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Three Phase Motors (Aluminium Frame)

موتورهای سه فاز فریم آلومینیوم

IEC Three Phase Squirrel-Cage Motors Standard Motors up to Frame Size 160

Technical Data

Aluminium housing. Basic version

IE1	Rated Output kW	Size	Type	Rated Speed rpm	Nominal Efficiency	Power Factor	Rated Current at 400v A	Rated Torque Nm	Starting Torque	Starting Current
									For Direct-on-line starting as multiple of the rated	
									Torque	Current
3000 rpm, 2-poles, 50 Hz, 400V										
0.18	63	34183	2780	63.8	0.70	0.60	0.61	2.8	3.7	
0.25		34253	2770	67.6	0.74	0.72	0.86	3.1	3.5	
0.37	71	35373	2800	70.0	0.80	1.00	1.3	3.0	5.0	
0.55		35553	2800	72.7	0.82	1.50	1.85	3.3	5.4	
0.75	80	37753	2830	78.3	0.80	1.70	2.5	3.1	6.0	
1.1		37113	2850	78.0	0.80	2.60	3.8	3.4	5.7	
1.5	90	39153	2850	77.7	0.84	3.30	5.0	2.4	5.5	
2.2		39223	2860	82.4	0.85	4.60	7.3	2.8	6.3	
3	100L	42035	2910	85.3	0.85	6.0	9.9	2.8	6.8	
4	112M	45045	2900	84.3	0.85	8.40	13.0	2.6	7.2	
5.5	132	48555	2930	86.5	0.87	10.50	18.0	2.0	5.9	
7.5		48755	2930	87.6	0.86	14.20	24.0	2.3	6.9	
11	160	51115	2940	87.9	0.89	21	36.0	2.1	6.5	
15		51155	2945	89.0	0.90	27.50	49.0	2.2	6.6	
18.5		51185	2945	90.0	0.90	34.0	60.0	2.4	7.0	
1500 rpm, 4-poles, 50 Hz, 400V										
0.12	63	41123	1350	55.0	0.62	0.52	0.85	1.9	2.8	
0.18		41183	1335	59.0	0.64	0.70	1.3	1.9	3.0	
0.25	71	36253	1380	68.6	0.7	0.78	1.8	1.9	3.8	
0.37		36373	1390	71.8	0.7	1.25	2.6	2.5	3.5	
0.55	80	38553	1410	74.0	0.75	1.50	3.8	2.3	4.9	
0.75		38753	1420	76.0	0.77	1.80	5.1	2.3	5.3	
1.1	90	40113	1420	77.4	0.76	2.60	7.4	2.3	4.9	
1.5		40153	1420	77.5	0.77	3.60	10.0	2.4	5.9	
2.2	100L	43225	1420	81.0	0.76	5.10	15.0	2.5	5.6	
3		43035	1420	82.7	0.82	6.40	20.0	2.7	5.6	
4	112M	46045	1425	83.5	0.83	8.40	27.0	1.9	5.7	
5.5	132	49555	1450	86.0	0.8	11.50	37.0	2.0	4.9	
7.5		49755	1440	87.6	0.86	14.40	50.0	2.3	5.4	
11	160	52115	1460	88.5	0.88	20.80	72.0	2.4	6.2	
15		52155	1460	89.4	0.9	27.00	98.0	2.5	6.2	

* Flange-mounted (B5) and foot-mounted (B3) are available for all type of motors.



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IEC Three Phase Squirrel-Cage Motors Standard Motors up to Frame Size 160

Technical Data

Aluminium housing. Basic version

IE1	Rated Output kW	Size	Type	Rated Speed rpm	Nominal Efficiency	Power Factor	Rated Current at 400v A	Rated Torque Nm	Starting Torque	Starting Current
									For Direct-on-line starting as multiple of the rated	
									Torque	Current
1000 rpm, 6-poles, 50 Hz, 400V										
0.09	63	41904	850	45.0	0.66	0.44	1.0	1.8	2.0	
0.18	71	36184	850	53.0	0.73	0.67	2.0	2.1	2.3	
0.25		36255	860	60.0	0.76	0.79	2.8	2.2	2.7	
0.37	80	38373	925	66.85	0.70	1.15	3.8	1.9	3.1	
0.55		38554	935	71.2	0.67	1.70	5.8	2.1	3.4	
0.75	90	40754	915	69.0	0.76	2.05	7.8	2.2	3.7	
1.1		40115	915	72.0	0.77	2.85	11.0	2.3	3.8	
1.5	100L	44155	925	74.0	0.75	3.90	15.0	2.3	4.0	
2.2	112M	47225	935	80.0	0.75	5.35	22.0	2.2	4.6	
3	132	50035	950	79.0	0.76	7.20	30.0	1.9	4.2	
4		50045	950	80.5	0.76	9.40	40.0	2.1	4.5	
5.5		50555	950	83.0	0.76	12.60	55.0	2.3	5.0	
7.5	160	53755	960	86.0	0.74	17.00	75.0	2.1	4.6	
11		53115	960	87.5	0.74	24.50	109.0	2.3	4.8	
750 rpm, 8-poles, 50 Hz, 400V										
0.09	71	36905	630	53.0	0.68	0.36	1.4	1.9	2.2	
0.12		36125	645	53.0	0.64	0.51	1.8	2.2	2.2	
0.18	80	38185	675	51.0	0.68	0.75	2.5	1.7	2.3	
0.25		38255	685	55.0	0.64	1.02	3.5	2.0	2.6	
0.37	90	40375	675	63.0	0.75	1.14	5.2	1.6	2.9	
0.55		40555	675	66.0	0.76	1.58	7.8	1.7	3.0	
0.75	100L	44755	680	66.0	0.76	2.15	11.0	1.6	3.0	
1.1		44115	680	72.0	0.76	2.90	15.0	1.8	3.3	
1.5	112M	47155	705	74.0	0.76	3.85	20.0	1.8	3.7	
2.2	132	50227	700	75.0	0.74	5.70	30.0	1.9	3.9	
3		50037	700	77.0	0.74	7.60	41.0	2.1	4.1	
4	160	53045	715	80.0	0.72	10.00	53.0	2.2	4.5	
5.5		53555	710	83.5	0.73	13.00	74.0	2.3	4.7	
7.5		53755	715	85.5	0.72	17.60	100.0	2.7	5.3	

* Flange-mounted (B5) and foot-mounted (B3) are available for all type of motors.



ELECTROGEN

IEC Three Phase Squirrel-Cage Motors Standard Motors up to Frame Size 160

Technical Data

Aluminium housing. Basic version

IE2	Rated Output kW	Size	Type	Rated Speed rpm	Nominal Efficiency	Power Factor	Rated Current at 400v A	Rated Torque Nm	Starting Torque	Starting Current
									For Direct-on-line starting as multiple of the rated	
									Torque	Current
3000 rpm, 2-poles, 50 Hz, 400V										
0.18	63	34184	2840	70.0	0.78	0.48	0.61	2.5	4.8	
0.25		34254	2830	70.0	0.82	0.63	0.84	2.3	4.9	
0.37	71	35374	2840	74.0	0.77	0.94	1.2	3.1	6.5	
0.55		35554	2835	75.0	0.75	1.42	1.9	3.0	6.3	
0.75	80	37754	2870	80.0	0.84	1.65	2.5	3.5	8.3	
1.1		37114	2860	84.0	0.89	2.15	3.7	3.2	7.0	
1.5	90	39154	2890	85.0	0.87	2.95	5.0	3.5	7.0	
2.2		39224	2890	86.5	0.87	4.25	7.3	3.5	7.0	
3	100L	42034	2890	87.0	0.88	5.70	9.9	3.1	7.0	
4	112M	45044	2905	88.5	0.89	7.40	13.0	2.6	7.0	
5.5	132	48554	2930	89.5	0.90	9.90	18.0	2.4	7.0	
7.5		48754	2930	90.5	0.92	13.00	24.0	2.5	7.0	
11	160	51114	2945	91.0	0.90	19.40	36.0	2.3	7.0	
15		51154	2945	91.5	0.90	26.30	49.0	2.3	7.0	
18.5		51184	2940	92.3	0.92	31.50	60.0	2.3	7.0	
1500 rpm, 4-poles, 50 Hz, 400V										
0.12	63	41124	1395	66.0	0.65	0.41	0.82	2.6	3.5	
0.18		41184	1340	62.0	0.68	0.62	1.3	2.9	3.2	
0.25	71	36254	1410	70.0	0.64	0.81	1.7	3.2	4.3	
0.37		36374	1385	71.0	0.73	1.03	2.6	2.8	4.2	
0.55	80	38554	1410	77.0	0.78	1.32	3.7	2.8	5.6	
0.75		38754	1400	81.0	0.75	1.80	5.1	3.6	5.8	
1.1	90	40114	1440	84.0	0.77	2.45	7.3	2.7	6.4	
1.5		40154	1440	85.0	0.77	3.30	9.9	3.1	6.7	
2.2	100L	43224	1435	86.5	0.82	4.55	15.0	3.1	7.0	
3		43034	1435	87.5	0.81	6.10	20.0	3.5	7.0	
4	112M	46044	1440	88.5	0.81	8.10	27.0	2.8	6.9	
5.5	132	49554	1455	89.5	0.84	10.60	36.0	2.9	7.0	
7.5		49754	1455	90.3	0.84	14.30	49.0	3.0	7.0	
11	160	52114	1460	91.5	0.85	20.50	72.0	2.7	6.9	
15		52154	1460	92.0	0.86	27.50	98.0	2.9	7.0	

* Flange-mounted (B5) and foot-mounted (B3) are available for all type of motors.

IEC Three Phase Squirrel-Cage Motors Standard Motors up to Frame Size 160

Technical Data

Aluminium housing. Basic version

IE2	Rated Output kW	Size	Type	Rated Speed rpm	Nominal Efficiency	Power Factor	Rated Current at 400v A	Rated Torque Nm	Starting Torque	Starting Current
									For Direct-on-line starting as multiple of the rated	
									Torque	Current
1000 rpm, 6-poles, 50 Hz, 400V										
0.75	1.1	90	40755	925	75.5	0.72	2.00	7.7	2.5	4.4
			40116	940	82.0	0.70	2.80	11.0	3.2	5.7
1.5	2.2	100L	44154	950	85.0	0.70	3.65	15.0	3.4	6.2
		112M	47224	955	84.0	0.70	5.40	22.0	2.7	6.2
3	4	132	50034	950	79.0	0.76	7.20	30.0	1.9	4.2
			50044	950	84.0	0.81	8.50	40.0	2.5	6.3
			50554	960	86.0	0.77	12.00	55.0	3.3	7.3
7.5	11	160	53754	965	88.0	0.72	17.10	74.0	2.2	5.5
			53114	960	88.5	0.78	23.00	109.0	2.9	6.9

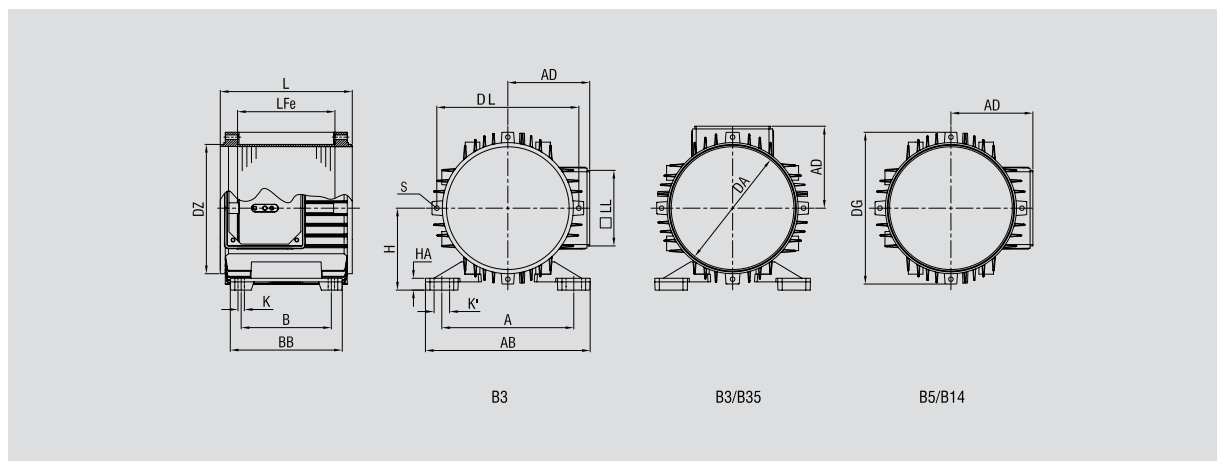
* Flange-mounted (B5) and foot-mounted (B3) are available for all type of motors.

IEC Three Phase Squirrel-Cage Motors Standard Motors up to Frame Size 160

Stator Housing Aluminium Series



Frame Size	Stator Housing Dimensions																
	H	B	A	DA	DG	DZ	DL	S	L	BB	AB	LL	AD	HA	LF _e	K	K'
63	63	80	100	90	122	95	110	M5	110	101	120	75x70	67	7	60	7	12
71	71	90	112	110	139	114	125		124	112	136	83	76	8	65		15
80	80	100	125	125	159	130	142		138	125	150		83	12	80	9	15.5
90S	90		140	135	167	140	158		145	123	171		90	13	100	10	18
90L		125	170	148	100	125											
100	100	140	160	152	190	161	176	M6	225	175	194	85	100	13	160	12	21
112	112	140	190	173	214	182	195	M8	235	183	227	100	112	14	170		
132	132	178-210	216	210	253	218	235		295	248	260	115	132	16	200	10.5	
160	160	254	254	260	310	270	286	M10	320	302	318	149.5	164	23	220	12.5	23



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Three Phase Motors (Cast Iron Frame)

موتورهای سه فاز فریم چدن





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IEC Three Phase Squirrel-Cage Motors Standard Motors Frame Sizes 160 to 225

Technical Data

Cast iron housing. Basic version

IE1	Rated Output kW	Size	Type	Rated Speed rpm	Nominal Efficiency	Power Factor	Rated Current at 400v A	Rated Torque Nm	Starting Torque	Starting Current
									For Direct-on-line starting as multiple of the rated	
									Torque	Current
3000 rpm, 2-poles, 50 Hz, 400V										
11	160	51117	2940	87.9	0.89	21.00	36.0	2.1	6.5	
15		51157	2945	89.0	0.90	27.50	49.0	2.2	6.6	
18.5		51187	2945	90.0	0.90	34.00	60.0	2.4	7.0	
22	180	56225	2945	91.6	0.86	40.50	71.0	2.5	6.4	
30	200	59305	2950	91.8	0.88	54.00	97.0	2.3	6.5	
37		59375	2955	92.9	0.89	65.00	120.0	2.5	7.2	
45	225	62455	2960	93.6	0.88	79.00	145.0	2.4	6.7	
1500 rpm, 4-poles, 50 Hz, 400V										
11	160	52117	1460	88.5	0.88	20.80	72.0	2.2	6.2	
15		52157	1460	89.4	0.90	27.00	98.0	2.6	6.5	
18.5	180	57185	1465	90.4	0.84	35.00	120.0	2.4	6.7	
22		57225	1465	91.0	0.84	41.50	143.0	2.5	6.9	
30	200	60305	1465	91.6	0.85	56.00	195.0	2.5	6.7	
37	225	63375	1475	92.2	0.85	68.00	239.0	2.5	6.7	
45		63455	1475	92.8	0.86	81.00	290.0	2.7	7.2	
1000 rpm, 6-poles, 50 Hz, 400V										
7.5	160	53757	960	86.0	0.74	17.00	75.0	2.1	4.6	
11		53117	960	87.5	0.74	24.50	109.0	2.3	4.8	
15	180	58155	965	88.9	0.83	29.50	148.0	2.3	5.3	
18.5	200	61185	975	89.8	0.81	36.50	181.0	2.5	5.6	
22		61225	975	90.3	0.81	43.50	215.0	2.6	5.7	
30	225	64305	978	91.8	0.83	57.00	293.0	2.7	5.6	
750 rpm, 8-poles, 50 Hz, 400V										
4	160	53047	715	80.0	0.72	10.00	53.0	2.2	4.5	
5.5		53557	715	83.5	0.73	13.00	74.0	2.3	4.7	
7.5		53758	715	85.5	0.72	17.60	100.0	2.7	5.3	
11	180	58115	725	87.5	0.73	25.00	145.0	1.7	4.2	
15	200	61155	725	87.7	0.76	32.50	198.0	2.2	4.9	
18.5	225	64185	730	89.4	0.78	38.50	242.0	2.3	5.5	
22		64225	730	89.7	0.79	45.00	288.0	2.3	5.6	

IEC Three Phase Squirrel-Cage Motors Standard Motors Frame Sizes 160 to 225

Technical Data

Cast iron housing. Basic version

IE2	Rated Output kW	Size	Type	Rated Speed rpm	Nominal Efficiency	Power Factor	Rated Current at 400v A	Rated Torque Nm	Starting Torque	Starting Current
									For Direct-on-line starting as multiple of the rated	
									Torque	Current
3000 rpm, 2-poles, 50 Hz, 400V										
11	160	51116	2945	91.0	0.90	19.40	36.0	2.3	7.0	
15		51156	2945	91.5	0.90	26.30	49.0	2.3	7.0	
18.5		51186	2940	92.3	0.92	31.50	60.0	2.3	7.0	
22	180	56224	2955	94.1	0.88	38.50	71.0	2.5	7.2	
30	200	59304	2960	93.5	0.88	53.00	97.0	2.4	7.0	
37		59374	2960	94.1	0.89	64.00	119.0	2.5	7.2	
45	225	62454	2965	94.9	0.89	77.00	145.0	2.5	7.3	
1500 rpm, 4-poles, 50 Hz, 400V										
11	160	52116	1460	91.5	0.85	20.50	72.0	2.7	6.9	
15		52156	1460	92.0	0.86	27.50	98.0	2.9	7.0	
18.5	180	57184	1470	92.6	0.83	34.50	120.0	2.5	6.4	
22		57224	1470	93.2	0.84	40.50	143.0	2.5	6.7	
30	200	60304	1470	93.4	0.85	55.00	195.0	2.6	6.7	
37	225	63374	1480	94.4	0.85	67.00	239.0	2.7	6.8	
45		63454	1480	94.7	0.85	81.00	290.0	2.8	6.9	
1000 rpm, 6-poles, 50 Hz, 400V										
7.5	160	53756	965	88.0	0.72	17.10	74.0	2.2	5.5	
11		53116	960	88.5	0.78	23.00	109.0	2.9	6.9	
15	180	58154	975	90.9	0.81	29.50	147.0	2.4	5.5	
18.5	200	61184	978	91.2	0.81	36.00	181.0	2.4	5.6	
22		61224	978	91.9	0.82	42.00	215.0	2.4	5.6	
30	225	64304	980	93.2	0.83	56.00	292.0	2.8	6.5	
750 rpm, 8-poles, 50 Hz, 400V										
11	180	58114	725	88.7	0.76	23.50	145.0	1.9	4.6	
15	200	61154	725	89.3	0.80	30.50	198.0	2.3	5.3	
18.5	225	64184	730	91.1	0.81	36.00	242.0	2.3	5.6	
22		64224	730	91.6	0.81	43.00	288.0	2.4	5.8	



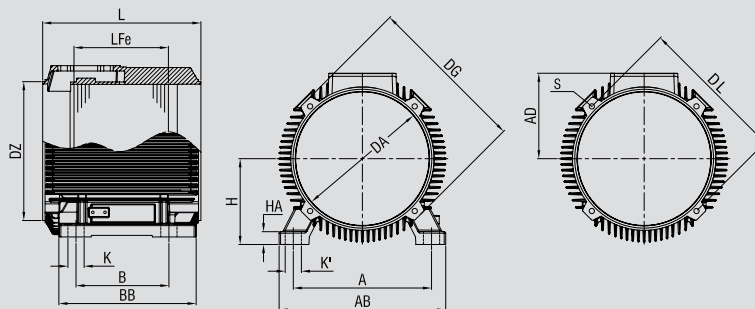
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IEC Three Phase Squirrel-Cage Motors Standard Motors Frame Sizes 160 to 225

Stator Housing Cast Iron Series



Frame Size	Stator Housing Dimensions															
	H	B	A	DA	DG	DZ	DL	S	L	BB	AB	AD	HA	LFe	K	K'
160	160	254	254	260	310	270	286	M10	320	302	318	164	23	220	12.5	23
180	180	239-277	279	280	340	291	312	M10	310	325	344	182	19	180	14	19
200	200	305	318	310	374	323	347	M12	350	352	377	199	27	190	26	18
225	225	286-311	357	350	422	364	388		415	357	437	224	34	225	27	19



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General Specification (End Shield)

اطلاعات ابعادی در پوش موتورهای سه فاز



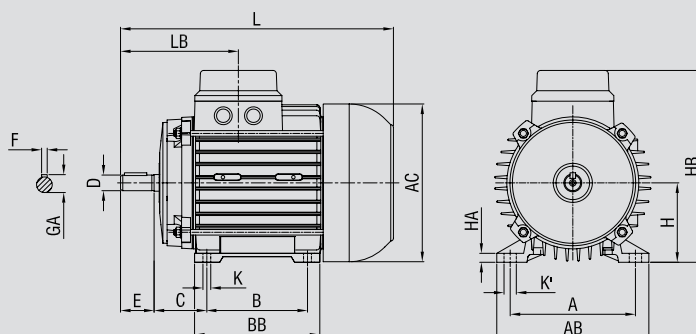
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IEC Three Phase Squirrel-Cage Motors Foot-Mounted Motor, IMB3

Dimensions



Frame Size	Housing		No. of Poles	Dimension drawing according to IEC																		
	Cast Aluminium	Cast Iron		H	B	A	C	K	K'	D	E	F	GA	HA	BB	AB	AC	HB	LB	L		
63	Yes	No	2-8	63	80	100	40	M6	12	11	23	4	12.5	7	101	120	124	155	91.5	208		
71				90	112	47	11		14	30	5	16	8	112	136	141	171.5	105	244			
80				100	124.5	50	M8	15.5	19	40	6	21.5	12	125	150	159	193	118	273			
90S																				90	140	56
90L				125	140	160	63	M10	21	28	60	8	30.9	12.5	174.5	194	194.5	235	152.5			
100				140	190	70	38													80	10	41.3
112				Yes	Yes	160	178-210	216	89	M12	23	42	12	45.1	23	302	318	156.5	393	264	615	
132							140	190	70													19
160				No	Yes	200	180	239-277	279	121	M16	26	55	16	58.8	27	352	377	395	495	307	723
180							200	305	318	133												
200	225	286-311	357				149	27	60	140	18	63.8	34	357	437	438	546	407	832			

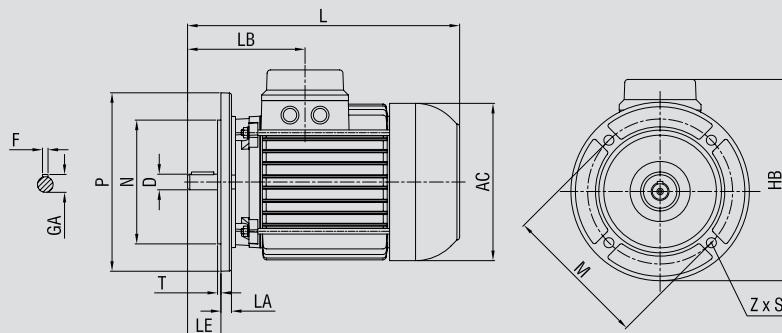


IEC Three Phase Squirrel-Cage Motors Flange-Mounted Motor, IMB5

Dimensions



Frame Size	Housing		No. of Poles	Dimension drawing according to IEC																				
	Cast Aluminium	Cast Iron		P	N	M	LA	T	D	LE	F	GA	AC	HB	Z	S	LB	L						
63	Yes	No	2-8	140	95	115	10	3	11	23	4	12.6	124	160	4	M8	91.5	208						
71				160	110	130	9	3.5	14	30	5	16	141	180.5			105	244						
80				200	130	165	11		19	40	6	21.5	159	213		118	273							
90S									200	24	50	26.9	176	220		133	306							
90L				250	180	215	12.5	4	28	60	8	30.9	194.5	257		M10	152.5	403						
100							15										219.5	272	161	416				
112							17										38	80	10	41.3	259	346	215	532
132							19										42	12	45.1	313	404	264	615	
160				Yes	Yes	2-8	350	250	300	13	5	48	110	14		51.5	355	434	8	M16	339	664		
180				No	Yes		13	55	16	58.8		395	521	307		723								
200	15	60	140				18	63.8	438	546		407	832											
225	16	18	63.8				438	546	8	407		832												





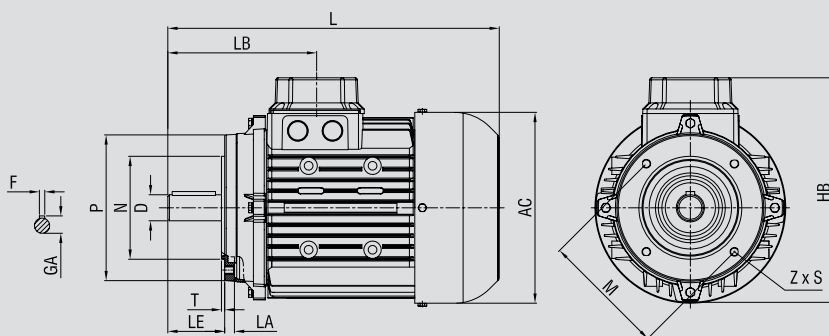
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IEC Three Phase Squirrel-Cage Motors Flange-Mounted Motor,IMB14

Dimensions



Frame Size	Housing		No. of Poles	Dimension drawing according to IEC															
	Cast Aluminium	Cast Iron		P	N	M	LA	T	D	LE	AC	HB	L	LB	Z	S	F	GA	
63	Yes	No	2-8	90	60	75	8	2.5	11	23	124	153	208	91.5	4	M4	4	12.6	
71				106	70	85	9.5	3	14	30	141	171	244	105			M6	5	16
80				119	80	100	9		19	40	159	195	273	118				6	21.5
90S				135	95	115		17	3.5	24	50	176	210	306		133	M8	8	26.9
90L				160	110	130	16.5			28	60	194	233	403					
100														218		257	416	161	
112																			

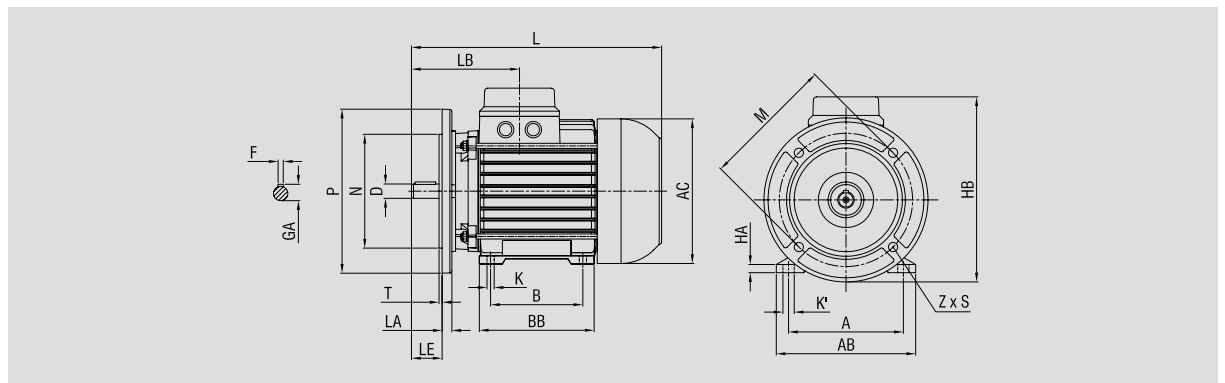


IEC Three Phase Squirrel-Cage Motors Foot and Flange-Mounted Motor,IMB35

Dimensions



Frame Size	Housing		No. of Poles	Dimension drawing according to IEC																																						
	Cast Aluminium	Cast Iron		P	N	M	LA	T	D	LE	F	GA	AC	HB	Z	S	LB	L	B	A	K	K'	HA	BB	AB																	
63	Yes	No	2-8	140	95	115	10	3	11	23	4	12.6	124	160	4	M8	91.5	208	80	100	M6	12	7	101	120																	
71				160	110	130	9	3.5	14	30	5	16	141	180.5			105	244	90	112		11	8	112	136																	
80				200	130	165	11		19	40	6	21.5	159	213			118	273	100	124.5	M8	15.5	12	125	150																	
90S				200				24	50	8	26.9	176	220	133			306	140		140		M8	18	13	123	171																
90L				250	180	215	12.5	4	28		60	30.9	194.5	257			152.5		403	140	160		M10	21	12.5		175	194														
100										250			38	80			10	41.3	259	346	215	532			178-210	216	161	416	140	190	14	183	227									
112				Yes	Yes	2-8	300	230	265	17	5	42	110	12			45.1	313	404	M12	215	532	178-210	216	M10	21	16	248	260													
132																														350	250	300	19	48	110	14	51.5	355	434	264	615	254
160				No	Yes	2-8	350	250	300	13	5	48	110	14			51.5	355	434	M16	307	723	305	318	M12	19	19	325	344													
180																														400	300	350	15	55	110	16	58.8	395	521	339	664	239-277
200	400	300	350												15	55														110	16	58.8	395	521	307	723	305	318	26	27	352	377
225	450	350	400												16	60														140	18	63.8	438	546	407	832	286-311	357	27	34	357	437





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IEC Three Phase Squirrel-Cage Motors Standard Motors up to Frame Size 225

Spare Parts

Part No.	Designation	Part No.	Designation
1	Frame	10	Fan
2	Stator	11	Fan Cover
3	Shaft	12	Screw for Fan Cover
4	Rotor	13	Frame Feet (1 Pair)
5	Bearing , N-end	14	Screw for Frame Feet
5	Bearing , D-end	15	Terminal board
6	Endshield , N-end	16	Screw for Terminal board
7	Wave Spring , N-end	17	Terminal box Cover
8	Endshield , D-end	18	Key , D-end
9	Screws for Endshields		

