

W20

Three-phase Low Voltage Motors

Technical Catalogue
African Market

Industrial Motors

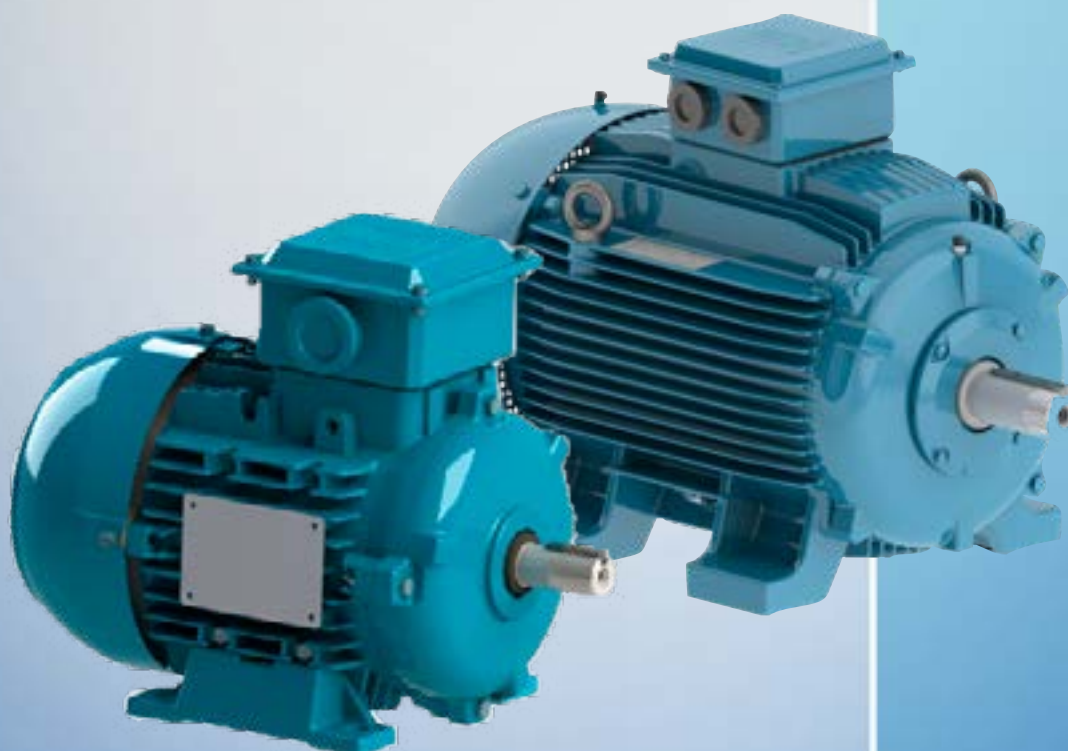
Commercial & Appliance Motors

Automation & Systems

Energy

Transmission & Distribution

Coatings



Driving efficiency and sustainability





About WEG

WEG was founded in 1961 in Jaraguá do Sul, a southern Brazilian city. As one of the world's largest motor manufacturers, it has an area of more than 2,500,000 square meters. WEG has offices in 42 countries on five continents and production bases in 18 countries. It has more than 1,400 service outlets worldwide, and its products are sold in more than 135 countries and regions around the world. It has more than 49,000 employees worldwide and annual sales of more than US\$ 6 billion. WEG has seven major business divisions: industrial motors, commercial and appliance motors, automation, digital and systems, energy, transmission and distribution, and coatings.

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 69,769 square meters, with a construction area of 33,500 square meters, and currently employs around 700 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

WEG (Jiangsu) Electrical Equipment Co., Ltd. is the third wholly-owned domestic production base (currently there are 6 factories in China) after the establishment of WEG Nantong Factory in 2005. It is located at No. 88 Huimin West Road, Rugao Economic and Technological Development Zone, Jiangsu Province, covering a total area of 180,000 square meters. The company's annual output of industrial motors will reach 450,000 units and 800,000 sets of parts. WEG is the most automated motor manufacturing base in the group. In addition to highly automated intelligent three-dimensional warehousing, each production station is equipped with 26 sets of automated production equipment such as robots, and it is expected to reach 57 sets in 2026. In 2021, it has obtained the intelligent manufacturing workshop certification, which provides a strong guarantee for the high output and high quality of its products. The ISO9001, ISO14001 and ISO45001 system certification certificates it has obtained are also sufficient to recognize its scientific and complete management system. In addition to supplying the Chinese market, the products are also exported to countries and regions such as Europe, Asia and Africa, and are widely used in various industrial fields, including traditional applications such as fans, pumps and compressors. The company has established an engineering technology low-voltage center, and through the WMS system (WEG manufacturing system), Six Sigma and other lean production systems to ensure that customers are provided with high-quality products and services.

About Changzhou Yatong Jiewei Electromotor Co., Ltd

Changzhou Yatong Jiewei Eletromotor Co., Ltd. is mainly engaged in the research and development, manufacturing and sales of industrial motors, household appliance motors, industrial control and other variable frequency drive systems. The company is in a leading position in variable frequency drive system solutions and mechatronics integration and has core independent intellectual property rights. In the fields of washing machines, dryers, dishwashers, etc., the company has a variety of advanced solutions and cost-effective modular products such as AC variable frequency drive systems, DD direct drive variable frequency drive systems, and DDM variable frequency drive systems. The company's main customers include General Electric and Whirlpool, which are among the world's top 500 companies, and domestic customers include Midea, Skyworth and other companies. The company has a world-class development team and has established three R&D centers for motors, electronic control and mechanical transmission. The company has an industry-leading position in process automation, 6Sigma management and quality control.

CERTIFICATION

WEG CHINA



WEG GLOBAL



Table of Contents

1. Construction Details.....	5
1.1 Frame.....	5
1.2 End shields	5
1.3 Fan cover	5
1.4 Terminal box.....	5
1.5 Terminal block.....	5
1.6 Bearings	5
1.7 Nameplate	6
1.8 Packing.....	6
W20 Series Motor Structures.....	7
2. Construction Features	8
3. Optional Feature	12
4. Electrical Data.....	13
5. Mechanical Data.....	25



**W20 Frame 80 to 200
(Cast Iron Frame)**



**W20 Frame 80 to 132
(Aluminum Frame)**



W20 Frame 225 to 355 (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.



Figure 1- Aluminum Frame

The cast iron frame is made of FC-200 cast iron, which is sturdy and durable.



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 4 - 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

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 6 - Terminal block

1.6 Bearings

WEG motors are equipped with ball bearings and have regreasing nipples 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 7 - Shaft down mounting & shaft up mounting

1.6.1 Bearings thrusts

62 series bearing

Frame	DE Bearing	Poles	50 Hz - Fr (kN*) - 20,000h		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		

63 series bearing

Frame	DE Bearing	Poles	50 Hz - Fr (kN*) - 20,000h		Radial Load		Axial Load	
			L/2	L	Push	Pull		
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		
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	2P	5.7	5.2	5.0	3.6		
	6316	4P	8.3	7.6	7.4	5.8		
		6P	9.6	8.7	8.6	7.0		
		8P	10.6	9.6	9.7	8.1		
280	6314	2P	5.7	5.2	4.9	3.5		
	6319	4P	10.3	9.5	8.6	6.7		
		6P	11.9	11.0	8.3	10.2		
		8P	11.9	11.0	8.3	10.2		
315	6314	2P	5.6	5.2	4.8	3.4		
	6319	4P	9.6	8.8	8.3	6.4		
		6P	11.0	10.1	9.7	7.8		
		8P	12.1	11.1	10.9	9.0		

63 series bearing

Frame	DE Bearing	Poles	50 Hz - Fr (kN*) - 20,000h		Radial Load		Axial Load	
			L/2	L	Push	Pull		
315*	6316*	2P	6.7	6.2	5.5	3.9		
	6319	4P	9.6	8.8	8.3	6.4		
		6P	11.0	10.1	9.7	7.8		
		8P	12.1	11.1	10.9	9.0		
355	6319	2P	7.3	6.9	6.0	4.2		
	6322	4P	12.0	11.0	9.8	7.6		
		6P	13.6	12.5	11.4	9.2		
		8P	15.4	14.1	13.0	10.8		

*Only for 185kW and above

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).

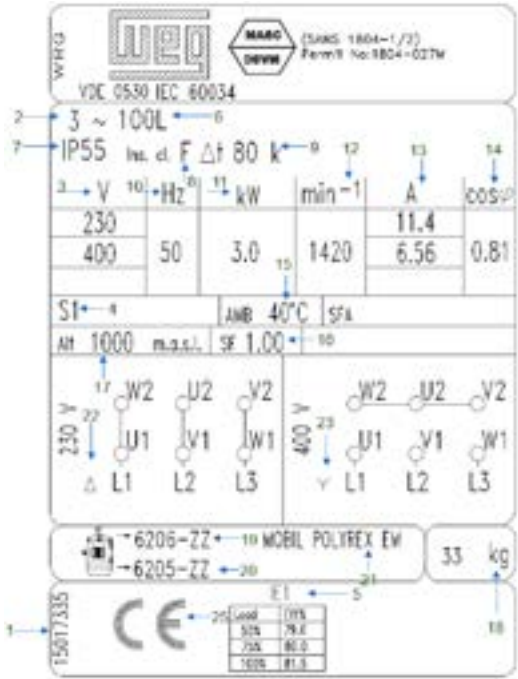


Figure 8 - Nameplate for frame size 80 to 200

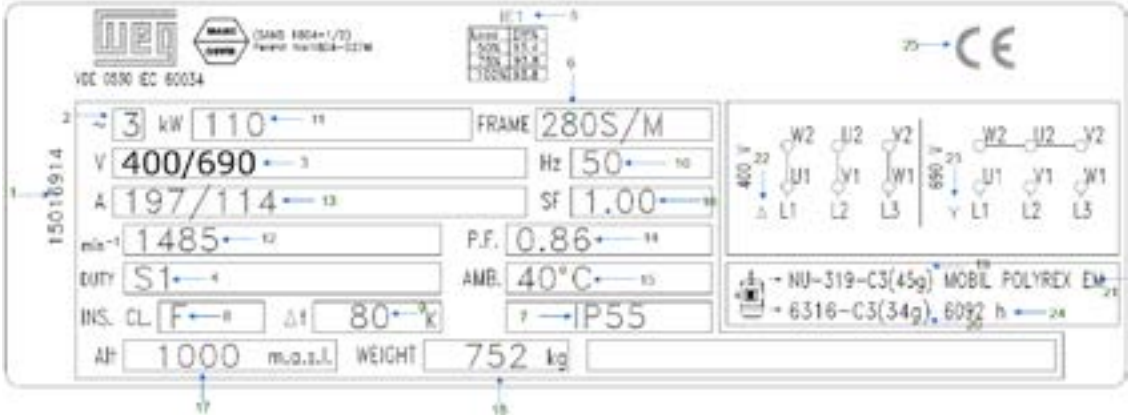


Figure 9 - Nameplate for frame size 225 to 355

Details on Nameplate:

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

1.8 Packing

W20 motors frame 80 to 132 have carton box as standard packaging (figure 10). 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.

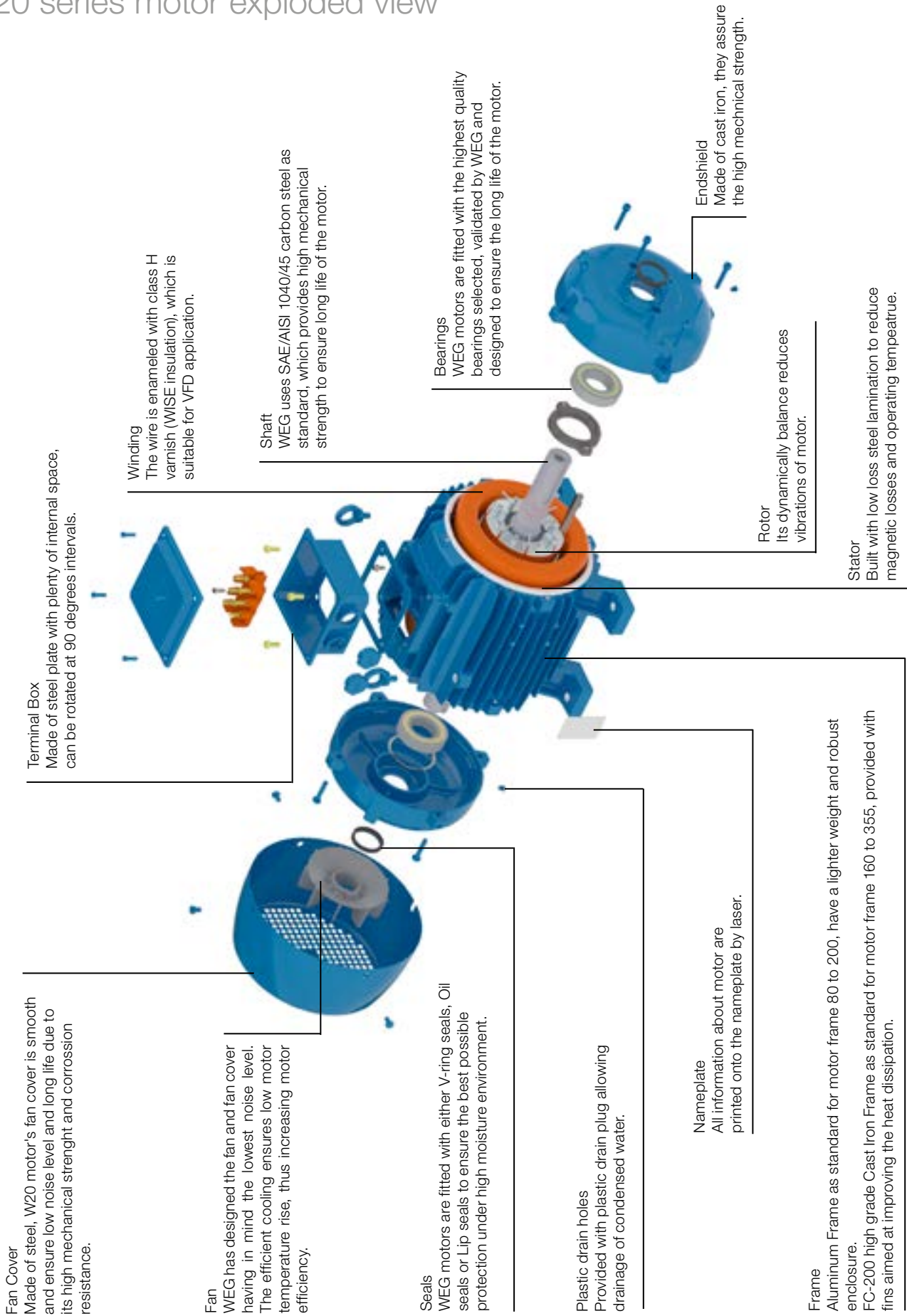


Figure 10 - Carton box



Figure 11 - Crate

W20 series motor exploded view



2. Construction Features - Cast Iron Frame

Frame size			80	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L	200M	200L
Mechanical features															
Marking/logos on nameplate:			WEG												
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 Plate												
Endshields	Material		FC-200 Cast Iron												
Drain plug			Automatic T labyrinth drain plug												
Rolling bearings	Shielded/Clearance DE		ZZ							ZZ-C3					
	Shielded/Clearance 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 4-8P	6204	6205	6205	6206	6207	6308	6308	6309	6309	6311	6311	6312	6312
	Non drive end side	2P 4-8P	6203	6204	6204	6205	6206	6207	6207	6209	6209	6211	6211	6212	6212
Bearing sealing			V'ring												
Joints sealing			none												
Lubrication	Grease type		Mobil Polyrex EM												
	Grease fitting		None												
Terminal block			BMC 6 Terminals												
Terminal box	Material		Steel Plate												
Additional terminal box			None												
Leads inlet	Main	Size	2XM20x1.5	2XM25x1.5			2XM32x1.5			2xM40x1.5			2XM50X1.5		
	Plug		Plastic plug for transport and storage purposes												
Shaft	Material	2p	Steel Carbon SAE 1040/45												
		4 - 8p	Steel Carbon SAE 1040/45												
	DE threaded hole	2p	M6	M8	M8	M10	M10	M12	M12	M16	M16	M16	M16	M20	M20
		4 - 8p													
Key			Fitted with "A" type (China key type: B)												
Vibration level			Grade A												
Balancing		2P	Without	With 1/2 key											
		4P	Without	With 1/2 key											
		6-8P	With 1/2 key												
Nameplate	Material		Stainless Steel AISI 304												
Painting	Type		201A							203A					
	Color		RAL 5009												
Packaging			Cardboard box							Crate					
Electrical features															
Desing			N												
Voltage			230/400V with 6 leads				400/690V with 6 leads								
Winding	Impregnation		POLYESTER IMPREGNATION												
	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 on line												

NOTE:
- *Only for 185kW and above
- IE3 optional voltage 525V with 3 leads (80-100frames) and 6 Leads (112-355frames)
- WEG logo on the Terminal box cover and manual in package
- The motors are suitable for VFD applications, but need to use it based on the requirements in the "Commercial and Technical Guide for Price Lists WMO"
- For frame 315-355, we recommend configuring insulated end shield and grounding brush when the motors work on VFD. Insulated end shield and grounding brush are optional, the price reference price list(Rev 06).

2. Construction Features - Cast Iron Frame

Frame size			225S/M	250S/M	280S/M	315S/M	355M/L
Mechanical features							
Marking/logos on nameplate:			WEG				
Certification			MASC				No Certification
Mounting			B3T				
Frame	Material		FC-200 Cast Iron				
Degree of protection			IP55				
Grounding			Double grounding (1 terminal box + 1 outside frame)				
Cooling method			TEFC				
Fan	Material	2P 4-8P	Plastic				Aluminium
Fan cover	Material		Steel plate				
Endshields	Material		FC-200 Cast Iron				
Drain plug			Automatic T labyrinth drain plug				
Rolling bearings	Shielded/Clearence DE		C3				
	Shielded/Clearence NDE		C3				
	Locking		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	6314	6314	6314	6314 - 6316(*)	6319
		4-8P		6316	6319	6319	6322
	Non drive end side	2P		6314	6314	6314 - 6316(*)	6316
		4-8P		6314	6316	6316	6319
	Bearing sealing			V'ring			
Joint Sealing			none				
Lubrication	Grease type		Mobil Polyrex EM				ISOFLEX NBU-15 for 2P
	Grease fitting		With grease fittings in DE and NDE bearings				
Terminal block			BMC 6 Terminals				
Terminal box	Material		Steel plate				
Additional terminal box			none				
Leads inlet	Main	Size	2XM50X1.5	2xM63x1.5			
	Plug		Plastic plug for transport and storage purposes				
Shaft	Material	2P	Steel Carbone SAE 1040/45				SAE 4140
		4 - 8P	SAE 4140				
	DE threaded hole	2P	M20	M20	M20	M20	M20
		4 - 8P					M24
Key			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		203A				
	Color		RAL5009				
Packaging			Crate				
Electrical features							
Desing			N				
Voltage			400/690V with 6 leads				
Winding	Impregnation		By dripping				
	Insulation class		F (DT 80K)				
Service factor			1.00				
Thermal protector			PTC 155°C				
Space heaters			None				
Flying leads			None				
Ambient temperature	Maximum		40°C				
	Minium		-20°C				
Starting method			Direct on line				

NOTE:

- *Only for 185kW and above
- IE3 optional voltage 525V with 3 leads (80-100frames) and 6 Leads (112-355frames)
- WEG logo on the Terminal box cover and manual in package
- The motors are suitable for VFD applications, but need to use it based on the requirements in the "Commercial and Technical Guide for Price Lists WMO"
- For frame 315-355, we recommend configuring insulated end shield and grounding brush when the motors work on VFD. Insulated end shield and grounding brush are optional, the price reference price list(Rev 06).

2. Construction Features - Aluminum Frame

Frame size			80	90S/L	100L	112M	132S	132M
Mechanical features								
Marking/logos on nameplate:			WEG					
Certification			MASC					
Mounting			B3T					
Frame	Material		aluminum					
Degree of protection			IP55					
Grounding			Single grounding (inside terminal box)					
Cooling method			TEFC					
Fan	Material		Plastic					
Fan cover	Material		Steel Plate					
Endshields	Material		FC-200 Cast Iron					
Drain plug			Automatic T Labyrinth drain plug					
Rolling bearings	Shielded/Clearence DE		ZZ					
	Shielded/Clearence NDE		ZZ					
	Locking		None					
	Bearing life (h)		20000h					
	Drive end side	2P	6204	6205	6206	6207	6308	6308
		4-8P						
	Non drive end side	2P	6203	6204	6205	6206	6207	6207
4-8P								
Bearing sealing			V'ring					
Joints sealing			None					
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	2*M20*1.5	2*M25*1.5		2*M32*1.5		
	Plug		Plastic plug for transport and storage purposes					
Shaft	Material		Steel Carbone SAE 1040/45					
	DE threaded hole	2p	M6	M8	M10	M10	M12	M12
		4 - 8p						
Key			Fitted with "A" type (China key type: B)					
Vibration level			Grade A					
Balancing			Without	With 1/2 key				
Nameplate	Material		Stainless Steel AISI 304					
Painting	Type		201A					
	Color		RAL 5009					
	Tropicalized		None					
Packaging			Cardboard box					
Electrical features								
Desing			N					
Voltage			230/400V with 6 leads			400/690V with 6 leads		
Winding	Impregnation		POLYESTER IMPREGNATION					
	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 on line					

3. Optional Features

Frame size	80	90S	90L	100L	112M	132S	132M	132M/L	160M	160L	180M	180L	200M	200L	225S/M	250S/M	280S/M	315S/M	355M/L
Mechanical Options																			
Flange																			
Flange FF	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Flange C-DIN	O	O	O	O	O	O	O	O	O	O	NA	NA	NA	NA	NA	NA	NA	NA	NA
Flange C	O	O	O	O	O	O	O	O	O	O	O	O	O	O	NA	NA	NA	O	O
Cooling Fan																			
Aluminum	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	SD
Frame Material																			
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	SD	NA	NA	NA	NA	NA
Cast Iron	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	NA	SD	SD	SD	SD	SD
Insulation Class																			
F DT 105K	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
H DT 80K	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
H DT 105K	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Painting Plan																			
203A	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
207A	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Bearing Seal																			
Lip seal	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Oil seal	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Bearing Cap																			
Bearing cap	O	O	O	O	O	O	O	O	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	NA
AISI 4140	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	SD
Shaft 4P																			
SAE 1040/45	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	O	O	O	O	NA
AISI 4140	O	O	O	O	O	O	O	O	O	O	O	O	O	O	SD	SD	SD	SD	SD
Degree of protection																			
IP56	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Grounding																			
Single	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	NA	NA	NA	NA	NA
Double	O	O	O	O	O	O	O	O	O	O	O	O	O	O	SD	SD	SD	SD	SD
Other Mechanical Optional																			
Drip cover	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Electrical Options																			
Winding Thermal Protection																			
PTC - Alarm	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
PTC - Trip	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Space Heater																			
110-127 V	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
200-240 V	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
110-127 / 220-240 V	NA	NA	NA	NA	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
380-480 V	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Direction of Rotation																			
Clockwise	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Counter clockwise	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Service factor																			
1.15	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 (kgfm)	Locked Rotor Current I/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	400 V						Full load current In (A)	
													% of full load							
													Efficiency		Power Factor					
kW	HP							Hot	Cold				50	75	100	50	75	100		
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	2.3	2.3	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	292	75	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	356	78	2955	93.1	93.0	93.1	0.80	0.87	0.90	95.0	
90	125	280M	29.5	6.5	1.7	2.2	0.8605	14	31	560	83	2975	92.7	93.8	93.8	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	837	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	911	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	
45	60	225S/M	14.9	6.6	2.3	2.7	0.3139	21	46	356	82	2950	91.7	92.6	92.4	0.79	0.86	0.89	78.9	
45	60	250S/M*	14.8	7.0	2.6	2.8	0.3139	16	35	356	82	2955	90.0	91.0	92.0	0.77	0.86	0.89	79.3	
55	75	225S/M	18.1	7.4	2.5	2.9	0.3767	17	37	410	82	2955	92.5	93.3	93.1	0.81	0.87	0.90	95.0	
55	75	250S/M	18.1	7.4	2.5	2.9	0.3767	17	37	410	82	2955	92.5	93.3	93.1	0.81	0.87	0.90	95.0	
55	75	280S/M	18.0	7.3	2	3.2	1.05	37	81	663	83	2977	90.0	92.1	92.9	0.74	0.82	0.86	100	
75	100	250S/M	24.7	8.5	2.9	3.1	0.5023	13	29	469	82	2960	93.5	93.6	93.6	0.85	0.90	0.92	125	
75	100	280S/M	24.6	6.0	1.7	2.5	1.08	35	77	663	83	2969	92.1	93.3	93.5	0.81	0.87	0.89	130	
90	125	280S/M	29.5	6.4	1.8	2.6	1.18	29	64	675	83	2970	92.9	93.9	94.0	0.83	0.88	0.90	154	
110	150	280S/M	36.1	6.5	2.1	2.6	1.41	30	66	810	83	2970	94.0	94.2	94.2	0.84	0.89	0.90	187	
132	175	280S/M	43.2	7.4	2.2	2.9	1.65	22	48	870	83	2973	94.0	94.5	94.5	0.83	0.89	0.91	221	
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 lI/in	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							Full load current ln (A)
												Rated speed (rpm)	% of full load						
													Efficiency			Power Factor			
								Hot	Cold				50	75	100	50	75	100	
kW	HP																		
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	12.2	7.0	2.4	2.8	0.1615	7	15	172	64	1473	88.0	89.5	90.0	0.70	0.80	0.84	35.3
22	30	180L*	14.6	6.8	2.6	2.6	0.1884	7	15	190	64	1472	90.8	91.0	90.5	0.72	0.81	0.86	40.8
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
45	60	225M*	29.8	5.5	2.2	2.6	0.4947	12	26	298	---	1469	91.2	91.6	91.7	0.79	0.86	0.88	80.5
55	75	250M*	36.2	6.6	2.2	2.5	0.7804	12	26	339	---	1478	93.1	93.3	92.6	0.75	0.83	0.86	100
90	125	280M	59.1	5.8	2.1	2.8	1.63	11	24	597	---	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	21	46	818	77	1481	94.4	94.7	94.4	0.77	0.84	0.86	196
132	175	315S/M	86.6	7.6	2.4	2.6	3.21	16	35	908	77	1485	94.0	94.5	94.6	0.77	0.84	0.86	235
150	200	315S/M	98.5	6.8	2.3	2.4	3.45	16	35	962	77	1483	94.9	95.0	94.8	0.79	0.85	0.87	262
160	220	315S/M	105	7.2	2.3	2.5	3.77	14	31	976	77	1484	94.0	94.5	94.5	0.78	0.85	0.87	281
185	250	315S/M*	122	7.2	2.4	2.5	3.63	12	26	1000	77	1483	94.0	94.5	95.0	0.78	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	12.2	7.0	2.4	2.8	0.1615	7	15	172	64	1473	88.0	89.5	90.0	0.70	0.80	0.84	35.3
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	6.3	2.4	2.6	0.1884	10	22	190	64	1468	90.8	91.0	90.5	0.72	0.81	0.86	40.8
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	6.5	2.5	2.6	0.2075	9	20	186	64	1465	91.3	91.4	90.8	0.69	0.78	0.84	56.8
37	50	225S/M*	24.4	6.0	1.8	2.3	0.5599	11	24	335	70	1477	91.7	92.0	91.3	0.74	0.82	0.85	68.8
37	50	250S/M*	24.4	6.0	1.8	2.3	0.5599	13	29	335	70	1477	91.7	92.0	91.3	0.74	0.82	0.85	68.8
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
45	60	225S/M*	29.7	6.1	1.9	2.3	0.6649	12	26	360	70	1476	92.2	92.7	92.1	0.74	0.82	0.85	82.9
45	60	250S/M	29.6	6.7	2.2	2.6	0.6649	12	26	360	70	1480	91.0	91.5	92.0	0.71	0.81	0.85	83.0
55	75	225S/M	36.2	7.7	2.1	2.4	0.8748	10	22	430	70	1478	93.3	93.2	92.4	0.75	0.83	0.86	100
55	75	250S/M	36.2	6.6	2.2	2.5	0.8748	10	22	430	70	1478	93.0	93.1	92.4	0.76	0.83	0.86	100
55	75	280S/M	36.0	7.0	1.9	2.4	1.80	39	86	735	76	1486	90.0	93.0	93.2	0.79	0.84	0.86	98.8
75	100	250S/M	49.4	7.5	2.7	2.8	1.12	11	24	510	70	1480	93.9	94.2	93.8	0.74	0.83	0.86	134
75	100	280S/M	49.2	6.8	2	2.4	1.85	22	48	647	76	1485	93.0	93.5	93.5	0.76	0.83	0.85	136
90																			

W20 - Cast Iron Frame - IE3

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current lI/In	Locked Rotor Torque TI/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																			
0.75	1	80	0.255	7.5	2.4	2.8	0.0008	18	40	13.7	59	2870	74.2	78.0	80.7	0.58	0.70	0.79	1.70
1.1	1.5	80	0.379	7.4	3.6	3.6	0.0009	23	51	15.5	59	2830	81.0	83.0	83.0	0.63	0.76	0.82	2.33
1.5	2	90S	0.508	7.6	3.3	3.3	0.0020	15	33	21.8	62	2875	83.0	84.0	84.5	0.64	0.76	0.83	3.09
2.2	3	90L	0.744	7.5	2.9	3.5	0.0026	12	26	28.5	62	2880	83.5	85.5	85.9	0.65	0.77	0.83	4.45
3	4	100L	1.00	7.5	2.2	3.2	0.0064	6	13	32.7	67	2915	86.3	87.1	87.1	0.69	0.81	0.87	5.71
4	5.5	112M	1.34	7.7	2.5	3.5	0.0080	14	31	42.6	62	2900	87.0	88.0	88.3	0.69	0.80	0.86	7.60
5.5	7.5	132S	1.82	7.9	2.3	3.4	0.0216	14	31	68.7	63	2945	86.4	88.5	89.2	0.68	0.79	0.85	10.5
7.5	10	132S	2.49	7.2	2.5	3.2	0.0252	16	35	71.6	63	2935	87.8	89.7	90.1	0.70	0.81	0.86	14.0
9.2	12.5	132M	3.05	8.5	3	3.8	0.0306	13	29	80.7	63	2940	88.2	90.0	90.7	0.62	0.75	0.82	17.9
11	15	160M	3.63	8.5	2.8	3.4	0.0618	13	29	111	70	2950	89.5	90.5	91.2	0.75	0.84	0.87	20.0
15	20	160M	4.97	8.0	2.8	3.2	0.0565	14	31	115	70	2940	90.5	91.5	91.9	0.75	0.84	0.87	27.1
18.5	25	L160L	6.11	9.1	3.1	3.6	0.0763	7	15	142	70	2950	90.4	91.0	92.4	0.73	0.83	0.87	33.3
22	30	180M	7.24	8.2	2.5	3.2	0.1138	9	20	162	70	2960	91.8	92.7	92.7	0.69	0.80	0.85	40.3
30	40	200L	9.85	7.0	2.3	2.6	0.2214	17	37	243	74	2965	92.7	93.3	93.3	0.79	0.86	0.88	52.7
37	50	200L	12.1	7.2	2.9	3	0.1958	11	24	253	74	2967	92.7	93.6	93.7	0.73	0.82	0.85	67.1
45	60	225M	14.8	8.8	2.7	3.8	0.2601	12	26	319	75	2960	92.0	93.0	94.0	0.70	0.80	0.85	81.3
55	75	250M	18.0	9.8	2.6	3.2	0.3920	11	24	369	78	2970	93.0	93.9	94.3	0.74	0.82	0.86	97.9
90	125	280M	29.4	8.0	1.9	2.6	1.06	12	26	578	83	2978	93.6	94.6	95.0	0.81	0.88	0.90	152
110	150	315S/M	36.0	7.8	2	3	1.23	25	55	800	83	2975	95.0	95.2	95.2	0.75	0.84	0.87	192
132	175	315S/M	43.2	7.3	1.9	3	1.40	22	48	797	83	2975	95.0	95.4	95.4	0.80	0.87	0.89	224
160	220	315S/M	52.3	9.8	2.8	3.5	1.97	15	33	917	83	2980	95.0	95.6	95.6	0.77	0.85	0.88	275
200	270	355M/L	65.3	9.2	2	2.6	4.63	36	79	1543	81	2985	95.7	95.8	95.8	0.87	0.92	0.93	324
High-Output Design																			
0.75	1	90S	0.250	8.2	2.6	3.4	0.0015	13	29	17.3	62	2920	79.0	82.5	83.0	0.60	0.73	0.81	1.61
1.1	1.5	90S	0.370	7.8	2.2	2.9	0.0018	12	26	19.4	62	2895	82.0	84.2	84.5	0.63	0.75	0.82	2.29
1.5	2	90L	0.502	7.2	2.2	3.1	0.0020	9	20	21.8	62	2910	81.3	83.5	84.2	0.64	0.76	0.83	3.10
4	5.5	132S	1.32	7.2	2.1	3.3	0.0180	19	42	61.4	63	2945	84.7	87.1	88.1	0.67	0.79	0.85	7.71
5.5	7.5	132M	1.82	7.9	2.3	3.4	0.0216	14	31	68.7	63	2945	86.4	88.5	89.2	0.68	0.79	0.85	10.5
7.5	10	132M	2.48	8.8	2.8	3.9	0.0252	10	22	71.6	63	2950	87.0	89.0	90.1	0.65	0.77	0.84	14.3
11	15	132M	3.65	7.7	2.8	3.4	0.0306	12	26	84.9	63	2935	89.3	90.0	91.2	0.70	0.81	0.86	20.2
45	60	225S/M	14.8	7.9	2.5	3.2	0.4448	29	64	400	82	2965	93.4	94.0	94.0	0.83	0.89	0.91	75.9
55	75	250S/M	18.1	7.4	2.2	3	0.3736	19	42	450	82	2960	93.8	94.3	94.3	0.80	0.87	0.90	93.6
75	100	280S/M	24.6	6.4	1.6	2.7	0.9386	45	99	680	83	2975	93.0	94.2	94.7	0.81	0.87	0.89	128
90	125	280S/M	29.5	6.2	1.6	2.6	1.03	40	88	750	83	2975	93.7	94.6	95.0	0.83	0.88	0.90	152
110	150	280M	36.0	8.7	2.1	2.7	1.10	10	22	619	83	2980	93.9	94.8	95.2	0.80	0.88	0.90	185
110	150	280S/M	36.0	7.5	1.9	3.1	1.33	29	64	800	83	2980	94.4	95.2	95.2	0.81	0.87	0.90	185
200	270	315S/M*	65.5	8.3	2.5	2.9	2.03	11	24	1000	83	2975	95.1	95.7	95.8	0.84	0.89	0.91	332

W20 - Cast Iron Frame - IE3

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current lI/In	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	400 V						Full load current In (A)
													% of full load						
													Efficiency		Power Factor				
kW	HP							Hot	Cold				50	75	100	50	75	100	
4P																			
0.55	0.75	80	0.372	6.7	2.3	2.9	0.0026	23	51	16.2	44	1440	77.0	79.0	80.8	0.60	0.73	0.80	1.23
0.75	1	80	0.506	7.0	2.7	3.1	0.0032	18	40	17.7	44	1445	80.3	81.5	82.5	0.53	0.67	0.76	1.73
1.1	1.5	90S	0.739	6.5	2.1	2.7	0.0055	15	33	24.3	49	1450	82.2	84.1	84.1	0.59	0.70	0.78	2.42
1.5	2	90L	1.01	6.5	2.7	3.2	0.0066	13	29	25.0	49	1445	84.0	85.3	85.3	0.58	0.71	0.79	3.21
2.2	3	100L	1.49	7.4	3.2	3.5	0.0090	18	40	35.1	53	1435	86.5	87.0	87.0	0.60	0.73	0.80	4.56
3	4	L100L	2.03	7.8	3.5	3.7	0.0120	15	33	43.5	53	1440	87.0	88.0	88.0	0.60	0.73	0.80	6.15
4	5.5	112M	2.69	7.0	2.3	3.1	0.0182	15	33	47.7	56	1450	86.0	88.0	88.8	0.60	0.72	0.79	8.23
5.5	7.5	132S	3.66	8.2	2.1	2.9	0.0528	15	33	65.4	56	1465	87.5	89.0	89.6	0.67	0.79	0.85	10.4
7.5	10	132M	4.99	8.5	2.5	3.4	0.0642	13	29	76.8	56	1465	87.5	90.0	90.6	0.67	0.78	0.84	14.2
11	15	L160L	7.29	7.5	2.7	3	0.1360	9	20	120	62	1470	88.5	89.8	91.4	0.61	0.74	0.81	21.5
15	20	160L	9.94	8.0	3	3.4	0.1214	10	22	127	62	1470	90.5	91.5	92.1	0.62	0.74	0.81	29.0
18.5	25	180M	12.2	7.6	2.7	3.1	0.2088	12	26	156	64	1475	91.0	92.0	92.6	0.64	0.76	0.82	35.2
22	30	180L	14.5	7.9	2.8	3.2	0.2098	12	26	180	64	1475	91.6	92.6	93.0	0.70	0.80	0.84	40.7
30	40	200L	19.7	7.0	2.5	3	0.3342	17	37	241	69	1480	92.0	92.9	93.6	0.68	0.79	0.84	55.1
45	60	225M	29.6	7.0	2.9	3.4	0.6143	11	24	330	66	1480	93.0	94.0	94.2	0.71	0.81	0.85	81.1
55	75	250M	36.1	8.5	2.8	3.3	0.8822	12	26	396	70	1484	94.0	94.6	94.6	0.70	0.80	0.84	100
90	125	280M	59.0	6.1	2.2	2.6	1.80	10	22	596	76	1485	94.9	95.2	95.2	0.73	0.82	0.85	161
110	150	315S/M	72.0	8.0	2.7	3	2.71	20	44	794	77	1488	95.1	95.4	95.4	0.74	0.82	0.85	196
132	175	315S/M	86.5	7.6	2.5	2.7	3.09	17	37	858	77	1486	95.4	95.6	95.6	0.75	0.83	0.86	232
160	220	315S/M	105	7.8	2.7	2.8	3.40	16	35	929	77	1486	95.4	95.8	95.8	0.75	0.83	0.86	280
200	270	355M/L	131	7.6	2.5	2.9	6.62	26	57	1440	79	1490	95.2	96.0	96.0	0.71	0.80	0.84	358
High-Output Design																			
0.75	1	90S	0.500	7.0	2.0	2.9	0.0049	11	24	22.1	49	1460	78.7	81.5	82.5	0.54	0.67	0.76	1.73
1.1	1.5	90L	0.739	6.5	2.1	2.7	0.0055	15	33	24.3	49	1450	82.2	84.1	84.1	0.59	0.70	0.78	2.42
1.5	2	100L	1.01	7.8	2.4	3.1	0.0082	10	22	31.3	53	1450	84.0	85.5	85.5	0.55	0.68	0.76	3.33
2.2	3	112M	1.48	6.8	2	3	0.0143	31	68	44.9	56	1450	87.5	88.2	88.2	0.62	0.74	0.81	4.44
3	4	112M	2.02	7.8	2.2	2.6	0.0169	15	33	46.0	56	1445	87.5	87.7	87.7	0.64	0.76	0.82	6.02
5.5	7.5	132M	3.66	8.2	2.1	2.9	0.0528	15	33	65.4	56	1465	87.5	89.0	89.6	0.67	0.79	0.85	10.4
11	15	160M	7.29	7.7	2.9	3.1	0.1025	12	26	119	62	1470	89.2	90.3	91.4	0.63	0.75	0.81	21.5
37	50	225S/M	24.3	8.0	2.8	3.2	0.9133	15	33	370	70	1485	93.1	93.6	93.9	0.67	0.78	0.83	68.5
45	60	225S/M	29.5	8.5	2.9	3.3	0.7804	12	26	385	70	1485	93.5	94.0	94.2	0.70	0.80	0.84	82.1
55	75	250S/M	36.1	7.8	2.7	3	0.9413	15	33	470	70	1483	94.0	94.6	94.6	0.70	0.80	0.84	100
75	100	280S/M	49.1	7.5	2.2	2.8	1.79	22	48	660	72	1487	94.5	95.0	95.0	0.72	0.81	0.84	136
90	125	280S/M	59.0	8.0	2.4	2.9	2.10	18	40	800	72	1487	94.8	95.2	95.2	0.73	0.82	0.85	161
110	150	280M	72.1	9.2	2.6	3	2.04	9	20	655	72	1485	94.7	95.3	95.4	0.67	0.78	0.82	203
110	150	280S/M	72.1	7.7	2.5	2.8	2.71	20	44	860	72	1487	95.0	95.4	95.4	0.74	0.82	0.85	196
185	250	315S/M	121	9.2	3.3	3.4	3.71	12	26	994	72	1488	94.9	95.7	96.0	0.69	0.79	0.83	335
200	270	315S/M*	131	8.8	3	3.1	3.48	11	24	1250	77	1487	95.3	95.6	96.0	0.72	0.81	0.85	353

W20 - Cast Iron Frame - IE3

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current I/Ln	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								Full load current In (A)
								Rated speed (rpm)	% of full load											
									Efficiency			Power Factor								
kW	HP							Hot	Cold			50	75	100	50	75	100			
6P																				
0.25	0.33	80	0.255	4.3	1.7	2.4	0.0029	25	55	12.0	43	955	63.6	68.5	68.8	0.47	0.60	0.71	0.739	
0.37	0.5	80	0.385	4.2	2.2	2.3	0.0025	25	55	13.9	43	935	68.9	71.7	73.5	0.51	0.64	0.74	0.982	
0.55	0.75	L80	0.567	5.1	2.9	3.1	0.0034	20	44	18.0	43	945	70.5	75.2	77.2	0.45	0.58	0.69	1.49	
0.75	1	L90S	0.777	5.2	2.5	2.8	0.0066	31	68	25.7	45	940	77.0	78.0	79.0	0.49	0.62	0.71	1.93	
1.1	1.5	L100L	1.12	6.2	2.2	2.5	0.0110	32	70	29.5	44	955	81.0	81.0	81.0	0.51	0.63	0.71	2.76	
1.5	2	100L	1.54	5.5	2.3	2.8	0.0143	31	68	32.2	44	950	79.0	81.0	82.5	0.49	0.62	0.71	3.70	
2.2	3	112M	2.23	6.0	2.5	2.6	0.0257	26	57	45.7	49	960	81.0	83.5	84.3	0.53	0.64	0.72	5.23	
3	4	132S	3.01	6.0	1.9	2.5	0.0566	28	62	66.9	53	970	84.0	85.0	85.6	0.52	0.65	0.73	6.93	
4	5.5	132M	4.02	6.5	2.3	2.9	0.0566	30	66	73.3	53	970	85.0	86.0	86.8	0.53	0.66	0.74	8.99	
5.5	7.5	132M/L	5.55	7.0	2.5	2.8	0.0755	26	57	79.0	53	965	86.0	87.0	88.0	0.50	0.64	0.72	12.5	
7.5	10	160M	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	160L	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	180L	14.9	8.5	2.7	3.5	0.2975	6	13	180	56	980	88.7	90.5	91.2	0.64	0.76	0.83	28.6	
18.5	25	200L	18.5	6.3	2.3	2.5	0.3861	17	37	225	58	975	90.5	91.8	92.0	0.65	0.76	0.82	35.4	
22	30	200L	22.0	6.2	2.3	2.6	0.4388	15	33	240	58	975	90.4	92.0	92.2	0.65	0.75	0.82	42.0	
30	40	225M	29.6	8.0	2.5	3.3	0.7853	15	33	300	61	988	92.0	92.5	92.9	0.64	0.76	0.82	56.8	
37	50	250M	36.8	6.7	1.9	2.5	1.05	14	31	363	61	980	92.8	93.2	93.3	0.69	0.79	0.84	68.1	
55	75	280M	54.2	7.0	2.1	2.8	2.04	14	31	552	69	988	93.1	93.9	94.1	0.64	0.76	0.81	105	
75	100	315S/M	73.9	7.5	2.6	2.9	2.83	15	33	786	69	989	93.7	94.3	94.6	0.63	0.74	0.81	142	
90	125	315S/M	88.6	7.4	2.6	2.8	3.53	16	35	949	69	989	94.3	94.8	94.9	0.66	0.77	0.82	167	
110	150	315S/M	108	7.6	2.8	2.9	5.14	18	40	959	69	989	95.0	95.1	95.1	0.64	0.75	0.81	206	
132	175	355M/L	129	6.5	1.9	2.5	10.4	40	88	1600	73	995	93.8	94.8	95.4	0.68	0.77	0.81	247	
150	200	355M/L	147	6.3	2.1	2.5	11.1	27	59	1650	73	995	94.4	95.3	95.7	0.66	0.76	0.81	279	
160	220	355M/L	157	6.0	2	2.4	11.1	60	132	1654	73	994	94.0	95.0	95.6	0.68	0.78	0.81	298	
185	250	355M/L	181	6.3	2.2	2.5	11.6	34	75	1695	73	995	94.7	95.6	95.8	0.66	0.76	0.81	344	
220	300	355M/L	215	6.1	2.1	2.4	13.5	31	68	1847	73	995	95.0	95.6	95.8	0.67	0.77	0.81	409	
250	340	355M/L	245	6.5	2	2.4	14.4	60	132	1890	73	995	95.5	95.8	95.8	0.68	0.78	0.81	465	
High-Output Design																				
0.75	1	90L	0.777	5.2	2.5	2.8	0.0066	31	68	25.7	45	940	77.0	78.0	79.0	0.49	0.62	0.71	1.93	
1.1	1.5	100L	1.11	5.2	2.3	2.7	0.0143	30	66	28.5	44	964	77.0	80.0	81.0	0.45	0.58	0.67	2.93	
1.1	1.5	112M	1.12	5.9	2.3	2.8	0.0220	28	62	36.5	49	955	84.0	85.0	85.0	0.52	0.64	0.72	2.59	
1.5	2	112M	1.51	6.0	2.3	2.7	0.0202	28	62	39.8	49	965	84.5	85.5	85.5	0.51	0.63	0.71	3.57	
2.2	3	132S	2.21	5.7	1.8	2.7	0.0491	30	66	60.1	53	970	86.0	87.5	87.5	0.52	0.64	0.72	5.04	
3	4	132M	3.01	6.0	1.9	2.5	0.0566	28	62	66.9	53	970	84.0	85.0	85.6	0.52	0.65	0.73	6.93	
5.5	7.5	L132M/L	5.55	7.0	2.5	2.8	0.0755	26	57	79.0	53	965	86.0	87.0	88.0	0.50	0.64	0.72	12.5	
30	40	225S/M	29.7	7.0	2.6	2.6	1.06	21	46	366	61	985	91.0	92.2	93.0	0.73	0.81	0.85	54.8	
37	50	250S/M	36.8	7.0	2.5	2.6	1.29	20	44	450	61	980	91.0	93.2	93.5	0.72	0.81	0.84	68.0	
45	60	280S/M	44.3	6.8	2.1	2.8	2.36	27	59	610	66	990	93.2	93.7	93.7	0.67	0.77	0.82	84.6	
55	75	280S/M	54.1	7.0	2.5	3.2	2.81	21	46	655	66	990	93.5	94.0	94.2	0.64	0.75	0.81	105	
75	100	280M	73.9	7.0	2.3	2.9	2.49	13	29	634	66	988	93.8	94.5	94.6	0.64	0.75	0.81	142	
75	100	280S/M	73.9	7.5	2.6	2.9	2.83	15	33	725	66	989	93.7	94.3	94.6	0.63	0.74	0.81	142	
11	150	355M/L	108	7.0	2.1	2.7	9.28	40	88	1460	73	995	93.0	94.5	95.1	0.64	0.75	0.80	209	

W20 - Cast Iron Frame - IE3 - 525V

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current I/In	Locked Rotor Torque T/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	525 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																			
0.75	1	80	0.255	7.5	2.4	2.8	0.0008	18	40	13.7	59	2870	74.2	78.0	80.7	0.58	0.70	0.79	1.30
1.1	1.5	80	0.379	7.4	3.6	3.6	0.0009	23	51	15.5	59	2830	81.0	83.0	83.0	0.63	0.76	0.82	1.78
1.5	2	90S	0.508	7.6	3.3	3.3	0.0020	15	33	21.8	62	2875	83.0	84.0	84.5	0.64	0.76	0.83	2.35
2.2	3	90L	0.744	7.5	2.9	3.5	0.0026	12	26	28.5	62	2880	83.5	85.5	85.9	0.65	0.77	0.83	3.39
3	4	100L	1.00	7.5	2.2	3.2	0.0064	6	13	32.7	67	2915	86.3	87.1	87.1	0.69	0.81	0.87	4.35
4	5.5	112M	1.34	7.7	2.5	3.5	0.0080	14	31	42.6	62	2900	87.0	88.0	88.3	0.69	0.80	0.86	5.79
5.5	7.5	132S	1.82	7.9	2.3	3.4	0.0216	14	31	68.7	63	2945	86.4	88.5	89.2	0.68	0.79	0.85	8.00
7.5	10	132S	2.49	7.2	2.5	3.2	0.0252	16	35	71.6	63	2935	87.8	89.7	90.1	0.70	0.81	0.86	10.7
9.2	12.5	132M	3.05	8.5	3	3.8	0.0306	13	29	80.7	63	2940	88.2	90.0	90.7	0.62	0.75	0.82	13.6
11	15	160M	3.63	8.5	2.8	3.4	0.0618	13	29	111	70	2950	89.5	90.5	91.2	0.75	0.84	0.87	15.3
15	20	160M	4.97	8.0	2.8	3.2	0.0565	14	31	115	70	2940	90.5	91.5	91.9	0.75	0.84	0.87	20.6
18.5	25	L160L	6.11	9.1	3.1	3.6	0.0763	7	15	142	70	2950	90.4	91.0	92.4	0.73	0.83	0.87	25.3
22	30	180M	7.24	8.2	2.5	3.2	0.1138	9	20	162	70	2960	91.8	92.7	92.7	0.69	0.80	0.85	30.7
30	40	200L	9.85	7.0	2.3	2.6	0.2214	17	37	243	74	2965	92.7	93.3	93.3	0.79	0.86	0.88	40.2
37	50	200L	12.1	7.2	2.9	3	0.1958	11	24	253	74	2967	92.7	93.6	93.7	0.73	0.82	0.85	51.1
45	60	225M	14.8	8.8	2.7	3.8	0.2601	12	26	319	75	2960	92.0	93.0	94.0	0.70	0.80	0.85	62.0
55	75	250M	18.0	9.8	2.6	3.2	0.3920	11	24	369	78	2970	93.0	93.9	94.3	0.74	0.82	0.86	74.6
75	100	W280S	24.6	9.0	2.8	3.2	0.5094	10	22	467	82	2970	94.0	94.7	94.7	0.78	0.86	0.89	97.7
90	125	280M	29.4	8.0	1.9	2.6	1.06	12	26	578	83	2978	93.6	94.6	95.0	0.81	0.88	0.90	116
110	150	315S/M	36.0	7.8	2	3	1.23	25	55	800	83	2975	95.0	95.2	95.2	0.75	0.84	0.87	146
132	175	315S/M	43.2	7.3	1.9	3	1.40	22	48	797	83	2975	95.0	95.4	95.4	0.80	0.87	0.89	171
160	220	315S/M	52.3	9.8	2.8	3.5	1.97	15	33	917	83	2980	95.0	95.6	95.6	0.77	0.85	0.88	209
200	270	355M/L	65.3	9.2	2	2.6	4.63	36	79	1543	81	2985	95.7	95.8	95.8	0.87	0.92	0.93	247
High-Output Design																			
0.75	1	90S	0.250	8.2	2.6	3.4	0.0015	13	29	17.3	62	2920	79.0	82.5	83.0	0.60	0.73	0.81	1.23
1.1	1.5	90S	0.370	7.8	2.2	2.9	0.0018	12	26	19.4	62	2895	82.0	84.2	84.5	0.63	0.75	0.82	1.74
1.5	2	90L	0.502	7.2	2.2	3.1	0.0020	9	20	21.8	62	2910	81.3	83.5	84.2	0.64	0.76	0.83	2.36
4	5.5	132S	1.32	7.2	2.1	3.3	0.0180	19	42	61.4	63	2945	84.7	87.1	88.1	0.67	0.79	0.85	5.87
5.5	7.5	132M	1.82	7.9	2.3	3.4	0.0216	14	31	68.7	63	2945	86.4	88.5	89.2	0.68	0.79	0.85	8.00
7.5	10	132M	2.48	8.8	2.8	3.9	0.0252	10	22	71.6	63	2950	87.0	89.0	90.1	0.65	0.77	0.84	10.9
11	15	132M	3.65	7.7	2.8	3.4	0.0306	12	26	84.9	63	2935	89.3	90.0	91.2	0.70	0.81	0.86	15.4
45	60	225S/M	14.8	7.9	2.5	3.2	0.4448	29	64	400	82	2965	93.4	94.0	94.0	0.83	0.89	0.91	57.8
55	75	250S/M	18.1	7.4	2.2	3	0.3736	19	42	450	82	2960	93.8	94.3	94.3	0.80	0.87	0.90	71.3
75	100	280S/M	24.6	6.4	1.6	2.7	0.9386	45	99	680	83	2975	93.0	94.2	94.7	0.81	0.87	0.89	97.7
90	125	280S/M	29.5	6.2	1.6	2.6	1.03	40	88	750	83	2975	93.7	94.6	95.0	0.83	0.88	0.90	116
110	150	280M	36.0	8.7	2.1	2.7	1.10	10	22	619	83	2980	93.9	94.8	95.2	0.80	0.88	0.90	141
110	150	280S/M	36.0	7.5	1.9	3.1	1.33	29	64	800	83	2980	94.4	95.2	95.2	0.81	0.87	0.90	141
200	270	315S/M*	65.5	8.3	2.5	2.9	2.03	11	24	1000	83	2975	95.1	95.7	95.8	0.84	0.89	0.91	253

W20 - Cast Iron Frame - IE3 - 525V

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current I/In	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	525 V							Full load current In (A)	
												% of full load			Power Factor					
								kW	HP			50	75	100	50	75	100			
4P																				
0.55	0.75	80	0.372	6.7	2.3	2.9	0.0026	23	51	16.2	44	1440	77.0	79.0	80.8	0.60	0.73	0.80	0.937	
0.75	1	80	0.506	7.0	2.7	3.1	0.0032	18	40	17.7	44	1445	80.3	81.5	82.5	0.53	0.67	0.76	1.32	
1.1	1.5	90S	0.739	6.5	2.1	2.7	0.0055	15	33	24.3	49	1450	82.2	84.1	84.1	0.59	0.70	0.78	1.84	
1.5	2	90L	1.01	6.5	2.7	3.2	0.0066	13	29	25.0	49	1445	84.0	85.3	85.3	0.58	0.71	0.79	2.45	
2.2	3	100L	1.49	7.4	3.2	3.5	0.0090	18	40	35.1	53	1435	86.5	87.0	87.0	0.60	0.73	0.80	3.47	
3	4	L100L	2.03	7.8	3.5	3.7	0.0120	15	33	43.5	53	1440	87.0	88.0	88.0	0.60	0.73	0.80	4.69	
4	5.5	112M	2.69	7.0	2.3	3.1	0.0182	15	33	47.7	56	1450	86.0	88.0	88.8	0.60	0.72	0.79	6.27	
5.5	7.5	132S	3.66	8.2	2.1	2.9	0.0528	15	33	65.4	56	1465	87.5	89.0	89.6	0.67	0.79	0.85	7.92	
7.5	10	132M	4.99	8.5	2.5	3.4	0.0642	13	29	76.8	56	1465	87.5	90.0	90.6	0.67	0.78	0.84	10.8	
11	15	L160L	7.29	7.5	2.7	3	0.1360	9	20	120	62	1470	88.5	89.8	91.4	0.61	0.74	0.81	16.4	
15	20	160L	9.94	8.0	3	3.4	0.1214	10	22	127	62	1470	90.5	91.5	92.1	0.62	0.74	0.81	22.1	
18.5	25	180M	12.2	7.6	2.7	3.1	0.2088	12	26	156	64	1475	91.0	92.0	92.6	0.64	0.76	0.82	26.8	
22	30	180L	14.5	7.9	2.8	3.2	0.2098	12	26	180	64	1475	91.6	92.6	93.0	0.70	0.80	0.84	31.0	
30	40	200L	19.7	7.0	2.5	3	0.3342	17	37	241	69	1480	92.0	92.9	93.6	0.68	0.79	0.84	42.0	
37	50	W225S	24.4	7.8	2.5	3.2	0.3987	14	31	278	69	1480	93.2	93.9	93.9	0.63	0.75	0.81	53.5	
45	60	225M	29.6	7.0	2.9	3.4	0.6143	11	24	330	66	1480	93.0	94.0	94.2	0.71	0.81	0.85	61.8	
55	75	250M	36.1	8.5	2.8	3.3	0.8822	12	26	396	70	1484	94.0	94.6	94.6	0.70	0.80	0.84	76.0	
75	100	W280S	49.2	8.5	3.4	3.6	1.24	9	20	510	70	1485	94.5	95.0	95.0	0.66	0.78	0.83	105	
90	125	280M	59.0	6.1	2.2	2.6	1.80	10	22	596	76	1485	94.9	95.2	95.2	0.73	0.82	0.85	122	
110	150	315S/M	72.0	8.0	2.7	3	2.71	20	44	794	77	1488	95.1	95.4	95.4	0.74	0.82	0.85	149	
132	175	315S/M	86.5	7.6	2.5	2.7	3.09	17	37	858	77	1486	95.4	95.6	95.6	0.75	0.83	0.86	177	
160	220	315S/M	105	7.8	2.7	2.8	3.40	16	35	929	77	1486	95.4	95.8	95.8	0.75	0.83	0.86	214	
200	270	355M/L	131	7.6	2.5	2.9	6.62	26	57	1440	79	1490	95.2	96.0	96.0	0.71	0.80	0.84	273	
250	340	355M/L	163	7.3	2.2	2.7	7.70	28	62	1563	79	1490	95.7	96.0	96.0	0.72	0.81	0.85	337	
300	400	355M/L	196	7.0	2.1	2.6	8.93	25	55	1440	79	1490	95.8	96.0	96.0	0.75	0.83	0.86	400	
315	430	355M/L	206	7.4	2.5	2.6	9.47	20	44	1750	79	1490	95.8	96.0	96.0	0.75	0.83	0.86	420	
High-Output Design																				
0.75	1	90S	0.500	7.0	2.0	2.9	0.0049	11	24	22.1	49	1460	78.7	81.5	82.5	0.54	0.67	0.76	1.32	
1.1	1.5	90L	0.739	6.5	2.1	2.7	0.0055	15	33	24.3	49	1450	82.2	84.1	84.1	0.59	0.70	0.78	1.84	
1.5	2	100L	1.01	7.8	2.4	3.1	0.0082	10	22	31.3	53	1450	84.0	85.5	85.5	0.55	0.68	0.76	2.54	
2.2	3	112M	1.48	6.8	2	3	0.0143	31	68	44.9	56	1450	87.5	88.2	88.2	0.62	0.74	0.81	3.38	
3	4	112M	2.02	7.8	2.2	2.6	0.0169	15	33	46.0	56	1445	87.5	87.7	87.7	0.64	0.76	0.82	4.59	
5.5	7.5	132M	3.66	8.2	2.1	2.9	0.0528	15	33	65.4	56	1465	87.5	89.0	89.6	0.67	0.79	0.85	7.92	
11	15	160M	7.29	7.7	2.9	3.1	0.1025	12	26	119	62	1470	89.2	90.3	91.4	0.63	0.75	0.81	16.4	
37	50	225S/M	24.3	8.0	2.8	3.2	0.9133	15	33	370	70	1485	93.1	93.6	93.9	0.67	0.78	0.83	52.2	
45	60	225S/M	29.5	8.5	2.9	3.3	0.7804	12	26	385	70	1485	93.5	94.0	94.2	0.70	0.80	0.84	62.5	
55	75	250S/M	36.1	7.8	2.7	3	0.9413	15	33	470	70	1483	94.0	94.6	94.6	0.70	0.80	0.84	76.0	
75	100	280S/M	49.1	7.5	2.2	2.8	1.79	22	48	660	72	1487	94.5	95.0	95.0	0.72	0.81	0.84	104	
90	125	280S/M	59.0	8.0	2.4	2.9	2.10	18	40	800	72	1487	94.8	95.2	95.2	0.73	0.82	0.85	122	
110	150	280M	72.1	9.2	2.6	3	2.04	9	20	655	72	1485	94.7	95.3	95.4	0.67	0.78	0.82	155	
110	150	280S/M	72.1	7.7	2.5	2.8	2.71	20	44	860	72	1487	95.0	95.4	95.4	0.74	0.82	0.85	149	
185	250	315S/M	121	9.2	3.3	3.4	3.71	12	26	994	72	1488	94.9	95.7	96.0	0.69	0.79	0.83	256	
200	270	315S/M*	131	8.8	3	3.1	3.48	11	24	1250	77	1487	95.3	95.6	96.0	0.72	0.81	0.85	269	

W20 - Cast Iron Frame - IE3 - 525V

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current I/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	525V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
								kW	HP			50	75	100	50	75	100		
6P																			
0.25	0.33	80	0.255	4.3	1.7	2.4	0.0029	25	55	12.0	43	955	63.6	68.5	68.8	0.47	0.60	0.71	0.563
0.37	0.5	80	0.385	4.2	2.2	2.3	0.0025	25	55	13.9	43	935	68.9	71.7	73.5	0.51	0.64	0.74	0.748
0.55	0.75	L80	0.567	5.1	2.9	3.1	0.0034	20	44	18.0	43	945	70.5	75.2	77.2	0.45	0.58	0.69	1.14
0.75	1	L90S	0.777	5.2	2.5	2.8	0.0066	31	68	25.7	45	940	77.0	78.0	79.0	0.49	0.62	0.71	1.47
1.1	1.5	L100L	1.12	6.2	2.2	2.5	0.0110	32	70	29.5	44	955	81.0	81.0	81.0	0.51	0.63	0.71	2.10
1.5	2	100L	1.54	5.5	2.3	2.8	0.0143	31	68	32.2	44	950	79.0	81.0	82.5	0.49	0.62	0.71	2.82
2.2	3	112M	2.23	6.0	2.5	2.6	0.0257	26	57	45.7	49	960	81.0	83.5	84.3	0.53	0.64	0.72	3.98
3	4	132S	3.01	6.0	1.9	2.5	0.0566	28	62	66.9	53	970	84.0	85.0	85.6	0.52	0.65	0.73	5.28
4	5.5	132M	4.02	6.5	2.3	2.9	0.0566	30	66	73.3	53	970	85.0	86.0	86.8	0.53	0.66	0.74	6.85
5.5	7.5	132M/L	5.55	7.0	2.5	2.8	0.0755	26	57	79.0	53	965	86.0	87.0	88.0	0.50	0.64	0.72	9.52
7.5	10	160M	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	11.6
11	15	160L	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	16.9
15	20	180L	14.9	8.5	2.7	3.5	0.2975	6	13	180	56	980	88.7	90.5	91.2	0.64	0.76	0.83	21.8
18.5	25	200L	18.5	6.3	2.3	2.5	0.3861	17	37	225	58	975	90.5	91.8	92.0	0.65	0.76	0.82	27.0
22	30	200L	22.0	6.2	2.3	2.6	0.4388	15	33	240	58	975	90.4	92.0	92.2	0.65	0.75	0.82	32.0
30	40	225M	29.6	8.0	2.5	3.3	0.7853	15	33	300	61	988	92.0	92.5	92.9	0.64	0.76	0.82	43.3
37	50	250M	36.8	6.7	1.9	2.5	1.05	14	31	363	61	980	92.8	93.2	93.3	0.69	0.79	0.84	51.9
45	60	W280S	44.5	8.5	2.5	3.2	1.52	12	26	357	61	985	93.0	93.7	93.7	0.68	0.79	0.84	62.9
55	75	280M	54.2	7.0	2.1	2.8	2.04	14	31	552	69	988	93.1	93.9	94.1	0.64	0.76	0.81	79.6
75	100	315S/M	73.9	7.5	2.6	2.9	2.83	15	33	786	69	989	93.7	94.3	94.6	0.63	0.74	0.81	108
90	125	315S/M	88.6	7.4	2.6	2.8	3.53	16	35	949	69	989	94.3	94.8	94.9	0.66	0.77	0.82	127
110	150	315S/M	108	7.6	2.8	2.9	5.14	18	40	959	69	989	95.0	95.1	95.1	0.64	0.75	0.81	157
132	175	355M/L	129	6.5	1.9	2.5	10.4	40	88	1600	73	995	93.8	94.8	95.4	0.68	0.77	0.81	188
150	200	355M/L	147	6.3	2.1	2.5	11.1	27	59	1650	73	995	94.4	95.3	95.7	0.66	0.76	0.81	213
160	220	355M/L	157	6.0	2	2.4	11.1	60	132	1654	73	994	94.0	95.0	95.6	0.68	0.78	0.81	227
185	250	355M/L	181	6.3	2.2	2.5	11.6	34	75	1695	73	995	94.7	95.6	95.8	0.66	0.76	0.81	262
220	300	355M/L	215	6.1	2.1	2.4	13.5	31	68	1847	73	995	95.0	95.6	95.8	0.67	0.77	0.81	312
250	340	355M/L	245	6.5	2	2.4	14.4	60	132	1890	73	995	95.5	95.8	95.8	0.68	0.78	0.81	354
High-Output Design																			
0.75	1	90L	0.777	5.2	2.5	2.8	0.0066	31	68	25.7	45	940	77.0	78.0	79.0	0.49	0.62	0.71	1.47
1.1	1.5	100L	1.11	5.2	2.3	2.7	0.0143	30	66	28.5	44	964	77.0	80.0	81.0	0.45	0.58	0.67	2.23
1.1	1.5	112M	1.12	5.9	2.3	2.8	0.0220	28	62	36.5	49	955	84.0	85.0	85.0	0.52	0.64	0.72	1.97
1.5	2	112M	1.51	6.0	2.3	2.7	0.0202	28	62	39.8	49	965	84.5	85.5	85.5	0.51	0.63	0.71	2.72
2.2	3	132S	2.21	5.7	1.8	2.7	0.0491	30	66	60.1	53	970	86.0	87.5	87.5	0.52	0.64	0.72	3.84
3	4	132M	3.01	6.0	1.9	2.5	0.0566	28	62	66.9	53	970	84.0	85.0	85.6	0.52	0.65	0.73	5.28
5.5	7.5	L132M/L	5.55	7.0	2.5	2.8	0.0755	26	57	79.0	53	965	86.0	87.0	88.0	0.50	0.64	0.72	9.52
30	40	225S/M	29.7	7.0	2.6	2.6	1.06	21	46	366	61	985	91.0	92.2	93.0	0.73	0.81	0.85	41.8
37	50	250S/M	36.8	7.0	2.5	2.6	1.29	20	44	450	61	980	91.0	93.2	93.5	0.72	0.81	0.84	51.8
45	60	280S/M	44.3	6.8	2.1	2.8	2.36	27	59	610	66	990	93.2	93.7	93.7	0.67	0.77	0.82	64.4
55	75	280S/M	54.1	7.0	2.5	3.2	2.81	21	46	655	66	990	93.5	94.0	94.2	0.64	0.75	0.81	79.6
75	100	280M	73.9	7.0	2.3	2.9	2.49	13	29	634	66	988	93.8	94.5	94.6	0.64	0.75	0.81	108
75	100	280S/M	73.9	7.5	2.6	2.9	2.83	15	33	725	66	989	93.7	94.3	94.6	0.63	0.74	0.81	108
110	150	355M/L	108	7.0	2.1	2.7	9.28	40	88	1460	73	995	93.0	94.5	95.1	0.64	0.75	0.80	159

W20 - Aluminum Frame - IE1

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current lI/n	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							Full load current In (A)
												% of full load			Power Factor				
								kW	HP			Rated speed (rpm)	50	75	100	50	75	100	
2P																			
0.18	0.25	80	0.258	3.3	2.0	2.2	0.0029	30	66	15.0	42	680	51.0	57.0	58.7	0.45	0.55	0.65	0.681
0.25	0.33	80	0.350	3.5	2	2.2	0.0034	30	66	15.5	42	695	53.0	60.0	64.1	0.42	0.52	0.63	0.894
0.37	0.5	90S	0.522	3.7	2.1	2.4	0.0055	30	66	19.0	44	690	61.0	66.0	69.3	0.41	0.53	0.62	1.24
0.55	0.75	90L	0.782	3.6	1.8	2.1	0.0066	29	64	23.0	44	685	63.0	72.5	73.0	0.44	0.57	0.67	1.62
0.75	1	100L	1.03	4.6	1.9	2.3	0.0127	30	66	33.6	50	710	72.5	75.5	75.5	0.41	0.53	0.62	2.31
1.1	1.5	100L	1.52	4.6	2.1	2.4	0.0143	30	66	35.9	50	705	73.0	76.0	77.7	0.41	0.53	0.62	3.30
1.5	2	112M	2.07	5.0	2.5	2.8	0.0238	28	62	45.8	46	705	79.0	80.5	80.5	0.45	0.59	0.68	3.96
2.2	3	132S	3.02	6.2	2.3	2.5	0.0690	27	59	66.7	48	710	82.0	82.6	82.6	0.51	0.65	0.72	5.34
3	4	132M	4.12	7.5	2.4	2.6	0.0838	21	46	74.4	48	710	82.5	83.5	83.5	0.51	0.64	0.72	7.20
4	5.5	160M	5.34	5.4	2	2.9	0.1264	16	35	107	53	730	81.0	83.0	84.8	0.50	0.63	0.72	9.45
5.5	7.5	160M	7.39	5.3	2.1	2.8	0.1614	22	48	110	53	725	85.0	86.2	86.2	0.53	0.66	0.73	12.6
7.5	10	160L	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	180L	14.6	7.5	2.4	3.1	0.3129	8	18	180	51	735	87.0	88.0	88.6	0.54	0.68	0.76	23.6
15	20	200L	19.9	5.0	2	2.2	0.4932	28	62	255	56	735	89.5	90.5	90.9	0.53	0.65	0.71	33.5
22	30	225M	29.1	5.8	1.9	2.4	0.7192	23	51	316	56	736	90.0	90.6	90.6	0.59	0.71	0.77	45.5
30	40	250M	39.8	5.6	1.6	2.1	1.15	18	40	369	56	735	90.5	91.3	91.3	0.64	0.75	0.80	59.3
45	60	280M*	59.4	5.1	1.6	2.1	2.04	18	40	562	62	738	91.2	92.0	92.2	0.59	0.71	0.77	91.5
High-Output Design																			
22	30	225S/M	29.2	8.5	2.1	3.0	1.20	164	361	365	56	735	91.5	91.6	91.6	0.65	0.76	0.82	42.3
30	40	250S/M	39.8	8.7	2.5	3.2	1.25	17	37	435	56	735	90.3	91.0	91.5	0.62	0.74	0.81	58.4
37	50	280S/M	48.7	6.5	1.9	2.2	2.59	32	70	580	59	740	91.6	92.0	92.5	0.63	0.74	0.80	72.2
4P																			
0.37	0.5	80	0.251	5.8	1.8	2.2	0.0019	15	33	11.0	44	1435	57.6	64.0	66.0	0.61	0.74	0.83	0.681
0.55	0.75	80	0.377	6.0	2	2.6	0.0024	8	18	12.0	44	1420	64.0	67.0	70.0	0.60	0.72	0.81	0.894
0.75	1	80	0.516	4.7	1.7	2.1	0.0029	9	20	16.0	44	1415	70.0	71.0	72.1	0.58	0.74	0.83	1.24
1.1	1.5	90S/L	0.747	6.0	2	2.2	0.0044	8	18	18.0	49	1435	73.5	74.0	75.0	0.60	0.74	0.83	1.62
1.5	2	90S/L	1.02	5.1	1.3	2.1	0.0063	7	15	22.0	49	1435	74.0	77.0	77.2	0.66	0.78	0.85	2.31
2.2	3	100L	1.50	5.6	2.1	2.6	0.0075	8	18	22.0	53	1430	79.0	80.0	80.0	0.59	0.73	0.81	3.30
3	4	100L	2.07	5.4	2.1	2.5	0.0097	7	15	30.0	53	1415	79.0	79.5	81.5	0.66	0.78	0.84	3.96
4	5.5	112M	2.71	5.7	1.7	2.4	0.0156	8	18	32.9	56	1440	82.0	83.1	83.1	0.64	0.77	0.82	5.34
5.5	7.5	S132S	3.68	6.1	1.3	2.4	0.0415	7	15	47.3	60	1455	83.0	83.5	84.7	0.72	0.83	0.87	7.20
7.5	10	132M	4.99	6.8	1.6	3	0.0563	5	11	57.8	60	1465	84.6	85.5	85.6	0.64	0.77	0.83	9.45
9.2	12.5	L132M	6.12	7.7	1.9	3.2	0.0679	5	11	79.0	60	1465	85.5	86.5	87.0	0.67	0.79	0.85	12.6
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	17.2
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	23.6
18.5	25	180M/L	12.2	7.5	2.9	3.3	0.1831	7	15	172	64	1478	88.5	89.5	89.5	0.63	0.75	0.82	33.5
22	30	180M/L	14.5	7.7	3	3.3	0.1923	6	13	182	64	1477	89.2	90.0	90.0	0.66	0.77	0.83	45.5
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	59.3
High-Output Design																			
0.75	1	90S/L	0.506	4.8	1.2	2.1	0.0036	8	18	14.5	49	1445	71.2	74.0	74.0	0.60	0.74	0.83	1.77
1.1	1.5	80	0.771	6.5	3	2.9	0.0030	8	18	14.0	44	1390	71.0	72.0	72.0	0.60	0.74	0.82	2.69
1.5	2	100L	1.03	5.0	1.7	2.3	0.0052	7	15	20.0	53	1425	76.0	77.2	77.2	0.59	0.73	0.81	3.46
6P																			
0.37	0.5	80	0.392	3.8	1.7	1.7	0.0027	16	35	13.5	43	920	55.0	60.0	62.0	0.50	0.64	0.73	1.18
0.55	0.75	80	0.576	4.0	1.8	1.8	0.0030	10	22	14.0	43	930	57.0	63.0	65.0	0.51	0.66	0.76	1.61
0.75	1	90S/L	0.803	4.2	1.9	2	0.0041	16	35	19.1	45	910	69.0	70.0	71.0	0.55	0.69	0.79	1.93
1.1	1.5	90S/L	1.16	4.8	2.2	2.1	0.0055	9	20	22.0	45	925	70.0	71.0	73.0	0.53	0.66	0.73	2.98
1.5	2	100L	1.57	4.1	2	2.2	0.0121	17	37	25.0	44	930	72.0	75.5	75.5	0.51	0.65	0.73	3.93
2.2	3	112M	2.28	5.5	2.2	2.3	0.0220	14	31	37.0	49	940	76.0	78.5	78.5	0.53	0.66	0.74	5.46
3	4	S132S	3.06	5.3	2	2.2	0.0378	20	44	60.0	53	955	78.0	80.5	80.5	0.55	0.68	0.75	7.17
4	5.5	132M	4.06	5.8	2.3	2.4	0.0492	19	42	59.0	53	960	80.0	81.5	82.0	0.54	0.66	0.74	9.50
5.5	7.5	132M	5.58	6.4	2.2	2.8	0.0681	15	33	73.0	53	960	81.0	83.0	83.5	0.49	0.62	0.71	13.4
7.5	10	160M/L	7.49	6.0	2	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
High-Output Design																			
3	4	112M	3.11	6.3	2.6	2.6	0.0220	10	22	46.0	49	940	79.0	80.0	80.0	0.50	0.64	0.71	7.62
3	4	132S	3.06	5.3	2	2.2	0.0378	20	44	60.0	53	955	78.0	80.5	80.5	0.55	0.68	0.75	7.17

W20 - Aluminum Frame - IE3

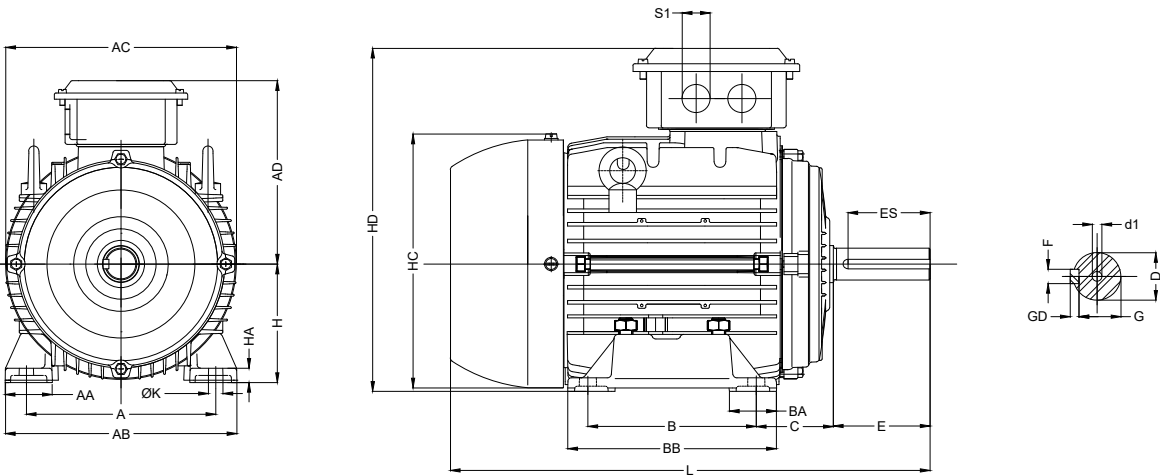
Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current I/Ln	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							Full load current In (A)
												% of full load							
								Efficiency				Power Factor							
kW	HP							Hot	Cold			Rated speed (rpm)	50	75	100	50	75	100	
2P																			
0.75	1	80	0.257	7.0	1.9	2.3	0.0007	16	35	10.2	59	2840	80.2	80.7	80.7	0.64	0.77	0.84	1.60
1.1	1.5	80	0.380	6.2	3.5	3.4	0.0009	26	57	14.0	59	2820	82.0	82.7	82.7	0.64	0.77	0.84	2.29
1.5	2	90S/L	0.504	8.7	2.2	3	0.0020	8	18	18.1	62	2900	83.6	84.2	84.2	0.62	0.75	0.82	3.14
2.2	3	90S/L	0.751	7.0	3.4	3.4	0.0025	10	22	18.9	62	2855	84.2	85.1	85.9	0.67	0.79	0.85	4.35
3	4	100L	1.01	7.8	2.3	3.3	0.0064	9	20	25.0	67	2905	85.0	86.5	87.1	0.69	0.81	0.87	5.72
4	5.5	112M	1.34	7.7	2.5	3.3	0.0905	12	26	34.8	62	2900	86.1	87.4	88.1	0.69	0.80	0.86	7.62
5.5	7.5	S132S	1.82	7.5	2.1	3.1	0.0270	15	33	50.7	67	2940	86.5	88.4	89.2	0.73	0.83	0.88	10.1
7.5	10	132S	2.48	8.5	2.5	3.5	0.0252	10	22	59.3	63	2945	87.4	89.4	90.1	0.70	0.81	0.86	14.0
9.2	12.5	132M	3.05	8.3	2.7	3.3	0.0303	12	26	69.5	63	2935	88.8	90.0	90.7	0.69	0.80	0.86	17.0
15	20	160M/L	4.94	8.1	3.1	4	0.0643	10	22	109	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	213	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	223	74	2967	92.7	93.6	93.7	0.73	0.82	0.85	67.1
High-Output Design																			
0.75	1	90S/L	0.251	8.8	2.4	2.9	0.0012	14	31	16.0	62	2915	78.9	80.7	80.7	0.60	0.71	0.78	1.72
1.1	1.5	90S/L	0.369	8.4	2	3	0.0014	11	24	16.5	62	2905	81.0	82.7	82.7	0.62	0.75	0.82	2.34
4	5.5	132S	1.33	7.2	2	3.1	0.0216	20	44	57.0	63	2940	85.0	87.1	88.1	0.70	0.81	0.86	7.62
4	5.5	S132S	1.33	7.2	2	3.1	0.0216	20	44	57.0	63	2940	85.0	87.1	88.1	0.70	0.81	0.86	7.62
5.5	7.5	132S	1.82	7.5	2.1	3.1	0.0270	15	33	50.7	67	2940	86.5	88.4	89.2	0.73	0.83	0.88	10.1
7.5	10	S132S	2.49	7.8	2.5	3.2	0.0252	17	37	54.7	63	2930	88.0	89.0	90.1	0.70	0.81	0.86	14.0
11	15	132M	3.66	8.5	2.8	3.4	0.0303	12	26	74.0	63	2930	89.0	90.6	91.2	0.70	0.81	0.86	20.2
4P																			
0.55	0.75	80	0.372	6.5	2.4	2.7	0.0026	21	46	11.2	44	1440	79.7	80.8	80.8	0.57	0.71	0.79	1.24
0.75	1	80	0.511	6.2	2.3	2.7	0.0032	21	46	13.7	44	1430	80.0	82.0	82.5	0.58	0.71	0.79	1.66
1.1	1.5	90S/L	0.741	6.9	2.1	2.7	0.0055	16	35	16.3	49	1445	81.5	84.1	84.1	0.58	0.70	0.77	2.45
1.5	2	90S/L	1.01	7.4	2.9	3.6	0.0066	10	22	19.2	49	1450	83.1	85.0	85.3	0.59	0.72	0.80	3.17
2.2	3	100L	1.48	7.3	2.7	3.1	0.0097	18	40	25.1	53	1445	84.7	86.3	86.7	0.57	0.70	0.77	4.76
3	4	L100L	2.04	7.2	3.8	3.8	0.0112	19	42	30.2	53	1435	85.5	86.5	87.7	0.60	0.73	0.80	6.18
4	5.5	112M	2.69	7.5	2.2	2.7	0.0167	17	37	37.0	56	1450	87.8	88.4	88.6	0.58	0.71	0.79	8.25
5.5	7.5	S132S	3.66	8.5	2.2	3.3	0.0528	14	31	54.9	56	1465	89.0	89.6	89.6	0.62	0.74	0.81	10.9
7.5	10	132M	5.00	7.9	2.2	3.4	0.0638	12	26	66.3	56	1460	90.0	90.4	90.4	0.68	0.79	0.85	14.1
11	15	160M/L	7.29	7.7	3.4	3.6	0.1023	13	29	100	67	1470	89.4	90.6	91.4	0.57	0.70	0.78	22.2
15	20	160M/L	9.94	8.0	3	3.4	0.1214	10	22	111	62	1470	90.5	91.5	92.1	0.62	0.74	0.81	29.0
18.5	25	180M/L	12.2	7.5	2.9	3.2	0.2088	15	33	175	64	1477	91.6	92.4	92.6	0.65	0.77	0.82	35.2
22	30	180M/L	14.5	7.5	3	3.3	0.2098	15	33	195	64	1477	92.5	92.9	93.0	0.66	0.78	0.83	41.1
30	40	200M/L	19.7	7.0	2.5	3	0.3342	17	37	211	67	1480	92.0	92.9	93.6	0.68	0.79	0.84	55.1
High-Output Design																			
0.75	1	90S/L	0.500	7.0	2.0	3.2	0.0049	16	35	17.5	49	1460	82.0	82.5	82.5	0.58	0.71	0.79	1.66
1.5	2	100L	1.01	7.6	3	3.6	0.0105	17	37	30.0	53	1450	82.7	84.8	85.3	0.58	0.71	0.79	3.21
2.2	3	112M	1.46	7.3	2	3.3	0.0182	14	31	41.0	56	1465	86.2	86.7	86.7	0.57	0.70	0.78	4.69
3	4	L112M	1.99	7.2	2.1	3.2	0.0195	14	31	42.0	56	1465	86.6	87.7	87.7	0.58	0.71	0.79	6.25
5.5	7.5	132S	3.66	8.5	2.2	3.3	0.0528	14	31	54.9	56	1465	89.0	89.6	89.6	0.62	0.74	0.81	10.9
6P																			
0.25	0.33	80	0.256	4.1	1.6	2.2	0.0019	21	46	12.0	43	950	60.0	65.0	68.6	0.47	0.60	0.69	0.762
0.37	0.5	80	0.390	4.5	1.9	2.1	0.0026	25	55	13.9	43	925	66.0	69.5	73.5	0.51	0.65	0.75	0.969
0.55	0.75	L80	0.567	5.1	2.9	3.1	0.0037	20	44	14.2	43	945	70.5	75.2	77.2	0.45	0.58	0.69	1.49
0.75	1	90S/L	0.774	5.0	2.6	2.7	0.0050	27	59	21.0	45	944	76.4	78.9	78.9	0.49	0.62	0.71	1.93
1.1	1.5	100L	1.12	5.0	1.9	2.3	0.0110	16	35	25.7	44	960	78.0	80.0	81.0	0.49	0.62	0.71	2.76
1.5	2	100L	1.54	5.5	2.3	2.8	0.0143	31	68	27.5	44	950	81.5	82.5	82.5	0.49	0.62	0.71	3.70
2.2	3	112M	2.23	6.0	2.5	2.6	0.0257	26	57	38.9	49	960	83.0	84.5	84.5	0.53	0.64	0.72	5.22
3	4	132S	3.01	7.3	1.9	2.5	0.0568	28	62	56.4	53	970	85.0	85.8	85.8	0.52	0.65	0.73	6.92
4	5.5	132M	4.06	6.5	2.2	2.5	0.0568	30	66	60.8	53	960	86.0	86.8	86.8	0.53	0.66	0.74	8.99
5.5	7.5	L132M	5.52	7.3	2.1	2.5	0.0795	26	57	74.0	52	970	86.0	87.0	88.0	0.50	0.64	0.72	12.5
7.5	10	160M/L	7.49	6.6	2.4	2.8	0.1614	15	33	95.0	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	119	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
High-Output Design																			
1.1	1.5	112M	1.12	5.9	2.3	2.8	0.0220	28	62	32.0	49	955	84.0	85.0	85.0	0.52	0.64	0.72	2.59
1.5	2	112M	1.52	6.0	2.1	2.8	0.0257	28	62	35.0	49	960	84.5	85.5	85.5	0.51	0.63	0.71	3.56
2.2	3	132S	2.21	5.7	1.8	2.7	0.0492	30	66	55.0	53	970	86.0	87.5	87.5	0.52	0.64	0.72	5.04
2.2	3	S132S	2.21	5.7	1.8	2.7	0.0492	30	66	55.0	53	970	86.0	87.5	87.5	0.52	0.64	0.72	5.04

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5. Mechanical Data (Aluminum Frame)

Frame 80-132



Frame	Shaft					
	D	E	ES	F	G	GD
80	19j6	40	28	6	15.5	6
90S/L	24j6	50	36	8	20	7
100L	28j6	60	45		24	
112M						
132S	38k6	80	63	10	33	8
132M						

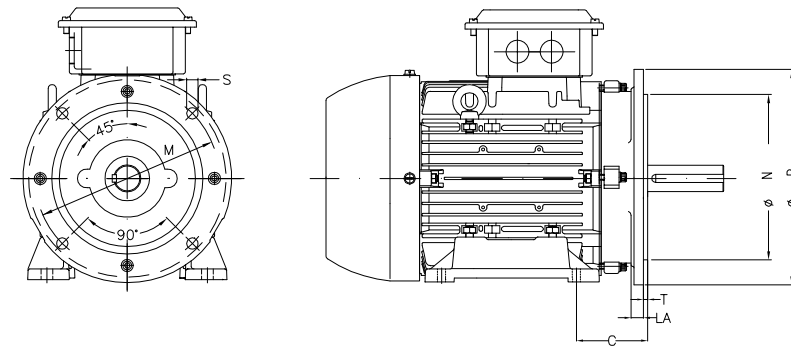
Frame	A	AA	AB	AC	AD	B	BA	BB	C	H	HA	HC	HD	K	L	S1	d1	Bearing	
																		DE	NDE
80	125	32	155	159	136	100	28	125	50	80	13	157	216	10	276/297*	2xM20x1.5	DM6	6204-ZZ	6203-ZZ
90S/L	140	35	170	179	146	100	42	146	56	90	15	177	245	10	330/360*	2xM25x1.5	DM8	6205-ZZ	6204-ZZ
100L	160	40	196	199	156	140	29	170	63	100	16	198	265	12	376/420*	2xM25x1.5	DM10	6206-ZZ	6205-ZZ
112M	190	46	220	222	179	140	32	170	70	112	18.5	235	296	12	393/435*	2xM32x1.5	DM10	6207-ZZ	6206-ZZ
132S	216	44	248	270	207	140	33	170	89	132	20	274	344	12	490/520*	2xM32x1.5	DM12	6308-ZZ	6207-ZZ
132M	216	44	248	270	207	178	33	210	89	132	20	274	344	12	490/520*	2xM32x1.5	DM12	6308-ZZ	6207-ZZ

W20GP

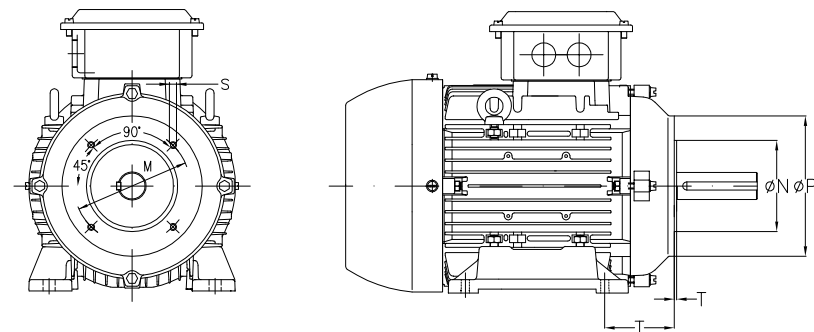
The W20 GP series general-purpose motors are specifically developed for OEM customers in traditional applications. They offer energy efficiency up to IE3, feature aluminum housings for IEC 200 frame sizes and below, and allow for flexible configuration with various mounting options. Thanks to advanced design and manufacturing processes, these motors ensure reliable performance and superior efficiency, effectively supporting your production processes, enhancing productivity, and saving operational costs throughout the product lifecycle.

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.

Flanges 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/L		56								
100L	FF-215	63	11	215	180	250	4	15		
112M		70								
132S/M	FF-265	89	12	265	230	300				

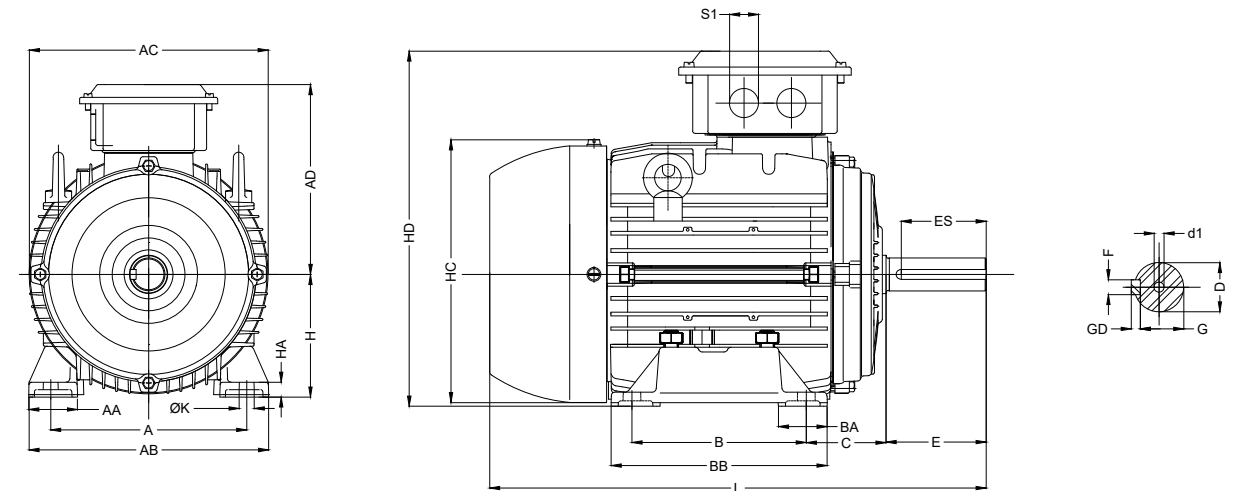


Frame	"C-DIN" Flange Dimension							Qty of holes
	Flange	C	M	N	P	S	T	
80	C-120	50	100	80	120	M6	3	4
90S/L	C-140	56	115	95	140	M8		
100L	C-160	63	130	110	160		3.5	
112M		70						
132S/M	C-200	89	165	130	200	M10		

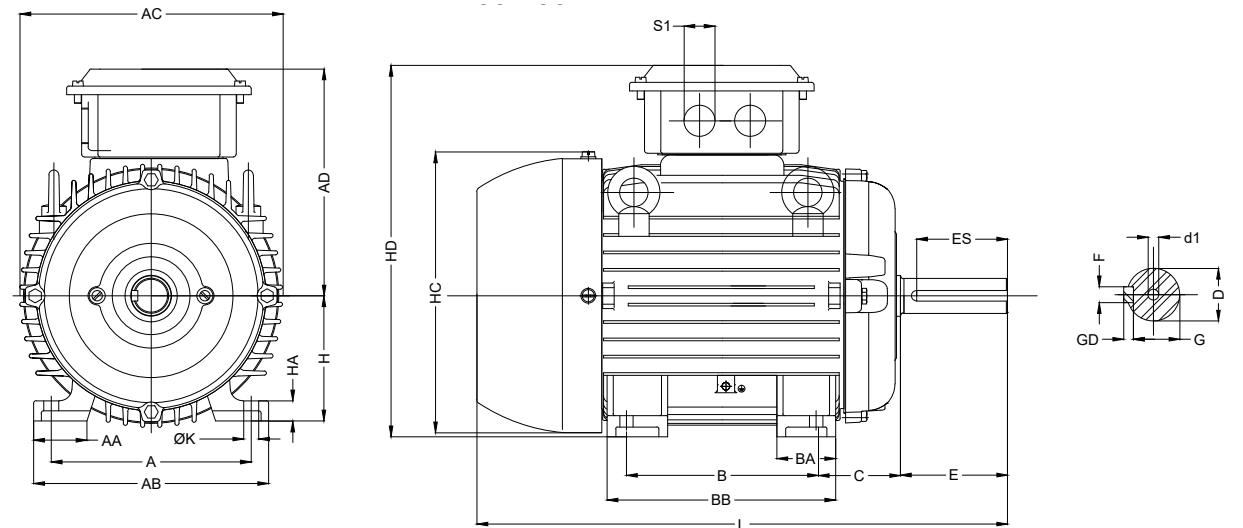
Frame	"C" Flange Dimension							Qty of holes
	Flange	C	M	N	P	S	T	
80	FC-95	50	95.2	76.2	143	1/4"20	4	4
90S/L	FC-149	56	149.2	114.3	165	UNC 3/8"16		
100L		63						
112M	FC-184	70	184.2	215.9	225	UNC 1/2"13	6.3	
132S/M		89						

5. Mechanical Data

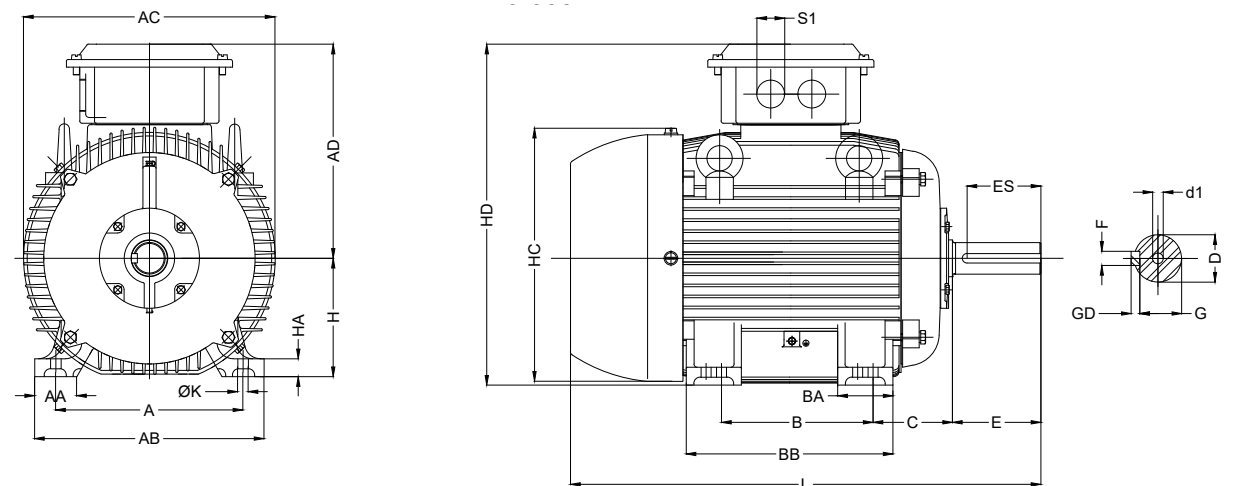
FRAME 80-132 (Aluminum)



FRAME 160 - 200 (Cast Iron)



FRAME 225 to 355 (Cast Iron)



5. Mechanical Data (Cast Iron Frame)

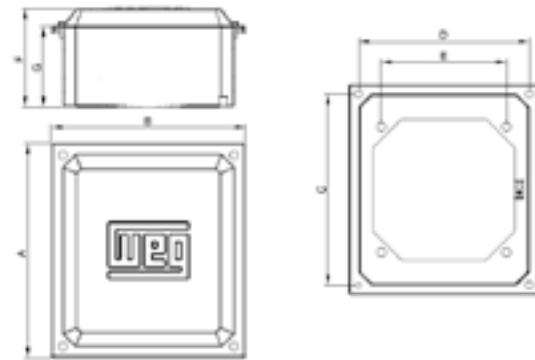
Frame	Shaft					
	D	E	ES	F	G	GD
80	19j6	40	28	6	15.5	6
90S	24j6	50	36	8	20	7
90L						
100L	28j6	60	45		24	
112M						
132S	38k6	80	63	10	33	8
132M						
160M	42k6	110	80	12	37	
160L						
180M	48k6			14	42.5	9
180L						
200M	55m6			16	49	10
200L	55m6					

Frame	Shaft					
	D	E	ES	F	G	GD
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
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

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*	2xM20x1.5	DM6	6204-ZZ	6203-ZZ
90S	140	35	170	179	155	100	42	131	56	90	15	177	245	10	304/334*	2xM25x1.5	DM8	6205-ZZ	6204-ZZ
90L	140	35	170	179	155	125	42	156	56	90	15	177	245	10	329/359*	2xM25x1.5	DM8	6205-ZZ	6204-ZZ
100L	160	40	196	199	165	140	29	170	63	100	16	198	265	12	376/420*	2xM25x1.5	DM10	6206-ZZ	6205-ZZ
112M	190	46	220	222	184	140	32	170	70	112	18.5	235	296	12	393/435*	2xM32x1.5	DM10	6207-ZZ	6206-ZZ
132S	216	44	248	270	212	140	33	170	89	132	20	274	344	12	490/520*	2xM32x1.5	DM12	6308-ZZ	6207-ZZ
132M	216	44	248	270	212	178	33	210	89	132	20	274	344	12	490/520*	2xM32x1.5	DM12	6308-ZZ	6207-ZZ
160M	254	64	308	312	255	210	65	254	108	160	22	317	415	14.5	598/615*	2xM40x1.5	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*	2xM40x1.5	DM16	6309-ZZ-C3	6209-ZZ-C3
180M	279	80	350	358	275	241	75	294	121	180	28	360	455	14.5	664	2xM40x1.5	DM16	6311-ZZ-C3	6211-ZZ-C3
180L	279	80	350	358	275	279	75	332	121	180	28	360	455	14.5	702	2xM40x1.5	DM16	6311-ZZ-C3	6211-ZZ-C3
200M	318	82	385	396	300	267	85	332	133	200	30	402	500	18.5	729	2xM50x1.5	DM20	6312-ZZ-C3	6212-ZZ-C3
200L	318	82	385	396	300	305	85	370	133	200	30	402	500	18.5	767	2xM50x1.5	DM20	6312-ZZ-C3	6212-ZZ-C3
225S/M	356	80	436	476	373	286	105	391	149	225	34	466	598	18.5	817	2xM50x1.5	DM20	6314-C3	6314-C3
	356	80	436	476	373	311	105	391	149	225	34	466	598	18.5	847	2xM50x1.5	DM20	6314-C3	6314-C3
250S/M	406	100	506	476	373	311	138	449	168	250	42	491	623	24	923	2xM63x1.5	DM20	6314-C3	6314-C3
	406	100	506	476	373	349	138	449	168	250	42	491	623	24	923	2xM63x1.5	DM20	6316-C3	6314-C3
280S/M	457	100	557	600	468	368	142	510	190	280	42	578	748	24	1036	2xM63x1.5	DM20	6314-C3	6314-C3
	457	100	557	600	468	419	142	510	190	280	42	578	748	24	1066	2xM63x1.5	DM20	6319-C3	6316-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	6319-C3	6316-C3
315S/M***	508	120	628	600	497	406	152	558	216	315	52	613	812	28	1126	2xM63x1.5	DM20	6316-C3	6316-C3
	508	120	628	600	497	457	152	558	216	315	52	613	812	28	1156	2xM63x1.5	DM20	6319-C3	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	6322-C3	6319-C3

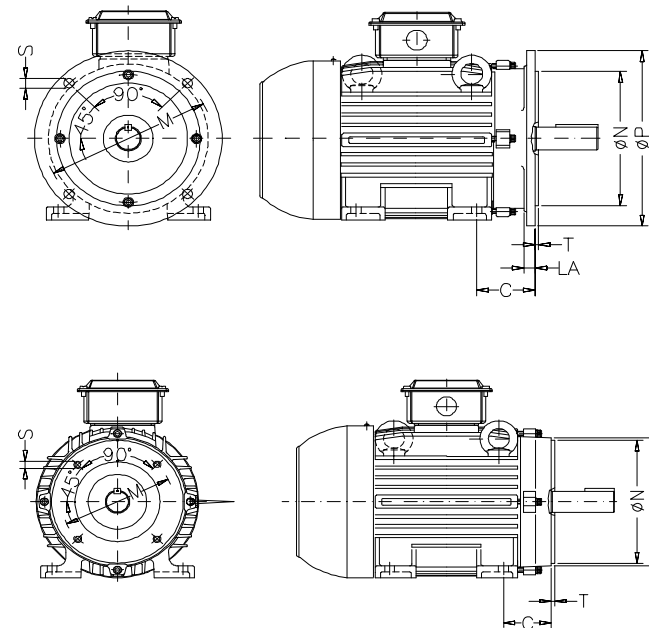
Note:
- (*) refers to motors which use deep endshield;
- (**) Dimension applicable to 2-pole motors;
- (***) 185 kW and larger;
- All dimensions are in millimeters;
- The average values are subject to change without prior notice. To obtain guaranteed value, please contact with nearest WEG sales office.

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
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	"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		
100L	C-160	63	130	110	160		3.5	
112M		70						
132S 132M	C-200	89	165	130	200	M10		

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	5	19			
160M 160L	FF-300	108	18	300	250	350					
180M 180L		121									
200M 200L	FF-350	133									350
225M	FF-400	149							400	350	450
250M	FF-500	168	500	450	5 50	6	24				
280M		190									
315S/M	FF-600	216	22	600	550			660			
355M/L	FF-740	254		740	680			800			

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.

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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.



	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

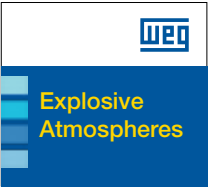
Automation

- 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



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



The WEG Group's scope of solutions is not limited to the products and solutions presented in this catalog.

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The values shown are subject to change without prior notice.
The information contained is reference values.