

MS series 3 Phase Induction Motor Aluminium Housing



Frequency : 50Hz, 60Hz
Voltage : 220/380V, 380/660V
Connection : Y-Connection for up to 3 kw
delta-connection for 4 kw and above.
Duty : Continuous (S1)
Insulation class : F
Protection : IP55
cooling : IC411

MS motors (center height 56-132mm, 0.06-7.5kw) are aluminium housing, totally enclosed, fan cooled, three-phase, squirrel cage induction motors. MS motors is high starting torque, low noise (test at load), light weight and modern design. Rated output and mounting dimensions are fully conformed to the standard IEC 34-1 and DIN 42673. They are general purpose motors suitable for driving various kinds of machines or equipments without special requirements, ambient temperature is not exceeding 40°C. Altitude is not over 1000 meters above sea level.

Note: bearing of (C 3: increased clearance), type zz to both driving and non-driving side with temperature range from -10 c to +110 c

Mounting Arrangements

*Types of mounting	IEC 34-7 Code	1992 Code II
	IM B ₃	IM 1001
	IM B ₅	IM 3001
	IM B ₆	IM 1051
	IM B ₇	IM 1061
	IM B ₈	IM 1071
	IM B ₁₄	IM 3601
	IM B ₃₄	IM 2101
	IM B ₁₅	IM 2001
	IM V ₁	IM 3001

*Types of mounting	IEC 34-7 Code I	1992 Code II
	IM V ₁	IM 3021
	IM V ₃	IM 1011
	IM V ₅	IM 1031
	IM V ₆	IM 2011
	IM V ₁₅	IM 12111
	IM V ₁₅	IM 3611
	IM V ₁₈	IM 3631
	IM V ₃₆	IM 2031
	IM V ₃₆	IM 2131

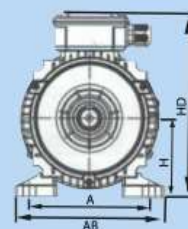
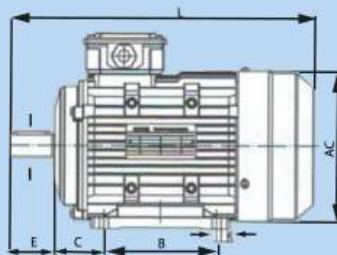
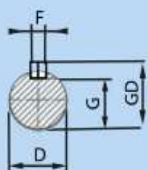
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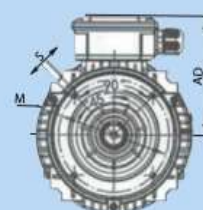
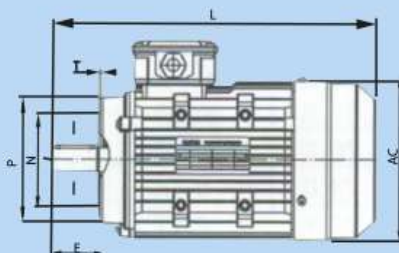
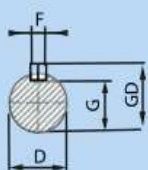
Model	Output		full load				75% load		50% load		Tstart/Tn	Ist/In	Tmax/Tn
	kW	HP	Current(A)	speed(r/min)	Eff(%)	Power factor	Eff(%)	Power factor	Eff(%)	Power factor			
380V 50Hz Synchronous Speed 3000r/min(2 poles)													
MS-561-2	0.09	0.12	0.30	2700	58.0	0.78	56.2	0.77	54.0	0.74	2.2	5.5	2.2
MS-562-2	0.12	0.18	0.38	2700	60.0	0.79	58.5	0.78	56.0	0.75	2.2	5.5	2.2
MS-631-2	0.18	0.25	0.53	2720	63.0	0.80	62.0	0.80	60.5	0.76	2.2	5.5	2.2
MS-632-2	0.25	0.33	0.69	2720	65.0	0.81	64.0	0.80	62.5	0.77	2.2	5.5	2.2
MS-711-2	0.37	0.50	0.99	2740	66.0	0.81	55.0	0.80	63.5	0.78	2.2	6.1	2.2
MS-712-2	0.55	0.75	1.40	2740	71.0	0.82	70.0	0.82	68.5	0.79	2.2	6.1	2.3
MS-801-2	0.75	1	1.83	2830	73.0	0.83	72.0	0.83	70.2	0.80	2.2	6.1	2.3
MS-802-2	1.1	1.5	2.58	2830	76.2	0.84	75.1	0.83	73.0	0.80	2.2	7.0	2.3
MS-90S-2	1.5	2	3.43	2840	78.5	0.84	77.0	0.85	70.0	0.81	2.2	7.0	2.3
MS-90L-2	2.2	3	4.85	2840	81.0	0.85	80.0	0.85	78.0	0.84	2.2	7.0	2.3
MS-100L-2	3	4	6.31	2870	82.6	0.87	81.0	0.86	79.3	0.86	2.2	7.0	2.3
MS-112M-2	4.0	5.5	8.10	2890	84.2	0.88	83.5	0.87	81.0	0.84	2.2	7.5	2.3
MS-132S1-2	5.5	7.5	11.0	2900	85.7	0.88	84.3	0.89	83.0	0.84	2.2	7.5	2.3
MS-132S2-2	7.5	10	14.9	2900	87.0	0.88	85.9	0.87	83.7	0.84	2.2	7.5	2.3
380V 50Hz Synchronous Speed 1500r/min(4 poles)													
MS-561-4	0.06	0.08	0.26	1300	53.0	0.70	51.8	0.65	50.0	0.53	2.1	5.2	2.2
MS-562-4	0.09	0.12	0.35	1300	55.0	0.71	53.8	0.67	52.0	0.55	2.1	5.2	2.2
MS-631-4	0.12	0.18	0.42	1310	57.0	0.72	58.1	0.69	53.9	0.57	2.1	5.2	2.2
MS-632-4	0.18	0.25	0.62	1310	60.0	0.73	58.5	0.70	56.7	0.59	2.1	5.2	2.2
MS-711-4	0.25	0.33	0.79	1330	65.0	0.74	62.4	0.73	59.3	0.59	2.1	5.2	2.2
MS-712-4	0.37	0.50	1.12	1330	67.0	0.75	65.3	0.74	60.8	0.63	2.1	5.2	2.2
MS-801-4	0.55	0.75	1.57	1390	71.0	0.75	69.2	0.74	67.2	0.64	2.4	5.2	2.3
MS-802-4	0.75	1.0	2.03	1390	73.0	0.76	71.7	0.75	69.8	0.67	2.3	6.0	2.3
MS-90S-4	1.1	1.5	2.89	1400	76.2	0.77	73.1	0.75	70.8	0.67	2.3	6.0	2.3
MS-90L-4	1.5	2	3.70	1400	78.5	0.79	76.1	0.76	73.7	0.69	2.3	6.0	2.3
MS-100L1-4	2.2	3	5.16	1430	81.0	0.81	78.0	0.79	75.5	0.69	2.3	7.0	2.3
MS-100L2-4	3.0	4	6.78	1430	82.6	0.82	79.9	0.78	77.5	0.70	2.3	7.0	2.3
MS-112M-4	4.0	5.5	8.80	1440	84.2	0.82	81.9	0.79	79.6	0.70	2.3	7.0	2.3
MS-132S-4	5.5	7.5	11.7	1440	85.7	0.83	82.8	0.81	80.4	0.73	2.3	7.0	2.3
MS-132M-4	7.5	10	15.6	1440	87.0	0.84	84.8	0.82	82.6	0.74	2.3	7.0	2.3
380V 50Hz Synchronous Speed 1000r/min(6 poles)													
MS-711-6	0.18	0.25	0.74	850	56.0	0.66	54.6	0.66	53.0	0.65	1.9	4.0	2.0
MS-712-6	0.25	0.33	0.95	850	59.0	0.68	57.5	0.68	56.1	0.62	1.9	4.0	2.0
MS-801-6	0.37	0.50	1.30	890	62.0	0.70	60.5	0.69	59.1	0.64	1.9	4.7	2.0
MS-802-6	0.55	0.75	1.79	890	65.0	0.72	63.3	0.71	60.1	0.64	1.9	4.7	2.1
MS-90S-6	0.75	1	2.29	910	69.0	0.72	67.3	0.72	66.3	0.65	2.0	5.5	2.1
MS-90L-6	1.1	1.5	3.18	910	72.0	0.73	70.2	0.72	38.0	0.66	2.0	5.5	2.2
MS-100L-6	1.5	2	3.94	940	76.0	0.75	74.0	0.75	71.0	0.68	2.0	5.5	2.1
MS-112M-6	2.2	3	5.60	940	79.0	0.73	77.1	0.77	75.1	0.69	2.0	6.5	2.1
MS-132S-6	3.0	4	7.40	960	81.0	0.76	78.9	0.77	76.1	0.69	2.1	6.5	2.1
MS-132M1-6	4.0	5.5	9.80	960	82.0	0.76	80.0	0.76	77.5	0.70	2.1	6.5	2.1
MS-132M2-6	5.5	7.5	12.9	960	84.0	0.77	82.1	0.77	79.4	0.70	2.1	6.5	2.1

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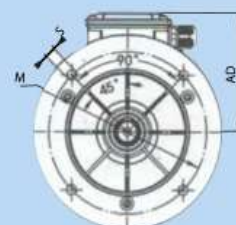
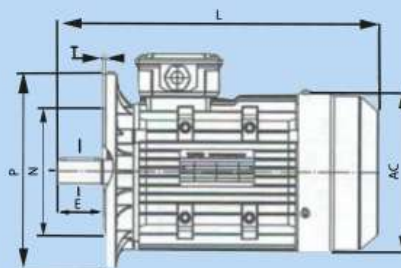
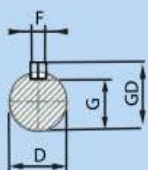
B3



B14



B5



Frrame No.	Installtion Size										Installtion Size B14					Installtion Size B5					Over all dimensions						
	A	B	C	D	E	F	G	GD	H	K	M	N	P	S	T	M	N	P	S	T	AB	AC	AD	HD	L	L*	
56	90	71	36	9	20	3	7.2	10.2	56	6	65	50	80	M5	2	100	80	120	8.5	3	110	120	91	147	195	-	
63	100	80	40	11	23	4	8.5	12.5	63	7	75	60	90	M5	2.5	115	95	140	10	3	130	130	100	163	230	267	
71	112	90	45	14	30	5	11	16	71	7	85	70	105	M6	2.5	130	110	160	10	3.5	145	145	106	177	255	310	
80	125	100	50	19	40	6	15.5	16	80	10	100	80	120	M6	3	165	130	200	12	3.5	160	165	116	196	295	357	
90S	140	100	56	24	50	8	20	21.5	90	10	115	95	140	M8	3	165	130	200	12	3.5	180	185	122	212	335	362	
90L	140	125	56	24	50	8	20	21.5	90	10	115	95	140	M8	3	165	130	200	12	3.5	180	185	122	212	360	388	
100L	160	140	63	28	60	8	24	31	100	12	130	110	160	M8	3.5	215	180	250	15	4	205	215	155	255	380	453	
112M	190	140	70	28	60	8	24	31	112	12	130	110	160	M8	3.5	215	180	250	15	4	245	240	173	285	400	470	
132S	216	140	89	38	80	10	33	41	132	12	165	130	200	M10	3.5	265	230	300	15	4	280	275	195	327	475	523	
132M	216	178	89	38	80	10	33	41	132	12	165	130	200	M10	3.5	265	230	300	15	4	280	275	195	327	515	563	

L* for brake motor

Frequency at 60 Hz

All electrical data in this catalogue refer to three-phase wound motors at 50 Hz. These may be connected to 60 Hz, taking into account the multiplier coefficients in the table below:

Rated voltage at 50 Hz	Volt a 60 Hz	Rated power W	rpm	In	Ist/In	Tstart/In	Tmax/Tn
220	220	1	1.2	1.2	0.8	0.8	0.8
220	230	1.05	1.2	1.15	0.85	0.85	0.85
220	240	1.06	1.2	1.1	0.87	0.87	0.87
230	230	1	1.2	1.2	0.8	0.8	0.8
230	240	1.1	1.2	1.15	0.9	0.9	0.9
230	260	1.2	1.2	1	1	1	1
400	400	1	1.2	1.2	0.8	0.8	0.8
400	440	1.06	1.2	1.1	0.87	0.87	0.87
400	460	1.2	1.2	1	1	1	1
400	480	1.25	1.2	1	1.1	1.1	1.1
440	440	1	1.2	1.2	0.8	0.8	0.8
500	500	1	1.2	1.2	0.8	0.8	0.8
500	550	1.06	1.2	1.1	0.87	0.87	0.87

Where you can notice that a motor winded at 50 Hz can work at 60 Hz with the same rated voltage, power (W), with a 1.2 increase of rpm and rated current In, also a 0.8 reduction of starting current Ist/In, of the starting torque Tstart/Tn and of the maximum torque Tmax/Tn.

Ist = Starting current
In = Rated current
Imax = Max. current

Tstart = Starting torque
Tn = Rated torque
Tmax = Max. torque



Frequency : 50Hz, 60Hz ***D.C coil brake**
Voltage : 220/380V,380/660V
Connection : Y-Connection for up for 3 kw, delta-connection for 4 kw and above.
Duty : Continuous (S1)
Insulation class : F,Aluminium Housing
Protection : IP55
cooling : IC411

Brake action promptly when power of electric motor is off. When power off, electromagnet loses electromagnetic force. The armature is pushed by spring and sticks to end shield of the motor immediately, rotation is stopped therefore,

This series have low noise and braking performance is reliable The electromagnetic brake get 90 or 170V DC voltage through 220V AC and rectifier. Hand lever for manually remove brake action.

Type	Power		Speed (r/min)	Current (A)	Eff (%)	Power factor	Static baking touque (N.m)	No-load braking lag time (S)	Enetgizing Power (W)	Ist/In	Tstart/Tn	Tmax/Tn	WEIGHT (KG)
	kW	HP											
380V 50Hz Synchronous Speed 3000r/min(2 poles)													
631-2	0.18	0.25	2720	0.53	65	0.80	4	0.20	18	5.5	2.2	2.2	5
632-2	0.25	0.33	2720	0.69	68	0.81	4	0.20	18	5.5	2.2	2.2	6
711-2	0.37	0.50	2740	0.99	70	0.81	4	0.20	18	6.1	2.2	2.2	8
712-2	0.55	0.75	2740	1.40	73	0.82	4	0.20	18	6.1	2.2	2.3	8
801-2	0.75	1	2845	1.83	75	0.83	7.5	0.20	30	6.1	2.2	2.3	11
802-2	1.1	1.5	2840	2.58	77	0.84	7.5	0.20	30	7.0	2.2	2.3	12
90S-2	1.5	2	2840	3.43	79	0.84	15	0.20	50	7.0	2.2	2.3	17
90L-2	2.2	3	2840	4.85	81	0.85	15	0.20	50	7.0	2.2	2.3	18
100L-2	3.0	4	2860	6.31	83	0.87	30	0.20	65	7.5	2.2	2.3	25
112M-2	4.0	5.5	2880	8.10	85	0.88	40	0.25	90	7.5	2.2	2.3	36
132S1-2	5.5	7.5	2900	11.0	86	0.88	75	0.25	90	7.5	2.2	2.3	58
132S2-2	7.5	10	2900	14.9	87	0.88	75	0.25	90	7.5	2.2	2.3	61
380V 50Hz Synchronous Speed 1500r/min(4 poles)													
631-4	0.12	0.18	1310	0.44	57	0.72	4	0.20	18	4.4	2.1	2.2	5
632-4	0.18	0.25	1310	0.62	60	0.73	4	0.20	18	4.4	2.1	2.2	7
711-4	0.25	0.33	1330	0.79	65	0.74	4	0.20	18	5.2	2.1	2.2	8
712-4	0.37	0.50	1330	1.12	67	0.75	4	0.20	18	5.2	2.1	2.2	8
801-4	0.55	0.75	1390	1.57	71	0.75	7.5	0.20	30	5.2	2.4	2.3	11
802-4	0.75	1.0	1380	2.03	73	0.76	7.5	0.20	30	6.0	2.3	2.3	13
90S-4	1.1	1.5	1390	2.89	75	0.77	15	0.20	50	6.0	2.3	2.3	17
90L-4	1.5	2	1390	3.70	78	0.79	15	0.20	50	6.0	2.3	2.3	18
100L1-4	2.2	3	1410	5.16	80	0.81	30	0.20	65	7.0	2.3	2.3	25.5
100L2-4	3.0	4	1410	6.78	82	0.82	30	0.20	65	7.0	2.3	2.3	28
112M-4	4.0	5.5	1435	8.80	84	0.82	40	0.25	90	7.0	2.3	2.3	38
132S-4	5.5	7.5	1440	11.7	85	0.83	75	0.25	90	7.0	2.3	2.3	56
132M-4	7.5	10	1440	15.6	87	0.84	75	0.25	90	7.0	2.3	2.3	66
380V 50Hz Synchronous Speed 1000r/min(6 poles)													
711-6	0.18	0.25	850	0.74	56	0.66	4	0.20	18	4.0	1.9	2.0	7
712-6	0.25	0.33	850	0.95	59	0.68	4	0.20	18	4.0	1.9	2.0	8
801-6	0.37	0.50	885	1.3	62	0.70	7.5	0.20	30	4.7	1.9	2.0	11
802-6	0.55	0.75	885	1.79	65	0.72	7.5	0.20	30	4.7	1.9	2.1	13
90S-6	0.75	1	910	2.29	69	0.72	15	0.20	50	5.5	2.0	2.1	17
90L-6	1.1	1.5	910	3.18	72	0.73	15	0.20	50	5.5	2.0	2.1	18
100 -6	1.5	2	920	3.94	76	0.75	30	0.20	65	5.5	2.0	2.1	26
112M-6	2.2	3	935	5.6	79	0.76	40	0.25	90	6.5	2.0	2.1	39
132S-6	3.0	4	960	7.4	81	0.76	75	0.25	90	6.5	2.1	2.1	56
132M1-6	4.0	5.5	960	9.8	82	0.76	75	0.25	90	6.5	2.1	2.1	65
132M -6	5.5	7.5	960	12.9	84	0.77	75	0.25	90	6.5	2.1	2.1	68

Single Phase Induction Motor



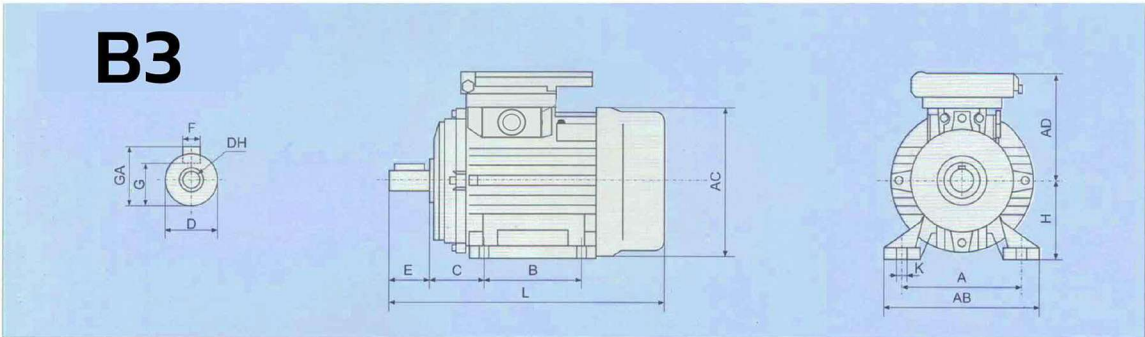
MODERNA Single phase ML Series
Aluminum Motors are dual capacitors,
high starting torque high rated torque
Motor size acc. to IEC34-1. DIN 42673.
Totally Enclosed Fan cooled
Light construction
Top mounted terminal box
IP55 Protection, IC411 cooling.
Choice of foot or flange mounting
Motor frame size from 56-112
Rated at 220V 50Hz.
ML: Dual capacitor for start and run
MY: Single capacitor for run (only for size 56)



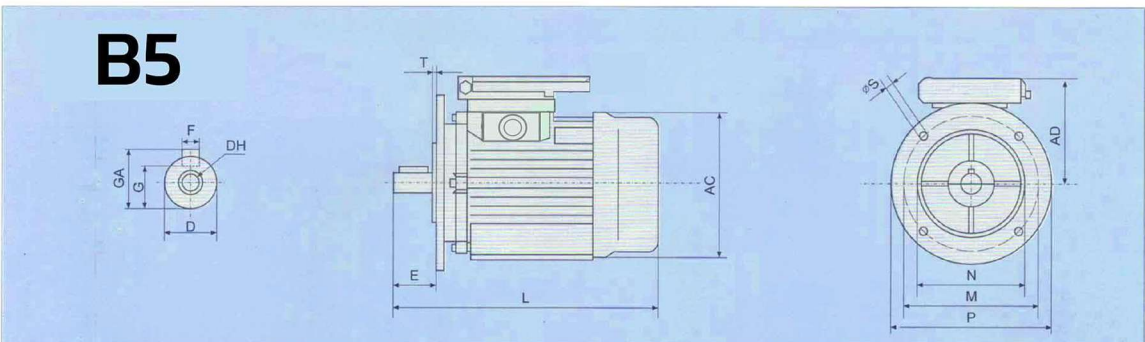
Technical Data

Type	Output		Voltage	Current	Speed	Eff	Power	Frequency	Tstart/Tn	Istart/In	Tmax/Tn
	HP	KW	(V)	(A)	(r/min)	(%)	Factor	HZ			
MY-5624	0.12	0.09	220	0.81	1400	56	0.90	50	0.45	2.9	1.7
ML-6324	0.25	0.18	220	1.41	1400	60	0.92	50	1.8	6.0	1.8
ML-7112	0.5	0.37	220	2.73	2800	67	0.92	50	1.8	6.0	1.8
ML-7122	0.75	0.55	220	3.88	2800	70	0.92	50	1.8	6.0	1.8
ML-7114	0.33	0.25	220	1.99	1400	62	0.92	50	1.8	6.0	1.8
ML-7124	0.5	0.37	220	2.81	1400	65	0.92	50	1.8	6.0	1.8
ML-8012	1	0.75	220	5.15	2810	72	0.92	50	1.8	6.0	1.8
ML-8022	1.5	1.1	220	7.02	2810	75	0.95	50	1.8	6.0	1.8
ML-8014	0.75	0.55	220	4.0	1410	68	0.92	50	1.8	6.0	1.8
ML-8024	1	0.75	220	5.22	1410	71	0.92	50	1.8	6.0	1.8
ML-90S-2	2	1.5	220	9.44	2820	76	0.95	50	1.8	6.0	1.8
ML-90L-2	3	2.2	220	13.7	2820	77	0.95	50	1.8	6.0	1.8
ML-90S-4	1.5	1.1	220	7.21	1430	76	0.95	50	1.8	6.0	1.8
ML-90L-4	2	1.5	220	9.57	1430	75	0.95	50	1.8	6.0	1.8
ML-100L-2	4	3	220	18.4	2850	78	0.95	50	1.8	6.0	1.8
ML-100L1-4	3	2.2	220	13.9	1440	76	0.95	50	1.8	6.0	1.8
ML-100L2-4	4	3	220	18.6	1440	77	0.95	50	1.8	6.0	1.8
ML-112M-2	5	3.7	220	22.2	2850	80	0.95	50	1.8	6.0	1.8
ML-112M-4	3	2.2	220	13.9	1450	76	0.95	50	1.8	6.0	1.8
ML-112M1-4	4	3	220	18.6	1450	77	0.95	50	1.8	6.0	1.8
ML-112M2-4	5	3.7	220	23	1450	78	0.95	50	1.8	6.0	1.8

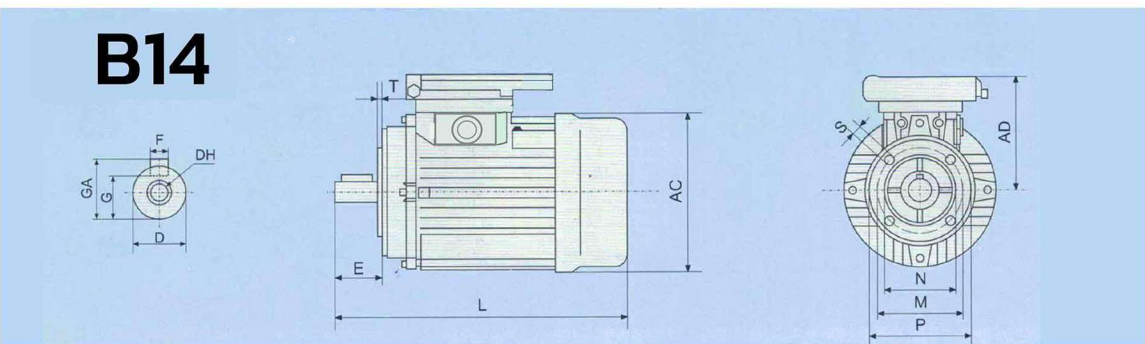
B3



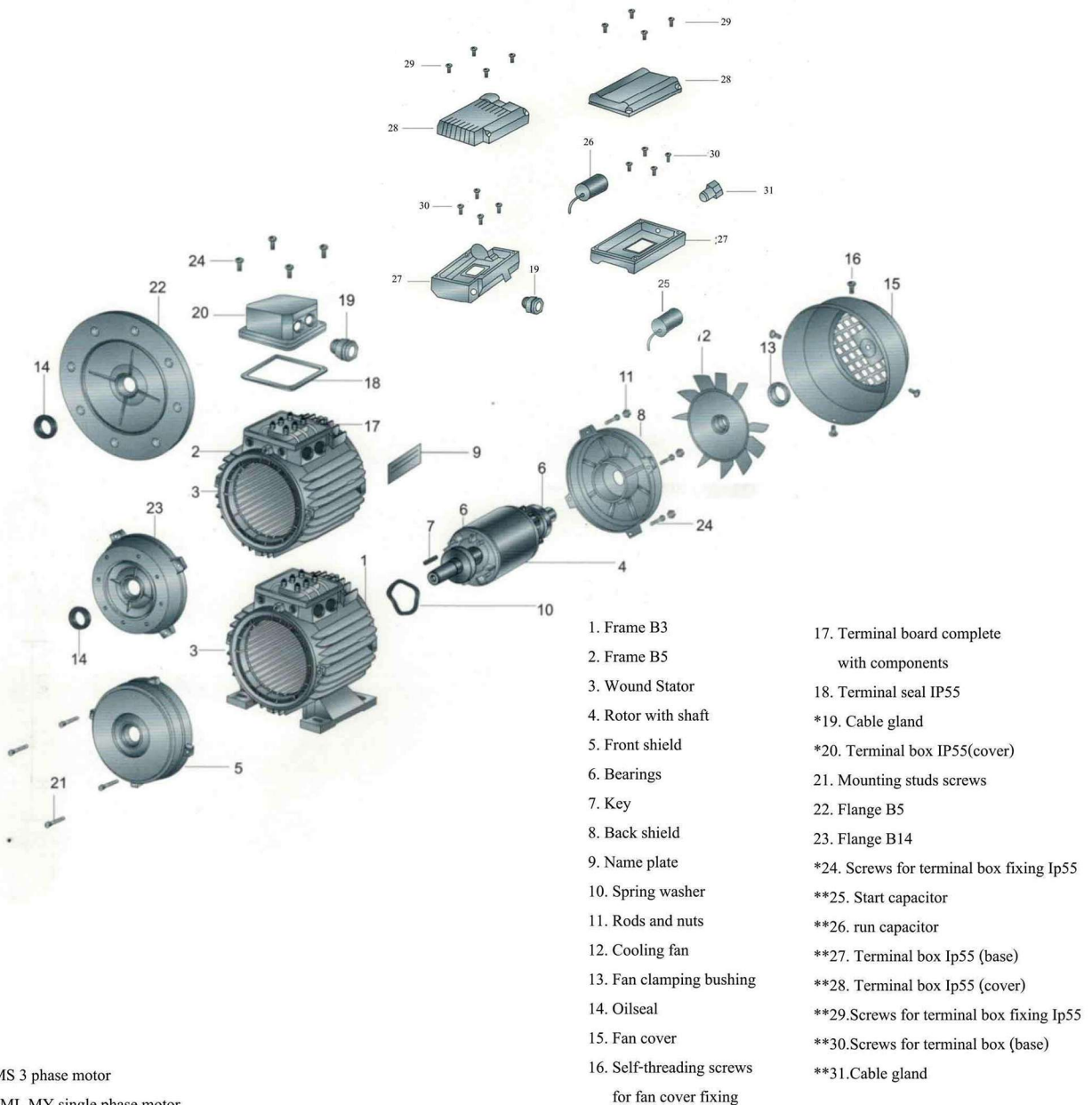
B5



B14



Frame	A	AB	AC	AD	B	C	D	DH	E	F	G	H	K	L	B5				B14				T	GA
															M	N	P	S	M	N	P	S		
56	90	110	110	88	71	36	9	M4 x 12	20	3	7.2	56	7	189	100	80	120	8.5	65	50	80	M5	3	10.2
63	100	122	130	93	80	40	11	M4 x 12	23	4	8.5	63	7	218	115	95	140	10	75	60	90	M5	3	12.5
71	112	136	145	100	90	45	14	M5x 12	30	5	11	71	7	250	130	110	160	10	85	70	105	M6	3.5	16
80	125	154	165	132	100	50	19	M6x16	40	6	15.5	80	10	278	165	130	200	12	100	80	120	M6	3.5	21.5
90S	140	174	185	142	100	56	24	M8 x 19	50	8	20	90	10	335	165	130	200	12	115	95	140	M8	3.5	27
90L	140	174	185	142	125	56	24	M8 x 19	50	8	20	90	10	360	165	130	200	12	115	95	140	M8	3.5	27
100L	160	194	215	182	140	63	28	M10x 22	60	8	24	100	12	377	215	180	250	15	130	110	160	M8	4	31
112M	190	224	220	184	140	70	28	M10x 22	60	8	24	112	12	395	215	180	250	15	130	110	160	M8	4	31



*for MS 3 phase motor

**for ML,MY single phase motor

FRAME SIZE	DRIVING END BEARINGS	NON DRIVING END BEARINGS	OILSEAL	PG THREAD
56	6201ZZ-C3	6201ZZ-C3	Ø12 x Ø22X5	PG11
63	6201ZZ-C3	6201ZZ-C3	Ø12 x Ø22X7	PG11
71	6202ZZ-C3	6202ZZ-C3	Ø15 x Ø25X7	PG11
80	6204ZZ-C3	6204ZZ-C3	Ø20 x Ø30x7	PG13.5
90	6205ZZ-C3	6205ZZ-C3	Ø25 x Ø37X7	PG16
100	6206ZZ-C3	6206ZZ-C3	Ø30 x Ø42x7	PG16
112	6206ZZ-C3	6206ZZ-C3	Ø30 x Ø42x7	PG21
132	6208ZZ-C3	6208ZZ-C3	Ø40 x Ø58x7	PG21

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