AZURE® ECM

marsdelivers.com

MARS
Delivering Confidence

AZURE® ECM

Walk-In Cooler Applications

Drop in 3.3" ECM replaces most OEM / ECM / PSC and standard shaded pole commercial refrigeration evaporator fan motors up to 1/15 HP for walk-in cooler/freezer applications. Smart microprocessor automatically adapts to the fan load up to 1/15HP and voltage up to 230V. With the Azure ECM app (available for download from the Google Play and Apple stores), speed and rotation can be field programmed using a smart phone and the optional wireless programming kit. A thermistor kit can convert the motor to 2-speed operation without the need for a separate 2-speed controller.

Specifications:

Horsepower:	1/15 - 1/25
Voltage:	115/230
Amps (Max)	1.3/0.65
Efficiency:	68%
Estimated Energy Savings:	$65/year ($91/year total)[1]
Operating Range:	-40° to 131°F
OL Protection:	Electronic
Bearing:	Ball
Wire Connector:	Lyall Plug
Listings:	UL/cUL

MARS NO.	RPM	SPEEDS	ROTATION	PROGRAMMABLE
10850	1550	1	Rev	No
10852	1550*	1 or 2**	CCWLE***	Yes

1550 default; adjustable 600-2000 RPM with optional wireless programmer kit (MARS No. 08505)
** 2-speeds attainable with optional wireless programmer kit (MARS No. 08505) and optional thermistor kit (MARS No. 08515)
*** CCWLE default; reversible with optional wireless programmer kit (MARS No. 08505)

[1] *Estimated energy savings based on replacement of a 1/20 HP shaded pole evaporator fan motor with Azure® at $0.11/kWh. $65 savings is based solely on the reduction of power consumption. An additional savings of approximately 40% will result from the reduction of the refrigeration load due to Azure®'s lower operating temperature.*

Power Consumption		
Fan Load	Standard Motor Power Consumption	Azure® Power Consumption
1/20 HP	105 W	43 W
1/15 HP	139 W	57 W

Reach-In Cooler/Case Applications

Submersible watt motor replaces most OEM / ECM / PSC and standard shaded pole commercial refrigeration evaporator and condenser fan motors 4 - 25 W for reach-in cooler/freezer applications. The microprocessor sets power output to match the fan load ensuring correct CFM and maximum efficiency in every installation. With the Azure ECM app (available for download from the Google Play and Apple stores), speed and rotation can be field programmed using a smart phone and the optional programming kit.

Specifications:

Wattage:	4 - 25
Voltage:	115/230
Amps (Max)	0.47/0.33
Efficiency:	68%
Estimated Energy Savings:	$33/year ($46/year total)[2]
Operating Range:	-40° to 131°F
OL Protection:	Electronic
Bearing:	Ball
Wire Connector:	90° Angle Lyall Plug
Listings:	UL/cUL
IP Rating:	IP 67 (Submersible)

MARS NO.	RPM	SPEEDS	ROTATION	PROGRAMMABLE
10891	1550*	1	CWLE***	Yes

* 1550 default; adjustable 600-2000 RPM with optional wireless programmer kit (MARS No. 08505)
*** CWLE default; reversible with optional wireless programmer kit (MARS No.08505)

[2] *Estimated energy savings based on replacement of a 9 W shaded pole evaporator fan motor with Azure® at $0.11/kWh. $33 savings is based solely on the reduction of power consumption. An additional savings of approximately 40% will result from the reduction of the refrigeration load due to Azure®'s lower operating temperature.*

Power Consumption		
Fan Load	Standard Motor Power Consumption	Azure® Power Consumption
4 W	28 W	6 W
9 W	47 W	14 W
16 W	77 W	30 W

AZURE® ECM

Variable Speed, Constant Torque, and PSC Replacement Motors

✓ **Simple Drop-In Installation**

✓ **Adjustable Torque Optimizes CFM**

✓ **Significantly Reduces Truck Stock & Carrying Cost**

✓ **Ball Bearing**

✓ **2 Year Warranty**

Wired Hand Held Programmer For Azure Blower Motors

- Manually adjust any speed tap up to 80 different settings
- Dial in CFM during heat rise tests
- Optimize airflow
- Create custom low speed for constant fan

MARS NO.	DESCRIPTION
08502	Hand Held Programmer for 10860/10861/10865/ 10866/10867/10868/10869

To Azure™ Motor

4.6.

MARS Azure™ Programming Tool

BERES-OCEAN

To 24VAC

MARS NO.	DIA.	HP	VOLTS	RPM	ROTATION	BLUETOOTH CONTROL	REPLACES
10856	5.5"	1/4-1/2	115/230	1075 Variable	REV	Yes	Variable Speed ECM and Constant Torque
10857	5.5"	1/2-1	115/230	1075 Variable	REV	Yes	Variable Speed ECM and Constant Torque
10858	5.5"	1/5-1/2	115/230	1075	REV	Yes	Constant Torque
10859	5.5"	1/2-1	115/230	1075	REV	Yes	Constant Torque
10860	5.5"	1/5-1/2	115/230	1075	REV	No	PSC/Constant Torque
10861	5.5"	1/2-1	115/230	1075	REV	No	PSC/Constant Torque
10867	5.0"	1/8-1/3	115/230/277	1075	REV	No	PSC
10865	5.5"	1/3-1/2	115/230	1075	REV	No	PSC
10866	5.5"	3/4-1	115/230	1075	REV	No	PSC
10868*	5.5"	1/3-1/2	115/230	1075	REV	No	Variable Speed ECM
10869*	5.5"	3/4-1	115/230	1075	REV	No	Variable Speed ECM

*Includes MARS 08506 QwikSwap board with the motor.

Replaces OEM Constant Torque and Variable Speed ECM with These Connectors... No Module Required.
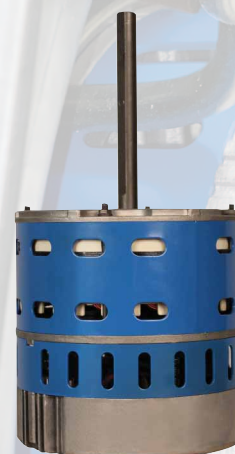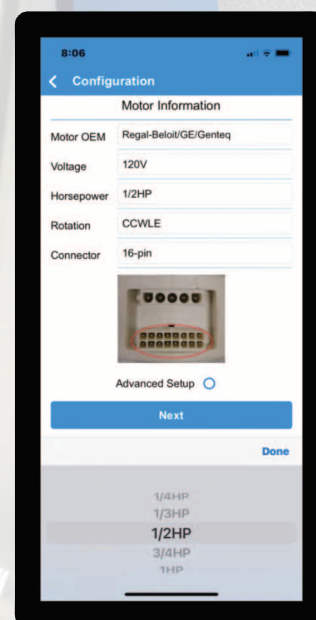

4 Pin Variable Speed

16 Pin Variable Speed

Constant Torque

✓ **Bluetooth Control**
Free app (AZURE ECM) is available on both Apple and Google stores.

✓ **Intuitive**
Drop down menus and data inputs are simple and make sense.

✓ **Plug and Play**
Azure connects directly to OEM harnesses; additional module or adapter is not required.

✓ **Adjustable Torque**
The app allows optimization of airflow even if ductwork is not optimal.

✓ **Ultimate Truck Stock**
Save time and money. Two Azure ECMs replace A LOT of motors!

✓ **Replaces** 16 Pin OEM Variable Speed ECM, PWM, 2.0, 2.3, 2.5 EON®; and Evergreen® VS, Rescue® EZ16®

✓ **Replaces** Many* 4 Pin OEM Variable Speed ECM 3.0; and Evergreen® VS

✓ **Replaces** Constant Torque X13®, Endura® Pro, SelecTech®; and Evergreen® EM, Rescue® EZ13®

Bluetooth inside

MARS No.	HP	Volts	RPM	Rotation	Diameter
10856	1/4-1/2	115/230	1075 Variable	REV	5.5"
10857	1/2-1	115/230	1075 Variable	REV	5.5"

*Due to proprietary OEM protocol, some communicating ECMs may not be compatible with Azure.

Smartphone not included

AZURE® ECM

PSC Condenser Fan Applications

Other ECMs

Compact Size

825 & 1075 RPM Motor in One

Easy to Mount
- The short shell 1/3 HP (MARS No.10874) fits where larger competitive motors will not

Easy to Configure
- Simply power the motor to cycle it through 4 possible configurations and lock in the desired mode

  1075 RPM CW • 1075 RPM CCW • 825 RPM CW • 825 RPM CCW

Simple 2 Wire Installation
- Connect the 2 motor leads directly to the definite purpose contactor; there are no capacitor, rotation, or RPM jumper wires

Outboard Surge Protection
- Unique to Azure® is the replaceable outboard surge protector included within the wire harness of each Azure® condenser fan motor

Replaces PSC Motors, Only

Features:	Benefits:
Multi HP, reversible, 825/1075 RPM	Reduces truck stock
High efficiency	Reduces energy consumption
Ball bearing	Provides quiet operation
No capacitor required	Improves reliability
Rheem mounting holes (10874)	Fits Rheem equipment
2 year warranty	Provides peace of mind

MARS NO.	HP	VOLTS	RPM	ROTATION	ORIENTATION	RHEEM HOLES
10874	1/8-1/3	208-230	825/1075	REV	Shaft Down	Yes
10872	1/3-1/2	208-230	1075	REV	Horizontal	No
10875	1/8-1/3	208-230	1075	REV	Horizontal	No

Commercial Refrigeration Motors Programmable to Meet Your Needs

Out of the box, the programmable Azure 3.3 and Azure watt motors are set to meet the majority of your application requirements. Need more flexibility? Plug the optional wireless programmer into either motor and use your smart phone to change both the speed and rotation to meet nearly any application requirement including OEM.

Need more efficiency? Plug the optional thermistors into the 3.3 motor and use the programming kit to set up 2-speed operation. The motor will sense the refrigeration cycles and operate at normal speed during the on call and then low speed during the off call for enhanced energy savings.

Simple Operation

Step 1: Download the Azure ECM App to your Apple or Android smart phone/tablet.

Step 2: Connect the wireless programmer to the motor.

Step 3: Open the App and make adjustments to motor speed and rotation.

08505

08515

10852

MARS NO.	DESCRIPTION	AZURE® MOTOR COMPATIBILITY
08505	Wireless Programmer Kit; Requires Azure ECM App and Smart Device (sold separately)	10852, 10891
08515	Thermistor Kit for 2-Speed Operation (1 Pair); Controls up to 5 Motors	10852

Videos

Scan with your smartphone or see us on YouTube and marsdelivers.com under *Resources.*

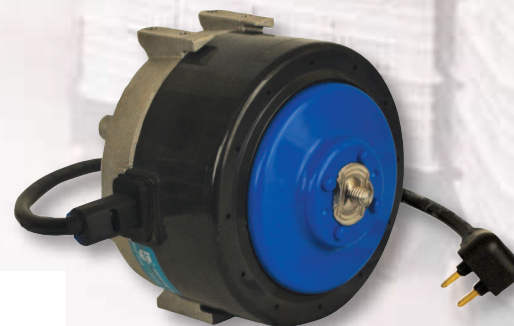**Compatibility:** Azure® watt motor (MARS No. 10891) / Azure® 3.3 motor (MARS No. 10852)

The Azure® Wirelessly Programmer is available from:

Android Smart Devices: (Azure ECM app required). Download from your On-line app store.

Apple Smart Devices: (Azure ECM app required). Download from your On-line app store.

Azure Wireless Programmer Kit

Programming the Azure Watt Motor

Programming the Azure 3.3 Motor

Azure 2-Speed Motor Retrofit

10891