

Technical data, 400 V 50 Hz

IE2 Process performance aluminum motors

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

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-30-1: 2014			Power factor Cosφ	Current		Torque		Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure Level L _{PA} dB	
				Full load 100%	3/4 load 75%	1/2 load 50%		I _N A	I _s /I _N	T _N Nm	T _i /T _N				T _b /T _N
3000 r/min = 2 poles				400 V 50 Hz				CENELEC-design							
0.09	M3AA 56A 2	3GAA051311-...F	2800	55.6	50.8	38.7	0.67	0.35	3.5	0.29	2.4	2.6	0.0001	2.8	56
0.12	M3AA 56B 2	3GAA051312-...F	2830	53.6	49.3	37.2	0.68	0.41	4.3	0.4	2.5	2.8	0.00013	2.9	57
0.18	M3AA 63A 2	3GAA061311-...F	2790	60.4	57.8	49.5	0.75	0.51	4.5	0.61	2.4	2.6	0.00015	3.7	60
0.25	M3AA 63B 2	3GAA061312-...F	2790	64.8	63.2	56.7	0.76	0.66	4.8	0.86	2.8	2.7	0.00017	4.1	61
0.37	M3AA 71A 2	3GAA071311-...E	2785	69.5	70.8	67.8	0.79	0.91	4.6	1.26	2.5	2.8	0.0004	4.9	58
0.55	M3AA 71B 2	3GAA071312-...E	2790	74.1	75.4	73.4	0.79	1.29	5.1	1.88	3.1	3.1	0.0005	5.9	58
0.75	M3AA 80B 2	3GAA081312-...E	2895	80.6	80.4	77.3	0.79	1.7	8.1	2.4	3.7	3.9	0.0009	10.5	60
1.1	M3AA 80C 2	3GAA081313-...E	2875	80.6	80.4	77.9	0.80	2.4	7.8	3.6	3.6	3.5	0.0012	11	60
1.5	M3AA 90L 2	3GAA091500-...E	2900	84.1	85.0	83.5	0.86	2.9	7.6	4.9	2.5	3.3	0.0024	16	60
2.2	M3AA 90LB 2	3GAA091520-...E	2870	84.6	85.7	85.0	0.86	4.4	6.9	7.3	2.8	3.2	0.0027	18	63
3	M3AA 100LB 2	3GAA101520-...E	2920	86.4	86.1	84.0	0.86	5.8	9.3	9.8	3.3	3.9	0.005	25	62
4	M3AA 112MB 2	3GAA111320-...E	2885	86.1	87.0	88.0	0.88	7.6	7.6	13.2	2.5	2.8	0.0062	30	68
5.5	M3AA 132SB 2	3GAA131120-...E	2915	88.0	88.2	86.9	0.82	11	7.9	18	2.6	3.6	0.016	52	73
7.5	M3AA 132SC 2	3GAA131130-...E	2915	88.5	89.2	88.6	0.88	13.6	7.6	24.5	2.2	3.2	0.022	52	73
11	M3AA 160MLA 2	3GAA161410-...G	2938	90.6	91.5	91.1	0.90	19.2	7.5	35.7	2.4	3.1	0.044	91	69
15	M3AA 160MLB 2	3GAA161420-...G	2934	91.5	92.5	92.2	0.90	26	7.5	48.8	2.5	3.3	0.053	105	69
18.5	M3AA 160MLC 2	3GAA161430-...G	2932	92.0	93.1	93.1	0.92	31.5	7.5	60.2	2.9	3.4	0.063	123	69
22	M3AA 180MLA 2	3GAA181410-...G	2952	92.2	92.8	92.2	0.87	39.5	7.7	71.1	2.8	3.3	0.076	132	69
30	²⁾ M3AA 200MLA 2	3GAA201410-...G	2956	93.1	93.5	92.8	0.90	51.4	7.7	96.9	2.7	3.1	0.178	210	72
37	M3AA 200MLB 2	3GAA201420-...G	2959	93.4	93.7	92.9	0.90	63.5	8.2	119	3.0	3.3	0.196	225	72
45	M3AA 225SMA 2	3GAA221210-...G	2961	93.6	93.9	93.1	0.88	78.8	6.7	145	2.5	2.5	0.244	263	74
55	M3AA 250SMA 2	3GAA251210-...G	2967	94.1	94.4	93.8	0.88	95.8	6.8	177	2.2	2.7	0.507	304	75
75	²⁾ M3AA 280SMA 2	3GAA281210-...G	2968	94.4	94.7	94.2	0.89	128	7.1	241	2.5	2.8	0.583	389	75
90	²⁾ M3AA 280SMB 2	3GAA281220-...G	2971	94.9	95.2	94.7	0.89	153	7.8	289	2.6	3.2	0.644	425	75

²⁾ Temperature rise class F

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

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-30-1: 2014			Power factor Cosφ	Current		Torque		Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure Level L _{PA} dB	
				Full load 100%	3/4 load 75%	1/2 load 50%		I _N A	I _s /I _N	T _N Nm	T _i /T _N				T _b /T _N
3000 r/min = 2 poles				400 V 50 Hz				High-output design							
0.37	M3AA 63C 2	3GAA061313-...F	2750	69.5	68.8	63.2	0.78	0.96	4.7	1.28	2.8	2.6	0.0002	4.6	59
0.75	M3AA 71C 2	3GAA071003-...E	2780	75.7	78.7	77.8	0.79	1.81	5.3	2.5	3.0	2.7	0.00056	6.5	58
1.5	M3AA 80C 2	3GAA081003-...E	2830	80.7	82.0	80.0	0.83	3.2	5.8	5	2.6	3.0	0.0011	11	60
2.2	²⁾ M3AA 90LB 2	3GAA091003-...E	2840	81.0	83.2	83.5	0.86	5.5	6.4	9	2.4	2.7	0.0027	18	68
4	M3AA100LF 2	3GAA101560-...E	2880	84.3	86.1	85.7	0.86	7.9	8.0	13.2	3.0	3.3	0.005	25	68
5.5	²⁾ M3AA 112MF 2	3GAA111360-...E	2850	87.0	88.9	89.4	0.90	10.1	7.2	18.4	3.4	3.4	0.0062	30	68
9.2	²⁾ M3AA 132SF 2	3GAA131160-...E	2885	88.1	90.2	90.7	0.91	16.5	6.9	30.4	2.0	2.7	0.018	52	68
11	M3AA 132SMF 2	3GAA131260-...E	2900	90.3	90.5	89.4	0.87	20.2	8.5	36.2	2.7	3.7	0.0186	77	68
15	M3AA 132SMG 2	3GAA131270-...E	2905	90.4	90.8	90.0	0.84	28.5	9.1	49.3	3.3	4.0	0.02	81	69
18.5	M3AA 160SMJ 2	3GAA131290-...E	2895	91.1	92.0	92.1	0.89	32.9	9.7	61	3.2	4.3	0.0256	93	68
22	M3AA 160MLD 2	3GAA161440-...G	2933	91.7	92.8	92.8	0.90	38	8.1	71.6	3.2	3.6	0.063	123	69
27	M3AA 160MLE 2	3GAA161450-...G	2939	92.2	93.1	93.1	0.90	46.4	8.8	87.7	3.4	3.8	0.072	145	69
30	²⁾ M3AA 180MLB 2	3GAA181420-...G	2950	92.7	93.5	93.3	0.88	53	7.9	97.1	2.8	3.3	0.092	149	69
45	²⁾ M3AA 200MLC 2	3GAA201430-...G	2957	93.3	93.8	93.2	0.90	78.2	8.1	145	3.1	3.3	0.196	225	72
55	²⁾ M3AA 200MLD 2	3GAA201440-...G	2953	93.8	94.5	94.3	0.89	95	7.8	177	2.9	3.3	0.217	241	72
55	M3AA 225SMB 2	3GAA221220-...G	2961	93.9	94.3	93.6	0.88	96	6.5	177	2.4	2.5	0.274	286	74
75	²⁾ M3AA 225SMC 2	3GAA221230-...G	2969	94.4	94.6	94.0	0.84	136	7.4	241	3.2	3.1	0.309	312	74
75	²⁾ M3AA 225SMD 2	3GAA221240-...G	2967	94.4	94.6	94.0	0.87	131	7.7	241	3.2	3.0	0.329	317	74
75	²⁾ M3AA 250SMB 2	3GAA251220-...G	2970	94.5	94.8	94.3	0.89	128	7.6	241	2.8	3.1	0.583	351	75
80	²⁾ M3AA 225SMD 2	3GAA221240-...G	2964	94.4	94.8	94.3	0.87	140	7.3	257	3.0	2.8	0.329	317	74
90	²⁾ M3AA 250SMC 2	3GAA251230-...G	2971	95.0	95.3	94.9	0.89	153	7.6	289	2.5	3.1	0.644	386	75

²⁾ Temperature rise class F

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

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-30-1: 2014			Power factor Cosφ	Current		Torque		Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure Level L _{PA} dB	
				Full load 100%	3/4 load 75%	1/2 load 50%		I _N A	I _s /I _N	T _N Nm	T _i /T _N				T _b /T _N
1500 r/min = 4 poles				400 V 50 Hz				CENELEC-design							
0.06	M3AA 56A 4	3GAA052311-...F	1390	52.8	49.6	40.8	0.54	0.3	3.2	0.41	3.2	3.3	0.00019	2.9	47
0.09	M3AA 56B 4	3GAA052312-...F	1400	56.2	52.6	44.8	0.59	0.39	3.1	0.62	2.3	2.8	0.00024	3.2	48
0.12	M3AA 63A 4	3GAA062311-...F	1403	59.1	55.8	47.1	0.63	0.41	2.9	0.82	2.2	2.4	0.0003	3.7	51
0.18	M3AA 63B 4	3GAA062312-...F	1380	64.7	62.8	55.9	0.68	0.58	3.6	1.25	2.0	2.4	0.00034	4.4	54
0.25	M3AA 71A 4	3GAA072311-...E	1430	68.5	66.8	59.9	0.67	0.76	4.7	1.67	2.2	3.0	0.0006	5.2	45
0.37	M3AA 71B 4	3GAA072312-...E	1375	69.7	71.9	71.1	0.79	0.96	3.8	2.5	2.0	2.2	0.0008	5.9	45
0.55	M3AA 80A 4	3GAA082311-...E	1406	77.1	78.6	76.8	0.78	1.29	6.4	3.73	2.8	2.9	0.0022	8.5	50
0.75	M3AA 80E 4	3GAA082315-...E	1425	79.8	80.4	77.9	0.72	1.88	6.6	5	3.5	3.6	0.002	15	54
1.1	M3AA 90LB 4	3GAA092520-...E	1435	83.7	83.7	81.7	0.78	2.4	6.6	7.3	2.9	3.2	0.0043	16	50
1.5	M3AA 90LD 4	3GAA092540-...E	1435	84.2	84.1	81.9	0.76	3.3	7.0	9.9	3.1	3.5	0.0048	17	50
2.2	M3AA 100LC 4	3GAA102530-...E	1450	86.4	86.2	84.1	0.79	4.6	7.3	14.4	2.8	3.4	0.009	25	54
3	M3AA 100LD 4	3GAA102540-...E	1445	85.7	86.1	85.1	0.79	6.3	7.0	19.8	2.4	3.0	0.011	28	63
4	M3AA 112MB 4	3GAA112320-...E	1445	86.7	86.5	85.2	0.75	8.8	7.3	26.4	3.1	3.4	0.0126	34	64
5.5	M3AA 132M 4	3GAA132300-...E	1465	89.0	89.5	88.6	0.79	10.9	6.3	36	1.9	2.6	0.038	48	66
7.5	M3AA 132MA 4	3GAA132310-...E	1460	88.7	89.5	89.0	0.79	14.7	6.4	49	1.8	2.6	0.048	59	63
11	M3AA 160MLA 4	3GAA162410-...G	1466	90.4	91.6	91.4	0.84	20.9	6.8	71.6	2.2	2.8	0.081	99	62
15	M3AA 160MLB 4	3GAA162420-...G	1470	91.4	92.4	92.2	0.83	28.5	7.1	97.4	2.6	3.0	0.099	118	62
18.5	M3AA 180MLA 4	3GAA182410-...G	1477	91.9	92.9	92.7	0.84	34.5	7.2	119	2.6	2.9	0.166	146	62
22	M3AA 180MLB 4	3GAA182420-...G	1475	92.3	93.3	93.2	0.84	40.9	7.3	142	2.6	3.0	0.195	163	62
30	M3AA 200MLA 4	3GAA202410-...G	1480	93.2	94.0	93.7	0.84	55.2	7.4	193	2.8	3.0	0.309	218	63
37	M3AA 225SMA 4	3GAA222210-...G	1479	93.4	93.9	93.4	0.84	68	7.1	238	2.6	2.9	0.356	240	66
45	M3AA 225SMB 4	3GAA222220-...G	1480	93.9	94.3	93.9	0.85	81.3	7.5	290	2.8	3.2	0.44	273	66
55	M3AA 250SMA 4	3GAA252210-...G	1480	94.4	94.9	94.6	0.85	98.9	7.0	354	2.6	2.9	0.765	314	67
75	M3AA 280SMA 4	3GAA282210-...G	1478	94.3	94.9	94.6	0.85	135	7.1	484	2.8	3.0	0.866	389	67
90	²⁾ M3AA 280SMB 4	3GAA282220-...G	1478	94.6	95.4	95.2	0.84	163	7.7	581	3.2	3.4	0.941	418	67

²⁾ Temperature rise class F

Technical data, 400 V 50 Hz

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IE2 efficiency class according to IEC 60034-30-1: 2014

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-30-1: 2014			Power factor Cosφ	Current		Torque		Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure Level L _{PA} dB	
				Full load 100%	3/4 load 75%	1/2 load 50%		I _N A	I _s /I _N	T _N Nm	T _i /T _N				T _b /T _N
1500 r/min = 4 poles				400 V 50 Hz				High-output design							
0.25	M3AA 63C 4	3GAA062313-...F	1374	68.5	68.8	64.6	0.70	0.70	3.1	1.7	2.2	2.4	0.0004	5	55
0.55	M3AA 71C 4	3GAA072003-...E	1355	67.5	71.5	70.0	0.75	1.56	4.1	3.8	2.3	2.2	0.0011	6.5	45
0.95	M3AA 80C 4	3GAA082003-...E	1395	76.0	76.9	76.3	0.80	2.2	5.2	6.5	2.5	2.6	0.0023	10.5	50
1.1	²⁾ M3AA 80C 4	3GAA082004-...E	1370	73.3	75.6	74.5	0.81	2.7	5.0	7.7	2.4	2.6	0.0023	10.5	50
1.85	M3AA 90LE 4	3GAA092550-...E	1410	79.7	82.0	80.9	0.76	4.4	5.3	12.5	2.6	2.7	0.0043	16	50
2.2	M3AA 90LF 4	3GAA092560-...E	1390	80.0	83.1	83.1	0.83	4.7	5.3	15.1	2.3	2.6	0.0048	17	50
3.75	M3AA 100LG 4	3GAA102570-...E	1415	84.0	85.9	85.2	0.74	8.7	5.7	25.3	2.0	2.4	0.009	25	60
4	²⁾ M3AA 100LG 4	3GAA102570-...E	1415	83.2	85.8	85.5	0.76	9.1	5.5	26.9	2.1	2.5	0.009	25	60
5.5	²⁾ M3AA 112MF 4	3GAA112360-...E	1410	82.5	84.0	83.4	0.81	11.8	6.2	37.3	2.9	3.4	0.0126	34	64
9.2	M3AA 132MF 4	3GAA132360-...E	1460	89.8	90.8	90.2	0.79	18.7	7.3	60.1	2.2	3.4	0.048	59	59
11	²⁾ M3AA 132ME 4	3GAA132350-...E	1440	86.8	89.5	90.2	0.83	22	6.0	72.9	2.0	2.8	0.048	59	59
11	M3AA 132SMF 4	3GAA132260-...E	1460	90.4	90.8	89.9	0.79	21.5	7.7	71.9	2.1	3.1	0.0433	83	65
15	²⁾ M3AA 132SMH 4	3GAA132280-...E	1455	90.6	91.0	90.3	0.77	29.8	7.1	98.4	2.4	2.9	0.0517	82	67
18.5	M3AA 160MLC 4	3GAA162430-...G	1469	91.4	92.5	92.3	0.84	34.7	7.6	120	3.0	3.2	0.11	127	62
22	²⁾ M3AA 160MLD 4	3GAA162440-...G	1464	91.6		92.7	0.85	41.3	6.9	143	2.5	2.9	0.125	140	62
30	²⁾ M3AA 180MLC 4	3GAA182430-...G	1474	92.3	93.5	93.5	0.83	56.5	7.3	194	2.7	2.9	0.217	177	62
37	M3AA 200MLB 4	3GAA202420-...G	1479	93.4	94.4	94.4	0.85	67.2	7.1	238	2.6	2.9	0.343	234	63
45	²⁾ M3AA 200MLC 4	3GAA202430-...G	1479	93.6	94.4	94.2	0.83	83.6	7.5	290	2.9	3.2	0.366	246	63
55	²⁾ M3AA 225SMC 4	3GAA222230-...G	1478	94.0	94.7	94.5	0.85	99.3	7.4	355	2.9	3.1	0.474	287	66
64	M3AA 225SMD 4	3GAA222240-...G	1480	94.2	94.6	94.1	0.85	115	8.2	412	3.3	3.3	0.542	314	66
75	²⁾ M3AA 250SMB 4	3GAA252220-...G	1478	94.4	95.1	94.8	0.85	134	7.3	484	2.8	3.1	0.866	350	67
90	²⁾ M3AA 250SMC 4	3GAA252230-...G	1478	94.6	95.3	95.0	0.84	163	7.4	581	3.1	3.3	0.941	377	67

²⁾ Temperature rise class F

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				Full load 100%	3/4 load 75%	1/2 load 50%		I _N A	I _s /I _N	T _N Nm	T _i /T _N	T _b /T _N			
1000 r/min = 6 poles				400 V 50 Hz				CENELEC-design							
0.09	M3AA 63A 6	3GAA063311-...F	890	50.7	48.5	42.0	0.62	0.41	2.8	0.96	2.0	2.2	0.00042	4.2	48
0.12	M3AA 63B 6	3GAA063312-...F	890	50.6	46.8	39.3	0.60	0.55	3.0	1.29	2.2	2.4	0.00052	4.5	53
0.18	M3AA 71A 6	3GAA073311-...E	870	56.6	58.7	54.8	0.71	0.61	2.8	1.97	1.9	2.0	0.0009	5.5	42
0.25	M3AA 71B 6	3GAA073312-...E	890	61.6	61.8	56.7	0.68	0.84	3.1	2.68	2.3	2.4	0.0012	6.5	42
0.37	M3AA 80A 6	3GAA083311-...E	923	67.6	67.5	62.6	0.73	1.04	4.4	3.82	2.6	2.8	0.0019	9	47
0.75	M3AA 90LB 6	3GAA093520-...E	930	77.6	78.0	75.6	0.71	1.96	4.0	7.7	2.0	2.3	0.0048	18	44
1.1	M3AA 90LD 6	3GAA093540-...E	935	78.2	79.2	77.5	0.66	2.94	4.2	11.2	2.2	2.6	0.0056	20	44
1.5	M3AA 100LC 6	3GAA103530-...E	945	80.3	81.4	80.7	0.73	3.6	3.9	15.1	1.7	2.0	0.009	26	49
2.2	M3AA 112MB 6	3GAA113320-...E	955	81.9	81.8	79.2	0.72	5.3	5.2	21.9	1.8	2.2	0.01	34	56
3	M3AA 132S 6	3GAA133100-...E	960	83.3	82.9	80.5	0.65	7.69	4.3	29.8	1.6	2.3	0.031	46	57
4	M3AA 132MB 6	3GAA133320-...E	975	86.4	85.8	83.1	0.70	9.4	7.3	39.2	2.1	4.4	0.045	54	57
5.5	M3AA 132MC 6	3GAA133330-...E	965	86.1	85.6	83.0	0.67	13.3	6.2	54.3	2.5	2.8	0.049	59	61
7.5	M3AA 160MLA 6	3GAA163410-...G	975	88.5	89.8	89.7	0.79	15.4	7.4	73.4	1.7	3.2	0.087	98	59
11	M3AA 160MLB 6	3GAA163420-...G	972	89.3	90.6	90.5	0.79	22.5	7.5	108	1.9	2.9	0.114	125	59
15	M3AA 180MLA 6	3GAA183410-...G	977	90.5	91.5	91.0	0.77	31	5.8	146	1.8	2.7	0.168	148	59
18.5	M3AA 200MLA 6	3GAA203410-...G	988	91.6	92.3	91.7	0.80	36.4	6.7	178	2.3	2.9	0.382	196	63
22	M3AA 200MLB 6	3GAA203420-...G	987	92.0	92.9	92.8	0.82	42	6.6	212	2.2	2.8	0.448	218	63
30	M3AA 225SMA 6	3GAA223210-...G	986	92.6	93.3	92.8	0.83	56.2	7.0	290	2.6	2.9	0.663	266	63
37	M3AA 250SMA 6	3GAA253210-...G	989	93.1	93.8	93.4	0.82	69.9	6.8	357	2.4	2.7	1.13	294	63
45	M3AA 280SMA 6	3GAA283210-...G	988	93.2	94.0	93.9	0.84	82.9	6.8	434	2.4	2.6	1.37	378	63
55	²⁾ M3AA 280SMB 6	3GAA283220-...G	988	93.2	94.1	94.0	0.84	101	7.1	531	2.6	2.8	1.5	404	63

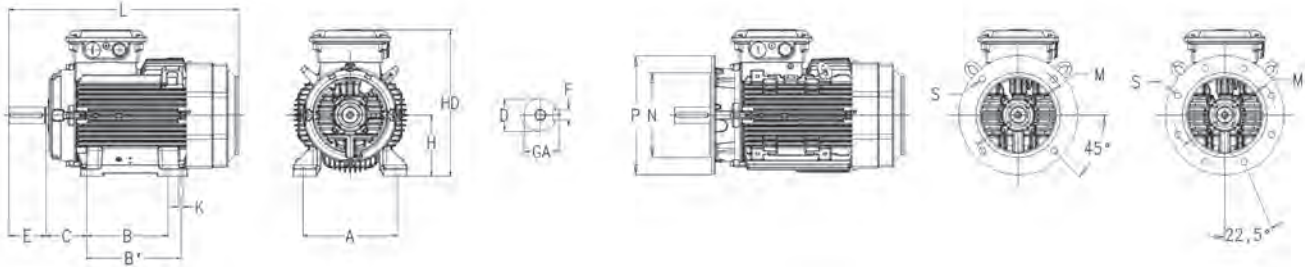
²⁾ Temperature rise class F

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-30-1: 2014			Power factor Cosφ	Current			Torque		Moment of inertia J = 1/4 GD ² kgm ²	Weight kg	Sound pressure Level L _{PA} dB
				Full load 100%	3/4 load 75%	1/2 load 50%		I _N A	I _s /I _N	T _N Nm	T _i /T _N	T _b /T _N			
1000 r/min = 6 poles				400 V 50 Hz				High-output design							
0.18	M3AA 63C 6	3GAA063313-...F	880	56.6	55.4	49.1	0.62	0.72	2.8	1.96	2.1	2.2	0.0006	5.3	45
0.37	M3AA 71C 6	3GAA073003-...E	895	63.6	64.1	59.3	0.66	1.27	3.7	3.9	2.4	2.6	0.0015	7	44
1.3	²⁾ M3AA 90LB 6	3GAA093003-...E	910	74.4	76.8	74.6	0.69	3.6	3.6	13.6	1.9	2.0	0.0048	18	44
15	M3AA 160MLC 6	3GAA163430-...G	971	89.7	91.2	91.2	0.77	31.3	7.3	147	1.8	3.6	0.131	138	59
18.5	M3AA 180MLB 6	3GAA183420-...G	975	90.7	92.0	92.0	0.79	37.2	5.8	181	1.7	2.7	0.198	162	59
30	²⁾ M3AA 200MLC 6	3GAA203430-...G	985	92.0	93.1	92.9	0.83	56.7	6.9	290	2.3	2.8	0.531	245	63
37	M3AA 225SMB 6	3GAA223220-...G	985	93.1	94.0	94.0	0.83	69.1	6.6	358	2.3	2.6	0.821	300	63
45	²⁾ M3AA 225SMC 6	3GAA223230-...G	984	92.6	93.9	94.0	0.83	84.4	6.4	436	2.3	2.6	0.821	300	63
45	²⁾ M3AA 250SMB 6	3GAA253220-...G	989	93.4	94.1	93.9	0.83	83.7	7.0	434	2.5	2.7	1.37	341	63
55	²⁾ M3AA 250SMC 6	3GAA253230-...G	988	93.2	94.1	94.0	0.84	101	7.1	531	2.6	2.8	1.5	367	63

²⁾ Temperature rise class F

Dimension drawings

Process performance IE2 aluminum motors



Foot-mounted motor IM1001, B3 and flange-mounted motor IM3001, B5

Motor size	Poles	D	GA	F	E	L max	A	B	B1	C	HD	K	M	N	P	S
56		9	10.4	3	20	183	90	71		36	56	143	100	80	120	7
63		11	12.5	4	23	208	100	80		40.1	154	7.5	115	95	140	10
71		14	12.5	5	30	240	112	90		45	180	7	130	110	160	10
80		19	21.5	6	40	265.5	125	100		50	193.5	10	165	130	200	12
90	S 8	24	27	8	50	284.5	140	125		56	217	10	165	130	200	12
90	L2, L8, LB 2-8	24	27	8	50	309.5	140	125		56	217	10	165	130	200	12
90	LD 4-6	24	27	8	50	331.5	140	125		56	217	10	165	130	200	12
100	LB2, LC 4-8, LA8, LB8	28	31	8	60	351	160	140		63	237	12	215	180	250	15
100	LD 4	28	31	8	60	373	160	140		63	237	12	215	180	250	15
112		28	31	8	60	393	190	140		70	249	12	215	180	250	15
132	SB2, M4, MA4, MBA4	38	41	10	80	447	216	140	178	89	295.5	12	265	230	300	14.5
132	SC2, MC6	38	41	10	80	487	216	140	178	89	295.5	12	265	230	300	14.5
132	SM_	38	41	10	80	550	216	140	178	89	321	12	265	230	300	14.5
160	MLA 2-8, MLB2, MLB8	42	45	12	110	584	254	210	254	108	370	15	300	250	350	19
160	MLB 4-6, MLC 2-8, MLD 2-4	42	45	12	110	681	254	210	254	108	370	15	300	250	350	19
180		48	51.5	14	110	726	279	241	279	121	405	15	300	250	350	19
200		55	59	16	110	821	318	267	305	133	532	18	400	350	400	19
225		55	59	16	110	850	356	286	311	149	579	18	400	350	450	19
225		60	63	18	140	880	356	286	311	149	579	18	400	350	450	19
250		60	64	18	140	884	406	406	349	168	627	22	500	450	550	19
250		65	69	18	140	884	406	406	349	168	627	22	500	450	550	19
280		65	69	18	140	884	457	457	419	190	657	24	500	450	550	19
280		75	79.5	20	140	884	457	457	419	190	657	24	500	450	550	19

IMB14 (IM3601)

Motor size	M	N	P	S	Motor size	M	N	P	S
63	75	60	90	5	100	130	110	160	8
71	85	70	105	6	112	130	110	160	8
80	100	80	120	6	132	165	130	200	10
90	115	95	140	8	132SM_	165	130	200	10

Tolerances		Tolerances	
A, B	±0,8	F	ISO h9
D	ISO j6 ≤ Ø 28 mm	H	-0,5
	ISO k6 < Ø 38 mm	N	ISO js6
	ISO m6 ≥ Ø 55 mm	C	±0,8

The table gives the main dimension in mm. For detailed drawings please see our web pages www.abb.com/motors&generators.

Motors in brief

Aluminum motors, sizes 56 - 132

Motor size	M3AA	56-63	71	80	90	100	112	132
Stator and end shields	Material	Die-cast aluminum alloy						
	Paint colour shade	Munsell blue 8B 4.5/3.25						
	Corrosion class	C3 according to IEO/EN 12944-5						
Feet	Integrated aluminum feet							
Bearings	D-end	6201-2Z/C3	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6306-2Z/C3	6306-2Z/C3	6208-2Z/C3 6308-2Z/C3 ¹⁾ E2.6208-2Z/C3 ²⁾ E2.6308-2Z/C3 ³⁾
	N-end	6201-2Z/C3	6202-2Z/C3	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6205-2Z/C3	6206-2Z/C3 E2.6206-2Z/C3 ⁴⁾
Axially-locked bearings	Inner bearing cover	ND-end retaining ring	Locked at D-end					
Bearing seal	D-end	V-ring						
	N-end	Labyrinth seal						
Lubrication	Permanent grease lubrication. Grease temperature range -40°C to +160°C							
Measuring nipples for condition monitoring of the bearings	Not included							
Rating plate	Material	Aluminum						
Terminal box	Material	Die-cast aluminum alloy, integrated to stator						
	Cover screws material	Zinc-electroplated steel						
Connections	Openings	2x(M16+M16)	2x(M20 + M20)	2x(M20+M25)			2x(M20+M25) ⁵⁾ 2x(M40+M32+M12) ⁶⁾	
	Terminals	6 terminals for connection with cable lugs (not included)						
	Cable glands	Optional						
Fan	Material	Glass-fiber reinforced polypropylene						
Fan cover	Material	Polypropylene						
	Paint colour shade	Munsell blue 8B 4.5/3.25						
	Corrosion class	C3						
Stator winding	Material	Copper						
	Insulation	Insulation class F						
	Winding protection	Optional						
Rotor winding	Material	Die-cast aluminum						
Balancing	Half key balancing							
Key ways	Closed key way							
Drain holes	Without drain holes		Drain holes with closable plastic plugs, open on delivery					
External earthing bolt	As option							
Enclosure	IP 55							
Cooling method	IC 411							

¹⁾ (SM) except 4p 11&15kW HO

²⁾ 2p 9,2kw HO

³⁾ 2p 15kW HO

⁴⁾ HO 2p 9,2&15kW

⁵⁾ S, SB, M, MA

⁶⁾ SC, MC, SMA-SME

Motors in brief

Aluminum motors, sizes 160 - 280

Motor size	M3AA	160	180	200	225	250	280
Stator and end shields	Material	Die-cast aluminum alloy		Extruded aluminum alloy			
	Paint colour shade	Munsell blue 8B 4.5/3.25					
	Corrosion class	C3 medium according IEO/EN 12944-5					
Feet		Separate aluminum feet		Separate cast iron feet			
Bearings	D-end	6309-2Z/C3	6310-2Z/C3	6312-2Z/C3	6313-2Z/C3	6315-2Z/C3	6315/C3 ¹⁾ 6316/C3 ²⁾
	N-end	6209-2Z/C3	6209-2Z/C3	6210-2Z/C3	6212-2Z/C3	6213-2Z/C3	6213/C3
Axially-locked bearings	Inner bearing cover	Locked at D-end					
Bearing seal	D-end	Axial seal					
	N-end	Axial seal					
Lubrication		Permanently lubricated shielded bearings					Regreasable
Measuring nipples for condition monitoring of the bearings		Not included					
Rating plate	Material	Aluminum					
Terminal box	Material	Die-cast aluminum alloy, integrated		Deep-drawn steel sheet, bolted to stator to stator			
	Cover screws material	Zinc-electroplated steel					
Connections	Openings	(2xM40+M16+(2xM40)		2xFL13, 2xM40 + 1xM16		2xFL21	
		Knock-out					
	Terminals	6 terminals for connection with cable lugs (not included)					
	Cable glands	Optional					
Fan	Material	Glass-fiber reinforced polypropylene					
Fan cover	Material	Steel					
	Paint colour shade	Munsell blue 8B 4.5/3.25					
	Corrosion class	C3					
Stator winding	Material	Copper					
	Insulation	Insulation class F					
	Winding protection	3 PTC thermistors, 150 °C					
Rotor winding	Material	Die-cast aluminum					
Balancing		Half key balancing					
Key ways		Closed key way					
Drain holes		Drain holes with closable plastic plugs, open on delivery					
External earthing bolt		As option					
Enclosure		IP 55					
Cooling method		IC411					

¹⁾ SC, MC, SMA-SME

²⁾ 4-8 poles