

# GENERAL PURPOSE AC MOTORS

## 56C FLANGE, THREE-PHASE FRACTIONAL AND INTEGRAL HP

Wide Range  
of Motor  
Sizes!

### OMAT Series



- Rolled Steel AC Motors: 0.33 to 2 HP
- NEMA 56C Frame
- NEMA Design B
- 208 to 230/460 Volt, 3-Phase
- TEFC (Totally Enclosed Fan Cooled)
- Class F Insulation
- Premium-Grade Quality
- Inverter-Duty Capable
  - Variable Torque = 5:1 Speed Turndown
  - Constant Torque = 2:1 Speed Turndown
- Electrically Reversible
- Heavy Gauge Bolt-On, Bolt-Off NEMA 56-Frame Removable Base
- Motor Slide Base for Adjustable Mounting

Omegamation™ general purpose AC motors are made by one of the leading motor manufacturers for over 45 years, a world-class accredited supplier with a long history of quality testing procedures and standards performed by the finest independent testing laboratories in the world. Our motors are made in high quality ISO9001-certified facilities using only the highest quality material and manufacturing processes. All motors are electrically tested in sub-assembly production and again after final assembly, and come with an ironclad 2-year warranty.

### Features and Benefits of AC Motors from Omegamation

Following are a few of the many reasons why our AC motors provide the best combination of quality and performance at the lowest prices.

OMAT13-18-56CB shown smaller than actual size.



#### Bearings

There are no sleeve bearings in our entire line of general purpose motors. We use nothing but heavy-duty oversized ball bearings on both the DE (drive end) and the ODE (opposite drive end). It is exactly for this reason that we can mount our motors in the “shaft up” or “shaft down” position with no derating. A shaft slinger keeps moisture and contaminants from the drive end bearing. And all of our AC motors have a high tensile strength steel shaft.

#### Windings/Insulation

All of our motors have copper windings and are manufactured with Class F insulation. This 155°C insulation system gives us inverter duty capability:

- Variable Torque Applications: (Basically, fans and blowers) 5 to 1 speed turndown permitted
- Constant Torque Applications: (Basically, all but fan and blower loads) 2 to 1 speed turndown

#### End Bells and Fan Covers

All of our end bells are heavy duty burnished (polished) aluminum. Our fan covers are steel, not plastic.

#### Junction Boxes

Our large, easy-to-wire junction boxes have rubber dust curtains designed to keep foreign particles from entry. These covers are designed to come apart at an angle to permit ease of wiring. Most motors are convertible F1 to F2 and all are rotatable at 90 degree intervals. Conduit holes are provided per NPT standards.

#### Motor Leads

All of our leads are both color coded and numbered per NEMA MG1 Standards.

#### Nameplates

Nameplates are said to be the “Window Of Quality” of a motor. Our AC motor nameplates are stainless steel to reduce corrosion and laser etched to provide permanent markings, and include an easy-to-read wiring diagram.

#### Paint

We use an electrostatically applied, rust proof and scratch resistant paint. The paint almost seems to become part of the steel enclosure itself.

#### Certification

Our motors are cCSA<sub>US</sub> Certified. Note the US stamp. It means that our motor has not only passed the Canadian Standard Association requirements, but also the USA's UL and ANSI standards, thus giving them the highest certification standards you can have for North America. Our certifications also include CE, CC006A, and of course ISO9001.

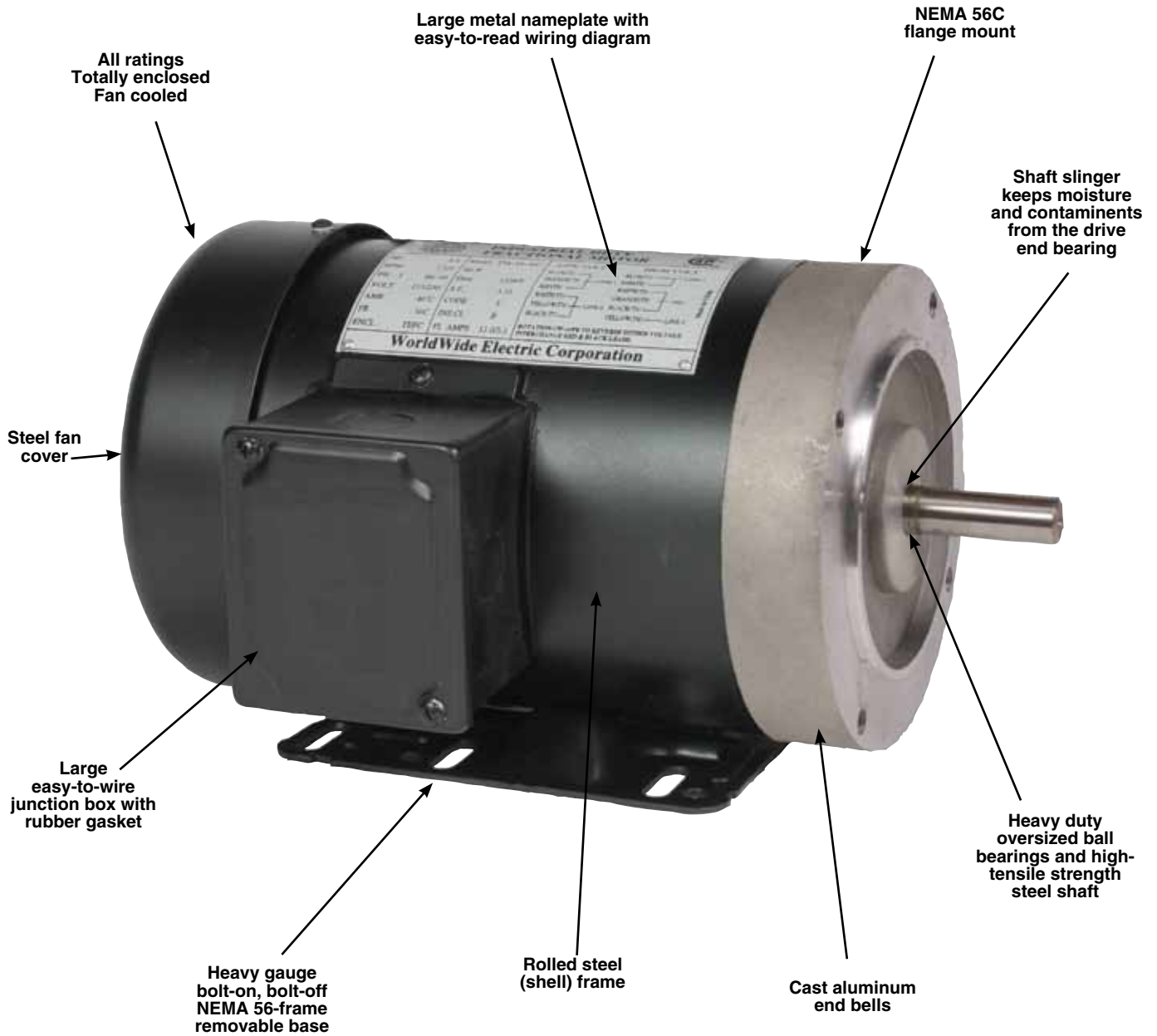
#### Warranty

Our warranty matches the motors quality in that it leads the industry in guaranteeing customer satisfaction. All of our AC motors have an ironclad two-year warranty and it is a nameplate-only warranty. That is to say, the customer sends us the nameplate and we send him a new motor. No paperwork—no delay—no waiting for credit based on a factory inspection—and no questions asked! Simply call our customer service department to obtain an AR number for the nameplate return.

# 56C FLANGE MOTORS

## THREE PHASE—208 TO 230/460 VOLT

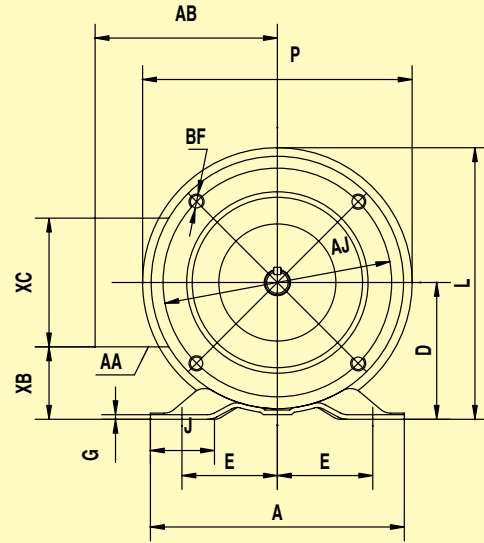
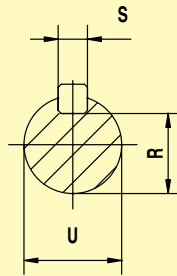
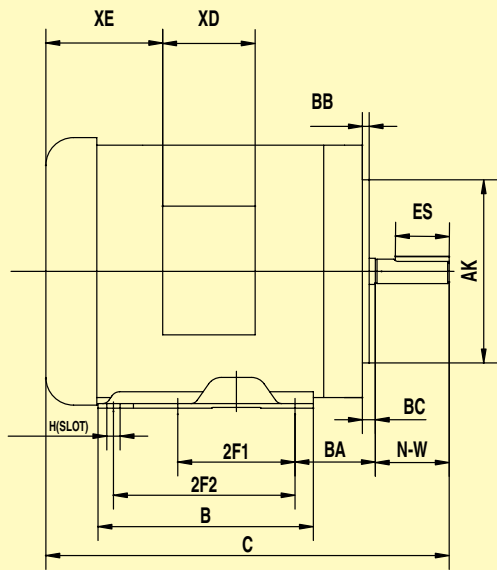
### INVERTER DUTY WITH CLASS “F” INSULATION



OMAT1-18-56CB shown smaller than actual size.

# 56C FRAME MOTORS—3 PHASE

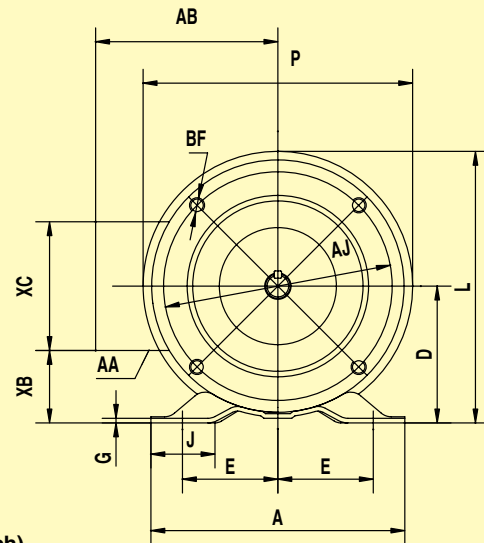
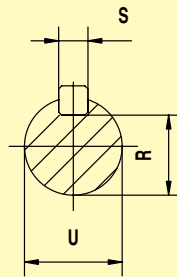
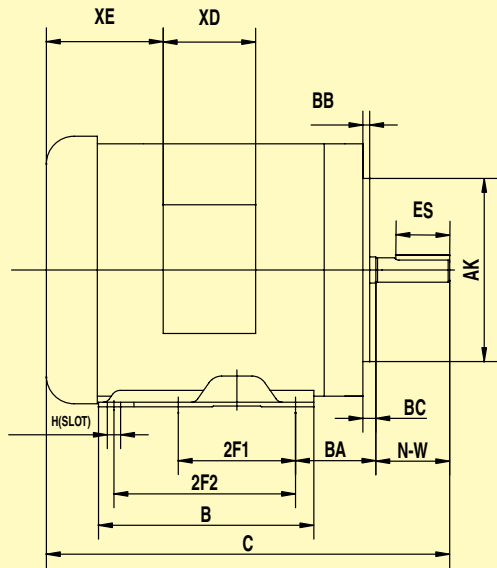
OMAT1-18-56CB



Dimensions: mm (inch)

A	B	C	D	E	2F1	2F2	G	H	J	L	P	R	S	U
165 (6.5)	165 (6.5)	310 (12.2)	89 (3.5)	62 (2.44)	76 (3)	127 (5)	3 (0.12)	9 (0.34)	44 (1.73)	178 (7)	175 (6.9)	13 (0.517)	5 (0.188)	16 (0.625)
ES	AA	AB	AH	AJ	AK	BA	BB	BC	BF	XB	XC	XD	XE	
36 (1.41)	1/2" NPT	136 (5.35)	49 (1.91)	149 (5.875)	114 (4.5)	70 (2.75)	4 (0.16)	5 (0.19)	3/8-16	42 (1.65)	94 (3.7)	82 (3.23)	72 (2.85)	

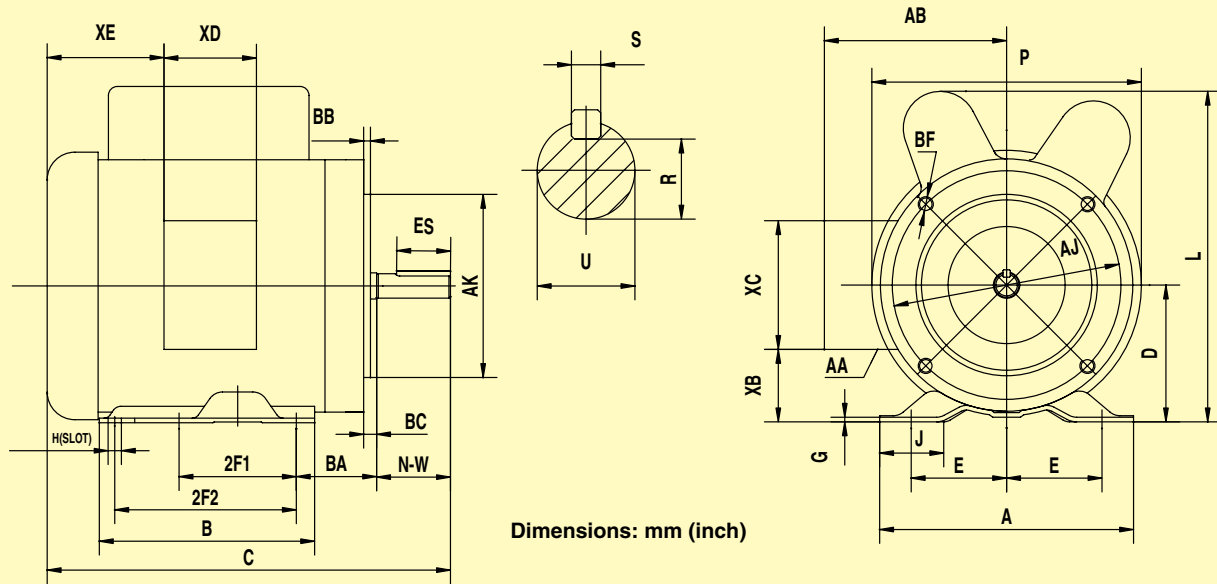
OMAT1.5-18-56CB



Dimensions: mm (inch)

A	B	C	D	E	2F1	2F2	G	H	J	L	P	R	S	U
165 (6.5)	165 (6.5)	320 (12.6)	89 (3.5)	62 (2.44)	76 (3)	127 (5)	3 (0.12)	9 (0.34)	44 (1.73)	178 (7)	175 (6.9)	13 (0.517)	5 (0.188)	16 (0.625)
ES	AA	AB	AH	AJ	AK	BA	BB	BC	BF	XB	XC	XD	XE	
36 (1.41)	1/2" NPT	136 (5.35)	49 (1.91)	149 (5.875)	114 (4.5)	70 (2.75)	4 (0.16)	5 (0.19)	3/8-16	42 (1.65)	94 (3.7)	82 (3.23)	72 (2.85)	

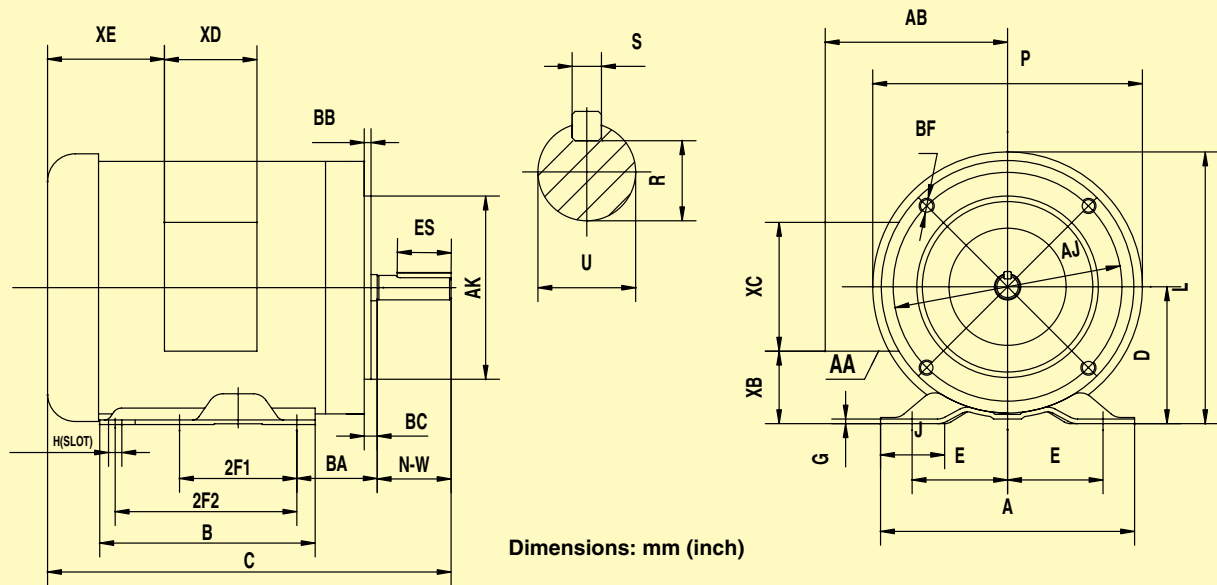
**OMAT2-18-56CB**



Dimensions: mm (inch)

A	B	C	D	E	2F1	2F2	G	H	J	L	P	R	S	U
165 (6.5)	165 (6.5)	351 (13.8)	89 (3.5)	62 (2.44)	76 (3)	127 (5)	3 (0.12)	9 (0.34)	44 (1.73)	178 (8.5)	175 (6.9)	13 (0.517)	5 (0.188)	16 (0.625)
ES	AA	AB	AH	AJ	AK	BA	BB	BC	BF	XB	XC	XD	XE	
36 (1.41)	1/2" NPT	136 (5.35)	49 (1.91)	149 (5.875)	114 (4.5)	70 (2.75)	4 (0.16)	5 (0.19)	3/8-16	42 (1.65)	94 (3.7)	82 (3.23)	72 (2.85)	

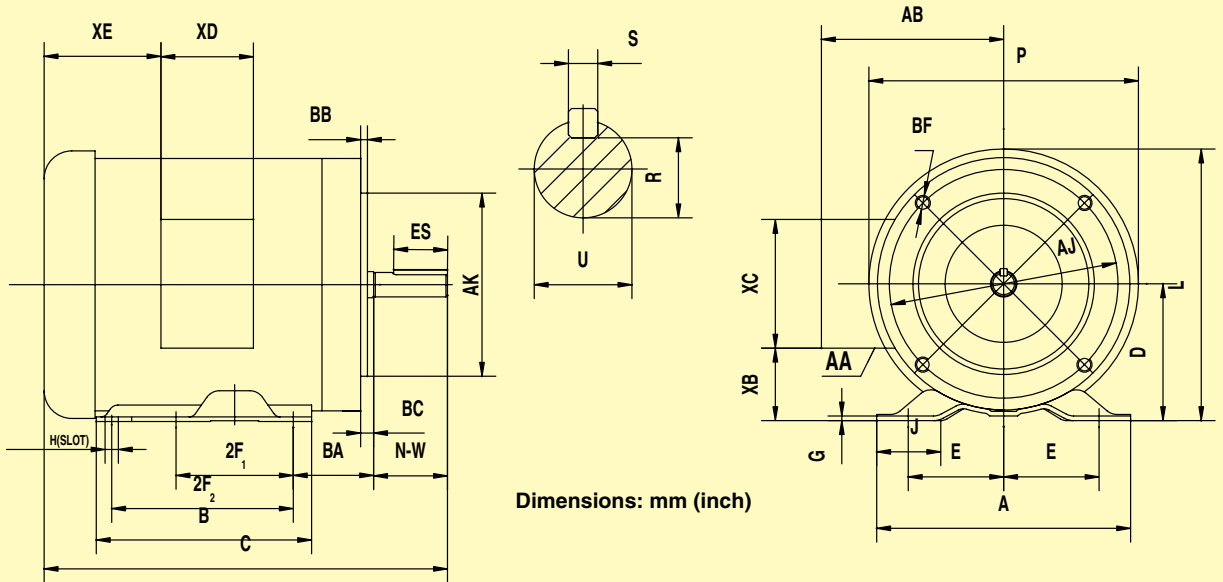
**OMAT12-18-56CB**



Dimensions: mm (inch)

A	B	C	D	E	2F1	2F2	G	H	J	L	P	R	S	U
165 (6.5)	165 (6.5)	310 (12.4)	89 (3.5)	62 (2.44)	76 (3)	127 (5)	3 (0.12)	9 (0.34)	44 (1.73)	178 (7)	175 (6.9)	13 (0.517)	5 (0.188)	16 (0.625)
ES	AA	AB	AH	AJ	AK	BA	BB	BC	BF	XB	XC	XD	XE	
36 (1.41)	1/2" NPT	136 (5.35)	49 (1.91)	149 (5.875)	114 (4.5)	70 (2.75)	4 (0.16)	5 (0.19)	3/8-16	42 (1.65)	94 (3.7)	82 (3.23)	72 (2.85)	

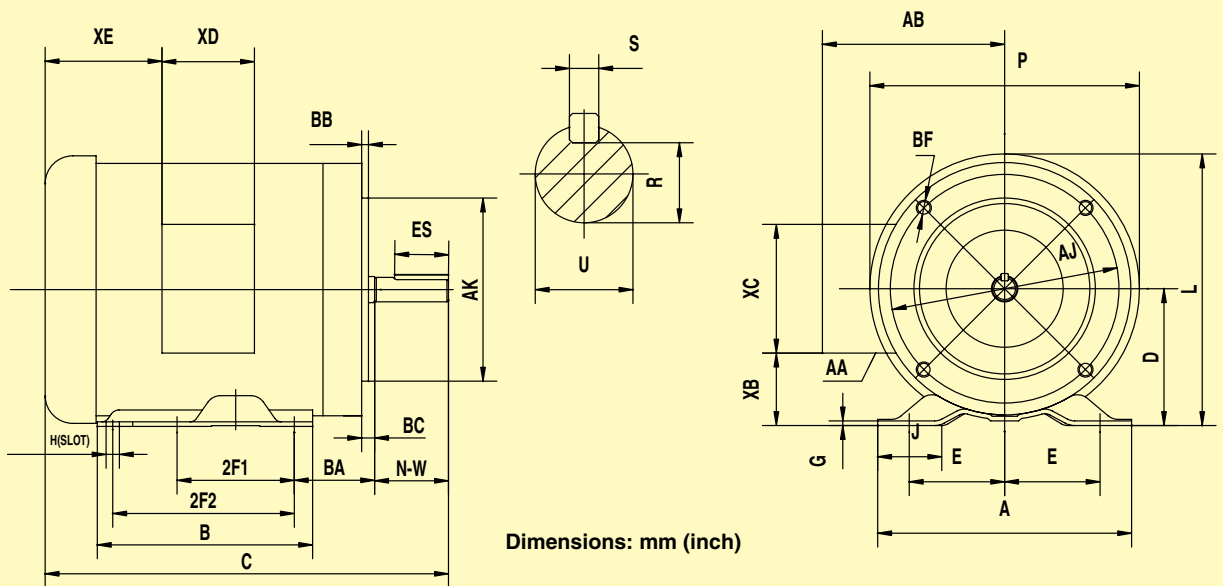
**OMAT13-18-56CB**



Dimensions: mm (inch)

A	B	C	D	E	2F <sub>1</sub>	2F <sub>2</sub>	G	H	J	L	P	R	S	U
165 (6.5)	165 (6.5)	310 (12.2)	89 (3.5)	62 (2.44)	76 (3)	127 (5)	3 (0.12)	9 (0.34)	44 (1.73)	178 (7)	175 (6.9)	13 (0.517)	5 (0.188)	16 (0.625)
ES	AA	AB	AH	AJ	AK	BA	BB	BC	BF	XB	XC	XD	XE	
36 (1.41)	1/2" NPT	136 (5.35)	49 (1.91)	149 (5.875)	114 (4.5)	70 (2.75)	4 (0.16)	5 (0.19)	3/16	42 (1.65)	94 (3.7)	82 (3.23)	72 (2.85)	

**OMAT34-18-56CB**



Dimensions: mm (inch)

A	B	C	D	E	2F <sub>1</sub>	2F <sub>2</sub>	G	H	J	L	P	R	S	U
165 (6.5)	165 (6.5)	310 (12.2)	89 (3.5)	62 (2.44)	76 (3)	127 (5)	3 (0.12)	9 (0.34)	44 (1.73)	178 (7)	175 (6.9)	13 (0.517)	5 (0.188)	16 (0.625)
ES	AA	AB	AH	AJ	AK	BA	BB	BC	BF	XB	XC	XD	XE	
36 (1.41)	1/2" NPT	136 (5.35)	49 (1.91)	149 (5.875)	114 (4.5)	70 (2.75)	4 (0.16)	5 (0.19)	3/16	42 (1.65)	94 (3.7)	82 (3.23)	72 (2.85)	

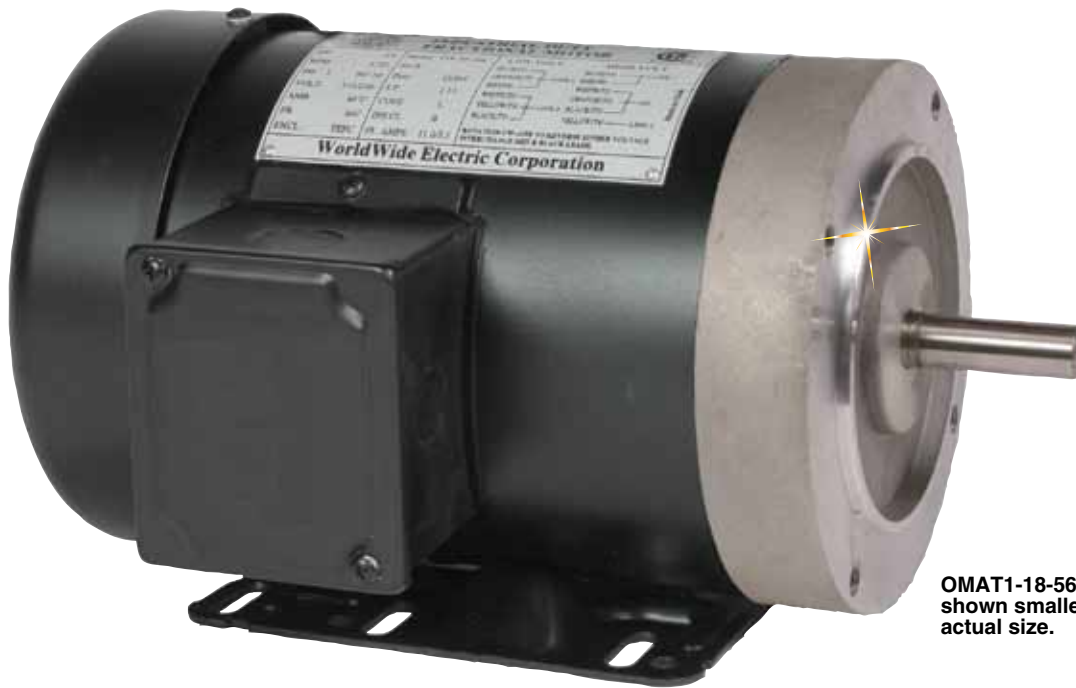
## 56C FRAME MOTORS—3 PHASE

	OMAT13-18-56CB	OMAT12-18-56CB	OMAT34-18-56CB
HP	1/3	1/2	3/4
RPM/POLES	1800/4	1800/4	1800/4
VOLTAGE/PHASE	208 to 230/460V 3	208 to 230/460V 3	208 to 230/460V 3
FRAME	56C	56C	56C
FREQUENCY	60 HZ	60 HZ	60 HZ
RATED SPEED	1725 RPM	1725 RPM	1725 RPM
DUTY CYCLE	Continuous	Continuous	Continuous
SERVICE FACTOR	1.15	1.15	1.15
AMBIENT TEMP	40°C	40°C	40°C
ALTITUDE	3300' ASL	3300' ASL	3300' ASL
INSULATION CLASS	F	F	F
FULL LOAD AMPS	1.7 to 1.6/0.8 A	2.2 to 2.0/1.0 A	3.0 to 2.8/1.4 A
TEMP RISE @ FULL LOAD	80K at SF 1.15	80K at SF 1.15	100K at SF 1.15
OVERLOAD	None	None	None
DESIGN	B	B	B
RATED TORQUE	1.02 ft-lb	1.52 ft-lb	2.29 ft-lb
LOCKED ROTOR TORQUE	250%	250%	250%
BREAKDOWN TORQUE	275%	275%	275%
LOCKED ROTOR AMPS (STARTING)	8/4 A	12/6 A	18/9 A
SLIP	4.17%	4.17% at full load	4.17% at full load
NO LOAD CURRENT	0.60 A	0.69 A	0.78 A
BEARINGS	Ball	Ball	Ball
DE BEARING	6203-ZZ	6203-ZZ	6203-ZZ
ODE BEARING	6203-ZZ	6203-ZZ	6203-ZZ
ENCLOSURE	TEFC	TEFC	TEFC
MOUNTING	F-1	F-1	F-1
ROTATION	CW/CCW	CW/CCW	CW/CCW
MOMENT OF INERTIA (lb-ft <sup>2</sup> )	0.05794	0.06767	0.075
CONNECTION DIAGRAM	208 to 230/460V—9 leads	208 to 230/460V—9 leads	208 to 230/460V—9 leads
TYPE WIRING	Loose wire	Loose wire	Loose wire
WIRE/HOUSING	Junction box	Junction box	Junction box
SHAFT	Keyed	Keyed	Keyed
CAPACITOR(S)	None	None	None
CAPACITOR SIZE	N/A	N/A	N/A
CAPACITOR INFO	N/A	N/A	N/A
BASE/TYPE	Rigid removable	Rigid removable	Rigid removable
PAINT COLOR	Black	Black	Black
APPROX WEIGHT	23 lb	23 lb	25 lb
POWER FACTOR	0.7	0.72	0.74
EFFICIENCY (%)	67.0 at full load	69.0 at full load	71.0 at full load

OMAT1-18-56CB	OMAT1.5-18-56CB	OMAT2-18-56CB
1	1.5	2
1800/4	1800/4	1800/4
208 to 230/460V 3	208 to 230/460V 3	208 to 230/460V 3
56C	56C	56C
60 HZ	60 HZ	60 HZ
1725 RPM	1725 RPM	1725 RPM
Continuous	Continuous	Continuous
1.15	1.15	1.15
40°C	40°C	40°C
3300' ASL	3300' ASL	3300' ASL
F	F	F
4.0 to 3.8/1.8 A	5.0 to 4.8/2.3 A	6.4 to 6.2/3.0 A
100K at SF 1.15	110K at SF 1.15	110K at SF 1.15
None	None	None
B	B	B
3.02 ft-lb	4.57 ft-lb	6.09 ft-lb
250%	225%	225%
275%	250%	250%
24/12 A	36/18 A	48/24 A
4.17% at full load	4.17% at full load	4.17% at full load
0.96 A	1.32 A	1.93 A
Ball	Ball	Ball
6203-ZZ	6203-ZZ	6203-ZZ
6203-ZZ	6203-ZZ	6203-ZZ
TEFC	TEFC	TEFC
F-1	F-1	F-1
CW/CCW	CW/CCW	CW/CCW
0.08588	0.1079	0.1431
208 to 230/460V—9 leads	208 to 230/460V—9 leads	208 to 230/460V—9 leads
Loose wire	Loose wire	Loose wire
Junction box	Junction box	Junction box
Keyed	Keyed	Keyed
None	None	None
N/A	N/A	N/A
N/A	N/A	N/A
Rigid removable	Rigid removable	Rigid removable
Black	Black	Black
27 lb	30 lb	41 lb
0.76	0.78	0.8
73.0 at full load	75.0 at full load	77.0 at full load



**OMAT13-18-56CB**  
shown smaller  
than actual size.



**OMAT1-18-56CB**  
shown smaller than  
actual size.

## To Order

MODEL NO.	DESCRIPTION
<b>OMAT13-18-56CB</b>	56C flange rolled steel motor, 208-230/460 V, three-phase, 1/3 HP, 1800 RPM
<b>OMAT12-18-56CB</b>	56C flange rolled steel motor, 208-230/460 V, three-phase, 1/2 HP, 1800 RPM
<b>OMAT34-18-56CB</b>	56C flange rolled steel motor, 208-230/460 V, three-phase, 3/4 HP, 1800 RPM
<b>OMAT1-18-56CB</b>	56C flange rolled steel motor, 208-230/460 V, three-phase, 1 HP, 1800 RPM
<b>OMAT1.5-18-56CB</b>	56C flange rolled steel motor, 208-230/460 V, three-phase, 1.5 HP, 1800 RPM
<b>OMAT2-18-56CB</b>	56C flange rolled steel motor, 208-230/460 V, three-phase, 2 HP, 1800 RPM

*Ordering Example: OMAT12-18-56CB, 56C flange rolled steel motor, 1/2 HP, 1800 RPM.*

## ACCESSORY

MODEL NO.	DESCRIPTION
<b>OMW56</b>	Motor slide base, 56 frame

*Ordering Example: OMW56, motor slide base for 56 frame.*