

MS SERIES (IE1)

THREE PHASE STANDARD EFFICIENCY ALUMINUM INDUCTION MOTORS



MS series is three phase induction aluminum motor with fixed feet. Efficiency indicator reaches IE1 standard. Mounting dimensions is according to IEC standard.

- Characteristics for all WONDER standard 3-Phase asynchronous motors
- Widely applied in general machinery and industries such as pumps & water treatment, road machinery, petroleum, chemical, metallurgy, cement and paper-milling.
 - IP55 protection, Class F insulation, B Temperature rise, S1 duty,
 - Rated voltage 400V, Rated frequency 50Hz.
 - Operation conditions: ambient temperature:-20°C ~40°C, altitude≤1000m.
 - Y-connection for motors up to 3kW and Δ-connection for 4kW and above
 - Cooling method is Ic411.

MOUNTING ARRANGEMENTS

Types	Basic type of construction	Derived types of construction				
MS56-132	IM B3 IM 1001	IM V5 IM 1011	IM V6 IM 1031	IM B6 IM 1051	IM B7 IM 1061	IM B8 IM 1071
MS56-132	IM B35 IM 2001	IM V15 IM 2011	IM V36 IM 2031	IM 2051	IM 2061	IM 2071
MS56-132	IM B34 IM 2101	IM 2111	IM 2131	IM 2151	IM 2161	IM 2171
MS56-132	IM B5 IM 3001	IM V1 IM 3011	IM V6 IM 3031			
MS56-132	IM B14 IM 3601	IM V18 IM 3611	IM V19 IM 3631			

basic types of construction may be used in all derived types of construction
 (*)not-defined mounting by IEC 60034-7
 1) for the types of construction IM V6,IM B6,IM B8 inquiry is necessary.

TECHNICAL SPECIFICATIONS

Output kW	IEC Frame	Rated speed (rpm)	Full load current I _n (A) 400V	Efficiency η% % Of full load			Power Factor cosφ	Locked Rotor Current I _s /I _n	Locked Rotor Torque M _s /M _N	Break Down Torque M _k /M _N	Rated torque (N·m)	Moment of inertia J(Kgm ²)	Weight (kg)
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2-POLE/3000RPM

0.09	561	2710	0.37	50.0*	49.7	45.0	0.70	4.0	1.8	2.0	0.32	-	3.2
0.12	562	2710	0.45	55.0*	56.2	53.2	0.70	4.0	1.8	2.0	0.42	-	3.4
0.18	631	2720	0.55	65.0*	64.5	59.6	0.73	5.5	2.2	2.2	0.63	-	3.9
0.25	632	2720	0.72	66.0*	65.6	61.4	0.76	5.5	2.2	2.2	0.88	-	4.4
0.33	633	2720	0.84	70.0*	70.3	67.1	0.81	6.1	2.2	2.2	1.30	-	4.7
0.37	711	2760	0.94	70.0*	70.9	68.9	0.81	6.1	2.2	2.2	1.28	0.0005	6.2
0.55	712	2760	1.33	73.0*	73.9	71.9	0.82	6.1	2.2	2.3	1.86	0.00063	6.3
0.75	713	2820	1.78	74.0	74.2	71.4	0.82	6.1	2.2	2.3	2.54	0.00076	6.5
0.75	801	2845	1.76	74.0	74.2	71.4	0.83	6.1	2.4	2.5	2.52	0.00083	8.3
1.1	802	2840	2.49	76.0	76.8	75.3	0.84	7.0	2.5	2.5	3.7	0.0010	9.0
1.5	803	2840	3.35	77.0	78.1	76.6	0.84	7.0	2.5	2.5	5.04	0.0012	10.0
1.5	90S	2840	3.30	78.0	78.7	76.7	0.84	7.0	2.7	2.8	5.04	0.0012	12.5
2.2	90L	2840	4.67	80.0	80.8	79.5	0.85	7.0	2.5	2.8	7.4	0.0014	14.0
3.0	90LB	2840	6.22	81.0	81.4	79.4	0.86	7.0	2.5	2.8	10.09	0.00145	16.0
3.0	100L	2870	6.07	82.0	82.1	80.3	0.87	7.5	2.2	2.5	9.98	0.0029	20.5
4.0	100LC	2880	7.81	84.0	84.8	84.1	0.88	7.5	2.3	2.5	13.26	0.0039	28.0
4.0	112M	2880	7.81	84.0	84.8	84.1	0.88	7.5	2.3	2.3	13.26	0.0050	26.0
5.5	112MC	2900	10.6	85.0	85.0	83.5	0.88	7.5	2.3	2.3	18.17	0.0069	33.0
5.5	132MA	2910	10.6	85.0	85.0	83.5	0.88	7.5	2.2	2.5	18.11	0.0104	40.0
7.5	132MB	2905	14.3	86.3	86.6	85.6	0.88	7.5	2.2	2.4	24.66	0.0121	44.0
11	132MC	2910	20.3	87.8	87.4	85.9	0.89	7.5	2.2	2.4	36.10	0.0178	65.0

4-POLE/1500RPM

0.06	561	1330	0.34	46.0*	42.0	35.5	0.55	4.0	1.4	2.0	0.43	-	3.2
0.09	562	1330	0.41	50.0*	49.2	43.0	0.63	4.0	1.8	2.0	0.65	-	3.4
0.12	631	1340	0.42	57.0*	57.1	52.6	0.72	4.4	1.8	2.0	0.86	-	4.0
0.18	632	1340	0.61	58.0*	59.5	56.4	0.73	4.4	1.8	2.0	1.28	-	4.5
0.22	633	1340	0.75	58.0*	58.4	54.7	0.73	4.4	1.8	2.0	1.57	-	4.9
0.25	711	1345	0.75	65.0*	65.1	61.3	0.74	5.2	2.1	2.2	1.78	0.0011	6.1
0.37	712	1340	1.06	67.0*	68.2	65.7	0.75	5.2	2.1	2.2	2.64	0.0012	6.7
0.55	713	1390	1.49	71.0*	72.4	70.6	0.75	5.3	2.2	2.5	3.78	0.0016	8.2
0.55	801	1390	1.49	71.0*	72.4	70.6	0.75	5.3	2.2	2.5	3.78	0.0013	8.9
0.75	802	1380	1.96	72.6	73.3	71.2	0.76	5.3	2.3	2.5	5.19	0.0015	9.6
1.1	803	1390	2.76	75.7	77.3	76.1	0.76	6.0	2.3	2.5	7.56	0.0019	12.2
1.1	90S	1390	2.72	75.7	77.3	76.1	0.77	6.0	2.3	2.5	7.56	0.002	12.5
1.5	90L	1390	3.56	78.0	79.4	78.3	0.78	6.0	2.3	2.5	10.31	0.003	15.0
2.2	90LB	1415	4.84	80.0	80.8	79.5	0.82	7.0	2.3	2.5	14.85	0.0039	19.5
2.2	100LA	1415	4.90	80.0	80.8	79.5	0.81	7.0	2.3	2.5	14.85	0.0054	19.2
3.0	100LB	1415	6.44	82.0	82.6	81.1	0.82	7.0	2.3	2.5	20.25	0.0067	23.0
4.0	100LC	1430	8.29	83.9	84.6	83.5	0.83	7.0	2.3	2.5	26.71	0.0069	25.9
4.0	112M	1440	8.29	83.9	84.6	83.5	0.83	7.0	2.3	2.5	26.71	0.0091	29.0
5.5	112MC	1445	11.3	85.0	85.6	84.6	0.83	7.0	2.3	2.5	36.35	0.0117	37.5
5.5	132S	1445	11.3	85.0	85.6	84.6	0.83	7.0	2.3	2.5	36.35	0.0205	43.5
7.5	132M	1445	14.9	86.4	87.0	86.3	0.84	7.0	2.3	2.5	49.57	0.0296	53.5
11.0	132MC	1460	21.5	87.9	87.9	86.6	0.84	7.0	2.2	2.3	71.95	0.0326	75.6

*Defined by wonder
 Efficiencies according to the indirect method of IEC60034-2-1:2007 with stray load losses determined from measurement.

TECHNICAL SPECIFICATIONS

Output kW	IEC Frame	Rated speed (rpm)	Full load current I _n (A)	Efficiency h%			Power Factor cosφ	Locked Rotor Current I _s /I _n	Locked Rotor Torque M _s /M _N	Break Down Torque M _k /M _N	Rated torque (N·m)	Moment of inertia J(Kg·m ²)	Weight (kg)
				100	75	50							
6-POLE/1000RPM													
0.09	631	860	0.46	48.0*	43.9	34.0	0.59	4.0	1.9	2	1.0	-	4.5
0.12	632	860	0.57	51.5*	48.0	40.2	0.59	4.0	1.9	2	1.33	-	5.6
0.18	711	860	0.70	56.0*	55.9	50.5	0.66	4.0	1.9	2	2.0	0.0011	6.4
0.25	712	860	0.90	59.0*	59.2	55.0	0.68	4.0	1.9	2	2.78	0.0012	6.5
0.37	801	885	1.23	62.0*	61.2	56.4	0.70	4.7	2.0	2.1	3.99	0.0016	8.5
0.55	802	885	1.70	65.0*	65.2	61.8	0.72	4.7	2.0	2.1	5.94	0.002	9.2
0.75	90S	915	2.15	70.0	70.8	68.3	0.72	5.5	2.0	2.2	7.83	0.003	12.0
1.1	90L	915	2.98	72.9	73.8	71.6	0.73	5.5	2.0	2.2	11.48	0.004	14.0
1.5	100L	920	3.82	75.5	76.8	75.1	0.75	5.5	2.1	2.2	15.57	0.0069	19.5
2.2	112M	935	5.33	78.4	79.3	77.8	0.76	6.5	2.2	2.2	22.47	0.0071	28.0
3.0	132S	960	7.12	80.0	80.3	78.6	0.76	6.5	2.2	2.8	29.84	0.0274	38.0
4.0	132M1	960	9.32	81.5	81.8	80.2	0.76	6.5	2.4	2.9	39.79	0.0343	45.0
5.5	132M2	960	12.4	83.3	84.0	83.1	0.77	6.5	2.4	2.8	54.71	0.0431	54.0

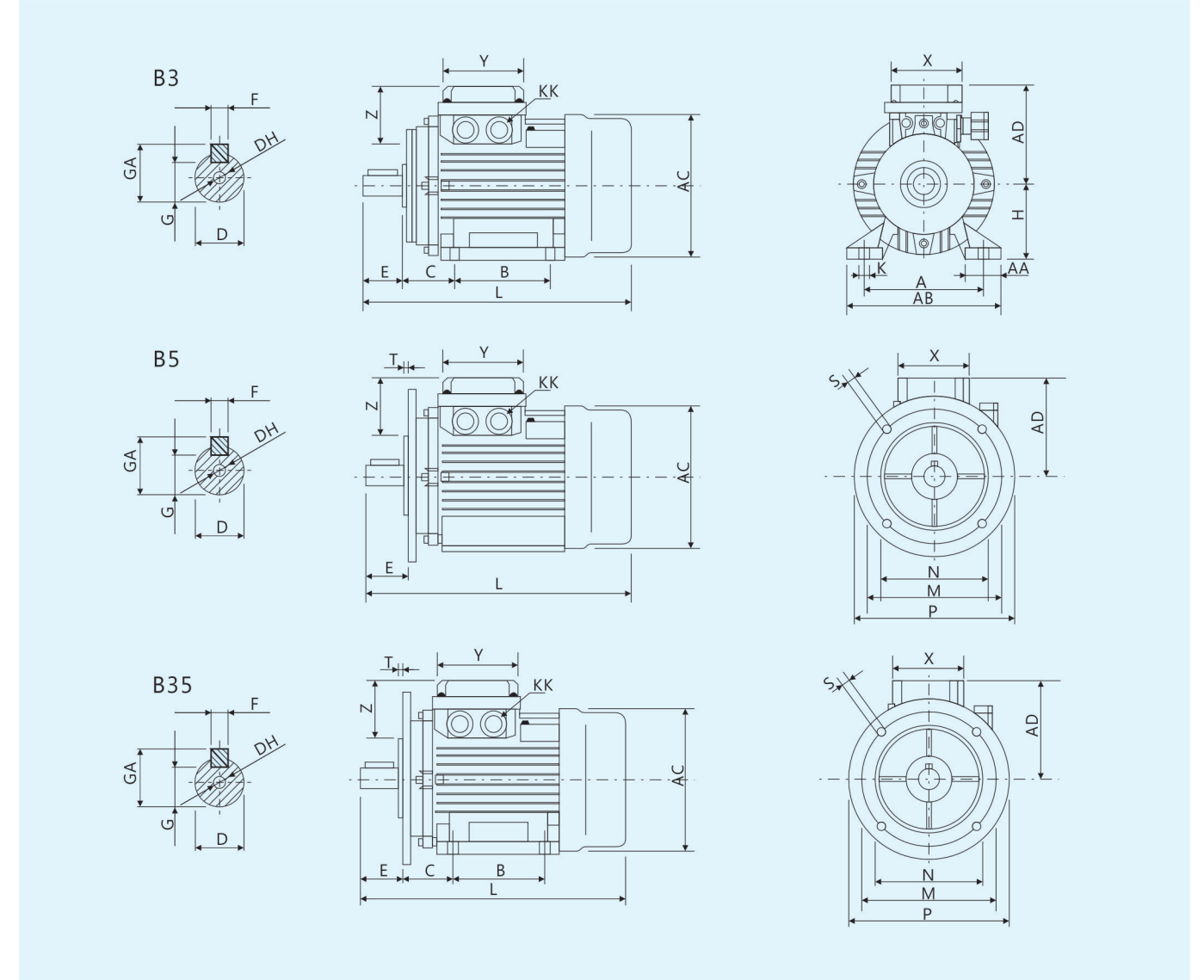
*Defined by wonder
Efficiencies according to the indirect method of IEC60034-2-1:2007
with stray load losses determined from measurement.

8-POLE/750RPM

0.09	711	635	0.68	39.0*	35.9	29.3	0.49	2.9	1.8	2.0	1.35	-	6.5
0.12	712	635	0.74	48.0*	45.8	39.5	0.49	2.9	1.8	2.0	1.80	-	7.5
0.18	801	645	0.84	51.0*	50.5	44.7	0.61	2.9	1.8	2.0	2.67	0.0018	8.3
0.25	802	645	1.10	54.0*	53.9	48.4	0.61	2.9	1.8	2.0	3.7	0.0021	9.0
0.37	90S	670	1.41	62.0*	61.8	57.1	0.61	3.2	1.9	2.3	5.27	0.0030	12.0
0.55	90L	670	2.07	63.0*	63.3	59.2	0.61	3.2	2.0	2.3	7.84	0.0040	15.0
0.75	100LA	680	2.42	66.7	66.5	62.2	0.67	4.7	1.8	2.2	10.46	0.0063	16.4
1.1	100LB	680	3.29	69.9	70.8	68.0	0.69	5.0	1.8	2.2	15.22	0.0097	21.8
1.5	112M	700	4.30	73.0	73.1	70.1	0.69	5.0	2.0	2.5	19.62	0.012	29.0
2.2	132S	710	5.88	76.1	76.3	73.9	0.71	6.0	1.8	2.5	29.59	0.029	39.0
3.0	132M	710	7.59	78.2	79.1	77.4	0.73	6.0	1.8	2.4	40.35	0.038	45.0

*Defined by wonder
Efficiencies according to the indirect method of AS/NZS1359.5:2004(MEPS2)
with stray load losses determined from measurement.

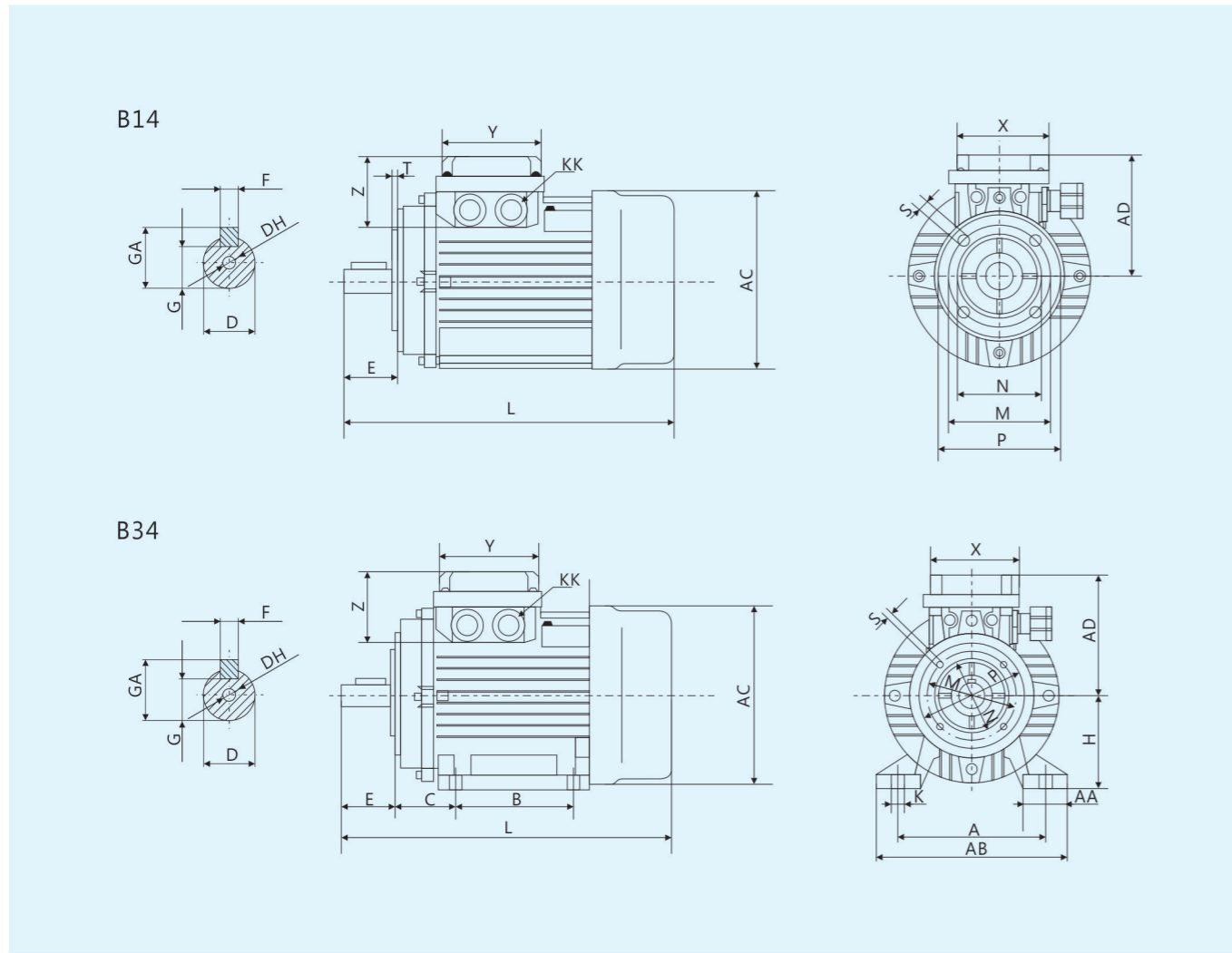
MOUNTING AND OVERALL DIMENSIONS



Frame size	Mounting dimensions(mm)														Overall dimensions(mm)					XxYxZ(mm)				
	A	AA	AB	AC	AD	B	C	D	DH	E	F	G	H	R	K	KK	L	M	N		P	S	GA	
56	90	22.5	110	110	96	71	36	9	M4×10	20	3	7.2	56	0±1.5	7	M18×1.5	183	100	80	120	7	3	10.2	92x92x38
63	100	26	122	122	99	80	40	11	M4×10	23	4	8.5	63	0±1.5	7	M18×1.5	218	115	95	140	9	3	12.5	92x92x38
71	112	26	136	138	109	90	45	14	M5×12	30	5	11	71	0±1.5	7	M18×1.5	251	130	110	160	9	3.5	16	103x103x38
80	125	30	154	157	112	100	50	19	M6×16	40	6	15.5	80	0±1.5	10	M20×1.5	286	165	130	200	12	3.5	21.5	110x110x35.5
90S	140	34	174	175	120	100	56	24	M8×19	50	8	20	90	0±1.5	10	M20×1.5	320	165	130	200	12	3.5	27	110x110x35.5
90L	140	34	174	175	120	125	56	24	M8×19	50	8	20	90	0±1.5	10	M20×1.5	335	165	130	200	12	3.5	27	110x110x35.5
100L	160	39	194	196	139	140	63	28	M10×22	60	8	24	100	0±2.0	12	M20×1.5	377	215	180	250	15	4	31	110x110x35.5
112M	190	39	224	220	156	140	70	28	M10×22	60	8	24	112	0±2.0	12	M20×1.5	395	215	180	250	15	4	31	144x144x44
132S	216	48	256	260	185	140	89	38	M12×28	80	10	33	132	0±2.0	12	M25×1.5	472	265	230	300	15	4	41	144x144x44
132M	216	48	256	260	185	178	89	38	M12×28	80	10	33	132	0±2.0	12	M25×1.5	510	265	230	300	15	4	41	144x144x44

R=0 distance from flange to shaft shoulder

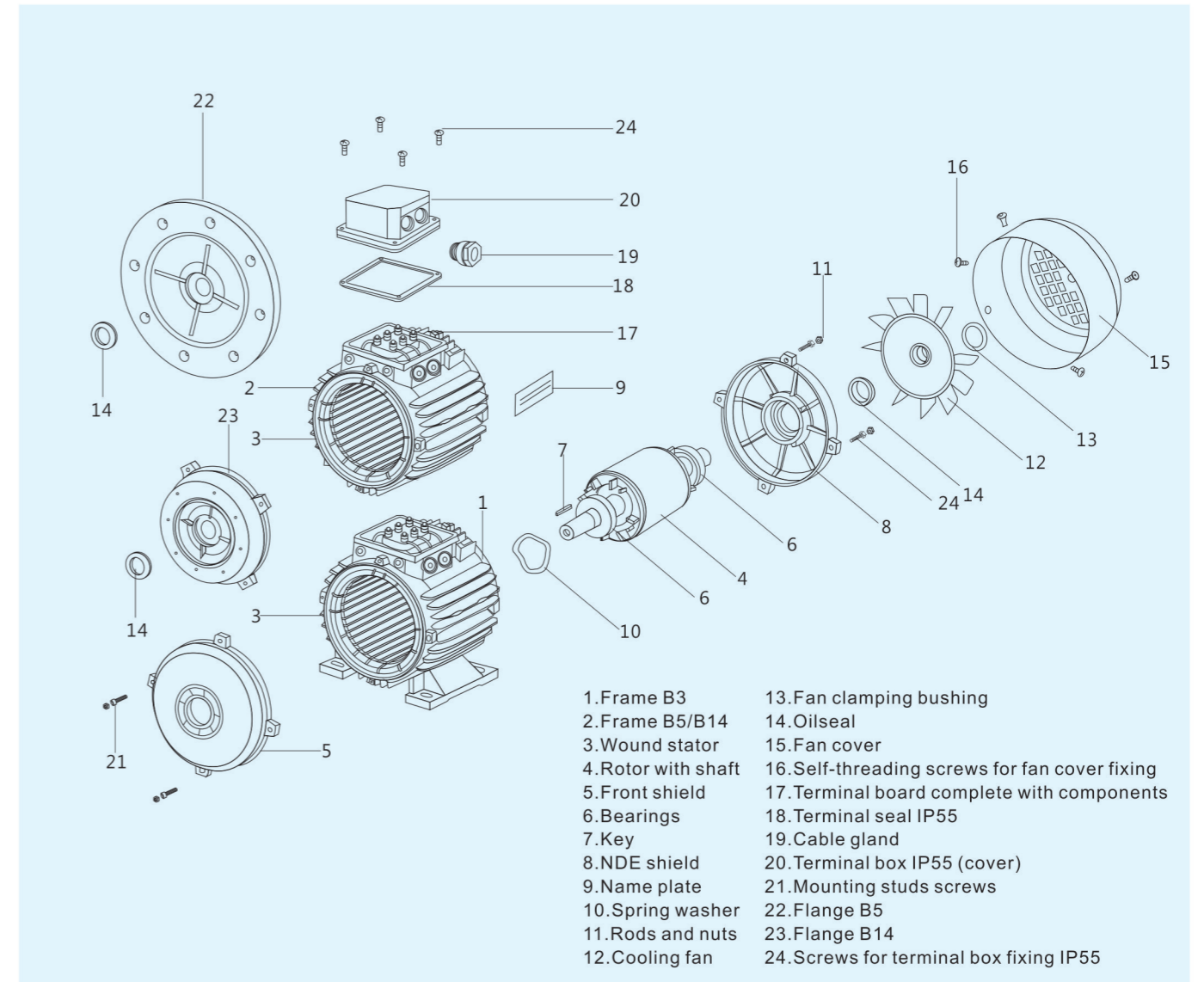
MOUNTING AND OVERALL DIMENSIONS



Frame size	Mounting dimensions(mm)											Overall dimensions(mm)								XxYxZ(mm)			
	A	AA	AB	AC	AD	B	C	D	DH	E	F	G	H	K	KK	L	M	N	P		S	T	GA
56	90	22.5	110	110	96	71	36	9	M4×10	20	3	7.2	56	7	M18×1.5	189	65	50	80	M5	3	10.292x92x38	
63	100	26	122	122	99	80	40	11	M4×10	23	4	8.5	63	7	M18×1.5	218	75	60	90	M5	3	12.592x92x38	
71	112	26	136	138	109	90	45	14	M5×12	30	5	11	71	7	M18×1.5	250	85	70	105	M6	3.5	16	103x103x38
80	125	30	154	157	112	100	50	19	M6×16	40	6	15.5	80	10	M20×1.5	278	100	80	120	M6	3.5	21	5.1110x110x35.5
90S	140	34	174	175	120	100	56	24	M8×19	50	8	20	90	10	M20×1.5	335	115	95	140	M8	3.5	27	110x110x35.5
90L	140	34	174	175	120	125	56	24	M8×19	50	8	20	90	10	M20×1.5	335	115	95	140	M8	3.5	27	110x110x35.5
100L	160	39	194	196	139	140	63	28	M10×22	60	8	24	100	12	M20×1.5	377	130	110	160	M8	4	31	110x110x35.5
112M	190	39	224	220	156	140	70	28	M10×22	60	8	24	112	12	M20×1.5	395	130	110	160	M8	4	31	144x144x44
132S	216	48	256	260	185	140	89	38	M12×28	80	10	33	132	12	M25×1.5	472	165	130	200	M10	4	41	144x144x44
132M	216	48	256	260	185	178	89	38	M12×28	80	10	33	132	12	M25×1.5	510	165	130	200	M10	4	41	144x144x44

R=0 distance from flange to shaft shoulder

MOTOR SPARE PART LIST/DRAWING



Frame size	Driving End Bearings	Non driving End Bearings	Oil Seal
56	6201 2RS/C3	6201 2RS/C3	φ 12× φ 22×5
63	6201 2RS/C3	6201 2RS/C3	φ 12× φ 22×7
71	6202 2RS/C3	6202 2RS/C3	φ 15× φ 25×7
80	6204 2RS/C3	6204 2RS/C3	φ 20× φ 30×7
90	6205 2RS/C3	6205 2RS/C3	φ 25× φ 37×7
100	6206 2RS/C3	6206 2RS/C3	φ 30× φ 42×7
112	6206 2RS/C3	6206 2RS/C3	φ 30× φ 42×7
132	6208 2RS/C3	6208 2RS/C3	φ 40× φ 58×8