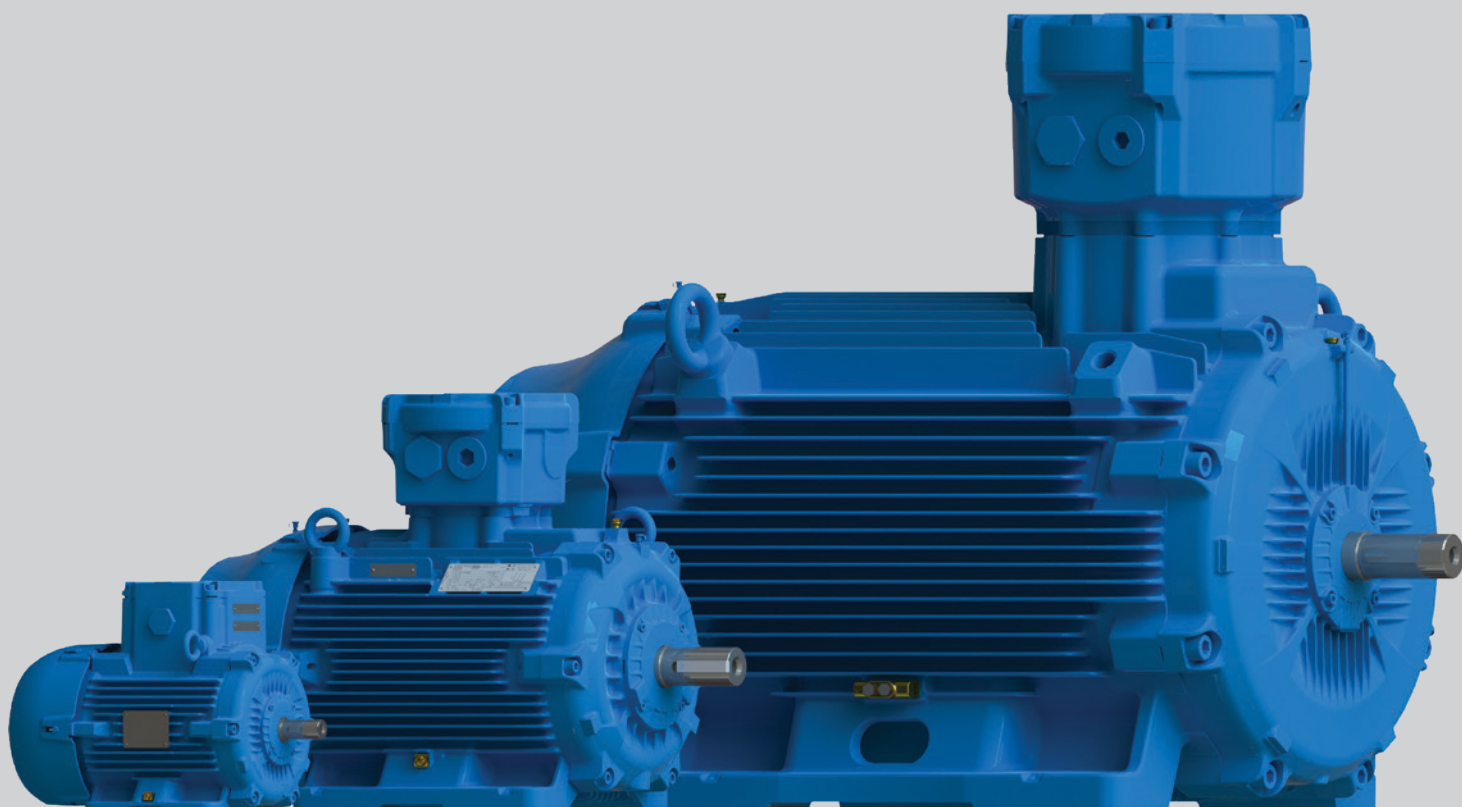


W22Xdb Flameproof Motors

High Efficiency Low Voltage
IEC Frame Sizes 71 to 355

Technical Catalogue
European Market



Motors | Automation | Energy | Transmission & Distribution | Coatings

W22Xdb Flameproof Motors

The W22Xdb line represents all that is modern in rotating equipment for explosive atmospheres.

As a result of intense research and development, WEG launches its new flameproof motor line, the W22Xdb. Incorporating the same innovative concepts of the W22 general purpose motors, the W22Xdb line is an evolution in the market of classified area products offering high efficiency levels, energy saving, low operational costs, extended lifetime, low maintenance and assured safety!

Learn more about the W22Xdb line including the benefits and advantages for your plant.



Standards and Classification of Explosive Atmospheres


ATEX Directives

The ATEX Directives were adopted by the European Union (EU) to simplify free trade between member states whilst aligning the technical and legal requirements for products utilised in potentially explosive atmospheres.

The ATEX Product Directive 2014/34/EU ("ATEX 114"), effective from 20th April 2016 (and replacing the former 94/9/EC or "ATEX 95"), places responsibilities on the equipment manufacturer, whereas the Worker Protection Directive 1999/92/EC - "ATEX 153" (formerly "ATEX 137") places obligations on the end user.

Manufacturers' products must comply with the Essential Health and Safety Requirements for equipment intended for use in potentially explosive atmospheres, and follow a Conformity Assessment Procedure.

This Procedure requires the manufacturer to obtain from a Notified Body ("Ex NB") an EC Type Examination Certificate for the relevant product(s), a Production Quality Assurance Notification (assessed and periodically audited by an ExNB) and the internal production control by the manufacturer to guarantee the products are in compliance with the ATEX Directive.

ATEX compliant products can be easily recognised by the explosion protection symbol  and the **CE** mark certifying conformity with the Product Directive. Directive 1999/99/EC ("ATEX 153") lays down the minimum requirements for improving the safety and health protection of workers at risk from explosive atmospheres, and also classifies the environment into zones and outlines which category of equipment can be used in each zone.

Further, the Directive highlights the responsibilities of End Users to assess potential risks of their workplaces and equipment, prepare an Explosion Protection Document and provide suitable warning signage for areas where explosive atmospheres may occur.

IECEx System

According to its website, www.iecex.com, the objective of the IECEx System is defined as the means "to facilitate international trade in equipment and services utilised in potentially explosive atmospheres, whilst maintaining the required level of safety".

The IECEx System is based on the use of International Electrotechnical Commission (IEC) standards, and is a certification system which verifies compliance to those standards associated with the safe use of equipment in installations where a potential risk of fire or explosion may exist.

Whilst it is voluntary, and differs for example from ATEX (where compliance is mandatory for equipment installed within the European Economic Area), the IECEx System is now accepted in many Countries around the globe, and aims to be the world approval system for electrical equipment intended for installation in potentially explosive atmospheres. Product Certification under the IECEx Scheme requires the involvement of an IECEx Approved Certification Body ("ExCB") to test products and samples according to IEC standards and issue the IECEx Test Report ("ExTR"). Additionally, it is mandatory to comply with a Quality Management System previously assessed to be in conformity with ISO 9001, following the specific Ex requirements of ISO/IEC80079-34.

An IECEx Quality Assessment Report ("QAR") is provided once the results of an on-site assessment of the manufacturer's quality management system has been conducted by the ExCB, and found to be in compliance with the requirements of the IECEx Certified Equipment Scheme and, most importantly, the document IECEx OD 005.

Thereafter, the ExCB will review and endorse the ExTR and QAR and then issue the IECEx Certificate of Conformity ("CoC").

IECEx certificates are issued electronically and are all available for viewing or printing on the IECEx public access website.



Hazardous Areas

According to the IEC 60079-10-1 and IEC 60079-10-2 standards, the definition of an Explosive Atmosphere is a “mixture with air, under atmospheric conditions, of flammable substances in the form of gas, vapors, dust, fibers, or flyings which, after ignition, permits self-sustaining propagation”.

A Hazardous Area is “an area in which an explosive atmosphere is or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of equipment”.

Explosions may occur either due to the transfer of flames or through overheating. For this reason, motors with flameproof protection are constructed in such a way as to prevent propagation of an internal explosion in to the hazardous area in which they are installed.

Hazardous areas are classified through Zones, Groups and Temperature Classes. The classifications according to the International Electrotechnical Commission (IEC) are shown below:

Classification per Zones: based upon the frequency of the occurrence and duration of an explosive atmosphere and based on the type of flammable material (gases/vapors or dusts):

- **IEC Zone 0 (gases/vapours) or 20 (dusts)**
An explosive atmosphere with continuous grade of release
- **IEC Zone 1 (gases/vapours) or 21 (dusts)**
An explosive atmosphere with primary grade of release
- **IEC Zone 2 (gases/vapours) or 22 (dusts)**
An explosive atmosphere with secondary grade of release

Zone 2/22: area in which an explosive atmosphere is not likely to occur in normal operation but, if it does occur, will persist for a short period only

Zone 1/21: area in which an explosive atmosphere is likely to occur in normal operation occasionally

Zone 0/20: area in which an explosive atmosphere is present continuously or for long periods or frequently

(not applicable for motors and generators)

Classification per Groups: subdivision according to the type of flammable material present.

IEC Group I: gases present in underground coal mines (example: methane)

IEC Group II: gases present in other explosive atmospheres. Group II subdivisions:

- **IEC Group IIA:** example: Propane
- **IEC Group IIB:** example: Ethylene
- **IEC Group IIC:** example: Hydrogen

IEC Group III: dusts

Group III subdivisions:

- **IEC Group IIIA:** solid particles, larger than 500 µm suspended - combustible dusts
- **IEC Group IIIB:** non-conductive dust, equal or smaller than 500 µm, with electrical resistivity less than or equal to 10³ Ω.m - grime
- **IEC Group IIIC:** conductive dust, equal or smaller than 500 µm, with electrical resistivity less than or equal to 10³ Ω.m - metallic dust

Classification per Temperature Classes: according to the temperature limitation, related to the ignition temperature of the flammable material present, IEC 60079-0 defines the limits for electrical equipment surface temperature for Groups I, II and III.

Group I - Underground Coal Mines (Methane and Coal Dust)

Conditions	Maximum surface temperature (°C)*
Where coal dust is not likely to form a layer	450
Where coal dust can form a layer	150

*On any surface of the enclosure.

Group II - Gases & Vapours

Temperature class	Maximum surface temperature (°C)
IEC	
T1	450
T2	300
T3	200
T4	135
T5	100
T6	85

Group III - Conductive Dusts

Conditions	Maximum surface temperature (°C)*
With dust layers	Maximum surface temperature of the apparatus must be determined for a given depth of dust layer
Without dust layers	Maximum surface temperature of the apparatus shall not exceed the assigned value. For W22Xdb motors the standard assigned temperature is T125 °C.

*On any surface of the enclosure.

Equipment Protection Levels - EPL

In addition to the traditional hazardous area classification of the IEC 60079-10-1 and IEC 60079-10-2, which considers the possibility of an explosion occurring, IEC 60079-0, has introduced a new risk assessment approach known as the “Equipment Protection Level” that considers, besides the hazardous location itself, the consequences of a possible explosion. The primary intent of the EPL is to allow flexibility in the use of equipment in the various zones. For example it may be appropriate to use Gc equipment in a Zone 1 area where the amount of flammable gas / vapour is small and the location is unmanned virtually all of the time. Conversely Gb equipment may be selected in Zone 2 to allow this equipment to be used in the event of a persistent emergency condition. IEC 60079-14 explains in detail how to use EPLs in a risk assessment.

The EPL designations are defined as follows:

First Indices

- M** - Mines
- G** - Gas
- D** - Dust

Second Indices

- a** - Equipment having a very high level of protection
- b** - Equipment having a high level of protection
- c** - Equipment having an enhanced high level of protection

Relationship between Groups, Zones and EPLs are detailed in the table below:

Group	Zone	EPL
Group I	-	Ma
		Mb
Group II	0	Ga
	1	Gb
	2	Gc
Group III	20	Da
	21	Db
	22	Dc

Protection

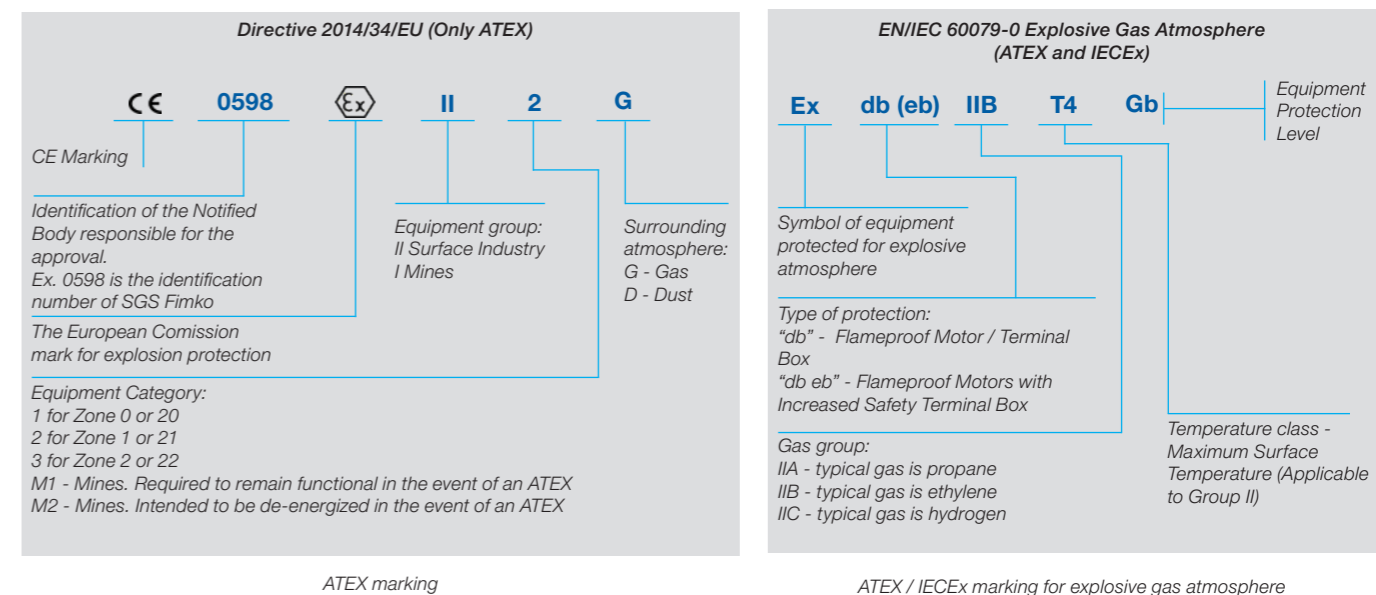
As standard the W22Xdb range was designed for operation in hazardous areas classified as IEC Zones 1 and 2, Groups IIA and IIB or IIA, IIB and IIC, Temperature Classification T4 and EPL Gb.

The W22Xdb also offers added protection against combustible dusts, for operation in hazardous areas classified as Zones 21 and 22, Groups IIIA, IIIB and IIIC and EPL Db.

Further, W22Xdb is prepared for operation in underground coal mines, Group I, Category M2 and EPL Mb.

Markings

The marking of Equipment meets the ATEX Directives and IECEx Scheme.



Features and Benefits

Concept

The mechanical design of the W22Xdb line is based on the highly successful W22 general purpose motor range, with the incorporation of some innovative new features, including: modern frame design with new fins and feet to ensure higher mechanical stiffness and excellent heat dissipation; redesigned endshields to reduce bearing operating temperatures thus increasing the re-lubrication intervals; and an advanced cooling system to reduce noise levels and significantly improve heat dissipation.

Energy Efficiency

Besides relying on the safe operation of the product, users of W22Xdb motors can also reduce their energy consumption and CO₂ emissions due the technology employed and the levels of performance achieved.

The W22Xdb motor line was designed to meet the efficiency levels defined in IEC 60034-30-1. As standard the motors meet the IE2 High Efficiency level, with IE3 Premium and IE4 Super Premium Efficiency available as an option.

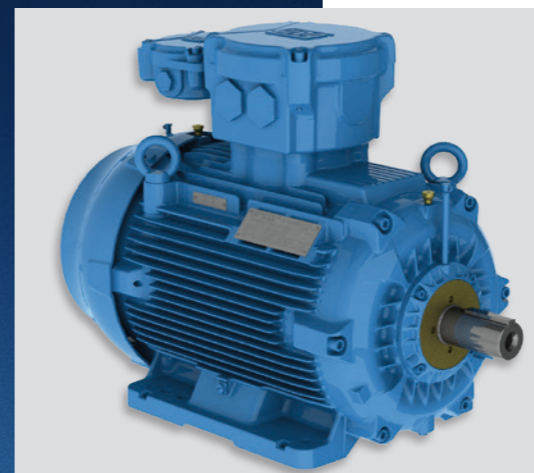
The ratios between rated power, speed and frame size of the new W22Xdb line follow the applicable parts of the IEC Standards 60034 and 60072. This ensures interchangeability with the existing WEG W21 flameproof line and, where replacing lower efficiency motors, offers users the means to achieve a rapid return on their investment.

Careful Construction

In designing the W22Xdb line, special consideration was given to the needs of Industry to reduce their operating costs.

Aside from the energy saving aspects afforded by these machines, a variety of carefully chosen features were incorporated as standard to ensure maximum performance and durability:

- IP56 degree of protection: an enhanced protection against the ingress of liquid contaminant agents into the motor enclosure.
- Space heaters: prevent accumulation of condensation inside the motor and maintain the winding insulation resistance within acceptable levels, thus prolonging the life of the motor.
- Eyebolts: ensuring safety to operators, offering easy handling, shipment and storage, and allowing the motors to meet specific local standards and directives regarding product lifting.
- Thermal protection: winding thermistors fitted as standard to protect the motor winding in case of overload.
- Paint finish: high performance polyurethane coating (respecting the C3 Medium criteria of the ISO 12944 standard) protects the motor surface even in the harshest of environments.



Versatility

The W22Xdb line incorporates a comprehensive range of options and accessories, enabling them to fulfil a variety of customer specifications without losing the primary focus on the safety of the application.

Among the most widely used accessories are winding or bearing thermal protections, additional terminal boxes for accessories, higher degrees of protection (up to IP66), sintered drain plugs for removal of condensed water, stainless steel shafts / hardware and enhanced painting systems.

W22Xdb motors can be supplied for mounting with feet, flanges or both, in horizontal or vertical orientations. Specifically for axial fan applications, they can be supplied without cooling fans and fan covers, and with loose leads in lieu of a terminal box.

Easy Installation and Simplified Maintenance

The W22Xdb concept also focuses on the provision of easier and safer installation and maintenance procedures. Integrally cast feet provide higher mechanical stiffness particularly suited to heavy duty applications, and frames 90 and above feature double drilled holes in order to simplify the replacement and retrofitting of existing motors. Extended lubrication intervals for W22Xdb motors are achieved due to the reduced bearing temperatures, a benefit obtained with the revolutionary motor cooling system, realized in this case by the endshield designs. To further extend bearing lifetime, motors in frame sizes 160 and above are supplied with grease fittings to permit re-lubrication. For all frame sizes, flat areas for placement of accelerometers are provided in both the vertical and horizontal planes, thus permitting easier monitoring of vibration levels. Additionally for motor frame sizes 160 and above, SPM nipples/adaptors are provided as standard.

Variable Frequency Drives Operation

The use of VFD's is recognized as one of the major driving forces behind energy saving due to their ability to adjust the motor's output to best suit load requirements.

For this reason, W22Xdb motors are equipped with the WISE[®] insulation (WEG Insulation System Evolution) which permits them to operate with variable frequency drives (VFD's) at voltages up to 690V.

To further enhance their use with VFD's, Insulated Bearings and Shaft Grounding Rings are available.

Additionally, for operation at low frequencies the W22Xdb line can be produced in TEBC versions (with forced ventilation) or fitted with an Encoder¹ for applications which require precise positioning operations.

Due to their outstanding performance, W22Xdb motors are capable of maintaining the T4 temperature class even when driven by a VFD ².

¹) Encoder must be compatible with the hazardous location.

²) For VFD operation, output power derating must be considered.



W22Xd Products for Hazardous Areas

Standard Version

- **W22Xdb** - Flameproof motors (Ex db) - suitable for Zones 1 and 2, Gas groups IIA and IIB
- Temperature class: T4
- Certifying body: BASEEFA or INERIS
- Directives / Standards: ATEX / IECEx
- Efficiency level: High Efficiency - IE2 according standard IEC 60034-30-1
- Rated outputs: 0.12 to 370 kW
- Suitable for variable frequency drive operation*
- Ambient temperature: -20 °C to +40 °C

**For the application of hazardous atmosphere motors with frequency inverters please contact the nearest WEG office.*

Optional Versions / Features on Request:

- Flameproof motors with increased safety terminal box (Ex db eb) - suitable for Zones 1 & 2, Gas groups IIA and IIB
- Flameproof / Dust Ignition Proof motors (Ex db / Ex tb) - suitable for Zones 1 & 2 / 21 & 22, Gas / Dust groups IIA, IIB / IIIA, IIIB, IIIC
- Flameproof / Dust Ignition Proof motors with increased safety terminal box (Ex db eb / Ex tb) - suitable for Zones 1 & 2 / 21 & 22, Gas / Dust groups IIA, IIB / IIIA, IIIB, IIIC
- Flameproof motors (Ex db) - suitable for Zones 1 & 2, Gas groups IIA, IIB, IIC
- Flameproof motors with increased safety terminal box (Ex db eb) - suitable for Zones 1 & 2, Gas groups IIA, IIB, IIC
- Flameproof / Dust Ignition Proof motors (Ex db / Ex tb) - suitable for Zones 1 & 2 / 21 & 22, Gas / Dust groups IIA, IIB, IIC / IIIA, IIIB, IIIC
- Flameproof / Dust Ignition Proof motors with increased safety terminal box (Ex db eb / Ex tb) - suitable for Zones 1 & 2 / 21 & 22, Groups IIA, IIB, IIC / IIIA, IIIB, IIIC
- Flameproof motors (Ex db) - suitable for Group I mining
- Flameproof motors with increased safety terminal box (Ex db eb) - suitable for Group I mining
- Temperature class: T5 or T6
- Efficiency levels: Super Premium Efficiency - IE4
Premium Efficiency - IE3
Standard Efficiency - IE1
- Ambient temperature: -55 °C to +80 °C
- Certification according TR/CU (EAC Ex), INMETRO, ANZEx, CERTEX, PESO/CCoE, SONCAP, SASO, MASC.

Meet the Other Members of the W22X Family

W22Xeb

Increased safety Level of protection “eb” motors (Ex eb machines)
For use in areas classified as Zone 1 and 2
Power ratings 0.18 kW to 250 kW
Frames: 63 to 355M/L
Voltage: up to 690 V

W22Xec

Increased safety level of protection “ec” motors/dust ignition proof motors (Ex ec/Ex tc machines)
For use in areas classified as Zone 2 and 22
Power ratings 0.12 kW to 450 kW
Frames 63 to 355A/B
Voltage: up to 690 V

Other WEG Industrial Motors for Hazardous Locations

Pressurized Motors (Ex p machines)

For use in areas classified as Zone 1 and 2
Power ratings up to 50,000 kW (other outputs upon request)
Frames 280 to 1800
Voltages: up to 13,800 V

W22Xtb

Dust ignition proof motors (Ex tb machines)
For use in areas classified as Zone 21
Power ratings 0.12 kW to 450 kW
Frames 63 to 355A/B
Voltage: up to 690 V

W22Xdb High Voltage

Flameproof motors (Ex db/Ex db eb machines)
For use in areas classified as Zone 1 and 2
Power ratings 75 kW to 9,000 kW
Frames 315 to 1000
Voltage: up to 11,000 V

HGF Ex ec

Increased safety level of protection “ec” (Ex ec machines)
For use in areas classified as Zone 2
Power ratings 75 kW to 3150 kW
Frames: 315L/A/B to 630
Voltage: up to 11,000 V

Please visit us at www.weg.net to find out more about WEG hazardous area products.

Construction Features

Frame		71	80	90S/L	100L	112M	132S/M	
General features								
Certification		ATEX, IECEx						
Nameplate marking		Ex db IIB T4 Gb or Ex db IIC T4 Gb						
Ambient temperature range		-20°C up to +40°C						
Temperature class		T4						
Mechanical features								
Mounting form		Horizontal Foot (IM B3T)						
Frame Material		FC-200 (EN GJL 200) Cast iron						
Degree of protection		IP56						
Grounding		Double grounding - one inside the terminal box and one on the frame						
Cooling method		Totally enclosed fan cooled - IC411						
Fan material		Aluminum						
Fan cover material		FC-200 (EN GJL 200) Cast iron						
Endshields material		FC-200 (EN GJL 200) Cast iron						
Bearings	Drive end side	2p 4 - 12p	6202-ZZ	6204-ZZ	6205-ZZ	6206-ZZ	6207-ZZ	6308-ZZ
	Non drive end side	2p 4 - 12p		6203-ZZ	6204-ZZ	6205-ZZ	6206-ZZ	6207-ZZ
Locking		Fixed at DE with spring washer at NDE		Fixed at DE with external bearing cap and spring washer at NDE				
Shaft Seal		Nitrile rubber Oil Seal at DE / Lip Seal at NDE						
Joints seal		Lumomoly						
Lubrication	Type of grease	Mobil Polyrex EM						
	Grease fitting	Without grease fitting						
Terminal block		BMC 6 terminals						
Terminal box material		FC-200 (EN GJL 200) Cast iron						
Cable entries	Main	Size	M25x1.5		M32x1.5			
	Threaded plug		Plastic					
	Accessory	Size	2xM20x1.5 lateral holes (with certified threaded plugs)					
Shaft	Material		AISI 1040/45					
	DE Threaded hole	2p 4 - 12p	M5	M6	M8	M10	M12	
	Key type		A					
	Direction of rotation		Bidirectional					
Vibration level		Grade A						
Balance	2p	Without		With half key				
	4 - 12p	Without	With half key					
Nameplate material		Stainless steel AISI 304						
Painting	Type	205P						
	Performance	C3 Medium criteria of the ISO 12944 Standards						
	Colour	IE2 and IE3 Motors: RAL 5009 IE4 Motors: RAL 6002						
Electrical features								
Design		N						
Voltage / Frequency	IE2 and IE3	220-240/380-415 // 460 V (50 // 60Hz)			380-415/660-690 // 460 V (50//60Hz)			
	IE4	NA			400/690 // 460 V (50//60Hz)			
Winding	Impregnation	Dip and bake						
	Insulation class	F (DT 80K)						
Service factor		1.00						
Rotor		Aluminium die cast						
Thermal protection		Thermistor PTC, 1 per phase, for tripping at 150°C						
Space Heater	Voltage	200-240 V						
	Output	7,5 W	11 W	22 W	30 W			

Frame		160M/L	180M/L	200M/L	225S/M	250S/M	280S/M	315S/M	315L	355M/L	
General features											
Certification		ATEX, IECEx									
Nameplate marking		Ex db IIB T4 Gb or Ex db IIC T4 Gb									
Ambient temperature range		-20°C up to +40°C									
Temperature class		T4									
Mechanical features											
Mounting form		Horizontal Foot (IM B3T)									
Frame material		FC-200 (EN GJL 200) Cast iron									
Degree of protection		IP56									
Grounding		Double grounding - one inside the terminal box and one on the frame									
Cooling method		Totally enclosed fan cooled - IC411									
Fan material		Aluminum									
Fan cover material		FC-200 (EN GJL 200) Cast iron									
Endshields material		FC-200 (EN GJL 200) Cast iron									
Bearings	Drive end side	2p 4 - 12p	6309-C3	6311-C3	6312-C3	6314-C3	6314-C3	6314-C3	6314-C3	6314-C3	6316-C3
	Non drive end side	2p 4 - 12p	6308-C3	6309-C3	6212-C3			6316-C3	6319-C3	6319-C3	6319-C3
Locking		Fixed at DE with external bearing cap and spring washer at NDE			Fixed at DE with external and internal bearing cap and spring washer at NDE						
Shaft Seal		Nitrile rubber Oil Seal at DE / Lip Seal at NDE			Viton Oil Seal						
Joints seal		Lumomoly									
Lubrication	Type of grease	Mobil Polyrex EM									
	Grease fitting	With grease fitting									
Terminal block		BMC 6 terminals			Ex d bushing isolator						
Terminal box material		FC-200 (EN GJL 200) Cast iron									
Cable entries	Main	Size	2xM40x1.5		2xM50x1.5		2 x M63 x 1.5				
	Threaded plug		1xPlastic + 1xCertified								
	Accessory	Size	2 x M20 x 1.5 lateral holes (with certified threaded plugs)								
Shaft	Material		AISI 1040/45						AISI 4140		
	DE Threaded hole	2p 4 - 12p	M16	M16	M20	M20	M20	M20	M20	M20	M24
	Key type		A			B					
	Direction of rotation		Bidirectional								
Vibration level		Grade A									
Balance	2p	Without		With half key							
	4 - 12p	Without	With half key								
Nameplate material		Stainless steel AISI 304									
Painting	Type	205P									
	Performance	C3 Medium criteria of the ISO 12944 Standards									
	Colour	IE2 and IE3 Motors: RAL 5009 IE4 Motors: RAL 6002									
Electrical features											
Design		N									
Voltage / Frequency	IE2 and IE3	220-240/380-415 // 460 V (50//60Hz)			380-415/660-690 // 460 V (50//60Hz)						
	IE4	NA			400/690 // 460 V (50//60Hz)						
Winding	Impregnation	Dip and bake			Continuous flow						
	Insulation class	F (DT 80K)									
Service factor		1.00									
Rotor		Aluminium die cast									
Thermal protection		Thermistor PTC, 1 per phase, for tripping at 150°C									
Space Heater	Voltage	200-240 V									
	Output	30 W	38 W	56 W	140 W			174 W			

Optional Features

Frame	71	80	90S/L	100L	112M	132S/M
General features						
Nameplate marking						
Ex db eb IIB T4 Gb	NA	NA	0	0	0	0
Ex db eb IIC T4 Gb	NA	NA	0	0	0	0
Ex db I Mb	0	0	0	0	0	0
Ex db eb I Mb	NA	NA	0	0	0	0
Ex tb IIC T125°C Db IP6X	0	0	0	0	0	0
Ambient temperature design						
-20°C to -40°C	0	0	0	0	0	0
-40°C to -55°C	0	0	0	0	0	0
-20°C to +50°C	0	0	0	0	0	0
-20°C to +60°C	0	0	0	0	0	0
-20°C to +70°C	0	0	0	0	0	0
-20°C to +80°C	0	0	0	0	0	0
Temperature Class						
T5	0	0	0	0	0	0
T6	0	0	0	0	0	0
Certifications						
EAC Ex	0	0	0	0	0	0
INMETRO	0	0	0	0	0	0
PESO / CCOE	0	0	0	0	0	0
ANZEx	0	0	0	0	0	0
SASO	0	0	0	0	0	0
SONCAP	0	0	0	0	0	0
MASC	0	0	0	0	0	0
VIK Execution	0	0	0	0	0	0
Mechanical options						
Terminal box						
Auxiliary terminal box (thermal protection)	NA	NA	0	0	0	0
Terminal block						
Ex db eb Increased Safety terminal block	NA	NA	0	0	0	0
Ex db eb increased safety bushing isolator	NA	NA	NA	NA	NA	NA
Cable glands						
Ex db / Ex db eb cable glands (brass)	0	0	0	0	0	0
Mounting						
Flange FF (IEC)	0	0	0	0	0	0
Flange FF (IEC) - superior	0	0	0	0	0	0
Flange FF (IEC) - inferior	NA	NA	0	0	0	0
Flange C-DIN (IEC)	0	0	0	0	0	0
Flange C-DIN (IEC) - superior	0	0	0	0	0	0
Flange C-DIN (IEC) - inferior	0	0	0	0	0	0
Flange C (NEMA)	0	0	0	0	0	0
Flange D (NEMA)	NA	0	0	0	0	0
Dowel pins	NA	NA	0	0	0	0
Cooling fan						
Cast iron	0	0	0	0	0	0
Bronze	0	0	0	0	0	0
Bearings						
2RS ball bearings at both ends	0	0	0	0	0	0
ZZ ball bearings at both ends	S	S	S	S	S	S
Shaft sealing						
Viton seal (IP56)	0	0	0	0	0	0
Lip seal for low temperature	0	0	0	0	0	0
Oil seal for low temperature	0	0	0	0	0	0
Taconite labyrinth (IP65, IP56)	NA	NA	0	0	0	0
W3 Seal (IP65, IP56, IP66)	NA	NA	0	0	0	0
Joints / Bolts sealing						
Molykote DC 33 (joint sealing)	0	0	0	0	0	0
Lumomoly (bolt sealing)	0	0	0	0	0	0

S (Standard) / NA (Not available) / O (Optional)

Frame	160M/L	180M/L	200M/L	225S/M	250S/M	280S/M	315S/M	315L	355M/L
General features									
Nameplate marking									
Ex db eb IIB T4 Gb	0	0	0	0	0	0	0	0	0
Ex db eb IIC T4 Gb	0	0	0	0	0	0	0	0	0
Ex db I Mb	0	0	0	0	0	0	0	0	0
Ex db eb I Mb	0	0	0	0	0	0	0	0	0
Ex tb IIC T125°C Db IP6X	0	0	0	0	0	0	0	0	0
Ambient temperature design									
-20°C to -40°C	0	0	0	0*	0*	0*	0*	0*	0*
-40°C to -55°C	0	0	0	0*	0*	0*	0*	0*	0*
-20°C to +50°C	0	0	0	0	0	0	0	0	0
-20°C to +60°C	0	0	0	0	0	0	0	0	0
-20°C to +70°C	0	0	0	0	0	0	0	0	0
-20°C to +80°C	0	0	0	0	0	0	0	0	0
Temperature Class									
T5	0	0	0	0	0	0	0	0	0
T6	0	0	0	0	0	0	0	0	0
Certifications									
EAC Ex	0	0	0	0	0	NA	NA	NA	NA
INMETRO	0	0	0	0	0	0	0	0	0
PESO / CCOE	0	0	0	0	0	NA	NA	NA	NA
ANZEx	0	0	0	0	0	NA	NA	NA	NA
SASO	0	0	0	0	0	0	0	0	0
SONCAP	0	0	0	0	0	0	0	0	0
MASC	0	0	0	NA	NA	NA	NA	NA	NA
VIK Execution	0	0	0	0	0	0	0	0	0
Mechanical options									
Terminal box									
Auxiliary terminal box (thermal protection)	0	0	0	0	0	0	0	0	0
Terminal block									
Ex db eb Increased Safety terminal block	0	0	0	0	0	NA	NA	NA	NA
Ex db eb increased safety bushing isolator	NA	NA	NA	NA	NA	0	0	0	0
Cable glands									
Ex db / Ex db eb cable glands (brass)	0	0	0	0	0	0	0	0	0
Mounting									
Flange FF (IEC)	0	0	0	0	0	0	0	0	0
Flange FF (IEC) - superior	0	0	0	0	0	0	NA	NA	NA
Flange FF (IEC) - inferior	0	0	0	0	0	0	0	0	0
Flange C-DIN (IEC)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Flange C-DIN (IEC) - superior	NA	NA	NA	NA	NA	NA	NA	NA	NA
Flange C-DIN (IEC) - inferior	NA	NA	NA	NA	NA	NA	NA	NA	NA
Flange C (NEMA)	0	0	0	0	0	0	0	0	0
Flange D (NEMA)	0	0	0	0	0	0	0	0	0
Dowel pins	0	0	0	0	0	0	0	0	0
Cooling fan									
Cast iron	0	0	0	0	0	0	0	0	0
Bronze	0	0	0	0	0	0	0	0	0
Bearings									
2RS ball bearings at both ends	0	0	0	NA	NA	NA	NA	NA	NA
ZZ ball bearings at both ends	0	0	0	NA	NA	NA	NA	NA	NA
Shaft sealing									
Viton seal (IP56)	0	0	0	0	0	0	0	0	0
Lip seal for low temperature	0	0	0	0	0	0	0	0	0
Oil seal for low temperature	0	0	0	0	0	NA	NA	NA	NA
Taconite labyrinth (IP65, IP56)	0	0	0	0	0	0	0	0	0
W3 Seal (IP65, IP56, IP66)	0	0	0	0	0	0	0	0	0
Joints / Bolts sealing									
Molykote DC 33 (joint sealing)	0	0	0	0	0	0	0	0	0
Lumomoly (bolt sealing)	0	0	0	0	0	0	0	0	0

* Refer to WEG for IIB designs in frames 280-355 and IIC designs in frames 225-355.

Frame	71	80	90S/L	100L	112M	132S/M
Shaft						
AISI 1040/45	S	S	S	S	S	S
AISI 4140	O	O	O	O	O	O
AISI 304 (Stainless Steel)	O	O	O	O	O	O
AISI 316 (Stainless Steel)	O	O	O	O	O	O
AISI 420 (Stainless Steel)	O	O	O	O	O	O
Shaft Locking Device	NA	NA	NA	NA	NA	O
Second Shaft End	O	O	O	O	O	O
Degree of protection						
IP65	O	O	O	O	O	O
IP66	O	O	O	O	O	O
IPW56	O	O	O	O	O	O
IPW65	O	O	O	O	O	O
IPW66	O	O	O	O	O	O
Grease / lubrication						
Grease Aeroshell 22	O	O	O	O	O	O
Grease Aeroshell 7	O	O	O	O	O	O
Grease Isoflex NBU 15	O	O	O	O	O	O
Carbon steel grease nipple	NA	NA	O	O	O	O
Carbon steel grease nipple (extended)	NA	NA	NA	NA	NA	NA
Stainless steel grease nipple	NA	NA	O	O	O	O
Stainless steel grease nipple (extended)	NA	NA	NA	NA	NA	NA
Painting and protection*						
211E (epoxy) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O
211P (polyurethane) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O
212E (epoxy) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O
212P (polyurethane) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O
214P (polyurethane) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O
Inside of terminal box painted	O	O	O	O	O	O
Internal tropical protection - complete	O	O	O	O	O	O
Balance and Vibration						
Vibration level grade B	O	O	O	O	O	O
Provision for vibration detector SPM	O	O	O	O	O	O
Balance without key	NA	O	O	O	O	O
Balance with full key	NA	O	O	O	O	O
Key type C	O	O	O	O	O	O
Special foot flatness (0,127 mm)	O	O	O	O	O	O
Drain						
Certified Ex d drain plugs (not Ex d l)	O	O	O	O	O	O
Grounding						
Double grounding + accessory (1 in terminal box + 2 on frame)	O	O	O	O	O	O
Larger Grounding	O	O	O	O	O	O
Nameplates						
VSD rating plate	O	O	O	O	O	O
Direction of Rotation plate	O	O	O	O	O	O
Additional / Tag plate	O	O	O	O	O	O
Second main nameplate (loose)	O	O	O	O	O	O

S (Standard) / NA (Not available) / O (Optional)

*For IIC and painting >250 µm, beware of risk of electrostatic discharge. Refer to WEG Instruction Manual.

Frame	160M/L	180M/L	200M/L	225S/M	250S/M	280S/M	315S/M	315L	355M/L
Shaft									
AISI 1040/45	S	S	S	S	S	S	O	O	O
AISI 4140	O	O	O	O	O	O	S	S	S
AISI 304 (Stainless Steel)	O	O	O	O	O	O	O	O	O
AISI 316 (Stainless Steel)	O	O	O	O	O	O	O	O	O
AISI 420 (Stainless Steel)	O	O	O	O	O	O	O	O	O
Shaft Locking Device	O	O	O	O	O	O	O	O	O
Second Shaft End	O	O	O	O	O	O	O	O	O
Degree of protection									
IP65	O	O	O	O	O	O	O	O	O
IP66	O	O	O	O	O	O	O	O	O
IPW56	O	O	O	O	O	O	O	O	O
IPW65	O	O	O	O	O	O	O	O	O
IPW66	O	O	O	O	O	O	O	O	O
Grease / lubrication									
Grease Aeroshell 22	O	O	O	O	O	O	O	O	O
Grease Aeroshell 7	O	O	O	O	O	O	O	O	O
Grease Isoflex NBU 15	O	O	O	O	O	O	O	O	O
Carbon steel grease nipple	S	S	S	S	S	S	S	S	S
Carbon steel grease nipple (extended)	NA	NA	NA	O	O	O	O	O	O
Stainless steel grease nipple	O	O	O	O	O	O	O	O	O
Stainless steel grease nipple (extended)	NA	NA	NA	O	O	O	O	O	O
Painting and protection*									
211E (epoxy) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O	O	O	O
211P (polyurethane) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O	O	O	O
212E (epoxy) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O	O	O	O
212P (polyurethane) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O	O	O	O
214P (polyurethane) - Meets atmospheric corrosive categories C5 (I and M) as indicated in DIN EN ISO 12944-2	O	O	O	O	O	O	O	O	O
Inside of terminal box painted	O	O	O	O	O	O	O	O	O
Internal tropical protection - complete	O	O	O	O	O	O	O	O	O
Balance and Vibration									
Vibration level grade B	O	O	O	O	O	O	O	O	O
Provision for vibration detector SPM	S	S	S	S	S	S	S	S	S
Balance without key	O	O	O	O	O	O	O	O	O
Balance with full key	O	O	O	O	O	O	O	O	O
Key type C	O	O	O	O	O	O	O	O	O
Special foot flatness (0,127 mm)	O	O	O	O	O	O	O	O	O
Drain									
Certified Ex d drain plugs (not Ex d l)	O	O	O	O	O	O	O	O	O
Grounding									
Double grounding + accessory (1 in terminal box + 2 on frame)	O	O	O	O	O	NA	NA	NA	NA
Larger Grounding	O	O	O	O	O	NA	NA	NA	NA
Nameplates									
VSD rating plate	O	O	O	O	O	O	O	O	O
Direction of Rotation plate	O	O	O	O	O	O	O	O	O
Additional / Tag plate	O	O	O	O	O	O	O	O	O
Second main nameplate (loose)	O	O	O	O	O	O	O	O	O

Frame	71	80	90S/L	100L	112M	132S/M
Other mechanical options						
Stainless steel hardware (nuts & bolts)	0	0	0	0	0	0
Stainless steel fan cover	0	0	0	0	0	0
Canopy (mandatory for vertical shaft down applications and all Group I machines)	0	0	0	0	0	0
Slinger (vertical shaft up applications)	0	0	0	0	0	0
Grease outlet through the endshield	NA	NA	0	0	0	0
Grease outlet by plastic plug	NA	NA	0	0	0	0
Without cooling fan - IC 418 (TEAO)	0	0	0	0	0	0
Without cooling fan - IC 410 (TENV)	0	0	0	0	0	0
Electrical options						
Winding thermal protection						
Thermostat - alarm / trip (NO or NC)	0	0	0	0	0	0
PT100 two wires, one per phase	NA	NA	0	0	0	0
PT100 two wires, two per phase	NA	NA	0	0	0	0
PT100 three wires, one per phase	NA	NA	0	0	0	0
PT100 three wires, two per phase	NA	NA	0	0	0	0
PTC thermistors (alarm)	0	0	0	0	0	0
Thermocouple - alarm / trip	0	0	0	0	0	0
KTY 84 sensor	0	0	0	0	0	0
Bearing thermal protection						
PTC thermistor	0	0	0	0	0	0
PT100 two wires, one per bearing	0	0	0	0	0	0
PT100 three wires, one per bearing	0	0	0	0	0	0
Space heaters						
110-127 V	0	0	0	0	0	0
200-240 V	S	S	S	S	S	S
110-127 / 220-240 V	0	0	0	0	0	0
380-480 V	0	0	0	0	0	0
Service factor						
1.15	0	0	0	0	0	0
1.25	0	0	0	0	0	0
Insulation class						
H	0	0	0	0	0	0
Variable Speed Options						
Insulated DE or NDE bearing	NA	NA	NA	NA	NA	NA
Forced ventilation kit with encoder provision	0	0	0	0	0	0
Forced ventilation kit without encoder provision	0	0	0	0	0	0
Encoder	0	0	0	0	0	0
Drive end shaft grounding ring	NA	NA	0	0	0	0
Non drive end shaft grounding ring	NA	NA	0	0	0	0

S (Standard) / NA (Not available) / O (Optional)

Frame	160M/L	180M/L	200M/L	225S/M	250S/M	280S/M	315S/M	315L	355M/L
Other mechanical options									
Stainless steel hardware (nuts & bolts)	0	0	0	0	0	0	0	0	0
Stainless steel fan cover	0	0	0	0	0	0	0	0	0
Canopy (mandatory for vertical shaft down applications and all Group I machines)	0	0	0	0	0	0	0	0	0
Slinger (vertical shaft up applications)	0	0	0	0	0	0	0	0	0
Grease outlet through the endshield	0	0	0	0	0	0	0	0	0
Grease outlet by plastic plug	0	0	0	NA	NA	NA	NA	NA	NA
Without cooling fan - IC 418 (TEAO)	0	0	0	0	0	0	0	0	0
Without cooling fan - IC 410 (TENV)	0	0	0	0	0	0	0	0	0
Electrical options									
Winding thermal protection									
Thermostat - alarm / trip (NO or NC)	0	0	0	0	0	0	0	0	0
PT100 two wires, one per phase	0	0	0	0	0	0	0	0	0
PT100 two wires, two per phase	0	0	0	0	0	0	0	0	0
PT100 three wires, one per phase	0	0	0	0	0	0	0	0	0
PT100 three wires, two per phase	0	0	0	0	0	0	0	0	0
PTC thermistors (alarm)	0	0	0	0	0	0	0	0	0
Thermocouple - alarm / trip	0	0	0	0	0	0	0	0	0
KTY 84 sensor	0	0	0	0	0	0	0	0	0
Bearing thermal protection									
PTC thermistor	0	0	0	0	0	0	0	0	0
PT100 two wires, one per bearing	0	0	0	0	0	0	0	0	0
PT100 three wires, one per bearing	0	0	0	0	0	0	0	0	0
Space heaters									
110-127 V	0	0	0	0	0	0	0	0	0
200-240 V	S	S	S	S	S	S	S	S	S
110-127 / 220-240 V	0	NA	NA	NA	NA	NA	NA	NA	NA
380-480 V	0	0	0	0	0	0	0	0	0
Service factor									
1.15	0	0	0	0	0	0	0	0	0
1.25	0	0	0	0	0	0	0	0	0
Insulation class									
H	0	0	0	0	0	0	0	0	0
Variable Speed Options									
Insulated DE or NDE bearing	0	0	0	0	0	0	0	0	0
Forced ventilation kit with encoder provision	0	0	0	0	0	0	0	0	0
Forced ventilation kit without encoder provision	0	0	0	0	0	0	0	0	0
Encoder	0	0	0	0	0	0	0	0	0
Drive end shaft grounding ring	0	NA	0	0	0	0	0	0	0
Non drive end shaft grounding ring	0	0	0	0	0	0	0	0	0



W22Xdb - Premium Efficiency - IE3

Table for W22Xdb - Premium Efficiency - IE3, 400 V. Columns include Output (kW, HP), Frame, Full load torque, Locked rotor current, Locked rotor torque, Break-down torque, Inertia J, Allowable locked rotor time, Weight, Sound dB(A), Rated speed, Efficiency, Power factor, and Full load current.

Table for W22Xdb - Premium Efficiency - IE3, 400 V. Columns include Output (kW, HP), Frame, Full load torque, Locked rotor current, Locked rotor torque, Break-down torque, Inertia J, Allowable locked rotor time, Weight, Sound dB(A), Rated speed, Efficiency, Power factor, and Full load current.

Ex db / Ex db eb IIB T4 Gb¹⁾
Ex db / Ex db eb IIC T4 Gb¹⁾

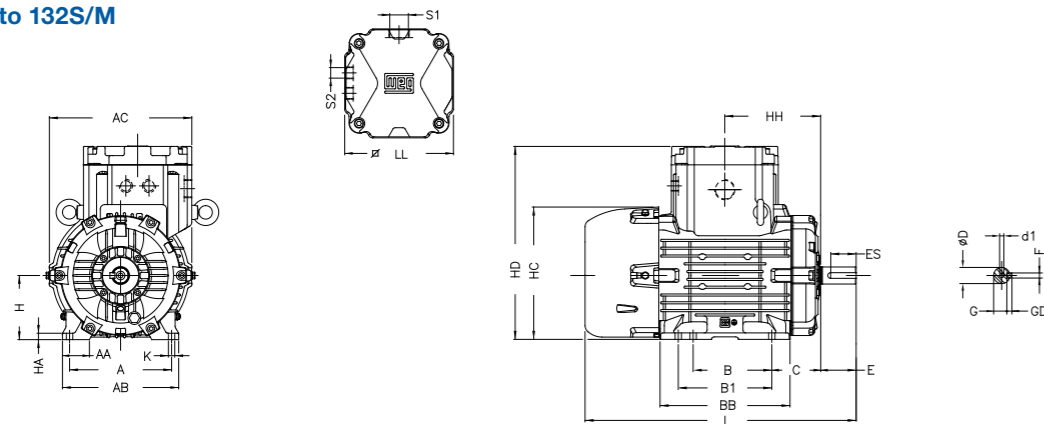
Table for W22Xdb - Premium Efficiency - IE3, 380 V and 415 V. Columns include Output (kW, HP), Frame, Full load torque, Locked rotor current, Locked rotor torque, Break-down torque, Inertia J, Allowable locked rotor time, Weight, Sound dB(A), Rated speed, Efficiency, Power factor, and Full load current.

Table for W22Xdb - Premium Efficiency - IE3, 380 V and 415 V. Columns include Output (kW, HP), Frame, Full load torque, Locked rotor current, Locked rotor torque, Break-down torque, Inertia J, Allowable locked rotor time, Weight, Sound dB(A), Rated speed, Efficiency, Power factor, and Full load current.

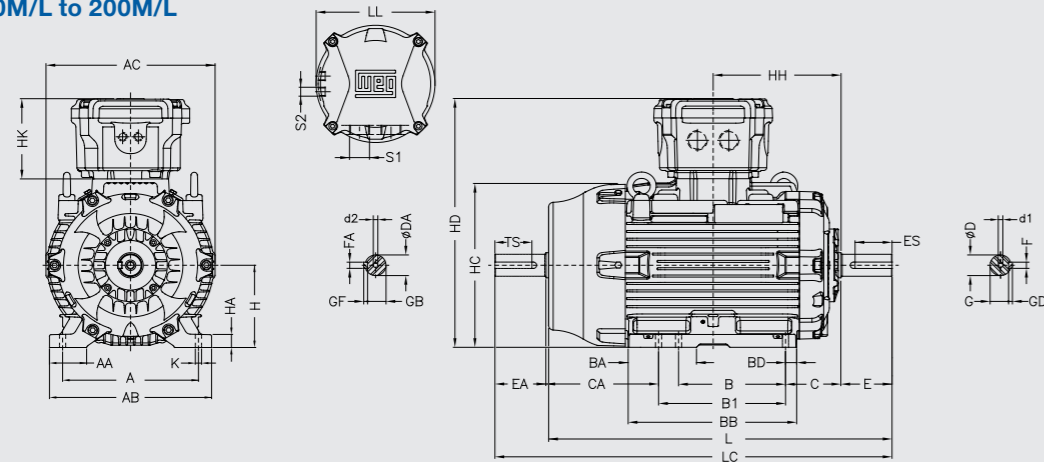
1) 71/80 frames are available only in Ex db executions.

Mechanical Data (Standard)

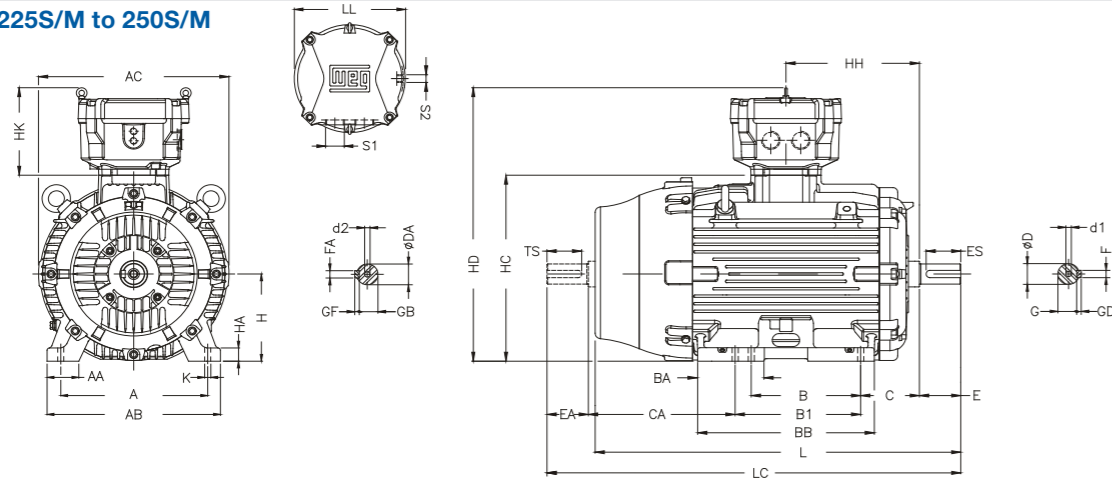
Frames 71 to 132S/M



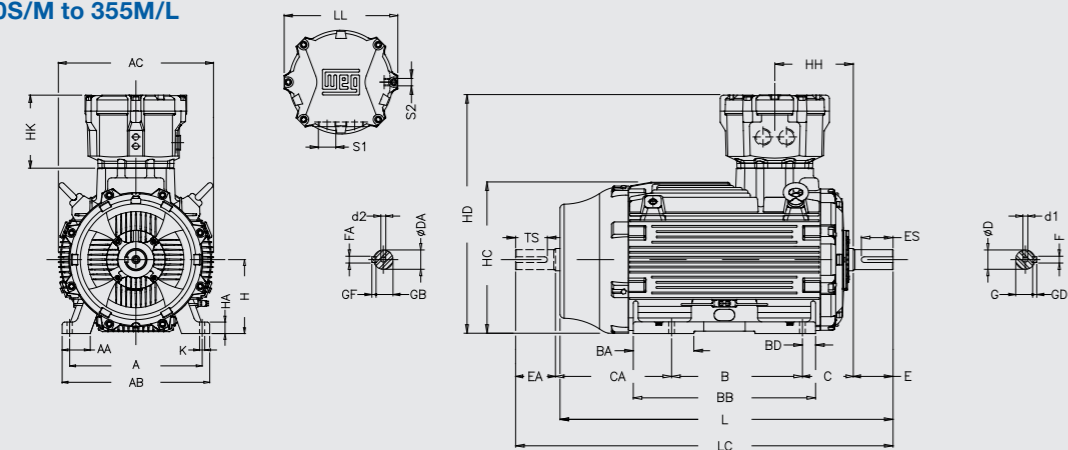
Frames 160M/L to 200M/L



Frames 225S/M to 250S/M



Frames 280S/M to 355M/L



Frame size	A	AA	AB	AC	B	B1	BA	BB	BD	C*	CA	D	DA	E	EA	ES	F	FA	G
71	112	32	132	155,5	90	110	48	132	11	45	125/105	14j6	11j6	30	23	18	5	4	11
80	125	37	149	180	100	121	53	143	11	50	127/106	19j6	14j6	40	30	28	6	5	15,5
90S/L	140	38	164	200	100	125	89	183	12,5	56	157,5/124,5	24j6	16j6	50	40	36	8	6	20
100L	160	46	188	232	140	183	82	211	14	63	178,5/135,5	28j6	22j6	60	50	45	8	6	24
112M	190	48	220	252	140	186	79	213,5	14	70	191/145	28j6	24j6	60	50	45	8	8	33
132S/M	216	45	248	296	140	178	104	243	20	89	222/184	38k6	28j6	80	60	63	10	8	37
160M/L	254	64	308	347	210	254	150	353	26	108	291/247	42k6	24j6	110	50	80	12	14	42,5
180M/L	279	80	350	371	241	279	148	367	26	121	287/249	48k6	24j6	110	50	80	14	14	49
200M/L	318	82	385	411	267	305	149	410	31	133	311/276	55m6	48j6	110	110	110	16	14	49
225S/M	356	80	436	465	286	311	167	445	41	149	381/356	55m6**	55m6**	110**	110**	100**	16**	16**	49**
												60m6	60m6	140	125	18	53		
250S/M	406	100	506	493	311	349	176	486	47	168	395/357	60m6**	60m6**	140	140	125	18	18	53**
												65m6	60m6						58
												65m6**	60m6**						18**
280S/M	457	100	557	620	368	419	208	570	41	190	385/334	75m6	65m6	140	140	125	20	18	67,5
												65m6**	60m6**						140**
315S/M	508	120	630	663	406	457	242	665	54	216	494/443	80m6	65m6	170	170	160	22	18	71
												65m6**	60m6**						140**
315L	508	120	630	721	508	-	257	775	59	216	497	80m6	65m6	170	160	22	18	18	71
												65m6**	60m6**						140**
355M/L	610	140	750	744	560	630	237	805	67,5	254	483/413	75m6**	60m6**	140**	140**	125**	20**	18**	67,5**
												100m6	80m6	210	170	200	28	22	90

Frame size	GB	GD	GF	TS	H	HA	HC	HD	HH	HK	K	L*	LC	LL	S1	S2	d1	d2
71	8,5	5	4	14	71		147	222,5	100		7	285	313	130			M5	M4
80	11	6	5	18	80	9	165	243,5	111		10	310	347		M25x1,5		M6	M5
90S/L	13	7	5	28	90		186,5	272,5	135			384	430	151			M8	M5
100L	18,5	7	6		100	10	207	295,5	155			438	491,5		M32x1,5		M10	M8
112M	18,5	7	7	36	112		234	320,5	163		12	456	511	171			M10	M8
132S/M	24	8	7	45	132	15	274	361	191			524	591				M12	M10
160M/L	20	8	7		160	22	326	509,5	258,5		14,5	717	769		2xM40x1,5		M16	M8
180M/L	20	9	7	36	180	28	362	549,5	278,5	174,5		752	809	256			M16	M8
200M/L	42,5	10	9	80	200	30	400	594,5	306,5			821	934					M16
225S/M	49**	10**	10**	100**	225	34	457	738	330,5		18,5	921**	1001,5**		2xM50x1,5	2x M20x1,5		
250S/M	53	11			250	42	497	783	363	258		951	1031,5	400				
280S/M	53**	11**	11		280	43	576	953	319,5		24	1135,5	1226				M20	
	58	12										1009	1089					
315S/M	53**	11**	11**	125								1282**	1381**					
	58	14	14									1312	1411					
315L	53**	11**	11**		315	49	647	1018	335	313	28	1392**	1491**		2xM63x1,5			
	58	14	14									1422	1521	470				
355M/L	53**	12**	11**	125**	355	51,5	727	1058	339			1488,5**	1587,5**				M20**	
	71	16	14	160								1558,5	1657,5				M24	

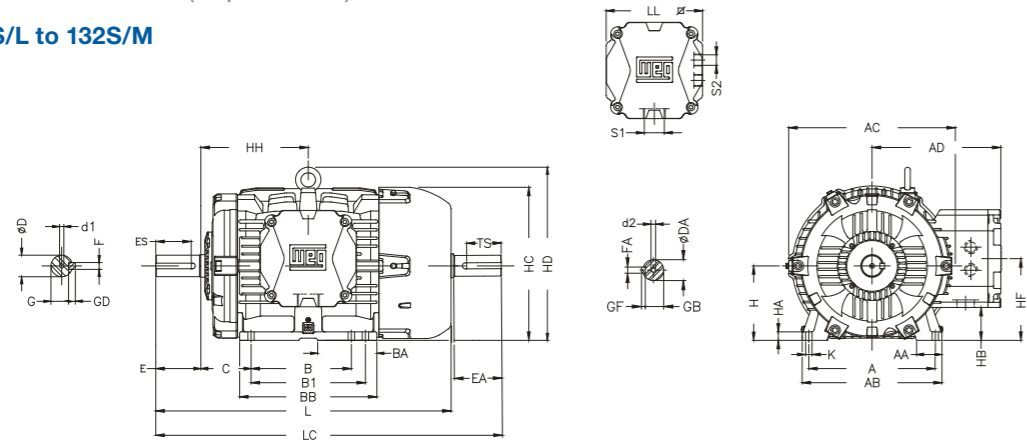
* For 71 frame foot mounted motors with FF flange, the dimensions " C " and " L " will be 70 mm and 310 mm respectively.

** Dimensions for 2-pole motors.

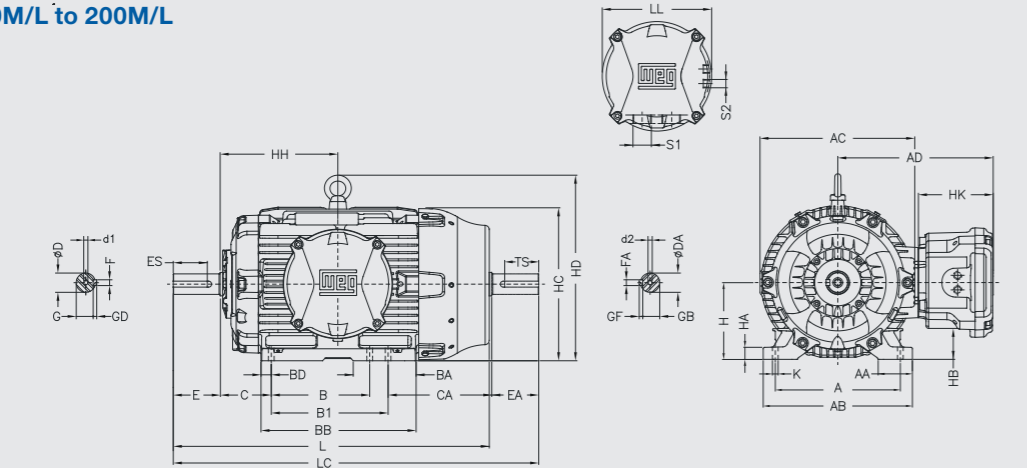


Mechanical Data (Optional)

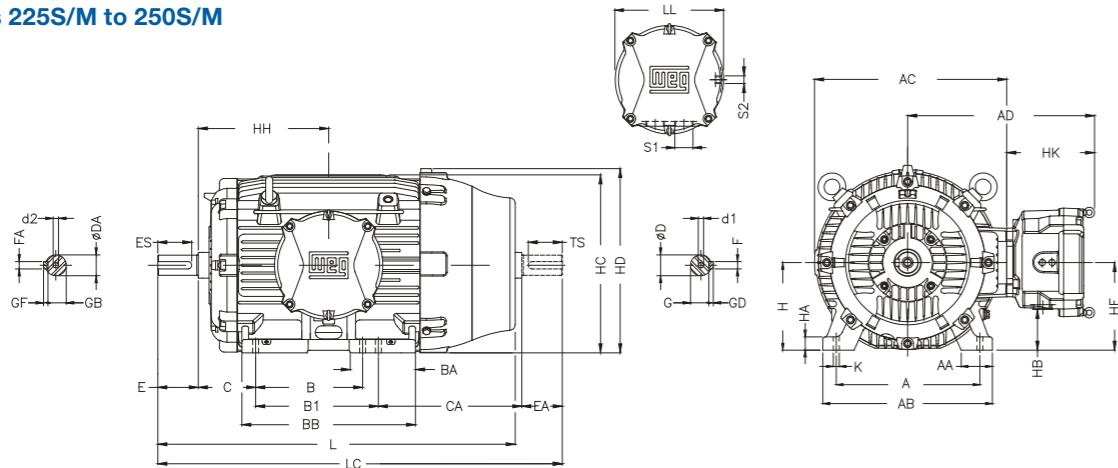
Frames 90S/L to 132S/M



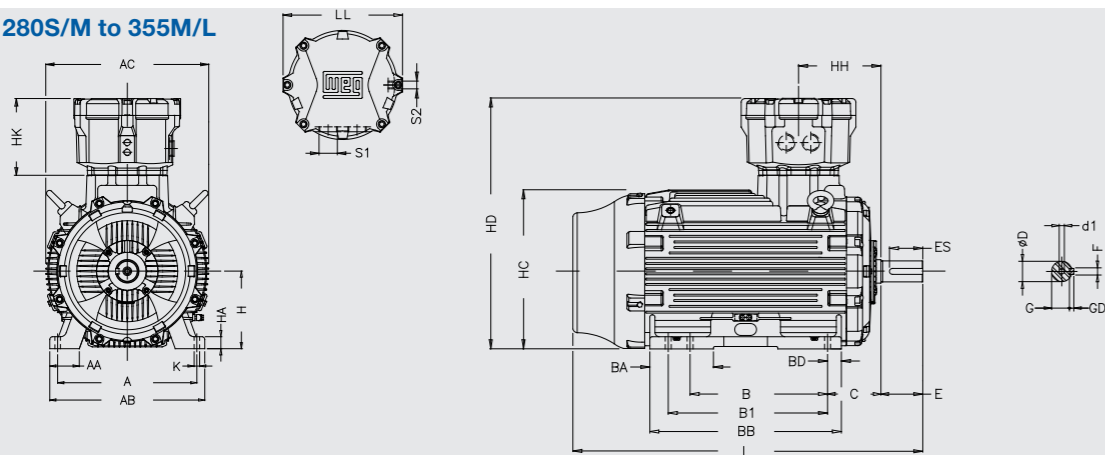
Frames 160M/L to 200M/L



Frames 225S/M to 250S/M



Frames 280S/M to 355M/L



Frame size	A	AA	AB	AC	AD	B	B1	BA	BB	BD	C*	CA	D	DA	E	EA	ES	F	FA	G
90S/L	140	38	164	200	182,5	100	125	89	183	12,5	56	157,5/124,5	24j6	16j6	50	40	36	8	5	20
100L	160	46	188	232	195,5	140	183	82	211	14	63	178,5/135,5	28j6	22j6	60	50	45	8	6	24
112M	190	48	220	252	208,5	140	186	79	213,5	14	70	191/145	28j6	24j6	60	50	45	8	8	33
132S/M	216	45	248	296	229	140	178	104	243	20	89	222/184	38k6	28j6	80	60	63	10	8	37
160M/L	254	64	308	347	349,5	210	254	150	353	26	108	291/247	42k6	24j6	110	50	80	12	14	42,5
180M/L	279	80	350	371	369,5	241	279	148	367	26	121	287/249	48k6	24j6	110	50	80	14	14	49
200M/L	318	82	385	411	394,5	267	305	149	410	31	133	311/276	55m6	48j6	110	110	110	16	14	49
225S/M	356	80	436	465	513	286	311	167	445	41	149	381/356	55m6**	55m6**	110**	110*	100**	16**	16**	49**
													60m6	60m6	140	125	18	53		
250S/M	406	100	506	493	533	311	349	176	486	47	168	395/357	60m6**	60m6**	140	140	125	18	18	58
													65m6	60m6						
280S/M	457	100	557	620	673	368	419	208	570	41	190	385/334	65m6**	60m6**	140	140	125	18**	18	58**
													75m6	65m6						
315S/M	508	120	630	663	703	406	457	242	665	54	216	494/443	65m6**	60m6**	140**	140	125**	18**	18	58**
													80m6	65m6	170					
315L	508	120	630	721	703	508	-	257	775	59	216	497	65m6**	60m6**	140**	140	125**	18**	18	58**
													80m6	65m6	170					
355M/L	610	140	750	744	703	560	630	237	805	67,5	254	483/413	75m6**	60m6**	140**	140**	125**	20**	18**	67,5**
													100m6	80m6	210	170	200	28	22	90

Frame size	GB	GD	GF	TS	H	HA	HB	HC	HD	HF	HH	HK	K	L*	LC	LL	S1	S2	d1	d2
90S/L	13	7	5	28	90	9	38,5	186,5	219	114	135	-	12	384	430	151	M25x1,5	2xM20x1,5	M8	M5
100L	18,5	7	6	36	100	10	42,5	207	239	118	155			438	491,5	M32x1,5	M10		M8	
112M	18,5	7	7	45	112	15	50,5	234	276	136	163	17,5	14,5	456	511	171	2xM40x1,5	M16	M10	
132S/M	24	8	7	45	132	15	59,5	274	307	145	191			524	591	2xM50x1,5				M16
160M/L	20	8	7	36	160	22	63	326	400	171	258,5	174,5	18,5	717	769	256	2xM50x1,5	M20	M8	
180M/L	20	9	7	36	180	28	73	362	435	180	278,5			921**	1001,5**					400
200M/L	42,5	10	9	80	200	30	93	400	479	200	306,5	258	24	821	934	470	2xM63x1,5	M20	M16	
225S/M	49**	10**	10**	100**	225	34	70	457	490	225	330,5			951	1031,5					400
250S/M	53	11	11	125	250	42	95	497	532	250	363	313	28	1009	1089	470	2xM63x1,5	M20	M20	
280S/M	53**	11**	11**	125	280	43	92	576	585,5	280	319,5			1135,5	1226					470
315S/M	53**	11**	11**	125	315	49	130	647	655,5	315	335	313	28	1282**	1381**	470	2xM63x1,5	M20	M20	
														1312	1411					
315L	53**	11**	11**	125	315	49	130	647	655,5	315	335	313	28	1392**	1491**	470	2xM63x1,5	M20	M20	
														1422	1521					
355M/L	53**	12**	11**	125**	355	51,5	170	727	739,5	355	339	313	28	1488,5**	1587,5**	470	2xM63x1,5	M20	M24	
														1558,5	1657,5					

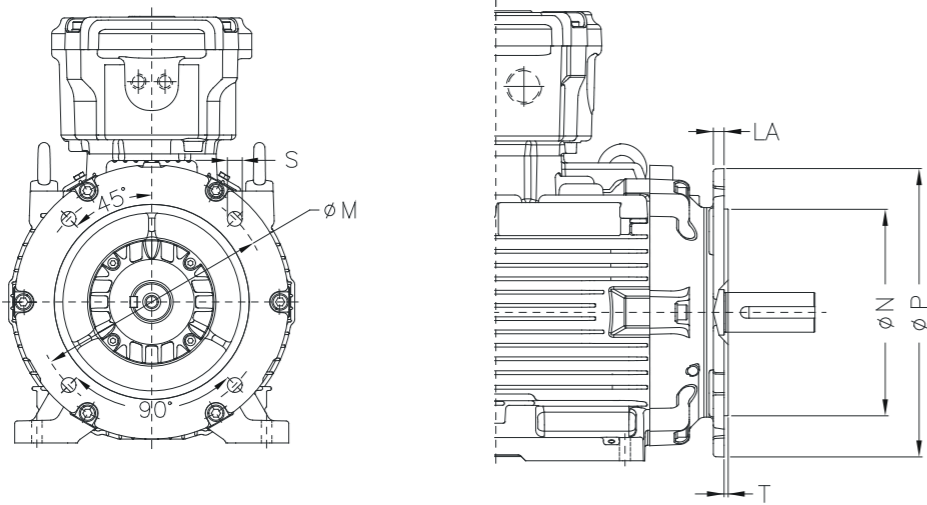
Note: Side mounted terminal box not available for frames 71/80.

** Dimensions for 2-pole motors.



Flange Mounted Motors

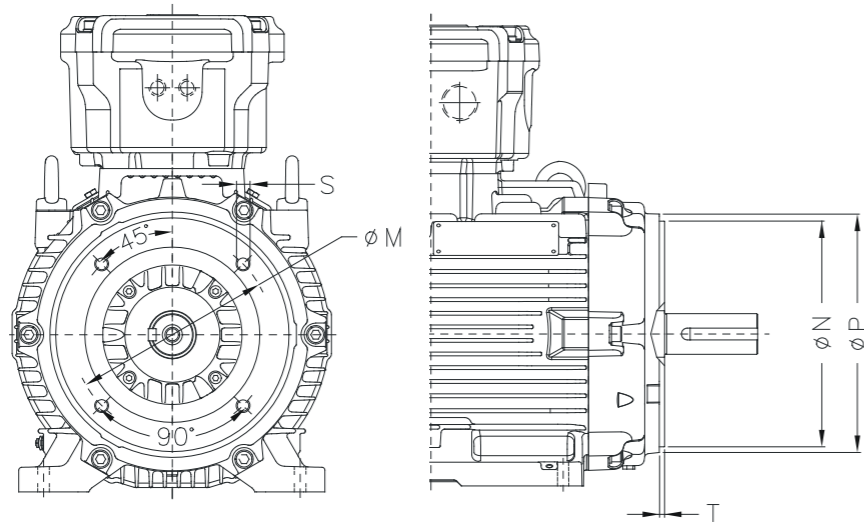
“FF” Flange



Frame size	Flange	LA	M	N	P	S	T	α	N° of holes		
71	FF-130	7	130	110	160	10	3.5	45°	4		
80	FF-165		165	130	200	12					
90		8	215	180	250	15	4				
100	FF-215	11									
112		12	265	230	300	19	5				
132	FF-265										
160	FF-300	13	300	250	350	19	5				
180			350	300	400						
200	FF-350	16	400	350	445	24	6			22,5°	8
225	FF-400	18	500	450	550						
250	FF-500	18	500	450	546						
280					550						
315	FF-600	20	600	550	660	24	6	22,5°	8		
355	FF-740	22	740	680	800						

* Note: For 71 frame foot mounted motors with FF flange, the dimensions "C" and "L" will be 70mm and 310 mm respectively.

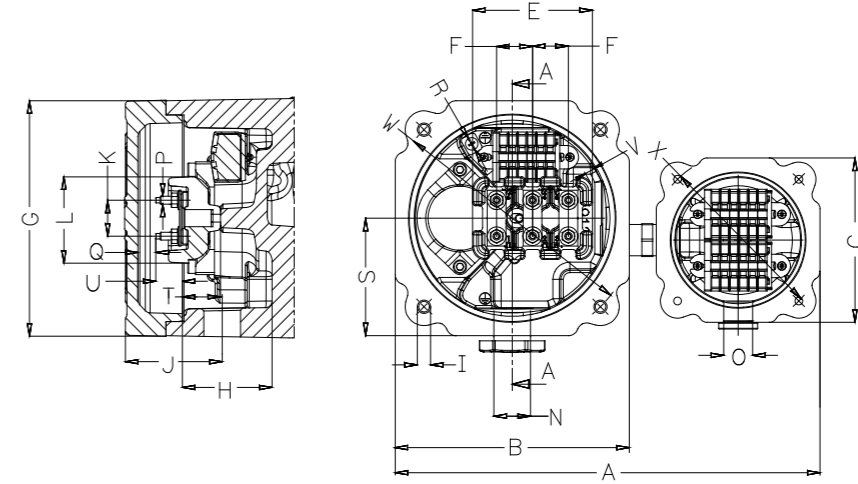
“C-DIN” Flange



Frame size	Flange	M	N	P	S	T	α	N° of holes
71	C-105	85	70	105	M6	2.5	45°	4
80	C-120	100	80	120		3		
90	C-140	115	95	140	M8	3.5		
100	C-160	130	110	165				
112		160						
132	C-200	165	130	200	M10			

Terminal Box Drawings

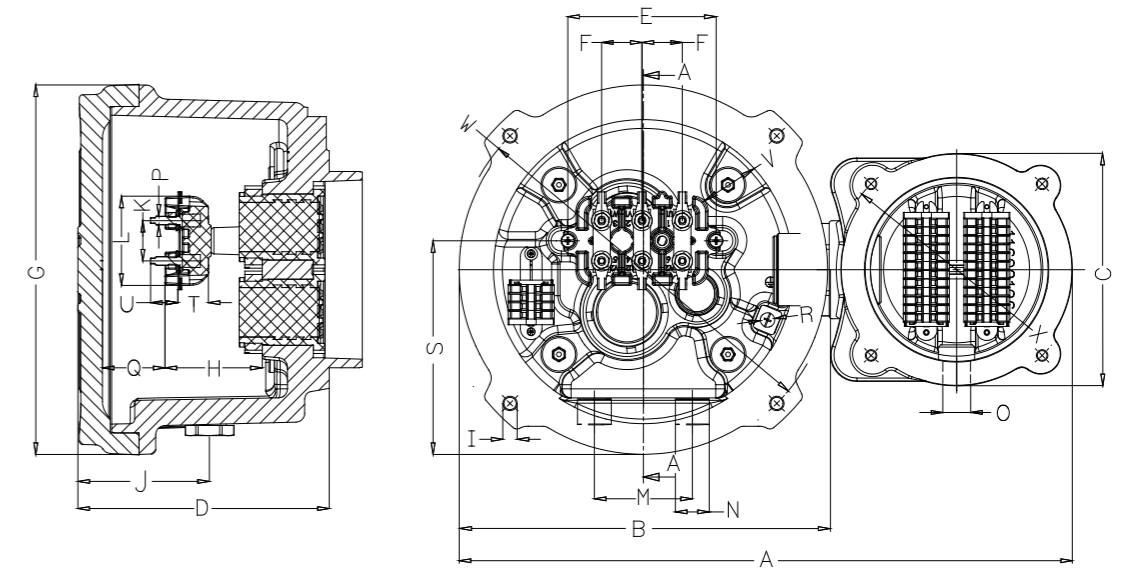
Main and Accessory Terminal Boxes - Frames 71 to 132M/L



Frame size	A	B	C	E	F	G	H	I	J	K	L
71	-	-	-	53	16	131	44	M6x1.0	36	16	35
80	274	152	106	76	23	151	56	M8x1.25	62	23	53
90											
100	288	166	106	76	23	171	70	M8x1.25	65	23	53
112											
132											

Frame size	N	O	P	Q	R	S	T	U	V	W	X
71	M25x1.5	-	M4x0,7	11.5	M4x0,7	62,5	23.5	10	6,5	140	-
80						75		18	7	160	
90	M32x1.5	M20x1.5	M5x0,8	11.5	M5x0,8	85	29,5	12	12	184	110
100											
112											
132											

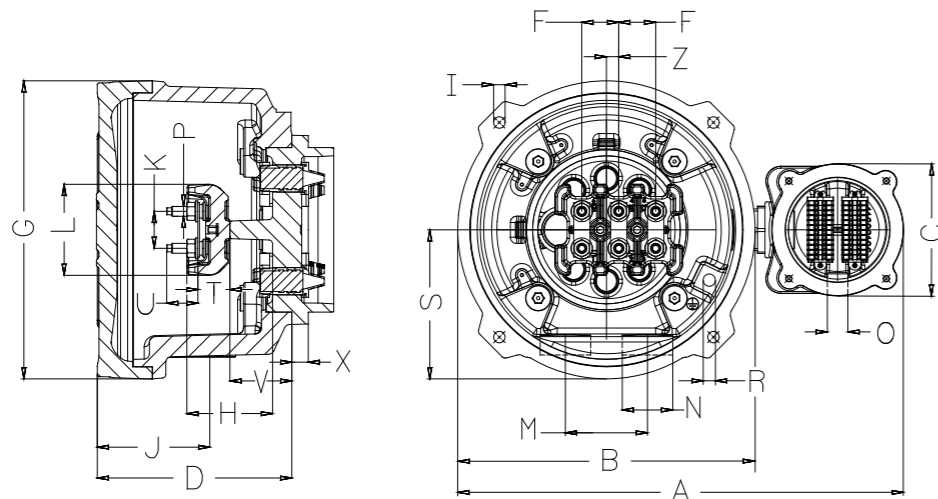
Main and Accessory Terminal Boxes - Frames 160M/L to 200M/L



Frame size	A	B	C	D	E	F	G	H	I	J	K	L
160	435	257	160	174	103	28	256	67.5	M10x1.5	90.5	28	62
180					112	35		70.5			35	76
200												

Frame size	M	N	O	P	Q	R	S	T	U	V	W	X
160	68	2xM40x1,5	M20x1,5	M6x1,0	43.5	M6x1,0	140	19.5	20.5	40	262	168
180				M8x1,25	40.5	M8x1,25		22	24	29		
200												

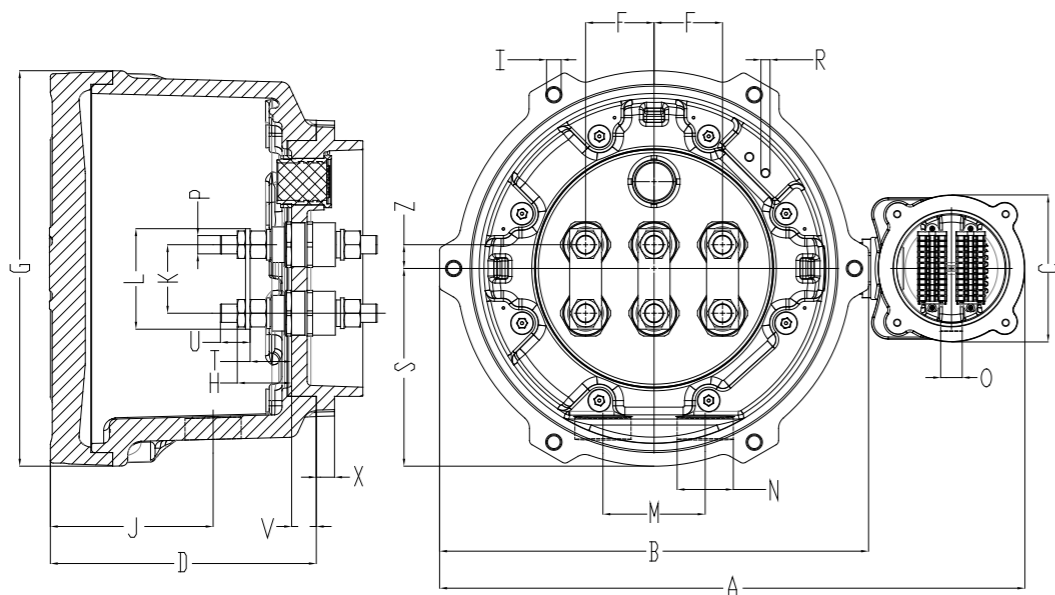
Main and Accessory Terminal Boxes - Frames 225S/M to 250S/M



Frame size	A	B	C	D	F	G	H	I	J	K	L
225	543	362.5	161	237	45	362	104.5	M16x2	137	45	111
250											

Frame size	M	N	O	P	R	S	T	U	V	Z
225	100	2xM50x1,5	2xM20x1,5	M12x1,75	M10x1,5	181	39	38	75.5	15
250		2xM63x1,5								

Main and Accessory Terminal Boxes - Frames 280S/M to 355M/L



Frame size	A	B	C	D	F	G	H	I	J	K	L
280	641	470	161	291	60	433	57	M16x2.0	168	60	85
315					65		63			75	105
355					75		67.5			110	

Frame size	M	N	O	P	R	S	T	U	V	X	Z
280	112	2xM63x1.5	2xM20x1.5	M12x2.0	2xM10x1.5	216	46	23	27	20	10
315				M16x2.0			51.5	28			26.5
355				M20x2.5			54.5	25			26

Drip Cover Data

Utilization of a drip cover / impact canopy increases the total length of the motor. The additional land length can be seen in table 2 below.

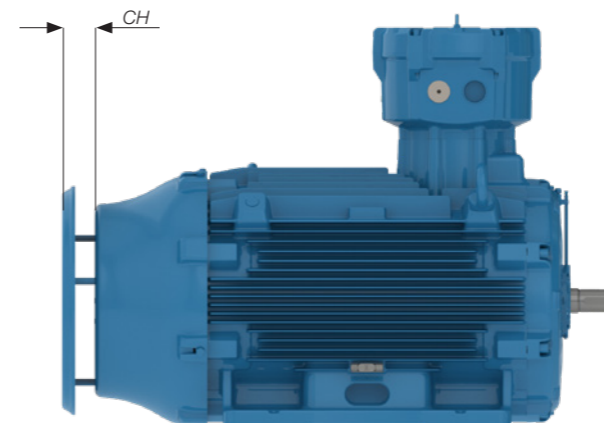


Figure 1 - Motor with drip cover

Frame	Dimension CH (increase motor length (mm))
71	
80	34
90	30
100	44
112	
132	47
160	48
180	59
200	69
225	80,5
250	80
280	98,5
315	
355	99
315L	

Table 2 - Additional length with rain drip cover.

Packaging

Frames 71 to 112

W22Xdb motors in frames 71 to 112 are packaged in cardboard boxes (see figure 2), following the dimensions, weights and volumes of the tables 3 and 4.



Figure 2: Cardboard box

Frame	External height (m)	External width (m)	External length (m)	Weight (kg)	Volume (m³)
71	0,32	0,27	0,43	1,34	0,037
80	0,32	0,27	0,43	1,34	0,037
90	0,37	0,30	0,47	2,36	0,053
100	0,42	0,34	0,59	3,61	0,080
112	0,42	0,34	0,59	3,61	0,080

Table 3 - Cardboard box dimensions, weights and volumes for top mounting.

Frame	External height (m)	External width (m)	External length (m)	Weight (kg)	Volume (m³)
90	0,32	0,38	0,47	2,59	0,095
100	0,35	0,41	0,59	4,29	0,085
112	0,35	0,41	0,59	4,29	0,085

Note: Values to be added to the net motor weight.

Table 4 - Cardboard box dimensions, weights and volumes for side mounting.

Frames 132 to 355M/L

For frames 132 to 355M/L, the motors are packaged in wooden crates (see figure 3). Dimensions, weights and volumes are in tables 5 and 6.

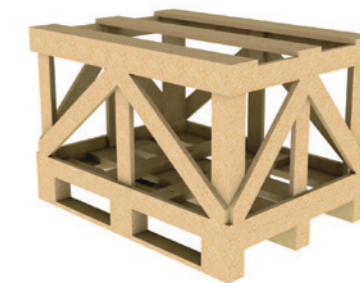


Figure 3: Wooden crates

Frame	External height (m)	External width (m)	External length (m)	Weight (kg)	Volume (m³)
132	0,45	0,38	0,64	8,25	0,109
160	0,59	0,44	0,88	13,9	0,230
180	0,64	0,47	0,92	14,7	0,278
200	0,70	0,54	0,98	16,9	0,373
225	1,08	0,85	1,25	58,3	1,148
250	1,08	0,85	1,35	62,8	1,239
280	1,30	0,85	1,40	80,7	1,547
315S/M	1,30	0,85	1,55	82,9	1,713
315L	1,30	0,95	1,65	99,3	2,038
355M/L	1,52	1,00	1,80	200	2,738

Table 5 - Wooden crates dimensions, weights and volumes for top mounting.

Frame	External height (m)	External width (m)	External length (m)	Weight (kg)	Volume (m³)
132	0,38	0,49	0,64	9,52	0,119
160	0,45	0,64	0,88	18,4	0,255
180	0,47	0,68	0,92	18,5	0,296
200	0,53	0,72	0,98	19,6	0,376
225	0,78	1,05	1,25	52,9	0,942
250	0,78	1,05	1,25	52,9	0,942
280	0,95	1,10	1,40	76,1	1,463
315S/M	0,95	1,25	1,55	82,8	1,840
315L	1,09	1,24	1,65	101	2,230
355M/L	1,17	1,40	1,85	190	3,030

Note: Values to be added to the net motor weight.

Table 6 - Wooden crates dimensions, weights and volumes for side mounting.

For WEG's worldwide
operations visit our website



www.weg.net



 +55 47 3276.4000

 motores@weg.net

 Jaraguá do Sul - SC - Brazil

Cod: 50042084 | Rev: 08 | Date (m/y): 01/2020.

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