STANDARD SERIES

THREE PHASE ELECTRIC MOTOR LOW VOLTAGE

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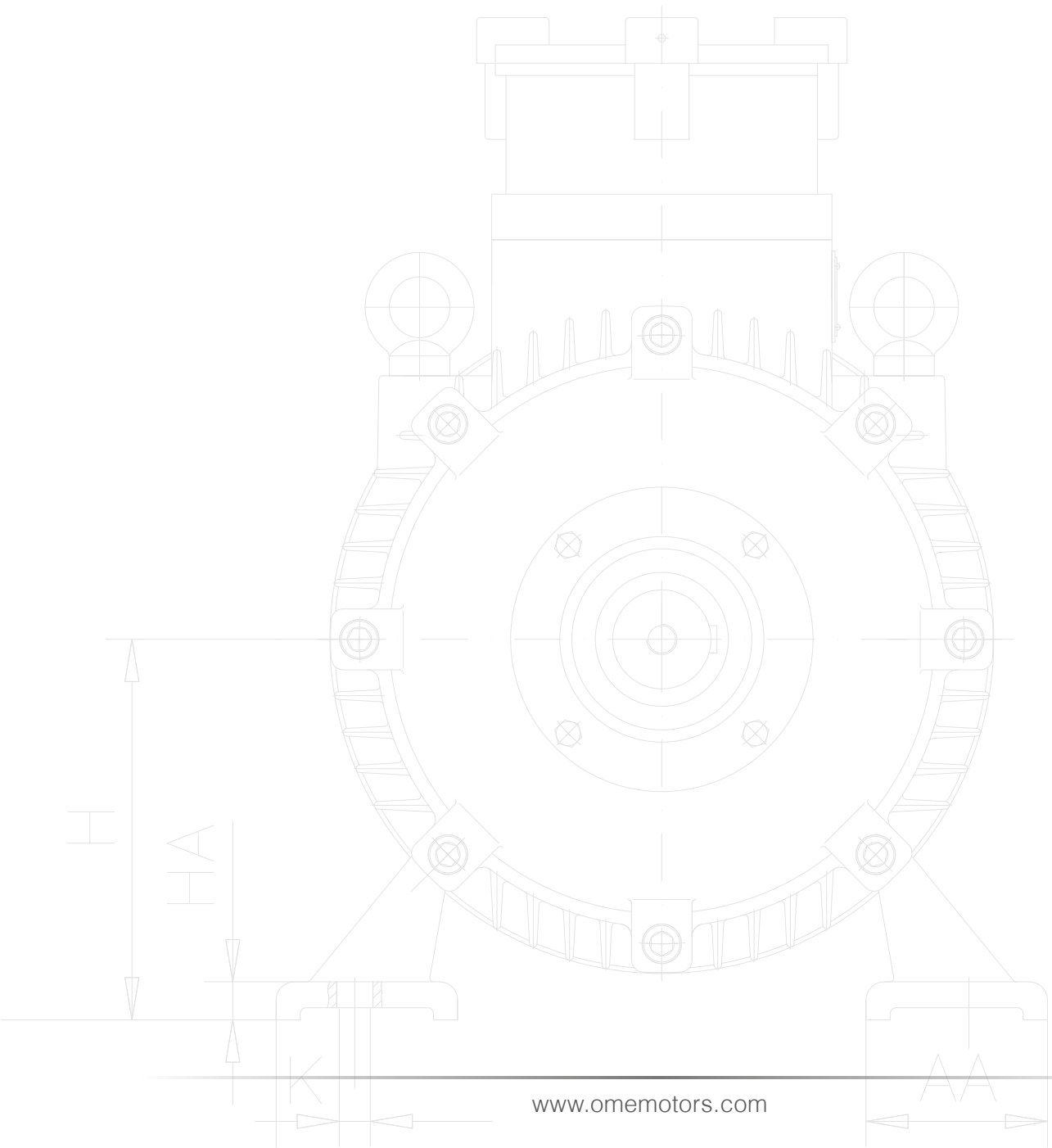
ISO14000 ISO9001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GENERAL INFORMATION

STANDARD AC MOTORS

APPENDIX

STANDARD SERIES

THREE PHASE ELECTRIC MOTOR LOW VOLTAGE

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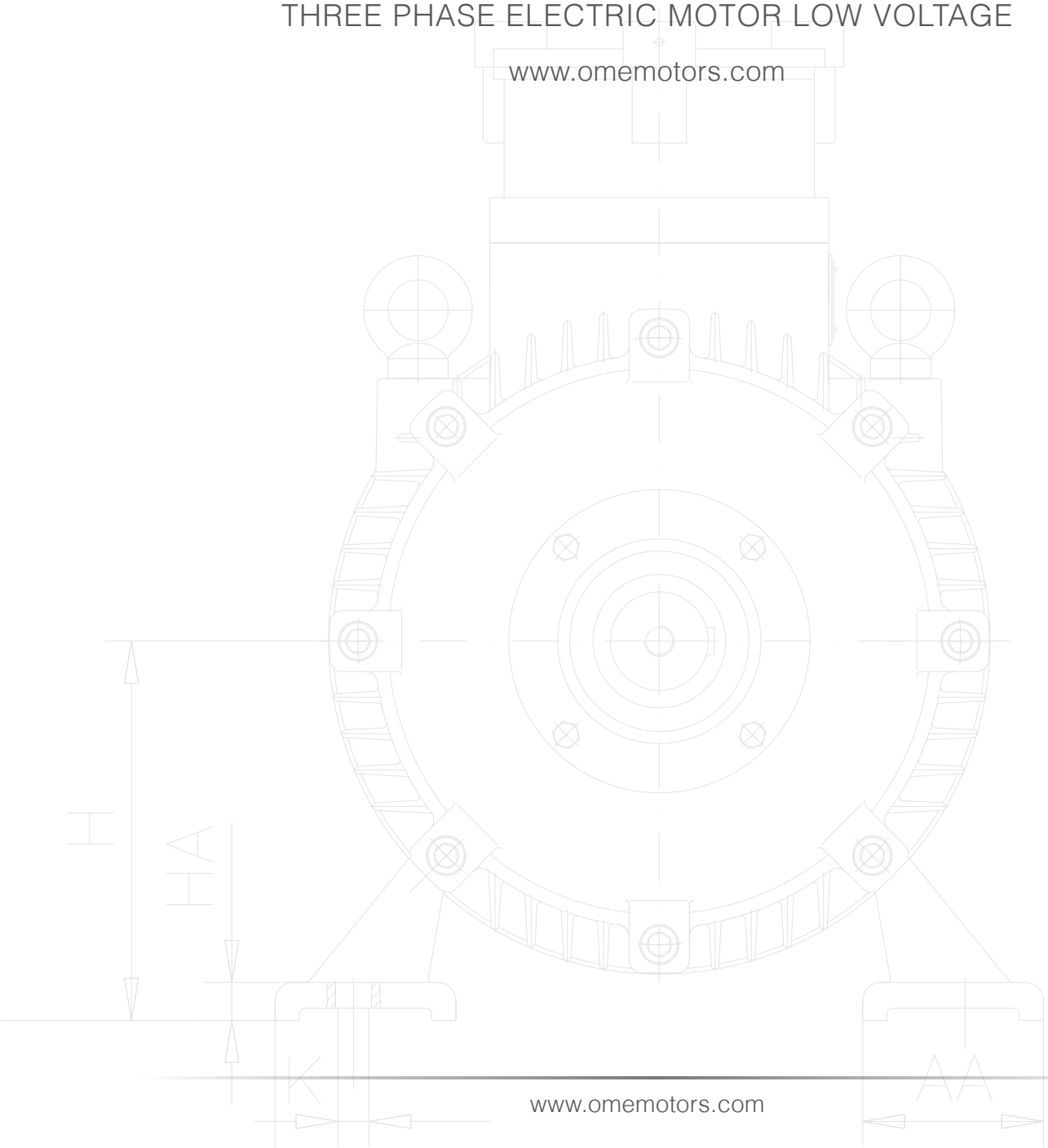


STANDARD SERIES
THREE PHASE ELECTRIC MOTOR LOW VOLTAGE

High efficiency • Reliability • Long life • Easy Manutenction

- Standard low voltage motors - or IEC motors - designed and manufactured by OME are low voltage motors that offer high efficiency and at the same time effective energy savings, in line with environmental regulations.

- OME high efficiency motors ensure significant optimisation of energy consumption, safeguarding the environment and ensuring substantial savings in operating costs.

OME Electric Motors

OME IEC low voltage motors are suitable for all industrial sectors and applications, complying with national and international mandatory efficiency rules.
OME's motors help our customers increase their productivity, save energy, improve quality and generate power.

- High quality components including superior copper, metal cable glands and SKF bearings.
Thanks to their high quality, OME electric motors are perfectly suitable for heavy duty applications, with Long lasting performances.

High quality production

- OME also pays exceptional care and to the design attention of its electric motors.
This increase the cooling efficiency and also the looking of the product.

Modern design

- Customized packaging that provides increased protection during transport and an easyer handling.

Superior packaging

OME Electric Motors and Orsatti Group

OME is a well-established global reality born from the Orsatti family's long experience in the electrical machinery sector and characterized by a history in continuous evolution.

The key points that distinguish the Orsatti Group are in particular:

- Technical experience of over 50 years
- The continuous research for new solutions to increase the performance of our electric motors
- Development of technical solutions in compliance with current standards
- The tailor-made service to customize the motors on customer request
- The wide range of production to meet any market need
- The constant research for suitable solutions to increase the efficiency of our electric motors
- Compliance with the standards required for energy saving and environmental protection

MISSION

Our mission is to be a leading company in the production of electric motors at an international level.

VISION

Our vision is to design and manufacture highly customized motors, meeting the most varied customer requirements, managing to make competitive even the smallest realities.

VALUES

- The high quality of production, sales, service and maintenance;
- Intelligent and low costs logistics;
- Providing motors, services and expertise to save energy and improve customer processes throughout the life cycle of our products and beyond.

STANDARDS AND REGULATIONS

General specifications for rotating electrical machines	IEC 60034-1 IEC 60085	DIN EN 60034-1
Specifications of the losses and efficiency of rotating electrical machines	IEC 60034-2	DIN EN 60034-2
Asynchronous AC motors for general use with standardized dimensions and outputs	IEC 60072	DIN EN 50347
Restart caracteristics for rotating electrical machines	IEC 60034-12	DIN EN 60034-12
Terminal designations and direction of rotation for rotating electrical machines	IEC 60034-8	DIN EN 60034-8
Designation for type of construction, installation and terminal box position	IEC 60034-7	DIN EN 60034-7
Entry to terminal box	-	DIN 42925
Built-in thermal protection	IEC 60034-11	DIN EN 60034-11
Noise limit values for rotating electrical machines	IEC 60034-9	DIN EN 60034-9
IEC standard voltages	IEC 60038	DIN IEC 60038
Cooling methods for rotating electrical machines	IEC 60034-6	DIN EN 60034-6
Vibration severity of rotating electrical machines	IEC 60034-14	DIN EN 60034-14
Vibration limits	-	DIN ISO 10816-3
Degrees of protection of rotating electrical machines	IEC 60034-5	DIN EN 60034-5

The motors comply with the appropriate standards and regulations, especially those listed in the table above in relevant parts.

OVERVIEW OF THE PRODUCT

VOLTAGE AND FREQUENCY

The tolerances of voltage and frequency of the power line are regulated by EN 60034-1. In range A a combination of voltage difference (±5%) and frequency difference (±2%) is acceptable. In range B a not combination of voltage difference (±10%) and frequency difference (+3%/-5%) is acceptable. TThe motors are marked with the rated voltage according to EN 60034-1. 230V/400V 50Hz or 265V/460V 60Hz - 400V/690V 50Hz or 460V/795V 60Hz

INSULATION

All motors are produced with class F insulation. In rated power and line operation the motors are working in class is B. Windings have tropicalized insulation

POWER

The nominal power is referred to continuous duty in accordance with DIN EN 60034-1 at a frequency of 50 Hz, a coolant temp. of 40°C and an altitude up to 1000m above sea level.

DEGREE OF PROTECTION

All motors are in protection class IP55 in accordance with DIN EN 60529. All motor types with driving-end direction to the bottom (i.e.V1) shall be ordered with protection hood.

DESIGN OF HOUSING

The Type OM is made of Aluminium-die-casting. The type OM is made of cast iron. The terminal box mounted on top at all B3-motors. At the SA types the position is variable. The motors of the OM types with a size of 56 till 132 have removable feet which can also be fixed on the side.

MECHANICAL BALANCE QUALITY

All rotors are balanced with half key inserted in the shaft. The vibration severity grade is A (normal), according to DIN EN 6034-14. Referring to DIN ISO 8821 the balancing with half inserted key in the shaft is required.

BEARINGS

All motors are fitted with high quality, lifetime-lubricated bearings from the manufacturer SKF.
The nominal rating life of the bearings used in horizontal mounted motors without any axial load is 40.000 operating hours, for Power take-off via shaft-coupling. Under the use of maximal load the lifetime of the bearings is min. 20.000 operating hours.
From framesize 250 all motors have open bearings and lubrication devices.

The lubrication intervals are in this catalogue. Option: reinforced bearings.

Frame size	Poles	horizontal (B3)		Vertikal | vertical (B5)	
		AS | DE	NS | NDE	AS | DE	NS | NDE
63	2/4/6/8	6201 2RS/C3		6201 2RS/C3	
71	2/4/6/8	6202 2RS/C3		6202 2RS/C3	
80	2/4/6/8	6204 2RS/C3		6204 2RS/C3	
90	2/4/6/8	6205 2RS/C3		6205 2RS/C3	
100	2/4/6/8	6206 2RS/C3		6206 2RS/C3	
112	2/4/6/8	6306 2RS/C3		6306 2RS/C3	
132	2/4/6/8	6308 2RS/C3		6308 2RS/C3	
160	2/4/6/8	6309 2RS/C3		6309 2RS/C3	
180	2/4/6/8	6311 2RS/C3		6311 2RS/C3	
200	2/4/6/8	6312 2RS/C3		6312 2RS/C3	
225	2	6312 2RS/C3		6312 2RS/C3	
	4/6/8	6313 2RS/C3		6313 2RS/C3	
250	2	6314/C3		6314/C3	7314B
	4/6/8	6314/C3		6314/C3	7314B
280	2	6316/C3		6316/C3	7316B
	4/6/8	6316/C3		6316/C3	7316B
315	2	NU316E/C3	6316/C3	6316/C3	7316B
	4/6/8	NU319E/C3	6319/C3	6319/C3	7319B
355	2	NU319E/C3	6319/C3	6319/C3	7319B
	4/6/8	NU322E/C3	6322/C3	6322/C3	7322B

COOLING AND VENTILATION

The motors are equipped with radial-flow-fans made of plastic or aluminium, which cools the motor independently of the direction of the rotating (IC 411 according to DIN EN 60034-6). The fan covers are made of sheet-steel.

COLOUR

Standard coating colour is RAL 7030 (stone grey). The coating is qualified for climate-group moderate according to IEC-Publication 721-2-1 for indoor- and outdoor installation.

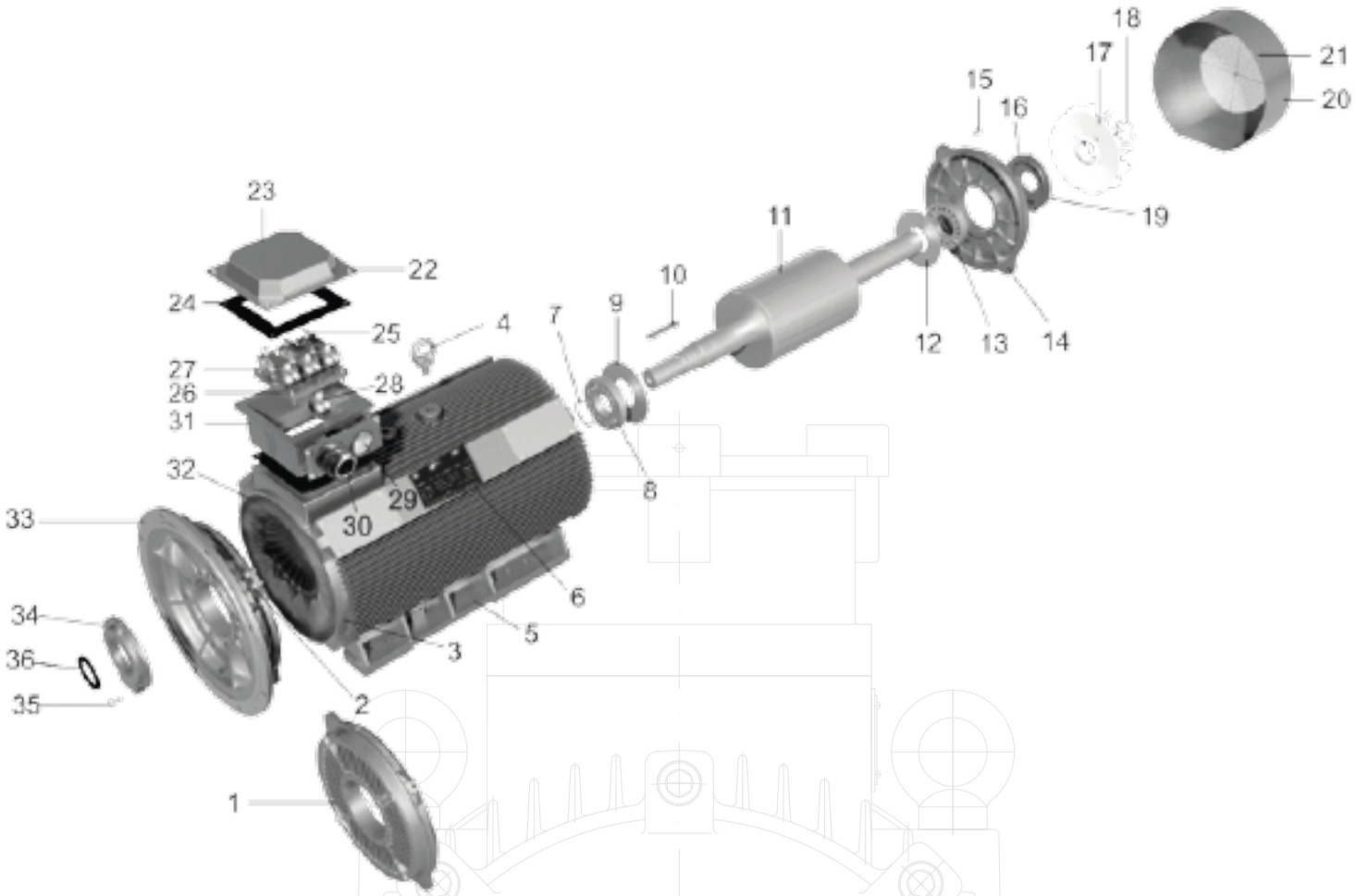
MOTORFEET

The types SA 56 – SA 132 have removable feet. The feet are fixed with two screws at the housing. The feet can also be fixed sideways to change the terminal box position top, left or right. The mounting into B35 and B34 can also be done. The motors from type SC 160 and larger have fixed feet and terminal box on the top. On request available with terminal box at the right or left side.

Sound power level LWA [dB(A)] / Sound pressure level LpA [dB(A)]

Frame size	2 Pol. at no load		4 Pol. at no load		6 Pol. at no load		8 Pol. at no load	
	LWA	LpA	LWA	LpA	LWA	LpA	LWA	LpA
63	70	61	61	52	59	50	-	-
71	73	64	64	55	61	52	59	50
80	76	67	67	58	63	54	61	52
90	77	68	70	61	66	57	65	56
100	78	69	73	64	70	61	68	59
112	83	74	74	65	72	63	70	61
132	86	77	80	71	78	69	73	64
160	84	75	78	69	72	63	68	59
180	88	79	81	72	80	71	71	62
200	88	79	81	72	75	66	69	60
225	88	79	81	72	78	69	73	64
250	88	79	84	75	81	72	73	64
280	87	78	83	74	82	73	79	70
315	94	85	88	79	84	75	82	73
355	99	90	89	80	85	76	86	77

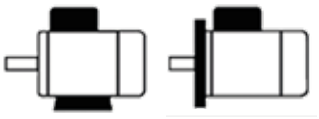
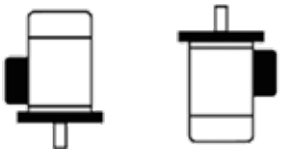
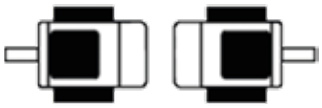
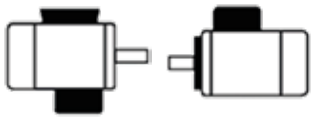
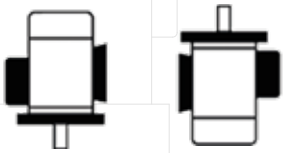
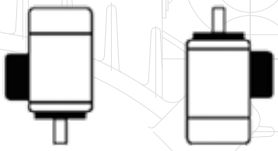
EXPLOSION DRAWING



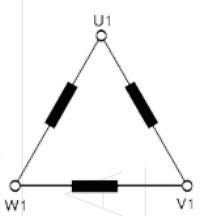
1.	Shield B3	19.	Fixing bolt
2.	Fixing bolt	20.	Cover fan
3.	Stator frame	21.	Fixing bolt
4.	Eyebolt	22.	Fixing bolt
5.	Feet	23.	Terminal box cover
6.	Nameplate	24.	Gasket terminal box cover
7.	Spring washer	25.	Connection material
8.	Bearing DE	26.	Terminal board
9.	Inner bearing cap DE	27.	Fixing bolt
10.	Key	28.	Terminal block PTC
11.	Rotor	29.	Blinder*
12.	Inner bearing cap NDE	30.	Cable gland
13.	Bearing NDE	31.	Terminal box base
14.	Shield NDE	32.	Winding
15.	Fixing bolt	33.	Flange B5
16.	Outer bearing cap NDE	34.	Outer bearing cap DE
17.	Fan	35.	Fixing bolt
18.	Circlip	36.	shaft seal

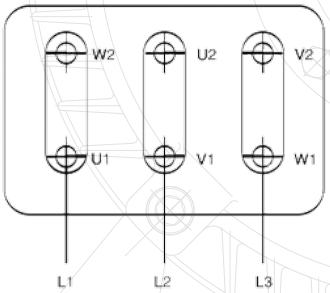
* Aluminium only - Cast Iron with two cable glands

TYPES OF CONSTRUCTION ACCORDING TO DIN IEC 34.CODE

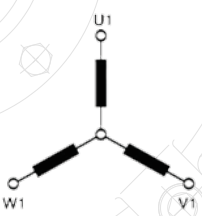
Types of Mounting	IEC34-7(1992) Code I	IEC34-7(1992) Code II	Types of Mounting	IEC34-7(1992) Code I	IEC34-7(1992) Code II
	IMB3	IM1001		IMV1	IM3001
	IMB5	IM3001		IMV3	IM3031
	IMB6	-		IMV5	IM1011
	IMB7	-		IMV6	IM1031
	IMB8	-		IMV15	IM2011
	IMB14	IM3601		IMV36	IM2031
	IMB34	IM2101		IMV18	IM3611
	IMB35	IM2001		IMV19	

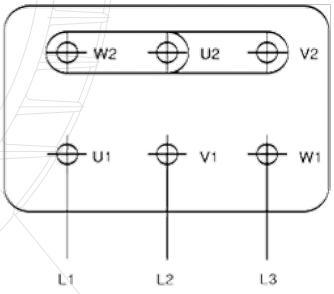
CONNECTION DIAGRAM





delta-connection





star-connection

TECHNICAL DATA STANDARD AC MOTORS

ALUMINIUM IE2

2P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

TYPE	P	I	n	cos φ		η		M	Ia/In	Ma/Mn	Mk/Mn	J	m
	400V				100	75	50		Ist/In	Tst/Tn	Tmax/Tn		
	kW	A	1/min		%	%	%	Nm				Kg/m²	Kg
OM2 63A2	0,18	0.5	2800	0.80	60.4	60.2	59.6	0.61	6.0	3.2	3.4	0.00052	4.1
OM2 63B2	0,25	0.7	2800	0.81	64.8	64.4	63.2	0.85	6.2	3.2	3.5	0.00061	4.7
OM2 71A2	0,37	0.9	2800	0.81	69.5	69.2	68.5	1.26	6.4	3.1	3.5	0.00067	6.3
OM2 71B2	0,55	1.3	2800	0.82	74.1	73.7	73.2	1.88	6.6	3.3	3.4	0.00073	7.2
OM2 80A2	0,75	1.7	2830	0.82	77.4	77.1	76.4	2.53	6.8	3.0	3.2	0.00085	9
OM2 80B2	1,1	2.4	2830	0.83	79.6	79.3	78.7	3.71	7.1	3.0	3.1	0.00110	10
OM2 90S2	1,5	3.2	2840	0.84	81.3	81.0	80.2	5.0	7.3	3.2	3.8	0.00146	12
OM2 90L2	2,2	4.5	2840	0.85	83.2	82.8	82.1	7.4	7.6	3.2	3.9	0.00185	15
OM2 100L2	3	5.9	2870	0.87	84.6	84.3	83.6	10.0	7.8	3.1	3.5	0.00325	23
OM2 112M2	4	7.6	2890	0.88	85.8	85.4	84.7	13.2	8.1	2.8	3.6	0.00550	28
OM2 132SA2	5,5	10.4	2900	0.88	87.0	86.7	85.7	18.1	8.2	2.3	2.9	0.01378	40
OM2 132SB2	7,5	13.8	2900	0.89	88.1	87.7	86.7	24.7	7.8	2.4	3.0	0.01456	44.5

4P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

OM2 63A4	0,12	0.4	1310	0.72	59.1	59.0	58.3	0.9	5.8	2.5	3.0	0.00089	4.9
OM2 63B4	0,18	0.6	1310	0.73	64.7	64.5	63.7	1.6	6.0	2.5	3.3	0.00102	5.7
OM2 71A4	0,25	0.7	1330	0.74	68.5	68.3	67.6	1.8	6.0	2.6	3.3	0.00112	6.5
OM2 71B4	0,37	1.0	1330	0.74	72.7	72.4	71.9	2.7	6.1	2.8	3.1	0.00124	7.2
OM2 80A4	0,55	1.4	1390	0.75	77.1	76.9	76.2	3.8	6.2	2.8	3.0	0.00132	9.4
OM2 80B4	0,75	1.8	1390	0.76	79.6	79.8	77.5	5.2	6.4	2.9	3.0	0.00148	11
OM2 90S4	1,1	2.5	1400	0.77	81.4	81.6	79.3	7.5	6.6	2.8	3.0	0.00212	12.5
OM2 90L4	1,5	3.4	1400	0.78	82.8	83.0	80.2	10.2	6.7	2.7	3.4	0.00287	15
OM2 100LA4	2,2	4.7	1430	0.80	84.3	84.7	82.2	14.7	7.3	2.4	3.1	0.00606	22
OM2 100LB4	3	6.3	1430	0.81	85.5	85.7	83.8	20.0	7.5	2.7	2.9	0.00779	26
OM2 112M4	4	8.2	1440	0.81	86.6	85.9	82.1	26.5	7.5	2.6	2.9	0.01176	32
OM2 132S4	5,5	11.0	1440	0.82	87.7	86.5	84.1	36.5	7.5	2.5	3.2	0.02465	42
OM2 132M4	7,5	14.7	1440	0.83	88.7	89.2	88.2	49.7	7.3	2.6	3.3	0.03301	51

ALUMINIUM IE2

6P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

TYPE	P	I	n	cos φ		η		M	Ia/In	Ma/Mn	Mk/Mn	J	m
	400V				100	75	50		Ist/In	Tst/Tn	Tmax/Tn		
	kW	A	1/min		%	%	%	Nm				Kg/m²	Kg
OM2 71A6	0,18	0.7	850	0.66	56.6	56.4	55.8	2.0	5.4	2.4	3.1	0.00144	6.6
OM2 71B6	0,25	0.9	850	0.68	61.6	61.4	60.8	2.8	5.4	2.2	3.1	0.00167	7.6
OM2 80A6	0,37	1.1	890	0.70	67.6	67.4	66.8	4.0	5.6	2.3	3.2	0.00201	9.2
OM2 80B6	0,55	1.5	890	0.72	73.1	72.9	72.2	5.9	5.6	2.4	2.8	0.00218	10.5
OM2 90S6	0,75	2.0	910	0.71	75.9	76.4	74.4	7.9	5.8	2.3	2.9	0.00297	12.5
OM2 90L6	1,1	2.8	910	0.72	78.1	78.3	75.7	11.5	5.9	2.4	2.9	0.00392	16
OM2 100L6	1,5	3.8	940	0.72	79.8	79.2	76.3	15.2	5.9	2.1	2.7	0.00745	21
OM2 112M6	2,2	5.4	940	0.72	81.8	81.7	78.7	22.4	6.2	2.2	2.6	0.01324	27
OM2 132S6	3	7.2	960	0.72	83.3	83.0	81.4	29.8	6.4	2.2	2.8	0.02821	38
OM2 132MA6	4	9.2	960	0.74	84.6	84.0	83.0	39.8	6.6	2.1	3.2	0.03716	47
OM2 132MB6	5,5	12.3	960	0.75	86	86.1	83.2	54.7	6.8	2.1	3.1	0.04889	58

8P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

OM2 80A8	0,18	0.9	630	0.61	45.9	45.4	44.8	2.7	4.8	2.3	2.6	0.00247	10.3
OM2 80B8	0,25	1.2	640	0.61	50.6	50.1	49.4	3.7	4.8	2.3	2.6	0.00279	11.5
OM2 90S8	0,37	1.6	660	0.61	56.1	55.6	55.0	5.4	5.0	2.2	2.9	0.00357	14.5
OM2 90L8	0,55	2.0	660	0.63	61.7	61.2	60.8	8.0	5.0	2.3	3.0	0.00425	18
OM2 100LA8	0,75	2.3	690	0.71	66.2	65.8	65.3	10.4	5.2	2.1	3.0	0.00598	20
OM2 100LB8	1,1	3.1	690	0.72	70.8	70.2	69.6	15.2	5.4	2.1	2.8	0.00745	23
OM2 112M8	1,5	4.1	700	0.72	74.1	73.6	73.0	20.5	5.6	2.0	2.9	0.01326	27
OM2 132S8	2,2	5.7	710	0.72	77.6	77.0	76.4	29.6	5.8	2.1	3.1	0.02900	39
OM2 132M8	3	7.5	710	0.72	80.0	79.6	79.0	40.4	6.0	2.0	3.2	0.03800	48

CAST IRON IE2

2P Cast iron frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

TYPE	P	I	n	cos φ		η		M	Ia/In	Ma/Mn	Mk/Mn	J	m
	400V				100	75	50		Ist/In	Tst/Tn	Tmax/Tn		
	kW	A	1/min		%	%	%	Nm				Kg/m²	Kg
OM2 160MA2	11	19,9	2930	0,89	90,5	90,5	90,2	35,7	6,5	2,5	3,1	0,03700	121
OM2 160MB2	15	26,3	2940	0,91	91,8	91,2	90,9	48,8	8,2	2,7	3,8	0,04320	132
OM2 160L2	18,5	32,6	2930	0,92	91,1	91,2	90,4	60,2	8,3	2,8	3,8	0,05250	138
OM2 180M2	22	38,2	2950	0,90	91,4	91,0	90,5	71,1	7,7	2,8	3,5	0,07100	191
OM2 200LA2	30	52,1	2960	0,92	92,2	91,7	90,9	96,9	7,8	2,6	3,5	0,11900	240
OM2 200LB2	37	63,2	2955	0,91	92,5	92,3	92,1	119	7,7	2,7	3,5	0,13300	257
OM2 225M2	45	78,6	2960	0,90	93,5	93,1	92,3	145	7,9	2,6	3,6	0,22100	310
OM2 250M2	55	96,1	2965	0,91	93,4	91,7	92,6	177	7,5	2,4	2,7	0,30500	386
OM2 280S2	75	126	2975	0,91	93,9	93,7	91,8	240	7,2	2,4	3,4	0,58400	505
OM2 280M2	90	151	2972	0,91	94,3	93,9	93,2	288	7,0	2,3	3,2	0,66500	555
OM2 315S2	110	184	2980	0,91	94,8	94,5	92,8	352	7,1	1,8	3,4	1,13000	921
OM2 315M2	132	221	2980	0,91	95,0	95,2	93,5	422	7,1	1,8	3,3	1,75000	959
OM2 315LA2	160	266	2980	0,92	95,4	95,0	94,8	512	6,9	2,2	3,3	2,01000	1088
OM2 315LB2	200	331	2980	0,91	96,0	95,4	94,9	640	6,7	2,1	3,2	2,27000	1162
OM2 355M2	250	411	2985	0,92	96,3	95,6	94,5	800	7,8	2,2	3,7	3,29600	1685
OM2 355L2	315	519	2980	0,91	96,4	95,9	95,1	1009	7,8	1,7	4,1	3,84900	1850

4P Cast iron frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

OM2 160M4	11	20,9	1450	0,86	89,9	88,9	88,3	71,6	7,2	2,1	3,0	0,07240	122
OM2 160L4	15	28,1	1460	0,86	90,6	90,8	90,2	97,4	8,3	2,2	3,1	0,09290	139
OM2 180M4	18,5	33,3	1470	0,89	91,2	90,5	89,7	119	7,0	2,2	3,1	0,13500	188
OM2 180L4	22	39,9	1465	0,88	91,6	91,4	91,2	142	6,9	2,1	3,1	0,13600	193
OM2 200L4	30	53,8	1465	0,88	92,7	92,6	91,7	193	7,0	2,4	3,2	0,24500	256
OM2 225S4	37	66,9	1475	0,87	93,6	92,0	91,9	238	6,7	2,2	3,0	0,39000	308
OM2 225M4	45	80,6	1480	0,87	94,2	93,3	92,9	290	7,1	2,4	3,2	0,45000	337
OM2 250M4	55	98,0	1480	0,87	94,2	91,3	91,1	354	6,5	2,4	3,2	0,64000	410
OM2 280S4	75	133	1485	0,87	94,5	93,9	93,3	482	6,5	2,4	3,1	1,04500	581

CAST IRON IE2

4P Cast iron frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

TYPE	P	I	n	cos φ		η		M	Ia/In	Ma/Mn	Mk/Mn	J	m
	400V				100	75	50		Ist/In	Tst/Tn	Tmax/Tn		
	kW	A	1/min		%	%	%	Nm				Kg/m²	Kg
OM2 280M4	90	156	1485	0,88	94,8	94,5	94,1	579	7,2	2,3	2,7	1,39600	643
OM2 315S4	110	193	1485	0,87	95,4	94,3	94,3	706	5,8	1,9	2,9	2,98000	961
OM2 315M4	132	230	1480	0,87	95,5	94,5	93,8	847	5,5	1,9	2,8	3,48000	1012
OM2 315LA4	160	274	1485	0,89	95,7	94,6	93,9	1027	6,0	2,0	3,0	3,96000	1096
OM2 315LB4	200	342	1485	0,88	95,8	95,4	95,1	1285	6,0	2,2	3,0	4,47000	1330
OM2 355M4	250	421	1490	0,90	96,3	95,8	95,4	1604	5,9	1,5	2,9	7,16400	1720
OM2 355L4	315	529	1485	0,90	96,4	95,7	95,4	2021	6,9	2,1	3,2	8,70200	1950

6P Cast iron frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

OM2 160M6	7,5	15,8	965	0,80	88,0	88,3	87,7	73,4	6,0	2,1	2,3	0,08000	113
OM2 160L6	11	22,4	970	0,81	89,2	89,6	89,1	108	6,9	1,9	3,1	0,10800	134
OM2 180L6	15	29,4	975	0,83	89,7	89,2	88,5	146	6,5	2,1	3,0	0,16700	178
OM2 200LA6	18,5	35,3	980	0,84	91,0	90,8	90,2	178	6,7	2,1	3,2	0,30200	226
OM2 200LB6	22	41,6	975	0,85	91,0	90,2	89,8	212	6,8	2,1	3,1	0,34200	234
OM2 225M6	30	57,5	985	0,82	91,7	91,6	91,1	290	6,2	1,9	2,9	0,52500	294
OM2 250M6	37	66,0	980	0,88	92,7	92,4	92,0	357	6,9	1,9	3,1	0,80700	369
OM2 280S6	45	82,0	985	0,88	92,7	92,6	92,2	434	6,5	2,0	3,0	1,33400	513
OM2 280M6	55	98,0	985	0,89	93,1	92,8	92,3	530	7,0	2,1	3,0	1,59800	661
OM2 315S6	75	136	990	0,85	93,7	93,2	92,8	721	6,0	1,8	2,9	3,94000	856
OM2 315M6	90	163	990	0,85	94,0	93,6	93,0	866	6,0	2,0	2,8	4,58000	973
OM2 315LA6	110	195	990	0,86	94,5	94,3	93,9	1059	5,9	1,9	2,9	5,23000	1055
OM2 315LB6	132	230	990	0,87	94,9	94,9	94,4	1271	6,1	2,0	2,9	5,54000	1175
OM2 355MA6	160	267	990	0,91	95,2	95,0	94,3	1538	7,3	1,8	3,4	9,26600	1690
OM2 355MB6	200	334	990	0,91	95,3	95,2	94,6	1923	7,0	1,7	3,4	10,7620	1870
OM2 355L6	250	407	990	0,93	95,6	95,7	95,1	2404	7,1	1,6	3,3	12,8590	1980

CAST IRON IE2

8P Cast iron frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

TYPE	P	I	n	cos φ		η		M	Ia/In	Ma/Mn	Mk/Mn	J	m
	400V				100	75	50		Ist/In	Tst/Tn	Tmax/Tn		
	kW	A	1/min		%	%	%	Nm				Kg/m²	Kg
OM2 160MA8	4	9,3	715	0,75	82,4	82,8	82,5	52,4	5,3	1,8	2,9	0,06490	104
OM2 160MB8	5,5	12,4	720	0,76	86,6	84,8	84,3	72,3	6,0	2,1	3,2	0,08210	114
OM2 160L8	7,5	16,3	725	0,77	86,6	86,5	86,2	98,5	6,0	2,1	3,3	0,11400	132
OM2 180L8	11	23,3	725	0,77	88,7	88,9	88,4	143	6,4	2,1	3,0	0,16700	176
OM2 200L8	15	32,4	730	0,75	89,5	89,3	88,7	194	6,3	2,2	2,9	0,32500	232
OM2 225S8	18,5	39,1	730	0,76	90,7	90,2	89,7	239	6,6	2,2	2,8	0,48100	268
OM2 225M8	22	43,6	735	0,80	91,6	91,5	91,2	284	7,1	2,2	3,0	0,53100	288
OM2 250M8	30	59,7	735	0,80	91,8	90,4	90,0	386	6,0	2,0	3,0	0,80900	372
OM2 280S8	37	73,2	735	0,81	92,6	90,2	89,6	476	5,7	2,1	2,8	1,38100	567
OM2 280M8	45	89,3	735	0,79	93,2	93,6	93,1	579	5,8	2,1	2,9	1,72100	651
OM2 315S8	55	109	740	0,79	93,7	93,6	93,2	707	5,0	1,6	2,9	4,59000	1032
OM2 315M8	75	142	740	0,81	94,4	94,8	94,1	966	6,1	2,0	2,8	5,36000	1085
OM2 315LA8	90	167	740	0,83	94,7	93,9	93,4	1159	6,3	1,8	2,9	6,11000	1160
OM2 315LB8	110	205	740	0,82	95,1	93,5	93,2	1419	6,4	1,7	3,1	6,55000	1230
OM2 355MA8	132	247	745	0,82	95,4	95,4	95,0	1694	6,5	1,8	3,1	12,8500	1700
OM2 355MB8	160	288	745	0,85	95,7	95,7	95,2	2053	6,7	1,8	3,4	14,3400	1890
OM2 355L8	200	360	750	0,85	95,7	95,8	95,2	2570	6,0	1,7	3,1	15,8240	1850

2P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

TYPE	P	I	n	cos φ		η		M	Ia/In	Ma/Mn	Mk/Mn	J	m
	400V				100	75	50		Ist/In	Tst/Tn	Tmax/Tn		
	kW	A	1/min		%	%	%	Nm				Kg/m²	Kg
OM3 80A2	0,75	1,64	2830	0,82	80,7		79,2	2,5	7,0	3,1	3,3	0,00090	10
OM3 80B2	1,1	2,31	2830	0,83	82,7		81,2	3,7	7,3	3,2	3,2	0,00120	11
OM3 90S2	1,5	3,06	2840	0,84	84,2		82,7	5,0	7,6	3,3	3,9	0,00156	13,3
OM3 90L2	2,2	4,35	2840	0,85	85,9		83,9	7,7	7,6	3,3	4	0,00255	16,5
OM3 100L2	3	5,71	2870	0,87	87,1		85,1	10,0	7,8	3,2	3,6	0,00425	25
OM3 112M2	4	7,44	2890	0,88	88,1		86,3	13,2	8,3	3	3,8	0,00650	31
OM3 132SA2	5,5	10,11	2900	0,88	89,2		87,5	18,1	8,3	2,5	3,1	0,01418	44
OM3 132SB2	7,5	13,65	2900	0,88	90,1		88,6	24,7	7,9	2,6	3,2	0,01496	49

4P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

OM3 80B4	0,75	1,74	1390	0,75	82,5	82,1	80,7	5,2	6,6	3	3,1	0,00168	12,5
OM3 90S4	1,1	2,48	1400	0,76	84,1		82,4	7,5	6,8	2,9	3,1	0,00252	14
OM3 90L4	1,5	3,30	1400	0,77	85,3		84,1	10,2	7,0	2,8	3,5	0,00307	17
OM3 100LA4	2,2	4,52	1430	0,81	86,7		85,2	14,7	7,6	2,5	3,2	0,00656	24
OM3 100LB4	3	6,02	1430	0,82	87,7		86,3	20,0	7,6	2,8	3	0,00819	29
OM3 112M4	4	7,94	1440	0,82	88,6		87,1	26,5	7,8	2,8	3,1	0,01276	35
OM3 132S4	5,5	10,7	1440	0,83	89,6	89,1	88,3	36,5	7,9	2,7	3,2	0,02565	45
OM3 132M4	7,5	14,4	1465	0,83	90,4		89,7	48,9	7,5	2,8	3,2	0,03401	58

6P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

OM3 90S6	0,75	1,93	910	0,71	78,9		77,3	7,9	6,0	2,4	3	0,00317	14
OM3 90L6	1,1	2,68	910	0,73	81,0		79,1	11,5	6,0	2,5	3	0,00402	19
OM3 100L6	1,5	3,60	940	0,73	82,5		80,8	15,2	6,5	2,2	2,8	0,00845	24
OM3 112M6	2,2	5,09	940	0,74	84,3		82,3	22,4	6,6	2,4	2,8	0,01428	30
OM3 132S6	3	6,84	960	0,74	85,6		83,6	29,8	6,8	2,4	3	0,02971	41
OM3 132MA6	4	8,99	960	0,74	86,8	86,1	84,9	39,8	6,8	2,3	3,4	0,03916	51
OM3 132MB6	5,5	12,0	960	0,75	88,0		86,1	54,7	7,0	2,3	3,3	0,04989	62

2P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

TYPE	P	I	n	cos φ		η		M	Ia/In	Ma/Mn	Mk/Mn	J	m
	400V				100	75	50		Ist/In	Tst/Tn	Tmax/Tn		
	kW	A	1/min		%	%	%	Nm				Kg/m²	Kg
OM3 160MA2	11	20,1	2920	0,90	91,2	91,5	90,6	36,0	7,5	2,5	3,1	0,03700	135
OM3 160MB2	15	26,7	2935	0,91	92,0	92,0	91,1	48,8	7,3	2,7	3,8	0,04320	145
OM3 160L2	18,5	33,5	2935	0,90	92,5	92,6	91,7	60,2	7,5	2,8	3,7	0,05250	156
OM3 180M2	22	41,0	2930	0,90	92,8	92,4	92,3	71,7	7,7	2,8	3,5	0,07100	213
OM3 200LA2	30	54,7	2950	0,91	93,6	93,1	92,8	97,1	7,8	2,6	3,5	0,11900	255
OM3 200LB2	37	63,0	2950	0,90	93,8	93,6	93,6	119,8	7,5	2,7	3,5	0,13300	272
OM3 225M2	45	76,5	2955	0,90	94,2	93,8	93,4	145,4	7,7	2,6	3,6	0,22100	325
OM3 250M2	55	91,8	2960	0,90	94,8	94,7	93,8	177,4	7,5	2,4	2,7	0,30500	405
OM3 280S2	75	127,8	2980	0,90	95,1	95,1	94,3	240,4	7,2	2,4	3,4	0,58400	525
OM3 280M2	90	152,4	2975	0,90	95,2	95,2	94,4	288,9	7,2	2,3	3,2	0,66500	565
OM3 315S2	110	183,8	2980	0,90	95,2	94,9	94,5	352,5	7,0	1,8	3,4	1,13000	933
OM3 315M2	132	222,5	2980	0,90	95,4	95,4	95,0	423,0	7,0	1,8	3,3	1,75000	995
OM3 315LA2	160	263,6	2980	0,89	95,6	95,6	94,9	512,8	6,9	2,2	3,3	2,01000	1123
OM3 315LB2	200	337,3	2980	0,91	95,7	95,7	95,0	640,9	6,7	2,1	3,2	2,27000	1244
OM3 355M2	250	411,3	2985	0,91	95,8	95,5	94,3	799,8	7,8	2,2	3,7	3,29600	1812
OM3 355L2	315	523,2	2990	0,90	95,8	95,5	94,8	1.006,1	7,8	1,7	4,1	3,84900	1922

4P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

OM3 160M4	11	20,9	1465	0,82	91,5	91,5	89,9	71,7	7,2	2,1	3,0	0,07240	132
OM3 160L4	15	28,1	1465	0,82	92,3	92,5	91,9	97,8	7,8	2,2	3,1	0,09290	147
OM3 180M4	18,5	33,4	1465	0,85	92,6	91,9	91,1	120,6	7,2	2,2	3,1	0,13500	210
OM3 180L4	22	39,9	1465	0,85	93,1	92,9	92,7	143,4	7	2,1	3,1	0,13600	225
OM3 200L4	30	53,8	1475	0,88	93,8	93,7	92,8	194,2	7,2	2,4	3,2	0,24500	297
OM3 225S4	37	66,9	1480	0,86	94,0	94,1	92,3	238,8	6,8	2,2	3,0	0,39000	332
OM3 225M4	45	80,8	1480	0,86	94,2	94,3	93,0	290,4	7,2	2,4	3,2	0,45000	352
OM3 250M4	55	95,5	1475	0,88	94,6	94,6	93,5	356,1	6,6	2,4	3,2	0,64000	443
OM3 280S4	75	130,0	1485	0,87	95,1	94,9	93,9	482,3	6,6	2,4	3,1	1,04500	655

CAST IRON IE3

4P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

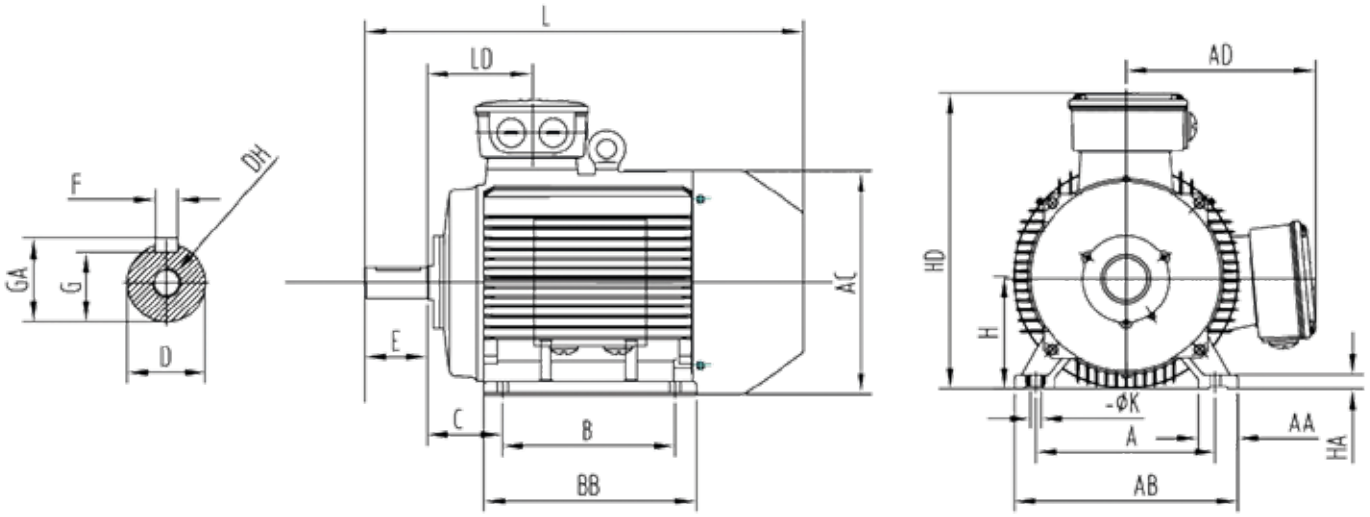
TYPE	P	I	n	cos φ		η		M	Ia/In	Ma/Mn	Mk/Mn	J	m
	400V				100	75	50		Ist/In	Tst/Tn	Tmax/Tn		
	kW	A	1/min		%	%	%	Nm				Kg/m²	Kg
OM3 280M4	90	158,3	1485	0,86	95,3	95,0	94,6	578,8	7,1	2,3	2,7	1,39600	695
OM3 315S4	110	192,5	1490	0,88	95,5	94,4	94,4	705,0	6,2	1,9	2,9	2,98000	1012
OM3 315M4	132	229,8	1490	0,87	95,8	95,5	94,2	846,0	6,5	1,9	2,8	3,48000	1045
OM3 315LA4	160	274,3	1490	0,87	96,1	95,8	94,5	1.025,5	6,5	2,0	3,0	3,96000	1134
OM3 315LB4	200	341,6	1485	0,86	96,2	95,9	95,7	1.286,2	7,2	2,2	3,0	4,47000	1287
OM3 355M4	250	435,2	1490	0,86	96,2	95,9	95,8	1.602,3	6,2	1,5	2,9	7,16400	1866
OM3 355L4	315	541,5	1490	0,87	96,2	95,9	95,7	2.019,0	6,9	2,1	3,2	8,70200	2065

6P Aluminium frame, IP 55, IC 411, insulation Class F, temp. rise Class B, 400 V – 50 Hz

OM3 160M6	7,5	16,0	970	0,77	89,2	88,6	87,9	73,8	6,1	2,1	2,3	0,08000	118
OM3 160L6	11	22,6	970	0,77	90,4	89,4	88,5	108,3	6,9	1,9	3,1	0,10800	135
OM3 180L6	15	29,6	970	0,80	91,3	91,5	90,1	147,7	6,5	2,1	3,0	0,16700	185
OM3 200LA6	18,5	35,3	975	0,82	91,8	91,1	91,0	181,2	6,7	2,1	3,2	0,30200	236
OM3 200LB6	22	41,6	975	0,81	92,3	92,1	91,1	215,5	7,1	2,1	3,1	0,34200	243
OM3 225M6	30	57,5	985	0,85	92,9	92,8	92,3	290,9	6,5	1,9	2,9	0,52500	296
OM3 250M6	37	65,9	985	0,85	93,4	93,1	92,5	358,7	6,9	1,9	3,1	0,80700	436
OM3 280S6	45	83,8	990	0,84	93,8	92,9	92,3	434,1	6,5	2,0	3,0	1,33400	565
OM3 280M6	55	99,6	990	0,84	94,2	94,3	93,4	530,6	7,1	2,1	3,0	1,59800	583
OM3 315S6	75	135,9	990	0,85	94,8	94,7	93,9	723,5	6,5	1,8	2,9	3,94000	923
OM3 315M6	90	162,8	990	0,85	95,1	94,8	94,1	868,2	6,6	2,0	2,8	4,58000	1008
OM3 315LA6	110	194,7	990	0,84	95,2	94,1	94,6	1.061,1	6,2	1,9	2,9	5,23000	1155
OM3 315LB6	132	228,9	990	0,85	95,5	95,2	94,7	1.273,3	6,1	2,0	2,9	5,54000	1195
OM3 355MA6	160	266,5	990	0,88	95,6	95,3	94,9	1.543,4	7,3	1,8	3,4	9,26600	1898
OM3 355MB6	200	333,8	995	0,87	95,7	95,4	95,0	1.919,6	7,2	1,7	3,4	10,7620	1988
OM3 355L6	250	406,7	995	0,87	95,8	95,5	95,3	2.399,5	7,1	1,6	3,3	12,8590	2118

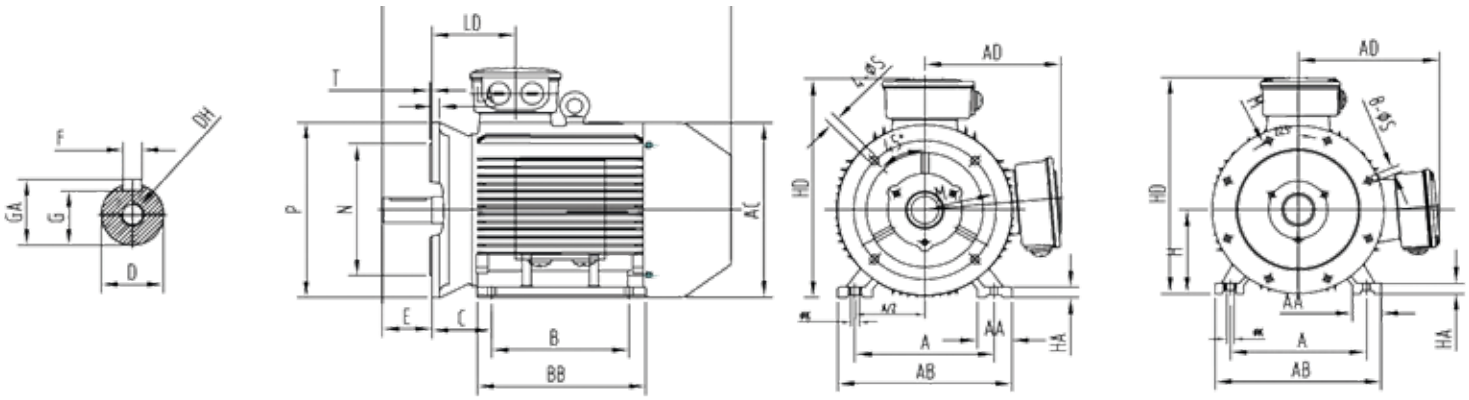
DIMENSION STANDARD AC MOTORS

IE2 - B3 - Aluminium



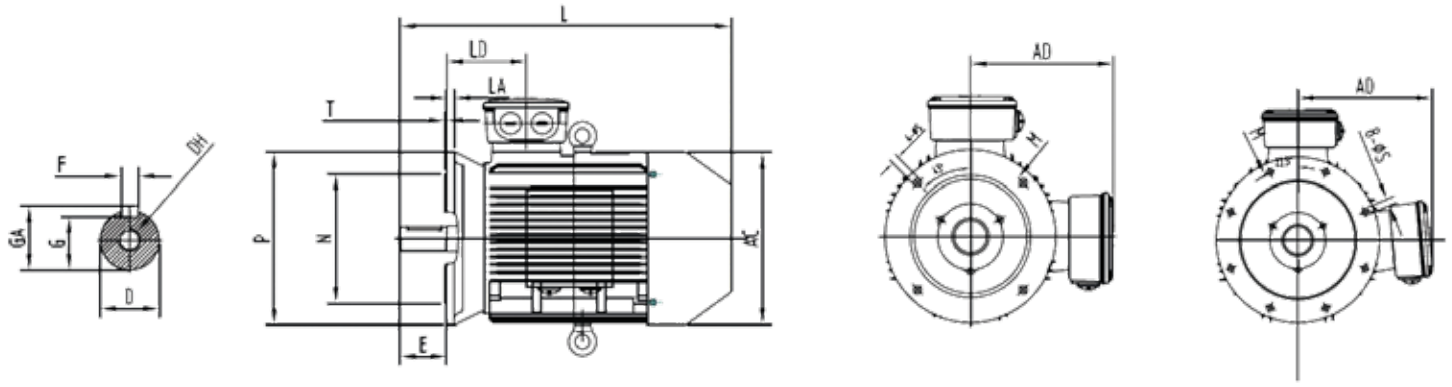
Frame size	Poles	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
63	2-8	100	80	-	40	11	23	4	8,5	63	7	M4X10	12,5	32	120	125	110	7	173	103	62	215
71	2-8	112	90	-	45	14	30	5	11	71	10	M5X13	16	32	132	139	117	10	188	105	68	255
80	2-8	125	100	-	50	19	40	6	15,5	80	10	M6x16	21,5	41	160	156	137	10	217	130	80	290
90S	2-8	140	100	-	56	24	50	8	20	90	10	M8x19	27	45	175	174,5	143,5	12	233,5	155	83,5	333
90L	2-8	140	125	-	56	24	50	8	20	90	10	M8x19	27	45	175	174,5	143,5	12	233,5	155	83,5	365
100L	2-8	160	140	-	63	28	60	8	24	100	12	M10x22	31	50	196	197	152	14	252	176	83,5	386
112M	2-8	190	140	-	70	28	60	8	24	112	12	M10x22	31	55	220	221	179	14	291	180	88	394,5
132S	2-8	216	140	-	89	38	80	10	33	132	15	M12x28	41	58	270	265	193	16	325	176	94	440
132M	2-8	216	178	-	89	38	80	10	33	132	15	M12x28	41	58	270	265	193	16	325	214	94	475

IE2 - B35 - Aluminium



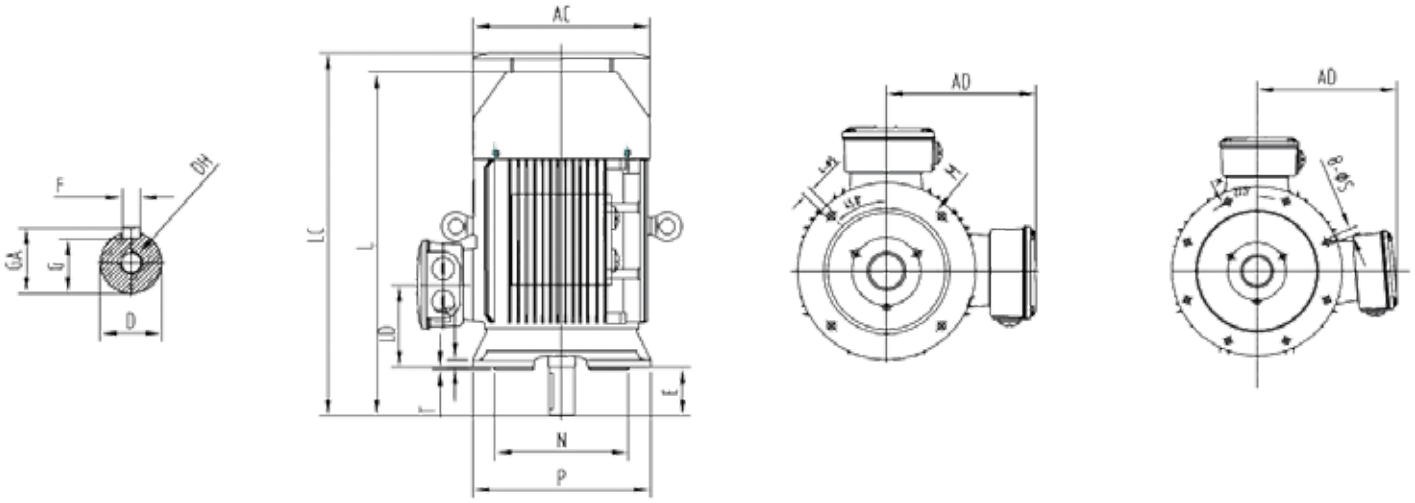
Frame size	Poles	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
63	2-8	100	80	-	40	11	23	4	8,5	63	7	M4X10	12,5	32	120	125	110	7	173	103	62	215
71	2-8	112	90	-	45	14	30	5	11	71	10	M5X13	16	32	132	139	117	10	188	105	68	255
80	2-8	125	100	-	50	19	40	6	15,5	80	10	M6x16	21,5	41	160	156	137	10	217	130	80	290
90S	2-8	140	100	-	56	24	50	8	20	90	10	M8x19	27	45	175	174,5	143,5	12	233,5	155	83,5	333
90L	2-8	140	125	-	56	24	50	8	20	90	10	M8x19	27	45	175	174,5	143,5	12	233,5	155	83,5	365
100L	2-8	160	140	-	63	28	60	8	24	100	12	M10x22	31	50	196	197	152	14	252	176	83,5	386
112M	2-8	190	140	-	70	28	60	8	24	112	12	M10x22	31	55	220	221	179	14	291	180	88	394,5
132S	2-8	216	140	-	89	38	80	10	33	132	15	M12x28	41	58	270	265	193	16	325	176	94	440
132M	2-8	216	178	-	89	38	80	10	33	132	15	M12x28	41	58	270	265	193	16	325	214	94	475

IE2 - B5 - Aluminium



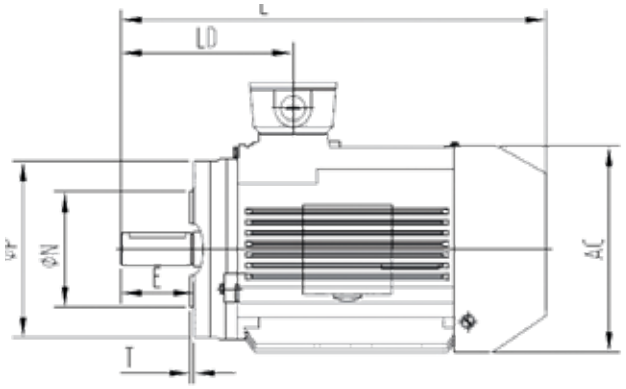
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
63	2-8	11	23	4	8,5	115	95	140	4-Ø10	3	M4X10	12,5	125	173	-	62	215
71	2-8	14	30	5	11	130	110	160	4-Ø10	3,5	M5X13	16	139	188	-	68	255
80	2-8	19	40	6	15,5	165	130	200	4-Ø12	3,5	M6x16	21,5	156	217	-	80	290
90S	2-8	24	50	8	20	165	130	200	4-Ø12	3,5	M8x19	27	174,5	233,5	-	83,5	333
90L	2-8	24	50	8	20	165	130	200	4-Ø12	3,5	M8x19	27	174,5	233,5	-	83,5	365
100L	2-8	28	60	8	24	215	180	250	4-Ø14,5	4	M10x22	31	197	252	-	83,5	386
112M	2-8	28	60	8	24	215	180	250	4-Ø14,5	4	M10x22	31	221	291	-	88	394,5
132S	2-8	38	80	10	33	265	230	300	4-Ø14,5	4	M12x28	41	265	325	-	94	440
132M	2-8	38	80	10	33	265	230	300	4-Ø14,5	4	M12x28	41	265	325	-	94	475

IE2 - V1 - Aluminium



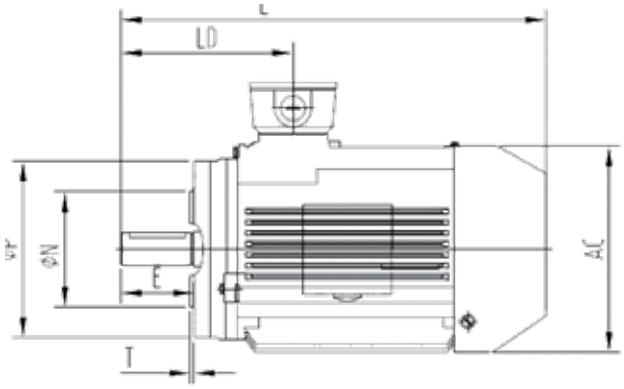
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
63	2-8	11	23	4	8,5	115	95	140	4-Ø10	3	M4X10	12,5	125	173	-	62	215
71	2-8	14	30	5	11	130	110	160	4-Ø10	3,5	M5X13	16	139	188	-	68	255
80	2-8	19	40	6	15,5	165	130	200	4-Ø12	3,5	M6x16	21,5	156	217	-	80	290
90S	2-8	24	50	8	20	165	130	200	4-Ø12	3,5	M8x19	27	174,5	233,5	-	83,5	333
90L	2-8	24	50	8	20	165	130	200	4-Ø12	3,5	M8x19	27	174,5	233,5	-	83,5	365
100L	2-8	28	60	8	24	215	180	250	4-Ø14,5	4	M10x22	31	197	252	-	83,5	386
112M	2-8	28	60	8	24	215	180	250	4-Ø14,5	4	M10x22	31	221	291	-	88	394,5
132S	2-8	38	80	10	33	265	230	300	4-Ø14,5	4	M12x28	41	265	325	-	94	440
132M	2-8	38	80	10	33	265	230	300	4-Ø14,5	4	M12x28	41	265	325	-	94	475

IE2 - B14C - Aluminium



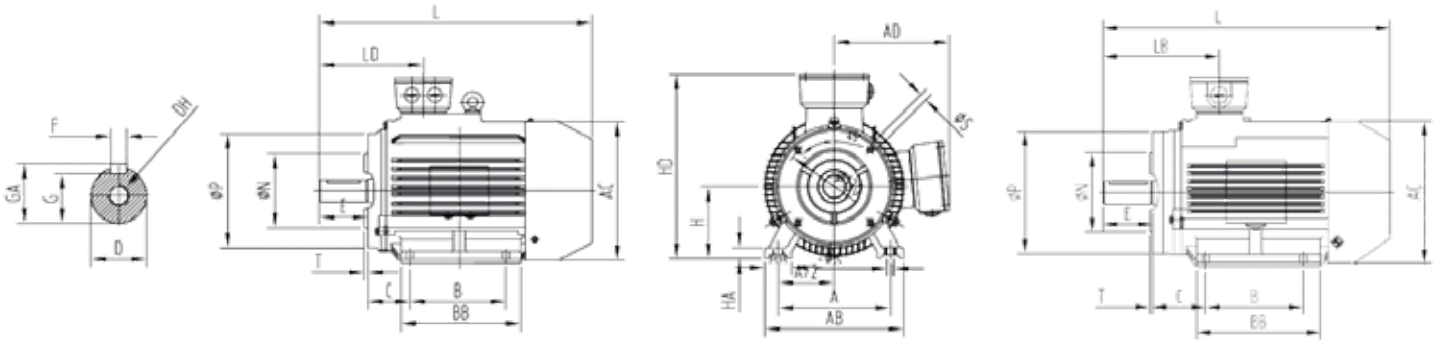
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
63	2-8	11	23	4	8,5	75	60	90	4-M5	2,5	M4X10	12,5	125	173	-	62	215
71	2-8	14	30	5	11	85	70	105	4-M6	2,5	M5X13	16	139	188	-	68	255
80	2-8	19	40	6	15,5	100	80	120	4-M6	3	M6x16	21,5	156	217	-	80	290
90S	2-8	24	50	8	20	115	95	140	4-M8	3	M8x19	27	174,5	233,5	-	83,5	333
90L	2-8	24	50	8	20	115	95	140	4-M8	3	M8x19	27	174,5	233,5	-	83,5	365
100L	2-8	28	60	8	24	130	110	160	4-M8	3,5	M10x22	31	197	252	-	83,5	386
112M	2-8	28	60	8	24	130	110	160	4-M8	3,5	M10x22	31	221	291	-	88	394,5
132S	2-8	38	80	10	33	165	130	200	4-M10	3,5	M12x28	41	265	325	-	94	440
132M	2-8	38	80	10	33	165	130	200	4-M10	3,5	M12x28	41	265	325	-	94	475

IE2 - B14B - Aluminium



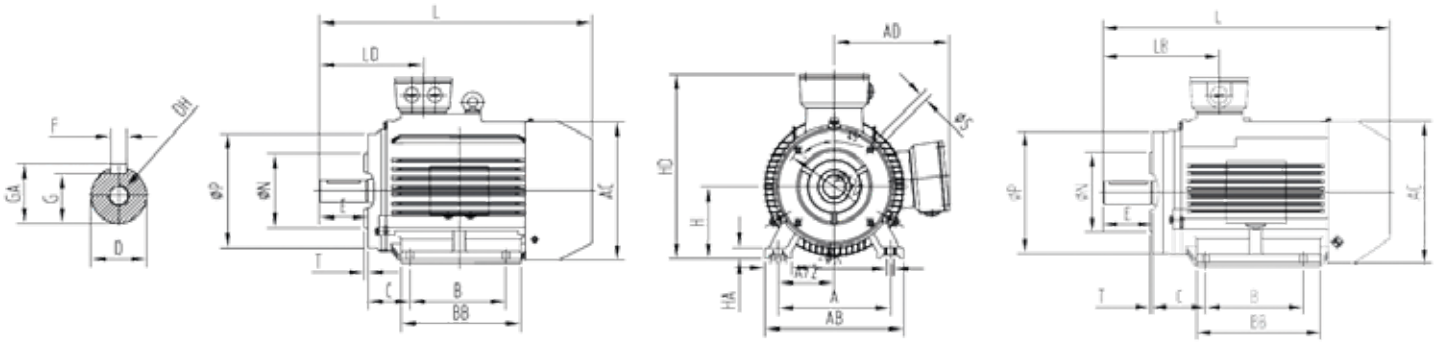
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
63	2-8	11	23	4	8,5	100	80	120	4-M6	3	M4X10	12,5	125	173	-	62	215
71	2-8	14	30	5	11	115	95	140	4-M8	3	M5X13	16	139	188	-	68	255
80	2-8	19	40	6	15,5	130	110	160	4-M8	3,5	M6x16	21,5	156	217	-	80	290
90S	2-8	24	50	8	20	130	110	160	4-M8	3,5	M8x19	27	174,5	233,5	-	83,5	333
90L	2-8	24	50	8	20	130	110	160	4-M8	3,5	M8x19	27	174,5	233,5	-	83,5	365
100L	2-8	28	60	8	24	165	130	200	4-M10	3,5	M10x22	31	197	252	-	83,5	386
112M	2-8	28	60	8	24	165	130	200	4-M10	3,5	M10x22	31	221	291	-	88	394,5
132S	2-8	38	80	10	33	215	180	250	4-M12	4	M12x28	41	265	325	-	94	440
132M	2-8	38	80	10	33	215	180	250	4-M12	4	M12x28	41	265	325	-	94	475

IE2 - B34C - Aluminium



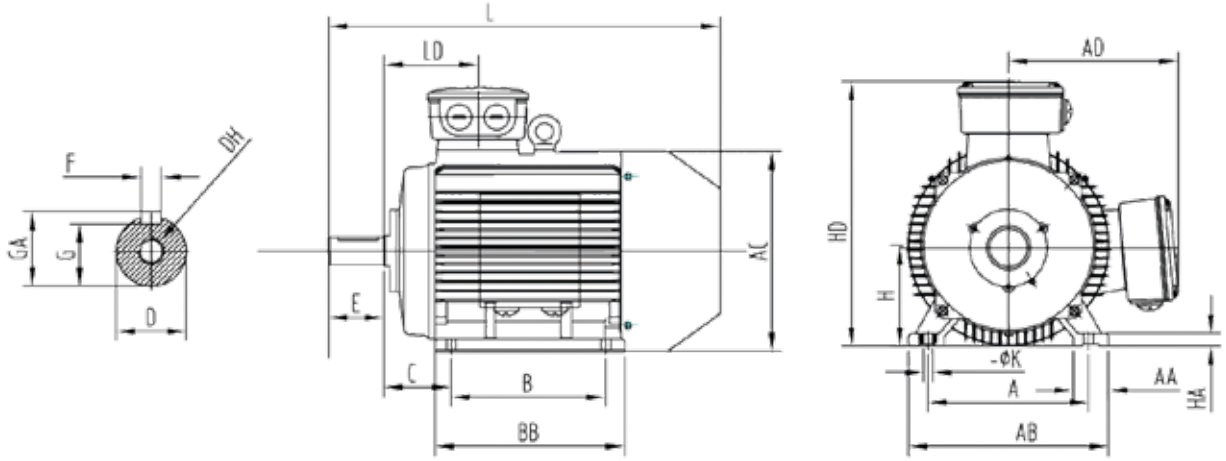
Frame size	Poles	C	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	A	B	HD	LA	LD	L
63	2-8	40	11	23	4	8,5	75	60	90	4-M5	2,5	M4X10	12,5	125	110	100	80	173	-	62	215
71	2-8	45	14	30	5	11	85	70	105	4-M6	2,5	M5X13	16	139	117	112	90	188	-	68	255
80	2-8	50	19	40	6	15,5	100	80	120	4-M6	3	M6x16	21,5	156	137	125	100	217	-	80	290
90S	2-8	56	24	50	8	20	115	95	140	4-M8	3	M8x19	27	174,5	143,5	140	100	233,5	-	83,5	333
90L	2-8	56	24	50	8	20	115	95	140	4-M8	3	M8x19	27	174,5	143,5	140	125	233,5	-	83,5	365
100L	2-8	63	28	60	8	24	130	110	160	4-M8	3,5	M10x22	31	197	152	160	140	252	-	83,5	386
112M	2-8	70	28	60	8	24	130	110	160	4-M8	3,5	M10x22	31	221	179	190	140	291	-	88	394,5
132S	2-8	89	38	80	10	33	165	130	200	4-M10	3,5	M12x28	41	265	193	216	140	325	-	94	440
132M	2-8	89	38	80	10	33	165	130	200	4-M10	3,5	M12x28	41	265	193	216	178	325	-	94	475

IE2 - B34B - Aluminium



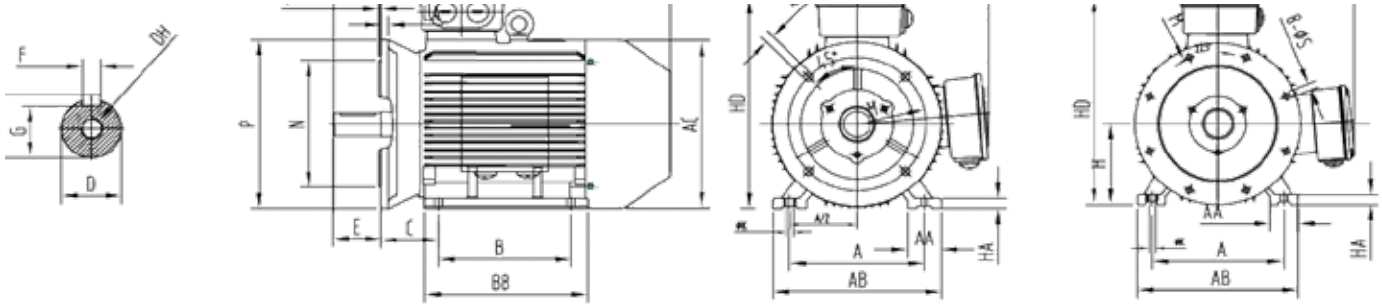
Frame size	Poles	C	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	A	B	HD	LA	LD	L
63	2-8	40	11	23	4	8,5	100	80	120	4-M6	3	M4X10	12,5	125	110	100	80	173	-	62	215
71	2-8	45	14	30	5	11	115	95	140	4-M8	3	M5X13	16	139	117	112	90	188	-	68	255
80	2-8	50	19	40	6	15,5	130	110	160	4-M8	3,5	M6x16	21,5	156	137	125	100	217	-	80	290
90S	2-8	56	24	50	8	20	130	110	160	4-M8	3,5	M8x19	27	174,5	143,5	140	100	233,5	-	83,5	333
90L	2-8	56	24	50	8	20	130	110	160	4-M8	3,5	M8x19	27	174,5	143,5	140	125	233,5	-	83,5	365
100L	2-8	63	28	60	8	24	165	130	200	4-M10	3,5	M10x22	31	197	152	160	140	252	-	83,5	386
112M	2-8	70	28	60	8	24	165	130	200	4-M10	3,5	M10x22	31	221	179	190	140	291	-	88	394,5
132S	2-8	89	38	80	10	33	215	180	250	4-M12	4	M12x28	41	265	193	216	140	325	-	94	440
132M	2-8	89	38	80	10	33	215	180	250	4-M12	4	M12x28	41	265	193	216	178	325	-	94	475

IE2 - B3 - Cast iron



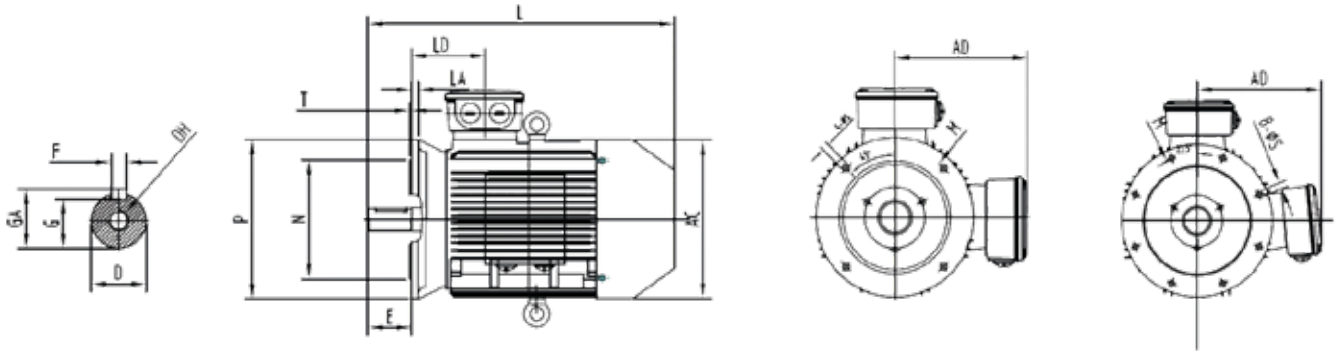
Frame size	Poles	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
160M	2-8	254	210	254	108	42	110	12	37	160	15	M16x36	45	65	320	330	285	20	440	304	149	652
160L	2-8	254	210	254	108	42	110	12	37	160	15	M16x36	45	65	320	330	285	20	440	304	149	652
180M	2,4	279	241	279	121	48	110	14	42,5	180	15	M16x36	51,5	70	355	380	310	22	470	355	161	720
180L	4-6-8	279	241	279	121	48	110	14	42,5	180	15	M16x36	51,5	70	355	380	310	22	470	355	161	720
200L	2-8	318	267	305	133	55	110	16	49	200	19	M20x42	59	70	395	420	335	25	525	375	186	778
225S	4,8	356	286	-	149	60	140	18	53	225	19	M20x42	64	75	435	470	335	25	580	370	189	815
225M	2	356	286	311	149	55	110	16	49	225	19	M20x42	59	75	435	470	370	28	580	395	189	820
	4-8	356	286	311	149	60	140	18	53	225	19	M20x42	64	75	435	470	370	28	580	395	189	845
250M	2	406	311	349	168	60	140	18	53	250	24	M20x42	64	80	490	510	380	30	635	445	207	915
	4-8	406	311	349	168	65	140	18	58	250	24	M20x42	69	80	490	510	380	30	635	445	207	915
280S	2	457	368	-	190	65	140	18	58	280	24	M20x42	69	85	550	550	410	35	698	490	215	978
	4-8	457	368	-	190	75	140	20	67,5	280	24	M20x42	79,5	85	550	550	410	35	698	490	215	978
280M	2	457	368	419	190	65	140	18	58	280	24	M20x42	69	85	550	580	410	35	698	540	215	985
	4-8	457	368	419	190	75	140	20	67,5	280	24	M20x42	79,5	85	550	580	410	35	698	540	215	1035
315S	2	508	406	-	216	65	140	18	58	315	28	M20x46	69	120	630	580	535	45	885	570	257	1185
	4-8	508	406	-	216	80	170	22	71	315	28	M20x46	85	120	630	580	535	45	885	570	257	1215
315ML	2	508	457	508	216	65	140	18	58	315	28	M20x46	69	120	630	645	535	45	885	680	257	1295
	4-8	508	457	508	216	80	170	22	71	315	28	M20x46	85	120	630	645	535	45	885	680	257	1325
355M	2	610	560	630	254	75	140	20	67,5	355	28	M20x46	79,5	120	730	720	700	52	1065	760	284	1495
	4-8	610	560	630	254	95	170	25	86	355	28	M20x46	100	120	730	720	700	52	1065	760	284	1525
355L	2	610	560	630	254	75	140	20	67,5	355	28	M20x46	79,5	120	730	720	700	52	1065	760	284	1495
	4-8	610	560	630	254	100	210	25	86	355	28	M20x46	100	120	730	720	700	52	1065	760	284	1525

IE2 - B35 - Cast iron



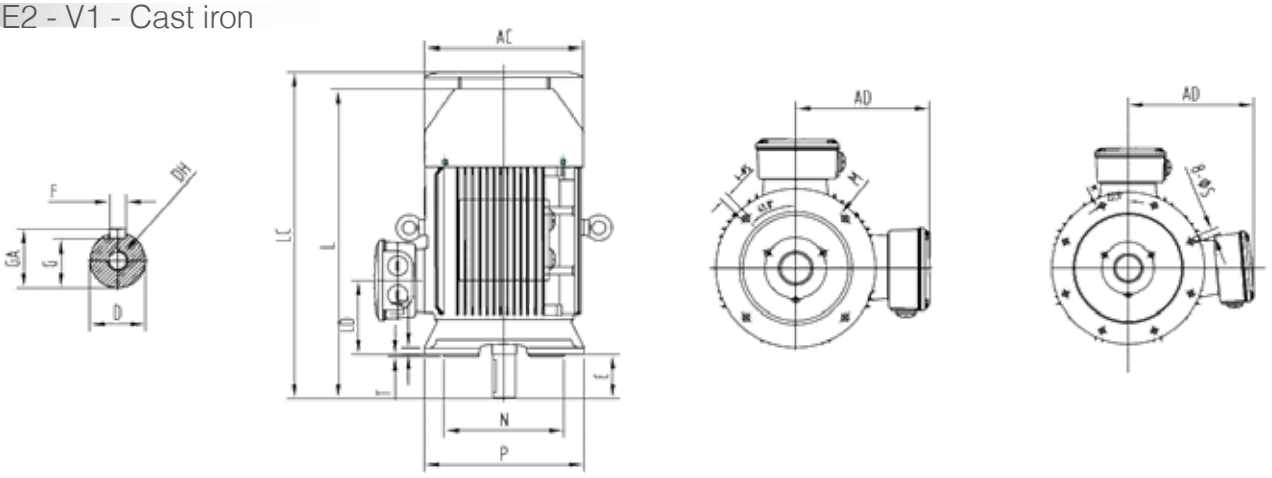
Frame size	Poles	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
160M	2-8	254	210	254	108	42	110	12	37	160	15	M16x36	45	65	320	330	285	20	440	304	149	652
160L	2-8	254	210	254	108	42	110	12	37	160	15	M16x36	45	65	320	330	285	20	440	304	149	652
180M	2,4	279	241	279	121	48	110	14	42,5	180	15	M16x36	51,5	70	355	380	310	22	470	355	161	720
180L	4-6-8	279	241	279	121	48	110	14	42,5	180	15	M16x36	51,5	70	355	380	310	22	470	355	161	720
200L	2-8	318	267	305	133	55	110	16	49	200	19	M20x42	59	70	395	420	335	25	525	375	186	778
225S	4,8	356	286	-	149	60	140	18	53	225	19	M20x42	64	75	435	470	335	25	580	370	189	815
225M	2	356	286	311	149	55	110	16	49	225	19	M20x42	59	75	435	470	370	28	580	395	189	820
	4-8	356	286	311	149	60	140	18	53	225	19	M20x42	64	75	435	470	370	28	580	395	189	845
250M	2	406	311	349	168	60	140	18	53	250	24	M20x42	64	80	490	510	380	30	635	445	207	915
	4-8	406	311	349	168	65	140	18	58	250	24	M20x42	69	80	490	510	380	30	635	445	207	915
280S	2	457	368	-	190	65	140	18	58	280	24	M20x42	69	85	550	550	410	35	698	490	215	978
	4-8	457	368	-	190	75	140	20	67,5	280	24	M20x42	79,5	85	550	550	410	35	698	490	215	978
280M	2	457	368	419	190	65	140	18	58	280	24	M20x42	69	85	550	580	410	35	698	540	215	985
	4-8	457	368	419	190	75	140	20	67,5	280	24	M20x42	79,5	85	550	580	410	35	698	540	215	1035
315S	2	508	406	-	216	65	140	18	58	315	28	M20x46	69	120	630	580	535	45	885	570	257	1185
	4-8	508	406	-	216	80	170	22	71	315	28	M20x46	85	120	630	580	535	45	885	570	257	1215
315ML	2	508	457	508	216	65	140	18	58	315	28	M20x46	69	120	630	645	535	45	885	680	257	1295
	4-8	508	457	508	216	80	170	22	71	315	28	M20x46	85	120	630	645	535	45	885	680	257	1325
355M	2	610	560	630	254	75	140	20	67,5	355	28	M20x46	79,5	120	730	720	700	52	1065	760	284	1495
	4-8	610	560	630	254	95	170	25	86	355	28	M20x46	100	120	730	720	700	52	1065	760	284	1525
355L	2	610	560	630	254	75	140	20	67,5	355	28	M20x46	79,5	120	730	720	700	52	1065	760	284	1495
	4-8	610	560	630	254	100	210	25	86	355	28	M20x46	100	120	730	720	700	52	1065	760	284	1525

IE2 - B5 - Cast iron



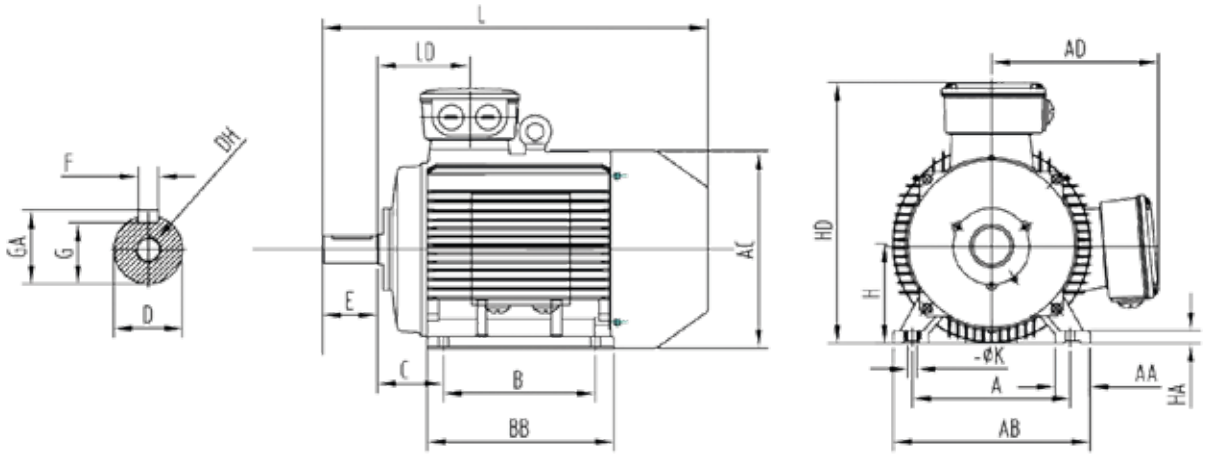
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
160M	2-8	42	110	12	37	300	250	350	4-Ø18.5	5	M16x36	45	330	440	15	149	652
160L	2-8	42	110	12	37	300	250	350	4-Ø18.5	5	M16x36	45	330	440	15	149	652
180M	2,4	48	110	14	42,5	300	250	350	4-Ø18.5	5	M16x36	51,5	380	470	15	161	720
180L	4-8	48	110	14	42,5	300	250	350	4-Ø18.5	5	M16x36	51,5	380	470	15	161	720
200L	2-8	55	110	16	49	350	300	400	4-Ø18.5	5	M20x42	59	420	525	17	186	778
225S	4,8	60	140	18	53	400	350	450	8-Ø18.5	5	M20x42	64	470	580	20	189	815
225M	2	55	110	16	49	400	350	450	8-Ø18.5	5	M20x42	59	470	580	20	189	820
	4-8	60	140	18	53	400	350	450	8-Ø18.5	5	M20x42	64	470	580	20	189	845
250M	2	60	140	18	53	500	450	550	8-Ø18.5	5	M20x42	64	510	635	22	207	915
	4-8	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	510	635	22	207	915
280S	2	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	550	698	22	215	978
	4-8	75	140	20	67,5	500	450	550	8-Ø18.5	5	M20x42	79,5	550	698	22	215	978
280M	2	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	580	698	22	215	985
	4-8	75	140	20	67,5	500	450	550	8-Ø18.5	5	M20x42	79,5	580	698	22	215	1035
315S	2	65	140	18	58	600	550	660	8-Ø24	6	M20x46	69	580	885	22	257	1185
	4-8	80	170	22	71	600	550	660	8-Ø24	6	M20x46	85	580	885	22	257	1215
315ML	2	65	140	18	58	600	550	660	8-Ø24	6	M20x46	69	645	885	22	257	1295
	4-8	80	170	22	71	600	550	660	8-Ø24	6	M20x46	85	645	885	22	257	1325
355M	2	75	140	20	67,5	740	680	800	8-Ø24	6	M20x46	79,5	720	1065	25	284	1495
	4-8	95	170	25	86	740	680	800	8-Ø24	6	M20x46	100	720	1065	25	284	1525
355L	2	75	140	20	67,5	740	680	800	8-Ø24	6	M20x46	79,5	720	1065	25	284	1495
	4-8	95	170	25	86	740	680	800	8-Ø24	6	M20x46	100	720	1065	25	284	1525

IE2 - V1 - Cast iron



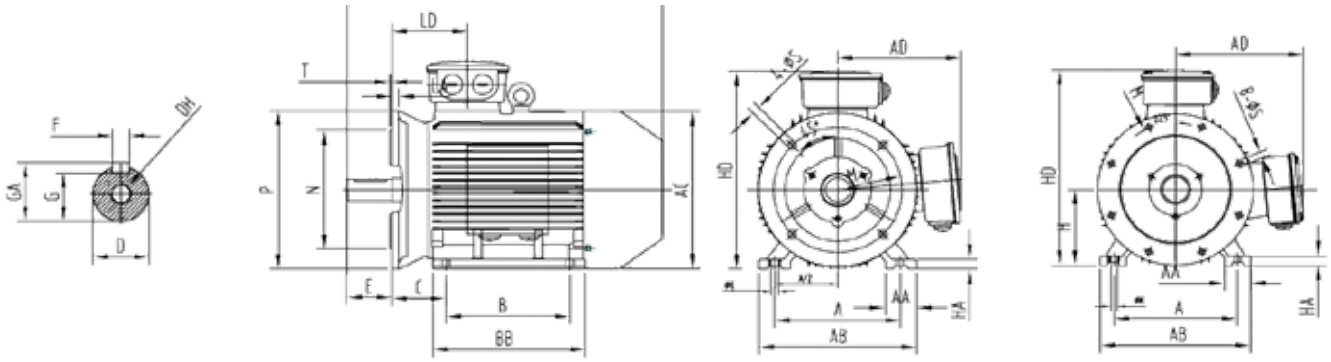
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L	LC
160M	2-8	42	110	12	37	300	250	350	4-Ø18.5	5	M16x36	45	330	440	15	149	652	667
160L	2-8	42	110	12	37	300	250	350	4-Ø18.5	5	M16x36	45	330	440	15	149	652	723
180M	2,4	48	110	14	42,5	300	250	350	4-Ø18.5	5	M16x36	51,5	380	470	15	161	720	760
180L	4-8	48	110	14	42,5	300	250	350	4-Ø18.5	5	M16x36	51,5	380	470	15	161	720	760
200L	2-8	55	110	16	49	350	300	400	4-Ø18.5	5	M20x42	59	420	525	17	186	778	845
225S	4,8	60	140	18	53	400	350	450	8-Ø18.5	5	M20x42	64	470	580	20	189	815	915
225M	2	55	110	16	49	400	350	450	8-Ø18.5	5	M20x42	59	470	580	20	189	820	910
	4-8	60	140	18	53	400	350	450	8-Ø18.5	5	M20x42	64	470	580	20	189	845	940
250M	2	60	140	18	53	500	450	550	8-Ø18.5	5	M20x42	64	510	635	22	207	915	1035
	4-8	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	510	635	22	207	915	1035
280S	2	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	550	698	22	215	978	1115
	4-8	75	140	20	67,5	500	450	550	8-Ø18.5	5	M20x42	79,5	550	698	22	215	978	1115
280M	2	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	580	698	22	215	985	1157
	4-8	75	140	20	67,5	500	450	550	8-Ø18.5	5	M20x42	79,5	580	698	22	215	1035	1157
315S	2	65	140	18	58	600	550	660	8-Ø24	6	M20x46	69	580	885	22	257	1185	1310
	4-8	80	170	22	71	600	550	660	8-Ø24	6	M20x46	85	580	885	22	257	1215	1340
315ML	2	65	140	18	58	600	550	660	8-Ø24	6	M20x46	69	645	885	22	257	1295	1425
	4-8	80	170	22	71	600	550	660	8-Ø24	6	M20x46	85	645	885	22	257	1325	1450
355M	2	75	140	20	67,5	740	680	800	8-Ø24	6	M20x46	79,5	720	1065	25	284	1495	1640
	4-8	95	170	25	86	740	680	800	8-Ø24	6	M20x46	100	720	1065	25	284	1525	1670
355L	2	75	140	20	67,5	740	680	800	8-Ø24	6	M20x46	79,5	720	1065	25	284	1495	1640
	4-8	95	170	25	86	740	680	800	8-Ø24	6	M20x46	100	720	1065	25	284	1525	1670

IE3 - B3 - Aluminium



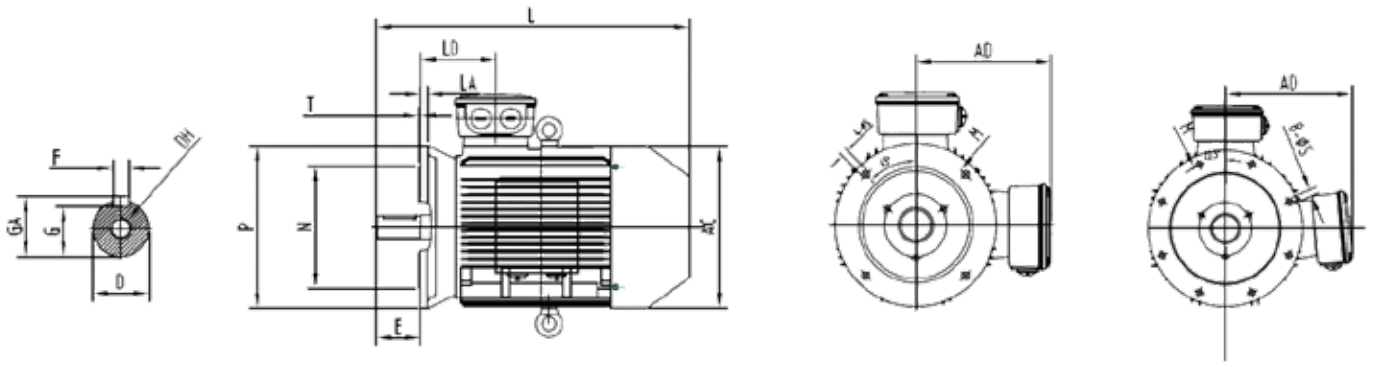
Frame size	Poles	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
80	2-8	125	100	-	50	19	40	6	15,5	80	10	M6x16	21,5	41	160	156	137	10	217	130	80	320
90S	2-8	140	100	-	56	24	50	8	20	90	10	M8x19	27	45	175	174,5	143,5	12	233,5	155	83,5	345
90L	2-8	140	125	-	56	24	50	8	20	90	10	M8x19	27	45	175	174,5	143,5	12	233,5	155	83,5	375
100L	2-8	160	140	-	63	28	60	8	24	100	12	M10x22	31	50	196	197	152	14	252	176	83,5	390
112M	2-8	190	140	-	70	28	60	8	24	112	12	M10x22	31	55	220	221	179	14	291	180	88	420
132S	2-8	216	140	-	89	38	80	10	33	132	15	M12x28	41	58	270	265	193	16	325	176	94	455
132M	2-8	216	178	-	89	38	80	10	33	132	15	M12x28	41	58	270	265	193	16	325	214	94	495

IE3 - B35 - Aluminium



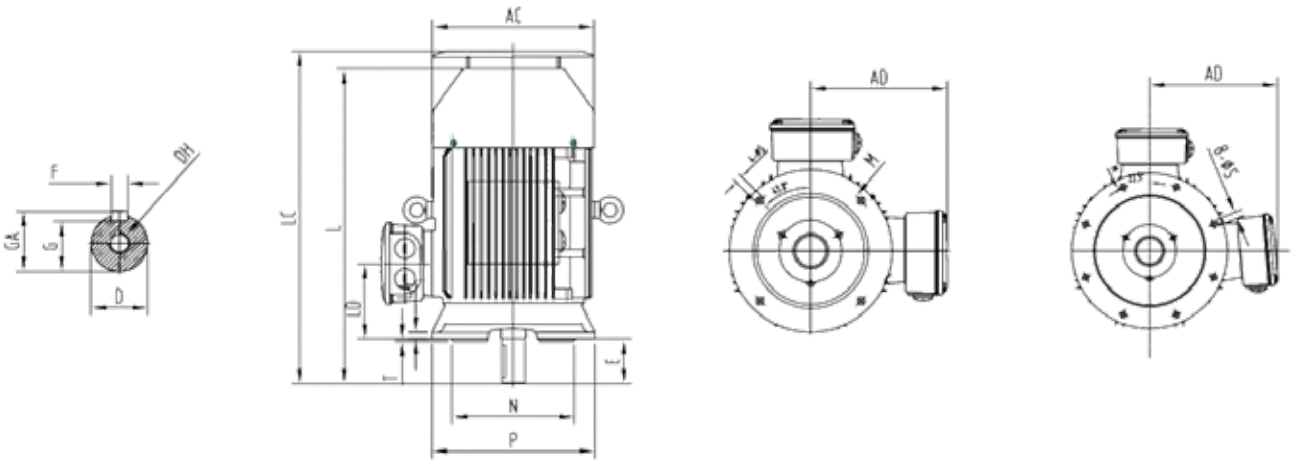
Frame size	Poles	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
80	2-8	125	100	-	50	19	40	6	15,5	80	10	M6x16	21,5	41	160	156	137	10	217	130	80	320
90S	2-8	140	100	-	56	24	50	8	20	90	10	M8x19	27	45	175	174,5	143,5	12	233,5	155	83,5	345
90L	2-8	140	125	-	56	24	50	8	20	90	10	M8x19	27	45	175	174,5	143,5	12	233,5	155	83,5	375
100L	2-8	160	140	-	63	28	60	8	24	100	12	M10x22	31	50	196	197	152	14	252	176	83,5	390
112M	2-8	190	140	-	70	28	60	8	24	112	12	M10x22	31	55	220	221	179	14	291	180	88	420
132S	2-8	216	140	-	89	38	80	10	33	132	15	M12x28	41	58	270	265	193	16	325	176	94	455
132M	2-8	216	178	-	89	38	80	10	33	132	15	M12x28	41	58	270	265	193	16	325	214	94	495

IE3 - B5 - Aluminium



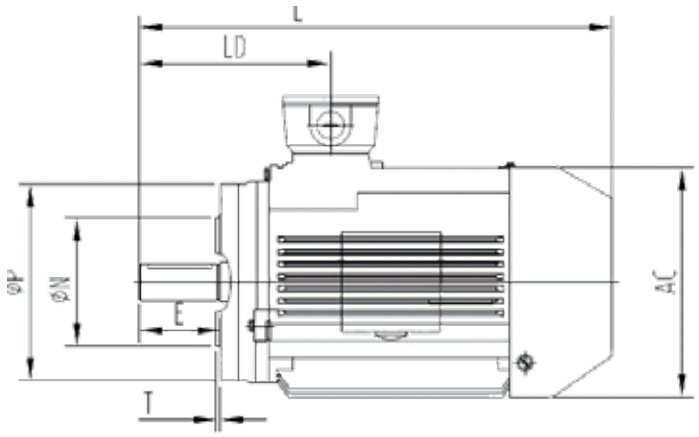
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	HD	LA	LD	L
80	2-8	19	40	6	15,5	165	130	200	4-Ø12	3,5	M6x16	21,5	156	137	217	10	80	320
90S	2-8	24	50	8	20	165	130	200	4-Ø12	3,5	M8x19	27	174,5	143,5	233,5	12	83,5	345
90L	2-8	24	50	8	20	165	130	200	4-Ø12	3,5	M8x19	27	174,5	143,5	233,5	12	83,5	375
100L	2-8	28	60	8	24	215	180	250	4-Ø14,5	4	M10x22	31	197	152	252	13	83,5	390
112M	2-8	28	60	8	24	215	180	250	4-Ø14,5	4	M10x22	31	221	179	291	14	88	420
132S	2-8	38	80	10	33	265	230	300	4-Ø14,5	4	M12x28	41	265	193	325	14	94	455
132M	2-8	38	80	10	33	265	230	300	4-Ø14,5	4	M12x28	41	265	193	325	14	94	495

IE3 - V1 - Aluminium



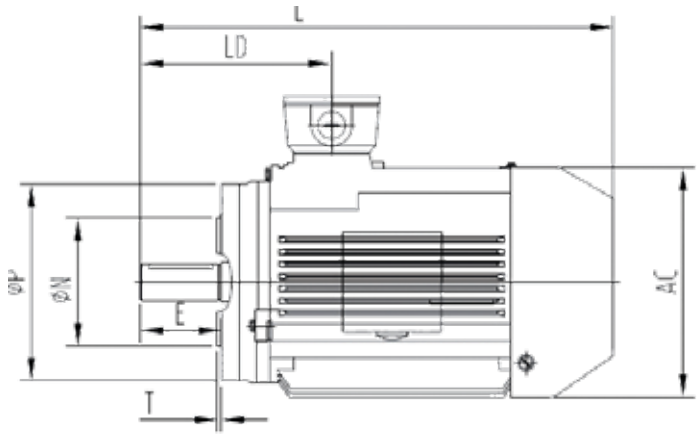
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	HD	LA	LD	L	LC
80	2-8	19	40	6	15,5	165	130	200	4-Ø12	3,5	M6x16	21,5	156	137	217	10	80	320	-
90S	2-8	24	50	8	20	165	130	200	4-Ø12	3,5	M8x19	27	174,5	143,5	233,5	12	83,5	345	-
90L	2-8	24	50	8	20	165	130	200	4-Ø12	3,5	M8x19	27	174,5	143,5	233,5	12	83,5	375	-
100L	2-8	28	60	8	24	215	180	250	4-Ø14,5	4	M10x22	31	197	152	252	13	83,5	390	-
112M	2-8	28	60	8	24	215	180	250	4-Ø14,5	4	M10x22	31	221	179	291	14	88	420	-
132S	2-8	38	80	10	33	265	230	300	4-Ø14,5	4	M12x28	41	265	193	325	14	94	455	-
132M	2-8	38	80	10	33	265	230	300	4-Ø14,5	4	M12x28	41	265	193	325	14	94	495	-

IE3 - B14C - Aluminium



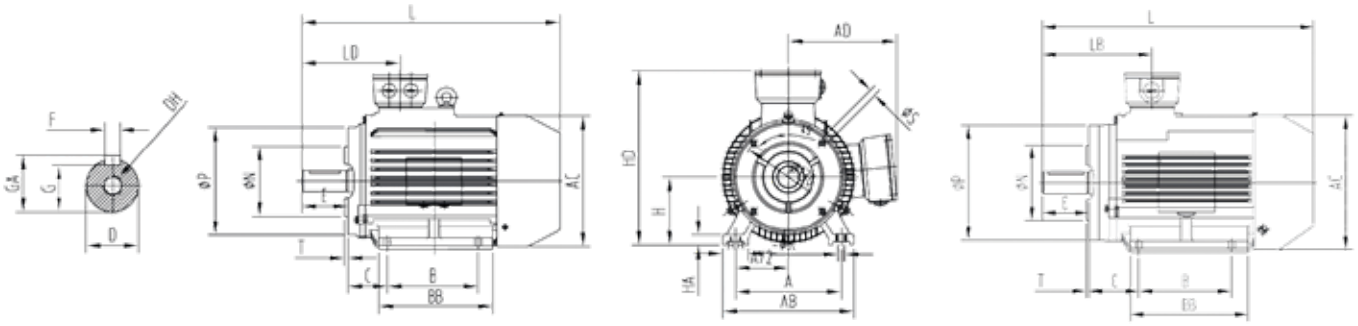
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
80	2-8	19	40	6	15,5	100	80	120	4-M6	3	M6x16	21,5	156	217	10	80	320
90S	2-8	24	50	8	20	115	95	140	4-M8	3	M8x19	27	174,5	233,5	12	83,5	345
90L	2-8	24	50	8	20	115	95	140	4-M8	3	M8x19	27	174,5	233,5	12	83,5	375
100L	2-8	28	60	8	24	130	110	160	4-M8	3,5	M10x22	31	197	252	13	83,5	390
112M	2-8	28	60	8	24	130	110	160	4-M8	3,5	M10x22	31	221	291	14	88	420
132S	2-8	38	80	10	33	165	130	200	4-M10	3,5	M12x28	41	265	325	14	94	455
132M	2-8	38	80	10	33	165	130	200	4-M10	3,5	M12x28	41	265	325	14	94	495

IE3 - B14B - Aluminium



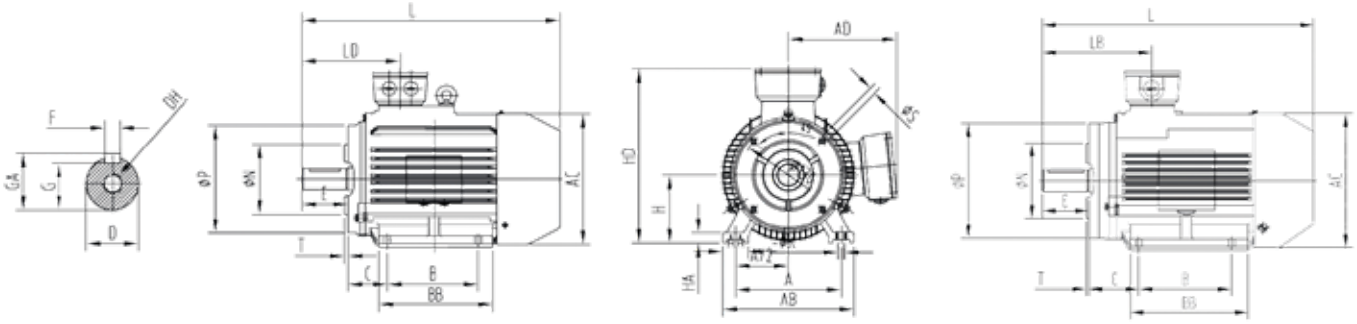
Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
80	2-8	19	40	6	15,5	130	110	160	4-M8	3,5	M6x16	21,5	156	217	10	80	320
90S	2-8	24	50	8	20	130	110	160	4-M8	3,5	M8x19	27	174,5	233,5	12	83,5	345
90L	2-8	24	50	8	20	130	110	160	4-M8	3,5	M8x19	27	174,5	233,5	12	83,5	375
100L	2-8	28	60	8	24	165	130	200	4-M10	3,5	M10x22	31	197	252	13	83,5	390
112M	2-8	28	60	8	24	165	130	200	4-M10	3,5	M10x22	31	221	291	14	88	420
132S	2-8	38	80	10	33	215	180	250	4-M12	4	M12x28	41	265	325	14	94	455
132M	2-8	38	80	10	33	215	180	250	4-M12	4	M12x28	41	265	325	14	94	495

IE3 - B34C - Aluminium



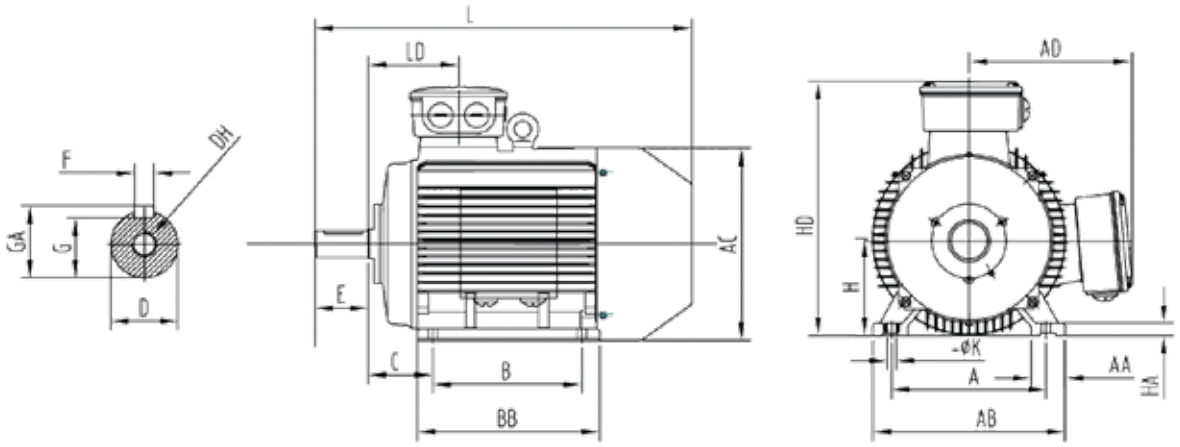
Frame size	Poles	C	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	A	B	HD	LA	LD	L
80	2-8	50	19	40	6	15,5	100	80	120	4-M6	3	M6x16	21,5	156	137	125	100	217	10	80	320
90S	2-8	56	24	50	8	20	115	95	140	4-M8	3	M8x19	27	174,5	143,5	140	100	233,5	12	83,5	345
90L	2-8	56	24	50	8	20	115	95	140	4-M8	3	M8x19	27	174,5	143,5	140	125	233,5	12	83,5	375
100L	2-8	63	28	60	8	24	130	110	160	4-M8	3,5	M10x22	31	197	152	160	140	252	13	83,5	390
112M	2-8	70	28	60	8	24	130	110	160	4-M8	3,5	M10x22	31	221	179	190	140	291	14	88	420
132S	2-8	89	38	80	10	33	165	130	200	4-M10	3,5	M12x28	41	265	193	216	140	325	14	94	455
132M	2-8	89	38	80	10	33	165	130	200	4-M10	3,5	M12x28	41	265	193	216	178	325	14	94	495

IE3 - B34B - Aluminium



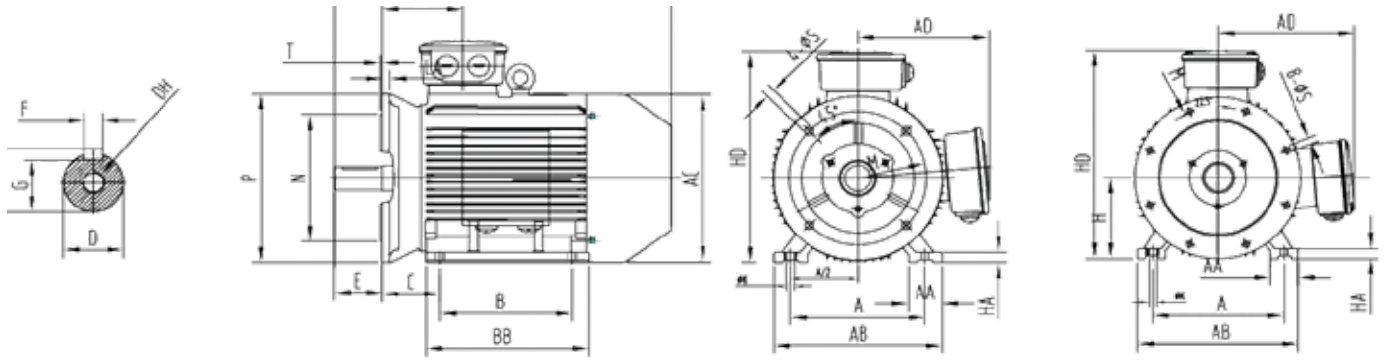
Frame size	Poles	C	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	A	B	HD	LA	LD	L
80	2-8	50	19	40	6	15,5	130	110	160	4-M8	3,5	M6x16	21,5	156	137	125	100	217	10	80	320
90S	2-8	56	24	50	8	20	130	110	160	4-M8	3,5	M8x19	27	174,5	143,5	140	100	233,5	12	83,5	345
90L	2-8	56	24	50	8	20	130	110	160	4-M8	3,5	M8x19	27	174,5	143,5	140	125	233,5	12	83,5	375
100L	2-8	63	28	60	8	24	165	130	200	4-M10	3,5	M10x22	31	197	152	160	140	252	13	83,5	390
112M	2-8	70	28	60	8	24	165	130	200	4-M10	3,5	M10x22	31	221	179	190	140	291	14	88	420
132S	2-8	89	38	80	10	33	215	180	250	4-M12	4	M12x28	41	265	193	216	140	325	14	94	455
132M	2-8	89	38	80	10	33	215	180	250	4-M12	4	M12x28	41	265	193	216	178	325	14	94	495

IE3 - B3 - Cast iron



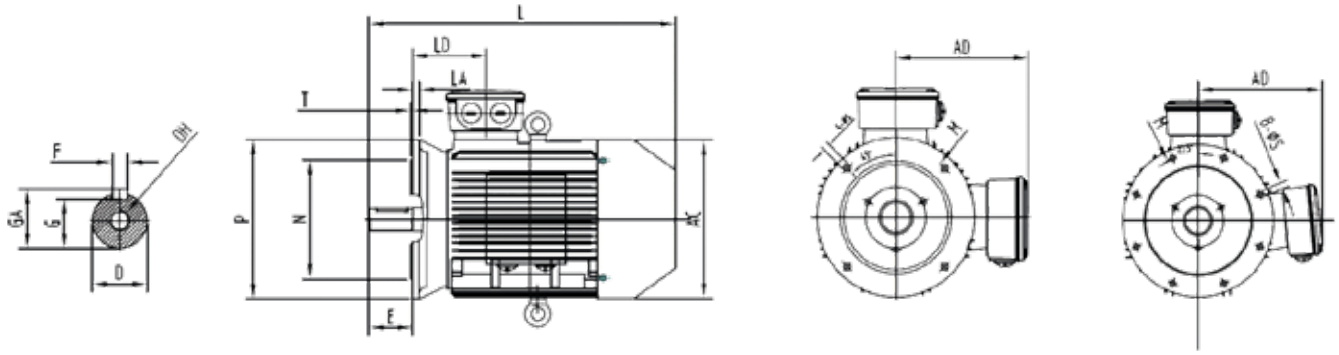
Frame size	Poles	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
160M	2-8	254	210	254	108	42	110	12	37	160	15	M16x36	45	65	320	330	285	20	440	304	149	652
160L	2-8	254	210	254	108	42	110	12	37	160	15	M16x36	45	65	320	330	285	20	440	304	149	652
180M	2,4	279	241	279	121	48	110	14	42,5	180	15	M16x36	51,5	70	355	380	310	22	470	355	161	720
180L	4-6-8	279	241	279	121	48	110	14	42,5	180	15	M16x36	51,5	70	355	380	310	22	470	355	161	720
200L	2-8	318	267	305	133	55	110	16	49	200	19	M20x42	59	70	395	420	335	25	525	375	186	778
225S	4,8	356	286	-	149	60	140	18	53	225	19	M20x42	64	75	435	470	335	25	580	370	189	815
225M	2	356	286	311	149	55	110	16	49	225	19	M20x42	59	75	435	470	370	28	580	395	189	820
	4-8	356	286	311	149	60	140	18	53	225	19	M20x42	64	75	435	470	370	28	580	395	189	845
250M	2	406	311	349	168	60	140	18	53	250	24	M20x42	64	80	490	510	380	30	635	445	207	915
	4-8	406	311	349	168	65	140	18	58	250	24	M20x42	69	80	490	510	380	30	635	445	207	915
280S	2	457	368	-	190	65	140	18	58	280	24	M20x42	69	85	550	550	410	35	698	490	215	978
	4-8	457	368	-	190	75	140	20	67,5	280	24	M20x42	79,5	85	550	550	410	35	698	490	215	978
280M	2	457	368	419	190	65	140	18	58	280	24	M20x42	69	85	550	580	410	35	698	540	215	985
	4-8	457	368	419	190	75	140	20	67,5	280	24	M20x42	79,5	85	550	580	410	35	698	540	215	1035
315S	2	508	406	-	216	65	140	18	58	315	28	M20x46	69	120	630	580	535	45	885	570	257	1185
	4-8	508	406	-	216	80	170	22	71	315	28	M20x46	85	120	630	580	535	45	885	570	257	1215
315ML	2	508	457	508	216	65	140	18	58	315	28	M20x46	69	120	630	645	535	45	885	680	257	1295
	4-8	508	457	508	216	80	170	22	71	315	28	M20x46	85	120	630	645	535	45	885	680	257	1325
355M	2	610	560	630	254	75	140	20	67,5	355	28	M20x46	79,5	120	730	720	700	52	1065	760	284	1495
	4-8	610	560	630	254	95	170	25	86	355	28	M20x46	100	120	730	720	700	52	1065	760	284	1525
355L	2	610	560	630	254	75	140	20	67,5	355	28	M20x46	79,5	120	730	720	700	52	1065	760	284	1495
	4-8	610	560	630	254	100	210	25	86	355	28	M20x46	100	120	730	720	700	52	1065	760	284	1525

IE3 - B - Cast iron



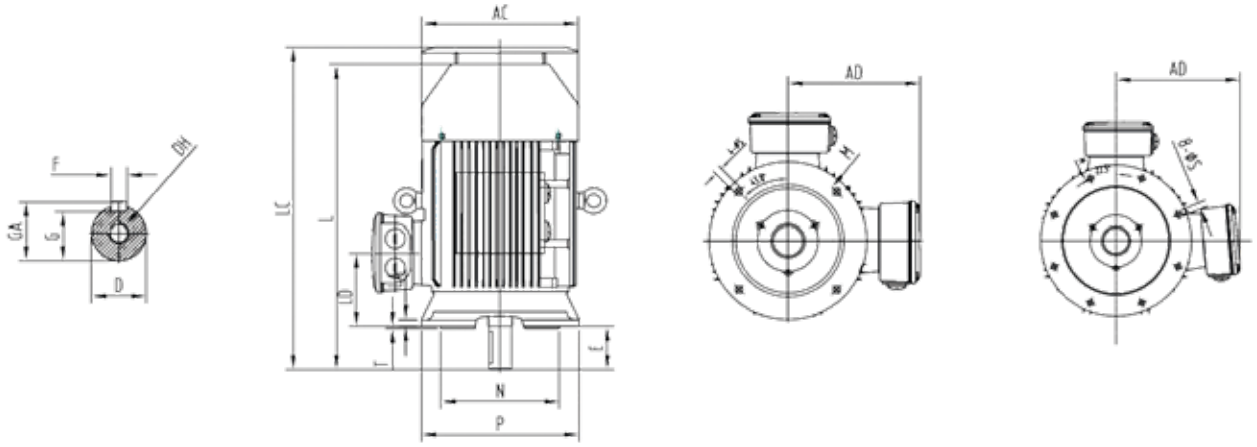
Frame size	Poles	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
160M	2-8	254	210	254	108	42	110	12	37	160	15	M16x36	45	65	320	330	285	20	440	304	149	652
160L	2-8	254	210	254	108	42	110	12	37	160	15	M16x36	45	65	320	330	285	20	440	304	149	652
180M	2,4	279	241	279	121	48	110	14	42,5	180	15	M16x36	51,5	70	355	380	310	22	470	355	161	720
180L	4-6-8	279	241	279	121	48	110	14	42,5	180	15	M16x36	51,5	70	355	380	310	22	470	355	161	720
200L	2-8	318	267	305	133	55	110	16	49	200	19	M20x42	59	70	395	420	335	25	525	375	186	778
225S	4,8	356	286	-	149	60	140	18	53	225	19	M20x42	64	75	435	470	335	25	580	370	189	815
225M	2	356	286	311	149	55	110	16	49	225	19	M20x42	59	75	435	470	370	28	580	395	189	820
	4-8	356	286	311	149	60	140	18	53	225	19	M20x42	64	75	435	470	370	28	580	395	189	845
250M	2	406	311	349	168	60	140	18	53	250	24	M20x42	64	80	490	510	380	30	635	445	207	915
	4-8	406	311	349	168	65	140	18	58	250	24	M20x42	69	80	490	510	380	30	635	445	207	915
280S	2	457	368	-	190	65	140	18	58	280	24	M20x42	69	85	550	550	410	35	698	490	215	978
	4-8	457	368	-	190	75	140	20	67,5	280	24	M20x42	79,5	85	550	550	410	35	698	490	215	978
280M	2	457	368	419	190	65	140	18	58	280	24	M20x42	69	85	550	580	410	35	698	540	215	985
	4-8	457	368	419	190	75	140	20	67,5	280	24	M20x42	79,5	85	550	580	410	35	698	540	215	1035
315S	2	508	406	-	216	65	140	18	58	315	28	M20x46	69	120	630	580	535	45	885	570	257	1185
	4-8	508	406	-	216	80	170	22	71	315	28	M20x46	85	120	630	580	535	45	885	570	257	1215
315ML	2	508	457	508	216	65	140	18	58	315	28	M20x46	69	120	630	645	535	45	885	680	257	1295
	4-8	508	457	508	216	80	170	22	71	315	28	M20x46	85	120	630	645	535	45	885	680	257	1325
355M	2	610	560	630	254	75	140	20	67,5	355	28	M20x46	79,5	120	730	720	700	52	1065	760	284	1495
	4-8	610	560	630	254	95	170	25	86	355	28	M20x46	100	120	730	720	700	52	1065	760	284	1525
355L	2	610	560	630	254	75	140	20	67,5	355	28	M20x46	79,5	120	730	720	700	52	1065	760	284	1495
	4-8	610	560	630	254	100	210	25	86	355	28	M20x46	100	120	730	720	700	52	1065	760	284	1525

IE3 - B5 - Cast iron



Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
160M	2-8	42	110	12	37	300	250	350	4-Ø18.5	5	M16x36	45	330	440	15	149	652
160L	2-8	42	110	12	37	300	250	350	4-Ø18.5	5	M16x36	45	330	440	15	149	652
180M	2,4	48	110	14	42,5	300	250	350	4-Ø18.5	5	M16x36	51,5	380	470	15	161	720
180L	4-8	48	110	14	42,5	300	250	350	4-Ø18.5	5	M16x36	51,5	380	470	15	161	720
200L	2-8	55	110	16	49	350	300	400	4-Ø18.5	5	M20x42	59	420	525	17	186	778
225S	4,8	60	140	18	53	400	350	450	8-Ø18.5	5	M20x42	64	470	580	20	189	815
225M	2	55	110	16	49	400	350	450	8-Ø18.5	5	M20x42	59	470	580	20	189	820
	4-8	60	140	18	53	400	350	450	8-Ø18.5	5	M20x42	64	470	580	20	189	845
250M	2	60	140	18	53	500	450	550	8-Ø18.5	5	M20x42	64	510	635	22	207	915
	4-8	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	510	635	22	207	915
280S	2	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	550	698	22	215	978
	4-8	75	140	20	67,5	500	450	550	8-Ø18.5	5	M20x42	79,5	550	698	22	215	978
280M	2	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	580	698	22	215	985
	4-8	75	140	20	67,5	500	450	550	8-Ø18.5	5	M20x42	79,5	580	698	22	215	1035
315S	2	65	140	18	58	600	550	660	8-Ø24	6	M20x46	69	580	885	22	257	1185
	4-8	80	170	22	71	600	550	660	8-Ø24	6	M20x46	85	580	885	22	257	1215
315ML	2	65	140	18	58	600	550	660	8-Ø24	6	M20x46	69	645	885	22	257	1295
	4-8	80	170	22	71	600	550	660	8-Ø24	6	M20x46	85	645	885	22	257	1325
355M	2	75	140	20	67,5	740	680	800	8-Ø24	6	M20x46	79,5	720	1065	25	284	1495
	4-8	95	170	25	86	740	680	800	8-Ø24	6	M20x46	100	720	1065	25	284	1525
355L	2	75	140	20	67,5	740	680	800	8-Ø24	6	M20x46	79,5	720	1065	25	284	1495
	4-8	95	170	25	86	740	680	800	8-Ø24	6	M20x46	100	720	1065	25	284	1525

IE3 - V1 - Cast iron



Frame size	Poles	D	E	F	G	M	N	P	S	T	DH	GA	AC	HD	LA	LD	L
160M	2-8	42	110	12	37	300	250	350	4-Ø18.5	5	M16x36	45	330	440	15	149	652	667
160L	2-8	42	110	12	37	300	250	350	4-Ø18.5	5	M16x36	45	330	440	15	149	652	723
180M	2,4	48	110	14	42,5	300	250	350	4-Ø18.5	5	M16x36	51,5	380	470	15	161	720	760
180L	4-8	48	110	14	42,5	300	250	350	4-Ø18.5	5	M16x36	51,5	380	470	15	161	720	760
200L	2-8	55	110	16	49	350	300	400	4-Ø18.5	5	M20x42	59	420	525	17	186	778	845
225S	4,8	60	140	18	53	400	350	450	8-Ø18.5	5	M20x42	64	470	580	20	189	815	915
225M	2	55	110	16	49	400	350	450	8-Ø18.5	5	M20x42	59	470	580	20	189	820	910
	4-8	60	140	18	53	400	350	450	8-Ø18.5	5	M20x42	64	470	580	20	189	845	940
250M	2	60	140	18	53	500	450	550	8-Ø18.5	5	M20x42	64	510	635	22	207	915	1035
	4-8	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	510	635	22	207	915	1035
280S	2	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	550	698	22	215	978	1115
	4-8	75	140	20	67,5	500	450	550	8-Ø18.5	5	M20x42	79,5	550	698	22	215	978	1115
280M	2	65	140	18	58	500	450	550	8-Ø18.5	5	M20x42	69	580	698	22	215	985	1157
	4-8	75	140	20	67,5	500	450	550	8-Ø18.5	5	M20x42	79,5	580	698	22	215	1035	1157
315S	2	65	140	18	58	600	550	660	8-Ø24	6	M20x46	69	580	885	22	257	1185	1310
	4-8	80	170	22	71	600	550	660	8-Ø24	6	M20x46	85	580	885	22	257	1215	1340
315ML	2	65	140	18	58	600	550	660	8-Ø24	6	M20x46	69	645	885	22	257	1295	1425
	4-8	80	170	22	71	600	550	660	8-Ø24	6	M20x46	85	645	885	22	257	1325	1450
355M	2	75	140	20	67,5	740	680	800	8-Ø24	6	M20x46	79,5	720	1065	25	284	1495	1640
	4-8	95	170	25	86	740	680	800	8-Ø24	6	M20x46	100	720	1065	25	284	1525	1670
355L	2	75	140	20	67,5	740	680	800	8-Ø24	6	M20x46	79,5	720	1065	25	284	1495	1640
	4-8	95	170	25	86	740	680	800	8-Ø24	6	M20x46	100	720	1065	25	284	1525	1670

Operating - and maintenance instructions

• STORAGE AND TRANSPORT

The motors have to be protected against mechanical damages and if possible they are to be stored in closed and dry rooms. In case of short-term outdoor storage they have to be protected against all harmful influences. Never transport or store the motors on the fan cowl. During transportation the motors should be kept from any damage.

• MOUNTING - TRANSMISSION COMPONENTS

When pulling a transmission component onto the shaft it is necessary to use a pull-on device or to warm up the component to be pulled on. To prevent shaft, bearings and other parts from damages the transmission components must never be driven onto the shaft by hammer.

• MOUNTING - BALANCING

All components attached to the shaft end are to be balanced dynamically. On the part of the manufacturer the rotors are balanced with half key.

• MOUNTING - INSTALLATION

If possible, the motors are to be installed free from vibration. In the case of direct coupling the motor is to be accurately aligned to the driven machine. The axles of the machines must be in line and no stresses should occur.

• MOUNTING - VENTILATION

Vent holes and cooling fins are to be kept free and the required minimum distances must be observed. It is to be avoided that the heated up cooling air is taken in again. In case of outdoor-installation the motors have to be protected against influences (rain, snow and ice, freezing of the fan)

• COMMISSIONING - PREREQUISITES

- All operations have to be carried out by skilled staff with the motor in dead state
- The power supply has to correspond with the name plate.
  Voltage tolerance in acc. with EN 60034-1
- The dimensions of the connection cables have to be adapted to the rated motor currents.

COMMISSIONING - OVERLOAD PROTECTION

In case of direct starting, the motors are to be provided with triple-pole protection switch. A protection is also needed for Delta/Star starting. For motors with PTC-thermistors a tripping device is required. For motors with bi-metal thermistors it is needed to switch off the motor with a contactor in case of overload.

COMMISSIONING - ROTATION DIRECTION

The rotation direction is to be checked before coupling the machine. If necessary, the rotation direction can be altered by changing the connections of two phases.

COMMISSIONING - ROTATION DIRECTION

- Check all terminal box connections are tightened
-The inside is clean and free from particles
- Unused cable entries are closed and threaded plugs are tightened
- The packing in the terminal box lid is inserted correctly.

COMMISSIONING - SWITCHING THE MOTOR

Before switching the motor on, during operation and when switching it off it should be checked whether all safety regulations are followed. When switching the motor on the current under load should be observed to detect possible overloads.

COMMISSIONING - INSULATION

Before starting a new motor and after long periods of inactivity or storage, the insulation resistance of the windings is to be measured. The resistance should be higher than 5M at 25°C ambient temperature. If this value cannot be obtained, the winding is damp and must be dried out.

MAINTENANCE

The motor as well as possible accessories should always be kept clean, free from dust trace, oil or other grime.
- That the motor operates without any vibrations or anomalous noises
- That the tension of a possible driving belt is correct
- That the inlet of the ventilations circuits is not obscured causing overheating of the windings

BEARINGS

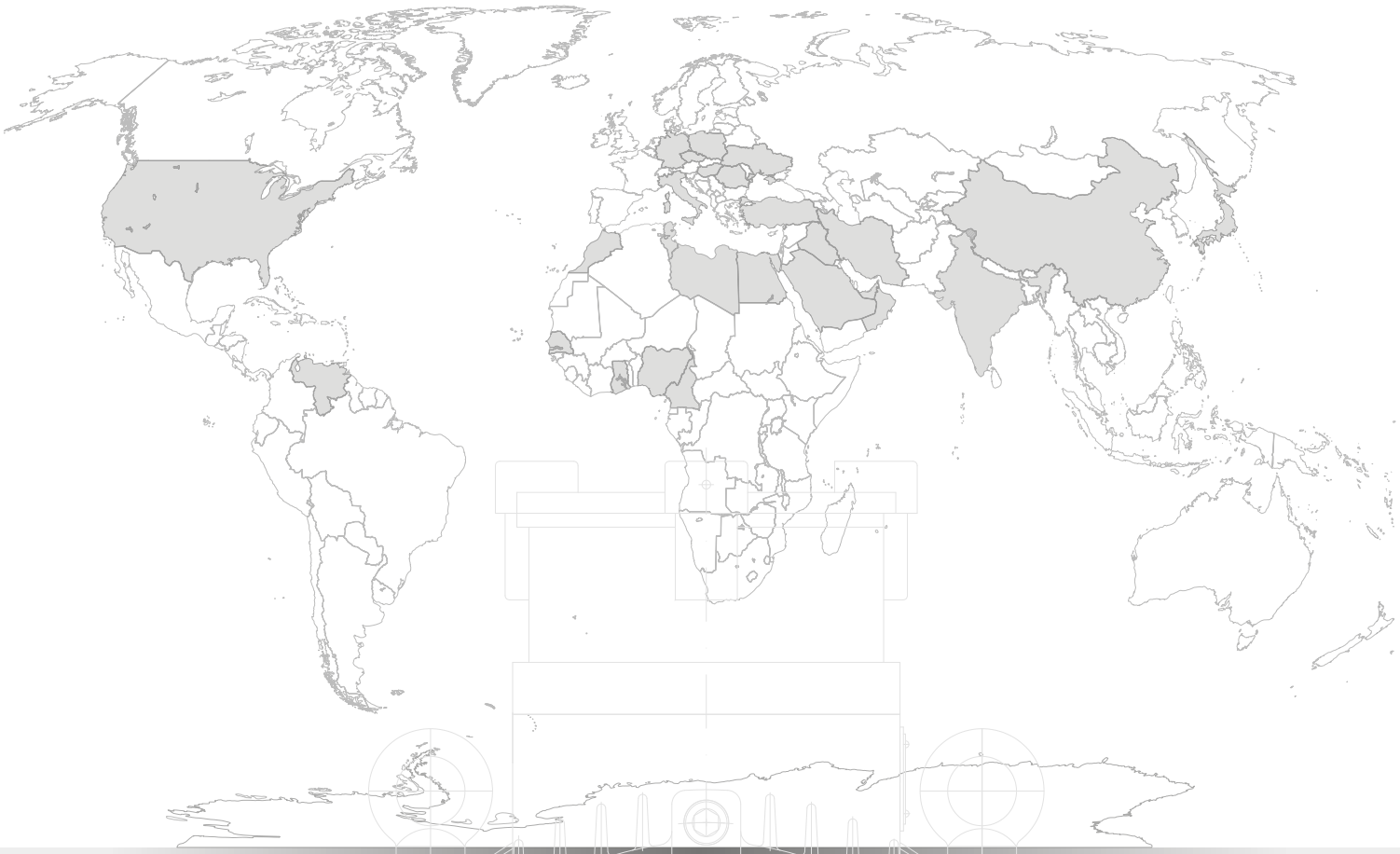
All motors are fitted with high quality, lifetime-lubricated bearings from the manufacturer SKF. The nominal rating life of the bearings used in horizontal mounted motors without any axial load is 40.000 operating hours, for Power take-off via shaft-coupling. Under the use of maximal load the lifetime of the bearings is min. 20.000 operating hours. From framesize 250 all motors have open bearings and lubrication devices. Option: reinforced bearings.

Lubrication intervals

6312/C3	2500	5500	7200	8500	20
6313/C3	2300	5300	7100	8400	23
6314/C3	2100	5200	7000	8200	26
6316/C3	1800	4900	6700	8000	33
6319/C3	1300	4600	6500	7800	51
6322/C3	1300	4600	6500	7800	60
NU314E/C3	1000	2500	3400	4000	26
NU316E/C3	800	2300	3200	3900	33
NU319E/C3	500	2200	3100	3800	51
NU322E/C3	300	2100	3000	3700	60
7314B	2000	4900	6600	7800	26
7316B	1700	4600	6300	7500	33
7319B	1200	3800	5700	7100	51
7322B	1200	3800	5700	7100	60

CATALOGUE

OM Standard Electric Motor



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