

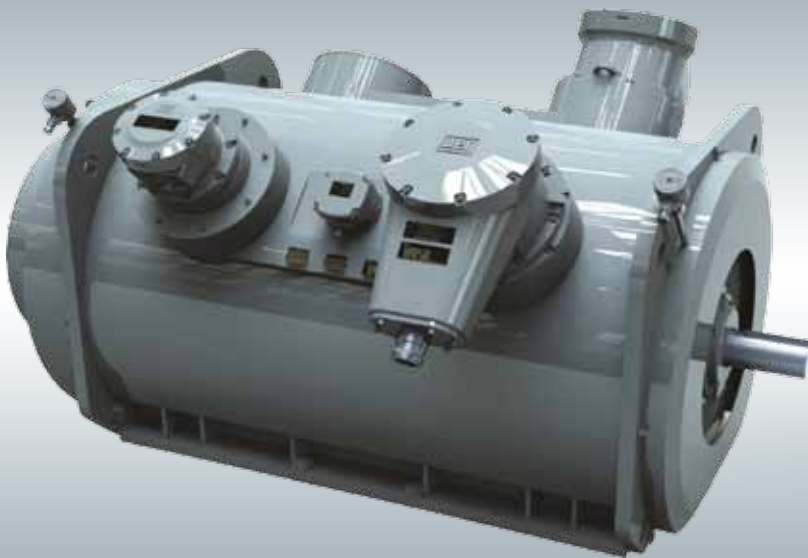
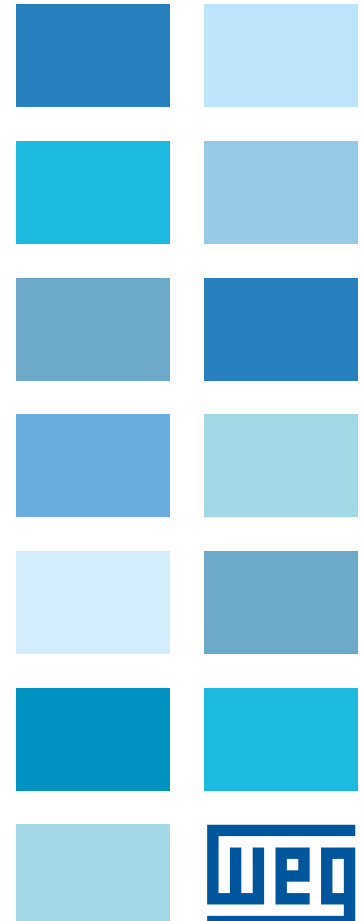
W22Xd

Ex d | Ex d e

Medium and High Voltage

new
New extension of
W22Xd range concept
Frame sizes 560-710

- High efficiency
- Modular design
- Low running temperature
- Flexible customization
(wide range of options & extras)
- Voltages up to 11,000 V
- Low operating costs
- IC511 cooling system



Product Overview

WEG is proud to announce and introduce the completion of the W22Xd Line of Flameproof Motors with 3 new frame sizes 560, 630 and 710.

The Maia factory in Portugal is the **Centre of Excellence for the design and manufacture of LV, MV and HV explosion proof induction motors**, specially developed for OIL & GAS and MINING markets. With this range extension up to frame size 710 and 4500 kW, WEG makes available a real global and comprehensive product portfolio according to the most demanding specifications covering a large variety of applications for hazardous area industries worldwide.

This ultimate product comprises frame sizes 560, 630 and 710, which are the extension of the existing W22Xd Line and is the result of years of development plan that WEG named as W22X Project. During this development, a lot of simulation studies were undertaken with complementary experimental prototype tests always with the target to get cooler and efficient motors.



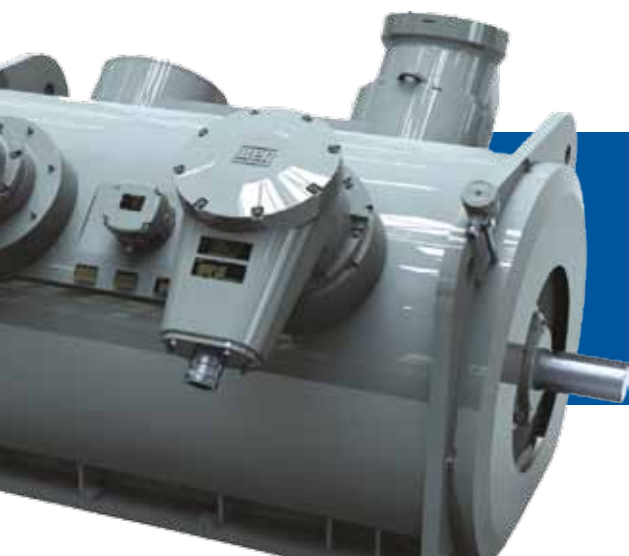
WEG has now a complete flameproof range of motors starting in frame size 71 up to 710.

The new motors are available in Medium and High Voltage from 2 up to 8 poles, 50/60 Hz. Low Voltage motors and other speeds are also available on request.

The new motors will have a wide range of options similar to the existing available in the W22Xd Line.

The new frames are in a cutting edge tubular cooling technology comparing with the ribbed frames technology base on the smaller frame sizes.

The new frames have an incorporated air/air heat exchanger and magnetic cores with radial and axial air ducts construction.



This cooling principle is based on an external shaft fan that forces the cold air into the frame tubes and by two separate internal cooling chambers making the hot air circulation for an efficient air/air heat exchanger over the frame tubes. The efficient cooling system was developed also to assure a low noise level and reduced mechanical losses.

All the frame enclosures are in fabricated steel with stainless steel cooling tubes and cast iron terminal boxes giving a final rigid, reliable and a low maintenance cost motor, suitable for the most demanding applications.

WEG adopted also modular principles of construction going against the usual idea that big machines must be tailor made and project oriented.

This extension Line is now available with ATEX and IECEx certifications for Ex d(e) IIB T4 Gb (W22XdB versions). It is also foreseen the certification such for Ex d(e) IIC T4 Gb (W22XdC versions), Mining - Group I (W22XdM versions) and conductive dusts - Group III (W22XdBD and W22XdCD versions). Other regional certifications such as GOST, CCOE, INMETRO... will be available in the future.

Product Certification tests are undertaken by INERIS (French Notified Body) INERIS is also the notified body that issues to W22Xd Line concept the ATEX / IECEx Product certificates. WEG production system is assessed and certified by Baseefa that issues the required QAN and QAR certificate.

Medium Voltage - Outputs (kW)								
Frame	2P		4P		6P		8P	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
560	1120	1600	1400	1600	1120	1250	900	1000
630	1800	2250	1800	2250	1400	1600	1120	1400
710	2500	2800	2500	4500	1800	3550	1600	2500

Medium Voltage: $1100\text{ V} < U \leq 6600\text{ V}$

High Voltage - Outputs (kW)								
Frame	2P		4P		6P		8P	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
560	710	1000	900	1120	630	800	500	630
630	1120	1400	1250	1600	900	1250	710	1000
710	1600	2000	1800	3550	1400	2500	1120	2000

High Voltage: $6600\text{ V} < U \leq 11,000\text{ V}$

A new Motor Concept

A
M

General Construction Mechanical Features

Enclosures main parts

The W22Xd Plus motors are totally enclosed tube-cooled machines (IC511) according to IEC 60034-6 as standard in IM B3 mounting form and optionally in flange and vertical arrangements as standard with protection degree IP55.

Frame

- The W22Xd frames are manufactured in fabricated steel providing high levels of mechanical strength to meet the most demanding applications and to ensure low vibration levels
- Stainless steel cooling tubes as standard to ensure a high degree of corrosion resistance
- Solid integrated feet with high mechanical stiffness
- Lifting eyes integrated on the two endshields of the frame designed for allowing an easier motor handling
- Grounding lugs

Endshields

- Endshields constructed in welded steel
- Can be supplied with flat areas for easier placement of vibration probes available in both vertical and horizontal directions

Terminal boxes

- As standard the motor terminal boxes are mounted at the left-hand side 45 degree from the horizontal
- Separate terminal boxes for auxiliary connections and space heaters
- Grounding lugs inside and outside of terminal boxes
- Multiple positions and combinations of power, neutral, protection and auxiliary terminal boxes can be provided



Cooling system

- The cooling tubes are arranged around the magnetic core functioning as air/air heat exchangers. The heat generated within the motor is dissipated by the cooling tubes which are cooled by external air
- The internal air circulation with axial air ducts in the shaft and radial air ducts in the active parts ensures a uniform temperature distribution inside the motor avoiding hot spots and extending the thermal life of the winding
- The fan cover made of fabricated steel with special aerodynamic inlet design allows a significant reduction in noise level, optimizing airflow through cooling tubes



Shaft

- As standard the shaft material is AISI 4140
- Motors with standard dimensions, in accordance with IEC 60072-2 Standards, are supplied with type "C" key as per DIN 688

Bearings

- Antifriction or sleeve bearings can be provided
- Horizontal motors are supplied, as standard, with anti-friction ball bearings
- Optionally, executions with roller bearings at one or both sides for higher radial external thrusts can be supplied
- On request, sleeve bearings, self or force lubricated, are available for horizontal mounting form on both drive and non drive end

new
otor Concept

General Construction Electrical Features

WEG flameproof motors are tested in accordance with EN/IEC 60079-0 that imposes a voltage drop supply of -10% for validation of the enclosure surface temperature.

For motors with increased safety terminal box, voltage and tolerances are limited by IEC 60079-7 Standards.

The maximum voltage allowed for “Ex e” equipment is 10 kV $\pm$ 10%. The W22Xd standard line voltages are indicated on the following table:

Voltage Range		
MV	50 Hz	Y 3,0 kV / Y 6,0 kV
	60 Hz	Y 4,16 kV
HV	50 Hz	Y 10,0 kV

Unless otherwise specified, the rated power outputs shown refer to continuous duty operation S1, as per IEC 60034-1 and under the following conditions:

- With ambient temperature range from -20 °C to +40 °C
- With altitudes up to 1000 meters above sea level

All motors are supplied with Class F insulation and Class B (80 K) temperature rise at normal operating conditions.

The insulation system for medium and high voltage motors consists mainly of rectangular bare copper wire with mica and VPI insulation system.

Medium and High Voltage standard motors are equipped with tubular space heaters of 230 V.



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 painting, also known as tropicalization.

As standard, the W22Xd motors have a tropicalized painting and are equipped with:

Windings protection

Medium and High voltage motors have two Pt-100 per phase (3 wires), connected in the auxiliary terminal box.

Bearings protection

Medium and High voltage motors have one Pt-100 per phase (3 wires), connected in the auxiliary terminal box.

Motors for use with VSD

WEG Flameproof motors are designed with re-inforced insulation to withstand harmonics due to VSD operation. Bearing currents are avoided by means of insulated bearings and grounding rings.

For VSD operation motors, the speed ranges must be confirmed. Depending on the operation speed, restriction may arise due to bearings/sleeve bearings maximum peripheral speed, from rotational parts or rotor natural frequencies.

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

Efficiency (η)	-15% (1- η) for $P_{nom} \leq 150$ kW / -10% (1- η) for $P_{nom} > 150$ kW
Power factor	-1/6(1-cos η) Minimum 0,02 and Maximum 0,07
Slip	$\pm$ 20% for $P_{nom} \geq 1$ kW $\pm$ 30% for $P_{nom} < 1$ kW
Starting current	+20% (without lower limit)
Starting torque	-15% +25%
Breakdown torque	-10%
Moment of inertia	$\pm$ 10%

Optional Features

The WEG electric motors W22Xd concept offers a comprehensive range of options and special executions, covering a wide range of applications.

- Wide range of operating temperatures
 - Maximum: up to +60 °C
 - Minimum: down to -55 °C
- Terminal boxes for different options are available including a 2nd power terminal box, separate star point terminal box, and phase insulated, phase separated and phase segregated terminal boxes
- A variety of solutions of adaptors, allowing multiple positions and combinations of power, neutral, protection and auxiliary terminal boxes
- Fault rated "Ex d" terminal box (45 kA up to 11,000 V)
- Fault rated "Ex e" terminal box (25 kA up to 11,000 V)
- Current transformers
- Surge arresters / capacitors
- Partial discharge measurement system
- Bearings probes terminal box
- Brass or stainless steel cable glands
- Insulated bearings
- IP56, IP65 and IP66 (W3 Seal®) mechanical protections
- Different shaft materials and dimensions
- Special painting plans according to customer's specifications (Ex: 213E to meet Petrobrás specification N1374)
- Drain valves on motor frame or terminal box
- Vibration monitoring accessories (provision for SPM, accelerometers, key-phasors, etc)
- Temperature Class T5
- Use for VSD application
- Encoder or tachometer assembly
- Different windings / bearings thermal protections (Pt-100, thermocouples)
- Special space heaters power and voltage
- Service factor 1.15
- Class H insulation



Optional terminal boxes arrangements

Explosive Atmospheres

A potentially explosive atmosphere is composed by air with mixtures of gases, vapours, mists or dusts, which might be ignited under certain operating conditions.

Equipment and protective systems intended for use in potentially explosive atmospheres cover a quite large range of products, including equipment used on fixed offshore platforms, in petrochemical plants, mines, flour mills and other areas where a potentially explosive atmosphere may arise. WEG has a long experience in the design and manufacturing of motors which fully comply with the ATEX Directive 94/9/EC and the IECEx Scheme for Equipment Certification Program. WEG motors are manufactured to meet special application requirements and severe duties in Hazardous Areas.

IEC/EN Standards Applicable to WEG's Flameproof Motors

The implementation of ATEX Directives and IECEx Scheme are supported by the EN (CENELEC) and IEC Standards regarding the enclosure protections of electric motors to be used in potentially explosive atmospheres, as well as the hazardous areas classification criteria, depending on the presence of Gas and/or Combustible Dusts.

The main applicable IEC/EN Standards for the manufacturing of flameproof motors are:

IEC/EN 60079-0	Explosive atmospheres Part 0: Equipment - General requirements
IEC/EN 60079-1	Explosive atmospheres Part 1: Equipment protection by flameproof enclosures "d"
IEC/EN 60079-7	Explosive atmospheres Part 7: Equipment protection by increased safety "e"
IEC/EN 60079-10-1	Explosive atmospheres Part 10-1: Classification of areas - Explosive gas atmospheres
IEC/EN 60079-10-2	Explosive atmospheres Part 10-2: Classification of areas - Combustible dust atmospheres
IEC/EN 60079-31	Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure "t"
IEC/EN 60079-14	Explosive atmospheres Part 14: Electrical installations design, selection and erection
IEC/EN 60079-17	Explosive atmospheres Part 17: Electrical installations inspection and maintenance
IEC/EN 60079-19	Explosive atmospheres Part 19: Equipment repair, overhaul and reclamation

World class motors ATEX/IECEX

Certified for operating temperatures -55 °C up to +60 °C
for a global application

- Modular concept: multiple combinations/flexible mountings
- Different sizes of cable entry integrated on terminal box enclosure
- Voltages from 380 V up to 11,000 V
- Fault rated capacity up to 45 kA, 250 ms
- Different protections "Ex d", "Ex d e"
- Fixing bolts protected against impacts and water accumulation
- Easy cable handling connection and installation
- Wide range of terminal boxes

- Possibility of bearing thermal protection on separate terminal box

- Wide range of terminal box certified adaptors

- Special air inlet design to optimize integrated Air-Air heat exchanger
- New cooling system with improved thermal efficiency and reduced sound power levels

- Superior mechanical strength to withstand impact test IK10 (20J) according EN 62262



Maintenance

- Key factors for low operating and maintenance costs: safety and reliability!

General

- Different arrangements for terminal boxes, bearings and protections devices
- Mechanical protections up to IP66
- The most suitable construction for replacement market
- Customized construction to meet particular specifications
- Inverter duty applications

- High stiffness frame in fabricated steel
- Low and uniform operating temperature
- Frame sizes 560 up to 710
- Modular frame construction incorporating different arrangements (terminal boxes, bearings, protection devices)

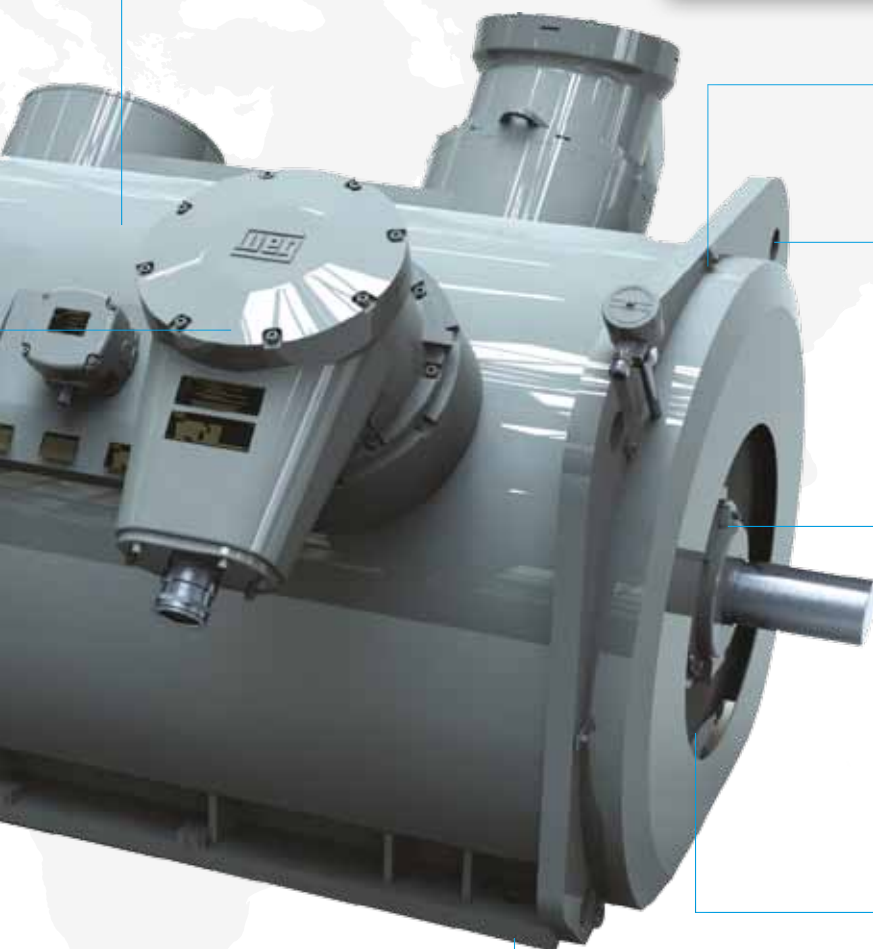
- Easy accessible lubricating grease nipples

- Easy handling through frame integrated lifting eyes

- Low operating temperature bearings
- Optionally sleeve bearings for group I and IIB certification
- Long relubricating intervals. Extended bearings lifetime

- Stainless steel cooling tubes

- Solid and integrated feet on frame
- Different fixing distances
- Easy alignment

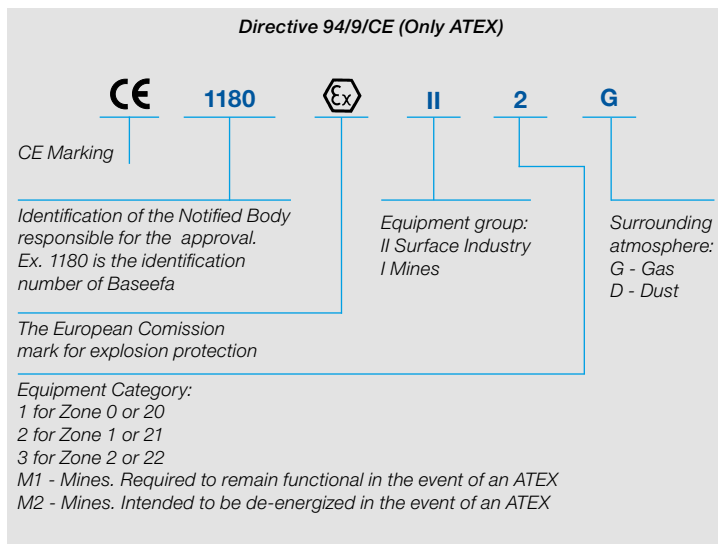


Any time.
Any place. **Any place.**

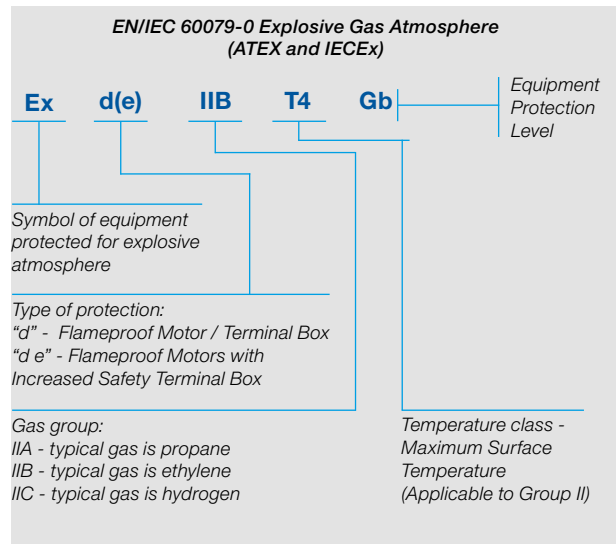
Technical Information

Markings

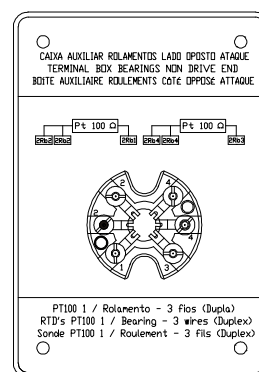
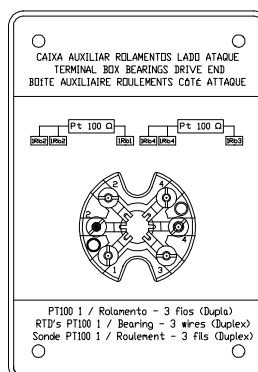
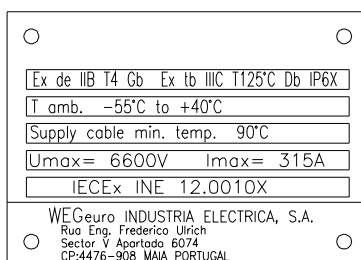
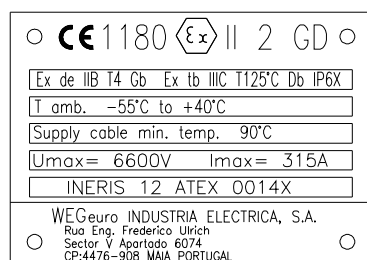
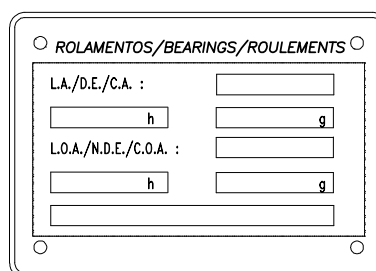
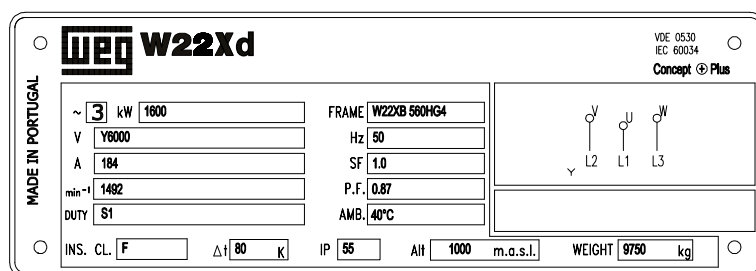
The marking of Equipment meets the ATEX Directives and IECEx Scheme.



ATEX marking



ATEX / IECEx marking for explosive gas atmosphere



Regional Certifications

For some world regions or applications, some certifications are mandatory to install flameproof motors. WEG is certifying the motor range for hazardous areas with the following regional certifications:

Certification	Comprised Regions
GOST 	
INMETRO 	
CCOE 	

Certification	Comprised Regions
SITIAS-NEPSI 	
CSA / CSA US 	 

Electrical Data - 6000 V

										6000 V							
Output		Frame IEC	T _n (Nm)	I _s / I _n	T _s / T _n	T _{max} / T _n	Inertia J Kgm ²	Weight Kg	Sound Pressure dB(A)	rpm min ⁻¹	% of full load						I _n (A)
kW	HP										Efficiency η			Power Factor Cos φ			
											50	75	100	50	75	100	

II Poles - 3000 min⁻¹

1120	1515	W22XdB 560 JH	3580	5.9	0.5	2.1	13.5	7500	85	2988	94.4	95.4	96.0	0.85	0.87	0.89	126
1250	1690	W22XdB 560 JH	3995	5.9	0.5	2.1	15.0	7750	85	2988	94.6	95.6	96.2	0.85	0.87	0.89	140
1400	1890	W22XdB 560 JH	4475	6.0	0.5	2.2	16.5	8000	85	2988	94.8	95.8	96.4	0.85	0.87	0.89	157
1600	2160	W22XdB 560 HG	5114	6.0	0.5	2.2	18.5	8750	85	2988	95.0	96.0	96.6	0.85	0.87	0.89	179
1800	2430	W22XdB 630 KJ	5749	5.9	0.5	2.2	23.0	9250	85	2990	94.5	96.0	96.6	0.86	0.88	0.90	199
2000	2705	W22XdB 630 KJ	6388	6.0	0.5	2.3	27.0	9500	85	2990	94.5	96.0	96.6	0.86	0.88	0.90	221
2250	3040	W22XdB 630 JH	7186	6.0	0.5	2.3	32.0	10,000	85	2990	94.5	96.0	96.6	0.86	0.88	0.90	249
2500	3380	W22XdB 710 KJ	7980	6.0	0.5	2.5	48.0	11,250	87	2992	94.5	96.0	96.6	0.85	0.88	0.89	280
2800	3785	W22XdB 710 KJ	8937	6.0	0.5	2.5	51.5	11,750	87	2992	94.5	96.0	96.6	0.85	0.88	0.89	313

IV Poles - 1500 min⁻¹

1400	1890	W22XdB 560 JH	8967	6.0	0.5	2.1	37.0	8750	85	1491	95.0	96.0	96.2	0.83	0.86	0.87	161
1600	2160	W22XdB 560 HG	10,241	6.0	0.5	2.1	42.5	9750	85	1492	95.2	96.1	96.3	0.83	0.86	0.87	184
1800	2430	W22XdB 630 KJ	11,506	5.8	0.5	2.1	67.0	10,000	85	1494	95.2	96.1	96.4	0.83	0.86	0.87	207
2000	2705	W22XdB 630 KJ	12,776	6.0	0.5	2.1	70.0	10,250	85	1495	95.3	96.2	96.5	0.83	0.86	0.87	229
2250	3040	W22XdB 630 JH	14,373	6.0	0.5	2.1	76.5	11,250	85	1495	95.3	96.2	96.5	0.83	0.86	0.87	258
2500	3380	W22XdB 710 JH	15,970	6.0	0.4	2.0	121.0	11,500	85	1495	95.4	96.3	96.6	0.83	0.86	0.87	286
2800	3785	W22XdB 710 JH	17,886	6.0	0.4	2.0	128.0	11,750	85	1495	95.5	96.4	96.8	0.83	0.86	0.87	320
3150	4255	W22XdB 710 JH	20,122	6.0	0.4	2.0	134.0	12,250	85	1495	95.8	96.6	97.0	0.84	0.87	0.88	355
3550	4795	W22XdB 710 JH	22,677	6.0	0.4	2.0	139.0	12,500	85	1495	95.8	96.6	97.0	0.84	0.87	0.88	400
4000	5405	W22XdB 710 HG	25,535	6.0	0.4	2.1	166.0	13,250	85	1496	96.0	96.7	97.1	0.84	0.87	0.89	445
4500	6080	W22XdB 710 HG	28,727	6.5	0.5	2.2	177.0	13,500	85	1496	96.0	96.7	97.1	0.84	0.87	0.89	501

VI Poles - 1000 min⁻¹

1120	1515	W22XdB 560 JH	10,750	5.8	0.7	2.3	74.0	9000	83	995	95.1	95.9	96.2	0.78	0.84	0.86	130
1250	1690	W22XdB 560 HG	11,997	6.0	0.8	2.5	82.0	10,000	83	995	95.1	95.9	96.2	0.78	0.84	0.86	145
1400	1890	W22XdB 630 KJ	13,437	5.5	0.5	2.0	101.0	10,500	83	995	95.2	96.0	96.3	0.80	0.84	0.86	163
1600	2160	W22XdB 630 JH	15,357	5.5	0.5	2.1	109.0	11,500	83	995	95.2	96.0	96.3	0.81	0.85	0.86	186
1800	2430	W22XdB 710 JH	17,259	5.7	0.5	2.1	192.0	11,750	83	996	95.3	96.1	96.4	0.82	0.86	0.87	207
2000	2705	W22XdB 710 JH	19,177	5.7	0.5	2.1	204.0	12,000	83	996	95.3	96.1	96.4	0.82	0.86	0.87	229
2250	3040	W22XdB 710 JH	21,574	6.0	0.5	2.2	212.0	12,250	83	996	95.4	96.2	96.6	0.82	0.86	0.87	258
2500	3380	W22XdB 710 JH	23,971	6.0	0.5	2.2	221.0	12,750	83	996	95.4	96.2	96.6	0.82	0.86	0.87	286
2800	3785	W22XdB 710 HG	26,874	6.0	0.5	2.1	272.0	13,250	83	995	95.5	96.3	96.7	0.83	0.87	0.88	317
3150	4255	W22XdB 710 HG	30,234	6.0	0.5	2.1	280.0	13,500	83	995	95.5	96.3	96.7	0.83	0.87	0.88	356

VIII Poles - 750 min⁻¹

900	1215	W22XdB 560 JH	11,537	5.0	0.5	2.0	81.0	9000	82	745	94.5	95.3	95.5	0.76	0.81	0.83	109
1000	1350	W22XdB 560 HG	12,819	5.0	0.5	2.0	91.0	10,000	82	745	94.5	95.3	95.5	0.76	0.81	0.83	121
1120	1515	W22XdB 630 KJ	14,338	5.5	0.5	2.1	125.0	10,250	82	746	94.6	95.4	95.7	0.76	0.81	0.83	136
1250	1690	W22XdB 630 KJ	16,002	6.0	0.6	2.2	132.0	10,500	82	746	94.7	95.5	95.8	0.76	0.81	0.83	151
1400	1890	W22XdB 630 JH	17,922	6.0	0.6	2.2	144.0	11,500	82	746	94.8	95.6	95.9	0.76	0.82	0.84	167
1600	2160	W22XdB 710 JH	20,483	6.0	0.5	2.2	249.0	12,250	82	746	94.9	95.7	96.0	0.76	0.82	0.84	191
1800	2430	W22XdB 710 JH	23,012	6.0	0.5	2.2	257.0	12,500	82	747	95.1	95.9	96.2	0.76	0.82	0.84	214
2000	2705	W22XdB 710 JH	25,569	6.0	0.5	2.2	264.0	12,750	82	747	95.1	95.9	96.2	0.76	0.82	0.84	238
2250	3040	W22XdB 710 HG	28,765	6.0	0.5	2.1	304.0	13,250	82	747	95.3	96.0	96.3	0.76	0.82	0.84	268
2500	3380	W22XdB 710 HG	31,961	6.0	0.5	2.1	316.0	13,500	82	747	95.3	96.0	96.3	0.76	0.82	0.84	297

T_n = Full load torque

I_s / I_n = Locked rotor current

T_s / T_n = Locked rotor torque

T_{max} / T_n = Breakdown torque

I_n = Full load current

Standard voltage and frequency

6000 V, 50 Hz

Notes:

- All motors are fitted with copper rotors.
- The indicated values for sound pressure levels are measured @ 1m no load, with 3 dB(A) tolerance.
- All values are according to IEC 60034-1 tolerances.
- The motors can also operate at 60 Hz supply. For 2 poles motors, please contact refer to us.
- 2 poles motors of frame size 710 are fitted with sleeve bearings.
- These data can be changed without prior notice.

Electrical Data - 10.000 V

Output										10.000 V							
										rpm min ⁻¹	% of full load						I _n (A)
											Efficiency η			Power Factor Cos φ			
											50	75	100	50	75	100	
kW	HP	Frame IEC	T _n (Nm)	I _s / I _n	T _s / T _n	T _{max} / T _n	Inertia J Kgm ²	Weight Kg	Sound Pressure dB(A)								
II Poles - 3000 min ⁻¹																	
710	960	W22XdB 560 JH	2274	5.5	0.4	2.0	10.0	8000	85	2982	94.0	95.0	95.5	0.85	0.87	0.89	48,2
800	1080	W22XdB 560 HG	2562	5.5	0.4	2.0	12.0	8500	85	2982	94.2	95.1	95.6	0.85	0.87	0.89	54,3
900	1215	W22XdB 560 HG	2882	5.5	0.4	2.0	13.5	9000	85	2982	94.3	95.2	95.7	0.85	0.87	0.89	61,0
1000	1350	W22XdB 560 HG	3203	5.5	0.4	2.0	15.0	9250	85	2982	94.5	95.3	95.8	0.85	0.87	0.89	67,7
1120	1515	W22XdB 630 KJ	3577	6.0	0.5	2.3	21.0	9500	85	2990	94.5	95.4	95.9	0.86	0.88	0.90	74,9
1250	1690	W22XdB 630 JH	3992	5.8	0.5	2.2	24.0	10,000	85	2990	94.5	95.5	96.0	0.86	0.88	0.90	83,5
1400	1890	W22XdB 630 JH	4472	6.0	0.5	2.3	26.0	10,250	85	2990	94.5	95.5	96.0	0.86	0.88	0.90	93,6
1600	2160	W22XdB 710 KJ	5112	5.5	0.4	2.0	29.0	11,000	87	2989	94.5	95.5	96.0	0.85	0.88	0.89	108
1800	2430	W22XdB 710 KJ	5751	5.5	0.4	2.0	33.0	11,500	87	2989	94.5	95.5	96.0	0.85	0.88	0.89	122
2000	2705	W22XdB 710 KJ	6390	5.5	0.4	2.0	36.5	12,000	87	2989	94.5	95.5	96.0	0.85	0.88	0.89	135

IV Poles - 1500 min ⁻¹																	
900	1215	W22XdB 560 JH	5765	6.0	0.5	2.2	26.0	9000	85	1491	94.8	95.6	95.8	0.83	0.86	0.87	62,3
1000	1350	W22XdB 560 HG	6401	5.5	0.4	2.0	31.0	9750	85	1492	95.0	95.8	96.0	0.84	0.87	0.88	68,3
1120	1515	W22XdB 560 HG	7169	5.5	0.4	2.0	35.5	10,000	85	1492	95.0	95.8	96.0	0.84	0.87	0.88	76,5
1250	1690	W22XdB 630 KJ	7996	5.8	0.4	2.1	48.0	10,000	85	1493	95.0	95.8	96.0	0.84	0.87	0.88	85,4
1400	1890	W22XdB 630 JH	8949	5.5	0.4	2.0	56.0	10,500	85	1494	95.0	95.8	96.0	0.84	0.87	0.88	95,7
1600	2160	W22XdB 630 JH	10,228	5.5	0.4	2.0	60.0	11,500	85	1494	95.0	95.8	96.0	0.84	0.87	0.88	109
1800	2430	W22XdB 710 JH	11,506	5.5	0.4	2.0	82.0	11,750	85	1494	95.3	96.0	96.3	0.84	0.87	0.88	123
2000	2705	W22XdB 710 JH	12,784	5.5	0.4	2.0	89.0	12,000	85	1494	95.3	96.0	96.3	0.84	0.87	0.88	136
2250	3040	W22XdB 710 JH	14,383	5.5	0.4	2.0	94.0	12,250	85	1494	95.6	96.5	96.5	0.84	0.87	0.88	153
2500	3380	W22XdB 710 JH	15,981	5.5	0.4	2.0	100.0	12,500	85	1494	95.6	96.5	96.5	0.84	0.87	0.88	170
2800	3785	W22XdB 710 JH	17,898	5.5	0.4	2.0	107.0	12,750	85	1494	95.6	96.5	96.5	0.84	0.87	0.88	190
3150	4255	W22XdB 710 HG	20,122	6.0	0.5	2.1	134.0	13,250	85	1495	96.0	96.8	97.0	0.85	0.88	0.89	211
3550	4795	W22XdB 710 HG	22,677	6.0	0.5	2.1	140.0	13,500	85	1495	96.0	96.8	97.0	0.85	0.88	0.89	237

VI Poles - 1000 min ⁻¹																	
710	960	W22XdB 560 JH	6815	6.0	0.8	2.5	58.0	9250	83	995	94.3	95.2	95.4	0.78	0.84	0.86	50.0
800	1080	W22XdB 560 HG	7678	6.0	0.8	2.5	66.0	10,000	83	995	94.3	95.2	95.4	0.78	0.84	0.86	56.3
900	1215	W22XdB 630 KJ	8638	5.5	0.5	2.1	71.0	10,500	83	995	94.4	95.3	95.6	0.79	0.84	0.86	63.2
1000	1350	W22XdB 630 KJ	9598	5.5	0.5	2.1	75.0	10,750	83	995	94.4	95.3	95.6	0.79	0.84	0.86	70.2
1120	1515	W22XdB 630 KJ	10,750	5.5	0.5	2.1	80.0	11,000	83	995	94.5	95.5	95.8	0.79	0.84	0.86	78.5
1250	1690	W22XdB 630 JH	11,997	5.5	0.5	2.1	86.0	11,500	83	995	94.5	95.5	95.8	0.79	0.84	0.86	87.6
1400	1890	W22XdB 710 JH	13,437	5.5	0.5	2.1	148.0	11,750	83	995	94.8	95.7	96.0	0.80	0.84	0.86	97.9
1600	2160	W22XdB 710 JH	15,357	5.5	0.5	2.1	162.0	12,000	83	995	94.8	95.7	96.0	0.80	0.84	0.86	112
1800	2430	W22XdB 710 JH	17,276	5.5	0.5	2.1	176.0	12,500	83	995	95.0	95.9	96.2	0.81	0.85	0.87	124
2000	2705	W22XdB 710 JH	19,196	5.5	0.5	2.1	185.0	12,750	83	995	95.0	95.9	96.2	0.81	0.85	0.87	138
2250	3040	W22XdB 710 HG	21,574	6.0	0.5	2.2	232.0	13,500	83	996	95.1	96.0	96.4	0.81	0.86	0.88	153
2500	3380	W22XdB 710 HG	23,971	6.5	0.6	2.4	240.0	13,750	83	996	95.2	96.1	96.5	0.81	0.86	0.88	170

VIII Poles - 750 min ⁻¹																	
500	675	W22XdB 560 JH	6418	5.0	0.5	2.1	52.0	9250	82	744	93.4	94.2	94.3	0.73	0.80	0.82	37.3
630	850	W22XdB 560 HG	8087	5.0	0.5	2.1	62.0	10,000	82	744	93.4	94.2	94.3	0.73	0.80	0.82	47.0
710	960	W22XdB 630 KJ	9101	5.0	0.5	2	79.0	10,500	82	745	93.8	94.8	95.0	0.74	0.81	0.83	52.0
800	1080	W22XdB 630 KJ	10,255	5.0	0.5	2	86.0	10,750	82	745	93.8	94.8	95.0	0.74	0.81	0.83	58.6
900	1215	W22XdB 630 KJ	11,537	5.0	0.5	2	94.0	11,000	82	745	94.0	95.0	95.2	0.74	0.81	0.83	65.8
1000	1350	W22XdB 630 JH	12,819	5.0	0.5	2	103.5	11,500	82	745	94.2	95.1	95.3	0.74	0.81	0.83	73.0
1120	1515	W22XdB 710 JH	14,319	6.0	0.6	2.3	176.0	11,750	82	747	94.4	95.3	95.5	0.74	0.81	0.84	80.6
1250	1690	W22XdB 710 JH	15,981	6.0	0.6	2.3	191.0	12,000	82	747	94.4	95.3	95.5	0.74	0.81	0.84	90.0
1400	1890	W22XdB 710 JH	17,898	6.0	0.6	2.3	208.0	12,500	82	747	94.5	95.4	95.6	0.74	0.81	0.84	101
1600	2160	W22XdB 710 JH	20,455	6.0	0.6	2.3	221.0	12,750	82	747	94.5	95.5	95.8	0.74	0.81	0.84	115
1800	2430	W22XdB 710 HG	23,012	6.0	0.6	2.3	262.0	13,500	82	747	94.6	95.6	96.0	0.74	0.81	0.84	129
2000	2705	W22XdB 710 HG	25,569	6.5	0.7	2.4	280.0	13,750	82	747	94.6	95.6	96.0	0.74	0.81	0.84	143

T_n = Full load torque

I_s / I_n = Locked rotor current

T_s / T_n = Locked rotor torque

T_{max} / T_n = Breakdown torque

I_n = Full load current

Standard voltage and frequency

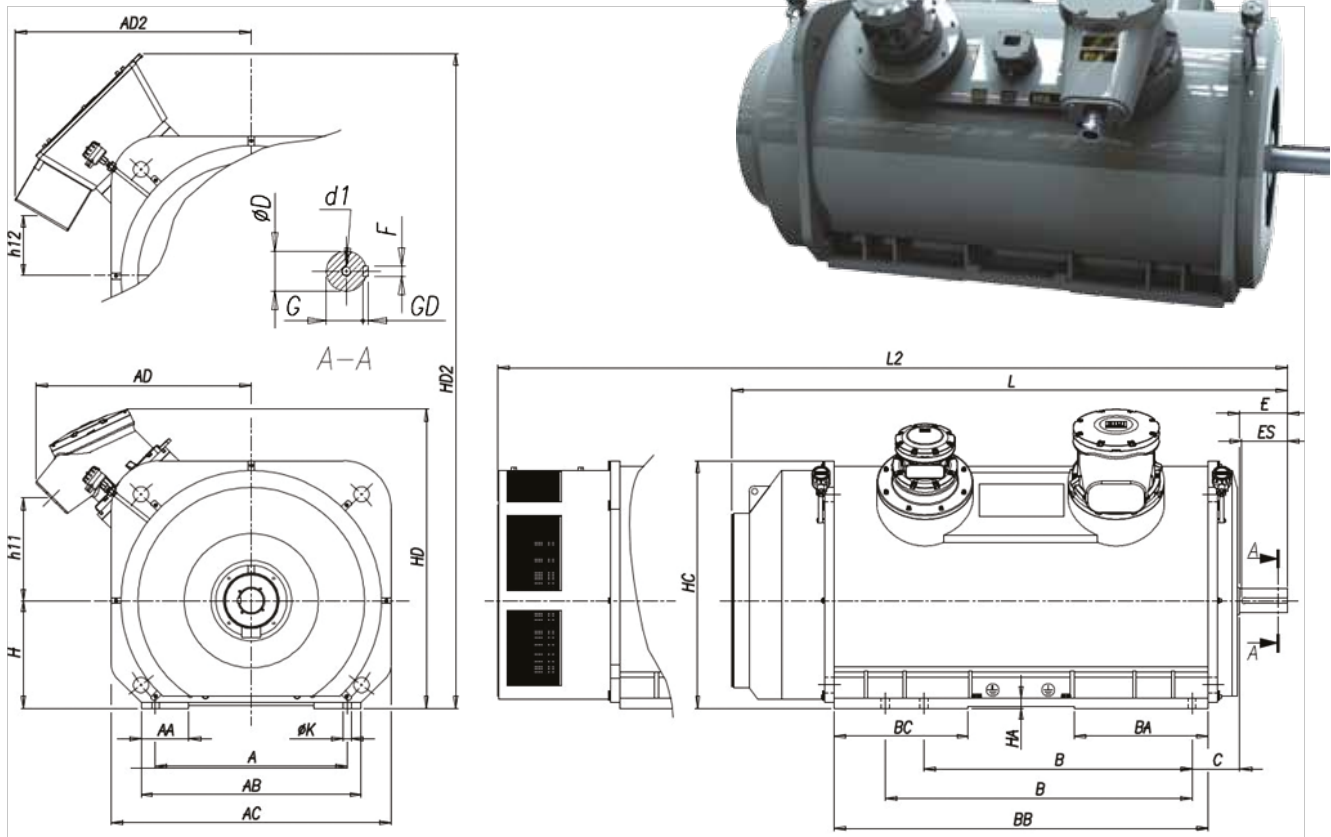
10,000 V, 50 Hz

Notes:

- All motors are fitted with copper rotors.
- The indicated values for sound pressure levels are measured @ 1m no load, with 3 dB(A) tolerance.
- All values are according to IEC 60034-1 tolerances.
- The motors can also operate at 60Hz supply. For 2 pole motors, please contact refer to us.
- 2 Pole motors of frame size 710 are fitted with sleeve bearings.
- These data can be changed without prior notice..

Mechanical Data

Ex d(e) IIB T4 B3T - Medium Voltage



Frame	Poles	A	AA	AB	AC	B	BA	BC	BB	C	h11	h12(*)	Shaft Dimensions					
													D	E	ES	F	G	GD
560JH	2P	1000	250	1150	1460	1250	600	600	1820	250	535	314	100m6	210	200	28	90	16
	1400					130m6							250	240	32	119	18	
560HG	2P					100m6	210	200	28	90			16					
	4P+					130m6	250	240	32	119			18					
630KJ	2P	1150	280	1330	1740	1250	600	600	1840	280	655	435	100m6	210	200	28	90	16
	1400					140m6							250	240	36	128	20	
630JH	2P					100m6	210	200	28	90			16					
	4P+					140m6	250	240	36	128			20					
710KJ	2P	1250	350	1400	1820	1400	700	700	1910	315	695	475	100m6	210	200	28	90	16
710JH	4P+					1600			2180				160m6	300	290	40	147	22
710HG						1800												

Frame	Poles	H	HA	HC	HD	HD2(*)	AD	AD2(*)	L	L2	K	d1	
560JH	2P	560	50	1290	1558	1719	1122	1231	2730	2834	42	DSM24	
	4P+								2770	2874			
560HG	2P								2860	2964			
	4P+								2900	3004			
630KJ	2P	630		1480	1748	1910	1262	1370	2750	2869		DSM30	
	4P+								2790	2909			
630JH	2P								2850	2969			DSM24
	4P+								2890	3009			
710KJ	2P	710		1600	1868	2030	1302	1410	2820	2949		DSM24	
710JH	4P+								3180	3309		DSM30	
710HG									3500	3629		DSM30	

(*) When $I \geq 400 A$

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