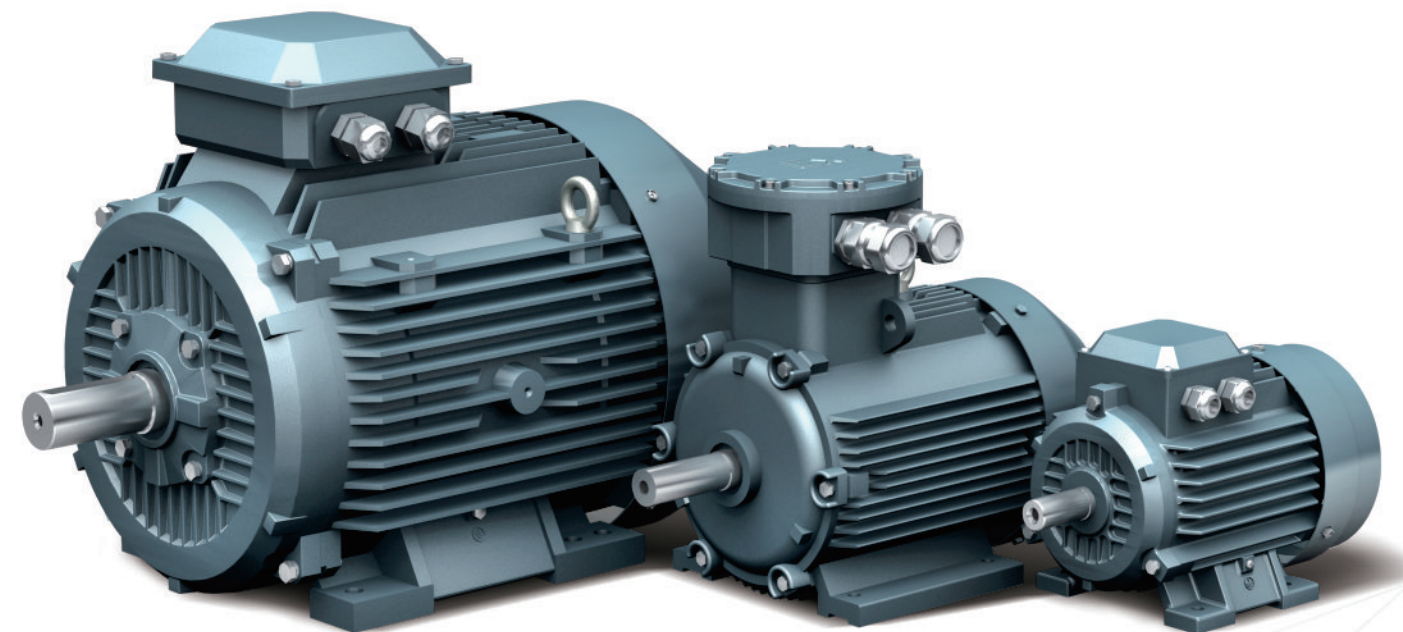




AMG ELECTRIC MOTORS

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Standard Induction Motor
www.amgmotors.co.za



About

AMG Electric Motors commenced business in South Africa in January 2015, introducing mechanical product and consumables to the market with high quality at a market related price. Our Sales force is experienced and knowledgeable with some members of the team with up to 30 year experience in some industries. The management team is there to support the customers and sales team, in finding reliable products and solutions to support their business and plants to maximum efficiencies, to establish a sound, reliable long lasting relationship.

AMG Motor's aims to provide a service that exceeds your expectations by selling quality motors that meet your every requirement. Our price is competitive and carries an outstanding back up service.

Our office and warehouse facilities are situated in the east rand, as the location supports easy access to all major highways for logistical functionality, thus ensuring we are able to provide prompt service to a large area. We service the whole of Gauteng and surrounding provinces with quality motors, professional service and expert advice.



AMG ELECTRIC MOTORS

www.amgmotors.co.za

END USER MARKETS



OEM SPECIALIZED EQUIPMENT

- Pump, Fan, Compressor & Other
- Power Transmission, Mixers, Conveyors & Other



Nameplate

Motor type
Duty cycle
Series No
Drive –end Bearing & Non-Drive-end bearing
Protection degree
Weight
Insulation class
Rated voltage
Rated frequency
RPM
Rated output
Electric current
Power factor

SABS

APPROVED

Permit NO.11016/17295

SANS 1804-1/2

ELECTRIC MOTORS

TYPE IE2-160L2-2		S1-100%		No.2206001	
6309/C3	6309/C3	IP 65	IM B3	IEC 60034-1	
EFF- 90.9 (100%)		90.9 (75%)	89.1 (50%)	132 Kg	
Amb 40 °C		Alt 1000 m	Ins.cl F	DATE 2022.06	
3~	V	Hz	r/min	kW	COS Φ A
380	△	50	2945	18.5	0.89 34.7
660	Y	50	2945	18.5	0.89 20.0

Electrical Formulas

Active kW	=	kVA x PF	or	$\frac{\text{line amps} \times \text{line volts} \times 1.732 \times \text{PF}}{1000}$
Rated kW	=	kVA x PF x eff	or	$\frac{\text{line amps} \times \text{line volts} \times 1.732 \times \text{PF} \times \text{eff}}{1000}$ or HP x 0.746
Rated HP	=	$\frac{\text{active kW} \times \text{eff}}{0.746}$	or	$\frac{\text{line amps} \times \text{line volts} \times 1.732 \times \text{PF} \times \text{eff}}{746}$
Apparent Power (kVA)	=	$\frac{\text{rated kW}}{\text{eff} \times \text{PF}}$	or	$\frac{\text{HP} \times 0.746}{\text{eff} \times \text{PF}}$ or $\frac{\text{line amps} \times \text{line volts} \times 1.732}{1000}$
Line Amps	=	$\frac{\text{rated kW} \times 1000}{\text{line volts} \times 1.732 \times \text{eff} \times \text{PF}}$	or	$\frac{\text{Rated HP} \times 746}{\text{Line volts} \times 1.732 \times \text{eff} \times \text{PF}}$
Rated Torque (Nm)	=	$\frac{9.55 \times \text{rated kW} \times 1000}{\text{rated speed of motor (r/min)}}$		
Rated kW	=	$\frac{\text{rated torque (Nm)} \times \text{rated speed of motor (r/min)}}{9.55 \times 1000}$		
Rated Slip (%)	=	$\left\{ \frac{\text{synchronous speed} - \text{rated speed}}{\text{synchronous speed}} \right\} \times 100$		
Starting Time(s)	=	$\frac{\text{total inertia} \times \text{working speed (r/min)}}{9.55 \times \text{Mean acceleration torque (Nm)}}$		
Synch. Speed (r/min)	=	$\frac{\text{frequency (Hz)} \times 60}{\text{number of pairs of poles}}$		

Key: PF = Power Factor; EFF = Efficiency (%); HP = Horse Power

Cooling and Ventilation

The standard motors from FS 80 ~ 355 are fitted with an radial flow fan for cooling in accordance with IEC 60034-6 cooling method. For applications where self ventilation is not adequate, an optional external blower can be ordered.

Bearing

All motors are supplied with the ball bearing as standard. FS 160 and above, roller bearings and angular contact ball bearings on options. These bearings are either of the sealed or regreasable type.

Bearing type

Motor Type	Frame Size	Poles	Drive –end Bearing	Non-Drive-end bearing
IE2/IE3-63	63	2.4.6.8	6201 2RZC3	6201 2RZC3
IE2/IE3-71	71	2.4.6.8	6202 2RZC3	6202 2RZC3
IE2/IE3-80	80	2.4.6.8	6204 2RZC3	6204 2RZC3
IE2/IE3-90	90	2.4.6.8	6205 2RZC3	6205 2RZC3
IE2/IE3-100	100	2.4.6.8	6206 2RZC3	6206 2RZC3
IE2/IE3-112	112	2.4.6.8	6306 2RZC3	6306 2RZC3
IE2/IE3-132	132	2.4.6.8	6308 2RZC3	6308 2RZC3
IE2/IE3-160	160	2.4.6.8	6309 C3	6309 C3
IE2/IE3-180	180	2.4.6.8	6311 C3	6311 C3
IE2/IE3-200	200	2.4.6.8	6312 C3	6312 C3
IE2/IE3-225	225	2.4.6.8	6313 C3	6313 C3
IE2/IE3-250	250	2	6314 C3	6314 C3
IE2/IE3-250	250	4.6.8	6317 C3	6314 C3
IE2/IE3-280	280	2	6314 C3	6314 C3
IE2/IE3-280	280	4.6.8	6317 C3	6317 C3
IE2/IE3-315	315	2	6317 C3	6317 C3
IE2/IE3-315	315	4.6.8	NU319	6319 C3
IE2/IE3-355	355	2	6319 C3	6319 C3
IE2/IE3-355	355	4.6.8	NU322 C3	6322 C3

General Specifications

Voltages / Frequencies

Standard Voltages are 380v-420 50Hz and 440-480 60Hz

Insulation

The components of the insulation system are 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 polyester resins (Class H);

Limit temperature for insulating material according IEC60085

Insulation Class	Limit Temperature (°C)
B	130
F	155
H	180

Temperature Rise

Standard single-speed continuous duty (S1) motors have temperature rise within class B limit.Motors with higher output and pole-changing motors normally have tempture rise within Class F limit .

Insulation Class	Max Temperature Rise (°C)
B	80
F	105
H	125

Temperature rises specified at a reference ambient air temperature of 40°C

PTC temperature sensor (thermistors):

It consist of 3 sensors connected in series embedded in the stator winding .
Once reaching the operating temperature,the device quickly changes its resistance;
it must be connected to a suitable releasing device (supplied on motors 11kW and above)

Duty Cycles

S1 Continuous Duty	Operation under constant load,lasting long enough to allow the machine to reach thermal equilibrium.
S2 Short-Time Duty	Operation under constant load,for a time too short to allow the machine to reach thermal equilibrium.Idle time of the machine is long enough to allow the machine to cooldown to ambient temperature. Standard duration of short-term operation:10,30,60 and 90 minutes.
S3 Intermittent Periodic Duty	Operation under repeated,constant load in specified cycles.Neither operating nor resting period are long enough to allow the motor to reach thermal equilibrium.The starting losses are small and do not essentially influence the temperature rise.The nominal values of relative starting time are 15,25,40,60% at a daily 10-minute cycle.
S4 Intermittent Periodic Duty	Operation under repeated,constant load in specified cycles.The start of the motor influences the temperature rise.
S5 Intermittent Periodic Duty	Same as S4 operation,except that the electric braking of the machine has an es-sential influence on the temperature rise.
S6 Continuously Operation With Cyclic Load	Operation consisting of a continuous series of equal cycles.Each cycle is made up of noload and a constant load period.The cycle duration is not long enough to allow the machine to reach thermal equilibrium in one cycl.In order to define S6 operation , the relative starting time must be specified.
S7 Intermittent Periodic Duty with Starting and Braking	Uninterrupted operation with a series of constant loading and braking periods.The most demanding type of operation for the motor.In order to define this type of operation,The number of cycles per hour and the inertia constant must be specified.
S8 Intermittent Periodic Duty with pole Changing	This type of operation only exists with pole amplitude modulated motors.In this case the definition of operation must contain the following data for each pole: -Number of starts per hour -Inertia constant -Relative operation period

Electrical Design

Reliable quality and performance

To ensure reliable and long life, the windings are made of materials with class F temperature rise limited to class B (80K) .

Voltage and Frequency

Standard motor will operate on mains power supplies in accordance with IEC 60034-1 Category A (combination of voltage deviation ±5 % and frequency deviation ±2 %) voltage and frequency fluctuations

Rated Output

Rated output power refers to continuous duty (S1) operation in accordance with IEC 60034-1 when operated at 40°C ambient temperature and at site altitudes of 1000m or less. current overload is in accordance with IEC 60034-1(1.5 times for 2 minutes)

Environmental

- Suitable for IP55 installations
- Below or equal to1000m above sea level
- Operating temperature between -20°C and 40°C
- Relative humidity

Temperature	Relative Humidity
-20°C ≤ T ≤ 20°C	100%
20°C < T ≤ 30°C	95%
30°C < T ≤ 40°C	55%

Note: For other requirements,Hanzel should be consulted

If environmental conditions vary from those listed above, please consult the chart below for output power derating factor.

	< 30°C	30~40°C	45°C	50°C	55°C	60°C
1000m	1.07	1.00	0.96	0.92	0.87	0.82
1500m	1.04	0.97	0.93	0.89	0.84	0.79
2000m	1.00	0.94	0.90	0.86	0.82	0.77
2500m	0.96	0.90	0.86	0.83	0.78	0.74
3000m	0.92	0.86	0.82	0.79	0.75	0.70
3500m	0.88	0.82	0.79	0.75	0.71	0.67
4000m	0.82	0.77	0.74	0.71	0.67	0.63

Space heater electrical data

Frame Size	80~90	100~112	132~160	180~200	225~280	315	355
Power(W)	20	30	40	50	60	80	110
Voltage(V)	230						

Converter fed application

IE2 / IE3 motors are suitable for pumps, fans, compressors, textile machine and mechanical machine applications where variable or constant speed is required. When motor operating with a constant load by a speed lower than 50% of rated speed, External separately driven fan.

Note:

(1) In application where the motor is driven by a converter, the degree of electrical interference depends on the type of converter used (type, number of IGBTs, interference suppression measures, and manufacturer), cabling, distance and application requirements.(2) The installation guidelines of the converter manufacturer with regards to electromagnetic compatibility must be considered at all times during the design and implementation phases.

Technical data for separated fan

Motor frame size	Voltage (V)	Frequency (Hz)	Rated Output (W)	Current Noise (A)	Speed (r/min)	Fan Power (m³/h)	Fan Pressure (Pa)
80	400V	50	40	0.08	2800	58	60
90	400V	50	40	0.08	2800	91	80
100	400V	50	40	0.11	2800	142	80
112	400V	50	60	0.14	2800	229	80
132	400V	50	60	0.17	2800	337	70
160	400V	50	90	0.31	1400	609	80
180	400V	50	105	0.33	1400	686	55
200	400V	50	120	0.36	1400	1679	65
225	400V	50	180	0.62	1400	1786	70
250	400V	50	210	0.74	1400	1813	80
280	400V	50	370	1.05	1400	2415	85
315	400V	50	600	1.5	1400	2820	110
355	400V	50	850	1.9	1400	4500	130

Construction or mounting type

Construction type	With feet and without flange on the end-shield (DE)					
Mounting type	IM B3 FS 80 ~ 355	IM B6 FS 80 ~ 160	IM B7 FS 80 ~ 160	IM B8 FS 80 ~ 160	IM V5 FS 80 ~ 225	IM V6 FS 80 ~ 225
Diagram						

Construction type	Without feet and with flange on the end-shield (DE)			With feet and with flange on the end-shield (DE)		
Mounting type	IM B5 FS 80 ~ 280	IM V1¹) FS 80 ~ 355		IM V3 FS 80 ~ 160	IM B35 FS 80 ~ 355	IM V15 FS 80 ~ 160
Diagram						

1) For IMV1 with canopy and without canopy, motor has different order number. Please find detailed information in "Technical data table".

Winding Failures of Electrical Motors

If an electric motor is subject to improper operating conditions, either electrical, mechanical or environmental, the winding life will be significantly reduced. The pictures given below show what can happen to the electric motor winding and it can help to identify the causes for the failures so that preventative actions can be taken. The defects shown in pictures 7, 8, 9, 10, 11, 12, 13 and 14 are originated from incorrect use. Therefore, not considered as warranty.



Picture number 1, 2, 3, 4, 5, 6:

These pictures show insulation defects caused by contaminants, abrasion or voltage fluctuation.

Picture number 7:

The complete insulation burning out on all phases of the three-phase winding is caused by motor overload. Under or overvoltages cause the same type of failure.

Picture number 8:

The complete insulation burn out on all phases is normally caused by high currents in the stator winding due to locked rotor. This can also occur due to excessive starts and reversions.

Picture number 9:

Insulation defects such as this are normally caused by voltage peaks that often occur in the power circuit commutation, atmospheric discharge, semi-conductors power devices and capacitor discharge.

Pictures number 10 and 11:

The winding single-phase defect is a consequence of an interruption in one power supply phase. This defect is normally caused by a burnt fuse, open contactor, one power supply interrupted or poor connection.

Picture number 12:

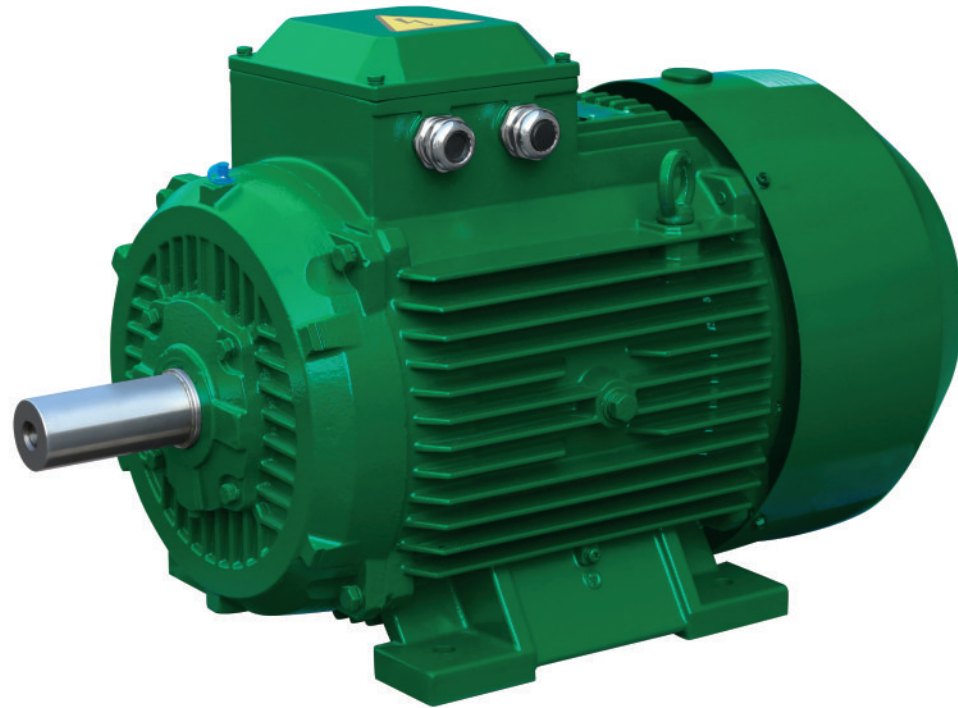
The insulation burn out in one phase of the stator winding can be a result of uneven voltage between phases. Uneven voltages are usually caused by unbalanced loads in the power supply originated by poor connections at motor terminals or by bad contact. 1% of voltage unbalance can cause a current unbalance from 6% to 10%.

Picture number 13:

The auxiliary coil or starting burn out is normally caused by the non-opening of the centrifugal and stationary switch set where this coil remains switched on longer than the specified time. Foreign bodies that might penetrate into the motor can cause this defect.

Picture number 14:

An overload causes a complete insulation burnout of the single-phase winding main coil. Undervoltages, overvoltages or even when the auxiliary coil is not duly connected during the starting cause the same type of failure.



AMG PREMIUM EFFICIENCY IE3 CAST IRON MOTORS

Efficiency : IE3 Premium Efficiency
Construction: Cast Iron Totally Enclosed Fan-Cooled (TEFC)
Output power: 0.55 - 1000kW
Frame size: 80 - 450
Speed: 2, 4, 6 & 8 Pole
Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (63 to 100 frame)
 : Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 355 frame)
 : Δ 525-550V (63 to 132 frame)
 : Δ 525-550-575V/1000V (160 to 355 frame)
Winding: H Class insulation, B Class temperature rise
Mounting: Standard Configurations
IP rating: IP66
Compliance: SANS 1804: 1&2
Application : Industry Specific - Mining – General Industry

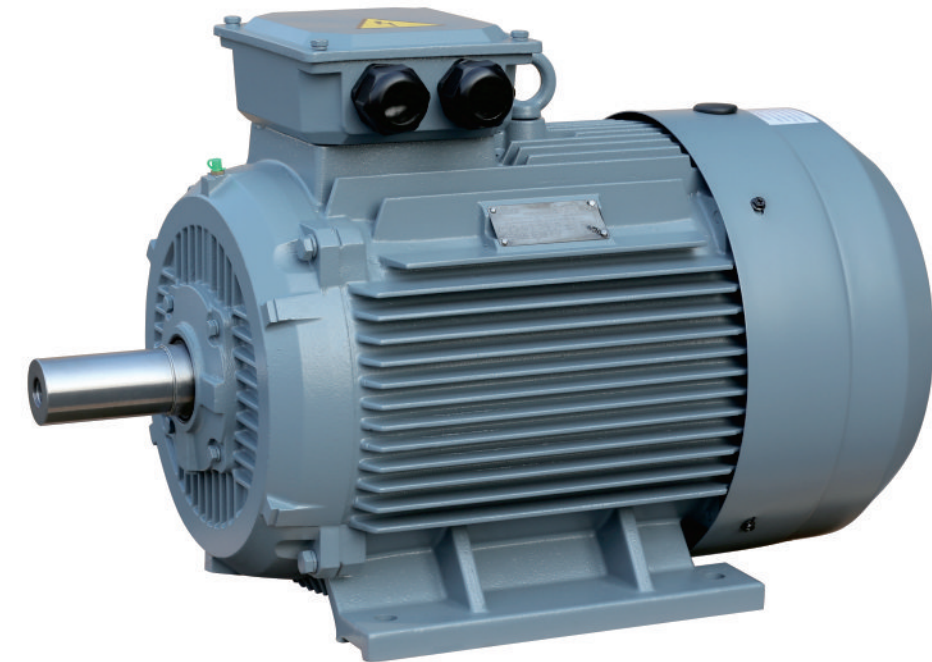
IE3 Level
European standard,
level 3 energy efficiency

Time
Permanent load
Long-lasting stability

IP66
Security guard
Life is longer

B Level
Ultra high temperature rise
Durable and long-lasting

H Level
Higher insulation delay
aging



AMG HIGH EFFICIENCY IE2 CAST IRON MOTORS

Efficiency : IE2 High Efficiency
Construction: Cast Iron Totally Enclosed Fan-Cooled (TEFC)
Output power: 0.55 – 1000 kW
Frame size: 80 - 450
Speed: 2, 4, 6 & 8 Pole
Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (63 to 100 frame)
 : Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 355 frame)
 : Δ 525-550V (63 to 132 frame)
 : Δ 525-550-575V/1000V (160 to 355 frame)
Winding: F Class insulation, B Class temperature rise
Mounting: Standard Configurations
IP rating: IP65
Compliance: SANS 1804-1/2 – IEC6004-1-2
Application : Low & High-Power Requirements

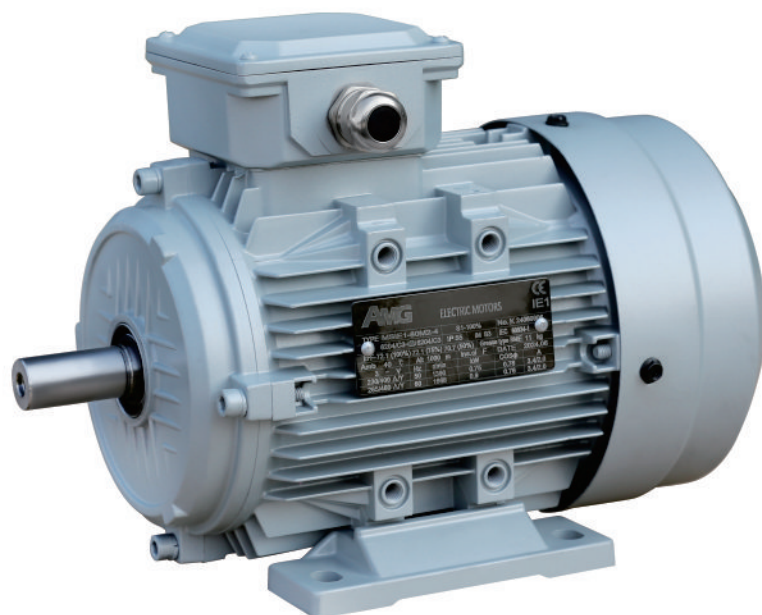
IE2 Level
European standard,
level 2 energy efficiency

Time
Permanent load
Long-lasting stability

IP65
Security guard
Life is longer

B Level
Ultra high temperature rise
Durable and long-lasting

F Level
Higher insulation delay
aging



AMG STANDARD EFFICIENCY IE1 ALUMINIUM MOTORS

Efficiency : IE1 Standard Efficiency
Construction: Cast Aluminium Totally Enclosed Fan-Cooled (TEFC)
Output power: 0.12-11kW
Frame size: 63 - 160
Speed: 2, 4, 6 & 8 Pole
Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (63 to 100 frame)
 : Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 160 frame)
 : Δ 525-550V (63 to 132 frame)
 : Δ 525-550-575V/1000V (160 frame)
Winding: F Class insulation, B Class temperature rise
Mounting: Standard Configurations
IP rating: IP55
Compliance: SANS 1804: 1&2
Application : General Industry

IE1 Level
European standard,
level 1 energy efficiency

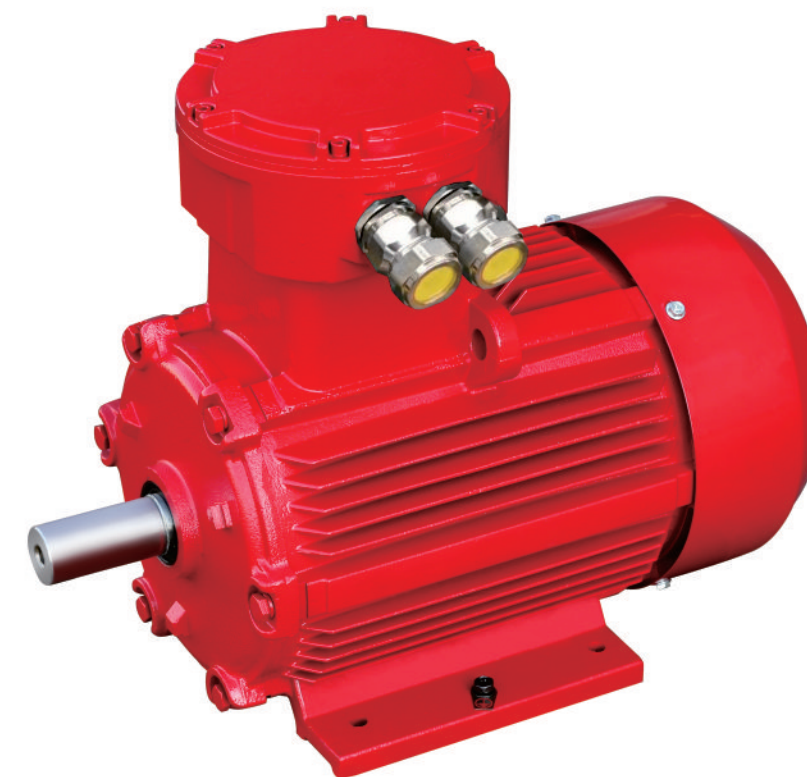
Time
Permanent load
Long-lasting stability

IP55
Security guard
Life is longer

B Level
Efficient and energy-
saving environment

F Level
Ultra high temperature rise
Durable and long-lasting

F Level
Higher insulation delay
aging



AMG HIGH EFFICIENCY IE2 CAST IRON EXPLOSION PROOF MOTORS

Efficiency : IE2 High Efficiency
Construction: Cast Iron Totally Enclosed Fan-Cooled (TEFC)
Output power: 0.55 – 315 kW
Frame size: 80 – 355
Speed: 2, 4, 6 & 8 Pole
Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (80 to 100 frame)
 : Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 355 frame)
 : Δ 525-550V (63 to 132 frame)
 : Δ 525-550-575V/1000V (160 to 355 frame)
Winding: F Class insulation, B Class temperature rise
Mounting: Standard Configurations
IP rating: IP55
Compliance: SANS 60079: 0&1
Application : Hazardous Area Classification

IE2 Level
European standard,
level 2 energy efficiency

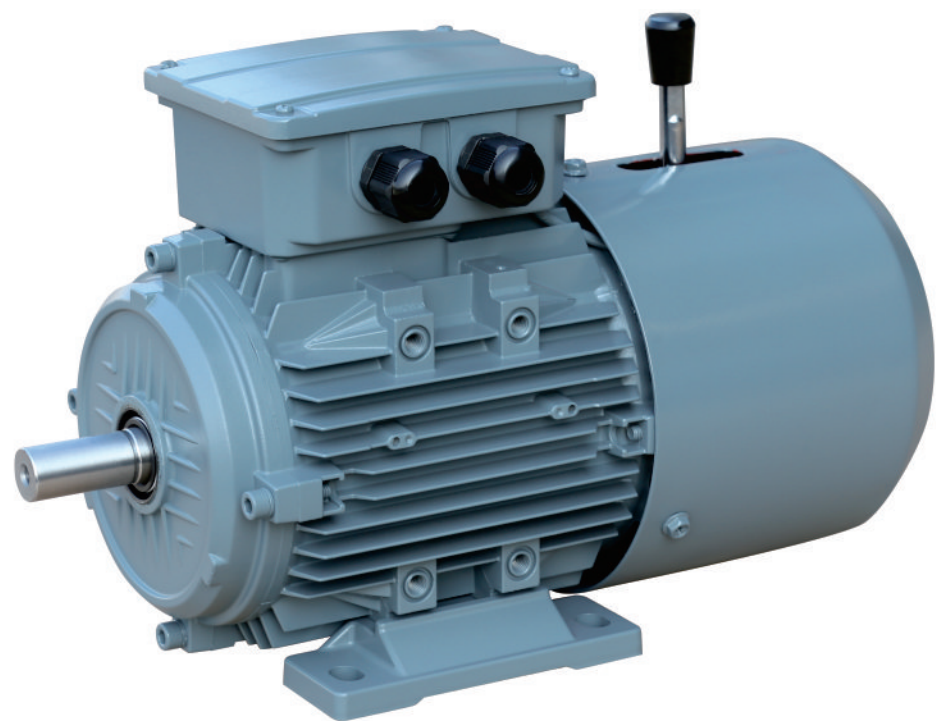
Time
Permanent load
Long-lasting stability

IP55
Security guard
Life is longer

B Level
Efficient and energy-
saving environment

F Level
Ultra high temperature rise
Durable and long-lasting

F Level
Higher insulation delay
aging



AMG STANDARD EFFICIENCY IE1 ALUMINIUM BRAKE MOTORS

Efficiency : IE1 Standard Efficiency
Construction: Cast Aluminium Totally Enclosed Fan-Cooled (TEFC)
Output power: 0.12-7.5kW
Frame size: 63 - 132
Speed: 2, 4 & 6 Pole
Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (63 to 100 frame)
 : Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 132 frame)
 : Δ 525-550V (63 to 132 frame)
 : Δ 525-550-575V/1000V (132 frame)
Brake Voltage: Same As Motor Voltage
Winding: F Class insulation, B Class temperature rise
Mounting: Standard Configurations
IP rating: IP55
Compliance: SANS 1804: 1&2
Application : General Industry

IE1 Level European standard, level 1 energy efficiency	Time Permanent load Long-lasting stability	IP55 Security guard Life is longer	B Level Ultra high temperature rise Durable and long-lasting	F Level Higher insulation delay aging
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AMG STANDARD EFFICIENCY IE1 ALUMINIUM TEAO MOTORS

Efficiency : IE1 Standard Efficiency
Construction: Cast Aluminium Totally Enclosed Air Over (TEAO)
Output power: 0.12-11kW
Frame size: 63 - 160
Speed: 2, 4, 6 & 8 Pole
Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (63 to 100 frame)
 : Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 160 frame)
 : Δ 525-550V (63 to 132 frame)
 : Δ 525-550-575V/1000V (160 frame)
Winding: F Class insulation, B Class temperature rise
Mounting: B3 Foot Mounted or B35 Foot & Flange Mounted
IP rating: IP55
Compliance: SANS 1804: 1&2
Application : Cooling Tower Fans

IE1 Level European standard, level 2 energy efficiency	Time Permanent load Long-lasting stability	IP65 Security guard Life is longer	B Level Ultra high temperature rise Durable and long-lasting	F Level Higher insulation delay aging
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AMG HIGH EFFICIENCY IE2 CAST IRON PAD MOUNTED MOTORS

Efficiency : IE2 High Efficiency – Surface & Underground Ventilation

Construction: Cast Iron

Output power: 0.55 – 75 kW

Frame size: 80 - 250

Speed: 2 Pole (4 Pole on request)

Voltage: Δ 525-550V (80 to 132 frame)

: Δ 525-550-575V/1000V (160 to 355 frame)

Winding: F Class insulation, B Class temperature rise

Mounting: Pad or With B5 Flange

IP rating: IP65

Compliance: IEC60034-1-2

Application : Axial Flow Fans

IE2 Level
European standard,
level 1 energy efficiency

Time
Permanent load
Long-lasting stability

IP65
Security guard
Life is longer

B Level
Ultra high temperature rise
Durable and long-lasting

F Level
Higher insulation delay
aging



AMG HIGH EFFICIENCY IE2 CAST IRON TEAO MOTORS

Efficiency : IE2 High Efficiency

Construction: Cast Iron Totally Enclosed Air Over (TEAO)

Output power: 0.55 – 15 kW

Frame size: 80 - 200

Speed: 2, 4, 6 & 8 Pole

Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (63 to 100 frame)

: Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 355 frame)

: Δ 525-550V (63 to 132 frame)

: Δ 525-550-575V/1000V (160 to 355 frame)

Winding: F Class insulation, B Class temperature rise

Mounting: B3 Foot Mounted or B35 Foot & Flange Mounted

IP rating: IP65

Compliance: IEC60034-1-2

Application : Cooling Tower Fans

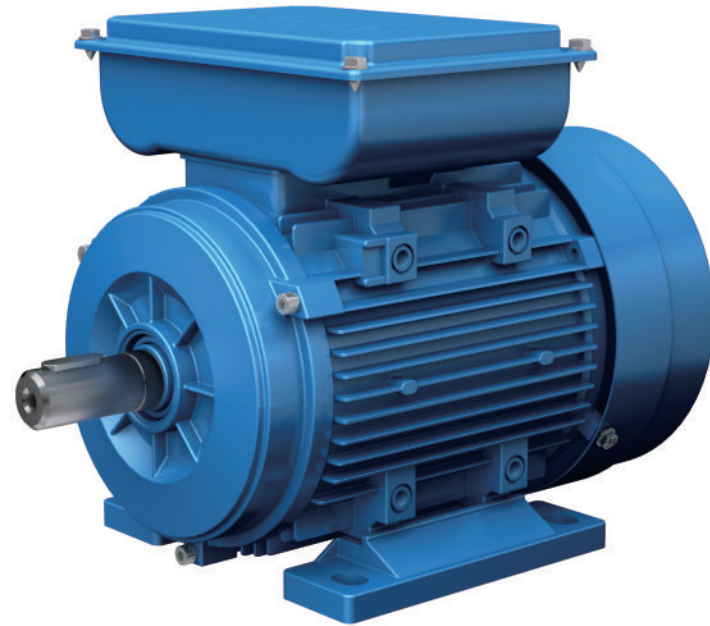
IE2 Level
European standard,
level 2 energy efficiency

Time
Permanent load
Long-lasting stability

IP65
Security guard
Life is longer

B Level
Ultra high temperature rise
Durable and long-lasting

F Level
Higher insulation delay
aging



AMG SINGLE PHASE HIGH TORQUE ALUMINIUM MOTORS

Efficiency : IE1 Standard Efficiency
Construction: Cast Aluminium Totally Enclosed Fan-Cooled (TEFC)
Output power: 0.55 – 4.0 kW
Frame size: 63 - 112
Speed: 2 & 4 Pole
Voltage: 220-240V
Winding: F Class insulation, B Class temperature rise
Mounting: Standard Configurations
IP rating: IP55
Compliance: SANS 1804: 1&2
Application : General Industry

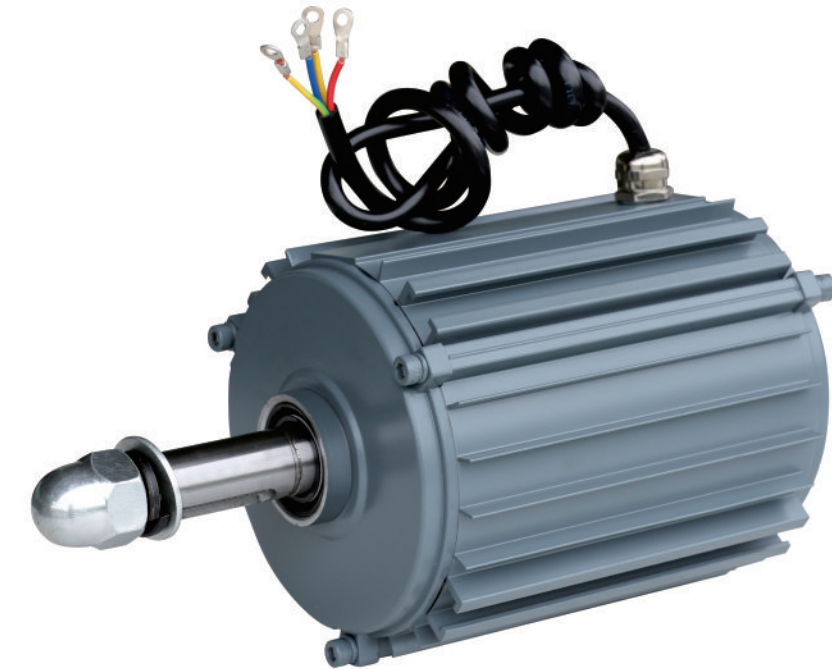
IE1 Level
European standard,
level 1 energy efficiency

Time
Permanent load
Long-lasting stability

IP55
Security guard
Life is longer

B Level
Ultra high temperature rise
Durable and long-lasting

F Level
Higher insulation delay
aging



AMG STANDARD EFFICIENCY IE1 ALUMINIUM PAD MOUNT MOTORS

Efficiency : IE1 Standard Efficiency
Construction: Cast Aluminium Air Over
Output power: 0.12-7.5kW
Frame size: 63 - 132
Speed: 2, 4, & 6 Pole
Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (63 to 100 frame)
: Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 132 frame)
: Δ 525-550V (63 to 132 frame)
Winding: F Class insulation, B Class temperature rise
Mounting: Standard Pad Mount Configuration
IP rating: IP55
Compliance: SANS 1804: 1&2
Application : Industrial Fans

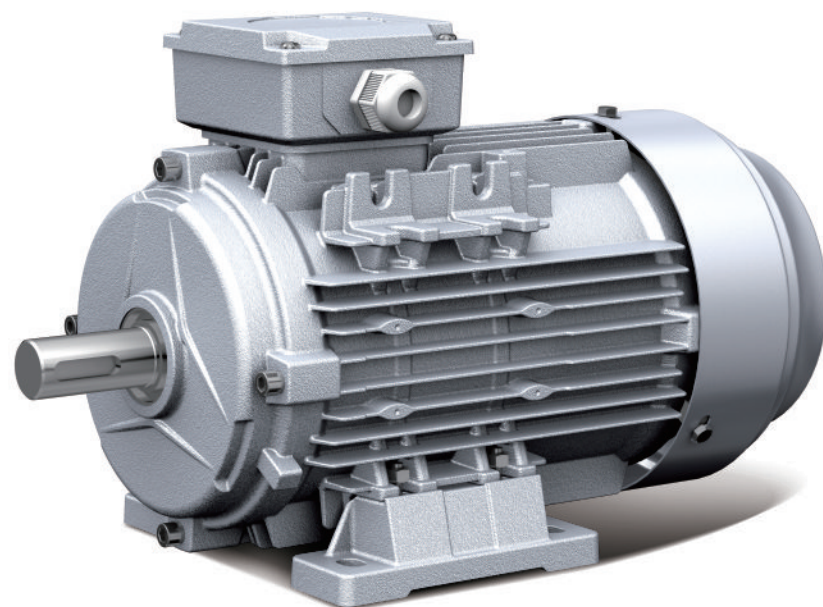
IE1 Level
European standard,
level 2 energy efficiency

Time
Permanent load
Long-lasting stability

IP55
Security guard
Life is longer

B Level
Ultra high temperature rise
Durable and long-lasting

F Level
Higher insulation delay
aging



AMG PREMIUM EFFICIENCY IE3 ALUMINIUM MOTORS

Efficiency : IE3 Premium Efficiency

Construction: Cast Aluminium Totally Enclosed Fan-Cooled (TEFC)

Output power: 0.25 – 7.5kW

Frame size: 71 - 132

Speed: 2, 4 & 6 pole

Voltage: Δ 220-240V or Y 380-415V 50Hz & 60Hz (63 to 100 frame)

Δ 380-415V or Y 660-690V 50Hz & 60Hz (112 to 132 frame)

Δ 525-550V (71 to 132 frame)

Δ 525-550-575V/1000V (132 frame)

Winding: F Class insulation, B Class temperature rise

Mounting: Standard Configurations

IP rating: IP55

Compliance: SANS 1804: 1&2

Application : General Industry

IE3 Level
European standard,
level 1 energy efficiency

Time
Permanent load
Long-lasting stability

IP55
Security guard
Life is longer

B Level
Efficient and energy-
saving environment

B Level
Ultra high temperature rise
Durable and long-lasting

F Level
Higher insulation delay
aging

Type IE3	Rated output		Rated speed RPM	Efficiency η %			Power factor Cosφ	Rated current			Rated Torque N.m	Lock Rotor Torque Tst/Tn	Break Down Tmax/Tn	Lock Rotor Ist/In	Noise dB(A)	Cast Iron Motor Weight kg
	kW	HP		100% Loda	75% Loda	50% Loda		380V	400V	415V						
IE3-63M1-2	0.18	0.25	2730	65.9	65.9	64.6	0.80	0.52	0.49	0.48	0.63	2.2	2.3	5.0	61	6.1
IE3-63M2-2	0.25	0.37	2730	69.7	69.7	68.3	0.81	0.67	0.64	0.62	0.87	2.2	2.3	5.0	61	6.4
IE3-71M1-2	0.37	0.5	2750	73.8	73.8	72.3	0.81	0.94	0.89	0.86	1.28	2.2	2.3	5.5	64	11
IE3-71M2-2	0.55	0.75	2750	77.8	77.8	76.2	0.83	1.29	1.23	1.18	1.91	2.2	2.3	5.5	64	12.1
IE3-80M1-2	0.75	1	2880	80.7	80.7	79.1	0.82	1.72	1.64	1.58	2.49	2.3	2.3	7.0	62	18.1
IE3-80M2-2	1.1	1.5	2880	82.7	82.7	81.0	0.83	2.43	2.31	2.23	3.65	2.2	2.3	7.3	62	19.5
IE3-90S-2	1.5	2	2895	84.2	84.2	82.5	0.84	3.22	3.06	2.95	4.95	2.2	2.3	7.6	67	23.3
IE3-90L-2	2.2	3	2895	85.9	85.9	84.2	0.85	4.58	4.35	4.19	7.26	2.2	2.3	7.6	67	27.1
IE3-100L-2	3	4	2895	87.1	87.1	85.4	0.87	6.02	5.71	5.51	9.90	2.2	2.3	7.8	74	38.8
IE3-112M-2	4	5.5	2905	88.1	88.1	86.3	0.88	7.8	7.4	7.2	13.1	2.2	2.3	8.3	77	48.3
IE3-132S1-2	5.5	7.5	2930	89.2	89.2	87.4	0.88	10.6	10.1	9.7	17.9	2.0	2.3	8.3	79	55.1
IE3-132S2-2	7.5	10	2930	90.1	90.1	88.3	0.88	14.4	13.7	13.2	24.4	2.0	2.3	7.9	79	69.2
IE3-160M1-2	11	15	2945	91.2	91.2	89.4	0.89	20.6	19.6	18.9	35.7	2.0	2.3	8.1	81	113
IE3-160M2-2	15	20	2945	91.9	91.9	90.1	0.89	27.9	26.5	25.5	48.6	2.0	2.3	8.1	81	123
IE3-160L-2	18.5	25	2940	92.4	92.4	90.6	0.89	34.2	32.5	31.3	60.1	2.0	2.3	8.2	81	142
IE3-180M-2	22	30	2955	92.7	92.7	90.8	0.89	40.5	38.5	37.1	71.1	2.0	2.3	8.2	83	182
IE3-200L1-2	30	40	2960	93.3	93.3	91.4	0.89	54.9	52.1	50.3	96.8	2.0	2.3	7.6	84	246
IE3-200L2-2	37	50	2960	93.7	93.7	91.8	0.89	67.4	64.0	61.7	119.4	2.0	2.3	7.6	84	265
IE3-225M-2	45	60	2965	94.0	94.0	92.1	0.90	80.8	76.8	74.0	144.9	2.0	2.3	7.7	86	323
IE3-250M-2	55	75	2970	94.3	94.3	92.4	0.90	98.5	93.5	90.2	176.9	2.0	2.3	7.7	89	413
IE3-280S-2	75	100	2975	94.7	94.7	92.8	0.90	133.7	127.0	122.4	240.8	1.8	2.3	7.1	91	546
IE3-280M-2	90	125	2975	95.0	95.0	93.1	0.90	159.9	151.9	146.4	288.9	1.8	2.3	7.1	91	569
IE3-315S-2	110	150	2978	95.2	95.2	93.3	0.90	195.1	185.3	178.6	352.8	1.8	2.3	7.1	92	897
IE3-315M-2	132	180	2978	95.4	95.4	93.5	0.90	233.6	221.9	213.9	423.3	1.8	2.3	7.1	92	1029
IE3-315L1-2	160	200	2980	95.6	95.6	93.7	0.91	279.4	265.5	255.9	512.8	1.8	2.3	7.2	92	1067
IE3-315L2-2	200	270	2980	95.8	95.8	93.9	0.91	348.6	331.1	319.2	640.9	1.8	2.2	7.2	92	1194
IE3-355M-2	250	340	2982	95.8	95.8	93.9	0.91	435.7	413.9	399.0	800.6	1.6	2.2	7.2	100	1685
IE3-355L-2	315	430	2982	95.8	95.8	93.9	0.91	549.0	521.5	502.7	1008.8	1.6	2.2	7.2	100	1734
IE3-400L1-2	355	480	2980	95.8	95.8	93.9	0.91	618.7	587.8	566.5	1137.7	1.3	2.5	6.5	106	2850
IE3-400L2-2	400	550	2980	95.8	95.8	93.9	0.91	697.1	662.3	638.3	1281.9	1.3	2.5	6.5	106	3000
IE3-400S-2	450	600	2980	95.8	95.8	93.9	0.91	784.3	745.1	718.1	1442.1	1.3	2.5	6.5	106	3150
IE3-400L2-2	500	680	2980	95.8	95.8	93.9	0.91	871.4	827.9	797.9	1602.3	1.3	2.5	6.5	106	3300
IE3-400S-2	560	760	2980	95.8	95.8	93.9	0.91	976.0	927.2	893.7	1794.6	1.2	2.5	6.5	106	3450
IE3-400L2-2	630	840	2980	95.8	95.8	93.9	0.91	1098.0	1043.1	1005.4	2019.0	1.2	2.5	6.5	106	3600
IE3-450L1-2	710	956	2980	95.8	95.8	93.9	0.91	1237.4	1175.6	1133.1	2275.3	1.2	2.5	6.5	109	3500
IE3-450L2-2	800	1090	2980	95.8	95.8	93.9	0.91	1394.3	1324.6	1276.7	2563.8	1.2	2.5	6.5	109	3650
IE3-450S-2	900	1225	2980	95.8	95.8	93.9	0.91	1568.6	1490.1	1436.3	2884.2	1.2	2.5	6.5	109	3800
IE3-450L2-2	1000	1360	2980	95.8	95.8	93.9	0.91	1742.9	1655.7	1595.9	3204.7	1.2	2.5	6.5	109	3900

Type IE3	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/Tn	Ist/In	dB(A)	kg
IE3-63M1-4	0.12	0.18	1320	64.8	64.8	63.5	0.72	0.39	0.37	0.36	0.87	2.0	2.2	4.0	52	4.8
IE3-63M2-4	0.18	0.25	1320	69.9	69.9	68.5	0.73	0.54	0.51	0.49	1.30	2.0	2.2	4.0	52	5.3
IE3-71M1-4	0.25	0.37	1340	73.5	73.5	72.0	0.74	0.70	0.66	0.64	1.78	2.0	2.2	4.0	55	15.2
IE3-71M2-4	0.37	0.5	1340	77.3	77.3	75.8	0.75	0.97	0.92	0.89	2.64	2.0	2.2	4.0	55	16.6
IE3-80M1-4	0.55	0.75	1400	80.8	80.8	79.2	0.75	1.38	1.31	1.26	3.75	2.4	2.3	5.2	56	17.6
IE3-80M2-4	0.75	1	1420	82.5	82.5	80.9	0.75	1.84	1.75	1.69	5.04	2.3	2.3	6.6	56	18.4
IE3-90S-4	1.1	1.5	1445	84.1	84.1	82.4	0.76	2.61	2.48	2.39	7.27	2.3	2.3	6.8	59	24.2
IE3-90L-4	1.5	2	1445	85.3	85.3	83.6	0.77	3.47	3.30	3.18	9.91	2.3	2.3	7.0	59	29.7
IE3-100L1-4	2.2	3	1450	86.7	86.7	85.0	0.81	4.76	4.52	4.36	14.49	2.3	2.3	7.6	64	41.5
IE3-100L2-4	3	4	1450	87.7	87.7	85.9	0.82	6.34	6.02	5.80	19.76	2.3	2.3	7.6	64	46
IE3-112M-4	4	5.5	1450	88.6	88.6	86.8	0.82	8.4	7.9	7.7	26.3	2.2	2.3	7.8	65	63.2
IE3-132S-4	5.5	7.5	1460	89.6	89.6	87.8	0.83	11.2	10.7	10.3	36.0	2.0	2.3	7.9	71	71.2
IE3-132M-4	7.5	10	1460	90.4	90.4	88.6	0.84	15.0	14.3	13.7	49.1	2.0	2.3	7.5	71	85.1
IE2-160M-4	11	15	1465	91.4	91.4	89.6	0.85	21.5	20.4	19.7	71.7	2.2	2.3	7.7	73	121
IE3-160L-4	15	20	1465	92.1	92.1	90.3	0.86	28.8	27.3	26.3	97.8	2.2	2.3	7.8	73	142
IE3-180M-4	18.5	25	1470	92.6	92.6	90.7	0.86	35.3	33.5	32.3	120.2	2.0	2.3	7.8	76	181
IE3-180L-4	22	30	1470	93.0	93.0	91.1	0.86	41.8	39.7	38.3	142.9	2.0	2.3	7.8	76	209
IE3-200L-4	30	40	1475	93.6	93.6	91.7	0.86	56.6	53.8	51.9	194.2	2.0	2.3	7.3	76	284
IE3-225S-4	37	50	1485	93.9	93.9	92.0	0.86	69.6	66.1	63.7	237.9	2.0	2.3	7.4	78	328
IE3-225M-4	45	60	1485	94.2	94.2	92.3	0.86	84.4	80.2	77.3	289.4	2.0	2.3	7.4	78	363
IE3-250M-4	55	75	1485	94.6	94.6	92.7	0.86	102.7	97.6	94.1	353.7	2.2	2.3	7.4	79	442
IE3-280S-4	75	100	1486	95.0	95.0	93.1	0.88	136.3	129.5	124.8	482.0	2.0	2.3	6.9	80	569
IE3-280M-4	90	125	1486	95.2	95.2	93.3	0.88	163.2	155.1	149.5	578.4	2.0	2.3	6.9	80	639
IE3-315S-4	110	150	1488	95.4	95.4	93.5	0.89	196.8	187.0	180.2	706.0	2.0	2.2	7.0	88	939
IE3-315M-4	132	180	1488	95.6	95.6	93.7	0.89	235.7	223.9	215.8	847.2	2.0	2.2	7.0	88	1033
IE3-315L1-4	160	200	1488	95.8	95.8	93.9	0.89	285.1	270.9	261.1	1026.9	2.0	2.2	7.1	88	1126
IE3-315L2-4	200	270	1490	96.0	96.0	94.1	0.90	351.7	334.1	322.0	1281.9	2.0	2.2	7.1	88	1238
IE3-355M-4	250	340	1490	96.0	96.0	94.1	0.90	439.6	417.7	402.6	1602.3	2.0	2.2	7.1	95	1830
IE3-355L-4	315	430	1490	96.0	96.0	94.1	0.90	553.9	526.2	507.2	2019.0	2.0	2.2	7.1	95	1950
IE3-4001-4	355	480	1490	96.0	96.0	94.1	0.88	638.5	606.5	584.6	2275.3	1.7	2.2	6.5	102	2880
IE3-4002-4	400	550	1490	96.0	96.0	94.1	0.88	719.4	683.4	658.7	2563.8	1.6	2.5	6.5	102	3020
IE3-4003-4	450	600	1490	96.0	96.0	94.1	0.88	809.3	768.9	741.1	2884.2	1.6	2.5	6.5	105	3100
IE3-4004-4	500	680	1490	96.0	96.0	94.1	0.88	899.3	854.3	823.4	3204.7	1.4	2.5	6.5	105	3350
IE3-4005-4	560	760	1490	96.0	96.0	94.1	0.89	995.9	946.1	911.9	3589.3	1.4	2.5	6.5	108	3500
IE3-4006-4	630	840	1490	96.0	96.0	94.1	0.89	1120.3	1064.3	1025.8	4037.9	1.4	2.5	6.5	108	3600
IE3-4501-4	710	956	1490	96.0	96.0	94.1	0.89	1262.6	1199.5	1156.1	4550.7	1.4	2.5	6.5	108	3550
IE3-4502-4	800	1090	1490	96.0	96.0	94.1	0.90	1406.8	1336.5	1288.2	5127.5	1.4	2.5	6.5	108	3750
IE3-4503-4	900	1225	1490	96.0	96.0	94.1	0.90	1582.7	1503.6	1449.2	5768.5	1.4	2.5	6.5	108	3950
IE3-4504-4	1000	1360	1490	96.0	96.0	94.1	0.90	1758.6	1670.6	1610.2	6409.4	1.4	2.5	6.5	108	4100

Type IE3	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/Tn	Ist/In	dB(A)	kg
IE3-71M1-6	0.18	0.25	855	63.9	63.9	62.6	0.66	0.65	0.62	0.59	2.01	1.9	2.0	4.0	52	11
IE3-71M2-6	0.25	0.37	855	68.6	68.6	67.2	0.68	0.81	0.77	0.75	2.79	1.9	2.0	4.0	52	11.5
IE3-80M1-6	0.37	0.5	890	73.5	73.5	72.0	0.70	1.09	1.04	1.00	3.97	1.9	2.0	4.7	54	15.2
IE3-80M2-6	0.55	0.75	890	77.2	77.2	75.7	0.72	1.50	1.43	1.38	5.90	1.9	2.1	4.7	54	16.6
IE3-90S-6	0.75	1	935	78.9	78.9	77.3	0.71	2.03	1.93	1.86	7.66	2.0	2.1	6.0	57	24.1
IE3-90L-6	1.1	1.5	945	81.0	81.0	79.4	0.73	2.83	2.69	2.59	11.12	2.0	2.1	6.0	57	25.7
IE3-100L-6	1.5	2	949	82.5	82.5	80.9	0.73	3.78	3.60	3.47	15.09	2.0	2.1	6.5	61	34.9
IE3-112M-6	2.2	3	955	84.3	84.3	82.6	0.74	5.36	5.09	4.91	22.00	2.0	2.1	6.6	65	54.2
IE3-132S-6	3	4	968	85.6	85.6	83.9	0.74	7.20	6.84	6.59	29.60	2.0	2.1	6.8	69	62.3
IE3-132M1-6	4	5.5	968	86.8	86.8	85.1	0.74	9.5	9.0	8.7	39.5	2.0	2.1	6.8	69	75.2
IE3-132M2-6	5.5	7.5	968	88.0	88.0	86.2	0.75	12.7	12.0	11.6	54.3	2.0	2.1	7.0	69	82.3
IE3-160M-6	7.5	10	970	89.1	89.1	87.3	0.79	16.2	15.4	14.8	73.8	2.0	2.1	7.0	73	112
IE3-160L-6	11	15	970	90.3	90.3	88.5	0.80	23.1	22.0	21.2	108.3	2.0	2.1	7.2	73	134
IE3-180L-6	15	20	978	91.2	91.2	89.4	0.81	30.9	29.3	28.2	146.5	2.0	2.1	7.3	73	197
IE3-200L1-6	18.5	25	980	91.7	91.7	89.9	0.81	37.8	36.0	34.7	180.3	2.0	2.1	7.3	73	234
IE3-200L2-6	22	30	980	92.2	92.2	90.4	0.81	44.8	42.5	41.0	214.4	2.0	2.1	7.4	73	251
IE3-225M-6	30	40	980	92.9	92.9	91.0	0.83	59.1	56.2	54.1	292.3	2.0	2.1	6.9	74	308
IE3-250M-6	37	50	985	93.3	93.3	91.4	0.84	71.7	68.1	65.7	358.7	2.0	2.1	7.1	76	383
IE3-280S-6	45	60	985	93.7	93.7	91.8	0.85	85.8	81.6	78.6	436.3	2.0	2.0	7.3	78	501
IE3-280M-6	55	75	985	94.1	94.1	92.2	0.86	103.3	98.1	94.6	533.2	2.0	2.0	7.3	78	573
IE3-315S-6	75	100	985	94.6	94.6	92.7	0.84	143.4	136.2	131.3	727.2	2.0	2.0	6.6	83	843
IE3-315M-6	90	125	988	94.9	94.9	93.0	0.85	169.5	161.0	155.2	869.9	2.0	2.0	6.7	83	941
IE3-315L1-6	110	150	988	95.1	95.1	93.2	0.85	206.8	196.4	189.3	1063.3	2.0	2.0	6.7	83	1017
IE3-315L2-6	132	180	988	95.4	95.4	93.5	0.86	244.5	232.2	223.8	1275.9	2.0	2.0	6.8	83	1121
IE3-355M1-6	160	200	990	95.6	95.6	93.7	0.86	295.7	280.9	270.7	1543.4	1.8	2.0	6.8	85	1715
IE3-355M2-6	200	270	990	95.8	95.8	93.9	0.87	364.6	346.4	333.8	1929.3	1.8	2.0	6.8	85	1846
IE3-355L-6	250	340	990	95.8	95.8	93.9	0.87	455.7	433.0	417.3	2411.6	1.8	2.0	6.8	85	2085
IE3-4001-6	315	430	990	95.8	95.8	93.9	0.86	580.9	551.9	531.9	3038.6	1.8	2.0	6.8	96	2850
IE3-4002-6	355	480	990	95.8	95.8	93.9	0.82	686.6	652.3	628.7	3424.5	1.6	2.5	6.5	96	3000
IE3-4003-6	400	550	990	95.8	95.8	93.9	0.83	764.3	726.1	699.9	3858.6	1.6	2.4	6.5	100	3200
IE3-4004-6	450	600	990	95.8	95.8	93.9	0.83	859.9	816.9	787.4	4340.9	1.6	2.4	6.5	100	3400
IE3-4005-6	500	680	990	95.8	95.8	93.9	0.83	955.4	907.7	874.8	4823.2	1.6	2.4	6.5	100	3550
IE3-4501-6	560	760	990	95.8	95.8	93.9	0.84	1057.3	1004.5	968.2	5402.0	1.6	2.4	6.5	100	3600
IE3-4502-6	630	840	990	95.8	95.8	93.9	0.84	1189.5	1130.0	1089.2	6077.3	1.6	2.4	6.5	100	3800
IE3-4503-6	710	956	990	95.8	95.8	93.9	0.84	1340.5	1273.5	1227.5	6849.0	1.6	2.4	6.5	100	4000

Type IE3	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/Tn	Ist/In	dB(A)	kg
IE3-80M1-8	0.18	0.25	650	58.7	58.7	57.5	0.61	0.76	0.73	0.70	2.64	1.8	1.9	3.3	52	14.5
IE3-80M2-8	0.25	0.37	650	64.1	64.1	62.8	0.61	0.97	0.92	0.89	3.67	1.8	1.9	3.3	52	16.7
IE3-90S-8	0.37	0.5	675	69.3	69.3	67.9	0.61	1.33	1.26	1.22	5.23	1.8	1.9	4.0	56	28.2
IE3-90L-8	0.55	0.75	675	73.0	73.0	71.5	0.61	1.88	1.78	1.72	7.78	1.8	2.0	4.0	56	29.7
IE3-100L1-8	0.75	1	685	75.0	75.0	73.5	0.67	2.27	2.15	2.08	10.46	1.8	2.0	4.0	59	40
IE3-100L2-8	1.1	1.5	685	77.7	77.7	76.1	0.69	3.12	2.96	2.85	15.34	1.8	2.0	5.0	59	41.4
IE3-112M-8	1.5	2	695	79.7	79.7	78.1	0.70	4.09	3.88	3.74	20.61	1.8	2.0	5.0	61	57.5
IE3-132S-8	2.2	3	710	81.9	81.9	80.3	0.71	5.75	5.46	5.26	29.59	1.8	2.0	6.0	64	74.8
IE3-132M-8	3	4	710	83.5	83.5	81.8	0.73	7.48	7.10	6.85	40.35	1.8	2.0	6.0	64	89.1
IE3-160M1-8	4	5.5	725	84.8	84.8	83.1	0.73	9.8	9.3	9.0	52.7	1.9	2.0	6.0	68	101
IE3-160M2-8	5.5	7.5	725	86.2	86.2	84.5	0.74	13.1	12.4	12.0	72.4	2.0	2.0	6.0	68	126.5
IE3-160L-8	7.5	10	725	87.3	87.3	85.6	0.75	17.4	16.5	15.9	98.8	2.0	2.0	6.0	68	136
IE3-180L-8	11	15	735	88.6	88.6	86.8	0.75	25.2	23.9	23.0	142.9	2.0	2.0	6.6	70	198
IE3-200L-8	15	20	730	89.6	89.6	87.8	0.76	33.5	31.8	30.6	196.2	2.0	2.0	6.6	73	234
IE3-225S-8	18.5	25	730	90.1	90.1	88.3	0.76	41.0	39.0	37.6	242.0	1.9	2.0	6.6	73	284
IE3-225M-8	22	30	730	90.6	90.6	88.8	0.78	47.3	44.9	43.3	287.8	1.9	2.0	6.6	73	325
IE3-250M-8	30	40	735	91.3	91.3	89.5	0.79	63.2	60.0	57.9	389.8	1.9	2.0	6.5	75	425
IE3-280S-8	37	50	735	91.8	91.8	90.0	0.79	77.5	73.6	71.0	480.7	1.9	2.0	6.6	76	518
IE3-280M-8	45	60	735	92.2	92.2	90.4	0.79	93.9	89.2	86.0	584.7	1.9	2.0	6.6	76	582
IE3-315S-8	55	75	735	92.5	92.5	90.7	0.81	111.5	106.0	102.1	714.6	1.8	2.0	6.6	82	852
IE3-315M-8	75	100	735	93.1	93.1	91.2	0.81	151.1	143.6	138.4	974.5	1.8	2.0	6.6	89	952
IE3-315L1-8	90	125	735	93.4	93.4	91.5	0.82	178.5	169.6	163.5	1169.4	1.8	2.0	6.6	89	1040
IE3-315L2-8	110	150	735	93.7	93.7	91.8	0.82	217.5	206.6	199.2	1429.3	1.8	2.0	6.4	89	1056
IE3-355M1-8	132	180	740	94.0	94.0	92.1	0.82	260.2	247.2	238.3	1703.5	1.8	2.0	6.4	89	1784
IE3-355M2-8	160	220	740	94.3	94.3	92.4	0.82	314.4	298.7	287.9	2064.9	1.8	2.0	6.4	89	1941
IE3-355L-8	200	270	740	94.6	94.6	92.7	0.83	387.0	367.7	354.4	2581.1	1.8	2.0	6.4	89	2026
IE3-4001-8	250	340	740	94.6	94.6	92.7	0.80	501.9	476.8	459.6	3226.4	1.6	1.8	6.0	98	2850
IE3-4002-8	280	380	740	94.6	94.6	92.7	0.80	562.1	534.0	514.7	3613.5	1.6	1.8	6.0	98	2950
IE3-4003-8	315	430	740	94.6	94.6	92.7	0.80	632.4	600.8	579.1	4065.2	1.6	1.8	6.0	98	3200
IE3-4004-8	355	480	740	94.6	94.6	92.7	0.80	712.7	677.1	652.6	4581.4	1.6	1.8	6.0	98	3400
IE3-4005-8	400	550	740	94.6	94.6	92.7	0.80	803.1	762.9	735.3	5162.2	1.6	1.8	6.0	98	3600
IE3-4501-8	450	600	740	94.6	94.6	92.7	0.81	892.3	847.7	817.0	5807.4	1.6	1.8	6.0	98	3800
IE3-4502-8	500	680	740	94.6	94.6	92.7	0.81	991.4	941.9	907.8	6452.7	1.6	1.8	6.0	98	4000
IE3-4503-8	560	760	740	94.6	94.6	92.7	0.81	1110.4	1054.9	1016.8	7227.0	1.6	1.8	6.0	98	4200
IE3-4504-8	630	840	740	94.6	94.6	92.7	0.81	1249.2	1186.7	1143.8	8130.4	1.6	1.8	6.0	98	4400
Type IE3	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/Tn	Ist/In	dB(A)	kg
IE3-315S-10	45	60	590	92.0	92.0	90.4	0.75	99.1	94.1	90.7	728.4	1.5	2.0	6.2	82	830
IE3-315M-10	55	75	590	92.0	92.0	90.4	0.75	121.1	115.1	110.9	890.3	1.5	2.0	6.2	82	940
IE3-315L1-10	75	100	590	92.8	92.8	90.7	0.76	161.6	153.5	147.9	1214.0	1.5	2.0	6.2	82	1070
IE3-315L2-10	90	125	590	93.0	93.0	91.2	0.77	191.0	181.4	174.9	1456.8	1.5	2.0	6.2	82	1150
IE3-355M1-10	110	150	590	93.3	93.3	91.3	0.78	229.7	218.2	210.3	1780.5	1.3	2.0	6.0	90	1660
IE3-355M2-10	132	180	590	93.8	93.8	91.5	0.78	274.1	260.4	251.0	2136.6	1.3	2.0	6.0	90	1780
IE3-355L-10	160	220	590	93.8	93.8	91.5	0.78	332.3	315.7	304.2	2589.8	1.3	2.0	6.0	90	1950
IE3-4001-10	200	270	595	93.8	93.8	91.5	0.74	437.8	415.9	400.9	3210.1	1.2	1.6	5.5	93	2820
IE3-4002-10	250	340	595	93.8	93.8	91.5	0.74	547.2	519.9	501.1	4012.6	1.2	1.6	5.5	93	2950
IE3-4003-10	280	380	595	93.8	93.8	91.5	0.74	612.9	582.3	561.2	4494.1	1.2	1.6	5.5	97	3100
IE3-4004-10	315	430	595	93.8	93.8	91.5	0.77	662.7	629.5	606.8	5055.9	1.2	1.6	5.5	97	3350
IE3-4005-10	355	480	595	93.8	93.8	91.8	0.77	746.8	709.5	683.8	5697.9	1.2	1.6	5.5	97	3600
IE3-4502-10	400	550	595	93.8	93.8	91.8	0.77	841.5	799.4	770.5	6420.2	1.2	1.6	5.5	97	3800
IE3-4503-10	450	600	595	93.8	93.8	91.8	0.77	946.6	899.3	866.8	7222.7	1.2	1.6	5.5	97	4050
IE3-4504-10	500	680	595	93.8	93.8	91.8	0.77	1051.8	999.2	963.1	8025.2	1.2	1.6	5.5	97	4300

Type IE2	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/T _n	Ist/In	dB(A)	kg
IE2-63M1-2	0.18	0.25	2725	60.4	60.4	59.2	0.80	0.57	0.54	0.52	0.63	2.2	2.3	5.0	61	5.1
IE2-63M2-2	0.25	0.37	2725	64.8	64.8	63.5	0.81	0.72	0.69	0.66	0.88	2.2	2.3	5.0	61	5.3
IE2-71M1-2	0.37	0.5	2745	69.5	69.5	68.1	0.81	1.00	0.95	0.91	1.29	2.2	2.3	5.5	64	10
IE2-71M2-2	0.55	0.75	2745	74.1	74.1	72.6	0.82	1.38	1.31	1.26	1.91	2.2	2.3	5.5	64	10.5
IE2-80M1-2	0.75	1	2875	77.4	77.4	75.9	0.82	1.80	1.71	1.64	2.49	2.3	2.3	6.8	62	16
IE2-80M2-2	1.1	1.5	2875	79.6	79.6	78.0	0.83	2.53	2.40	2.32	3.65	2.3	2.3	7.1	62	17
IE2-90S-2	1.5	2	2890	81.3	81.3	79.7	0.84	3.34	3.17	3.06	4.96	2.3	2.3	7.3	67	20.3
IE2-90L-2	2.2	3	2890	83.2	83.2	81.5	0.85	4.73	4.49	4.33	7.27	2.3	2.3	7.6	67	23.2
IE2-100L-2	3	4	2891	84.6	84.6	82.9	0.87	6.19	5.88	5.67	9.91	2.2	2.3	7.8	74	33
IE2-112M-2	4	5.5	2914	85.8	85.8	84.1	0.88	8.0	7.6	7.4	13.1	2.2	2.3	8.1	77	41.1
IE2-132S1-2	5.5	7.5	2937	87.0	87.0	85.3	0.88	10.9	10.4	10.0	17.9	2.2	2.3	8.2	79	55.5
IE2-132S2-2	7.5	10	2940	88.1	88.1	86.3	0.89	14.5	13.8	13.3	24.4	2.2	2.3	7.8	79	61.7
IE2-160M1-2	11	15	2930	89.4	89.4	87.6	0.89	21.0	20.0	19.2	35.9	2.2	2.3	7.9	81	108
IE2-160M2-2	15	20	2930	90.3	90.3	88.5	0.89	28.4	26.9	26.0	48.9	2.2	2.3	7.9	81	122
IE2-160L-2	18.5	25	2937	90.9	90.9	89.1	0.89	34.7	33.0	31.8	60.2	2.2	2.3	8.0	81	140
IE2-180M-2	22	30	2940	91.3	91.3	89.5	0.89	41.1	39.1	37.7	71.5	2.2	2.3	8.1	83	178
IE2-200L1-2	30	40	2950	92.0	92.0	90.2	0.89	55.7	52.9	51.0	97.1	2.0	2.3	7.5	84	229
IE2-200L2-2	37	50	2950	92.5	92.5	90.7	0.89	68.3	64.9	62.5	119.8	2.0	2.3	7.5	84	249
IE2-225M-2	45	60	2960	92.9	92.9	91.0	0.89	82.7	78.6	75.7	145.2	2.2	2.3	7.5	86	322
IE2-250M-2	55	75	2965	93.2	93.2	91.3	0.89	100.7	95.7	92.2	177.2	2.2	2.3	7.6	89	401
IE2-280S-2	75	100	2970	93.8	93.8	91.9	0.89	136.5	129.7	125.0	241.2	1.8	2.3	6.9	91	533
IE2-280M-2	90	125	2970	94.1	94.1	92.2	0.89	163.3	155.1	149.5	289.4	1.8	2.3	6.9	91	568
IE2-315S-2	110	150	2975	94.3	94.3	92.4	0.90	196.9	187.1	180.3	353.1	1.8	2.2	7.0	92	914
IE2-315M-2	132	180	2975	94.6	94.6	92.7	0.90	235.6	223.8	215.7	423.7	1.8	2.2	7.0	92	1029
IE2-315L1-2	160	200	2975	94.8	94.8	92.9	0.91	281.8	267.7	258.0	513.6	1.8	2.2	7.1	92	1067
IE2-315L2-2	200	270	2975	95.0	95.0	93.1	0.91	351.5	333.9	321.9	642.0	1.8	2.2	7.1	92	1194
IE2-355M-2	250	340	2980	95.0	95.0	93.1	0.91	439.4	417.4	402.3	801.2	1.6	2.2	7.1	100	1597
IE2-355L-2	315	430	2980	95.0	95.0	93.1	0.91	553.6	525.9	506.9	1009.5	1.6	2.2	7.2	100	1702
IE2-4001-2	355	480	2980	95.0	95.0	93.1	0.92	617.1	586.3	565.1	1137.7	1.3	2.0	6.5	104	2850
IE2-4002-2	400	550	2980	95.0	95.0	93.1	0.92	695.4	660.6	636.7	1281.9	1.3	2.0	6.5	104	3000
IE2-4003-2	450	600	2980	95.0	95.0	93.1	0.92	782.3	743.2	716.3	1442.1	1.2	2.0	6.5	104	3150
IE2-4004-2	500	680	2980	95.0	95.0	93.1	0.92	869.2	825.8	795.9	1602.3	1.2	2.0	6.5	108	3300
IE2-4005-2	560	760	2980	95.0	95.0	93.1	0.92	973.5	924.8	891.4	1794.6	1.2	2.0	6.5	108	3450
IE2-4006-2	630	840	2980	95.0	95.0	93.1	0.92	1095.2	1040.5	1002.8	2019.0	1.2	2.0	6.5	108	3600
IE2-4501-2	710	956	2980	95.0	95.0	93.1	0.92	1234.3	1172.6	1130.2	2275.3	1.2	2.0	6.5	109	3500
IE2-4502-2	800	1090	2980	95.0	95.0	93.1	0.92	1390.7	1321.2	1273.5	2563.8	1.2	2.0	6.5	109	3650
IE2-4503-2	900	1225	2980	95.0	95.0	93.1	0.92	1564.6	1486.4	1432.6	2884.2	1.2	2.0	6.5	109	3800
IE2-4504-2	1000	1360	2980	95.0	95.0	93.1	0.92	1738.4	1651.5	1591.8	3204.7	1.2	2.0	6.5	109	3900

Type IE2	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/Tn	Ist/In	dB(A)	kg
IE2-63M1-4	0.12	0.18	1315	59.1	59.1	57.9	0.72	0.43	0.41	0.39	0.87	2.0	2.2	4.0	52	4.6
IE2-63M2-4	0.18	0.25	1315	64.7	64.7	63.4	0.73	0.58	0.55	0.53	1.31	2.0	2.2	4.0	52	4.9
IE2-71M1-4	0.25	0.37	1335	68.5	68.5	67.1	0.74	0.75	0.71	0.69	1.79	2.0	2.2	4.0	55	13.2
IE2-71M2-4	0.37	0.5	1335	72.7	72.7	71.2	0.75	1.03	0.98	0.94	2.65	2.0	2.2	4.0	55	14.5
IE2-80M1-4	0.55	0.75	1400	77.1	77.1	75.6	0.75	1.45	1.37	1.32	3.75	2.4	2.3	5.2	56	14.7
IE2-80M2-4	0.75	1	1400	79.6	79.6	78.0	0.76	1.88	1.79	1.72	5.12	2.3	2.3	6.4	56	15.4
IE2-90S-4	1.1	1.5	1440	81.4	81.4	79.8	0.77	2.67	2.53	2.44	7.30	2.3	2.3	6.6	59	20.5
IE2-90L-4	1.5	2	1445	82.8	82.8	81.1	0.78	3.53	3.35	3.23	9.91	2.3	2.3	6.7	59	24.6
IE2-100L1-4	2.2	3	1440	84.3	84.3	82.6	0.80	4.96	4.71	4.54	14.59	2.3	2.3	7.3	64	34.6
IE2-100L2-4	3	4	1440	85.5	85.5	83.8	0.81	6.58	6.25	6.03	19.90	2.2	2.3	7.5	64	35
IE2-112M-4	4	5.5	1445	86.6	86.6	84.9	0.81	8.7	8.2	7.9	26.4	2.2	2.3	7.5	65	51.5
IE2-132S-4	5.5	7.5	1455	87.7	87.7	85.9	0.82	11.6	11.0	10.6	36.1	2.2	2.3	7.5	71	62.8
IE2-132M-4	7.5	10	1455	88.7	88.7	86.9	0.83	15.5	14.7	14.2	49.2	2.2	2.3	7.3	71	81
IE2-160M-4	11	15	1460	89.8	89.8	88.0	0.83	22.4	21.3	20.5	72.0	2.2	2.3	7.4	73	114
IE2-160L-4	15	20	1460	90.6	90.6	88.8	0.84	29.9	28.4	27.4	98.1	2.2	2.3	7.5	73	136
IE2-180M-4	18.5	25	1470	91.2	91.2	89.4	0.85	36.3	34.4	33.2	120.2	2.2	2.3	7.6	76	176
IE2-180L-4	22	30	1470	91.6	91.6	89.8	0.85	42.9	40.8	39.3	142.9	2.2	2.3	7.7	76	196
IE2-200L-4	30	40	1470	92.3	92.3	90.5	0.85	58.1	55.2	53.2	194.9	2.0	2.3	7.1	76	259
IE2-225S-4	37	50	1480	92.7	92.7	90.8	0.86	70.5	67.0	64.6	238.8	2.0	2.3	7.3	78	302
IE2-225M-4	45	60	1480	93.1	93.1	91.2	0.86	85.4	81.1	78.2	290.4	2.2	2.3	7.3	78	329
IE2-250M-4	55	75	1480	93.5	93.5	91.6	0.86	103.9	98.7	95.2	354.9	2.2	2.3	7.3	79	418
IE2-280S-4	75	100	1480	94.0	94.0	92.1	0.87	139.3	132.4	127.6	484.0	1.8	2.3	6.8	80	546
IE2-280M-4	90	125	1480	94.2	94.2	92.3	0.88	165.0	156.7	151.0	580.7	1.8	2.3	6.9	80	638
IE2-315S-4	110	150	1485	94.5	94.5	92.6	0.89	198.7	188.8	182.0	707.4	1.8	2.2	6.9	88	939
IE2-315M-4	132	180	1485	94.7	94.7	92.8	0.89	238.0	226.1	217.9	848.9	1.8	2.2	6.9	88	1033
IE2-315L1-4	160	200	1485	94.9	94.9	93.0	0.90	284.6	270.4	260.6	1029.0	1.8	2.2	6.9	88	1126
IE2-315L2-4	200	270	1485	95.1	95.1	93.2	0.90	355.0	337.3	325.1	1286.2	1.8	2.2	6.9	88	1229
IE2-355M-4	250	340	1490	95.1	95.1	93.2	0.90	443.8	421.6	406.4	1602.3	1.6	2.2	6.9	95	1670
IE2-355L-4	315	430	1490	95.1	95.1	93.2	0.90	559.2	531.2	512.0	2019.0	1.6	2.2	6.9	95	2848
IE2-4001-4	355	480	1490	95.1	95.1	93.2	0.90	630.2	598.7	577.0	2275.3	1.6	2.2	6.5	104	2880
IE2-4002-4	400	550	1490	95.1	95.1	93.2	0.90	710.1	674.6	650.2	2563.8	1.6	2.2	6.5	104	3020
IE2-4003-4	450	600	1490	95.1	95.1	93.2	0.90	798.8	758.9	731.5	2884.2	1.4	2.2	6.5	107	3100
IE2-4004-4	500	680	1490	95.1	95.1	93.2	0.90	887.6	843.2	812.7	3204.7	1.4	2.2	6.5	107	3350
IE2-4005-4	560	760	1490	95.1	95.1	93.2	0.90	994.1	944.4	910.3	3589.3	1.4	2.2	6.5	107	3500
IE2-4006-4	630	840	1490	95.1	95.1	93.2	0.90	1118.4	1062.5	1024.1	4037.9	1.4	2.2	6.5	107	3600
IE2-4501-4	710	956	1490	95.1	95.1	93.2	0.90	1260.4	1197.4	1154.1	4550.7	1.4	2.2	6.5	107	3550
IE2-4502-4	800	1090	1490	95.1	95.1	93.2	0.90	1420.2	1349.1	1300.4	5127.5	1.4	2.2	6.5	107	3750
IE2-4503-4	900	1225	1490	95.1	95.1	93.2	0.90	1597.7	1517.8	1462.9	5768.5	1.4	2.2	6.5	107	3950
IE2-4504-4	1000	1360	1490	95.1	95.1	93.2	0.90	1775.2	1686.4	1625.5	6409.4	1.4	2.2	6.5	107	4100

Type IE2	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/Tn	Ist/In	dB(A)	kg
IE2-71M1-6	0.18	0.25	850	56.6	56.6	55.5	0.66	0.73	0.70	0.67	2.00	1.9	2.1	4.0	52	9.5
IE2-71M2-6	0.25	0.37	850	61.6	61.6	60.4	0.68	0.91	0.86	0.83	2.78	1.9	2.1	4.0	52	10
IE2-80M1-6	0.37	0.5	885	67.6	67.6	66.2	0.70	1.19	1.13	1.09	3.93	1.9	2.0	4.7	54	13.2
IE2-80M2-6	0.55	0.75	885	73.1	73.1	71.6	0.72	1.59	1.51	1.45	5.84	1.9	2.1	4.7	54	14.4
IE2-90S-6	0.75	1	934	75.9	75.9	74.4	0.71	2.11	2.01	1.94	7.87	2.0	2.1	5.8	57	23.3
IE2-90L-6	1.1	1.5	945	78.1	78.1	76.5	0.72	2.97	2.82	2.72	11.5	2.0	2.1	5.9	57	26.6
IE2-100L-6	1.5	2	945	79.8	79.8	78.2	0.72	3.97	3.77	3.63	15.4	2.0	2.1	5.9	61	36.2
IE2-112M-6	2.2	3	960	81.8	81.8	80.2	0.72	5.68	5.39	5.20	22.4	2.0	2.1	6.2	65	51.2
IE2-132S-6	3	4	964	83.3	83.3	81.6	0.72	7.60	7.22	6.96	29.9	2.0	2.1	6.4	69	56.1
IE2-132M1-6	4	5.5	965	84.6	84.6	82.9	0.74	9.7	9.2	8.9	39.8	2.0	2.1	6.6	69	71.4
IE2-132M2-6	5.5	7.5	965	86.0	86.0	84.3	0.75	13.0	12.3	11.9	54.7	2.0	2.1	6.8	69	73.7
IE2-160M-6	7.5	10	970	87.2	87.2	85.5	0.78	16.8	15.9	15.3	73.8	2.0	2.1	6.8	73	112
IE2-160L-6	11	15	970	88.7	88.7	86.9	0.79	23.9	22.7	21.8	108.3	2.0	2.1	6.9	73	133
IE2-180L-6	15	20	975	89.7	89.7	87.9	0.82	31.0	29.4	28.4	147.7	2.0	2.1	7.3	73	183
IE2-200L1-6	18.5	25	980	90.4	90.4	88.6	0.80	38.9	36.9	35.6	181.2	2.0	2.1	7.2	73	224
IE2-200L2-6	22	30	980	90.9	90.9	89.1	0.81	45.4	43.1	41.6	215.5	2.0	2.1	7.3	73	240
IE2-225M-6	30	40	980	91.7	91.7	89.9	0.82	60.6	57.6	55.5	292.3	2.0	2.1	6.8	74	285
IE2-250M-6	37	50	980	92.2	92.2	90.4	0.83	73.5	69.8	67.3	360.5	2.0	2.1	7.0	76	389
IE2-280S-6	45	60	980	92.7	92.7	90.8	0.85	86.8	82.4	79.5	438.5	2.0	2.0	7.2	78	489
IE2-280M-6	55	75	980	93.1	93.1	91.2	0.86	104.4	99.2	95.6	535.9	2.0	2.0	7.2	78	550
IE2-315S-6	75	100	985	93.7	93.7	91.8	0.84	144.8	137.5	132.6	727.1	2.0	2.0	6.5	83	838
IE2-315M-6	90	125	985	94.0	94.0	92.1	0.85	171.1	162.6	156.7	872.5	2.0	2.0	6.6	83	941
IE2-315L1-6	110	150	985	94.3	94.3	92.4	0.85	208.5	198.1	190.9	1066.0	2.0	2.0	6.6	83	986
IE2-315L2-6	132	180	985	94.6	94.6	92.7	0.86	246.5	234.2	225.7	1280.0	2.0	2.0	6.6	83	1121
IE2-355M1-6	160	200	990	94.8	94.8	92.9	0.86	298.2	283.3	273.0	1543.0	2.0	2.0	6.7	85	1650
IE2-355M2-6	200	270	990	95.0	95.0	93.1	0.86	371.9	353.3	340.6	1929.3	2.0	2.0	6.8	85	1752
IE2-355L-6	250	340	990	95.0	95.0	93.1	0.86	464.9	441.7	425.7	2411.0	2.0	2.0	6.8	85	1990
IE2-4001-6	315	430	990	95.0	95.0	93.1	0.86	585.8	556.5	536.4	2892.7	2.0	2.0	6.8	96	2850
IE2-4002-6	355	480	990	95.0	95.0	93.1	0.86	660.2	627.2	604.5	3374.4	2.0	2.0	6.8	96	3000
IE2-4003-6	400	550	990	95.0	95.0	93.1	0.86	743.9	706.7	681.1	3856.1	1.6	2.4	6.5	100	3200
IE2-4004-6	450	600	990	95.0	95.0	93.1	0.84	856.8	814.0	784.5	4337.8	1.6	2.4	6.5	100	3400
IE2-4005-6	500	680	990	95.0	95.0	93.1	0.84	952.0	904.4	871.7	4819.5	1.6	2.4	6.5	100	3550
IE2-4006-6	560	760	990	95.0	95.0	93.1	0.84	1066.2	1012.9	976.3	5301.2	1.6	2.4	6.5	100	3600
IE2-4501-6	630	840	990	95.0	95.0	93.1	0.84	1199.5	1139.5	1098.4	5782.9	1.6	2.4	6.5	100	3800
IE2-4502-6	710	956	990	95.0	95.0	93.1	0.84	1351.8	1284.2	1237.8	6264.6	1.6	2.4	6.5	100	4000
IE2-4503-6	800	1090	990	95.0	95.0	93.1	0.84	1523.2	1447.0	1394.7	6746.3	1.6	2.4	6.5	100	4200

Type IE2	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/Tn	Ist/In	dB(A)	kg
IE2-80M1-8	0.18	0.25	650	45.9	45.9	45.0	0.61	0.98	0.93	0.89	2.64	1.8	1.9	3.3	52	12.7
IE2-80M2-8	0.25	0.37	650	50.6	50.6	49.6	0.61	1.23	1.17	1.13	3.67	1.8	1.9	3.3	52	14.5
IE2-90S-8	0.37	0.5	675	56.1	56.1	55.0	0.61	1.64	1.56	1.50	5.35	1.8	1.9	4.0	56	24.5
IE2-90L-8	0.55	0.75	675	61.7	61.7	60.5	0.61	2.22	2.11	2.03	7.96	1.8	2.0	4.0	56	25.8
IE2-100L1-8	0.75	1	685	66.2	66.2	64.9	0.67	2.57	2.44	2.35	10.4	1.8	2.0	4.0	59	34.5
IE2-100L2-8	1.1	1.5	685	70.8	70.8	69.4	0.69	3.42	3.25	3.13	15.2	1.8	2.0	5.0	59	36
IE2-112M-8	1.5	2	695	74.1	74.1	72.6	0.70	4.39	4.17	4.02	20.5	1.8	2.0	5.0	61	50
IE2-132S-8	2.2	3	710	77.6	77.6	76.0	0.71	6.07	5.76	5.56	29.6	1.8	2.0	6.0	64	65
IE2-132M-8	3	4	710	80.0	80.0	78.4	0.73	7.81	7.41	7.15	40.4	1.8	2.0	6.0	64	81
IE2-160M1-8	4	5.5	725	81.9	81.9	80.3	0.73	10.2	9.7	9.3	53.1	1.9	2.0	6.0	68	92
IE2-160M2-8	5.5	7.5	725	83.8	83.8	82.1	0.74	13.5	12.8	12.3	73.0	2.0	2.0	6.0	68	115
IE2-160L-8	7.5	10	725	85.3	85.3	83.6	0.75	17.8	16.9	16.3	99.5	2.0	2.0	6.0	68	124
IE2-180L-8	11	15	735	86.9	86.9	85.2	0.75	25.6	24.4	23.5	143.9	2.0	2.0	6.6	70	180
IE2-200L-8	15	20	730	88.0	88.0	86.2	0.76	34.1	32.4	31.2	196.2	2.0	2.0	6.6	73	213
IE2-225S-8	18.5	25	730	88.6	88.6	86.8	0.76	41.7	39.7	38.2	242.0	1.9	2.0	6.6	73	263
IE2-225M-8	22	30	730	89.1	89.1	87.3	0.78	48.1	45.7	44.0	287.8	1.9	2.0	6.6	73	301
IE2-250M-8	30	40	735	89.8	89.8	88.0	0.79	64.3	61.0	58.8	389.8	1.9	2.0	6.6	75	394
IE2-280S-8	37	50	735	90.3	90.3	88.5	0.79	78.8	74.9	72.2	480.7	1.9	2.0	6.6	76	480
IE2-280M-8	45	60	735	90.7	90.7	88.9	0.79	95.4	90.7	87.4	584.7	1.9	2.0	6.6	76	539
IE2-315S-8	55	75	735	91.0	91.0	89.2	0.81	113.4	107.7	103.8	714.6	1.8	2.0	6.6	82	820
IE2-315M-8	75	100	735	91.6	91.6	89.8	0.81	153.6	145.9	140.6	974.5	1.8	2.0	6.6	82	916
IE2-315L1-8	90	125	735	91.9	91.9	90.1	0.82	181.5	172.4	166.2	1161.5	1.8	2.0	6.6	82	1000
IE2-315L2-8	110	150	735	92.3	92.3	90.5	0.82	220.8	209.8	202.2	1419.6	1.8	2.0	6.4	82	1015
IE2-355M1-8	132	180	740	92.6	92.6	90.7	0.82	264.1	250.9	241.9	1703.5	1.8	2.0	6.4	90	1715
IE2-355M2-8	160	220	740	93.0	93.0	91.1	0.82	318.8	302.8	291.9	2064.9	1.8	2.0	6.4	90	1866
IE2-355L-8	200	270	740	93.5	93.5	91.6	0.83	391.6	372.0	358.5	2581.1	1.8	2.0	6.4	90	1948
IE2-4001-8	250	340	740	93.5	93.5	91.6	0.80	507.8	482.4	465.0	2641.9	1.6	2.5	6.0	95	2850
IE2-4002-8	315	430	740	93.5	93.5	91.6	0.80	639.8	607.9	585.9	2917.7	1.6	2.5	6.0	95	2950
IE2-4003-8	355	480	740	93.5	93.5	91.6	0.80	721.1	685.0	660.3	3193.6	1.6	2.5	6.0	98	3200
IE2-4004-8	400	550	740	93.5	93.5	91.6	0.80	812.5	771.9	744.0	3469.4	1.6	2.4	6.0	98	3400
IE2-4005-8	450	600	740	93.5	93.5	91.6	0.82	891.8	847.2	816.6	3745.3	1.6	2.4	6.0	98	3600
IE2-4501-8	500	680	740	93.5	93.5	91.6	0.82	990.9	941.3	907.3	4021.1	1.6	2.4	6.0	98	3800
IE2-4502-8	560	760	740	93.5	93.5	91.6	0.82	1109.8	1054.3	1016.2	4297.0	1.6	2.4	6.0	98	4000
IE2-4503-8	630	840	740	93.5	93.5	91.6	0.82	1248.5	1186.1	1143.2	4572.8	1.6	2.4	6.0	98	4200
IE2-4504-8	710	956	740	93.5	93.5	91.6	0.82	1407.0	1336.7	1288.4	4848.7	1.6	2.4	6.0	98	4400

Type IE2	Rated output		Rated speed	Efficiency η %			Power factor	Rated current			Rated Torque	Lock Rotor Torque	Break Down	Lock Rotor	Noise	Cast Iron Motor Weight
	kW	HP	RPM	100% Loda	75% Loda	50% Loda	Cos ϕ	380V	400V	415V	N.m	Tst/Tn	Tmax/Tn	Ist/In	dB(A)	kg
IE2-315S-10	45	60	590	91.5	91.5	79.7	0.75	99.6	94.7	91.2	2.6	1.5	2.0	6.2	82	830
IE2-315M-10	55	75	590	92.0	92.0	79.9	0.75	121.1	115.1	110.9	3.6	1.5	2.0	6.2	82	940
IE2-315L1-10	75	100	590	92.5	92.5	90.5	0.76	162.1	154.0	148.4	4.6	1.5	2.0	6.2	82	1070
IE2-315L2-10	90	125	590	93.0	93.0	91.1	0.77	191.0	181.4	174.9	5.6	1.5	2.0	6.2	82	1150
IE2-355M1-10	110	150	590	93.2	93.2	91.4	0.77	232.9	221.2	213.3	6.6	1.3	2.0	6.0	90	1660
IE2-355M2-10	132	180	590	93.2	93.2	91.6	0.77	279.5	265.5	255.9	7.6	1.3	2.0	6.0	90	1780
IE2-355L-10	160	220	590	93.5	93.5	91.6	0.77	337.7	320.8	309.2	8.6	1.3	2.0	6.0	90	1950
IE2-4001-10	200	270	595	93.5	93.5	91.6	0.74	439.2	417.2	402.2	9.6	1.4	1.6	6.0	93	2820
IE2-4002-10	250	340	595	93.5	93.5	91.6	0.74	549.0	521.5	502.7	10.6	1.4	1.6	6.0	93	2950
IE2-4003-10	280	380	595	93.5	93.5	91.6	0.77	590.9	561.4	541.1	11.6	1.4	1.6	6.0	97	3100
IE2-4004-10	315	430	595	93.5	93.5	91.6	0.77	664.8	631.5	608.7	12.6	1.4	1.6	6.0	97	3350
IE2-4005-10	355	480	595	93.5	93.5	91.6	0.77	749.2	711.7	686.0	13.6	1.4	1.6	6.0	97	3600
IE2-4501-10	400	550	595	93.5	93.5	91.6	0.77	844.2	802.0	773.0	14.6	1.4	1.6	6.0	97	3800
IE2-4502-10	450	600	595	93.5	93.5	91.6	0.77	949.7	902.2	869.6	15.6	1.4	1.6	6.0	97	4050
IE2-4503-10	500	680	595	93.5	93.5	91.6	0.77	1055.2	1002.4	966.2	16.6	1.4	1.6	6.0	97	4300

OVERVIEW

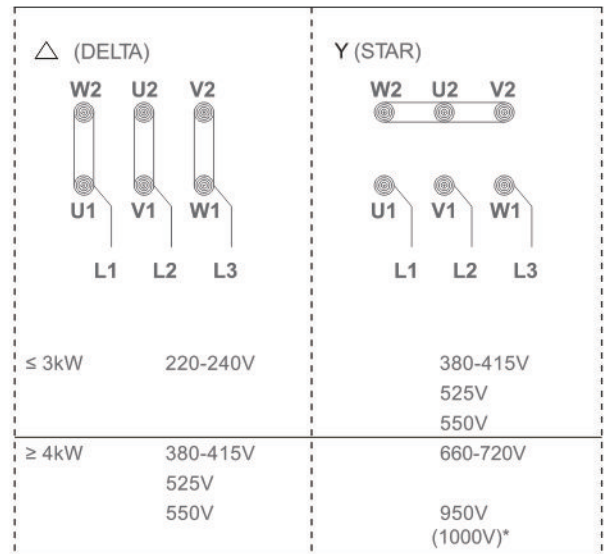
The IE2/IE3 series of 3 phase motors are Totally Enclosed Fan Cooled (TEFC) with IP65/IP66 environmental protection. These motors are designed and manufactured in accordance with IEC standards.

Standard Features

- **Frame material** : Cast Iron & Aluminum
- **Terminal box material** : Cast Iron & Aluminum
 - Plastic cable entry is standard (Metallic cable entry is optional)
- **Standard colour** : RAL 5010
- Specific wound stators supporting multiple 3PH mains supply voltages at 50Hz or 60Hz
- **Aluminum Frame sizes** : 63mm ~ 160mm
- **Cast Iron Frame sizes** : 80mm ~ 450mm
- **Rated power range** : 0.12kW ~ 1000kW at 50Hz
- Standard mounting types and variations (IEC 60034-7)
 - TEFC with IP55 degree of protection (IEC 60034-5)
 - IP 55 Dust protected Jetting Water
 - IP 56 Dust protected Powerful Jetting
 - IP 65 Dust Tight Jetting Water
 - IP 66 Dust Tight Powerful Jetting
 - All Electric motor are protected to IP55 as a minimum Higher levels of protection are available on request ..
- Overload capacity of 1.5 times rated current for 2 minutes(IEC 60034-1)
- Oil seal as standard on DE and NDE rotor shaft for motor with FS 63-450
- Anti-condensation heater (space heater) as option
- Winding protection with PTC145°C, PTC160°C, PT100 as option
- Insulation class: F/H, used according to temperature rise B
- Flexible cable entry (Rotatable terminal box)
- Rotor shaft with open or closed keyway (A type key) and NDE shaft extension
- Regreasing Nipples from size 160 and up

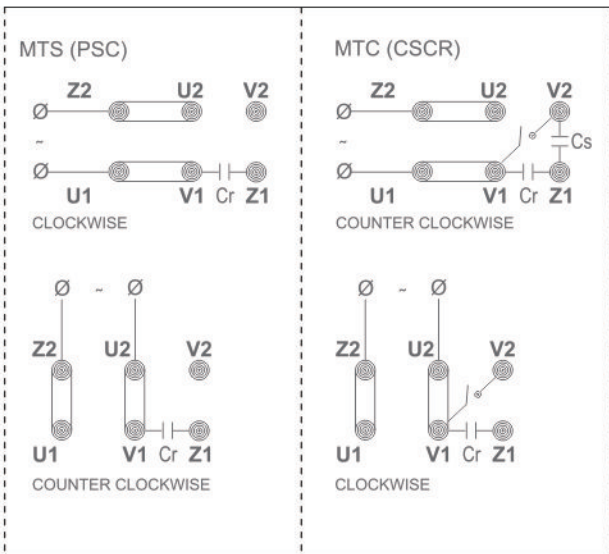
Typical AMG Wiring Diagram

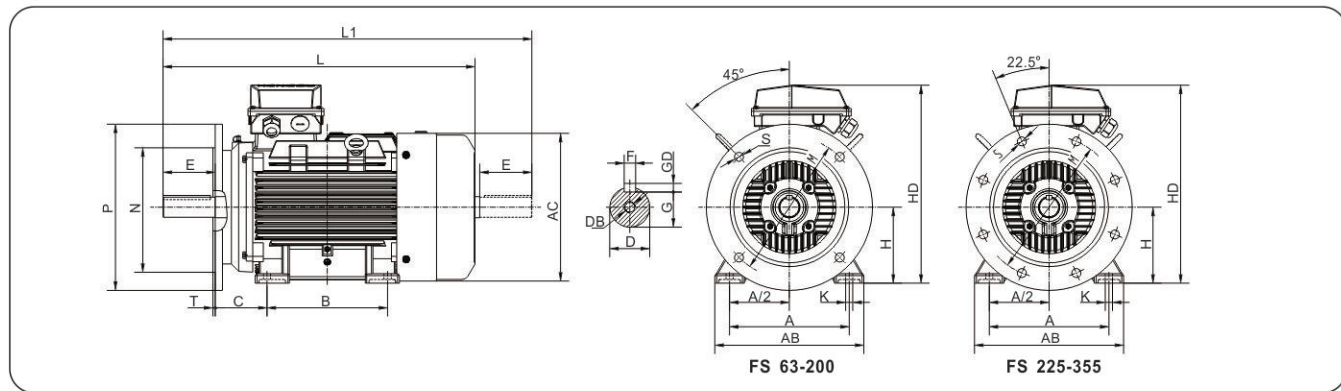
Three-Phase Squirrel Cage Motors



*Subject to 950V being displayed on the nameplate

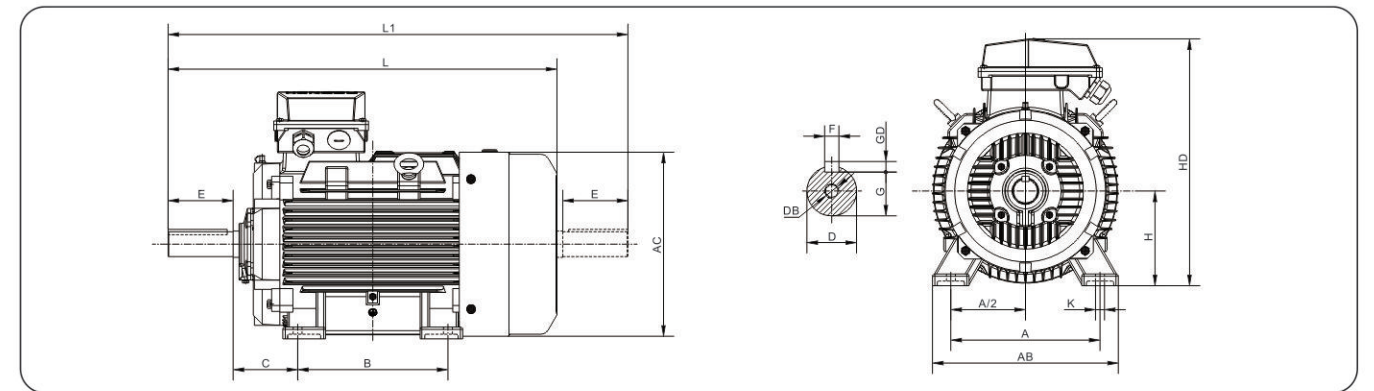
Single-Phase Motors



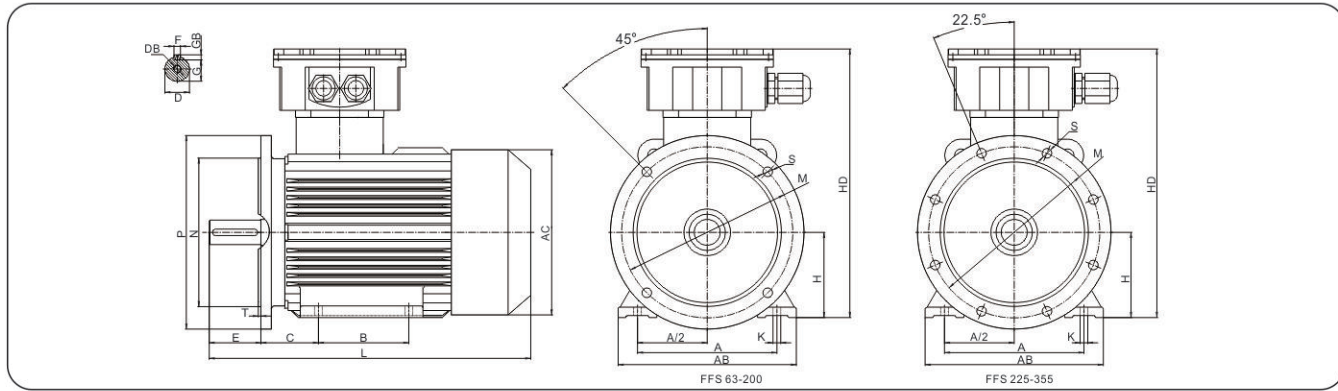


Frame size	Pole	Mounting Dimensions																		OVERALLDIMENSIONS													
		A	A/2	B	C	D	E	F	G	H	K	M	N	P	R	S	T	Flange hole	DB	GD	AB	AC	HD	L	L1								
63M	2.4	100	50	80	40	11 ±1.5	+ 0.008	23	4	85	63	7	φ0.5 (M)	115	95	+ 0.013	140	10 ±1.5	0.36	3	0 -0.10	4	M4	4	135	130	180	230	255				
71M	2.4.6	112	56	90	45		14	0	30	5	-0.030			11	-0.010	71	130						110	- 0.003	160	205	215	270	385	450	M5	5	150
80M	2.4.6.8	125	62.5	100	50	19		40	6		15.5	80			165	130		200			3.5		7	M6	6	165	175	220	295	340			
90S		140	70	100	56	24	+ 0.009	50			20	90	10		165	130	+ 0.014	200	12					M8	8	180	195	250	320	375			
90L				125			+ 0.004	8						φ1.0 (M)			- 0.011				0.43					205	215	270	385	450			
100L		160	80	140	63	28		60	0	-0.036	24	100			215	180		250			0					M10	10	230	240	300	410	475	
112M		190	95	140	70	±2.0						112	12						250	±2.0	15	4											
132S		216	108	140	89		38		80	10		33	132	0	+ 0.43	265	230		300								M12	12	270	275	345	470	555
132M				178									0						300								8	320	330	420	510	595	
160M		254	127	210	108	42	+ 0.018	12			37	160	-0.5				+ 0.016												320	330	420	615	730
160L				254			+ 0.002										- 0.013		350								M16	16	355	380	455	670	785
180M		279	139.5	241	121	±3.0	48		110	14	42.5	180		φ1.5 (M)	300	250		350	±3.0								9						
180L				279																									355	380	455	700	815
200L			318	159	305	133			16	0	-0.043	49	200		350	300	±0.016	400										10			740	855	
225S	4.8			286		60		140	18		53		19								0					11			820	965			
225M	2	356	178	311	149	55		110	16		49	225		400	350	±0.018	450				-0.12					10			845	990			
	4.6.8					60		18		53																							
250M	2					60						250																					
	4.6.8	406	203	349	168	70		140	20	0	-0.052	62.5							19		5				11			490	510	615	920	1065	
280S	2					65			18	0	-0.043	58						0															
	4.6.8			368		80	+ 0.030	170	22	0	-0.052	71	0	500	450		550									M20	12			995	1140		
280M	2	457	228.5	190		65	+ 0.011					-0.020	280															550	580	680			
	4.6.8			419		80		140	18	0	-0.043	58				±0.020				+ 0.52	0									1045	1190		
315M/L	2	508	254	457/508	216	65*		140	18	0	-0.043	58							±4.0								11				1310	1465	
						70*		140	20		62.5	315	0	600	500		660													635	640	800	
	4.6.8.10					85*		170	22		76	-1.0														14				1340	1525		
						90*		170	25		81		28							24													
355M/L	2					90	+ 0.030	170	25		81															12				1500	1650		
	4.6.8.10	610	305	560/630	254	100	+ 0.035	210	28	0	-0.052	90	355		740	680	±0.025	800			6	0	-0.15			M20	14						
400	2					85	+ 0.030	170	22		76				940	880		1000								M20	14			1880	2060		
	4					110	+ 0.035	210	28		100		35		940	880	±0.028									16				1920	2140		
450	2					95	+ 0.013	170	25		86									28						14				2045	2225		
	4	800	400	1000	250	130	+ 0.040	210	32	0	-0.062	119	450		1080	1000		1150								M24	18						
							+ 0.015																					990	960	1380	2145	2365	

*132-160kW Shaft diameter: 65mm, 185-200kW Shaft diameter: 70mm,
*132-160kW Shaft diameter: 85mm, 185-200kW Shaft diameter: 90mm,

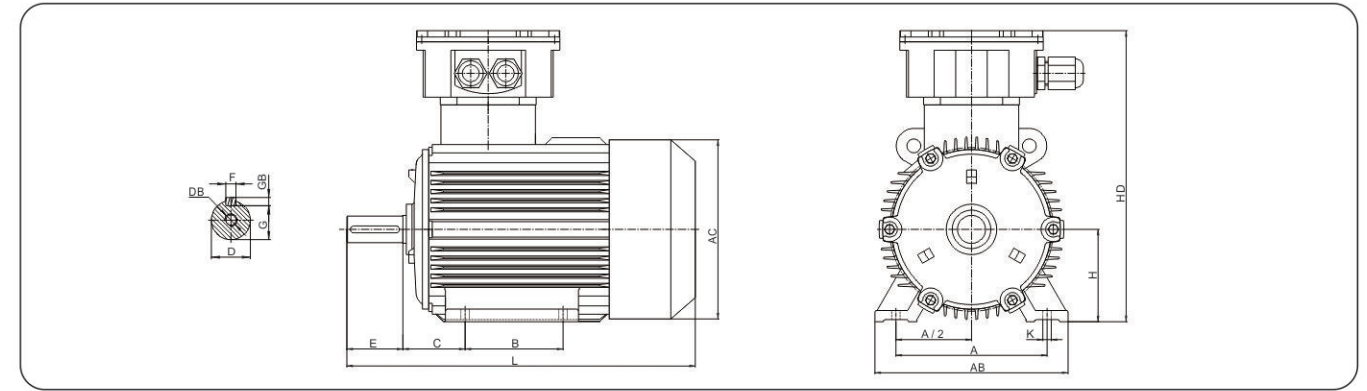


Frame size	Pole	Mounting Dimensions																OVERALLDIMENSIONS							
		A	A/2	B	C	D		E	F	G		H	K			DB	GD	AB	AC	HD	L	L1			
63M	2.4	100	50	80	40	11 + 0.008 + 0.003	23	4	8.5	63	7	+ 0.36 0	φ0.5(M)	M4	4	135	130	180	230	255					
71M	2.4.6	112	56	90	45									14	30	5	0 -0.030	11	0 -0.010	71	M5	5	150	145	195
80M	2.4.6.8	125	62.5	100	50	± 1.5	19	40	6	15.5	80	10	φ1.0(M)	M6	6	165	175	220	295	340					
90S		140	70	100	56	24	50							8	20	90	M8	7	180	195	250	320	375		
90L		125	63	70	28	60	0 -0.036	24	100	M10	205	215	270		385	450									
100L		160						80	140	60	24	112	230	240	300	410	475								
112M		190	95	140	70	± 2.0	38	80	10	33	132	12	+ 0.43 0	M12	8	270	275	345	470	555					
132S		216	108	178	89	38								80		10	33	132	M12	270	275	345	510	595	
132M		216	108	178	89	± 3.0	42	+ 0.018 + 0.002	12	37	160	15	φ1.5(M)	M16	9	320	330	420	615	730					
160M		254	127	254	108	42								12		37	160	15	M16	320	330	420	670	785	
160L		254	127	254	108	± 3.0	48	110	14	42.5	180	15	φ1.5(M)	M16	9	355	380	455	700	815					
180M		279	139.5	241	121	48								14		42.5	180	15	M16	355	380	455	740	855	
180L		279	139.5	241	121	± 3.0	55	16	0 -0.043	49	200	19	φ1.5(M)	10	395	420	505	770	885						
200L		318	159	305	133	55									16	49	200	19	10	395	420	505	820	965	
225S	4.8	356	178	286	149	55	140	18	0 -0.043	53	225	19	φ1.5(M)	11	435	470	560	820	965						
225M	2														435	470	560	820	965						
225M	4.6.8	356	178	311	149	60	110	16	0 -0.043	53	225	19	φ1.5(M)	10	435	470	560	820	965						
250M	2														435	470	560	820	965						
250M	4.6.8	406	203	349	168	70	140	20	0 -0.052	62.5	250	24	+ 0.52 0	φ2.0(M)	11	490	510	615	920	1065					
280S	2	457	228.5	368	190	65	18	0 -0.043	58	280	24					315	0 -1.0	28	12	550	580	680	995	1140	
	4.6.8					80	+ 0.030 + 0.011	170	22	0 -0.052	71	0 -0.020	280	24	12										550
280M	2	457	228.5	419	190	65	140	18	0 -0.043	58	280	24	+ 0.52 0	φ2.0(M)	11	550	580	680	1045	1190					
	4.6.8					80	170	22	0 -0.052	71	280										24	12	1045	1190	
315M/L	2	508	254	457/ 508	216	± 4.0	65*	140	18	0 -0.043	58	315	0 -1.0	28	φ2.0(M)	11	635	640	800	1310	1465				
	70*					140	20	62.5	315	0 -1.0	28									14	1340	1525			
	4.6.8.10					85*	170	22	76	315	0 -1.0									28	14	1340	1525		
355M/L	2	610	305	560/ 630	254	90	+ 0.030 + 0.013	170	25	81	355	35	+ 0.52 0	φ2.0(M)	M20	12	730	710	880	1500	1650				
	4.6.8.10					100	+ 0.035 + 0.013	210	28	0 -0.052	90									M24	14	1530	1710		
400	2	686	343	710	280	85	+ 0.030 + 0.011	170	22	76	400	35	+ 0.52 0	φ2.0(M)	M20	14	806	850	1090	1880	2060				
	4					110	+ 0.035 + 0.013	210	28	100	M24									16	1920	2140			
450	2	800	400	1000	250	95	+ 0.040 + 0.015	170	25	86	450	35	+ 0.52 0	φ2.0(M)	M24	14	990	960	1380	2045	2225				
	4					130	+ 0.040 + 0.015	210	32	0 -0.062	119									M24	18	2145	2365		



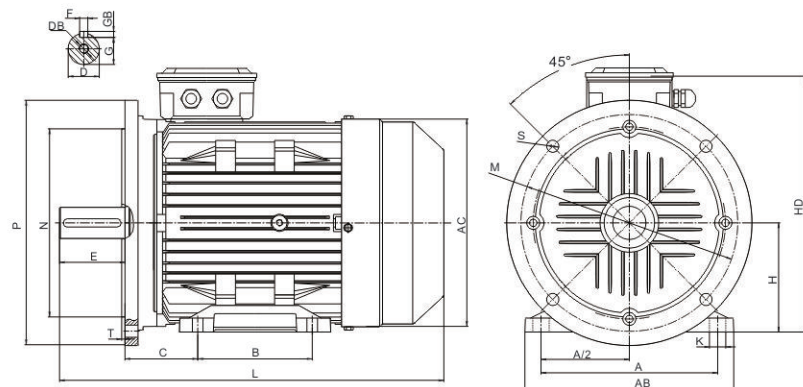
Frame size	Pole	Mounting Dimensions																		OVERALL DIMENSIONS					
		A	A/2	B	C	D	E	F	G	H	K	M	N	P	R	S	T	Flange hole	DB	GD	AB	AC	HD	L	
63M	2.4	100	50	80	40	11 ^{+0.008}	23	4 ⁰	8.5	63	7	φ0.5	115	95 ^{+0.013}	140	10 ^{+0.36} 0	3 ⁰	0	4	M4	4	135	130	180	250
71M	2.4.6	112	56	90	45	14 ^{+0.003}	30	5 ⁰	11 ^{-0.030}	71		φ1.0	130	110 ^{-0.003}	160		12 ^{+0.36} 0			3 ⁰	4	M5	5	150	145
80M	2.4.6.8	125	62.5	100	50	±1.5	19	40	6	15.5	80	10	165	130 ^{+0.014}	200	±1.5	3.5	4	M6	6		165	175	220	330
90S		140	70	100	56	24 ^{+0.009}	50	8 ⁰	20	90	215		180 ^{-0.011}	250	12		4		M8	8	180	195	250	355	
90L		140	70	125	56	24 ^{+0.004}	50	8 ⁰	20	90	215	180 ^{-0.011}	250	12	4	M8	8	180	195	250	355				
100L		160	80	140	63	28	60	0	24	100	215	180 ^{-0.011}	250	12	4	M10	10	205	215	270	430				
112M		190	95	140	70	±2.0	80	10	33	112	265	230	300	±2.0	15	4	M10	10	230	240	300	450			
132S		216	108	140	89	38	80	10	33	132	265	230	300	±2.0	15	4	M12	12	270	275	345	500			
132M		216	108	178	89	38	80	10	33	132	265	230	300	±2.0	15	4	M12	12	270	275	345	500			
160M		254	127	210	108	42 ^{+0.018}	12	16	37	160	300	250 ^{+0.016}	350	±3.0			8	M16	16	320	330	420	660		
160L		254	127	254	108	42 ^{+0.002}	12	16	37	160	300	250 ^{-0.013}	350	±3.0			8	M16	16	320	330	420	660		
180M		279	139.5	241	121	±3.0	48	110	14	42.5	180	15	φ1.5	350	300	±0.016	400	±3.0		9	355	380	455	760	
180L	279	139.5	279	121	±3.0	48	110	14	42.5	180	15	φ1.5	350	300	±0.016	400	±3.0		9	355	380	455	760		
200L	318	159	305	133	55	16	0	49	200	350	300	±0.016	400			0		10	395	420	505	810			
225S	4.8			286	149	60	140	18	53	225	19		400	350	±0.018	450	0		11				855		
225M	2	356	178	311	149	60	110	16	49	225	19		400	350	±0.018	450	0		10	435	470	560	850		
	4.6.8			311	149	60	110	16	49	225	19		400	350	±0.018	450	0		10	435	470	560	850		
	2			311	149	60	110	16	49	225	19		400	350	±0.018	450	0		10	435	470	560	850		
250M	4.6.8	406	203	349	168	70	140	20	62.5	250	19						19	5	11	490	510	615	930		
						70	140	20	62.5	250	19						19	5	11	490	510	615	930		
280S	2			368		65	18	0	58	280	24		500	450	550	0			12				1010		
	4.6.8			368		80 ^{+0.030}	170	22	71	280	24		500	450	550	0			12				1010		
		457	228.5		190	80 ^{+0.011}	170	22	71	280	24		500	450	550	0			12				1010		
280M	2			419		65	140	18	58	280	24				±0.020				11				1040		
	4.6.8			419		80	170	22	71	280	24						±0.52	0	M20	12				1040	
315M/L	2				±4.0	65 ⁺	140	18	58	315		φ2.0	600	500	660		±4.0		8	11				1340	
		508	254	457/508	216	70 ⁺	140	20	62.5	315		φ2.0	600	500	660		±4.0		8	11				1340	
	4.6.8.10					85 ⁺	170	22	76	315		φ2.0	600	500	660		±4.0		8	14				1370	
						90 ⁺	170	25	81	315							±4.0		8	14				1370	
355S	2					90 ^{+0.030}	170	25	81	355									M20	12				1340	
	4.6.8.10	610	305	500		100 ^{+0.035}	210	28	90	355	28						24	6	M24	14				1380	
						90 ^{+0.030}	170	25	81	355									M20	12				1520	
355M	2	610	305	560	254	90 ^{+0.013}	170	25	81	355			740	680	±0.025	800			M20	12			730	710	880
	4.6.8.10	610	305	560	254	100 ^{+0.035}	210	28	90	355			740	680	±0.025	800			M24	14					1560
355L	2	610	305	630		90 ^{+0.030}	170	25	81	355									M20	12					1620
	4.6.8.10	610	305	630		100 ^{+0.035}	210	28	90	355									M24	14					1660

*132-160kW Shaft diameter: 65mm, 185-200kW Shaft diameter: 70mm,
*132-160kW Shaft diameter: 85mm, 185-200kW Shaft diameter: 90mm,

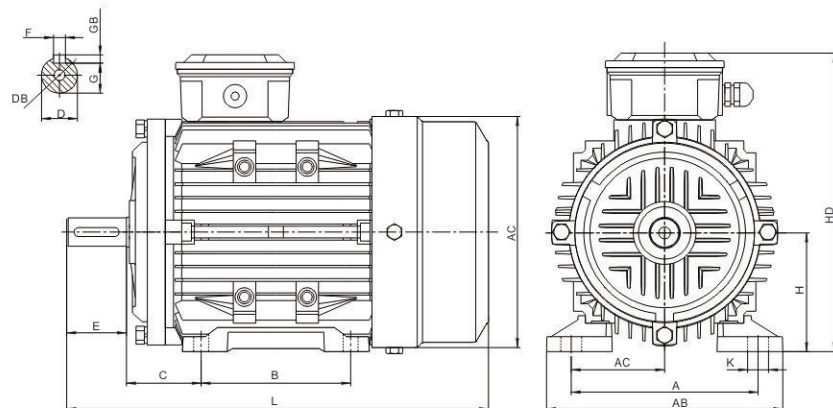


Frame size	Pole	Mounting Dimensions															OVERALLDIMENSIONS							
		A	A/2	B	C	D		E	F	G	H	K			DB	GD	AB	AC	HD	L				
63M	2.4	100	50	80	40	± 1.5	11	+ 0.008	23	4	8.5	0 -0.010	63	7	+ 0.36 0	φ0.5(M)	M4	4	135	130	180	250		
71M	2.4.6	112	56	90	45		14	+ 0.003	30	5	0 -0.030		11				71	M5	5	150	145	195	280	
80M	2.4.6.8	125	62.5	100	50		19		40	6	15.5		80				M6	6	165	175	220	330		
90S		140	70	100	56	24	+ 0.009 + 0.004	50		8	20	90	10	M8		180	195	250	355					
90L		160	80	140	63	± 2.0	28		60	0 -0.036	24	100	12	φ1.0(M)	7	205	215	270	430					
100L		190	95	140	70		38		80	10	33	112				M10		230	240	300	450			
112M		216	108	140	89		38		80	10	33	132				M12		270	275	345	500			
132S		254	127	210	108	± 3.0	42	+ 0.018 + 0.002		12		37	160	15	+ 0.43 0	φ1.5(M)	8	320	330	420	660			
160M		279	139.5	241	121		48		110	14	42.5	180	M16						355	380	455	760		
160L		318	159	305	133		55		16	0 -0.043	49	200	10					395	420	505	810			
180M		4.8	356	178	311	149	60		140	18	53	0 -0.020	280	19	+ 0.52 0	φ2.0(M)	11	490	510	615	930			
225S		2					55		110	16	49							225	10	435	470	560	850	
225M		4.6.8					60		18	53											880			
250M		2	406	203	349	168	60		140	20	0 -0.052	62.5	250	24	28	24	11	550	580	680	1040			
		4.6.8					70	18														0 -0.043	58	12
280S	2	457	228.5	368	190	65			18	0 -0.043	58	315	24	28	24	11	635	640	800	1340				
	4.6.8					80	+ 0.030 + 0.011	170	22	0 -0.052	71										12	635	640	800
280M	2	508	254	457/508	216	65		140	18	0 -0.043	58	315	24	28	24	11	635	640	800	1340				
	4.6.8					80		170	22	0 -0.052	71										12	635	640	800
315M/L	2	508	254	457/508	216	65*		140	18	0 0.043	58	315	0 -1.0	28	+ 0.52 0	φ2.0(M)	11	635	640	800	1370			
	70*						140	20	62.5	14														
	85*						170	22	76															
	90*						170	25	81															
355S	2	610	305	500	254	± 4.0	90	+ 0.030 + 0.013	170	25	81	355	28	28	28	M20	12				1340			
	4.6.8.10					100	+ 0.035 + 0.013	210	28	90	M24						14				1380			
355M	2	610	305	560	254	90	+ 0.030 + 0.013	170	25	0 -0.052	81	355	28	28	28	M20	12		730	710	880	1520		
	4.6.8.10					100	+ 0.035 + 0.013	210	28	90	M24						14				1560			
355L	2	610	305	630	254	90	+ 0.030 + 0.013	170	25	81	90	355	28	28	28	M20	12				1620			
	4.6.8.10					100	+ 0.035 + 0.013	210	28	90							M24	14				1660		

*132-160kW Shaft diameter: 65mm, 185-200kW Shaft diameter: 70mm,
*132-160kW Shaft diameter: 85mm, 185-200kW Shaft diameter: 90mm,



Frame size	Pole	Mounting Dimensions																		OVERALLDIMENSIONS																	
		A	A/2	B	C	D	E	F	G	H	K	M	N	P	R	S	T	Flange hole	DB	GD	AB	AC	HD	L													
63M	2.4	100	50	80	40	11	0.008	23	4	8.5	0	63	7	φ0.5	115	95	+ 0.013	140	3	0	4	M4	4	125	130	165	221										
71M	2.4.6	112	56	90	45	14	+ 0.003	30	5	0	-0.010	71	0.36	M	130	110	- 0.003	160	10	+ 0.36		M5	5	140	145	179	259										
80M	2.4.6	125	62.5	100	50	±1.5	19	40	6	15.5	0	80	0	φ1.0	165	130	+ 0.014 - 0.011	200	±1.5	12		3.5	M6	6	158	175	198	285									
90S		140	70	100	56	24	+ 0.009 + 0.004	50	20	90	10	0	-0.5						215				180	250	±2.0	15	4	0	-0.12	M8	7	175	195	218	320		
90L		160	80	140	63	28	60	0	-0.036	24	100	0	112						12				0.43	265	230	300	±3.0	19	5	0	M10	8	200	215	254	392	
100L		190	95	140	70	±2.0	38	80	10	33	132	0	-0.020						15				1.5	300	250	350	±3.0	19	5	0	M12	8	220	240	278	419	
112M		216	108	140	89	38	0.018 + 0.002	80	10	33	132	0	-0.020						15				1.5	300	250	350	±3.0	19	5	0	M12	8	255	275	317	489	
132S		254	127	178	210	108	±3.0	42	110	12	0	-0.043	37						160				15	φ1.5	300	250	350	±3.0	19	5	0	M16	8	302	330	420	615
132M		216	108	140	89	38	0.018 + 0.002	80	10	33	132	0	-0.020						15				1.5	300	250	350	±3.0	19	5	0	M12	8	255	275	317	489	
160M		254	127	178	210	108	±3.0	42	110	12	0	-0.043	37						160				15	φ1.5	300	250	350	±3.0	19	5	0	M16	8	302	330	420	615
160L	254	127	178	210	108	±3.0	42	110	12	0	-0.043	37	160	15	φ1.5	300	250	350	±3.0	19	5	0	M16	8	302	330	420	615									



Frame size	Pole	Mounting Dimensions																OVERALLDIMENSIONS							
		A	A/2	B	C	D		E	F		G		H		K		DB	GD	AB	AC	HD	L			
63M	2.4	100	50	80	40		11	+ 0.008	23	4	0	8.5	0	63		7	+ 0.36 0	φ0.5M	M4	4	125	130	180	230	
71M	2.4.6	112	56	90	45		14	+ 0.003	30	5		-0.030		11		-0.010			71	7	M5	5	140	145	195
80M	2.4.6	125	62.5	100	50	± 1.5	19		40	6	8	15.5	0	80	0	10	+ 0.43 0	φ1.0M	M6	6	158	175	220	295	
90S		140	70	100	56	24	+ 0.009 + 0.004		50	20		90		100					112	7	200	215	270	385	
90L		140	70	125	56	28		60	-0.036	24	0	-0.020	132	12	M8		175	195	250	320 345					
100L				160																	80	140	63	± 2.0	38
112M		190	95	140	70	± 2.0	38	+ 0.018 + 0.002	110	12	0	-0.043	37		15	φ1.5M	M12		255	275	345	510			
132S		216	108	140	89																		160M	254	127
132M					178																				
160M					178																				
160L		254	127	210	108	± 3.0	42		110	12	0	-0.043	37		160		15								

SABS

Permit to Apply Certification Mark

Subject to the provisions of the Standards Act, 2008
(Act 8 of 2008), the relevant regulations made thereunder and the permit
conditions contained in the under mentioned schedules, this permit authorizes

AMG ELECTRIC MOTORS (PTY) LTD
Co Reg. 2015/128477/07
ZHEJIANG PROVINCE, CHINA

to apply the certification mark



in respect of the mark specification

SANS 1804-1:2012 & SANS 1804-2:2012
TO: INDUCTION MOTORS
PART 1: IEC REQUIREMENTS
PART 2: LOW-VOLTAGE THREE-PHASE STANDARD
MOTORS

This permit, including the schedules 1 to 3 which form an integral part thereof:

- is issued without alteration;
- is identified by the applicable permit number;
- is subject to any condition or limitation contained therein;
- is valid subject to ongoing compliance with permit conditions;
- bears the embossed SABS Commercial seal. In the absence of the seal, the permit and the schedules shall be invalid; and
- the permit may be authenticated by referring to the register of "Certified Clients" on the SABS Commercial website (www.sabs.co.za)
- Scheme Type 3 permit applies to products that have been tested.

Permit Number **11016/17295**

Effective Date **19 June 2019**

Expiry Date **18 June 2025**

Date of Original Registration **19 June 2019**

Chief Executive Officer *Acabasho*



SABS COMMERCIAL SOC Ltd
1 Dr Lategan Rd, Greenfield, Pretoria
Republic of South Africa

44A3000641

11/2020