Industrial Motors

Commercial & Appliance Motors

Automation

Digital & Systems

Energy

Transmisssion & Distribution

Coatings

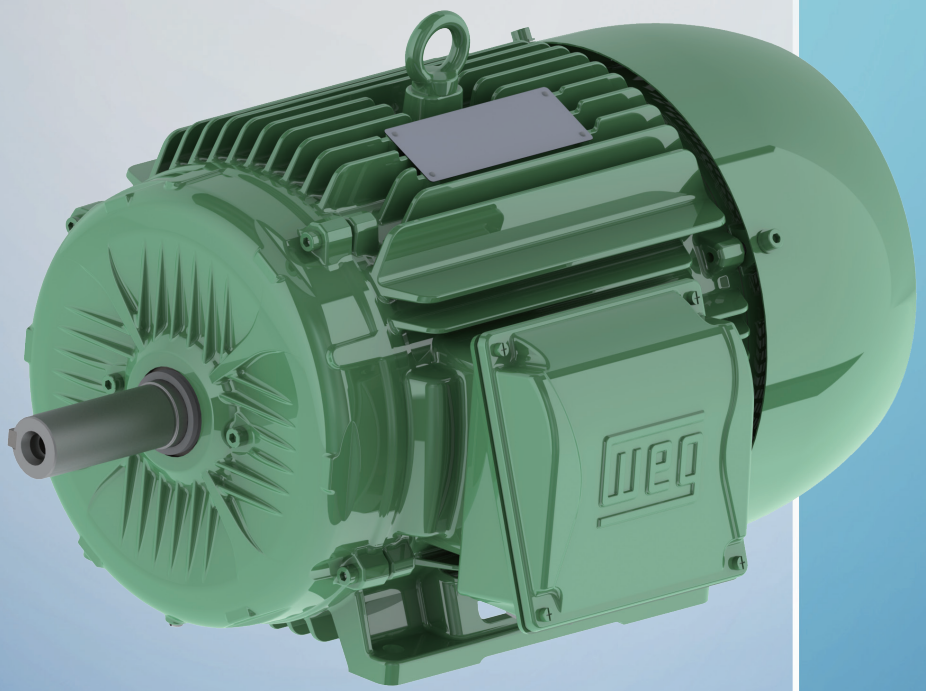
W21 Prime

GB1 Efficiency

Three Phase Low Voltage Motors

Technical Catalogue

China Market



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 17 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 47,000 employees worldwide and annual sales of more than US$ 6 billion.
WEG has seven major 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 Wangao 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. Its first phase project has been completed and officially put into production in November 2015. The second phase project was put into production during the epidemic in April 2020. The third phase project has completed the factory building construction in February 2024, and immediately installed equipment and debugged the production line. It has been put into production in April 2024. 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 IS045001 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

USA · China · Europe · China · GEMS Australia · France · Norway & Germany · Saudi Arabia · China · Canada

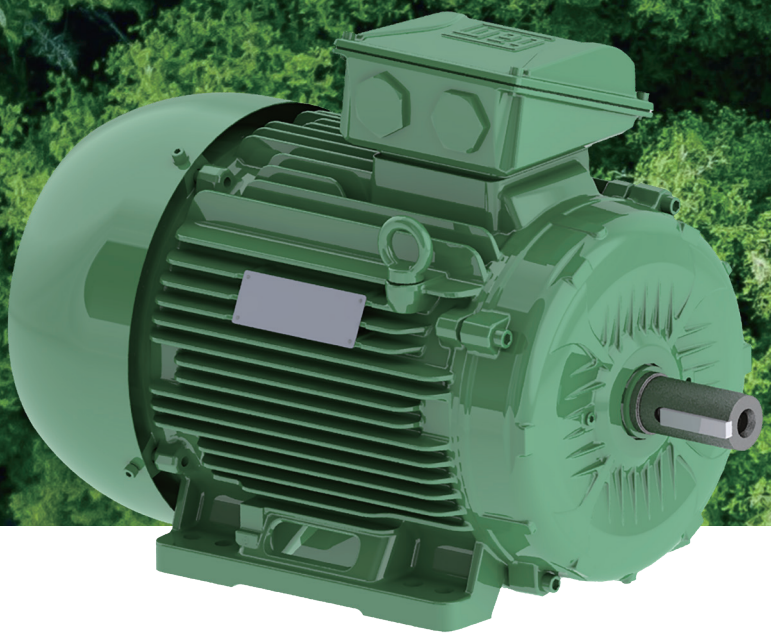
Customs Union Certification · South Korea · South Africa · USA · IEC EX · ISO9001:2015 · ISO45001:2018 · ISO14001:2015

WEG GLOBAL

Argentina	Columbia	Russia
Australia	France	Saudi Arabien
Belgium	Germany	Spain
Brazil	Italy	South Africa
Canada	Mexico	Norway
USA	United Kingdom	Europe

W21 Prime **GB1** Efficiency

The most efficient and wide-ranging induction motor series

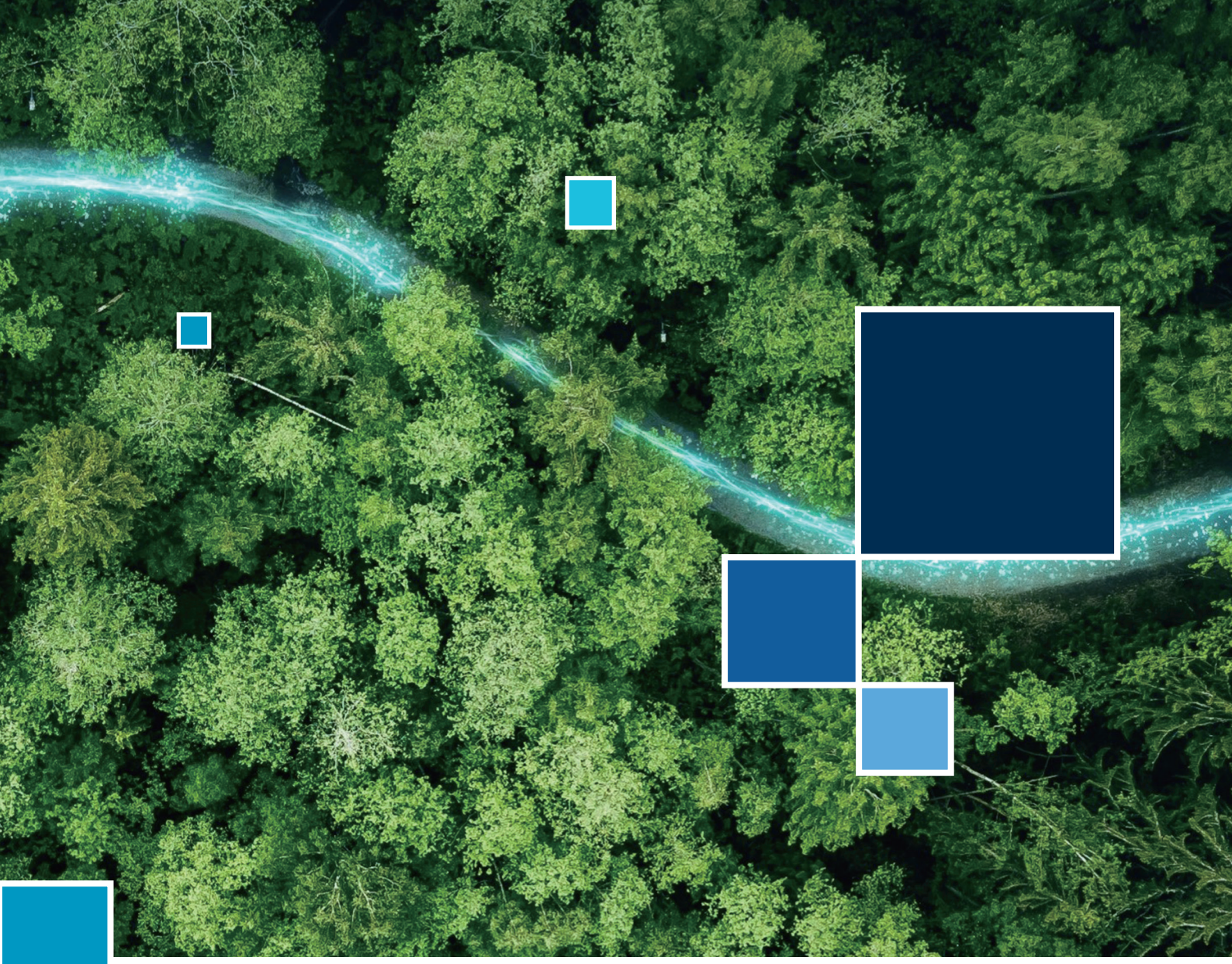


Global energy consumption has surged by 50% over the past two decades, and this trend is expected to continue to grow significantly over the next two decades. In order to support the continued momentum of global development, the demand for electrical energy is increasingly urgent. This not only requires us to make continuous and large-scale investments in electricity supply, but these investments also rely heavily on natural resources, which are being severely affected by environmental pressures. Continuously increasing and gradually drying up.

The sharp rise in electricity costs has a particularly negative impact compared with other economic indicators. The industrial sector is the main driver of increased electricity consumption, consuming approximately 30% of global electricity resources. In the industrial sector, motor drive systems account for 68% of all energy consumption.
Furthermore, when we consider both industrial and household applications, including household appliances, motors account for more than 40% of global energy consumption. This data highlights the huge share of electric motors in global electricity consumption and the importance of developing more efficient products, not only to meet current demand, but also to reduce this growing demand and thereby achieve energy and financial benefits. savings, and reduce emissions.

With the increasing global attention to energy conservation, emission reduction and green development, the Chinese government has taken a series of measures to promote the development of the high-efficiency motor industry and achieved remarkable results. These measures include not only financial subsidies and tax incentives, but also strict energy efficiency standards and technological innovation encouragement. At the same time, the market demand for high-efficiency motors continues to grow, especially in the fields of new energy vehicles, home appliances, industrial automation, etc.

In the "14th Five-Year Plan", the Chinese government clearly proposed to vigorously develop high-efficiency and energy-saving motors and promote the green development and transformation and upgrading of the motor industry. To this end, the government has issued a number of policies and regulations, including:
- "Energy Efficiency Limit Values and Energy Efficiency Grades for Electric Motors" (GB18613-2020): This standard sets the IE3 energy efficiency grade as the minimum standard to ensure that the energy efficiency of Chinese motors is consistent with international standards and promote the elimination of inefficient motor products.
- "Energy Efficiency Improvement Plan for Motors (2021-2023)": jointly issued by the General Office of the Ministry of Industry and Information Technology and the General Office of the State Administration for Market Regulation, it aims to promote industrial energy conservation and emission reduction by improving motor energy efficiency.



Under the guidance of policies and keen insight into market dynamics, WEG grandly launched the W21 GB1 efficiency motor series. The excellent energy efficiency performance of these motors not only greatly exceeds the IE3 minimum efficiency standard currently stipulated in China, but also provides customers with an effective way to significantly reduce energy consumption, reduce total cost of ownership and reduce carbon emissions. The launch of this series of products not only helps WEG grow its market share and improve its competitiveness in the Chinese market, but also marks WEG's becoming a key player in the Chinese motor market.

WEG's unremitting efforts and remarkable achievements in promoting the development of high-efficiency motor technology demonstrate its firm commitment to green development and sustainable development, while also contributing actively to global energy conservation and emission reduction.

Excellent overall performance significantly reduces total cost of ownership, thanks to outstanding reliability, easy maintenance and significant energy savings.

Driving efficiency and sustainability

1. Construction Details

1.1 Frame / endshields

The frame can be cast iron or aluminum. The cast iron frame and endshields are made of FC-200 cast iron, which not only improves thermal conductivity but also provides sufficient mechanical strength to meet the most demanding application requirements. For easy installation, models with frame size 90S/L and above are equipped with lifting eye-bolts.

All endshields are designed with drain holes to drain condensed water in the frame. The drain holes are plugged with drain plugs, which can drain condensed water and meet the protection level requirements.

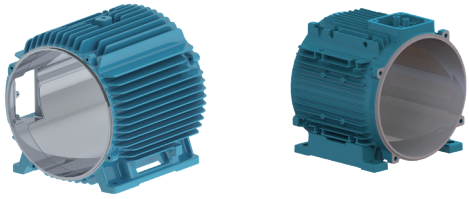


Figure 1. Cast iron frame (left) and AL frame (right)

1.2 Grounding

W21 Prime cast iron motors 160 to 200 have one ground connection in the terminal box. Frame sizes 225 to 355 are designed with two ground connections, one in the terminal box and one on the outside of the frame. Aluminum frame motors 80-132 are equipped with one ground connection in the terminal box as standard.

Figure 2. Grounding

1.3 Fan cover

The standard fan cover of frame 80 to 355 is made of steel plate.

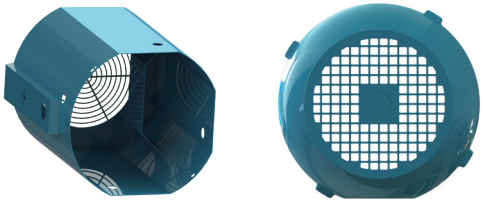


Figure 3. Fan cover in steel plate

1.4 Terminal box

Like the frame and endshields, the terminal box is also made of FC-200 cast iron. In order to facilitate wiring, there is ample space inside the junction box and it can be rotated 90 degrees, making it very flexible to install.

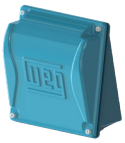


Figure 4.1 - Cast iron t-box

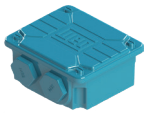


Figure 4.2 - Aluminum t-box

1.5 Terminal block

The terminal block is not only printed with the IEC 60034-8 standard markings, but also have designated terminals. The W21 Prime motor with a winding voltage of 380V is equipped with glass fiber reinforced unsaturated polyester bulk molding compound (BMC) terminals, as shown below.

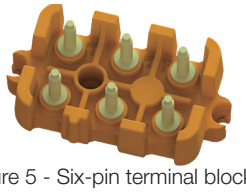


Figure 5 - Six-pin terminal block

1.6 Flange

Based on the product structure, if it is difficult to install the flange motor using hexagonal bolts, studs must be used instead.

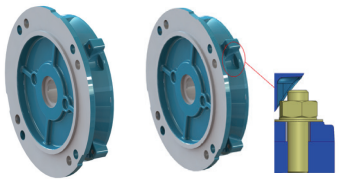
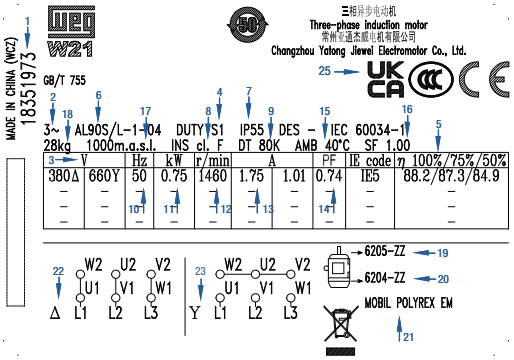


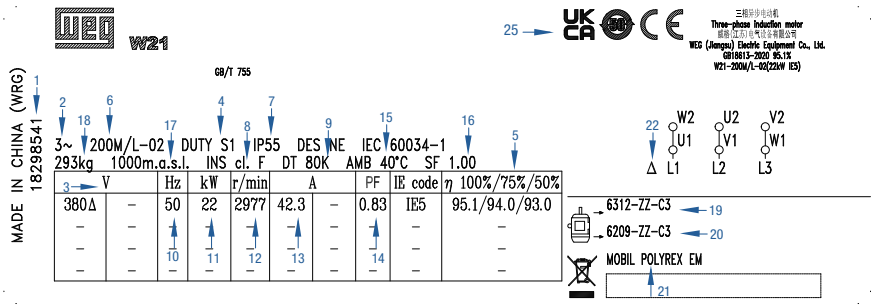
Figure 6 -Flange

1.7 Nameplate

The main nameplate and the secondary nameplate are made of AISI 304 stainless steel, and all information is printed on the nameplate by laser. The nameplate contains a lot of important useful information, such as serial number, output power, voltage, frequency, rated current, protection level, power factor, insulation level, bearing model, grease type and lubrication cycle, etc. The nameplates for IEC frames 132 and below (inclusive) are square nameplates, and the nameplates for IEC frames 160 to 355 are long strip nameplates.



Details on nameplate:



1. Motor material number
2. Three phase
3. Rated voltage
4. Duty
5. Efficiency
6. Frame size
7. Protection degree
8. Insulation class
9. Temperature rise
10. Frequency
11. Rated output
12. Full load speed (rpm)
13. Rated Current
14. Power factor
15. Ambient temperature
16. Service factor
17. Altitude
18. Weight
19. DE bearing type
20. NDE bearing type
21. Bearing grease type
22. △ connection diagram
23. Y connection diagram
24. Regreasing interval
25. Certification

Figure 7 -Nameplate

2. Cooling system / Noise level / Vibration level

2.1 Cooling system / Noise level

The W21 Prime motor line is totally enclosed fan-cooled TEFC (IC411), as per IEC60034-6. Non-ventilated TENV (IC410), air over TEAO (IC418), and forced ventilation (TEBC) are available on request. More information about IC416 can be found in the Variable Frequency Drive Operation section.
Fans are made of polypropylene from frame IEC80 to 315 and made of aluminum in frames 355A/B 2P. Designed for low noise levels, the W21 Prime motors comply with the IEC60034-9 standard and the corresponding sound pressure levels. The tables below show sound pressure levels in dB (A), the permit tolerance is + 3dB).

Frame	2P	4P	6P	8P
80	64	49	45	-
90	67	53	44	-
100	64	56	48	-
112	65	56	52	-
132	67	60	60	-
160	70	67	54	53
180	70	64	56	51
200	74	69	58	64
225	82	70	61	60
250	82	70	61	60
280	83	72	66	59
315	83	72	69	62
355M/L	81	79	73	70
355A/B	83	76	73	70

Table 1 -Sound pressure level for 50Hz motors

The noise level figures shown in the table above are taken at no load. Under load, the IEC 60034-9 standard foresees an increase of the sound pressure levels as shown in table 2.

Shaft Height H(mm)	2P	4P	6P	8P
90 ≤ H ≤ 160	2	5	7	8
180 ≤ H ≤ 200	2	4	6	7
225 ≤ H ≤ 280	2	3	6	7
H = 315	2	3	5	6
355 ≤ H	2	2	4	5

Table 2 - Maximum expected increase of sound pressure level for loaded motors

Note: with canopy can decrease the noise level in 2 dB.

2.2 Vibration level

W21 Prime motors are dynamically balanced with half key and the standard version meets the vibration levels of Grade A (without special vibration requirements) described in IEC 60034-14 Standard. As an option, motors can be supplied in conformance with the vibration of Grade B. The RMS speed and vibration levels in mm/s of Grades A and B are shown in Table 3.

Vibration	Shaft height H(mm)	60 ≤ H ≤ 132	132 < H ≤ 280	H > 280
	Assembly	Vibration speed RMS (mm/s)		
Grade A	Free Suspension	2.8	2.8	2.8
Grade B	Free Suspension	1.1	1.8	1.8

Table 3. Speed and vibration levels

3. Shaft / Bearings / Thrusts

3.1 Shaft

The shaft of W21 Prime motors is made of GB45 steel, in frames IEC 80 to 315S/M, and in 42CrMo steel for frames 315L and 355A/B. When supplied with roller bearings as optional, the shaft material must be 42CrMo. As they are fitted with 42CrMo steel shafts in frames 315L and 355A/B, W21 Prime motors can employ roller bearings, making them suitable for heavy-duty applications such as pulley and belt applications. Information about maximum allowable radial and axial loads on shaft ends is given in tables 5.

Important: To modify bearings from a ball into a roller, the drive end and non-drive end bearing caps (internal and external) need to be replaced since the non-drive end bearing remains locked. If further information is required, please contact WEG Sales support team.
Shafts are supplied with WEG A type key (China:B type) in frame sizes 80 to 200 and WEG B type key (China:C type) in frames 225 to 355, and with dimensions shown in section 14-Mechanical data. All these shafts are supplied with threaded center holes with dimensions that comply with Table 4.

Frame	Poles	Size	Depth of thread (mm)
80	All	M6	16
90S/L	All	M8	19
90S/L-1	All	M8	19
100L	All	M10	22
112M	All	M10	22
112M-1	All	M10	22
132S	All	M12	28
132M	All	M12	28
160	All	M16	36
180	All	M16	36
200	All	M20	42
225SM	All	M20	42
250SM	All	M20	42
280SM	All	M20	42
315SM	All	M20	42
315L	All	M20	42
355ML	2P	M20	42
	≥4P	M24	50
355AB	2P	M20	42
	≥4P	M24	50

Table 4. Center hole dimensions for Drive end shaft

3.2 Bearings

WEG motors are supplied with ball bearings as standard. And have a regreasing system for motor frame 225 and above. WEG cooperates with internationally recognized bearing brands (FAG, SKF, NSK, NTN, C&U, etc), assuring the excellent performance of the motor and longer motor life. If the specific bearing brand is required, please inform WEG before placing an order. The W21 Prime series motors frame 80 to 100 are with 62 series bearings and 112M and above are with 63 series bearings. The bearing lifetime is L10h with 20,000 hours in conformance with maximum radial and axial loads as described in Tables 5. For direct coupling arrangements (free of radial and axial thrusts), the bearing lifetime will be L10h with 40,000 hours.

Note: Lifetime L10 means that at least 90% of the bearings submitted to maximum indicated loads will reach the numbers of predicted hours. The maximum allowable radial and axial loads for standard configuration are given in Tables 5. The values of the maximum radial load consider the axial load as nil. The values of the maximum axial load consider radial load as nil. Contact WEG to get information about bearing lifetime for applications with combined axial and radial loads.

The bearing lifetime depends on the type and size of the bearings, on radial and axial mechanical loads that the motor is submitted to, on operating conditions (ambient, temperature), and the speed and quality of the grease. Therefore, the bearing lifetime is directly related to the correct application, maintenance and lubrication. When the amount of grease and

lubrication intervals are followed accordingly, bearings are expected to reach their predefined lifetime. W21 Prime motors are supplied ZZ bearings for frames 80 to 132, and ZZ-C3 bearings for frames 160 to 200, and open bearing is used for 225 or above. The amount of grease and lubrication intervals are given on the nameplate and are shown in Tables 6 and 7. Excess of grease, which is an amount of grease exceeding what is indicated on the nameplate, can result in bearing over temperature.

3.2.1 Bearing locking

For the standard line, the drive end bearing is locked axially with the external bearing cap in frame size 160 up to 200, and the internal and external bearing cap in frame size 225 up to 355. The non-drive end bearings are fitted with a spring washer in frame size 160 up to 200, and a pre-load spring in frame size 225 up to 355 to take any axial play. When supplied with roller bearings (an optional feature available from frame 160), the non-drive end bearing is locked and an axial play is compensated by the axial play of the drive end roller bearing.

Important:
1 - Special applications: Motor operation under adverse operating conditions, such as higher ambient temperatures and altitudes or abnormal axial/radial loads, may require specific lubrication measures and alternative relubrication intervals to those indicated in the tables provided within this technical catalog.
2 - Roller bearings: Roller bearings require a minimum radial load to ensure correct operation. They are not recommended for direct coupling arrangements or use on 2-pole motors.
3 - Frequency inverter-driven motors: Bearing life may be reduced when a motor is driven by a frequency drive at speeds above nominal. Speed itself is one of the factors taken into consideration when determining motor bearing life.
4 - Motors with modified mounting configurations: For motors supplied with horizontal mounting but working vertically, lubrication intervals must be reduced by half.
5 – Tables for radial thrusts: The values given in the tables below for radial thrusts take into consideration the point upon which the load is applied, either at the center of the shaft (L/2) or at the end of the shaft (L).

Thrusts (L10 with 20,000 hours)

Frame	DE Brg.	Poles	Radial Load		Axial Load					
					Horizontal		Vertical Shaft Up		Vertical Shaft Down	
			L/2	L	Push	Pulling	Push	Pulling	Push	Pulling
80	6204	2P	0.6	0.6	0.3	0.4	0.3	0.4	0.3	0.4
		4P	0.7	0.7	0.4	0.6	0.3	0.6	0.4	0.5
		6P	0.8	0.8	0.5	0.7	0.4	0.7	0.5	0.7
		8P	1.0	0.8	0.6	0.8	0.5	0.9	0.6	0.8
90S/L	6205	2P	0.7	0.6	0.4	0.4	0.3	0.5	0.4	0.4
		4P	0.8	0.7	0.5	0.6	0.5	0.7	0.5	0.6
		6P	0.9	0.8	0.6	0.7	0.6	0.8	0.6	0.7
		8P	1.0	0.9	0.8	0.9	0.7	0.9	0.8	0.8
90S/L-1	6205	2P	0.7	0.6	0.4	0.4	0.3	0.5	0.4	0.4
		4P	0.8	0.7	0.5	0.6	0.5	0.7	0.5	0.6
		6P	0.9	0.8	0.6	0.7	0.6	0.8	0.6	0.7
		8P	1.0	0.9	0.8	0.9	0.7	0.9	0.8	0.8
100L	6206	2P	0.9	0.9	0.4	0.6	0.3	0.7	0.4	0.6
		4P	1.0	0.9	0.5	0.8	0.4	0.9	0.5	0.8
		6P	1.2	1.1	0.7	1.0	0.6	1.1	0.7	1.0
		8P	1.4	1.3	0.8	1.2	0.7	1.3	0.8	1.1
112M	6207	2P	1.3	1.2	0.5	1.1	0.5	1.2	0.6	1.1
		4P	1.5	1.4	0.7	1.6	0.7	1.7	0.8	1.5
		6P	1.8	1.6	1.0	1.9	0.9	2.1	1.0	1.9
		8P	1.9	1.7	1.1	2.2	1.0	2.4	1.1	2.1
112M-1	6207	2P	1.3	1.2	0.5	1.1	0.5	1.2	0.6	1.1
		4P	1.5	1.4	0.7	1.6	0.7	1.7	0.8	1.5
		6P	1.8	1.6	1.0	1.9	0.9	2.1	1.0	1.9
		8P	1.9	1.7	1.1	2.2	1.0	2.4	1.1	2.1
132S	6308	2P	2.0	1.8	1.1	1.3	1.0	1.6	1.4	1.1
		4P	2.3	2.0	1.5	1.8	1.3	2.2	1.8	1.7
		6P	2.6	2.3	1.8	2.2	1.6	2.6	2.1	2.2
		8P	2.9	2.6	2.1	2.5	1.8	3.0	2.5	2.5
132M	6308	2P	2.0	1.8	1.1	1.3	1.0	1.6	1.4	1.1
		4P	2.3	2.0	1.5	1.8	1.3	2.2	1.8	1.7
		6P	2.6	2.3	1.8	2.2	1.6	2.6	2.1	2.2
		8P	2.9	2.6	2.1	2.5	1.8	3.0	2.5	2.5
160M	6309	2P	2.9	2.5	2.6	1.7	2.5	2.1	3.0	1.6
		4P	3.6	3.0	3.4	2.5	3.2	3.0	3.9	2.3
		6P	4.1	3.1	4.0	3.1	3.7	3.7	4.6	2.8
		8P	4.5	3.0	4.5	3.6	4.2	4.1	5.0	3.3
160L	6309	2P	2.8	2.5	2.6	1.7	2.4	2.1	3.0	1.5
		4P	3.5	2.7	3.4	2.5	3.1	3.0	3.9	2.2
		6P	4.0	2.7	4.0	3.1	3.6	3.7	4.0	2.6
		8P	4.4	2.7	4.5	3.6	4.2	4.1	5.0	3.3
180M	6311	2P	4.1	3.7	3.3	2.2	3.0	2.9	4.0	1.9
		4P	5.0	4.4	4.5	3.4	4.1	3.9	5.0	3.0
		6P	5.6	4.5	5.2	4.1	4.8	4.8	5.9	3.7
		8P	6.4	4.5	5.9	4.8	5.5	5.3	6.4	4.4
180L	6311	2P	3.9	3.5	3.4	2.3	3.1	2.9	4.0	2.0
		4P	4.9	4.4	4.5	3.4	4.1	3.9	5.0	3.0
		6P	5.6	4.5	5.2	4.1	4.8	4.8	5.9	3.7
		8P	6.1	4.5	5.8	4.7	5.4	5.4	6.5	4.3
200M/L	6312	2P	4.6	4.2	3.9	2.7	3.4	3.4	4.6	2.2
		4P	5.8	5.3	5.1	3.9	4.0	4.3	5.3	3.0
		6P	6.4	5.8	5.9	4.7	4.7	5.1	6.1	3.7
		8P	7.0	6.3	6.6	5.4	6.0	6.4	7.6	4.8
225S/M	6314	2P	5.9	5.5	5.0	3.6	4.4	4.5	5.8	3.0
		4P	7.3	6.6	6.5	5.1	5.7	6.2	7.6	4.3
		6P	8.4	6.8	7.6	5.8	6.8	7.5	8.9	5.4
		8P	8.8	6.8	8.9	6.7	7.5	8.6	10.0	6.1
250S/M	6314	2P	5.9	5.3	4.9	3.5	4.3	4.6	5.9	2.9
		4P	7.3	6.7	6.5	5.1	5.5	6.4	7.8	4.2
		6P	8.5	7.8	7.6	6.2	6.6	7.7	9.1	5.2
		8P	9.4	8.1	8.5	7.1	7.4	8.7	10.1	6.0
280S/M	6314	2P	5.4	5.0	4.4	3.6	3.8	5.1	4.9	3.5
	6316	4P	7.8	7.1	8.2	6.6	6.1	7.6	9.2	4.6
		6P	9.9	9.1	8.6	7.0	7.2	9.1	10.7	5.6
		8P	10.9	10.1	9.7	8.1	8.3	10.2	11.8	6.7
315S/M	6314	2P	3.6	2.2	4.7	2.6	2.3	6.5	7.9	0.9
	6319	4P	8.6	6.5	9.0	6.6	5.7	10.2	12.1	3.8
		6P	11.2	10.2	9.9	8.0	7.2	12.0	13.9	5.3
		8P	13.6	12.5	10.8	8.9	7.6	14.0	15.9	5.7
315L	6314	2P	5.2	4.9	4.6	3.2	1.7	7.1	8.5	0.3
	6319	4P	9.0	8.1	9.2	6.8	4.4	11.6	13.5	2.5
		6P	11.1	10.3	9.7	7.8	6.4	12.8	14.7	4.5
		8P	11.9	11.0	10.7	8.8	6.8	14.8	16.7	4.9
355M/L	6316	2P	5.6	5.3	5.0	3.4	1.7	8.3	9.9	0.1
	6322	4P	8.5	9.3	7.7	7.0	5.6	13.8	16.0	3.4
		6P	13.1	12.0	11.2	9.0	6.1	16.6	18.8	3.9
		8P	14.8	13.6	12.7	10.5	7.8	18.3	20.5	5.6
355A/B	6316	2P	5.4	5.1	4.8	3.2	0.8	9.3	10.7	-
	6322	4P	11.6	10.7	9.4	7.2	4.3	15.0	17.2	2.1
		6P	12.3	11.4	11.0	8.8	4.9	17.8	20.0	2.7
		8P	14.9	13.8	12.6	10.4	6.6	19.4	21.6	4.5

Table 5 - thrusts for ball bearings

1 kN = 101.97kgf = 224.8 lbf

Lubrication Intervals - Ball bearings

Lubrication intervals (50Hz)							
Frame	Poles	Bearing	Hours	Frame	Poles	Bearing	Hours
160	2	6309	18100	250	2	6314	4500
	4		20000		4		11600
	6		20000		6		16400
	8		20000		8		19700
180	2	6311	13700	280	2	6314	4500
	4		20000		4	6316	10400
	6		20000		6		14900
	8		20000		8		18700
200	2	6312	11900	315	2	6314	4500
	4		20000		4	6319	9000
	6		20000		6		13000
	8		20000		8		17400
225	2	6314	4500	355	2	6316	3520
	4		11600		4	6322	7200
	6		16400		6		10800
	8		19700		8		15100

Table 6 - Lubrication interval for ball bearings

Lubrication intervals (50Hz)							
Frame	Poles	Bearing	Hours	Frame	Poles	Bearing	Hours
160	4	NU309	20000	250	4	NU314	8900
	6		20000		6		13100
	8		20000		8		16900
180	4	NU311	20000	280	4	NU316	7600
	6		20000		6		11600
	8		20000		8		15500
200	4	NU312	20000	315	4	NU319	6000
	6		20000		6		9800
	8		20000		8		13700
225	4	NU314	8900	355	4	NU322	4400
	6		13100		6		7800
	8		16900		8		11500

Table 7 - Lubrication interval for roller bearings

3.2.2 Bearing temperature monitoring

On request, W21 Prime motors can be equipped with bearing temperature detectors that monitor bearing operating conditions. The most commonly used accessory is the Pt-100 temperature detector for continuous monitoring of bearing operating temperature.
This type of monitoring is extremely important considering that it directly affects the grease and bearing lives, particularly on motors equipped with regreasing facilities. For motors with insulation class F, it is recommended to set up the maximum bearing Pt-100 Alarm temperature as 110°C and the maximum trip temperature as 120°C.

4. Protection degree / Painting

4.1 Protection Degree

W21 Prime motors are supplied with degrees of protection in conformance with IEC 60034-5. As standard, they are IP55, which means:
a) First characteristic numeral 5: machine protected against dust. The enclosure is protected against contact with moving parts. Ingress of dust is not totally prevented, but dust does not enter in sufficient quantity to interfere with the satisfactory operation of the machine.
b) Second characteristic numeral 5: Machine protected against water jets. Water projected by a nozzle against the machine from any direction shall have no harmful effect.

4.2 Painting

W21 Prime motors are supplied as standard with WEG internal painting plans 203A(160-355). This plan consists of:
■ Primer: Cast Iron (One-component epoxy ester with a thickness of 20-55µm; Aluminum (no primer);
■ Top coat: Two-component acrylic polyurethane with a thickness of 40-70µm.
For some frame sizes were released water-based paint, and the standard painting plan includes:
■ Primer: Cast Iron (One-component epoxy ester with a thickness of 20-55µm; Aluminum (no primer);
■ Top coat: Two-component acrylic polyurethane with a thickness of 60-80µm.

A) Finish coat color: RAL color or according to the customer's definition.
B) Gloss level: 30-60°.
C) Adherence grade: Gr0-Gr1.
D) Resistance to salty spray: No.

Recommended for applications in rural, urban, and industrial environments indoor or outdoor, with low contamination of corrosive agents and low relative humidity and with normal variations of temperature.

Note:
These painting plans are not recommended for direct exposure to acid steam, alkalis, solvents, and salty environments.

Alternative painting plans are available on request, which are suitable to guarantee additional protection in aggressive environments, either protected or unprotected.

4.2.1 Tropicalized painting

The integrity of the insulation system is the primary consideration when determining the lifetime of an electric motor. High humidity can result in premature deterioration of the insulation system, therefore for any ambient temperature with relative humidity above 95%, it is recommended to coat all internal components of the motor with an epoxy paint, also known as tropicalization. If the application has relative humidity above 95%, please inform WEG to ensure the tropicalization painting for the motor.

5. Ambient / Insulation

Unless otherwise specified, the rated power outputs shown in the electrical data tables within this catalog refer to continuous duty operation S1, as per IEC 60034-1 and under the following conditions:
■ With ambient temperature range -20°C to +40°C
■ With altitudes up to 1000 meters above sea level
■ With related humidity up to 60% (when it is above 60%, we recommend installing a space heater to avoid water condensation inside of the motor).

T (°C)	Altitude (m)								
	1000	1500	2000	2500	3000	3500	4000	4500	5000
10							0.97	0.92	0.88
15						0.98	0.94	0.90	0.86
20					1.00	0.95	0.91	0.87	0.83
25				1.00	0.95	0.93	0.89	0.85	0.81
30			1.00	0.96	0.92	0.90	0.86	0.82	0.78
35		1.00	0.95	0.93	0.90	0.88	0.84	0.80	0.75
40	1.00	0.97	0.94	0.90	0.86	0.82	0.80	0.76	0.71
45	0.95	0.92	0.90	0.88	0.85	0.81	0.78	0.74	0.69
50	0.92	0.90	0.87	0.85	0.82	0.80	0.77	0.72	0.67
55	0.88	0.85	0.83	0.81	0.78	0.76	0.73	0.70	0.65
60	0.83	0.82	0.80	0.77	0.75	0.73	0.70	0.67	0.62
65	0.79	0.76	0.74	0.72	0.70	0.68	0.66	0.62	0.58
70	0.74	0.71	0.69	0.67	0.66	0.64	0.62	0.58	0.53
75	0.70	0.68	0.66	0.64	0.62	0.60	0.58	0.53	0.49
80	0.65	0.64	0.62	0.60	0.58	0.56	0.55	0.48	0.44

Table 8 - Correction factors for altitude and ambient temperature

For operating temperatures and altitudes differing from those above, the factors indicated in Table 8 must be applied to the nominal motor power rating to determine the derated available output (Pmax).
Pmax = Pnom x correction factor

W21 Prime motors are supplied with class F insulation and Class B (80 K) temperature rise at normal operating conditions (unless otherwise specified). The difference between the temperature of the class F insulation (155 K) and the temperature rise of the design (80 K) means that, in practice, W21 Prime motors are suitable to supply output ratings 15% above the rated values up to a limit where the temperature rise reaches the temperature rise value of the insulation class.
All W21 Prime motors are wound with the WISE® insulation system which consists of enameled wire meeting temperatures up to 200°C and impregnated with solvent-free resin. The WISE® system also permits motor operation with variable speed drives.

IEC	Temperature rise △T (Average value measured by resistance method)	Maximum Temperature Tmax (from amb. temp 40°C)
CLASS B	80K	130°C
CLASS F	105K	155°C
CLASS H	125K	180°C

Table 9 - Temperature Rise and Maximum Temp.

6. Variable speed drive application

6.1 Considerations about rated voltage

The stator windings of W21 Prime motors are wound with class F insulation (class H optional) and are suitable for either DOL starting or via a variable speed drive. They incorporate the WEG exclusive insulation system - WISE® (WEG Insulation System Evolution) - which ensures superior electrical insulation characteristics.
The stator winding is suitable for variable speed drive applications, taking into account the limits shown in Table 10.

Motor rated voltage	Voltage Spikes at motor terminals (phase-phase)	*dV/dt* * at motor terminals (phase-phase)	*Rise time**	Time between pulses
Vn < 460V	≤ 1600 V	≤ 5200 V/µs	≥0.1 µs	≥6 µs
460V ≤ Vn < 575V	≤ 2000 V	≤ 6500 V/µs		
575 V ≤ Vn < 690 V	≤ 2400 V	≤ 7800 V/µs		

Table 10 - Limit conditions for variable frequency drive operation

*** : dV/dt and Rise time are in accordance with NEMA standard MG1-Part 30**

Notes:
1 - To protect the motor insulation system, the maximum recommended switching frequency is 5 kHz.
2 - If one or more of the above conditions is not attended, a filter (load reactor or dV/dt filter) must be installed in the output of the VSD.
3 - General purpose motors with rated voltage greater than 575 V, which at the time of purchase did not have any indication of operation with VSD, can withstand the electrical limits set in the table above for rated voltage up to 575 V. If such conditions are not fully satisfied, output filters must be used.
4 - General purpose motors of the multi-voltage type, for example, 380-415/660//460V or 380/660 V, which at the time of purchase did not have any indication of operation with VSD, can be driven by a VSD in the higher voltage only if the limits set in the table above for rated voltage up to 460 V are fully attended in the application. Otherwise, a load reactor or a dV/dt filter must be installed in the VSD output.

6.2 Torque derating criteria

In order to keep the temperature rise of WEG motors within acceptable levels, when under VSD supply, the speed range related load ability limits established in Figure 8 (for operation under constant flux condition) or Figure 9 (for operation under optimal flux condition) must be observed.

Notes:
1 - The derating curves below are related to the motor thermal capability only and do not concern the insulation class. Speed regulation will depend on the VSD mode of operation and proper adjustment.
2 - Torque derating is usually required when the motor drives constant torque loads (e.g. screw compressors, conveyors, extruders, etc.). For squared torque loads, such as pumps and fans, no torque derating is normally required.
3 - W21 Prime motors of frame sizes ≥ 90S can be blower cooled (independently ventilated) under request. In such case, the motor will be suitable for VSD operation without torque derating regardless of the load type.
4 - For operation above base (nameplate) speed, mechanical issues must be also observed. Please contact WEG.
5 - Applications with motors rated for use in hazardous areas must be particularly evaluated - in such case please contact WEG.

Constant flux condition

Applicable when the motor is supplied by any commercial drive operating with any control scheme other than the Optimal Flux® available in WEG drives.

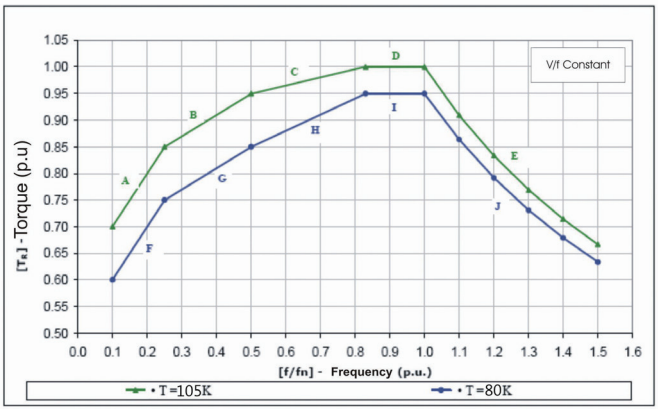


Figure 8 - Derating curves for constant flux condition

Derating curve for insulation class F(DT=105K)*		
Interval	Frequency Range	Torque Calculation
A	0.10 ≤ f/fn < 0.25	T_R = (f/fn) + 0.60
B	0.25 ≤ f/fn < 0.50	T_R = 0.40 (f/fn) + 0.75
C	0.50 ≤ f/fn < 0.83	T_R = 0.15 (f/fn) + 0.87
D	0.83 ≤ f/fn ≤ 1.0	T_R = 1.0
E	f/fn >1.0	T_R = 1/ (f/fn)

Derating curve for insulation class F(DT=80K)*		
Interval	Frequency Range	Torque Calculation
F	0.10 ≤ f/fn < 0.25	T_R = (f/fn) + 0.50
G	0.25 ≤ f/fn < 0.50	T_R = 0.40 (f/fn) + 0.65
H	0.50 ≤ f/fn < 0.83	T_R = 0.30 (f/fn) + 0.70
I	0.83 ≤ f/fn ≤ 1.0	T_R = 0.95
J	f/fn >1.0	T_R = 0.95/ (f/fn)

Table 11 - Torque calculation for derating curves

When using the green curve above, the temperature rise of the motor will be limited by the temperature class of the insulating material. For instance, for a motor with an F insulation class, the temperature rise will be limited to 105°C (with an ambient temperature of 40°C). Only motors with an F insulation class and a B temperature rise class can use this curve to ensure that the motor maintains an F-class temperature rise (greater than 80°C and less than 105°C) when driven by a frequency converter.
When using the blue curve below, it means that even with a frequency converter drive, a motor with an F insulation class and a B temperature rise class will still maintain a temperature rise of 80°C at an ambient temperature of 40°C.

Optimal Flux ®®

Variable frequency drive technology for motors is suitable for constant torque loads:

- Outputs rated torque at low speeds without the need for separate ventilation or increasing motor power.
- Saves space and costs in applications.
- Improves the performance of the frequency inverter and motor package (WEG exclusive solution) with optimized magnetic flux function, which is used exclusively with WEG high-efficiency motors + CFW11/09 kit.

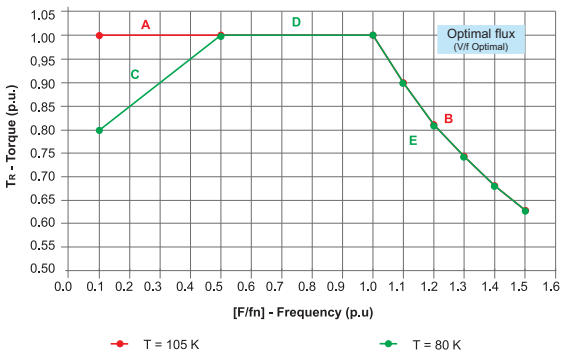


Figure 9 - Derating curves for optimal flux condition

6.3 Considerations regarding bearing currents

Motors with frame sizes up to IEC280S/M do not require additional bearing protection in variable frequency drive applications. Motors with frame sizes 315S/M and above must use additional protection to prevent current from flowing through the bearings. Specific methods include using insulated bearings or insulated end covers (usually the non-drive end cover) and grounding carbon brushes (usually installed on the drive end cover).
If the motor is not equipped with such protection, WEG can provide a kit to install on the motor. Please contact WEG sales staff for details.

6.4 Forced ventilation kit

For those cases where an independent cooling system is required, the W21 Prime motors can be supplied with a forced ventilation kit, as shown in Figure 10. When the forced ventilation kit is assembled on the motor in the factory, the overall motor length will be as shown in Table 12.

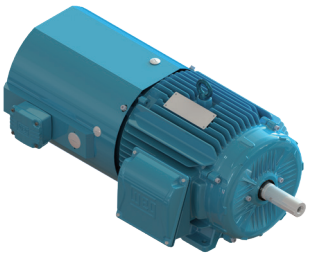


Figure 10 - W21 Prime motor with forced ventilation kit

Frame	Poles	Motor Length (L)		Blower motor
		without blower kit	with blower kit	
80	All	277	无	0.37kW 2P 63 Frame
90S/L	All	330	450	
90S/L-1	All	360	480	
100L	All	376	497	
112M	All	389	536	
112M-1	All	424	571	
132S	All	491	647	
132M	All	491	677	
160M	All	621	846	
160L	All	665	890	
180M	All	685	917	
180L	All	723	955	
200M/L	All	768	999	
225S/M	All	876	1174	0.75kW 4P 80 Frame
250S/M	All	876	1174	
280S/M*	2	1059	1335	
280S/M	4/6/8	1089	1365	
315S/M*	2	1232	1447	
315S/M	4/6/8	1262	1477	
315L*	2	1342	1557	
315L	4/6/8	1372	1587	
355M/L*	2	1406	1774	3kW 4P 100LFrame
355M/L	4/6/8	1476	1844	
355A/B*	2	1595	1969	
355A/B	4/6/8	1665	2039	

Table 12 - Total length of motor with / without blower kit

Note: The motor base with * is a 2-pole motor. The fan motors used in the above forced ventilation kits are all IE2 efficiency, suitable for the Chinese market and the main motor does not include CE certification. If you need to meet CE certification, please consult WEG sales staff for the power and model of the forced cooling fan motor.

7. Tolerances for electrical data

The following tolerances are allowed in accordance with IEC 60034-1:

Efficiency (η)	Pnom <=150kW : -0.15(1-η) Pnom >150kW : -0.1(1-η) Where η is a decimal number
Power factor	$\frac{1 - \cos \varnothing}{6}$ Minimum 0.02 and Maximum 0.07
Slip	± 20% for Pnom ≥ 1 kW and ± 30 % for Pnom < 1 kW
Starting current	20% (without lower limit)
Starting torque	-15% + 25%
Breakdown torque	- 10%
Moment of inertia	± 10%

Table 13 - Tolerances for electrical data

8. Space heaters

The use of space heaters are recommended in two situations:
1. Motors installed in environments with relative air humidity up to 95%, in which the motor may remain idle for periods greater than 24 hours;
2. Motors installed in environments with relative air humidity greater than 95%, regardless of the operating schedule. It should be highligthed that in this situation it is strongly recommended that an epoxy paint known as tropicalized painting is applied in the internal components of the motor. More information can be obtained in section 4.2.1.

The supply voltage for space heaters must be defined by the Customer. For all frame sizes, W21 motors can be provided with space heaters suitable for 110-127 V, 220-240 V and 380-480 V. The power rating and number of space heaters fitted depends on the size of the motor as indicated in table 14 below:

Frame	Quantities	Total Power rated (W)
80	1	11
90	1	11
100	2	22
112	2	22
132	2	30
160	2	30
180 and 200	2	38
225 and 250	2	56
280 and 315	2	140
355	2	174

Table 14 - Power and quantity of space heaters

9. Thermal protections

9.1 PT-100

Figure 11 - PT-100

These are temperature detectors with operating principles based on the properties that some materials vary the electric

resistance with the variation in temperature (usually platinum, nickel, or copper). They are also fitted with calibrated resistances that vary linearly with temperature, allowing continuous reading of motor operating temperature through a monitoring display, with high precision rate and response sensitivity.
The same detector can serve as an alarm (with the operation above the regular operating temperature) and trip (usually set up for the maximum temperature of the insulation class).

9.2 PTC

Figure 12 - Thermistor (PTC)

These are thermal protectors consisting of semiconductor detectors with sudden variations of resistance when reaching a certain temperature. PTC is considered a thermistor with the resistance increasing drastically to a well-defined temperature figure. This sudden resistance variation blocks the PTC current, causing the output relay to operate, and the main circuit to switch-off.
The thermistors are of small dimensions, do not wear and have a quicker response if compared to other protectors, although they do not allow continuous monitoring of motor operating temperature.
Together with their electronic circuits, these thermistors provide full protection against overheating caused by overload, under or overvoltage or frequent reversing operations.
Where thermistor protection is required to provide both alarm and trip operation, it is necessary for each phase of the motor winding to be equipped with two sets of appropriately rated thermistors.
WEG Automation has a product called RPW which is an electronic relay intended specifically to read the PTC signal and operate its output relay. For more information go to the website www.weg.net.

10. Packaging

W21 Prime motors frame 80 to 132, the packaging of motor are carton box.

Figure 13 - Carton Box

W21 Prime motors 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 14-1 - Crate1

Figure 14-2 - Crate2

Figure 14-3 - Crate3

Figure 15 - Carton box

W21 Prime Cast Iron Frame Motor
Exploded View

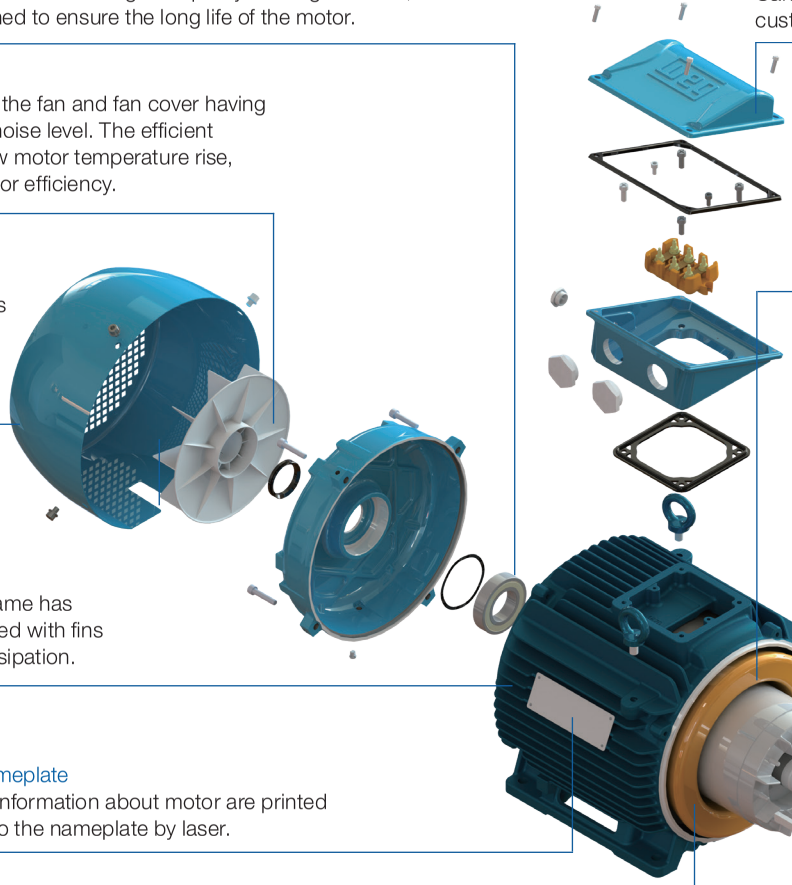
Terminal Box
WEG Terminal box has been designed with plenty of internal space, can be rotated at 90 degrees interval. Can be supplied with one or two holes according to customer's requirement.

Bearings
WEG motors are fitted with the highest quality bearing selected, verified by WEG and designed to ensure the 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.

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

Fan Cover
Made of steel, W21 motor's fan cover is smooth and ensure the low noise level and long life due to its high mechanical strength and corrossion resistance.



Rotor
Its dynamically balance reduces vibration of motor.

Shaft
WEG use GB45 carbon steel as standard, which provides high mechanical strength to ensure long life of the motor.

Frame
FC 200 high grade Cast Iron Frame has high mechnical strength, provided with fins aimed at improving the heat dissipation.

Endshield
Made of cast iron, they assure the high mechanical strength and better heat exchange, guarantee the long bearing life.

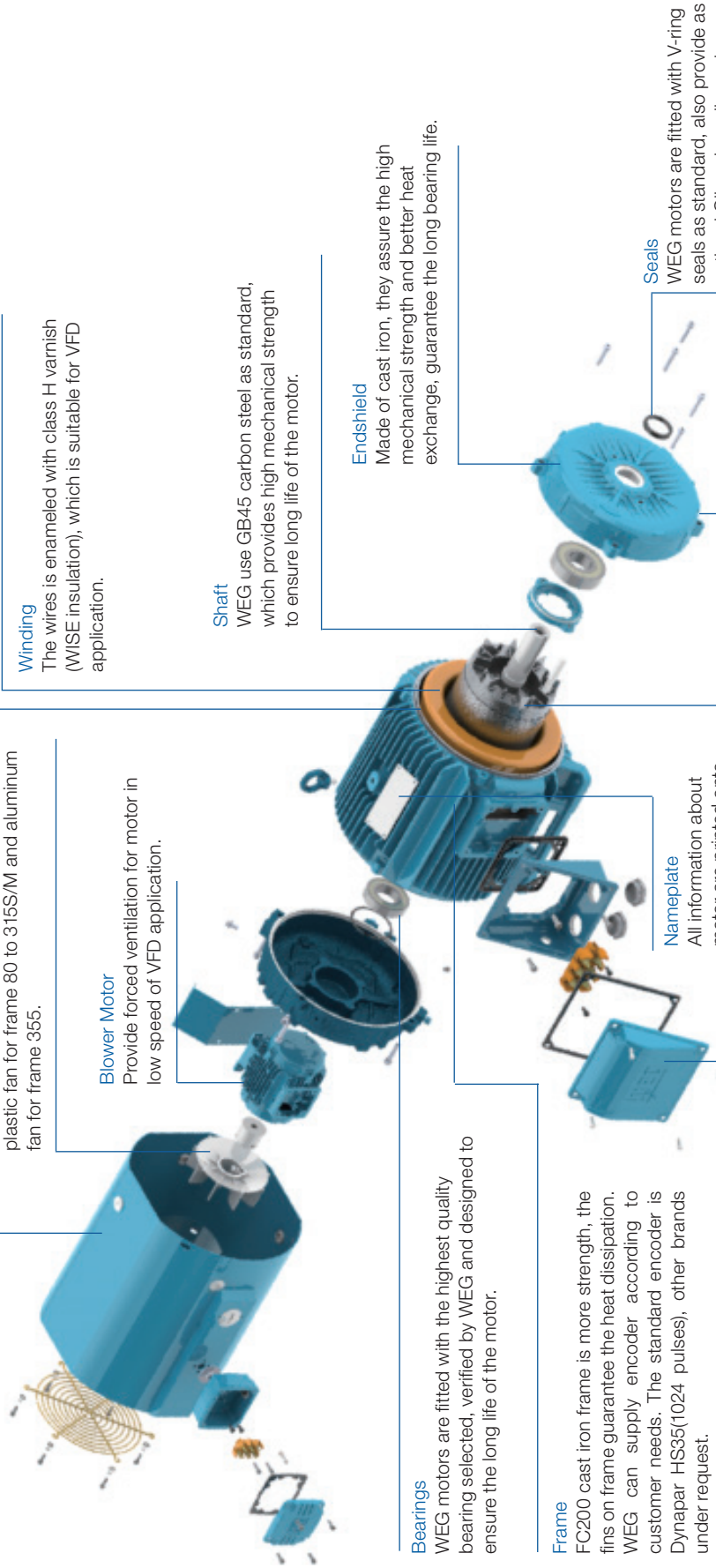
Nameplate
All information about motor are printed onto the nameplate by laser.

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

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

Seals
WEG motors are fitted with V-ring seals as standard, also provide as optional Oil seals, or lip seals, Labyrinth taconite seal and W3 seal to ensure the best possible protection under high moisture environment.

W21 Prime Cast Iron Frame Forced Ventilation Motor Exploded View



Fan Cover
Made of steel, W21 motor's fan cover is smooth and ensure the low noise level and long life due to its high mechanical strength and corrosion resistance.

Fan
Independent design of fan system guarantee the low noise level and high efficiency. The efficient cooling ensure the low temperature rise of motor, reducing the winding losses and increase the motor efficiency. W21Prime serie motor has plastic fan for frame 80 to 315S/M and aluminum fan for frame 355.

Blower Motor
Provide forced ventilation for motor in low speed of VFD application.

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

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

Shaft
WEG use GB45 carbon steel as standard, which provides high mechanical strength to ensure long life of the motor.

Endshield
Made of cast iron, they assure the high mechanical strength and better heat exchange, guarantee the long bearing life.

Seals
WEG motors are fitted with V-ring seals as standard, also provide as optional Oil seals, or lip seals, Labyrinth taconite seal and W3 seal to ensure the best possible protection under high moisture environment.

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

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

Rotor
Its dynamically balance reduces vibration of motor.

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

Frame
FC200 cast iron frame is more strength, the fins on frame guarantee the heat dissipation. WEG can supply encoder according to customer needs. The standard encoder is Dynapar HS35(1024 pulses), other brands under request.

Terminal Box
WEG Terminal box has been designed with plenty of internal space, can be rotated at 90 degrees interval.Can be supplied with one or two holes according to customer's requirement.

Construction Features- W21 Prime GB1 / GB1-Pro (AL Frame)

Frame			80	90S/L	90S/L-1	100L	112M	112M-1	132S	132M
Mechanical Features										
Nameplate Marks			CE; IEC 60034; GB/T 755							
Certificate			CCC*, CEL							
Mounting			B3T							
Frame	Material		Aluminum							
Protection Degree			IP55							
Grounding			Single grounding (Terminal box)							
Cooling method			TEFC (IC411)							
Fan	Material		Plastic							
Fan cover	Material		Steel Plate							
Endshields	Material		FC-200 Cast Iron							
Drain hole			Automatic T-type labyrinth drain plug							
Bearings	Clearance (D.E)		ZZ							
	Clearance (N.D.E)		ZZ							
	Locking		Non-locking bearings, wave washer in non-drive end bearing							
	Bearing Life		20000h							
	D.E		6204	6205	6205	6206	6207	6207	6308	6308
	N.D.E		6203	6204	6204	6205	6206	6206	6207	6207
Bearing Seal			V-rings							
Joint Seal			None							
Lubrication	Type		Mobile POLYREX EM							
	Grease fitting		None							
Terminal block			BMC 6 Pins (Orange)							
Terminal Box	Material		Aluminum							
Additional terminal box			None							
Lead inlet	Main	Size	2 x M20 x 1.5	2 x M25 x 1.5	2 x M25 x 1.5	2 x M25 x 1.5	2 x M32 x 1.5	2 x M32 x 1.5	2 x M32 x 1.5	2 x M32 x 1.5
	Lateral	Size	None							
	Auxiliar	Size	None							
	Plug		Equipped with plastic cover for transportation and storage							
Shaft	Material		SAE 1040/45							
	Threaded hole in DE		M6	M8	M8	M10	M10	M10	M12	M12
Key			Type A (China: type B)							
Vibration			Grade A							
Balance			1/2 key							
Nameplate	Material		AISI 304 Stainless steel							
Painting	Plan		207A							
	Color		RAL 6002							
	Tropicalized		None							
Packaging			Carton Box							
Electrical Features										
Design			NE							
Voltage			380V with 3 terminals			380V with 6 terminals				
Winding	Impregnation		Continuous vacuum impregnation							
	Insulation Class		F(DT 80K)							
Service Factor			1.00							
Duty			S1							
Thermal Protection			None							
Space Heater			None							
Extended leads			None							
Ambient Temperature	Maximum		+40°C							
	Minimum		-20°C							
Starting Method			D.O.L							
Insulated Endshield			None							

Note: *: Rated power ≤ synchronous speed ×1.1kW/1500;
2P:≤2.2kW 4P:≤1.1kW; 6P:≤0.75kW 8P:≤0.55kW

Optional Features- W21 Prime GB1 / GB1-Pro (AL Frame)

Frame	80	90S/L	90S/L-1	100L	112M	112M-1	132S	132M
Mechanical Features								
Flange								
FF Flange	0	0	0	0	0	0	0	0
C-DIN Flange	0	0	0	0	0	0	0	0
C Flange	0	0	0	0	0	0	0	0
Cable Gland								
Plastic	0	0	0	0	0	0	0	0
Terminal Box								
Base	E	E	E	E	E	E	E	E
W21 Cast Iron	0	0	0	0	0	0	0	0
W21 Cast Iron + Aux T-box	0	0	0	0	0	0	0	0
Stainless steel screw								
304 Stainless Steel	0	0	0	0	0	0	0	0
Bearing Cap								
With Bearing Cap	0	0	0	0	0	0	0	0
Insulation Class								
F DT 105K	0	0	0	0	0	0	0	0
H DT 80K	0	0	0	0	0	0	0	0
H DT 105K	0	0	0	0	0	0	0	0
H DT 125K	0	0	0	0	0	0	0	0
Painting Plan								
203A	0	0	0	0	0	0	0	0
205E	0	0	0	0	0	0	0	0
205P	0	0	0	0	0	0	0	0
Fan								
Aluminum	E	E	E	E	E	E	E	E
Protection Degree								
IP56	0	0	0	0	0	0	0	0
IP65	E	E	E	E	E	E	E	E
IP66	E	E	E	E	E	E	E	E
Others								
Canopy	0	0	0	0	0	0	0	0
Cooling Method								
TEBC	E	E	E	E	E	E	E	E
TEAO	E	E	E	E	E	E	E	E
Shaft material								
SAE 4140	0	0	0	0	0	0	0	0
Electrical Features								
Winding Thermal protection								
Bimetal 130°C Alarm/trip	0	0	0	0	0	0	0	0
Bimetal 155°C Alarm/trip	0	0	0	0	0	0	0	0
Bimetal 180°C trip	0	0	0	0	0	0	0	0
PT100 2 wires - Alarm	0	0	0	0	0	0	0	0
PT100 3 wires - Alarm	0	0	0	0	0	0	0	0
PTC-130°C Alarm/trip	0	0	0	0	0	0	0	0
PTC-155°C Alarm/trip	0	0	0	0	0	0	0	0
PTC-180°C trip	0	0	0	0	0	0	0	0
Space Heater								
200-240 V	0	0	0	0	0	0	0	0
110-127 / 220-240 V	NA	NA	NA	NA	0	0	0	0
110-127 V	0	0	0	0	0	0	0	0
380-480 V	0	0	0	0	0	0	0	0
Rotation Direction								
Clockwise	0	0	0	0	0	0	0	0
Counterclockwise	0	0	0	0	0	0	0	0
Service Factor								
S.F 1.15	0	0	0	0	0	0	0	0

Note:
P = STANDARD configuration;
O = OPTIONAL configuration;
E = ESPECIAL configuration, please consult;
NA = NOT AVAILABLE configuration is not available

Construction Features- W21 Prime GB1 (Cast iron Frame)

Frame			160M	160L	180M	180L	200M/L
Mechanical Features							
Nameplate Marks			CE; IEC 60034; GB/T 755				
Certificate			CEL				
Mounting			B3T				
Frame	Material		FC-200 Cast iron				
Protection Degree			IP55				
Grounding			Single grounding (Terminal box)				
Cooling method			TEFC (IC411)				
Fan	Material		Plastic				
Fan cover	Material		Steel Plate				
Endshields	Material		FC-200 Cast iron				
Drain hole			Automatic T-type labyrinth drain plug				
Bearings	Clearance (D.E)		ZZ-C3				
	Clearance (N.D.E)		ZZ-C3				
	Locking		The DE bearing is locked by the inner bearing cap and a wave washer is installed in the NDE bearing				
	Bearing Life		20000h				
	D.E	2P	6309	6309	6311	6311	6312
		≥4P					
	N.D.E	2P	6209	6209	6209	6209	6209
		≥4P					
Bearing Seal			V-rings				
Joint Seal			None				
Lubrication	Type		Mobile POLYREX EM				
	Grease fitting		None				
Terminal block			BMC 6 Pins (Orange)				
Terminal Box	Material		FC-200 Cast iron				
Additional terminal box			None				
Lead inlet	Main	Size	2xM40x1.5	2xM40x1.5	2xM40x1.5	2xM40x1.5	2xM50x1.5
	Lateral	Size	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5
	Auxiliar	Size	-	-	-	-	-
	Plug		Equipped with plastic cover for transportation and storage				
Shaft	Material		SAE 1040/45 (China: GB45)				
	Threaded hole in DE	2P	M16	M16	M16	M16	M20
		≥4P					
Key			Type A (China: type B)				
Vibration			Grade A				
Balance			1/2 key				
Nameplate	Material		AISI 304 Stainless Steel				
Painting	Plan		203A				
	Color		RAL 6002				
	Tropicalized		None				
Packaging			Crate				
Electrical Features							
Design			NE				
Voltage			380V with 6 terminals				
Winding	Impregnation		Continuous vacuum impregnation				
	Insulation Class		F(DT 80K)				
Service Factor			1.00				
Duty			S1				
Thermal Protection			PTC Thermistor -155 °C				
Space Heater			None				
Extended leads			None				
Ambient Temperature	Maximum		+40°C				
	Minimum		-20°C				
Starting Method			D.O.L				

Construction Features- W21 Prime GB1 (Cast iron Frame)

Frame			225S/M	250S/M	280S/M	315S/M	315L	355M/L	355A/B
Mechanical Features									
Nameplate Marks			CE; IEC 60034; GB/T 755						
Certificate			CEL						
Mounting			B3T						
Frame	Material		FC-200 Cast iron						
Protection Degree			IP55						
Grounding			Double grounding (Terminal box+Frame)						
Cooling method			TEFC (IC411)						
Fan	Material		Plastic						
Fan cover	Material		Steel Plate						
Endshields	Material		FC-200 Cast iron						
Drain hole			Automatic T-type labyrinth drain plug						
Bearings	Clearance (D.E)		C3						
	Clearance (N.D.E)		C3						
	Locking		The DE bearing is locked by the inner and outer bearing caps, and the NDE bearing is fixed by the preload spring						
	Bearing Life		20000h						
	D.E	2P	6314	6314	6314	6314	6314	6316	6316
		4-8P			6316	6319	6319	6322	6322
	N.D.E	2P	6314	6314	6314	6314	6314	6314	6314
		4-8P			6316	6316	6316	6319	6319
Bearing Seal			V-rings						
Joint Seal			None						
Lubrication	Type		Mobile POLYREX EM						
	Grease fitting		regreasing nipples in DE and NDE endshields						
Terminal block			BMC 6 Pins (Orange)						
Terminal Box	Material		FC-200 Cast iron						
Additional terminal box			None						
Lead inlet	Main	Size	2xM50x1.5	2xM63x1.5	2xM63x1.5	2xM63x1.5	2xM63x1.5	2xM80x2	2xM80x2
	Lateral	Size	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5
	Auxiliar	Size	-	-	-	-	-	-	-
	Plug		Equipped with plastic cover for transportation and storage						
Shaft	Material		SAE 1040/45 (China: GB45)				SAE 4140 (China: 42CrMo)		
	Threaded hole in DE	2P	M20	M20	M20	M20	M20	M20	M20
		≥4P						M24	M24
Key			Type B (China: type C)						
Vibration			Grade A						
Balance			1/2 key						
Nameplate	Material		AISI 304 Stainless Steel						
Painting	Plan		203A						
	Color		RAL 6002						
	Tropicalized		None						
Packaging			Crate						
Electrical Features									
Design			NE						
Voltage			380V with 6 terminals						
Winding	Impregnation		Continuous vacuum impregnation			Dripping			
	Insulation Class		F(DT 80K)						
Service Factor			1.00						
Duty			S1						
Thermal Protection			PTC Thermistor -155 °C						
Space Heater			None						
Extended leads			None						
Ambient Temperature	Maximum		+40°C						
	Minimum		-20°C						
Starting Method			D.O.L						

Construction Features- W21 Prime GB1-Pro (Cast iron Frame)

Frame			160L	180M	180L	200M/L	225S/M	315L
Mechanical Features								
Nameplate Marks			CE; IEC 60034; GB/T 755					
Certificate			CEL					
Mounting			B3T					
Frame	Material		FC-200 Cast iron					
Protection Degree			IP55					
Grounding			Single grounding (Terminal box)					Double grounding (Terminal box+Frame)
Cooling method			TEFC (IC411)					
Fan	Material		Plastic					
Fan cover	Material		Steel Plate					
Endshields	Material		FC-200 Cast iron					
Drain hole			Automatic T-type labyrinth drain plug					
Bearings	Clearance (D.E)		ZZ-C3				C3	
	Clearance (N.D.E)		ZZ-C3				C3	
	Locking		The DE bearing is locked by the inner bearing cap and a wave washer is installed in the NDE bearing				The DE bearing is locked by the inner and outer bearing caps, and the NDE bearing is fixed by the preload spring	
	Bearing Life		20000h					
	D.E	2P	6309	6311	6311	6312	6314	6314
		≥4P						6319
	N.D.E	2P	6209	6209	6209	6209	6314	6314
		≥4P						6316
Bearing Seal			V-rings					
Joint Seal			None					
Lubrication	Type		Mobile POLYREX EM					
	Grease fitting		None					
Terminal block			BMC 6 Pins (Orange)					
Terminal Box	Material		FC-200 Cast iron					
Additional terminal box			None					
Lead inlet	Main	Size	2xM40x1.5	2xM40x1.5	2xM40x1.5	2xM50x1.5	2xM50x1.5	2xM63x1.5
	Lateral	Size	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5
	Auxiliar	Size	-	-	-	-	-	-
	Plug		Equipped with plastic cover for transportation and storage					
Shaft	Material		SAE 1040/45 (China: GB45)					
	Threaded hole in DE	2P	M16	M16	M16	M16	M20	M20
		≥4P						
Key			Type A (China: type B)				Type B (China: type C)	
Vibration			Grade A					
Balance			1/2 key					
Nameplate	Material		AISI 304 Stainless Steel					
Painting	Plan		203A					
	Color		RAL 6002					
	Tropicalized		None					
Packaging			Crate					
Electrical Features								
Design			NE					
Voltage			380V with 6 terminals					
Winding	Impregnation		Continuous vacuum impregnation					Dripping
	Insulation Class		F(DT 80K)					
Service Factor			1.00					
Duty			S1					
Thermal Protection			PTC Thermistor -155 °C					
Space Heater			None					
Extended leads			None					
Ambient Temperature	Maximum		+40°C					
	Minimum		-20°C					
Starting Method			D.O.L					

Optional Features- W21 Prime GB1 (Cast iron Frame)

Frame	160M	160L	180M	180L	200M/L	225S/M	250S/M	280S/M	315S/M	315L	355M/L	355A/B
Mechanical Features												
Flange												
FF Flange	0	0	0	0	0	0	0	0	0	0	0	0
C-DIN Flange	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C Flange	0	0	0	0	0	0	0	0	0	0	0	0
Cable Gland												
Plastic	0	0	0	0	0	0	0	0	0	0	0	0
Brass	0	0	0	0	0	0	0	0	0	0	0	0
Stainless Steel	0	0	0	0	0	0	0	0	0	0	0	0
Insulation Class												
F DT 105K	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
H DT 105K	0	0	0	0	0	0	0	0	0	0	0	0
H DT 125K	0	0	0	0	0	0	0	0	0	0	0	0
Painting Plan												
Prime Only	0	0	0	0	0	0	0	0	0	0	0	0
202E	0	0	0	0	0	0	0	0	0	0	0	0
202P	0	0	0	0	0	0	0	0	0	0	0	0
211E	0	0	0	0	0	0	0	0	0	0	0	0
211P	0	0	0	0	0	0	0	0	0	0	0	0
212E	0	0	0	0	0	0	0	0	0	0	0	0
212P	0	0	0	0	0	0	0	0	0	0	0	0
Fan												
Conductive Plastic	NA	NA	NA	NA	NA	NA	NA	0	0	0	0	0
Aluminum	E	E	E	E	E	E	E	0	0	0	0	0
Cast iron	E	E	E	E	E	E	E	E	E	E	E	E
Protection Degree												
IP56	0	0	0	0	0	0	0	0	0	0	0	0
IP65	0	0	0	0	0	0	0	0	0	0	0	0
IP66	0	0	0	0	0	0	0	0	0	0	0	0
IPW55	0	0	0	0	0	0	0	0	0	0	0	0
IPW56	0	0	0	0	0	0	0	0	0	0	0	0
IPW65	0	0	0	0	0	0	0	0	0	0	0	0
IPW66	0	0	0	0	0	0	0	0	0	0	0	0
Grounding												
Single Grounding	P	P	P	P	P	NA	NA	NA	NA	NA	NA	NA
Double Grounding	0	0	0	0	0	P	P	P	P	P	P	P
Others												
Canopy	0	0	0	0	0	0	0	0	0	0	0	0
Cooling Method												
TEBC	0	0	0	0	0	0	0	0	0	0	0	0
TEAO	0	0	0	0	0	0	0	0	0	0	0	0
Shaft material												
SAE 1040/45	P	P	P	P	P	P	P	P	P	NA	NA	NA
SAE 4140	0	0	0	0	0	0	0	0	0	P	P	P
Electrical Features												
Winding Thermal protection												
Bimetal 130°C Alarm/trip	0	0	0	0	0	0	0	0	0	0	0	0
Bimetal 155°C Alarm/trip	0	0	0	0	0	0	0	0	0	0	0	0
Bimetal 180°C trip	0	0	0	0	0	0	0	0	0	0	0	0
PT100 2 wires - Alarm	0	0	0	0	0	0	0	0	0	0	0	0
PT100 3 wires - Alarm	0	0	0	0	0	0	0	0	0	0	0	0
PTC-130°C Alarm/trip	0	0	0	0	0	0	0	0	0	0	0	0
PTC-140°C Alarm/trip	0	0	0	0	0	0	0	0	0	0	0	0
PTC-155°C Alarm/trip	0	0	0	0	0	0	0	0	0	0	0	0
PTC-160°C trip	0	0	0	0	0	0	0	0	0	0	0	0
PTC-180°C trip	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
200-240 V	0	0	0	0	0	0	0	0	0	0	0	0
110-127 / 220-240 V	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
Rotation Direction												
Clockwise	0	0	0	0	0	0	0	0	0	0	0	0
Counterclockwise	0	0	0	0	0	0	0	0	0	0	0	0
Service Factor												
S.F 1.15	0	0	0	0	0	0	0	0	0	0	0	0

Optional Features- W21 Prime GB1-Pro (Cast iron Frame)

Frame	160L	180M	180L	200M/L	225S/M	315L
Mechanical Features						
Flange						
FF Flange	0	0	0	0	0	0
C-DIN Flange	0	NA	NA	NA	NA	NA
C Flange	0	0	0	0	0	0
Cable Gland						
Plastic	0	0	0	0	0	0
Brass	0	0	0	0	0	0
Stainless Steel	0	0	0	0	0	0
Insulation Class						
F DT 105K	0	0	0	0	0	0
H DT 80K	0	0	0	0	0	0
H DT 105K	0	0	0	0	0	0
H DT 125K	0	0	0	0	0	0
Painting Plan						
Prime Only	0	0	0	0	0	0
202E	0	0	0	0	0	0
202P	0	0	0	0	0	0
211E	0	0	0	0	0	0
211P	0	0	0	0	0	0
212E	0	0	0	0	0	0
212P	0	0	0	0	0	0
Fan						
Conductive Plastic	NA	NA	NA	NA	NA	0
Aluminum	E	E	E	E	E	0
Cast iron	E	E	E	E	E	E
Protection Degree						
IP56	0	0	0	0	0	0
IP65	0	0	0	0	0	0
IP66	0	0	0	0	0	0
IPW55	0	0	0	0	0	0
IPW56	0	0	0	0	0	0
IPW65	0	0	0	0	0	0
IPW66	0	0	0	0	0	0
Grounding						
Single Grounding	P	P	P	P	NA	NA
Double Grounding	0	0	0	0	P	P
Others						
Canopy	0	0	0	0	0	0
Cooling Method						
TEBC	0	0	0	0	0	0
TEAO	0	0	0	0	0	0
Shaft material						
SAE 1040/45	P	P	P	P	P	NA
SAE 4140	0	0	0	0	0	P
Electrical Features						
Winding Thermal protection						
Bimetal 130°C Alarm/trip	0	0	0	0	0	0
Bimetal 155°C Alarm/trip	0	0	0	0	0	0
Bimetal 180°C trip	0	0	0	0	0	0
PT100 2 wires - Alarm	0	0	0	0	0	0
PT100 3 wires - Alarm	0	0	0	0	0	0
PTC-130°C Alarm/trip	0	0	0	0	0	0
PTC-140°C Alarm/trip	0	0	0	0	0	0
PTC-155°C Alarm/trip	0	0	0	0	0	0
PTC-160°C trip	0	0	0	0	0	0
PTC-180°C trip	0	0	0	0	0	0
Space Heater						
110-127 V	0	0	0	0	0	0
200-240 V	0	0	0	0	0	0
110-127 / 220-240 V	0	0	0	0	0	0
380-480 V	0	0	0	0	0	0
Rotation Direction						
Clockwise	0	0	0	0	0	0
Counterclockwise	0	0	0	0	0	0
Service Factor						
S.F 1.15	0	0	0	0	0	0

Electrical Data

W21 Prime - GB1 Aluminum Frame

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kg.m²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	380 V						Full load current In (A)
													Efficiency at % Load			Power Factor at % Load			
kW	HP							Hot	Cold				50%	75%	100%	50%	75%	100%	
2P - 50Hz																			
0.55	0.75	80	0.183	9.9	3.9	4.3	0.0016	42	92	12.8	64	2923	78.2	82.3	84.6	0.58	0.69	0.77	1.28
0.75	1	L80	0.251	9.3	3.4	4	0.0021	40	88	14.5	64	2909	81.3	84.3	86.3	0.65	0.75	0.82	1.61
1.1	1.5	90S/L-1	0.366	11.3	3.5	4.5	0.0064	20	44	30.5	67	2925	84.2	87.0	87.8	0.68	0.79	0.85	2.24
1.1*	1.5	L90S/L-1	0.366	11.3	3.5	4.5	0.0064	20	44	30.5	67	2925	84.2	87.0	87.8	0.68	0.79	0.85	2.24
1.5	2	90S/L-1	0.501	10.5	3.5	4.2	0.0070	24	53	32.2	67	2915	87.0	87.8	88.9	0.71	0.81	0.85	3.02
1.5*	2	L90S/L-1	0.501	10.5	3.5	4.2	0.0070	24	53	32.2	67	2915	87.0	87.8	88.9	0.71	0.81	0.85	3.02
2.2	3	100L	0.731	10.0	3.3	4.6	0.0087	48	106	36.2	64	2931	87.2	89.2	90.2	0.62	0.75	0.81	4.57
3	4	L100L	0.998	10.2	3.4	4.5	0.0105	37	81	41.9	64	2928	89.0	90.2	91.1	0.67	0.78	0.84	5.96
4	5.5	112M-1	1.33	11.4	4	4.6	0.0110	31	68	49.3	65	2922	89.5	90.6	91.8	0.69	0.80	0.85	7.79
4*	5.5	L112M-1	1.33	11.4	4	4.6	0.0110	31	68	49.3	65	2922	89.5	90.6	91.8	0.69	0.80	0.85	7.79
4P - 50Hz																			
0.37	0.5	90S/L	0.246	9.2	3.3	3.8	0.0060	97	213	22.9	53	1464	79.1	83.0	84.3	0.49	0.61	0.70	0.953
0.55	0.75	90S/L	0.367	8.6	3.4	3.6	0.0075	89	196	24.2	53	1458	83.0	85.6	86.7	0.54	0.67	0.75	1.29
0.75	1	90S/L-1	0.500	9.3	3.5	3.8	0.0097	72	158	31.9	53	1460	84.9	87.3	88.2	0.53	0.66	0.74	1.75
0.75*	1	L90S/L-1	0.500	9.3	3.5	3.8	0.0097	72	158	31.9	53	1460	84.9	87.3	88.2	0.53	0.66	0.74	1.75
1.1	1.5	L100L	0.727	9.0	2.5	3.9	0.0208	117	257	44.8	56	1473	85.7	88.0	89.5	0.54	0.66	0.74	2.52
1.5	2	L100L	0.993	9.2	3.1	4	0.0208	74	163	44.8	56	1471	87.5	89.2	90.4	0.53	0.66	0.74	3.41
2.2	3	112M-1	1.46	9.2	3.5	4.2	0.0208	74	163	51.5	56	1465	89.2	90.3	91.4	0.52	0.65	0.74	4.94
2.2*	3	L112M-1	1.46	9.2	3.5	4.2	0.0208	74	163	51.5	56	1465	89.2	90.3	91.4	0.52	0.65	0.74	4.94
3	4	L132S	1.98	10.9	3.4	4.4	0.0755	74	163	89.6	60	1477	88.5	90.5	92.1	0.61	0.73	0.80	6.19
4	5.5	L132S	2.64	11.5	3.6	4.6	0.0755	50	110	89.6	60	1477	89.7	91.3	92.8	0.61	0.74	0.80	8.19
High Output Design																			
3	4	L132M	1.98	10.9	3.4	4.4	0.0755	74	163	89.6	60	1477	88.5	90.5	92.1	0.61	0.73	0.80	6.19
4	5.5	L132M	2.64	11.5	3.6	4.6	0.0755	50	110	89.6	60	1477	89.7	91.3	92.8	0.61	0.74	0.80	8.19
6P - 50Hz																			
0.25	0.33	80	0.253	5.4	3.0	3.3	0.0044	81	178	14.2	45	962	72.5	77.1	78.1	0.42	0.54	0.63	0.772
0.37	0.5	L80	0.375	5.9	3.1	3.4	0.0060	70	154	18.0	45	961	75.0	79.6	81.6	0.41	0.53	0.63	1.09
0.55	0.75	90S/L-1	0.553	5.4	2.1	2.8	0.0143	155	341	31.9	44	968	79.5	82.8	84.2	0.44	0.57	0.65	1.53
0.75	1	90S/L-1	0.754	5.9	2.6	2.9	0.0154	94	207	33.2	44	969	81.0	83.9	85.7	0.43	0.56	0.65	2.05
0.75*	1	L90S/L-1	0.754	5.9	2.6	2.9	0.0154	94	207	33.2	44	969	81.0	83.9	85.7	0.43	0.56	0.65	2.05
1.1	1.5	L100L	1.11	6.0	2	2.5	0.0293	103	227	44.8	48	967	85.0	86.7	87.2	0.49	0.61	0.69	2.78
1.5	2	112M-1	1.51	6.8	2.5	3	0.0293	102	224	51.5	52	968	85.8	87.1	88.4	0.48	0.61	0.68	3.79
1.5*	2	L112M-1	1.51	6.8	2.5	3	0.0293	102	224	51.5	52	968	85.8	87.1	88.4	0.48	0.61	0.68	3.79
2.2	3	132S	2.18	7.2	2.8	3.2	0.0985	17	37	71.9	60	982	86.8	88.8	89.7	0.52	0.66	0.74	5.04
3	4	132S	2.97	7.7	3	3.7	0.1196	22	48	80.7	60	983	86.8	89.5	90.6	0.49	0.63	0.72	6.99
4	5.5	L132S	3.96	7.7	3	3.1	0.1407	23	51	89.6	60	983	87.5	90.0	91.4	0.49	0.63	0.72	9.24
High Output Design																			
2.2	3	132M	2.18	7.2	2.8	3.2	0.0985	17	37	71.9	60	982	86.8	88.8	89.7	0.52	0.66	0.74	5.04
3	4	132M	2.97	7.7	3	3.7	0.1196	22	48	80.7	60	983	86.8	89.5	90.6	0.49	0.63	0.72	6.99
4	5.5	L132M	3.96	7.7	3	3.1	0.1407	23	51	89.6	60	983	87.5	90.0	91.4	0.49	0.63	0.72	9.24

Note: Standard power is only suitable for standard end cover (no flange design).
Power with * is designed for standard FF flange motor.
L means extended NDE endshield,
-1 means extended frame.

Electrical Data

W21 Prime - GB1 Cast Iron Frame

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kg.m²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	380 V						Full load current In (A)
													Efficiency at % Load			Power Factor at % Load			
kW	HP							Hot	Cold				50%	75%	100%	50%	75%	100%	
2P - 50Hz																			
5.5	7.5	160M	1.81	10.5	3.8	5.0	0.0555	88	194	135	70	2966	87.6	90.2	92.6	0.70	0.80	0.85	10.6
7.5	10	160L	2.46	10.3	3.8	5	0.0571	61	134	145	70	2965	89.4	91.5	93.3	0.69	0.79	0.85	14.4
11	15	160L	3.62	9.8	3.5	4.6	0.0588	38	84	145	70	2961	91.8	93.1	94.0	0.68	0.79	0.85	20.9
15	20	160L	4.94	10.0	3.9	4.7	0.0735	27	59	160	70	2960	92.6	93.7	94.5	0.71	0.81	0.86	28.0
18.5	25	180L	6.07	10.7	3.1	4.3	0.1243	30	66	215	70	2970	92.5	93.8	94.9	0.73	0.82	0.86	34.4
22	30	200M/L	7.20	9.9	5.2	4.9	0.2119	48	106	280	74	2977	93.0	94.0	95.1	0.65	0.76	0.83	42.3
30	40	200M/L	9.84	9.5	4.2	4.1	0.2119	37	81	290	74	2971	93.5	94.5	95.5	0.70	0.80	0.85	56.1
37	50	225S/M	12.1	9.8	3.4	4.2	0.3771	50	110	430	82	2977	92.9	94.3	95.8	0.71	0.81	0.85	69.1
45	60	225S/M	14.7	9.8	3.3	4.1	0.3742	41	90	440	82	2974	94.0	95.0	96.0	0.70	0.80	0.85	83.8
55	75	250S/M	18.0	10.0	4	4.1	0.5752	50	110	570	82	2975	93.7	94.9	96.2	0.77	0.85	0.88	98.7
75	100	280S/M	24.5	9.1	3.2	3.6	1.73	50	110	945	83	2984	94.1	95.3	96.5	0.79	0.86	0.88	134
90	125	280S/M	29.4	9.4	3.1	3.7	1.82	44	97	970	83	2984	94.3	95.5	96.6	0.78	0.86	0.88	161
110	150	315S/M	35.9	9.5	3.2	3.7	2.86	50	110	1135	83	2988	94.9	95.9	96.8	0.80	0.87	0.89	194
132	175	315S/M	43.0	9.8	3.4	3.7	3.38	50	110	1235	83	2988	95.2	96.2	96.9	0.82	0.88	0.90	230
160	220	315L	52.1	9.2	3.2	3.3	3.74	47	103	1285	83	2989	95.2	96.2	97.0	0.80	0.87	0.89	282
185	250	315L	60.3	10.5	3.1	3.7	3.59	47	103	1447	83	2989	95.2	96.2	97.1	0.77	0.85	0.88	328
200	270	315L	65.2	9.9	2.9	3.6	3.72	42	92	1450	83	2988	95.0	96.2	97.2	0.77	0.85	0.88	355
250	340	355M/L	81.5	9.1	3.2	3.2	6.01	45	99	1825	81	2988	95.5	96.2	97.2	0.84	0.89	0.90	434
315	430	355M/L	103	9.0	3.3	2.8	6.22	26	57	1830	81	2985	96.5	96.9	97.2	0.87	0.90	0.91	541
355	480	355A/B	116	9.2	3.3	3.2	7.40	29	64	2185	83	2987	96.7	97.1	97.2	0.85	0.89	0.90	617
High Output Design																			
11	15	L160M	3.62	9.8	3.5	4.6	0.0588	38	84	145	70	2961	91.8	93.1	94.0	0.68	0.79	0.85	20.9
15	20	L160M	4.94	10.0	3.9	4.7	0.0735	27	59	160	70	2960	92.6	93.7	94.5	0.71	0.81	0.86	28.0
4P - 50Hz																			
5.5	7.5	160M	3.61	9.2	3.2	4.0	0.1070	61	134	132	67	1483	91.7	93.0	93.4	0.62	0.74	0.80	11.2
7.5	10	160L	4.93	9.2	3.4	4.2	0.1311	53	117	157	67	1483	92.4	93.6	94.0	0.62	0.74	0.80	15.2
11	15	160L	7.23	9.1	3.5	4.4	0.1607	36	79	170	67	1482	92.5	93.7	94.6	0.61	0.73	0.80	22.1
15	20	180L	9.86	9.1	3.7	4	0.2263	48	106	225	64	1482	93.5	94.3	95.1	0.62	0.74	0.81	29.6
18.5	25	200M/L	12.1	9.7	3.7	4.3	0.2673	42	92	245	69	1485	93.5	94.5	95.3	0.59	0.72	0.79	37.3
22	30	200M/L	14.4	9.4	3.5	4.5	0.3074	38	84	260	69	1485	93.7	94.8	95.5	0.59	0.72	0.79	44.3
30	40	225S/M	19.7	9.0	2.7	3.3	0.7371	50	110	430	70	1485	94.7	95.4	95.9	0.71	0.81	0.85	55.9
37	50	225S/M	24.3	9.1	3.2	3.8	0.7371	50	110	440	70	1486	94.4	95.3	96.1	0.66	0.77	0.83	70.5
45	60	225S/M	29.5	9.0	3.3	3.9	0.7322	46	101	450	70	1486	94.4	95.3	96.3	0.61	0.73	0.80	88.7
55	75	250S/M	36.0	10.0	3.6	3.8	1.28	53	117	595	70	1488	95.3	96.0	96.5	0.65	0.76	0.82	105
75	100	280S/M	49.0	8.5	2.8	3.2	3.36	50	110	1005	72	1490	95.3	96.0	96.7	0.64	0.75	0.81	145
90	125	280S/M	58.8	9.0	3	3.3	3.51	41	90	1030	72	1490	95.4	96.1	96.9	0.63	0.74	0.80	177
110	150	315S/M	71.8	9.0	3.6	3.3	5.11	50	110	1225	72	1493	95.7	96.4	97.0	0.72	0.82	0.86	200
132	175	315S/M	86.1	9.0	3.7	3.3	5.44	50	110	1270	72	1493	95.8	96.5	97.1	0.72	0.82	0.86	240
160	220	315L	104	9.0	3.8	3.3	6.85	50	110	1505	72	1493	96.1	96.8	97.2	0.70	0.80	0.85	295
185	250	315L	121	8.2	3.4	3.1	6.03	48	106	1508	72	1491	96.0	96.5	97.3	0.70	0.80	0.84	344
200	270	355M/L	130	8.2	3.1	3.1	11.3	50	110	1915	79	1494	95.3	96.3	97.4	0.69	0.79	0.83	376
250	340	355M/L	163	9.0	3.3	3.3	11.3	39	86	1925	79	1494	95.4	96.3	97.4	0.66	0.77	0.82	476
315	430	355M/L	205	9.0	3.3	3.2	11.3	24	53	1935	79	1493	95.6	96.4	97.4	0.70	0.79	0.84	585
355	480	355A/B	232	8.4	3.3	2.4	14.7	33	73	2415	76	1493	96.0	96.6	97.4	0.73	0.82	0.85	652
High Output Design																			
11	15	L160M	7.23	9.1	3.5	4.4	0.1607	36	79	170	67	1482	92.5	93.7	94.6	0.61	0.73	0.80	22.1

Electrical Data

W21 Prime - GB1 Cast Iron Frame

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kg.m²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	380 V						Full load current In (A)
													Efficiency at % Load			Power Factor at % Load			
kW	HP							Hot	Cold				50%	75%	100%	50%	75%	100%	
6P - 50Hz																			
5.5	7.5	160M	5.44	9.9	3.0	4.2	0.2435	34	75	138	54	985	91.0	92.0	92.2	0.61	0.74	0.81	11.2
7.5	10	160L	7.42	10.5	3	3.9	0.2773	21	46	154	54	985	91.6	92.5	92.9	0.61	0.74	0.81	15.2
9.2	12.5	180M	9.12	10.1	3	3.9	0.2560	33	73	177	56	983	91.6	92.7	93.3	0.56	0.69	0.77	19.5
11	15	180L	10.9	10.2	3.1	4	0.3233	34	75	210	56	983	92.1	93.1	93.7	0.57	0.70	0.78	22.8
15	20	200M/L	14.8	7.5	3	3.6	0.4380	78	172	275	58	987	92.1	93.5	94.3	0.52	0.66	0.73	33.2
18.5	25	225S/M	18.2	9.6	2.8	4.1	0.7170	58	128	358	61	989	92.5	93.8	94.6	0.58	0.71	0.78	38.1
22	30	225S/M	21.7	10.4	2.9	4.3	0.9218	53	117	403	61	989	93.4	94.4	94.9	0.58	0.71	0.78	45.2
30	40	250S/M	29.5	9.5	2.8	3.8	1.14	41	90	475	61	989	94.0	94.8	95.3	0.57	0.70	0.77	62.1
37	50	250S/M	36.4	9.7	3	3.9	1.51	43	95	548	61	989	94.4	95.2	95.6	0.58	0.71	0.78	75.4
45	60	W315S/M	44.1	8.9	3	3.5	3.81	51	112	883	66	994	94.2	95.2	95.8	0.60	0.71	0.78	91.5
55	75	W315S/M	53.9	9.0	3.2	3.6	4.48	46	101	954	66	994	94.4	95.4	96.0	0.59	0.71	0.77	113
75	100	315S/M	73.5	8.1	2.7	3.2	6.69	63	139	1080	69	994	95.0	95.7	96.3	0.61	0.73	0.79	149
90	125	315S/M	88.2	9.0	3.2	3.4	7.96	52	114	1181	69	994	95.1	95.8	96.5	0.58	0.70	0.77	184
110	150	315L	108	9.2	2.8	3.1	11.0	53	117	1496	69	994	94.9	95.9	96.6	0.64	0.75	0.80	216
132	175	315L	129	8.8	3.3	3.5	11.2	46	101	1490	69	994	95.0	96.0	96.8	0.57	0.70	0.77	269
150	200	355M/L	147	6.3	2.2	2.5	14.8	50	110	1940	73	995	94.8	95.9	96.9	0.62	0.73	0.78	301
160	220	355A/B	157	6.5	2.4	2.8	18.7	50	110	2405	73	995	94.7	96.0	96.9	0.58	0.70	0.76	331
185	250	355A/B	181	6.5	2.4	2.6	19.1	50	110	2435	73	994	95.2	96.1	97.0	0.64	0.74	0.79	366
200	270	355A/B	196	6.9	2.2	2.5	19.6	50	110	2475	73	995	95.1	96.1	97.0	0.61	0.73	0.78	402
220	300	355A/B	216	6.5	2	2.3	19.1	50	110	2435	73	994	95.3	96.2	97.0	0.64	0.74	0.79	436
High Output Design																			
7.5	10	L160M	7.42	10.5	3.0	3.9	0.2773	21	46	154	54	985	91.6	92.5	92.9	0.61	0.74	0.81	15.2
45	60	280S/M	44.1	9.3	3.1	3.8	3.47	41	90	730	66	993	94.2	95.2	95.8	0.56	0.68	0.75	95.2
55	75	280S/M	54.0	9.0	3	3.7	4.14	41	90	805	66	992	94.6	95.4	96.0	0.56	0.69	0.76	115
8P - 50Hz																			
4	5.5	160M	5.30	6.9	2.0	3.0	0.1488	28	62	108	53	735	87.0	88.6	89.4	0.47	0.61	0.70	9.72
5.5	7.5	160M	7.29	7.4	2.2	3.1	0.2029	25	55	124	53	735	88.5	89.8	90.4	0.49	0.63	0.72	12.8
7.5	10	160L	9.94	7.9	2.5	3.4	0.2840	22	48	156	53	735	89.4	90.6	91.3	0.49	0.63	0.72	17.4
9.2	12.5	180M	12.3	6.6	2	2.8	0.2840	48	106	185	51	731	90.4	91.2	91.7	0.52	0.65	0.72	21.2
11	15	180L	14.6	6.8	2.2	2.9	0.3516	47	103	218	51	732	90.9	91.6	92.2	0.52	0.65	0.72	25.2
15	20	225S/M	19.8	6.9	1.9	2.3	0.6184	76	167	332	60	738	91.3	92.4	92.9	0.56	0.68	0.74	33.2
18.5	25	225S/M	24.4	8.0	2.5	2.8	0.7901	61	134	370	60	739	91.2	92.5	93.3	0.51	0.64	0.71	42.4
22	30	225S/M	29.0	8.2	2.6	2.9	0.9619	58	128	408	60	739	91.5	92.8	93.6	0.51	0.64	0.71	50.3
30	40	250S/M	39.5	7.1	2.3	3.1	1.20	48	106	482	60	739	92.4	93.4	94.1	0.49	0.62	0.70	69.2
37	50	250S/M	48.8	7.6	2.4	3.2	1.56	43	95	574	60	739	92.8	93.7	94.4	0.50	0.63	0.71	83.9
45	60	W315S/M	58.9	7.5	2.4	3	3.72	44	97	855	62	744	93.2	94.2	94.7	0.52	0.65	0.72	100
55	75	W315S/M	72.0	7.6	2.2	2.8	4.51	41	90	948	62	744	93.8	94.6	94.9	0.54	0.66	0.73	121
75	100	315S/M	98.3	7.0	2	2.4	5.86	38	84	1003	62	743	94.7	95.1	95.3	0.61	0.72	0.77	156
90	125	315S/M	118	7.0	2.2	2.4	7.14	28	62	1104	62	743	94.9	95.3	95.5	0.62	0.73	0.78	183
High Output Design																			
55	75	315S/M	72.0	7.5	2.2	2.6	5.31	54	119	959	62	744	94.5	94.9	94.9	0.60	0.71	0.77	115

Electrical Data

W21 Prime - GB1-Pro Aluminum Frame

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kg.m²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	380 V						Full load current In (A)
													Efficiency at % Load			Power Factor at % Load			
kW	HP							Hot	Cold				50%	75%	100%	50%	75%	100%	
2P - 50Hz																			
1.1	1.5	L80	0.365	9.5	2.4	3.5	0.0018	22	48	15.3	64	2937	84.2	86.2	87.8	0.68	0.78	0.83	2.29
2.2	3	90S/L-1	0.729	10.5	2.8	4	0.0055	17	37	33.8	67	2939	88.5	89.3	90.2	0.73	0.83	0.87	4.26
2.2*	3	L90S/L-1	0.729	10.5	2.8	4	0.0055	17	37	33.8	67	2939	88.5	89.3	90.2	0.73	0.83	0.87	4.26
5.5	7.5	L132S	1.80	10.7	3.3	4	0.0467	40	88	83.5	67	2980	90.1	91.2	92.6	0.75	0.83	0.87	10.4
7.5	10	L132S	2.45	10.2	3.3	4	0.0467	33	73	84.2	67	2980	89.5	91.7	93.3	0.75	0.83	0.87	14.0
High Output Design																			
5.5	7.5	L132M	1.80	10.7	3.3	4	0.0467	40	88	83.5	67	2980	90.1	91.2	92.6	0.75	0.83	0.87	10.4
7.5	10	L132M	2.45	10.2	3.3	4	0.0467	33	73	84.2	67	2980	89.5	91.7	93.3	0.75	0.83	0.87	14.0
4P - 50Hz																			
0.55	0.75	L80	0.363	8.0	1.9	3.3	0.0049	34	75	18.2	49	1476	82.4	84.5	86.7	0.55	0.68	0.76	1.27
0.75	1	L80	0.495	8.8	2.4	3.6	0.0049	26	57	18.6	49	1475	83.6	86.1	88.2	0.53	0.66	0.75	1.72
1.1	1.5	90S/L-1	0.727	9.6	2.3	3.2	0.0094	42	92	34.0	53	1474	87.0	88.5	89.5	0.58	0.70	0.77	2.43
1.1*	1.5	L90S/L-1	0.727	9.6	2.3	3.2	0.0094	42	92	34.0	53	1474	87.0	88.5	89.5	0.58	0.70	0.77	2.43
1.5	2	90S/L-1	0.991	10.5	3	3.7	0.0094	25	55	35.3	53	1475	87.4	89.2	90.4	0.56	0.69	0.76	3.32
1.5*	2	L90S/L-1	0.991	10.5	3	3.7	0.0094	25	55	35.3	53	1475	87.4	89.2	90.4	0.56	0.69	0.76	3.32
2.2	3	L100L	1.45	8.2	2	3.4	0.0170	44	97	45.5	56	1480	89.3	90.6	91.4	0.53	0.66	0.74	4.94
3	4	L100L	1.97	8.6	2.3	3.6	0.0170	29	64	46.6	56	1480	89.3	90.0	92.1	0.53	0.66	0.73	6.78
4	5.5	112M-1	2.64	7.9	2	3	0.0176	31	68	52.5	56	1475	90.6	91.0	92.8	0.63	0.73	0.79	8.29
4*	5.5	L112M-1	2.64	7.9	2	3	0.0176	31	68	52.5	56	1475	90.6	91.0	92.8	0.63	0.73	0.79	8.29
5.5	7.5	L132S	3.61	10.6	2.8	3.6	0.0755	47	103	90.5	60	1485	92.0	92.5	93.4	0.67	0.78	0.84	10.7
7.5	10	L132S	4.92	10.6	2.9	3.7	0.0668	33	73	91.8	60	1485	92.0	93.0	94.0	0.67	0.78	0.83	14.6
High Output Design																			
5.5	7.5	L132M	3.61	10.6	2.8	3.6	0.0755	47	103	90.5	60	1485	92.0	92.5	93.4	0.67	0.78	0.84	10.7
7.5	10	L132M	4.92	10.6	2.9	3.7	0.0668	33	73	91.8	60	1485	92.0	93.0	94.0	0.67	0.78	0.83	14.6
6P - 50Hz																			
0.55	0.75	L80	0.549	6.4	2.1	3.1	0.0052	38	84	19.5	45	975	79.3	82.5	84.2	0.46	0.58	0.67	1.48
1.1	1.5	90S/L-1	1.09	6.0	1.8	2.7	0.0154	59	130	36.6	44	980	83.3	85.2	87.2	0.48	0.60	0.68	2.82
1.1*	1.5	L90S/L-1	1.09	6.0	1.8	2.7	0.0154	59	130	36.6	44	980	83.3	85.2	87.2	0.48	0.60	0.68	2.82
1.5	2	L100L	1.49	7.1	1.9	3	0.0254	52	114	45.8	48	982	86.0	87.9	88.4	0.48	0.61	0.68	3.79
2.2	3	112M-1	2.18	7.6	2	2.8	0.0250	56	123	52.0	52	982	86.0	88.8	89.7	0.50	0.62	0.69	5.40
2.2*	3	L112M-1	2.18	7.6	2	2.8	0.0250	56	123	52.0	52	982	86.0	88.8	89.7	0.50	0.62	0.69	5.40
5.5	7.5	L132S	5.41	8.2	3	3.3	0.1247	16	35	92.0	60	991	88.5	90.3	92.2	0.50	0.63	0.72	12.6

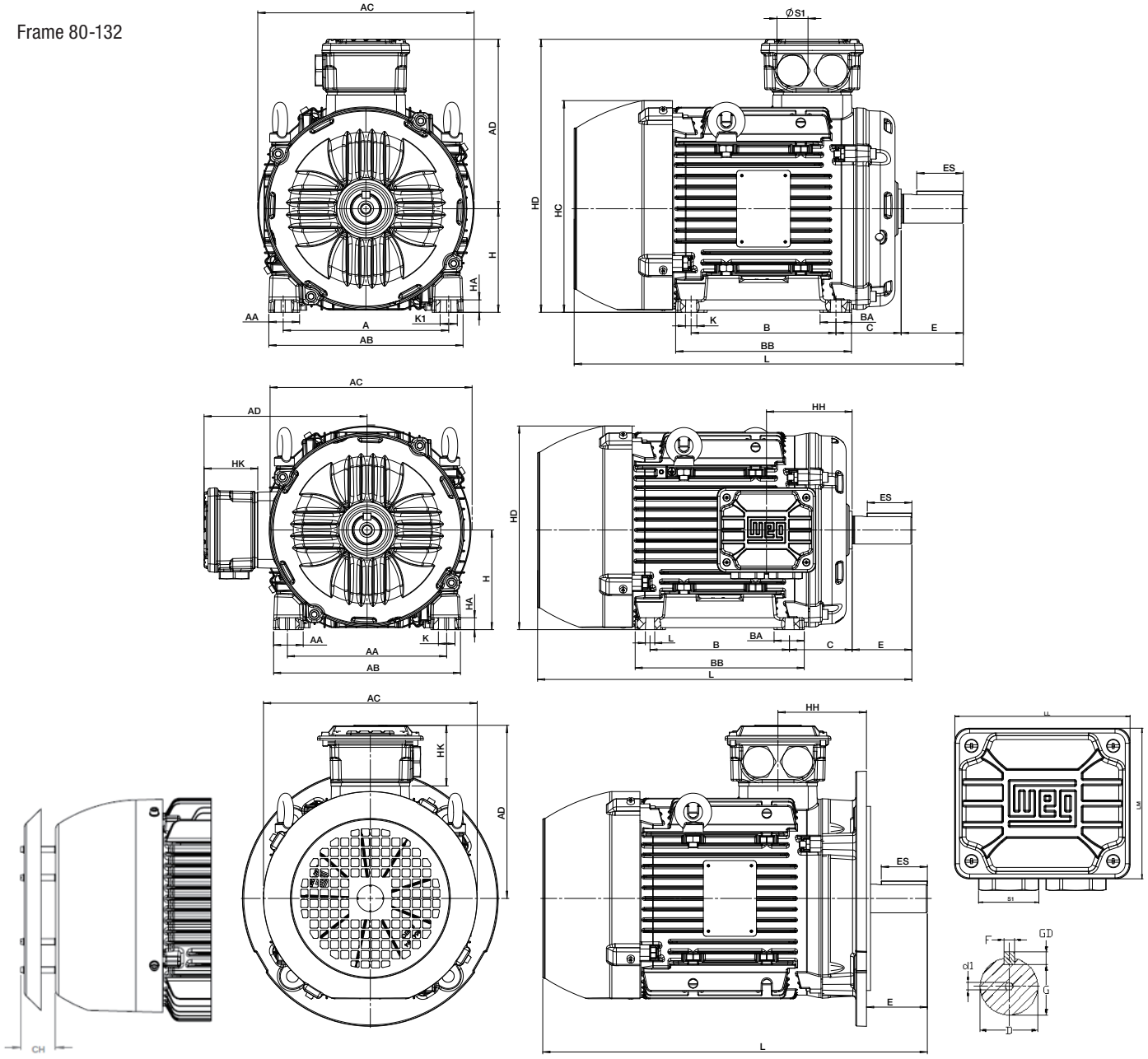
W21 Prime - GB1-Pro Cast Iron Frame

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kg.m²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	380 V						Full load current In (A)
													Efficiency at % Load			Power Factor at % Load			
kW	HP							Hot	Cold				50%	75%	100%	50%	75%	100%	
2P - 50Hz																			
18.5	25	160L	6.07	10.9	3.5	4.0	0.0735	16	35	166	70	2970	92.1	93.2	94.9	0.74	0.83	0.87	34.0
22	30	L180M	7.19	10.8	3	3.8	0.1216	20	44	208	70	2980	92.3	93.4	95.1	0.74	0.83	0.87	40.4
37	50	200M/L	12.1	10.2	4.2	3.5	0.1958	22	48	288	74	2975	93.0	94.1	95.8	0.74	0.83	0.86	68.2
4P - 50Hz																			
15	20	160L	9.84	8.6	3.0	3.1	0.1516	23	51	182	67	1485	93.2	94.0	95.1	0.71	0.81	0.85	28.2
18.5	25	L180M	12.2	8.6	3	3.1	0.1907	27	59	222	64	1483	93.4	94.3	95.3	0.70	0.80	0.84	35.1
22	30	180L	14.4	9.2	3.2	3.3	0.2057	24	53	232	64	1485	93.4	94.3	95.5	0.66	0.77	0.83	42.2
30	40	200M/L	19.6	9.9	3.4	3.6	0.3329	24	53	300	69	1488	93.5	94.5	95.9	0.65	0.77	0.82	58.0
200	270	315L	131	8.8	3.6	3.3	5.74	37	81	1490	72	1492	96.0	96.5	97.4	0.68	0.79	0.83	376
6P - 50Hz																			
11	15	160L	10.8	10.5	2.7	3.7	0.2877	13	29	182	54	990	92.0	92.5	93.7	0.63	0.76	0.82	21.8
15	20	180L	14.8	9.4	2.6	3.5	0.3101	22	48	231	56	989	92.6	93.1	94.3	0.60	0.73	0.79	30.6
18.5	25	200M/L	18.2	7.6	2.8	3	0.4363	51	112	295	58	992	93.0	93.5	94.6	0.56	0.69	0.76	39.1
22	30	200M/L	21.6	7.2	2.6	2.8	0.4363	43	95	305	58	992	92.2	93.2	94.9	0.58	0.70	0.77	45.7
30	40	225S/M	29.5	9.4	2.5	3.6	0.9910	37	81	467	61	992	94.1	94.8	95.3	0.63	0.73	0.80	59.8
160	220	315L	157	7.8	2.8	3	9.70	41	90	1505	69	993	95.5	96.0	96.9	0.61	0.73	0.79	318

Note: Standard power is only suitable for standard end cover (no flange design).
Power with * is designed for standard FF flange motor. L means extended NDE endshield, -1 means extended frame.

Aluminum Frame

Frame 80-132

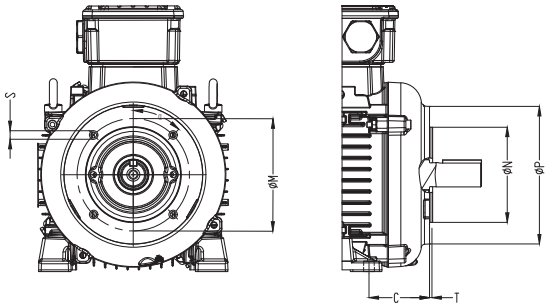


IEC	Feet											Terminal Box					Keyway			
Frame	A	B	K	K1	C	H	AA	AB	BA	BB	HA	LL	LM	HK	HH	S1	F	GD	G	ES
80	125	100	10	13	50	80	24	150	29	124	8	100	85	55	80	2xM20x1.5	6	6	15.5	28
90S/L	140	100 / 125	10	13	56	90	24	164	25	146	9	100	85	55	81	2xM25x1.5	8	7	20	36
90S/L-1	140	100 / 125	10	13	56	90	24	164	25	146	9	100	85	55	81	2xM25x1.5	8	7	20	36
100L	160	140	12	16	63	100	30	188	30	170	12	100	85	55	86	2xM25x1.5	8	7	24	45
112M	190	140	12	18	70	112	37.5	219	36	170	12	137	117	72	106	2xM32x1.5	8	7	24	45
112M-1	190	140	12	18	70	112	37.5	219	36	170	12	137	117	72	106	2xM32x1.5	8	7	24	45
132S	216	140	12	18	89	132	35.5	248	37	170	12	137	117	72	119	2xM32x1.5	10	8	33	63
132M	216	178	12	18	89	132	35.5	248	39.5	210	12	137	117	72	119	2xM32x1.5	10	8	33	63
Mounting	Only with feet											All								

IEC	Shaft end			Drip Cover		External											Bearings	
Frame	E	D	d1	LCH	CH	L	L*	AC	AD	HC	HD	AC	AD	HD	AC	AD	DE	NDE
80	40	19j6	DM6	296	19	277	300	163	145	170	225	163	145	162	163	145	6204	6203
90S/L	50	24j6	DM8	349	19	330	/	186	155	190	245	186	155	187	186	155	6205	6204
90S/L-1	50	24j6	DM8	378	19	360	389	186	155	190	245	186	155	187	186	155	6205	6204
100L	60	28j6	DM10	407	31	376	411	209	165	210	265	209	165	205	209	165	6206	6205
112M	60	28j6	DM10	424	35	389	/	230	197	237	309	230	197	227	230	197	6207	6206
112M-1	60	28j6	DM10	459	35	424	457	230	197	237	309	230	197	227	230	197	6207	6206
132S	80	38k6	DM12	526	35	491	518	271	222	282	354	271	222	268	271	222	6308	6207
132M	80	38k6	DM12	526	35	491	518	271	222	282	354	271	222	268	271	222	6308	6207
Mounting	All							Top				Sideway			Footless		All	

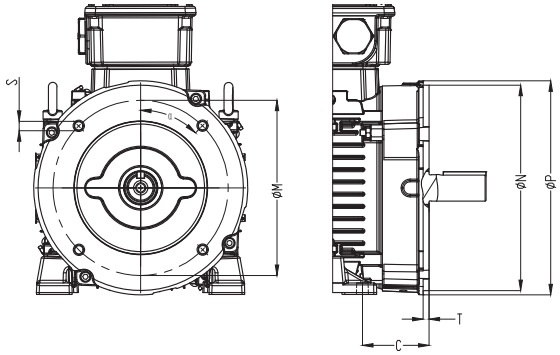
Aluminum Frame
Flange Dimension

C-DIN Flange dimension



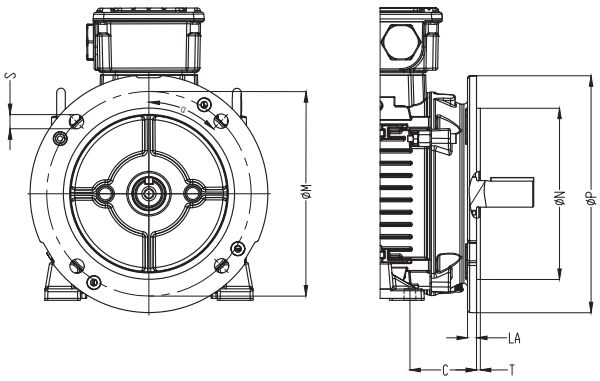
C-DIN Flange dimension											
IEC	Bearings		Flange	C	M	N	P	S		T	α
Frame	DE	NDE						Qty	Size		
80	6204	6203	C-120	50	100	80	120	4	M6	3	45°
90S/L	6205	6204	C-140	56	115	95	140	4	M8	3	45°
90S/L-1	6205	6204	C-140	56	115	95	140	4	M8	3	45°
100L	6206	6205	C-160	63	130	110	160	4	M8	3.5	45°
112M	6207	6206	C-160	70	130	110	160	4	M8	3.5	45°
112M-1	6207	6206	C-160	70	130	110	160	4	M8	3.5	45°
132S	6308	6207	C-200	89	165	130	200	4	M10	3.5	45°
132M	6308	6207	C-200	89	165	130	200	4	M10	3.5	45°

FC Flange dimension



FC Flange dimension											
IEC	Bearings		Flange	C	M	N	P	S		T	α
Frame	DE	NDE						Qty	Size		
80	6204	6203	FC-95	50	95.2	76.2	143	4	UNC1/4"×20	4	45°
90S/L	6205	6204	FC-149	56	149.2	114.3	165	4	UNC3/8"×16	4	45°
90S/L-1	6205	6204	FC-149	56	149.2	114.3	165	4	UNC3/8"×16	4	45°
100L	6206	6205	FC-149	63	149.2	114.3	165	4	UNC3/8"×16	4	45°
112M	6207	6206	FC-184	70	184.2	215.9	225	4	UNC1/2"×13	6.3	45°
112M-1	6207	6206	FC-184	70	184.2	215.9	225	4	UNC1/2"×13	6.3	45°
132S	6308	6207	FC-184	89	184.2	215.9	225	4	UNC1/2"×13	6.3	45°
132M	6308	6207	FC-184	89	184.2	215.9	225	4	UNC1/2"×13	6.3	45°

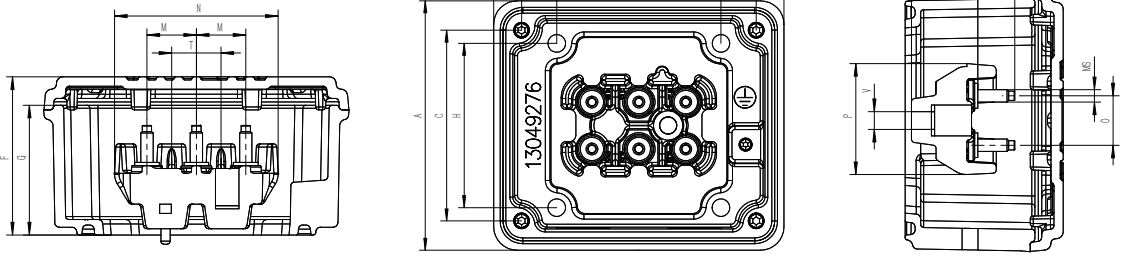
FF Flange dimension



FF Flange dimension												
IEC	Bearings		Flange	C	LA	M	N	P	S		T	α
Frame	DE	NDE							Qty	Size		
80	6204	6203	FF-165	50	10	165	130	200	4	12	3.5	45°
			FF-215		11	215	180	250	4	15	3.5	45°
90S/L	6205	6204	FF-165	56	10	165	130	200	4	12	3.5	45°
			FF-215		11	215	180	250	4	15	3.5	45°
90S/L-1	6205	6204	FF-165	56	10	165	130	200	4	12	3.5	45°
			FF-215		11	215	180	250	4	15	3.5	45°
100L	6206	6205	FF-215	63	11	215	180	250	4	15	4	45°
			FF-265		12	265	230	300	4	15	4	45°
112M	6207	6206	FF-215	70	11	215	180	250	4	15	4	45°
			FF-265		12	265	230	300	4	15	4	45°
112M-1	6207	6206	FF-215	70	11	215	180	250	4	15	4	45°
			FF-265		12	265	230	300	4	15	4	45°
132S	6308	6207	FF-265	89	12	265	230	300	4	15	4	45°
			FF-300		18	300	250	350	4	19	5	45°
132M	6308	6207	FF-265	89	12	265	230	300	4	15	4	45°
			FF-300		18	300	250	350	4	19	5	45°

* The size of the fixing bolts for fixing the flange of the motor frame 100-132 to the machine is M12.

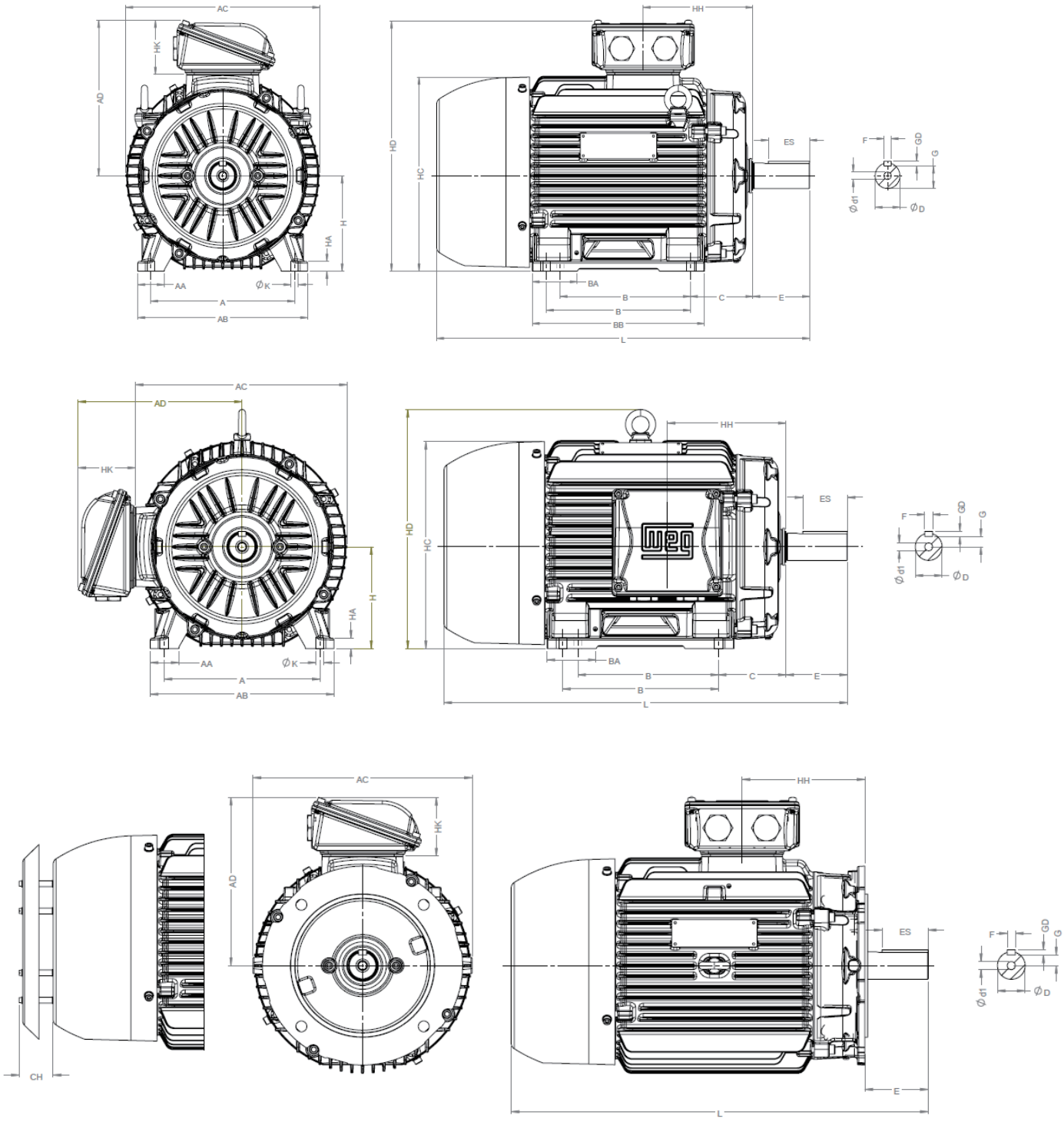
W21Prime GB1/GB1Pro AL Frame - T-box



IEC	Terminal Box Dimensional																
Frame	A	B	C	D	E	F	G	H	M	N	O	P	Q	R	S	T	V
80-100	85	99	79	77	56	51.2	42	56	16	53	16	35	19.5	8.5	4	16	5.8
112-132	117	137	88	108	70	67.7	58	70	23	75	23	51.3	23	10.5	5	23	5.8
Mounting	All																

Mecanical Data

Cast Iron Frame



Notes:

** Shaft dimensions for II pole motors, only for direct coupling.*

- All dimensions are in millimeters.

- Larger and smaller flanges on request.

- The data for frame 355M/L shown above are for B3T horizontal mounting applications under standard coupling loads.

The customer must inform when application is vertical or under special coupling loads.

- The AC dimension for B3L or B3R mounting on frame 355M/L is 740mm.

- The values shown are subject to change without prior notice.

To obtain guaranteed values please contact our nearest sales office.

Mecanical Data

Cast Iron Frame

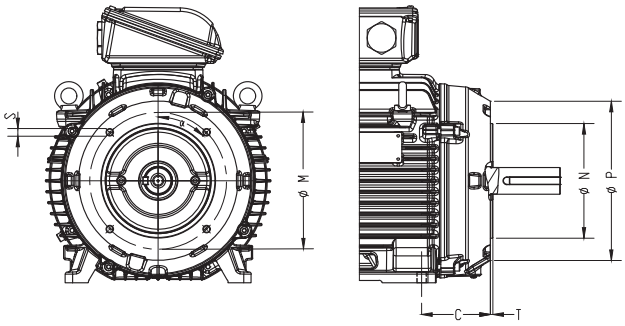
IEC	Feet										Terminal Box					Keyway			
Frame	A	B	K	C	H	AA	AB	BA	BB	HA	LL	LM	HK	HH	S1 - EUR	F	GD	G	ES
160M	254	210	14.5	108	160	36	292	85	255	17	198.5	190	103	213	2xM40x1.5	12	8	37	80
160L		254						85	299					187					
180M	279	241		121	180	51	329	85	296	19				241.5		14	9	42.5	
180L		279						88	335					212.5					
200M/L	318	267/305	18.5	133	200	65	385	105.5	369	30	228.5	217.5	120	209	2xM50x1.5	16	10	49	
225S/M*	356	286/311	18.5	149	225	80	436	102	395	28	269	285	151	204	2xM50x1.5	16	10	49	100
225S/M																18	11	53	125
250S/M*	406	311/349	24	168	250	90	486	135	447	30				217	2xM63x1,5				
250S/M																		58	
280S/M*	457	368/419		190	280	100	557	151	517	42	314	312	155	265		18	11	58	
280S/M																20	12	67.5	
315S/M*	508	406/457	28	216	315	120	630	184	626	48	379	382	176	264		18	11	58	125
315S/M																22	14	71	160
315L*		508						219	752		404	436	220	285		18	11	58	125
315L																22	14	71	160
355M/L*	610	560/630		254	355	140	750	230	760	50				339	2xM80x2,0	20	12	67.5	125
355M/L																28	16	90	200
355A/B*		710/800						325	955		460	544	328	340		20	12	67.5	125
355A/B																28	16	90	200
Mounting	Only with feet										All								

IEC	Shaft end			Drip Cover		External											Bearings	
Frame	E	D	D1	LCH	CH	L	AC	AD	HC	HD	AC	AD	HC	HD	AC	AD	DE	NDE
160M	110	42k6	DM16	673	52	621	354	278	335	438	354	278	339	392	354	378	6309-ZZ-C3	6209-ZZ-C3
160L				717		665												
180M		48k6		742	57	685	376	294	371	474	376	294	370	423	376	294	6311-ZZ-C3	
180L				780		723												
200M/L		55m6	DM20	835	67	768	414	334	414	534	414	334	414	476	414	334	6312-ZZ-C3	
225S/M*	110	55m6	M20	958	82	876	488	395	469	620	488	395	469	540	488	395	6314 C3	6314 C3
225S/M	140	60m6		988	82	906												
250S/M*				1064	82	982	528	415	514	665	528	415	508	579	528	415		
250S/M		65m6																
280S/M*		65m6		1154	95	1059	599	436	580	751	599	436	575	646	599	436	6314 C3	
280S/M		75m6		1154		1059											6316 C3	
315S/M*	140	65m6		1327		1232	657	526	644	845	657	526	648	738	657	526	6314 C3	
315S/M	170	80m6		1357		1262											6319 C3	6316 C3
315L*	140	65m6		1437		1342		570		891		570		757		570	6314 C3	6314 C3
315L	170	80m6		1467		1372											6319 C3	6316 C3
355M/L*	140	75m6		1501		1406	736	620	723	975	736	620	730	839	736	620	6316 C3	6314 C3
355M/L	210	100m6	M24	1571		1476											6322 C3	6319 C3
355A/B*	140	75m6	DM20	1696		1601		728	723	1083		701				728	6316 C3	6314 C3
355A/B	210	100m6	M24	1766		1671											6322 C3	6319 C3
Mounting	All						Top				Sideway				Footless		All	

Mecanical Data

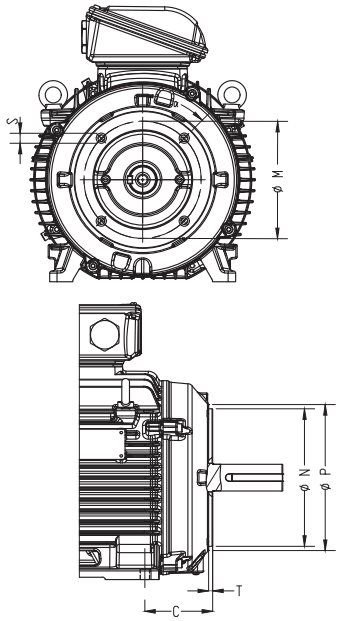
Cast Iron Frame

C-DIN Flange dimension



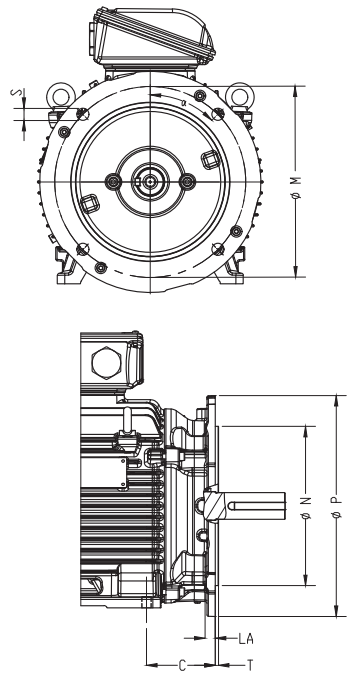
IEC Frame	Flange C-DIN								
	Flange	C	M	N	P	S		T	α
						Qty	Size		
160M	C 250	108	215	180	250	4	M12	4	45°
160L									

FC Flange dimension



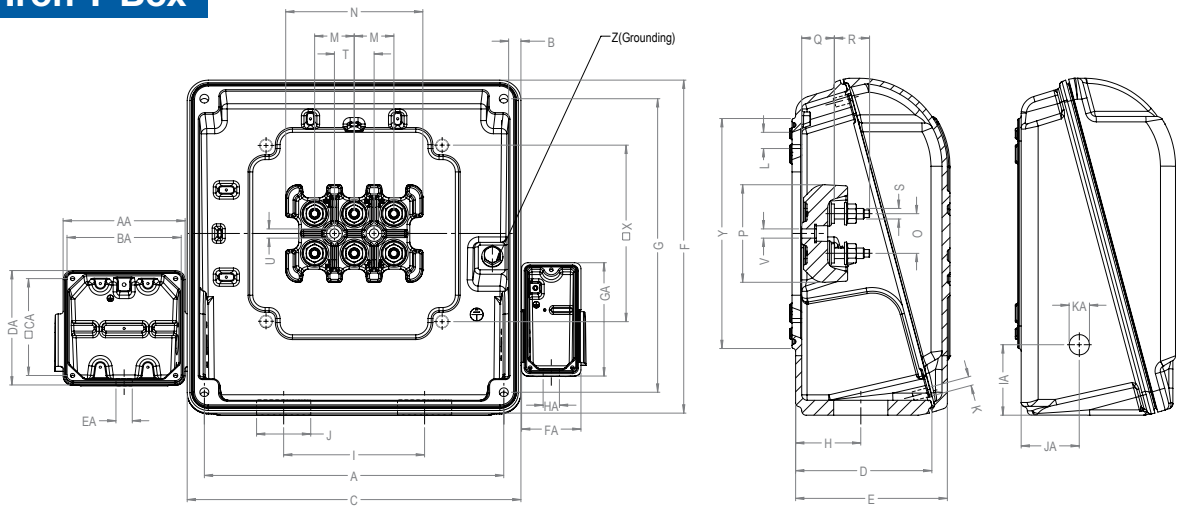
IEC Frame	Flange FC								
	Flange	C	M	N	P	S		T	α
						Qty	Size		
160M	FC-184	108	184.15	215.9	225	4	UNC 1/2' 13	6.35	45°
160L									
180M	FC-228	121	228.6	266.7	280				
180L									
200M/L		133							
225S/M*	FC-279	149	279.4	317.5	395	8	UNC 5/8' x11		22°30'
225S/M									
250S/M*	FC-355	168	355.6	406.4	455				
250S/M									
280S/M*		190							
280S/M									
315S/M*	FC-368	216	368.3	419.1					
315S/M									
315L*									
315L									
355M/L*		254							
355M/L									
355A/B*									
355A/B									

FF Flange dimension



IEC Frame	Flange FF									
	Flange	C	LA	M	N	P	S		T	α
							Qty	Size		
160M	FF-300	108	16	300	250	347	4	19	5	45°
160L										
180M		121								
180L										
200M/L	FF-350	133	18	350	300	397				
225S/M	FF-400	149		400	350	448	8			22°30'
250S/M	FF-500	168	20	500	450	548				
280S/M		190				550				
315S/M	FF-600	216	16	600	550	660/780*		24	6	
315L										
355M/L	FF-740	254	22	740	680	800/880*				
355A/B										

Cast Iron T-Box



Frame	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
160	175	4	198.5	90	103	190	175	46	84	2xM40x1.5	M8x1.25	M8x1.25	28	90	28	60	21.5	20.5	M6x1.0	28	6.6
180																					
200	204	4.5	230	107	120	217.5	204	59	94	2xM50x1.5			35	112	35	74	24	24	M8x1.25	35	9.5
225S/M	235	12.5	269	133	151	285	260	71	110		M10x1.5	M10x1.5	44	140	44	94	28	28	M10x1.5	45	10.5
250S/M										2xM63x1.5											
280S/M	275	13.5	314		155	312	275		126		M12x1.75	M12x1.75	45	153	45	108	34	40	M12x1.75		
315S/M	340	14.5	379	162	176	382	345	78	160												
315L	365		404	202	220	436	390	97	200	2xM80x2.0		M14x2.0	65	210	65	146	48	48	M16x2.0	65	
355M/L																					
355A/B																					

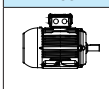
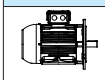
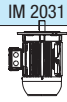
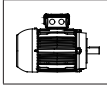
Frame	V	X	Y	Z	AA	BA	CA	DA	EA	FA	GA	HA	IA	JA	KA	Max number of connectors		
																Main	Accessories	Space heater
160	M6x1.0	110	140	5.5-25mm²	139	117	117	133	M20x1.5	68	101.4	M20x1.5	47	40	M20x1.5	15	26	4
180																		
200	M8x1.25	120	155	5.5-35mm²										45				
225S/M	M10x1.5	150	192	25-50mm²							131.2		62	48				
250S/M			197															
280S/M			204	35-70mm²									77	56				
315S/M		200	260										82	69				
315L		260	300	25-185mm²									97	79				
355M/L																		
355A/B																		

Mounting

The mounting configuration of the W21 Prime motor complies with the IEC 60034-7 standard. The following figure shows the standard mounting configuration of the W21 Prime motor and other configurations. The letter after the specified mounting configuration (as shown in the table below) is used to define the location of the terminal box. Therefore, it can be noticed that the motor mounting in the WEG company document is shown without the IM code, for example IM B3 is written as B3, as shown below:

B3R-the terminal box is located on the right side of the frame when viewed from the motor shaft end.
B3L-the terminal box is located on the left side of the frame when viewed from the motor shaft end.
B3T-the terminal box is located on the top of the frame.

Note:
1.IM B34 and IM B14 (two C-DINs that comply with DIN 42.948) are not suitable for motors with frame sizes above 132.
2. For motors installed vertically with shafts extending downward, it is recommended to use a rain shield to prevent small objects from entering the fan.
3. For motors installed vertically with shafts extending upward and used in liquid environments, it is recommended to use a rubber oil retainer to prevent liquid from entering the motor through the shaft.

Basic mountings	Other type of mounting				
IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071
					
IM B35	IM V15	IM V36	- *)	- *)	- *)
IM 2001	IM 2011	IM 2031	IM 2051	IM 2061	IM 2071
					
IM B34	IM V17	IM V37	- *)	- *)	- *)
IM 2101	IM 2111	IM 2131	IM 2151	IM 2161	IM 2171
					
IM B5	IM V1	IM V3	IM B30		
IM 3001	IM 3011	IM 3031			
					
IM B14	IM V18	IM V19			
IM 3601	IM 3611	IM 3631			
					

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www.weg.net

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