W20

Three Phase
Low Voltage Motors
Technical Catalogue - African Market

Motors | Automation | Energy | Transmission & Distribution | Coatings

About WEG

Founded in 1961, WEG is acknowledged today as one of the largest manufacturers of electric motors in the world. More than 37,000 people are employed in the different manufacturing units which cover over 2,500,000 square meters of constructed area.
In support of exports in over 135 countries worldwide, WEG has branch offices located in all five continents and has manufacturing plants in 13 countries supported by more than 1400 service centers around the world.
WEG's great success with export activities is based on the company's willingness to meet worldwide standard requirements, keeping product inventories in strategic locations, personnel training and prompt service.

About WEG (Nantong) Electric Motor Mfg. Co., Ltd

With the expansion of WEG Group's business, in addition to setting up commercial branches around the world, the establishment of factories in
overseas strategic markets has also become a solid backing to support local business growth. WEG Group established the first manufacturing plant in Asia in 2005 in the Nantong Economic and Technological Development Zone, Jiangsu, namely WEG (Nantong) Electrical Motor Manufacturing Co., Ltd. ("WEG Nantong"). The company covers an area of 67,000 square meters, with a construction area of 33,500 square meters, and currently employs 650 people. It is a high-efficiency motor manufacturer integrating R&D, design, production, testing, sales, after-sales service and motor maintenance. The annual production capacity of motors exceeds 3 million kilowatts. The company has a research and development center in collaboration with the headquarters, more than 270 sets of various advanced large and medium-sized production equipment, and a complete and scientific management system. It has successively obtained "ISO9001:2015 Quality Management System Certification" and "ISO14001:2015 Environmental Management System" and "ISO45001-2018 Occupational Health and Safety Management System Certification" provide a strong guarantee for the sustainable development of enterprises. The products sell well in domestic and foreign markets, and are widely used in many industrial segments such as pulp and paper, water treatment, marine, food and beverage, power energy, metallurgy, mining, petroleum and natural gas, urban infrastructure, etc., and are well received by domestic and foreign customers.

About WEG (Jiangsu) Electric Equipment Co., Ltd

Since the establishment of WEG Nantong factory in 2005, WEG brand awareness and market share have been increasing in the Chinese market year by year. WEG Group is optimistic about the development potential and opportunities of the Chinese market. In order to establish a competitive advantage and ensure the sustainable growth of WEG business, the WEG Rugao Greenfield Project with a total investment of US$120 million came into being.
Established in 2015 and located in Jiangsu Rugao Economic and Technological Development Zone, WEG(Jiangsu) Electrical Equipment Co., Ltd. ("WEG Rugao" for short) is the third motor manufacturing plant established by WEG Group in China. Covering a total area of about 180,000 square meters, the second phase of the project has now been completed and officially put into production in 2020. There are about 900 employees, and the products mainly cover small and medium-sized low-voltage motors and reducers. The annual design capacity of industrial motors is 800,000 units and 200,000 sets of parts.
WEG Rugao is the motor manufacturing plant with the highest degree of industrial automation in the group. In addition to highly automated intelligent warehousing, a large number of automated production equipment such as robots are equiped to production,
which provides a strong guarantee for the high volume and high quality of products. The ISO9001, ISO14001 and ISO45001 system certifications obtained are also recognition of its scientific and complete management system. In addition to supplying the Chinese market, the products are also exported to Europe, America, Asia and Africa and other countries and regions. They are widely used in various industrial fields, including traditional applications such as fans, pumps and compressors. The company has established a R&D low-voltage center, through the WMS system (WEG manufacturing system), six sigma and other lean production systems to ensure to provide customers with high-quality products and services.

Certifications

WEG China

USA | China | Europe | China | GEMS Australia | France | Russia | Norway & Germany | Saudi Arabia

China | Canada | Custom Federation | South Korea | South Africa | USA | IEC Ex

ISO9001:2015 Quality Management System

ISO45001:2018 Occupational health and safety management

ISO14001:2015 Environmental Management System

Note: For the specific product certification please consult WEG support team.

Table of Contents

W20 Frame 80 to 200 (Cast Iron Frame)

W20 Frame 160 to 200 (Aluminum Frame)

W20 Frame W225S 225M 250M W280S 280M (Cast Iron Frame)

W20 Frame 315S/M 355S/M (Cast Iron Frame)

1. Construction Details

1.1 Frame

Aluminum Frames are made of high quality die cast aluminum, providing a light weight and robust enclosure. Available from 160 to 200 frame size. Frame sizes above 112 are all equipped with eyebolts in order to allow easy handling.

Frame size 160-200

Figure 1- Aluminum Frame

The cast iron frame is made of FC-200 cast iron, which is sturdy and durable. Frame sizes from W225S to 280M are designed with one-piece feet.

Frame size
80 to 200, 315S/M, 355S/M

Frame size
W225S,225M,250M,W280S,280M

Figure 2 - Cast Iron Frame

1.2 End shields

W20 motors DE and NDE shields are made of cast iron. This new design ensures robustness for long term operation for a wide range of ambients and temperature.

DE End shield

NDE End Shield

Figure 3 - End shields

1.3 Fan cover

W20's fan cover is made of steel plate.

Figure 3 - Fan cover

1.4 Terminal Box

As the fan cover, W20 motor terminal box is also made of steel. In order to facilitate wiring, there is enough space in the terminal box, which can be rotated 90 degrees, and the installation is very flexible. The hole of the terminal box is the Chinese standard threaded hole, with plastic cover.

Note: users can select or replace the wiring gland to meet the IP55 protection level.

Figure 5 - Terminal Box

Figure 6 - Terminal box switching device

1.5 Terminal Block

The connection wires are in accordance with standard IEC 60034-8 and GB1971-2006, and are matched with appointed terminal block. W20 motors are equipped with BMC terminal block. The picture is as below.

Figure 7 - Terminal block

Figure 8- W225S to 280M Terminal block

1.6 Bearings

WEG motors are equipped with ball bearings and have regreasing nippes for frame 225 and above. WEG cooperate with international recognized bearing suppliers to ensure the motor's high performance and extended bearing life time. If a specific bearing brand was required, please contact WEG support team before placing order.

Note 1: Motor with shaft down mounting position shall considered drip cover.

Note 2: For shaft up outdoor applications, the use of slinger can provide extra protection to the bearing.

Figure 9 - Shaft down mounting & shaft up mounting

1.6.1 Bearings thrusts

62 series bearing

50 Hz - Fr (kN*) - 20,000h						
Frame	DE Bearing	Poles	Radial Load		Axial Load	
			L/2	L	Push	Pull
80	6204	2	0.64	0.58	0.26	0.42
		4	0.72	0.65	0.35	0.56
		6	0.84	0.76	0.45	0.7
		8	0.98	0.79	0.55	0.83
90	6205	2	0.66	0.6	0.37	0.43
		4	0.76	0.69	0.51	0.59
		6	0.9	0.81	0.63	0.71
		8	1.03	0.94	0.76	0.86
100	6206	2	0.94	0.85	0.37	0.59
		4	1.03	0.93	0.5	0.81
		6	1.22	1.1	0.65	1.02
		8	1.4	1.26	0.78	1.19
112	6207	2	1.3	1.2	0.5	0.8
		4	1.5	1.4	0.7	1.1
		6	1.8	1.6	1	1.4
		8	1.9	1.7	1.1	1.5
132	6208	2	1.6	1.8	0.9	1
		4	2.2	2	1.3	1.4
		6	2.3	2.2	1.5	1.6
		8	2.5	2.3	1.6	1.7
W160M	6209	2	1.95	1.75	0.72	1.32
		4	2.25	2.3	0.99	1.81
		6	2.33	2.58	1.22	2.2
		8	2.88	2.6	1.37	2.45
160M/L	6209	2	1.95	1.53	1.85	1.02
		4	2.36	1.89	2.25	1.42
		6	2.8	2.19	2.61	1.8
		8	3.06	2.4	2.88	2.07
180M/L	6211	2	1.49	2	2.34	1.34
		4	3.06	2.5	2.88	1.89
		6	3.58	2.92	3.33	2.34
		8	3.97	3.24	3.74	2.75
200M/L	6212	2	3.03	2.52	2.7	1.62
		4	3.74	3.11	3.38	2.3
		6	4.35	3.62	3.92	2.84
		8	4.71	3.94	4.32	3.24

63 series bearing

50 Hz - Fr (kN*) - 20,000h						
Frame	DE Bearing	Poles	Radial Load		Axial Load	
			L/2	L	Push	Pull
112	6307	2	1.66	1.5	0.54	1.14
		4	1.96	1.72	0.73	1.55
		6	2.24	1.76	0.96	1.94
		8	2.58	1.8	1.07	2.15
132	6308	2	1.94	1.75	0.72	1.32
		4	2.25	2.03	0.99	1.81
		6	2.58	2.33	1.22	2.2
		8	2.88	2.6	1.37	2.45
160	6309	2	2.5	2.25	2.4	1.69
		4	2.87	2.58	2.95	2.25
		6	3.2	2.65	3.4	2.7
		8	3.81	2.76	3.85	3.15

63 series bearing

50 Hz - Fr (kN*) - 20,000h						
Frame	DE Bearing	Poles	Radial Load		Axial Load	
			L/2	L	Push	Pull
180	6311	2	4.27	3.87	3.2	2.3
		4	3.98	3.61	3.9	3
		6	4.7	4.15	4.65	3.75
		8	5.06	4.1	5.2	4.35
200	6312	2	4.01	3.67	3.55	2.55
		4	4.57	4.19	4.45	3.45
		6	5.19	4.75	5.2	4.2
		8	5.81	5.31	6	5
225	6314	2	5.23	4.81	4.35	3.55
		4	5.92	5.33	5.5	4.7
		6	6.67	6.01	6.6	5.8
		8	7.54	6.18	7.5	6.7
250	6314	2	5.12	4.66	4.3	3.5
		4	5.52	5.03	5.3	4.45
		6	6.48	5.91	6.4	5.6
		8	7.15	6.51	7.3	6.5
280	6314	2	4.92	4.54	4.15	3.35
	6316	4	6.41	5.91	5.8	5
		6	7.37	6.79	7.2	6.4
		8	7.57	6.98	8.4	7.6
315	6314	2	4.48	4.16	3.65	2.85
	6319	4	7.01	6.42	6.1	5.4
		6	7.83	7.17	7.4	6.6
		8	8.49	7.78	8.5	7.7
355	6316	2	4.03	3.79	3.7	2.95
	6322	4	8.53	7.83	6.6	5.8
		6	9.33	8.56	7.7	7
		8	11.4	10.5	7.7	7

1.7 Nameplate

Nameplates are made of AISI 304 stainless steel. All the information are printed onto the nameplates by laser. Nameplate included main informations of motor, such as: serial number, output, voltage, current, frequency, protection degree, power factor, insulation class, bearings type, grease and regreasing interval, etc. IEC frame up to 200 has vertical nameplate (figure 7) and frame 225 to 355 has horizontal nameplate (figure 8).

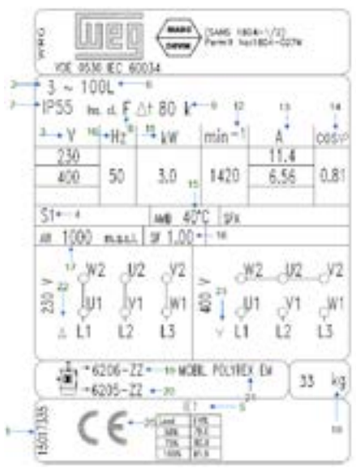


Figure 7 - Nameplate for frame size 80 to 200

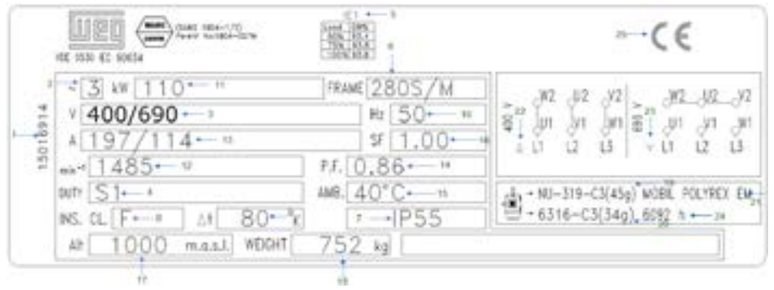


Figure 8 - Nameplate for frame size 225 to 355

Details on Nameplate:

1. Material number
2. Three phase
3. Rated voltage
4. Duty type
5. Efficiency
6. Frame size
7. Degree of protection
8. Insulation class
9. Temperature rise
10. Frequency
11. Rated power
12. Full load speed (RPM)
13. Rated currentPower factor
14. Ambient temperature
15. Service factor
16. Altitude
17. Weight
18. Drive End Bearing type
19. Non Drive End Bearing type
20. Grease
21. △ connection diagram
22. Y connection diagram
23. Regreasing interval
24. Certification
25. Power factor

1.8 Forced ventilation Blower (Optional)

In frequency conversion applications, a blower can be selected according to customer requirements for forced cooling (90 to 355 frames). The position of the terminal box of the blower is at the top by default (view from the shaft end). If you have special requirements for the position of the terminal box of the axial flow fan, please contact related WEG support team for more details.

Figure 12 - W20 motor with axial flow blower

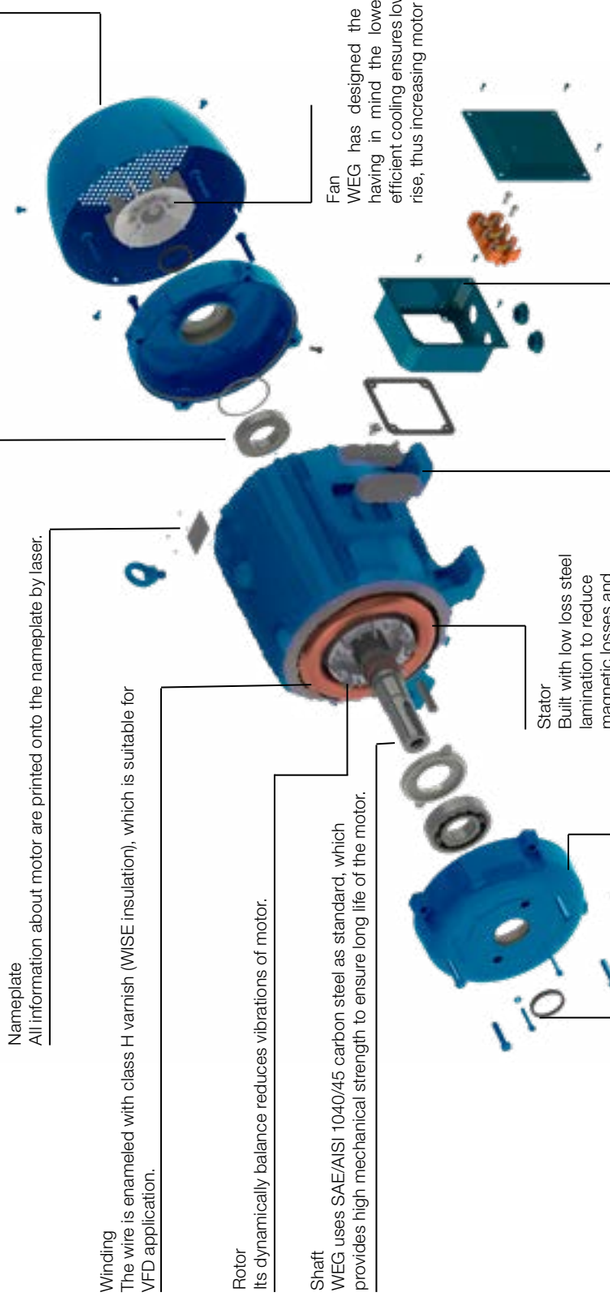
1.9 Packing

W20 motors frame 80 to 132 have carton box as standard packaging (figure 13). Frame 160 to 355, the packaging of motor are carton box or wooden box WEG choose different packaging according to the mounting and frame size of motors). The WEG packaging is under continuous improvement, it is subject to change without previous notifications.

Figure 13 - Carton box

Figure 14 - Crate 1

W20 series motor structure



Fan Cover
Made of steel, W20 motor's fan cover is smooth and ensure low noise level and long life due to its high mechanical strenght and corrosion resistance.

Bearings
WEG motors are fitted with the highest quality bearings selected, validated by WEG and designed to ensure the long life of the motor.

Nameplate
All information about motor are printed onto the nameplate by laser.

Winding
The wire is enameled with class H varnish (WISE insulation), which is suitable for VFD application.

Rotor
Its dynamically balance reduces vibrations of motor.

Shaft
WEG uses SAE/AISI 1040/45 carbon steel as standard, which provides high mechanical strength to ensure long life of the motor.

Fan
WEG has designed the fan and fan cover having in mind the lowest noise level. The efficient cooling ensures low motor temperature rise, thus increasing motor efficiency.

Terminal Box
Made of steel plate with plenty of internal space, can be rotated at 90 degrees intervals.

Frame
Aluminum Frame as standard for motor frame 80 to 200, have a lighter weight and robust enclosure. FC-200 high grade Cast Iron Frame as standard for motor frame 160 to 355, provided with fins aimed at improving the heat dissipation.

Stator
Built with low loss steel lamination to reduce magnetic losses and operating tempeatrue.

Endshield
Made of cast iron, they assure the high mechnical strength.

Plastic drain holes
Provided with plastic drain plug allowing drainage of condensed water.

Seals
WEG motors are fitted with either V-ring seals, Oil seals or Lip seals to ensure the best possible protection under high moisture environment.

2. Construction Features - Cast Iron Frame

Frame size			80	90S	90L	100L	112M	132S	132M	132M/L	160M	160L
Mechanical features												
Marking/logos on nameplate:			CE（IE2）; MASC									
Certification			MASC									
Mounting			B3T									
Frame	Material		FC-200 Cast Iron									
Degree of protection			IP55									
Grounding			Single grounding (inside terminal box)									
Cooling method			TEFC									
Fan	Material	2P	Plastic									
		4-8P										
Fan cover	Material		Steel									
Endshields	Material		FC-200 Cast Iron									
Drain plug			Automatic rubber drain plug									
Rolling bearings	Shielded/Clearence DE		ZZ								ZZ-C3	
	Shielded/Clearence NDE		ZZ								ZZ-C3	
	Locking		None								DE bearing locked with inner bearing cap and fitted with wave washer in the NDE bearing	
	Bearing life (h)		20000h									
	Drive end side	2P	6204	6205	6205	6206	6207	6208	6208	6208	6309	6309
		4-8P										
	Non drive end side	2P	6203	6204	6204	6205	6206	6207	6207	6207	6209	6209
		4-8P										
Bearing sealing			V'ring									
Joints sealing			none									
Lubrication	Grease type		Mobil Polyrex EM									
	Oil type		——									
	Grease fitting		None									
Terminal block			BMC 6 Terminais									
Terminal box	Material		Aluminum									
Additional temrinal box			None									
Leads inlet	Main	Size	M20x1.5				M25x1.5	2xM25x1.5				
	Lateral hole	Size	——									
	Additional	Size										
	Plug		Plastic plug for transport and storage purposes									
Shaft	Material	2p	AISI 1040/45									
		4 - 8p	AISI 1040/45									
	DE threaded hole	2p	M6	M8	M8	M10	M10	M12	M12	M12	M16	M16
		4 - 8p										
Key			Fitted with "A" type (China key type: B)									
Vibration level			Grade A									
Balancing			With 1/2 key									
Nameplate	Material		Stainless Steel AISI 304									
Painting	Type		201A									
	Color		RAL 5009									
	Tropicalized		——									
Packaging			Cardboard box								Crate	
Electrical features												
Desing			N									
Voltage			400V									
Winding	Impregnation		Dip and Bake									
	Insulation class		F (DT 80K)									
Service factor			1.00									
Thermal protector			None									
Space heaters			None									
Flying leads			None									
Ambient temperature	Maximum		40°C									
	Minium		-20°C									
Starting method			Direct									

2. Construction Features - Cast Iron Frame

Frame size			180M	180L	200M	200L	W225S	225M	250M	W280S	280M	315S/M	355M/L
Mechanical features													
Marking/logos on nameplate:			CE (IE2); MASC										
Certification			MASC										
Mounting			B3T										
Frame	Material		FC-200 Cast Iron										
Degree of protection			IP55										
Grounding			Single grounding (inside terminal box)				Double grounding (1 terminal box + 1 outside frame)						
Cooling method			TEFC										
Fan	Material	2P 4-8P	Plastic										Aluminium
Fan cover	Material		Steel										
Endshields	Material		FC-200 Cast Iron										
Drain plug			Automatic rubber drain plug										
Rolling bearings	Shielded/Clearence DE		ZZ-C3					C3					
	Shielded/Clearence NDE		ZZ-C3					C3					
	Locking		DE bearing locked with inner bearing cap and fitted with wave washer in the NDE bearing					DE bearing locked with inner and outer bearing caps and fitted with pre-load springs in the NDE bearing					
	Bearing life (h)		20000h										
	Drive end side	2P	6311	6311	6312	6312	6312	6314	6314	6314	6314	6314 - 6316(*)	6319
		4-8P					6314		6316	NU319	NU319	NU319	NU322
	Non drive end side	2P	6211	6211	6212	6212	6212		6314	6314	6314	6314 - 6316(*)	6316
		4-8P							6314	6314	6316	6316	6319
Bearing sealing			V'ring										
Lubrication	Grease type		Mobil Polyrex EM										
	Grease fitting		None					With grease fittings in DE and NDE bearings					
Terminal block			BMC 6 Terminais										
Terminal box	Material		Aluminum				Cast Iron						
Additional temrinal box			None										
Leads inlet	Main	Size	2xM32x1.5						2xM40x1.5	2xM50x1.5		2xM63x1.5	
	Plug		Plastic plug for transport and storage purposes										
Shaft	Material	2P	AISI 1040/45										AISI 4140
		4 - 8P	AISI 1040/45					AISI 4140					
	DE threaded hole	2P	M16	M16	M20	M20	M20	M20	M20	M20	M20	M20	M20
		4 - 8P											M24
Key			Fitted with "A" type (China key type: B)				Fitted with "B" type (China key type: C)						
Vibration level			Grade A										
Balancing			With 1/2 key										
Nameplate	Material		Stainless Steel AISI 304										
Painting	Type		201A										
	Color		RAL 5009										
Packaging			Crate										
Electrical features													
Desing			N										
Voltage			400V										
Winding	Impregnation		Dip and Bake					Continuous Resin Flow					
	Insulation class		F (DT 80K)										
Service factor			1.00										
Thermal protector			None						PTC 155°C				
Space heaters			None										
Flying leads			None										
Ambient temperature	Maximum		40°C										
	Minium		-20°C										
Starting method			Direct										

*Only for 185kW and above.

2. Construction Features - Aluminum Frame

Frame size			W160M	160M/L	180M/L	200M/L
Mechanical features						
Marking/logos on nameplate:			CE; MASC; EML			
Certification			MASC			
Mounting			B3T			
Frame	Material		aluminum			
Degree of protection			IP55			
Grounding			Single grouding			
Cooling method			TEFC			
Fan	Material		Plastic			
Fan cover	Material		Steel			
Endshields	Material		FC-200 Cast Iron			
Drain plug			Automatic rubber drain plug			
Rolling bearings	Shielded/Clearence DE		ZZ - C3			
	Shielded/Clearence NDE		ZZ - C3			
	Locking		DE bearing locked with inner bearing cap and NDE bearing fitted with wave washer			
	Bearing life (h)		20000h			
	Drive end side	2P 4-8P	6209	6209	6211	6212
	Non drive end side	2P 4-8P	6207	6209	6211	6212
Bearing sealing			V'ring			
Lubrication	Grease type		Mobil Polyrex EM			
	Grease fitting		None			
Terminal block			BMC 6 Terminais			
Terminal box	Material		Aluminum			
Additional temrinal box			None			
Leads inlet	Main	Size	2xM25x1.5			2xM32x1.5
	Plug		Plastic plug for transport and storage purposes			
Shaft	Material		SAE 1040/45			
	DE threaded hole	2p 4 - 8p	M16			M20
Key			Fitted with "A" type (China key type: B)			
Vibration level			Grade A			
Balancing			With 1/2 key			
Nameplate	Material		Stainless Steel AISI 304			
Painting	Type		201A			
	Color		IE1: RAL 7000; IE2 / IE3:RAL 5009			
	Tropicalized		None			
Packaging			Crate			
Electrical features						
Desing			N			
Voltage			400/690V with 6 terminals			
Winding	Impregnation		Immersion			
	Insulation class		F (DT 80K)			
Service factor			1.00			
Thermal protector			None			
Space heaters			None			
Flying leads			None			
Ambient temperature	Maximum		40°C			
	Minium		-20°C			
Starting method			Direct			

3. Optional Features

Frame size	80	90S	90L	100L	112M	132S	132M	132M/L	W160M	160M	160L	160M/L	180M	180L	180M/L	200L	200M/L	W225S	225M	250M	W280S	280M	315S/M	355M/L
Mechanical Options																								
Flange																								
Flange FF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flange C-DIN	0	0	0	0	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Flange C	0	0	0	0	0	0	0	0	NA	0	0	0	0	0	0	0	0	NA	NA	NA	NA	NA	0	0
Cooling Fan																								
Aluminum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SD
Frame Material																								
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	SD	NA	NA	SD	NA	NA	SD	NA	SD	NA	NA	NA	NA	NA	NA	NA
Cast Iron	SD	SD	SD	SD	SD	SD	SD	SD	NA	SD	SD	NA	SD	SD	NA	SD	NA	SD	SD	SD	SD	SD	SD	SD
Insulation Class																								
F DT 105K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H DT 80K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H DT 105K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Painting Plan																								
203A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
207A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bearing Seal																								
Lip seal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil seal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bearing Cap																								
Bearing cap	0	0	0	0	0	0	0	0	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
Shaft 2P																								
SAE 1040/45	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	NA
AISI 4140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SD	SD	SD	SD	SD	SD
Shaft 4P																								
SAE 1040/45	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	0	0	0	0	0	NA
AISI 4140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SD	SD	SD	SD	SD	SD
Degree of protection																								
IP56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grounding																								
Single	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	NA	NA	NA	NA	NA	NA	NA
Double	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SD	SD	SD	SD	SD	SD	SD
Other Mechanical Optional																								
Drip cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electrical Options																								
Winding Thermal Protection																								
PTC - Alarm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PTC - Trip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Space Heater																								
110-127 V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200-240 V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110-127 / 220-240 V	NA	NA	NA	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
380-480 V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Direction of Rotation																								
Clockwise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Counter clockwise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Service factor																								
1.15	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E

Note: SD = Standard Feature; O = Optional Feature; E = Especial Feature; NA = Not Available

4. Electrical Data

W20 - Cast Iron Frame - IE1

Output		Frame	Full Load Torque	Locked Rotor Current	Locked Rotor Torque	Break-down Torque	Inertia J	Allowable locked rotor time (s)		Weight	Sound	400 V							
												Rated speed	% of full load						Full load current
													Efficiency			Power Factor			
kW	HP		(kgfm)	Il/In	Tl/Tn	Tb/Tn	(kgm2)	Hot	Cold	(kg)	dB(A)	(rpm)	50	75	100	50	75	100	In (A)
2P																			
0.55	0.75	80	0.193	4.7	1.9	2.1	0.0007	25	55	13.0	59	2778	73.5	74.0	74.0	0.71	0.83	0.89	1.21
0.75	1	80	0.260	5.3	2.3	2.5	0.0006	16	35	10.0	59	2807	74.0	76.6	75.9	0.65	0.78	0.86	1.66
1.1	1.5	80	0.384	6.6	3.8	3.4	0.0008	19	42	13.5	59	2790	73.0	74.0	75.0	0.71	0.83	0.88	2.40
1.5	2	90S	0.512	5.7	1.9	2.4	0.0017	10	22	15.0	64	2853	81.3	81.9	80.0	0.68	0.81	0.87	3.11
2.2	3	90L	0.752	6.2	2.2	2.6	0.0022	7	15	23.0	64	2849	84.4	84.0	81.7	0.74	0.84	0.89	4.37
3	4	100L	1.02	6.5	2	2.6	0.0052	8	18	23.5	67	2876	82.5	83.2	81.8	0.78	0.88	0.91	5.81
4	5.5	112M	1.35	6.8	2.1	2.8	0.0073	11	24	35.0	64	2888	83.6	84.8	83.9	0.75	0.85	0.90	7.65
5.5	7.5	132S	1.83	6.5	1.8	2.8	0.0159	8	18	56.0	68	2930	83.0	84.0	84.7	0.70	0.82	0.87	10.7
7.5	10	132S	2.50	6.5	1.9	2.8	0.0187	9	20	60.0	68	2925	85.0	86.0	86.0	0.73	0.83	0.88	14.3
9.2	12.5	132M	3.06	6.9	2.1	2.9	0.0243	7	15	68.0	68	2925	85.8	86.7	86.9	0.74	0.83	0.88	17.4
11	15	160M	3.65	6.9	2.4	3	0.0353	9	20	110	70	2937	87.3	88.6	88.4	0.72	0.82	0.87	20.6
15	20	160M	4.97	7.8	2.8	3.3	0.0471	7	15	127	70	2942	88.8	90.0	89.8	0.74	0.84	0.88	27.4
18.5	25	160L	6.13	7.7	2.8	3.4	0.0559	6	13	130	70	2941	90.6	91.3	90.8	0.72	0.83	0.87	33.8
22	30	180M	7.26	7.4	2.9	3	0.0965	8	18	185	70	2952	90.5	91.0	91.0	0.74	0.84	0.88	39.6
30	40	200L	9.87	6.7	2.7	2.6	0.1794	13	29	250	74	2959	91.1	92.0	91.7	0.76	0.85	0.88	53.7
37	50	200L	12.2	6.8	2.7	2.6	0.2063	12	26	290	74	2958	91.9	92.5	92.1	0.78	0.86	0.89	65.2
45	60	225M	14.9	7.4	2.3	2.6	0.2341	23	51	283	---	2942	92.2	93.0	92.7	0.77	0.85	0.88	79.6
55	75	250M	18.1	6.9	2	3	0.3238	12	26	338	---	2955	93.1	93.0	93.1	0.80	0.87	0.90	95.0
75	100	W280S*	24.7	8.3	2.7	3	0.4585	8	18	428	---	2963	93.5	93.6	93.6	0.80	0.87	0.90	128
90	125	280M	29.6	6.5	1.8	3.1	0.8605	14	31	544	---	2960	93.5	94.1	94.0	0.83	0.89	0.91	152
110	150	315S/M	36.1	6.5	2.1	2.6	1.41	30	66	810	84	2970	93.7	94.0	94.2	0.84	0.89	0.90	187
132	175	315S/M	43.2	7.4	2.2	2.9	1.65	22	48	870	84	2973	94.2	94.3	94.5	0.83	0.89	0.91	221
150	200	315S/M	49.1	7.6	2.2	2.9	1.88	18	40	930	84	2973	94.5	94.5	94.5	0.83	0.89	0.91	252
160	220	315S/M	52.4	7.5	2.3	2.8	2.12	19	42	1010	84	2972	94.0	94.3	94.6	0.84	0.90	0.91	268
185	250	315S/M	60.6	8.4	2.5	3.1	1.96	16	35	1010	84	2974	94.0	94.5	94.8	0.84	0.89	0.91	310
200	270	355M/L	65.3	6.1	1.8	2.2	4.56	70	154	1490	81	2981	94.0	94.5	94.8	0.89	0.91	0.91	334
220	300	355M/L	71.8	7.3	2.3	2.7	4.88	56	123	1650	81	2984	94.0	94.5	94.8	0.88	0.91	0.91	368
250	340	355M/L	81.7	7.1	2.7	2.5	5.39	41	90	1750	81	2982	94.0	94.5	94.8	0.89	0.91	0.91	418
280	380	355M/L*	91.6	5.7	2.3	2.1	5.90	35	77	1850	81	2977	94.0	94.5	94.8	0.91	0.92	0.91	468
300	400	355M/L	98.0	6.7	2.2	2.5	5.90	68	150	1850	81	2983	94.0	94.5	94.8	0.87	0.90	0.90	507
315	430	355M/L	103	6.4	2.1	2.4	5.90	60	132	1850	81	2982	94.0	94.5	94.8	0.87	0.90	0.90	533
330	450	355M/L	108	6.1	2	2.3	5.90	60	132	1850	81	2980	94.0	94.5	94.8	0.88	0.91	0.90	559
High-Output Design																			
1.1	1.5	90S	0.376	5.4	1.7	2.2	0.0012	12	26	15.0	64	2848	79.4	80.3	78.4	0.68	0.81	0.87	2.33
1.5	2	90L	0.512	5.7	1.9	2.4	0.0017	10	22	15.0	64	2853	81.3	81.9	80.0	0.68	0.81	0.87	3.11
1.5	2	L80	0.522	5.8	2.6	2.6	0.0009	10	22	15.0	59	2800	81.5	81.7	79.6	0.75	0.85	0.90	3.02
2.2	3	100L	0.746	6.1	1.8	2.4	0.0051	9	20	23.5	67	2871	79.4	80.9	79.7	0.75	0.86	0.90	4.43
2.2	3	90S	0.752	6.2	2.2	2.6	0.0022	7	15	23.0	64	2849	84.4	84.0	81.7	0.74	0.84	0.89	4.37
3	4	112M	1.02	5.9	1.7	2.4	0.0070	15	33	39.0	64	2868	82.3	83.2	81.8	0.79	0.87	0.91	5.81
3	4	L90L*	1.02	6.0	2.4	3.1	0.0025	4	9	24.0	64	2859	83.1	84.2	83.1	0.58	0.73	0.82	6.36
4	5.5	132S	1.32	7.5	2.1	3.2	0.0135	8	18	61.0	68	2945	81.0	83.1	83.1	0.72	0.82	0.87	7.99
4	5.5	L100L	1.34	7.6	2.3	3.1	0.0065	6	13	33.0	67	2900	84.2	85.3	84.4	0.76	0.86	0.91	7.51
5.5	7.5	112M	1.86	7.0	2.3	3	0.0096	8	18	45.0	64	2882	86.0	86.6	85.5	0.74	0.84	0.89	10.5
7.5	10	132M	2.50	6.5	1.9	2.8	0.0187	9	20	60.0	68	2925	85.0	86.0	86.0	0.73	0.83	0.88	14.3
7.5	10	L112M*	2.54	6.8	2.3	2.9	0.0094	5	11	45.0	64	2871	85.5	86.0	86.0	0.74	0.85	0.89	14.2
9.2	12.5	160M	3.05	6.9	2.3	2.9	0.0353	11	24	97.0	70	2938	86.6	88.1	87.8	0.75	0.85	0.89	17.0
11	15	L132M	3.66	7.4	2.2	2.9	0.0280	8	18	74.0	68	2925	86.0	87.6	87.6	0.80	0.87	0.90	20.1
15	20	160L	4.97	7.8	2.8	3.3	0.0471	7	15	127	70	2942	88.8	90.0	89.8	0.74	0.84	0.88	27.4
22	30	L160L	7.29	8.0	3	3.5	0.0639	5	11	132	70	2941	90.5	91.0	91.0	0.70	0.81	0.87	40.1
30	40	180L	9.90	8.6	3.3	3.3	0.1130	11	24	250	70	2953	91.0	91.5	91.8	0.70	0.81	0.86	54.8
30	40	200M	9.87	6.7	2.7	2.6	0.1794	13	29	250	74	2959	91.1	92.0	91.7	0.76	0.85	0.88	53.7
37	50	200M	12.2	6.8	2.7	2.6	0.2063	12	26	290	74	2958	91.9	92.5	92.1	0.78	0.86	0.89	65.2
185	250	355M/L	60.6	7.0	1.6	1.8	4.02	70	154	1430	81	2975	92.0	93.5	94.0	0.86	0.91	0.92	309
200	270	315S/M	65.5	7.2	2.1	2.7	2.03	41	90	1045	84	2976	94.0	94.5	94.8	0.85	0.90	0.91	334

W20 - Cast Iron Frame - IE1

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
4P																			
0.37	0.5	80	0.254	4.2	1.3	2.0	0.0020	17	37	14.0	44	1420	67.5	71.1	70.5	0.63	0.77	0.86	0.881
0.55	0.75	80	0.380	4.4	1.5	2	0.0019	13	29	12.7	44	1409	71.9	74.1	72.4	0.66	0.80	0.88	1.24
0.75	1	80	0.518	4.6	1.6	2.1	0.0023	10	22	11.0	44	1409	72.4	74.8	73.4	0.65	0.79	0.87	1.69
1.1	1.5	90S	0.743	4.8	1.3	2.1	0.0039	11	24	18.0	49	1442	76.3	78.6	77.4	0.61	0.75	0.84	2.44
1.5	2	90L	1.02	5.2	1.4	2.2	0.0048	8	18	22.0	49	1438	79.7	80.6	78.7	0.65	0.79	0.86	3.20
2.2	3	100L	1.52	5.6	2.1	2.3	0.0065	10	22	23.0	53	1414	82.0	82.0	79.7	0.68	0.80	0.86	4.64
3	4	100L	2.06	5.7	2.2	2.5	0.0084	9	20	30.0	53	1416	82.6	82.9	81.5	0.65	0.78	0.85	6.25
4	5.5	112M	2.71	5.8	1.8	2.3	0.0147	10	22	43.0	56	1439	84.6	84.8	83.1	0.66	0.78	0.84	8.27
5.5	7.5	132S	3.68	6.6	1.6	2.5	0.0349	7	15	47.0	60	1456	84.0	84.7	84.7	0.72	0.83	0.88	10.6
7.5	10	132M	5.03	6.5	1.6	2.5	0.0465	7	15	66.0	60	1453	85.0	85.5	86.0	0.74	0.84	0.89	14.2
9.2	12.5	160M	6.11	6.5	2.3	2.8	0.0633	7	15	95.0	67	1466	86.9	87.8	87.1	0.69	0.81	0.86	17.8
11	15	160M	7.30	6.7	2.5	3	0.0753	7	15	102	67	1467	88.6	89.4	88.7	0.64	0.77	0.83	21.6
15	20	160L	9.98	7.0	2.9	3.1	0.1054	10	22	130	67	1464	90.2	90.3	90.5	0.68	0.79	0.85	28.1
18.5	25	180M	12.3	6.7	2.5	2.7	0.1615	10	22	172	64	1466	89.9	90.4	89.5	0.73	0.82	0.87	34.3
22	30	180L	14.6	7.1	2.7	2.8	0.1884	9	20	190	64	1468	90.0	90.6	89.9	0.72	0.82	0.86	41.0
30	40	200L	19.8	7.4	2.8	2.9	0.3034	9	20	255	69	1478	90.8	91.0	91.3	0.69	0.80	0.85	55.8
37	50	W225S*	24.4	7.2	2.7	2.8	0.4136	7	15	278	---	1476	92.0	92.4	91.8	0.70	0.80	0.85	68.4
45	60	225M*	29.8	5.5	2.2	2.6	0.4947	12	26	297	---	1469	91.2	91.6	91.7	0.79	0.86	0.88	80.5
55	75	250M	36.3	6.8	2.4	2.5	0.7804	16	35	339	---	1475	93.1	93.3	92.6	0.79	0.86	0.88	97.9
75	100	W280S*	49.5	7.2	2.7	2.8	1.04	11	24	447	---	1476	94.6	94.5	93.9	0.72	0.81	0.85	136
90	125	280M	59.1	5.8	2.1	2.8	1.63	11	24	561	---	1483	94.1	94.4	94.0	0.77	0.84	0.87	159
110	150	315S/M	72.3	6.6	2.1	2.5	2.57	22	48	825	77	1481	94.4	94.7	94.4	0.79	0.85	0.87	193
132	175	315S/M	86.6	7.6	2.6	2.8	3.21	17	37	930	77	1484	94.0	94.5	94.6	0.77	0.84	0.87	232
150	200	315S/M	98.6	6.8	2.3	2.5	3.45	20	44	962	77	1482	95.0	95.2	94.8	0.80	0.86	0.88	259
160	220	315S/M	105	7.2	2.5	2.6	3.77	18	40	1010	77	1482	94.0	94.5	94.8	0.79	0.86	0.88	276
185	250	315S/M*	122	7.2	2.5	2.6	3.63	12	26	1010	77	1481	94.0	94.5	95.0	0.79	0.85	0.87	323
200	270	355M/L	131	5.7	1.9	2.4	6.34	34	75	1525	79	1490	93.9	94.2	95.0	0.78	0.85	0.87	350
220	300	355M/L	144	5.8	1.9	2.4	6.89	28	62	1525	79	1489	93.8	94.5	95.0	0.80	0.86	0.88	380
250	340	355M/L	164	5.7	2.1	2.4	8.12	30	66	1615	79	1489	93.8	94.5	95.0	0.81	0.87	0.88	431
260	350	355M/L	170	5.5	2	2.3	8.12	30	66	1615	79	1489	93.8	94.5	95.0	0.82	0.87	0.88	449
280	380	355M/L	183	5.6	0	2.3	9.02	30	66	1770	79	1489	93.8	94.5	95.0	0.81	0.87	0.88	484
300	400	355M/L	197	6.7	2	2.2	9.50	47	103	1770	79	1485	94.0	94.7	94.8	0.83	0.88	0.89	513
315	430	355M/L	206	6.4	2.5	2.5	9.92	24	53	1770	79	1490	93.8	94.5	95.0	0.81	0.87	0.89	538
330	450	355M/L	216	5.5	2.3	2.2	10.8	29	64	1865	79	1489	93.8	94.5	95.0	0.84	0.88	0.89	563
355	480	355M/L*	232	5.7	2.1	2.3	11.7	22	48	1865	79	1488	93.8	94.5	95.0	0.82	0.87	0.89	606
High-Output Design																			
0.75	1	90S	0.506	4.9	1.3	2.1	0.0038	12	26	17.0	49	1443	74.2	76.9	76.1	0.60	0.74	0.83	1.71
1.1	1.5	90L	0.743	4.8	1.3	2.1	0.0039	11	24	18.0	49	1442	76.3	78.6	77.4	0.61	0.75	0.84	2.44
1.1	1.5	L80	0.763	4.4	1.5	2.1	0.0032	8	18	15.0	44	1404	74.9	76.6	75.0	0.64	0.78	0.87	2.43
1.5	2	100L	1.03	5.3	1.8	2.2	0.0065	12	26	23.0	53	1420	78.6	79.7	77.8	0.64	0.77	0.84	3.32
1.5	2	L90S	1.02	5.2	1.4	2.2	0.0048	8	18	17.0	49	1438	79.7	80.6	78.7	0.65	0.79	0.86	3.20
2.2	3	90L	1.51	5.6	2	2.4	0.0066	8	18	24.0	49	1423	83.2	83.2	83.2	0.67	0.80	0.86	4.44
3	4	112M	2.04	5.2	1.5	2	0.0156	12	26	45.5	56	1434	83.4	83.3	81.5	0.68	0.80	0.85	6.25
4	5.5	100L*	2.82	6.7	2.4	2.4	0.0105	7	15	42.0	53	1380	81.0	82.0	83.1	0.69	0.80	0.85	8.17
4	5.5	132S	2.67	6.7	1.5	2.6	0.0341	10	22	56.0	60	1461	84.1	85.3	84.6	0.67	0.80	0.86	7.93
5.5	7.5	112M*	3.76	5.8	2.1	2.4	0.0188	11	24	45.0	56	1423	87.4	87.0	84.9	0.64	0.78	0.84	11.1
9.2	12.5	L132M	6.11	7.8	1.9	3.1	0.0582	6	13	70.0	60	1466	88.0	88.6	87.6	0.71	0.82	0.88	17.2
11	15	160L	7.30	6.7	2.5	3	0.0753	7	15	102	67	1467	88.6	89.4	88.7	0.64	0.77	0.83	21.6
11	15	L132M/L	7.33	7.7	1.9	3	0.0676	5	11	83.0	60	1461	88.9	89.0	87.7	0.75	0.85	0.89	20.3
15	20	L160M	9.98	7.0	2.9	3.1	0.1054	10	22	130	67	1464	90.2	90.4	90.5	0.68	0.79	0.85	28.1
18.5	25	180L	12.3	6.8	2.6	2.7	0.1615	10	22	172	64	1466	90.1	90.6	89.8	0.73	0.82	0.87	34.2
18.5	25	L160L*	12.3	6.8	2.6	3.1	0.1123	3	7	130	67	1466	88.1	89.1	89.3	0.63	0.76	0.83	36.0
22	30	180M	14.6	7.1	2.7	2.8	0.1884	9	20	190	64	1468	90.0	90.6	89.9	0.72	0.82	0.86	41.0
30	40	200M	19.8	7.5	2.8	2.9	0.3034	9	20	255	69	1478	90.9	91.8	91.5	0.69	0.80	0.85	55.7
30	40	L180L*	19.9	7.2	3	3.2	0.2075	7	15	186	64	1469	91.1	91.7	91.2	0.62	0.74	0.81	58.6
37	50	L200L	24.4	7.5	2.8	2.9	0.3735	9	20	260	69	1478	91.7	92.3	91.9	0.71	0.81	0.86	67.5
90	125	315S/M	59.1	6.9	2.2	2.5	2.17	25	55	700	77	1482	93.8	94.3	94.0	0.81	0.86	0.88	157
185	250	355M/L	121	5.6	1.7	1.9	6.20	38	84	1415	79	1485	93.5	94.3	94.7	0.79	0.86	0.88	320
200	270	315S/M*	132	6.6	2.3	2.5	3.77	12	26	1010	77	1479	94.0	94.5	95.0	0.78	0.85	0.87	350

W20 - Cast Iron Frame - IE1

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
6P																			
0.25	0.33	80	0.256	3.9	1.7	2.3	0.0022	25	55	13.5	43	950	59.9	61.3	61.5	0.50	0.63	0.74	0.793
0.37	0.5	80	0.388	3.3	1.4	1.8	0.0019	16	35	13.5	43	929	59.3	64.7	64.8	0.54	0.68	0.79	1.05
0.55	0.75	L80	0.583	3.4	1.5	1.8	0.0030	14	31	14.0	43	919	64.2	67.9	66.6	0.56	0.71	0.81	1.47
0.75	1	L90S	0.775	4.3	1.6	2.2	0.0045	18	40	19.1	45	942	71.8	74.8	74.3	0.53	0.67	0.76	1.92
1.1	1.5	L90L	1.15	4.1	1.6	2	0.0062	12	26	22.0	45	929	71.4	74.2	72.9	0.55	0.69	0.78	2.79
1.5	2	100L	1.55	4.6	1.8	2.1	0.0090	13	29	25.0	44	941	77.3	78.8	77.3	0.56	0.70	0.78	3.59
2.2	3	112M	2.27	4.8	1.7	2.2	0.0165	12	26	37.0	49	946	79.5	80.6	78.9	0.57	0.71	0.78	5.16
3	4	132S	3.06	5.1	1.6	2	0.0340	19	42	60.0	53	955	82.9	83.6	82.0	0.60	0.73	0.79	6.69
4	5.5	132M	4.06	5.6	1.9	2.3	0.0446	16	35	59.0	53	960	84.0	84.9	83.6	0.59	0.72	0.78	8.85
5.5	7.5	132M	5.56	6.2	2.2	2.5	0.0581	14	31	73.0	53	964	85.1	86.1	85.2	0.58	0.70	0.77	12.1
7.5	10	160M	7.52	5.6	2	2.5	0.1077	7	15	100	57	971	83.3	84.6	84.7	0.64	0.77	0.84	15.2
9.2	12.5	160L	9.23	5.8	2.1	2.6	0.1293	7	15	115	57	971	94.6	85.7	85.7	0.65	0.78	0.84	18.4
11	15	160L	11.0	5.8	2.2	2.6	0.1580	6	13	125	57	971	86.5	87.1	86.4	0.64	0.77	0.83	22.1
15	20	180L	14.9	8.0	2.2	3	0.2620	5	11	163	56	980	87.0	87.7	87.7	0.71	0.81	0.85	29.1
18.5	25	200L	18.4	5.7	1.9	2.3	0.3408	10	22	213	58	978	88.9	89.3	88.6	0.70	0.80	0.85	35.4
22	30	200L	21.9	6.0	2.1	2.5	0.4037	10	22	235	58	979	90.3	90.6	89.7	0.66	0.78	0.83	42.7
30	40	225M	29.8	6.5	1.9	2.5	0.6507	15	33	298	---	981	91.5	91.6	90.6	0.76	0.84	0.87	54.9
37	50	250M	36.8	5.9	1.6	2.4	0.9689	15	33	341	---	978	92.2	91.9	90.8	0.81	0.87	0.89	66.1
45	60	W280S*	44.8	6.2	1.7	2.1	1.25	13	29	419	---	979	92.6	92.3	91.4	0.81	0.87	0.89	79.8
55	75	280M	54.5	5.3	1.5	2.3	1.73	16	35	495	---	983	92.6	92.6	91.9	0.78	0.85	0.87	100
75	100	315S/M	74.2	5.8	2	2.4	3.22	21	46	768	69	984	93.6	93.8	93.2	0.74	0.82	0.85	137
90	125	315S/M	89.3	5.2	1.8	2.2	3.57	21	46	818	69	982	94.0	94.0	93.2	0.74	0.82	0.85	164
110	150	315S/M	109	6.4	2.3	2.5	4.83	0	0	942	69	985	94.1	94.4	93.9	0.72	0.81	0.85	199
132	175	315S/M*	130	6.8	2.4	2.6	5.29	11	24	990	69	986	94.2	94.4	94.0	0.72	0.81	0.85	238
150	200	355M/L	147	5.5	1.8	2.3	9.05	46	101	1650	73	993	93.8	94.2	94.6	0.70	0.79	0.83	276
160	220	355M/L	157	4.9	1.6	2.1	9.53	55	121	1485	73	992	93.8	94.2	94.7	0.68	0.77	0.81	301
185	250	355M/L	182	4.4	1.5	1.9	10.2	53	117	1530	73	990	94.0	94.5	94.9	0.71	0.79	0.82	343
200	270	355M/L	196	5.4	1.9	2.3	12.4	51	112	1700	73	992	94.0	94.5	94.9	0.68	0.77	0.81	375
220	300	355M/L	216	6.5	1.8	2.1	13.5	72	158	1795	73	990	93.8	95.0	95.3	0.72	0.80	0.82	407
250	340	355M/L	245	5.7	2	2.4	14.8	45	99	1830	73	993	94.0	94.5	94.9	0.68	0.78	0.82	464
260	350	355M/L	256	6.1	1.9	1.9	14.8	64	141	1830	73	990	94.3	95.2	95.5	0.74	0.81	0.83	473
280	380	355M/L	277	6.0	1.9	2	14.8	54	119	1830	73	985	94.7	95.3	95.4	0.73	0.80	0.81	523
300	400	355M/L*	295	6.4	1.9	1.9	14.8	39	86	1920	73	990	94.7	95.7	95.7	0.68	0.77	0.81	559
315	430	355M/L*	310	5.1	1.8	2.2	15.5	28	62	1950	73	991	94.0	94.5	94.9	0.68	0.78	0.81	592
High-Output Design																			
0.75	1	90L	0.775	4.3	1.6	2.2	0.0045	18	40	21.0	45	942	71.8	74.8	74.3	0.53	0.67	0.76	1.92
1.5	2	112M	1.58	3.5	1.1	1.5	0.0150	20	44	36.0	49	923	79.2	77.9	75.2	0.66	0.78	0.83	3.47
3	4	L112M	3.10	5.0	1.9	2.3	0.0257	11	24	46.0	49	944	81.7	82.2	80.2	0.59	0.72	0.79	6.83
4	5.5	132S	4.06	5.6	1.9	2.3	0.0446	16	35	59.0	53	960	84.0	84.9	83.6	0.59	0.72	0.78	8.85
7.5	10	160L	7.52	5.6	2	2.5	0.1077	7	15	100	57	971	83.3	84.6	84.7	0.64	0.77	0.84	15.2
9.2	12.5	160M	9.23	5.8	2.1	2.6	0.1293	7	15	115	57	971	84.6	85.7	85.7	0.65	0.78	0.84	18.4
11	15	160M	11.1	5.8	2.4	2.6	0.1580	10	22	125	57	966	87.6	88.0	86.8	0.69	0.80	0.85	21.6
18.5	25	200M	18.4	5.7	1.9	2.3	0.3408	10	22	213	58	978	88.9	89.3	88.6	0.70	0.80	0.85	35.4
22	30	200M	21.9	6.0	2.1	2.5	0.4037	10	22	235	58	979	90.3	90.6	89.7	0.66	0.78	0.83	42.7
132	175	355M/L	130	6.1	1.8	2.1	8.50	90	198	1385	73	990	93.0	94.7	94.5	0.70	0.80	0.82	246

W20 - Cast Iron Frame - IE1

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
8P																			
0.18	0.25	80	0.248	2.6	1.8	2.1	0.0021	26	57	13.0	42	707	36.7	45.8	45.8	0.46	0.55	0.64	0.886
0.25	0.33	L80	0.347	2.7	1.8	2	0.0028	25	55	14.2	42	701	42.5	50.0	50.5	0.46	0.56	0.66	1.08
0.37	0.5	90S	0.516	3.0	1.2	1.8	0.0039	25	55	15.4	44	698	51.5	55.5	56.0	0.47	0.58	0.69	1.38
0.55	0.75	L90L	0.772	3.1	1.3	1.8	0.0056	21	46	22.0	44	694	55.9	61.0	61.6	0.46	0.59	0.69	1.87
0.75	1	100L	1.03	3.8	1.4	1.9	0.0079	35	77	25.0	50	710	66.7	66.0	66.1	0.46	0.59	0.68	2.41
1.1	1.5	100L	1.52	3.7	1.4	1.8	0.0118	24	53	28.5	50	705	67.7	70.0	70.7	0.47	0.60	0.70	3.21
1.5	2	112M	2.10	4.0	1.7	2	0.0178	20	44	36.5	46	695	73.0	73.5	74.0	0.54	0.68	0.77	3.80
2.2	3	132S	3.04	5.0	1.4	1.8	0.0602	21	46	65.0	48	704	77.0	77.2	77.5	0.59	0.72	0.78	5.25
3	4	L132M	4.14	5.4	1.5	1.9	0.0728	20	44	66.0	48	705	79.0	79.5	79.9	0.60	0.72	0.78	6.94
4	5.5	160M	5.35	5.0	1.8	2.2	0.1006	11	24	97.0	53	728	80.1	82.1	81.4	0.57	0.70	0.78	9.09
5.5	7.5	160L	7.37	5.0	1.8	2.2	0.1221	9	20	107	53	727	81.4	83.0	82.1	0.59	0.72	0.79	12.3
7.5	10	160L	10.0	5.6	2.4	2.6	0.1508	13	29	122	53	727	84.3	85.0	85.2	0.55	0.68	0.76	16.7
9.2	12.5	180M	12.3	6.5	1.9	2.5	0.2344	8	18	163	51	730	84.0	84.5	84.5	0.61	0.73	0.80	19.7
11	15	180L	14.7	6.9	2.2	2.7	0.2758	8	18	175	51	730	84.5	85.0	85.0	0.58	0.71	0.78	23.9
15	20	200L	20.0	4.2	1.6	1.9	0.3672	20	44	217	56	730	86.9	87.6	86.6	0.57	0.70	0.77	32.5
18.5	25	W225S*	24.8	4.0	1.6	1.8	0.4756	30	66	258	---	726	88.0	88.3	88.5	0.61	0.71	0.75	40.2
22	30	225M*	29.3	5.1	1.6	2.1	0.6507	19	42	309	---	732	88.0	88.5	89.0	0.67	0.77	0.81	44.1
30	40	250M	40.0	4.7	1.3	3	1.06	23	51	354	---	731	89.0	89.5	89.7	0.72	0.80	0.83	58.1
37	50	W280S*	49.4	4.7	1.3	1.7	1.29	19	42	426	---	729	91.8	91.4	89.9	0.73	0.81	0.84	70.7
45	60	280M*	59.8	3.9	1.1	1.8	1.80	25	55	517	---	733	91.0	90.5	90.6	0.63	0.74	0.78	91.9
55	75	315S/M	72.7	4.9	1.5	1.9	3.05	27	59	745	62	737	90.0	90.5	90.9	0.70	0.78	0.81	107
75	100	315S/M	98.8	5.6	1.7	2.2	4.37	25	55	876	62	739	91.0	91.3	91.5	0.67	0.77	0.80	148
90	125	315S/M	119	5.1	1.6	2	5.29	26	57	985	62	738	91.0	91.5	91.8	0.68	0.77	0.81	175
110	150	355M/L	144	5.3	1.1	2.2	12.2	45	99	1390	70	743	91.5	92.0	92.1	0.67	0.76	0.80	216
132	175	355M/L	174	6.5	1.1	2	14.1	44	97	1445	70	740	93.5	94.6	94.8	0.66	0.75	0.81	248
150	200	355M/L	197	6.5	1.4	2	16.0	40	88	1570	70	740	93.5	94.8	94.7	0.66	0.76	0.80	286
160	220	355M/L	211	6.6	1.4	2	18.3	42	92	1620	70	740	93.8	94.8	94.8	0.68	0.77	0.81	301
185	250	355M/L	244	6.5	1.4	2	19.8	30	66	1730	70	740	93.5	94.7	95.1	0.65	0.75	0.80	351
200	270	355M/L	263	6.8	1.4	1.9	22.9	37	81	1830	70	740	93.8	94.8	95.1	0.65	0.75	0.81	374
220	300	355M/L*	290	6.5	1.4	1.9	24.8	35	77	1930	70	740	93.8	94.8	95.2	0.66	0.76	0.80	417
High-Output Design																			
2.2	3	132M	3.04	5.0	1.4	1.8	0.0602	21	46	65.0	48	704	77.0	77.2	77.5	0.59	0.72	0.78	5.25
5.5	7.5	160M	7.37	5.0	1.8	2.2	0.1221	9	20	107	53	727	81.4	83.0	82.1	0.59	0.72	0.79	12.3
7.5	10	160M	10.0	5.6	2.4	2.6	0.1200	13	29	122	53	727	84.3	85.0	85.2	0.55	0.68	0.76	16.7
110	150	315S/M*	145	5.5	1.8	2.2	5.53	17	37	970	62	738	91.5	92.0	92.1	0.66	0.76	0.80	216

W20 - Cast Iron Frame - IE2

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
2P																			
11	15	160M	3.64	7.8	2.5	3.1	0.0450	9	20	100	70	2940	87.9	89.3	89.4	0.72	0.82	0.86	20.6
15	20	160M	4.97	8.2	2.8	3.2	0.0534	7	15	105	70	2940	89.3	90.2	90.3	0.73	0.83	0.87	27.6
18.5	25	L160L	6.12	9.0	3.1	3.6	0.0674	6	13	120	70	2945	89.0	90.9	90.9	0.69	0.80	0.85	34.6
22	30	180M	7.24	7.9	2.3	2.7	0.1138	8	18	170	70	2960	91.0	91.3	91.3	0.70	0.80	0.85	40.9
30	40	200L	9.87	6.5	2.1	2.4	0.1618	10	22	190	74	2960	91.4	92.0	92.0	0.77	0.84	0.87	54.1
37	50	200L	12.2	7.8	2.4	2.8	0.1958	8	18	242	74	2965	91.7	92.5	92.5	0.69	0.79	0.84	68.7
45	60	225M	14.9	7.9	2.1	2.7	0.2359	13	29	290	75	2950	91.5	92.5	92.9	0.77	0.85	0.88	79.4
55	75	250M	18.1	7.7	2.3	2.9	0.3238	10	22	338	78	2960	92.3	93.2	93.2	0.74	0.83	0.87	97.9
75	100	W280S	24.6	8.8	2.6	3.1	0.4585	7	15	428	82	2965	93.0	93.8	93.8	0.75	0.84	0.88	131
90	125	280M	29.5	7.6	2.1	2.5	0.9267	10	22	563	83	2970	93.2	94.1	94.1	0.79	0.86	0.89	155
110	150	315S/M	36.0	7.6	1.9	3.1	1.16	21	46	741	83	2975	94.0	94.3	94.3	0.79	0.86	0.89	189
132	175	315S/M	43.2	7.2	1.8	2.8	1.42	21	46	830	83	2975	94.0	94.6	94.6	0.83	0.89	0.90	224
150	200	315S/M	49.1	8.0	2	3.1	1.59	18	40	853	83	2975	94.5	94.7	94.7	0.81	0.87	0.90	254
160	220	315S/M	52.4	7.4	1.9	2.8	1.68	18	40	900	83	2975	94.5	94.8	94.8	0.84	0.89	0.91	268
185	250	315S/M	60.6	7.9	2	3.1	1.74	12	26	952	83	2975	94.8	95.0	95.0	0.80	0.87	0.90	313
200	270	355M/L	65.3	8.5	2.1	3.5	3.88	41	90	1278	81	2985	94.8	95.0	95.0	0.80	0.87	0.90	337
220	300	355M/L	71.8	7.9	1.9	2.9	4.31	39	86	1420	81	2985	94.8	95.0	95.0	0.85	0.90	0.92	363
250	340	355M/L	81.7	6.6	1.6	2.4	4.85	44	97	1650	81	2980	94.8	95.0	95.0	0.89	0.92	0.92	413
280	380	355M/L	91.5	6.7	2	2.4	5.06	34	75	1723	81	2980	94.8	95.0	95.0	0.90	0.93	0.93	458
300	400	355M/L	97.9	7.7	2	2.7	5.60	33	73	1906	81	2985	94.8	95.0	95.0	0.89	0.92	0.93	490
315	430	355M/L	103	8.5	2.5	3	5.60	18	40	1906	81	2985	94.8	95.0	95.0	0.86	0.90	0.91	526
330	450	355M/L	108	6.7	1.8	2.3	6.03	34	75	1960	81	2985	94.8	95.0	95.0	0.91	0.93	0.93	539
High-Output Design																			
75	100	250M*	24.6	9.0	2.3	2.8	0.4602	8	18	432	82	2970	93.6	93.8	93.8	0.84	0.88	0.90	128
110	150	280M	36.1	8.2	2.1	2.3	0.9598	9	20	626	83	2965	93.8	94.3	94.3	0.82	0.89	0.91	185
200	270	315S/M	65.5	7.6	2	2.9	1.92	16	35	1004	83	2975	94.8	95.0	95.0	0.82	0.88	0.90	337

Note: GB efficiency value based on GB18613-2020 standard, data measured on direct on line starting.
IE efficiency value based on IEC60034-2-1 standard, data measured on direct on line starting.
(*) Insulation Class "F", temperature rise as Delta T 105K.
Frame with L in the front means that it uses extended endshield.

W20 - Cast Iron Frame - IE2

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
4P																			
9.2	12.5	160M	6.10	6.6	2.3	2.5	0.0883	8	18	82.0	67	1470	88.0	89.0	89.3	0.68	0.79	0.85	17.5
11	15	160M	7.29	6.9	2.5	2.8	0.1071	8	18	119	67	1470	87.0	88.5	89.8	0.61	0.74	0.81	21.9
15	20	160L	9.94	7.2	2.6	2.8	0.1318	8	18	130	67	1470	89.9	90.4	90.6	0.67	0.78	0.83	28.8
18.5	25	180M	12.3	6.9	2.6	3	0.1923	9	20	167	64	1470	90.9	91.2	91.2	0.68	0.79	0.84	34.9
22	30	180L	14.6	6.8	2.6	2.9	0.2398	9	20	209	64	1470	91.0	91.6	91.6	0.70	0.80	0.85	40.8
30	40	200L	19.7	7.0	2.4	2.9	0.3476	8	18	210	69	1480	92.1	92.3	92.3	0.67	0.78	0.84	55.9
37	50	W225S	24.4	6.8	2.1	2.7	0.3588	10	22	260	69	1475	92.0	92.7	92.7	0.67	0.78	0.83	69.4
45	60	225M	29.7	6.4	2.6	3.2	0.5177	11	24	303	66	1475	92.8	93.1	93.1	0.72	0.81	0.85	82.1
55	75	250M	36.2	6.3	2.5	2.5	0.7126	11	24	346	70	1480	93.0	93.5	93.5	0.74	0.83	0.86	98.8
75	100	W280S	49.4	7.2	3	3.1	1.04	11	24	447	70	1480	93.6	94.0	94.0	0.69	0.79	0.85	136
90	125	280M	59.0	6.3	2.2	2.6	1.75	10	22	581	76	1485	94.0	94.2	94.2	0.73	0.82	0.85	162
110	150	315S/M	72.1	7.9	2.4	2.9	2.59	20	44	805	72	1485	94.0	94.5	94.5	0.74	0.82	0.86	196
132	175	315S/M	86.6	7.2	2.3	2.7	2.95	18	40	1023	72	1485	94.0	94.7	94.7	0.75	0.82	0.86	234
150	200	315S/M	98.4	7.4	2.4	2.8	3.25	16	35	1030	72	1485	94.5	94.9	94.9	0.76	0.84	0.87	262
160	220	315S/M	105	7.6	2.4	2.9	3.56	15	33	1050	72	1485	94.5	94.9	94.9	0.76	0.84	0.87	279
185	250	315S/M	121	7.9	2.6	3	3.71	14	31	1060	77	1485	94.5	95.1	95.1	0.75	0.83	0.86	327
200	270	355M/L	131	6.3	1.9	2.4	5.94	39	86	1310	79	1490	94.5	95.1	95.1	0.77	0.84	0.86	353
220	300	355M/L	144	6.1	1.8	2.3	6.48	40	88	1350	79	1490	94.5	95.1	95.1	0.78	0.85	0.87	384
250	340	355M/L	163	6.6	2	2.4	7.19	31	68	1405	79	1490	94.5	95.1	95.1	0.77	0.84	0.87	436
260	350	355M/L	170	6.5	2.1	2.3	7.73	29	64	1468	79	1490	94.5	95.1	95.1	0.79	0.86	0.87	453
280	380	355M/L	183	7.4	2.4	2.7	8.05	22	48	1505	79	1490	94.5	95.1	95.1	0.74	0.82	0.86	494
300	400	355M/L*	196	5.6	1.7	2.1	8.59	30	66	1580	79	1490	94.5	95.1	95.1	0.81	0.86	0.87	523
315	430	355M/L	206	6.7	2	2.4	8.95	23	51	1643	79	1490	94.5	95.1	95.1	0.77	0.84	0.87	549
330	450	355M/L	216	6.8	2.3	2.4	9.84	23	51	1769	79	1490	94.5	95.1	95.1	0.79	0.85	0.87	576
High-Output Design																			
37	50	200L	24.4	6.5	2.3	2.8	0.3588	12	26	265	69	1475	92.0	92.7	92.7	0.67	0.78	0.83	69.4
37	50	250M	24.5	6.0	1.8	2.5	0.5090	14	31	275	70	1470	92.5	92.7	92.7	0.73	0.82	0.86	67.0
110	150	280M	72.1	8.1	2.3	2.6	1.87	8	18	708	72	1485	93.9	94.5	94.5	0.71	0.80	0.84	200
185	250	355M/L	121	6.5	1.8	2.4	5.80	11	24	1294	79	1490	94.5	95.1	95.1	0.78	0.85	0.87	323
200	270	315S/M	131	8.6	2.9	3.3	3.71	43	95	1065	77	1485	94.5	95.1	95.1	0.73	0.82	0.86	353

Note: GB efficiency value based on GB18613-2020 standard, data measured on direct on line starting.
IE efficiency value based on IEC60034-2-1 standard, data measured on direct on line starting.
(*) Insulation Class "F", temperature rise as Delta T 105K.
Frame with L in the front means that it uses extended endshield.

W20 - Cast Iron Frame - IE2

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
6P																			
5.5	7.5	160M	5.49	6.3	2.1	2.8	0.1191	12	26	110	57	975	84.5	86.0	86.0	0.59	0.72	0.79	11.7
7.5	10	160M	7.49	6.3	2.1	2.7	0.1055	10	22	95.0	57	975	86.5	87.2	87.2	0.60	0.73	0.80	15.5
9.2	12.5	160L	9.19	6.4	2.1	2.7	0.1266	8	18	115	57	975	87.5	88.0	88.3	0.60	0.73	0.80	18.8
11	15	160L	11.0	6.6	2.5	2.9	0.1622	10	22	130	57	975	88.0	88.7	88.7	0.60	0.73	0.80	22.4
15	20	180L	14.9	8.2	2.3	3.2	0.2705	6	13	170	56	980	89.0	89.5	89.7	0.67	0.78	0.84	28.7
18.5	25	200L	18.4	7.4	2.3	2.5	0.3335	10	22	210	58	980	89.5	90.4	90.4	0.64	0.75	0.81	36.5
22	30	200L	22.0	6.2	2.3	2.6	0.3868	10	22	222	58	975	91.0	91.2	91.2	0.65	0.75	0.82	42.5
30	40	225M	29.7	6.7	2	2.6	0.6850	12	26	298	61	985	90.8	91.2	91.7	0.72	0.81	0.85	55.6
37	50	250M	36.8	6.5	1.8	2.3	0.9689	12	26	341	61	980	92.0	92.2	92.2	0.74	0.83	0.86	67.4
45	60	W280S	44.5	7.1	2	2.5	1.25	11	24	419	61	985	92.0	92.7	92.7	0.75	0.84	0.87	80.6
55	75	280M	54.4	6.3	1.7	2	1.74	14	31	505	69	985	92.5	93.0	93.1	0.79	0.85	0.87	97.9
75	100	315S/M	74.2	6.7	2.1	2.4	3.05	10	22	700	69	985	93.0	93.4	93.7	0.70	0.79	0.83	140
90	125	315S/M	89.0	6.5	2.2	2.4	3.59	12	26	830	69	985	94.0	94.2	94.2	0.71	0.80	0.83	166
110	150	315S/M	109	6.5	2.2	2.4	4.93	12	26	1000	69	985	94.1	94.6	94.6	0.69	0.79	0.84	200
132	175	315S/M	131	6.6	2.2	2.5	5.48	12	26	1050	69	985	94.0	94.5	94.6	0.70	0.79	0.84	239
150	200	355M/L	147	6.0	2.2	2.4	8.82	81	178	1460	73	994	93.5	95.0	95.3	0.65	0.75	0.80	284
160	220	355M/L	157	7.0	2.3	2.9	9.28	76	167	1460	73	995	93.5	94.5	95.0	0.60	0.71	0.77	315
185	250	355M/L	181	6.0	2	2.1	9.94	76	167	1530	73	995	94.2	95.3	95.4	0.65	0.75	0.80	350
200	270	355M/L	197	6.1	2.2	2.3	12.1	28	62	1650	73	990	94.5	95.4	95.4	0.66	0.76	0.81	373
220	300	355M/L	215	6.5	2	2.3	13.5	25	55	1800	73	995	94.5	95.4	95.4	0.64	0.75	0.80	416
250	340	355M/L	246	6.1	1.9	2.1	14.3	64	141	1890	73	990	94.6	95.2	95.4	0.69	0.78	0.81	467
260	350	355M/L	256	5.7	2	2.3	14.3	28	62	1830	73	990	94.6	95.2	95.4	0.66	0.76	0.81	485
280	380	355M/L	275	6.0	2	2.4	14.3	54	119	1890	73	990	94.2	95.3	95.4	0.67	0.76	0.80	529
300	400	355M/L*	295	5.9	2.1	2.4	14.3	29	64	1920	73	990	93.8	95.0	95.5	0.65	0.75	0.80	567
315	430	355M/L*	308	6.5	2.2	2.6	15.0	38	84	1950	73	995	94.2	95.4	95.5	0.61	0.73	0.78	610
High-Output Design																			
37	50	225M	36.6	7.2	2.5	3	0.7535	11	24	320	61	985	91.1	92.2	92.2	0.63	0.75	0.81	71.5
45	60	250M	44.7	7.2	2.1	2.8	1.11	9	20	376	61	980	92.2	92.7	92.7	0.71	0.82	0.85	82.5
75	100	280M	74.2	6.7	1.9	2.3	2.21	13	29	601	66	985	93.4	93.7	93.7	0.77	0.84	0.86	134
132	175	355M/L	129	6.1	1.9	2.2	8.78	90	198	1400	73	994	93.4	94.8	95.1	0.67	0.77	0.81	247

Note: GB efficiency value based on GB18613-2020 standard, data measured on direct on line starting.
IE efficiency value based on IEC60034-2-1 standard, data measured on direct on line starting.
(*) Insulation Class "F", temperature rise as Delta T 105K.
Frame with L in the front means that it uses extended endshield.

W20 - Cast Iron Frame - IE2

Output		Frame	Full Load Torque	Locked Rotor Current	Locked Rotor Torque	Break-down Torque	Inertia J	Allowable locked rotor time (s)		Weight	Sound	400 V							
												Rated speed	% of full load						Full load current
													Efficiency			Power Factor			
kW	HP		(kgfm)	Il/In	Tl/Tn	Tb/Tn	(kgm2)	Hot	Cold	(kg)	dB(A)	(rpm)	50	75	100	50	75	100	In (A)
8P																			
4	5.5	160M	5.34	5.6	2.2	3.2	0.0985	12	26	90.0	53	730	78.0	81.0	81.9	0.45	0.58	0.68	10.4
5.5	7.5	160M	7.34	5.7	2.4	3.4	0.1266	9	20	115	53	730	77.0	80.5	83.8	0.42	0.55	0.65	14.5
7.5	10	160L	10.1	5.3	2.2	2.8	0.1555	15	33	122	53	725	84.0	85.3	85.3	0.52	0.64	0.72	17.7
9.2	12.5	180M	12.4	7.0	2.2	2.5	0.2172	10	22	155	51	725	87.0	87.2	87.2	0.67	0.77	0.83	18.3
11	15	180L	14.8	7.0	2.2	2.4	0.2993	9	20	183	51	725	87.5	88.0	88.4	0.68	0.78	0.83	21.7
15	20	200L	20.0	5.0	2	2.2	0.4228	18	40	238	56	730	88.0	88.5	89.0	0.53	0.65	0.71	34.3
18.5	25	W225S	24.7	4.6	1.6	2	0.4756	24	53	258	56	730	88.0	88.6	88.6	0.59	0.71	0.76	39.6
22	30	225M	29.2	5.4	1.7	2.3	0.6507	18	40	309	56	735	88.5	89.1	89.1	0.61	0.72	0.78	45.7
30	40	250M	39.8	5.2	1.5	1.9	1.06	16	35	354	56	735	89.0	89.8	89.8	0.65	0.75	0.80	60.2
37	50	W280S	49.0	5.0	1.4	1.8	1.29	15	33	426	56	735	90.0	90.3	90.3	0.69	0.78	0.82	72.1
45	60	280M*	59.6	4.7	1.4	1.8	2.04	20	44	547	62	735	90.0	90.7	90.7	0.60	0.71	0.77	93.0
55	75	315S/M	72.4	6.5	1.8	2.2	3.17	28	62	680	62	740	91.8	92.0	92.0	0.63	0.74	0.79	109
75	100	315S/M	98.7	6.6	1.9	2.2	4.29	20	44	876	62	740	92.0	92.5	92.5	0.66	0.78	0.81	144
90	125	315S/M	118	6.8	1.9	2.4	5.53	23	51	970	62	740	92.5	93.0	93.0	0.67	0.77	0.81	173
110	150	355M/L	145	6.4	1.5	2.2	10.7	41	90	1430	70	740	93.0	93.2	93.2	0.62	0.73	0.79	216
132	175	355M/L	173	6.5	1.6	2.3	12.9	47	103	1445	70	745	93.2	93.5	93.5	0.63	0.73	0.79	258
160	220	355M/L	209	6.6	1.5	2.4	15.6	42	92	1590	70	745	94.0	94.2	94.2	0.60	0.72	0.78	314
220	300	355M/L	290	6.8	1.6	2.2	19.9	35	77	1930	70	740	94.0	94.3	94.3	0.61	0.73	0.77	437

W20 - Aluminum Frame - IE1

Output		Frame	Full Load Torque	Locked Rotor Current	Locked Rotor Torque	Break-down Torque	Inertia J	Allowable locked rotor time (s)		Weight	Sound	400 V							
												Rated speed	% of full load						Full load current
													Efficiency			Power Factor			
kW	HP		(kgfm)	Il/In	Tl/Tn	Tb/Tn	(kgm2)	Hot	Cold	(kg)	dB(A)	(rpm)	50	75	100	50	75	100	In (A)
2P																			
11	15	W160M	3.68	7.1	2.7	3.0	0.0267	12	26	75.0	70	2908	87.6	87.6	87.6	0.74	0.83	0.87	20.8
15	20	160M/L	4.96	8.5	2.8	3.4	0.0534	5	11	127	70	2945	87.2	88.5	88.7	0.71	0.81	0.86	28.4
18.5	25	160M/L	6.11	9.0	3.1	3.7	0.0653	5	11	157	70	2950	88.5	89.5	89.5	0.62	0.75	0.82	36.4
22	30	180M/L	7.24	8.1	2.5	3	0.1138	8	18	185	70	2960	90.0	90.5	90.5	0.76	0.84	0.87	40.4
30	40	200M/L	9.87	7.3	2.3	2.6	0.1865	10	22	240	74	2960	90.0	91.0	91.2	0.71	0.81	0.86	55.2
37	50	200M/L	12.2	7.5	2.3	2.5	0.2289	8	18	295	74	2960	91.0	91.5	91.5	0.75	0.84	0.87	67.1
4P																			
11	15	W160M	7.31	9.1	3.0	3.8	0.0755	8	18	97.4	67	1466	88.5	89.8	87.6	0.61	0.74	0.82	22.1
15	20	160M/L	9.94	7.2	2.6	2.8	0.1221	8	18	130	67	1470	88.0	88.5	89.0	0.67	0.78	0.83	29.4
18.5	25	180M/L	12.3	7.5	3	3.4	0.1831	7	15	172	64	1470	88.5	89.5	89.5	0.63	0.75	0.82	36.4
22	30	180M/L	14.6	7.2	2.9	3.3	0.1923	7	15	182	64	1470	88.8	90.0	90.0	0.64	0.76	0.83	42.5
30	40	200M/L	19.8	7.0	2.4	2.9	0.3475	8	18	255	69	1475	89.5	90.0	91.0	0.69	0.80	0.85	56.0
High Output Design																			
11	15	160M/L	7.29	7.0	2.6	2.9	0.0877	6	13	102	67	1470	86.0	87.5	88.0	0.60	0.73	0.81	22.2
6P																			
7.5	10	160M/L	7.49	6.0	2.0	2.6	0.0983	6	13	100	56	975	82.5	84.0	84.7	0.56	0.70	0.78	16.3
11	15	160M/L	11.0	6.1	2.3	2.6	0.1471	9	20	125	56	970	86.5	87.0	87.0	0.63	0.75	0.82	22.2
15	20	180M/L	14.9	8.3	2.3	3.2	0.2705	5	11	163	56	980	87.0	87.7	87.7	0.64	0.77	0.83	29.7
18.5	25	200M/L	18.4	6.2	2.3	2.8	0.4022	11	24	206	58	980	88.6	89.3	89.3	0.57	0.70	0.77	38.9
22	30	200M/L	22.0	6.0	2.3	2.4	0.3510	14	31	235	58	975	88.0	89.0	89.5	0.64	0.75	0.80	44.4
8P																			
4	5.5	W160M	5.52	5.8	2.4	2.8	0.0888	21	46	74.0	53	706	81.6	82.2	79.2	0.51	0.64	0.72	10.2
5.5	7.5	160M/L	7.34	5.4	2.1	3	0.1191	8	18	107	51	730	76.5	79.5	81.4	0.48	0.62	0.71	13.8
7.5	10	160M/L	10.1	5.6	2.4	3	0.1471	12	26	122	51	725	82.0	83.1	83.1	0.51	0.63	0.72	18.0
9.2	12.5	180M/L	12.3	6.5	1.9	2.4	0.2308	8	18	163	51	730	84.5	85.0	85.0	0.63	0.75	0.81	19.3
11	15	180M/L*	14.6	6.9	2.2	2.7	0.2993	8	18	175	51	732	84.5	85.0	85.0	0.59	0.72	0.79	23.7
15	20	200M/L	20.0	4.6	1.8	2.1	0.3672	15	33	217	53	730	86.5	86.8	86.8	0.54	0.66	0.73	34.2
High Output Design																			
4	5.5	160M/L	5.34	5.2	2.0	2.9	0.0980	10	22	97.0	51	730	75.5	78.5	79.2	0.48	0.62	0.71	10.3

W20 - Aluminum Frame - IE2

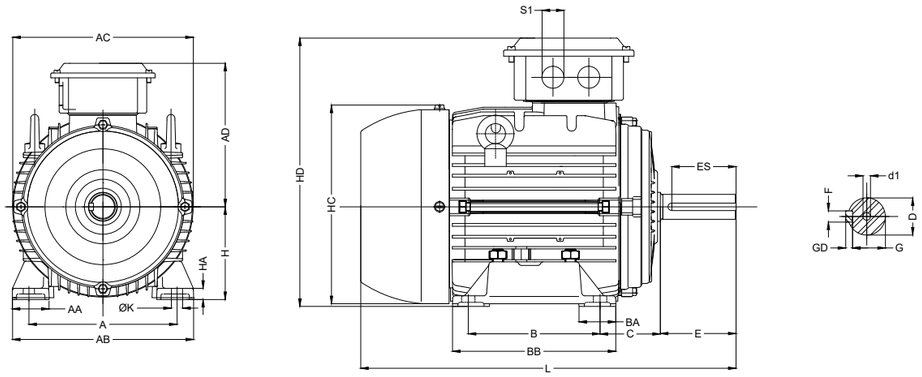
Output		Frame	Full Load Torque	Locked Rotor Current	Locked Rotor Torque	Break-down Torque	Inertia J	Allowable locked rotor time (s)		Weight	Sound	400 V							
												Rated speed	% of full load						Full load current
													Efficiency			Power Factor			
kW	HP		(kgfm)	Il/In	Tl/Tn	Tb/Tn	(kgm2)	Hot	Cold	(kg)	dB(A)	(rpm)	50	75	100	50	75	100	In (A)
2P																			
11	15	W160M	3.67	7.8	3.1	3.4	0.0267	11	24	71.0	70	2917	88.4	89.4	89.4	0.68	0.79	0.84	21.2
15	20	160M/L	4.97	8.2	2.8	3.2	0.0534	7	15	105	70	2940	89.3	90.2	90.3	0.73	0.83	0.87	27.6
18.5	25	L160M/L	6.12	9.0	3.1	3.6	0.0674	6	13	120	70	2945	89.0	90.9	90.9	0.69	0.80	0.85	34.6
22	30	180M/L	7.24	7.9	2.3	2.7	0.1138	8	18	170	70	2960	91.0	91.3	91.3	0.70	0.80	0.85	40.9
30	40	200M/L	9.87	6.5	2.1	2.4	0.1618	10	22	190	74	2960	91.4	92.0	92.0	0.77	0.84	0.87	54.1
37	50	200M/L	12.2	7.8	2.4	2.8	0.1958	8	18	242	74	2965	91.7	92.5	92.5	0.69	0.79	0.84	68.7
4P																			
11	15	160M/L	7.29	6.9	2.5	2.8	0.1071	8	18	119	67	1470	87.0	88.5	89.8	0.61	0.74	0.81	21.9
15	20	160M/L	9.94	7.2	2.6	2.8	0.1318	8	18	130	67	1470	89.9	90.4	90.6	0.67	0.78	0.83	28.8
18.5	25	180M/L	12.3	6.9	2.6	3	0.1923	9	20	167	64	1470	90.9	91.2	91.2	0.68	0.79	0.84	34.9
22	30	180M/L	14.6	7.5	2.9	3	0.2272	10	22	159	64	1470	91.1	91.5	91.6	0.68	0.79	0.84	41.2
30	40	200M/L	19.7	7.0	2.4	2.9	0.3476	8	18	210	69	1480	92.1	92.3	92.3	0.67	0.78	0.84	55.9
37	50	200M/L	24.4	6.5	2.3	2.8	0.3588	12	26	265	69	1475	92.0	92.7	92.7	0.67	0.78	0.83	69.4
6P																			
7.5	10	160M/L	7.49	6.3	2.1	2.7	0.1055	10	22	95.0	56	975	86.5	87.2	87.2	0.60	0.73	0.80	15.5
11	15	160M/L	11.0	6.6	2.5	2.9	0.1622	10	22	130	56	975	88.0	88.7	88.7	0.60	0.73	0.80	22.4
15	20	180M/L	14.9	8.5	2.4	3.2	0.2705	6	13	170	56	980	89.0	89.5	89.7	0.65	0.77	0.84	28.7
18.5	25	200M/L	18.4	7.4	2.3	2.5	0.3335	10	22	210	58	980	89.5	90.4	90.4	0.64	0.75	0.81	36.5
22	30	200M/L	22.0	6.2	2.3	2.6	0.3868	10	22	222	58	975	91.0	91.2	91.2	0.65	0.75	0.82	42.5
8P																			
4	5.5	160M/L	5.34	5.6	2.2	3.2	0.0985	12	26	90.0	51	730	78.0	81.0	81.9	0.45	0.58	0.68	10.4
5.5	7.5	160M/L	7.34	5.7	2.4	3.4	0.1266	9	20	115	51	730	77.0	80.5	83.8	0.42	0.55	0.65	14.5
7.5	10	160M/L	10.1	5.3	2.2	2.8	0.1555	15	33	122	51	725	84.0	85.3	85.3	0.52	0.64	0.72	17.7
9.2	12.5	180M/L	12.3	6.5	1.9	2.5	0.2172	8	18	155	51	730	85.0	86.3	86.3	0.58	0.71	0.78	19.8
11	15	180M/L	14.6	7.0	2.1	2.8	0.2993	7	15	183	51	732	85.0	86.0	86.9	0.57	0.70	0.77	23.8
15	20	200M/L	20.0	5.0	2	2.2	0.4228	18	40	238	53	730	88.0	88.5	89.0	0.53	0.65	0.71	34.3

W20 - Aluminum Frame - IE3

Output		Frame	Full Load Torque	Locked Rotor Current	Locked Rotor Torque	Break-down Torque	Inertia J	Allowable locked rotor time (s)		Weight	Sound	400 V							
												Rated speed	% of full load						Full load current
													Efficiency			Power Factor			
kW	HP		(kgfm)	Il/In	Tl/Tn	Tb/Tn	(kgm2)	Hot	Cold	(kg)	dB(A)	(rpm)	50	75	100	50	75	100	In (A)
2P																			
11	15	W160M	3.66	9.1	3.6	4.0	0.0303	11	24	75.0	70	2931	89.1	90.4	91.2	0.65	0.77	0.83	21.0
15	20	160M/L	4.94	8.1	3.1	4	0.0643	10	22	132	70	2955	90.0	90.9	91.9	0.67	0.79	0.84	28.0
18.5	25	160M/L	6.11	8.4	3.4	4.1	0.0618	12	26	126	70	2947	90.0	91.2	92.4	0.65	0.77	0.83	34.9
22	30	180M/L	7.24	8.2	2.5	3.2	0.1138	9	20	180	70	2960	91.8	92.7	92.7	0.69	0.80	0.85	40.3
30	40	200M/L	9.85	7.0	2.3	2.6	0.2214	17	37	245	74	2965	92.7	93.3	93.3	0.79	0.86	0.88	52.7
37	50	200M/L	12.1	7.2	2.9	3	0.1958	11	24	260	74	2967	92.7	93.6	93.7	0.73	0.82	0.85	67.1
4P																			
11	15	160M/L	7.29	7.7	3.4	3.6	0.1023	13	29	111	67	1470	89.4	90.6	91.2	0.57	0.70	0.78	22.3
15	20	160M/L	9.94	8.0	3	3.4	0.1214	10	22	130	62	1470	90.5	91.5	92.1	0.62	0.74	0.81	29.0
18.5	25	180M/L	12.3	7.5	2.6	3.1	0.2088	22	48	175	64	1470	91.1	92.6	92.6	0.65	0.77	0.83	34.8
22	30	180M/L	14.6	6.9	2.7	3	0.2098	16	35	195	64	1470	92.5	92.9	93.0	0.71	0.81	0.85	40.2
30	40	200M/L	19.7	7.0	2.5	3	0.3342	17	37	260	67	1480	92.0	92.9	93.6	0.68	0.79	0.84	55.1
6P																			
7.5	10	160M/L	7.49	6.6	2.4	2.8	0.1614	15	33	127	56	975	86.0	88.5	89.1	0.61	0.73	0.80	15.2
11	15	160M/L	11.0	6.8	2.6	3	0.1891	13	29	136	56	975	89.0	90.0	90.3	0.59	0.72	0.79	22.2
15	20	180M/L	15.0	8.7	2.8	3.4	0.2975	9	20	178	56	977	90.6	91.2	91.2	0.66	0.78	0.84	28.2
22	30	200M/L	22.0	6.2	2.3	2.6	0.4388	15	33	245	58	975	90.4	92.0	92.2	0.65	0.75	0.82	42.0
8P																			
4	5.5	160M/L	5.34	5.4	2.0	2.9	0.1264	16	35	102	51	730	81.0	83.0	84.8	0.50	0.63	0.72	9.45
5.5	7.5	160M/L	7.39	5.3	2.1	2.8	0.1614	22	48	125	51	725	85.0	86.2	86.2	0.53	0.66	0.73	12.6
7.5	10	160M/L	10.0	5.6	2.3	3	0.1838	19	42	130	51	730	86.0	87.0	87.3	0.52	0.65	0.72	17.2
11	15	180M/L	14.6	7.2	2.2	2.9	0.3129	8	18	180	51	733	87.0	88.0	88.6	0.56	0.69	0.77	23.3
15	20	200M/L	19.9	5.0	2	2.2	0.4932	28	62	250	53	735	89.5	90.5	90.9	0.53	0.65	0.71	33.5

5. Mechanical Data (Aluminum Frame)

Frame W160M-200M/L B3T

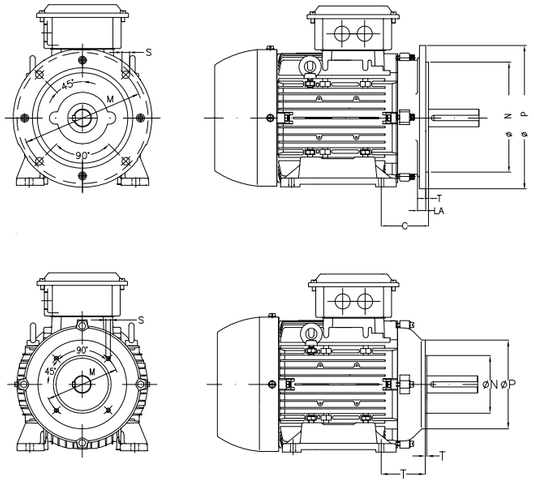


Frame	Shaft					
	D	E	ES	F	G	GD
W160M 160M/L	42k6	110	80	12	37	8
180M/L	48k6	110	80	14	42.5	9
200M/L	55m6	110	80	16	49	10

Note:
--(*) refers to shaft dimensions for all II poles motors, only for direct coupling;
--(**)refers to the total length of the motor using the extended NDE endshield. Please refer to the notes under the electrical performance table for the specific motor specifications.
-- All dimensions are in millimeters;
-- The average values are subject to change without prior notice. To obtain guaranteed value, please contact with nearest WEG sales office.

Frame	A	AA	AB	AC	AD	B	BA	BB	C	H	HA	HC	HD	K	L	S1	d1	Bearing	
																		DE	NDE
W160M	254	75	305	260	200	210	68	256	108	160	12	266	360	14.5	540/**565	2xM25x1.5	DM16	6209-ZZ-C3	6209-ZZ-C3
160M/L	254	62	308	347	255	210 254	60	298	108	160	18	313	414	14.5	634/**657	2xM25x1.5	DM16	6209-ZZ-C3	6209-ZZ-C3
180M/L	279	68	350	306	274	241 279	49	322	121	180	20	354	454		694			6211-ZZ-C3	6211-ZZ-C3
200M/L	318	73	385	386	300	268 305	60	370	133	200	25	393	500	18.5	758	2xM32x1.5	DM20	6212-ZZ-C3	6212-ZZ-C3

Flange Dimension



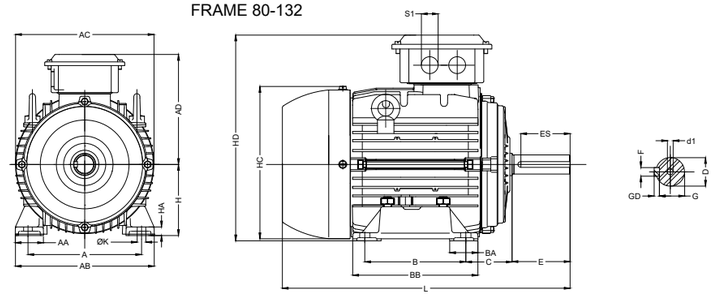
Frame	FF Flange dimension									Qty of holes
	Flange	C	LA	M	N	P	T	S	a	
W160M 160M/L	FF-300	108	18	300	250	350	5	19	45°	4
180M/L		121								
200M/L	FF-350	133		350	300	400				

Frame	"C-DIN" Flange Dimension							Qty of holes
	Flange	C	M	N	P	S	T	
W160M 160M/L	C-250	108	215	180	250	M12	4	4

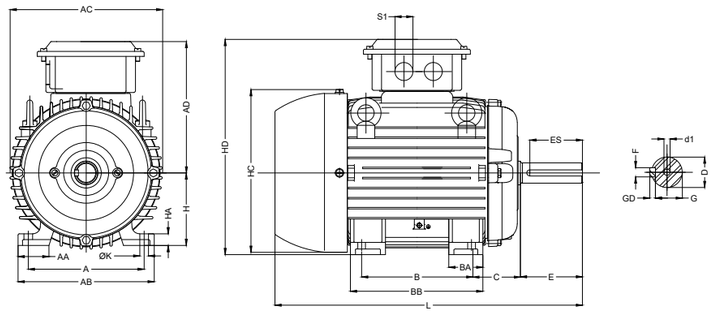
Frame	"C" Flange Dimension							Qty of holes
	Flange	C	M	N	P	S	T	
160M/L	FC-184	108	184.2	215.9	225	UNC 1/2"13	6.3	4
180M/L 200M/L	FC-228	121 133	228.6	266.7	280			

5. Mechanical Data (Cast Iron Frame)

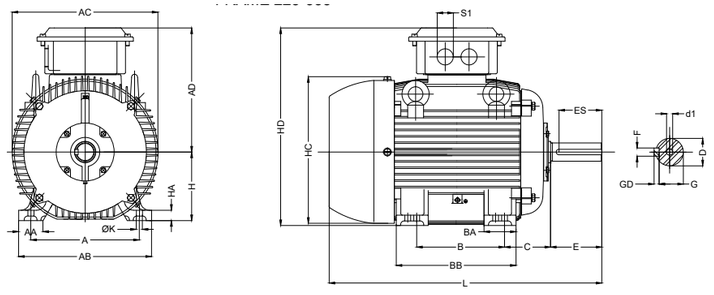
FRAME 80-132



FRAME 160 - 200



FRAME 315 & 355

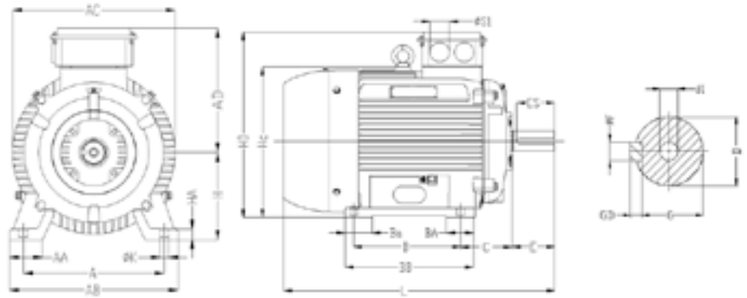


Frame	Shaft					
	D	E	ES	F	G	GD
80	19j6	40	28	6	15.5	6
90S 90L	24j6	50	36	8	20	7
100L 112M	28j6	60	45		24	
132S 132M	38k6	80	63	10	33	8
160M 160L	42k6	110	80	12	37	
180M 180L	48k6			14	42.5	9
200M	55m6			16	49	10
200L	55m6					
W225S	55m6**	110	100	16	49	10
	60m6	140	125	18	53	11
225M	55m6**	110	100	16	49	10
	60m6	140	125	18	53	11
250M	60m6**	140	125	18	53	11
	70m6			20	62.5	12
W280S	65m6**	140	125	18	58	11
	80m6	170	160	22	71	14
280M	65m6**	140	125	18	58	11
	80m6	170	160	22	71	14
315S/M	65m6**	140	125	18	58	11
	85m6	170	160	22	76	14
315S/M***	70m6**	140	125	20	62.5	12
	90m6	170	160	25	81	14
355M/L	90m6**					
	100m6	210	200	28	90	16

Note:
- (*) refers to motors which use deep endshield;
- (**) Dimension applicable to 2-pole motors;
- (***) 185 kW and larger;
- All dimensions are in millimeters;
- The average values are subject to change without prior notice. To obtain guaranteed value, please contact with nearest WEG sales office.

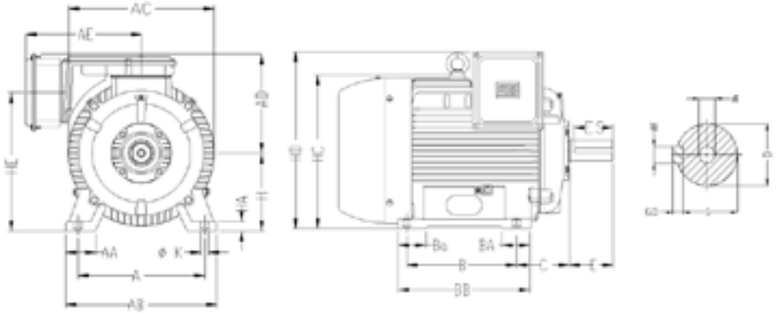
Frame	A	AA	AB	AC	AD	B	BA	BB	C	H	HA	HC	HD	K	L	S1	d1	Bearing	
																		DE	NDE
80	125	32	155	159	136	100	28	125	50	80	13	157	216	10	276/297*	M20x1.5	DM6	6204-ZZ	6203-ZZ
90S	140	35	170	179	155	100	42	131	56	90	15	177	245	10	304/334*	M20x1.5	DM8	6205-ZZ	6204-ZZ
90L	140	35	170	179	155	125	42	156	56	90	15	177	245	10	329/359*	M20x1.5	DM8	6205-ZZ	6204-ZZ
100L	160	40	196	199	165	140	29	170	63	100	16	198	265	12	376/420*	M20x1.5	DM10	6206-ZZ	6205-ZZ
112M	190	46	220	222	184	140	32	170	70	112	18.5	235	296	12	393/435*	M25x1.5	DM10	6207-ZZ	6206-ZZ
132S	216	44	248	270	212	140	33	170	89	132	20	274	344	12	490/520*	2xM25x1.5	DM12	6208-ZZ	6207-ZZ
132M	216	44	248	270	212	178	33	210	89	132	20	274	344	12	490/520*	2xM25x1.5	DM12	6208-ZZ	6207-ZZ
160M	254	64	308	312	255	210	65	254	108	160	22	317	415	14.5	598/615*	2xM25x1.5	DM16	6309-ZZ-C3	6209-ZZ-C3
160L	254	64	308	312	255	254	65	298	108	160	22	317	415	14.5	642/668*	2xM25x1.5	DM16	6309-ZZ-C3	6209-ZZ-C3
180M	279	80	350	358	275	241	75	294	121	180	28	360	455	14.5	664	2xM32x1.5	DM16	6311-ZZ-C3	6211-ZZ-C3
180L	279	80	350	358	275	279	75	332	121	180	28	360	455	14.5	702	2xM32x1.5	DM16	6311-ZZ-C3	6211-ZZ-C3
200M	318	82	385	396	300	267	85	332	133	200	30	402	500	18.5	729	2xM32x1.5	DM20	6312-ZZ-C3	6212-ZZ-C3
200L	318	82	385	396	300	305	85	370	133	200	30	402	500	18.5	767	2xM32x1.5	DM20	6312-ZZ-C3	6212-ZZ-C3
315S/M	508	120	628	600	497	406	152	558	216	315	52	613	812	28	1126	2xM63x1.5	DM20	6314-C3	6314-C3
	508	120	628	600	497	457	152	558	216	315	52	613	812	28	1156	2xM63x1.5	DM20	NU-319	6316-C3
315S/M***	508	120	628	600	497	406	152	558	216	315	52	613	812	28	1126	2xM63x1.5	DM20	6316-C3	6314-C3
	508	120	628	600	497	457	152	558	216	315	52	613	812	28	1156	2xM63x1.5	DM20	NU-319	6316-C3
355M/L	610	140	750	816	685	560	200	760	254	355	50	725	1040	28	1426	2xM63x1.5	DM20	6319-C3	6316-C3
	610	140	750	816	685	630	200	760	254	355	50	725	1040	28	1466	2xM63x1.5	DM24	NU-322	6319-C3

FRAME W225S-280M B3T



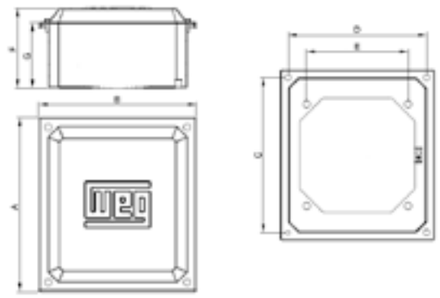
Frame	A	AA	AB	AC	AD	B	BA	BB	BC	C	H	HA	HC	HD	K	L	S1	d1	Bearing	
																			DE	NDE
W225S	356	80	436	391	311	286	64	348	149	225	29	433	536	18.5	18.5	748	2xM32x1.5	DM20	6312-ZZ C3	6312-ZZ C3
																778			6314-ZZ C3	
225M	356	85	432	447	351	311	88	362	149	225	31	462	573	18.5	18.5	785	2xM32x1.5	DM20	6314-C3	6314-C3
																815				
250M	406	95	484	468	357	349	89	424	168	250	32	493	607	24	24	875	2xM40x1.5	DM20	6314-C3	6314-C3
																			6316-C3	6314-C3
W280S	457	100	542	482	357	368	101	435	190	280	33	525	637	24	24	945	2xM50x1.5	DM20	6314-C3	6314-C3
																975			NU-319	6314-C3
280M	457	108	542	541	399	419	129	499	190	280	37	565	679	24	24	1027	2xM50x1.5	DM20	6314-C3	6314-C3
																1057			NU-319	6316-C3

FRAME W225S-280M B3D/B3E



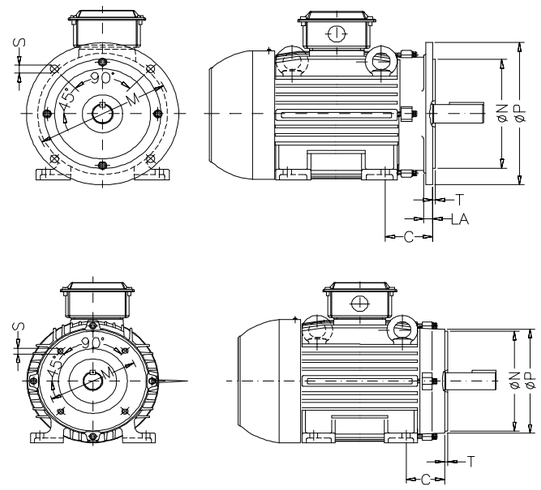
Frame	A	AA	AB	AC	AD	AE	B	BA	BB	BC	C	H	HA	HC	HD	HE	K	L	S1	d1	Bearing	
																					DE	NDE
W225S	356	80	436	389	272	297	286	80	348	40	149	225	27	433	498	391	18.5	748	2xM32x1.5	DM20	6312-ZZ C3	6312-ZZ C3
																		778			6314-ZZ C3	
225M	356	85	432	446	308	370	311	86	362	20.5	149	225	30	462	533	405	18.5	784.5	2xM32x1.5	DM20	6314-C3	6314-C3
																		814.5			6314-C3	6314-C3
250M	406	95	484	468	314	370	349	93	424	42.5	168	250	30	493	564	436	24	875	2xM40x1.5	DM20	6314-C3	6314-C3
																					6316-C3	6314-C3
W280S	457	100	542	480	316	370	368	100	435	37	190	280	32	525	596	468	24	945	2xM50x1.5	DM20	6314-C3	6314-C3
																		975			NU-319	6314-C3
280M	457	108	542	541	376	370	419	119	499	25	190	280	37	566	656	508	24	1027	2xM50x1.5	DM20	6314-C3	6314-C3
																		1057			NU-319	6316-C3

Terminal Box Dimension



Frame	A	B	C	D	E	F	G
63-100	103.4	103.4	88	88	56	55	45
112-132	126.2	118.2	109	101	70	62	50
160-180	168	160	146	138	110	81	65
200	216	200	190	174	120	100	78.5
W225S	216	200	190	174	132	100	78
225-250	248	224	222	198	150	109	86
225M-280M	248	224	222	198	152	102	88
280	248	224	222	198	150	111	86
315	342	310	305	273	200	161	128
355	400	362	358	320	260	173	140

Flange Dimension



Frame	FF Flange dimension									Qty of holes
	Flange	C	LA	M	N	P	T	S	a	
80	FF-165	50	10	165	130	200	3.5	12	45°	4
90S 90L		56								
100L	FF-215	63	11	215	180	250	4	15		
112M		70								
132S 132M	FF-265	89	12	265	230	300				
160M 160L	FF-300	108	18	300	250	350	5	19		
180M 180L		121								
200M 200L	FF-350	133		350	300	400				
W225S	FF-400	149		400	350	450			22°30'	8
225M										
250M	FF-500	168		500	450	550				
W280S		190								
280M										
315S/M	FF-600	216	22	600	550	660	6	24		
355M/L	FF-740	254		740	680	800				

Frame	"C-DIN" Flange dimension							Qty of holes
	Flange	C	M	N	P	S	T	
80	C-120	50	100	80	120	M6	3	4
90S 90L	C-140	56	115	95	140	M8	3.5	
100L	C-160	63	130	110	160			
112M		70						
132S 132M	C-200	89	165	130	200	M10		

Frame	"C" Flange dimension							Qty of holes
	Flange	C	M	N	P	S	T	
80	FC-95	50	95.2	76.2	143	1/4"20	4	4
90S 90L	FC-149	56	149.2	114.3	165	UNC 3/8"16		
100L		63						
112M	FC-184	70	184.2	215.9	225	UNC 1/2"13	6.3	
132S 132M		89						
160M 160L		108						
180M 180L	FC-228	121	228.6	266.7	280			
200M 200L		133						
315S/M	FC-368	216	368.3	419.1	455	UNC 5/8"11		8
355M/L		254						

Global presence is essential, as much as understanding your needs.

Global Presence

With approximately 37,000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our ***W20 three-phase induction motor*** is the right choice for your application and business, assuring safety, efficiency and reliability.

Availability is to have a global support network

Partnership is to create solutions that suits your needs

Competitive edge is to unite technology and inovation

SERVICE

From our wide Services portfolio, stands out the list of interventions on products from WEG activity areas: Electric Motors, Energy and Automation, being the most common:

	Products		Procedure	
	Automation	Motor	Internal	External
General Repair and overhaul	X	X	X	X
Product repair that may include the replacement of the components by original parts	X	X	X	X
Commissioning and start up	X	X		X
Repair of electrical machines (Ex and Safety)		X	X	X
Inspection and/or replacement of sleeve bearing or bearings		X	X	X
Repair of the sleeve bearings shell		X	X	X
High, Medium and Low Voltage rewinding		X	X	
Stator or rotor core replacement		X	X	
Brushes and brushes holder replacement		X	X	X
Shaft complete replacement or repair of shafts with grinding finishing of complete rotor		X	X	
Dynamic balancing of rotor (Maximum speed 1600 rpm 20T)		X	X	
Field dynamic balancing		X		X
Centring service		X		X
Painting (standard and special plan)		X	X	X
Inspection, tests and technical analysis	X	X	X	X
Energy Efficiency Study	X	X		X
Training of product maintenance	X	X		X

Inspection, Tests and Technical Analyses

From all the inspections, tests and technical analyses we have capacity to offer, we emphasize the following:

- Production and expedition of spare parts to all over the world;
- Application diagnosis on site or in our factory;
- Technical advise on best, reliable and efficient solutions on energy saving.

Automation

- Analysis of application improvements and technical assessment to the client, helping on the choice of the most appropriate equipment, targeting the application/optimizing installation efficiency
- Manufacturing, Installation, Modification, Start-Up and Maintenance of Electrical Panels
- Support on the settings parametrization of Variable Speed Drives and Soft Starters
- Commissioning and Start-Up of applications with Variable Speed Drives
- WEG Products Training

Explosive Atmospheres

Electric Motors

- Commissioning and Start-Up of applications with electric motors
- Alignment applications with electric motors
- Vibration analysis and failures diagnosis
- Dimensional check of Electric Motors and Components/Spare Parts
- Electric Motors maintenance
- Electric Motors Mechanical and Electrical refurbishment:
  - Replacement of bearings / sleeve bearings
  - Recovery of sleeve bearings
  - Rewinding of Electric Motors (stator/rotor) - in Low, Medium and High Voltage (up to 11kV)
  - Recover / Refurbishment / replacement of spare parts
  - Replacement of rotor shafts
  - Repair and replacement of accessories, temperature sensors and anti-condensation heaters and other auxiliaries
- Balancing in factory up to 1600 rpm (20T, Ø Max. 4640 mm)
- Dynamic balancing on site
- Electric Motors modification to new operating conditions (IP protection, cooling system, auxiliaries mounting form, terminal boxes, external loads, etc)
- Painting and finishing recovery
- Customer training on electric motors
- Repair electric machines (Ex and Safety)
- Energy analysis and efficiency of electric motors

CUSTOMER SERVICE DEPARTMENT

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