

30. MS SERIES – Three-Phase Asynchronous double speed motors

Electrical data (50Hz) single winding - 2/4 poles

Type	Power (kW)		rpm		Eff. (%)		Power factor (Cosφ)		Current In(A) 400V		Cn (Nm)		Cs/Cn		Is/In		Cmax/Cn	
	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P

MSD 711-2/4	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
MSD 712-2/4	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
MSD 801-2/4	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
MSD 802-2/4	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
MSD 90S-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
MSD 90L-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
MSD 100L1-2/4	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
MSD 100L2-2/4	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
MSD 112M-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
MSD 132S-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
MSD 132M-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
MSD 160M-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
MSD 160L-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

Electrical data (50Hz) single winding - 4/8 poles

Type	Power (kW)		rpm		Eff. (%)		Power factor (Cosφ)		Current In(A) 400V		Cn (Nm)		Cs/Cn		Is/In		Cmax/Cn	
	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P

MSD 801-4/8	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
MSD 802-4/8	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
MSD 90S-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
MSD 90L-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
MSD 100L1-4/8	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
MSD 100L2-4/8	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
MSD 112M-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
MSD 132S-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
MSD 132M-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
MSD 160M1-4/8	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
MSD 160M2-4/8	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
MSD 160L-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

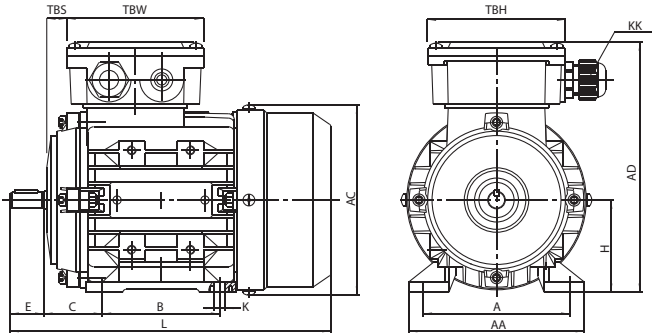
Electrical data (50Hz) double winding - 4/6 poles

Type	Power (kW)		rpm		Eff. (%)		Power factor (Cosφ)		Current In(A) 400V		Cn (Nm)		Cs/Cn		Is/In		Cmax/Cn	
	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P

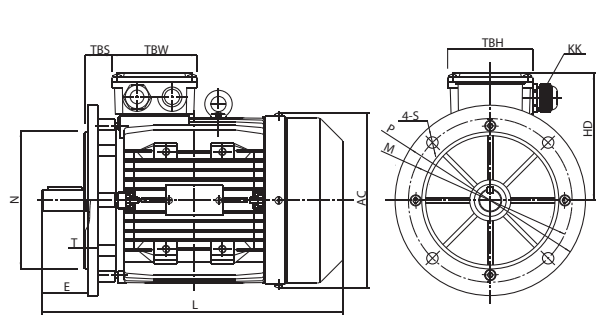
MSD 801-4/6	0.3	0.22	1400	910	60	55	0.74	0.69	0.98	0.84	2.05	2.31	2	1.8	4.5	4	2	2
MSD 802-4/6	0.45	0.3	1410	920	63	58	0.75	0.7	1.37	1.07	3.05	3.11	2	1.8	4.5	4	2	2
MSD 90S-4/6	0.66	0.45	1410	920	66	61	0.76	0.65	1.9	1.64	4.47	4.67	1.7	1.7	5	4.5	2	2
MSD 90L-4/6	0.88	0.6	1420	930	70	64	0.77	0.67	2.36	2.02	5.92	6.16	1.7	1.7	5	4.5	2	2
MSD 100L1-4/6	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
MSD 100L2-4/6	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
MSD 112M-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
MSD 132S-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
MSD 132M-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
MSD 160M-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
MSD 160L-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

31. MS SERIES - Overall and Installation dimensions

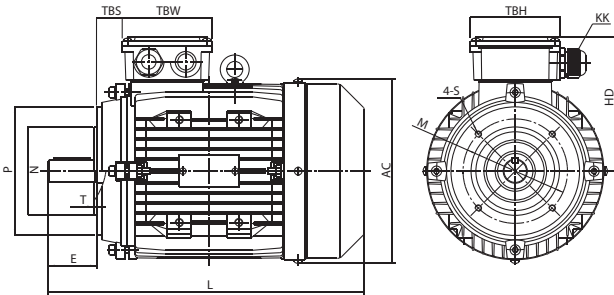
Measures in mm



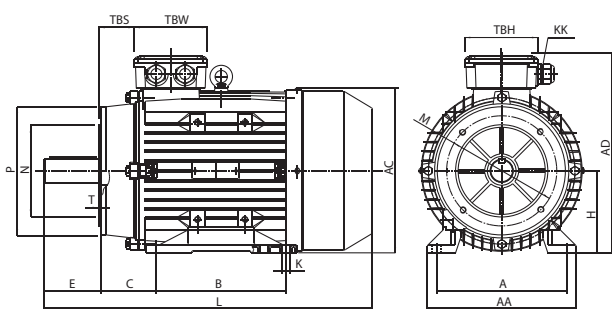
IM B3



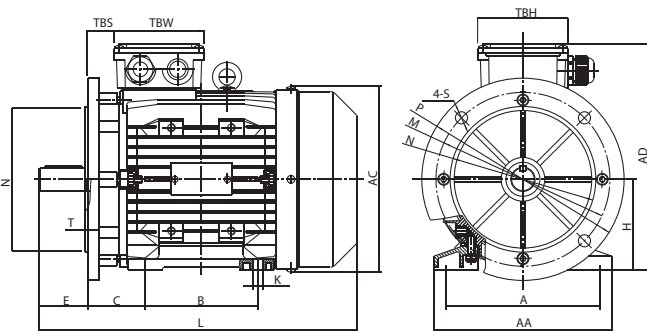
IM B5



IM B14



IM B34



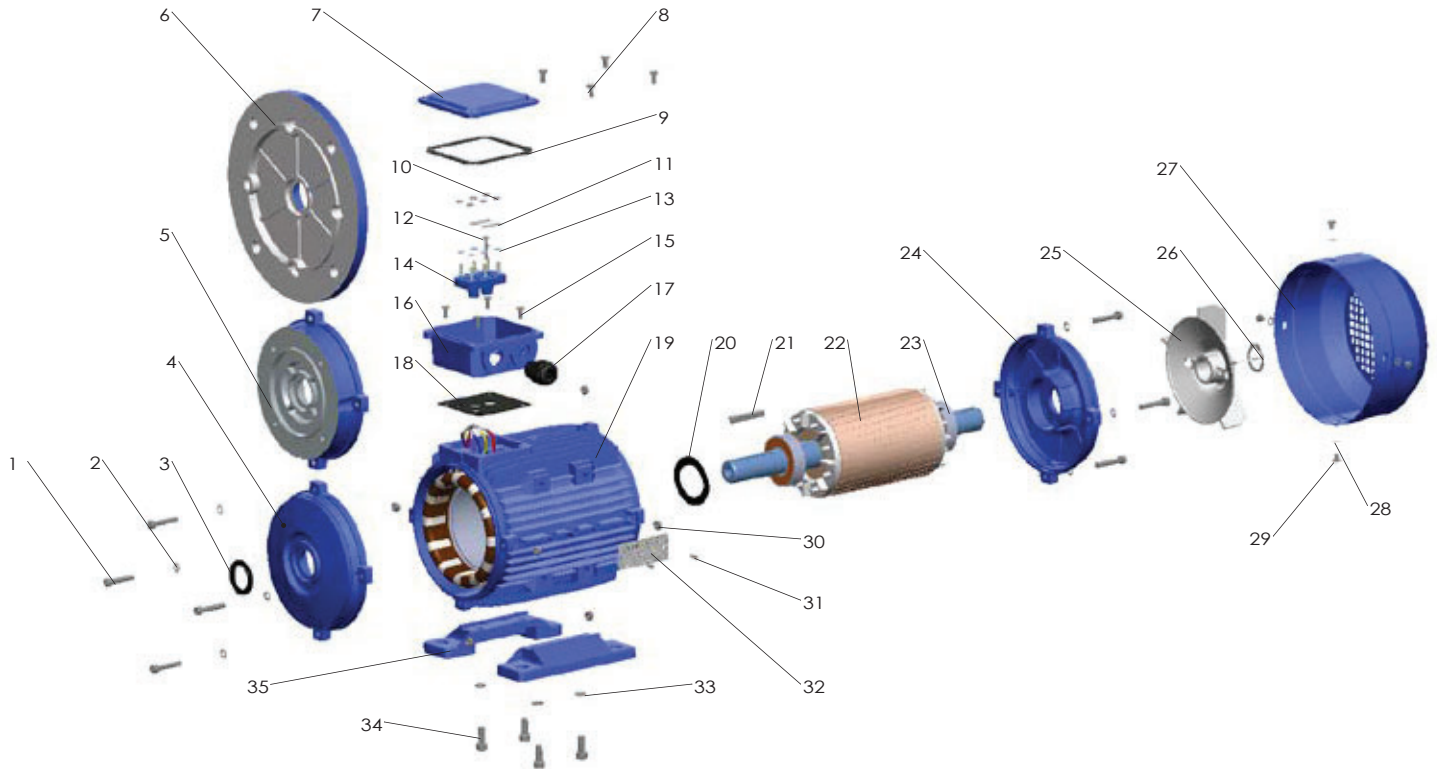
IM B35



Frame size	B3					Shaft							General								
	H	A	B	C	K	D	E	F	G	SS	XX	ZZ	AA	AD	HD	AC	L	KK	TBS	TBW	TBH
56	56	90	71	36	5.8X8.8	Ø9	20	3	7.2	M3	9	12	110	156	100	Ø117	196	1-M16X1.5	14	88	88
63	63	100	80	40	7X10	Ø11	23	4	8.5	M4	10	14	120	171	108	Ø130	220	1-M16X1.5	14	94	94
71	71	112	90	45	7X10	Ø14	30	5	11	M5	12	17	132	186	115	Ø147	241	1-M20X1.5	20	94	94
80	80	125	100	50	10X13	Ø19	40	6	15.5	M6	16	21	160	213	133	Ø163	290	1-M20X1.5	27	105	105
90S	90	140	100	56	10X13	Ø24	50	8	20	M8	19	25	175	229	139	Ø183	312	1-M20X1.5	30	105	105
90L1/L2	90	140	125	56	10X13	Ø24	50	8	20	M8	19	25	175	229	139	Ø183	337/367	1-M20X1.5	30	105	105
100	100	160	140	63	12X15	Ø28	60	8	24	M10	22	30	198	252	152	Ø205	369	2-M20X1.5	26	105	105
112	112	190	140	70	12X15	Ø28	60	8	24	M10	22	30	220	279	167	Ø229	395	2-M25X1.5	32	112	112
132S	132	216	140	89	12X15	Ø38	80	10	33	M12	28	37	252	318	186	Ø265	437	2-M25X1.5	38	112	112
132M/L	132	216	178	89	12X15	Ø38	80	10	33	M12	28	37	252	318	186	Ø265	475/501	2-M25X1.5	38	112	112
160M/L	160	254	210/254	108	15X19	Ø42	110	12	37	M16	36	45	290	384	224	Ø325	640	2-M32X1.5	64	143	143
180M/L	180	279	241/279	121	15X25	Ø48	110	14	42.5	M16	36	45	340	440	260	Ø368	730	2-M32X1.5	73	190	190
200L	200	318	305	133	19X29	Ø55	110	16	49	M20	42	53	390	460	260	Ø368	745	2-M40X1.5	85	190	190

Frame size	B5						B5R						B14						B14B					
	M	N	P	T	S	R	M	N	P	T	S	R	N	M	P	T	S	R	N	M	P	T	S	R
56	Ø100	Ø80	Ø120	3.0	Ø7	0							Ø50	Ø65	Ø80	2.5	M5	0						
63	Ø115	Ø95	Ø140	3.0	Ø10	0							Ø60	Ø75	Ø90	2.5	M5	0	Ø80	Ø100	Ø120	3.0	M6	0
71	Ø130	Ø110	Ø160	3.5	Ø10	0	Ø115	Ø95	Ø140	3.5	Ø10	0	Ø70	Ø85	Ø105	2.5	M6	0	Ø95	Ø115	Ø140	3.0	M8	0
80	Ø165	Ø130	Ø200	3.5	Ø12	0	Ø130	Ø110	Ø160	3.5	Ø10	0	Ø80	Ø100	Ø120	3.0	M6	0	Ø110	Ø130	Ø160	3.5	M8	0
90S	Ø165	Ø130	Ø200	3.5	Ø12	0	Ø130	Ø110	Ø160	3.5	Ø10	0	Ø95	Ø115	Ø140	3.0	M8	0	Ø110	Ø130	Ø160	3.5	M8	0
90L1/L2	Ø165	Ø130	Ø200	3.5	Ø12	0	Ø130	Ø110	Ø160	3.5	Ø10	0	Ø95	Ø115	Ø140	3.0	M8	0	Ø110	Ø130	Ø160	3.5	M8	0
100	Ø215	Ø180	Ø250	4.0	Ø15	0	Ø165	Ø130	Ø200	4.0	Ø12	0	Ø110	Ø130	Ø160	3.5	M8	0	Ø130	Ø165	Ø200	3.5	M10	0
112	Ø215	Ø180	Ø250	4.0	Ø15	0	Ø165	Ø130	Ø200	4.0	Ø12	0	Ø110	Ø130	Ø160	3.5	M8	0	Ø130	Ø165	Ø200	3.5	M10	0
132S	Ø265	Ø230	Ø300	4.0	Ø15	0	Ø215	Ø180	Ø250	4.0	Ø15	0	Ø130	Ø165	Ø200	4.0	M10	0	Ø180	Ø215	Ø250	4.0	M12	0
132M/L	Ø265	Ø230	Ø300	4.0	Ø15	0	Ø215	Ø180	Ø250	4.0	Ø15	0	Ø130	Ø165	Ø200	4.0	M10	0	Ø180	Ø215	Ø250	4.0	M12	0
160M/L	Ø300	Ø250	Ø350	5.0	Ø19	0							Ø180	Ø215	Ø250	4.0	M12	0						
180M/L	Ø300	Ø250	Ø350	5.0	Ø19	0																		
200L	Ø350	Ø300	Ø400	5.0	Ø19	0																		

32. MS SERIES - Exploded view drawings and Spare Parts list



- | | | |
|-------------------------------|--------------------------------|-----------------------------|
| 1. Screw | 13. Terminal shim | 25. Cooling fan |
| 2. Gasket | 14. Terminal board | 26. Fan circlip |
| 3. Oil seal | 15. Terminal box fixing screws | 27. Fan cover |
| 4. DE endshleld | 16. Terminal box case | 28. Fan cover fixing shim |
| 5. B14 Flange | 17. Cable gland | 29. Fan cover fixing screws |
| 6. B5 Flange | 18. Terminal box bottomgasket | 30. Endshiels fixing nut |
| 7. Terminal box cover | 19. Frame | 31. Rivet |
| 8. Terminal box fixing screws | 20. Preload washer | 32. Nameplate |
| 9. Terminal box upper gasket | 21. Key | 33. Foot fixing nut |
| 10. Terminal box fixing nut | 22. Rotor | 34. Foot fixing screws |
| 11. Terminal bridge | 23. Bearing | 35. Foot |
| 12. Terminal pin | 24. NDE endshield | |