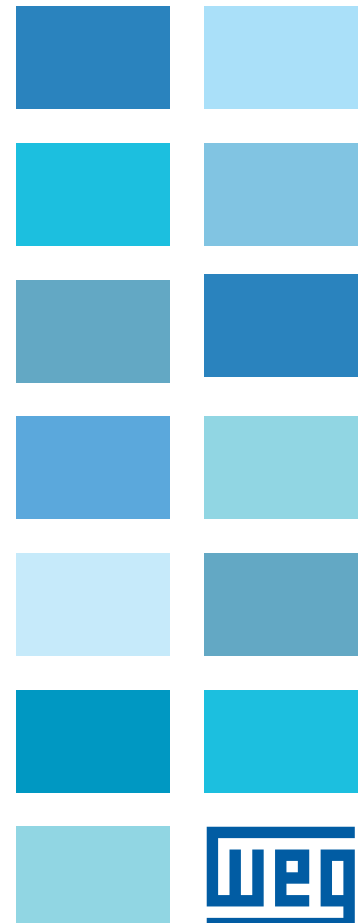
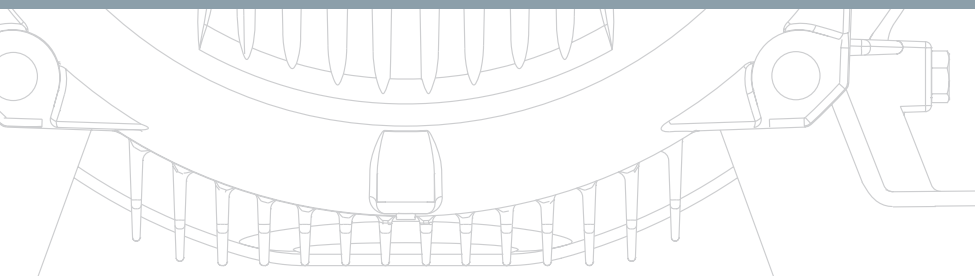
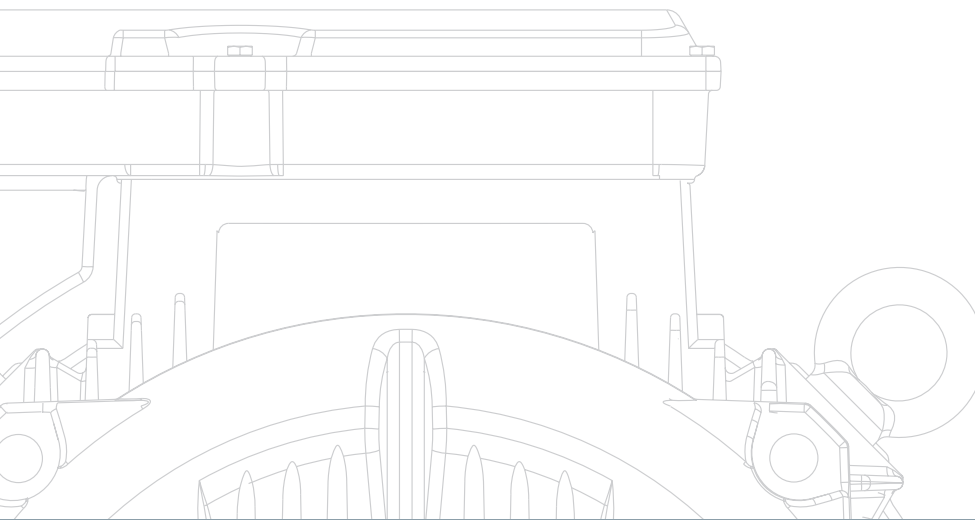


W22Xe

Increased Safety Motor

Technical Catalogue
European Market



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 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 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  mark certifying conformity with the Product Directive. Directive 1999/99/EC ("ATEX 137") 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 utilized 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/fibres):

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

Group III subdivisions:

- **IEC Group IIIA:** solid particles, larger than 500 µm suspended - combustible fibres
- **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. The 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 W22Xd 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, the new version of the IEC 60079-0, published in 2011, 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 EPL’s 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 EPL’s 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

W22Xe “Ex eb” Increased Safety motors are certified for installation in hazardous areas defined as Zone 1 (Gas Groups IIA, IIB, IIC) and, optionally, “Ex tb”, Zone 21 (Dust Groups IIIA, IIIB, IIIC).



W22Xe

Increased Safety “Ex eb” motors are designed to prevent the occurrence in operation (including starting & locked rotor conditions) of arcs, sparks and excessive overheating of all inner and outer surfaces of the machine which could reach the self ignition temperature of the surrounding potentially explosive atmosphere.

Features

Standard

- Rated Output: 0,18 to 250 kW
- Number of Poles: 2 to 8
- Frame Sizes: IEC 63 to 355M/L
- Voltage: up to 690 V
- Frequency: 50/60 Hz
- Efficiency Level: IE2
- Hazardous Area: Zone 1 – Gas Groups IIA, IIB, IIC
- Ambient Temperature Range: -20°C to 40°C
- Degree of Protection: IP55
- Loctite 5923 sealing on joints
- Winding Thermal Protection: PTC 110 °C
- Painting plan 205P (C3 according to ISO 12944)



Optional

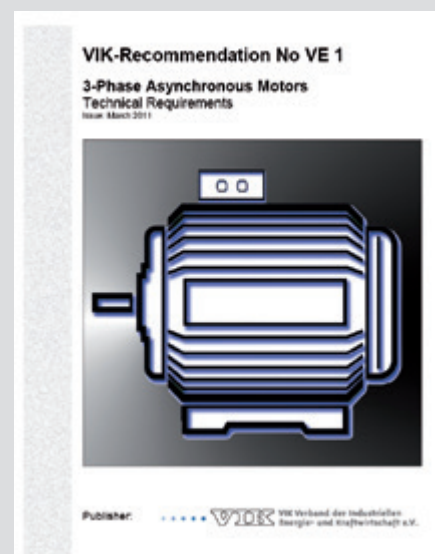
- Efficiency Level: IE3
- Dual marking for Zone 1 / Zone 21, Gas & Dust: Ex eb / Ex tb
- Degree of Protection up to IP66
- Ambient Temperature Range: -55 °C to 60 °C
- Pt-100, anti-condensation heaters
- Painting plans C5M / C5I acc. ISO 12944, NORSOK M-501 etc
- VIK Compliant Execution
- Suitable for frequency inverter application

W22Xe – VIK Execution

According VIK Recommendation No VE 1 (March 2011)

- Rated output: 0.12 kW to 135 kW* (according DIN 42673-2)
- Frame Sizes: IEC 63 to 315S/M*
- tE time according VIK recommendation
- Additional nameplate inside the terminal box
- Mobil Unirex N2 grease (frames 160 & above)
- Grease nipples M10 x 1 acc. DIN 3404
- Extended grease outlet (frames 160 & above)
- Removable gland plate (frames 315+)
- Cooling fans: plastic (up to 315S/M) /cast iron (315L)

* Larger frame sizes & outputs > 135 kW acc. IEC 60034-1



VFD Application

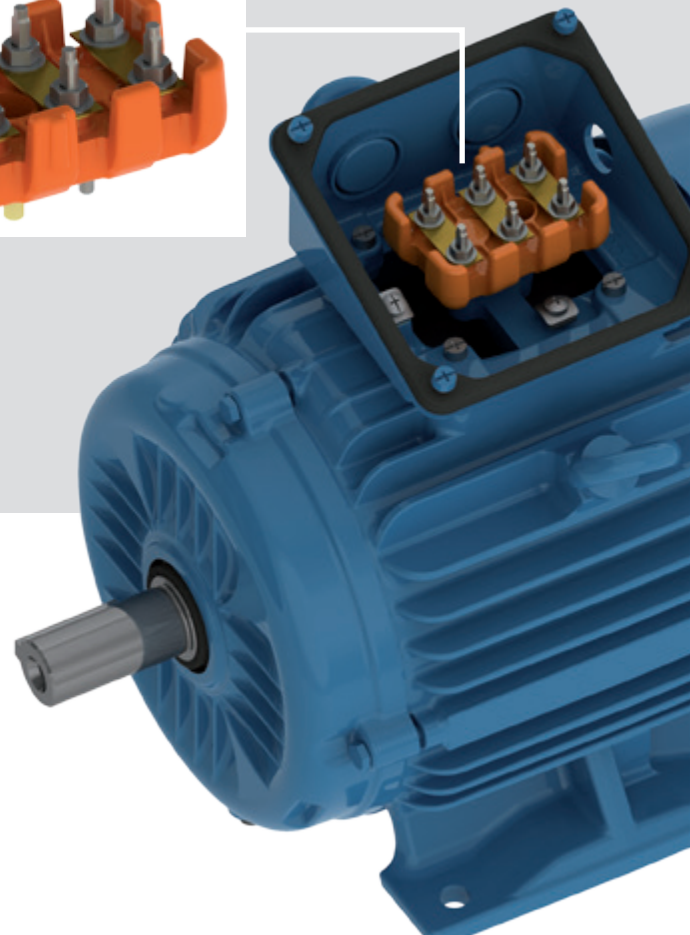
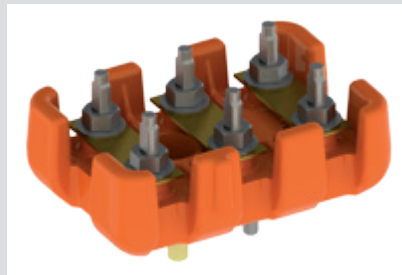
W22Xe motors are also certified for operation with Variable Frequency Drives

- Thermal protection embedded in motor windings
- Separate rating plate indicating permissible operating parameters under variable speed conditions.
- Must respect WEG derating curves / conditions defined in BASEEFA certificates



Ex e Design - Key Requirements

- Terminal boxes must have a minimum degree of protection IP54
- All components and connection cables must be firmly fastened, without allowing any movement during installation and operation
- The screw connections have a specified torque value (indicated in the O&M manual)
- tE time may not be below than 5 seconds and starting current ratio I_A/I_N not exceeding 10 times rated current
- Special attention to cross section, impregnation and reinforcement of winding wire
- Temperature rise limited to 70 K for ambient conditions of 40 °C (must be at least 10K below the permitted maximum of the insulation class)





Certification

SGS BASEEFA

- ATEX & IECEx certifications
- Zone 1 / Zone 21
- Gas groups IIA, IIB, IIC / Dust groups IIIA, IIIB, IIIC
- Standards IEC 60079-0, 60079-7 & 60079-31

Marking

- Ex eb IIC T3 Gb / Ex tb IIIC T125 °C Db



Ex eb IIC T1, T2, T3 Gc

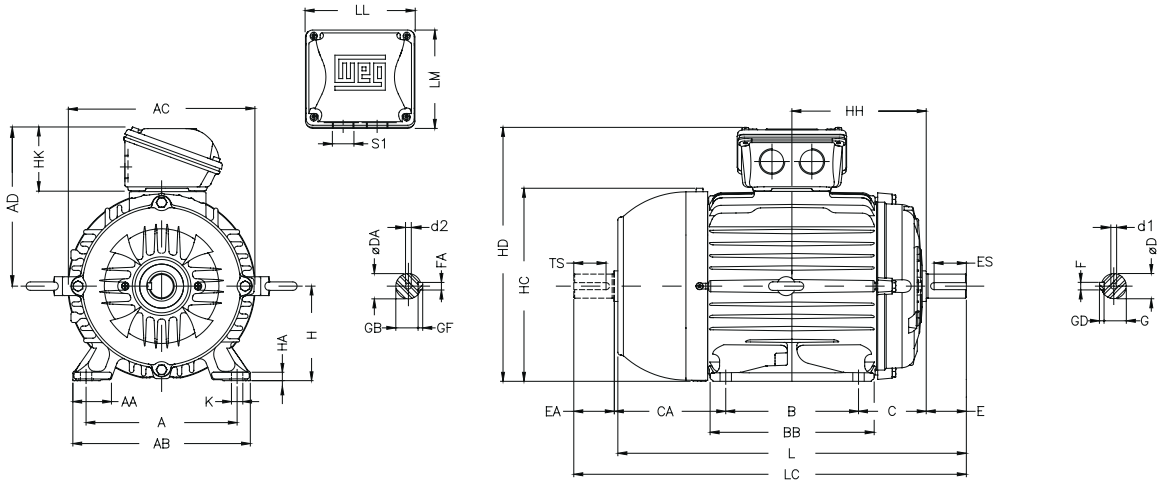
Output		Frame	Full Load Torque (Nm)	Locked Rotor Current I _L /I _n	Locked Rotor Torque T _L /T _n	Break-down Torque T _b /T _n	Inertia J (kgm ²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	400 V						IE Time (s)		
								Hot	Cold				% of full load						T1/T2	T3	
													Efficiency (%)			Power Factor					Full load current I _n (A)
													50	75	100	50	75	100			
kW	HP																				
VI poles																					
0,25	0,33	71	2,65	3,1	2,1	2,2	0,0009	53	117	12,4	43	900	62,5	67,6	68,7	0,36	0,48	0,57	0,921	53	30
0,37	0,5	80	3,80	4,3	1,9	2,4	0,0030	32	70	13,9	43	930	70,8	71,4	71,4	0,50	0,65	0,75	0,997	32	24
0,55	0,75	80	5,65	4,6	2,3	2,6	0,0037	21	46	16,0	43	930	71,9	74,0	74,0	0,49	0,63	0,73	1,47	21	20
0,65	0,88	90L	6,54	4,9	1,8	2,4	0,0052	29	64	19,3	45	950	74,4	75,0	75,0	0,52	0,66	0,75	1,67	29	19
0,95	1,29	L90L	9,66	5,3	2,3	2,6	0,0066	23	51	23,3	45	940	76,7	77,3	77,3	0,52	0,66	0,75	2,37	23	17
1,3	1,8	100L	13,2	4,9	1,9	2,4	0,0110	28	62	28,5	44	940	78,4	79,0	79,0	0,54	0,67	0,75	3,17	28	22
1,9	2,6	112M	18,7	7,3	3,5	4,3	0,0257	22	48	44,0	52	970	80,5	81,1	81,1	0,43	0,56	0,65	5,20	22	22
2,6	3,53	132S	25,9	5,4	1,6	2,5	0,0360	43	95	63,0	53	960	82,0	82,6	82,6	0,54	0,67	0,74	6,14	43	22
3,5	4,8	132M	34,8	5,6	1,7	2,5	0,0454	34	75	67,4	53	960	83,4	84,0	84,0	0,56	0,68	0,75	8,02	34	20
4,8	6,5	132M/L	47,5	6,0	1,8	2,7	0,0606	30	66	75,0	53	965	84,8	85,4	85,4	0,56	0,68	0,75	10,8	30	19
6,6	9	160M	65,0	6,0	2	2,7	0,1229	22	48	118	56	970	86,1	86,7	86,7	0,64	0,76	0,82	13,4	22	22
9,7	13,1	160L	95,5	5,8	2	2,6	0,1664	19	42	130	56	970	87,6	88,2	88,2	0,65	0,77	0,83	19,1	19	19
13,2	18	180L	129	8,2	2,6	3,5	0,2970	12	26	180	56	975	88,7	89,3	89,3	0,70	0,81	0,86	24,8	12	12
16,5	22,5	200L	161	5,8	1,8	2,5	0,3341	21	46	211	60	980	89,4	90,0	90,0	0,68	0,79	0,83	31,9	21	17
20	27,2	200L	195	5,8	2	2,6	0,4037	18	40	238	60	980	90,0	90,6	90,6	0,66	0,77	0,83	38,4	18	12
27	37	225S/M	262	6,6	2	2,6	0,8876	24	53	405	63	985	90,8	91,4	91,4	0,74	0,83	0,86	49,6	24	14
33	44,8	250S/M	322	6,1	1,9	2,4	1,29	29	64	490	64	980	91,4	92,0	92,0	0,78	0,85	0,87	59,5	29	14
40	55	280S/M	386	6,0	1,8	2,6	2,13	32	70	663	65	990	91,8	92,4	92,4	0,69	0,79	0,83	75,3	32	13
46	63	280S/M	444	6,1	1,8	2,6	2,36	29	64	684	65	990	92,1	92,7	92,7	0,69	0,79	0,83	86,3	29	12
64	87	315S/M	618	5,9	1,7	2,4	4,18	50	110	926	67	990	92,8	93,4	93,4	0,70	0,80	0,83	119	37	14
76	103	315S/M	734	5,4	1,5	2,2	4,54	44	97	953	67	990	93,1	93,7	93,7	0,74	0,82	0,84	139	36	13
VIII poles																					
0,65	0,88	100L	8,69	4,2	1,7	2,3	0,0110	45	99	28,5	50	715	70,2	70,8	70,8	0,40	0,52	0,61	2,17	45	22
0,95	1,29	100L	12,8	4,2	1,8	2,3	0,0127	40	88	30,8	50	710	73,0	73,6	73,6	0,41	0,53	0,62	3,00	40	20
1,3	1,8	112M	17,5	4,9	2,5	2,9	0,0202	38	84	41,0	46	710	75,3	75,9	75,9	0,46	0,60	0,69	3,58	38	20
1,9	2,6	132S	25,6	5,0	1,8	2,3	0,0592	38	84	68,0	48	710	77,8	78,4	78,4	0,54	0,67	0,74	4,73	38	20
2,6	3,53	132M	35,0	5,2	2	2,4	0,0740	30	66	75,5	48	710	79,7	80,3	80,3	0,55	0,68	0,74	6,32	30	19
3,5	4,8	160M	45,8	4,6	1,5	2,3	0,1053	38	84	112	51	730	81,5	82,1	82,1	0,52	0,65	0,73	8,43	38	22
4,8	6,5	160M	63,3	4,6	1,5	2,3	0,1404	30	66	123	51	725	83,2	83,8	83,8	0,54	0,67	0,75	11,0	30	21
6,6	9	160L	87,0	4,8	1,7	2,4	0,1756	25	55	132	51	725	84,8	85,4	85,4	0,52	0,66	0,74	15,1	25	20
9,7	13,1	180L	128	5,6	1,7	2,4	0,2439	17	37	170	51	725	86,6	87,2	87,2	0,67	0,78	0,83	19,3	17	17
13,2	18	200L	173	4,5	1,5	2,2	0,3868	33	73	231	53	730	87,8	88,4	88,4	0,56	0,68	0,75	28,7	33	20
16,5	22,5	225S/M	214	6,7	1,7	2,9	0,6517	27	59	373	56	735	88,7	89,3	89,3	0,64	0,75	0,81	32,9	27	20
20	27,2	225S/M	260	6,8	1,8	2,9	0,7203	22	48	382	56	735	89,4	90,0	90,0	0,64	0,75	0,81	39,6	22	18
27	37	250S/M	353	7,0	1,8	3	1,16	21	46	475	56	730	90,4	91,0	91,0	0,70	0,80	0,84	51,0	21	15
33	44,8	280S/M	426	5,1	1,3	2,1	2,03	40	88	652	59	740	91,0	91,6	91,6	0,65	0,75	0,79	65,8	40	18
40	55	280S/M	516	5,2	1,4	2	2,48	35	77	695	59	740	91,5	92,1	92,1	0,68	0,77	0,80	78,4	35	17
50	68	315S/M	646	5,3	1,3	2	5,13	45	99	992	62	740	92,1	92,7	92,7	0,72	0,80	0,82	94,9	37	14
68	92,3	315S/M	878	5,8	1,5	2,1	5,67	43	95	1031	62	740	92,8	93,4	93,4	0,72	0,80	0,82	128	36	13



Mechanical Data

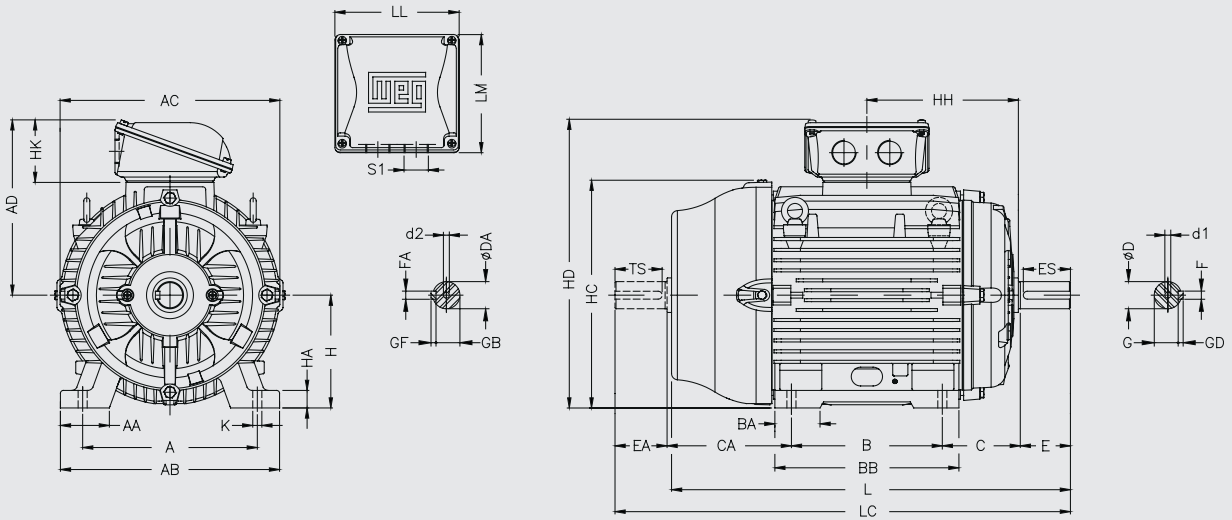
Foot Mounted Motors, Terminal Box Top

Frames 63 to 132M/L

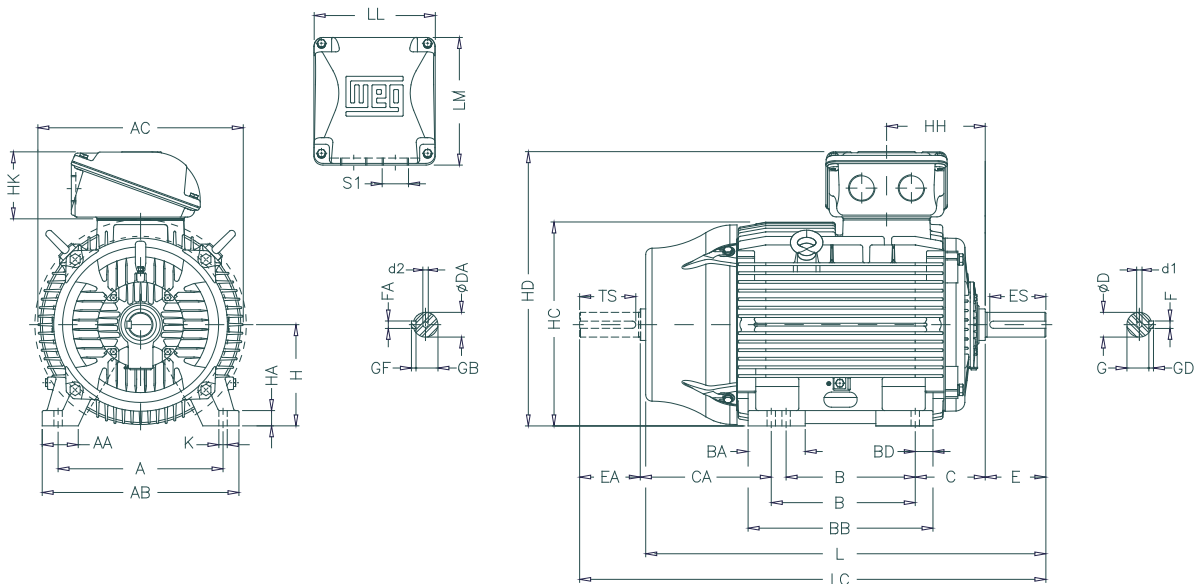


For frames 132S, 132M/L and 132M, the eyebolt will be fitted at 50°.

Frames 160M to 200L



Frames 225 to 355M/L



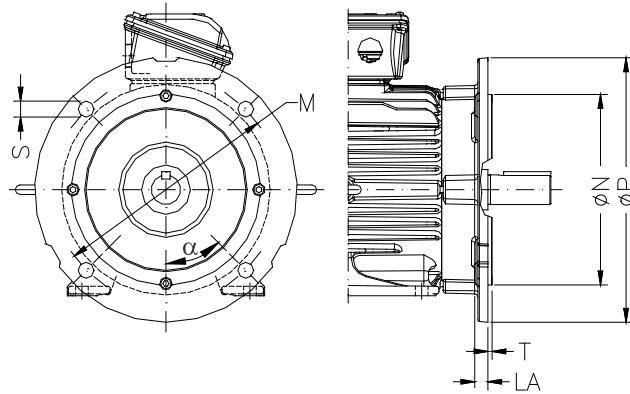
Frame	A	AA	AB	AC	AD	B	BA	BB	BD	Shaft													
										D	E	ES	F	G	GD	DA	d1	EA	TS	FA	GB	GF	d2
63	100	25,5	116	133	164	80		95		11j6	23	14	4	8,5	4	9j6	EM4	20	12	3	7,2	3	EM3
71	112	28,5	132	141	172	90		113,5		14j6	30	18	5	11	5	11j6	DM5	23	14	4	8,5	4	
80	125	30,7	149	159	181	100		125,5		19j6	40	28	6	15,5	6	14j6	DM6	30	18	5	11	5	EM4
L80																							
90S	140	36,5	164	184	191	125		131		24j6	50	36		20		16j6	DM8	40	28	5	13	5	DM6
L90S																							
90L	160	40	188	206	201	173		156		28j6	60	45		24		22j6	DM10	50	36	6	18,5	6	DM8
L90L																							
100L	190	40,5	220	227	203	177		173		28j6	60	45		24		24j6	DM10	50	36	8	20	7	DM8
L100L																							
112M	216	45	248	274	222	187		225		38k6	80	63	10	33		28j6	DM12	60	45	8	24	7	DM10
L112M																							
132S	254	64	308	329	272	254	63	254		42k6	110	80	12	37		42k6	DM16	110	80	12	37	8	DM16
132M																							
132M/L	279	78	350	360	287	279	70	294		48k6	110	80	14	42,5	9	48k6	DM16	110	80	14	42,5	9	DM16
160M																							
160L	318	82	385	402	326,5	267	82	332		55m6	110	80	16	49	10	48k6	DM16	110	80	14	42,5	9	DM16
180L																							
200M	356	80	436	455	381	286/311	124	412	41	55m6*	110*	100*	16*	49*	10*	55m6*	DM20	110*	100*	16*	49*	10*	DM20
200L																							
225S/M	406	100	506	486	396	311/349	146	467	59	60m6*	140	125	18	53	11	60m6	DM20	140	125	18	53	11	DM20
250S/M																							
280S/M	457	100	557	599	447	368/419	151	517	49	65m6*	140	125	18*	58*	11*	60m6*	DM20	140	125	18	53*	11	DM20
315S/M																							
355M/L	508	120	630	657	505	406/457	184	621	70	75m6*	140*	125*	18*	58*	11*	60m6*	DM20	140	125	18	53*	11	DM20
200M																							
200L	610	140	750	736	588	560/630	230	760	65	80m6	170	200	22	71	14	65m6	DM24	170	160	22	71	14	DM24
225S/M																							

Frame	C	CA	H	HA	HC	HD	HH	HK	LL	LM	K	L	LC	S1	Bearing	
															DE	NDE
63	40	78	63	7	130	186	80				7	216	241	2xM20x1,5 (EN) 2xM25x1,5 (VK)	6201 ZZ	
71	45	88	71	7	145	202	90				7	250	276		6202 ZZ	
80	50	93	80	8	163	220	100								6204 ZZ	6203 ZZ
L80		142														
90S	56	104	90	9	182	249	106							2xM25x1,5	6205 ZZ	6204 ZZ
L90S		135														
90L	63	104	100	10	205	269	133								6206 ZZ	6205 ZZ
L90L		135														
100L	70	118	112	10	235	304	140								6207 ZZ	6206 ZZ
L100L		162														
112M	89	150	132	17	274	352	159							2xM32x1,5	6308 ZZ	6207 ZZ
L112M																
132S	108	174	160	22	331	426	178								6309 C3	6209 C3
132M/L																
160M	121	200	180	28	366	461	213	101	198,5	190	14,5			2xM40x1,5	6311 C3	6211 C3
160L																
180M	133	222	200	30	407	519	241,5	119,5	230	220	18,5			2xM50x1,5	6312 C3	6212 C3
180L																
200M	149	319/294	225	34	453	635	212	153	269	285	24			2xM63x1,5	6314 C3	6314 C3
200L																
225S/M	168	354/316	250	43	493	660	214								6316 C3	6316 C3
250S/M																
280S/M	190	385/334	280	42	580	725	266	147	314	312	28				6319 C3	6316 C3
315S/M																
355M/L	254	483/413	355	50	723	964	339	220	404	436	28			2xM80x2,0	6322 C3	6319 C3
200M																
200L	1244*	1392*	315	48	644	840	264	176	379	382	28				6319 C3	6316 C3
225S/M																
250S/M	1274	1426	315	48	644	840	264	176	379	382	28				6319 C3	6316 C3
280S/M																
315S/M	1482	1677	355	50	723	964	339	220	404	436	28				6322 C3	6319 C3
355M/L																

Notes:
(*) Dimension applicable to 2 pole motors.

Flange Mounted Motors

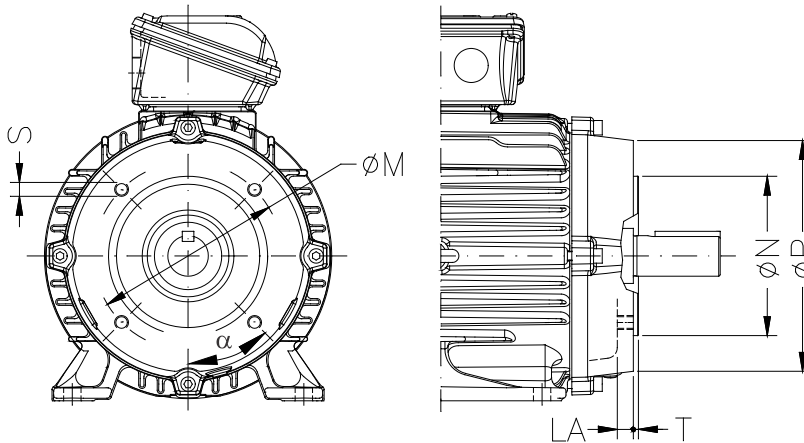
“FF” Flange



Frame	“FF” Flange							α	N° of holes
	Flange	LA	M	N	P	S	T		
63	FF-115	5,5	115	95	140	10	3	45°	4
71	FF-130	7	130	110	160		3.5		
80	FF-165	9	165	130	200	12	4		
90		10							
100	FF-215	12,5	215	180	250	15	5		
112									
132	FF-265	12	265	230	300	19	5		
160	FF-300	18	300	250	350				
180									
200	FF-350		350	300	400	19	5		
225	FF-400		400	350	450				
250	FF-500	18	500	450	550	19	5	22°30'	8
280									
315	FF-600	22	600	550	660/780(*)	24	6		
355	FF-740		740	680	800/880(*)				

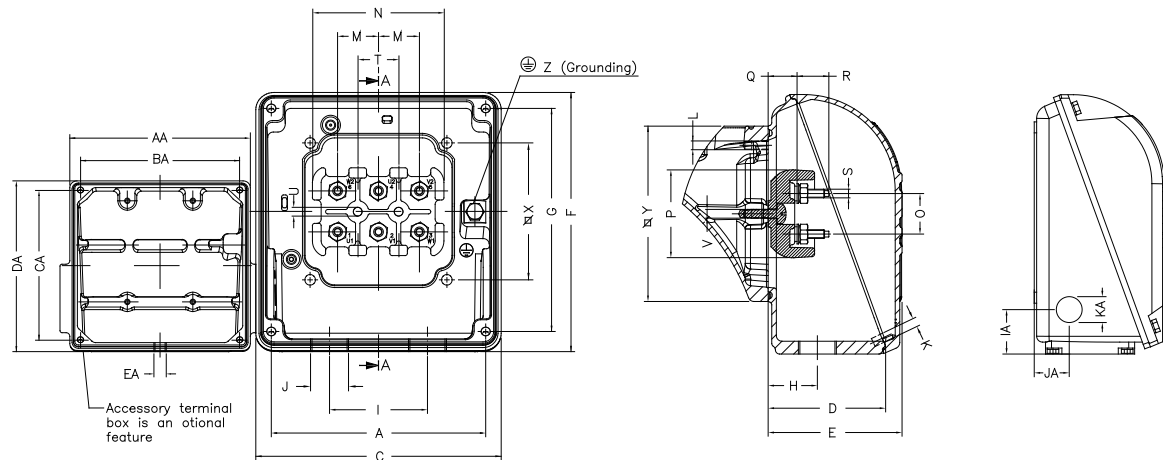
*Only for motors fitted with air deflector in drive end side.

“C-DIN” Flange



Frame	“C DIN” Flange							α	N° of holes
	Flange	LA	M	N	P	S	T		
63	C-90	9,5	75	60	90	M5	2,5	45°	4
71	C-105	8	85	70	105	M6			
80	C-120	10,5	100	80	120	M8	3		
90	C-140		115	95	140				
100	C-160	12	130	110	160	M8	3,5		
112		13,5							
132	C-200	15,5	165	130	200	M10	6,3		
160	C-250	19	215	180	249	M12x1,75			

Terminal Box Drawings



Frame	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U									
63	117	2,5	140	71	80	133	117	36,5	54	2xM20x1,5 (EN)	M6x1,0	M5x0,8	23	75	23	52	17	16	M5x0,8	23	6,5									
71										2xM25x1,5 (VIK)																				
80										2xM25x1,5																				
90										2xM32x1,5																				
100																														
112																														
132																														
160	175	4	198,5	90	101	190	175	49	84	2xM40x1,5	M8x1,25	M8x1,25	28	90	28	60	21,5	20,5	M6x1,0	28	6,6									
180	204	4,5	230	107	119,5	220	204	59	94	2xM50x1,5	M10x1,5	M10x1,5	35	112	35	74	24	24	M8x1,25	35	9,5									
200										2xM63x1,5			44	140	44	94	28	28	M10x1,5	45	10,5									
225S/M										235			12,5	269	133	153	285	260	71	110	45	153	45	108	34	40	M12x1,75	45	10,5	
250S/M	275	13,5	314	147	312	275	71	126	160	2xM63x1,5	M12x1,75	M12x1,75	65	210	65	146	48	48	M16x2,0	65	10,5									
280S/M										2xM80x2,0												M14x2,0	65	210	65	146	48	48	M16x2,0	65
315S/M										340												14,5	379	162	176	382	345	78	160	M12x1,75
355M/L	365	14,5	404	202	220	436	390	97	200	2xM80x2,0	M14x2,0	M14x2,0	65	210	65	146	48	48	M16x2,0	65	10,5									

Frame	V	X	Y	Z	AA	BA	CA	DA	EA	IA	JA	KA	Maximum number of connectors			
													Main	Accessories		
63	M5x0,8	70		2-10 mm ²	109	90	85	98	M20x1,5	35	20	M20x1,5	6	16		
71																
80																
90																
100																
112																
132																
160	M6x1,0	110		5,2-25 mm ²	139	117	117	133	M20x1,5	47	40	M20x1,5	12	26		
180				5,2-35 mm ²												
200																
225S/M	M10x1,5	150		192	198	175	175	189	M20x1,5	62	48	M20x1,5	16	26		
250S/M				25-50 mm ²												
280S/M				204												
315S/M*				200											260	35-70 mm ²
355M/L				260											300	85-120 mm ²

Notes:

(*) For frame size 315S/M (VIK), the main terminal box dimensions are the same of the 355M/L frame size. For Cenelec design please follow the table above.

WEG Worldwide Operations

ARGENTINA

San Francisco - Cordoba
Phone: +54 3564 421484
info-ar@weg.net

Cordoba - Cordoba
Phone: +54 351 4641366
weg-morbe@weg.com.ar

Buenos Aires
Phone: +54 11 42998000
ventas@pulverlux.com.ar

AUSTRALIA

Scoresby - Victoria
Phone: +61 3 97654600
info-au@weg.net

AUSTRIA

Markt Piesting - Wiener
Neustadt-Land
Phone: +43 2633 4040
watt@wattdrive.com

BELGIUM

Nivelles - Belgium
Phone: +32 67 888420
info-be@weg.net

BRAZIL

Jaraguá do Sul - Santa Catarina
Phone: +55 47 32764000
info-br@weg.net

CHILE

La Reina - Santiago
Phone: +56 2 27848900
info-cl@weg.net

CHINA

Nantong - Jiangsu
Phone: +86 513 85989333
info-cn@weg.net

Changzhou - Jiangsu
Phone: +86 519 88067692
info-cn@weg.net

COLOMBIA

San Cayetano - Bogota
Phone: +57 1 4160166
info-co@weg.net

ECUADOR

El Batan - Quito
Phone: +593 2 5144339
ceccato@weg.net

FRANCE

Saint-Quentin-Fallavier - Isère
Phone: +33 4 74991135
info-fr@weg.net

GERMANY

Türnich - Kerpen
Phone: +49 2237 92910
info-de@weg.net

Balingen - Baden-Württemberg
Phone: +49 7433 90410
info@weg-antriebe.de

Homburg (Efze) - Hesse
Phone: +49 5681 99520
info@akh-antriebstechnik.de

GHANA

Accra
Phone: +233 30 2766490
info@zestghana.com.gh

INDIA

Bangalore - Karnataka
Phone: +91 80 41282007
info-in@weg.net

Hosur - Tamil Nadu
Phone: +91 4344 301577
info-in@weg.net

ITALY

Cinisello Balsamo - Milano
Phone: +39 2 61293535
info-it@weg.net

JAPAN

Yokohama - Kanagawa
Phone: +81 45 5503030
info-jp@weg.net

MALAYSIA

Shah Alam - Selangor
Phone: +60 3 78591626
info@wattdrive.com.my

MEXICO

Huehuetoca - Mexico
Phone: +52 55 53214275
info-mx@weg.net

Tizayuca - Hidalgo
Phone: +52 77 97963790

NETHERLANDS

Oldenzaal - Overijssel
Phone: +31 541 571080
info-nl@weg.net

PERU

La Victoria - Lima
Phone: +51 1 2097600
info-pe@weg.net

PORTUGAL

Maia - Porto
Phone: +351 22 9477700
info-pt@weg.net

RUSSIA and CIS

Saint Petersburg
Phone: +7 812 363 2172
sales-wes@weg.net

SOUTH AFRICA

Johannesburg
Phone: +27 11 7236000
info@zest.co.za

SPAIN

Coslada - Madrid
Phone: +34 91 6553008
wegiberia@wegiberia.es

SINGAPORE

Singapore
Phone: +65 68589081
info-sg@weg.net

Singapore
Phone: +65 68622220
watteuro@watteuro.com.sg

SCANDINAVIA

Mölnlycke - Sweden
Phone: +46 31 888000
info-se@weg.net

UK

Redditch - Worcestershire
Phone: +44 1527 513800
info-uk@weg.net

UNITED ARAB EMIRATES

Jebel Ali - Dubai
Phone: +971 4 8130800
info-ae@weg.net

USA

Duluth - Georgia
Phone: +1 678 2492000
info-us@weg.net

Minneapolis - Minnesota
Phone: +1 612 3788000

VENEZUELA

Valencia - Carabobo
Phone: +58 241 8210582
info-ve@weg.net

For those countries where there is not a WEG own operation, find our local distributor at www.weg.net.



WEG Group - Motors Business Unit
Jaraguá do Sul - SC - Brazil
Phone: +55 47 3276 4000
motores@weg.net
www.weg.net

