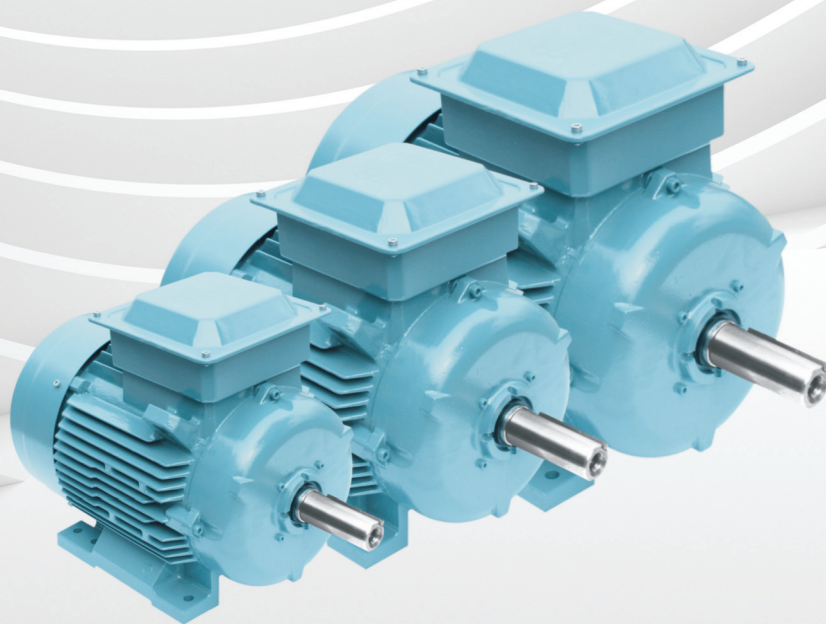


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MOTORS AND GENERATORS

# Low Voltage

General Performance  
IE3 Premium efficiency  
cast iron motors



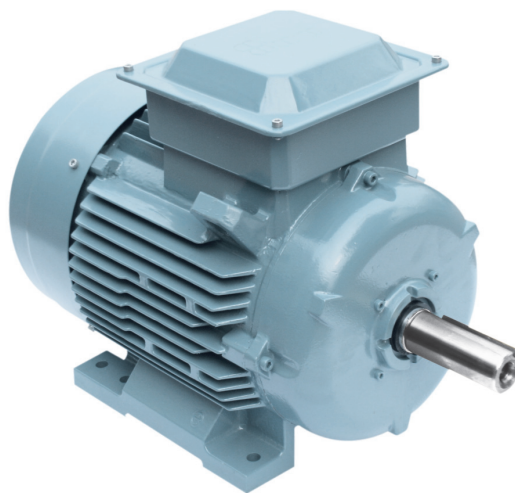
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**ABB offers a comprehensive range of reliable and high efficiency motors. ABB's general performance IE3 efficiency motors are best suited for industries where quality, robustness and reliability are paramount.**

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# General performance IE3 premium efficiency cast iron motors Sizes 71 to 355

- 04 - 07**      **Technical data**
- 08**            **Dimension drawings**
- 09 - 11**      **General performance motors  
in brief**



## Technical data

IE3 premium 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, IE3 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 $\phi$	Current		Torque			Moment of inertia J=1/4GD <sup>2</sup> kgm <sup>2</sup>	Weight kg
			Full load 100%	3/4 load 75%	1/2 load 50%		I <sub>n</sub> , A	I <sub>s</sub> /I <sub>n</sub>	T <sub>n</sub> Nm	T <sub>s</sub> /T <sub>n</sub>	T <sub>b</sub> /T <sub>n</sub>		
3000 r/min = 2 poles			415V, 50Hz										
0.37	M2BAX71MC2	2790	75.5	75.4	72.7	0.72	0.95	5.5	1.3	2.1	2.5	0.00033	9
0.55	M2BAX71MB2	2782	78.1	78.4	76.4	0.73	1.35	5.5	1.9	2.1	2.6	0.00041	10
0.75	M2BAX80MC2	2870	80.7	80.0	76.7	0.76	1.7	6.5	2.5	2.8	3.6	0.00080	14
1.1	M2BAX80MD2	2865	82.7	83.3	81.9	0.80	2.3	7.0	3.7	2.8	3.6	0.00119	17
1.5	M2BAX90SB2	2882	84.2	84.6	83.0	0.83	3	6.0	5.0	2.7	3.3	0.00224	21
2.2	M2BAX90SLA2	2890	85.9	86.7	85.8	0.88	4.4	7.0	7.3	3.0	3.5	0.00304	25
3.7	M2BAX100LKB2	2900	87.8	88.1	86.8	0.85	6.9	7.7	12.2	3.5	3.9	0.00756	42
5.5	M2BAX132SMA2	2900	89.2	89.6	88.9	0.82	10.5	7.0	18.1	2.1	3.3	0.01625	69
7.5	M2BAX132SMB2	2905	90.1	90.5	89.7	0.82	14.2	6.5	24.7	2.2	3.5	0.01821	74
9.3	M2BAX160MLJ2	2935	90.7	90.8	89.7	0.86	16.6	7.7	30.3	2.5	3.5	0.053	115
11	M2BAX160MLA2	2935	91.2	91.5	90.8	0.87	19.2	7.7	35.8	2.4	3.2	0.057	118
15	M2BAX160MLB2	2940	91.9	92.1	91.3	0.86	26.5	7.7	48.7	2.9	4.0	0.063	126
18.5	M2BAX160MLC2	2950	92.4	92.9	92.5	0.90	33.0	7.7	59.9	3.0	3.9	0.076	144
22	M2BAX180MLA2	2950	92.7	93.2	92.7	0.88	37.7	7.7	71.2	2.6	3.3	0.110	181
30	M2BAX200MLA2	2950	93.3	93.6	93.2	0.89	51	7.7	97.1	2.4	2.9	0.182	230
37	M2BAX200MLB2	2955	93.7	94.1	93.6	0.88	62.7	7.7	119.6	2.8	3.4	0.222	257
45	M2BAX225SMA2	2965	94.0	94.1	93.3	0.86	77.7	7.7	144.9	2.8	3.4	0.296	287
55	M2BAX250SMA2	2965	94.3	94.3	93.5	0.87	93.5	7.0	177.2	2.7	3.1	0.426	344
75	M2BAX280SMB2	2978	94.7	94.7	93.7	0.85	129.0	7.7	240.0	2.7	3.0	0.900	596
90	M2BAX280SMC2	2975	95.0	95.0	94.0	0.88	150.0	7.7	289.0	2.5	3.0	0.990	618
110	M2BAX315SMB2	2982	95.2	95.2	94.2	0.87	185.0	7.7	352.0	1.9	2.8	1.300	801
132	M2BAX315SMC2	2982	95.4	95.4	94.4	0.87	220.0	7.7	423.0	2.0	2.8	1.500	852
160	M2BAX315SMD2	2983	95.6	95.6	94.6	0.88	265.0	7.7	512.0	2.2	2.8	1.700	909
200	M2BAX315MLA2	2984	95.8	95.8	94.8	0.86	338.0	7.7	640.0	3.0	3.6	2.100	1051
250	M2BAX355SMA2	2985	95.8	95.8	94.8	0.87	417.0	7.7	800.0	2.1	3.3	3.000	1412
315	M2BAX355SMB2	2980	95.8	95.8	94.8	0.87	525.0	7.7	1009.0	2.1	3.0	3.400	1495
355	M2BAX355SMC2	2984	95.8	95.8	94.8	0.87	593.0	7.7	1136.0	2.5	3.2	3.600	1565
375	E3BA355MLD2	2982	95.8	95.8	94.8	0.90	605.0	7.7	1201.0	1.6	3.1	6.520	2260

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<sub>s</sub> / I<sub>n</sub> = Starting current  
T<sub>s</sub> / T<sub>n</sub> = Locked rotor torque  
T<sub>b</sub> / T<sub>n</sub> = Breakdown

## Technical data

IE3 premium 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, IE3 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 $\phi$	Current		Torque			Moment of inertia $J=1/4GD^2$ kgm <sup>2</sup>	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	M2BAX71MLA4	1415	77.3	76.0	67.0	0.65	1.02	4.6	2.5	2.5	2.8	0.00098	12
0.55	M2BAX80MC4	1435	80.8	80.0	75.0	0.70	1.35	6.0	3.7	2.5	2.8	0.00195	17
0.75	M2BAX80MLA4	1445	82.5	81.1	77.1	0.70	2.05	4.5	5.0	3.5	3.9	0.00309	20
1.1	M2BAX90SB4	1435	84.1	83.7	81.0	0.70	2.60	6.0	7.3	3.0	3.7	0.00397	22
1.5	M2BAX90SLA4	1431	85.3	85.2	82.9	0.75	3.50	6.0	10.0	3.5	3.9	0.00486	25
2.2	M2BAX100LB4	1445	86.7	86.9	85.1	0.74	4.8	7.0	14.5	2.9	3.7	0.00919	34
3.7	M2BAX112MLA4	1450	88.4	88.5	87.0	0.76	7.7	7.5	24.4	3.3	3.9	0.01542	50
5.5	M2BAX132SMA4	1460	89.6	90.6	90.2	0.79	10.8	7.0	36.0	2.0	3.0	0.03505	72
7.5	M2BAX132MLA4	1462	90.4	90.9	90.3	0.75	15.4	7.0	48.8	2.1	3.2	0.04108	84
9.3	M2BAX160MLJ4	1470	91.0	90.9	89.5	0.77	18.5	7.5	60.4	2.7	3.5	0.105	130
11	M2BAX160MLA4	1470	91.4	91.5	90.5	0.78	21.6	7.5	71.5	2.6	3.2	0.11	134
15	M2BAX160MLB4	1470	92.1	92.2	91.3	0.80	28.8	7.5	97.4	2.6	3.4	0.135	159
18.5	M2BAX180MLA4	1475	92.6	93.0	92.5	0.80	34.7	7.5	119.8	2.5	3.3	0.219	192
22	M2BAX180MLB4	1475	93.0	93.5	93.0	0.79	41.5	7.5	142.4	2.9	3.5	0.243	205
30	M2BAX200MLA4	1480	93.6	93.8	93.2	0.83	54.0	7.5	193.6	2.9	3.3	0.385	259
37	M2ABX225SMA4	1480	93.9	94.2	93.8	0.80	68.5	7.5	238.8	2.8	3.2	0.427	274
45	M2BAX225SMB4	1480	94.2	94.6	94.3	0.81	82.5	7.5	290.4	2.5	3.1	0.525	307
55	M2BAX250SMA4	1482	94.6	94.7	94.1	0.82	99.0	7.5	354.4	2.6	3.0	0.694	358
75	M2BAX280SMB4	1485	95.0	95.0	94.0	0.83	133.0	7.7	482.0	2.3	2.8	1.38	573
90	M2BAX280SMC4	1485	95.2	95.2	94.2	0.83	159.0	7.7	579.0	2.5	2.9	1.73	636
110	M2BAX315SMB4	1489	95.4	95.4	94.4	0.82	196.0	7.7	705.0	2.1	3.0	2.43	823
132	M2BAX315SMC4	1488	95.6	95.6	94.6	0.85	226.0	7.7	847.0	2.2	2.9	2.9	892
160	M2BAX315SMD4	1488	95.8	95.8	94.8	0.84	276.0	7.7	1027.0	2.5	3.0	3.2	933
200	M2BAX315MLB4	1488	96.0	96.0	95.0	0.84	343.0	7.7	1283.0	2.4	3.0	3.9	1091
250	M2BAX355SMA4	1491	96.0	96.0	95.0	0.83	435.0	7.7	1601.0	2.1	2.9	5.9	1445
315	M2BAX355SMB4	1491	96.0	96.0	95.0	0.83	548.0	7.7	2017.0	2.3	3.0	6.9	1595
355	M2BAX355SMC4	1486	96.0	96.0	95.0	0.84	612.0	7.7	2281.0	2.3	2.5	7.2	1635
400	E3BA355MLB4H	1486	96.0	96.0	95.0	0.86	674.0	7.7	2570.0	2.5	3.0	11.065	2430

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

IE3 premium 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, IE3 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 $\phi$	Current		Torque			Moment of inertia J=1/4GD <sup>2</sup> kgm <sup>2</sup>	Weight kg
			Full load 100%	3/4 load 75%	1/2 load 50%		I <sub>n</sub> , A	I <sub>s</sub> /I <sub>n</sub>	T <sub>n</sub> Nm	T <sub>s</sub> /T <sub>n</sub>	T <sub>b</sub> /T <sub>n</sub>		
1000 r/min = 6 poles			415V, 50Hz										
0.37	M2BAX80MC6	931	73.5	73.0	67.0	0.65	1.15	3.9	3.8	2.5	2.8	0.00220	15
0.55	M2BAX80MLA6	935	77.2	77.0	71.5	0.59	1.70	4.5	5.6	2.8	3.3	0.00349	19
0.75	M2BAX90SLA6	940	78.9	77.5	73.2	0.63	2.1	4.5	7.6	2.3	3.0	0.00487	25
1.1	M2BAX90LB6	945	81.0	79.7	75.4	0.61	3.1	4.5	11.1	3.0	3.6	0.00676	30
1.5	M2BAX100LKA6	954	82.5	82.6	80.2	0.67	3.8	4.5	15.0	2.2	2.4	0.00994	37
2.2	M2BAX112MLA6	952	84.3	84.4	82.5	0.66	5.5	5.0	22.1	1.9	2.7	0.01388	47
3.7	M2BAX132SMB6	960	86.5	87.0	86.0	0.68	8.8	5.0	36.8	1.6	2.7	0.03540	72
5.5	M2BAX132MLA6	965	88.0	88.3	87.3	0.68	12.7	5.0	54.4	1.6	2.8	0.05334	97
7.5	M2BAX160MLA6	965	89.1	90.2	90.0	0.72	16.2	6.5	74.2	1.8	3.1	0.089	119
9.3	M2BAX160MLJ6	970	89.8	90.3	89.7	0.70	20.6	6.5	91.5	1.9	3.1	0.128	153
11	M2BAX160MLB6	970	90.3	91.0	90.7	0.74	23.0	6.5	108.2	1.7	2.6	0.138	160
15	M2BAX180MLA6	972	91.2	91.6	91.0	0.75	30.5	6.0	147.3	1.5	2.6	0.212	190
18.5	M2BAX200MLA6	980	91.7	91.8	90.9	0.80	35.0	7.0	180.2	2.2	3.1	0.496	238
22	M2BAX200MLB6	980	92.2	92.2	91.1	0.79	42.2	7.5	214.3	2.3	3.6	0.585	263
30	M2BAX225SMA6	982	92.9	93.0	92.0	0.76	59.0	7.5	291.6	2.3	3.0	0.724	285
37	M2BAX250SMA6	985	93.3	93.7	93.4	0.80	69.3	7.0	358.6	2.1	2.5	1.3	379
45	M2BAX280SMB6	991	93.7	93.7	91.7	0.77	87.0	7.7	434.0	2.7	3.0	1.87	562
55	M2BAX280SMC6	993	94.1	94.1	92.1	0.80	102.0	7.7	529.0	2.8	3.0	2.57	615
75	M2BAX315SMB6	994	94.6	94.6	92.6	0.83	133.0	7.7	720.0	1.8	2.6	4.1	791
90	M2BAX315SMC6	994	94.9	94.9	92.9	0.82	160.0	7.7	865.0	2.0	3.0	4.6	859
110	M2BAX315SMD6	994	95.1	95.1	93.1	0.82	196.0	7.7	1057.0	2.2	3.0	4.9	912
132	M2BAX315MLB6	995	95.4	95.4	93.4	0.81	238.0	7.7	1267.0	2.3	3.2	6.3	1068
160	M2BAX355SMA6	993	95.6	95.6	93.6	0.80	291.0	7.7	1539.0	2.5	2.6	7.9	1348
200	M2BAX355SMB6	993	95.8	95.8	93.8	0.79	367.0	7.7	1923.0	2.1	2.5	9.7	1512
250	M2BAX355SMC6	988	95.8	95.8	93.8	0.79	460.0	7.7	2416.0	3.0	3.1	11.3	1656
275	E3BA355MLB6K	990	95.8	95.8	93.8	0.84	475.0	7.7	2653.0	1.4	2.6	15.975	2250
315	E3BA355MLB6	990	95.8	95.8	93.8	0.84	545.0	7.7	3039.0	2.3	2.8	15.975	2250
355	E3BA355MLB6H**	990	95.8	95.8	93.8	0.84	614.0	7.7	3424.0	1.3	2.7	15.975	2250

\*\* Temp. Rise Class F

Efficiency values are measured according to IEC 60034-2-1; 2007, IS 15999(Part2 Sec1):2011  
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has calculated the efficiency values according to indirect method, stray load losses  
(additional losses) determined from measuring.

I<sub>s</sub> / I<sub>n</sub> = Starting current  
T<sub>s</sub> / T<sub>n</sub> = Locked rotor torque  
T<sub>b</sub> / T<sub>n</sub> = Breakdown

## Technical data

IE3 premium 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, IE3 efficiency class according to IEC 60034-30-1:2014, IS 12615:2018  
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 $\phi$	Current		Torque			Moment of inertia J=1/4GD <sup>2</sup> kgm <sup>2</sup>	Weight kg
			Full load 100%	3/4 load 75%	1/2 load 50%		I <sub>n</sub> , A	I <sub>s</sub> /I <sub>n</sub>	T <sub>n</sub> Nm	T <sub>s</sub> /T <sub>n</sub>	T <sub>b</sub> /T <sub>n</sub>		
750 r/min = 8 poles		415V, 50Hz											
0.12	M2BAX71MB8	680	50.7	44.9	35.8	0.51	0.65	3.0	1.7	2.6	2.7	0.0011	12
0.18	M2BAX80MA8	700	58.7	53.5	42.6	0.56	0.76	3.0	2.5	2.5	2.8	0.0019	16
0.25	M2BAX80MB8	690	64.1	60.3	51.7	0.57	0.95	3.0	3.5	2.3	2.4	0.0024	17
0.37	M2BAX90SA8	697	69.3	66.2	57.1	0.55	1.35	4.5	5.1	2.2	2.6	0.0044	23
0.55	M2BAX90LA8	672	73	71	66	0.59	1.8	3.0	7.8	1.7	1.9	0.0075	30
0.75	M2BAX100LKA8	695	75	72.2	63.8	0.64	2.2	4.0	10.3	2.2	2.6	0.0096	35
1.1	M2BAX100LKB8	695	77.7	77.5	73.1	0.62	3.2	4.0	15.1	2.0	2.2	0.0113	38
1.5	M2BAX112MLA8	680	79.7	78.7	73.7	0.66	4.0	4.0	21.1	1.8	2.1	0.0146	47
2.2	M2BAX132SMA8	715	81.9	80.9	76.4	0.61	6.1	5.0	29.4	1.7	2.4	0.0362	81
3.7	M2BAX160MLA8	715	84.5	84.5	83.5	0.63	9.7	5.0	49.4	1.7	2.5	0.0689	107
5.5	M2BAX160MLB8	725	86.2	86.2	85.2	0.63	14.1	5.0	72.4	1.7	2.5	0.0940	127
7.5	M2BAX160MLC8	725	87.3	87.3	86.3	0.63	19.0	5.0	98.8	1.7	2.5	0.1230	150
9.3	M2BAX180MLA8	730	88.1	88.1	86.7	0.61	24.1	5.6	121.7	1.9	2.9	0.2140	208
11	M2BAX180MLB8	730	88.6	88.6	87.5	0.67	26.0	5.6	143.9	1.5	2.4	0.2280	216
15	M2BAX200MLA8	736	89.6	89.6	89.2	0.71	32.8	5.6	194.6	2.0	2.4	0.4960	238
18.5	M2BAX225SMA8	738	90.1	90.1	90.0	0.72	39.7	5.2	239.4	2.0	2.3	0.6570	271
22	M2BAX225SMB8	738	90.6	90.6	90.2	0.69	66.3	5.5	284.7	2.0	2.3	0.7240	290
30	M2BAX250SMA8	740	91.3	91.3	91.0	0.72	63.5	5.5	387.2	1.9	2.5	1.3000	379
37	M2BAX280SA8	741	91.8	91.8	89.8	0.72	78.0	7.7	477.0	1.8	3.2	1.8500	605
45	M2BAX280SB8	742	92.2	92.2	90.2	0.75	90.0	7.7	579.0	1.9	3.3	2.2000	646
55	M2BAX315SMA8	743	92.5	92.5	90.5	0.75	110.0	7.7	707.0	1.7	2.9	3.2000	830
75	M2BAX315SMB8	742	93.1	93.1	91.1	0.78	144.0	7.7	966.0	1.8	2.9	4.1000	930
90	M2BAX315SMC8	742	93.4	93.4	91.4	0.78	172.0	7.7	1159.0	1.9	2.9	4.9000	1000
110	M2BAX315MLA8	743	93.7	93.7	91.7	0.8	204.0	7.7	1414.0	1.9	2.9	5.8000	1150
132	M2BAX355SMA8	745	94	94	92	0.75	260.0	7.7	1692.0	1.6	2.8	7.9000	1520
160	M2BAX355SMB8	744	94.3	94.3	92.3	0.75	315.0	7.7	2054.0	1.8	2.8	9.7000	1680
200	M2BAX355SMC8	745	94.6	94.6	92.6	0.77	382.0	7.7	2563.0	1.8	2.8	11.3000	1820
225	E3BA355MLB8H	740	94.6	94.6	92.6	0.77	429.7	7.0	2904.0	1.7	2.6	16.0500	2100
250	E3BA355MLB8k**	740	94.6	94.6	92.6	0.81	453.9	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.

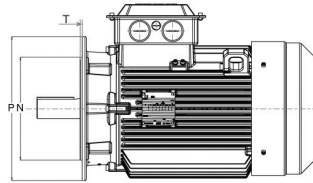
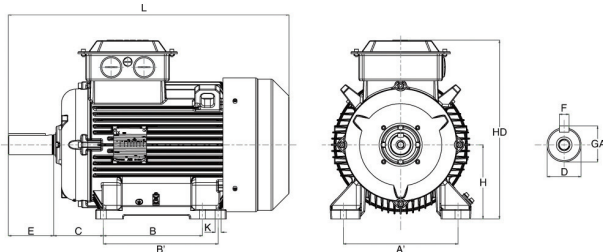
I<sub>s</sub> / I<sub>n</sub> = Starting current  
T<sub>s</sub> / T<sub>n</sub> = Locked rotor torque  
T<sub>b</sub> / T<sub>n</sub> = Breakdown

## Dimension drawings

### General performance IE3 premium efficiency cast iron motors

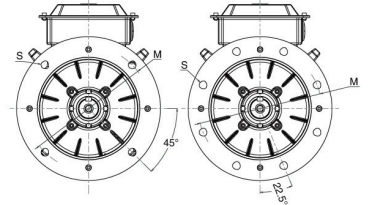
Foot-mounted motor IM1001, B3

Flange-mounted motor IM3001, B5



Size 71 to 200

Size 225 to 355



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												
<b>General performance cast iron motors</b>																						
71M	14	14	16.0	16.0	5	5	30	30	257	257 <sup>2)</sup>	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
80ML	19	19	21.5	21.5	6	6	40	40	334	334	125	100	112	50	192	10	80	165	130	200	12	3.5
90S	24	24	27.0	27.0	8	8	50	50	335	335	140	100	-	56	217	10	90	165	130	200	12	3.5
90SL	24	24	27.0	27.0	8	8	50	50	351	351	140	100	125	56	217	10	90	165	130	200	12	3.5
90L	24	24	27.0	27.0	8	8	50	50	386	386	140	-	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
100LK	28	28	31.0	31.0	8	8	60	60	410	410	160	140	160	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
112ML	28	28	31.0	31.0	8	8	60	60	456	456	190	140	159	70	252	12	112	215	180	250	15	4.0
132SM	38	38	41.0	41.0	10	10	80	80	521	521	216	140	178	89	301	12	132	265	230	300	15	4.0
132ML	38	38	41.0	41.0	10	10	80	80	586	586	216	178	203	89	301	12	132	265	230	300	15	4.0
160ML	42	42	45.0	45.0	12	12	110	110	639 <sup>1)</sup>	639 <sup>1)</sup>	254	210	254	108	414	15	160	300	250	350	19	5.0
180ML	48	48	51.5	51.5	14	14	110	110	728	728	279	241	279	121	454	15	180	300	250	350	19	5.0
200ML	55	55	59.0	59.0	16	16	110	110	809	809	318	267	305	133	515	19	200	350	300	400	19	5.0
225SM	55	60	59.0	64.0	16	18	110	140	812	842	356	286	311	149	560	19	225	400	350	450	19	5.0
250SM	60	65	64.0	69.0	18	18	140	140	853	853	406	311	349	168	613	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
E3BA 355MLB8K	-	100	-	106.0	-	28	-	210	-	1680	610	560	630	254	965	28	355	740	680	800	24	6.0
E3BA 355MLB4H	-	100	-	106.0	-	28	-	210	-	1680	610	560	630	254	995	28	355	740	680	800	24	6.0
E3BA 355MLD2	75	-	79.5	-	20	-	140	-	1610	-	610	560	630	254	995	28	355	740	680	800	24	6.0
E3BA 355MLB6H	-	100	-	106.0	-	28	-	210	-	1680	610	560	630	254	995	28	355	740	680	800	24	6.0
E3BA 355MLB6/B6K	-	100	-	106.0	-	28	-	210	-	1680	610	560	630	254	965	28	355	740	680	800	24	6.0
E3BA355MLB8H	-	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) M2BAX 160ML C2, B4, B6: L = 696  
 2) M2BAX 71ML A4: L = 282



## Motors in brief

General performance IE3 premium efficiency cast iron motors in brief

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

## Motors in brief

General performance IE3 premium efficiency cast iron motors in brief

Size		160	180	200	225	250
<b>Stator</b>	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				
<b>Feet</b>		Integrated with stator				
	Material	Cast iron grade 200 : ISO 185				
<b>Bearing end shields</b>	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				
<b>Bearings</b>	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
<b>Axially-locked</b>	Inner Bearing Cover	As standard, locked at D-end				
<b>Bearing seals</b>		Axial seal standard, radial on request				
<b>Measuring nipple</b>		Not included				
<b>Lubrication</b>		Permanently lubricated shielded bearings				
<b>Rating plate</b>	Material	Aluminium				
<b>Terminal Box</b>	Frame material	Sheet of Steel, cold rolled				
	Cover material	Sheet of Steel, cold rolled				
	Cover screws material	Steel 8.8				
<b>Connections</b>	Cable entries	2xM40, 1xM16		2xM50, 1xM16		
	Cable Sizes	2Rx3Cx70mm2		2Rx3Cx120mm2		
	Terminal Stud Size	M6		M10		
	Terminals	6 terminals for connection, Cable lugs not included				
<b>Fan</b>	Material	Polypropylene, Reinforced with 20% glass fibre				
<b>Fan Cover</b>	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				
<b>Stator winding</b>	Material	Copper				
	Insulation	Insulation class F, Temperature rise class B unless otherwise stated.				
	Winding protection	-				
<b>Rotor winding</b>	Material	Pressure diecast aluminium				
<b>Balancing method</b>		Half Key Balancing as Standard				
<b>Key ways</b>		Open Key Way				
<b>Enclosure</b>		IP 55, Higher protection on request				
<b>Cooling method</b>		IC 411				
<b>Drain holes</b>		Drain holes with closable plastic plugs, open on delivery				
<b>Lifting lugs</b>		Integrated with the stator				

## Motors in brief

General performance IE3 premium efficiency cast iron motors in brief

Size		280 2-8 Pole	315 2 Pole	315 4-8 Pole	355 2 Pole	355 4-8 Pole
<b>Stator</b>	Material	Cast iron grade 150, IS:210 <sup>1)</sup>				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	C3 medium according to ISO / EN 12944-5				
<b>Feet</b>		Integrated with stator				
	Material	Cast iron grade 150, IS:210 <sup>1)</sup>				
<b>Bearing end shields</b>	Material	Cast iron grade 150, IS:210 <sup>1)</sup>				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	C3 medium according to ISO / EN 12944-5				
<b>Bearing</b>	D-end	6316/C3	6316/C3	6319/C3	6319/C3 <sup>2)</sup>	6322/C3
	N-end	6316/C3	6316/C3	6316/C3	6319/C3 <sup>2)</sup>	6319/C3 <sup>2)</sup>
<b>Axially-locked</b>	Inner Bearing Cover	As standard, locked at D-end				
<b>Lubrication</b>		Regreasable Bearings, Regreasing nipple M10X1				
<b>Measuring nipple</b>		-				
<b>Rating plate</b>	Material	Stainless Steel				
<b>Terminal Box</b>	Frame material	Cast iron grade 150, IS:210 <sup>1)</sup>				
	Cover Material	Cast iron grade 150, IS:210 <sup>1)</sup>				
	Screws	Steel				
<b>Connections</b>	Cable Entries	2 x 2" BSC <sup>3)</sup>		2 x 2-1/2" BSC* <sup>3)</sup>		
	Cable Sizes	280 : 2Rx3Cx185Sqmm Cu/Al Cable 315 : 2Rx3Cx240Sqmm Cu/Al Cable 355 : 2Rx3Cx240Sqmm Cu/Al Cable*				
	Terminal Stud Size	M12		M16 <sup>4)</sup>		
	Terminal Box	6 terminals for connection, Cable lugs not included				
	<b>Fan</b>	Material	Polypropylene, Reinforced Aluminium <sup>5)</sup> with 20% glass fibre			
<b>Fan Cover</b>	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				
<b>Stator winding</b>	Material	Copper				
	Insulation	Insulation class F, Temperature rise class B unless otherwise stated				
	Winding protection	-				
<b>Rotor winding</b>	Material	Pressure diecast aluminum				
<b>Balancing method</b>		Half Key Balancing as standarad				
<b>Key ways</b>		Open Key Way				
<b>Enclosure</b>		IP 55				
<b>Cooling method</b>		IC 411				
<b>Drain holes</b>		Drain holes with closable plastic plugs, open on delivery				
<b>Lifting lugs</b>		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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