

CMG

m o t o r s

Extended Range
56 - 200 frames



THREE PHASE ASYNCHRONOUS MOTOR

CMG AUSTRALIA TYPE: MTT 82A19.2

DUTY	S1	INS	LL	F	IP	SI
VOLTS	CONN	PH	WV	RPM	AMPS	COEFF EFF %
380-240	DELTA	3Ø	2.65	1070	2.74	0.78
380-415	STAR	3Ø	2.55	1070	1.58	0.78
660-480	STAR	3Ø	2.01	1645	1.58	

6204-30S

PROD No: 12

SERIAL No: 12

AMPS TEMP: 85 °C

Wt: 12 kg

60 Years

Proudly manufacturing since 1948

MT series motors

Cast aluminium single & three phase units



“Solutions, not just products.”

Specialists in Electric Motors, Geared Motors & AC Drives

At CMG we offer customised packages to the most demanding industrial markets. Our success is built on a strong commitment to our customers' needs and a willingness to find the best solution possible. We have been in business since 1948 so you can be confident our expertise and experience is second to none.

With over 650 staff around the globe, our branches extend across Australia, New Zealand, Asia Pacific, South Africa, Europe and the Middle East.

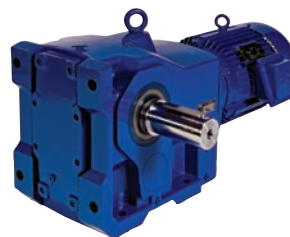
We have the capability to value-add our products through partnerships with leading international companies whose technical skills are equal to ours, including Gear Motors from Reggiana Riduttori and NORD, and AC Drives from VACON. In return we offer these companies superior technical support that complements their own R&D capabilities.

Our manufacturing facility in Melbourne, Australia, demonstrates our commitment to efficient automated manufacturing processes. This facility includes a NATA & ILAC accredited laboratory which offers complete design and testing services.

“We specialise in an extensive range of Electric Motors, Geared Motors and AC Drives. Offering a “complete package” ensures our customers get the most efficient, cost effective solution possible.”



➤ Electric Motors



➤ Geared Motors



➤ AC Drives

MT cast aluminium general purpose motors

Sizes 56 to 200, 0.06 to 37 kW, single & three phase

CMG's MT series are an ideal general purpose motor range in permanent split capacitor (MTS), cap start-cap run (MTC), three phase (MTT), and three phase brake (MTTB/MTTBHR) configurations.

Motor design

The motors are low weight cast aluminium and boast options which are unequalled by any other range of small frame electric motor on the market today.

Multi-mount feature

The standard MT motor features a top mounted terminal box and detachable feet. The unique multi-mount design (frame 63+) enables the motor feet to be removed and the motor mounted from any of the eight mounting pads.

This feature means that for axial flow fans there is no need for a motor mount in the fan case, which enables quicker assembly times, lower cost, and less restrictions to air flow.

Alternatively, for a wall mounted motor or side mounted terminal box, the MTS & MTT series both allow the feet to be relocated to either side.

Standards and specifications

The main dimensions and rated outputs of the MT series generally conform to Australian Standard AS/NZS1359 (CENELEC kW-frame size allocation table) and International Standards IEC 60034 and IEC 60072.

Operating parameters

Standard MT series motors are designed with the following parameters:

- Continuous duty (S1)
- Single phase: 220-240 Volt 50Hz power supply
Three phase: 380-415 Volt 50Hz power supply
- Ambient temperatures up to 40°C
- Installation at altitudes up to 1000 metres

Performance data is based on these parameters and may need adjustment for different conditions.

F class insulation, B class temperature rise

MT motors have F class insulation and B class temperature rise, ensuring cool running of the motor.

Degree of protection

Level of enclosure protection for the MT series is IP55 (increased IP ratings available). Shafts are fitted with an oil seal as standard.

Air movement application

With its low weight design and standard drilled and tapped hole in the shaft, the MT series is ideally suited for all air movement applications.

Efficiency

MTT motors meet requirements of European Eff2. For Eff1 aluminium frame motors, refer to CMG's HLA series catalogue.

Brake motors

MTTB brake motors are fail to safe design, as the brake will engage when power is interrupted. They are fitted with a Lenze DC brake and half wave rectifier mounted in the terminal box enabling direct connection of the brake to the AC supply, and come standard with a manual hand release. They are available in all mounting arrangements.

MTT internal connections

Standard terminal connections are:

- 230V Delta/ 400V Star (motors 3kW and below)
- 400V Delta/ 690V Star (motors 4kW and above)

Thermistors

The MTT series motors, frames 160 and above, are fitted as standard with one set (3) of PTC thermistors.

Finish

Standard surface finish is RAL 5010 Gentian Blue. Paint coatings in an alternative colour available on request.

Bearings

Bearings fitted are deep groove ball type.

Motor frame	Bearing size	
	DE	NDE
56	6201-2RS	6201-2RS
63	6201-2RS	6201-2RS
71	6202-2RS	6202-2RS
80	6204-2RS	6204-2RS
90	6205-2RS	6205-2RS*
100	6206-2RS	6206-2RS
112	6306-2RS	6206-2RS
132	6308-2RS	6208-2RS
160	6309-2RS	6309-2RS
180	TBA	TBA
200	TBA	TBA

*MTS & MTC 90 frame NDE = 6204-2RS

Top mounted terminal box

The standard position of the terminal box is on top of the motor, allowing for ease of connection to supply. The terminal box is separate from the body of the motor allowing it to be rotated for additional convenience when connecting to supply.

Product code specification

When placing an order the motor product code should be specified.
The product code of the motor is composed in accordance with the following example:

M	2	4	0	0	1	5	0	3	M	T	S	1
1	2	3	4-8					9	10 - 12			13 - 15

Position 1

M = metric frame size

Position 2

Phase

2 = PSC or Cap start-cap run

3 = Three phase

Position 3

Number of poles

2 = 2 poles

4 = 4 poles

6 = 6 poles

8 = 8 poles

Positions 4 to 8

Rated power output

(kW x 100)

Position 9

Mounting arrangements

1 = V1 **3** = B3

4 = B3/B5 **5** = B5

6 = B3/B14A **7** = B14A

8 = B3/B14B **9** = B14B

0 = multi-mount B0

Positions 10 to 12

Series

MTS = MT PSC series

MTC = MT CS/CR series

MTT = Three phase

Positions 13 to 15

Variation suffix - MTS & MTC series

Blank = no thermal overload

1 = in winding auto reset thermal overload

2 = manual reset current overload

3 = auto reset current overload

Variation suffix - MTT series

Blank = standard motor

1 = high output design

B = Three phase brake motor

BHR = Three phase brake motor with hand release (standard)

F = flying leads

H = H class insulation

R = airstream rated

Performance data

MTS series, single phase PSC connection, 220-240V 50Hz
IP55, F class insulation, B class temperature rise

kW	Motor frame	Speed [r/min]	230V 50Hz						220V 50Hz		240V 50Hz		Weight of foot mount motor [kg]	Capacitor Run Cap. [μ F/volts]
			Efficiency η	Power factor $\cos \varphi$	Current		Torque			Current Full load I_N [A]	Current Full load I_N [A]			
					Full load	Locked rotor	Full load	Locked rotor	Break down					
												I_L/I_N		
[%]														
3000 r/min = 2 poles														
0.09	56A - 9	2760	54.0	0.92	0.79	3.8	0.31	0.65	1.6	0.83	0.76	3.0	4/450	
0.12	56B - 9	2770	58.0	0.92	0.98	4.1	0.41	0.65	1.6	1.00	0.94	3.2	6/450	
0.18	63A - 11	2780	62.0	0.95	1.33	3.8	0.62	0.60	1.7	1.40	1.30	3.8	10/450	
0.25	63B - 11	2780	65.0	0.95	1.76	4.0	0.86	0.60	1.7	1.80	1.70	4.5	12/450	
0.37	71A - 14	2800	67.0	0.95	2.5	4.0	1.26	0.60	1.7	2.6	2.4	5.5	16/450	
0.55	71B - 14	2810	70.0	0.98	3.5	4.3	1.87	0.55	1.7	3.6	3.3	6.7	20/450	
0.75	80A - 19	2810	72.0	0.98	4.6	4.3	2.5	0.35	1.7	4.8	4.4	8.9	25/450	
1.1	80B - 19	2820	75.0	0.98	6.5	4.3	3.7	0.33	1.7	6.8	6.2	10.8	35/450	
1.5	90S - 24	2820	76.0	0.98	8.8	4.6	5.1	0.30	1.8	8.8	8.1	12.0	45/450	
2.2	90L - 24	2820	77.0	0.98	12.7	4.7	7.5	0.30	1.8	13.3	12.2	15.0	60/450	
3.0	100L - 28	2840	78	0.98	17.1	4.4	10.1	0.28	1.8	17.9	16.4	28.5	80/450	
1500 r/min = 4 poles														
0.06	56A - 9	1360	48.0	0.92	0.59	4.2	0.42	0.75	1.6	0.62	0.57	2.9	4/450	
0.09	56B - 9	1370	51.0	0.92	0.83	3.6	0.63	0.75	1.6	0.87	0.80	3.4	6/450	
0.12	63A - 11	1380	55.0	0.92	1.03	3.4	0.83	0.65	1.6	1.10	0.99	4	10/450	
0.18	63B - 11	1390	57.0	0.92	1.49	3.7	1.24	0.65	1.5	1.60	1.40	4.4	12/450	
0.25	71A - 14	1400	61.0	0.94	1.90	4.2	1.71	0.50	1.5	2.00	1.80	5.7	14/450	
0.37	71B - 14	1400	62.0	0.94	2.8	3.6	2.5	0.50	1.5	2.60	2.40	7.8	16/450	
0.55	80A - 19	1400	64.0	0.95	3.9	3.8	3.8	0.35	1.7	4.10	3.80	9.5	20/450	
0.75	80B - 19	1410	68.0	0.95	5.1	4.0	5.1	0.33	1.7	5.30	4.80	11.7	25/450	
1.1	90S - 24	1410	71.0	0.98	6.9	4.4	7.5	0.33	1.8	7.20	6.60	14.5	40/450	
1.5	90L - 24	1420	73.0	0.98	9.1	4.4	10.1	0.30	1.8	9.50	8.70	17.1	45/450	
2.2	100LA - 28	1440	76.0	0.98	12.8	4.7	14.6	0.28	1.8	13.50	12.3	23.4	70/450	
3	100LB - 28	1440	78.0	0.98	17.1	4.4	19.9	0.28	1.8	17.80	16.4	28.7	90/450	
1000 r/min = 6 poles														
0.09	63A - 11	930	57.0	0.96	0.72	1.83	0.92	0.37	1.43	1.00	0.9	4.1	8/450	
0.12	63B - 11	930	57.0	0.96	0.95	2.14	1.23	0.71	2.70	1.00	0.9	4.6	11/450	
0.18	71A - 14	910	56.0	0.98	1.43	2.16	1.89	0.71	1.53	1.43	1.31	6.3	16/450	
0.37	80A - 19	950	64.2	0.98	2.6	3.21	3.7	0.41	1.89	2.65	2.43	9.7	25/450	
0.55	80B - 19	910	67.6	0.98	3.6	2.53	5.8	0.36	1.36	5.10	4.68	10.7	30/450	
0.75	90S - 24	948	69.8	0.97	4.8	3.34	7.6	0.44	1.67	3.70	3.38	13.7	40/450	

This data is provided for guidance only, guaranteed only when confirmed by CMG.

Performance data

MTC series, single phase CS/CR connection, 220-240V 50Hz

IP55, F class insulation, B class temperature rise

kW	Motor frame	Speed	230V 50Hz					220V 50Hz			240V 50Hz		Weight of foot mount motor	Capacitor	
			Efficiency	Power factor	Current		Torque			Current	Current	Run Cap.		Start Cap.	
			Full load	Full load	Full load	Locked rotor	Full load	Locked rotor	Break down	Full load	Full load				
			η	$\cos \varphi$	I_N	I_L/I_N	T_N	T_L/T_N	T_B/T_N	I_N	I_N	[kg]		[μ F/volts]	[μ F/volts]

3000 r/min = 2 poles

0.37	71A	- 14	2780	70.0	0.95	2.4	6.2	1.27	2.5	1.7	2.5	2.3	6.1	12/450	75/250
0.55	71B	- 14	2790	73.0	0.95	3.5	5.8	1.88	2.5	1.7	3.6	3.3	7.0	16/450	100/250
0.75	80A	- 19	2800	74.0	0.97	4.5	6.6	2.6	2.5	1.7	4.7	4.4	9.0	20/450	100/250
1.1	80B	- 19	2810	76.0	0.97	6.5	6.2	3.7	2.5	1.7	6.7	6.2	10.3	30/450	150/250
1.5	90S	- 24	2810	78.0	0.97	8.6	6.4	5.1	2.5	1.8	9.0	8.3	13	40/450	200/250
2.2	90L	- 24	2810	79.0	0.97	12.5	6.0	7.5	2.2	1.8	13.1	12.0	16.7	50/450	250/300
3	100L	- 28	2830	80.0	0.98	16.6	5.7	10.1	2.2	2.0	17.4	15.9	25.0	60/450	350/300

1500 r/min = 4 poles

0.18	63B	- 11	1320	55.0	0.99	1.42	4.7	1.30	2.5	1.5	1.48	1.41	4.1	12/450	40/250
0.25	71A	- 14	1380	61.0	0.92	1.94	5.2	1.73	2.5	1.6	2.0	1.9	5.9	14/450	50/250
0.37	71B	- 14	1380	62.5	0.92	2.8	5.4	2.6	2.5	1.5	2.9	2.7	6.9	16/450	75/250
0.55	80A	- 19	1400	67.0	0.94	3.8	5.3	3.8	2.5	1.7	4.0	3.6	9.6	20/450	100/250
0.75	80B	- 19	1410	73.0	0.94	4.8	6.3	5.1	2.5	1.7	4.9	4.5	10.9	25/450	120/250
1.1	90S	- 24	1410	74.5	0.95	6.8	5.9	7.5	2.2	1.8	7.1	6.5	13.8	35/450	150/250
1.5	90L	- 24	1420	76.0	0.95	9.0	6.1	10.1	2.2	1.8	9.4	8.7	16.8	40/450	200/300
2.2	100LA	- 28	1430	78.0	0.97	12.6	6.0	14.7	2.2	1.8	13.2	12.1	22.8	50/450	350/300
3	100LB	- 28	1440	79.0	0.97	17.0	5.6	19.9	2.2	1.8	17.8	16.3	28.7	60/450	450/300
3.7	112M	- 28	1440	80.0	0.97	20.7	5.8	24.5	2.0	2.0	21.6	19.8	31.0	60/450	500/250

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Performance data

MTT series, three phase connection, 380-415V 50Hz

IP55, F class insulation, B class temperature rise

kW	Motor frame	Speed [r/min]	400V 50Hz			380V 50Hz			415V 50Hz		Weight of foot mount motor [kg]	
			Efficiency	Power factor	Current		Torque			Current		Current
			Full load	Full load	Full load	Locked rotor	Full load	Locked rotor	Break down	Full load		Full load
			η	$\cos \varphi$	I_N [A]	I_L/I_N	T_N [Nm]	T_L/T_N	T_B/T_N	I_N [A]		I_N [A]
3000 r/min = 2 poles												
0.09	56A - 9	2670	57.0	0.65	0.35	6.0	0.32	2.2	2.4	0.37	0.34	2.6
0.12	56B - 9	2730	62.0	0.69	0.40	6.0	0.42	2.2	2.4	0.43	0.39	3.0
0.18	63A - 11	2710	63.0	0.75	0.55	6.0	0.63	2.2	2.4	0.58	0.53	4.0
0.25	63B - 11	2710	65.0	0.78	0.71	6.0	0.88	2.2	2.4	0.75	0.69	4.2
0.37	71A - 14	2730	70.0	0.79	0.97	6.0	1.29	2.2	2.4	1.02	0.93	5.2
0.55	71B - 14	2760	71.0	0.79	1.42	6.0	1.90	2.2	2.4	1.49	1.36	6.0
0.75	80A - 19	2770	73.0	0.84	1.77	6.0	2.6	2.2	2.4	1.86	1.70	8.7
1.1	80B - 19	2770	76.2	0.83	2.5	6.0	3.8	2.2	2.4	2.6	2.4	10.0
1.5	90S - 24	2840	78.5	0.84	3.3	6.0	5.0	2.2	2.4	3.5	3.2	12.0
2.2	90L - 24	2840	81.0	0.85	4.6	6.0	7.4	2.2	2.4	4.9	4.5	14.5
3	100L - 28	2840	82.6	0.87	6.0	7.0	10.1	2.2	2.3	6.3	5.8	20.0
4	112M - 28	2880	84.2	0.87	7.9	7.5	13.3	2.2	2.3	8.3	7.6	26.0
5.5	132SA - 38	2900	85.7	0.88	10.5	7.5	18.1	2.0	2.2	11.1	10.2	38.4
7.5	132SB - 38	2920	87.0	0.88	14.1	7.5	24.5	2.0	2.2	14.9	13.6	41.3
11	160MA - 42	2940	88.4	0.90	20.0	7.5	35.7	2.0	2.2	21.0	19.2	76.0
15	160MB - 42	2940	89.4	0.91	26.6	7.5	48.7	2.0	2.2	28.0	25.6	77.5
18.5	160L - 42	2940	90.0	0.91	32.0	7.5	60.1	2.0	2.2	34.3	31.4	92.3
22	180L - 48	Under Development										
30	200LA - 55	Under Development										
37	200LB - 55	Under Development										
High Output Design - CENELEC +1 frame allocations (MTT1)*												
5.5	112MB - 28	2880	85.7	0.88	10.5	7.5	18.2	2.2	2.3	11.1	10.2	30.2
11	132M - 38	2930	88.4	0.90	20.0	7.5	35.9	2.0	2.2	21.0	19.2	58.8

*The output of these motors is one step higher than the basic design with rated outputs in accordance with CENELEC.
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Performance data

MTT series, three phase connection, 380-415V 50Hz

IP55, F class insulation, B class temperature rise

kW	Motor frame	Speed [r/min]	400V 50Hz					380V 50Hz			415V 50Hz		Weight of foot mount motor [kg]
			Efficiency	Power factor	Current		Torque			Current	Current		
			Full load	Full load	Full load	Locked rotor	Full load	Locked rotor	Break down	Full load	Full load		
			η	$\cos \varphi$	I_N	I_L/I_N	T_N	T_L/T_N	T_B/T_N	I_N	I_N		
1500 r/min = 4 poles													
0.09	56B - 9	1320	50.0	0.61	0.43	6.0	6.0	0.65	2.3	2.4	0.45	0.41	3.2
0.12	63A - 11	1350	57.0	0.64	0.47	6.0	6.0	0.85	2.2	2.4	0.50	0.46	3.7
0.18	63B - 11	1350	59.0	0.65	0.68	6.0	6.0	1.27	2.2	2.4	0.71	0.65	4.2
0.25	71A - 14	1350	60.0	0.72	0.84	6.0	6.0	1.77	2.2	2.4	0.88	0.81	5.0
0.37	71B - 14	1370	65.0	0.74	1.11	6.0	6.0	2.6	2.2	2.4	1.17	1.07	5.8
0.55	80A - 19	1370	67.0	0.75	1.58	6.0	6.0	3.8	2.2	2.4	1.66	1.52	8.1
0.75	80B - 19	1380	72.0	0.78	1.93	6.0	6.0	5.2	2.2	2.4	2.0	1.86	9.1
1.1	90S - 24	1400	76.2	0.79	2.6	6.0	6.0	7.5	2.2	2.4	2.8	2.5	11.7
1.5	90L - 24	1400	78.5	0.80	3.5	6.0	6.0	10.2	2.2	2.4	3.6	3.3	14.4
2.2	100LA - 28	1420	81.0	0.81	4.8	7.0	7.0	14.8	2.2	2.3	5.1	4.7	19.2
3	100LB - 28	1420	82.6	0.81	6.5	7.0	7.0	20.2	2.2	2.3	6.8	6.2	22.5
4	112M - 28	1430	84.2	0.83	8.3	7.0	7.0	26.7	2.2	2.2	8.7	8.0	29.0
5.5	132S - 38	1450	85.7	0.84	11.0	7.0	7.0	36.2	2.2	2.2	11.6	10.6	39.0
7.5	132M - 38	1450	87.0	0.85	14.6	7.0	7.0	49.4	2.2	2.2	15.4	14.1	48.6
11	160M - 42	1460	88.4	0.87	20.6	7.0	7.0	72.0	2.2	2.2	21.7	19.9	73.0
15	160L - 42	1460	88.4	0.87	28.2	7.5	7.5	98.1	2.2	2.2	29.6	27.1	88.5
18.5	180M - 48	Under Development											
22	180L - 48	Under Development											
30	200L - 55	Under Development											
High Output Design - CENELEC +1 frame allocations (MTT1)*													
5.5	112MB - 28	1440	85.7	0.83	11.2	7.0	7.0	36.5	2.2	2.2	11.8	10.8	34.8
11	132L - 38	1460	88.4	0.86	20.9	7.5	7.5	72.0	2.2	2.2	22.0	20.1	64.0

*The output of these motors is one step higher than the basic design with rated outputs in accordance with CENELEC. This data is provided for guidance only, guaranteed only when confirmed by CMG.

Performance data

MTT series, three phase connection, 380-415V 50Hz

IP55, F class insulation, B class temperature rise

kW	Motor frame	Speed [r/min]	400V 50Hz								380V 50Hz		415V 50Hz	Weight of foot mount motor [kg]
			Efficiency η	Power factor cos φ	Current			Torque			Current I _N [A]	Current I _N [A]		
					Full load	Full load	Locked rotor	Full load	Locked rotor	Break down				
													Full load	
1000 r/min = 6 poles														
0.18	71A - 14	880	56.0	0.66	0.70	4.0	1.95	1.6	1.7	0.74	0.68	5.6		
0.25	71B - 14	900	59.0	0.70	0.87	4.0	2.7	2.1	2.2	0.92	0.84	6.0		
0.37	80A - 19	900	62.0	0.70	1.23	4.0	3.9	1.9	1.9	1.30	1.19	8.1		
0.55	80B - 19	900	67.0	0.72	1.65	4.0	5.8	2.0	2.3	1.73	1.59	9.6		
0.75	90S - 24	920	69.0	0.72	2.2	5.5	7.8	2.2	2.2	2.3	2.1	11.3		
1.1	90L - 24	925	72.0	0.73	3.0	5.5	11.4	2.2	2.2	3.2	2.9	14.4		
1.5	100L - 28	945	74.0	0.76	3.9	6.0	15.2	2.2	2.2	4.1	3.7	18.8		
2.2	112M - 28	955	78.0	0.76	5.4	6.0	22.0	2.2	2.2	5.6	5.2	25.0		
3	132S - 38	960	79.0	0.76	7.2	6.5	29.8	2.0	2.0	7.6	7.0	35.0		
4	132MA - 38	960	80.5	0.76	9.4	6.5	39.8	2.0	2.0	9.9	9.1	47.6		
5.5	132MB - 38	960	83.0	0.77	12.4	6.5	54.7	2.0	2.0	13.1	12.0	50.7		
7.5	160M - 42	960	86.0	0.80	15.7	6.5	74.6	2.0	2.2	16.6	26.2	70.2		
11	160L - 42	960	87.5	0.79	23.0	6.5	109.4	2.0	2.2	24.2	22.1	87.3		
15	180L - 48	Under Development												
18.5	200LA - 55	Under Development												
22	200LB - 55	Under Development												
750 r/min = 8 poles														
0.18	80A - 19	680	51.0	0.61	0.84	2.8	2.5	1.5	1.7	0.88	0.81	9.4		
0.25	80B - 19	680	56.0	0.61	1.06	2.7	3.5	1.6	2.0	1.12	1.02	10.1		
0.37	90S - 24	680	63.0	0.63	1.35	2.8	5.2	1.6	1.8	1.42	1.30	12.5		
0.55	90L - 24	680	66.0	0.65	1.85	3.0	7.7	1.6	1.8	1.95	1.78	15.3		
0.75	100LA - 28	710	66.0	0.67	2.5	3.5	10.1	1.7	2.1	2.6	2.4	17.2		
1.1	100LB - 28	710	72.0	0.69	3.2	3.5	14.8	1.7	2.1	3.4	3.1	19.5		
1.5	112M - 28	710	74.0	0.68	4.3	4.2	20.2	1.8	2.1	4.5	4.2	25.5		
2.2	132S - 38	720	75.0	0.71	6.0	5.5	29.2	2.0	2.0	6.3	5.8	34.2		
3	132M - 38	720	77.0	0.73	7.7	5.5	39.8	2.0	2.0	8.1	7.4	40.0		
4	160MA - 42	730	80.0	0.73	9.9	6.0	52.3	1.9	2.1	10.4	9.5	59.0		
5.5	160MB - 42	720	83.5	0.74	12.9	6.0	73.0	2.0	2.2	13.5	12.4	69.0		
7.5	160L - 42	720	85.0	0.75	17.0	6.0	99.5	1.9	2.2	17.9	16.4	87.0		
11	180L - 48	Under Development												
15	200L - 55	Under Development												

This data is provided for guidance only, guaranteed only when confirmed by CMG.

Brake Details

MTTB Brake series, three phase connection, 380-415V 50Hz
IP55, F class insulation, B class temperature rise

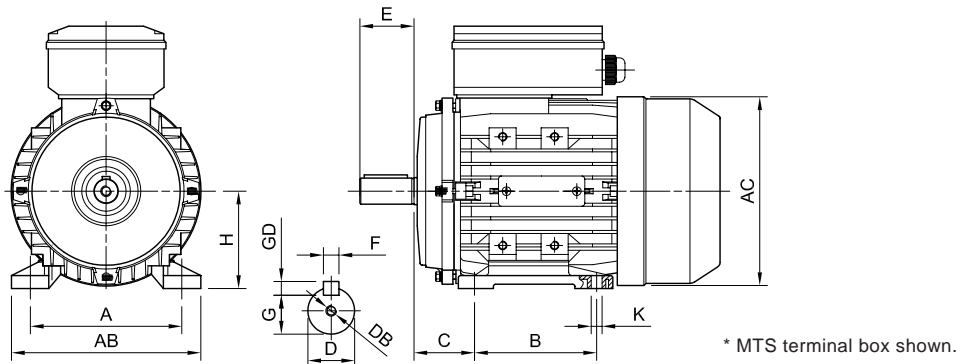
Output kW	Motor frame	Brake model	Brake weight [kg]	Motor full load torque T_N [Nm]	Brake torque			Brake torque as % of full load		
					Nominal [Nm]	Min [Nm]	Max [Nm]	Nominal [%]	Min [%]	Max [%]
1500 r/min = 4 poles										
0.09	56B	L06/04	1.14	0.65	4	2.0	6	610%	310%	920%
0.12	63A	L06/04	1.14	0.85	4	2.0	6	470%	240%	710%
0.18	63B	L06/04	1.14	1.27	4	2.0	6	310%	160%	470%
0.25	71A	L06/04	1.14	1.77	4	2.0	6	230%	110%	340%
0.37	71B	L06/04	1.14	2.6	4	2.0	6	150%	80%	230%
0.55	80A	L08/08	1.9	3.8	8	3.5	12	210%	90%	320%
0.75	80B	L08/08	1.9	5.2	8	3.5	12	150%	70%	230%
1.1	90S	L10/16	2.8	7.5	16	7.0	23	210%	90%	310%
1.5	90L	L10/23	2.8	10.2	23	7.0	23	230%	70%	230%
2.2	100LA	L12/32	4.5	14.8	32	14	46	220%	100%	310%
3	100LB	L12/40	4.5	20.2	40	14	46	200%	70%	230%
4	112M	L14/60	6.2	26.7	60	25	95	230%	90%	360%
5.5	132S	L16/80	9.0	36.2	80	45	125	220%	120%	350%
7.5	132M	L16/100	9.0	49.4	100	45	125	200%	90%	250%
1000 r/min = 6 poles										
0.18	71A	L06/04	1.14	2.0	4	2.0	6	210%	100%	310%
0.25	71B	L06/06	1.14	2.7	6	2.0	6	220%	80%	220%
0.37	80A	L08/08	1.9	3.9	8	3.5	12	200%	90%	310%
0.55	80B	L08/12	1.9	5.8	12	3.5	12	210%	60%	210%
0.75	90S	L10/16	2.8	7.8	16	7.0	23	210%	90%	300%
1.1	90L	L10/23	2.8	11.4	23	7.0	23	200%	60%	200%
1.5	100L	L12/32	4.5	15.2	32	14	46	210%	90%	300%
2.2	112M	L14/45	6.2	22.0	45	25	95	210%	110%	430%
3	132S	L16/60	9.0	29.8	60	45	125	200%	150%	420%
4	132MA	L16/80	9.0	39.8	80	45	125	200%	110%	310%
5.5	132MB	L16/100	9.0	54.7	100	45	125	180%	80%	230%

For motor data, please refer to MTT series performance data on page 8 and 9.

Dimensional drawings

MTS & MTC series

Foot mount B3 (IM1001)*



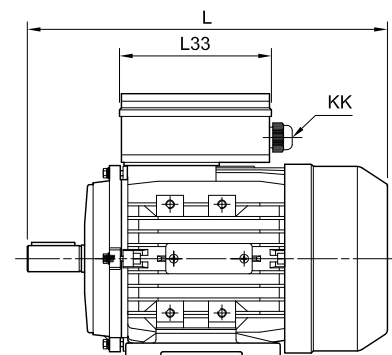
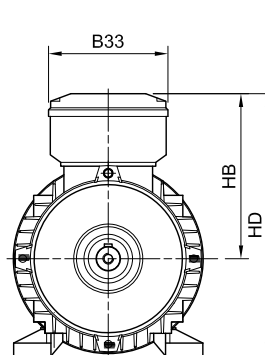
Foot and body dimensions

Motor frame		A	AB	AC	B	C	D	DB	E	F	GD	G	H	K
56	- 9	90	110	120	71	36	9	M3	20	3	3	7.2	56	5.8 x 8.8
63	- 11	100	120	130	80	40	11	M4	23	4	4	8.5	63	7 x 10
71	- 14	112	132	145	90	45	14	M5	30	5	5	11.0	71	7 x 10
80	- 19	125	160	165	100	50	19	M6	40	6	6	15.5	80	10 x 13
90S	- 24	140	175	185	100	56	24	M8	50	8	7	20	90	10 x 13
90L	- 24	140	175	185	125	56	24	M8	50	8	7	20	90	10 x 13
100L	- 28	160	196	205	140	63	28	M10	60	8	7	24	100	12 x 16
112M	- 28	190	220	230	140	70	28	M10	60	8	7	24	112	12 x 16

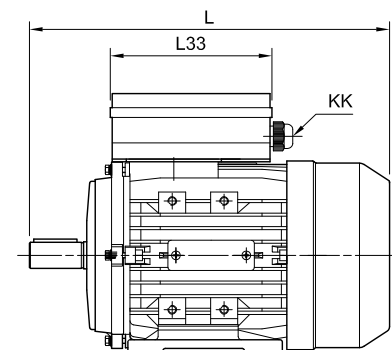
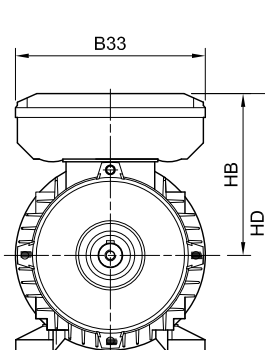
Terminal box and motor length dimensions

Motor frame		B33	HD	KK	L33	L	HB
MTS							
56	-9	85	156	-	107	192	100
63	-11	95	180	M20	118	212	117
71	-14	95	194	M20	118	240	123
80	-19	112	222	M20	141	290	142
90S	-24	112	240	M20	141	310	150
90L	-24	112	240	M20	141	335	150
100L	-28	146	252	M20	193	357	160
MTC							
63	-11	144	174	M16	104	212	111
71	-14	144	188	M20	104	255	117
80	-19	176	222	M20	150	290	142
90S	-24	176	238	M20	150	335	148
90L	-24	176	238	M20	150	365	148
100L	-28	176	262	M20	150	427	162
112M	-28	193	286	M25	150	453	174

MTS Cap Box



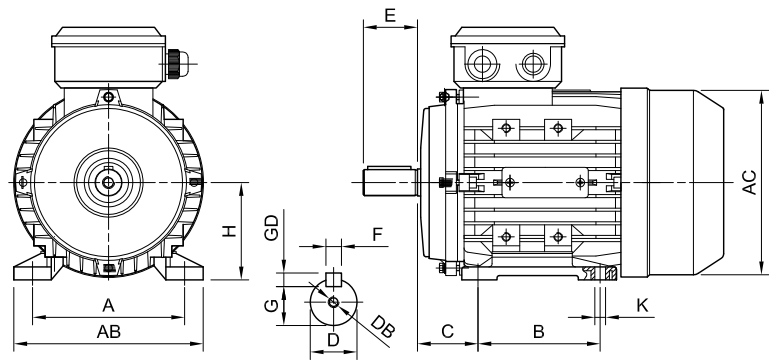
MTC Cap Box



Dimensional drawings

MTT & MTTB series

Foot mount B3 (IM1001)

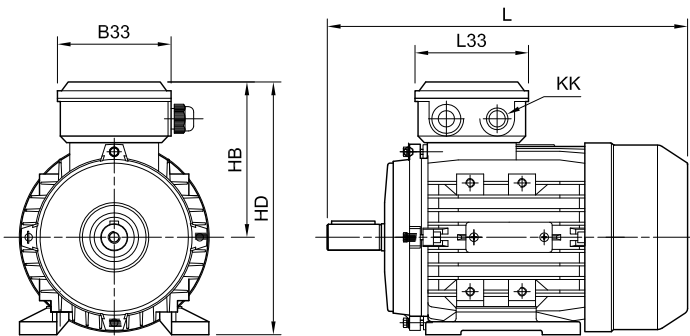


Foot and body dimensions

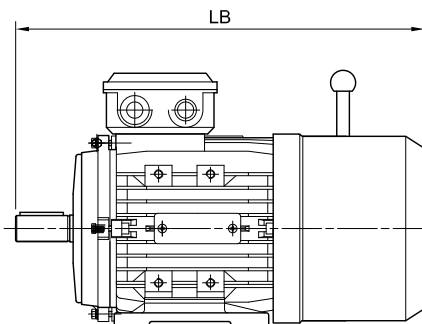
Motor frame	A	AB	AC	B	C	D	DB	E	F	GD	G	H	K
56 - 9	90	110	120	71	36	9	M3	20	3	3	7.2	56	5.8 x 8.8
63 - 11	100	120	130	80	40	11	M4	23	4	4	8.5	63	7 x 10
71 - 14	112	132	145	90	45	14	M5	30	5	5	11.0	71	7 x 10
80 - 19	125	160	165	100	50	19	M6	40	6	6	15.5	80	10 x 13
90S - 24	140	175	185	100	56	24	M8	50	8	7	20	90	10 x 13
90L - 24	140	175	185	125	56	24	M8	50	8	7	20	90	10 x 13
100L - 28	160	196	205	140	63	28	M10	60	8	7	24	100	12 x 16
112M - 28	190	220	230	140	70	28	M10	60	8	7	24	112	12 x 16
132S - 38	216	252	270	140	89	38	M12	80	10	8	33	132	12 x 16
132M(L) - 38	216	252	270	178	89	38	M12	80	10	8	33	132	12 x 16
160M/L - 42	210/254	290	320	210	108	42	M16	110	12	8	37	160	15 x 19
180M - 48	Under Development												
180L - 48	Under Development												
200L - 55	Under Development												

Terminal box and motor length dimensions

Motor frame	B33	HD	KK	L33	L	LB	HB
56 - 9	88	156	M16	88	192	230	100
63 - 11	94	173	M16	94	212	252	110
71 - 14	94	188	M20	94	240	297	117
80 - 19	105	217	M20	105	290	332	137
90S - 24	105	235	M20	105	310	359	145
90L - 24	105	235	M20	105	335	384	145
100L - 28	105	252	M25	105	368	420	152
112M - 28	112	292	M25	112	395	463	180
132S - 38	112	325	M25	112	436	520	193
132M - 38	112	325	M25	112	474	559	193
132L - 38	112	325	M25	112	500	585	193
160M/L - 42	143	390	M32	146	640	-	230
180M - 48	Under Development						
180L - 48	Under Development						
200L - 55	Under Development						



MTTB Brake Motor*

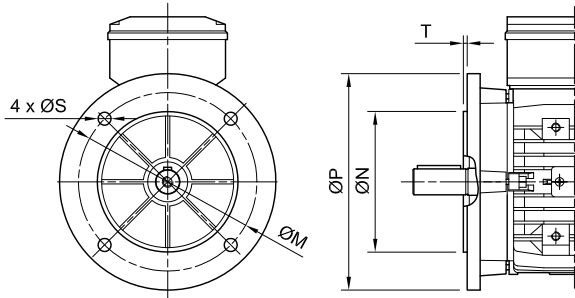


*Shown with hand release model MTTBHR

Dimensional drawings

Common to single and three phase series

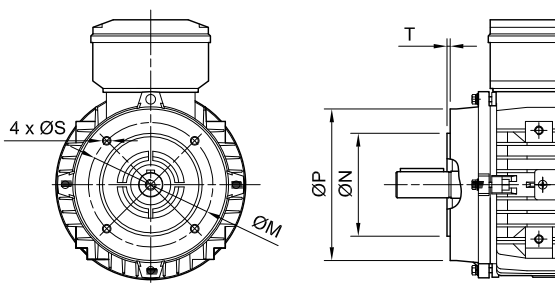
Flange mount B5 (IM3001)



Flange mount B5

Motor frame		ØM	ØN	ØP	ØS	T
56	- 9	100	80	120	7	3.0
63	- 11	115	95	140	10	3.0
71	- 14	130	110	160	10	3.5
80	- 19	165	130	200	12	3.5
90S	- 24	165	130	200	12	3.5
90L	- 24	165	130	200	12	3.5
100L	- 28	215	180	250	15	4.0
112M	- 28	215	180	250	15	4.0
132S	- 38	265	230	300	15	4.0
132M(L)	- 38	265	230	300	15	4.0
160M/L	- 42	300	250	350	19	5.0
180M	- 48	Under Development				
180L	- 48	Under Development				
200L	- 55	Under Development				

Face mount B14 (IM3601)



Face mount B14A

Motor frame		ØM	ØN	ØP	ØS	T
56	- 9	65	50	80	M5	2.5
63	- 11	75	60	90	M5	2.5
71	- 14	85	70	105	M6	2.5
80	- 19	100	80	120	M6	3.0
90S	- 24	115	95	140	M8	3.0
90L	- 24	115	95	140	M8	3.0
100L	- 28	130	110	160	M8	3.5
112M	- 28	130	110	160	M8	3.5
132S	- 38	165	130	200	M10	3.5
132M(L)	- 38	165	130	200	M10	3.5

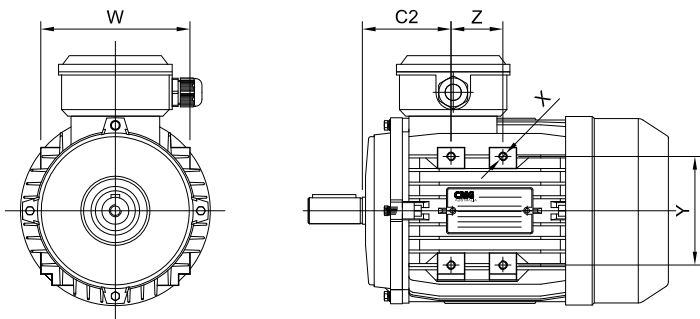
Face mount B14B

Motor frame		ØM	ØN	ØP	ØS	T
63	- 11	100	80	120	M6	3.0
71	- 14	115	95	140	M8	3.0
80	- 19	130	110	160	M8	3.5
90S	- 24	130	110	160	M8	3.5
90L	- 24	130	110	160	M8	3.5
100L	- 28	165	130	200	M10	3.5
112M	- 28	165	130	200	M10	3.5
132S	- 38	215	180	250	M12	4.0
132M(L)	38	215	180	250	M12	4.0

Dimensional drawings

Common to single and three phase series

Multi-mount option - MTT



Multi-mount B0

Motor frame		C2	W	X ¹⁾	Y	Z	
56	-	9	Multi-mount option not available				
63	-	11	60	85	M6	68	40
71	-	14	66	102	M6	82	48
80	-	19	76	124	M6	93	48
90S	-	24	82	138	M8	100	48
90L	-	24	82	138	M8	100	73
100L	-	28	101	146	M8	116	64
112M	-	28	103	166	M10	144	74
132S	-	38	122	192	M10	156	74
132M(L)	-	38	122	192	M10	156	112
160M	-	42	189	230	M12	190	92
160L	-	42	189	230	M12	190	92
180M	-	48	Under Development				
180L	-	48	Under Development				
200L	-	55	Under Development				

¹⁾ 16 multi-mount mounting pads, 12 tapped or have a provision for tapping. The standard multi-mount offers mounting holes that are vertical or horizontal only.

Modifications and variations

Bearings

CMG can address applications where bearings need special consideration. Attention may need to be given to the following:

- Alternative bearing types
- Low/high temperature bearing grease

Shafts

MT motors come standard with a single output shaft to standard dimensions. The following alternatives are available:

- Double shaft extension
- Special shaft extension
- Stainless steel shaft material

Endshields

Standard MT endshields are all aluminium. For frames 90 to 200 they are fitted with cast iron inserts for the bearings. Cast iron or special endshields for customer applications can be manufactured to specification.

Slide rails

CMG stock slide rails to suit frame sizes from 80 to 200. Rail sets are manufactured from cast iron and provided with mounting bolts and nuts between motor and rail.

Environmental considerations

Where environmental factors need special consideration CMG can provide the following modifications:

- Winding temperature monitors
- Thermistors (standard on 160 frame and above)
- Anti-condensation heaters
- Separately powered cooling fans
- Tropic proofing
- Special paint finish
- High ambient temperature motors - MTTH with H class insulation

Special performance

CMG is able to provide MTT motors with special windings. These include:

- 10,12 and 16 pole single speed windings
- Two, three and four speed windings
- Windings for alternative operating voltages and frequencies
- Windings designed for increased outputs and short time ratings

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- SGA series** Enhanced performance cast iron units
- HLA series** Cast aluminium multi-mount units MEPS2 (Eff 1) compliant
- SLA series** Cast aluminium multi-mount units
- PPA series** High specification cast iron units
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- PPD series** Zone 1 Exd cast iron units
- MT series** Cast aluminium single & three phase units
- CT series** Air movement, pumping & general purpose application motors
- CW series** Australian made, special application & general purpose motors
- Centurion series** HTE & HCA series cast iron and fabricated steel high voltage motors

AC Drives & Softstarters

- Vacon NX** Vacon frequency converters
- Lovato ADX** Softstarters with torque control

Gear Motors

- Nordbloc-HGA** Euro dimension inline units
- Nordunicase-HGA** Heavy duty inline and flat helical units
- Nordbevel-HGA** Heavy duty helical bevel units
- Nordworm-HGA** All cast iron motor & wormbox units
- FRT-MTT/HLA** All aluminium universal mount wormbox units
- FRS-HGA** All cast iron motor & wormbox units
- FRS-MTT/HLA** All aluminium motor & wormbox units
- FRD-MTT/HLA** All aluminium Euro dimension inline units
- C&H SLA** High ratio inline multi-stage spur units
- Cycloid 600** Compact High Efficiency Cycloidal speed reducers
- Geardrive** C-frame sub-fractional horsepower units
- SMR®** Helical shaft mounted reducers
- CRT-MTT/HLA** All aluminium universal mount wormbox units

Other

- Corporate Brochure & Product Selection Guide

Please note: not all products are available worldwide.



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