CMG

CW Series Motors

Australian made, special application & general purpose motors

PRODUCT CATALOGUE

“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.

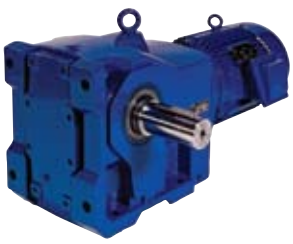
With over 650 staff around the globe, our branches extend across Australia, New Zealand, Asia Pacific, South Africa, Europe and the Middle East.

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 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**

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FEATURES

The CWC special application motor range by CMG offers complete customisation to suit your application needs. CWC motors are designed and tested by our experienced engineering team, allowing for rapid prototyping.

The motors are manufactured in our modern facility, located in Melbourne Australia, using state of the art machines and production techniques. The CWC design, pioneered by company founder C.M.Gringlas, stands today as the sole remaining motor still manufactured in Australia.

Complimentary to the CWC special application range is the general purpose CW range of standard motors.

VERSATILE COMPONENTS

The success of the CWC range is based around its configurable mechanical and electrical components which can be combined to match the needs of your application.

Terminal, capacitor, and other switch boxes offer many possibilities for electrical connection. The standard terminal box offers four lead entry points, two cable clamps, plus two conduit entries. Special shaft designs, and materials including stainless steel, are available on request.

MOUNTING OPTIONS

The CWC range can be designed in all standard motor mounting arrangements and combinations including foot (B3), flange (B5), foot/flange (B3/B5), face (B14), and foot/face (B3/B14).

Special mounting requirements can also be accommodated, including pad mounting, resilient mounting, and special endshields with mounting studs and screws.

SURFACE FINISH

A full spectrum of colours is possible. Popular colours include Hammertex Grey (standard CW range), Royal Blue, Satin White, and Signal Red.

Special paint systems are available when stringent specifications must be met, including corrosive environments involving acids, salt water, extreme climates, and other demanding locations.

WINDING DESIGN

Special starting and running requirements in both torque and speed properties can be designed and produced in-house, including:

- Split phase
- Cap Start Induction Run (CSIR)
- Cap Start Cap Run (CSCR)
- Permanent Split Capacitor (PSC)
- Three phase
- Integrated VVVF drive.

Details of winding options are available on page 23.

Other winding feature options also include:

- Multi-speed designs
- 2, 4, 6, 8 & 12 pole (3000 – 500 r/min)
- Non-standard voltages and frequencies
- Intermittent duty windings
- Torque and high slip windings.

Most motors come standard with F class insulation and B class (80K) temperature rise. Alternatives are also available.

PROTECTION AND COOLING

Ingress protection comes standard as IP44. (Ratings up to IP56 are available.)

Electrical overload protection can be designed as either auto reset (internal and external) or manual reset (external).

The motor cooling method is an important consideration in relation to both ingress and overload protection. Cooling options include:

- Totally enclosed fan cooled (TEFC) - standard
- Drip proof fan cooled (DPFC)
- Totally enclosed surface cooled (TESC)
- Totally enclosed air over motor (TEAOM).

BUILT TO STANDARD

The main dimensions and rated outputs of CWC motors generally conform to Australian standard AS1359, international standard IEC 600072 (metric frames) and British standard BS2048 (imperial B56 frame).

APPLICATIONS

APPLICATIONS

CMG's knowledge and experience in motor design covers many common industrial applications. Along with our stocked CW general purpose range, the CWC range offers a ready solution to numerous applications in a variety of different industries. Below is a collection of application examples (further details on many of these are outlined in this catalogue).


Cement Mixers


Compressors


Floor Polishers


Brick Saws


Sewage Aeration


Centrifugal & Axial Fans


Pool & Spa Pumps


Grain Feeders


Two Speed Saws


Shearers Grinders


Hydraulic Hoist


General Purpose

THE EXTENSIVE LIST OF APPLICATIONS ALSO INCLUDES:

- Industrial washing machines
- Farming equipment
- Wood lathes
- Gearboxes
- Refrigerated containers
- Evaporative coolers
- Materials handling
- Catering equipment
- Drill presses
- Brake motors
- Speedmaster™ integral motor-drive
- plus many more.

SPEEDMASTER

SPEEDMASTER™ INTEGRAL MOTOR-DRIVE

CMG's patented new Speedmaster™ represents the world's first truly integrated Motor-Variable Frequency Drive unit. It combines the reliability of a standard 3 phase motor, with a 240V AC single phase VVVF drive encapsulated in a conventional motor size, capitalising on the flexible mechanical design of traditional CW motors.

The Speedmaster™ series is available with a rated output power from 0.37kW to 1.5kW and a frequency range of 20Hz to 60Hz. Motors can be programmed to match the torque/speed requirements of any customer's application.

Winner Victorian ENGINEERING EXCELLENCE Awards 2005

FEATURES

- Simple speed control knob for easy use - no programming required
- Single phase 220-240V 50/60Hz supply
- Electronic variable speed
- Overload protection
- Optional remote control and electronic isolation/advanced control supply system
- Savings on installation costs - no additional wiring is needed
- Compact TEFC design
- IP55 ingress protection
- Standard with 2 metre flex & plug
- Reversible

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Full Load AMPS	Standard Rotation Direction	Speed RPM min	Speed RPM max	Torque	Frame	Mount	Flex & Plug Rating	Length L [mm]
CWC4016A	0.37	4.4	CW	540	1740	Constant	D71	B5	10A	296
CWC4008A	0.37	4.4	CW	540	1740	Constant	D71	B14A	10A	246
CWC4012A	0.75	7.1	CW	550	1720	Constant	B56	B3	10A	293
CWC4017A	0.75	7.1	CW	550	1720	Constant	D80	B5	10A	296
CWC4009A	0.75	7.1	CW	550	1720	Constant	D80	B14A	10A	276
CWC4013A*	1.50	14.0	CW	800	1700	Constant	D90	B3	15A	360
CWC4018A*	1.50	14.0	CW	800	1700	Constant	D90	B5	15A	360
CWC4010A*	1.50	14.0	CW	800	1700	Constant	D90	B14A	15A	335
CWC4012B	0.75	7.1	CW	570	1720	Variable	B56	B3	10A	293
CWC4013B	1.50	14.0	CW	570	1700	Variable	D90	B3	15A	360

*Minimum 30Hz.
Output kW relates to max speed.
Motor dimensions page 18.

EVAPORATIVE COOLER

EVAPORATIVE COOLER MOTORS

CMG's Evaporative Cooler series is a trusted and proven design for reliability and performance within the cooler industry. The motors are manufactured locally for the toughest Australian conditions.

Motor designs are dual or variable speed to suit a variety of air movement applications. Flexibility in the design process enables motors to be manufactured to customer specified designs. Standard motors are single phase. Other power ratings and three phase versions are available on request.

FEATURES

- Resilient mount
- Fully interchangeable with other brands
- Drip proof with internal cooling fan
- In-winding auto-reset thermal overload protection
- Efficient 240V 50Hz single phase PSC winding design
- Low noise
- B56 motor frame
- Reversible
- Full protection against corrosion of motor and cradle (gold zinc plated)

MOTOR SPECIFICATIONS

CMG Product Code	Model	Input kW	Full Load AMPS	Speed RPM	Variable or Dual Speed	Standard Rotation Direction	Dimensions		
							L [mm]	L1 [mm]	L2 [mm]
CWC4031A	M550	0.80	3.3	1360	Variable	ACW	237	218	25.4(1″)
CWC4031B	M750	1.00	4.1	1400	Variable	ACW	263	244	50.8(2″)
CWC4031C	M550	0.66	2.7/1.5	1380/900	Dual	ACW	237	218	25.4(1″)
CWC4031D	M750	0.85	3.7/2.2	1380/900	Dual	ACW	263	244	50.8(2″)
CWC4031E	M1100	1.20	5.2/3.5	1400/1050	Dual	ACW	288	269	76.2(3″)
CWC4031F	M1500	1.70	7.5/5.3	1400/1090	Dual	ACW	288	269	76.2(3″)

When used with speed varying device, speed is variable from the rated speed down to a recommended minimum of 600r/min.
For CWC4031B and CWC4031F the front endshield is slotted through 360˚ (all others are slotted through 120˚).
Motor dimensions page 18.

COMPRESSOR

COMPRESSOR DUTY MOTORS

The CMG Compressor series is designed and manufactured in Australia to meet demanding applications where the need for high starting performance, reliability, and flexibility is paramount.

Compressor motors are available in single phase with rated output powers available from 1.3kW to 2.4kW.

FEATURES

- Heavy duty centrifugal switch
- High starting torque CSCR design
- TEFC or DPFC cooling designs
- Rolled steel case with steel B56 base
- Manual reset thermal overload protection
- Easy 240V single phase connection via supplied lead from top cap box.

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Full Load AMPS	Speed RPM	Standard Rotation Direction	Reversible	Cooling	3 Core Lead	Length L [mm]
CWC3971A	1.30	7.2	2820	ACW	YES	TEFC	0.58m / 10A	266
CWC3971B	1.65	9.0	2820	ACW	YES	TEFC	0.58m / 10A	278
CWC3971F	1.65	9.3	2780	ACW	YES	DPFC	0.58m / 10A	266
CWC3971E	2.40	13.6	2840	ACW	YES	DPFC	0.88m / 15A	304

Motor dimensions page 18.

BRICKSAW

BRICKSAW MOTORS

The custom-built CMG Bricksaw series are specially designed to have higher torque characteristics needed for demanding saw applications. CMG Bricksaw motors have a proven track record in the industry and are renowned for their reliability and premium quality.

FEATURES

- High starting torque CSCR design
- Motor-mounted heavy duty on/off switch
- 240V single phase
- 2 metre flex & 10 Amp clear plug supplied
- Proudly manufactured in Australia
- Manual reset overload protection
- IP55 protection against dust and water ingress
- Wear resistant metal rating plate for easy identification

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Full Load AMPS	Speed RPM	Standard Rotation Direction	On/Off switch position
CWC3637D	1.7	9.6	2880	CW	RHS
CWC3766B	1.7	9.6	2880	ACW	LHS

The rotation of these motors is fixed for safety reasons.
Motor dimensions page 18.

CEMENT MIXER

CEMENT MIXER / SPLIT PHASE MOTORS

CMG's general purpose Split Phase motor series is ideal for domestic, commercial and light industrial applications. Common uses include cement mixers, drill presses and light duty machinery.

This single phase workhorse comes standard in 0.56kW, and is available in other rated output powers on request. With motors in the field as old as 50 years this well proven long standing design performs day in day out without missing a beat.

FEATURES

- Double pole on/off switch
- Comes standard with flex & clear plug fitted
- TEFC cooling
- IP44 protection against dust and water ingress (IP55 available upon request)
- Rolled steel case with B56 base
- Manual reset thermal overload protection
- 240V Single phase Split Phase winding design

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Full Load AMPS	Speed RPM	Standard Rotation Direction	Reversible	Lead Length [m]	T/box position	Base	Length L [mm]
CWC3572A	0.56	5.3	1420	CW	YES	3.0	Top	Steel	251
CWC3572E	0.56	5.3	1420	ACW	YES	0.3	Top	Aluminium	264
CWC3705C	0.56	5.3	1420	CW	YES	0.3	RHS	Aluminium	264

Motor dimensions page 19.

FAN Motors

FAN SERIES MOTORS

Specifically designed for fan applications, the Fan series is available in both single and three phase versions, with rated output powers from 0.37kW to 1.1kW. Motors are either a fixed or variable speed design to suit a variety of air movement applications.

Flexibility in our design process enables us to manufacture motors to suit your needs.

FEATURES

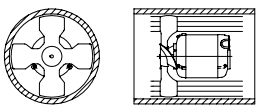
- Single and three phase models
- Efficient PSC winding design (single phase models)
- IP55 protection against dust and water ingress
- Reversible
- Low noise
- In-winding auto-reset thermal overload protection (single phase models)
- TEFC or TEAOM cooling options

MOTOR SPECIFICATIONS

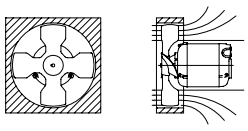
CMG Product Code	Output kW	Connection	Full Load AMPS	Speed		Standard Rotation Direction	Length L [mm]	Design
				RPM	Variation			
CWC3626A1	0.37	1Ø	2.9	1410	Fixed	CW	234	TEAOM
CWC3626D1	0.37	1Ø	2.5	930	Fixed	CW	234	TEAOM
CWC3626B1	0.56	1Ø	3.5	1420	Fixed	CW	234	TEAOM
CWC3626C1	0.75	1Ø	4.7	1420	Fixed	CW	234	TEAOM
CWC3688A1	0.40	1Ø	3.2	1370	Variable	CW	274	TEFC
CWC3626P1	0.75/0.60*	1Ø	4.4/3.6*	1380/1410*	Variable	CW	247	TEAOM
CWC3626R1	1.10/0.90*	1Ø	6.6/5.6*	1350/1375*	Variable	CW	285	TEAOM
CWC3626H	0.37	3Ø	1.1	1400	Fixed	CW	234	TEAOM
CWC3626J	0.72	3Ø	1.7	1400	Fixed	CW	234	TEAOM

When used with a speed varying device, the speed is variable from the rated speed down to a recommended 600r/min minimum.
* Values correspond with Ducted/Free air movement applications. (See diagrams below.)
Motor dimensions page 19.

Ducted



Free



GRAIN FEEDER

GRAIN FEEDER MOTORS

Specifically designed for feeder applications, the Grain Feeder series is available in both single and three phase versions, with rated output powers from 0.37kW to 0.75kW.

CMG's rolled steel body is ideal for this application, as it avoids the build up of harmful contaminants that occurs on finned body motors. Porous drain plugs fitted allow any moisture or condensation to escape, avoiding any possibility of water build up inside the motor.

FEATURES

- Australian made
- Smooth rolled steel case
- High starting torque CSCR winding design (single phase)
- TEFC cooling
- IP55 protection against dust and water ingress
- NEMA "oil burner" flange
- Manual reset thermal overload protection (single phase models)

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Connection	Full Load AMPS	Speed RPM	Standard Rotation Direction	Reversible	Voltage
CWC3910A	0.37	1Ø	2.5	1380	ACW	Yes	240
CWC3910B	0.56	1Ø	3.3	1390	ACW	Yes	240
CWC3910N	0.56	1Ø	3.5	2720	ACW	Yes	240
CWC3910C	0.75	1Ø	4.5	1410	ACW	Yes	240
CWC3910H	0.72	3Ø	1.7	1400	ACW	Yes	415

Single phase models are fitted with a 0.69m flex & plug.
Motor dimensions page 19.

SEWAGE AERATION

SEWAGE AERATION MOTORS

The purpose built Sewage Aeration series is a CMG original and remains the dominant market leader. The motor boasts a proven track record within the industry for reliability and premium quality.

The special hollow stainless steel shaft design and protective coating gives a perfectly adapted motor for this application.

FEATURES

- Proudly still manufactured in Australia
- Special marine grade epoxy coating
- IP56+ protection against water and dust ingress
- 240V single phase
- Efficient PSC winding design
- TESC cooling
- Shaft and all mounting attachments are stainless steel

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Full Load AMPS	Speed RPM	Standard Rotation Direction	Flex	Capacitor
CWC3635D	0.12	1.00	2925	ACW	3 core	Internal, high temp
CWC3635E	0.12	1.00	2925	ACW	4 core, with quick connectors	External

Motor dimensions page 19.

GENERAL PURPOSE

GENERAL PURPOSE MOTORS

The popular CMG General Purpose series motor is a strong performer, ideally suited for most general applications. The series is designed to suit domestic, commercial and industrial applications. With no wiring necessary, it is simple and convenient to use.

Available in single phase with rated output powers from 0.37kW to 1.5kW continuous duty.

FEATURES

- High starting torque CSCR winding design
- TEFC cooing
- IP44 protection against dust and water ingress (IP55 available upon request)
- Heavy Duty rolled steel case with B56 base
- Manual reset thermal overload protection
- 240V single phase with 2 metre flex & clear 10A plug standard

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Full Load AMPS	Speed RPM	Standard Rotation Direction	Reversible	Shaft Size D	L [mm]	L1 [mm]	L2 [mm]
CWC3703A	0.37	2.5	1380	CW	YES	5/8″	275	47.5	69.8
CWC3703B	0.56	3.3	1390	CW	YES	5/8″	275	47.5	69.8
CWC3703C	0.75	4.5	1410	CW	YES	5/8″	275	47.5	69.8
CWC3708A	1.10	6.0	1420	CW	YES	3/4″	317	52.5	61.5
CWC3708B	1.50	8.2	1430	CW	YES	3/4″	317	52.5	61.5

Motor dimensions page 19.

PUMPING Motors

PUMPING MOTORS

Specifically designed for a variety of pump applications, CMG's Pump series is available in both single and three phase versions, with rated output powers from 0.75kW to 2.0kW.

Our flexible design process gives us the capability of manufacturing motors with special flange and shaft arrangements to meet specific customer requirements.

Swimming pool and spa motors are certified to the latest and most stringent standards (AS/NZS 60335).

FEATURES

- Australian Made
- Full length stainless steel shaft with protected screwdriver slot in rear
- Painted black as standard (other colours available on request)
- Overload protection
- Slimline single capacitor box
- IP44 protection against dust and water ingress (IP55 available upon request)
- Efficient 240V single phase PSC winding design

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Full Load AMPS	Speed RPM	Standard Rotation Direction	Length L [mm]
CWC3973A	0.75	4.4	2790	ACW	291
CWC3973C	1.1	6.2	2850	ACW	291
CWC3973D	1.5	8.2	2840	ACW	304
CWC3973G3	2.0	10.3	2875	ACW	354

Motor dimensions page 19.

BRAKE Motors

BRAKE MOTORS

CMG offers a variety of light industrial Brake motors, available in both single and three phase versions, with rated output power from 0.37kW to 1.7kW.

Brake motors are designed for use in applications requiring rapid stopping, holding and position control. Any standard motor from our CW range can be manufactured with an electro-magnetic brake fitted.

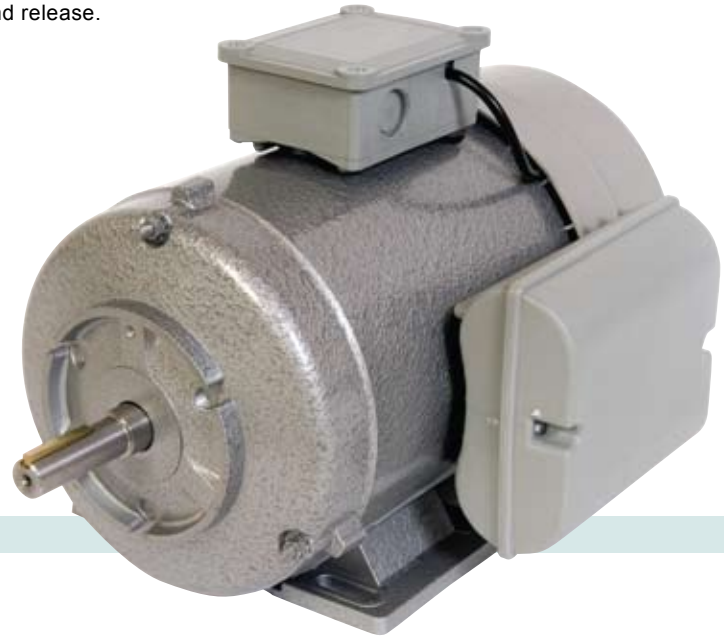
FEATURES

- Quality MAYR electro-magnetic DC brake fitted
- Compact design
- Fail safe design
  - brake engages when power is interrupted
- Fast acting brake
- Self adjusting
- Manual hand release option available

MOTOR SPECIFICATIONS

CMG Product Code	Output kW	Connection	Frame	Mounting	Brake Torque [NM]			Brake Torque (% of full load)			XL
					Min	Norm.	Max	Min	Norm.	Max	
CWB240371	0.37	1Ø	B56	B3	1.4	4	5	55%	160%	200%	45
CWB24037F1	0.37	1Ø	D71	B5	1.4	4	5	55%	160%	200%	45
CWB240751	0.75	1Ø	B56	B3	2.8	8	10	55%	160%	200%	58
CWB24075F1	0.75	1Ø	D80	B5	2.8	8	10	55%	160%	200%	58
CWB241701	1.7	1Ø	D90	B3	5.5	16	20	50%	140%	175%	93
CWB24170E1	1.7	1Ø	D90	B3/B5	5.5	16	20	50%	140%	175%	93
CWB340371	0.37	3Ø	B56	B3	1.4	4	5	55%	160%	200%	20
CWB34037F1	0.37	3Ø	D71	B5	1.4	4	5	55%	160%	200%	20
CWB340751	0.72	3Ø	B56	B3	2.8	8	10	55%	160%	200%	20
CWB34075F1	0.72	3Ø	D80	B5	2.8	8	10	55%	160%	200%	20
CWB341501	1.5	3Ø	D90	B3	5.5	16	20	55%	160%	200%	55
CWB34150FHR1*	1.5	3Ø	D90	B5	5.5	16	20	55%	160%	200%	55

XL = Extra motor length to standard CW motors on page 21.
* Comes standard with hand release.



SPARE PARTS

Spare parts listed are used on standard CW motors and many CWC special application motors.
For all other spare parts please contact your nearest CMG office.

CAPACITORS & OVERLOADS

CMG Product Code	Start Capacitor [µF/volts]	Run Capacitor [µF/volts]	Manual Reset Overload Part Number
CW14025	-	-	880F-02
CW14037	-	-	880F-02
CW14056	-	-	880F-09
CW14075	-	-	880F-04
CW22037	31-40/320	12.5/450	880F-13
CW22056	40-50/320	14/450	880F-07
CW22075	50-63/320	20/450	880F-08
CW22110	80-100/320	25/450	880F-04
CW22150	100-125/250	25/450	880F-03
CW22220	125-160/250	40/400	880F-21
CW24037	31-40/320	12.5/450	880F-06
CW24056	40-50/320	16/450	880F-07
CW24075	63-80/320	20/450	880F-08
CW24110	80-100/320	25/450	880F-04
CW24150	100-125/250	25/450	880F-14
CW24170	125-160/250	25/450	880F-14
CW24220	125-160/250	25/450	880F-21
CW26018	50-63/320	10/450	880F-01
CW26025	50-63/320	12.5/450	880F-06
CW26037	40-50/320	14/450	880F-13
CW26056	80-100/250	16/450	880F-07
CW26075	80-100/250	16/450	880F-08
CW26110	100-125/250	25/450	880F-18

Note: All start capacitors are fitted with discharge resistors.

BASES

CMG Product Code	Description
794-55730	B56 aluminium base
794-554911	D90 aluminium base
794-52190	B56 pressed steel base
794-52110	D90 pressed steel base

FANS

CMG Product Code	Description
788-555617	Black plastic 17mm bore fan

COWLS

CMG Product Code	Description
792-5448B	Black plastic cowl
792-5116G	Grey plastic cowl (std on brake motors)

CAPACITOR BOXES

CMG Product Code	Description
800-50640B	Black capacitor box base
800-50650B	Black capacitor box lid

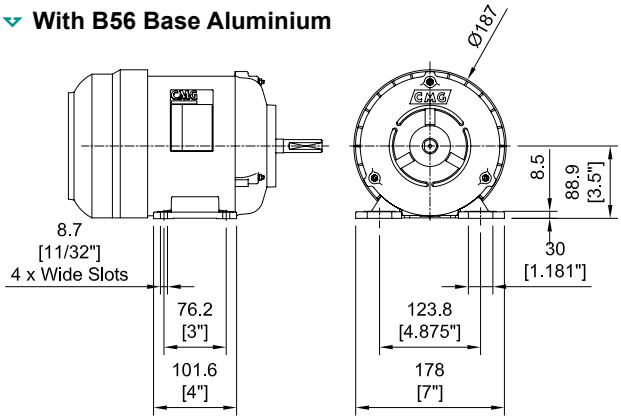
TERMINAL BOXES

CMG Product Code	Description
800-5090TB	Black plastic terminal box base
800-50910B	Black plastic terminal box lid

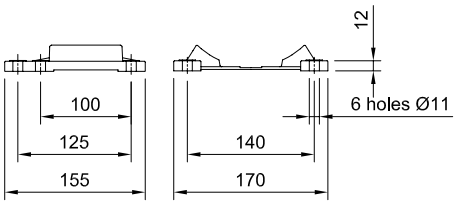
DIMENSIONS

COMMON CWC DIMENSIONS
(Unless shown otherwise)

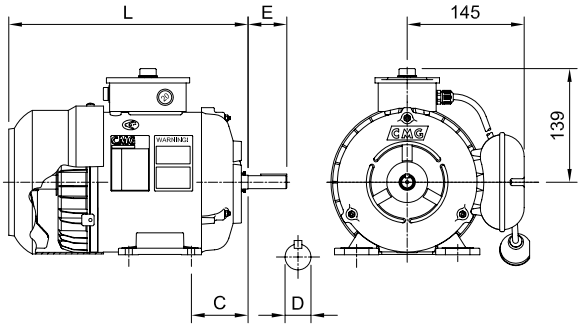
With B56 Base Aluminium



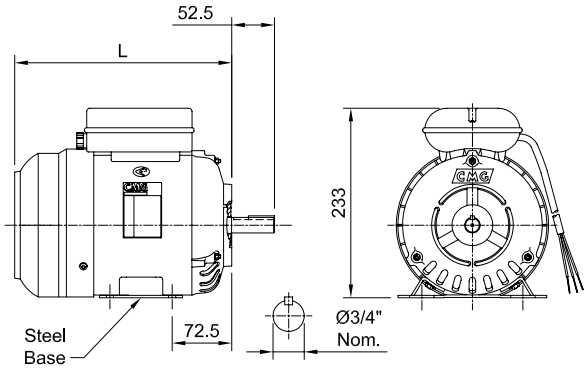
D90 Base Aluminium



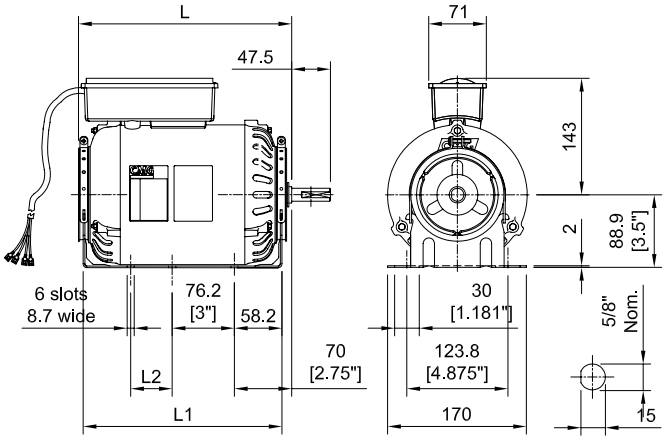
SPEEDMASTER
(See standard product dimensions page 21 for C, D and E)



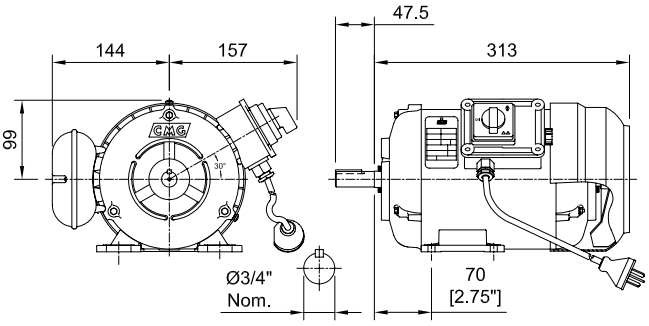
COMPRESSOR



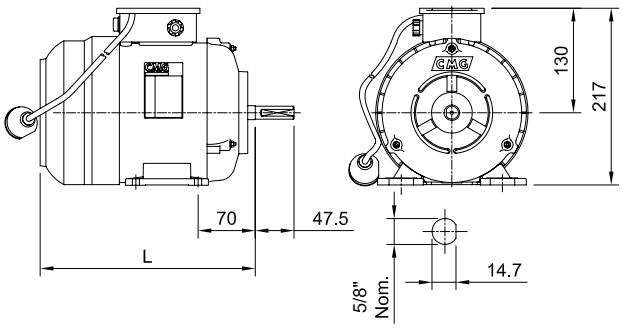
EVAPORATIVE COOLER



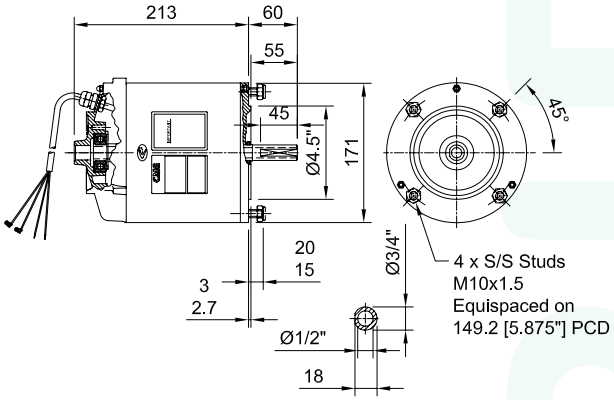
BRICKSAW



CEMENT MIXER

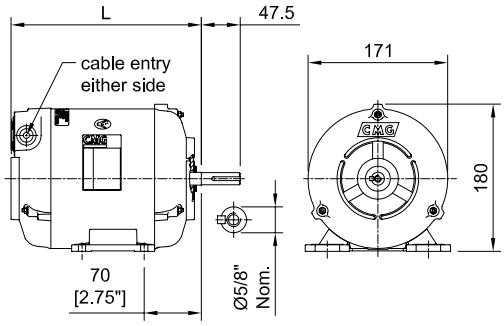


SEWAGE AERATION

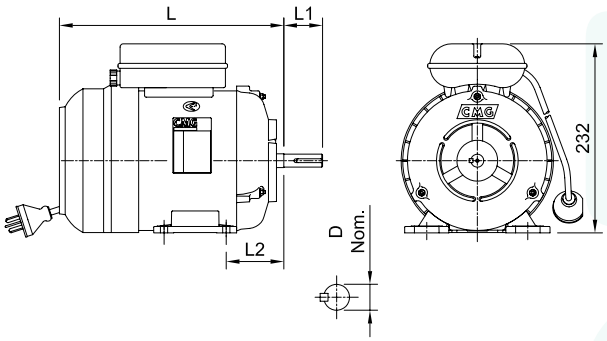


FAN SERIES

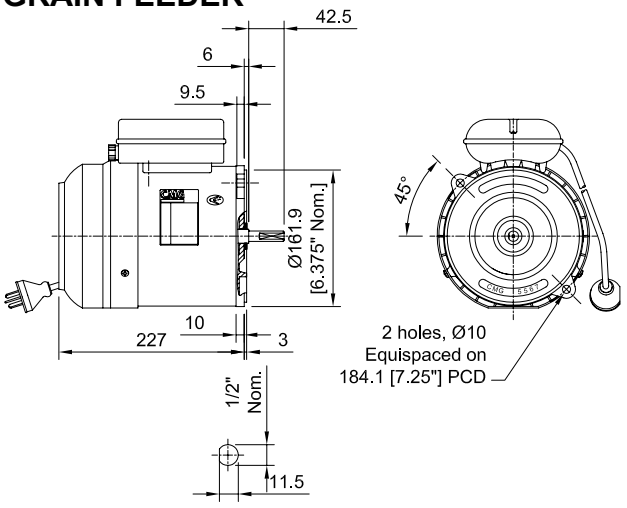
(CWC3626 models)



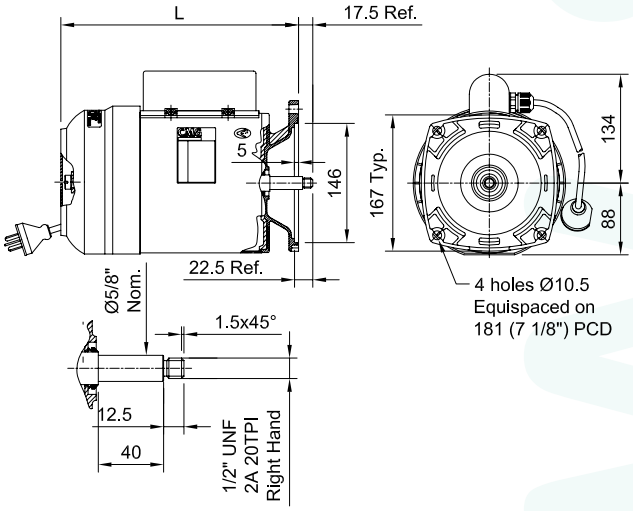
GENERAL PURPOSE



GRAIN FEEDER



PUMPING



For more detailed drawings please contact your nearest CMG office.

PERFORMANCE DATA

CMG Product Code*	kW	Motor Frame B3	Motor Frame B5	Speed	Efficiency [%]	Power Factor	Current Full Load [A]	Current Locked Rotor	Torque Full Load [Nm]	Torque Locked Rotor	Torque Break Down	Weight of Foot Mount Motor [kg]
Single phase - Split phase - 240V 50Hz												
1500 r/min = 4 poles												
CW14025	**0.25**	B56	D71	1420	56.1	0.64	2.9	8.0	1.7	2.0	2.7	9
CW14037	**0.37**	B56	D71	1420	60.9	0.68	3.7	6.4	2.5	1.5	2.2	11
CW14056[1)]	**0.56**	B56	D80	1420	60.6	0.73	5.3	6.5	3.8	1.5	2.2	12
CW14075[1)]	**0.75**	B56	D80	1425	67.0	0.72	6.5	6.5	5.0	1.5	2.0	14
Single phase - CSCR - 240V 50Hz												
3000 r/min = 2 poles												
CW22037	**0.37**	B56	D71	2770	66.8	0.97	2.4	4.1	1.3	2.3	1.9	10
CW22056	**0.56**	B56	D71	2770	68.7	0.99	3.5	3.7	1.9	1.9	1.6	12
CW22075	**0.75**	B56	D80	2790	72.9	0.98	4.4	3.5	2.6	1.8	1.8	13
CW22110	**1.1**	B56	D80	2850	75.9	0.97	6.2	4.7	3.7	2.1	1.8	17
CW22150[1)]	**1.5**	D90	D90	2840	79.2	0.96	8.2	5.1	5.0	2.0	2.1	19
CW22220[1)]	**2.2**	D90	D90	2870	80.9	0.97	11.6	6.1	7.3	1.7	2.5	21.5
1500 r/min = 4 poles												
CW24037	**0.37**	B56	D71	1380	66.4	0.97	2.4	3.8	2.5	2.4	1.6	9
CW24056	**0.56**	B56	D80	1390	73.0	0.97	3.3	3.8	3.8	1.7	1.7	12
CW24075	**0.75**	B56	D80	1410	75.7	0.96	4.3	4.9	5.1	2.2	2.1	13
CW24110	**1.1**	D90	D90	1420	79.3	0.97	6.0	5.1	7.4	2.4	2.0	17
CW24150	**1.5**	D90	D90	1430	79.6	0.97	8.2	5.4	10.0	2.0	1.9	21
CW24170[1)]	**1.7**	D90	D90	1420	79.5	0.97	9.3	5.3	11.5	2.1	2.0	22
CW24220[1)]	**2.2**	D90	D90	1400	77.3	0.94	12.4	4.8	14.9	1.9	1.8	22
1000 r/min = 6 poles												
CW26018	**0.18**	B56	D71	935	62.5	1.00	1.20	5.3	1.8	2.0	2.1	10
CW26025	**0.25**	B56	D71	935	64.6	0.99	1.65	5.7	2.5	2.1	1.8	11
CW26037	**0.37**	B56	D80	930	66.4	0.96	2.4	3.9	3.8	1.8	1.6	12
CW26056	**0.56**	D90	D80	950	65.9	0.79	4.5	5.0	5.6	2.6	2.4	17
CW26075	**0.75**	D90	D90	950	71.9	0.82	5.3	4.7	7.5	2.4	2.3	22
CW26110[1)]	**1.1**	D90	D90	950	69.3	0.86	7.7	4.4	11.0	2.0	2.0	22
Three phase - 415V 50Hz												
3000 r/min = 2 poles												
CW32037	**0.37**	B56	D71	2720	68.2	0.78	0.98	4.0	1.3	2.9	2.5	10
CW32056	**0.56**	B56	D71	2740	71.1	0.77	1.45	5.2	2.0	3.7	3.0	11
CW32075	**0.72**	B56	D80	2760	74.5	0.79	1.70	5.3	2.5	3.5	3.0	13
1500 r/min = 4 poles												
CW34037	**0.37**	B56	D71	1400	68.3	0.69	1.10	4.7	2.5	3.1	2.8	9
CW34056	**0.56**	B56	D80	1400	72.5	0.73	1.50	5.0	3.8	3.5	2.5	10
CW34075	**0.72**	B56	D80	1400	77.4	0.77	1.70	5.7	4.9	3.6	2.8	12
1000 r/min = 6 poles												
CW36018	**0.18**	B56	D71	940	64.5	0.55	0.70	3.8	1.9	2.9	3.2	9
CW36025	**0.25**	B56	D71	940	68.5	0.60	0.85	3.9	2.5	3.2	3.6	10
CW36037	**0.37**	B56	D80	930	71.1	0.64	1.15	4.1	3.8	3.1	3.3	11
CW36056	**0.56**	B56	D80	920	72.4	0.68	1.60	3.8	5.8	2.8	2.5	12
CW36075	**0.72**	D90	D90	910	75.3	0.74	1.80	4.0	7.6	2.8	2.4	15
500 r/min = 12 poles												
CW3C018	**0.18**	B56	D71	450	49.8	0.46	1.10	2.0	3.8	2.3	2.4	15.5

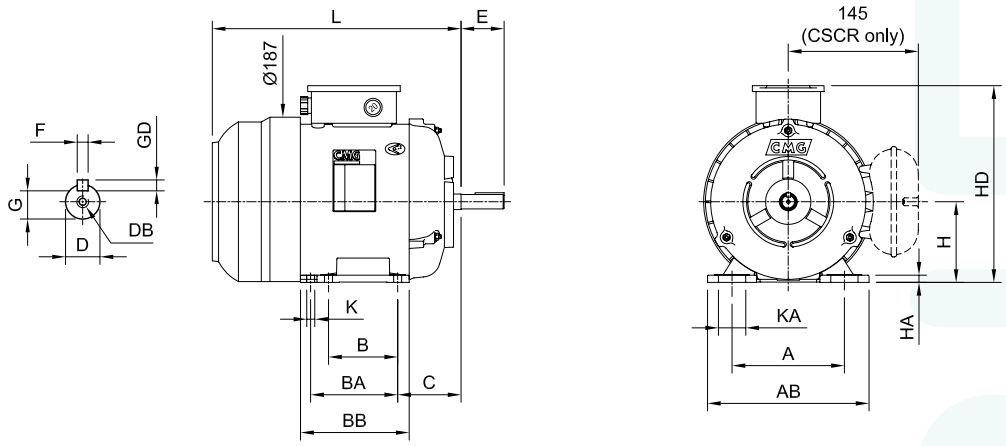
CW24220 & CW26110 use DPFC cooling, all others use TEFC.

[1)] Class F temperature rise (100K).

* Product codes shown are for B3 versions. For B5 versions add suffix 'F', for B3/B5 versions add suffix 'E', and for B14 versions add suffix 'N' (domed endshield) or 'S' (flat endshield).

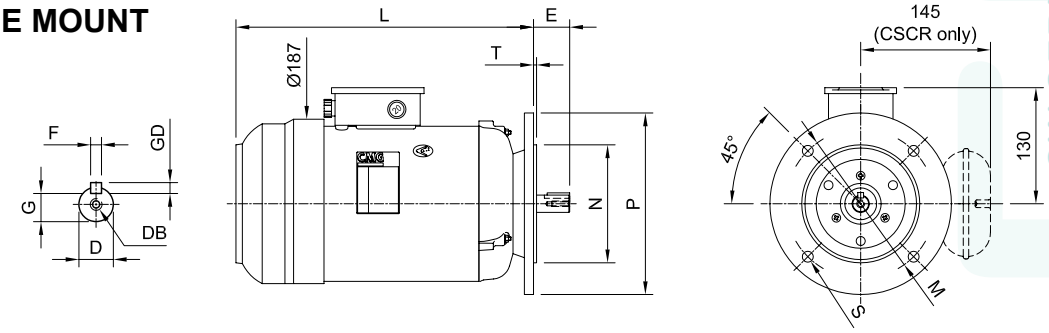
DIMENSIONS

FOOT MOUNT
B3 (IM1001)



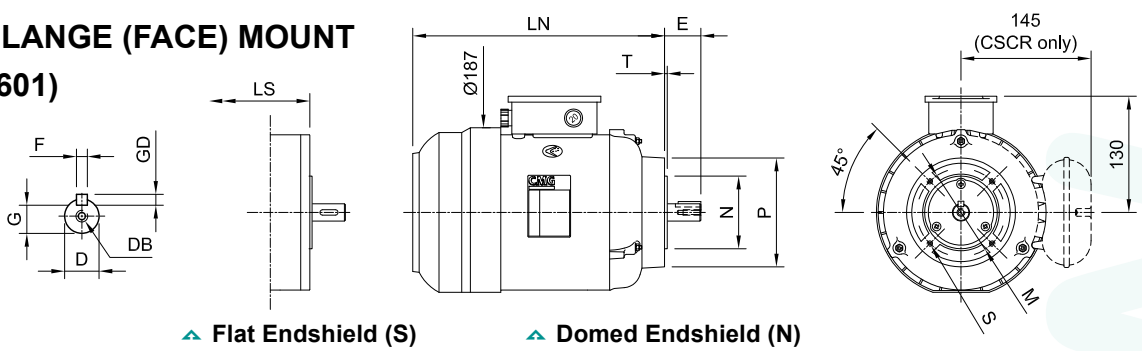
Motor Frame		A	AB	B	BA	BB	C	D	DB	E	F	GD	G	H	HA	HD	K	KA	L
B56	-5/8″	123.8	182	76.2	-	101.6	69.8	15.875	-	47.6	4.76	4.76	13.10	88.9	8.5	219	8.7	30	274
D90	-24	140	180	100	125	155	56	24	M8	50	8	7	20	90	12	220	10	10	327

LARGE FLANGE MOUNT
B5 (IM3001)



Motor Frame		D	DB	E	F	GD	G	L	M	N	P	S	T
D71	-14	14	M5	30	5	5	11.0	277	130	110	160	10	3.5
D80	-19	19	M6	40	6	6	15.5	277[1)]	165	130	200	12	3.5
D90	-24	24	M8	50	8	7	20.0	327	165	130	200	12	3.5
B56	-5/8″	15.875	-	47.6	4.76	4.76	13.10	277	139.7	120.65	165.1	8.7	3.0
NEMA 56	-5/8″	15.875	-	47.6	4.76	4.76	13.10	277	149.2	114.30	165.1	10	3.0

SMALL FLANGE (FACE) MOUNT
B14 (IM3601)



▲ Flat Endshield (S) ▲ Domed Endshield (N)

Motor Frame		D	DB	E	F	GD	G	LN	LS	B14A M	B14A N	B14A P	B14A S	B14A T	B14B M	B14B N	B14B P	B14B S	B14B T
D71	-14	14	M5	30	5	5	11.0	277	227	85	70	105	M6	2.5	115	95	140	M8	3.0
D80	-19	19	M6	40	6	6	15.5	277	253	100	80	120	M6	3.0	130	110	160	M8	3.5
D90	-24	24	M8	50	8	7	20.0	327	-	115	95	140	M8	3.0	130	110	160	M8	3.5

[1)] 328 for model CW26056F

TECHNICAL DATA

OPERATING PARAMETERS

Special application CWC and standard CW series motors are designed to the following parameters:
- Continuous duty (S1)
- Three phase 415V STAR / 240V DELTA, 50Hz power supply
  Single phase 240V, 50Hz
- 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.

MATERIALS AND CONSTRUCTION

Materials used in the construction of CWC and CW series motors include:
- Aluminium endshield
- Rolled steel body
- Polypropylene copolymer fan and fan cowl
- 20% glass filled polypropylene terminal and capacitor cover
- Cast aluminium base (pressed steel versions are available).

ROTOR BALANCING

Rotors have been balanced fitted with half key, to a commercial level. Special balancing can be performed on request.

BEARINGS

CMG CW standard series motors are provided with high quality shielded bearings (ZZ), prepacked with grease. Bearings with full contact neoprene seals (DDU or 2RS) are available for enclosure ratings such as IP55 and are fitted to CWC special application motors.

Bearings are lubricated with lithium based rolling contact bearing grease and are suitable for operation within the ambient temperature range of -20°C to +40°C. Low or high temperature grease is available on request.

ROTATION

Standard single phase motors are supplied to give clockwise rotation, as viewed from drive end. They can easily be reconnected to anti-clockwise rotation by interchanging two leads in the terminal box. Rotation of special application CWC motors vary. See relevant page for details.

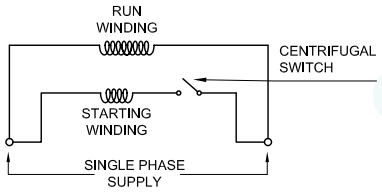
IP RATING

IP ratings for the CW standard range is IP44 (up to IP56 is available). For CWC motors see relevant pages.

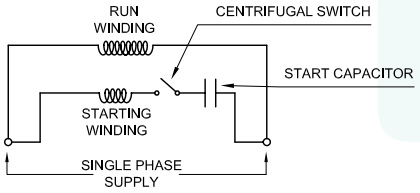
TECHNICAL DATA

WINDING CONFIGURATIONS

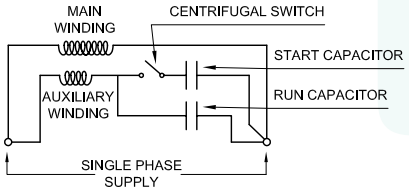
Split phase
Split phase motors are single phase. The starting winding has **less turns** and smaller wire size than the running winding. This gives a relatively low locked rotor torque and high locked rotor current. The starting winding is cut out by a centrifugal switch at the appropriate speed.



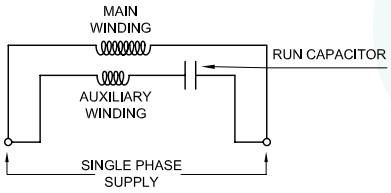
Capacitor start induction run (CSIR)
CSIR motors are similar to split phase but have a capacitor connected in series with the starting winding. This gives a higher locked rotor torque for less current than a split phase motor.



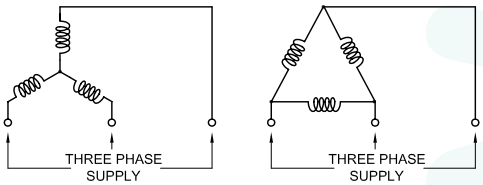
Capacitor start capacitor run (CSCR)
CSCR motors have two capacitors connected in series with the auxiliary winding. One capacitor of low value (run capacitor) is permanently connected. The second capacitor of high value (start capacitor) is connected in parallel with the run capacitor during the start up period. This motor is more efficient than CSIR.



Permanent split capacitor (PSC)
For PSC motors one capacitor is permanently connected in series with the auxiliary winding. This gives a low locked rotor torque and current and is used mainly for driving fans and some pumps.



Three phase
Three phase motors have three balanced windings displaced by 120 electrical degrees producing a rotating field without switch or capacitor components. The windings produce relatively high locked rotor torques.



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