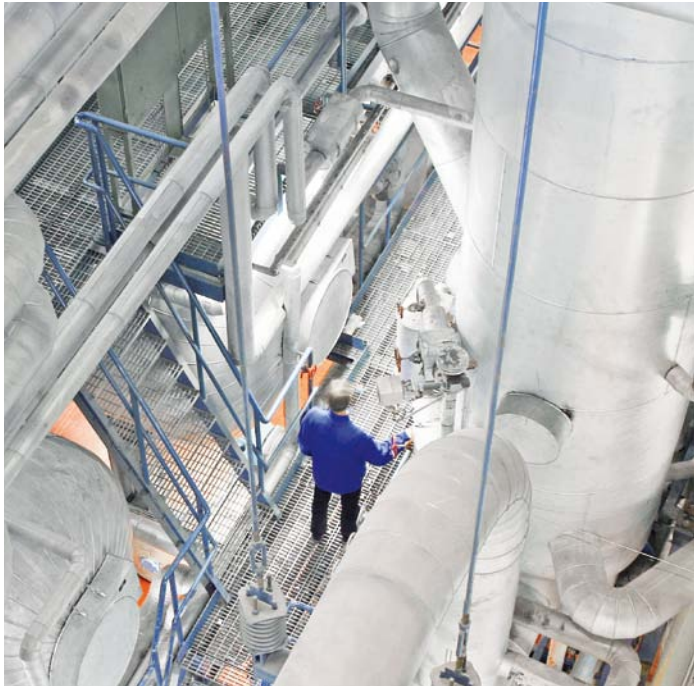




Catalog

Low voltage  
General performance  
IE2 high efficiency motors

We provide motors, generators and mechanical power transmission products, services and expertise to save energy and improve customers' processes over the total life cycle of our products, and beyond.





# General performance IE2 high efficiency motors Sizes 56 to 355, from 0.06 to 250 kW



ABB's General performance IE2 high efficiency motors are best suited for applications where simplicity and off-the-shelf availability are paramount. With ABB quality and support these motors have the features appreciated by volume customers and serial OEM's. Motors have IE2 efficiency.

Motor range for cast iron motors 71 to 355, 0.25 to 250 kW and aluminum motors is 56 to 250, 0.06 to 55 kW.

Ordering information	04
Technical data	
– Cast iron	05
– Aluminum	08
Variant codes	
– Cast iron	09
– Aluminum	11
Dimension drawings	
– Cast iron	13
– Aluminum	13
General performance motors in brief	
– Cast iron	14
– Aluminum	17

# Ordering information

When placing an order, please state the following minimum data in the order, as in the example.

The product code of the motor is composed in accordance with the following example.

<b>Motor type</b>	<b>M2BA 112 MB</b>
<b>Pole number</b>	<b>4</b>
<b>Mounting arrangement (IM-code)</b>	<b>IM B3 (IM 1001)</b>
<b>Rated output</b>	<b>4 kW</b>
<b>Product code</b>	<b>3GBA 112 212-ADB</b>
<b>Variant codes if needed</b>	

## Motor size

A	B	C	D, E, F
<b>M2BA</b>	<b>112 MB</b>	<b>3GBA 112 212</b>	<b>- ADB, 122, 451, etc.</b>
		1   2   3   4   5   6   7   8   9   10   11   12   13   14...	
A Motor type		D Code for mounting arrangement	E Voltage and frequency code
B Motor size			F Generation code followed by variant codes
C Product code			

## Explanation of the product code

### Positions 1 to 4

**3GAA** = Totally enclosed motor with aluminum stator frame  
**3GBA** = Totally enclosed motor with cast iron frame

### Position 4

Type of rotor  
**A** = Squirrel cage rotor

### Positions 5 and 6

IEC size

<b>05</b> = 56	<b>16</b> = 160
<b>06</b> = 63	<b>18</b> = 180
<b>07</b> = 71	<b>20</b> = 200
<b>08</b> = 80	<b>22</b> = 225
<b>09</b> = 90	<b>25</b> = 250
<b>10</b> = 100	<b>28</b> = 280
<b>11</b> = 112	<b>31</b> = 315
<b>13</b> = 132	<b>35</b> = 355

### Position 7

Pole pairs  
**1** = 2 poles  
**2** = 4 poles  
**3** = 6 poles

### Positions 8 to 10

Running number

### Position 11

- (dash)

### Position 12

#### Mounting arrangement

**A** = Foot-mounted motor  
**B** = Flange-mounted motor. Large flange with clearance holes.  
**C** = Flange-mounted motor. Small flange with tapped holes.  
**F** = Foot- and flange-mounted motor. Special flange.  
**H** = Foot- and flange-mounted motor. Large flange with clearance holes.  
**J** = Foot- and flange-mounted motor. Small flange with tapped holes.  
**N** = Flange-mounted (CI ring flange FF)  
**P** = Foot- and flange-mounted motor (CI ring flange FF)

### Position 13

#### Voltage and frequency

##### Single-speed motors

**D** 400 VΔ, 415 VΔ, 460 VΔ 60 Hz, 690 VY 50 Hz  
**S** 230 VΔ, 400 VY, 415 VY 50 Hz, 460 VΔ 60 Hz\*)

### Position 14

Version A,B,C... = Generation code followed by variant codes

\*) M2AA 200 is not available for voltages less than 380 VD

# General performance cast iron motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	Weight kg	Sound pressure level L <sub>PA</sub> dB
				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>I</sub> / T <sub>N</sub>	T <sub>b</sub> / T <sub>N</sub>			
<b>3000 r/min = 2 poles</b>			<b>400 V 50 Hz</b>			<b>GENELEC-design</b>									
0.37	M2BA 71 MA	3GBA 071 211-••B	2660	69.2	73.5	73.7	0.80	0.96	3.9	1.32	2.2	2.3	0.00039	11	58
0.55	M2BA 71 MB	3GBA 071 212-••B	2680	73.2	77.3	79.3	0.85	1.27	4.3	1.95	2.4	2.5	0.00051	11	56
0.75	M2BA 80 MB	3GBA 081 212-••B	2895	80.6	79.9	76.2	0.74	1.81	7.7	2.4	4.2	4.2	0.001	16	57
1.1	M2BA 80 MC	3GBA 081 213-••B	2870	81.8	82.4	80.2	0.80	2.4	7.5	3.6	2.7	3.5	0.0012	18	60
1.5	M2BA 90 SLB	3GBA 091 212-••B	2900	82.2	84.1	82.7	0.86	3	7.5	4.9	2.5	2.6	0.00254	24	69
2.2	M2BA 90 SLC	3GBA 091 213-••B	2885	84.7	86.7	85.7	0.87	4.3	6.8	7.2	1.9	2.5	0.0028	25	64
3	M2BA 100 LB	3GBA 101 212-••B	2925	85.2	84.9	82.8	0.86	5.9	9.1	9.7	3.1	3.5	0.00528	36	68
4	M2BA 112 MB	3GBA 111 212-••B	2895	86.1	87.0	86.6	0.86	7.7	8.1	13.1	2.9	3.2	0.00575	37	70
5.5	M2BA 132 SMB	3GBA 131 212-••B	2865	88.0	88.6	88.0	0.86	10.4	7.0	18.3	2.0	2.7	0.01275	68	70
7.5	M2BA 132 SMC	3GBA 131 214-••B	2890	88.6	88.8	87.5	0.84	14.5	7.3	24.7	2.0	3.6	0.01359	70	70
11	M2BA 160 MLA	3GBA 161 044-••G	2920	89.8	91.0	90.7	0.89	19.8	5.9	35.9	1.6	2.7	0.038	119	69
15	M2BA 160 MLB	3GBA 161 045-••G	2934	91.1	92.2	92.0	0.90	26.4	7.0	48.8	2.5	3.1	0.048	133	69
18.5	M2BA 160 MLC	3GBA 161 046-••G	2934	91.0	91.8	91.2	0.89	32.9	7.3	60.2	2.6	3.2	0.052	141	73
22	M2BA 180 MLA	3GBA 181 042-••G	2933	91.5	92.8	92.8	0.91	38.1	7.8	71.6	3.0	3.5	0.062	173	73
30	M2BA 200 MLA	3GBA 201 043-••G	2950	92.2	92.9	92.3	0.89	52.7	7.8	97.1	2.7	3.3	0.092	214	75
37	M2BA 200 MLB	3GBA 201 044-••G	2947	92.5	93.0	92.5	0.91	63.4	7.7	119	2.8	3.6	0.116	240	75
45	M2BA 225 SMA	3GBA 221 042-••G	2956	93.0	93.5	92.9	0.90	77.6	8.1	145	3.1	3.4	0.197	297	75
55	M2BA 250 SMA	3GBA 251 042-••G	2960	93.9	94.3	93.6	0.90	93.9	6.8	177	2.6	2.5	0.275	339	75
75	M2BAT 280 SMA	3GBA 281 210-••E	2977	94.0	93.7	92.3	0.88	130	7.6	240	2.1	3.0	0.8	590	78
90	M2BAT 280 SMB	3GBA 281 220-••E	2976	94.3	94.2	93.1	0.90	153	7.4	288	2.1	2.9	0.9	630	78
110	M2BAT 315 SMA	3GBA 311 210-••E	2982	94.6	94.1	92.7	0.86	195	7.6	352	2.0	3.0	1.2	860	83
132	M2BAT 315 SMB	3GBA 311 220-••E	2982	94.9	94.6	93.4	0.88	228	7.4	422	2.2	3.0	1.4	920	83
160	M2BAT 315 SMC	3GBA 311 230-••E	2981	95.2	95.0	94.1	0.89	272	7.5	512	2.3	3.0	1.7	1010	83
200	M2BAT 315 MLA	3GBA 311 410-••E	2980	95.3	95.2	94.4	0.9	336	7.7	640	2.6	3.0	2.1	1170	83
250	M2BAT 355 S	3GBA 351 100-••E	2983	95.4	95.2	94.3	0.89	424	6.8	800	1.5	2.8	2.7	1500	83
<b>3000 r/min = 2 poles</b>			<b>400 V 50 Hz</b>			<b>High-output design</b>									
110 <sup>1)</sup>	M2BAT 280 SMA	3GBA 281 230-••E	2978	94.7	94.6	93.8	0.90	186	7.9	352	2.4	3.0	1.15	690	78

<sup>1)</sup> Temperature rise class F

The two bullets in the product code indicate choice of mounting arrangements, voltage and frequency code (see ordering information page).

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

Efficiency values are given according to IEC 60034-2-1; 2007.

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.

IE-class concerns motors from 0.75 kW to 375 kW.

# General performance cast iron motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	Weight kg	Sound pressure level L <sub>PA</sub> dB
				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>l</sub> /T <sub>N</sub>	T <sub>b</sub> /T <sub>N</sub>			
<b>1500 r/min = 4 poles</b>			<b>400 V 50 Hz</b>			<b>CENELEC-design</b>									
0.25	M2BA 71 MA	3GBA 072 211-••B	1365	68.3	70.8	69.7	0.81	0.65	3.5	1.74	1.9	2.0	0.00074	10	45
0.37	M2BA 71 MB	3GBA 072 212-••B	1380	72.4	74.5	74.6	0.83	0.88	4.0	2.5	1.6	2.1	0.00088	11	45
0.55	M2BA 80 MA	3GBA 082 211-••B	1415	74.5	73.8	70.0	0.73	1.45	5.0	3.7	2.0	2.8	0.00144	15	45
0.75	M2BA 80 MD	3GBA 082 214-••B	1430	81.0	80.7	77.3	0.73	1.83	5.3	5	2.7	3.2	0.00205	17	50
1.1	M2BA 90 SLB	3GBA 092 212-••B	1435	83.6	84.5	83.2	0.80	2.3	6.1	7.3	2.7	3.4	0.0044	25	50
1.5	M2BA 90 SLD	3GBA 092 215-••B	1430	84.3	85.6	84.7	0.83	3	6.3	10	2.7	3.4	0.0053	27	56
2.2	M2BA 100 LC	3GBA 102 213-••B	1450	85.9	85.1	83.4	0.78	4.7	6.4	14.4	2.9	3.6	0.00948	36	56
3	M2BA 100 LD	3GBA 102 214-••B	1450	86.8	87.0	85.4	0.79	6.3	7.7	19.7	2.9	3.4	0.011	38	58
4	M2BA 112 MB	3GBA 112 212-••B	1440	86.8	87.7	87.3	0.81	8.2	7.0	26.5	2.5	2.9	0.0125	44	59
5.5	M2BA 132 SMB	3GBA 132 212-••B	1460	89.0	89.8	88.9	0.80	11.1	5.9	35.9	1.7	2.4	0.03282	70	67
7.5	M2BA 132 SMC	3GBA 132 213-••B	1450	89.3	90.1	90.0	0.81	14.9	5.6	49.3	1.6	2.4	0.03659	73	64
11	M2BA 160 MLA	3GBA 162 043-••G	1463	90.2	91.4	91.2	0.85	20.7	7.1	71.7	2.6	3.0	0.084	134	65
15	M2BA 160 MLB	3GBA 162 044-••G	1463	90.6	91.8	91.6	0.84	28.4	7.2	97.9	2.7	3.6	0.095	141	65
18.5	M2BA 180 MLA	3GBA 182 043-••G	1464	91.2	92.3	92.1	0.84	34.8	7.9	120	3.1	3.6	0.112	175	62
22	M2BA 180 MLB	3GBA 182 044-••G	1465	91.6	92.5	92.1	0.83	41.7	8.0	143	3.0	3.8	0.13	187	65
30	<sup>1)</sup> M2BA 200 MLA	3GBA 202 042-••G	1474	92.3	93.4	93.5	0.83	56.5	7.3	194	2.7	2.9	0.217	241	62
37	M2BA 225 SMA	3GBA 222 043-••G	1479	93.0	93.9	93.8	0.84	68.3	7.2	238	2.6	2.9	0.309	293	68
45	M2BA 225 SMB	3GBA 222 044-••G	1479	93.2	94.0	93.7	0.83	83.9	7.4	290	2.4	3.1	0.368	318	68
55	M2BA 250 SMA	3GBA 252 042-••G	1478	93.5	94.2	93.7	0.85	99.8	7.3	355	2.8	3.0	0.476	342	70
75	M2BAT 280 SMA	3GBA 282 210-••E	1484	94.2	94.2	93.5	0.85	135	6.9	482	2.5	2.8	1.25	590	71
90	M2BAT 280 SMB	3GBA 282 220-••E	1483	94.4	94.6	94.1	0.86	160	7.2	579	2.5	2.7	1.5	630	71
110	M2BAT 315 SMA	3GBA 312 210-••E	1487	94.7	94.6	93.8	0.86	194	7.2	706	2.0	2.5	2.3	870	78
132	M2BAT 315 SMB	3GBA 312 220-••E	1487	95.0	95.0	94.3	0.86	233	7.1	847	2.3	2.7	2.6	925	78
160	M2BAT 315 SMC	3GBA 312 230-••E	1487	95.2	95.3	94.6	0.85	285	7.2	1027	2.4	2.9	2.9	970	78
200	M2BAT 315 MLA	3GBA 312 410-••E	1486	95.3	95.4	94.9	0.86	352	7.0	1285	2.3	2.8	3.5	1080	78
250	M2BAT 355 S	3GBA 352 100-••E	1488	95.2	95.2	94.4	0.85	445	6.7	1604	2.0	2.6	5.4	1500	82
<b>1500 r/min = 4 poles</b>			<b>400 V 50 Hz</b>			<b>High-output design</b>									
110	M2BAT 280 SMC	3GBA 282 230-••E	1485	94.9	95.1	94.6	0.86	194	7.6	707	3.0	3.0	1.85	690	71

<sup>1)</sup> Temperature rise class F

The two bullets in the product code indicate choice of mounting arrangements, voltage and frequency code (see ordering information page).

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

Efficiency values are given according to IEC 60034-2-1; 2007.

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.

IE-class concerns motors from 0.75 kW to 375 kW.

# General performance cast iron motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	Weight kg	Sound pressure level L <sub>PA</sub> dB
				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>I</sub> / T <sub>N</sub>	T <sub>b</sub> / T <sub>N</sub>			
<b>1000 r/min = 6 poles</b>			<b>400 V 50 Hz</b>			<b>CENELEC-design</b>									
0.18	M2BA 71 MA	3GBA 073 211-••B	900	63.7	63.8	59.0	0.71	0.57	3.1	1.9	2.0	2.1	0.00089	10	42
0.25	M2BA 71 MB	3GBA 073 212-••B	895	67.2	67.2	62.6	0.69	0.77	3.4	2.6	2.2	2.3	0.0011	12	42
0.37	M2BA 80 MA	3GBA 083 211-••B	915	71.0	71.1	67.0	0.69	1.09	3.6	3.8	1.8	2.2	0.00187	15	47
0.55	M2BA 80 MB	3GBA 083 212-••B	920	73.9	75.0	72.8	0.71	1.51	3.8	5.7	1.8	2.2	0.00239	17	47
0.75	M2BA 90 SLC	3GBA 093 213-••B	960	78.7	77.3	72.5	0.58	2.3	4.5	7.4	2.3	3.1	0.00491	25	44
1.1	M2BA 90 SLE	3GBA 093 214-••B	930	78.2	78.6	76.4	0.66	3	4.0	11.2	1.9	2.3	0.0054	28	44
1.5	M2BA 100 L	3GBA 103 212-••B	950	82.2	82.9	81.6	0.69	3.8	4.0	15	1.5	1.1	0.00873	37	49
2.2	M2BA 112 MB	3GBA 113 212-••B	950	82.5	83.8	81.7	0.69	5.5	4.4	22.1	1.7	2.3	0.0125	44	66
3	M2BA 132 SMB	3GBA 133 211-••B	975	85.3	84.5	81.3	0.63	8	5.5	29.3	1.8	2.9	0.03336	69	57
4	M2BA 132 SMB	3GBA 133 212-••B	960	84.9	85.3	83.9	0.68	10	4.6	39.7	1.5	2.2	0.03336	69	57
5.5	M2BA 132 SMF	3GBA 133 214-••B	965	86.1	86.6	85.5	0.71	12.9	5.1	54.4	2.0	2.3	0.0487	86	57
7.5	M2BA 160 MLA	3GBA 163 043-••G	971	87.6	89.1	89.0	0.79	15.6	7.1	73.7	1.9	3.3	0.089	141	61
11	M2BA 160 MLB	3GBA 163 044-••G	970	88.7	90.1	89.9	0.79	22.6	7.6	108	2.1	3.3	0.119	157	61
15	M2BA 180 MLA	3GBA 183 042-••G	971	89.7	90.8	90.5	0.76	31.7	7.8	147	2.5	4.1	0.137	187	61
18.5	M2BA 200 MLA	3GBA 203 043-••G	975	90.7	92.0	91.9	0.79	37.2	6.2	161	1.7	3.2	0.198	228	65
22	M2BA 200 MLB	3GBA 203 044-••G	974	91.0	92.4	92.5	0.79	44.1	5.8	215	1.8	3.0	0.222	241	65
30	M2BA 225 SMA	3GBA 223 042-••G	985	92.2	93.1	93.1	0.83	56.5	6.9	290	2.4	2.8	0.532	318	65
37	M2BA 250 SMA	3GBA 253 042-••G	985	92.4	93.2	93.0	0.83	69.6	6.6	358	2.4	2.8	0.718	336	66
45	M2BAT 280 SMA	3GBA 283 210-••E	990	92.8	93.0	92.1	0.84	83.3	7.0	434	2.5	2.5	1.85	570	71
55	M2BAT 280 SMB	3GBA 283 220-••E	990	93.3	93.5	92.9	0.84	101	7.0	530	2.7	2.6	2.2	610	71
75	M2BAT 315 SMA	3GBA 313 210-••E	992	94.0	94.0	93.0	0.81	142	7.0	721	2.1	2.7	3.2	820	75
90	M2BAT 315 SMB	3GBA 313 220-••E	992	94.3	94.4	93.6	0.83	165	7.2	866	2.1	2.7	4.1	910	75
110	M2BAT 315 SMC	3GBA 313 230-••E	992	94.7	94.8	94.2	0.83	201	7.0	1058	2.2	2.7	4.9	980	75
132	M2BAT 315 MLA	3GBA 313 410-••E	992	94.9	95.0	94.4	0.83	241	7.2	1270	2.4	2.7	5.8	1100	75
160	M2BAT 355 S	3GBA 353 100-••E	992	94.9	95.0	94.4	0.83	293	6.2	1540	2.1	2.3	7.3	1500	77
<b>1000 r/min = 6 poles</b>			<b>400 V 50 Hz</b>			<b>High-output design</b>									
75	M2BAT 280 SMC	3GBA 283 230-••E	990	93.8	93.9	93.3	0.84	137	7.3	723	2.8	2.7	2.85	690	71

<sup>1)</sup> Temperature rise class F The two bullets in the product code indicate choice of mounting arrangements, voltage and frequency code (see ordering information page).

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

Efficiency values are given according to IEC 60034-2-1; 2007.

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.

IE-class concerns motors from 0.75 kW to 375 kW.

# General performance aluminum motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	Weight kg	Sound pressure level L <sub>PA</sub> dB
				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>l</sub> / T <sub>N</sub>	T <sub>b</sub> / T <sub>N</sub>			
<b>3000 r/min = 2-poles</b>			<b>400 V 50 Hz</b>			<b>CENELEC-design</b>									
0.09	M2AA 56 A	3GAA 051 001-••A	2820	59.8	53.3	47.9	0.69	0.31	3.9	0.3	2.9	2.7	0.00011	3.2	48
0.12	M2AA 56 B	3GAA 051 002-••A	2840	67.2	63.8	55.6	0.64	0.4	4.1	0.4	3.2	2.8	0.00012	3.4	48
0.18	M2AA 63 A	3GAA 061 001-••C	2820	75.0	72.0	66.1	0.62	0.55	4.2	0.6	3.5	3.1	0.00013	3.9	54
0.25	M2AA 63 B	3GAA 061 002-••C	2810	78.6	77.0	69.6	0.69	0.66	4.5	0.84	3.6	3.3	0.00016	4.4	54
0.37	M2AA 71 A	3GAA 071 001-••E	2800	73.8	75.8	73.9	0.76	0.95	4.9	1.26	2.7	2.7	0.00035	4.9	58
0.55	M2AA 71 B	3GAA 071 002-••E	2790	78.4	79.8	78.7	0.78	1.29	5.3	1.88	2.9	2.8	0.00045	5.9	58
0.75	M2AA 80 B	3GAA 081 212-••E	2895	81.4	80.8	77.1	0.78	1.7	8.1	2.4	3.7	3.9	0.0009	10.5	60
1.1	M2AA 80 C	3GAA 081 213-••E	2875	80.6	80.5	77.9	0.80	2.4	7.8	3.6	3.6	3.5	0.0012	11	60
1.5	M2AA 90 L	3GAA 091 212-••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	M2AA 90 LB	3GAA 091 213-••E	2875	84.6	85.7	85.5	0.85	4.4	6.9	7.3	2.8	3.2	0.0027	18	63
3	M2AA 100 LB	3GAA 101 212-••E	2920	86.4	86.0	83.9	0.86	5.8	9.3	9.8	3.3	3.9	0.005	25	62
4	M2AA 112 MB	3GAA 111 212-••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	M2AA 132 SB	3GAA 131 212-••E	2915	88.0	88.5	87.6	0.82	11	7.9	18	2.6	3.6	0.016	42	73
7.5	M2AA 132 SC	3GAA 131 213-••E	2915	88.5	88.7	88.1	0.87	14	7.6	24.5	2.2	3.2	0.022	56	73
11	M2AA 160 MLA	3GAA 161 044-••G	2920	89.8	91.0	90.7	0.89	19.8	5.9	35.9	1.6	2.7	0.038	83	69
15	M2AA 160 MLB	3GAA 161 045-••G	2934	91.1	92.2	92.0	0.90	26.4	7.0	48.8	2.5	3.1	0.048	96	69
18.5	M2AA 160 MLC	3GAA 161 046-••G	2934	91.0	91.8	91.2	0.89	32.9	7.3	60.2	2.6	3.2	0.052	104	73
22	M2AA 180 MLA	3GAA 181 042-••G	2933	91.5	92.8	92.8	0.91	38.1	7.8	71.6	3.0	3.5	0.062	123	73
30	M2AA 200 MLA	3GAA 201 043-••G	2950	92.2	92.9	92.3	0.89	52.7	7.8	97.1	2.7	3.3	0.092	160	75
37	M2AA 200 MLB	3GAA 201 044-••G	2947	92.5	93.0	92.5	0.91	63.4	7.7	119	2.8	3.6	0.116	186	75
45	M2AA 225 SMA	3GAA 221 042-••G	2956	93.0	93.5	92.9	0.90	77.6	8.1	145	3.1	3.4	0.197	244	75
55	M2AA 250 SMA	3GAA 251 042-••G	2960	93.9	94.3	93.6	0.90	93.9	6.8	177	2.6	2.5	0.275	308	75

The two bullets in the product code indicate choice of mounting arrangements, voltage and frequency code (see ordering information page).

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

Efficiency values are given according to IEC 60034-2-1; 2007.

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.

IE-class concerns motors from 0.75 kW to 375 kW.



# General performance aluminum motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	Weight kg	Sound pressure level L <sub>PA</sub> dB
				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>l</sub> / T <sub>N</sub>	T <sub>b</sub> / T <sub>N</sub>			
<b>1500 r/min = 4 poles</b>															
<b>400 V 50 Hz</b>															
<b>GENELEC-design</b>															
0.06	M2AA 56 A	3GAA 052 001-••A	1340	51.1	45.8	36.0	0.67	0.25	2.5	0.42	2.2	2.2	0.00017	3.2	36
0.09	M2AA 56 B	3GAA 052 002-••A	1370	55.5	50.2	40.5	0.62	0.37	2.8	0.62	2.9	2.9	0.00018	3.4	36
0.12	M2AA 63 A	3GAA 062 001-••C	1400	65.5	60.4	51.7	0.57	0.46	3.1	0.81	2.7	2.8	0.00019	4	40
0.18	M2AA 63 B	3GAA 062 002-••C	1380	67.3	63.9	56.7	0.62	0.62	3.1	1.24	2.5	2.6	0.00026	4.5	40
0.25	M2AA 71 A	3GAA 072 001-••E	1365	65.1	66.0	62.7	0.76	0.72	4.0	1.74	2.0	2.1	0.00066	5.2	45
0.37	M2AA 71 B	3GAA 072 002-••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	M2AA 80 A	3GAA 082 001-••E	1375	72.8	76.1	75.2	0.77	1.41	4.5	3.8	1.8	2.2	0.0013	8.5	50
0.75	M2AA 80 D	3GAA 082 214-••E	1415	79.8	81.3	79.9	0.82	1.65	5.9	5	2.6	3.2	0.0016	12	50
1.1	M2AA 90 LB	3GAA 092 214-••E	1435	83.7	84.1	83.0	0.78	2.4	6.6	7.3	2.9	3.2	0.0043	16	50
1.5	M2AA 90 LD	3GAA 092 215-••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	M2AA 100 LC	3GAA 102 213-••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	M2AA 100 LD	3GAA 102 214-••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	M2AA 112 MB	3GAA 112 212-••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	M2AA 132 M	3GAA 132 212-••E	1465	89.0	89.8	89.1	0.79	11.2	6.3	35.8	1.9	2.6	0.038	48	66
7.5	M2AA 132 MA	3GAA 132 214-••E	1460	89.1	89.9	89.5	0.79	15.3	6.4	49	1.8	2.6	0.048	59	63
11	M2AA 160 MLA	3GAA 162 043-••G	1463	90.2	91.4	91.2	0.85	20.7	7.1	71.7	2.6	3.0	0.084	97	65
15	M2AA 160 MLB	3GAA 162 044-••G	1463	90.6	91.8	91.6	0.84	28.4	7.2	97.9	2.7	3.6	0.095	105	65
18.5	M2AA 180 MLA	3GAA 182 043-••G	1464	91.2	92.3	92.1	0.84	34.8	7.9	120	3.1	3.6	0.112	125	62
22	M2AA 180 MLB	3GAA 182 044-••G	1465	91.6	92.5	92.1	0.83	41.7	8.0	143	3.0	3.8	0.13	137	65
30	M2AA 200 MLA	3GAA 202 042-••G	1474	92.3	93.4	93.5	0.83	56.5	7.3	194	2.7	2.9	0.217	188	62
37	M2AA 225 SMA	3GAA 222 043-••G	1479	93.0	93.9	93.8	0.84	68.3	7.2	238	2.6	2.9	0.309	239	68
45	M2AA 225 SMB	3GAA 222 044-••G	1479	93.2	94.0	93.7	0.83	83.9	7.4	290	2.4	3.1	0.368	265	68
55	M2AA 250 SMA	3GAA 252 042-••G	1478	93.5	94.2	93.7	0.85	99.8	7.3	355	2.8	3.0	0.476	311	70

The two bullets in the product code indicate choice of mounting arrangements, voltage and frequency code (see ordering information page).

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

Efficiency values are given according to IEC 60034-2-1; 2007.

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.

IE-class concerns motors from 0.75 kW to 375 kW.

# General performance aluminum motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

Output kW	Motor type	Product code	Speed r/min	Efficiency IEC 60034-2-1; 2007			Power factor cos φ	Current		Torque			Moment of inertia J = 1/4 GD <sup>2</sup> kgm <sup>2</sup>	Weight kg	Sound pressure level L <sub>PA</sub> dB
				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>I</sub> / T <sub>N</sub>	T <sub>b</sub> / T <sub>N</sub>			
<b>1000 r/min = 6 poles</b>			<b>400 V 50 Hz</b>			<b>GENELEC-design</b>									
0.09	M2AA 63 A	3GAA 063 001-••C	910	47.1	42.5	32.1	0.56	0.49	2.1	0.94	2.1	2.1	0.0002	4	38
0.12	M2AA 63 B	3GAA 063 002-••C	910	57.5	54.0	46.2	0.58	0.51	2.1	1.25	2.1	2.1	0.00027	4.5	38
0.18	M2AA 71 A	3GAA 073 001-••E	885	59.5	61.1	56.5	0.71	0.61	3.1	1.94	1.7	1.9	0.00092	5.5	42
0.25	M2AA 71 B	3GAA 073 002-••E	895	64.0	63.6	59.5	0.71	0.79	3.3	2.6	2.2	2.2	0.0012	6.5	42
0.37	M2AA 80 A	3GAA 083 001-••E	905	68.0	70.7	68.3	0.73	1.07	3.6	3.9	1.6	2.1	0.002	9	47
0.55	M2AA 80 B	3GAA 083 002-••E	905	68.7	71.8	69.7	0.73	1.58	3.3	5.8	1.6	1.8	0.0026	10	47
0.75	M2AA 90 LB	3GAA 093 213-••E	930	77.6	76.2	75.6	0.71	1.96	4.0	7.7	2.0	2.3	0.0048	18	44
1.1	M2AA 90 LD	3GAA 093 214-••E	935	78.2	79.1	76.5	0.66	3	4.2	11.2	2.2	2.6	0.0056	20	44
1.5	M2AA 100 LC	3GAA 103 212-••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	M2AA 112 MB	3GAA 113 212-••E	955	81.9	82.3	79.8	0.72	5.3	5.2	21.9	1.8	2.2	0.01	28	56
3	M2AA 132 S	3GAA 133 211-••E	960	83.3	83.6	81.7	0.65	7.9	4.3	29.8	1.6	2.3	0.031	39	57
4	M2AA 132 MB	3GAA 133 213-••E	975	86.4	86.3	84.0	0.70	9.5	7.3	39.1	2.1	4.4	0.045	54	57
5.5	M2AA 132 MC	3GAA 133 214-••E	965	86.1	86.1	84.3	0.67	13.7	6.2	54.4	2.5	2.8	0.049	59	61
7.5	M2AA 160 MLA	3GAA 163 043-••G	971	87.6	89.1	89.0	0.79	15.6	7.1	73.7	1.9	3.3	0.089	105	61
11	M2AA 160 MLB	3GAA 163 044-••G	970	88.7	90.1	89.9	0.79	22.6	7.6	108	2.1	3.3	0.119	121	61
15	M2AA 180 MLA	3GAA 183 042-••G	971	89.7	90.8	90.5	0.76	31.7	7.8	147	2.5	4.1	0.137	139	61
18.5	M2AA 200 MLA	3GAA 203 043-••G	975	90.7	92.0	91.9	0.79	37.2	6.2	181	1.7	3.2	0.198	173	65
22	M2AA 200 MLB	3GAA 203 044-••G	974	91.0	92.4	92.5	0.79	44.1	5.8	215	1.8	3.0	0.222	187	65
30	M2AA 225 SMA	3GAA 223 042-••G	985	92.2	93.1	93.1	0.83	56.5	6.9	290	2.4	2.8	0.532	265	65
37	M2AA 250 SMA	3GAA 253 042-••G	985	92.4	93.2	93.0	0.83	69.6	6.6	358	2.4	2.8	0.718	305	66

The two bullets in the product code indicate choice of mounting arrangements, voltage and frequency code (see ordering information page).

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

Efficiency values are given according to IEC 60034-2-1; 2007.

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.

IE-class concerns motors from 0.75 kW to 375 kW.

# General performance IE2 cast iron motors – variant codes

Code <sup>1)</sup>	Variant code	M2BA										M2BAT		
		80	90	100	112	132	160	180	200	225	250	280	315	355
<b>Bearing and lubrication</b>														
037	Roller bearing at D-end.	NA	NA	NA	NA	NA	M	M	M	M	M	M	M	M
040	Heat resistant grease.	M	M	M	M	M	M	M	M	M	M	M	M	M
043	SPM compatible nipples	M	M	M	M	M	M	M	M	M	M	M	M	M
188	63-series bearings in D-end	M	M	M	M	M	M	M	M	M	M	S	S	S
<b>Branch standard design</b>														
178	Stainless steel / acid proof bolts.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Cooling system</b>														
068	Light alloy metal fan	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Documentation</b>														
141	Binding dimension drawing.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Drain holes</b>														
065	Plugged existing drain holes.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Earthing bolt</b>														
067	External earthing bolt.	M	M	M	M	M	M	M	M	M	S	S	S	S
<b>Heating elements</b>														
450	Heating element, 100-120V.	M	M	M	M	M	M	M	M	M	M	M	M	M
451	Heating element, 200-240V.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Mounting arrangements</b>														
008	IM 2101 foot/flange mounted, IEC flange, from IM 1001 (B34 from B3).	M	M	M	M	M	NA	NA	NA	NA	NA	NA	NA	NA
009	IM 2001 foot/flange mounted, IEC flange, from IM 1001 (B35 from B3).	M	M	M	M	M	M	M	M	M	M	M	M	M
047	IM 3601 flange mounted, IEC flange, from IM 3001 (B14 from B5).	M	M	M	M	M	NA	NA	NA	NA	NA	NA	NA	NA
048	IM 3001 flange mounted, IEC flange, from IM 3601 (B5 from B14).	M	M	M	M	M	NA	NA	NA	NA	NA	NA	NA	NA
066	Modified for specified mounting position differing from IM B3 (1001), IM B5 (3001), B14 (3601), IM B35 (2001) & IM B34 (2101).	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Painting</b>														
114	Special paint colour, standard grade.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Protection</b>														
005	Metal protective roof, vertical motor, shaft down.	M	M	M	M	M	M	M	M	M	M	M	M	M
072	Radial seal at D-end.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Rating and instruction plate</b>														
095	Restamping output (maintained voltage, frequency), intermittent duty.	M	M	M	M	M	M	M	M	M	M	M	M	M
135	Mounting of additional identification plate, stainless.	M	M	M	M	M	M	M	M	M	M	M	M	M
161	Additional rating plate delivered loose.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Restamping</b>														
002	Restamping voltage, frequency and output, continuous duty.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Standards and regulations</b>														
331	IE1 motor not for sale for use in EU	M	M	M	M	M	M	M	M	M	M	M	M	M

<sup>1)</sup> Certain variant codes cannot be used simultaneously.

Following variant codes are available, more information from ABB  
M = modifications  
NA = not applicable  
S = Standard

Code <sup>1)</sup> Variant code	M2BA										M2BAT										
	80	90	100	112	132	160	180	200	225	250	280	315	355								
<b>Stator winding temperature sensors</b>																					
122	Bimetal detectors, break type (NCC), (3 in series), 150°C, in stator winding.										M	M	M	M	M	M	M	M	M		
435	PTC - thermistors (3 in series), 130°C, in stator winding.										M	M	M	M	M	M	M	M	M		
436	PTC - thermistors (3 in series), 150°C, in stator winding.										S	S	S	S	S	S	S	S	S		
441	PTC - thermistors (3 in series, 130°C & 3 in series, 150°C), in stator winding.										M	M	M	M	M	M	M	M	M		
445	Pt-100 2-wire in stator winding, 1 per phase										M	M	M	M	M	M	M	M	M		
230	Standard metal cable glands										M	M	M	M	M	M	M	M	M		
447	Top mounted separate terminal box for monitoring equipment.										NA	NA	NA	NA	NA	NA	NA	NA	M	M	M
<b>Terminal box</b>																					
230	Standard metal cable glands										M	M	M	M	M	M	M	M	M		
<b>Testing</b>																					
145	Type test report from a catalogue motor, 400V 50Hz.										M	M	M	M	M	M	M	M	M		
148	Routine test report.										M	M	M	M	M	M	M	M	M		
<b>Variable speed drive</b>																					
701	Insulated bearing at N-end										NA	NA	NA	NA	NA	NA	NA	NA	M	M	M
704	EMC cable gland.										M	M	M	M	M	M	M	M	M		

1) Certain variant codes cannot be used simultaneously.

Following variant codes are available,  
more information from ABB  
M = modifications  
NA = not applicable  
S = Standard



# General performance IE2 aluminum motors – variant codes

Code <sup>1)</sup>	Variant	M2AA											
		56	63	71	80	90	100	112	132	160	180	200	225
<b>Bearing and Lubrication</b>													
037	Roller bearing at D-end.	NA	NA	NA	NA	NA	NA	NA	NA	M	M	M	M
040	Heat resistant grease.	M	M	M	M	M	M	M	M	M	M	M	M
043	SPM compatible nipples for vibration measurement	NA	NA	NA	NA	M	M	M	M	M	M	M	M
188	63-series bearings in D-end	NA	NA	NA	NA	M	S	S	M	M	M	M	M
<b>Branch standard design</b>													
178	Stainless steel / acid proof bolts.	M	M	M	M	M	M	M	M	M	M	M	M
217	Cast iron D-end shield (on aluminum foot mounted motor).	NA	NA	M	M	M	M	M	M	S	S	S	S
<b>Cooling system</b>													
068	Light alloy metal fan	NA	NA	M	M	M	M	M	M	M	M	M	M
<b>Documentation</b>													
141	Binding dimension drawing.	M	M	M	M	M	M	M	M	M	M	M	M
<b>Drain holes</b>													
065	Plugged existing drain holes.	M	M	M	M	M	M	M	M	M	M	M	M
<b>Earthing bolt</b>													
067	External earthing bolt.	M	M	M	M	M	M	M	M	M	M	M	M
<b>Heating elements</b>													
450	Heating element, 100-120V.	M	M	M	M	M	M	M	M	M	M	M	M
451	Heating element, 200-240V.	M	M	M	M	M	M	M	M	M	M	M	M
<b>Mounting arrangements</b>													
008	IM 2101 foot/flange mounted, IEC flange, from IM 1001 (B34 from B3).	M	M	M	M	M	M	M	M	NA	NA	NA	NA
009	IM 2001 foot/flange mounted, IEC flange, from IM 1001 (B35 from B3).	M	M	M	M	M	M	M	M	M	M	M	M
047	IM 3601 flange mounted, IEC flange, from IM 3001 (B14 from B5)	M	M	M	M	M	M	M	M	NA	NA	NA	NA
048	IM 3001 flange mounted, IEC flange, from IM 3601 (B5 from B14).	M	M	M	M	M	M	M	M	NA	NA	NA	NA
066	Modified for specified mounting position differing from IM B3 (1001), IM B5 (3001), B14 (3601), IM B35 (2001) & IM B34 (2101)	M	M	M	M	M	M	M	M	M	M	M	M
200	Flange ring holder.	NA	NA	M	M	M	M	M	M	NA	NA	NA	NA
217	Cast iron D-end shield (on aluminum motor).	NA	NA	M	M	M	M	M	M	S	S	S	S
218	Flange ring FT 85.	NA	NA	M	M	M	NA	NA	NA	NA	NA	NA	NA
219	Flange ring FT 100.	NA	NA	M	M	M	NA	NA	NA	NA	NA	NA	NA
220	Flange ring FF 100.	NA	NA	M	M	M	NA	NA	NA	NA	NA	NA	NA
223	Flange ring FF 115.	NA	NA	M	M	M	NA	NA	NA	NA	NA	NA	NA
224	Flange ring FT 115.	NA	NA	M	M	M	NA	NA	NA	NA	NA	NA	NA
226	Flange ring FF 130.	NA	NA	M	M	M	M	M	NA	NA	NA	NA	NA
227	Flange ring FT 130.	NA	NA	M	M	M	M	M	NA	NA	NA	NA	NA
233	Flange ring FF 165.	NA	NA	M	M	M	M	M	NA	NA	NA	NA	NA
234	Flange ring FT 165.	NA	NA	M	M	M	M	M	NA	NA	NA	NA	NA
236	Flange FT 165.	NA	NA	NA	NA	NA	NA	NA	M	NA	NA	NA	NA
243	Flange ring FF 215.	NA	NA	NA	NA	NA	M	M	M	NA	NA	NA	NA
244	Flange ring FT 215.	NA	NA	NA	NA	NA	M	M	M	NA	NA	NA	NA
253	Flange ring FF 265.	NA	NA	NA	NA	NA	NA	NA	M	NA	NA	NA	NA
254	Flange ring FT 265.	NA	NA	NA	NA	NA	NA	NA	M	NA	NA	NA	NA
255	Flange FF 265.	NA	NA	NA	NA	NA	NA	NA	M	NA	NA	NA	NA
<b>Painting</b>													
114	Special paint colour, standard grade.	M	M	M	M	M	M	M	M	M	M	M	M

<sup>1)</sup> Certain variant codes cannot be used simultaneously.

Following variant codes are available,  
more information from ABB

M = modifications

NA = not applicable

S = Standard

Code <sup>1)</sup>	Variant	M2AA												
		56	63	71	80	90	100	112	132	160	180	200	225	250
<b>Protection</b>														
005	Metal protective roof, vertical motor, shaft down.	M	M	M	M	M	M	M	M	M	M	M	M	M
072	Radial seal at D-end.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Rating and instruction plate</b>														
002	Restamping voltage, frequency and output, continuous duty.	M	M	M	M	M	M	M	M	M	M	M	M	M
095	Restamping output (maintained voltage, frequency), intermittent duty.	M	M	M	M	M	M	M	M	M	M	M	M	M
135	Mounting of additional identification plate, stainless.	NA	NA	M	M	M	M	M	M	M	M	M	M	M
161	Additional rating plate delivered loose.	M	M	M	M	M	M	M	M	M	M	M	M	M
198	Aluminum rating plate.	S	S	S	S	S	S	S	S	S	S	S	S	S
<b>Standards and regulations</b>														
331	IE1 motor not for sale for use in EU	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Stator winding temperature sensors</b>														
122	Bimetal detectors, break type (NCC), (3 in series), 150°C, in stator winding.	M	M	M	M	M	M	M	M	M	M	M	M	M
435	PTC - thermistors (3 in series), 130°C, in stator winding.	M	M	M	M	M	M	M	M	M	M	M	M	M
436	PTC - thermistors (3 in series), 150°C, in stator winding.	M	M	M	M	M	M	M	M	S	S	S	S	S
441	PTC - thermistors (3 in series, 130°C & 3 in series, 150°C), in stator winding.	NA	NA	NA	NA	M	M	M	M	M	M	M	M	M
445	Pt-100 2-wire in stator winding, 1 per phase	NA	NA	NA	NA	NA	NA	NA	NA	M	M	M	M	M
<b>Terminal box</b>														
230	Standard metal cable glands.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Testing</b>														
145	Type test report from a catalogue motor, 400V 50Hz.	M	M	M	M	M	M	M	M	M	M	M	M	M
148	Routine test report.	M	M	M	M	M	M	M	M	M	M	M	M	M
<b>Variable speed drives</b>														
704	EMC cable gland.	M	M	M	M	M	M	M	M	M	M	M	M	M

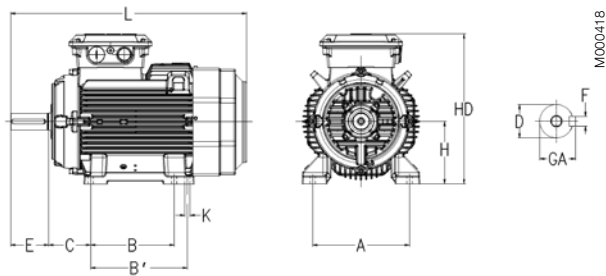
<sup>1)</sup> Certain variant codes cannot be used simultaneously.

Following variant codes are available,  
more information from ABB  
M = modifications  
NA = not applicable  
S = Standard

# General performance IE2 high efficiency motors Sizes 71 - 355

## Dimension drawings

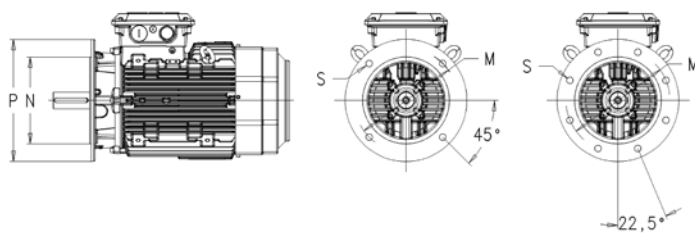
Foot-mounted motor IM1001, B3



Flange-mounted motor IM 3001, B5

Size 56 to 200

Size 225 to 355



IM 1001, IM B3 ja IM 3001, IM B5

IM 1001, IM B3

IM 3001, IM B5

Motor size	D poles		GA poles		F poles		E poles		L max poles											
	2	4-6	2	4-6	2	4-6	2	4-6	2	4-6	A	B	B'	C	HD	K	H	M	N	P

### General performance aluminum motors

M2AA	56	63	71	80	90 S	90 L	100	112	132 <sup>1)</sup>	132 <sup>2)</sup>	132 SM	160	180	200	225	250
	9	11	14	19	24	24	28	28	38	38	38	42	48	55	55	60
	9	11	14	19	24	24	28	28	38	38	38	42	48	55	55	60
	10.2	12.5	16	21.5	27	27	31	31	41	41	41	45	51.5	59	59	64
	3	4	5	6	8	8	8	8	10	10	10	12	14	16	16	18
	3	4	5	6	8	8	8	8	10	10	10	12	14	16	16	18
	20	23	30	40	50	50	60	60	80	80	80	110	110	110	110	140
	20	23	30	40	50	50	60	60	80	80	80	110	110	110	110	140
	197	214	240	265.5	284.5	309.5	351	393	447	447	550	584	681	726	821	880
	197	214	240	265.5	284.5	309.5	351	393	447	447	550	584 <sup>3)</sup>	681	726	821	880
	90	100	112	125	140	140	160	190	216	216	216	254	279	318	356	406
	71	80	90	100	100	125	140	140	140	140	140	210	241	267	286	311
	-	-	-	-	-	-	-	-	178	178	178	254	279	305	311	349
	36	40	45	50	56	56	63	70	89	89	89	108	121	133	149	168
	159	171	180	193.5	217	217	237	249	295.5	295.5	295.5	370	390	425	525 <sup>4)</sup>	572 <sup>4)</sup>
	5.8	7	7	10	10	10	12	12	12	12	12	14.5	14.5	18.5	18	22
	56	63	71	80	90	90	100	112	132	132	132	160	180	200	225	250
	100	115	130	165	165	165	215	215	265	265	265	300	300	350	400	500
	80	95	110	130	130	130	250	250	230	230	230	250	250	300	350	450
	120	140	160	200	200	200	350	350	300	300	300	350	350	400	450	550
	7	10	10	12	12	12	19	19	14.5	14.5	14.5	19	19	19	19	19

### General performance cast iron motors

M2BA	71	80	90	100	112	132	160	180	200	225	250
	14	19	24	28	28	38	42	48	55	55	60
	14	19	24	28	28	38	42	48	55	55	60
	16	21.5	27	31	31	41	45	51.5	59	59	64
	5	6	8	8	8	10	12	14	16	16	18
	5	6	8	8	8	10	12	14	16	16	18
	30	40	50	60	60	80	110	110	110	110	140
	30	40	50	60	60	80	110	110	110	110	140
	264	321	357	381	403	533	584	681	726	821	879
	264	321	357	381	403	533	584 <sup>5)</sup>	681	726	821	879
	112	125	140	160	190	216	254	279	318	356	406
	90	100	100	140	140	140	210	241	267	286	311
	-	-	125	-	-	178	254	279	305	311	349
	45	50	56	63	70	89	108	121	133	149	168
	178	195	219	247	259	300	413	433	473 <sup>6)</sup>	539	584
	7	10	10	12	12	12	14.5	14.5	18.5	18.5	24
	71	80	90	100	112	132	160	180	200	225	250
	130	165	165	215	215	265	300	300	350	400	500
	110	130	130	250	250	230	250	250	300	350	450
	160	200	200	350	350	300	350	350	400	450	550
	10	12	12	15	15	15	19	19	19	19	19

### General performance aluminum motors IM 3601, IM B14

Motor size	M	N	P	S
56	65	50	80	M5
63	75	60	90	M5
71	85	70	105	M6
80	100	80	120	M6
90	115	95	140	M8
100	130	110	160	M8
112	130	110	160	M8
132 <sup>1)</sup>	165	130	200	M10

### General performance cast iron motors IM 3601, IM B14

Motor size	M	N	P	S
71	85	70	105	M6
80	100	80	120	M6
90	115	95	140	M8
100	130	110	160	M8
112	130	110	160	M8
132	165	130	200	M10

### Tolerances

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

- <sup>1)</sup> All types except M2AA 132 SM<sub>L</sub>, SC 2 pole, MC 6 pole
- <sup>2)</sup> M2AA 132 SC 2 pole and MC 6 pole
- <sup>3)</sup> 160MLB 6-pole L = 681
- <sup>4)</sup> For voltage code S add 32 mm to listed HD-dimension
- <sup>5)</sup> 160MLB 6-pole L = 681
- <sup>6)</sup> 200, voltage code S HD = 478

Above table gives the main dimensions in mm.  
For detailed drawings please see our web-pages '[www.abb.com/motors&generators](http://www.abb.com/motors&generators)' or contact ABB.

# General performance IE2 cast iron motors in brief

Motor size		71	80	90	100	112	132
<b>Stator</b>	Material	Cast iron EN-GJL-150/GG 15/GRS 150					
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G					
	Surface treatment	Phosphating anticorrosive primer and top coat polyurethane, $\geq 70\mu\text{m}$					
<b>Feet</b>		Integrated with stator					
	Material	Cast iron EN-GJL-150/GG 15/GRS 150					
<b>Bearing end shields</b>	Material	Cast iron EN-GJL-150/GG 15/GRS 150					
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G					
	Surface treatment	Phosphating anticorrosive primer and top coat polyurethane $\geq 70\mu\text{m}$					
<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 bearings</b>	Inner bearing cover	As standard, locked at D-end					
<b>Bearing seals</b>	D-end	V-ring					
	N-end	Labyrinth seal					
<b>Lubrication</b>		Permanently lubricated shielded bearings. Grease temperature range -40 to +160°C					
<b>Terminal box</b>	Material	Cast iron EN-GJL-150/GG 15/GRS 150					
	Surface treatment	Similar to stator.					
	Screws	Steel 5G, coated with zinc and yellow chromated.					
<b>Connections</b>	Threaded openings	2 x M16	2 x M25	2 x M32			
	Max Cu-area mm <sup>2</sup>	4	6	10			
	Terminal box	Cable lugs, 6 terminals					
<b>Fan</b>	Material	Polypropylene. Reinforced with 20% glass fibre.					
<b>Fan cover</b>	Material	Steel					
	Paint colour shade	Black RAL 9011					
	Surface treatment	Phosphating pretreatment and polyester powder top coat $\geq 70\mu\text{m}$					
<b>Stator winding</b>	Material	Copper					
	Insulation class	Insulation class F					
	Winding protection	3 PTC thermistors as standard, 150°C					
<b>Rotor winding</b>	Material	Diecast aluminum.					
<b>Balancing method</b>		Half key balancing as standard					
<b>Key ways</b>		Closed key way					
<b>Heating elements</b>	On request	8 W			25 W		
<b>Enclosure</b>		IP 55.					
<b>Cooling method</b>		IC 411					
<b>Drain holes</b>		Drain holes with closable plugs, open on delivery.					
<b>Lifting lugs</b>		Bolted to the stator					



# General performance IE2 cast iron motors in brief

Size	M2BA	160	180	200	225	250
<b>Stator</b>	Material	Cast iron EN-GJL-200/GG 20/GRS 200				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface treatment	Two-pack epoxy paint, $\geq 70\mu\text{m}$				
<b>Feet</b>		Integrated with stator				
	Material	Cast-iron EN-GJL-200/GG 20/GRS 200				
<b>Bearing end shields</b>	Material	Cast iron EN-GJL-200/GG 20/GRS 200				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface treatment	Two-pack epoxy paint, $\geq 70\mu\text{m}$				
<b>Bearings</b>	D-end	6209-2Z/C3	6210-2Z/C3	6212-2Z/C3	6213-2Z/C3	6215-2Z/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>	D-end	V-ring				
	N-end	V-ring				
<b>Lubrication</b>		Permanently lubricated shielded bearings.				
<b>Terminal box</b>	Material	Cast iron, base integrated with stator.				
	Surface treatment	Two-pack epoxy paint, $\geq 70\mu\text{m}$				
	Screws	Steel 8.8, zinc electroplated and chromated				
<b>Connections</b>	Threaded openings				(2 x M63 + M16)	
		(2 x M40 + M16)*				
	Max Cu-area mm <sup>2</sup>	35			70	
	Terminal box	6 terminals for connection with cable lugs (not included)				
	Screws	M6			M10	
<b>Fan</b>	Material	Polypropylene. Reinforced with 20% glass fibre.				
<b>Fan cover</b>	Material	Hot dip galvanized steel				
	Paint colour shade	Black, NCS 8801-B09G				
	Surface treatment	Polyester powder paint, $\geq 70\mu\text{m}$				
<b>Stator winding</b>	Material	Copper				
	Insulation	Insulation class F				
	Winding protection	3 PTC thermistors as standard, 150°C				
<b>Rotor winding</b>	Material	Diecast aluminum				
<b>Balancing method</b>		Half key balancing as standard				
<b>Key ways</b>		Closed key way				
<b>Heating elements</b>	On request	25 W		50 W		
<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>		Integrated with the stator				

\*) Frame size 200 code S

(2 x M63 + M16), max. CU-area 70 mm<sup>2</sup> and screws M10.

# General performance IE2 cast iron motors in brief

Motors size	M2BAT	280	315	355
<b>Stator</b>	Material	Cast iron GG 20/GRS 200		
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G		
	Surface treatment	Two-pack epoxy paint, $\geq 70\mu\text{m}$		
<b>Feet</b>		Integrated with stator		
	Material	Cast-iron		
<b>Bearing end shield</b>	Material	Cast iron EN-GJL-200/GG 20/GRS 200		
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G		
	Surface treatment	Two-pack epoxy paint, thickness $\geq 70\mu\text{m}$		
<b>Bearings</b>	D-end	6316/C4, 2 pole	6316/C4, 2 pole	6319/C4, 2 pole
		6316/C3, 4 to 8 pole	6319/C3, 4 to 8 pole	6322/C3, 4 to 8 pole
	N-end	6316/C4, 2 pole	6316/C4, 2 pole	6319M/C4, 2 pole
		6316/C3, 4 to 8 pole	6319/C3, 4 to 8 pole	6319/C3, 4 to 8 pole
<b>Axially-locked bearings</b>	Inner bearing cover	As standard, locked at D-end		
<b>Bearing seals</b>	D-end	V-ring		
	N-end	V-ring		
<b>Lubrication</b>		Regreasable bearings		
<b>Terminal box</b>	Material	Cast iron GG 15/GRS 150		
	Surface treatment	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G		
	Screws	Steel 8.8, zinc electroplated and chromated		
<b>Connections</b>	Threaded openings	2 x M63 + 2xM20)		
	Terminal box	6 terminals for connection		
<b>Fan</b>	Material	Reinforced glass fiber or aluminium		
<b>Fan cover</b>	Material	Steel		
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G / RAL 5014		
	Surface treatment	Two-pack epoxy polyester paint, $\geq 80\mu\text{m}$		
<b>Stator winding</b>	Material	Copper		
	Insulation	Insulation class F		
	Winding protection	3 PTC thermistors as standard, 150°C		
<b>Rotor winding</b>	Material	Pressure die-cast aluminium		
<b>Balancing method</b>		Half key balancing as standard		
<b>Key ways</b>		Open key way		
<b>Heating elements</b>	Optional	60 W	120 W	
<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>		Separate lifting lugs		

# General performance IE2 aluminum motors in brief

Motor size	M2AA	56	63	71	80	90	100	112	132
<b>Stator</b>	Material	Diecast aluminum alloy.							
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G							
	Surface treatment	Epoxy polyester powder paint, $\geq 60\mu\text{m}$							
<b>Feet</b>		Fixed feet.							
	Material	Aluminum alloy, integrated with stator							
<b>Bearing end shields</b>	Material	Diecast aluminum alloy							
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G							
	Surface treatment	Epoxy polyester powder paint, $\geq 60\mu\text{m}$				Polyester powder paint, $\geq 60\mu\text{m}$			
<b>Bearings</b>	D-end	6201-2Z/C3	6202-2Z/C3	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6306-2Z/C3	6306-2Z/C3	6208-2Z/C3 <sup>1)</sup>
	N-end	6201-2Z/C3	6201-2Z/C3	6202-2Z/C3	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6205-2Z/C3	6206-2Z/C3
<b>Axially-locked bearings</b>	Inner bearing cover	D-end internal retaining ring				D-end			
<b>Bearing seals</b>	D-end	V-ring							
	N-end	Labyrinth seal							
<b>Lubrication</b>		Permanently lubricated shielded bearings. Grease temperature range -40 to +160°C							
<b>Terminal box</b>	Material	Diecast aluminum alloy, base integrated with stator.							
	Surface treatment	Diecast aluminum alloy							
	Screws	Steel 5G, galvanised.							
<b>Connections</b>	Knock-out openings	1 x M16 x Pg11		2 x (M20 + M20)		2 x (M20 + M25) <sup>2)</sup>			
	Max Cu-area mm <sup>2</sup>	2.5		4		6		10 <sup>3)</sup>	
	Terminal box	Cable lugs, 6 terminals				Screw terminal, 6 terminals			Cable lugs, 6 terminals
<b>Fan</b>	Material	Polypropylene. Reinforced with 20% glass fibre.							
<b>Fan cover</b>	Material	Polypropylene.							
	Paint colour shade	Black							
<b>Stator winding</b>	Material	Copper.							
	Insulation	Insulation class F							
	Winding protection	Optional							
<b>Rotor winding</b>	Material	Diecast aluminum.							
<b>Balancing method</b>		Half key balancing.							
<b>Key ways</b>		Closed key way							
<b>Heating elements</b>	Optional	8 W				25 W			
<b>Enclosure</b>		IP 55.							
<b>Cooling method</b>		IC 411.							
<b>Drain holes</b>		Drain holes with closable plugs, open on delivery.							
<b>Lifting lugs</b>		Integrated with the stator							

M2AA 132 SMA, SMC, SMD;

<sup>1)</sup> 6308-2Z/C3

<sup>2)</sup> 2\*(M40+M32+M12)

<sup>3)</sup> 35

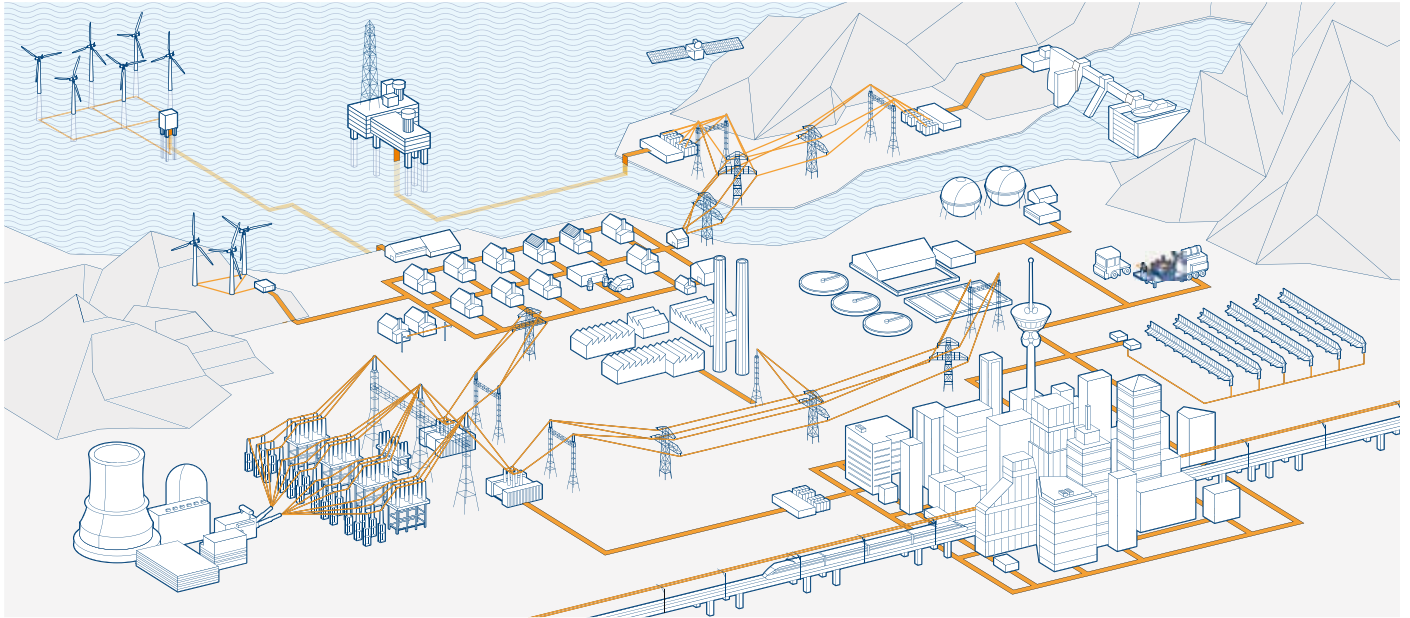
# General performance IE2 aluminum motors in brief

Size	M2AA	160	180	200	225	250
<b>Stator</b>	Material	Diecast aluminum alloy			Extruded aluminum alloy.	
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface treatment	Polyester powder paint, $\geq 60\mu\text{m}$				
<b>Feet</b>		Bolt on feet, bolted to the stator.				
	Material	Aluminum alloy			Cast iron	
<b>Bearing end shields</b>	Material	Cast iron EN-GJL-200/GG 20/GRS 200				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface treatment	Two-pack epoxy pain paint, $\geq 60\mu\text{m}$				
<b>Bearings</b>	D-end	6209-2Z/C3	6210-2Z/C3	6212-2Z/C3	6213-2Z/C3	6215-2Z/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	D-end				
<b>Bearing seals</b>		Axial seal				
<b>Lubrication</b>		Permanently lubricated shielded bearings. Wide temperature grease.				
<b>Terminal box</b>	Material	Diecast aluminum alloy, base integrated with stator.			Deep-drawn steel sheet, bolted to stator.	
	Surface treatment	Polyester powder paint, $\geq 60\mu\text{m}$			Phosphated. Polyester paint.	
	Screws	Steel 8.8, zinc electroplated and chromated				
<b>Connections</b>	Knock-out openings				2 x FL13, 2 x M40	
	Flange-openings	(2 x M40 + M16) + (2 x M40)			2 x FL 21, 2 x M63 (voltage code S)	
	Max Cu-area mm <sup>2</sup>	35			70	
	Terminal box	6 terminals for connection with cable lugs (not included)				
	Screws	M6			M10	
<b>Fan</b>	Material	Polypropylene. Reinforced with 20% glass fibre.				
<b>Fan cover</b>	Material	Hot dip galvanized steel				
	Paint colour shade	Black, NCS 8801-B09G				
	Surface treatment	Polyester powder paint, $\geq 60\mu\text{m}$				
<b>Stator winding</b>	Material	Copper				
	Insulation class	Insulation class F				
	Winding protection	3 PTC thermistors as standard, 150°C				
<b>Rotor winding</b>	Material	Diecast aluminum.				
<b>Balancing method</b>		Half key balancing.				
<b>Key ways</b>		Closed key way				
<b>Heating elements</b>	Optional	25 W		50 W		
<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>		Integrated with the stator			Bolted to the stator	





# Total offer of motors, generators and mechanical power transmission products with a complete portfolio of services



**ABB is the leading manufacturer of low, medium and high voltage motors and generators, mechanical power transmission products with an offering of a complete portfolio of services. Our in-depth knowledge of virtually every type of industrial processing ensures we always specify the best solution for your needs.**

## **Low and high voltage IEC induction motors**

- Process performance motors
- General performance motors
- High voltage cast iron motors
- Induction modular motors
- Slip-ring modular motors
- Synchronous reluctance motors

## **Low and medium voltage NEMA motors**

- Steel frame open drip proof (ODP) motors
- Weather protected, water cooled, fan ventilated

- Cast iron frame (TEFC)
- Air to air cooled (TEAAC) motors

## **Motors and generators for explosive atmospheres**

- IEC and NEMA motors and generators, for all protection types

## **Synchronous motors**

### **Synchronous generators**

- Synchronous generators for diesel and gas engines
- Synchronous generators for steam and gas turbines

## **Wind power generators**

### **Generators for small hydro**

### **Other motors and generators**

- Brake motors
- DC motors and generators
- Gear motors
- Marine motors and generators
- Single phase motors
- Motors for high ambient temperatures

- Permanent magnet motors and generators
- High speed motors
- Smoke extraction motors
- Wash down motors
- Water cooled motors
- Generator sets
- Roller table motors
- Servo motors
- Traction motors

## **Life cycle services**

- Installation and commissioning
- Service contracts
- Preventive maintenance
- Spare parts
- Diagnosis
- Repair and refurbishment
- Site survey and overhaul
- Replacement motors and generators
- Technical support and consulting
- Trainings

## **Mechanical power transmission components, bearings, gears**

# Visit our web site

[www.abb.com/motors&generators](http://www.abb.com/motors&generators)

## Motors and Generators

### > Low voltage motors

Process performance motors

### >> General performance motors

>>> IE2 high efficiency

cast iron motors

>>> IE2 high efficiency

aluminum motors

>>> IE2 high efficiency

steel motors

>>> IE1 standard efficiency

cast iron motors

>>> IE1 standard efficiency

aluminum motors

Brake Motors

High Ambient Temperature Motors

Marine Motors

Permanent Magnet Motors

Roller Table Motors

Single phase motors

Smoke Extraction Motors

Water Cooled Motors

The screenshot shows the ABB website's 'Motors and Generators' page. At the top, there is a navigation bar with 'Home', 'About ABB', 'Products and services', 'News center', 'Careers', and 'Investor center'. Below this is a secondary navigation bar with 'Offerings A-Z', 'ABB Product Guide', 'Industries and utilities', 'Service Guide', and 'Contact Directory'. The main content area features a large image of a motor with the text 'Energy efficiency. Full offer from ABB'. To the right of the image is a search bar and a 'Products & Services only' checkbox. Below the search bar are links for '+ Rate this page' and '+ Share this page'. The 'Your preferences' section includes dropdown menus for 'United Kingdom' and 'English'. The 'ABB contact for United Kingdom' section lists 'Derek Robinson' and a 'Select another country' dropdown. The 'Downloads' section mentions 'View related documents and downloads for: Motors and Generators'. The 'News' section lists several recent updates, including 'Enterprises Frame Agreement with Shell', 'ABB permanent magnet generators for Finland's largest wind farm (video)', 'ABB motors save Michelin energy and emissions', 'ABB signs agreement with Oryx to supply high quality Qatar-based electrical motor and generator maintenance services', 'Revolutionary ABB motor and drive technology cuts energy consumption', and 'ABB's Head of Motors and Generators on the new EU regulation (video)'. The 'Our offering' section is divided into two columns: 'Low Voltage Motors' (including Wind Power Generators, Synchronous Generators, Synchronous Motors, VSD synchronous motor and drive package, and Service) and 'High Voltage Induction Motors' (including Motors and Generators for Explosive Atmospheres, Traction motors and generators, DC Motors, and Servomotors).

The screenshot shows the ABB website's 'General performance motors' page. The navigation and secondary navigation bars are identical to the previous page. The main content area features a large image of several blue cast iron motors. To the right of the image is a search bar and a 'Products & Services only' checkbox. Below the search bar are links for '+ Rate this page' and '+ Share this page'. The 'Your preferences' section includes dropdown menus for 'United Kingdom' and 'English'. The 'ABB contact for United Kingdom' section lists 'Derek Robinson' and a 'Select another country' dropdown. The 'Downloads' section mentions 'View related documents and downloads for: General Performance Motors'. The 'Our offering' section is divided into two columns: 'IE2 High Efficiency Cast Iron Motors' (Motor type M2BA, M2BAT, IEC sizes 71 to 355, 0.25 to 250 kW) and 'IE1 Standard Efficiency Cast Iron Motors' (Motor type M2BA, IEC sizes 71 to 250, 0.25 to 55 kW). The second column also includes 'IE2 High Efficiency Aluminum Motors' (Motor type M2AA, IEC sizes 56 to 250, 0.06 to 55 kW) and 'IE1 Standard Efficiency Aluminum Motors' (Motor type M2AA, IEC sizes 56 to 250, 0.06 to 55 kW). The third column includes 'IE2 High Efficiency Steel Motors' (Motor type M2CA, IEC sizes 280 to 400, 75 to 630 kW).

# Contact us

[www.abb.com/motors&generators](http://www.abb.com/motors&generators)

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility what so ever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained herein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB.

© Copyright 2011 ABB.  
All rights reserved.

9AKK105496 EN 12-2011