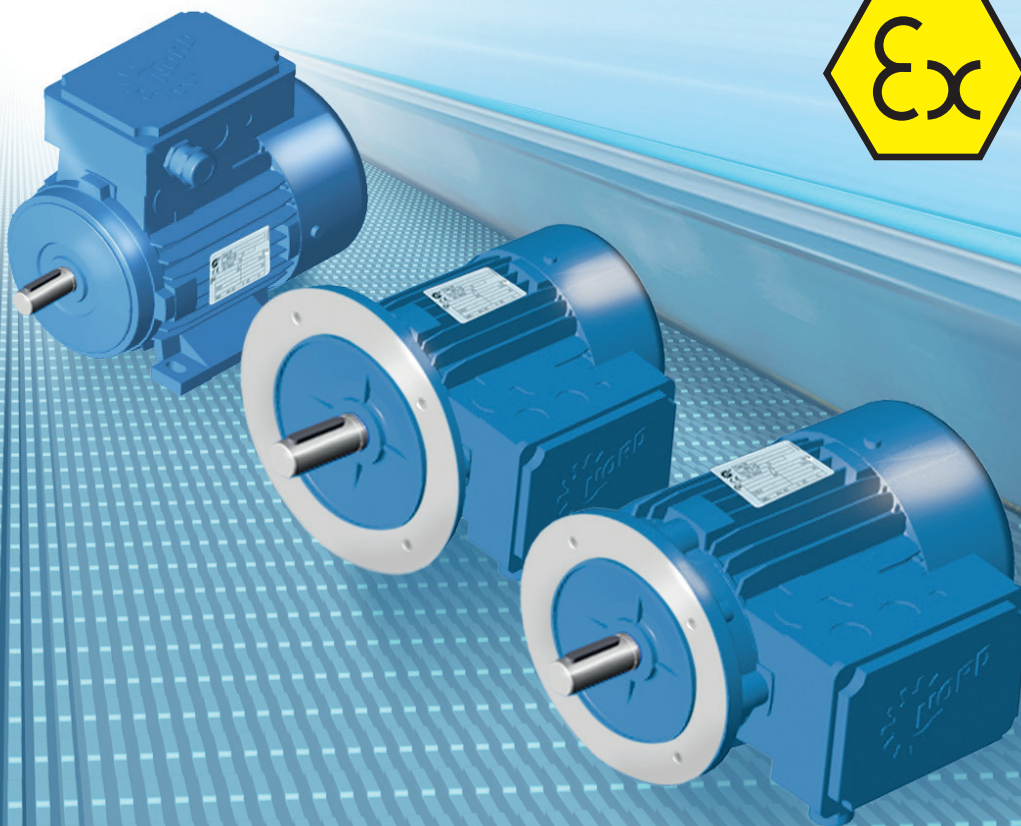


Intelligent Drivesystems, Worldwide Services

# NORD ATEX II 2G Ex e Motors



EN

**PRODUCT CATALOGUE**  
**M7003**

The logo features a black gear with the word "NORD" in bold black letters inside it. Below the gear, the word "DRIVESYSTEMS" is written in blue capital letters.

**NORD**  
DRIVESYSTEMS

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**COMPANY OVERVIEW**

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**DIMENSIONED DRAWING OF MOTORS**

**NORD-PRODUCT OVERVIEW**





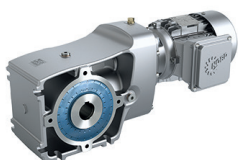


## Headquarters and Technology Centre

- in Bargteheide, close to Hamburg

### Mechanical products

Gear units



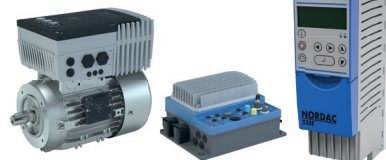
### Electrical products

Motors



### Electronic products

Inverters, motor starters and distribution systems



## Innovative drive solutions

- for more than 100 branches of industrial



Gear unit production



Motor production



Inverter production

## 7 state-of-the-art production plants

- produce gear units, motors and inverters also for complete drive solutions from a single source



The above map image is for information purpose and may not have been prepared or be suitable for legal purpose and we do not own any responsibility for correctness or authenticity of the same.

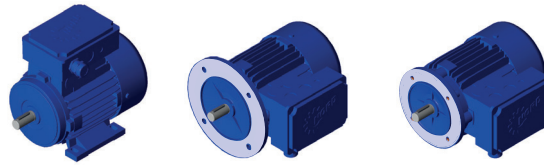
## Subsidiaries and sales partners in 89 countries on 5 continents

- provide local stocks
- assembly and production centres
- technical support
- customer service



## More than 3.500 employees throughout the world

- create customer oriented solutions



## Increased safety (Ex e)

Explosion protected motors with ignition protection class Ex e fulfil the stringent requirements of EN 60079-0 and EN 60079-7.

Special constructional features reliably prevent the occurrence of impermissibly high temperatures as well as arcing in sparks on and in the electric motor. Electric motors with ignition protection class Ex e are therefore suitable for use in Zone 1 and Zone 2 according to EN 60079-10-1. Compliance with the relevant operating and maintenance instructions is essential for safe operation.

## Notice!

Depending on their size, electric motors with ignition protection class Ex e which are produced as of 2015 are supplied with unreduced motor power. Please note the performance rating table on page [⇨](#) [3](#).

## Motor protection

Each Ex e motor must be protected against impermissible heating due to overload by means of a motor protection switch. The function test is certified by a notified body.

Thermal protection of the machine by means of direct temperature monitoring of the windings with a thermistor temperature sensor is permissible, if this is certified and stated on the rating plate.

If the only protection is a PTC thermistor temperature sensor, a performance-tested, PTC tripping device certified by a designated body must be used.

The PTC tripping device must be equipped with this protection class labelling.



No sole means of protection via temperature sensor

Sole protection via temperature sensor

## Type plate - examples

				Getriebebau NORD GmbH & Co. KG D-22941 Bargteheide		0102				08513450	
Type SK 112MH/4 2G TF 12											
3~ Mot.			No. 200900815.200				12345678				
Th. Cl. 155(F)		IP55	S1	EN 60034 (H),(A)/EN 60079							
50 Hz		230/400 V Δ/Y		220-242/380-420 V Δ/Y							
13,9/8,3 A		3,60 kW		PTB 14							
		0,77		1455 min <sup>-1</sup>		ATEX 3038/XX					
		II 2G Exe II C T3 Gb		T1	T2	T3	T4	IE2=87,3%			
IA/IN: 8,3		tE [s]:		14	14	6	230/400 V				
PTC nur als zusätzlicher Schutz zulässig											
www.nord.com											

				Getriebebau NORD GmbH & Co. KG D-22941 Bargteheide		0102				08513450	
Type SK 80SH/4 2G TF 12											
3~ Mot.			No. 200900815.100				12345678				
Th. Cl. 155(F)		IP55	S1	EN 60034 (H),(A)/EN 60079							
50 Hz		230/400 V Δ/Y		220-242/380-420 V Δ/Y							
1,77/1,60 A		0,55 kW		PTB 08							
		0,70		1391 min <sup>-1</sup>		ATEX 3024/09					
		II 2G Exe II C T3 Gb		T1	T2	T3	T4	IE2=82%			
IA/IN: 4,3		tE [s]:		30	30	29	230/400 V				
TMS bei Angabe der tA-Zeit nur mit PTC-Auslösegerät nach											
www.nord.com											

## Attention! Danger!

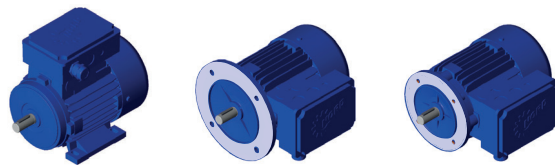
- If the time tA is not stated on the type plate, the thermistor is not permissible as the sole means of protection
- A thermistor is permissible as the sole protection

It is essential that the motor is protected with a motor protection relay which has been approved by a testing facility. The motor protection relay must be approved for the ignition protection class which is stated on the motor.

## Direct mounting

As with all NORD motors, Ex e motors can be directly mounted on NORD gear units.





## NORD ATEX 2G (Gas) - Ex e motors

Temperature classes: T1, T2, T3

Efficiency class: > 0,37 kW IE2

Voltage: 230/ 400V , 400/690V - 50 Hz

Operating mode: S1

Type	P <sub>N</sub>	n <sub>N</sub>	M <sub>N</sub>	I <sub>N</sub>		cos φ	η	M <sub>A</sub> /M <sub>N</sub>	M <sub>K</sub> /M <sub>N</sub>	I <sub>A</sub> /I <sub>N</sub>	J	kg	Sole protec. with therm.	Time t <sub>IE</sub> T1/T2	Time t <sub>IE</sub> T3	Ma	Mk
	[kW]	[1/min]	[Nm]	230/400 V	400/690 V		[%]				[kgm <sup>2</sup> ]	[kg]	**	[s]	[s]	[Nm]	[Nm]
63 S /4 2G	0,12	1355	0,85	0,99/0,57		0,63	49,7	2,7	2,7	2,7	0,00021	3,6	ja	60/60	50	2,30	2,31
63 L /4 2G	0,18	1370	1,25	1,49/0,86		0,54	55,4	2,5	2,6	3,0	0,00028	4,2	ja	60/60	19	3,14	3,30
71 S /4 2G	0,25	1389	1,72	1,52/0,88		0,68	65,0	2,2	2,2	3,8	0,00072	5,4	ja	29/29	25	3,80	3,70
71 L /4 2G	0,37	1397	2,53	2,25/1,30		0,63	67,5	2,0	2,4	4,3	0,00086	6,3	ja	23/23	20	5,12	6,15
80SH/4 2G	0,55	1415	3,71	2,86/1,65		0,66	77,1	3,2	3,2	4,8	0,0014	8,0	ja	45/45	40	11,7	11,9
80LH/4 2G	0,75	1400	5,12	3,55/2,05		0,68	79,6	3,0	3,1	4,9	0,0019	9,0	ja	45/45	31	15,2	15,7
90SH/4 2G	1,10	1425	7,37	5,00/2,90		0,70	81,4	3,1	3,5	5,8	0,0034	12,0	ja	24/24	21	22,7	25,6
90LH/4 2G	1,50	1425	10,0	7,53/4,35		0,65	83,6	3,3	3,5	5,6	0,0039	15,0	ja	17/17	9	33,3	35,4
100LH/4 2G	2,20	1445	14,5	10,00/5,80	5,80/3,35	0,71	84,3	3,7	4,3	7,1	0,0075	21,0	ja	18/18	13	54,0	62,0
100AH/4 2G	3,00	1450	19,8	12,64/7,30	7,30/4,21	0,76	85,5	2,4	3,6	6,5	0,0081	25,0	ja	10/10	9	47,7	70,2
112MH/4 2G	3,60	1445	23,8	13,90/8,00	8,00/4,64	0,77	86,2	3,4	4,0	8,3	0,014	28,0	nein	14/14	6	82,0	96,0
132SH/4 2G	5,50	1460	36,0	20,78/12,00	12,00/6,93	0,77	87,7	3,1	3,5	7,7	0,032	42,0	ja	14/14	9	113	127
132MH/4 2G	7,50	1460	49,0	29,10/16,80	16,80/9,70	0,74	88,7	3,3	3,9	8,1	0,035	55,0	nein	10/10	5	162	191
160MH/4 2G	11,00	1470	71,5	38,97/22,50	22,50/13,00	0,82	89,8	2,9	3,4	8,6	0,067	93,0	nein	12/12	5	206	241
160LH/4 2G	13,50	1470	87,7	45,90/26,50	26,50/15,30	0,85	90,4	3,32	3,85	9,53	0,092	122	ja	14/14	6	291	338
180MH/4 2G	15,0	1480	96,8		30,3/17,5	0,82	90,6	2,9	3,2	8,2	0,13	137	nein	24/24	8	278	310
180LH/4 2G	17,5	1478	113,1		34,5/19,9	0,84	91,0	2,9	3,2	8,2	0,16	155	nein	23/23	7	326	362
200	coming soon																

\* version B5, without options

\*\* If "No" is stated for sole thermistor protection, the thermistor may only be used as additional protection. It is therefore essential that a certified motor protection relay is used for the ignition protection class Ex e.

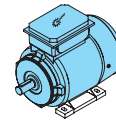
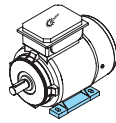
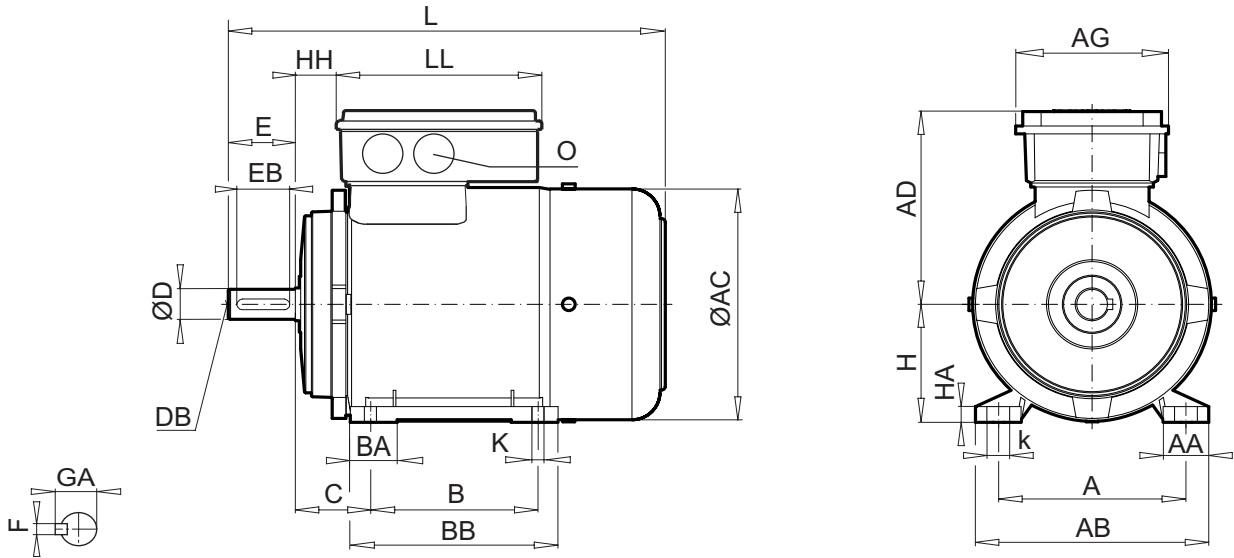
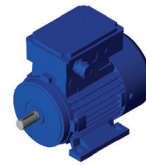
## Possible options

Voltage: 104 - 725V ±5%

Frequency: 50Hz, 60Hz on request

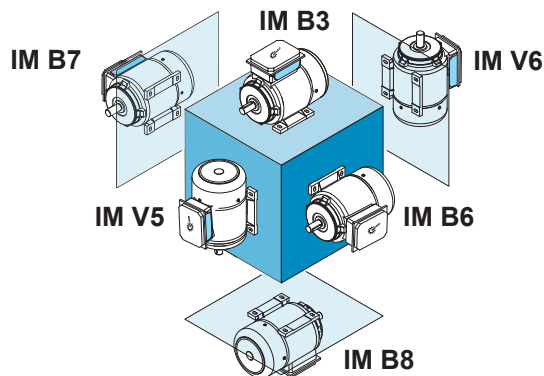
Options:

- TF - Thermistor temperature sensor (always provided)
- RD - Protective shield (against mechanical influences)
- WE - 2nd shaft end
- KB - Condensation drain holes

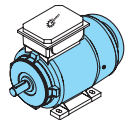
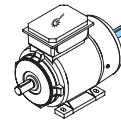
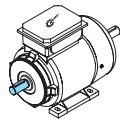
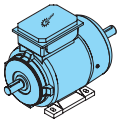
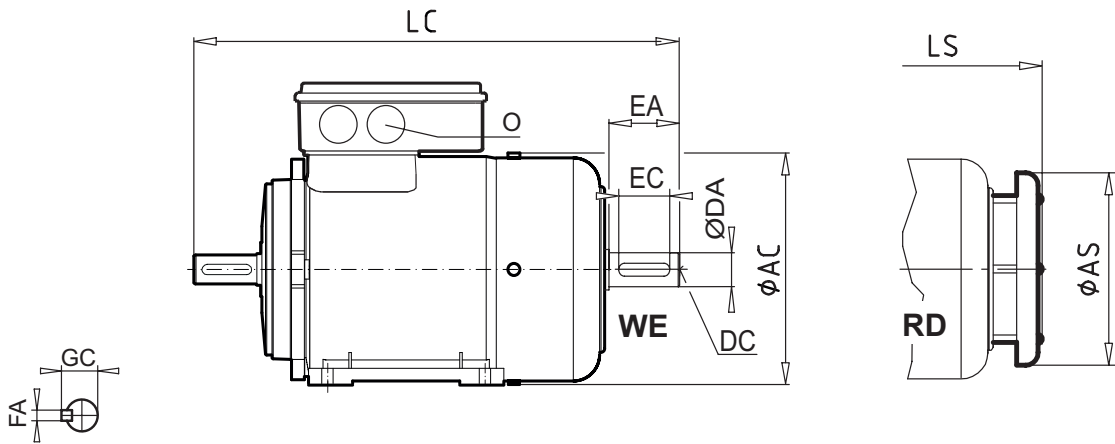
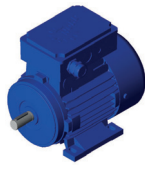


Type		IE1*	IE2																		
				[mm]																	
				A	AA	AB	B	BA	BB	HA	k	K	AC	AC**	AD	AG	C	H	HH	L	LL
63	S/L	-		100	21	120	80	27	105	9	12	7	123	130	139	108	40	63	9	215	153
71	S/L	-		112	24	136	90	24	108	12	12	7	138	145	148	108	45	71	17	244	153
80	-	SH/LH		125	30	160	100	30	125	11	17	9	156	164	142	108	50	80	26	276	153
90	-	SH/LH		140	34	174	125	35	155	12	17	9	176	184	147	108	56	90	30	326	153
100	-	LH/AH		160	37	192	140	30	175	15	22	12	194	202	171	108	63	100	36	366	153
112	-	MH		190	40	224	140	34	175	15	22	12	218	226	182	108	70	112	39	411	153
132	-	SH/MH		216	58	260	178	37	218	18	30	14	258	264	200	139	89	132	40	491	185
160	-	MH		254	72	318	210	52	264	25	30	14	310	319	241	186	108	160	52	601	186
160	-	LH		254	72	318	254	52	308	25	30	14	310	319	241	186	108	160	52	645	186
180	-	MH		279	88,5	340	241	-	281	27	30	14	348	357	258	186	121	180	54	723	186
180	-	LH		279	88,5	340	279	-	319	27	30	14	348	357	258	186	121	180	54	723	186
200	-																				

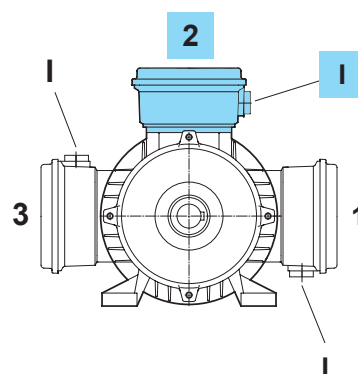
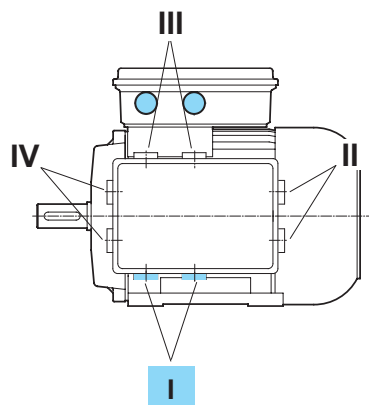
\* + Standard \*\* Dimensions over screw heads

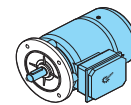
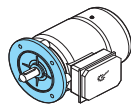
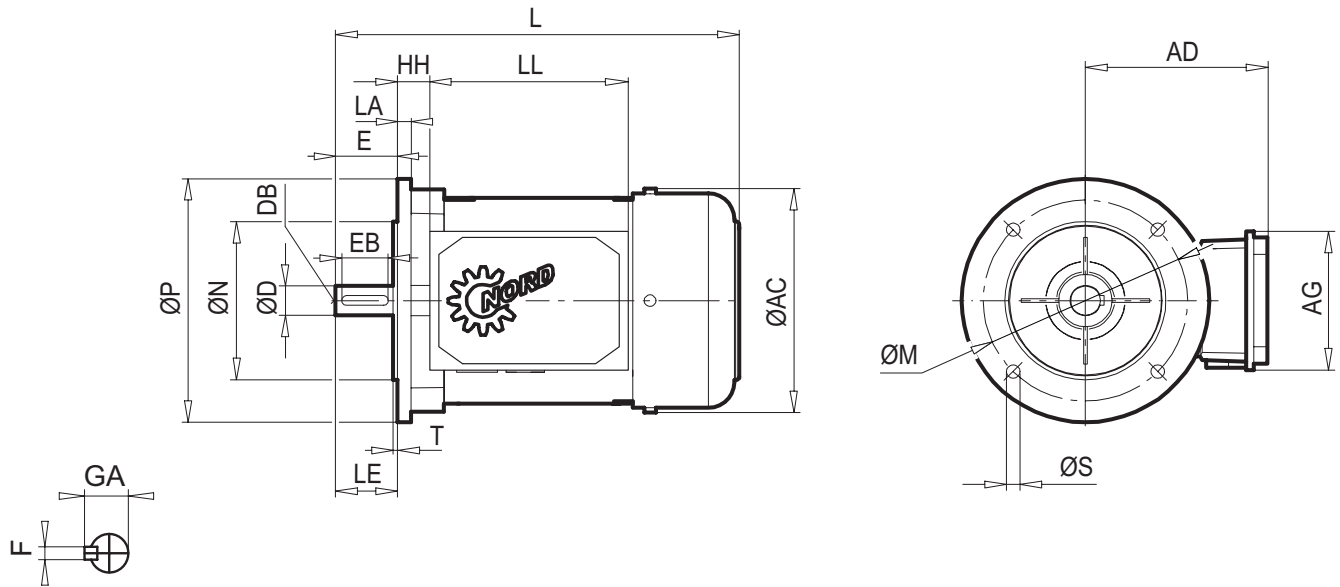
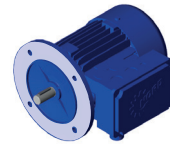






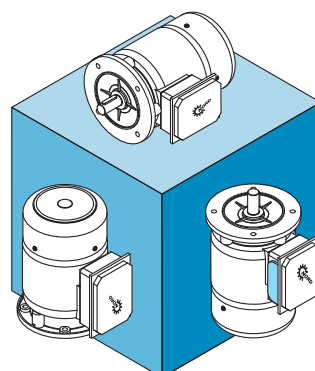
[mm]	LC	O	D	DB	E	EB	F	GA	DA	DC	EA	EC	FA	GC	AS	LS
	238	M20 x 1,5	11	M4	23	16	4	12,5	11	M4	23	16	4	12,0	122	227
	268	M20 x 1,5	14	M5	30	20	5	16,0	11	M4	23	16	4	12,0	137	256
	309	M25 x 1,5	19	M6	40	32	6	21,5	14	M5	30	20	5	16,0	155	292
	373	M25 x 1,5	24	M8	50	40	8	27,0	19	M6	40	32	6	21,5	175	342
	422	M32 x 1,5	28	M10	60	50	8	31,0	24	M8	50	40	8	27,0	193	382
	465	M32 x 1,5	28	M10	60	50	8	31,0	24	M8	50	40	8	27,0	217	426
	589	M32 x 1,5	38	M12	80	70	10	41,0	32	M12	80	70	10	35,0	256	511
	721 765	M40 x 1,5	42	M16	110	90	12	45,0	42	M16	110	90	12	45,0	310	621 665
	843	M40 x 1,5	48	M16	110	100	14	51,5	48	M16	110	100	14	52,0	350	741



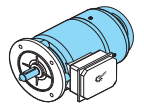
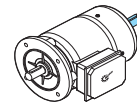
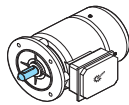
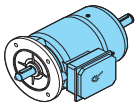
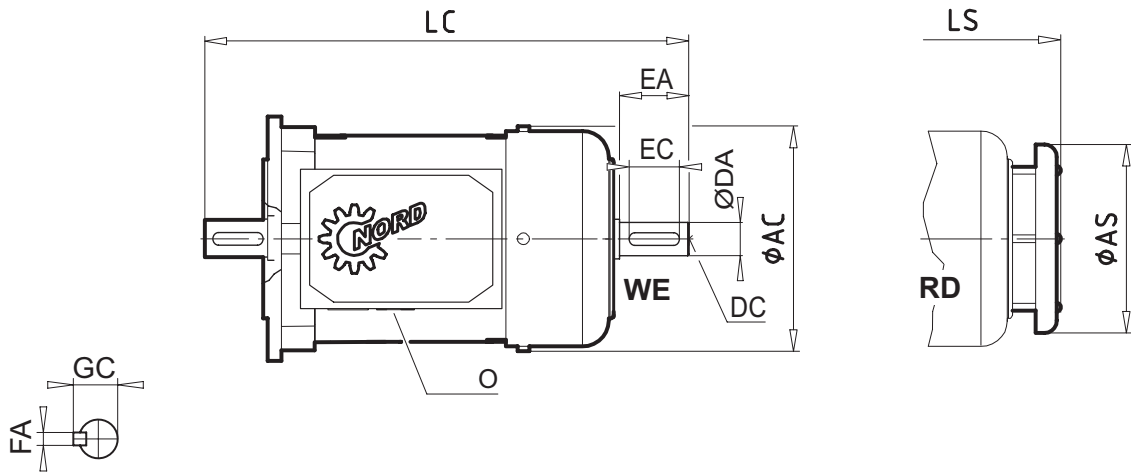
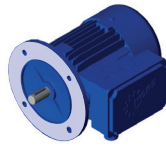


Type															
	IE1*	IE2	[mm]												
			M	N	P	S	T	LA	AC	AC**	AD	AG	HH	L	LL
63	S/L	-	115	95	140	4 x Ø9	3,0	10	123	130	139	108	9	215	153
71	S/L	-	130	110	160	4 x Ø9	4,0	10	138	145	148	108	17	244	153
80	-	SH/LH	165	130	200	4 x Ø11	4,0	11	156	165	142	108	26	276	153
90	-	SH/LH	165	130	200	4 x Ø11	4,0	11	176	184	147	108	30	326	153
100	-	LH/AH	215	180	250	4 x Ø13,5	4,0	15	194	202	171	108	36	366	153
112	-	MH	215	180	250	4 x Ø13	4,0	15	218	226	182	108	39	411	153
132	-	SH/MH	265	230	300	4 x Ø13	4,0	20	258	264	200	139	40	491	185
160	-	MH	300	250	350	4 x Ø17,5	5,0	20	310	319	241	186	52	602	186
160	-	LH												646	
180	-	MH/LH	300	250	350	4 x 17,5	5,0	14	348	357	258	186	54	726	186
200	-														

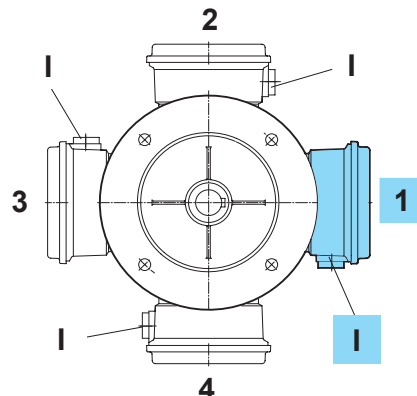
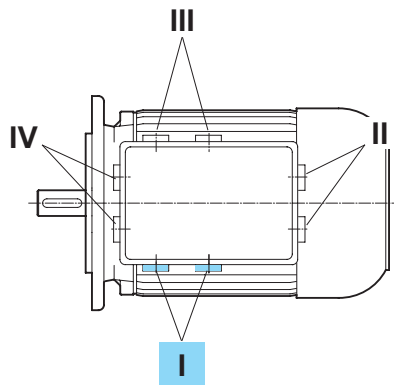
\* + Standard    \*\* Dimensions over screw heads

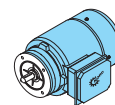
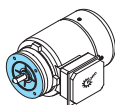
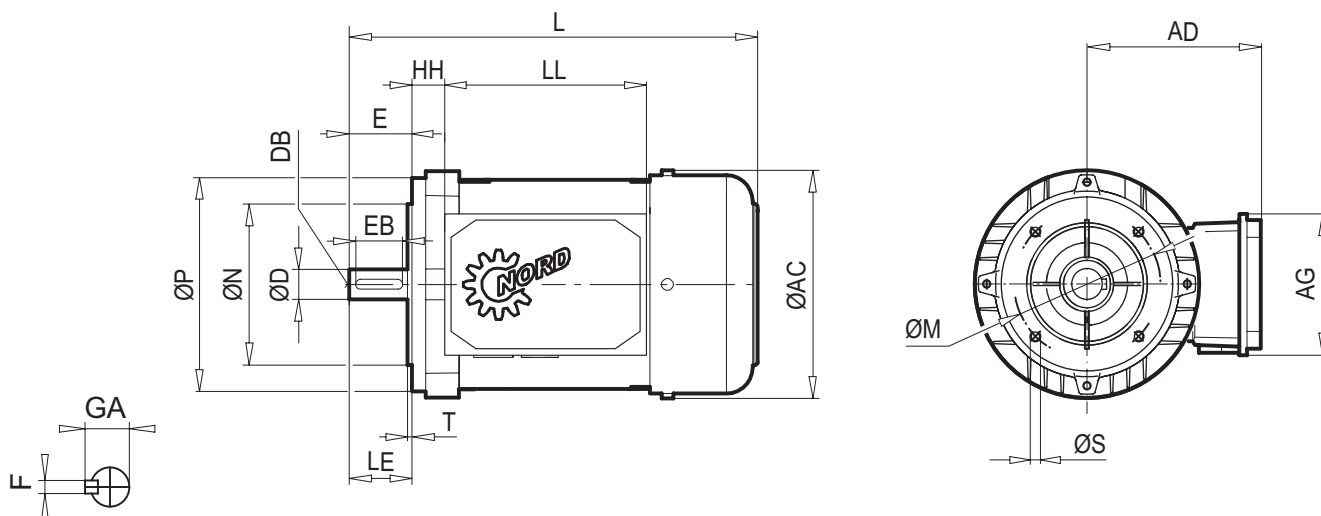
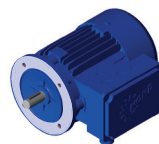






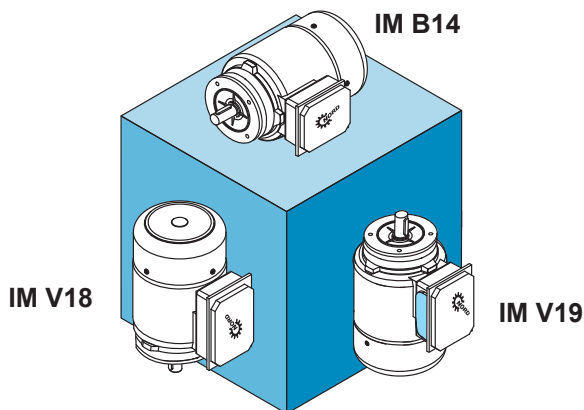
[mm]	LC	O	D	DB	E	EB	LE	F	GA	DA	DC	EA	EC	FA	GC	AS	LS
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	268	M20 x 1,5	14	M5	30	20	30	5	16,0	11	M4	23	16	4	12,0	137	256
	309	M25 x 1,5	19	M6	40	32	40	6	21,5	14	M5	30	20	5	16,0	138	310
	373	M25 x 1,5	24	M8	50	40	50	8	27,0	19	M6	40	32	6	21,5	156	366
	422	M32 x 1,5	28	M10	60	50	60	8	31,0	24	M8	50	40	8	27,0	176	419
	465	M32 x 1,5	28	M10	60	50	60	8	31,0	24	M8	50	40	8	27,0	194	466
	589	M32 x 1,5	38	M12	80	70	80	10	41,0	32	M12	80	70	10	35,0	218	550
	721	M40 x 1,5	42	M16	110	90	110	12	45,0	42	M16	110	90	12	45,0	310	669
	765																713
	843	M40 x 1,5	48	M16	110	100	110	14	51,5	48	M16	110	100	14	52,0	350	744



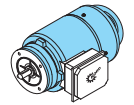
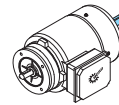
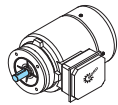
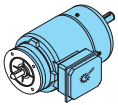
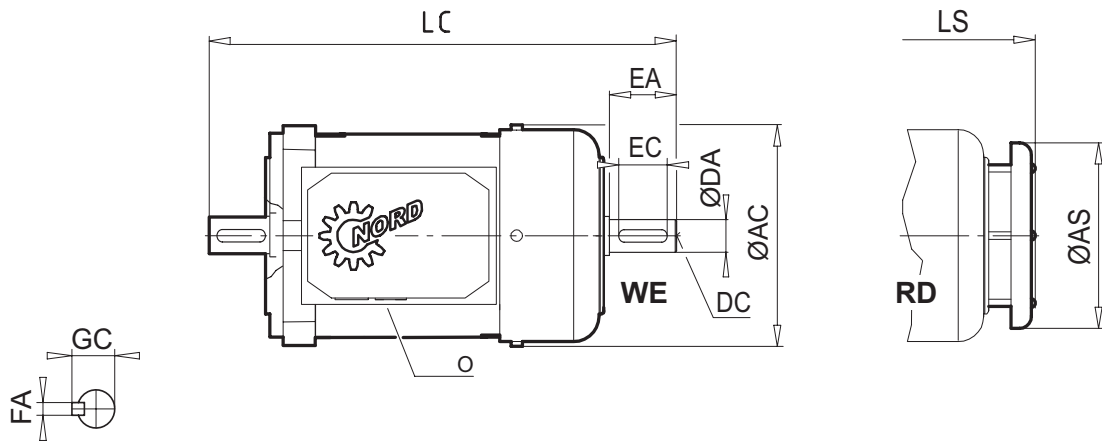
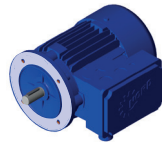


Type	IE		[mm]											
	IE1*	IE2	M	N	P	S	T	AC	AC**	AD	AG	HH	L	LL
63	S/L	-	75	60	90	M5 x Ø8	2,0	123	130	114	108	9	215	153
71	S/L	-	85	70	105	M6 x Ø12	2,0	138	145	124	108	17	244	153
80	-	SH/LH	100	80	120	M6 x Ø12	3,0	156	165	142	108	26	276	153
90	-	SH/LH	115	95	140	M8 x Ø15	3,0	176	183	147	108	30	326	153
100	-	LH/AH	130	110	160	M8 x Ø16	3,5	194	201	173	108	36	366	153
112	-	MH	130	110	160	M8 x Ø12	3,5	218	228	182	108	39	411	153
132	-	SH/MH	165	130	200	M10 x Ø18	3,5	258	266	201	139	40	491	185
160	-	MH	165	130	200	M10 x Ø20	4,0	310	319	241	186	52	602	186
160	-	LH											646	
180	MX	-	165	130	200	M10 x Ø20	4,0	348	357	241	186	54	602	186
180	LX	-											646	
200	-	-												

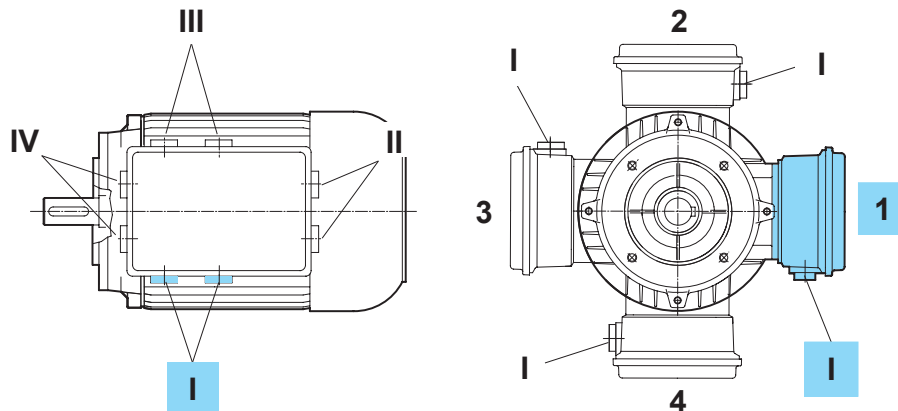
\* + Standard \*\* Dimensions over screw heads

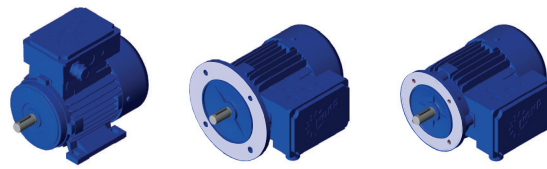






[mm]	LC	O	D	DB	E	EB	LE	F	GA	DA	DC	EA	EC	FA	GC	AS	LS
	238	M20 x 1,5	11	M4	23	16	23	4	12,5	11	M4	23	16	4	12,0	122	227
	268	M20 x 1,5	14	M5	30	20	30	5	16,0	11	M4	23	16	4	12,0	137	256
	309	M25 x 1,5	19	M6	40	32	40	6	21,5	14	M5	30	20	5	16,0	155	292
	373	M25 x 1,5	24	M8	50	40	50	8	27,0	19	M6	40	32	6	21,5	175	342
	422	M32 x 1,5	28	M10	60	50	60	8	31,0	24	M8	50	40	8	27,0	193	382
	465	M32 x 1,5	28	M10	60	50	60	8	31,0	24	M8	50	40	8	27,0	217	426
	589	M32 x 1,5	38	M12	80	70	80	10	41,0	32	M12	80	70	10	35,0	256	511
	721 765	M40 x 1,5	42	M16	110	90	110	12	45,0	42	M16	110	90	12	45,0	309	621 665
	721 765	M40 x 1,5	48	M16	110	100	110	14	51,5	42	M16	110	100	12	50,0	309	621 665

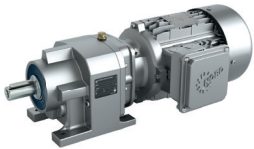




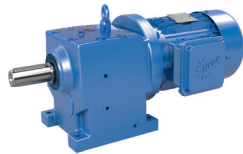
The latest drive technology compliant with Directive 94/9/EC (ATEX) from a single source

## Gear units for Gas- or Dust Explosion Protection

Helical Inline NORDBLOC.1



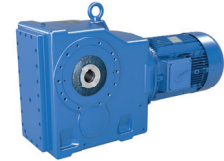
Helical Inline UNICASE



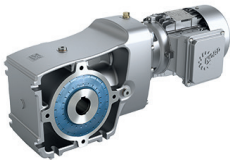
Parallel Shaft UNICASE



Helical Bevel UNICASE



Helical Bevel NORDBLOC.1



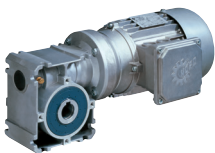
Helical Inline Standard



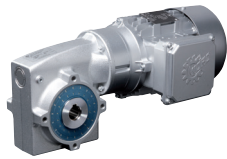
Helical Worm UNICASE



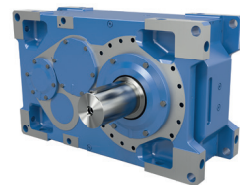
SI Worm UNIVERSAL



SMI Worm UNIVERSAL



Industrial Gear Units UNICASE



## Motors for Gas Explosion Protection

3 motor types are available with gas explosion protection:

### Ignition protection classes

- 2G "Pressure resistant" Ex de or Ex d Zone 1
- 2G "Increased safety" Ex e Zone 1
- 3G "Non sparking" Ex n Zone 2

## Motors for Dust Explosion Protection

2 motor types are available with dust explosion protection:

### Ignition protection classes

- 2D "Protection with housing" Ex tb Zone 21
- 3D "Protection with housing" Ex tc Zone 22

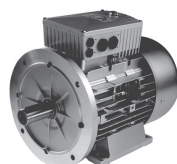
## Decentralised drive technology for Dust Explosion Protection

Following motor is available with dust explosion protection:

### Ignition protection class

- 3D "Protection with housing" Ex tc Zone 22

Motor starters



SK 135E  
up to 7,5 kW

Frequency inverters

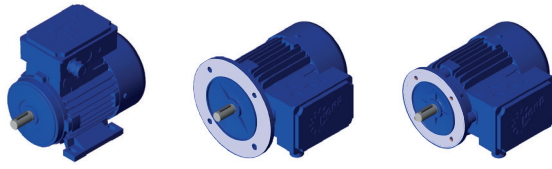


SK 180E  
up to 2,2 kW



SK 200E  
up to 22 kW





### Product documentation



- **Manuals**
  - Operating instructions
  - Installation instructions
- **Available in 20 languages**



### Certificates - ATEX, IEC Ex, RTN, CSA

The certificates can be found on the **NORD** homepage under [www.nord.com](http://www.nord.com) - Heading **DOCUMENTATION / CERTIFICATES** ATEX Motors

■ **Constant high quality is confirmed by international certificates.**



# Excerpts from the NORD range

## G1000 Fixed speeds

### UNICASE housing 50 Hz, 60 Hz

- NORDBLOC.1 Helical geared motors
- Helical geared motors
- Parallel geared motors
- Bevel geared motors
- Contrate worm gear motors

## G4014 Electronic variable speed drives

### UNICASE housing 50 Hz

- NORDBLOC.1 Helical geared motors
- Helical geared motors
- Parallel geared motors
- Bevel geared motors
- Contrate worm gear motors

## G1050 MAXXDRIVE Industrial gear units

### UNICASE housing 50 Hz, 60 Hz

- Parallel-Axis
- Right-Angle

## G1035 UNIVERSAL Worm gear motors


- SI and SMI

## F3020 Frequency inverter SK200E

## F3018 Frequency inverter SK180E







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