



MODULAR MID DESIGN (MMD) **PRODUCT ENHANCEMENT**

GEARMOTOR DIVISION

AC Induction 1/8HP - 3HP Product Enhancement

brother
at your side

KEY FEATURES

MOTOR DIMENSIONS

- Motors have a more compact design
- No changes to mounting dimensions

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MOTOR FEATURES

- F Class Insulation
- Fanless Design for ¼ HP Models
- Inverter Duty models as standard

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TERMINAL BOX

- Orientation can be easily changed on site after delivery
- Easier Wiring
- Integrated rectifier compartment for easier wiring changes on motors equipped with a brake

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BRAKE

- An easily replaceable brake mechanism
- The multilayer brake design allows for increased torque stability and reduced power consumption

Page Reference: [Page 6](#)

OPTIONS AND ACCESSORIES

- Various new options are now available for your specific needs
- Encoder, Auxiliary Motor Shaft, Forced Fan

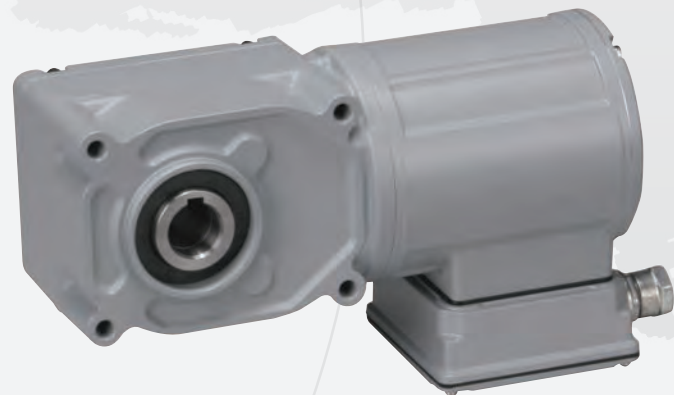
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VOLTAGES AND NOMENCLATURE EXAMPLES

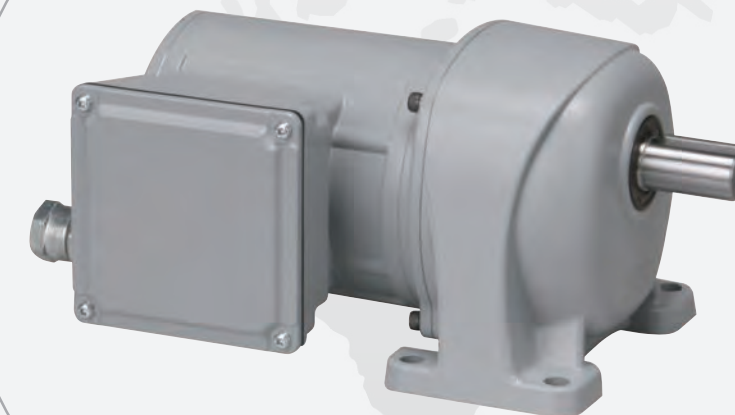
- Standardized Nomenclature for all regions
- Each model is compatible with multiple global standards (UL, CE, CCC*, etc.)
- Each model is compatible with efficiency standards around the world

*Please contact us for more details

Page Reference: [Pages 9-10](#)



1



2

CHANGES IN MOTOR DIMENSIONS

More compact size for a better fit.



Changes in Motor Dimensions
More compact size for a better fit

Note: Images are for reference only.

MMD (Inch)	w/o Brake			w/ Brake			Manual Release			Waterproof w/o Brake			Waterproof w/ Brake			Note
	L	A	J	L	A	J	L	A	J	L	A	J	L	A	J	
HP																
1/8HP	-0.10	0.00	-0.02	-0.10	-0.35	-0.02	-0.10	-0.51	-0.43	-0.06	0.00	-0.02	0.33	0.00	-0.02	E-BOX
1/4 HP	-1.30	-0.79	-0.02	0.00	-0.35	-0.02	0.00	-0.51	-0.43	-1.26	-0.79	-0.02	0.33	-0.35	-0.02	E-BOX
1/2 HP	-0.18	-0.16	0.02	-0.16	-0.16	0.02	-0.16	-0.12	-0.39	-0.12	-0.16	0.02	0.00	-0.16	0.02	E-BOX
3/4 HP	-0.12	0.00	-0.12	-0.14	-0.31	-0.12	-0.14	-0.20	-0.12	-0.06	0.00	-0.12	-0.96	-0.31	-0.12	E-BOX
1 HP	-0.41	0.00	-0.12	-0.02	0.00	-0.12	-0.02	-0.20	-0.12	-0.41	0.00	-0.12	-0.77	0.00	-0.12	E-BOX
2 HP	-0.31	0.00	-0.12	-0.16	0.00	-0.12	-0.16	-0.55	-0.12	-0.31	0.00	-0.12				E-BOX
3 HP	-0.31	0.00	-0.16	-0.16	0.00	-0.16	-0.16	0.00	-0.16	-0.31	0.00	-0.16				E-BOX
1/8 HP	-0.10	-0.35	0.00	0.00	0.00	0.00										A-BOX
1/4 HP	0.26	-0.35	0.00	0.00	0.00	0.00										A-BOX
1/2 HP	-0.06	0.00	0.37	-0.02	0.00	0.37										A-BOX

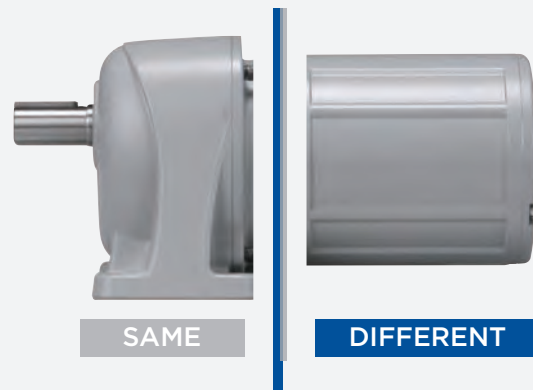
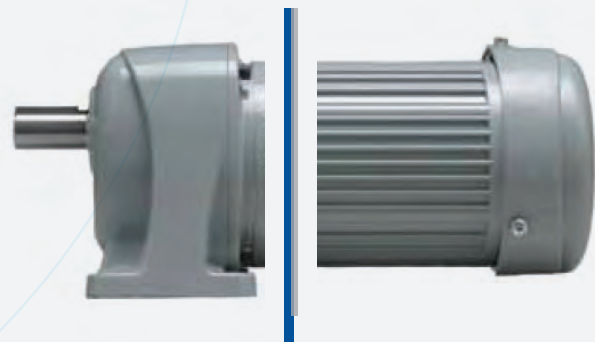
Note: Dimensions shown are a reference for 3PH motors only. Please visit our website for per model dimensional prints.

EQUIVALENT GEARBOX MOUNTING DIMENSIONS

Gearboxes will not be changed for these updated models which means that the equivalent updated models will have the same gearbox mounting dimensions as the current models.

CURRENT MODEL

MMD MODEL



SAME

DIFFERENT

LIGHTER, QUIETER MORE COMPACT DESIGN.

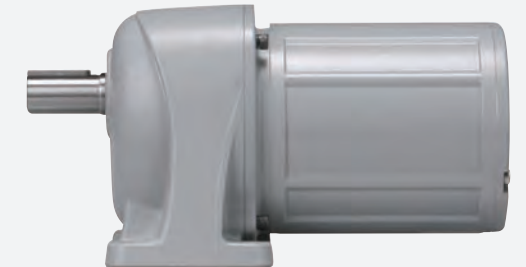
1/4 HP units have changed from a totally enclosed fan cooled motor to a totally enclosed non-ventilated motor which allows for smaller dimensions and a lower noise level. Excellent for clean-rooms and work-sites prone to dust.

Note: Fanless designs are not available for models with a brake.

CURRENT MODEL



MMD MODEL



- Compact
- Fanless
- Low Noise

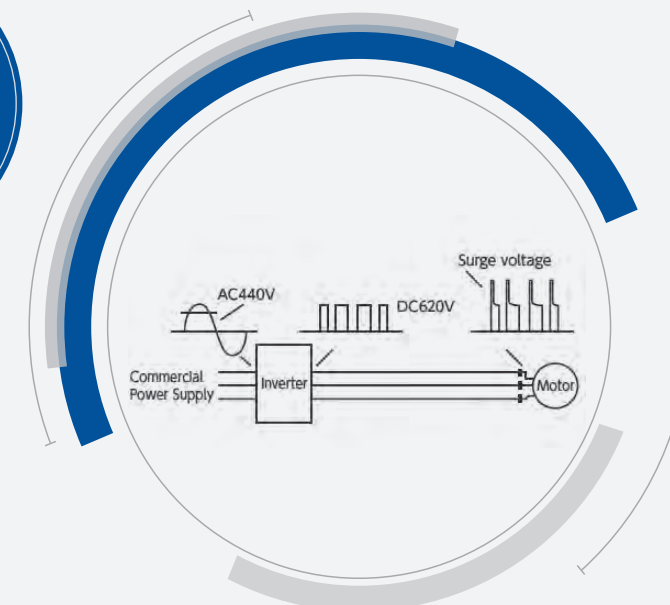
CLASS F INSULATION

All motors come standard with Class F insulation. This allows for a wide operational temperature range when used with an adjustable speed drive.



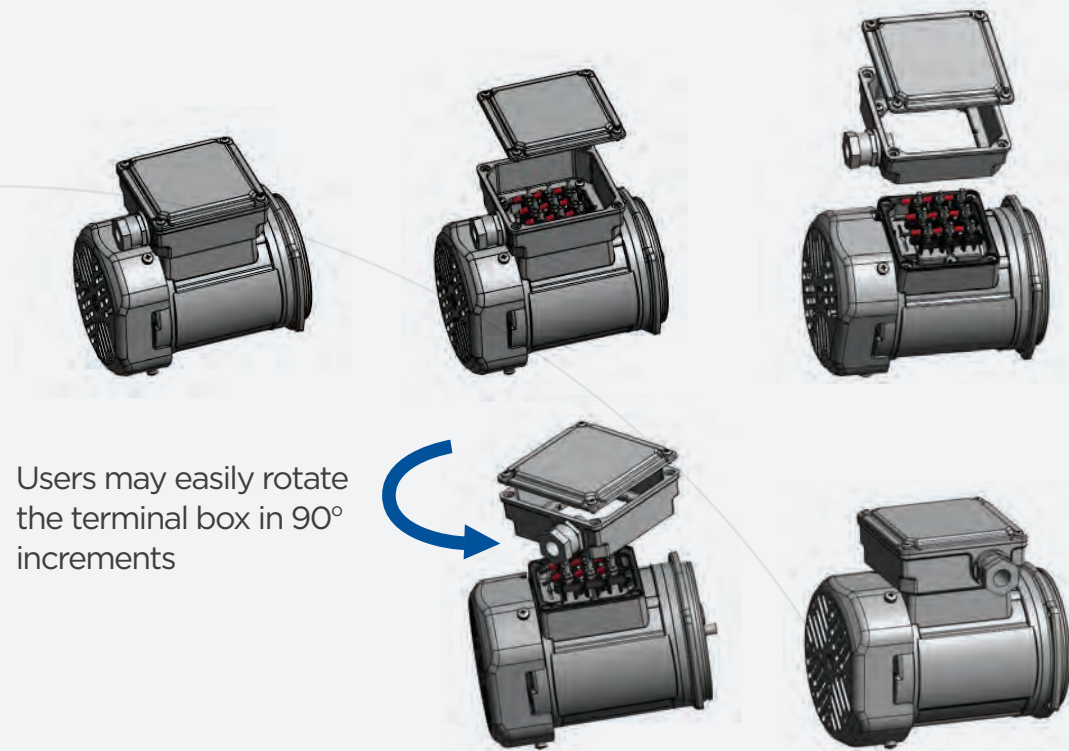
INVERTER DUTY

All motors are tested to appropriate NEMA standards to ensure reliable operation with adjustable speed drives and surge voltages.



FLEXIBLE TERMINAL BOX DESIGN

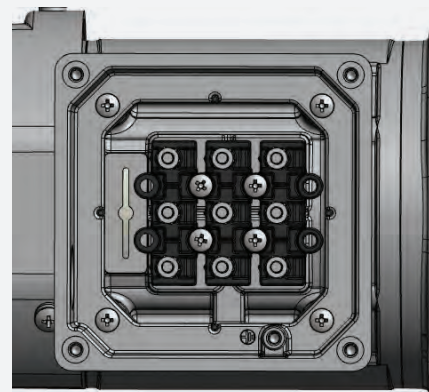
Flexible design allows users to easily change the orientation of the terminal box.



Users may easily rotate the terminal box in 90° increments

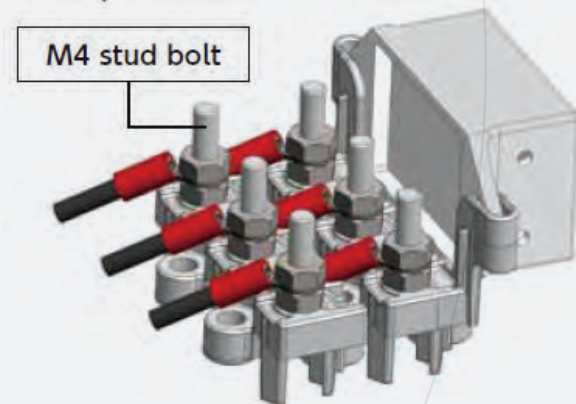
MORE CLEARANCE FOR WIRING

Revised dimensions and terminal block layout. The new design allows for more working space when wiring.



BUILT-IN RECTIFIER

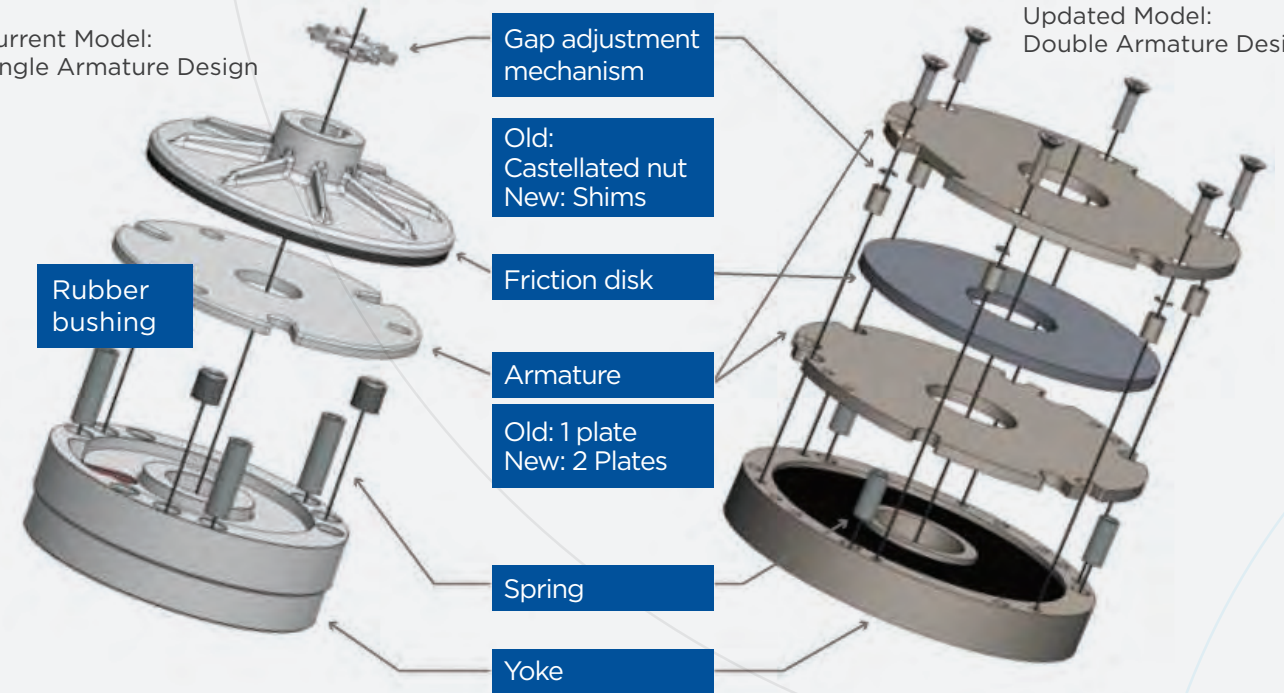
A standard compartment for a built-in rectifier (brakemotor models only) has been implemented for all motor powers. Customers may easily rewire the rectifier after delivery if necessary.



NEW MULTILAYER BRAKE MECHANISM

Current Model:
Single Armature Design

Updated Model:
Double Armature Design



ENERGY EFFICIENT

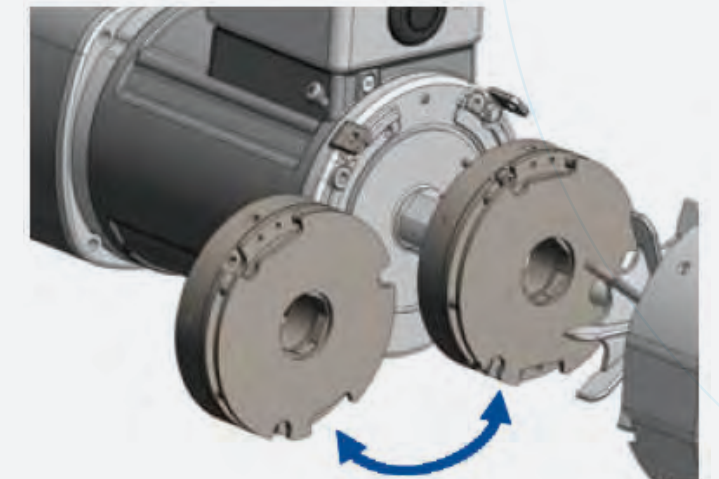
Reduces brake power consumption by up to 40% compared to the current model. Note: Results may vary between motor sizes.

FIELD REPLACEABLE

The brake mechanism is a single unit instead of multiple separate parts. This allows for easy field replacements.

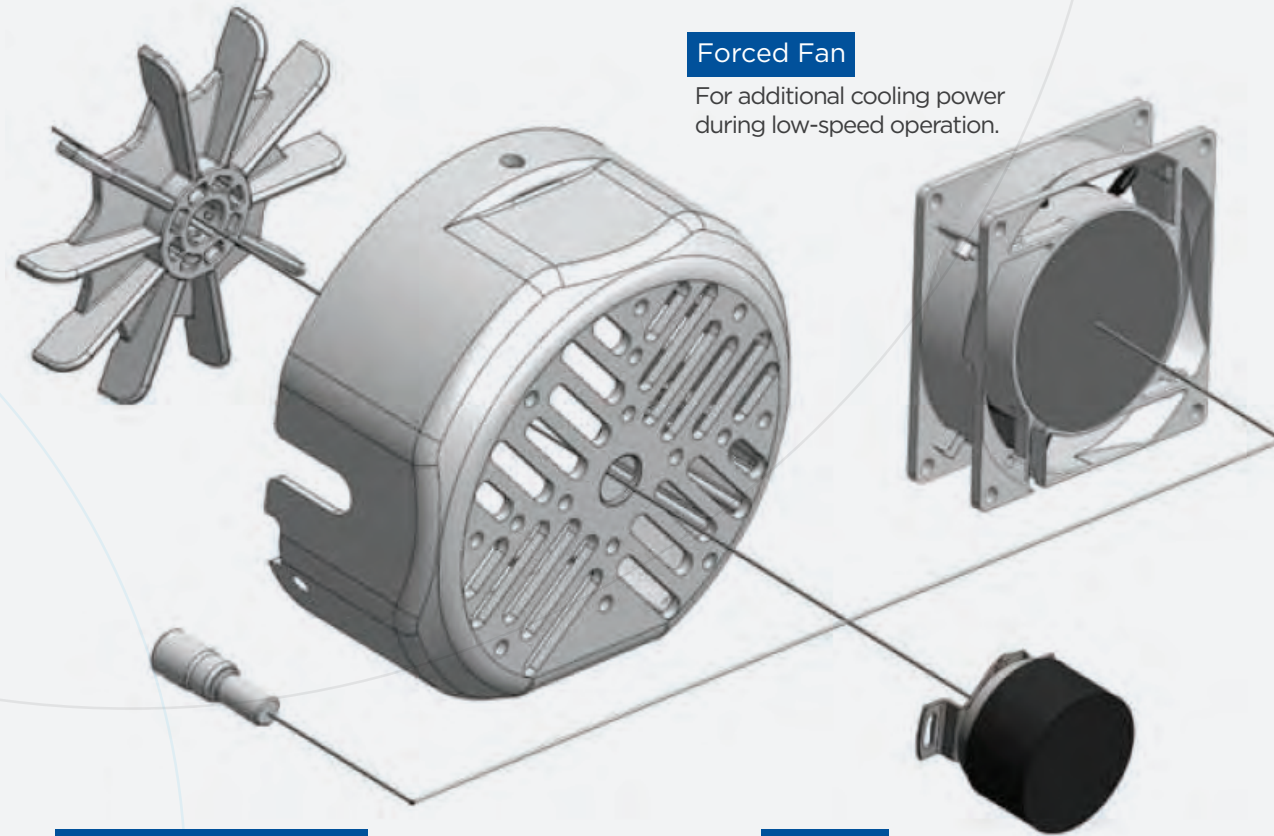
STABLE BRAKING TORQUE

Increased torque stability from the initial stage of operation compared to the current model.



VARIOUS NEW OPTIONS ARE NOW AVAILABLE TO SUIT A VARIETY OF APPLICATIONS

The new motor end bell design allows for an increased number of options to be offered.



Forced Fan
For additional cooling power during low-speed operation.

Extended Motor Shaft
Allows users to add their own sensors or motor attachments for a variety of applications.

Encoder
For high accuracy vector control operation and positioning signal applications.

Other Available Options

Option Type	Description
Terminal box rotation	Rotates the terminal box from the standard position to one of our available optional positions
Cord outlet rotation	Rotates the terminal box cord outlet from the standard position to one of our available optional positions
Special grease	H1 food grade grease
Motor tropicalization	Motor treatment for environments with high ambient humidity
Output shaft/bore dimension	Alternate shaft/bore size available in both metric and imperial sizes
Output shaft/bore material	Selection of either carbon steel or stainless steel output shaft/bore

For any special options or add-on components, please contact us. Our engineering team will work with you to come up with a solution to fit your unique application.

ACCESSORIES AND CUSTOMIZATION

Accessorizing available at our local manufacturing facility in TN. Add on any of the following:



Sprocket

Pulley

Extension Cable

Connector

Custom Label

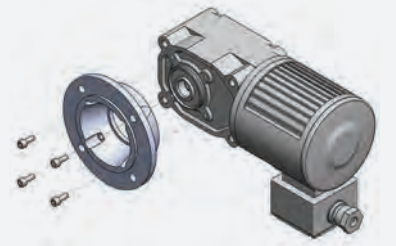
PERFORMANCE MATCHED DRIVES

- Ability to fine tune run speeds for applications that require precision and control
- Potential to extend motor life by reducing wear and tear on motor
- Drives available for:
 - AC Induction Motors - 1/50 - 1/6 HP
 - Brushless DC Motors - entire product line
 - Interior Permanent Magnet Motors - entire product line



B5/B14 MOUNTING STYLES

- B14 (Standard) - easily attach to a torque arm or other accessories including encoders
- B5 (Option) - Easy drop in that follows standard IEC design
- 1/8-2 HP Models: Up to a 60:1 Ratio
- 3 HP Models: Up to a 30:1 Ratio



UPDATED VOLTAGES

An increased number of special voltages will be available for global use under standardized nomenclature.

STANDARD VOLTAGES

Three Phase- 1/8 to 3 HP

- 415/440/480V 50/50/60Hz
- 208/230/460/400V 60/60/60/50Hz
- 575V 60Hz

Note: All models comply with UL, cUL, and CE. 1-3 HP models comply to IE3 high efficiency regulations
UL/cUL File No. E172017

Single Phase- 1/8 to 1/2 HP

- 115V 50/60Hz
- 220/230V 50/60Hz

Note: All models comply with UL, cUL, and CE
UL/cUL File No. (1/8HP) E153713
UL/cUL File No. (1/4-1/2HP) E172017

SPECIAL VOLTAGES

Three Phase-1/8 to 1 HP

- 200/200/220V 50/60/60Hz
- 380/400/400/440V 50/50/60/60Hz
- 200/380V 60Hz
- 200/230/380V 50Hz

Note: All models comply with UL and CE. Only 1/8 to 1/2 HP Models comply with cUL
UL/cUL File No. E172017

Single Phase- 1/8 to 1/2 HP

- 100V 50/60Hz
- 200V 50/60Hz

Note: All models comply with UL, cUL, and CE
UL/cUL File No. (1/8HP) E153713
UL/cUL File No. (1/4-1/2HP) E172017

Note: Please contact us regarding special voltage Nomenclature

NOMENCLATURE

G3L18N5 - **M** **B** **01** **T** **A** **V** **E** **B2**

Motor Type
M: Standard (IP44)
W: Washdown (IP65)

Motor Specs.
B: Common Code

Motor Phase
T : 3-Phase
S: 1-Phase (1/8 HP)
C: 1-Phase (1/4,1/2 HP)

Motor Power
01: 1/8 HP (0.1 kW)
02: 1/4 HP (0.2 kW)
04: 1/2 HP (0.4 kW)
05: 3/4 HP (0.55 kW)
08: 1 HP (.75 kW)
15: 2 HP (1.5 kW)
22: 3 HP (2.2 kW)

Motor Voltage 3-Phase
AV: 208/230/460/400V 60/60/60/50Hz
EV: 415/440/480V 50/50/60Hz
MA: 575V 60Hz
1-Phase
LV: 115V 50/60Hz
DV: 220/230V 50/60Hz

Brake
N : Without Brake
B2 : 200VBrake
B4 : 400VBrake
V2 : 200V WD Brake
V4 : 400V WD Brake

Terminal Box
E : Square Aluminum Box(T)
A: A-BOX(S/C)

UPDATED NOMENCLATURE

Nomenclature across voltages and motor sizes has been simplified to follow the same format.

NOMENCLATURE EXAMPLES

Three Phase

Current Models	Product Series	Mounting	Frame	Shaft/Bore Direction	Gear Ratio	Motor Type	Motor Specs.	Motor Power	Motor Voltage	Terminal Box	Brake
1/8 to 3HP	G3	K	22	N	25	M	F	4	A	E	N
	F3	S	35	N	30	M	V	6	A	W	B2



MMD Models	Product Series	Mounting	Frame	Shaft/Bore Direction	Gear Ratio	Motor Type	Motor Specs.	Motor Power	Phase	Motor Voltage	Terminal Box	Brake
1/8 to 3HP	G3	K	22	N	25	M	B	04	T	AV	E	N
	F3	S	35	N	30	M	B	08	T	AV	E	B2

Single Phase

Current Models	Product Series	Mounting	Frame	Shaft/Bore Direction	Gear Ratio	Common Code	Motor Type	Motor Power	Motor Voltage	Terminal Box
1/8 to 1/2 HP	G3	K	22	N	025	B	M	H	1	A
	G3	K	22	N	025	B	M	K	1	A
	F3	S	30	N	030	B	B	L	1	S



MMD Models	Product Series	Mounting	Frame	Shaft/Bore Direction	Gear Ratio	Motor Type	Motor Specs.	Motor Power	Phase	Motor Voltage	Terminal Box	Brake
1/8 to 1/2 HP	G3	K	22	N	25	M	B	01	S	LV	A	N
	G3	K	22	N	25	M	B	02	C	LV	A	N
	F3	S	30	N	30	M	B	04	C	LV	A	B2

*For more information regarding voltage/standards codes, please refer to the tables on page 7



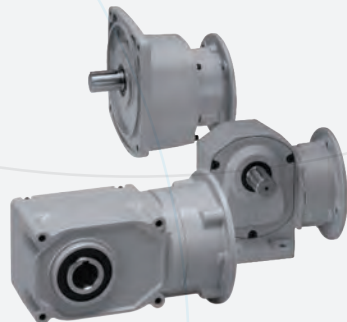
AC INDUCTION GEARMOTORS

- **Reducer Type:** Inline, Right Angle Hollow Bore, Right Angle Shaft
- **Motor Power:** 1/50 HP (15 W) - 3 HP (2.2 kW)
- **Gear Ratio:** 5:1 - 1800:1
- **Motor Type:** Standard gearmotor, Washdown Gearmotor, and brake options available
- **Phase:** 1 and 3 Phase



BRUSHLESS DC GEARMOTORS

- **Reducer Type:** Inline, Right Angle Hollow Bore, Right Angle Shaft
- **Motor Power:** 1/15 HP (50 W) - 1/2 HP (400 W)
- **Gear Ratio:** 5:1 - 240:1
- **Motor Type:** Standard gearmotor and brake options available
- **Voltage:** DC 12V, 24V, 48V



NEMA C-FACE REDUCERS

- **Reducer Type:** Inline, Right Angle Hollow Bore, Right Angle Shaft
- **Motor Input Power:** 1/4 HP (200 W) - 3 HP (2.2 kW)
- **Motor Input Speed:** 1750RPM
- **Gear Ratio:** 5:1 - 240:1

NEMA INPUT FLANGE AVAILABILITY PER HORSEPOWER

Reducer Input Flange	INPUT HORSEPOWER				
	1/4 HP	1/2 HP	1 HP	2 HP	3 HP
56C	✓	✓	✓		
140TC				✓	
180TC					✓

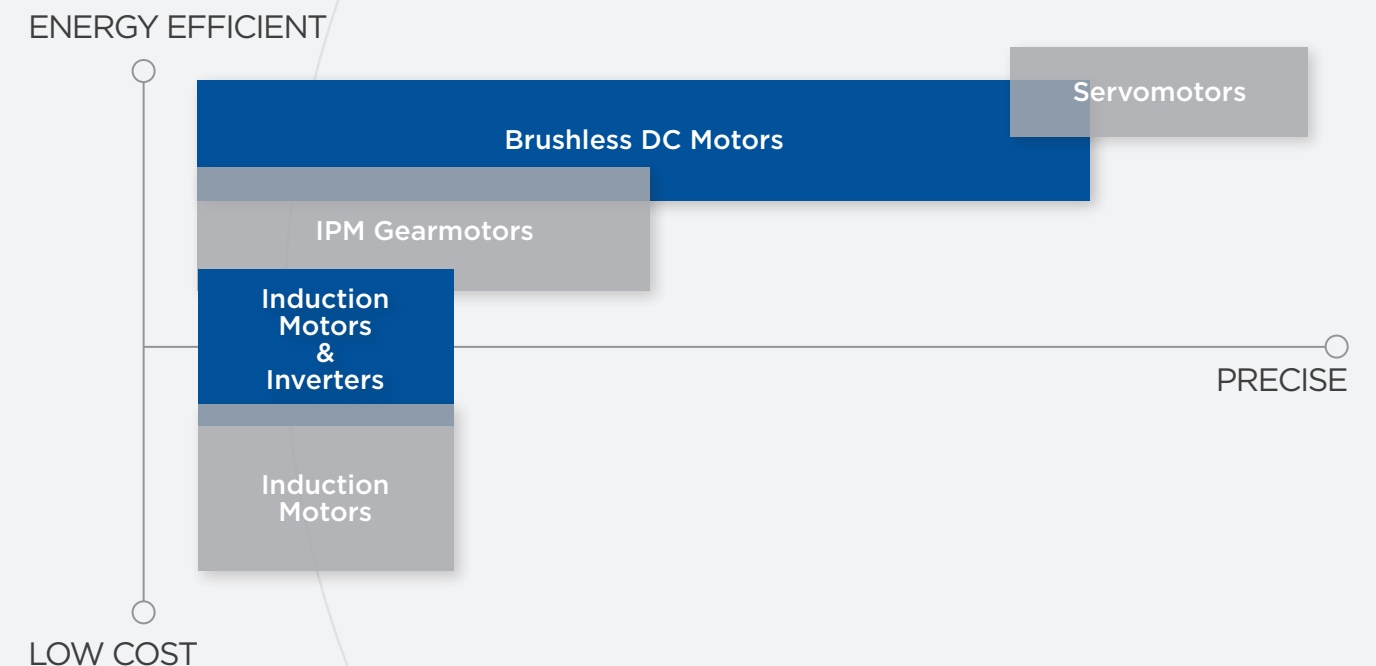


IPM GEARMOTORS (IPMAX)

- **Reducer Type:** Inline, Right Angle Hollow Bore, Right Angle Shaft
- **Motor Power:** 1/8 HP (100 W) - 3 HP (2.2 kW)
- **Gear Ratio:** 5:1 - 1800:1
- **Motor Type:** Standard gearmotor, Washdown Gearmotor, and brake options available

Note: Most of the improvements and benefits of AC MMD are also being done to our IPMAX series of gearmotors

MOTOR TYPE COMPARISONS



The logo features the word "brother" in a bold, lowercase, blue sans-serif font. Below it, the tagline "at your side" is written in a smaller, lowercase, blue sans-serif font. The background of the entire page is a light gray world map with a large, light blue circular arc overlaid on it.

brother
at your side

TO LEARN MORE, CALL 866-523-6283

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