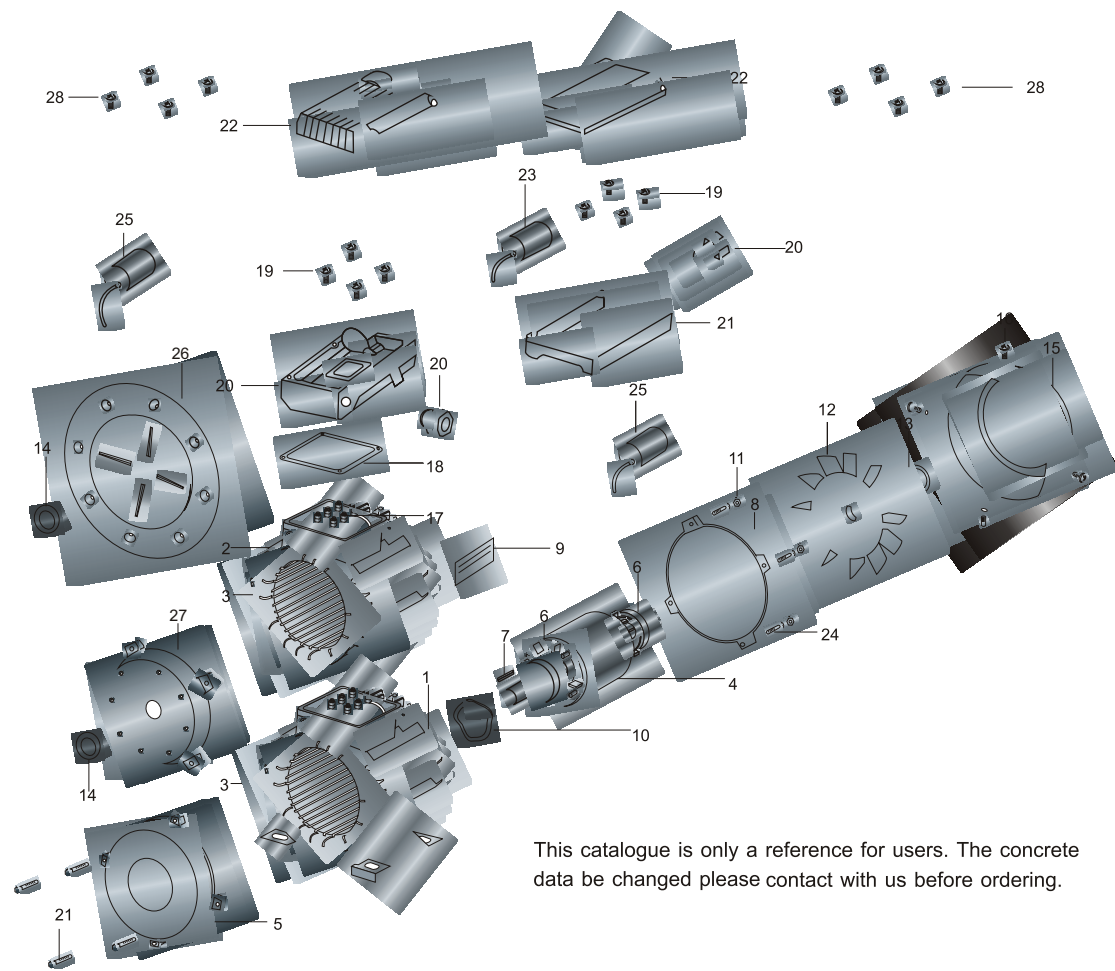


MOTORS



Motor spare part list/drawing



This catalogue is only a reference for users. The concrete data be changed please contact with us before ordering.

1. Frame B3
2. Frame B5
3. Wound Stator
4. Rotor with shaft
5. Front shield
6. Bearings
7. Key
8. Back shield
9. Name plate
10. Compensation ring
11. Bolts and nuts
12. Cooling fan
13. Fan clamping bushing
14. Rubber seal ring
15. Fan cover
16. Self-threading screws for fan cover fixing
17. Terminal board complete with components
18. Terminal seal IP55
19. Screws for terminal box fixing IP56
20. Cable press
21. Terminal box IP65(base)
22. Terminal box IP65(cover)
23. Run capacitor
24. Mounting studs screws
25. Start capacitor
26. Flange B5
27. Flange B14
28. Screws for terminal box fixing Ip55

Mountings and positions

Mountings and positions for standard motors, according to IEC 60034-7, are defined by the codes mentioned in the following table.

	STANDARDS			FRAME SIZES
	CEI 2-14	IEC 60034-7		56-132
		Code I	Code II	
	B3	IM B3	IM 1001	Standard
	B3/B5	IM B35	IM 2001	Standard
	B5	IM B5	IM 3001	Standard
	B14	IM B14	IM 4001	Standard
	B8	IM B8	IM 1071	Upon reques
	B6	IM B6	IM 1051	Upon request
	B7	IM B7	IM 1061	Upon requestt

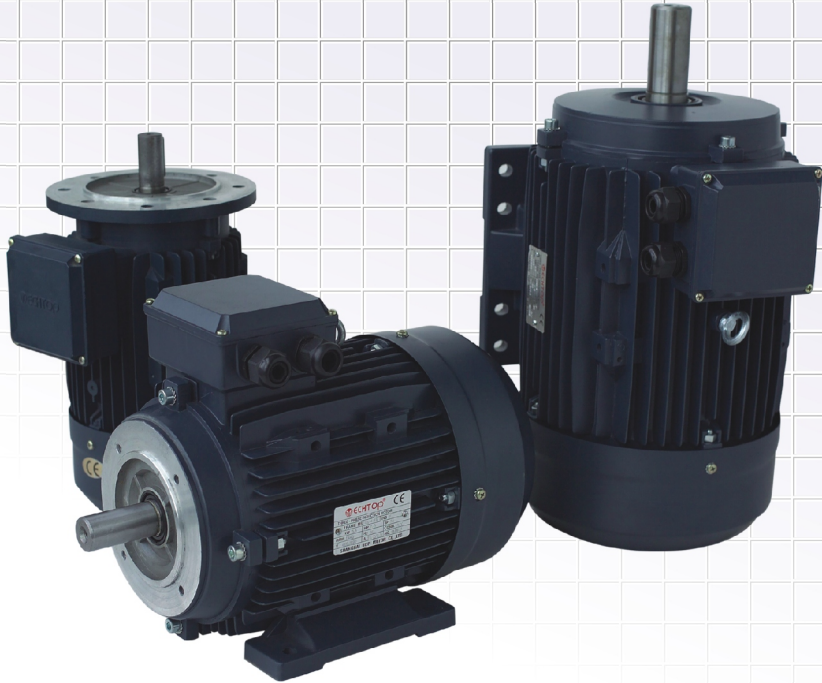
	STANDARDS			FRAME SIZES
	CEI 2-14	IEC 60034-7		
		Code I	Code II	
	V1	IM V1	IM 3011	Standard
	V3	IM V3	IM 3031	Upon request
	V5	IM V5	IM 1011	Upon request
	V6	IM V6	IM 1031	Upon request
	V1/V5	IM V15	IM 2011	Upon request

Aluminum Housing Electric Motors Bearings& oilseals

Frame	Bearings		Oilseals		☆Thread of Cable Gland
	Drive end	Non-drive end	Drive end	Non-drive end	
56	6201	6201	12x22x5	12x22x5	M16
63	6201	6201	12x24x7	12x24x7	M16
71	6202	6202	15x25x7	15x25x7	M20
80	6204	6204	20x34x7	20x34x7	M20
90S	6205	6205(6204)☆☆	25x37x7	25x37x7(20x34x7)☆☆	M25
90L	6205	6205(6204)☆☆	25x37x7	25x37x7(20x34x7)☆☆	M25
100L	6206	6206	30x42x7	30x42x7	M25
112M	6306	6206	30x42x7	30x42x7	M25
132S	6308	6208	40x58x8	40x58x8	M32
132M	6308	6208	40x58x8	40x58x8	M32
160M	6309	6309	45x65x8	45x65x8	M32
160L	6309	6309	45x65x8	45x65x8	M32

☆ Other standard is also available as per request.
☆☆ The figures in bracket “ () ” is for the MC/ML single phase motors.

SERIES THREE-PHASE ASYNCHRONOUS MOTORS
ALUMINUM HOUSING



MS series aluminum housing three-phase asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard. MS motors have good performance, safety and reliable operation, nice appearance, and can be maintained very conveniently, while with low noises, little vibration and at the same time light weight and simple construction. These series motors can be used for general drive.

TECHNICAL DATA @50Hz

Model	Power (kW)	Current (A)			Current (A)			Current (A)			Speed (r/min)	Eff. (%)	Power Factor	Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In (Times)	Noise dB(A)	W.t. (Kg)
		220V	380V	660V	230V	400V	690V	240V	415V	720V									
MS561-2	0.09	0.64	0.37	0.21	0.61	0.35	0.20	0.58	0.34	0.19	2670	57	0.65	2.2	2.4	1.6	6	58	2.8
MS562-2	0.12	0.74	0.43	0.25	0.70	0.40	0.23	0.67	0.39	0.22	2730	62	0.69	2.2	2.4	1.6	6	58	3.2
MS563-2	0.18	1.0	0.58	0.34	0.96	0.56	0.32	0.93	0.54	0.31	2750	65	0.72	2.2	2.4	1.6	6	59	3.5
MS631-2	0.18	1.00	0.58	0.33	0.95	0.55	0.32	0.92	0.53	0.31	2710	63	0.75	2.2	2.4	1.6	6	61	4
MS632-2	0.25	1.29	0.75	0.43	1.23	0.71	0.41	1.19	0.69	0.40	2710	65	0.78	2.2	2.4	1.6	6	61	4.4
MS633-2	0.37	1.92	1.11	0.64	1.82	1.05	0.61	1.76	1.02	0.59	2710	65	0.78	2.2	2.4	1.6	6	62	4.9
MS711-2	0.37	1.76	1.02	0.59	1.67	0.97	0.56	1.61	0.93	0.54	2730	70	0.79	2.2	2.4	1.6	6	64	5.6
MS712-2	0.55	2.57	1.49	0.86	2.45	1.42	0.82	2.36	1.36	0.79	2760	71	0.79	2.2	2.4	1.6	6	64	6.1
MS713-2	0.75	3.33	1.93	1.11	3.18	1.83	1.06	3.06	1.77	1.02	2730	72	0.82	2.2	2.4	1.5	6	65	7
MS801-2	0.75	3.21	1.86	1.07	3.06	1.77	1.02	2.94	1.70	0.98	2770	73	0.84	2.2	2.4	1.5	6	67	9.1
MS802-2	1.1	4.56	2.64	1.52	4.35	2.51	1.45	4.18	2.42	1.39	2770	76.2	0.83	2.2	2.4	1.5	6	67	10.2
MS803-2	1.5	6.04	3.50	2.01	5.87	3.32	1.92	5.54	3.20	1.85	2800	78.5	0.83	2.2	2.4	1.5	6	70	11.7
MS90S-2	1.5	5.97	3.46	1.99	5.76	3.28	1.90	5.47	3.16	1.82	2840	78.5	0.84	2.2	2.4	15	6	72	12
MS90L1-2	2.2	8.39	4.85	2.80	8.0	4.61	2.66	7.69	4.45	2.56	2840	81	0.85	2.2	2.4	1.4	6	72	15
MS90L2-2	3	11.08	6.42	3.69	10.56	6.10	3.52	10.16	5.88	3.39	2840	82.6	0.86	2.2	2.4	1.4	6	74	18.5
MS100L1-2	3	10.96	6.34	3.65	10.44	6.03	3.48	10.04	5.81	3.35	2840	82.6	0.87	2.2	2.3	1.4	7	76	22.3
MS100L2-2	4	14.33	8.30	4.78	13.65	7.88	4.55	13.14	7.60	4.38	2850	84.2	0.87	2.2	2.3	1.4	7.5	77	25.2
MS112M-2	4	14.33	8.30	4.78	13.65	7.88	4.55	13.14	7.60	4.38	2880	84.2	0.87	2.2	2.3	1.4	7.5	77	26.7
MS112L-2	5.5	19.14	11.08	6.38	18.23	10.53	6.08	17.54	10.15	5.85	2880	85.7	0.88	2.2	2.3	1.2	7.5	78	30.2
MS132S1-2	5.5	19.14	11.08	6.38	18.23	10.53	6.08	17.54	10.15	5.85	2900	85.7	0.88	2	2.2	1.2	7.5	80	38.5
MS132S2-2	7.5	25.71	14.88	8.57	24.49	14.14	8.16	23.57	13.63	7.86	2920	87	0.88	2	2.2	1.2	7.5	80	42.2
MS132M1-2	9.2	30.86	17.85	10.28	29.87	17.25	9.96	28.26	16.34	9.42	2930	88	0.89	2	2.2	1.2	7.5	81	51.4
MS132M2-2	11	36.28	21.01	12.09	34.57	19.96	11.52	33.26	19.23	11.09	2930	88.4	0.9	2	2.2	1.2	7.5	83	58.8
MS160M1-2	11	36.28	21.01	12.09	34.57	19.96	11.52	33.26	19.23	11.09	2940	88.4	0.9	2	2.2	1.2	7.5	86	75
MS160M2-2	15	48.39	28.01	16.13	46.09	26.61	15.36	44.35	25.62	14.78	2940	89.4	0.91	2	2.2	1.2	7.5	86	88
MS160L-2	18.5	59.28	34.32	19.76	56.47	32.6	18.82	54.34	31.43	18.11	2940	90	0.91	2	2.2	1.1	7.5	86	99

TECHNICAL DATA @50Hz

Model	Power (KW)	Current (A)			Current (A)			Current (A)			Speed (r/min)	Eff. (%)	Power Factor	Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In (Times)	Noise dB(A)	W.t. (Kg)
		220V	380V	660V	230V	400V	690V	240V	415V	720V									
MS561-4	0.06	0.55	0.32	0.18	0.52	0.30	0.17	0.50	0.29	0.17	1320	48.5	0.59	2.3	2.4	1.7	6	50	3
MS562-4	0.09	0.77	0.45	0.26	0.74	0.43	0.25	0.71	0.41	0.24	1320	50	0.61	2.3	2.4	1.7	6	50	3.3
MS563-4	0.12	0.96	0.56	0.32	0.92	0.53	0.31	0.88	0.51	0.29	1320	52	0.63	2.2	2.4	1.7	6	51	3.5
MS631-4	0.12	0.86	0.50	0.29	0.82	0.47	0.27	0.79	0.46	0.26	1350	57	0.64	2.2	2.4	1.7	6	52	3.9
MS632-4	0.18	1.23	0.71	0.41	1.17	0.68	0.39	1.13	0.65	0.38	1350	59	0.65	2.2	2.4	1.7	6	52	4.3
MS633-4	0.25	1.66	0.96	0.55	1.58	0.91	0.53	1.52	0.88	0.51	1350	60	0.66	2.2	2.4	1.7	6	54	4.8
MS711-4	0.25	1.52	0.88	0.51	1.45	0.84	0.48	1.39	0.81	0.46	1350	60	0.72	2.2	2.4	1.7	6	55	5.4
MS712-4	0.37	2.02	1.17	0.67	1.92	1.11	0.64	1.85	1.07	0.62	1370	65	0.74	2.2	2.4	1.7	6	55	6.2
MS713-4	0.55	2.92	1.69	0.97	2.78	1.60	0.93	2.67	1.55	0.89	1380	66	0.75	2.2	2.4	1.7	6	57	7.3
MS801-4	0.55	2.87	1.66	0.96	2.74	1.58	0.91	2.63	1.52	0.88	1370	67	0.75	2.2	2.4	1.7	6	58	9
MS802-4	0.75	3.50	2.03	1.17	3.34	1.93	1.11	3.21	1.86	1.07	1380	72	0.78	2.2	2.4	1.5	6	58	10
MS803-4	1.1	4.86	2.81	1.62	4.63	2.67	1.54	4.45	2.57	1.48	1390	76.2	0.78	2.2	2.4	1.5	6	60	12.3
MS90S-4	1.1	4.80	2.78	1.60	4.57	2.64	1.52	4.40	2.54	1.47	1400	76.2	0.79	2.2	2.4	1.5	6	61	12.1
MS90L-4	1.5	6.27	3.63	2.09	5.97	3.45	1.99	5.75	3.32	1.92	1400	78.5	0.8	2.2	2.4	1.5	6	61	14.6
MS90L2-4	2.2	8.91	5.16	2.97	8.45	4.90	2.83	8.17	4.72	2.72	1400	81	0.8	2.2	2.4	1.	7	63	18.3
MS100L1-4	2.2	8.80	5.09	2.93	8.38	4.84	2.79	8.07	4.66	2.69	1420	81	0.81	2.2	2.3	1.5	7	64	21
MS100L2-4	3	11.77	6.81	3.92	11.21	6.47	3.74	10.79	6.24	3.60	1420	82.6	0.81	2.2	2.3	1.5	7	64	24.7
MS100L3-4	4	15.20	8.80	5.07	14.18	8.36	4.83	13.94	8.06	4.65	1430	84.2	0.82	2.2	2.2	1.5	7	65	29
MS112M-4	4	15.02	8.70	5.01	14.31	8.26	4.77	13.77	7.96	4.59	1430	84.2	0.83	2.2	2.2	1.5	7	65	30.5
MS112L-4	5.5	20.29	11.75	6.76	19.33	11.16	6.44	18.60	10.76	6.20	1440	85.7	0.83	2.2	2.2	1.4	7	68	34.8
MS132S-4	5.5	20.05	11.61	6.68	19.1	11.03	6.37	18.38	10.63	6.13	1450	85.7	0.84	2.2	2.2	1.4	7	71	40.4
MS132M-4	7.5	26.62	15.41	8.87	25.35	14.64	8.45	24.40	14.11	8.13	1450	87	0.85	2.2	2.2	1.4	7	71	49.6
MS132L1-4	9.2	32.46	18.79	10.82	30.92	17.85	10.31	29.76	17.21	9.92	1460	87.5	0.85	2.2	2.2	1.4	7.5	74	56.6
MS132L2-4	10	35.08	20.31	11.69	33.42	19.3	11.14	32.16	18.60	10.72	1460	88	0.85	2.2	2.2	1.4	7.5	74	58.6
MS132L3-4	11	37.97	21.98	12.66	36.17	20.88	12.06	34.81	20.13	11.60	1460	88.4	0.86	2.2	2.2	1.4	7.5	74	64
MS160M-4	11	37.54	21.73	12.51	35.76	20.64	11.92	34.41	19.90	11.47	1460	88.4	0.87	2.2	2.2	1.4	7	75	78
MS160L-4	15	51.18	29.63	17.06	48.76	28.15	16.25	46.92	27.13	15.64	1460	88.4	0.87	2.2	2.2	1.4	7.5	75	98
MS631-6	0.09	0.92	0.53	0.31	0.88	0.51	0.29	0.85	0.49	0.28	840	42	0.61	2	2	1.5	3.5	50	4.2
MS632-6	0.12	1.129	0.65	0.38	1.08	0.62	0.36	1.03	0.60	0.34	850	45	0.62	2	2	1.5	3.5	50	4.8
MS711-6	0.18	1.28	0.74	0.43	1.22	0.70	0.41	1.17	0.68	0.39	880	56	0.66	1.6	1.7	1.5	4	52	6
MS712-6	0.25	1.6	0.92	0.53	1.51	0.87	0.50	1.46	0.84	0.49	900	59	0.7	2.1	2.2	1.5	4	52	6.5
MS713-6	0.37	2.31	1.34	0.77	2.2	1.27	0.73	2.11	1.22	0.70	890	61	0.69	2	2.1	1.5	4	54	7.2
MS801-6	0.37	2.24	1.30	0.75	2.13	1.23	0.71	2.05	1.19	0.68	900	62	0.7	1.9	1.9	1.5	4	56	8.2
MS802-6	0.55	2.99	1.73	1.00	2.85	1.65	0.95	2.74	1.59	0.91	900	67	0.72	2	2.3	1.5	4	56	9.9
MS803-6	0.75	4.02	2.33	1.34	3.83	2.21	1.28	3.69	2.13	1.23	900	68	0.72	2	2.3	1.5	4	58	11.3
MS90S-6	0.75	3.96	2.29	1.32	3.77	2.18	1.26	3.63	2.10	1.21	920	69	0.72	2.2	2.2	1.5	5.5	59	11.7
MS90L-6	1.1	5.49	3.18	1.83	5.23	3.02	1.74	5.03	2.91	1.68	925	72	0.73	2.2	2.2	1.3	5.5	59	15.1
MS100L-6	1.5	7.00	4.05	2.33	6.67	3.85	2.22	6.42	3.71	2.14	945	74	0.76	2.2	2.2	1.3	6	61	19.1
MS112M-6	2.2	9.74	5.64	3.25	9.28	5.36	3.09	8.93	5.16	2.98	955	78	0.76	2.2	2.2	1.3	6	64	25.4
MS132S-6	3	13.11	7.59	4.37	12.49	7.21	4.16	12.02	6.95	4.01	960	79	0.76	2	2	1.3	6.5	64	36.1
MS132M1-6	4	17.16	9.93	5.72	16.35	9.44	5.45	15.73	9.10	5.24	960	80.5	0.76	2	2	1.3	6.5	68	45
MS132M2-6	5.5	22.58	13.08	7.53	21.51	12.42	7.17	20.70	11.97	6.90	960	83	0.77	2	2	1.3	6.5	68	55.5
MS132L-6	7.5	30.07	17.41	10.02	28.65	16.54	9.55	27.57	15.94	9.19	960	85	0.77	2	2	1.3	6.5	68	60
MS160M-6	7.5	28.61	16.56	9.54	27.25	15.73	9.08	26.22	15.17	8.74	960	86	0.8	2	2.2	1.3	6.5	68	72
MS160L-6	11	41.76	24.18	13.92	39.78	22.97	13.26	38.28	22.14	12.76	960	87.5	0.79	2	2.2	1.3	6.5	73	92
MS711-8	0.09	0.88	0.51	0.29	0.84	0.48	0.28	0.81	0.47	0.27	680	48	0.56	1.5	1.7	1.3	3	50	6
MS712-8	0.12	1.05	0.61	0.35	1.00	0.58	0.33	0.96	0.55	0.32	690	51	0.59	1.6	1.7	1.3	2.7	50	6.8
MS801-8	0.18	1.52	0.88	0.51	1.45	0.84	0.48	1.39	0.80	0.46	680	51	0.61	1.5	1.7	1.3	2.8	52	9.9
MS802-8	0.25	1.92	1.11	0.64	1.83	1.06	0.61	1.76	1.02	0.59	680	56	0.61	1.6	2	1.3	2.7	52	10.9
MS803-8	0.37	2.45	1.42	0.82	2.33	1.35	0.78	2.24	1.30	0.75	680	63	0.63	1.6	1.8	1.3	2.8	56	14.8
MS90S-8	0.55	3.36	1.95	1.12	3.21	1.85	1.07	3.08	1.78	1.03	680	66	0.65	1.6	1.8	1.3	3	56	17.2
MS100L1-8	0.75	4.45	2.58	1.48	4.24	2.45	1.41	4.08	2.36	1.36	710	66	0.67	1.7	2.1	1.3	3.5	59	17.5
MS100L2-8	1.1	5.81	3.36	1.94	5.54	3.20	1.85	5.33	3.08	1.78	710	72	0.69	1.7	2.1	1.2	3.5	59	19.7
MS112M-8	1.5	7.82	4.53	2.61	7.45	4.30	2.48	7.17	4.15	2.39	710	74	0.68	1.8	2.1	1.2	4.2	61	25.6
MS132S-8	2.2	10.84	6.28	3.61	10.33	5.96	3.44	9.94	5.75	3.31	720	75	0.71	2	2	1.2	5.5	64	35.5
MS132M-8	3	14.01	8.11	4.67	13.34	7.70	4.45	12.84	7.43	4.28	720	77	0.73	2	2	1.2	5.5	64	45
MS160M1-8	4	17.97	10.41	5.99	17.12	9.89	5.71	16.48	9.53	5.49	730	80	0.73	1.9	2.1	1.2	6	68	60
MS160M2-8	5.5	23.36	13.52	7.79	22.25	12.85	7.42	21.41	12.38	7.14	720	83.5	0.74	2	2.2	1.2	6	68	72
MS160L-8	7.5	30.87	17.87	10.29	29.41	17.0	9.8	28.30	16.37	9.43	720	85	0.75	1.9	2.2	1.2	6	68	92



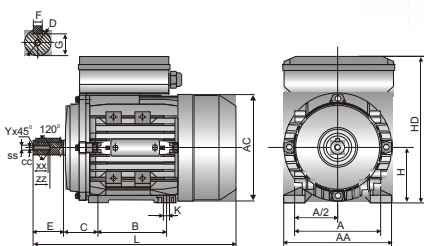
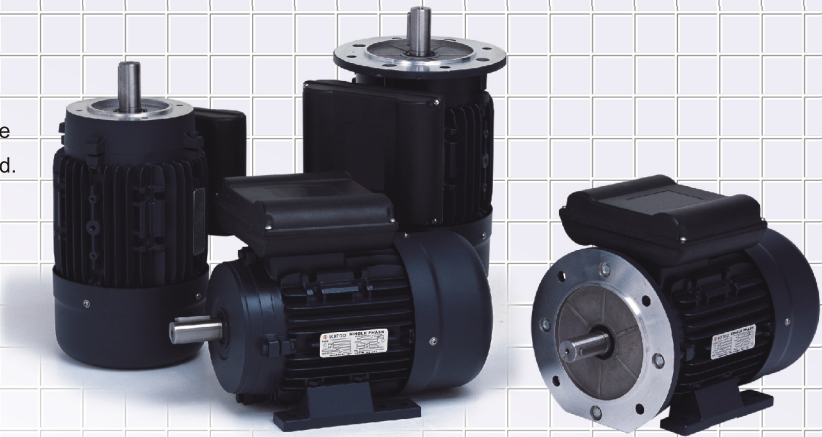
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ALUMINUM HOUSING

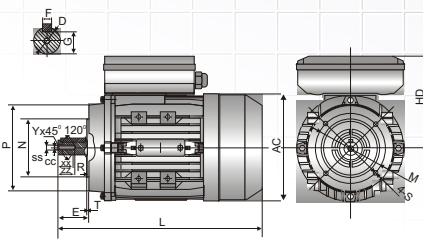
ML series aluminum housing single-phase dual-capacitor asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard.

ML motors have good performance, safety and reliable operation, nice appearance and, can be maintained very conveniently, while with low noises, little vibration and at the same time of lightweight and simple construction. The compositive performance is good, the multiple of starting torque is 1.8~2.5.

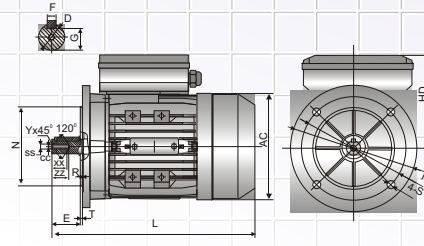
These series motors are suitable for the occasion where the requirements of big starting torque and high over load, such as air-compressors, pumps, fans, medical apparatus and instruments, and many other small machines.



IMB3



IMB14



IMB5

Overall & Installation Dimensions

Frame Size	MOUNTING DIMENSIONS																				OVERALL DIMENSIONS					SHAFT END SCREW DIMENSIONS					
	IMB14															IMB5															
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AA	AC	AD	HD	L	SS	XX	ZZ	CC	Y
63	100	80	40	11	23	4	8.5	63	7X10	75	60	90	0	M5	2.5	115	95	140	0	φ 10	3.0	120	130	179	116	212	M4	10	15	3.3	0.8
71	112	90	45	14	30	5	11	71	7X10	85	70	105	0	M6	2.5	130	110	160	0	φ 10	3.5	132	145	194	123	255	M5	12	18	4.2	0.8
80	125	100	50	19	40	6	15.5	80	10X13	100	80	120	0	M6	3.0	165	130	200	0	φ 12	3.5	157	165	223	143	290	M6	16	22	5	1
90S	140	100	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	φ 12	3.5	172	185	240	150	335	M8	20	25	6.8	1
90L	140	125	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	φ 12	3.5	172	185	240	150	365	M8	20	25	6.8	1
100L	160	140	63	28	60	8	24	100	12X15	130	110	160	0	M8	3.5	215	180	250	0	φ 15	4.0	196	205	260	160	445	M10	22	28	8.5	1.5
112M	190	140	70	28	60	8	24	112	12X15	130	110	160	0	M8	3.5	215	180	250	0	φ 15	4.0	222	230	295	183	453	M10	22	28	8.5	1.5

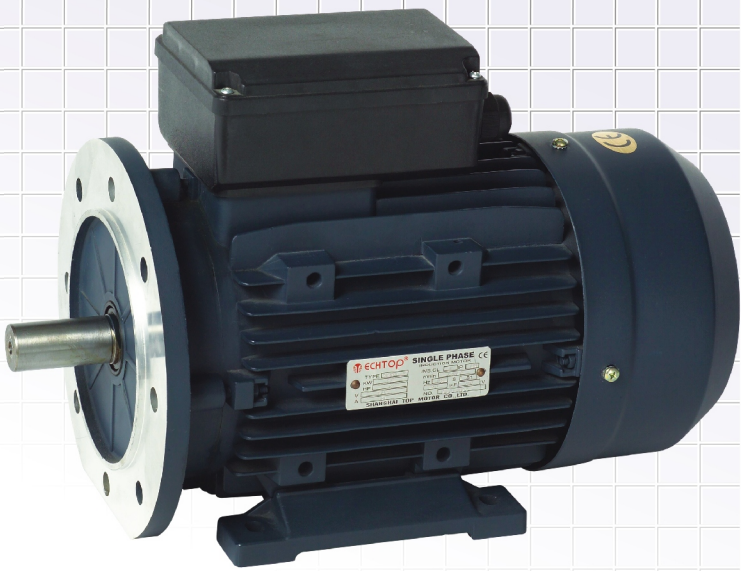
TECHNICAL DATA @230V

Model	Power (kW)	Current (A)	Speed (r/min)	Eff. (%)	Power Factor	Rated Torque (N.M)	Tstart/Tn (Times)	Tmax/Tn (Times)	Starting Current (A)	Run Capacitor (μ f/V)	Start Capacitor (μ f/V)	Noise dB(A)	W.t. (Kg)
ML631-2	0.18	1.31	2750	65	0.92	0.63	2.5	1.7	8	8 μ F/450V	40 μ F/250V	70	4.2
ML632-2	0.25	1.76	2760	67	0.92	0.87	2.5	1.7	10	10 μ F/450V	50 μ F/250V	73	4.7
ML711-2	0.37	2.42	2780	70	0.95	1.27	2.5	1.7	15	12 μ F/450V	75 μ F/250V	75	5.3
ML712-2	0.55	3.45	2790	73	0.95	1.88	2.5	1.7	20	16 μ F/450V	100 μ F/250V	76	7.4
ML801-2	0.75	4.54	2800	74	0.97	2.59	2.5	1.7	30	20 μ F/450V	100 μ F/250V	76	9.5
ML802-2	1.1	6.45	2810	76	0.97	3.74	2.5	1.7	40	25 μ F/450V	150 μ F/250V	79	11.2
ML90S-2	1.5	8.62	2810	78	0.97	5.10	2.5	1.8	55	40 μ F/450V	150 μ F/250V	84	14
ML90S-2	2.2	12.5	2810	79	0.97	7.48	2.2	1.8	75	50 μ F/450V	250 μ F/250V	84	17
ML100L-2	3.0	16.6	2830	80	0.98	10.12	2.2	2.0	95	60 μ F/450V	400 μ F/300V	88	25
ML112M-2	3.7	20.5	2850	80	0.98	12.40	2.0	2.0	120	60 μ F/450V	500 μ F/300V	90	30.5
ML631-4	0.12	1.04	1350	55	0.91	0.85	2.5	1.6	6	10 μ F/450V	40 μ F/250V	64	4
ML632-4	0.18	1.54	1360	56	0.91	1.26	2.5	1.6	8.5	12 μ F/450V	40 μ F/250V	64	4.8
ML711-4	0.25	1.94	1380	61	0.92	1.73	2.5	1.6	10	14 μ F/450V	50 μ F/250V	66	5.9
ML712-4	0.37	2.80	1380	62.5	0.92	2.56	2.5	1.5	15	16 μ F/450V	75 μ F/250V	68	6.9
ML801-4	0.55	3.80	1400	67	0.94	3.75	2.5	1.7	20	20 μ F/450V	100 μ F/250V	71	9.6
ML802-4	0.75	4.75	1410	73	0.94	5.08	2.5	1.7	30	25 μ F/450V	150 μ F/250V	71	10.8
ML90S-4	1.1	6.76	1410	74.5	0.95	7.45	2.2	1.8	40	30 μ F/450V	150 μ F/250V	74	13.5
ML90L-4	1.5	9.03	1420	76	0.95	10.09	2.2	1.8	55	40 μ F/450V	200 μ F/250V	79	16.5
ML100L1-4	2.2	12.6	1430	78	0.97	14.69	2.2	1.8	75	50 μ F/450V	300 μ F/250V	79	24
ML100L2-4	3	17.0	1440	79	0.97	19.90	2.2	1.8	95	60 μ F/450V	400 μ F/250V	83	30
ML112M-4	3.7	20.7	1440	80	0.97	24.54	2.0	2.0	120	60 μ F/450V	500 μ F/250V	86	36

MY

SERIES SINGLE-PHASE ASYNCHRONOUS MOTORS

ALUMINUM HOUSING

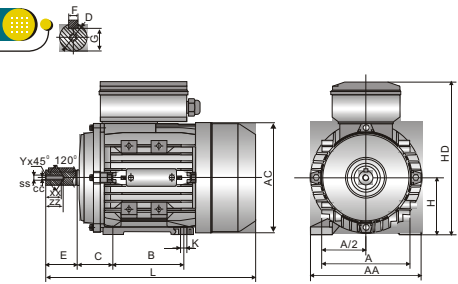


MY Series aluminum housing single-phase capacitor-run asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard.

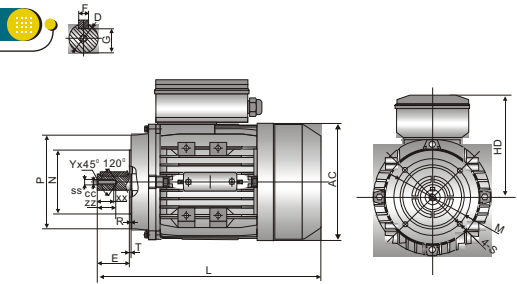
MY motors have good performance, safety and reliable operation, nice appearance, and can be maintained very conveniently, while with low noises, little vibration and at the same time of light weight and simple construction. The multiple of starting torque is 0.3-0.7.

These series motors are suitable for the occasion where there requirement of starting torque is low and long-term continuous working, such as home electric appliances, pumps, fans and recording meters, etc.

IMB3



IMB14



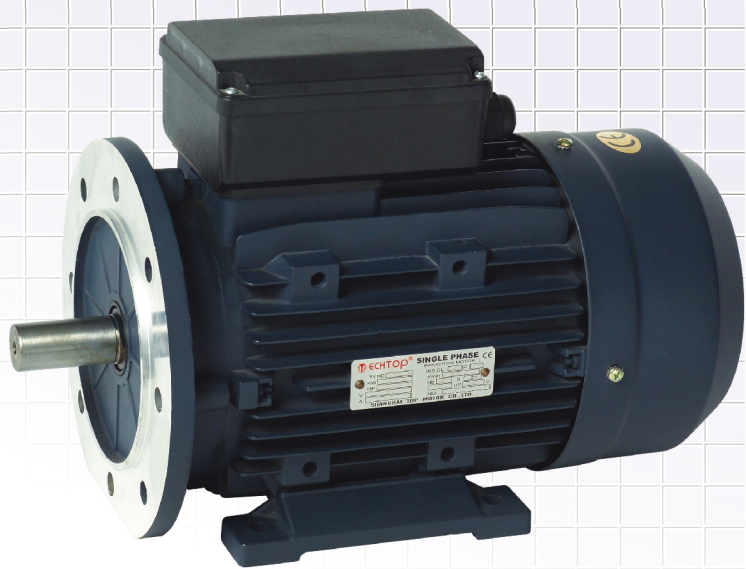
Overall & Installation Dimensions

Frame Size	MOUNTING DIMENSIONS																				OVERALL DIMENSIONS					SHAFT END SCREW DIMENSIONS					
	IMB14															IMB5															
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AA	AC	AD	HD	L	SS	XX	ZZ	CC	Y
56	90	71	36	9	20	3	7.2	56	5.8X8.8	65	50	80	0	M5	2.5	98	80	120	0	φ 7	3.0	108	115	256	100	192	M3	8	12	2.5	0.5
63	100	80	40	11	23	4	8.5	63	7X10	75	60	90	0	M5	2.5	115	95	140	0	φ 10	3.0	120	130	179	116	212	M4	10	15	3.3	0.8
71★	112	90	45	14	30	5	11	71	7X10	85	70	105	0	M6	2.5	130	110	160	0	φ 10	3.5	132	145	194	123	240(254)	M5	12	18	4.2	0.8
80	125	100	50	19	40	6	15.5	80	10X13	100	80	120	0	M6	3.0	165	130	200	0	φ 12	3.5	157	165	223	143	290	M6	16	22	5	1
90S	140	100	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	φ 12	3.5	172	185	240	150	310	M8	20	25	6.8	1
90L	140	125	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	φ 12	3.5	172	185	240	150	335	M8	20	25	6.8	1
100L★★	160	140	63	28	60	8	24	100	12X15	130	110	160	0	M8	3.5	215	180	250	0	φ 15	4.0	196	205	260	160	357(375)	M10	22	28	8.5	1.5

★ ★ : This frame size has two housing sizes, the rated output is for normal “L” size, and increased output is for the bigger “L” size (refer to the figures in the bracket “()”)

MY

SERIES SINGLE-PHASE ASYNCHRONOUS MOTORS
ALUMINUM HOUSING

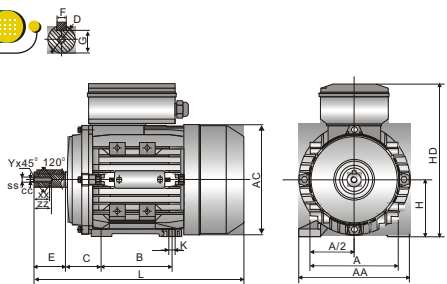


MY Series aluminum housing single-phase capacitor-run asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard.

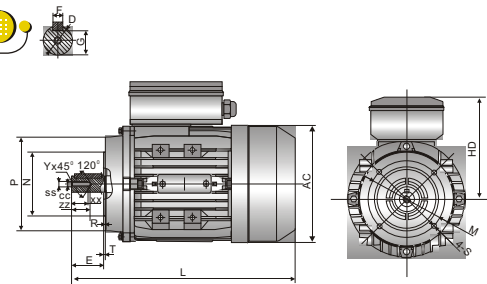
MY motors have good performance, safety and reliable operation, nice appearance, and can be maintained very conveniently, while with low noises, little vibration and at the same time of light weight and simple construction. The multiple of starting torque is 0.3-0.7.

These series motors are suitable for the occasion where there requirement of starting torque is low and long-term continuous working, such as home electric appliances, pumps, fans and recording meters, etc.

IMB3



IMB14



Overall & Installation Dimensions

Frame Size	MOUNTING DIMENSIONS																				OVERALL DIMENSIONS					SHAFT END SCREW DIMENSIONS					
	IMB14															IMB5															
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AA	AC	AD	HD	L	SS	XX	ZZ	CC	Y
56	90	71	36	9	20	3	7.2	56	5.8X8.8	65	50	80	0	M5	2.5	98	80	120	0	φ 7	3.0	108	115	256	100	192	M3	8	12	2.5	0.5
63	100	80	40	11	23	4	8.5	63	7X10	75	60	90	0	M5	2.5	115	95	140	0	φ 10	3.0	120	130	179	116	212	M4	10	15	3.3	0.8
71★	112	90	45	14	30	5	11	71	7X10	85	70	105	0	M6	2.5	130	110	160	0	φ 10	3.5	132	145	194	123	240(254)	M5	12	18	4.2	0.8
80	125	100	50	19	40	6	15.5	80	10X13	100	80	120	0	M6	3.0	165	130	200	0	φ 12	3.5	157	165	223	143	290	M6	16	22	5	1
90S	140	100	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	φ 12	3.5	172	185	240	150	310	M8	20	25	6.8	1
90L	140	125	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	φ 12	3.5	172	185	240	150	335	M8	20	25	6.8	1
100L★★	160	140	63	28	60	8	24	100	12X15	130	110	160	0	M8	3.5	215	180	250	0	φ 15	4.0	196	205	260	160	357(375)	M10	22	28	8.5	1.5

★★: This frame size has two housing sizes, the rated output is for normal “L” size, and increased output is for the bigger “L” size (refer to the figures in the bracket “()”)

T

TECHNICAL DATA @230V

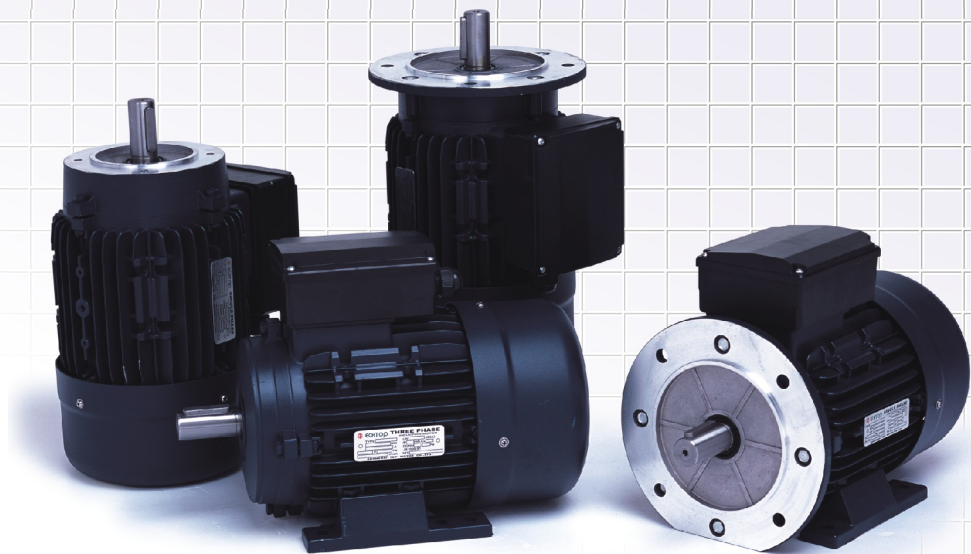
MODEL	Power (KW)	Current (A)	Speed (r/min)	Eff. (%)	Power factor	Tstart/Tn (Times)	Tmax/Tn (Times)	Starting Current (A)	Run Capacitor (μ f/V)	Noise dB(A)	W.t. (Kg)
MY561-2	0.09	0.79	2760	54	0.92	0.65	1.6	3	4 μ f/450V	67	2.9
MY562-2	0.12	0.98	2770	58	0.92	0.65	1.6	4	6 μ f/450V	67	3.2
MY563-2	0.18	1.42	2780	60	0.92	0.65	1.6	5	10 μ f/450V	69	3.5
MY631-2	0.18	1.33	2780	62	0.95	0.60	1.7	5	10 μ f/450V	70	4
MY632-2	0.25	1.76	2780	65	0.95	0.60	1.7	7	12 μ f/450V	70	4.5
MY711-2	0.37	2.53	2800	67	0.95	0.60	1.7	10	16 μ f/450V	75	5.1
MY712-2	0.55	3.49	2810	70	0.98	0.55	1.7	15	20 μ f/450V	75	7.2
MY801-2	0.75	4.62	2810	72	0.98	0.35	1.7	20	25 μ f/450V	75	9.6
MY802-2	1.1	6.51	2820	75	0.98	0.33	1.7	28	35 μ f/450V	78	11
MY90S-2	1.5	8.76	2820	76	0.98	0.30	1.8	40	45 μ f/450V	80	14
MY90L-2	2.2	12.7	2820	77	0.98	0.30	1.8	60	60 μ f/450V	80	16.5
MY100L-2	3.0	17.1	2840	78	0.98	0.28	1.8	75	80 μ f/450V	83	25
MY561-4	0.06	0.59	1360	48	0.92	0.75	1.6	2.5	4 μ f/450V	63	3.5
MY562-4	0.09	0.83	1370	51	0.92	0.75	1.6	3	6 μ f/450V	63	3.8
MY631-4	0.12	1.03	1380	55	0.92	0.65	1.6	3.5	10 μ f/450V	65	4
MY632-4	0.18	1.49	1390	57	0.92	0.65	1.5	5.5	12 μ f/450V	65	4.6
MY711-4	0.25	1.90	1400	61	0.94	0.50	1.5	8	14 μ f/450V	65	5.7
MY712-4	0.37	2.76	1400	62	0.94	0.50	1.5	10	16 μ f/450V	68	6.7
MY801-4	0.55	3.93	1400	64	0.95	0.35	1.7	15	20 μ f/450V	70	9.2
MY802-4	0.75	5.05	1410	68	0.95	0.33	1.7	20	25 μ f/450V	70	9
MY90S-4	1.1	6.87	1410	71	0.98	0.33	1.8	30	40 μ f/450V	73	14.5
MY90L-4	1.5	9.12	1420	73	0.98	0.30	1.8	40	45 μ f/450V	75	16.2
MY100L1-4	2.2	12.8	1440	76	0.98	0.28	1.8	60	70 μ f/450V	78	24
MY100L2-4	3	17.1	1440	78	0.98	0.28	1.8	75	90 μ f/450V	78	30
MYT711-2	0.37	2.61	2700	65	0.95	0.6	1.7	10.44	16 μ f/450V	75	5.1
MYT712-2	0.55	3.66	2700	68	0.96	0.70	1.7	15.6	20 μ f/450V	75	7.2
MYT801-2	0.75	4.73	2760	71	0.95	0.70	1.8	20	25 μ f/450V	75	9.8
MYT802-2	1.1	6.73	2720	72.5	0.98	0.65	1.7	26	35 μ f/450V	78	11.3
MYT90S-2	1.5	8.87	2800	75	0.98	0.6	1.8	38	45 μ f/450V	80	15
MYT90L-2	2.2	12.8	2800	76	0.98	0.6	1.7	58	60 μ f/450V	80	17.6
MYT100L-2	3	17.4	2800	76.5	0.98	0.5	1.8	81.5	80 μ f/450V	83	25.5
MYT711-4	0.25	1.97	1320	60	0.92	0.70	1.5	7.88	16 μ f/450V	65	5.7
MYT712-4	0.37	2.91	1320	60	0.92	0.70	1.5	11.66	20 μ f/450V	68	6.7
MYT801-4	0.55	4.17	1370	63	0.91	0.65	1.7	14	20 μ f/450V	73	9.7
MYT802-4	0.75	5.1	1370	67.3	0.95	0.63	1.65	18	30 μ f/450V	73	11.5
MYT90S-4	1.1	7.59	1350	68.5	0.92	0.55	1.7	27	40 μ f/450V	75	15.5
MYT90L-4	1.5	9.64	1370	72	0.94	0.55	1.7	35	45 μ f/450V	78	17.5
MYT100L1-4	2.2	14.05	1400	74	0.92	0.45	1.8	60	70 μ f/450V	80	26
MYT100L2-4	3	17.83	1400	77	0.95	0.45	1.7	76	90 μ f/450V	80	32

Note: MYT is high starting torque series single phase capacitor-run motors

MC

SERIES SINGLE-PHASE CAPACITOR START ASYNCHRONOUS MOTORS

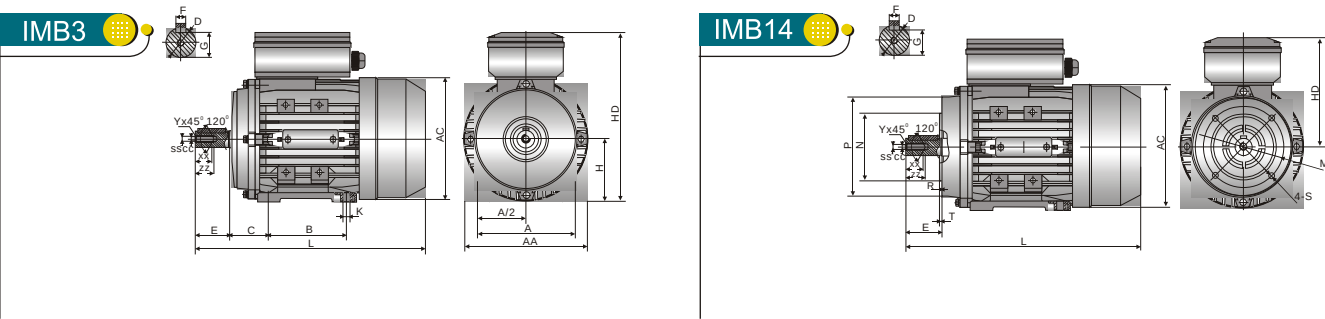
ALUMINUM HOUSING



MC Series aluminum housing single-phase capacitor-start asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard.

MC motors have good performance, safety and reliable operation, nice appearance, and can be maintained very conveniently, while with low noises, little vibration and at the same time of light weight and simple construction. High starting torque, perfect starting performance, generally the multiple of the starting torque can up to more than 2.5 times.

These series motors are suitable for the occasion where big starting torque and small starting current, such as air-compressors, pumps, refrigerators, medical apparatus, and many other machines needing full-load start.



Overall & Installation Dimensions

FRAME SIZE	MOUNTING DIMENSIONS																					OVERALL DIMENSIONS					Shaft End Screw Dimensions				
										IMB14																					
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AA	AC	AD	HD	L	SS	XX	ZZ	CC	Y
63	100	80	40	11	23	4	8.5	63	7X10	75	60	90	0	M5	2.5	115	95	140	0	Φ10	3.0	120	130	179	116	212	M4	10	15	3.3	0.8
71	112	90	45	14	30	5	11	71	7X10	85	70	105	0	M6	2.5	130	110	160	0	Φ10	3.5	132	145	194	123	255	M5	12	18	4.2	0.8
80	125	100	50	19	40	6	15.5	80	10X13	100	80	120	0	M6	3.0	165	130	200	0	Φ12	3.5	157	165	223	143	290	M6	16	22	5	1
90S	140	100	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	Φ12	3.5	172	185	240	150	335	M8	20	25	6.8	1
90L	140	125	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	Φ12	3.5	172	185	240	150	365	M8	20	25	6.8	1
100L	160	140	63	28	60	8	24	100	12X15	130	110	160	0	M8	3.5	215	180	250	0	Φ15	4.0	196	205	260	160	445	M10	22	28	8.5	1.5
112M	190	140	70	28	60	8	24	112	12X15	130	110	160	0	M8	3.5	215	180	250	0	Φ15	4.0	222	230	295	183	453	M10	22	28	8.5	1.5

TECHNICAL DATA

Model	Power (kW)	Current (A)	Speed (r/min)	Eff. (%)	Power Factor	Rated Torque (N.M)	Tstart/Tn (Times)	Tmax/Tn (Times)	Starting Current (A)	Start Capacitor (μ f/V)	Noise dB(A)	W.t. (Kg)
MC711-2	0.18	1.81	2750	60	0.72	0.63	3.0	2.2	12	75 μ F/250V	70	5
MC712-2	0.25	2.30	2780	64	0.74	0.86	3.0	2.2	15	75 μ F/250V	70	6.8
MC801-2	0.37	3.21	2800	65	0.77	1.26	2.8	2.2	21	100 μ F/250V	75	9.2
MC802-2	0.55	4.45	2800	68	0.79	1.88	2.8	2.2	29	150 μ F/250V	75	11
MC90S-2	0.75	5.82	2810	70	0.80	2.55	2.5	2.2	37	200 μ F/250V	75	13
MC90L-2	1.1	8.30	2820	72	0.80	3.73	2.5	2.2	60	300 μ F/250V	78	16
MC100L1-2	1.5	10.88	2830	74	0.81	5.06	2.5	2.0	80	400 μ F/300V	83	22
MC100L2-2	2.2	15.75	2840	75	0.81	7.40	2.2	2.0	120	400 μ F/300V	83	24
MC112M-2	3.0	20.93	2850	76	0.82	10.05	2.2	1.9	150	600 μ F/300V	87	28
MC711-4	0.12	1.80	1360	50	0.58	0.84	3.0	2.2	9	75 μ F/250V	65	5.4
MC712-4	0.18	2.38	1380	53	0.62	1.25	2.8	2.2	12	75 μ F/250V	65	6.4
MC801-4	0.25	2.97	1390	58	0.63	1.72	2.8	2.2	15	100 μ F/250V	65	9
MC802-4	0.37	4.05	1400	62	0.64	2.52	2.5	2.2	21	100 μ F/250V	70	10.2
MC90S-4	0.55	5.25	1400	66	0.69	3.75	2.5	2.0	29	100 μ F/250V	70	12.8
MC90L-4	0.75	6.57	1410	68	0.73	5.08	2.5	2.0	37	150 μ F/250V	70	15.7
MC100L1-4	1.1	9.10	1420	71	0.74	7.40	2.5	2.0	60	200 μ F/300V	73	23
MC100L2-4	1.5	11.91	1430	73	0.75	10.01	2.5	2.0	80	400 μ F/300V	78	28
MC112M-4	2.2	17.01	1440	74	0.76	14.59	2.2	1.9	120	600 μ F/300V	78	34.5

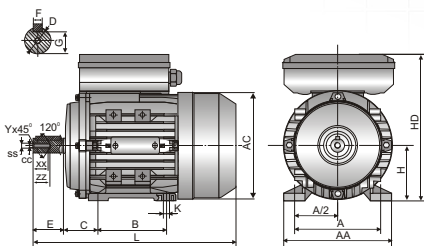
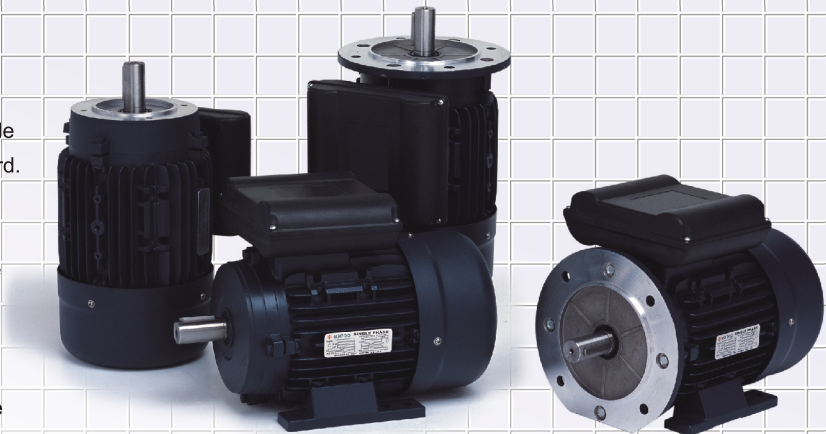
ML

ALUMINUM HOUSING

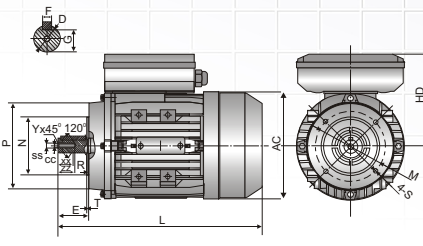
ML series aluminum housing single-phase dual-capacitor asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard.

ML motors have good performance, safety and reliable operation, nice appearance and, can be maintained very conveniently, while with low noises, little vibration and at the same time of lightweight and simple construction. The compositive performance is good, the multiple of starting torque is 1.8~2.5.

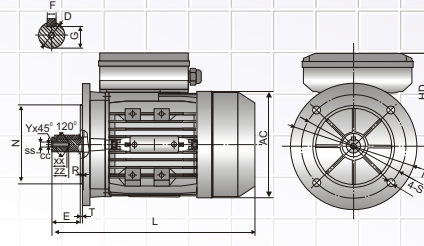
These series motors are suitable for the occasion where the requirements of big starting torque and high over load, such as air-compressors, pumps, fans, medical apparatus and instruments, and many other small machines.



IMB3



IMB14



IMB5

Overall & Installation Dimensions

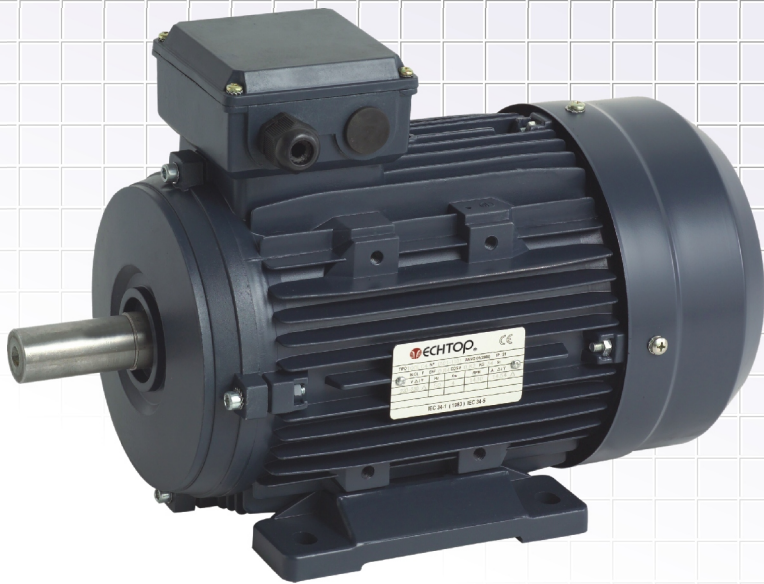
Frame Size	MOUNTING DIMENSIONS																		OVERALL DIMENSIONS					SHAFT END SCREW DIMENSIONS							
	IMB14										IMB5																				
	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	M	N	P	R	S	T	AA	AC	AD	HD	L	SS	XX	ZZ	CC	Y
63	100	80	40	11	23	4	8.5	63	7X10	75	60	90	0	M5	2.5	115	95	140	0	φ 10	3.0	120	130	179	116	212	M4	10	15	3.3	0.8
71	112	90	45	14	30	5	11	71	7X10	85	70	105	0	M6	2.5	130	110	160	0	φ 10	3.5	132	145	194	123	255	M5	12	18	4.2	0.8
80	125	100	50	19	40	6	15.5	80	10X13	100	80	120	0	M6	3.0	165	130	200	0	φ 12	3.5	157	165	223	143	290	M6	16	22	5	1
90S	140	100	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	φ 12	3.5	172	185	240	150	335	M8	20	25	6.8	1
90L	140	125	56	24	50	8	20	90	10X13	115	95	140	0	M8	3.0	165	130	200	0	φ 12	3.5	172	185	240	150	365	M8	20	25	6.8	1
100L	160	140	63	28	60	8	24	100	12X15	130	110	160	0	M8	3.5	215	180	250	0	φ 15	4.0	196	205	260	160	445	M10	22	28	8.5	1.5
112M	190	140	70	28	60	8	24	112	12X15	130	110	160	0	M8	3.5	215	180	250	0	φ 15	4.0	222	230	295	183	453	M10	22	28	8.5	1.5

TECHNICAL DATA @230V

Model	Power (kW)	Current (A)	Speed (r/min)	Eff. (%)	Power Factor	Rated Torque (N.M)	Tstart/Tn (Times)	Tmax/Tn (Times)	Starting Current (A)	Run Capacitor (μ f/V)	Start Capacitor (μ f/V)	Noise dB(A)	W.t. (Kg)
ML631-2	0.18	1.31	2750	65	0.92	0.63	2.5	1.7	8	8 μ F/450V	40 μ F/250V	70	4.2
ML632-2	0.25	1.76	2760	67	0.92	0.87	2.5	1.7	10	10 μ F/450V	50 μ F/250V	73	4.7
ML711-2	0.37	2.42	2780	70	0.95	1.27	2.5	1.7	15	12 μ F/450V	75 μ F/250V	75	5.3
ML712-2	0.55	3.45	2790	73	0.95	1.88	2.5	1.7	20	16 μ F/450V	100 μ F/250V	76	7.4
ML801-2	0.75	4.54	2800	74	0.97	2.59	2.5	1.7	30	20 μ F/450V	100 μ F/250V	76	9.5
ML802-2	1.1	6.45	2810	76	0.97	3.74	2.5	1.7	40	25 μ F/450V	150 μ F/250V	79	11.2
ML90S-2	1.5	8.62	2810	78	0.97	5.10	2.5	1.8	55	40 μ F/450V	150 μ F/250V	84	14
ML90L-2	2.2	12.5	2810	79	0.97	7.48	2.2	1.8	75	50 μ F/450V	250 μ F/250V	84	17
ML100L-2	3.0	16.6	2830	80	0.98	10.12	2.2	2.0	95	60 μ F/450V	400 μ F/300V	88	25
ML112M-2	3.7	20.5	2850	80	0.98	12.40	2.0	2.0	120	60 μ F/450V	500 μ F/300V	90	30.5
ML631-4	0.12	1.04	1350	55	0.91	0.85	2.5	1.6	6	10 μ F/450V	40 μ F/250V	64	4
ML632-4	0.18	1.54	1360	56	0.91	1.26	2.5	1.6	8.5	12 μ F/450V	40 μ F/250V	64	4.8
ML711-4	0.25	1.94	1380	61	0.92	1.73	2.5	1.6	10	14 μ F/450V	50 μ F/250V	66	5.9
ML712-4	0.37	2.80	1380	62.5	0.92	2.56	2.5	1.5	15	16 μ F/450V	75 μ F/250V	68	6.9
ML801-4	0.55	3.80	1400	67	0.94	3.75	2.5	1.7	20	20 μ F/450V	100 μ F/250V	71	9.6
ML802-4	0.75	4.75	1410	73	0.94	5.08	2.5	1.7	30	25 μ F/450V	150 μ F/250V	71	10.8
ML90S-4	1.1	6.76	1410	74.5	0.95	7.45	2.2	1.8	40	30 μ F/450V	150 μ F/250V	74	13.5
ML90L-4	1.5	9.03	1420	76	0.95	10.09	2.2	1.8	55	40 μ F/450V	200 μ F/250V	79	16.5
ML100L1-4	2.2	12.6	1430	78	0.97	14.69	2.2	1.8	75	50 μ F/450V	300 μ F/250V	79	24
ML100L2-4	3	17.0	1440	79	0.97	19.90	2.2	1.8	95	60 μ F/450V	400 μ F/250V	83	30
ML112M-4	3.7	20.7	1440	80	0.97	24.54	2.0	2.0	120	60 μ F/450V	500 μ F/250V	86	36

MSBCC

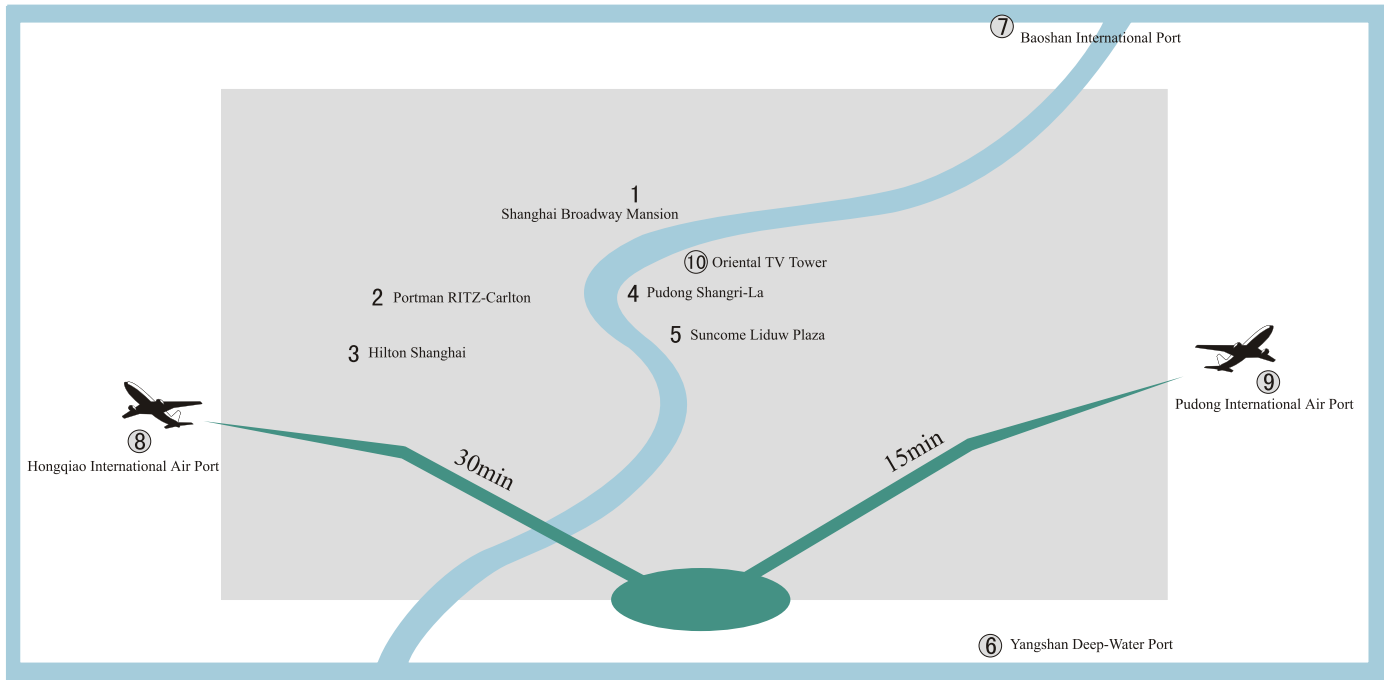
ASYNCHRONOUS THREE-PHASE BRAKE MOTORS WITH SQUIRREL CAGE ROTOR · DIRECT CURRENT BRAKE



MSBCC series -enclosed construction externally ventilated -sizes 63~160

The motors under this series result from coupling an asynchronous three-phase motor with an electromagnetic brake unit. Due to their safety and precision as well as their quick stop with a connection and disconnection time of a matter of 5~80 msec (milliseconds) they are suitable for a variety of applications such as:

- Braking of loads or torques on the driving shaft.
- Braking of rotary masses in order to avoid any down-times.
- Braking to increase the set-up precision.
- Braking of machine parts in case of danger, in compliance with accident prevention rules.



Please refer to the MS series motor overall dimensions (page 3 to 4)

TECHNICAL FEATURES

2 poles-3000rpm-50Hz

Brake motors have a $\pm 6\%$ tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCC631-2	0.18	2710	63	0.75	0.95	0.55	0.32	2.2	2.4	1.6	6	61
MSBCC632-2	0.25	2710	65	0.78	1.23	0.71	0.41	2.2	2.4	1.6	6	61
MSBCC633-2	0.37	2710	65	0.78	1.82	1.05	0.61	2.2	2.4	1.6	6	62
MSBCC711-2	0.37	2730	70	0.79	1.67	0.97	0.56	2.2	2.4	1.6	6	64
MSBCC712-2	0.55	2760	71	0.79	2.45	1.42	0.82	2.2	2.4	1.6	6	64
MSBCC713-2	0.75	2730	72	0.82	3.18	1.83	1.06	2.2	2.4	1.5	6	65
MSBCC801-2	0.75	2770	73	0.84	3.06	1.77	1.02	2.2	2.4	1.5	6	67
MSBCC802-2	1.1	2770	76.2	0.83	4.35	2.51	1.45	2.2	2.4	1.5	6	67
MSBCC803-2	1.5	2800	78.5	0.83	5.87	3.32	1.92	2.2	2.4	1.5	6	70
MSBCC90S-2	1.5	2840	78.5	0.84	5.76	3.28	1.90	2.2	2.4	1.5	6	72
MSBCC90L1-2	2.2	2840	81	0.85	8.0	4.61	2.66	2.2	2.4	1.4	6	72
MSBCC90L2-2	3	2840	82.6	0.86	10.56	6.10	3.52	2.2	2.4	1.4	6	74
MSBCC100L1-2	3	2840	82.6	0.87	10.44	6.03	3.48	2.2	2.3	1.4	7	76
MSBCC100L2-2	4	2850	84.2	0.87	13.65	7.88	4.55	2.2	2.3	1.4	7.5	77
MSBCC112M-2	4	2880	84.2	0.87	13.65	7.88	4.55	2.2	2.3	1.4	7.5	77
MSBCC112L-2	5.5	2880	85.7	0.88	18.23	10.53	6.08	2.2	2.3	1.2	7.5	78
MSBCC132S1-2	5.5	2900	85.7	0.88	18.23	10.53	6.08	2	2.2	1.2	7.5	80
MSBCC132S2-2	7.5	2920	87	0.88	24.49	14.14	8.16	2	2.2	1.2	7.5	80
MSBCC132M1-2	9.2	2930	88	0.89	29.87	17.25	9.96	2	2.2	1.2	7.5	81
MSBCC132M2-2	11	2930	88.4	0.9	34.57	19.96	11.52	2	2.2	1.2	7.5	83
MSBCC160M1-2	11	2940	88.4	0.9	34.57	19.96	11.52	2	2.2	1.2	7.5	86
MSBCC160M2-2	15	2940	89.4	0.91	46.09	26.61	15.36	2	2.2	1.2	7.5	86
MSBCC160L-2	18.5	2940	90	0.91	56.47	32.6	18.82	2	2.2	1.1	7.5	86

Type	Brake Type s	Static Brake torque Nm	Brake Rated Power W	J brake Pd ² kgm ²	No.of Starts/Hr. Under no load	Cut in Time Msec.	Cut-out Time ★normal Msec.	Cut-out Time ◆rapid Msec.	Noise dB(A)
MSBCC 63	S 63	2.5	18	0.00036	3000	20	40	25	68
MSBCC 71	S 71	4	18	0.00046	3000	15	100	30	68
MSBCC 80	S 80	9	25	0.00110	1300	15	120	45	69
MSBCC 90S	S 90	10	25	0.00122	1100	15	120	45	72
MSBCC 90L	S 90	10	25	0.00122	1100	15	120	45	74
MSBCC 100 L	S 100	12	35	0.00265	900	10	200	55	77
MSBCC 112 MT	S 100	12	35	0.00265	880	10	200	55	78
MSBCC 112 M	S 100	12	35	0.00265	800	10	200	55	78
MSBCC 132 S	S 132	17	35	0.00652	480	10	200	55	80
●MSBCC 132 S	S 160	30	65	0.01463	480	13	215	65	80
MSBCC 132 M	S 132	17	35	0.00652	450	10	200	55	83
●MSBCC 132 M	S 160	30	65	0.01463	450	13	215	65	83
MSBCC 160 MT	S 160	30	65	0.01463	350	13	215	65	86
MSBCC 160 L	S 160	30	65	0.01463	350	13		65	86

- Motor with increased braking torque on request
- ★ Standard rectifier AS -On request
- ◆ = ASR for quicker braking operations

4 poles-1500rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCC631-4	0.12	1350	57	0.64	0.82	0.47	0.27	2.2	2.4	1.7	6	52
MSBCC632-4	0.18	1350	59	0.65	1.17	0.68	0.39	2.2	2.4	1.7	6	52
MSBCC633-4	0.25	1350	60	0.66	1.58	0.91	0.53	2.2	2.4	1.7	6	54
MSBCC711-4	0.25	1350	60	0.72	1.45	0.84	0.48	2.2	2.4	1.7	6	55
MSBCC712-4	0.37	1370	65	0.74	1.92	1.11	0.64	2.2	2.4	1.7	6	55
MSBCC713-4	0.55	1380	66	0.75	2.78	1.60	0.93	2.2	2.4	1.7	6	57
MSBCC801-4	0.55	1370	67	0.75	2.74	1.58	0.91	2.2	2.4	1.7	6	58
MSBCC802-4	0.75	1380	72	0.78	3.34	1.93	1.11	2.2	2.4	1.6	6	58
MSBCC803-4	1.1	1390	76.2	0.78	4.63	2.67	1.54	2.2	2.4	1.6	6	60
MSBCC90S-4	1.1	1400	76.2	0.79	4.57	2.64	1.52	2.2	2.4	1.6	6	61
MSBCC90L-4	1.5	1400	78.5	0.8	5.97	3.45	1.99	2.2	2.4	1.6	6	61
MSBCC90L2-4	2.2	1400	81	0.8	8.45	4.90	2.83	2.2	2.4	1.5	7	63
MSBCC100L1-4	2.2	1420	81	0.81	8.38	4.84	2.79	2.2	2.3	1.5	7	64
MSBCC100L2-4	3	1420	82.6	0.81	11.21	6.47	3.74	2.2	2.3	1.5	7	64
MSBCC100L3-4	4	1430	84.2	0.82	14.18	8.36	4.83	2.2	2.3	1.5	7	65
MSBCC112M-4	4	1430	84.2	0.83	14.31	8.26	4.77	2.2	2.2	1.5	7	65
MSBCC112L-4	5.5	1440	85.7	0.83	19.33	11.16	6.44	2.2	2.2	1.4	7	68
MSBCC132S-4	5.5	1450	85.7	0.84	19.1	11.03	6.37	2.2	2.2	1.4	7	71
MSBCC132M-4	7.5	1450	87	0.85	25.35	14.64	8.45	2.2	2.2	1.4	7	71
MSBCC132L1-4	9.2	1460	87.5	0.85	30.92	17.85	10.31	2.2	2.2	1.4	7.5	74
MSBCC132L2-4	10	1460	88	0.85	33.42	19.3	11.14	2.2	2.2	1.4	7.5	74
MSBCC132L2-4	11	1460	88.4	0.86	36.17	20.88	12.06	2.2	2.2	1.4	7.5	74
MSBCC160M-4	11	1460	88.4	0.87	35.76	20.64	11.92	2.2	2.2	1.4	7	75
MSBCC160L-4	15	1460	88.4	0.87	48.76	28.15	16.25	2.2	2.2	1.4	7.5	75

Type	Brake Type s	Static Brake torque Nm	Brake Rated Power W	J brake Pd ² kgm ²	No.of Starts/Hr. Under no load	Cut in Time Msec.	Cut-out Time ★normal Msec.	Cut-out Time ◆rapld Msec.	Noise dB(A)
MSBCC 63	S 63	2.5	18	0.00036	3000	20	40	25	68
MSBCC 71	S 71	4	18	0.00046	3000	15	100	30	68
MSBCC 80	S 80	9	25	0.00110	1300	15	120	45	69
MSBCC 90S	S 90	10	25	0.00122	1100	15	120	45	69
MSBCC 90L	S 90	10	25	0.00122	1100	15	120	45	69
MSBCC 100 L	S 100	12	35	0.00265	900	10	200	55	66
MSBCC 112 MT	S 100	12	35	0.00265	880	10	200	55	68
MSBCC 112 M	S 100	12	35	0.00265	800	10	200	55	68
MSBCC 132 S	S 132	17	35	0.00652	480	10	200	55	71
●MSBCC 132 S	S 160	30	65	0.01463	480	13	215	65	71
MSBCC 132 M	S 132	17	35	0.00652	450	10	200	55	71
●MSBCC 132 M	S 160	30	65	0.01463	450	13	215	65	71
MSBCC 160 MT	S 160	30	65	0.01463	350	13	215	65	75
MSBCC 160 L	S 160	30	65	0.01463	350	13		65	75

●Motor with increased braking torque on request
★Standard rectifier AS -On request
◆= ASR for quicker braking operations

6 poles-1000rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCC631-6	0.09	840	42	0.61	0.88	0.51	0.29	2	2	1.5	3.5	50
MSBCC632-6	0.12	850	45	0.62	1.08	0.62	0.36	2	2	1.5	3.5	50
MSBCC711-6	0.18	880	56	0.66	1.22	0.70	0.41	1.6	1.7	1.5	4	52
MSBCC712-6	0.25	900	59	0.7	1.51	0.87	0.50	2.1	2.2	1.5	4	52
MSBCC713-6	0.37	890	61	0.69	2.2	1.27	0.73	2	2.1	1.5	4	54
MSBCC801-6	0.37	900	62	0.7	2.13	1.23	0.71	1.9	1.9	1.5	4	56
MSBCC802-6	0.55	900	67	0.72	2.85	1.65	0.95	2	2.3	1.5	4	56
MSBCC803-6	0.75	900	68	0.72	3.83	2.21	1.28	2	2.3	1.5	4	58
MSBCC90S-6	0.75	920	69	0.72	3.77	2.18	1.26	2.2	2.2	1.5	5.5	59
MSBCC90L-6	1.1	925	72	0.73	5.23	3.02	1.74	2.2	2.2	1.3	5.5	59
MSBCC100L-6	1.5	945	74	0.76	6.67	3.85	2.22	2.2	2.2	1.3	6	61
MSBCC112M-6	2.2	955	78	0.76	9.28	5.36	3.09	2.2	2.2	1.3	6	64
MSBCC132S-6	3	960	79	0.76	12.49	7.21	4.16	2	2	1.3	6.5	64
MSBCC132M1-6	4	960	80.5	0.76	16.35	9.44	5.45	2	2	1.3	6.5	68
MSBCC132M2-6	5.5	960	83	0.77	21.51	12.42	7.17	2	2	1.3	6.5	68
MSBCC132L-6	7.5	960	85	0.77	28.65	16.54	9.55	2	2	1.3	6.5	68
MSBCC160M-6	7.5	960	86	0.8	27.25	15.73	9.08	2	2.2	1.3	6.5	68
MSBCC160L-6	11	960	87.5	0.79	39.78	22.97	13.26	2	2.2	1.2	6.5	73

Type	Brake Type s	Static Brake torque Nm	Brake Rated Power W	J brake Pd ² kgm ²	No.of Starts/Hr. Under no load	Cut in Time Msec.	Cut-out Time ★normal Msec.	Cut-out Time ◆rapld Msec.	Noise dB(A)
MSBCC 63	S 63	2.5	18	0.00036	3000	20	40	25	68
MSBCC 71	S 71	4	18	0.00046	3000	15	100	30	68
MSBCC 80	S 80	9	25	0.00110	1300	15	120	45	69
MSBCC 90S	S 90	10	25	0.00122	1100	15	120	45	69
MSBCC 90L	S 90	10	25	0.00122	1100	15	120	45	69
MSBCC 100 L	S 100	12	35	0.00265	900	10	200	55	66
MSBCC 112 MT	S 100	12	35	0.00265	880	10	200	55	66
MSBCC 112 M	S 100	12	35	0.00265	800	10	200	55	66
MSBCC 132 S	S 132	17	35	0.00652	480	10	200	55	66
●MSBCC 132 S	S 160	30	65	0.01463	480	13	215	65	67
MSBCC 132 M	S 132	17	35	0.00652	450	10	200	55	68
●MSBCC 132 M	S 160	30	65	0.01463	450	13	215	65	68
MSBCC 160 MT	S 160	30	65	0.01463	350	13	215	65	73
MSBCC 160 L	S 160	30	65	0.01463	350	13		65	73

●Motor with increased braking torque on request
★Standard rectifier AS -On request
◆= ASR for quicker braking operations

8 poles-750rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCC711-8	0.09	680	48	0.56	0.84	0.48	0.28	1.5	1.7	1.3	3	50
MSBCC712-8	0.12	690	51	0.59	1.00	0.58	0.33	1.6	1.7	1.3	2.7	50
MSBCC801-8	0.18	680	51	0.61	1.45	0.84	0.48	1.5	1.7	1.3	2.8	52
MSBCC802-8	0.25	680	56	0.61	1.83	1.06	0.61	1.6	2	1.3	2.7	52
MSBCC90S-8	0.37	680	63	0.63	2.33	1.35	0.78	1.6	1.8	1.3	2.8	56
MSBCC90L-8	0.55	680	66	0.65	3.21	1.85	1.07	1.6	1.8	1.3	3	56
MSBCC100L1-8	0.75	710	66	0.67	4.24	2.45	1.41	1.7	2.1	1.3	3.5	59
MSBCC100L2-8	1.1	710	72	0.69	5.54	3.20	1.85	1.7	2.1	1.2	3.5	59
MSBCC112M-8	1.5	710	74	0.68	7.45	4.30	2.48	1.8	2.1	1.2	4.2	61
MSBCC132S-8	2.2	720	75	0.71	10.33	5.96	3.44	2	2	1.2	5.5	64
MSBCC132M-8	3	720	77	0.73	13.34	7.70	4.45	2	2	1.2	5.5	64
MSBCC160M1-8	4	730	80	0.73	17.12	9.89	5.71	1.9	2.1	1.2	6	68
MSBCC160M2-8	5.5	720	83.5	0.74	22.25	12.85	7.42	2	2.2	1.2	6	68
MSBCC160L-8	7.5	720	85	0.75	29.41	17.0	9.8	1.9	2.2	1.2	6	68

Type	Brake Type s	Static Brake torque Nm	Brake Rated Power W	J brake Pd ² kgm ²	No.of Starts/Hr. Under no load	Cut in Time Msec.	Cut-out Time ★normal Msec.	Cut-out Time ◆rapid Msec.	Noise dB(A)
MSBCC 71	S 71	4	18	0.00110	3000	15	100	30	68
MSBCC 80	S 80	9	25	0.00122	1300	15	120	45	69
MSBCC 90S	S 90	10	25	0.00122	1100	15	120	45	69
MSBCC 90L	S 90	10	25	0.00265	1100	15	120	45	69
MSBCC 100 L	S 100	12	35	0.00265	900	10	200	55	66
MSBCC 112 MT	S 100	12	35	0.00265	880	10	200	55	66
MSBCC 112 M	S 100	12	35	0.00652	800	10	200	55	66
MSBCC 132 S	S 132	17	35	0.01463	480	10	200	55	66
●MSBCC 132 S	S 160	30	65	0.00652	480	13	215	65	67
MSBCC 132 M	S 132	17	35	0.01463	450	10	200	55	66
●MSBCC 132 M	S 160	30	65	0.01463	450	13	215	65	67
MSBCC 160 MT	S 160	30	65	0.01463	350	13	215	65	68
MSBCC 160 L	S 160	30	65		350	13		65	68

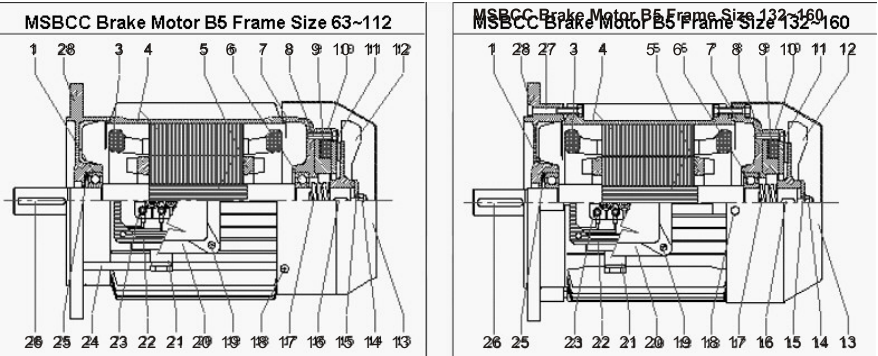
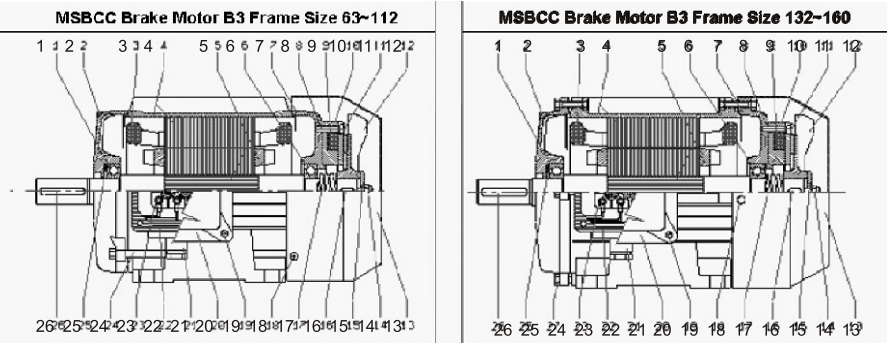
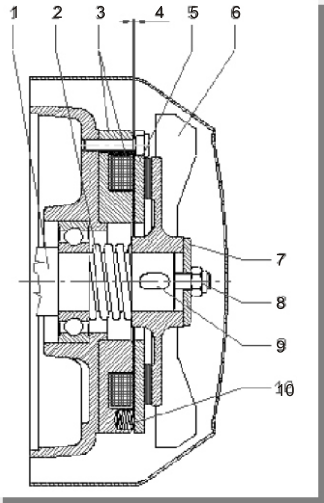
●Motor with increased braking torque on request
★Standard rectifier AS -On request
◆= ASR for quicker braking operations

OPERATING PRINCIPLE

The direct current brake is fed by means of an electronic circuit with diode bridge (rectifier) situated inside the motor. When feeding the electromagnet (3), the movable anchor equipped with friction packing (5) is attracted, thus allowing the fan (6) to turn solidary the motor shaft (1) by means of a key (9) and is kept in the right position by a spring (2), a washer (7) and by the stud bolt with self-locking nut (8). By interrupting the feeding, the movable anchor (5), pushed by three springs (10), exerts a pressure upon the friction surface of the fan (6), thus causing its stopping.

ADJUSTMENT OF THE AIR GAP

The air gap (4) is the distance between the electromagnet (3) and the movable anchor (5). It is recommended to check the air gap regularly, since due to the wear of the friction packing (5) tends to increase. Act on the self-locking nut of the stud bolt (8) to bring the air gap to the required value.
Pls. contact our technical department for information on the air gap adjustment values.



ASYNCHRONOUS THREE-PHASE BRAKE MOTORS with direct current brake -Type MSBCC Frame B3 Sizes 63~160 Type MSBCC Frame B5 Sizes 63~160 Enclosed construction -External ventilation

SPARE PARTS

- 1. Front bearing
- 2. Front shield
- 3. Winding
- 4. Frame with stator package
- 5. Shaft with rotor
- 6. Rear bearing
- 7. Rear shield
- 8. Electromagnetfixing screw
- 9. Brake coil with diode
- 10. Electromagnet
- 11. Movable anchor
- 12. Cooling fan
- 13. Fan hood
- 14. Stud bolt with self-locking nut
- 15. Washer
- 16. Braking side key
- 17. Spring
- 18. Fan hood fixing screw
- 19. Fixing screw for terminal-box
- 20. Terminal-box
- 21. Cable-holder
- 22. Packing
- 23. Terminal board
- 24. Tie-bolt
- 25. Compensating spring
- 26. Coupling side key
- 27. Fixing screw for shield
- 28. Flange shield

MSBCA

ASYNCHRONOUS THREE-PHASE BRAKE MOTORS
WITH SQUIRREL CAGE ROTOR • ALTERNATING CURRENT BRAKE



MSBCA series-enclosed construction externally ventilated sizes 63 ~160

The motors under this series result from coupling an asynchronous three-phase motor with an electromagnetic disc-brake unit. Due to their safety and precision as well as their quick stop with a connection and disconnection time of a matter of 5 to 80 milliseconds they are suitable for a variety of applications such as:

- braking of loads or torques on the driving shaft
- braking of rotary masses in order to avoid any down-times
- braking to increase the set-up precision
- braking of machine parts in case of danger, in compliance with accident prevention rules.



Please refer to the MS series motor overall dimensions (page 3 to 4)

TECHNICAL FEATURES

2 poles-3000rpm-50Hz
Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCA631-2	0.18	2710	63	0.75	0.95	0.55	0.32	2.2	2.4	1.6	6	61
MSBCA632-2	0.25	2710	65	0.78	1.23	0.71	0.41	2.2	2.4	1.6	6	61
MSBCA633-2	0.37	2710	65	0.78	1.82	1.05	0.61	2.2	2.4	1.6	6	62
MSBCA711-2	0.37	2730	70	0.79	1.67	0.97	0.56	2.2	2.4	1.6	6	64
MSBCA712-2	0.55	2760	71	0.79	2.45	1.42	0.82	2.2	2.4	1.6	6	64
MSBCA713-2	0.75	2730	72	0.82	3.18	1.83	1.06	2.2	2.4	1.5	6	65
MSBCA801-2	0.75	2770	73	0.84	3.06	1.77	1.02	2.2	2.4	1.5	6	67
MSBCA802-2	1.1	2770	76.2	0.83	4.35	2.51	1.45	2.2	2.4	1.5	6	67
MSBCA803-2	1.5	2800	78.5	0.83	5.87	3.32	1.92	2.2	2.4	1.5	6	70
MSBCA90S-2	1.5	2840	78.5	0.84	5.76	3.28	1.90	2.2	2.4	1.5	6	72
MSBCA90L1-2	2.2	2840	81	0.85	8.0	4.61	2.66	2.2	2.4	1.4	6	72
MSBCA90L2-2	3	2840	82.6	0.86	10.56	6.10	3.52	2.2	2.4	1.4	6	74
MSBCA100L1-2	3	2840	82.6	0.87	10.44	6.03	3.48	2.2	2.3	1.4	7	76
MSBCA100L2-2	4	2850	84.2	0.87	13.65	7.88	4.55	2.2	2.3	1.4	7.5	77
MSBCA112M-2	4	2880	84.2	0.87	13.65	7.88	4.55	2.2	2.3	1.4	7.5	77
MSBCA112L-2	5.5	2880	85.7	0.88	18.23	10.53	6.08	2.2	2.3	1.2	7.5	78
MSBCA132S1-2	5.5	2900	85.7	0.88	18.23	10.53	6.08	2	2.2	1.2	7.5	80
MSBCA132S2-2	7.5	2920	87	0.88	24.49	14.14	8.16	2	2.2	1.2	7.5	80
MSBCA132M1-2	9.2	2930	88	0.89	29.87	17.25	9.96	2	2.2	1.2	7.5	81
MSBCA132M2-2	11	2930	88.4	0.9	34.57	19.96	11.52	2	2.2	1.2	7.5	83
MSBCA160M1-2	11	2940	88.4	0.9	34.57	19.96	11.52	2	2.2	1.2	7.5	86
MSBCA160M2-2	15	2940	89.4	0.91	46.09	26.61	15.36	2	2.2	1.2	7.5	86
MSBCA160L-2	18.5	2940	90	0.91	56.47	32.6	18.82	2	2.2	1.1	7.5	86

Motor Type	Brake Type	Static Brake Torque Nm.	Brake Current @400V.A	No.of Starts/h under no load	Cut-in Msec.	Cut out Msec.	J Brake Kg ^m ²
MSBCA 63	60 MD/MS	1.2~4	0.07	3000	5	20	0.00007
MSBCA 71	70 MD/MS	2~9	0.10	3000	5	20	0.00038
MSBCA 80	MEC 71 MD/MS	6.8~17	0.15	1300	6	25	0.0005
MSBCA 90 S	90 S MD/MS	16~35	0.26	1100	6	25	0.001
MSBCA 90 L	90 S MD/MS	16~35	0.26	1100	6	25	0.001
MSBCA 100 L	100 MD/MS	12~48	0.32	900	8	35	0.0016
●MSBCA 100 L	100 DD/MS	24~96	0.32	900	8	35	0.0032
MSBCA 112 MT	100 MD/MS	12~48	0.32	880	8	35	0.0016
●MSBCA 112 MT	100 DD/MS	24~96	0.32	880	8	35	0.0032
MSBCA 132 M	120 MD/MS	22~90	0.47	480	10	40	0.0053
MSBCA 132 S	120 MD/MS	22~90	0.47	480	10	40	0.0053
●1MSBCA 32 M	120 DD/MS	42~180	0.47	450	10	40	0.010
●MSBCA 132 S	120 DD/MS	42~180	0.47	450	10	40	0.010
MSBCA 160 MT	140 MD/MS	37~130	0.57	350	15	60	0.005
●MSBCA 160 MT	140 DD/MS	74~260	0.57	350	15	60	0.009
MSBCA 160 L	160 MD/MS	60~150	0.76	350	15	60	0.006
●MSBCA 160 L	160 DD/MS	120~300	0.76	350	15	60	0.011

● Motors with increased braking torque, on request.

4 poles-1500rpm-50Hz
Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCA631-4	0.12	1350	57	0.64	0.82	0.47	0.27	2.2	2.4	1.7	6	52
MSBCA632-4	0.18	1350	59	0.65	1.17	0.68	0.39	2.2	2.4	1.7	6	52
MSBCA633-4	0.25	1350	60	0.66	1.58	0.91	0.53	2.2	2.4	1.7	6	54
MSBCA711-4	0.25	1350	60	0.72	1.45	0.84	0.48	2.2	2.4	1.7	6	55
MSBCA712-4	0.37	1370	65	0.74	1.92	1.11	0.64	2.2	2.4	1.7	6	55
MSBCA713-4	0.55	1380	66	0.75	2.78	1.60	0.93	2.2	2.4	1.7	6	57
MSBCA801-4	0.55	1370	67	0.75	2.74	1.58	0.91	2.2	2.4	1.7	6	58
MSBCA802-4	0.75	1380	72	0.78	3.34	1.93	1.11	2.2	2.4	1.6	6	58
MSBCA803-4	1.1	1390	76.2	0.78	4.63	2.67	1.54	2.2	2.4	1.6	6	60
MSBCA90S-4	1.1	1400	76.2	0.79	4.57	2.64	1.52	2.2	2.4	1.6	6	61
MSBCA90L-4	1.5	1400	78.5	0.8	5.97	3.45	1.99	2.2	2.4	1.6	6	61
MSBCA90L2-4	2.2	1400	81	0.8	8.45	4.90	2.83	2.2	2.4	1.5	7	63
MSBCA100L1-4	2.2	1420	81	0.81	8.38	4.84	2.79	2.2	2.3	1.5	7	64
MSBCA100L2-4	3	1420	82.6	0.81	11.21	6.47	3.74	2.2	2.3	1.5	7	64
MSBCA100L3-4	4	1430	84.2	0.82	14.18	8.36	4.83	2.2	2.3	1.5	7	65
MSBCA112M-4	4	1430	84.2	0.83	14.31	8.26	4.77	2.2	2.2	1.5	7	65
MSBCA112L-4	5.5	1440	85.7	0.83	19.33	11.16	6.44	2.2	2.2	1.4	7	68
MSBCA132S-4	5.5	1450	85.7	0.84	19.1	11.03	6.37	2.2	2.2	1.4	7	71
MSBCA132M-4	7.5	1450	87	0.85	25.35	14.64	8.45	2.2	2.2	1.4	7	71
MSBCA132L1-4	9.2	1460	87.5	0.85	30.92	17.85	10.31	2.2	2.2	1.4	7.5	74
MSBCA132L2-4	10	1460	88	0.85	33.42	19.3	11.14	2.2	2.2	1.4	7.5	74
MSBCA132L2-4	11	1460	88.4	0.86	36.17	20.88	12.06	2.2	2.2	1.4	7.5	74
MSBCA160M-4	11	1460	88.4	0.87	35.76	20.64	11.92	2.2	2.2	1.4	7	75
MSBCA160L-4	15	1460	88.4	0.87	48.76	28.15	16.25	2.2	2.2	1.4	7.5	75

Motor Type	Brake Type	Static Brake Torque Nm.	Brake Current @400V.A	No.of Starts/h under no load	Cut-in Msec.	Cut out Msec.	J Brake Kgm ²
MSBCA 63	60 MD/MS	1.2~4	0.07	3000	5	20	0.00007
MSBCA 71	70 MD/MS	2~9	0.10	3000	5	20	0.00038
MSBCA 80	MEC 71 MD/MS	6.8~17	0.15	1300	6	25	0.0005
MSBCA 90 S	90 S MD/MS	16~35	0.26	1100	6	25	0.001
MSBCA 90 L	90 S MD/MS	16~35	0.26	1100	6	25	0.001
MSBCA 100 L	100 MD/MS	12~48	0.32	900	8	35	0.0016
●MSBCA 100 L	100 DD/MS	24~96	0.32	900	8	35	0.0032
MSBCA 112 MT	100 MD/MS	12~48	0.32	880	8	35	0.0016
●MSBCA 112 MT	100 DD/MS	24~96	0.32	880	8	35	0.0032
MSBCA 132 M	120 MD/MS	22~90	0.47	480	10	40	0.0053
MSBCA 132 S	120 MD/MS	22~90	0.47	480	10	40	0.0053
●1MSBCA 32 M	120 DD/MS	42~180	0.47	450	10	40	0.010
●MSBCA 132 S	120 DD/MS	42~180	0.47	450	10	40	0.010
MSBCA 160 MT	140 MD/MS	37~130	0.57	350	15	60	0.005
●MSBCA 160 MT	140 DD/MS	74~260	0.57	350	15	60	0.009
MSBCA 160 L	160 MD/MS	60~150	0.76	350	15	60	0.006
●MSBCA 160 L	160 DD/MS	120~300	0.76	350	15	60	0.011

● Motors with increased braking torque, on request.

6 poles-1000rpm-50Hz
Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCA631-6	0.09	840	42	0.61	0.88	0.51	0.29	2	2	1.5	3.5	50
MSBCA632-6	0.12	850	45	0.62	1.08	0.62	0.36	2	2	1.5	3.5	50
MSBCA711-6	0.18	880	56	0.66	1.22	0.70	0.41	1.6	1.7	1.5	4	52
MSBCA712-6	0.25	900	59	0.7	1.51	0.87	0.50	2.1	2.2	1.5	4	52
MSBCA713-6	0.37	890	61	0.69	2.2	1.27	0.73	2	2.1	1.5	4	54
MSBCA801-6	0.37	900	62	0.7	2.13	1.23	0.71	1.9	1.9	1.5	4	56
MSBCA802-6	0.55	900	67	0.72	2.85	1.65	0.95	2	2.3	1.5	4	56
MSBCA803-6	0.75	900	68	0.72	3.83	2.21	1.28	2	2.3	1.5	4	58
MSBCA90S-6	0.75	920	69	0.72	3.77	2.18	1.26	2.2	2.2	1.5	5.5	59
MSBCA90L-6	1.1	925	72	0.73	5.23	3.02	1.74	2.2	2.2	1.3	5.5	59
MSBCA100L-6	1.5	945	74	0.76	6.67	3.85	2.22	2.2	2.2	1.3	6	61
MSBCA112M-6	2.2	955	78	0.76	9.28	5.36	3.09	2.2	2.2	1.3	6	64
MSBCA132S-6	3	960	79	0.76	12.49	7.21	4.16	2	2	1.3	6.5	64
MSBCA132M1-6	4	960	80.5	0.76	16.35	9.44	5.45	2	2	1.3	6.5	68
MSBCA132M2-6	5.5	960	83	0.77	21.51	12.42	7.17	2	2	1.3	6.5	68
MSBCA132L-6	7.5	960	85	0.77	28.65	16.54	9.55	2	2	1.3	6.5	68
MSBCA160M-6	7.5	960	86	0.8	27.25	15.73	9.08	2	2.2	1.3	6.5	68
MSBCA160L-6	11	960	87.5	0.79	39.78	22.97	13.26	2	2.2	1.2	6.5	73

Motor Type	Brake Type	Static Brake Torque Nm.	Brake Current @400V.A	No.of Starts/h under no load	Cut-in Msec.	Cut out Msec.	J Brake Kgm ²
MSBCA 63	60 MD/MS	1.2~4	0.07	3000	5	20	0.00007
MSBCA 71	70 MD/MS	2~9	0.10	3000	5	20	0.00038
MSBCA 80	MEC 71 MD/MS	6.8~17	0.15	1300	6	25	0.0005
MSBCA 90 S	90 S MD/MS	16~35	0.26	1100	6	25	0.001
MSBCA 90 L	90 S MD/MS	16~35	0.26	1100	6	25	0.001
MSBCA 100 L	100 MD/MS	12~48	0.32	900	8	35	0.0016
●MSBCA 100 L	100 DD/MS	24~96	0.32	900	8	35	0.0032
MSBCA 112 MT	100 MD/MS	12~48	0.32	880	8	35	0.0016
●MSBCA 112 MT	100 DD/MS	24~96	0.32	880	8	35	0.0032
MSBCA 132 M	120 MD/MS	22~90	0.47	480	10	40	0.0053
MSBCA 132 S	120 MD/MS	22~90	0.47	480	10	40	0.0053
●1MSBCA 32 M	120 DD/MS	42~180	0.47	450	10	40	0.010
●MSBCA 132 S	120 DD/MS	42~180	0.47	450	10	40	0.010
MSBCA 160 MT	140 MD/MS	37~130	0.57	350	15	60	0.005
●MSBCA 160 MT	140 DD/MS	74~260	0.57	350	15	60	0.009
MSBCA 160 L	160 MD/MS	60~150	0.76	350	15	60	0.006
●MSBCA 160 L	160 DD/MS	120~300	0.76	350	15	60	0.011

● Motors with increased braking torque, on request.

TECHNICAL FEATURES

8 poles-750rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCA711-8	0.09	680	48	0.56	0.84	0.48	0.28	1.5	1.7	1.3	3	50
MSBCA712-8	0.12	690	51	0.59	1.00	0.58	0.33	1.6	1.7	1.3	2.7	50
MSBCA801-8	0.18	680	51	0.61	1.45	0.84	0.48	1.5	1.7	1.3	2.8	52
MSBCA802-8	0.25	680	56	0.61	1.83	1.06	0.61	1.6	2	1.3	2.7	52
MSBCA90S-8	0.37	680	63	0.63	2.33	1.35	0.78	1.6	1.8	1.3	2.8	56
MSBCA90L-8	0.55	680	66	0.65	3.21	1.85	1.07	1.6	1.8	1.3	3	56
MSBCA100L1-8	0.75	710	66	0.67	4.24	2.45	1.41	1.7	2.1	1.3	3.5	59
MSBCA100L2-8	1.1	710	72	0.69	5.54	3.20	1.85	1.7	2.1	1.2	3.5	59
MSBCA112M-8	1.5	710	74	0.68	7.45	4.30	2.48	1.8	2.1	1.2	4.2	61
MSBCA132S-8	2.2	720	75	0.71	10.33	5.96	3.44	2	2	1.2	5.5	64
MSBCA132M-8	3	720	77	0.73	13.34	7.70	4.45	2	2	1.2	5.5	64
MSBCA160M1-8	4	730	80	0.73	17.12	9.89	5.71	1.9	2.1	1.2	6	68
MSBCA160M2-8	5.5	720	83.5	0.74	22.25	12.85	7.42	2	2.2	1.2	6	68
MSBCA160L-8	7.5	720	85	0.75	29.41	17.0	9.8	1.9	2.2	1.2	6	68

Motor Type	Brake Type	Static Brake Torque Nm.	Brake Current @400V.A	No.of Starts/h under no load	Cut-in Msec.	Cut out Msec.	J Brake Kg ^m
MSBCA 71	70 MD/MS	2~9	0.10	3000	5	20	0.00038
MSBCA 80	MEC 71 MD/MS	6.8~17	0.15	1300	6	25	0.0005
MSBCA 90 S	90 S MD/MS	16~35	0.26	1100	6	25	0.001
MSBCA 90 L	90 S MD/MS	16~35	0.26	1100	6	25	0.001
MSBCA 100 L	100 MD/MS	12~48	0.32	900	8	35	0.0016
●MSBCA 100 L	100 DD/MS	24~96	0.32	900	8	35	0.0032
MSBCA 112 MT	100 MD/MS	12~48	0.32	880	8	35	0.0016
●MSBCA 112 MT	100 DD/MS	24~96	0.32	880	8	35	0.0032
MSBCA 132 M	120 MD/MS	22~90	0.47	480	10	40	0.0053
MSBCA 132 S	120 MD/MS	22~90	0.47	480	10	40	0.0053
●1MSBCA 32 M	120 DD/MS	42~180	0.47	450	10	40	0.010
●MSBCA 132 S	120 DD/MS	42~180	0.47	450	10	40	0.010
MSBCA 160 MT	140 MD/MS	37~130	0.57	350	15	60	0.005
●MSBCA 160 MT	140 DD/MS	74~260	0.57	350	15	60	0.009
MSBCA 160 L	160 MD/MS	60~150	0.76	350	15	60	0.006
●MSBCA 160 L	160 DD/MS	120~300	0.76	350	15	60	0.011

● Motors with increased braking torque, on request.

ELECTROMAGNETIC DISK BRAKE SERIES CA

OPERATING PRINCIPLE

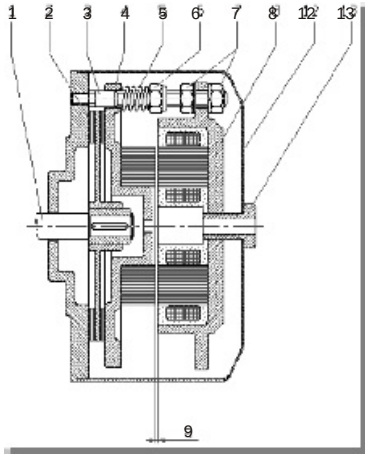
A) When brake is fed, the electromagnet (8) overcomes the strength exerted by the springs (5), attracts the moving core (4), releases the brake disc (2) and enables the motor shaft to rotate freely.
B) When the electromagnet (8) is not fed, the moving core pushed by the springs (5) actuates on the brake disc (2) and stops the rotation of the driving shaft.

ADJUSTMENT OF THE BRAKING TORQUE

The braking torque is proportional to the compression of springs (5) and is varied by turning the self-locking nuts (6); the more springs are compressed, the greater the braking torque is.

ADJUSTMENT OF THE AIR GAP

The air gap (9) is the distance between electromagnet (8) and the moving core (4). It is recommended to check the air gap regularly, since due to wear of the packings of the brake disc (2) it tends to increase. Turn nuts (7) to bring the air gap to the required value. Pls. contact our technical department for information on the air gap adjustment values.



ELECTROMAGNETIC TWODISC BRAKE

OPERATING PRINCIPLE

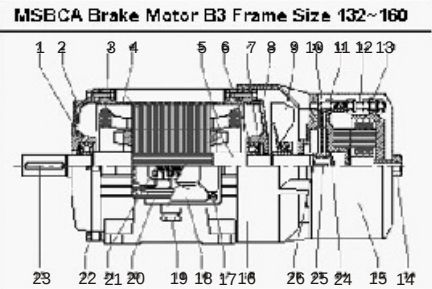
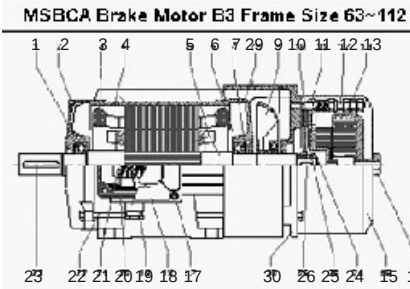
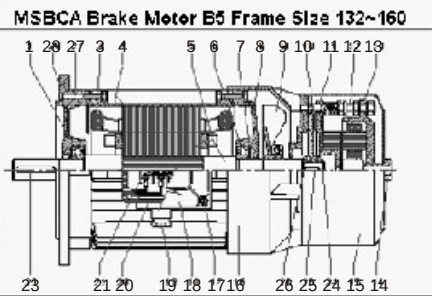
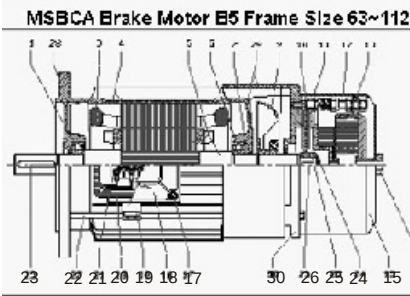
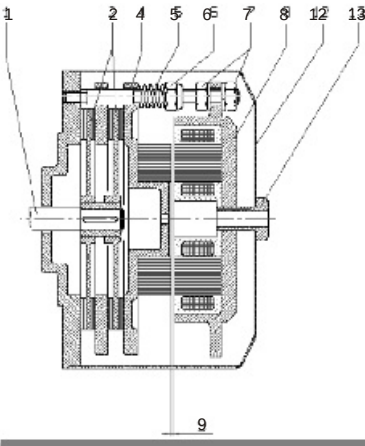
A) When brake is fed, the electromagnet (8) overcomes the strength exerted by the springs (5), attracts the moving core (4), releases the brake discs (2) and enables the motor shaft (1) to rotate freely.
B) When the electromagnet (8) is not fed, the moving core pushed by the springs (5) actuates on the brake discs (2) and stops the rotation of the driving shaft.

ADJUSTMENT OF THE BRAKING TORQUE

The braking torque is proportional to the compression of springs (5) and is varied by turning the self-locking nuts (6); the more springs are compressed, the greater the braking torque is.

ADJUSTMENT OF THE AIR GAP

The air gap (9) is the distance between electromagnet (8) and the moving core (4). It is recommended to check the air gap regularly, since due to wear of the packing of the brake disc (2) it tends to increase. Turn nuts (7) to bring the air gap to the required value. Pls. contact our technical department for information on the air gap adjustment values.



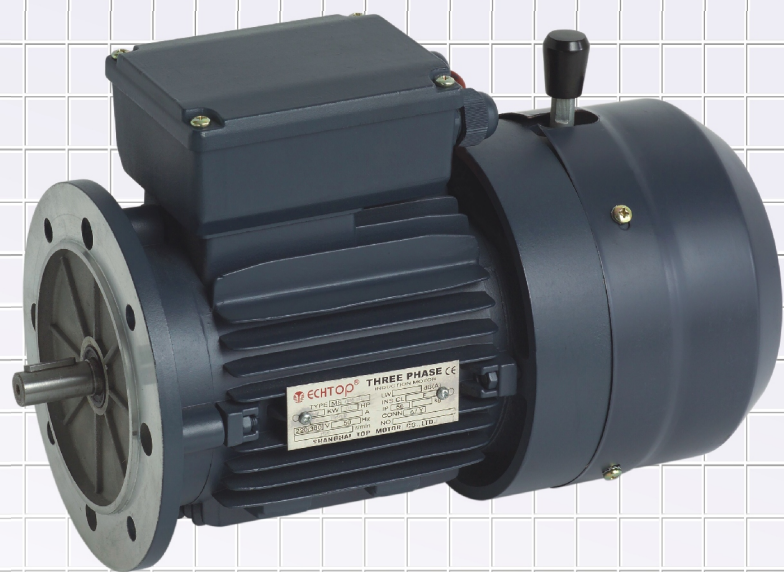
ASYNCHRONOUS THREE-PHASE BRAKE MOTORS with squirrel cage rotor -Type MSBCA
Frame B3 Sizes 63~160 Type MSBCA Frame B5 Sizes 63~160 Enclosed construction -External ventilation

SPARE PARTS

1. Front bearing
2. Front shield
3. Winding
4. Frame with stator package
5. Shaft with rotor
6. Rear bearing
7. Compensating spring
8. Rear shield
9. Cooling fan
10. Brake disc
11. Moving anchor
12. Stud bolt with brake adjustment nuts
13. Electromagnet
14. Fixing bushing for brake hood
15. Brake hood
16. Brake holder
17. Fixing screw for terminal cover
18. Terminal-box cover
19. Cable-holder
20. Packing
21. Terminal box
22. Tie-bolt
23. Coupling side key
24. Seeger elastic ring
25. Brake side key
26. Toothed pignon
27. Fixing screw for shield
28. Shield with flange
29. Shield hood
30. Core

MSBCCL

ASYNCHRONOUS THREE-PHASE BRAKE MOTORS
WITH SQUIRREL CAGE ROTOR · DIRECT CURRENT BRAKE



MSBCCL series -enclosed construction externally ventilated -sizes 63 ~ 160

The brake-motors of the MSBCCL series result from coupling an asynchronous three-phase motor and an electromagnetic D.C. brake unit. Due to their reliability and operating safety, as well as their quick braking time (connection & disconnection time = 5~80 milliseconds) they are suitable for a great variety of applications, as:

- Braking of loads or torques on the driving shaft.
- Braking of rotating masses to reduce any lost-time.
- Braking operations to increase the set-up precision.
- Braking of machine parts, according to safety rules.

One Universal Electric Institvte

An industry pioneer in Permanent Magnet slot less & Brushless DC Motor research and manufacturing area awarded the Name of Shanghai new and high-tech enterprise by the right of self-intellectual asset on patent for invention.

Please refer to the MS series motor overall dimensions (page 3 to 4)

TECHNICAL FEATURES

2 poles-3000rpm-50Hz

Brake motors have a $\pm 6\%$ tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCCL631-2	0.18	2710	63	0.75	0.95	0.55	0.32	2.2	2.4	1.6	6	61
MSBCCL632-2	0.25	2710	65	0.78	1.23	0.71	0.41	2.2	2.4	1.6	6	61
MSBCCL633-2	0.37	2710	65	0.78	1.82	1.05	0.61	2.2	2.4	1.6	6	62
MSBCCL711-2	0.37	2730	70	0.79	1.67	0.97	0.56	2.2	2.4	1.6	6	64
MSBCCL712-2	0.55	2760	71	0.79	2.45	1.42	0.82	2.2	2.4	1.6	6	64
MSBCCL713-2	0.75	2730	72	0.82	3.18	1.83	1.06	2.2	2.4	1.5	6	65
MSBCCL801-2	0.75	2770	73	0.84	3.06	1.77	1.02	2.2	2.4	1.5	6	67
MSBCCL802-2	1.1	2770	76.2	0.83	4.35	2.51	1.45	2.2	2.4	1.5	6	67
MSBCCL803-2	1.5	2800	78.5	0.83	5.87	3.32	1.92	2.2	2.4	1.5	6	70
MSBCCL90S-2	1.5	2840	78.5	0.84	5.76	3.28	1.90	2.2	2.4	1.5	6	72
MSBCCL90L1-2	2.2	2840	81	0.85	8.0	4.61	2.66	2.2	2.4	1.4	6	72
MSBCCL90L2-2	3	2840	82.6	0.86	10.56	6.10	3.52	2.2	2.4	1.4	6	74
MSBCCL100L1-2	3	2840	82.6	0.87	10.44	6.03	3.48	2.2	2.3	1.4	7	76
MSBCCL100L2-2	4	2850	84.2	0.87	13.65	7.88	4.55	2.2	2.3	1.4	7.5	77
MSBCCL112M-2	4	2880	84.2	0.87	13.65	7.88	4.55	2.2	2.3	1.4	7.5	77
MSBCCL112L-2	5.5	2880	85.7	0.88	18.23	10.53	6.08	2.2	2.3	1.2	7.5	78
MSBCCL132S1-2	5.5	2900	85.7	0.88	18.23	10.53	6.08	2	2.2	1.2	7.5	80
MSBCCL132S2-2	7.5	2920	87	0.88	24.49	14.14	8.16	2	2.2	1.2	7.5	80
MSBCCL132M1-2	9.2	2930	88	0.89	29.87	17.25	9.96	2	2.2	1.2	7.5	81
MSBCCL132M2-2	11	2930	88.4	0.9	34.57	19.96	11.52	2	2.2	1.2	7.5	83
MSBCCL160M1-2	11	2940	88.4	0.9	34.57	19.96	11.52	2	2.2	1.2	7.5	86
MSBCCL160M2-2	15	2940	89.4	0.91	46.09	26.61	15.36	2	2.2	1.2	7.5	86
MSBCCL160L-2	18.5	2940	90	0.91	56.47	32.6	18.82	2	2.2	1.1	7.5	86

Type	Brake Type k	Brake torque Nm	Brake Rated Power W	J brake Pd ² kgm ²	No.of Starts/Hr. Under no load	Delayed Cut-in Time★ Msec.	Quick Cut-in Time Msec.	Cut out Time Msec.	Noise dB(A)
MSBCCL63	K 1	5	15	0.00005	3000	45	20	10	62
MSBCCL 71	K 2	12	20	0.00014	3000	50	30	15	64
MSBCCL 80	K 3	16	25	0.00021	1300	55	30	15	67
MSBCCL 90S	K 4	20	30	0.00039	1100	65	40	15	72
●MSBCCL 90S	K 4 D	40	30	0.00078	1100	65	40	15	72
MSBCCL 90 L	K 4	20	30	0.00039	1100	65	40	15	72
●MSBCCL 90 L	K 4 D	40	30	0.00078	1100	65	40	15	72
MSBCCL 100 L	K 5	40	45	0.00104	900	75	45	20	76
●MSBCCL 100 L	K 6	60	50	0.00135	900	180	85	25	76
MSBCCL 112 MT	K 5	40	45	0.00104	880	75	45	20	77
MSBCCL 112 M	K 6	60	50	0.00135	880	180	85	25	78
MSBCCL 132 S	K 7	90	55	0.00219	480	200	95	50	80
●MSBCCL 132 S	K 7 D	180	55	0.00438	480	200	95	50	80
MSBCCL 132 M	K 7	90	55	0.00219	450	200	95	50	80
●MSBCCL 132 M	K 7 D	180	55	0.00438	480	200	95	50	80
MSBCCL 160 MT	K 7 D	180	55	0.00438	350	200	95	50	86
MSBCCL 160 L	K 8	200	60	0.00408	350	210	100	60	86
●MSBCCL 160 L	K 8 D	400	60	0.00816	350	210	100	60	86

- Motor with increased braking torque on request
★On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

4 poles-1500rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCCL631-4	0.12	1350	57	0.64	0.82	0.47	0.27	2.2	2.4	1.7	6	52
MSBCCL632-4	0.18	1350	59	0.65	1.17	0.68	0.39	2.2	2.4	1.7	6	52
MSBCCL633-4	0.25	1350	60	0.66	1.58	0.91	0.53	2.2	2.4	1.7	6	54
MSBCCL711-4	0.25	1350	60	0.72	1.45	0.84	0.48	2.2	2.4	1.7	6	55
MSBCCL712-4	0.37	1370	65	0.74	1.92	1.11	0.64	2.2	2.4	1.7	6	55
MSBCCL713-4	0.55	1380	66	0.75	2.78	1.60	0.93	2.2	2.4	1.7	6	57
MSBCCL801-4	0.55	1370	67	0.75	2.74	1.58	0.91	2.2	2.4	1.7	6	58
MSBCCL802-4	0.75	1380	72	0.78	3.34	1.93	1.11	2.2	2.4	1.6	6	58
MSBCCL803-4	1.1	1390	76.2	0.78	4.63	2.67	1.54	2.2	2.4	1.6	6	60
MSBCCL90S-4	1.1	1400	76.2	0.79	4.57	2.64	1.52	2.2	2.4	1.6	6	61
MSBCCL90L-4	1.5	1400	78.5	0.8	5.97	3.45	1.99	2.2	2.4	1.6	6	61
MSBCCL90L2-4	2.2	1400	81	0.8	8.45	4.90	2.83	2.2	2.4	1.5	7	63
MSBCCL100L1-4	2.2	1420	81	0.81	8.38	4.84	2.79	2.2	2.3	1.5	7	64
MSBCCL100L2-4	3	1420	82.6	0.81	11.21	6.47	3.74	2.2	2.3	1.5	7	64
MSBCCL100L3-4	4	1430	84.2	0.82	14.18	8.36	4.83	2.2	2.3	1.5	7	65
MSBCCL112M-4	4	1430	84.2	0.83	14.31	8.26	4.77	2.2	2.2	1.5	7	65
MSBCCL112L-4	5.5	1440	85.7	0.83	19.33	11.16	6.44	2.2	2.2	1.4	7	68
MSBCCL132S-4	5.5	1450	85.7	0.84	19.1	11.03	6.37	2.2	2.2	1.4	7	71
MSBCCL132M-4	7.5	1450	87	0.85	25.35	14.64	8.45	2.2	2.2	1.4	7	71
MSBCCL132L1-4	9.2	1460	87.5	0.85	30.92	17.85	10.31	2.2	2.2	1.4	7.5	74
MSBCCL132L2-4	10	1460	88	0.85	33.42	19.3	11.14	2.2	2.2	1.4	7.5	74
MSBCCL132L2-4	11	1460	88.4	0.86	36.17	20.88	12.06	2.2	2.2	1.4	7.5	74
MSBCCL160M-4	11	1460	88.4	0.87	35.76	20.64	11.92	2.2	2.2	1.4	7	75
MSBCCL160L-4	15	1460	88.4	0.87	48.76	28.15	16.25	2.2	2.2	1.4	7.5	75

Type	Brake Type k	Brake torque Nm	Brake Rated Power W	J brake Pd² kgm²	No.of Starts/Hr. Under no load	Delayed Cut-in Time★ Msec.	Quick Cut-in Time Msec.	Cut out Time Msec.	Noise dB(A)
MSBCCL63	K 1	5	15	0.00005	3000	45	20	10	52
MSBCCL 71	K 2	12	20	0.00014	3000	50	30	15	55
MSBCCL 80	K 3	16	25	0.00021	1300	55	30	15	58
MSBCCL 90S	K 4	20	30	0.00039	1100	65	40	15	61
●MSBCCL 90S	K 4 D	40	30	0.00078	1100	65	40	15	61
MSBCCL 90 L	K 4	20	30	0.00039	1100	65	40	15	63
●MSBCCL 90 L	K 4 D	40	30	0.00078	1100	65	40	15	63
MSBCCL 100 L	K 5	40	45	0.00104	900	75	45	20	64
●MSBCCL 100 L	K 6	60	50	0.00135	900	180	85	25	65
MSBCCL 112 MT	K 5	40	45	0.00104	880	75	45	20	65
MSBCCL 112 M	K 6	60	50	0.00135	880	180	85	25	65
MSBCCL 132 S	K 7	90	55	0.00219	480	200	95	50	71
●MSBCCL 132 S	K 7 D	180	55	0.00438	480	200	95	50	71
MSBCCL 132 M	K 7	90	55	0.00219	450	200	95	50	71
●MSBCCL 132 M	K 7 D	180	55	0.00438	480	200	95	50	71
MSBCCL 160 MT	K 7 D	180	55	0.00438	350	200	95	50	75
MSBCCL 160 L	K 8	200	60	0.00408	350	210	100	60	75
●MSBCCL 160 L	K 8 D	400	60	0.00816	350	210	100	60	75

●Motor with increased braking torque on request
★On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

6 poles-1000rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCCL631-6	0.09	840	42	0.61	0.88	0.51	0.29	2	2	1.5	3.5	50
MSBCCL632-6	0.12	850	45	0.62	1.08	0.62	0.36	2	2	1.5	3.5	50
MSBCCL711-6	0.18	880	56	0.66	1.22	0.70	0.41	1.6	1.7	1.5	4	52
MSBCCL712-6	0.25	900	59	0.7	1.51	0.87	0.50	2.1	2.2	1.5	4	52
MSBCCL713-6	0.37	890	61	0.69	2.2	1.27	0.73	2	2.1	1.5	4	54
MSBCCL801-6	0.37	900	62	0.7	2.13	1.23	0.71	1.9	1.9	1.5	4	56
MSBCCL802-6	0.55	900	67	0.72	2.85	1.65	0.95	2	2.3	1.5	4	56
MSBCCL803-6	0.75	900	68	0.72	3.83	2.21	1.28	2	2.3	1.5	4	58
MSBCCL90S-6	0.75	920	69	0.72	3.77	2.18	1.26	2.2	2.2	1.5	5.5	59
MSBCCL90L-6	1.1	925	72	0.73	5.23	3.02	1.74	2.2	2.2	1.3	5.5	59
MSBCCL100L-6	1.5	945	74	0.76	6.67	3.85	2.22	2.2	2.2	1.3	6	61
MSBCCL112M-6	2.2	955	78	0.76	9.28	5.36	3.09	2.2	2.2	1.3	6	64
MSBCCL132S-6	3	960	79	0.76	12.49	7.21	4.16	2	2	1.3	6.5	64
MSBCCL132M1-6	4	960	80.5	0.76	16.35	9.44	5.45	2	2	1.3	6.5	68
MSBCCL132M2-6	5.5	960	83	0.77	21.51	12.42	7.17	2	2	1.3	6.5	68
MSBCCL132L-6	7.5	960	85	0.77	28.65	16.54	9.55	2	2	1.3	6.5	68
MSBCCL160M-6	7.5	960	86	0.8	27.25	15.73	9.08	2	2.2	1.3	6.5	68
MSBCCL160L-6	11	960	87.5	0.79	39.78	22.97	13.26	2	2.2	1.2	6.5	73

Type	Brake Type k	Brake torque Nm	Brake Rated Power W	J brake Pd² kgm²	No.of Starts/Hr. Under no load	Delayed Cut-in Time★ Msec.	Quick Cut-in Time Msec.	Cut out Time Msec.	Noise dB(A)
MSBCCL63	K 1	5	15	0.00005	3000	45	20	10	50
MSBCCL 71	K 2	12	20	0.00014	3000	50	30	15	52
MSBCCL 80	K 3	16	25	0.00021	1300	55	30	15	56
MSBCCL 90S	K 4	20	30	0.00039	1100	65	40	15	59
●MSBCCL 90S	K 4 D	40	30	0.00078	1100	65	40	15	59
MSBCCL 90 L	K 4	20	30	0.00039	1100	65	40	15	59
●MSBCCL 90 L	K 4 D	40	30	0.00078	1100	65	40	15	59
MSBCCL 100 L	K 5	40	45	0.00104	900	75	45	20	61
●MSBCCL 100 L	K 6	60	50	0.00135	900	180	85	25	61
MSBCCL 112 MT	K 5	40	45	0.00104	880	75	45	20	64
MSBCCL 112 M	K 6	60	50	0.00135	880	180	85	25	64
MSBCCL 132 S	K 7	90	55	0.00219	480	200	95	50	64
●MSBCCL 132 S	K 7 D	180	55	0.00438	480	200	95	50	64
MSBCCL 132 M	K 7	90	55	0.00219	450	200	95	50	68
●MSBCCL 132 M	K 7 D	180	55	0.00438	480	200	95	50	68
MSBCCL 160 MT	K 7 D	180	55	0.00438	350	200	95	50	68
MSBCCL 160 L	K 8	200	60	0.00408	350	210	100	60	73
●MSBCCL 160 L	K 8 D	400	60	0.00816	350	210	100	60	73

●Motor with increased braking torque on request
★On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

8 poles-750rpm-50Hz

Brake motors have a ±6% tolerance on the supply voltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power factor	Rated Current (A)			Tstart/Tn (Times)	Tmax/Tn (Times)	Tmin/Tn (Times)	Is/In	Noise dB(A)
					230V	400V	690V					
MSBCCL711-8	0.09	680	48	0.56	0.84	0.48	0.28	1.5	1.7	1.3	3	50
MSBCCL712-8	0.12	690	51	0.59	1.00	0.58	0.33	1.6	1.7	1.3	2.7	50
MSBCCL801-8	0.18	680	51	0.61	1.45	0.84	0.48	1.5	1.7	1.3	2.8	52
MSBCCL802-8	0.25	680	56	0.61	1.83	1.06	0.61	1.6	2	1.3	2.7	52
MSBCCL90S-8	0.37	680	63	0.63	2.33	1.35	0.78	1.6	1.8	1.3	2.8	56
MSBCCL90L-8	0.55	680	66	0.65	3.21	1.85	1.07	1.6	1.8	1.3	3	56
MSBCCL100L1-8	0.75	710	66	0.67	4.24	2.45	1.41	1.7	2.1	1.3	3.5	59
MSBCCL100L2-8	1.1	710	72	0.69	5.54	3.20	1.85	1.7	2.1	1.2	3.5	59
MSBCCL112M-8	1.5	710	74	0.68	7.45	4.30	2.48	1.8	2.1	1.2	4.2	61
MSBCCL132S-8	2.2	720	75	0.71	10.33	5.96	3.44	2	2	1.2	5.5	64
MSBCCL132M-8	3	720	77	0.73	13.34	7.70	4.45	2	2	1.2	5.5	64
MSBCCL160M1-8	4	730	80	0.73	17.12	9.89	5.71	1.9	2.1	1.2	6	68
MSBCCL160M2-8	5.5	720	83.5	0.74	22.25	12.85	7.42	2	2.2	1.2	6	68
MSBCCL160L-8	7.5	720	85	0.75	29.41	17.0	9.8	1.9	2.2	1.2	6	68

Type	Brake Type k	Brake torque Nm	Brake Rated Power W	J brake Pd² kgm²	No.of Starts/Hr. Under no load	Delayed Cut-in Time★ Msec.	Quick Cut-in Time Msec.	Cut out Time Msec.	Noise dB(A)
63 MSBCCL	K 1	5	15	0.00005	3000	45	20	10	50
71 MSBCCL	K 2	12	20	0.00014	3000	50	30	15	50
80 MSBCCL	K 3	16	25	0.00021	1300	55	30	15	52
90 S MSBCCL	K 4	20	30	0.00039	1100	65	40	15	56
●90 S MSBCCL	K 4 D	40	30	0.00078	1100	65	40	15	56
90 L MSBCCL	K 4	20	30	0.00039	1100	65	40	15	56
●90 L MSBCCL	K 4 D	40	30	0.00078	1100	65	40	15	56
100 L MSBCCL	K 5	40	45	0.00104	900	75	45	20	59
●100 L MSBCCL	K 6	60	50	0.00135	900	180	85	25	59
112 MT MSBCCL	K 5	40	45	0.00104	880	75	45	20	61
112 M MSBCCL	K 6	60	50	0.00135	880	180	85	25	61
132 S MSBCCL	K 7	90	55	0.00219	480	200	95	50	64
●132 S MSBCCL	K 7 D	180	55	0.00438	480	200	95	50	64
132 M MSBCCL	K 7	90	55	0.00219	450	200	95	50	64
●132 M MSBCCL	K 7 D	180	55	0.00438	480	200	95	50	64
160 MT MSBCCL	K 7 D	180	55	0.00438	350	200	95	50	68
160 L MSBCCL	K 8	200	60	0.00408	350	210	100	60	68
●160 L MSBCCL	K 8 D	400	60	0.00816	350	210	100	60	68

●Motor with increased braking torque on request
★On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

OPERATING PRINCIPLE

The direct current brake is fed by means of an electronic circuit with diode bridge (rectifier) situated inside the terminal-box. When feeding the electromagnet (5), the movable anchor (4) is attracted towards the same, thus loading the braking torque springs (9) and allowing the disk (2), equipped with friction packing and fitted on the groove hub (6) to turn solitary the motor shaft (1) by means of a key (7). By interrupting the feeding, the movable anchor (4), pushed by the braking torque springs (9), exerts a pressure upon the friction surface of the disk (2), thus causing its stopping.

ADJUSTMENT OF THE AIR GAP.

The air gap (11) is the distance between the electromagnet (5) and the movable anchor (9).

The air gap has to be regularly checked, since due to the wear of the friction packing (2) it tends to increase.

Act no the brake adjusters (3) after having unloosen the screws (8) to bring the air gap to the required value.

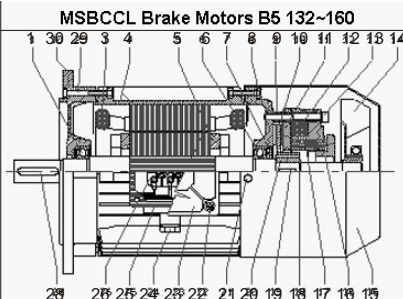
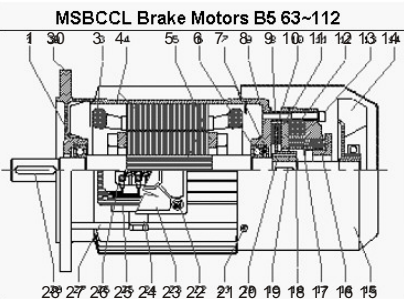
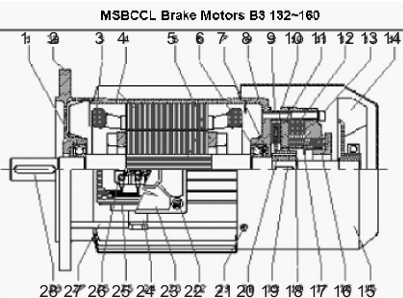
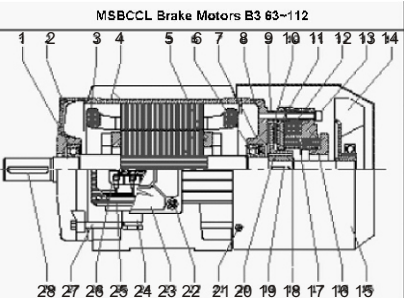
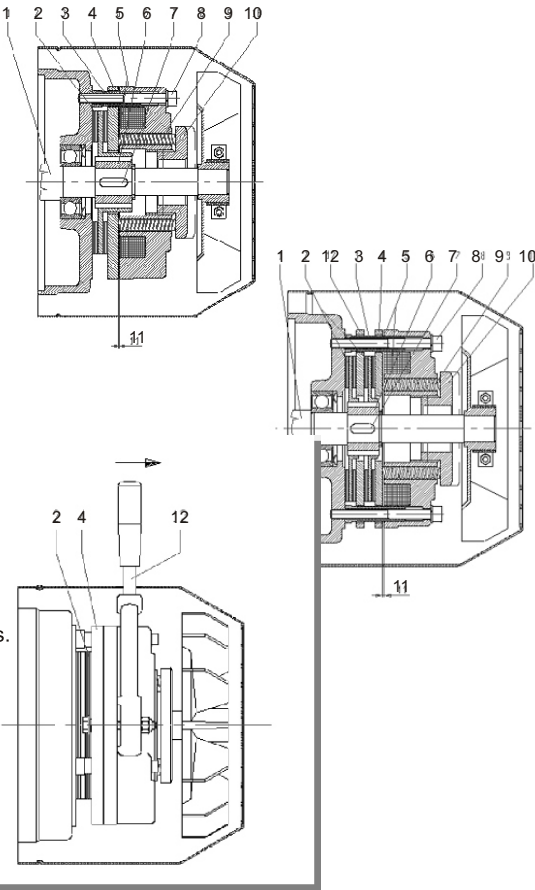
Act on the ring nut (10) which acts on the braking torque springs (9) to adjust the braking torque.

Pls. contact our technical department for information on the air gap adjustment values.

HANDRELEASE WITH LEVER

Upon request a hand release with lever can be supplied.

In case of a current cutoff, acting on the lever (12), the release, connected to the movable anchor (4) overcomes the springs pressure, thus detaching the movable anchor from the disc friction packing (2) allowing the shaft to turn.



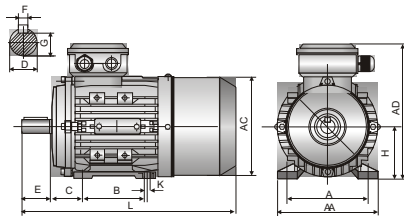
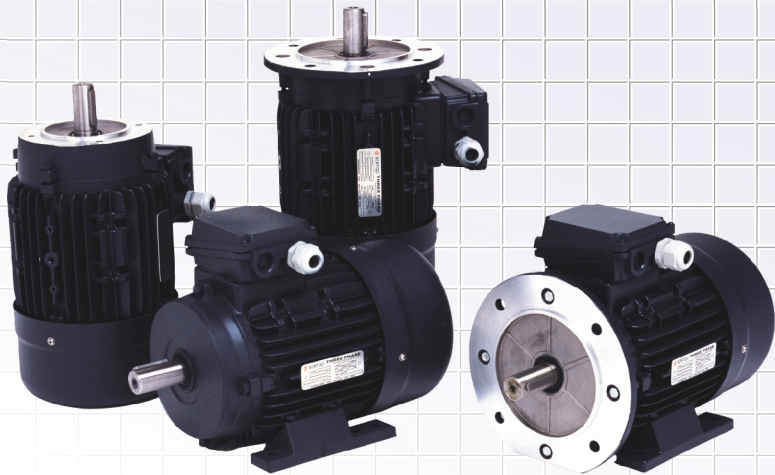
SPARE PARTS

1. Front bearing
2. Front shield
3. Winding
4. Frame with stator package
5. Shaft with rotor
6. Rear bearing
7. Spring
8. Rear shield
9. Adjusting bush
10. Brake disc
11. Moving anchor
12. Electromagnet coil with diode
13. Fixing screws for brake
14. Cooling fan
15. Fan hood
16. Ring nut
17. Spring
18. See gearing
19. Key brake side
20. Toothed pinion
21. Fixing screw for fan hood
22. Fixing crew for terminal-box
23. Terminal-box
24. able-holder
25. Packing
26. Terminal-block
27. Tie-bolt
28. Coupling side key
29. Fixing screw for shield
30. Flange shield

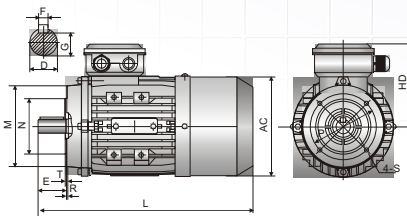
ASYNCHRONOUS THREE-PHASE BRAKE MOTORS with direct current 63~160 Type C FECCL Frame B3 Sizes 63~160, Type FC FECCLFrame B5 Sizes 63~160 Enclosed construction -External ventilation

MSD

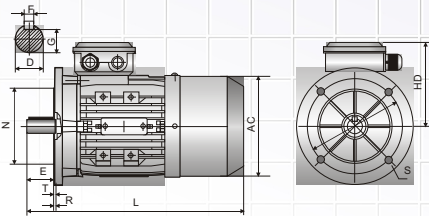
SERIES THREE-PHASE ASYNCHRONOUS DOUBLE-POLARITY MOTORS ALUMINUM HOUSING



IMB3



IMB14



IMB5

Overall & Installation Dimensions

B3

160M/L	160	254	210/254	108	Φ42	110	12	37	15X19	290	390	Φ320	640	652	705	795	2-M32X1.5	64	143	146	M16	35	42	14.2	2
132M/L	132	216	178	89	Φ38	80	10	33	12X16	252	325	Φ270	474/500	484/510	564/590	648/674	2-M25X1.5	38	112	119	M12	28	34	10.2	1.5
132S	132	216	140	89	Φ38	80	10	33	12X16	252	325	Φ270	436	468	553	636	2-M25X1.5	38	112	119	M12	28	34	10.2	1.5
112	112	190	140	70	Φ28	60	8	24	12X16	220	292	Φ230	395	410	483	455	2-M25X1.5	32	112	119	M10	22	28	8.5	1.5
100☆☆	100	160	140	63	Φ28	60	8	24	12X16	196	252	Φ205	368(386)	392(410)	474	445	1-M20X1.5	26	105	105	M10	22	28	8.5	1.5
90L1/L2	90	140	125	56	Φ24	50	8	20	10X13	175	235	Φ185	335/365	345/375	392	463	1-M20X1.5	30	105	105	M8	20	25	6.8	1
90S	90	140	100	56	Φ24	50	8	20	10X13	175	235	Φ185	310	320	367	448	1-M20X1.5	30	105	105	M8	20	25	6.8	1
80	80	125	100	50	Φ19	40	6	15.5	10X13	160	217	Φ165	290	300	353	390	1-M20X1.5	27	105	105	M6	16	22	5	1
71☆☆	71	112	90	45	Φ14	30	5	11	7X10	132	188/180	Φ145	240(254)	252(267)	307	345	1-M20X1.5	20/27	94/80	94/80	M5	12	18	4.2	0.8
63	63	100	80	40	Φ11	23	4	8.5	7X10	120	173/165	Φ130	215	232	265	283	1-M16X1.5	14/21	94/80	94/80	M4	10	15	3.3	0.8
56	56	90	71	36	Φ9	20	3	7.2	5.8X8.8	110	156/151	Φ120	195				1-M16X1.5	14/21	88/63	88/63	M3	8	12	2.5	0.5
FRAME	H	A	B	C	D	E	F	G	K	AA	AD	AC	L	Lcc [☆]	Lccl [☆]	Lca [☆]	KK	TBS	TBW	TBH	SS	XX	ZZ	CC	Y

B5 Overall & Installation Dimensions

160M/L	Φ300	Φ250	Φ350	5.0	Φ19	0							Φ42	110	12	37	2-M32X1.5	Φ320	230	640	652	705	795	64	143	146	M16	35	42	14.2	2
132M/L	Φ265	Φ230	Φ300	4.0	Φ15	0	Φ215	Φ180	Φ250	4.0	Φ15	0	Φ38	80	10	33	2-M25X1.5	Φ270	193	474/500	484/510	564/590	648/674	38	112	119	M12	28	34	10.2	1.5
132S	Φ265	Φ230	Φ300	4.0	Φ15	0	Φ215	Φ180	Φ250	4.0	Φ15	0	Φ38	80	10	33	2-M25X1.5	Φ270	193	436	468	553	636	38	112	119	M12	28	34	10.2	1.5
112	Φ215	Φ180	Φ250	4.0	Φ15	0	Φ165	Φ130	Φ200	3.5	Φ12	0	Φ28	60	8	24	2-M25X1.5	Φ230	180	395	410	483	455	32	112	119	M10	22	28	8.5	1.5
100☆☆	Φ215	Φ180	Φ250	4.0	Φ15	0	Φ165	Φ130	Φ200	3.5	Φ12	0	Φ28	60	8	24	1-M20X1.5	Φ205	152	368(386)	392(410)	474	445	26	105	105	M10	22	28	8.5	1.5
90L1/L2	Φ165	Φ130	Φ200	3.5	Φ12	0	Φ130	Φ110	Φ160	3.5	Φ12	0	Φ24	50	8	20	1-M20X1.5	Φ185	145	335/365	345/375	392	463	30	105	105	M8	20	25	6.8	1
90S	Φ165	Φ130	Φ200	3.5	Φ12	0	Φ130	Φ110	Φ160	3.5	Φ12	0	Φ24	50	8	20	1-M20X1.5	Φ185	145	310	320	367	448	30	105	105	M8	20	25	6.8	1
80	Φ165	Φ130	Φ200	3.5	Φ12	0	Φ130	Φ110	Φ160	3.5	Φ10	0	Φ19	40	6	15.5	1-M20X1.5	Φ165	137	290	300	353	390	27	105	105	M6	16	22	5	1
71☆☆	Φ130	Φ110	Φ160	3.5	Φ10	0	Φ115	Φ95	Φ140	3.0	Φ10	0	Φ14	30	5	11	1-M20X1.5	Φ145	117/109	240(254)	252(267)	307	345	20/27	94/80	94/80	M5	12	18	4.2	0.8
63	Φ115	Φ95	Φ140	3.0	Φ10	0							Φ11	23	4	8.5	1-M16X1.5	Φ130	110/102	215	232	265	283	14/21	94/80	94/80	M4	10	15	3.3	0.8
56	Φ98	Φ80	Φ120	3.0	Φ7	0							Φ9	20	3	7.2	1-M16X1.5	Φ120	100/95	195				14/21	88/63	88/63	M3	8	12	2.5	0.5
FRAME	M	N	P	T	S	R	M	N	P	T	S	R	D	E	F	G	KK	AC	HD	L	L _{CC} [☆]	L _{CL} [☆]	L _{CA} [☆]	TBS	TBW	TBH	SS	XX	ZZ	CC	Y
	B5						B5R																								

B14 Overall & Installation Dimensions

132M/L	Φ130	Φ165	Φ200	3.5	0	M10	Φ180	Φ215	Φ250	4.0	0	M12	Φ38	80	10	33	2-M32X1.5	Φ270	193	475/500	484/510	564/590	648/674	38	112	119	M12	28	34	10.2	1.5
132S	Φ130	Φ165	Φ200	3.5	0	M10	Φ180	Φ215	Φ250	4.0	0	M12	Φ38	80	10	33	2-M25X1.5	Φ270	193	436	468	553	636	38	112	119	M12	28	34	10.2	1.5
112	Φ110	Φ130	Φ160	3.5	0	M8	Φ130	Φ165	Φ200	3.5	0	M10	Φ28	60	8	24	2-M25X1.5	Φ230	180	395	410	483	455	32	112	119	M10	22	28	8.5	1.5
100☆☆	Φ110	Φ130	Φ160	3.5	0	M8	Φ130	Φ165	Φ200	3.5	0	M10	Φ28	60	8	24	1-M25X1.5	Φ205	152	368(386)	392(410)	474	445	26	105	105	M10	22	28	8.5	1.5
90L1/L2	Φ95	Φ115	Φ140	3.0	0	M8	Φ110	Φ130	Φ160	3.5	0	M8	Φ24	50	8	20	1-M20X1.5	Φ185	145	335/365	345/375	392	463	30	105	105	M8	20	25	6.8	1
90S	Φ95	Φ115	Φ140	3.0	0	M8	Φ110	Φ130	Φ160	3.5	0	M8	Φ24	50	8	20	1-M20X1.5	Φ185	145	310	320	367	448	30	105	105	M8	20	25	6.8	1
80	Φ80	Φ100	Φ120	3.0	0	M6	Φ110	Φ130	Φ160	3.5	0	M8	Φ19	40	6	15.5	1-M20X1.5	Φ165	137	290	300	353	390	27	105	105	M6	16	22	5	1
71☆☆	Φ70	Φ85	Φ105	2.5	0	M6	Φ95	Φ115	Φ140	3.0	0	M8	Φ14	30	5	11	1-M20X1.5	Φ145	117/109	240(254)	252(267)	307	345	20/27	94/80	94/80	M5	12	18	4.2	0.8
63	Φ60	Φ75	Φ90	2.5	0	M5	Φ80	Φ100	Φ120	3.0	0	M6	Φ11	23	4	8.5	1-M16X1.5	Φ130	110/102	215	232	265	283	14/21	94/80	94/80	M4	10	15	3.3	0.8
56	Φ50	Φ65	Φ80	2.5	0	M5							Φ9	20	3	7.2	1-M16X1.5	Φ120	100/95	195				14/21	88/63	88/63	M3	8	12	2.5	0.5
FRAME	N	M	P	T	R	S	N	M	P	T	R	S	D	E	F	G	KK	AC	HD	L	Lcc [®]	Lccl [®]	Lca [®]	TBS	TBW	TBH	SS	XX	ZZ	CC	Y
	B14						B14B																								

☆☆:For Brake Motors
☆☆: This frame size has two housing sizes, the rated output is for normal “L” size, and increased output is for the bigger “L” size
(refer to the figures in the bracket “ () ”)

TECHNICAL DATA @400V

Model	Power (KW)		Speed (r/min)		Eff (%)		Cos ϕ		Current (A)		Rated Torque (N.m)		Ts/Tn (Times)		Is/In (Times)		Tmax/Tn (Times)	
	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P
MSD631-2/4	0.15	0.11	2680	1340	54	50	0.68	0.63	0.59	0.50	0.535	0.784	2	2	3.5	3.5	2	2
MSD632-2/4	0.22	0.15	2690	1340	58	53	0.72	0.65	0.76	0.63	0.78	1.07	2	2	3.5	3.5	2	2
MSD711-2/4	0.3	0.22	2750	1350	60	55	0.8	0.73	0.90	0.79	1.04	1.56	1.7	1.7	3.5	3.5	1.9	1.9
MSD712-2/4	0.45	0.3	2790	1380	63	58	0.8	0.73	1.29	1.02	1.54	2.08	2	2	4	4	2	2
MSD801-2/4	0.55	0.45	2800	1380	65	64	0.84	0.75	1.45	1.35	1.88	3.11	2	2	4.5	4.5	2.1	2.1
MSD802-2/4	0.75	0.6	2800	1400	67	68	0.86	0.77	1.88	1.65	2.56	4.09	1.8	1.8	4.5	4.5	2	2
MSD90S-2/4	1.25	0.95	2820	1400	72	68	0.86	0.82	2.91	2.46	4.23	6.48	2	2	5	5	2	2
MSD90L-2/4	1.7	1.32	2830	1400	73	70	0.86	0.83	3.91	3.28	5.74	9.00	2	2	5	5	2	2
MSD100L1-2/4	2.4	1.84	2830	1410	73	76	0.86	0.83	5.52	4.21	8.10	12.46	2	2	5.5	5	2	2
MSD100L2-2/4	3.3	2.6	2840	1420	74	78	0.86	0.85	7.48	5.66	11.10	17.19	2	1.9	5.5	5	2	1.9
MSD112M-2/4	4.5	4	2860	1430	77	79	0.85	0.86	9.92	8.50	15.03	26.71	2	1.8	5.5	5	2.2	2
MSD132S-2/4	6	5	2860	1440	79	82	0.84	0.86	13.05	10.23	20.03	33.16	2	1.5	5.5	5.5	2.2	1.9
MSD132M-2/4	8	6.6	2870	1440	82	84	0.84	0.86	16.76	13.09	26.62	43.77	2	2	6	6	2.2	2.2
MSD160M-2/4	11	9	2920	1450	84	84	0.85	0.82	22.23	18.86	35.98	59.28	1.8	1.8	7	6	2	2
MSD160L-2/4	15	12	2920	1450	86	84	0.87	0.83	28.94	24.84	49.06	79.03	2	2	7	7	2.2	2.2

TECHNICAL DATA @400V

Model	Power (KW)		Speed (r/min)		Eff (%)		Cos ϕ		Current (A)		Rated Torque (N.m)		Ts/Tn (Times)		Is/In (Times)		Tmax/Tn (Times)	
	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P
MSD712-4/8	0.18	0.11	1380	680	55	36	0.68	0.55	0.69	0.80	1.25	1.54	2	2	3.6	2.2	2	2
MSD801-4/8	0.25	0.15	1380	680	58	40	0.77	0.60	0.81	0.90	1.73	2.11	2	2	4.5	3	2	2
MSD802-4/8	0.45	0.25	1390	685	68	48	0.80	0.60	1.19	1.25	3.09	3.49	1.8	2	4.5	3	2	2
MSD90S-4/8	0.55	0.3	1400	690	68	50	0.83	0.61	1.41	1.42	3.75	4.15	1.8	2	4.5	3.5	2	2
MSD90L-4/8	0.8	0.45	1400	690	68	53	0.83	0.63	2.05	1.95	5.46	6.23	1.8	1.6	4	3	1.9	1.8
MSD100L1-4/8	1.25	0.6	1400	700	69	54	0.82	0.56	3.19	2.86	8.53	8.16	1.8	2	5	3.5	2	2
MSD100L2-4/8	1.76	0.88	1400	700	71	58	0.84	0.56	4.26	3.91	12.00	12.00	1.8	2	5.5	4	2	2
MSD112M-4/8	2.2	1.5	1420	700	75	64	0.82	0.61	5.16	5.54	14.80	20.46	2	2	6	4	2	2
MSD132S-4/8	3.3	2.2	1430	705	78	70	0.84	0.64	7.27	7.09	22.04	29.8	2	2	6	5	2	2
MSD132M-4/8	4.5	3	1430	705	82	77	0.85	0.65	9.32	8.65	30.05	40.64	2	2	6	5	2	2
MSD160M1-4/8	5.5	4	1440	710	82	77	0.81	0.69	11.95	10.87	36.48	53.80	2.1	1.7	7.6	4.6	2.3	2.2
MSD160M2-4/8	7.5	5	1440	710	82	79	0.89	0.78	14.83	11.71	49.74	67.25	1.7	1.6	6.6	4.5	2.3	2.1
MSD160L-4/8	10	7	1450	715	84	82	0.90	0.78	19.09	15.80	65.86	93.50	1.8	1.9	5.5	5	2.3	2.1

TECHNICAL DATA @400V

Model	Power (KW)		Speed (r/min)		Eff (%)		Cos ϕ		Current (A)		Rated Torque (N.m)		Ts/Tn (Times)		Is/In (Times)		Tmax/Tn (Times)	
	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P
MSD712-4/6	0.22	0.15	1400	910	55	50	0.71	0.68	0.81	0.64	1.5	1.57	1.8	1.9	3.5	3.2	1.9	2
MSD801-4/6	0.3	0.22	1400	910	60	55	0.74	0.69	0.98	0.84	2.05	2.31	2	1.8	4.5	4	2	2
MSD802-4/6	0.45	0.3	1410	920	63	58	0.75	0.7	1.37	1.07	3.05	3.11	2	1.8	4.5	4	2	2
MSD90S-4/6	0.66	0.45	1410	920	66	61	0.76	0.65	1.9	1.64	4.47	4.67	1.7	1.7	5	4.5	2	2
MSD90L-4/6	0.88	0.6	1420	930	70	64	0.77	0.67	2.36	2.02	5.92	6.16	1.7	1.7	5	4.5	2	2
MSD100L1-4/6	1.32	0.88	1420	940	72	67	0.85	0.75	3.11	2.3	8.88	8.94	1.8	1.8	6	5	2	2
MSD100L2-4/6	1.76	1.2	1430	950	74	70	0.85	0.75	4.04	3.3	11.75	12.06	1.8	1.8	6	5	2	2
MSD112M-4/6	2.2	1.5	1430	950	76	70	0.8	0.70	5.22	4.42	14.69	15	2	1.8	6	5	2.2	2.2
MSD132S-4/6	3.3	2.2	1440	960	82	78	0.81	0.72	7.17	5.65	21.9	21.9	2	2	7	6	2.2	2.2
MSD132M-4/6	4.5	3	1450	970	83	80	0.82	0.74	9.54	7.31	29.6	29.5	2	2	7	6	2.3	2.3
MSD160M-4/6	6.6	4.5	1460	970	84	81	0.84	0.78	13.5	10.3	43.2	44.3	1.8	1.8	7	6	2.3	2.3
MSD160L-4/6	8.8	6	1460	970	84	81	0.85	0.79	17.8	13.5	57.6	59.1	1.8	1.8	7	6	2.3	2.3

TECHNICAL DATA @400V

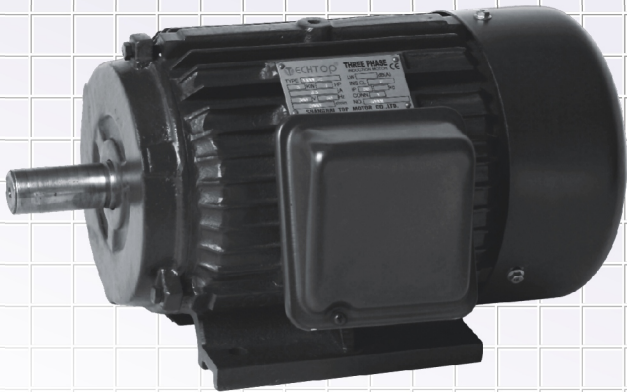
Model	Power (KW)		Speed (r/min)		Eff (%)		Cos ϕ		Current (A)		Rated Torque (N.m)		Ts/Tn (Times)		Is/In (Times)		Tmax/Tn (Times)	
	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P
MSD712-6/8	0.11	0.075	880	670	44	35	0.69	0.68	0.52	0.45	1.19	1.07	1.3	1.3	3	2.5	1.5	1.5
MSD801-6/8	0.18	0.11	900	680	50	42	0.69	0.65	0.75	0.58	1.91	1.54	1.5	1.5	3.5	3	1.5	1.5
MSD802-6/8	0.25	0.18	920	700	54	46	0.7	0.66	0.95	0.86	2.60	2.46	1.7	1.5	3.5	3	1.5	1.7
MSD90S-6/8	0.37	0.25	930	680	58	50	0.72	0.68	1.28	1.06	3.80	3.51	1.5	1.4	4	3	1.8	1.7
MSD90L-6/8	0.55	0.37	940	685	63	54	0.73	0.69	1.73	1.43	5.59	5.16	1.5	1.4	4	3	1.8	1.7
MSD100L1-6/8	0.75	0.55	950	700	69	63	0.74	0.74	2.12	1.70	7.54	7.50	1.5	1.4	5	4	2	1.8
MSD100L2-6/8	1.03	0.75	955	705	71	65	0.76	0.76	2.76	2.19	10.30	10.16	1.5	1.4	5	4	2	1.8
MSD112M-6/8	1.25	0.95	960	710	72	64	0.71	0.71	3.53	3.02	12.43	12.78	1.5	1.5	5	4	2	1.8
MSD132S-6/8	2.2	1.5	970	720	76	70	0.71	0.7	5.88	4.42	21.66	19.90	1.6	1.4	6	5.5	2.3	2
MSD132M-6/8	3	1.85	970	720	78	74	0.71	0.7	7.82	5.01	29.54	24.37	1.6	1.4	6	5.5	2.3	2
MSD160M1-6/8	3.7	2.6	970	720	78	75	0.74	0.71	9.25	7.05	36.43	34.49	1.8	1.5	6	5.5	2.5	1.9
MSD160M2-6/8	4.5	3.3	970	720	79	76	0.78	0.72	10.54	8.70	44.30	43.77	1.8	1.7	6	5.5	2.5	2
MSD160L-4/6	6	4.5	973	720	80	77	0.79	0.73	13.70	11.55	59.89	59.69	1.8	1.7	6	5.5	2.5	2

Y

SERIES THREE-PHASE INDUCTION MOTORS

- Frame size H80~355
- Power 0.55~315KW
- Synchronous speed 3000; 1500; 1000; 750RPM
- Voltage 220/380V; 380/660V
- Frequency 50Hz、60Hz
- Protection class IP44; IP54; IP55
- Insulation class B、F
- Ambi.temperature -15~+40℃
- Altitude above sea level ≤1000m

- See Table 1 for the mounting arrangements and respective frame numbers
- See Table 2 for the bearings
- See Table 3-4 for the technical data
- See Table 7-10 for the types and mounting dimensions



Y2

SERIES THREE-PHASE INDUCTION MOTORS

- Frame size H63~355
- Power 0.120~315KW
- Synchronous speed 3000; 1500; 1000; 750RPM
- Voltage 230/400V ; 400/690V
- Frequency 50Hz、60Hz
- Protection class IP54; IP55
- Insulation class F
- Ambi.temperature -15~+40℃
- Altitude above sea level ≤1000m

- See Table 1 for the mounting arrangements and respective frame numbers
- See Table 2 for the bearings
- See Table 5-6 for the technical data
- See Table 11-14 for the types and mounting dimensions

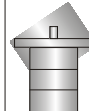


M

OUNTING ARRANGEMENTS

The Commonly used mounting arrangements and the corresponding frame numbers are shown in table 1

Table 1

Frame No.	Basic			Variations								
	B3	B5	B35	Based on B5		Based on B3					Based on B35	
				V1	V3	V5	V6	B6	B7	B8	V15	V36
												
H63~160	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
H180~225	✓	✓	✓	✓	—	—	—	—	—	—	—	—
H250~355	✓	—	✓	✓	—	—	—	—	—	—	—	—

B

EARINGS

Table 2

Frame No.	Driving End				Non-driving End			
	2P		4,6,8P		2P	4,6,8P	2P	4,6,8P
	Y	Y ₂	Y	Y ₂	Y	Y	Y ₂	Y ₂
63	6201				6201			
71	6202				6202			
80	6204				6204			
90	6205				6205			
100	6206				6206			
112	6206				6206			
132	6208				6208			
160	6309	6209	6309		6309		6209	
180	6311	6211	6311		6311		6211	
200	6312	6212	6312		6312		6212	
225	6313	6312	6313		6313		6312	
250	6314	6313	6314		6314		6313	
280	6314		6317		6314	6317	6314	
315	6317		N319		6317	6319	6317	6319
355	6319		N322		6319	6322	6319	6322

Y SERIES TECHNICAL DATA @ 380V												Table 3	
Model	Rated output (KW)	At full load				Locked current	Locked torque	Max torque	Net weight (kg)	Noise level dB(A)			
		Speed (r/min)	Current (A)	Eff. (%)	Power factor (cos ϕ)	Rated current	Rated torque	Rated torque		I	II		
Synchronous Speed 3000r/min 50Hz													
80M1	0.75	2825	1.8	75.5	0.845	6.5	2.2	2.3	16	66	71		
80M2	1.1		2.5	77.2	0.867				18				
90S	1.5	2840	3.4	78.6	0.849				21	70	75		
90L	2.2		4.8	80.7	0.86	24							
100L	3	2880	6.4	82.2	0.872				34	74	79		
112M	4	2890	8.2	85.8	0.86	43							
132S1	5.5	2900	11.1	85.7	0.89				63	78	83		
132S2	7.5		14.9	86.4	0.886	69							
160M1	11	2930	21.6	87.4	0.885				114	82	87		
160M2	15		28.9	88.3	0.893	120							
160L	18.5		35.7	89.2	0.883	136							
180M	22	2940	42.2	89.9	0.881		172	87	92				
200L1	30	2950	56.9	90.2	0.888		222	90	95				
200L2	37		69.8	90.6	0.889	246							
225M	45	2970	83.9	91.3	0.893		292	92	97				
250M	55		103	91.6	0.884	392							
280S	75	2960	139.7	91.8	0.889		508	94	99				
280M	90		166	92.6	0.89	590							
315S	110		202	92.7	0.883	862	99	104					
315M	132		238	93.1	0.905	996							
315L1	160		287	93.6	0.905	1055							
315L2	200		365	93.7	0.905	1080							
355M1	220	2980	397	94.2	0.89	6.9	1750	109					
355M2	250		444	94.5	0.9	7	1770	111					
355L1	280		497	94.7		1830							
355L2	315		557	95		7.1		1900					
Synchronous Speed 1500r/min 50Hz													
80M1	0.55	1390	1.5	73.2	0.766	6	2.4	2.3	16	56	67		
80M2	0.75		2	74.7	0.764		17						
90S	1.1	1400	2.8	77.9	0.782	6.5	2.3		21	61			
90L	1.5		3.7	79.2	0.792				25				
100L1	2.2	1420	5	81.1	0.824	7	2.2		33	65	70		
100L2	3		6.8	82.7	0.811				38				
112M	4	1440	8.7	84.6	0.83				49	68	74		
132S	5.5		11.6	85.6	0.843				64				
132M	7.5	1460	15.4	86.7	0.852		77		71	78			
160M	11		22.7	88.1	0.84		122						
160L	15		30.5	88.4	0.845	140	77		82				
180M	18.5	1470	35.9	91.2	0.859	166							
180L	22		42.9	91.3	0.861	181	79	84					
200L	30		56.8	92.1	0.871	242							
225S	37	1480	70.4	91.9	0.869	1.9	278	81	86				
225M	45		84.2	92.2	0.88	312							
250M	55	1470	103	92.7	0.875	2	395	85	90				
280S	75		137.6	92.8	0.892		562						
280M	90		163.7	93.4	0.894	2.2	630	93	98				
315S	110		199	94.1	0.893		905						
315M	132		235	94.6	0.902		1016	96	101				
315L1	160		285	94.5	0.903		1108						
315L2	200		361	94.6	0.89		1210						
355M1	220	1490	407	94.4	0.87	6.8	1660	106					
	250		461	94.7			1700	108					
355L1	280		515	94.9			1790						
	315		578	95.2			6.9			1890			

Y SERIES TECHNICAL DATA @ 380V												Table 4	
Model	Rated output (KW)	At full load				Locked current	Locked torque	Max torque	Net weight (kg)	Noise level dB(A)			
		Speed (r/min)	Current (A)	Eff. (%)	Power factor (cos ϕ)	Rated current	Rated torque	Rated torque		I	II		
Synchronous Speed 1000r/min 50Hz													
90S	0.75	910	2.3	72.5	0.7	5.5	2	2.2	22	56	65		
90L	1.1		3.2	73.5	0.72				25				
100L	1.5	940	4	77.5	0.74	6			33	62	67		
112M	2.2		5.6	80.5	0.74				43				
132S	3	960	7.2	83	0.76	6.5			2	60	66	71	
132M1	4		9.4	84	0.77					71			
132M2	5.5		13	85.3	0.78					82			
160M	7.5	970	17.1	86.2	0.773					6.5	1.8	108	69
160L	11		25	87.1	0.768	128			70				
180L	15		31.4	89.4	0.812	178						78	
200L1	18.5		37.7	89.9	0.829	220			73				
200L2	22		44.6	90.4	0.829	230	81						
225M	30		980	59.5	90.2	0.849		296	76				
250M	37	72		90.9	0.859	386	84						
280S	45	84.2		92.1	0.882	498							
280M	55		102	92.4	0.887	556							
315S	75	990	139.6	92.9	0.879	6.7	1.3	858	87	92			
315M	90		167	93.3	0.878			962					
315L1	110		203.3	93.7	0.877			1020					
315L2	132		241.8	93.9	0.886			1126	102				
355M1	160		300	94.1	0.86			6.7		1590			
355M2	185		346	94.3						1680			
355M3	200		374	94.3						1750			
355L1	220	409	94.5	1880									
355L2	250	465	94.7		1990	105							
Synchronous Speed 750r/min 50Hz													
132S	2.2	710	5.8	80.5	0.71	5.5	2	2	60	61	66		
132M	3		7.6	82.3	0.729				71				
160M1	4	720	10.5	84.1	0.73	6			102	64	69		
160M2	5.5		13.4	85.2	0.732				108				
160L	7.5	730	17.7	86.1	0.748	5.5	6	133	67	72			
180L	11		25.1	87.7	0.758	1.7		176					
200L	15		34.1	88.3	0.757	1.8		230	75				
225S	18.5		41.3	89.7	0.759	1.7	258						
225M	22		47.6	90.3	0.778	1.8	296	78					
250M	30		63	90.5	0.8		378						
280S	37		76.1	91.2	0.81		494						
280M	45		90.8	91.9	0.819	6.5	1.6	562	82	87			
315S	55		110.2	92.3	0.822			856					
315M	75		148.9	92.7	0.826			1010					
315L1	90		175.9	93.3	0.833	6	1110	99					
315L2	110	214.8	93.4	0.833	1195								
355M1	132	740	260	93.8	0.81	6.3	1.3		1660				
355M2	160		315	94				1740					
355L1	185		363	94.2				1870					
355L2	200		392	94.3				1980					

Y2 SERIES TECHNICAL DATA @ 400V												Table 5	
Model	Rated output (KW)	At full load				Locked current	Locked torque	Max torque	Net weight (kg)	Noise level dB(A)			
		Speed (r/min)	Current (A)	Eff. (%)	Power factor (cos ϕ)					I	II		
Synchronous Speed 3000r/min 50Hz													
63M1	0.18	2730	0.5	65	0.80	5.5		2.2	5	61	63		
63M2	0.25	2800	0.7	68					5.4				
71M1	0.37	2760	1.0	70	0.81				7.8				
71M2	0.55	2800	1.4	73	0.82	6.1			10	64	66		
80M1	0.75	2830	1.8	75	0.83				16				
80M2	1.1		2.5	77	0.84				17				
90S	1.5	2840	3.3	79		7		2.2	22	72	74		
90L	2.2		4.6	81	0.85				25				
100L	3	2860	6.0	83	0.87				7.5				2.3
112M	4	2880	7.7	85	0.88	45	80	82					
132S1	5.5	2900	10.5	86		64							
132S2	7.5		14.1	87		70							
160M1	11	2930	20.3	88	0.89	7.5		2	117	86	88		
160M2	15		27.3	89					125				
160L	18.5		33	90					147				
180M	22	2940	39.2	90					180	89	91		
200L1	30	2950	52.8	91.2	0.90				240			92	94
200L2	37		64.5	92					255				
225M	45	2970	78.2	92.3					2	309	93		
250M	55		95.4	92.5	403								
280S	75		129.3	93	544								
280M	90		152.2	93.8					620	94	96		
315S	110	2980	185.6	94	0.91				980			96	98
315M	132		221.6	94.5					1080				
315L1	160		265.4	94.6		1160							
315L2	200		331.0	94.8	0.92	7.1	1.8	2.2	1190	99	101		
355M	250		411.6	95.3					1760				
355L	315		517.0	95.6								1850	103
Synchronous Speed 1500r/min 50Hz													
63M1	0.12	1320	0.4	57	0.72	4.4	2.1	2.2	5.2	52	57		
63M2	0.18		0.6	60	0.73				5.5				
71M1	0.25		0.8	65	0.74				7				
71M2	0.37	1340	1.1	67	0.75	5.2	2.4		7.5	55	60		
80M1	0.55	1390	1.5	71					17				
80M2	0.75		2.0	73	0.76				18				
90S	1.1	1390	2.8	75	0.77	6			22	61	66		
90L	1.5		3.5	78	0.79				27				
100L1	2.2		4.9	80	0.81				34				
100L2	3	1410	6.5	82		7			38	64	69		
112M	4		8.4	84	0.82				43				
132S	5.5	1440	11.3	85	0.83				7				
132M	7.5		14.8	87	0.84	81							
160M	11	1460	21.5	88						123	75		
160L	15		30.1	89	0.85				144				
180M	18.5	1470	34.3	90.5					7.5				182
180L	22		40.6	91	0.86	190							
200L	30		54.7	92		7.2					270		79
225S	37	66.4	92.5		284				81	85			
225M	45	80.5	92.8		320						84		
250M	55	1480	98.1	93	0.87	7.2			427	83	86		
280S	75		132.7	93.8					562			86	89
280M	90		158.5	94.2					667				
315S	110	1490	191.0	94.5	0.88				1000	93	96		
315M	132		228.4	94.8					1100				
315L1	160		273.4	94.9					1160				
315L2	200		334.4	95	0.89	6.9	2.1	2.2	1270	97	100		
355M	250		420.7	95.3					1700				
355L	315		528.4	95.6					0.90			1850	101

Y2 SERIES TECHNICAL DATA @ 400V												Table 6	
Model	Rated output (KW)	At full load				Locked current	Locked torque	Max torque	Net weight (kg)	Noise level dB(A)			
		Speed (r/min)	Current (A)	Eff. (%)	Power factor (cos ϕ)					I	II		
Synchronous Speed 1000r/min 50Hz													
71M1	0.18	870	0.7	56	0.66	4.00	1.90	2.00	7	52	59		
71M2	0.25	870	0.9	59	0.68				8				
80M1	0.37	890	1.3	62	0.70				17			54	61
80M2	0.55		1.7	65	0.72	19							
90S	0.75	910	2.2	69		5.50	2.00		23	57	64		
90L	1.1		3.0	72	0.73				25				
100L	1.5	920	3.8	76	0.75				6.50			2.10	2.10
112M	2.2	940	5.3	79		45	65	72					
132S	3	960	7.0	81	0.76	63				69	76		
132M1	4		9.3	82		73							
132M2	5.5		12.3	84	0.77	84							
160M	7.5	970	16.4	86		2.00			119	73	80		
160L	11		23.3	87.5	0.78				147				
180L	15		30.0	89.0	0.81				195			79	
200L1	18.5	36.6	90.0		220	76	82						
200L2	22	42.5	90.0	0.83	250								
225M	30	980	56.3	91.5	0.84			292	7.00	2.00	408	78	84
250M	37		67.5	92		536	80	85					
280S	45		81.7	92.5		595							
280M	55		99.5	92.8		2.00	2.00		990	85	90		
315S	75		134.6	93.5					1080				
315M	90		161.1	93.8	0.86				1150			89	
315L1	110	196.1	94.0		1210	96							
315L2	132	232.5	94.2	0.87	1600		92	96					
355M1	160	227.7	94.5	0.88	1700								
355M2	200	346.4	94.7		1800								
355L	250	432.1	94.9										
Synchronous Speed 750r/min 50Hz													
80M1	0.18	630	0.9	51.0		0.61	3.30	1.90	17	52	60		
80M2	0.25	640	1.1	54.0					19				
90S	0.37	660	1.4	62.0					23			56	64
90L	0.55		2.1	63.0		25							
100L1	0.75	690	2.3	71.0	0.67	4.00	1.80		33	59	67		
100L2	1.1		3.2	73.0	0.69				38				
112M	1.5	680	4.2	75.0					50			61	69
132S	2.2	710	5.8	78.0	0.71	5.00			63	64	72		
132M	3		7.5	79.0	0.73				79				
160M1	4	720	9.8	81.0					6.00			1.90	
160M2	5.5		12.9	83.0	0.74	119							
160L	7.5		16.9	85.5	0.75	145							
180L	11	730	23.9	87.5			2.00		184	70	78		
200L	15		32.4	88.0	0.76				250				
225S	18.5		39.1	90.0					6.60			1.90	2.00
225M	22		45.0	90.5	0.78	292							
250M	30		63.4	91.0		405	75	82					
280S	37	73.9	91.5	0.79	520	76			83				
280M	45	89.4	92.0		592					82			
315S	55	740	105.6	92.8			1.80		1000		82	88	
315M	75		143.7	93.0	0.81				1100				
315L1	90		168.9	93.8					1160				
315L2	110	206.0	94.0	0.82	1230	90	95						
355M1	132	248.0	93.7		1600								
355M2	160	299.0	94.2		1700								
355L	200	368.1	94.5	0.83	1800								

Y SERIES MOUNTING DIMENSIONS

IMB3

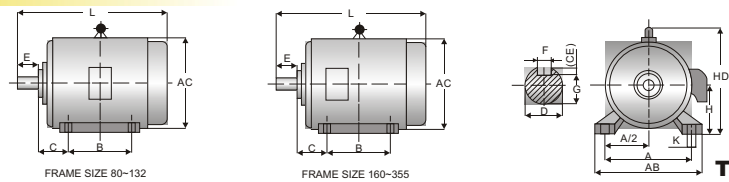


Table 7

Frame No.	Poles	Mounting Dimensions & Tolerance											Frame Dimensions				
		A	A/2	B	C	D	E	F	G ¹⁾	H	K ²⁾		AB	AC	AD	HD	L
80M	2,4	125	62.5	100	50	19	40	6	0 -0.030	15.5	0 -0.10	80	165	175	150	175	290
90S	2,4,6	140	70	100	±1.5	24	±0.009	50	±0.310	8	0	10	180	195	160	195	315
90L		140	70	125	56	24	-0.004	50	±0.310	8	0	10	180	195	160	195	340
100L		160	80	140	63	28	0	60	±0.370	24	0 -0.036	100	205	215	180	245	380
112M		190	95	140	70	28	0	60	±0.370	24	0 -0.036	112	245	240	190	265	400
132S	2,4,6,8	216	108	140	±2.0	38	±0.018	80	±0.370	10	0	12	280	275	210	315	475
132M		216	108	178	89	38	±0.018	80	±0.370	10	0	12	280	275	210	315	515
160M		254	127	210	108	42	±0.002	110	±0.430	12	0	15	330	335	265	385	605
160L		254	127	254	108	42	±0.002	110	±0.430	12	0	15	330	335	265	385	650
180M	2,4,6,8	279	139.5	241	±3.0	48	±0.030	140	±0.500	14	0	18	355	380	285	430	670
180L		279	139.5	279	121	48	±0.030	140	±0.500	14	0	18	355	380	285	430	710
200L		318	159	305	133	55	±0.030	160	±0.500	16	0	20	395	420	315	475	775
225S		318	159	286	149	55	±0.030	160	±0.500	16	0	20	395	420	315	475	820
225M	4,8	356	178	311	190	60	±0.030	180	±0.500	18	0	22	435	475	345	530	815
250M	2	406	203	349	168	65	±0.030	200	±0.500	20	0	24	490	515	385	575	930
280S	4,6,8	457	228.5	368	190	75	±0.030	240	±0.500	24	0	28	550	580	410	640	1000
280M	2	457	228.5	419	190	75	±0.030	240	±0.500	24	0	28	550	580	410	640	1050
315S	2	508	254	406	216	80	±0.030	280	±0.500	28	0	32	645	645	576	865	1240
315M	4,6,8,10	508	254	457	216	80	±0.030	280	±0.500	28	0	32	744	645	576	865	1270
315L	2	508	254	508	216	80	±0.030	280	±0.500	28	0	32	744	645	576	865	1310
355M	2	610	305	560	254	95	±0.030	355	±0.500	35	0	40	740	750	680	1035	1540
355L	4,6,8,10	610	305	630	254	95	±0.030	355	±0.500	35	0	40	740	750	680	1035	1570

Y SERIES MOUNTING DIMENSIONS

IMB5

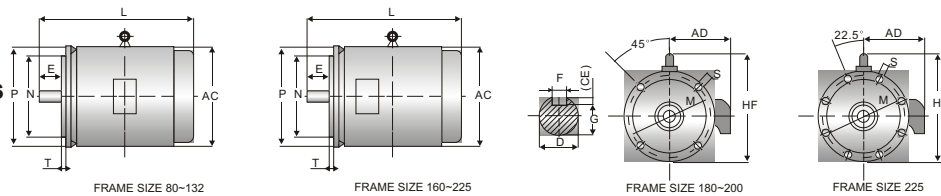


Table 8

Frame No.	Poles	Mounting Dimensions & Tolerance													Frame Dimensions														
		D		E		F	G ¹⁾	M	N	P ³⁾	R ⁴⁾		S		T		Holes No.	AC	AD	HF	L								
80M	2,4	19	+0.009 -0.004	40	±0.310	6	0 -0.030	15.5	0 -0.10	165	130	+0.014 -0.011	200	0	±1.5	12	+0.430 0	3.5	4	175	150	185	290						
90S	2,4,6	24		50				20					200		±1.5	12	+0.430 0	3.5		195	160	195	315						
90L						8	0 -0.036						200		±1.5	12	+0.430 0	3.5		215	180	245	380						
100L									24				250		±2.0	15		4		240	190	265	400						
112M			28		60	±0.370							250		±2.0	15		4		275	210	315	475						
132S	2,4,6,8	38	+0.018 -0.002	80		10		33		265	230	+0.016 -0.013	300		0	±3.0	19	+0.520 0		5	8	335	265	385	605				
132M						12		37	0 -0.20				350									300	250	350	380	285	430	670	
160M								42.5	0 -0.043																	420	315	480	775
160L																													
180M			48		110	±0.430	14				350	300	±0.016			400													
180L							16		49																				
200L			55																										
225S		4,8	60	+0.030 -0.011	140	±0.500	18		53		400	350	±0.018	450		±4.0									820				
225M	2	55		110	±0.430	16		49														815							
	4,6,8	60		140	±0.500	18		53														845							

Y SERIES MOUNTING DIMENSIONS

IMB35

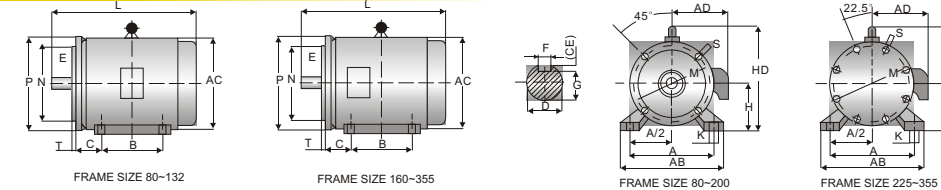


Table 9

Frame No.	Poles	Mounting Dimensions & Tolerance											Frame Dimensions				
		A	A/2	B	C	D	E	F	G ¹⁾	H	K ²⁾	M	N	P ³⁾	R ⁴⁾	S	T
80M	2,4	125	62.5	100	50	19	40	6	0 -0.030	16	0 -0.10	80	165	175	150	175	290
90S	2,4,6	140	70	100	±1.5	24	±0.009	50	±0.310	8	0	10	180	195	160	195	315
90L		140	70	125	56	24	-0.004	50	±0.310	8	0	10	180	195	160	195	340
100L		160	80	140	63	28	0	60	±0.370	24	0 -0.036	100	205	215	180	245	380
112M		190	95	140	70	28	0	60	±0.370	24	0 -0.036	112	245	240	190	265	400
132S	2,4,6,8	216	108	140	±2.0	38	±0.018	80	±0.370	10	0	12	280	275	210	315	475
132M		216	108	178	89	38	±0.018	80	±0.370	10	0	12	280	275	210	315	515
160M		254	127	210	108	42	±0.002	110	±0.430	12	0	15	330	335	265	385	605
160L		254	127	254	108	42	±0.002	110	±0.430	12	0	15	330	335	265	385	650
180M	2,4,6,8	279	139.5	241	±3.0	48	±0.030	140	±0.500	14	0	18	355	380	285	430	670
180L		279	139.5	279	121	48	±0.030	140	±0.500	14	0	18	355	380	285	430	710
200L		318	159	305	133	55	±0.030	160	±0.500	16	0	20	395	420	315	475	775
225S		318	159	286	149	55	±0.030	160	±0.500	16	0	20	395	420	315	475	820
225M	4,8	356	178	311	190	60	±0.030	180	±0.500	18	0	22	435	475	345	530	815
250M	2	406	203	349	168	65	±0.030	200	±0.500	20	0	24	490	515	385	575	930
280S	4,6,8	457	228.5	368	190	75	±0.030	240	±0.500	24	0	28	550	580	410	640	1000
280M	2	457	228.5	419	190	75	±0.030	240	±0.500	24	0	28	550	580	410	640	1050
315S	2	508	254	406	216	80	±0.030	280	±0.500	28	0	32	645	645	576	865	1240
315M	4,6,8,10	508	254	457	216	80	±0.030	280	±0.500	28	0	32	744	645	576	865	1270
315L	2	508	254	508	216	80	±0.030	280	±0.500	28	0	32	744	645	576	865	1310
355M	2	610	305	560	254	95	±0.030	355	±0.500	35	0	40	740	750	680	1035	1540
355L	4,6,8,10	610	305	630	254	95	±0.030	355	±0.500	35	0	40	740	750	680	1035	1570

Y SERIES MOUNTING DIMENSIONS

IMV1

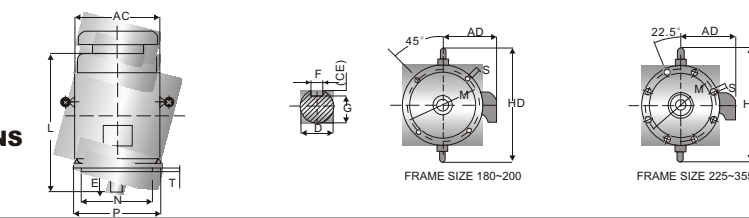


Table 10

Frame No.	Poles	Mounting Dimensions & Tolerance													Frame Dimensions										
		D	E		F		G ¹⁾	M	N	P ³⁾	R ⁴⁾	S	T	Holes No.	AC	AD	HF	L							
180M	2,4,6,8	48	+0.018 +0.002	110	±0.43	14	0 -0.043	42.5	300	250	+0.016 +0.013	350	±3.0	19	5	0 -0.150	4	380	285	500	730				
180L		55	16			49		350			300	+0.016						400	420	315	550	770			
200L		60	18			53		400			300	±0.018						450							
225S		4.8	2			110		±0.43			16	49													
225M	2	55	140	±0.50	18	0 -0.043	53	500	450	±0.020	550	0	±4.0	+0.520 0	6	0 -0.150	8	475	345	610	910				
225M	4.6,8	2			16		49																		
250M	2	60			18		53																		
250M	4.6,8	2			58																				
280S	2	65	140	±0.50	20	0 -0.052	67.5	600	550	±0.022	660	0	±4.0	24	6	0 -0.150	8	515	385	650	1035				
280S	4.6,8	2			18	0 -0.043	58																		
280M	2	65			20	0 -0.052	67.5																		
280M	4.6,8	75			20	0 -0.052	67.5																		
315S	2	65	170	±0.50	18	0 -0.043	58	740	680	±0.025	800	0	±4.0	24	6	0 -0.150	8	580	410	720	1120				
315S	4.6,8,10	80			22	0 -0.052	71																		
315M	2	65			140	18	0 -0.043											58							
315M	4.6,8,10	80			170	22	0 -0.052											71							
315L	2	65	140	±0.57	18	0 -0.043	58	740	680	±0.025	800	0	±4.0	24	6	0 -0.150	8	645	576	900	1460				
315L	4.6,8,10	80			170	22	0 -0.052											71							
355	2	75			140	20	0 -0.052											67.5							
355	4.6,8,10	95			+0.035 +0.013	170	25											86							

IMB3

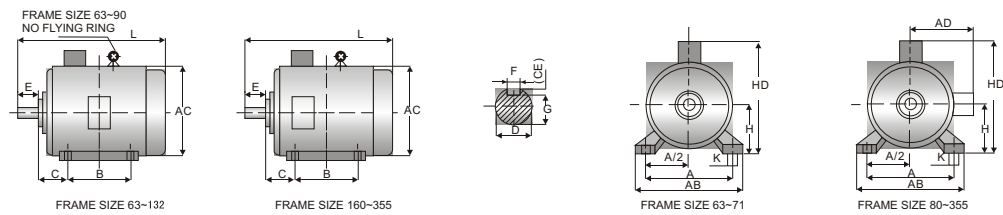


Table 11

Frame No.	Poles	Mounting Dimensions & Tolerance															Frame Dimensions					
		A	A/2	B	C	D		E		F		G ⁽¹⁾		H		K ⁽²⁾		AB	AC	AD	HD	L
63M	2,4,	100	50	80	40	±1.5	11	+0.008 -0.003	23	±0.26	4	0 -0.030	8.5	0 -0.10	63	7	+0.036 0	135	130	70	180	230
71M	2,4,6	112	56	90	45		14	30	5	11	71		150		145			80	195	255		
80M	2,4,6,8	125	62.5	100	50	±1.5	19	+0.009 -0.004	40	±0.31	6	8	15.5	0 -0.036	80	10	+0.036 0	165	175	145	220	295
90S		140	70	100	56		24		50	20	90		180		195			155	250	345		
90L		140	70	125	56	±2.0	28	60	±0.37	8	0 -0.036	24	100	0 -0.5	112	205	215	180	270	385		
100L		160	80	140	63		38					80	10		33	132	230	240	190	300	400	
112M		190	95	140	70	±2.0	38	80	10	33	132	12	270	275	210	345	470	510				
132S		216	108	140	89		42												50	12	37	160
132M		216	108	178	89	±3.0	48	110	±0.43	14	42.5	180	395	420	305	505	770	700	740			
160M		254	127	210	108		55													140	±0.50	18
160L		254	127	254	108	±3.0	48	110	±0.43	16	49	200	250	0 -1.0	280	24	550	580	410	680	1035	
180M		279	139.5	241	121		55															110
180L		279	139.5	279	121	±3.0	48	110	±0.43	14	42.5	180	395	420	305	505	770	700	740			
200L		318	159	305	133		55													110	±0.43	16
225S	4,8	356	178	286	149	±4.0	60	+0.030 +0.011	140	±0.50	18	0 -0.043	53	250	0 -1.0	280	24	550	580	410	680	1035
225M	2	356	178	311	149		60		140	±0.50	18	0 -0.043	53									
250M	2	406	203	349	168	±4.0	65	+0.030 +0.011	140	±0.50	18	0 -0.043	58	250	0 -1.0	280	24	550	580	410	680	1035
250M	4,6,8	406	203	349	168		65		140	±0.50	18	0 -0.043	58									
280S	2	457	228.5	368	190	±4.0	75	+0.030 +0.011	140	±0.50	20	0 -0.052	67.5	250	0 -1.0	280	24	550	580	410	680	1035
280S	4,6,8	457	228.5	368	190		75		140	±0.50	20	0 -0.052	67.5									
280M	2	457	228.5	419	190	±4.0	65	+0.030 +0.011	140	±0.50	18	0 -0.043	58	250	0 -1.0	280	24	550	580	410	680	1035
280M	4,6,8	457	228.5	419	190		65		140	±0.50	18	0 -0.043	58									
315S	2	508	254	406	216	±4.0	65	+0.030 +0.011	140	±0.50	18	0 -0.043	58	250	0 -1.0	280	24	550	580	410	680	1035
315S	4,6,8,10	508	254	406	216		65		140	±0.50	18	0 -0.043	58									
315M	2	508	254	457	216	±4.0	65	+0.030 +0.011	140	±0.50	18	0 -0.043	58	250	0 -1.0	280	24	550	580	410	680	1035
315M	4,6,8,10	508	254	457	216		65		140	±0.50	18	0 -0.043	58									
315L	2	508	254	508	216	±4.0	65	+0.030 +0.011	140	±0.50	18	0 -0.043	58	250	0 -1.0	280	24	550	580	410	680	1035
315L	4,6,8,10	508	254	508	216		65		140	±0.50	18	0 -0.043	58									
355M	2	610	305	560	254	±4.0	75	+0.035 +0.013	140	±0.50	20	0 -0.052	67.5	250	0 -1.0	280	24	550	580	410	680	1035
355M	4,6,8,10	610	305	560	254		75		140	±0.50	20	0 -0.052	67.5									
355L	2	610	305	630	254	±4.0	75	+0.035 +0.013	140	±0.50	20	0 -0.052	67.5	250	0 -1.0	280	24	550	580	410	680	1035
355L	4,6,8,10	610	305	630	254		75		140	±0.50	20	0 -0.052	67.5									

IMB5

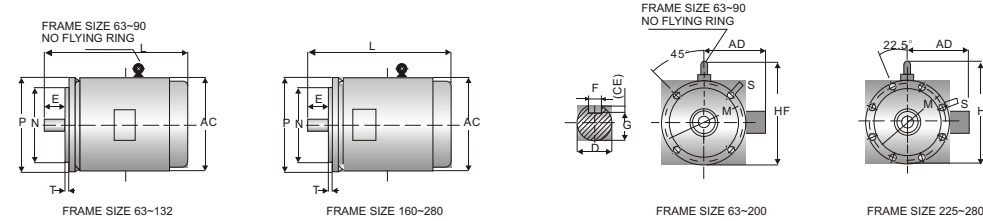


Table 12

Frame No.	Poles	Mounting Dimensions & Tolerance													Frame Dimensions															
		D		E		F		G ¹⁾		M	N	P ³⁾	R ⁴⁾		S	T		Holes No.		AC	AD	HF	L							
63M	2,4	11	+0.008 -0.003	23	±0.26	4	0	8.5	0	115	95	+0.013 -0.009	140			10	+0.360 0	3	0 -0.100	4	130	70	130	230						
2,4,6		14		30		5	0 -0.030	11	-0.10	130	110		160											145	80	145	255			
80M	2,4,6,8	19		40		6		15.5					200	±1.5		12		3.5			175	145	185	295						
		24	+0.009 -0.004	50	±0.31			20		165	130	+0.014 -0.011														195	155	195	320 345	
90L						8	0 -0.036	24			215	180		250	±2.0	15	+0.430 0	4			215	180	245	385						
		28		60																					240	190	265	400		
112M			38		80	±0.37	10		33	0 -0.20	265	230		300	0	±3.0			0 -0.120			275	210	315	470 510					
			42	+0.018 +0.002			12		37				+0.016 -0.013	350													330	255	385	615 670
			48		110	±0.43	14		42.5		300	250		350													380	280	430	700 740
			55				16		49		350	300	±0.016	400	±4.0		19	+0.520 0	5			8	420	305	480	770				
225S		4,8	60		140	±0.50	18	0 -0.043	53					450																
225M	2	55		110	±0.43	16		49		400	350	±0.018																		820
	4,6,8	60						53																						845
250M	2		+0.030 +0.011			18		58																						910
	4,6,8	65																												
280S	2	140		±0.50																										
	4,6,8		75				20	0 -0.052	67.5		500	450	±0.020	550										985						
280M	2	65				18	0 -0.043	58																						
	4,6,8	75				20	0 -0.052	67.5															1035							

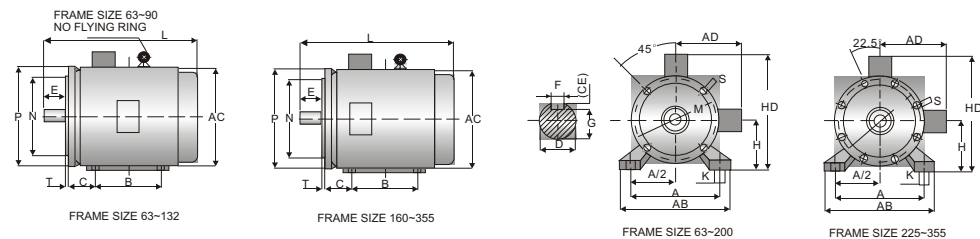


Table 13

Frame No.	Poles	Mounting Dimensions & Tolerance																	Frame Dimensions																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		A	A/2	B	C	D		E	F	G ¹⁾		H	K ²⁾		M	N	P ³⁾	R ⁴⁾	S	T	Holes No.	AB	AC	AD	HD	L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
63M	2,4	100	50	80	40	±1.5	11	+0.008 -0.003	23	±0.260	4	0 -0.030	8.5	63	7	115	95	+0.013 -0.009	140	±1.5	10	+0.36 0	3	0 -0.10	4	135	130	70	180	230																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
71M	2,4,6	112	56	90	45		14		30	5	11	0 -0.10	71				+0.360 0	130	110			160						150	145	80	195	255																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
80M		125	63	100	50		19		40	6	16	80				10						200							165	175	145	220	295																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
90S	2,4,6,8	140	70	100	56	24	+0.009 -0.004	50	±0.310	8	20	90		12		165	130	+0.014 -0.011	200	12		3.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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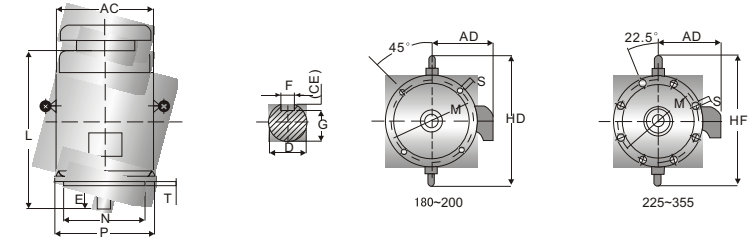


Table 14

Frame No .	Poles	Mounting Dimensions & tolerance															Frame Dimensions																	
		D		E		F		G ¹⁾		M	N	P ³⁾	R ⁴⁾	S	T	Holes No.	AC	AD	HF	L														
180M	2,4,6,8	48	+0.018 +0.022	110	±0.430	14	42.5	300	250	+0.016 -0.013	350	±3.0			0 -0.120	4	380	280	500	760														
180L																											800							
200L		55							16	49	350						300	±0.016	400							420	305	550	840					
225S	4,8	60		140	±0.500	18	0 -0.043	400	350	±0.018	450		19		5		470	335	610	905														
225M	2	55	110	±0.430	16	49																					910							
	4,6,8	60				53																					935							
250M	2	65	+0.030 +0.011	140		18	0 -0.052	500	450	±0.020	550						510	370	650	1015														
	4,6,8																				58													
280S	2																				20	0 -0.043	67.5											
280M	4,6,8	75		18	0 -0.043	58	0 -0.20			±0.020	550						580	410	720	1150														
		2	65		20	0 -0.052														67.5														
315S	2	65		18	0 -0.043	58																			±4.0								1280	
	4,6,8,10	80		22	0 -0.052	71													1510															
315M	2	65		140	18	0 -0.043	58	600	550	±0.022	660						645	530	900	1310														
	4,6,8,10	80		170	22	0 -0.052	71																								1430			
315L	2	65		140	18	0 -0.043	58																	24		6						1310		
	4,6,8,10	80		170	22		71												1430															
355M	2	75		140	20		67.5													1640														
355L	4,6,8,10	95	+0.035 +0.013	170	25	0 -0.052	86	740	680	±0.025	800						710	655	1010	1670														
	2	75	+0.030 +0.011	140	20		67.5																							1640				
		4,6,8,10	95	+0.035 +0.013	170	25														86											1670			

The note for: 1)G=D-GE.The limit of deciation in GE is ($\begin{smallmatrix} +0.10 \\ 0 \end{smallmatrix}$)for frame No.up to 80,the rest is($\begin{smallmatrix} +0.20 \\ 0 \end{smallmatrix}$).

2)The position tolerance for hole K is based on the axis of shaft extention.

3)Dimension P is the maximun limit value.

4)R is the distance from the matching surface of flange to the shoulder of shaft extension.