
MOTORS AND GENERATORS

Low Voltage

General Performance

IE2 high efficiency cast iron motors

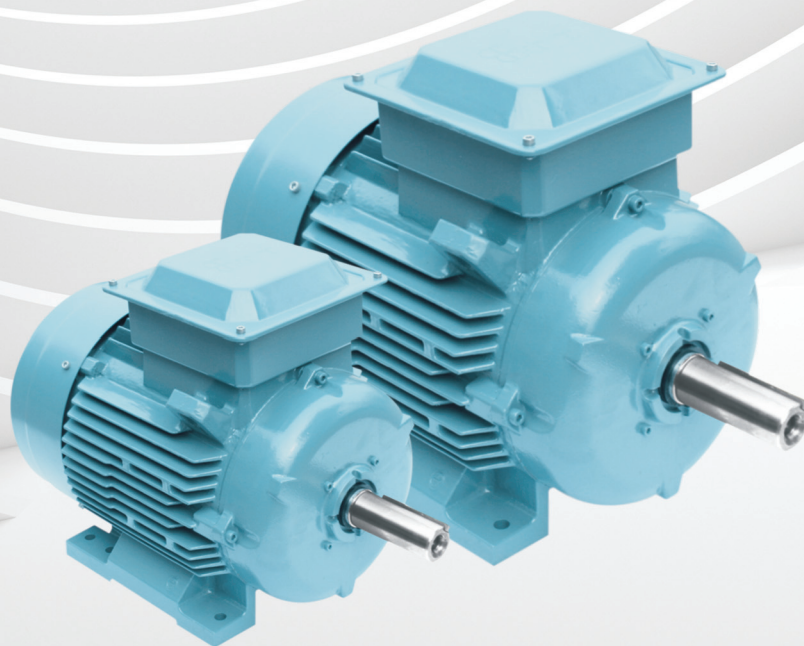
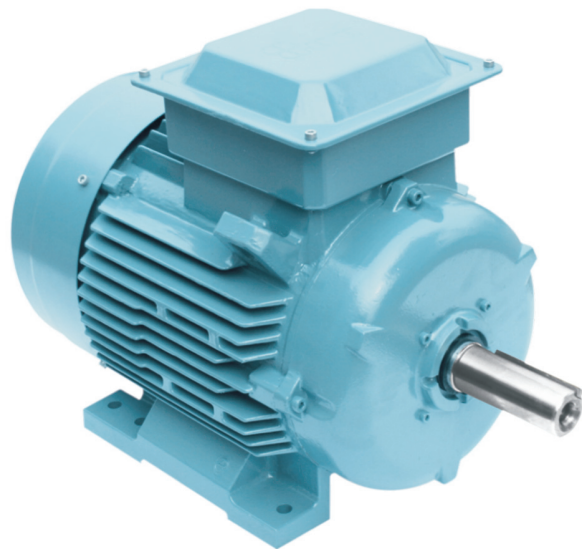


ABB offers a comprehensive range of reliable and high efficiency motors. ABB's general performance IE2 efficiency motors are best suited for applications where simplicity and off-the-shelf availability are paramount.

General performance IE2 high efficiency cast iron motors Sizes 71 to 355

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in brief**



Technical data

IE2 high efficiency cast iron motors

Technical data for totally enclosed squirrel cage three phase induction motors

IP 55 - IC 411 - Insulation class F, temperature rise class B, IE2 efficiency class according to IEC 60034-30-1:2014, IS 12615:2018

2-Pole, TEFC, 415V, 50Hz, IP55, IC411, Ambt. 50 deg, Rise Class B (70 deg)

Output KW	Frame Size	Speed r/min	Efficiency			Power factor cos ϕ	Current		Torque			Moment of inertia $J=1/4GD^2$ kgm ²	Weight kg
			Full load 100%	3/4 load 75%	1/2 load 50%		I_n , A	I_s/I_n	T_n Nm	T_s/T_n	T_b/T_n		
3000 r/min = 2 poles			415V, 50Hz										
0.37	M2BAX71MA2	2760	72.2	72.9	70.3	0.79	0.90	5.0	1.3	2.0	2.4	0.00033	9
0.55	M2BAX71MB2	2785	74.8	75.5	73.0	0.79	1.30	5.0	1.9	2.2	2.7	0.00041	10
0.75	M2BAX80MA2	2820	77.4	78.0	75.7	0.79	1.70	6.0	2.5	2.3	2.8	0.00067	13
1.1	M2BAX80MB2	2840	79.6	80.0	77.9	0.77	2.5	6.0	3.7	2.5	3.0	0.00088	14
1.5	M2BAX90SA2	2875	81.3	82.0	80.3	0.83	3.1	6.0	5.0	2.3	3.0	0.00208	20
2.2	M2BAX90LA2	2878	83.2	84.0	82.6	0.84	4.4	7.0	7.3	2.5	3.1	0.00274	23
3.7	M2BAX100LC2	2890	85.5	85.8	84.3	0.87	6.9	7.0	12.2	3.0	3.8	0.00561	34
5.5	M2BAX132SA2	2915	87.0	87.8	86.7	0.84	10.5	7.0	18.0	2.0	3.4	0.01170	54
7.5	M2BAX132SB2	2910	88.1	89.0	88.7	0.86	13.8	7.0	24.6	2.1	3.5	0.01320	58
9.3	M2BAX160MLJ2	2925	88.8	89.1	87.6	0.87	16.7	7.0	30.3	2.1	3.0	0.038	102
11	M2BAX160MLA2	2925	89.4	89.7	88.2	0.88	19.6	7.0	35.9	2.4	3.0	0.0415	105
15	M2BAX160MLB2	2928	90.3	90.7	90.0	0.87	26.5	7.0	48.9	2.1	3.0	0.0544	120
18.5	M2BAX160MLC2	2928	90.9	91.2	90.4	0.87	32.4	7.0	60.3	2.3	3.0	0.0581	131
22	M2BAX180MLA2	2932	91.3	91.7	91.0	0.88	38.0	7.0	71.6	3.0	3.5	0.0679	152
30	M2BAX200MLA2	2935	92.0	92.4	91.5	0.88	51.5	7.0	97.6	2.2	3.2	0.1077	198
37	M2BAX200MLB2	2950	92.5	92.8	91.7	0.87	64.0	7.0	119.7	3.0	3.8	0.1332	232
45	M2BAX225SMA2	2960	92.9	92.6	92.0	0.88	77.0	7.0	145.1	2.2	3.0	0.2443	295
55	M2BAX250SMA2	2965	93.2	93.8	92.8	0.89	92.0	7.0	177.1	2.5	3.0	0.316	344
75	M2BAX280SA2	2977	93.8	93.8	92.8	0.86	130.0	7.0	241.0	2.2	3.1	0.8	546
90	M2BAX280SMB2	2976	94.1	94.1	93.1	0.89	150.0	7.0	289.0	2.5	2.9	0.9	586
110	M2BAX315SMA2	2982	94.3	94.3	93.3	0.88	185.0	7.0	352.0	2.0	3.0	1.2	767
132	M2BAX315SMB2	2982	94.6	94.6	93.6	0.88	220.0	7.0	423.0	2.2	3.5	1.4	827
160	M2BAX315SMC2	2981	94.8	94.8	93.8	0.89	265.0	7.0	513.0	2.1	3.5	1.7	917
200	M2BAX315MLA2	2981	95.0	95.0	94.0	0.88	332.0	7.0	641.0	2.6	3.2	2.1	1037
250	M2BAX355SMA2	2983	95.0	95.0	94.0	0.86	425.0	7.0	800.0	2.2	3.5	2.7	1329
315	M2BAX355SMB2	2980	95.0	95.0	94.0	0.86	536.0	7.0	1009.0	2.2	3.5	3.4	1469
355	M2BAX355SMC2	2982	95.0	95.0	94.0	0.88	591.0	7.0	1137.0	2.8	3.2	3.6	1565
375	E2BA355MLD2	2982	95.0	95.0	94.0	0.90	610.0	7.0	1201.0	1.6	3.1	6.525	2070

Efficiency values are measured according to IEC 60034-2-1; 2007, IS 15999(Part2 Sec1):2011
Please note that the values are not comparable without knowing the testing method. ABB has calculated the efficiency values according to indirect method, stray load losses (additional losses) determined from measuring.

I_s / I_n = Starting current
 T_s / T_n = Locked rotor torque
 T_b / T_n = Breakdown

Technical data

IE2 high efficiency cast iron motors

Technical data for totally enclosed squirrel cage three phase induction motors

IP 55 - IC 411 - Insulation class F, temperature rise class B, IE2 efficiency class according to IEC 60034-30-1:2014, IS 12615:2018

4-Pole, TEFC, 415V, 50Hz, IP55, IC411, Ambt. 50 deg, Rise Class B (70 deg)

Output KW	Frame Size	Speed r/min	Efficiency			Power factor cos ϕ	Current		Torque			Moment of inertia $J=1/4GD^2$ kgm ²	Weight kg
			Full load 100%	3/4 load 75%	1/2 load 50%		I_n , A	I_s/I_n	T_n Nm	T_s/T_n	T_b/T_n		
1500 r/min = 4 poles			415V, 50Hz										
0.37	M2BAX71MB4	1395	72.7	72.0	67.0	0.65	1.10	5.0	2.5	1.9	2.2	0.00076	10
0.55	M2BAX80MA4	1415	77.1	76.0	71.0	0.71	1.40	5.0	3.7	2.2	2.8	0.00156	15
0.75	M2BAX80MB4	1425	79.6	78.5	74.3	0.67	1.97	6.0	5.0	3.0	3.5	0.00247	17
1.1	M2BAX90SA4	1430	81.4	80.6	76.8	0.74	2.55	6.0	7.3	3.0	3.5	0.00372	21
1.5	M2BAX90LA4	1430	82.8	82.2	79.4	0.73	3.47	6.0	10.0	3.0	3.5	0.00462	23
2.2	M2BAX100LA4	1435	84.3	84.2	82.1	0.76	4.8	7.0	14.6	2.6	3.3	0.00759	31
3.7	M2BAX112MA4	1435	86.3	86.9	85.9	0.80	7.5	7.0	24.6	2.8	3.3	0.01200	41
5.5	M2BAX132SA4	1450	87.7	88.4	87.6	0.79	11.1	6.0	36.2	1.7	2.8	0.02570	57
7.5	M2BAX132MA4	1455	88.7	89.2	88.3	0.77	15.3	6.0	49.2	1.7	3.0	0.03200	68
9.3	M2BAX160MLJ4	1455	89.3	89.8	88.0	0.81	17.9	7.0	61.0	2.0	2.9	0.0738	107
11	M2BAX160MLA4	1455	89.8	90.4	89.4	0.81	21.0	7.0	72.2	2.1	2.9	0.084	115
15	M2BAX160MLB4	1463	90.6	91.2	90.2	0.84	27.6	7.0	97.9	2.5	3.0	0.1025	134
18.5	M2BAX180MLA4	1457	91.2	91.8	90.9	0.81	35.0	7.0	121.2	2.7	3.5	0.1217	155
22	M2BAX180MLB4	1460	91.6	92.1	91.2	0.80	42.0	7.0	143.8	2.4	3.2	0.1396	171
30	M2BAX200MLA4	1474	92.3	92.5	91.8	0.81	55.5	7.0	194.3	2.5	3.5	0.2572	229
37	M2BAX225SMA4	1475	92.7	93.1	92.2	0.84	66.5	6.5	239.4	2.1	2.7	0.3605	267
45	M2BAX225SMB4	1478	93.1	93.5	92.6	0.83	81.5	7.0	290.6	2.2	2.9	0.4314	304
55	M2BAX250SMA4	1478	93.5	93.7	92.9	0.85	96.8	7.0	355.2	2.7	3.0	0.5331	342
75	M2BAX280SA4	1488	94.0	94.0	93.0	0.83	134.0	7.0	481.0	2.7	3.0	1.25	531
90	M2BAX280SMB4	1483	94.2	94.2	93.2	0.84	158.0	7.0	580.0	2.6	3.0	1.5	591
110	M2BAX315SMA4	1487	94.5	94.5	93.5	0.85	190.0	7.0	706.0	2.2	2.9	2.3	792
132	M2BAX315SMB4	1487	94.7	94.7	93.7	0.85	228.0	7.0	848.0	2.3	3.1	2.6	847
160	M2BAX315SMC4	1487	94.9	94.9	93.9	0.84	278.0	7.0	1027.0	2.4	3.0	2.9	887
200	M2BAX315MLA4	1487	95.1	95.1	94.1	0.85	345.0	7.0	1284.0	2.4	3.0	3.5	1012
250	M2BAX355SMA4	1487	95.1	95.1	94.1	0.85	430.0	7.0	1605.0	1.9	3.1	5.4	1419
315	M2BAX355SMB4	1486	95.1	95.1	94.1	0.85	544.0	7.0	2024.0	2.4	3.0	6.9	1669
355	M2BAX355SMC4	1487	95.1	95.1	94.1	0.86	605.0	7.0	2280.0	2.4	3.0	7.2	1669
400	E2BA355MLB4H	1486	95.1	95.1	94.1	0.86	680.0	7.0	2570.0	2.3	2.8	11.065	2430

Efficiency values are measured according to IEC 60034-2-1; 2007, IS 15999(Part2 Sec1):2011
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Technical data

IE2 high efficiency cast iron motors

Technical data for totally enclosed squirrel cage three phase induction motors

IP 55 - IC 411 - Insulation class F, temperature rise class B, IE2 efficiency class according to IEC 60034-30-1:2014, IS 12615:2018

6-Pole, TEFC, 415V, 50Hz, IP55, IC411, Ambt. 50 deg, Rise Class B (70 deg)

Output KW	Frame Size	Speed r/min	Efficiency			Power factor cos ϕ	Current		Torque			Moment of inertia J=1/4GD ² kgm ²	Weight kg
			Full load 100%	3/4 load 75%	1/2 load 50%		I _n , A	I _s /I _n	T _n Nm	T _s /T _n	T _b /T _n		
1000 r/min = 6 poles		415V, 50Hz											
0.37	M2BAX80MA6	910	69.0	68.1	63.1	0.62	1.20	4.0	3.9	2.0	2.4	0.00173	13
0.55	M2BAX80MB6	910	73.1	72.8	69.2	0.66	1.60	4.0	5.8	2.1	2.5	0.00274	15
0.75	M2BAX90SA6	945	75.9	74.3	69.2	0.62	2.2	4.5	7.6	2.4	3.2	0.00438	21
1.1	M2BAX90LA6	935	78.1	77.3	73.3	0.63	3.1	4.5	11.2	2.3	2.9	0.00507	24
1.5	M2BAX100LA6	945	79.8	79.7	77.0	0.67	3.9	4.5	15.2	1.8	2.3	0.00795	31
2.2	M2BAX112MA6	950	81.8	81.7	79.0	0.68	5.5	5.0	22.1	1.8	2.6	0.01160	40
3.7	M2BAX132SB6	960	84.3	84.7	83.4	0.71	8.6	5.0	36.8	1.5	2.3	0.02830	60
5.5	M2BAX132MB6	965	86.0	86.0	84.2	0.70	12.7	5.0	54.4	1.5	2.8	0.03970	77
7.5	M2BAX160MLA6	957	87.2	88.0	86.8	0.77	15.6	6.5	74.8	1.7	2.6	0.089	122
9.3	M2BAX160MLJ6	965	88.0	88.6	87.8	0.77	19.1	6.5	92.0	2.0	2.8	0.119	141
11	M2BAX160MLB6	965	88.7	89.2	88.5	0.75	23.0	7.0	108.8	2.1	2.8	0.1293	147
15	M2BAX180MLA6	970	89.7	90.1	89.4	0.76	30.5	7.0	147.6	2.0	3.0	0.1522	173
18.5	M2BAX200MLA6	965	90.4	90.8	90.0	0.77	37.0	6.0	183.0	1.5	2.5	0.198	190
22	M2BAX200MLB6	970	90.9	91.2	90.6	0.77	43.7	6.0	216.5	1.5	2.5	0.2384	212
30	M2BAX225SMA6	981	91.7	92.0	91.2	0.82	55.8	6.5	291.9	2.1	2.8	0.5687	284
37	M2BAX250SMA6	981	92.2	92.4	91.9	0.81	68.9	6.0	360.0	2.0	2.6	0.8042	337
45	M2BAX280SA6	990	92.7	92.7	90.7	0.78	87.0	7.0	434.0	2.4	2.7	1.85	516
55	M2BAX280SB6	990	93.1	93.1	91.1	0.81	102.0	7.0	531.0	2.5	2.7	2.2	556
75	M2BAX315SMA6	993	93.7	93.7	91.7	0.78	143.0	7.0	721.0	2.5	3.0	3.2	722
90	M2BAX315SMB6	993	94.0	94.0	92.0	0.81	165.0	7.0	865.0	2.7	3.0	4.1	817
110	M2BAX315SMC6	992	94.3	94.3	92.3	0.80	203.0	7.0	1059.0	2.6	3.0	4.9	887
132	M2BAX315MLA6	990	94.6	94.6	92.6	0.81	241.0	7.0	1273.0	2.7	3.0	5.8	997
160	M2BAX355SMA6	993	94.8	94.8	92.8	0.80	292.0	7.0	1539.0	2.3	2.6	7.3	1309
200	M2BAX355SMB6	992	95.0	95.0	93.0	0.81	360.0	7.0	1925.0	2.2	2.6	9.7	1459
250	M2BAX355SMC6	991	95.0	95.0	93.0	0.83	442.0	7.0	2409.0	2.8	3.0	11.3	1656
275	E2BA355MLB6K	990	95.0	95.0	93.0	0.82	491.0	7.0	2653.0	2.5	2.8	15.06	2040
315	E2BA355MLB6	990	95.0	95.0	93.0	0.84	549.0	7.0	3039.0	2.3	2.8	15.06	2250
355	E2BA355MLB6H**	990	95.0	95.0	93.0	0.84	619.0	7.0	3424.0	1.3	2.7	15.975	2250

** Temp. Rise Class F

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8-Pole, TEFC, 415V, 50Hz, IP55, IC411, Ambt. 50 deg, Rise Class B (70 deg)

Output KW	Frame Size	Speed r/min	Efficiency			Power factor cos ϕ	Current		Torque			Moment of inertia J=1/4GD ² kgm ²	Weight kg
			Full load 100%	3/4 load 75%	1/2 load 50%		I _n , A	I _s /I _n	T _n Nm	T _s /T _n	T _b /T _n		
750 r/min = 8 poles		415V, 50Hz											
0.12	M2BAX71MB8	680	39.8	34	24.9	0.60	0.70	3.0	1.7	2.6	2.7	0.0011	11
0.18	M2BAX80MA8	700	45.9	40.7	29.8	0.61	0.90	3.0	2.5	2.5	2.8	0.0019	15
0.25	M2BAX80MB8	690	50.6	46.8	38.2	0.62	1.10	3.0	3.5	2.3	2.4	0.0024	16
0.37	M2BAX90SA8	690	56.1	53	43.9	0.61	1.5	3.0	5.1	2.0	2.4	0.0044	22
0.55	M2BAX90LA8	680	61.7	61.1	55.8	0.62	2.0	3.0	7.7	1.7	1.9	0.0049	24
0.75	M2BAX100LA8	700	66.2	62.1	54.1	0.61	2.6	4.0	10.2	2.3	2.7	0.0072	30
1.1	M2BAX100LB8	695	70.8	70.6	66.2	0.64	3.4	4.0	15.1	2.0	2.2	0.0087	32
1.5	M2BAX112MA8	680	74.1	74.1	72.8	0.70	4.0	4.0	21.1	1.7	2	0.0118	40
2.2	M2BAX132SA8	710	77.6	76.2	72	0.65	6.1	4.5	29.6	1.5	2.3	0.0334	69
3.7	M2BAX160MLA8	715	81.4	81.4	80.4	0.64	9.8	5.0	49.4	1.5	2.3	0.0590	100
5.5	M2BAX160MLB8	720	83.8	83.8	82.8	0.66	13.8	5.0	73.0	1.5	2.3	0.0940	127
7.5	M2BAX160MLC8	720	85.3	85.3	83.3	0.64	19.0	5.0	99.5	1.5	2.3	0.1170	143
9.3	M2BAX180MLA8	720	86.3	86.3	83.6	0.61	24.6	5.0	123.4	1.7	2.6	0.1470	166
11	M2BAX180MLB8	720	86.9	86.9	84.5	0.68	26.0	5.0	145.9	1.5	2.2	0.2020	200
15	M2BAX200MLA8	725	88	88	85.8	0.68	35.0	5.0	197.6	1.4	2.1	0.2720	235
18.5	M2BAX225SMA8	735	88.6	88.6	87.6	0.73	40.0	5.0	240.4	2.1	2.3	0.4950	254
22	M2BAX225SMB8	735	89.1	89.1	88.1	0.75	45.7	5.0	285.9	1.9	2.2	0.5870	286
30	M2BAX250SMA8	735	89.8	89.8	88.8	0.74	62.8	5.0	389.8	1.9	2.2	0.8620	348
37	M2BAX280SA8	740	90.3	90.3	88.3	0.73	78.0	7.0	477.0	1.8	3.2	1.8500	605
45	M2BAX280SB8	742	90.7	90.7	88.7	0.77	90.0	7.0	579.0	1.9	3.3	2.2000	646
55	M2BAX315SMA8	743	91	91	89	0.75	112.0	7.0	707.0	1.7	2.9	3.2000	830
75	M2BAX315SMB8	742	91.6	91.6	89.6	0.78	146.0	7.0	965.0	1.8	2.9	4.1000	930
90	M2BAX315SMC8	742	91.9	91.9	89.9	0.78	175.0	7.0	1158.0	1.9	2.9	4.9000	1000
110	M2BAX315MLA8	743	92.3	92.3	90.3	0.80	207.0	7.0	1414.0	1.9	2.9	5.8000	1150
132	M2BAX355SMA8	745	92.6	92.6	90.6	0.76	260.0	7.0	1692.0	1.6	2.8	7.9000	1520
160	M2BAX355SMB8	744	93	93	91	0.76	315.0	7.0	2054.0	1.8	2.9	9.7000	1680
200	M2BAX355SMC8	745	93.5	93.5	91	0.78	382.0	7.0	2563.0	1.8	2.8	11.3000	1820
225	E2BA355MLB8H	740	93.5	93.5	91.5	0.77	434.8	7.0	2904.0	1.7	2.6	16.0500	2100
250	E2BA355MLB8k**	740	93.5	93.5	91.5	0.81	460.0	7.0	3226.0	1.6	2.6	16.5000	2225

** Temp. Rise Class F

Efficiency values are measured according to IEC 60034-2-1; 2007,IS 15999(Part2 Sec1):2011
Please note that the values are not comparable without knowing the testing method. ABB has calculated the efficiency values according to indirect method, stray load losses (additional losses) determined from measuring.

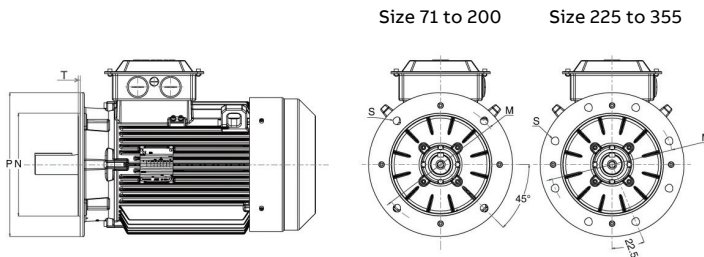
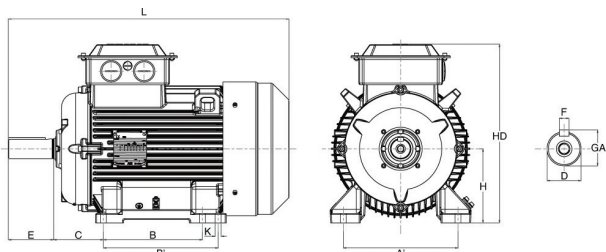
I_s / I_n = Starting current
T_s / T_n = Locked rotor torque
T_b / T_n = Breakdown

Dimension drawings

General performance IE2 high efficiency cast iron motors Sizes 71 - 355

Foot-mounted motor IM1001, B3

Flange-mounted motor IM 3001, B5



Motor Size	D Poles		GA Poles		F Poles		E Poles		L max Poles		A	B	B'	C	HD	K	H	M	N	P	S	T
	2	4-8	2	4-8	2	4-8	2	4-8	2	4-8												
General performance cast iron motors																						
71M	14	14	16.0	16.0	5	5	30	30	257	257	112	90	-	45	175	7	71	130	110	160	10	3.5
80M	19	19	21.5	21.5	6	6	40	40	309	309	125	100	-	50	192	10	80	165	130	200	12	3.5
90SL	24	24	27.0	27.0	8	8	50	50	351	351 ⁵⁾	140	100	125	56	217	10	90	165	130	200	12	3.5
100L	28	28	31.0	31.0	8	8	60	60	376	376	160	140	-	63	240	12	100	215	180	250	15	4.0
112M	28	28	31.0	31.0	8	8	60	60	411	411	190	140	-	70	252	12	112	215	180	250	15	4.0
132SM	38	38	41.0	41.0	10	10	80	80	521	521 ⁶⁾	216	140	178	89	301	12	132	265	230	300	15	4.0
160	42	42	45.0	45.0	12	12	110	110	586	586 ^{1),1)}	254	210	254	108	414	15	160	300	250	350	19	5.0
180	48	48	51.5	51.5	14	14	110	110	684	684 ²⁾	279	241	279	121	434	15	180	300	250	350	19	5.0
200	55	55	59.0	59.0	16	16	110	110	728	728 ³⁾	318	267	305	133	474	19	200	350	300	400	19	5.0
225	55	60	59.0	64.0	16	18	110	140	854	854 ⁴⁾	356	286	311	149	540	19	225	400	350	450	19	5.0
250	60	65	64.0	69.0	18	18	140	140	882	882	406	311	349	168	585	24	250	500	450	550	19	5.0
280S	65	75	69.0	79.5	18	20	140	140	982	982	457	368	-	190	775	24	280	500	450	550	19	5.0
280SM	65	75	69.0	79.5	18	20	140	140	1052	1052	457	368	419	190	728	24	280	500	450	550	19	5.0

Motor	D		GA		F		E		L Max		A	B	B'	C	HD	K	H	M	N	P	S	T
	2	4_8	2	4_8	2	4_8	2	4_8	2	4_8												
M2BAX 315SM	65	80	69.0	85.0	18	22	140	170	1216	1246	508	406	457	216	872	28	315	600	550	660	24	6.0
M2BAX 315ML	65	90	69.0	95.0	18	25	140	170	1326	1356	508	457	508	216	849	28	315	600	550	660	24	6.0
M2BAX 355SM	70	100	74.5	106.0	20	28	140	210	1399	1469	610	500	560	254	933	35	355	740	680	800	24	6.0
E2BA 355MLB8K	-	100	-	106.0	-	28	-	210	-	1680	610	560	630	254	965	28	355	740	680	800	24	6.0
E2BA 355MLB4H	-	100	-	106.0	-	28	-	210	-	1680	610	560	630	254	995	28	355	740	680	800	24	6.0
E2BA 355MLD2	75	-	79.5	-	20	-	140	-	1610	-	610	560	630	254	995	28	355	740	680	800	24	6.0
E2BA 355MLB6H	-	100	-	106.0	-	28	-	210	-	1680	610	560	630	254	995	28	355	740	680	800	24	6.0
E2BA355MLB6K	-	100	-	106.0	-	28	-	210	-	1574	610	560	630	254	965	28	355	740	680	800	24	6.0
E2BA 355MLB6	-	100	-	106.0	-	28	-	210	-	1680	610	560	630	254	995	28	355	740	680	800	24	6.0
E2BA355MLB8H	-	100	-	106.0	-	28	-	210	-	1574	610	560	630	254	965	28	355	740	680	800	24	6.0

Above table gives the main dimensions in mm.

- 1) M2BAX160MLC2, B4, J6 L = 626
- 1') M2BAX160MLB6 L = 646
- 2) M2BAX180MLB4, A6 L = 704
- 3) M2BAX200MLB2, A4, B6 L = 768
- 4) M2BAX225SMB4, A6 L = 884
- 5) M2BAX90SA2,SA4,SA6 L = 335
- 6) M2BAX132SA2,B2,SA4,SB6 L = 479

Motors in brief

General performance IE2 high efficiency cast iron motors in brief

Size	71	80	90	100	112	132	
Stator	Material	Cast Iron Grade 150:ISO 185					
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G					
	Surface Treatment	C3 medium according to ISO / EN 12944-5					
Feet	Integrated with stator						
	Material	Cast iron grade 150 : ISO 185					
Bearing end shields	Material	Cast iron grade 150 : ISO 185					
	Paint colour shade	Munsell blue 8B 4.5/3.25/NCS 4822 B05G					
	Surface Treatment	C3 medium according to ISO / EN 12944-5					
Bearings	D-end	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6206-2Z/C3	6206-2Z/C3	6208-2Z/C3
	N-end	6202-2Z/C3	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6205-2Z/C3	6208-2Z/C3
Axially-locked	Retaining Ring	As standard, locked at D-end					
Bearing seals	Axial seal as standard, radial on request						
Lubrication	Permanently lubricated shielded bearings						
Rating plate	Material	Aluminium					
Terminal Box	Frame material	Cast Iron, Integral to stator frame					
	Cover material	Sheet of steel, Cold rolled					
	Cover screws material	Steel 8.8					
Connections	Cable entries	2xM16	2xM25	2xM32			
	Cable Sizes	2Rx3Cx4mm ²	2Rx3Cx6mm ²	2Rx3Cx10mm ²			
	Terminal Stud Size	M4	M4	M5			
	Terminals	Upto 2HP - STAR / 3 Leads > 2 HP - DELTA / 6 Leads, (Cable lugs not included)					
Fan	Material	Polypropylene, Reinforced with 20% glass fibre					
Fan Cover	Material	Sheet of steel, cold rolled					
	Paint Colour shade	Munsell blue 8B 4.5/3.25/NCS 4822 B05G					
	Surface Treatment	C3 medium according to ISO/EN 12944-5					
Stator winding	Material	Copper					
	Insulation	Insulation class F, Temperature rise class B unless otherwise stated					
	Winding protection	-					
Rotor winding	Material	Pressure diecast aluminum					
Balancing method	Half Key Balancing as Standard						
Key ways	Open Key Way						
Enclosure	IP 55, Higher protection on request						
Cooling method	IC 411						
Drain holes	Drain holes with closable plastic plugs, open on delivery						
Lifting lugs	Integrated with the stator						

Motors in brief

General performance IE2 high efficiency cast iron motors

Size	160	180	200	225	250	
Stator	Material	Cast iron grade 200 : ISO 185				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	C3 medium according to ISO / EN 12944-5				
Feet		Integrated with stator				
	Material	Cast iron grade 200 : ISO 185				
Bearing end shields	Material	Cast iron grade 200 : ISO 185				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	Aliphatic polyurethane enamel paint_70µm				
Bearings	D-end	6209-2Z/C3	6310-2Z/C3	6312-2Z/C3	6313-2Z/C3	6315-2Z/C3
	N-end	6209-2Z/C3	6209-2Z/C3	6209-2Z/C3	6210-2Z/C3	6212-2Z/C3
Axially-locked	Inner Bearing Cover	As standard, locked at D-end				
Bearing seals	D-end	V-ring				
	N-end	V-ring				
Lubrication		Permanently lubricated shielded bearings				
Terminal Box	Material	Sheet of Steel, Cold Rolled				
	Surface	Treatment Similar to stator				
	Screws	Steel 8.8				
Connections	Cable Entries	2xM40, 1xM16			2xM50, 1xM16	
	Cable Sizes	2Rx3Cx70mm ²			2Rx3Cx120mm ²	
	Terminal Stud Size	M6			M10	
	Terminal Box	6 terminals for connection, Cable lugs not included				
Fan	Material	Polypropylene, Reinforced with 20% glass fibre				
Fan Cover	Material	Sheet of Steel, Cold Rolled				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	Similar to stator				
Stator winding	Material	Copper				
	Insulation	Insulation class F				
Rotor winding	Material	Diecast aluminum				
Balancing method		Half Key Balancing as standard				
Key ways		Open Key Way				
Enclosure		IP 55				
Cooling method		IC 411				
Drain holes		Drain holes with closable plastic plugs, open on delivery				
Lifting lugs		Integrated with the stator				

Motors in brief

General performance IE2 high efficiency cast iron motors

Size		280 2-8 Pole	315 2 Pole	315 4-8 Pole	355 2 Pole	355 4-8 Pole
Stator	Material	Cast iron grade 150, IS:210 ¹⁾				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	C3 medium according to ISO / EN 12944-5				
Feet		Integrated with stator				
	Material	Cast iron grade 150, IS:210 ¹⁾				
Bearing end shields	Material	Cast iron grade 150, IS:210 ¹⁾				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	Aliphatic polyurethane paint ≥80µm				
Bearings	D-end	6316/C3	6316/C3	6319/C3	6319/C3 ²⁾	6322/C3
	N-end	6316/C3	6316/C3	6316/C3	6319/C3 ²⁾	6319/C3 ²⁾
Axially-locked	Inner Bearing Cover	As standard, locked at D-end				
Bearing seals	D-end	Oil Seal ***				
	N-end	- ***				
Lubrication		Regreasable Bearings, Regreasing nipple M10X1				
Terminal Box	Material	Cast iron grade 150, IS:210 ¹⁾				
	Surface	Similar to stator				
	Screws	Steel				
Connections	Cable Entries	2 x 2" BSC ³⁾		2 x 2-1/2" BSC* ³⁾		
	Cable Sizes	280 : 2Rx3Cx185Sqmm Cu/Al Cable 315 : 2Rx3Cx240Sqmm Cu/Al Cable 355 : 2Rx3Cx240Sqmm Cu/Al Cable*				
	Terminal Stud Size	M12		M16 ⁴⁾		
	Terminal Box	6 terminals for connection, (Cable lugs not included)				
	Fan	Material	Polypropylene, Reinforced with 20% glass fibre			Aluminium ⁵⁾
Fan Cover	Material	Sheet of steel, Cold Rolled				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	Similar to stator				
Stator winding	Material	Copper				
	Insulation	Insulation class F				
Rotor winding	Material	Diecast aluminum				
Balancing method		Half Key Balancing as standarad				
Key ways		Open Key Way				
Enclosure		IP 55				
Cooling method		IC 411				
Drain holes		Drain holes with closable plastic plugs, open on delivery				
Lifting lugs		Bolted to the Stator				

*Cable Size for 355MLD2, 355MLB6H & 355MLB4H will be 2Rx3Cx300 Sqmm Cu/Al , Threaded opening 2x3" BSC

For M2BAX series, following is applicable:

- 1) Cast Iron Grade 200, IS:210
- 2) Bearing Size: 6316/C3
- 3) Cable Entries for
 - 280 to 315 frame - 2xM63, 2xM20
 - 355 frame - 2xM75, 2xM20
- 4) Terminal Stud Size: M12
- 5) For all Frames,fan material is Polypropylene,Reinforced with 20% glass fibre.

***Bearings Seals in M2BAX 280 to 355 frame is V-ring at DE and NDE side.

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