



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

## **GEARMOTOR DIVISION**

AC Induction 1/2HP - 3HP Product Enhancement



# KEY FEATURES

## MOTOR DIMENSIONS

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

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## MOTOR FEATURES

- F Class Insulation
- 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

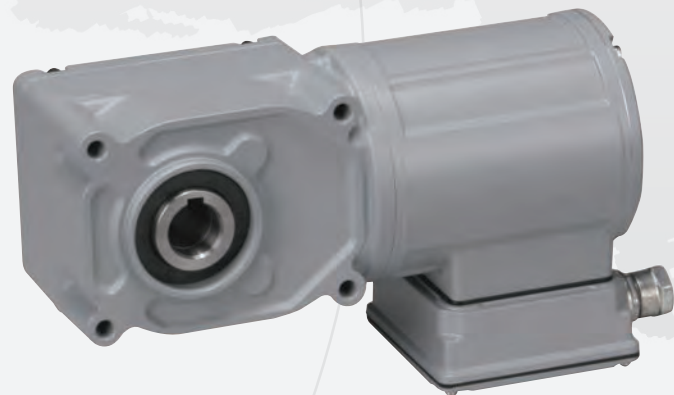
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## VOLTAGES AND NOMENCLATURE EXAMPLES

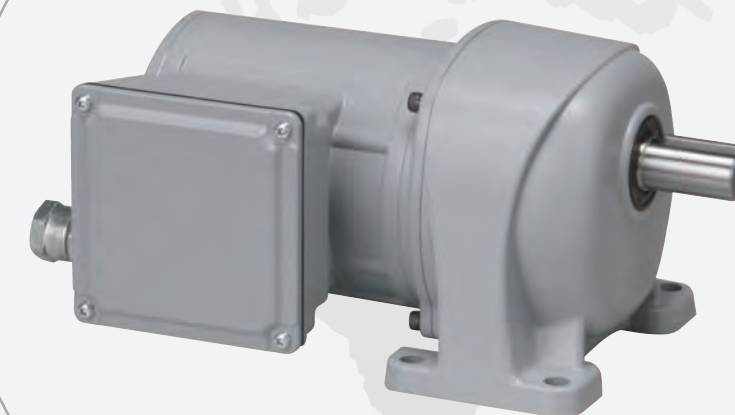
- Standardized Nomenclature for all regions
- Each model is compatible with multiple global standards (UL, CE, CCC\*, etc.)
- Each model is compatible with efficiency standards around the world

\*Please contact us for more details

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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)	Phase	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	3																	
1/2 HP	3	-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		
3/4 HP	3	-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		
1 HP	3	-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	3	-0.31	0.00	-0.12	-0.16	0.00	-0.12	-0.16	-0.55	-0.12	-0.31	0.00	-0.12					
3 HP	3	-0.31	0.00	-0.16	-0.16	0.00	-0.16	-0.16	0.00	-0.16	-0.31	0.00	-0.16					
1/2 HP	1	-0.06	0.00	0.37	-0.02	0.00	0.37										A-BOX	

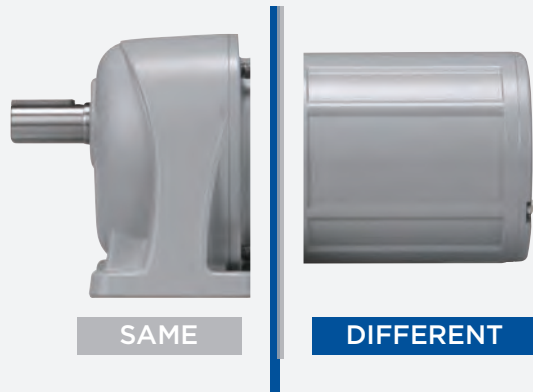
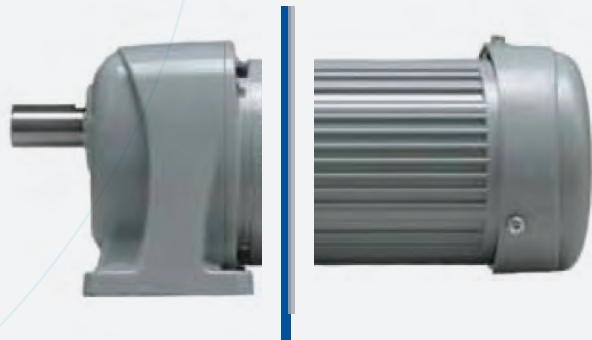
Note: Dimensions shown are a reference only. Please visit our website for per model dimensional prints.

## 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



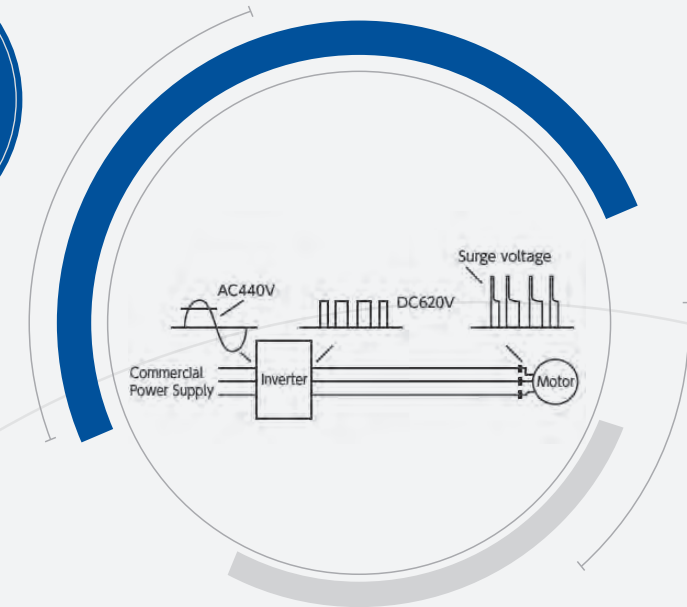
## CLASS F INSULATION

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

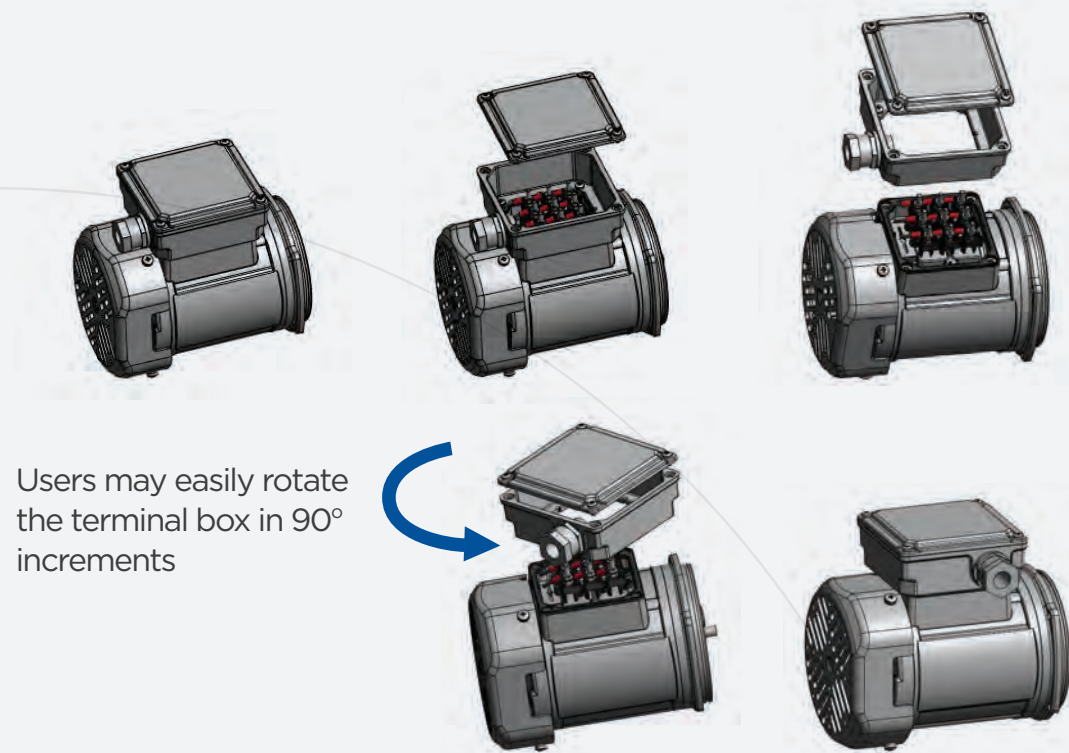
All motors are tested to appropriate NEMA standards to ensure reliable operation with adjustable speed drives and surge voltages.





## FLEXIBLE TERMINAL BOX DESIGN

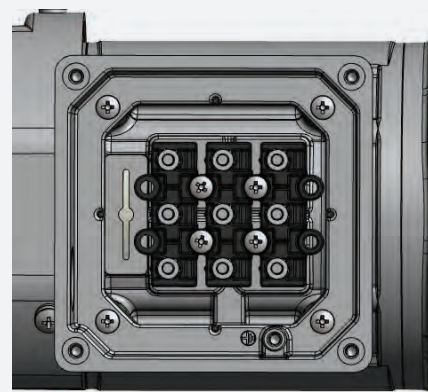
Flexible design allows users to easily change the orientation of the terminal box.



Users may easily rotate the terminal box in 90° increments

## MORE CLEARANCE FOR WIRING

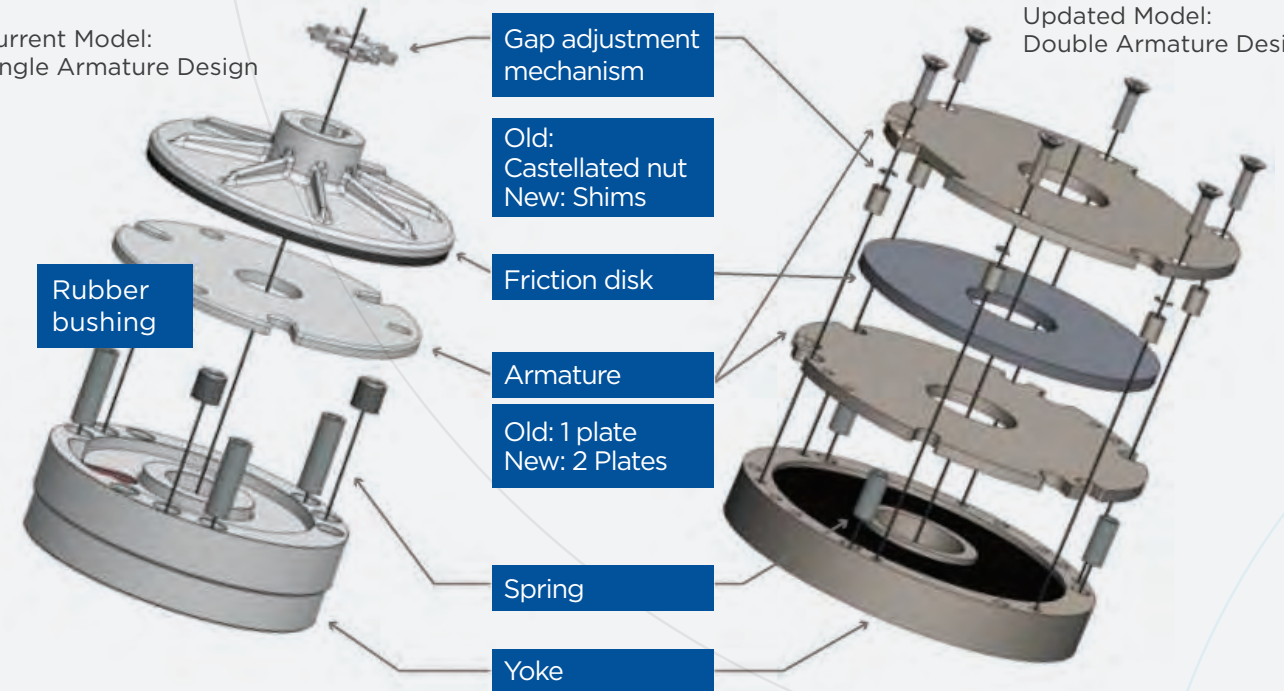
Revised dimensions and terminal block layout. The new design allows for more working space when wiring.



## NEW MULTILAYER BRAKE MECHANISM

Current Model:  
Single Armature Design

Updated Model:  
Double Armature Design



## ENERGY EFFICIENT

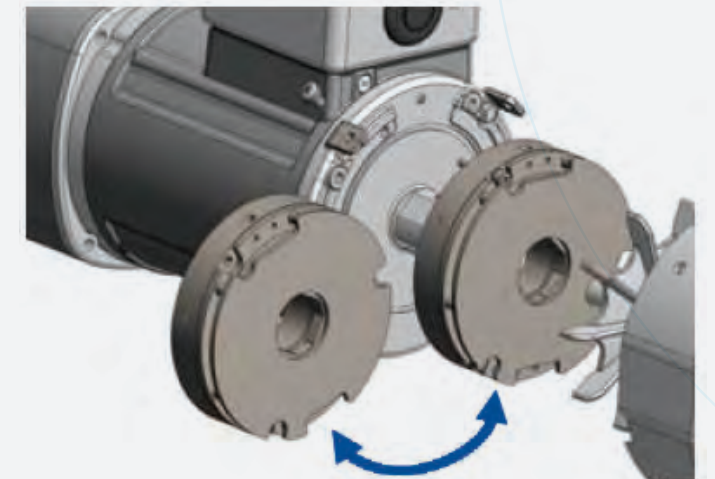
Reduces brake power consumption by up to 40% compared to the current model. Note: Results may vary between motor sizes.

## STABLE BRAKING TORQUE

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

## FIELD REPLACEABLE

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





# UPDATED VOLTAGES

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

## STANDARD VOLTAGES

Three Phase- 1/2 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- 1/2 HP

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

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

## SPECIAL VOLTAGES

Three Phase-1/2 to 3 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 1/2 HP Models comply with cUL  
UL/cUL File No. E172017

Single Phase- 1/2 HP

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

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

Note: Please contact us regarding special voltage Nomenclature

## NOMENCLATURE

G3L22N5 - **M** **B** **04** **T** **A** **V** **E** **B2**

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

**Motor Specs.**  
B: Common Code

**Motor Phase**  
T : 3-Phase  
C: 1-Phase (1/2 HP)

**Motor Power**  
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 : 200V Brake  
B4 : 400V Brake  
V2 : 200V WD Brake  
V4 : 400V WD Brake  
J2 : 200V Manual Release  
J4 : 400V Manual Release

**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
1/2 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
1/2 to 3HP	G3	K	22	N	25	B	04	T	AV	E	N
	F3	S	35	N	30	B	08	T	AV	E	B2

Single Phase

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



MMD Models

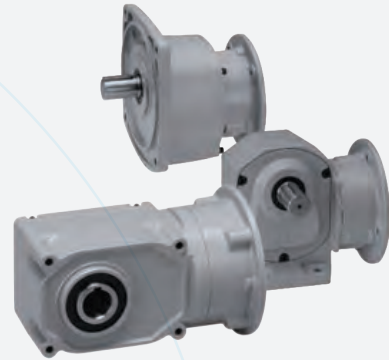
Product Series	Mounting	Frame	Shaft/Bore Direction	Gear Ratio	Motor Type	Motor Specs.	Motor Power	Phase	Motor Voltage	Terminal Box	Brake
1/2 HP	G3	K	22	N	25	B	04	C	LV	A	N
	F3	S	30	N	30	B	04	C	LV	A	B2

\*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:** 1/2 HP (400 W) - 3 HP (2.2 kW)
- **Gear Ratio:** 5:1 - 1200:1
- **Motor Type:** Standard gearmotor, Washdown Gearmotor, and brake options available
- **Phase:** 1 and 3 Phase



## NEMA C-FACE REDUCERS

- **Reducer Type:** Inline, Right Angle Hollow Bore, Right Angle Shaft
- **Motor Input Power:** 1/2 HP (400 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			
	1/2 HP	1 HP	2 HP	3 HP
56C	✓	✓		
140TC			✓	
180TC				✓



# Oriental motor

Technical Support

Tel: (800) 468-3982

8:30 A.M. to 5:00 P.M., P.S.T. (M-F)  
 7:30 A.M. to 5:00 P.M., C.S.T. (M-F)  
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