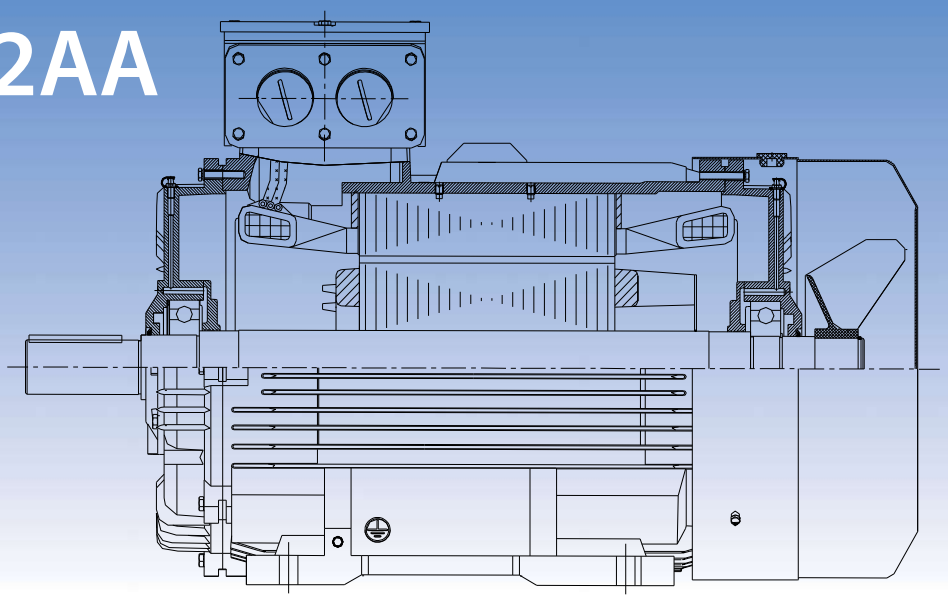
M2QA, M2AA Series

IE1 Common Efficiency
IE2 High Efficiency
IE3 Premium Efficiency



CAST IRON
Frame 80-355
ALUMINIUM
Frame 56-132

WAT MOTOR

M2QA, M2AA SERIES
THREE-PHASE INDUCTION MOTOR



FRAME SIZE : H80-355MM

RATED POWER : 0.75kW~375kW

DEGREES OF EFFICIENCY : IE1,IE2,IE3

DEGREES OF PROTECTION : IP55

DEGREES OF INSULATION : F/B, H/B

CONTENTS:

General Specification	1
Standards Compliance	2-3
Specification, Arrangement & Parts List	4-6
Performance Data for 2 POLES	7
Performance Data for 4 POLES	8
Performance Data for 6 POLES	9
Performance Data for 8 POLES	10
Dimensions Foot Mount B3 IM1001	11-12
Dimensions Foot Mount B5 IM3001	13-14
Dimensions Foot and Flange Mount B35 IM2001	15-16
Terminal Box Information	17-18
Motor Spare Part List “Exploded Drawing”	19
MS/MSD/MSBCCL Series Dimensional Drawings	20
MS Series	21-22
MSBCCL Series	23-27
MSBCCL Series Brake Motors	28
MY/MYT Series	29-31

GENERAL SPECIFICATION

THE CAST IRON MOTOR RANGE

WAT Electric Motors technical data sheets gives details of the cast iron motor range M2QA series from 0.75kW in frame size 80 to 355, meeting most applications from fan drives to large industrial pumps. Cast iron motors benefit from the strength and were proven reliable traditionally associated with this construction material. Cast iron has been successfully tried and tested during the many years of our extensive experimentation in the manufacture of electric motors. For many arduous applications it is the preferred construction material.

Motors are manufactured in a one-piece stator frame casing. The feet integrally cast into the stator frame.

For most frames the terminal box is mounted on the top as standard.

The complete high efficiency motor ranges can be recovered within 18 months on a single shift operation, depending on motor rating and duty cycle.

SPECIFICATION

SPECIFICATION

Cast iron motors are suitable for almost all applications and are designed to operate in an ambient temperature of -20°C to +40°C and at an altitude not exceeding 1000m above sea level.

INSULATION AND TEMPERATURE RISE

Standard motors are designed complying with Class F insulation system, but temperature rise is checked according to Class B. That improves motor's useful life and reliability.

COOLING

The standard cooling method is Totally Enclosed Fan Cooled (TEFC) in accordance with code IC 411 of IEC 60034-6.

ENCLOSURE

The standard protection degree is IP55, which offer complete protection against contacting with live or moving parts inside the enclosure and against water splashing from any direction. More higher degree of protection is available.

TERMINAL BOX

Terminal boxes on all motors are of a generous size for easy of connection and maintenance.

VOLTAGE

Standard voltage are 415V 50Hz, 400V 50Hz and 380V 50Hz, but any single voltage in the range of 200-660V could be designed

STARTING

Direct-on-line starting can be used on all frame sizes. Single speed, single voltage motors above 2.2kW are provided with 6 terminals that can be used for star-delta starting if required. All motors, when started direct-on-line, will meet the requirements of IEC 60034-12.

SHAFTS

All shaft diameters are machined to IEC 60072.For ease of fitting, removing or securring fitments, a tapped hole in the drive end shaft is provided as standard on all motor shafts.

BALANCE

All motors are dynamically balance to IEC 60072. Reduced and special balances are available.

TOLERANCES ON MAIN PERFORMANCE PARAMETERS

IEC 60034-1, specifies allow tolerances for efficiency, power factor, speed, locked rotor torque, pullout torque, starting current and moment of inertia.

QUALITY TESTING

All motors are tested to strict engineering tolerances and are subject to mechanical and electrical tests at intermediate and final stages of manufacture. Individual motors are also tested to specific customer requirements.

QUALITY ASSURANCE

Stringent quality procedures are observed from first design to finished product in accordance with the ISO9001 documented quality systems. Our factory has assessed to meeting these requirements, a further assurance that only the highest possible standards of quality are accepted

STANDARDS COMPLIANCE

WAT motors are designed and built to suit all industrial requirements, including operation outside in the weather, in the tropics, or subzero temperatures.

WAT motors are built to comply with the requirements of the following international standards:

1. International Electrotechnical Commission-IEC60034 and IEC60072.
2. British Standards-BS 5000 and BS 4999.
3. Australian Standards-AS 1359.
4. The requirements for European "CE" marking, Low Voltage Directive 73/23(1973), modified by Directive 93/68(1993) & the EMC-Directive 89/336.These WAT motors are designed for use with other machineries, and they should only be used if the complete machinery is in conformity with the Directive for Safety of Machinery(89/392/EEC).

Standards	IEC	CEN/CENELEC	BS
IEC60034			
General Requirements for Electrical machines	60034-1	EN60034-1	4999-1 4999-69
Methods of Determining Losses & Effiency	60034-2	HD 53 2	4999-34
Degrees of Protection	60034-5	EN60034-5	4999-20
Method of Cooling	60034-6	EN60034-6	4999-21
Mounting arrangements	60034-7	EN60034-7	4999-22
Rotation	60034-8	HD53 8 S4	4999-3
Noise limits	60034-9	EN60034-9	4999-51
Starting Performance	60034-12	EN60034-12	4999-112
Mechanical vibration	60034-14	EN60034-14	4999-50
Standard voltages	60038	HD 472 S1	
Dimensions & Output ratings	60072		
Mounting Dimensions & relationship frame sizes-output ratings.	60072	HD 231	4999-10 51-110
Shaft dimensions	60072	HD 231	4999-10
Classification of environmental conditions	600721-2-1		
IEC60085			
Insulation material	60085		
Efficiency of M2QA series	60034-30 IE1		

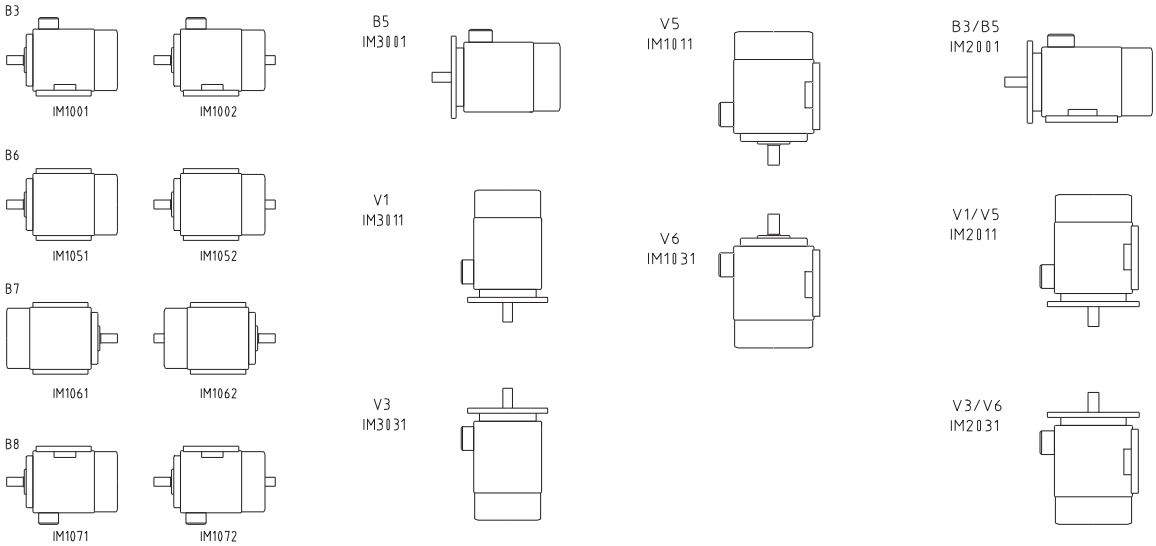
STANDARDS COMPLIANCE

DEGREES OF PROTECTION (IEC 60034-5)

Designation	First Numeral	Second Numeral
	Protection against contact and ingress of foreign bodies. Protection against hazardous “Live” parts and moving mechanical parts	Protection against water
	5. Ingress of dust is not totally prevented, but dust shall not interfere with the proper operation of equipment.A probe of 1mm diameter shall not penetrate the enclosure	5. Water projected in jets against the enclosure from any direction will have no harmful effects.
	6. No ingress of dust	6.Water projected in power jets shall have no harmful effects.
IP55	Dust Protected	Jetting Water
IP56	Dust Protected	Powerful jetting
IP65	Dust Tight	Jetting Water
IP66	Dust Tight	Powerful jetting

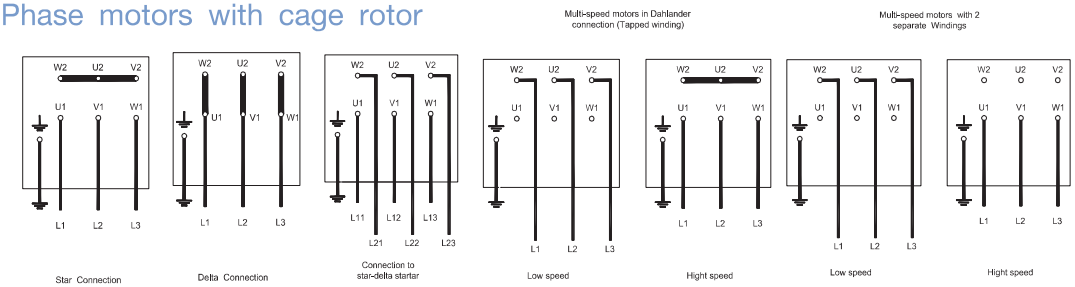
MOUNTING ARRANGEMENTS (IEC60034-7)

FOOT MTG HORIZ	FLANGE MTG	FOOT MTG VERT	FOOT/FLANGE MTG
B3 IM1001 IM1002	B5 IM3001	V5 IM1011	B3/B5 IM2001
B6 IM1051 IM1052	V1 IM3011	V6 IM1031	V1/V5 IM2011
B7 IM1061 IM1062	V3 IM3031		V3/V6 IM2031
B8 IM1071 IM1072			



CONNECTION DIAGRAMS

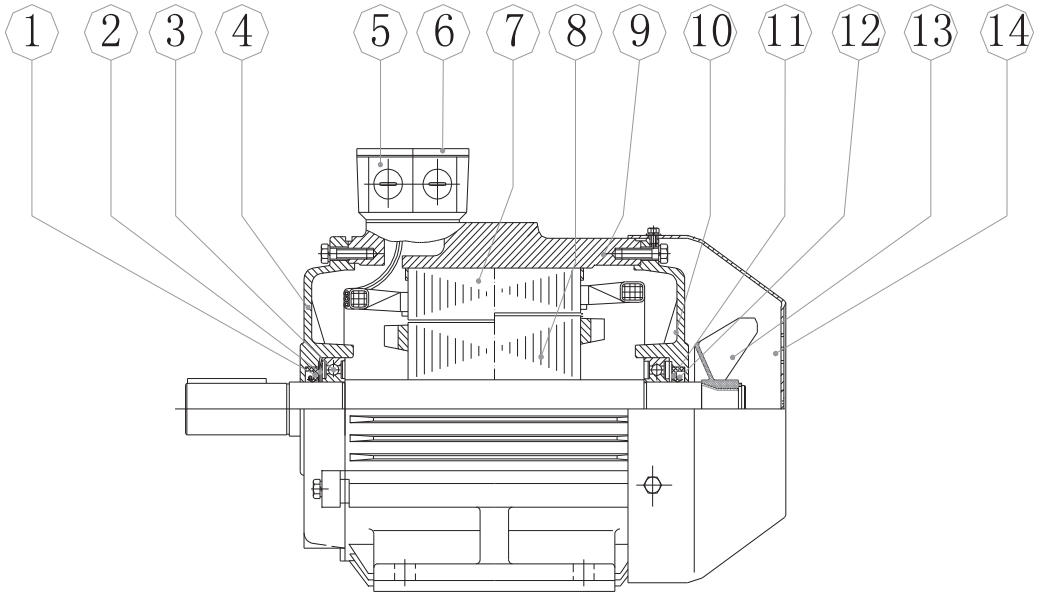
Three Phase motors with cage rotor



SPECIFICATION,
ARRANGEMENT & PARTS LIST

M2QA 80-132 FRAME

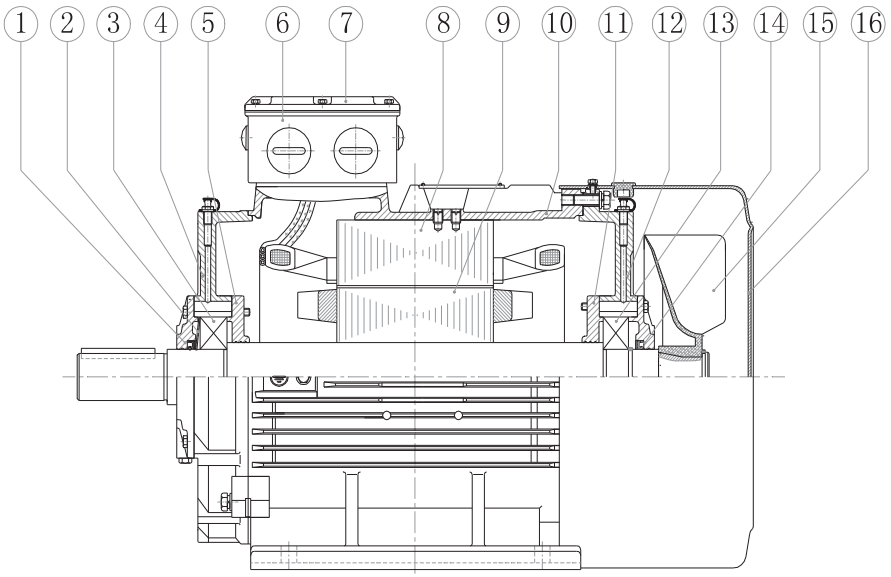
Parts Description	Specification
1. Endshield D.E.with oil seal	Standard Construction
2. Wave Spring D.E.	Cast iron Frame,Endshields.Terminal Box.
3. Bearing D.E.	Pressed Steel Fan Cowl.
4. Endshield D.E.	Cast iron Bearings cover
5. Terminal Box	Polypropylene glass reinforced Fan
6. Terminal Box Lid	NSK or equivalent Bearings
7. Stator Lamination Pack.	**Features**
8. Rotor with shaft	Dimensions and ratings to IEC60072.
9. Stator Frame	IP55
10. Endshield N.D.E.	Top or side mounted Terminal Box
11. Bearing N.D.E.	Terminal Box rotates in 90 deg. Increments
12. Endshield N.D.E.with oil seal	Drilled and tapped hole in D.E.of shaft
13. Fan	Cooling IC411
14. Fan Cowl	**Mounting**
	B3-Foot mounted
	B5-Flange mounted-horizontal.
	B3/B5-Foot and Flange mounted
	V1-Flange mounted-vertical



SPECIFICATION, ARRANGEMENT & PARTS LIST

M2QA 160-315 FRAME

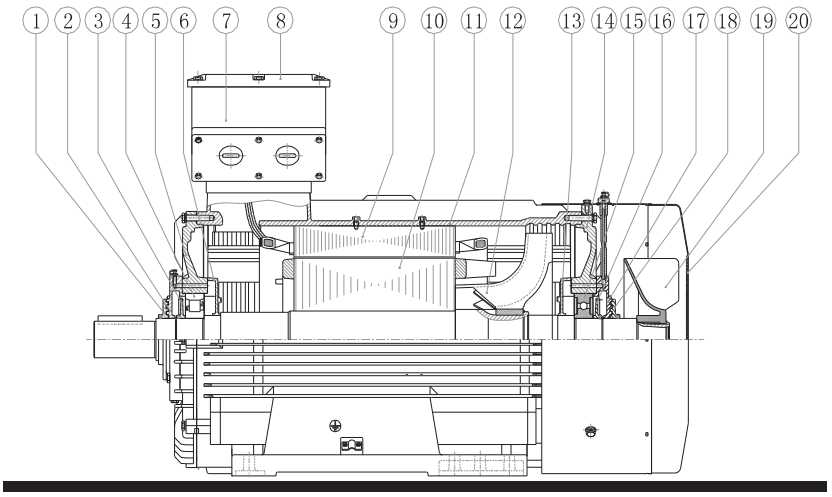
Parts Description	Specification
1. Outer Bearing Cover D.E. with oil seal	Standard Construction
2. Wave Spring D.E.	Cast iron Frame,Endshields.Terminal Box.
3. Bearing D.E.	Pressed Steel Fan Cowl.
4. Endshield D.E.	Cast iron Bearings cover
5. Inner Bearing Cover D.E.	Polypropylene glass reinforced Fan
6. Terminal Box	NSK or equivalent Bearings
7. Terminal Box Lid	**Features**
8. Stator Lamination Pack	Dimensions and ratings to IEC60072.
9. Rotor with shaft	IP55
10. Stator Frame	Top mounted Terminal Box
11. Inner Bearing Cover N.D.E.	Terminal Box rotates in 90 deg. Increments
12. Endshield N.D.E.	Drilled and tapped hole in D.E.of shaft
13. Bearing N.D.E.	Cooling IC411
14. Outer Bearing Cover N.D.E.with oil seal	**Mounting**
15. Fan	B3-Foot mounted
16. Fan Cowl	B5-Flange mounted-horizontal.
	B3/B5-Foot and Flange mounted
	V1-Flange mounted-vertical



SPECIFICATION,
ARRANGEMENT & PARTS LIST

M2QA 355 FRAME

Parts Description	Specification
1. Labyrinth Ring	Cast iron Frame,Endshields.Terminal Box.
2. Outer Bearing Cover D.E.	Pressed Steel Fan Cowl.
3. Flinger	Cast iron Bearings cover
4. Bearing D.E.	Polypropylene glass reinforced Fan
5. Endshield D.E.	NSK or equivalent Bearings
6. Inner Bearing Cover D.E.	
7. Terminal Box	**Features**
8. Terminal Box Lid	Dimensions and ratings to IEC60072.
9. Stator Lamination Pack	IP55
10. Rotor with shaft	Top mounted Terminal Box
11. Stator Frame	Terminal Box rotates in 90 deg. Increments
12. Inner Fan	Drilled and tapped hole in D.E.of shaft
13. Inner Bearing Cover N.D.E.	Cooling IC411
14. Endshield N.D.E.	
15. Bearing N.D.E.	**Mounting**
16. Flinger	B3-Foot mounted
17. Outer Bearing Cover N.D.E.with oil seal	B5-Flange mounted-horizontal.
18. Labyrinth Ring	B3/B5-Foot and Flange mounted
19. Fan	V1-Flange mounted-vertical
20. Fan	



PERFORMANCE DATA

2 POLES -3000 RPM SYNCHRONOUS SPEED 50Hz IE1

Type	output	Speed	Rated Current			Efficiency		%FL	Power factor		%FL	Ist/In	Tn	Tst/Tn	Tmax/Tn	J	Noise	Weight
	(kW)	(r/min)	380V(A)	400V(A)	415V(A)	100	75	50	100	75	50		(N.m)			($kg.m^2$)	dB(A)	(kg)
80M1-2	0.75	2840	1.8	1.7	1.7	75	74.3	71.5	0.83	0.81	0.67	5.5	2.5	2.2	2.5	0.001	61	18
80M2-2	1.1	2845	2.6	2.5	2.4	76.2	78.2	75.3	0.84	0.79	0.67	5.5	3.7	2.2	2.6	0.001	63	19
90S-2	1.5	2850	3.5	3.3	3.2	78.5	79.5	77	0.84	0.81	0.71	6	5.0	2.7	3.2	0.001	65	24
90L-2	2.2	2850	4.9	4.6	4.4	81	82.2	80.2	0.85	0.81	0.72	6.1	7.4	2.9	3.1	0.001	69	27
100L-2	3	2860	6.3	6.0	5.8	82.6	83.5	82.1	0.87	0.85	0.75	6.9	10.0	3	3.5	0.004	72	38
112M1-2	4	2870	8.2	7.8	7.5	84.2	85.5	84.5	0.88	0.88	0.81	6.7	13.3	2.5	3.1	0.006	74	45
112M2-2	5.5	2890	11.3	10.7	10.3	84.2	86.9	86.3	0.88	0.88	0.81	7.4	18.2	2.6	3.3	0.007	78	50
132S1-2	5.5	2900	11.1	10.5	10.1	85.7	87.1	85.3	0.88	0.84	0.76	7.4	18.1	2.5	3.3	0.011	83	68
132S2-2	7.5	2915	14.9	14.1	13.6	87	87.3	85.1	0.88	0.87	0.78	7.6	24.6	2.4	3.2	0.013	83	75
132M-2	11	2915	21.8	20.7	20.0	87	88.2	87.1	0.88	0.88	0.81	7.2	36.0	2.4	3.3	0.028	83	87
160M1-2	11	2930	21.2	20.2	19.5	88.4	89.3	88.1	0.89	0.88	0.82	7.3	35.9	2.3	2.6	0.039	83	125
160M2-2	15	2930	28.6	27.2	26.2	89.4	88.9	84.4	0.89	0.89	0.84	7.2	48.9	2.3	2.6	0.044	83	135
160L-2	18.5	2935	34.7	33.0	31.8	90	91.1	89.7	0.9	0.9	0.83	7.3	60.2	2.2	2.7	0.057	84	155
180M-2	22	2940	41.0	39.0	37.6	90.5	88.5	86.5	0.9	0.87	0.82	7	71.5	2.4	3	0.077	84	180
200L1-2	30	2950	55.4	52.6	50.7	91.4	90.2	88	0.9	0.88	0.82	5.9	97.1	1.9	3	0.125	86	265
200L2-2	37	2955	67.9	64.5	62.2	92	92	90.5	0.9	0.86	0.79	6.5	119.6	2.3	3.3	0.140	88	285
225M-2	45	2960	82.1	78.0	75.2	92.5	91.9	89.5	0.9	0.88	0.85	7.1	145.2	2.4	3.3	0.230	90	340
250M1-2	55	2965	99.8	94.8	91.4	93	92.2	89.8	0.9	0.87	0.81	8	177.2	2.7	3.1	0.320	90	435
250M2-2	75	2965	136.1	129.3	124.7	93	93.9	92.5	0.9	0.89	0.82	6.8	241.6	2.2	3.2	0.412	90	520
280S-2	75	2965	135.3	128.5	123.9	93.6	92.5	90.1	0.9	0.89	0.84	6.8	241.6	2.2	3.2	0.595	90	540
280M1-2	90	2970	160.0	152.0	146.5	93.9	92.9	91	0.91	0.89	0.87	7.2	289.4	2.2	3	0.678	90	580
280M2-2	110	2970	195.6	185.8	179.1	93.9	94.3	93.1	0.91	0.92	0.91	6.8	353.7	2.6	3.1	0.860	88	635
315S-2	110	2975	195.4	185.6	178.9	94	93.6	91.7	0.91	0.89	0.82	6.1	353.1	2.3	2.6	1.170	90	1080
315M-2	132	2980	233.2	221.6	213.6	94.5	94.5	93.1	0.91	0.92	0.9	7.1	423.0	2.3	2.8	1.550	90	1175
315L1-2	160	2980	279.3	265.4	255.8	94.6	94.7	93.2	0.92	0.91	0.88	7.4	512.8	2.5	2.7	1.750	91	1300
315L2-2	200	2980	348.4	331.0	319.0	94.8	94.9	94.1	0.92	0.91	0.88	7.3	640.9	2.7	3	2.050	91	1300
355M-2	250	2985	433.7	412.0	397.1	95.2	94.5	92.5	0.92	0.92	0.89	7.1	799.8	1.8	2.6	3.560	93	1840
355L-2	315	2985	545.3	518.0	499.3	95.4	95.2	93.8	0.92	0.93	0.91	6.3	1007.8	1.7	2.9	4.120	94	1950

INL=No Load Current IFL=Full Load Current IST=Locked Rotor Current TST=Locked Rotor Torque
TPU=Pull Up Torque TM=Maximum Torque TFL=Full Load Torque

PERFORMANCE DATA

4 POLES -1500 RPM SYNCHRONOUS SPEED 50Hz IE1

Type	output	Speed	Rated Current			Efficiency		%FL	Power factor		%FL	Ist/In	Tn	Tst/Tn	Tmax/Tn	J	Noise	Weight
	(kW)	(r/min)	380V(A)	400V(A)	415V(A)	100	75	50	100	75	50		(N.m)			(kg.m2)	dB(A)	(kg)
80M1-4	0.55	1410	1.6	1.5	1.4	71	72.5	70.1	0.75	0.67	0.55	4.6	3.7	2.4	2.7	0.002	54	17
80M2-4	0.75	1415	2.1	2.0	1.9	73	72.9	69.5	0.76	0.66	0.54	4.4	5.1	2.2	2.7	0.002	57	18
90S-4	1.1	1405	2.8	2.7	2.6	76.2	76.6	75	0.77	0.68	0.55	4.3	7.5	2.2	3	0.002	61	24
90L-4	1.5	1410	3.7	3.5	3.4	78.5	79	78.5	0.79	0.71	0.58	4.7	10.2	2.5	3	0.003	61	26
100L1-4	2.2	1415	5.1	4.8	4.7	81	80.8	79.5	0.81	0.73	0.59	5.3	14.8	2.5	2.9	0.007	61	33
100L2-4	3	1420	6.7	6.4	6.2	82.6	82.7	81.5	0.82	0.75	0.63	5.7	20.2	2.4	3	0.007	63	37
112M-4	4	1440	8.8	8.4	8.1	84.2	83.9	81.7	0.82	0.77	0.69	5.7	26.5	2.7	3.1	0.010	67	47
132S-4	5.5	1450	11.7	11.2	10.8	85.7	87.1	85.6	0.83	0.77	0.65	6.8	36.2	2.3	3.1	0.022	68	70
132M1-4	7.5	1450	15.6	14.8	14.3	87	88.7	88.3	0.84	0.82	0.72	7.2	49.4	2.6	3.1	0.030	68	80
132M2-4	11	1450	22.9	21.7	20.9	87	88.6	88	0.84	0.8	0.72	6.2	72.4	2.2	2.8	0.063	69	88
160M-4	11	1460	22.5	21.4	20.6	88.4	87.8	85.1	0.84	0.82	0.76	6.8	72.0	2.3	2.8	0.075	70	128
160L-4	15	1460	30.0	28.5	27.5	89.4	89.5	84	0.85	0.8	0.74	7.4	98.1	2.6	3.4	0.093	73	148
180M-4	18.5	1465	36.3	34.5	33.3	90	90.5	88.6	0.86	0.83	0.73	7	120.6	2.1	3.2	0.140	75	175
180L-4	22	1470	42.9	40.8	39.3	90.5	91	89.3	0.86	0.85	0.76	6.8	142.9	2.1	3	0.159	75	185
200L-4	30	1475	58.0	55.1	53.1	91.4	92.3	91.2	0.86	0.87	0.81	6.5	194.2	2.2	3	0.265	80	275
225S-4	37	1475	70.2	66.7	64.3	92	92.2	91.1	0.87	0.87	0.77	7	239.6	2.1	3.2	0.404	81	323
225M-4	45	1475	85.0	80.7	77.8	92.5	92.5	91.3	0.87	0.86	0.8	6.6	291.4	2.2	2.8	0.470	82	345
RYR-250M1-	55	1480	103.3	98.1	94.6	93	92.6	91	0.87	0.84	0.78	6.3	354.9	2.2	2.7	0.670	82	423
RYR-250M2-	75	1480	140.8	133.8	129.0	93	93.9	91.9	0.87	0.87	0.83	6.3	484.0	2.2	3.2	0.880	82	550
280S-4	75	1480	139.9	132.9	128.1	93.6	93.6	92	0.87	0.86	0.81	6.3	484.0	2.3	2.8	1.120	84	574
280M1-4	90	1485	167.4	159.0	153.3	93.9	94	92.9	0.87	0.87	0.81	7.1	578.8	2.6	3	1.460	84	630
280M2-4	110	1480	204.6	194.4	187.3	93.9	94.3	93.1	0.87	0.88	0.83	6.2	709.8	2.4	2.8	2.680	85	750
315S-4	110	1485	201.0	190.9	184.0	94.5	94.4	93.8	0.88	0.88	0.84	5.8	707.4	2.1	2.8	3.100	88	1105
315M-4	132	1485	240.4	228.4	220.1	94.8	94.6	93	0.88	0.87	0.82	6.3	848.9	2.2	2.6	3.300	88	1235
315L1-4	160	1489	287.8	273.4	263.6	94.9	95	94	0.89	0.86	0.81	5.7	1026.2	2	2.6	3.790	87	1330
315L2-4	200	1489	359.8	341.8	329.4	94.9	94.9	94	0.89	0.86	0.81	6.2	1282.7	2.3	2.7	4.500	89	1360
355M-4	250	1490	443.3	421.2	405.9	95.2	94.7	93.2	0.9	0.89	0.85	6.5	1602.3	2.1	3.1	5.670	90	1900
355L-4	315	1490	558.6	530.7	511.5	95.2	94.8	94.3	0.9	0.89	0.88	6	2019.0	2.1	3.3	6.660	90	2050

INL=No Load Current IFL=Full Load Current IST=Locked Rotor Current TST=Locked Rotor Torque
TPU=Pull Up Torque TM=Maximum Torque TFL=Full Load Torque

PERFORMANCE DATA

6 POLES -1000 RPM SYNCHRONOUS SPEED 50Hz IE1

Type	output	Speed	Rated Current			Efficiency			%FL	Power factor		%FL	Ist/In	Tn	Tst/Tn	Tmax/Tn	J	Noise	Weight
	(kW)	(r/min)	380V(A)	400V(A)	415V(A)	100	75	50		100	75	50		(N.m)			(kg.m2)	dB(A)	(kg)
80M1-6	0.37	915	1.3	1.2	1.2	62	63.2	55.5		0.7	0.63	0.52	3.2	3.9	1.8	2	0.002	46	17
80M2-6	0.55	915	1.8	1.7	1.6	65	70	65.2		0.72	0.62	0.52	3.3	5.7	2	2.2	0.003	50	20
90S-6	0.75	920	2.3	2.2	2.1	69	71.6	67.8		0.72	0.74	0.54	3.6	7.8	2.3	2.6	0.003	53	23
90L-6	1.1	925	3.2	3.0	2.9	72	73.5	70.4		0.73	0.65	0.52	3.5	11.4	2.1	2.5	0.004	59	26
100L-6	1.5	925	4.0	3.8	3.7	76	75.8	72.4		0.75	0.66	0.54	4.3	15.5	2.3	2.9	0.007	62	35
112M-6	2.2	935	5.6	5.3	5.1	79	78.1	75.9		0.76	0.74	0.6	4.4	22.5	2.2	2.5	0.014	65	45
132S-6	3	960	7.4	7.0	6.8	81	82.5	80.1		0.76	0.7	0.57	5.8	29.8	2.1	3	0.029	66	65
132M1-6	4	960	9.8	9.3	8.9	82	83.9	82.4		0.76	0.7	0.57	6.4	39.8	2.1	2.7	0.036	66	70
132M2-6	5.5	960	12.9	12.3	11.8	84	85.3	83.3		0.77	0.74	0.58	6.5	54.7	2	2.5	0.045	67	80
160M-6	7.5	965	17.2	16.3	15.8	86	88.3	87		0.77	0.74	0.67	5.4	74.2	2	2.3	0.088	71	125
160L-6	11	970	24.5	23.3	22.4	87.5	89.1	87.5		0.78	0.77	0.67	5.5	108.3	2	2.3	0.115	72	150
180L-6	15	970	31.6	30.0	28.9	89	89.4	87.9		0.81	0.78	0.66	6.2	147.7	2.1	2.5	0.207	72	185
200L1-6	18.5	975	38.6	36.6	35.3	90	91.5	90.4		0.81	0.76	0.64	6.2	181.2	2	2.8	0.315	73	260
200L2-6	22	975	44.7	42.5	41.0	90	88.9	87.8		0.83	0.81	0.71	5.9	215.5	2	2.5	0.360	73	270
225M-6	30	980	59.3	56.3	54.3	91.5	91.8	90.6		0.84	0.84	0.74	6.4	292.3	2	2.5	0.545	71	340
RYR-250M-(	37	980	71.1	67.5	65.1	92	91.7	90		0.86	0.82	0.75	6.7	360.6	2.3	2.6	0.834	76	430
280S-6	45	980	85.9	81.7	78.7	92.5	92.5	91.7		0.86	0.84	0.76	6.7	438.5	2.1	3	1.390	76	525
280M1-6	55	980	104.7	99.5	95.9	92.8	93	92.2		0.86	0.86	0.81	6.3	536.0	2.1	2.5	1.650	76	580
280M2-6	75	980	142.8	135.6	130.7	92.8	93.6	92.1		0.86	0.86	0.8	6.8	730.9	2.8	2.9	3.210	79	700
315S-6	75	985	141.7	134.6	129.8	93.5	94	93		0.86	0.84	0.81	7	727.2	2	2.7	4.100	80	1060
315M-6	90	985	169.5	161.0	155.2	93.8	94.5	93		0.86	0.84	0.77	6.2	872.6	2	2.4	4.300	80	1170
315L1-6	110	990	206.7	196.4	189.3	94	94.5	93.2		0.86	0.85	0.8	6.7	1061.1	2.4	2.8	5.450	82	1220
315L2-6	132	990	244.7	232.5	224.1	94.2	94.5	93.8		0.87	0.85	0.81	6.8	1273.3	2.3	2.9	6.120	82	1280
355M1-6	160	990	292.3	277.7	267.7	94.5	94.9	93		0.88	0.87	0.85	6.5	1543.4	1.9	2.5	8.850	85	1800
355M2-6	200	990	365.4	347.1	334.6	94.5	95.8	94.2		0.88	0.87	0.81	6.3	1929.3	2	2.5	9.550	85	1900
355L-6	250	990	456.8	433.9	418.2	94.5	95.9	94		0.88	0.88	0.84	6	2411.6	1.9	2.4	10.40	87	2050

INL=No Load Current IFL=Full Load Current IST=Locked Rotor Current TST=Locked Rotor Torque
TPU=Pull Up Torque TM=Maximum Torque TFL=Full Load Torque

PERFORMANCE DATA

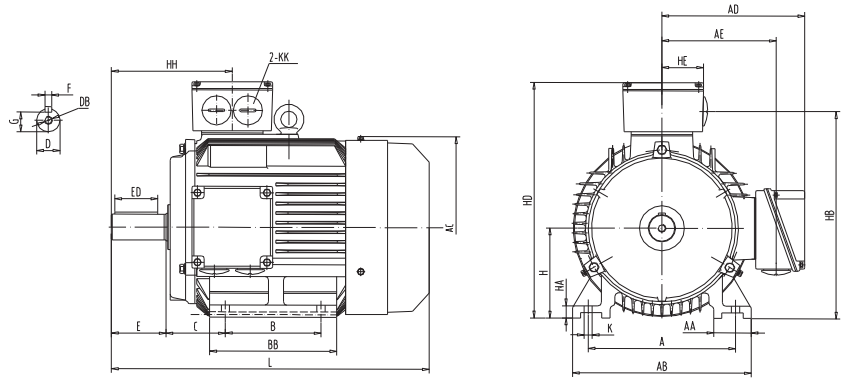
8 POLES -750RPM SYNCHRONOUS SPEED 50Hz IE1

Type	output	Speed	Rated Current			Efficiency		%FL	Power factor		%FL	Ist/In	Tn	Tst/Tn	Tmax/Tn	J	Noise	Weight
	(kW)	(r/min)	380V(A)	400V(A)	415V(A)	100	75	50	100	75	50		(N.m)			(kg.m2)	dB(A)	(kg)
80M1-8	0.18	680	0.9	0.8	0.8	51	54	45	0.61	0.55	0.46	3.2	2.5	2.1	2.4	0.002	50	17
80M2-8	0.25	690	1.2	1.1	1.1	54	55.2	45.1	0.61	0.55	0.47	3.3	3.5	2	2.2	0.003	50	19
90S-8	0.37	700	1.5	1.4	1.4	62	64.9	56.2	0.61	0.53	0.44	3.6	5.0	1.9	2.5	0.004	53	23
90L-8	0.55	700	2.2	2.1	2.0	63	67.1	59.3	0.61	0.51	0.42	3.5	7.5	1.9	2.3	0.004	54	25
100L1-8	0.75	700	2.4	2.3	2.2	71	70.2	62.5	0.67	0.57	0.46	4	10.2	2.1	2.4	0.008	56	33
100L2-8	1.1	700	3.3	3.2	3.0	73	74.1	68.8	0.69	0.59	0.47	3.7	15.0	2.2	2.4	0.010	59	38
112M1-8	1.5	700	4.4	4.2	4.0	75	76.8	73.7	0.69	0.6	0.5	4.2	20.5	2.2	2.7	0.017	61	50
112M2-8	2.2	700	6.5	6.1	5.9	75	76.9	73.6	0.69	0.62	0.51	4.5	30.0	2	2.6	0.018	62	55
132S-8	2.2	705	6.0	5.7	5.5	78	80.1	77.5	0.71	0.63	0.51	4.7	29.8	2.1	2.5	0.030	65	58
132M1-8	3	705	7.9	7.5	7.2	79	82.6	79.5	0.73	0.67	0.55	4.6	40.6	2.1	2.6	0.040	65	68
132M2-8	4	706	10.5	10.0	9.6	79	81.6	79.8	0.73	0.69	0.57	4.6	54.1	1.9	2.4	0.040	67	74
160M1-8	4	710	10.3	9.8	9.4	81	81.5	80.3	0.73	0.66	0.56	4.5	53.8	2.1	2.7	0.075	67	113
160M2-8	5.5	715	13.6	12.9	12.5	83	87.1	85.6	0.74	0.67	0.55	5	73.5	2.3	2.8	0.093	68	123
160L-8	7.5	720	17.8	16.9	16.3	85.5	87.4	85.9	0.75	0.69	0.55	6	99.5	2.2	2.6	0.125	69	150
180L-8	11	730	25.1	23.9	23.0	87.5	87.5	85.9	0.76	0.67	0.56	5.5	143.9	2.2	2.5	0.202	70	178
200L-8	15	730	34.1	32.4	31.2	88	89.6	88.2	0.76	0.72	0.59	5.8	196.2	2.1	2.8	0.338	71	233
225S-8	18.5	731	41.1	39.0	37.6	90	89.5	88.8	0.76	0.73	0.65	6.3	241.7	2.1	2.5	0.490	73	283
225M-8	22	735	47.4	45.0	43.4	90.5	90.6	89.9	0.78	0.74	0.63	6.2	285.9	2.2	2.5	0.550	73	323
RYR-250M-8	30	735	63.4	60.2	58.1	91	90.5	88.6	0.79	0.76	0.65	5.9	389.8	2.3	3	0.830	74	400
280S-8	37	735	77.8	73.9	71.2	91.5	91.2	90.1	0.79	0.77	0.69	6.3	480.7	2.1	2.8	1.390	75	515
280M1-8	45	740	94.1	89.4	86.1	92	91.3	89.5	0.79	0.76	0.64	6.4	580.7	1.9	2.5	1.650	76	566
280M2-8	55	740	115.0	109.2	105.3	92	91.6	90.5	0.79	0.77	0.67	6.9	709.8	2.3	2.9	3.650	77	678
315S-8	55	740	111.2	105.6	101.8	92.8	93.2	92.5	0.81	0.78	0.7	6.8	709.8	1.9	2.7	4.790	78	790
315M-8	75	740	151.3	143.7	138.5	93	93.9	91.6	0.81	0.8	0.72	7	967.9	2	2.4	5.580	78	970
315L1-8	90	740	177.8	168.9	162.8	93.8	94	92	0.82	0.76	0.69	6.7	1161.5	2.4	2.8	6.370	80	1060
315L2-8	110	740	216.8	206.0	198.5	94	94.3	92.5	0.82	0.8	0.72	6.4	1419.6	2.4	2.5	7.230	81	1170
355M1-8	132	740	261.0	248.0	239.0	93.7	94.9	93.6	0.82	0.81	0.72	5.8	1703.5	1.7	2.3	10.54	82	1560
355M2-8	160	743	314.7	299.0	288.2	94.2	95.1	94.2	0.82	0.83	0.75	5.5	2056.5	1.5	2.3	11.72	86	1650
355L-8	200	743	387.4	368.1	354.8	94.5	95.5	94.6	0.83	0.86	0.78	6	2570.7	1.3	3.3	12.85	87	1940

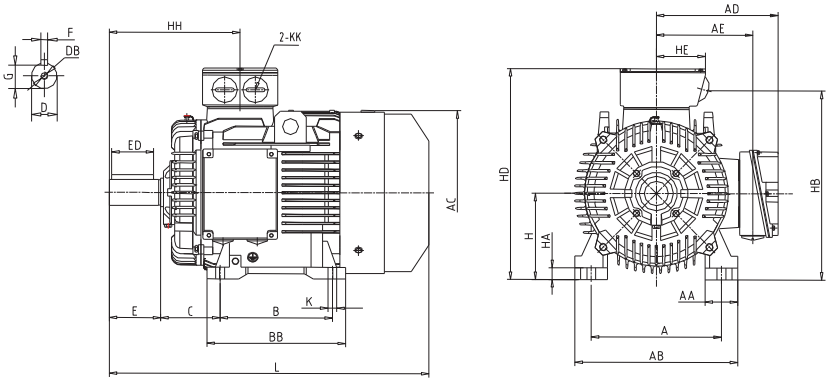
INL=No Load Current IFL=Full Load Current IST=Locked Rotor Current TST=Locked Rotor Torque
TPU=Pull Up Torque TM=Maximum Torque TFL=Full Load Torque

DIMENSIONS FOOT MOUNT B3 IM1001

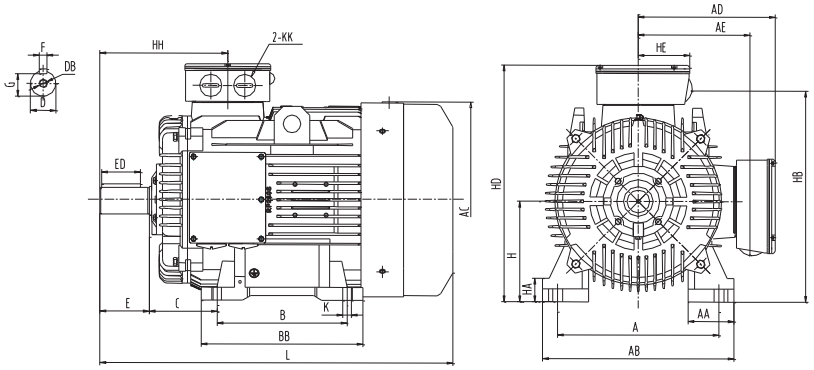
80~132



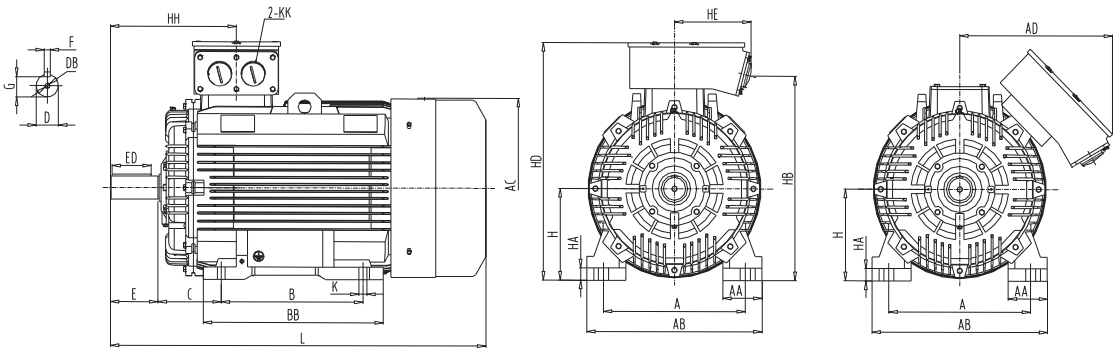
160~200



225~280



315~355

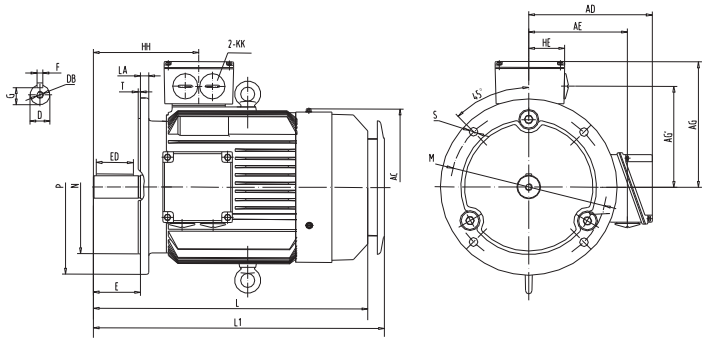


DIMENSIONS FOOT MOUNT B3 IM1001

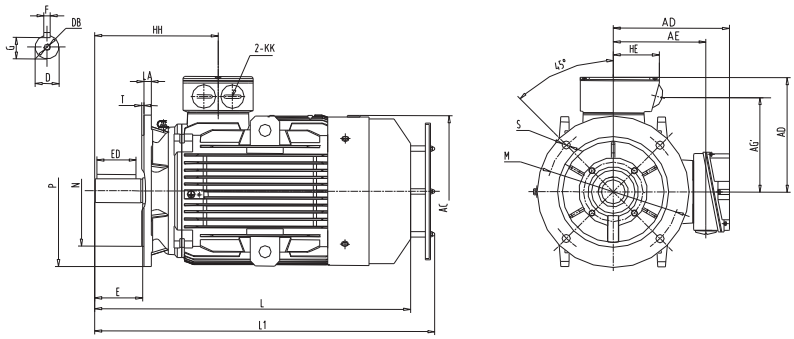
FRAME	A	AA	AB	AC	AD	AE	B	BB	C	D	DB	E	ED	F	G	H	HA	HB	HD	HE	HH	K	KK	L
80	125	36	165	160	150	112	100	150	50	19	M6X16	40	25	6	16	80	10	192	230	59	112	10	M25X1.5	310
90S	140	38	180	176	155	116	100	180	56	24	M8X19	50	40	8	20	90	12	206	245	59	166	10	M25X1.5	350
90L	140	38	180	176	155	116	125	205	56	24	M8X19	50	40	8	20	90	12	206	245	59	166	10	M25X1.5	375
100L	160	42	200	200	170	130	140	203	63	28	M10X22	60	45	8	24	100	14	230	270	59	143	12	M25X1.5	410
112M	190	45	226	220	198	153	140	180	70	28	M10X22	60	45	8	24	112	13	265	310	59	154	12	M32X1.5	400
132S	216	55	262	260	218	173	140	186	89	38	M12X28	80	63	10	33	132	18	305	350	59	179	12	M32X1.5	470
132M	216	55	262	260	205	164	178	224	89	38	M12X28	80	63	10	33	132	18	305	350	59	179	12	M32X1.5	510
160M	254	65	314	330	270	205	210	268	108	42	M16x36	110	90	12	37	160	20	365	415	95	269	14.5	M40x1.5	625
160L	254	65	314	330	270	205	254	312	108	42	M16x36	110	90	12	37	160	20	365	415	95	269	14.5	M40x1.5	670
180M	279	70	349	380	285	220	241	296	121	48	M16X36	110	90	14	43	180	22	400	450	95	274	14.5	M40X1.5	700
180L	279	70	349	380	285	220	279	335	121	48	M16X36	110	90	14	43	180	22	400	450	95	274	14.5	M40X1.5	740
200L	318	72	380	420	325	255	305	366	133	55	M20X42	110	90	16	49	200	23	445	510	165.5	296	18.5	M50X1.5	780
225S-4,6,8	356	75	431	470	340	270	286	380	149	60	M20X42	140	110	18	53	225	28	507	550	165.5	329	18.5	M50X1.5	820
225M-2	356	75	431	470	340	270	311	405	149	55	M20X42	110	90	16	49	225	28	507	550	165.5	299	18.5	M50X1.5	820
225M-4,6,8	356	75	431	470	340	270	311	405	149	60	M20X42	140	110	18	53	225	28	507	550	165.5	329	18.5	M50X1.5	850
250M-2	406	110	480	510	365	290	349	440	168	60	M20X42	140	110	18	53	250	38	560	620	185	355	24	M63X1.5	945
250M-4,6,8	406	110	480	510	365	290	349	440	168	65	M20X42	140	110	18	58	250	38	560	620	185	355	24	M63X1.5	945
280S-2	457	130	542	580	391	320	368	458	190	65	M20X42	140	110	18	58	280	33	600	670	146	359	24	M63X1.5	1020
280S-4,6,8	457	130	542	580	391	320	368	458	190	75	M20X42	140	110	20	68	280	33	600	670	146	359	24	M63X1.5	1020
280M-2	457	130	542	580	391	320	419	509	190	65	M20X42	140	110	18	58	280	33	600	670	146	359	24	M63X1.5	1070
280M-4,6,8	457	130	542	580	391	320	419	509	190	75	M20X42	140	110	20	68	280	33	600	670	146	359	24	M63X1.5	1070
315S-2	508	140	628	645	560	440	406	595	216	65	M20x42	140	110	18	58	315	43	745	840	275	415	28	M63X1.5	1200
315S-4,6,8	508	140	628	645	560	440	406	595	216	80	M20x42	170	140	22	71	315	43	745	840	275	445	28	M63X1.5	1230
315M-2	508	140	628	645	560	440	457	645	216	65	M20x42	140	110	18	58	315	43	745	840	275	415	28	M63X1.5	1310
315M-4,6,8	508	140	628	645	560	440	457	645	216	80	M20x42	170	140	22	71	315	43	745	840	275	445	28	M63X1.5	1340
315L-2	508	140	628	645	560	440	508	645	216	65	M20x42	140	110	18	58	315	43	745	840	275	415	28	M63X1.5	1310
315L-4,6,8	508	140	628	645	560	440	508	645	216	80	M20x42	170	140	22	71	315	43	745	840	275	445	28	M63X1.5	1340
355M-2	610	150	740	720	710	483	560	805	254	75	M24x50	140	110	20	68	355	55	838	1060	447	419	28	M63X1.5	1650
355M-4,6,8	610	150	740	720	710	483	560	805	254	95	M24x50	170	140	25	86	355	55	838	1060	447	449	28	M63X1.5	1680
355L-2	610	150	740	720	710	483	630	805	254	75	M24x50	140	110	20	68	355	55	838	1060	447	419	28	M63X1.5	1650
355L-4,6,8	610	150	740	720	710	483	630	805	254	95	M24x50	170	140	25	86	355	55	838	1060	447	449	28	M63X1.5	1680

DIMENSIONS FLANGE MOUNT B5 IM3001

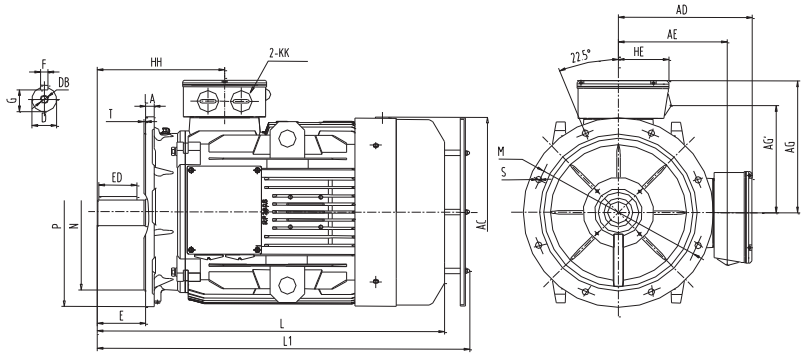
80~132



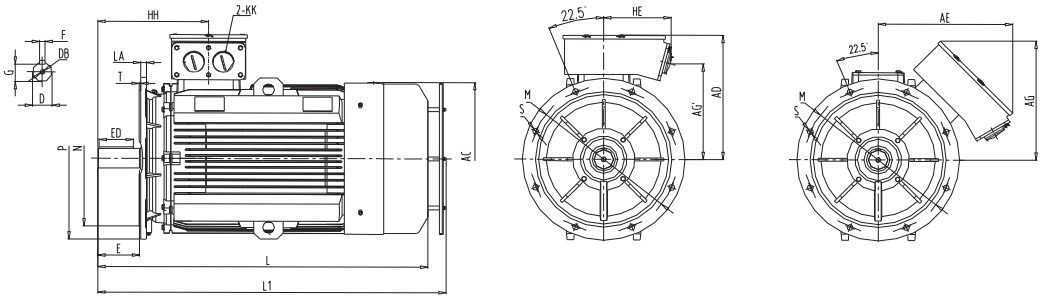
160~200



225~280



315~355

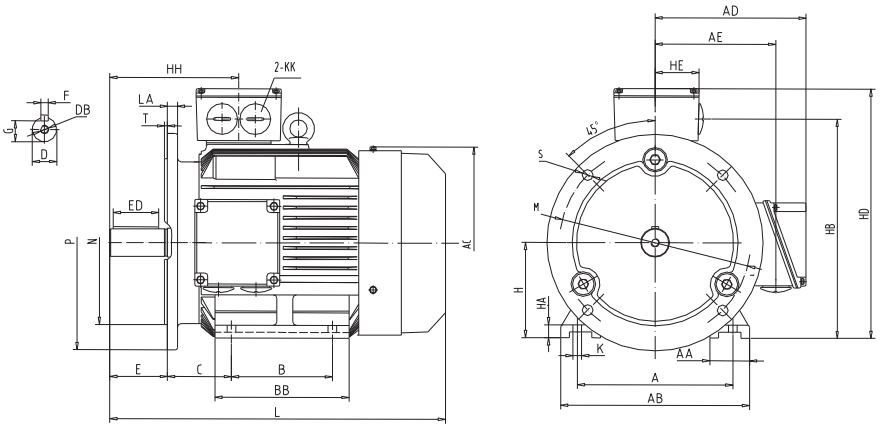


DIMENSIONS FLANGE MOUNT B5 IM3001

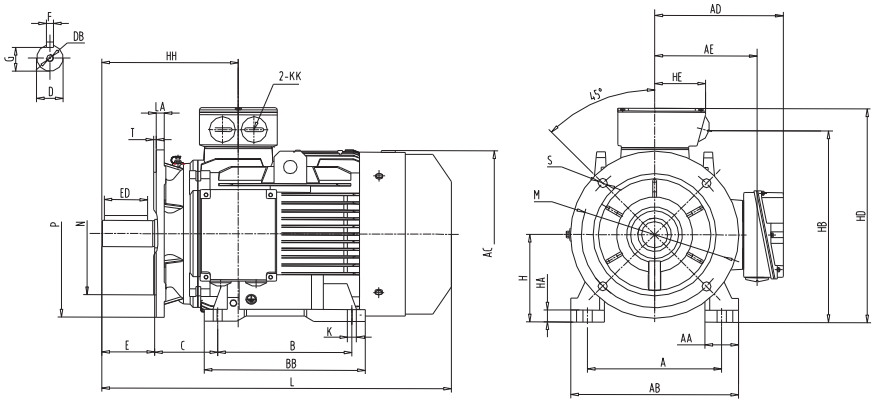
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80	175	150	150	112	19	M6X16	40	25	6	15.5	59	112	M25X1.5	310	310	12	165	130	200	4x12	3.5
90S	195	155	155	116	24	M8X19	50	40	8	20	59	166	M25X1.5	375	350	12	165	130	200	4x12	3.5
90L	195	155	155	116	24	M8X19	50	40	8	20	59	166	M25X1.5	400	375	12	165	130	200	4x12	3.5
00L	215	170	170	130	28	M10X22	60	45	8	24	59	143	M25X1.5	43.5	410	15	215	180	250	4x14.5	4
112M	220	198	198	162	28	M10X22	60	45	8	24	59	154	M32X1.5	465	400	14	215	180	250	4x14.5	4
132S	260	218	218	182	38	M12X28	80	63	10	33	59	179	M32X1.5	535	470	14	265	230	300	4x14.5	4
132M	260	218	218	182	38	M12X28	80	63	10	33	59	179	M32X1.5	575	510	14	265	230	300	4x14.5	4
160M	330	260	255	215	42	M16x36	110	90	12	37	95	269	M40x1.5	695	625	15	300	250	350	4x18.5	5
160L	330	260	255	215	42	M16x36	110	90	12	37	95	269	M40x1.5	740	670	15	300	250	350	4x18.5	5
180M	380	275	270	225	48	M16X36	110	90	14	42.5	95	274	M40X1.5	785	700	18	300	250	350	4x18.5	5
180L	380	275	270	225	48	M16X36	110	90	14	42.5	95	274	M40X1.5	820	740	18	300	250	350	4x18.5	5
200L	420	325	310	254	55	M20X42	110	90	16	49	165.5	296	M50X1.5	865	780	18	350	300	400	4x18.5	5
225S-4,6,8	470	340	325	282	60	M20X42	140	110	18	53	165.5	329	M50X1.5	900	820	20	400	350	450	8x18.5	5
225M-2	470	340	325	282	55	M20X42	110	90	16	49	165.5	299	M50X1.5	900	820	20	400	350	450	8x18.5	5
225M-4,6,8	470	340	325	282	60	M20X42	140	110	18	53	165.5	329	M50X1.5	930	850	20	400	350	450	8x18.5	5
250M-2	510	365	370	310	60	M20X42	140	110	18	53	185	347	M63X1.5	1010	935	22	500	450	550	8x18.5	5
250M-4,6,8	510	365	370	310	65	M20X42	140	110	18	58	185	347	M63X1.5	1010	935	22	500	450	550	8x18.5	5
280S-2	580	387	390	314	65	M20X42	140	110	18	58	146	359	M63X1.5	1085	1020	22	500	450	550	8x18.5	5
280S-4,6,8	580	387	390	314	75	M20X42	140	110	20	67.5	146	359	M63X1.5	1085	1020	22	500	450	550	8x18.5	5
280M-2	580	387	390	314	65	M20X42	140	110	18	58	146	359	M63X1.5	1135	1070	22	500	450	550	8x18.5	5
280M-4,6,8	580	387	390	314	75	M20X42	140	110	20	67.5	146	359	M63X1.5	1135	1070	22	500	450	550	8x18.5	5
315S-2	645	560	525	410	65	M20x42	140	110	18	58	275	415	M63X1.5	1275	1200	24	600	550	660	8x24	6
315S-4,6,8	645	560	525	410	80	M20x42	170	140	22	71	275	445	M63X1.5	1305	1230	24	600	550	660	8x24	6
315M-2	645	560	525	410	65	M20x42	140	110	18	58	275	415	M63X1.5	1385	1310	24	600	550	660	8x24	6
315M-4,6,8	645	560	525	410	80	M20x42	170	140	22	71	275	445	M63X1.5	1415	1340	24	600	550	660	8x24	6
315L-2	645	560	525	410	65	M20x42	140	110	18	58	275	415	M63X1.5	1385	1310	24	600	550	660	8x24	6
315L-4,6,8	645	560	525	410	80	M20x42	170	140	22	71	275	445	M63X1.5	1415	1340	24	600	550	660	8x24	6
355M-2	710	710	705	500	75	M24x50	140	110	20	67.5	447	419	M63X1.5	1710	1650	24	740	680	800	8x24	6
355M-4,6,8	710	710	705	500	95	M24x50	170	140	25	86	447	449	M63X1.5	1740	1680	24	740	680	800	8x24	6
355L-2	710	710	705	500	75	M24x50	140	110	20	67.5	447	419	M63X1.5	1710	1650	24	740	680	800	8x24	6
355L-4,6,8	710	710	705	500	95	M24x50	170	140	25	86	447	449	M63X1.5	1740	1680	24	740	680	800	8x24	6

DIMENSIONS FOOT AND FLANGE MOUNT B35 IM2001

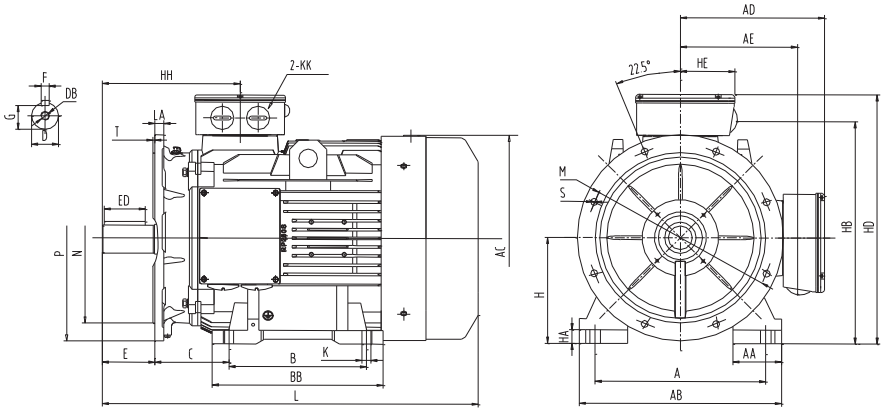
80~132



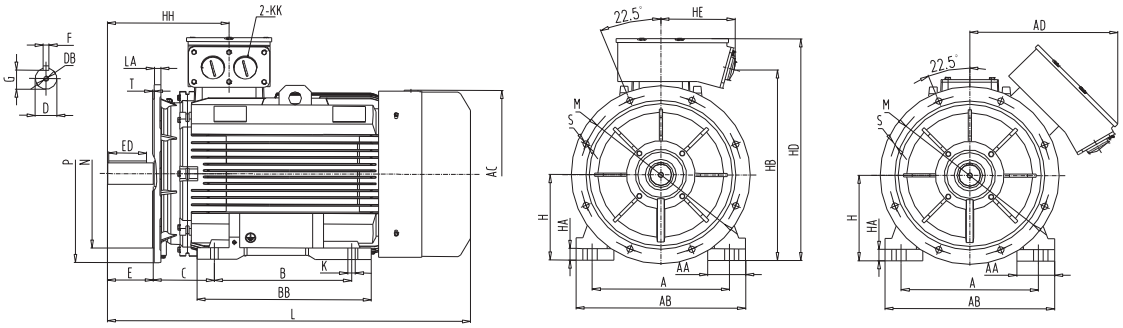
160~200



225~280



315~355

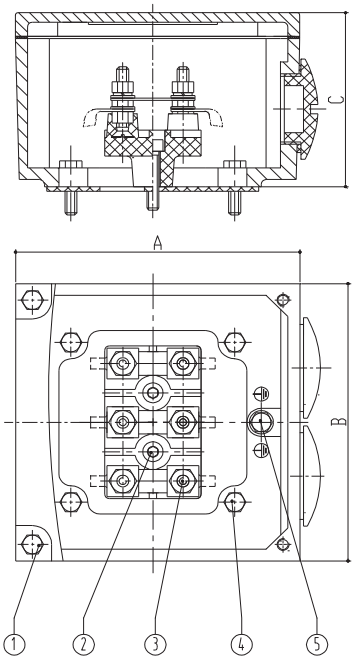


DIMENSIONS FOOT AND FLANGE MOUNT B35 IM2001

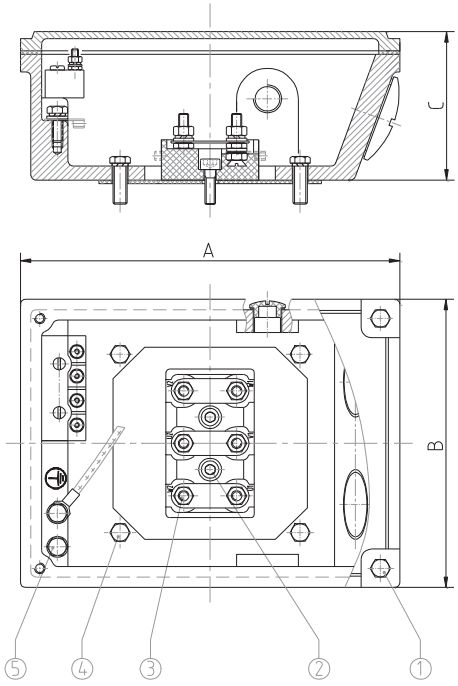
FRAME	A	AA	AB	AC	AD	AE	B	BB	C	D	DB	E	ED	F	G	H	HA	HB	HD	HE	HH	K	KK	L	LA	M	N	P	S	T
80	125	36	165	160	150	112	100	150	50	19	M6X16	40	25	6	16	80	10	192	230	59	112	10	M25X1.5	310	12	165	130	200	4x12	3.5
90S	140	38	180	176	155	116	100	180	56	24	M8X19	50	40	8	20	90	12	206	245	59	166	10	M25X1.5	350	12	165	130	200	4x12	3.5
90L	140	38	180	176	155	116	125	205	56	24	M8X19	50	40	8	20	90	12	206	245	59	166	10	M25X1.5	375	12	165	130	200	4x12	3.5
100L	160	42	200	200	170	130	140	203	63	28	M10X22	60	45	8	24	100	14	230	270	59	143	12	M25X1.5	410	14	215	180	250	4x14.5	4
112M	190	45	226	220	198	153	140	180	70	28	M10X22	60	45	8	24	112	13	265	310	59	154	12	M32X1.5	400	14	215	180	250	4x14.5	4
132S	216	55	262	260	218	173	140	186	89	38	M12X28	80	63	10	33	132	18	305	350	59	179	12	M32X1.5	470	14	265	230	300	4x14.5	4
132M	216	55	262	260	205	164	178	224	89	38	M12X28	80	63	10	33	132	18	305	350	59	179	12	M32X1.5	510	14	265	230	300	4x14.5	4
160M	254	65	314	330	260	215	210	268	108	42	M16x36	110	90	12	37	160	20	360	420	95	262	14.5	M40x1.5	625	15	300	250	350	4x18.5	5
160L	254	65	314	330	260	215	254	312	108	42	M16x36	110	90	12	37	160	20	360	420	95	262	14.5	M40x1.5	670	15	300	250	350	4x18.5	5
180M	279	70	349	380	275	225	241	296	121	48	M16X36	110	90	14	43	180	22	400	455	95	270	15	M40X1.5	700	18	300	250	350	4x18.5	5
180L	279	70	349	380	275	225	279	335	121	48	M16X36	110	90	14	43	180	22	400	455	95	270	15	M40X1.5	740	18	300	250	350	4x18.5	5
200L	318	72	380	420	320	254	305	366	133	55	M20X42	110	90	16	49	200	23	445	510	165.5	296	19	M50X1.5	780	18	350	300	400	4x18.5	5
225S-4,6,8	356	75	431	470	340	270	286	380	149	60	M20X42	140	110	18	53	225	28	507	550	165.5	329	19	M50X1.5	820	20	400	350	450	8x18.5	5
225M-2	356	75	431	470	340	270	311	405	149	55	M20X42	110	90	16	49	225	28	507	550	165.5	299	19	M50X1.5	820	20	400	350	450	8x18.5	5
225M-4,6,8	356	75	431	470	340	270	311	405	149	60	M20X42	140	110	18	53	225	28	507	550	165.5	329	19	M50X1.5	850	20	400	350	450	8x18.5	5
250M-2	406	110	480	510	370	310	349	440	168	60	M20X42	140	110	18	53	250	38	560	620	185	355	24	M63X1.5	945	22	500	450	550	8x18.5	5
250M-4,6,8	406	110	480	510	370	310	349	440	168	65	M20X42	140	110	18	58	250	38	560	620	185	355	24	M63X1.5	945	22	500	450	550	8x18.5	5
280S-2	457	130	542	580	387	314	368	458	190	65	M20X42	140	110	18	58	280	33	600	670	146	359	24	M63X1.5	1020	22	500	450	550	8x18.5	5
280S-4,6,8	457	130	542	580	387	314	368	458	190	75	M20X42	140	110	20	68	280	33	600	670	146	359	24	M63X1.5	1020	22	500	450	550	8x18.5	5
280M-2	457	130	542	580	387	314	419	509	190	65	M20X42	140	110	18	58	280	33	600	670	146	359	24	M63X1.5	1070	22	500	450	550	8x18.5	5
280M-4,6,8	457	130	542	580	387	314	419	509	190	75	M20X42	140	110	20	68	280	33	600	670	146	359	24	M63X1.5	1070	22	500	450	550	8x18.5	5
315S-2	508	140	628	645	560	440	406	595	216	65	M20x42	140	110	18	58	315	43	745	840	275	415	28	M63X1.5	1200	24	600	550	660	8x24	6
315S-4,6,8	508	140	628	645	560	440	406	595	216	80	M20x42	170	140	22	71	315	43	745	840	275	445	28	M63X1.5	1230	24	600	550	660	8x24	6
315M-2	508	140	628	645	560	440	457	645	216	65	M20x42	140	110	18	58	315	43	745	840	275	415	28	M63X1.5	1310	24	600	550	660	8x24	6
315M-4,6,8	508	140	628	645	560	440	457	645	216	80	M20x42	170	140	22	71	315	43	745	840	275	445	28	M63X1.5	1340	24	600	550	660	8x24	6
315L-2	508	140	628	645	560	440	508	645	216	65	M20x42	140	110	18	58	315	43	745	840	275	415	28	M63X1.5	1310	24	600	550	660	8x24	6
315L-4,6,8	508	140	628	645	560	440	508	645	216	80	M20x42	170	140	22	71	315	43	745	840	275	445	28	M63X1.5	1340	24	600	550	660	8x24	6
355M-2	610	150	740	720	710	483	560	805	254	75	M24x50	140	110	20	68	355	55	838	1060	447	419	28	M63X1.5	1650	24	740	680	800	8x24	6
355M-4,6,8	610	150	740	720	710	483	560	805	254	95	M24x50	170	140	25	86	355	55	838	1060	447	449	28	M63X1.5	1680	24	740	680	800	8x24	6
355L-2	610	150	740	720	710	483	630	805	254	75	M24x50	140	110	20	68	355	55	838	1060	447	419	28	M63X1.5	1650	24	740	680	800	8x24	6
355L-4,6,8	610	150	740	720	710	483	630	805	254	95	M24x50	170	140	25	86	355	55	838	1060	447	449	28	M63X1.5	1680	24	740	680	800	8x24	6

TERMINAL BOX INFORMATION

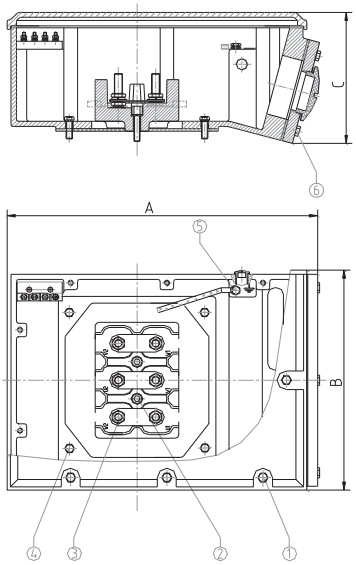
80~132



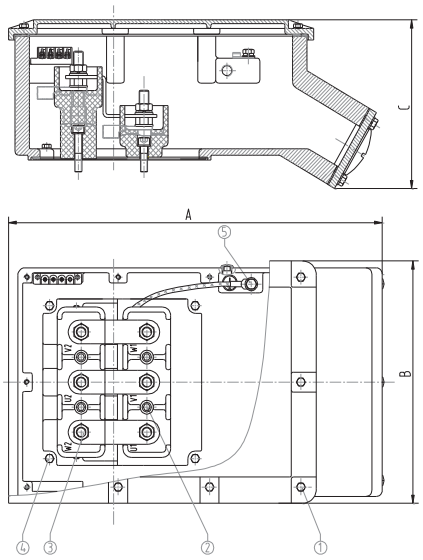
160~280



315



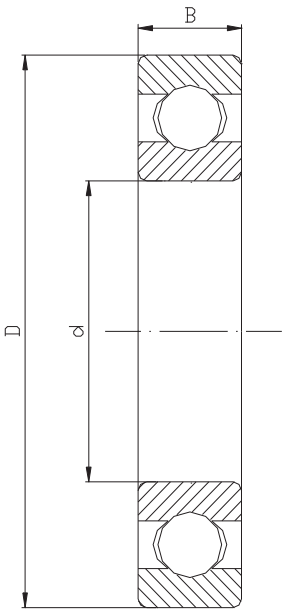
355



Frame	A	B	C	1	2	3	4	5	6	Metric Gland Sizes	PG Gland Sizes
80-100	118	118	61	M5x16	M5x20	M4	M5x16	M5x12		2xM25x1.5	2xPG16
112-132	118	118	77	M5x16	M5x25	M5	M5x20	M5x12		2xM32x1.5	2xPG21
160-180	183	185	85	M6x20	M6x20	M6	M6x25	M6x16		2xM40x1.5	2xPG29
200-225	249	210	102	M6x16	M8x25	M8	M8x25	M8x16		2xM50x1.5	2xPG36
250-280	275	238	110	M6x20	M10x30	M10	M8x25	M10x20		2xM63x1.5	2xPG42
315	460	317	190	M8x25	M10x55	M12	M12x30	M10x25	M8x30	2xM63x1.5	2xPG42
355	620	390	275	M8x30	M12x60	M16	M12x40	M10x20	M10x40	2xM63x1.5	2xPG42

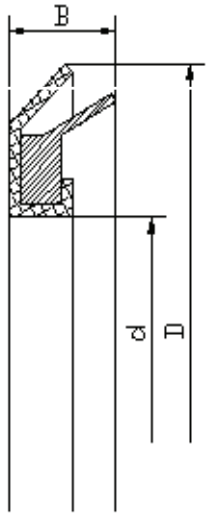
TERMINAL BOX INFORMATION

BEARING DATA



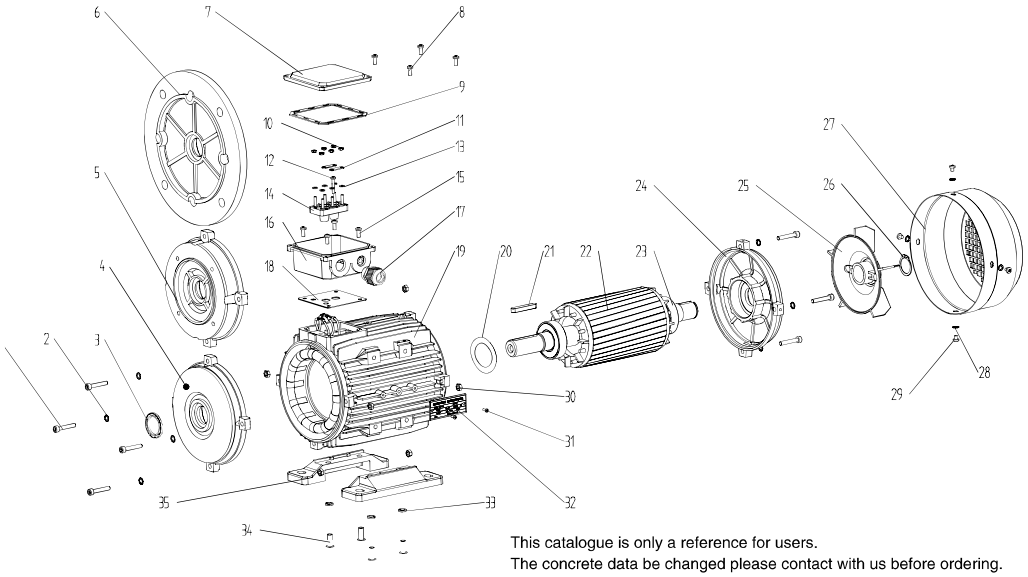
FRAME	DE	d	D	B	NDE	d	D	B
80	6204ZZCM	20	47	14	6204ZZCM	20	47	14
90	6205ZZCM	25	52	15	6205ZZCM	25	52	15
100	6206ZZCM	30	62	16	6206ZZCM	30	62	16
112	6206ZZCM	30	62	16	6206ZZCM	30	62	16
132	6208ZZCM	40	80	18	6208ZZCM	40	80	18
160	6309C3	45	100	25	6309C3	45	100	25
180	6311C3	55	120	29	6311C3	55	120	29
200	6312C3	60	130	31	6312C3	60	130	31
225	6313C3	65	140	33	6313C3	65	140	33
250	6314C3	70	150	35	6314C3	70	150	35
280-2	6314C3	70	150	35	6314C3	70	150	35
280-4,6,8	6317C3	85	180	41	6317C3	85	180	41
315-2	6317C3	85	180	41	6317C3	85	180	41
315-2 V1	6317C3	85	180	41	7317B	85	180	41
315-4,6,8	6319C3	95	200	45	6319C3	95	200	45
315-4,6,8 V1	6319C3	95	200	45	7319B	95	200	45
355-2	6319C3	95	200	45	6319C3	95	200	45
355-2 V1	6319C3	95	200	45	7319B	95	200	45
355-4,6,8	NU322C3	110	240	50	6322C3	110	240	50
355-4,6,8 V1	NU322C3	110	240	50	7322B	110	240	50

OIL SEAL DATA



FRAME	DE			NDE		
	d	D	B	d	D	B
80	19.7	35	6	19.7	35	6
90	24.7	40	6	24.7	40	6
100	29.7	47	6	29.7	47	6
112	29.7	47	6	29.7	47	6
132	39.7	57	6	39.7	57	6
160	44.7	62	6	44.7	62	6
180	54.7	75	7	54.7	75	7
200	59.7	80	7	59.7	80	7
225	64.7	85	7	64.7	85	7
250	69.7	90	7	69.7	90	7
280-2	69.7	90	7	69.7	90	7
280-4,6,8	84.7	105	7	84.7	105	7
315-2	84.7	105	7	84.7	105	7
315-4,6,8	94.7	115	7	94.7	115	7
355-2	94.7	115	7	94.7	115	7
355-4,6,8	109.7	130	8	109.7	130	8

MOTOR SPARE PART LIST "EXPLODED DRAWING"



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

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

MOUNTINGS AND POSITIONS

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

	Standards			Frame Sizes
	CEI 2-14	IEC 60034-7		56-200
		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 request
	B6	IM B6	IM 1051	Upon request
	B7	IM B7	IM 1061	Upon request

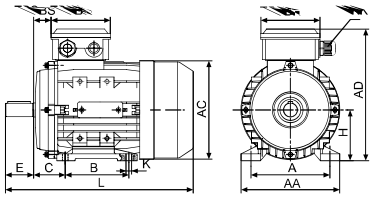
	Standards			Frame Sizes
	CEI 2-14	IEC 60034-7		56-200
		Code I	Code II	
	V1	IM V1	IM 3011	Standard
	V3	IM V3	IM 3031	Upon request
	V5	IM V5	IM 1011	Upon request
	V6	IM V6	IM 1031	Upon request
	V1/V5	IM V15	IM 2011	Upon request

Aluminum Housing Electric Motors Bearings & Oil Seals

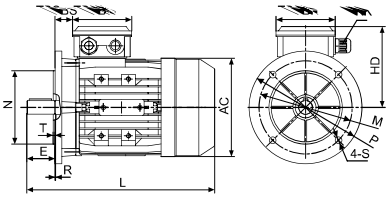
Frame	Bearings		Oil Seals	
	Drive End	Non-drive End	Drive End	Non-drive End
56	6201	6201	12×22×5	12×22×5
63	6201	6201	12×24×5	12×24×5
71	6202	6202	15×25×7	15×25×7
80	6204	6204	20×34×7	20×34×7
90S	6205	6205(6204)※※	25×37×7	25×37×7(20×34×7)※※
90L	6205	6205(6204)※※	25×37×7	25×37×7(20×34×7)※※
100L	6206	6206	30×44×7	30×44×7
112M	6306	6206(6306)	30×44×7	30×44×7
132S	6308	6208(6308)	40×58×7	40×58×7
132M/L	6308	6208(6308)	40×58×7	40×58×7
160M	6309	6309	45×65×8	45×65×8
160L	6309	6309	45×65×8	45×65×8
180M	6311	6211	55×72×8	55×72×8
180L	6311	6211	55×72×8	55×72×8
200L	6312	6212	60×80×8	60×80×8

※ Other standards are also available on request,the figures in brackets()are for the MC/ML single phase motors

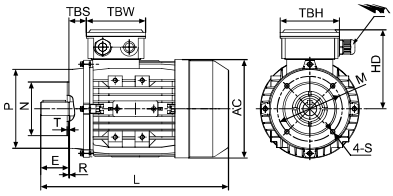
MS/MSD/MSBCCL SERIES DIMENSIONAL DRAWINGS



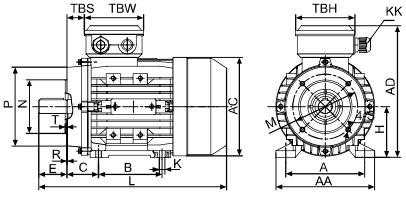
IM B3



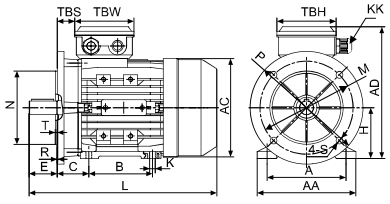
IM B5



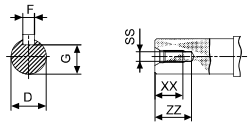
IM B14



IM B34



IM B35



Frame	Foot Mounting					Shaft							General								
	H	A	B	C	K	D	E	F	G	SS	XX	ZZ	AA	AD	HD	AC	L	LCCL☆	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	232	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	258	1-M16X1.5	14	94	94
71☆☆	71	112	90	45	7X10	Ø14	30	5	11	M5	12	17	132	186	115	Ø147	241(255)	282(296)	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	339	1-M20X1.5	27	105	105
90S	90	140	100	56	10X13	Ø24	50	8	20	M8	19	25	175	229	139	Ø183	312	361	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	386/416	1-M20X1.5	30	105	105
100☆☆	100	160	140	63	12X15	Ø28	60	8	24	M10	22	30	198	252	152	Ø205	369(387)	425(443)	2-M20X1.5	26	105	105
112	112	190	140	70	12X15	Ø28	60	8	24	M10	22	30	220	279	167	Ø229	395	463	2-M25X1.5	32	112	112
132S	132	216	140	89	12X15	Ø38	80	10	33	M12	28	37	252	318	186	Ø265	437	497	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	535/561	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	697	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	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																		

☆ This data is provided for MSBCCL series Brake motors both with and without hand release lever.

☆☆ This frame size has two housing sizes, the rated output is for normal "L" size,and increased output is for thd bigger "L" size (refer to the figures in the bracket "( )")

MS 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.



MS SERIES IE1 EFFICIENCY MOTORS TECHNICAL DATA (at 50Hz)

Model	Power (KW)	Current (A)			Current (A)			Current (A)			Speed (r/min)	Eff. (%)	Power Factor (CosΦ)	T_{st}/T_n (Times)	T_{max}/T_n (Times)	T_{min}/T_n (Times)	I_{st}/I_n (Times)	Noise dB(A)	W.T (Kg)
		220V	380V	660V	230V	400V	690V	240V	415V	720V									
MS561-2	0.09	0.66	0.38	0.22	0.62	0.36	0.21	0.60	0.35	0.20	2710	53	0.72	2.2	2.3	2	4	58	2.60
MS562-2	0.12	0.73	0.42	0.24	0.69	0.40	0.23	0.67	0.39	0.22	2700	61	0.72	2.2	2.3	2	4	58	3.00
MS563-2	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	4.00
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	4.00
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	4.20
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	4.70
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	5.20
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	6.00
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	7.00
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	8.70
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	10.00
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	11.20
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	1.5	6	72	12.00
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	14.50
MS90L2-2	3	11.1	6.42	3.69	10.6	6.10	3.52	10.2	5.88	3.39	2840	82.6	0.86	2.2	2.4	1.4	6	74	15.00
MS100L1-2	3	11.0	6.34	3.65	10.4	6.03	3.48	10.0	5.81	3.35	2840	82.6	0.87	2.2	2.3	1.4	7	76	20.00
MS100L2-2	4	14.3	8.30	4.78	13.7	7.88	4.55	13.1	7.60	4.38	2850	84.2	0.87	2.2	2.3	1.4	7.5	77	24.00
MS112M-2	4	14.3	8.30	4.78	13.7	7.88	4.55	13.1	7.60	4.38	2880	84.2	0.87	2.2	2.3	1.4	7.5	77	26.00
MS112L-2	5.5	19.1	11.1	6.38	18.2	10.5	6.08	17.5	10.1	5.85	2880	85.7	0.88	2.2	2.3	1.2	7.5	78	29.30
MS132S1-2	5.5	19.1	11.1	6.38	18.2	10.5	6.08	17.5	10.1	5.85	2900	85.7	0.88	2	2.2	1.2	7.5	80	38.40
MS132S2-2	7.5	25.7	14.9	8.57	24.5	14.1	8.16	23.6	13.6	7.86	2920	87	0.88	2	2.2	1.2	7.5	80	41.30
MS132M1-2	9.2	30.8	17.8	10.3	29.9	17.3	9.96	28.3	16.3	9.42	2930	88	0.89	2	2.2	1.2	7.5	81	48.20
MS132M2-2	11	36.3	21.0	12.1	34.6	20.0	11.5	33.3	19.2	11.1	2930	88.4	0.9	2	2.2	1.2	7.5	83	52.50
MS160M1-2	11	36.3	21.0	12.1	34.6	20.0	11.5	33.3	19.2	11.1	2940	88.4	0.9	2	2.2	1.2	7.5	86	76.00
MS160M2-2	15	48.4	28.0	16.1	46.1	26.6	15.4	44.4	25.7	14.8	2940	89.4	0.91	2	2.2	1.2	7.5	86	77.50
MS160L-2	18.5	59.3	34.3	19.8	56.5	32.6	18.8	54.3	31.4	18.1	2940	90	0.91	2	2.2	1.1	7.5	86	92.00
MS180M-2	22	71.3	41.3	23.8	68.2	39.2	22.6	65.3	37.8	21.8	2950	90	0.9	2	2.2	1.2	7.5	91	121.0
MS200L1-2	30	96.0	55.6	32.1	91.8	52.8	30.5	88.0	50.9	29.4	2950	91.2	0.9	2	2.2	1.2	7.5	94	144.0
MS200L2-2	37	117	67.9	39.2	112	64.5	37.2	108	62.2	35.9	2940	92	0.9	2	2.2	1.2	7.5	94	151.0
MS561-4	0.06	0.64	0.37	0.21	0.61	0.35	0.20	0.58	0.34	0.19	1360	50	0.56	2.3	2.4	2	4	50	2.90
MS562-4	0.09	0.82	0.47	0.27	0.78	0.45	0.26	0.75	0.43	0.25	1360	52	0.59	2.3	2.4	2	4	50	3.20

MS SERIES IE1 EFFICIENCY MOTORS TECHNICAL DATA (at 50Hz)

Model	Power (KW)	Current (A)			Current (A)			Current (A)			Speed (r/min)	Eff. (%)	Power Factor (CosΦ)	T_{st}/T_n (Times)	T_{max}/T_n (Times)	T_{min}/T_n (Times)	I_{st}/I_n (Times)	Noise dB(A)	W.T (Kg)
		220V	380V	660V	230V	400V	690V	240V	415V	720V									
MS631-4	0.12	1.00	0.58	0.33	0.95	0.55	0.32	0.92	0.53	0.31	1360	52	0.64	2.2	2.4	2	4	52	3.70
MS632-4	0.18	1.28	0.74	0.43	1.21	0.70	0.40	1.17	0.67	0.39	1310	57	0.65	2.2	2.4	2	4	52	4.20
MS633-4	0.25	1.66	0.96	0.55	1.58	0.91	0.53	1.52	0.88	0.51	1340	60	0.66	2.2	2.2	2	4	54	5.00
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	5.00
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	5.80
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	6.50
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	8.10
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	1.6	6	58	9.10
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	1.6	6	60	11.00
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	1.6	6	61	11.70
MS90L1-4	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	1.6	6	61	14.40
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	1.5	7	63	17.60
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	19.20
MS100L2-4	3	11.8	6.81	3.92	11.2	6.47	3.74	10.8	6.24	3.60	1420	82.6	0.81	2.2	2.3	1.5	7	64	22.50
MS100L3-4	4	15.2	8.80	5.07	14.2	8.36	4.83	13.9	8.06	4.65	1430	84.2	0.82	2.2	2.3	1.5	7	65	27.30
MS112M-4	4	15.0	8.70	5.01	14.3	8.26	4.77	13.8	7.96	4.59	1430	84.2	0.83	2.2	2.2	1.5	7	65	29.00
MS112L-4	5.5	20.3	11.7	6.76	19.3	11.2	6.44	18.6	10.8	6.20	1440	85.7	0.83	2.2	2.2	1.4	7	68	35.70
MS132S-4	5.5	20.1	11.6	6.68	19.1	11.0	6.37	18.4	10.6	6.13	1450	85.7	0.84	2.2	2.2	1.4	7	71	39.00
MS132M-4	7.5	26.6	15.4	8.87	25.4	14.6	8.45	24.4	14.1	8.13	1450	87	0.85	2.2	2.2	1.4	7	71	48.60
MS132L1-4	9.2	32.5	18.8	10.8	30.9	17.9	10.3	29.8	17.2	9.9	1460	87.5	0.85	2.2	2.2	1.4	7.5	74	56.50
MS132L2-4	11	38.0	22.0	12.7	36.2	20.9	12.1	34.8	20.1	11.6	1460	88.4	0.86	2.2	2.2	1.4	7.5	74	64.00
MS160M-4	11	37.5	21.7	12.5	35.8	20.6	11.9	34.4	19.9	11.5	1460	88.4	0.87	2.2	2.2	1.4	7	75	73.00
MS160L1-4	15	51.2	29.6	17.1	48.8	28.2	16.3	46.9	27.1	15.6	1460	88.4	0.87	2.2	2.2	1.4	7.5	75	88.50
MS160L2-4	18.5	63.1	36.5	21.0	60.1	34.7	20.0	57.9	33.5	19.3	1460	90.5	0.85	2.2	2.2	1.4	7.5	78	97.50
MS180M-4	18.5	62.4	36.1	20.8	59.7	34.3	19.8	57.2	33.1	19.1	1460	90.5	0.86	2.2	2.2	1.4	7.5	80	118.0
MS180L-4	22	73.8	42.7	24.7	70.6	40.6	23.4	67.7	39.1	22.6	1460	91	0.86	2.2	2.2	1.4	7.5	80	128.0
MS200L-4	30	99.5	57.6	33.2	95.1	54.7	31.6	91.2	52.7	30.4	1470	92	0.86	2.2	2.2	1.4	7.5	83	158.0
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	4.20
MS632-6	0.12	1.13	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	4.50
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	5.60
MS712-6	0.25	1.59	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	6.00
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	6.80
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	8.10
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	9.60
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	10.00
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	11.30
MS90L1-6	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	14.40
MS90L2-6	1.5	7.09	4.11	2.36	6.76	3.90	2.25	6.50	3.76	2.17	925	74	0.75	2.2	2.2	1.3	5.5	60	15.50
MS100L1-6	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	18.80
MS100L2-6	2.2	9.87	5.71	3.29	9.40	5.43	3.13	9.04	5.23	3.01	950	77	0.76	2.2	2.2	1.3	6	63	19.80
MS112M-6	2.2	9.7	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	25.00
MS112L-6	3	12.9	7.49	4.31	12.3	7.12	4.11	11.9	6.86	3.95	950	79	0.77	2.2	2.2	1.3	6	64	30.00
MS132S-6	3	13.1	7.59	4.37	12.5	7.21	4.16	12.0	6.95	4.01	960	79	0.76	2	2	1.3	6.5	64	35.00
MS132M1-6	4	17.2	9.93	5.72	16.4	9.44	5.45	15.7	9.10	5.24	960	80.5	0.76	2	2	1.3	6.5	68	47.60
MS132M2-6	5.5	22.6	13.1	7.53	21.5	12.4	7.17	20.7	12.0	6.9	960	83	0.77	2	2	1.3	6.5	68	50.70
MS132L-6	7.5	30.1	17.4	10.0	28.7	16.5	9.55	27.6	15.9	9.2	960	85	0.77	2	2	1.3	6.5	68	47.60
MS160M-6	7.5	28.6	16.6	9.5	27.3	15.7	9.08	26.2	15.2	8.7	960	86	0.8	2	2.2	1.3	6.5	68	70.0
MS160L-6	11	41.8	24.2	13.9	39.8	23.0	13.3	38.3	22.1	12.8	960	87.5	0.79	2	2.2	1.2	6.5	73	87.0
MS180L-6	15	54.6	31.6	18.2	52.2	30.0	17.3	50.1	28.9	16.7	970	89	0.81	2	2.2	1.3	6.5	79	122.0
MS200L1-6	18.5	66.6	38.6	22.2	63.7	36.6	21.1	61.0	35.3	20.3	975	90	0.81	2	2.2	1.3	6.5	82	136.0
MS200L2-6	22	77.3	44.7	25.8	73.9	42.5	24.5	70.8	41.0	23.6	975	90	0.83	2	2.2	1.3	6.5	82	152.0
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	5.60
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	6.00
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	9.40
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	10.10
MS90S-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	12.50
MS90L-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	15.30
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	17.20
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	19.50
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	25.50
MS132S-8	2.2	10.8	6.28	3.61	10.3	5.96	3.44	9.94	5.75	3.31	720	75	0.71	2	2	1.2	5.5	64	34.20
MS132M-8	3	14.0	8.11	4.67	13.3	7.70	4.45	12.8	7.43	4.28	720	77	0.73	2	2	1.2	5.5	64	40.00
MS160M1-8	4	18.0	10.4	5.99	17.1	9.89	5.71	16.5	9.53	5.49	730	80	0.73	1.9	2.1	1.2	6	68	59.00
MS160M2-8	5.5	23.4	13.5	7.79	22.3	12.9	7.42	21.4	12.4	7.14	720	83.5	0.74	2	2.2	1.2	6	68	69.00
MS160L-8	7.5	30.9	17.9	10.3	29.4	17.0	9.8	28.3	16.4	9.43	720	85	0.75	1.9	2.2	1.2	6	68	87.00
MS180L-8	11	45.2	26.2	15.1	43.6	25.1	14.5	41.5	24.0	13.8	715	87.4	0.73	1.9	2.2	1.2	6	78	125.0
MS200L-8	15	58.9	34.1	19.6	56.3	32.4	18.7	54.0	31.2	18.0	725	88.0	0.76	1.9	2.2	1.2	6	80	151.0

MSBCCL SERIES

ASYNCHRONOUS THREE-PHASE BRAKE MOTORS WITH SQUIRREL CAGE ROTOR DIRECT CURRENTBRAKE



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, such 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 safely rules.

TECHNICAL FEATURES

2 poles-3000rpm-50Hz

Brake motors have a ±6% torerance on the supply coltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power Factor (CosΦ)	Current (A)			T_{st}/T_n (Times)	T_{max}/T_n (Times)	T_{min}/T_n (Times)	I_{st}/I_n (Times)	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.

TECHNICAL FEATURES

4 poles-1500rpm-50Hz

Brake motors have a ±6% torerance on the supply coltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power Factor (CosΦ)	Current (A)			T_{st}/T_n (Times)	T_{max}/T_n (Times)	T_{min}/T_n (Times)	I_{st}/I_n (Times)	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 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	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.

TECHNICAL FEATURES

6 poles-1000rpm-50Hz

Brake motors have a ±6% torerance on the supply coltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power Factor (CosΦ)	Current (A)			T_{st}/T_n (Times)	T_{max}/T_n (Times)	T_{min}/T_n (Times)	I_{st}/I_n (Times)	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 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	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% torerance on the supply coltage

Model	Power (KW)	Speed (r/min)	Eff. (%)	Power Factor (CosΦ)	Current (A)			T_{st}/T_n (Times)	T_{max}/T_n (Times)	T_{min}/T_n (Times)	I_{st}/I_n (Times)	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 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)
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

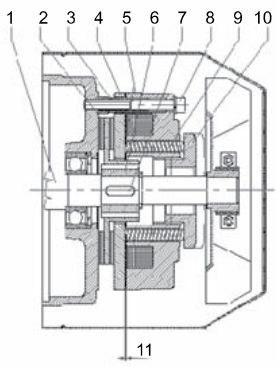
● Motor with increased braking torque on request

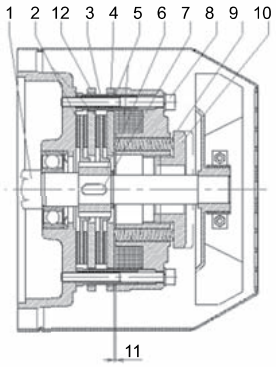
★ On request, delayed brake cut in time for lifting equipments. We suggest double disk brake D for lifting equipments.

MSBCCL SERIES BRAKE MOTORS

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

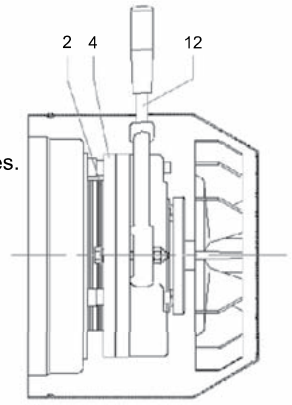
The air gap (11) is the distance between the electromagnet (5) and the movable anchor (9).

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.

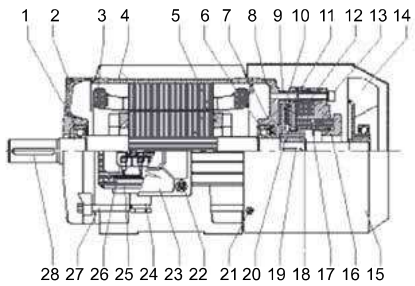


Hand Release With Lever

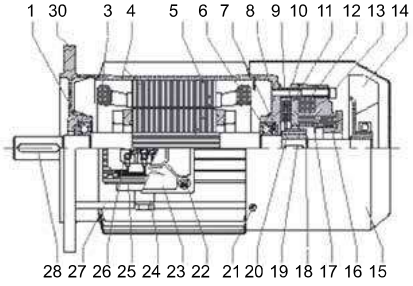
Upon request a hand release with lever can be supplied.

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.

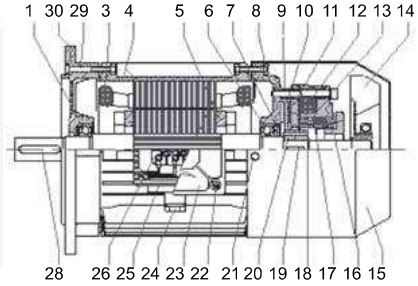
MSBCCL Brake Motors B3 63~160



MSBCCL Brake Motors B5 63~112



MSBCCL Brake Motors B5 132~160



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

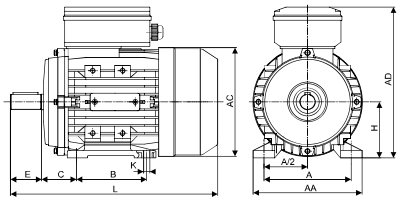
MY/MYT SERIES

SINGLE-PHASE CAPACITOR RUM ASYNCHRONOUS MOTORS

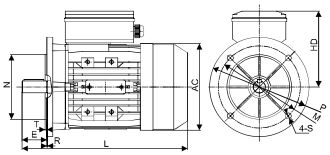
ALUMINUM HOUSING

MY/MYT 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(MY), 0.45~0.75(MYT).
These series motors are suitable for the occasion where there requirements of starting torque is low and long-term continuous woking, such as home electric appliances, pumps, fans, and recording meters,etc.

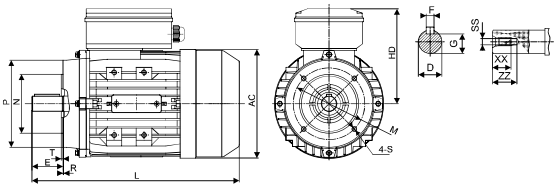




IM B3



IM B5



IM B14

OVERALL & INSTALLATION DIMENSIONS

Frame Size	Mounting Dimensions									IM B14						IM B5						Overall Dimensions					Shaft End Screw Dimensions		
	A	B	C	D	E	F	G	H	K	M	N	P	T	R	S	M	N	P	T	R	S	AA	AC	AD	HD	L	SS	XX	ZZ
56	90	71	36	φ9	20	3	7.2	56	5.8x8.8	φ65	φ50	φ80	2.5	0	M5	φ100	φ80	φ120	3.0	0	φ7	110	φ117	144	88	196	M3	9	12
63	100	80	40	φ11	23	4	8.5	63	7x10	φ75	φ60	φ90	2.5	0	M5	φ115	φ95	φ140	3.0	0	φ10	120	φ130	181	118	220	M4	10	14
71*	112	90	45	φ14	30	5	11	71	7x10	φ85	φ70	φ105	2.5	0	M6	φ130	φ110	φ160	3.5	0	φ10	132	φ147	196	125	241/255	M5	12	17
80	125	100	50	φ19	40	6	15.5	80	10x13	φ100	φ80	φ120	3.0	0	M6	φ165	φ130	φ200	3.5	0	φ12	160	φ163	226	146	290	M6	16	21
90S	140	100	56	φ24	50	8	20	90	10x13	φ115	φ95	φ140	3.0	0	M8	φ165	φ130	φ200	3.5	0	φ12	175	φ183	243	153	312	M8	19	25
90L	140	125	56	φ24	50	8	20	90	10x13	φ115	φ95	φ140	3.0	0	M8	φ165	φ130	φ200	3.5	0	φ12	175	φ183	243	153	337/367	M8	19	25
100L**	160	140	63	φ28	60	8	24	100	12x15	φ130	φ110	φ160	3.5	0	M8	φ215	φ180	φ250	4.0	0	φ15	198	φ205	265	165	369/387	M10	22	30

TECHNICAL DATA (at 230V/50Hz)

Model	Power (KW)	Current (A)	Speed (r/min)	Eff. (%)	Power Factor (CosΦ)	T_{st}/T_n (Times)	T_{max}/T_n (Times)	Starting Current (A)	Run Capacitor (μF/V)	Noise dB(A)	W.T (Kg)
MY561-2	0.09	0.80	2740	54	0.91	0.69	1.8	2.5	4μF/450V	67	2.8
MY562-2	0.12	0.90	2760	60	0.93	0.69	1.8	3.5	6μF/450V	67	3.05
MY631-2	0.18	1.40	2760	62	0.93	0.55	1.8	4.5	8μF/450V	70	4.1
MY632-2	0.25	1.70	2780	66	0.93	0.55	1.8	6	10μF/450V	70	4.5
MY633-2	0.37	2.50	2780	67	0.93	0.45	1.65	8	12μF/450V	75	5.25
MY711-2	0.37	2.60	2780	67	0.93	0.5	1.65	10	12μF/450V	75	5.6
MY712-2	0.55	3.50	2790	73	0.95	0.5	1.8	15	16μF/450V	75	6.95
MY713-2	0.75	4.50	2810	74	0.97	0.48	1.8	20	25μF/450V	75	8.15
MY801-2	0.75	4.40	2810	74	0.98	0.4	1.8	19	25μF/450V	75	8.5
MY802-2	1.1	6.30	2810	75	0.98	0.4	1.8	30	35μF/450V	78	11
MY803-2	1.5	8.50	2810	77	0.98	0.33	1.8	40	40μF/450V	80	12.75
MY90S-2	1.5	8.40	2820	77	0.98	0.33	1.72	35	45μF/450V	80	13.7
MY90L-2	2.2	12.10	2850	78	0.98	0.29	1.8	61	60μF/450V	80	16.7
MY100L-2	3	16.50	2860	79	0.99	0.28	1.8	73	80μF/450V	83	23.1
MY561-4	0.06	0.60	1370	48	0.92	0.73	1.75	2	4μF/450V	63	3.3
MY562-4	0.09	0.80	1370	50	0.92	0.6	1.75	3	6μF/450V	63	3.6
MY631-4	0.12	1.30	1370	52	0.92	0.6	1.75	3	8μF/450V	65	4.45
MY632-4	0.18	1.50	1370	54	0.94	0.6	1.6	4	12μF/450V	65	5.05
MY633-4	0.25	2.00	1370	58	0.95	0.6	1.6	5	14μF/450V	65	5.4
MY711-4	0.25	1.80	1390	61	0.96	0.5	1.6	5	14μF/450V	65	5.8
MY712-4	0.37	2.70	1390	62	0.96	0.5	1.6	8	16μF/450V	68	6.9
MY713-4	0.55	3.70	1390	64	0.97	0.48	1.7	12	20μF/450V	70	8.25
MY801-4	0.55	3.50	1410	64	0.98	0.37	1.8	13	25μF/450V	70	9.55
MY802-4	0.75	4.70	1410	68	0.98	0.37	1.65	17	30μF/450V	70	10.45
MY90S-4	1.1	6.30	1410	71	0.98	0.35	1.75	24	40μF/450V	73	13.1
MY90L-4	1.5	8.50	1420	73	0.96	0.33	1.8	36	45μF/450V	75	16.45
MY100L1-4	2.2	12.90	1440	77	0.96	0.32	1.8	57	80μF/450V	78	22.8
MY100L2-4	3	16.20	1440	78	0.99	0.3	1.7	75	100μF/450V	78	29.2
MY711-6	0.18	1.49	920	57	0.92	0.45	1.5	4	16μF/450V	68	6.3
MY712-6	0.25	2.00	920	59	0.92	0.45	1.5	5	20μF/450V	68	7.6
MY801-6	0.37	2.78	920	63	0.92	0.35	1.6	8	20μF/450V	68	9
MY802-6	0.55	3.90	920	66	0.93	0.35	1.6	14	25μF/450V	70	11.6
MY90S-6	0.75	5.05	920	68	0.95	0.35	1.6	16	35μF/450V	70	13.5
MY90L-6	1.1	7.30	920	69	0.95	0.35	1.6	25	50μF/450V	70	16.2

TECHNICAL DATA (at 230V/50Hz)

Model	Power (KW)	Current (A)	Speed (r/min)	Eff. (%)	Power Factor (CosΦ)	T_{st}/T_n (Times)	T_{max}/T_n (Times)	Starting Current (A)	Run Capacitor (μF/V)	Noise dB(A)	W.T (Kg)
MYT631-2	0.18	1.40	2750	62	0.93	0.7	1.8	4.5	10μF/450V	70	4
MYT632-2	0.25	1.80	2750	65	0.93	0.65	1.75	6	12μF/450V	70	4.7
MYT711-2	0.37	2.60	2640	66	0.94	0.72	1.65	8	14μF/450V	75	6.1
MYT712-2	0.55	3.60	2760	71	0.95	0.7	1.8	14	20μF/450V	75	7.7
MYT801-2	0.75	4.50	2735	73	0.98	0.68	1.75	16	25μF/450V	75	10.25
MYT802-2	1.1	6.60	2720	74	0.98	0.65	1.8	23	35μF/450V	78	11.6
MYT90S-2	1.5	8.50	2755	76	0.98	0.65	1.8	31	50μF/450V	80	14.55
MYT90L-2	2.2	12.30	2765	77	0.98	0.65	1.8	51	70μF/450V	80	17.8
MYT100L-2	3	16.90	2765	77	0.99	0.55	1.75	64	90μF/450V	83	23.7
MYT711-4	0.25	2.00	1320	56	0.94	0.75	1.6	5	16μF/450V	65	6.2
MYT712-4	0.37	2.90	1325	58	0.94	0.7	1.55	7	20μF/450V	68	7.3
MYT801-4	0.55	10.60	1340	64	0.94	0.7	1.7	11	25μF/450V	73	10.05
MYT802-4	0.75	5.30	1340	64	0.94	0.7	1.75	15	35μF/450V	73	11.4
MYT90S-4	1.1	7.00	1355	72	0.95	0.68	1.8	22	40μF/450V	75	14.4
MYT90L-4	1.5	9.30	1360	74	0.95	0.68	1.8	32	50μF/450V	78	17.5
MYT100L1-4	2.2	12.60	1390	78	0.97	0.48	1.75	49	70μF/450V	80	24.5
MYT100L2-4	3	16.50	1380	79	0.99	0.45	1.6	61	90μF/450V	80	32
MYT631-6	0.09	0.92	900	46	0.92	0.8	1.45	2	8μF/450V	63	5.1
MYT632-6	0.12	1.05	900	54	0.92	0.75	1.45	3	11μF/450V	63	6
MYT711-6	0.18	1.55	900	55	0.92	0.7	1.5	4	16μF/450V	68	6.3
MYT712-6	0.25	2.07	900	57	0.92	0.68	1.5	5	20μF/450V	68	7.6
MYT801-6	0.37	2.82	900	62	0.92	0.68	1.6	8	25μF/450V	68	9
MYT802-6	0.55	4.08	900	63	0.93	0.68	1.6	14	30μF/450V	70	11.6
MYT90S-6	0.75	5.20	900	66	0.95	0.65	1.6	16	40μF/450V	70	13.5
MYT90L-6	1.1	7.51	900	67	0.95	0.62	1.6	25	50μF/450V	70	16.2

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

