The most widely used motors from the world leaders

M2BA M 2000 range

TEFC, S1 Duty
415 ± 10% V, 50 ± 5%Hz.
Combined Variation of ±10%
IP 55, IC 0141

Insulation Class F
Ambient 50°C (Temp. rise class B 70°C)

2 Pole

Output kW	Output HP	Frame Size	Rated Speed (rpm)	I_n (A)	Efficiency % FL	Efficiency % 3/4FL	Efficiency % 1/2FL	Power factor FL	Power factor 3/4FL	Power factor 1/2FL	I_s/I_n	Torque T_s/T_n	Torque T_{max}/T_n	T_n Nm	T_{hot} (Sec)	T_{cold} (Sec)	Weight Kg	Gd^2 Kgm^2
110	150	M2BA315SMA2	2980	185	95.0	95.0	94.0	0.87	0.83	0.75	7.0	1.9	2.7	352	40	83	875	5.0
125	167	M2BA315SMB2K	2980	206	95.3	95.3	94.3	0.88	0.85	0.78	7.0	2.0	2.8	401	40	83	915	5.8
132	180	M2BA315SMB2	2980	217	95.3	95.3	94.3	0.89	0.86	0.80	7.0	2.0	2.7	423	40	83	915	5.8
150	200	M2BA315MLA2K	2980	243	95.6	95.6	94.6	0.90	0.87	0.81	7.0	2.3	3.0	481	50	98	1150	7.8
160	220	M2BA315MLA2	2980	259	95.6	95.6	94.6	0.90	0.87	0.81	7.0	2.2	3.0	513	50	98	1150	7.8
180	240	M2BA315MLC2K	2980	290	95.8	95.8	94.8	0.90	0.87	0.81	7.5	2.7	3.2	577	50	102	1275	10.2
200	270	M2BA315MLC2	2979	322	96.0	96.0	95.0	0.90	0.87	0.81	7.0	2.6	3.0	641	50	102	1275	10.2
250	340	M2BA355SMA2	2978	403	96.0	96.0	95.0	0.90	0.87	0.81	6.0	1.5	3.0	802	60	115	1645	17.0
315	425	M2BA355MLA2	2978	500	96.1	96.1	95.1	0.91	0.88	0.82	6.0	1.5	3.0	1010	70	138	1895	23.0
355	475	M2BA355MLC2	2982	570	96.2	96.2	95.2	0.90	0.87	0.81	7.5	1.7	3.2	1138	70	138	2000	26.1

4 Pole

Output kW	Output HP	Frame Size	Rated Speed (rpm)	I_n (A)	Efficiency % FL	Efficiency % 3/4FL	Efficiency % 1/2FL	Power factor FL	Power factor 3/4FL	Power factor 1/2FL	I_s/I_n	Torque T_s/T_n	Torque T_{max}/T_n	T_n Nm	T_{hot} (Sec)	T_{cold} (Sec)	Weight Kg	Gd^2 Kgm^2
110	150	M2BA315SMA4	1485	187	95.2	95.2	94.2	0.86	0.82	0.74	6.0	2.0	2.7	707	34	70	905	9.5
125	167	M2BA315SMB4K	1485	210	95.4	95.4	94.4	0.87	0.83	0.75	6.0	1.8	2.6	804	31	63	960	10.6
132	180	M2BA315SMB4	1485	221	95.5	95.5	94.5	0.87	0.83	0.75	6.0	2.0	2.7	849	31	63	960	10.6
150	200	M2BA315MLA4K	1485	250	95.8	95.8	94.8	0.87	0.83	0.75	6.0	2.1	2.8	964	34	70	1110	13.5
160	220	M2BA315MLA4	1485	267	95.8	95.8	94.8	0.87	0.83	0.75	6.0	2.0	2.7	1029	34	70	1110	13.5
180	240	M2BA315MLB4K	1485	300	95.8	95.8	94.8	0.87	0.83	0.75	6.0	2.0	2.7	1157	32	65	1150	15.6
187	250	M2BA315MLB4	1485	312	95.8	95.8	94.8	0.87	0.83	0.75	6.0	2.0	2.7	1202	32	65	1150	15.6
200	270	M2BA315MLC4	1485	329	96.0	96.0	95.0	0.88	0.85	0.79	6.0	2.2	2.8	1286	36	75	1260	17.0
250	335	M2BA355SMA4	1486	416	96.1	96.1	95.1	0.87	0.83	0.75	6.0	2.0	2.6	1606	60	122	1620	26.5
315	425	M2BA355MLA4	1486	523	96.3	96.3	95.3	0.87	0.82	0.73	7.0	2.5	3.0	2024	58	120	1870	33.0
355	475	M2BA355MLB4	1486	588	96.5	96.5	95.5	0.87	0.82	0.73	6.5	1.5	2.7	2281	58	120	2110	40.0

6 Pole

Output kW	Output HP	Frame Size	Rated Speed (rpm)	I_n (A)	Efficiency % FL	Efficiency % 3/4FL	Efficiency % 1/2FL	Power factor FL	Power factor 3/4FL	Power factor 1/2FL	I_s/I_n	Torque T_s/T_n	Torque T_{max}/T_n	T_n Nm	T_{hot} (Sec)	T_{cold} (Sec)	Weight Kg	Gd^2 Kgm^2
75	100	M2BA315SMA6	986	132	94.2	94.2	92.2	0.85	0.81	0.72	6.0	2.0	2.5	726	27	55	860	14.2
90	120	M2BA315SMB6	988	158	94.5	94.5	92.5	0.84	0.79	0.70	6.5	2.3	2.7	870	21	43	930	16.7
110	150	M2BA315SMC6	988	193	94.6	94.6	92.6	0.84	0.79	0.70	6.5	2.3	2.7	1063	26	54	1005	20.0
125	167	M2BA315SMC6K	988	219	94.7	94.7	92.7	0.84	0.79	0.70	6.5	2.4	2.7	1208	26	54	1005	20.0
132	180	M2BA315MLC6	988	228	94.9	94.9	92.9	0.85	0.80	0.71	6.5	2.3	2.7	1276	24	50	1240	28.2
160	220	M2BA355SMA6	989	275	95.2	95.2	93.2	0.85	0.80	0.71	6.5	2.0	2.7	1545	58	120	1595	42.0
180	240	M2BA355SMB6K	990	313	95.3	95.3	93.3	0.84	0.79	0.70	6.5	2.0	3.0	1736	60	115	1800	50.5
200	270	M2BA355SMB6	990	347	95.5	95.5	93.5	0.84	0.79	0.70	6.5	2.5	2.8	1929	60	115	1800	50.5
250	335	M2BA355MLA6	988	428	95.6	95.6	93.6	0.85	0.80	0.71	6.5	2.3	2.7	2416	52	107	1940	55.0
315	425	M2BA355MLB6	990	546	95.6	95.6	93.6	0.84	0.80	0.71	6.5	2.5	2.8	3039	52	107	2040	60.24

8 Pole

Output kW	Output HP	Frame Size	Rated Speed (rpm)	I_n (A)	Efficiency % FL	Efficiency % 3/4FL	Efficiency % 1/2FL	Power factor FL	Power factor 3/4FL	Power factor 1/2FL	I_s/I_n	Torque T_s/T_n	Torque T_{max}/T_n	T_n Nm	T_{hot} (Sec)	T_{cold} (Sec)	Weight Kg	Gd^2 Kgm^2
55	75	M2BA315SMA8	740	101	93.5	93.5	91.5	0.81	0.73	0.61	6.0	1.7	2.5	710	29	59	830	13.0
75	100	M2BA315SMB8	740	135	94.0	94.0	92.0	0.82	0.75	0.65	6.0	1.8	2.5	968	30	61	975	18.8
90	120	M2BA315SMC8	740	162	94.5	94.5	92.5	0.82	0.75	0.65	6.0	1.9	2.5	1161	30	61	1055	22.0
110	150	M2BA315MLB8	740	197	94.6	94.6	92.6	0.82	0.75	0.65	6.0	1.8	2.5	1420	24	49	1125	23.6
132	180	M2BA355SMA8	740	239	94.7	94.7	92.7	0.81	0.73	0.61	6.0	1.5	2.3	1704	32	66	1590	42.0
150	200	M2BA355MLA8K	740	274	95.0	95.0	93.0	0.80	0.72	0.61	6.0	1.8	2.7	1936	40	82	1945	55.0
160	220	M2BA355MLA8	740	293	95.0	95.0	93.0	0.80	0.72	0.60	6.0	1.8	2.5	2064	40	82	1945	55.0
180	240	M2BA355MLB8I	740	358	95.2	95.2	93.2	0.74	0.66	0.54	6.0	1.9	3.0	2323	70	150	2090	64.2
200	270	M2BA355MLB8	740	385	95.3	95.3	93.3	0.76	0.68	0.54	6.0	1.7	2.6	2581	70	150	2090	64.2
225	300	M2BA355MLB8H	740	426	95.3	95.3	93.3	0.77	0.69	0.55	6.0	1.8	2.7	2904	70	150	2100	64.2
250#	335	M2BA355MLB8K	740	460	95.5	95.5	93.5	0.79	0.71	0.57	6.0	1.6	2.6	3226	70	150	2100	64.2

*** On request, motors of higher kw can be offered. # Class F rise**

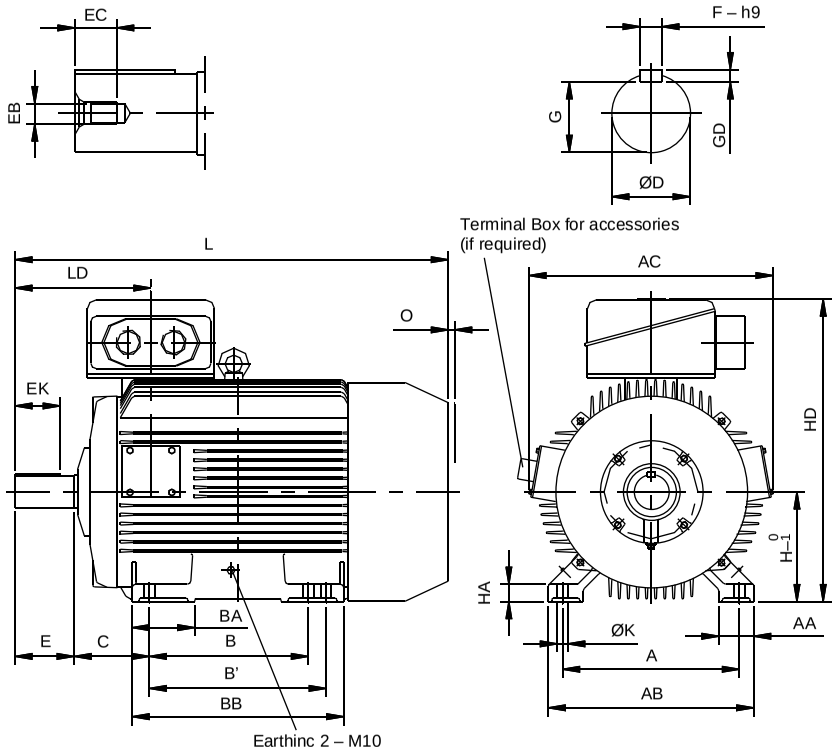
I_n = Nominal or rated current
I_s = Starting current
T_n = Nominal or rated torque in Nm
T_s = Starting torque
T_{max} = Maximum torque
T_{hot} = Hot withstand time
T_{cold} = Cold withstand time

Note :
1. All performance figures are subject to IS tolerances.
2. Max. load GD^2 has been calculated assuming load torque is proportional to square of speed.

Note : Owing to continuous upgradation of our design, performance parameters and dimensions are subject to change without prior notice.

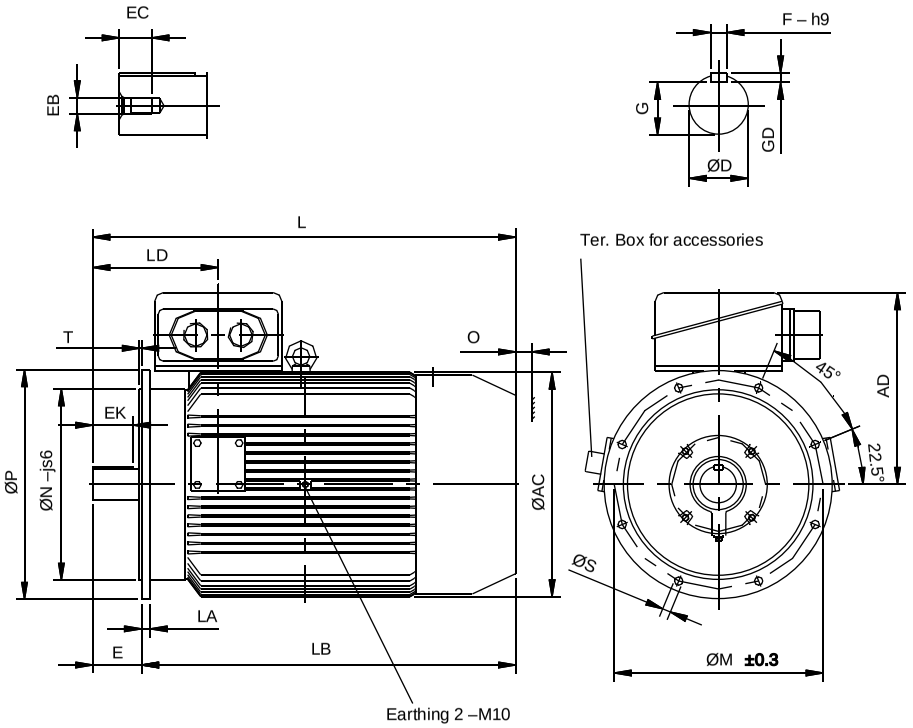
M2BA315 (Foot Mounted)

Mounting Designation B3, IM1001



M2BA315 (Flange Mounted)

Mounting Designation B5, IM3001



Type		A	AA	AB	AC	B	B'	BA	BB	C	D TOL.		E	EB
M2BA315SM	2 Pole	508	120	620	645	406	457	180	589	216	65	m6	140	M20
	4-8 Pole										80	m6	170	
M2BA315ML	2 Pole	508	120	620	645	457	508	180	608	216	65	m6	140	
	4-8 Pole										90	m6	170	M24

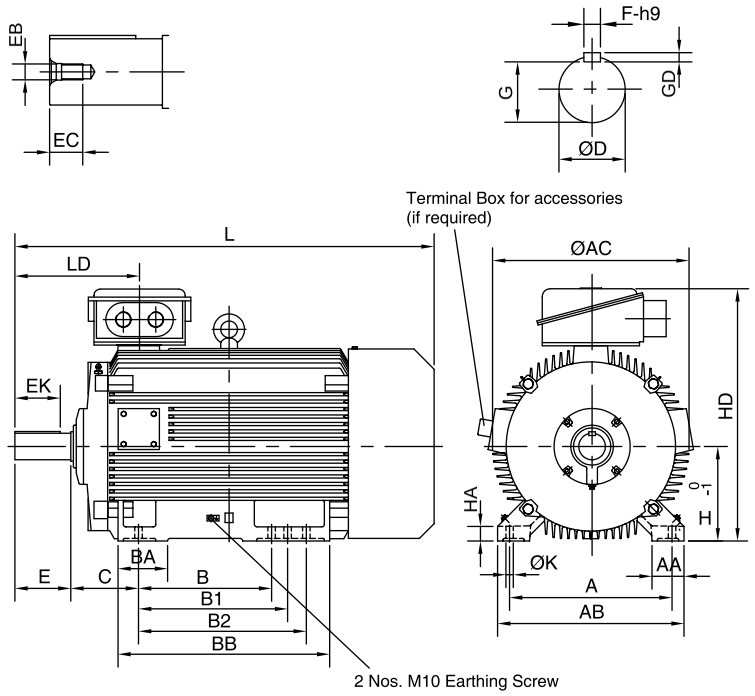
Type		EC	EK	F	G	GD	H	HA	HD	K	L	LD	O	Bearings	
														D	N
M2BA315SM	2 Pole	40	115	18	58	11	315	50	872	28	1169	360.5	115	6316C3	6316C3
	4-8 Pole		130	22	71	14					1199	390.5		6319C3	6316C3
M2BA315ML	2 Pole	40	115	18	58	11	315	50	872	28	1215	360.5	115	6316C3	6316C3
	4-8 Pole	48	130	25	81	14					1245	390.5		6319C3	6316C3

Type		AC	AD	D TOL.		E	EB	EC	EK	F	G	GD	L	LA	LB
M2BAF315SM	2 Pole	645	557	65	m6	140	M20	40	115	18	58	11	1169	22	1029
	4-8 Pole			80	m6	170			130	22	71	14	1199		
M2BAF315ML	2 Pole	645	557	65	m6	140	M20	40	115	18	58	11	1215	22	1075
	4-8 Pole			90	m6	170	M24	48	130	25	81	14	1245		

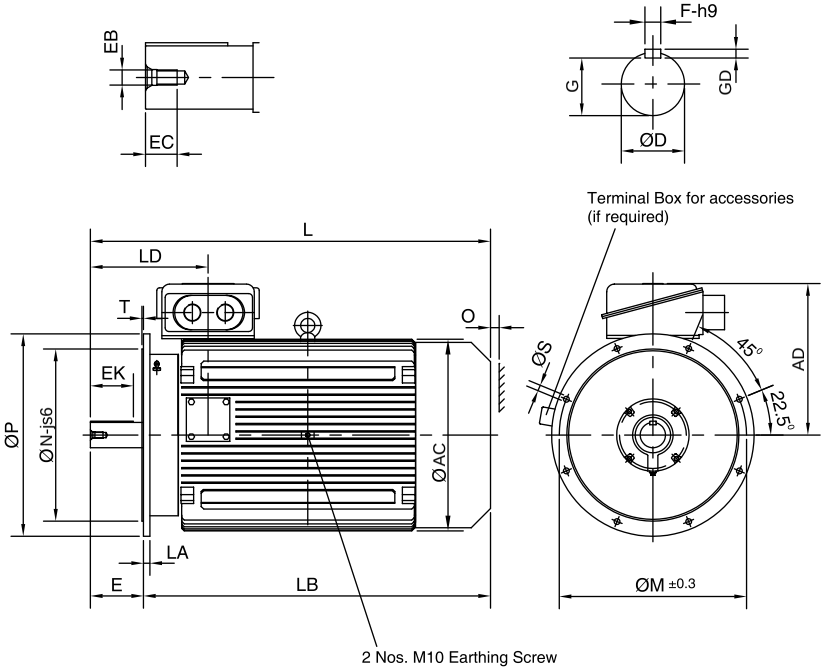
Type		LD	M	N	P	S	T	O	Bearings	
									D	N
M2BAF315SM	2 Pole	360.5	600	550	660	24	6	115	6316C3	6316C3
	4-8 Pole	390.5							6319C3	6316C3
M2BAF315ML	2 Pole	360.5	600	550	660	24	6	115	6316C3	6316C3
	4-8 Pole	390.5							6319C3	6316C3

Note : All Dimensions are in mm

M2BA355 (Foot Mounted)



M2BA355 (Flange Mounted)



Type	A	AA	AB	AC	B	B1	B2	BA	BB	C	D	Tol.	E	EB
M2BA355MLC2	610	120	710	740	-	560	630	160	795	254	75	m6	140	M20
M2BA355SML 2P			700		500			186						
M2BA355SML 4-8P											100	m6	210	M24
M2BA355MLB4			710		-			160						

Type	AC	AD	D	Tol.	E	EB	EC	EK	F	G	GD	L
M2BA355MLC2	740	610	75	m6	140	M20	40	115	20	67.5	12	1575
M2BAF355SML 2P												1505
M2BAF355SML 4-8P			100	m6	210	M24	48	170	28	90	16	1575
M2BA355MLB4												1650

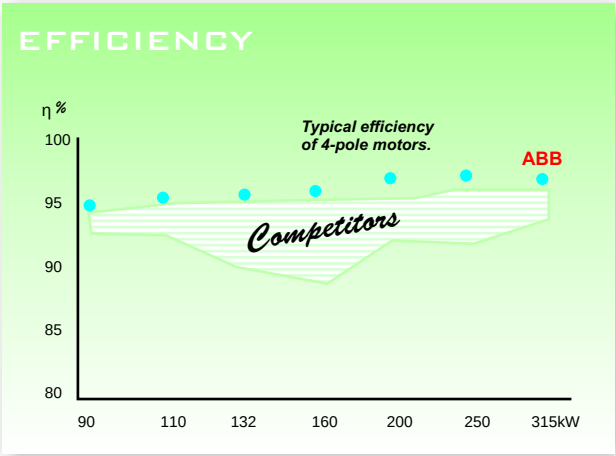
Type	EC	EK	F	G	GD	H	HA	HD	K	L	LD	O	Bearings	
													D	N
M2BA355MLC2	40	115	20	67.5	12	355	33	985	28	1575	395	130	6319 C3	6319 C3
M2BA355SML 2P							55	965		1505				
M2BA355SML 4-8P	48	170	28	90	16					1575	465		6322 C3	6319 C3
M2BA355MLB4							33			1650				

Type	LA	LB	LD	M	N	P	S	T	O	Bearings	
										D	N
M2BA355MLC2	25	1365	395	740	680	800	24	6	130	6319 C3	6319 C3
M2BAF355SML 2P 4-8P			465							6322 C3	6319 C3
M2BA355MLB4											

Note : All Dimensions are in mm

The 'M2000' Series

M2000 Motors have been engineered for the twin objective of high power to weight ratio and efficiency at a designed ambient of 50°C. The performance of 'M2BA' is well ahead of relevant IEC & IS standards resulting in lower energy consumption, reduced operational costs and ultimately faster returns on investment. 'M2BA' Motors have a wide range of applications including windmill.



Heavy duty design

The electrical and mechanical design of 'M2BA' Motors offer high performance values in all the mounting arrangements, protection class and in all applications. 'M2BA' Motors have withstood the test of time and are established for reliability in stringent operating conditions like thermal power plants world wide.

Installation Flexibility

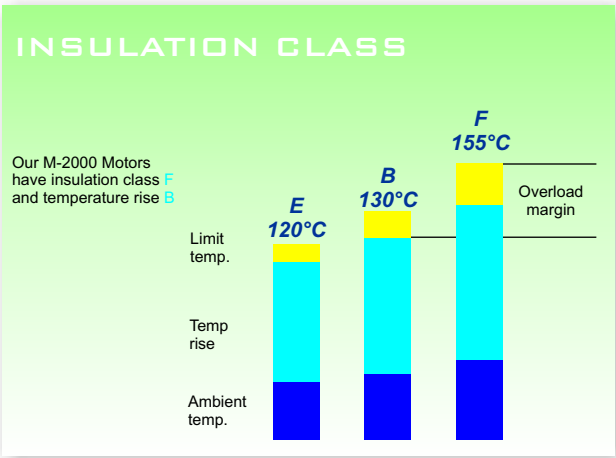
A dual mounting hole is provided for installation flexibility i.e. same housing length can be used for varied mounting applications.

IP55

'M2BA' Motors are protected against the ingress of water and dust. A high degree of protection IP 55 is a standard feature of 'M2BA' Motors. Higher degrees of protection (e.g. IP 56) can also be made available on request.

Insulation scheme

'M2BA' Motors employ a unique polyamide based Class F insulation scheme rated for 155°C with temperature rise limited to Class B. The advanced insulation the 'M2000' series gives high electrical and mechanical stability. This provides a generous thermal overload margin bringing greater reliability and improves life of the motor. This can be used for such conditions as increased load, high ambient temperature and variations in voltage and frequency.



User friendly design

'M2BA' Motors have a user friendly design and less number of components leading to faster and trouble-free dismantling and assembly.

Enclosure

'M2BA' Motors use rigid cast iron / fabricated housings and are provided with integrated deeper longitudinal ribs designed to give maximum cooling surface area. Integral feet ensure that the frame is rigid and vibration resistants. These frames are treated for high corrosion resistance. Effective and robust corrosion protection means that the motor can be used in all environments.

Winding

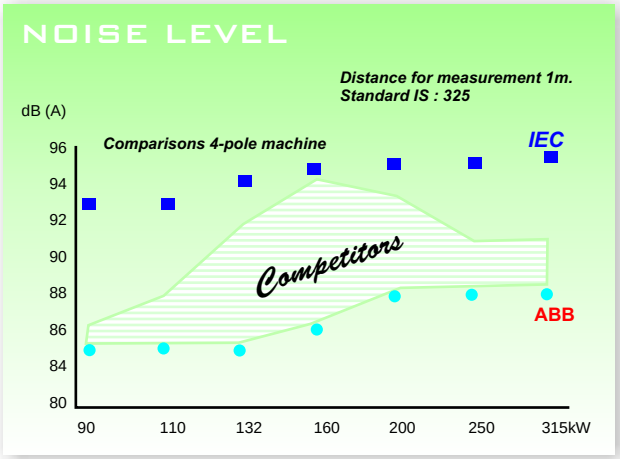
Stator winding uses high quality enamelled wires conforming to IS:13730. The windings are reinforced in the slots with slot wedges and on the overhang with fibre glass tape. To ensure long life, the stator is impregnated with a solventless resin. Gaps between individual conductors are effectively filled with this material resulting in good thermal conductivity and superior mechanical strength. All windings are tropicalised with epoxy gelcoat and made Insensitive to moisture and micro-organisms.

Ventilation

Ventilation circuit of 'M2BA' has been optimally designed based on aerodynamic and acoustic considerations. Special design of fan blades and segmental groupings of fins in horizontal and vertical planes offer the most efficient air flow and minimum air borne noise while incurring least windage losses.

Low noise levels

'M2BA' Motors are the result of special efforts made to minimize electromagnetic, airborne and structural noise. These motors are designed for quieter operation even under abnormal load conditions.



Terminal box

The spacious terminal box makes the motor quick and easy to connect. The terminal box can be rotated so that cables can be connected from the right or the left. Further, positioning of the terminal box assembly on the side or the top can also be made available on request. Flexible orientation of the terminal box with liberal sizing for easy access are design inbuilt.

Bearings

'M2BA' Motors use appropriately selected ball bearings with high temperature grease to give increased life and reliability. For high radial loads and belt driven applications roller bearings are provided. 'M2BA' Motors are provided with regreasing facility.

Voltage ranges for extra versatility

The motors are matched to the standard voltages applicable in India i.e. 415V. However, motors for voltages ranging from 220V to 660V can also be provided on request.

Frequency converter drive

'M2BA' Motors are backed by the world class technology to incorporate inherent features in the design to take care of harmonics in frequency converter and yet offer the best performance. Special attention is given to mechanical features of 'M2BA' for reliable operation at extremes of speed range in variable speed applications.