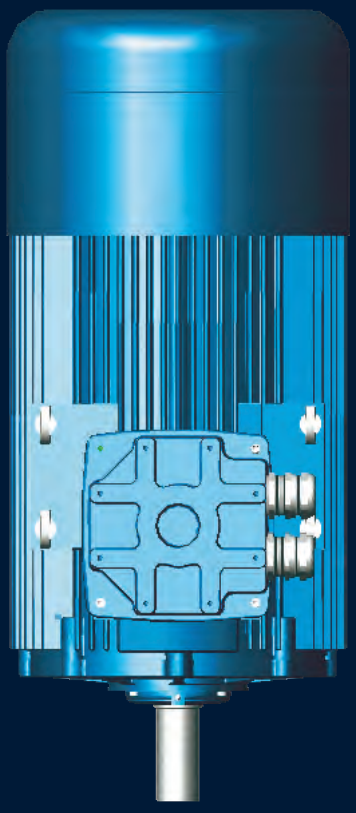
Flameproof motors
Moteurs antidéflagrants
Explosionsgeschützte Motoren
Motores antideflagrantes
Motori antideflagranti

63 ÷ 315

II 2G, II 2GD

Ex d, Ex de • IIB, IIC • tD • IP65 (A21)



cemp

Flameproof
Motors

Member of
ABG Group

Les Ateliers de l'Avre

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cemp

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Catalogue 14
Edition 09-09
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ENGLISH CONTENTS

FRANÇAIS *SOMMAIRE*

DEUTSCH INHALTSVERZEICHNIS

Flameproof motors

0. Introduction
0.1 SI units and conversion equations

0.1 SI units and conversion equations

Table 0 A

Description	SI			Conversion equations
	Formular symbols	Unit symbol	Unit name	
Distance Area Volume	*L* *A* *V*	m m^2 m^3	metre	 1 m^3 = 1000 dm^3 1 dm^3 = 1l
Angle in one plane	α, β, γ	rad	radian	1° = $\frac{\pi}{180}$ rad 1' = 1°/60 1" = 1'/60
Time Frequency	*t* *f*	s Hz	second Hertz	1 Hz = 1/s
Speed Velocity Angular velocity	*n* *v* ω	1/min m/s rad/s		1 km/h = $\frac{1}{3.6}$ m/s
Acceleration Angular acceleration	*a* α	m/s^2 rad/s^2		
Mass Density	*m* ρ	kg kg/m^3	kilogram	
Force Pressure Mechanical stress	*F* *p* σ	N $Pa = N/m^2$ N/mm^2	Newton Pascal	1N = 1kg · 1 m/s^2 9.81 N = 1 kp 9.81 · 10^4 N/m^2 = 1kp/cm^2 9.81 N/mm^2 = 1 kp/mm^2
Work done Energy Thermal quantity	*W* *W* *Q*	*J = Nm*	Joule	9.81 Nm = 1 kpm 4187 J = 1 kcal 1 kWh = 3.6 x 10^6 J
Torque	*M*	Nm		9.81 Nm = 1 kpm 1 Nm = 0.102 kpm
Power	*P*	W = J/s = Nm/s	Watt	735.5 W = 1 hp
Moment of inertia	*J*	kg m^2		9.81 kg m^2 = 1 $kpms^2$ PD^2 = 4 J
Dynamic viscosity Kinematic viscosity	η ν	Pa · s m^2/s		10^{-1} Pa · s = 1 P (Poise) 10^{-4} m^2/s = 1 St (Stoke)
Electric current Electric voltage Electric resistance Electric conductivity Electric capacity Charge	*I* *U* *R* *G* *C* *Q*	A V Ω S F C	Ampere Volt Ohm Siemens Faraday Coulomb	1 A = 1 W/V = 1 V/Ω 1 V = 1 W/A 1 Ω = 1 V/A = 1/S 1 S = 1/Ω 1 F = 1 C/V 1 C = 1 A · s
Inductance Magnetic flux density Magnetic field strength Magnetic flux	*L* *B* *H* Φ	H T A/m Wb	Henry Tesla Weber	1 H = 1 Vs/A 1 T = 1 Wb/m^2 1 Wb = 1 V · s
Temperature difference	*T* ϑ	K °C	Kelvin	0 K = - 273.15 °C

0.2 Engineering formulae for motor drives

0.2 Engineering formulae for motor drives

Power (3-phase motors)

P_1 = power input = $U \cdot I \cdot \cos\varphi \cdot \sqrt{3} \cdot 10^{-3}$ [kW]

P_2 = power output = $P_1 \cdot \eta$ [kW]

Where:
U = voltage [V]
I = current [I]
cos φ = power factor
η = efficiency

Power requirements of some applications

Lifting:

$$P = \frac{m \cdot v}{\eta} \cdot 9.81 \cdot 10^{-3} \text{ [kW]}$$

Rotation:

$$P = \frac{M \cdot n}{9550 \cdot \eta} \text{ [kW]}$$

Fan and pump drives:

$$P = \frac{H \cdot Q}{\eta} \text{ [W]}$$

Where:
P = power [kW]
m = mass [kg]
v = speed [m/s]
n = rotational speed [min^{-1}]
η = efficiency
M = torque [Nm]
Q = output [m^3/s]
H = head [N/m^2]

Torque from motor power

$$M = 9550 \cdot \frac{P_2}{n} \text{ [Nm]}$$

Where:
P_2 = motor output [kW]
n = motor speed

Conversion of torque for step-up and step-down speed ratios:

$$M_2 = \frac{M_1 \cdot n_1}{n_2}$$

Where:
n_1 = motor speed [min^{-1}]
M_1 = motor torque at n_1 [Nm]
n_2 = speed of load [min^{-1}]
M_2 = torque of load at n_2 [Nm]

Moment of Inertia J

Moment of Inertia of a cylindrical flywheel:

$$J = \frac{md^2}{8}$$

Where:
m = mass [kg]
d = flywheel diameter [m]

Effective moment of inertia on the motor of a linearly moved load:

$$J = 91.2 \cdot m \cdot \left(\frac{v}{n}\right)^2$$

Where:
m = mass [kg]
v = velocity [m/s]
n = motor speed [min^{-1}]

Conversions of moments of inertia for step-up or step-down speed ratio:

$$J_2 = J_1 \cdot \left(\frac{n_1}{n_2}\right)^2$$

Where:
n_1 = motor speed
J_1 = moment of inertia at n_1
n_2 = speed of load
J_2 = moment of inertia of load

Factor of Inertia FI

$$FI = \frac{J_{mot} + J_{load}}{J_{mot}}$$

Where:
J_{mot} = moment of inertia of motor
J_{oad} = moment of inertia of load

Starting time t_a

$$t_a = \frac{FI \cdot J_{mot} \cdot n}{9.55 \cdot (M_{mot} - M_{load})} \text{ [s]}$$

Where:
FI = Factor of inertia
J_{mot} = moment of inertia of motor [kgm^2]
n = motor speed [min^{-1}]
M_{mot} = motor torque during starting (mean) [Nm]
M_{load} = counter torque of load during starting (mean) [Nm]

Speed

The no-load speed is virtually the same as the synchronous speed. The synchronous speed of the motor is calculated as follow:

$n_s = 120 \cdot f/p$ [min^{-1}]

Where:
f = frequency [Hz]
p = number of pole

The synchronous speed is reduced by the slip (S) to the rated speed:

$n_n = n_s \cdot (1\text{-}S)$ [min^{-1}]

0.3 Standards and specifications

0.3 Standards and specifications

Flameproof motors conform to the following standards and specifications:

Table 0 B

Title	INTERNATIONAL IEC	EU CENELEC
Electrical rotating machines/rated operation and characteristic data	IEC 60034-1	EN 60034-1
Methods for determining losses and efficiency of rotating electrical machines	IEC 60034-2	EN 60034-2
Protection types rotating electrical machines	IEC 60034-5	EN 60034-5
Cooling methods of rotating electrical machines	IEC 60034-6	EN 60034-6
Construction types of rotating electrical machines	IEC 60034-7	EN 60034-7
Terminal markings and direction of rotation for electrical machines	IEC 60034-8	HD 53 8
Noise emission, limit values	IEC 60034-9	EN 60034-9
Start-up behaviour of squirrel-cage motors at 50 Hz up to 660V	IEC 60034-12	EN 60034-12
Vibration severity of rotating electrical machines	IEC 60034-14	EN 60034-14
Protection level provided by enclosures for electrical equipment against mechanical impact (Code IK)	IEC 60068-1 IEC 60068-2-75	EN 50102
Fixing dimensions and outputs for IM B3	IEC 60072	EN 50347
Fixing dimensions and outputs for IM B5, IM B14	IEC 60072	EN 50347
Cylindrical shaft ends for electrical machines	IEC 60072	EN 60072
Electrical equipment for hazardous areas General provisions	IEC 60079-0	EN 60079-0
Electrical equipment for hazardous areas Flame-proof enclosure “d”	IEC 60079-1	EN 60079-1
Electrical equipment for hazardous areas Increased safety “e”	IEC 60079-7	EN 60079-7
Electrical equipment for use in areas with presence of combustible dust General provisions	IEC 61241-0	EN 61241-0
Electrical equipment for use in areas with presence of combustible dust Protection method “tD”	IEC 61241-1	EN 61241-1

0.4 Protection against explosions in dangerous areas

0.4.1 Types protection

0.4.1 Types protection

The use of electrical apparatus in potentially explosive atmospheres is quite usual today.
This equipment has to be manufactured in such a way that there is no risk of explosion.
An explosion occurs when the three following conditions happen:

- presence of a potentially explosive atmosphere;
- possibility of transmission of the explosion;
- existence of an ignition source.

The recognized types of protection eliminate one of these conditions and thus make an explosion impossible.

Two types of protection prevent the presence of a potentially explosive atmosphere inside the electrical apparatus:

- oil immersion (safety “o”);
- pressurized apparatus (safety “p”).

Two types of protection make the transmission of an internal explosion to the potentially explosive atmosphere surrounding the electrical apparatus impossible:

- sand filling (safety “q”);
- flameproof enclosure (safety “d”).

Lastly, three types of protection eliminate any source of ignition such as sparks, overheating, etc...:

- increased safety (safety “e”);
- intrinsic safety (safety “i”);
- protection “n” (restricted to zone 2).

In practice, only four of these seven types of protection are applicable to electric motors:

- pressurized apparatus (symbol Ex p);
- flameproof enclosure (symbol Ex d);
- increased safety (symbol Ex e);
- non sparking protection (symbol Ex n).

Electric motors have an additional type of protection (symbol Ex de) which is a combination of:

- **flameproof enclosure “d” for motor frame;**
- **increased safety “e” for terminal box.**

Fig. 0 A - Specific marking for protection against explosions - Directive 94/9/EC.

0.4.2 Dangerous areas and zones

Dangerous areas include any area in which explosive atmospheres may occur under specific conditions.

An explosive atmosphere is a mixture of air and combustible gases, vapours, fumes or dust under atmospheric conditions where combustion expands itself (explosion) after ignition.
Only local authorities can classify hazardous areas.

The user shall classify the hazardous areas as indicated in the European directive 1999/92/EC under his own responsibility.

International standards IEC 61241-10 provide instructions on how to classify the hazardous areas in relation to the chemical nature, to the physical characteristics and to the amount of substances used and based on the frequency and period of time in which an explosive mix may develop.

Fig. 0 B - Warning sign for areas subject to the risk of explosion - Directive 99/92/EC

Zones susceptible to gas

When the hazard is due to the presence of gas, vapours or mists of flammable substances, the European directive 1999/92/EC envisages a classification in three zones defined as followos:

Zone 0 - Areas constantly susceptible to an explosive atmosphere, or for long periods of time. Power equipment with double insulation must be installed in this area.

Zone 1 - Areas where an explosive atmosphere is likely to develop during normal conditions.
Flameproof electric motors or motors with added protection means can be installed in this zone (for the latter, restrictions by the standards apply).

Zone 2 - Areas rarely susceptible to an explosive atmosphere and for a short period of time.
Flameproof motors or motors with added protection can be installed in this zone, as well as non-sparking motors.

Zones susceptible to combustible dust

When the hazard is due to the presence of combustible dust, the European directive 1999/92/EC envisages a classification in three zones defined as followos:

Zone 20 - Areas constantly susceptible to an explosive atmosphere, or for long periods of time.
Power apparatus cannot be installed in this zone.

Zone 21 - Areas where an explosive atmosphere is likely to develop during normal conditions.
Electric motors certified in compliance with the ATEX directive with IP6X protection rating can be installed in this zone

Zone 22 - Areas rarely susceptible to an explosive atmosphere, and only for a short period of time. In the presence of conductive dust, electric motors certified in compliance with the ATEX directive with protection rating IP6x can be installed in this zone, whereas in the presence of non conductive dust, motors with protection rating IP5x and a declaration of conformity issued by the manufacturer can be installed.

Table 0 C - Dangerous areas classified into zones

Usage area in the presence of **GAS**	Usage area in the presence of **COMBUSTIBLE DUSTS**	Hazardous level of the operational **ZONE**
Zone 0	**Zone 20**	Explosive atmosphere **ALWAYS PRESENT**
Zone 1	**Zone 21**	**PROBABLE** explosive atmosphere
Zone 2	**Zone 22**	Explosive atmosphere **UNLIKELY**

0.4.3 Apparatus classification

The ATEX 94/9/EC European Directive classifies equipment into three categories, with differing protection levels, related to the protection guaranteed.

Table 0 D - Equipment categories

PROTECTION LEVEL guaranteed by the equipment Category	**MINE**	**SURFACE**	
	Category	**GAS** Category	**COMBUSTIBLE DUST** Category
Very high	M1	1G	1D
High	M2	2G	2D
Normal	not provided for	3G	3D

NOTE: Equipment of higher categories can also be installed instead of those of a lower category.

0.4.4 Enclosure groups

The standards classify electrical equipment into two groups.

Group I: electric apparatus to be installed in mines or galleries susceptible to firedamp or coal dust.

Group II: electric apparatus to be installed in surface plants susceptible to other explosive atmospheres.

The enclosures for equipment intended for use on the surface, providing “d” protection (flameproof), are in turn broken down into three sub-groups, in relation to the inflammable substances for which they are suitable:
Group IIA, Group IIB, Group IIC.

A motor that belongs to a certain enclosure group is also suitable for lower enclosure groups: a motor in group IIB is also suitable for group IIA; a motor in group IIC is also suitable for group IIA and IIB.

0.4.5 Temperature classes (for gas atmospheres)

The electrical apparatus is classified into 6 classes according to the maximum surface temperatures.

The maximum surface temperature is the highest temperature which is attained in service under the conditions described in the standards, by any part of the electrical apparatus, which, could ignite the surrounding atmosphere.

For electric motors this is:

- the temperature of the outside surface of the enclosure for “d” and “p” protection modes;
- the temperature of any internal or external point for type of protection “e” or “n”.

Table 0 E

Ignition temperature of medium relative to limit temperature [°C]	Temperature class	Maximum surface temperature of electrical equipment including 40 °C ambient temperature	
		[°C]	[°F]
over 450	**T 1**	450	842
from 300 to 450	**T 2**	300	572
from 200 to 300	**T 3**	200	392
from 135 to 200	**T 4**	135	275
from 100 to 135	**T 5**	100	212
from 85 to 100	**T 6**	85	185

0.4.6 Combustion temperatures of gases, vapours and groups

Combustible gases and vapours are divided into classes according to their ignition temperature and into groups according to their explosive capacity.

Markings on motors and other electrical equipment with the symbols used to indicate the protection mode, the enclosure group, and the temperature class, indicate the zone in which such equipment can be installed.

Table 0 F - Classification of the more common combustible gases and vapours according to temperature class and group

Group	Temperature classes					
	T 1	T 2	T 3	T 4	T 5	T 6
I	Methane (firedamp)					
IIA	Acetic acid Acetone Ammonia Benzole Benzene Butanone Carbon monoxide Ethane Ethyl acetate Ethyl Chloride Methane Methanol Methyl acetate Methyl alcohol Methyl Chloride Naphtalene Propane Toluene Xylene	Acetic anhydride I amyl acetate n butane n butyl alcohol Amylic alcohol Butyl acetate Cyclohexanon Ethyl alcohol Iso butylic alcohol Liquefied gas Natural gas Propyl acetate	Cyclohexane Cyclohexanol Decane Diesel fuels Gasoline Heating oil Heptane Hexane Jet fuels Pentane Petroleum*	Acetaldehyde Ether		
IIB	Coke-oven gas Water gas (carburetted)	1,3- butadiene Ethylene Ethylbenzene Ethylene oxide	Hydrogen sulphide Isoprene Petroleum*	Ethyl ether		
IIC	Hydrogen	Acetylene				Carbon disulphide Ethyl nitrate

* depending on composition

0.4.7 Temperature for atmospheres with combustible dusts

The flash point of the dust must be taken into account in providing protection against flammable dust, both where this is in cloud form and in layers.

The surface temperature of the enclosure indicated on the motor nameplate must be less than the reference ignition temperature.

The reference temperature is the lowest between the two values thus calculated:

TS1 = 2/3 Tcl (Tcl = ignition temperature of the cloud of dust)
TS2 = T5mm – 75K (T5mm = ignition temperature of a 5mm layer of dust).
Tamm = lowest between TS1 and TS2.

Table 0 G - Calculation of the flash points for combustible dusts

Dust ignition temperature	Cloud Tcl	Layer T5mm
↓ Safety temperature	Ts1 = 2/3 Tcl	Ts2 = T5mm - 75K
↓ Maximum surface temperature	Tamm = lowest between Ts1 and Ts2	
↓ Surface temperature of the motor ≤ Tamm		

Table 0 H - Examples of flash points for combustible dusts

	Cloud [°C]	**Layer** [°C]
Aluminium	590	>450
Carbon dust	380	225
Flour	490	340
Wheat dust	510	300
Methylcellulose	420	320
Phenolic resin	530	>450
Polyethylene	420	melting
PVC	700	>450
Soot	810	570
Starch	460	435
Sugar	490	460

Source SIRA Ltd

0.4.8 Choice of safety-electric motor

The connection between danger zones and the categories of equipment to be used is defined in Directive 1999/92/EC.

The specific construction standards for the protection modes (e.g. Ex d) also define the motor category that can be obtained by applying the standards (e.g. 2G).

Table 0 I - Choosing the protection mode for zones in which gas is present

Explosive Atmosphere	Danger Zone	Protection guaranteed by Equipment	Motor Category	Protection Mode
ALWAYS PRESENT	0	Very High	1G	IEC EN 60079-26
PROBABLE	1	High	2G	Ex d Ex de Ex e
IMPROBABLE	2	Normal	3G	Ex nA

Table 0 L - Choice of protection mode for areas where combustible dust is present

Explosive Atmosphere	Danger Zone	Protection guaranteed by Equipment	Motor Category	Protection Mode
ALWAYS PRESENT	20	Very High	1D	Currently not provided for
PROBABLE	21	High	2D	Ex tD - A21 - IP6x
IMPROBABLE	22 Conductive dusts	Normal	2D	Ex tD - A21 - IP6x
IMPROBABLE	22 Non-conductive dusts	Normal	3D	Ex tD - A22 - IP5x

N. B. Equipment of a higher category can be installed in place of equipment of a lower category

0.4.9 Certification and approved laboratories

The motors offered in the catalogue herein comply with Directive 94/9/EC ATEX, which states that two different certificates of conformity are to be issued:
- EC Type examination certificate
- Product quality assurance notification.

Certification

Flameproof motors and motors with added protection must be approved by a notified body appointed by the European Commission according to the methods defined by the same ATEX directive.

The motors are classified based on the hazardous atmosphere of the place of installation.

The type of motor protection must be chosen on the basis of the area of installation.
The dangerousness of the zone is determined by the atmosphere involved.

The user is responsible for determining the type of protection, enclosure group, and maximum surface temperature of the motor to be installed.

The user must also correctly install, connect to the mains, use and service the motor. Certificates of conformity to CENELEC standards are valid in all member countries in the European Union and member countries of CENELEC.

The electro-technical committees of the following countries are members of the CENELEC: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Norway, Holland, Portugal, United Kingdom, Spain, Sweden and Switzerland.

The nominal characteristics of motors relate to a maximum ambient temperature of 40°C.

The certifications are valid for a maximum ambient temperature of 60°C (IIC) and 80°C (IIB).

At ambient temperatures exceeding 40°C, the nominal characteristics may deviate from the standard.

Certificates of EC Type Conformity relate to motors with:
- IIB or IIC enclosure groups
- Ex d or Ex de protection modes
- category 2G and temperature classes T3, T4, T5, T6
- category 2GD and surface temperatures T150°C, T135°C, T100°C, T85°C.

These certificates cover:
- motors with voltage up to 1000V and frequencies of 50 and 60Hz
- single-phase motors
- three-phase double winding and/or double polarity motors
- motors installed at altitudes higher than 1000m above sea level
- service from S1 to S9
- motors operated by electronic frequency converter and with forced ventilation.
- accessories such as: anti-condensation heaters and temperature detectors
- ambient temperature:
  minimum - 50 °C
  maximum + 80 °C (T3)
  + 60 °C (T4).

Notified bodies

The list of notified bodies can be found on the European Union website at the following address:
www.europa.eu.int/comm/enterprise/atex/nb/nblist.htm

IECEx Certifications

Presently (July 2009) the procedure for obtaining certifications according to the IECEx program is in place.

1. General informations

1.1 Range of motors in the ATEX series

1.1 Range of motors in the ATEX series

The motors offered in this catalogue comply with standards concerning equipment and protective systems intended for use in potentially explosive atmospheres, in compliance with European Directive 94/9/EC dated 23/3/94, otherwise known as the ATEX directive.

The ATEX directive states that two different certificates of conformity are to be issued.

One is the "EC-Type examination certificate" for the homologation of the prototype and the other is for the "Production Quality Assurance Notification".

The Certificates are issued by CESI in Milan, Notified Body no. 0722.

All motors in the ATEX series are available in 2G (for gas) or 2GD (for gas and dust) versions.

Table 1 A - The Series ATEX range

Version	Frame size [mm]	Output range (2 pole) [kW]	Standard temperature class for 2G motors	Standard surface temperature for 2GD motors	Motor type			
					Ex d IIB	Ex de IIB	Ex d IIC	Ex de IIC
Single speed, three phase (2, 4, 6, 8 pole)	63 ÷ 315	0.18 ÷ 200.00	T4	T 135°C	**AB 30**	**AB 35**	**AC 30**	**AC 35**
Two speeds, three phase (2/4, 4/8, 4/6, 6/8 pole) for general purpose (constant-torque)	63 ÷ 315	0.15 ÷ 160.00	T4	T 135°C	**AB 20**	**AB 25**	**AC 20**	**AC 25**
Two speeds, three phase (2/4, 4/8, 4/6, 6/8 pole) for centrifugal machines (quadratic-torque)	63 ÷ 315	0.18 ÷ 160.00	T4	T 135°C	**AB 40**	**AB 45**	**AC 40**	**AC 45**
Single phase, (2, 4, 6 pole)	63 ÷ 100	0.10 ÷ 3.00	T4	T 135°C	**AB 10**	**AB 15**	**AC 10**	**AC 15**
Single-phase with capacitor in extra-size terminal box (2, 4, 6 pole)	63 ÷ 100	0.10 ÷ 1.10	T4	T 135°C	**AB 12**		**AC 12**	
Motors energized by inverter (2, 4, 6, 8 poli)	63 ÷ 315	0.18 ÷ 200.00	T4	T 135°C	**AB 70**	**AB 75**	**AC 70**	**AC 75**

Table 1 B - Temperature Class upon request

Version	T3	T5	T6
63 ÷ 160	Same power as T4	Same power as T4 (*)	Power lower than T4
180 ÷ 315	Same power as T4	Power lower than T4	Power lower than T4

(*) For the single and three-phase, 2-speed motors: power lower than T4.

Also available flameproof motors with brake and flameproof motors of Group I for installation in mines.
Documentation supplied upon request.

1.2 Main characteristics

1.2 Main characteristics

- Flameproof motors compliant with the Standards IEC EN 60079-0, 60079-1, 60079-7 for atmospheres where gas is present and IEC EN 61241-0, 61241-1 for areas where combustible dust is present.
- Three phase and single phase Squirrel Cage Asynchronous Induction motors.
- Totally enclosed, fan cooled, frame IP55 with Terminal box IP65.
- The motors dimensions comply with IEC 60072 standard.
- Power Supply 400V / 50Hz. Three-phase, 1-speed motors, 2-4-6-8 poles, T4 (for sizes between 63 and 250, multi-voltage power supply 380-400-420V/ 50 Hz).
- Class F insulation.
- Noise level within 80 dB (A).
- Terminal Box:
  - available both in a flameproof, or increased safety version
  - large size
  - standard position - top, opposite feet
  - rotate by 90° in 4 positions.
- Motor frame and terminal box enclosure separated to avoid the transmission of explosions.
- Winding cables connected to the terminal board by means of terminal blocks or by a flameproof sealing device.
- Internal and external mechanical components painted with epoxy polyester powders;
  - stainless steel nameplate,
  - anti-corrosion screws.
- Highly resistant to impact:
  - cast iron made frame, terminal box and endshields.
  - fan cover in sheet steel.
- Low friction dust seals.
- The conformity certificates also cover alternatives, such as:
  - altitude over 1000m
  - modification of the rated voltage and rated frequency
  - power supply from an inverter
  - motor protection through temperature detectors
  - duty S1 to S9.

1.3 Main options

1.3 Main options

Main versions

- Motors with brakes.
- 2GD motors for areas classified as zone 21 and zone 22 (Combustible dusts).
- Group I motors (for mines).

Electrical variants

- Non-standard voltages and frequencies (maximum voltage 1000V).
- Motors for tropical climates.
- Motors for low temperatures (-50°C)
- Temperature rise below 80K.
- Motors insulated to class H.
- Motors with bimetallic detector, thermistor PTC or thermistor PT100.
- Motors with anti-condensation heaters.
- Motors with special electrical design.
- Single-phase motors with capacitor fitted in a large-size terminal box (Ex d, max 50 µF).

Mechanical variants

- Special flanges and shafts.
- Double ended shafts.
- Cable gland fitted to terminal box.
- Terminal box with special cable entries.
- Motors without terminal box and with loose cables. Sealing joints and conduits can be supplied on request.
- Motors protection IP56 - IP65 - IP66.
- Motors with condensation drainage valves.
- Motors with special bearings (uni-directional, with sensors, with rollers, insulated, oversized, thrust bearings).
- Grade A or B balancing
- Motors with a rain cap or sun shield, water-shedding disc.
- Side terminal box frame size 160 to 315.
- Separate terminal box for auxiliary terminals.
- Low noise emission version.
- High protection against corrosion for tropical climates or applications in marine environments:
  - external mechanical components finished with epoxy paint;
  - protection of the internal parts (winding and rotor) with protective paint;
  - stainless steel screws.

Accessories

- Motors suitable for frequency inverter drive.
- Motors with encoder.
- Motors with forced ventilation (from frame size 100).

Certificates

- Motors according to American Bureau of Shipping, Bureau Veritas, Det Norske Veritas, Germanischer LLoyd, Korean Register of Shipping, LLoyd Register of Shipping, Nippon Kaiji Kyokaj, R.I.Na., ...

1.4 Nomenclature

1.4 Nomenclature

Pos. 1 = Motor series:

A	Flameproof 63÷315		

Pos. 2 = Type of application:

B	Enclosure group IIB		
C	Enclosure group IIC		

Pos. 3 = Type of motor (electric characteristics):

1	Single phase	**4**	Three-phase 2 speed quadratic torque
2	Three-phase 2 speed, constant torque	**5**	For lifting
3	Three-phase 1 speed	**7**	For inverters

Pos. 4 = Terminal box version:

0	Protection method Ex d	**5**	Protection method Ex e
3	Without box, with plate Ex d	**2**	Ex d capacitor holder in extra-size box

Pos. 5 = Size (centre height):

63	**90**	**132**	**200**	**280**
71	**100**	**160**	**225**	**315**
80	**112**	**180**	**250**	

Pos. 6 = Length of stator pack:

	63	71	80	90	100	112	132	*	160	*	180	200	225	250	280	315
Extra short							**SA**									
Short	**A**	**A**	**A**	**S**	**LA**		**SB**	**S**	**MA**			**LA**	**S**		**S**	**S**
Medium						**M**	**MB**	**M**	**MB**	**M**	**M**			**M**		
Long	**B**	**B**	**B**	**L**	**LB**		**ML**	**L**	**L**	**L**	**L**	**LB**	**M**		**M**	**M**
Extra long			**L**										**ML**			**L**

* Three-phase, 2-speed version

Pos. 7 = Polarity:

2	2 poles	**24**	Double polarity: 2 / 4 poles	**46**	Double polarity: 4 / 6 poles
4	4 poles	**28**	Double polarity: 2 / 8 poles	**48**	Double polarity: 4 / 8 poles
6	6 poles	**21**	Double polarity: 2 / 12 poles	**41**	Double polarity: 4 / 12 poles
8	8 poles			**43**	Double polarity: 4 / 16 poles
10	10 poles			**68**	Double polarity: 6 / 8 poles
12	12 poles			**61**	Double polarity: 6 / 12 poles

Pos. 8 = Mounting (IM Code I):

B3		**V5**		**V6**	
B5		**V1**		**V3**	
B14		**V18**		**V19**	
B35		**V15**		**V36**	

Pos. 9 = Supply:

3F xxxD / xxxS / xx	Three-phase 1-speed; voltage for delta connection; voltage for star connection; frequency
3F xxx / xx	Three-phase, 2-speed: voltage; frequency
1F xxx / xx	Single-phase; voltage; frequency

A B 2 5 132 S 46 B5 3F 400/50 = Example of the commercial codes

2. Design features
2.1 Mounting arrangements

2.1 Mounting arrangements

The most commonly used mounting arrangements are shown in the table 2 A. Other mounting arrangements are available on request.

Standard motors ordered in basic mounting arrangements (universal mounting arrangements)
IM B3, IM B5 or IM B14 can also be operated in the following different mounting positions:
- IM B3 in IM B6, IM B7, IM B8, IM V5 or IM V6,
- IM B5 in IM V1 or IM V3,
- IM B14 in IM V18 or IM V19.

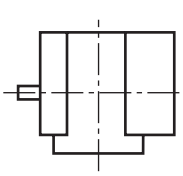
According to the safety standard for electrical machines, foreign objects must be prevented from falling into the fan cover.

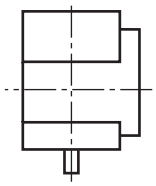
Motors for vertical arrangement with shaft end down are fitted with a protective hood over the fan cowl.

Table 2 A

Size 63 ÷ 315

Foot-mounted motor

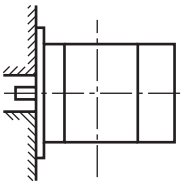


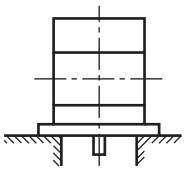


CEI 2-14	B3	V5
IEC EN 60034-7 code I	IM B3	IM V5
IEC EN 60034-7 code II	IM 1001	IM 1011

Size 63 ÷ 315

Flange-mounted motor:
large flange,
clearance fixing holes

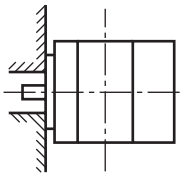


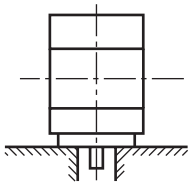


CEI 2-14	B5	V1
IEC EN 60034-7 code I	IM B5	IM V1
IEC EN 60034-7 code II	IM 3001	IM 3011

Size 63 ÷ 132

Flange-mounted motor:
small flange,
tapped fixing holes

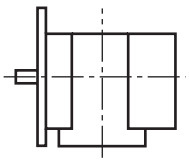


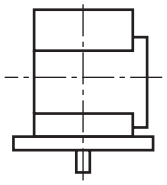


CEI 2-14	B14	V18
IEC EN 60034-7 code I	IM B14	IM V18
IEC EN 60034-7 code II	IM 3601	IM 3611

Size 63 ÷ 315

Foot and flange-mounted motor:
large flange, clearance
fixing holes

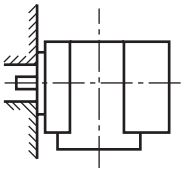


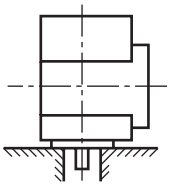


CEI 2-14	B3/B5	V5/V1
IEC EN 60034-7 code I	IM B35	IM V15
IEC EN 60034-7 code II	IM 2001	IM 2011

Size 63 ÷ 132

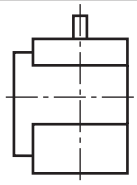
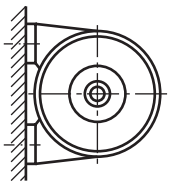
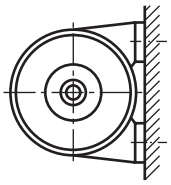
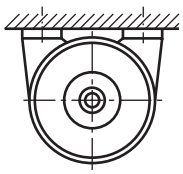
Foot and flange-mounted motor:
with small flange, tapped fixing
holes

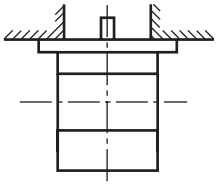


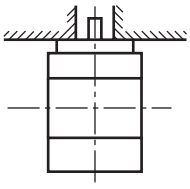


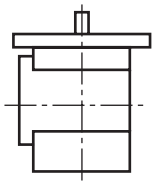
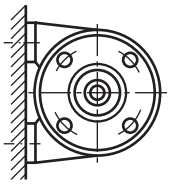
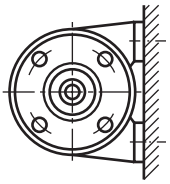
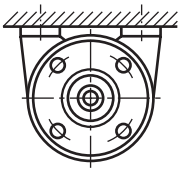
CEI 2-14	B3/B14	V5/V18
IEC EN 60034-7 code I	IM B34	
IEC EN 60034-7 code II	IM 2101	IM 2111

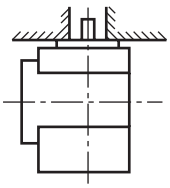
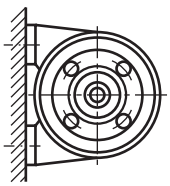
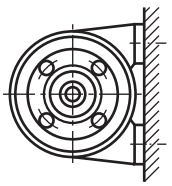
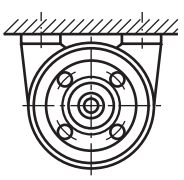
2.1

			
V6	B6	B7	B8
IM V6	IM B6	IM B7	IM B8
IM 1031	IM 1051	IM 1061	IM 1071


V3
IM V3
IM 3031


V19
IM V19
IM 3631

			
V6/V3	B6/B5	B7/B5	B8/B5
IM V36			
IM 2031	IM 2051	IM 2061	IM 2071

			
V6/V19	B6/B14	B7/B14	B8/B14
IM 2131	IM 2151	IM 2161	IM 2171

2.2 Installation and application
2.2.1 Installation, mechanical enclosure and cooling

2.2.1 Installation, mechanical enclosure and cooling

Standard installation

The motors can be installed outdoors and in dusty, moist and chemically aggressive environment (industrial climate) at ambient temperatures from -20 °C to 40 °C.

Mechanical protection (IP); Table 2 B

The mechanical protection systems for electric motors are classified with the IP code followed by two numbers and, in some applications, by a letter.

IP (International Protection):
this indicates the level of protection against accidental contacts of foreign bodies and against water.

0 - 6 (1st digit):
this indicates the level of protection against accidental contacts of foreign bodies.

0 - 8 (2nd digit):
this indicates the level of protection against water.

W, S and M (additional letters for special protections):

W; this means that the machine is to be used in specified weather conditions and with special protections.
The W letter has to be added to the IP code (e. g. IPW55).

S and M; these are used for protection against water.
The letter S stands for static protection; protection against water only for a stationary motor. Letter M stands for protection against water when the motor is running (e. g. IP56S).

Without the additional letters the protection applies in both cases (standing still and running motor).

Our standard motors are IP55 (terminal box IP65). On request we can supply motors without ventilation with IP56 or IP57, and self ventilated motors with IP56S.

Upper-Deck Installation

Motors meant for installation on board ships and offshore areas are designed to comply with the specifications of the relevant classification authorities (see page 22).

Gear mounting, Oil-protected Flange

In some applications, it is necessary that the flange and the drive shaft are completely sealed against oil. This need must be specified during the order phase.

Fixed bearings

Some applications need to have a “zero axial play”. This need must be specified during the order phase.

Cooling

Motors are air-cooled by means of external surface ventilation (IC 411). Standard motors have radial flow fan allowing fully reversible rotation. Reference standards are: IEC 60034-6. From frame size 100 to 315 motors may be supplied with forced ventilation.

Table 2 B - Mechanical protection to IEC 60034-5

Protection against accidental contact and the penetration of foreign bodies	International protection	Protection against water
Complete protection against contact and approaching of voltage-carrying parts as well as against contact with rotating parts inside the housing. Protection against harmful dust deposits. The penetration of dust is not completely prevented but the dust cannot enter in such quantities as to affect operation.	**IP55** standard design	A jet of water squirting out of a nozzle towards the motor from all directions has no harmful effect.
	IP56 special design	In case of temporary flood, e. g. heavy seas, water cannot enter into the motor in harmful quantities.
	IP57 special design	Motor can operate under water at given pressure.
Complete protection against contact of voltage-carrying parts as well against contact with rotating parts inside the housing. Protection against the penetration of dust (dust-proof).	**IP65** special design	A jet of water squirting out of a nozzle towards the motor from all directions as no harmful effect.

2.2.2 Low temperature version and anti-condensation heating

Low Temperature Version

Motors intended for use at extremely low temperatures are specially designed.

Flameproof certificates are valid for temperatures as low as -50°C.

Motors equipped with heating coils keep the minimum temperature of a stopped motor at -20°C (see table 2 C).
As an alternative to heaters, the motors can be powered with low voltage via terminals U1 and V1 (see table 2 C).

Also, it is possible to use a special construction with suitable materials in low temperature areas (-50° C) as an alternative to heating the motor.

Anti-condensation heating

Condensate may form inside the motor due to temperature fluctuations.

To prevent this from happening, motors must be heated using strip type heaters on the end windings or low voltage power can be supplied to the winding via terminals U1 and V1.

The heat output is given in table 2 C.

It is vital that during the motor operation the heaters are turned off.

The supply voltage for the heaters is 230V ± 10% (115V ± 10% on request).

Table 2 C - Data of the anti-condensation heater

Frame size	For preventing condensation							For protection at temperatures below -20 °C (down to -50 °C)						
	With heater	Via Motor winding						With heater	Via Motor winding					
		Output	Heating voltage with a rated motor voltage of						Output	Heating voltage with a rated motor voltage of				
	Output [W]	[VA]	230V [V]	400V [V]	440V [V]	500V [V]	690V [V]	Output [W]	[VA]	230V [V]	400V [V]	440V [V]	500V [V]	690V [V]
63	25	35	45	75	90	100	130	50	90	70	120	140	160	210
71	25	55	35	65	75	85	110	50	130	60	100	120	135	175
80	25	70	30	55	65	75	100	50	180	50	90	100	115	155
90	25	100	25	45	50	60	80	50	250	40	70	80	95	125
100	25	140	20	35	40	50	65	50	440	40	65	75	85	115
112	50	190	20	38	45	50	65	100	490	35	60	70	80	105
132	50	300	20	35	40	45	60	100	700	30	55	65	70	90
160	50	420	17	30	35	40	50	100	950	25	45	55	60	80
180	100	500	15	25	30	35	45	200	1200	25	40	50	55	70
200	100	720	13	20	25	30	40	200	1500	20	35	40	45	60
225	100	800	13	20	25	30	40	200	2200	20	35	40	45	60
250	100	950	10	20	25	30	40	200	2700	20	35	40	45	60
280	200	1700	---	20	22	25	30	400	3000	---	28	35	40	50
315	200	1900	---	16	20	25	30	400	3600	---	25	32	38	48
315 L	200	2100	---	14	18	24	30	400	4800	---	22	30	35	45

2.3 Materials, painting and nameplate

2.3 Materials, painting and nameplate

ENGLISH

Materials

Table 2 D - Materials of the main components:

Frame size	63 ÷ 250	280 ÷ 315
Frame **Endshields** **Terminal box**	Cast iron G200 (ISO 185)	Cast iron G200 (ISO 185)
Fan cover **Rain cap**	Steel	Steel
Fan	Non sparking thermoplastic material or aluminium	Aluminium
Shaft	Steel C40	Steel C40
Rotor	Squirrel cage in pressure cast aluminium	Squirrel cage in pressure cast aluminium
Winding	Insulation class F or H	Insulation class F or H
Bolts and screws	Galvanised steel 8.8 or A4-80 UNI EN ISO 3506-1	Steel 8.8 zinc plated
Cable gland (on request)	Brass or stainless steel	Brass or nickel-plated brass

Painting - Table 2 E - Paint system and characteristics

Frame size	63 ÷ 250	280 ÷ 315
Pretreatment	All components are sandblasted, cleaned and degreased	All components are sandblasted, cleaned and degreased
Painting	Polymerised epoxy polyester powder, oven-baked at 200°C	Treatment with anti-corrosion primer Final coat of enamel paint
Thickness	Total 120 µm (different thicknesses available upon request)	Total 120 µm (different thicknesses available upon request)
Colour	RAL 5010 (special colours available upon request)	RAL 5010 (special colours available upon request)
Mechanical strength	Non-abrasive, elastic, insensitive to scratches, resistant to impact	Non-abrasive, elastic, insensitive to scratches, resistant to impact
Corrosion resistance	Highly resistant to water, water vapour, salt water	Highly resistant to water, water vapour, salt water
Chemical resistance	Good resistance in chemically aggressive environments	Good resistance in chemically aggressive environments
Temperature range	-40 °C +130°C	-40 °C +130°C

Nameplate

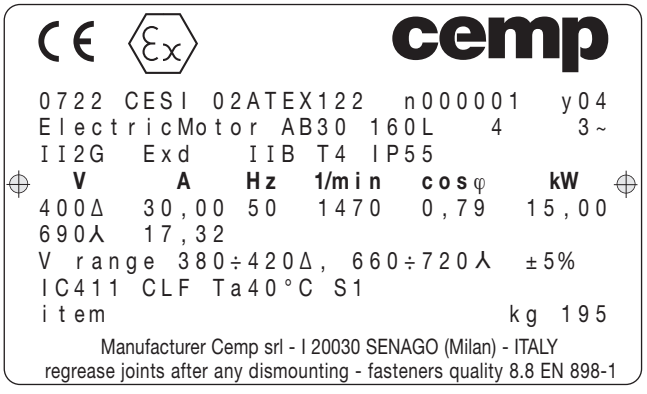


Fig. 2 A

The stainless steel nameplate is fitted on the motor frame.

2.4 Shaft ends, balancing, vibrations, noise levels, coupling and belt drives

2.4 Shaft ends, balancing, vibrations, noise levels, coupling and belt drives

Shaft ends

The shaft ends are cylindrical and comply with IEC 60072 in their design and in their correspondence to frame sizes and outputs.

The shaft ends of all motors are equipped with a tapped hole to assist in the fitting of pulleys and couplings.

The keys are always supplied along with the motors.

On request, special shaft ends or a second free shaft end can be provided.

Pole-changing motors with a 2-pole speed have the same shaft ends as single-speed 2-pole motors.

Balancing, and vibration

The motors are dynamically balanced with half keys in accordance with vibration grade “A” (N) normal balance IEC 60034-14 (and ISO 8821).

The low-vibration version “B” (R) (reduced) can be supplied where high demands are made on quiet running.

Care must be taken to ensure that transmission parts (pulleys, couplings) supplied by others are dynamically balanced with half key.

Noise level

Noise measurements are performed to IEC 60034-9.

In the performance data, the sound pressure levels “Lp” are given in dB (A) for the individual frame sizes.

They apply for no load at 50 Hz.
The tolerance is + 3 dB (A).

At 60 Hz the values of sound pressure increase approximately by 4 dB (A).

Coupling drive

When aligning a motor to be coupled directly to the machine, care must be taken that the rollers and balls of the bearings do not jam.
Elastic couplings are permissible with all motors.

To ensure vibration-free running and to avoid any inadmissible stress on the bearings, the machine to be coupled must still be exactly aligned in the case of elastic coupling.

Maximum accuracy must be applied to the coupling of 2-pole motors.

Belt drive

Slide rails are used for motors for easy tensioning and readjustment at the belts.

Permissible forces have to be taken into consideration (See Table 2 I).

Pulleys and couplings must only be fitted and removed by means of specific tools.

Table 2 F - Vibration limits according to IEC 60034-14

Balancing rate	**Limit values of the speed of vibration/oscillation for frame sizes:**		
	63 ÷ 132 [mm/s]	**160 ÷ 280** [mm/s]	**315** [mm/s]
A	1.6	2.2	2.8
B	0.7	1.1	1.8

Terms of measure: Free standing

2.5 Bearing system
2.5.1 Bearing system

2.5.1 Bearing system

Table 2 G - Standard model -
Closed non-lubricated bearings

Frame size	Poles	Bearing	
		Drive end	Non-Drive end
63	2 - 4 - 6 - 8	6202 ZZ	
71	2 - 4 - 6 - 8	6203 ZZ	
80	2 - 4 - 6 - 8	6204 ZZ	
90	2 - 4 - 6 - 8	6205 ZZ	
100	2 - 4 - 6 - 8	6206 ZZ	
112	2 - 4 - 6 - 8	6306 ZZ	
132	2 - 4 - 6 - 8	6308 ZZ C3	
160	2 - 4 - 6 - 8	6309 ZZ C3	
180	2 - 4 - 6 - 8	6310 ZZ C3	
200	2 - 4 - 6 - 8	6312 ZZ C3	
225	2 - 4 - 6 - 8	6313 ZZ C3	
250	2	6313 ZZ C3	
	4 - 6 - 8	6314 ZZ C3	6313 ZZ C3
280 horizontal	2 - 4 - 6 - 8	6316 ZZ C3	
280 vertical	2 - 4 - 6 - 8	6316 C3	
315 horizontal	2	6316 ZZ C3	
	4 - 6 - 8	6317 ZZ C3	6316 ZZ C3
315 vertical	2	6316 C3	
	4 - 6 - 8	6317 C3	6316 C3

Table 2 H - Upon request -
Open bearings with lubricators

Frame size	Poles	Bearing			Time interval for lubrication (hours)	Amount of grease*
		Front ball bearings	Front rollers	Rear ball bearings		
160	2	6309 C3	NU 309	6309 C3	5500	12 g
	4				8250	
	6 - 8				11000	
180	2	6310 C3	NU 310	6310 C3	2000	12 g
	4				6000	15 g
	6 - 8				7000	
200	2	6312 C3	NU 312	6312 C3	2100	12 g
	4				5000	15 g
	6 - 8				7000	
225	2	6313 C3	NU 313	6313 C3	2000	15 g
	4				4500	18 g
	6				5600	
	8				6400	
250	2	6313 C3	NU 313	6313 C3	2000	18 g
	4	6314 C3	NU 314		4100	20 g
	6				5300	
	8				6200	
280 S	2	6316 C3	NU 316	6316 C3	4100	33 g
	4				5000	
	6				5250	
	8				5800	
280 M	2	6316 C3	NU 316	6316 C3	3700	33 g
	4				4300	
	6				4600	
	8				4800	
315 S	2	6316 C3	NU 316	6316 C3	3300	33 g
	4	6317 C3	NU 317		9500	37 g
	6				13700	
	8				15300	
315 M	2	6316 C3	NU 316	6316 C3	2900	33 g
	4	6317 C3	NU 317		7800	37 g
	6				11300	
	8				13600	
315 LA	2	6316 C3	NU 316	6316 C3	4100	33 g
	4 - 6	6317 C3	NU 317		11100	37 g
	8				19500	
315 LB	2	6316 C3	NU 316	6316 C3	3500	33 g
	4 - 6	6317 C3	NU 317		9500	37 g
	8				16550	
315 LC	2	6316 C3	NU 316	6316 C3	2900	33 g
	4 - 6	6317 C3	NU 317		7800	37 g
	8				13600	

* Grease type LGHP2 SKF or equivalent.

2.5
2.5.1 Bearing system
2.5.2 Bearing section

2.5.1 Bearing system

Standard motors are equipped with radial deep groove ball bearings (ZZ pre-greased series) or open bearings complete with grease nipples.

Where requested roller, or other special bearings can be fitted.

Lubrication

The ZZ series bearings are lubricated for life and require no further lubrication.

Open bearings are supplied with grease nipples and are to be lubricated according to the indications given in the table 2 G - 2 H.

Bearing Seal

In order to prevent dust and water penetration, a seal ring is fitted to the endshield on the driving and non-driving ends.

These seal rings are highly resistant to vibrations, thermally stable, and resistant to mineral oils and diluted acids.

Seals for media not listed above are available on request.

2.5.2 Bearing section

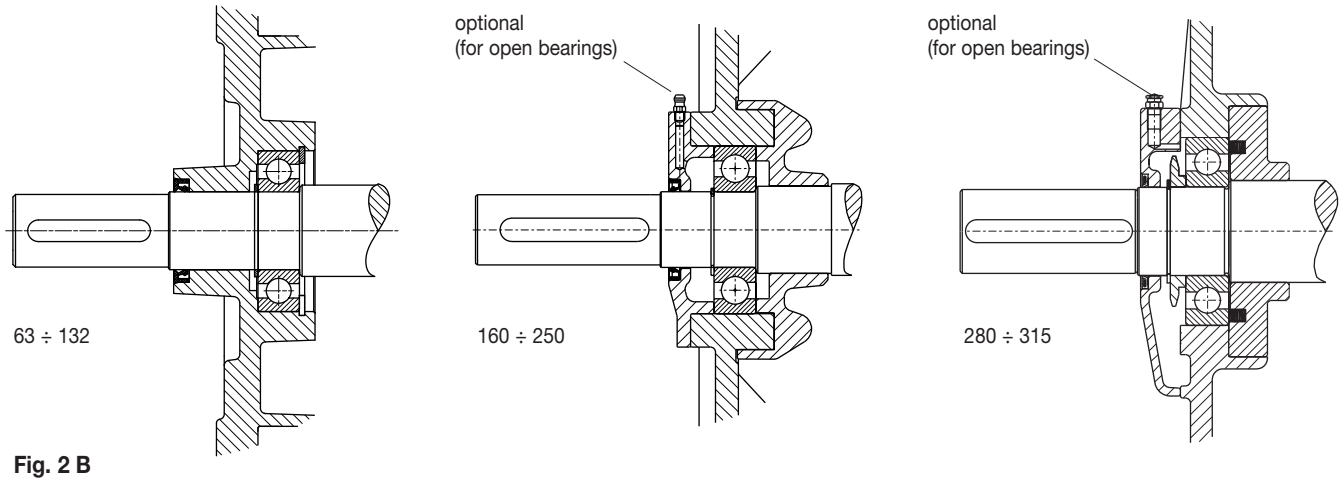


Fig. 2 B
Ball bearings - DE (front)

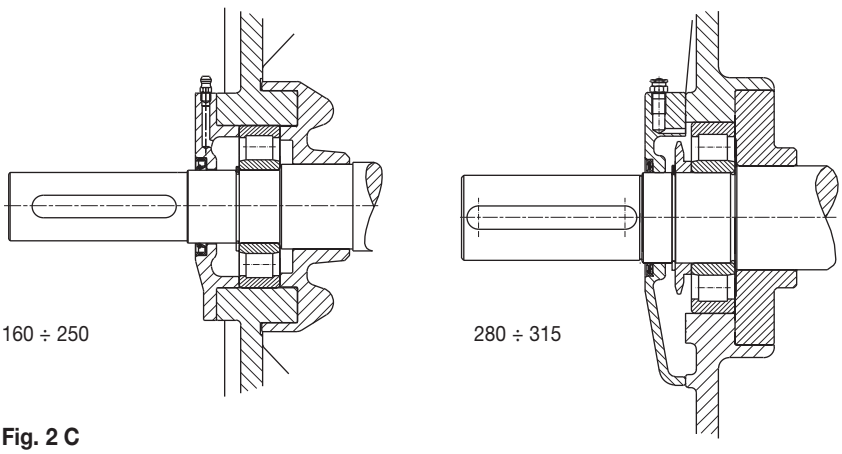


Fig. 2 C
Roller bearings - On request execution DE (front)

ENGLISH

2.5.3 Permissible radial loads on the shaft with standard bearings

Table 2 I shows the values of radial load calculated considering:
- frequency 50 Hz
- temperature not exceeding 90°C
- 20,000 hours of life for 2-pole motors;
- 40,000 hours of life for 4, 6, 8-pole motors

For operation at 60 Hz the values have to be reduced by 6% in order to achieve the same useful life. For double speed motors consider always the higher speed.

The distance of the point of action of force F_R from the shoulder of the shaft must not exceed the length of the shaft end.

F_R = maximum radial load (e. g. belt load + weight of belt pulley)

F = belt load [N] = $\frac{2 \cdot K \cdot M}{D}$

M = torque [Nm] = $\frac{9550 \cdot P}{n}$

P = rated motor output [kW]

n = rated motor speed [1/min]

D = belt pulley diameter [m]

K = prestress factor governed by belt type: it is assumed approximately as follows

K = 3 for normal flat belts without tensioning pulley

K = 2 for normal flat belts with tensioning pulley

K = 2.2 for V-belts or special flat belts

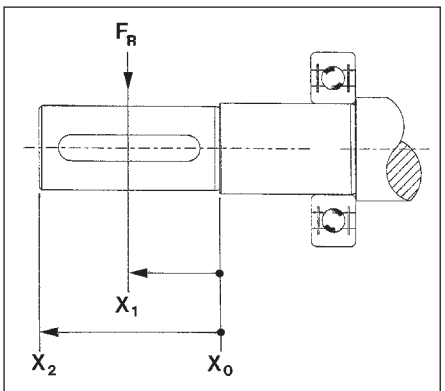


Fig. 2 D

Table 2 I

Frame size	Pole number	Permissible radial load F_R [N]					
		Ball bearings			Roller bearings		
		X_0	X_1	X_2	X_0	X_1	X_2
63	2	390	360	340	---	---	---
	4	390	360	340	---	---	---
	6	440	410	380	---	---	---
	8	490	450	420	---	---	---
71	2	490	450	420	---	---	---
	4	480	450	420	---	---	---
	6	550	510	480	---	---	---
	8	610	560	520	---	---	---
80	2	640	590	540	---	---	---
	4	640	580	540	---	---	---
	6	730	660	610	---	---	---
	8	800	730	670	---	---	---
90	2	730	660	610	---	---	---
	4	720	660	600	---	---	---
	6	820	750	680	---	---	---
	8	910	820	750	---	---	---
100	2	1020	910	830	---	---	---
	4	1010	910	820	---	---	---
	6	1150	1030	940	---	---	---
	8	1270	1140	1030	---	---	---
112	2	1480	1350	1240	---	---	---
	4	1470	1340	1230	---	---	---
	6	1680	1530	1410	---	---	---
	8	1850	1680	1550	---	---	---
132	2	2160	1930	1750	---	---	---
	4	2140	1910	1720	---	---	---
	6	2450	2190	1970	---	---	---
	8	2700	2410	2180	---	---	---
160	2	2790	2470	2210	5720	5200	4680
	4	2770	2450	2190	5885	5350	4815
	6	3150	2790	2490	5995	5450	4905
	8	3480	3080	2750	6050	5500	4950
180	2	3600	3200	2950	6490	5900	5310
	4	3500	3350	2850	7040	6400	5760
	6	3900	3600	3300	7370	6700	6030
	8	4300	3950	3700	7480	6800	6120
200	2	4500	4300	4000	9680	8800	7920
	4	4550	4350	4100	10450	9500	8550
	6	5300	5500	5000	10780	9800	8820
	8	5500	5350	5050	10945	9950	8955
225	2	5500	5000	4650	11880	10800	9720
	4	5350	4900	4500	12760	11600	10440
	6	5950	5650	5200	13200	12000	10800
	8	6400	6100	5700	13420	12200	10980
250	2	5300	5100	4750	13860	12600	11340
	4	5650	5400	5300	15950	14500	13050
	6	5820	5600	5370	16500	15000	13500
	8	6420	5980	5520	16665	15150	13635
280	2	5500	5000	4500	15400	14000	12600
	4	5665	5150	4635	15950	14500	13050
	6	6930	6300	5670	16500	15000	13500
	8	7920	7200	6480	18150	16500	14850
315 S-M	2	5500	5000	4500	14300	13000	11700
	4	6270	5700	5130	28050	25500	22950
	6	7370	6700	6030	29150	26500	23850
	8	8360	7600	6840	29700	27000	24300
315 L	2	6820	6200	5580	13640	12400	11160
	4	7095	6450	5805	24750	22500	20250
	6	8030	7300	6570	27500	25000	22500
	8	9020	8200	7380	30800	28000	25200

2.5
2.5.4 Permissible axial load on the shaft

2.5.4 Permissible axial load on the shaft with standard bearings

If the shaft end is loaded at X_2 with the permissible radial load F_R an additional axial load F_A is allowed (table 2 L).

If the permissible radial load is not fully utilized, higher loads are possible in axial direction (Values on request).

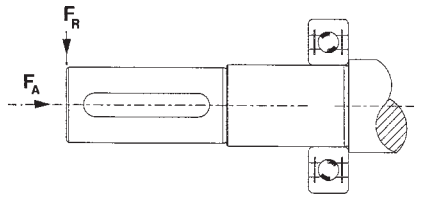


Fig. 2 E

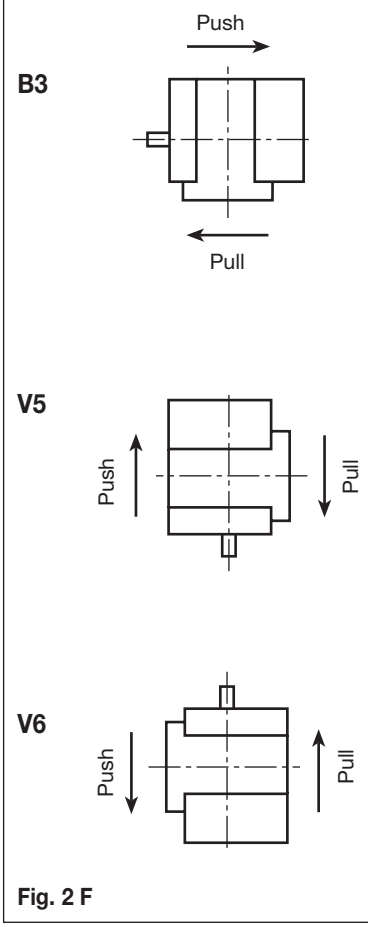


Fig. 2 F

Table 2 L

Frame size	Pole number	Limit axial load with F_R at X_2 - F_A [N]			
		Ball bearings		Roller bearings	
		B3 push/pull	V5/V6 push/pull	B3 push/pull	V5/V6 push/pull
63	2	120	110	---	---
	4	120	110	---	---
	6	140	130	---	---
	8	160	150	---	---
71	2	140	130	---	---
	4	140	120	---	---
	6	170	150	---	---
	8	190	170	---	---
80	2	190	170	---	---
	4	190	160	---	---
	6	220	190	---	---
	8	250	220	---	---
90	2	200	170	---	---
	4	200	160	---	---
	6	240	190	---	---
	8	270	220	---	---
100	2	280	230	---	---
	4	280	220	---	---
	6	330	260	---	---
	8	370	300	---	---
112	2	410	330	---	---
	4	410	320	---	---
	6	480	370	---	---
	8	540	430	---	---
132	2	590	430	---	---
	4	590	380	---	---
	6	690	470	---	---
	8	780	560	---	---
160	2	750	490	1000	700
	4	750	450	1200	840
	6	880	520	1300	910
	8	1000	640	1400	980
180	2	880	950	1000	700
	4	880	1150	1250	875
	6	1030	1350	1350	945
	8	1160	1550	1550	1085
200	2	1160	1100	1100	770
	4	1160	1200	1200	840
	6	1360	1400	1400	980
	8	1520	1600	1600	1120
225	2	1300	1250	1250	875
	4	1300	1350	1350	945
	6	1520	1600	1600	1120
	8	1710	1850	1850	1295
250	2	1460	1300	1300	910
	4	1460	1400	1400	980
	6	1710	1600	1600	1120
	8	1920	1920	1900	1330
280	2	5500	3850	3700	2590
	4	5500	3850	3700	2590
	6	6500	4550	4000	2800
	8	7400	5180	4500	3150
315 S-M	2	5500	3850	3700	2590
	4	5800	4060	3500	2450
	6	6800	4760	4000	2800
	8	7650	5355	4500	3150
315 L	2	2200	1540	3850	2695
	4	2200	1540	3800	2660
	6	2500	1750	4600	3220
	8	3000	2100	5500	3850

2.6 Terminal box
2.6.1 Terminal box design

2.6.1 Terminal box design

The standard design has four basic versions:

- Ex d IIB
- Ex d IIC
- Ex de IIB
- Ex de IIC

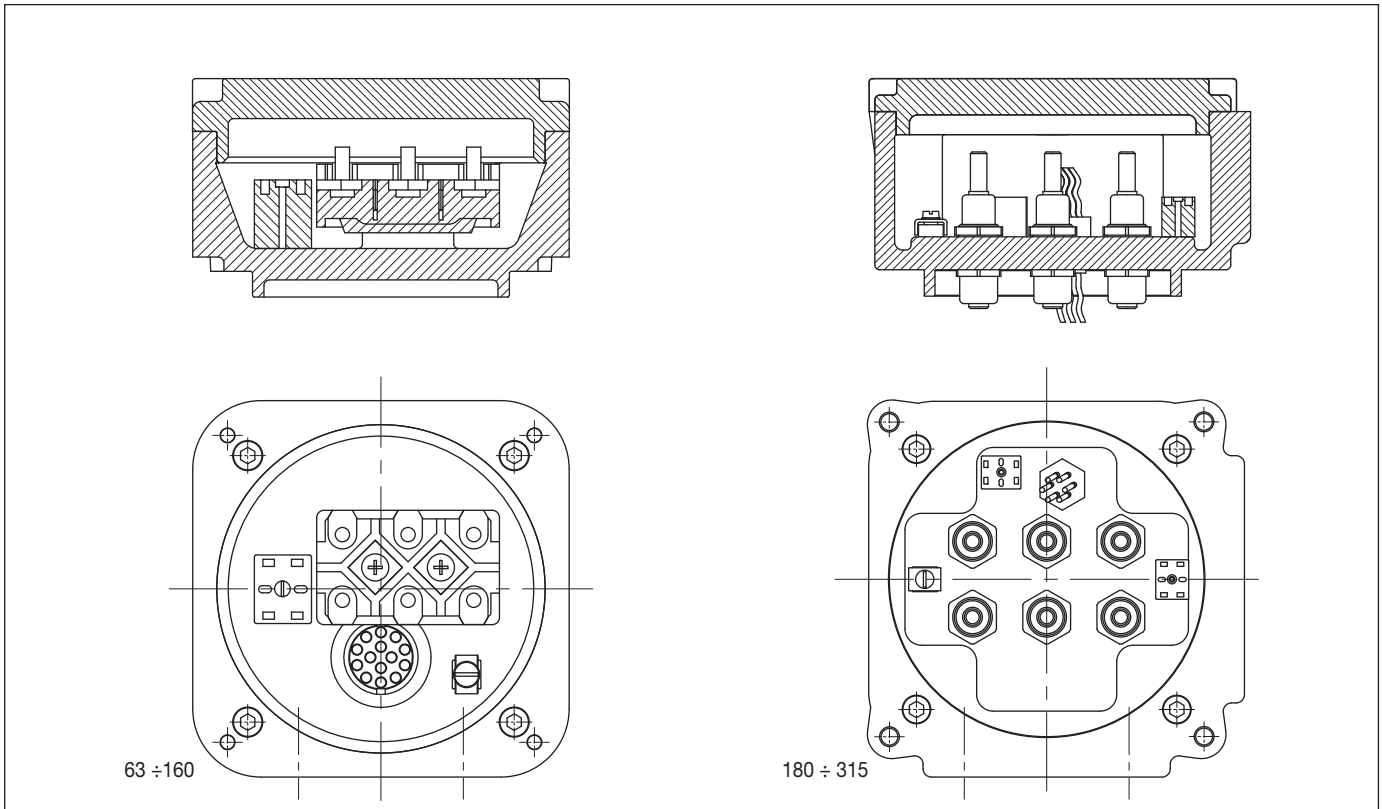


Fig. 2 G - Terminal box, design IIB

On request we can supply:

- additional terminal box for auxiliary terminals (Fig. 2 H)
- motors without terminal box and with leads (Fig. 2 I)
- bigger terminal box with capacitor for single phase motors (Fig. 2 L).

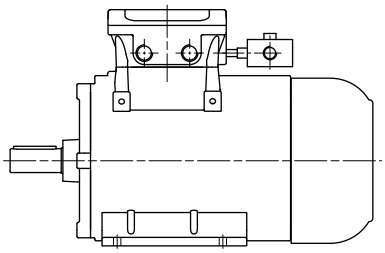


Fig. 2 H

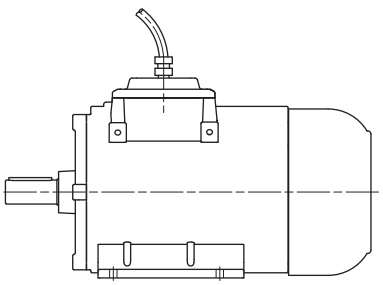


Fig. 2 I

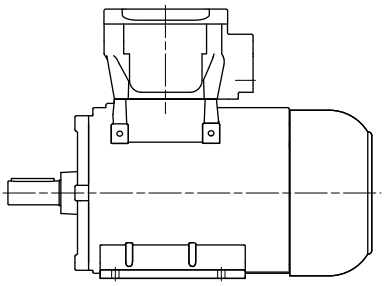


Fig. 2 L

2.6
2.6.2 Position of terminal box and terminals
2.6.3 Cable-entries

2.6.2 Position of terminal box and terminals

The terminal box is usually located on top and can be turned through 4 x 90° (Fig. 2 M).

For a horizontal mounted motor the cable entry is normally located on the right side (looking at the driving-end).

Cable entry:

- standard position: 1
- special positions upon request: 2, 3, 4.

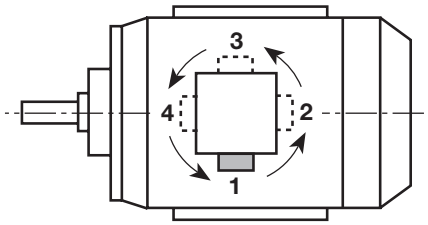


Fig. 2 M - Positioning of the cable entry, plan view

Terminals and earthing terminal

There are a maximum number of 6 power terminals in the terminal box.

The type of monitoring device depends on the number of possible additional terminals in the main terminal box.

PTC thermistors can be connected to two additional terminals.
Two terminals are also necessary for connecting the anticondensation heater.

For PT 100 (RTD) thermistors, 3 or 4 terminals are necessary depending on the type chosen.

An earthing terminal is located in the terminal box and another earthing terminal is located on motor frame.

2.6.3 Cable-entries

As standard, the motors are delivered with one or two threaded cable entries for flameproof packing glands.

Ex de motors can be also provided with Ex e packing glands.

Motors fitted with thermodetectors or heaters are always provided with additional cable entry.

Table 2 N

Mains connection cable entries				
Frame size	**Mains power supply**	**Power supply from an inverter**	**Conical threading upon request***	
			ANSI B 2.1	**UNI 6125**
63 ÷ 112	1 x M25	1 x M25 + 1 x M20	NPT 3/4”	Gk 3/4”
132 ÷ 160	2 x M32	1 x M32 + 1 x M20	NPT 1”	Gk 1”
180 ÷ 250	2 x M40	1 x M40 + 1 x M20	NPT 1.1/2”	Gk 1.1/2”
280 ÷ 315	2 x M63	1 x M63 + 1 x M20	NPT 2”	Gk 2”
Auxiliaries cable entries				
63 ÷ 315	----	1 x M20	NPT 1/2”	Gk 1/2”

* Other threads available upon request

3. Electrical design
3.1 Standard operating conditions

3.1 Standard operating conditions

Output

The rated outputs and operating characteristics given in the performance data refer according to IEC 60034-1 to:
- continuous duty (S1)
- frequency of 50Hz
- voltage 400V (230V for single phase)
- maximum ambient temperature of 40 °C
- maximum height of installation of 1000 m above sea level.

Motors can also be operated in ambient temperatures from 40 °C up to 80 °C and at altitudes of more than 1000 m up to 4000 m above sea level.

In these cases the rated output given in the tables must be reduced in accordance with table 3 A or a larger motor has to be chosen.

The rated data does not need to be changed if at altitudes in excess of 1000 m above sea level the ambient temperature is reduced according to the following table:

Altitude of installation [m]	Maximum ambient temperature [°C]
0 to 1000	40
1000 to 2000	30
2000 to 3000	19
3000 to 4000	9

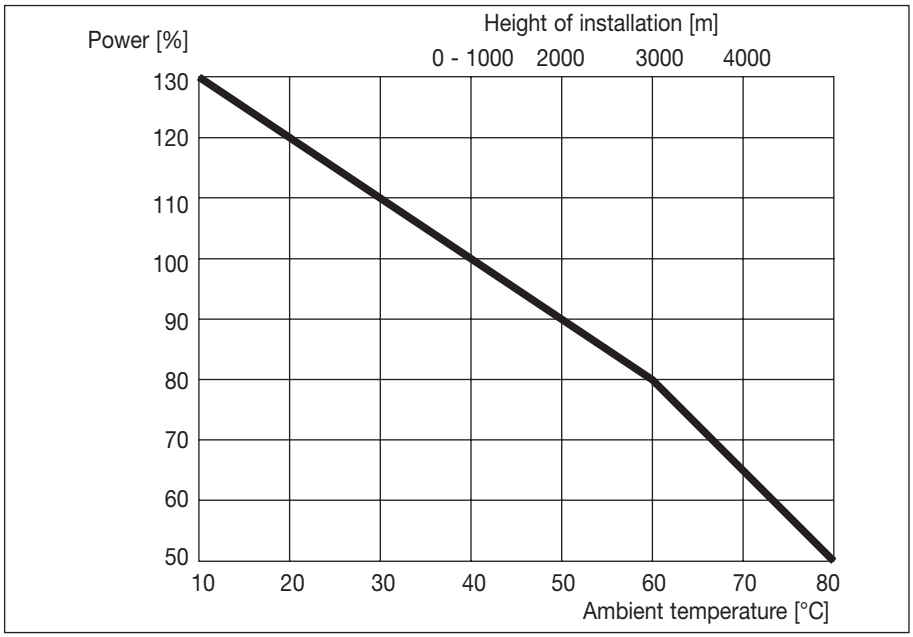
Voltage, frequency

The motors as standard are built to run at the voltage and frequency with the tolerances indicated in figure 3 A.

The motors can run with the variations envisaged in normal operational areas at a voltage of ± 5% and frequency of ± 2%.

Furthermore, the motors can be used in the operational area with restrictions (variations in voltage of ± 10% and frequency of ± 3%) as long as the indications given by norm 60034-1 are complied with.

Table 3 A - Power variation of standard motors in case of coolant temperature different from 40 °C or height of installation over 1000 m above sea-level



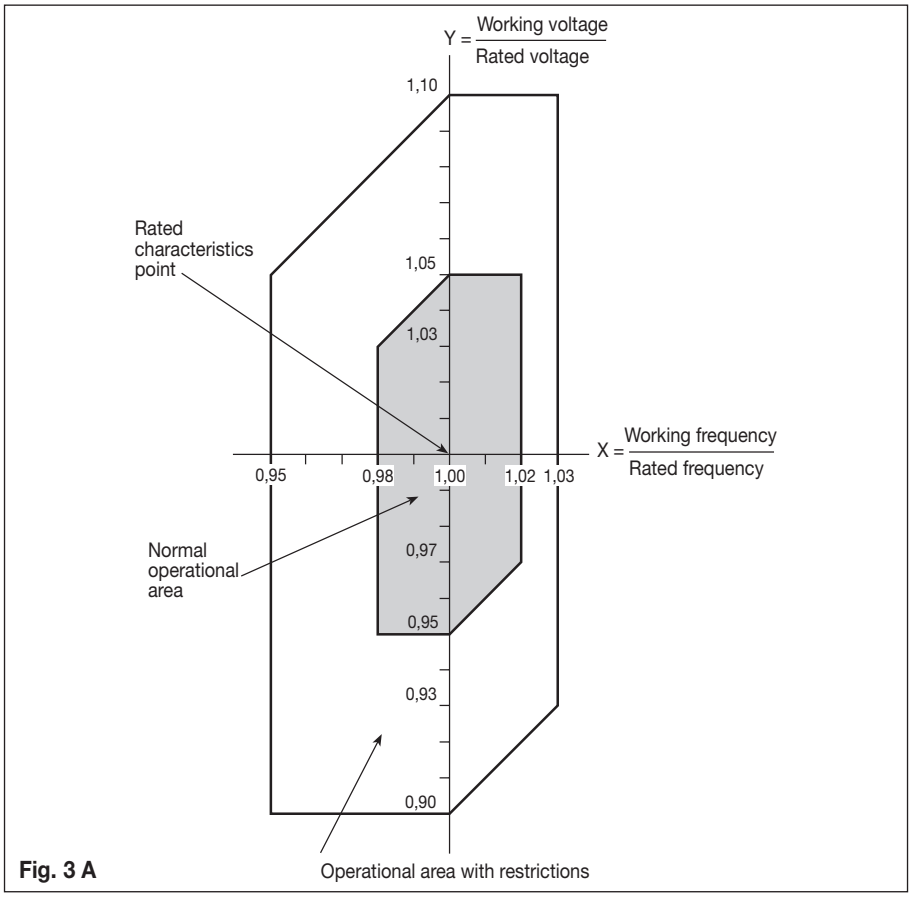


Fig. 3 A

3.1 Standard operating conditions

Torque

The motors are fitted with squirrel-cage rotors suitable for direct-on-line starting.

The resulting starting and maximum torques, expressed as a multiple of the rated torques are given in the performance data.

A deviation in the voltage from the rated value changes the torques as an approximate function of the square of the voltages.

Normally two-speed motors have a nominal torque that is roughly the same for both speeds.

A version is also available with quadratic torque, for centrifugal machines (fans, pumps). In this case, the torque at the lower speed is roughly half that available at the higher speed.

Rated current

In the performance data the rated currents are only indicated for a rated voltage of 400V.

For other voltages the rated currents are inversely proportional to the voltages:

$$\frac{U}{U'} = \frac{I'}{I}$$

This results in:

$$I' = \frac{U \cdot I}{U'}$$

Speed

The rated speeds shown in the performance data are valid for 50 Hz and the rated speed equals synchronous speed less slip.

The following speeds result from the number of poles and the mains frequencies of 50 and 60 Hz:

Pole number	No-load speed at	
	50 Hz [1/min]	60 Hz [1/min]
2	3000	3600
4	1500	1800
6	1000	1200
8	750	900
10	600	720
12	500	600
16	375	450

Direction of rotation

The motors can be operated in both directions of rotation. If the phases are connected in the sequence L1, L2, L3 to the terminals U1, V1, W1, the motor turns clockwise.

The direction of rotation can be reversed by interchanging any two phases.

Note regarding electro-magnetic compatibility

Low voltage induction motors, if installed correctly and connected to the power supply, respect all immunity and emission limits as set out in the regulations relating to electro-magnetic compatibility (EMC "Generic Standard" for industrial environments).

In the case of supply by means of electronic impulse devices (inverters, soft starters etc.), all verifications and any modifications, necessary to ensure that emission and immunity limits, as stated within the regulations, are respected, are the responsibility of the installer.

Tolerances

According to IEC 60034-1 the electrical data stated in the tables are subject to the following tolerances:

Efficiency:
$P_n \leq 50$ kW: - 0.15 (1-η)

$P_n > 50$ kW: - 0.10 (1-η)

Power factor: $-\frac{1 - \cos \varphi}{6}$

(minimum 0.02 - maximum 0.07)

Slip at rated load operating temperature: ± 20% of rated slip.

Locked rotor torque (starting torque): - 15% + 25%

Maximum torque: - 10%.

Current with locked rotor: + 20% (no lower limit).

3.2 Efficiency and power factor at partial load

3.2 Efficiency and power factor at partial load

The efficiency and power factor values shown in the performance data refer to rated output at 50Hz.

Values at partial load given in table 3 B, 3 C are for approximate reference only.

Table 3 B

Efficiency in % at			
$^1/_2$	$^3/_4$	$^4/_4$	$^5/_4$
of full load			
94	95	**96**	95
93	94	**95**	94
92	93	**94**	93
91	92	**93**	92
91	92	**92**	91
89	91	**91**	90
88	90	**90**	88
87	89	**89**	87
86	88	**88**	86
85	87	**87**	84
85	86	**86**	84
84	86	**85**	83
83	85	**84**	82
82	84	**83**	81
80	82	**82**	80
79	81	**81**	79
78	80	**80**	78
77	79	**79**	77
75	78	**78**	76
74	77	**77**	75
73	76	**76**	74
72	75	**75**	73
71	74	**74**	72
70	73	**73**	71
68	72	**72**	70
67	71	**71**	69
66	70	**70**	68
65	69	**69**	67
64	67	**68**	66
62	66	**67**	65
61	65	**66**	64
60	64	**65**	63
59	63	**64**	62

Table 3 C

Power factor at			
$^1/_2$	$^3/_4$	$^4/_4$	$^5/_4$
of full load			
0.85	0.91	**0.93**	0.93
0.84	0.90	**0.92**	0.92
0.81	0.88	**0.91**	0.91
0.80	0.87	**0.90**	0.91
0.77	0.86	**0.89**	0.90
0.75	0.84	**0.88**	0.89
0.73	0.83	**0.87**	0.88
0.71	0.81	**0.86**	0.88
0.69	0.80	**0.85**	0.87
0.68	0.79	**0.84**	0.87
0.67	0.78	**0.83**	0.86
0.65	0.77	**0.82**	0.85
0.64	0.75	**0.81**	0.85
0.62	0.74	**0.80**	0.84
0.61	0.72	**0.79**	0.83
0.60	0.71	**0.78**	0.82
0.58	0.70	**0.77**	0.81
0.57	0.69	**0.76**	0.80
0.55	0.67	**0.75**	0.79
0.54	0.66	**0.74**	0.79
0.53	0.65	**0.73**	0.78
0.52	0.63	**0.72**	0.77
0.50	0.62	**0.71**	0.76
0.49	0.61	**0.70**	0.75
0.48	0.59	**0.69**	0.74
0.47	0.58	**0.68**	0.74
0.46	0.57	**0.67**	0.73
0.45	0.56	**0.66**	0.72
0.44	0.55	**0.65**	0.71
0.43	0.54	**0.64**	0.70
0.42	0.53	**0.63**	0.69
0.41	0.52	**0.62**	0.68
0.40	0.51	**0.61**	0.67

3.3 Insulation and temperature rise

3.3 Insulation and temperature rise

Insulation

The components of the insulation system were selected so as to ensure good protection against chemically aggressive gases, vapours, dust, oil and air humidity. All materials used for insulating the winding and winding ends correspond to insulating classes F or H according to IEC 60085:

- Enamel-insulated copper wires with temperature index 200 (class H);
- Insulating sheet on polyester base (class F);
- Impregnation with fenolic resins modified with polyesther resins (class H);

Table 3 D - Limit temperature for insulating material according IEC 60085

Insulation class	Limit temperature [°C]
B	130
F	155
H	180

Temperature rise

Standard single-speed motors in continuous service (excluding 315M) have temperature rises that are within the limits for class B.

Motors with higher output and pole-changing motors normally have temperature rise within class F limit.

Table 3 E - Temperature rise limit for rotating machines according IEC 60034-1

Insulation class	Max temperature rise [K]
B	80
F	105
H	125

According to Normative IEC 60034-1, the values shown in the table above may be up to 10 °C higher, with a feeding current variance of ± 5%.

3.4 Duty types

3.4 Duty types

ENGLISH

In compliance with IEC 60034-1 the following duty-types are distinguished:

Duty-type S1 - continuous running duty.
Constant load operation.

Duty-type S2 - short-time duty.
Operating times of 10, 30, 60, and 90 minutes are recommended.
After each operating period the motor remains de-energized until the winding has cooled down to the ambient temperature.

Duty-type where start-ups DO NOT INFLUENCE winding over-heating:

Duty-type S3 - intermittent periodic duty.
Where starting does not influence the temperature. Duty cycle 10 minutes unless otherwise agreed upon. For the cyclic duration factor the values 15, 25, 40, and 60% are recommended.

Duty-type S6 - continuous operation periodic duty.
Duty cycle 10 minutes unless otherwise agreed upon. For the cyclic duration factor the value 15, 25, 40, and 60% are recommended.

Duty-types where starting and braking have a corresponding INFLUENCE on the temperature rise of the winding:

Duty-type S4 - intermittent periodic duty with starting.
Intermittent periodical operation with identical cycles.

Duty-type S5 - intermittent periodic duty with electric braking.
Intermittent periodical operation with identical cycles, which include an electrical braking phase.

For S4 and S5 duty-types the following details must be given after this code:
- Intermittence ratio;
- The number of starts per hour;
- Moment of inertia of the motor;
- Moment of inertia of the load.

Duty-type S7 - continuous operation periodic duty with electric braking.

Duty-type S8 - continuous operation periodic duty with related load/speed changes.

Duty-type S9 - duty with non-periodical load and speed variations.
Typical operation for motors powered by frequency converters.

Most of the real duty-type conditions represent a combination of duty-types as mentioned under 1. and 2.
In order to exactly determine a suitable motor details of all the operating conditions are required.

N.B.:
The output ratings stated in the "Performance data" (Chapter 4.) apply to duty-type S1.

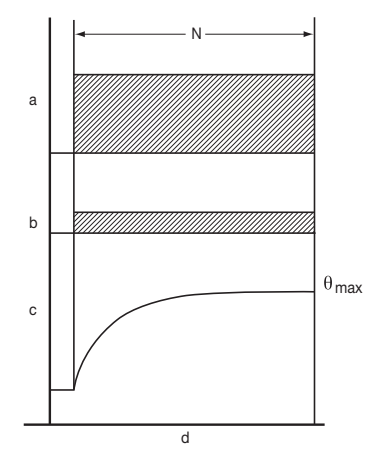


Fig. 3 B - Duty type S1

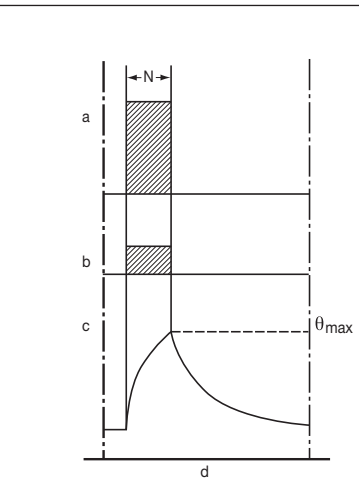
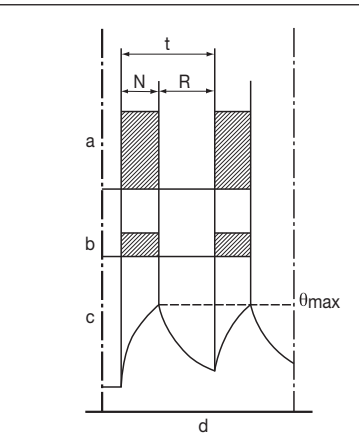
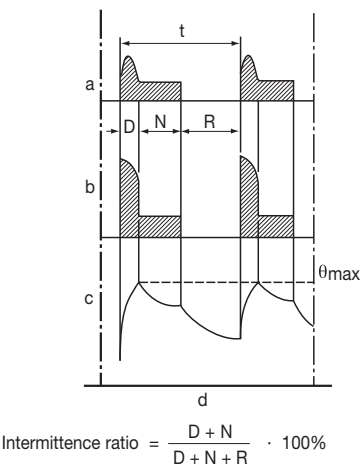


Fig. 3 C - Duty type S2



$$\text{Intermittence ratio} = \frac{N}{N+R} \cdot 100\%$$

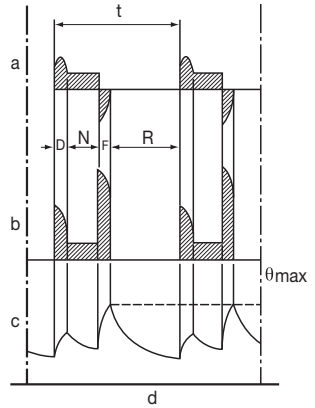
Fig. 3 D - Duty type S3



$$\text{Intermittence ratio} = \frac{D+N}{D+N+R} \cdot 100\%$$

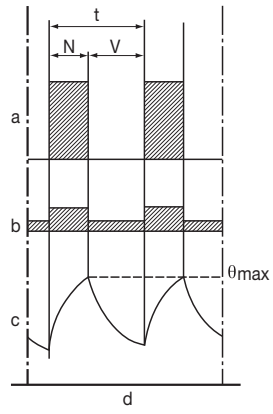
Fig. 3 E - Duty type S4

3.4 Duty types



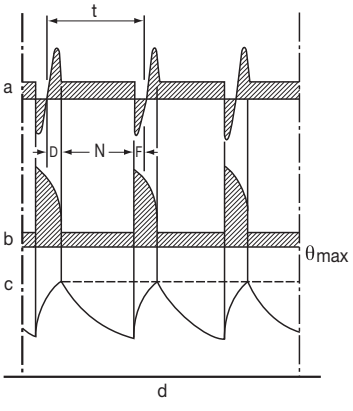
Intermittence ratio = $\frac{D + N + F}{D + N + F + R} \cdot 100\%$

Fig. 3 F - Duty type S5



Intermittence ratio = $\frac{N}{N + V} \cdot 100\%$

Fig. 3 G - Duty type S6



Intermittence ratio = 1

Fig. 3 H - Duty type S7

Intermittence ratio =

$$\frac{D + N_1}{D + N_1 + F_1 + N_2 + F_2 + N_3} \cdot 100\%$$

$$\frac{F_1 + N_2}{D + N_1 + F_1 + N_2 + F_2 + N_3} \cdot 100\%$$

$$\frac{F_2 + N_3}{D + N_1 + F_1 + N_2 + F_2 + N_3} \cdot 100\%$$

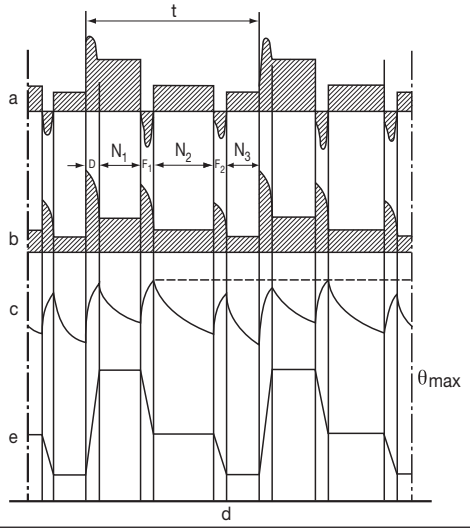


Fig. 3 I - Duty type S8

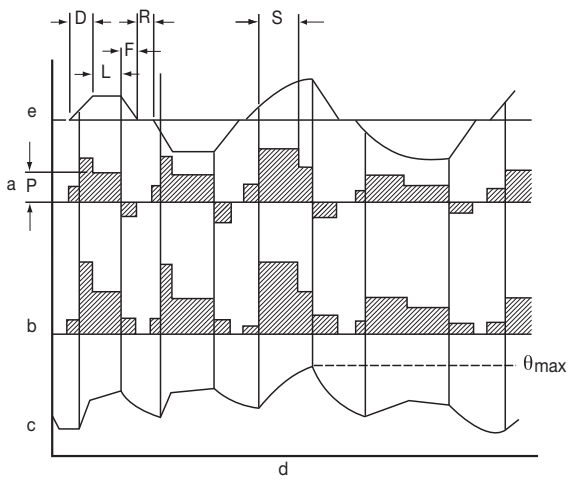


Fig. 3 L - Duty type S9

Table 3 F - Simbology

a	=	Load
b	=	Electrical losses
c	=	Temperature
d	=	Time
e	=	Speed
t	=	Cycle length
D	=	Start-up or acceleration time
F, F_1, F_2	=	Electrical braking time
N, N_1, N_2, N_3	=	Constant load operating time
L	=	Variable load operating time
V	=	No-load operating time
R	=	Rest time
S	=	Overload operating time
P	=	Full load
θ_{max}	=	Maximum temperature reached during cycle

3.5 Connecting diagrams
3.5.1 Three-phase motors

3.5.1 Three-phase motors

Single-speed motors are normally pre-arranged to be connected in star or delta method.

Star connection

Connecting together the W2, U2, V2 terminals (star point) and connecting to the mains the U1, V1, W1 terminals a star connection is obtained.

The phase current I_{ph} and the phase voltage U_{ph} are the following:

$I_{ph} = I_n$

$U_{ph} = U_n / \sqrt{3}$

where I_n the line current and U_n is the line voltage.

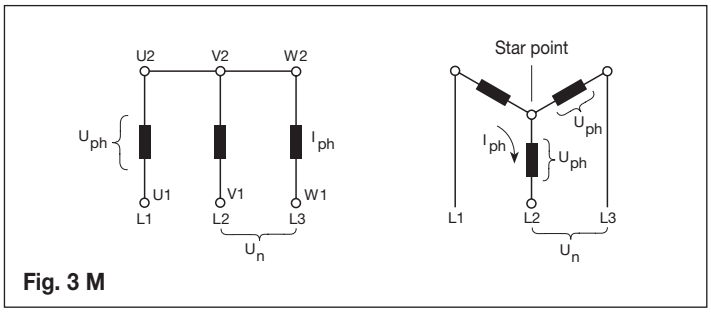


Fig. 3 M

Delta connection

Connecting the end of each winding to the beginning of the next winding a delta connection is obtained.

The phase current I_{ph} and the phase voltage U_{ph} are the following:

$I_{ph} = I_n / \sqrt{3}$

$U_{ph} = U_n$

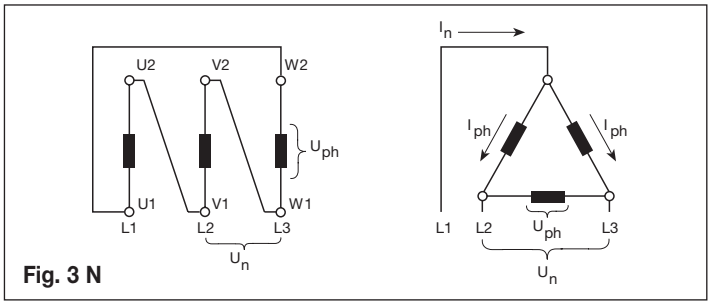


Fig. 3 N

Star - Delta starting

The star-delta starting is an easy way to reduce the starting current and starting torque.

Motors can be started with the star-delta starting method whenever the supply voltage correspond to the rated voltage of the motors in delta connections.

Two speed motors

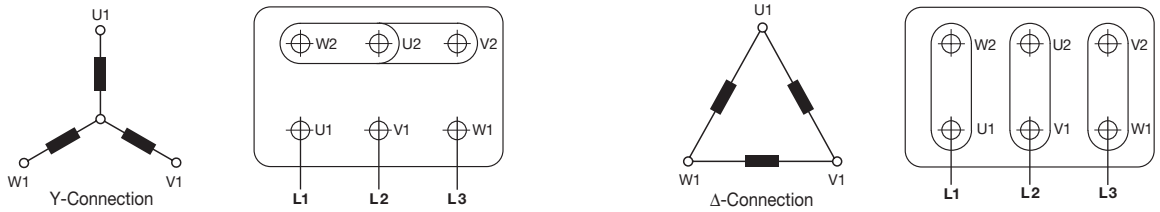
Standard two speed motors are designed for only one rated voltage and for direct starting.

When the speed ratio is 1/2 the standard motors have one winding (Dahlander connection).

For other speed ratios the motors have two different windings.

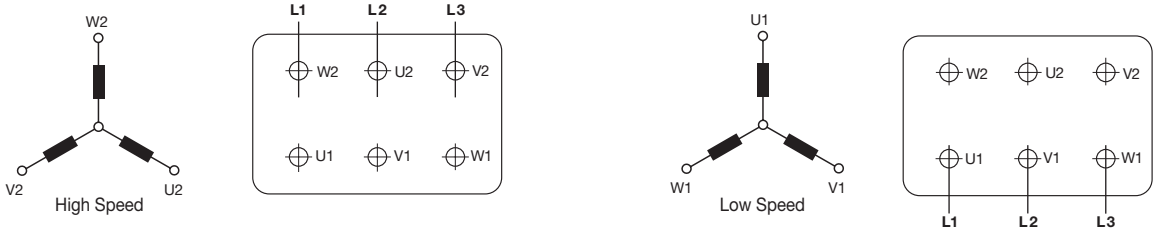
3.5.1 Three-phase motors

Connection for single speed motors:



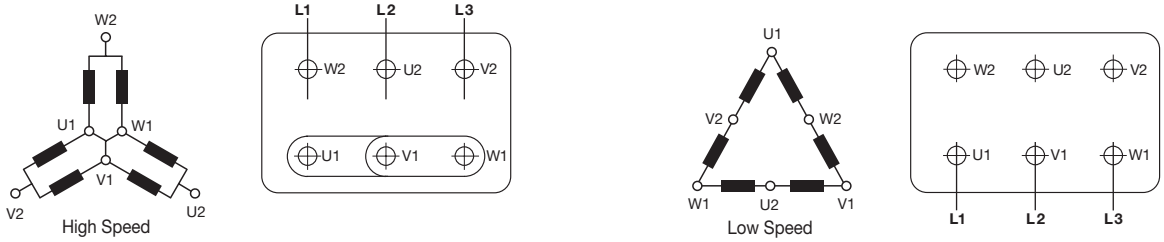
Number of pole: 2, 4, 6, 8 .....
Synchronous speed at 50 Hz: 3000, 1500, 1000, 750 .....

Two separate windings for two speed motors:



Number of pole: 2/6, 2/8, 4/6, 6/8
Synchronous speed at 50 Hz: 3000/1000, 3000/750, 1500/1000, 1000/750.

Dahlander system for two speed motors:



Number of pole: 2/4, 4/8
Synchronous speed at 50 Hz: 3000/1500, 1500/750.

Fig. 3 O - Three phase motors connecting diagrams

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3.5.2 Single phase motors

Single phase motors are designed for only one rated voltage.

They have two windings (starting and main winding) which have to be connected to the capacitor supplied with the motor.

The sense of rotation can be reversed according to the connecting diagram.

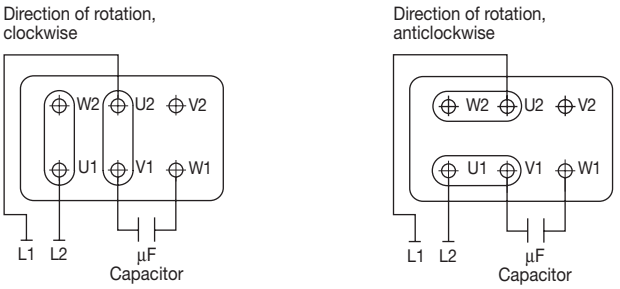

Fig. 3 P - Single phase motors connecting diagram

3.5.3 Additional terminal marking (IEC 60034-8)

Motors fitted with accessories are supplied with additional terminals, marked as indicated in Table 3 G.

Table 3 G

Marking	Nr. terminals	Additional terminal for:
TP1 - TP2 (warning) TP3 - TP4 (switch off)	2 2	Thermistor PTC (*)
R1 - R2 - R3 (I sensor) R4 - R5 - R6 (II sensor) R7 - R8 - R9 (III sensor)	3 3 3	Thermistor PT 100 with 3 wire
R11 - R12 - R13 (DE) R21 - R22 - R23 (NDE)	3 3	Thermistor PT 100 on bearing
TB1 - TB2 (warning) TB3 - TB4 (switch off)	2 2	Normally closed bi-metallic switch (**)
TB8 - TB9 (switch off)	2	Normally closed brake bi-metallic switch (**)
TM1 - TM2 (warning) TM3 - TM4 (switch off)	2 2	Normally open bi-metallic switch (**)
HE1- HE2	2	Space heaters
U1 - U2	2	Single phase forced ventilation
U - V - W	2	Three phase forced ventilation
colours according manufacturer diagram	9	Encoder
CA1 - CA2	2	Capacitor
PE	1	Earth cable

(*) U rated = 6V - max 30V - (**) U rated = 250V

3.6 Protection devices

In order to protect the winding of a three-phase induction motor against thermal overloads, resulting in example from overloading and operation with only two phases, one of the following devices can be provided:

- **Bimetallic type device:**
  it consists of 2 motor protectors connected in series. The contact is normally closed; the disc opens when the windings temperature reaches limits dangerous for the insulation system.
  On request normally open device are available.

- **PTC temperature sensor**
  (thermistors):
  it consists of 3 sensors connected in series embedded in stator windings.

  Once reached the operating temperature, this device quickly changes the resistance; it must be connected to a suitable releasing device (supplied only on request).

- **PT 100 (RTD) thermometric resistors**
  (from size 132 and above).
  The resistance value of this device varies according to the windings temperature.

  They are particularly suitable for a continuous survey of the windings temperature.

  For a good survey at least two set of PT 100 are requested; they must be connected to their proper monitoring equipment (supplied only on request).

PTC and PT 100 also offer reliable protection for operating modes other than continuous operation, e. g. short-time operation, switching operation, longtime start-up as well as for reduced cooling air flow rates and high ambient temperatures.

Motors for operation with frequency converter are always supplied with PTC thermistor temperature detectors.

Above devices have their proper terminal block located inside main box.

Upon request also available with separate terminal box.

3.7 Frequency converter driven motors

3.7 Frequency converter driven motors

Motors with enclosures in protection type “d”, “de” are designed for variable speed drives.

Chapter 4.5 lists the electrical data in different working conditions of the Ex d, Ex de motors shown in this catalogue.

Specific type-approvals are needed for motors with protection type Ex e, while in many countries motors with protection type Ex nA are strongly restricted.

When using a squirrel cage “Ex d” motor with a frequency converter the following points must be taken into account in addition to the general selection criteria:

- The voltage (or current) fed by the frequency converter is not purely sinusoidal.

  As a result it may increase the losses, vibration, and noise of the motor.

  Futhermore, a change in the distribution of the losses may affect the motor temperature balance.

  In every case, the motor must be correctly sized according to the instructions supplied with the selected frequency converter and with our technical data.

- In a frequency converter drive the actual operating speed of the motor may deviate considerably from its rated speed.

  For higher speeds it must be ensured that the highest permissible speed of rotation of the motor, or the critical speed of the entire equipment, is not exceeded.

  In addition, bearing lubrication and any ventilation noise suppression arrangements will require special attention.

- The torque values shown in this catalogue for motors with constant torque at frequencies over 60Hz can be stably supplied only if the motor has a delta connection.

  For example, to stably achieve these values from a 230/400V 50Hz winding motor with a 400V 50Hz mains voltage supply, the motor must have a delta connection and, consequently, the inverter must be configured so that at 50Hz it supplies a voltage of 230V.

  Vice-versa, with a star connection, the values listed can be supplied only for very short periods.

- Operating periods at a speed above 3600 1/min must never exceed 10% of the entire work cycle of the motor to ensure the bearings last accordingly.

- If the rated voltage is 690V or if there is a long feeding cable between the motor and the frequency converter, the insulation of the motor must be reinforced because of the occuring voltage peaks.

A correct earthing of the motor and the driven equipment is also important to avoid bearing currents and voltages.

The features of motors for use in constant torque and those for use in quadratic torque are indicated in section 4.5.

Section 4.5.1 contains graphs showing loading curves for the use of variable torque motors.

The reference torque value (Mn) is the value indicated in the tables in section 4.1.

4. Performance data
4.1 Three-phase motors, 1 speed
4.2 Three-phase motors, 2 speeds, for general purpose (constant torque)
4.3 Three-phase motors, 2 speeds, for centrifugal machines (quadratic torque)
4.4 Single-phase motors, 1 speed
4.5 Motors energized by inverter

4. Données nominales
4.1 Moteurs triphasés, 1 vitesse
4.2 Moteurs triphasés, 2 vitesses, pour usage général (couple constant)
4.3 Moteurs triphasés, 2 vitesses, pour machines centrifuges (couple quadratique)
4.4 Moteurs monophasés, 1 vitesse
4.5 Moteurs alimentés par variateur

4. Betriebsdaten
4.1 Drehstrom Motoren, 1 Drehzahl
4.2 Drehstrom Motoren, 2 Drehzahlen, für allgemeinen Gebrauch (konstantes Gegenmoment)
4.3 Drehstrom Motoren, 2 Drehzahlen, für Zentrifugalmaschinen (quadratisches Gegenmoment)
4.4 Einphasen Motoren, 1 Drehzahl
4.5 Motoren mit Umrichterversorgung

4. Datos nominales
4.1 Motores trifásicos, 1 velocidad
4.2 Motores trifásicos, 2 velocidades, para uso general (par constante)
4.3 Motores trifásicos, 2 velocidades, para máquinas centrifugas (par cuadrático)
4.4 Motores monofásicos, 1 velocidad
4.5 Motores alimentados con inverter

4. Dati nominali
4.1 Motori trifase, 1 velocità
4.2 Motori trifase, 2 velocità, per uso generale (coppia costante)
4.3 Motori trifase, 2 velocità, per macchine centrifughe (coppia quadratica)
4.4 Motori monofase, 1 velocità
4.5 Motori alimentati da inverter

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4. / **4.1**

Three-phase motors — *Moteurs triphasés* — **Drehstrom Motoren** — *Motores trifásicos* — **Motori trifase**

II 2G / **II 2GD**

1

Speed — *Vitesse* — **Drehzahl** — *Velocidad* — **Velocità**

Rated data at — *Données nominales à* — **Betriebsdaten bei** — *Datos nominales* — **Dati nominali a**

400 V 50 Hz

direct on line start — *démarrage direct* — **Direkteinschaltung** — *arranque directo* — **avviamento diretto**

3000

rpm — *tours/min* — **U/min** — *rev/min* — **giri/min**

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Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Maximum torque	Noise level	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Couple maximal*	*Niveau de bruit*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungs-faktor	Moment	Anlauf-strom	Anlauf-moment	Kipp-moment	Schalldruck-pegel	Trägheits-moment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Par máximo*	*Nivel de ruido*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Coppia massima	Rumorosità	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	M_m/M_n	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
AB30 63 A 2	AB35 63 A 2	**AC30 63 A 2**	AC35 63 A 2	0.18	2857	0.75	63.00	0.57	0.63	4.4	3.6	3.8	60	52	0.0001	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 63 B 2	AB35 63 B 2	**AC30 63 B 2**	AC35 63 B 2	0.25	2805	0.85	66.00	0.66	0.85	3.9	3.5	3.7	60	52	0.0001	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 71 A 2	AB35 71 A 2	**AC30 71 A 2**	AC35 71 A 2	0.37	2800	1.10	62.00	0.77	1.26	3.6	2.4	2.6	66	58	0.0004	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 71 B 2	AB35 71 B 2	**AC30 71 B 2**	AC35 71 B 2	0.55	2830	1.40	71.00	0.79	1.85	4.3	2.5	2.7	66	58	0.0004	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 80 A 2	AB35 80 A 2	**AC30 80 A 2**	AC35 80 A 2	0.75	2800	1.84	74.50	0.79	2.56	4.7	2.6	2.8	70	62	0.0006	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 80 B 2	AB35 80 B 2	**AC30 80 B 2**	AC35 80 B 2	1.10	2845	2.68	77.00	0.77	3.69	5.3	3.0	3.1	70	62	0.0008	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 90 S 2	AB35 90 S 2	**AC30 90 S 2**	AC35 90 S 2	1.50	2845	3.26	79.00	0.84	5.04	6.2	2.3	2.5	77	69	0.0012	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 90 L 2	AB35 90 L 2	**AC30 90 L 2**	AC35 90 L 2	2.20	2820	4.53	80.50	0.87	7.45	5.5	2.6	2.8	77	69	0.0015	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 100 LA 2	AB35 100 LA 2	**AC30 100 LA 2**	AC35 100 LA 2	3.00	2910	6.64	82.50	0.79	9.85	7.5	3.2	3.4	80	72	0.0029	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 112 M 2	AB35 112 M 2	**AC30 112 M 2**	AC35 112 M 2	4.00	2900	7.97	84.20	0.86	13.17	6.8	2.0	2.2	80	72	0.0074	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 SA 2	AB35 132 SA 2	**AC30 132 SA 2**	AC35 132 SA 2	5.50	2905	10.90	85.00	0.86	18.08	6.5	2.8	3.1	81	73	0.0124	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 SB 2	AB35 132 SB 2	**AC30 132 SB 2**	AC35 132 SB 2	7.50	2925	14.10	86.00	0.89	24.49	6.6	2.5	2.7	83	75	0.0150	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 MB 2	AB35 132 MB 2	**AC30 132 MB 2**	AC35 132 MB 2	9.20	2900	18.00	84.00	0.88	30.30	7.5	2.8	3.0	83	75	0.0178	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 ML 2	AB35 132 ML 2	**AC30 132 ML 2**	AC35 132 ML 2	11.00	2930	20.00	92.00	0.86	36.00	7.0	2.8	3.1	83	75	0.0216	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 MA 2	AB35 160 MA 2	**AC30 160 MA 2**	AC35 160 MA 2	11.00	2930	20.00	89.00	0.89	35.85	6.6	2.5	2.8	84	76	0.0360	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 MB 2	AB35 160 MB 2	**AC30 160 MB 2**	AC35 160 MB 2	15.00	2950	26.80	89.70	0.90	48.56	7.0	2.9	3.1	84	76	0.0463	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 L 2	AB35 160 L 2	**AC30 160 L 2**	AC35 160 L 2	18.50	2930	33.00	89.80	0.90	60.30	7.0	2.8	3.1	84	76	0.0534	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 180 M 2	AB35 180 M 2	**AC30 180 M 2**	AC35 180 M 2	22.00	2945	39.00	90.60	0.90	71.34	7.5	2.8	3.2	83	74	0.0818	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 200 LA 2	AB35 200 LA 2	**AC30 200 LA 2**	AC35 200 LA 2	30.00	2975	54.00	91.50	0.88	96.30	8.5	3.5	3.7	87	77	0.1625	285	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 200 LB 2	AB35 200 LB 2	**AC30 200 LB 2**	AC35 200 LB 2	37.00	2975	65.00	91.70	0.90	118.77	7.9	2.8	3.2	87	77	0.1947	305	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 225 M 2	AB35 225 M 2	**AC30 225 M 2**	AC35 225 M 2	45.00	2975	79.00	92.30	0.89	144.45	9.0	2.6	3.0	89	79	0.2902	385	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 250 M 2	AB35 250 M 2	**AC30 250 M 2**	AC35 250 M 2	55.00	2980	95.00	92.50	0.90	176.26	7.3	2.5	2.8	90	79	0.4197	505	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 280 S 2	AB35 280 S 2	**AC30 280 S 2**	AC35 280 S 2	75.00	2980	134.00	93.00	0.87	240.35	7.3	2.7	3.3	88	76	0.5200	842	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 280 M 2	AB35 280 M 2	**AC30 280 M 2**	AC35 280 M 2	90.00	2985	159.00	93.00	0.88	287.94	8.6	3.1	3.8	88	76	0.6300	881	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 S 2	AB35 315 S 2	**AC30 315 S 2**	AC35 315 S 2	110.00	2980	185.00	94.10	0.91	352.52	7.5	2.3	2.5	90	76	0.7000	932	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 M 2	AB35 315 M 2	**AC30 315 M 2**	AC35 315 M 2	132.00	2975	229.00	93.00	0.90	423.70	7.9	2.5	3.3	90	76	0.7500	948	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 LA 2	AB35 315 LA 2	**AC30 315 LA 2**	AC35 315 LA 2	132.00	2984	222.00	94.00	0.92	422.47	7.0	2.0	2.3	99	85	1.8800	1340	08 ATEX 021	---	07 ATEX 073	---	4
AB30 315 LB 2	AB35 315 LB 2	**AC30 315 LB 2**	AC35 315 LB 2	160.00	2984	269.00	94.50	0.91	512.21	7.0	1.7	2.0	99	85	2.2500	1430	08 ATEX 021	---	07 ATEX 073	---	4
AB30 315 LC 2	AB35 315 LC 2	**AC30 315 LC 2**	AC35 315 LC 2	200.00	2983	332.00	95.20	0.91	640.30	7.4	1.7	2.0	99	85	2.7900	1550	08 ATEX 021	---	07 ATEX 073	---	4

◗ $I'_n = I_n \cdot \frac{400}{U'}$ (I'_n = current at U' Volt); (I'_n = *intensité à U' Volt);* (I'_n = Strom mit U' Volt); (I'_n = *corriente de U' Voltios);* (I'_n = corrente a U' Volt);

▼ $J = \frac{PD^2}{4}$

★
Versions that need special installation solutions
Versions qui demandent des mesures particulières pour l'installation
Ausführungen, die bei der Installation besondere Vorsichtsmaßnahmen erfordern
Versiones que requieren precauciones especiales de instalación
Versioni che richiedono particolari accorgimenti di installazione

◆
T3, T5 and T6 see table 1B
T3, T5 et T6 voir tableau 1B
T3, T5 und T6 siehe Tabelle 1B
T3, T5 y T6 véase tabla 1B
T3, T5 e T6 vedi tabella 1B

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

4. / **4.1**

Three-phase motors — ***Moteurs triphasés*** — **Drehstrom Motoren** — ***Motores trifásicos*** — **Motori trifase**

II 2G / **II 2GD**

1

Speed — ***Vitesse*** — **Drehzahl** — ***Velocidad*** — **Velocità**

Rated data at — ***Données nominales à*** — **Betriebsdaten bei** — ***Datos nominales*** — **Dati nominali a**

400 V 50 Hz

direct on line start — ***démarrage direct*** — **Direkteinschaltung** — ***arranque directo*** — **avviamento diretto**

1500

rpm — ***tours/min*** — **U/min** — ***rev/min*** — **giri/min**

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Maximum torque	Noise level	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Couple maximal*	*Niveau de bruit*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungs-faktor	Moment	Anlauf-strom	Anlauf-moment	Kipp-moment	Schalldruck-pegel	Trägheits-moment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Par máximo*	*Nivel de ruido*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Coppia massima	Rumorosità	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	M_m/M_n	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
AB30 63 A 4	AB35 63 A 4	**AC30 63 A 4**	AC35 63 A 4	0.12	1380	0.62	58.00	0.55	0.93	4.5	2.3	2.5	52	44	0.0002	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 63 B 4	AB35 63 B 4	**AC30 63 B 4**	AC35 63 B 4	0.18	1340	0.67	62.00	0.65	1.28	4.2	2.3	2.5	52	44	0.0002	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 71 A 4	AB35 71 A 4	**AC30 71 A 4**	AC35 71 A 4	0.25	1372	0.80	60.00	0.78	1.72	3.1	2.2	2.6	56	48	0.0006	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 71 B 4	AB35 71 B 4	**AC30 71 B 4**	AC35 71 B 4	0.37	1390	1.10	69.00	0.72	2.53	3.5	2.2	2.7	56	48	0.0009	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 80 A 4	AB35 80 A 4	**AC30 80 A 4**	AC35 80 A 4	0.55	1380	1.60	69.00	0.71	3.86	4.0	2.3	2.5	59	51	0.0009	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 80 B 4	AB35 80 B 4	**AC30 80 B 4**	AC35 80 B 4	0.75	1390	2.06	73.00	0.72	5.15	4.0	2.3	2.6	59	51	0.0013	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 90 S 4	AB35 90 S 4	**AC30 90 S 4**	AC35 90 S 4	1.10	1390	2.58	76.00	0.81	7.56	4.1	2.0	2.4	62	54	0.0020	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 90 L 4	AB35 90 L 4	**AC30 90 L 4**	AC35 90 L 4	1.50	1400	3.54	77.50	0.79	10.23	5.0	2.3	2.5	62	54	0.0026	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 100 LA 4	AB35 100 LA 4	**AC30 100 LA 4**	AC35 100 LA 4	2.20	1427	5.15	80.10	0.77	14.72	4.4	2.1	2.3	63	55	0.0043	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 100 LB 4	AB35 100 LB 4	**AC30 100 LB 4**	AC35 100 LB 4	3.00	1436	7.07	81.70	0.75	19.95	4.8	2.4	2.8	63	55	0.0053	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 112 M 4	AB35 112 M 4	**AC30 112 M 4**	AC35 112 M 4	4.00	1435	8.28	85.00	0.82	26.62	5.5	2.7	3.5	68	60	0.0103	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 SB 4	AB35 132 SB 4	**AC30 132 SB 4**	AC35 132 SB 4	5.50	1455	11.90	87.00	0.77	36.10	6.3	2.4	2.8	72	64	0.0250	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 MB 4	AB35 132 MB 4	**AC30 132 MB 4**	AC35 132 MB 4	7.50	1460	17.20	86.30	0.73	49.06	5.3	2.7	3.1	75	67	0.0324	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 ML 4	AB35 132 ML 4	**AC30 132 ML 4**	AC35 132 ML 4	8.80	1455	18.50	87.00	0.79	57.59	6.8	2.5	3.5	75	67	0.0405	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 MB 4	AB35 160 MB 4	**AC30 160 MB 4**	AC35 160 MB 4	11.00	1465	22.90	89.00	0.78	71.71	6.2	2.5	3.0	77	69	0.0627	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 L 4	AB35 160 L 4	**AC30 160 L 4**	AC35 160 L 4	15.00	1470	31.40	89.50	0.77	97.45	5.9	2.5	3.0	77	69	0.0801	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 180 M 4	AB35 180 M 4	**AC30 180 M 4**	AC35 180 M 4	18.50	1470	39.00	89.80	0.76	120.19	6.0	3.2	3.0	79	70	0.1236	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 180 L 4	AB35 180 L 4	**AC30 180 L 4**	AC35 180 L 4	22.00	1470	44.00	91.00	0.79	142.93	6.5	2.8	3.1	79	70	0.1493	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 200 LB 4	AB35 200 LB 4	**AC30 200 LB 4**	AC35 200 LB 4	30.00	1470	54.00	91.20	0.88	194.90	6.5	2.5	2.9	82	72	0.2456	305	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 225 S 4	AB35 225 S 4	**AC30 225 S 4**	AC35 225 S 4	37.00	1480	69.00	91.70	0.84	238.75	7.1	2.7	3.0	84	73	0.3737	360	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 225 M 4	AB35 225 M 4	**AC30 225 M 4**	AC35 225 M 4	45.00	1480	85.00	92.50	0.83	290.37	6.2	2.4	2.8	84	73	0.4479	385	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 250 M 4	AB35 250 M 4	**AC30 250 M 4**	AC35 250 M 4	55.00	1485	96.00	94.20	0.88	353.70	7.2	2.9	2.9	86	75	0.7673	540	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 280 S 4	AB35 280 S 4	**AC30 280 S 4**	AC35 280 S 4	75.00	1480	135.00	93.00	0.86	483.95	6.3	2.2	2.4	82	70	0.9500	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 280 M 4	AB35 280 M 4	**AC30 280 M 4**	AC35 280 M 4	90.00	1485	162.00	93.50	0.86	578.79	7.3	3.0	3.1	82	70	1.1200	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 S 4	AB35 315 S 4	**AC30 315 S 4**	AC35 315 S 4	110.00	1488	196.00	94.00	0.86	705.98	7.5	2.1	2.2	85	71	1.2700	971	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 M 4	AB35 315 M 4	**AC30 315 M 4**	AC35 315 M 4	132.00	1480	239.00	93.00	0.83	851.80	7.1	2.7	2.5	85	71	1.3300	984	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 LA 4	AB35 315 LA 4	**AC30 315 LA 4**	AC35 315 LA 4	132.00	1491	236.00	95.00	0.85	845.00	7.2	1.6	1.7	90	76	3.7200	1190	08 ATEX 021	---	07 ATEX 073	---	4
AB30 315 LB 4	AB35 315 LB 4	**AC30 315 LB 4**	AC35 315 LB 4	160.00	1488	282.00	95.50	0.86	1027.00	7.1	2.0	2.1	90	76	4.1100	1455	08 ATEX 021	---	07 ATEX 073	---	4
AB30 315 LC 4	AB35 315 LC 4	**AC30 315 LC 4**	AC35 315 LC 4	200.00	1488	354.00	95.20	0.86	1285.00	8.7	2.0	2.1	90	76	5.2100	1640	08 ATEX 021	---	07 ATEX 073	---	4

◗ $I'_n = I_n \cdot \frac{400}{U'}$ (I'_n = current at U' Volt); (I'_n = *intensité à U' Volt);* (I'_n = Strom mit U' Volt); (I'_n = *corriente de U' Voltios);* (I'_n = corrente a U' Volt);

▼ $J = \frac{PD^2}{4}$

★
Versions that need special installation solutions
Versions qui demandent des mesures particulières pour l'installation
Ausführungen, die bei der Installation besondere Vorsichtsmaßnahmen erfordern
Versiones que requieren precauciones especiales de instalación
Versioni che richiedono particolari accorgimenti di installazione

◆
T3, T5 and T6 see table 1B
T3, T5 et T6 voir tableau 1B
T3, T5 und T6 siehe Tabelle 1B
T3, T5 y T6 véase tabla 1B
T3, T5 e T6 vedi tabella 1B

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

4. / **4.1**

Three-phase motors — ***Moteurs triphasés*** — **Drehstrom Motoren** — ***Motores trifásicos*** — **Motori trifase**

II 2G / **II 2GD**

1

Speed — ***Vitesse*** — **Drehzahl** — ***Velocidad*** — **Velocità**

Rated data at — ***Données nominales à*** — **Betriebsdaten bei** — ***Datos nominales*** — **Dati nominali a**

400 V 50 Hz

direct on line start — ***démarrage direct*** — **Direkteinschaltung** — ***arranque directo*** — **avviamento diretto**

1000

rpm — ***tours/min*** — **U/min** — ***rev/min*** — **giri/min**

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Maximum torque	Noise level	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Couple maximal*	*Niveau de bruit*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungs-faktor	Moment	Anlauf-strom	Anlauf-moment	Kipp-moment	Schalldruck-pegel	Trägheits-moment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Par máximo*	*Nivel de ruido*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Coppia massima	Rumorosità	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	M_m/M_n	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
AB30 63 B 6	AB35 63 B 6	**AC30 63 B 6**	AC35 63 B 6	0.09	850	0.65	38.00	0.52	1.00	2.0	2.3	2.2	48	40	0.0002	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 71 A 6	AB35 71 A 6	**AC30 71 A 6**	AC35 71 A 6	0.18	945	0.92	55.00	0.51	1.82	3.7	3.7	3.7	50	42	0.0007	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 71 B 6	AB35 71 B 6	**AC30 71 B 6**	AC35 71 B 6	0.26	918	1.00	60.00	0.63	2.71	3.4	2.6	2.6	50	42	0.0010	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 80 A 6	AB35 80 A 6	**AC30 80 A 6**	AC35 80 A 6	0.37	930	1.60	58.00	0.58	3.80	3.1	2.9	3.2	53	45	0.0022	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 80 B 6	AB35 80 B 6	**AC30 80 B 6**	AC35 80 B 6	0.55	930	1.80	70.00	0.65	5.79	2.8	2.0	2.1	53	45	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 90 S 6	AB35 90 S 6	**AC30 90 S 6**	AC35 90 S 6	0.75	910	2.20	70.00	0.71	7.90	3.0	1.8	2.1	54	46	0.0034	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 90 L 6	AB35 90 L 6	**AC30 90 L 6**	AC35 90 L 6	1.10	935	3.35	73.00	0.65	11.24	3.4	2.0	2.2	54	46	0.0049	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 100 LB 6	AB35 100 LB 6	**AC30 100 LB 6**	AC35 100 LB 6	1.50	950	3.80	76.00	0.75	15.08	4.2	2.0	2.3	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 112 M 6	AB35 112 M 6	**AC30 112 M 6**	AC35 112 M 6	2.20	960	6.11	80.00	0.65	21.89	5.2	2.3	2.1	65	57	0.0172	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 SB 6	AB35 132 SB 6	**AC30 132 SB 6**	AC35 132 SB 6	3.00	950	7.50	80.00	0.72	30.16	5.8	1.4	1.9	68	60	0.0323	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 MB 6	AB35 132 MB 6	**AC30 132 MB 6**	AC35 132 MB 6	4.00	970	9.50	81.40	0.75	39.38	6.1	1.7	1.9	68	60	0.0395	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 ML 6	AB35 132 ML 6	**AC30 132 ML 6**	AC35 132 ML 6	5.50	960	12.30	84.00	0.77	54.71	4.8	1.8	2.0	68	60	0.0506	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 MB 6	AB35 160 MB 6	**AC30 160 MB 6**	AC35 160 MB 6	7.50	950	15.70	85.00	0.81	75.39	5.9	1.6	2.0	72	64	0.0919	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 L 6	AB35 160 L 6	**AC30 160 L 6**	AC35 160 L 6	11.00	950	21.50	87.00	0.85	110.58	6.2	1.7	2.0	72	64	0.1218	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 180 L 6	AB35 180 L 6	**AC30 180 L 6**	AC35 180 L 6	15.00	960	29.00	88.00	0.86	149.22	5.4	1.7	2.2	76	67	0.2263	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 200 LA 6	AB35 200 LA 6	**AC30 200 LA 6**	AC35 200 LA 6	18.50	975	38.00	91.00	0.77	181.21	5.9	1.6	2.1	79	69	0.2986	295	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 200 LB 6	AB35 200 LB 6	**AC30 200 LB 6**	AC35 200 LB 6	22.00	980	44.00	91.70	0.78	214.39	6.1	1.6	2.1	79	69	0.3064	305	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 225 M 6	AB35 225 M 6	**AC30 225 M 6**	AC35 225 M 6	30.00	985	61.00	91.70	0.78	290.86	5.8	2.0	2.5	81	70	0.7617	385	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 250 M 6	AB35 250 M 6	**AC30 250 M 6**	AC35 250 M 6	37.00	990	73.00	92.00	0.79	356.92	5.2	2.0	2.4	81	70	1.0475	520	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 280 S 6	AB35 280 S 6	**AC30 280 S 6**	AC35 280 S 6	45.00	982	89.00	91.40	0.80	437.63	4.9	2.5	2.8	77	65	1.1400	858	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 280 M 6	AB35 280 M 6	**AC30 280 M 6**	AC35 280 M 6	55.00	980	107.00	92.00	0.81	535.97	4.7	2.3	2.4	77	65	1.3600	894	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AC30 315 S 6	AC35 315 S 6	**AC30 315 S 6**	AC35 315 S 6	75.00	990	147.20	94.00	0.79	724.00	6.3	2.6	2.7	79	65	1.6300	965	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AC30 315 M 6	AC35 315 M 6	**AC30 315 M 6**	AC35 315 M 6	90.00	990	175.00	94.00	0.79	871.00	4.4	1.8	1.8	79	65	1.8300	991	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 LA 6	AB35 315 LA 6	**AC30 315 LA 6**	AC35 315 LA 6	90.00	994	167.60	94.00	0.83	865.00	5.3	2.2	2.3	84	70	5.7300	1370	08 ATEX 021	---	07 ATEX 073	---	4
AB30 315 LB 6	AB35 315 LB 6	**AC30 315 LB 6**	AC35 315 LB 6	110.00	994	205.00	94.00	0.83	1057.00	5.3	2.2	2.3	84	70	6.9400	1450	08 ATEX 021	---	07 ATEX 073	---	4
AB30 315 LC 6	AB35 315 LC 6	**AC30 315 LC 6**	AC35 315 LC 6	132.00	995	243.00	94.00	0.83	1264.00	5.3	2.1	2.2	84	70	8.4500	1520	08 ATEX 021	---	07 ATEX 073	---	4

◗ $I'_n = I_n \cdot \frac{400}{U'}$
(I'_n = current at U' Volt);
(I'_n = *intensité à U' Volt);*
(I'_n = Strom mit U' Volt);
(I'_n = *corriente de U' Voltios);*
(I'_n = corrente a U' Volt);

▼ $J = \frac{PD^2}{4}$

★
Versions that need special installation solutions
Versions qui demandent des mesures particulières pour l'installation
Ausführungen, die bei der Installation besondere Vorsichtsmaßnahmen erfordern
Versiones que requieren precauciones especiales de instalación
Versioni che richiedono particolari accorgimenti di installazione

◆
T3, T5 and T6 see table 1B
T3, T5 et T6 voir tableau 1B
T3, T5 und T6 siehe Tabelle 1B
T3, T5 y T6 véase tabla 1B
T3, T5 e T6 vedi tabella 1B

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

4. / **4.1**

Three-phase motors — *Moteurs triphasés* — **Drehstrom Motoren** — *Motores trifásicos* — **Motori trifase**

II 2G **II 2GD**

1

Speed — *Vitesse* — **Drehzahl** — *Velocidad* — **Velocità**

Rated data at — *Données nominales à* — **Betriebsdaten bei** — *Datos nominales* — **Dati nominali a**

400 V 50 Hz

direct on line start — *démarrage direct* — **Direkteinschaltung** — *arranque directo* — **avviamento diretto**

750

rpm — *tours/min* — **U/min** — *rev/min* — **giri/min**

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Maximum torque	Noise level	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Couple maximal*	*Niveau de bruit*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungs-faktor	Moment	Anlauf-strom	Anlauf-moment	Kipp-moment	Schalldruck-pegel	Trägheits-moment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Par máximo*	*Nivel de ruido*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Coppia massima	Rumorosità	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	M_m/M_n	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
AB30 63 B 8	AB35 63 B 8	**AC30 63 B 8**	AC35 63 B 8	0.05	590	0.44	27.00	0.60	0.79	1.60	1.6	1.8	47	39	0.0002	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 71 B 8	AB35 71 B 8	**AC30 71 B 8**	AC35 71 B 8	0.15	600	0.57	54.00	0.75	2.54	2.10	1.3	1.5	48	40	0.0010	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 80 A 8	AB35 80 A 8	**AC30 80 A 8**	AC35 80 A 8	0.18	705	0.97	55.00	0.52	2.63	3.40	1.9	2.0	49	41	0.0022	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 80 B 8	AB35 80 B 8	**AC30 80 B 8**	AC35 80 B 8	0.25	690	1.00	61.00	0.60	3.53	3.30	1.4	1.7	49	41	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 90 S 8	AB35 90 S 8	**AC30 90 S 8**	AC35 90 S 8	0.37	680	1.30	75.00	0.55	5.20	2.20	1.5	1.8	53	45	0.0034	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 90 L 8	AB35 90 L 8	**AC30 90 L 8**	AC35 90 L 8	0.55	680	1.90	80.00	0.52	7.73	2.10	1.5	1.8	53	45	0.0049	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 100 LA 8	AB35 100 LA 8	**AC30 100 LA 8**	AC35 100 LA 8	0.75	720	2.90	67.00	0.56	9.90	3.40	2.0	2.2	60	52	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	
AB30 100 LB 8	AB35 100 LB 8	**AC30 100 LB 8**	AC35 100 LB 8	1.10	675	3.10	75.00	0.68	15.50	2.70	1.8	2.2	60	52	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB30 112 M 8	AB35 112 M 8	**AC30 112 M 8**	AC35 112 M 8	1.50	715	4.40	76.00	0.65	20.00	4.10	1.9	2.2	62	54	0.0172	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 SB 8	AB35 132 SB 8	**AC30 132 SB 8**	AC35 132 SB 8	2.20	720	6.50	75.00	0.66	29.20	4.00	1.8	2.3	66	58	0.0323	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 132 ML 8	AB35 132 ML 8	**AC30 132 ML 8**	AC35 132 ML 8	3.00	720	8.50	82.00	0.63	40.25	3.90	1.7	2.3	66	58	0.0506	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 MA 8	AB35 160 MA 8	**AC30 160 MA 8**	AC35 160 MA 8	4.00	718	9.70	85.00	0.70	53.20	4.50	2.3	2.6	70	62	0.0919	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 MB 8	AB35 160 MB 8	**AC30 160 MB 8**	AC35 160 MB 8	5.50	720	14.00	76.00	0.77	73.00	4.10	2.2	2.5	70	62	0.0919	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 160 L 8	AB35 160 L 8	**AC30 160 L 8**	AC35 160 L 8	7.50	720	18.00	80.00	0.77	99.50	4.30	2.4	2.8	70	62	0.1218	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
AB30 180 L 8	AB35 180 L 8	**AC30 180 L 8**	AC35 180 L 8	11.00	718	23.00	87.00	0.79	146.40	5.70	2.2	2.4	73	64	0.2791	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 200 LB 8	AB35 200 LB 8	**AC30 200 LB 8**	AC35 200 LB 8	15.00	735	35.00	89.00	0.70	196.00	5.30	1.6	2.1	75	65	0.4595	305	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 225 S 8	AB35 225 S 8	**AC30 225 S 8**	AC35 225 S 8	18.50	735	42.25	88.00	0.72	240.33	5.80	2.4	2.7	79	68	0.6337	360	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 225 M 8	AB35 225 M 8	**AC30 225 M 8**	AC35 225 M 8	22.00	730	46.00	88.00	0.79	288.00	5.10	2.1	2.3	79	68	0.7617	385	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 250 M 8	AB35 250 M 8	**AC30 250 M 8**	AC35 250 M 8	30.00	742	61.00	94.00	0.76	386.90	6.20	1.8	2.2	79	68	1.2961	550	06 ATEX 074	Pending	06 ATEX 073	Pending	4
AB30 280 S 8	AB35 280 S 8	**AC30 280 S 8**	AC35 280 S 8	37.00	730	70.00	90.00	0.86	492.30	5.60	1.9	2.5	72	60	1.5100	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 280 M 8	AB35 280 M 8	**AC30 280 M 8**	AC35 280 M 8	45.00	739	83.00	94.00	0.83	581.53	5.30	1.4	1.9	72	60	1.7900	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 S 8	AB35 315 S 8	**AC30 315 S 8**	AC35 315 S 8	55.00	742	113.50	93.00	0.76	712.00	8.80	2.7	2.9	75	61	1.9900	965	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 M 8	AB35 315 M 8	**AC30 315 M 8**	AC35 315 M 8	75.00	738	142.00	93.00	0.82	971.00	7.10	2.0	2.5	75	61	2.1800	991	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
AB30 315 LA 8	AB35 315 LA 8	**AC30 315 LA 8**	AC35 315 LA 8	75.00	744	136.60	94.00	0.84	963.00	6.40	1.7	2.0	77	63	5.7300	1330	08 ATEX 021	---	07 ATEX 073	---	4
AB30 315 LB 8	AB35 315 LB 8	**AC30 315 LB 8**	AC35 315 LB 8	90.00	744	164.50	95.00	0.84	1164.00	6.40	1.7	2.5	77	63	6.9400	1470	08 ATEX 021	---	07 ATEX 073	---	4
AB30 315 LC 8	AB35 315 LC 8	**AC30 315 LC 8**	AC35 315 LC 8	110.00	743	202.00	94.00	0.84	1414.00	6.40	1.7	2.7	77	63	8.4500	1590	08 ATEX 021	---	07 ATEX 073	---	4

◗ $I'_n = I_n \cdot \frac{400}{U'}$ (I'_n = current at U' Volt); (I'_n = *intensité à U' Volt);* (I'_n = Strom mit U' Volt); (I'_n = *corriente de U' Voltios);* (I'_n = corrente a U' Volt);

▼ $J = \frac{PD^2}{4}$

★
Versions that need special installation solutions
Versions qui demandent des mesures particulières pour l'installation
Ausführungen, die bei der Installation besondere Vorsichtsmaßnahmen erfordern
Versiones que requieren precauciones especiales de instalación
Versioni che richiedono particolari accorgimenti di installazione

◆
T3, T5 and T6 see table 1B
T3, T5 et T6 voir tableau 1B
T3, T5 und T6 siehe Tabelle 1B
T3, T5 y T6 véase tabla 1B
T3, T5 e T6 vedi tabella 1B

Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Noise level	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Niveau de bruit*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungs-faktor	Moment	Anlauf-strom	Anlauf-moment	Schalldruck-pegel	Trägheits-moment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Nivel de ruido*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Rumorosità	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB		IIC		P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
Ex d	Ex de	Ex d	Ex de																	
AB20 63 B 24	AB25 63 B 24	**AC20 63 B 24**	AC25 63 B 24	0.20	2740	0.52	68	0.83	0.7	3.5	2.6	60	52	0.0002	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.15	1310	0.59	49	0.74	1.1	2.2	1.5									
AB20 71 A 24	AB25 71 A 24	**AC20 71 A 24**	AC25 71 A 24	0.30	2890	1.05	56	0.74	1.0	3.2	1.7	66	58	0.0006	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.20	1440	1.10	47	0.56	1.3	2.9	1.5									
AB20 71 B 24	AB25 71 B 24	**AC20 71 B 24**	AC25 71 B 24	0.45	2805	1.26	62	0.83	1.5	3.8	1.8	66	58	0.0009	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.30	1420	1.20	59	0.63	2.0	3.6	1.6									
AB20 80 A 24	AB25 80 A 24	**AC20 80 A 24**	AC25 80 A 24	0.60	2800	1.60	68	0.87	2.1	4.8	1.3	70	62	0.0009	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.45	1400	1.20	69	0.84	3.1	4.6	2.3									
AB20 80 B 24	AB25 80 B 24	**AC20 80 B 24**	AC25 80 B 24	0.80	2800	2.10	64	0.85	2.7	4.4	1.8	70	62	0.0013	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.60	1400	1.70	72	0.71	4.1	4.1	1.7									
AB20 90 S 24	AB25 90 S 24	**AC20 90 S 24**	AC25 90 S 24	1.25	2780	2.90	65	0.96	4.3	5.4	2.0	77	69	0.0020	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.90	1380	2.40	64	0.85	6.2	4.6	1.8									
AB20 90 L 24	AB25 90 L 24	**AC20 90 L 24**	AC25 90 L 24	1.60	2800	3.60	72	0.90	5.5	4.3	2.2	77	69	0.0026	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				1.20	1400	2.90	78	0.77	8.2	4.3	2.1									
AB20 100 LA 24	AB25 100 LA 24	**AC20 100 LA 24**	AC25 100 LA 24	2.35	2780	5.40	70	0.90	8.1	6.4	2.4	80	72	0.0043	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				1.85	1400	4.50	72	0.82	12.6	5.4	2.1									
AB20 100 LB 24	AB25 100 LB 24	**AC20 100 LB 24**	AC25 100 LB 24	3.00	2880	7.30	73	0.77	10.0	6.6	2.6	80	72	0.0053	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				2.40	1420	5.70	79	0.77	16.1	5.1	2.4									
AB20 112 M 24	AB25 112 M 24	**AC20 112 M 24**	AC25 112 M 24	4.00	2860	8.60	84	0.80	13.4	7.0	2.3	80	72	0.0103	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				3.30	1450	6.80	65	0.80	21.7	6.2	2.2									
AB20 132 S 24	AB25 132 S 24	**AC20 132 S 24**	AC25 132 S 24	5.90	2880	11.50	80	0.93	19.6	7.2	2.2	83	75	0.0150	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				4.80	1430	10.00	82	0.85	32.1	6.4	2.1									
AB20 132 MB24	AB25 132 MB 24	**AC20 132 MB 24**	AC25 132 MB 24	7.50	2880	14.50	88	0.85	24.9	8.9	2.2	83	75	0.0178	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				5.50	1430	13.50	73	0.80	36.8	7.1	2.1									
AB20 132 L 24	AB25 132 L 24	**AC20 132 L 24**	AC25 132 L 24	8.00	2890	19.00	72	0.85	26.5	7.5	2.3	83	75	0.0216	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				6.00	1440	17.00	63	0.80	39.3	6.3	2.2									
AB20 160 M 24	AB25 160 M 24	**AC20 160 M 24**	AC25 160 M 24	11.00	2940	22.00	80	0.90	35.7	7.3	2.3	84	76	0.0627	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				8.80	1440	22.00	78	0.74	58.4	6.5	2.1									
AB20 160 L 24	AB25 160 L 24	**AC20 160 L 24**	AC25 160 L 24	15.00	2945	29.50	77	0.95	48.6	7.5	2.4	84	76	0.0801	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				12.00	1450	28.50	81	0.75	79.0	6.6	2.3									
AB20 180 M 24	AB25 180 M 24	**AC20 180 M 24**	AC25 180 M 24	18.50	2930	36.00	82	0.90	60.3	6.4	2.1	83	74	0.1270	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				15.00	1460	29.50	83	0.88	98.1	5.6	2.0									
AB20 180 L 24	AB25 180 L 24	**AC20 180 L 24**	AC25 180 L 24	22.00	2960	42.60	89	0.84	71.2	6.6	2.2	83	74	0.1488	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				18.50	1465	38.00	90	0.78	121.1	5.8	2.1									
AB20 200 LB 24	AB25 200 LB 24	**AC20 200 LB 24**	AC25 200 LB 24	30.00	2970	54.60	90	0.88	97.3	7.0	2.3	87	77	0.2436	315	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				24.00	1480	44.60	93	0.84	156.5	6.4	2.3									
AB20 225 S 24	AB25 225 S 24	**AC20 225 S 24**	AC25 225 S 24	33.00	2955	66.00	80	0.90	106.6	6.8	2.2	89	79	0.3762	355	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				30.00	1475	55.00	91	0.87	194.2	6.2	2.1									
AB20 225 M 24	AB25 225 M 24	**AC20 225 M 24**	AC25 225 M 24	40.00	2965	77.00	82	0.92	128.8	6.8	2.2	89	79	0.4451	380	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				37.00	1480	69.00	88	0.88	238.7	6.2	2.2									
AB20 250 M 24	AB25 250 M 24	**AC20 250 M 24**	AC25 250 M 24	50.00	2975	86.50	89	0.94	160.3	6.9	2.1	90	79	0.4611	450	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				42.00	1480	74.00	93	0.89	270.8	6.4	2.3									
AB20 280 S 24	AB25 280 S 24	**AC20 280 S 24**	AC25 280 S 24	66.00	2950	123.30	91	0.85	200.7	9.4	2.8	88	76	0.5200	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				52.00	1480	102.80	85	0.86	238.8	8.2	2.7									
AB20 280 M 24	AB25 280 M 24	**AC20 280 M 24**	AC25 280 M 24	79.00	2950	145.90	91	0.86	242.8	9.2	2.8	88	76	0.6300	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				60.00	1480	122.90	84	0.84	290.4	8.0	2.6									
AB20 315 S 24	AB25 315 S 24	**AC20 315 S 24**	AC25 315 S 24	90.00	2955	166.10	89	0.88	323.2	9.4	2.9	90	76	0.7000	971	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				70.00	1485	133.80	90	0.84	334.4	8.0	2.9									
AB20 315 M 24	AB25 315 M 24	**AC20 315 M 24**	AC25 315 M 24	95.00	2965	173.30	89	0.89	347.9	9.5	2.9	90	76	0.7500	984	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				75.00	1485	140.10	91	0.85	353.7	8.1	2.8									
AB20 315 LA 24	AB25 315 LA 24	**AC20 315 LA 24**	AC25 315 LA 24	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB20 315 LB 24	AB25 315 LB 24	**AC20 315 LB 24**	AC25 315 LB 24	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB20 315 LC 24	AB25 315 LC 24	**AC20 315 LC 24**	AC25 315 LC 24	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4

❍ Data not indicated is supplied on request - *Les données qui ne sont pas indiquées sont fournies sur demande* - Die nicht angegebenen Daten werden auf Anfrage geliefert - *Los datos que no se han precisado se pueden comunicar cuando se solicite* - I dati non indicati sono forniti su richiesta

◗ - ▼ - ★ - ◆ - see the notes in section 4.1 - *voir remarques dans la section 4.1* - siehe Anmerkung in Abschnitt 4.1 - *véase notas en la sección 4.1* - vedi note di sezione 4.1

Motor type / *Moteur type* / Motor Typ / *Tipo de motor* / Tipo motore	Rated output / *Puissance mécanique* / Leistung / *Potencia proporcionada* / Potenza resa	Speed / *Vitesse* / Drehzahl / *Velocidad* / Velocità	Current / *Intensité* / Strom / *Corriente* / Corrente	Efficiency / *Rendement* / Wirkungsgrad / *Rendimiento* / Rendimento	Power factor / *Facteur de puissance* / Leistungs-faktor / *Factor de potencia* / Fattore potenza	Torque / *Couple* / Moment / *Par* / Coppia	Starting current / *Intensité démarrage* / Anlauf-strom / *Corriente de arranque* / Corrente avviamento	Starting torque / *Couple démarrage* / Anlauf-moment / *Par de arranque* / Coppia avviamento	Noise level / *Niveau de bruit* / Schalldruck-pegel / *Nivel de ruido* / Rumorosità	Moment of inertia / *Moment d'inertie* / Trägheits-moment / *Momento de inercia* / Momento d'inerzia	Mass / *Masse* / Masse / *Peso* / Massa	CESI Certificates / *CESI Certificat* / CESI Konformitäts-Bescheinigung / *Certificados CESI* / Certificato CESI	Class T / *Classe T* / Klasse T / *Clase T* / Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
AB20 71 A 48	AB25 71 A 48	**AC20 71 A 48**	AC25 71 A 48	0.17	1330	0.57	74	0.58	1.2	3.2	1.5	56	48	0.0007	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.09	670	0.48	48	0.57	1.3	2.4	1.4									
AB20 71 B 48	AB25 71 B 48	**AC20 71 B 48**	AC25 71 B 48	0.20	1400	0.71	68	0.80	1.4	3.4	1.6	56	48	0.0010	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.10	700	0.67	35	0.52	1.4	2.6	1.5									
AB20 80 A 48	AB25 80 A 48	**AC20 80 A 48**	AC25 80 A 48	0.30	1400	0.90	67	0.72	2.1	4.3	2.0	59	51	0.0022	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.15	710	1.05	42	0.48	2.0	2.7	1.7									
AB20 80 B 48	AB25 80 B 48	**AC20 80 B 48**	AC25 80 B 48	0.40	1400	1.10	63	0.83	2.7	3.5	1.5	59	51	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.20	710	1.10	47	0.56	2.7	2.5	1.3									
AB20 90 S 48	AB25 90 S 48	**AC20 90 S 48**	AC25 90 S 48	0.60	1390	1.40	75	0.83	4.1	3.6	1.6	62	54	0.0034	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.30	700	1.30	62	0.54	4.1	2.7	1.5									
AB20 90 L 48	AB25 90 L 48	**AC20 90 L 48**	AC25 90 L 48	0.90	1370	2.00	74	0.90	6.4	4.0	1.8	62	54	0.0049	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.45	710	1.80	65	0.60	6.1	3.1	1.6									
AB20 100 LA 48	AB25 100 LA 48	**AC20 100 LA 48**	AC25 100 LA 48	1.25	1400	3.20	81	0.70	8.5	3.8	2.0	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.60	700	3.00	61	0.47	8.2	3.0	1.8									
AB20 100 LB 48	AB25 100 LB 48	**AC20 100 LB 48**	AC25 100 LB 48	1.60	1445	3.60	73	0.88	10.6	4.8	1.9	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.80	700	4.00	59	0.49	10.9	3.7	1.6									
AB20 112 M 48	AB25 112 M 48	**AC20 112 M 48**	AC25 112 M 48	2.55	1420	5.40	78	0.90	17.2	5.1	2.0	68	60	0.0172	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.25	710	4.90	66	0.61	16.8	3.9	2.5									
AB20 132 S 48	AB25 132 S 48	**AC20 132 S 48**	AC25 132 S 48	3.30	1430	7.20	77	0.86	22.5	5.0	1.7	72	64	0.0323	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.85	720	8.30	58	0.56	24.5	3.6	1.6									
AB20 132 MB 48	AB25 132 MB 48	**AC20 132 MB 48**	AC25 132 MB 48	4.80	1410	10.50	77	0.86	32.5	5.3	1.8	75	67	0.0506	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.40	700	8.10	68	0.63	32.0	4.4	1.7									
AB20 132 L 48	AB25 132 L 48	**AC20 132 L 48**	AC25 132 L 48	5.50	1450	11.00	87	0.83	36.2	5.6	1.8	75	67	0.0506	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				3.00	720	13.50	72	0.45	40.0	4.6	1.8									
AB20 160 M 48	AB25 160 M 48	**AC20 160 M 48**	AC25 160 M 48	7.50	1450	16.00	82	0.82	49.4	5.8	1.9	77	69	0.0919	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				4.80	730	15.00	83	0.56	62.8	4.8	1.7									
AB20 160 L 48	AB25 160 L 48	**AC20 160 L 48**	AC25 160 L 48	10.00	1440	21.00	76	0.91	66.3	6.9	1.8	77	69	0.1218	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				6.60	710	22.00	73	0.59	88.8	5.7	1.8									
AB20 180 M 48	AB25 180 M 48	**AC20 180 M 48**	AC25 180 M 48	13.00	1474	26.50	81	0.87	84.1	6.6	2.0	79	70	0.2067	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				8.10	735	22.50	85	0.61	105.2	5.3	2.0									
AB20 180 L 48	AB25 180 L 48	**AC20 180 L 48**	AC25 180 L 48	16.00	1470	31.00	85	0.88	103.9	6.5	1.9	79	70	0.2067	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				9.90	730	27.00	87	0.61	129.5	5.3	1.9									
AB20 200 LB 48	AB25 200 LB 48	**AC20 200 LB 48**	AC25 200 LB 48	20.00	1480	37.30	91	0.85	129.0	7.4	2.8	82	72	0.2436	315	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				13.00	730	39.00	86	0.56	170.2	4.6	2.9									
AB20 225 S 48	AB25 225 S 48	**AC20 225 S 48**	AC25 225 S 48	25.00	1460	47.50	82	0.93	163.5	6.5	2.1	84	73	0.3762	355	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				17.00	720	44.50	79	0.70	225.5	5.2	1.9									
AB20 225 M 48	AB25 225 M 48	**AC20 225 M 48**	AC25 225 M 48	30.00	1485	57.30	90	0.84	193.6	6.6	2.2	84	73	0.4451	380	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				20.00	735	61.00	88	0.54	261.0	5.5	2.1									
AB20 250 M 48	AB25 250 M 48	**AC20 250 M 48**	AC25 250 M 48	40.00	1480	73.00	91	0.88	258.4	6.4	2.2	86	75	0.4611	450	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				26.00	735	67.50	91	0.62	336.8	5.5	2.0									
AB20 280 S 48	AB25 280 S 48	**AC20 280 S 48**	AC25 280 S 48	59.00	1485	110.00	91	0.86	380.1	5.4	1.9	82	70	0.9500	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				34.00	740	101.00	90	0.55	448.5	3.8	1.5									
AB20 280 M 48	AB25 280 M 48	**AC20 280 M 48**	AC25 280 M 48	71.00	1480	132.00	92	0.85	456.3	5.5	1.8	82	70	1.1200	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				41.00	740	105.00	90	0.62	524.8	3.7	1.4									
AB20 315 S 48	AB25 315 S 48	**AC20 315 S 48**	AC25 315 S 48	80.00	1485	152.90	90	0.84	514.5	5.4	1.9	85	71	1.2700	971	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				47.00	735	116.90	88	0.66	610.7	3.8	1.5									
AB20 315 M 48	AB25 315 M 48	**AC20 315 M 48**	AC25 315 M 48	85.00	1480	158.80	91	0.85	548.5	4.9	1.8	85	71	1.3300	984	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				50.00	735	123.00	89	0.66	649.7	3.8	1.4									
AB20 315 LA 48	AB25 315 LA 48	**AC20 315 LA 48**	AC25 315 LA 48	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB20 315 LB 48	AB25 315 LB 48	**AC20 315 LB 48**	AC25 315 LB 48	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB20 315 LC 48	AB25 315 LC 48	**AC20 315 LC 48**	AC25 315 LC 48	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4

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◗ - ▼ - ★ - ◆ - see the notes in section 4.1 - *voir remarques dans la section 4.1* - siehe Anmerkung in Abschnitt 4.1 - *véase notas en la sección 4.1* - vedi note di sezione 4.1

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

4. / **4.2**

Three-phase motors — ***Moteurs triphasés*** — **Drehstrom Motoren** — ***Motores trifásicos*** — **Motori trifase**

II 2G / **II 2GD**

2

Speeds — ***Vitesses*** — **Drehzahlen** — ***Velocidades*** — **Velocità**

Rated data at — ***Données nominales à*** — **Betriebsdaten bei** — ***Datos nominales*** — **Dati nominali a**

400 V 50 Hz

direct on line start — ***démarrage direct*** — **Direkteinschaltung** — ***arranque directo*** — **avviamento diretto**

For general purpose (constant torque) - 2 separate windings — ***Pour usage général (couple constant) - 2 enroulements séparés*** — **Für allgemeinen Gebrauch (konstantes Gegenmoment) - 2 getrennte Wicklungen** — ***Para uso general (par constante) - 2 devanados separados*** — **Per uso generale (coppia costante) - 2 avvolgimenti separati**

1500 1000

rpm — ***tours/min*** — **U/min** — ***rev/min*** — **giri/min**

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Noise level	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Niveau de bruit*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungs-faktor	Moment	Anlauf-strom	Anlauf-moment	Schalldruck-pegel	Trägheits-moment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Nivel de ruido*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Rumorosità	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB		IIC		P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	[dB(A)] Lw	Lp	J ▼ [kgm²]	m [kg]	IIB		IIC		◆
Ex d	Ex de	Ex d	Ex de													standard	★	standard	★	
AB20 71 B 46	AB25 71 B 46	**AC20 71 B 46**	AC25 71 B 46	0.20	1420	0.76	60	0.63	1.3	3.4	1.4	56	48	0.0010	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.10	900	0.57	50	0.51	1.1	2.4	1.4									
AB20 80 A 46	AB25 80 A 46	**AC20 80 A 46**	AC25 80 A 46	0.40	1360	1.00	80	0.72	2.8	3.5	1.5	59	51	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.20	900	0.86	56	0.60	2.1	2.5	1.4									
AB20 80 B 46	AB25 80 B 46	**AC20 80 B 46**	AC25 80 B 46	0.50	1380	1.40	70	0.73	3.4	3.7	1.5	59	51	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.30	910	0.95	68	0.67	3.2	3.1	1.5									
AB20 90 S 46	AB25 90 S 46	**AC20 90 S 46**	AC25 90 S 46	0.65	1475	2.55	78	0.50	4.4	4.0	1.6	62	54	0.0034	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.45	950	1.35	74	0.65	4.5	3.2	1.4									
AB20 90 L 46	AB25 90 L 46	**AC20 90 L 46**	AC25 90 L 46	0.95	1455	2.70	80	0.65	6.4	5.6	1.6	62	54	0.0049	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.60	920	1.60	71	0.78	6.3	3.7	1.5									
AB20 100 LA 46	AB25 100 LA 46	**AC20 100 LA 46**	AC25 100 LA 46	1.40	1400	3.80	70	0.76	9.5	5.8	1.8	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.90	930	2.90	64	0.70	9.2	4.2	1.6									
AB20 100 LB 46	AB25 100 LB 46	**AC20 100 LB 46**	AC25 100 LB 46	1.85	1415	4.20	77	0.84	12.7	4.5	1.8	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				1.10	900	3.05	71	0.73	11.5	3.0	1.6									
AB20 112 M 46	AB25 112 M 46	**AC20 112 M 46**	AC25 112 M 46	2.40	1420	5.20	79	0.84	16.1	6.5	1.8	68	60	0.0172	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.60	920	4.20	71	0.78	16.6	4.4	1.6									
AB20 132 S 46	AB25 132 S 46	**AC20 132 S 46**	AC25 132 S 46	3.00	1475	8.30	83	0.65	20.0	6.0	2.0	72	64	0.0323	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.00	960	5.50	75	0.71	19.7	4.0	1.5									
AB20 132 MA 46	AB25 132 MA 46	**AC20 132 MA 46**	AC25 132 MA 46	4.00	1460	9.40	79	0.78	26.2	6.2	2.0	75	67	0.0395	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.60	960	8.40	72	0.62	25.9	4.6	1.8									
AB20 132 MB 46	AB25 132 MB 46	**AC20 132 MB 46**	AC25 132 MB 46	4.40	1450	10.50	76	0.80	29.0	6.4	2.0	75	67	0.0506	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				3.00	950	8.90	79	0.62	30.2	4.5	1.8									
AB20 132 L 46	AB25 132 L 46	**AC20 132 L 46**	AC25 132 L 46	5.15	1470	12.00	83	0.75	33.5	6.9	1.9	75	67	0.0506	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				3.30	965	9.50	79	0.64	32.7	4.8	1.7									
AB20 160 M 46	AB25 160 M 46	**AC20 160 M 46**	AC25 160 M 46	6.60	1460	14.50	79	0.84	43.2	6.8	2.0	77	69	0.0919	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				4.40	960	10.50	87	0.70	43.8	4.5	1.9									
AB20 160 L 46	AB25 160 L 46	**AC20 160 L 46**	AC25 160 L 46	8.80	1460	18.50	78	0.88	57.6	6.9	2.0	77	69	0.1218	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				5.90	970	13.50	88	0.72	58.1	5.0	1.9									
AB20 180 M 46	AB25 180 M 46	**AC20 180 M 46**	AC25 180 M 46	11.00	1470	21.50	88	0.84	71.5	6.6	2.0	79	70	0.2067	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				7.50	980	18.50	84	0.70	73.1	5.2	1.9									
AB20 180 L 46	AB25 180 L 46	**AC20 180 L 46**	AC25 180 L 46	13.00	1475	25.00	88	0.85	84.2	6.5	2.0	79	70	0.2067	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				8.80	980	20.50	86	0.72	85.7	5.0	1.8									
AB20 200 LA 46	AB25 200 LA 46	**AC20 200 LA 46**	AC25 200 LA 46	16.00	1480	33.50	82	0.84	103.2	6.7	2.1	82	72	0.2986	295	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				11.00	985	24.50	80	0.81	106.6	5.4	1.9									
AB20 200 LB 46	AB25 200 LB 46	**AC20 200 LB 46**	AC25 200 LB 46	18.50	1485	40.10	88	0.76	119.0	9.8	2.2	82	72	0.3503	315	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				13.00	985	28.70	90	0.73	126.0	8.9	3.2									
AB20 225 S 46	AB25 225 S 46	**AC20 225 S 46**	AC25 225 S 46	22.00	1485	42.50	89	0.84	141.8	6.6	2.2	84	73	0.6965	355	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				15.00	995	33.50	88	0.74	144.4	5.6	2.0									
AB20 225 M 46	AB25 225 M 46	**AC20 225 M 46**	AC25 225 M 46	26.00	1480	48.40	91	0.85	167.7	6.7	2.1	84	73	0.6965	380	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				16.50	990	33.90	90	0.74	159.2	5.4	1.8									
AB20 250 M 46	AB25 250 M 46	**AC20 250 M 46**	AC25 250 M 46	30.00	1480	55.90	90	0.87	195.2	5.0	1.2	86	75	0.7216	450	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				20.00	990	41.30	90	0.78	193.5	4.9	1.4									
AB20 280 S 46	AB25 280 S 46	**AC20 280 S 46**	AC25 280 S 46	56.00	1480	109.80	91	0.81	361.4	8.1	2.9	82	70	0.9500	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				34.00	985	78.30	86	0.73	329.6	6.4	2.8									
AB20 280 M 46	AB25 280 M 46	**AC20 280 M 46**	AC25 280 M 46	65.00	1480	124.50	92	0.82	419.4	8.2	2.8	82	70	1.1200	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				40.00	985	89.60	86	0.75	387.8	6.2	2.9									
AB20 315 S 46	AB25 315 S 46	**AC20 315 S 46**	AC25 315 S 46	75.00	1485	147.00	91	0.81	482.3	8.3	2.9	85	71	1.2700	971	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				46.00	990	103.30	87	0.74	443.7	6.4	3.0									
AB20 315 M 46	AB25 315 M 46	**AC20 315 M 46**	AC25 315 M 46	80.00	1488	145.00	96	0.84	518.0	8.2	2.8	85	71	1.3300	984	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				50.00	990	104.40	93	0.74	482.6	6.4	3.0									
AB20 315 LA 46	AB25 315 LA 46	**AC20 315 LA 46**	AC25 315 LA 46	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB20 315 LB 46	AB25 315 LB 46	**AC20 315 LB 46**	AC25 315 LB 46	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB20 315 LC 46	AB25 315 LC 46	**AC20 315 LC 46**	AC25 315 LC 46	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4

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◗ - ▼ - ★ - ◆ - see the notes in section 4.1 - *voir remarques dans la section 4.1* - siehe Anmerkung in Abschnitt 4.1 - *véase notas en la sección 4.1* - vedi note di sezione 4.1

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

4. 4.2 Three-phase motors — *Moteurs triphasés* — Drehstrom Motoren — *Motores trifásicos* — Motori trifase

II 2G
II 2GD

2 Speeds — *Vitesses* — Drehzahlen — *Velocidades* — Velocità

Rated data at — *Données nominales à* — Betriebsdaten bei — *Datos nominales* — Dati nominali a

400 V
50 Hz

direct on line start — *démarrage direct* — Direkteinschaltung — *arranque directo* — avviamento diretto

For general purpose (constant torque) - 2 separate windings — *Pour usage général (couple constant) - 2 enroulements séparés* — Für allgemeinen Gebrauch (konstantes Gegenmoment) - 2 getrennte Wicklungen — *Para uso general (par constante) - 2 devanados separados* — Per uso generale (coppia costante) - 2 avvolgimenti separati

1000
750

rpm — *tours/min* — U/min — *rev/min* — giri/min

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

Motor type	*Moteur type*	Motor Typ	*Tipo de motor*	Tipo motore
Rated output	*Puissance mécanique*	Leistung	*Potencia proporcionada*	Potenza resa
Speed	*Vitesse*	Drehzahl	*Velocidad*	Velocità
Current	*Intensité*	Strom	*Corriente*	Corrente
Efficiency	*Rendement*	Wirkungsgrad	*Rendimiento*	Rendimento
Power factor	*Facteur de puissance*	Leistungs-faktor	*Factor de potencia*	Fattore potenza
Torque	*Couple*	Moment	*Par*	Coppia
Starting current	*Intensité démarrage*	Anlauf-strom	*Corriente de arranque*	Corrente avviamento
Starting torque	*Couple démarrage*	Anlauf-moment	*Par de arranque*	Coppia avviamento
Noise level	*Niveau de bruit*	Schalldruck-pegel	*Nivel de ruido*	Rumorosità
Moment of inertia	*Moment d'inertie*	Trägheits-moment	*Momento de inercia*	Momento d'inerzia
Mass	*Masse*	Masse	*Peso*	Massa
CESI Certificates	*CESI Certificat*	CESI Konformitäts-Bescheinigung	*Certificados CESI*	Certificato CESI
Class T	*Classe T*	Klasse T	*Clase T*	Classe T

IIB		IIC		P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	[dB(A)] Lw	Lp	J ▼ [kgm²]	m [kg]	IIB		IIC		◆
Ex d	Ex de	Ex d	Ex de																	
AB20 71 B 68	AB25 71 B 68	**AC20 71 B 68**	AC25 71 B 68	0.12	960	0.73	45	0.55	1.2	3.0	2.4	50	42	0.0010	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.08	670	0.48	32	0.77	1.2	1.4	1.0									
AB20 80 A 68	AB25 80 A 68	**AC20 80 A 68**	AC25 80 A 68	0.15	930	0.67	46	0.70	1.5	2.7	1.5	53	45	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.13	690	0.62	51	0.59	1.8	2.0	1.4									
AB20 80 B 68	AB25 80 B 68	**AC20 80 B 68**	AC25 80 B 68	0.25	920	1.00	51	0.71	2.6	2.8	1.6	53	45	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.15	680	0.81	46	0.58	2.1	2.1	1.3									
AB20 90 S 68	AB25 90 S 68	**AC20 90 S 68**	AC25 90 S 68	0.35	910	1.30	53	0.74	3.7	3.2	1.4	54	46	0.0034	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.25	640	1.00	59	0.61	3.7	2.2	1.4									
AB20 90 L 68	AB25 90 L 68	**AC20 90 L 68**	AC25 90 L 68	0.60	930	2.00	58	0.75	6.2	3.9	1.5	54	46	0.0049	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.30	690	1.30	57	0.59	4.2	3.0	1.6									
AB20 100 LA 68	AB25 100 LA 68	**AC20 100 LA 68**	AC25 100 LA 68	0.80	920	2.30	66	0.76	8.3	3.9	1.5	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.55	700	1.90	67	0.62	7.5	3.5	1.5									
AB20 100 LB 68	AB25 100 LB 68	**AC20 100 LB 68**	AC25 100 LB 68	1.00	920	3.30	54	0.82	10.4	3.0	1.1	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.65	680	2.55	50	0.74	9.1	2.5	1.6									
AB20 112 M 68	AB25 112 M 68	**AC20 112 M 68**	AC25 112 M 68	1.50	960	4.10	74	0.71	14.9	4.2	1.7	65	57	0.0172	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.00	710	3.20	65	0.69	13.4	3.8	1.6									
AB20 132 S 68	AB25 132 S 68	**AC20 132 S 68**	AC25 132 S 68	1.85	960	5.20	73	0.70	18.4	4.1	1.6	68	60	0.0323	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.30	715	4.20	68	0.66	17.4	4.0	1.7									
AB20 132 MA 68	AB25 132 MA 68	**AC20 132 MA 68**	AC25 132 MA 68	2.55	965	6.80	75	0.72	25.2	4.2	1.8	68	60	0.0395	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.85	720	5.80	68	0.68	24.5	4.1	1.8									
AB20 132 MB 68	AB25 132 MB 68	**AC20 132 MB 68**	AC25 132 MB 68	3.00	970	7.40	79	0.74	29.5	5.4	1.9	68	60	0.0506	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.00	730	6.00	73	0.66	26.2	4.0	1.8									
AB20 160 M 68	AB25 160 M 68	**AC20 160 M 68**	AC25 160 M 68	4.00	970	9.50	82	0.74	39.4	4.2	1.9	72	64	0.0919	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.80	720	7.60	77	0.69	37.1	4.1	1.9									
AB20 160 L 68	AB25 160 L 68	**AC20 160 L 68**	AC25 160 L 68	5.50	985	14.60	86	0.64	53.5	4.3	1.8	72	64	0.1218	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				4.00	732	11.60	81	0.63	52.9	4.2	1.9									
AB20 180 M 68	AB25 180 M 68	**AC20 180 M 68**	AC25 180 M 68	6.50	970	15.00	83	0.75	64.0	4.1	1.7	76	67	0.2067	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				5.00	720	12.50	77	0.75	66.3	4.3	1.8									
AB20 180 L 68	AB25 180 L 68	**AC20 180 L 68**	AC25 180 L 68	8.00	965	17.50	85	0.78	79.2	4.4	1.8	76	67	0.2067	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				6.00	715	15.00	78	0.74	80.1	4.2	1.9									
AB20 200 LA 68	AB25 200 LA 68	**AC20 200 LA 68**	AC25 200 LA 68	9.90	970	21.00	85	0.80	97.5	4.6	1.7	79	69	0.2986	295	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				7.50	710	18.00	80	0.75	100.9	4.3	1.7									
AB20 200 LB 68	AB25 200 LB 68	**AC20 200 LB 68**	AC25 200 LB 68	12.00	990	33.40	88	0.59	115.8	4.7	1.9	79	69	0.3503	315	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				8.80	736	22.20	87	0.66	114.3	4.4	1.7									
AB20 225 S 68	AB25 225 S 68	**AC20 225 S 68**	AC25 225 S 68	15.00	970	32.50	82	0.81	147.7	4.8	1.8	81	70	0.6965	355	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				11.00	720	24.50	83	0.78	145.9	4.7	1.8									
AB20 225 M 68	AB25 225 M 68	**AC20 225 M 68**	AC25 225 M 68	17.00	975	37.00	81	0.82	166.5	4.9	1.8	81	70	0.6965	380	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				13.00	725	30.50	80	0.77	171.2	4.6	1.9									
AB20 250 M 68	AB25 250 M 68	**AC20 250 M 68**	AC25 250 M 68	22.00	980	48.50	82	0.80	214.4	4.7	1.9	81	70	0.7216	450	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				16.00	730	37.00	82	0.76	209.3	4.5	1.8									
AB20 280 S 68	AB25 280 S 68	**AC20 280 S 68**	AC25 280 S 68	37.00	990	80.30	90	0.74	356.9	7.3	3.1	77	65	1.1400	858	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				25.00	740	57.00	88	0.72	322.6	5.3	2.7									
AB20 280 M 68	AB25 280 M 68	**AC20 280 M 68**	AC25 280 M 68	44.00	995	97.00	91	0.72	422.3	7.5	3.0	77	65	1.3600	894	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				30.00	740	70.40	88	0.70	387.2	5.2	2.7									
AB20 315 S 68	AB25 315 S 68	**AC20 315 S 68**	AC25 315 S 68	52.00	990	112.80	90	0.74	501.6	7.9	3.4	79	65	1.6300	965	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				36.00	745	81.20	89	0.72	461.5	5.4	2.9									
AB20 315 M 68	AB25 315 M 68	**AC20 315 M 68**	AC25 315 M 68	60.00	995	132.30	91	0.72	575.9	7.8	3.3	79	65	1.8300	997	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				40.00	743	91.80	90	0.70	514.1	5.3	2.9									
AB20 315 LA 68	AB25 315 LA 68	**AC20 315 LA 68**	AC25 315 LA 68	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB20 315 LB 68	AB25 315 LB 68	**AC20 315 LB 68**	AC25 315 LB 68	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB20 315 LC 68	AB25 315 LC 68	**AC20 315 LC 68**	AC25 315 LC 68	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4

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Motor type / *Moteur type* / Motor Typ / *Tipo de motor* / Tipo motore	Rated output / *Puissance mécanique* / Leistung / *Potencia proporcionada* / Potenza resa	Speed / *Vitesse* / Drehzahl / *Velocidad* / Velocità	Current / *Intensité* / Strom / *Corriente* / Corrente	Efficiency / *Rendement* / Wirkungsgrad / *Rendimiento* / Rendimento	Power factor / *Facteur de puissance* / Leistungs-faktor / *Factor de potencia* / Fattore potenza	Torque / *Couple* / Moment / *Par* / Coppia	Starting current / *Intensité démarrage* / Anlauf-strom / *Corriente de arranque* / Corrente avviamento	Starting torque / *Couple démarrage* / Anlauf-moment / *Par de arranque* / Coppia avviamento	Noise level / *Niveau de bruit* / Schalldruck-pegel / *Nivel de ruido* / Rumorosità	Moment of inertia / *Moment d'inertie* / Trägheits-moment / *Momento de inercia* / Momento d'inerzia	Mass / *Masse* / Masse / *Peso* / Massa	CESI Certificates / *CESI Certificat* / CESI Konformitäts-Bescheinigung / *Certificados CESI* / Certificato CESI	Class T / *Classe T* / Klasse T / *Clase T* / Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
AB40 63 B 24	AB45 63 B 24	**AC40 63 B 24**	AC45 63 B 24	0.24	2740	0.86	60	0.68	0.8	3.4	2.0	60	52	0.0001	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.07	1360	0.20	73	0.71	0.5	2.6	1.8									
AB40 71 A 24	AB45 71 A 24	**AC40 71 A 24**	AC45 71 A 24	0.37	2882	1.07	69	0.73	1.2	3.6	2.0	66	58	0.0004	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.09	1450	0.36	67	0.55	0.6	2.9	2.0									
AB40 71 B 24	AB45 71 B 24	**AC40 71 B 24**	AC45 71 B 24	0.50	2810	1.50	67	0.72	1.7	3.8	1.8	66	58	0.0004	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.14	1380	0.42	72	0.70	1.0	3.0	2.0									
AB40 80 A 24	AB45 80 A 24	**AC40 80 A 24**	AC45 80 A 24	0.75	2820	1.90	70	0.80	2.5	4.0	1.7	70	62	0.0006	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.18	1400	0.48	70	0.76	1.2	3.6	2.1									
AB40 80 B 24	AB45 80 B 24	**AC40 80 B 24**	AC45 80 B 24	1.10	2800	2.60	75	0.82	3.8	4.2	1.8	70	62	0.0008	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.25	1380	0.71	66	0.76	1.7	3.7	2.0									
AB40 90 S 24	AB45 90 S 24	**AC40 90 S 24**	AC45 90 S 24	1.50	2780	3.20	81	0.84	5.2	4.5	1.9	77	69	0.0012	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.37	1400	1.00	68	0.78	2.5	3.9	2.1									
AB40 90 L 24	AB45 90 L 24	**AC40 90 L 24**	AC45 90 L 24	2.00	2760	4.30	77	0.88	7.0	4.3	1.8	77	69	0.0015	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.51	1380	1.30	68	0.82	3.5	4.0	2.2									
AB40 100 LA 24	AB45 100 LA 24	**AC40 100 LA 24**	AC45 100 LA 24	2.60	2810	5.60	75	0.89	8.8	7.7	2.2	80	72	0.0029	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.62	1410	1.60	69	0.81	4.2	7.0	2.0									
AB40 100 LB 24	AB45 100 LB 24	**AC40 100 LB 24**	AC45 100 LB 24	3.30	2870	7.70	78	0.80	11.0	5.6	2.2	80	72	0.0029	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.75	1480	2.20	57	0.85	4.8	5.1	2.0									
AB40 112 M 24	AB45 112 M 24	**AC40 112 M 24**	AC45 112 M 24	4.41	2930	8.90	81	0.88	14.4	7.9	2.5	80	72	0.0074	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.10	1450	2.30	82	0.83	7.2	6.9	2.7									
AB40 132 S 24	AB45 132 S 24	**AC40 132 S 24**	AC45 132 S 24	6.50	2910	12.50	83	0.90	21.3	6.2	2.1	83	75	0.0150	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.00	1450	4.80	75	0.80	13.2	6.0	1.9									
AB40 132 M 24	AB45 132 M 24	**AC40 132 M 24**	AC45 132 M 24	8.50	2945	16.70	89	0.82	27.6	6.8	2.2	83	75	0.0178	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.50	1460	5.50	88	0.74	16.4	6.5	2.2									
AB40 132 ML 24	AB45 132 ML 24	**AC40 132 ML 24**	AC45 132 ML 24	9.20	2910	17.50	90	0.84	30.2	6.9	2.3	83	75	0.0216	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.80	1440	5.70	87	0.82	18.6	6.6	2.2									
AB40 160 M 24	AB45 160 M 24	**AC40 160 M 24**	AC45 160 M 24	12.00	2935	26.00	75	0.89	39.3	6.2	3.4	84	76	0.0360	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				3.00	1445	8.00	67	0.81	19.9	4.4	2.1									
AB40 160 L 24	AB45 160 L 24	**AC40 160 L 24**	AC45 160 L 24	16.00	2945	29.60	87	0.90	51.6	7.4	2.0	84	76	0.0534	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				4.40	1455	8.90	87	0.82	29.0	7.0	1.9									
AB40 180 M 24	AB45 180 M 24	**AC40 180 M 24**	AC45 180 M 24	18.00	2965	37.00	79	0.89	58.0	8.3	2.6	83	74	0.0750	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				5.00	1465	11.40	75	0.85	32.6	7.1	2.3									
AB40 180 L 24	AB45 180 L 24	**AC40 180 L 24**	AC45 180 L 24	24.00	2960	44.50	90	0.87	77.4	9.6	3.3	83	74	0.0750	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				6.00	1480	11.80	89	0.83	39.0	9.6	3.1									
AB40 200 LB 24	AB45 200 LB 24	**AC40 200 LB 24**	AC45 200 LB 24	30.00	2970	51.20	92	0.92	96.5	7.3	2.0	87	77	0.1449	315	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				8.00	1480	15.60	88	0.86	52.2	7.2	1.9									
AB40 225 S 24	AB45 225 S 24	**AC40 225 S 24**	AC45 225 S 24	37.00	2960	68.00	86	0.91	119.4	7.3	2.1	89	79	0.1714	355	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				9.20	1460	21.00	74	0.86	60.2	7.0	2.0									
AB40 225 M 24	AB45 225 M 24	**AC40 225 M 24**	AC45 225 M 24	44.00	2970	78.00	91	0.90	141.5	9.0	2.6	89	79	0.2656	380	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				11.50	1480	21.80	91	0.84	74.3	8.4	2.4									
AB40 250 M 24	AB45 250 M 24	**AC40 250 M 24**	AC45 250 M 24	51.00	2970	93.00	89	0.89	164.0	6.5	2.2	90	79	0.2809	450	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				13.50	1475	26.50	87	0.85	87.4	6.2	1.8									
AB40 280 S 24	AB45 280 S 24	**AC40 280 S 24**	AC45 280 S 24	70.00	2960	130.80	91	0.85	225.8	9.4	2.8	88	76	0.5200	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				25.00	1480	49.40	85	0.86	161.3	8.2	2.7									
AB40 280 M 24	AB45 280 M 24	**AC40 280 M 24**	AC45 280 M 24	86.00	2960	158.80	91	0.86	277.5	9.2	2.8	88	76	0.6300	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				31.00	1480	63.50	84	0.84	200.0	8.0	2.6									
AB40 315 S 24	AB45 315 S 24	**AC40 315 S 24**	AC45 315 S 24	100.00	2965	181.50	91	0.87	322.1	9.4	2.9	90	76	0.7000	971	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				36.00	1485	75.50	83	0.83	231.5	8.0	2.9									
AB40 315 M 24	AB45 315 M 24	**AC40 315 M 24**	AC45 315 M 24	110.00	2970	196.30	92	0.88	353.7	9.5	2.9	90	76	0.7500	948	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				40.00	1485	83.90	84	0.82	257.2	8.1	2.8									
AB40 315 LA 24	AB45 315 LA 24	**AC40 315 LA 24**	AC45 315 LA 24	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB40 315 LB 24	AB45 315 LB 24	**AC40 315 LB 24**	AC45 315 LB 24	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB40 315 LC 24	AB45 315 LC 24	**AC40 315 LC 24**	AC45 315 LC 24	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4

❍ Data not indicated is supplied on request - *Les données qui ne sont pas indiquées sont fournies sur demande* - Die nicht angegebenen Daten werden auf Anfrage geliefert - *Los datos que no se han precisado se pueden comunicar cuando se solicite* - I dati non indicati sono forniti su richiesta

◗ - ▼ - ★ - ◆ - see the notes in section 4.1 - *voir remarques dans la section 4.1* - siehe Anmerkung in Abschnitt 4.1 - *véase notas en la sección 4.1* - vedi note di sezione 4.1

Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Noise level	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Niveau de bruit*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungs-faktor	Moment	Anlauf-strom	Anlauf-moment	Schalldruck-pegel	Trägheits-moment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Nivel de ruido*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Rumorosità	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB		IIC		P_n	n	I_n ◗	η	cos φ	M_n	I_a/I_n	M_a/M_n	[dB(A)]		J ▼	m	IIB		IIC		◆
Ex d	Ex de	Ex d	Ex de	[kW]	[1/min]	[A]	[%]		[Nm]			Lw	Lp	[kgm²]	[kg]	standard	★	standard	★	
AB40 71 A 48	AB45 71 A 48	**AC40 71 A 48**	AC45 71 A 48	0.20	1420	0.82	50	0.71	1.4	3.5	1.8	56	48	0.0009	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.05	700	0.39	32	0.59	0.7	1.7	1.4									
AB40 71 B 48	AB45 71 B 48	**AC40 71 B 48**	AC45 71 B 48	0.30	1390	0.95	58	0.78	2.1	3.6	1.8	56	48	0.0009	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.07	680	0.44	34	0.70	1.0	1.8	1.6									
AB40 80 A 48	AB45 80 A 48	**AC40 80 A 48**	AC45 80 A 48	0.45	1450	1.40	68	0.69	3.0	5.1	2.6	59	51	0.0013	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.10	710	0.66	40	0.55	1.4	2.6	2.8									
AB40 80 B 48	AB45 80 B 48	**AC40 80 B 48**	AC45 80 B 48	0.65	1420	1.67	70	0.80	4.4	4.3	1.8	59	51	0.0013	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.14	695	0.69	47	0.63	1.9	2.5	2.0									
AB40 90 S 48	AB45 90 S 48	**AC40 90 S 48**	AC45 90 S 48	0.90	1420	2.40	76	0.72	6.1	4.2	1.9	62	54	0.0020	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.22	690	0.95	50	0.65	3.0	2.4	1.8									
AB40 90 L 48	AB45 90 L 48	**AC40 90 L 48**	AC45 90 L 48	1.20	1440	3.25	77	0.70	8.0	4.4	2.0	62	54	0.0026	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.30	700	1.50	56	0.52	4.1	2.7	1.8									
AB40 100 LA 48	AB45 100 LA 48	**AC40 100 LA 48**	AC45 100 LA 48	1.90	1410	4.70	74	0.79	13.0	4.2	1.8	63	55	0.0053	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.44	700	1.90	58	0.58	6.2	2.4	1.6									
AB40 100 LB 48	AB45 100 LB 48	**AC40 100 LB 48**	AC45 100 LB 48	2.20	1405	5.30	73	0.82	15.0	4.9	2.0	63	55	0.0053	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.55	695	2.00	63	0.64	7.6	3.0	1.7									
AB40 112 M 48	AB45 112 M 48	**AC40 112 M 48**	AC45 112 M 48	3.00	1420	6.80	75	0.85	20.3	5.0	2.1	68	60	0.0103	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				0.75	710	2.50	64	0.68	10.1	3.1	1.8									
AB40 132 S 48	AB45 132 S 48	**AC40 132 S 48**	AC45 132 S 48	4.41	1445	9.30	86	0.80	29.3	5.9	2.3	72	64	0.0250	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.10	710	3.90	74	0.56	15.0	3.5	1.8									
AB40 132 MB 48	AB45 132 MB48	**AC40 132 MB 48**	AC45 132 MB48	5.90	1460	12.90	82	0.81	38.6	6.4	2.1	75	67	0.0324	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.50	710	5.30	69	0.61	20.4	4.0	1.7									
AB40 132 L 48	AB45 132 L 48	**AC40 132 L 48**	AC45 132 L 48	7.50	1440	16.00	83	0.82	49.8	6.9	2.0	75	67	0.0405	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.85	710	6.20	72	0.60	25.0	4.4	1.8									
AB40 160 M 48	AB45 160 M 48	**AC40 160 M 48**	AC45 160 M 48	8.80	1470	18.00	89	0.80	57.7	7.0	2.1	77	69	0.0627	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.50	730	7.75	82	0.58	33.1	4.0	1.8									
AB40 160 L 48	AB45 160 L 48	**AC40 160 L 48**	AC45 160 L 48	12.00	1470	25.10	89	0.77	77.7	7.0	2.1	77	69	0.0801	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				3.20	715	10.50	79	0.56	42.5	4.1	2.0									
AB40 180 M 48	AB45 180 M 48	**AC40 180 M 48**	AC45 180 M 48	16.00	1465	30.50	89	0.85	103.5	7.0	2.6	79	70	0.1270	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				4.00	730	12.50	66	0.70	53.5	4.6	2.0									
AB40 180 L 48	AB45 180 L 48	**AC40 180 L 48**	AC45 180 L 48	22.00	1470	45.00	89	0.80	143.0	6.7	3.7	79	70	0.1488	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				5.50	732	17.20	82	0.56	71.8	4.2	3.1									
AB40 200 LB 48	AB45 200 LB 48	**AC40 200 LB 48**	AC45 200 LB 48	26.00	1480	49.40	92	0.83	168.2	6.8	2.3	82	72	0.2436	315	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				6.00	735	15.60	91	0.61	78.2	4.4	2.2									
AB40 225 S 48	AB45 225 S 48	**AC40 225 S 48**	AC45 225 S 48	32.00	1470	60.00	92	0.86	207.9	6.7	2.4	84	73	0.3762	355	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				8.10	725	19.00	91	0.68	105.2	4.6	2.3									
AB40 225 M 48	AB45 225 M 48	**AC40 225 M 48**	AC45 225 M 48	37.00	1475	67.00	92	0.87	238.0	7.0	2.8	84	73	0.4451	380	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				9.20	730	22.00	90	0.67	120.0	4.8	2.4									
AB40 250 M 48	AB45 250 M 48	**AC40 250 M 48**	AC45 250 M 48	45.00	1475	87.00	94	0.80	291.3	5.8	2.4	86	75	0.4611	450	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				11.00	730	27.90	91	0.63	143.3	5.0	2.2									
AB40 280 S 48	AB45 280 S 48	**AC40 280 S 48**	AC45 280 S 48	69.00	1480	128.90	91	0.85	445.2	5.4	1.9	82	70	0.9500	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				20.00	720	49.80	88	0.66	265.3	3.8	1.5									
AB40 280 M 48	AB45 280 M 48	**AC40 280 M 48**	AC45 280 M 48	83.00	1480	155.10	91	0.85	535.6	5.5	1.8	82	70	1.1200	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				25.00	720	63.90	87	0.65	331.6	3.7	1.4									
AB40 315 S 48	AB45 315 S 48	**AC40 315 S 48**	AC45 315 S 48	94.00	1485	173.70	92	0.85	604.5	5.4	1.9	85	71	1.2700	971	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				28.00	725	70.50	87	0.66	368.8	3.8	1.5									
AB40 315 M 48	AB45 315 M 48	**AC40 315 M 48**	AC45 315 M 48	100.00	1485	182.60	92	0.86	643.1	4.9	1.8	85	71	1.3300	984	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				30.00	725	75.80	88	0.65	395.2	3.8	1.4									
AB40 315 LA 48	AB45 315 LA 48	**AC40 315 LA 48**	AC45 315 LA 48	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB40 315 LB 48	AB45 315 LB 48	**AC40 315 LB 48**	AC45 315 LB 48	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB40 315 LC 48	AB45 315 LC 48	**AC40 315 LC 48**	AC45 315 LC 48	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4

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Motor type / *Moteur type* / Motor Typ / *Tipo de motor* / Tipo motore	Rated output / *Puissance mécanique* / Leistung / *Potencia proporcionada* / Potenza resa	Speed / *Vitesse* / Drehzahl / *Velocidad* / Velocità	Current / *Intensité* / Strom / *Corriente* / Corrente	Efficiency / *Rendement* / Wirkungsgrad / *Rendimiento* / Rendimento	Power factor / *Facteur de puissance* / Leistungs-faktor / *Factor de potencia* / Fattore potenza	Torque / *Couple* / Moment / *Par* / Coppia	Starting current / *Intensité démarrage* / Anlauf-strom / *Corriente de arranque* / Corrente avviamento	Starting torque / *Couple démarrage* / Anlauf-moment / *Par de arranque* / Coppia avviamento	Noise level / *Niveau de bruit* / Schalldruck-pegel / *Nivel de ruido* / Rumorosità	Moment of inertia / *Moment d'inertie* / Trägheits-moment / *Momento de inercia* / Momento d'inerzia	Mass / *Masse* / Masse / *Peso* / Massa	CESI Certificates / *CESI Certificat* / CESI Konformitäts-Bescheinigung / *Certificados CESI* / Certificato CESI	Class T / *Classe T* / Klasse T / *Clase T* / Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
AB40 71 B 46	AB45 71 B 46	**AC40 71 B 46**	AC45 71 B 46	0.30	1390	0.95	56	0.82	2.1	4.0	2.1	56	48	0.0009	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.10	905	0.45	46	0.76	1.1	2.8	1.9									
AB40 80 A 46	AB45 80 A 46	**AC40 80 A 46**	AC45 80 A 46	0.44	1430	1.27	71	0.70	2.9	4.2	1.6	59	51	0.0013	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.13	930	0.44	59	0.70	1.3	3.8	1.2									
AB40 80 B 46	AB45 80 B 46	**AC40 80 B 46**	AC45 80 B 46	0.59	1430	1.60	74	0.72	4.0	4.0	1.7	59	51	0.0013	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.18	950	0.67	56	0.69	1.8	3.6	1.9									
AB40 90 S 46	AB45 90 S 46	**AC40 90 S 46**	AC45 90 S 46	0.90	1410	2.45	64	0.83	6.2	4.2	2.0	62	54	0.0020	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.30	960	1.65	54	0.49	3.0	3.0	1.5									
AB40 90 L 46	AB45 90 L 46	**AC40 90 L 46**	AC45 90 L 46	1.15	1395	3.20	70	0.77	8.3	4.3	2.0	62	54	0.0026	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.40	920	1.65	51	0.69	4.2	3.1	1.6									
AB40 100 LA 46	AB45 100 LA 46	**AC40 100 LA 46**	AC45 100 LA 46	1.80	1430	4.10	79	0.80	12.0	5.2	2.0	63	55	0.0053	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.60	955	1.90	70	0.65	6.0	4.0	1.7									
AB40 100 LB 46	AB45 100 LB 46	**AC40 100 LB 46**	AC45 100 LB 46	2.20	1425	4.70	80	0.85	14.7	5.0	1.9	63	55	0.0053	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.70	950	2.10	73	0.66	7.0	3.8	1.6									
AB40 112 M 46	AB45 112 M 46	**AC40 112 M 46**	AC45 112 M 46	3.00	1455	6.90	76	0.83	19.7	6.0	1.9	68	60	0.0103	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				0.90	960	2.30	75	0.75	9.0	4.2	1.8									
AB40 132 S 46	AB45 132 S 46	**AC40 132 S 46**	AC45 132 S 46	4.00	1460	9.50	79	0.77	26.2	6.5	2.0	72	64	0.0250	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.20	980	4.60	68	0.55	11.7	5.1	1.7									
AB40 132 MA 46	AB45 132 MA 46	**AC40 132 MA 46**	AC45 132 MA 46	4.80	1455	11.50	75	0.80	31.5	6.9	1.9	75	67	0.0324	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.40	965	5.10	68	0.58	13.9	5.4	1.8									
AB40 132 MB 46	AB45 132 MB 46	**AC40 132 MB 46**	AC45 132 MB 46	5.50	1460	13.00	76	0.80	36.0	5.7	1.9	75	67	0.0324	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.70	960	6.50	63	0.60	16.9	4.9	2.0									
AB40 132 L 46	AB45 132 L 46	**AC40 132 L 46**	AC45 132 L 46	6.60	1470	15.50	88	0.70	42.9	6.9	1.8	75	67	0.0405	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.00	980	8.00	76	0.49	20.0	5.4	1.8									
AB40 160 M 46	AB45 160 M 46	**AC40 160 M 46**	AC45 160 M 46	7.50	1470	15.35	86	0.82	48.9	7.4	2.1	77	69	0.0627	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.50	985	6.67	83	0.66	24.4	6.0	2.2									
AB40 160 L 46	AB45 160 L 46	**AC40 160 L 46**	AC45 160 L 46	11.00	1460	23.00	82	0.84	71.9	7.1	2.2	77	69	0.0801	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				3.30	980	9.50	71	0.71	32.2	6.2	2.3									
AB40 180 M 46	AB45 180 M 46	**AC40 180 M 46**	AC45 180 M 46	15.00	1450	31.50	81	0.85	98.8	6.9	1.8	79	70	0.1270	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				5.20	960	21.00	85	0.57	51.7	6.0	1.6									
AB40 180 L 46	AB45 180 L 46	**AC40 180 L 46**	AC45 180 L 46	18.50	1450	36.00	84	0.88	121.8	7.0	1.8	79	70	0.1488	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				6.25	965	22.00	66	0.62	61.8	6.2	1.6									
AB40 200 LA 46	AB45 200 LA 46	**AC40 200 LA 46**	AC45 200 LA 46	21.00	1460	41.00	85	0.87	137.4	6.9	2.0	82	72	0.2436	295	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				7.50	970	16.50	82	0.80	73.8	6.5	1.9									
AB40 200 LB 46	AB45 200 LB 46	**AC40 200 LB 46**	AC45 200 LB 46	26.00	1465	48.50	89	0.87	169.5	6.4	2.1	82	72	0.2436	315	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				8.80	970	24.50	83	0.63	86.6	6.2	2.1									
AB40 225 S 46	AB45 225 S 46	**AC40 225 S 46**	AC45 225 S 46	31.00	1470	58.00	88	0.88	201.4	6.5	2.2	84	73	0.3762	355	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				11.00	975	23.00	82	0.84	107.7	6.0	2.1									
AB40 225 M 46	AB45 225 M 46	**AC40 225 M 46**	AC45 225 M 46	36.00	1475	70.00	88	0.84	233.0	6.1	2.1	84	73	0.4451	380	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				12.00	990	30.00	86	0.68	117.0	6.0	2.0									
AB40 250 M 46	AB45 250 M 46	**AC40 250 M 46**	AC45 250 M 46	38.00	1485	72.66	89	0.85	244.5	5.6	1.9	86	75	0.4611	450	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				14.00	985	28.89	85	0.83	136.0	5.4	1.9									
AB40 280 S 46	AB45 280 S 46	**AC40 280 S 46**	AC45 280 S 46	65.00	1480	123.00	92	0.83	419.4	8.1	2.9	82	70	0.9500	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				25.00	980	63.60	86	0.66	243.6	6.4	2.8									
AB40 280 M 46	AB45 280 M 46	**AC40 280 M 46**	AC45 280 M 46	80.00	1485	145.20	96	0.84	518.0	8.2	2.8	82	70	1.1200	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				30.00	995	76.30	91	0.63	291.6	6.2	2.9									
AB40 315 S 46	AB45 315 S 46	**AC40 315 S 46**	AC45 315 S 46	90.00	1485	170.30	92	0.83	578.8	8.3	2.9	85	71	1.2700	971	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				35.00	985	89.40	87	0.65	339.3	6.4	3.0									
AB40 315 M 46	AB45 315 M 46	**AC40 315 M 46**	AC45 315 M 46	95.00	1485	179.80	92	0.83	610.9	8.2	2.8	85	71	1.3300	984	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				37.00	990	92.10	88	0.66	356.9	6.4	3.0									
AB40 315 LA 46	AB45 315 LA 46	**AC40 315 LA 46**	AC45 315 LA 46	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB40 315 LB 46	AB45 315 LB 46	**AC40 315 LB 46**	AC45 315 LB 46	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB40 315 LC 46	AB45 315 LC 46	**AC40 315 LC 46**	AC45 315 LC 46	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4

❍ Data not indicated is supplied on request - *Les données qui ne sont pas indiquées sont fournies sur demande* - Die nicht angegebenen Daten werden auf Anfrage geliefert - *Los datos que no se han precisado se pueden comunicar cuando se solicite* - I dati non indicati sono forniti su richiesta

◗ - ▼ - ★ - ◆ - see the notes in section 4.1 - *voir remarques dans la section 4.1* - siehe Anmerkung in Abschnitt 4.1 - *véase notas en la sección 4.1* - vedi note di sezione 4.1

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

4. / **4.3**

Three-phase motors — ***Moteurs triphasés*** — **Drehstrom Motoren** — ***Motores trifásicos*** — **Motori trifase**

II 2G / **II 2GD**

2

Speeds — ***Vitesses*** — **Drehzahlen** — ***Velocidades*** — **Velocità**

Rated data at — ***Données nominales à*** — **Betriebsdaten bei** — ***Datos nominales*** — **Dati nominali a**

400 V 50 Hz

direct on line start — ***démarrage direct*** — **Direkteinschaltung** — ***arranque directo*** — **avviamento diretto**

For centrifugal machines (quadratic torque) - 2 separate windings — ***Pour machines centrifuges (couple quadratique) - 2 enroulements séparés*** — **Für Zentrifugalmaschinen (quadratisches Gegenmoment) - 2 getrennte Wicklungen** — ***Para máquinas centrífugas (par cuadrático) - 2 devanados separados*** — **Per macchine centrifughe (coppia quadratica) - 2 avvolgimenti separati**

1000 / **750** **rpm** / ***tours/min*** / **U/min** / ***rev/min*** / **giri/min**

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Noise level	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Niveau de bruit*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungs-faktor	Moment	Anlauf-strom	Anlauf-moment	Schalldruck-pegel	Trägheits-moment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Nivel de ruido*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Rumorosità	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB		IIC		P_n	n	I_n ◗	η	cos φ	M_n	I_a/I_n	M_a/M_n	[dB(A)]		J ▼	m	IIB		IIC		◆
Ex d	Ex de	Ex d	Ex de	[kW]	[1/min]	[A]	[%]		[Nm]			Lw	Lp	[kgm²]	[kg]	standard	★	standard	★	
AB40 80 A 68	AB45 80 A 68	**AC40 80 A 68**	AC45 80 A 68	0.33	930	1.15	59	0.68	3.4	3.2	1.8	53	45	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.09	700	0.64	33	0.51	1.2	2.0	1.4									
AB40 80 B 68	AB45 80 B 68	**AC40 80 B 68**	AC45 80 B 68	0.40	930	1.20	61	0.76	4.1	3.0	1.7	53	45	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.12	680	0.65	44	0.63	1.7	2.1	1.3									
AB40 90 S 68	AB45 90 S 68	**AC40 90 S 68**	AC45 90 S 68	0.48	895	1.54	52	0.89	5.3	3.1	1.8	54	46	0.0034	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.19	705	0.82	52	0.65	2.6	2.2	1.4									
AB40 90 L 68	AB45 90 L 68	**AC40 90 L 68**	AC45 90 L 68	0.66	895	2.00	60	0.80	7.0	3.3	1.9	54	46	0.0049	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.25	700	1.20	51	0.59	3.4	2.4	1.6									
AB40 100 LA 68	AB45 100 LA 68	**AC40 100 LA 68**	AC45 100 LA 68	0.88	960	2.90	66	0.66	8.8	4.1	1.8	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.37	715	1.80	47	0.63	4.9	3.6	1.7									
AB40 100 LB 68	AB45 100 LB 68	**AC40 100 LB 68**	AC45 100 LB 68	1.10	950	3.40	69	0.68	11.1	4.0	1.6	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
				0.44	710	2.10	49	0.62	5.9	3.5	1.4									
AB40 112 M 68	AB45 112 M 68	**AC40 112 M 68**	AC45 112 M 68	1.50	970	4.60	74	0.64	14.8	4.5	2.0	65	57	0.0172	65	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				0.75	725	3.30	60	0.54	9.9	3.6	1.6									
AB40 132 S 68	AB45 132 S 68	**AC40 132 S 68**	AC45 132 S 68	2.20	950	5.70	75	0.74	22.1	4.5	2.2	68	60	0.0323	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				0.88	710	3.30	60	0.64	11.8	3.8	1.7									
AB40 132 MA 68	AB45 132 MA 68	**AC40 132 MA 68**	AC45 132 MA 68	3.00	960	7.00	76	0.81	29.8	4.9	2.0	68	60	0.0395	95	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.20	730	4.80	59	0.61	15.7	3.9	2.0									
AB40 132 MB 68	AB45 132 MB 68	**AC40 132 MB 68**	AC45 132 MB 68	3.70	965	8.90	79	0.76	36.6	5.1	2.2	68	60	0.0506	105	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				1.50	715	5.00	64	0.68	20.0	3.9	2.1									
AB40 160 M 68	AB45 160 M 68	**AC40 160 M 68**	AC45 160 M 68	5.50	980	12.50	87	0.73	53.6	5.6	2.2	72	64	0.0919	180	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				2.50	730	6.80	83	0.64	32.7	4.3	2.3									
AB40 160 L 68	AB45 160 L 68	**AC40 160 L 68**	AC45 160 L 68	7.50	970	17.40	83	0.75	73.9	5.8	2.1	72	64	0.1218	195	02 ATEX 122	02 ATEX 124X	02 ATEX 123	02 ATEX 125X	4
				4.00	728	11.60	78	0.64	52.8	4.0	2.0									
AB40 180 M 68	AB45 180 M 68	**AC40 180 M 68**	AC45 180 M 68	9.00	965	20.00	83	0.78	89.1	5.8	2.3	76	67	0.2067	230	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				4.50	725	11.00	80	0.74	59.3	4.3	2.2									
AB40 180 L 68	AB45 180 L 68	**AC40 180 L 68**	AC45 180 L 68	10.00	960	23.50	79	0.78	99.5	5.6	2.1	76	67	0.2067	245	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				5.20	720	13.00	80	0.72	69.0	4.1	2.0									
AB40 200 LA 68	AB45 200 LA 68	**AC40 200 LA 68**	AC45 200 LA 68	13.00	970	29.50	81	0.79	128.0	5.3	2.0	79	69	0.2986	295	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				6.50	720	15.50	82	0.74	86.2	4.7	2.1									
AB40 200 LB 68	AB45 200 LB 68	**AC40 200 LB 68**	AC45 200 LB 68	16.00	970	36.00	80	0.80	157.5	5.2	1.9	79	69	0.3503	315	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				8.10	725	21.00	72	0.77	106.7	4.6	2.0									
AB40 225 S 68	AB45 225 S 68	**AC40 225 S 68**	AC45 225 S 68	20.00	980	41.00	88	0.80	194.9	5.0	2.3	81	70	0.6965	355	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				10.00	730	24.50	76	0.78	130.8	4.9	2.2									
AB40 225 M 68	AB45 225 M 68	**AC40 225 M 68**	AC45 225 M 68	23.00	988	46.40	91	0.79	223.9	4.7	2.0	81	70	0.6965	380	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				11.00	737	25.20	89	0.72	144.8	4.6	2.1									
AB40 250 M 68	AB45 250 M 68	**AC40 250 M 68**	AC45 250 M 68	26.00	980	53.00	89	0.80	253.3	4.8	1.8	81	70	0.7216	450	06 ATEX 074	Pending	06 ATEX 073	Pending	4
				13.00	730	31.50	75	0.80	170.1	4.5	1.7									
AB40 280 S 68	AB45 280 S 68	**AC40 280 S 68**	AC45 280 S 68	40.00	985	81.40	91	0.78	387.8	7.3	3.1	77	65	1.1400	875	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				16.00	740	38.20	84	0.72	206.5	5.3	2.7									
AB40 280 M 68	AB45 280 M 68	**AC40 280 M 68**	AC45 280 M 68	48.00	990	99.50	90	0.78	464.5	7.5	3.0	77	65	1.3600	901	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				20.00	740	53.40	86	0.63	258.0	5.2	2.7									
AB40 315 S 68	AB45 315 S 68	**AC40 315 S 68**	AC45 315 S 68	58.00	990	119.60	91	0.77	559.5	7.9	3.4	79	65	1.6300	971	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				24.00	742	56.90	87	0.70	308.9	5.4	2.9									
AB40 315 M 68	AB45 315 M 68	**AC40 315 M 68**	AC45 315 M 68	65.00	995	130.90	92	0.78	623.9	7.8	3.3	79	65	1.8300	884	08 ATEX 012	---	00 ATEX 053	01 ATEX 003X	4
				27.00	740	62.30	87	0.72	348.4	5.3	2.9									
AB40 315 LA 68	AB45 315 LA 68	**AC40 315 LA 68**	AC45 315 LA 68	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB40 315 LB 68	AB45 315 LB 68	**AC40 315 LB 68**	AC45 315 LB 68	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4
AB40 315 LC 68	AB45 315 LC 68	**AC40 315 LC 68**	AC45 315 LC 68	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	08 ATEX 021	---	07 ATEX 073	---	4

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◗ - ▼ - ★ - ◆ - see the notes in section 4.1 - *voir remarques dans la section 4.1* - siehe Anmerkung in Abschnitt 4.1 - *véase notas en la sección 4.1* - vedi note di sezione 4.1

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

4. / **4.4**

Single-phase motors — ***Moteurs monophasé*** — **Einphasen Motoren** — ***Motores monofásicos*** — **Motori monofase**

II 2G / **II 2GD**

1

Speed — ***Vitesse*** — **Drehzahl** — ***Velocidad*** — **Velocità**

Rated data at — ***Données nominales à*** — **Betriebsdaten bei** — ***Datos nominales*** — **Dati nominali a**

230 V 50 Hz

direct on line start — ***démarrage direct*** — **Direkteinschaltung** — ***arranque directo*** — **avviamento diretto**

3000 / **1500** / **1000**

rpm — ***tours/min*** — **U/min** — ***rev/min*** — **giri/min**

ENGLISH | FRANÇAIS | DEUTSCH | ESPAÑOL | ITALIANO

Motor type	Rated output	Speed	Current	Efficiency	Power factor	Torque	Starting current	Starting torque	Capacitor	Sound pressure	Moment of inertia	Mass	CESI Certificates	Class T
Moteur type	*Puissance mécanique*	*Vitesse*	*Intensité*	*Rendement*	*Facteur de puissance*	*Couple*	*Intensité démarrage*	*Couple démarrage*	*Condensateur*	*Pression sonore*	*Moment d'inertie*	*Masse*	*CESI Certificat*	*Classe T*
Motor Typ	Leistung	Drehzahl	Strom	Wirkungsgrad	Leistungsfaktor	Moment	Anlaufstrom	Anlaufmoment	Kondensator	Geräuschwerte	Trägheitsmoment	Masse	CESI Konformitäts-Bescheinigung	Klasse T
Tipo de motor	*Potencia proporcionada*	*Velocidad*	*Corriente*	*Rendimiento*	*Factor de potencia*	*Par*	*Corriente de arranque*	*Par de arranque*	*Condensador*	*Presión acústica*	*Momento de inercia*	*Peso*	*Certificados CESI*	*Clase T*
Tipo motore	Potenza resa	Velocità	Corrente	Rendimento	Fattore potenza	Coppia	Corrente avviamento	Coppia avviamento	Condensatore	Pressione sonora	Momento d'inerzia	Massa	Certificato CESI	Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	n [1/min]	I_n ◗ [A]	η [%]	cos φ	M_n [Nm]	I_a/I_n	M_a/M_n	C [µF]	[dB(A)] Lw	[dB(A)] Lp	J ▼ [kgm²]	m [kg]	IIB standard	IIB ★	IIC standard	IIC ★	◆
AB10 63 A 2	AB15 63 A 2	**AC10 63 A 2**	AC15 63 A 2	0.10	2750	1.30	35	0.95	0.3	3.3	0.6	6.3	60	52	0.0001	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 63 B 2	AB15 63 B 2	**AC10 63 B 2**	AC15 63 B 2	0.15	2750	1.30	53	0.95	0.5	3.8	0.6	8.0	60	52	0.0001	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 71 A 2	AB15 71 A 2	**AC10 71 A 2**	AC15 71 A 2	0.20	2800	2.60	48	0.92	0.7	3.6	0.7	10.0	66	58	0.0004	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 71 B 2	AB15 71 B 2	**AC10 71 B 2**	AC15 71 B 2	0.40	2730	2.90	63	0.95	1.4	2.7	0.7	12.5	66	58	0.0004	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 80 A 2	AB15 80 A 2	**AC10 80 A 2**	AC15 80 A 2	0.55	2720	5.40	53	0.82	1.9	2.5	0.6	16.0	70	62	0.0006	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 80 B 2	AB15 80 B 2	**AC10 80 B 2**	AC15 80 B 2	0.75	2790	5.30	63	0.97	2.6	4.5	0.8	20.0	70	62	0.0008	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 90 S 2	AB15 90 S 2	**AC10 90 S 2**	AC15 90 S 2	1.10	2750	7.80	63	0.97	3.8	4.4	0.7	45.0	77	69	0.0012	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 90 L 2	AB15 90 L 2	**AC10 90 L 2**	AC15 90 L 2	1.50	2800	8.90	74	0.98	5.1	4.9	0.7	60.0	77	69	0.0015	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 100 LA 2	AB15 100 LA 2	**AC10 100 LA 2**	AC15 100 LA 2	2.20	2800	15.50	65	0.95	7.5	5.0	0.6	60.0	80	72	0.0029	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 100 LB 2	AB15 100 LB 2	**AC10 100 LB 2**	AC15 100 LB 2	3.00	2800	18.00	74	0.98	10.2	5.0	0.6	80.0	80	72	0.0036	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 63 A 4	AB15 63 A 4	**AC10 63 A 4**	AC15 63 A 4	0.09	1360	1.10	39	0.90	0.6	3.2	0.6	6.3	52	44	0.0002	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 63 B 4	AB15 63 B 4	**AC10 63 B 4**	AC15 63 B 4	0.13	1350	1.30	55	0.90	1.1	3.0	0.6	8.0	52	44	0.0002	16	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 71 A 4	AB15 71 A 4	**AC10 71 A 4**	AC15 71 A 4	0.15	1380	1.70	42	0.90	1.0	3.2	0.7	10.0	56	48	0.0006	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 71 B 4	AB15 71 B 4	**AC10 71 B 4**	AC15 71 B 4	0.25	1380	2.30	48	0.97	1.7	3.4	0.7	12.5	56	48	0.0009	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 80 A 4	AB15 80 A 4	**AC10 80 A 4**	AC15 80 A 4	0.35	1410	3.30	49	0.96	2.4	3.8	0.7	20.0	59	51	0.0009	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 80 B 4	AB15 80 B 4	**AC10 80 B 4**	AC15 80 B 4	0.45	1420	4.30	53	0.85	3.0	3.8	0.8	25.0	59	51	0.0013	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 80 L 4	AB15 80 L 4	**AC10 80 L 4**	AC15 80 L 4	0.55	1420	4.90	56	0.87	3.7	3.9	0.7	30.0	59	51	0.0014	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 90 S 4	AB15 90 S 4	**AC10 90 S 4**	AC15 90 S 4	0.75	1420	5.90	56	0.97	5.2	2.1	1.0	30.0	62	54	0.0020	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 90 L 4	AB15 90 L 4	**AC10 90 L 4**	AC15 90 L 4	1.10	1430	7.20	73	0.91	7.3	4.0	0.6	35.0	62	54	0.0026	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 100 LA 4	AB15 100 LA 4	**AC10 100 LA 4**	AC15 100 LA 4	1.30	1370	8.10	72	0.98	9.0	3.2	0.5	35.0	63	55	0.0043	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 100 LB 4	AB15 100 LB 4	**AC10 100 LB 4**	AC15 100 LB 4	1.60	1400	10.00	71	0.98	11.1	2.6	0.5	40.0	63	55	0.0053	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 71 A 6	AB15 71 A 6	**AC10 71 A 6**	AC15 71 A 6	0.10	900	1.50	36	0.80	1.1	2.6	0.5	8.0	50	42	0.0007	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 71 B 6	AB15 71 B 6	**AC10 71 B 6**	AC15 71 B 6	0.15	850	1.40	50	0.93	1.7	2.8	0.5	10.0	50	42	0.0010	19	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 80 A 6	AB15 80 A 6	**AC10 80 A 6**	AC15 80 A 6	0.20	910	2.70	40	0.81	2.1	2.9	0.6	16.0	53	45	0.0022	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 80 B 6	AB15 80 B 6	**AC10 80 B 6**	AC15 80 B 6	0.30	930	3.00	53	0.82	3.1	3.0	0.6	25.0	53	45	0.0027	26	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 90 S 6	AB15 90 S 6	**AC10 90 S 6**	AC15 90 S 6	0.55	920	4.30	63	0.88	5.7	3.0	0.6	30.0	54	46	0.0034	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 90 L 6	AB15 90 L 6	**AC10 90 L 6**	AC15 90 L 6	0.75	910	6.10	60	0.88	7.9	3.1	0.7	35.0	54	46	0.0049	33	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4
AB10 100 LB 6	AB15 100 LB 6	**AC10 100 LB 6**	AC15 100 LB 6	1.10	920	8.00	65	0.92	11.4	3.2	0.7	75.0	63	55	0.0088	46	01 ATEX 102	02 ATEX 044X	01 ATEX 103	02 ATEX 045X	4

◗ - ▼ - ★ - ◆ - see the notes in section 4.1 - *voir remarques dans la section 4.1* - siehe Anmerkung in Abschnitt 4.1 - *véase notas en la sección 4.1* - vedi note di sezione 4.1

	400 V, 50 Hz [1/min] 3000	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 300 ÷ 3000	[Hz] 10 ÷ 50 range 1 ÷ 5 [1/min] 600 ÷ 3000	[Hz] 25 ÷ 50 range 1 ÷ 2 [1/min] 1500 ÷ 3000	[Hz] 50 ÷ 87 range 10 ÷ 17 [1/min] 3000 ÷ 5200	[Hz] 50 ÷ 87 range 10 ÷ 17 [1/min] 3000 ÷ 5200	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 300 ÷ 3000	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 300 ÷ 3000	
Motor type	Mains connection	Constant torque	Constant torque	Constant torque	Constant torque - Weakened flux	Constant torque - Constant flux Δ connection	Constant torque - Forced Ventilation	Quadratic torque ●	Class T
Moteur type	*Alimentation de secteur*	*Couple constant*	*Couple constant*	*Couple constant*	*Couple constant - Flux affaibli*	*Couple constant - Flux constant raccordement Δ*	*Couple constant - Ventilation Assistée*	*Couple quadratique* ●	*Classe T*
Motor Typ	Netzeinspeisung	Konstantes Gegenmoment	Konstantes Gegenmoment	Konstantes Gegenmoment	Konstantes Gegenmoment - Feldschwächbetrieb	Konstantes Gegenmoment - konstanter Strom Δ-Verbindung	Konstantes Gegenmoment - Fremdbelüftung	Quadratisches Gegenmoment ●	Klasse T
Tipo de motor	*Alimentación desde la red*	*Par constante*	*Par constante*	*Par constante*	*Par constante - Flujo debilitado*	*Par constante - Flujo constante conexión Δ*	*Par constante - Ventilación asistida*	*Par cuadrático* ●	*Clase T*
Tipo motore	Alimentazione da rete	Coppia costante	Coppia costante	Coppia costante	Coppia costante- Flusso indebolito	Coppia costante - Flusso costante collegamento Δ	Coppia costante - Ventilazione Assistita	Coppia quadratica ●	Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	I_n [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	◆
AB70 63 B 2	AB75 63 B 2	**AC70 63 B 2**	AC75 63 B 2	0.25	0.85	0.02-0.16	0.54	0.53	0.04-0.18	0.61	0.60	0.11-0.22	0.76	0.74	0.13-0.23	0.46	0.44	0.21-0.36	0.70	1.18	---	---	---	0.25	0.85	0.83	4
AB70 71 A 2	AB75 71 A 2	**AC70 71 A 2**	AC75 71 A 2	0.37	1.10	0.02-0.24	0.81	0.71	0.05-0.27	0.91	0.80	0.16-0.33	1.12	0.99	0.20-0.35	0.68	0.60	0.30-0.53	1.04	1.60	---	---	---	0.37	1.26	1.12	4
AB70 71 B 2	AB75 71 B 2	**AC70 71 B 2**	AC75 71 B 2	0.55	1.40	0.04-0.35	1.19	0.91	0.08-0.40	1.34	1.02	0.24-0.49	1.65	1.26	0.30-0.51	1.00	0.76	0.45-0.79	1.53	2.02	---	---	---	0.55	1.86	1.42	4
AB70 80 A 2	AB75 80 A 2	**AC70 80 A 2**	AC75 80 A 2	0.75	1.90	0.05-0.48	1.64	1.29	0.11-0.54	1.84	1.45	0.33-0.67	2.28	1.80	0.40-0.70	1.37	1.08	0.62-1.07	2.10	2.89	---	---	---	0.75	2.56	2.02	4
AB70 80 B 2	AB75 80 B 2	**AC70 80 B 2**	AC75 80 B 2	1.10	2.60	0.07-0.70	2.38	1.67	0.16-0.79	2.67	1.88	0.49-0.98	3.31	2.32	0.59-1.03	1.99	1.40	0.90-1.57	3.05	3.73	---	---	---	1.10	3.71	2.61	4
AB70 90 S 2	AB75 90 S 2	**AC70 90 S 2**	AC75 90 S 2	1.50	3.10	0.10-0.96	3.19	1.99	0.22-1.08	3.59	2.24	0.67-1.34	4.45	2.78	0.81-1.40	2.68	1.67	1.23-2.14	4.10	4.45	---	---	---	1.50	4.99	3.12	4
AB70 90 L 2	AB75 90 L 2	**AC70 90 L 2**	AC75 90 L 2	2.20	4.80	0.14-1.41	4.77	3.08	0.32-1.58	5.36	3.47	0.98-1.96	6.64	4.29	1.18-2.06	4.00	2.59	1.81-3.15	6.12	6.88	---	---	---	2.20	7.45	4.82	4
AB70 100 LA 2	AB75 100 LA 2	**AC70 100 LA 2**	AC75 100 LA 2	3.00	7.30	0.19-1.92	6.41	4.67	0.43-2.16	7.21	5.26	1.34-2.67	8.93	6.51	1.61-2.80	5.38	3.92	2.47-4.29	8.23	10.44	0.27-2.70	9.02	6.57	3.00	10.02	7.30	4
															[Hz] 50 ÷ 70 ★ range 10 ÷ 14 [1/min] 3000 ÷ 4200			[Hz] 50 ÷ 70 ★ range 10 ÷ 14 [1/min] 3000 ÷ 4200							
AB70 112 M 2	AB70 112 M 2	**AC70 112 M 2**	AC75 112 M 2	4.00	8.70	0.30-2.60	8.40	5.60	0.60-2.90	9.50	6.30	1.80-3.60	11.70	7.80	3.00-4.10	9.80	6.50	3.90-5.40	12.80	14.90	0.40-3.60	11.90	7.90	4.00	13.20	8.80	4
AB70 132 SA 2	AB75 132 SA 2	**AC70 132 SA 2**	AC75 132 SA 2	5.50	12.00	0.40-3.50	11.60	7.40	0.80-4.00	13.10	8.30	2.50-4.90	16.20	10.30	4.10-5.70	13.50	8.60	5.30-7.50	17.60	19.50	0.50-5.00	16.40	10.40	5.50	18.20	11.60	4
AB70 132 SB 2	AB75 132 SB 2	**AC70 132 SB 2**	AC75 132 SB 2	7.50	15.00	0.50-4.80	15.80	9.60	1.10-5.40	17.70	10.80	3.30-6.70	21.90	13.40	5.60-7.80	18.20	11.10	7.30-10.20	23.90	25.30	0.70-6.80	22.20	13.50	7.50	24.60	15.00	4
AB70 132 MB 2	AB75 132 MB 2	**AC70 132 MB 2**	AC75 132 MB 2	9.20	18.00	0.60-5.90	19.40	11.50	1.30-6.60	21.80	13.00	4.10-8.20	27.00	16.10	6.80-9.50	22.40	13.40	8.90-12.50	29.40	30.40	0.80-8.30	27.30	16.20	9.20	30.30	18.00	4
AB70 160 MA 2	AB75 160 MA 2	**AC70 160 MA 2**	AC75 160 MA 2	11.00	20.60	0.70-7.00	23.00	13.10	1.60-7.90	25.80	14.80	4.90-9.80	32.00	18.30	8.10-11.40	26.50	15.20	10.70-14.90	34.80	34.60	1.00-9.90	32.30	18.50	11.00	35.90	20.50	4
AB70 160 MB 2	AB75 160 MB 2	**AC70 160 MB 2**	AC75 160 MB 2	15.00	26.80	1.00-9.60	31.10	16.90	2.20-10.80	35.00	19.00	6.70-13.40	43.30	23.60	11.10-15.50	36.00	19.60	14.60-20.40	47.20	44.60	1.40-13.50	43.80	23.80	15.00	48.60	26.40	4
AB70 160 L 2	AB75 160 L 2	**AC70 160 L 2**	AC75 160 L 2	18.50	32.80	1.20-11.80	38.40	20.90	2.70-13.30	43.20	23.50	8.20-16.50	53.50	29.00	13.70-19.20	44.40	24.10	17.90-25.10	58.20	55.00	1.70-16.70	54.00	29.30	18.50	60.00	32.60	4
															[Hz] 50 ÷ 60 ★ range 10 ÷ 12 [1/min] 3000 ÷ 3600			[Hz] 50 ÷ 60 ★ range 10 ÷ 12 [1/min] 3000 ÷ 3600							
AB70 180 M 2	AB75 180 M 2	**AC70 180 M 2**	AC75 180 M 2	22.00	40.00	1.40-14.10	46.00	25.40	3.20-15.80	51.00	28.50	9.80-19.60	63.00	35.30	19.80-23.80	64.00	35.70	22.00-26.40	71.00	68.90	2.00-19.80	64.00	35.70	22.00	71.00	39.60	4
AB70 200 LA 2	AB75 200 LA 2	**AC70 200 LA 2**	AC75 200 LA 2	30.00	55.00	1.90-19.20	62.00	35.20	4.30-21.60	69.00	39.60	13.40-26.70	86.00	49.00	27.00-32.40	87.00	49.50	30.00-36.00	96.00	95.70	2.70-27.00	87.00	49.50	30.00	96.00	55.00	4
AB70 200 LB 2	AB75 200 LB 2	**AC70 200 LB 2**	AC75 200 LB 2	37.00	67.00	2.40-23.70	76.00	42.40	5.30-26.60	86.00	47.70	16.50-33.00	106.00	59.00	33.30-40.00	107.00	59.60	37.00-44.40	119.00	115.20	3.30-33.30	107.00	59.60	37.00	119.00	66.30	4
AB70 225 M 2	AB75 225 M 2	**AC70 225 M 2**	AC75 225 M 2	45.00	82.00	2.90-28.80	92.00	52.00	6.50-32.40	104.00	58.50	20.00-40.10	129.00	72.30	40.50-48.60	130.00	73.10	42.70-51.30	137.00	134.20	4.10-40.50	130.00	73.10	45.00	144.00	81.20	4
AB70 250 M 2	AB75 250 M 2	**AC70 250 M 2**	AC75 250 M 2	55.00	98.00	3.50-35.20	113.00	62.80	7.90-39.60	127.00	70.60	24.50-49.00	157.00	87.40	49.50-59.40	159.00	88.30	52.20-62.70	168.00	162.10	5.00-49.50	159.00	88.30	55.00	176.00	98.10	4
AB70 280 S 2	AB75 280 S 2	**AC70 280 S 2**	AC75 280 S 2	75.00	132.00	4.60-46.40	149.00	81.00	10.10-50.70	163.00	88.50	31.70-63.40	203.00	110.70	63.70-76.50	204.00	111.30	67.50-81.00	216.00	205.00	6.40-63.70	204.00	111.30	73.50	240.00	131.00	4
AB70 280 M 2	AB75 280 M 2	**AC70 280 M 2**	AC75 280 M 2	90.00	165.00	5.60-55.60	178.00	101.40	12.20-60.80	195.00	110.90	38.00-76.10	244.00	138.70	76.50-91.80	245.00	139.40	81.00-97.20	259.00	256.70	7.70-76.50	245.00	139.40	87.30	288.00	164.00	4
AB70 315 S 2	AB75 315 S 2	**AC70 315 S 2**	AC75 315 S 2	110.00	139.00	6.80-68.00	218.00	118.50	14.90-74.40	238.00	129.60	46.50-91.00	298.00	162.10	93.50-112.20	300.00	163.00	99.00-118.80	317.00	300.10	9.40-93.50	300.00	163.00	105.60	353.00	191.80	4
AB70 315 LA 2	AB75 315 LA 2	**AC70 315 LA 2**	AC75 315 LA 2	132.00	222.00	8.20-81.60	262.00	140.70	17.90-89.20	287.00	153.90	55.80-111.60	359.00	192.40	112.20-134.60	361.00	193.40	118.80-142.50	382.00	356.20	11.20-112.20	361.00	193.40	124.10	424.00	227.60	4
AB70 315 LB 2	AB75 315 LB 2	**AC70 315 LB 2**	AC75 315 LB 2	160.00	269.00	9.90-98.90	317.00	166.00	21.60-108.20	346.00	181.50	67.60-135.30	433.00	227.00	136.00-163.20	435.00	228.20	144.00-172.80	461.00	420.30	13.60-136.00	435.00	228.20	147.20	512.00	268.60	4
AB70 315 LC 2	AB75 315 LC 2	**AC70 315 LC 2**	AC75 315 LC 2	200.00	332.00	12.40-123.60	396.00	206.00	27.00-135.20	433.00	225.30	84.50-169.10	541.00	281.70	170.00-204.00	544.00	283.20	180.00-216.00	576.00	521.50	17.00-170.00	544.00	283.00	180.00	640.00	333.20	4

Rounded values
Valeurs arrondies
Gerundete Werte
Valores redondeado
Valori arrotondati

✦
To reduce noise level, IC 416 is advisable (available from frame size 100)
On conseille IC 416 pour réduire le bruit (disponible à partir de hauteur d'axe 100)
Zur Lärmverringerung wird IC 416 empfohlen (verfügbar ab Baugröße 100)
Se aconseja IC 416 para reducir el nivel de ruido (disponible a partir de altura del eje 100)
Si consiglia IC 416 per ridurre il rumore (disponibile da altezza d'asse 100)

★
Higher frequency upon request
Fréquence supérieure sur demande
Auf Anfrage höhere Frequenz
Frecuencia mayor a petición del cliente
Frequenza superiore su richiesta

●
Values refer to 50 Hz
Valeurs se réfèrent à 50 Hz
Werte beziehen sich auf 50 Hz
Valores se refieren a 50 Hz
Valori riferiti a 50 Hz

◀
Same certificates as section 4.1
Mêmes certificats que ceux de la section 4.1
Gleiche Bescheinigungen wie in Abschnitt 4.1
Los mismos certificados que en la sección 4.1
Stessi certificati della sezione 4.1

◆
T3 upon request;
T3 sur demande;
T3 auf Wunsch;
T3 según demanda;
T3 a richiesta;

		400 V, 50 Hz [1/min] 1500	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 150 ÷ 1500	[Hz] 10 ÷ 50 range 1 ÷ 5 [1/min] 300 ÷ 1500	[Hz] 25 ÷ 50 range 1 ÷ 2 [1/min] 750 ÷ 1500	[Hz] 50 ÷ 87 range 10 ÷ 17 [1/min] 1500 ÷ 2600	[Hz] 50 ÷ 87 range 10 ÷ 17 [1/min] 1500 ÷ 2600	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 150 ÷ 1500	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 150 ÷ 1500	
Motor type		Mains connection	Constant torque	Constant torque	Constant torque	Constant torque - Weakened flux	Constant torque - Constant flux Δ connection	Constant torque - Forced Ventilation	Quadratic torque ●	Class T
Moteur type		*Alimentation de secteur*	*Couple constant*	*Couple constant*	*Couple constant*	*Couple constant - Flux affaibli*	*Couple constant - Flux constant raccordement Δ*	*Couple constant - Ventilation Assistée*	*Couple quadratique* ●	*Classe T*
Motor Typ		Netzeinspeisung	Konstantes Gegenmoment	Konstantes Gegenmoment	Konstantes Gegenmoment	Konstantes Gegenmoment - Feldschwächbetrieb	Konstantes Gegenmoment - konstanter Strom Δ-Verbindung	Konstantes Gegenmoment - Fremdbelüftung	Quadratisches Gegenmoment ●	Klasse T
Tipo de motor		*Alimentación desde la red*	*Par constante*	*Par constante*	*Par constante*	*Par constante - Flujo debilitado*	*Par constante - Flujo constante conexión Δ*	*Par constante - Ventilación asistida*	*Par cuadrático* ●	*Clase T*
Tipo motore		Alimentazione da rete	Coppia costante	Coppia costante	Coppia costante	Coppia costante - Flusso indebolito	Coppia costante - Flusso costante collegamento Δ	Coppia costante- Ventilazione Assistita	Coppia quadratica ●	Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	I_n [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	◆
AB70 63 A 4	AB75 63 A 4	**AC70 63 A 4**	AC75 63 A 4	0.12	0.62	0.01-0.08	0.53	0.34	0.02-0.09	0.60	0.38	0.05-0.11	0.74	0.48	0.06-0.11	0.45	0.29	0.10-0.17	0.68	0.76	---	---	---	0.12	0.83	0.53	4
AB70 63 B 4	AB75 63 B 4	**AC70 63 B 4**	AC75 63 B 4	0.18	0.67	0.01-0.12	0.82	0.44	0.03-0.13	0.92	0.49	0.08-0.16	1.14	0.61	0.10-0.17	0.69	0.37	0.15-0.26	1.05	0.97	---	---	---	0.18	1.28	0.68	4
AB70 71 A 4	AB75 71 A 4	**AC70 71 A 4**	AC75 71 A 4	0.25	0.80	0.02-0.16	1.11	0.49	0.04-0.18	1.25	0.56	0.11-0.22	1.55	0.69	0.13-0.23	0.93	0.41	0.21-0.36	1.43	1.10	---	---	---	0.25	1.74	0.77	4
AB70 71 B 4	AB75 71 B 4	**AC70 71 B 4**	AC75 71 B 4	0.37	1.10	0.02-0.24	1.63	0.69	0.05-0.27	1.83	0.77	0.16-0.33	2.26	0.96	0.20-0.35	1.37	0.58	0.30-0.53	2.09	1.54	---	---	---	0.37	2.54	1.07	4
AB70 80 A 4	AB75 80 A 4	**AC70 80 A 4**	AC75 80 A 4	0.55	1.60	0.04-0.35	2.44	1.04	0.08-0.40	2.74	1.17	0.24-0.49	3.39	1.44	0.30-0.51	2.04	0.87	0.45-0.79	3.13	2.32	---	---	---	0.55	3.81	1.62	4
AB70 80 B 4	AB75 80 B 4	**AC70 80 B 4**	AC75 80 B 4	0.75	2.00	0.05-0.48	3.27	1.29	0.11-0.54	3.68	1.45	0.33-0.67	4.56	1.79	0.40-0.70	2.75	1.08	0.62-1.07	4.21	2.87	---	---	---	0.75	5.12	2.01	4
AB70 90 S 4	AB75 90 S 4	**AC70 90 S 4**	AC75 90 S 4	1.10	2.80	0.07-0.70	4.80	1.75	0.16-0.79	5.40	1.97	0.49-0.98	6.69	2.43	0.59-1.03	4.03	1.47	0.90-1.57	6.17	3.91	---	---	---	1.10	7.50	2.73	4
AB70 90 L 4	AB75 90 L 4	**AC70 90 L 4**	AC75 90 L 4	1.50	3.60	0.10-0.96	6.46	2.31	0.22-1.08	7.26	2.60	0.67-1.34	8.99	3.21	0.81-1.40	5.42	1.94	1.23-2.14	8.29	5.15	---	---	---	1.50	10.09	3.61	4
AB70 100 LA 4	AB75 100 LA 4	**AC70 100 LA 4**	AC75 100 LA 4	2.20	5.25	0.14-1.41	9.42	3.34	0.32-1.58	10.60	3.76	0.98-1.96	13.12	4.65	1.18-2.06	7.91	2.80	1.81-3.15	12.10	7.46	0.20-1.98	13.25	4.70	2.20	14.72	5.22	4
AB70 100 LB 4	AB75 100 LB 4	**AC70 100 LB 4**	AC75 100 LB 4	3.00	6.83	0.19-1.92	12.77	4.34	0.43-2.16	14.36	4.88	1.34-2.67	17.78	6.04	1.61-2.80	10.71	3.64	2.47-4.29	16.40	9.68	0.27-2.70	17.96	6.10	3.00	19.95	6.78	4
AB70 112 M 4	AB75 112 M 4	**AC70 112 M 4**	AC75 112 M 4	4.00	8.20	0.30-2.60	17.00	5.10	0.60-2.90	19.10	5.80	1.80-3.60	23.60	7.20	2.20-3.70	14.30	4.30	3.30-5.70	21.80	11.50	0.40-3.60	23.90	7.20	4.00	26.50	8.00	4
AB70 132 SB 4	AB75 132 SB 4	**AC70 132 SB 4**	AC75 132 SB 4	5.50	11.60	0.40-3.50	23.10	7.40	0.80-4.00	26.00	8.30	2.50-4.90	32.20	10.30	3.00-5.10	19.40	6.20	4.50-7.90	29.70	16.50	0.50-5.00	32.50	10.40	5.50	36.10	11.60	4
AB70 132 MB 4	AB75 132 MB 4	**AC70 132 MB 4**	AC75 132 MB 4	7.50	16.50	0.50-4.80	31.60	10.50	1.10-5.40	35.60	11.80	3.30-6.70	44.00	14.60	4.00-7.00	26.50	8.80	6.20-10.70	40.60	23.30	0.70-6.80	44.50	14.70	7.50	49.40	16.30	4
AB70 132 ML 4	AB75 132 ML 4	**AC70 132 ML 4**	AC75 132 ML 4	8.80	18.50	0.60-5.60	37.00	11.80	1.30-6.30	41.60	13.30	3.90-7.80	51.50	16.50	4.70-8.20	31.00	9.90	7.20-12.60	47.50	26.40	0.80-7.90	52.00	16.60	8.80	57.80	18.50	4
AB70 160 MB 4	AB75 160 MB 4	**AC70 160 MB 4**	AC75 160 MB 4	11.00	23.00	0.70-7.00	45.70	14.60	1.60-7.90	51.50	16.50	4.90-9.80	63.70	20.40	5.90-10.30	38.40	12.30	9.00-15.70	58.70	32.70	1.00-9.90	64.30	20.60	11.00	71.50	22.90	4
AB70 160 L 4	AB75 160 L 4	**AC70 160 L 4**	AC75 160 L 4	15.00	30.00	1.00-9.60	62.40	19.10	2.20-10.80	70.20	21.50	6.70-13.40	86.80	26.70	8.10-14.00	52.30	16.10	12.30-21.50	80.10	42.80	1.40-13.50	87.70	26.90	15.00	97.50	29.90	4
AB70 180 M 4	AB75 180 M 4	**AC70 180 M 4**	AC75 180 M 4	18.50	39.00	1.20-11.80	77.00	25.00	2.70-13.30	87.00	28.20	8.20-16.50	107.00	34.90	9.90-17.30	65.00	21.00	15.20-26.50	99.00	55.90	1.70-16.70	108.00	35.20	18.50	120.20	39.10	4
AB70 180 L 4	AB75 180 L 4	**AC70 180 L 4**	AC75 180 L 4	22.00	44.00	1.40-14.10	92.00	28.30	3.20-15.80	103.00	31.90	9.80-19.60	127.00	39.40	11.80-20.60	77.00	23.80	18.10-31.50	118.00	63.30	2.00-19.80	129.00	39.80	22.00	143.00	44.30	4
AB70 200 LB 4	AB75 200 LB 4	**AC70 200 LB 4**	AC75 200 LB 4	30.00	54.00	1.90-19.20	124.00	34.30	4.30-21.60	140.00	38.60	13.40-26.70	173.00	47.80	16.10-28.00	104.00	28.80	24.70-42.90	160.00	76.60	2.70-27.00	175.00	48.30	30.00	194.00	53.60	4
AB70 225 S 4	AB75 225 S 4	**AC70 225 S 4**	AC75 225 S 4	37.00	70.00	2.40-23.70	153.00	44.60	5.30-26.60	172.00	50.20	16.50-33.00	213.00	62.20	19.90-34.60	128.00	37.50	28.90-50.30	186.00	94.70	3.30-33.30	215.00	62.80	37.00	239.00	69.80	4
AB70 225 M 4	AB75 225 M 4	**AC70 225 M 4**	AC75 225 M 4	45.00	82.00	2.90-28.80	186.00	52.70	6.50-32.40	209.00	59.30	20.00-40.10	259.00	73.40	24.20-42.00	156.00	44.20	35.10-61.10	227.00	111.90	4.10-40.50	261.00	74.10	45.00	290.00	82.40	4
AB70 250 M 4	AB75 250 M 4	**AC70 250 M 4**	AC75 250 M 4	55.00	96.00	3.50-35.20	226.00	61.40	7.90-39.60	255.00	69.10	24.50-49.00	315.00	85.50	29.50-51.40	190.00	51.50	42.90-74.70	276.00	130.30	5.00-49.50	318.00	86.40	55.00	354.00	96.00	4
AB70 280 S 4	AB75 280 S 4	**AC70 280 S 4**	AC75 280 S 4	75.00	136.00	4.80-48.00	310.00	86.60	10.50-52.50	339.00	94.70	32.20-64.50	416.00	116.40	33.70-58.70	218.00	60.90	58.60-101.90	378.00	183.80	6.60-66.00	426.00	119.10	75.00	484.00	135.40	4
AB70 280 M 4	AB75 280 M 4	**AC70 280 M 4**	AC75 280 M 4	90.00	163.00	5.80-57.60	370.00	103.90	12.60-63.00	405.00	113.70	38.70-77.40	498.00	139.70	40.50-70.50	261.00	73.10	70.30-122.30	452.00	220.50	7.90-79.20	509.00	142.90	90.00	579.00	162.40	4
AB70 315 S 4	AB75 315 S 4	**AC70 315 S 4**	AC75 315 S 4	110.00	199.00	7.00-70.40	453.00	127.20	15.40-77.00	495.00	139.10	47.30-94.60	608.00	170.90	49.50-86.10	318.00	89.40	85.90-149.40	552.00	269.80	9.70-96.80	623.00	174.80	110.00	707.00	198.70	4
AB70 315 LA 4	AB75 315 LA 4	**AC70 315 LA 4**	AC75 315 LA 4	132.00	239.00	8.50-84.50	543.00	154.20	18.50-92.40	594.00	168.70	56.80-113.50	730.00	207.20	59.40-103.30	382.00	108.40	103.10-179.30	663.00	327.30	11.60-116.10	747.00	212.10	132.00	849.00	241.00	4
AB70 315 LB 4	AB75 315 LB 4	**AC70 315 LB 4**	AC75 315 LB 4	160.00	282.00	10.20-102.40	657.00	179.90	22.40-112.00	719.00	196.80	68.80-137.60	883.00	241.80	72.00-125.30	462.00	126.50	124.90-217.40	802.00	381.80	14.10-140.80	904.00	247.40	160.00	1027.00	281.20	4
AB70 315 LC 4	AB75 315 LC 4	**AC70 315 LC 4**	AC75 315 LC 4	200.00	354.00	12.80-128.00	822.00	225.60	28.00-140.00	899.00	246.80	86.00-172.00	1104.00	303.20	90.00-156.60	578.00	158.60	156.20-271.70	1002.00	478.80	17.60-176.00	1130.00	310.20	200.00	1284.00	352.60	4

Rounded values
Valeurs arrondies
Gerundete Werte
Valores redondeado
Valori arrotondati

●
Values refer to 50 Hz
Valeurs se réfèrent à 50 Hz
Werte beziehen sich auf 50 Hz
Valores se refieren a 50 Hz
Valori riferiti a 50 Hz

◆
Same certificates as section 4.1
Mêmes certificats que ceux de la section 4.1
Gleiche Bescheinigungen wie in Abschnitt 4.1
Los mismos certificados que en la sección 4.1
Stessi certificati della sezione 4.1

◆
T3 upon request;
T3 sur demande;
T3 auf Wunsch;
T3 según demanda;
T3 a richiesta;

4. Motors energized by inverter
Moteurs alimentés par variateur
Motoren mit Umrichterversorgung
Motores alimentados con inverter
4.5 Motori alimentati da inverter

II 2G
II 2GD

Self-ventilated IC 411
Autoventilés IC 411
Eigenbelüftet IC 411
Autoventilados IC 411
Autoventilati IC 411

Self-ventilated IC 411 or forced ventilation IC 416
Autoventilés IC 411 ou ventilation assistée IC 416
Eigenbelüftet IC 411 oder fremdbelüftet IC 416
Autoventilados IC 411 o ventilación asistida IC 416
Autoventilati IC 411 o ventilazione assistita IC 416

Forced ventilation IC 416
Ventilation assistée IC 416
Fremdbelüftung IC 416
Ventilación asistida IC 416
Ventilazione assistita IC 416

Self-ventilated IC 411
Autoventilés IC 411
Eigenbelüftet IC 411
Autoventilados IC 411
Autoventilati IC 411

Pole
Pôles
Pole
Polos
6 Poli

	400 V, 50 Hz [1/min] 1000	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 100 ÷ 1000	[Hz] 10 ÷ 50 range 1 ÷ 5 [1/min] 200 ÷ 1000	[Hz] 25 ÷ 50 range 1 ÷ 2 [1/min] 500 ÷ 1000	[Hz] 50 ÷ 87 range 10 ÷ 17 [1/min] 1000 ÷ 1750	[Hz] 50 ÷ 87 range 10 ÷ 17 [1/min] 1000 ÷ 1750	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 100 ÷ 1000	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 100 ÷ 1000	
Motor type	Mains connection	Constant torque	Constant torque	Constant torque	Constant torque - Weakened flux	Constant torque - Constant flux Δ connection	Constant torque - Forced Ventilation	Quadratic torque ●	Class T
Moteur type	*Alimentation de secteur*	*Couple constant*	*Couple constant*	*Couple constant*	*Couple constant - Flux affaibli*	*Couple constant - Flux constant raccordement Δ*	*Couple constant - Ventilation Assistée*	*Couple quadratique* ●	*Classe T*
Motor Typ	Netzeinspeisung	Konstantes Gegenmoment	Konstantes Gegenmoment	Konstantes Gegenmoment	Konstantes Gegenmoment - Feldschwächbetrieb	Konstantes Gegenmoment - konstanter Strom Δ-Verbindung	Konstantes Gegenmoment - Fremdbelüftung	Quadratisches Gegenmoment ●	Klasse T
Tipo de motor	*Alimentación desde la red*	*Par constante*	*Par constante*	*Par constante*	*Par constante - Flujo debilitado*	*Par constante - Flujo constante conexión Δ*	*Par constante - Ventilación asistida*	*Par cuadrático* ●	*Clase T*
Tipo motore	Alimentazione da rete	Coppia costante	Coppia costante	Coppia costante	Coppia costante - Flusso indebolito	Coppia costante - Flusso costante collegamento Δ	Coppia costante - Ventilazione Assistita	Coppia quadratica ●	Classe T

IIB Ex d	IIB Ex de	IIC Ex d	IIC Ex de	P_n [kW]	I_n [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	◆
AB70 63 B 6	AB75 63 B 6	**AC70 63 B 6**	AC75 63 B 6	0.09	0.65	0.01-0.06	0.65	0.42	0.01-0.06	0.73	0.47	0.04-0.08	0.90	0.59	0.05-0.08	0.54	0.35	0.07-0.13	0.83	0.94	---	---	---	0.09	1.01	0.66	4
AB70 71 A 6	AB75 71 A 6	**AC70 71 A 6**	AC75 71 A 6	0.18	0.92	0.01-0.12	1.18	0.70	0.03-0.13	1.33	0.79	0.08-0.16	1.65	0.97	0.10-0.17	0.99	0.59	0.15-0.26	1.52	1.56	---	---	---	0.18	1.85	1.09	4
AB70 71 B 6	AB75 71 B 6	**AC70 71 B 6**	AC75 71 B 6	0.26	1.00	0.02-0.17	1.73	0.64	0.04-0.19	1.95	0.71	0.12-0.23	2.41	0.88	0.14-0.24	1.45	0.53	0.21-0.37	2.22	1.42	---	---	---	0.26	2.70	0.99	4
AB70 80 A 6	AB75 80 A 6	**AC70 80 A 6**	AC75 80 A 6	0.37	1.60	0.02-0.24	2.43	1.02	0.05-0.27	2.74	1.14	0.16-0.33	3.39	1.41	0.20-0.35	2.04	0.85	0.30-0.53	3.12	2.27	---	---	---	0.37	3.80	1.59	4
AB70 80 B 6	AB75 80 B 6	**AC70 80 B 6**	AC75 80 B 6	0.55	1.80	0.04-0.35	3.61	1.12	0.08-0.40	4.07	1.26	0.24-0.49	5.03	1.55	0.30-0.51	3.03	0.94	0.45-0.79	4.64	2.49	---	---	---	0.55	5.65	1.74	4
AB70 90 S 6	AB75 90 S 6	**AC70 90 S 6**	AC75 90 S 6	0.75	2.20	0.05-0.48	5.04	1.39	0.11-0.54	5.67	1.57	0.33-0.67	7.01	1.94	0.40-0.70	4.23	1.17	0.62-1.07	6.47	3.11	---	---	---	0.75	7.87	2.18	4
AB70 90 L 6	AB75 90 L 6	**AC70 90 L 6**	AC75 90 L 6	1.10	3.20	0.07-0.70	7.19	2.00	0.16-0.79	8.09	2.25	0.49-0.98	10.01	2.79	0.59-1.03	6.03	1.68	0.90-1.57	9.24	4.47	---	---	---	1.10	11.24	3.13	4
AB70 100 LB 6	AB75 100 LB 6	**AC70 100 LB 6**	AC75 100 LB 6	1.50	3.80	0.10-0.96	9.65	2.43	0.22-1.07	10.86	2.73	0.67-1.34	13.44	3.38	0.81-1.40	8.10	2.04	1.23-2.14	12.39	5.43	0.13-1.35	13.57	3.42	1.50	15.08	3.80	4
AB70 112 M 6	AB75 112 M 6	**AC70 112 M 6**	AC75 112 M 6	2.20	6.20	0.10-1.40	14.00	3.90	0.30-1.60	15.80	4.40	1.00-2.00	19.50	5.40	1.20-2.10	11.80	3.30	1.80-3.20	18.00	8.70	0.20-2.00	19.70	5.50	2.20	21.90	6.10	4
AB70 132 S 6	AB75 132 S 6	**AC70 132 S 6**	AC75 132 S 6	3.00	8.50	0.20-1.90	19.30	5.40	0.40-2.20	21.70	6.10	1.30-2.70	26.90	7.60	1.60-2.80	16.20	4.60	2.50-4.30	24.80	12.10	0.30-2.70	27.20	7.60	3.00	30.20	8.50	4
AB70 132 M 6	AB75 132 M 6	**AC70 132 M 6**	AC75 132 M 6	4.00	9.50	0.30-2.60	25.20	6.10	0.60-2.90	28.40	6.80	1.80-3.60	35.10	8.50	2.20-3.70	21.20	5.10	3.30-5.70	32.40	13.60	0.40-3.60	35.40	8.60	4.00	39.40	9.50	4
AB70 132 ML 6	AB75 132 ML 6	**AC70 132 ML 6**	AC75 132 ML 6	5.50	12.00	0.40-3.50	35.00	7.70	0.80-4.00	39.40	8.60	2.50-4.90	48.80	10.70	3.00-5.10	29.40	6.40	4.50-7.90	45.00	17.10	0.50-5.00	49.20	10.80	5.50	54.70	12.00	4
AB70 160 MB 6	AB75 160 MB 6	**AC70 160 MB 6**	AC75 160 MB 6	7.50	16.00	0.50-4.80	48.30	10.20	1.10-5.40	54.30	11.50	3.30-6.70	67.20	14.20	4.00-7.00	40.50	8.50	6.20-10.70	62.00	22.70	0.70-6.80	67.90	14.30	7.50	75.40	15.90	4
AB70 160 L 6	AB75 160 L 6	**AC70 160 L 6**	AC75 160 L 6	11.00	23.00	0.70-7.00	70.80	14.80	1.60-7.90	79.60	16.60	4.90-9.80	98.50	20.50	5.90-10.30	59.40	12.40	9.00-15.70	91.00	33.00	1.00-9.90	99.50	20.80	11.00	110.60	23.10	4
AB70 180 L 6	AB75 180 L 6	**AC70 180 L 6**	AC75 180 L 6	15.00	29.00	1.00-9.60	96.00	18.30	2.20-10.80	107.00	20.60	6.70-13.40	133.00	25.50	8.10-14.00	80.00	15.40	12.30-21.50	123.00	40.90	1.40-13.50	134.00	25.70	15.00	149.00	28.60	4
AB70 200 LA 6	AB75 200 LA 6	**AC70 200 LA 6**	AC75 200 LA 6	18.50	38.00	1.20-11.80	116.00	24.40	2.70-13.30	130.00	27.40	8.20-16.50	161.00	34.00	9.90-17.30	97.00	20.50	15.20-26.50	149.00	54.50	1.70-16.70	163.00	34.30	18.50	181.00	38.10	4
AB70 200 LB 6	AB75 200 LB 6	**AC70 200 LB 6**	AC75 200 LB 6	22.00	44.00	1.40-14.10	137.00	28.30	3.20-15.80	154.00	31.90	9.80-19.60	191.00	39.40	11.80-20.60	115.00	23.80	18.10-31.50	176.00	63.30	2.00-18.80	193.00	39.80	22.00	214.00	44.30	4
AB70 225 M 6	AB75 225 M 6	**AC70 225 M 6**	AC75 225 M 6	30.00	61.00	1.90-19.20	186.00	38.60	4.30-21.60	209.00	43.40	13.40-26.70	259.00	53.80	16.10-28.00	156.00	32.40	23.40-40.80	227.00	81.90	2.70-27.00	262.00	54.30	30.00	291.00	60.30	4
AB70 250 M 6	AB75 250 M 6	**AC70 250 M 6**	AC75 250 M 6	37.00	72.00	2.40-23.70	228.00	46.00	5.30-26.60	257.00	51.80	16.50-33.00	318.00	64.10	19.90-34.60	192.00	38.60	28.90-50.30	279.00	97.70	3.30-33.30	321.00	64.70	37.00	357.00	71.90	4
AB70 280 S 6	AB75 280 6 6	**AC70 280 S 6**	AC75 280 S 6	45.00	90.50	2.90-28.80	280.00	58.40	6.30-31.50	306.00	63.80	19.40-38.70	376.00	78.40	20.30-35.20	197.00	41.00	35.10-61.10	342.00	123.90	4.00-39.60	385.00	80.30	45.00	438.00	91.20	4
AB70 280 M 6	AB75 280 6 6	**AC70 280 M 6**	AC75 280 M 6	55.00	109.00	3.50-35.20	343.00	68.90	7.70-38.50	375.00	75.40	23.70-47.30	461.00	92.60	24.70-43.10	241.00	48.50	43.00-74.70	419.00	146.20	4.80-48.40	472.00	94.80	55.00	536.00	107.70	4
AB70 315 S 6	AB75 315 S 6	**AC70 315 S 6**	AC75 315 S 6	75.00	147.20	4.80-48.00	463.00	93.30	10.50-52.50	506.00	102.00	32.20-64.50	622.00	125.30	33.70-58.70	326.00	65.60	58.60-101.90	565.00	197.90	6.60-66.00	637.00	128.30	75.00	724.00	145.80	4
AB70 315 LA 6	AB75 315 LA 6	**AC70 315 LA 6**	AC75 315 LA 6	90.00	167.60	5.80-57.60	558.00	111.90	12.60-63.00	611.00	122.40	38.70-77.40	750.00	150.40	40.50-70.50	393,00	78.70	70.30-122.30	681.00	237.50	7.90-79.20	768.00	153.90	90.00	873.00	174.90	4
AB70 315 LB 6	AB75 315 LB 6	**AC70 315 LB 6**	AC75 315 LB 6	110.00	205.00	7.00-70.40	676.00	130.20	15.40-77.00	740.00	142.40	47.30-94.60	909.00	175.00	49.50-86.10	476.00	91.60	85.90-149.40	825.00	276.30	9.70-96.80	930.00	179.00	110.00	1057.00	203.50	4
AB70 315 LC 6	AB75 315 LC 6	**AC70 315 LC 6**	AC75 315 LC 6	132.00	243.00	8.50-84.50	811.00	156.30	18.50-92.40	887.00	170.90	56.80-113.50	1090.00	210.00	59.40-103.30	570.00	109.90	103.10-179.30	989.00	331.60	11.60-116.10	1115.00	214.90	132.00	1267.00	244.20	4

Rounded values
Valeurs arrondies
Gerundete Werte
Valores redondeado
Valori arrotondati

●
Values refer to 50 Hz
Valeurs se réfèrent à 50 Hz
Werte beziehen sich auf 50 Hz
Valores se refieren a 50 Hz
Valori riferiti a 50 Hz

◀
Same certificates as section 4.1
Mêmes certificats que ceux de la section 4.1
Gleiche Bescheinigungen wie in Abschnitt 4.1
Los mismos certificados que en la sección 4.1
Stessi certificati della sezione 4.1

◆
T3 upon request;
T3 sur demande;
T3 auf Wunsch;
T3 según demanda;
T3 a richiesta;

		400 V, 50 Hz [1/min] 750	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 75 ÷ 750	[Hz] 10 ÷ 50 range 1 ÷ 5 [1/min] 150 ÷ 750	[Hz] 25 ÷ 50 range 1 ÷ 2 [1/min] 375 ÷ 750	[Hz] 50 ÷ 87 range 10 ÷ 17 [1/min] 750 ÷ 1300	[Hz] 50 ÷ 87 range 10 ÷ 17 [1/min] 750 ÷ 1300	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 75 ÷ 750	[Hz] 5 ÷ 50 range 1 ÷ 10 [1/min] 75 ÷ 750	
Motor type		Mains connection	Constant torque	Constant torque	Constant torque	Constant torque - Weakened flux	Constant torque - Constant flux Δ connection	Constant torque - Forced Ventilation	Quadratic torque ●	Class T
Moteur type		*Alimentation de secteur*	*Couple constant*	*Couple constant*	*Couple constant*	*Couple constant - Flux affaibli*	*Couple constant - Flux constant raccordement Δ*	*Couple constant - Ventilation Assistée*	*Couple quadratique* ●	*Classe T*
Motor Typ		Netzeinspeisung	Konstantes Gegenmoment	Konstantes Gegenmoment	Konstantes Gegenmoment	Konstantes Gegenmoment - Feldschwächbetrieb	Konstantes Gegenmoment - konstanter Strom Δ-Verbindung	Konstantes Gegenmoment - Fremdbelüftung	Quadratisches Gegenmoment ●	Klasse T
Tipo de motor		*Alimentación desde la red*	*Par constante*	*Par constante*	*Par constante*	*Par constante - Flujo debilitado*	*Par constante - Flujo constante conexión Δ*	*Par constante - Ventilación asistida*	*Par cuadrático* ●	*Clase T*
Tipo motore		Alimentazione da rete	Coppia costante	Coppia costante	Coppia costante	Coppia costante - Flusso indebolito	Coppia costante - Flusso costante collegamento Δ	Coppia costante - Ventilazione Assistita	Coppia quadratica ●	Classe T

IIB		IIC		P_n	I_n																			
Ex d	Ex de	Ex d	Ex de	[kW]	[A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	P [kW]	M [Nm]	I [A]	◆
AB70 63 B 8	AB75 63 B 8	**AC70 63 B 8**	AC75 63 B 8	0.05	0.44	0.003-0.03	0.52	0.29	0.01-0.04	0.58	0.32	0.02-0.04	0.72	0.40	0.03-0.05	0.43	0.24	0.04-0.07	0.67	0.64	---	---	---	0.05	0.81	0.45	4
AB70 71 B 8	AB75 71 B 8	**AC70 71 B 8**	AC75 71 B 8	0.15	0.57	0.01-0.10	1.53	0.34	0.02-0.11	1.72	0.38	0.07-0.13	2.13	0.48	0.08-0.14	1.28	0.29	0.12-0.21	1.96	0.76	---	---	---	0.15	2.39	0.53	4
AB70 80 A 8	AB75 80 A 8	**AC70 80 A 8**	AC75 80 A 8	0.18	0.97	0.01-0.12	1.56	0.58	0.03-0.13	1.76	0.65	0.08-0.16	2.17	0.81	0.10-017	1.31	0.49	0.15-0.26	2.00	1.30	---	---	---	0.18	2.44	0.91	4
AB70 80 B 8	AB75 80 B 8	**AC70 80 B 8**	AC75 80 B 8	0.25	1.00	0.02-0.16	2.21	0.63	0.04-0.18	2.49	0.71	0.11-0.22	3.08	0.88	0.13-0.23	1.86	0.53	0.21-0.36	2.84	1.41	---	---	---	0.25	3.46	0.99	4
AB70 90 S 8	AB75 90 S 8	**AC70 90 S 8**	AC75 90 S 8	0.37	1.30	0.02-0.24	3.33	0.83	0.05-0.27	3.74	0.93	0.16-0.33	4.63	1.15	0.20-0.35	2.79	0.70	0.30-0.53	4.27	1.85	---	---	---	0.37	5.20	1.29	4
AB70 90 L 8	AB75 90 L 8	**AC70 90 L 8**	AC75 90 L 8	0.55	1.90	0.04-0.35	4.94	1.22	0.08.0.40	5.56	1.37	0.24-0.49	6.88	1.70	0.30-0.51	4.15	1.02	0.45-0.79	6.35	2.73	---	---	---	0.55	7.72	1.91	4
AB70 100 LA 8	AB75 100 LA 8	**AC70 100 LA 8**	AC75 100 LA 8	0.75	2.90	0.05-0.48	6.37	1.85	0.11-0.54	7.16	2.08	0.33-0.67	8.86	2.57	0.40-0.70	5.34	1.55	0.62-1.07	8.18	4.12	0.07-0.67	8.95	2.60	0.75	9.95	2.89	4
AB70 100 LB 8	AB75 100 LB 8	**AC70 100 LB 8**	AC75 100 LB 8	1.10	3.10	0.07-0.70	9.96	1.99	0.16-0.79	11.21	2.24	0.49-0.98	13.87	2.77	0.59-1.03	8.36	1.67	0.90-1.57	12.79	4.45	0.10-0.99	14.01	2.80	1.10	15.56	3.11	4
AB70 112 M 8	AB75 112 M 8	**AC70 112 M 8**	AC75 112 M 8	1.50	4.40	0.10-1.00	12.70	2.80	0.20-1.10	14.30	3.20	0.70-1.30	17.70	3.90	0.80-1.40	10.70	2.40	1.20-2.10	16.40	6.30	0.10-1.40	17.90	3.90	1.50	19.90	4.40	4
AB70 132 SB 8	AB75 132 SB 8	**AC70 132 SB 8**	AC75 132 SB 8	2.20	6.50	0.10-1.40	18.70	4.10	0.30-1.60	21.00	4.60	1.00-2.00	26.00	5.70	1.20-2.10	15.70	3.40	1.80-3.20	24.00	9.20	0.20-2.00	26.30	5.80	2.20	29.20	6.40	4
AB70 132 ML 8	AB75 132 ML 8	**AC70 132 ML 8**	AC75 132 ML 8	3.00	8.50	0.20-1.90	25.50	5.40	0.40-2.20	28.70	6.00	1.30-2.70	35.50	7.50	1.60-2.80	21.40	4.50	2.50-4.30	32.70	12.00	0.30-2.70	35.80	7.50	3.00	39.80	8.40	4
AB70 160 MA 8	AB75 160 MA 8	**AC70 160 MA 8**	AC75 160 MA 8	4.00	9.70	0.30-2.60	34.10	6.20	0.60-2.90	38.30	7.00	1.80-3.60	47.40	8.60	2.20-3.70	28.60	5.20	3.30-5.70	43.70	13.90	0.40-3.60	47.90	8.70	4.00	53.20	9.70	4
AB70 160 MB 8	AB75 160 MB 8	**AC70 160 MB 8**	AC75 160 MB 8	5.50	14.00	0.40-3.50	46.40	8.70	0.80-4.00	52.20	9.80	2.50-4.90	64.60	12.10	3.00-5.10	38.90	7.30	4.50-7.90	59.60	19.40	0.50-5.00	65.20	12.20	5.50	72.50	13.60	4
AB70 160 L 8	AB75 160 L 8	**AC70 160 L 8**	AC75 160 L 8	7.50	18.00	0.50-4.80	63.70	11.20	1.10-5.40	71.60	12.70	3.30-6.70	88.60	15.70	4.00-7.00	53.40	9.40	6.20-10.70	81.80	25.10	0.70-6.80	89.50	15.80	7.50	99.50	17.60	4
AB70 180 L 8	AB75 180 L 8	**AC70 180 L 8**	AC75 180 L 8	11.00	23.00	0.70-7.00	93.00	14.80	1.60-7.90	105.00	16.60	4.90-9.80	130.00	20.60	5.90-10.30	78.00	12.40	9.00-15.70	120.00	33.00	1.00-9.90	131.00	20.80	11.00	146.00	23.10	4
AB70 200 LB 8	AB75 200 LB 8	**AC70 200 LB 8**	AC75 200 LB 8	15.00	35.00	1.00-9.60	125.00	22.20	2.20-10.80	140.00	25.00	6.70-13.40	174.00	31.00	8.10-14.00	105.00	18.70	12.30-21.50	160.00	49.70	1.40-13.50	175.00	31.30	15.00	195.00	34.80	4
AB70 225 S 8	AB75 225 S 8	**AC70 225 S 8**	AC75 225 S 8	18.50	42.25	1.20-11.80	155.00	24.60	2.70-13.30	174.00	27.70	8.20-16.50	216.00	34.20	9.90-17.30	130.00	20.60	14.40-25.10	189.00	52.20	1.70-16.70	218.00	34.60	18.50	242.00	38.40	4
AB70 225 M 8	AB75 225 M 8	**AC70 225 M 8**	AC75 225 M 8	22.00	46.00	1.40-14.10	184.00	29.20	3.20-15.80	207.00	32.90	9.80-19.60	256.00	40.70	11.80-20.60	155.00	24.50	17.20-29.90	225.00	62.00	2.00-19.80	259.00	41.10	22.00	288.00	45.70	4
AB70 250 M 8	AB70 250 M 8	**AC70 250 M 8**	AC75 250 M 8	30.00	61.00	1.90-19.20	248.00	38.80	4.30-21.60	279.00	43.60	13.40-26.70	345.00	54.00	16.10-28.00	208.00	32.50	23.40-40.80	302.00	82.30	2.70-27.00	348.00	54.50	30.00	387.00	60.60	4
AB70 280 S 8	AB75 280 S 8	**AC70 280 S 8**	AC75 280 S 8	37.00	71.00	2.40-23.70	310.00	44.20	5.20-25.90	339.00	48.30	15.90-31.80	416.00	59.30	16.70-29.00	218.00	31.00	28.90-50.30	378.00	93.70	3.30-32.60	426.00	60.70	37.00	484.00	69.00	4
AB70 280 M 8	AB75 280 M 8	**AC70 280 M 8**	AC75 280 M 8	45.00	83.00	2.90-28.80	372.00	53.30	6.30-31.50	407.00	58.30	19.40-38.70	500.00	71.60	20.30-35.20	262.00	37.50	35.10-61.10	454.00	113.00	4.00-39.60	512.00	73.20	45.00	582.00	83.30	4
AB70 315 S 8	AB75 315 S 8	**AC70 315 S 8**	AC75 315 S 8	55.00	113.50	3.50-35.20	453.00	71.90	7.70-38.50	496.00	78.60	23.70-47.30	609.00	96.60	24.70-43.10	319.00	50.50	42.90-74.70	553.00	152.50	4.80-48.40	623.00	98.80	55.00	708.00	112.30	4
AB70 315 LA 8	AB75 315 LA 8	**AC70 315 LA 8**	AC75 315 LA 8	75.00	136.60	4.80-48.00	624.00	90.80	10.50-52.50	682.00	99.40	32.20-64.50	838.00	122.10	33.70-58.70	439.00	63.90	58.60-101.90	761.00	192.70	6.60-66.00	858.00	124.90	75.00	975.00	142.00	4
AB70 315 LB 8	AB75 315 LB 8	**AC70 315 LB 8**	AC75 315 LB 8	90.00	164.50	5.80-57.60	739.00	104.20	12.60-63.00	809.00	113.90	38.70-77.40	994.00	140.00	40.50-70.50	520.00	73.20	70.30-122.30	902.00	221.00	7.90-79.20	1017.00	143.20	90.00	1155.00	162.80	4
AB70 315 LC 8	AB75 315 LC 8	**AC70 315 LC 8**	AC75 315 LC 8	110.00	102.00	7.00-70.40	905.00	128.70	15.40-77.00	990.00	140.70	47.30-94.60	1216.00	172.90	49.50-86.10	636.00	90.50	85.90-149.40	1104.00	273.00	9.70-96.80	1244.00	176.90	110.00	1414.00	201.10	4

Rounded values
Valeurs arrondies
Gerundete Werte
Valores redondeado
Valori arrotondati

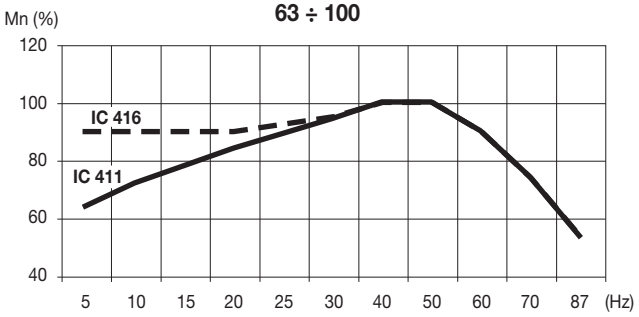
●
Values refer to 50 Hz
Valeurs se réfèrent à 50 Hz
Werte beziehen sich auf 50 Hz
Valores se refieren a 50 Hz
Valori riferiti a 50 Hz

◀
Same certificates as section 4.1
Mêmes certificats que ceux de la section 4.1
Gleiche Bescheinigungen wie in Abschnitt 4.1
Los mismos certificados que en la sección 4.1
Stessi certificati della sezione 4.1

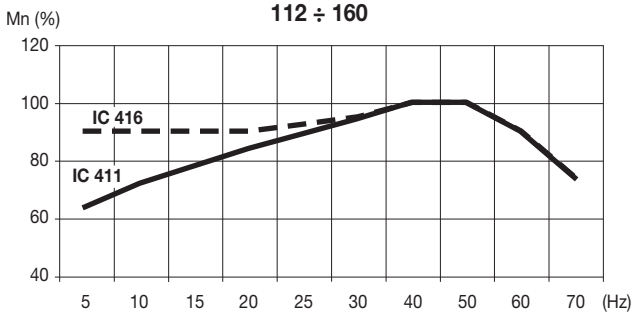
◆
T3 upon request;
T3 sur demande;
T3 auf Wunsch;
T3 según demanda;
T3 a richiesta;

2 pole - *pôles* - polig - *polos* - poli

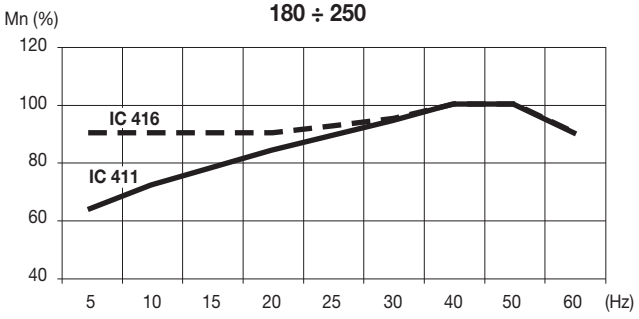
frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
63 ÷ 100



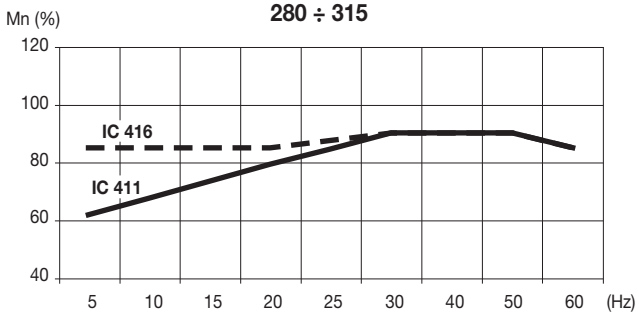
frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
112 ÷ 160



frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
180 ÷ 250

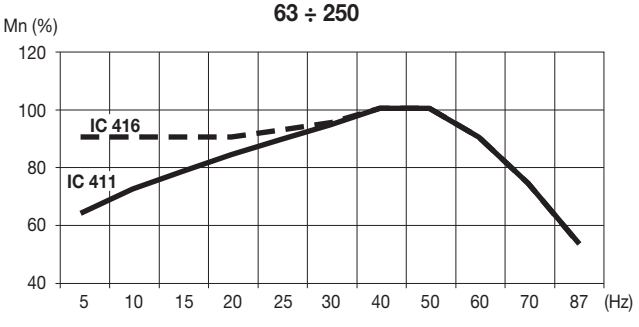


frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
280 ÷ 315

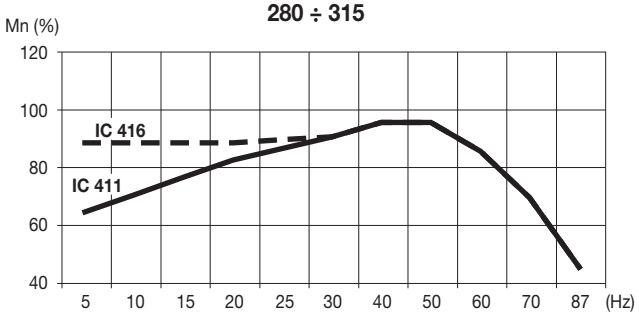


4 - 6 - 8 pole - *pôles* - polig - *polos* - poli

frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
63 ÷ 250



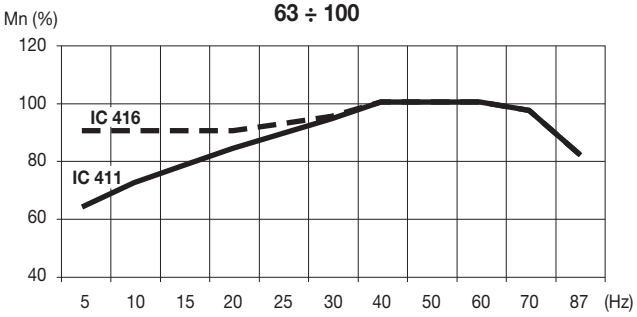
frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
280 ÷ 315



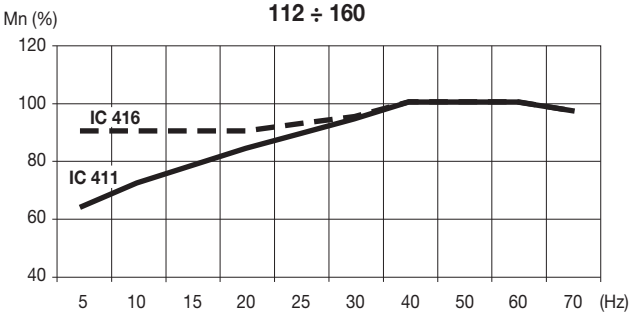
Mn (%)	(Hz)	IC 411	IC 416
Torque	Frequency	Self-ventilated	Forced ventilation (available from frame size 100)
Couple	*Fréquence*	*Autoventilés*	*Ventilation assistée (disponible à partir de hauteur d'axe 100)*
Gegenmoment	Frequenz	Eigenbelüftet	Fremdbelüftung (verfügbar ab Baugröße 100)
Par	*Frecuencia*	*Autoventilados*	*Ventilacion asistida (disponible a partir de altura del eje 100)*
Coppia	Frequenza	Autoventilati	Ventilazione assistita (disponibile da altezza d'asse 100)

2 pole - *pôles* - polig - *polos* - poli

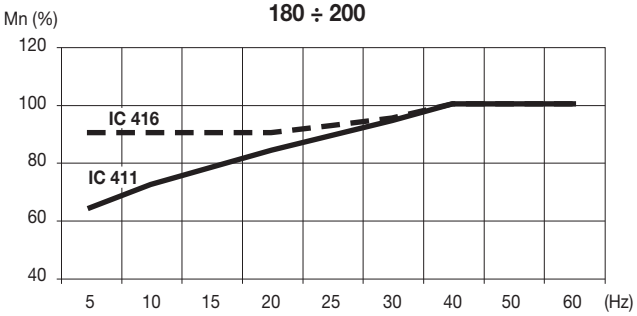
frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
63 ÷ 100



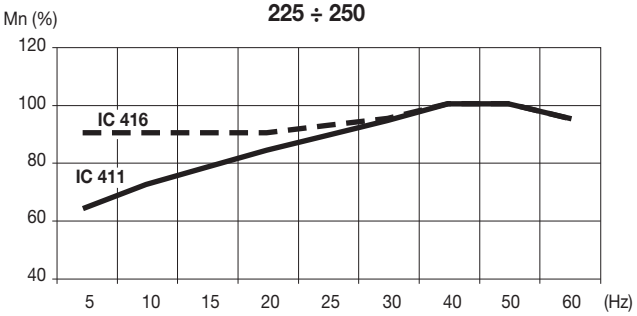
frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
112 ÷ 160



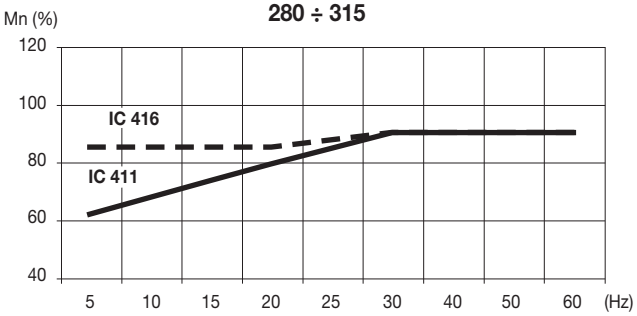
frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
180 ÷ 200



frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
225 ÷ 250



frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
280 ÷ 315

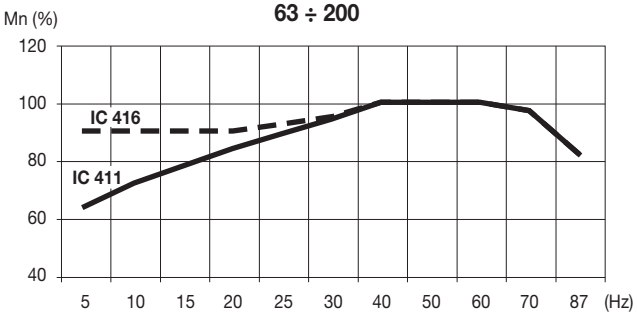


Note:
In the constant torque operating mode, the usable torque value is the lowest value of the chosen range of operation
Lors du fonctionnement à couple constant la valeur de couple utilisable est la valeur inférieure à la plage de fonctionnement sélectionnée
Im Betrieb mit konstantem Drehmoment ist der verwendbare Momentwert der Mindestwert des gewählten Betriebsbereichs
En el funcionamiento con par constante el valor de par que se puede utilizar es el valor menor del intervalo de funcionamiento elegido
Nel funzionamento a coppia costante il valore di coppia utilizzabile è il valore minore del range di funzionamento prescelto

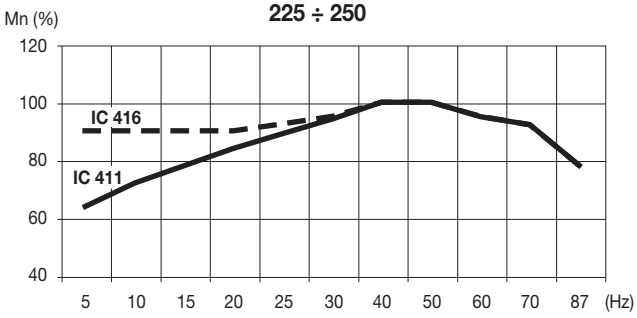
The reference torque value (Mn) is the value indicated in the tables in section 4.1
La valeur de couple de référence (Mn) est celle indiquée dans les tableaux de la section 4.1
Der Richtwert des Drehmoments (Mn) ist der in den Tabellen in Abschnitt 4.1 angegebene
El valor de par de referencia (Mn) es el que recogen las tablas de la sección 4.1
Il valore di coppia di riferimento (Mn) è quello indicato nelle tabelle della sezione 4.1

4 - 6 - 8 pole - *pôles* - polig - *polos* - poli

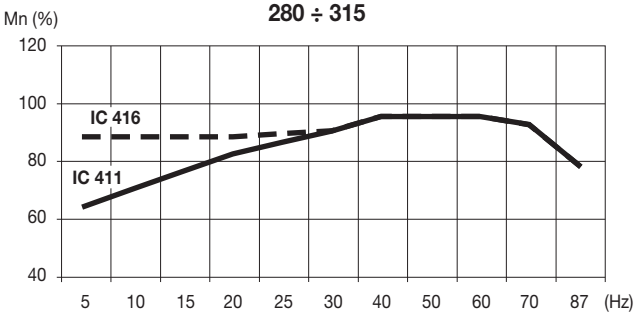
frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
63 ÷ 200



frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
225 ÷ 250

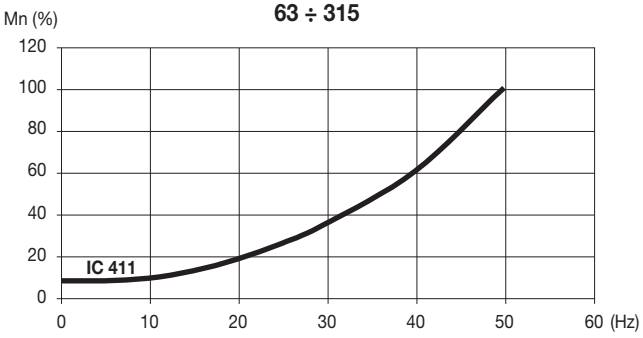


frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
280 ÷ 315



2 - 4 - 6 - 8 pole - *pôles* - polig - *polos* - poli

frame size - *hauteur d'axe* - Baugröße - *tamaño* - altezza d'asse
63 ÷ 315



Note:
see page 242, 243;
voir page 242, 243;
siehe Seite 242, 243;
vèase página 242, 243;
vedi pagina 242, 243;

5. Overall dimensions

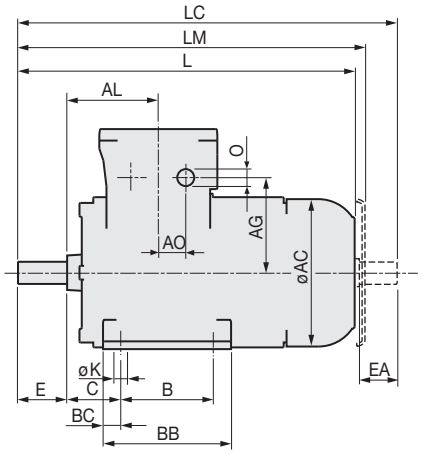
5. Dimensions

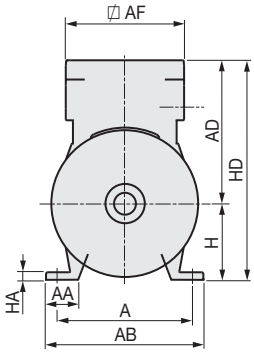
5. Abmessungen

5. Dimensiones de espacio máximo

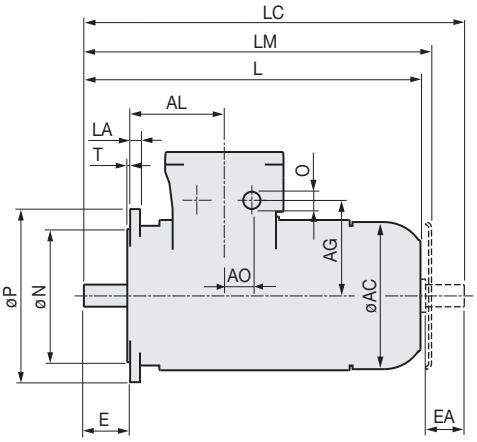
5. Dimensioni d'ingombro

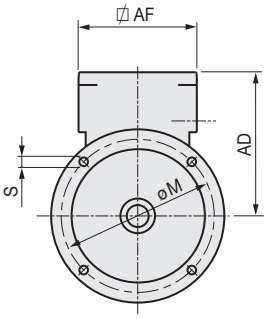
IM B3





IM B5





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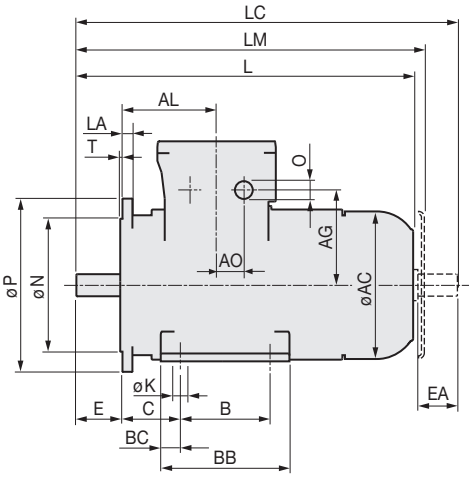
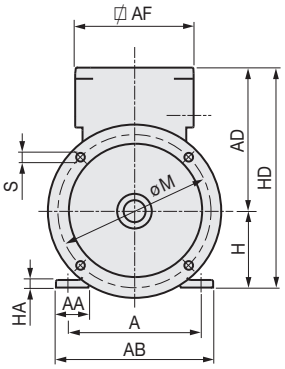
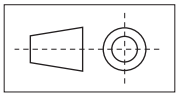
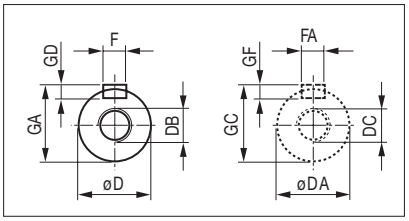
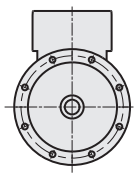








◆
225÷315
8 holes
8 trous
8 Bohrungen
8 orificios
8 fori



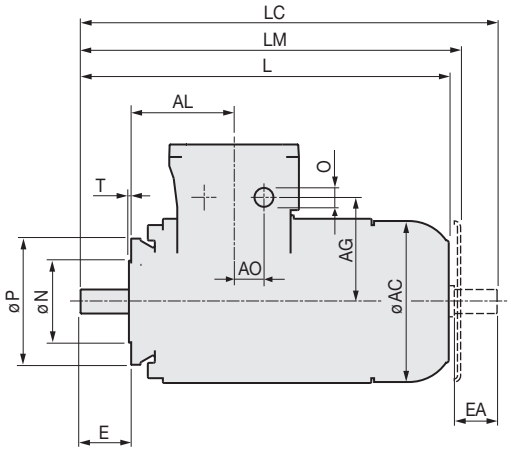
Type	A	AA	AB	ø AC	AD	⍁ AF	AL	B	BC	BB	C	H. $^{0}_{0,5}$	HA	HD	ø K	L	LC
63	100	25	125	123	145	139	95	80	9.5	105	40	63	6	208	7	247	275.5
71	112	32	140	140	155	139	106	90	11.0	112	45	71	7	226	7	276	311.0
80	125	40	160	158	165	139	142	100	15.0	130	50	80	8	245	9	327	372.5
90 S	140	45	175	178	175	139	125	100	14.0	157	56	90	9	265	9	390	441.0
90 L	140	45	175	178	175	139	125	125	14.0	157	56	90	9	265	9	390	441.0
100	160	45	200	196	185	139	125	140	15.0	170	63	100	10	285	12	430	490.5
112	190	45	235	223	206	139	138	140	17.0	175	70	112	12	318	12	475	543.5
132 S	216	56	272	258	260	205	163	140	22.0	222	89	132	13	392	12	505	590.0
132 M-L	216	56	272	258	260	205	163	178	22.0	222	89	132	13	392	12	580	665.0
160 M	254	64	318	310	290	205	166	210	25.0	305	108	160	15	450	14	693	811.0
160 L	254	64	318	310	290	205	166	254	25.0	305	108	160	15	450	14	693	811.0
180 M	279	71	350	359	326	223	223	241	25.0	340	121	180	17	506	14	814	923.5
180 L	279	71	350	359	326	223	223	279	25.0	340	121	180	17	506	14	814	923.5
200	318	75	393	395	346	223	230	305	27.0	360	133	200	18	546	18	867	985.0
225 S	356	78	431	445	371	223	240	286	38.0	380	149	225	20	596	18	945	1090.0
225 M 2	356	78	431	445	371	223	240	311	38.0	380	149	225	20	596	18	915	1030.0
225 M 4-8	356	78	431	445	371	223	240	311	38.0	380	149	225	20	596	18	945	1090.0
250 M 2	406	95	500	467	396	223	221	349	33.0	415	168	250	22	646	24	963	1110.0
250 M 4-8	406	95	500	467	396	223	221	349	33.0	415	168	250	22	646	24	963	1110.0
280 S 2	457	90	540	558	548	320	316	368	80.0	550	190	280	41	828	25	1119	1272.0
280 S 4-8	457	90	540	558	548	320	316	368	80.0	550	190	280	41	828	25	1119	1272.0
280 M 2	457	90	540	558	548	320	316	419	80.0	550	190	280	41	828	25	1119	1272.0
280 M 4-8	457	90	540	558	548	320	316	419	80.0	550	190	280	41	828	25	1119	1272.0
315 S 2	508	110	590	558	536	320	316	406	32.0	470	216	315	41	851	27	1269	1420.0
315 S 4-8	508	110	590	558	536	320	316	406	32.0	470	216	315	41	851	27	1299	1480.0
315 M 2	508	110	590	558	536	320	316	457	32.0	521	216	315	41	851	27	1269	1420.0
315 M 4-8	508	110	590	558	536	320	316	457	32.0	521	216	315	41	851	27	1299	1480.0
315 L 2	508	100	590	626	612	320	330	457	68.5	610	216	315	41	927	24	1407	1560.0
315 L 4-8	508	100	590	626	612	320	330	508	68.5	610	216	315	41	927	24	1437	1620.0

Type	✳ LM	AO	IEC 423 n. x O	AG	ø D ø DA	E EA	F FA	GA GC	GD GF	DB DC	LA	ø M	ø N	ø P	◆ S	T
63	275	24	1 x M25	100	11j6	23	4	12.5	4	M4	6.5	115	95j6	140	10	3.0
71	305	24	1 x M25	110	14j6	30	5	16.0	5	M5	6.5	130	110j6	160	10	3.5
80	356	24	1 x M25	120	19j6	40	6	21.5	6	M6	11.0	165	130j6	200	12	3.5
90 S	418	24	1 x M25	130	24j6	50	8	27.0	7	M8	12.0	165	130j6	200	12	3.5
90 L	418	24	1 x M25	130	24j6	50	8	27.0	7	M8	12.0	165	130j6	200	12	3.5
100	458	24	1 x M25	140	28j6	60	8	31.0	7	M10	14.0	215	180j6	250	15	4.0
112	503	24	1 x M25	161	28j6	60	8	31.0	7	M10	16.0	215	180j6	250	15	4.0
132 S	550	35	2 x M32	185	38k6	80	10	41.0	8	M12	17.0	265	230j6	300	15	4.0
132 M-L	625	35	2 x M32	185	38k6	80	10	41.0	8	M12	17.0	265	230j6	300	15	4.0
160 M	738	35	2 x M32	215	42k6	110	12	45.0	8	M16	18.0	300	250h6	350	18	5.0
160 L	738	35	2 x M32	215	42k6	110	12	45.0	8	M16	18.0	300	250h6	350	18	5.0
180 M	860	38	2 x M40	266	48k6	110	14	52.0	9	M16	20.0	300	250h6	350	18	5.0
180 L	860	38	2 x M40	266	48k6	110	14	52.0	9	M16	20.0	300	250h6	350	18	5.0
200	913	38	2 x M40	286	55m6	110	16	59.0	10	M20	20.0	350	300h6	400	18	5.0
225 S	991	38	2 x M40	311	60m6	140	18	64.0	11	M20	22.0	400	350h6	450	18	5.0
225 M 2	961	38	2 x M40	311	55m6	110	16	59.0	10	M20	22.0	400	350h6	450	18	5.0
225 M 4-8	991	38	2 x M40	311	60m6	140	18	64.0	11	M20	22.0	400	350h6	450	18	5.0
250 M 2	1006	38	2 x M40	336	60m6	140	18	64.0	11	M20	22.0	500	450h6	550	18	5.0
250 M 4-8	1006	38	2 x M40	336	65m6	140	18	69.0	11	M20	22.0	500	450h6	550	18	5.0
280 S 2	1215	56	2 x M63	410	65m6	140	18	69.0	11	M20	18.0	500	450h6	550	18	5.0
280 S 4-8	1215	56	2 x M63	410	75m6	140	20	79.5	12	M20	18.0	500	450h6	550	18	5.0
280 M 2	1215	56	2 x M63	410	65m6	140	18	69.0	11	M20	18.0	500	450h6	550	18	5.0
280 M 4-8	1215	56	2 x M63	410	75m6	140	20	79.5	12	M20	18.0	500	450h6	550	18	5.0
315 S 2	1365	56	2 x M63	398	65m6	140	18	69.0	11	M20	22.0	600	550h6	660	22	6.0
315 S 4-8	1395	56	2 x M63	398	80m6	170	22	85.0	14	M20	22.0	600	550h6	660	22	6.0
315 M 2	1365	56	2 x M63	398	65m6	140	18	69.0	11	M20	22.0	600	550h6	660	22	6.0
315 M 4-8	1395	56	2 x M63	398	80m6	170	22	85.0	14	M20	22.0	600	550h6	660	22	6.0
315 L 2	1503	56	2 x M63	474	65m6	140	18	69.0	11	M20	22.0	600	550h6	660	24	6.0
315 L 4-8	1533	56	2 x M63	474	80m6	170	22	85.0	14	M20	22.0	600	550h6	660	24	6.0

◆ see page 246; *voir page 246;* siehe Seite 246; *véase página 246;* vedi pagina 246;

✳ ⏚ ► see page 249; *voir page 249;* siehe Seite 249; *véase página 249;* vedi pagina 249;

IM B14


LC
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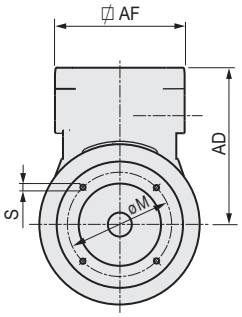
□ AF
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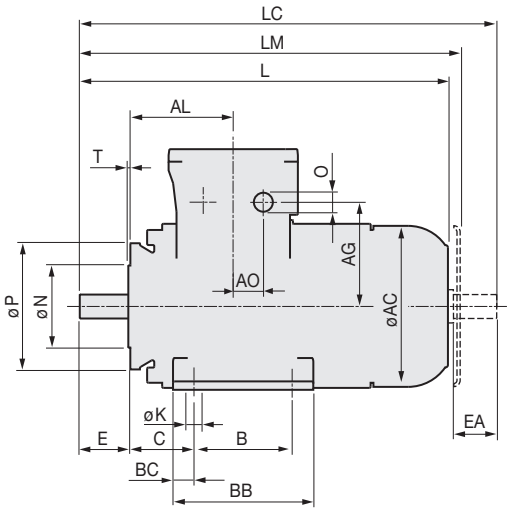
IM B34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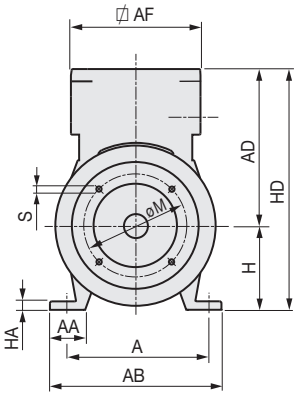
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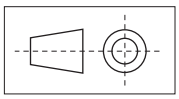

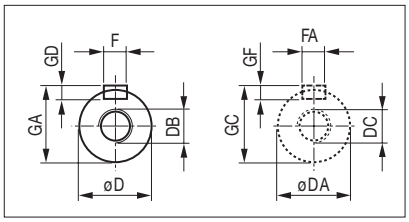
GD
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Type	A	AA	AB	ø AC	AD	□ AF	AL	B	BC	BB	C	H $^{0}_{-0,5}$	HA	HD	ø K	L	LC
63	100	25	125	123	145	139	95	80	9.5	105	40	63	6	208	7	247	275.5
71	112	32	140	140	155	139	106	90	11.0	112	45	71	7	226	7	276	311.0
80	125	40	160	158	165	139	142	100	15.0	130	50	80	8	245	9	327	372.5
90 S	140	45	175	178	175	139	125	100	14.0	157	56	90	9	265	9	390	441.0
90 L	140	45	175	178	175	139	125	125	14.0	157	56	90	9	265	9	390	441.0
100	160	45	200	196	185	139	125	140	15.0	170	63	100	10	285	12	430	490.5
112	190	45	235	223	206	139	138	140	17.0	175	70	112	12	318	12	475	543.5
132 S	216	56	272	258	260	205	163	140	22.0	222	89	132	13	392	12	505	590.0
132 M-L	216	56	272	258	260	205	163	178	22.0	222	89	132	13	392	12	580	665.0
160 M	254	64	318	310	290	205	166	210	25.0	305	108	160	15	450	14	693	811.0
160 L	254	64	318	310	290	205	166	254	25.0	305	108	160	15	450	14	693	811.0

Type	✳ LM	AO	IEC 423 n. x O	AG	ø D ø DA	E EA	F FA	GA GC	GD GF	DB DC	ø M	ø N	ø P	S	T
63	275	24	1 x M25	100	11j6	23	4	12.5	4	M4	75	60j6	90	M5	2.5
71	305	24	1 x M25	110	14j6	30	5	16.0	5	M5	85	70j6	105	M6	2.5
80	356	24	1 x M25	120	19j6	40	6	21.5	6	M6	100	80j6	120	M6	3.0
90 S	418	24	1 x M25	130	24j6	50	8	27.0	7	M8	115	95j6	140	M8	3.0
90 L	418	24	1 x M25	130	24j6	50	8	27.0	7	M8	115	95j6	140	M8	3.0
100	458	24	1 x M25	140	28j6	60	8	31.0	7	M10	130	110j6	160	M8	3.5
112	503	24	1 x M25	161	28j6	60	8	31.0	7	M10	130	110j6	160	M8	3.5
132 S	550	35	2 x M32	185	38k6	80	10	41.0	8	M12	165	130j6	200	M10	3.5
132 M-L	625	35	2 x M32	185	38k6	80	10	41.0	8	M12	165	130j6	200	M10	3.5
160 M	738	35	2 x M32	215	42k6	110	12	45.0	8	M16	215	180h6	250	M12	4.0
160 L	738	35	2 x M32	215	42k6	110	12	45.0	8	M16	215	180h6	250	M12	4.0

✳
rain canopy: only when vertical shaft-down mounting
parapluie: uniquement pour position verticale, arbre vers le bas
Regenschutzdach: nur für die Vertikalbauformen
tapa de protección contra la lluvia: sólo para montaje en vertical, eje en la parte inferior
parapioggia: normalmente presente solo per montaggio verticale, albero in basso

Tolerances allowed
Dimensions données à titre indicatif
Übliche Toleranzen
Cotas no vinculantes
Quote non impegnative

⏚ 1 in the terminal box, 1 on the frame
1 à l'intérieur de la boîte à bornes, 1 sur la carcasse
1 am Klemmkasten, 1 am Motorgehäuse
1 en la caja de bornes, 1 en la carcasa
1 nella scatola morsetti, 1 sulla carcassa

►
280 and 315 L fixed feet. Removable feet available on request with different dimensions.
280 et 315 L pieds fixes standards, sur demande pieds amovibles avec des mesures autres que celles indiquées
280 und 315 L ortsfeste Standardfüße, auf Wunsch entfernbare Füße mit von den angegebenen abweichenden Abmessungen
280 y 315 L pies fijos estándar, bajo pedido pies desmontables de medidas diferentes de las indicadas
280 e 315 L piedi fissi standard, su richiesta piedi removibili con misure d'ingombro diverse da quelle indicate

6. Spare parts

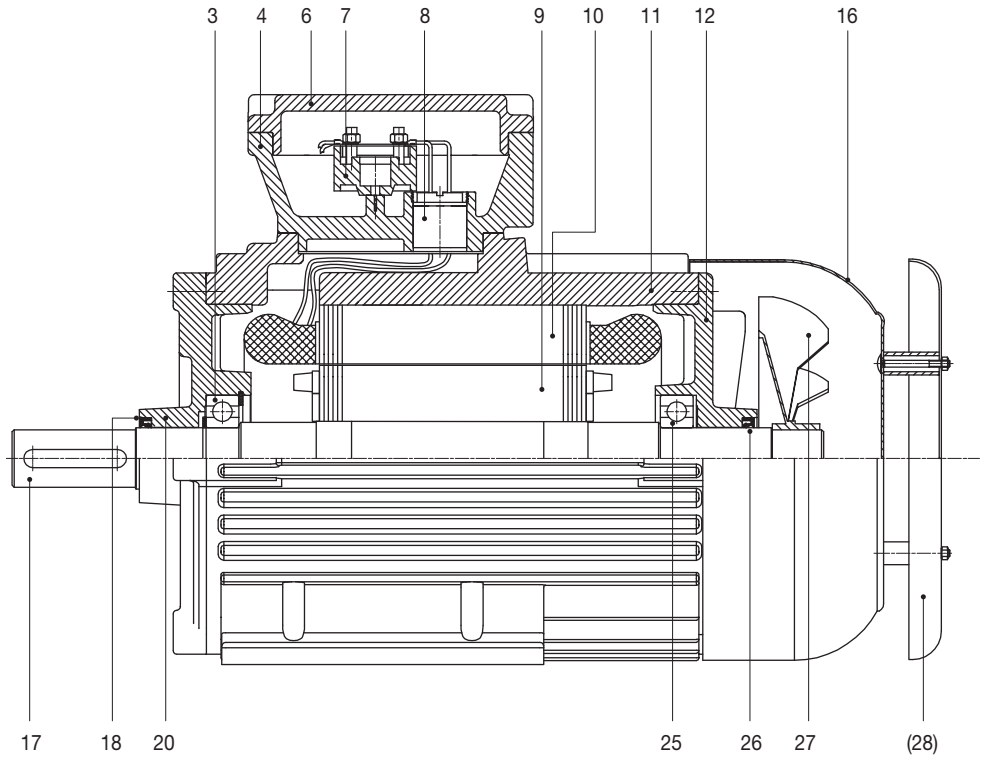
6. Pièces détachées

6. Ersatzteilliste

6. Piezas de repuesto

6. Parti di ricambio

63 ÷ 132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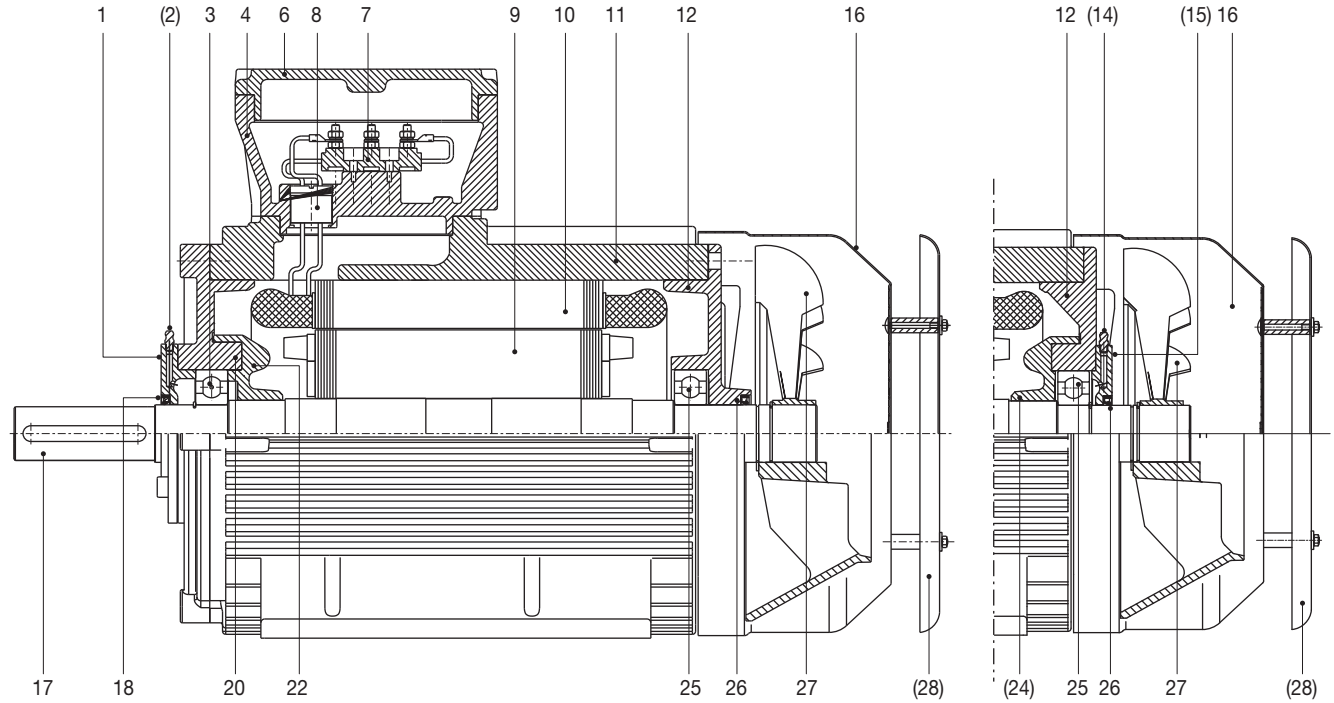
1
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(24)
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27
(28)

ENGLISH

1 End cap - front
(2) Grease nipple - front
3 Front bearing
4 Terminal box
6 Terminal box lid
7 Terminal board
8 Cable nipple
9 Rotor
10 Stator
11 Frame
12 Endshield - rear
(14) Grease nipple - rear
(15) End cap - rear
16 Fan cover (cowl)
17 Shaft
18 Sealing ring - front
20 Endshield - front
22 Inner bearing cap - front
25 Rear bearing
(24) Inner bearing cap - rear
26 Sealing ring - rear
27 Cooling fan
(28) Rain cap
(...) = when provided

FRANÇAIS

1 *Couvercle avant*
(2) *Graisseur avant*
3 *Roulement avant*
4 *Boîte à bornes*
6 *Couvercle boîte à bornes*
7 *Bornes*
8 *Dispositif pour le passage des câbles*
9 *Rotor*
10 *Stator*
11 *Carcasse*
12 *Flasque arrière*
(14) *Graisseur arrière*
(15) *Couvercle arrière*
16 *Capot de ventilateur*
17 *Arbre*
18 *Bague avant d'étanchéité*
20 *Flasque avant*
22 *Flasque intérieur avant*
25 *Roulement arrière*
(24) *Flasque intérieur arrière*
26 *Bague arrière d'étanchéité*
27 *Ventilateur*
(28) *Tôle parapluie*
(...) = *si prévu*

DEUTSCH

1 Äußerer Fettkammerdeckel A-Seite
(2) Schmiernippel A-Seite
3 Kugellager A-Seite
4 Klemmkasten
6 Klemmkastendeckel
7 Klemmbrett
8 Druckfeste Kabeldurchführung
9 Läufer
10 Statorpaket
11 Motorgehäuse
12 Lagerschild B-Seite
(14) Schmiernippel B-Seite
(15) Äußerer Fettkammerdeckel B-Seite
16 Lüfterhaube
17 Welle
18 Dichtungsring A-Seite
20 Lagerschild A-Seite
22 Innerer Fettkammerdeckel A-Seite
25 Kugellager B-Seite
(24) Innerer Fettkammerdeckel B-Seite
26 Dichtungsring B-Seite
27 Lüfterflügel
(28) Regenschutzdach
(...) = wenn vorgesehen

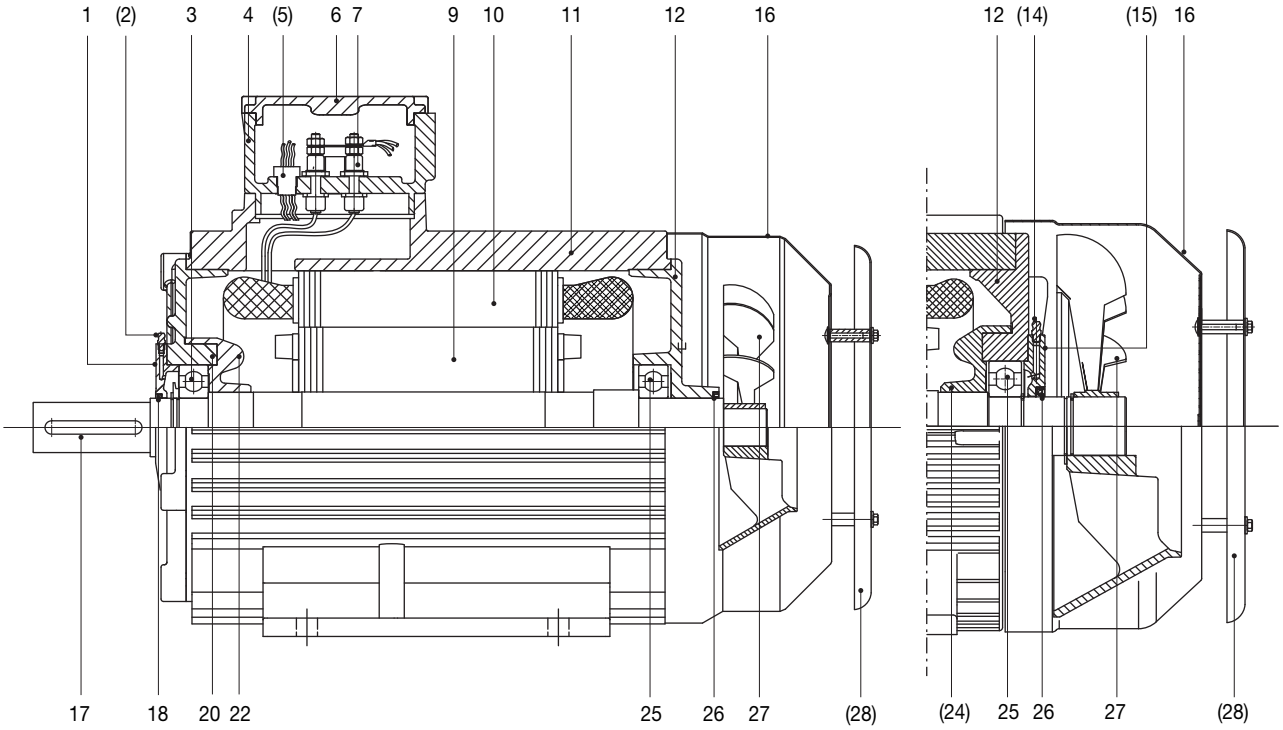
ESPAÑOL

1 *Tapa externa delantera*
(2) *Engrasador delantero*
3 *Cojinete delantero*
4 *Caja de bornes*
6 *Tapa de la caja de bornes*
7 *Placa de bornes*
8 *Niple paso cables*
9 *Rotor*
10 *Estator*
11 *Armazón*
12 *Escudo trasero*
(14) *Engrasador trasero*
(15) *Fondo externo trasero*
16 *Casquete cubre ventilador*
17 *Eje*
18 *Anillo de retención delantero*
20 *Escudo delantero*
22 *Fondo interno delantero*
25 *Cojinete trasero*
(24) *Tapa interna trasera*
26 *Anillo de retención trasero*
27 *Ventilador*
(28) *Tapa de protección contra la lluvia*
(...) = *cuando previsto*

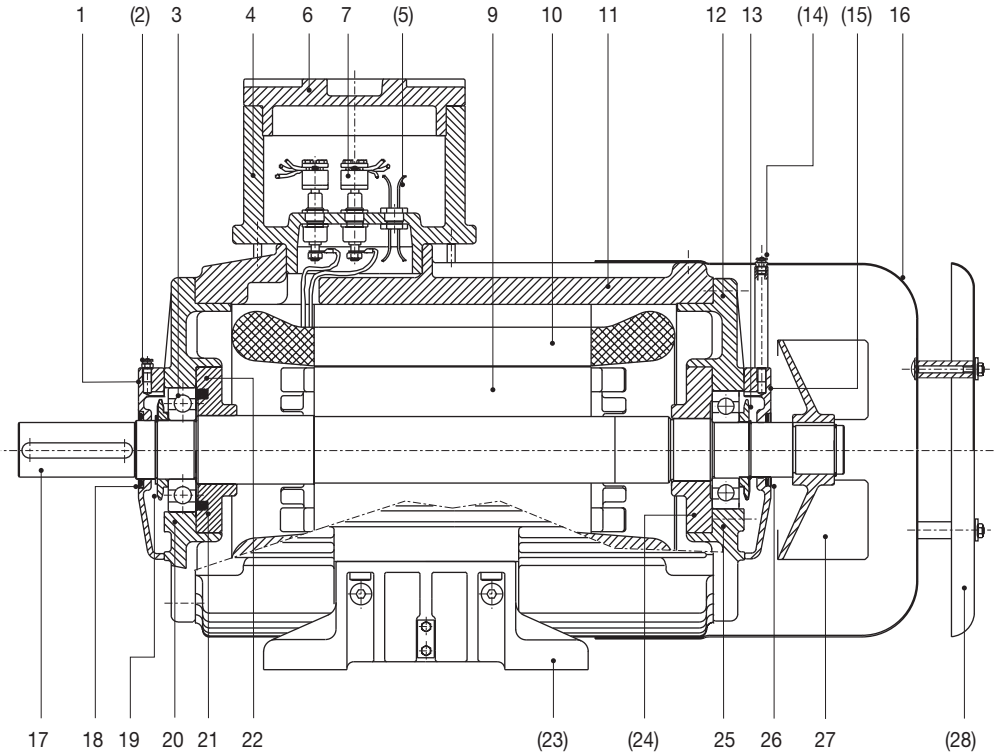
ITALIANO

1 Fondello esterno anteriore
(2) Ingrassatore anteriore
3 Cuscinetto anteriore
4 Scatola morsetti
6 Coperchio scatola morsetti
7 Morsettiera
8 Nipplo passaggio cavi
9 Rotore
10 Statore
11 Carcassa
12 Scudo posteriore
(14) Ingrassatore posteriore
(15) Fondello esterno posteriore
16 Calotta copriventola
17 Albero
18 Anello di tenuta anteriore
20 Scudo anteriore
22 Fondello interno anteriore
25 Cuscinetto posteriore
(24) Fondello interno posteriore
26 Anello di tenuta posteriore
27 Ventola
(28) Tettuccio parapioggia
(...) = quando previsto

180 ÷ 250



280 ÷ 315



ENGLISH

1 End cap - front
(2) Grease nipple - front
3 Front bearing
4 Terminal box
(5) Auxiliary connections
6 Terminal box lid
7 Terminal board
9 Rotor
10 Stator
11 Frame
12 Endshield - rear
13 Grease sealing ring - rear
(14) Grease nipple - rear
(15) End cap - rear
16 Fan cover (cowl)
17 Shaft
18 Sealing ring - front
19 Grease sealing ring - front
20 Endshield - front
21 Pre loading springs
22 Inner bearing cap - front
(23) Feet
(24) Inner bearing cap - rear
25 Rear bearing
26 Sealing ring - rear
27 Cooling fan
(28) Rain cap
(...) = when provided

FRANÇAIS

1 *Couvercle avant*
(2) *Graisseur avant*
3 *Roulement avant*
4 *Boîte à bornes*
(5) *Dispositif pour le passage des auxiliaires*
6 *Couvercle boîte à bornes*
7 *Bornes traversante*
9 *Rotor*
10 *Stator*
11 *Carcasse*
12 *Flasque arrière*
13 *Bague arrière de rétention graisse*
(14) *Graisseur arrière*
(15) *Couvercle arrière*
16 *Capot de ventilateur*
17 *Arbre*
18 *Bague avant d'étanchéité*
19 *Bague avant de rétention graisse*
20 *Flasque avant*
21 *Ressorts de précharge*
22 *Flasque intérieur avant*
(23) *Pattes*
(24) *Flasque intérieur arrière*
25 *Roulement arrière*
26 *Bague arrière d'étanchéité*
27 *Ventilateur*
(28) *Tôle parapluie*
(...) = *si prévu*

DEUTSCH

1 Äußerer Fettkammerdeckel A-Seite
(2) Schmiernippel A-Seite
3 Kugellager A-Seite
4 Klemmkasten
(5) Kabeldurchfürung Hilfskreise
6 Klemmkastendeckel
7 Klemmbrett
9 Läufer
10 Statorpaket
11 Motorgehäuse
12 Lagerschild B-Seite
13 Schmierfett – Schleuderring B-Seite
(14) Schmiernippel B-Seite
(15) Äußerer Fettkammerdeckel B-Seite
16 Lüfterhaube
17 Welle
18 Dichtungsring A-Seite
19 Schmierfett Schleuderring A-Seite
20 Lagerschild A-Seite
21 Lagervorspannung
22 Innerer Fettkammerdeckel A-Seite
(23) Füße
(24) Innerer Fettkammerdeckel B-Seite
25 Kugellager B-Seite
26 Dichtungsring B-Seite
27 Lüfterflügel
(28) Regenschutzdach
(...) = wenn vorgesehen

ESPAÑOL

1 *Tapa externa delantera*
(2) *Engrasador delantero*
3 *Cojinete delantero*
4 *Caja de bornes*
(5) *Niple paso auxiliares*
6 *Tapa de la caja de bornes*
7 *Placa de bornes*
9 *Rotor*
10 *Estator*
11 *Armazón*
12 *Escudo trasero*
13 *Anillo retención grasa trasero*
(14) *Engrasador trasero*
(15) *Fondo externo trasero*
16 *Casquete cubre ventilador*
17 *Eje*
18 *Anillo de retención delantero*
19 *Anillo retención grasa delantero*
20 *Escudo delantero*
21 *Muelles de carga previa*
22 *Fondo interno delantero*
(23) *Pies*
(24) *Tapa interna trasera*
25 *Cojinete trasero*
26 *Anillo de retención trasero*
27 *Ventilador*
(28) *Tapa de protección contra la lluvia*
(...) = *cuando previsto*

ITALIANO

1 Fondello esterno anteriore
(2) Ingrassatore anteriore
3 Cuscinetto anteriore
4 Scatola morsetti
(5) Nipplo passaggio ausiliari
6 Coperchio scatola morsetti
7 Morsettiera
9 Rotore
10 Statore
11 Carcassa
12 Scudo posteriore
13 Anello ritenzione grasso posteriore
(14) Ingrassatore posteriore
(15) Fondello esterno posteriore
16 Calotta copriventola
17 Albero
18 Anello di tenuta anteriore
19 Anello ritenzione grasso anteriore
20 Scudo anteriore
21 Molle di precarico
22 Fondello interno anteriore
(23) Piedi
(24) Fondello interno posteriore
25 Cuscinetto posteriore
26 Anello di tenuta posteriore
27 Ventola
(28) Tettuccio parapioggia
(...) = quando previsto

Sales programme

Flameproof-Explosion proof motors
Ex d, Ex de
- frame size 56 ÷ 315
- power 0.06 ÷ 200 kW
- threephase, 1 or 2 speed, singlephase
- ventilated, unventilated
- group I, IIA, IIB, IIC
- category M2, 2G, 2D, 2GD
- temperature class T3, T4, T5, T6
- maximum surface temperature [°C] T150, 135, 125, 100, 85, 70
- with brake

Increased safety motors
Ex e
- frame size 63 ÷ 132
- power 0.12 ÷ 7.5 kW
- threephase
- group II
- category 2G
- temperature class T3

Non sparking motors
Ex nA
- frame size 63 ÷ 315
- power 0.12 ÷ 132 kW
- threephase, 1 or 2 speed
- group II
- category 3G, 3GD
- temperature class T3

Totally enclosed fan cooled IEC motors
- frame size 63 ÷ 315
- power 0.12 ÷ 132 kW
- threephase, 1 or 2 speed
- category 3D
- protection IP55

Centrifugal flameproof electric pumps for printing machines
Ex d - Ex de
- group IIB, IIC
- output over 300 l/min
- head up to 15 m
- stem length 170 ÷ 550 mm
- special applications
- detachable motor from the pump unit

Centrifugal electric pumps for machine tools
- submersible
- output over 300 l/min
- head up to 30 m
- stem length 90 ÷ 550 mm
- special applications

Programme

Moteurs antidéflagrants
Ex d, Ex de
- hauteur d'axe 56 ÷ 315
- puissance 0.06 ÷ 200 kW
- triphasés, à 1 ou 2 vitesses, monophasés
- ventilés, non ventilés
- groupe I, IIA, IIB, IIC
- catégorie M2, 2G, 2D, 2GD
- classes de température T3, T4, T5, T6
- température superficielle maximum [°C] T150, 135, 125, 100, 85, 70
- avec frein

Moteurs à sécurité augmentée
Ex e
- hauteur d'axe 63 ÷ 132
- puissance 0.12 ÷ 7.5 kW
- triphasés
- groupe II
- catégorie 2G
- classes de température T3

Moteurs anti-étincelles
Ex nA
- hauteur d'axe 63 ÷ 315
- puissance 0.12 ÷ 132 kW
- triphasés, à 1 ou 2 vitesses
- groupe II
- catégorie 3G, 3GD
- classes de température T3

Moteurs fermés IP55 CEI/IEC avec ventilation extérieure
- hauteur d'axe 63 ÷ 315
- puissance 0.12 ÷ 132 kW
- triphasés, à 1 ou 2 vitesses
- catégorie 3D
- protection IP55

Electropompes centrifuges antidéflagrantes pour machines d'imprimerie
Ex d - Ex de
- groupe IIB, IIC
- debit supérieur à 300 l/min
- hauteur de refoulement jusqu'à 15 m
- corps immerge 170 ÷ 550 mm
- applications spéciales
- moteur détacable de l'unitè pompe

Electropompes centrifuges pour machines-outils
- immergeables
- debit supérieur à 300 l/min
- hauteur de refoulement jusqu'à 30 m
- corps immerge 90 ÷ 550 mm
- applications spéciales

Verkaufsprogramm

Explosionsgeschützte Motoren
Ex d, Ex de
- Baugrößen 56 ÷ 315
- Leistung 0.06 ÷ 200 kW
- Drehstrommotoren, 1 oder 2 Geschwindigkeiten, Einphasenmotoren
- mit Lüftung, ohne Lüftung
- Gruppe I, IIA, IIB, IIC
- Kategorie M2, 2G, 2D, 2GD
- Temperaturklassen T3, T4, T5, T6
- maximale Oberflächen-temperatur [°C] T150, 135, 125, 100, 85, 70
- mit Bremse

Motoren für erhöhte Sicherheit
Ex e
- Baugrößen 63 ÷ 132
- Leistung 0.12 ÷ 7.5 kW
- Drehstrommotoren
- Gruppe II
- Kategorie 2G
- Temperaturklassen T3

Funkenfreie Motoren
Ex nA
- Baugrößen 63 ÷ 315
- Leistung 0.12 ÷ 132 kW
- Drehstrommotoren, 1 oder 2 Geschwindigkeiten
- Gruppe II
- Kategorie 3G, 3GD
- Temperaturklassen T3

Geschlossene Motoren mit Fremdbelüftung nach IEC
- Baugrößen 63 ÷ 315
- Leistung 0.12 ÷ 132 kW
- Drehstrommotoren, 1 oder 2 Geschwindigkeiten
- Kategorie 3D
- Schutzart IP55

Explosionsgeschützte Zentrifugal-Elektropumpen für Druckmaschinen
Ex d - Ex de
- Gruppe IIB, IIC
- Leistung bis 300 l/min
- Bis zu 15 m Förderhöhe
- Eintauchtiefe 170 ÷ 550 mm
- Sonderanwendungen
- Motor vom Pumpenkörper abnehmbar

Elektropumpen für Werkzeugmaschinen
- Eintauchfähig
- Leistung mehr als 300 l/min
- Bis zu 30 m Förderhöhe
- Eintauchtiefe 90 ÷ 550 mm
- Sonderanwendungen

Programa de venta

Motores antideflagrantes
Ex d, Ex de
- tamaños 56 ÷ 315
- potencia 0.06 ÷ 200 kW
- trifásicos, 1 o 2 velocidades, monofásicos
- autoventilados o no
- grupo I, IIA, IIB, IIC
- categoría M2, 2G, 2D, 2GD
- clase temperatura T3, T4, T5, T6
- màxima temperatura superficial [°C] T150, 135, 125, 100, 85, 70
- con freno

Motores de seguridad aumentada
Ex e
- tamaños 63 ÷ 132
- potencia 0.12 ÷ 7.5 kW
- trifásicos
- grupo II
- categoría 2G
- clase temperatura T3

Motores no sparking
Ex nA
- tamaños 63 ÷ 315
- potencia 0.12 ÷ 132 kW
- trifásicos, 1 o 2 velocidades
- grupo II
- categoría 3G, 3GD
- clase temperatura T3

Motores cerrados con ventilación exterior IP55
- tamaños 63 ÷ 315
- potencia 0.12 ÷ 132 kW
- trifásicos, 1 o 2 velocidades
- categoría 3D
- protección IP55

Electrobombas centrífugas antideflagrantes para máquinas de impresión
Ex d - Ex de
- grupo IIB, IIC
- capacidad: más 300 l/min
- altura: hasta 15 m
- cuerpos sumergidos 170 ÷ 550 mm
- aplicaciones especiales
- motor separable del cuerpo bomba

Electrobombas centrífugas para máquinas herramientas
- sumergibles
- capacidad: más 300 l/min
- altura: hasta 30 m
- cuerpos sumergidos 90 ÷ 550 mm
- aplicaciones especiales

Programma di vendita

Motori antideflagranti
Ex d, Ex de
- altezza d'asse 56 ÷ 315
- potenze 0.06 ÷ 200 kW
- trifase, 1 o 2 velocità, monofase
- ventilato, non ventilato
- gruppo I, IIA, IIB, IIC
- categoria M2, 2G, 2D, 2GD
- classi di temperatura T3, T4, T5, T6
- massima temperatura superficiale [°C] T150, 135, 125, 100, 85, 70
- con freno

Motori a sicurezza aumentata
Ex e
- altezza d'asse 63 ÷ 132
- potenze 0.12 ÷ 7.5 kW
- trifase
- gruppo II
- categoria 2G
- classe di temperatura T3

Motori non sparking
Ex nA
- altezza d'asse 63 ÷ 315
- potenze 0.12 ÷ 132 kW
- trifase, 1 o 2 velocità
- gruppo II
- categoria 3G, 3GD
- classe di temperatura T3

Motori chiusi con ventilazione esterna CEI/IEC
- altezza d'asse 63 ÷ 315
- potenze 0.12 ÷ 132 kW
- trifase, 1 o 2 velocità
- categoria 3D
- protezione IP55

Elettropompe centrifughe antideflagranti per macchine da stampa
Ex d - Ex de
- gruppo IIB, IIC
- portate oltre 300 l/min
- prevalenze: fino a 15 m
- corpi immersi 170 ÷ 550 mm
- applicazioni speciali
- motore separabile dal corpo pompa

Elettropompe centrifughe per macchine utensili
- ad immersione
- portate oltre 300 l/min
- prevalenze fino a 30 m
- corpi immersi 90 ÷ 550 mm
- applicazioni speciali

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