SAMT®

Specialised Air Motors and Transmission

New South Wales

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Explosion-proof motors

Contents

Legend

P = Power (kW)
M = Torque (Nm)
n = Speed (rpm)
i = Ratio
F = Load (N)
m = Weight (kg)
η = Efficiency
γ = Helix angle
f.s. = Service factor

1 = Input shaft
2 = Output shaft
r = Radial
a = Axial
s = Statical
d = Dynamic
max = Maxima
min = Minimum

These motors are used where safety against explosions and fires caused by gases, dust and liquids must be guaranteed. These motors are used in: Chemical industries, refineries, petroleum platforms, oil pipelines, gas pipelines pharmaceutical industries, graphic industries, thermal power stations, on ships, manufacturing industries, off-shore platforms.

They are also used by systems and equipment manufactures for: waste collection and treatment, etc... UMEB's range of motors includes: Ex-d – de flameproof motors, Ex-d - Ex-de flameproof motors with brake, Ex-nA non sparking motors. Main features:

- Frame size from 63 to 355
- Cast iron casing
- Power from 0,12 to 400 kW
- Three – phase
- 1 speed
- Self-ventilated
- Group IIC
- ATEX category 2G, 2D, 3G
- Temperature class T3, T4, T5

		Frame size														
Ex-d	*Flameproof*	*63*	*71*	*80*	*90*	*100*	*112*	*132*	*160*	*180*	*200*	*225*	*250*	*280*	*315*	*355*
Ex-de				*80*	*90*	*100*	*112*	*132*	*160*	*180*	*200*	*225*	*250*	*280*	*315*	*355*
Ex-d	*Flameproof with brake*			*80*	*90*	*100*	*112*	*132*	*160*	*180*	*200*	*225*	*250*	*280*		
Ex-nA	*Non sparking motors*	*63*	*71*	*80*	*90*	*100*	*112*	*132*	*160*	*180*	*200*	*225*	*250*	*280*	*315*	*355*

- Ex-d, Ex-de
- Frame size from 63 to 355 (cast iron)
- ATEX category 2G, 2D
- Group: IIC
- Temperature class T3, T4, T5
- EPL Gb, EPL Db
- Protection IP55, IP56, IP65, IP66
- Power from 0.09 to 400kW
- Three-phase single speed

Non sparking motors

- Ex-nA
- Frame size from 63 to 355 (cast-iron)
- ATEX category 3G
- Group II, EPL Gc
- Temperature class T4

- Protection IP55, IP56, IP65, IP66
- Power from 0.09 to 400 kW
- Three-phase single speed

Flameproof brake motors

- Ex-d
- Frame size from 80 to 280 (cast iron)
- ATEX category 2G, 2D
- Group IIC
- Temperature class T4
- EPL Gb, EPL Db
- Protection IP55, IP56, IP65, IP66
- Power from 0.18 to 90 kW
- Three-phase 1 speed flameproof brake

Main characteristics

Flameproof motors comply with the standards IEC/EN 60079-0, 60079-1, 60079-31 for atmospheres where gas or combustible dust is present and areas where combustible dust is present.

- 63 and 71 frame sizes – Ex d II CT5/T4 80 – 355 frame sizes – Ex d/de II CT4/T3.
- Three phase Squirrel Cage Asynchronous Induction motors.
- Totally enclosed fan cooled frame IP55. On request, IP56, IP65 or IP66 are available.
- The motor dimensions comply with IEC 60072 standard.
- Power Supply 220V, 230V, 280V, 400V, 415V, 440V, 460V, 480V, 500V, 660V and 690V / 50Hz or 60Hz.
- Three phase, 1 – speed motors are available on request.
- F insulation class.
- Noise level according to EN 60034-9.
- Terminal box: available both in the flameproof and increased safety version (frame size 80-355), located on the top as standard, turnable by 90 degrees in 4 positions.
- Motor frame and terminal box enclosure from 80 up to 355 are separated to avoid the transmission of explosions.
- Winding cables connected to the terminal box by means of terminal blocks or by flameproof bushings.
- Mechanical components painted with protective paints; stainless steel nameplate, anti-corrosion screws.
- Cast-iron frame, terminal box and end shields are highly resistant to impact.
- Low friction dust seals.
- The conformity certificates also cover alternatives, such as: altitude over 1000m, modification of the rated voltage and rated frequency, power supply from an inverter, motor protection through temperature detectors.

Main options

Main versions

- 2D motors for areas classified as zone 21 and zone 22 (combustible dusts).

Electrical variants

- Non-standard voltages and frequencies (maximum voltage 690V)
- Motors fir tropical climates
- Motors for low temperatures (-55degrees)
- Motors insulated to class H
- Motors with thermistor PTC or PT100 sensor.
- Motors with anti-condensation heaters.
- Motors with forced ventilation.
- Mechanical variants
- Special flanges and shafts
- Double ended shafts
- Cable gland fitted to terminal box
- Terminal box with metric or IPE cable entries.
- Motors protection IP56 – IP 65 – IP66
- Grade A or B balancing
- Motors with a rain canopy or sun shield, water – shedding disc.
- High protection against corrosion for tropical climates or applications in marine environments:

1. External mechanical components finished with epoxy paint;
2. Protection of the internal parts (winding and rotor) with protective paint;
3. Stainless steel screws,
4. VIK

Accessories

- Motors suitable for frequency inverter drive

Mounting arrangements

The most commonly used mounting arrangements are shown in the table 8. Other mounting arrangements are available on request.

Standard motors ordered in basic mounting arrangements (universal mounting arrangements) IM B3, IM B5 or IM B 14 can also be operated in the following different mounting positions:

- IM B3 in IM B6, IM B7, IM B8, IM V5 or IM V6.
- IM B5 in IM V1 or IM V3,
- IM B14 in IM V18 or IM V19.

According to the safety standards for electrical machines, foreign objects must be prevented from falling into the fan cover. Motors for vertical arrangements with shaft end down are fitted with a protection canopy over the fan cover.

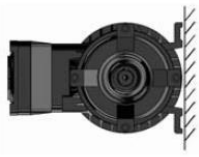
Table 8

Size 63÷355

Foot-mounted motor








B3	V5	V6	B6	B7	B8
IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071

Size 63÷355

Flange-mounted motor: large flange, clearance fixing holes



B5	V1	V3
IM B5	IM V1	IM V3
IM 3001	IM 3011	IM 3031

Size 63÷355

Flange-mounted motor: small flange, tapped fixing holes



B14	V18	V19
IM B14	IM V18	IM V19
IM 3601	IM 3611	IM 3631

Size 63÷355

Foot and flange-mounted motor: large flange, clearance fixing holes



B3/B5	V5/V1	V6/V3
IM B35	IM V15	IM V36
IM 2001	IM 2011	IM 2031

Size 63÷355

Foot and flange-mounted motor: with small flange, tapped fixing holes

B3/B14
IM B34
IM 2101

Shaft ends, balancing, vibrations, noise levels, coupling and belt drives

Shaft ends

The shaft ends are cylindrical and comply with IEC 60072. The shaft ends of all motors are equipped with a tapped hole to assist in the fitting of pulleys and couplings. The keys are always supplied along with the motors. On request, special shaft ends or a second free shaft end can be provided.

Balancing, and vibration

The motors are dynamically balanced with half keys in accordance with vibration grade A (former N) normal balance IEC 60034 – 14. The low-vibration version B (former R) (reduced) can be supplied where high demands are made on quiet running (table 9).

Table 9 -Vibration limits according to IEC 60034-14

Balancing rate	Limit values of the speed of vibration / oscillation for frame sizes:		
	63÷132 [mm/s]	160÷280 [mm/s]	315 [mm/s]
A	1.6	2.2	2.8
B	0.7	1.1	1.8

Noise level

Noise measurements are performed to IEC 60034-9. They apply for no load at 50 Hz. The tolerance is + 3 dB(A). At 60 Hz the values of sound pressure increase approximately by 4 dB(A).

Coupling drive

When aligning a motor to be coupled directly to the machine, care must be taken that the balls of the bearings do not jam. Elastic couplings are permissible with all motor. To ensure vibration-free running and to avoid any inadmissible stress on the bearings, the machine to be coupled must still be exactly aligned in the case of elastic coupling. Maximum accuracy must be applied to the coupling of 2-pole motors.

Belt drive

Side rails are used for motors for easy tensioning and readjustment at the belts. Permissible radial forces have to be taken into consideration (See Table 10). Pulleys and couplings must only be fitted and removed by means of specific tools.

Table 10 – Permissible radial load FR [N]

Frame size	poles			
	2	4	6	8
	F_R [N]			
63	240	270		
71	305	395	435	520
80	480	610	645	708
90	530	690	740	820
100	655	828	905	1025
112	800	940	1030	1150
132	1290	1480	1600	1760
160	2250	2800	3150	3600
180	2600	3200	3700	4150
200	2970	3740	4130	4415
225	3360	4200	4520	4700
250	3360	4830	5200	5550
280	5060	7100	7900	8650
315	6100	9300	10500	11200
355	4500	8500	8800	9100

Permissible radial loads on the shaft with standard bearings

The values of radial load are calculated considering: frequency 50Hz, temperature not exceeding 90degrees, 20000 hours of life.

For operation at 60Hz the values have to be reduced by 6% in order to achieve the same useful life. The distance of the point of action of force F_R measured from the shoulder of the shaft must not exceed half of the length of the shaft end.

Terminal box

The terminal box is located on top and can be turned through 4 x 90^{O}. As standard, the motors are delivered with one or two threaded cable entries. Motors fitted with thermodetectors or heaters are always provided with additional cable entry. The size of cable entries is given in table 11.

Terminals and earthing terminal

There are a maximum 6 terminals for power supply in the terminal box. An earthing terminal is located in the terminal on motor frame.

Standard operation conditions

Output

The rated outputs and operating characteristics given in the performance data refer according to IEC 60034-1 to:

- Continuous duty (S1)
- Frequency of 50Hz
- Voltage 400V
- Maximum ambient temperature at 40^{O}C
- Maximum height of installation of 1000 m above sea level.

Motors can also operate in ambient temperatures from 40 ^{O}C up to 60 ^{O}C and at altitudes of more than 1000 m up to 3000 m above sea level. In these cases the rated outputted given in the tables must be reduced in accordance with figure 2 or a larger motor has to be chosen. The rated data does not need to be changed if at altitudes in excess of 1000m above sea level the ambient temperature is reduced according to the table 12.

Figure 2

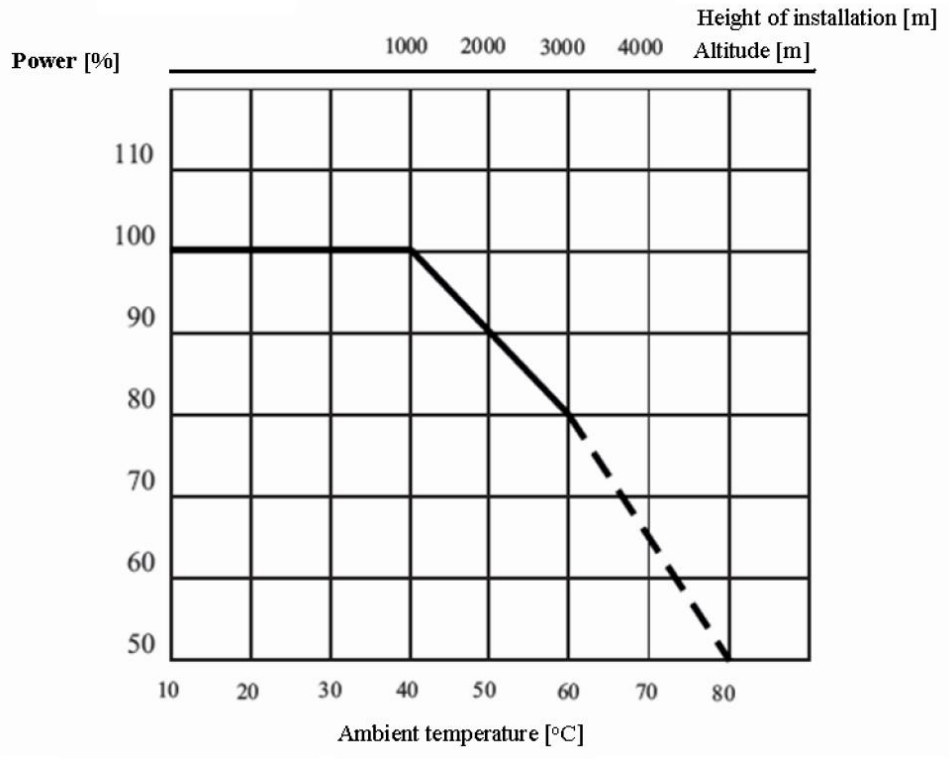


Table 12

Altitude of installation [m]	Maximum ambient temperature [°]
0 to 1000	40
1000 to 2000	30
2000 to 3000	19

Speed

The rated speeds shown in the performance data are valid for 50Hz and the rated speed equals synchronous speed less slip. The following speeds result from the number of poles and the supply frequency of 50 and 60 Hz.

Pole number	Asynchronous speed at	
	50 Hz [rpm]	60 Hz [rpm]
2	3000	3600
4	1500	1800
6	1000	1200
8	750	900

Direction of rotation

The motors can be operated in both directions of rotation. The direction of rotation can be reversed by interchanging any two phases.

IE1 - STANDARD EFFICIENCY

ASA

Flameproof motors Ex d / Ex de II CT4

Technical data

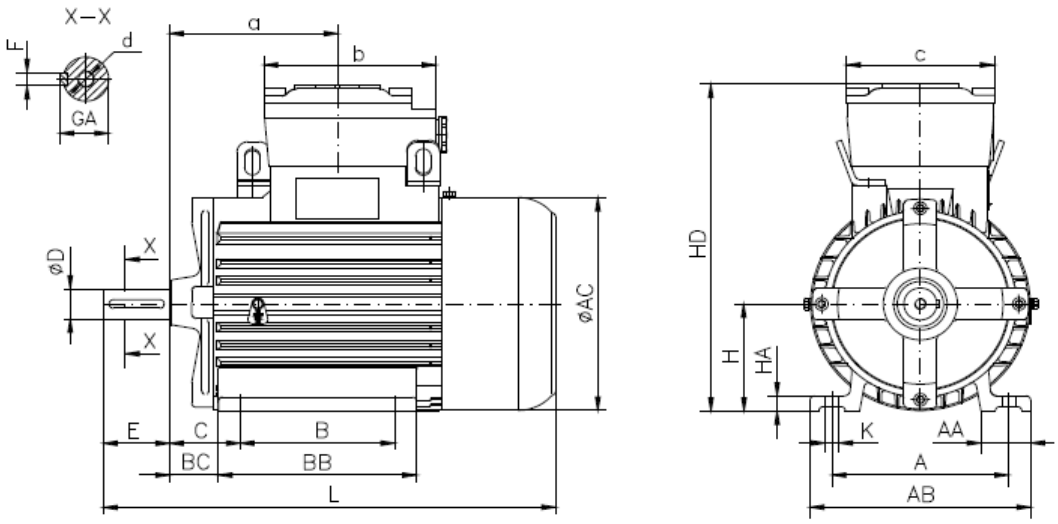
Motor type	P_n kW	n rpm	I_n[A] (400V)	η %	cosφ	Ip / In	Mp / Mn	Mmax / Mn	J Kgm^2	L_{PA} dB(A)	m kg
2 poles											
ASA 63a-2	0,18	2744	0,57	58.2	0,79	3,5	3,1	3,1	0.000137	53	12
ASA 63b-2	0,25	2752	0,69	67,8	0,77	3,8	3,1	3,1	0.000175	55	12
ASA 71a-2	0,37	2832	0,94	71,2	0,8	3,4	2,4	2,4	0.000618	53	17
ASA 71b-2	0,55	2750	1,34	71	0,83	3,7	2,7	2,7	0.000854	57	18
ASA 80a-2	0,75	2832	1,72	75	0,84	4,5	2,3	2,6	0.001251	64	23
ASA 80b-2	1,1	2820	2,44	76,6	0,85	4,5	2,5	2,6	0.001325	61	27
ASA 90S-2	1,5	2825	3,28	78,5	0,84	5	2,5	2,5	0.002587	68	30
ASA 90L-2	2,2	2820	4,58	80.2	0,86	5	2,8	2,8	0.003181	67	32
ASA 100LW-2	3	2880	5,82	83	0,89	5,5	3,1	3,3	0.005303	71	46
ASA 112M-2	4	2913	8	83.1	0,85	6,2	3,1	3,1	0.007443	74	58
ASA 132Sa-2	5,5	2916	11.58	86,1	0,85	6,45	3,2	3,2	0.015375	78	83
ASA 132Sb-2	7,5	2916	14,5	86	0,87	6,8	3,1	3,2	0.020965	77	88
ASA 160Ma-2	11	2925	20,3	88,7	0,88	7	2,3	2,4	0.032672	82	138
ASA 160Mb-2	15	2925	28,0	89,81	0,86	7	2,2	2,4	0.04155	80	146
ASA 160L-2	18,5	2934	34,2	90,5	0,86	7	2,3	2,5	0.050427	80	160
ASA 180M-2	22	2945	39,3	90,8	0,89	7,5	2,6	2,8	0.095899	83	211
ASA 200La-2	30	2948	52,0	91,5	0,91	7	2,4	2,7	0.153346	85	285
ASA 200Lb-2	37	2943	64,4	92,2	0,9	6,7	2,2	2,8	0.169519	85	300
ASA 225M-2	45	2946	78,6	92,85	0,89	7	2	2,5	0.246059	89	383
ASA 250M-2	55	2963	93,6	93,25	0,91	7	2,4	2,45	0.321106	89	458
ASA 280S-2	75	2950	128	94	0,9	7,1	2,3	2,4	0.549547	89	587
ASA 280M-2	90	2960	154	93,92	0,9	7,1	2	2,25	0.610978	88	660
ASA 315S-2	110	2975	185	94,2	0,91	7,5	2,1	2,6	1.039568	87	820
ASA 315M-2	132	2975	222	94,5	0,91	7,5	2,1	2,2	1.283009	87	945
ASA 315MX-2	160	2975	271	94,8	0,9	7,5	2,3	2,4	1.93201	97	1150
ASA 315LY-2	200	2980	339	94,69	0,9	7,5	2,3	2,4	2.170946	93	1260
ASA 355M-2	250	2980	431	95,1	0,88	6,3	2,2	2,8	3,42549	99	1495
ASA 355La-2	280	2980	483	95,1	0,88	6,0	2,0	2,5	3,80611	99	1610
ASA 355Lb-2	315	2980	542	95,2	0,88	6,3	2,3	2,9	4,09156	99	1810

Motor type	P_n kW	n rpm	I_n[A] (400V)	η %	cosφ	Ip / In	Mp / Mn	Mmax / Mn	J Kgm^2	L_{PA} dB(A)	m kg
4 poles											
ASA 63a-4	0,12	1360	0,42	53.53	0,76	3	2,4	2,4	0.000206	45	12
ASA 63b-4	0,18	1345	0,6	57.3	0,75	3,3	2,7	2,7	0.000266	50	12
ASA 71a-4	0,25	1420	0,83	62	0,7	4,1	2,4	2,7	0.000887	49	16
ASA 71b-4	0,37	1414	1,1	66	0,74	3,5	2,6	2,6	0.001221	47	17
ASA 80a-4	0,55	1400	1,6	70	0,71	4,5	2,3	2,6	0.001777	56	23
ASA 80b-4	0,75	1410	2,2	72.1	0,7	4	2,3	2,6	0.002229	50	24
ASA 90S-4	1,1	1407	2,76	75.4	0,76	4,7	2,7	2,6	0.003833	53	29
ASA 90L-4	1,5	1407	3,48	77.3	0,79	4,6	2,3	2,5	0.00504	53	32
ASA 100LW-4	2,2	1436	5.27	80,1	0,752	5	2,5	2,6	0.007182	58	46
ASA 100LX-4	3	1444	6,9	81.5	0,77	4,8	2,5	2,6	0.009894	59	50
ASA 112M-4	4	1434	8	83.5	0,86	5,8	2,6	2,8	0.015056	58	61
ASA 132S-4	5,5	1452	11,0	87	0,83	6	2,5	2,7	0.032981	63	88
ASA 132M-4	7,5	1451	14,7	87,5	0,84	6,5	2,1	2,3	0.044587	66	105
ASA 160M-4	11	1460	20,3	88,7	0,88	6,3	2,2	2,4	0.073755	66	148
ASA 160L-4	15	1465	27,5	89,5	0,88	6,5	2,3	2,4	0.093947	67	157
ASA 180M-4	18,5	1465	33,9	90,5	0,87	6	2	2,4	0.150583	79	210
ASA 180L-4	22	1465	40,6	91	0,86	6,2	2	2,3	0.166755	76	216
ASA 200L-4	30	1476	54,4	91,5	0,87	7	2	2,6	0.254287	80	294
ASA 225S-4	37	1476	65,6	92,5	0,88	7	2	2,6	0.387394	81	375
ASA 225M-4	45	1477	79,4	93	0,88	7,4	2	2,4	0.456489	80	406
ASA 250M-4	55	1479	96,7	93,3	0,88	7,1	2,5	2,6	0.570238	80	476
ASA 280S-4	75	1480	127	93,8	0,91	7,25	2,4	2,4	0.937528	82	640
ASA 280M-4	90	1480	155	94,1	0,89	7	1,9	2	1.061629	81	680
ASA 315S-4	110	1480	185	94,3	0,91	7,1	2,1	2,2	1.645323	85	830
ASA 315M-4	132	1480	224	94,54	0,90	7	2,3	2,3	1.839217	84	895
ASA 315MX-4	160	1484	280	94,7	0,87	6,5	2,1	2,2	3.309658	94	1150
ASA 315LZ-4	200	1482	345	95,21	0,88	6,5	2,1	2,2	4.121748	93	1315
ASA 355M-4	250	1485	430	95,3	0,88	6,5	2,3	2,3	6,79104	96	1795
ASA 355La-4	280	1485	476	95,5	0,89	6,3	2,4	2,4	7,52559	96	1875
ASA 355Lb-4	315	1485	535	95,5	0,89	6,6	2,5	2,5	7,99833	96	2150

Motor type	P_n kW	n rpm	I_n[A] (400V)	η %	cosφ	Ip / In	Mp / Mn	Mmax / Mn	J Kgm^2	L_{PA} dB(A)	m kg
6 poles											
ASA 71a-6	0,18	936	0,58	61	0,74	3,2	2,3	2,4	0.001754	44	15
ASA 71b-6	0,25	920	0,77	65,5	0,72	3,6	2,5	2,7	0.00221	42	16
ASA 80a-6	0,37	936	1,09	67	0,73	3,6	2	2,5	0.002818	47	22
ASA 80b-6	0,55	932	1,66	68,5	0,7	4	2,2	2,3	0.003987	45	23
ASA 90S-6	0,75	933	1,99	71,5	0,76	3,2	2	3,4	0.005782	53	30
ASA 90L-6	1,1	936	2,82	74	0,76	4	2,4	2,6	0.007639	57	33
ASA 100LX-6	1,5	950	3,70	77	0,76	4,6	1,9	2,2	0.012386	55	48
ASA 112M-6	2,2	960	5,29	79	0,76	5,7	2,2	2,3	0.021573	59	58
ASA 132S-6	3	962	6,94	81	0,77	5,3	2,7	2,9	0.036096	58	85
ASA 132Ma-6	4	970	8,81	84	0,78	5,5	2,1	2,2	0.049837	59	90
ASA 132Mb-6	5,5	967	11,5	86,5	0,8	6	2,4	2,6	0.071284	60	105
ASA 160M-6	7,5	969	15,6	88	0,79	6,5	2	2,1	0.1082	61	146
ASA 160L-6	11	970	22,7	88,5	0,79	6,5	1,9	2	0.148631	59	156
ASA 180L-6	15	969	30,4	89	0,8	6,5	1,8	2	0.251523	67	225
ASA 200La-6	18,5	977	36,9	90,5	0,8	6,7	2	2,5	0.363143	69	282
ASA 200Lb-6	22	980	42,2	91,73	0,82	6,2	2	2,3	0.45198	70	300
ASA 225M-6	30	982	56,4	91,41	0,84	6,9	1,8	2,4	0.689311	72	400
ASA 250M-6	37	985	68,3	92,01	0,85	7,2	2,7	2,7	0.859972	70	473
ASA 280S-6	45	980	82,1	92	0,86	6,2	1,9	2	1.420715	72	595
ASA 280M-6	55	980	100,1	92,2	0,86	6,7	2	2,1	1.613843	72	645
ASA 315S-6	75	985	134	92,78	0,87	7,3	2,4	2,5	2.714892	75	820
ASA 315M-6	90	985	158	93,5	0,88	7,5	2,3	2,4	3.042483	76	886
ASA 315MX-6	110	990	199	93,96	0,85	6,5	2	2,2	5.253971	84	1100
ASA 315LX-6	132	990	235	94,2	0,86	6,5	2	2,2	5.253971	84	1150
ASA 315LY-6	160	990	284	94,5	0,86	6,5	2	2,2	5.905251	91	1225
ASA 355M-6	200	990	341	95,1	0,89	6,0	2,1	2,1	8,90799	94	1795
ASA 355L-6	250	990	430	95,3	0,88	7,0	2,5	2,5	9,79879	94	1865

Overall dimensions [mm] **Flameproof motors Ex d / Ex de II CT4**

IM 1001



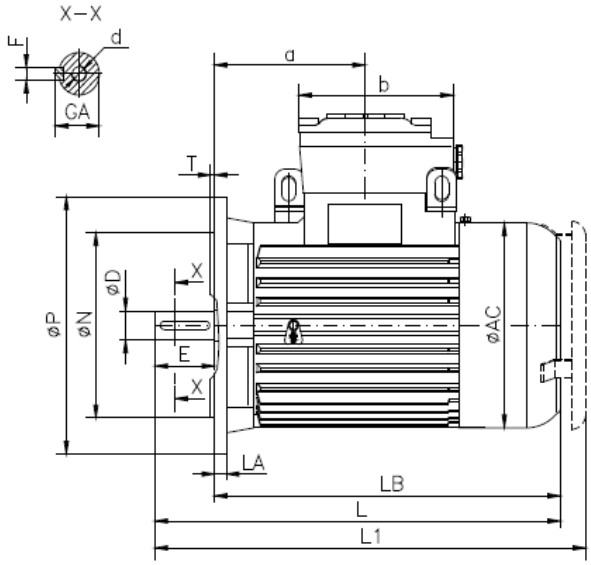
Frame size	A	B	C	$H_{-0,5}$	K	D_{j6}	E	F_{h9}	GA	d	AA	AB	BB	BC	HA	AC	HD	L
63	100	80	40	63	7	11	23	4	12,5	M4	31	131	104	28,5	9	125	200	259
71	112	90	45	71	7	14	30	5	16	M5	37	141	125	33	9	140	222	295
80	125	100	50	80	10	19	40	6	21,5	M6	35	160	152	35,5	12	158	254	315
90S	140	100	56	90	10	24	50	8	27	M8	40	180	147	39,5	13	177	272	361
90L	140	125	56	90	10	24	50	8	27	M8	40	180	172	39,5	13	177	272	361
100LW	160	140	63	100	12	28	60	8	31	M10	45	200	180	43	14	199	307	412
100LX	160	140	63	100	12	28	60	8	31	M10	45	200	200	43	14	199	307	437
112M	190	140	70	112	12	28	60	8	31	M10	45	224	200	50	15	221	332	456

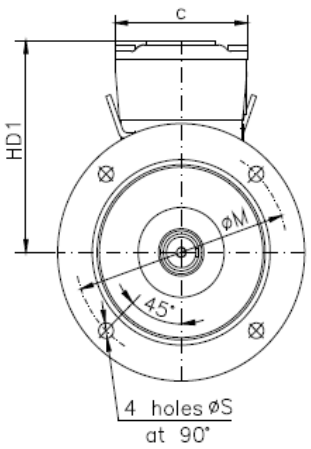
Frame size	a	b	c
63	100	105	95
71	80	105	95
80	125	125	120
90S	140	125	120
90L	140	125	120
100LW	165	160	135
100LX	165	160	135
112M	175	160	135

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

IM 3001



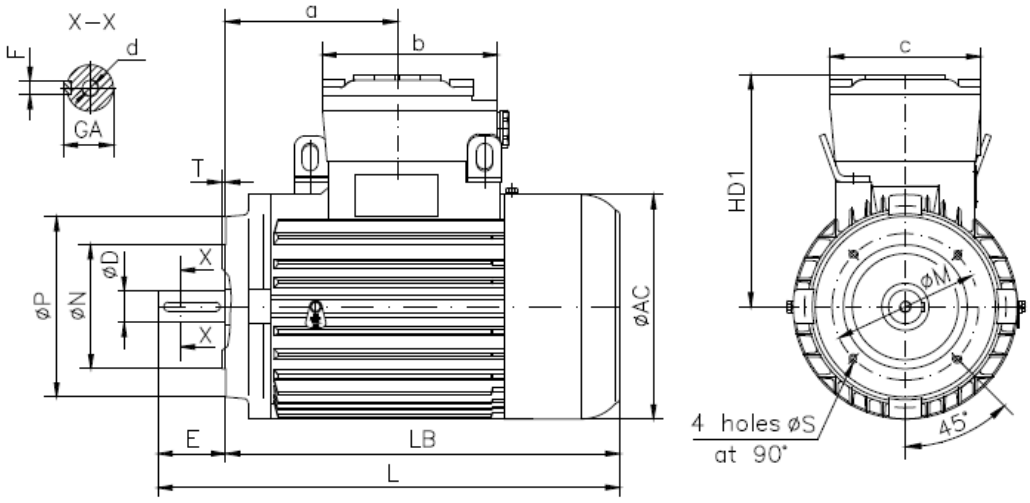


Frame size	M	N_{js}	P	S	T	D_{js}	E	F_{hs}	GA	d	AC	HD1	LA	LB	L	a	b	c	L1
63	115	95	140	10	3	11	23	4	12,5	M4	125	137	8	236	259	100	105	95	273
71	130	110	160	10	3,5	14	30	5	16	M5	140	151	8	265	295	80	105	95	309
80	165	130	200	12	3,5	19	40	6	21,5	M6	158	174	10	275	315	125	125	120	346
90S	165	130	200	12	3,5	24	50	8	27	M8	177	182	10	311	361	140	125	120	392
90L	165	130	200	12	3,5	24	50	8	27	M8	177	182	10	311	361	140	125	120	392
100LW	215	180	250	14.5	4	28	60	8	31	M10	199	207	12	352	412	165	160	135	436
100LX	215	180	250	14.5	4	28	60	8	31	M10	199	207	12	377	437	165	160	135	461
112M	215	180	250	14.5	4	28	60	8	31	M10	221	220	12	396	456	175	160	135	474

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

IM 3601

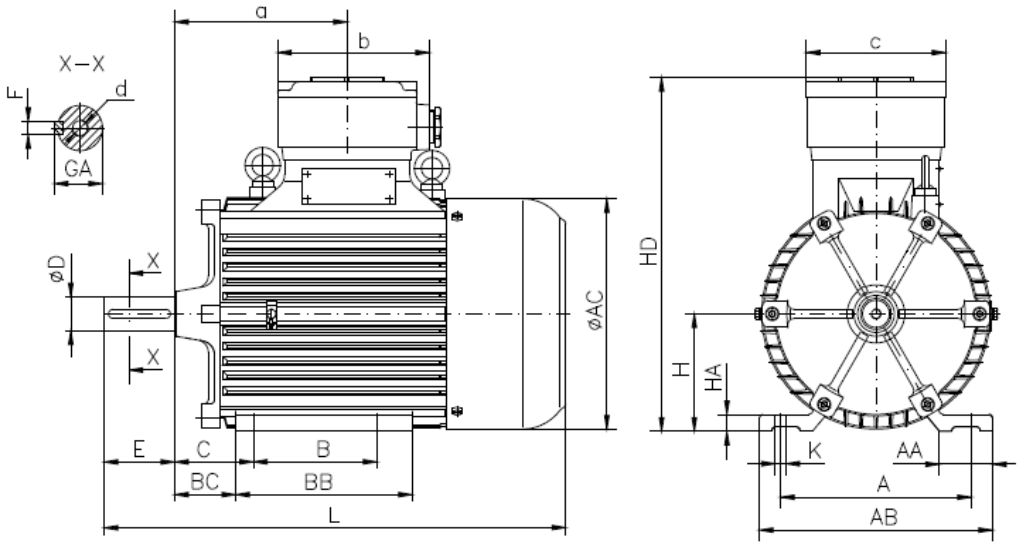


Frame size	Flange Flansch Flangia	M	N_{j6}	P	S	T	D		E	F_{h9}	GA	d	AC	HD1	LB	L	a	b	c
							nom	tol											
63	F75	75	60	90	M5	2,5	11	j6	23	4	12,5	M4	125	137	236	259	100	105	95
	F100	100	80	120	M6	3													
71	F85	85	70	105	M6	2,5	14	j6	30	5	16	M5	140	151	265	295	80	105	95
	F115	115	95	140	M8	3													
80	F100	100	80	120	M6	3	19	j6	40	6	21,5	M6	158	174	275	315	125	125	120
	F130	130	110	160	M8	3,5													
90S	F115	115	95	140	M8	3	24	j6	50	8	27	M8	177	182	311	361	140	125	120
	F130	130	110	160	M8	3,5													
90L	F115	115	95	140	M8	3	24	j6	50	8	27	M8	177	182	311	361	140	125	120
	F130	130	110	160	M8	3,5													
100LW	F130	130	110	160	M8	3,5	28	j6	60	8	31	M10	199	207	352	412	165	160	135
	F165	165	130	200	M10	3,5													
100LX	F130	130	110	160	M8	3,5	28	j6	60	8	31	M10	199	207	377	437	165	160	135
	F165	165	130	200	M10	3,5													
112M	F130	130	110	160	M8	3,5	28	j6	60	8	31	M10	221	220	396	456	175	160	135
	F165	165	130	200	M10	3,5													
132S	F165	165	130	200	M10	3,5	38	k6	80	10	41	M12	263	268	443	523	200	175	160
	F215	215	180	250	M12	4													
132M	F165	165	130	200	M10	3,5	38	k6	80	10	41	M12	263	268	490	570	225	175	160
	F215	215	180	250	M12	4													
160	F215	215	180	250	M12	4	42	k6	110	12	45	M16	317	311	550	660	245	210	195
	F265	265	230	300	M12	4													

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

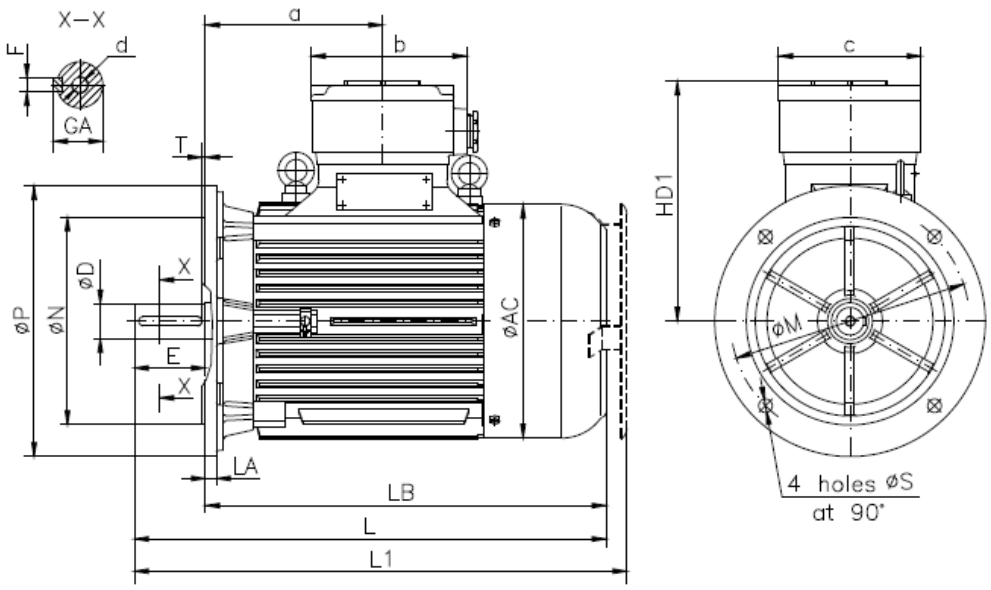
IM 1001



Frame size	A	B	C	H -0,5	K	D	E	F_{h9}	GA	d	AA	AB	BB	BC	HA	AC	HD	L	a	b	c
132S	216	140	89	132	12	38 k6	80	10	41	M12	60	264	200	69	19	263	400	523	200	175	160
132M	216	178	89	132	12	38 k6	80	10	41	M12	60	264	250	69	19	263	400	570	225	175	160
160M	254	210	108	160	14,5	42 k6	110	12	45	M16	80	320	300	80	20	317	471	660	245	210	195
160L	254	254	108	160	14,5	42 k6	110	12	45	M16	80	320	300	80	20	317	471	660	245	210	195
180M	279	241	121	180	14,5	48 k6	110	14	51,5	M16	80	360	340	87	25	357	507	730	275	210	195
180L	279	279	121	180	14,5	48 k6	110	14	51,5	M16	80	360	340	87	25	357	507	730	275	210	195
200L	318	305	133	200	18,5	55 m6	110	16	59	M20	82	400	380	95	25	396	580	805	310	275	240

Overall dimensions [mm] **Flameproof motors Ex d / Ex de II CT4**

IM 3001

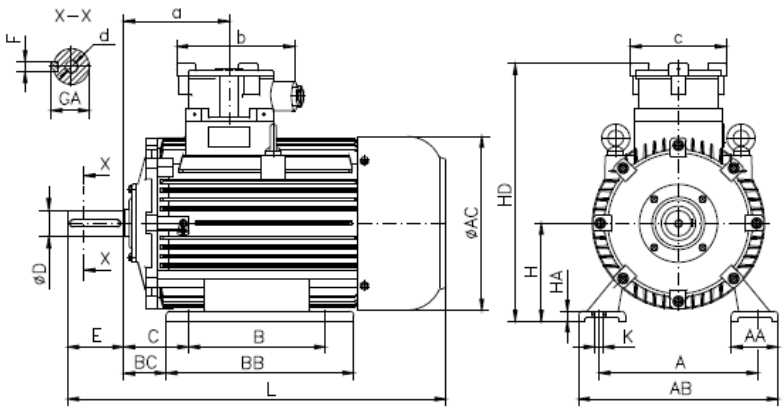


Frame size	M	N_{j6}	P	S	T	D	E	F_{h9}	GA	d	AC	HD1	LA	LB	L	a	b	c	L1
132S	265	230	300	14,5	4	38 k6	80	10	41	M12	263	268	12	443	523	200	175	160	544
132M	265	230	300	14,5	4	38 k6	80	10	41	M12	263	268	12	490	570	225	175	160	591
160M	300	250	350	18,5	5	42 k6	110	12	45	M16	317	311	14	550	660	245	210	195	715
160L	300	250	350	18,5	5	42 k6	110	12	45	M16	317	311	14	550	660	245	210	195	715
180M	300	250	350	18,5	5	48 k6	110	14	51,5	M16	357	327	16	620	730	275	210	195	790
180L	300	250	350	18,5	5	48 k6	110	14	51,5	M16	357	327	16	620	730	275	210	195	790
200L	350	300	400	18,5	5	55 m6	110	16	59	M20	396	383	16	695	805	310	275	240	849

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

IM 1001



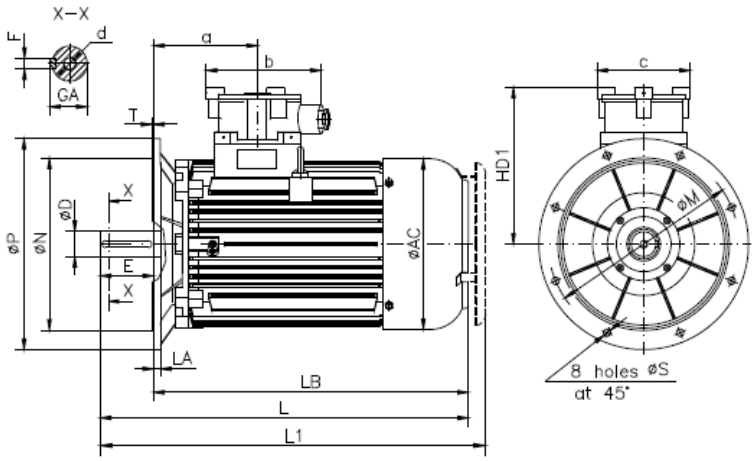
Frame size	A	B	C	H -0,5	K	Dm6		E		F h9		GA		d		AA	AB
						2p=2	2p=4,6,8	2p=2	2p=4,6,8	2p=2	2p=4,6,8	2p=2	2p=4,6,8				
225S	356	286	149	225	18.5	-	60	-	140	-	18	-	64	M20		100	450
225M	356	311	149	225	18.5	55	60	110	140	16	18	59	64	M20		100	450
250M	406	349	168	250	24	60	65	140	140	18	18	64	69	M20		120	510
280S	457	368	190	280	24	65	75	140	140	18	20	69	79.5	M20		120	550
280M	457	419	190	280	24	65	75	140	140	18	20	69	79.5	M20		120	550
315S	508	406	216	315	28	65	80	140	170	18	22	69	85	M20		130	630
315M	508	457	216	315	28	65	80	140	170	18	22	69	85	M20		130	630
315MX/LX	508	457	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
315LY	508	508	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
315LZ	508	508	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
355M	610	560	254	355-1	28	70	100	140	210	20	28	74.5	106	M20	M24	110	714
355L	610	630	254	355-1	28	70	100	140	210	20	28	74.5	106	M20	M24	110	714

Frame size	BB	BC	HA	AC	HD	L		a	b	c
						2p=2	2p>2			
225S	430	114	20	446	635	-	920	275	275	240
225M	430	114	20	446	635	890	920	275	275	240
250M	480	114	20	446	660	970	970	275	275	240
280S	460	147	30	500	758	1045	1045	280	340	300
280M	500	147	30	500	758	1085	1085	280	340	300
315S	528	155.5	30	560	826	1195	1225	300	340	300
315M	568	155.5	30	560	826	1235	1265	300	340	300
315MX/LX	588	176	26	620	880	1220	1280	320	460	355
315LY	588	176	26	620	880	1220	1350	320	460	355
315LZ	588	176	26	620	880	-	1350	320	460	355
355M	695	177	32	705	960	1380	1490	320	460	355
355L	695	177	32	705	960	1440	1550	320	460	355

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

IM 3001



Frame size	M	N j6	P	S	T	Dm6		E		Fh9		GA		d		AC	HD1	LA
						2p=2	2p>2	2p=2	2p>2	2p=2	2p>2	2p=2	2p>2					
225S	400	350	450	18.5	5	-	60	-	140	-	18	-	64	M20		446	410	18
225M	400	350	450	18.5	5	55	60	110	140	16	18	59	64	M20		446	410	18
250M	500	450	550	18.5	5	60	65	140	140	18	18	64	69	M20		446	410	18
280S	500	450	550	18.5	5	65	75	140	140	18	20	69	79.5	M20		500	478	20
280M	500	450	550	18.5	5	65	75	140	140	18	20	69	79.5	M20		500	478	20
315S	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		560	511	20
315M	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		560	511	20
315MX-LX	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	565	25
315LY	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	565	25
315LZ	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	565	25
355M	740	680	800	24	6	70	100	140	210	20	28	74.5	106	M20	M24	705	605	35
355L	740	680	800	24	6	70	100	140	210	20	28	74.5	106	M20	M24	705	605	35

Frame size	LB		L		a	b	c	L1	
	2p=2	2p>2	2p=2	2p>2				2p=2	2p>2
225S	780		-	920	275	275	240	-	965
225M	780		890	920	275	275	240	940	965
250M	830		970	970	275	275	240	1015	1015
280S	905		1045	1045	280	340	300	1150	1150
280M	945		1085	1085	280	340	300	1190	1190
315S	1055		1195	1225	300	340	300	1295	1325
315M	1095		1235	1265	300	340	300	1335	1365
315MX-LX	1080	1110	1220	1280	320	460	355	1320	1380
315LY	1150	1180	1290	1350	320	460	355	1390	1450
315LZ	-	1180	-	1350	320	460	355	-	1450
355M	1230	1270	1380	1490	320	460	355	1480	1590
355L	1300	1340	1440	1550	320	460	355	1540	1650

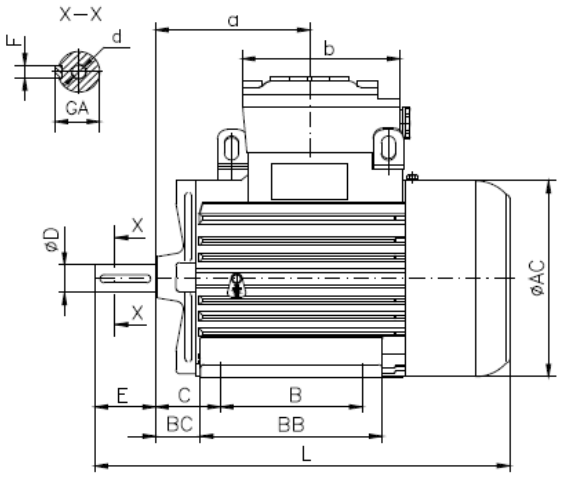
IE2 - HIGH EFFICIENCY

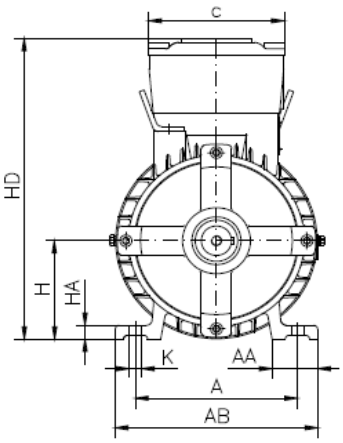
Motor type	P_n kW	n rpm	I_n[A] (400V)	η % 100%	η % 75%	η % 50%	Cos φ	Ip / In	Mp / Mn	Mmax / Mn	J Kgm^2	L_{PA} dB(A)	m kg
2 poles													
E2-ASA 80a-2	0,75	2865	1,59	80,3	79,5	76,1	0,85	6,3	4,1	4,3	0,001251	64.0	23.5
E2-ASA 80b-2	1,1	2850	2,19	80,5	79,7	76,3	0,90	5,6	2,3	2,5	0,001582	61.0	28.5
E2-ASA 90Sa-2	1,5	2850	2,95	81,6	82,1	78,5	0,89	5,2	3,3	3,4	0,002587	68.0	30
E2-ASA 90L-2	2,2	2820	4,14	83,3	83,8	80,2	0,92	5,7	2,3	2,7	0,003563	67.0	35
E2-ASA 100La-2	3	2830	5,6	85,2	86,5	83,2	0,92	6,1	3,2	3,5	0,005939	71.0	47
E2-ASA 112Ma-2	4	2885	7,4	86,7	86,4	84,4	0,91	7,7	2,7	2,7	0,009262	74.0	60
E2-ASA 132Sa-2	5,5	2930	10,1	88,6	88,3	86,0	0,85	7,7	3,6	3,9	0,019133	75.8	97
E2-ASA 132Sb-2	7,5	2920	14,1	88,1	87,8	85,5	0,88	7,1	3,3	3,8	0,026835	77.2	105
E2-ASA 160Ma-2	11	2925	19,6	91,0	90,6	89,8	0,90	7,0	2,3	2,4	0,042474	77.5	147
E2-ASA 160Mb-2	15	2925	26,6	92,2	91,8	91,0	0,90	7,0	2,2	2,4	0,051138	77.8	156
E2-ASA 160L-2	18,5	2925	32,1	92,4	92,0	91,2	0,91	7,0	2,3	2,5	0,063034	78.0	170
E2-ASA 180M-2	22	2945	38,1	91,5	91,4	89,8	0,92	7,5	1,9	2,1	0,106554	78.2	250
E2-ASA 200La-2	30	2930	52,3	92,3	92,1	90,8	0,90	6,4	2,5	2,5	0,170384	78.4	302
E2-ASA 200Lb-2	37	2945	64,2	92,6	92,4	91,1	0,90	7,3	2,9	2,9	0,211899	78.4	320
E2-ASA 225M-2	45	2955	75,3	93,5	93,7	92,9	0,91	7,7	3,0	3,6	0,246059	77.5	385
E2-ASA 250M-2	55	2943	92	93,4	93,6	92,8	0,92	7,8	2,7	3,5	0,321106	78.9	460
E2-ASA 280S-2	75	2950	130	94,2	94,2	93,5	0,89	6,1	1,8	1,8	0,615493	78.7	611
E2-ASA 280M-2	90	2960	155	94,3	94,0	92,8	0,89	6,8	2,6	2,6	0,698261	79.0	694
E2-ASA 315S-2	110	2964	183	95,1	95,1	94,3	0,93	7,5	2,2	2,7	1,039568	79.6	829
E2-ASA 315M-2	132	2965	214	94,6	95,3	94,6	0,93	7,6	2,5	2,5	1,283009	80.7	948
E2-ASA 315MX-2	160	2975	264	95,3	94,9	93,2	0,92	7,0	1,9	1,9	1.93201	80.8	1150
E2-ASA 315LY-2	200	2980	329	95,5	95,1	93,4	0,92	7,0	2,1	2,1	2.170946	92.9	1270
E2-ASA 355M-2	250	2980	431	95.1	94.9	93.5	0.88	6.3	2.2	2.8	3.425496	99.0	1500
E2-ASA 355La-2	280	2980	483	95.1	94.8	93.4	0.88	6.0	2.0	2.5	3.806107	99.0	1620
E2-ASA 355Lb-2	315	2980	542	95.2	94.8	93.2	0.88	6.3	2.3	2.9	4.091565	99.0	1825
4 poles													
E2-ASA 80b-4	0,75	1425	1,78	79,8	78,5	75,8	0,77	5,6	2,5	2,5	0,00314	50.0	26.5
E2-ASA 90Sb-4	1,1	1415	2,68	82,5	82,1	80,1	0,85	6,3	2,6	2,6	0,00638	53.0	35
E2-ASA 90L-4	1,5	1420	3,33	82,8	82,4	80,4	0,78	6,2	2,9	2,9	0,00706	53.0	37
E2-ASA 100La-4	2,2	1442	4,87	85,1	85,7	82,5	0,77	5,1	2,3	2,4	0,00894	58.0	52
E2-ASA 100Lb-4	3	1437	6,64	85,7	86,0	83,7	0,76	5,6	2,7	3,2	0,01187	59.0	57
E2-ASA 112Mb-4	4	1430	7,69	86,8	87,7	87,0	0,86	5,9	2,3	2,5	0,01757	58.0	68
E2-ASA 132Sb-4	5,5	1464	9,9	88,9	88,5	87,9	0,86	6,5	2,2	2,4	0,04485	63.0	107
E2-ASA 132M-4	7,5	1455	14,5	90,0	89,6	89,0	0,83	7,3	2,4	2,9	0,05246	66.0	110
E2-ASA 160M-4	11	1461	19,2	90,9	90,2	87,7	0,91	7,9	2,1	2,7	0,09483	66.0	165
E2-ASA 160L-4	15	1452	26,2	90,9	90,1	87,8	0,91	7,3	2,0	2,8	0,10439	67.0	178
E2-ASA 180M-4	18,5	1471	33,3	92,6	92,5	91,5	0,87	7,7	2,3	2,8	0,16731	79.0	215
E2-ASA 180L-4	22	1470	39,1	92,3	92,2	90,5	0,88	7,8	2,3	2,8	0,18761	76.0	230
E2-ASA 200La-4	30	1479	54,6	92,7	92,3	90,8	0,86	7,8	2,3	2,5	0,28608	74.9	323
E2-ASA 225S-4	37	1474	66,0	92,9	92,7	91,5	0,87	7,0	3,2	3,2	0,40778	74.7	390
E2-ASA 225M-4	45	1475	79,7	93,7	93,6	92,7	0,87	7,8	2,3	2,3	0,45649	78.8	415
E2-ASA 250M-4	55	1475	94	94,3	94,4	93,8	0,89	7,9	2,1	2,1	0,65170	78.8	506
E2-ASA 280S-4	75	1480	128	94,9	94,7	94,1	0,88	7,9	2,8	3,2	1.07146	74.0	655
E2-ASA 280M-4	90	1480	154	94,9	94,8	94,1	0,89	7,2	2,4	3,0	1,19433	75.0	711
E2-ASA 315S-4	110	1476	181	94,7	94,5	93,5	0,91	7,3	2,0	2,3	1,85099	77.5	860

Motor type	P_n kW	n rpm	I_n[A] (400V)	η % 100%	η % 75%	η % 50%	Cos φ	Ip/In	Mp/Mn	Mmax/Mn	J Kgm^2	L_{PA} dB(A)	m kg
E2-ASA 315M-4	132	1474	230	95,0	95,6	95,1	0,87	7,5	2,1	2,2	2.04358	78.0	956
E2-ASA 315MX-4	160	1478	251	95,0	94,8	93,8	0,87	7,2	2,3	2,6	3.30966	89.0	1160
E2-ASA 315LZ-4	200	1481	344	95,3	95,2	94,2	0,88	6,8	2,9	2,9	4.12175	90.0	1320
E2-ASA 355M-4	250	1485	430	95.3	94.9	93.9	0.88	6.5	2.3	2.3	6.791039	96.0	1795
E2-ASA 355La-4	280	1485	476	95.5	95.0	94.2	0.89	6.3	2.4	2.4	7.545598	96.0	1885
E2-ASA 355Lb-4	315	1485	535	95.5	95.1	94.5	0.89	6.6	2.5	2.5	7.998334	96.0	2150
E2-ASA 355Lxa-4	355	1491	583.6	96.02	96.22	95.62	0.92	8.15	1.34	3.81	9.200000	75.5	2323
E2-ASA 355Lxb-4	400	1488	684	96	96.2	95.6	0.90	7.2	1.3	3.5	9.600000	75.5	2500
6 poles													
E2-ASA 90Sb-6	0,75	948	1,89	76,2	74,7	70,3	0,75	4,6	2,1	2,3	0,00863	53.0	33
E2-ASA 90L-6	1,1	950	2,76	78,1	76,6	73,2	0,74	5,1	2,4	2,9	0,01146	57.0	42
E2-ASA 100Lb-6	1,5	965	3,68	80,4	79,0	74,8	0,73	5,7	2,2	2,2	0,01735	55.0	54
E2-ASA 112Mb-6	2,2	955	4,71	82,9	82,7	79,5	0,81	5,8	2,1	2,1	0,02696	59.0	62
E2-ASA 132Sa-6	3	962	6,69	84,8	79,9	77,4	0,77	6,5	2,2	2,9	0,04492	58.0	96
E2-ASA 132Ma-6	4	962	8,84	84,6	84,4	80,4	0,74	6,6	2,3	2,6	0,05582	59.0	109
E2-ASA 132Mb-6	5,5	955	10,8	87,0	86,4	84,4	0,82	6,5	2,4	2,6	0,07128	60.0	115
E2-ASA 160M-6	7,5	964	14,8	87,2	87,8	86,7	0,85	5,8	2,0	2,9	0,11652	61.0	156
E2-ASA 160L-6	11	965	21,4	88,9	90,1	90,0	0,84	5,6	1,9	1,9	0,16514	59.0	165
E2-ASA 180L-6	15	975	27,6	91,5	91,4	89,9	0,86	7,8	2,2	2,8	0,28296	67.0	230
E2-ASA 200L-6	18,5	977	34,2	90,5	90,5	89,5	0,87	7,7	2,3	3,3	0,36314	69.0	287
E2-ASA 200La-6	22	979	38,9	91,7	91,5	90,8	0,89	7,8	2,1	2,8	0,45198	70.0	303
E2-ASA 225M-6	30	982	54,2	93,2	93,5	92,6	0,86	7,4	2,2	2,6	0,68931	72.0	400
E2-ASA 250M-6	37	980	65,1	92,5	92,4	92,2	0,89	7,6	2,4	3,1	0,85997	70.0	473
E2-ASA 280S-6	45	980	78,9	93,1	93,2	92,3	0,89	7,4	2,0	2,8	1,42072	72.5	560
E2-ASA 280M-6	55	980	100	94,5	94,7	94,2	0,84	7,9	2,8	3,2	1,61384	73.5	695
E2-ASA 315S-6	75	982	133	94,4	94,5	93,9	0,86	7,5	2,2	2,2	2,71489	75.0	825
E2-ASA 315M-6	90	981	156	94,4	94,7	94,4	0,89	6,7	1,9	2,1	3,38053	76.0	942
E2-ASA 315MX-6	110	988	196	94,3	94,2	93,2	0,87	6,5	2,5	2,5	5.25397	84.0	1100
E2-ASA 315LY-6	132	985	234	94,6	94,9	94,7	0,86	5,4	2,2	2,2	5.91072	84.0	1150
E2-ASA 315LZ-6	160	985	282	94,8	95,1	94,9	0,86	5,4	2,0	2,0	6.56139	91.0	1340
E2-ASA 355M-6	200	987	341	95.1	94.8	94	0.89	6.0	2.1	2.1	8.907998	94.0	1800
E2-ASA 355L-6	250	989	430	95.3	95	94.3	0.88	7.0	2.5	2.5	9.798798	94.0	1868

Overall dimensions [mm] **Flameproof motors Ex d / Ex de II CT4**

IM 1001





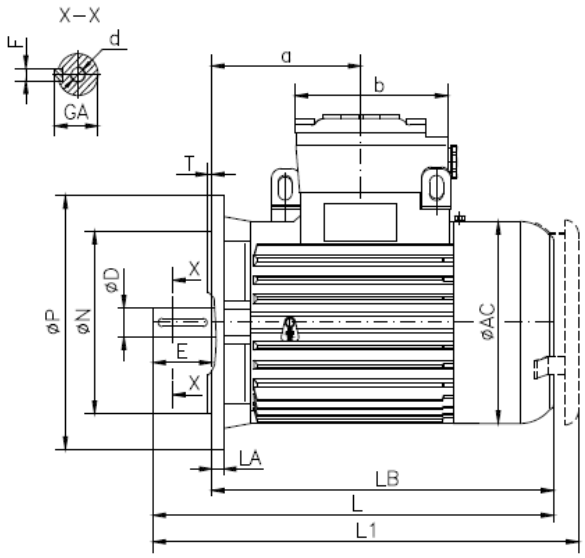
Frame size	A	B	C	$H_{-0,5}$	K	D_{j6}	E	F_{h9}	GA	d	AA	AB	BB	BC	HA	AC	HD	L
80a	125	100	50	80	10	19	40	6	21,5	M6	35	160	152	35,5	12	158	254	315
80b	125	100	50	80	10	19	40	6	21,5	M6	35	160	152	35,5	12	158	254	340
90Sa	140	100	56	90	10	24	50	8	27	M8	40	180	172	39,5	13	177	272	361
90Sb	140	100	56	90	10	24	50	8	27	M8	40	180	190	39,5	13	177	272	411
90L	140	125	56	90	10	24	50	8	27	M8	40	180	190	39,5	13	177	272	411
100La	160	140	63	100	12	28	60	8	31	M10	45	200	200	43	14	199	307	435
100Lb	160	140	63	100	12	28	60	8	31	M10	45	200	220	43	14	199	307	465
112Ma	190	140	70	112	12	28	60	8	31	M10	45	224	200	50	15	221	332	456
112Mb	190	140	70	112	12	28	60	8	31	M10	45	224	200	50	15	221	332	480

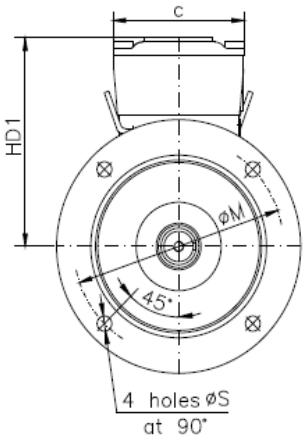
Frame size	a	b	c
80a	125	125	120
80b	125	125	120
90Sa	140	125	120
90Sb	140	125	120
90L	140	125	120
100La	165	160	135
100La	165	160	135
112Ma	175	160	135
112Mb	175	160	135

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

IM 3001



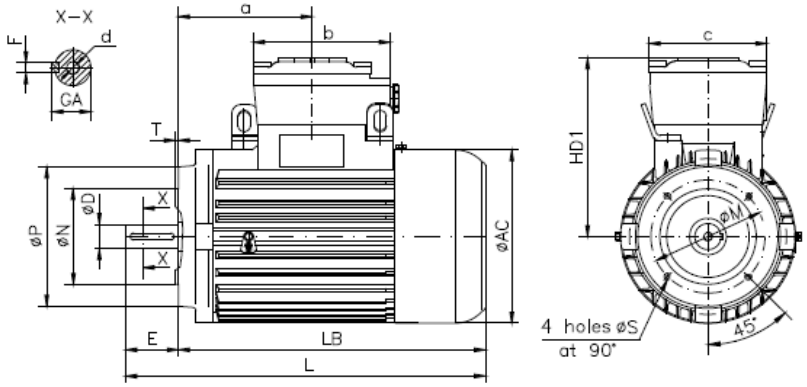


Frame size	M	N_{j6}	P	S	T	D_{j6}	E	F_{h9}	GA	d	AC	HD1	LA	LB	L	a	b	c	L1
80a	165	130	200	12	3,5	19	40	6	21,5	M6	158	174	10	275	315	125	125	120	346
80b	165	130	200	12	3,5	19	40	6	21,5	M6	158	174	10	300	340	125	125	120	371
90Sa	165	130	200	12	3,5	24	50	8	27	M8	177	182	10	311	361	140	125	120	392
90Sb	165	130	200	12	3,5	24	50	8	27	M8	177	182	10	361	411	140	125	120	442
90L	165	130	200	12	3,5	24	50	8	27	M8	177	182	10	361	411	140	125	120	442
100La	215	180	250	14.5	4	28	60	8	31	M10	199	207	12	375	435	165	160	135	461
100Lb	215	180	250	14.5	4	28	60	8	31	M10	199	207	12	405	465	165	160	135	491
112Ma	215	180	250	14.5	4	28	60	8	31	M10	221	220	12	396	454	175	160	135	472
112Mb	215	180	250	14.5	4	28	60	8	31	M10	221	220	12	420	480	175	160	135	498

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

IM 3601

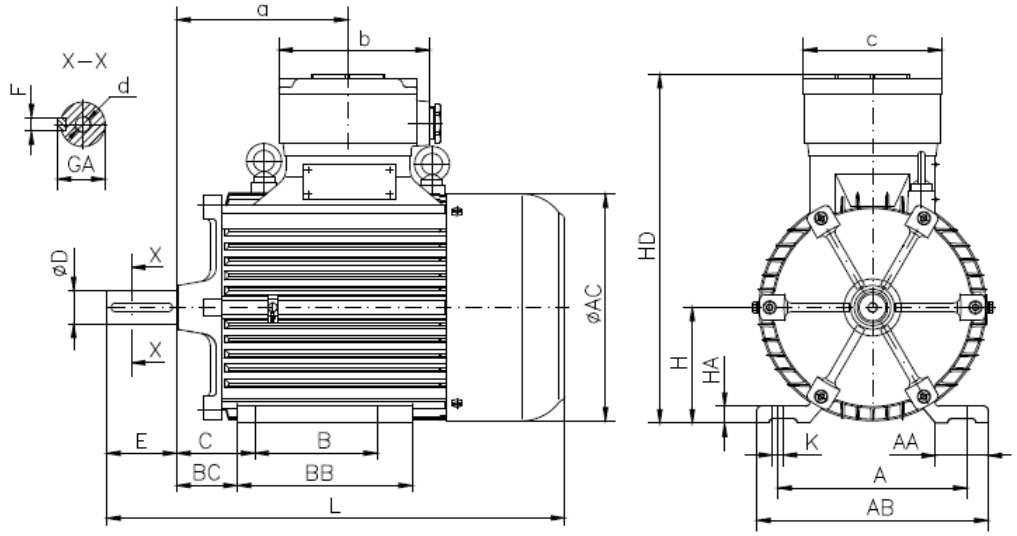


Frame size	Flange	M	N_{j6}	P	S	T	D		E	F_{h9}	GA	d	AC	HD1	LB	L	a	b	c
							nom	tol											
80a	F100	100	80	120	M6	3	19	j6	40	6	21,5	M6	158	174	275	315	125	125	120
	F130	130	110	160	M8	3,5													
80b	F100	100	80	120	M6	3	19	j6	40	6	21,5	M6	158	174	300	340	125	125	120
	F130	130	110	160	M8	3,5													
90Sa	F115	115	95	140	M8	3	24	j6	50	8	27	M8	177	182	311	361	140	125	120
	F130	130	110	160	M8	3,5													
90Sb	F115	115	95	140	M8	3	24	j6	50	8	27	M8	177	182	361	411	140	125	120
	F130	130	110	160	M8	3,5													
90L	F115	115	95	140	M8	3	24	j6	50	8	27	M8	177	182	361	411	140	125	120
	F130	130	110	160	M8	3,5													
100La	F130	130	110	160	M8	3,5	28	j6	60	8	31	M10	199	207	375	435	165	160	135
	F165	165	130	200	M10	3,5													
100Lb	F130	130	110	160	M8	3,5	28	j6	60	8	31	M10	199	207	405	465	165	160	135
	F165	165	130	200	M10	3,5													
112Ma	F130	130	110	160	M8	3,5	28	j6	60	8	31	M10	221	220	396	454	175	160	135
	F165	165	130	200	M10	3,5													
112Mb	F130	130	110	160	M8	3,5	28	j6	60	8	31	M10	221	220	420	480	175	160	135
	F165	165	130	200	M10	3,5													
132Sa	F165	165	130	200	M10	3,5	38	k6	80	10	41	M12	263	268	526	606	200	175	160
	F215	215	180	250	M12	4													
132Sb	F165	165	130	200	M10	3,5	38	k6	80	10	41	M12	263	268	573	653	225	175	160
	F215	215	180	250	M12	4													
132M,Ma,Mb	F165	165	130	200	M10	3,5	38	k6	80	10	41	M12	263	268	573	653	225	175	160
	F215	215	180	250	M12	4													
160M,Ma,Mb,L	F215	215	180	250	M12	4	42	k6	110	12	45	M16	317	311	550	660	245	210	195
	F265	265	230	300	M12	4													

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

IM 1001

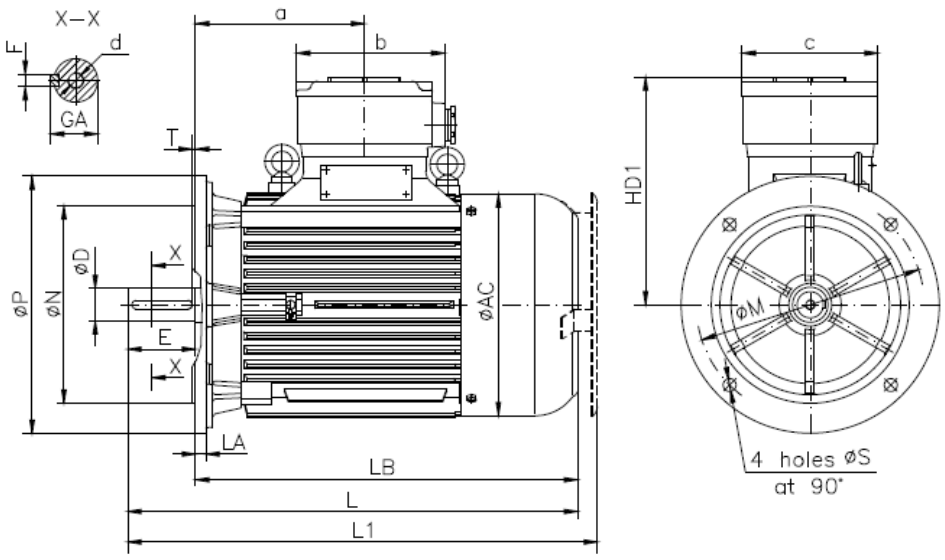


Frame size	A	B	C	H -0,5	K	D	E	F h9	GA	d	AA	AB	BB	BC	HA	AC	HD	L	a	b	c
132Sa	216	140	89	132	12	38 k6	80	10	41	M12	60	264	200	69	19	263	400	606	200	175	160
132Sb	216	140	89	132	12	38 k6	80	10	41	M12	60	264	200	69	19	263	400	653	225	175	160
132M,Ma,Mb	216	178	89	132	12	38 k6	80	10	41	M12	60	264	250	69	19	263	400	653	225	175	160
160M,Ma,Mb	254	210	108	160	14,5	42 k6	110	12	45	M16	80	320	300	80	20	317	471	660	245	210	195
160L	254	254	108	160	14,5	42 k6	110	12	45	M16	80	320	300	80	20	317	471	660	245	210	195
180M	279	241	121	180	14,5	48 k6	110	14	51,5	M16	80	360	340	87	25	357	507	730	275	210	195
180L	279	279	121	180	14,5	48 k6	110	14	51,5	M16	80	360	340	87	25	357	507	730	275	210	195
200L,La	318	305	133	200	18,5	55 m6	110	16	59	M20	82	400	380	95	25	396	580	895	310	275	240
200Lb	318	305	133	200	18,5	55 m6	110	16	59	M20	82	400	380	95	25	396	580	945	310	275	240

Overall dimensions [mm]

Flameproof motors Ex d / Ex de II CT4

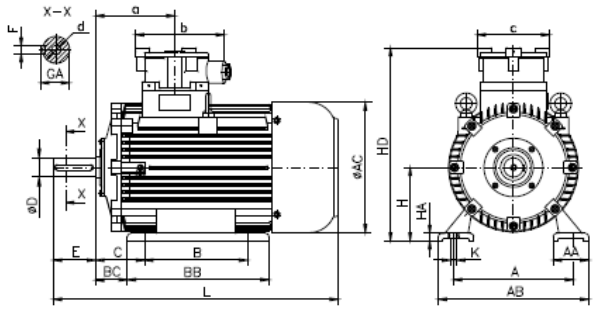
IM 3001



Frame size	M	N_{j6}	P	S	T	D	E	F_{h9}	GA	d	AC	HD1	LA	LB	L	a	b	c	L1
132Sa	265	230	300	14,5	4	38 k6	80	10	41	M12	263	268	12	526	606	200	175	160	644
132Sb	265	230	300	14,5	4	38 k6	80	10	41	M12	263	268	12	573	653	225	175	160	691
132M,Ma,Mb	265	230	300	14,5	4	38 k6	80	10	41	M12	263	268	12	573	653	225	175	160	691
160M,Ma,Mb	300	250	350	18,5	5	42 k6	110	12	45	M16	317	311	14	550	660	245	210	195	715
160L	300	250	350	18,5	5	42 k6	110	12	45	M16	317	311	14	550	660	245	210	195	715
180M	300	250	350	18,5	5	48 k6	110	14	51,5	M16	357	327	16	620	730	275	210	195	790
180L	300	250	350	18,5	5	48 k6	110	14	51,5	M16	357	327	16	620	730	275	210	195	790
200L,La	350	300	400	18,5	5	55 m6	110	16	59	M20	396	383	16	785	895	310	275	240	947
200Lb	350	300	400	18,5	5	55 m6	110	16	59	M20	396	383	16	835	945	310	275	240	997

Overall dimensions [mm] **Flameproof motors Ex d / Ex de II CT4**

IM 1001

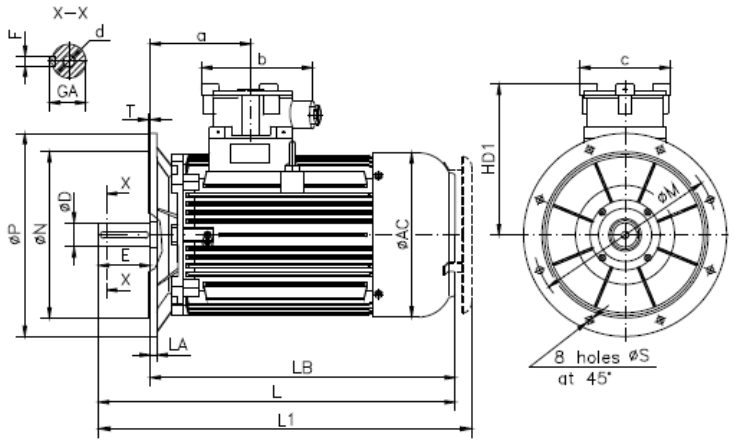


Frame size	A	B	C	H -0,5	K	Dm6		E		F_{h9}		GA		d		AA	AB
						2p=2	2p=4,6,8	2p=2	2p=4,6,8	2p=2	2p=4,6,8	2p=2	2p=4,6,8				
225S	356	286	149	225	18.5	-	60	-	140	-	18	-	64	M20		100	450
225M	356	311	149	225	18.5	55	60	110	140	16	18	59	64	M20		100	450
250M	406	349	168	250	24	60	65	140	140	18	18	64	69	M20		120	510
280S	457	368	190	280	24	65	75	140	140	18	20	69	79.5	M20		120	550
280M	457	419	190	280	24	65	75	140	140	18	20	69	79.5	M20		120	550
315S	508	406	216	315	28	65	80	140	170	18	22	69	85	M20		130	630
315M	508	457	216	315	28	65	80	140	170	18	22	69	85	M20		130	630
315MX	508	457	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
315LY	508	508	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
315LZ	508	508	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
355M	610	560	254	355	28	70	100	140	210	20	28	74.5	106	M20	M24	110	714
355La	610	630	254	355	28	70	100	140	210	20	28	74.5	106	M20	M24	110	714
355Lxa	610	560	254	355	28	-	100	-	210	-	28	-	116	-	M24	160	750
355Lxb	610	630	254	355	28	-	100	-	210	-	28	-	116	-	M24	160	750

Frame size	BB	BC	HA	AC	HD	L		a	b	c
						2p=2	2p>2			
225S	430	114	25	446	635	-	1010	275	275	240
225M	430	114	25	446	635	980	1010	275	275	240
250M	480	114	25	446	660	1060	1060	275	275	240
280S	460	147	30	500	758	1130	1130	280	340	300
280M	500	147	30	500	758	1170	1170	280	340	300
315S	528	155.5	30	560	826	1245	1275	300	340	300
315M	568	155.5	30	560	826	1285	1315	300	340	300
315MX	588	176	26	620	880	1325	1355	320	460	355
315LY	588	176	26	620	880	1395	1425	320	460	355
315LZ	588	176	26	620	880	-	1425	320	460	355
355M	695	177	32	705	960	1370	1480	320	460	355
355La	695	177	32	705	960	1450	1560	320	460	355
355Lxa	900	177	35	720	1087	-	1760	415	545	455
355Lxa	900	177	35	720	1087	-	1830	415	545	455

Overall dimensions [mm] **Flameproof motors Ex d / Ex de II CT4**

IM 3001



Frame size	M	N j6	P	S	T	Dm6		E		Fh9		GA		d		AC	HD1	LA
						2p=2	2p>2	2p=2	2p>2	2p=2	2p>2	2p=2	2p>2					
225S	400	350	450	18.5	5	-	60	-	140	-	18	-	64	M20		446	410	18
225M	400	350	450	18.5	5	55	60	110	140	16	18	59	64	M20		446	410	18
250M	500	450	550	18.5	5	60	65	140	140	18	18	64	69	M20		446	410	18
280S	500	450	550	18.5	5	65	75	140	140	18	20	69	79.5	M20		500	478	20
280M	500	450	550	18.5	5	65	75	140	140	18	20	69	79.5	M20		500	478	20
315S	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		560	511	20
315M	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		560	511	20
315MX	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	565	25
315LY	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	565	25
315LZ	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	565	25
355M	740	680	800	24	6	70	100	140	210	20	28	74.5	106	M20	M24	705	605	35
355L	740	680	800	24	6	70	100	140	210	20	28	74.5	106	M20	M24	705	605	35
355Lxa	740	680	800	24	6	-	100	-	210	-	28	-	116	-	M24	720	732	35
355Lxa	740	680	800	24	6	-	100	-	210	-	28	-	116	-	M24	720	732	35

Frame size	LB		L		a	b	c	L1	
	2p=2	2p>2	2p=2	2p>2				2p=2	2p>2
225S	870		-	1010	275	275	240	-	1055
225M	870		980	1010	275	275	240	1025	1055
250M	920		1060	1060	275	275	240	1105	1105
280S	990		1130	1130	280	340	300	1230	1230
280M	1030		1170	1170	280	340	300	1270	1270
315S	1105		1245	1275	300	340	300	1345	1385
315M	1142		1285	1315	300	340	240	1385	1415
315MX	1185	1185	1325	1355	320	460	355	1430	1460
315LY	1225	1255	1395	1425	320	460	355	1500	1530
315LZ	-	1255	-	1425	320	460	355	-	1530
355M	1230	1270	1370	1480	320	460	355	1480	1590
355L	1310	1450	1450	1560	320	460	355	1560	1670
355Lxa	-	1550	-	1760	415	545	455	-	1860
355Lxb	-	1620	-	1830	415	545	455	-	1930

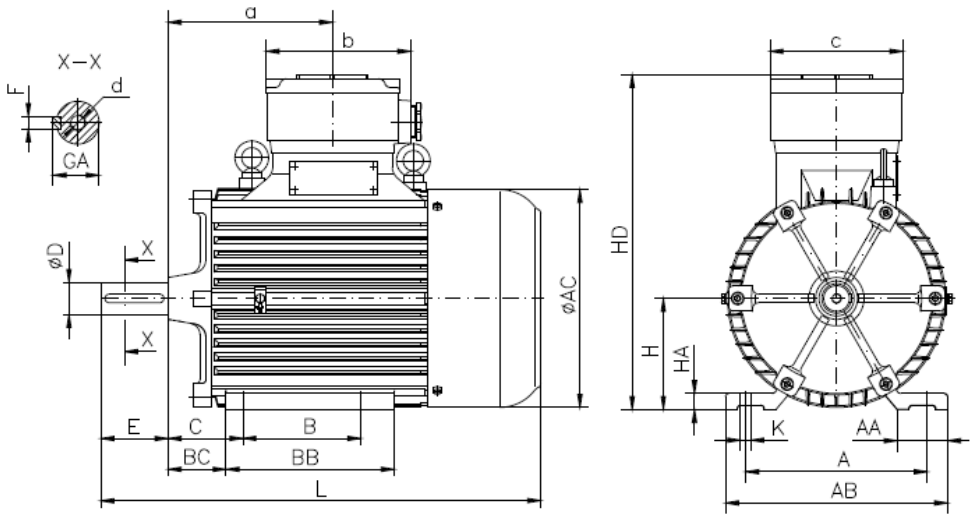
IE3 - PREMIUM EFFICIENCY

Motor type	P_n kW	n rpm	I_n[A] (400V)	η % 100%	η % 75%	η % 50%	Cos φ	Ip/In	Mp/Mn	Mmax/Mn	J [kgm^2]	L_{PA} dB(A)	m kg
2 poles													
E3-ASA 132Sb-2	7,5	2936	13.2	91.38	91.08	88.78	0.903	7.53	2.6	2.6	0.02837	64.4	118
E3-ASA 160Ma-2	11	2931	18.3	91.89	91.49	90.69	0.946	7.48	2,56	3.05	0.04247	77.5	153
E3-ASA 160Mb-2	15	2931	26,5	91.9	91.5	90.7	0.89	7.89	3.18	3.95	0.05114	77.8	156
E3-ASA 160L-2	18,5	2931	31.5	92.63	92.23	91.43	0,917	6.78	2.02	2,59	0.06665	74.2	193
E3-ASA 180M-2	22	2956	37.4	93.07	92.97	91.37	0.905	8.99	2.43	3.6	0.10974	80.7	264
E3-ASA 200La-2	30	2949	58	93.86	93.66	92.36	0.935	8.2	2.13	4.73	0.18016	75	319
E3-ASA 200Lb-2	37	2969	61.5	94.81	94.61	93.31	0.918	9.7	2.22	2.88	0.22539	72.2	374
E3-ASA 225M-2	45	2956	75	94.46	94.66	93.86	0.918	7.78	2.19	2.71	0.25668	75.3	421
E3-ASA 250M-2	55	2976	91	95.33	95.53	94.73	0.918	9.15	3.35	4.15	0.61543	78.2	624
E3-ASA 280S-2	75	2970	126	95.04	95.04	94.34	0.916	7.05	1.79	2.49	0.63639	76.9	694
E3-ASA 280M-2	90	2964	149	95.5	95.2	94	0.915	8.28	2.58	3.87	0.71913	79	725
E3-ASA 315S-2	110	2964	176.7	95.28	95.28	94.48	0.94	7.98	2.28	2,72	1.03957	79.6	829
E3-ASA 315M-2	132	2970	216.6	95.5	95.3	94.6	0,92	8.14	2.43	3.51	1.28301	80.7	948
E3-ASA 315MX-2	160	2979	263	95.99	95.59	93.89	0,916	8.18	2.64	2.2	1.93201	80.8	1160
E3-ASA 315LY-2	200	2973	325	95.89	95.49	93.79	0,912	7,89	2,65	2,28	2.17095	82	1300
E3-ASA 355M-2	250	2980	427	95.9	95.7	94.3	0.88	6.5	2.2	2.8	3.42549	82	1550
E3-ASA 355La-2	280	2980	478	96	95.7	94.3	0.88	6.5	2.2	2.5	3.80611	99	1650
E3-ASA 355Lb-2	315	2980	537	96.1	95.7	94.1	0.88	6.5	2.3	2.9	4.09157	83	1850
4 poles													
E3-ASA 132M-4	7,5	1467	15	91.96	91.56	90.96	0.785	7.7	2.99	4.23	0.05246	54	113
E3-ASA 160M-4	11	1473	19.4	92.83	92.13	89.63	0.88	9.18	2.52	3.3	0.09736	55	169
E3-ASA 160L-4	15	1452	26	92.15	91.35	89.05	0.91	7.5	2.2	2.8	0.10926	67	215
E3-ASA 180M-4	18,5	1471	33	92.7	92.6	91.6	0.87	7.7	2.3	2.8	0.17231	70	230
E3-ASA 180L-4	22	1470	39.5	93.2	93.1	91.4	0.86	7.8	2.3	2.8	0.19262	79	265
E3-ASA 200La-4	30	1485	59.6	93.87	93.47	91.87	0.793	8.7	2.77	3.06	0.31241	70	368
E3-ASA 225S-4	37	1479	65	94.83	94.63	93.43	0.876	7.55	2.28	2.75	0.44356	70	483
E3-ASA 225M-4	45	1463	76.5	94.99	94.89	93.99	0.896	8.1	2.18	2.46	0.49851	72.6	509
E3-ASA 250M-4	55	1485	95	94.87	94.99	94.39	0,88	7.98	2.59	2.94	1.07146	73.3	630
E3-ASA 280S-4	75	1485	141.5	95.35	95.15	94.55	0.8	7,9	2.8	3.2	1.10348	74	715
E3-ASA 280M-4	90	1480	157.5	95.2	95.1	94.4	0.87	8	2.9	2.9	1.22621	76	750
E3-ASA 315S-4	110	1477	186	95.49	95.29	94.29	0.897	8	2.5	3.5	1.9063	72	863
E3-ASA 315M-4	132	1478	221	95.62	96.22	95.72	0.9	8	2.5	2.5	2.04358	78	958

Motor type Motor Typ Moteur type	P_n kW	n rpm	I_n[A] (400V)	η %			Cos φ	Ip / In	Mp / Mn	Mmax / Mn	J [kgm²]	L_{PA} dB(A)	m kg
				100%	75%	50%							
E3-ASA 315MX-4	160	1478	277	95.85	95.65	94.65	0.87	7.2	2.3	2.6	3.30966	79	1170
E3-ASA 315LZ-4	200	1481	341	96.1	96	95	0.88	6.8	2.9	2.9	4.12175	79	1330
E3-ASA 355M-4	250	1485	472	96.1	95.7	94.7	0.88	6.5	2.3	2.3	6.79104	96	1815
E3-ASA 355La-4	280	1485	472	96.2	95.7	94.9	0.89	6.3	2.4	2.4	7.5456	83	1895
E3-ASA 355Lb-4	315	1485	531	96.2	95.8	95.2	0.89	6.6	2.5	2.5	7.99833	84	2170
E3-ASA 355Lxa-4	355	1491	583.68	96.02	96.22	95.62	0.92	8.15	1.34	3.81	9.2	75.5	2323
E3-ASA 355Lxb-4	400	1488	663	96.1	96.3	95.7	0.9	8.35	1.32	4.1	9.6	76	2500
6 poles / 6 pole / 6 poli													
E3-ASA 160M-6	7,5	983	15.5	90.6	91.2	90.1	0.778	8.31	2.53	3.8	0.12738	68.2	162
E3-ASA 160L-6	11	980	20.5	91.16	92.36	92.26	0.85	7	2.03	2.49	0.17461	62.1	190
E3-ASA 180L-6	15	976	27	91,75	91.65	90.15	0.878	7.73	1.95	2.01	0.28296	66.7	232
E3-ASA 200L-6	18,5	981	34	92.04	92.04	91.04	0,849	7,74	1.96	3.46	0.37283	64.4	297
E3-ASA 200La-6	22	980	39.3	92.35	92.15	91.45	0.876	7,46	2.12	2.62	0.45198	70	303
E3-ASA 225M-6	30	980	52	93	93.3	92.4	0.893	7.11	1.96	2.74	0.68931	72	406
E3-ASA 250M-6	37	988	66	94.74	94.64	94.44	0.855	7.29	2.72	2.84	1.4207	67	632
E3-ASA 280S-6	45	985	80	95.07	95.17	94.27	0.862	8.93	2.42	3.54	1.51284	64.5	710
E3-ASA 280M-6	55	986	101	94.61	94.81	94.31	0.833	8.13	3.63	2.65	1.65691	66	750
E3-ASA 315S-6	75	988	131	96.1	96.2	95.6	0.859	8.97	2.53	3.03	2.79602	75	863
E3-ASA 315M-6	90	987	155.5	95.12	95.42	95.12	0.877	8.96	2.5	3.12	3.42153	68	975
E3-ASA 315MX-6	110	992	198.6	95.2	95.1	94.1	0.837	6.5	2.5	2.2	5.25397	71.2	1130
E3-ASA 315LY-6	132	988	223	95.71	96.01	95.81	0.884	5.4	2.2	2.2	5.91072	72	1240
E3-ASA 315LZ-6	160	986	285	95.61	95.91	95.71	0.841	5.4	2	2	6.56139	71.2	1340
E3-ASA 355M-6	200	987	338	96	95.7	94.9	0.89	6	2.1	2.1	8.90799	94	1850
E3-ASA 355L-6	250	989	427	96	95.7	95	0.88	7	2.5	2.5	9.7988	94	1900

Overall dimensions [mm] **Flameproof motors Ex d / Ex de II CT4**

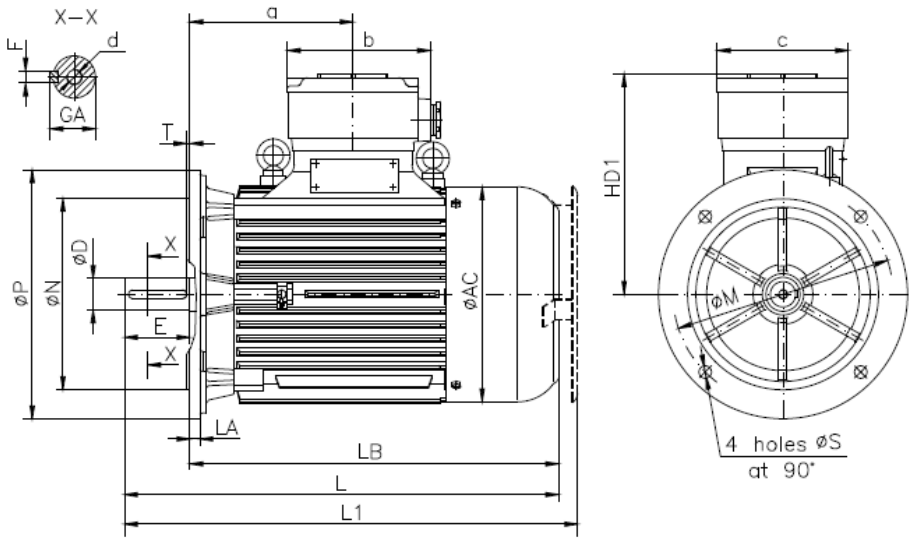
E3-ASA IM 1001 (IMB3)



Frame size	A	B	C	H -0,5	K	D	E	F_{h9}	GA	d	AA	AB	BB	BC	HA	AC	HD	L	a	b	c
132Sb	216	140	89	132	12	38 k6	80	10	41	M 12	60	264	250	69	19	263	400	653	225	175	160
132M	216	178	89	132	12	38 k6	80	10	41	M 12	60	264	250	69	19	263	400	653	225	175	160
160M, Ma,Mb	254	210	108	160	14,5	42 k6	110	12	45	M 16	80	320	330	80	20	317	471	660	245	210	195
160L	254	254	108	160	14,5	42 k6	110	12	45	M 16	80	320	330	80	20	317	471	710	245	210	195
180M,La	279	241/279	121	180	14,5	48 k6	110	14	51,5	M 16	80	360	360	87	25	357	507	730	275	210	195
180Lb	279	241/279	121	180	14,5	48 k6	110	14	51,5	M 16	80	360	360	87	25	357	507	760	275	210	195
200L	318	305	133	200	18,5	55 m6	110	16	59	M 20	82	400	450	95	25	396	576	897	310	275	240
200La	318	305	133	200	18,5	55 m6	110	16	59	M 20	82	400	450	95	25	396	576	947	310	275	240
200Lb	318	305	133	200	18,5	55 m6	110	16	59	M 20	82	400	450	95	25	396	576	1017	310	275	240

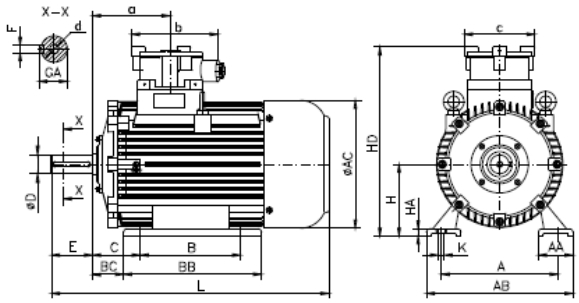
Overall dimensions [mm] **Flameproof motors Ex d / Ex de II CT4**

E3-ASA IM 3001 (IMB5)



Frame size	M	N_{j6}	P	S	T	D	E	F_{h9}	GA	d	AC	HD1	LA	LB	L	a	b	c	L1
132Sb	265	230	300	14,5	4	38 k6	80	10	41	M12	263	268	12	573	653	225	175	160	695
132M	265	230	300	14,5	4	38 k6	80	10	41	M12	263	268	12	573	653	225	175	160	695
160M,Ma,Mb	300	250	350	18,5	5	42 k6	110	12	45	M16	317	311	14	550	660	245	210	195	775
160L	300	250	350	18,5	5	42 k6	110	12	45	M16	317	311	14	600	710	245	210	195	825
180M,La	300	250	350	18,5	5	48 k6	110	14	51,5	M16	357	327	12	620	730	275	210	195	785
180Lb	300	250	350	18,5	5	48 k6	110	14	51,5	M16	357	327	12	680	760	275	210	195	815
200L	350	300	400	18,5	5	55 m6	110	16	59	M20	396	380	16	787	897	310	275	240	945
200La	350	300	400	18,5	5	55 m6	110	16	59	M20	396	380	16	837	945	310	275	240	995
200Lb	350	300	400	18,5	5	55 m6	110	16	59	M20	396	380	16	907	1015	310	275	240	1065

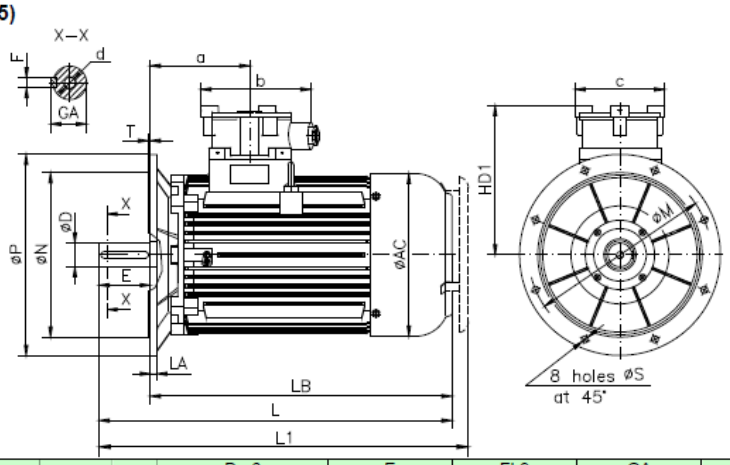
E3-ASA IM 1001 (IMB3)



Frame size	A	B	C	H -0,5	K	Dm6		E		F h9		GA		d		AA	AB
						2p=2	2p>2	2p=2	2p>2	2p=2	2p>2	2p=2	2p>2	2p=2	2p>2		
225Sb	356	286/311	149	225	18.5	-	60	-	140	-	18	-	64	M20		100	450
225Ma	356	286/311	149	225	18.5	55	60	110	140	16	18	59	64	M20		100	450
225Mb	356	286/311	149	225	18.5	55	60	110	140	16	18	59	64	M20		100	450
250M	406	349	168	250	24	60	65	140	140	18	18	64	69	M20		120	500
280S	457	368	190	280	24	65	75	140	140	18	20	69	79.5	M20		120	550
280M	457	419	190	280	24	65	75	140	140	18	20	69	79.5	M20		120	550
315S	508	406	216	315	28	65	80	140	170	18	22	69	85	M20		130	630
315M	508	457	216	315	28	65	80	140	170	18	22	69	85	M20		130	630
315MX	508	457	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
315LY	508	508	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
315LZ	508	508	216	315	28	65	80	140	170	18	22	69	85	M20		120	630
355M	610	560	254	355	28	70	100	140	210	20	28	74.5	106	M20	M24	110	714
355L	610	630	254	355	28	70	100	140	210	20	28	74.5	106	M20	M24	110	714
355Lxa	610	560	254	355	28	70	100	140	210	20	28	74.5	116	M20	M24	160	750
355Lxb	610	630	254	355	28	-	100	-	210	-	28	-	116	M20	M24	160	750

Frame size	BB	BC	HA	AC	HD	L		a	b	c
						2p=2	2p>2			
225Sb	430	114	25	446	635	-	1060	275	275	240
225Ma	430	114	25	446	635	980	1010	275	275	240
225Mb	430	114	25	446	635	-	1060	275	275	240
250M	503	121	30	500	687	1130	1130	275	275	240
280S	420	147	30	500	758	1170	1170	280	340	300
280M	540	147	30	500	758	1210	1210	280	340	300
315S	528	155.5	30	560	826	1245	1275	300	340	300
315M	568	155.5	30	560	826	1285	1315	300	340	300
315MX	588	176	26	620	880	1330	1360	320	460	355
315LY	588	176	26	620	880	1400	1430	320	460	355
315LZ	588	176	26	620	880	-	1430	320	460	355
355M	695	177	32	705	960	1480	1550	320	460	355
355L	695	177	32	705	960	1560	1630	320	460	355
355Lxa	900	117	35	720	1087	-	1760	415	545	455
355Lxb	900	177	35	720	1087	-	1830	415	545	455

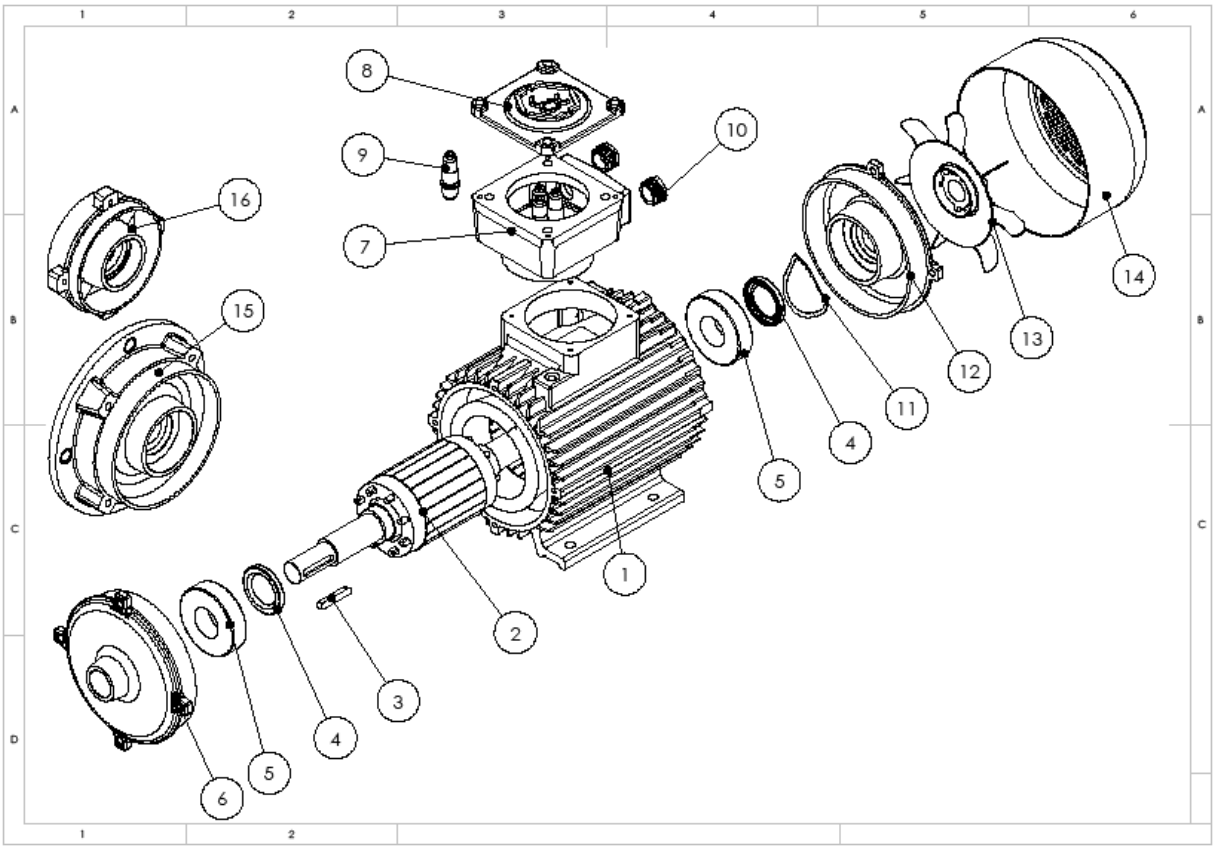
E3-ASA IM 3001 (IMB5)



Frame size	M	N j6	P	S	T	Dm6		E		Fh9		GA		d		AC	HD1	LA
						2p=2	2p>2	2p=2	2p>2	2p=2	2p>2	2p=2	2p>2	2p=2	2p>2			
225Sb	400	350	450	18.5	5	-	60	-	140	-	18	-	64	M20		446	410	18
225Ma	400	350	450	18.5	5	55	60	110	140	16	18	59	64	M20		446	410	18
225 Mb	400	350	450	18.5	5	55	60	110	140	16	18	59	64	M20		446	410	18
250M	500	450	550	18.5	5	60	65	140	140	18	18	64	69	M20		500	475	20
280S	500	450	550	18.5	5	65	75	140	140	18	20	69	79.5	M20		500	437	20
280M	500	450	550	18.5	5	65	75	140	140	18	20	69	79.5	M20		500	478	20
315S	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		560	478	20
315M	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		560	510	20
315MX	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	510	25
315LY	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	565	25
315LZ	600	550	660	24	6	65	80	140	170	18	22	69	85	M20		620	565	25
355M	740	680	800	24	6	70	100	140	210	20	28	74.5	106	M20	M24	705	565	35
355L	740	680	800	24	6	70	100	140	210	20	28	74.5	106	M20	M24	705	605	35
355Lxa	740	680	800	24	6	-	100	-	210	-	28	-	106	-	M24	720	605	35
355Lxb	740	680	800	24	6	-	100	-	210	-	28	-	106	-	M24	720	605	35

Frame size	LB		L		a	b	c	L1	
	2p=2	2p>2	2p=2	2p>2				2p=2	2p>2
225Sb	920	920	1060	1060	275	275	240	1105	1105
225Ma	870	870	980	1010	275	275	240	1025	1055
225 Mb	950	920	1060	1060	275	275	240	1105	1105
250M	985	985	1130	1130	275	275	240	1175	1175
280S	985	985	1170	1170	280	340	300	1270	1270
280M	1023	1023	1210	1210	280	340	300	1310	1310
315S	1102	1102	1245	1275	300	340	300	1345	1385
315M	1142	1142	1285	1315	300	340	300	1355	1415
315MX	1155	1185	1330	1360	320	460	355	1430	1460
315LY	1225	1255	1400	1430	320	460	355	1500	1530
315LZ	-	1255	-	1430	320	460	355	-	1530
355M	1230	1270	1380	1490	320	460	355	1480	1590
355L	1310	1350	1460	1570	320	460	355	-	1670
355Lxa	-	1550	-	1760	415	560	455	-	1860
355Lxb	-	1620	-	1830	415	545	455	-	1930

Spare parts



1- wound stator
2- rotor
3- key
4- rotary shaft lip type seal
5- bearing
6- DE shield
7- terminal box
8- terminal box cover
9- terminal (bushing)
10- cable entry
11- spring washer
12- NDE shield
13- fan
14- fan cover
15- B5 flange
16- B14 flange (only for 80-112 frame size)

We reserve the right to implement modifications without notice

SAMT®

Specialised Air Motors and Transmission

New South Wales

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