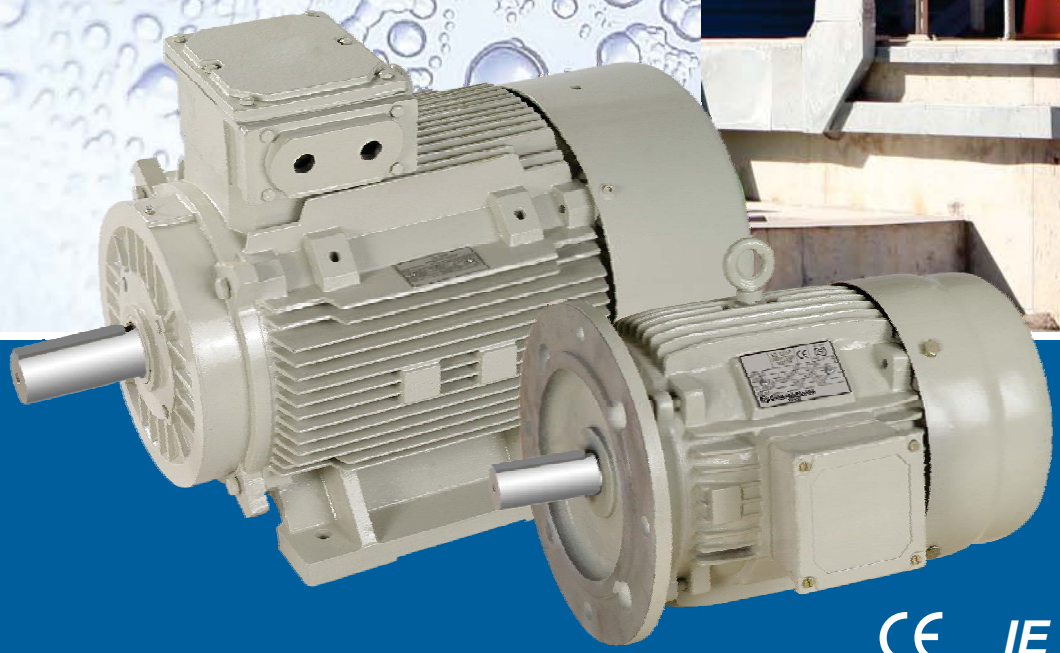
GENERAL PUMPS

Energy-efficient Cast Iron Three Phase Induction Motors 50 Hz



CE IE 1 / EFF2, IE 2 / EFF1

www.pumpsgp.com

CONTENTS

SPECIFICATIONS	Page 3
APPLICATIONS	Page 4
FEATURES AND BENEFITS	Page 4
BENEFITS OF ENERGY EFFICIENT MOTORS	Page 4
STANDARDS FOR MOTORS	Page 5
INTERNATIONAL STANDARDS FOR MOTOR EFFICIENCY	Page 6
NOMINAL EFFICIENCY OF MOTORS & EFFICIENCY CLASS COMPARISON	Page 7
TOLERANCES	Page 8
TYPE KEY	Page 9
MATERIAL OF CONSTRUCTION	Page 9
MOUNTING ARRANGEMENTS	Page 10
DEGREE OF PROTECTION (INGRESS PROTECTION - IP)	Page 11
INSULATION CLASS	Page 12
EFFECTS OF VARIATION OF VOLTAGE AND FREQUENCY	Page 12
OVERLOAD	Page 12
INSTALLATION CONDITIONS	Page 13
INSTALLATION AT ALTITUDES OF MORE THAN 1000 M ABOVE SEA LEVEL	Page 13
NUMBERS OF STARTS/HOUR	Page 13
BEARING DETAILS & LUBRICATION	Page 14
TERMINAL BOX	Page 14
CABLE SIZE	Page 14
NOISE LEVEL	Page 15
VIBRATION LEVEL	Page 15
EXPLODED VIEW AND SPARE PARTS DESCRIPTION	Page 16
MOTOR PERFORMANCE DATA	Page 17
MOTOR DIMENSIONAL DRAWING	Page 24
SHIPPING DIMENSIONS	Page 30

SPECIFICATIONS

- ❒ Motor type : AC three-phase squirrel cage induction motor
- ❒ Enclosure : TEFC
- ❒ Frame : 63 to 355L
- ❒ Mounting : Foot, Flange and Face
- ❒ Rated power : 0.18 kW to 315 kW (0.25 to 430 HP)
- ❒ Voltage ± variation : 415 V ± 10%
- ❒ Frequency ± variation: 50 Hz ± 5%
- ❒ Combined variation : 10% (Absolute sum)
- ❒ Rated speed : 3000, 1500, 1000, 750 rpm (2 pole, 4 pole, 6 pole, 8 pole)
- ❒ Ambient temperature : +50°C
- ❒ Altitude : Should be lower than 1000 metres above sea level
- ❒ Relative humidity : Up to 100%
- ❒ Connection : Up to 2.2 kW-Star connection with 3 leads & above 2.2 kW-Delta connection with 6 leads
- ❒ Direction of rotation : Anticlockwise or clockwise as seen from the Driver end side
- ❒ Duty / Rating : S1 / Continuous
- ❒ Insulation class : Class 'F' and temperature rise limited to class 'B'
- ❒ Degree of protection : IP 55
- ❒ Cooling method : IC411 / Shaft mounted fan.

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

APPLICATIONS

- ❒ Pumps
- ❒ Compressors
- ❒ Fans and blowers
- ❒ Flour mills, rolling mills, mixers
- ❒ Machine tools
- ❒ Textile and plastic machineries
- ❒ Printing, packaging and wood working machineries
- ❒ Agricultural, food processing machinery
- ❒ Material handling equipments
- ❒ Cranes, hoists and lifts
- ❒ Cooling towers.

FEATURES AND BENEFITS

- ❒ Motors are fitted with dynamically balanced aluminium die cast squirrel cage rotors.
- ❒ Motors are fitted with pre-lubricated antifriction ball bearings up to 132 frame.
- ❒ Motors are free from moisture and dust particles.
- ❒ Minimum electricity consumption because of special grade electrical steel used in an energy efficient optimized design.
- ❒ Balanced three-dimensional heat transfer principal due to special fins design of stator body.
- ❒ Minimum rotor losses due to use of electrolytic grade of aluminium.
- ❒ Minimum copper losses due to use of electrolytic grade of copper.
- ❒ Minimum friction losses.
- ❒ Low noise, smooth running motor.
- ❒ Reliable operation.
- ❒ Easy maintenance.
- ❒ Low payback period.

BENEFITS OF ENERGY EFFICIENT MOTORS

- ❒ Short payback period / lower operating cost due to their higher efficiency.
- ❒ Motors have lower power dissipation due to their higher efficiency.
- ❒ Motors have a longer life span due to their relatively low temperature rise.
- ❒ Motors have higher thermal margins, which helps avoid unnecessary safety margins in the design process.
- ❒ Motors save energy and reduce CO_2 emissions.

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

STANDARDS FOR MOTORS

All motors are complying with following International standards:

International Standards	
IEC 60034-1	Rating and performance
IEC 60034-2-1	Methods for determining losses and efficiency
IEC 60034-5	Classification of degrees of protection
IEC 60034-6	Methods of cooling
IEC 60034-7	Symbols of construction and mounting arrangements
IEC 60034-8	Terminal markings and direction of rotation
IEC 60034-9	Noise limits
IEC 60072-1	Dimensions and output of electric machines
IEC 60034-14	Vibration limits

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

INTERNATIONAL STANDARDS FOR MOTOR EFFICIENCY

The efficiency factor defines the efficiency of motors when transforming electrical energy into mechanical energy.

The International Electrotechnical Commission (IEC), in order to harmonize the energy consumption regulations aimed to reduce the CO_2 emissions and the impact of industrial operations on the environment, has established the standard IEC 60034-30:2008 which defines energy efficiency classes for low-voltage, three-phase, 50Hz and 60Hz squirrel cage induction motors.

For many years low-voltage three-phase motors in the European Union have been sold in three efficiency classes EFF3, EFF2 and EFF1. Energy efficiency classification systems have been introduced and well-proven in many countries all over the world. They unfortunately differ from each other in terms of scope, wording and values. That was the reason for the International Electrotechnical Commission IEC to develop and publish an energy efficiency standard which replaces all the different national issues. In parallel IEC developed and issued a new standard for determining the motor efficiencies. The new standard IEC 60034-30 defines and harmonizes worldwide the efficiency classes IE1, IE2 and IE3 for low-voltage three-phase motors in the power range from 0.75 kW to 375 kW.

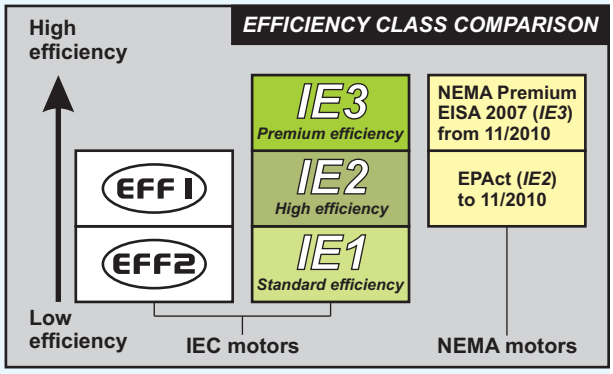
New international efficiency classes of low-voltage three-phase motors - IE = International Efficiency

The new IEC 60034-30:2008 defines worldwide the following efficiency classes of LV three-phase motors, in the range from 0.75 to 375 kW.

IE1 = Standard Efficiency
(efficiency levels roughly equivalent to EFF2 in Europe nowadays).

IE2 = High Efficiency
(efficiency levels roughly equivalent to EFF1 in Europe nowadays & identical to EPAct in the USA for 60Hz).

IE3 = Premium Efficiency
(new efficiency class in Europe nowadays and identical to "NEMA Premium" in the USA for 60Hz).



From now motors can be offered and sold with the new classes IE1, IE2 and IE3.
In that case the efficiency has to be determined according to the new requirements given in the IEC 60034-2-1 standard.

According to the Commission Regulation (EC) No 640/2009 (introduced in July 2009) the required efficiency class of general-purpose motors (introduced to the market in Europe in future) will be as follows:

- **From 16 June 2011, motors placed for the first-time on the market shall have a minimum efficiency class of IE2.**
- **From 1 January 2015: motors with a rated output between 7.5 - 375 kW shall have a minimum efficiency class of IE3, or IE2 if they are operated/equipped with electronic speed control (VSD).**
- **From 1 January 2017: motors with a rated output between 0.75 - 375 kW shall have a minimum efficiency class of IE3, or IE2 if they are operated/equipped with electronic speed control (VSD).**

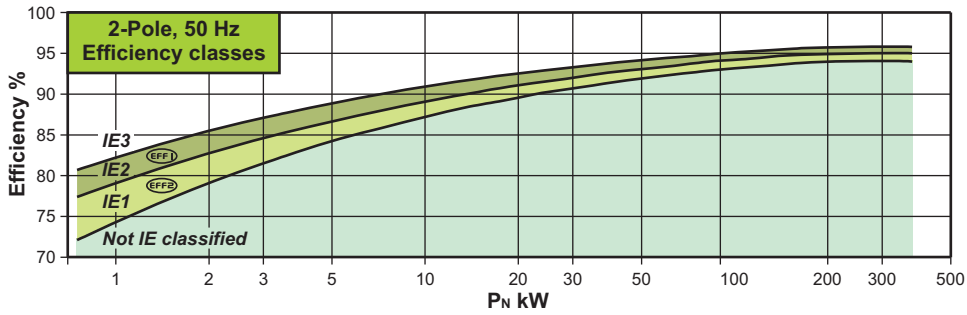
Electronic speed control is carried out using a frequency converter (VSD) that adjusts the speed of the motor - and therefore the torque produced - based on the energy needed.

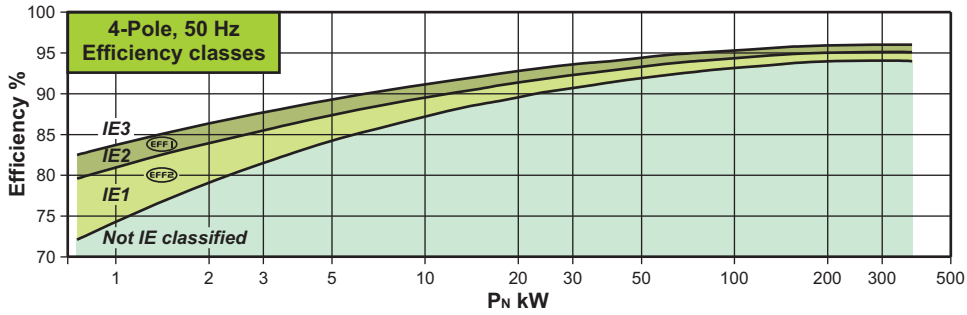
General Pumps has offered energy efficiency motors for several years now. These motors are also in compliance with the efficiency standards covered by CEMEP. We continuously carry out intensive research and development of the motors according to the new standards IEC 60034-30 and IEC 60034-2-1.

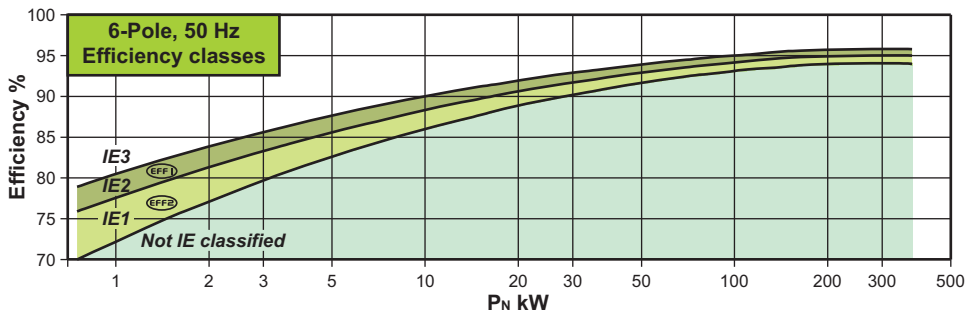
NOMINAL EFFICIENCY OF MOTORS & EFFICIENCY CLASS COMPARISON

Nominal efficiency (%) limits for class IE1/(EFF2) & IE2/(EFF1) 50 Hz according to the IEC 60034-30

P_N		2-Pole Eff. (%)		4-Pole Eff. (%)		6-Pole Eff. (%)	
kW	HP	IE1 / (EFF2)	IE2 / (EFF1)	IE1 / (EFF2)	IE2 / (EFF1)	IE1 / (EFF2)	IE2 / (EFF1)
0.75	1	72.1	77.4	72.1	79.6	70.0	75.9
1.1	1.5	75.0	79.6	75.0	81.4	72.9	78.1
1.5	2	77.2	81.3	77.2	82.8	75.2	79.8
2.2	3	79.7	83.2	79.7	84.3	77.7	81.8
3	4	81.5	84.6	81.5	85.5	79.7	83.3
3.7	5	83.1	85.8	83.1	86.6	81.4	84.6
5.5	7.5	84.7	87.0	84.7	87.7	83.1	86.0
7.5	10	86.0	88.1	86.0	88.7	84.7	87.2
11	15	87.6	89.4	87.6	89.8	86.4	88.7
15	20	88.7	90.3	88.7	90.6	87.7	89.7
18.5	25	89.3	90.9	89.3	91.2	88.6	90.4
22	30	89.9	91.3	89.9	91.6	89.2	90.9
30	40	90.7	92.0	90.7	92.3	90.2	91.7
37	50	91.2	92.5	91.2	92.7	90.8	92.2
45	60	91.7	92.9	91.7	93.1	91.4	92.7
55	75	92.1	93.2	92.1	93.5	91.9	93.1
75	100	92.7	93.8	92.7	94.0	92.6	93.7
90	120	93.0	94.1	93.0	94.2	92.9	94.0
110	150	93.3	94.3	93.3	94.5	93.3	94.3
132	180	93.5	94.6	93.5	94.7	93.5	94.6
160	215	93.8	94.8	93.8	94.9	93.8	94.8
200 to 375	270 to 500	94.0	95.0	94.0	95.1	94.0	95.0







Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

TOLERANCES

For industrial motors according to IEC 60034-1, certain tolerances must be allowed on guaranteed values, taking into consideration the necessary tolerances for the manufacture of such motors and the materials used. The standard includes the following remarks:

- ❒ It is not intended that guarantees necessarily have to be given for all or any of the items involved. Quotations including guaranteed values subject to tolerances should say so, and the tolerances should be in accordance with the table.
- ❒ Attention is drawn to the different interpretation of the term guarantee. In some countries a distinction is made between guaranteed values and typical or declared values.
- ❒ Where a tolerance is stated is only one direction, the value is not limited in the other direction.

Permissible deviation between real values & declared values according to the IEC 60034-1	
Power factor (cos φ)	-1/6(1-cos φ) Minimum 0.02 and maximum 0.07
Efficiency (η)	-0.15(1-η) for $P_N \leq 150$ kW -0.1(1-η) for $P_N > 150$ kW Where η is a decimal number
Slip (s)	±20% of the slip for $P_N \geq 1$ kW ±30% of the slip for $P_N < 1$ kW
Locked rotor current (I_L/I_N)	+20% (No lower limit)
Locked rotor torque (T_L/T_N)	-15% and +25% (+25% may be exceeded by agreement)
Breakdown torque (T_B/T_N)	-10%
Moment of inertia (J) [kgm²]	±10%

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

TYPE KEY

GMT	050	2	112	M	A	2

Type range
GMT = General Pumps Three-phase induction motor series

Motor output (HP)
025 = 0.25 hp
050 = 0.50 hp
075 = 0.75 hp
110 = 1.00 hp
115 = 1.50 hp
120 = 2.00 hp
130 = 3.00 hp
150 = 5.00 hp
175 = 7.50 hp
210 = 10.0 hp
212 = 12.5 hp
215 = 15.0 hp
220 = 20.0 hp
225 = 25.0 hp
230 = 30.0 hp
240 = 40.0 hp
250 = 50.0 hp
260 = 60.0 hp
275 = 75.0 hp
310 = 100 hp
312 = 120 hp
315 = 150 hp
318 = 180 hp
321 = 215 hp
327 = 270 hp
334 = 340 hp
343 = 430 hp

Number of poles
2 = 2 Pole
4 = 4 Pole
6 = 6 Pole
8 = 8 Pole

Shaft centre height
063 = 63 mm
071 = 71 mm
080 = 80 mm
090 = 90 mm
100 = 100 mm
112 = 112 mm
132 = 132 mm
160 = 160 mm
180 = 180 mm
200 = 200 mm
225 = 225 mm
250 = 250 mm
280 = 280 mm
315 = 315 mm
355 = 355 mm

Frame length
Z =
S = Mechanical dimensions (short)
M = Mechanical dimensions (medium)
L = Mechanical dimensions (long)

Mounting arrangements
A = Mounting code IM B3
B = Mounting code IM B34
C = Mounting code IM B5
D = Mounting code IM B6
E = Mounting code IM B7
F = Mounting code IM B8
G = Mounting code IM B14
H = Mounting code IM B35
I = Mounting code IM V1
J = Mounting code IM V3
K = Mounting code IM V5
L = Mounting code IM V6
M = Mounting code IM V15
N = Mounting code IM V18
O = Mounting code IM V19
P = Mounting code IM V37

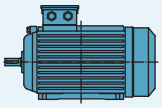
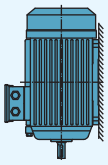
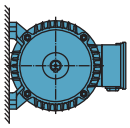
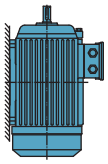
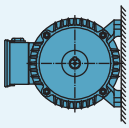
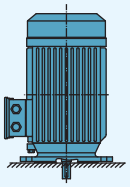
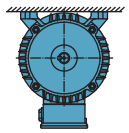
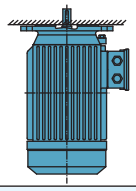
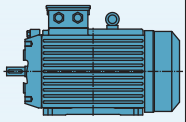
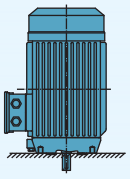
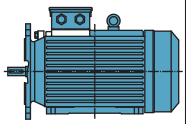
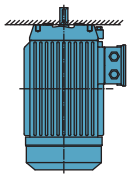
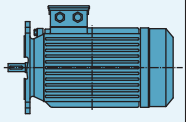
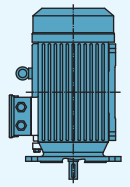
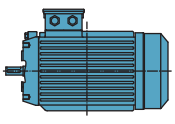
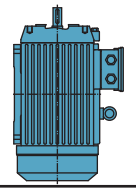
Efficiency class
1 = IE1 / EFF 2 class motor
2 = IE2 / EFF 1 class motor

MATERIAL OF CONSTRUCTION

Component	Material
Stator frame	Cast iron
Front endshield	Cast iron
Rear endshield	Cast iron
Terminal box	Aluminum alloy / Cast iron
Terminal plate	Bakelite
Fan cover	Carbon steel
Fan	Reinforced polypropylene / Nylon
Electric rotor	Silicon steel / Carbon steel
Key	Carbon steel
Hardware	Carbon steel

MOUNTING ARRANGEMENTS

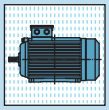
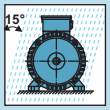
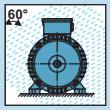
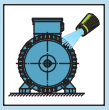
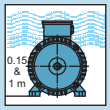
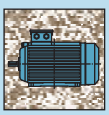
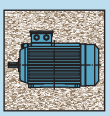
Mounting arrangements for rotating electrical machines are designated according to the IEC 60034-7 standard. Our motors are available with the mounting arrangements as per details below, depending on design and frame size.

Horizontal shaft mounting					Vertical shaft mounting				
Mounting arrangement		Code I	Code II	Frame size	Mounting arrangement		Code I	Code II	Frame size
	Mounted by foot, foot down	IM B3	IM 1001	63 - 355		Mounted by foot, Driver end down	IM V5	IM 1011	63 - 160
	Mounted by foot, foot left (viewed from Driver-end)	IM B6	IM 1051	63 - 160		Mounted by foot, Driver end up	IM V6	IM 1031	63 - 160
	Mounted by foot, foot right (viewed from Driver-end)	IM B7	IM 1061	63 - 160		Mounted on Driver end side of flange type 'B', Driver end down	IM V1	IM 3011	63 - 355
	Mounted by foot, foot up	IM B8	IM 1071	63 - 160		Mounted on Driver end side of flange type 'B', Driver end up	IM V3	IM 3031	63 - 160
	Mounted by foot, foot down, with additional mounting on D-end side of flange type 'C'	IM B34	IM 2101	63 - 132		Mounted on Driver end side of flange type 'C', Driver end down	IM V18	IM 3611	63 - 132
	Mounted by foot, foot down, with additional mounting on D-end side of flange type 'B'	IM B35	IM 2001	63 - 355		Mounted on Driver end side of flange type 'C', Driver end up	IM V19	IM 3631	63 - 132
	Mounted on Driver end side of flange type 'B'	IM B5	IM 3001	63 - 355		Mounted by foot, with additional mounting on D-end side of flange, type 'B' D-end down	IM V15	IM 2011	63 - 160
	Mounted on Driver end side of flange type 'C'	IM B14	IM 3601	63 - 160		Mounted by foot, with additional mounting on D-end side of flange, type 'C' D-end up	IM V37	IM 2131	63 - 132

DEGREE OF PROTECTION (INGRESS PROTECTION - IP)

As per IEC 60034-5 standard, the Degree of protection of a rotating electrical machine is designated with the letters IP (Ingress Protection) followed by two characteristic numbers, with the following manner:

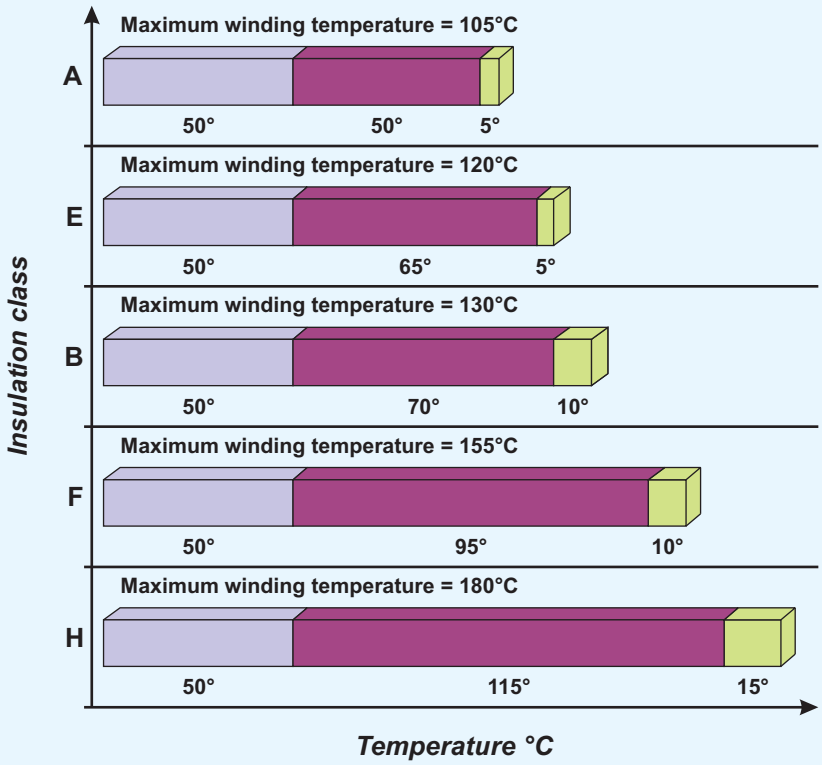
- ❒ First characteristic numeral: Describes to protection against access to hazardous parts and ingress of solids & foreign bodies.
- ❒ Second characteristic numeral: Describes to protection against ingress of water.
- ❒ All our motors shown in this catalog are IP 55.

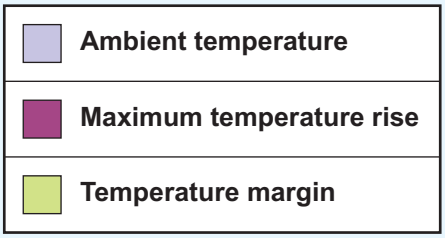
First numeral & description			Second numeral & description								
			0	1	2	3	4	5	6	7	8
			Not protected	Protection against vertically falling drops of water	Protection against direct spray of water up to 15° from vertical	Protection against direct spray of water up to 60° from vertical	Protection against water splashed from all directions	Protection against low pressure jet of water from any directions	Protection against strong jet of water from any directions	Protection against immersion between 0.15 & 1 m	Protection against long period of immersion under pressure
										
0	Not protected										
1	Protection against solid foreign bodies > 50 mm (e.g: Inadvertent contact with hand)										
2	Protection against solid foreign bodies > 12 mm (e.g: Inadvertent contact with the fingers)			IP 21	IP 22	IP 23					
3	Protection against solid foreign bodies > 2.5 mm (e.g: Inadvertent contact with wires and tools)										
4	Protection against solid foreign bodies > 1 mm (e.g: Inadvertent contact with wires, bands)						IP 44				
5	Protection against dust (no harmful deposits of dust)						IP 54	IP 55	IP 56		
6	Totally protected against deposition of dust										

INSULATION CLASS

Motors are manufactured with class 'F' insulation as a standard and temperature rise limited to class 'B'. This allows for about 25°C reserve thermal capacity in the motor. The reserve thermal capacity is what helps maintain the integrity of the insulation and lengthen motor life.

Temperature rise and maximum temperatures at the hottest points of the winding according to the temperature classes of IEC 60034-1.





Ins. class	Maximum winding temperature
A	105°C
E	120°C
B	130°C
F	155°C
H	180°C

Insulation class 'F' in an electric motor means that at ambient temperature of 50°C, the temperature rise of the winding may be max. 95°C with the additional temperature margin of 10°C (under specified measuring conditions in accordance with the IEC 60034-1 standard).

EFFECTS OF VARIATION OF VOLTAGE AND FREQUENCY

Effects of variation of voltage and frequency on the characteristics of motor

Characteristics	Voltage		Frequency	
	110%	90%	105%	95%
Torque				
Starting and maximum	Increase 21%	Decrease 19%	Decrease 10%	Increase 11%
Speed				
Synchronous	No change	No change	Increase 5%	Decrease 5%
Full load	Increase 1%	Decrease 1.5%	Increase 5%	Decrease 5%
Current				
No load	Increase 10-15%	Decrease 10-12%	Decrease 5-6%	Increase 5-6%
Starting	Increase 10-12%	Decrease 10-12%	Decrease 5-6%	Increase 5-6%
Full load	Decrease 7%	Increase 11%	Slight Decrease	Slight Increase
Temperature rise	Decrease 3-4%	Increase 6-7%	Slight Decrease	Slight Increase
Overload capacity	Increase 21%	Decrease 19%	Slight Decrease	Slight Increase
Magnetic noise	Slight Increase	Slight Decrease	Slight Decrease	Slight Increase
Efficiency				
Full load	Increase 0.5-1.0%	Decrease 2%	Slight Increase	Slight Decrease
Power factor	Decrease 3%	Increase 1%	Slight Increase	Slight Decrease

OVERLOAD

At operating temperature three-phase motors are capable of withstanding an overload for 15 second at 1.6 times the rated torque at rated voltage. This overload is according to the IEC 60034-1 standard and will not result in excessive heating.

INSTALLATION CONDITIONS

The motors conform to degree of protection IP 55 as per IEC 60034-5.

The standard design for horizontal mounting is suitable for indoor and protected outdoor installation (temperature of coolant -20°C to +50°C).

For unprotected outdoor installation or severe climatic conditions (moisture category wet, climate group WORLDWIDE, extremely dusty site conditions, aggressive industrial atmosphere, danger of storm rain and coastal climate, danger of attack by termites, etc.), as well as vertical mounting, special protective measures are recommended, such as:

- ❒ Protective cowl (for vertical shaft-down motors)
- ❒ For vertical shaft-up motors additional bearing seal and flange drainage
- ❒ Special paint finish
- ❒ Treatment of winding with protective moisture-proof varnish
- ❒ Anti-condensation heating (possibly winding heating)
- ❒ Condensation drain holes.

The special measures to be applied have to be agreed with the factory once the conditions of installation have been settled.

The corresponding conditions of installation have to be clearly indicated in the order.

INSTALLATION AT ALTITUDES OF MORE THAN 1000 M ABOVE SEA LEVEL

Conditions	Altitude of installation		
	2000 m	3000 m	4000 m
At 50°C ambient temperature and thermal class 'B', Rated output reduce to approx	92%	84%	76%
At 50°C ambient temperature and thermal class 'F', Rated output reduce to approx	89%	79%	68%
Full nominal output to data tables with thermal class 'B' and ambient temperature of	32°C	24°C	16°C
Full nominal output to data tables with thermal class 'F' and ambient temperature of	30°C	19°C	9°C

NUMBERS OF STARTS/HOUR

The permissible nos. of starts per hour can be taken as given in the table below, provided the following conditions are met:

Additional moment of inertia ≤ moment of inertia of the rotor: load torque rising with the square of the speed up to nominal torque; starts at even intervals.

Frame size	2 Pole	4 Pole	6 & 8 Pole
63 -71	100	250	350
80 - 100	60	140	160
112 - 132	30	60	80
160 - 180	15	30	50
200 - 225	8	15	30
250 - 355	4	8	12

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

BEARING DETAILS & LUBRICATION

Frame size	Nos. of poles	Drive end bearing	Non-Drive end bearing	Regreasing interval [hours]
63	2	6201 ZZ-C3	6201 ZZ-C3	-
	4, 6, 8			-
71	2	6202 ZZ-C3	6202 ZZ-C3	-
	4, 6, 8			-
80	2	6204 ZZ-C3	6204 ZZ-C3	-
	4, 6, 8			-
90	2	6205 ZZ-C3	6205 ZZ-C3	-
	4, 6, 8			-
100	2	6206 ZZ-C3	6206 ZZ-C3	-
	4, 6, 8			-
112	2	6206 ZZ-C3	6206 ZZ-C3	-
	4, 6, 8			-
132	2	6208 ZZ-C3	6208 ZZ-C3	-
	4, 6, 8			-
160	2	6309-C3	6209-C3	4000
	4, 6, 8			8000
180	2	6310-C3*	6210-C3*	3500
	4, 6, 8			8000
200	2	6312-C3	6212-C3*	3500
	4, 6, 8			8000
225	2	6313-C3	6313-C3	3500
	4, 6, 8			8000
250	2	6314-C3	6314-C3	3000
	4, 6, 8			7000
280	2	6314-C3	6314-C3	3000
	4, 6, 8	6317-C3	6317-C3	5000
315	2	6317-C3	6317B	2000
	4, 6, 8	6319-C3 (NU319E)	6319B	4000
355	2	6319-C3	6319B	2000
	4, 6, 8	6322-C3 (NU319E)	7322B	3000

* For ***IE2*** / (EFF1) motor bearing size as per details below.
Frame 180, Drive end and Non-drive end bearing is 6311-C3
Frame 200, Non-drive end bearing is 6312-C3.

TERMINAL BOX

Terminal box is provided on top as a standard.

CABLE SIZE

Frame size	Maximum cable size		Cable entry size	
	DOL starting	Star-Delta starting	*IE1* / (EFF2)	*IE2* / (EFF1)
63	3C x 2.5 mm²	-	1 x 3/4"	1 x M20 x 1.5
71	3C x 2.5 mm²	-	1 x 3/4"	1 x M20 x 1.5
80	3C x 4 mm²	-	1 x 3/4"	1 x M20 x 1.5
90	3C x 4 mm²	-	1 x 3/4"	1 x M20 x 1.5
100	3C x 10 mm²	2 x 3C x 10 mm²	2 x 3/4"	1 x M20 x 1.5
112	3C x 10 mm²	2 x 3C x 10 mm²	2 x 3/4"	2 x M32 x 1.5
132	3C x 10 mm²	2 x 3C x 10 mm²	2 x 1"	2 x M32 x 1.5
160	3C x 35 mm²	2 x 3C x 25 mm²	2 x 1"	2 x M40 x 1.5
180	3C x 35 mm²	2 x 3C x 25 mm²	2 x M40 x 1.5	2 x M40 x 1.5
200	3C x 120 mm²	2 x 3C x 70 mm²	2 x M50 x 1.5	2 x M50 x 1.5
225	3C x 120 mm²	2 x 3C x 70 mm²	2 x M50 x 1.5	2 x M50 x 1.5
250	3C x 120 mm²	2 x 3C x 70 mm²	2 x M63 x 1.5	2 x M63 x 1.5
280	3C x 240 mm²	2 x 3C x 150 mm²	2 x M63 x 1.5	2 x M63 x 1.5
315	3C x 240 mm²	2 x 3C x 150 mm²	2 x M63 x 1.5	2 x M63 x 1.5
355	3C x 400 mm²	2 x 3C x 300 mm²	2 x M63 x 1.5	2 x M63 x 1.5

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

NOISE LEVEL

As per IEC 60034-9 standard the permitted noise levels of electric machines are mention as per details below.

P_N		IE1 / EFF2 NOISE LEVEL						IE2 / EFF1 NOISE LEVEL					
		2-Pole (3000 r/min)		4-Pole (1500 r/min)		6-Pole (1000 r/min)		2-Pole (3000 r/min)		4-Pole (1500 r/min)		6-Pole (1000 r/min)	
kW	HP	Measuring surface sound at 50 Hz Lpfa dB(A)	Sound pressure level at 50 Hz LWA dB(A)	Measuring surface sound at 50 Hz Lpfa dB(A)	Sound pressure level at 50 Hz LWA dB(A)	Measuring surface sound at 50 Hz Lpfa dB(A)	Sound pressure level at 50 Hz LWA dB(A)	Measuring surface sound at 50 Hz Lpfa dB(A)	Sound pressure level at 50 Hz LWA dB(A)	Measuring surface sound at 50 Hz Lpfa dB(A)	Sound pressure level at 50 Hz LWA dB(A)	Measuring surface sound at 50 Hz Lpfa dB(A)	Sound pressure level at 50 Hz LWA dB(A)
0.75	1	56	67	47	58	45	57	56	67	46	57	45	57
1.1	1.5	56	67	49	61	45	57	57	68	48	60	45	57
1.5	2	61	73	49	61	49	61	61	73	48	60	49	61
2.2	3	62	74	52	64	53	65	61	73	52	64	53	65
3	4	64	76	52	64	57	69	63	75	52	64	53	65
3.7	5	65	77	53	65	57	69	65	75	53	65	55	67
5.5	7.5	68	80	59	71	57	69	68	80	59	71	55	67
7.5	10	68	80	59	71	61	73	68	80	59	71	57	69
11	15	73	86	62	72	61	73	72	84	62	72	57	69
15	20	73	86	63	73	61	73	73	86	62	73	58	70
18.5	25	73	86	64	76	64	76	73	86	64	76	58	70
22	30	75	88	64	76	64	76	74	87	64	76	61	73
30	40	78	92	66	79	64	76	77	91	64	76	62	74
37	50	78	92	68	81	66	78	77	91	64	76	62	74
45	60	78	92	68	81	68	80	77	91	65	78	63	75
55	75	79	93	70	83	68	80	80	94	66	79	64	76
75	100	80	94	72	85	73	85	80	94	69	82	68	80
90	120	80	94	73	86	73	85	80	94	69	82	68	80
110	150	82	96	80	93	73	85	81	95	77	90	73	83
132	180	82	96	80	93	73	85	81	95	77	90	73	83
160	215	85	99	84	97	80	92	85	99	82	95	78	90
200	270	86	100	84	97	80	92	85	99	82	95	78	90
250	340	88	102	88	101	80	92	88	102	84	97	78	90
315	430	89	103	88	101	-	-	88	102	84	97	-	-

VIBRATION LEVEL

The amplitude of vibration in electric motors are governed by IEC 60034-14, Mechanical vibration of rotating electrical machines with frame size 56 & large - methods of measurement and limits.

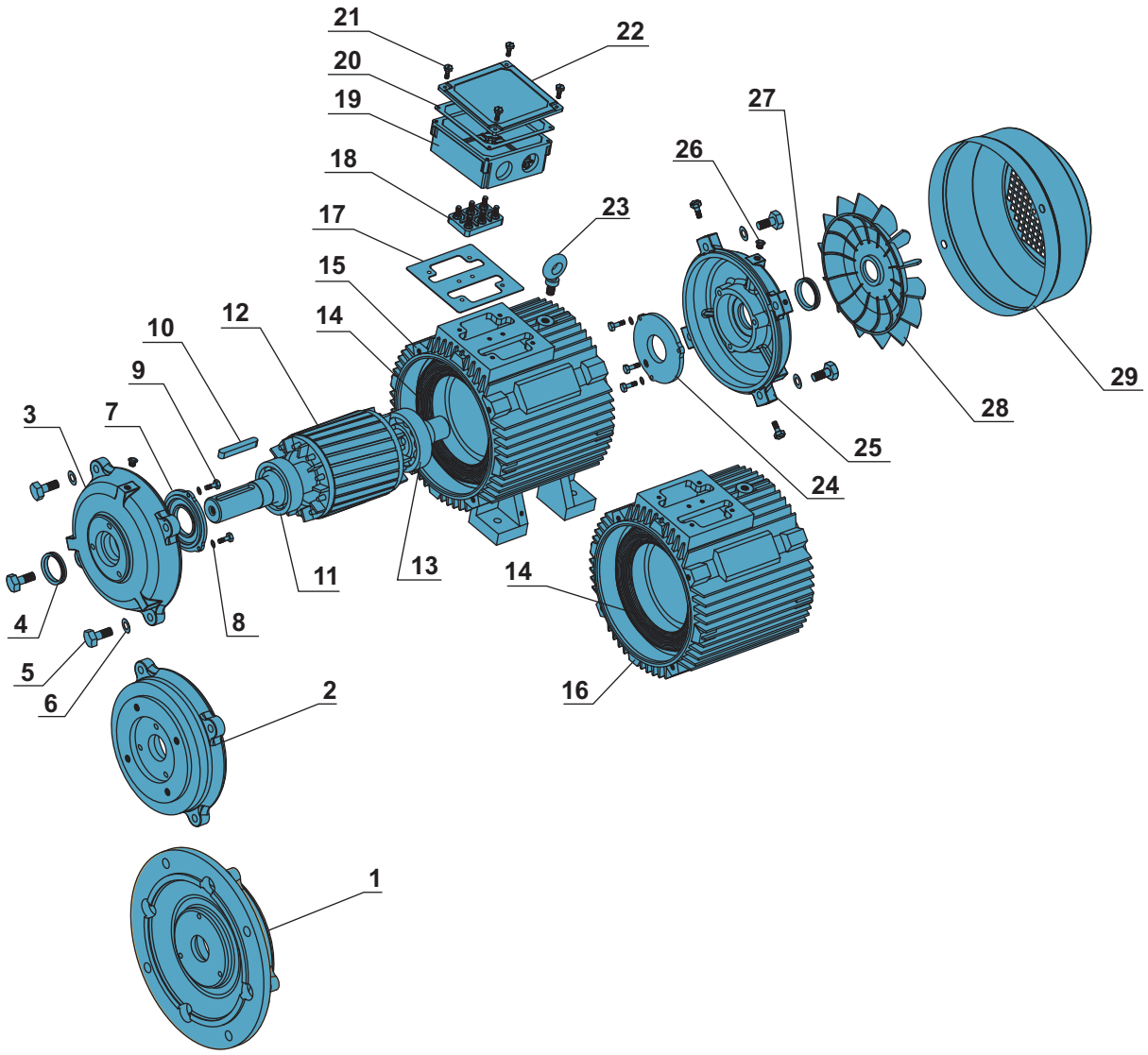
- ❒ Rotors are dynamically balanced with half key and the standard version meets the vibration levels of Grade A (without special vibration requirements) described in IEC 60034-14. As an option, motors can be supplied in conformance with vibration of Grade B.
- ❒ The RMS speed and vibration levels in mm/s of Grade A and B are shown in below table.

Vibration	Assembly	Vibration speed RMS (mm/s)		
		Shaft height $63 \leq H \leq 132$	Shaft height $132 < H \leq 280$	Shaft height $H > 280$
Grade A	Free suspension	1.6	2.2	2.8
Grade B	Free suspension	0.7	1.1	1.8

If the machine vibrates even after proper alignment on an amply size foundation, this could be cause by incorrect balanced pulley, coupling or similar, fitted to the shaft. Other causes could be weak foundation.

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

EXPLODED VIEW AND SPARE PARTS DESCRIPTION



Pos.	Parts name	Pos.	Parts name
1	B5 flange	16	B4/B14 stator frame
2	B14 flange	17	Gasket
3	Front end shield	18	Terminal plate
4	V-seal	19	Terminal box base
5	Hex bolt	20	Gasket
6	Spring washer	21	Screw
7	Front bearing cover	22	Terminal box cover
8	Spring washer	23	Lifting bolt
9	Hex bolt	24	Rear bearing cover
10	Key	25	Rear end shield
11	Ball bearing (Drive end)	26	Grease nipple
12	Electric rotor	27	V-seal
13	Ball bearing (Non-drive end)	28	Fan
14	Stator stack	29	Fan cover
15	B3 stator frame		

MOTOR PERFORMANCE DATA - 3000 RPM (2 POLE)

IE 1 / EFF2 STANDARD EFFICIENCY

Rated output P_N		Frame size	Rated speed n [min^{-1}]	Efficiency η [%]	Power factor [cos φ]	Rated current I_N at 415 V [A]	Rated Torque T_N [Nm]	DOL starting		Break down Torque / Rated Torque T_B/T_N	Moment of inertia J [kgm^2]	Gross weight [kg]
kW	HP							Locked rotor current / Rated current I_L/I_N	Locked rotor Torque / Rated Torque T_L/T_N			
0.18	0.25	63	2790	64.0	0.83	0.47	0.64	3.50	3.08	3.15	0.0009	8
0.37	0.5	71	2773	71.0	0.84	0.86	1.30	4.72	3.33	3.50	0.0019	10
0.55	0.75	71	2798	74.0	0.97	1.07	1.90	5.25	2.29	2.40	0.0019	15
0.75	1	80	2833	77.0	0.89	1.52	2.58	5.70	3.40	3.55	0.0038	16
1.1	1.5	80	2875	79.0	0.88	2.21	3.77	5.50	2.34	2.50	0.0048	22
1.5	2	90S	2818	80.0	0.95	2.75	5.12	6.00	2.30	2.50	0.0125	24
2.2	3	90L	2800	82.0	0.90	4.15	7.00	5.50	2.88	2.95	0.0229	28
3.7	5	100L	2890	84.5	0.97	6.28	12.53	6.00	2.73	2.85	0.0257	46
5.5	7.5	132S	2881	86.0	0.94	9.47	18.56	6.00	3.62	3.78	0.0853	80
7.5	10	132M	2885	87.0	0.94	12.76	25.22	6.00	2.05	2.20	0.1024	88
9.3	12.5	160M	2940	88.0	0.95	15.48	31.28	6.00	2.26	2.40	0.1556	120
11	15	160M	2912	89.0	0.93	18.49	36.77	5.90	1.89	2.00	0.2029	128
15	20	160M	2943	89.5	0.98	23.79	50.11	6.00	2.35	2.50	0.2435	144
18.5	25	160L	2943	90.0	0.97	29.48	61.59	6.00	1.92	2.10	0.4179	182
22	30	180M	2959	91.0	0.97	34.67	73.26	6.00	2.12	2.25	0.5032	273
30	40	200L	2950	91.5	0.94	48.52	97.13	7.62	2.40	2.20	0.9500	327
37	50	200L	2915	92.5	0.91	61.15	119.64	6.10	2.00	2.30	0.9950	345
45	60	225M	2965	92.8	0.90	74.96	145.14	6.40	2.25	2.40	1.0400	365
55	75	250M	2975	93.3	0.93	88.18	176.52	6.40	2.20	2.40	1.0500	480
75	100	280S	2975	94.0	0.90	123.33	240.75	6.50	2.20	2.50	2.5414	610
90	120	280M	2975	94.2	0.90	147.69	289.00	6.50	2.20	2.50	2.9368	680

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

MOTOR PERFORMANCE DATA - 1500 RPM (4 POLE)

IE 1 / EFF2 STANDARD EFFICIENCY

Rated output P_N		Frame size	Rated speed n [min^{-1}]	Efficiency η [%]	Power factor [cos φ]	Rated current I_N at 415 V [A]	Rated Torque T_N [Nm]	DOL starting		Break down Torque / Rated Torque T_B/T_N	Moment of inertia J [kgm^2]	Gross weight [kg]
kW	HP							Locked rotor current / Rated current I_L/I_N	Locked rotor Torque / Rated Torque T_L/T_N			
0.18	0.25	63	1340	64.0	0.66	0.59	1.29	2.80	1.70	1.80	0.0016	8
0.37	0.5	71	1415	71.5	0.73	0.99	2.66	4.15	2.54	2.65	0.0030	10
0.55	0.75	80	1417	74.0	0.66	1.57	3.92	3.50	2.38	2.50	0.0086	15
0.75	1	80	1440	77.0	0.70	1.93	5.27	3.70	2.36	2.50	0.0093	16
1.1	1.5	90S	1432	78.0	0.81	2.44	7.67	4.80	2.29	2.50	0.0152	19
1.5	2	90L	1412	80.0	0.86	3.04	10.39	4.30	2.00	2.25	0.0120	22
2.2	3	100L	1445	82.0	0.91	4.12	15.12	6.00	2.15	2.25	0.0272	47
3.7	5	112M	1445	85.0	0.83	7.30	25.07	5.60	1.92	2.10	0.0596	55
5.5	7.5	132S	1460	86.0	0.83	10.72	37.00	6.00	1.92	2.10	0.0850	85
7.5	10	132M	1460	87.0	0.84	14.28	50.09	6.00	1.80	2.00	0.1181	101
9.3	12.5	160M	1450	88.0	0.85	17.30	62.12	5.00	1.90	2.00	0.3916	129
11	15	160M	1456	89.0	0.84	20.59	72.96	5.10	1.72	1.85	0.4569	139
15	20	160L	1456	90.0	0.83	27.94	99.50	5.00	2.29	2.35	0.6005	166
18.5	25	180M	1462	91.5	0.91	30.81	122.71	5.00	2.66	2.75	0.7355	273
22	30	180L	1452	91.8	0.93	35.85	145.93	6.00	2.00	2.20	0.9244	283
30	40	200L	1474	92.2	0.90	50.30	199.00	5.70	2.02	2.20	2.5653	342
37	50	225S	1470	93.0	0.88	62.90	239.61	5.90	1.90	2.20	2.6600	351
45	60	225M	1470	93.2	0.84	79.97	292.49	6.50	2.80	2.95	2.7800	375
55	75	250M	1470	93.8	0.85	95.97	356.17	6.00	1.40	1.60	3.0500	503
75	100	280S	1480	94.2	0.90	123.07	484.45	6.00	2.20	2.50	5.0000	625
90	120	280M	1480	95.0	0.90	146.44	580.55	6.00	2.20	2.50	6.0000	721

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

MOTOR PERFORMANCE DATA - 1000 RPM (6 POLE)

IE 1 / EFF2 STANDARD EFFICIENCY

Rated output P_N		Frame size	Rated speed n [min^{-1}]	Efficiency η [%]	Power factor [cos φ]	Rated current I_N at 415 V [A]	Rated Torque T_N [Nm]	DOL starting		Break down Torque / Rated Torque T_B/T_N	Moment of inertia J [kgm^2]	Gross weight [kg]
kW	HP							Locked rotor current / Rated current I_L/I_N	Locked rotor Torque / Rated Torque T_L/T_N			
0.37	0.5	80	914	68.0	0.66	1.15	4.11	3.52	2.10	2.25	0.0027	16
0.55	0.75	80	918	69.0	0.65	1.71	6.11	3.20	2.18	2.30	0.0084	18
0.75	1	90S	923	72.0	0.79	1.83	8.05	3.50	1.90	2.00	0.0122	21
1.1	1.5	90L	925	71.5	0.71	3.01	11.67	3.50	2.10	2.35	0.0235	23
1.5	2	100L	945	78.0	0.78	3.43	15.92	4.34	2.09	2.30	0.0290	49
2.2	3	112M	959	80.6	0.72	5.27	23.09	5.11	1.93	2.15	0.1069	55
3.7	5	132S	910	85.0	0.85	7.12	38.83	5.24	1.60	1.70	0.2050	88
5.5	7.5	132M	954	85.5	0.82	10.91	57.10	6.06	1.60	1.68	0.2432	108
7.5	10	160M	970	87.5	0.79	15.09	77.03	5.81	1.88	1.95	0.2916	136
9.3	12.5	160M	970	88.2	0.80	18.34	91.57	5.75	1.50	1.65	0.4055	141
11	15	160L	974	88.5	0.87	19.88	112.37	6.39	2.10	2.30	0.7765	156
15	20	180L	973	90.0	0.84	27.60	154.06	5.25	1.77	1.90	1.2960	280
18.5	25	200L	974	91.0	0.88	32.14	190.00	4.92	1.85	1.95	1.4435	334
22	30	200L	980	92.0	0.87	38.24	225.96	4.90	1.45	1.55	1.9654	345
30	40	225M	945	92.5	0.84	53.71	308.12	5.00	1.96	2.10	2.8560	365
37	50	250M	982	93.0	0.84	65.89	359.90	5.50	1.30	1.50	3.2200	485
45	60	280S	980	93.3	0.87	77.13	438.36	6.00	2.30	2.30	5.1100	605
55	75	280M	980	93.5	0.85	96.28	536.42	6.00	2.30	2.30	6.1600	655
75	100	315S	985	93.8	0.86	129.35	727.20	7.00	2.10	2.20	4.1100	1030
90	120	315M	985	94.1	0.86	154.72	872.60	6.70	2.00	2.10	4.7800	1110

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

MOTOR PERFORMANCE DATA - 750 RPM (8 POLE)

IE 1 / EFF2 STANDARD EFFICIENCY

Rated output P_N		Frame size	Rated speed n [min^{-1}]	Efficiency η [%]	Power factor [cos φ]	Rated current I_N at 415 V [A]	Rated Torque T_N [Nm]	DOL starting		Break down Torque / Rated Torque T_B/T_N	Moment of inertia J [kgm^2]	Gross weight [kg]
kW	HP							Locked rotor current / Rated current I_L/I_N	Locked rotor Torque / Rated Torque T_L/T_N			
0.37	0.5	90S	710	67.5	0.59	1.29	5.12	3.50	2.33	2.50	0.0160	21
0.55	0.75	90L	712	70.7	0.59	1.83	7.73	3.55	2.66	2.80	0.0210	24
0.75	1	100L	720	71.0	0.56	2.62	9.95	3.87	2.32	2.50	0.0300	47
1.1	1.5	100L	719	76.6	0.68	2.94	14.59	4.50	2.00	2.20	0.0340	50
1.5	2	112M	711	77.0	0.69	3.93	19.90	4.00	1.67	1.80	0.0570	55
2.2	3	132S	706	78.0	0.70	5.61	29.18	4.18	1.66	1.85	0.1740	86
3.7	5	160M	731	82.0	0.73	8.60	48.75	5.35	1.65	1.75	0.2140	131
5.5	7.5	160M	726	85.5	0.74	12.09	72.46	5.20	1.70	1.85	0.4500	141
7.5	10	160L	728	85.0	0.75	16.37	98.14	5.10	1.34	1.50	0.6300	163
11	15	180L	725	88.0	0.72	24.15	144.94	5.00	2.00	2.20	0.5949	290
15	20	200L	735	88.8	0.83	28.31	203.19	6.20	2.67	3.15	1.7600	343
18.5	25	225S	732	89.0	0.83	34.84	241.44	3.60	1.40	1.60	2.9580	355
22	30	225M	730	90.7	0.78	43.26	287.81	6.60	1.90	2.00	0.5470	370
30	40	250M	735	91.0	0.79	58.06	382.47	6.60	1.90	2.00	0.8340	483
37	50	280S	735	91.5	0.79	71.21	484.04	6.60	1.90	2.00	1.9300	587
45	60	280M	735	92.0	0.79	86.14	580.74	6.60	1.80	2.00	3.6500	653
55	75	315S	735	93.0	0.81	101.57	709.80	6.60	1.80	2.00	4.7900	1030
75	100	315M	735	93.2	0.81	138.21	967.91	6.60	1.80	2.00	5.5800	1130
90	120	315L	735	94.0	0.82	162.44	161.49	6.60	1.80	2.00	6.3700	1185

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

MOTOR PERFORMANCE DATA - 3000 RPM (2 POLE)

IE 2 / EFF I

HIGH EFFICIENCY

Rated output P_N		Frame size	Rated speed n [min^{-1}]	Efficiency η [%]	Power factor [cos φ]	Rated current I_N at 415 V [A]	Rated Torque T_N [Nm]	DOL starting		Break down Torque / Rated Torque T_B/T_N	Moment of inertia J [kgm^2]	Gross weight [kg]
kW	HP							Locked rotor current / Rated current I_L/I_N	Locked rotor Torque / Rated Torque T_L/T_N			
0.75	1	80	2875	77.5	0.83	1.62	2.49	5.30	2.5	3.0	0.0008	20
1.1	1.5	80	2875	82.8	0.84	2.20	3.65	7.00	3.2	3.8	0.0009	21
1.5	2	90S	2890	84.1	0.84	2.95	4.96	7.10	2.7	3.5	0.0012	26
2.2	3	90L	2890	85.6	0.85	4.21	7.27	6.90	2.4	3.0	0.0015	29
3.7	5	100L	2914	87.5	0.88	6.69	13.11	7.50	2.5	3.0	0.0050	62
5.5	7.5	132S	2937	88.6	0.86	10.04	17.88	7.50	2.7	3.5	0.0100	93
7.5	10	132S	2940	89.5	0.88	13.25	24.36	7.50	2.4	3.3	0.0120	101
11	15	160M	2930	90.5	0.89	19.00	35.85	7.60	2.2	2.9	0.0385	149
15	20	160M	2930	91.3	0.89	25.68	48.89	7.60	2.3	3.0	0.0466	161
18.5	25	160L	2937	91.8	0.89	31.50	60.15	7.40	2.3	3.1	0.0550	177
22	30	180M	2940	92.2	0.88	37.72	71.46	7.80	2.8	3.2	0.0810	248
30	40	200L	2950	93.0	0.88	51.00	97.12	7.80	2.6	3.0	0.1250	308
37	50	200L	2950	93.3	0.89	61.99	119.78	7.70	2.6	3.0	0.1450	328
45	60	225M	2960	93.7	0.89	75.07	145.19	7.50	2.4	2.6	0.2280	421
55	75	250M	2965	94.0	0.90	90.44	177.15	7.10	2.3	2.8	0.3050	515
75	100	280S	2970	94.6	0.90	122.55	241.16	7.40	2.5	2.8	0.6000	655
90	120	280M	2970	95.0	0.91	144.83	289.39	7.60	2.8	2.8	0.6860	703
110	150	315S	2975	95.2	0.91	176.65	353.11	6.90	2.4	2.8	1.1700	1078
132	180	315M	2975	95.4	0.91	211.53	423.73	7.10	2.6	2.9	1.8000	1139
160	215	315L	2975	95.6	0.92	253.08	513.61	7.10	2.5	2.9	2.1200	1241
200	270	315L	2975	95.7	0.92	316.03	642.02	6.90	2.5	2.8	2.5000	1272
250	340	355M	2980	96.0	0.92	393.80	801.17	7.00	2.5	2.8	3.1000	2088
315	430	355L	2980	96.2	0.92	495.15	1009.48	7.00	2.5	2.9	3.6000	2496

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

MOTOR PERFORMANCE DATA - 1500 RPM (4 POLE)

IE 2 / EFF I

HIGH EFFICIENCY

Rated output P_N		Frame size	Rated speed n [min^{-1}]	Efficiency η [%]	Power factor [cos φ]	Rated current I_N at 415 V [A]	Rated Torque T_N [Nm]	DOL starting		Break down Torque / Rated Torque T_B/T_N	Moment of inertia J [kgm^2]	Gross weight [kg]
kW	HP							Locked rotor current / Rated current I_L/I_N	Locked rotor Torque / Rated Torque T_L/T_N			
0.75	1	80	1400	82.5	0.76	1.66	5.12	5.0	2.4	2.9	0.0022	22
1.1	1.5	90S	1440	83.8	0.77	2.37	7.3	6.0	3.0	3.5	0.0024	27
1.5	2	90L	1445	85.0	0.77	3.19	9.91	6.8	3.2	3.8	0.0030	32
2.2	3	100L	1440	86.4	0.81	4.37	14.6	7.0	3.0	3.5	0.0056	56
3.7	5	112M	1445	88.5	0.82	7.09	26.4	7.5	3.5	4.0	0.0097	67
5.5	7.5	132S	1455	89.3	0.83	10.32	36.1	6.4	2.2	2.8	0.0220	98
7.5	10	132M	1455	90.2	0.84	13.77	49.2	7.0	2.4	3.0	0.0300	108
11	15	160M	1460	91.3	0.84	19.95	71.9	6.9	2.5	2.9	0.0740	162
15	20	160L	1460	92.0	0.85	26.69	98.1	7.5	2.5	3.0	0.0920	173
18.5	25	180M	1470	92.3	0.86	32.42	120.2	7.8	2.6	3.1	0.1350	247
22	30	180L	1470	92.6	0.86	38.43	142.9	7.5	2.6	3.1	0.1600	286
30	40	200L	1470	93.2	0.86	52.07	194.9	7.1	2.4	2.9	0.2650	337
37	50	225S	1480	93.6	0.87	63.21	238.8	7.5	2.5	2.7	0.4200	383
45	60	225M	1480	94.0	0.87	76.55	290.4	7.6	2.5	2.8	0.4700	413
55	75	250M	1480	94.2	0.87	93.36	354.9	7.3	2.6	2.7	0.6600	528
75	100	280S	1480	94.7	0.87	126.64	484	7.6	2.7	2.7	1.1400	645
90	120	280M	1480	95.0	0.87	151.49	580.7	7.5	2.7	2.7	1.4200	745
110	150	315S	1485	95.2	0.88	182.67	707.4	7.1	2.7	2.9	3.4000	1080
132	180	315M	1485	95.5	0.88	218.51	848.9	7.3	2.7	2.9	3.5800	1167
160	215	315L	1485	95.7	0.89	261.34	1029	7.4	3.0	3.0	4.1000	1237
200	270	315L	1485	95.8	0.89	326.34	1286	7.6	3.0	3.0	4.9000	1355
250	340	355M	1490	96.2	0.90	401.71	1602	7.5	2.8	2.9	6.7000	1884
315	430	355L	1490	96.4	0.90	505.11	2019	7.4	2.6	2.8	8.4000	2090

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

MOTOR PERFORMANCE DATA - 1000 RPM (6 POLE)

IE 2 / EFF I

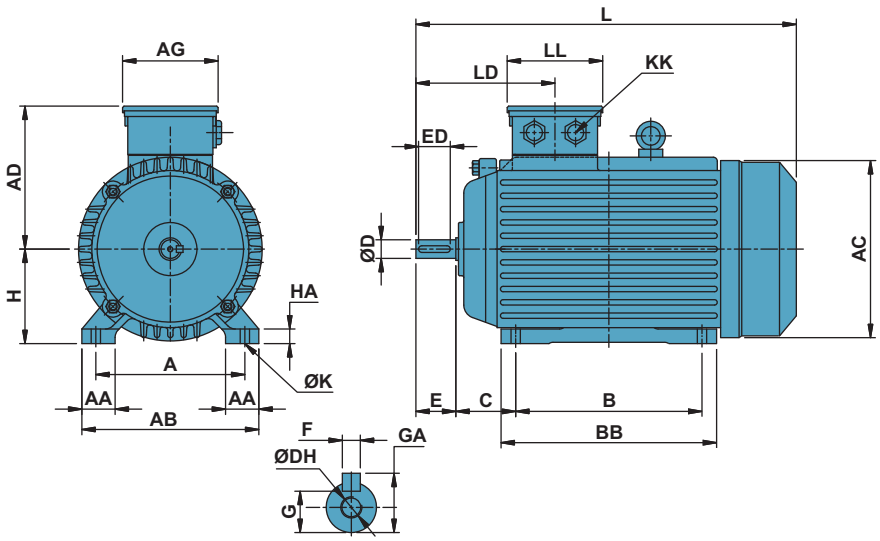
HIGH EFFICIENCY

Rated output P_N		Frame size	Rated speed n [min^{-1}]	Efficiency η [%]	Power factor [cos φ]	Rated current I_N at 415 V [A]	Rated Torque T_N [Nm]	DOL starting		Break down Torque / Rated Torque T_B/T_N	Moment of inertia J [kgm^2]	Gross weight [kg]
kW	HP							Locked rotor current / Rated current I_L/I_N	Locked rotor Torque / Rated Torque T_L/T_N			
0.75	1	90S	934	76.0	0.72	1.91	7.67	4.5	2.2	2.4	0.0030	27
1.1	1.5	90L	945	78.1	0.72	2.72	11.1	4.5	2.4	2.6	0.0040	29
1.5	2	100L	945	79.8	0.75	3.49	15.2	4.2	1.8	2.2	0.0082	54
2.2	3	112M	960	82.2	0.76	4.90	21.9	4.5	2.3	2.8	0.0140	64
3.7	5	132M	965	85.1	0.76	7.96	39.6	5.0	2.3	2.7	0.0360	103
5.5	7.5	132M	965	86.8	0.77	11.45	54.4	5.5	1.9	2.8	0.0400	115
7.5	10	160M	970	88.2	0.78	15.17	73.8	6.5	2.0	3.0	0.0880	175
11	15	160L	970	89.7	0.78	21.87	108.3	7.5	2.4	3.3	0.1150	192
15	20	180L	975	90.5	0.81	28.47	146.9	6.4	2.0	2.7	0.2100	260
18.5	25	200L	980	91.3	0.81	34.80	180.3	7.0	2.3	3.0	0.3100	303
22	30	200L	980	91.8	0.83	40.17	214.4	7.0	2.3	2.8	0.3500	318
30	40	225M	980	92.6	0.84	53.66	292.3	6.5	2.2	2.7	0.5340	390
37	50	250M	980	93.0	0.86	64.36	360.6	6.9	2.5	2.7	0.8250	512
45	60	280S	980	93.5	0.86	77.86	438.5	7.0	2.2	2.4	1.3500	628
55	75	280M	980	93.8	0.86	94.85	536	7.1	2.4	2.5	1.6000	677
75	100	315S	985	94.3	0.86	128.66	727.2	7.3	2.8	3.0	4.0000	1063
90	120	315M	985	94.7	0.86	153.74	872.6	7.1	2.7	2.9	4.6000	1143
110	150	315L	985	94.8	0.86	187.71	1066	7.4	2.9	2.9	5.2500	1216
132	180	315L	985	95.2	0.87	221.72	1280	7.6	3.0	3.1	6.2000	1338
160	215	355M	990	95.3	0.88	265.42	1543	7.6	3.1	3.1	9.6000	1731
200	270	355M	990	95.5	0.88	331.08	1929	7.8	3.0	3.0	10.800	1782
250	340	355L	990	95.6	0.88	413.42	2412	7.7	3.1	3.0	12.500	1884

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

FOOT MOUNTED (IM B3) MOTOR DIMENSIONAL DRAWING

IE 1 / EFF2 STANDARD EFFICIENCY

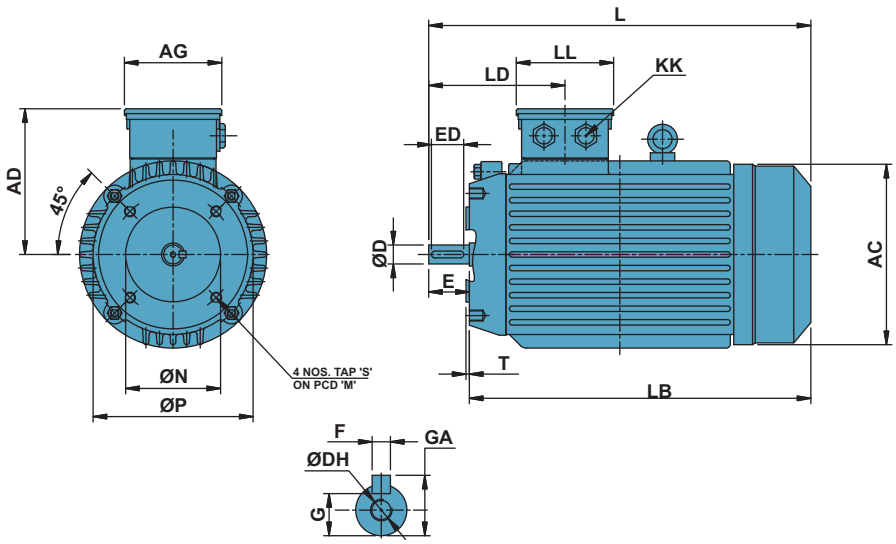


Frame	Pole	A	AA	AB	AC	AD	AG	B	BB	C	D	DH	E	ED	F	G	GA	H	HA	K	KK	L	LD	LL
63	2, 4, 6, 8	100	25	126	122	90	84	80	106	40	11	M4 x 12	23	12	4	8.5	12.5	63	10	7	1 x 3/4"	223	88	78
71	2, 4, 6, 8	112	25	135	144	105	85	90	112	45	14	M5 x 15	30	25	5	11	16	71	10	7	1 x 3/4"	245	100	85
80	2, 4, 6, 8	125	38	155	159	116	85	100	126	50	19	M6 x 19	40	35	6	15.5	21.5	80	10	10	1 x 3/4"	282	120	85
90S	2, 4, 6, 8	140	35	168	178	123	101	100	135	56	24	M8 x 23	50	45	8	20	27	90	12	10	1 x 3/4"	313	156	101
90L	2, 4, 6, 8	140	36	168	178	147	101	125	158	56	24	M8 x 23	50	45	8	20	27	90	12	10	1 x 3/4"	336	172	101
100L	2, 4, 6, 8	160	38	195	193	151	101	140	170	63	28	M10 x 28	60	55	8	24	31	100	14	12	2 x 3/4"	368	157	101
112M	2, 4, 6, 8	190	42	230	218	183	101	140	180	70	28	M10 x 28	60	55	8	24	31	112	15	12	2 x 3/4"	398	164	101
132S	2, 4, 6, 8	216	62	257	262	190	131	140	182	89	38	M12 x 35	80	70	10	33	41	132	18	12	2 x 1"	459	202	131
132M	2, 4, 6, 8	216	62	257	262	190	131	178	220	89	38	M12 x 35	80	70	10	33	41	132	18	12	2 x 1"	497	202	131
160M	2, 4, 6, 8	254	55	305	303	241	172	210	260	108	42	M16 x 42	110	100	12	37	45	160	18	15	2 x 1"	597	282	195
160L	2, 4, 6, 8	254	55	305	303	241	172	254	300	108	42	M16 x 42	110	100	12	37	45	160	18	15	2 x 1"	639	282	195
180M	2, 4, 6, 8	279	66	342	355	294	265	241	310	121	48	M16 x 42	110	100	14	42.5	51.5	180	27	15	2xM40x1.5	720	280	195
180L	2, 4, 6, 8	279	66	342	355	294	265	279	340	121	48	M16 x 42	110	100	14	42.5	51.5	180	27	15	2xM40x1.5	759	280	195
200L	2, 4, 6, 8	318	86	400	392	306	265	305	360	133	55	M20 x 42	110	100	16	49	59	200	30	19	2xM50x1.5	807	288	195
225S	4, 8	356	75	431	446	322	210	286	368	149	60	M20 x 42	140	125	18	53	64	225	28	19	2xM50x1.5	824	329	190
225M	2	356	75	431	446	322	210	311	393	149	55	M20 x 42	110	100	16	49	59	225	28	19	2xM50x1.5	819	299	190
	4, 6, 8	356	75	431	446	322	210	311	393	149	60	M20 x 42	140	125	18	53	64	225	28	19	2xM50x1.5	849	329	190
250M	2	406	80	484	485	358	248	349	445	168	60	M20 x 42	140	125	18	53	64	250	30	24	2xM63x1.5	910	347	218
	4, 6, 8	406	80	484	485	358	248	349	445	168	65	M20 x 42	140	125	18	58	69	250	30	24	2xM63x1.5	910	347	218
280S	2	457	85	542	547	387	248	368	485	190	65	M20 x 42	140	125	18	58	69	280	35	24	2xM63x1.5	982	355.5	218
	4, 6, 8	457	85	542	547	387	248	368	485	190	75	M20 x 42	140	125	20	67.5	79.5	280	35	24	2xM63x1.5	982	355.5	218
280M	2	457	85	542	547	387	248	419	536	190	65	M20 x 42	140	125	18	58	69	280	35	24	2xM63x1.5	1033	355.5	218
	4, 6, 8	457	85	542	547	387	248	419	536	190	75	M20 x 42	140	125	20	67.5	79.5	280	35	24	2xM63x1.5	1033	355.5	218
315S	2	508	120	628	620	527	320	406	570	216	65	M20 x 42	140	125	18	58	69	315	45	28	2xM63x1.5	1178	397	280
	4, 6, 8	508	120	628	620	527	320	406	570	216	80	M20 x 42	170	160	22	71	85	315	45	28	2xM63x1.5	1208	427	280
315M	2	508	120	628	620	527	320	457	680	216	65	M20 x 42	140	125	18	58	69	315	45	28	2xM63x1.5	1288	397	280
	4, 6, 8	508	120	628	620	527	320	457	680	216	80	M20 x 42	170	160	22	71	85	315	45	28	2xM63x1.5	1318	427	280
315L	2	508	120	628	620	527	320	508	680	216	65	M20 x 42	140	125	18	58	69	315	45	28	2xM63x1.5	1288	397	280
	4, 6, 8	508	120	628	620	527	320	508	680	216	80	M20 x 42	170	160	22	71	85	315	45	28	2xM63x1.5	1318	427	280

Note: All dimensions in mm unless otherwise noted.

"C" TYPE FLANGE MOUNTED (IM B14) MOTOR DIMENSIONAL DRAWING

IE 1 / EFF2 STANDARD EFFICIENCY

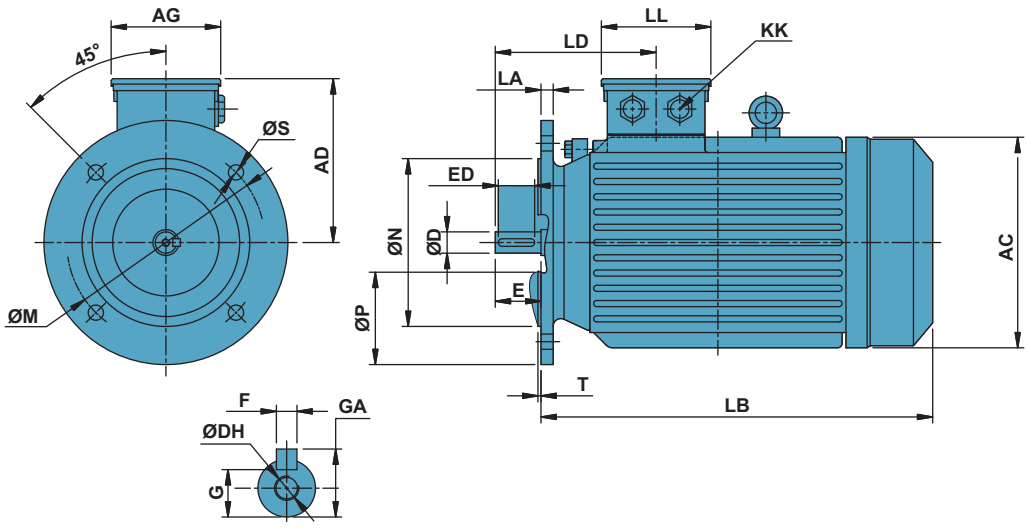


Frame	Pole	AC	AD	AG	D	DH	E	ED	F	G	GA	KK	L	LB	LD	LL	M	N	P	S	T
63	2, 4, 6, 8	122	90	84	11	M4 x 12	23	12	4	8.5	12.5	1 x 3/4"	223	200	88	78	75	60	90	M5	2.5
71	2, 4, 6, 8	144	105	85	14	M5 x 15	30	25	5	11	16	1 x 3/4"	245	215	100	85	85	70	105	M6	2.5
80	2, 4, 6, 8	159	116	85	19	M6 x 19	40	35	6	15.5	21.5	1 x 3/4"	282	242	120	85	100	80	120	M6	3
90S	2, 4, 6, 8	178	123	101	24	M8 x 23	50	45	8	20	27	1 x 3/4"	313	263	156	101	115	95	140	M8	3
90L	2, 4, 6, 8	178	147	101	24	M8 x 23	50	45	8	20	27	1 x 3/4"	336	286	172	101	115	95	140	M8	3
100L	2, 4, 6, 8	193	151	101	28	M10 x 28	60	55	8	24	31	2 x 3/4"	368	308	157	101	130	110	160	M8	3.5
112M	2, 4, 6, 8	218	183	101	28	M10 x 28	60	55	8	24	31	2 x 3/4"	398	338	164	101	130	110	160	M8	3.5
132S	2, 4, 6, 8	262	190	131	38	M12 x 35	80	70	10	33	41	2 x 1"	459	379	202	131	165	200	160	M12	3.5
132M	2, 4, 6, 8	262	190	131	38	M12 x 35	80	70	10	33	41	2 x 1"	497	417	202	131	165	200	160	M12	3.5

Note: All dimensions in mm unless otherwise noted.

"B" TYPE FLANGE MOUNTED (IM B5) MOTOR DIMENSIONAL DRAWING

IE 1 / EFF2 STANDARD EFFICIENCY



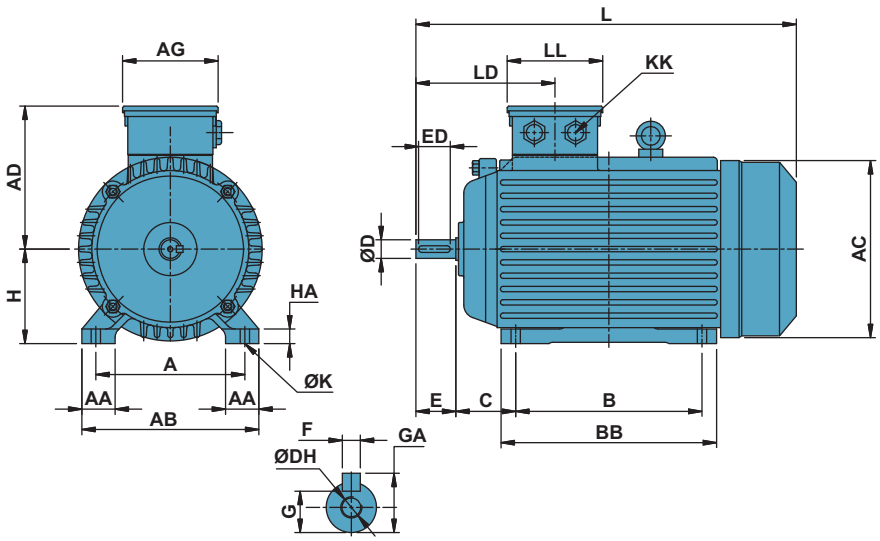
Frame	Pole	AC	AD	AG	D	DH	E	ED	F	G	GA	KK	L	LA	LB	LD	LL	M	N	P	S	T
63	2, 4, 6, 8	122	90	84	11	M4 x 12	23	12	4	8.5	12.5	1 x 3/4"	223	9	200	88	78	115	95	140	10	3
71	2, 4, 6, 8	144	105	85	14	M5 x 15	30	25	5	11	16	1 x 3/4"	245	9	215	100	85	130	110	160	10	3.5
80	2, 4, 6, 8	159	116	85	19	M6 x 19	40	35	6	15.5	21.5	1 x 3/4"	282	10	242	120	85	165	130	200	12	3.5
90S	2, 4, 6, 8	178	123	101	24	M8 x 23	50	45	8	20	27	1 x 3/4"	313	10	263	156	101	165	130	200	12	3.5
90L	2, 4, 6, 8	178	147	101	24	M8 x 23	50	45	8	20	27	1 x 3/4"	336	10	286	172	101	165	130	200	12	3.5
100L	2, 4, 6, 8	193	151	101	28	M10 x 28	60	55	8	24	31	2 x 3/4"	368	11	308	157	101	215	180	250	15	4
112M	2, 4, 6, 8	218	183	101	28	M10 x 28	60	55	8	24	31	2 x 3/4"	398	11	338	164	101	215	180	250	15	4
132S	2, 4, 6, 8	262	190	131	38	M12 x 35	80	70	10	33	41	2 x 1"	459	12	379	202	131	265	230	300	15	4
132M	2, 4, 6, 8	262	190	131	38	M12 x 35	80	70	10	33	41	2 x 1"	497	12	417	202	131	265	230	300	15	4
160M	2, 4, 6, 8	303	241	172	42	M16 x 42	110	100	12	37	45	2 x 1"	597	13	487	282	195	300	250	350	19	5
160L	2, 4, 6, 8	303	241	172	42	M16 x 42	110	100	12	37	45	2 x 1"	639	13	529	282	195	300	250	350	19	5
180M	2, 4, 6, 8	355	294	265	48	M16 x 42	110	100	14	42.5	51.5	2xM40x1.5	720	13	610	280	195	300	250	350	19	5
180L	2, 4, 6, 8	355	294	265	48	M16 x 42	110	100	14	42.5	51.5	2xM40x1.5	759	13	649	280	195	300	250	350	19	5
200L	2, 4, 6, 8	392	306	265	55	M20 x 42	110	100	16	49	59	2xM50x1.5	807	15	697	288	195	350	300	400	19	5
225S	4, 8	446	322	210	60	M20 x 42	140	125	18	43	64	2xM50x1.5	824	20	684	329	190	400	350	450	19	5
225M	2	446	322	210	55	M20 x 42	110	100	16	49	59	2xM50x1.5	819	20	709	299	190	400	350	450	19	5
	4, 6, 8	446	322	210	60	M20 x 42	140	125	18	53	64	2xM50x1.5	849	20	709	329	190	400	350	450	19	5
250M	2	485	358	248	60	M20 x 42	140	125	18	53	64	2xM63x1.5	910	22	770	347	218	500	450	550	19	5
	4, 6, 8	485	358	248	65	M20 x 42	140	125	18	58	69	2xM63x1.5	910	22	770	347	218	500	450	550	19	5
280S	2	547	387	248	65	M20 x 42	140	125	18	58	69	2xM63x1.5	982	22	842	355.5	218	500	450	550	19	5
	4, 6, 8	547	387	248	75	M20 x 42	140	125	20	67.5	79.5	2xM63x1.5	982	22	842	355.5	218	500	450	550	19	5
280M	2	547	387	248	65	M20 x 42	140	125	18	58	69	2xM63x1.5	1033	22	893	355.5	218	500	450	550	19	5
	4, 6, 8	547	387	248	75	M20 x 42	140	125	20	67.5	79.5	2xM63x1.5	1033	22	893	355.5	218	500	450	550	19	5
315S	2	620	527	320	65	M20 x 42	140	125	18	58	69	2xM63x1.5	1178	22	1038	397	280	600	550	660	24	6
	4, 6, 8	620	527	320	80	M20 x 42	170	160	22	71	85	2xM63x1.5	1208	22	1038	427	280	600	550	660	24	6
315M	2	620	527	320	65	M20 x 42	140	125	18	58	69	2xM63x1.5	1288	22	1148	397	280	600	550	660	24	6
	4, 6, 8	620	527	320	80	M20 x 42	170	160	22	71	85	2xM63x1.5	1318	22	1148	427	280	600	550	660	24	6
315L	2	620	527	320	65	M20 x 42	140	125	18	58	69	2xM63x1.5	1288	22	1148	397	280	600	550	660	24	6
	4, 6, 8	620	527	320	80	M20 x 42	170	160	22	71	85	2xM63x1.5	1318	22	1148	427	280	600	550	660	24	6

Note: All dimensions in mm unless otherwise noted.

FOOT MOUNTED (IM B3) MOTOR DIMENSIONAL DRAWING

IE 2 / EFF I

HIGH EFFICIENCY



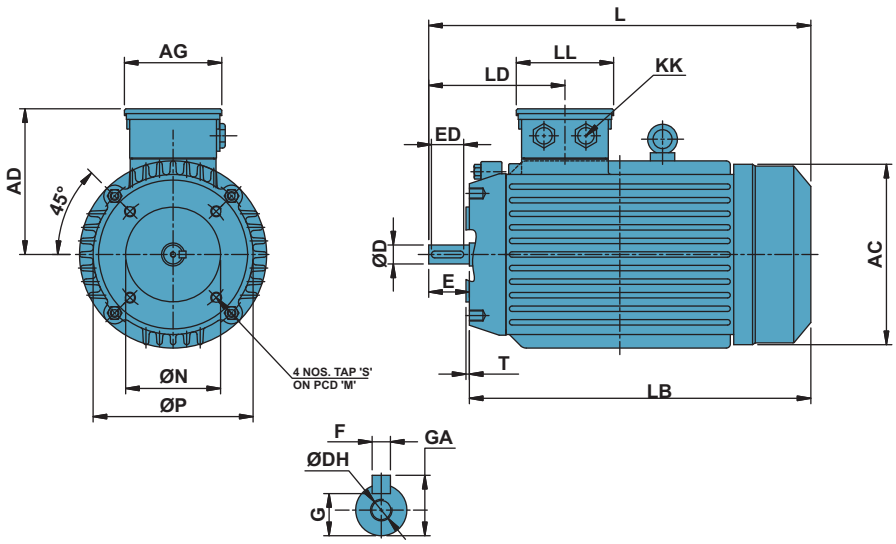
Frame	Pole	A	AA	AB	AC	AD	AG	B	BB	C	D	DH	E	ED	F	G	GA	H	HA	K	KK	L	LD	LL
80	2, 4, 6, 8	125	34	160	167	147	102	100	150	50	19	M6 x 16	40	30	6	15.5	21.5	80	10	10	1xM20x1.5	304	119	102
90S	2, 4, 6, 8	140	36	176	182.4	154.5	102	100	161	56	24	M8 x 19	50	40	8	20	27	90	12	10	1xM20x1.5	336	143	102
90L	2, 4, 6, 8	140	36	176	182.4	154.5	102	125	186	56	24	M8 x 19	50	40	8	20	27	90	12	10	1xM20x1.5	361	143	102
100L	2, 4, 6, 8	160	40	200	205.4	166	102	140	213	63	28	M10 x 22	60	50	8	24	31	100	14	12	1xM20x1.5	406	147	102
112M	2, 4, 6, 8	190	50	240	219.4	182	118	140	225	70	28	M10 x 22	60	50	8	24	31	112	15	12	2xM32x1.5	452	147	110
132S	2, 4, 6, 8	216	55	262	258.4	203	118	140	200	89	38	M12 x 28	80	65	10	33	41	132	18	12	2xM32x1.5	470	172	110
132M	2, 4, 6, 8	216	55	262	258.4	203	118	178	238	89	38	M12 x 28	80	65	10	33	41	132	18	12	2xM32x1.5	508	172	110
160M	2, 4, 6, 8	254	65	314	314	251	162	210	260	108	42	M16 x 36	110	90	12	37	45	160	20	14.5	2xM40x1.5	608	256	152
160L	2, 4, 6, 8	254	65	314	314	251	162	254	304	108	42	M16 x 36	110	90	12	37	45	160	20	14.5	2xM40x1.5	652	256	152
180M	2, 4, 6, 8	279	70	349	355	267	162	241	311	121	48	M16 x 36	110	90	14	42.5	51.5	180	22	14.5	2xM40x1.5	688	271	152
180L	2, 4, 6, 8	279	70	349	355	267	162	279	349	121	48	M16 x 36	110	90	14	42.5	51.5	180	22	14.5	2xM40x1.5	726	271	152
200L	2, 4, 6, 8	318	70	388	397	299	210	305	369	133	55	M20 x 36	110	100	16	49	59	200	25	16.5	2xM50x1.5	779	296	190
225S	4, 8	356	75	431	446	322	210	286	368	149	60	M20 x 42	140	125	18	53	64	225	28	18.5	2xM50x1.5	824	329	190
225M	2	356	75	431	446	322	210	311	393	149	55	M20 x 42	110	100	16	49	59	225	28	18.5	2xM50x1.5	819	299	190
	4, 6, 8	356	75	431	446	322	210	311	393	149	60	M20 x 42	140	125	18	53	64	225	28	18.5	2xM50x1.5	849	329	190
250M	2	406	80	484	485	358	248	349	445	168	60	M20 x 42	140	125	18	53	64	250	30	24	2xM63x1.5	910	347	218
	4, 6, 8	406	80	484	485	358	248	349	445	168	65	M20 x 42	140	125	18	58	69	250	30	24	2xM63x1.5	910	347	218
280S	2	457	85	542	547	387	248	368	485	190	65	M20 x 42	140	125	18	58	69	280	35	24	2xM63x1.5	982	355.5	218
	4, 6, 8	457	85	542	547	387	248	368	485	190	75	M20 x 42	140	125	20	67.5	79.5	280	35	24	2xM63x1.5	982	355.5	218
280M	2	457	85	542	547	387	248	419	536	190	65	M20 x 42	140	125	18	58	69	280	35	24	2xM63x1.5	1033	355.5	218
	4, 6, 8	457	85	542	547	387	248	419	536	190	75	M20 x 42	140	125	20	67.5	79.5	280	35	24	2xM63x1.5	1033	355.5	218
315S	2	508	120	628	620	527	320	406	570	216	65	M20 x 42	140	125	18	58	69	315	45	28	2xM63x1.5	1178	397	280
	4, 6, 8	508	120	628	620	527	320	406	570	216	80	M20 x 42	170	160	22	71	85	315	45	28	2xM63x1.5	1208	427	280
315M	2	508	120	628	620	527	320	457	680	216	65	M20 x 42	140	125	18	58	69	315	45	28	2xM63x1.5	1288	397	280
	4, 6, 8	508	120	628	620	527	320	457	680	216	80	M20 x 42	170	160	22	71	85	315	45	28	2xM63x1.5	1318	427	280
315L	2	508	120	628	620	527	320	508	680	216	65	M20 x 42	140	125	18	58	69	315	45	28	2xM63x1.5	1288	397	280
	4, 6, 8	508	120	628	620	527	320	508	680	216	80	M20 x 42	170	160	22	71	85	315	45	28	2xM63x1.5	1318	427	280
355M	2	610	116	726	698	642	380	560	750	254	75	M20 x 50	140	130	20	67.5	79.5	355	52	28	2xM63x1.5	1486	414	330
	4, 6, 8	610	116	726	698	642	380	560	750	254	95	M24 x 50	170	160	25	86	100	355	52	28	2xM63x1.5	1516	444	330
355L	2	610	116	726	698	642	380	630	750	254	75	M20 x 50	140	130	20	67.5	79.5	355	52	28	2xM63x1.5	1486	414	330
	4, 6, 8	610	116	726	698	642	380	630	750	254	95	M24 x 50	170	160	25	86	100	355	52	28	2xM63x1.5	1516	444	330

Note: All dimensions in mm unless otherwise noted.

"C" TYPE FLANGE MOUNTED (IM B14) MOTOR DIMENSIONAL DRAWING

IE 2 / EFF I

HIGH EFFICIENCY



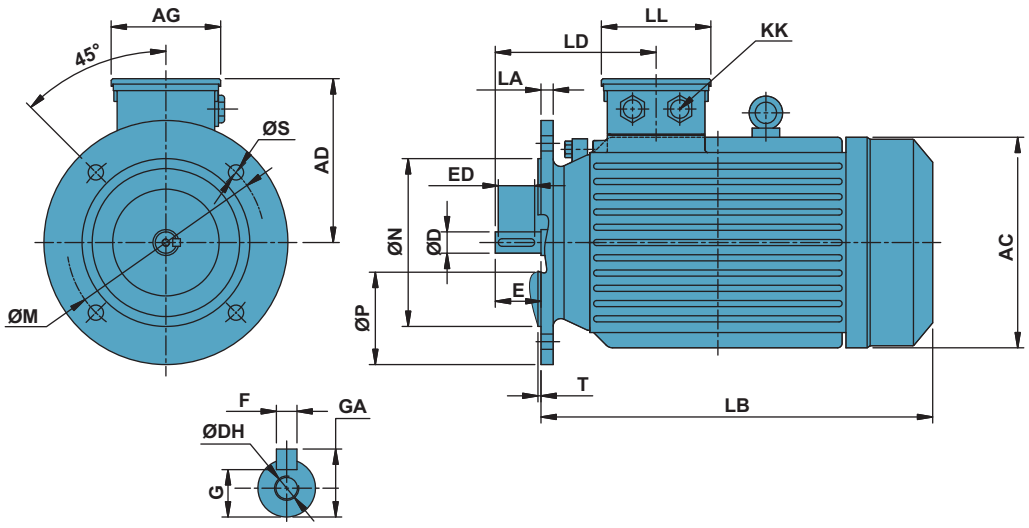
Frame	Pole	AC	AD	AG	D	DH	E	ED	F	G	GA	KK	L	LB	LD	LL	M	N	P	S	T
80	2, 4, 6, 8	158	129	101	19	M6 x 16	40	30	6	15.5	21.5	1xM20x1.5	290	250	75	101	100	80	120	M6	3
90S	2, 4, 6, 8	175	140	109	24	M8 x 19	50	40	8	20	27	1xM20x1.5	325	275	95	109	115	95	140	M8	3
90L	2, 4, 6, 8	175	140	109	24	M8 x 19	50	40	8	20	27	1xM20x1.5	350	300	95	109	115	95	140	M8	3
100L	2, 4, 6, 8	198	156	109	28	M10 x 22	60	50	8	24	31	1xM20x1.5	398	338	88.5	109	130	110	160	M8	3.5
112M	2, 4, 6, 8	219	166	117.5	28	M10 x 22	60	50	8	24	31	2xM32x1.5	447	387	92	117.5	130	110	160	M8	3.5
132S	2, 4, 6, 8	258	188	117.5	38	M12 x 28	80	65	10	33	41	2xM32x1.5	475	395	100	117.5	165	130	200	M10	3.5
132M	2, 4, 6, 8	258	188	117.5	38	M12 x 28	80	65	10	33	41	2xM32x1.5	513	433	100	117.5	165	130	200	M10	3.5
160M	2, 4, 6, 8	315	242	167	42	M16 x 36	110	90	12	37	45	2xM40x1.5	609	499	158.5	167	215	180	250	M12	4
160L	2, 4, 6, 8	315	242	167	42	M16 x 36	110	90	12	37	45	2xM40x1.5	653	543	158.5	167	215	180	250	M12	4

Note: All dimensions in mm unless otherwise noted.

"B" TYPE FLANGE MOUNTED (IM B5) MOTOR DIMENSIONAL DRAWING

IE 2 / EFF I

HIGH EFFICIENCY



Frame	Pole	AC	AD	AG	D	DH	E	ED	F	G	GA	KK	L	LA	LB	LD	LL	M	N	P	S	T
80	2, 4, 6, 8	167	154.5	102	19	M6 x 16	40	30	6	15.5	21.5	1xM20x1.5	304	12	264	112	102	165	130	200	12	3.5
90S	2, 4, 6, 8	182.4	162	102	24	M8 x 19	50	40	8	20	27	1xM20x1.5	336	12	286	130	102	165	130	200	12	3.5
90L	2, 4, 6, 8	182.4	162	102	24	M8 x 19	50	40	8	20	27	1xM20x1.5	361	12	311	130	102	165	130	200	12	3.5
100L	2, 4, 6, 8	205.4	173.5	102	28	M10 x 22	60	50	8	24	31	1xM20x1.5	406	13	346	139	102	215	180	250	14.5	4
112M	2, 4, 6, 8	219.4	190	118	28	M10 x 22	60	50	8	24	31	2xM32x1.5	452	14	392	147	110	215	180	250	14.5	4
132S	2, 4, 6, 8	258.4	203	118	38	M12 x 28	80	65	10	33	41	2xM32x1.5	470	14	390	172	110	265	230	300	14.5	4
132M	2, 4, 6, 8	258.4	203	118	38	M12 x 28	80	65	10	33	41	2xM32x1.5	508	14	428	172	110	265	230	300	14.5	4
160M	2, 4, 6, 8	314	251	162	42	M16 x 36	110	90	12	37	45	2xM40x1.5	608	15	498	256	152	300	250	350	18.5	5
160L	2, 4, 6, 8	314	251	162	42	M16 x 36	110	90	12	37	45	2xM40x1.5	652	15	542	256	152	300	250	350	18.5	5
180M	2, 4, 6, 8	355	267	162	48	M16 x 36	110	90	14	42.5	51.5	2xM40x1.5	688	15	578	271	152	300	250	350	18.5	5
180L	2, 4, 6, 8	355	267	162	48	M16 x 36	110	90	14	42.5	51.5	2xM40x1.5	726	15	616	271	152	300	250	350	18.5	5
200L	2, 4, 6, 8	397	299	210	55	M20 x 42	110	100	16	49	59	2xM50x1.5	779	17	669	296	190	350	300	400	18.5	5
225S	4, 8	446	322	210	60	M20 x 42	140	125	18	53	64	2xM50x1.5	824	20	684	329	190	400	350	450	18.5	5
225M	2	446	322	210	55	M20 x 42	110	100	16	49	59	2xM50x1.5	819	20	709	299	190	400	350	450	18.5	5
	4, 6, 8	446	322	210	60	M20 x 42	140	125	18	53	64	2xM50x1.5	849	20	709	329	190	400	350	450	18.5	5
250M	2	485	358	248	60	M20 x 42	140	125	18	53	64	2xM63x1.5	910	22	770	347	218	500	450	550	18.5	5
	4, 6, 8	485	358	248	65	M20 x 42	140	125	18	58	69	2xM63x1.5	910	22	770	347	218	500	450	550	18.5	5
280S	2	547	387	248	65	M20 x 42	140	125	18	58	69	2xM63x1.5	982	22	842	355.5	218	500	450	550	18.5	5
	4, 6, 8	547	387	248	75	M20 x 42	140	125	20	67.5	79.5	2xM63x1.5	982	22	842	355.5	218	500	450	550	18.5	5
280M	2	547	387	248	65	M20 x 42	140	125	18	58	69	2xM63x1.5	1033	22	893	355.5	218	500	450	550	18.5	5
	4, 6, 8	547	387	248	75	M20 x 42	140	125	20	67.5	79.5	2xM63x1.5	1033	22	893	355.5	218	500	450	550	18.5	5
315S	2	620	527	320	65	M20 x 42	140	125	18	58	69	2xM63x1.5	1178	22	1038	397	280	600	550	660	24	6
	4, 6, 8	620	527	320	80	M20 x 42	170	160	22	71	85	2xM63x1.5	1208	22	1038	427	280	600	550	660	24	6
315M	2	620	527	320	65	M20 x 42	140	125	18	58	69	2xM63x1.5	1288	22	1148	397	280	600	550	660	24	6
	4, 6, 8	620	527	320	80	M20 x 42	170	160	22	71	85	2xM63x1.5	1318	22	1148	427	280	600	550	660	24	6
315L	2	620	527	320	65	M20 x 42	140	125	18	58	69	2xM63x1.5	1288	22	1148	397	280	600	550	660	24	6
	4, 6, 8	620	527	320	80	M20 x 42	170	160	22	71	85	2xM63x1.5	1318	22	1148	427	280	600	550	660	24	6
355M	2	698	642	380	75	M20 x 50	140	130	20	67.5	79.5	2xM63x1.5	1486	25	1346	414	330	740	680	800	24	6
	4, 6, 8	698	642	380	95	M24 x 50	170	160	25	86	100	2xM63x1.5	1516	25	1346	444	330	740	680	800	24	6
355L	2	698	642	380	75	M20 x 50	140	130	20	67.5	79.5	2xM63x1.5	1486	25	1346	414	330	740	680	800	24	6
	4, 6, 8	698	642	380	95	M24 x 50	170	160	25	86	100	2xM63x1.5	1516	25	1346	444	330	740	680	800	24	6

Note: All dimensions in mm unless otherwise noted.

SHIPPING DIMENSIONS

IE 1 / EFF2 STANDARD EFFICIENCY

Frame size	Gross weight [kg]				Package dimensions [mm]	Gross volume [m³]
	2 pole	4 pole	6 pole	8 pole		
63	8	8	-	-	300 x 235 x 185	0.013
71	15	10	-	-	300 x 235 x 185	0.013
80	22	16	18	-	320 x 235 x 205	0.015
90S	24	19	21	21	390 x 270 x 245	0.026
90L	28	22	23	24	390 x 270 x 245	0.026
100L	46	47	49	50	510 x 380 x 380	0.074
112M	52	55	55	55	510 x 380 x 380	0.074
132S	80	85	88	86	660 x 435 x 460	0.132
132M	93	101	108	-	660 x 435 x 460	0.132
160M	144	139	141	141	750 x 535 x 430	0.173
160L	182	166	156	163	800 x 535 x 430	0.184
180M	273	273	-	-	965 x 610 x 660	0.389
180L	-	289	280	290	965 x 610 x 660	0.389
200L	345	342	345	343	1020 x 635 x 690	0.447
225S	-	351	-	355	1070 x 635 x 740	0.503
225M	365	375	365	370	1070 x 635 x 740	0.503
250M	480	503	485	483	1095 x 660 x 865	0.625
280S	610	625	605	587	1270 x 790 x 1020	1.020
280M	680	721	655	653	1270 x 790 x 1020	1.020
315S	-	-	1030	1030	1410 x 830 x 1140	1.334
315M	-	-	1110	1130	1410 x 830 x 1140	1.410
315L	-	-	-	1185	1410 x 830 x 1140	1.438
355M	-	-	-	-	1740 x 950 x 1250	2.066
355L	-	-	-	-	1740 x 950 x 1250	2.066

SHIPPING DIMENSIONS

IE 2 / EFF I

HIGH EFFICIENCY

Frame size	Gross weight [kg]			Package dimensions [mm]	Gross volume [m³]
	2 pole	4 pole	6 pole		
63	-	-	-	300 x 235 x 185	0.013
71	-	-	-	300 x 235 x 185	0.013
80	21	22	-	320 x 235 x 205	0.015
90S	26	27	27	390 x 270 x 245	0.026
90L	29	32	29	390 x 270 x 245	0.026
100L	55	61	54	510 x 380 x 380	0.074
112M	62	67	64	510 x 380 x 380	0.074
132S	101	98	96	660 x 435 x 460	0.132
132M	-	108	115	660 x 435 x 460	0.132
160M	161	162	175	750 x 535 x 430	0.173
160L	177	173	192	800 x 535 x 430	0.184
180M	248	247	-	965 x 610 x 660	0.389
180L	-	286	260	965 x 610 x 660	0.389
200L	328	337	318	1020 x 635 x 690	0.447
225S	-	383	-	1070 x 635 x 740	0.503
225M	421	413	390	1070 x 635 x 740	0.503
250M	515	528	512	1095 x 660 x 865	0.625
280S	655	645	628	1270 x 790 x 1020	1.020
280M	703	745	677	1270 x 790 x 1020	1.020
315S	1078	1080	1063	1410 x 830 x 1140	1.334
315M	1139	1167	1143	1410 x 830 x 1140	1.410
315L	1272	1355	1338	1410 x 830 x 1140	1.438
355M	2088	1884	1782	1740 x 950 x 1250	2.066
355L	2496	2090	1884	1740 x 950 x 1250	2.066

Tel. : +34 96 1665200
e-mail: info@pumpsgp.com

GENERAL PUMPS

GENERAL PUMPS, S.L.

Pol. Ind. El Oliveral (U.E.7, Nave n°1) - Calle W
46394 Ribarroja del Turia - Valencia Spain
Tel. : +34 96 1665200 / Fax :+34 96 1665052
E-mail: info@pumpsgp.com • www.pumpsgp.com