.6	19	12
C 36 2_10.6	10.6	1.1	—	—	3.9	3.8	5.1	5.1	19	12
C 36 2_11.7	11.7	1.0	2.5	2.5	3.9	3.8	5.1	5.1	19	12
C 36 2_13.3	13.3	0.69	2.2	2.2	3.6	3.5	4.8	4.8	19	11
C 36 2_14.8	14.8	0.68	2.2	2.2	3.6	3.5	4.8	4.8	19	11
C 36 2_17.2	17.2	0.47	2.0	2.0	3.4	3.3	4.6	4.6	18	11
C 36 2_19.0	19.0	0.47	2.0	2.0	3.4	3.3	4.6	4.6	18	11
C 36 3_22.1	22.1	1.8	—	—	4.7	4.6	5.9	5.9	19	12
C 36 3_26.2	26.2	1.3	—	—	4.2	4.1	5.4	5.4	19	12
C 36 3_28.7	28.7	1.3	—	—	4.2	4.1	5.4	5.4	19	12
C 36 3_34.6	34.6	0.88	—	—	3.8	3.7	5.0	5.0	19	11
C 36 3_38.1	38.1	0.90	2.4	2.4	3.8	3.7	5.0	5.0	19	11
C 36 3_43.5	43.5	0.59	2.1	2.1	3.5	3.4	4.7	4.7	19	11
C 36 3_48.2	48.2	0.60	2.1	2.1	3.5	3.4	4.7	4.7	19	11
C 36 3_56.2	56.2	0.41	1.9	1.9	3.3	3.2	4.5	4.5	18	11
C 36 3_62.0	62.0	0.42	1.9	1.9	3.3	3.2	4.5	4.5	18	11
C 36 3_70.8	70.8	0.30	1.8	1.8	3.2	3.1	4.4	4.4	18	11
C 36 3_77.6	77.6	0.28	1.8	1.8	3.2	3.1	4.4	4.4	17	11
C 36 3_83.1	83.1	0.24	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 36 3_91.9	91.9	0.21	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 36 3_102.2	102.2	0.19	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 36 3_111.5	111.5	0.16	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 36 3_125.8	125.8	0.14	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 36 3_139.8	139.8	0.11	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 36 3_162.0	162.0	0.09	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 36 3_183.5	183.5	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 36 3_206.4	206.4	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 36 4_230.9	230.9	0.08	—	—	—	—	—	—	—	—
C 36 4_255.0	255.0	0.08	1.6	1.6	3.0	2.9	4.2	4.2	—	0.90
C 36 4_290.9	290.9	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.89
C 36 4_318.9	318.9	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.89
C 36 4_341.7	341.7	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.89
C 36 4_377.9	377.9	0.07	1.6	1.6	3.0	2.9	4.2	4.2	—	0.89
C 36 4_420.2	420.2	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
C 36 4_458.4	458.4	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
C 36 4_517.2	517.2	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
C 36 4_574.7	574.7	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
C 36 4_665.9	665.9	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
C 36 4_754.2	754.2	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88
C 36 4_848.5	848.5	0.06	1.6	1.6	3.0	2.9	4.2	4.2	—	0.88



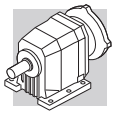
C 36

	i	J (•10-4) [kgm2]											
		SERVO											
		60A		60B 80A		95A		80C 95B 110A		95C 110B		130A	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 36 2_2.7	2.7	—	—	—	—	—	—	6.5	7.0	6.4	7.4	6.4	7.4
C 36 2_3.2	3.2	—	—	—	—	—	—	5.4	5.9	5.3	6.3	5.3	6.3
C 36 2_3.5	3.5	—	—	—	—	—	—	5.3	5.8	5.2	6.2	5.2	6.2
C 36 2_4.2	4.2	—	—	—	—	—	—	4.5	5.0	4.4	5.4	4.4	5.4
C 36 2_4.6	4.6	1.8	2.0	1.8	2.2	4.3	4.7	4.4	4.9	4.3	5.3	4.3	5.3
C 36 2_5.3	5.3	1.4	1.6	1.4	1.8	3.9	4.4	4.0	4.5	3.9	4.9	3.9	4.9
C 36 2_5.8	5.8	1.3	1.5	1.3	1.7	3.8	4.2	3.9	4.4	3.8	4.8	3.8	4.8
C 36 2_6.8	6.8	—	—	—	—	—	—	5.1	5.6	5.0	6.0	5.0	6.0
C 36 2_8.0	8.0	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
C 36 2_8.8	8.8	—	—	—	—	—	—	4.4	4.9	4.3	5.3	4.3	5.3
C 36 2_10.6	10.6	—	—	—	—	—	—	3.9	4.4	3.8	4.8	3.8	4.8
C 36 2_11.7	11.7	1.3	1.5	1.3	1.7	3.8	4.3	3.9	4.4	3.8	4.8	3.8	4.8
C 36 2_13.3	13.3	0.96	1.2	0.98	1.4	3.5	3.9	3.6	4.1	3.5	4.5	3.5	4.5
C 36 2_14.8	14.8	0.95	1.2	0.97	1.4	3.5	3.9	3.6	4.1	3.5	4.5	3.5	4.5
C 36 2_17.2	17.2	0.74	1.0	0.76	1.2	3.3	3.7	3.4	3.9	3.3	4.3	3.3	4.3
C 36 2_19.0	19.0	0.74	1.0	0.76	1.2	3.3	3.7	3.4	3.9	3.3	4.3	3.3	4.3
C 36 3_22.1	22.1	—	—	—	—	—	—	4.7	5.2	4.6	5.6	4.6	5.6
C 36 3_26.2	26.2	—	—	—	—	—	—	4.2	4.7	4.1	5.1	4.1	5.1
C 36 3_28.7	28.7	—	—	—	—	—	—	4.2	4.7	4.1	5.1	4.1	5.1
C 36 3_34.6	34.6	—	—	—	—	—	—	3.8	4.3	3.7	4.7	3.7	4.7
C 36 3_38.1	38.1	1.2	1.4	1.2	1.6	3.7	4.2	3.8	4.3	3.7	4.7	3.7	4.7
C 36 3_43.5	43.5	0.86	1.1	0.88	1.3	3.4	3.8	3.5	4.0	3.4	4.4	3.4	4.4
C 36 3_48.2	48.2	0.87	1.1	0.89	1.3	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4
C 36 3_56.2	56.2	0.68	0.94	0.70	1.1	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2
C 36 3_62.0	62.0	0.69	0.95	0.71	1.1	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2
C 36 3_70.8	70.8	0.57	0.83	0.59	1.0	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1
C 36 3_77.6	77.6	0.55	0.81	0.57	1.0	3.1	3.5	3.2	3.7	3.1	4.1	3.1	4.1
C 36 3_83.1	83.1	0.51	0.77	0.53	0.97	3.1	3.5	3.1	3.6	3.0	4.0	3.0	4.0
C 36 3_91.9	91.9	0.48	0.74	0.50	0.94	3.0	3.5	3.1	3.6	3.0	4.0	3.0	4.0
C 36 3_102.2	102.2	0.46	0.72	0.48	0.92	3.0	3.4	3.1	3.6	3.0	4.0	3.0	4.0
C 36 3_111.5	111.5	0.43	0.69	0.45	0.89	3.0	3.4	3.1	3.6	3.0	4.0	3.0	4.0
C 36 3_125.8	125.8	0.41	0.67	0.43	0.87	3.0	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 36 3_139.8	139.8	0.38	0.64	0.40	0.84	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9
C 36 3_162.0	162.0	0.36	0.62	0.38	0.82	2.9	3.3	3.0	3.5	2.9	3.9	2.9	3.9
C 36 3_183.5	183.5	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	2.9	3.9
C 36 3_206.4	206.4	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	2.9	3.9
C 36 4_230.9	230.9	0.35	0.61	0.37	0.81	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_255.0	255.0	0.35	0.61	0.37	0.81	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_290.9	290.9	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_318.9	318.9	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_341.7	341.7	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_377.9	377.9	0.34	0.60	0.36	0.80	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_420.2	420.2	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_458.4	458.4	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_517.2	517.2	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_574.7	574.7	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_665.9	665.9	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_754.2	754.2	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—
C 36 4_848.5	848.5	0.33	0.59	0.35	0.79	2.9	3.3	3.0	3.5	2.9	3.9	—	—



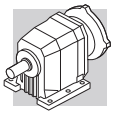
C 41

	i	J (•10-4) [kgm2]								
			IEC							
			63	71	80	90	100	112	132	
C 41 2_2.7	2.7	10	—	—	13	13	14	14	29	21
C 41 2_3.6	3.6	6.0	—	—	8.9	8.8	10	10	25	17
C 41 2_4.7	4.7	3.7	—	—	6.6	6.5	7.8	7.8	23	14
C 41 2_6.0	6.0	2.5	—	—	5.4	5.3	6.6	6.6	21	13
C 41 2_6.4	6.4	4.3	—	—	7.2	7.1	8.4	8.4	23	15
C 41 2_7.1	7.1	4.1	—	—	7.0	6.9	8.2	8.2	23	15
C 41 2_8.6	8.6	2.9	—	—	5.8	5.7	7.0	7.0	22	13
C 41 2_9.6	9.6	2.8	—	—	5.7	5.6	6.9	6.9	22	13
C 41 2_11.2	11.2	1.8	—	—	4.7	4.6	5.9	5.9	21	12
C 41 2_12.4	12.4	1.8	—	—	4.7	4.6	5.9	5.9	21	12
C 41 2_14.2	14.2	1.4	2.9	2.9	4.3	4.2	5.5	5.5	20	12
C 41 2_15.8	15.8	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	12
C 41 2_17.8	17.8	1.0	2.5	2.5	3.9	3.8	5.1	5.1	20	12
C 41 2_19.8	19.8	0.98	2.5	2.5	3.9	3.8	5.1	5.1	20	12
C 41 2_22.6	22.6	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	11
C 41 2_25.0	25.0	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	11
C 41 2_28.3	28.3	0.44	1.9	1.9	3.3	3.2	4.5	4.5	19	11
C 41 2_31.4	31.4	0.43	1.9	1.9	3.3	3.2	4.5	4.5	19	11
C 41 2_33.4	33.4	0.34	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 2_37.1	37.1	0.33	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 2_44.8	44.8	0.27	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_28.5	28.5	2.5	—	—	5.4	5.3	6.6	6.6	21	13
C 41 3_31.2	31.2	2.5	—	—	5.4	5.3	6.6	6.6	21	13
C 41 3_36.8	36.8	1.6	—	—	4.5	4.4	5.7	5.7	21	12
C 41 3_40.3	40.3	1.6	—	—	4.5	4.4	5.7	5.7	21	12
C 41 3_47.0	47.0	1.2	2.7	2.7	4.1	4.0	5.3	5.3	20	12
C 41 3_51.5	51.5	1.2	2.7	2.7	4.1	4.0	5.3	5.3	20	12
C 41 3_58.7	58.7	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	11
C 41 3_64.3	64.3	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	11
C 41 3_74.4	74.4	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	11
C 41 3_81.5	81.5	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	11
C 41 3_93.9	93.9	0.40	1.9	1.9	3.3	3.2	4.5	4.5	19	11
C 41 3_102.3	102.3	0.40	1.9	1.9	3.3	3.2	4.5	4.5	19	11
C 41 3_110.1	110.1	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_120.6	120.6	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_132.9	132.9	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_145.6	145.6	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	11
C 41 3_164.1	164.1	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 41 3_179.9	179.9	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	11
C 41 3_190.8	190.8	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 41 3_209.1	209.1	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	11
C 41 4_239.9	239.9	0.15	1.7	1.7	3.1	3.0	4.3	4.3	—	2.1
C 41 4_263.0	263.0	0.15	1.7	1.7	3.1	3.0	4.3	4.3	—	2.1
C 41 4_304.2	304.2	0.13	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_333.4	333.4	0.13	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_382.0	382.0	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_419.0	419.0	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_450.2	450.2	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_493.5	493.5	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_543.5	543.5	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_595.8	595.8	0.12	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_671.3	671.3	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_735.9	735.9	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_780.4	780.4	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0
C 41 4_855.5	855.5	0.10	1.6	1.6	3.0	2.9	4.2	4.2	—	2.0



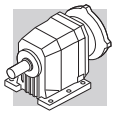
C 41

	i	J (•10-4) [kgm2]																	
		SERVO																	
		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
C 41 2_2.7	2.7	—	—	—	—	—	—	—	—	13	14	13	14	13	14	27	29	29	34
C 41 2_3.6	3.6	—	—	—	—	—	—	—	—	8.9	9.4	8.8	9.8	8.8	9.8	23	25	25	30
C 41 2_4.7	4.7	—	—	—	—	—	—	—	—	6.6	7.1	6.5	7.5	6.5	7.5	21	23	23	28
C 41 2_6.0	6.0	—	—	—	—	5.3	5.8	5.3	5.8	5.4	5.9	5.3	6.3	5.3	6.3	19	22	21	26
C 41 2_6.4	6.4	—	—	—	—	—	—	—	—	7.2	7.7	7.1	8.1	7.1	8.1	21	24	23	28
C 41 2_7.1	7.1	—	—	—	—	—	—	—	—	7.0	7.5	6.9	7.9	6.9	7.9	21	24	23	28
C 41 2_8.6	8.6	—	—	—	—	—	—	—	—	5.8	6.3	5.7	6.7	5.7	6.7	20	22	22	27
C 41 2_9.6	9.6	—	—	—	—	—	—	—	—	5.7	6.2	5.6	6.6	5.6	6.6	20	22	22	27
C 41 2_11.2	11.2	—	—	—	—	—	—	—	—	4.7	5.2	4.6	5.6	4.6	5.6	19	21	21	26
C 41 2_12.4	12.4	—	—	—	—	—	—	—	—	4.7	5.2	4.6	5.6	4.6	5.6	19	21	21	26
C 41 2_14.2	14.2	—	—	—	—	4.2	4.7	4.2	4.7	4.3	4.8	4.2	5.2	4.2	5.2	18	21	20	25
C 41 2_15.8	15.8	—	—	—	—	4.1	4.6	4.1	4.6	4.2	4.7	4.1	5.1	4.1	5.1	18	21	20	25
C 41 2_17.8	17.8	—	—	—	—	3.8	5.3	3.8	5.3	3.9	4.4	3.8	4.8	3.8	4.8	18	20	20	25
C 41 2_19.8	19.8	—	—	—	—	3.8	4.2	3.8	4.2	3.9	4.4	3.8	4.8	3.8	4.8	18	20	20	25
C 41 2_22.6	22.6	—	—	—	—	3.4	3.9	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4	18	20	20	25
C 41 2_25.0	25.0	—	—	—	—	3.4	3.9	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4	18	20	20	25
C 41 2_28.3	28.3	—	—	—	—	3.3	3.7	3.3	3.7	3.3	3.8	3.2	4.2	3.2	4.2	17	20	19	24
C 41 2_31.4	31.4	—	—	—	—	3.3	3.7	3.3	3.7	3.3	3.8	3.2	4.2	3.2	4.2	17	20	19	24
C 41 2_33.4	33.4	—	—	—	—	3.2	3.6	3.2	3.6	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
C 41 2_37.1	37.1	—	—	—	—	3.2	3.6	3.2	3.6	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
C 41 2_44.8	44.8	—	—	—	—	3.1	3.5	3.1	3.5	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
C 41 3_28.5	28.5	—	—	—	—	—	—	—	—	5.4	5.9	5.3	6.3	5.3	6.3	19	22	21	26
C 41 3_31.2	31.2	—	—	—	—	—	—	—	—	5.4	5.9	5.3	6.3	5.3	6.3	19	22	21	26
C 41 3_36.8	36.8	—	—	—	—	—	—	—	—	4.5	5.0	4.4	5.4	4.4	5.4	19	21	21	26
C 41 3_40.3	40.3	—	—	—	—	—	—	—	—	4.5	5.0	4.4	5.4	4.4	5.4	19	21	21	26
C 41 3_47.0	47.0	—	—	—	—	4.0	4.5	4.0	4.5	4.1	4.6	4.0	5.0	4.0	5.0	18	21	20	25
C 41 3_51.5	51.5	—	—	—	—	4.0	4.5	4.0	4.5	4.1	4.6	4.0	5.0	4.0	5.0	18	21	20	25
C 41 3_58.7	58.7	—	—	—	—	3.7	4.2	3.7	4.2	3.8	4.3	3.7	4.7	3.7	4.7	18	20	20	25
C 41 3_64.3	64.3	—	—	—	—	3.7	4.2	3.7	4.2	3.8	4.3	3.7	4.7	3.7	4.7	18	20	20	25
C 41 3_74.4	74.4	—	—	—	—	3.4	3.9	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4	18	20	20	25
C 41 3_81.5	81.5	—	—	—	—	3.4	3.9	3.4	3.9	3.5	4.0	3.4	4.4	3.4	4.4	18	20	20	25
C 41 3_93.9	93.9	—	—	—	—	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2	17	20	19	24
C 41 3_102.3	102.3	—	—	—	—	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	3.2	4.2	17	20	19	24
C 41 3_110.1	110.1	—	—	—	—	3.1	3.6	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
C 41 3_120.6	120.6	—	—	—	—	3.1	3.6	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
C 41 3_132.9	132.9	—	—	—	—	3.1	3.6	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
C 41 3_145.6	145.6	—	—	—	—	3.1	3.6	3.1	3.6	3.2	3.7	3.1	4.1	3.1	4.1	—	—	—	—
C 41 3_164.1	164.1	—	—	—	—	3.0	3.5	3.0	3.5	3.1	3.6	3.0	4.0	3.0	4.0	—	—	—	—
C 41 3_179.9	179.9	—	—	—	—	3.0	3.5	3.0	3.5	3.1	3.6	3.0	4.0	3.0	4.0	—	—	—	—
C 41 3_190.8	190.8	—	—	—	—	2.9	3.4	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9	—	—	—	—
C 41 3_209.1	209.1	—	—	—	—	2.9	3.4	2.9	3.4	3.0	3.5	2.9	3.9	2.9	3.9	—	—	—	—
C 41 4_239.9	239.9	0.42	0.68	0.44	0.88	—	—	3.0	3.4	3.1	3.6	3.0	4.0	—	—	—	—	—	—
C 41 4_263.0	263.0	0.42	0.68	0.44	0.88	—	—	3.0	3.4	3.1	3.6	3.0	4.0	—	—	—	—	—	—
C 41 4_304.2	304.2	0.40	0.66	0.42	0.86	—	—	3.0	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_333.4	333.4	0.40	0.66	0.42	0.86	—	—	3.0	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_382.0	382.0	0.39	0.65	0.41	0.85	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_419.0	419.0	0.39	0.65	0.41	0.85	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_450.2	450.2	0.39	0.65	0.41	0.85	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_493.5	493.5	0.39	0.65	0.41	0.85	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_543.5	543.5	0.39	0.65	0.41	0.85	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_595.8	595.8	0.39	0.65	0.41	0.85	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_671.3	671.3	0.37	0.63	0.39	0.83	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_735.9	735.9	0.37	0.63	0.39	0.83	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_780.4	780.4	0.37	0.63	0.39	0.83	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—
C 41 4_855.5	855.5	0.37	0.63	0.39	0.83	—	—	2.9	3.4	3.0	3.5	2.9	3.9	—	—	—	—	—	—



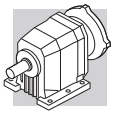
C 51

	i	J (•10-4) [kgm2]										
			IEC									
			63	71	80	90	100	112	132	160	180	
C 51 2_2.6	2.6	15	—	—	17	17	19	19	33	79	76	25
C 51 2_3.3	3.3	10	—	—	13	13	14	14	29	75	72	21
C 51 2_4.5	4.5	6.3	—	—	9.2	9.1	10	10	25	71	68	17
C 51 2_5.6	5.6	4.1	—	—	7.0	6.9	8.2	8.2	23	69	66	15
C 51 2_7.0	7.0	8.1	—	—	11	11	12	12	27	73	70	19
C 51 2_7.8	7.8	7.8	—	—	11	11	12	12	27	73	70	18
C 51 2_8.8	8.8	6.0	—	—	8.9	8.8	10	10	25	71	68	17
C 51 2_9.8	9.8	5.8	—	—	8.7	8.6	9.9	9.9	25	71	68	16
C 51 2_11.8	11.8	4.1	—	—	7.0	6.9	8.2	8.2	23	69	66	15
C 51 2_13.1	13.1	4.0	—	—	6.9	6.8	8.1	8.1	23	69	66	15
C 51 2_15.0	15.0	2.7	—	—	5.6	5.5	6.8	6.8	22	68	65	13
C 51 2_16.6	16.6	2.6	—	—	5.5	5.4	6.7	6.7	22	68	65	13
C 51 2_18.9	18.9	2.0	3.5	3.5	4.9	4.8	6.1	6.1	21	67	64	13
C 51 2_21.0	21.0	1.9	3.4	3.4	4.8	4.7	6.0	6.0	21	67	64	12
C 51 2_23.4	23.4	1.5	3.0	3.0	4.4	4.3	5.6	5.6	20	66	63	12
C 51 2_25.9	25.9	1.4	2.9	2.9	4.3	4.2	5.5	5.5	20	66	63	12
C 51 2_29.8	29.8	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	66	63	11
C 51 2_33.0	33.0	0.90	2.4	2.4	3.8	3.7	5.0	5.0	20	66	63	11
C 51 2_36.4	36.4	0.70	2.2	2.2	3.6	3.5	4.8	4.8	20	66	63	11
C 51 2_40.4	40.4	0.70	2.2	2.2	3.6	3.5	4.8	4.8	20	66	63	11
C 51 2_43.1	43.1	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 51 2_47.8	47.8	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 51 2_51.4	51.4	0.40	1.9	1.9	3.3	3.2	4.5	4.5	—	—	—	11
C 51 2_57.0	57.0	0.40	1.9	1.9	3.3	3.2	4.5	4.5	—	—	—	11
C 51 3_21.8	21.8	6.8	—	—	9.7	9.6	11	11	26	72	69	17
C 51 3_23.9	23.9	6.8	—	—	9.7	9.6	11	11	26	72	69	17
C 51 3_27.4	27.4	5.2	—	—	8.1	8.0	9.3	9.3	24	70	67	16
C 51 3_30.1	30.1	5.2	—	—	8.1	8.0	9.3	9.3	24	70	67	16
C 51 3_37.0	37.0	3.6	—	—	6.5	6.4	7.7	7.7	23	69	66	14
C 51 3_40.5	40.5	3.6	—	—	6.5	6.4	7.7	7.7	23	69	66	14
C 51 3_46.7	46.7	2.4	—	—	5.3	5.2	6.5	6.5	21	67	64	13
C 51 3_51.2	51.2	2.4	—	—	5.3	5.2	6.5	6.5	21	67	64	13
C 51 3_59.0	59.0	1.8	3.3	3.3	4.7	4.6	5.9	5.9	21	67	64	12
C 51 3_64.6	64.6	1.8	3.3	3.3	4.7	4.6	5.9	5.9	21	67	64	12
C 51 3_72.9	72.9	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	66	63	12
C 51 3_79.9	79.9	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	66	63	12
C 51 3_93.0	93.0	0.80	2.3	2.3	3.7	3.6	4.9	4.9	20	66	63	11
C 51 3_101.8	101.8	0.80	2.3	2.3	3.7	3.6	4.9	4.9	20	66	63	11
C 51 3_113.6	113.6	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	66	63	11
C 51 3_124.4	124.4	0.60	2.1	2.1	3.5	3.4	4.7	4.7	20	66	63	11
C 51 3_134.6	134.6	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 51 3_147.4	147.4	0.50	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 51 3_160.5	160.5	0.40	1.9	1.9	3.3	3.2	4.5	4.5	—	—	—	11
C 51 3_175.8	175.8	0.40	1.9	1.9	3.3	3.2	4.5	4.5	—	—	—	11
C 51 3_197.9	197.9	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	11
C 51 3_216.7	216.7	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	11
C 51 4_240.9	240.9	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	1.2
C 51 4_263.8	263.8	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	1.2
C 51 4_297.8	297.8	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	1.2
C 51 4_326.1	326.1	0.30	1.8	1.8	3.2	3.1	4.4	4.4	—	—	—	1.2
C 51 4_380.0	380.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_416.0	416.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_463.9	463.9	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_508.0	508.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_549.7	549.7	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_602.0	602.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_655.4	655.4	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_717.7	717.7	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_808.0	808.0	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1
C 51 4_884.9	884.9	0.20	1.7	1.7	3.1	3.0	4.3	4.3	—	—	—	1.1



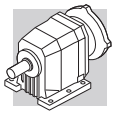
C 51

	i	J (•10-4) [kgm2]											
		SERVO											
		80B		95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 51 2_2.6	2.6	—	—	—	—	17	18	17	18	32	34	33	38
C 51 2_3.3	3.3	—	—	—	—	13	14	13	14	27	29	29	34
C 51 2_4.5	4.5	—	—	—	—	9.2	9.7	9.1	10	23	26	25	30
C 51 2_5.6	5.6	—	—	—	—	7.0	7.5	6.9	7.9	21	24	23	28
C 51 2_7.0	7.0	—	—	—	—	11	12	11	12	25	28	27	32
C 51 2_7.8	7.8	—	—	—	—	11	12	11	12	25	27	27	32
C 51 2_8.8	8.8	—	—	—	—	8.9	9.4	8.8	9.8	23	25	25	30
C 51 2_9.8	9.8	—	—	—	—	8.7	9.2	8.6	9.6	23	25	25	30
C 51 2_11.8	11.8	—	—	—	—	7.0	7.5	6.9	7.9	21	24	23	28
C 51 2_13.1	13.1	—	—	—	—	6.9	7.4	6.8	7.8	21	23	23	28
C 51 2_15.0	15.0	—	—	—	—	5.6	6.1	5.5	6.5	20	22	22	27
C 51 2_16.6	16.6	—	—	—	—	5.5	6.0	5.4	6.4	20	22	22	27
C 51 2_18.9	18.9	4.8	5.3	4.8	5.3	4.9	5.4	4.8	5.8	19	21	21	26
C 51 2_21.0	21.0	4.7	5.2	4.7	5.2	4.8	5.3	4.7	5.7	19	21	21	26
C 51 2_23.4	23.4	4.3	4.8	4.3	4.8	4.4	4.3	4.3	5.3	18	21	20	25
C 51 2_25.9	25.9	4.2	4.7	4.2	4.7	4.3	4.8	4.2	5.2	18	21	20	25
C 51 2_29.8	29.8	3.7	4.2	3.7	4.2	3.8	4.3	3.7	4.7	18	20	20	25
C 51 2_33.0	33.0	3.7	4.2	3.7	4.2	3.8	4.3	3.7	4.7	18	20	20	25
C 51 2_36.4	36.4	3.5	4.0	3.5	4.0	3.6	4.1	3.5	4.5	18	20	20	25
C 51 2_40.4	40.4	3.5	4.0	3.5	4.0	3.6	4.1	3.5	4.5	18	20	20	25
C 51 2_43.1	43.1	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 51 2_47.8	47.8	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 51 2_51.4	51.4	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	—	—	—	—
C 51 2_57.0	57.0	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	—	—	—	—
C 51 3_21.8	21.8	—	—	—	—	9.7	10	9.6	11	24	26	26	31
C 51 3_23.9	23.9	—	—	—	—	9.7	10	9.6	11	24	26	26	31
C 51 3_27.4	27.4	—	—	—	—	8.1	8.6	8.0	9.0	22	25	24	29
C 51 3_30.1	30.1	—	—	—	—	8.1	8.6	8.0	9.0	22	25	24	29
C 51 3_37.0	37.0	—	—	—	—	6.5	7.0	6.4	7.4	21	23	23	28
C 51 3_40.5	40.5	—	—	—	—	6.5	7.0	6.4	7.4	21	23	23	28
C 51 3_46.7	46.7	—	—	—	—	5.3	5.8	5.2	6.2	19	22	21	26
C 51 3_51.2	51.2	—	—	—	—	5.3	5.8	5.2	6.2	19	22	21	26
C 51 3_59.0	59.0	4.6	5.1	4.6	5.1	4.7	5.2	4.6	5.6	19	21	21	26
C 51 3_64.6	64.6	4.6	5.1	4.6	5.1	4.7	5.2	4.6	5.6	19	21	21	26
C 51 3_72.9	72.9	4.1	4.6	4.1	4.6	4.2	5.2	4.1	5.1	18	21	20	25
C 51 3_79.9	79.9	4.1	4.6	4.1	4.6	4.2	5.2	4.1	5.1	18	21	20	25
C 51 3_93.0	93.0	3.6	4.1	3.6	4.1	3.7	4.2	3.6	4.6	18	20	20	25
C 51 3_101.8	101.8	3.6	4.1	3.6	4.1	3.7	4.2	3.6	4.6	18	20	20	25
C 51 3_113.6	113.6	3.4	3.9	3.4	3.9	3.5	4.0	3.4	4.4	18	20	20	25
C 51 3_124.4	124.4	3.4	3.9	3.4	3.9	3.5	4.0	3.4	4.4	18	20	20	25
C 51 3_134.6	134.6	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 51 3_147.4	147.4	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 51 3_160.5	160.5	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	—	—	—	—
C 51 3_175.8	175.8	3.2	3.7	3.2	3.7	3.3	3.8	3.2	4.2	—	—	—	—
C 51 3_197.9	197.9	3.1	3.6	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 3_216.7	216.7	3.1	3.6	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_240.9	240.9	—	—	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_263.8	263.8	—	—	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_297.8	297.8	—	—	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_326.1	326.1	—	—	3.1	3.6	3.2	3.7	3.1	4.1	—	—	—	—
C 51 4_380.0	380.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_416.0	416.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_463.9	463.9	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_508.0	508.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_549.7	549.7	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_602.0	602.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_655.4	655.4	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_717.7	717.7	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_808.0	808.0	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—
C 51 4_884.9	884.9	—	—	3.0	3.5	3.1	3.6	3.0	4.0	—	—	—	—



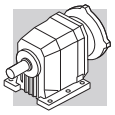
C 61

	i	J (•10-4) [kgm2]										
			IEC									
			63	71	80	90	100	112	132	160	180	
C 61 2_2.8	2.8	30	—	—	—	—	—	—	49	78	76	52
C 61 2_3.7	3.7	19	—	—	22	22	23	23	38	78	76	41
C 61 2_4.6	4.6	14	—	—	17	17	18	18	33	78	76	36
C 61 2_6.0	6.0	8.8	—	—	12	12	13	13	28	78	76	31
C 61 2_6.7	6.7	14	—	—	—	—	—	—	33	78	76	36
C 61 2_7.5	7.5	13	—	—	—	—	—	—	32	78	76	35
C 61 2_8.8	8.8	13	—	—	16	16	17	17	32	78	76	35
C 61 2_9.8	9.8	12	—	—	15	15	16	16	31	78	76	34
C 61 2_10.9	10.9	9.6	—	—	13	12	14	14	29	78	76	31
C 61 2_12.1	12.1	9.2	—	—	12	12	13	13	28	78	76	31
C 61 2_14.3	14.3	5.8	—	—	8.7	8.6	9.9	9.9	25	78	76	28
C 61 2_15.9	15.9	5.6	—	—	8.5	8.4	9.7	9.7	25	78	76	27
C 61 2_17.7	17.7	4.4	—	—	7.3	7.2	8.5	8.5	23	78	76	26
C 61 2_19.6	19.6	4.3	—	—	7.2	7.1	8.4	8.4	23	78	76	26
C 61 2_22.4	22.4	3.2	4.7	4.7	6.1	6.0	7.3	7.3	22	78	76	25
C 61 2_24.8	24.8	3.1	4.6	4.6	6.0	5.9	7.2	7.2	22	78	76	25
C 61 2_27.4	27.4	2.1	3.6	3.6	5.0	4.9	6.2	6.2	21	78	76	24
C 61 2_30.4	30.4	2.2	3.7	3.7	5.1	5.0	6.3	6.3	21	78	76	24
C 61 2_34.2	34.2	1.5	3.0	3.0	4.4	4.3	5.6	5.6	20	78	76	23
C 61 2_38.0	38.0	1.5	3.0	3.0	4.4	4.3	5.6	5.6	20	78	76	23
C 61 3_26.8	26.8	10	—	—	13	13	14	14	29	78	76	32
C 61 3_29.4	29.4	10	—	—	13	13	14	14	29	78	76	32
C 61 3_33.0	33.0	8.1	—	—	11	11	12	12	27	78	76	30
C 61 3_36.1	36.1	8.1	—	—	11	11	12	12	27	78	76	30
C 61 3_43.4	43.4	5.0	—	—	7.9	7.8	9.1	9.1	24	78	76	27
C 61 3_47.6	47.6	5.0	—	—	7.9	7.8	9.1	9.1	24	78	76	27
C 61 3_53.5	53.5	3.9	—	—	6.8	6.7	8.0	8.0	23	78	76	26
C 61 3_58.6	58.6	3.8	—	—	6.7	6.6	7.9	7.9	23	78	76	26
C 61 3_67.7	67.7	2.8	4.3	4.3	5.7	5.6	6.9	6.9	22	78	76	25
C 61 3_74.2	74.2	2.8	4.3	4.3	5.7	5.6	6.9	6.9	22	78	76	25
C 61 3_83.0	83.0	1.9	3.4	3.4	4.8	4.7	6.0	6.0	21	78	76	24
C 61 3_91.0	91.0	1.9	3.4	3.4	4.8	4.7	6.0	6.0	21	78	76	24
C 61 3_103.6	103.6	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	78	76	23
C 61 3_113.6	113.6	1.3	2.8	2.8	4.2	4.1	5.4	5.4	20	78	76	23
C 61 3_128.1	128.1	1.0	2.5	2.5	3.9	3.8	5.1	5.1	20	78	76	23
C 61 3_140.5	140.5	1.0	2.5	2.5	3.9	3.8	5.1	5.1	20	78	76	23
C 61 3_150.0	150.0	0.70	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	23
C 61 3_164.5	164.5	0.70	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	23
C 61 3_178.6	178.6	0.60	2.1	2.1	3.5	3.4	4.7	4.7	—	—	—	22
C 61 3_195.8	195.8	0.60	2.1	2.1	3.5	3.4	4.7	4.7	—	—	—	22
C 61 4_217.4	217.4	0.67	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	11
C 61 4_238.3	238.3	0.67	2.2	2.2	3.6	3.5	4.8	4.8	—	—	—	11
C 61 4_275.3	275.3	0.81	2.3	2.3	3.7	3.6	4.9	4.9	—	—	—	11
C 61 4_301.7	301.7	0.81	2.3	2.3	3.7	3.6	4.9	4.9	—	—	—	11
C 61 4_337.7	337.7	0.56	2.1	2.1	3.5	3.4	4.7	4.7	—	—	—	11
C 61 4_370.1	370.1	0.56	2.1	2.1	3.5	3.4	4.7	4.7	—	—	—	11
C 61 4_421.5	421.5	0.53	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 61 4_462.0	462.0	0.53	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 61 4_521.1	521.1	0.51	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 61 4_571.2	571.2	0.51	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 61 4_610.1	610.1	0.49	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 61 4_668.8	668.8	0.49	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 61 4_726.3	726.3	0.48	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11
C 61 4_796.1	796.1	0.48	2.0	2.0	3.4	3.3	4.6	4.6	—	—	—	11



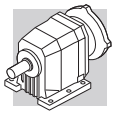
C 61

	i	J (•10-4) [kgm2]											
		SERVO											
		80B		95A		80C 95B 110A		95C 110B 130A		130B 180A		180B	
		SK	SC	SK	SC	SK	SC	SK	SC	SK	SC	SK	SC
C 61 2_2.8	2.8	—	—	—	—	—	—	—	—	47	49	49	54
C 61 2_3.7	3.7	—	—	—	—	22	23	22	23	36	38	38	43
C 61 2_4.6	4.6	—	—	—	—	17	18	17	18	31	33	33	38
C 61 2_6.0	6.0	—	—	—	—	12	13	12	13	26	28	28	33
C 61 2_6.7	6.7	—	—	—	—	—	—	—	—	31	33	33	38
C 61 2_7.5	7.5	—	—	—	—	—	—	—	—	30	32	32	37
C 61 2_8.8	8.8	—	—	—	—	16	17	16	17	30	32	32	37
C 61 2_9.8	9.8	—	—	—	—	15	16	15	16	23	31	31	36
C 61 2_10.9	10.9	—	—	—	—	13	14	12	13	27	29	29	34
C 61 2_12.1	12.1	—	—	—	—	12	13	12	13	26	29	28	33
C 61 2_14.3	14.3	—	—	—	—	8.7	9.2	8.6	9.6	23	25	25	30
C 61 2_15.9	15.9	—	—	—	—	8.5	9.0	8.4	9.4	23	25	25	30
C 61 2_17.7	17.7	—	—	—	—	7.3	7.8	7.2	8.2	21	24	23	28
C 61 2_19.6	19.6	—	—	—	—	7.2	7.7	7.1	8.1	21	24	23	28
C 61 2_22.4	22.4	—	—	6.0	6.5	6.1	6.6	6.0	7.0	20	23	22	27
C 61 2_24.8	24.8	—	—	5.9	6.4	6.0	6.5	5.9	6.9	20	23	22	27
C 61 2_27.4	27.4	—	—	4.9	5.4	5.0	5.5	4.9	5.9	19	22	21	26
C 61 2_30.4	30.4	—	—	5.0	5.5	5.1	5.6	5.0	6.0	19	22	21	26
C 61 2_34.2	34.2	—	—	4.3	4.8	4.4	4.9	4.3	5.3	18	21	20	25
C 61 2_38.0	38.0	—	—	4.3	4.8	4.4	4.9	4.3	5.3	18	21	20	25
C 61 3_26.8	26.8	—	—	—	—	13	14	13	14	27	29	29	34
C 61 3_29.4	29.4	—	—	—	—	13	14	13	14	27	29	29	34
C 61 3_33.0	33.0	—	—	—	—	11	12	11	12	25	28	27	32
C 61 3_36.1	36.1	—	—	—	—	11	12	11	12	25	28	27	32
C 61 3_43.4	43.4	—	—	—	—	7.9	8.4	7.8	8.8	22	24	24	29
C 61 3_47.6	47.6	—	—	—	—	7.9	8.4	7.8	8.8	22	24	24	29
C 61 3_53.5	53.5	—	—	—	—	6.8	7.3	6.7	7.7	21	23	23	28
C 61 3_58.6	58.6	—	—	—	—	6.7	7.2	6.6	7.6	21	23	23	28
C 61 3_67.7	67.7	—	—	5.6	6.1	5.7	6.2	5.6	6.6	20	22	22	27
C 61 3_74.2	74.2	—	—	5.6	6.1	5.7	6.2	5.6	6.6	20	22	22	27
C 61 3_83.0	83.0	—	—	4.7	5.2	4.8	5.3	4.7	5.7	19	21	21	26
C 61 3_91.0	91.0	—	—	4.7	5.2	4.8	5.3	4.7	5.7	19	21	21	26
C 61 3_103.6	103.6	—	—	4.1	4.6	4.2	4.7	4.1	5.1	18	21	20	25
C 61 3_113.6	113.6	—	—	4.1	4.6	4.2	4.7	4.1	5.1	18	21	20	25
C 61 3_128.1	128.1	—	—	3.8	4.3	3.9	4.4	3.8	4.8	18	20	20	25
C 61 3_140.5	140.5	—	—	3.8	4.3	3.9	4.4	3.8	4.8	18	20	20	25
C 61 3_150.0	150.0	—	—	3.5	4.0	3.6	4.1	3.5	4.5	—	—	—	—
C 61 3_164.5	164.5	—	—	3.5	4.0	3.6	4.1	3.5	4.5	—	—	—	—
C 61 3_178.6	178.6	—	—	3.4	3.9	3.5	4.0	3.4	4.4	—	—	—	—
C 61 3_195.8	195.8	—	—	3.4	3.9	3.5	4.0	3.4	4.4	—	—	—	—
C 61 4_217.4	217.4	3.5	3.9	3.5	3.9	3.6	4.1	3.5	4.5	—	—	—	—
C 61 4_238.3	238.3	3.5	3.9	3.5	3.9	3.6	4.1	3.5	4.5	—	—	—	—
C 61 4_275.3	275.3	3.6	4.1	3.6	4.1	3.7	4.2	3.6	4.6	—	—	—	—
C 61 4_301.7	301.7	3.6	4.1	3.6	4.1	3.7	4.2	3.6	4.6	—	—	—	—
C 61 4_337.7	337.7	3.4	3.8	3.4	3.8	3.5	4.0	3.4	4.4	—	—	—	—
C 61 4_370.1	370.1	3.4	3.8	3.4	3.8	3.5	4.0	3.4	4.4	—	—	—	—
C 61 4_421.5	421.5	3.4	3.8	3.4	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_462.0	462.0	3.4	3.8	3.4	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_521.1	521.1	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_571.2	571.2	3.3	3.8	3.3	3.8	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_610.1	610.1	3.3	3.7	3.3	3.7	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_668.8	668.8	3.3	3.7	3.3	3.7	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_726.3	726.3	3.3	3.7	3.3	3.7	3.4	3.9	3.3	4.3	—	—	—	—
C 61 4_796.1	796.1	3.3	3.7	3.3	3.7	3.4	3.9	3.3	4.3	—	—	—	—



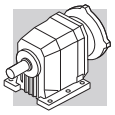
C 70

	i	J (•10-4) [kgm2]													
			IEC												
			63	71	80	90	100 112	132	160	180	200	225	250	280	
C 70 2_4.6	4.6	—	—	—	—	—	—	—	136	133	143	—	—	—	99
C 70 2_5.9	5.9	—	—	—	—	—	—	—	119	117	126	—	—	—	32
C 70 2_6.3	6.3	—	—	—	—	—	—	—	129	127	136	—	—	—	93
C 70 2_7.5	7.5	26	—	—	—	—	—	45	105	102	112	—	—	—	68
C 70 2_8.0	8.0	—	—	—	—	—	—	—	115	113	122	—	—	—	78
C 70 2_9.5	9.5	19	—	—	—	—	—	38	97	95	—	—	—	—	60
C 70 2_10.2	10.2	24	—	—	—	—	—	43	102	100	109	—	—	—	65
C 70 2_11.2	11.2	15	—	—	—	—	—	34	94	91	—	—	—	—	56
C 70 2_13.0	13.0	17	—	—	—	—	—	36	95	93	—	—	—	—	58
C 70 2_14.1	14.1	9.9	—	—	12	12	14	29	88	86	—	—	—	—	51
C 70 2_15.3	15.3	14	—	—	—	—	—	33	93	90	—	—	—	—	55
C 70 2_16.7	16.7	6.9	—	—	9.5	9.4	11	26	85	83	—	—	—	—	48
C 70 2_19.3	19.3	9.1	—	—	12	12	13	28	87	85	—	—	—	—	50
C 70 2_22.9	22.9	6.4	—	—	9.0	8.9	10	25	85	83	—	—	—	—	48
C 70 2_27.7	27.7	5.2	—	—	8.0	7.9	9.2	24	84	81	—	—	—	—	46
C 70 2_34.7	34.7	3.2	—	—	6.1	6.0	7.3	22	82	79	—	—	—	—	44
C 70 3_41.3	41.3	4.4	—	—	7.2	7.2	8.5	23	83	80	—	—	—	—	46
C 70 3_44.7	44.7	4.2	—	—	7.0	7.0	8.2	23	83	80	—	—	—	—	45
C 70 3_52.2	52.2	3.0	—	—	5.8	5.8	7.0	22	81	79	—	—	—	—	44
C 70 3_56.5	56.5	2.8	—	—	5.7	5.6	6.9	22	81	79	—	—	—	—	44
C 70 3_65.9	65.9	2.0	—	—	4.9	4.8	6.1	21	80	78	—	—	—	—	43
C 70 3_71.3	71.3	2.0	—	—	4.8	4.8	6.0	21	80	78	—	—	—	—	43
C 70 3_81.4	81.4	1.5	—	—	4.3	4.3	5.6	20	80	78	—	—	—	—	43
C 70 3_88.2	88.2	1.4	—	—	4.3	4.2	5.5	20	80	76	—	—	—	—	43
C 70 3_103.8	103.8	1.0	—	—	3.8	3.8	5.1	20	79	77	—	—	—	—	42
C 70 3_112.4	112.4	0.90	—	—	3.8	3.7	5.0	20	79	77	—	—	—	—	42
C 70 3_126.8	126.8	0.70	—	—	3.5	3.5	4.8	20	79	77	—	—	—	—	42
C 70 3_137.4	137.4	0.70	—	—	3.5	3.5	4.7	20	79	77	—	—	—	—	42
C 70 3_150.3	150.3	0.50	—	—	3.4	3.4	9.6	—	—	—	—	—	—	—	42
C 70 3_162.8	162.8	0.50	—	—	3.4	3.4	4.6	—	—	—	—	—	—	—	42
C 70 3_179.2	179.2	0.40	—	—	3.2	3.3	4.5	—	—	—	—	—	—	—	42
C 70 3_194.1	194.1	0.40	—	—	3.2	3.2	4.5	—	—	—	—	—	—	—	42
C 70 3_220.9	220.9	0.30	—	—	3.1	3.1	4.3	—	—	—	—	—	—	—	41
C 70 3_239.3	239.3	0.30	—	—	3.1	3.1	4.3	—	—	—	—	—	—	—	41
C 70 4_251.3	251.3	0.70	2.2	2.2	3.5	3.5	4.8	20	—	—	—	—	—	—	11
C 70 4_272.2	272.2	0.70	2.2	2.1	3.5	3.5	4.8	20	—	—	—	—	—	—	11
C 70 4_317.9	317.9	0.50	2.0	2.0	3.4	3.3	4.6	19	—	—	—	—	—	—	11
C 70 4_344.3	344.3	0.50	2.0	2.0	3.4	3.3	4.6	19	—	—	—	—	—	—	11
C 70 4_409.4	409.4	0.40	1.8	1.8	3.2	3.2	4.5	19	—	—	—	—	—	—	7.9
C 70 4_443.5	443.5	0.40	1.8	1.8	3.2	3.2	4.5	19	—	—	—	—	—	—	7.9
C 70 4_512.0	512.0	0.30	1.7	1.7	3.1	3.1	4.4	19	—	—	—	—	—	—	7.8
C 70 4_554.7	554.7	0.30	1.7	1.7	3.1	3.1	4.4	19	—	—	—	—	—	—	7.8
C 70 4_606.8	606.8	0.20	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	7.8
C 70 4_657.3	657.3	0.20	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	7.7
C 70 4_736.0	736.0	0.20	1.6	1.6	3.0	2.9	4.3	—	—	—	—	—	—	—	7.7
C 70 4_797.3	797.3	0.20	1.6	1.6	3.0	2.9	4.3	—	—	—	—	—	—	—	7.7
C 70 4_922.6	922.6	0.10	1.6	1.6	3.0	2.9	4.2	—	—	—	—	—	—	—	7.7
C 70 4_999.5	999.5	0.10	1.6	1.6	3.0	2.9	4.2	—	—	—	—	—	—	—	7.6
C 70 4_1069	1069	0.80	1.6	1.5	2.9	2.9	4.2	—	—	—	—	—	—	—	7.6
C 70 4_1158	1158	0.80	1.6	1.5	2.9	2.9	4.2	—	—	—	—	—	—	—	7.6
C 70 4_1362	1362	0.60	1.5	1.5	2.9	2.9	4.1	—	—	—	—	—	—	—	7.6
C 70 4_1476	1476	0.60	1.5	1.5	2.9	2.9	4.1	—	—	—	—	—	—	—	7.6



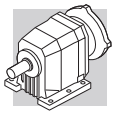
C 80

	i	J (•10-4) [kgm2]													
			IEC												
			63	71	80	90	100 112	132	160	180	200	225	250	280	
C 80 2_5.6	5.6	—	—	—	—	—	—	—	—	197	211	489	—	—	164
C 80 2_6.1	6.1	—	—	—	—	—	—	—	—	193	210	485	—	—	159
C 80 2_7.0	7.0	—	—	—	—	—	—	—	160	161	174	452	—	—	127
C 80 2_7.6	7.6	—	—	—	—	—	—	—	158	158	172	449	—	—	124
C 80 2_8.9	8.9	—	—	—	—	—	—	—	137	135	146	429	—	—	101
C 80 2_9.6	9.6	—	—	—	—	—	—	—	136	133	144	427	—	—	99
C 80 2_11.1	11.1	38	—	—	—	—	—	56	116	113	124	408	—	—	79
C 80 2_12.0	12.0	36	—	—	—	—	—	55	115	112	123	407	—	—	78
C 80 2_13.8	13.8	28	—	—	—	—	—	47	106	104	135	398	—	—	69
C 80 2_14.9	14.9	27	—	—	—	—	—	46	106	103	134	397	—	—	69
C 80 2_16.7	16.7	21	—	—	—	—	—	40	100	97	127	391	—	—	63
C 80 2_18.1	18.1	21	—	—	—	—	—	40	99	97	127	390	—	—	62
C 80 2_20.5	20.5	14	—	—	17	17	18	33	93	90	120	383	—	—	55
C 80 2_22.2	22.2	14	—	—	16	16	18	33	92	90	120	383	—	—	55
C 80 2_24.0	24.0	13	—	—	16	16	17	32	91	89	119	382	—	—	54
C 80 2_25.9	25.9	13	—	—	16	15	17	32	91	89	118	382	—	—	54
C 80 2_31.3	31.3	8.7	—	—	12	11	13	28	87	85	—	—	—	—	50
C 80 2_39.1	39.1	5.2	—	—	8.0	8.0	9.2	24	84	81	—	—	—	—	46
C 80 3_43.5	43.5	9.6	—	—	12	12	14	29	88	86	—	—	—	—	51
C 80 3_47.4	47.4	9.1	—	—	12	12	13	28	87	85	—	—	—	—	50
C 80 3_57.3	57.3	5.7	—	—	8.5	8.5	9.7	25	84	82	—	—	—	—	47
C 80 3_62.5	62.5	5.4	—	—	8.2	8.2	9.5	24	84	82	—	—	—	—	47
C 80 3_70.5	70.5	4.3	—	—	7.1	7.0	8.3	23	83	80	—	—	—	—	45
C 80 3_76.9	76.9	4.1	—	—	7.0	6.9	8.2	23	82	80	—	—	—	—	45
C 80 3_89.3	89.3	3.0	—	—	5.9	5.8	7.1	22	81	79	—	—	—	—	44
C 80 3_97.4	97.4	2.9	—	—	5.8	5.7	7.0	22	81	79	—	—	—	—	44
C 80 3_109.5	109.5	2.0	—	—	4.8	4.8	6.1	21	80	78	—	—	—	—	43
C 80 3_119.5	119.5	1.9	—	—	4.8	4.7	6.0	21	80	79	—	—	—	—	43
C 80 3_136.7	136.7	1.4	—	—	4.3	4.2	5.5	20	80	78	—	—	—	—	43
C 80 3_149.1	149.1	1.4	—	—	4.2	4.2	5.5	20	80	77	—	—	—	—	43
C 80 3_169.0	169.0	1.0	—	—	3.9	3.8	5.1	20	80	77	—	—	—	—	42
C 80 3_184.4	184.4	1.0	—	—	3.9	3.8	5.1	20	80	77	—	—	—	—	42
C 80 3_197.9	197.9	0.80	—	—	3.7	3.6	4.9	—	—	—	—	—	—	—	42
C 80 3_215.8	215.8	0.80	—	—	3.6	3.6	4.9	—	—	—	—	—	—	—	42
C 80 4_261.9	261.9	1.7	—	—	4.6	4.5	5.8	21	—	—	—	—	—	—	12
C 80 4_285.7	285.7	1.7	—	—	4.6	4.5	5.8	21	—	—	—	—	—	—	12
C 80 4_334.3	334.3	1.2	2.7	2.7	4.0	4.0	5.3	20	—	—	—	—	—	—	11
C 80 4_364.7	364.7	1.2	2.7	2.6	4.0	4.0	5.3	20	—	—	—	—	—	—	11
C 80 4_417.5	417.5	0.90	2.4	2.3	3.7	3.7	5.0	20	—	—	—	—	—	—	11
C 80 4_455.4	455.4	0.90	2.3	2.3	3.7	3.7	5.5	20	—	—	—	—	—	—	11
C 80 4_529.3	529.3	0.50	2.0	2.0	3.4	3.3	4.6	19	—	—	—	—	—	—	11
C 80 4_577.4	577.4	0.50	2.0	2.0	3.4	3.3	4.6	19	—	—	—	—	—	—	11
C 80 4_664.3	664.3	0.40	2.0	1.9	3.3	3.2	4.5	19	—	—	—	—	—	—	11
C 80 4_724.7	724.7	0.40	2.0	1.9	3.3	3.2	4.5	19	—	—	—	—	—	—	11
C 80 4_783.4	783.4	0.30	2.0	1.8	3.2	3.1	4.4	—	—	—	—	—	—	—	9.4
C 80 4_854.6	854.6	0.30	2.0	1.8	3.2	3.1	4.4	—	—	—	—	—	—	—	9.4
C 80 4_945.7	945.7	0.20	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	9.3
C 80 4_1032	1032	0.20	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	9.3
C 80 4_1168	1168	0.20	1.6	1.6	3.0	3.0	4.2	—	—	—	—	—	—	—	9.2
C 80 4_1274	1274	0.20	1.6	1.6	3.0	3.0	4.2	—	—	—	—	—	—	—	9.2
C 80 4_1358	1358	0.10	1.6	1.6	3.0	2.9	4.2	—	—	—	—	—	—	—	9.2
C 80 4_1481	1481	0.10	1.6	1.6	3.0	2.9	4.2	—	—	—	—	—	—	—	9.2



C 90

	i	J (•10-4) [kgm2]													
			IEC												
			63	71	80	90	100 112	132	160	180	200	225	250	280	
C 90 2_5.2	5.2	—	—	—	—	—	—	—	—	—	332	610	637	—	619
C 90 2_5.6	5.6	—	—	—	—	—	—	—	—	—	321	599	626	—	609
C 90 2_6.8	6.8	—	—	—	—	—	—	—	—	—	252	530	557	—	540
C 90 2_7.3	7.3	—	—	—	—	—	—	—	—	—	246	524	551	—	533
C 90 2_8.3	8.3	—	—	—	—	—	—	—	—	—	212	490	517	—	499
C 90 2_9.0	9.0	—	—	—	—	—	—	—	—	—	208	485	513	—	495
C 90 2_10.4	10.4	—	—	—	—	—	—	—	167	164	175	458	484	—	461
C 90 2_11.2	11.2	—	—	—	—	—	—	—	164	162	173	455	482	—	458
C 90 2_12.8	12.8	65	—	—	—	—	—	84	143	141	152	436	462	—	439
C 90 2_13.9	13.9	63	—	—	—	—	—	82	141	139	200	434	460	—	437
C 90 2_16.0	16.0	47	—	—	—	—	—	66	125	123	154	417	443	—	420
C 90 2_17.3	17.3	46	—	—	—	—	—	65	124	122	153	416	442	—	419
C 90 2_18.7	18.7	42	—	—	—	—	—	61	121	119	148	412	433	—	415
C 90 2_20.2	20.2	41	—	—	—	—	—	61	199	118	147	411	438	—	414
C 90 2_22.9	22.9	28	—	—	30	30	31	47	106	104	133	397	423	—	400
C 90 2_24.8	24.8	27	—	—	29	29	31	46	105	103	133	396	422	—	399
C 90 2_27.2	27.2	22	—	—	25	25	26	41	101	99	128	391	418	—	394
C 90 2_29.4	29.4	22	—	—	25	24	26	41	100	98	127	391	417	—	394
C 90 2_35.1	35.1	14	—	—	17	17	18	33	93	90	—	—	—	—	386
C 90 3_39.4	39.4	27	—	—	—	—	—	46	105	103	112	398	424	—	412
C 90 3_43.0	43.0	26	—	—	—	—	—	45	104	102	111	396	422	—	410
C 90 3_50.3	50.3	19	—	—	—	—	—	38	98	95	126	389	415	—	403
C 90 3_54.9	54.9	19	—	—	—	—	—	37	97	95	125	389	415	—	401
C 90 3_59.2	59.2	16	—	—	—	—	—	35	94	92	122	385	411	—	398
C 90 3_64.6	64.6	15	—	—	—	—	—	34	94	91	121	384	410	—	398
C 90 3_74.4	74.4	10	—	—	13	13	14	29	88	86	116	379	405	—	393
C 90 3_81.2	81.2	9.8	—	—	12	12	13	29	88	86	115	379	405	—	392
C 90 3_88.2	88.2	7.1	—	—	9.7	9.6	11	26	85	83	113	376	402	—	389
C 90 3_96.2	96.2	6.9	—	—	9.4	9.4	11	26	85	83	112	376	402	—	389
C 90 3_107.0	107.0	5.7	—	—	8.4	8.4	9.6	25	84	82	—	—	—	—	388
C 90 3_116.7	116.7	5.5	—	—	8.3	8.2	9.5	24	84	82	—	—	—	—	388
C 90 3_134.1	134.1	3.5	—	—	6.4	6.3	7.6	22	82	80	—	—	—	—	386
C 90 3_146.3	146.3	3.4	—	—	6.3	6.2	7.5	22	82	80	—	—	—	—	386
C 90 3_157.8	157.8	2.5	—	—	5.4	5.3	6.6	21	81	79	—	—	—	—	385
C 90 3_172.1	172.1	2.4	—	—	5.3	5.2	6.5	21	81	79	—	—	—	—	385
C 90 4_212.4	212.4	4.2	—	—	7.0	7.0	8.3	23	83	80	—	—	—	—	14
C 90 4_231.7	231.7	4.1	—	—	7.0	6.9	8.2	23	82	80	—	—	—	—	14
C 90 4_268.5	268.5	2.8	—	—	5.7	5.6	6.9	22	81	79	—	—	—	—	13
C 90 4_292.9	292.9	2.8	—	—	5.7	2.6	6.9	22	81	79	—	—	—	—	13
C 90 4_339.0	339.0	2.0	3.4	3.4	4.8	4.8	6.0	21	80	78	—	—	—	—	12
C 90 4_369.8	369.8	2.0	3.4	3.4	4.8	4.8	6.0	21	80	78	—	—	—	—	12
C 90 4_419.0	419.0	1.4	2.9	2.9	4.3	4.2	5.5	20	80	78	—	—	—	—	12
C 90 4_457.1	457.1	1.4	2.9	2.9	4.3	4.2	5.5	20	80	78	—	—	—	—	12
C 90 4_534.2	534.2	0.90	2.4	2.4	3.8	3.7	5.0	20	79	77	—	—	—	—	11
C 90 4_582.8	582.8	0.90	2.4	2.4	3.8	3.7	5.0	20	79	77	—	—	—	—	11
C 90 4_652.8	652.8	0.70	2.1	2.1	3.5	3.5	4.7	20	79	77	—	—	—	—	11
C 90 4_712.2	712.2	0.70	2.1	2.1	3.5	3.5	4.7	20	79	77	—	—	—	—	11
C 90 4_773.6	773.6	0.50	2.0	2.0	3.4	3.3	4.6	—	—	—	—	—	—	—	9.7
C 90 4_844.0	844.0	0.50	2.0	2.0	3.4	3.3	4.6	—	—	—	—	—	—	—	9.6
C 90 4_922.3	922.3	0.40	1.8	1.8	3.2	3.2	4.5	—	—	—	—	—	—	—	9.5
C 90 4_1006	1006	0.40	1.8	1.8	3.2	3.2	4.5	—	—	—	—	—	—	—	9.4
C 90 4_1137	1137	0.30	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	9.3
C 90 4_1240	1240	0.30	1.7	1.7	3.1	3.0	4.3	—	—	—	—	—	—	—	9.3



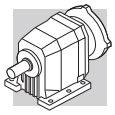
C 100

	i	J (•10-4) [kgm2]													
			IEC												
			63	71	80	90	100 112	132	160	180	200	225	250	280	
C 100 2_4.9	4.9	—	—	—	—	—	—	—	—	—	674	960	987	970	972
C 100 2_5.3	5.3	—	—	—	—	—	—	—	—	—	647	933	960	943	944
C 100 2_6.5	6.5	—	—	—	—	—	—	—	—	—	481	767	794	777	778
C 100 2_7.1	7.1	—	—	—	—	—	—	—	—	—	465	751	778	761	763
C 100 2_8.4	8.4	—	—	—	—	—	—	—	—	—	365	651	678	660	662
C 100 2_9.0	9.0	—	—	—	—	—	—	—	—	—	355	641	668	651	653
C 100 2_10.1	10.1	—	—	—	—	—	—	—	—	—	291	577	604	587	589
C 100 2_10.9	10.9	—	—	—	—	—	—	—	—	—	285	570	597	580	582
C 100 2_12.5	12.5	—	—	—	—	—	—	—	224	222	233	521	550	539	529
C 100 2_13.5	13.5	—	—	—	—	—	—	—	220	218	228	517	545	532	524
C 100 2_15.2	15.2	122	—	—	—	—	—	82	141	200	199	472	499	528	514
C 100 2_16.5	16.5	119	—	—	—	—	—	138	197	195	206	496	525	511	504
C 100 2_18.7	18.7	97	—	—	—	—	—	116	175	173	203	474	501	488	480
C 100 2_20.2	20.2	95	—	—	—	—	—	114	173	171	201	471	499	486	478
C 100 2_22.2	22.2	73	—	—	—	—	—	92	102	150	179	448	477	463	456
C 100 2_24.1	24.1	72	—	—	—	—	—	91	150	148	178	447	476	462	455
C 100 2_29.6	29.6	50	—	—	—	—	54	69	129	127	156	425	454	440	433
C 100 3_34.3	34.3	—	—	—	—	—	—	—	148	146	155	439	465	471	461
C 100 3_36.9	36.9	—	—	—	—	—	—	—	145	143	152	436	462	468	458
C 100 3_42.9	42.9	44	—	—	—	—	—	63	123	120	130	415	441	451	437
C 100 3_46.2	46.2	43	—	—	—	—	—	61	121	118	128	413	439	452	435
C 100 3_53.3	53.3	33	—	—	—	—	—	51	111	109	139	403	429	432	424
C 100 3_57.4	57.4	31	—	—	—	—	—	50	110	107	138	401	427	431	423
C 1003_64.5	64.5	24	—	—	—	—	—	43	103	101	130	394	420	422	415
C 100 3_69.4	69.4	24	—	—	—	—	—	43	102	100	129	393	419	421	414
C 100 3_79.4	79.4	16	—	—	—	—	20	35	95	92	122	385	411	413	407
C 100 3_85.6	85.6	16	—	—	—	—	19	35	94	92	121	385	411	413	406
C 100 3_92.7	92.7	15	—	—	—	—	18	34	93	91	120	384	410	412	405
C 100 3_99.8	99.8	14	—	—	—	—	18	33	93	90	119	383	409	411	404
C 100 3_111.9	111.9	9.9	—	—	—	—	14	29	88	86	—	—	—	—	392
C 100 3_120.5	120.5	9.6	—	—	—	—	14	29	88	86	—	—	—	—	392
C 100 3_139.7	139.7	6.0	—	—	—	—	10	25	84	82	—	—	—	—	388
C 100 3_150.4	150.4	5.8	—	—	—	—	9.8	25	84	82	—	—	—	—	388
C 100 4_162.1	162.1	13	—	—	16	16	17	32	100	89	—	—	—	—	23
C 100 4_185.4	185.4	9.6	—	—	13	12	14	29	88	86	—	—	—	—	20
C 100 4_199.6	199.6	8.5	—	—	12	12	14	28	88	86	—	—	—	—	20
C 100 4_244.2	244.2	5.7	—	—	8.5	8.5	9.8	25	84	82	—	—	—	—	16
C 100 4_263.0	263.0	5.6	—	—	8.5	8.4	9.7	25	84	82	—	—	—	—	16
C 100 4_300.5	300.5	4.2	—	—	7.1	7.1	8.4	23	83	80	—	—	—	—	15
C 100 4_323.6	323.6	4.2	—	—	7.1	7.0	8.3	23	83	80	—	—	—	—	14
C 100 4_380.5	380.5	3.1	4.5	4.5	5.9	5.5	7.1	22	81	79	—	—	—	—	13
C 100 4_409.8	409.8	3.0	4.5	4.5	5.9	5.5	7.1	22	81	79	—	—	—	—	13
C 100 4_466.7	466.7	2.0	3.5	3.5	4.9	4.8	6.1	20	80	78	—	—	—	—	12
C 100 4_502.6	502.6	2.0	3.5	3.4	4.8	4.8	6.1	20	80	78	—	—	—	—	12
C 100 4_582.6	582.6	1.4	2.9	2.9	4.3	4.2	5.5	20	80	77	—	—	—	—	12
C 100 4_627.4	627.4	1.4	2.9	2.9	4.3	4.2	5.5	20	80	77	—	—	—	—	12
C 100 4_720.3	720.3	1.0	2.5	2.5	3.9	3.4	5.1	20	79	77	—	—	—	—	11
C 100 4_775.7	775.7	1.0	2.5	2.5	3.9	3.4	5.1	20	79	77	—	—	—	—	11
C 100 4_843.3	843.3	0.80	2.3	2.3	3.7	3.6	4.9	—	—	—	—	—	—	—	9.9
C 100 4_908.2	908.2	0.80	2.3	2.3	3.7	3.6	4.9	—	—	—	—	—	—	—	9.9
C 100 4_1004	1004	0.60	2.1	2.0	3.4	3.4	4.7	—	—	—	—	—	—	—	9.7
C 100 4_1081	1081	0.60	2.1	2.0	3.4	3.4	4.7	—	—	—	—	—	—	—	9.7

29 EXACT RATIOS

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

2x **3x**

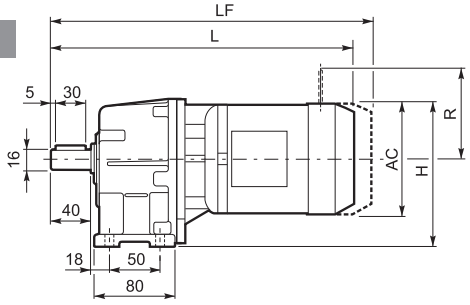


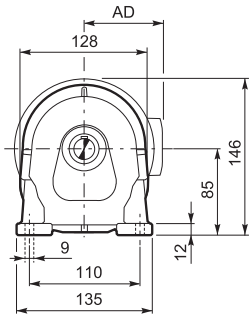
i_N	C12	C22	C32	C36	C41	C51	C61	C70	C80	C90	C100
112.2		112.00000	110.62626	111.50649	110.05917	113.60510	113.61026	112.44066	109.50347	107.00379 116.73140	111.90476
125.5		122.18182	122.35587	125.80220	120.64178	124.41758	128.14222	126.83497	119.45833		120.51282
140.0		136.50000	136.04040 148.40771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

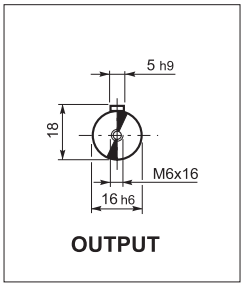
3x 4x

C 05...M

P







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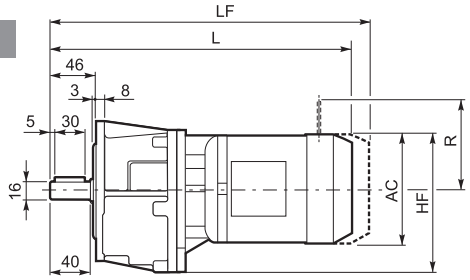
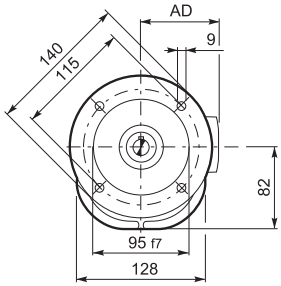
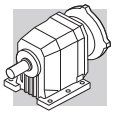


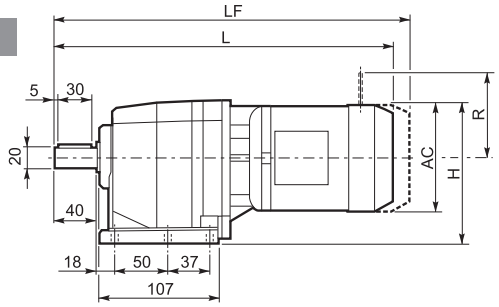


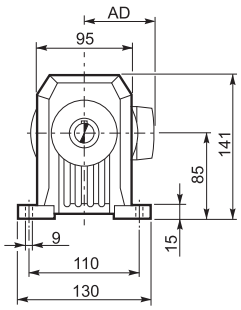
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	LF	Kg	R	AD	R	AD
C 05 2	**S0**	**M0**	110	140	137	287	91	7	—	—	—	—	—	—
C 05 2	**S05**	**M05**	121	145.5	142.5	332	95	8	398	10	96	122	116	95
C 05 2	**S1**	**M1**	138	154	151	360.5	108	11	423	13	103	135	124	108

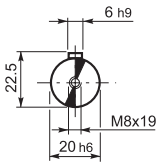


C 12...M

P







OUTPUT

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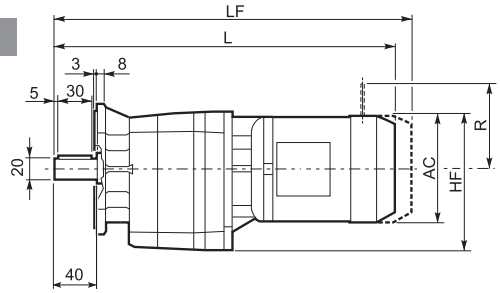

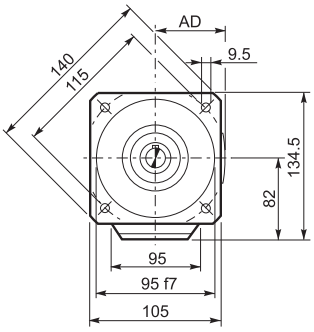

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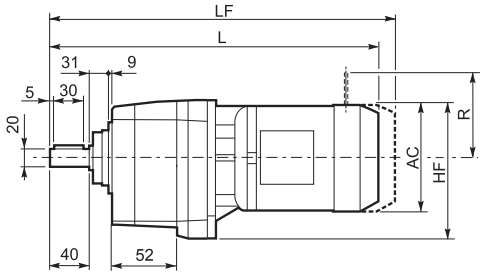

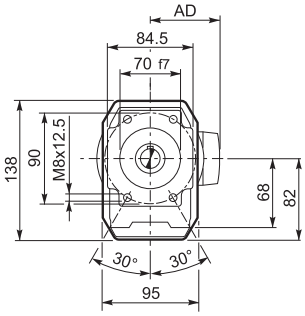

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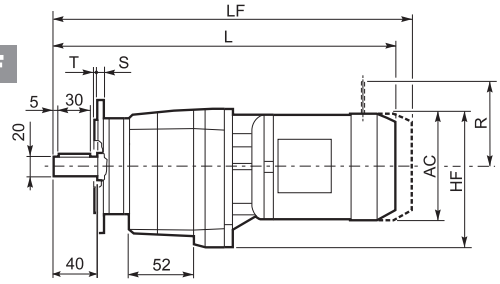
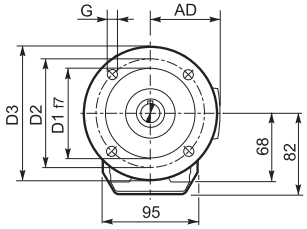
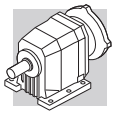




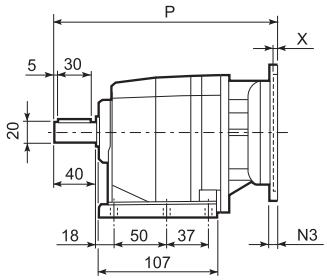
C 12 2_U						
	D1	D2	D3	G	T	S
FA	80	100	120	7	3	8
FB	95	115	140	9	3	10
FC	110	130	160	9	3	10

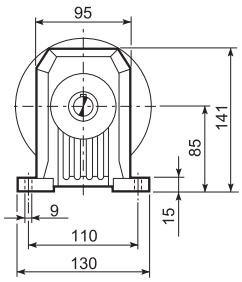
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	LF	Kg	R	AD	R	AD
C 12 2	S05	M05	121	145.5	142.5	370.5	95	9	436.5	10	96	122	116	95
C 12 2	S1	M1	138	154	151	404.5	108	11	460.5	13	103	135	124	108
C 12 2	S2	M2S	156	163	160	428.5	119	15	498.5	18	129	146	134	119
C 12 2	S3	M3S	195	182.5	179.5	471.5	142	20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

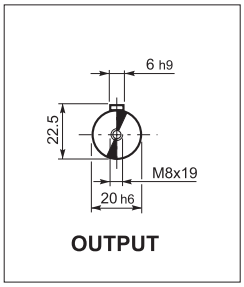


C 12...P (IEC)

P







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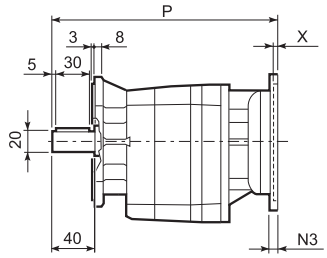

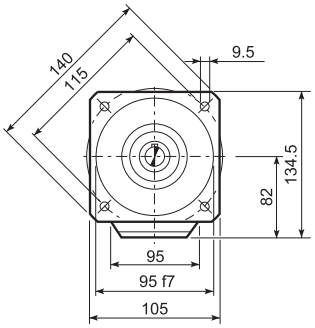

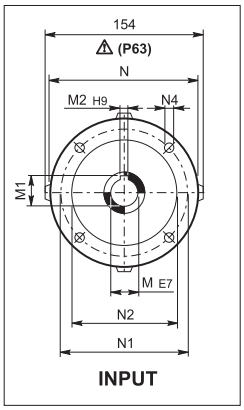

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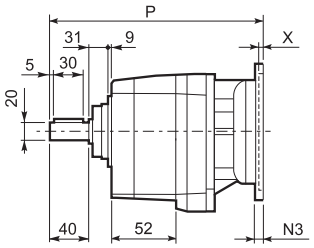

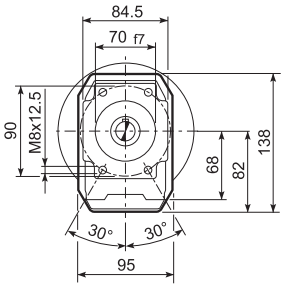

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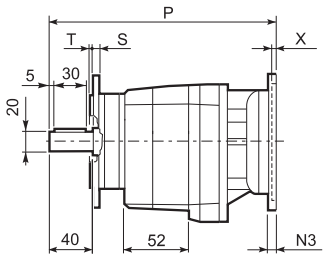
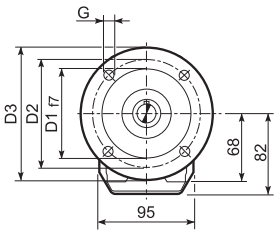
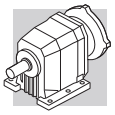


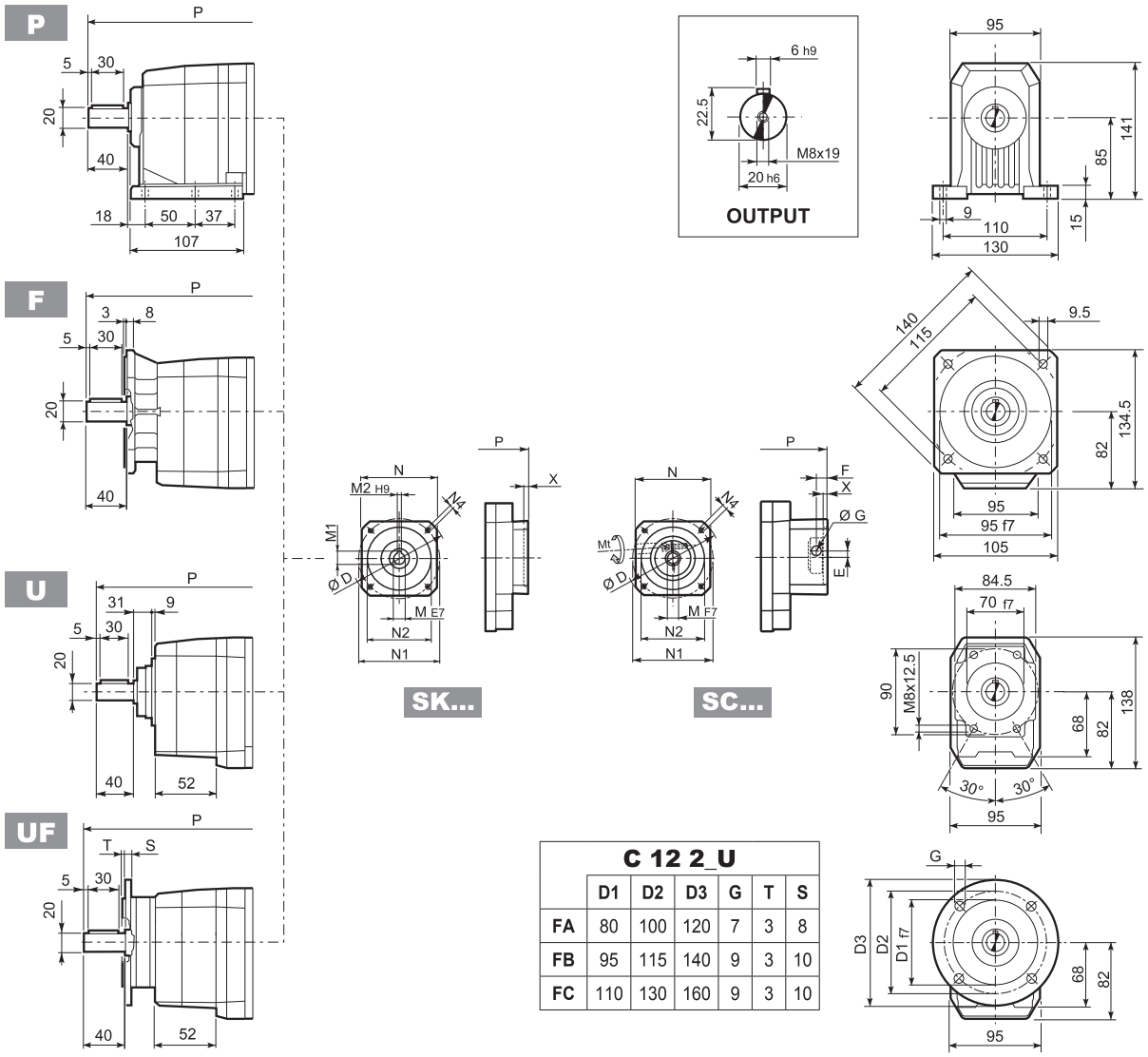


C 12 2_U						
	D1	D2	D3	G	T	S
FA	80	100	120	7	3	8
FB	95	115	140	9	3	10
FC	110	130	160	9	3	10

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



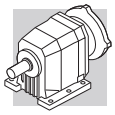
C 12...SK / SC



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

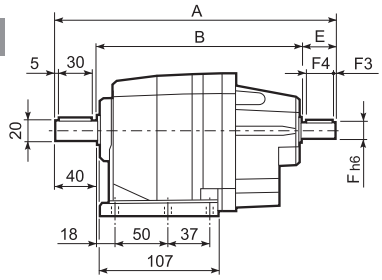
		D	M	M1	M2	N	N1	N2	N4	X	P	Kg
C 12 2	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	216	6
C 12 2	SK60B	102	14	16.3	5	82	75	60	M5x10	4	223	5
C 12 2	SK80A	115	14	16.3	5	90	100	80	M6x12	4	223	5
C 12 2	SK80C	120	19	21.8	6	96	100	80	M6x12	4	264	7
C 12 2	SK95A	130	14	16.3	5	102	115	95	M8x12	4	264	6
C 12 2	SK95B	130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

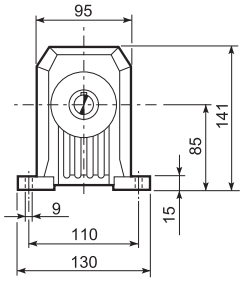
			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P	Kg
C 12 2	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	243	7
C 12 2	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	243	6
C 12 2	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	243	6
C 12 2	SC80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	287.5	8
C 12 2	SC95A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

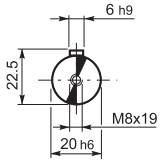


C 12...HS

P







OUTPUT

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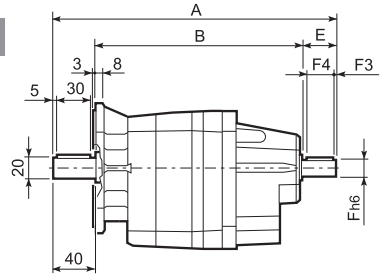

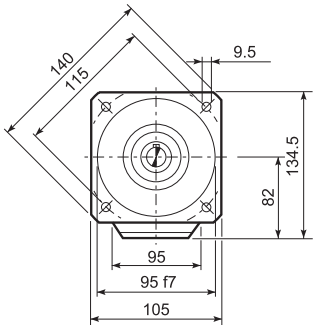

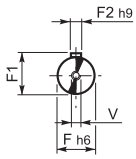

INPUT

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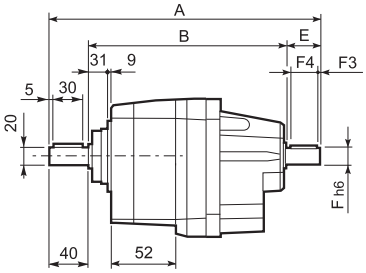

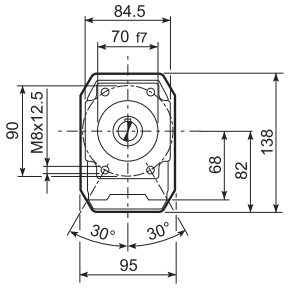

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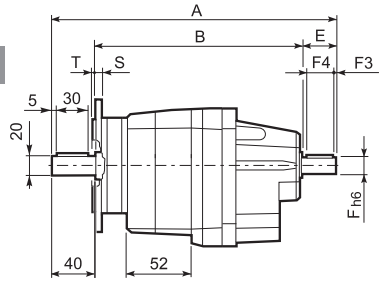
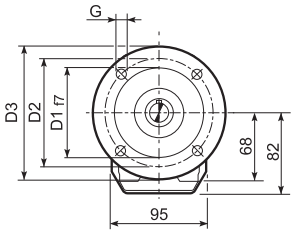
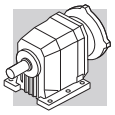




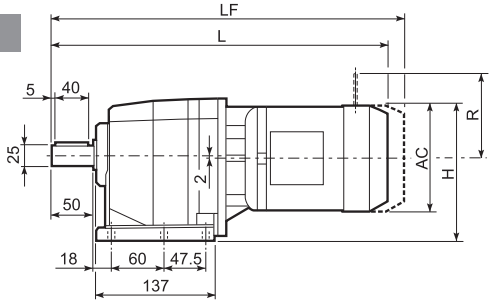
C 12 2_U						
	D1	D2	D3	G	T	S
FA	80	100	120	7	3	8
FB	95	115	140	9	3	10
FC	110	130	160	9	3	10

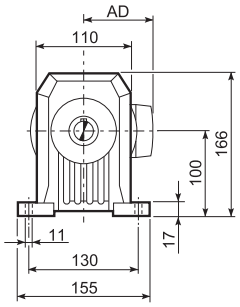
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 12 2	HS	251.5	171.5	40	16	18	5	2.5	35	M6x16	7.8

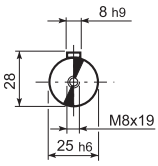


C 22...M

P

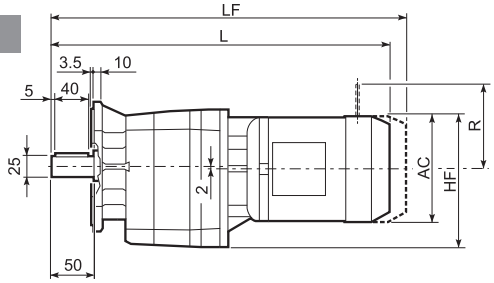


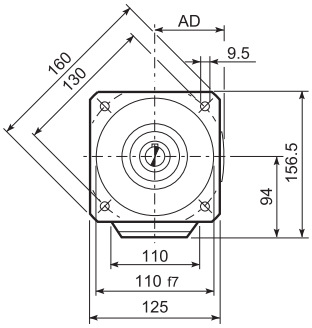




OUTPUT

F





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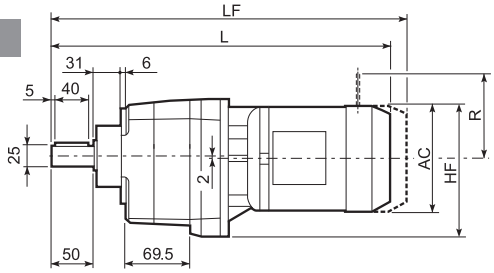

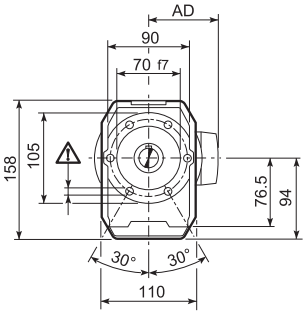

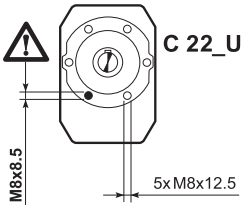

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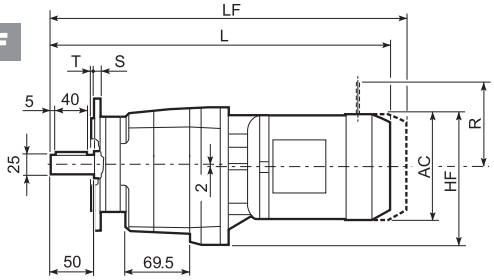
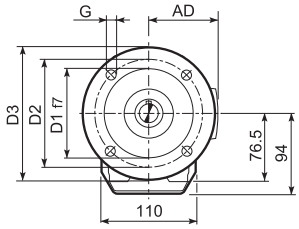
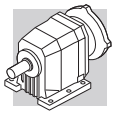




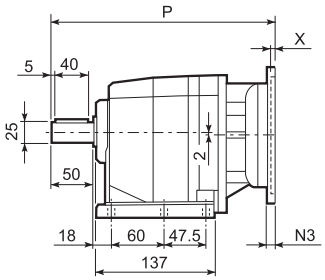
C 22_U						
	D1	D2	D3	G	T	S
FA	95	115	140	9	3	10
FB	110	130	160	9	3	10
FC	130	165	200	11	3.5	11

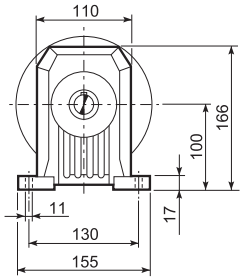
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	LF	Kg	R	AD	R	AD
C 22 2	S05	M05	121	160.5	154.5	399	95	8	465	10	96	119	116	95
C 22 2	S1	M1	138	169	163	428	108	11	489	14	103	135	124	108
C 22 2	S2	M2S	156	178	170	456	119	16	527	19	129	146	134	119
C 22 2	S3	M3S	195	197.5	191.5	500	142	21	596	26	160	158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

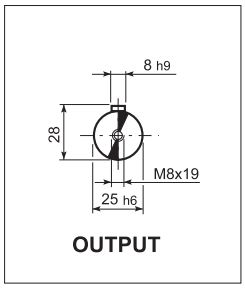


C 22...P(IEC)

P







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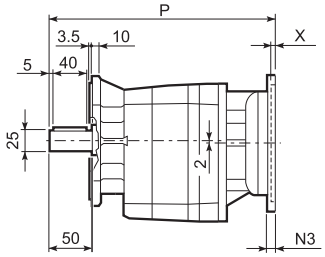

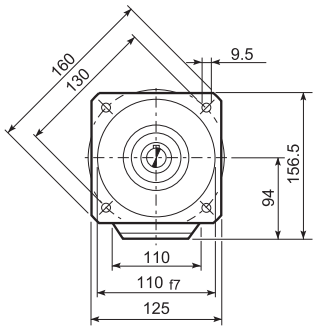

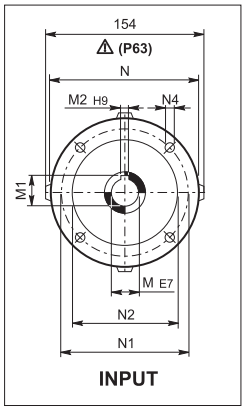

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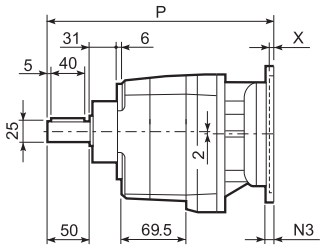

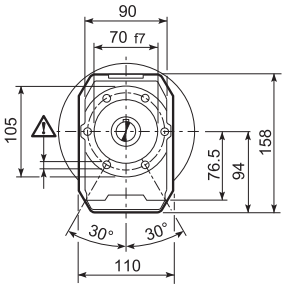

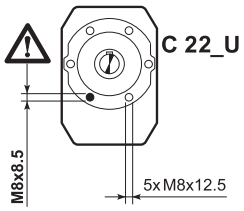

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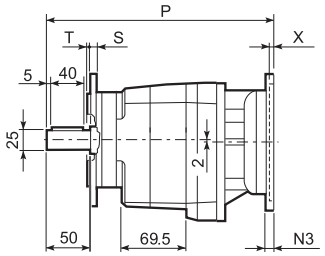
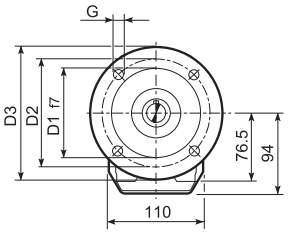
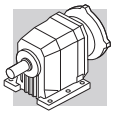


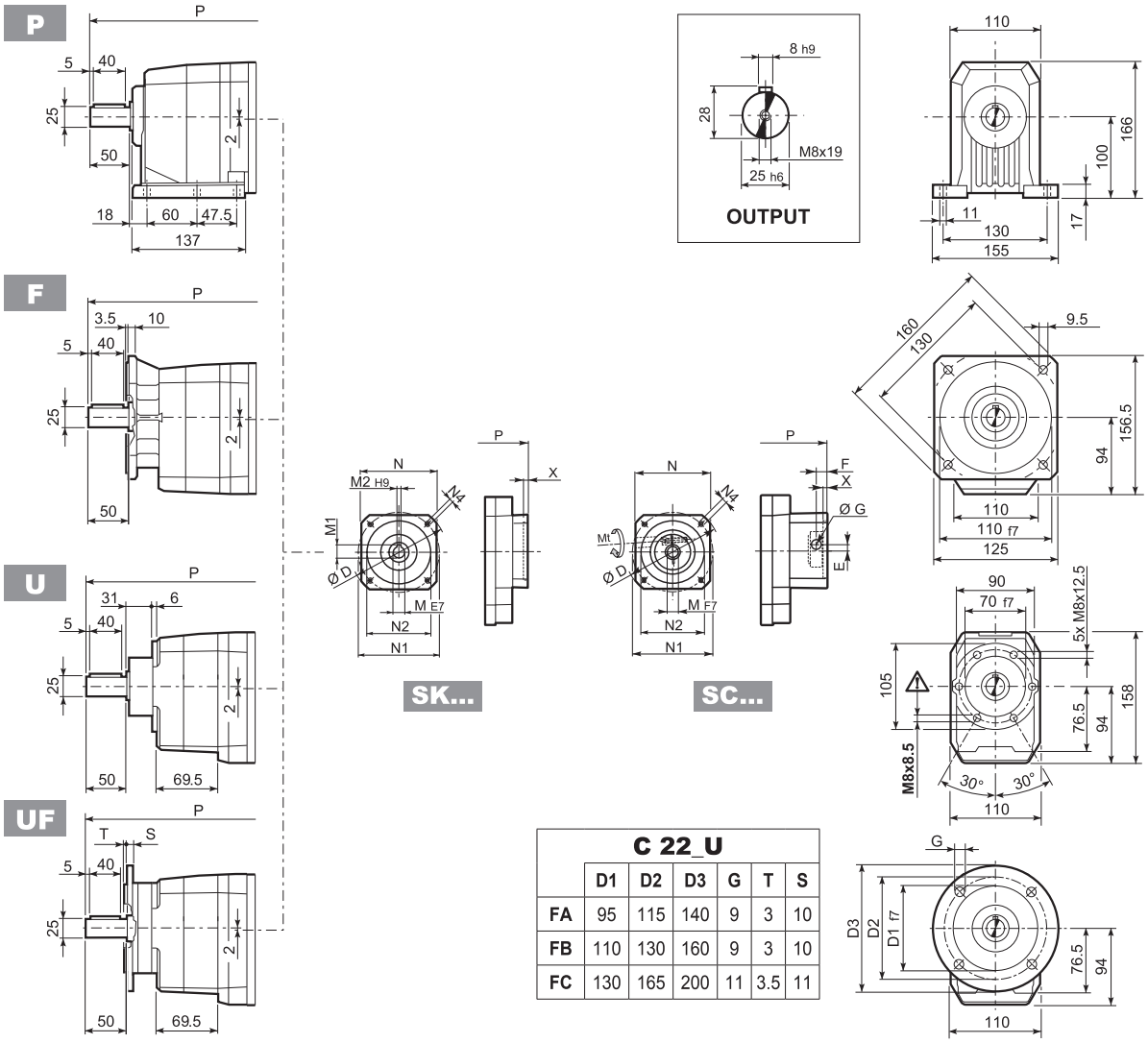


C 22_U						
	D1	D2	D3	G	T	S
FA	95	115	140	9	3	10
FB	110	130	160	9	3	10
FC	130	165	200	11	3.5	11

		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 22 2	P63	11	12.8	4	140	115	95	—	M8x19	4	273	7
C 22 2	P71	14	16.3	5	160	130	110	—	M8x16	4.5	273	7
C 22 2	P80	19	21.8	6	200	165	130	—	M10x14.5	4	292.5	8
C 22 2	P90	24	27.3	8	200	165	130	—	M10x14.5	4	292.5	8
C 22 2	P100	28	31.3	8	250	215	180	—	M12X16	4.5	302.5	12
C 22 2	P112	28	31.3	8	250	215	180	—	M12X16	4.5	302.5	12
C 22 3	P63	11	12.8	4	140	115	95	—	M8x19	4	328.5	8
C 22 3	P71	14	16.3	5	160	130	110	—	M8x16	4.5	328.5	8
C 22 3	P80	19	21.8	6	200	165	130	—	M10x14.5	4	348	9
C 22 3	P90	24	27.3	8	200	165	130	—	M10x14.5	4	348	9
C 22 3	P100	28	31.3	8	250	215	180	—	M12x16	4.5	358	13
C 22 3	P112	28	31.3	8	250	215	180	—	M12x16	4.5	358	13



C 22...SK / SC



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

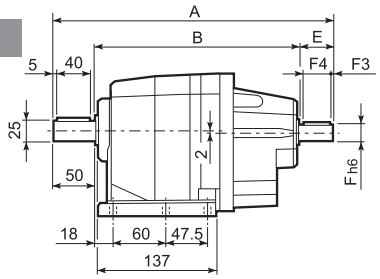
		D	M	M1	M2	N	N1	N2	N4	X	P 2x	P 3x	Kg
C 22 2/3	SK60A*	102	11	12.8	4	82	75	60	M5x10	3.5	224.5	300	6/9
C 22 2/3	SK60B*	102	14	16.3	5	82	75	60	M5x10	4	251.5	307	7/8
C 22 2/3	SK80A*	115	14	16.3	5	90	100	80	M6x12	4	251.5	307	7/8
C 22 2/3	SK80C	120	19	21.8	6	96	100	80	M6x12	4	292.5	348	8/9
C 22 2/3	SK95A	130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

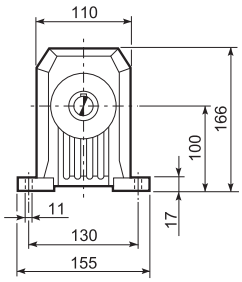
		Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P 2x	P 3x	Kg
C 22 2/3	SC60A*	M6 15	102	7	12.5	12.5	11	82	75	60	M5x10	4	271.5	327	7/8
C 22 2/3	SC60B*	M6 15	102	7	12.5	12.5	14	82	75	60	M5x10	4	271.5	327	8/9
C 22 2/3	SC80A*	M6 15	115	6	12.5	12.5	14	90	100	80	M6x12	4	271.5	327	8/9
C 22 2/3	SC80C	M6 15	120	15.5	14.5	17.75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

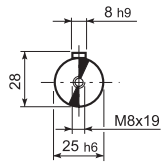
* Contact our technical service department advising application data

C 22...HS

P







OUTPUT

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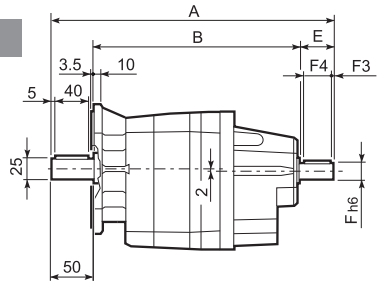

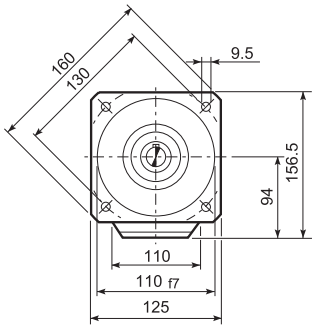

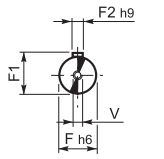

INPUT

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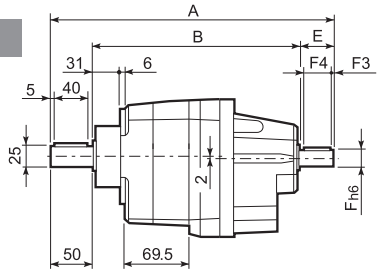

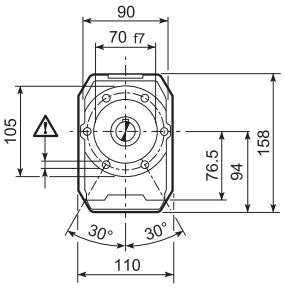

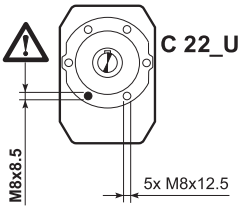

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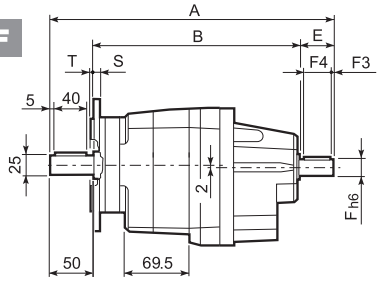
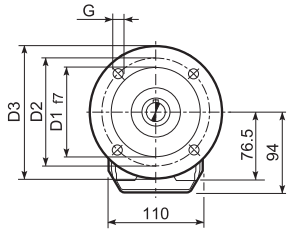
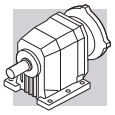




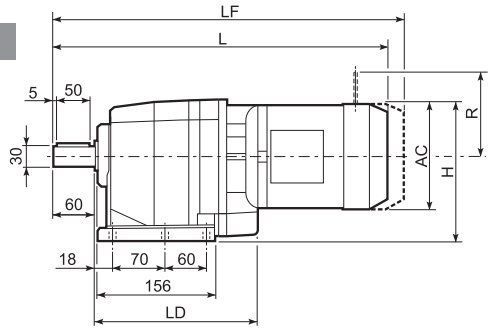
C 22_U						
	D1	D2	D3	G	T	S
FA	95	115	140	9	3	10
FB	110	130	160	9	3	10
FC	130	165	200	11	3.5	11

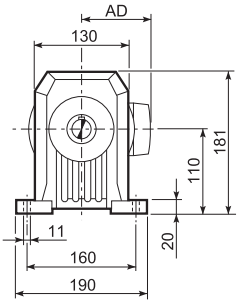
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 22 2	HS	323	233	40	19	21.5	6	2.5	35	M6x16	7.2
C 22 3		335.5	245.5	40	16	18	6	2.5	36	M6x16	7.5

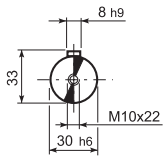


C 32...M

P







OUTPUT

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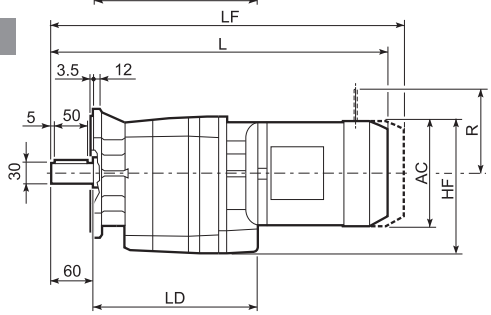

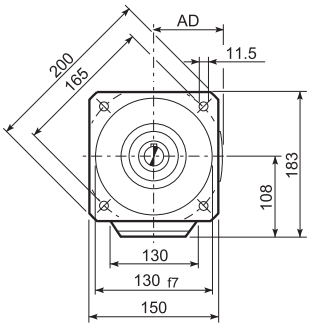

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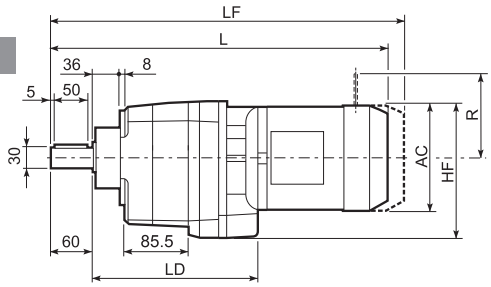

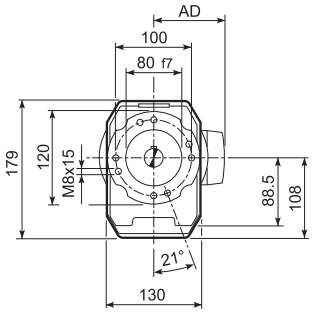

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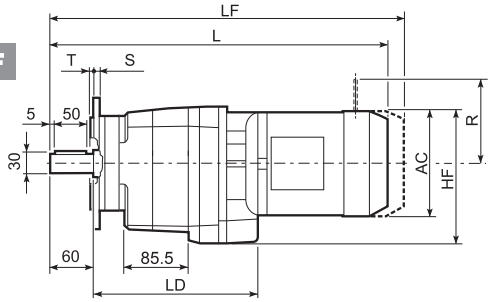
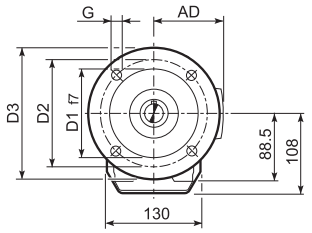
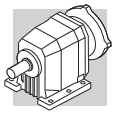




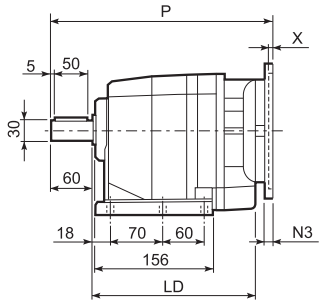
C 32_U	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

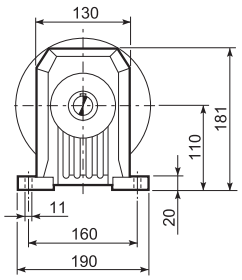
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD	Kg	LF	Kg	R	AD	R	AD
C 32 2	S1	M1	138	179	177	462.5	205.5	108	14	523.5	16	103	135	124	108
C 32 2	S2	M2S	156	188	186	490.5	217.5	119	18	561.5	21	129	146	134	119
C 32 2	S3	M3S	195	207.5	205.5	534.5	227.5	142	23	630.5	28	160	158	160	142
C 32 2	S3	M3L	195	207.5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

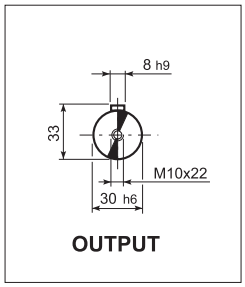


C 32...P(IEC)

P







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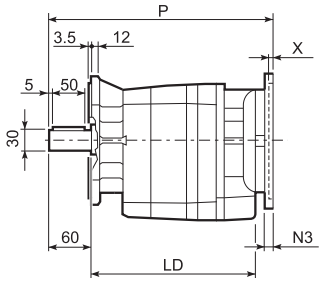

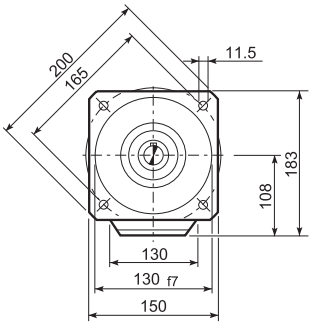

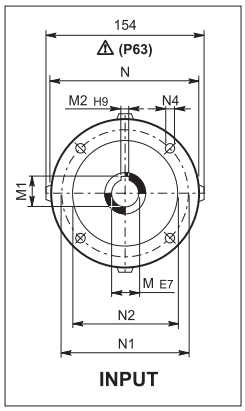

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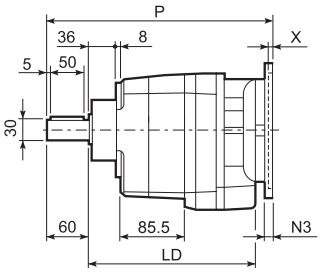

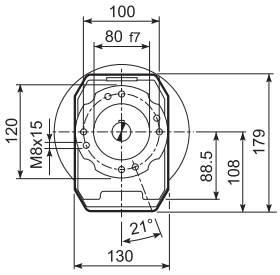

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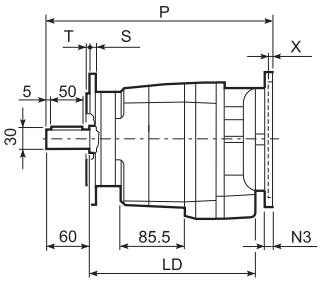
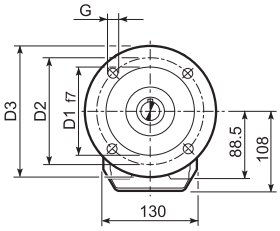
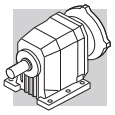


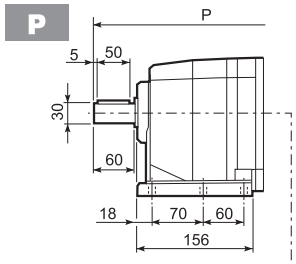


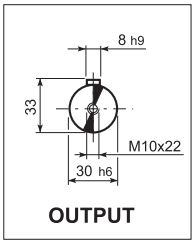
C 32_U						
	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

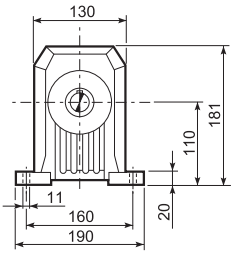
		LD	M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 32 2	P63	217.5	11	12.8	4	140	115	95	—	M8x19	4	307.5	9
C 32 2	P71	217.5	14	16.3	5	160	130	110	—	M8x16	4.5	307.5	9
C 32 2	P80	227.5	19	21.8	6	200	165	130	—	M10x14.5	4	327	10
C 32 2	P90	227.5	24	27.3	8	200	165	130	—	M10x14.5	4	327	10
C 32 2	P100	227.5	28	31.3	8	250	215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

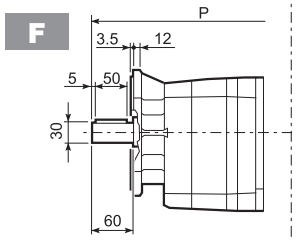


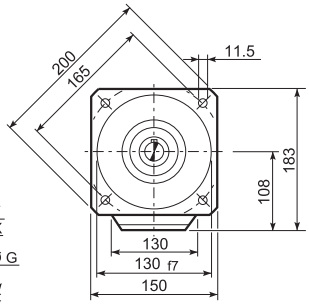
C 32...SK / SC

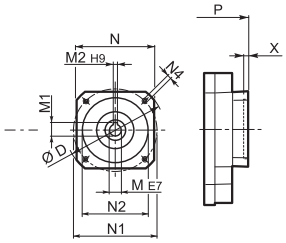












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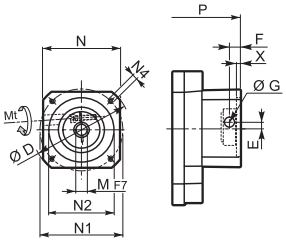
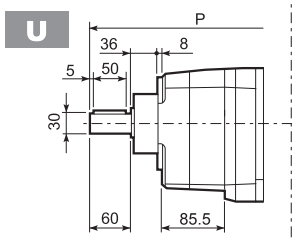
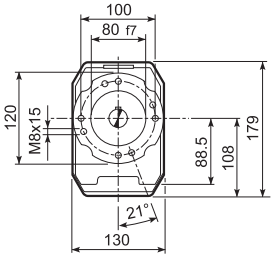
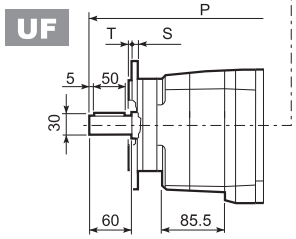


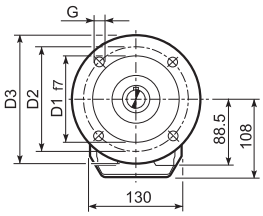
SC...







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

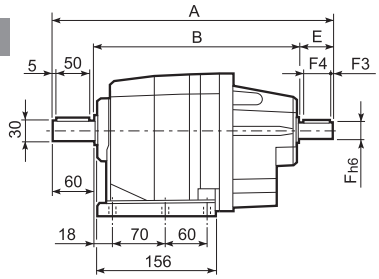


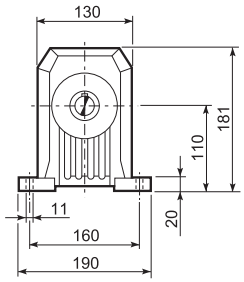
		D	M	M1	M2	N	N1	N2	N4	X	P 2x	P 3x	Kg
C 32 2/3	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	279	336.5	8/9
C 32 2/3	SK60B	102	14	16.3	5	82	75	60	M5x10	4	286	343.5	9/10
C 32 2/3	SK80A	115	14	16.3	5	90	100	80	M6x12	4	286	343.5	9/10
C 32 2/3	SK80C	120	19	21.8	6	96	100	80	M6x12	4	327	384.5	10/11
C 32 2/3	SK95A	130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

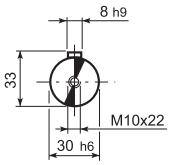
			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P 2x	P 3x	Kg
C 32 2/3	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	306	363.5	9/10
C 32 2/3	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	306	363.5	10/11
C 32 2/3	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	306	363.5	10/11
C 32 2/3	SC80C	M6	15	120	15.5	14.5	17.75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

C 32...HS

P







OUTPUT

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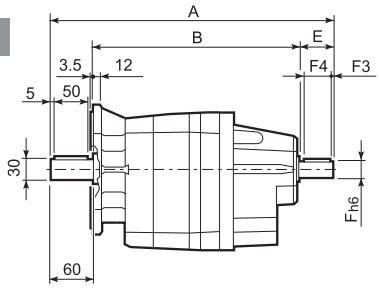

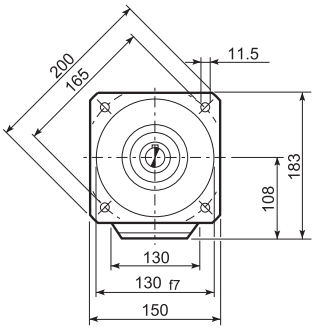

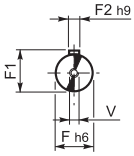

INPUT

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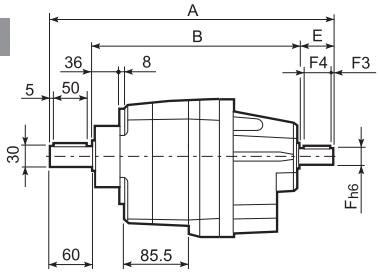

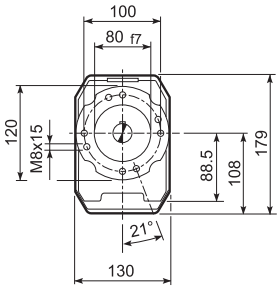

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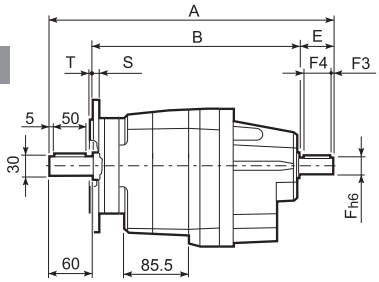
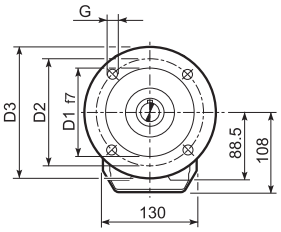
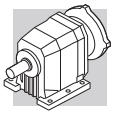




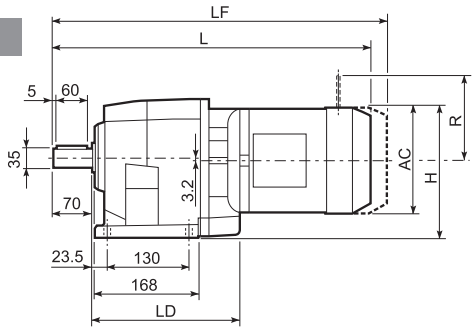
C 32_U						
	D1	D2	D3	G	T	S
FA	110	130	160	9	3	10
FB	130	165	200	11	3.5	11
FC	180	215	250	14	4	13

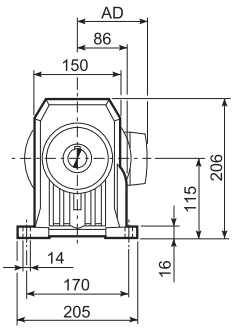
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 32 2	HS	357.5	257.5	40	19	21.5	6	2.5	35	M6x16	11.1
C 32 3		372	272	40	16	18	5	2.5	35	M6x16	10.6

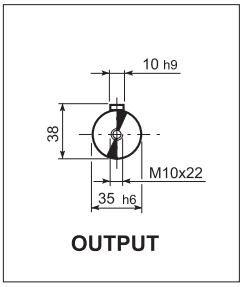


C 36...M

P







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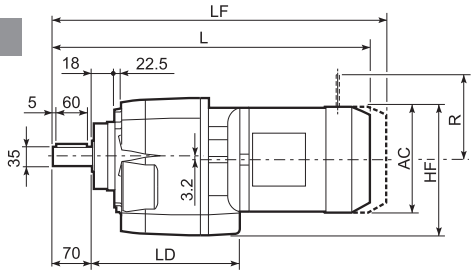

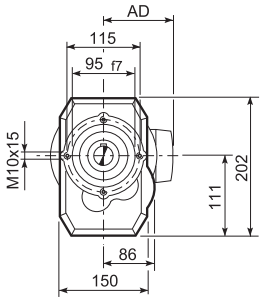

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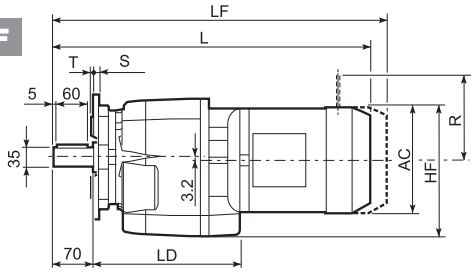
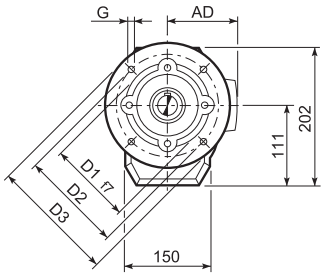
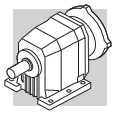




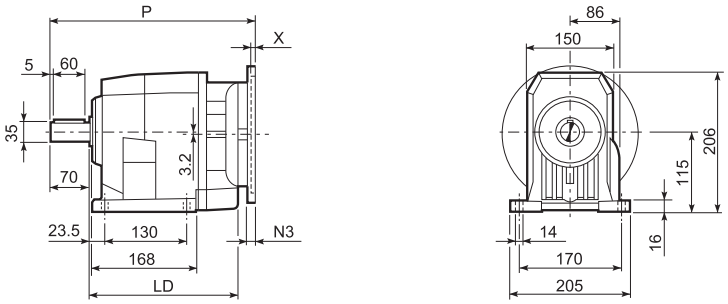
C 36_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14

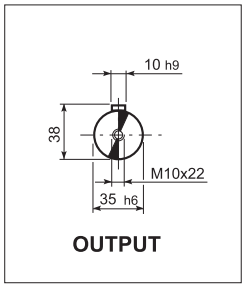
										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD	Kg	LF	Kg	R	AD	R	AD
C 36 2/3	S1	M1	138	184	177	481	214	108	20	542	21	103	135	124	108
C 36 2/3	S2	M2S	156	193	186	509	226	119	23	580	27	129	146	134	119
C 36 2/3	S3	M3S	195	212.5	205.5	553	236	142	28	649	33	160	158	160	142
C 36 2/3	S3	M3L	195	212.5	205.5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



C 36...P(IEC)

P





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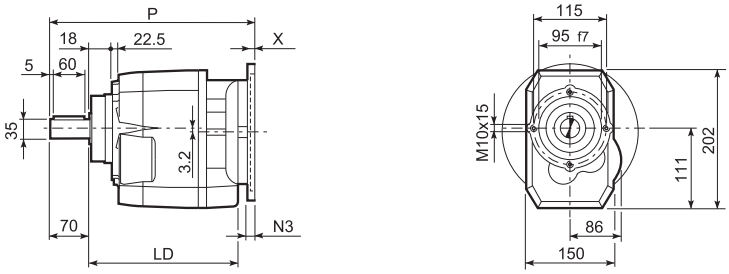

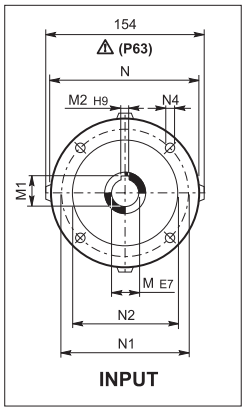

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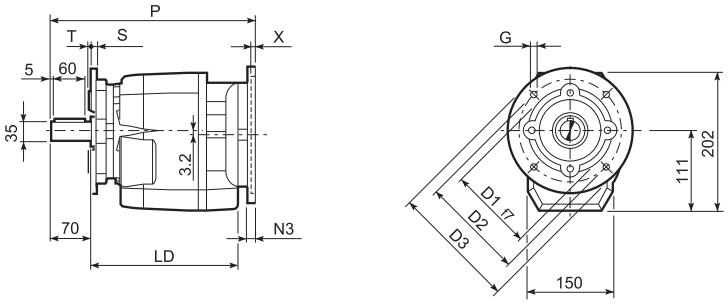
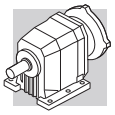
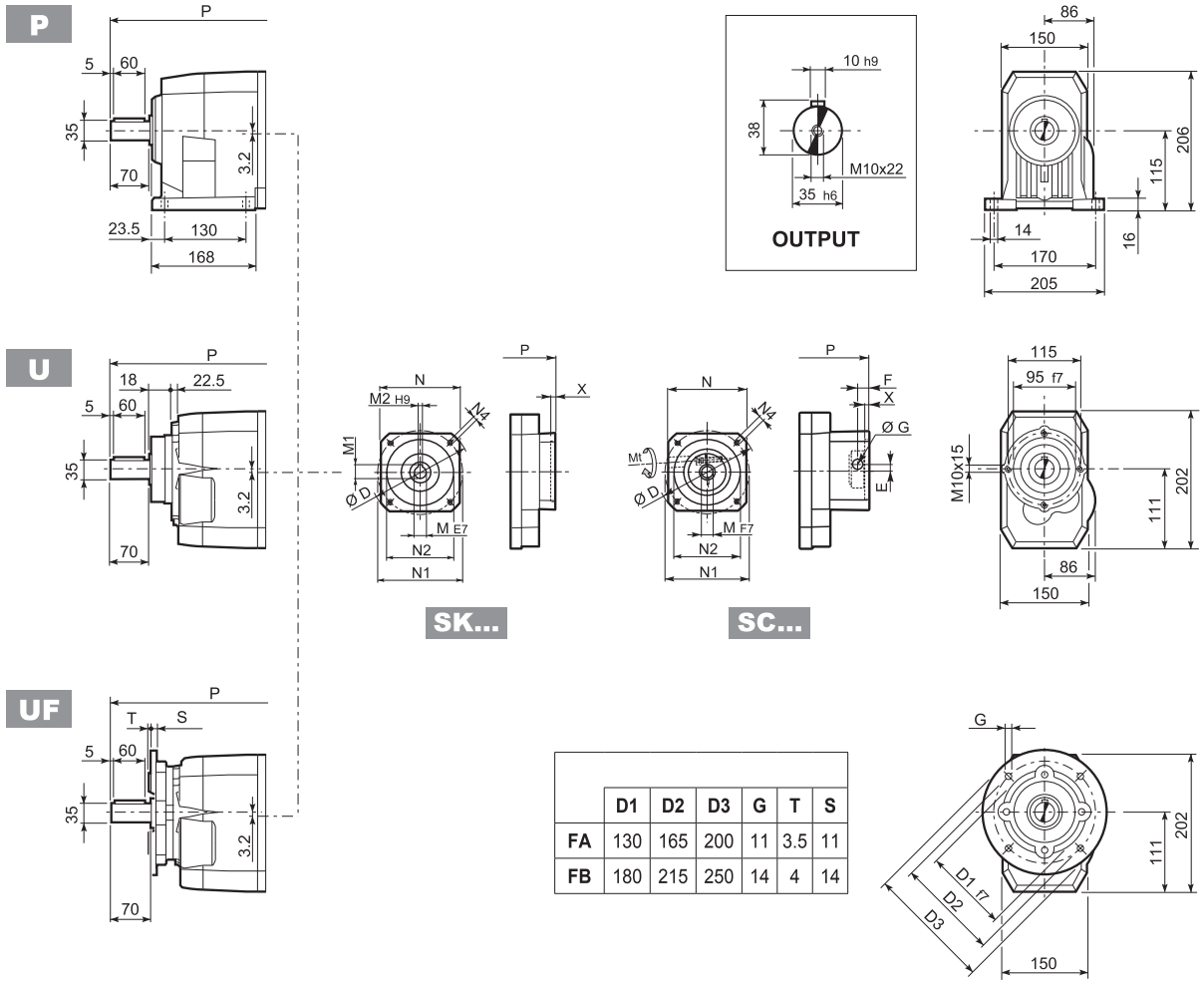


C 36_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14

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



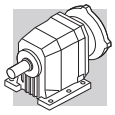
C 36...SK / SC



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

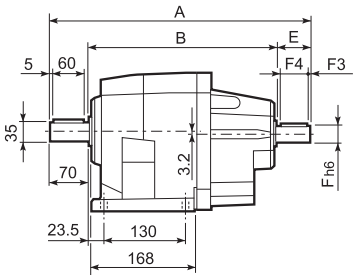
		D	M	M1	M2	N	N1	N2	N4	X	P 2/3x	P 4x	Kg
C 36 2/3/4	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	297.5	355	16/16/19
C 36 2/3/4	SK60B	102	14	16.3	5	82	75	60	M5x10	4	304.5	362	17/17/20
C 36 2/3/4	SK80A	115	14	16.3	5	90	100	80	M6x12	4	304.5	362	18/18/21
C 36 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	304.5	403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

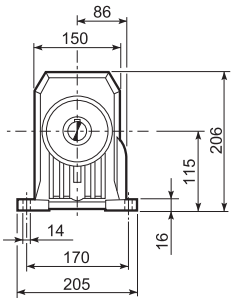
			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P 2/3x	P 4x	Kg
C 36 2/3/4	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	324.5	382	17/17/20
C 36 2/3/4	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	324.5	382	18/18/21
C 36 2/3/4	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	324.5	426.5	18/18/21
C 36 2/3/4	SC80C	M6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

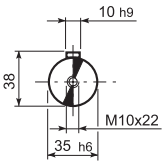


C 36...HS

P







OUTPUT

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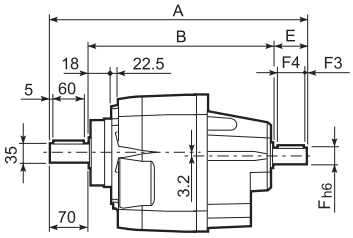
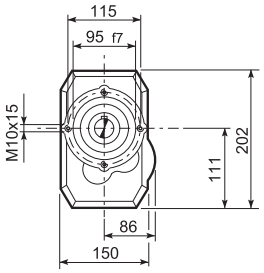
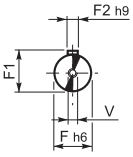
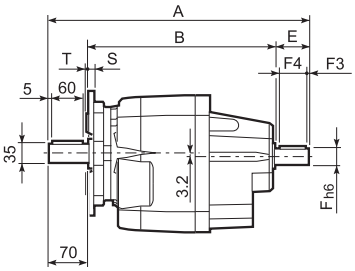


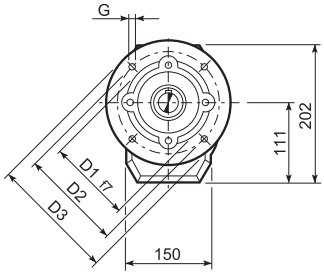




INPUT

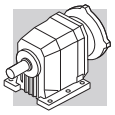
UF





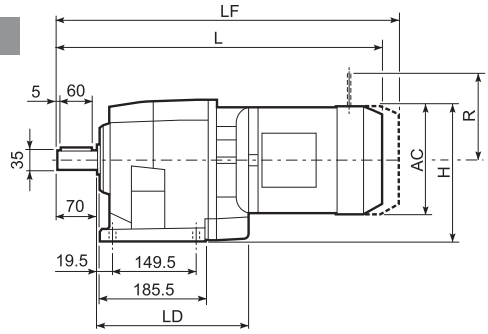
C 36_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	14

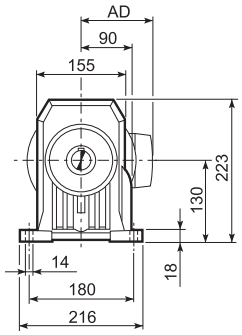
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 36 2	HS	415.5	295.5	50	24	27	8	2.5	45	M8x19	25.5
C 36 3		415.5	295.5	50	24	27	8	2.5	45	M8x19	25.5
C 36 4		390.5	280.5	40	16	18	5	2.5	36	M6x16	26.5

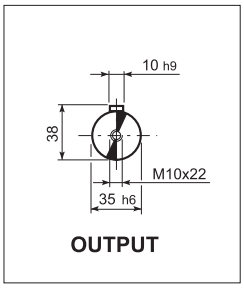


C 41...M

P







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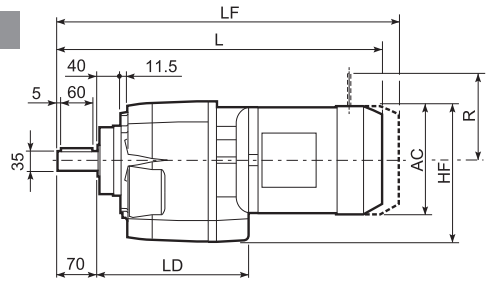

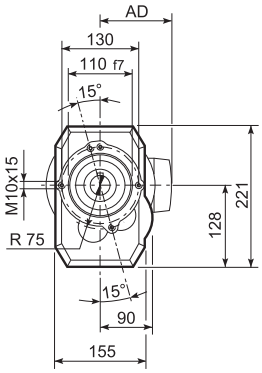

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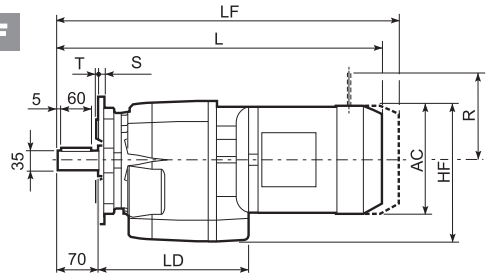
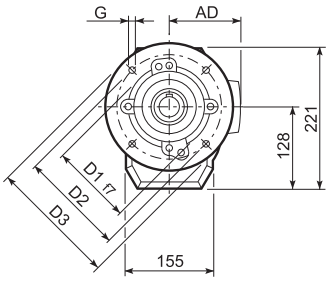
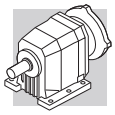




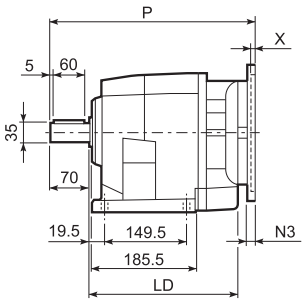
C 41_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	13

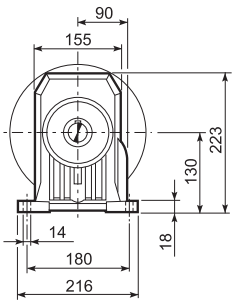
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD	Kg	LF	Kg	R	AD	R	AD
C 41 2/3	S1	M1	138	199	197	491.5	220	108	25	552.5	28	103	135	124	108
C 41 2/3	S2	M2S	156	208	206	519.5	235.5	119	31	590.5	34	129	146	134	119
C 41 2/3	S3	M3S	195	227.5	225.5	563.5	251.5	142	36	659.5	41	160	158	160	142
C 41 2/3	S3	M3L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

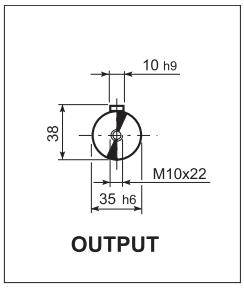


C 41...P(IEC)

P







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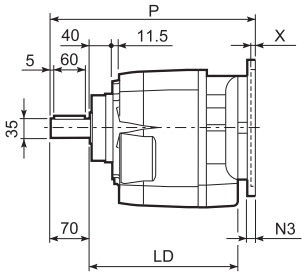

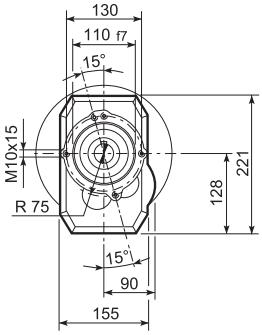

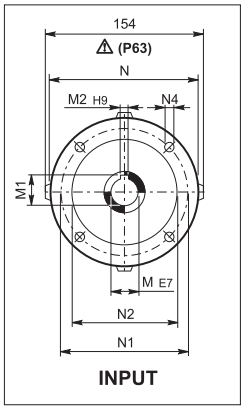

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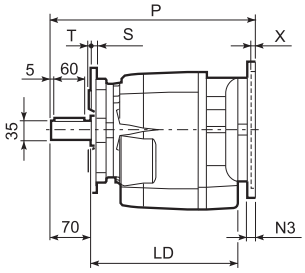
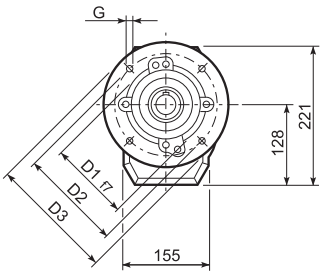
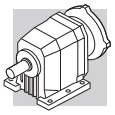


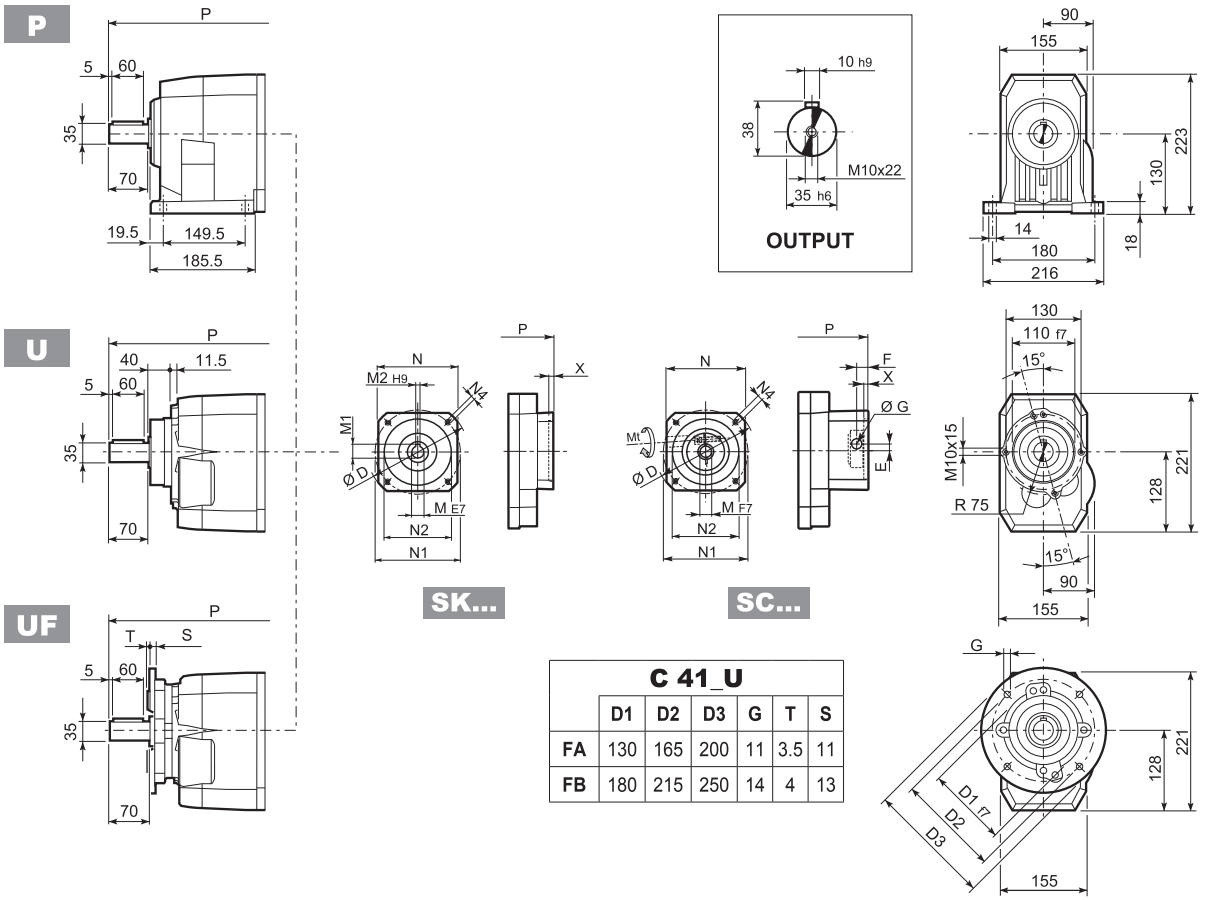


C 41_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	13

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



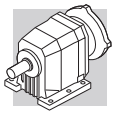
C 41...SK / SC



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

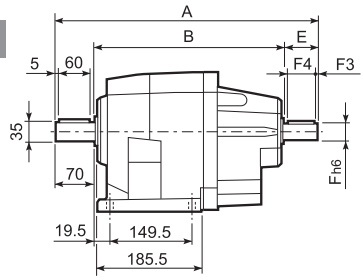
		D	M	M1	M2	N	N1	N2	N4	X	P 2/3x	P 4x	Kg
C41 4	SK60A	102	11	12.8	4	82	75	60	M5x10	3.5	—	370	31
C41 4	SK60B	102	14	16.3	5	82	75	60	M5x10	4	—	377	32
C41 4	SK80A	115	14	16.3	5	90	100	80	M6x12	4	—	377	32
C41 2/3	SK80B	120	14	16.3	5	96	100	80	M6x12	4	356.5	—	29/29
C41 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12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

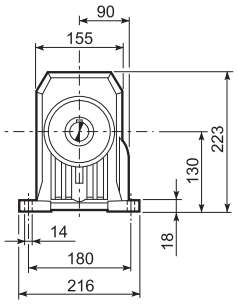
			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P 2/3x	P 4x	Kg
C41 4	SC60A	M6	15	102	7	12.5	12.5	11	82	75	60	M5x10	4	—	397	32
C41 4	SC60B	M6	15	102	7	12.5	12.5	14	82	75	60	M5x10	4	—	397	33
C41 4	SC80A	M6	15	115	6	12.5	12.5	14	90	100	80	M6x12	4	—	397	33
C41 2/3	SC80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	380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

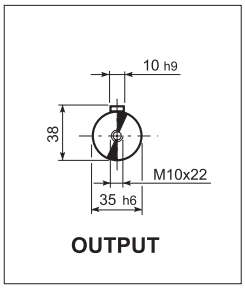


C 41...HS

P







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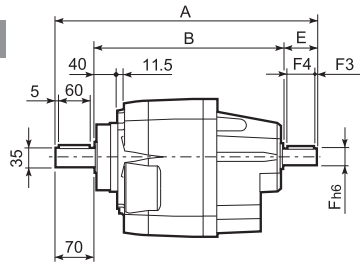

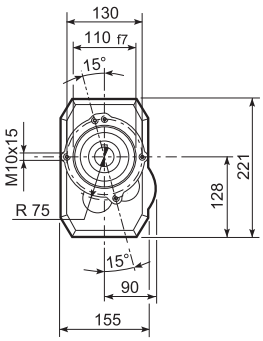

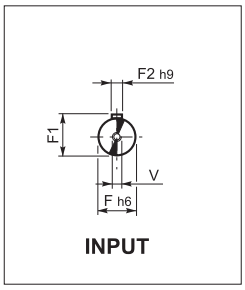

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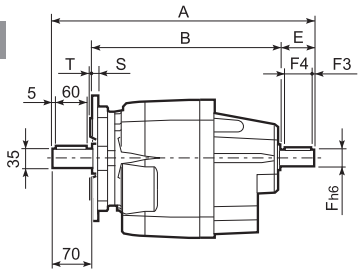
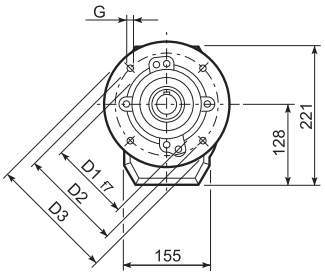
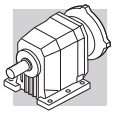




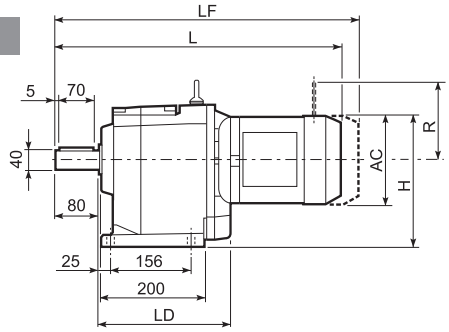
C 41_U						
	D1	D2	D3	G	T	S
FA	130	165	200	11	3.5	11
FB	180	215	250	14	4	13

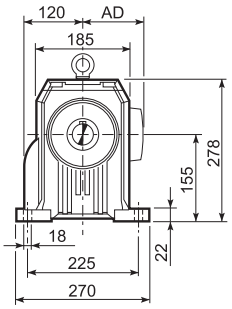
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 41 2	HS	425.5	305.5	50	24	27	8	2.5	45	M8x19	30
C 41 3		425.5	305.5	50	24	27	8	2.5	45	M8x19	30
C 41 4		448	338	40	19	21.5	6	2.5	35	M6x16	33

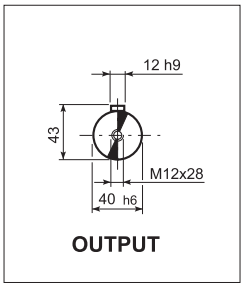


C 51...M

P







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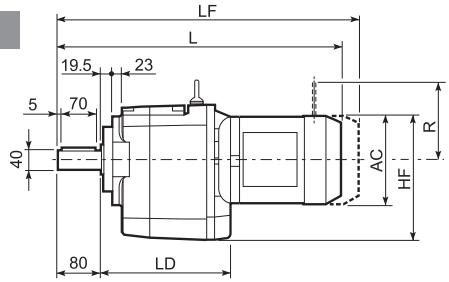

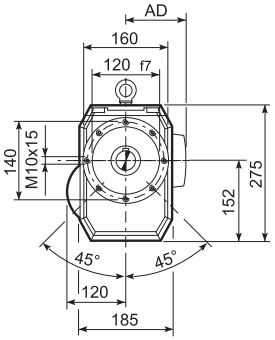

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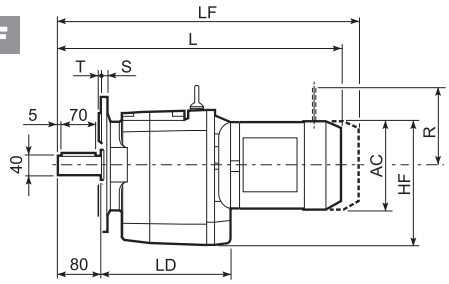
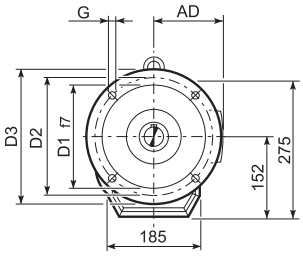
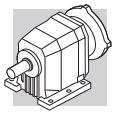




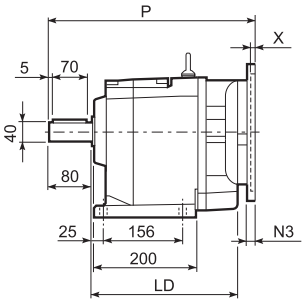
C 51_U						
	D1	D2	D3	G	T	S
FA	180	215	250	14	4	13
FB	230	265	300	14	4	16

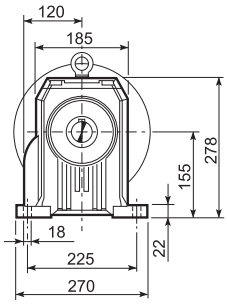
										M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	LD	AD	Kg	LF	Kg	R	AD	R	AD
C 51 2/3	S1	M1	138	224	221	517.5	—	108	49	578.5	52	103	135	124	108
C 51 2/3	S2	M2S	156	233	230	545.5	252.5	119	53	616.5	57	129	146	134	119
C 51 2/3	S3	M3S	195	252.5	249.5	589.5	267.5	142	58	685.5	65	160	158	160	142
C 51 2/3	S3	M3L	195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

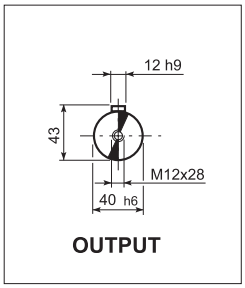


C 51...P(IEC)

P







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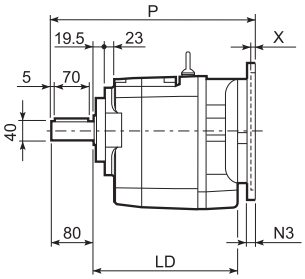

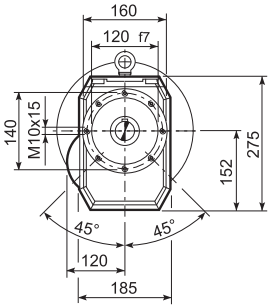

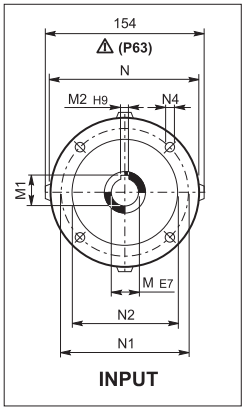

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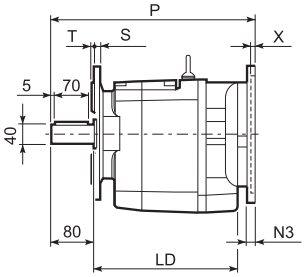
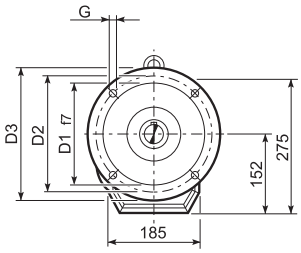
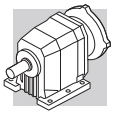


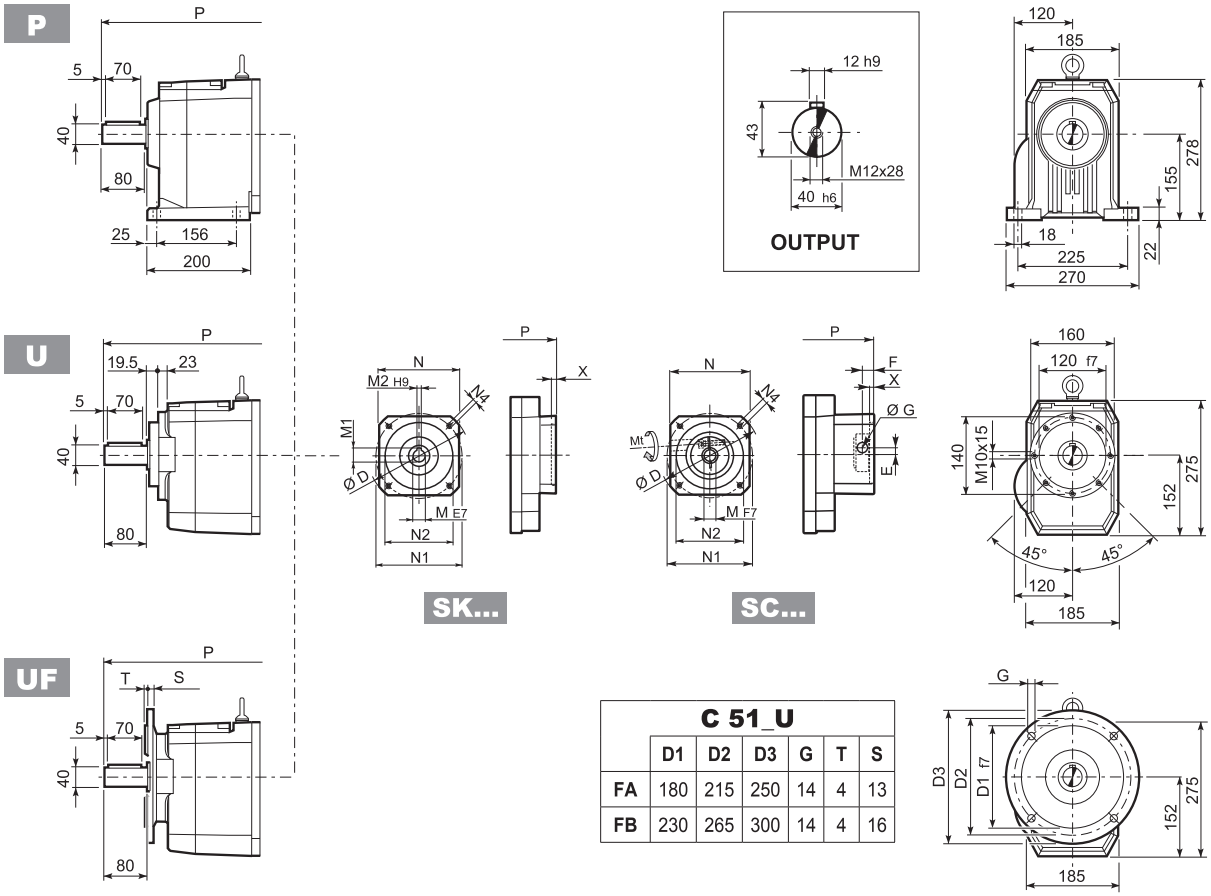


C 51_U						
	D1	D2	D3	G	T	S
FA	180	215	250	14	4	13
FB	230	265	300	14	4	16

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



C 51...SK / SC



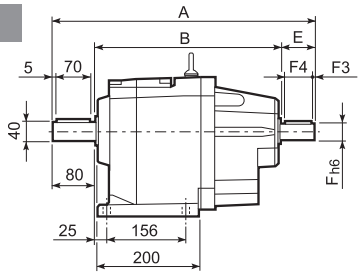
C 51_U						
	D1	D2	D3	G	T	S
FA	180	215	250	14	4	13
FB	230	265	300	14	4	16

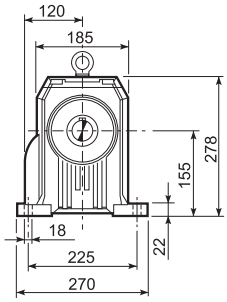
		D	M	M1	M2	N	N1	N2	N4	X	P 2/3x	P 4x	Kg
C 51 2/3	SK80B	120	14	16.3	5	96	100	80	M6x12	4	382	—	46/46
C 51 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	382	453.5	47/47/49
C 51 2/3/4	SK95A	130	14	16.3	5	102	115	95	M8x12	4	382	453.5	46/46/48
C 51 2/3/4	SK95B	130	19	21.8	6	102	115	95	M8x12	4	382	453.5	47/47/49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

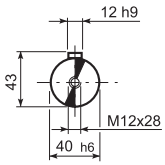
			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P 2/3x	P 4x	Kg
C 51 2/3	SC80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	405.5	—	47/47
C 51 2/3/4	SC80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	405.5	477	48/48/50
C 51 2/3/4	SC95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	405.5	477	47/47/49
C 51 2/3/4	SC95B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

C 51...HS

P

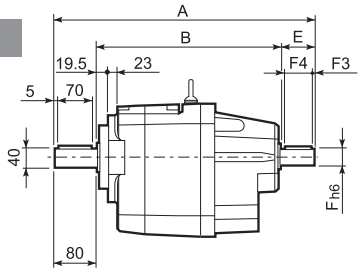


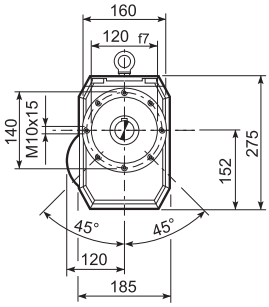


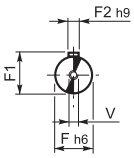


OUTPUT

U

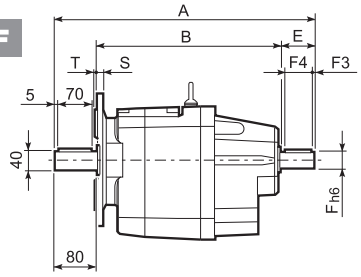


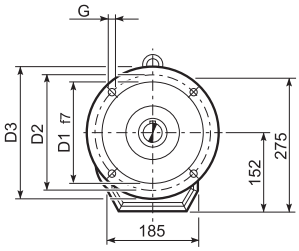




INPUT

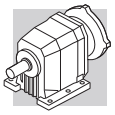
UF





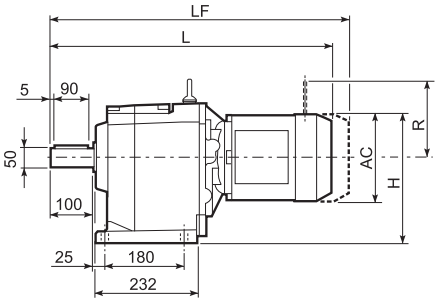
C 51_U						
	D1	D2	D3	G	T	S
FA	180	215	250	14	4	13
FB	230	265	300	14	4	16

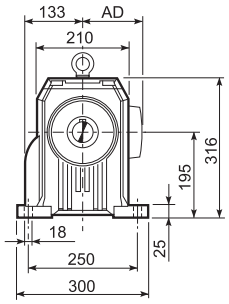
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 51 2	**HS**	451.5	322	50	24	24	8	2.5	45	M8x19	45
C 51 3		451.5	322	50	24	24	8	2.5	45	M8x19	45
C 51 4		484	364	40	19	21.5	6	2.5	35	M6x16	48

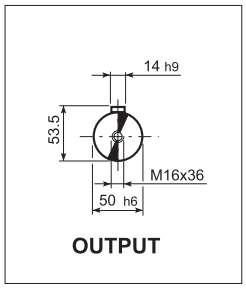


C 61...M

P







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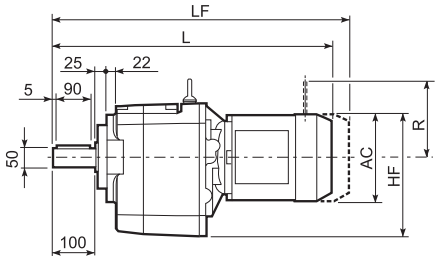

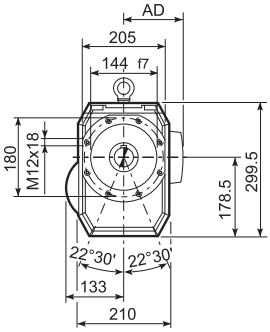

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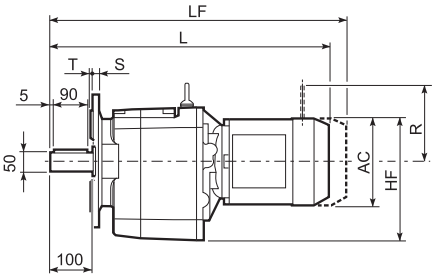
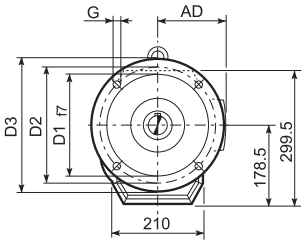
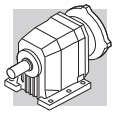




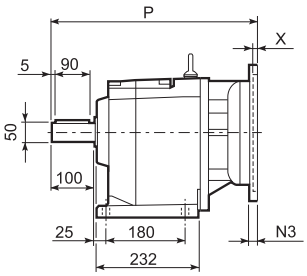
C 61_U						
	D1	D2	D3	G	T	S
FA	230	265	300	14	4	16
FB	250	300	350	18	5	18

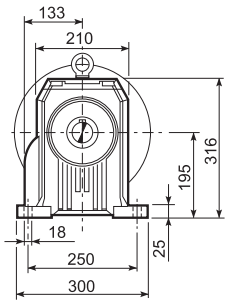
								M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	LF	Kg	R	AD	R	AD
C 61 2/3	S2	M2S	156	273	256.5	598.5	119	61	669.5	65	129	146	134	119
C 61 2/3	S3	M3S	195	292.5	276	642.5	142	66	738.5	74	160	158	160	142
C 61 2/3	S3	M3L	195	292.5	276	674.5	142	74	765.5	81	160	158	160	142
C 61 2/3	S4	M4	258	324	307.5	782.5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

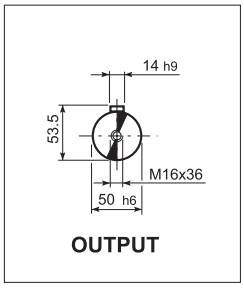


C 61...P(IEC)

P







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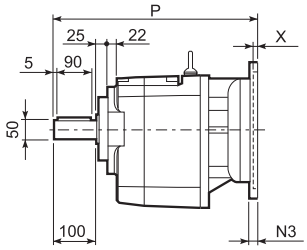
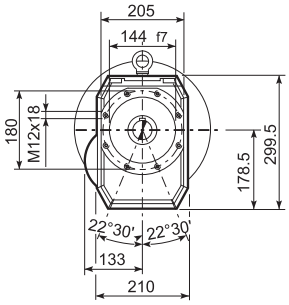
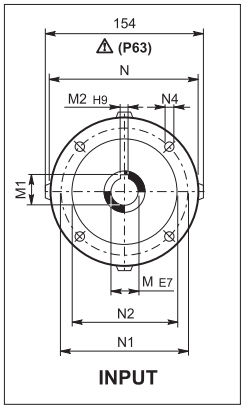
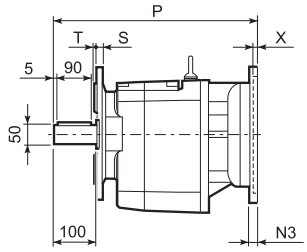
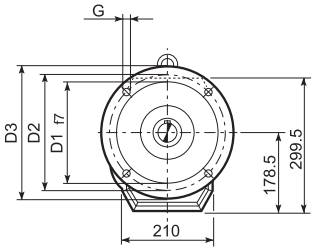






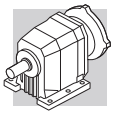
UF



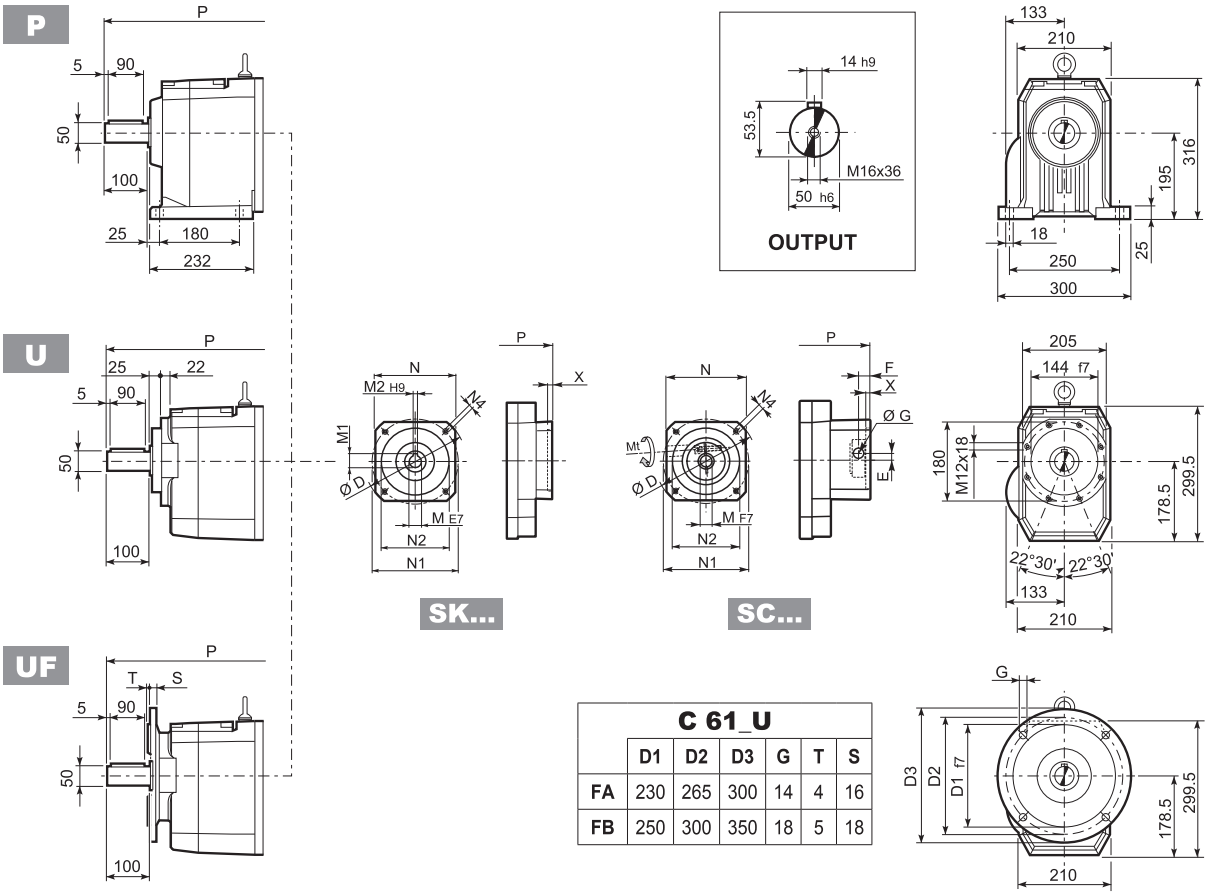


C 61_U						
	D1	D2	D3	G	T	S
FA	230	265	300	14	4	16
FB	250	300	350	18	5	18

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



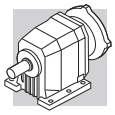
C 61...SK / SC



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

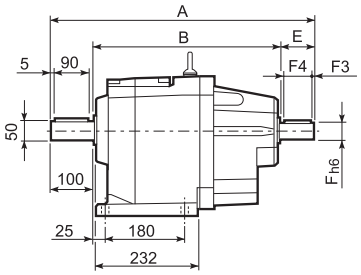
		D	M	M1	M2	N	N1	N2	N4	X	P 2/3x	P 4x	Kg
C 61 4	SK80B	120	14	16.3	5	96	100	80	M6x12	4	—	505.5	62
C 61 2/3/4	SK80C	120	19	21.8	6	96	100	80	M6x12	4	435	505.5	63/63/69
C 61 2/3/4	SK95A	130	14	16.3	5	102	115	95	M8x12	4	435	505.5	60/60/67
C 61 2/3/4	SK95B	130	19	21.8	6	102	115	95	M8x12	4	435	505.5	63/63/69
C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

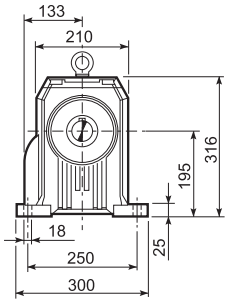
			Mt [Nm]	D	E	F	G	M	N	N1	N2	N4	X	P 2/3x	P 4x	Kg
C 61 4	SC80B	M6	15	120	15.5	14.5	17.75	14	96	100	80	M6x12	4	—	529	63
C 61 2/3/4	SC80C	M6	15	120	15.5	14.5	17.75	19	96	100	80	M6x12	4	458.5	529	64/64/70
C 61 2/3/4	SC95A	M6	15	130	16.5	15	17.75	14	102	115	95	M8x16	4	458.5	529	61/61/68
C 61 2/3/4	SC95B	M6	15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

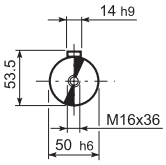


C 61...HS

P

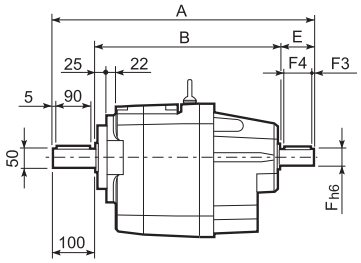


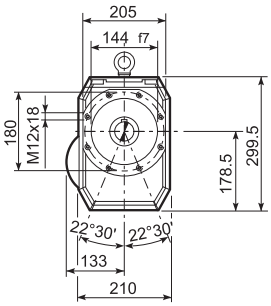


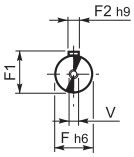


OUTPUT

U

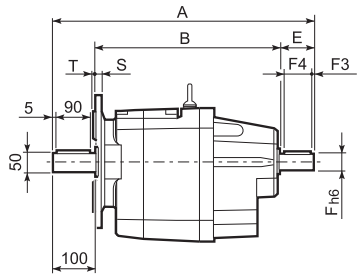


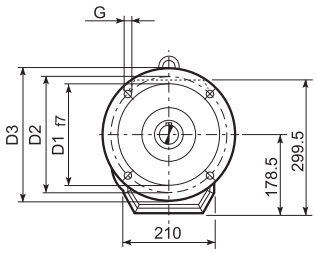




INPUT

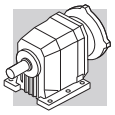
UF





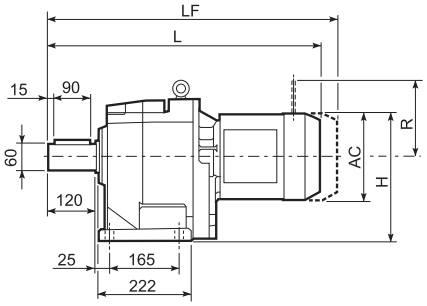
C 61_U						
	D1	D2	D3	G	T	S
FA	230	265	300	14	4	16
FB	250	300	350	18	5	18

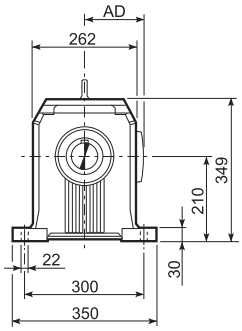
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 61 2	HS	532	372	60	28	31	8	5	50	M10x22	66
C 61 3		532	372	60	28	31	8	5	50	M10x22	66
C 61 4		575	425	50	24	27	8	2.5	45	M8x19	72

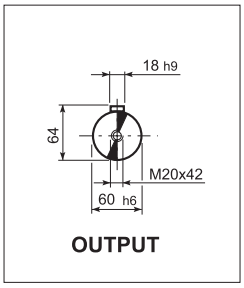


C 70...M

P







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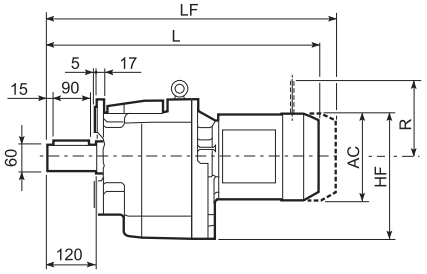
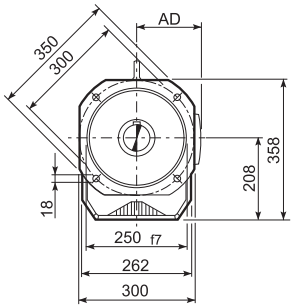
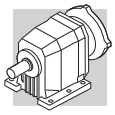


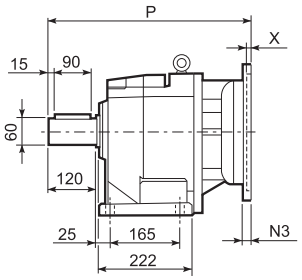


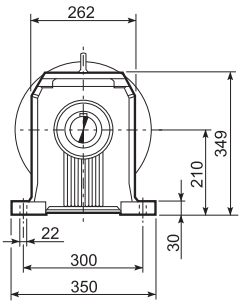
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	LF	Kg	R	AD	R	AD
C 70 2/3	**S2**	**M2S**	156	288	286	636.5	119	88	707.5	92	129	146	134	119
C 70 2/3	**S3**	**M3S**	195	307.5	305.5	680.5	142	93	776.5	101	160	158	160	142
C 70 2/3	**S3**	**M3L**	195	307.5	305.5	712.5	142	101	803.5	108	160	158	160	142
C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

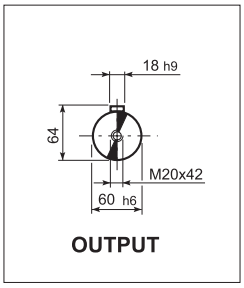


C 70...P(IEC)

P







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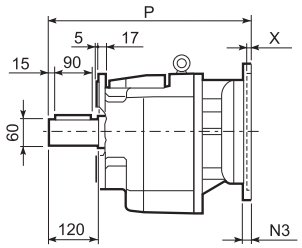
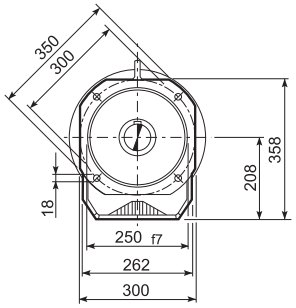
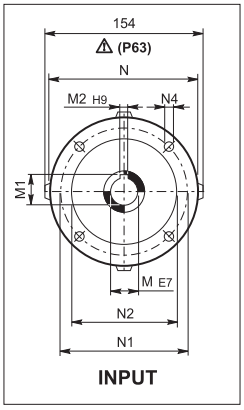
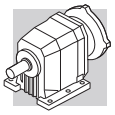




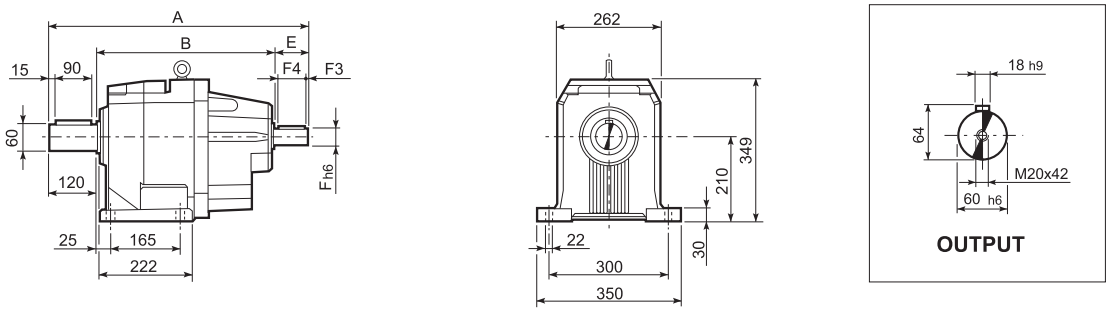


		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 70 2/3	**P80**	19	21.8	6	200	165	130	—	M10x14.5	4	473	88
C 70 2/3	**P90**	24	27.3	8	200	165	130	—	M10x14.5	4	473	88
C 70 2/3	**P100**	28	31.3	8	250	215	180	—	M12x16	4.5	483	92
C 70 2/3	**P112**	28	31.3	8	250	215	180	—	M12x16	4.5	483	92
C 70 2/3	**P132**	38	41.3	10	300	265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



C 70...HS

P



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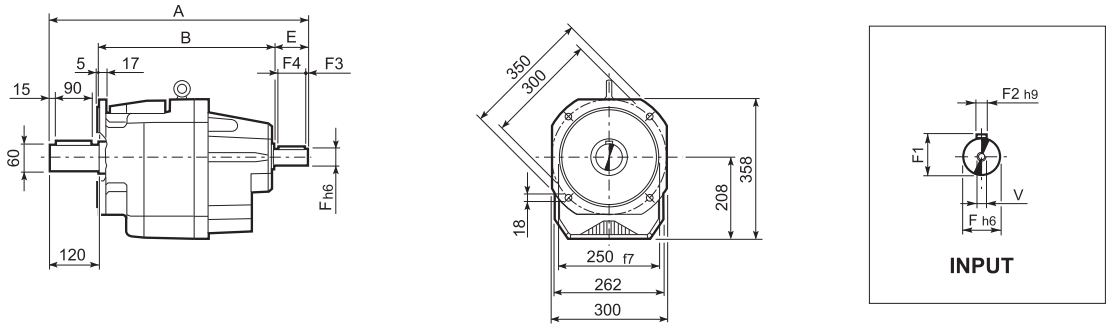
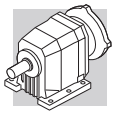
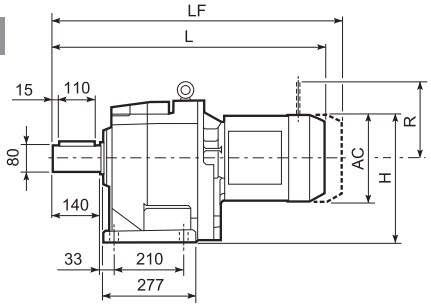


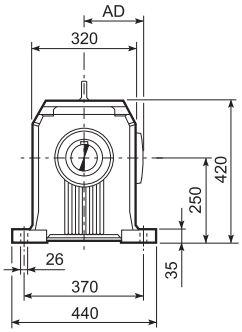
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 70 2	**HS**	657.5	427.5	110	42	45	12	10	90	M12x28	108
C 70 3		657.5	427.5	110	42	45	12	10	90	M12x28	108
C 70 4		593.5	423.5	50	24	27	8	2.5	45	M8x19	94

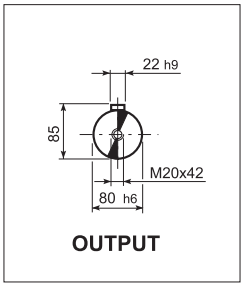


C 80...M

P







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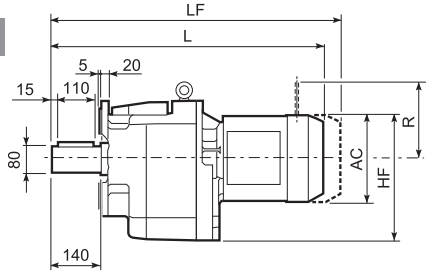
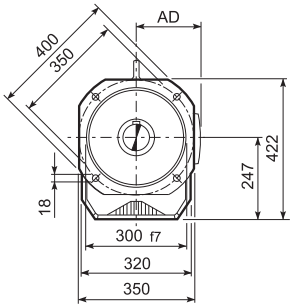
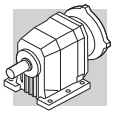


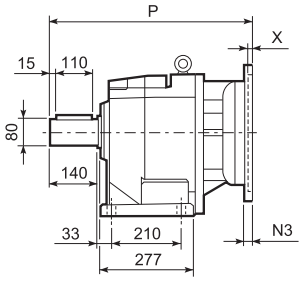


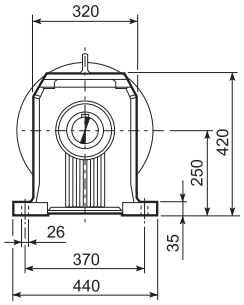
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	LF	Kg	R	AD	R	AD
C 80 2/3	**S3**	**M3S**	195	347.5	344.5	742.5	142	139	838.5	146	160	158	160	142
C 80 2/3	**S3**	**M3L**	195	347.5	344.5	774.5	142	146	865.5	153	160	158	160	142
C 80 2/3	**S4**	**M4**	258	379	376	882.5	193	180	991.5	196	226	210	217	193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

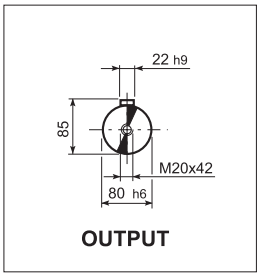


C 80...P(IEC)

P







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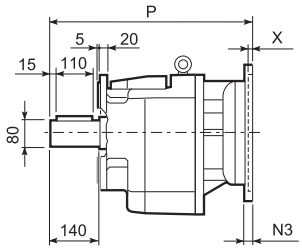
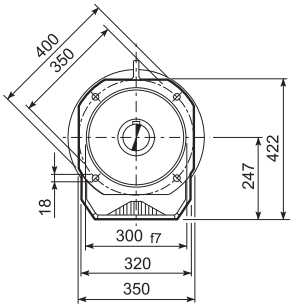
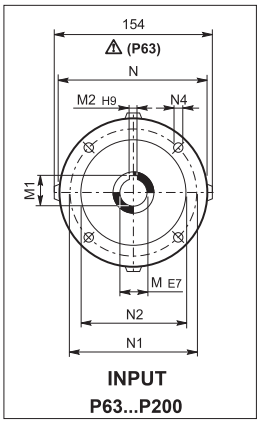
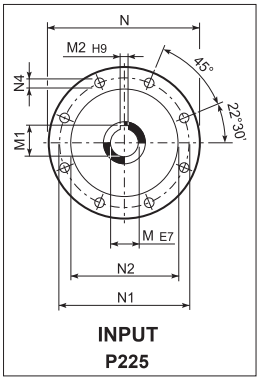
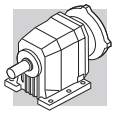






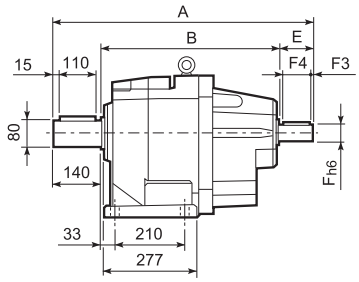


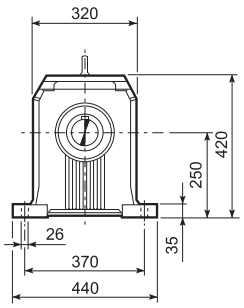
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 80 2/3	**P80**	19	21.8	6	200	165	130	—	M10x14.5	4	533	135
C 80 2/3	**P90**	24	27.3	8	200	165	130	—	M10x14.5	4	533	135
C 80 2/3	**P100**	28	31.3	8	250	215	180	—	M12x16	4.5	543	139
C 80 2/3	**P112**	28	31.3	8	250	215	180	—	M12x16	4.5	543	139
C 80 2/3	**P132**	38	41.3	10	300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

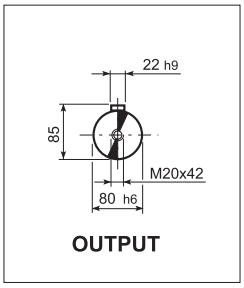


C 80...HS

P







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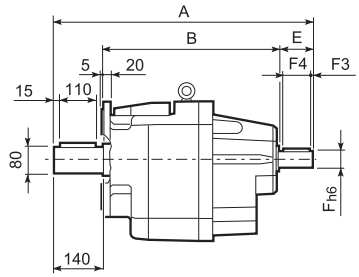
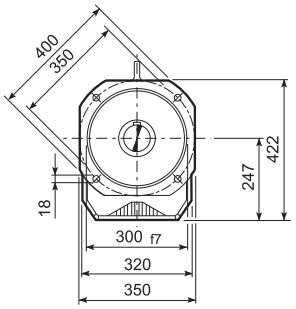
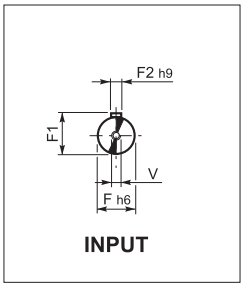
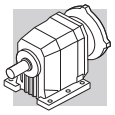




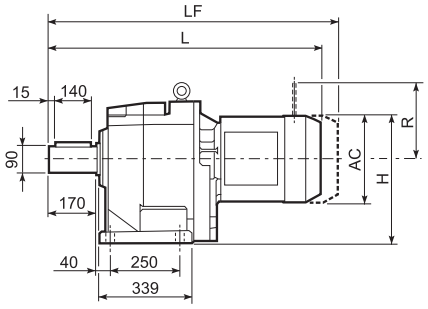


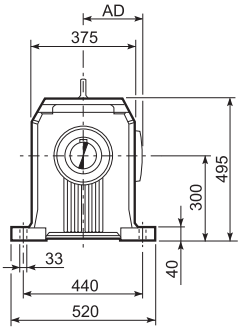
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 80 2		718.5	468.5	110	42	45	12	10	90	M12x28	154
C 80 3	**HS**	718.5	468.5	110	42	45	12	10	90	M12x28	154
C 80 4		666.5	476.5	50	24	27	8	2.5	45	M8x19	141

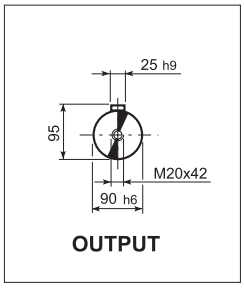


C 90...M

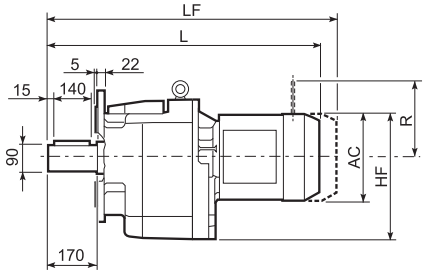
P

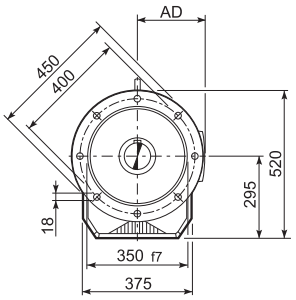




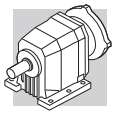


F



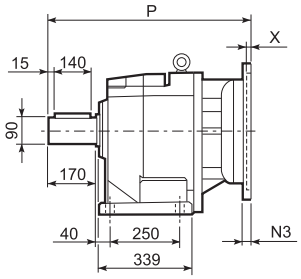


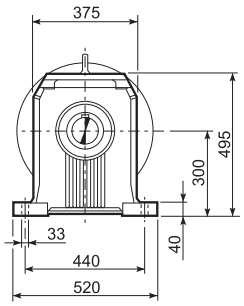
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	LF	Kg	R	AD	R	AD
C 90 2/3	**S3**	**M3S**	195	397.5	392.5	852	142	228	948	236	160	158	160	142
C 90 2/3	**S3**	**M3L**	195	397.5	392.5	884	142	236	975	243	160	158	160	142
C 90 2/3	**S4**	**M4**	258	429	424	992	193	270	1101	288	226	210	217	193
C 90 2/3	**S4**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

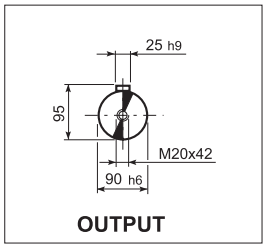


C 90...P(IEC)

P







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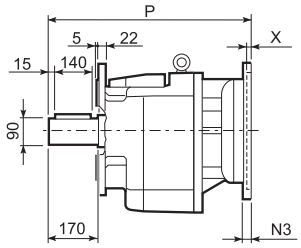
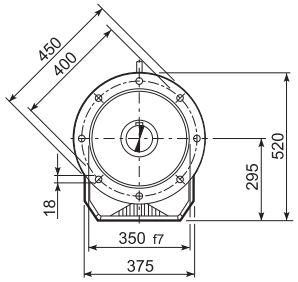
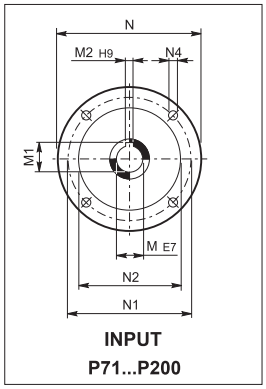
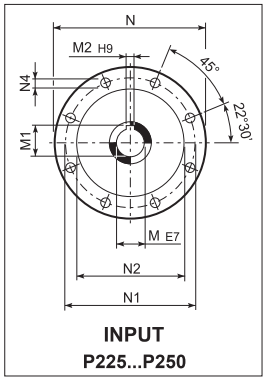
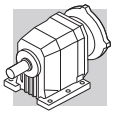






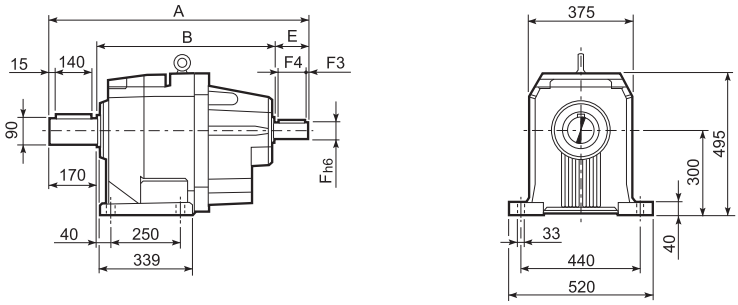


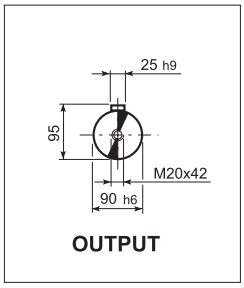
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 90 2/3	**P80**	19	21.8	6	200	165	130	—	M10x14.5	4	644.5	229
C 90 2/3	**P90**	24	27.3	8	200	165	130	—	M10x14.5	4	644.5	229
C 90 2/3	**P100**	28	31.3	8	250	215	180	—	M12x16	4.5	654.5	234
C 90 2/3	**P112**	28	31.3	8	250	215	180	—	M12x16	4.5	654.5	234
C 90 2/3	**P132**	38	41.3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



C 90...HS

P





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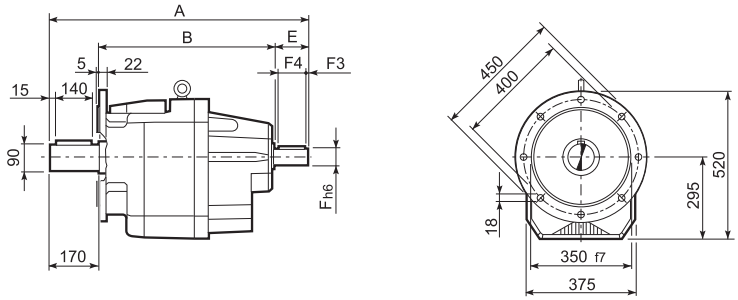
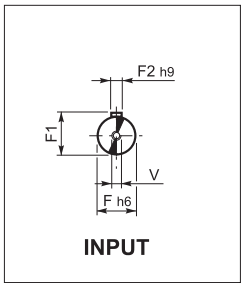
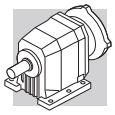


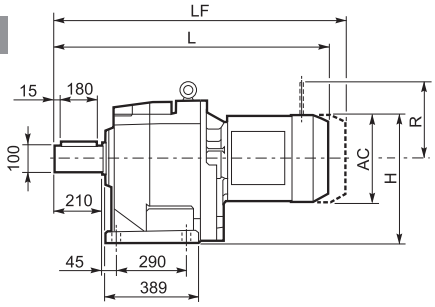


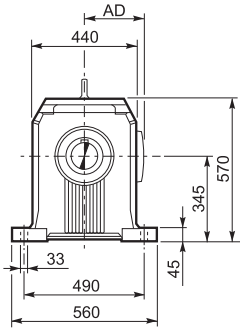
		A	B	E	F	F1	F2	F3	F4	V	Kg
C 90 2		930.5	620.5	140	60	64	18	10	120	M16x36	273
C 90 3	**HS**	930.5	620.5	140	60	64	18	10	120	M16x36	273
C 90 4		797	577	50	24	27	8	2.5	45	M8x19	240

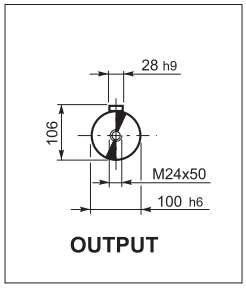


C 100...M

P







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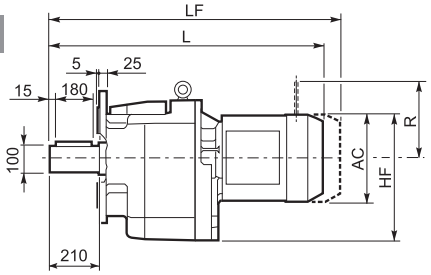
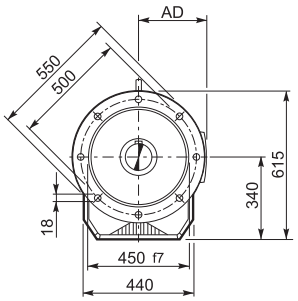
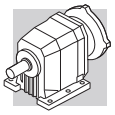


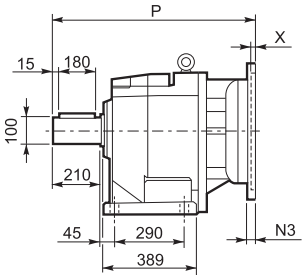


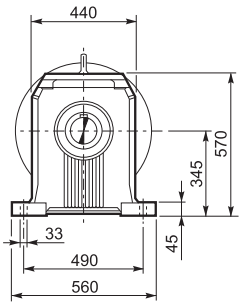
									M...FD M...FA		M...FD		M...FA	
			AC	H	HF	L	AD	Kg	LF	Kg	R	AD	R	AD
C 100 2/3	**S4**	**M4**	258	474	469	1087	193	392	1196	410	226	210	217	193
C 100 2/3	**S4**	**M4LC**	258	474	469	1122	193	400	1221	418	226	210	217	193
C 100 2/3	**S5**	**M5S**	310	500	495	1173.5	245	420	1313.5	450	266	245	247	245
C 100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

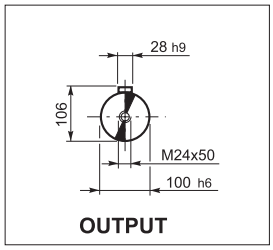


C 100...P(IEC)

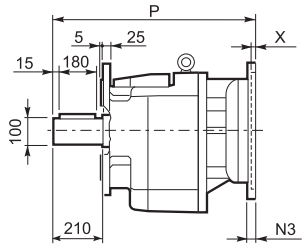
P

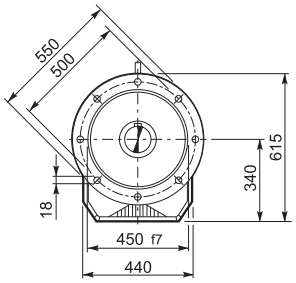


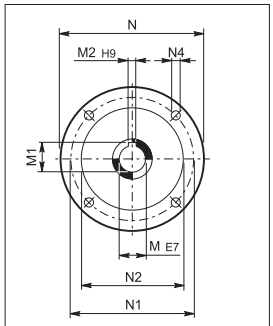


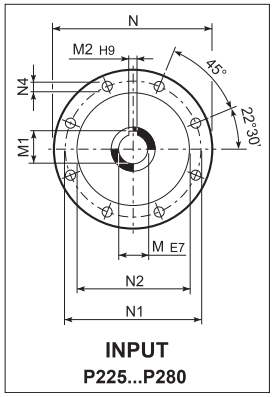


F





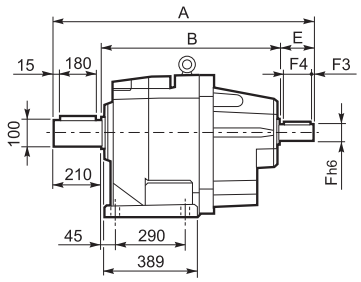


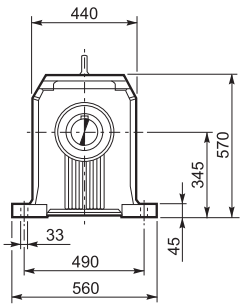


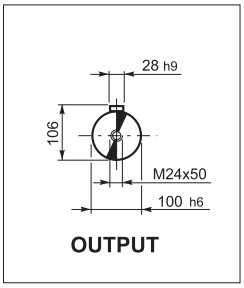
		M	M1	M2	N	N1	N2	N3	N4	X	P	Kg
C 100 2/3	**P100**	28	31.3	8	250	215	180	—	M12x16	4.5	749.5	364
C 100 2/3	**P112**	28	31.3	8	250	215	180	—	M12x16	4.5	749.5	364
C 100 2/3	**P132**	38	41.3	10	300	265	230	16	14	5	786	367
C 100 2/3	**P160**	42	45.3	12	350	300	250	23	18	6	841.5	382
C 100 2/3	**P180**	48	51.8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

C 100...HS

P







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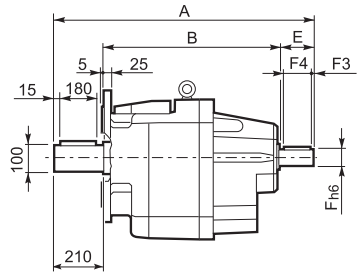
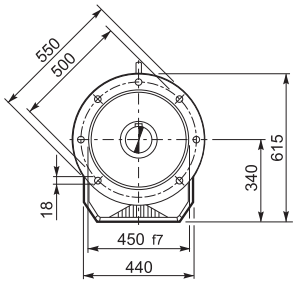
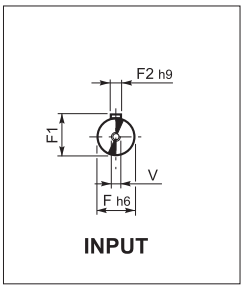




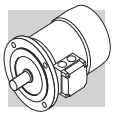


		A	B	E	F	F1	F2	F3	F4	V	Kg
C 100 2		1025.5	676	140	60	64	18	10	120	M16x36	409
C 100 3	**HS**	1025.5	676	140	60	64	18	10	120	M16x36	409
C 100 4		892	632	50	24	27	8	2.5	45	M8x19	372

M1 SYMBOLS AND UNITS OF MEASUREMENT

Symbols	Units of Measure	Description
cosφ	–	Power factor
η	–	Efficiency
f_m	–	Power adjusting factor
I	–	Cyclic duration factor
I_N	[A]	Rated current
I_S	[A]	Locked rotor current
J_C	[Kgm^2]	Load moment of inertia
J_M	[Kgm^2]	Moment of inertia
K_c	–	Torque factor
K_d	–	Load factor
K_J	–	Inertia factor
M_A	[Nm]	Mean breakaway torque
M_B	[Nm]	Brake torque
M_N	[Nm]	Rated torque
M_L	[Nm]	Counter-torque during acceleration
M_S	[Nm]	Starting torque

Symbols	Units of Measure	Description
n	[min^{-1}]	Rated speed
P_B	[W]	Power drawn by the brake at 20°C
P_n	[kW]	Motor rated power
P_r	[kW]	Required power
t_1	[ms]	Brake response time with one-way rectifier
t_{1s}	[ms]	Brake response time with electronic-controlled rectifier
t_2	[ms]	Brake reaction time with a.c. disconnect
t_{2c}	[ms]	Brake reaction time with a.c. and d.c. disconnect
t_a	[°C]	Ambient temperature
t_f	[min]	Work time at constant load
t_r	[min]	Rest time
W	[J]	Braking work between service interval
W_{max}	[J]	Maximum brake work for each braking
Z	[1/h]	Permissible starting frequency, loaded
Z_0	[1/h]	Max. permissible unloaded starting frequency (I = 50%)



M2 GENERAL CHARACTERISTICS

M2.1 Production range

The asynchronous three-phase electric motors of BONFIGLIOLI RIDUTTORI's production, are available in basic designs IMB5 and derived versions.
The technical characteristics of compact motors, M type, are also supplied in this manual.

M2.2 Standards

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

(F 1)

Title	CEI	IEC
General requirements for rotating electrical machines	**CEI EN 60034-1**	**IEC 60034-1**
Terminal markings and direction of rotation of rotating machines	**CEI 2-8**	**IEC 60034-8**
Methods of cooling for electrical machines	**CEI EN 60034-6**	**IEC 60034-6**
Dimensions and output ratings for rotating electrical machines	**EN 50347**	**IEC 60072**
Classification of degree of protection provided by enclosures for rotating machines	**CEI EN 60034-5**	**IEC 60034-5**
Noise limits	**CEI EN 60034-9**	**IEC 60034-9**
Classification of type of construction and mounting arrangements	**CEI EN 60034-7**	**IEC 60034-7**
Rated voltage for low voltage mains power	**CEI 8-6**	**IEC 60038**
Vibration level of electric machines	**CEI EN 60034-14**	**IEC 60034-14**

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

(F 2)

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

M2.3 Motors for USA and Canada

CUS

CUS option is available in NEMA Design C execution for BN motors, and NEMA Design B for BX motors, with regards to the electrical features. Motors are certified in compliance with CSA (Canadian Standard) C22.2 N° 100 and UL (Underwriters Laboratory) UL 1004-1 standards, as stated on UL file E308649.
BN motors nameplates show the below marks:

C US

NOTE:
Starting from **June, 1st 2016**, CUS motors whose efficiency is below IE3 (i.e. “Premium Efficiency”) cannot be any longer sold in the USA and Canada, unless one or more of the following conditions apply:

- Double speed motors;
- Motors plated for a non - continuous duty (<80%);
- Motors intended to be operated through variable frequency drive only (properly equipped with “Inverter Duty Only” label, or similar).

The CUS option does not apply to servo-ventilated motors.
US power mains voltages and the corresponding rated voltages to be specified for the motor are indicated in the following table:

(F 3)

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

CUS option is applicable onto 50 Hz operating motors as well.

Motors with voltage in ratio 2 (e.g. 230/460-60; 220/440-60) feature, as standard, a 9-stud terminal board. For same executions, as well as for 575V-60Hz supply, the nominal rating is coincident with the correspondent 50Hz rating.
For DC brake motors type FD, the rectifier is connected to a single-phase 230 VAC supply voltage in the motor terminal box.
Brake power supply for brake motors is as follows:

(F 4)

BN_FD M_FD
Wired to terminal box 1~230V a.c.

BN_FA M_FA		Specify
Separate power supply	230V Δ	230SA
Separate power supply	460V Y	460SA

M2.4 China Compulsory Certification

CCC

Electric motors destined for sale in the People's Republic of China have to be certified under the CCC (China Compulsory Certification) system. BN motors of up to 7 Nm in rated torque are available with CCC certification and a special nameplate bearing the mark shown below:

CCC option is not currently available for servo - ventilated motors.

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

BN and M motors meet the requirements of Directives 2006/95/EC (Low Voltage Directive) and 2004/108/EC (Electromagnetic Compatibility Directive) and their name plates bear the CE mark.
As for the EMC Directive, construction is in accordance with standards CEI EN 60034-1, EN 61000-6-2, EN 61000-6-4.
Motors with FD brakes, when fitted with the suitable capacitive filter at rectifier input (option **CF**), meet the emission limits required by Standard EN 61000-6-3:2007 "Electromagnetic compatibility - Generic Emission Standard - Part 6-3 Residential, commercial and light industrial environment".
Motors also meet the requirements of standard CEI EN 60204-1 "Electrical equipment of machines".
The responsibility for final product safety and compliance with applicable directives rests with the manufacturer or the assembler who incorporate the motors as component parts.

M2.6 Tolerances

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

(F 5)

-0.15 (1 - η) P ≤ 50kW	Efficiency
-(1 - cosφ)/6 min 0.02 max 0.07	Power factor
±20% *	Slip
+20%	Locked rotor current
-15% +25%	Locked rotor torque
-10%	Max. torque

* ± 30% for motors with Pn < 1 kW

M3 MECHANICAL FEATURES

M3.1 Versions

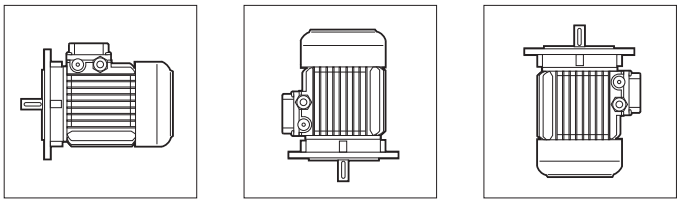
EC-normalised BN motors are available in the design versions indicated in table (F6) as per Standards CEI EN 60034-14.

Mounting versions are:

IM B5 (basic)
IM V1, IM V3 (derived)

IM B5 design motors can be installed in positions IM V1 and IM V3; in such cases, the basic design IM B5 is indicated on the motor name plate.
In design versions with a vertically located motor and shaft downwards, it is recommended to request the drip cover (always necessary for brake motors). This facility, included in the option list should be specified when ordering as it does not come as a standard device

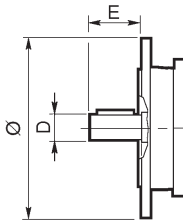
(F 6)



IM B5 **IM V1** **IM V3**

Flange output motors are also available with reduced coupling dimensions, as indicated in the table below - executions **B5R**. Their use in combination with gearboxes must be however coherent with the maximum installable power on gearboxes themselves (see chapters “Motors availability”). In case this condition is not met need to contact the Technical Service for the checking of the combination.

(F 7)



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

(1) flange with through holes

M3.2 Degree of protection

IP..

The following chart provides an overview of the degrees of protection available.
In addition to the degree of protection specified when ordering, motors to be installed outdoors require protection against direct sunlight and also – when they are to be installed vertically down – a drip cover to prevent the ingress of water and solid particles (option **RC**).

(F 8)

		IP 54	IP 55	IP 56
BN	**M**	⊖	standard	on request
BN_FD **BN_FA**	**M_FD** **M_FA**	standard	on request	⊖

M3.3 Cooling

The motors are externally ventilated (IC 411 to CEI EN 60034-6) and are equipped with a plastic fan working in both directions. The motors must be installed allowing sufficient space between fan cowl and the nearest wall to ensure free air intake and allow access for maintenance purposes on motor and brake, if supplied.
Independent, forced air ventilation (IC 416) can be supplied on request (option U1).
This solution enables to increase the motor duty factor when driven by an inverter and operating at reduced speed.

M3.4 Direction of rotation

Rotation is possible in both directions. If terminals U1, V1, and W1 are connected to line phases L1,L2 and L3, clockwise rotation (looking from drive end) is obtained. For counterclockwise rotation, switch two phases.

M3.5 Noise

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

M3.6 Vibrations and balancing

Rotor shafts are balanced with half key fitted and fall within the vibration class N, as per Standard CEI EN 60034-14.
If a further reduced noise level is required improved balancing carequired improved balancing can be optionally requested (class B).
Table below shows the value for the vibration velocity for standard (A) and improved (B) balancing.

(F 9)

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

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

M3.7 Terminal box

Terminal board features 6 studs for eyelet terminal connection (9 studs execution for US voltage “Dual Voltage”).
A ground terminal is also supplied for earthing of the equipment.
Terminals number and type are shown in the following table.
For brake power supply, please read par. M6 (brake FD), M7 (brake FA).
Brakemotors house the a.c./d.c. rectifier (factory pre-wired) inside the terminal box.
Wiring instructions are provided either in the box or in the user manual.

(F 10)

		No. of terminals	Terminal threads	Wire max cross section area mm^2
BN 56 ... BN 71	**M05, M1**	6	M4	2.5
BN 80, BN 90	**M2**	6	M4	2.5
BN 100 ... BN 112	**M3**	6	M5	6
BN 132 ... BN 160MR	**M4**	6	M5	6
BN 160M ... BN 180M	**M5**	6	M6	16
BN 180L ... BN 200L	**–**	6	M8	25
BN 63 ... BN 160MR	**M05 ... M4**	9	M4	6
BN 160M ... BN 200L	**M5**	9	M6	16

M3.8 Cable entry

The holes used to bring cables to terminal boxes use metric threads in accordance with standard EN 50262 as indicated in the table here after.

(F 11)

		Cable entry	Max. cable diameter allowed [mm]
BN 63	**M05**	2 x M20 x 1.5	13
BN 71	**M1**	2 x M25 x 1.5	17
BN 80 - BN 90	**M2**	2 x M25 x 1.5	17
BN 100	**M3**	2 x M32 x 1.5	21
		2 x M25 x 1.5	17
BN 112	**—**	2 x M32 x 1.5	21
		2 x M25 x 1.5	17
BN 132...BN 160MR	**M4**	4 x M32 x 1.5	21
BN 160M...BN 200L	**M5**	2 x M40 x 1.5	28

M3.9 Bearings

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

(F 12)

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

(F 13)

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

M4 ELECTRICAL CHARACTERISTICS

M4.1 Voltage

Single speed motors are provided in standard execution either for nominal voltage 230 / 400 V Δ/Y, 50 Hz, or 400 / 690 V Δ/Y, 50 Hz, with a voltage tolerance of ± 10%, according to what is specified on the below table.
On all the motors BN and M, for which the voltage / frequency configuration is not included on the below table, the voltage tolerance is reduced down to ± 5%.
For the operation out of the tolerance boundaries, the temperature may exceed by 10 K the limit provided by the adopted insulation class.
The motors are suitable for operation on distribution European grid with voltage complying with the pubblication IEC 60038.

(F 14)

			V_{mot} ± 10 % 3 ~	**Configuation**
IE1	**BN 56 … BN 132**	**M0 … M4**	230 / 400 V - Δ/Y - 50 Hz	Standard
			400 / 690 V - Δ/Y - 50 Hz	On request at no extra charge
			460 V Y - 60 Hz	Standard
	BN 160 … 200	**M5**	400 / 690 V - Δ/Y - 50 Hz	Standard
			460 V Δ - 60 Hz	Standard

[1] 4 pole motor only

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

The table below shows the wiring options available.

(F 15)

Pole		Wiring options
2	**BN 63 … BN 200**	Δ / Y (²)
4	**BN 56 … BN 200**	
6	**BN 63 … BN 200**	
8	**BN 71 … BN 132**	
2/4	**BN 63 … BN 132**	Δ / YY (Dahlander)
2/6	**BN 71 … BN 132**	Y / Y (Two windings)
2/8	**BN 71 … BN 132**	
2/12	**BN 80 … BN 132**	
4/6	**BN 71 … BN 132**	
4/8	**BN 80 … BN 132**	Δ / YY (Dahlander)

(²) Motors with voltage in ratio 2 (ex. 230/460 - 60) will be equipped with a 9 pin terminal box with winding connection either Δ Δ/ Δ or YY / Y (except 6 pole BN 63 Δ / Y)

M4.2 Frequency

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

(F 16)

		P_n [kW]			
		2P	**4P**	**6P**	**8P (*)**
BN 56A	**–**	–	0.07	–	–
BN 56B	**M0B**	–	0.1	–	–
BN 63A	**M05A**	0.21	0.14	0.1	–
BN 63B	**M05B**	0.3	0.21	0.14	–
BN 63C	**M05C**	0.45	0.3	–	–
BN 71A	**–**	0.45	0.3	0.21	0.1
–	**M1SC**	–	–	0.21	–
BN 71B	**M05SD**	0.65	0.45	0.3	0.14
BN 71C	**M1LA**	0.9	0.65	0.45	–
BN 80A	**–**	0.9	0.65	0.45	0.21
BN 80B	**M2SA**	1.3	0.9	0.65	0.30
BN 80C	**M2SB**	1.8	1.3	0.9	–
BN 90S	**–**	–	1.3	0.9	0.45
BN 90SA		1.8	–	–	–
BN 90SB		2.2	–	–	–
BN 90L	**M3SA**	2.5	–	1.3	0.65
BN 90LA		–	1.8	–	–
BN 90LB	**–**	–	2.2	–	–

		P_n [kW]			
		2P	**4P**	**6P**	**8P (*)**
BN 100L	**M3LA**	3.5	–	–	–
BN 100LA		–	2.5	1.8	0.9
BN 100LB	**M3LB**	4.7	3.5	2.2	1.3
BN 112M	**–**	4.7	4.7	2.5	1.8
–	**M3LC**	–	4.7	2.5	–
BN 132S	**M4SA**	–	6.5	3.5	2.5
BN 132SA		6.5	–	–	–
BN 132SB	**M4SB**	8.7	–	–	–
BN 132M	**M4LA**	11	–	–	3.5
BN 132MA		–	8.7	4.6	–
BN 132MB	**M4LB**	–	11	6.5	–
BN 160MR	**M4LC**	12.5	12.5	–	–
BN 160M	**M5SA**	–	–	8.6	–
BN 160MB	**–**	17.5	–	–	–
–	**M5SB**	17.5	17.5	–	–
BN 160L	**–**	21.5	17.5	12.6	–
–	**M5SC**	21.5	–	–	–
BN 180M	**M5LA**	24.5	21.5	–	–
BN 180L	**–**	–	25.3	17.5	–
BN 200L	**–**	–	34	–	–
BN 200LA	**–**	34	–	22	–

(*) Excluded M_ motors

Double speed BN / M motors supplied at 60 Hz will have an increase of nominal power, referred to 50 Hz, equal to 15%.
If a nominal power rating, equal to the normalised nominal power rating at 50 Hz, was requested to be on a nameplate of a motor meant to be voltage supplied at 60 Hz, the PN option shall be specified on the motor designation.
Motors normally designed for a 50 Hz frequency may be used on a 60 Hz operating grid, but the related data shall be updated according to the following table.
Motors designated for 50 Hz operation show on the nameplate also the values for 60 Hz operation (excluding motors in CUS execution and brake motors). See the following table.

(F 17)

50 Hz	**60 Hz**			
V - 50 Hz	**V** - 60 Hz	**Pn** - 60 Hz	M_n, M_a/M_n - 60 Hz	**n** [min^{-1}] - 60 Hz
230/400 Δ/Y	220 - 240 Δ	1	0.83	1.2
	380 - 415 Y			
400/690 Δ/Y	380 - 415 Δ			
230/400 Δ/Y	265 - 280 Δ	1.15	1	1.2
	440 - 480 Y			
400/690 Δ/Y	440 - 480 Δ			

M4.3 Ambient temperature

Catalogue rating values are calculated for 50 Hz operation and for standard ambient conditions (temperature 40 °C; elevation <1000 m a.s.l.) as per the CEI EN 60034-1 Standards.
The motors can be used within the 40 - 60 °C temperature range with rated power output adjusted by factors given in the following charts.

(F 18)

Ambient temperature (°C)	40°	45°	50°	55°	60°
Permitted power as a % of rated power	100%	95%	90%	85%	80%

Should a derating factor higher than 15% apply please consult factory.

M4.4 Insulation class

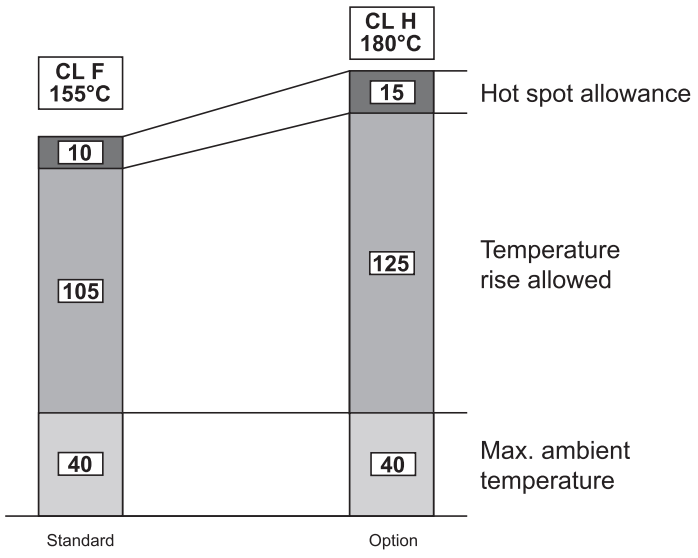
CL F

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

CL H

Motors manufactured in insulation class **H** are available at request.
In standard motors, stator windings over temperature normally stays below the 80 K limit corresponding to class B over temperature.
A careful selection of insulating components makes the motors compatible with tropical climates and normal vibration.
For applications involving the presence of aggressive chemicals or high humidity, contact Bonfiglioli Engineering for assistance with product selection.
Not available for motors in compliance with CSA e UL standards (CUS option).

(F 19)



M4.5 Type of duty

Unless otherwise specified, catalogue motor power refers to continuous duty S1.
Any operating conditions other than S1 duty must be identified in accordance with duty cycle definitions laid down in standards CEI EN 60034-1.
For duty cycles S2 and S3, the power increase co-efficient reported in the following table may be used. Please note that the table provided below applies to single-speed motors.
As an alternative to S1 continuous duty, one of the following values can be specified at the product configuration stage: S2, S3 or S9. The motor nameplate will be marked with an increased power rating to suit the type of duty, and with specific electrical data and a duty type of S2-30 min, S3-70% or S9 respectively.
For further details, contact Bonfiglioli's Technical Service.
Please contact Bonfiglioli Engineering for the power increase coefficients applicable to switch-pole motors.
(F 20)

	Duty						
	S2			**S3 ***			**S4 - S9**
	Cycle duration (min)			Cyclic duration factor (I)			Consult factory
	10	**30 (*)**	**60**	**25%**	**40%**	**70% (*)**	
f_m	1.35	1.15	1.05	1.25	1.15	1.1	

* Cycle duration must, in any event, be equal to or less than 10 minutes; if this time is exceeded, please contact our Technical Service.
(*) Default values from options.

M4.5.1 Cyclic duration factor:

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

t_f = work time under constant load
t_r = rest time

M4.5.2 Limited duration duty S2

This type of duty is characterized by operation at constant load for a limited time, which is shorter than the time required to reach thermal equilibrium, followed by a rest period of sufficient duration to restore ambient temperature in the motor.

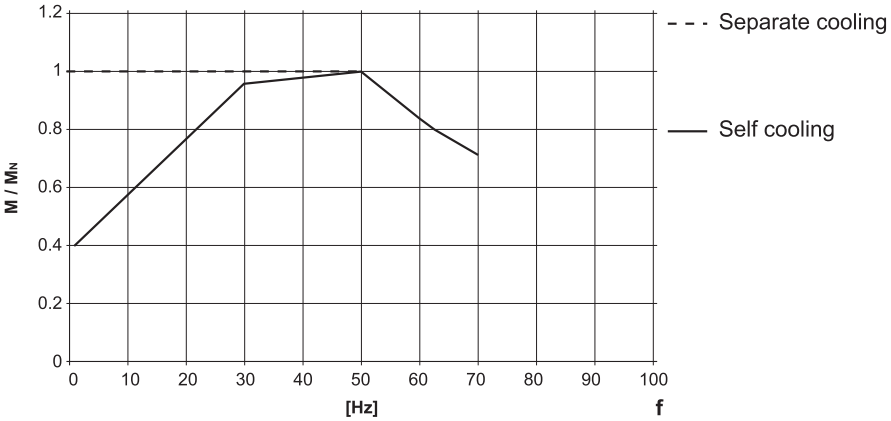
M4.5.3 Periodical intermittent duty S3:

This type of duty is characterized by a sequence of identical operation cycles, each including a constant load operation period and a rest period.
For this type of duty, the starting current does not significantly influence overtemperature.

M4.6 Inverter-controlled motors

The electric motors of series BN and M may be used in combination with PWM inverters with rated voltage at transformer input up to 500 V.Standard motors use a phase insulating system with separators, class 2 enamelled wire and class H impregnation resins (1600V peak-to-peak voltage pulse capacity and rise edge t_s > 0.1µs at motor terminals). The following table shows the typical torque/ speed curves referred to S1 duty for motors with base frequency f_b = 50 Hz.
Because ventilation is somewhat impaired in operation at lower frequencies (about 30 Hz), standard motors with incorporated fan (IC411) require adequate torque derating or - alternately - the addition of a separate supply fan cooling.
Above base frequency, upon reaching the maximum output voltage of the inverter, the motor enters a steady-power field of operation, and shaft torque drops with ratio (f/f_b).
As motor maximum torque decreases with $(f/f_b)^2$, the allowed overloading must be reduced progressively.

(F 21)



The following table reports the mechanical limit speed for motor operation above rated frequency:

(F 22)

		n [min-1]		
		2p	**4p**	**6p**
≤ BN 112	**M05…M3**	5200	4000	3000
≥ BN 132	**M4, M5**	4500	4000	3000

Above rated speed, motors generate increased mechanical vibration and fan noise. Class B rotor balancing is highly recommended in these applications. Installing a separate supply fan cooling may also be advisable.

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

M4.7 Permissible starts per hour, Z

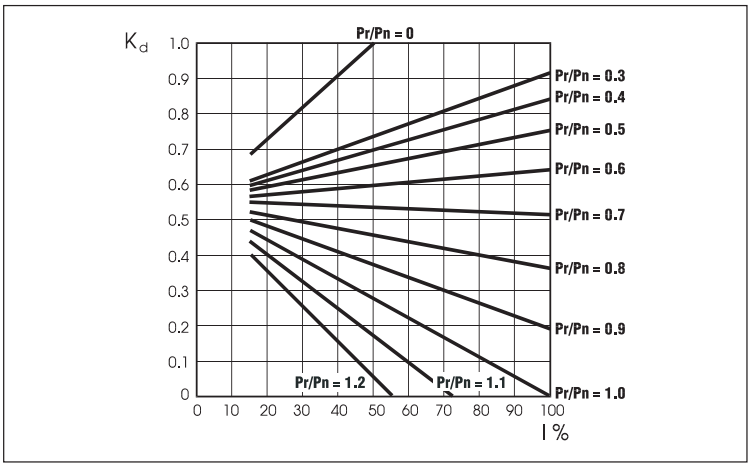
The rating charts of brakemotors lend the permitted number of starts Z_0, based on 50% intermittence and for unloaded operation.
The catalogue value represents the maximum number of starts per hour for the motor without exceeding the rated temperature for the insulation class F.
To give a practical example for an application characterized by inertia J_c, drawing power P_r and requiring mean torque at start-up M_L the actual number of starts per hour for the motor can be calculated approximately through the following equation:

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

where:

$K_J = \frac{J_m + J_c}{J_m}$	inertia factor
$K_c = \frac{M_a - M_L}{M_a}$	torque factor
$K_d =$	load factor see table (F23)

(F 23)



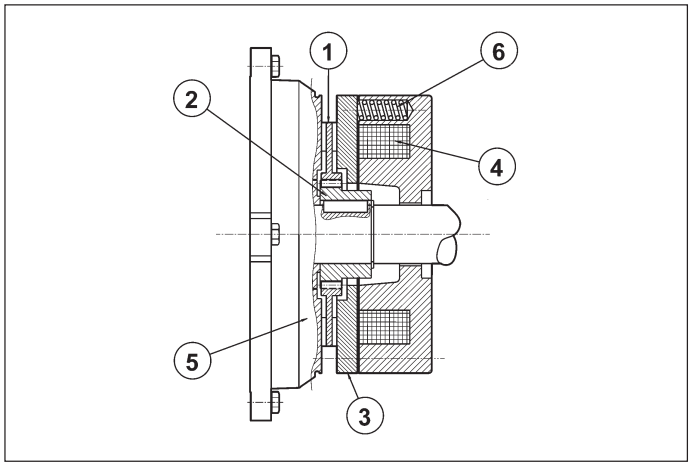
If actual starts per hour is within permitted value (Z) it may be worth checking that braking work is compatible with brake (thermal) capacity W_{max} also given in tables (F30), (F38) and dependent on the number of switches (c/h).

M5 ASYNCHRONOUS BRAKE MOTORS

M5.1 Operation

Versions with incorporated brake use spring-applied DC (FD option) or AC (FA options) brakes.
All brakes are designed to provide fail-safe operation, meaning that they are applied by spring-action in the event of power failure.

(F 24)



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

When voltage is interrupted, pressure springs push the armature plate against the brake disc. The disc becomes trapped between the armature plate and motor shield and stops the shaft from rotation. When the coil is energized, a magnetic field strong enough to overcome spring action attracts the armature plate, so that the brake disc – which is integral with the motor shaft – is released.

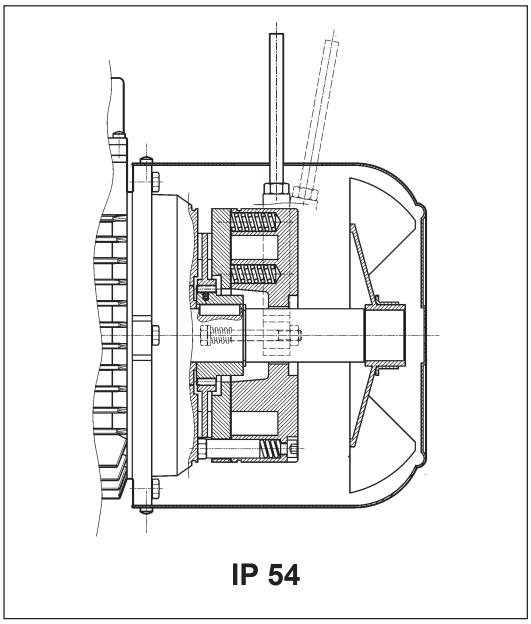
M5.2 Most significant features

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

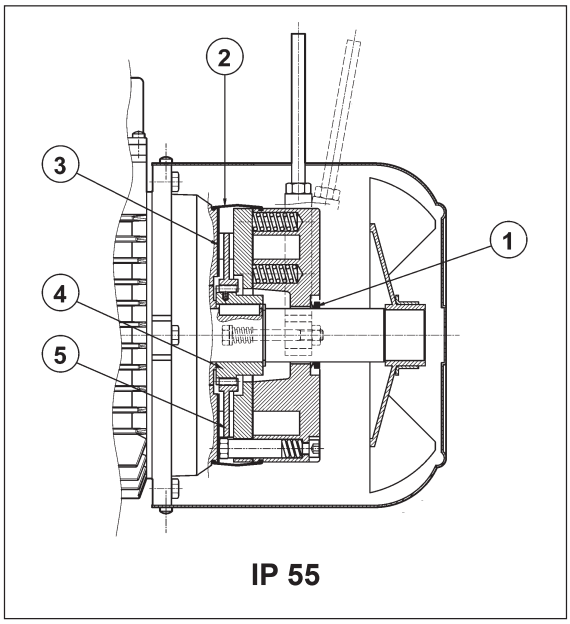
M6 DC BRAKE MOTORS TYPE BN_FD and M_FD

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

(F 25)



(F 26)



Direct current toroidal-coil electromagnetic brake bolted onto motor shield. Preloading springs provide axial positioning of magnet body.
Brake disc slides axially on steel hub shrunk onto motor shaft with anti-vibration device.
Brake torque factory setting is indicated in the corresponding motor rating charts. Braking torque may be modified by changing the type and/or number of springs.
At request, motors may be equipped with manual release lever with automatic return (**R**) or system for holding brake in the released position (**RM**).
See variant at paragraph “BRAKE RELEASE SYSTEMS” for available release lever locations.
FD brakes ensure excellent dynamic performance with low noise. DC brake operating characteristics may be optimized to meet application requirements by choosing from the various rectifier/power supply and wiring connection options available.
For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli’s Technical Service.

M6.1 Degree of protection

Standard protection class is IP54.
Brake motor FD is also available in protection class **IP55**, which mandates the following variants:

① V-ring at N.D.E. of motor shaft
② dust and water-proof rubber boot
③ stainless steel ring placed between motor shieldand brake disc
④ stainless steel hub
⑤ stainless steel brake disc

M6.2 FD brake power supply

A rectifier accommodated inside the terminal box feeds the DC brake coil. Wiring connection across rectifier and brake coil is performed at the factory.
On all single-pole motors, rectifier is connected to the motor terminal board.
Rectifier standard power supply voltage VB is as indicated in the following table, regardless of mains frequency:

(F 27)

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

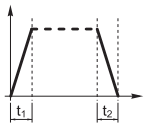
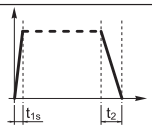
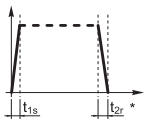
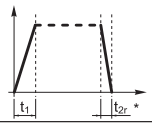
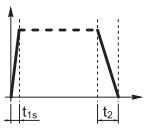
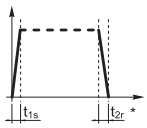
Switch-pole motors feature a separate power supply line for the brake with rectifier input voltage V_B as indicated in the table below:

(F 28)

2/4, 2/6, 2/8, 2/12, 4/6, 4/8 P					**2 speed**
		BN_FD / M_FD		brake connected to terminal board power supply	separate power supply
		V_{mot} ± 10% 3 ~	V_B ± 10% 1 ~		
BN 63…BN 132	**M05...M4LB**	400 V – 50 Hz	230 V	⊖	specify **V_B SA** o **V_B SD**

The diode half-wave rectifier (VDC ≈ 0,45 x VAC) is available in versions **NB, SB, NBR** e **SBR**, as detailed in the table below:

(F 29)

		brake	standard	at request
BN 63	**M05**	**FD 02**	**NB** 	**SB** 
BN 71	**M1**	**FD 03** **FD 53**		**SBR** 
BN 80	**M2**	**FD 04**		**NBR** 
BN 90S	**—**	**FD 14**		
BN 90L	**—**	**FD 05**		
BN 100	**M3**	**FD 15**		
—		**FD 55**	**SB** 	**SBR** 
BN 112	**—**	**FD 06S**		
BN 132 - BN 160MR	**M4**	**FD 56** **FD 06** **FD 07**		
BN 160L - BN 180M	**M5**	**FD 08**		
BN 180L - BN 200M	**—**	**FD 09**		

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

Rectifier **SB** with electronic energizing control over-energizes the electromagnet upon power-up to cut brake release response time and then switches to normal half-wave operation once the brake has been released.

Use of the **SB** rectifier is mandatory in the event of:
- high number of operations per hour
- reduced brake release response time
- brake is exposed to extreme thermal stress

Rectifiers **NBR** or **SBR** are available for applications requiring quick brake intervention (braking condition reinstatement) response.
These rectifiers complement the **NB** and **SB** types as their electronic circuit incorporates a static switch that de-energizes the brake quickly in the event voltage is missing.
This arrangement ensures short brake release response time with no need for additional external wiring and contacts.
Optimum performance of rectifiers **NBR** and **SBR** is achieved with separate brake power supply.
Versions available: 230Vac ±10%, 400Vac ± 10%, 50/60 Hz (with power supply); 100Vdc ±10%, 180Vdc ± 10% (with SD option).

M6.3 FD brake technical specifications

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

(F 30)

Brake	Brake torque M_b [Nm] springs			Release		Braking		W_{max} per brake operation [J]			W	P
				t_1	$t_{1\,s}$	t_2	t_{2c}					
	6	4	2	[ms]	[ms]	[ms]	[ms]	10 s/h	100 s/h	1000 s/h	[MJ]	[W]
FD02	–	3.5	1.75	30	15	80	9	4500	1400	180	15	17
FD03	5	3.5	1.75	50	20	100	12	7000	1900	230	25	24
FD53	7.5	5	2.5	60	30	100	12					
FD04	15	10	5	80	35	140	15	10000	3100	350	30	33
FD14												
FD05	40	26	13	130	65	170	20	18000	4500	500	50	45
FD15	40	26	13	130	65	170	20					
FD55	55	37	18	–	65	170	20					
FD06S	60	40	20	–	80	220	25	20000	4800	550	70	55
FD56	–	75	37	–	90	250	20	29000	7400	800	80	65
FD06		100	50		100	250	20					
FD07	150	100	50	–	120	200	25	40000	9300	1000	130	65
FD08*	250	200	170	–	140	350	30	60000	14000	1500	230	100
FD09**	400	300	200	–	200	450	40	70000	15000	1700	230	120

* brake torque values obtained with 9, 7 and 6 springs, respectively

** brake torque values obtained with 12, 9 and 6 springs, respectively

t_1 = brake release time with half-wave rectifier
t_{1s} = brake release time with over-energizing rectifier
t_2 = brake engagement time with AC line interruption and separate power supply
t_{2c} = brake engagement time with AC and DC line interruption – Values for t1, t1s, t2, t2c indicated in the tab. (F30) are referred to brake set at maximum torque, medium air gap and rated voltage
W_{max} = max energy per brake operation
W = braking energy between two successive air gap adjustments
P_b = brake power absorption at 20 °C
M_b = static braking torque (±15%)
s/h = starts per hour

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

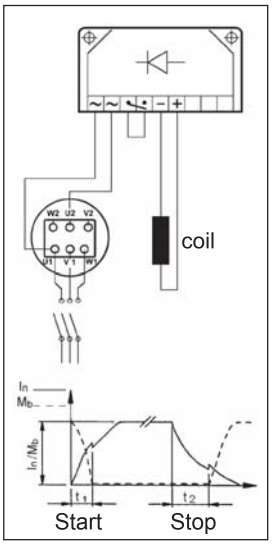
M6.4 FD brake connections

On standard single-pole motors, the rectifier is connected to the motor terminal board at the factory. For switch-pole motors and where a separate brake power supply is required, connection to rectifier must comply with brake voltage VB stated in motor name plate.
Because the load is of the inductive type, brake control and DC line interruption must use contacts from the usage class AC-3 to IEC 60947-4-1.

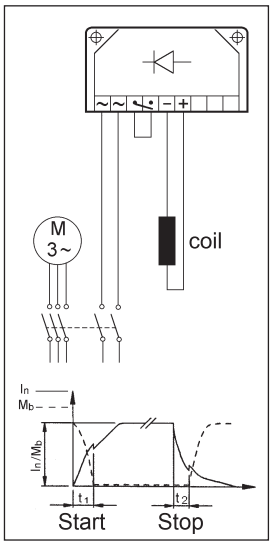
Table (F31) – Brake power supply from motor terminals and AC line interruption
Delayed stop time t_2 and function of motor time constants.
Mandatory when soft-start/stops are required.
Table (F32) – Brake coil with separate power supply and AC line interruption
Normal stop time independent of motor.
Achieved stop times t_2 are indicated in the table (F30).
Table (F33) – Brake coil power supply from motor terminals and AC/DC line interruption.
Quick stop with operation times t_{2c} as per table (F30).
Table (F34) – Brake coil with separate power supply and AC/DC line interruption.
Stop time decreases by values t_{2c} indicated in the table (F30).

The brake may be voltage supplied directly from the motor terminal box (from tab. F31 to tab. F34) only if the nominal voltage of the brake is the same as the smaller voltage of the motor.

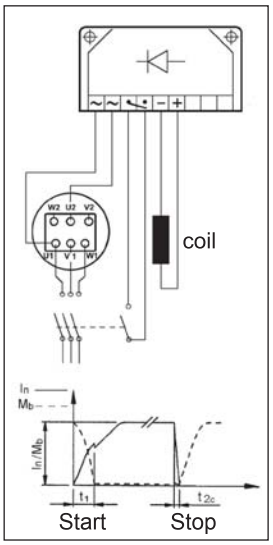
(F 31)



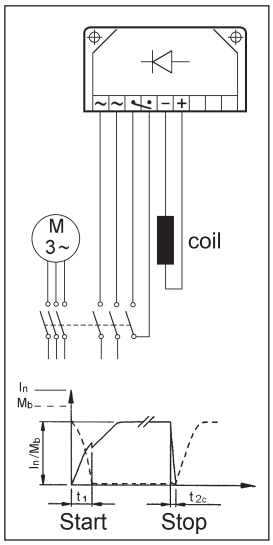
(F 32)



(F 33)



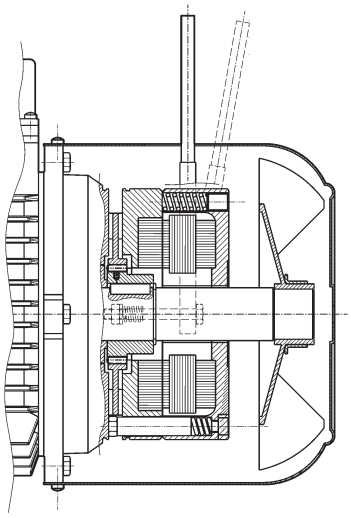
(F 34)



M7 AC BRAKE MOTORS TYPE BN_FA and M_FA

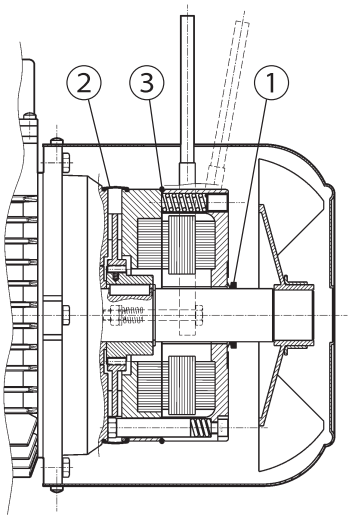
Frame sizes: BN 63 … BN 180M / M05 ... M5

(F 35)



IP 54

(F 36)



IP 55

Electromagnetic brake operates from three-phase **alternated current** power supply and is bolted onto conveyor shield. Preloading springs provide axial positioning of magnet body.
Steel brake disc slides axially on steel hub shrunk onto motor shaft with anti-vibration device.
Brake torque factory setting is indicated in the corresponding motor rating charts.
Spring preloading screws provide stepless braking torque adjustment.
Torque adjustment range is 30% $M_{bMAX} < M_b < M_{bMAX}$ (where M_{bMAX} is maximum braking torque as shown in tab. (F38).
Thanks to their high dynamic characteristics, FA brakes are ideal for heavy-duty applications as well as applications requiring frequent stop/starts and very fast response time.
Motors may be equipped with manual release lever with automatic return (**R**) at request. See variant at paragraph “BRAKE RELEASE SYSTEMS” for available release lever locations.
For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli’s Technical Service.

M7.1 Degree of protection

Standard protection class is IP54.
Brake motor FA is also available in protection class **IP55**, which mandates the following variants:

① V-ring at N.D.E. of motor shaft
② dust and water-proof rubber boot
③ O-ring

M7.2 FA brake power supply

In single speed motors, power supply is brought to the brake coil direct from the motor terminal box. As a result, brake voltage and motor voltage are the same. In this case, brake voltage indication may be omitted in the designation.
Switch-pole motors and motors with separate brake power supply feature an auxiliary terminal board with 6 terminals for connection to brake line. In both cases, brake voltage indication in the designation is mandatory.
The following table reports standard AC brake power supply ratings for single- and switch-pole motors:
(F 37)

	BN 63…BN 132	BN 160…BN 180
single-pole motor	**M05...M4LB**	**M4LC...M5**
	230Δ / 400Y V ±10% – 50 Hz	400Δ/ 690Y V ±10% – 50 Hz
	265Δ / 460Y ±10% - 60 Hz	460Y – 60 Hz

	BN 63…BN 132
switch-pole motors (separate power supply line)	**M05...M4**
	230Δ / 400Y V ±10% – 50 Hz
	460Y - 60 Hz

Unless otherwise specified, standard brake power supply is 230Δ /400Y V - 50 Hz.

Special voltages in the 24…690 V, 50-60 Hz range are available at request.

M7.3 Technical specifications of FA brakes

(F 38)

Brake	Brake torque M_b [Nm]	Release t_1 [ms]	Braking t_2 [ms]	W_{max} [J] 10 s/h	100 s/h	1000 s/h	W [MJ]	P [VA]
FA 02	3.5	4	20	4500	1400	180	15	60
FA 03	7.5	4	40	7000	1900	230	25	80
FA 04 / **FA 14**	15	6	60	10000	3100	350	30	110
FA 05 / **FA 15**	40	8	90	18000	4500	500	50	250
FA 06S	60	16	120	20000	4800	550	70	470
FA 06	75	16	140	29000	7400	800	80	550
FA 07	150	16	180	40000	9300	1000	130	600
FA 08	250	20	200	60000	14000	1500	230	1200

M_b = max static braking torque (±15%)
t_1 = brake release time
t_2 = brake engagement time
W_{max} = max energy per brake operation (brake thermal capacity)
W = braking energy between two successive air gap adjustments
P_b = power drawn by brake at 20° (50 Hz)
s/h = starts per hour

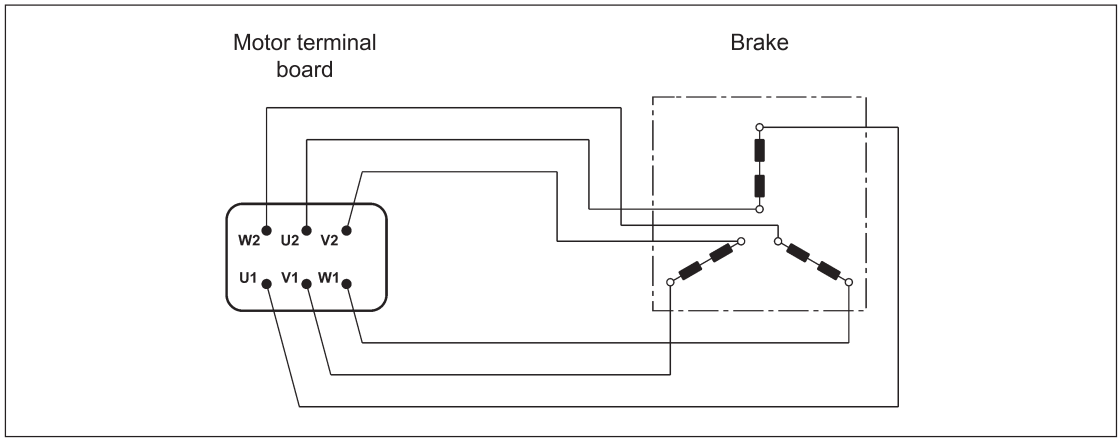
NOTE
Values t_1 and t_2 in the table refer to a brake set at rated torque, medium air gap and rated voltage.

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

M7.4 FA brake connections

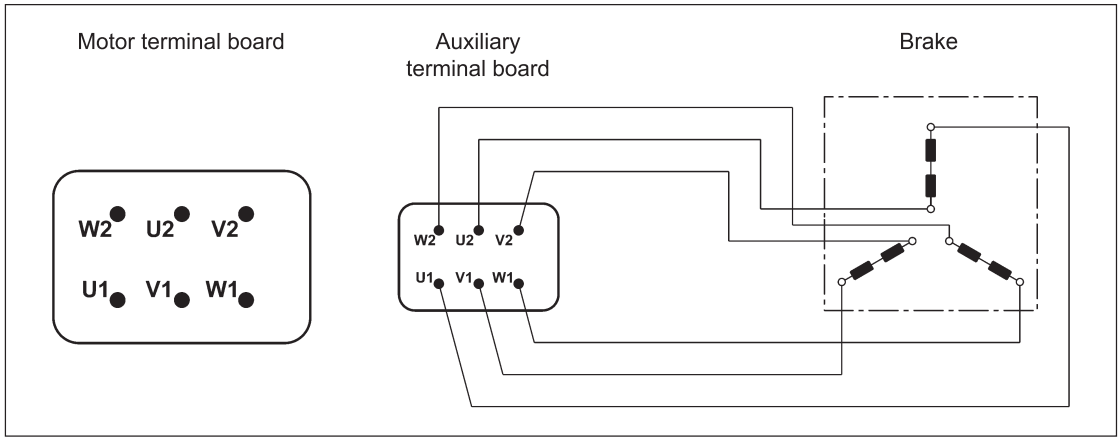
The diagram below shows the wiring when brake is connected directly to same power supply of the motor:

(F 39)



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

(F 40)

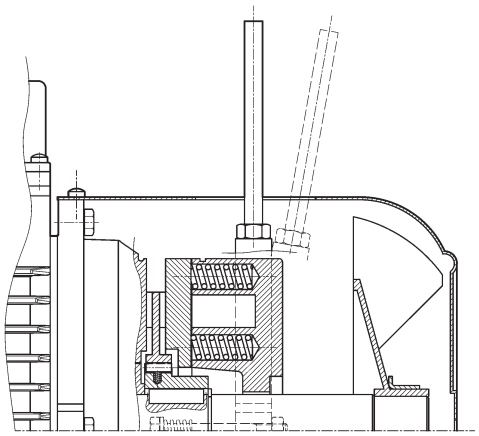


M8 BRAKE RELEASE SYSTEMS

Spring-applied brakes type FD and FA may be equipped with optional manual release devices. These are typically used for manually releasing the brake before servicing any machine or plant parts operated by the motor.

R

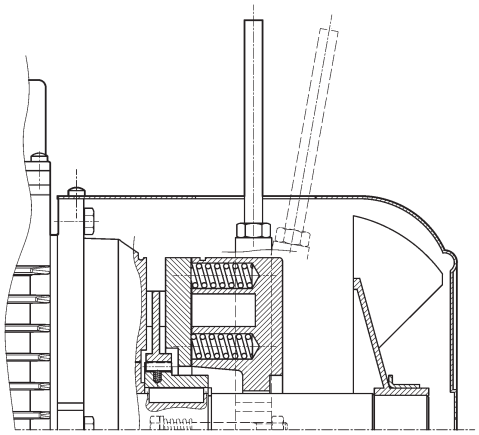
(F 41)



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

RM

(F 42)



On brake motors type FD, if the option RM is specified, the release device may be locked in the ”release” position by tightening the lever until its end becomes engaged with a brake housing projection. The availability for the various disengagement devices is charted here below:

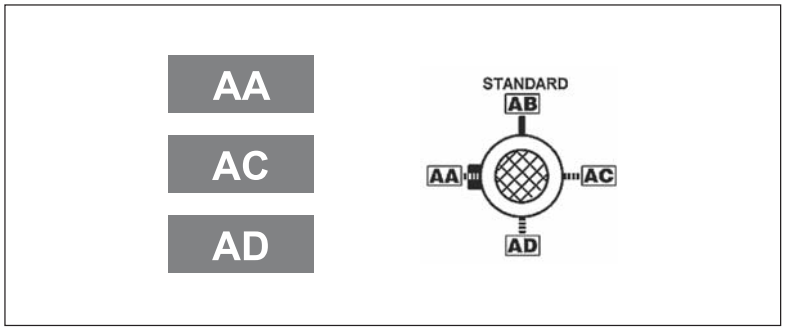
(F 43)

	R	RM
BN_FD	BN 63...BN 200	2p 63A2 ≤ H ≤ 132M2 4p 63A4 ≤ H ≤ 132MA4 6p 63A6 ≤ H ≤ 132MA6
M_FD	M 05...M 5	M 05...M 4LA
BN_FA	BN 63...BN 180M	⛔
M_FA	M 05...M 5	

M8.1 Release lever orientation

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

(F 44)



M8.2 Separate brake supply

...SA

The brake coil is directly fed through an independent line, separately from the motor.
In this case the rated voltage for the coil must be specified, e.g.230SA. The option is applicable to all motors with brake type FD and FA.

...SD

The brake coil is directly fed with DC current and the rectifier is out of the scope for supply.
The rated voltage for the coil must be specified, e.g. 24SD.

M8.3 Fly-wheel data (F1)

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

(F 45)

Main data for flywheel of motore type: BN_FD, M_FD			
		**Fly-wheel weight** [Kg]	**Fly-wheel inertia** [Kgm^2]
BN 63	**M05**	0.69	0.00063
BN 71	**M1**	1.13	0.00135
BN 80	**M2**	1.67	0.00270
BN 90 S - BN 90 L	**–**	2.51	0.00530
BN 100	**M3**	3.48	0.00840
BN 112	**–**	4.82	0.01483
BN 132 S - BN 132 M	**M4**	6.19	0.02580

M9 OPTIONS

M9.1 Thermal protective devices

In addition to the standard protection provided by the magneto-thermal device, motors can be supplied with built-in thermal probes to protect the winding against overheating caused, by insufficient ventilation or by an intermittent duty.
This additional protection should always be specified for servoventilated motors (IC416).

M9.2 Capacitive filter

CF

An optional capacitive filter is available for brake motors type FD only. When the suitable capacitive filter is installed upstream of the rectifier (option CF), motors comply with the emission limits required by standard EN61000-6-3:2007“ Electromagnetic Compatibility – Generic Emission Standard – Part 6-3: Residential, commercial and light industrial environment”.

M9.3 Thermistors

E3

These are semi-conductors having rapid resistance variation when they are close to the rated switch off temperature (150 °C).
Variations of the R = f(T) characteristic are specified under DIN 44081, IEC 34-11 Standards.
Positive temperature coefficient thermistors are normally used (also known as PTC “cold conductor resistors”).
Thermistors cannot control relays directly and must be connected to a suitable disconnect device.
Thus protected, three PTCs connected in series are installed in the winding, the terminals of which are located on the auxiliary terminal-board.

K1

The design characteristics of this sub-group of PTC thermistors allow them to be used as positive temperature coefficient sensors with variable resistance.
Functioning temperature range: 0°C ... +260°C.
Thermistors cannot control relays directly and must be connected to a suitable disconnect device.
Terminals (polarised) for 1 x KTY 84-130 are provided on an auxiliary terminal strip.

M9.4 Bimetallic thermostates

D3

These types of protective devices house a bimetal disk. When the rated switch off temperature (150 °C) is reached, the disk switches the contacts from their initial rest position.
As temperature falls, the disk and the contacts automatically return to rest position.
Three bimetallic thermostates connected in series are usually employed, with normally closed contacts. The terminals are located on an auxiliary terminal-board.

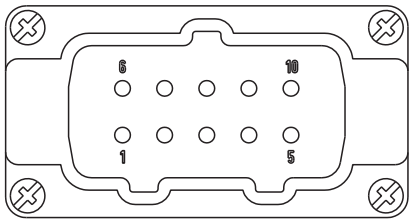
M9.5 Plug connector

CON

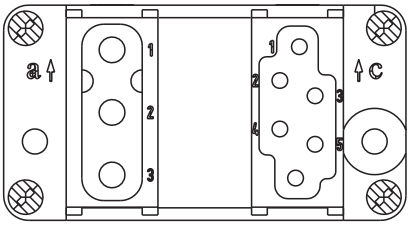
Three types of connectors (CON 1, CON 2, CON 3) are provided; they can be mounted in two different positions: right side of terminal box cover (C1D, C2D, C3D); left side of terminal box cover (C1S, C2S, C3S).
The option CON is applicable to single speed BN and M motors (2, 4, 6, 8 poles), and it is not applicable to switch-pole motors. More details about the motor sizes are available in the next table.
The connectors CON 1 / CON 2 are available for BN and M motors without brake and for brakemotors equipped with DC brake type FD, for the motor sizes listed below.
The male connector (with pins) is mounted on the motor, the female connector is not provided. With CON option, the winding connection is always Y.
With option U1 “forced ventilation”, the fan unit supply is available inside the separate terminal box fixed to fan cover.
With options EN1...EN6, the encoder connection is made by a cable not connected to the motor plug connector.
The CON option is not applicable to brakemotors equipped with AC brake type FA. The CON option is not available when at least one of the next options are selected: the U2, CUS, IC.

Specifications

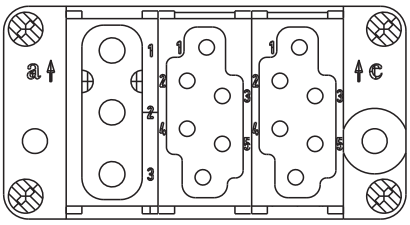
(F 46)

Option	**CON 1**
Motor size	**BN63…BN112 / M05...M3**
Connector view	
Type of connector	Harting Han 10ES
Housing	Han EMC 10B with 2 levers
Numbers of pins - nominal current	10 x 16A
Voltage	500 Vac
Contact connection	Screw terminals

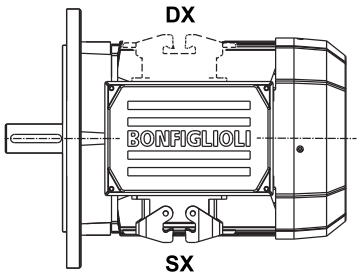
(F 47)

Option	CON 2
Motor size	**BN63…BN160MR / M05...M4L**
Connector view	
Type of connector	Harting Han Modular
Housing	Han EMC 10B with 2 levers
Module type	Module C + Empty module + Module E
Numbers of pins - nominal current	3 x 36A / 6 x 16A
Voltage	500 Vac
Contact connection	Crimping contacts

(F 48)

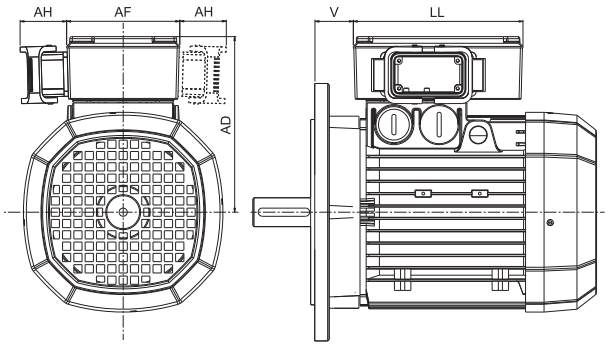
Option	CON 3
Motor size	**BN63…BN160M / M05...M4L**
Connector view	
Type of connector	Harting Han Modular
Housing	Han EMC 10B with 2 levers
Module type	Module C + Module E + Module E
Numbers of pins - nominal current	3 x 36A / 6 + 6 x 16A
Voltage	500 Vac
Contact connection	Crimping contacts

(F 49)

Connector orientation


(F 50)

Motors without brake dimensions

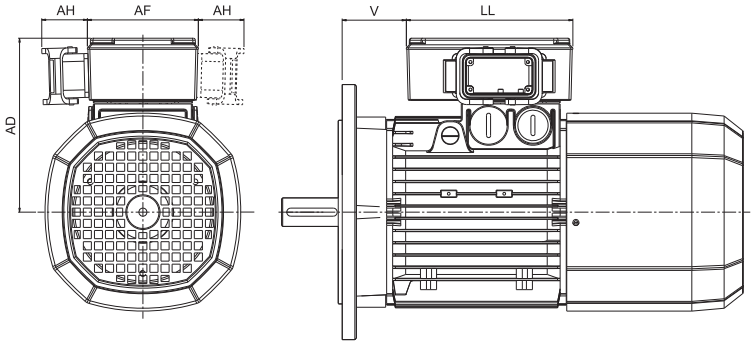


		AD (mm)	**AF** (mm)	**AH** (mm)	**LL** (mm)	**V**(*) (mm)
BN63	**M05**	136	110	45	165	4.5
BN71	**M1**	149	110	45	165	15.5
BN80	**M2**	160	110	45	165	16.5
BN90	**—**	162	110	45	165	31.5
BN100	**M3**	171	110	45	165	37.5
BN112	**—**	186	110	45	165	39
BN132	**M4**	210	140	45	188	45.5
BN160MR	**—**	210	140	45	188	161

(*) Dimension valid only for motors BN.

(F 51)

Motors with FD brake dimensions



		AD (mm)	**AF** (mm)	**AH** (mm)	**LL** (mm)	**V**(*) (mm)
BN63	**M05**	136	110	45	165	4.5
BN71	**M1**	149	110	45	165	1.5
BN80	**M2**	160	110	45	165	18.5
BN90	**—**	162	110	45	165	39.5
BN100	**M3**	171	110	45	165	63.5
BN112	**—**	186	110	45	165	75
BN132	**M4**	210	140	45	188	122
BN160MR	**—**	210	140	45	188	161

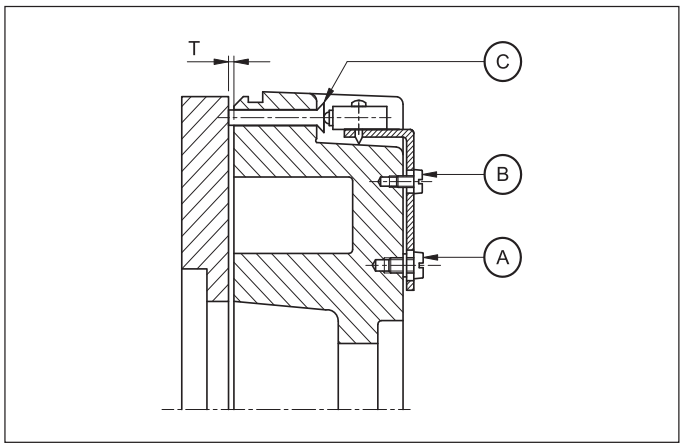
(*) Dimension valid only for motors BN.

M9.6 Control of brake operation

MSW

The microswitch can be set in order to obtain from it a signal related to the attraction/release of anchor plate, or it can be set in order to give feedback when the air gap reaches the maximum value.
MSW option is available for brakes FD03...FD09.
The microswitch is provided with three lead wires (NC, NO, COM). The next figure shown the main components of the brake equipped with microswitch.

(F 52)



A: Plate fixing screws
B: Setting screws
C: Actuator control pin

M9.7 Additional cable entry for brakemotors

IC

The terminal box cover of brakemotors BN63...BN160MR / M05...M4 is provided with two additional cable entry M16 x 1.5 (one cable entry per side).
The terminal box cover of brakemotors BN160...BN200 / M5 is provided with an additional cable entry M16 x 1.5 next to the cable entry used for the brake.

M9.8 Anti-condensation heaters

H1 **NH1**

Where an application involves high humidity or extreme temperature fluctuation, motors may be equipped with an anti-condensate heater.
A single-phase power supply is available in the auxiliary terminal board inside the main terminal box.
Values for the absorbed power are listed here below:

(F 53)

		H1	NH1
		1~ 230V ± 10% P [W]	1~ 115V ± 10% P [W]
BN 56...BN 80	**M0...M2**	10	10
BN 90...BN 160MR	**M3 - M4**	25	25
BN 160M...BN 180M	**M5**	50	50
BN 180L...BN 200L	**—**		

Warning!
Always remove power supply to the anti-condensante hea- ter before operating the motor.

M9.9 Tropicalization

TP

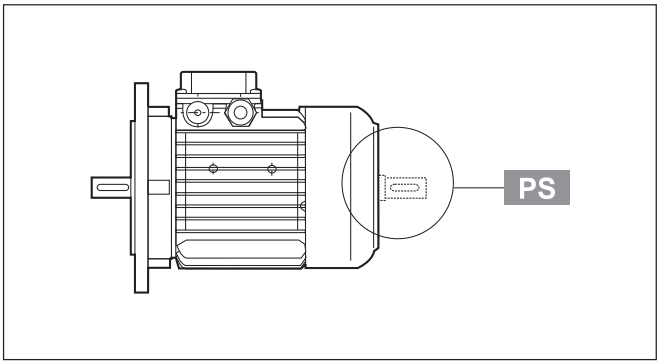
When option **TP** is specified, motor windings receive additional protection for operation in high humidity and temperature conditions.

M9.10 Second shaft extension

PS

This option is not compatible with variants RC, TC, U1, U2, EN1, EN2, EN3, EN4, EN5, EN6.
For shaft dimensions please see motor dimensions tables.

(F 54)



M9.11 Backstop device

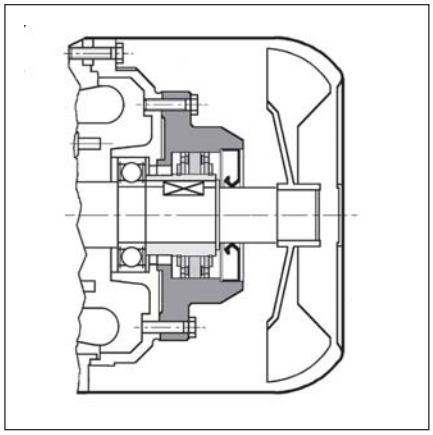
AL **AR**

For applications where backdriving must be avoided, motors equipped with an anti run-back device can be used (available for the M series only). While allowing rotation in the direction required, this device operates instantaneously in case of a power failure, preventing the shaft from running back. The anti run-back device is life lubricated with special grease for this specific application. When ordering, customers should indicate the required rotation direction, AL or AR.
Never use the anti run-back device to prevent reverse rotation caused by faulty electrical connection. Table (F55) shows rated and maximum locking torques for the anti run-back devices. A diagram of the device can be seen in Table (F56). Overall dimensis are same as the corresponding brake motor. The direction of free rotation is described in the “MOTOR OPTIONS” section of specifically dedicated sections to gear units.

(F 55)

	Rated locking torque [Nm]	Max. locking torque [Nm]	Release speed [min^{-1}]
M1	6	10	750
M2	16	27	650
M3	54	92	520
M4	110	205	430

(F 56)



M9.12 Ventilation

Motors are cooled through outer air blow (IC 411 according to CEI EN 60034-6) and are equipped with a plastic radial fan, which operates in both directions.
Ensure that fan cover is installed at a suitable distance from the closest wall so to allow air circulation and servicing of motor and brake, if fitted.
On request, motors can be supplied with independently power-supplied forced ventilation system starting from BN 71 or M1 size.
Motor is cooled by an axial fan with independent power supply and fitted on the fan cover (IC 416 cooling system).
This version is used in case of motor driven by inverter so that steady torque operation is possible even at low speed or when high starting frequencies are needed.
Brake all motors with rear shaft projection (PS option) are excluded.

(F 57)

Power supply					
		V a.c. ± 10%	**Hz**	**P** [W]	**I** [A]
BN 71	**M1**	1~ 230	50 / 60	22	0.12
BN 80	**M2**			22	0.12
BN 90	**—**			40	0.30
BN 100 (*)	**M3**			50	0.25
BN 112	**—**	3~ 230 Δ / 400Y		50	0.26 / 0.15
BN 132S	**M4S**			110	0.38 / 0.22
BN 132M...BN 160MR	**M4L**				
BN 160...BN 180M	**M5**		50	180	1.25 / 0.72

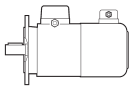
This variant has two different models, called **U1** and **U2**, having the same longitudinal size. Longer side of fan cover (**DL**) is specified for both models in the table below. Overall dimension can be reckoned from motor size table.

(F 58)

Extra length for servoventilated motors			
		Δ L_1	**Δ L_2**
BN 71	**M1**	93	32
BN 80	**M2**	127	55
BN 90	**—**	131	48
BN 100	**M3**	119	28
BN 112	**—**	130	31
BN 132S	**M4S**	161	51
BN 132M	**M4L**	161	51

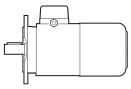
ΔL_1 = extra length to LB value of corresponding standard motor
ΔL_2 = extra length to LB value of corresponding brake motor

U1



Fan wiring terminals are housed in a separate terminal box.
In brake motors of size BN 71...BN 160MR, M1...M4L, with **U1** model, the release lever cannot be positioned to AA.
The option is not applicable to motors compliant with the CSA and UL norms (option CUS).

U2



Fan terminals are wired in the motor terminal box.
The **U2** option does not apply to motors BN 160 through BN 200L, M5, with the only exception of motor BN 160MR for which the option is available instead and to motors with option CUS (ompliant to norms CSA and UL).

(F 59)

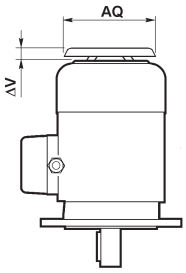
		V a.c. ±10%	**Hz**	**P** [W]	**I** [A]
BN 71	**M1**	1 ~ 230	50 / 60	22	0.12
BN 80	**M2**			22	0.12
BN 90	**–**			40	0.30
BN 100	**M3**	3 ~ 230Δ / 400Y		40	0.26 / 0.09
BN 112	**–**			50	0.26 / 0.15
BN 132 ... BN 160MR	**M4L**			110	0.38 / 0.22

M9.13 Rain canopy

RC

The rain canopy protects the motor from dripping and avoids the ingress of solid bodies. It is recommended when motor is installed in a vertical position with the shaft downwards.
Relevant dimensions are indicated in the table below.
The drip cover is not compatible with variants PS, EN1, EN2, EN3, EN4, EN5, EN6.

(F 60)

		AQ	ΔV	
BN 63	**M05**	118	24	
BN 71	**M1**	134	27	
BN 80	**M2**	152	25	
BN 90	**—**	168	30	
BN 100	**M3**	190	28	
BN 112	**—**	211	32	
BN 132...BN 160MR	**M4**	254	32	
BN 160M...BN 180M	**M5**	302	36	
BN 180L...BN 200L	**—**	340	36	

M9.14 Textile canopy

TC

Option TC is a cover variant for textile industry environments, where lint may obstruct the fan grid and prevent a regular flow of cooling air.
This option is not compatible with variants EN1, EN2, EN3, EN4, EN5, EN6.
Overall dimensions are the same as drip cover type RC.

M9.15 Feedback units

Motors may be combined with six different types of encoders to achieve feedback circuits.
Configurations with double-extended shaft (PS) and rain canopy (RC, TC) are not compatible with encoder installation.

EN1

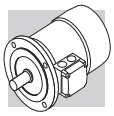
Incremental encoder, V_{IN} = 5 V, line-driver output RS 422.

EN2

Incremental encoder, V_{IN} = 10-30 V, line-driver output RS 422.

EN3

Incremental encoder, V_{IN} = 12-30 V, push-pull output 12-30 V



EN4

Encoder sin/cos, V_{IN} = 4.5-5.5 V, output Sinus $0.5V_{PP}$.

EN5

Absolute encoder singleturn, HIPERFACE® interface, V_{IN} = 7-12 V.

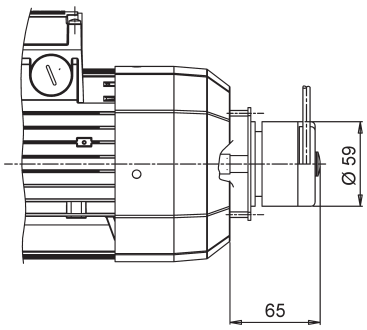
EN6

Absolute encoder multiturn, HIPERFACE® interface, V_{IN} = 7-12 V.

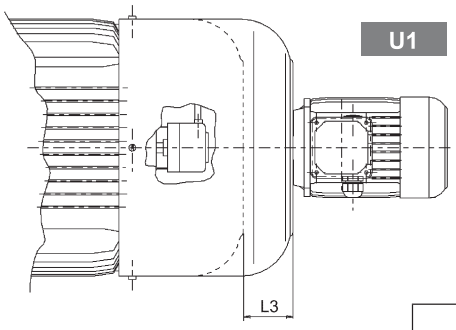
(F 61)

		EN1	EN2	EN3	EN4	EN5	EN6
Interface		TTL/RS 422	TTL/RS 422	HTL/push-pull	Sinus 0.5 VPP	HIPERFACE®	HIPERFACE®
Power supply voltage	[V]	4...6	10...30	12...30	4.4...5.5	7...12	7...12
Output voltage	[V]	5	5	12...30	—	—	—
No-load operating current	[mA]	120	100	100	40	80	80
No. of pulses per revolution		1024					
Steps per revolution		—	—	—	—	15 bit	15 bit
Revolutions		—	—	—	—	—	12 bit
No. of signals		6 (A, B, Z + inverted signals)			6 (cos-, cos+, sin-, sin+, Z, $\overline{Z}$)	—	—
Max. output frequency	[kHz]	600			200		
Max. speed	[min^{-1}]	6000 (9000 min^{-1} for 10 s)					
Working temperature range	[°C]	-30 ... +100					
Protection class		IP 65					

(F 63)

EN1, EN2, EN3, EN4, EN5, EN6	
	
BN 63...BN 200L	**M05...M5**
BN 63_FD...BN 200L_FD	**M05_FD...M5_FD**
BN 63_FA...BN 200L_FA	**M05_FA...M5_FA**

(F 62)

EN_ + U1		
		
		L3
BN 160M...BN 180M	**M5**	72
BN 180L...BN 200L	**-**	82
BN 160M_FD...BN 180M_FD	**M5_FD**	35
BN 180L_FD...BN 200L_FD	**-**	41

If the encoder device (option EN_) is specified on motors BN71...BN160MR / M1...M4, along with the independent fan cooling (options U1, U2), the extra length of motor is coincident with that of the correspondent U1 and U2 execution.

M9.16 Surface protection

C_

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

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

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

M9.17 Painting

RAL_

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

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.

M9.18 Certificates

ACM

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

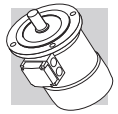
CC

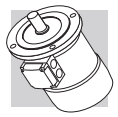
Inspection certificate
The document entails checking on order compliance, the visual inspection of external conditions and instrumental testing of the electrical characteristics in unloaded conditions. Units inspected are sampled within the shipping batch and marked individually.

2P — 3000 min-1 - S1 — 50 Hz

P_n kW			n min-1	M_n Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm²	IM B5 Kg	d.c. brake FD Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm²	IM B5 Kg	a.c. brake FA Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm²	IM B5 Kg
0.18	BN 63A	2	2730	0.63	○	59.9	56.9	51.9	0.77	0.56	3.0	2.1	2.0	2.0	3.5	FD 02	1.75	3900	4800	2.6	5.2	FA 02	1.75	4800	2.6	5.0
0.25	BN 63B	2	2740	0.87	○	66.0	64.8	64.8	0.76	0.72	3.3	2.3	2.3	2.3	3.9	FD 02	1.75	3900	4800	3.0	5.6	FA 02	1.75	4800	3.0	5.4
0.37	BN 63C	2	2800	1.26	○	69.1	66.8	66.8	0.78	0.99	3.9	2.6	2.6	3.3	5.1	FD 02	3.5	3600	4500	3.9	6.8	FA 02	3.5	4500	3.9	6.6
0.37	BN 71A	2	2820	1.25	○	73.8	73.0	70.6	0.76	0.95	4.8	2.8	2.6	3.5	5.4	FD 03	3.5	3000	4100	4.6	8.1	FA 03	3.5	4200	4.6	7.8
0.55	BN 71B	2	2820	1.86	○	76.0	75.8	74.8	0.76	1.37	5.0	2.9	2.8	4.1	6.2	FD 03	5	2900	4200	5.3	8.9	FA 03	5	4200	5.3	8.6
0.75	BN 71C	2	2810	2.6	○	76.6	76.2	76.2	0.76	1.86	5.1	3.1	2.8	5.0	7.3	FD 03	5	1900	3300	6.1	10.0	FA 03	5	3600	6.1	9.7
0.75	BN 80A	2	2810	2.6	•	76.2	75.5	68.3	0.81	1.75	4.8	2.6	2.2	7.8	8.6	FD 04	5	1700	3200	9.4	12.5	FA 04	5	3200	9.4	12.4
1.1	BN 80B	2	2800	3.8	•	76.4	76.2	75.0	0.81	2.57	4.8	2.8	2.4	9.0	9.5	FD 04	10	1500	3000	10.6	13.4	FA 04	10	3000	10.6	13.3
1.5	BN 80C	2	2800	5.1	•	79.1	79.5	77.2	0.81	3.4	4.9	2.7	2.4	11.4	11.3	FD 04	15	1300	2600	13.0	15.2	FA 04	15	2600	13.0	15.1
1.5	BN 90SA	2	2870	5.0	•	82.0	81.5	78.1	0.80	3.4	5.9	2.7	2.6	12.5	12.3	FD 14	15	900	2200	14.1	16.5	FA 14	15	2200	14.1	16.4
1.85	BN 90SB	2	2880	6.1	•	82.5	82.0	75.4	0.80	4.0	6.2	2.9	2.6	16.7	14	FD 14	15	900	2200	18.3	18.2	FA 14	15	2200	18.3	18.1
2.2	BN 90L	2	2880	7.3	•	82.7	82.1	80.8	0.80	4.8	6.3	2.9	2.7	16.7	14	FD 05	26	900	2200	21	20	FA 05	26	2200	21	20.7
3	BN 100L	2	2860	10.0	•	81.5	81.3	77.4	0.79	6.7	5.6	2.6	2.2	31	20	FD 15	26	700	1600	35	26	FA 15	26	1600	35	27
4	BN 100LB	2	2870	13.3	•	83.1	83.0	77.8	0.80	8.7	5.8	2.7	2.5	39	23	FD 15	40	450	900	43	29	FA 15	40	1000	43	30
4	BN 112M	2	2900	13.2	•	85.5	84.5	83.0	0.82	8.2	6.9	3.0	2.9	57	28	FD 06S	40	—	950	66	39	FA 06S	40	950	66	40
5.5	BN 132SA	2	2890	18.2	•	84.7	84.5	81.2	0.84	11.2	5.9	2.6	2.2	101	35	FD 06	50	—	600	112	48	FA 06	50	600	112	49
7.5	BN 132SB	2	2900	25	•	86.5	86.3	84.4	0.85	14.7	6.4	2.6	2.2	145	42	FD 06	50	—	550	154	55	FA 06	50	550	154	56
9.2	BN 132M	2	2930	30	•	87.0	86.5	83.6	0.86	17.7	6.7	2.8	2.3	178	53	FD 56	75	—	430	189	66	FA 06	75	430	189	67
11	BN 160MR	2	2920	36	•	87.6	87.0	86.0	0.88	20.6	6.9	2.9	2.5	210	65											
15	BN 160MB	2	2930	49	•	89.6	89.4	88.0	0.86	28.1	7.1	2.6	2.3	340	84											
18.5	BN 160L	2	2930	60	•	90.4	90.1	89.0	0.86	34	7.6	2.7	2.3	420	97											
22	BN 180M	2	2930	72	•	89.9	89.7	89.5	0.88	40	7.8	2.6	2.4	490	109											
30	BN 200LA	2	2930	98	•	90.7	90.1	87.6	0.89	54	7.8	2.7	2.9	770	140											

○ = n.a. • = IE1





4P — 1500 min^{-1} - S1 — 50 Hz

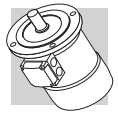
P_n kW			n min^{-1}	M_n Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	d.c. brake FD Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	a.c. brake FA Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.06	**BN 56A**	**4**	1340	0.43	○	46.8	44.2	41.3	0.65	0.28	2.6	2.3	2.0	1.5	3.1											
0.09	**BN 56B**	**4**	1350	0.64	○	51.7	47.6	42.9	0.60	0.42	2.6	2.5	2.4	1.5	3.1											
0.12	**BN 63A**	**4**	1350	0.85	○	59.8	56.2	47.0	0.62	0.47	2.6	1.9	1.8	2.0	3.5	**FD 02**	1.75	10000	13000	2.6	5.2	**FA 02**	1.75	13000	2.6	5.0
0.18	**BN 63B**	**4**	1320	1.30	○	54.8	52.9	52.5	0.67	0.71	2.6	2.2	2.0	2.3	3.9	**FD 02**	3.5	10000	13000	3.0	5.6	**FA 02**	3.5	13000	3.0	5.4
0.25	**BN 63C**	**4**	1340	1.78	○	65.3	65.0	57.9	0.69	0.80	2.7	2.1	1.9	3.3	5.1	**FD 02**	3.5	7800	10000	3.9	6.8	**FA 02**	3.5	10000	3.9	6.6
0.25	**BN 71A**	**4**	1380	1.73	○	63.7	62.2	59.1	0.73	0.78	3.3	1.9	1.7	5.8	5.1	**FD 03**	3.5	7700	11000	6.9	7.8	**FA 03**	3.5	11000	6.9	7.5
0.37	**BN 71B**	**4**	1370	2.6	○	66.8	66.7	63.0	0.76	1.05	3.7	2.0	1.9	6.9	5.9	**FD 03**	5	6000	9400	8.0	8.6	**FA 03**	5.0	9400	8.0	8.3
0.55	**BN 71C**	**4**	1380	3.8	○	69.0	68.9	68.8	0.74	1.55	4.1	2.3	2.3	9.1	7.3	**FD 53**	7.5	4300	8700	10.2	10.0	**FA 03**	7.5	8700	10.2	9.7
0.55	**BN 80A**	**4**	1390	3.8	○	72.0	71.3	69.7	0.77	1.43	4.1	2.3	2.0	15	8.2	**FD 04**	10	4100	8000	16.6	12.1	**FA 04**	10	8000	16.6	12.0
0.75	**BN 80B**	**4**	1400	5.1	•	75.0	74.5	69.3	0.78	1.85	4.9	2.7	2.5	20	9.9	**FD 04**	15	4100	7800	22	13.8	**FA 04**	15	7800	22	13.7
1.1	**BN 80C**	**4**	1400	7.5	•	75.5	76.2	70.4	0.78	2.7	5.1	2.8	2.5	25	11.3	**FD 04**	15	2600	5300	27	15.2	**FA 04**	15	5300	27	15.1
1.1	**BN 90S**	**4**	1390	7.6	•	76.5	76.2	72.2	0.77	2.70	4.6	2.6	2.2	21	12.2	**FD 14**	15	4800	8000	23	16.4	**FA 14**	15	8000	23	16.3
1.5	**BN 90LA**	**4**	1410	10.2	•	78.7	78.5	74.9	0.77	3.6	5.3	2.8	2.4	28	13.6	**FD 05**	26	3400	6000	32	19.6	**FA 05**	26	6000	32	20.3
1.85	**BN 90LB**	**4**	1390	12.7	•	78.6	78.9	77.2	0.79	4.3	5.1	2.8	2.6	30	15.1	**FD 05**	26	3200	5900	34	21.1	**FA 05**	26	5900	34	21.8
2.2	**BN 100LA**	**4**	1410	14.9	•	81.1	81.4	79.9	0.75	5.2	4.5	2.2	2.0	40	18	**FD 15**	40	2600	4700	44	25	**FA 15**	40	4700	44	25
3	**BN 100LB**	**4**	1410	20	•	82.6	83.8	83.7	0.77	6.8	5.0	2.3	2.2	54	22	**FD 15**	40	2400	4400	58	28	**FA 15**	40	4400	58	29
4	**BN 112M**	**4**	1430	27	•	84.4	84.2	81.6	0.81	8.4	5.6	2.7	2.5	98	30	**FD 06S**	60	—	1400	107	40	**FA 06S**	60	2100	107	42
5.5	**BN 132S**	**4**	1440	36	•	84.7	84.8	82.5	0.81	11.6	5.5	2.3	2.2	213	44	**FD 56**	75	—	1050	223	57	**FA 06**	75	1200	223	58
7.5	**BN 132MA**	**4**	1440	50	•	86.0	86.3	85.3	0.81	15.5	5.7	2.5	2.4	270	53	**FD 06**	100	—	950	280	66	**FA 07**	100	1000	280	71
9.2	**BN 132MB**	**4**	1440	61	•	88.4	88.6	87.5	0.81	18.8	5.9	2.7	2.5	319	59	**FD 07**	150	—	900	342	75	**FA 07**	150	900	342	77
11	**BN 160MR**	**4**	1440	73	•	87.6	87.8	86.0	0.81	22.4	6.0	2.7	2.5	360	70	**FD 07**	150	—	850	382	86	**FA 07**	150	850	382	88
15	**BN 160L**	**4**	1460	98	•	88.7	88.5	88.4	0.81	30	6.0	2.3	2.1	650	99	**FD 08**	200	—	750	725	129	**FA 08**	200	750	710	128
18.5	**BN 180M**	**4**	1460	121	•	89.3	89.5	89.2	0.81	37	6.2	2.6	2.5	790	115	**FD 08**	250	—	700	865	145	**FA 08**	250	700	850	144
22	**BN 180L**	**4**	1460	144	•	89.9	90.0	90.0	0.80	44	6.4	2.5	2.5	1250	135	**FD 09**	300	—	400	1450	175					
30	**BN 200L**	**4**	1460	196	•	91.4	91.7	91.0	0.80	59	7.1	2.7	2.8	1650	157	**FD 09**	400	—	300	1850	197					

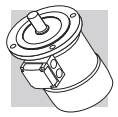
○ = n.a. • = IE1

6P — 1000 min^{-1} - S1 — 50 Hz

P_n kW			n min^{-1}	M_n Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	d.c. brake FD Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	a.c. brake FA Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.09	BN 63A	6	880	0.98	○	41.0	41.0	32.9	0.53	0.60	2.1	2.1	1.8	3.4	4.6	FD 02	3.5	9000	14000	4.0	6.3	FA 02	3.5	14000	4.0	6.1
0.12	BN 63B	6	870	1.32	○	45.0	44.0	41.8	0.60	0.64	2.1	1.9	1.7	3.7	4.9	FD 02	3.5	9000	14000	4.3	6.6	FA 02	3.5	14000	4.3	6.4
0.18	BN 71A	6	900	1.91	○	55.0	55.5	51.0	0.69	0.68	2.6	1.9	1.7	8.4	5.5	FD 03	5	8100	13500	9.5	8.2	FA 03	5.0	13500	9.5	7.9
0.25	BN 71B	6	900	2.70	○	62.0	58.5	51.4	0.71	0.82	2.6	1.9	1.7	10.9	6.7	FD 03	5	7800	13000	12	9.4	FA 03	5.0	13000	12	9.1
0.37	BN 71C	6	910	3.9	○	66.0	60.0	53.3	0.69	1.17	3.0	2.4	2.0	12.9	7.7	FD 53	7.5	5100	9500	14	10.4	FA 03	7.5	9500	14	10.1
0.37	BN 80A	6	910	3.9	○	68.0	67.4	63.3	0.68	1.15	3.2	2.2	2.0	21	9.9	FD 04	10	5200	8500	23	13.8	FA 04	10	8500	23	13.7
0.55	BN 80B	6	920	5.7	○	70.0	69.8	64.3	0.68	1.67	3.9	2.6	2.2	25	11.3	FD 04	15	4800	7200	27	15.2	FA 04	15	7200	27	15.1
0.75	BN 80C	6	920	7.8	•	70.0	70.0	64.4	0.65	2.38	3.8	2.5	2.2	28	12.2	FD 04	15	3400	6400	30	16.1	FA 04	15	6400	30	16.0
0.75	BN 90S	6	920	7.8	•	70.0	69.0	64.2	0.68	2.27	3.8	2.4	2.2	26	12.6	FD 14	15	3400	6500	28	16.8	FA 14	15	6500	28	16.7
1.1	BN 90L	6	920	11.4	•	72.9	72.6	69.1	0.69	3.2	3.9	2.3	2.0	33	15	FD 05	26	2700	5000	37	21	FA 05	26	5000	37	22
1.5	BN 100LA	6	940	15.2	•	75.2	74.2	70.3	0.72	4.0	4.1	2.1	2.0	82	22	FD 15	40	1900	4100	86	28	FA 15	40	4100	86	29
1.85	BN 100LB	6	930	19.0	•	76.6	72.8	62.6	0.73	4.8	4.6	2.1	2.0	95	24	FD 15	40	1700	3600	99	30	FA 15	40	3600	99	31
2.2	BN 112M	6	940	22	•	78.5	79.0	76.5	0.73	5.5	4.8	2.2	2.0	168	32	FD 06S	60	—	2100	177	42	FA 06S	60	2100	177	44
3	BN 132S	6	940	30	•	79.7	77.0	75.1	0.76	7.1	5.1	1.9	1.8	216	36	FD 56	75	—	1400	226	49	FA 06	75	1400	226	50
4	BN 132MA	6	950	40	•	81.4	81.5	79.5	0.77	9.2	5.5	2.0	1.8	295	45	FD 06	100	—	1200	305	58	FA 07	100	1200	318	63
5.5	BN 132MB	6	945	56	•	83.1	80.9	79.1	0.78	12.2	6.1	2.1	1.9	383	56	FD 07	150	—	1050	406	72	FA 07	150	1050	406	74
7.5	BN 160M	6	955	75	•	85.0	85.0	84.8	0.81	15.7	5.9	2.2	2.0	740	83	FD 08	170	—	900	815	112	FA 08	170	900	815	113
11	BN 160L	6	960	109	•	86.4	86.5	85.9	0.81	22.7	6.6	2.5	2.3	970	103	FD 08	200	—	800	1045	133	FA 08	200	800	1045	133
15	BN 180L	6	970	148	•	87.7	88.0	87.3	0.82	30	6.2	2.0	2.4	1550	130	FD 09	300	—	600	1750	170					
18.5	BN 200LA	6	960	184	•	88.6	88.0	87.3	0.81	37	5.9	2.0	2.3	1700	145	FD 09	400	—	450	1900	185					

○ = n.a. • = IE1



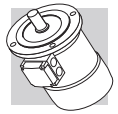


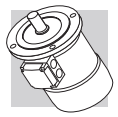
8P — 750 min-1 - S1 — 50 Hz

													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min-1	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm²	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm²	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm²	IM B5 Kg
0.09	**BN 71A**	**8**	680	1.26	47	0.59	0.47	2.3	2.4	2.3	10.9	6.7	**FD 03**	3.5	9000	16000	12.0	9.4	**FA 03**	3.5	16000	12.0	9.1
0.12	**BN 71B**	**8**	680	1.69	51	0.59	0.58	2.1	2.3	2.2	12.9	7.7	**FD 03**	5.0	9000	16000	14.0	10.4	**FA 03**	5.0	16000	14.0	10.1
0.18	**BN 80A**	**8**	690	2.49	51	0.60	0.85	2.4	2.2	2.2	15	8.2	**FD 04**	5.0	6500	11000	16.6	12.1	**FA 04**	5.0	11000	16.6	12.0
0.25	**BN 80B**	**8**	680	3.51	54	0.63	1.06	2.4	2.0	1.9	20	9.9	**FD 04**	10.0	6000	10000	22	13.8	**FA 04**	10.0	10000	23	13.7
0.37	**BN 90S**	**8**	675	5.2	58	0.60	1.53	2.6	2.3	2.1	26	12.6	**FD 14**	15.0	4800	7500	28	16.8	**FA 14**	15.0	7500	28	16.7
0.55	**BN 90L**	**8**	670	7.8	62	0.60	2.13	2.6	2.2	2.0	33	15	**FD 05**	26	4000	6400	37	21	**FA 05**	26	6400	37	22
0.75	**BN 100LA**	**8**	700	10.2	68	0.63	2.53	3.4	1.9	1.7	82	22	**FD 15**	26	2800	4800	86	28	**FA 15**	26	4800	86	29
1.1	**BN 100LB**	**8**	700	15.0	68	0.64	3.65	3.2	1.7	1.7	95	24	**FD 15**	40	2500	4000	99	30	**FA 15**	40	4000	99	31
1.5	**BN 112M**	**8**	710	20.2	71	0.66	4.6	3.7	1.8	1.9	168	32	**FD 06S**	60	—	3000	177	42	**FA 06S**	60	3000	177	44
2.2	**BN 132S**	**8**	710	29.6	75	0.66	6.4	3.8	1.8	2.0	295	45	**FD 56**	75	—	2300	305	58	**FA 06**	75	2300	305	56
3	**BN 132MA**	**8**	710	40.4	76	0.69	8.3	3.9	1.6	1.8	370	53	**FD 06**	100	—	1900	394	69	**FA 07**	100	1900	406	74

2/4P — 3000/1500 min^{-1} - S1 — 50 Hz

P_n kW			n min^{-1}	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	d.c. brake FD Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	a.c. brake FA Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.20	**BN 63B**	**2**	2700	0.71	55	0.82	0.64	3.5	2.1	1.9	2.9	4.4	**FD 02**	3.5	2200	2600	3.5	6.1	**FA 02**	3.5	2600	3.5	5.9
0.15		**4**	1350	1.06	49	0.67	0.66	2.6	1.8	1.7					4000	5100					5100		
0.28	**BN 71A**	**2**	2700	0.99	56	0.82	0.88	2.9	1.9	1.7	4.7	4.4	**FD 03**	3.5	2100	2400	5.8	7.1	**FA 03**	3.5	2400	5.8	6.8
0.20		**4**	1370	1.39	59	0.72	0.68	3.1	1.8	1.7					3800	4800					4800		
0.37	**BN 71B**	**2**	2740	1.29	56	0.82	1.16	3.5	1.8	1.8	5.8	5.1	**FD 03**	5.0	1400	2100	6.9	7.8	**FA 03**	5.0	2100	6.9	7.5
0.25		**4**	1390	1.72	60	0.73	0.82	3.3	2.0	1.9					2900	4200					4200		
0.45	**BN 71C**	**2**	2780	1.55	63	0.85	1.21	3.8	1.8	1.8	6.9	5.9	**FD 03**	5.0	1400	2100	8.0	8.6	**FA 03**	5.0	2100	8.0	8.3
0.30		**4**	1400	2.0	63	0.73	0.94	3.6	2.0	1.9					2900	4200					4200		
0.55	**BN 80A**	**2**	2800	1.9	63	0.85	1.48	3.9	1.7	1.7	15	8.2	**FD 04**	5.0	1600	2300	17	12.1	**FA 04**	5.0	2300	16.6	12.0
0.37		**4**	1400	2.5	67	0.79	1.01	4.1	1.8	1.9					3000	4000					4000		
0.75	**BN 80B**	**2**	2780	2.6	65	0.85	1.96	3.8	1.9	1.8	20	9.9	**FD 04**	10	1400	1600	22	13.8	**FA 04**	10	1600	22	13.7
0.55		**4**	1400	3.8	68	0.81	1.44	3.9	1.7	1.7					2700	3600					3600		
1.1	**BN 90S**	**2**	2790	3.8	71	0.82	2.73	4.7	2.3	2.0	21	12.2	**FD 14**	10	1500	1600	23	16.4	**FA 14**	10	1600	23	16.3
0.75		**4**	1390	5.2	66	0.79	2.08	4.6	2.4	2.2					2300	2800					2800		
1.5	**BN 90L**	**2**	2780	5.2	70	0.85	3.64	4.5	2.4	2.1	28	14.0	**FD 05**	26	1050	1200	32	20	**FA 05**	26	1200	32	21
1.1		**4**	1390	7.6	73	0.81	2.69	4.7	2.5	2.2					1600	2000					2000		
2.2	**BN 100LA**	**2**	2800	7.5	72	0.85	5.2	4.5	2.0	1.9	40	18.3	**FD 15**	26	600	900	44	25	**FA 15**	26	900	44	25
1.5		**4**	1410	10.2	73	0.79	3.8	4.7	2.0	2.0					1300	2300					2300		
3.5	**BN 100LB**	**2**	2850	11.7	80	0.84	7.5	5.4	2.2	2.1	61	25	**FD 15**	40	500	900	65	31	**FA 15**	40	900	65	32
2.5		**4**	1420	16.8	82	0.80	5.5	5.2	2.2	2.2					1000	2100					2100		
4	**BN 112M**	**2**	2880	13.3	79	0.83	8.8	6.1	2.4	2.0	98	30	**FD 06S**	60	—	700	107	40	**FA 06S**	60	700	107	42
3.3		**4**	1420	22.2	80	0.80	7.4	5.1	2.1	2.0					—	1200					1200		
5.5	**BN 132S**	**2**	2890	18.2	80	0.87	11.4	5.9	2.4	2.0	213	44	**FD 56**	75	—	350	223	57	**FA 06**	75	350	223	58
4.4		**4**	1440	29	82	0.84	9.2	5.3	2.2	2.0					—	900					900		
7.5	**BN 132MA**	**2**	2900	25	82	0.87	15.2	6.5	2.4	2.0	270	53	**FD 06**	100	—	350	280	66	**FA 07**	100	350	293	71
6		**4**	1430	40	84	0.85	12.1	5.8	2.3	2.1					—	900					900		
9.2	**BN 132MB**	**2**	2920	30	83	0.86	18.6	6.0	2.6	2.2	319	59	**FD 07**	150	—	300	342	75	**FA 07**	150	300	342	77
7.3		**4**	1440	48	85	0.85	14.6	5.5	2.3	2.1					—	800					800		



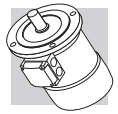


2/6P — 3000/1000 min-1 - S3 60/40% — 50 Hz

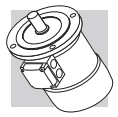
													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min-1	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm²	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm²	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm²	IM B5 Kg
0.25	**BN 71A**	**2**	2850	0.84	60	0.82	0.73	4.3	1.9	1.8	6.9	5.9	**FD 03**	1.75	1500	1700	8.0	8.6	**FA 03**	2.5	1700	8.0	8.3
0.08		**6**	910	0.84	43	0.70	0.38	2.1	1.4	1.5					10000	13000					13000		
0.37	**BN 71B**	**2**	2880	1.23	62	0.80	1.08	4.4	1.9	1.8	9.1	7.3	**FD 03**	3.5	1000	1300	10.2	10.0	**FA 03**	3.5	1300	10.2	9.7
0.12		**6**	900	1.27	44	0.73	0.54	2.4	1.4	1.5					9000	11000					11000		
0.55	**BN 80A**	**2**	2800	1.88	63	0.86	1.47	4.5	1.9	1.7	20	9.9	**FD 04**	5.0	1500	1800	22	13.8	**FA 04**	5.0	1800	22	13.7
0.18		**6**	930	1.85	52	0.65	0.77	3.3	2.0	1.9					4100	6300					6300		
0.75	**BN 80B**	**2**	2800	2.6	66	0.87	1.89	4.3	1.8	1.6	25	11.3	**FD 04**	5.0	1700	1900	27	15.2	**FA 04**	5.0	1900	27	15.1
0.25		**6**	930	2.6	54	0.67	1.00	3.2	1.7	1.8					3800	6000					6000		
1.10	**BN 90L**	**2**	2860	3.7	67	0.84	2.82	4.7	2.1	1.9	28	14.0	**FD 05**	13	1400	1600	32	20	**FA 05**	13	1600	32	21
0.37		**6**	920	3.8	59	0.71	1.27	3.3	1.6	1.6					3400	5200					5200		
1.5	**BN 100LA**	**2**	2880	5	73	0.84	3.53	5.1	1.9	2.0	40	18.3	**FD 15**	13	1000	1200	44	24	**FA 15**	13	1200	44	25
0.55		**6**	940	5.6	64	0.67	1.85	3.5	1.7	1.8					2900	4000					4000		
2.2	**BN 100LB**	**2**	2900	7.2	77	0.85	4.9	5.9	2.0	2.0	61	25	**FD 15**	26	700	900	65	31	**FA 15**	26	900	65	32
0.75		**6**	950	7.5	67	0.64	2.5	3.3	1.9	1.8					2100	3000					3000		
3	**BN 112M**	**2**	2900	9.9	78	0.87	6.4	6.3	2.0	2.1	98	30	**FD 06S**	40	—	1000	107	40	**FA 06S**	40	1000	107	32
1.1		**6**	950	11.1	72	0.64	3.4	3.9	1.8	1.8					—	2600					2600		
4.5	**BN 132S**	**2**	2910	14.8	78	0.84	9.9	5.8	1.9	1.8	213	44	**FD 56**	37	—	500	223	57	**FA 06**	37	500	223	58
1.5		**6**	960	14.9	74	0.67	4.4	4.2	1.9	2.0					—	2100					2100		
5.5	**BN 132M**	**2**	2920	18.0	78	0.87	11.7	6.2	2.1	1.9	270	53	**FD 56**	50	—	400	280	66	**FA 06**	50	400	280	67
2.2		**6**	960	22	77	0.71	5.8	4.3	2.1	2.0					—	1900					1900		

2/8P — 3000/750 min^{-1} - S3 60/40% — 50 Hz

													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min^{-1}	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.25	**BN 71A**	**2**	2790	0.86	61	0.87	0.68	3.9	1.8	1.9	10.9	6.7	**FD 03**	1.75	1300	1400	12	9.4	**FA 03**	2.5	1400	12	9.1
0.06		**8**	680	0.84	31	0.61	0.46	2.0	1.8	1.9					10000	13000					13000		
0.37	**BN 71B**	**2**	2800	1.26	63	0.86	0.99	3.9	1.8	1.9	12.9	7.7	**FD 03**	3.5	1200	1300	14	10.4	**FA 03**	3.5	1300	14	10.1
0.09		**8**	670	1.28	34	0.75	0.51	1.8	1.4	1.5					9500	13000					13000		
0.55	**BN 80A**	**2**	2830	1.86	66	0.86	1.40	4.4	2.1	2.0	20	9.9	**FD 04**	5.0	1500	1800	22	13.8	**FA 04**	5.0	1800	22	13.7
0.13		**8**	690	1.80	41	0.64	0.72	2.3	1.6	1.7					5600	8000					8000		
0.75	**BN 80B**	**2**	2800	2.6	68	0.88	1.81	4.6	2.1	2.0	25	11.3	**FD 04**	10	1700	1900	27	15.2	**FA 04**	10	1900	27	15.1
0.18		**8**	690	2.5	43	0.66	0.92	2.3	1.6	1.7					4800	7300					7300		
1.10	**BN 90L**	**2**	2830	3.7	63	0.84	3.00	4.5	2.1	1.9	28	14.0	**FD 05**	13	1400	1600	32	20	**FA 05**	13	1600	32	21
0.28		**8**	690	3.9	48	0.63	1.34	2.4	1.8	1.9					3400	5100					5100		
1.5	**BN 100LA**	**2**	2880	5.0	69	0.85	3.69	4.7	1.9	1.8	40	18.3	**FD 15**	13	1000	1200	44	25	**FA 15**	13	1200	44	25
0.37		**8**	690	5.1	46	0.63	1.84	2.1	1.6	1.6					3300	5000					5000		
2.4	**BN 100LB**	**2**	2900	7.9	75	0.82	5.6	5.4	2.1	2.0	61	25	**FD 15**	26	550	700	65	31	**FA 15**	26	700	65	32
0.55		**8**	700	7.5	54	0.58	2.5	2.6	1.8	1.8					2000	3500					3500		
3	**BN 112M**	**2**	2900	9.9	76	0.87	6.5	6.3	2.1	1.9	98	30	**FD 06S**	40	—	900	107	40	**FA 06S**	40	900	107	42
0.75		**8**	690	10.4	60	0.65	2.8	2.5	1.6	1.6					—	2900					2900		
4	**BN 132S**	**2**	2870	13.3	73	0.84	9.4	5.6	2.3	2.4	213	44	**FD 56**	37	—	500	223	57	**FA 06**	37	500	223	58
1		**8**	690	13.8	66	0.62	3.5	2.9	1.9	1.8					—	3500					3500		
5.5	**BN 132M**	**2**	2870	18.3	75	0.84	12.6	6.1	2.4	2.5	270	53	**FD 06**	50	—	400	280	66	**FA 06**	50	400	280	67
1.5		**8**	690	21	68	0.63	5.1	2.9	1.9	1.9					—	2400					2400		



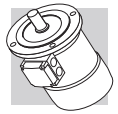
2/12P — 3000/500 min^{-1} - S3 60/40% — 50 Hz

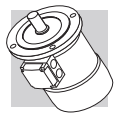


													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min^{-1}	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.55	**BN 80B**	**2**	2820	1.86	64	0.89	1.39	4.2	1.6	1.7	25	11.3	**FD 04**	5.0	1000	1300	27	15.2	**FA 04**	5.0	1300	27	15.1
0.09		**12**	430	2.0	30	0.63	0.69	1.8	1.9	1.8					8000	12000					12000		
0.75	**BN 90L**	**2**	2790	2.6	56	0.89	2.17	4.2	1.8	1.7	26	12.6	**FD 05**	13	1000	1150	30	18.6	**FA 05**	13	1150	30	19.3
0.12		**12**	430	2.7	26	0.63	1.06	1.7	1.4	1.6					4600	6300					6300		
1.10	**BN 100LA**	**2**	2850	3.7	65	0.85	2.87	4.5	1.6	1.8	40	18.3	**FD 15**	13	700	900	44	25	**FA 15**	13	900	44	25
0.18		**12**	430	4.0	26	0.54	1.85	1.5	1.3	1.5					4000	6000					6000		
1.5	**BN 100LB**	**2**	2900	4.9	67	0.86	3.76	5.6	1.9	1.9	54	22	**FD 15**	13	700	900	58	28	**FA 15**	13	900	58	29
0.25		**12**	440	5.4	36	0.46	2.18	1.8	1.7	1.8					3800	5000					5000		
2	**BN 112M**	**2**	2900	6.6	74	0.88	4.43	6.5	2.1	2.0	98	30	**FD 06S**	20	—	800	107	40	**FA 06S**	20	800	107	42
0.3		**12**	460	6.2	46	0.43	2.19	2.0	2.1	2.0					—	3400					3400		
3	**BN 132S**	**2**	2920	9.8	74	0.87	6.7	6.8	2.3	1.9	213	44	**FD 56**	37	—	450	223	57	**FA 06**	37	450	223	58
0.5		**12**	470	10.2	51	0.43	3.3	2.0	1.7	1.6					—	3000					3000		
4	**BN 132M**	**2**	2920	13.1	75	0.89	8.6	5.9	2.4	2.3	270	53	**FD 56**	37	—	400	280	66	**FA 06**	37	400	280	67
0.7		**12**	460	14.5	53	0.44	4.3	1.9	1.7	1.6					—	2800					2800		

4/6P — 1500/1000 min^{-1} - S1 — 50 Hz

P_n kW			n min^{-1}	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	d.c. brake FD Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	a.c. brake FA Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.22	BN 71B	4	1410	1.5	64	0.74	0.67	3.9	1.8	1.9	9.1	7.3	FD 03	3.5	2500	3500	10.2	10.0	FA 03	3.5	3500	10.2	9.7
0.13		6	920	1.4	43	0.67	0.65	2.3	1.6	1.7					5000	9000					9000		
0.30	BN 80A	4	1410	2.0	61	0.82	0.87	3.5	1.3	1.5	15	8.2	FD 04	5.0	2500	3100	16.6	12.1	FA 04	5.0	3100	16.6	12.0
0.20		6	930	2.1	54	0.66	0.81	3.2	1.9	2.0					4000	6000					6000		
0.40	BN 80B	4	1430	2.7	63	0.75	1.22	3.9	1.8	1.8	20	9.9	FD 04	10	1800	2300	22	13.8	FA 04	10	2300	22	13.7
0.26		6	930	2.7	55	0.70	0.97	2.7	1.5	1.6					3600	5500					5500		
0.55	BN 90S	4	1420	3.7	70	0.78	1.45	4.5	2.0	1.9	21	12.2	FD 14	10	1500	2100	23	16.1	FA 14	10	2100	23	16.3
0.33		6	930	3.4	62	0.70	1.10	3.7	2.3	2.0					2500	4100					4100		
0.75	BN 90L	4	1420	5.0	74	0.78	1.88	4.3	1.9	1.8	28	14	FD 05	13	1400	2000	32	20	FA 05	13	2000	32	21
0.45		6	920	4.7	66	0.71	1.39	3.3	2.0	1.9					2300	3600					3600		
1.1	BN 100LA	4	1450	7.2	74	0.79	2.72	5.0	1.7	1.9	82	22	FD 15	26	1400	2000	86	28	FA 15	26	2000	86	29
0.8		6	950	8.0	65	0.69	2.57	4.1	1.9	2.1					2100	3300					3300		
1.5	BN 100LB	4	1450	9.9	75	0.79	3.65	5.1	1.7	1.9	95	25	FD 15	26	1300	1800	99	31	FA 15	26	1800	99	32
1.1		6	950	11.1	72	0.68	3.24	4.3	2.0	2.1					2000	3000					3000		
2.3	BN 112M	4	1450	15.2	75	0.78	5.7	5.2	1.8	1.9	168	32	FD 06S	40	—	1600	177	42	FA 06S	40	1600	177	44
1.5		6	960	14.9	73	0.72	4.1	4.9	2.0	2.0					—	2400					2400		
3.1	BN 132S	4	1460	20	83	0.83	6.5	5.9	2.1	2.0	213	44	FD 56	37	—	1200	223	57	FA 06	37	1200	223	58
2		6	960	20	77	0.75	4.9	4.5	2.1	2.1					—	1900					1900		
4.2	BN 132MA	4	1460	27	84	0.82	8.8	5.9	2.1	2.2	270	53	FD 06	50	—	900	280	66	FA 06	50	900	280	67
2.6		6	960	26	79	0.72	6.6	4.3	2.0	2.0					—	1500					1500		





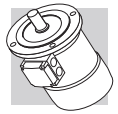
4/8P — 1500/750 min^{-1} - S1 — 50 Hz

													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min^{-1}	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.37	**BN 80A**	**4**	1400	2.5	63	0.82	1.03	3.3	1.4	1.4	15	8.2	**FD 04**	10	2300	3500	16.6	12.1	**FA 04**	10	3500	16.6	12.0
0.18		**8**	690	2.5	44	0.60	0.98	2.2	1.5	1.6					4500	7000					7000		
0.55	**BN 80B**	**4**	1390	3.8	65	0.86	1.42	3.8	1.7	1.6	20	9.9	**FD 04**	10	2200	2900	22	13.8	**FA 04**	10	2900	22	13.7
0.30		**8**	670	4.3	49	0.65	1.36	2.3	1.7	1.8					4200	6500					6500		
0.65	**BN 90S**	**4**	1390	4.5	73	0.85	1.51	4.0	1.9	1.9	28	13.6	**FD 14**	15	2300	2800	30	17.8	**FA 14**	15	2800	30	17.7
0.35		**8**	690	4.8	49	0.57	1.81	2.5	2.1	2.2					3500	6000					6000		
0.9	**BN 90L**	**4**	1370	6.3	73	0.87	2.05	3.8	1.8	1.8	30	15.1	**FD 05**	26	1700	2100	34	21	**FA 05**	26	2100	34	22
0.5		**8**	670	7.1	57	0.62	2.04	2.4	2.1	2.0					2500	4200					4200		
1.30	**BN 100LA**	**4**	1420	8.7	72	0.83	3.14	4.3	1.7	1.8	82	22	**FD 15**	40	1300	1700	86	28	**FA 15**	40	1700	86	29
0.70		**8**	700	9.6	58	0.64	2.72	2.8	1.8	1.8					2000	3400					3400		
1.8	**BN 100LB**	**4**	1420	12.1	69	0.87	4.3	4.2	1.6	1.7	95	25	**FD 15**	40	1200	1700	99	31	**FA 15**	40	1700	99	32
0.9		**8**	700	12.3	62	0.63	3.3	3.2	1.7	1.8					1600	2600					2600		
2.2	**BN 112M**	**4**	1440	14.6	77	0.85	4.9	5.3	1.8	1.8	168	32	**FD 06S**	60	—	1200	177	42	**FA 06S**	60	1200	177	43
1.2		**8**	710	16.1	70	0.63	3.9	3.3	1.9	1.8					—	2000					2000		
3.6	**BN 132S**	**4**	1440	24	80	0.82	7.9	6.5	2.1	1.9	295	45	**FD 56**	75	—	1000	305	58	**FA 06**	75	1000	305	59
1.8		**8**	720	24	72	0.55	6.6	4.6	1.9	2.0					—	1400					1400		
4.6	**BN 132M**	**4**	1450	30	81	0.83	9.9	6.5	2.2	1.9	383	56	**FD 06**	100	—	1000	393	69	**FA 07**	100	1000	406	74
2.3		**8**	720	31	73	0.54	8.4	4.4	2.3	2.0					—	1300					1300		

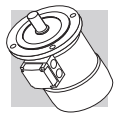
2P — 3000 min^{-1} - S1 — 50 Hz

P_n kW			n min^{-1}	M_n Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	d.c. brake FD Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	a.c. brake FA Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.18	**M 05A**	**2**	2730	0.63	○	59.9	56.9	51.9	0.77	0.56	3.0	2.1	2.0	2.0	3.2	**FD 02**	1.75	3900	4800	2.6	4.9	**FA 02**	1.75	4800	2.6	4.7
0.25	**M 05B**	**2**	2740	0.87	○	66.0	64.8	64.8	0.76	0.72	3.3	2.3	2.3	2.3	3.6	**FD 02**	1.75	3900	4800	3.0	5.3	**FA 02**	1.75	4800	3.0	5.1
0.37	**M 05C**	**2**	2800	1.26	○	69.1	66.8	66.8	0.78	0.99	3.9	2.6	2.6	3.3	4.8	**FD 02**	3.5	3600	4500	3.9	6.5	**FA 02**	3.5	4500	3.9	6.3
0.55	**M 1SD**	**2**	2820	1.86	○	76.0	75.8	74.8	0.76	1.37	5.0	2.9	2.8	4.1	5.8	**FD 03**	5	2900	4200	5.3	8.5	**FA 03**	5	4200	5.3	8.2
0.75	**M 1LA**	**2**	2810	2.6	○	76.6	76.2	76.2	0.76	1.86	5.1	3.1	2.8	5.0	6.9	**FD 03**	5	1900	3300	6.1	9.6	**FA 03**	5	3300	6.1	9.3
1.1	**M 2SA**	**2**	2800	3.8	•	76.4	76.2	75.0	0.81	2.57	4.8	2.8	2.4	9.0	8.8	**FD 04**	10	1500	3000	10.6	11.9	**FA 04**	10	3000	10.6	12.6
1.5	**M 2SB**	**2**	2800	5.1	•	79.1	79.5	77.2	0.81	3.4	4.9	2.7	2.4	11.4	10.6	**FD 04**	15	1300	2600	13.0	9.9	**FA 04**	15	2600	13.0	14.4
2.2	**M 3SA**	**2**	2880	7.3	•	82.7	82.1	81.0	0.80	4.8	6.3	2.9	2.7	24	15.5	**FD 15**	26	1100	2400	28	22	**FA 15**	26	2400	28	23
3	**M 3LA**	**2**	2860	10.0	•	81.5	81.3	77.4	0.79	6.7	5.6	2.6	2.2	31	18.7	**FD 15**	26	700	1600	35	25	**FA 15**	26	1600	35	26
4	**M 3LB**	**2**	2870	13.3	•	83.1	83.0	77.8	0.80	8.7	5.8	2.7	2.5	39	22	**FD 15**	40	450	900	43	28	**FA 15**	40	900	43	29
5.5	**M 4SA**	**2**	2890	18.2	•	84.7	84.5	81.2	0.84	11.2	5.9	2.6	2.2	101	33	**FD 06**	50	—	600	112	46	**FA 06**	50	600	112	47
7.5	**M 4SB**	**2**	2900	25	•	86.5	86.3	84.4	0.85	14.7	6.4	2.6	2.2	145	40	**FD 06**	50	—	550	154	53	**FA 06**	50	550	154	54
9.2	**M 4LA**	**2**	2930	30	•	87.0	86.5	83.6	0.86	17.7	6.7	2.8	2.3	178	51	**FD 56**	75	—	430	189	64	**FA 06**	75	430	189	65
11	**M 4LC**	**2**	2920	36	•	87.6	87.0	86.0	0.88	20.6	6.9	2.9	2.5	210	60											
15	**M 5SB**	**2**	2930	49	•	89.6	89.4	88.0	0.86	28.1	7.1	2.6	2.3	340	70											
18.5	**M 5SC**	**2**	2930	60	•	90.4	90.1	89.0	0.86	34	7.6	2.7	2.3	420	83											
22	**M 5LA**	**2**	2930	72	•	89.9	89.7	89.5	0.88	40	7.8	2.6	2.4	490	95											

○ = n.a. • = IE1



4P — 1500 min^{-1} - S1 — 50 Hz



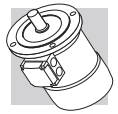
															d.c. brake						a.c. brake				
															FD						FA				
P_n kW		n min^{-1}	M_n Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.09	**M 0B 4**	1350	0.64	○	51.7	47.6	42.9	0.60	0.42	2.6	2.5	2.4	1.5	2.9											
0.12	**M 05A 4**	1350	0.85	○	59.8	56.2	47.0	0.62	0.47	2.6	1.9	1.8	2.0	3.2	**FD 02**	1.75	10000	13000	2.6	4.9	**FA 02**	1.75	13000	2.6	4.7
0.18	**M 05B 4**	1320	1.30	○	54.8	52.9	52.5	0.67	0.71	2.6	2.2	2.0	2.3	3.6	**FD 02**	3.5	10000	13000	3.0	5.3	**FA 02**	3.5	13000	3.0	5.1
0.25	**M 05C 4**	1340	1.78	○	65.3	65.0	57.9	0.69	0.80	2.7	2.1	1.9	3.3	4.8	**FD 02**	3.5	7800	10000	3.9	6.5	**FA 02**	3.5	10000	3.9	6.3
0.37	**M 1SD 4**	1370	2.6	○	66.8	66.7	63.0	0.76	1.05	3.7	2.0	1.9	6.9	5.5	**FD 03**	5	6000	9400	8.0	8.2	**FA 03**	5	9400	8.0	7.9
0.55	**M 1LA 4**	1380	3.8	○	69.0	68.9	68.8	0.74	1.55	4.1	2.3	2.3	9.1	6.9	**FD 53**	7.5	4300	8700	10.2	9.6	**FA 03**	7.5	8700	10.2	9.3
0.75	**M 2SA 4**	1400	5.1	•	75.0	74.5	69.3	0.78	1.85	4.9	2.7	2.5	20	9.2	**FD 04**	15	4100	7800	22	13.1	**FA 04**	15	7800	22	13.0
1.1	**M 2SB 4**	1400	7.5	•	76.4	76.2	70.4	0.78	2.66	5.1	2.8	2.5	25	10.6	**FD 04**	15	2600	5300	27	14.5	**FA 04**	15	5300	27	14.4
1.5	**M 3SA 4**	1410	10.2	•	79.6	80.5	79.3	0.77	3.5	4.6	2.1	2.1	34	15.5	**FD 15**	26	2800	4900	38	22	**FA 15**	26	4900	38	23
2.2	**M 3LA 4**	1410	14.9	•	81.1	81.4	79.9	0.75	5.2	4.5	2.2	2.0	40	17	**FD 15**	40	2600	4700	44	24	**FA 15**	40	4700	44	24
3	**M 3LB 4**	1410	20	•	82.6	83.8	83.7	0.77	6.8	5.0	2.3	2.2	54	21	**FD 15**	40	2400	4400	58	27	**FA 15**	40	4400	58	28
4	**M 3LC 4**	1400	27	○	82.7	83.1	80.5	0.78	9.0	4.7	2.3	2.2	61	23	**FD 55**	55	—	1300	65	29	**FA 15**	40	1300	65	30
5.5	**M 4SA 4**	1440	36	•	84.7	84.8	82.5	0.81	11.6	5.5	2.3	2.2	213	42	**FD 56**	75	—	1050	223	55	**FA 06**	75	1050	223	56
7.5	**M 4LA 4**	1440	50	•	86.0	86.3	85.3	0.81	15.5	5.7	2.5	2.4	270	51	**FD 06**	100	—	950	280	64	**FA 07**	100	950	280	65
9.2	**M 4LB 4**	1440	61	•	88.4	88.6	87.5	0.81	18.8	5.9	2.7	2.5	319	57	**FD 07**	150	—	900	342	73	**FA 07**	150	900	342	75
11	**M 4LC 4**	1440	73	•	87.6	87.8	86.0	0.81	22.4	6.0	2.7	2.5	360	65	**FD 07**	150	—	850	382	81	**FA 07**	150	850	382	83
15	**M 5SB 4**	1460	98	•	88.7	88.5	88.4	0.81	30.1	6.0	2.3	2.1	650	85	**FD 08**	200	—	750	725	115	**FA 08**	200	750	710	114
18.5	**M 5LA 4**	1460	121	•	89.3	89.5	89.2	0.81	37	6.2	2.6	2.5	790	101	**FD 08**	250	—	700	865	131	**FA 08**	250	700	850	130

○ = n.a. • = IE1

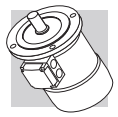
6P — 1000 min^{-1} - S1 — 50 Hz

P_n kW			n min^{-1}	M_n Nm	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	d.c. brake FD Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	a.c. brake FA Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.09	**M 05A**	**6**	880	0.98	○	41.0	41.0	32.9	0.53	0.60	2.1	2.1	1.8	3.4	4.3	**FD 02**	3.5	9000	14000	4.0	6.0	**FA 02**	3.5	14000	4.0	5.8
0.12	**M 05B**	**6**	870	1.32	○	45.0	44.0	41.8	0.60	0.64	2.1	1.9	1.7	3.7	4.6	**FD 02**	3.5	9000	14000	4.3	6.3	**FA 02**	3.5	14000	4.3	6.1
0.18	**M 1SC**	**6**	900	1.91	○	55.0	55.5	51.0	0.69	0.68	2.6	1.9	1.7	8.4	5.1	**FD 03**	5	8100	13500	9.5	7.8	**FA 03**	5	13500	9.5	7.5
0.25	**M 1SD**	**6**	900	2.7	○	62.0	58.5	51.4	0.71	0.82	2.6	1.9	1.7	10.9	6.3	**FD 03**	5	7800	13000	12	9.0	**FA 03**	5	13000	12	8.7
0.37	**M 1LA**	**6**	910	3.9	○	66.0	60.0	53.3	0.69	1.17	3.0	2.4	2.0	12.9	7.3	**FD 53**	7.5	5100	9500	14	10.0	**FA 03**	7.5	9500	14	9.7
0.55	**M 2SA**	**6**	920	5.7	○	70.0	69.8	64.3	0.68	1.67	3.9	2.6	2.2	25	10.6	**FD 04**	15	4800	7200	27	14.5	**FA 04**	15	7200	27	14.4
0.75	**M 2SB**	**6**	920	7.8	•	70.0	70.0	64.4	0.65	2.38	3.8	2.5	2.2	28	11.5	**FD 04**	15	3400	6400	30	15.4	**FA 04**	15	6400	30	15.3
1.1	**M 3SA**	**6**	920	11.4	•	75.0	74.0	72.0	0.72	2.9	4.3	2.0	1.8	33	17	**FD 15**	26	2700	5000	37	23	**FA 15**	26	5000	37	24
1.5	**M 3LA**	**6**	940	15.2	•	75.2	74.2	70.3	0.72	4.0	4.1	2.1	2.0	82	21	**FD 15**	40	1900	4100	86	27	**FA 15**	40	4100	86	28
1.85	**M 3LB**	**6**	930	19.0	•	76.6	72.8	62.6	0.73	4.8	4.6	2.1	2.0	95	23	**FD 15**	40	1700	3600	99	29	**FA 15**	40	3600	99	30
2.2	**M 3LC**	**6**	930	23	•	77.7	76.8	72.4	0.71	5.8	4.7	2.3	2.1	95	23	**FD 55**	55	—	1900	99	29	**FA 15**	40	1900	99	30
3	**M 4SA**	**6**	940	30	•	79.7	77.0	75.1	0.76	7.1	5.1	1.9	1.8	216	34	**FD 56**	75	—	1400	226	47	**FA 06**	75	1400	226	48
4	**M 4LA**	**6**	950	40	•	81.4	81.5	79.5	0.77	9.2	5.5	2.0	1.8	295	43	**FD 06**	100	—	1200	305	56	**FA 07**	100	1200	305	57
5.5	**M 4LB**	**6**	945	56	•	83.1	80.9	79.1	0.78	12.2	6.1	2.1	1.9	383	54	**FD 07**	150	—	1050	406	70	**FA 07**	150	1050	406	72
7.5	**M 5SA**	**6**	955	75	•	85.0	85.0	84.8	0.81	15.7	5.9	2.2	2.0	740	69	**FD 08**	170	—	900	815	98	**FA 08**	170	900	800	98
11	**M 5SB**	**6**	960	109	•	86.4	86.5	85.9	0.81	22.7	6.6	2.5	2.3	970	89	**FD 08**	200	—	800	1045	119	**FA 08**	200	800	1030	118

○ = n.a. • = IE1



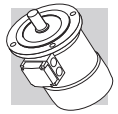
2/4P — 3000/1500 min-1 - S1 — 50 Hz



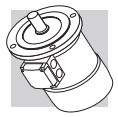
													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min-1	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm²	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm²	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm²	IM B5 Kg
0.20	**M 05A**	**2**	2700	0.71	55	0.82	0.64	3.5	2.1	1.9	2.9	4.1	**FD 02**	3.5	2200	2600	3.5	5.8	**FA 02**	3.5	2600	3.5	5.6
0.15		**4**	1350	1.06	49	0.67	0.66	2.6	1.8	1.7					4000	5100					5100		
0.28	**M 1SB**	**2**	2700	0.99	56	0.82	0.88	2.9	1.9	1.7	4.7	4.0	**FD 03**	3.5	2100	2400	5.8	6.7	**FA 03**	3.5	2400	5.8	6.4
0.20		**4**	1370	1.39	59	0.68	1.02	3.1	1.8	1.7					3800	4800					4800		
0.37	**M 1SC**	**2**	2740	1.29	56	0.82	1.16	3.5	1.8	1.8	5.8	4.7	**FD 03**	5	1400	2100	6.9	7.4	**FA 03**	5	2100	6.9	7.1
0.25		**4**	1390	1.72	60	0.73	0.82	3.3	2.0	1.9					2900	4200					4200		
0.45	**M 1SD**	**2**	2780	1.55	63	0.85	1.21	3.8	1.8	1.8	6.9	5.5	**FD 03**	5	1400	2100	8.0	8.2	**FA 03**	5	2100	8.0	7.9
0.30		**4**	1400	2.0	63	0.74	0.93	3.8	2.1	1.9					2900	4200					4200		
0.55	**M 1LA**	**2**	2800	1.9	73	0.79	1.38	4.2	2.0	1.8	9.1	6.9	**FD 03**	5	1600	2200	10.2	9.6	**FA 03**	5	2200	10.2	9.3
0.37		**4**	1400	2.5	68	0.72	1.09	3.9	2.2	2.0					3300	4600					4600		
0.75	**M 2SA**	**2**	2780	2.6	65	0.85	1.96	3.8	1.9	1.8	20	9.2	**FD 04**	10	1400	1600	22	13.1	**FA 04**	10	1600	22	13.0
0.55		**4**	1400	3.8	68	0.81	1.44	3.9	1.7	1.7					2700	3600					3600		
1.1	**M 2SB**	**2**	2730	3.9	65	0.86	2.84	3.9	2.0	1.9	25	10.7	**FD 04**	10	1200	1500	27	14.5	**FA 04**	10	1500	27	14.5
0.75		**4**	1410	5.1	75	0.81	1.78	4.5	2.1	2.0					2300	3100					3100		
1.5	**M 3SA**	**2**	2830	5.1	74	0.83	3.5	4.7	2.1	2.0	34	15.5	**FD 15**	26	700	1000	38	22	**FA 15**	26	1000	38	23
1.1		**4**	1420	7.4	77	0.78	2.6	4.3	2.1	2.0					1600	2600					2600		
2.2	**M 3LA**	**2**	2800	7.5	72	0.85	5.2	4.5	2.0	1.9	40	17	**FD 15**	26	600	900	44	24	**FA 15**	26	900	44	24
1.5		**4**	1410	10.2	73	0.79	3.8	4.7	2.0	2.0					1300	2300					2300		
3.5	**M 3LB**	**2**	2850	11.7	80	0.84	7.5	5.4	2.2	2.1	61	23	**FD 15**	40	500	900	65	29	**FA 15**	40	900	65	30
2.5		**4**	1420	16.8	82	0.80	5.5	5.2	2.2	2.2					1000	2100					2100		
4.8	**M 4 SA**	**2**	2900	15.8	81	0.88	9.7	6.0	2.0	1.9	213	42	**FD 06**	50	—	400	233	55	**FA 06**	50	400	233	56
3.8		**4**	1430	25.4	81	0.84	8.1	5.2	2.1	2.1					—	950					950		
5.5	**M 4SB**	**2**	2890	18.2	80	0.87	11.4	5.9	2.4	2.0	213	42	**FD 56**	75	—	350	223	55	**FA 06**	75	350	223	56
4.4		**4**	1440	29	82	0.84	9.2	5.3	2.2	2.0					—	900					900		
7.5	**M 4LA**	**2**	2900	25	82	0.87	15.2	6.5	2.4	2.0	270	51	**FD 06**	100	—	350	280	64	**FA 07**	100	350	280	65
6		**4**	1430	40	84	0.85	12.1	5.8	2.3	2.1					—	950					950		
9.2	**M 4LB**	**2**	2920	30	83	0.86	18.6	6.0	2.6	2.2	319	57	**FD 07**	150	—	300	342	73	**FA 07**	150	300	342	75
7.3		**4**	1440	48	85	0.85	14.6	5.5	2.3	2.1					—	800					800		

2/6P — 3000/1000 min^{-1} - S3 60/40% — 50 Hz

													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min^{-1}	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.25	**M 1SA**	**2**	2850	0.84	60	0.82	0.73	4.3	1.9	1.8	6.9	5.5	**FD 03**	1.75	1500	1700	8.0	8.2	**FA 03**	1.75	1700	8.0	7.9
0.08		**6**	910	0.84	43	0.70	0.38	2.1	1.4	1.5					10000	13000					13000		
0.37	**M 1LA**	**2**	2880	1.23	62	0.80	1.08	4.4	1.9	1.8	9.1	6.9	**FD 03**	3.5	1000	1300	10.2	9.6	**FA 03**	3.5	1300	10.2	9.3
0.12		**6**	900	1.27	44	0.73	0.54	2.4	1.4	1.5					9000	11000					11000		
0.55	**M 2SA**	**2**	2800	1.88	63	0.86	1.47	4.5	1.9	1.7	20	9.2	**FD 04**	5	1500	1800	22	13.1	**FA 04**	5	1800	22	13.0
0.18		**6**	930	1.85	52	0.65	0.77	3.3	2.0	1.9					4100	6300					6300		
0.75	**M 2SB**	**2**	2800	2.6	66	0.87	1.89	4.3	1.8	1.6	25	10.6	**FD 04**	5	1700	1900	27	14.5	**FA 04**	5	1900	27	14.4
0.25		**6**	930	2.6	54	0.67	1.00	3.2	1.7	1.8					3800	6000					6000		
1.1	**M 3SA**	**2**	2870	3.7	71	0.82	2.73	4.9	1.8	1.9	34	15.5	**FD 15**	13	1000	1300	38	22	**FA 15**	13	1300	38	23
0.37		**6**	930	3.8	63	0.70	1.21	3.1	1.5	1.8					3500	5000					5000		
1.5	**M 3LA**	**2**	2880	5.0	73	0.84	3.53	5.1	1.9	2.0	40	17	**FD 15**	13	1000	1200	44	24	**FA 15**	13	1200	44	24
0.55		**6**	940	5.6	64	0.67	1.85	3.5	1.7	1.8					2900	4000					4000		
2.2	**M 3LB**	**2**	2900	7.2	77	0.85	4.9	5.9	2.0	2.0	61	23	**FD 15**	26	700	900	65	29	**FA 15**	26	900	65	30
0.75		**6**	950	7.5	67	0.64	2.5	3.3	1.9	1.8					2100	3000					3000		
3	**M 4SA**	**2**	2910	9.9	74	0.88	6.6	5.6	2.0	2.1	170	36	**FD 56**	37	—	600	182	48	**FA 06**	37	600	182	50
1.1		**6**	960	10.9	73	0.68	3.2	4.5	2.2	2.0					—	2200					2200		
4.5	**M 4SB**	**2**	2910	14.8	78	0.84	9.9	5.8	1.9	1.8	213	42	**FD 56**	37	—	500	223	55	**FA 06**	37	500	223	56
1.5		**6**	960	14.9	74	0.67	4.4	4.2	1.9	2.0					—	2100					2100		
5.5	**M 4LA**	**2**	2920	18.0	78	0.87	11.7	6.2	2.1	1.9	270	51	**FD 06**	50	—	400	280	64	**FA 06**	50	400	280	65
2.2		**6**	960	22	77	0.71	5.8	4.3	2.1	2.0					—	1900					1900		



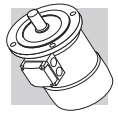
2/8P — 3000/750 min^{-1} - S3 60/40% — 50 Hz



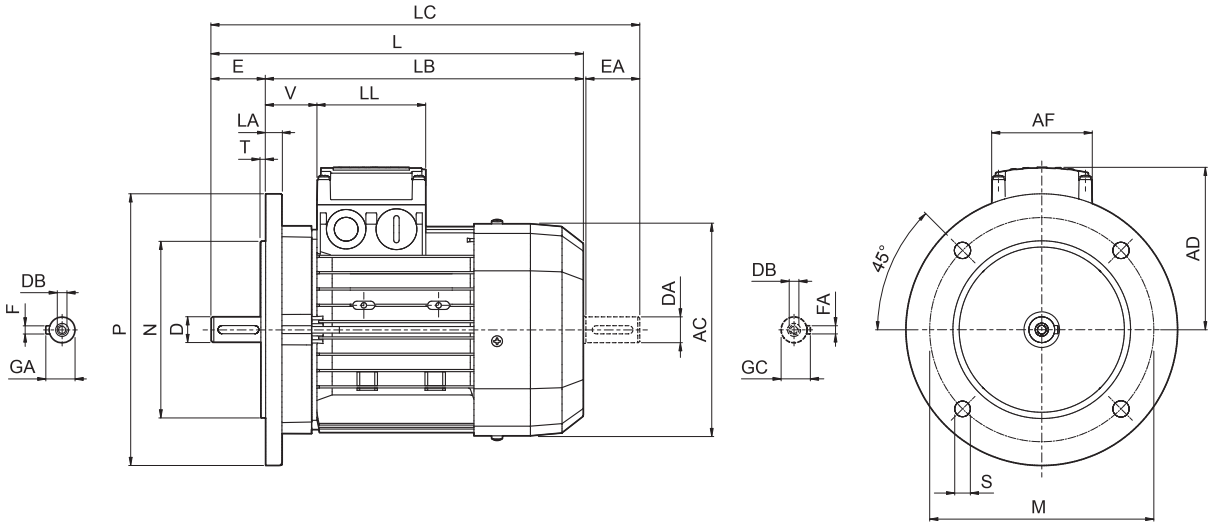
													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min^{-1}	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.37	**M 1LA**	**2**	2800	1.26	63	0.86	0.99	3.9	1.8	1.9	12.9	7.3	**FD 03**	3.5	1200	1300	14	10.0	**FA 03**	3.5	1300	14	9.7
0.09		**8**	670	1.28	34	0.75	0.51	1.8	1.4	1.5					9500	13000					13000		
0.55	**M 2SA**	**2**	2830	1.86	66	0.86	1.40	4.4	2.1	2.0	20	9.2	**FD 04**	5	1500	1800	22	13.1	**FA 04**	5	1800	22	13.0
0.13		**8**	690	1.80	41	0.64	0.72	2.3	1.6	1.7					5600	8000					8000		
0.75	**M 2SB**	**2**	2800	2.6	68	0.88	1.81	4.6	2.1	2.0	25	10.6	**FD 04**	10	1700	1900	27	14.5	**FA 04**	10	1900	27	14.4
0.18		**8**	690	2.5	43	0.66	0.92	2.3	1.6	1.7					4800	7300					7300		
1.1	**M 3SA**	**2**	2870	3.7	69	0.84	2.74	4.6	1.8	1.7	34	15.5	**FD 15**	13	1000	1300	38	22	**FA 15**	13	1300	38	23
0.28		**8**	690	3.9	44	0.56	1.64	2.3	1.4	1.7					3400	5000					5000		
1.5	**M 3LA**	**2**	2880	5.0	69	0.85	3.69	4.7	1.9	1.8	40	17	**FD 15**	13	1000	1200	44	24	**FA 15**	13	1200	44	24
0.37		**8**	690	5.1	46	0.63	1.84	2.1	1.6	1.6					3300	5000					5000		
2.4	**M 3LB**	**2**	2900	7.9	75	0.82	5.6	5.4	2.1	2.0	61	23	**FD 15**	26	550	700	65	29	**FA 15**	26	700	65	30
0.55		**8**	700	7.5	54	0.58	2.5	2.6	1.8	1.8					2000	3500					3500		
3	**M 4SA**	**2**	2920	9.8	72	0.85	7.1	5.6	2.0	1.8	162	36	**FD 56**	37	—	600	182	48	**FA 06**	37	600	182	50
0.75		**8**	710	10.1	61	0.64	2.8	3.0	1.7	1.8					—	3400					3400		
4	**M 4SB**	**2**	2870	13.3	73	0.84	9.4	5.6	2.3	2.4	213	42	**FD 56**	37	—	500	223	55	**FA 06**	37	500	223	56
1		**8**	690	13.8	66	0.62	3.5	2.9	1.9	1.8					—	3500					3500		
5.5	**M 4LA**	**2**	2870	18.3	75	0.84	12.6	6.1	2.4	2.5	270	51	**FD 06**	50	—	400	280	64	**FA 06**	50	400	280	65
1.5		**8**	690	21	68	0.63	5.1	2.9	1.9	1.9					—	2400					2400		

2/12P — 3000/500 min^{-1} - S3 60/40% — 50 Hz

													d.c. brake						a.c. brake				
													FD						FA				
P_n kW			n min^{-1}	M_n Nm	η %	cosφ	In 400V A	Is/In	Ms/Mn	Ma/Mn	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h NB	Z_o 1/h SB	J_m x 10^{-4} kgm^2	IM B5 Kg	Mod	Mb Nm	Z_o 1/h	J_m x 10^{-4} kgm^2	IM B5 Kg
0.55	**M 2SA**	**2**	2820	1.86	64	0.89	1.39	4.2	1.6	1.7	25	10.6	**FD 04**	5	1000	1300	27	14.5	**FA 04**	5	1300	27	14.4
0.09		**12**	430	2.0	30	0.63	0.69	1.8	1.9	1.8					8000	12000					12000		
0.75	**M 3SA**	**2**	2900	2.5	65	0.81	2.06	5.2	1.9	2.1	34	15.5	**FD 15**	13	700	900	38	22	**FA 15**	13	900	38	23
0.12		**12**	460	2.5	33	0.43	1.22	1.9	1.3	1.6					5000	7000					7000		
1.1	**M 3LA**	**2**	2850	3.7	65	0.85	2.87	4.5	1.6	1.8	40	17	**FD 15**	13	700	900	44	24	**FA 15**	13	900	44	24
0.18		**12**	430	4.0	26	0.54	1.85	1.5	1.3	1.5					4000	6000					6000		
1.5	**M 3LB**	**2**	2900	4.9	67	0.86	3.76	5.6	1.9	1.9	54	21	**FD 15**	13	700	900	58	27	**FA 15**	13	900	58	28
0.25		**12**	440	5.4	36	0.46	2.18	1.8	1.7	1.8					3800	5000					5000		
2	**M 3LC**	**2**	2850	6.7	70	0.84	4.9	4.9	1.8	1.7	61	23	**FD 55**	18	—	700	65	29	**FA 15**	18	700	65	30
0.3		**12**	450	6.4	38	0.47	2.4	1.7	1.6	1.7					—	3500					3500		
3	**M 4SA**	**2**	2920	9.8	74	0.87	6.7	6.8	2.3	1.9	213	42	**FD 56**	37	—	450	223	55	**FA 06**	37	450	223	56
0.5		**12**	470	10.2	51	0.43	3.3	2.0	1.7	1.6					—	3000					3000		
4	**M 4LA**	**2**	2920	13.1	75	0.89	8.6	5.9	2.4	2.3	270	51	**FD 56**	37	—	400	280	64	**FA 06**	37	400	280	65
0.7		**12**	460	14.5	53	0.44	4.3	1.9	1.7	1.6					—	2800					2800		

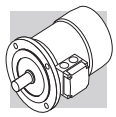


BN - IM B5

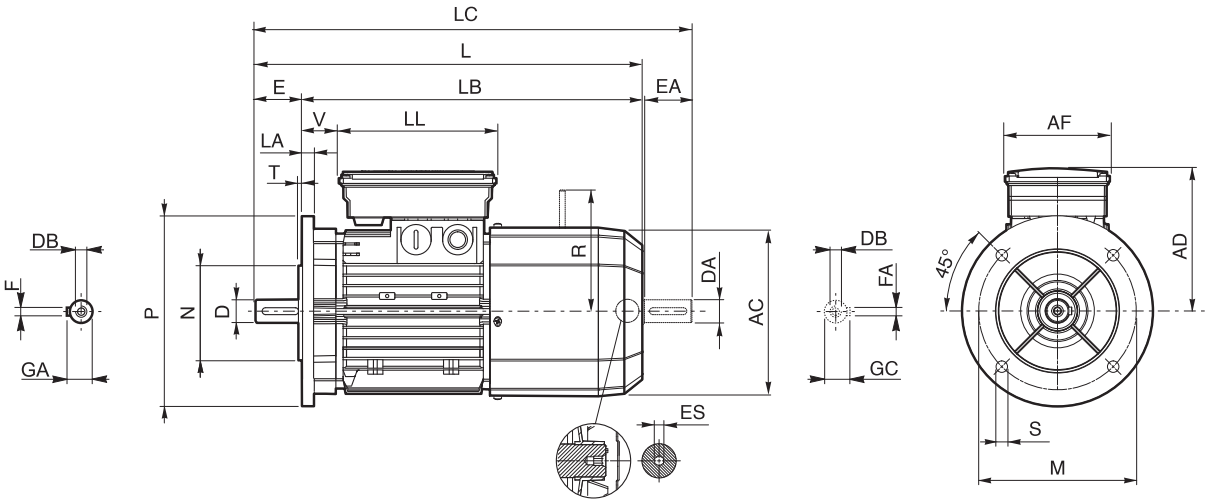


	Shaft					Flange						Motor							
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V
BN 56	9	20	M3	10.2	3	100	80	120	7	3	8	110	185	165	207	91	74	80	34
BN 63	11	23	M4	12.5	4	115	95	140	9.5		10	121	207	184	232	95			26
BN 71	14	30	M5	16	5	130	110	160		3.5		138	249	219	281	108			37
BN 80	19	40	M6	21.5	6	165	130	200	11.5		11.5	156	274	234	315	119			38
BN 90	24	50	M8	27	8							176	326	276	378	133	98	98	44
BN 100	28	60	M10	31		215	180	250	14	4	14	195	367	307	429	142			50
BN 112											15	219	385	325	448	157			52
BN 132	38	80	M12	41	10	265	230	300			20	258	493	413	576	193	118	118	58
BN 160 MR	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15		562	452	645				218
BN 160 M												310	596	486	680	245	187	187	51
BN 160 L																			
BN 180 M	48 38 (1)	110 110 (1)	M16 M12 (1)	51.5 41 (1)	14 10 (1)							310	640	530	724				
BN 180 L	48 42 (1)		M16 M16 (1)	51.5 45 (1)	14 12 (1)						18	348	708	598	823	261			52
BN 200 L	55 42 (1)		M20 M16 (1)	59 45 (1)	16 12 (1)	350	300	400					722	612	837				66

NOTE:
1) These values refer to the rear shaft end.



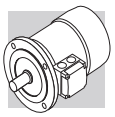
BN_FD ; IM B5



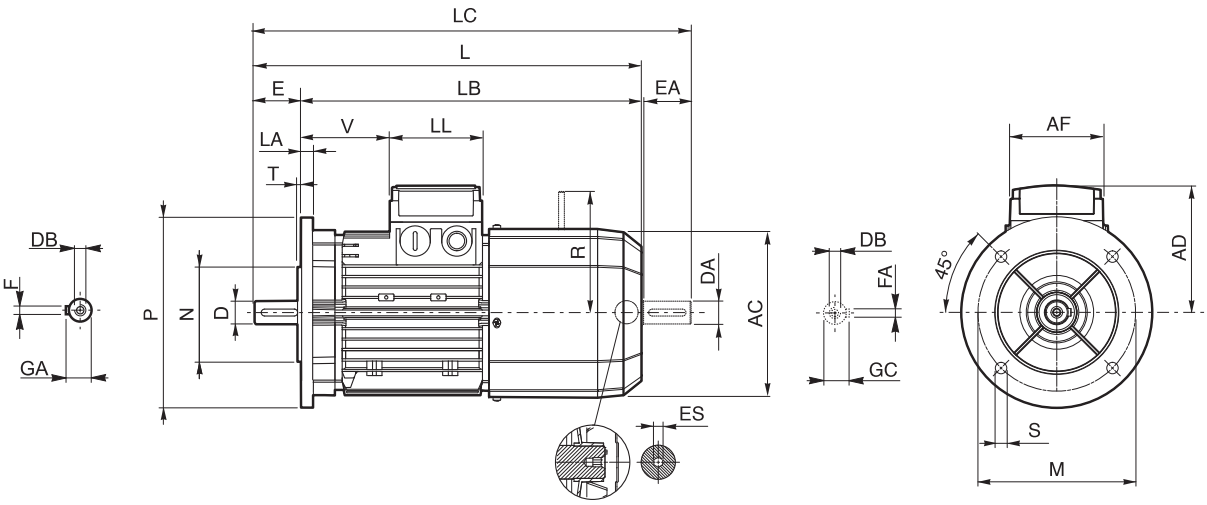
	Shaft					Flange						Motor									
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R	ES
BN 63	11	23	M4	12.5	4	115	95	140	9.5	3	10	121	272	249	297	122	98	133	14	96	5
BN 71	14	30	M5	16	5	130	110	160	9.5	3.5		138	310	280	342	135			25	103	
BN 80	19	40	M6	21.5	6	165	130	200	11.5		11.5	156	346	306	388	146			41	129	
BN 90 S	24	50	M8	27	8							176	409	359	461	149	110	165	39	160	6
BN 90 L																146					
BN 100	28	60	M10	31		215	180	250	14	4	14	195	458	398	521	158		165	62		
BN 112											15	219	484	424	547	173		165	73	199	
BN 132	38	80	M12	41	10	265	230	300			20	258	603	523	686	210	140	188	46	204 (2)	
BN 160 MR	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15		672	562	755				161	226	
BN 160 M												310	736	626	820	245	187	187	51	266	—
BN 160 L	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)																
BN 180 M	48 38 (1)			51.5 41 (1)	14 10 (1)								780	670	864						
BN 180 L	48 42 (1)	110 110 (1)	M16 M16 (1)	51.5 45 (1)	14 12 (1)						18	348	866	756	981	261			52	305	
BN 200 L	55 42 (1)		M20 M16 (1)	59 45 (1)	16 12 (1)	350	300	400	18.5				878	768	993				64		

NOTE:
1) These values refer to the rear shaft end.
2) For FD07 brake value R=226.

ES hexagon is not supplied with PS option.



BN_FA - IM B5

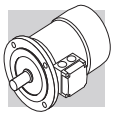


	Shaft					Flange						Motor									
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**	**R**	**ES**
BN 63	11	23	M4	12.5	4	115	95	140	9.5	3	10	121	272	249	297	95	74	80	26	116	5
BN 71	14	30	M5	16	5	130	110	160		3.5	11.5	138	310	280	342	108			68	124	
BN 80	19	40	M6	21.5	6	165	130	200	11.5			156	346	306	388	119			83	134	
BN 90	24	50	M8	27	8							176	409	359	461	133	98	98	95	160	6
BN 100	28	60	M10	31		215	180	250	14	4	14	195	458	398	521	142			119		
BN 112											15	219	484	424	547	157			128	198	
BN 132	38	80	M12	41	10	265	230	300			20	258	603	523	686	210	140	188	46	200 (2)	
BN 160 MR	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15		672	562	755	193	118	118	218	217	
BN 160 M												310	736	626	820	245	187	187	51	247	—
BN 160 L																					
BN 180 M				51.5 41 (1)	14 10 (1)								780	670	864						

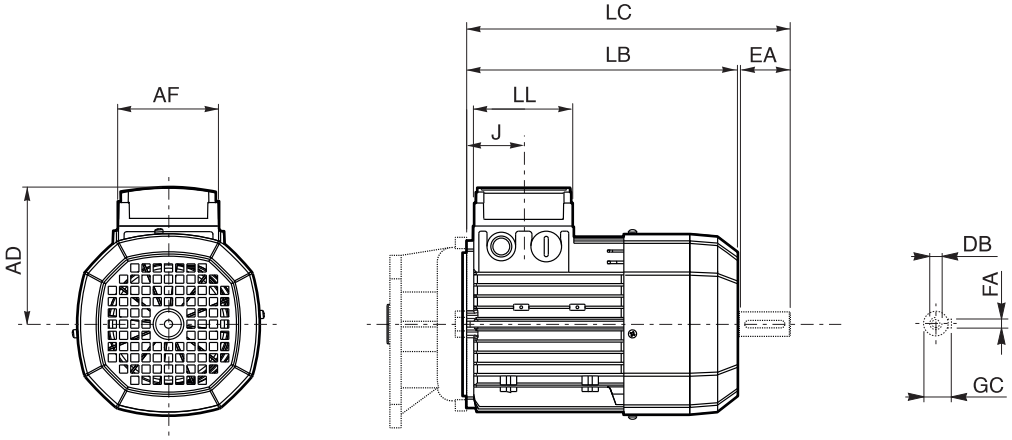
NOTE:
1) These values refer to the rear shaft end.
2) For FA07 brake value R=217.

Dimensions AD, AF, LL and V, relevant to terminal box of motors BN…FA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size BN…FD motors

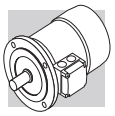
ES hexagon is not supplied with PS option.



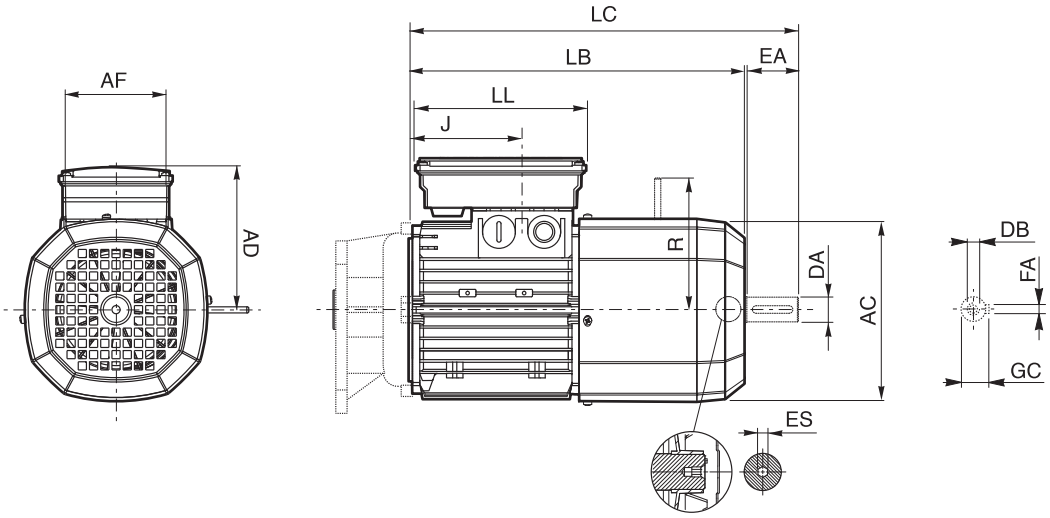
M



	Rear shaft end					Motor						
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**
M 0	9	20	M3	3	10.2	110	133	155	74	80	42	91
M 05	11	23	M4	4	12.5	121	165	191			48	95
M 1	14	30	M5	5	16	138	187	219			45	108
M 2 S	19	40	M6	6	21.5	156	202	245			44	119
M 3 S	28	60	M10	8	31	195	230	293	98	98	53.5	142
M 3 L							262	325				
M 4	38	80	M12	10	41	258	361	444	118	118	64.5	193
M 4 LC							396	479				
M 5 S						310	418	502	187	187	77	245
M 5 L							462	546				



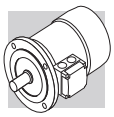
M_FD



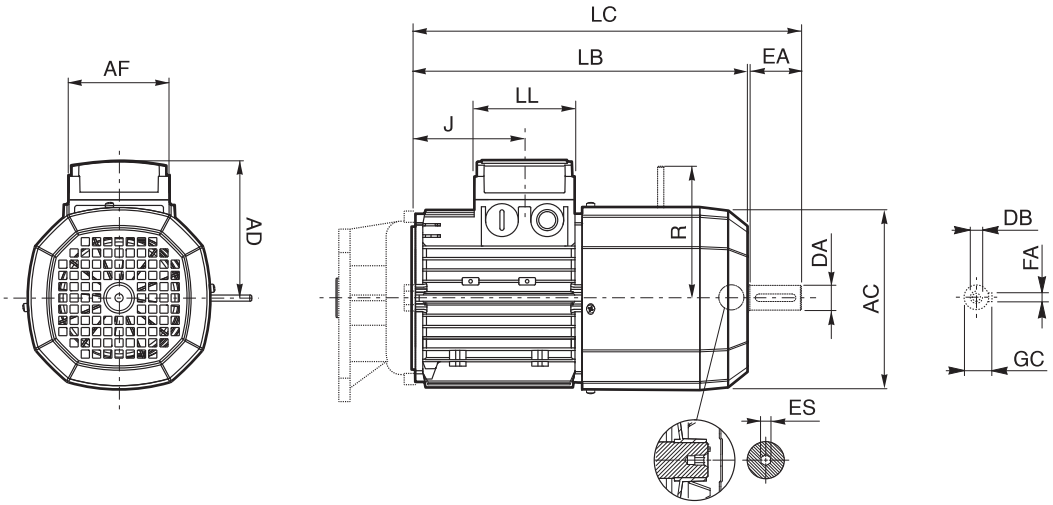
	Rear shaft end					Motor								
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R**	**ES**
M 05	11	23	M4	4	12.5	121	231	256	98	133	48	122	96	5
M 1	14	30	M5	5	16	138	248	280			73	135	103	
M 2 S	19	40	M6	6	21.5	156	272	314			88	146	129	
M 3 S	28	60	M10	8	31	195	326	389	110	165	124.5	158	160	6
M 3 L							353	416						
M 4	38	80	M12	10	41	258	470	553	140	188	185.5	210	204 (1)	
M 4 LC							495	578			64.5		226	
M 5 S						310	558	642	187	187	77	245	266	—
M 5 L							602	686						

NOTE:
1) For FD07 brake value R=226.

ES hexagon is not supplied with PS option.



M_FA



	Rear shaft end					Motor								
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R**	**ES**
M 05	11	23	M4	4	12.5	121	231	256	74	80	48	95	116	5
M 1	14	30	M5	5	16	138	248	280			73	108	124	
M 2 S	19	40	M6	6	21.5	156	272	314			88	119	134	
M 3 S	28	60	M10	8	31	195	326	389	98	98	124.5	142	160	6
M 3 L							353	416						
M 4	38	80	M14	10	41	258	470	553	140	188	185.5	210	200 (1)	
M 4 LC							495	578			64.5		217	
M 5 S			M12			310	558	642	187	187	77	245	247	—
M 5 L							602	686						

NOTE:
1) For FA07 brake value R=217.

Dimensions AD, AF, LL and V, relevant to terminal box of motors M…FA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size M…FD motors

ES hexagon is not supplied with PS option.

INDEX OF REVISIONS

BR_CAT_CAFS_STD_ENG_R09_3	
	Description
170	Amended drawings for the backstop option of serie A gearboxes.
486, 487	Updated 1.5 kW technical data for gearmotors series S.
512…571	Updated section “Electric Motors”.
...	Removed combinations of gearboxes C514 and F514 with inputs P132 and M4.
40…45	Updated 0.37 ; 0.55 kW technical data for gearmotors series C.

2018 03 31

Bonfiglioli
Forever Forward

We have a relentless commitment to excellence, innovation and sustainability. Our team creates, distributes and services world-class power transmission and drive solutions to keep the world in motion.

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