

## ECM Technology

These 51 frame unit bearing motors are primarily used in commercial refrigeration applications, both evaporator and condenser, but can be used in any application demanding high efficiency and dependability with output ratings between 4 – 12 watts and 13 – 23 watts.

These motors significantly outperform both shaded pole and PSC technology. With efficiencies three times higher than shaded pole motors and 45% higher than PSC, in addition to the reliable and quiet unit bearing design, they provide users great reliability and excellent energy savings for their applications

### Environmental Summary:

- Storage Temps: -40 to 80° C ambient
- Operating Temps: -40 to 55° C ambient
- Design Life: 10 years, 83,720 hours on time

### Mechanical Summary

- 3.3" Electronically commutated aluminum or cast iron unit bearing
- 1/4" x 20 threaded shaft
- Aluminum enclosure (totally enclosed)
- Five .150" diameter cored mounting holes on rear
- Horizontal shaft (+/- 15°) or vertical shaft up operating position
- Standard 18 gauge, 2 conductor leads
- Lead cord may be terminated with 1/2" stripped wire, in-house molded plugs, eyelets, 1/4" quick connects, or special terminals
- RoHS compliant

### Applications:

- Bottle coolers
- Display cases
- Reach-In coolers
- Vending machines

### Features:

- Output 4 – 12W and 13 – 23W
- ~66% peak efficiency
- Speed regulated within +/-6%
- Regulated speed; +/-6% Full Scale
- 1 Discrete speed
- 51fr Unit bearing motor; cast aluminum frame
- Side pedestal mounting feet (2 sets standard)

MARS NO.	APPLICATIONS	OUTPUT WATTS	VOLTS	ROT	RPM	MARS PACK
00650	Evaporator/Condenser	4-12	115	CW	1550	1
00651	Evaporator/Condenser	4-12	230	CW	1550	1
00652	Evaporator/Condenser (90° lyall plug)	4-12	115	CW	1550	1
00654	Evaporator/Condenser	13-23	115	CW	1550	1
00655	Evaporator/Condenser	13-23	230	CW	1550	1
00656	Evaporator/Condenser	13-23	115	CCW	1550	1
00657	Evaporator/Condenser	13-23	230	CCW	1550	1



## ARKTIC™ 59

### Ball Bearing

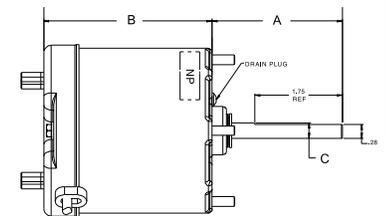
The Morrill ARKTIC 59 motor is primarily used in the evaporator of commercial refrigeration walk-in coolers and freezers, but can be used in any application demanding high efficiency and dependability with output ratings up to 50 watts. The ARKTIC 59 significantly outperforms both shaded pole and PSC technology with efficiencies three times higher than shaded pole motors and 40% higher than PSC. In addition to the reliable design, the ARKTIC 59 provides users the ease of drop-in replacement and extraordinary energy savings for their applications.

### Features:

- Universal "Drop-In" replacement for walk-in evaporator applications
- Totally enclosed, non-vented
- Shaft water slinger
- Standard thru-bolt configuration
- All angle mount
- Power cord with lyall plug

### Specifications:

- Automatic torque variation, constant speed
- Low temp (-20° F) lubrication system
- 50/60 Hz
- 1 Discrete speed
- CUL (CE & VDE pending) UL file # E306123
- Thermally protected



### 1550 RPM - Front Or Rear Thru-Bolt Mount

MARS NO.	MFG MODEL 5SME59	NOMINAL HP	VOLTS	AMPS	OSE ROT	DIMENSIONS		
						A	B	C
05105	BVA1038	1/15	115	1.1	CCW	2.61	3.36	5/16
05204	BVA2037	1/15	208-230	0.63	CW	2.61	3.36	5/16
05205	BVA2039	1/15	208-230	0.63	CCW	2.61	3.36	5/16

### 1550/800 RPM - Two Speed - Front or Rear Thru Bolt Mount

MARS NO.	MFG MODEL 5SME59	NOMINAL HP	VOLTS	AMPS	OSE ROT	DIMENSIONS		
						A	B	C
05127	BVA1065	1/15	115	1.1	CCW	2.61	3.36	5/16
05128	BVA1066	1/15	115	1.1	CW	2.61	3.36	5/16

MARS NO.	DESCRIPTION	MARS PACK
08040	Krack Refrigeration Retrofit Bracket Kit	1

# Unit Bearing Motors / OEM Direct Replacement Motors

## 51 Frame Motors For Domestic Refrigeration



**Features:**

- Single phase, shaded pole
- Fan duty, continuous, air over
- Class A insulation
- 60/50 Hertz
- Impedance protected
- For accessories see pages M-44 – M-46



**1550**

MARS NO.	GE NO. 5KS	WATTS	ROT OSE	VOLTS	AMPS	SHAFT	REPLACES	MARS PACK
05109	M81FFL0065	2	CW	115	0.25	1/4-20 threaded	most refrigerators and freezers	12

## Tyler Refrigeration OEM Direct Replacement Refrigeration Motors



**Features:**

- Universal 5 hole rear mount
- Dual mounting pads



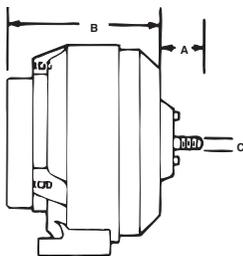
MARS NO.	WATTS	VOLTS	RPM	AMPS	ROTATION	CONSTRUCTION	TYLER NO.
00660	5	115	1550	0.34	CW	cast iron	51255320
00661	9	115	1550	0.53	CW	aluminum	52434980

## EM&S PSC Type Replacement For GE



**Features:**

- Drop-in replacement
- Single phase PSC
- Fan duty, continuous, air over
- Low temp oil
- Reliable unit bearing
- Internal capacitor



**1660 RPM 1/4" – 20 Threaded**

MARS NO.	GE NO. 5KS	WATTS	ROT OSE	VOLTS	AMPS	DIMENSIONS	
						A	B
00114	RS4BEB6E14	4	CW	115	0.20	0.40	2.50
00117*	RS4BEB9E12	9	CW	115	0.26	0.40	2.50

\* 00117 replaces Hussmann SVC 441-302

## Copeland OEM Direct Replacement Refrigeration Motors

**Features:**

- Single speed
- Cast iron
- Single foot pad, horizontal only
- Automatic thermal protection



MARS NO.	WATTS	VOLTS	RPM	AMPS	ROTATION	COPELAND NO.
00511	50	115	1500	1.7	CW	050-0344-01
00512	50	230	1500	1.0	CW	050-0344-00, 050-0344-10