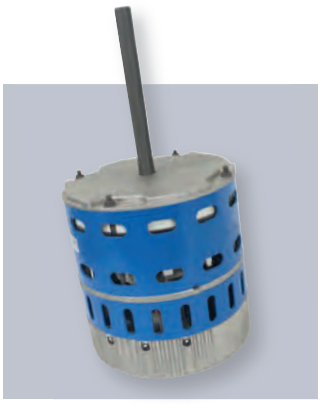
Motors
Components
Service & Installation

Parts & Accessories

CATALOG



DELIVERING CONFIDENCE TO THE HVAC/R INDUSTRY FOR OVER 75 YEARS

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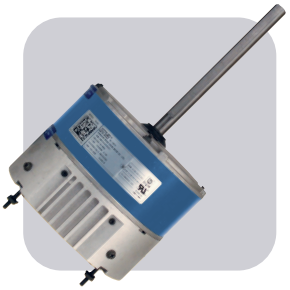
Motors



Delivering Confidence

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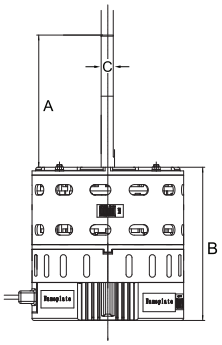
AZURE® ECM
Direct Drive Blower Applications
Ball Bearing

Azure® ECM from MARS is a high efficiency variable speed direct drive blower motor for a multitude of applications. Azure® is a replacement for both standard PSC and Constant Torque motors. These motors cover ratings from 1/5 HP to 1 HP at 115V or 230V and CW or CCW.

Azure® features an auto sizing learn mode. In start-up learn mode, Azure® runs for approximately 2 minutes measuring the external static pressure of the system application. Azure® then assigns torque values to each of its speed taps self-programming itself to the correct horsepower for the application.



If none of the four speeds provides perfect airflow for the application or if duplicate speeds are desired on 2 or more taps, an optional hand held programmer (MARS No. 08502) can be used. The programmer connects to Azure® and displays the percentage of torque applied to the speed tap being energized. The percentage (motor speed) can then be increased or decreased and permanently set with the programmer. This tool overrides the motor torques established in the auto sizing mode.

Unlike other electronically commutated motors, an outboard surge protector is included within Azure's® wire harness. This is a replaceable device (MARS No. 08593).

Features:

- Outboard replaceable surge protector
- Adjustable speeds (with optional MARS No. 08502)
- 4 speeds plus 625 RPM constant fan mode
- High efficiency 85%
- Multi-horsepower, dual voltage
- Belly band mount

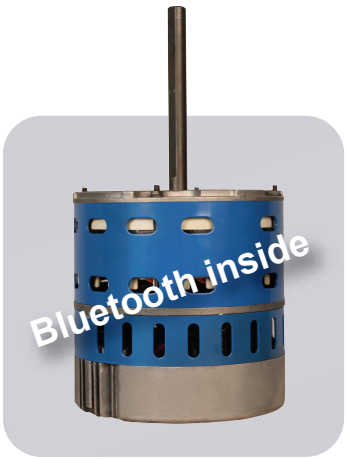
Specifications:

- Class "B" insulation
- Thermal overload protected
- Operating temperature range: -20°C to 55°C (-4°F to 131°F)
- UL Recognized
- For accessories see page M-5

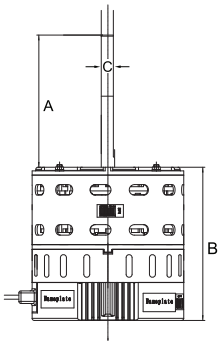
MARS No.	External Surge Protection	Auto-Sizing	Replaces
10860	Yes	Yes	PSC / Constant Torque
10861	Yes	Yes	PSC / Constant Torque
10865	No	No	PSC
10866	No	No	PSC
10867	No	No	PSC

MARS NO.	HP	VOLTS	RPM	ROTATION	DIAMETER	DIMENSIONS A	B	C
10860	1/5-1/2	115/230	1075	Rev	5-1/2	4.93	5.72	1/2
10861	1/2-1	115/230	1075	Rev	5-1/2	4.93	6.66	1/2
10865	1/3-1/2	115/230	1075	Rev	5-1/2	4.93	5.72	1/2
10866	3/4-1	115/230	1075	Rev	5-1/2	4.93	6.66	1/2
10867	1/8-1/3	115/230/277	1075	Rev	5	5.00	5.00	1/2

AZURE® ECM
Direct Drive Blower Applications Bluetooth
Ball Bearing



The latest generation of Azure® ECM features integrated Bluetooth control for use with the Azure® ECM smartphone app. While not required for the installation of these motors, the app allows the installer to take full advantage of the ECM technology. While competitive aftermarket ECMs provide only 5 speed taps for setting airflow, the Bluetooth Azure® motors provide more than 50 speed selections and the ability to autosize to the ductwork all with a keystroke or two in the app..



One Touch Autosizing

One touch of a button automatically assigns correct torque for the ductwork; additional programming harnesses are not required.

Individual Speed Tap Adjustments

Dial in the temperature rise with 1% torque increments. Tune out annoying high frequency harmonics. Optimize CFM.

Real Time Data

Monitor motor volts, amps, watts, and RPM's.

Drop-in Installation

Simple to wire; connections are the same as the motor being replaced.

Features:

- 4 speeds plus 625 RPM constant fan mode
- High efficiency 85%
- Multi-horsepower, dual voltage
- Belly band mount

Specifications:

- Class "B" insulation
- Thermal overload protected
- Operating temperature range: -20°C to 55°C (-4°F to 131°F)
- UL Recognized
- For accessories see page M-5

MARS No.	Adjustable Speeds*	Auto-Sizing*	Replaces
10858	Yes	Yes	Constant Torque, Ensite, Endura
10859	Yes	Yes	Constant Torque, Ensite, Endura

* When Azure® Blower Motor App is used

MARS NO.	HP	VOLTS	RPM	ROTATION	DIAMETER	DIMENSIONS A	B	C
10858	1/5 – 1/2	115/230	1075	Rev	5-1/2	4.93	5.72	1/2
10859	1/2 – 1	115/230	1075	Rev	5-1/2	4.93	6.66	1/2

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AZURE® ECM

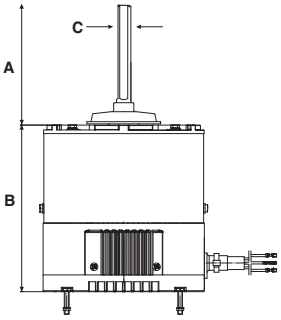
Condenser Fan Applications

Ball Bearing

Azure® is an electronically controlled motor (ECM) that replaces a multitude of applications. These motors cover ratings from 1/8 HP to 1/3 HP at 208-230V 825/1075 RPM and 1/3 HP to 1/2 HP 208-230V 825/1075 RPM and CW or CCW. These motors are simple to install. The Azure® condenser fan motors connect the same as a standard PSC condenser fan motor, BUT WITHOUT the capacitor. Just plug the motor into a 115V power source (using supplied programming cable) and select 1 of 4 operating modes and then install the motor:

1) 1075 RPM CW (LE) - Factory Default
2) 1075 RPM CCW (LE)
3) 825 RPM CW (LE)
4) 825 RPM CCW (LE)

Unlike other ECM motors, an outboard surge protector is included with the Azure® wiring harness. This is a replaceable device that is much less expensive to replace than replacing the entire motor in the event of a power surge.

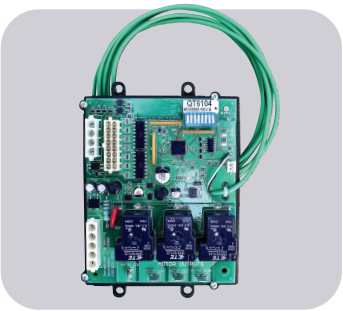


Specifications:

- Multi horsepower, self-adjusting
- 825/1075 RPM, single speed
- Reversible rotation
- High efficiency ECM
- No capacitor required
- Water slinger on shaft
- UL Recognized
- For accessories see page M-5

MARS NO.	HP	VOLTS	RPM	ROTATION	ORIENTATION	RHEEM HOLES	DIMENSIONS A	B	C
10874	1/8 - 1/3	208-230	825/1075	Rev	Shaft Down	Yes	6.50	4.33	1/2
10875	1/8 - 1/3	208-230	1075	Rev	Horizontal	No	6.50	4.33	1/2
10872	1/3 - 1/2	208-230	1075	Rev	Horizontal	No	6.00	5.95	1/2

Azure® Variable Speed Motor Adapter



The Azure® Variable Speed Motor Adapter is a money saving solution to the expensive replacement of a failed OEM variable speed blower motor using an Azure® ECM motor. Simply move the OEM wire harnesses to the Azure® Variable Speed Adapter and connect the Azure® direct drive motor speed taps to the Azure® Variable Speed Adapter.

- Allows replacement of 2.0, 2.3, 2.5, and 3.0 variable speed communicating ECM motors
- Allows replacement of variable speed communicating ECM motors from Nidec / US Motors, and Emerson
- Eliminates wasted time & money locating OEM motor
- Allows replacement of all variable speed direct drive ECM 115V / 230V 1/3, 1/2, 3/4, 1HP (not for use to replace X13 style constant torque ECM)

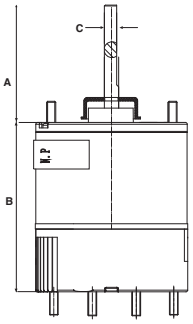
MARS NO.	DESCRIPTION	AZURE® MOTOR COMPATIBILITY
08506	Variable Speed Motor Adapter	10865, 10866

AZURE® ECM

3.3" Commercial Refrigeration Evaporator Fan Motor

Ball Bearing

Azure® is an electronically controlled 3.3" motor (ECM) that replaces all 1/15 - 1/25 HP, 115/230V, and 1550/600 RPM commercial refrigeration evaporator fan motors for walk in cooler/freezer applications. For 1550 RPM, this motor connects easily to the fan controller via a standard Lyall plug. For 2-speed applications, the Lyall plug can be removed and the motor can be wired directly to a separate 2-speed control module using the included second speed tap for 600 RPM. Motor rotation is set using a simple jumper wire. Azure® is rated for 115V or 230V with nothing to set; plug it in to either voltage and it adapts to the correct voltage.



Specifications:

- Operating temperature range: -40° to 131°F
- Multi horsepower, self adjusting from 1/15 to 1/25HP
- Reversible rotation
- Auto voltage select (115/230V)
- High efficiency ECM technology
- No capacitor required
- UL Recognized
- For accessories see page M-5

MARS NO.	HP	VOLTS	RPM	SPEEDS	ROTATION	DIMENSIONS A	B	C
10850	1/15 - 1/25	115/230	1550	1	Rev	2.5	3.74	5/16
10852	1/15 - 1/25	115/230	1550(1)	1 or 2(2)	CCWLE(3)	2.5	3.74	5/16

(1) 1550 default; adjustable 600-2000 RPM with optional wireless programmer kit (MARS No. 08505)

(2) 2-speeds attainable with optional wireless programmer (MARS No. 08505) and optional thermistor kit (MARS No. 08515)

(3) CCWLE default; reversible with optional wireless programmer (MARS No. 08505)

⚠ WARNING:
Cancer and Reproductive Harm
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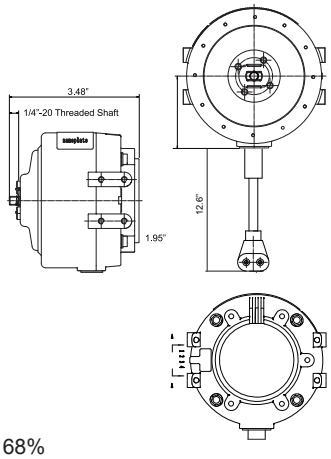
AZURE® ECM

Commercial Refrigeration Watt (Reach-In) Motor

Ball Bearing

MARS ECM watt motor is a Drop in replacement for most OEM / ECM / PSC and standard shaded pole commercial refrigeration evaporator and condenser fan motors. Capable of replacing most 1550 RPM case motors 4 - 25W 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. Automatically senses and adapts to the system voltage (115/230V). MARS No. 10891 - Wirelessly Programmable. Download Azure® ECM App to your smart phone/tablet.



Specifications:

- Submersible - IP67
- Operating temperature range: -40° to 131°F
- Self adjusting from 4 to 25 Watts
- 1550(1) RPM
- CWLE(3) Rotation
- Auto Voltage Select (115/230V)
- High efficiency ECM technology: 68%
- Estimated Energy Savings: $33/year ($46/year total)(2)
- 90° Angle Lyall Plug
- Water Resistant: Yes
- UL Recognized
- For accessories see page M-5

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

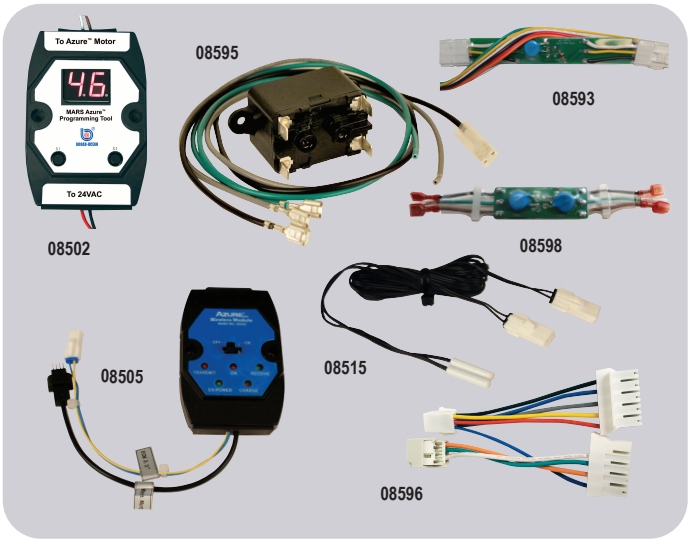
MARS NO.	WATTS OUTPUT	VOLTS	RPM	ROTATION	LEAD LENGTH
10891	4 - 25	115/230	1550(1)	CWLE(3)	13"

(1) 1550 default; adjustable 600-2000 RPM with optional wireless programmer kit (MARS No. 08505)

(2) Estimated energy savings based on replacement of a 9W 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.

(3) CWLE default; reversible with optional wireless programmer kit (MARS No.08505)

Accessories for Azure® ECM



MARS NO.	DESCRIPTION
08502	Hand Held Programmer 10860/10861/10865/10866/10867/10868/10869
08593	Replacement Surge Protector 10860/10861
08595	Constant Fan Kit 10858/10859/10860/10861/10865/10866
08598	Replacement Surge Protector 10872/10874/10875
08505	Wireless Programmer Kit; Requires Azure ECM` App and Smart Device (sold separately) for 10891/10852
08515	Thermistor Kit for 2-Speed Operation (2/PK) for 10852; Controls up to 5 Motors
08596	Ensite Adapter: Accessory 10856, 10857 Replacement Part 10858, 10859

Tech Tip

All ECM motors are more energy efficient than standard motors even though the amp draw may be similar. ECM motors have lower power factors and thus consume fewer watts. Power Consumption (Watts) = Volts x Amps x Power Factor.

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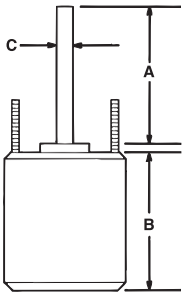
Condenser Fan Motors

Outdoor Condenser Fan Motors

Ball Bearing

MARS all angle outdoor condenser fan motors are designed for either shaft-up or shaft-down applications. End shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain. All of these motors are suitable for air conditioning or heat pump applications.



Features:

- All angle
- Rheem mounting holes w/screws installed
- Water slinger on shaft
- Thru bolt or band mounting
- Capacitor requirement noted on motor label
- Double full flatted shaft

Specifications:

- Class “B” insulation
- Single phase, 60 Hertz
- Thermal overload protected
- Fan duty, continuous, air over
- Totally enclosed
- 36 inch leads
- UL Recognized

Reversible Rotation – Single Speed

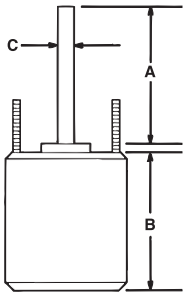
MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
1075 RPM									
10725	1/8	208-230	0.72	5/370	TEAO	Ball	6.50	4.12	1/2
10727	1/6	208-230	0.90	5/370	TEAO	Ball	6.50	4.23	1/2
10726	1/5	208-230	1.17	5/370	TEAO	Ball	6.50	4.12	1/2
10728	1/4	208-230	1.8	5/370	TEAO	Ball	6.50	4.23	1/2
10729	1/3	208-230	2.4	7.5/370	TEAO	Ball	6.50	5.23	1/2
10730	1/2	208-230	3.5	10/370	TEAO	Ball	6.50	5.73	1/2
10731	3/4	208-230	5.2	10/370	TEAO	Ball	6.50	6.23	1/2

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
825 RPM									
10411	1/8	208-230	0.80	5/370	TEAO	Ball	6.50	4.13	1/2
10403	1/6	208-230	1.0	5/370	TEAO	Ball	6.50	4.23	1/2
10412	1/5	208-230	1.3	5/370	TEAO	Ball	6.50	4.40	1/2
10404	1/4	208-230	1.6	5/370	TEAO	Ball	6.50	4.48	1/2
10405	1/3	208-230	1.9	7.5/370	TEAO	Ball	6.50	5.23	1/2
10746	1/2	208-230	2.8	12.5/370	TEAO	Ball	6.50	5.70	1/2

Outdoor Condenser Fan Motors

Ball Bearing

MARS up/down outdoor condenser fan motors are designed for either vertical shaft-up or shaft-down applications. Shell and end shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain. All of these motors are suitable for air conditioning or heat pump applications.



Features:

- All angle
- Rheem mounting holes w/screws installed
- Water slinger on shaft
- Thru-bolt or band mounting
- Capacitor requirement noted on motor label
- Extra set of nuts & star washers on mounting studs
- Double full flatted shaft

Specifications:

- Class “B” insulation
- Single phase, 60 hertz
- Thermal overload protected
- Totally enclosed
- 36 inch leads
- UL Recognized

Reversible Rotation – Single Speed

MARS NO.	HP	VOLTS	AMPS	RPM	CAP REQ.	DIMENSIONS A	B	C
1075 RPM								
10732	1/6	208-230	0.90	1075	5/370	6.50	4.13	1/2
10733	1/4	208-230	1.8	1075	5/370	6.50	4.25	1/2
10734	1/3	208-230	2.4	1075	7.5/370	6.50	5.10	1/2
10735	1/2	208-230	3.5	1075	10/370	6.50	5.70	1/2
10736	3/4	208-230	5.2	1075	10/370	6.50	5.11	1/2

MARS NO.	HP	VOLTS	AMPS	RPM	CAP REQ.	DIMENSIONS A	B	C
825 RPM								
10203	1/6	208-230	1.0	825	5/370	5.50	4.10	1/2
10204	1/4	208-230	1.6	825	5/370	5.50	4.40	1/2
10205	1/3	208-230	1.9	825	7.5/370	5.50	5.10	1/2
10747	1/2	208-230	2.8	825	12.5/370	6.50	5.70	1/2

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Outdoor Condenser Fan Motors - Shaft Up Only

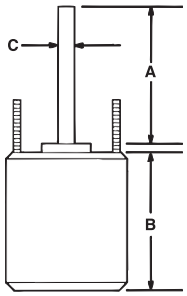
MARS outdoor condenser fan motors are designed for shaft up only used in condenser fan and heat pump units requiring vertical shaft up positioning with "belly band" or extended clamp screw mounting.

Features:

- Rheem mounting holes w/screws installed
- For shaft up application
- Reversible rotation
- Water slinger on shaft
- Full flatted six inch shaft length
- Capacitor requirement noted on motor label

Specifications:

- Class "B" insulation
- Single phase, 60/50 Hertz
- Automatic thermal overload protected
- Fan duty, continuous, air over
- 36 inch leads
- Lead end endshield open construction
- UL Recognized



1075 RPM – Shaft-Up – Single Speed

MARS NO.	HP	VOLTS	AMPS	ROTATION	CAP REQ.	BRG.	DIMENSIONS A	B	C
10327	1/6	208-230	0.9	REV	5/370	Sleeve	6.0	4.15	1/2
10328	1/4	208-230	1.8	REV	5/370	Sleeve	6.0	4.15	1/2
10329	1/3	208-230	2.4	REV	7.5/370	Sleeve	6.0	5.11	1/2
10330	1/2	208-230	3.5	REV	10/370	Ball	6.0	5.70	1/2
10331	3/4	208-230	5.2	REV	10/370	Sleeve	6.0	6.09	1/2

MARS Three Wire Condenser Fan Motors

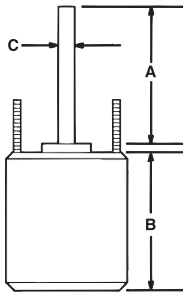
Ball Bearing

MARS 3 Wire condenser fan motors replicate OEM wiring for condenser fan motors speeding installation and saving time.

Condenser fan motors are designed for either shaft-up or shaft-down applications.
End shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain.
All of these motors are suitable for air conditioning or heat pump applications.

Features:

- All angle, ball bearing
- Rheem mounting holes w/screws installed
- Water slinger on shaft
- Thru bolt or band mounting
- Capacitor requirement noted on motor label
- Double full flatted shaft



Specifications:

- Class "B" insulation
- Single phase, 60 Hertz
- Thermal overload protected
- Fan duty, continuous, air over
- Totally enclosed
- 36 inch leads
- UL Recognized

Reversible Rotation – Single Speed – 3 Wire

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
1075 RPM									
23728	1/4	208-230	1.8	5/370	TEAO	Ball	6.50	4.23	1/2
23729	1/3	208-230	2.4	7.5/370	TEAO	Ball	6.50	5.23	1/2

Condenser Fan Motors

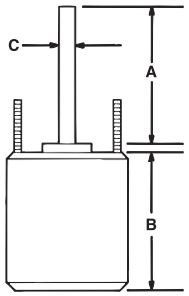
Outdoor Condenser Fan Motors

Ball Bearing - 70°C

MARS 70°C SunSlinger totally enclosed condenser fan motors are designed for either vertical shaft-up or shaft-down applications in a variety of ambient conditions. Shell and end shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain. All of these motors are suitable for air conditioning or heat pump applications.

Features:

- All angle
- Rheem mounting holes w/screws installed
- Trane 4.33 bolt circle mounting holes with self tapping screws
- Thru bolt or band mounting
- Water slinger on shaft
- Capacitor requirement noted on motor label
- Extra set of nuts on mounting studs



Specifications:

- Class “B” insulation
- Single phase, 60 Hertz
- 70°C/158°F
- Thermal overload protected
- Fan duty, continuous, air over
- Totally enclosed
- 36 inch leads
- UL Recognized

Reversible Rotation – Single Speed

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	DIMENSIONS A	B	C
1075 RPM								
20727	1/6	208-230	0.90	5/370	TEAO	6.50	4.25	1/2
20728	1/4	208-230	1.8	5/370	TEAO	6.50	4.72	1/2
20729	1/3	208-230	2.4	7.5/370	TEAO	6.50	5.24	1/2
20730	1/2	208-230	3.5	10/370	TEAO	6.50	5.91	1/2
20731	3/4	208-230	5.2	10/370	TEAO	6.50	5.90	1/2

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	DIMENSIONS A	B	C
825 RPM								
20402	1/8	208-230	0.75	5/370	TEAO	6.50	4.30	1/2
20403	1/6	208-230	1.0	5/370	TEAO	6.50	4.52	1/2
20404	1/4	208-230	2.2	5/370	TEAO	6.50	4.92	1/2
20405	1/3	208-230	1.9	7.5/370	TEAO	6.50	5.31	1/2
20746	1/2	208-230	2.8	12.5/370	TEAO	7.00	5.90	1/2

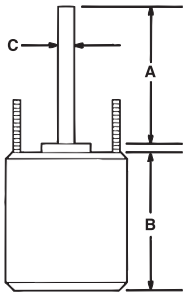
Outdoor Condenser Fan Motors

Ball Bearing - 80°C

MARS 80°C SunSlinger Max totally enclosed condenser fan replacement motors are designed for all major brands of HVAC equipment applications in a variety of ambient conditions. These 48 frame motors offer the highest performance and available from 1/6HP thru 3/4HP, 1075 RPM and 825 RPM, and 208-230V.

Features:

- All angle
- Rheem mounting holes w/screws installed
- Trane 4.33 bolt circle mounting holes with self tapping screws
- Thru bolt or belly band mounting
- Water slinger on shaft
- Capacitor requirement noted on motor label
- Extra set of nuts on mounting studs



Specifications:

- Class “F” insulation
- Single phase, 60 Hz
- 80°C (176˚F) max ambient
- Thermal overload protection
- Fan duty, continuous, air over
- Totally enclosed
- 36 inch leads
- UL Recognized

Reversible Rotation

MARS NO.	HP	VOLTS	AMPS	RPM	CAP REQ.	ENCL.	DIMENSIONS A	B	C
1075 RPM									
20791	3/4	208-230	4.5	1075	10/370	TEAO	6.50	6.50	1/2
825 RPM									
20796	1/2	208-230	2.8	825	12.5/370	TEAO	7.00	6.42	1/2

⚠ WARNING:
Cancer and Reproductive Harm
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Multi-Horsepower Condenser Fan Motors

Ball Bearing

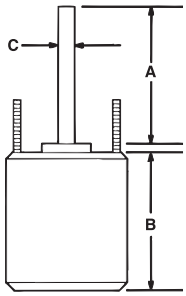
MARS multi-horsepower condenser fan motors are ideal for truck stock. Three 1075 RPM models cover 208-230 volt applications from 1/6 to 1/2 HP. Two 825 RPM models cover 208-230 volt applications from 1/8 ro 1/3 HP.

Features:

- Rheem mounting holes w/screws installed
- Thru bolt or band mounting
- Water slinger on shaft
- Air conditioning or heat pump duty

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- UL Recognized



MARS NO.	HP	ROT	RPM/SP.	VOLTS	ENCL.	BRG.	DIMENSIONS A	B	C	LEAD LENGTHS
10458	1/6 - 1/3	Rev	1075	208-230	TEAO	Ball	6.50	4.52	1/2	36"
10459	1/8 - 1/3	Rev	825	208-230	TEAO	Ball	6.50	5.48	1/2	36"
10465	1/6 - 1/3	Rev	1075/2	208-230	TEAO	Ball	5.00	4.73	1/2	38"
10468	1/5 - 1/2	Rev	1075/2	208-230	TEAO	Ball	5.00	5.48	1/2	38"
10469	1/6 - 1/3	Rev	825/2	208-230	TEAO	Ball	5.00	5.48	1/2	42"

The Wiz

Multi-Horsepower Condenser Fan Motors

Ball Bearing - 70°C

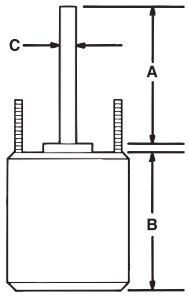
MARS 70°C multi-horsepower SunSlinger condenser fan motors are ideal for truck stock. They are designed to provide reliable operation in a wide range of ambient temperatures. Three 1075 RPM models cover 208-230 volt applications from 1/6 to 1/2 HP. Two 825 RPM models cover 208-230 volt applications from 1/8 to 1/3 HP.

Features:

- All angle
- Rheem shell mounting holes with screws installed
- Trane 4.33 bolt circle mounting holes with self tapping screws
- Thru bolt or band mounting
- Water slinger on shaft
- Extra set of nuts on mounting studs

Specifications:

- Class “B” insulation
- Single phase, 60 Hertz
- 70°C/158°F
- 36 inch leads
- Thermal overload protected
- Fan duty, continuous, air over
- Totally enclosed
- UL Recognized



20458 & 20459:

- Short shell length
- Just ONE capacitor rating per motor
- Quick & Simple 2 wire installation

Multi-Horsepower – Reversible Rotation

MARS NO.	HP	RPM/ SPDS	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
20458	1/6-1/3	1075	208-230	2.8	7.5/370	TEAO	Ball	6.50	5.00	1/2
20459	1/8-1/3	825	208-230	1.9	10/370	TEAO	Ball	6.50	5.71	1/2
20465	1/6-1/3	1075/2	208-230	2.5	5/7.5/370	TEAO	Ball	7.00	5.16	1/2
20468	1/5-1/2	1075/2	208-230	3.6	10/12.5/370	TEAO	Ball	5.00	6.10	1/2
20469	1/6-1/3	825/2	208-230	1.9	10/7.5/370	TEAO	Ball	5.00	6.10	1/2

The Wiz

One-On-One™ Replacement Motors

MARS NO.	HP	ROT	RPM/ SPDS	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
Emerson 5462H											
20462	1/3, 1/4, 1/5, 1/6	REV	1075/2	208-230	2.0	5/7.5/370	TEAO	Ball	5.00	4.91	1/2
Emerson 5482H											
20471	1/4, 1/3, 1/2, 3/4	REV	1075/2	208-230	4.2/3.6	15/440	TEAO	Ball	5.5	6.5	1/2
AO Smith FE6003F											
20470	1/4, 1/2	REV	825/2	208-230	2.6	10/12.5/ 440	TEAO	Ball	6.5	6.1	1/2
AO Smith ORM5854BF											
20457	1/8, 1/10, 1/12, 1/15	REV	825/1	208-230	0.75	5/440	TEAO	Ball	6.5	4.7	1/2
AO Smith ORM5454BF											
20463	1/8 - 1/15	REV	1075/1	208-230	0.65	5/440	TEAO	Ball	6.5	4.4	1/2

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Condenser Fan Motors

MARS 460V Outdoor Condenser Fan Motors

Ball Bearing - 70°C

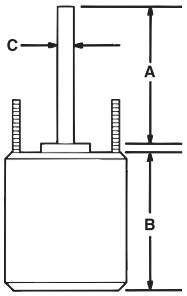
MARS 70°C SunSlinger totally enclosed outdoor condenser fan motors are designed for all angle air conditioning or heat pump applications. A weep hole is provided in each end shield to allow condensate to drain.

Features:

- All angle
- Rheem mounting holes w/screws installed
- Trane 4.33 bolt circle mounting holes and self tapping screws
- Extended thru bolt or band mounting and extra nuts
- Capacitor requirement noted on motor label
- Water slinger on shaft
- End shield drain holes w/plugs

Specifications:

- Single phase, 60 Hz
- 70°C/158°F
- Thermal overload protected
- Totally enclosed
- 48 inch leads, Multi-HP
- 36 inch leads
- UL Recognized



Reversible Rotation

MARS NO.	HP	VOLTS	AMPS	RPM	CAP REQ.	DIMENSIONS A	B	C
1075 RPM - Single Speed								
20835	1/6	460	0.48	1075	5/440	6.50	4.32	1/2
20836	1/4	460	0.65	1075	7.5/440	6.50	4.52	1/2
20837	1/3	460	0.90	1075	7.5/440	6.50	5.38	1/2
20838	1/2	460	1.3	1075	10/440	6.50	5.86	1/2
20842	3/4	460	2.0	1075	10/440	6.50	6.29	1/2

MARS NO.	HP	VOLTS	AMPS	RPM	CAP REQ.	DIMENSIONS A	B	C
825 RPM - Single Speed								
20859 *	1/6	460	0.53	825	5/440	3.22	4.52	1/2
20880	1/4	460	0.90	825	5/440	6.50	5.00	1/2
20881	1/3	460	1.0	825	7.5/440	6.50	5.62	1/2
20882	1/2	460	1.55	825	10/440	6.50	6.34	1/2

MARS NO.	HP	VOLTS	AMPS	RPM	CAP REQ.	DIMENSIONS A	B	C
1075 RPM - Multi-HP								
20478	1/3 - 1/6	460	1.2	1075	7.5/370	6.50	4.90	1/2
20479	1/2 - 1/5	460	1.5	1075	10/370	6.50	5.60	1/2
20480	1/2 - 1/6	460	1.46	1075	10/440	5.50	5.70	1/2
20481	3/4 - 1/4	460	2.12	1075	15/440	5.50	6.48	1/2

One-On-One™ Replacement Motor for AO Smith ORM4688BF

MARS NO.	HP	ROT	RPM/ SPDS	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
20884	1/8,1/6,1/5, 1/4,1/3	REV	825/1	460	1.0	7.5/370	TEAO	Ball	6.50	5.3	1/2

* CW Rotation-opposite shaft end

MARS 460V Outdoor Condenser Fan Motors – Shaft Up Only

Ball Bearing - 70°C

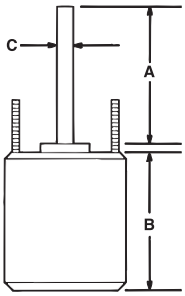
MARS 70°C Sunslinger totally enclosed outdoor condenser fan motors are designed for Shaft Up Only. All of these motors are suitable for air conditioning or heat pump applications. A weep hole is provided in each end shield to allow condensate to drain.

Features:

- Shaft up only
- Rheem mounting holes w/screws installed
- Extended thru bolt or band mounting
- Capacitor requirement noted on motor label

Specifications:

- Single Phase, 60 Hz
- 70°C/158°F
- Thermal overload protected
- Totally enclosed
- UL Recognized



Reversible Rotation

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	DIMENSIONS A	B	C	LEAD LENGTHS
1075 RPM								
20846	1/4	460	0.65	7.5/440	6.50	4.60	1/2	36"
20847	1/3	460	0.90	7.5/440	6.50	5.50	1/2	36"
20848	1/2	460	1.3	10/440	6.50	5.90	1/2	36"
20849	3/4	460	2.05	10/440	7.00	6.20	1/2	47"

⚠ WARNING:
Cancer and Reproductive Harm
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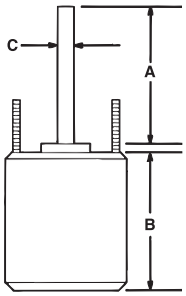
Super-Fit™ Multi-Horsepower Condenser 42 Frame Fan Motors

Ball Bearing

MARS 42 frame Super-Fit™ multi-horsepower condenser fan motors are ideal for truck stock. Two models cover 208-230V applications from 1/12 HP through 1/4 HP replacing many AOS, Westinghouse, Fasco, Emerson and GE motor designs.



Features:

- Super-Fit™ mounting holes for Trane 4.33, 4.42 and 4.62 bolt circle mounting. Includes self threading screws.
- All angle mount
- Reversible rotation
- Multi-HP
- Capacitor requirement noted on motor label
- 1/2 inch dia. flatted shaft
- Totally enclosed

Specifications:

- Class “B” insulation
- 42 frame
- Single phase, 60 Hz
- Continuous air over
- Thermal overload protected
- Continuous duty
- 36 inch leads
- UL Recognized

Reversible Rotation – Single Speed

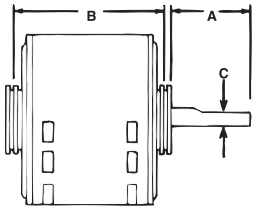
MARS NO.	HP	VOLTS	AMPS	RMP	CAP	ENCL.	BRG.	DIMENSIONS A	B	C
10722	1/8, 1/10, 1/12	208-230	0.75	1075	5/370	TEAO	Ball	3.00	4.13	1/2
10723	1/4, 1/5, 1/6	208-230	1.5	1075	7.5/370	TEAO	Ball	3.00	4.72	1/2
10724	1/4, 1/5, 1/6	208-230	1.35	1625	5/370	TEAO	Ball	3.00	4.60	1/2

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Direct Drive Blower Motors

Direct Drive Blower Motors

MARS direct drive furnace blower motors are three speed standard efficiency models. All models are electrically reversible and include 2-1/4 inch resilient rings for base mounting. These models have all angle sleeve bearings and have open air over enclosures.



Features:

- Sleeve bearing
- Rheem mounting holes
- 3 speeds
- 1/2 inch extended thru bolts
- 2-1/4 inch resilient rings
- For accessories see pages M-44 – M-46

Specifications:

- Class “B” insulation
- Single phase, 60 Hertz
- Thermal overload protected
- Fan duty, continuous,air over
- Open construction
- 36 inch leads
- UL Recognized

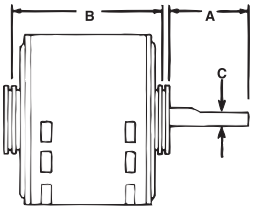
1075 RPM – Three Speed – Reversible Rotation

MARS NO.	HP	ROT	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
10583	1/4	Rev	115	4.2	5/370	OAO	Slv	4.50	4.89	1/2
10584	1/4	Rev	208-230	1.8	5/370	OAO	Slv	4.50	4.89	1/2
10585	1/3	Rev	115	6.1	5/370	OAO	Slv	4.50	5.14	1/2
10586	1/3	Rev	208-230	2.7	5/370	OAO	Slv	4.50	5.14	1/2
10587	1/2	Rev	115	7.5	10/370	OAO	Slv	4.50	5.89	1/2
10588	1/2	Rev	208-230	3.2	7.5/370	OAO	Slv	4.50	5.64	1/2
10589	3/4	Rev	115	11.2	15/370	OAO	Slv	4.50	6.14	1/2
10590	3/4	Rev	208-230	4.5	10/370	OAO	Slv	4.50	6.14	1/2
10591	1	Rev	115	11.8	20/370	OAO	Slv	4.50	5.80	1/2
10592	1	Rev	208-230	5.6	15/370	OAO	Slv	4.50	5.80	1/2

High Efficiency Direct Drive Blower Motors – MARS Energy Master

Ball Bearing

MARS High Efficiency direct drive blower motors save ENERGY. Designed for continuous air over applications, such as furnace blowers or central air handling units with single shaft requirements.



Features:

- Optimized high efficiency design
- 12-15% more efficient compared to standard motors
- Permanently lubricated ball bearings
- Rheem mounting holes
- Extended thru bolts, shaft end
- 3 Speeds
- Open Construction
- 2-1/4 resilient rings - plus 2-1/2 split rings included

Specifications:

- Class “B” insulation
- Single phase, 60 Hertz
- Fan duty, continuous air over
- Automatic thermal overload protection
- 36 inch leads
- UL Recognized

1075 RPM – Reversible Rotation

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
10573	1/4	115	2.9	7.5/370	OPAO	Ball	4.50	4.07	1/2
10574	1/4	208-230	1.3	5/370	OPAO	Ball	4.50	4.07	1/2
10575	1/3	115	3.9	10/370	OPAO	Ball	4.50	4.58	1/2
10576	1/3	208-230	1.6	7.5/370	OPAO	Ball	4.50	4.58	1/2
10577	1/2	115	5.2	15/370	OPAO	Ball	4.50	5.28	1/2
10578	1/2	208-230	2.5	10/370	OPAO	Ball	4.50	5.28	1/2
10579	3/4	115	8.0	20/370	OPAO	Ball	4.50	5.60	1/2
10580	3/4	208-230	3.5	15/370	OPAO	Ball	4.50	5.60	1/2

⚠ WARNING:
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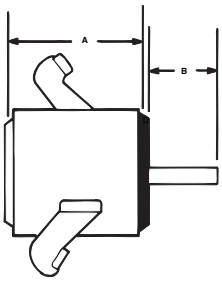
MARS 48 Frame Torsion Flex Mount Motors

MARS torsion flex mount motors are designed for direct drive furnace blower applications. The unique torsion flex mounting speeds installation \while the special steel of the torsion flex bracket absorbs vibration for quieter operations. All models are electrically reversible, 3 speed motors.

Features:

- Sleeve bearing
- Torsion flex mount
- 3 speeds
- 4-1/2 inch long, 1/2 inch diameter shaft
- Torsion mount sleeves and grommets included



Specifications:

- Class “B” insulation
- Single phase, 60 Hertz
- Thermal overload protected
- Fan duty, continuous, air over
- Open construction
- 36 inch leads
- UL Recognized

1075 RPM – Three Speed – Reversible Rotation

MARS NO.	HP	ROTATION	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
10683	1/4	REV	115	4.2	5/370	OAO	SLV	4.50	4.89	1/2
10684	1/4	REV	208-230	1.8	5/370	OAO	SLV	4.50	4.89	1/2
10685	1/3	REV	115	6.1	5/370	OAO	SLV	4.50	5.14	1/2
10686	1/3	REV	208-230	2.7	5/370	OAO	SLV	4.50	5.14	1/2
10687	1/2	REV	115	7.5	10/370	OAO	SLV	4.50	5.89	1/2
10688	1/2	REV	208-230	3.2	7.5/370	OAO	SLV	4.50	5.64	1/2
10689	3/4	REV	115	11.2	15/370	OAO	SLV	4.50	6.14	1/2
10690	3/4	REV	208-230	4.5	10/370	OAO	SLV	4.50	6.14	1/2

Multi-Horsepower Direct Drive Blower Motors

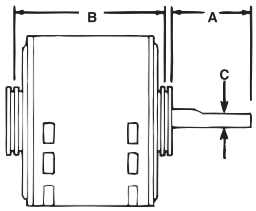
MARS multi-horsepower direct drive blower motors are ideal for truck stock. Four models cover both 115 volt and 208-230 volt applications from 1/6 through 3/4 HP. All MARS multi-horsepower motors feature Rheem shell mounting holes.

Features:

- Rheem mounting holes
- 2-1/4 inch resilient rings

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- 36 & 41 inch leads
- UL Recognized



Four Speed

MARS NO.	HP	ROT	VOLTS	RPM	ENCL.	BRG.	DIMENSIONS A	B	C	LEAD LENGTHS
10463	1/6 - 1/2	Rev	115	1075	OAO	Slv	5.50	4.73	1/2	41"
10464	1/6 - 1/2	Rev	208-230	1075	OAO	Slv	5.50	4.73	1/2	41"
10466	1/5 - 3/4	Rev	115	1075	OAO	Ball	5.80	5.73	1/2	41"
10467	1/5 - 3/4	Rev	208-230	1075	OAO	Ball	5.60	5.23	1/2	41"
10479	1/8 - 1/3	Rev	208-230	825	OAO	Slv	4.50	5.30	1/2	36"

MARS 460V Direct Drive Blower Motors

Ball Bearing

MARS direct drive blower motors are installed in residential and commercial furnaces, air conditioners, exhaust fans, and other air handling equipment.

Features:

- All angle • 2 speeds
- Extended studs
- 2-1/4 inch resilient rings

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- 36 inch leads • UL Recognized

Reversible Rotation

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
1075 RPM - Two Speed									
20538	1/2	460	1.8	10/370	OAO	Ball	6.50	5.25	1/2

Muti-Horsepower – Reversible Rotation

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
1075 RPM - Two Speed									
20580	1/3 - 1/4	460	0.95	7.5/370	OAO	Ball	6.50	4.50	1/2
20581	3/4 - 1/2	460	2.1	15/370	OAO	Ball	4.50	5.80	1/2

See diagram above for dimensions

Fan & Blower Motors

Belted Fan & Blower Motors

Ball Bearing

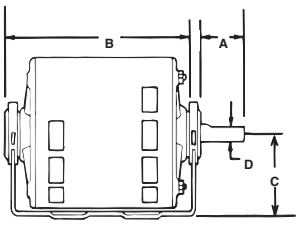
MARS belted blower motors are designed to meet manufacturer's requirements for belted fan or blowers.

Features:

- Resilient base mounted
- Single speed
- Slotted holes in base match 48 or 56 frame bolt patterns
- 1/2 inch shaft diameter

Specifications:

- Class "B" insulation
- Single phase, 60 Hz
- Thermal overload protected
- Open construction
- Continuous duty
- UL Recognized



1725 RPM – Single Speed – Reversible Rotation

MARS NO.	HP	VOLTS	FLA	SF	DIMENSIONS				NEMA FRAME
					A	B	C	D	
10401	1/4	115	4.3	1.35	1.85	6.25	3.00	1/2	48/56
10406	1/3	115	5.8	1.35	1.85	6.25	3.00	1/2	48/56
10408	1/2	115	7.7	1.25	1.85	6.88	3.00	1/2	48/56

Tech Tip

When replacing a blower or fan motor, inspect the blower wheel or fan and replace or clean as necessary to optimize performance.

Belted Fan & Blower Motors, Split Phase

Ball Bearing

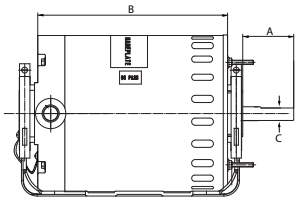
MARS belted blower motors are designed to meet manufacturer's requirements for belted fan or blowers.

Features:

- Single speed, split phase
- 48/56 frame mounting holes
- Heavy gauge steel construction frame and base
- 1/2" x 1-7/8" Shaft with 1-5/8" Flat
- Extended thru bolts

Specifications:

- Class "B" insulation
- Single phase, 60 Hz
- Continuous duty
- Automatic thermal overload protection, as noted
- cULus



Cross Reference:

MARS No.	AO Smith/ Century	Baldor	Emerson/ US Motors	Genteq	Magnetek	Marathon
10302	919L	-	DB14B2N4Z	-	919	B302
10303	920L, GF2024	RSP1441A	8000, 3618	4701, 4730	808	B303, B206
10304	921L, RB2034L	-	D13B2N4Z9	-	921	B304
10305	922L, RB2034	-	8100, PD6004	-	922	B305, B207
10306	-	-	D12C2J49	-	-	B306
10307	GF2054	RSP3451A	8200, PD6006	4708, 4733	-	B307

1725 RPM - Reversible - Dripproof

MARS NO.	HP	VOLTS	AMPS	S.F	ENCL.	BRG.	NEMA FRAME	DIMENSIONS		
								A	B	C
10303*	1/4	115	4.3	1.35	DP	Ball	48Y	1.85	6.25	1/2
10305*	1/3	115	5.8	1.35	DP	Ball	48Y	1.85	6.25	1/2
10307*	1/2	115	7.7	1.25	DP	Ball	48Y	1.85	6.88	1/2
10302	1/4	115	4.3	1.35	DP	Ball	48Y	1.85	6.25	1/2
10304	1/3	115	5.8	1.35	DP	Ball	48Y	1.85	6.25	1/2
10306	1/2	115	5.8	1.35	DP	Ball	48Y	1.85	6.88	1/2

* Automatic Thermal Overload Protection

⚠ WARNING:
Cancer and Reproductive Harm
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Fan & Blower Motors, Capacitor Start

Ball Bearing

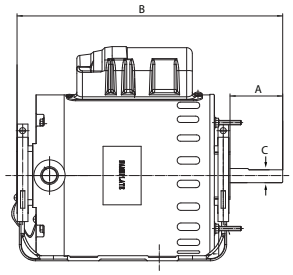
MARS fan & blower motors are designed for applications like commercial fans and blowers, direct and belt drive air handlers and exhaust fans.

Features:

- Single speed, capacitor start
- 48/56 frame mounting holes
- Heavy gauge steel construction frame and base
- 5/8" Shaft dia. with keyway
- Extended thru bolts

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Continuous duty
- Automatic thermal overload Protection, as noted
- cULus



Cross Reference:

MARS No.	AO Smith/ Century	Baldor	Emerson/ US Motors	Fasco	Leeson	Magnetek	Marathon
10313	C196L	RL1203A	D12CPA2P49	-	100109.00	C196	B313
10315	RBF1034A	-	180	-	-	-	B315
10317	BK1054, C412V1	-	D12CPA2PH9	D6084	100011.00	-	B317
10319	C426V1, RB1074A	RL1307A	1893	-	100012.00	-	B319
10321	C523V1	RL1310A	D1CPA2PH9	D6088	110007.00	-	4688

1725 RPM - Reversible - Dripproof

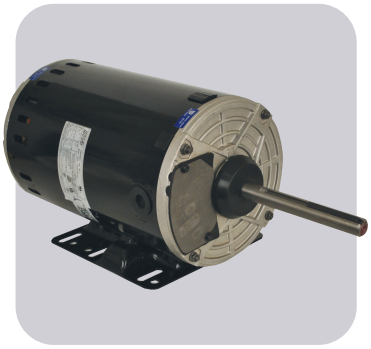
MARS NO.	HP	VOLTS	AMPS	S.F	ENCL.	BRG.	NEMA FRAME	DIMENSIONS A	B	C
10313*	1/4	115/208-230	5.0/2.4-2.5	1.35	DP	Ball	48YZ	1.85	10.30	1/2
10315*	1/3	115/208-230	5.4/2.6-2.7	1.35	DP	Ball	48Z	1.93	10.22	1/2
10317*	1/2	115/208-230	8.0/4.1-4.0	1.25	DP	Ball	56	1.93	10.41	5/8
10319*	3/4	115/208-230	10.0/5.2-5.0	1.25	DP	Ball	56	1.93	11.00	5/8
10321*	1	115/208-230	14.4/7.2-7.2	1.00	DP	Ball	56	1.95	11.26	5/8

* Automatic Thermal Overload Protection

Commercial Condenser Fan Motors, Rigid Base, 3 Phase

Ball Bearing

MARS Commercial condenser fan motors may be installed outdoors. These motors need to be mounted within the airflow of the fan for proper cooling. 56Z or 56HZ rigid base is easy to remove and provides mounting flexibility. Use on Trane, Carrier, Climatrol and York units, 5 tons and larger.

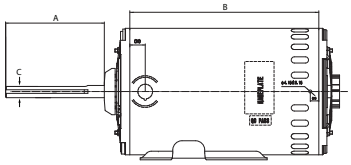


Features:

- 70°C ambient except as noted
- VFD Compatible
- Water slinger on shaft
- Rigid Base - Horizontal or Vertical mounting
- Enclosed shaft end bracket, vented frame
- Flat and keyway on shaft

Specifications:

- Class “H1” insulation
- Three Phase, 60/50 Hz
- Continuous duty, air over
- Automatic thermal overload protected
- cULus



Cross Reference:

MARS No.	AO Smith/ Century	Baldor	Emerson/ US Motors	Leeson	Marathon
10513	H1050A	-	1820H, 1820V	-	X513
10523	H1051A	CFM3166A	1821H, 1821V	111148	X523
10531	H1054A	-	1831H, 1831V, 1100	-	X531

MARS NO.	HP	VOLTS	AMPS	S.F	ENCL.	BRG.	NEMA FRAME	DIMENSIONS A	B	C
1140 RPM - Reversible - Three Phase										
10533*	1/2	208-230/460	2.1-2.0/1.0	1.0	OPAO	Ball	56Z	5.50	7.14	5/8
10513	1	208-230/460	4.1-4.5/2.3	1.0	OPAO	Ball	56HZ	5.00	7.66	5/8
10523	1-1/2	208-230/460	5.7-5.8/2.9	1.0	OPAO	Ball	56HZ	5.00	8.45	5/8
850 RPM - Reversible - Three Phase										
10531	1-1/2	208-230/460	6.5-6.7/3.4	1.0	OPAO	Ball	56HZ	5.00	9.23	5/8

* 60 Deg C

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Commercial Condenser Fan Motors / Heating Motors

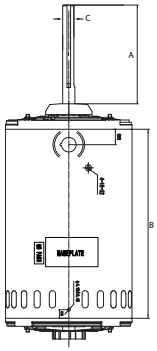
Commercial Condenser Fan Motors, Belly Band, 3 Phase

Ball Bearing

MARS Commercial condenser fan motors may be installed outdoors. These motors need to be mounted within the airflow of the fan for proper cooling. Use on Trane, Carrier, Climatrol and York units, 5 tons and larger.

Features:

- 70°C ambient
- VFD Compatible, except 575V
- Water slinger on shaft
- Four locating screws 90° apart, 3-3/8" from outer edge of shaft slinger
- Enclosed shaft end bracket, vented frame
- Flat and keyway on shaft
- Belly Band and Resilient Ring Mounting



Specifications:

- Class “H1” insulation
- Three Phase, 60/50 Hz, 575V - 60 Hz only
- Continuous duty, air over
- Automatic thermal overload protected
- cULus

Cross Reference:

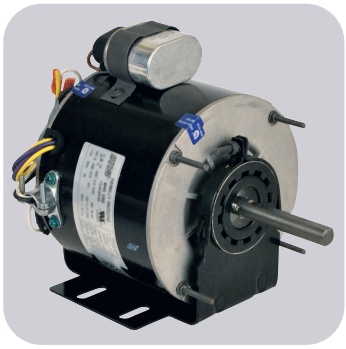
MARS No.	AO Smith/ Century	Baldor	Emerson/ US Motors	Fasco	Magnetek	Marathon
10502	FC3106F	CFM3156A	1818H	-	H667	X502
10503	H1051A	CFM3166A	1819H	D6610	H767	X503
10507	H1053A	-	1828H, 1828V	-	H686	X507
10509	H698	-	8987V	-	-	X509
10530	H1054A, H1053A	-	1832H, 1832V	-	-	X530

MARS NO.	HP	VOLTS	AMPS	S.F	ENCL.	BRG.	NEMA FRAME	DIMENSIONS A	B	C
1140 RPM - Reversible - Three Phase										
10502	1	208-230/460	4.18-4.38/2.19	1.0	OPAO	Ball	56Y	5.00	7.66	5/8
10503	1-1/2	208-230/460	5.3-5.09/2.55	1.0	OPAO	Ball	56Y	5.00	8.84	5/8
10509	2	208-230/460	7.3-7.0/3.7	1.0	OPAO	Ball	56Y	5.00	9.62	5/8
850 RPM - Reversible - Three Phase										
10507	1	208-230/460	5.1-5.1/2.53	1.0	OPAO	Ball	56Y	5.00	8.84	5/8
10530	1-1/2	208-230/460	7.05-6.7/3.57	1.0	OPAO	Ball	56Y	5.00	9.62	5/8

Unit Heater Motors, PSC

Ball Bearing

MARS replacement unit heater motors need to be mounted within the airstream for proper cooling.

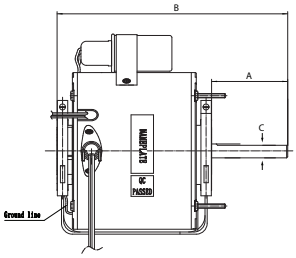


Features:

- Totally enclosed, air over
- Horizontal or vertical mount
- 1" extended thru-bolts
- Reversing plug
- BX connector mounted in frame

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Continuous duty
- Automatic reset thermal overload
- 37 inch leads
- cULus



Cross Reference:

MARS No.	AO Smith/ Century	Emerson/ US Motors	Marathon
30301	UH1016, US1016	1386	X302
30303	566A, UH1026	1384	X303
30305	UH1036	1388	X304

1075 RPM - Reversible

MARS NO.	HP	VOLTS	AMPS	CAPACITOR INCLUDED	ENCL.	BRG.	NEMA FRAME	DIMENSIONS A	B	C
30301	1/6	115	3.0	5/370	TEAO	Ball	48Y	2.75	8.25	1/2
30303	1/4	115	4.1	7.5/370	TEAO	Ball	48Y	2.75	8.25	1/2
30305	1/3	115	6.5	7.5/370	TEAO	Ball	48Y	2.75	9.70	1/2

⚠ WARNING:
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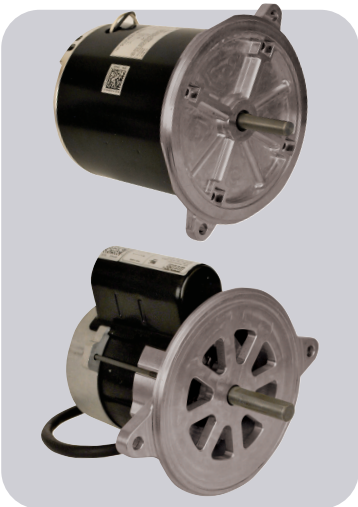
MARS Oil Burner Motors

Ball Bearing

MARS Oil Burner Motors are replacement motors for residential and commercial oil burners, hot water pressure/steam cleaners and other applications where 48M or 48N flange mounting is required.

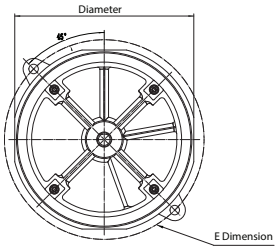


Features:

- All angle
- Split Phase and PSC
- Semi or totally enclosed
- Two bolt direct mounting for 48M and 48N

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Continuous duty
- Manual reset overload protection
- Auto reset protection for PSC
- cULus



Cross Reference:

MARS No.	AO Smith/ Century	Beckett	Emerson/ US Motors	Marathon
30004	EL2022	-	2302	O004
30011	OI2052D	-	3267	O011
30100	EL2002	-	3083	O100
30600	EL2005	-	3196	O600
30601	XEL2014	-	3252	O601
30701	_	21805U	3274	O701

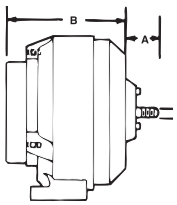
MARS NO.	DIA.	HP	RPM/ SPD	VOLTS	AMPS	ROT.	FRAME	ENCL.	S.F.	SHAFT LGTH	SHAFT DIA.	E DIM.
Split Phase												
30100	5-1/2	1/7	3450/1	115	2.4	Rev	48M	Semi Enclosed	1.0	1-3/4	1/2	6-3/4
30600	6-1/2	1/8	1725/1	115	2.7	Rev	48N	TENV	1.0	1-3/4	1/2	7-1/4
30601	6-1/2	1/6	1725/1	115	2.8	Rev	48N	TENV	1.0	1-3/4	1/2	6-1/2
30004	6-1/2	1/4	3450/1	115	3.8	Rev	48N	Semi Enclosed	1.0	1-13/16	1/2	7-1/4
Oil Burner, PSC												
30701	5-1/2	1/7	3450/1	115	1.5	CCW SE	-	Semi Enclosed	-	1-3/4	1/2	5-1/4
30011	6-1/2	1/2	3450/1	115/ 208-230	8.2/4.1	Rev	48N	Semi Enclosed	1.0	1-3/4	1/2	7-1/4

51 Frame Unit Bearing Cast Iron Motors

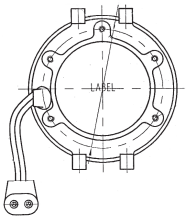
MARS 51 frame motors are used on refrigerators, freezers, food & beverage coolers, vending machines, display cases, and many other fan duty applications.

Features:

- Cast iron construction
- Packed with vibration dampener, speed nut & screws
- Shaded pole, single phase
- Fan duty, continuous, air over
- Impedance protected
- For accessories see pages M-44 – M-46
- Class “A” insulation
- 60/50 Hertz



Dual Pad Mounting Lyall Plug



MARS NO.	WATTS	ROT OSE	VOLTS	AMPS	LEAD LENGTH	DIMENSIONS A	B	C
1550 RPM—1/4-20 Threaded Shaft - Dual Pad Mounting - Lyall Plug								
05211(1)	4	CW	115	0.33	24"	0.66	2.64	1/4
05212(1)	4	CCW	115	0.33	24"	0.66	2.64	1/4
05221(1)	4	CW	230	0.19	24"	0.66	2.64	1/4
05222(1)	4	CCW	230	0.19	24"	0.66	2.64	1/4
05311	6	CW	115	0.46	24"	0.66	3.14	1/4
05312	6	CCW	115	0.46	24"	0.66	3.14	1/4
05411	9	CW	115	0.62	24"	0.66	3.14	1/4
05412	9	CCW	115	0.62	24"	0.66	3.14	1/4
05421	9	CW	230	0.33	24"	0.66	3.14	1/4
05422	9	CCW	230	0.33	24"	0.66	3.14	1/4
05811(2)	16	CW	115	0.95	24"	0.66	3.34	1/4
05812(2)	16	CCW	115	0.95	24"	0.66	3.34	1/4
05821(2)	16	CW	230	0.48	24"	0.66	3.34	1/4
05822(2)	16	CCW	230	0.48	24"	0.66	3.34	1/4
1500 RPM—1/4-20 Threaded Shaft								
05721(2)	35	CW	230	0.70	22"	0.50	3.50	1/4
1500 RPM—Smooth Shaft								
05511(2)	50	CW	115	1.7	22"	1.50	4.50	3/8
05521(2)	50	CW	230	0.85	22"	1.50	4.50	3/8

(1) Class A Insulation
(2) Automatic Reset Overload Protection

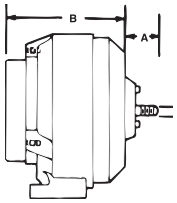
Unit Bearing Motors / C-Frame Motors

51 Frame Unit Bearing Aluminum Motors

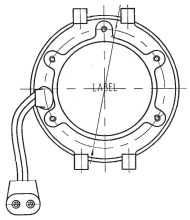
MARS aluminum 51 frame motors are economical replacements for cast iron motors. They feature an improved oiling system and class B insulation for longer life.

Features:

- Aluminum construction
- Unit bearing design
- Packed with vibration dampener, speed nut & screws
- Shaded pole, single phase
- Fan duty, continuous, air over
- Impedance protected
- For accessories see pages M-44 – M-46
- Class “A” insulation
- 60/50 Hertz



Dual Pad Mounting Lyall Plug



MARS NO.	WATTS	ROT OSE	VOLTS	AMPS	LEAD LENGTH	DIMENSIONS A	B	C
1550 RPM—1/4-20 Threaded Shaft - Dual Pad Mounting - Lyall Plug								
05213(1)	4	CW	115	0.33	24"	0.66	2.64	1/4
05223(1)	4	CW	230	0.19	24"	0.66	2.64	1/4
05313	6	CW	115	0.46	24"	0.66	3.14	1/4
05413	9	CW	115	0.62	24"	0.66	3.14	1/4
05414	9	CCW	115	0.62	24"	0.66	3.14	1/4
05423	9	CW	230	0.33	24"	0.66	3.14	1/4
05813(1)(2)	16	CW	115	0.95	24"	0.66	3.34	1/4
05814(1)(2)	16	CCW	115	0.95	24"	0.66	3.34	1/4
05823(1)(2)	16	CW	230	0.48	24"	0.66	3.34	1/4

(1) Class A Insulation
(2) Automatic Reset Overload Protection

Super-Fit™ 3000 RPM Replacement Motor*

The MARS 90999 Super-Fit™ replacement fan motor is designed to replace virtually any refrigerator evaporator fan motor.

The MARS 90999 motor incorporates a unique new system which duplicates any OEM mounting quickly and easily. The rotor is reversible in the field for either clockwise or counterclockwise rotation.

In addition the MARS 90999 motor has the power to perform in even the largest refrigerators.

The MARS 90999 Super-Fit™ motor comes complete with mounting accessories and hardware.

*U.S. Patent

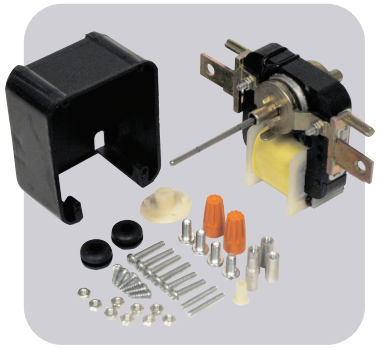
Features:

- Reversible rotation
- Duplicates any OEM motor
- Break-off shaft
- Easy-to-use, fewer parts to assemble than competitive motors
- Stock one motor - save on inventory
- Complete with accessories and instructions

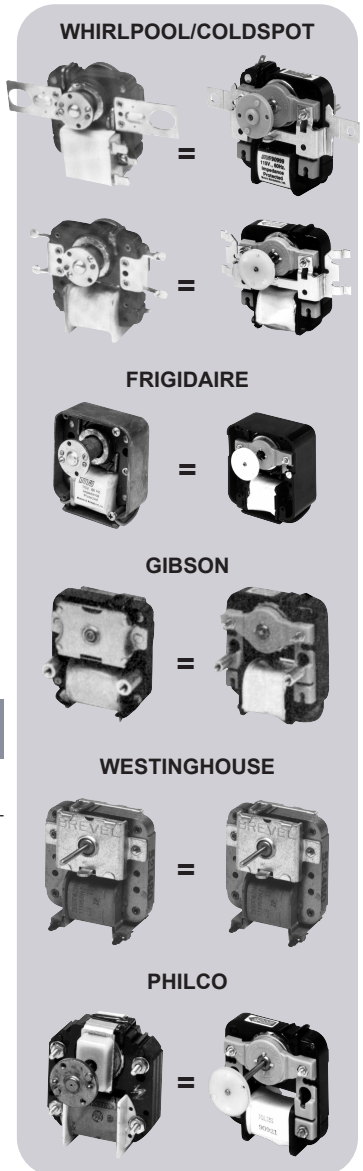
Specifications:

- Electrical rating: 90999, 115V, 50/60 Hertz
- Overload protection: impedance protected
- Speed: 3000 RPM
- Shaft: 1/8 inch diameter with adaptors for 3/16 inch and hubless fans

MARS NO.	DESCRIPTION	VOLTS
90999	“Super-Fit” motor with accessories	115V, 50/60 Hz



Replaces these popular motors... and hundreds more!



⚠ WARNING:
Cancer and Reproductive Harm
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Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Super-Fit™ 3000 RPM Commercial Replacement Motor*

MARS 90970 Super-Fit™ commercial evaporator fan motor is the most versatile, easy-to-use, heavy-duty replacement evaporator fan motor available.

MARS 90970 is the first motor of this type with a dual voltage coil so you can stock one motor for both 115 volt and 230 volt applications. The unique system of slide locator screws lets you match OEM mountings quickly and easily.

The reversible 90970 features rugged, die cast bearing housings with self-aligning bearings and generous oil reservoir. The break-off shaft has adaptors to fit 1/8, 3/16, 1/4, 5/16 inch bores and hubless fan blades.

Each kit includes: Motor, 5.5" white plastic blade, accessory package.

*U.S. Patent

MARS 90970 Replaces:

ACME MIAMI	GEM	UNI-LINE ROBERT SHAW
750	EM675 EM680	14011
7502	EM675 EM683	14019
780		

Features:

- Dual voltage coil, 110-120/208-240 VAC
- 50/60 Hertz
- Mechanically reversible

Specifications:

- Electrical: 110-120/208-240 VAC; 50/60 Hertz
- Protection: thermal overload protected
- HP: 1/50
- RPM: 3000

3000 RPM – Mechanically Reversible

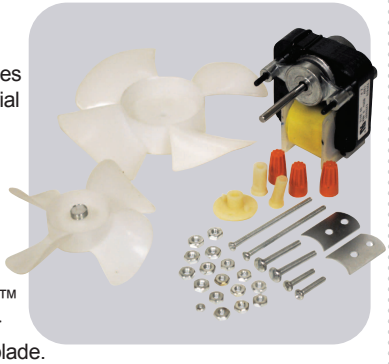
MARS NO.	HP	AMPS	STACK HT. IN.	SHAFT	VOLTS
90970	1/50	1.33	.75	2.174 X .1875	110-120/208-240

Super-Fit™ 3000 RPM Replacement Motor Kit With Fan Blades

The MARS 90971 Super-Fit™ replacement motor kit with fan blades is designed to provide all the material necessary to replace virtually any existing application that requires a 3/8", 1/2", or 5/8" stack motor.

The motor features a specially designed recirculating oil system for long life.

Each kit includes: MARS Super-Fit™ Motor, hardware plus a 4" diameter fan blade and a 5.5" diameter fan blade.



Cross Reference:

MARS NO.	ACME MIAMI	GEM	UNI-LINE ROBERT SHAW	SUPCO
90971	600 700 710 AM-4670	EM670	33-670 (14001)	SM-670

Features:

- Sleeve bearings
- All angle mount
- UL and CSA recognized
- Impedance protection
- Mechanically reversible
- Recirculating oil system

Specifications:

- Class “A” insulation
- 3000 RPM
- 60 Hz

3000 RPM – Mechanically Reversible

MARS NO.	HP	VOLTS	AMPS	SHAFT	STACK
90971	1/130	120	0.41	1.42" x 3/16"	5/8"

MARS 3.3" Commercial Refrigeration Multi-Horsepower Motors

These motors replace hundreds of OEM shaded pole evaporator fan motors found in Bohn, Nutone, Chandler, Larkin, Kramer, Climate Control, McQuay, Heatcraft and reduce truck stock costs.

These PSC type motors deliver more power and lower amp draw compared to shaded pole.

Features:

- Sleeve bearing, single speed
- Mounting - extended thru-bolt with nuts
- Low temp lubricant
- Capacitor included
- Open ventilation

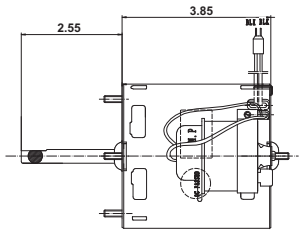
Specifications:

- Class “B” insulation
- 60 Hz
- Thermal overload protected

Replaces 12 Motor Ratings:

1/12HP CW or CCW 115V or 230V
1/15HP CW or CCW 115V or 230V
1/20HP CW or CCW 115V or 230V

01125



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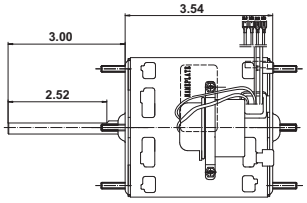


1550 RPM

MARS NO.	HP	VOLTS	ROT	AMPS	CAP INCLUDED	SHAFT LENGTH AND DIAMETER
01125	1/12, 1/15, 1/18	208-230	CW LE	0.56/0.50	4 MFD 370V	2.55 x 5/16
01127	1/12, 1/15, 1/20	115/230	REV	1.1/0.60	7.5 MFD 370V	3.00 x 5/16

Refrigeration Fan Motors / Draft Inducer Blowers

MARS Super-Fit™ 3.3" Commercial Refrigeration Evaporator Fan and Blower Motors

Application:

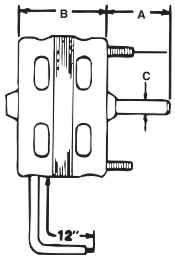
Can be used to replace virtually all popular 3.3" dia. commercial refrigeration evaporator fan motors.

Features:

- Adaptable to front or rear mount
- All angle operation
- Specially selected low temp. oil
- Full flatted black oxide shafts
- U.L. and C.S.A. recognized thermal protection

Specifications:

- Single phase, 60 Hertz
- Thermal overload protected
- 12 inch leads



1550 RPM

MARS NO.	HP	VOLTS	AMPS	ROT OLE	DIMENSIONS A	B	C	MOUNTING STUD LOCATION
09917	1/20	115	1.7	CW	2.50	2.96	5/16	SE
09927	1/20	208/230	0.96	CW	2.50	2.96	5/16	SE

MARS One-On-One™ 3.3" Commercial Refrigeration Evaporator Fan and Blower Motors

These motors feature original OEM-type plugs, wiring harness and conduit box (where appropriate).

Features:

- Sleeve bearing
- Original OEM-type mounting
- Original OEM-type wiring
- Specially selected low temp oil
- Full flatted black oxide shafts

Specifications:

- Single phase
- Thermal overload protected
- 12-1/2 inch leads

Bohn Applications/with Lyall Plug

MARS NO.	HP	RPM	VOLTS	AMPS	ROT OLE	DIMENSIONS A	B	C	MOUNTING STUD LOCATION
09930	1/20	1550	115	1.7	CW	3	3	5/16	LE and SE
09931	1/15	1550	230	1.1	CW	3	3.5	5/16	SE

1550 RPM – Larkin Applications/with Lyall Plug

MARS NO.	HP	VOLTS	AMPS	ROT OLE	DIMENSIONS A	B	C	MOUNTING STUD LOCATION
09932	1/20	115	1.7	CCW	2.25	2.75	5/16	LE
09933	1/20	208/230	1.0	CCW	2.25	3	5/16	LE

1550 RPM – McQuay Applications

MARS NO.	HP	VOLTS	AMPS	ROT OLE	DIMENSIONS A	B	C	MOUNTING STUD LOCATION
09934	1/15	115/230	2.1/1.1	CW	2.5	3.5	5/16	SE

See diagram above for dimensions

Draft Inducer Blowers

Ball Bearing

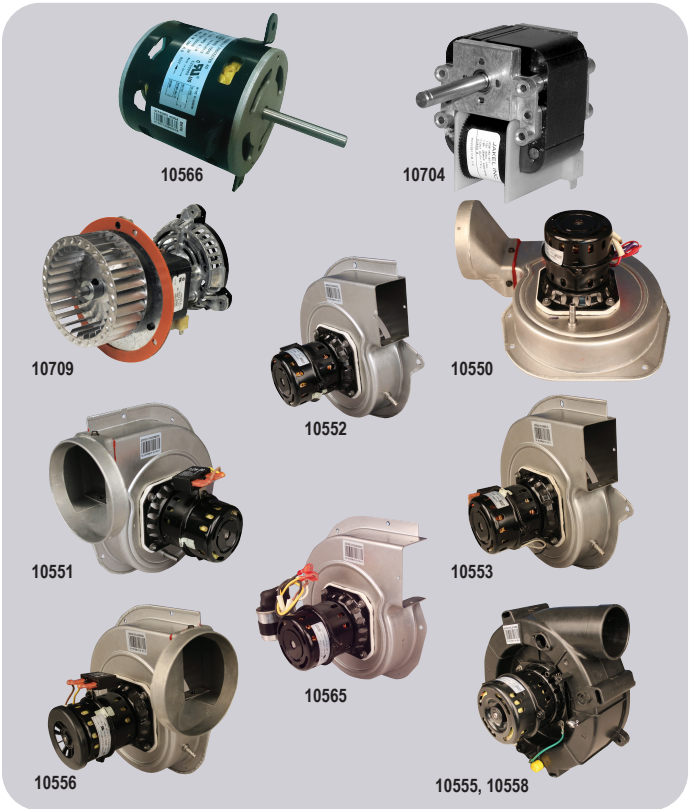
MARS draft inducer blower assemblies are designed and manufactured to serve as drop-in, exact replacements.

Specifications:

- C-Frame
- Single Speed
- 60 Hz
- Thermal protected, air over
- Single phase

Draft Inducer Blowers

MARS NO.	OEM	OEM NO.	APPL.	HP	VOLTS	AMPS	RPM	CAP INCL.
10566	Carrier	HC27Q118	80 + Furnace	1/4	115	0.38	3030	5MFD/370
10704	Carrier	HC21ZE117	80+ Furnace	1/22	115	1.9	–	–
10709	Carrier	HC24HE230	80+ Furnace	1/40	208/230	1.0	–	–
10556	Nordyne	622567	80+ Furnace	1/33	115	0.43	3000	4MFD/250V
10558	Nordyne	622302	90+ Furnace	1/31	115	0.46	3300	6MFD/250V
10550	Goodman	0131G00007	80+ Furnace	1/50	230	0.24	3000	2MFD/370V
10551	Goodman	0131G00009	80+ Furnace	1/32	230	0.24	3000	2MFD/370V
10552	Goodman	0131M00121	80+ Furnace	1/50	230	0.22	3000	2MFD/370V
10553	Goodman	0131M00002P	80+ Furnace	1/50	115	0.40	3000	6MFD/250V
10555	Goodman	0271F00126	90+ Furnace	1/32	115	0.46	3150/2950	6MFD/250V
10563	Trane	D965130P01	80+ Furnace	1/39	230	0.22	2800/1500	2MFD/370V
10564	Trane	D965129P01	80+ Furnace	1/39	230	0.22	2800/1500	2MFD/370V
10565	Trane	D965128P01	80+ Furnace	1/34	230	0.24	3000	2MFD/370V



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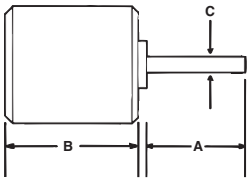
One-On-One™ Direct Replacement Motors



Replaces: Carrier HC33GE233

MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CW OSE

MARS NO.	HP	VOLTS	RPM/ SPEEDS	ROT OSE	AMPS	DIMENSIONS A	B	C
10234	1/10	208/230	1100/1	CW	0.77	1.8	3.8	1/2

Replaces: Goodman 0131M00019P

MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW OSE

MARS NO.	HP	VOLTS	RPM/ SPEEDS	ROT OSE	AMPS	DIMENSIONS A	B	C
10230	1/4	208/230	1100/1	CCW	1.26	3	4.1	1/2

Replaces: Goodman 0131M00060

MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW OSE

MARS NO.	HP	VOLTS	RPM/ SPEEDS	ROT OSE	AMPS	DIMENSIONS A	B	C
10232	1/6	208/230	810/1	CCW	1.1	3	4.1	1/2

Replaces: Goodman G3911

MARS USA, 5 ½ inch diam. Totally enclosed, ball bearing, capacitor required, 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW OSE

MARS NO.	HP	VOLTS	RPM/ SPEEDS	ROT OSE	AMPS	DIMENSIONS A	B	C
03242	1/6	208/230	1075/1	CCW	1.0	1	2.75	1/2

Replaces: Goodman 0131M00294

MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW OSE

MARS NO.	HP	VOLTS	RPM/ SPEEDS	ROT OSE	AMPS	DIMENSIONS A	B	C
10233	1/8	208/230	1050/1	CCW	0.70	2.5	4.1	1/2

Replaces: Goodman 0131F00022

MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 20 MFD @ 370V (MARS No. 12014, 12914, 14014), CW OSE

MARS NO.	HP	VOLTS	RPM/ SPEEDS	ROT OSE	AMPS	DIMENSIONS A	B	C
10594	1/2	115	1130/4	CW	8.1	4	5.1	1/2

Replaces: For use with Coleman and Evcon Equipment

5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 5 MFD @ 440V (MARS No. 12029, 12929, 14029), CCW OSE

MARS NO.	HP	VOLTS/ PHASE	RPM/ SPEEDS	ROT OSE	AMPS	DIMENSIONS A	B	C
10570	1/3	575/1	850/1	CCW	0.66	2.5	6.6	1/2

Replaces: For use with Coleman and Evcon Equipment

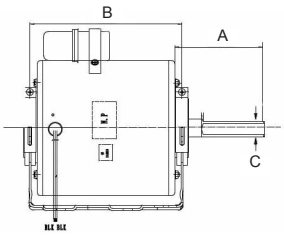
5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 10 MFD @ 440V (MARS No. 12032, 12932, 14032), CCW OSE

MARS NO.	HP	VOLTS/ PHASE	RPM/ SPEEDS	ROT OSE	AMPS	DIMENSIONS A	B	C
10571	3/4	575/1	1100/1	CW-LE	1.35	3.5	5.7	1/2

OEM Direct Replacement Motors For Copeland

Specifications:

- Class “B” insulation
- 50/60 Hz
- Single phase
- Single speed
- Thermal overload protected
- Continuous air over



MARS NO.	HP	VOLTS	ROT OSE	AMPS	RPM	CAP INCLUDED	ENCL.	DIMENSIONS A	B	C
10227	1/3	230	CW	2.2	1625	4MFD/370V	TEAO	1.75	5.87	1/2
10228	1/6	208-230	CW	1.1	1550	3MFD/370V	OAO	3.07	3.69	1/2
10229	1/4	208-230	CW	1.5	1625	5MFD/370V	OAO	3.07	4.32	1/2
10264	1/4	230	CW	2.1	1550	5MFD/370V	ODP	3.00	4.20	1/2
10265	1/6	208-230	Rev	1.1	1550	3MFD/370V	OAO	3.00	3.73	1/2

Tech Tip

Always replace the capacitor when replacing a PSC motor.

⚠ WARNING:
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Cross Reference / MARS Motors

MARS No.	Description	Century / AO Smith	US Motors/ Emerson	Fasco	GE/ Genteq	Marathon	Packard	Nordyne/ Partners Choice	Rheem/Ruud Protech	Carrier/ Totaline RCD	Wagner	York Source 1	ROTOM
Condenser Fan													
10725	1/8 HP, 208-230 V, 1075 RPM, B/B	-	-	D919	-	-	-	-	-	-	-	-	-
10727	1/6 HP, 208-230 V, 1075 RPM, B/B	FSE1016	1859	D917	3727	X411	43727	01-0160	W51-16CJA1-01	P257-8727	WG840727	S1-FHM3727	–
10728	1/4 HP, 208-230 V, 1075 RPM, B/B	FSE1026	1860	D909	3728	X412	43728	01-0161	W51-14CJA1-01	P257-8728	WG840728	S1-FHM3728	–
10729	1/3 HP, 208-230 V, 1075 RPM, B/B	FSE1036	1861	D908	3729	X413	43729	01-0162	W51-13CJA1-01	P257-8729	WG840729	S1-FHM3729	–
10730	1/2 HP, 208-230 V, 1075 RPM, B/B	FSE1056	1862	D907	3730	X414	43730	01-0163	W51-12CJA1-01	P257-8730	WG840730	S1-FHM3730	–
10731	3/4 HP, 208-230 V, 1075 RPM, B/B	FSE1076	1868	D933	3731	–	43731	01-0164	51-42534-19	P257-8731	WG840731	S1-FHM3731	–
10403	1/6 HP, 208-230 V, 825 RPM, B/B	FSE1018SF	1873	D798	3403	X465	60825	0165	51-23055-12	–	–	–	–
10404	1/4 HP, 208-230 V, 825 RPM, B/B	FSE1028SF	1874	D934	3404	–	40825	0166	51-23054-13	–	WG840204	S1-FHM3204	R22445
10405	1/3 HP, 208-230 V, 825 RPM, B/B	FSE1038SF	1875	D796	3405	X451	30825	0167	–	P257-8026	WG840205	S1-FHM3205	R22345
10746	1/2 HP, 208-230 V, 825 RPM, B/B	FSE1058SF	1870	D713	3746	X452	–	0168	–	–	–	–	R22245
10203	1/6 HP, 208-230 V, 825 RPM, B/B	FE1018SF, FSE1018SF	–	D793	3203	X465	3203	–	–	–	–	–	CF-816
10204	1/4 HP, 208-230 V, 825 RPM, B/B	FE1028SF, FSE1028SF	1874	–	3204	X450	40825	–	–	–	–	S1-FHM3204	CF-814
10205	1/3 HP, 208-230 V, 825 RPM, B/B	FE1038SF, FSE1038SF	1875	–	3205	X451	30825	–	–	–	–	S1-FHM3205	–
10747	1/2 HP, 208-230 V, 825 RPM	F1058	–	–	3736	X452	–	–	–	–	–	–	–
10732	1/6 HP, 208-230 V, 1075 RPM, B/B	FE1016SF	2246	–	3726	X427	–	–	–	–	–	–	CF-3726
10733	1/4 HP, 208-230 V, 1075 RPM, B/B	F1026S, FE1026SF, FSE1026SV1	1876	D7909	3732	X428	43732	–	–	–	–	–	CF-3732
10734	1/3 HP, 208-230 V, 1075 RPM, B/B	F1036S, FE1036S	1877	D7908	3733	X413	43733	–	–	–	–	–	CF-3733
10735	1/2 HP, 208-230 V, 1075 RPM, B/B	F1056S, FE1056SF	1878	D7907	3734	X414	43734	–	–	–	–	–	CF-3734
10736	3/4 HP, 208-230 V, 1075 RPM, B/B	F1076SF, FS1076S	1879	–	3735	–	43735	–	–	–	–	–	CF-3735
10327	1/6 HP, 208-230 V, 1075 RPM	–	8661	D718	3327	–	–	–	W51-16CJA1-01	–	–	–	–
10328	1/4 HP, 208-230 V, 1075 RPM	FS1026S	3851	D823	3328	–	–	–	W51-14CJA1-01	–	–	–	–
10329	1/3 HP, 208-230 V, 1075 RPM	FS1036S	6880	D748/D749	3329	–	–	–	W51-13CJA1-01	–	–	–	–
10330	1/2 HP, 208-230 V, 1075 RPM, B/B	FS1056S	3852	D745/D804	3330	–	–	–	W51-12CJA1-01	–	–	–	–
10331	3/4 HP, 208-230 V, 1075 RPM	FS1076S	3097	D929	3331	–	–	–	–	–	–	–	–
23728	1/4HP 208-230V 1075RPM 3W	FSE1026S	1860	D909	3728	X412	43728	01-0161	W51-14CJA1-01	P257-8728	WG840729	S1-FHM3728	–
23729	1/3HP 208-230V 1075RPM 3W	FSE1036S	1861	D908	3729	X413	43729	01-0162	W51-13CJA1-01	P257-8729	WG840729	S1-FHM3729	–
Multi-Horsepower Condenser Fan													
10458	1/6, 1/5, 1/4, 1/3, 1075 RPM, 208-230 V, WIZ, B/B	ORM5458	5458	–	3458	–	–	–	W51-MHCJA1-01	–	–	–	R22402
10459	1/8, 1/6, 1/5, 1/4, 1/3, 825RPM, 208-230 V, WIZ, B/B	ORM5488B	5464	–	3459	–	–	–	–	–	–	–	–
10465	1/6, 1/5, 1/4, 1/3, 1075 RPM, 208-230 V, B/B	FE6000	5462	D2827	3465	X072	–	01-0695	51-23053-21	P257-E5462	WG840465	S1-FHM3465	R22605
10468	1/5, 1/4, 1/3, 1/2, 1075 RPM, 208-230 V, B/B	FE6002	5465	–	3468	X076	–	01-0697	–	P257-E5465	WG840468	S1-FHM3468	R22602
10469	1/6, 1/5, 1/4, 1/3, 825 RPM, 208-230 V, B/B	FE6001	5464	D2826	3469	–	–	01-0696	51-20760-11	P257-E5464	WG840469	S1-FHM3469	R22601
Direct Drive													
10583	1/4 HP, 115 V, 1075 RPM	DL1026	1863	D721	3583	X000	43583	01-0169	W51-14BAA3-01	P257-8583	WG840583	S1-FHM3583	DD-3583
10584	1/4 HP, 208-230 V, 1075 RPM	D1026	1971	D725	3584	X001	43584	01-0173	W51-14BJA3-01	P257-8584	WG840584	S1-FHM3584	DD-3584
10585	1/3 HP, 115 V, 1075 RPM	DL1036	1864	D727	3585	X002	43585	01-0170	W51-13BAA3-01	P257-8585	WG840585	S1-FHM3585	DD-3585
10586	1/3 HP, 208-230 V, 1075 RPM	D1036	1972	D923	3586	X003	43586	01-0174	W51-13BJA3-01	P257-8586	WG840586	S1-FHM3586	DD-3586
10587	1/2 HP, 115 V, 1075 RPM	DL1056	1865	D701	3587	X004	43587	01-0171	W51-12BAA3-01	P257-8587	WG840587	S1-FHM3587	DD-3587
10588	1/2 HP, 208-230 V, 1075 RPM	D1056	1973	D703	3588	X005	43588	01-0175	W51-12BJA3-01	P257-8588	WG840588	S1-FHM3588	DD-3588
10589	3/4 HP, 115 V, 1075 RPM	DL1076	8904	D728	3589	X009	43589	01-0172	W51-34BAA3-01	P257-8589	WG840589	S1-FHM3589	DD-3589
10590	3/4 HP, 208-230 V, 1075 RPM	D1076	8905	D729	3590	X010	43590	01-0176	W51-34BJA3-01	P257-8590	WG840590	S1-FHM3590	DD-3590
10591	1 HP, 115 V, 1075 RPM	BDL1106	8906	D712	3595	–	–	–	–	–	WG840595	S1-FHM3595	R6-R42812
10592	1 HP, 208-230 V, 1075 RPM	BD1106	8907	D711	3596	X023	48907	–	–	–	WG840596	S1-FHM3596	R6-R42842
10683	1/4 HP, 115 V, 1075 RPM	FML1026	3783	D1730	3783	–	–	–	–	–	–	–	–
10684	1/4 HP, 208-230 V, 1075 RPM	FM1026	3784	D1733	3784	–	–	–	–	–	–	–	–
10685	1/3 HP, 115 V, 1075 RPM	FML1036	3785	D1731	3785	–	–	–	–	–	–	–	–
10686	1/3 HP, 208-230 V, 1075 RPM	FM1036	3786	D1734	3786	–	–	–	–	–	–	–	–
10687	1/2 HP, 115 V, 1075 RPM	FML1056	3787	D1732	3787	–	–	–	–	–	–	–	–
10688	1/2 HP, 208-230 V, 1075 RPM	FM1056	3788	D1735	3788	–	–	–	–	–	–	–	–
10689	3/4 HP, 115 V, 1075 RPM	FML1076V1	–	–	3789	–	–	–	–	–	–	–	–
10690	3/4 HP, 208-230 V, 1075 RPM	FM1076	–	–	3790	–	–	–	–	–	–	–	–

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MARS No.	Description	Century / AO Smith	US Motors/ Emerson	Fasco	GE/ Genteq	Marathon	Packard	Nordyne/ Partners Choice	Rheem/Ruud Protech	Carrier/ Totaline RCD	Wagner	York Source 1	ROTOM
Multi-Horsepower Direct Drive													
10463	1/6, 1/5, 1/4, 1/3, 1/2 HP, 115 V, 1075 RPM	FDL6001	5460	D2835	3463	X077	–	01-0698	51-23012-41	P257-E5460	WG840463	S1-FHM3463	R43600
10464	1/6, 1/5, 1/4, 1/3, 1/2 HP, 208-230 V, 1075 RPM	FD6000	5461	D833	3464	X073	–	01-0699	51-23022-41	P257-E5461	WG840464	S1-FHM3464	R43601
10466	1/5, 1/4, 1/3, 1/2, 3/4 HP, 115 V, 1075 RPM, B/B	FDL6002	5470	D2832	3466	X074	–	01-0701	51-23017-42	P257-E5470	WG840466	S1-FHM3466	R43602
10467	1/5, 1/4, 1/3, 1/2, 3/4 HP, 208-230 V, 1075 RPM, B/B	FD6001	5471	D2833	3467	X075	–	01-0702	51-23022-41	P257-E5471	WG840467	S1-FHM3467	R43603
10479	1/8, 1/4, 1/3 HP, 825 RPM, 208-230 V	–	5469	–	–	–	–	–	–	–	–	–	–
20538	1/2 HP, 460 V, 1075 RPM, B/B	–	–	–	–	X038	–	–	–	–	–	–	–
20580	1/4, 1/3 HP, 460 V, 1075 RPM, B/B	BDH1036*	–	–	3280	–	–	–	–	–	–	–	M2-R32712
20581	3/4, 1/2 HP, 460 V, 1075 RPM, B/B	BDH1076*	8947	–	3290	–	–	–	–	–	–	–	M2-R32426

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	Fasco	GE/Genteq	Rheem/Ruud Protech	Wagner	York Source 1	ROTOM
Sunslinger Condenser Fan 70°C									
20727	1/6 HP Condenser Fan, 208-230 V, 1075 RPM, B/B	FE1016SF	1859H	–	3726HS	–	WG840727HT	–	–
20728	1/4 HP Condenser Fan, 208-230 V, 1075 RPM, B/B	FE1026SF	1860H	–	3732HS	–	WG840728HT	S1-FHM3728HT	–
20729	1/3 HP Condenser Fan, 208-230 V, 1075 RPM, B/B	FE1036SF	1861H	–	3733HS	–	WG840729HT	S1-FHM3729HT	–
20730	1/2 HP Condenser Fan, 208-230 V, 1075 RPM, B/B	FE1056SF	1862H	–	3734HS	–	WG840730HT	S1-FHM3730HT	–
20731	3/4 HP Condenser Fan, 208-230 V, 1075 RPM, B/B	FE1076SF	1868H	–	3735HS	–	WG840731HT	–	–
20402	1/8 HP Condenser Fan, 208-230 V, 825 RPM, B/B	FE1008SF	1872H	–	3202HS	–	–	–	–
20403	1/6 HP Condenser Fan, 208-230 V, 825 RPM, B/B	FE1018SF	1873H	–	3203HS	–	–	–	–
20404	1/4 HP Condenser Fan, 208-230 V, 825 RPM, B/B	FE1028SF	1874H	–	3204HS	–	WG840204HT	S1-FHM3204HT	–
20405	1/3 HP Condenser Fan, 208-230 V, 825 RPM, B/B	FE1038SF	1875H	–	3205HS	–	WG840405HT	S1-FHM3205HT	–
20746	1/2 HP Condenser Fan, 208-230 V, 825 RPM, B/B	FE1058SF	1870H	–	3747HS	–	–	–	–
20846	1/4 HP Condenser Fan, 460 V, 1075 RPM, B/B, Shaft Up	FEH1026S	3736H	D980	3736HS	51-19704-01	WG840736HT	S1-FHM3736HT	R31710
20847	1/3 HP Condenser Fan, 460 V, 1075 RPM, B/B, Shaft Up	FEH1036S	3737H	D982	3737HS	51-23063-11	WG840737HT	S1-FHM3737HT	R31712
20848	1/2 HP Condenser Fan, 460 V, 1075 RPM, B/B, Shaft Up	FEH1056S	3738H	D802	3738HS	51-20929-01	WG840738HT	S1-FHM3738HT	R31718
20849	3/4 HP Condenser Fan, 460 V, 1075 RPM, B/B, Shaft Up	FEH1076S	3739H	-	3739HS	-	WG840739HT	-	-
Sunslinger Multi-Horsepower Condenser Fan 70°C									
20458	1/6, 1/5, 1/4, 1/3 Multi-HP, Condenser Fan, 1075 RPM, 208-230 V, B/B	ORM5458F	3323H	–	3458HS	–	–	–	–
20459	1/8, 1/6, 1/5, 1/4, 1/3 Multi-HP, Condenser Fan, 825RPM, 208-230 V, B/B	ORM5488F,	1874H	–	3459HS	–	–	–	–
20465	1/6, 1/5, 1/4, 1/3 Multi-HP, Condenser Fan, 1075 RPM, 208-230 V, B/B	FE6000F	5462H	–	3465HS	–	–	S1-FHM3465HT	–
20468	1/5, 1/4, 1/3, 1/2 Multi-HP, Condenser Fan, 1075 RPM, 208-230 V, B/B	FE6002F,	5465H	–	3468HS	–	–	–	–
20469	1/6, 1/5, 1/4, 1/3 Multi-HP, Condenser Fan, 825 RPM, 208-230 V, B/B	FE6002F	5464H	–	3469HS	–	–	S1-FHM3469HT	–
Sunslinger 460V Condenser Fan 70°C									
20859	1/6 HP Condenser Fan, 460 V, 825 RPM, B/B	–	–	–	–	51-101774-06	–	–	R31716
20880	1/4 HP Condenser Fan, 460 V, 825 RPM, B/B	FEH1028S	1880	–	–	51-23064-12	–	–	R22275
20881	1/3 HP Condenser Fan, 460 V, 825 RPM, B/B	–	1881	D960	–	51-100998-26	–	–	R32714
20882	1/2 HP Condenser Fan, 460 V, 825 RPM, B/B	–	1882	D961	–	–	–	–	–
20835	1/6 HP Condenser Fan, 460 V, 1075 RPM, B/B	–	–	–	–	–	–	–	–
20836	1/4 HP Condenser Fan, 460 V, 1075 RPM, B/B	788A, FEH1026SF	3736H	D980	3736	51-19704-01	WG840736HT	S1-FHM3736HT	R31710
20837	1/3 HP Condenser Fan, 460 V, 1075 RPM, B/B	789A, FEH1036SF	3737H	D982	3737	51-23063-11	WG840737HT	S1-FHM3737HT	R31712
20838	1/2 HP Condenser Fan, 460 V, 1075 RPM, B/B	790A, FEH1056SF	3738H	D802	3738	51-20929-01	WG840738HT	S1-FHM3738HT	R31718
20842	3/4 HP Condenser Fan, 460 V, 1075 RPM, B/B	FEH1076SF	3742H	–	3739	–	WG840739HT	–	–
Sunslinger 460V Multi-Horsepower Condenser Fan 70°C									
20478	1/5, 1/4, 1/3, 1/2 Multi-HP, Condenser Fan, 1075 RPM, 460 V, B/B	ORM4658BF	–	–	–	–	–	–	–
20479	1/6, 1/5, 1/4, 1/3, Multi-HP, Condenser Fan, 1075 RPM, 460 V, B/B	ORM4659BF	–	–	–	–	–	–	–
20480	1/6, 1/5, 1/4, 1/3, 1/2 Multi-HP, Condenser Fan, 1075 RPM, 460 V, B/B	–	5480H	–	–	–	–	–	–
20481	3/4, 1/2, 1/3, 1/4 Multi-HP, Condenser Fan, 1075 RPM, 460 V, B/B	–	5481H	–	–	–	–	–	–
Sunslinger MAX Condenser Fan 80°C									
20791	3/4 HP Condenser Fan, 208-230 V, 1075 RPM, B/B	FE1076SU	–	–	–	–	–	–	–
20796	3/4 HP Condenser Fan, 208-230 V, 825 RPM, B/B	–	–	–	–	–	–	–	–

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Note: B/B – Ball Bearing
* 2 Speed Motor

Cross Reference / MARS Motors

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	Fasco	Genteq	Magnetek	Marathon	Packard	Rheem/Ruud	ROTOM	Wagner
High Efficiency Direct Drive Motors											
10573	1/4 HP Direct Drive, 115V, 1075 RPM	DL1026, FDL1026	5460, 1863	D721, D2836	3983, 3583	0533	X000	43583, 63983	51-17947-11, 51-23012-41, 51-23014-32	R43600	WG840463, WG840583
10574	1/4 HP Direct Drive, 208-230V, 1075 RPM	D1026, FD1026	5461, 1971	D725	3984, 3584	0530	X001	43884, 63984	51-23022-41, 51-23024-31	DD3584, R43584	WG840584
10575	1/3 HP Direct Drive, 115V, 1075 RPM	DL1036, FDL1036	5460, 1864	D727	3985, 3585	0532	X002	43585, 63985	–	–	–
10576	1/3 HP Direct Drive, 208-230V, 1075 RPM	D1036, FD1036	5461, 1972	D923	3986, 3586	0529	X003	43586, 63986	–	–	–
10577	1/2 HP Direct Drive, 115V, 1075 RPM	DL1056, FDL1056	5460, 1865	D701	3987, 3587	0531	X004	43587, 63987	–	–	–
10578	1/2 HP Direct Drive, 208-230V, 1075 RPM	D1056, FD1056, F1076SV1	5461, 1973	D703	3988, 3588	0528	X005	43588, 63988	–	–	–
10579	3/4 HP Direct Drive, 115V, 1075 RPM	DL1076, FDL1076	5470, 8904	D728	3989, 3589	0678	X009	43589, 63989	–	–	–
10580	3/4 HP Direct Drive, 208-230V, 1075 RPM	D1076, FD1076	5471, 8905	D729	3990, 3590	0679	X010	43590, 63990	–	–	–

MARS No.	Description	Century/ AO Smith	Baldor	US Motors/ Emerson	Leeson	Marathon
Commercial Condenser Fan - Three Phase - Rigid Base						
10513	1HP 1140 RPM 208-230/460 CF	H1050A	–	1820H	–	X513
10523	1-1/ 2HP 1140 RPM 208-230/460V	H1051A	CFM3166A	1821H	111148	X523
10531	1-1/2 HP 850 RPM 208-230/460 CF	H1054A	–	1831H	–	X531
10533	1/2 HP 1140 RPM 208-230/460 CF	–	–	–	–	X533

MARS No.	Description	Century/ AO Smith	Baldor	US Motors/ Emerson	Fasco	KeepRite	Magnetek	Marathon
Commercial Condenser Fan - Three Phase - Belly Band								
10502	1 HP 1140 RPM 208-230/460 CF	FC3106F	CFM3156A	1818H	–	–	H667	X502
10503	1-1/2 HP 1140 RPM 208-230/460	H1051A	CFM3166A	1819H	D6610	–	H767	X503
10507	1 HP 850 RPM 208-230/460 CF	H1053A	–	1828H	–	–	H686	X507
10509	2 HP 1140 RPM 208-230/460 CF	H698	–	–	–	–	–	X509
10530	1-1/2 HP 85 0RPM 208-230/460 CF	H1054A	–	1832H	–	–	–	X530

MARS No.	Description	Century/ AO Smith	Baldor	US Motors/ Emerson	Genteq	Magnetek	Marathon
1 Phase Heating - Split Phase Fan & Blower							
10302	1/4 HP 1725RPM 115V FAN & BLWR	919L	–	DB14B2N49	–	919	B302
10303	1/4 HP 1725RPM 115V FAN & BLWR	920L, GF2024	RSP1441A	8000, 3618	4701, 4730	808	B303, B206
10304	1/3 HP 1725RPM 115V FAN & BLWR	921L, RB2034L	–	D13B2N4Z9	–	921	B304
10305	1/3 HP 1725RPM 115V FAN & BLWR	922L, RB2034	–	8100	–	922	B305, B207
10306	1/2 HP 1725RPM 115V FAN & BLWR	–	–	D12C2J49	–	–	B306
10307	1/2 HP 1725RPM 115V FAN & BLWR	GF2054	RSP3451A	8200, PD6006	4708, 4733	–	B307

MARS No.	Description	Century/ AO Smith	Baldor	US Motors/ Emerson	Fasco	Leeson	Magnetek	Marathon
1 Phase Heating - Cap Start Fan & Blower								
10313	1/4 HP 1725 RPM 115/208-230V	C196L	RL1203A	D14CA2P4Z9	–	100109.00	C196	B313
10315	1/3 HP 172 5RPM 115/208-230V	RBF1034A	–	D13CA3J9	–	–	–	B315
10317	1/2 HP 1725 RPM 115/208-230V	BK1054, C412V1	–	D12CA2J9	D6084	100011.00	–	B317
10319	3/4 HP 1725 RPM 115/208-230V	C426V1, RB1074A	RL1307A	D34CA2JH9	–	100012.00	–	B319
10321	1 HP 1725 RPM 115/208-230V	C523V1	RL1310A	D1CA2JH9	D6088	110007.00	–	4688

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Cross Reference / MARS Motors

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	Marathon
Oil Burner Motors				
30004	1/4 HP 115V 3450 RPM	EL2022	2302	O004
30011	1/2 HP 115/230 3450 RPM	–	3267	O011
30100	1/7 HP 115V 3450 RPM	EL2002	3083	O100
30600	1/8 HP 115V 1725 RPM	EL2005	3196	O600
30601	1/6 HP 115V 1725 RPM	XEL2014	3252	O601
30701	1/7 HP 115V 3450 RPM	–	3247	O701

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	Marathon
Unit Heater - PSC, TEAO				
30301	1/6 HP 1075RPM 115 UNIT HTR	UH1016, US1016	1386	X302
30303	1/4 HP 1075RPM 115 UNIT HTR	566A, UH1026	1384	X303
30305	1/3 HP 1075RPM 115 UNIT HTR	UH1036	1388	X304

MARS No.	Description	Replaces	Azure®	Century/ AO Smith	US Motors/ Emerson	GE/Genteq
Azure® ECM Direct Drive						
10860	1/5-1/2 HP, Direct Drive ECM, 115/230 V, 1075 RPM, B/B	X13, PSC	10800	Comfort Select: CS1056, CSL1056	Rescue Ecotech: 5522ET, 5532ET, 5542ET (1/3HP & 1/2HP), 5552ET (1/2HP), 6631RS (1/2-1/3HP), 6630RS (1/2-1/3HP)	6001, 6002, 6005, 6103E, 6203E, 6105E, 6205E
10861	1/2-1 HP, Direct Drive ECM, 115/230 V, 1075 RPM, B/B	X13, PSC	10801	Comfort Select: CS1106, CSL1106	Rescue Ecotech: 5552ET, 5542ET (3/4HP), 6651RS (1HP), 6641RS (3/4HP), 6650RS (1HP), 6640RS (3/4HP)	6003, 6004, 6010, 6107E, 6207E, 6110E, 6210E
10867	1/8-1/3 HP, Direct Drive ECM, 115/230/277 V, 1075 RPM, B/B	5" PSC Direct Drive	–	–	–	–
10865	AZURE 1/3 - 1/2 HP ECM D/D	PSC	–	–	Rescue Ecotech 5522ET, 5532ET	Evergreen 6005
10866	AZURE 3/4 - 1 HP ECM D/D	PSC	–	–	Rescue Ecotech 5542ET, 5552ET	Evergreen 6010
10858	1/5-1/2 HP AZURE FOR X13	X13, Ensite, Endura	–	–	Rescue EZ13 5632, Rescue Select Pro 6633	Evergreen 6103E, 6203E, 6105E, 6205E
10859	1/2-1 HP AZURE FOR X13	X13, Ensite, Endura	–	–	Rescue EZ13 5642, EZ13 5652, Rescue Select Pro 6643, 6653	Evergreen 6107E, 6207E, 6110E, 6210E
10856	AZURE VS 1/4-1/2 HP D/D	Variable Speed	–	–	Rescue EZ16 5862, EZ5863	Evergreen 6503V, 6505V, Interface Board 56010
10857	Azure VS 1/2 to 1 HP D/D	Variable Speed	–	–	Rescue EZ16 5860, EZ16 5861	Evergreen 6507V, 6510V, Interface Board 56010

MARS No.	Description	Replaces
Azure® ECM Condenser Fan		
10874	1/8 - 1/3 HP, Condenser Fan ECM, 208-230 V, 825/1075 RPM, B/B	PSC motors 1/8 to 1/3 HP
10875	1/8 - 1/3 HP, Condenser Fan ECM, 208-230 V, 1075 RPM, B/B	PSC motors 1/8 to 1/3 HP
10872	1/3 - 1/2 HP, Condenser Fan ECM, 208-230 V, 1075 RPM, B/B	PSC motors 1/3 to 1/2 HP

MARS No.	Description	Replaces	Bohn	Regal Beloit/Morrill	Wellington	US Motors
Azure® ECM 3.3" Commercial Refrigeration						
10850	1/15-1/25 HP, 3.3" Commercial Refrigeration ECM, 115/230 V, 1550/800 RPM, B/B	–	–	5100, 5105, 5106, 5101, 5111, 5200, 5201, 5205, 5206, 5211	ECR 85/95	EC5404D, EC5405D
10852	1/15-1/25 HP, 3.3" Commercial Refrigeration ECM, 115/230 V, 1550 RPM, B/B	Standard 3.3" motors	5008S, 5008T	5100, 5101, 5102, 5105, 5106, 5111, 5200, 5201, 5205, 5206, 5211	–	EC5404D, EC5405D

MARS No.	Description	Replaces	MARS	Century Motor	Hussmann	Morrill	US Motors Rescue
Azure® Commercial Refrigeration Watt (Reach-In) Motor							
10891	4-25 Watts, Commercial Refrigeration ECM, 115/230 V, 1550 RPM, B/B	All standard watt motors: 4 -25 W	10890	9207F2, 9208F2, 9211, 9212, 9213	4410547	5R999	EC5411D, EC5412D

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Cross Reference / MARS Motors

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	GE/Genteq	Magnetek	Marathon	Packard	ROTOM
Belted Fan & Blower								
10401	1/4 HP, Belted Fan & Blower, 115 V, 1725 RPM	GF2024, RB2024	2889, 8000	4701	808, 802	B303, B206	45014	BF-4701
10406	1/3 HP, Belted Fan & Blower, 115 V, 1725 RPM	GF2034, RB2034	2888, 8100	4706	922, 805	B305, B207	45013	BF-4706
10408	1/2 HP, Belted Fan & Blower, 115 V, 1725 RPM	GF2054, BF2054	2887, 8200	4708	F681, 811	B208	45012	BF-4708

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	Fasco	GE/Genteq	Magnetek
21/29 Frame Replacement Commercial Refrigeration						
10611	1/20 HP, Commercial, 115/230 V, 1550 RPM	–	F1468	D484, D485	2331, 2332, 2341, 2342	610, 611
10615	1/10 HP, Commercial, 115/230 V, 1550 RPM	329P118, 326P119, RF4400, RF4401	F1469, F1470	D480, D481, D482, D483	2131, 2132, 2141, 2142, 2231, 2232, 2241, 2242	614, 615, 612, 613

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	Fasco	GE/Genteq	Heil Quaker	York Source 1
Super-Fit™ Multi-Horsepower Condenser Fan							
10722	1/8, 1/10, 1/12 HP, Multi-HP, Condenser Fan, 208-230 V, 1075 RPM, B/B	9722	5440*	–	5KCP29DCA323S, 5KCP29ECA328S, 5KCP29DCA329S, 5KCP29FCA322S,02243, 02248, 02249, 02251	–	17416, 17465, 17483, 17484
10723	1/4, 1/5, 1/6 HP, Multi-HP, Condenser Fan, 208-230 V, 1075 RPM, B/B	9723	5441*, 1901	D1071	5KCP29JCA324S, 5KCP29JCA325S, 5KCP29HCA326S, 5KCP29JCA327S, 5KCP29ECA321S, 02244, 02245, 02246, 02247, 02250	HQ1052662EM	–
10724	1/4, 1/5, 1/6 HP, Multi-HP, Condenser Fan, 208-230 V, 1675 RPM, B/B	9724	–	–	–	–	–

*70°C Heat Shield

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	Fasco	GE/Genteq	Packard
3.3" Multi-Horsepower Commercial Refrigeration						
01125	1/12, 1/15, 1/18 HP, Evap Fan Motor, 208-230 V, 1550 RPM	9720A	9656, 8658, 9664	7190-0442, D1125	–	41125
01127	1/12, 1/15, 1/20 HP, Evap Fan Motor, 115/230 V, 1550 RPM	9721	9650, 9651, 9652, 9653, 9656, 9662, 9664	D1101, D1103, D1122, D1123, D1124, D1125, D1126, D1127, D1152, D1154, PD1125, PD1127, 7163-2113, 7163-3371 7190-0442, 7190-2084, 7190-2255, 7190-2285, 7190-2969	5KSM59ES2001 5KSM59JSK143S 5KSM59JS5036S 5KSM59LS2262AS	49101

MARS No.	Description	Century/ AO Smith	US Motors/ Emerson	Fasco	Magnetek	Packard	RMR
3.3" Commercial Refrigeration							
09916	1/30 HP, Evap Fan Motor, 115 V 1550 RPM	AO126, AO127	–	D532, D181	28, 29	–	RR-1106
09917	1/20 HP, Evap Fan Motor, 115 V 1550 RPM	AO132, AO133	–	D132	572, 574, 30, 31	40132	RR-1107
09927	1/20 HP, Evap Fan Motor, 208-230 V 1550 RPM	AO188, AO189	–	D188, D189	575	40188	RR-4107
09938	1/30 HP, Evap Fan Motor, 115 V 1550 RPM	–	9656	D1125	–	–	–

MARS No.	Description	Century/ AO Smith	Fasco	GE	Magnetek/UE
Fan Coil Replacement Motor					
10889	1/10 HP, 115 V 1050 RPM	DBL6409	D289	2089	89

Disclaimer: Every effort has been made to insure the accuracy of motor data and cross reference information. Design changes may result in different operating characteristics or dimensional changes from one manufacturer to another. Therefore, MARS cannot accept responsibility for the ultimate selection. For additional information, please contact MARS.

Note: B/B – Ball Bearing

⚠ WARNING:
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One-On-One™ Replacement Motors

MARS No.	Description	Copeland	US Motors/Emerson	GE/Genteq	Packard
One-On-One™ Replacement Motor for Copeland					
10227	1/3 HP, Condenser Fan, 208-230 V, 1625 RPM	050-0108-00	6127, K55HXECE2645	5KCP32KG2598, 5KCP32KG175	–
10228	1/6 HP, Condenser Fan, 208-230 V, 1550 RPM	050-0251-00	6128, K55HSJNG-2974	5KCP32KG221	40251
10229	1/4 HP, Condenser Fan, 208-230 V, 1625 RPM	050-0250-00	6129, K55HXJZJ-3126		40250
10264	1/4 HP, Condenser Fan, 230 V, 1550 RPM	050-0238-00, 050-0107-01	6124, K55BZY-1439	5KCP39GG357S	–
10265	1/6 HP, Condenser Fan, 208-230 V, 1550 RPM	050-0265-00	K55PGP5104		40265

MARS No.	Description	Carrier
10234	1/10 HP, 208-230 V, 1100/1, CW OSE	HC33GE233
MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CW Shaft End		

MARS No.	Description	Goodman
10230	1/4 HP, 208-230 V, 1100/1, CCW OSE	0131M00019P
MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW Shaft End		
10232	1/6 HP, 208-230 V, 810/1 CCW OSE	0131M00060
MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW Shaft End		
03242	1/6 HP, 208-230 V, 1075/1 CCW OSE	G3911
MARS USA, 5 ½ inch diam. Totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW Shaft End		
10233	1/8 HP, 208-230 V, 1050/1 CCW OSE	0131M00294
MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW Shaft End		
10594	1/2 HP, 115 V, 1130/4 CW OSE	0131F00022
MARS USA, 5-1/2 inch diam., totally enclosed, ball bearing, capacitor required 20 MFD @ 370V (MARS No. 12014, 12914, 14014), CW Shaft End		

MARS No.	Description	York Source 1
10570	1/3 HP, 575/1/60, 850 RPM, CCW OSE	S1-02434550003
5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 5 MFD @ 370V (MARS No. 12005, 12905, 14005), CCW OSE		
10571	3/4 HP, 575/1/60, 1100 RPM, CCW OSE	S1-02434551003
5-1/2 inch diam., totally enclosed, ball bearing, capacitor required, 10 MFD @ 440V (MARS No. 12032, 12932, 14032), CCW OSE		

Sunslinger One-On-One™ Replacement Motor

MARS No.	Description	Century/AO Smith
20884	1/8, 1/6, 1/5, 1/4, 1/3 HP, 460 V, 825/1 Reversible	ORM4688BF
5-1/2 inch diam., totally enclosed, ball bearing, capacitor required 7.5 MFD @ 370V (MARS No. 12007, 12907, 14007), Reversible		

Disclaimer: Every effort has been made to insure the accuracy of motor data and cross reference information. Design changes may result in different operating characteristics or dimensional changes from one manufacturer to another. Therefore, MARS cannot accept responsibility for the ultimate selection. For additional information, please contact MARS.

Note: B/B – Ball Bearing

⚠ WARNING:
Cancer and Reproductive Harm
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Unit Bearing / Condenser Fan Motors

Unit Bearing Motors

JARD Unit Bearing Cast Iron Motors are used on refrigerators, freezers, food & beverage coolers, vending machines, display cases, and many other fan duty applications.

Features:

- Cast iron construction
- Universal mount
- Mounting screws included
- Individually boxed

Specifications:

- Class “A” insulation
- UL Recognized

MARS NO.	WATTS	VOLTAGE	ROTATION	AMPS	LEAD LENGTH
15109	2	115	CW	0.28	24"
15211	4	115	CW	0.33	24"
15212	4	115	CCW	0.33	24"
15221	4	230	CW	0.19	24"
15222	4	230	CCW	0.19	24"
15311	6	115	CW	0.46	24"
15312	6	115	CCW	0.46	24"
15119*	9	115	CW	0.62	13"
15411	9	115	CW	0.62	24"
15412	9	115	CCW	0.62	24"
15421	9	230	CW	0.33	24"
15422	9	230	CCW	0.33	24"
15811	16	115	CW	0.95	24"
15812	16	115	CCW	0.95	24"
15821	16	230	CW	0.48	24"
15822	16	230	CCW	0.48	24"

* Note: 13" lead with lyall plug

Condenser Fan Motors

Ball Bearing

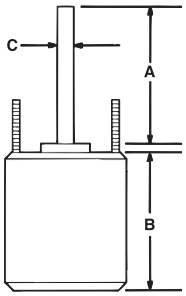
JARD replacement condenser fan motors are designed for residential and light commercial HVAC/R applications suitable for either vertical shaft-up or shaft-down mounting. Shell and end shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain.

Features:

- All angle, sleeve or ball bearing
- Rheem mounting holes w/screws
- Reversible rotation
- Thru bolt or band mounting
- Capacitor requirement noted on motor label
- Up/Down design

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- Fan duty, continuous air over
- 26 & 36 inch leads
- UL Recognized



Reversible Rotation – Single Speed

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	LEAD LENGTHS
1075 RPM										
22727	1/6	208-230	0.90	5/370	TEAO	Ball	6.50	4.23	1/2	26"
22728	1/4	208-230	1.8	5/370	TEAO	Ball	6.50	4.23	1/2	26"
22729	1/3	208-230	2.4	7.5/370	TEAO	Ball	6.50	5.23	1/2	26"
22730	1/2	208-230	3.5	10/370	TEAO	Ball	6.50	5.73	1/2	26"
22731	3/4	208-230	5.2	10/370	TEAO	Ball	6.50	6.23	1/2	30.5"

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	LEAD LENGTHS
825 RPM										
22403	1/6	208-230	1.0	5/370	TEAO	Ball	6.50	4.23	1/2	36"
22404	1/4	208-230	1.6	5/370	TEAO	Ball	6.50	4.48	1/2	36"
22405	1/3	208-230	1.9	7.5/370	TEAO	Ball	6.50	5.23	1/2	36"
22746	1/2	208-230	2.8	12.5/370	TEAO	Ball	6.50	5.70	1/2	36"

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Direct Drive Blower Motors

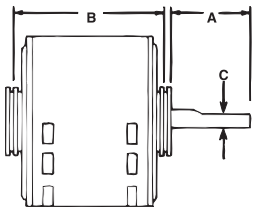
JARD direct drive blower motors are Ideal for use in commercial and residential furnaces and air-conditioners. All models are three speed standard efficiency and are electrically reversible.

Features:

- All angle sleeve bearing
- Rheem mounting holes
- 3 speeds
- 1/2 inch extended thru bolts
- 2-1/4 inch resilient rings
- 4 inch long, 1/2 inch diameter shaft

Specifications:

- Class “B” insulation
- Single phase, 60 Hertz
- Thermal overload protected
- Fan duty, continuous, air over
- Open construction
- 26 & 30 inch leads
- UL Recognized



Multi-Horsepower Direct Drive Motors

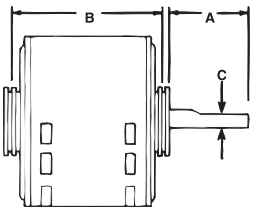
JARD multi-horsepower direct drive blower motors are used in residential and commercial furnaces, air conditioners, exhaust fans, and other air handling equipment installed in clean and dry environments. Four models cover both 115 and 208-230 volt applications from 1/6 through 3/4 HP. All models feature Rheem shell mounting holes.

Features:

- Rheem mounting holes
- Reversible rotation
- 2-1/4 inch resilient rings

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- 41 inch leads
- UL Recognized



1075 RPM – Three Speed – Reversible Rotation

MARS NO.	HP	ROT	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	LEAD LENGTHS
22583	1/4	Rev	115	4.2	5/370	OAO	Sleeve	4.50	4.89	1/2	26"
22584	1/4	Rev	208-230	1.8	5/370	OAO	Sleeve	4.50	4.89	1/2	26"
22585	1/3	Rev	115	6.1	5/370	OAO	Sleeve	4.50	5.14	1/2	30"
22586	1/3	Rev	208-230	2.7	5/370	OAO	Sleeve	4.50	5.14	1/2	26"
22587	1/2	Rev	115	7.5	10/370	OAO	Sleeve	4.50	5.89	1/2	30"
22588	1/2	Rev	208-230	3.2	7.5/370	OAO	Sleeve	4.50	5.64	1/2	30"
22589	3/4	Rev	115	11.2	15/370	OAO	Sleeve	4.50	6.14	1/2	30"
22590	3/4	Rev	208-230	4.5	10/370	OAO	Sleeve	4.50	6.14	1/2	30"

1075 RPM - Four Speed - Reversible Rotation

MARS NO.	HP	ROT	VOLTS	ENCL.	BRG.	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	LEAD LENGTHS
22463	1/6 - 1/2	Rev	115	OAO	Sleeve	5.50	4.73	1/2	42"
22464	1/6 - 1/2	Rev	230	OAO	Sleeve	5.50	4.73	1/2	41"
22466	1/5 - 3/4	Rev	115	OAO	Ball	5.80	5.73	1/2	41"
22467	1/5 - 3/4	Rev	230	OAO	Ball	4.60	5.23	1/2	41"

Tech Tip

Motor leads are for carrying electrical current, only. Carrying your motor by the leads may cause internal damage to the motor.

⚠ WARNING:
Cancer and Reproductive Harm
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Multi-Horsepower Motors / Condenser Fan Motors

Multi-Horsepower Condenser Fan Motors

Ball Bearing

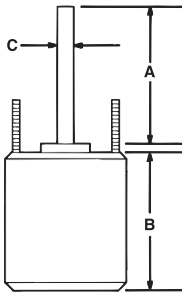
JARD multi-horsepower condenser fan motors are designed for either shaft up or shaft down applications. All motors are suitable for air conditioning or heat pump applications. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Rheem mounting holes w/screws installed
- Thru bolt or band mounting
- Water slinger on shaft
- Air conditioning or heat pump duty

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- UL Recognized



Reversible Rotation – Single Speed

MARS NO.	HP	ROT	RPM/ SPEED	VOLTS	ENCL.	BRG.	DIMENSIONS A	B	C	LEAD LENGTHS
22458	1/6 - 1/3	Rev	1075	208-230	TEAO	Ball	6.50	3.82	1/2	36"
22459	1/8 - 1/3	Rev	825	208-230	TEAO	Ball	6.50	5.48	1/2	36"
22465	1/6 - 1/3	Rev	1075/2	208-230	TEAO	Ball	5.00	4.73	1/2	38"
22468	1/8 - 1/2	Rev	1075/2	208-230	TEAO	Ball	5.00	5.48	1/2	38"
22469	1/6 - 1/3	Rev	825/2	208-230	TEAO	Ball	5.00	5.48	1/2	42"

Condenser Fan Motors

Ball Bearing

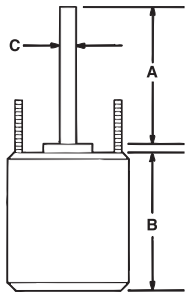
JARD replacement condenser fan motors are designed for residential and light commercial HVAC/R applications suitable for either vertical shaft-up or shaft-down mounting. Shell and end shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain.

Features:

- All angle, ball bearing
- Rheem mounting holes w/screws
- Reversible rotation
- Thru bolt or band mounting
- Capacitor requirement noted on motor label
- Up/Down design
- 48" Leads

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- 70°C, 158°F
- Thermal overload protected
- Fan duty, continuous air over
- UL Recognized



Reversible Rotation – Single Speed

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
1075 RPM									
26726	1/5	208-230	0.90	5/370	TEAO	Ball	6.50	4.23	1/2
26727	1/6	208-230	0.90	5/370	TEAO	Ball	6.50	4.23	1/2
26728	1/4	208-230	1.8	5/370	TEAO	Ball	6.50	4.23	1/2
26729	1/3	208-230	2.4	7.5/370	TEAO	Ball	6.50	5.23	1/2
26730	1/2	208-230	3.5	10/370	TEAO	Ball	6.50	5.73	1/2
26731	3/4	208-230	5.2	10/370	TEAO	Ball	6.50	6.23	1/2

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
825 RPM									
26403	1/6	208-230	1.0	5/370	TEAO	Ball	6.50	4.23	1/2
26404	1/4	208-230	1.6	5/370	TEAO	Ball	6.50	4.48	1/2
26405	1/3	208-230	1.9	7.5/370	TEAO	Ball	6.50	5.23	1/2
26746	1/2	208-230	2.8	12.5/370	TEAO	Ball	6.50	5.70	1/2

⚠ WARNING:
Cancer and Reproductive Harm
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Multi-Horsepower Condenser Fan Motors

Ball Bearing

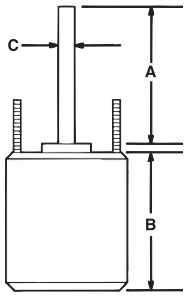
JARD multi-horsepower condenser fan motors are designed for either shaft up or shaft down applications. All motors are suitable for air conditioning or heat pump applications. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Rheem mounting holes w/screws installed
- Thru bolt or band mounting
- Water slinger on shaft
- Air conditioning or heat pump duty
- 48" Leads

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- 70°C, 158°F
- Thermal overload protected
- UL Recognized



MARS NO.	HP	ROT	RPM/ SPEED	VOLTS	ENCL.	BRG.	DIMENSIONS		
							A	B	C
26458	1/6 - 1/3	Rev	1075	208-230	TEAO	Ball	6.50	3.82	1/2
26459	1/8 - 1/3	Rev	825	208-230	TEAO	Ball	6.50	5.48	1/2
26465	1/6 - 1/3	Rev	1075/2	208-230	TEAO	Ball	5.00	4.73	1/2
26468	1/8 - 1/2	Rev	1075/2	208-230	TEAO	Ball	5.00	5.48	1/2
26469	1/6 - 1/3	Rev	825/2	208-230	TEAO	Ball	5.00	5.48	1/2

JARD Cross Reference:

JARD NO.	ECONOMASTER	SMART ELECTRIC	WAGNER/ DIVERSITECH	PACKARD	US MOTORS/ EMERSON
22403	EM3403	-	-	60825	1873
22404	EM3404	SE3338	WG840204	40825	1874
22405	EM3405	SE3339	WG840205	30825	1875
22746	EM3746	-	-	-	1870
22727	EM3727	SE3727	WG840727	43727	1859
22728	EM3728	SE3728	WG840728	43728	1860
22729	EM3729	SE3729	WG840729	43729	1861
22730	EM3730	SE3730	WG840730	43730	1862
22731	EM3731	SE3731	WG840731	43731	1868
22583	EM3583	SE3583	WG840583	43583	1863
22584	EM3584	SE3584	WG840584	43584	1971
22585	EM3585	SE3585	WG840585	43585	1864
22586	EM3586	SE3586	WG840586	43586	1972
22587	EM3587	SE3587	WG840587	43587	1865
22588	EM3588	SE3588	WG840588	43588	1973
22589	EM3589	SE3589	WG840589	43589	8904
22590	EM3590	SE3590	WG840590	43590	8905
22463	EM3463	SE3463	WG840463	45460	5460
22464	EM3464	SE3464	WG840464	45461	5461
22466	EM3466	SE3466	WG840466	45470	5470
22467	EM3467	SE3467	WG840467	45471	5471
22458	EM3458	-	-	45458BF	5458
22459	EM3459	-	-	45488BF	5464
22465	EM3465	SE3465	WG840465	45458B	5462
22468	EM3468	SE3468	WG840468	-	5465
22469	EM3469	SE3469	WG840469	-	5464
26726	-	-	-	-	-
26727	EM3727	-	WG840727	43727	1859
26728	EM3728	-	WG840728	43728	1860
26729	EM3729	-	WG840729	43729	1861
26730	EM3730	-	WG840730	43730	1862
26731	EM3731	-	WG840731	43731	1868
26403	EM3403	-	-	60825	1873
26404	EM3404	-	WG840204	40825	1874
26405	EM3405	-	WG840205	30825	1875
26746	EM3746	-	-	-	1870
26458	EM3458	-	-	-	5458
26459	EM3459	-	-	-	5464
26465	EM3465	-	WG840465	-	5462
26468	EM3468	-	WG840468	-	5465
26469	EM3469	-	WG840469	-	5464

⚠ WARNING:
Cancer and Reproductive Harm
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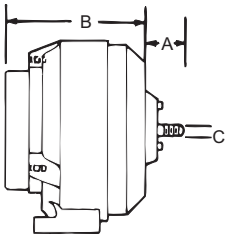
EM&S ESP-L Shaded Pole Motors

Features:

- Cast iron unit bearing
- Single speed
- End or side pad mounting
- Horizontal operation
- With flatted smooth shaft

Specifications:

- Single phase, 60 Hertz
- Overload protection
- Continuous, air over



For Tecumseh – Replaces No. 810M050A62

MARS NO.	EMS NO. ESP	WATTS OUTPUT	VOLTS	AMPS	RPM	ROT LE	DIMENSIONS A	B	C	SHAFT TYPE
00507	OL50EMJR21	50	230	0.85	1500	CCW	2.00	4.25	5/16	with flat

For Kelvinator – Replaces Nos. 24-0366, ESP-L15EMJR11

MARS NO.	EMS NO. ESP	WATTS OUTPUT	VOLTS	AMPS	RPM	ROT LE	DIMENSIONS A	B	C	SHAFT TYPE
00152	OL15EMJR11	15	115	0.60	1500	CCW	7.00	3.50	5/16	with flat

EM&S High Efficiency ESP-L Shaded Pole and PSC Motors

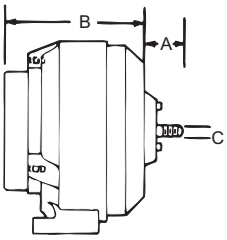
The ESP line of motors is a unique and patented design that makes possible a higher output in a smaller frame.

Features:

- Cast iron unit bearing
- Single speed
- End or side pad mounting
- Horizontal operation
- Threaded or smooth shaft
- Heat isolated oil pump and reservoir

Specifications:

- Single phase, 60 Hertz
- 22" leads
- Overload protection
- Continuous, air over



1550 RPM – 1/4" Threaded Shaft

MARS NO.	EMS NO. ESP	WATTS OUTPUT	VOLTS	AMPS	ROT OSE	DIMENSIONS A	B	C
00251	L25EM1	25	115	1.1	CW	.50	3.50	1/4
00253	L25EM2	25	230	0.60	CW	.50	3.50	1/4
00351	L35EM1	35	115	1.4	CW	.50	3.50	1/4
00352	L35EMR1	35	115	1.4	CCW	.50	3.50	1/4
00353	L35EM2	35	230	0.70	CW	.50	3.50	1/4
00354	L35EMR2	35	230	0.70	CCW	.50	3.50	1/4

1550 RPM – 3/8" & 5/16" Smooth Flatted Shaft

MARS NO.	EMS NO. ESP	WATTS OUTPUT	VOLTS	AMPS	ROT OSE	DIMENSIONS A	B	C
00501	OL50EM1	50	115	1.7	CW	1.50	4.50	3/8
00502	OL50EMR1	50	115	1.7	CCW	1.50	4.50	3/8
00505	OL50EM2B	50	230	0.85	CW	1.50	4.50	5/16
00503	OL50EM2	50	230	0.85	CW	1.50	4.50	3/8
00504	OL50EMR2	50	230	0.85	CCW	1.50	4.50	3/8
00508(1)	OL50EM1B1	50	115	1.7	CW	2.89	4.50	5/16
00513	OL60EM2	50	208-230	1.2	CW	2.89	4.50	3/8

(1) 2 female spade terminals at end of each wire

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Walk-In Cooler Evaporator EC Fan Motors

American Iron MOTOR LINE
Made In America

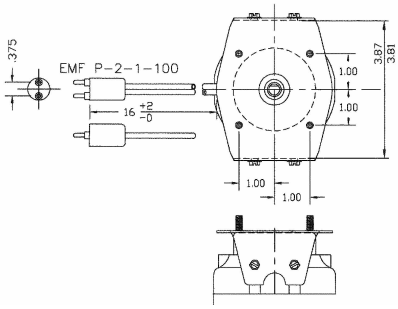
MARS American Iron Motors are high efficiency designs that are made in America incorporating EM&S patented, permanent magnet ECM technology that brings outstanding energy savings.

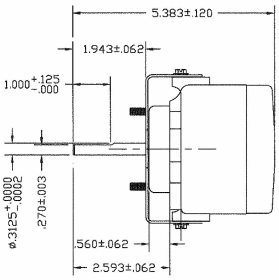
Features:

- 3.3 Interchangeability
- Shaft down and horizontal mounting
- Cast iron unit bearing construction
- Front mount studs
- Rotation: shaft end

Specifications:

- Universal, fits most 1/15HP and smaller applications,1550 RPM
- 230 Volt 60/50 Hz; 115 Volt 60 Hz.
- 22.5" Leads with EMF/ Lyall Plug
- 4 10-32 Hex Flange nuts are supplied with each motor
- UL and cUL recognized





SEE THIS MOTOR IN ACTION! Scan for video

1550 RPM – Single Speed

MARS NO.	APPLICATIONS	HP	VOLTS	AMPS	ROT SE	RPM	MARS PACK
00221*	Evaporator/Condenser	1/15	230	0.77	CW	1550	1

* Shaft and leads are on the same end

Evaporator/Condenser

American Iron MOTOR LINE
Made In America

The Unitronix Double Duty is an electronically commutated motor that brings outstanding energy savings to the refrigeration market in the form of a direct drop-in replacement for practically all unit bearing motors. No additional labor or sheet metal work is required to replace an existing shaded pole unit bearing motor with a Unitronix Double Duty.

Heat in a refrigerated space has always been a necessary evil in the food marketing industry. Lights, motors and defrost heating elements are the culprits. But, heat shortens food storage life and adds to the load placed on the refrigeration system. The new Unitronix Double Duty dramatically reduces (by as much as 75%) the waste heat generated by refrigerated case evaporator motors.

The universal 5 rear mounting hole configuration and the double boss with 4 drilled and tapped mounting holes on each boss mean no additional labor or sheet metal work!

Features:

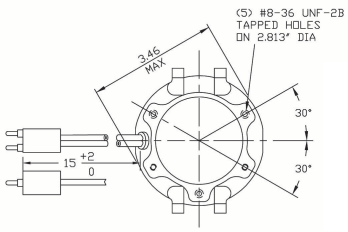
- Special wide temperature range lubrication system
- High capacity oil reservoir spiral grooved shaft for efficient distribution of oil to the bearing surface
- Mounting hardware included
- Water shield included
- Tapped & Drilled Mounting Holes:

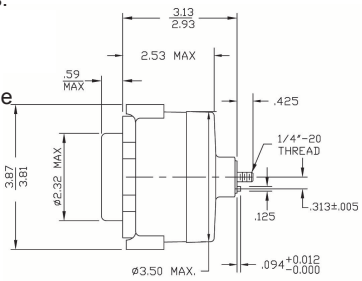
  Universal Evaporator Mount

  - Standard 3-Hole
  - Custom 4-Hole Hussmann Style

  Universal Condenser Mount

  - Double Boss





Specifications:

- 1550 RPM standard
- Cast iron
- Unit bearing
- EMF P-2-1A lyall power plug
- 15" Leads
- UL file no. E128044

MARS NO.	APPLICATIONS	OUTPUT WATTS	VOLTS	NOMINAL AMPS	ROT SE	RPM	MARS PACK
00621	Evaporator/ Condenser	6-12	115	0.25	CW	1550	1
00621BULK	Evaporator/ Condenser	6-12	115	0.25	CW	1550	6
00622	Evap/Cond, 90˚Lyall Plug	6-12	115	0.25	CW	1550	1
00624	Evaporator/ Condenser	14-16	115	0.50	CW	1550	1
00625	Evap/Cond, 90˚Lyall Plug	14-16	115	0.50	CW	1550	1

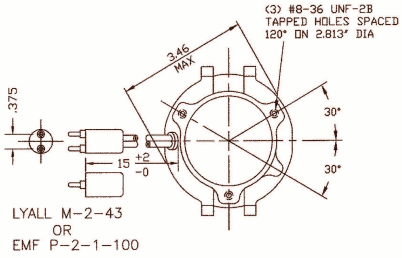
WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

ECM 51 Frame Commercial Refrigeration Motors

EM&S manufactures an ECM unit bearing construction motor that can serve as a drop-in replacement for the obsolete GE 55/44 frame ECM 1650 or 1850 rpm motor. This motor is available in a 9 watt and a 16 watt version. This promises substantial energy savings and potentially fast pay-back on the cost of conversion.

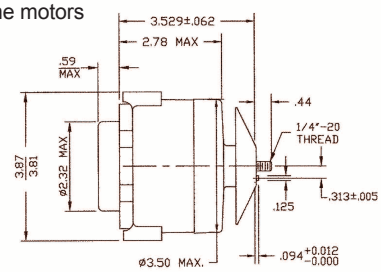
Features:

- Ultra high efficiency
- Improved reliability
- Enhanced airflow performance
- Energy savings of 66 percent over a wide speed range
- Low operating temperature
- Lyall plug or EMF plug
- Accessories included with each motor; (1) speed nut, (1) resilient fan silencer, (3) 8-36 mounting screws, (1) rainshield
- Replaces GE ECM 55/44 frame motors



Specifications:

- Totally enclosed air over
- Unit bearing
- 1/4" - 20 Threaded shaft
- 60/50 Hertz



ECM installation's average annual energy savings versus shaded pole motors

05443	$ 35
05444	$ 55

@ 8¢ KWH and 1.75 multiplier on energy saving

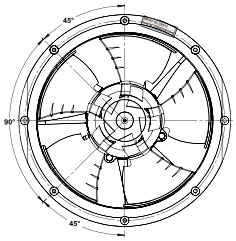
MARS NO.	WATTS	RPM	ROT OSE	VOLTS	AMPS	LEAD LENGTH
05443	9	1650	CW	115	0.32	12"
05444	16	1850	CW	115	0.40	12"

58 MM Series Replacement ECM Fan/Motor System

The 58MM Series replacement ECM Fan/Motor systems are primarily used in commercial refrigeration air moving applications demanding high efficiency and dependability. These motors are moisture resistant, reliable, quiet unit bearing design with efficiencies three times higher than shaded pole motors and 45% higher than PSC. These replacement ECM Fan/Motor systems are all metal in design and have 1 discrete speed, variable torque, low temperature lubrication system which makes them extremely quiet with low vibration.

Features:

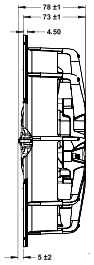
- Lyall plug
- Class B insulation
- 60 Hertz
- Thermal protection
- Single phase



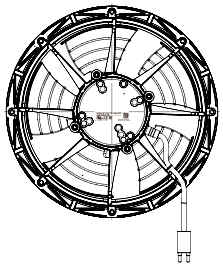
Front View

Specifications:

- -40 to 55°C ambient operating temp.
- Single speed
- Maximum watts 36



Side View



Rear View

MARS NO.	GE NO. 5SME58	REPLACES RPM	VOLTS	MAX AMPS	ROT. OSE	AT 0.05" CFM	AT 0.10" CFM	AT 0.15" CFM
05470	AAF1027	1340	115	0.30	CW	330	270	210
05471	AAF1026	1470	115	0.40	CW	370	300	200
05472	AAF1031	1650	115	0.40	CW	400	360	255

⚠ WARNING:
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ECM Technology

American Iron MOTOR LINE
Made In America

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)

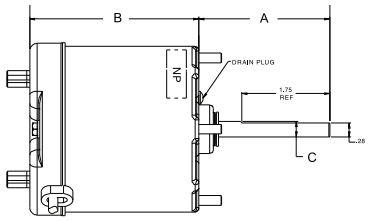
MARS NO.	APPLICATIONS	OUTPUT WATTS	VOLTS	ROT	RPM	MARS PACK
00650	Evaporator/Condenser	4-12	115	CW	1550	1
00651	Evaporator/Condenser	4-12	230	CW	1550	1
00652	Evaporator/Condenser (90˚ lyall plug)	4-12	115	CW	1550	1
00654	Evaporator/Condenser	13-23	115	CW	1550	1
00655	Evaporator/Condenser	13-23	230	CW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

ARKTIC™ 59

morrillmotors®

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 (-20º 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

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

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

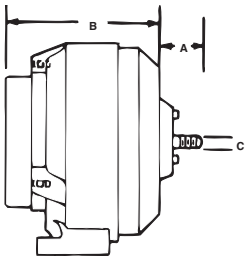
1550 RPM

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

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	DIMENSIONS 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

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

⚠ WARNING:
Cancer and Reproductive Harm
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11 Frame Unit Bearing Shaded Pole Motors

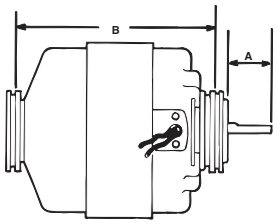
MARS unit bearing shaded pole motors are suitable for use in a wide variety of fan duty applications. Proven all-angle unit bearing design for trouble free operation. Can be resilient base, strap, or end mounted.

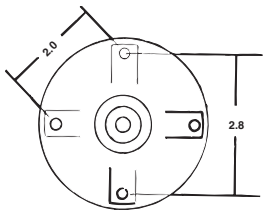
Features:

- All angle unit sleeve bearings
- Resilient base, strap, or end mounting
- 5/16 inch shaft diameter ground lead
- 12 inch leads
- For accessories see pages M-44 – M-46
- See the airMARS section of this catalog for fan blades & accessories

Specifications:

- Single phase, 60 Hertz
- Overload protection
- Fan duty, continuous, air over
- Shaft end has four 8-32 tapped holes
- UR/CSA





1550 RPM – 4 Pole

MARS NO.	GE NO. 5KSM92	HP	VOLTS	AMPS	ROT OSE	ENCL	DIMENSIONS A	DIMENSIONS B	BASE NO.
01431	KFL2005S	1/30	115	1.74	CW	OPEN	1.25	4.82/4.70	08042
01441	KFL2003S	1/30	115	1.74	CCW	OPEN	1.25	4.82/4.70	08042
01432	KFL200(S	1/20	208-230	0,76	CW	OPEN	1.25	4.82/4.70	08042
01442	KFL1009S	1/30	208-230	0.87	CCW	OPEN	1.25	4.82/4.70	08042
01332(1)	KFL2007S	1/20	208-230	1.1	CW	OPEN	2.00	4.82/4.70	08042
01232(2)(3)	KFL3006S	1/15	230	1.2	CW	OPEN	1.50	4.875	NONE

(1) 34 inch leads
(2) 30 inch leads
(3) 60/50 Hertz

NU Series Shaded Pole Motors

MARS is proud to introduce Elco NU Series shaded pole motors which are widely used in the HVAC & Refrigeration industry. These motors are suitable for all angle operation and have multiple mounting features. The NU series motors are used in industrial and commercial refrigeration for condensing and evaporating units, ventilating units, freezers, walk-in and reach-in coolers, food and beverage coolers and many other fan duty applications.

Features:

- Single speed
- Output 4 to 34 watts
- Totally enclosed
- Continuous air over
- 1 year Limited warranty

Specifications:

- Impedance or thermally protected
- All angle, sleeve bearing
- Class B insulation
- 50/60 Hz
- Standard operating temperature: -40°F to 104°F (-40°C to 40°C)
- 3 Tapped holes @ 120° & 2 @ 180°
- Single side pad mounting
- 4 Shaft end studs
- UL Recognized, CSA and CE Certified

MARS NO.	MFG STOCK NO.	WATTS	ROT. S.E	HP	VOLTS	AMPS	PROT.	BLADE DIA. IN.	BLADE PITCH	AIR FLOW (CFM) @ 0 IN. STATIC	AIR FLOW (CFM) @ .1 IN. STATIC
00805	EC6W115	6	CCW	1/125	115	0.41	Imp	7	31	206	119
00807	EC9W115	9	CCW	1/83	115	0.58	Therm	8	22	262	186
									28	325	240
00808	EC9W230				230	0.35		9	28	418	301
00809	EC16W115	18	CCW	1/47	115	0.89	Therm	9	28	476	395
									31	490	410
									34	557	466
00810	EC16W230	16			230	0.50		10	22	510	425
									28	610	470
00817	EC34W115	34	CCW	1/20	115	1.6	Therm	12	19	796	697
00818	EC34W230				230	0.80			28	1024	785

WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Refrigeration Fan Motors

ECM High Efficiency Motors

MARS Hi Efficiency ECM motors are drop in replacements of the traditional front mount shaded pole motors. They use all the same accessories with no extra work for an easy and hassle-free installation. These are built with ECM technology to run more efficiently, reduced CO2 emissions, longer life expectancy and quieter than the normal PSC shaded pole motors. They offer better airflow control than a PSC, up to 70%, 4 to 5 times more efficient than a regular shaded pole motor. Higher efficiency means cooler motor operation and reduced heat delivered to the refrigeration cycle, for a combined energy saving advantage and improved refrigeration quality. The ECM Series offers IP65 moisture protection grade, one of the highest in the industry. These motors are designed to satisfy the growing demands of energy savings.

Features:

- Life expectancy of 60,000+ hrs.
- Protection rating - IP65 moisture protection grade
- Totally enclosed
- All angle
- Continuous air over
- Long life sealed ball bearings

Specifications:

- Working temp: -40°C +55°C
- 50/60 Hz
- M4 Studs on 3.72" B.C. for shroud/guard
- UL recognized & CE Certified

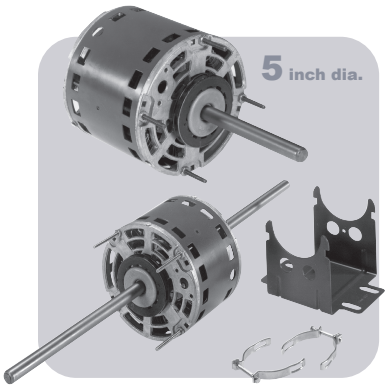
Cross Reference:

EDA15253UC0176, EDA10153UC0182	Hill Phoenix	P078449H, P079441C, P066237A

MARS NO.	WATTS	VOLTS	RPM	ROT. S.E	AMPS	TERM.PLUG
00892	1-30	120/240	1600	CCW	0.7/0.4	2 pin Lyall

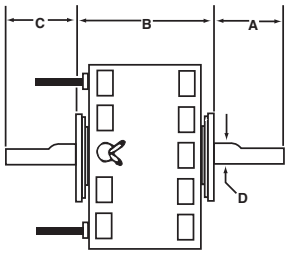
5KCP29 — Form G PSC Motors

Designed for virtually every fan and blower application.



Features:

- All angle sleeve bearings
- Open construction
- Aluminum end shields
- 26 inch color-coded leads
- 2-1/2 inch resilient ring mounting
- Double shaft models shipped with base mounted (3.5 inch shaft height)
- Extended thru bolts on shaft end—extended 3/4 inch on single shaft and 1-1/2 inch on double shaft motors (on 4.6 inch bolt circle)
- Energy $aver® design
- Motor reversing leads have terminals for quick change to opposite rotation
- For accessories see pages M-44 – M-46



Specifications:

- Single phase, 60 Hertz
- Automatic reset overload protection
- Fan duty, continuous, air over
- Advanced Class B insulation
- 5 Mfd @ 370V capacitor required (MARS No. 12005)

MARS NO.	GE NO. 5KCP29	HP	VOLTS	AMPS	ROT LE	RPM	DIMENSIONS A	B	C	D
1075 RPM - Single Shaft - Three Speed - 6 Pole										
02840(1)	BG5866S	1/30	115	.61	REV	1075	8.00	6.00/4.50	—	1/2
02824	EG5854S	1/8	115	2.45	REV	1075	4.00	5.06	—	1/2
02825	KG5855S	1/5	115	3.51	REV	1075	4.00	5.56	—	1/2
1075 RPM - Double Shaft - Four Speed - 6 Pole										
02830	BG5860S	1/15	115	1.4	CCW	1075	8.00	4.67	8.00	1/2
1625 RPM - Double Shaft - Four Speed - 4 Pole										
02837	FG5869S	1/6	115	2.1	CCW	1625	8.00	5.42	8.00	1/2

(1) Model has resilient ring length adapter kit included in carton

WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

"Cap-Can" Construction Vertical Shaft Down Condenser Fan And Heat Pump Motors

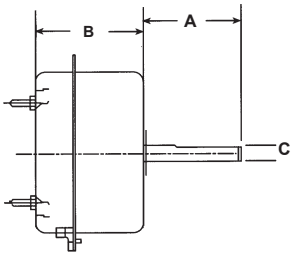
genteq

Ball Bearing

These new permanent split capacitor motors from GE are designed for use in residential outdoor condenser fan and heat pump units (primarily up to 3.5 tons), requiring vertical shaft down with stud or flange mounting.

Features:

- "Cap-Can" construction
- Automatic thermal overload protection
- #8-32 extended stud or flange mount
- Water slinger on shaft
- Vertical shaft down mounting orientation
- CW or CCW rotation in several ratings
- Designed for 370 volt capacitor (not furnished)
- Class B insulation
- For accessories see pages M-44 – M-46



Specifications:

- All models are single-speed
- 60 Hz
- 208-230 Volts
- 1/2" Shaft diameter
- 26" Leads
- Continuous duty, air-over

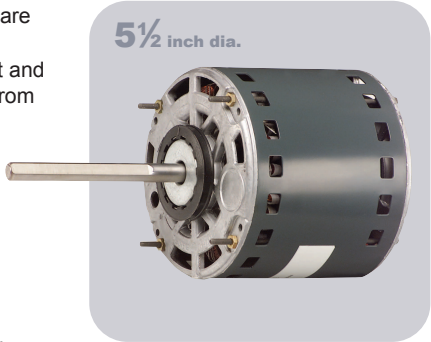
MARS NO.	GE NO.	HP	RPM	AMPS	ROTOSE	370V CAP REQUIRED	DIMENSIONS A	B	C
02248	5KCP29ECA328S	1/8	1075	0.86	CW	5 MFD	2.75	3.85	1/2"

SOS™ Multi-Horsepower Direct Drive Blower Motors

genteq

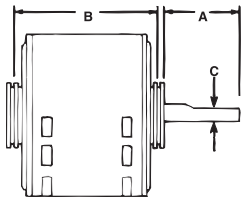
MARS SOS™ multi-horsepower direct drive blower motors are ideal for truck stock. Four models cover both 115 volt and 208-230 volt applications from 1/6 through 3/4 HP.

All SOS™ motors feature easy mounting in Rheem applications.



Features:

- Multi-HP
- Open end shields
- Extended mounting studs
- 2-1/2 inch resilient rings
- Reversible rotation
- All angle sleeve or ball bearings
- Capacitor requirement noted on motor label
- For accessories see pages M-44 – M-46



Specifications:

- Single phase, 60 Hz
- Overload protection
- Fan duty, continuous air over
- Open construction

Cross Reference:

MARS No.	A.O. SMITH	EMERSON
03463	FDL6001	5460
03464	FD6000	5461
03466	FDL6002	5470

1075 RPM Multi-Horsepower Reversible Rotation – 6 Pole

MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	DIMENSIONS A	B	C
03463	KGV804AS	1/2, 1/3, 1/4, 1/5, 1/6	115	6.2	5.00	4.73	1/2
03464	KGV805AS	1/2, 1/3, 1/4, 1/5, 1/6	208-230	2.7	5.00	4.73	1/2
03466*	SGU363AS	3/4, 1/2, 1/3, 1/4, 1/5	115	8.4	5.00	5.98	1/2

* Ball Bearing

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

SOS™ Multi-Horsepower Outdoor Condenser Fan Motors

genteq

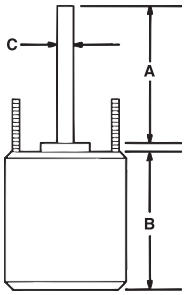
Ball Bearing

MARS SOS™ multi-horsepower condenser fan motors are ideal for truck stock. Three 1075 RPM models cover 208-230 volt applications from 1/6 to 1/2 HP.

New Slim Stack™#03458, **WIZARD**, and the new **WIZARD 825** fit in many 1/3 HP installations that will not accept other manufacturer's motors.

The 03458 is a single speed "wide-range" motor that will run at any fan load from 1/6 to 1/3 HP at a nominal 1075 RPM. MARS #03459, the new WIZARD 825, will run at any fan load from 1/8 to 1/3 HP at a nominal 825 RPM.

All SOS™ motors feature easy mounting in Rheem applications.



* Heat Shield

Features:

- Multi-HP
- Thru bolt or band mounting
- Rheem mounting capability
- Water slinger on shaft
- Air conditioning or heat pump duty
- Capacitor requirement noted on motor label
- End Shield drain holes w/plugs

Specifications:

- Single phase, 60 Hz
- Overload protection
- Fan duty, continuous air over
- Totally enclosed, Non-ventilated
- Class B insulation

Cross Reference:

MARS No.	A.O. SMITH	EMERSON
03458	ORM5458	5458
03459	ORM5488B	5464
03468	FE6002	5465
03469	FE6001	5464

Multi-Horsepower, Reversible Rotation

MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	DIMENSIONS A	B	C
1075 RPM - 6 Pole							
03458 Wizard	JGU530S	1/3, 1/4, 1/5, 1/6	208-230	2.8	6.75	4.48	1/2
03458HS* Wizard	LGU7215	1/3, 1/4, 1/5, 1/6	208-230	2.6	6.50	5.23	1/2
825 RPM - 8 Pole							
03459* Wizard 825	NFBA87S	1/3, 1/4, 1/5, 1/6, 1/8	208-230	1.8	6.50	5.48	1/2

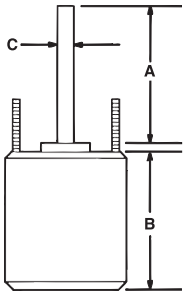
* Heat Shield

Vertical Outdoor Condenser Fan Motors Shaft-Up/Down

genteq

Ball Bearing

GE up/down outdoor condenser fan motors are designed for either vertical shaft-up or shaft-down applications. Shell and end shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain. A plastic plug is provided to seal the weep hole in the end shield exposed to the weather. All of these motors are suitable for air conditioning or heat pump applications. All feature reversible rotation, 208-230 volts, six inch shaft length and extended thru bolts extending from both ends.



* Heat Shield

Features:

- Thru bolt or band mounting
- All angle mounting
- Water slinger on shaft
- Serrated end cap on shaft end only
- For air conditioning or heat pumps
- Full six inch shaft length with two full flats at 90°
- Reversible rotation
- For accessories see pages M-44 – M-46
- Rheem mtg. holes (mtg. hardware included)

Specifications:

- 60 Hertz
- Single phase
- Overload protected
- Fan duty, continuous, air over
- 48 inch leads
- Totally enclosed, non-ventilated
- Class B insulation

Reversible Rotation

MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	RPM (1)	CAP REQ.	DIMENSIONS A	B	C
825 RPM - Single Speed - Standard Efficiency - 8 Pole									
03203*	HFBA79S	1/6	208-230	0.90	825	5/370	6.0	4.30	1/2
03204*	JFBA83	1/4	208-230	1.3	825	7.5/370	6.0	5.03	1/2
03205*	NFBA82S	1/3	208-230	1.8	825	10/370	6.0	5.80	1/2
1075 RPM - Single Speed - Standard Efficiency - 6 Pole									
03733(2) *	LGU715S	1/3	208-230	2.6	1075	7.5/370	6.0	4.48	1/2
03734(2) *	RGU718S	1/2	208-230	3.0	1075	10/370	6.0	5.23	1/2
03735(2) *	SGU717S	3/4	208-230	4.1	1075	10/370	6.0	5.98	1/2

(1) Low speed approximately 300 RPM less than high speed depending on fan load

* Heat Shield

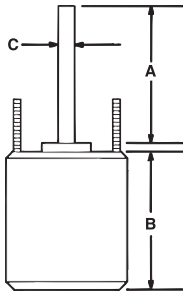
⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Shaft-Up Outdoor Condenser Fan Motors

genteq

GE outdoor condenser fan motors for vertical shaft-up applications are also suitable for horizontal mounting. GE vertical shaft-up outdoor condenser fan motors are designed for 60˚C ambient temperature. Add MARS No. 08105 resilient rings to base mount.

GE commercial 460 volt outdoor condenser fan motors are designed for 70˚ C ambient so lower operating temperatures = improved life and reliability.



Features:

- Reversible rotation
- Thru bolt or band mounting
- Water slinger on shaft
- Serrated end caps on vertical shaft-up models
- Full six inch shaft length
- For accessories see pages M-44 – M-46

Specifications:

- Class B insulation
- Single phase, 60/50 Hertz
- Automatic thermal overload protected
- Fan duty, continuous, air over
- 26 inch leads shaft-up, 46 inch leads all angle
- Lead end endshield open construction

70°C Heat Shield™

* Heat Shield

Reversible Rotation

MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	RPM	CAP REQ.	DIMENSIONS A	B	C
1075 RPM - Shaft-Up - Single Speed - Sleeve Bearings - Standard Efficiency - 6 Pole									
03329(1)(2)	HGP698S	1/3	208-230	2.4	1075	7.5/370	6.0	5.31	1/2
03330(1)(2)	MGK209S	1/2	208-230	3.6	1075	10/370	6.0	6.60	1/2
03331(1)(2)	PFM210S	3/4	208-230	5.1	1075	10/370	6.0	6.06	1/2
1075 RPM - 460V - Single Speed - All Angle Ball Bearing - 6 Pole									
03737(1)(3)*	NGU724S	1/3	460	1.2	1075	7.5/370	6.0	5.30	1/2
03738(1)(3)*	RGU723S	1/2	460	1.7	1075	10/370	6.0	5.80	1/2
03739(1)(3)*	SGU725S	3/4	460	2.0	1075	15/370	6.0	6.50	1/2

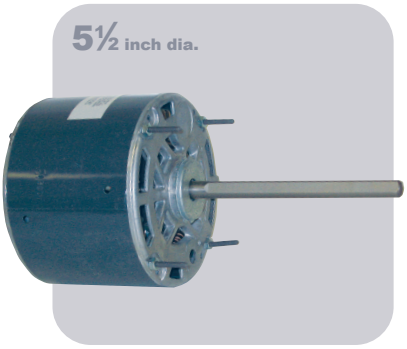
(1) 60 Hertz only
(2) Class A Insulation
(3) Rheem shell mtg. holes
* Heat Shield

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

5KCP39 PSC 460 Volt Motors

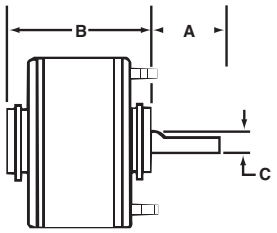
genteq

Ball Bearing



Features:

- Energy $aver®
- For use in air moving applications
- 460 volt, 2-speed
- All angle
- Extended thru bolts
- Capacitor included
- 08105 for cradle mount, serrated end caps
- For accessories see pages M-44 – M-46



Specifications:

- Single phase, 60/50 Hz
- Overload protection
- Fan duty, continuous, air over
- Enclosed shell, open end shields
- 26 inch leads
- Class A insulation

1075 RPM – Reversible Rotation - 6 Pole

MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	CAP. (FURNISHED)	DIMENSIONS A	B	C	BASE NO.
03290	PGC520ET	3/4	460	2.1	15/370	6.0	6.31	1/2	08060

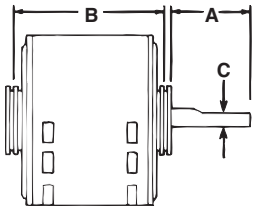
PSC Direct Drive Blower Motors

genteq

These GE 5KCP39 PSC motors are designed for use as direct drive furnace blower motors. All are three speed, high efficiency, Energy $aver® models and are electrically reversible. Motors have 2-1/4 inch resilient rings for base mounting. Four (4) split rings included if 2-1/2 inch diameter is required. Bases are sold separately.

Features:

- All angle sleeve bearings
- 3 speeds
- 1/2 inch extended thru bolts
- Ring kit allows 2-1/4 inch & 2-1/2 inch resilient ring mounting
- Reversible rotation
- 4 inch long, 1/2 inch diameter shaft
- For accessories see pages M-44 – M-46



Specifications:

- Single phase, 60/50 Hertz
- Overload protection
- Fan duty, continuous, air over
- Open construction
- 26 inch leads
- Class B insulation

Reversible Rotation — Energy $aver®

MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	CAP. REQ.	DIMENSIONS A	B	C	BASE NO.
1625 RPM[1] — Three Speed - 4 Pole									
03999	PGE416T	3/4	208-230	4.0	7.5/370	4.0	6.14	1/2	08060

1075 RPM — Reversible Rotation - Standard Efficiency - 6

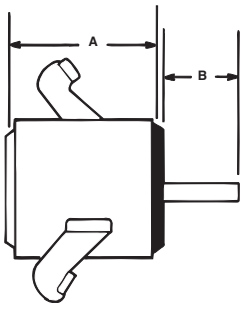
MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	CAP. REQ.	DIMENSIONS A	B	C	BASE NO.
Three Speed[1]									
03583[2]	FGN651T	1/4	115	4.2	5/370	4.0	4.89	1/2	08055
03586[2]	JGN654T	1/3	208-230	2.9	5/370	4.0	5.14	1/2	08056
03587[2]	PGN655T	1/2	115	9.0	5/370	4.0	6.14	1/2	08060
03588[2]	NGN656T	1/2	208-230	4.3	5/370	4.0	5.89	1/2	NA
03595[2]	SGL854S	1	115	11.8	20/370	4.0	6.90	1/2	08060
Two Speed[3]									
03383[2]	FGM421S	1/4	115	4.2	5/370	4.0	4.89	1/2	08055
03387	PGM438S	1/2	115	9.0	5/370	4.0	6.14	1/2	08060
03389	PGN091T	3/4	115	10.3	15/370	4.0	6.14	1/2	08060

(1) Approximately 150RPM differential between speeds depending on fan load
(2) 60 Hz only
(3) Approximately 300RPM differential between speeds depending on fan load

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

5KCP39 PSC Torsion Flex Mount Motors

GE torsion-flex mount motors are designed for direct drive furnace blower applications. The unique torsion- flex mounting speeds installation while the special steel of the torsion-flex bracket absorbs vibration for quieter operation. All models are electrically reversible, 3-speed motors of high efficiency Energy $aver® design.



Features:

- Energy $aver®
- All angle sleeve bearings
- 3-Speed 1075/925/775 RPM(1)
- Torsion-flex mounting, grommets and sleeves included
- 5.0 inch long, 1/2 inch diameter shaft
- Reversible rotation

Specifications:

- Class A insulation
- Single phase, 60/50 Hertz
- Overload protection
- Fan duty, continuous, air over
- Open construction
- 26 inch leads

1075 RPM(1) — Three Speed – Reversible Rotation - 6 Pole

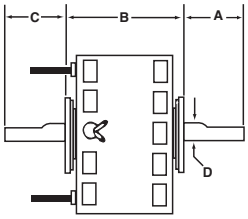
MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	CAP. REQ.	DIMENSIONS A	DIMENSIONS B	BLOWER SIZE
03785(2)	LGP732S	1/3	115	4.9	7.5/370	5.0	4.98	9 in.
03786	JGP733S	1/3	208-230	2.5	5/370	5.0	4.73	9 in.
03787	PGP734S	1/2	115	7.3	10/370	5.0	5.48	10 in.

(1) Approximately 150RPM differential between speeds depending on fan load
(2) 60 Hz only

PSC Motors Replace 5KCP32 & 5KCP38

Features:

- Energy $aver®
- Replace GE 5KCP32-38
- All angle sleeve bearings
- Two-speed, 1075/775 RPM(2) double shaft
- Extended thru bolts, base included, plus 4 split rings
- 14 inch leads
- For accessories see pages M-44 – M-46



Specifications:

- Single phase, 60/50 Hertz
- Open construction
- Overload protected
- Fan duty, continuous, air over
- 3 inch shaft height when base mounted

1075/775 RPM(1)

MARS NO.	GE NO. 5KCP	HP	VOLTS	AMPS	ROT LE	CAP. REQ.	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS D
03092(2)	39NGD369T	1/2	208-230	3.8	CCW	5/370	8.00	6.46	8.50	1/2

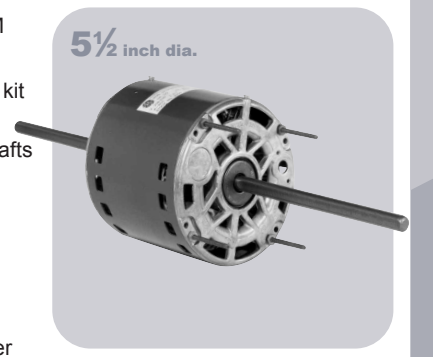
(1) Approximately 300 RPM differential between speeds depending on fan load
(2) 60 Hertz only

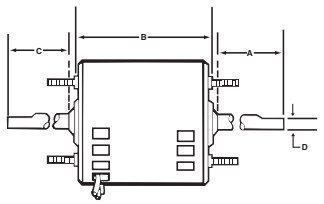
5KCP39 PSC Double Shaft Motors

GE Commercial Motors
By Regal-Beloit

Features:

- All angle sleeve bearings
- 3 speed, 1075/925/775 RPM
- Extended thru bolts
- Base mount using mounting kit 08095 and appropriate base
- Double 1/2 inch diameter shafts
- For accessories see pages M-44 – M-46





Specifications:

- Single phase, 60/50 Hertz
- Overload protected
- Fan duty, continuous, air over
- Open construction
- Requires 5 mfd, 370 volt capacitor (MARS No. 12005)
- 14 inch numbered leads

1075/925/775 RPM(1)

MARS NO.	GE NO. 5KCP39	HP	VOLTS	AMPS	RPM(1)	ROT LE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS D	BASE NO.
03696	NGA407T	1/2	208-230	3.5	1075/975/775	CCW	7.50	5.25	7.25	1/2	08060

(1) Approximately 150 RPM differential between speeds depending on fan load

WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

GE TECMate Pro™ Service Tool

The Tecmate Pro™ Service Tool, MARS stock #08500 is the latest advance in ECM technology developed by and for Genteq Motors. The Tecmate allows the service technician to analyze a Genteq ECM motor independently of the HVAC system in which it is installed. The Tecmate can test all the basic settings of a Genteq ECM motor, and can detect and isolate motor failures from HVAC system failures.

Compact

Easy To Use

MARS NO.	DESCRIPTION
08500	TECMate Pro ECM Motor Tester

Broad Ocean ECM Motor Tester (Digimotor Test Tool)

Save time and money with the Broad Ocean ECM Motor Tester

- Isolates any issues to either the motor or the control board and the control wiring

NOTE: This tool is for Broad Ocean OEM Digi-Motors only.

This tool is not compatible with Azure®.

Kit Contents:

Broad Ocean ECM Tool

Type A test Connector (Furnaces, AH & Packaged)

Type B Test Connector (Packaged Units)

Type C Test Connector (Air Handlers)

Type D Test Connector (Outdoor Condenser Fan Motors)

MARS NO.	DESCRIPTION	MARS PACK
08503	Broad Ocean ECM Motor Tester	1

ECM Protectors

Made in the U. S. A.

Saves Equipment

ECM protectors plug into existing motor connectors or plugs. They help to protect these valuable motors from voltage spikes, surges, and transients that often damage them.

Fast Installation

These protectors simply plug in between the motor connector and the existing wiring harness.

A ground strap with a ring terminal is provided for additional protection.

Protect Your Investment

The most common cause of ECM motor failure is damage to the electronics module as a result of poorly conditioned incoming power.

08552 08553

MARS NO.	USED ON	MARS PACK
08552	GE X-13 ECM	1
08553	OEM ECM Applications	1

ECM Repair Kit

Made in the U. S. A.

Repairs many ECM motor modules that have been damaged by voltage problems and power surges

- Full instructions included in kit
- Kit includes **OCPD** device and helpful circuit board releaser tool
- Using the kit requires a soldering gun or iron and rosin core solder

ECM's have ***O**ver **C**urrent **P**rotection **D**evices that are designed to keep excessive power from damaging other system components. Frequently, only this part needs replacement to restore an expensive ECM to an operation condition.

Not every ECM module can be repaired. Because of this, the repair kit is not guaranteed to fix every motor-but because of the motor's high cost vs. the repair kit's low cost- it's often worth the effort.

MARS NO.	DESCRIPTION	MARS PACK
08551	ECM Repair Kit	1

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Variable Speed Zebra

Made in the U. S. A.

Complete diagnostics for systems where an ECM motor is not working properly

Uses simple-to-operate microprocessor controlled tests to:

- accurately diagnose exactly which component has failed in a variable speed system that is not working correctly
- assist in system setup by reporting CFM airflow and motor RPM as room vents and other controls are adjusted
- allows easy adjustment of all available settings and options on ECM blower motors to obtain maximum customer comfort

MARS NO.	DESCRIPTION	MARS PACK
08550	ECM Diagnostic System	1
08562	2 Pc Adapter Set for New GE X-13 & Evergreen Motors (Variable Speed)	1

Universal Zebra

Made in the U. S. A.

A tool designed to troubleshoot every ECM motor in HVAC/R systems!

- Three 3-position switches test up to 6 speeds
- LED's indicate power and signals being sent
- Rugged case protects your tools & leads

Adapters for Universal Zebra

- Adapters quickly plug into motor and Universal Zebra
- Magnetic reference cards show what each switch does & what each LED means for that motor

MARS NO.	DESCRIPTION	MARS PACK
08554	Universal ECM Diagnostic System	1

MARS #

08555 Adapter "A" – for GE 2.0 & 2.3 ECM's

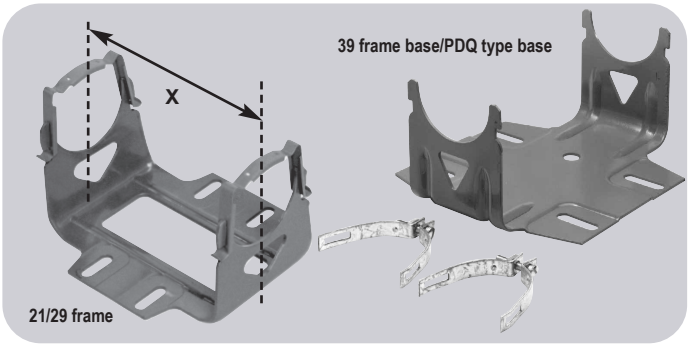
08556 Adapter "B" – for Genteq 3.0 ECM's

08557 Adapter "C" – for X-13 & X-mtr ECM's

08558 Adapter "E" – for ECM 142 & Signal Select ECM's

Motor Mounting Bases

Designed for use with GE motors.
Bases include clips.



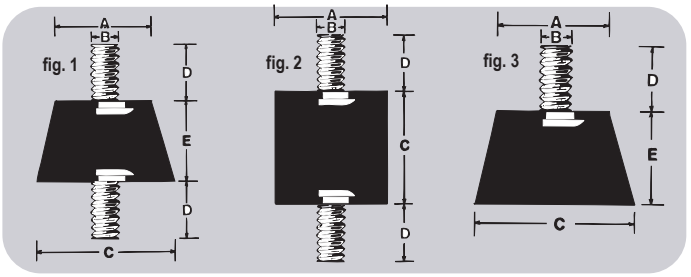
Mounting Bases

MARS NO.	FOR USE ON	GE NO.	SHAFT HEIGHT	X DIMENSION
08060	39 frame motors	920AB10	3-1/2	5.98/6.14

Mounting Accessories

MARS NO.	USED ON	DESCRIPTION	PAK QUAN
08096	39 frame	clips for 39 frame motor bases	2 pieces

Vibration Insulators



MARS NO.	MFR. NO.	DIMENSIONS A	B	C	D	E	MAX. LOAD IN POUNDS THD.	COMPRESSION	SHEAR	FIG. NO.
07801	K30	1-3/16	5/16	1-5/8	5/8	1-1/2	18	60	–	1
07802	K33	1-3/8	5/16	1-5/8	5/8	1.0	18	100	–	1
07804	K44	1.0	5/16	1.0	5/8	–	18	40	10	2
07805	K47	1.0	1/4	3/4	1/2	–	20	50	10	2
07807	K133	1-3/8	5/16	1-5/8	5/8	1.0	18	100	–	3

Plastic Rain Shields

MARS NO.	DESCRIPTION	MARS PACK
93581	6-3/4 in. diameter for motors with 1/2 in. diameter shaft	1 piece
93582	6-3/4 in. diameter for motors with 5/8 in. diameter shaft	1 piece

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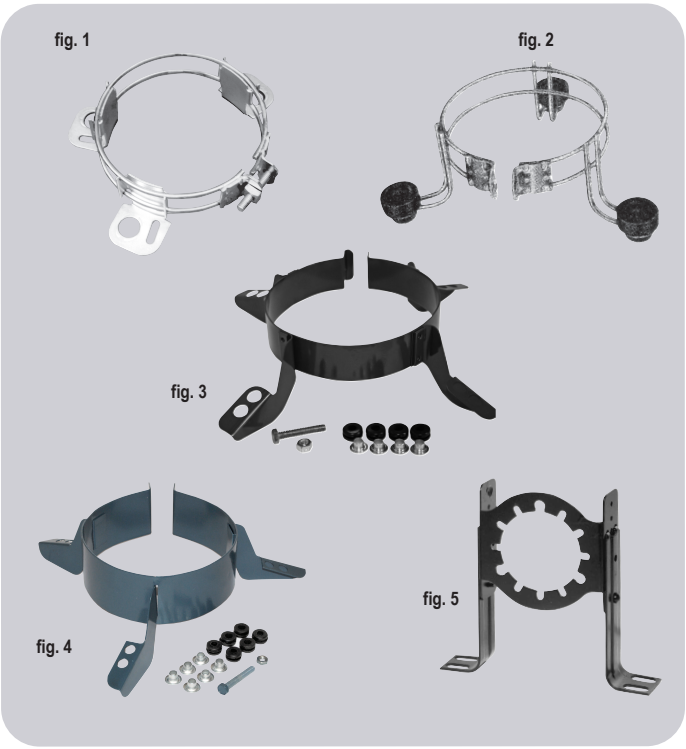
Mounting Brackets



MARS NO.	USED ON	DESCRIPTION	FIG. NO.
08020	39 frame and 5-1/2 in. diam. motors	adj. lug mounting bracket fits triangular bolt patterns of 6-1/8 in. to 6-9/16 in. bolt to bolt (1/4 in. x 7/8 in. and 3/4 in. x 1-3/8 in. knockouts)	1
08021	5-1/2 in. fixed motor mtg. bracket with grommets	for mounting blower motor with large wheel opening fits any 5-1/2 in. diameter motor	2
08024	5 in. fixed motor mtg. bracket with grommets	for mounting blower motor with large wheel opening fits any 5 in. diameter motor	2
08049	29 and 39 frame motors, 5 in. motors	3 Wing Torsion-Flex mounting adapter kit for 9 in. and 10 in. blowers	4
08050	48 frame, 5-5/8 in. and 5-1/2 in. diam. motors	3 Wing Torsion-Flex mounting adapter kit for 9 in. and 10 in. blowers	4
08047	48 frame, 5-5/8 in. and 5-1/2 in. diam. motors	4 Wing Torsion-Flex mounting adapter kit for 9 in. and 10 in. blowers	3
08004	51 frame motors	shaft height adjustable 4-1/8 in. to 5-3/8 in.	5

Premium Belly Bands

Applications:

Residential HVAC,
Direct Drive Blowers

- Welded 3-ring bracket
- Anodized steel rod construction
- Includes 3 sets of rubber grommets, 3 sheet metal screws, 3 galvanized steel sleeves, 1 bolt, 1 nut

MARS NO.	DESCRIPTION
08025	10" Bolt Pattern
08026	11" Bolt Pattern

Applications:

Residential HVAC,
Direct Drive Blowers

- Welded 4-ring bracket
- Anodized steel rod construction
- Includes 4 sets of rubber grommets, 4 sheet metal screws, 4 galvanized steel sleeves, 1 bolt, 1 nut

MARS NO.	DESCRIPTION
08027	13" Bolt Pattern

Rheem Adapter Belly Bands

Applications:

Rheem Blower Assemblies

This kit allows the use of standard 5.5" blower motors (without Rheem mounting holes) in Rheem original equipment blower applications.

- Welded 4-ring bracket
- Anodized steel rod construction
- Includes bracket, blower housing tabs, hardware & grommets

MARS NO.	DESCRIPTION
08028	Rheem Adapter

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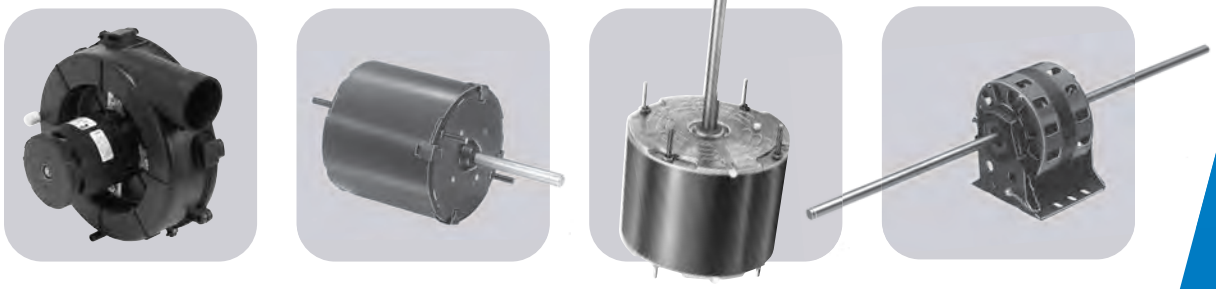

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FASCO reserves the right to change or modify product revision levels without notice.
PSC Motors use 5M 370V capacitors unless otherwise indicated.

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PSC - 3.3 DIAMETER										
MODEL	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.
D1125	3.3	1/12	208-230	1550	1	0.5	Open Vent.	CCW	SLV	5/16 X 2 5/8

SP - 3.3" DIAMETER										
MODEL	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.
D121	3.3	1/70	115	1500	1	0.7	Open Vent.	CCW	SLV	1/4 X 2 1/4
D1100	3.3	1/50	115	1550/900	2	1.2/.7	Open Vent.	CW	SLV	5/16 X 2 3/8
D125	3.3	1/50	115	1500	1	0.75	Totally Encl.	CCW	SLV	1/4 X 2 1/4
D1190	3.3	1/30	115	3000	1	1.6	Open Vent.	CW	SLV	5/16 X 1 3/4
D1164	3.3	1/25	115/230	1550	1	1.3-.65	Totally Encl.	CW	SLV	5/16 X 2 1/2
D1101	3.3	1/20	115	1500	1	1.9	Open Vent.	CCW	SLV	5/16 X 2 1/4
D1103	3.3	1/20	208-230	1500	1	1.15	Open Vent.	CCW	SLV	5/16 X 2 1/4
D1121	3.3	1/20	208-230	1550	1	1	Open Vent.	CW	SLV	5/16 X 2 1/2
D1124	3.3	1/20	115	1550	1	2.1	Open Vent.	CW	SLV	5/16 X 3
D1152	3.3	1/20	115	1500	1	1.7	Open Vent.	CW	SLV	5/16 X 2 3/8
D1154	3.3	1/20	230	1550	1	1	Open Vent.	CW	SLV	5/16 X 2 3/8
D1189	3.3	1/20	115/208-230	1550	1	1.4-.76	Totally Encl.	CW	BALL	5/16 X 1 5/8
D132	3.3	1/20	115	1500	1	1.8	Open Vent.	CW	SLV	5/16 X 2 1/4
D471	3.3	1/20	208-230	1550	1	1.1	Open Vent.	CCW	SLV	5/16 X 2 1/2
D1126	3.3	1/15	208-230	1550	1	1.1	Open Vent.	CW	SLV	5/16 X 3
D366	3.3	1/14 - 1/25	115	1550	2	2.5-1.5	Open Vent.	DS	SLV	6 3/8 X 5/16 X 6 3/8

SP - 4.4" DIAMETER										
MODEL	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.
D116	4.4	1/15	115	1500	1	2.4	Open Vent.	CW	SLV	3/8 X 2 3/8

PSC -5.0" DIAMETER										
MODEL	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.
D290	5	1/10 - 1/15 - 1/25 - 1/40	115	1050	4	2.2-1.4-1-.7	Open Vent.	REV	SLV	1/2 X 8 1/2
D277	5	1/10 - 1/12 - 1/20	277	1050	3	.7-.5-.4	Open Vent.	DS	SLV	8 1/2 X 1/2 X 8 1/2
D1059	5	1/6	115-127	1450	3	2.3	Open Vent.	DS	SLV	8 3/4 X 1/2 X 9
D1071	5	1/6	208-230	1100	1	0.99	Totally Encl.	REV	SLV	1/2 X 2 1/8
D1016	5	1/4	230	1100	1	2	Open Vent.	CW	SLV	1/2 X 4 1/8
D140	5	1/15	115	1050	1	2.7	Open Vent.	CW	SLV	3/8 X 2 3/8
D289	5	1/10 - 1/30 - 1/40 - 1/45 - 1/50	115	1050	5	3.6-1.6-1.2-.8-.6	Open Vent.	DS	SLV	10 3/4 X 1/2 X 10 3/4
D318	5	1/6 - 1/8	230	1050	2	3.1-2.2	Open Vent.	CW	SLV	1/2 X 3 1/2

PSC - 5.6" DIAMETER										
MODEL	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.
D832	5.6	1/8	208-230	825	1	1.1	Totally Encl.	REV	SLV	1/2 X 4 3/4
D847	5.6	1/8	208-230	1125	1	0.9	Totally Encl.	CCW	SLV	1/2 X 3 1/2
D895	5.6	1/8	208-230	1650	1	0.8	Totally Encl.	CW	SLV	1/2 X 1 1/2
D917	5.6	1/6	208-230	1075	1	1	Totally Encl.	REV	SLV	1/2 X 6 1/2
D5458	5.6	1/5,1/4,1/3	208-230	1075	1	2.0	Totally Encl.	REV	SLV	1/2 X 6 3/4
D2840	5.6	1/5	208/230	1075	1	1.3	Totally Encl.	CW	SLV	1/2 X 4 1/8
D743	5.6	1/5	208-230	1075	1	1.2	Open Vent.	REV	SLV	1/2 X 6
D725	5.6	1/4 - 1/6 - 1/8	208-230	1075	3	2.2-1.5-1.1	Open Vent.	REV	SLV	1/2 X 6
D721	5.6	1/4 - 1/5 - 1/6	115	1075	3	4.8-3.3-2.6	Open Vent.	REV	SLV	1/2 X 6
D7749	5.6	1/4	208-230	1075	1	1.7	Open Vent.	REV	BALL	1/2 X 6 1/2
D7909	5.6	1/4	208-230	1075	1	1.8	Totally Encl.	REV	BALL	1/2 X 6 1/2
D934	5.6	1/4	208-230	825	1	1.9	Totally Encl.	REV	SLV	1/2 X 6
D727	5.6	1/3 - 1/4 - 1/5	115	1075	3	5.9-4.6-3.8	Open Vent.	REV	SLV	1/2 X 6
D923	5.6	1/3 - 1/4 - 1/5	208-230	1075	3	2.9-2.2-1.7	Open Vent.	REV	SLV	1/2 X 6
D7748	5.6	1/3	208-230	1075	1	2.9	Open Vent.	REV	BALL	1/2 X 6 1/2
D7908	5.6	1/3	208-230	1075	1	2.6	Totally Encl.	REV	BALL	1/2 X 6 1/2
D701	5.6	1/2 - 1/3 - 1/4 - 1/5	115	1075	4	7.7-5.5-4.2-3.3	Open Vent.	REV	SLV	1/2 X 5 1/2
D7907	5.6	1/2	208-230	1075	1	3.7	Totally Encl.	REV	BALL	1/2 X 6 1/2

General Purpose Motors

3.3 inch dia.

FIG. A D1127

FIG. B D121

FIG. C D132

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
D1127	PSC	1/12	115/230	1550	1	1.1 / 0.6	Open Vent.	REV	SLV	5/16 X 3	3 1/2	A	75
D121	SP	1/70	115	1500	1	0.7	Open Vent.	CCW	SLV	1/4 X 2 1/4	2 1/8	B	85
D132	SP	1/20	115	1500	1	1.8	Open Vent.	CW	SLV	5/16 X 2 1/4	2 3/4	C	85

NOTES: 75: Shell Turbo 68, low temp. oil (-40°F) 85: Air Over

3.3 inch dia.

FIG. A D125

FIG. B D1164

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
D125	SP	1/50	115	1500	1	0.75	Totally Encl.	CCW	SLV	1/4 X 2 1/4	2 1/2	A	85
D1164	SP	1/25	115/230	1550	1	1.3-.65	Totally Encl.	CW	SLV	5/16 X 2 1/2	3 1/8	B	85

NOTES: 85: Air Over

Refrigeration Fan Motors

3.3 inch dia.

FIG. A D471

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
D471	SP	1/20	208-230	1550	1	1.1	Open Vent.	CCW	SLV	5/16 X 2 1/2	4 1/4	A	173, 174

NOTES: 173: 3.9" diameter 174: Includes 1/2" studs for mounting

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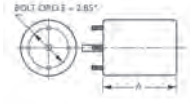

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Evaporator Coil and Refrigeration Fan Motors

3.3 inch dia.

FIG. A D1152, D1154, D101, D1103

FIG. B D1121

FIG. C D1124, D1126

FIG. D D1125

FIG. E D1164

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
BOHN													
D1124	SP	1/20	115	1550	1	2.1	Open Vent.	CW	SLV	5/16 X 3	3	C	75
D1126	SP	1/15	208-230	1550	1	1.1	Open Vent.	CW	SLV	5/16 X 3	3 1/2	C	75
D1125	PSC	1/12	208-230	1550	1	0.5	Open Vent.	CCW	SLV	5/16 X 2 5/8	3 3/4	D	29
KEEPRITE													
D1121	SP	1/20	208-230	1550	1	1	Open Vent.	CW	SLV	5/16 X 2 1/2	3 1/2	B	
KRAMER/TRENTON													
D1152	SP	1/20	115	1500	1	1.7	Open Vent.	CW	SLV	5/16 X 2 3/8	2 7/8	A	
D1154	SP	1/20	230	1550	1	1	Open Vent.	CW	SLV	5/16 X 2 3/8	3 1/8	A	
LARKIN COIL													
D1101	SP	1/20	115	1500	1	1.9	Open Vent.	CCW	SLV	5/16 X 2 1/4	2 3/4	A	75
D1103	SP	1/20	208-230	1500	1	1.15	Open Vent.	CCW	SLV	5/16 X 2 1/4	3	A	75, 201
SINGER													
D1164	SP	1/25	115/230	1550	1	1.3-.65	Totally Encl.	CW	SLV	5/16 X 2 1/2	3 1/8	E	

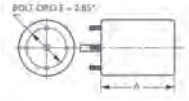
NOTES: 29: 4M 370V capacitor included 75: Shell Turbo 68, low temp. oil (-40°F) 201: Not a direct replacement for 253-1194, but is an acceptable substitute

Window A/C Motors

3.3 inch dia.

FIG. A D366

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
D366	SP	1/14 - 1/25	115	1550	2	2.5-1.5	Open Vent.	DS	SLV	6 3/8 X 5/16 X 6 3/8	3 1/4	A	



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NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

Flue Exhaust and Draft Booster Blower Motors

3.3 inch dia.

FIG. A D1190

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	FIG.	NOTES
D1190	SP	1/30	115	3000	1	1.6	Open Vent.	CW	SLV	5/16 X 1 3/4	A	33

NOTES: 33: Stainless steel shaft

General Purpose Motors

4.4 inch dia.

FIG. A D116

	FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
➤	D116	SP	1/15	115	1500	1	2.4	Open Vent.	CW	SLV	3/8 X 2 3/8	3	A	

Fan Coil Air-Conditioning and Heating Unit Motors

5.0 inch dia.

FIG. A D289

FIG. B D290

FIG. C D277, D258

FIG. D D1050

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
D289	SP	1/10 - 1/30 - 1/40 - 1/45 - 1/50	115	1050	5	3.6-1.6-1.2-.8-.6	Open Vent.	DS	SLV	10 3/4 X 1/2 X 10 3/4	3 1/4	A	
D290	PSC	1/10 - 1/15 - 1/25 - 1/40	115	1050	4	2.2-1.4-1-.7	Open Vent.	REV	SLV	1/2 X 8 1/2	3 1/4	B	29, 128, 147
D277	PSC	1/10 - 1/12 - 1/20	277	1050	3	.7-.5-.4	Open Vent.	DS	SLV	8 1/2 X 1/2 X 8 1/2	3 7/8	C	29, 147
D1050	PSC	1/8	230	1550	1	1.1	Open Vent.	CW	SLV	1/2 X 3	3 1/4	D	147, 199
D258	PSC	1/5 - 1/10	208-230	1550	2	2.8-1.3	Open Vent.	DS	SLV	8 X 1/2 X 8	3 3/8	C	54, 147

NOTES: 29: 4M 370V capacitor included 54: 5M 370V capacitor included 128: Electrically Reversible 147: COMES WITH 2 1/2" O.D. RUBBER MOUNTING RINGS
199: Original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing shaft end of motor to prevent moisture from enteringmotor

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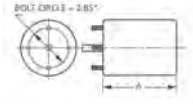

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Direct Drive Blower Motors

5.0 inch dia.

FIG. F D318

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
D318	SP	1/6 - 1/8	230	1050	2	3.1-2.2	Open Vent.	CW	SLV	1/2 X 3 1/2	4	F	

Ventilator and Unit Heater Motors

5.0 inch dia.

FIG. A D140

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
D140	SP	1/15	115	1050	1	2.7	Open Vent.	CW	SLV	3/8 X 2 3/8	2 5/8	A	

Condenser Fan Motors

5.6 inch dia.

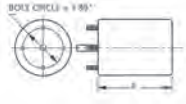
FIG. A D743

FIG. B D7749

FIG. C D7748

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
SHAFT DOWN OR HORIZONTAL													
D743	PSC	1/5	208-230	1075	1	1.2	Open Vent.	REV	SLV	1/2 X 6	3 1/2	A	36, 128, 189, 97
SHAFT UP OR HORIZONTAL													
D7749	PSC	1/4	208-230	1075	1	1.7	Open Vent.	REV	BALL	1/2 X 6 1/2	3 3/4	B	128, 187, 188, 189, 97
D7748	PSC	1/3	208-230	1075	1	2.9	Open Vent.	REV	BALL	1/2 X 6 1/2	4 1/4	C	128, 187, 188, 189, 97

NOTES: 36: Has 4 drilled and tapped holes in shell 97: All angle mount bearings 128: Electrically Reversible 187: Includes shaft water slinger
188: 60° ambient temperature rating 189: Closed end shield shaft end



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NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

Condenser Fan Motors

5.6 inch dia.

FIG. A D934

FIG. B D917

FIG. C D7909, D7908

FIG. D D7907

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
825 RPM MOTORS													
D934	PSC	1/4	208-230	825	1	1.9	Totally Encl.	REV	SLV	1/2 X 6	4 1/3	A	36, 128, 188, 190
TOTALLY ENCLOSED MOTORS													
D917	PSC	1/6	208-230	1075	1	1	Totally Encl.	REV	SLV	1/2 X 6 1/2	3 3/4	B	36, 97, 128, 188
D7909	PSC	1/4	208-230	1075	1	1.8	Totally Encl.	REV	BALL	1/2 X 6 1/2	4	C	36, 97, 128, 188
D7908	PSC	1/3	208-230	1075	1	2.6	Totally Encl.	REV	BALL	1/2 X 6 1/2	4 1/2	C	13, 36, 128, 190, 188
D7907	PSC	1/2	208-230	1075	1	3.7	Totally Encl.	REV	BALL	1/2 X 6 1/2	5	D	12, 128, 188, 97

NOTES: 12: 10M 370V Capacitor 13: 7.5M 370V Capacitor 36: Has 4 drilled and tapped holes in shell 97: All angle mount bearings 128: Electrically Reversible 188: 60° ambient temperature rating 190: All angle mount bearings. Use rain shield when necessary.

5.6 inch dia.

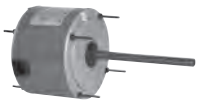

FIG. A D5458

FASCO MODEL	TYPE	HP	VOLTS	RPM	AMPS	ENCLOSURE	ROT.	BRING.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
208/230 VAC MOTORS												
D5458	PSC	1/5,1/4,1/3	208-230	1075	2.0	Totally Encl.	REV	SLV	1/2 X 6 3/4	4 1/4	A	13, 128, 36

NOTES: 13: 7.5M 370V Capacitor 36: Has 4 drilled and tapped holes in shell 128: Electrically Reversible 188: 60° ambient temperature rating

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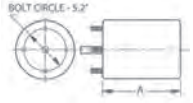

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5.6 inch dia.

FIG. A D721, D727, D701

FIG. B D725, D923

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
OPEN VENTILATION													
D721	PSC	1/4 - 1/5 - 1/6	115	1075	3	4.8-3.3-2.6	Open Vent.	REV	SLV	1/2 X 6	4	A	99, 137, 128
D727	PSC	1/3 - 1/4 - 1/5	115	1075	3	5.9-4.6-3.8	Open Vent.	REV	SLV	1/2 X 6	4 1/4	A	99, 137, 128
D701	PSC	1/2 - 1/3 - 1/4 - 1/5	115	1075	4	7.7-5.5-4.2-3.3	Open Vent.	REV	SLV	1/2 X 5 1/2	5 1/4	A	99, 137, 12, 128
D725	PSC	1/4 - 1/6 - 1/8	208-230	1075	3	2.2-1.5-1.1	Open Vent.	REV	SLV	1/2 X 6	4	B	98, 128
D923	PSC	1/3 - 1/4 - 1/5	208-230	1075	3	2.9-2.2-1.7	Open Vent.	REV	SLV	1/2 X 6	4 1/4	B	98, 128

NOTES: 12: 10M 370V Capacitor 98: All angle mount bearings. Use rainshield when necessary. 99: All angle mount bearings. 128: Electrically Reversible
137: Ideal for blowers and fans used in furnaces and air-conditioners.

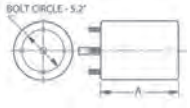
Window A/C, Condenser Fan & Direct Drive Blower Motors

5.6 inch dia.

FIG. A **D788, D784**

FASCO MODEL	TYPE	HP	VOLTS	RPM	SPD.	AMPS	ENCLOSURE	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	FIG.	NOTES
D788	PSC	1/2	208-230	1625	1	3.9	Open Vent.	REV	SLV	1/2 X 6	5	A	191
D784	PSC	1/2 - 1/3 - 1/4	208-230	1625	3	3.8-2.8-2.1	Open Vent.	REV	SLV	1/2 X 6	5	A	191

NOTES: 191: Should not be used for replacements where original motor is rated below 1500 RPM



Thermally protected • UL recognized • CSA or ULc certified
NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

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Specific Purpose Blowers

FIG. A A129

FIG. B A088

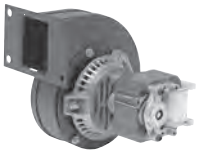

FIG. C A110

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A129	SP	115	1	1.95	Amana 7021-9064, 7021-9259	A	
A088	SP	115	1	1.3	Coleman 7021-6759, Dornback 7021-5478, York 7021-8629, 7021-7105	B	
A110	SP	115	1	0.76	Frymaster 7002-3512	C	

FIG. A A157

FIG. B A180

FIG. C A182

FIG. D A281

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A157	SP	115	1	1.3	Goodman 7002-2307	A	
A180	SP	115	1	1.8	Goodman 7021-9625, 20190601	B	
A182	SP	115	1	1.2	Goodman 7002-3036, B4059000	C	
A281	SP	115	1	0.9	Goodman 7021-8252, D6996405	D	

FIG. A A173

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A173	PSC	115	1	0.8	ICP 1011350, Alltemp (Rotom)7062-4578, 7062-4832	A	

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FIG. A A135

FIG. B A163

FIG. C A200

FIG. D A206

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A135	SP	120	1	0.7	Lennox 7021-8812, 7021-8819	A	
A163	SP	115	1	1.8	Lennox 7021-9450	B	
A200	SP	115	1	1.95	Lennox 7002-2975	C	
A206	SP	115	1	1.5	Lennox 7021-8473, 7021-8983	D	

FIG. A A324

FIG. B A079

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A324	PSC	230	1	.44	Lennox 7062-1909, 28G6601, 7062-1794	A	
A079	SP	115	1	1.1	Rheem Ruud 74-70-21496-03-01, 74-70-21504-03-04, Goodman B1859000, 7021-6804, JA1M106, JA1M137, Trane B1W24, WG94X167	B	

FIG. A A136

FIG. B A139

FIG. C A247

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A136	PSC	115	1	0.75	Rheem 7062-3861	A	
A139	SP	115	1	0.95	Rheem 7021-7577	B	
A247	PSC	115	2	0.95	Rheem 7062-5519S	C	

FIG. A A197

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A197	3 PHASE	33-110	VAR.	1	Trane 7092-0238S, 7092-0238	A	

Thermally protected • UL recognized • CSA or ULc certified

NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

Specific Purpose Blowers

FIG. A A276

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A276	SP	115	1	1	Trane 7021-9011	A	

FIG. A A165

FIG. B A224

FIG. C A225

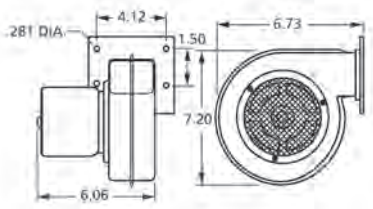
FIG. D A228

FASCO MODEL	TYPE	VOLTS	SPD.	AMPS	CROSS REF.	FIG.	NOTES
A165	PSC	115	1	0.7	York 7062-3958	A	
A224	SP	115	2	0.8	York 7062-5048, 024-27654-000, 7062-4743	B	
A225	SP	115	1	2.25	York 7021-11577, 17503, 7021-11577S, 7021-11830, 024-34558-000	C	
A228	SP	115	1	2	York 7002-3285, 024-31957-000, 7002-2941	D	

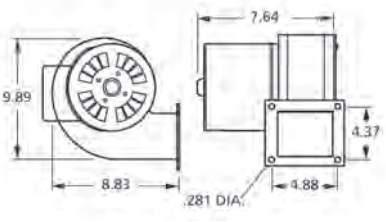
Centrifugal Blowers

80 to 125 Free Air Output

50752-D500



B45227



FASCO MODEL	CFM AT STATIC PRESSURE SHOWN STATIC PRESSURE (INCHES OF WATER) 0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	NAME-PLATE CFM	VOLTS	FREQ.	NO. OF SPEEDS	RPM@ FREE AIR	AMPS@ FREE AIR	BRNG.
50752-D500	108	105	97	93	90	83	77	65	32	–	135	115	60	1	3100	1.1	SLV
B45227	230	212	191	175	130	27	–	–	–	–	265	115	60	1	1650	1.86	SLV

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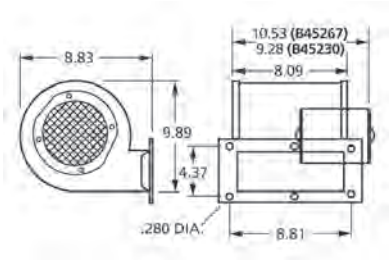
Centrifugal Blowers

320 to 1000 Free Air Output

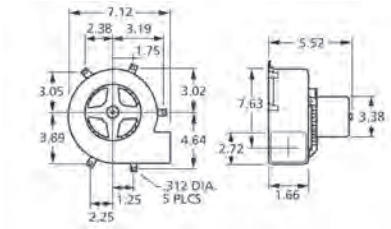
B45267



FASCO MODEL	CFM AT STATIC PRESSURE SHOWN STATIC PRESSURE (INCHES OF WATER) 0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	NAME-PLATE CFM	VOLTS	FREQ.	NO. OF SPEEDS	RPM@ FREE AIR	AMPS@ FREE AIR	BRNG
B45267	393/356	359/331	318/297	254/240	187/167	64/58	–	–	–	–	460	115	60	2	1600/1400	2.9	SLV

64 to 1200 Free Air Output

A079

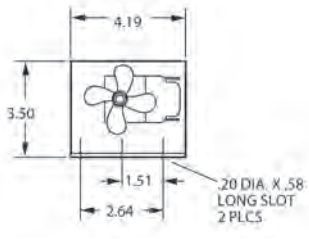


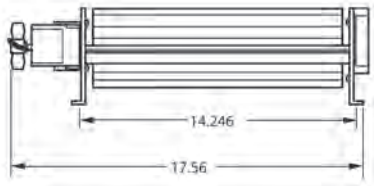
FASCO MODEL	CFM AT STATIC PRESSURE SHOWN STATIC PRESSURE (INCHES OF WATER) 0.2	0.4	0.6	0.8	1	1.2	1.4	1.6	1.8	2	2.2	2.4	2.6	NAME-PLATE CFM	VOLTS	FREQ.	NO. OF SPEEDS	RPM@ FREE AIR	AMPS@ FREE AIR	BRNG
A079	85	81	77	73	65	51	22	–	–	–	–	–	–	89	115	60	1	2200	1.1	SLV

Transflo® Direct Drive Blowers

80 to 215 CFM Free Air Output

B22513





FASCO MODEL	CFM AT STATIC PRESSURE SHOWN STATIC PRESSURE (INCHES OF WATER) 0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	NAME-PLATE CFM	VOLTS	FREQ.	NO. OF SPEEDS	RPM@ FREE AIR	AMPS@ FREE AIR	BRNG
B22513	196	70	–	–	–	–	–	–	–	–	215	115	60	1	2780	1.3	SLV

Thermally protected • UL recognized • CSA or ULc certified

NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

OEM Direct Replacement Motors

FIG. A A129

FIG. B A180

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
AMANA														
A129	SP	3.3	1/20	115	3250	1	1.95	CW	SLV			Amana, 7021-9064 7021-9259	A	
A180	SP	3.3	1/30	115	3400	1	1.8	CCW	BALL			7021-9625, 20190601	B	

FIG. A D847

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
BRYANT/PAYNE														
D847	PSC	5.6	1/8	208-230	1125	1	0.9	CCW	SLV	1/2 X 3 1/2	3 3/4	K1543, HC35VE-230 KA55CGD-9658	A	

FIG. A A088

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
COLEMAN														
A088	SP	3.3	1/25	115	3200	1	1.3	CW	SLV			7021-5478	A	

FIG. A D1160

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
FASCO														
➤ **D1160**	SP	3.3	1/100	115	1480	1	0.58	CW	SLV	5/16 X 1 1/2	2 1/8	7163-2593, 663, 668, 763, 768, 661, 761	A	

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FIG. A D1016

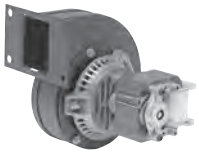

FIG. B A110

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
FEDDERS														
D1016	PSC	5	1/4	230	1100	1	2	CW	SLV	1/2 X 4 1/8	3 7/8	Condenser Fan; S196-18-2	A	
FRYMASTER														
A110	SP	-	1/70	115	3212	1	0.76	CW	BALL			7021-0898	B	195

NOTES: 195: 50/60 Hz

FIG. A D1050

FASCO MODEL	TY E	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
GENERAL ELECTRIC														
D1050	PSC	5	1/8	230	1550	1	1.1	CW	SLV	1/2 X 3	3 1/4	A/C Condenser; KSP29DK1728S	A	202

NOTES: 202: Original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing shaft end of motor to prevent moisture from entering motor.

FIG. A A157

FIG. B A079

FIG. C A182

FIG. D A281

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	CROSS REF.	FIG.	NOTES
GOODMAN												
A157	SP	-	1/35	115	3000	1	1.3	CCW	SLV	7002-2307	A	
A079	SP	3.3	1/50	115	3000	1	1.1	CCW	SLV	7021-6804	B	
A182	SP	3.3	1/35	115	3125	1	1.2	CCW	SLV	7002-3036, B4059000	C	
A281	SP	3.3	1/40	115	3000	1	0.9	CW	SLV	7021-8252, D6996405	D	

Thermally protected • UL recognized • CSA or ULc certified

NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

OEM Direct Replacement Motors

FIG. A D1071

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
HEIL-QUAKER														
D1071	PSC	5	1/6	208-230	1100	1	0.99	REV	SLV	1/2 X 2 1/8		HQ 1052662EM; 48HXCLW-1562	A	

FIG. A D1059

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
IEC														
D1059	PSC	5	1/6	115-127	1450	3	2.3	DS	SLV	8 3/4 X 1/2 X 9	3 1/3	5KCP29DK8384S, S89208	A	31

NOTES: 31: 5M 370V Capacitor

FIG. A A171

FIG. B A172

FIG. C A173

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	CROSS REF.	FIG.	NOTES
INTERCITY PRODUCTS												
A171	PSC	3.3	1/25	115	3450	1	0.7	CCW	BALL	7062-4783, 1011412	A	
A172	SP	-	1/35	115	3000	1	1.6	CW	BALL	7002-2792, 1010975P	B	
A173	PSC	3.3	1/18	115	3450	1	0.8	CCW	BALL	7062-4578, 1011350	C	

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FIG. A A302

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
INTERCITY PRODUCTS														
A302	SP	3.3	1/25	115	3060	1	1.5	CW	SLV			7021-9499, 1010324P, 7021-7700, 1708-607	A	

FIG. A A079

FIG. B D1121

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
JANITROL														
A079	SP	3.3	1/50	115	3000	1	1.1	CCW	SLV			7021-6804	A	
KEEPRITE														
D1121	SP	3.3	1/20	208-230	1550	1	1	CW	SLV	5/16 X 2 1/2	3 1/2	7163-8861, 1043766	B	

FIG. A D1152, D1154

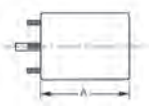
FIG. B A135

FIG. C A163

FIG. D A200

FIG. E A206

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
KRAMER/TRENTON														
D1152	SP	3.3	1/20	115	1500	1	1.7	CW	SLV	5/16 X 2 3/8	2 7/8	5KSM59ES2001	A	
D1154	SP	3.3	1/20	230	1550	1	1	CW	SLV	5/16 X 2 3/8	3 1/8	JA2R140N	A	
LARKIN COIL														
D1101	SP	3.3	1/20	115	1500	1	1.9	CCW	SLV	5/16 X 2 1/4	2 3/4	Larkin No. 253-1194 Fasco No. 7163-2113	A	75
LENNOX														
A135	SP	3.3	1/60	120	3000	1	0.7	CCW	SLV			LENNOX, 7021-8812, 7021-8819	B	
A163	SP	3.3	1/20	115	3400	1	1.8	CCW	BALL			LENNOX, 7021-9450	C	
A200	SP	-	1/30	115	3000	1	1.95	CCW	SLV			7002-2975, 31L5501	D	
A206	SP	3.3	1/25	115	3000	1	1.5	CW	SLV			7021-8473, 65204100/20J8901	E	



Thermally protected • UL recognized • CSA or ULc certified

NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

OEM Direct Replacement Motors

FIG. A A324

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
LENNOX														
A324	PSC	3.3	1/12	230	3200	1	.44	CW	BALL			7062-1909, 28G6601, 7062-1794	A	

FIG. A D1100

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
LOREN COOK														
D1100	SP	3.3	1/50	115	1550/900	2	1.2/.7	CW	SLV	5/16 X 2 3/8	2 7/8	7173-1580, GC/GN 142/144	A	

FIG. A A241

FIG. B A247

FIG. C D2840

FIG. D D832

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
RHEEM/RUUD														
A241	SP	3.3	1/25	208-230	3200	1	0.62	CW	SLV			7021-9567, 70-23641-81	A	
A247	PSC	3.3	1/40	115	3250/2800	2	.95	CW	SLV			7062-5519	B	
D2840	PSC	5.6	1/5	208/230	1075	1	1.3	CW	SLV	1/2 X 4 1/8	3 3/4	51-21853-82	C	
D832	PSC	5.6	1/8	208-230	825	1	1.1	REV	SLV	1/2 X 4 3/4	4	21276-02, 21276-01, 512076-01	D	

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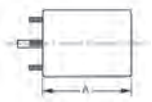

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FIG. A K628

FIG. B A079

FIG. C A136

FIG. D A139

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
RHEEM/RUUD														
K628	SP	-	1/200	208-230	3000	1	0.25	CW	SLV	1/4 X 1 1/2	5	51-21964-01, 7102-0628	A	
A079	SP	3.3	1/50	115	3000	1	1.1	CCW	SLV			74-70-21504-03-04, 74-70-21496-03-01, JAIM106, JAIM137, 7021-5615	B	
A136	PSC	3.3	1/20	115	3450	1	0.75	CW	SLV			RHEEM, 7062-3861	C	38
A139	SP	3.3	1/55	115	3000	1	0.95	CW	SLV			RHEEM, 7021-7577	D	

NOTES: 38: 4MFD, 370VAC capacitor rating (not included)

FIG. A D1164

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
SINGER														
D1164	SP	3.3	1/25	115/230	1550	1	1.3-.65	CW	SLV	5/16 X 2 1/2	3 1/8	JA2P091N, JA2P0901N	A	

FIG. A A197

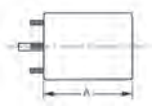
FIG. B A276

FIG. C D1050

FIG. D D895

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	CROSS REF.	FIG.	NOTES
TRANE													
A197	3 PHASE	3.3	1/70	33-110	1500-4700	VAR.	1	CW	BALL		7092-0238, D342097P01	A	
A276	SP	3.3	1/55	115	3000	1	1	CW	SLV		7021-9011, D330757P01	B	
D1050	PSC	5	1/8	230	1650	1	1.1	CW	SLV	1/2 X 3	WW94X236SP, WW94X936PSC	C	199
D895	PSC	5.6	1/8	208-230	1650	1	0.8	CW	SLV	1/2 X 1 1/2	5KCP39BGR426S, MOT 6363	D	1

NOTES: 1: 4M 370V capacitor 199: Original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing shaft end of motor to prevent moisture from enteringmotor



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NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

OEM Direct Replacement Motors

FIG. A D1190

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	"A" DIM.	CROSS REF.	FIG.	NOTES
WEIL MCLAIN														
D1190	SP	3.3	1/30	115	3000	1	1.6	CW	SLV	5/16 X 1 3/4	4 7/8	7121-5750, JA1N074	A	

FIG. A A165

FIG. B A224

FIG. C A225

FIG. D A228

FASCO MODEL	TYPE	DIA.	HP	VOLTS	RPM	SPD.	AMPS	ROT.	BRNG.	SHAFT DIM.	CROSS REF.	FIG.	NOTES
YORK													
A165	PSC	3.3	1/25	115	3450	1	0.7	CW	BALL		7062-3958	A	
A224	SP	3.3	1/18	115	3450	2	0.8	CW	SLV		7062-5048, 024-27654-000, 7062-4743	B	
A225	SP	3.3	1/15	115	3200	1	2.25	CW	BALL		7021-11577, 17503, 7021-11830, 024-34558-000	C	
A228	SP	-	1/25	115	3000	1	2	CW	BALL		7002-3285, 024-31957-000, 7002-2941	D	

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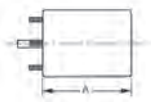

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Fas Mount Bracket Kits

FM50

Motor diameter 5.0"

Bolt circle 9" and 10.18"

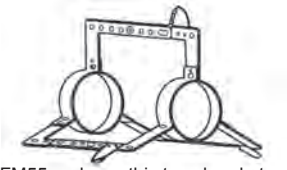
FM554

Motor diameter 5.5"

Bolt circle 9" and 10.18"

These kits are designed for direct drive blower motors using the flexible bracket mounting arrangement.

Grommets and eyelets are included.



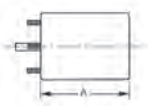
FM55 replaces this type bracket

Mounting Kits

KIT200

Holes for 4.4” and 5.6” diameter motors.

One kit will adapt both ends of motor for base mounting.



NOTES: 13: 7.5M 370V Capacitor 205: Window A/C Using Delco Inside-Outside Motor 485932, KCP39PG9769S

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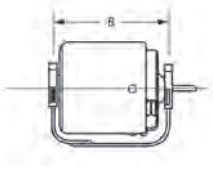
NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

Accessories

Two base clamps ship with each base.



Specify shaft height 3.00" or 3.50" and motor model.

NOTE: The current base numbering system uses the first two numbers to indicate shaft height (30 is 3.0" and 35 is 3.5") and the last three numbers represent distance between cradle arms (386 is 3.86" etc.). Example: 35-417 has a 3.5" shaft height and 4.17" cradle base. To achieve the shaft height listed, the 2 1/2" diameter rings must be used.

For motors not listed: Add .8 to a "A" dimension of 4 7/16" diameter motors for base "B" dimension. Add .9 to "A" dimension of 5" diameter motors for base "B" dimension. Add .5 to "A" dimension of 5 5/8" diameter motors for base "B" dimension.

CRADLE BASE "B" DIMENSION	3-1/2" BASE NO.	3" BASE NO.
3.54	35-354	30-354
3.86	35-386	30-386
4.08	35-408	30-408
4.17	35-417	–
4.35	35-435	30-435
4.61	35-461	30-461
4.79	35-479	30-479
4.92	35-492	30-492
5.17	35-517	30-517
5.42	35-542	30-542
5.58	35-558	30-558
5.95	35-595	30-595
7.05	35-705	30-705

RESILIENT MOTOR BASES											
FASCO MODEL	RECOMM. BASE	FASCO MODEL	RECOMM. BASE	FASCO MODEL	RECOMM. BASE	FASCO MODEL	RECOMM. BASE	FASCO MODEL	RECOMM. BASE	FASCO MODEL	RECOMM. BASE
D112	517*	D338	492	D703	558	D816	461	D939	461	D1749	461
D117	386	D339	492	D711	595	D818	705*	D940	595*	D1853	492
D148	354	D347	386	D721	461	D821	542	D951	595*	D1910	595
D150	492*	D356	417	D723	517	D823	595	D966	517*	D1911	558
D151	492*	D435	517*	D725	461	D825	705	D967	558	D2700	595
D152	492*	D474	542	D726	558*	D838	595	D968	595	D2701	558
D154	558	D480	542	D727	479	D860	595	D970	595	D2702	595*
D156	479*	D481	542	D728	595	D870	542	D971	542	D2703	595*
D158	479*	D482	492	D729	595	D896	435	D972	492	D2704	595*
D160	479*	D483	492	D730	595	D897	435	D973	461	D2705	705*
D164	479*	D484	492	D733	492	D902	595	D974	595	D2814	595*
D166	479*	D485	492	D735	595	D910	595	D975	461	D2816	NONE
D174	417	D486	517*	D737	517	D911	558	D1016	479	D2817	595*
D176	354*	D487	517*	D739	492	D912	479	D1025	492	D2818	NONE
D178	417	D488	517	D745	517	D913	479	D1033	479	D2832	595*
D236	435	D489	542	D748	492	D914	595	D1042	492	D2833	595
D260	479	D490	558	D780	517	D915	595	D1046	386	D7745	517
D261	461	D491	558	D782	492	D916	595	D1051	408	D7748	492
D264	408*	D492	558	D783	461	D918	479	D1061	492	D7749	435
D312	492	D493	558	D784	558	D920	595	D1065	408*	S2846	705
D314	517*	D494	492	D785	542	D923	492	D1086	435	S2848	NONE
D316	461*	D495	492	D786	595	D927	435	D1089	435	S156	435
D329	435	D497	542	D787	492	D928	435	D1246	435		
D333	386*	D635	435	D788	558	D929	558*	D1709	595*		
D335	408	D656	479	D789	592	D930	558*	D1710	705*		
D336	435	D658	479	D807	435	D935	558	D1745	558		
D337	435	D701	595	D812	492	D937	461	D1748	461		

* May need to reverse one or more mounting rings

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Below is a quick reference listing of numbers you will find in the notes column of FASCO's model charts throughout the catalog, and their respective meanings.

1 4M 370V capacitor
2 7.5M 370V capacitor not included
3 6M 370V capacitor
4 Water Heater Draft Inducer
5 Special low-temperature oil
6 Includes 4M 370V capacitor
7 Includes shaft bushing
8 Does not have shaft bushing
9 3M 370V capacitor
10 Has hall effect sensor
11 5M 440V Capacitor
12 10M 370V Capacitor
13 7.5M 370V Capacitor
14 7.5M 440V Capacitor
15 20M 370V Capacitor
16 Rotation is determined by viewing lug end
17 7.5M 370V Cap installed
18 Rotation is determined by viewing lug end.
19 Original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing shaft end of motor to prevent moisture from entering motor.
20 Not a direct replacement, but suitable for referenced models.
21 Rotation is determined from viewing lug end
22 2M 370V Capacitor
23 4 MFD 370V Capacitor
24 15M 370V Capacitor
25 Equipped with KFAN6046 fan blade
26 4M 250V Capacitor included
27 12.5M 370V Capacitor
28 4MFD 370V Capacitor included
29 4M 370V capacitor included
30 Special low temperature oil
31 5M 370V Capacitor
32 Not a direct replacement for 5KCP49SG1010S, but is an acceptable substitute.
33 Stainless steel shaft
34 Mounts on (3) P/N 0061-1518 Coleman Mounts
35 Has 8 drilled and tapped holes in shell
36 Has 4 drilled and tapped holes in shell
37 Includes 8 drilled and tapped holes in shell
38 4MFD, 370VAC capacitor rating (not included)
39 4MFD, 370VAC capacitor rating (included)
40 Original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing shaft end of motor to prevent moisture from entering motor.
41 Includes centrifugal switch
42 25M 370V Capacitor
43 Packed 6 per carton
44 Packed 1 per carton
45 Speed nut and vibration damper included.
46 Belted Fan & Blower Motor
47 56H Mounting
48 145T Frame
49 Mechanically Reversible
50 3M 370V Capacitor Included
51 3-1/2" SHAFT HEIGHT
52 6M 370V capacitor included
53 4M 370 capacitor included
54 5M 370V capacitor included
55 Has internal fan & 3.5" BC mounting holes for GE 21/29 Frame replacement.
56 Drilled and tapped holes in case for Coleman mounting
57 Luxaire/Whisperaire
58 With plug for Penn Ventilator
59 Repl. For Siegler & Williams Wall Heaters
60 Penn Ventilator
61 Repl. For Butler & Leslie-Locke Roof Ventilator--BX Connector
62 Hub only on shaft end
63 Repl. For Leslie-Locke Roof Ventilator
64 Sterling Radiator Co.
65 For use with Greenheck Fan
66 Shaft stepped down from 3/8" dia. Shaft
67 OEM direct replacement for Jenn Air 80CR
68 Used in Jenn Air units. P/N 7108-2101
69 Used in Leslie Locke ventilators original P/N 7108-5056
70 Used in Acme Eng. Roof Vents
71 ILG ventilator 7108-2171. Has internal fan.
72 External oil retainer to accommodate resiliant rings and cradle base, drilled and tapped holes in case for mounting in Coleman applications. (2 holes each end on case OD).
73 Mechanically Reversible
74 Popular Ice Machine pump motor
75 Shell Turbo 68, low temp. oil (-40°F)
76 Impedence Protected
77 Has hubs for end rings
78 Closed construction
79 See Tecumseh OEM section for cross references
80 With conduit box
81 PSC motor requiring a 10 MFD 370V cap
82 Rotation determined by viewing lug end
83 Totally enclosed, Sears-Whirlpool 5000-8000 BTU units.
84 4M 370V capacitor (similar to GE WJ94X306)
85 Air Over
86 Drilled & Tapped Holes (No. 8-32NC) in face of case at shaft end for mounting in various Coleman mobile home furnace applications, also has mounting studs.
87 Used in Economite, "E-20", LS1/Miller and Mid Continent gas units.
88 3 small lugs for Kit 55S
89 4 grommets to fit lugs on Kits 34, 49, 50, 55L, 55S
90 15 MFD 370V
91 7.5MFD 370VAC capacitor
92 Shaft up or horizontal applications
93 Motor has increased stack for higher ambient temperatures
94 7.5 m 440V Capacitor
95 Comes with unmounted conduit box.
96 Has maximum ventilation for high ambient temperatures
97 All angle mount bearings
98 All angle mount bearings. Use rainshield when necessary.
99 All angle mount bearings.
100 10 MFD 370V
101 7.5 MFD 370V
102 20 MFD 370V
103 Ideal for blowers and fans used in furnaces and air-conditioners
104 The capacitor and base are included
105 Ideal versatility using Kit 200 "X" brackets to accommodate various cradle base lengths
106 Includes dust seal
107 Includes pull-chain switch
108 12.5MFD 370V capacitor included
109 No pedestal yoke mount
110 Blower system designed to enhance heat output from home fireplaces. Kit includes variable speed control and temperature sensor switch.
111 Application: Designed for use in residential outdoor condenser fan and heat pump units (primarily up to 3.5 ton)
112 Vibration motor
113 PSC version of D1189 (OEM Replacement for Krack Refrigeration.
114 Separate connection for each voltage
115 Not a direct replacement for 253-1194, but is an acceptable substitute
116 Replacement for Airease
117 Not a direct replacement for 253-1194, but is an acceptable substitute
118 10M 370V capacitor not included
119 Has special OEM wiring configuration. Not for general purpose 3 speed applications
120 Use Fan Blades with round hub I.D.
121 Two Speed Motor
122 K110 has maximum flat length
123 Double Shafted
124 All mounting holes drilled and tapped.
125 Continuous Duty
126 3/8" shaft diameter with adapter to convert to 1/2" diameter
127 Front endshield drillled and tapped with four 10-32 threads on 3.5" bolt circle
128 Electrically Reversible
129 Repl. For ITT REZNOR
130 Do not have extended hubs or rubber rings for base mount
131 Motors include shaft bushing
132 Open vented on opposite shaft end
133 Shaft down or horizontal applications
134 Does not have removable conduit boxes
135 Special wiring configuration. Cannot be used with SPDT switching.
136 Does not come with conduit box.
137 Ideal for blowers and fans used in furnaces and air-conditioners.
138 Not CSA certified
139 All angle mount bearings. Use rainshield when necessary
140 Has 10' cordset
141 Keyed shaft
142 Vertical shaft down application.
143 All motors individually boxed.
144 Resilient Base
145 Interchangeable with GE 21 & 29 Frame motors and other Emerson, Universal and Franklin refrigeration motors
146 Interchangeable with GE 21/29 Frame and Universal Motors
147 Comes with 2 1/2" O.D. Rubber Mounting Rings
148 Weld nuts on 3.5" B.C. for stud mount
149 Wiring slightly different from OEM PSC; check nameplate connection diagram. Capacitor and Bracket included. Replaces 2 and 3 speed SP and PSC motor. Motor in Gibson/Belding window units.
150 Endshield on D520 is easily removed, allowing rotor and shaft to be rotated, thereby reversing motor rotation.
151 Has keyed shaft
152 Ideal for unit heaters
153 Agricultural applications
154 Extended hubs with rubber rings for base mount
155 Includes 8 drilled and tapped holes in shell.
156 Interchangeable with GE 21 & 29 Frame motors & other Emerson, Universal & Franklin Refrigeration motors
157 All angle mount sleeve bearings
158 All Rubber rings are used with direct drive blower motors and "Clamp" type supports.
159 D180 for International Oil Burner Co.- Furnaces MAC5A, 1045, 1052, 1060, 1145, 1155, 1165, 1175, 1265, 1380, 7040, 7060.
160 Henrite are rubber mounting rings with steel band, used with cradle bases and knife edge motor supports.
161 Hubless endshields for flush mounting
162 Ideal for lug mounting using lug Kit 55L or 55S
163 Internal cooling fan
164 Rotation is facing side opposite hub
165 Skeleton Motor
166 3.25" Diameter
167 Self-Cooled
168 10M 440V Capacitor
169 Mounting bracket designed to match the original motor (four 8-36 drilled and tapped holes)
170 Mounting hardware included
171 Has 22" leads with 1/16" thick insulation
172 Three studs opposite shaft end are 8-32 on a standard 2.84" bolt circle, 120° apart
173 3.9" diameter
174 Includes 1/2" studs for mounting
175 Bolt circle = 3.15"
176 Endshield on D520 is easily removed, allowing rotor and shaft to be rotated, thereby reversing motor rotation.
177 Used in Economite, "E-20", LS1/Miller and Mid Continent gas units.
178 External oil retainer to accommodate resiliant rings and cradle base, drilled and tapped holes in case for mounting in Coleman applications. (2 holes each end on case OD).
179 Self cooled for mechanical duty
180 Can be operated on 50Hz with air-over applications
181 3 1/2" shaft height
182 Has internal fan & 3.5" BC mounting holes for GE 21/29 Frame replacement.
183 Drilled and tapped holes in case for Coleman mounting
184 D180 for International Oil Burner Co.- Furnaces MAC5A, 1045, 1052, 1060, 1145, 1155, 1165, 1175, 1265, 1380, 7040, 7060.
185 Rooftop Ventilator
186 Unit Heater
187 Includes shaft water slinger
188 60° ambient temperature rating
189 Closed end shield shaft end
190 All angle mount bearings. Use rain shield when necessary.
191 Should not be used for replacements where original motor is rated below 1500 RPM
192 Ideal versatility using Kit 200 "X" brackets to accommodate various cradle base lengths
193 Poultry and Hog House fan motor
194 Condenser Fan Motor
195 50/60 Hz
196 Draft Booster/ Flue Exhaust/ Switch Motors
197 For 208V use 7.5M 370V Capacitor and 240V use 6M 370V Capacitor
198 Has special OEM wiring configuration. Not for general purpose 3 speed applications
199 Original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing shaft end of motor to prevent moisture from entering motor
200 Not a direct replacement for 5KCP49SG1010S, but is an acceptable substitute.
201 Not a direct replacement for 253-1194, but is an acceptable substitute
202 Original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing shaft end of motor to prevent moisture from entering motor.
203 Leads require modification
204 100,000 BTU Furnaces
205 Window A/C Using Delco Inside-Outside Motor 485932, KCP39PG9769S

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NOTE: Rotation is determined by looking at shaft end. Shaft length is measured from motor face.

Notes Glossary

NOTE:

Underwriters Laboratories has developed additional safety requirements for motors used in equipment where abnormal unit operation could likely be undetected by the user, thus increasing the risk of personal injury or property damage.

For example, a motor with a locked shaft could operate undetected for an extended period of time in an attic ventilator fan, thus increasing the risk of fire.

Fasco General Replacement and OEM Direct Replacement products for use in attic ventilators, bathroom ventilators, whole house fans, wall furnaces and other units in the category have been modified to meet these new standards.

Special attention must be given to ensure that ONLY the modified products are supplied to customers with units of this type.

Motors that are NOT SUITABLE for use in unattended equipment are clearly marked as such with a warning lable indicating the increased risk of fire.

The new safety requirements for air moving equipment used in unattended locations within a structure are documented in UL Standard 507, Electric Fans.

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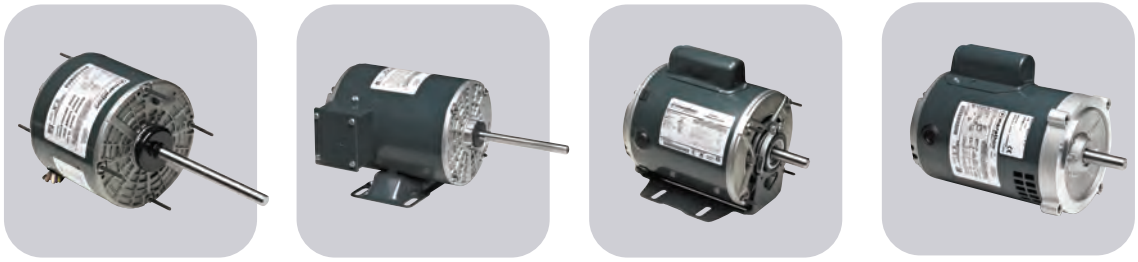
Marathon



Delivering Confidence

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Refrigeration Fan Motors, Three Phase, Open Air Over, Shaft Up & Horizontal Rigid Base Mount	ME-24
Accessory Kits	ME-25
NEMA Quick Reference Dimensional Chart	ME-26
Footnotes	ME-27

⚠ WARNING:
Cancer and Reproductive Harm
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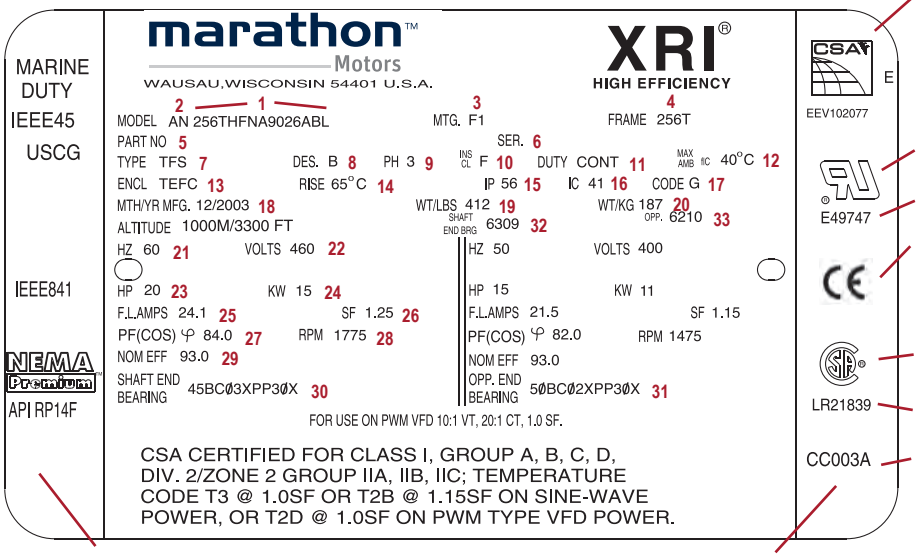
Marathon Motors Nameplate Information – How To Read The Nameplate

The nameplate is the key to selecting the proper replacement motor.



Motor Specifications (Example)

Agency Symbols

CSA Verification Mark - Complies with CSA's Energy Efficiency Verification Service and their Standard C390 - C390 is the Canadian efficiency equivalent of EPAct.

Underwriters Laboratories, Inc. UL Recognized Component Mark
UL file #

CE (Conformité Européene) Marking
This mark signifies the motor complies with the European Low Voltage Directive.

CSA Mark - Certified by the Canadian Standards Association

CSA file #

CC# - Compliance Certification Number as per assigned by the Department of Energy. Motors meeting EPAct efficiencies or higher will have this number.

1. **MODEL** - The ID number
2. **DATE CODE** - The month and year manufactured
3. **MTG.** - Mounting
4. **FRAME** - The size & mounting
5. **PART NO.** - Customer part number
6. **SER.** - Serial number
7. **TYPE** - Electrical type
8. **DES.** - Code by NEMA or IEC
9. **PH** - Electrical phase usually 1 or 3
10. **INS CL** - Insulation Class
11. **DUTY** - Time rating under load
12. **MAX AMB** - The allowable surrounding air temperature
13. **ENCL** - Enclosure (i.e. TEFC)
14. **RISE** - The temperature rise over ambient expressed in degrees Celsius when the motor operates at nameplated HP or KW
15. **IP** - Inherent Protection of the enclosure to solids and liquids as defined by IEC 34-5
16. **IC** - Inherent Cooling
17. **CODE** - NEMA locked-rotor KVA
18. **MTH/YR MFG.** - Month and year motor was manufactured
19. **WT/LBS** - Motor weight in pounds
20. **WT/KG** - Motor weight in kilograms
21. **HZ** - Input frequency of the power supply, usually 50 or 60 HZ
22. **VOLTS** - Voltage rating of the motor at the operating frequency
23. **HP** - Rated horsepower the motor will produce
24. **KW** - Rated output in watts
25. **F.L. AMPS** - The rated load current expressed in amps at nameplated horsepower with nameplate voltage and frequency
26. **S.F.** - Percentage of the rated horsepower the motor can safely operate at: Example: 1.15 SF (115% of rated HP)
27. **PF / COS** - Power Factor / Cosine is the ratio of actual power to the apparent power
28. **RPM** - Full load speed at rated frequency
29. **NOM EFF** - Average Efficiency
30. **SHAFT END BEARING** - Manufacturer drive end bearing number
31. **OPP. END BEARING** - Manufacturer opposite drive end bearing number
32. **SHAFT END BRG** - Drive end bearing size
33. **OPP** - Opposite drive end bearing size

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

General Information

How To Read A Model Number:

Each Marathon Motors motor carries a model number that can be used to define some of the motor's physical and electrical characteristics.

Example (For Fractional): 1PC48C17D2000AP

This is a breakdown of the model on the nameplate:

1	P	C	48	C	17	D	2000	A	P
1	2	3	4	5	6	7	10	11	12

This is a breakdown of the model in the catalog:

48	C	17	D	2000
4	5	6	7	10

Example (For Integral): 2QA215TBDRA7076ALL

This is a breakdown of the model on the nameplate:

2	Q	A	215T	B	D	R	A	7076	AL	L
1	2	3	4	5	7	8	9	10	11	12

This is a breakdown of the model in the catalog:

215T	B	D	R	A	7076
4	5	7	8	9	10

1. Date Code - Year of Manufacture
(Not shown in catalog listings.)

2. Thermal Protection (Not shown in catalog listings.)

	UL Recognized Motor Protector Combination	UL Recognized Motor Construction
Automatic Reset	Automatic Reset	Automatic Reset
Q	Yes	Yes
S	No	No
U	No	Yes
W	#	Yes
Manual Reset	Manual Reset	Manual Reset
P	Yes	Yes
Z	No	Yes
X	No	No
None	None	None
V	No	Yes

Motor protector combination is U.L. recognized only if motor is used in direct drive fan duty application, and is under locked rotor condition, or is running under no-load condition.

3. Date Code - Month of Manufacturer (Not shown in catalog listings.)

4. NEMA Frame Size - (Integral motors - T and U designate standard shaft, TS and US designate short shaft)

5. Electrical Type

Single Phase:
- A = Permanent split capacitor
- B = Capacitor start, capacitor run
- C = Capacitor start, induction run
- N = Split phase start, capacitor run
- S = Split phase

Three Phase:
- T = Three phase
- H = Inverter Duty/IEEE841 Inverter Duty
- V = Medium Voltage

DC Power:
- E = Permanent Magnet DC

6. RPM or Speed at 60 Hz (Fractional Only)
- 34=2-Pole, 3600 rpm
- 17=4-Pole, 1800 rpm
- 11=6-Pole, 1200 rpm
- 8 = 8-Pole, 900 rpm

7. Enclosure
- D = Dripproof
- E = Explosion proof, non-ventilated
- F = Totally enclosed, fan cooled
- G = Explosion proof, fan cooled
- O = Open
- P = Partial
- S = Semi-enclosed
- T = Totally enclosed, non-ventilated
- V = Washdown, non-ventilated
- W = Washdown, fan cooled

8. Frame Construction

Integral	Fractional
L = Aluminum (Full Frame)	B = Rolled Steel - Sourced
Y = Aluminum (Full Frame)	D = Stainless Steel - Sourced
Z = Aluminum (High Mount Down Frame)	U = Frameless - Sourced
H = Aluminum - Sourced	
R = Rolled Steel (Full Frame)	
W = Rolled Steel (Full Frame)	
X = Rolled Steel (High Mount Down Frame)	
B = Rolled Steel - Sourced	
S = Cast Iron (Full Frame)	
N = Cast Iron (Full Frame)	
P = Cast Iron (High Mount Down Frame)	
C = Cast Iron - Sourced	
D = Stainless Steel	

9. Style Letter (A, B, C, etc. indicate redesign)

10. Sequence Number

11. Minor Modification Letter(s)
Fractional - 1 letter; Integral - 2 letters

12. Manufacturing Code - A code for the factory where the motor was manufactured.

⚠ WARNING:
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How To Read A Model Number: Continued

Example ("harmonized" motor design):

A	B	C	D	E	F	G	H	I
5	KH	3	6	K	G	142	–	X

A. Rotating Device

B. Type of Winding

KH - Split Phase
KC - Capacitor Start, Induction Run
K - Polyphase
KCP - Permanent Split Capacitor
KCR - Capacitor Start, Capacitor Run

C. Lamination Size

3 - 48 frame, 4 - 56 frame

D. Length of Frame

	48 frame	56 frame
2	5.17	5.73
3	5.42	6.63
4	None	None
5	5.80	7.11
6	6.23	None
7	6.63	7.63
8	7.23	8.44
9	Spec.	Spec.

E. Stack Length

A - 5/8"	F - 1-1/4"	L - 1-7/8"	S - 3.0"
B - 3/4"	G - 1-3/8"	M - 2.0"	T - 3-1/4"
C - 7/8"	H - 1-1/2"	N - 2-1/4"	U - 3-1/2"
D - 1.0"	J - 1-5/8"	P - 2-1/2"	W- 4.0"
E - 1-1/8"	K - 1-3/4"	R - 2-3/4"	Q - Spec.

F. Endshield Construction

G & N - Aluminum
K - Steel
C - Cap/Can

G. Sequence Number

H. Current Revision (blank if original)

I. Type of Overload

X - UL Auto running & locked rotor
Y - UL Manual running & locked rotor
S - UL Auto locked rotor
T - Non-UL Auto running & locked rotor
U - Non-UL Manual running & locked rotor
V - Thermostat
W - UL Motor Parts

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Application Information

Agency Listings

UL and CSA

Marathon Motors's Fire Pump and Explosion Proof motors are UL Listed. Other motor types are UL Recognized, including models with inherent overheating protection as noted (i.e. thermally protected models). Marathon motors are also CSA Certified for both explosion proof and non-explosion proof enclosures.

AC Motors

Non-Explosion Proof	UL File No.	CSA File No.
NEMA 48-449 Frame	E49747	LR2025
All 5K type models numbers	E46035	MC236833
NEMA 500 and 5000 Frame	—	LR2025*
IEC 63-90 Frame	E49747	LR2025
IEC 100-280 Frame	E49747	LR2025#
Thermally Protected motors	E6312	LR2025
Thermally Protected 5K motors	E14133	MC236833
Insulation Systems	E37900	LR2025
* Does not include coverage for use with VFD		
# Domestic product only		
Explosion Proof	**UL File No.**	**CSA File No.**
NEMA 56-326 Frame	E12044	LR47504
NEMA 364-449 Frame	E12044	LR21839
Fire Pump Motors	**UL File No.**	**CSA File No.**
NEMA 143-510	EX5190	LR2025
Class I, Division 2/Zone 2	**UL File No.**	**CSA File No.**
NEMA 48-449, 5000 Frame	—	LR21839
European ATEX Zone 2	**Intertek Certificate No.**	
NEMA 143-449, IEC 112-280	ITS06ATEX45370	

PMDC Motors

Non-Explosion Proof	UL File No.	CSA File No.
NEMA 56-145	E49747	E49747

CE (Conformity Europeanne)

CE marking on the nameplates of Marathon Motors motors is available upon request for most motors rated 600V or less. We do not apply the CE Marking to explosion proof motors. The European "Low Voltage" Directive applies to electric motors. Contact a factory representative for details. Non-explosion proof microMAX™, BlackMax® and BlueMax® (TENV and TEFC) standard (catalog) models have the CE Mark on the nameplate.

ATEX Directive (ATmospheres EXplosibles)

Mandatory by law, the European Union (EU) Directive 94/9/EC requires that electric motors for use in explosive atmospheres carry the CE mark, notified body identifier, Ex symbol, equipment group and category, plus the date code. See "European Installations" for additional details, located on the next page.

NEMA (National Electrical Manufacturers Association)

Marathon Motors motors are manufactured in accordance with all applicable areas of NEMA standards in MG1-2006. When applied in accordance with the "Guidelines for Application of Three Phase Motors on Variable Frequency Drives", **Marathon Motors motors are in full compliance with NEMA MG1-2006, Part 31, Section 4.4.2**, as pertaining to voltage spikes. 460 volt motors must withstand voltage spikes of up to 1426 volts; 575 volt motors must withstand spikes up to 1788 volts. See "Insulation Systems" for additional detail on this subject.

Commitment to RoHS and WEEE European Directives

European Directive 2002/95/EC "Restriction of Use of Certain Hazardous Substances" (RoHS) and Directive 2002/96/EC "Directives on Waste Electrical and Electronic Equipment" (WEEE) were enacted to control the amount of certain hazardous substances contained in products shipped into the E.U. Restricted substances include lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated dipheynl ethers.

The scope of products covered, affecting motors, is:

- Large household appliances
- Small household appliances
- IT and telecommunications equipment
- Consumer equipment
- Electrical and electronic tools (except large scale stationary and industrial tools)
- Toys, leisure and sports equipment
- Automatic dispensers

The Directives do not currently apply to medical devices, monitoring and control instruments, spare parts for the repair or reuse of electrical and electronic equipment placed on the market before July 1, 2006, and most military and state security equipment.

Regal Beloit Corporation worked closely with suppliers to assure that product falling within the scope of these Directives meets the specified levels of these substances. The Directives took affect July 1st, 2006 however many products were converted in May and June. The products converted are motors in NEMA frame size 145 and below, both AC and DC motors with the following exceptions:

- Sleeve bearing motors
- Brake motors in 56-145 frame will have to be ordered specifically as RoHS compliant.
- Some motors with specialty electro-mechanical components.

Bearings

Frame Size	Standard Type	Comments
48	Shield Ball	
56 - 184T	Sealed Ball	
182 - 444T	Double Shield Ball	
284 - 449TS	Single Shield Ball	
445T - 6805	Double Shield Ball	Direct - coupled loads
445T - 6805	Roller (DE)/Ball	Belted loads

*** Belting data must be provided on all belted applications**

Standard horizontal motors can be mounted in a vertical shaft down orientation (except brakemotors). Contact a factory representative for shaft up mounting arrangements.

Motors for use in vertical shaft up or shaft down configurations must be reviewed by Engineering before ordering.

Continued on next page.

Marathon Motors motors employ the use of Mobil POLYREX® EM grease, a specially formulated bearing grease designed for electric motors. POLYREX® EM provides superior lubricity, durability and resists corrosion, rust and washout. POLYREX® EM is a registered trademark of Mobil Corporation.

Maximum safe mechanical speed capability is a function of bearing size, type and grease selection, as well as rotor balance specifications. Consult the "Maximum Safe Mechanical Speed Limits" chart in the "Overspeed Capability" section.

Note that these values do not imply maximum constant horsepower RPM.

Efficiency

The efficiency of a motor is the ratio of its useful power output to its total power input and is usually expressed in a percentage. Marathon Motors offers standard, high efficient EPAct, and NEMA Premium® efficient (XRI) ratings. Standard efficiency motors may only be used on applications that are exempt from legislated efficiencies. The high efficient motor line is in compliance with the Energy Policy Act of 1992 (EPAct) and/or Canadian efficiencies as set by NRCan. The Energy Independence and Security Act of 2007 (EISA07) will become law on December 19, 2010, requiring current EPAct-compliant motors to meet NEMA Premium® efficiencies, and most EPAct-exempt motors to meet EPAct levels. XRI Premium efficient motors in this catalog meet NEMA Premium® unless otherwise noted.

The XRI® line is a premium efficiency line, which exceeds mandated efficiencies of EPAct and /or NRCan. Unless otherwise noted, XRI® premium efficient motors in this catalog meet NEMA Premium® the newly promoted efficiency levels by NEMA and the Consortium for Energy Efficiency (CEE).

Electrical Type/Starting Method

Motors in this catalog are capacitor start, split phase, permanent split capacitor, or three phase. Capacitor Start motors have high starting torque, high breakdown torque, and relatively low starting current. Split phase motors have medium starting torque and medium starting current. Permanent split capacitor motors have low starting torque and low starting current. Three phase motors have high starting, extra breakdown torque, and typically very low starting current. Single phase motors cannot be applied on variable frequency drives with three phase output.

Enclosure And Method Of Cooling

Marathon Motors motors are available in various enclosures; Dripproof (DP), Dripproof Force Ventilated (DPFV), Totally Enclosed Fan Cooled (TEFC), Totally Enclosed Non-Ventilated (TENV), Totally Enclosed (TEAO) and Totally Enclosed Blower Cooled (TEBC). Application conditions will determine the type of motor enclosure required.

Dripproof motors have open enclosures and are suitable for indoor use and in relatively clean atmospheres. Dripproof motors have ventilating openings constructed so that drops of liquid or solid particles falling on the machine at an angle of not greater than 15 degrees from the vertical cannot enter the machine.

Totally enclosed motors are suitable for use in humid environments or dusty, contaminated atmospheres. Totally enclosed non-ventilated motors are NOT cooled by external means. Totally enclosed fan cooled motors are cooled by external means that are part of the motor but not in the internal workings of the motor. Totally enclosed air over motors are sufficiently cooled by external means, provided by the customer.

Hazardous Duty™

Hazardous Duty™ motors are totally enclosed (fan cooled or non-ventilated) motors designed for applications in hazardous atmospheres containing explosive gases and/or combustible dusts.

North American installations
North American standards for electric motors generally fall into one of two divisions. Division 1 Explosion Proof motors are UL Listed in accordance with NFPA Class I (Flammable Gases) or Class II (Combustible Dusts) and Groups (gases or dusts), depending upon the atmosphere. Division 2 motors are CSA Certified and are marked similarly to Division 1 equipment. Inverter Duty motors through 449T frames are CSA Certified for use in Division 2 locations.

European installations
Motors for hazardous locations in Europe must meet a different set of standards and require different markings than those of North America. CENELEC sets the standards for equipment in hazardous locations for Europe. Motors for use in explosive atmospheres in Europe are often referred to as flameproof (Zone 1) or non-sparking (Zone 2) motors. These motors must comply with the ATEX Directive. The ATEX Directive covers all electrical equipment used in explosive atmospheres. To ensure compliance with the Directive, equipment must meet the essential ATEX requirements and carry the CE mark on the nameplate. Other information required on the nameplate includes the Ex symbol, group & category, Ex protection method, gas group, and temperature code, example (Ex II 3 G Ex nA IIC T3).

The tables on the next page describe Marathon Motors's capabilities by Area Classification and by Temperature Code.

IEC Degrees Of Protection vs. Marathon Motor's Standard Construction

The enclosure terminology for an IEC motor is a combination of the IP (Ingress Protection) and IC (Inherent Cooling) codes. Each number in the IP code stands for a different degree of protection.

IP12 - Dripproof

IP22 - Dripproof with screens, or die cast aluminum bracket

IP43 - Totally Enclosed

IP54 - Totally Enclosed Severe Duty

IP55 - Totally Enclosed Severe Duty with V-Ring Shaft seals, and/ or "Smart Ring" rotating shaft seal and Neoprene gaskets

IP56 - Totally Enclosed Severe Duty with rotating Shaft seals (eg. Inpro/Seal® VBX bearing isolator) and Neoprene gaskets

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Application Information

Marathon Motors Hazardous Duty Motor Area Classification Chart

Class I Area Classification (Flammable Gases, Vapors or Mists)				Class II Area Classification (Combustible Dusts)			
North America		Europe - ATEX (Category G - Gases)		North America		Europe - ATEX (Category D - Dusts)	
Division 1 Explosion Proof	Division 2 TEFC & TENV	Zone 1 Flameproof	Zone 2 Non-Sparking	Division 1 Explosion Proof	Division 2	Zone 21 Flameproof	Zone 22 Non-Sparking
Group A	Group A	Contact Marathon Motors for ATEX Zone 1 capabilities	Group IIC, Category G	–	–	–	–
Group B	Group B		Group IIC, Category G	–	–	–	–
Group C	Group C		Group IIB, Category G	–	–	–	–
Group D	Group D		Group IIA, Category G	–	–	–	–
–	–	–	–	Group E	–	Catagory D	Catagory D
–	–	–	–	Group F	Group F①	Catagory D	Catagory D
–	–	–	–	Group G	Group G②	Catagory D	Catagory D

- Group is not applicable to that Division or Zone, or is not defined.

① Group is not available from Marathon Motors.

② Contact factory representative for availability.

Marathon Motors Hazardous Duty Motor Temperature Code Chart

Temperature Codes			Division 1 Explosion Proof/Zone 1 Flameproof		Division 2/Zone 2 Non-Sparking
			Class I Area Classification (Flammable Gases, Vapors or Mists)	Class II Area Classification* (Combustible Dusts)	Class I Area Classification (Flammable Gases, Vapors or Mists)
Temp.	UL/CSA	ATEX	Division 1/Zone 1	Division 1/Zone 21	Division 2/Zone 2
280°C	T2A	T2(280)			
260°C	T2B	T2(260)			XRI® Severe Duty & IEEE-841 @ 1.15 S.F., Class I, Groups A,B,C,D (Sine wave power)
215°C	T2D	T2(215)			Available through Marathon's Mod Central on Totally Enclosed EPAct, XRI®, XRI® Severe Duty or IEEE-841 @ 1.0 S.F. on PWM VFD, Class I, Groups A, B, C, D
200°C	T3	T3			Available through Marathon's Mod Central on Totally Enclosed EPAct, XRI®, XRI® Severe Duty or IEEE-841 @ 1.0 S.F., Sine wave power Class I, Groups A, B, C, D
165°C	T3B	T3(165)	Explosion Proof - Class I, Group D (Group C as noted), Sine wave or PWM power	Explosion Proof - Class II, Groups F & G, Sine wave or PWM power	
160°C	T3C	T3(160)	Available through Marathon's Mod Central on Explosion Proof - Class I, Group C & D @ 1.0 S.F. - Contact Factory	Available through Marathon's Mod Central on Explosion Proof - Class II, Group F & G @ 1.0 S.F. - Contact Factory	
135°C	T4	T4	ATEX compliant motors	ATEX compliant motors	

Divison I & II ambient range is -25°C to +40°C
ATEX ambient range is -20°C to +40°C
Consult Marathon Motors for higher ambients

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Insulation Systems

Class B – General Purpose motors that employ Class B insulation systems have a total temperature rating of 130°C and maximum allowable temperature rise of 80°C at 1.0 S.F.

Class F – Motors with a Class F system have a total temperature rating of 155°C, with a maximum temperature rise of 105°C at 1.0 S.F. Many Marathon Motors designs utilize a Class F system but limit temperature rise to no higher than "B" rise, providing thermal "headroom" for longer insulation life.

Class H – Class H insulated motors have a total temperature rating of 180°C and maximum allowable temperature rise of 125°C. All Marathon Motors motors that employ a Class H system are designed to operate between "B" and "F" rise, giving the user a generous thermal cushion.

"CR^{200}" – Corona Resistant, 200° rated magnet wire is utilized in numerous general purpose and inverter duty motor designs to extend insulation life under the rigors of steep fronted voltage spikes, common with today's IGBT inverters. Refer to page 17 for product lines that employ the use of CR^{200} magnet wire.

Motors with the CR^{200} insulation system can be operated at up to 475 feet from the drive on 460 volt systems, at 3 KHz carrier frequency. For other voltages and/or carrier frequency combinations, contact a factory representative.

MAX GUARD® – All Black Max®, Blue Max®, Blue Chip®, XRI® Severe Duty and XRI®-841 (IEEE841) motors feature the MAX GUARD® insulation system, either in conjunction with Class F or Class H materials. Combining corona-resistant magnet wire (CR^{200}) with our patented "low stress" winding configuration and uncompromising quality standards, MAX GUARD® delivers long, dependable motor life under the adverse thermal and dielectric stresses imposed by IGBT-based variable frequency drives. MAX GUARD® surpasses the requirements of NEMA MG1-2006, Part 31, Section 4.4.2.

460 Volt (or lower) motors equipped with MAX GUARD® can be operated at any distance from the drive and at any carrier frequency. 575 Volt motors can be operated at up to 650 feet cable length at 3 KHz.

Mounting

Most Marathon Motors motors are designed for horizontal mounting (shaft parallel with ground), unless designed otherwise, such as Vertical P Base motors. As a general rule, a horizontal motor can also be mounted in a vertical shaft down orientation. Horizontal motors should never be mounted in a vertical shaft up orientation without consulting your application engineer, as this practice can cause damage to the motor, which is not covered under warranty. Brakemotors should not be mounted vertically (up or down), unless the brake has been specifically designed for such.

Nema Service Factor Ratings

The table below lists the NEMA service factors for single phase, dripproof motors. Totally enclosed and explosion proof motors have 1.0 service factor except where noted.

Single Phase
NEMA SERVICE FACTOR @ RPM LISTED

HP	3600	1800	1200	900
1/12	1.4	1.4	1.4	1.4
1/8	1.4	1.4	1.4	1.4
1/6	1.35	1.35	1.35	1.35
1/4	1.35	1.35	1.35	1.35
1/3	1.35	1.35	1.35	1.35
1/2	1.25	1.25	1.25	1.15
3/4	1.25	1.25	1.15	1.15
1	1.25	1.15	1.15	1.15
1.5 & Up	1.15	1.15	1.15	1.15

Overload Protection

There are four choices in protection: manual (inherent type), automatic (inherent type), thermostats, and none. A manual overload must be physically reset to restart the motor. An automatic thermal overload will stop the motor when it is overloaded or overheated and restart it after the motor has cooled down. None means the motor has no protection. Thermostats are embedded in the winding and connected to the motor starter control circuit. Marathon Motors's standards are normally closed thermostats, one per phase.

⚠ CAUTION A motor with an automatic reset protector must not be used where automatic restarting (after motor cool-down) would endanger personnel or equipment. Such applications should use a manual reset protector.

Phase/Power Supply

Is the power supply three phase or single phase? Most home and farm applications require single phase motors, while most factories, large commercial and industrial users require three phase motors. Single phase motors can be used on three phase systems. Three phase motors, however, cannot be operated from single phase systems. Motor damage will result.

Rotation

Most motors in this catalog are reversible by electrical reconnection or by physical orientation. Marathon Motors's standard rotation from the factory for single phase motors is counterclockwise, when viewing the opposite shaft end of the motor.

Speed/Rpm

3600, 1800, and 1200 are the most common 60 HZ synchronous speeds with full load speed equivalents of 3450, 1725, and 1150.

Application Information

Terminology

Ambient Temperature – Temperature of the medium, such as air, water or earth, into which the heat of the equipment is dissipated.

Across The Line Start – A method of motor starting that applies full line voltage to the motor. The motor is connected directly to the power source.

Base Speed – Nameplate rating where the motor will develop rated HP at rated load and voltage. With AC systems, it is commonly the point where 60 Hz is applied to the induction motor.

Breakaway Torque – The torque required to start a machine from standstill.

Breakdown Torque (BDT) – The maximum torque that an AC motor will develop with rated voltage applied at rated frequency while rotating.

Cogging – A condition in which a motor does not rotate smoothly but "steps" or "jerks" from one position to another during shaft revolution. Cogging is most pronounced at low motor speeds and can cause objectionable vibrations in the driven machine.

Continuous Duty – The continuous rating is the maximum constant load that can be carried continuously without exceeding established temperature rise limitations under prescribed conditions of load and within the limitations of established standards.

Definite Purpose Motor – Any motor design, listed and offered in standard ratings with standard operating characteristics and mechanical construction, for use under service conditions other than usual or for use on a particular type of application (NEMA).

Duty Cycle – The relationship between the operating and resting times or repeatable operation at different loads and/or speeds.

Efficiency – Ratio of power output to power input indicated as a percentage. In motors, it is the effectiveness with which a motor converts electrical power into mechanical power.

Frequency – Number of cycles per second of alternating current 60HZ used primarily in the United States, 50HZ normally used overseas.

Full Load Torque (FLT) – The torque necessary to produce rated horsepower at full load speed.

General Purpose Motor – This motor has a continuous duty rating and NEMA A or B design, listed and offered in standard ratings with standard operating characteristics and mechanical construction for use under usual service conditions without restriction to a particular application or type of application (NEMA).

Inertia – A measure of a body's resistance to changes in velocity, whether the body is at rest or moving at a constant velocity. The velocity can be either linear or rotational. The moment of inertia (WK2) is the product of the weight (W) of an object and the square of the radius of gyration (K2). The radius of gyration is a measure of how the mass of the object is distributed about the axis of rotation. WK2 is usually expressed in units of lb-ft2.

Inrush Current – The initial surge of current into the windings. Inrush current can be up to ten times higher than the continuously needed current because there is low initial resistance.

Intermittent Duty – A motor that never reaches equilibrium temperature, but is permitted to cool down (to ambient temperature) between operations. For example, a crane, hoist or machine tool motor is often rated for 15, 30 or 60 minute duty.

Load Sharing – An application condition in which two or more similar-sized AC Induction motors are mechanically connected to each other and powered from the same inverter. Optimum load sharing is achieved with higher slip (NEMA Design B or C) motors.

Locked Rotor Current (LRA) – Steady state current taken from the line with the rotor at standstill, at rated voltage and frequency. This is the current when starting the motor and load across the line.

Locked Rotor Torque (LRT) – The minimum torque that a motor will develop at rest for all angular positions of the rotor, with rated voltage applied at rated frequency.

No Load (Conditions) – The state of a machine rotating at normal speed under rated conditions, but when no output is required from it.

Part Winding Start (PWS) – A method of reduced voltage starting that applies power to only one set of windings, then to the other set as the motor comes up to speed.

Power Factor – Power factor is the ratio of real power (kW) to total kVA, or the ratio of actual power (W) to apparent power (volt-amperes).

Reactance – The opposition to the flow of current made by an induction coil or a capacitor. Performance data expresses stator reactance as X1 and rotor reactance as X2.

Resistance – The opposition to voltage or current in an electrical circuit. Performance data expresses stator resistance as R1 and rotor resistance as R2.

Rotor – The rotating member of a machine with a shaft.

Service Factor (SF) – When used on a motor nameplate, a number which indicates how much above the nameplate rating a motor can be loaded intermittently without causing serious degradation (i.e. a motor with 1.15 SF can produce 15% greater torque than one with 1.0 SF, within temperature constraints).

Continued on next page.

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Terminology

Squirrel Cage Induction Motor – When used on a motor nameplate, a number which indicates how much above the nameplate rating a motor can be loaded without causing serious degradation (i.e. a motor with 1.15 SF can produce 15% greater torque than one with 1.0 SF, within temperature constraints).

Shock Load – The load seen by a clutch, brake or motor in a system that transmits high peak loads. This type of load is present in crushers, separators, grinders, conveyors, winches and cranes.

Slip – The difference between the speed of the rotating magnetic field (synchronous speed) and mechanical rotational speed (rotor speed) of AC induction motors. Usually expressed as a percentage of synchronous speed.

Special Purpose Motor – A motor with special operating characteristics, special mechanical construction, or both, designed for a particular application and not falling within the definition of a general purpose or definite purpose motor (NEMA).

Speed Range – The minimum and maximum speeds at which a motor must operate under constant or variable torque load conditions. A 50:1 speed range for a motor with top speed of 1800 RPM means the motor must operate as low as 36 RPM and still operate within specifications.

Starting Torque – The torque exerted by the motor during the starting period.

Stator – The stationary portion of the magnetic circuit and the associated windings and leads of a rotating machine.

Synchronous Speed – The speed of an AC induction motor's rotating magnetic field. It is determined by the frequency applied to the stator and the number of magnetic poles present in each phase of the stator windings. Mathematically, it is expressed as Sync Speed (RPM) = 120 x Applied Frequency (Hz)/Number of Poles per phase.

Torque – A turning force applied to a shaft, tending to cause rotation. Torque is normally measured in "pound-feet" and is equal to the force applied times the radius through which it acts.

Torque-to-Inertia Ratio – The rated motor torque divided by its rotor inertia. Helps determine a motor's ability to accelerate loads and/or respond to commands from a drive to change speed or direction.

Voltage Drop – The reduction in voltage level from the source to the load caused by conductor resistance.

Wye Start Delta Run (YD) – A method of reduced voltage starting that first connects a motor in a wye to reduce voltage, then reconnects the motor in a delta to provide full line voltage.

Formulas & Conversion Factors

Horsepower (HP) = Torque (lb-ft) x RPM / 5252

Horsepower (HP) = Torque (lb-in) x RPM / 63025

Torque (lb-ft) = HP x 5252 / RPM

Torque (lb-in) = HP x 63025 / RPM

Efficiency = Power Out / Power In

Synchronous RPM = 120 x Frequency / # Poles

Ohms = Volts / Amperes (R = E/I)

Amperes = Volts / Ohms (I = E/R)

Volts = Amperes x Ohms (E = IR)

Static Torque (T) = F x R (lb-ft),
F = Force (lb),
R = pully or drum radius (ft)

Pound-feet (torque) = .7376 x Newton-meters

Newton-meters (torque) = 1.3558 x lb-ft

Power (HP) = Torque (lb-ft) x 2π x RPM / 33000

Temperature (Celsius) = 5/9 x (F° – 32)

Temperature (Fahrenheit) = (9/5 x C°) + 32

1 Kilowatt (KW) = 1.341 Horsepower

1 Horsepower = 746 watts (.746 KW)

Brake Torque = (5252 x P / N) x SF, P = HP, N = RPM, SF = 1.4

Use 2.0 to 2.5 SF for cranes and hoists
(consult crane manufacturer or und-user).

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Variable Speed Operation

Guidelines for Application of General Purpose, Three Phase, Single Speed Motors on Variable Frequency Drives Meets NEMA MG1-2006 Part 30 and Part 31 Section 4.4.2 Unless stated otherwise, motor nameplates do NOT include listed speed range.

Enclosure	Efficiency	Variable Torque	Constant Torque								
NEMA Motors		All Frames	56	143-215		254-286		324-365		404-449	
		All Poles	All Poles	2-Pole	4 & 6 Pole	2-Pole	4 & 6 Pole	2-Pole	4 & 6 Pole	2-Pole	4 & 6 Pole
ODP	Standard (EPAct exempt)	10:1	2:1	2:1	2:1	Contact Engineering					
	EPAct compliant	10:1	N/A	2:1	2:1	2:1	2:1	Contact Engineering			
	NEMA Premium	10:1	N/A	10:1	10:1	10:1	10:1	10:1	10:1	2:1	2:1
TEFC	Standard (EPAct exempt)	10:1	2:1	2:1	2:1	Contact Engineering					
	EPAct compliant	10:1	N/A	2:1	10:1	2:1	10:1	2:1	2:1	2:1	2:1
	NEMA Premium	10:1	N/A	2:1	20:1	2:1	20:1	2:1	20:1 (1)	2:1	20:1 (1)
TENV	EPAct compliant	10:1	N/A	N/A	1000:1	1000:1	1000:1	1000:1	1000:1	1000:1	1000:1
	NEMA Premium	10:1	1000:1	1000:1	1000:1	1000:1	1000:1	1000:1	1000:1	1000:1	1000:1
Washdown TEFC	Standard (EPAct exempt)	10:1	10:1 (2)	10:1 (2)	10:1 (2)	N/A	N/A	N/A	N/A	N/A	N/A
	EPAct compliant	10:1	10:1 (2)	10:1 (2)	10:1 (2)	N/A	N/A	N/A	N/A	N/A	N/A
	NEMA Premium	10:1	10:1 (2)	10:1 (2)	10:1 (2)	N/A	N/A	N/A	N/A	N/A	N/A
Washdown TENV	Standard (EPAct exempt)	10:1	1000:1	1000:1	1000:1	N/A	N/A	N/A	N/A	N/A	N/A
	EPAct compliant	10:1	1000:1	1000:1	1000:1	N/A	N/A	N/A	N/A	N/A	N/A
	NEMA Premium	10:1	1000:1	1000:1	1000:1	N/A	N/A	N/A	N/A	N/A	N/A
Explosion Proof	All efficiency levels	Explosion Proof motors must be properly nameplated with inverter duty information prior to use on VFD. See Marathon catalog pages for specific rating capabilities. Motors with automatic overload protectors cannot be used on VFDs.									
IEC Motors		All Frames	63-90		100-225		250-315				
All Enclosures	All efficiency levels	10:1	20:1		Up to 20:1		Up tp 2:1				

Notes: (1) 324-449T, 4 & 6 Pole XRI motors are rated for 20:1 C.T. with fan modification; otherwise rated for 2:1 C.T. continuous duty, or 20:1 C.T. 60 minute duty at lowest RPM.

(2) Washdown TEFC motors are rated for 10:1 C.T. 60 minute duty or 2:1 C.T. continuous duty at lowest RPM. Model numbers beginning with 5K are not suitable for use with Variable Frequency Drives.

Application Notes

Bearing currents

Marathon Motors recommends that any motors used with Variable Frequency Drives be equipped with suitable means to protect the motor bearings from shaft currents caused by common mode voltages inherent with operation on a non-sinusoidal power supply. Marathon Motors offers several options for motors in non-classified (non-hazardous) locations, including ground brushes, insulated bearings and non-contact shaft grounding rings. For more information on ground brushes and bearing currents, see the VARIABLE SPEED OPERATION section. For installation cost and available options, see the MOD CENTRAL section.

Restricted use

DO NOT APPLY THE FOLLOWING MOTORS ON VARIABLE FREQUENCY DRIVES:

Single Phase motors, Motors with inherent overload protection, Multi-Speed motors, Motors with 1.0 Service Factor on sine wave power.

Fire Pump motors should not be used with variable frequency power supplies, due to the critical nature of these applications.

Hazardous Locations

Consult with Marathon Motors when applying motors and drives into Hazardous Locations, either Division/Zone 1 or Division/ Zone 2 areas.

UL and CSA policies prohibit the installation of bearing protection devices, such as shaft grounding brushes, rings or insulated bearings on motors in Hazardous Locations.

Maximum Cable Lengths from the Motor to Drive

Product Description	3 kHz CARRIER FREQUENCY (PHASE TO PHASE)		
	230 Volt	460 Volt	575 Volt
56-326 NEMA, 100-225 IEC Frames	600 ft.	125 ft.	40 ft.
364-5013 NEMA, 250-315 IEC Frames	1000 ft.	225 ft.	60 ft.
Motors with CR200 Corona Resistant Magnet Wire	1500 ft.	475 ft.	140 ft.
Motors with MAX GUARD® insulation system	Unllimited	Unllimited	650 ft.
Form-wound low voltage motors	Unllimited	Unllimited	650 ft.

* Higher carrier frequencies require shorter cable length to obtain normal (50Khrs) insulation life.

Standard Motor Insulation Systems

CR200 Corona-Resistant Magnet Wire	Max Guard®
microMAX® inverter duty	Black Max® Vector Duty - All Product
"4 - in - 1" Three Phase, C-Face with Removable Base	Blue Max® Vector Duty - All Products
Standard Three Phase stock Brakemotors	PowerWash™ XT, SXT, and SXT-Plus Washdown Duty - Three Phase
Blue Chip® Severe Duty Explosion Proof,	Blue Chip® XRI Severe Duty
EPAct Efficiency	Blue Chip® XRI-841 (IEEE841 compliant)
Max +	Automotive Duty "T" Frame
	Blue Chip® Explosion Proof, XRI® Premium Efficiency
	Globetrotter® IEC Metric motors

marathon™ Motors

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

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Variable Speed Information

Marathon Motors Vector-Duty and Inverter-Duty motors, unless otherwise stated, are rated for continuous operation in a 40°C ambient and for altitudes up to 3300 feet (1000 meters) above sea level. Special application considerations, such as high or low ambient, intermittent ratings, high altitude, duty cycle rated, extended constant horsepower range, special base speed, voltage or frequency, or any other special requirements, should be reviewed by a factory representative.

It is the responsibility of the startup personnel during commissioning of the VFD/motor system to properly tune the drive to the motor for the specific application. The correct voltage boost and volts/hertz settings are application dependent and unique to each motor design. Procedures for these adjustments should be in your VFD user manual. Many Vector Duty and Inverter Duty motors in this catalog are equipped with thermostats; warranty coverage may be denied if they are not properly utilized.

WARNING Power factor correction capacitors should never be installed between the drive and the motor.

Inverter Duty Or Inverter Rated

"Inverter Duty" (often called "Inverter Rated") motors are suitable for use with Variable Frequency Drives, as long as operation is within the application guidelines published in this catalog. In general, Marathon Motors's three phase, general purpose, NEMA Design B motors are considered "Inverter Duty", and meet or exceed the requirements of NEMA MG1, Part 30. As required under Federal law, these motors comply with EPAct efficiencies when operating from utility power.

Many of Marathon's motor product lines have been enhanced to facilitate reliable operation on today's variable speed drives, including wider constant torque speed range (up to 20:1) and improved insulation systems that withstand voltage spikes common with variable frequency operation.

Inverter Duty (Rated) motors are most often used in 10:1 speed range, variable torque or constant torque applications. A vector control is usually required for operation beyond 10:1 CT.

Refer to "Guidelines for Application of General Purpose, Single Speed Three Phase Motors on Variable Frequency Drives" in this section of this catalog for the allowable speed range and cable length restrictions (from VFD to motor). Additional detail regarding a specific product's capabilities is available on its catalog page, or by consulting your application engineer.

Vector Duty – "Vector Duty" describes a class of motors that are used in conjunction with Open- (without encoder) or Closed-Loop (with encoder) Vector controls, that provide enhanced performance under low speed operating conditions, or in cases where torque (rather than speed) must be controlled. "Vector Duty" motors can be applied to Volts/Hertz (scalar) drives, as well.

Marathon Motors's "MAX" family, consisting of Blue Max®, Black Max® and microMAX™ motors, have been specifically designed for optimal operation on vector or volts/hertz controls. These motors feature a wide constant torque (up to 2000:1) and/or constant horsepower (up to 4:1) speed range and are performance-matched to all current technology IGBT drives. Vector Duty motors meet or exceed the requirements of NEMA MG1, Part 31, and are equipped with an enhanced insulation system (MAX GUARD® or CR200) to provide many years of trouble-free service. Consult the catalog page for each product's capabilities and features. As these motors are specifically designed for operation through an inverter, they are exempt from EPAct legislation. Model numbers contain the letter "H" in the "Electrical Type" field.

Variable Torque Loads – Applications include fans, blowers and centrifugal pumps. Torque varies as the square of the speed, and horsepower as the cube of the speed. Operation below base speed significantly lightens the load on the motor. While most variable torque applications do not require the motor to operate below half speed, the motor is fully capable of operation to zero speed. Operation above base speed significantly adds to the load on the motor; therefore, a factory representative must review applications requiring variable torque above base speed. Refer to the application chart found on page 14 for use of general purpose three phase motors on variable frequency drives. Marathon's microMAX™, Black Max® or Blue Max® motors are not necessarily required for operation of variable torque loads. A bypass circuit is often employed in Variable Torque applications. If this device is intended to be used, selection of a NEMA Design B motor is recommended, to withstand the inrush current during across-the-line starting.

Constant Torque Loads – Applications include conveyors, elevators, hoists, extruders, positive displacement pumps, mixers and converting equipment. Torque remains constant throughout the range of operation, and extra care should be taken in the proper application of motors, especially at very low speeds. Most constant torque applications don't require operation below 10:1 (i.e. 6 Hz operation on a 60 Hz motor), but an increasing number of applications historically reserved for servo and/or stepper systems are being served with motors capable of operation beyond 20:1, up to 2000:1 (zero speed, constant torque). Refer to the application chart found on page 17 for use of general purpose three phase motors on variable frequency drives.

Continued on next page.

Variable Speed Operation

Constant Torque Loads (Cont'd.)

Applications requiring greater than 20:1 C.T. are ideal for microMAX™, Black Max® or Blue Max® motors. These motors provide full rated torque within their listed speed range, without exceeding a Class F temperature rating while under inverter power (many operate at Class B). Ratings in this catalog have been developed, based on extensive testing on IGBT inverters, set at a minimum 3 KHz (or equivalent) carrier frequency.

Vector Duty and Inverter Duty motors from Marathon Motors are designed for operation at 150% of rated load for one minute, up to the base speed of the motor (overload capability declines to 100% as the motor reaches maximum constant HP speed). These motors accommodate constant horsepower operation to 1-1/2 to 2 times base speed, subject to the motor's maximum safe mechanical speed limit. Refer to the Maximum Safe Mechanical Speed Chart, as well as the performance section for each motor's capability.

Motors rated for zero RPM continuous duty (1000:1 or 2000:1) must be powered by vector drives to produce rated torque without overheating. Optimum zero speed and low-speed full torque performance may require a closed loop vector drive (with encoder feedback).

Constant Horsepower Loads – Applications include coil winders, band saws, grinders, and turret lathes. Operation requires the motor to deliver the same horsepower rating, regardless of shaft speed. Torque increases at low speed and decreases at higher speed. Most general purpose motors can deliver constant horsepower up to 1 1/2 times base speed (consult a factory representative to verify performance). However, many constant HP applications require operation to twice base speed, and some, such as coil winders, up to 4 times base speed. microMAX™, Black Max® and Blue Max® motors are designed for 1 1/2 to 2 times base speed, and the Wide CHP motors, found in Marathon's SB371 Catalog, deliver up to 4 times constant horsepower performance.

Bearing Currents – As stated in NEMA MG1-31.4.4.3, to protect a motor from inverter-sourced shaft voltages, either both bearings must be insulated or the motor shaft must be effectively grounded. Marathon Motors offers several effective means to protect the bearings from inverter sourced EDM (electrical discharge machining). A Shaft Grounding device is standard in Blue Max® motors, in frame sizes 444T and larger. Insulating the motor bearings will not prevent damage to bearings of a connected load, and insulated couplings should be employed to protect the load. Adding a ground brush to a motor with insulated bearings will divert motor shaft currents and help protect the bearings of the connected load. At this time, UL policy prohibits the use of ground brushes or insulated bearings in Hazardous Locations (Div 1 & 2, Zones 1, 2, 21 & 22).

The Marathon Solution to Bearing Currents
Any motor with a "-P" behind the catalog number and a "P" footnote features a current mitigation device.

Motor Grounding - Frames and accessories of all motors must be grounded in accordance with the National Electric Code (NEC) Article 430. Refer to NEC Article 250 for general information on grounding. Proper grounding of inverter-driven motors is essential to protect personnel and livestock from inverter-sourced common mode voltages, which may reach hazardous levels on the frame of ungrounded or poorly grounded motors.

Low Input Voltage – If, due to lower utility supply voltage, the input voltage from the VFD to the motor is lower than the motor's rated voltage, de-rating of the motor's base frequency, horsepower, full load RPM, and constant HP RPM is required. The revised values can be calculated by multiplying by the ratio of the voltage change. For example, to operate a 460 volt motor from an inverter fed by 50 or 60 HZ, 400 volt utility power, the multiplier is 400/460 or 0.87.

The VFD can be reprogrammed to match the new base point values, allowing the motor to provide rated torque at rated current from the new base speed down to its original minimum Constant torque speed. The motor's CHP range will begin at the new base frequency and will be shortened by the same ratio as described above.

Overspeed Capability – Maximum safe mechanical speed capability is a function of bearing size and type, lubrication, rotor balancing technique and specifications, air gap, enclosure, frame construction and connection to the driven load. In addition, consideration must be given to ambient noise levels, as operation above base speed will increase motor noise and vibration, and reduce bearing life. Under no circumstances should bearing hub temperature exceed 100°C. Belted loads should not exceed 60 Hz operating RPM by more than 25% (NEMA "TS" shafts are not suitable for belted loads). Due to external cooling fans, TEFC (and Explosion Proof Fan Cooled) motors are limited to 4000 RPM maximum speed.

Marathon Motors, through extensive testing in our state-of-the-art laboratory and in actual field experience, has developed a number of high speed motors whose maximum safe mechanical speed exceeds the values in the table below. The following table depicts maximum safe speed limits for continuous operation, direct-coupled, non-explosion proof motors, and does not imply constant horsepower capability. Please consult a factory representative for requirements beyond those listed, or for intermittent duty limits.

Maximum Safe Mechanical Speed Limits
(ODP, TENV, DPFV OR TEBC ENCLOSURES)
60 Hz base frequency

Frame Size	2-Pole	4, 6 or 8-Pole
56-184	7200	5400
213-256	5400	4200
284-286	5400	3600
324-326	4000	3600
364-365	4000	2800
404-449	3600	2800
5000 Fr	N/A	CALL
6800 Fr	N/A	CALL

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Other Application Consideration

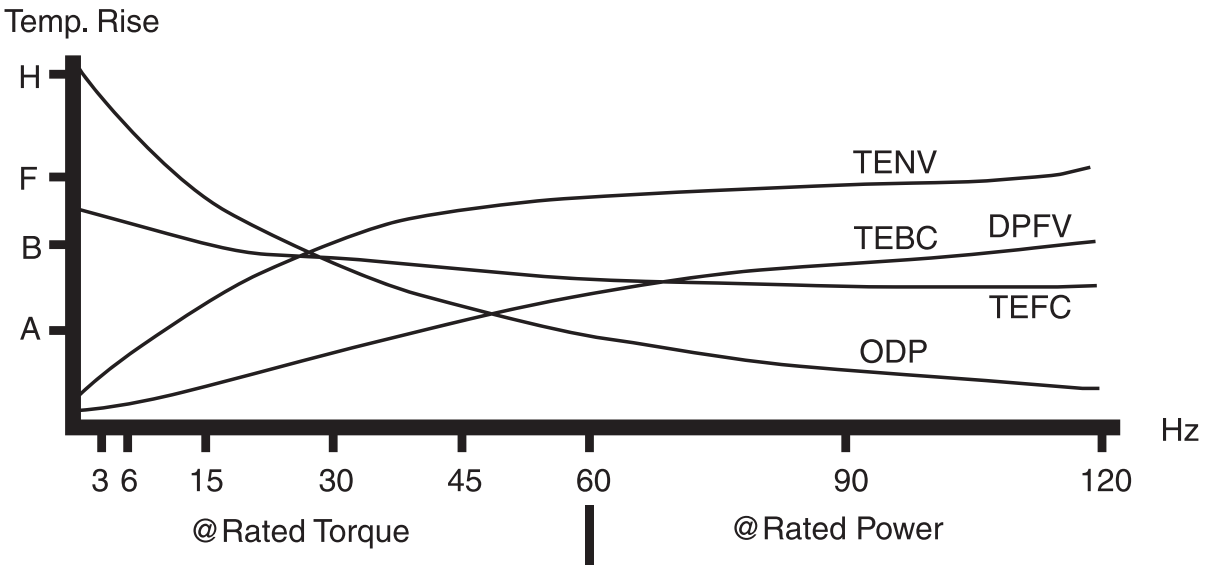
For proper selection, the following should be considered:

• Horsepower or torque requirements at various speeds.

• Desired speed range of the load and motor.

- Acceleration and deceleration rate requirements of the process being controlled.
- Starting requirements including the frequency of starting and a description of the load (reflected inertia at the motor, load torque during starting).
- Whether the application is a continuous process or duty cycle of starts, stops and speed changes.
- A general description of the type of application including the environment in which the VFD system components must operate (determines motor enclosure and/or explosion proof classification).
- Description of the available electrical power supply and wiring.
- Special performance requirements, if any.
- Whether the drive will be configured with a by-pass circuit. In case of its deployment, the motor will operate like its fixed speed counterpart and may require a NEMA B design which limits in-rush current, or selection of a larger motor starter or other protective circuitry.
- Load sharing
- Mounting and other mechanical considerations

Typical Temperature Rise Of Various Enclosures



√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Single Phase

Fan and Blower Duty, Single Phase

(NEMA Service Factor), Dripproof

Features:

- Heavy gauge steel frame and base
- Ball bearings (except as noted)
- Thermal protection, as noted
- Capacitor start design for high starting torque
- Capacitor start/capacitor run design for higher efficiency, as noted
- 48Y and 48YZ have 48/56 Fr mounting holes
- Service Factor, as noted
- UL Recognized and CSA Certified

Resilient Base

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	"C" DIM.	FOOT NOTES
1/3	1800	115/208-230	56	AUTO	C216	5KC36LN1X	√	6.0/3.2-3.0	18	10.32	20,68
1/2	1800	115/208-230	56	NONE	B1316	5KC49GN0001	√	8.8/4.2-4.4	21	10.38	19
	1800	115/208-230	56	AUTO	B317	056C17D2072	√	8.0/4.1-4.0	20	10.47	CF,19,31
3/4	1800	115/208-230	56	AUTO	B319	056C17D2074	√	10.0/5.2-5.0	23	11.72	CF,19,31
	1800	115/208-230	56	NONE	B318	056C17D2073	√	10.0/5.2-5.0	24	11.72	CF,19,31
1	1800	115/208-230	56	AUTO	C1158	5KC49PN0164X	√	14.7/7.2-7.4	29	11.38	18
	1800	115/208-230	56	NONE	C235	5KC49PN0155	√	13.6/6.7-6.8	31	11.38	5,18
1 1/2	1800	115/208-230	56H	NONE	B336	056C17D5347	√	18.0/9.3-9.	39	12.85	2,5,18,32
	1800	115/208-230	56H	AUTO	C1160	5KCR49SN0150X	√	16.4/8.4-8.2	35	11.90	ES,1,18

General Purpose Three Phase

General Purpose, Three Phase
Dripproof, NEMA Premium® XRI® Efficiency

Applications:

General purpose use on compressors, pumps, conveyors, blowers, and other machinery in environments that are relatively clean and dry. Substantial energy savings can be realized when using these high efficiency motors. Guaranteed efficiencies offer an eXtra Return on your Investment when using these premium efficiency motors on high cycle or long run time applications.

Features:

✪ Meets or exceeds NEMA Premium® efficiencies NEMA Premium® models are in compliance with EISA2007

- Motors are suitable for 10:1 VT on all frame sizes and 10:1 CT up to 365T frame (Except where noted)
- 1.15 Service Factor
- Normally closed thermostats, as noted
- Class F Insulation
- Nameplated 60/50 hertz
- UL Recognized, CSA Certified and CE Marked
- Three year warranty

Rigid Base

Suitable for use on VFD per guidelines on page ME-12.

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	NOM. EFF.	F.L. AMPS	WEIGHT	"C" DIM.	FOOT NOTES	C-FACE KITS
1 1/2	1800	208-230/460	145T	**U759**	145TTDR6028	√	86.5	4.8-5.6/2.4	35	12.62	TS	A600
2	1800	208-230/460	145T	**U760**	145TTDR6029	√	86.5	5.8/2.9	37	13.62	TS	A600

Catalog numbers (Cat No.) highlighted in bold blue have efficiency levels that meet EISA requirements

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Condenser Fan/Heat Pump, PSC, Open Air Over

Thru-Bolt, Shaft Up or Horizontal

Applications:

Direct drive condenser fans mounted vertically, shaft up. Models with open brackets should be mounted where they are shielded from rain. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Frame and shaft end bracket enclosed, except X011, X012, and X208 have open frames and X426 has open frame and brackets
- Single and multi-speed models as noted
- Ball bearings
- Weather resistant reversing plug
- 30" long leads
- Shaft with flat, unless otherwise noted
- 60°C ambient (as noted)
- Shaft slinger
- 1-5/8" Extended thru-bolts on shaft end, except where noted
- Automatic reset thermal protector
- Lug mount kits and other accessories available, see Accessories section
- UL Recognized and CSA Certified
- Capacitor not included

X400

X099

X011

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1/2	1075/1	460	48Y	X400	048A11O2017	√	1.8	194	5	1/2 x 6	35
3/4	1075/1	460	48Y	X099	048A11O2016	√	2.5	223	5 1/2	1/2 x 6	34
1	1075/1	200-230/460	56Z	P190	5KCP49ZN9617T	√	6.7-6.8/3.4	477	9.0	5/8 x 4	

Condenser Fan/Heat Pump, PSC, Open Air Over

48 Frame, Thru-Bolt, All-Angle

Applications:

Direct drive condenser fans for all angle mounting.These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Frame and end brackets enclosed
- Single and multi-speed models, as noted
- Ball bearings (except as noted)
- Weather resistant reversing plug
- 30" long leads
- Shaft slinger
- 1-1/2" Thru-bolts on shaft end, 1" thru-bolts on lead end (except as noted)
- Automatic reset thermal protector
- Weep holes with removable plugs on end brackets. Remove bottom plug after installation.
- Lug mount kits and other accessories available (see Accessories section)
- 60°C ambient, as noted
- UL Recognized and CSA Certified
- Capacitor not included

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1/4	1625/1	208-230	48Y	X467	048A47T87	√	2.0-2.0	12	4 1/2	1/2 x 6	21,36
	1075/1	208-230	48Y	X412	048A11T569	√	1.4-1.4	16	4 1/4	1/2 x 6	45
1/3	1075/1	208-230	48Y	X413	048A11T529	√	1.9-1.9	14	4 3/4	1/2 x 6	45
3/4	1075/1	460	48Y	X459	048A11T581	√	2.1	23	6	1/2 x 6	32,45

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Condenser Fan/Heat Pump, Single Phase, PSC

56 Frame, Resilient Ring, Thru-Bolt

Applications:

Direct drive condenser fans mounted vertically, shaft up or horizontal. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Enclosed shaft end bracket with vented frame
- Ball bearings
- 30" long leads
- Shaft slinger
- 60°C ambient, as noted
- Automatic reset thermal protector
- Flat & keyway on shaft
- UL Recognized and CSA Certified
- Capacitor not included

Open Air Over, Shaft Up

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1 1/2	1075	208-230/460	56Y	X271	056A11O5305	√	7.7-7.6/3.8	43	9 3/4	5/8 x 6	34,45

Commercial Condenser Fan/Heat Pump, PSC

Open Air Over, Belly Band, Shaft Up

Applications:

Heavy duty design for commercial direct drive condenser fans mounted vertically, shaft up. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Open frame and end brackets
- Shaft with flat, unless otherwise noted
- Unique Rain Shield fits over shaft to protect motor in vertical shaft up position
- Shaft slinger
- Automatic reset thermal protector
- Ball bearings
- UL Recognized and CSA Certified
- Capacitor not included

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1	1075	200-230/460	48Y	P195	5KCP39SNB482S	√	5.6/2.8	21	10 5/8	5/8 x 5 1/4 w/key/flat	

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Commercial Condenser Fan/Heat Pump, Three Phase

Open Air Over, Rigid Base, Shaft Up or Horizontal

As Noted

Applications:

Commercial condenser fans may be installed outdoors. These motors need to be mounted within the airflow of the fan for proper cooling. Used on Trane, Carrier, Climtrol and York units, 5 tons and larger.

Features:

- 70°C ambient (except as noted)
- Enclosed shaft end bracket, vented frame
- Continuous duty, air over
- Automatic reset thermal protector
- Shaft slinger
- Threaded lead exit
- Nameplated 60/50 hertz 190/380 volts, at next lower HP
- Double sealed ball bearings
- Flat and keyway on shaft
- Patented VCD™ - Voltage Change Device (as noted)
- Ball Bearings
- UL Recognized and CSA Certified

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1/2	850	208-230/460	56HZ	X529	056T8O5531	√	2.9-3.0/1.5	31	14.68	5/8 x 5	VC,5
1	1140	208-230/460	56HZ	X513	056T11O5305	√	4.1-4.2/2.1	29	14.68	5/8 x 5	VC,5
1 1/2	1140	208-230/460	56HZ	X523	056T11O5306	√	5.45-5.4/2.7	36	15.68	5/8 x 5	VC,5
	850	208-230/460	56HZ	X531	056T8O15504	√	7.0-7.0/3.5	47	16.68	5/8 x 5	VC,5
2	1140	208-230/460	56HZ	X525	056T11O5310	√	7.2-6.8/3.4	47	16.68	5/8 x 5	VC,5

Condenser Fan/Heat Pump, Three Phase

Open Air Over, Belly Band/Resilient Ring

As Noted

Applications:

Commercial condenser fans may be installed outdoors. These motors need to be mounted within the airflow of the fan for proper cooling. Used on Trane, Carrier, Climatrol and York units, 5 tons and larger.

Features:

- 70°C ambient (except as noted)
- Enclosed shaft end bracket, vented frame
- Automatic reset thermal protector
- Nameplate 60/50 hertz 190/380 volts, at next lower HP (except as noted)
- Double sealed ball bearings
- 5/8" Dia. x 5" long shaft with flat and keyway
- Ball bearings
- Threaded lead exit
- Patented VCD™ - Voltage Change Device
- 4 Locating screws 90 degrees apart, 3.33" from outer edge of shaft slinger
- Hubs on both ends will accept resilient base kits
- UL Recognized and CSA Certified
- External shaft slinger on all, internal slinger on 5K models

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	FOOT NOTES
1	1140	200-230/460	56Y	X502	056T11O5302	√	4.0-4.2/2.1	28	10.00	VC
	850	200-230/460	56Y	X507	056T8O5302	√	5.3-5.3/2.6	46	12.00	VC
1 1/2	1140	200-230/460	56Y	X503	056T11O5303	√	5.5-5.4/2.7	35	11.00	VC
	850	208-230/460	56Y	X530	056T8O5307	√	7.5-6.8/3.4	47	11.25	VC
2	1140	208-230/460	56Y	X509	056T11O5304	√	7.2-6.8/3.4	49	12.00	VC

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Fan and Blower - Direct Drive, PSC

Open Air Over, Resilient Ring, Thru-Bolt Mount

Features:

- Open frames and brackets (except X011 and X012 have enclosed shaft end bracket)
- Single and multi-speed models as noted
- Grommeted lead exit
- Weather resistant reversing plug
- 2-1/4" resilient ring mounting except where noted (base not included, see Accessories section)
- 2 1/2" adapter rings supplied, shipped loose in box
- Extended thru-bolts on shaft end
- 30" long leads
- Automatic reset thermal protector
- Ball bearings
- UL Recognized and CSA Certified
- Capacitor not included

X000

X016

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1/4	1075/3	115	48Y	X000	048A11O1798	√	3.4	12	4 1/4	1/2 x 4	32
1/3	1075/3	115	48Y	X002	048A11O1769	√	4.6	14	4 3/4	1/2 x 4	32
1/2	1625/3	115	48Y	X016	048A17O153	√	5.0	16	5 1/4	1/2 x 4	32
	1075/3	115	48Y	X004	048A11O1755	√	6.2	17	5 1/2	1/2 x 4	32
3/4	1075/3	115	48Y	X009	048A11O787	√	10.2	20	5 3/4	1/2 x 4	32

Fan and Blower - Direct Drive, PSC

Open Air Over, Extended Thru-Bolt, 460 Volt

Applications:

Residential and commercial furnaces, air conditioners, exhaust fans, and other air handling equipment installed in clean and dry environments.

Features:

- Enclosed frame and open end brackets
- Multi-speed capability
- Grommeted lead exit
- Weather resistant reversing plug
- Automatic reset thermal protector
- 7/8" extended thru-bolts on shaft end
- Ball Bearings
- UL Recognized and CSA Certified
- Capacitor not included

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	SHAFT DIM.	FOOT NOTES
1/3	1075/2	460	48Y	X037	48A11O1876	√	1.0	14	4 3/4	1/2 X 6	51
1/2	1075/2	460	48Y	X038	48A11O1874	√	1.6	17	5 1/4	1/2 X 6	51
3/4	1075/2	460	48Y	X039	48A11O1875	√	2.1	19	5 1/2	1/2 X 6	51

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov
Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com
MARS marsdelivers.com

Fan and Blower, Split Phase, Dripproof

Resilient Base (Single & Two Speed)

Features:

- Ball bearings (except as noted)
- Service factor, as noted
- Thermal protection, as noted
- Variable torque on two speed motors
- Extended thru-bolts, as noted
- Heavy gauge steel frame and base
- 48Y and 48YZ frame have 48/56 frame mounting holes
- UL Recognized and CSA certified

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	"C" DIM.	FOOT NOTES
1/4	1725	115	48YZ	NONE	B302	48S17D2054	√	5	14	9.57	9,20.28
	1725	115	48YZ	AUTO	B303	48S17D2055	√	5	14	9.57	20,32,53
	1725	115	56Z	AUTO	B201	56S17D2047	√	5	14	9.47	8,20,26
	1725	115	56Z	AUTO	4363	5KH39QN5526X	√	5.1	14	9.19	20
	1725	230	48	AUTO	4306	5KH39QN5537X	√	2.5	13	9.09	20
	1725	230	48	NONE	4360	5KH39QN5548	√	2.5	13	8.93	20,31,52
	1725	277	48YZ	NONE	B606	48S17D2116	√	2.1	13	9.47	20,31
	1140/850	115	56	NONE	H300	5KH49SN3048	√	5.8/3.6	30	12.01	20
	1140	115	56	AUTO	H163	5KH46MN6053X	√	5.6	23	10.88	20
	1140	115	56	NONE	H162	5KH46MN6053	√	5.6	27	10.88	19
	850	115	56	NONE	H296	5KH49SN3046	√	6.9	30	12.01	20
1/3	1725	115	48YZ	NONE	B304	048S17D2056	√	5.5	15	9.32	CF,20,31,52
1/2	1725	115	48Y	AUTO	D162	048S17D2087	√	7.2	19	10.09	19
	1725	115	48YZ	AUTO	B208	048S17D2109	√	7.5	20	10.43	CF,19,53
	1725	115	48YZ	NONE	B306	048S17D2058	√	7.5	18	10.32	CF,19,31,52
	1725	115	48YZ	AUTO	B307	048S17D2059	√	7.5	18	10.32	CF,19,31,52

Fan and Blower - Capacitor Start, Dripproof

Resilient Base (Single & Two-Speed)

Features:

- Ball bearings
- Heavy gauge steel frame and base
- Service Factor, as noted
- Capacitor start / capacitor run as noted
- Thermal protection, as noted
- 48Y and 48YZ Frame have 48/56 Frame mounting holes
- UL Recognized and CSA Certified

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	"C" DIM.	FOOT NOTES
1/3	1725	115/208-230	48YZ	AUTO	B315	48C17D2044	√	5.8/3.1-2.9	17	10.22	20,31,52
	1725	115/208-230	56	AUTO	C216	5KC36LN1X	√	6.0/3.2-3.0	18	10.32	20,50
1/2	1725	115/208-230	56	NONE	B1316	5KC49GN0001	√	8.8/4.2-4.4	21	10.38	19
	1725	115/208-230	56	AUTO	B317	56C17D2072	√	8.0/4.1-4.0	20	10.32	CF,19,31
3/4	1725	115/208-230	56	AUTO	C1156	5KC46LN0149X	√	13.3/6.5-6.6	27	10.78	19
	1725	115/208-230	56	AUTO	B319	56C17D2074	√	10.0/5.2-5.0	23	10.72	CF,19,31
	1725	115/208-230	56	NONE	B318	56C17D2073	√	10.0/5.2-5.0	24	10.72	CF,19,31
1	1725	115/208-230	56	AUTO	C1158	5KC49PN0164X	√	14.7/7.2-7.4	29	11.38	18
	1725	115/208-230	56H	NONE	C235	5KC49PN0155	√	13.6/6.7-6.8	31	11.38	18
1 1/2	1725	115/208-230	56H	NONE	B336	56C17D5347	√	18.0/9.3-9.0	39	12.85	5,18,32
	1725	115/208-230	56H	AUTO	C1160	5KCR49SN0150X	√	16.4/8.4-8.2	35	11.91	ES,1,18

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Fan & Blower - Three Phase, Dripproof

Resilient Base (Single and Two-Speed)

Features:

- Single and two-speed models, as noted
- Variable torque on two speed ratings
- Ball bearings
- Heavy gauge steel frame and base
- Thermal protection, as noted
- Service Factor, as noted
- Nameplated 60/50 Hz at next lower horsepower (except as noted)
- Patented VCD™, Voltage Change Device where footnoted “VC”
- UL Recognized and CSA Certified

THIS MOTOR FEATURES MARATHON'S PATENTED VCD VOLTAGE CHANGE DEVICE

As Noted

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	“C” DIM.	FOOT NOTES
1/2	1800	208-230/460	56	AUTO	K1408	5K42HN4089X	√	2.3-2.2/1.1	20	10.05	19
	1800	208-230/460	56	AUTO	G140	056T17D5345	√	2.3-2.4/1.2	22	10.85	VC,19
1	1800	208-230/460	56H	AUTO	G100	056T17D2101	√	3.4-3.4/1.7	24	11.47	5,18
1 1/2	1800	208-230/460	56	NONE	G122	056T17D5329	√	4.8-4.8/2.4	28	11.35	18
3	1800	208-230/460	56HZ	AUTO	G145	056T17D5350	√	9.2-8.6/4.3	48	14.22	Z,VC,5,18

Furnace Blower, Split Phase

Open, PDQ Mounting

Applications:

Designed for replacement of virtually any NEMA 48 and 56 frame belt drive furnace blower motors. PDQ models have 1 1/2" extended splined hub on opposite shaft end for quick and easy positioning of resilient ring to properly fit the pre-existing motor base.

Features:

- Ball bearings
- Reversible rotation connected for CCW rotation from factory
- NEMA service factors
- UL Recognized and CSA Certified

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	“C” DIM.	MIN/MAX BASE DIM'S	FOOT NOTES
1/3	1725	115	48Y	AUTO	4731	5KH39QN9696X	√	5.8	15	10.28	7.12" & 8.41"	30

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Oil Burner, Split Phase and Capacitor Start

NEMA 48M and 48N Flange Mount

Applications:

Direct replacement motors for residential and commercial oil burners and hot water pressure/steam cleaners.

Features:

- Ball Bearings (except as noted)
- Semi- or totally enclosed steel frame
- 20" Long leads from a 1/2" NPT opening (totally enclosed footnoted with N)
- Split phase and capacitor start designs
- Two-bolt, NEMA N- or M-Flange Direct
- Catalog numbers O010 mounting and O011 have dripproof enclosures
- 1.0 Service Factor

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	"C" DIM.	FOOT NOTES
1/8	1725	115	48N	MANUAL	O600	48S17T286	√	2.8	11	7.7	CF,N,3
1/7	3450	115	48M	MANUAL	O100	48S34S361	√	2.8	11	7.7	CF,3
1/6	3450	115	48M	MANUAL	O102	48S34S2005	√	3.0	11	7.25	3
	1725	115	48N	MANUAL	O601	48S17T290	√	2.7	12	7.59	CF,N,3
1/4	3450	115	48N	MANUAL	O004	48S34S2003	√	4.2	13	8.13	CF,3
	1725	115	48N	MANUAL	O002	48S17S25	√	4.2	12	7.59	3
1/3	3450	115/208-230	48N	MANUAL	O010	48C34D2024	√	5.6/2.7-2.8	14	10.34	2
	1725	115	48N	MANUAL	O003	48S17S24	√	5.0	17	8.34	3
1/2	3450	115/208-230	48N	MANUAL	O011	48C34D2028	√	7.4/3.5-3.7	17	10.84	2

Oil Burner, PSC

NEMA 48M Flange Mount

Applications:

Replacement motors for mini pumps in residential or light commercial furnaces.

Features:

- High efficiency design
- 14" cord for easy connection
- Ultra quiet performance
- UL Recognized and CSA Certified

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	"C" DIM.	FOOT NOTES
1/7	3450	115	48M	AUTO	O701	48A34SU1001	√	1.7	8	6.61	3,61

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Oil Burner, Split Phase and Capacitor Start

Dripproof, NEMA 56C, C-Face Footless

Features:

- Ball Bearings
- Automatic reset thermal
- Split Phase and capacitor start designs protector
- NEMA 56C direct mounting
- NEMA Jet Pump Service Factors
- Moderate starting torque
- UL Recognized and CSA Certified

HP	RPM	VOLTS	FRAME	OVER LOAD	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	"C" DIM.	FOOT NOTES
1/3	3600	115/208-230	56C	AUTO	O210	56C34D2114	√	5.6/2.7-2.8	14	10.44	2,115

Refrigeration Fan Motors, Three Phase

Open Air Over, Shaft Up & Horizontal Rigid Base Mount

Applications:

Replacement motor for refrigeration equipment.

Features:

- 70°C ambient
- Enclosed shaft end bracket, vented frame
- Continuous duty
- Automatic reset thermal protector
- Shaft slinger
- Threaded lead exit
- Nameplated 60/50 hertz 190/380 volts, at next lower HP
- Double sealed ball bearings
- Flat and keyway on shaft
- Patented VCD, Voltage Change Device
- Ball Bearings
- UL Recognized and CSA Certified

THIS MOTOR FEATURES MARATHON'S PATENTED VCD VOLTAGE CHANGE DEVICE

As Noted

X507 (Footless)

HP	RPM	VOLTS	FRAME	CAT. NO.	MODEL NO.	STOCK	F.L. AMPS	WEIGHT	FRAME LENGTH	"C" DIM.	FOOT NOTES
1/2	850	208-230/460	56HZ	X529	056T8O5531	√	2.9-3.0/1.5	31	9.62	5/8 x 5	VC,5
1	850	208-230/460	56Y	X507	056T8O5302	√	5.3-5.3/2.6	46	12.00	5/8 x 5	VC
1 1/2	1140	208-230/460	56HZ	X523	056T11O5306	√	5.45-5.4/2.7	36	11.00	5/8 x 5	VC,5
	850	208-230/460	56HZ	X531	056T8O15504	√	7.0-7.0/3.5	47	11.50	5/8 x 5	VC,5
2	1140	208-230/460	56HZ	X525	056T11O5310	√	7.2-6.8/3.4	47	12.00	5/8 x 5	VC,54

⚠ WARNING:
Cancer and Reproductive Harm
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Resilient Ring Kit

Used to mount Resilient Rings onto Hubbed PSC Brackets. Kit includes: 2 rubber resilient r ings and 4 split rings.

CAT. NO.	KIT NO.	WEIGHT	NOTES
A110	KIT 110	1	2-1/4" (48 frame)
A114	KIT 114	1	2-1/2" (56 frame)

Shaft Adapter Sleeve

Used to increase the diameter of a shaft to a larger size. Available sizes include converting from a 1/2" dia. shaft with flat to a 5/8" dia. with key and from a 5/8" dia. with key to a 3/4" dia. with key. Kit includes adapter sleeve and key.

CAT. NO.	KIT NO.	TO CHANGE SHAFT	WEIGHT
A105	KIT 105	1/2" to 5/8"	3

Drip Cover Kits

Mounts with two screws into the end bracket. Kit includes: drip cover, mounting screws, washers, and instructions. Contact Marathon Motors to determine compatibility with motor. For vertical shaft down applications.

CAT. NO.	FRAME	KIT NO.	ENCLOSURE	WEIGHT
A197	182T-184T	KIT 197	TEFC (4-IN-1)	3

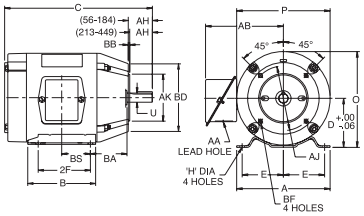
All Kits Listed on This Page are Stock

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

NEMA Quick Reference Dimensional Chart

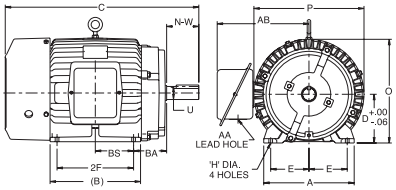
NEMA Quick Reference Dimensional Chart

Typical C-Face Motor



Contact your Marathon sales rep. for “AB”, “O”, & “P” Dim.

Typical Rigid Base Motor



Refer to your Marathon catalog for “C” Dim.

NEMA C-Face	BA Dim.
143-5TC	2-3/4
182-4TC	3-1/2
213-5TC	4-1/4
254-6TC	4-3/4

FRAME	D	E	2F	H	U	N-W	AA	AH	AJ	AK	BA	BB (MIN)	BD (MAX)	BF
48	3.00	2.12	2.75	.34 SLOT	.5000	1.50	1/2	1.69	3.750	3.000	2.50	.13	5.62	1/4-20
56	3.50	2.44	3.00	.34 SLOT	.6250	1.88	1/2	2.06	5.875	4.500	2.75	.13	6.50	3/8-16
56H	3.50	2.44	5.00	.34 SLOT	.6250	1.88	1/2	2.06	5.875	4.500	2.75	.13	6.50	3/8-16
143T	3.50	2.75	4.00	.34	.8750	2.25	3/4	2.12	5.875	4.500	2.25	.13	6.50	3/8-16
145T	3.50	2.75	5.00	.34	.8750	2.25	3/4	2.12	5.875	4.500	2.25	.13	6.50	3/8-16
182	4.50	3.75	4.50	.41	.8750	2.25	3/4	2.12	5.875	4.500	2.75	.13	6.50	3/8-16
184	4.50	3.75	5.50	.41	.8750	2.25	3/4	2.12	5.875	4.500	2.75	.13	6.50	3/8-16
182T	4.50	3.75	4.50	.41	1.125	2.75	3/4	2.62	7.250	8.500	2.75	.25	9.00	1/2-13
184T	4.50	3.75	5.50	.41	1.125	2.75	3/4	2.62	7.250	8.500	2.75	.25	9.00	1/2-13
213	5.25	4.25	5.50	.41	1.125	3.00	1	2.75	7.250	8.500	3.50	.25	9.00	1/2-13
215	5.25	4.25	7.00	.41	1.125	3.00	1	2.75	7.250	8.500	3.50	.25	9.00	1/2-13
213T	5.25	4.25	5.50	.41	1.375	3.38	1	3.12	7.250	8.500	3.50	.25	9.00	1/2-13
215T	5.25	4.25	7.00	.41	1.375	3.38	1	3.12	7.250	8.500	3.50	.25	9.00	1/2-13
254U	6.25	5.00	8.25	.53	1.375	3.75	1-1/4	3.50	7.250	8.500	4.25	.25	10.00	1/2-13
256U	6.25	5.00	10.00	.53	1.375	3.75	1-1/4	3.50	7.250	8.500	4.25	.25	10.00	1/2-13
254T	6.25	5.00	8.25	.53	1.625	4.00	1-1/4	3.75	7.250	8.500	4.25	.25	10.00	1/2-13
256T	6.25	5.00	10.00	.53	1.625	4.00	1-1/4	3.75	7.250	8.500	4.25	.25	10.00	1/2-13
284U	7.00	5.50	9.50	.53	1.625	4.88	1-1/2	4.62	9.000	10.500	4.75	.25	11.25	1/2-13
286U	7.00	5.50	11.00	.53	1.625	4.88	1-1/2	4.62	9.000	10.500	4.75	.25	11.25	1/2-13
284T	7.00	5.50	9.50	.53	1.875	4.62	1-1/2	4.38	9.000	10.500	4.75	.25	11.25	1/2-13
286T	7.00	5.50	11.00	.53	1.875	4.62	1-1/2	4.38	9.000	10.500	4.75	.25	11.25	1/2-13
284TS	7.00	5.50	9.50	.53	1.625	3.25	1-1/2	3.00	9.000	10.500	4.75	.25	11.25	1/2-13
286TS	7.00	5.50	11.00	.53	1.625	3.25	1-1/2	3.00	9.000	10.500	4.75	.25	11.25	1/2-13
324U	8.00	6.25	10.50	.66	1.875	5.62	2	5.38	11.000	12.500	5.25	.25	14.00	5/8-11
326U	8.00	6.25	12.00	.66	1.875	5.62	2	5.38	11.000	12.500	5.25	.25	14.00	5/8-11
324T	8.00	6.25	10.50	.66	2.125	5.25	2	5.00	11.000	12.500	5.25	.25	14.00	5/8-11
326T	8.00	6.25	12.00	.66	2.125	5.25	2	5.00	11.000	12.500	5.25	.25	14.00	5/8-11
324TS	8.00	6.25	10.50	.66	1.875	3.75	2	3.50	11.000	12.500	5.25	.25	14.00	5/8-11
326TS	8.00	6.25	12.00	.66	1.875	3.75	2	3.50	11.000	12.500	5.25	.25	14.00	5/8-11
364U	9.00	7.00	11.25	.66	2.125	6.38	2-1/2	6.12	11.000	12.500	5.88	.25	14.00	5/8-11
365U	9.00	7.00	12.25	.66	2.125	6.38	2-1/2	6.12	11.000	12.500	5.88	.25	14.00	5/8-11
364T	9.00	7.00	11.25	.66	2.375	5.88	2-1/2	5.62	11.000	12.500	5.88	.25	14.00	5/8-11
365T	9.00	7.00	12.25	.66	2.375	5.88	2-1/2	5.62	11.000	12.500	5.88	.25	14.00	5/8-11
364TS	9.00	7.00	11.25	.66	1.875	3.75	2-1/2	3.50	11.000	12.500	5.88	.25	14.00	5/8-11
365TS	9.00	7.00	12.25	.66	1.875	3.75	2-1/2	3.50	11.000	12.500	5.88	.25	14.00	5/8-11
404U	10.00	8.00	12.25	.81	2.375	7.12	3	6.88	11.000	12.500	6.62	.25	15.50	5/8-11
405U	10.00	8.00	13.75	.81	2.375	7.12	3	6.88	11.000	12.500	6.62	.25	15.50	5/8-11
404T	10.00	8.00	12.25	.81	2.875	7.25	3	7.00	11.000	12.500	6.62	.25	15.50	5/8-11
405T	10.00	8.00	13.75	.81	2.875	7.25	3	7.00	11.000	12.500	6.62	.25	15.50	5/8-11
404TS	10.00	8.00	12.25	.81	2.125	4.25	3	4.00	11.000	12.500	6.62	.25	15.50	5/8-11
405TS	10.00	8.00	13.75	.81	2.125	4.25	3	4.00	11.000	12.500	6.62	.25	15.50	5/8-11
444U	11.00	9.00	14.50	.81	2.875	8.62	3	8.38	14.000	16.000	7.50	.25	18.00	5/8-11
445U	11.00	9.00	16.50	.81	2.875	8.62	3	8.38	14.000	16.000	7.50	.25	18.00	5/8-11
444T	11.00	9.00	14.50	.81	3.375	8.50	3	8.25	14.000	16.000	7.50	.25	18.00	5/8-11
445T	11.00	9.00	16.50	.81	3.375	8.50	3	8.25	14.000	16.000	7.50	.25	18.00	5/8-11
444TS	11.00	9.00	14.50	.81	2.375	4.75	3	4.50	14.000	16.000	7.50	.25	18.00	5/8-11
445TS	11.00	9.00	16.50	.81	2.375	4.75	3	4.50	14.000	16.000	7.50	.25	18.00	5/8-11
447T	11.00	9.00	20.00	.81	3.375	8.50	3	8.25	14.000	16.000	7.50	.25	18.00	5/8-11
449T	11.00	9.00	25.00	.81	3.375	8.50	3	8.25	14.000	16.000	7.50	.25	18.00	5/8-11
447TS	11.00	9.00	20.00	.81	2.375	4.75	4 NPT	4.50	14.000	16.000	7.50	.25	18.00	5/8-11
449TS	11.00	9.00	25.00	.81	2.375	4.75	4 NPT	4.50	14.000	16.000	7.50	.25	18.00	5/8-11

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Footnotes

1	Capacitor Start/Capacitor Run design for reduced amperage
2	Capacitor Start Induction Run design
3	Split Phase design
4	Sleeve bearing
5	56H, 143T, and 145T Combination Base with 12 mounting holes
6	Bolt-on removable base for footless mounting option
7	Shaft extension 1-1/2" long by 1/2" diameter
8	Shaft extension 1-7/8" long by 1/2" diameter
9	Shaft extension 2-1/4" long by 1/2" diameter
10	Shaft extension 2-1/4" long by 5/8" diameter
11	Shaft extension 2-1/4" long by 7/8" diameter
12	With rigid base
13	F1 Mounting only, cannot reassemble to F2
14	Will accept C-Face kit, see Accessory Section
15	Fixed CW Rotation, viewing opposite shaft (or lead end) of motor
16	Fixed CCW Rotation, viewing opposite shaft (or lead end) of motor
17	1.0 Service Factor
18	1.15 Service Factor
19	1.25 Service Factor
20	1.35 Service Factor
21	Double shaft extension 1-1/2" long by 1/2" diameter with flat each end
22	Double shaft extension 1-7/8" long by 5/8" diameter each end
23	Shaft extension 3/8" diameter
24	Motor will NOT accept a Brake kit
25	Motor will NOT accept C-Face Kits
26	5/8" shaft adapter included
27	Drip Cover included
28	Steel Endshields
29	Weep holes with removable plugs on end brackets. Remove bottom plug after installation
30	Resilient ring mount, base not included
31	5/8" Thru-bolts, shaft end
32	3/4" Thru bolts, shaft end
33	Shaft extension 6" long by 5/8" diameter with full flat and key 90° apart
34	1" Thru-bolts, shaft end
35	1-1/8" Thru-bolts, shaft end
36	1-1/4" Thru-bolts, shaft end
37	1-1/2" Thru-bolts, shaft end
38	2" Thru-bolts, shaft end
39	No Thru-bolts, shaft end
40	Space heaters and 100 ohm platinum stator RTDs included
41	1/2" Thru-bolts, opposite shaft end
42	3/4" Thru-bolts, opposite shaft end
43	2-1/2" Resilient Rings included
44	1" Thru-bolts, opposite shaft end
45	60° C ambient
46	65° C ambient
47	Connected for CCW rotation (U.S. standard) facing opposite shaft end. Reversible by reconnection of leads
48	Connected for CW rotation (Canadian standard) facing opposite shaft end. Reversible by reconnection of leads
49	Shaft extension 1-13/16" long by 1/2" diameter with 6-3/8" mounting flange
50	Designed for 50 Hz operation
51	Does not include resilient rings, see Accessory Section
52	1/2" x 1-7/8" Shaft with 1-5/8" Flat
53	1/2" Shaft with 5/8" adapter and Key
54	30 minute duty cycle, not rated for continuous duty
55	Shaft extension 3-13/16" long by 5/8" diameter with 3.5" keyway
56	1-5/8" Thru-bolts, shaft end
57	Open construction
58	Capacitor supplied with motor
59	TEAO construction
60	Foot locating Set Screws on frame, 90 apart
61	10" Leads
62	43" Leads
63	1-1/2" Thru-bolts, opposite shaft end
65	Mounting accessories and resilient ring for pulley end are not included. Use accessory kit 161L131AB1 for resilient ring mounting
67	Capacitor not included, see Accessory Section
68	Rated 60/50 hertz, 190/380 or 380 volt at next lower horsepower
69	50° C Ambient
70	Not Nameplated 50 hz
71	Includes length adapter bracket
72	Usable on 200 Volts at 1.0 service factor
73	No hubs
74	Split phase/capacitor run electrical design
75	Addition of C-Face Kits may result in non-NEMA "BA", dimension. For the resulting "BA" dimension consult chart found in modification section
76	Addition of C-Face Kits in non-NEMA "AH" dimension. "AH" is 2.12, Rework "AH" is 2.38
77	Frame size is drilled with three sets of footholes, 5010, 5011, and 5012 as standard. Foothole drilling for 5009 available upon request, as a build-up
78	Frame size is drilled with two sets of footholes, 5012 and 5013 standard
79	Ball brgs on both ends suitable for direct connection. For belted applications, refer to Customer Service
80	Rolled steel fan guard on 143T-145T
81	24" long #18 SO 2-conductor cord out shell at 11 o'clock position
82	Welded Rigid Base
83	Shaft extension 1-7/8" long by 5/8" diameter with 6-3/8" mounting flange
84	NEMA 145T C-Face mounting with removable 182T rigid base
85	Not tach adaptable
86	2:1 constant torque speed range; RTM for greater torque capability
87	10:1 Constant Torque available as build-up, RTM for price and availability
88	182T base and shaft height, 145TC mounting face and shaft dimensions
89	Threaded NPT opening in conduit box
90	Not UL Recognized
91	Suitable for use on VFD at 208 volt
92	7/8" Thru-bolts, shaft end
93	Permanent split capacitor-switchless
94	1/2" Thru-bolts, shaft end
95	Will not accept drip cover kit
96	3 lead reversible design works with single pole, double throw reversing switch
97	Addition of D-Flange kit will result in non-NEMA "BA" dimension (1/2" longer than NEMA) and non-NEMA shaft extension (1/2" shorter than NEMA).
98	Not UL Listed for Fire Pump applications
99	Suitable for 2:1 CT operation
100	6" shaft extension with 2 flats 90° apart
110	1.20 Service Factor
111	1.30 Service Factor
112	1.40 Service Factor
113	1.50 Service Factor
114	1.60 Service Factor
115	1.75 Service Factor
116	1-3/4" thru-bolt extension on shaft-end
2:1	Suitable for 2:1 CT operation; consult "R164 Rework" table for fan change pricing to upgrade to 10:1 CT
A	NEMA Design A
B	NEMA Design B
C	NEMA Design C
D	Will become build-up item when current stock is gone
E	Design incorporates electronic switch
F	Class F Insulation
H	Class H Insulation
I	Reduced HP @ 120 HZ
N	Totally Enclosed, Non-Ventilated
P	BCP (Bearing Current Protection)
Q	Quick Connect" terminal board
S	Steel Frame Construction
V	Suitable for 10:1 CT 60 minute duty, otherwise 2:1 CT
X	XRI, Ultra High Efficiency Design
Z	56HZ with 7/8" shaft dia., 3-1/2" shaft height, and slotted 56 frame base
AH	Conforms to GM 7EH and satisfies Ford EM-1 and GM 7EQ
AL	Aluminum Frame Construction
AQ	Conforms to GM 7EQ and satisfies Daimler Chrysler NPEM-100, and Ford EM-1
BI	Class B Insulation
BP	Separate power supply required for blower motor
CD	Suitable for Group C
CF	Consult Factory for Accessory Kit and/or Modification Selection
CT	Suitable for 20:1 CT on Vector Drive, continuous duty or 2000:1
ES	Energy Saver Design
FN	Drive has cooling fan
NE	Exempt from NEMA Premium efficiency requirement
NP	Does not meet NEMA PremiumR efficiency
NS	Single Shielded Ball Bearings
PW	Part Winding Start Capability
RB	Roller Bearing on shaft end for belted load only
SH	Space heaters
SL	Sound level exceeds standard
TS	Normally Closed Thermostats installed
VB	Vibration not met
VC	Voltage Change Device feature for quick voltage changes
YD	12 Leads for WYE-DELTA, Part Winding on low voltage, or across-the-line starting

√ Stock model for Marathon and/or MARS. Prices and Specifications are subject to change without notice.

Notes

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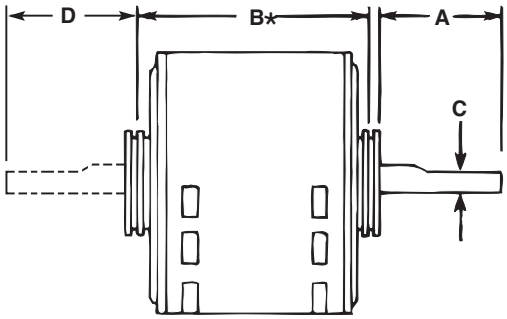
DIMENSIONS



- **Shaft diameter is 1/2 inch on all motors unless otherwise noted.**

* "B" dimension is the center to center of resilient ring dimension or the overall length of the shell and end shields if the motor does not have resilient rings.

Amana

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A129	-	1/20	115	3250/1	CW	1.95	-	-	-

3.3 inch, Shaded pole

Replaces: Amana, 7021-9064, 7021-9259 FASCO

Amana

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A180	-	1/30	115	3400/1	CCW	1.8	2.50	3.50	–

3.3 inch, Shaded pole, ball bearing

Replaces: 7021-9625, 20190601 FASCO

A O Smith/Century

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
20884	-	1/8,1/6, 1/5,1/4,1/3	460	825/1	REV	1.0	6.50	5.30	0.50

5.5 inch, Outdoor Condenser Fan, ball bearing, TEAO, 7.5 MFD @370 cap required

Replaces: ORM4688BF MARS

Bohn

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
09930	-	1/20	115	1550/1	CW SE	2.0	3.00	3.00	-

3.3 inch diameter, open 5/16 inch shaft, shaded pole with lyall plug

Replaces: AO Smith AO1124 Bohn 5KSM59JSK143 5008SS Fasco D1124, Magentek 572 MARS

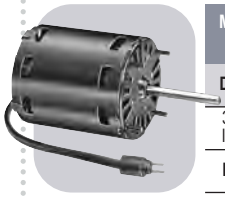
Bohn

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
09931	-	1/15	230	1550/1	CW SE	0.57	3.00	3.50	-

3.3 inch diameter, open 5/16 inch shaft, shaded pole with lyall plug

Replaces: AO Smith AO1126 Bohn 5KSM59S262AS 5034MS 5008TS Fasco D1126 Magnetek 573 MARS

Bohn

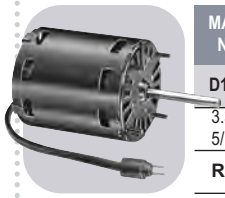


MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1124	-	1/20	115	1550/1	CW	2.1	3.00	3.00	0.31

3.3 inch Shaded pole, sleeve bearing, 5/16 inch dia. shaft, shell turbo 68, low temp. oil (-40°F)

Replaces: 5KSM59JSK143S & 5KSM59JS5036S FASCO

Bohn

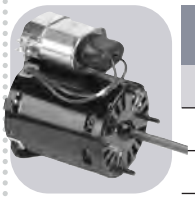


MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1126	-	1/15	208-230	1550/1	CCW	1.1	3.00	3.50	0.31

3.3 inch Shaded pole, sleeve bearing, shell turbo 68, low temp. oil (-40°F), 5/16 inch dia. Shaft

Replaces: 5KSM59LS2262AS FASCO

Bohn

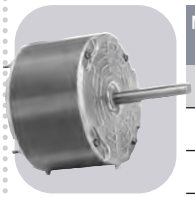


MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1125	-	1/12	208-230	1550/1	CW	0.50	2.63	3.75	0.31

3.3 inch PSC, sleeve bearing, 4@370V capacitor included, bolt circle 3.15", 5/16 inch dia. Shaft

Replaces: 7190-0442 FASCO

Bryant/Payne



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D847	-	1/8	208 - 230	1125/1	CCW	0.90	3.50	3.75	0.50

5.6 inch, PSC, sleeve bearing

Replaces: K1543HC35VE-230 KA55CGD-9658 FASCO

Carrier

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10234	-	1/10	208-230	1100/1	CCW OSE	0.77	1.80	3.80	0.50

5 1/2 inch diam., totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905), CW OSE

Replaces: Carrier HC33GE233 MARS

Carrier

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
P190	5KCP49ZN9617T	1	200-230/460	1075/1	REV	6.7-6.8/3.4	4.00	11.21	0.625

5.5 inch diam. open air over, ball bearings, capacitor not included G21-913

Replaces: 5KCP49UG1007S, 5KCP49UG1027S, 5KCP49UG1028S, 5KCP49ZG171S, 5KCP49ZG189S, 5KCP49ZG190S, 5KCP49ZG24S and 5KCP49ZN9622S genteq

Carrier

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03288	5KCP39SGU073S	1/2	200-230/460	1075/1	CCW OSE	4.6/2.3	2.92	7.31	-

5.5 inch diam. Open, lug mount, 7.5 MFD @ 370V capacitor required (MARS 12007)

Replaces: 5KCP39SGL288S genteq

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Carrier

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
X210	048A11O1068	1/4	208-230	1075/2	REV	2.2	4.25	4.12	-

48Y frame, three lug mount, open air over, ball bearings, 5 MFD @ 370V capacitor required (MARS No. 12005)

Replaces: Emerson 3303, FASCO D843, Magnetek 514, AOS OCB1026

Carrier

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
X222	048A11O1109	1/3	230	1075/2	REV	2.6	3.00	4.75	-

48Y frame, three lug mount, open air over, ball bearings, 7.5 MFD @ 370V capacitor required (MARS No. 12007)

Replaces: Carrier HC41VE700, HC41VE701, Emerson 3225, Magnetek 536, AOS OCB1036

Coleman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A088	-	1/25	115	3200/1	CW	1.3	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 7021-5478

Copeland

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10227	-	1/3	230	1625	CW OSE	2.2	1.75	5.87	0.50

1/3HP, Condenser Fan, 208-230V, 1625 RPM, TEAO, capacitor included 4 MFD @ 370V, sleeve bearing

Replaces: 050-0108-00, 5KCP32KG2598, 5KCP32KG175, 5KCP32KG221, 6127, K55HXECE2645

Copeland

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10228	-	1/6	208-230	1550	CW OSE	1.1	3.07	3.69	0.50

1/6HP, Condenser Fan, 208-230V, 1550 RPM, OAO, capacitor included 3 MFD @ 370V, sleeve bearing

Replaces: 050-0251-00, 998-0251-00, 6128, K55HSJNG-2974, 40251

Copeland

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10229	-	1/4	208-230	1625	CW OSE	1.5	3.07	4.32	0.50

1/4HP, Condenser Fan, 208-230V, 1625 RPM, OAO, capacitor included 5 MFD @ 370V, sleeve bearing

Replaces: 050-0250-00, 950-0250-00, 03242, 5KCP39EG755S, 6129, K55HXJZJ-3126, 40250, OCP0250

Copeland

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10264	-	1/4	230	1550	CW OSE	2.1	3.00	4.20	0.50

1/4HP, Condenser Fan, 230V, 1550 RPM, ODP, capacitor included 5 MFD @ 370V, sleeve bearing

Replaces: 050-0238-00, 5KCP-39GG357S, 6124, K55BZY-1439

Copeland

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10265	-	1/6	208-230	1550	REV	1.1	3.00	3.73	0.50

1/6HP, Condenser Fan, 208-230V, 1550 RPM, OAO, capacitor included 3 MFD @ 370V, sleeve bearing

Replaces: 050-0265-00, K55PGP5104, 40265

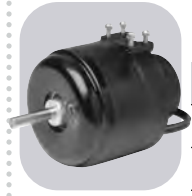
Copeland

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
00353	ESP-L35EM2	35W	230	1500/1	CW OSE	0.70	0.50	3.50	-

3 7/8 inch diam., cast iron unit bearing motor, end or side pad mounting, horizontal operation, 1/4" threaded shaft

Replaces: Copeland 050-0227-02, ESP-L35EMV2, ESP-L35E22, Gem EM-33502

Copeland



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
00503	ESP-OL50EM2	50W	230	1500/1	CW OSE	0.85	1.50	4.50	-

3 7/8 inch diam., cast iron unit bearing motor, end or side pad mounting, horizontal operation, 3/8" dia, flatted shaft

Replaces: Copeland 050-0011-00, 050-0237-00, 050-0244-00, use 00513 for 2080 units

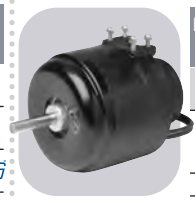
Copeland

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03047	5KCP39GGD320S	1/4	230	1625/1	CW OSE	1.5	2.50	5.10	-

5.5 inch diam., shell enclosed band mount, 5 MFD @ 370V capacitor required (MARS No. 12005)

Replaces: 5KCP39GG3537S, Copeland 050-0107-01 and 050-0238-00

Cornelius

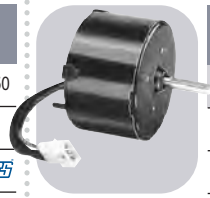


MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
00508	ESP-OL50EM1B1	50W	115	1500/1	CW OSE	1.7	2.89	4.50	-

3 7/8 inch diam., cast iron unit bearing motor, end or side pad mounting evaporator fan motor .312 shaft dia., 2 female spade terminals at end of each wire

Replaces: Rotom 6206

Fasco



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1160	-	1/110	115	1480/1	CW	0.58	1.50	2.13	0.31

3.3 inch, Shaded pole, sleeve bearing, 5/16 inch dia. Shaft

Replaces: 7163-2593, 663, 668, 763, 768, 661

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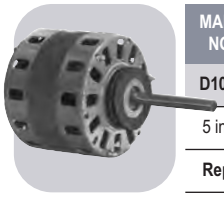
Fedders

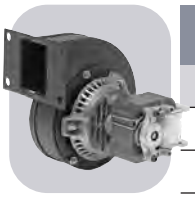


MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1016	-	1/4	230	1100/1	CW	2.0	4.13	3.88	-

5 inch, PSC, sleeve bearing

Replaces: Condenser Fan S196-18-2

Frymaster



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A110	-	1/70	115	3200/1	CW	0.76	-	-	-

Shaded pole, ball bearing, 50/60Hz

Replaces: 7021-0898

General Electric

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1050	-	1/8	230	1550/1	CW	1.1	3.00	3.25	0.50

5 inch, PSC, sleeve bearing, original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing of shaft end to prevent moisture from entering

Replaces: WW94X236SP, WW94X936PSC

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10230	-	1/4	208-230	1100/1	CCW OSE	1.26	3.00	4.10	0.50

5.5 inch diam., totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905), CCW OSE

Replaces: Goodman 0131M00019P

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10232	-	1/6	208-230	810/1	CCW OSE	1.1	3.00	4.10	0.50

5.5 inch diam., totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905), CCW OSE

Replaces: Goodman 0131M00060

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10233	-	1/8	208-230	1050/1	CCW OSE	0.70	2.50	4.10	0.50

5.5 inch diam., totally enclosed, ball bearing, capacitor required 5 MFD @ 370V (MARS No. 12005, 12905), CCW OSE

Replaces: Goodman 0131M00294

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10594	-	1/2	115	1130/4	CW OSE	8.1	4.00	5.10	0.50

5.5 inch diam., totally enclosed, ball bearing, capacitor required 20 MFD @ 370V (MARS No. 12014, 12914), CW OSE

Replaces: Goodman 0131F00022

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03242	-	1/6	208-230	1075/1	CCW OSE	1.0	2.75	3.73	0.50

5.5 inch diam., condenser, 5 MFD @370V capacitor required (MARS No.12005)

Replaces: G3911

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A157	-	1/35	115	3000/1	CCW	1.3	-	-	-

Shaded pole, sleeve bearing

Replaces: 7002-2307

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A079	-	1/50	115	3000/1	CCW	1.1	-	-	-

Shaded pole, sleeve bearing

Replaces: 74-70-21504-03-04, 74-70-21496-03-01, JAIM106, JAIM137, 7021-5615

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A182	-	1/35	115	3125/1	CCW	1.3	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 7002-3036, B4059000

Goodman

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A281	-	1/40	115	3000/1	CW	0.90	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 7021-8252, D6996405

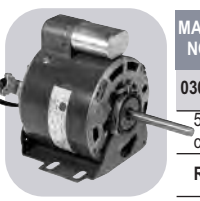
Heil-Quaker

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1071	-	1/6	208 - 230	1100/1	REV	0.99	2.13	-	0.50

5 inch, PSC, sleeve bearing

Replaces: HQ 1052662EM 48HXCLW-1562

Hill Refrigeration



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03001	5KCP39KG1369S	1/3	208-230	1625/1	CW OSE	2.9	3.50	5.70	0.50

5.5 inch diam., shell only enclosed, 3 inch resilient base and capacitor included

Replaces: Fasco D801 Hill No. PP3955B Universal 160

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Hill Refrigeration

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03067	5KCP39PGC910S	1	208-230	1075/1	CCW OSE	2.9	7.10	3.30	-

5.5 inch diam., open 3 inch resilient base included, ball bearing, 15 MFD @ 370V capacitor required (MARS No. 12010), shaft length 6 1/2 inch

Replaces: Hill No. PP19162G, 5KCP39PGC030S, A.O. SMITH OHR 1106

genteq

Hill Refrigeration

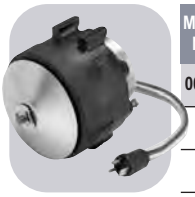
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
05095	5KSM81FFL0036	5W	115	1550/1	CW OSE	0.45	0.50	2.50	-

3.5 inch diam., totally enclosed, 3 tapped holes, shaded pole,1/4 inch threaded shaft

Replaces: 5KSP51AL486H, 5KSM51AG3005, Hill No. PP7577 Also Replaces: 5KSP51AL380H used by WARREN

mars

Hussman



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
00091	RS4BEB9E13	9W	115	1660/1	CW OSE	0.28	0.39	2.56	-

3.43 inch diam., enclosed, end or side pad mounting, capacitor mounted inside shell, water resistant

Replaces: RS4BEB9E16, RS4BEB9E12

EM&S

Hussman

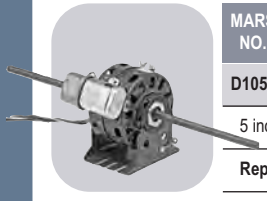
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03012	5KCP39GG5606S	1/5	208-230	1075/1	CW OSE	1.7	2.50	4.80	-

5.5 inch diam., shell enclosed, thru bolt mount, capacitor included

Replaces: 5KCP39GGA967T

genteq

IEC



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1059	-	1/6-1/12-1/50	115-127	1450/3	DS	2.3	8.75	3.33	0.50

5 inch, PSC, sleeve bearing

Replaces: 5KCP29DK8384S, S89208

FASCO

Inter City

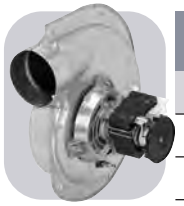
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A171	-	1/25	115	3450/1	CCW	0.70	-	-	-

3.3 inch, PSC, ball bearing

Replaces: 7062-4783, 1011412

FASCO

Inter City



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A172	-	1/35	115	3000/1	CW	1.6	-	-	-

Shaded pole, ball bearing

Replaces: 7002-2792, 1010975P

FASCO

Inter City

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A173	-	1/18	115	3450/1	CCW	0.80	-	-	-

3.3 inch, PSC, ball bearing

Replaces: 7062-4578, 1011350

FASCO

Inter City

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A174	-	1/100	115	2350/1	CW	0.80	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 7021-9188, 1010239

FASCO

Inter City

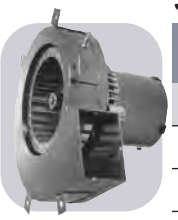
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A302	-	1/25	115	3060/1	CW	1.5	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 7021-9499, 1010324P, 7021-7700, 1708-607

FASCO

Janitrol



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A079	-	1/50	115	3000/1	CCW	1.1	-	-	0.50

3.3 inch, Shaded pole, sleeve bearing

Replaces: 74-70-21504-03-04, 74-70-21496-03-01, JAIM106, JAIM137, 7021-5615, 7021-6804

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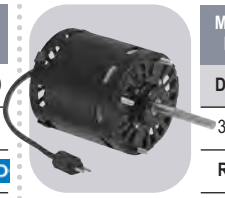
Keeprite



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1121	-	1/20	208 - 230	1550/1	CW	1.0	2.50	3.50	0.31

3.3 inch, Shaded pole, sleeve bearing, 5/16 inch dia. shaft

Replaces: 7163-8861, 1043766

FASCO

Kelvinator

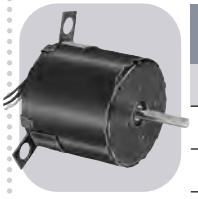
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
00152	ESP-OL15EMJR11	15W	115	1500/1	CCW OSE	0.60	7.00	3.17	-

3 7/8 inch diam., enclosed, 3 tapped holes or side pad mount, shaded pole, 5/16 inch diam. flatted shaft

Replaces: Kelvinator No. 24-0366 ESP-L15EMJR11

EM&S

Krack Refrigeration



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1189	-	1/20	115 / 208 - 230	1550/1	CW	1.4-0.76	1.63	3.13	0.31

3.3 inch, Shaded pole, ball bearing, 5/16 inch dia. shaft

Replaces: 11528, 11529, JB2P046N, JA2P216N, JA2P217N, JB2P047N, 8354110940, 8254111030

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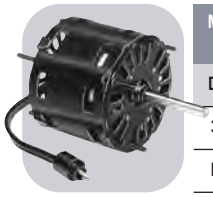


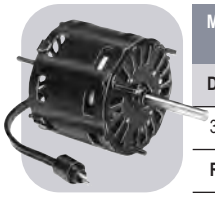
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1152	-	1/20	115	1500/1	CW	1.7	2.38	2.88	0.31

3.3 inch, Shaded pole, sleeve bearing, 5/16 inch dia. shaft

Replaces: 5KSM59ES2001

FASCO

Kramer/Trenton



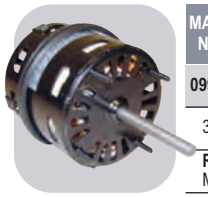
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1154	-	1/20	230	1550/1	CW	1.0	2.37	3.13	-

3.3 inch, Shaded pole, sleeve bearing, 5/16 inch dia. shaft

Replaces: JA2R140N

FASCO

Kramer/Trenton



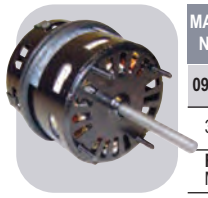
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
09932	253-1194	1/20	115	1550/1	CCW OSE	1.9	2.25	2.75	0.31

3.3 inch diam., open, 5/16 inch shaft, shaded pole with Lyall plug

Replaces: A.O Smith 1101, Fasco D1101, Larkin 253-1194, Magnetek 574

mars

Kramer/Trenton



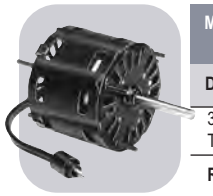
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
09933	253-1195	1/20	208-230	1550/1	CCW OSE	1.3	2.25	5.00	0.31

3.3 inch diam., open, 5/16 inch shaft, shaded pole with Lyall plug

Replaces: A.O. Smith 1103, Fasco D1103, Larkin 253-1195, Magnetek 575

mars

Larkin Coil



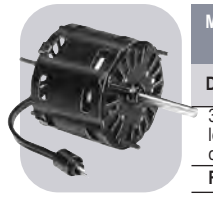
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1101	-	1/20	115	1500/1	CCW	1.9	2.25	2.75	0.31

3.3 inch diam., Shaded pole, sleeve bearing, 5/16 inch dia. shaft, Shel-Turbo 68, low temp oil (-40°F)

Replaces: Larkin No. 253-1194, Fasco No. 7163-2113

FASCO

Larkin Coil



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1103	-	1/20	208 - 230	1500/1	CCW	1.15	2.25	3.00	0.31

3.3 inch, Shaded pole, sleeve bearing, 5/16 inch dia. shaft, Shell Turbo 68, low temp oil (-40°F), not a direct replacement for 253-1194, but is an acceptable substitute

Replaces: Fasco No. 7163-3371, 252-1195

FASCO

Lennox

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A135	-	1/60	120	3000/1	CCW	0.70	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: LENNOX, 7021-8812, 7021-8819

FASCO

Lennox

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A163	-	1/20	115	3400/1	CCW	1.8	-	-	-

3.3 inch, Shaded pole, ball bearing

Replaces: LENNOX, 7021-9450

FASCO

Lennox

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A200	-	1/30	115	3000/1	CCW	1.95	-	-	-

Shaded pole, sleeve bearing

Replaces: 7002-2975, 31L5501

FASCO

Lennox

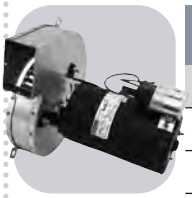
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A206	-	1/25	115	3000/1	CW	1.5	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 7021-8473, 65204100/20J8901

FASCO

Lennox



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A324	-	1/12	230	3200/1	CW	0.50	-	-	-

3.3 inch, PSC, ball bearing

Replaces: 7062-1909, 28G6601, 7062-1794

FASCO

Lennox

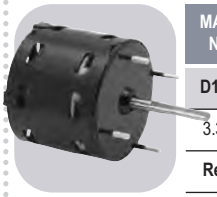
MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
X411	048A11T2008	1/6	208-230	1075/1	CCW/CW OSE	1.95	-	-	-

48Y frame, totally enclosed, ball bearings, 3@370V capacitor required (MARS No. 12003)

Replaces: Lennox 47F9901, Magnetek 9402, Marathon 048A11T300, 048A11T247

marathon electric

Loren Cook



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1100	-	1/50	115	1550/ 900/2	CW	1.2/ 0.70	2.38	2.88	0.31

3.3 inch, Shaded pole, sleeve bearing, 5/16 inch dia. shaft

Replaces: 7173-1580, GC/GN 142/144

FASCO

McQuay

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
09934	-	1/15	155/230	1550/1	CW OSE	2.2/1.1	2.50	3.50	0.31

3.3 inch diam., open, shaded pole, wiring harness and conductor box

Replaces: AO Smith A0142 Fasco D1142 Magnetek 342 McQuay 879-382562B-00, BA2H015

mars

One-On-One™ Direct Replacement Motors

Prestcold

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
05811	5KSM81HFL3004T	16W	115	1550/1	CW OSE	1.1	0.50	3.50	1/4

3.5 inch diam., enclosed, 3 tapped holes or side pad mount, shaded pole, 1/4 inch threaded shaft

Replaces: Prestcold No. 401-0032-01

Prestcold

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
05821	5KSM81HFL3006T	16W	230	1550/1	CW OSE	0.55	0.50	3.50	-

3.5 inch diam., enclosed 3 tapped holes or side pad, shaded pole, 1/4 inch threaded shaft

Replaces: Prestcold No, 401-0033-01

Rheem/Ruud

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A241	-	1/25	208-230	3200/1	CW	0.62	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 7021-9567, 70-23641-81

Rheem/Ruud

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A247	-	1/40	115	3250/ 2800/2	CW	0.95	-	-	-

3.3 inch, PSC, sleeve bearing

Replaces: 7062-5519

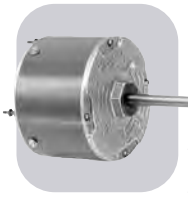
Rheem/Ruud

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
10463	-	1/2 - 1/3 - 1/4 - 1/6	115	1075/4	REV	6.2	5.50	4.73	0.50

5.5 inch dia., open endshields, sleeve bearing, capacitor required noted on motor label, direct drive blower motor

Replaces: 51-23012-41

Rheem/Ruud



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D2840	-	1/5	208/230	1075/1	CW	1.3	4.13	3.75	0.50

5.6 inch, PSC, sleeve bearing, 4 drilled and tapped holes in shell

Replaces: 51-21853-82

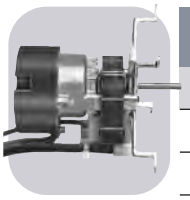
Rheem/Ruud

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D832	-	1/8	208 - 230	825/1	REV	1.1	4.75	4.00	0.50

3.3 inch, PSC, sleeve bearing, 4 drilled and tapped holes in shell

Replaces: 21276-02, 21276-01, 512076-01

Rheem/Ruud



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
K628	-	1/200	208 - 230	3000/1	CW	0.25	1.50	4.90	0.25

Shaded pole, sleeve bearing, 1/4 inch dia. shaft

Replaces: 51-21964-01, 7102-0628

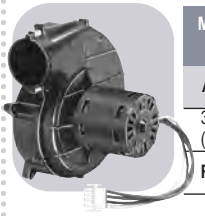
Rheem/Ruud

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A079	-	1/50	115	3000/1	CCW	1.1	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 74-70-21504-03-04, 74-70-21496-03-01, JAIM106, JAIM137, 7021-5615

Rheem/Ruud



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A136	-	1/20	115	3450/1	CW	0.75	-	-	-

3.3 inch, PSC, sleeve bearing 4@370V capacitor required (MARS # 12004)

Replaces: RHEEM, 7062-3861

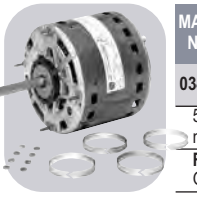
Rheem/Ruud

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A139	-	1/20	115	3000/1	CW	0.95	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: RHEEM, 7021-7577

Rheem/Ruud

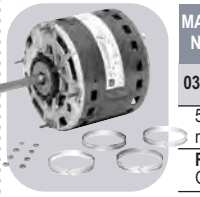


MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03463	5KCP39KG V804AS	1/2, 1/3, 1/4, 1/5, 1/6	115	1075/4	REV	6.2	5.00	4.73	0.50

5.5 inch dia., open endshields, sleeve bearing, capacitor required noted on motor label, direct drive blower motor

Replaces: Emerson 5460, Rheem 51-23012-41, Global E5460

Rheem/Ruud



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03464	5KCP39KG V805AS	1/2, 1/3, 1/4, 1/5, 1/6	208-230	1075/4	REV	2.7	5.00	4.73	0.50

5.5 inch dia., open endshields, sleeve bearing, capacitor required noted on motor label, direct drive blower motor

Replaces: Emerson 5461, Rheem 51-23022-41, Global E5461

Rheem/Ruud

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03465	5KCP39KGU361AS	1/3, 1/4, 1/5, 1/6	208-230	1075/2	REV	2.6	5.00	4.73	0.50

5.5 inch dia., totally enclosed, ball bearing, capacitor required noted on motor label, condenser fan motor

Replaces: Emerson 5462, Rheem 51-23053-21, Global E5462

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Singer

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1164	-	1/25	115 / 230	1550/1	CW	0.65	2.50	3.13	0.31

3.3 inch, Shaded pole, sleeve bearing, 5/16 inch dia. shaft

Replaces: JA2P091N, JA2P0901N

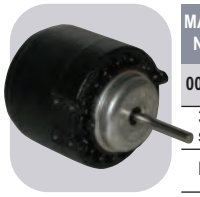
Tecumseh

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
00353	ESP-L35EM2	35W	230	1500/1	CCW OSE	0.70	0.50	3.50	1/4

3.875 inch diam., cast iron unit bearing motor, end or side pad mounting, horizontal operation, 1/4" threaded shaft

Replaces: Tecumseh TFM352, 810A10-B, 810M035A21, 810M035A28, 81091-R

Tecumseh



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
00507	ESP-0L50EMJR21	50W	230	1500/1	CCW OSE	0.85	-	4.30	5/16

3.875 inch diam., open 3 tapped holes shaft end or side pad mount, shaded pole, 5/16 inch shaft dia. 2" shaft length

Replaces: Tecumseh No. 810M050A62, 810E02674

Tecumseh

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
01336	5KSM92K FL2008S	1/20	230	1550	CW OSE	1.1	2.00	4.20	-

4 inch diam., open, end mounting, shaded pole, 5/16 inch shaft

Replaces: 5KSP11FG1377, 5KSP11FG1541SEmerson F33HXFRH-2649 Tecumseh 810G037A48 and 810E026A74

Trane

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A276	-	1/55	115	3000/1	CW	1.0	-	-	-

3.3 inch, Shaded pole, sleeve bearing

Replaces: 7021-9011, D330757P01

Trane

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1050	-	1/8	230	1550/1	CW	1.1	3.00	3.25	0.50

PSC, sleeve bearing, original motor is SP, D1050 is PSC to provide greater motor efficiency and permit closing of shaft end to prevent moisture from entering motor

Replaces: WW94X236SP, WW94X936PSC

Trane

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D895	-	1/8	208 - 230	1650/1	CW	0.80	1.50	-	0.50

5 inch, PSC, sleeve bearing, 4 MFD @370V capacitor required (MARS # 12004)

Replaces: 5KCP39BGR426S, MOT 6363

Tyler

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
00091	RS4BEB9E13	9W	115	1660/1	CW OSE	0.26	0.39	2.56	-

3.43 inch diam., enclosed, end or side pad mounting, capacitor mounted inside shell, water resistant

Replaces: RS4BEB9E16, RS4BEB9E12

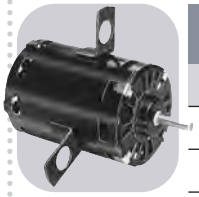
Warren

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
03007	5KCP39KGC056T	1/3	208-230	1075/1	CW OSE	3.1	3.00	5.50	0.50

5.5 inch diam., open resilient base and capacitor included, ball bearing

Replaces: 5KCP39KG884S

Weil McLain



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
D1190	-	1/30	115	3000/1	CW	1.6	1.75	4.88	0.31

3.3 inch, Shaded pole, sleeve bearing, 5/16 inch dia. shaft

Replaces: 7121-5750, JA1N074

York

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A165	-	1/25	115	3450/1	CW	0.70	-	-	-

3.3 inch, PSC, ball bearing

Replaces: 7062-3958

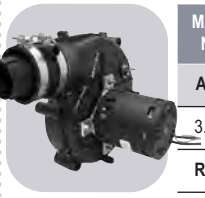
York

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A224	-	1/18	115	3450/2	CW	0.80	-	-	-

3.3 inch, Shaded Pole, Sleeve Bearing

Replaces: 7062-5048, 024-27654-000, 7062-4743

York



MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A225	-	1/15	115	3200/1	CW	2.25	-	-	-

3.3 inch, Shaded Pole, Sleeve Bearing

Replaces: 7021-11577, 17503, 7021-11830, 024-34558-000

York

MARS NO.	MFG. NO.	HP	VOLTS	RPM/ SPD	ROT	AMPS	DIMENSIONS A	B	C
A228	-	1/25	115	3000/1	CW	2.0	-	-	-

Shaded Pole, Ball Bearing

Replaces: 7002-3285, 024-31957-000, 7002-2941

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Notes

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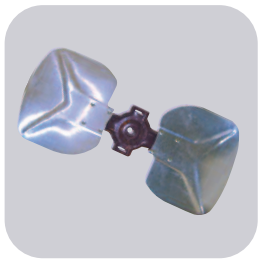
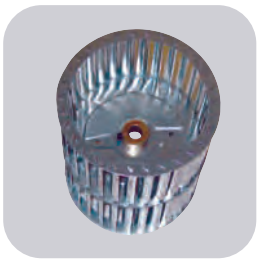
Air Moving Components

Delivering Confidence

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3 Wing Adapter Heavy Duty Condenser Fan Blades

airMARS 3 wing adapter, heavy duty condenser fan blades are designed for rigorous R/HVAC low pressure applications. They will accommodate universal hex/round adapter hubs. airMARS adapter fan blades are durable, efficient & quiet. They are manufactured using high strength aluminum alloy for the blades & sturdy steel for the blade spiders.

Blade depths and pitches specified for airMARS adapter fan blades allow for the replacement of a broad range of commonly used fan blades.

Typical applications are:

Air Cooled Condensers
Power Roof Ventilators
Residential Air Conditioners
Unit Heaters
Heat Pumps
Fan Coil Units
Roof Top Air Conditioners

Universal Hex Adapter Hubs on page AM-10

MARS NO.	MODEL NO.	BLADE DIA.	PITCH DEG.	BLADE DEPTH	STATIC PRESSURE .10"			STATIC PRESSURE .30"			MARS PACK
					RPM	CFM	BHP	RPM	CFM	BHP	
40030	1223-3CCW	12	23	1.88	825	209	0.01	825	N.A.	N.A.	
					1075	385	0.02	1075	N.A.	N.A.	2
					1725	769	0.05	1725	580	0.07	
40031	1227-3CW	12	27	2.19	825	289	0.01	825	N.A.	N.A.	
					1075	468	0.02	1075	N.A.	N.A.	2
					1725	914	0.07	1725	714	0.09	
40033 40034	1423-3CW 14233CCW	14	23	2.67	825	568	0.02	825	N.A.	N.A.	
					1075	892	0.04	1075	N.A.	N.A.	2
					1725	1573	0.16	1725	1387	0.17	
40035 40036	1427-3CW 14273CCW	14	27	3.06	825	664	0.03	825	N.A.	N.A.	
					1075	1006	0.05	1075	531	0.08	2
					1725	1757	0.21	1725	1568	0.23	
40038	1622-3CCW	16	22	2.94	825	748	0.03	825	N.A.	N.A.	
					1075	1164	0.06	1075	481	0.08	2
					1725	2039	0.23	1725	1815	0.25	
40039 40040	1627-3CW 1627-3CCW	16	27	3.56	825	1064	0.05	825	110	0.06	
					1075	1525	0.10	1075	969	0.11	2
					1725	2601	0.39	1725	2401	0.41	
40041 40042	1823-3CW 1823-3CCW	18	23	3.70	825	1202	0.06	825	464	0.10	
					1075	1870	0.10	1075	972	0.13	2
					1725	2487	0.32	1725	2629	0.33	

MAX RPM 10"- 18" DIA. 1725 RPM

3 Wing Adapter Heavy Duty Condenser Fan Blades (cont.)

Universal Hex Adapter Hubs on page AM-10

MARS NO.	MODEL NO.	BLADE DIA.	PITCH DEG.	BLADE DEPTH	STATIC PRESSURE .10"			STATIC PRESSURE .30"			MARS PACK
					RPM	CFM	BHP	RPM	CFM	BHP	
40043 40044	1827-3CW 1827-3CCW	18	27	4.31	825	1711	0.08	825	637	0.12	
					1075	2305	0.12	1075	1312	0.17	2
					1725	4089	0.56	1725	3784	0.63	
40065 40066	1830-3CW 1830-3CCW	18	30	4.75	825	1882	0.09	825	794	0.14	
					1075	2502	0.14	1075	1526	0.19	2
					1725	4438	0.65	1725	4136	0.72	
40045 40046	1833-3CW 1833-3CCW	18	33	5.17	825	1993	0.11	825	914	0.15	
					1075	2682	0.17	1075	1681	0.22	2
					1725	4790	0.80	1725	4403	0.86	
40047 40048	2024-3CW 2024-3CCW	20	24	3.86	825	2306	0.12	825	1290	0.16	
					1075	3052	0.18	1075	2063	0.22	2
					1140	3383	0.26	1140	2781	0.31	
40049 40050	2028-3CW 2028-3CCW	20	28	4.47	825	2639	0.14	825	1513	0.18	
					1075	3473	0.22	1075	2462	0.26	2
					1140	3841	0.32	1140	3245	0.37	
40068	2031-3CCW	20	31	4.91	825	2884	0.16	825	1707	0.21	
					1075	3790	0.26	1075	2727	0.30	2
					1140	4186	0.38	1140	3552	0.43	
40051 40052	2033-3CW 2033-3CCW	20	33	5.17	825	3035	0.19	825	1851	0.23	
					1075	3993	0.29	1075	2854	0.34	2
					1140	4412	0.43	1140	3687	0.47	
40053 40054	2227-3CW 2227-3CCW	22	27	4.31	825	3383	0.18	825	2111	0.26	
					1075	4478	0.28	1075	3323	0.34	2
					1140	4969	0.41	1140	4169	0.47	
40069 40024	2230-3CW 2230-3CCW	22	30	4.75	825	3580	0.21	825	2376	0.31	
					1075	4951	0.34	1075	3807	0.39	2
					1140	5483	0.49	1140	4675	0.54	
40055 40056	2233-3CW 2233-3CCW	22	33	5.17	825	3982	0.26	825	2639	0.35	
					1075	5259	0.41	1075	3978	0.48	2
					1140	5828	0.60	1140	4923	0.65	
40057 40058	2426-3CW 2426-3CCW	24	26	4.17	825	4433	0.27	825	3028	0.33	
					1075	5793	0.43	1075	4792	0.46	2
					1140	6382	0.63	1140	5649	0.68	
40059 40060	2433-3CW 2433-3CCW	24	33	5.17	825	5287	0.40	825	3772	0.46	
					1075	6906	0.65	1075	5782	0.68	2
					1140	7607	0.96	1140	6763	1.00	

MAX RPM 10"- 18" DIA. 1725 RPM 20"-24" DIA. 1140RPM

4 Wing Adapter Heavy Duty Condenser Fan Blades

airMARS 4 wing adapter, heavy duty condenser fan blades are designed for rigorous R/HVAC pressure applications. They will accomodate universal hex/round adapter hubs for unlimited versatility. airMARS adapter fan blades are durable, efficient, and quiet. They are manufactured using high strength aluminum alloy for the blades and sturdy steel for the blade spiders.

Blade depths and pitches specified for airMARS adapter fan blades allow for the replacement of a broad range of commonly used fan blades.

Typical applications are:

Air Cooled Condensers
Power Roof Ventilators
Residential Air Conditioners Unit Heaters
Heat Pumps
Fan Coil Units
Roof Top Air Conditioners

Universal Hex Adapter Hubs on page AM-10

MARS NO.	MODEL NO.	BLADE DIA.	PITCH DEG.	BLADE DEPTH	STATIC PRESSURE .10" RPM	.10" CFM	.10" BHP	STATIC PRESSURE .30" RPM	.30" CFM	.30" BHP	MARS PACK
40070 40071	1023-4CW 1023-4CCW	10	23	2.28	825	100	0.008	825	N.A.	N.A.	
					1075	250	0.009	1075	N.A.	N.A.	2
					1625	550	0.03	1625	350	0.04	
40072 40073	1027-4CW 1027-4CCW	10	27	2.64	825	150	0.007	825	N.A.	N.A.	
					1075	300	0.01	1075	N.A.	N.A.	2
					1625	600	0.03	1625	400	0.04	
40074 40075	1033-4CW 1033-4CCW	10	33	3.16	825	220	0.01	825	N.A.	N.A.	
					1075	360	0.02	1075	N.A.	N.A.	2
					1625	720	0.06	1625	480	0.09	
40076 40077	1223-4CW 1223-4CCW	12	23	2.28	825	260	0.01	825	N.A.	N.A.	
					1075	450	0.03	1075	140	0.04	2
					1625	890	0.08	1625	480	0.11	
40078	1227-4CW	12	27	2.64	825	300	0.01	825	N.A.	N.A.	
					1075	570	0.03	1075	N.A.	N.A.	2
					1625	1010	0.07	1625	790	0.09	
40080 40081	1233-4CW 1233-4CCW	12	33	3.16	825	410	0.02	825	N.A.	N.A.	
					1075	690	0.03	1075	380	0.06	2
					1625	1210	0.12	1625	960	0.12	

MAX RPM 10"- 16" DIA. 1725 RPM

4 Wing Adapter Heavy Duty Condenser Fan Blades (cont.)

Universal Hex Adapter Hubs on page AM-10

MARS NO.	MODEL NO.	BLADE DIA.	PITCH DEG.	BLADE DEPTH	STATIC PRESSURE .10" RPM	.10" CFM	.10" BHP	STATIC PRESSURE .30" RPM	.30" CFM	.30" BHP	MARS PACK
40082	1423-4CW	14	23	2.672	825	580	0.02	825	N.A.	N.A.	
					1075	890	0.04	1075	440	0.06	2
					1625	1470	0.14	1625	1100	0.13	
40084 40085	1427-4CW 1427-4CCW	14	27	3.063	825	650	0.02	825	N.A.	N.A.	
					1075	970	0.04	1075	550	0.06	2
					1625	1600	0.15	1625	1320	0.15	
40086	1433-4CW	14	33	3.672	825	780	0.04	825	120	0.05	
					1075	1180	0.07	1075	730	0.10	2
					1625	1940	0.18	1625	1730	0.19	
40088 40089	1623-4CW 1623-4CCW	16	23	3.063	825	1050	0.05	825	450	0.06	
					1075	1520	0.08	1075	890	0.11	2
					1625	2480	0.26	1625	2150	0.27	
40090 40091	1627-4CW 1627-4CCW	16	27	3.563	825	1180	0.07	825	730	0.10	
					1075	1670	0.09	1075	1130	0.14	2
					1625	2700	0.29	1625	2350	0.32	
40092	1633-4CW	16	33	4.281	825	1420	0.05	825	930	0.09	
					1075	2020	0.12	1075	1250	0.16	2
					1625	3190	0.44	1625	2490	0.46	
40132	1819-4CW	18	19	3.09	825	1318	0.06	825	646	0.09	
					1075	1815	0.08	1075	1080	0.13	2
					1140	2802	0.50	1140	1196	0.53	
40094 40095	1823-4CW 1823-4CCW	18	23	3.703	825	1630	0.07	825	860	0.11	
					1075	2160	0.12	1075	1470	0.17	2
					1140	2310	0.14	1140	1780	0.19	
40096 40097	1827-4CW 1827-4CCW	18	27	4.313	825	1810	0.09	825	950	0.12	
					1075	2430	0.15	1075	1820	0.19	2
					1140	2690	0.18	1140	2250	0.26	
40135	1830-4CCW	18	30	4.75	825	1991	0.11	825	1132	0.14	
					1075	2700	0.16	1075	1827	0.21	2
					1140	2990	0.78	1140	2023	0.84	
40098 40099	1833-4CW 1833-4CCW	18	33	5.172	825	2150	0.12	825	1300	0.16	
					1075	2880	0.20	1075	1970	0.25	2
					1140	3190	0.28	1140	2240	0.29	
40100 40101	2023-4CW 2023-4CCW	20	23	3.703	825	2120	0.13	825	1080	0.15	
					1075	3120	0.24	1075	2150	0.26	2
					1140	3110	0.25	1140	2360	0.30	

MAX RPM 10"- 16" DIA. 1725 RPM 18"-26" DIA. 1140 RPM

continued on next page

⚠ WARNING:
Cancer and Reproductive Harm
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4 Wing Adapter Heavy Duty Condenser Fan Blades (cont.)

Universal Hex Adapter Hubs on page AM-10

MARS NO.	MODEL NO.	BLADE DIA.	PITCH DEG.	BLADE DEPTH	STATIC PRESSURE .10" RPM	CFM	BHP	STATIC PRESSURE .30" RPM	CFM	BHP	MARS PACK
40102 40103	2027-4CW 2027-4CCW	20	27	4.313	825	2340	0.14	825	1250	0.17	2
					1075	3250	0.26	1075	2550	0.32	
					1140	3430	0.28	1140	2820	0.41	
40137 40138	2029-4CW 2029-4CCW	20	29	4.63	825	2975	0.02	825	2022	0.25	2
					1075	3706	0.03	1075	2934	0.36	
					1140	4286	0.13	1140	3760	0.51	
40104 40105	2033-4CW 2033-4CCW	20	33	5.172	825	3170	0.17	825	1650	0.26	2
					1075	3880	0.39	1075	3095	0.44	
					1140	4120	0.45	1140	3210	0.49	
40106 40107	2223-4CW 2223-4CCW	22	23	3.703	825	3070	0.18	825	1990	0.23	2
					1075	4120	0.37	1075	3580	0.46	
					1140	4400	0.40	1140	3900	0.50	
40108 40109	2227-4CW 2227-4CCW	22	27	4.313	825	3560	0.21	825	2260	0.27	2
					1075	4780	0.44	1075	4270	0.54	
					1140	5210	0.44	1140	4640	0.57	
40110 40111	2233-4CW 2233-4CCW	22	33	5.172	825	4230	0.30	825	2450	0.37	2
					1075	5210	0.60	1075	4600	0.69	
					1140	5860	0.74	1140	5220	0.80	
40139	2235-4CW	22	35	5.44	825	4431	0.32	825	3197	0.42	2
					1075	5932	0.51	1075	4778	0.60	
					1140	6385	0.75	1140	5624	0.81	
41816	2420-4CW	24	20	3.25	825	3648	0.20	825	2857	0.28	2
					1075	1848	0.33	1075	4296	0.40	
					1140	5199	0.48	1140	4781	0.57	
40112 40113	2423-4CW 2423-4CCW	24	23	3.703	825	3700	0.22	825	2280	0.30	2
					1075	5200	0.45	1075	4340	0.54	
					1140	5400	0.53	1140	4600	0.61	
40114 40115	2427-4CW 2427-4CCW	24	27	4.313	825	4300	0.34	825	2860	0.36	2
					1075	5900	0.55	1075	5170	0.64	
					1140	6220	0.66	1140	5500	0.75	
40116 40117	2433-4CW 2433-4CCW	24	33	5.172	825	4800	0.39	825	3000	0.50	2
					1075	6600	0.85	1075	5820	0.92	
					1140	7100	1.02	1140	6310	1.10	
40145 40146	2624-4CW 2624-4CCW	26	24	3.86	825	5383	0.39	825	4399	0.47	2
					1075	7129	0.61	1075	6376	0.70	
					1140	7629	0.89	1140	7099	1.00	
40118 40119	2627-4CW 2627-4CCW	26	27	4.313	825	5300	0.43	825	3590	0.51	2
					1075	7110	0.92	1075	6550	1.02	
					1140	7520	1.12	1140	7180	1.20	
40120	2633-4CW	26	33	5.172	825	6050	0.52	825	4220	0.58	2
					1075	8200	1.13	1075	7250	1.18	
					1140	8810	1.30	1140	8100	1.42	

MAX RPM 10"-16" DIA. 1725 RPM 18"-26" DIA. 1140 RPM

5 Wing Adapter Heavy Duty Condenser Fan Blades

airMARS 5 wing adapter, heavy duty condenser fan blades are designed for rigorous R/HVAC pressure applications. They will accomodate universal hex/round adapter hubs for unlimited versatility. airMARS adapter fan blades are durable, efficient, and quiet. They are manufactured using high strength aluminum alloy for the blades and sturdy steel for the blade spiders.

Blade depths and pitches specified for airMARS adapter fan blades allow for the replacement of a broad range of commonly used fan blades.

Typical applications are:

Air Cooled Condensers
Roof Top Air Conditioners
Residential Air Conditioners Unit Heaters
Heat Pumps
Fan Coil Units
Power Roof Ventilators

Universal Hex Adapter Hubs on page AM-10

MARS NO.	MODEL NO.	BLADE DIA.	PITCH DEG.	BLADE DEPTH	STATIC PRESSURE .10" RPM	CFM	BHP	STATIC PRESSURE .30" RPM	CFM	BHP	MARS PACK
40166	2427-5CW	24	27	4.31	825	4400	0.41	825	3500	0.47	2
					1075	6060	0.82	1075	5500	0.96	
					1140	6240	0.99	1140	5980	1.06	
40168	2433-5CW	24	33	5.15	825	5500	0.53	825	4350	0.62	2
					1075	7470	1.22	1075	6950	1.26	
					1140	7800	1.45	1140	7500	1.52	

MAX RPM 20"-24" DIA. 1140RPM

KC & KH Blades

airMARS KC series blades are designed for use in air circulators, cooling towers, air cooled condensing units, and small cooling towers. Performance figures are based on applicable standards such as ASHRAE 51/AMCA 210. Suitability for an application is the responsibility of the customer.

See page AM-10 for KC blades with fixed 5/8" hubs. Taper lock bushings for KC and KH blades are also listed on page AM-10.

Features:

- 4 wing blades
- High quality steel
- Viewing from air discharge side - CW rotation

MARS NO.	MODEL NO.	NO. OF BLADES	BLADE DIA.	PITCH DEG.	BLADE DEPTH	STATIC PRESSURE .10"			STATIC PRESSURE .30"		MAX RPM
						RPM	CFM	BHP	CFM	BHP	
40206	5-3299	4	30	30	2.88	850	8985	0.73	7209	0.79	1140
						1000	10809	1.16	9471	1.25	
						1140	12482	1.70	11354	1.81	

KC Blades with 5/8" Hub

MARS NO.	MODEL NO.	NO. OF BLADES	BLADE DIA.	PITCH DEG.	BLADE DEPTH	STATIC PRESSURE .10"			STATIC PRESSURE .30"		MAX RPM
						RPM	CFM	BHP	CFM	BHP	
40397	5-2223	4	30	30	2.88	850	8985	0.73	7209	0.79	1140
						1000	10809	1.16	9471	1.25	
						1140	12482	1.70	11354	1.81	

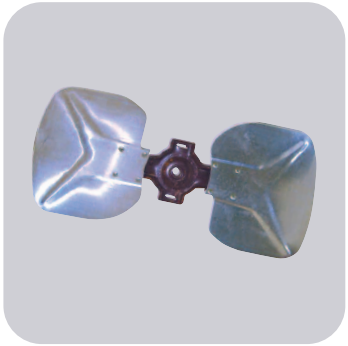
MAX RPM 16"-18" DIA. 1725 RPM 20"-24" DIA. 1140 RPM

Fixed Hub Blades

airMARS 2 and 3 wing blades are designed for lower static pressure applications. They will fit OEM's such as Carrier, Rheem Rudd, GE, Trane, Singer-climate control, York and others.

Available from 14" to 24" blade diameter with 1/2" assembled hub.

Always note original fan blade hub location (intake or discharge) and match when selecting fixed hub replacement fan blades.



2-Wing Blades with 1/2" Hub

MARS NO.	MODEL NO.	ROTATION	BLADE DIA.	PITCH DEG.	HUB LOCATION	MARS PACK
40300	6-9871-BP	CW	14	36˚	Discharge	2
40301	6-9788	CCW	14	36˚	Intake	2
40302	601274	CCW	18	19˚	Intake	2
40305	T1802-24	CW	18	24˚	Intake	2
40307	6-9250	CW	18	29˚	Intake	2
40308	6-9205	CCW	18	29˚	Intake	2
40408	T1802-32	CCW	18	33˚	Intake	2
40309	6-9254	CCW	18	36˚	Intake	2
40313	6-9252	CCW	20	25˚	Intake	2
40314	6-9251	CW	20	29˚	Intake	2
40315	6-9206	CCW	20	29˚	Intake	2
40316	6-9253	CCW	20	34˚	Intake	2
40319	T2202-22	CCW	22	22˚	Intake	2
40320	600041	CCW	22	27˚	Intake	2
40321	600455	CCW	22	29˚	Intake	2
40324	6-9299	CCW	24	24˚	Intake	2
40325	T2402-26	CW	24	26˚	Discharge	2

Taper Lock Bushings

H Bushing for 24"- 48" Blades

MARS NO.	BORE	KEYWAY
40235	1"	Shaft

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Fixed Hub Blades

airMARS 2 and 3 wing blades are designed for lower static pressure applications. They will fit OEM's such as Carrier, Rheem Rudd, GE, Trane, Singer-climate control, York and others.

Available from 14" to 26" blade diameter with 1/2" assembled hub.

Always note original fan blade hub location (intake or discharge) and match when selecting fixed hub replacement fan blades.

3-Wing Blades with 1/2" Hub

MARS NO.	MODEL NO.	ROTATION	BLADE DIA.	PITCH DEG.	HUB LOCATION	MARS PACK
40328	6-9255	CW	14	32˚	Discharge	2
40331	T1403-28	CW	16	28˚	Intake	2
40333	6-9257	CW	16	33˚	Discharge	2
40334	600893	CCW	16	33˚	Intake	2
40338	T1803-26	CW	18	26˚	Discharge	2
40339	T1803-27	CCW	18	26˚	Intake	2
40009	XW1803	CW	18	27˚	Intake	2
40340	601276	CW	18	27˚	Discharge	2
40343	6-9259	CW	18	33˚	Discharge	2
40010	XW1803	CW	18	35˚	Intake	2
40347	6-0316	CW	20	23˚	Discharge	2
40348	601278	CCW	20	25˚	Intake	2
40349	601279	CW	20	31˚	Discharge	2
40011	XW2003	CCW	20	34˚	Intake	2
40350	T2203-20	CW	22	20˚	Intake	2
40353	600240	CW	22	24˚	Intake	2
40352	UT Series	CW	22	24˚	Discharge	2
40012	TNT2203	CW	22	24˚	Intake	2
40013	TNT2203	CCW	22	25˚	Intake	2
40355	T2203-28	CW	22	28˚	Intake	2
40357	600916	CCW	22	33˚	Intake	2
40358	602048	CW	24	22˚	Intake	2
40323	601280	CCW	24	22˚	Intake	2
40359	601383	CW	24	30˚	Intake	2
40360	602297	CW	24	33˚	Intake	2
40362	601291	CW	26	26˚	Discharge	2
40407	T2603-26	CCW	26	26˚	Intake	2
40363	T2603-27	CW	26	27˚	Intake	2
40364	601282	CW	26	37˚	Intake	2

12"- 18" DIA. MAX. RPM 1725 20"- 28" DIA. MAX. RPM 1140 30" DIA. MAX. RPM 850

3-Wing Blades with 5/8" Hub

MARS NO.	MODEL NO.	ROTATION	BLADE DIA.	PITCH DEG.	HUB LOCATION	MARS PACK
40365	KA3018	CW	30	18˚	Discharge	2

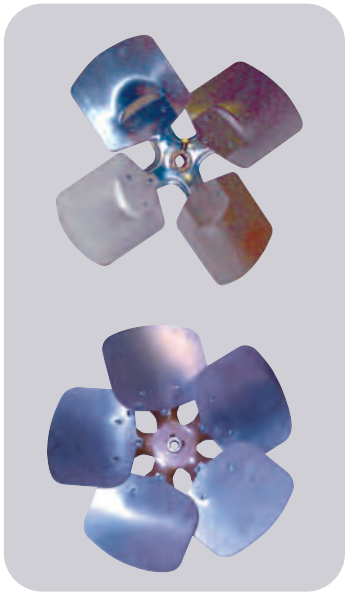
12"- 18" DIA. MAX. RPM 1725 20"- 28" DIA. MAX. RPM 1140 30" DIA. MAX. RPM 850

Fixed Hub Blades

airMARS fixed hub heavy duty condenser fan blades have been designed to serve as drop-in replacements for many OEM applications.

Hub location is on the intake side unless otherwise noted.

Always note original fan blade hub location (intake or discharge) and match when selecting fixed hub replacement fan blades.



4-Wing Blades with Hub

MARS NO.	MODEL NO.	ROTATION	BLADE DIA.	PITCH DEG.	BORE & LOCATION	MARS PACK
40369	6-9256	CW	14	33˚	1/2"	2
40372	6-9258	CW	16	33˚	1/2" Discharge	2
40375	601375	CW	18	30˚	1/2"	2
40376	6-9260	CW	18	33˚	1/2" Discharge	2
40377	T2004	CW	20	20˚	1/2" Discharge	2
40378	6-9992	CW	20	33˚	1/2"	2
40379	602689	CW	20	36˚	1/2"	2
40380	6-8745	CW	22	24˚	1/2" Discharge	2
40381	T2204-26	CW	22	26˚	1/2"	2
40382	600895	CCW	22	33˚	1/2"	2
40383	T2404-20	CW	24	20˚	1/2" Discharge	2
40384	T2404	CW	24	22˚	1/2"	2
40387	600794	CCW	24	27˚	1/2"	2
40389	601748	CW	26	30˚	5/8" Discharge	2
40391	601293	CW	28	29˚	1/2" Discharge	2
40392	601296	CW	30	22˚	5/8"	2
40393	6-8154	CW	30	27˚	5/8" Discharge	2

12"- 18" DIA. MAX. RPM 1725 20"- 28" DIA. MAX. RPM 1140 30" DIA. MAX. RPM 850

5-Wing Blades with Hub

MARS NO.	MODEL NO.	ROTATION	BLADE DIA.	PITCH DEG.	BORE & LOCATION	MARS PACK
40402	600176	CW	16	33˚	1/2" Discharge	2
40404	600178	CW	18	33˚	1/2" Discharge	2
40405	F1805-33	CCW				
40406	601292	CW	26	29˚	5/8" Discharge	2

16" - 18" DIA. MAX. RPM 1725 26" DIA. MAX. RPM 1140

⚠ WARNING:
Cancer and Reproductive Harm
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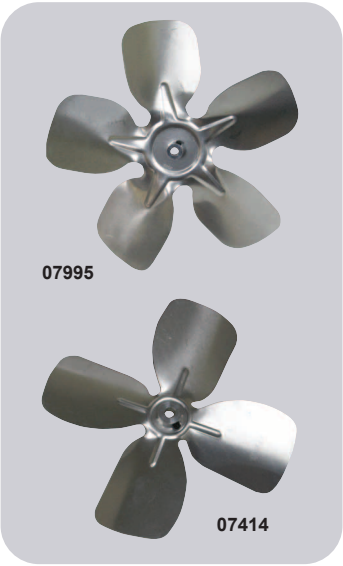
Single Piece Aluminum

airMARS one piece aluminum fan blades feature a patented hubbing method. airMARS fan blades are designed for low noise and energy efficient operation.

Applications:

- Walk-in coolers and freezers
- Icemakers
- Refrigerators
- Condensers
- Vending Machines



4 Wing Single Piece Aluminum Fan Blades

MARS NO.	WINGS	BLADE DIA.	DEG. PITCH	ROT.	BORE	HUB	APPROX. CFM 3000 RPM	LAU NO.	ACME	FASCO	PACKARD
07411	4	6.00	19	CW	3/16"	I	85	-	-	-	A61469
07414	4	6.00	19	CW	1/4"	I	85	-	-	-	A61470

5 Wing Single Piece Aluminum Fan Blades Hub on Discharge

MARS NO.	WINGS	BLADE DIA.	DEG. PITCH	ROT.	BORE	HUB	APPROX. CFM 3000 RPM	LAU NO.	ACME	FASCO	PACKARD
07993	5	10.00	20	CW	5/16"	D	450	-	-	-	-
07997	5	10.00	28	CW	5/16"	D	600	-	-	-	-
07995	5	10.00	31	CW	5/16"	D	650	-	-	-	-
07996	5	10.00	31	CCW	5/16"	D	650	60-8367-01	-	-	-
07998	5	10.00	40	CW	5/16"	D	850	-	-	-	-
07921	5	12.00	23	CW	5/16"	D	970	-	-	-	-
07922	5	12.00	23	CCW	5/16"	D	970	-	-	-	-

Single Piece Aluminum Fan Blades

airMARS one piece aluminum fan blades feature a patented hubbing method. airMARS fan blades are designed for low noise and energy efficient operation.

Applications:

- Walk-in coolers and freezers
- Icemakers
- Refrigerators
- Condensers
- Vending Machines

5 Wing Hub on Intake

MARS NO.	WINGS	BLADE DIA.	DEG. PITCH	ROT.	BORE	HUB	APPROX. CFM 1550 RPM	LAU NO.	ACME	FASCO	TORIN AIRDEX	PACKARD
07451	5	5.50	27	CW	1/4"	I	85		35504			A65504
07452	5	5.50	27	CCW	1/4"	I	85		35514			A65515
07551	5	5.50	27	CW	5/16"	I	85					
07471	5	7.00	27	CW	1/4"	I	200	60-8348-01	30704	5FR727-1		A60704
07472	5	7.00	27	CCW	1/4"	I	200	60-8349-01	30714	5FL727-1		A60714
07572	5	7.00	27	CCW	5/16"	I	200	60-8351-01	30715	5FL727-2		
07481	5	8.00	24	CW	1/4"	I	300	60-8352-01		5FR824-1	1010352 CW	
07482	5	8.00	24	CCW	1/4"	I	300	60-8353-01		5FL824-1	1010632 CCW	
07581	5	8.00	24	CW	5/16"	I	300	60-8352-01		5FR824-2	1010642 CW	
07582	5	8.00	24	CCW	5/16"	I	300	60-8353-01		5FL824-2	1010652 CCW	
07584	5	8.00	32	CCW	5/16"	I	330			5FL832-2		
07591	5	9.00	26	CW	5/16"	I	345	60-8362-01		5FR926-2		
07592	5	9.00	26	CCW	5/16"	I	345	60-8363-01		5FL926-2		
07493	5	10.00	20	CW	1/4"	I	450			5FR1020-1		
07593	5	10.00	20	CW	5/16"	I	450	60-8368-01		5FR1020-2		
07594	5	10.00	20	CCW	5/16"	I	450	60-8369-01		5FL1020-2		
07595	5	10.00	31	CW	5/16"	I	650	60-8370-01		5FR1031-2	1010362 CW	
07596	5	10.00	31	CCW	5/16"	I	650	60-8371-01		5FL1031-2	1010692 CCW	
07521	5	12.00	23	CW	5/16"	I	920					

WARNING:
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Single Piece Aluminum Fan Blades

airMARS one piece aluminum fan blades for unit bearing motors are designed for low noise and energy efficient operation.

Applications:

Evaporator Coils
Refrigerators
Vending Machines

4 & 5 Wing Unit Bearing Mount

MARS NO.	WINGS	BLADE DIA.	DEG. PITCH	ROT.	BORE	HUB	APPROX. CFM 1550 RPM	LAU NO.	ACME	FASCO	TORIN AIRDEX	PACKARD
07004	4	**10.00**	22	REV	UB	NONE	414			S-7004		
95628	5	**6.00**	28	CW	UB	NONE	134					
95629	5	**6.00**	28	CCW	UB	NONE	134					
95721	5	**7.00**	21	CW	UB	NONE	150	60-8372-01	3706	5FR721		
95722	5	**7.00**	21	CCW	UB	NONE	150		3716			
95723	5	**7.00**	25	CW	UB	NONE	170					
95731	5	**7.00**	31	CW	UB	NONE	199	60-8373-01	3706-31		1010412 CW	
95732	5	**7.00**	31	CCW	UB	NONE	199		3716-31		1010472 CCW	
95741	5	**7.00**	40	CW	UB	NONE	300					
95735	5	**7.75**	23	CW	UB	NONE	250					
95821	5	**8.00**	20	CW	UB	NONE	210					
95822	5	**8.00**	20	CCW	UB	NONE	210					
95823	5	**8.00**	25	CW	UB	NONE	280	60-8376-01	3806			A63816
07709	5	**8.00**	31	CCW		NONE						
95831	5	**8.00**	31	CW	UB	NONE	300	60-8377-01	3806-31	1010432 CW		
95832	5	**8.00**	31	CCW	UB	NONE	300		3816-31	1010492 CCW		
95841	5	**8.00**	40	CW	UB	NONE	400					
95842	5	**8.00**	40	CCW	UB	NONE	400					
95865	5	**8.00**	50	CW	UB	NONE	500					
95875	5	**8.75**	25	CW	UB	NONE	300					
95923	5	**9.00**	25	CW	UB	NONE	335					
95931	5	**9.00**	31	CW	UB	NONE	370	60-8379-01		3906-31	1010452 CW	
95932	5	**9.00**	31	CCW	UB	NONE	370			3916-31	1010512 CCW	
95941	5	**9.00**	40	CW	UB	NONE	425					
95021	5	**10.00**	20	CW	UB	NONE	450					
95022	5	**10.00**	20	CCW	UB	NONE	450					
95027	5	**10.00**	28	CW	UB	NONE	425			3106		A63126
95031	5	**10.00**	31	CW	UB	NONE	650	60-8381-01		3106-31	1010442 CW	A61108
95032	5	**10.00**	31	CCW	UB	NONE	650			3116-31	1010502 CCW	A63117
95041	5	**10.00**	40	CW	UB	NONE	880					

Small Wheels

Double Inlet

airMARS plastic precision blower wheels are molded for reliable, efficient performance.

Plastic Wheels - Double Inlet

MARS NO.	MODEL NO.	WHEEL DIA.	WIDTH	BORE	MATERIAL
41500	2169-A	5.75	7.8	1/2	Poly-Pro CC

OEM Blower Wheels
Single Inlet Blower Wheels

Special orders are available. Check with MARS customer service for minimum quantities on non-stock items.

Please review special order information request on page AM-24

MARS NO.	MODEL NO.	ROTATION	WHEEL DIA.	WHEEL WIDTH	BORE	MAX RPM
41204	1-6444	CCW	7.12	1.87	1/2	4000
41213	101891	CCW	9.87	1.50	5/8	3475
41241	BC987-150S	CCW	9.87	1.50	5/8	3000

airMARS Accessories

Universal Hex Hubs

MARS Universal Hex Hubs are designed to provide a firm mechanical fit with hex or round bore adapter fan blades. These hubs are machined steel, designed with tri-point mount for secure spider/hub connections. MARS Universal Hex Hubs include 2 set screws, for shaft fastening, offset at 90 degrees.

MARS NO.	BORE	PER PACK
40002	1/4"	1
40003	5/16"	1
40004	3/8"	1
40005	1/2"	1
40006	5/8"	1

airMARS Tools

Follow these steps to measure propeller rotation and pitch:

Step 1: Position the faceplate of the gauge on the blade of the fan.

Step 2: Place the foot of the wire body of the Pitch Guage on the center section (spider) of the fan.

Step 3: The pointer gives a direct reading of the pitch in degrees, and the clockwise/counter-clockwise markings indicate the rotation.

40851

40852

MARS NO.	DESCRIPTION
40851	Fan Blade Pitch Gauge
40852	Fan Blade & Hub Puller

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Cancer and Reproductive Harm
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Small Wheels

Single Inlet

airMARS Single Inlet wheels are used in a variety of commercial and residential applications, for room air conditioners, power burners, draft inducers, other heating and appliance devices. Rotation is determined viewing the closed end of the wheel.

MARS NO.	MODEL NO.	ROTATION	WHEEL DIA.	WHEEL WIDTH	HUB
40564	1-6696	CCW	**4**	1-1/2	5/16
40565	2-2443	CCW	**4.25**	2-7/8	1/4

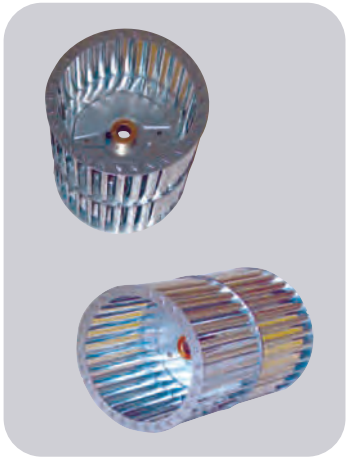
4" - 5.25" DIA. MAX. RPM 3600 RPM 5.25" DIA. MAX. RPM 2800 RPM

MARS NO.	MODEL NO.	ROTATION	WHEEL DIA.	WHEEL WIDTH	HUB	RPM	.1" S.P.		.3" S.P.	
							CFM	BHP	CFM	BHP
40618	1-7890	CCW	**6.31**	2.00	1/2	3450	831	1.294	818	1.274
40619	1-3414	CW	**6.31**	2.50	1/2	1000 3450	268 1013	0.035 1.669	179 996	0.022 1.633
40638	1-1992	CCW	**8.50**	4.00	1/2	1000 1550	902 1428	0.266 1.023	825 1387	0.229 0.977
40641	1-5266	CW	**9.125**	4.25	1/2	1000	1005	0.122	896	0.108
40642	1-8189	CW	**9.875**	2.00	5/8	1000	632	0.209	588	0.191

Small Wheels

Double Inlet

airMARS Double inlet wheels are used in many popular air handlers. The wheels below are made of galvanized steel unless indicated otherwise. Rotation is determined viewing the hub extension.



MARS NO.	MODEL NO.	ROTATION	WHEEL DIA.	WHEEL WIDTH	HUB	RPM	.1" S.P.		.3" S.P.	
							CFM	BHP	CFM	BHP
41102	2-0414	CW	**4.75**	7.00	1/2	1725	555	0.115	455	0.092
		CCW				1725	555	0.115	455	0.092
41107	2-0223	CW	**5.25**	7.00	1/2	1725	710	0.090	620	0.075
41108	2-0891	CCW				1725	710	0.090	620	0.075
41111	2-2402	CW	**5.75**	5.16	1/2	1000	396	0.035	-	-
						1725	725	0.217	682	0.205
41113	2-2406	CW	**5.75**	6.88	1/2	1000	439	0.047	-	-
						1725	854	0.278	755	0.241
41114	2-0600	CW	**5.75**	7.625	1/2	1000	439	0.047	-	-
41115	2-0678	CCW				1725	854	0.278	755	0.241
41116	2-2408	CW	**5.75**	8.00	1/2	1000	500	0.065	-	-
41117	2-0304	CCW				1725	976	0.390	863	0.35
41118	106729	CW	**5.75**	8.50	1/2	1000	710	0.078	-	-
41123	2-2405	CW	**6.22**	7.00	1/2	1000	626	0.040	406	0.120
41125	2-2407	CW	**6.22**	8.00	1/2	1000	705	0.042	500	1.250
41126	1-0439	CW	**6.25**	7.00	1/2	1000	625	0.077	415	0.046
41127	1-0438	CCW				1000	625	0.077	415	0.046
41132	802653	CW	**7.50**	9.00	1/2	1000	830	0.125	603	0.087

Direct Drive Furnace Blower Wheels

44 separate quality checks ensure the production process for airMARS belt drive blower wheels. Rigorous quality standards, high quality raw material and experienced manufacturing all work together to make airMARS blower wheels your best choice.

airMARS Direct Drive Blower Wheels are designed to work as “drop in” replacements for all major HVAC OEM equipment

MARS NO.	DESCRIPTION	ROT.	CENTER DISC	DIA.	WIDTH	BORE	LAU#	RPM	.1" S.P.		.3" S.P.	
									CFM	BHP	CFM	BHP
41303	9-6 DD Blower Wheel	CW	Convex	9.50	6.06	0.50	013335-01	1000	1395	.40	1240	.36
41302	9-6 DD Blower Wheel	CCW	Convex	9.50	6.06	0.50		1250	1744	.77	1650	.74
41307	9-7 DD Blower Wheel	CW	Convex	9.50	7.12	0.50	013336-02	1000	1600	.50	1400	.42
41306	9-7 DD Blower Wheel	CCW	Convex	9.50	7.12	0.50	013336-03	1250	1950	1.01	1850	.89
41305	9-7 DD Blower Wheel	CW	Concave	9.50	7.12	0.50		1000	1600	.50	1400	.42
41311	9-8 DD Blower Wheel	CW	Convex	9.50	8.06	0.50	013337-01	1000	1720	.50	1460	.42
41310	9-8 DD Blower Wheel	CCW	Convex	9.50	8.06	0.50	013337-03	1200	2000	.86	1850	.79
41365	9-9 DD Blower Wheel	CW	Convex	9.50	9.50	0.50	013332-01					
41312	9-9 DD Blower Wheel	CW	Concave	9.50	9.50	0.50		1000	1750	.51	1550	.43
41361	9-9 DD Blower Wheel	CCW	Concave	9.50	9.50	0.50	013332-03	1200	2150	.93	2000	.83
41314	10-4 DD Blower Wheel	CW	Convex	10.62	4.50	0.50	013327-01	1000	1130	.36	1050	.33
41316	10-6 DD Blower Wheel	CW	Concave	10.62	6.06	0.50		1200 1000	1395 1680	.63 .36	1300 1550	.57 .31
41318	10-6 DD Blower Wheel	CW	Convex	10.62	6.06	0.50	013326-01	1200	2010	.62	1910	.59
41317	10-6 DD Blower Wheel	CCW	Convex	10.62	6.06	0.50	013326-02	1200	2010	.62	1910	.59
41323	10-7 DD Blower Wheel	CW	Convex	10.62	7.12	0.50	013325-01	1000	2150	.85	1990	.71
41362	10-7 DD Blower Wheel	CCW	Convex	10.62	7.12	0.50	027102-04	1200	2600	1.57	2490	1.36
41322	10-7 DD Blower Wheel	CW	Concave	10.62	7.12	0.50						
41327	10-8 DD Blower Wheel	CW	Convex	10.62	8.06	0.50	013324-01	1000	2300	.83	2100	.71
41326	10-8 DD Blower Wheel	CCW	Convex	10.62	8.06	0.50	013324-02	1200	2800	1.49	2620	1.34
41325	10-8 DD Blower Wheel	CW	Concave	10.62	8.06	0.50		1000	2300	.83	2100	.71
41324	10-8 DD Blower Wheel	CCW	Concave	10.62	8.06	0.50		1200	2800	1.49	2620	1.34

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Direct Drive Furnace Blower Wheels

44 separate quality checks ensure the production process for airMARS belt drive blower wheels. Rigorous quality standards, high quality raw material and experienced manufacturing all work together to make airMARS blower wheels your best choice.

airMARS Direct Drive Blower Wheels are designed to work as “drop in” replacements for all major HVAC OEM equipment.

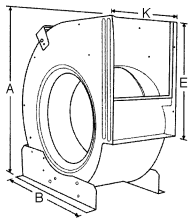
MARS NO.	DESCRIPTION	ROT.	CENTER DISC	DIA.	WIDTH	BORE	LAU#	RPM	.1" S.P.		.3" S.P.	
									CFM	BHP	CFM	BHP
41331	10-9 DD Blower Wheel	CW	Convex	10.62	9.50	0.50	013323-01	1000	2520	.90	2350	.81
41330	10-9 DD Blower Wheel	CCW	Convex	10.62	9.50	0.50		1150	2900	1.44	2780	1.29
41329	10-9 DD Blower Wheel	CW	Concave	10.62	9.50	0.50	013317-01	1000	2520	.90	2350	.81
41328	10-9 DD Blower Wheel	CCW	Concave	10.62	9.50	0.50	013317-04	1150	2900	1.44	2780	1.29
41335	10-10 DD Blower Wheel	CW	Convex	10.62	10.68	0.50	013322-03	1000	2700	1.07	2520	.95
41334	10-10 DD Blower Wheel	CCW	Convex	10.62	10.68	0.50		1150	3100	1.64	2990	1.51
41333	10-10 DD Blower Wheel	CW	Concave	10.62	10.68	0.50	013316-02	1000 1150	2700 3100	1.07 1.64	2520 2990	.95 1.51
41336	10-10 DD Blower Wheel	CW	Concave	10.62	10.68	0.62		1000	2700	1.07	2520	.95
41332	10-10 DD Blower Wheel	CCW	Concave	10.62	10.68	0.50	013316-06	1150	3100	1.64	2990	1.51
41341	11-7 DD Blower Wheel	CW	Convex	11.93	7.12	0.50	026940-05	1000 1150	2350 2720	1.01 1.51	2250 2610	.93 1.40
41344	11-8 DD Blower Wheel	CCW	Convex	11.93	8.06	0.50	026940-08	1000	2680	1.19	2500	1.05
41343	11-8 DD Blower Wheel	CW	Concave	11.93	8.06	0.50	026941-07	1150	3100	1.78	3000	1.64
41349	11-9 DD Blower Wheel	CW	Convex	11.93	9.50	0.50	026940-09	1000	2880	1.25	2660	1.08
41348	11-9 DD Blower Wheel	CCW	Convex	11.93	9.50	0.50	026940-10	1150	3300	1.92	3280	1.78
41347	11-9 DD lower Wheel	CW	Concave	11.93	9.50	0.50		1000	2880	1.25	2660	1.08
41346	11-9 DD Blower Wheel	CCW	Concave	11.93	9.50	0.50		1150	3300	1.92	3280	1.78
41352	11-10 DD Blower Wheel	CW	Convex	11.93	10.68	0.50						
41351	11-10 DD Blower Wheel	CW	Concave	11.93	10.68	0.50	026941-11	1000 1150	3100 3600	1.31 2.05	2910 3450	1.21 1.92
41350	11-10 DD Blower Wheel	CCW	Concave	11.93	10.68	0.50	026941-12					
41370	11-11 DD Blower Wheel	CCW	Concave	11.93	11.93	0.50		1000	3300	1.45	3090	1.29
41364	12-9 DD Blower Wheel	CW	Convex	12.87	9.50	0.50	013693-25	1000 1150	3800 4400	1.96 2.94	3620 4300	1.79 2.78
41355	12-12 DD Blower Wheel	CW	Concave	12.87	12.62	0.50	015565-07	1000 1150	4700 5500	2.56 3.83	4500 5250	2.38 3.70

Belt Drive Blower Wheel with Housing Assembly

MARS #41405 is a belt drive blower assembly with a 10 x 10 belt drive blower wheel included. The 41405 features universal mounting.

Features:

- Applications: Residential and Light Commercial
- Heavy Gauge Steel
- Includes: Shaft, Steel Bearings, Motor Mounting Bracket, Universal Housing Supports, Vibro Pads and Mounting Hardware
- Four Mounting Options

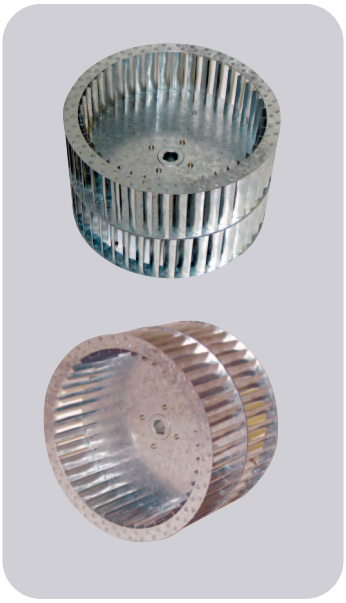


MARS NO.	HOUSING DIMENSIONS					BLOWER WHEEL		
	K	E	A	B	TYPE	DIA.	WIDTH	BORE
41405	13-1/6"	11-3/8"	17-1/4"	16-1/2"	BD	10-1/2"	10-5/8"	3/4"

Belt Drive Blower Wheels

airMARS belt drive blower wheels with forward curved blades are constructed out of galvanized steel with offset tab-locked blades for superior strength. The unique design allows higher operating speeds and lower noise levels on blower wheels from 9" to 40". All wheels are balanced both statically and dynamically to a factor of Q=6.3.

44 separate quality checks ensure the production process for airMARS belt drive blower wheels. Rigorous quality standards, high quality raw material and experienced manufacturing all work together to make airMARS blower wheels your best choice.



MARS NO.	DESCRIPTION	WHEEL DIA.	WHEEL WIDTH	BORE	NOMINAL DIA. X W.	LAU #	MAX. RPM
41533	15-15 BD 1.00 WHL	15.12	15.00	1.00	15-15	008276-16	1600

airMARS Belt Drive Blower Accessories

Bearings

All airMars bearings and bearing assemblies are designed and manufactured to precise tolerance. Dedication to quality assures good fit and long life.

MARS NO.	TYPE	BORE	O.D.	PHOTO	BAG QTY.
40863	Cartridge	3/4"	1-13/16"	A	2
40865	Cartridge w/journal	3/4"	1-13/16"	B	2
40867	Oil	5/8"	1-13/16"	H	2
40868	Oil	3/4"	1-13/16"	H	2
40871	Sealed	3/4"	1-13/16"	I	2
40872	Sealed H.D.	1"	2-1/2"	I	2
40873	Randall Type	3/4"	1-27/32"	J	2
40874	Randall Oil	1"	1-27/32"	J	2
40876	Pillow Block	5/8"	-	C	2
40877	Pillow Block	3/4"	-	C	2
40878	Pillow Block	1"	-	C	2
40879	Pillow Block H.D.	1"	-	C	2
40880	Pillow Block-Ball Brg.	3/4"	-	E	2
40881	Pillow Block-Ball Brg.	1"	-	E	2

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airMARS Belt Drive Blower Accessories

Variable Pitch Pulleys

MARS NO.	DIA	BORE	MATERIAL
40829	2.5"	1/2"	Cast Iron
40830 (1)	2.5"	5/8"	Cast Iron
40831	3.25"	1/2"	Cast Iron
40832 (1)	3.25"	5/8"	Cast Iron
40833	3.25"	3/4"	Cast Iron
40834	3.75"	1/2"	Cast Iron
40835 (1)	3.75"	5/8"	Cast Iron
40837 (1)	3.75"	7/8"	Cast Iron
40838	4.15"	1/2"	Cast Iron
40839 (1)	4.15"	5/8"	Cast Iron
40840	4.15"	3/4"	Cast Iron
40841 (1)	4.15"	7/8"	Cast Iron
40842	4.15"	1-1/8"	Cast Iron
40844 (1)	4.75"	7/8"	Cast Iron
40845	5.35"	5/8"	Cast Iron

(1) with keyway

Blower Pulleys

MARS NO.	DIA	BORE	MATERIAL
40804	6"	5/8"	Cast Iron
40805	6"	3/4"	Cast Iron
40806	6"	1"	Cast Iron
40808	7"	3/4"	Cast Iron
40811	8"	3/4"	Cast Iron
40812	8"	1"	Cast Iron
40815	10"	3/4"	Cast Iron
40816	10"	1"	Cast Iron

airMARS Belt Drive Blower Accessories

Shafts, Miscellaneous Accessories, etc.

All airMars bearings and bearing assemblies are designed and manufactured to precise tolerance. Dedication to quality assures good fit and long life.

Miscellaneous Accessories

MARS NO.	TYPE	PHOTO	PER PACK	WT. EACH
40897	5/8" Thrust Collar Kit	A	1	.20
40898	3/4" Thrust Collar Kit	A	2	.30
40899	1" Thrust Collar Kit	A	1	.50
40901	3/4" Thrust Spacer Kit	B	1	.10

Solid Shafts

MARS NO.	BLADE DIA	LENGTH	FLATTED OR KEYWAY	WT. EACH
40906	5/8"	20"	Flatted	2.10
40907	3/4"	20"	Flatted	3.00
40908	1"	25"	Flatted	6.40
40912	1-3/16"	68"	Flatted	24.30
40913	1-7/16"	52"	Flatted	27.30
40909	3/4"	35"	Flatted	5.30
40914	3/4"	20"	Keyway	3.00
40915	1"	25"	Keyway	6.40

Note: excess can be cut off

airMARS Belt Drive Blower Accessories

Bearings and Brackets

All airMars bearings and bearing assemblies are designed and manufactured to precise tolerance. Dedication to quality assures good fit and long life.

Bearings

MARS NO.	TYPE	BORE	O.D.	PHOTO	BAG QTY.
40885	Sealed Ball Bearing	3/4"	1-13/16"	D	2
40887	Sealed Ball Bearing	1"	2-27/32"	D	2
40886	Sealed Ball Bearing	3/4"	2-27/32"	D	2
40889	Sealed Brundage Repl.	3/4"	2-1/16"	B	2
40891	Oil Brundage Repl.	3/4"	2-1/16"	B	2

3-Wing Bearing Brackets

MARS NO.	TYPE	BORE	O.D.	PHOTO	BAG QTY.
40918	3-Wing Bracket w/Hardware	3/4"	w/ 3/4" x 20" shaft	-	1 Kit
40919	3-Wing Bracket w/Hardware	1"	w/ 1" x 20" shaft	-	1 Kit

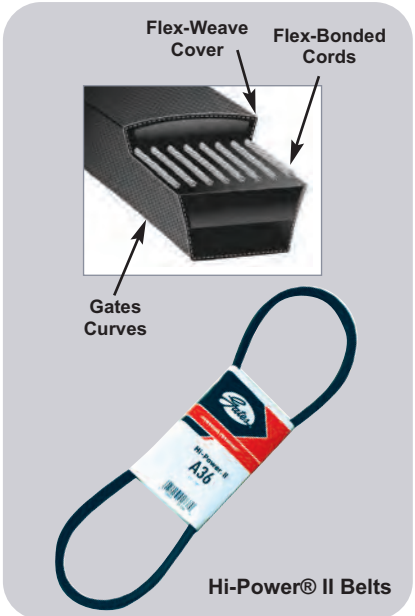
V-Belts

Hi-Power® II Belts

Gates Hi-Power II belts are engineered for classical applications. They have patented concave sidewalls to distribute wear evenly while providing proper belt support for improved service life. Flex-bonded cords and flex-weave covers make them the No. 1 choice for heavy-duty conventional V-belt drives. Hi-Power II belts also resist the effects of oil, heat, ozone, weather and aging while meeting RMA standards for static conductivity.

Features & Benefits:

- See page AM-40
- MARS Pack 1

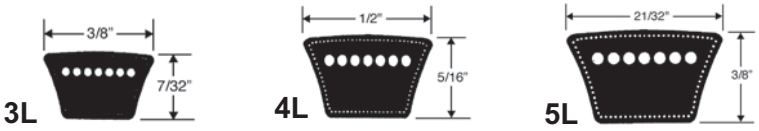


Truflex® V-Belts

GatesTruflex® belts offer improved performance on light duty, fractional horsepower (FHP) V-belt drives. Their unique patented construction provides smooth, quiet operation with less vibration.

Features & Benefits:

- Gates Curves provide proper cord support and full contact with the sheave-groove for uniform loading, uniform wear, and increased belt life.
- Flex-Bonded Cords are strongly bonded to the body of the belt resulting in equal load distribution and the absorption of bending stress without cord reduction.
- Flex-Weave® Cover is a patented fabric construction for longer cover life, providing extended protection to the belt core from oil, dirt and heat.
- Meets RMA static conductivity requirements.
- Meets RMA oil and heat resistant standards.
- MARS Pack 1



Tri-Power® Belts-AX, BX

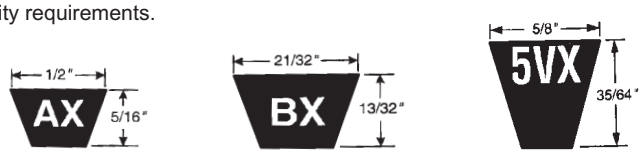
Constructed with Gates proprietary Vextra® construction, this belt has a superior combination of flex and load carrying capacity, as well as less stretch resulting in less maintenance. Suitable for all industrial applications, particularly where small or subminimal sheave diameters are required.

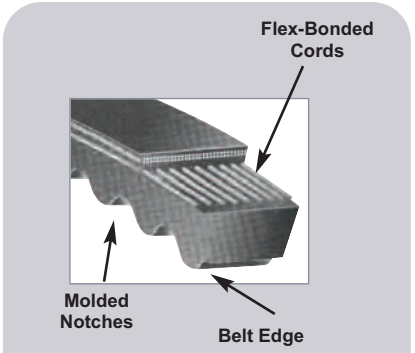
Super HC® Molded Notch Belts-5VX

Constructed with Gates proprietary construction, this belt has a superior combination of flex and load carrying capacity, as well as transmitting more horsepower than the classical cross sections in the same amount of drive space. Suitable for all industrial applications, particularly where space, weight and horsepower capacity are critical.

Features & Benefits:

- Notches molded in to the belt during manufacturing, make this belt well suited for drives with smaller diameter sheaves.
- Belt edge is machined for even sheave groove contact resulting in less slip and wear.
- Flex bonded cords are strongly bonded to the body of the belt resulting in equal load distribution and the absorption of bending stress without cord deterioration.
- Meets RMA oil and heat resistant standards
- Meets RMA static conductivity requirements.
- MARS Pack 1





WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

A Belts

MARS NO.	DESC.	CASE QTY.
74364	A20	1
74325	A21	1
74326	A22	1
74327	A23	1
74328	A24	185
74329	A25	185
74330	A26	150
74331	A27	150
74332	A28	150
74333	A29	150
74334	A30	150
74335	A31	150
74336	A32	150
74337	A33	150
74338	A34	150
74339	A35	130
74340	A36	130
74341	A37	110
74342	A38	110
74343	A39	110
74344	A40	110
74345	A41	90
74346	A42	90
74347	A43	90
74348	A44	90
74349	A45	90
74350	A46	90
74351	A47	90
74352	A48	90
74353	A49	90
74354	A50	90
74355	A51	90
74356	A52	50
74357	A53	50
74358	A54	50
74359	A55	50
74360	A56	50
74361	A57	50
74362	A58	50
74363	A59	50
74366	A60	50
74367	A61	50
74368	A62	50
74369	A63	50
74370	A64	50
74371	A65	75
74372	A66	75
74373	A67	75
74374	A68	50
74375	A69	7
74376	A70	42
74377	A71	75
74378	A72	75
74379	A73	75
74380	A74	42
74381	A75	75
74382	A76	75
74383	A77	75

A Belts cont.

MARS NO.	DESC.	CASE QTY.
74384	A78	75
74385	A79	50
74386	A80	75
74387	A81	25
74388	A82	50
74389	A83	60
74390	A84	25
74391	A85	50
74392	A86	10
74393	A87	10
74394	A88	30
74395	A89	60
74396	A90	60
74397	A91	60
74398	A92	60
74399	A93	60
74400	A94	60
74401	A95	60
74402	A96	50
74531	A97	5
74532	A98	4
74403	A100	35
74404	A103	50
74405	A105	25
74406	A110	5
74407	A112	45
74408	A120	35
74409	A128	35
74410	A133	2
74411	A136	2
74412	A144	15
74416	A158	2
74417	A173	2

B Belts

MARS NO.	DESC.	CASE QTY.
74517	B28	10
74526	B280	2
74518	B29	95
74422	B30	20
74423	B31	95
74424	B32	10
74425	B33	10
74426	B34	25
74427	B35	100
74428	B36	25
74429	B37	20
74430	B38	90
74431	B39	20
74432	B40	75
74433	B41	75
74434	B42	75
74435	B43	75
74436	B44	75
74437	B45	75
74438	B46	65
74439	B47	60
74440	B48	60

B Belts cont.

MARS NO.	DESC.	CASE QTY.
74441	B49	60
74442	B50	40
74443	B51	40
74444	B52	40
74445	B53	40
74446	B54	40
74447	B55	30
74448	B56	20
74449	B57	40
74450	B58	35
74451	B59	35
74452	B60	35
74453	B61	35
74454	B62	35
74455	B63	35
74456	B64	35
74457	B65	35
74458	B66	35
74459	B67	25
74460	B68	25
74461	B69	25
74462	B70	20
74463	B71	25
74464	B72	25
74465	B73	35
74466	B74	35
74467	B75	35
74468	B76	35
74469	B77	35
74470	B78	35
74471	B79	35
74472	B80	35
74473	B81	35
74474	B82	30
74475	B83	30
74476	B84	30
74477	B85	35
74478	B86	30
74479	B87	25
74480	B88	20
74481	B89	30
74482	B90	30
74528	B91	25
74483	B92	30
74484	B93	30
74485	B94	30
74486	B95	30
74487	B96	30
74488	B97	30
74489	B98	5
74490	B99	15
74491	B100	30
74519	B101	30
74520	B102	30
74492	B103	30
74493	B105	30
74494	B106	30
74495	B108	30

B Belts cont.

MARS NO.	DESC.	CASE QTY.
74530	B109	25
74496	B110	25
74497	B112	15
74521	B114	30
74498	B115	30
74499	B116	30
74500	B118	30
74501	B120	30
74529	B122	5
74502	B124	30
74503	B126	35
74504	B128	30
74509	B130	1
74505	B131	20
74525	B133	20
74506	B136	20
74507	B140	20
74522	B142	20
74508	B144	20
74510	B150	15
74511	B154	2
74512	B158	10
74513	B162	20
74533	B191	1

3L Belts

MARS NO.	DESC.	CASE QTY.
74103	3L170	100
74104	3L180	100
74105	3L190	100
74106	3L200	100
74107	3L210	100
74108	3L220	100
74109	3L230	100
74110	3L240	100
74111	3L250	100
74112	3L260	100
74113	3L270	100
74114	3L280	10
74115	3L290	100
74116	3L300	10
74117	3L310	1
74118	3L320	100
74119	3L330	150
74120	3L340	100
74121	3L350	100
74122	3L360	100
74123	3L370	1
74124	3L380	1
74125	3L390	1
74126	3L400	1
74128	3L420	1
74129	3L430	150
74130	3L440	50
74132	3L460	1

4L Belts

MARS NO.	DESC.	CASE QTY.
74153	4L150	5
74154	4L160	124

4L Belts cont.

MARS NO.	DESC.	CASE QTY.
74155	4L170	25
74156	4L180	100
74157	4L190	100
74158	4L200	100
74159	4L210	150
74160	4L220	100
74162	4L230	100
74163	4L240	100
74164	4L250	100
74165	4L260	100
74166	4L270	100
74167	4L280	100
74168	4L290	50
74169	4L300	50
74170	4L310	70
74171	4L320	50
74172	4L330	50
74173	4L340	50
74174	4L350	50
74175	4L360	75
74176	4L370	50
74177	4L380	50
74178	4L390	100
74179	4L400	50
74180	4L410	50
74181	4L420	50
74182	4L430	110
74183	4L440	50
74184	4L450	110
74185	4L460	50
74186	4L470	110
74187	4L480	50
74188	4L490	50
74189	4L500	110
74190	4L510	75
74191	4L520	75
74192	4L530	74
74193	4L540	60
74194	4L550	60
74195	4L560	60
74196	4L570	60
74197	4L580	60
74198	4L590	60
74199	4L600	80
74200	4L610	40
74201	4L620	80
74202	4L630	50
74203	4L640	75
74204	4L650	50
74205	4L660	75
74206	4L670	70
74207	4L680	74
74208	4L690	75
74209	4L700	75
74210	4L710	75
74211	4L720	75
74212	4L730	75
74213	4L740	75

4L Belts cont.

MARS NO.	DESC.	CASE QTY.
74214	4L750	75
74215	4L760	75
74216	4L770	75
74217	4L780	75
74218	4L790	75
74219	4L800	75
74220	4L810	75
74221	4L820	75
74222	4L830	5
74223	4L840	60
74224	4L850	2
74225	4L860	2
74226	4L870	75
74227	4L880	55
74228	4L890	55
74229	4L900	55
74230	4L910	55
74231	4L920	55
74232	4L930	55
74233	4L940	1
74234	4L950	1
74235	4L960	55
74236	4L970	55
74237	4L980	1
74238	4L990	55
74239	4L1000	55

5L Belts

MARS NO.	DESC.	CASE QTY.
74248	5L260	150
74249	5L270	50
74250	5L280	35
74251	5L290	130
74252	5L300	130
74253	5L310	50
74254	5L320	10
74255	5L330	10
74256	5L340	90
74257	5L350	10
74258	5L360	90
74259	5L370	10
74260	5L380	20
74261	5L390	90
74262	5L400	90
74263	5L410	75
74264	5L420	75
74265	5L430	75
74266	5L440	75
74267	5L450	75
74268	5L460	75
74269	5L470	75
74270	5L480	75
74271	5L490	75
74272	5L500	75
74273	5L510	55
74274	5L520	60
74275	5L530	60

5L Belts cont.

MARS NO.	DESC.	CASE QTY.
74276	5L540	25
74277	5L550	50
74278	5L560	25
74279	5L570	15
74280	5L580	25
74281	5L590	15
74282	5L600	35
74283	5L610	35
74284	5L620	20
74285	5L630	60
74286	5L640	60
74287	5L650	60
74288	5L660	25
74289	5L670	15
74290	5L680	27
74291	5L690	60
74292	5L700	10
74293	5L710	50
74294	5L720	25
74295	5L730	25
74296	5L740	50
74297	5L750	50
74298	5L760	50
74299	5L770	50
74300	5L780	15
74301	5L790	50
74302	5L800	15
74303	5L810	55
74304	5L820	55
74305	5L830	55
74306	5L840	45
74307	5L850	40
74308	5L860	40
74309	5L870	40
74310	5L880	40
74311	5L890	40
74312	5L900	40
74313	5L910	40
74314	5L920	40
74315	5L930	45
74316	5L940	45
74317	5L950	45
74318	5L960	45
74319	5L970	45
74320	5L980	45
74321	5L990	45
74322	5L1000	45

AX Belts

MARS NO.	DESC.	CASE QTY.
74720	AX20	1
74556	AX21	15
74557	AX22	5
74558	AX23	5
74553	AX24	5
74560	AX25	20
74566	AX26	25
74561	AX27	20
74555	AX28	20

Gates V-Belts

Gates V-Belts cont.

AX Belts cont.

MARS NO.	DESC.	CASE QTY.
74563	AX29	20
74564	AX30	10
74565	AX31	10
74554	AX32	50
74567	AX33	14
74568	AX34	15
74569	AX35	15
74570	AX36	15
74571	AX37	15
74572	AX38	10
74562	AX39	10
74573	AX40	10
74574	AX41	10
74575	AX42	15
74576	AX43	30
74604	AX44	10
74608	AX45	10
74577	AX46	55
74579	AX47	10
74578	AX48	5
74580	AX49	20
74598	AX50	10
74581	AX51	10
74599	AX52	5
74551	AX53	5
74582	AX54	15
74583	AX55	5
74600	AX56	10
74601	AX57	10
74584	AX58	5
74552	AX59	10
74585	AX60	4
74586	AX61	5
74587	AX62	5
74588	AX63	15
74589	AX64	10
74602	AX65	5
74603	AX66	5
74559	AX67	5
74590	AX68	5
74592	AX69	5
74749	AX70	5
74757	AX71	5
74514	AX72	5
74591	AX75	5
74593	AX80	5
74750	AX82	1
74594	AX85	1
74595	AX87	1
74596	AX90	5
74549	AX92	1
74597	AX96	5

BX Belts

MARS NO.	DESC.	CASE QTY.
74650	BX28	1
74662	BX30	1
74605	BX32	1
74684	BX33	1
74666	BX34	10
74609	BX35	1
74610	BX36	5
74611	BX37	1
74612	BX38	4
74613	BX39	40
74614	BX40	15
74615	BX41	1
74616	BX42	4
74617	BX43	5
74618	BX44	10
74710	BX45	10
74619	BX46	15
74719	BX47	1
74620	BX48	10
74663	BX49	1
74621	BX50	20
74607	BX51	50
74622	BX52	10
74623	BX53	5
74624	BX54	20
74625	BX55	1
74626	BX56	5
74664	BX57	1
74629	BX58	10
74630	BX59	25
74631	BX60	25
74627	BX61	15
74632	BX62	20
74628	BX63	20
74633	BX64	10
74634	BX65	15
74635	BX66	10
74636	BX67	10
74637	BX68	5
74707	BX69	10
74638	BX70	10
74639	BX71	10
74641	BX72	15
74640	BX73	5
74657	BX74	1
74646	BX75	10
74648	BX76	5
74651	BX77	5
74655	BX78	5
74656	BX79	5
74642	BX80	5
74643	BX81	10
74658	BX82	5
74644	BX83	5
74652	BX84	5

BX Belts cont.

MARS NO.	DESC.	CASE QTY.
74645	BX85	2
74721	BX86	1
74678	BX88	1
74679	BX89	1
74659	BX90	1
74665	BX91	1
74672	BX92	1
74661	BX93	1
74680	BX94	1
74660	BX95	1
74606	BX96	1
74681	BX97	30
74683	BX99	5
74647	BX100	1
74649	BX103	1
74653	BX105	1
74654	BX106	1
74685	BX108	1
74670	BX112	30
74671	BX113	1
74686	BX116	1
74668	BX120	1
74669	BX124	1
74687	BX128	1
74705	BX133	10
74748	BX162	1
74759	BX173	1

3VX Belts

MARS NO.	DESC.	CASE QTY.
74515	3VX315	1
74516	3VX355	1
74418	3VX475	1
74667	3VX630	1
74547	3VX670	1
74523	3VX710	1
74548	3VX750	5
74550	3VX800	1
74524	3VX850	1
74527	3VX900	1

5VX Belts

MARS NO.	DESC.	CASE QTY.
74712	5VX450	1
74711	5VX500	1
74688	5VX530	10
74674	5VX550	1
74713	5VX560	1
74714	5VX570	1
74682	5VX590	1
74715	5VX600	1
74722	5VX630	1
74702	5VX670	1
74716	5VX680	1
74703	5VX710	1
74675	5VX730	1

5VX Belts cont.

MARS NO.	DESC.	CASE QTY.
74689	5VX750	12
74708	5VX780	1
74704	5VX800	1
74676	5VX850	1
74677	5VX880	1
74690	5VX900	13
74691	5VX930	5
74706	5VX950	1
74692	5VX960	10
74693	5VX1000	10
74694	5VX1030	10
74718	5VX1050	1
74695	5VX1060	1
74696	5VX1080	10
74697	5VX1120	10
74698	5VX1150	10
74699	5VX1180	1
74673	5VX1230	1
74700	5VX1320	10
74701	5VX1400	20

AP Belts

MARS NO.	DESC.	CASE QTY.
74725	5V630	1
74726	5V710	1
74728	5V750	1
74729	5V800	1
74746	AP46	1
74751	AP51	1
74755	AP55	1
74756	AP56	1
74758	AP58	1
74760	AP59	1

Misc. Belts

MARS NO.	DESC.	CASE QTY.
74991	C85	1
74990	C100	5
74998	C136	1
74796	CX96	1

Tension Tester

Pencil type tension tester is for use with all small v-belts and synchronous belts. Maximum deflection force 30 lbs.

MARS NO.	GATES NO.
74101	7401-0076

Gates Merchandiser

Includes 10 – 3 foot long strips with 12 hooks each.

MARS NO.	GATES NO.
74000	7645-0003

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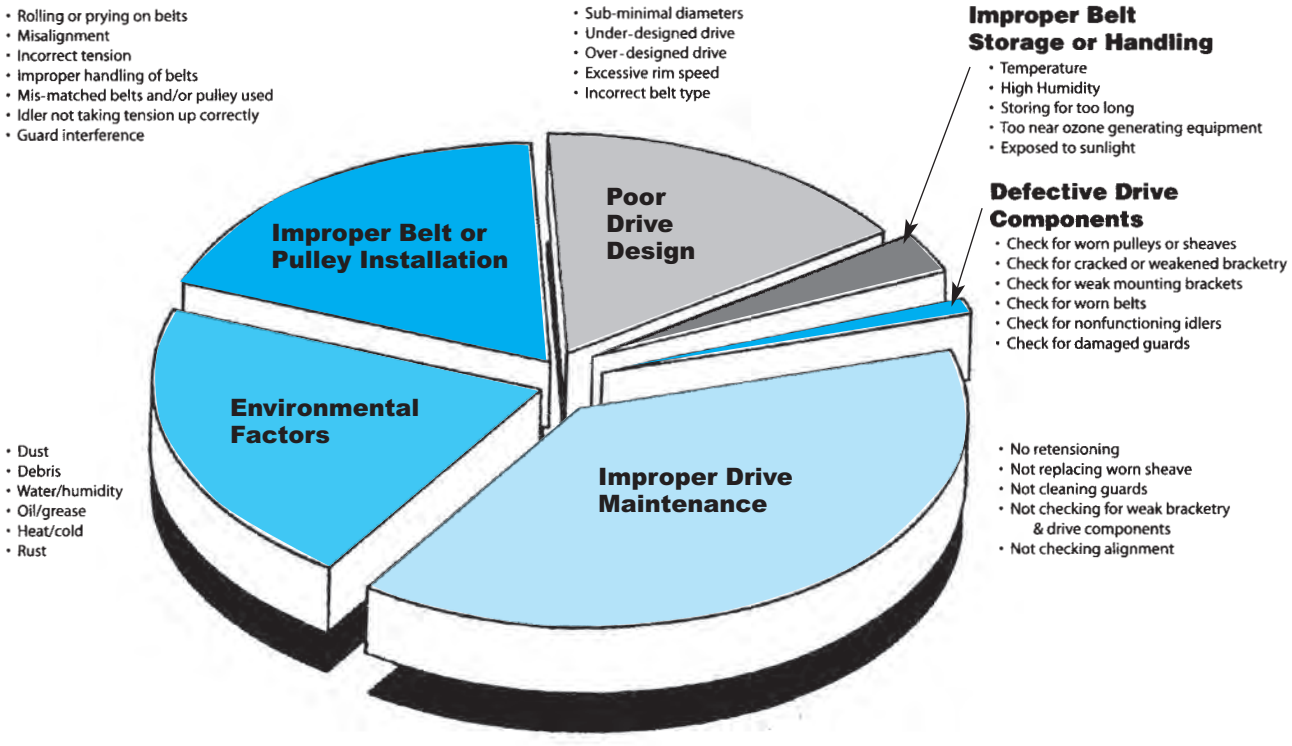
An effective preventive maintenance program saves time and money. Inspecting and replacing belts and faulty drive components before they fail will reduce costly downtime.

A comprehensive, effective program of preventive maintenance consists of several elements:

- Maintaining a safe work environment
- Regularly scheduled belt drive inspections
- Proper belt installation procedures
- Belt drive performance evaluations
- Belt product knowledge
- Belt storage and handling
- Trouble shooting

Sources of Drive Problems

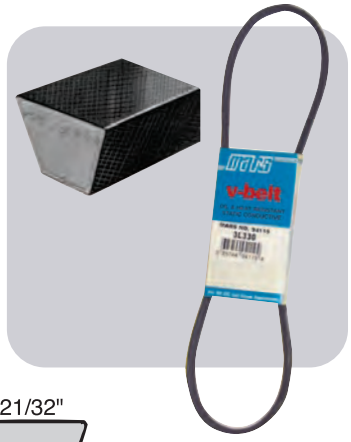


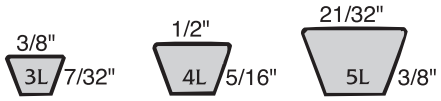
Ask your MARS Sales Representative about how MARS & Gates can help you provide your customers with superior product and superior product application knowledge.

MARS V-Belts

MARS FHP V-Belts

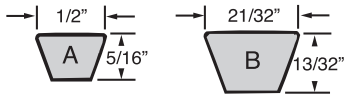
The airMARS FHP V-belt has been designed specifically for solving the problems of minimum space, small pulley diameters, large ratios and fractional horsepower requirements. Excellent for air conditioning, refrigeration and appliance equipment.
This series of airMARS belts uses only top quality material in order to have superior performance. All belts are manufactured under strict quality control standards.





MARS Dual Rated V-Belts

MARS is pleased to offer our dual rated v-belts. These belts are a combination of the classical multiple belt and the FHP belt, allowing the wholesaler and contractor to consolidate inventory. There is no need to stock both the FHP and multiple belts when you use the MARS dual brand v-belts. These unimatch belts are the same size and type and will measure within the RMA matching limits.

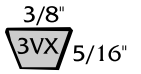


Cogged Raw Edge V-Belts

airMARS cogged raw edge V-belts are designed to keep drive costs and maintenance costs at a minimum. These belts are more compact and offer greater flexibility. Oil and heat resistant.

MARS Wedge V-Belts

airMARS Wedge V-belts allow for compact drives and higher (lower cost) RPM motors. These belts are oil and heat resistant and static conducting.



MARS Accu-Link Adjustable V-belts

airMARS Wedge V-belts allow for compact drives and higher (lower cost) RPM motors. These belts are oil and heat resistant and static conducting.

- Solves HVAC v-belt drive problems, quickly and accurately
- Ideal temporary or permanent replacement for conventional rubber belts
- Easy snap & twist assembly
- No special tools needed
- Ideal for emergency repairs & replacements
- Keep Accu-Link in every contractor truck and you will never be without a belt in any circumstance.
- 5 ft. sleeve

MARS NO.	DESCRIPTION	MARS PACK	QTY.
94670	3L Accu-Link	1	25
94671	A/4L Accu-Link	1	25
94672*	B/5L Accu-Link	1	25

** 6 foot sleeve*

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MARS FHP-2L & 3L V-Belts-3/8" Top Width

MARS NO.	DESC.	MARS PACK	CASE QTY.
94104	3L180	1	10
94105	3L190	1	10
94106	3L200	1	10
94107	3L210	1	10
94108	3L220	1	10

MARS FHP-4L V-Belts -1/2" Top Width

MARS NO.	DESC.	MARS PACK	CASE QTY.
94155	4L170	1	20
94156	4L180	1	20

MARS FHP-5L V-Belts -21/32" Top Width

MARS NO.	DESC.	MARS PACK	CASE QTY.
94281	5L590	1	10

A/4L Dual Rated V-Belts

MARS NO.	DESC.	MARS PACK	CASE QTY.
94416	A-18/4L200	1	10
94323	A-19/4L210	1	10
94324	A-20/4L220	1	10
94325	A-21/4L230	1	10
94326	A-22/4L240	1	10
94327	A-23/4L250	1	10
94328	A-24/4L260	1	10
94329	A-25/4L270	1	10
94330	A-26/4L280	1	10
94331	A-27/4L290	1	10
94332	A-28/4L300	1	10
94335	A-31/4L330	1	10
94336	A-32/4L340	1	10
94337	A-33/4L350	1	10
94338	A-34/4L360	1	10
94339	A-35/4L370	1	10
94340	A-36/4L380	1	10
94341	A-37/4L390	1	10
94342	A-38/4L400	1	10
94343	A-39/4L410	1	10
94344	A-40/4L420	1	10
94345	A-41/4L430	1	10
94346	A-42/4L440	1	10
94347	A-43/4L450	1	10
94348	A-44/4L460	1	10
94349	A-45/4L470	1	10
94350	A-46/4L480	1	10
94351	A-47/4L490	1	10
94352	A-48/4L500	1	10
94353	A-49/4L510	1	10
94354	A-50/4L520	1	10
94355	A-51/4L530	1	10
94356	A-52/4L540	1	10
94357	A-53/4L550	1	10
94358	A-54/4L560	1	10
94359	A-55/4L570	1	10
94360	A-56/4L580	1	10
94370	A-64/4L660	1	10

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Cross Reference

Enclosed you will find the airMARS cross reference guide. It is the result of Motors & Armatures' on going commitment to provide the most complete information possible to wholesalers, contractors and service technicians so they may select a desired product quickly and accurately.

In compiling this cross reference, every effort has been made to insure the accuracy of the information, however, Motors & Armatures cannot accept responsibility for errors which may be caused by changes in part numbers, specifications or by typographical or clerical errors in preparation. Manufacturers' and suppliers' part numbers within this cross reference and catalog are shown for identification and reference purposes only.

AAON	MARS
P47570	40053

Air Drive	MARS
A000581	07081
A000700	07411
A000290	07414
A000247	07451
A000815	07452
A000898	07471
A000892	07472
A000808	07481
A000245	07482
A000613	07483
A000115	07484
A000250	07491
A000251	07493
A001358	07521
A000816	07551
A001094	07552
A000253	07571
A000817	07572
A000254	07581
A000255	07582
A001120	07584
A000256	07591
A000645	07592
A000212	07593
A000213	07594
A000260	07595
A000261	07596
A000407	07921
A000408	07922
A000585	07993
A000482	07995
A001116	07996
A000490	07998
A000464	95021
A000381	95022
A000356	95027
A000374	95031
A000382	95032
A000125	95041
A001283	95131
A001045	95621
A001250	95628
A001206	95629
A000262	95641
A001093	95721
A001103	95722
A000365	95723
A000109	95731
A000106	95732
A000939	95735
A000246	95737
A000110	95741
A000107	95742
A000237	95821
A000314	95822
A000199	95823
A000104	95831
A000178	95832
A000111	95841
A000108	95842
A000277	95865
A000603	95866
A000412	95875
A000811	95923
A000309	95931
A001117	95932
A001483	95941

Allied	MARS
10026601	40356
10026801	40362
41141001	40094
41354001	40375
41355001	40132
41518001	40100
42686001	40343
44931001	40096
45582001	40340
100060-02	40382
100060-03	40339
100060-04	40042
100060-05	40099
100060-07	40339
100060-08	40097
100060-09	40099
100060-10	40382
100060-13	40107

Armstrong	MARS
46238001	40151
46239001	40042
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100060-03	40339
100060-04	40042
100060-05	40099
100060-07	40339
100060-08	40097
100060-09	40099
100060-10	40382
100060-13	40107
39062B001	40154

Bard	MARS
5151048	40138

Carrier	MARS
LA01RA042	40358
LA01AA015	40096
LA01AA019	40375
LA01AA022	40164
LA01AA023	40378
LA01AA026	40379
LA01AA177	40338
LA01AA179	40404
LA01AA198	40049
LA01AA199	40349
LA01AA201	40049
LA01AB017	40101
LA01AB018	40135
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LA01AB022	40105
LA01AB026	40105
LA01AB200	40105
LA01AB203	40378
LA01AB243	40387
LA01AD021	40139
LA01AD022	40110
LA01AD027	40381
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LA01AD030	40389
LA01AD032	40120
LA01AH243	40113
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LA01EA031B	40069
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LA01LB016	40068
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LA05LA016	40331
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LA680506	40051
LA680517	40135
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LA680522	40054
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LA680527	40356
LA680528	40139
LA680538	40166
LA680562	40118
LA01EA038	40352
LA01RA027	40350

EXCEL	MARS
20391101	40041
20391102	40343
20391105	40355
20391106	40352
20391107	40047
20391108	40100
20391109	40339
20391110	40097
20391111	40099
20391112	40107
100060-03	40339
100060-19	40053

Fasco	MARS
H10	40006
H5	40003
H6	40004
H8	40005
STB1	40230
STB2	40232
STB3	40231
STB4	40234
STB5	40235
STB6	40237
STB7	40238
STB8	40239
STBP5	40240
STBP6	40242
STBP7	40244
STBP8	40241
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2-6085	41130
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2-6091	41314
2-6092	41318
2-6093	41323
2CL1827	40308
2CL2025	40313
2CL2227	40320
3CL1433-4	40329
3CL1827	40044
3CL1830	40066
3CL1833	40046
3CL2024	40048
3CL2028	40050
3CL2031	40068
3CL2230	40024
3CL2233-4	40357
3CL2426	40058
3CL2426	40058
3CL2433	40060
3CR1433-4	40328
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3CR1827	40043
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3CR1833-4	40343
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3CR2031	40067
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4FR1223	40076
4FR1233	40080

GEM	MARS
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FBG10427R	40072
FBG10433L	40075
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FBT16423R	40088
FBT16433L	40093
FBT16433R	40092
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FBT18327L	40044
FBT18327R	40043
FBT18333L	40046
FBT18333R	40045
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FBT18433R	40098
FBT20225L	40313
FBT20324R	40047
FBT20328R	40049
FBT20331R	40067
FBT20426L	40103
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FBT20429L	40138
FBT20429R	40137
FBT20433L	40105
FBT20433R	40104
FBT22331R	40053
FBT22427R	40108
FBT22435R	40110
FBT24326L	40058
FBT24326R	40057
FBT24427L	40115
FBT24427R	40114
FBT24433R	40116
FBT26427R	40119

Goodman	MARS
10625715	40307
10625721	40065
10625731	40357
10625733	40054
10625739	40357
10650802	40363
11182905	40380
150M00001P	40050
B1086756	40066
B1086775	40054
150M00001P	40050
10625719	40352
10625732	40046
10625739	40357
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150M00001P	40050
B1086756	40066
B1086764	40107
B1086765	40109
B1086771	40045
B1086772	40358
B1086773	40054
B1086775	40054

Heatcraft	MARS
22901101	40168
5106B	40077
5108C	40083
5109B	40089
5110B	40091
5111B	40093
5113A	40097

HTP Group	MARS
8221154	40381

Lau	MARS
008276-16	41533
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008360-12	41510
008360-16	41511
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008362-12	41508
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008507-16	41514
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008747-16	41525
009867-16	41517
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029176-01	40919
050998-01	40851
052141-01	40850
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270-072-01	40832
270-089-12	40835
270-089-17	40834
38-2086-01	40877
38-2087-01	40878
38-2091-01	40863
38-2093-01	40879
38-2094-01	40875
38-2095-01	40908
38-2096-01	40907
38-2204-01	40876
38-2205-01	40906
38-2206-01	40898
38-2207-01	40899

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38-2214-01	40805
38-2215-01	40808
38-2216-01	40809
38-2217-01	40811
38-2218-01	40812
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38-2239-01	74178
38-2240-01	74179
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38-2569-01	40882
38-2570-01	40883
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38-2590-01	40887
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60-3315-09	40236
60-3795-01	93581
60-3795-02	93582
60-5553-01	40094
60-5554-01	40095
60-5555-01	40096
60-5556-01	40097
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60-5568-01	40050
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60-5614-01	40163
60-5615-01	40164
60-5616-01	40165
60-5617-01	40166
60-5619-01	40168
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60-5624-01	40113
60-5626-01	40115
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60-7163-01	40029
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60-7172-01	40038
60-7175-01	40070
60-7176-01	40071
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60-7178-01	40073
60-7179-01	40124
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60-7182-01	40077
60-7183-01	40078
60-7184-01	40079
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60-7189-01	40084
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60-7194-01	40089
60-7195-01	40090
60-7196-01	40091
60-7434-01	40300
60-7599-01	40074
60-7600-01	40075
60-7601-01	40080
60-7602-01	40081
60-7603-01	40086
60-7604-01	40087
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60-7613-01	40170
60-7615-01	40172
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60-7658-02	40003
60-7658-03	40004
60-7658-04	40005
60-7658-05	40006
60-7658-06	40007
60-7725-01	40308
60-7726-01	40315
60-7727-01	40317
60-8002-01	40094
60-8003-01	40095
60-8004-01	40100
60-8005-01	40101
60-8041-01	40106
60-8042-01	40107
60-8043-01	40112
60-8044-01	40113
60-8142-01	40320
60-8329-01	40200
60-8330-01	40202
60-8348-01	07471
60-8349-01	07472
60-8350-01	07571
60-8351-01	07572
60-8352-01	07481
60-8353-01	07482
60-8354-01	07483
60-8355-01	07484
60-8362-01	07591
60-8363-01	07592
60-8366-01	07595
60-8367-01	07596
60-8368-01	07593
60-8369-01	07594
60-8370-01	07595
60-8371-01	07596
60-8372-01	95721
60-8373-01	95737
60-8375-01	95737
60-8376-01	95823
60-8377-01	95831
60-8379-01	95931
60-8380-01	95021
60-8381-01	95031
60-8417-01	40384
60-9972-01	40395
725138-08	40240
725138-10	40241
725138-12	40244

LENNOX	MARS
65248500	40328
65257200	40072
65258600	40033
65258700	40035
100060-02	40382
100060-03	40339
100060-04	40042
100060-05	40099
100060-07	40339
100060-08	40097
100060-09	40099
100060-10	40382
100060-13	40107
16C0001	40057
24L2001	40137
27K7801	40072
32M9401	40382
33G0601	40100
37L4801	40334
37L5001	40099
43G3801	40108
45C5101	40114
45F5801	40380
54G3001	40112
56L7201	40359
65C6801	40358
68J2601	40339
68J2701	40097
68J2801	40099
68J4301	40107
72H2901	40068
72L9201	40352
93G9001	40389
95C5901	40375
98G5201	40101
99K2101	40033
99K4501	40057
P-8-11098	40102
P-8-8038	40137

Magnetek	MARS
1-0315	41130
1-0439	41123
1-14721	41116
1-2640	41335
1-2657	41109
1-2873	41110
2-0223	41105
2-0600	41114
2-0678	41115
6-4328	40074
6-4329	40075
6-4330	40076
6-4331	40077
6-4334	40080
6-4335	40091
6-4368	40340
6-4370	40065
6-4372	40045
6-4376	40049
6-4378	40067
6-4380	40069
6-4384	40057
6-4385	40058
6-4388	40082
6-4390	40086
6-4391	40087
6-4392	40088
6-4393	40089
6-4394	40092
6-4395	40093
6-4396	40096
6-4397	40097
6-4398	40134
6-4400	40098
6-4401	40099
6-4402	40102
6-4403	40103
6-4404	40137
6-4406	40104
6-4407	40105
6-4408	40108
6-4409	40109
6-4410	40139
6-4412	40114
6-4413	40115
6-4414	40116
6-4415	40117
6-4416	40118
6-4418	40120
6-4595	07481
6-4597	07581
6-4598	07582
6-4601	07583
6-4605	07591
6-4606	07592
6-4609	07593
6-4610	07594
6-4611	07595
6-4612	07596
6-4941	40308
6-4942	40313
6-4944	40320
6-5737	40143

Modine	MARS
5H57845C0104	40033
5H57847C0104	40082
5H63036C0101	40061
5H63038C0104	40332
5H70435B0104	40057
5H63039B0104	40375
5H63980C0104	40069
5H73833B0101	40061
5H73834B0104	40031
5H73835B0101	40033
5H73835B0104	40033
5H73840B0104	40378

NORDYNE	MARS
667303	40057
667309	40375
667323	40100
667355	40049
667356	40349
667359	40358
6672780	40067
6672790	40049
6672820	40102
6673180	40376
667206D	40103
667212C	40359
667212D	40359
667262B	40065
667312A	40387

RHEEM	MARS
702060801	40321
704226801	40024
701989703	40323
701989704	40058
702185905	40308
702185906	40319
704203501	40138
7010132307	40052
7010132306	40320
7010132309	40315

Springer	MARS
17601025	40338
17601026	40053
17604220	40053

TORIN	MARS
B-2026-4CCW	40102
B-2029-4CCW	40138
B-2227-4CW	40114
B-2236-4CW	40110
B-2427-3CW	40057
B-2427-4CCW	40115
B-2427-4CW	40117
B-2434-4CW	40116
B-2628-4CW	40119
B-2727-3CCW	40058
N-1024-4CCW	40071
N-1024-4CW	40070
N-1027-4CCW	40073
N-1027-4CW	40072
N-1033-4CCW	40075
N-1033-4CW	40074
N-1223-4CCW	40077
N-1223-4CW	40076
N-1233-4CCW	40081
N-1233-4CW	40080
N-1423-4CCW	40083
N-1423-4CW	40082
N-1433-4CCW	40087
N-1433-4CW	40086
N-1623-4CCW	40089
N-1623-4CW	40088
N-1633-4CCW	40093
N-1633-4CW	40092
N-1827-3CCW	40044
N-1827-3CW	40043
N-1827-4CCW	40097
N-1827-4CW	40096
N-1830-4CCW	40135
N-1830-4CW	40134
N-1832-4CCW	40099
N-1832-4CW	40098
N-1834-3CW	40045
N-2023-4CW	40102
N-2024-3CW	40047
N-2026-4CW	40137
N-2028-3CW	40049
N-2031-3CW	40067
N-2033-4CCW	40105
N-2033-4CW	40104
N-2231-3CW	40053
10334	40074
10338	40075
12234	40076
12238	40077
12334	40080
12338	40081
14234	40082
14238	40083
14334	40086
14338	40087
16234	40088
16238	40089
16334	40092
16338	40093
18273	40043
18274	40096
18277	40044
18278	40097
18304	40134
18308	40135
18324	40098
18328	40099
18343	40045
20234	40046
20243	40047
20264	40137
20268	40103
20283	40049
20294	40104
20298	40138
20313	40067
20334	40105
22274	40108
22313	40053
22364	40110
24273	40057
24274	40114
24278	40115
24344	40116
26284	40119
2700602	40043
2700612	40044
2700642	40045
2700652	40046
2700662	40047
2700682	40049
2700702	40067
2700722	40053
2700762	40057
2700772	40058
2700802	40096
2700812	40097
2700822	40134
2700832	40135
2700842	40098
2700852	40099
2700862	40103
2700882	40137
2700892	40138
2700912	40138
2700922	40108
2700942	40110
2700962	40114
2700972	40115
2700982	40116
2760212	40075
2760262	40080
2760462	40119
2760682	40074
2760702	40076
2760712	40077
2760732	40081
2760742	40082
2760752	40083
2760762	40086
2760772	40087
2760782	40088
2760792	40089
2760802	40092
2760812	40093
2760822	40104
2760832	40105

Trane	MARS
X38010305010	40069
X38010307050	40139
X38010309040	40098
X38010330010	40379

YORK	MARS
2628198000	40096
2629094000	40380
2634091000	40305
2634092000	40045
2634093000	40356

airMARS Special Orders

Special order requirements can be a way to provide an extra level of service to your customers. Motors & Armatures Inc. encourages our wholesale customers to take advantage of the opportunity to place special orders for airMARS products that are not in this catalog.

Special orders are processed as separate production runs by the factory. A minimum quantity will always be required. In most cases, the minimum will be 25 pieces. Because special orders are non-stock items, once ordered they are non-cancellable. Also, special orders are not returnable.

Quotes normally take 3 to 4 working days to process. Following is check list for various airMARS components.

Direct Drive Wheels

___ Diameter
___ Width
___ Material (aluminum, steel?)
___ Rotation
___ Type of hub & bore
___ Finish (galvanized, paint?)
___ Assembly (housing?)
___ Construction (strip or tablock?)

Small Blower Wheels

___ Diameter
___ Width
___ Bore
___ Material (Aluminum Steel, etc.)
___ Single or Double Inlet?
___ Construction
___ Assembly
___ Back Plate Configuration

Fan Blades

___ Diameter
___ Pitch
___ Number of Wings
___ Material
___ Hub Type (attached, adapter, bushing?)
___ Bore
___ Construction

Important Note:

Because special orders cannot be returned, it is highly recommended that your customer signs off on the check list specifications before the order is entered with the factory.

⚠ WARNING:
Cancer and Reproductive Harm
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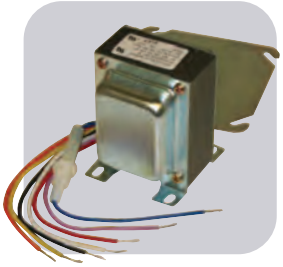
Components



Delivering Confidence

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Electrolytic Capacitors for Motor Starting Applications

Start capacitor case dimensions chart. Capacitor accessories on page C-9.

Features:

- The largest assortment of replacements in the industry!
- Smallest dimensions for general replacements.
- Hermetically sealed black Bakelite case permanently protects the capacitor from oil, dirt, grease or moisture.
- New and improved terminal construction capable of withstanding increased heat. This terminal will generate less heat when applied under severe hot humid environment.
- 50/60 Hz
- UL/ULc

110/125 Dual Voltage AC

MARS NO.	MICROFARAD MIN - MAX.	CASE SIZE
11002	21-25	1
11003	25-30	1
11004	30-36	1
11005	36-43	1
11006	43-56	1
11007	56-72	1
11008	72-88	1
11009	88-108	1
11010	108-130	1
11112	124-156	1
11011	130-156	1
11013	145-175	1
11014	161-193	1
11015	189-227	1
11016	200-240	1
11017	216-259	1
11018	233-292	1
11019	270-324	1
11020	300-360	1
11021	324-388	1
11022	340-408	2
11023	378-440	2
11024	400-480	2
11071	430-516	2
11025	460-552	2
11026	540-648	4
11027	590-708	4
11047	645-774	4
11028	708-850	4
11072	815-970	4
11029	829-995	4
11073	850-1020	4
11030	1000-1200	7
11074	1290-1548	7

MARS suggests applying a bleed resistor (MARS PN 93007) on start capacitors used in conjunction with starting relays

*Capacitors may be put in different case sizes occasionally, but will not be larger than those stated.

165 Volts AC

MARS NO.	MICROFARAD MIN - MAX.	CASE SIZE
11075	72-88	1
11076	88-108	1
11077	108-130	1
11031	124-149	1
11032	145-175	1
11033	161-193	1
11034	189-227	1
11078	216-259	4
11035	233-292	4
11036	270-324	4
11079	340-408	4
11080	378-455	4
11037	400-480	4
11081	540-648	4
11082	710-850	7
11083	810-972	7

220/250 Dual Voltage AC

MARS NO.	MICROFARAD MIN - MAX.	CASE SIZE
11038	21-25	1
11039	25-30	1
11040	30-36	1
11041	36-43	1
11042	43-56	1
11043	56-72	1
11084	59-71	1
11137	64-77	4
11044	72-88	4
11045	88-108	4
11046	108-130	4
11148	124-156	4
11049	145-175	4
11050	161-193	6
11051	189-227	6
11052	216-259	6
11053	233-292	6
11054	270-324	6
11085	280-336	7
11086	320-384	7
11087	340-408	7
11088	378-455	7
11089	400-480	7
11090	430-516	7
11091	630-750	8

330 Volts AC

MARS NO.	MICROFARAD MIN - MAX.	CASE SIZE
11055	21-25	2
11056	25-30	2
11057	30-36	2
11058	36-43	2
11059	43-56	4
11060	56-72	4
11160	64-77	4
11061	72-88	4
11062	88-108	4
11063	108-130	7
11064	130-156	7
11165	124-156	7
11092	135-162	7
11066	145-175	7
11067	161-193	7
11068	189-227	7
11069	216-259	7
11070	270-324	7
11093	300-360	7

Turbo Products

The Turbo Family of Products

Turbo Family of Products

- Truly Universal Capacitors
- Made in the USA
- Filled with a thick non-PCB dielectric fluid to reduce heat
- Rust free all brass terminals
- 5 Year warranty (3 year warranty on 12700)

Turbo 200® & Turbo 200®X with CPT®

- Turbo 200® replaces over 200 single or dual values from 2.5 to 67.5 MFD
- Turbo 200®X replaces any of the higher range single or dual capacitors used in scroll compressors and higher efficiency A/C units, values from 5 to 97.5 MFD
- CPT® acts as a kill switch between the hard-start and compressor in the event of a failed run capacitor, preventing damage and possible compressor failure
- Each Turbo 200® and 200X are individually tested and labeled with exact MFD ratings at completion of manufacturing

Turbo Easy-Start® Hardstart with CPT® Fuse Wire

- Replaces 4 commonly used hard start kits up to 5 tons
- 12600 has a built-in potential relay
- 12700 has an external potential relay
- CPT® Fuse Wire cuts off the motor-start capacitor from AC compressor within 3 seconds of a relay failure, preventing costly damage

Turbo 200® Mini & Mini-Oval

- A permanent replacement run capacitor for fan size values 2.5 MFD to 15 MFD

Turbolytic® 50 & Turbolytic® JR

- Turbolytic® 50 is a motor start capacitor that can replace any of the most popular values up to 324 MFD
- The JR is a more compact version that offers combined values up to 227 MFD

MARS NO.	DESCRIPTION	MICROFARAD	VOLTAGE
12100	Turbo 200® Mini	2.5 MFD - 15 MFD	370V or 440V
12500	Turbo 200® Mini - Oval	2.5 MFD - 15 MFD	370V or 440V
12200	Turbo 200®	2.5 MFD - 67.5 MFD	370V or 440V
12300	Turbo 200®X	5.0 MFD - 97.5 MFD	370V or 440V
11200	Turbolytic® 50	23 MFD - 302 MFD	125V to 330V
11100	Turbolytic® JR	23 MFD - 208 MFD	125V to 330V
12600	Turbo Easy-Start® 5 with CPT® Fuse Wire for protection against relay failure	Up to 1 ton 108 - 130 MFD 1 to 2 tons 189 - 227 MFD 2.5 to 3 tons 233 - 280 MFD 3.5 to 5 tons 270 - 324 MFD	Up to 330V
12700	Turbo Easy-Start® 5 EXT with External Potential Relay and CPT® Fuse Wire for protection against relay failure	Up to 1 ton 108 - 130 MFD 1 to 2 tons 189 - 227 MFD 2.5 to 3 tons 233 - 280 MFD 3.5 to 5 tons 270 - 324 MFD	Up to 330V

12100 Turbo 200® Mini

12500 Turbo 200® Mini - Oval

12200 Turbo 200®

12300 Turbo 200®X

11200 Turbolytic® 50

11100 Turbolytic® JR

12600 Turbo Easy-Start® 5

12700 Turbo Easy-Start® 5 EXT

65746

MARS Capacitor Tester

Features:

- Easy to use
- 9V battery and test leads included
- Low battery indicator

MARS NO.	RANGE	RESOLUTION	ACCURACY	TEST FREQUENCY
65746	200 pF	0, 1pF	± (0.5% rdg + 1 dgt + 0.5 pF)	
	2000 pF 20 nF 200 nF 2 nF	1 pF 10 pF 100 pF 1 nF	± (0.5% rdg +1 dgt)	820Hz
	20 µF	10 nF		82 Hz
	200 µF	-100 nF		8.2 Hz
	2000 µF	1 µF	± (2.0% rdg. + 1dgt)	
	20 mF	10 µF	± (4.0% rdg. + 1dgt)	

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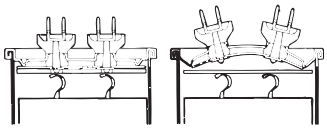
Single Section Run Capacitors

Capacitor accessories on page C-9.

Features:

- MARS offers the widest selection of ratings in the industry
- Non-PCB capacitors
- Physical interrupter makes our capacitors safe
- Perfect for general replacements—smallest dimensions available
- UL and CSA listings available
- 50/60 Hz



PHYSICAL INTERRUPTER

12002

12092

12026

12102

Blue Box™

Single Section 370 Volt Oval

MARS NO.	MICROFARAD	BASE	HEIGHT IN.
12002	2	A	1.500
12003	3	A	1.500
12004	4	A	1.500
12005	5	A	1.500
12006	6	A	1.500
12007	7.5	A	2.375
12008	10	A	2.625
12009	12.5	A	3.000
12010	15	A	3.750
12012	17.5	A	3.750
12014	20	C	2.375
12015	25	C	2.625
12017	30	C	2.625
12018	35	C	3.000
12021	40	C	3.750
12023	45	C	3.750
12025	50	C	3.750
12024	55	C	4.250
12087	60	C	4.750
12011	65	C	4.750
12089	70	C	4.750
12090	80	D	3.750

Single Section 370 Volt Round

MARS NO.	MICROFARAD	BASE	HEIGHT IN.
12092	2	M	2.000
12093	3	M	2.000
12094	4	M	2.000
12095	5	M	2.000
12096	6	M	2.000
12097	7.5	M	2.000
12098	10	M	2.000
12099	12.5	M	2.000
12210	15	M	2.375
12211	16	M	2.375
12212	17.5	M	2.375
12214	20	M	2.625
12215	25	M	3.000
12217	30	M	3.000
12218	35	M	3.750
12221	40	M	3.750
12223	45	N	3.375
12225	50	N	3.750
12226	55	N	3.750
12227	60	N	4.750
12128	65	N	4.750
12229	70	N	4.750
12199	80	N	4.750
12116	100	P	4.750

Single Section 440/370 Volt Oval

MARS NO.	MICROFARAD	BASE	HEIGHT IN.
12026	2	A	1.500
12019	2.5	A	1.500
12027	3	A	2.000
12028	4	A	2.000
12029	5	A	2.375
12030	6	A	2.375
12031	7.5	A	2.625
12032	10	A	3.750
12033	12.5	A	3.750
12034	15	C	2.375
12036	17.5	C	2.375
12037	20	C	2.625
12040	25	C	3.000
12041	30	C	3.750
12043	35	C	3.750
12045	40	C	4.750
12048	45	C	4.750
12049	50	C	4.750
12050	55	C	4.750
12051	60	D	3.750
12052	65	D	3.750
12130	70	D	3.750
12135	75	D	3.750
12140	80	D	4.750

Single Section 440/370 Volt Round

MARS NO.	MICROFARAD	BASE	HEIGHT IN.
12102	2	M	2.000
12103	3	M	2.000
12104	4	M	2.000
12105	5	M	2.000
12106	6	M	2.000
12107	7.5	M	2.000
12232	10	M	2.375
12233	12.5	M	2.375
12234	15	M	2.625
12236	17.5	M	2.750
12237	20	M	3.000
12240	25	M	3.750
12241	30	N	3.375
12243	35	N	3.750
12245	40	N	3.750
12248	45	N	4.750
12251	50	P	3.375
12252	55	P	3.750
12254	60	P	3.750
12357	65	P	3.750
12258	70	P	4.750
12259	80	P	4.750
12068	90	P	4.750

Motor Run Capacitors

Dual Section Motor Run Capacitors

Dual section run capacitors are used primarily to serve two microfarad applications. They can, however, by making various combinations of parallel connections, be used to obtain many other microfarad ratings.

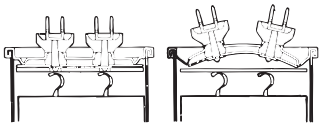
Capacitor accessories on page C-9.

12141

mars Blue Box™

Features:

- MARS offers the widest selections of ratings in the industry
- Non-PCB capacitors
- Physical interrupter makes our capacitors safe
- Perfect for general replacements—smallest dimensions available
- UL and CSA listings available
- 50/60 Hz



PHYSICAL INTERRUPTER

Dual Section 370 Volt Oval

MARS NO.	MICROFARAD	BASE	HEIGHT IN.
12141	15/3	C	2.625
12056	15/4	C	2.625
12057	15/5	C	2.625
12058	15/10	C	3.000
12059	17.5/4	C	2.375
12060	17.5/5	C	2.375
12061	20/3	C	2.625
12062	20/4	C	2.625
12063	20/5	C	2.625
12064	20/10	C	2.625
12164	20/15	C	4.750
12142	25/3	C	2.625
12065	25/4	C	2.625
12066	25/5	C	2.625
12143	25/7.5	C	2.625
12131	25/8	C	3.000
12167	25/10	C	3.000
12133	25/15	C	3.000
12144	30/3	C	3.000
12145	30/4	C	3.000
12069	30/5	C	3.000
12146	30/7.5	C	3.000
12147	30/10	C	3.375
12148	35/3	C	3.000
12071	35/4	C	3.750
12072	35/5	C	3.750
12149	35/7.5	C	3.000
12150	35/10	C	3.750
12151	40/3	C	3.750
12158	40/4	C	3.750
12171	40/5	C	3.750
12152	40/7.5	C	3.750
12134	40/10	C	3.750
12173	45/3	C	3.750
12174	45/5	C	3.750
12153	45/7.5	C	3.750
12136	45/10	C	4.750
12137	45/15	C	4.750
12138	50/5	C	4.750
12154	55/5	C	4.750
12155	55/7.5	C	4.750
12139	60/5	D	4.750
12156	60/7.5	C	4.750
12157	60/10	C	4.750
12159	65/5	D	4.750
12163	80/5	D	4.750
12123	80/7.5	D	4.750

Dual Section 370 Volt Round

MARS NO.	MICROFARAD	BASE	HEIGHT IN.
12121	15/3	N	3.125
12122	15/4	N	3.125
12203	15/5	N	3.125
12204	15/10	N	3.125
12205	17.5/4	N	3.125
12206	17.5/5	N	3.125
12207	20/4	N	3.125
12260	20/5	N	3.125
12016	20/7.5	N	3.125
12208	20/10	N	3.125
12209	20/15	N	3.125
12242	25/3	N	3.125
12175	25/4	N	3.125
12261	25/5	N	3.125
12262	25/7.5	N	3.125
12213	25/10	N	3.125
12244	30/3	N	3.125
12263	30/4	N	3.125
12264	30/5	N	3.125
12224	30/7.5	N	3.125
12228	30/10	N	3.125
12039	30/15	N	3.875
12082	35/3	N	3.875
12231	35/4	N	3.125
12266	35/5	N	3.875
12235	35/7.5	N	3.125
12238	35/10	N	3.875
12074	40/3	N	3.875
12267	40/4	N	3.875
12178	40/5	N	3.875
12268	40/7.5	N	3.875
12246	40/10	N	3.875
12073	45/3	N	3.875
12247	45/4	N	3.875
12269	45/5	P	3.875
12249	45/7.5	N	3.875
12250	45/10	N	3.875
12075	50/3	P	3.125
12191	50/5	N	3.875
12192	50/7.5	P	3.125
12239	50/10	P	3.875
12193	55/5	N	4.75
12194	55/7.5	N	4.75
12067	55/10	N	4.75
12076	60/3	P	3.875
12195	60/5	P	3.875
12196	60/7.5	N	4.75
12265	60/10	P	3.125
12042	65/5	N	4.75
12053	70/5	P	3.875
12054	70/7.5	P	3.875
12055	70/10	P	3.875
12044	75/5	P	3.875
12046	75/7.5	P	3.875
12084	75/10	P	3.875
12197	80/5	P	3.875
12198	80/7.5	P	3.875
12201	80/10	P	3.875
12202	80/12.5	P	4.75
12129	85/5	P	4.75
12230	85/7.5	P	4.75
12222	85/10	P	4.75

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

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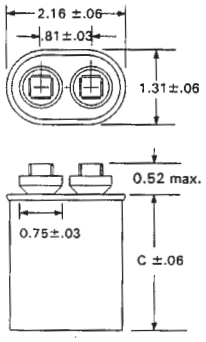
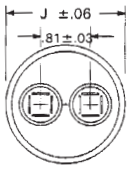
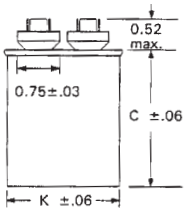
www.marsdelivers.com

Dual Section Motor Run Capacitors







Dual Section 440/370 Volt Oval

MARS NO.	MICROFARAD	BASE	HEIGHT IN.
12360	5/5	C	2.625
12165	10/5	C	3.125
12170	10/10	C	3.125
12270	15/4	C	2.625
12271	15/5	C	2.625
12177	15/10	C	3.750
12180	20/5	C	3.375
12083	20/15	D	3.000
12184	25/5	D	3.000
12182	25/7.5	C	3.750
12183	25/10	C	3.750
12186	25/15	D	3.000
12181	30/4	C	3.750
12187	30/5	D	3.750
12038	30/7.5	C	3.750
12035	30/10	C	3.750
12085	35/3	C	4.750
12179	35/4	C	3.750
12185	35/5	C	4.750
12188	35/7.5	C	3.750
12176	35/8.5	C	3.750
12272	35/10	C	4.750
12080	40/3	C	4.750
12086	40/5	C	4.750
12189	40/7.5	C	4.750
12273	40/10	C	4.750
12190	45/5	D	4.750
12274	45/7.5	C	4.750
12108	50/5	D	4.750
12013	50/7.5	C	4.750
12275	55/5	D	4.750
12276	55/10	D	4.750
12109	60/5	D	4.750
12110	60/7.5	D	4.750
12101	65/10	D	4.750
12297	80/5	D	5.750
12298	80/7.5	D	5.750

Dual Section 440/370 Volt Round

MARS NO.	MICROFARAD	BASE	HEIGHT IN.
12111	10/5	N	3.125
12118	15/5	N	3.125
12356	15/10	N	3.125
12350	17.5/5	N	3.125
12115	20/5	N	3.125
12354	20/7.5	N	3.125
12351	20/10	N	3.875
12112	20/15	N	3.875
12353	25/3	N	3.875
12355	25/4	N	3.875
12278	25/5	N	3.875
12279	25/7.5	N	3.875
12113	25/10	N	3.625
12114	25/15	N	3.875
12126	30/3	N	3.875
12120	30/4	N	3.875
12281	30/5	N	3.875
12282	30/7.5	N	3.875
12352	30/10	N	4.750
12077	35/3	N	3.875
12070	35/4	N	3.875
12283	35/5	N	3.875
12119	35/6	N	4.750
12284	35/7.5	P	3.875
12091	35/10	N	4.750
12078	40/3	P	3.125
12285	40/4	P	3.125
12286	40/5	P	3.125
12220	40/6	N	4.750
12287	40/7.5	P	3.875
12088	40/10	N	4.750
12079	45/3	P	3.875
12219	45/4	N	3.750
12288	45/5	P	3.875
12127	45/6	N	4.750
12289	45/7.5	N	3.875
12172	45/10	P	3.875
12290	50/5	P	3.875
12291	50/7.5	P	3.875
12124	50/10	P	3.875
12253	50/12.5	P	3.875
12292	55/5	P	3.875
12293	55/7.5	P	3.875
12299	55/10	P	3.875
12160	60/3	P	4.750
12294	60/5	P	3.875
12295	60/7.5	P	3.875
12296	60/10	P	3.875
12161	60/12.5	P	4.750
12358	65/5	P	4.750
12359	65/7.5	P	4.750
12162	65/10	P	4.750
12255	70/5	P	4.750
12166	70/7.5	P	4.750
12169	70/10	P	4.750
12168	75/5	P	4.750
12125	75/7.5	P	4.750
12047	75/10	P	4.750
12257	80/5	P	4.875
12216	80/7.5	P	4.750
12117	80/10	P	4.750
12022	85/5	P	4.750
12020	85/7.5	P	4.750
12001	85/10	P	4.750

Capacitor Base Dimensions

Base Dimension Key - Oval

KEY	WIDTH	LENGTH	DESCRIPTION
A	1.31	2.16	oval fan size
C	1.91	2.91	oval
D	1.97	3.66	oval

Base Dimension Key - Round

KEY	WIDTH	MOUNTING STRAP
M	1.75	93031
N	2.00	93032
P	2.50	93033

USA Motor Run Capacitors

MARS USA Capacitors

Features:

- Product of USA
- Tested and approved by every major US motor company and compressor company
- 440/370 Dual Voltage Rated
- Non-PCB capacitors
- Physical interrupter makes our capacitors safe
- Meets EIA-456A Test Standard (simulates 60,000 hours of operation)
- Meets Tecumseh H-115
- OEM Grade
- CSA approved and UL recognized
- 5 year warranty

Single Section 370 Volt Oval

MARS USA NO.	DESCRIPTION	BASE	HEIGHT
14002	2 MFD 370V OVL	A	1.50
14003	3 MFD 370V OVL	A	1.50
14004	4 MFD 370V OVL	A	1.50
14005	5 MFD 370V OVL	A	1.50
14006	6 MFD 370V OVL	A	1.50
14007	7.5 MFD 370V OVL	A	2.38
14008	10 MFD 370V OVL	A	2.63
14009	12.5 MFD 370V OVL	A	3.00
14010	15 MFD 370V OVL	A	3.75
14012	17.5 MFD 370V OVL	A	3.75
14014	20 MFD 370V OVL	C	2.38
14015	25 MFD 370V OVL	C	2.63
14017	30 MFD 370V OVL	C	2.63
14018	35 MFD 370V OVL	C	3.00
14021	40 MFD 370V OVL	C	3.75
14023	45 MFD 370V OVL	C	3.75
14025	50 MFD 370V OVL	C	3.75
14024	55 MFD 370V OVL	C	4.25
14087	60 MFD 370V OVL	C	4.75
14089	70 MFD 370V OVL	C	4.75
14090	80 MFD 370V OVL	D	3.75

Single Section 440/370 Volt Oval

MARS USA NO.	DESCRIPTION	BASE	HEIGHT
14026	2 MFD 440/370V OVL	D	1.50
14027	3 MFD 440/370V OVL	A	2.00
14028	4 MFD 440/370V OVL	A	2.00
14029	5 MFD 440/370V OVL	A	2.38
14030	6 MFD 440/370V OVL	A	2.38
14031	7.5 MFD 440/370V OVL	A	2.63
14032	10 MFD 440/370V OVL	A	3.75
14033	12.5 MFD 440/370 OVL	A	3.75
14034	15 MFD 440/370V OVL	C	2.38
14036	17.5 MFD 440/370V OVL	C	2.38
14037	20 MFD 440/370V OVL	C	2.63
14040	25 MFD 440/370V OVL	C	3.00
14041	30 MFD 440/370V OVL	C	3.38
14043	35 MFD 440/370V OVL	C	3.75
14045	40 MFD 440/370V OVL	C	4.75
14048	45 MFD 440/370V OVL	C	4.75
14049	50 MFD 440/370V OVL	C	4.75
14050	55 MFD 440/370V OVL	C	4.75
14051	60 MFD 440/370V OVL	D	3.75
14130	70MFD 440/370V OVL	D	3.75
14140	80 MFD 440/370V OVL	D	4.75

Single Section 370 Volt Round

MARS USA NO.	DESCRIPTION	BASE	HEIGHT
14095	5 MFD 370V RND	M	2.00
14098	10 MFD 370V RND	M	2.00
14099	12.5 MFD 370V RND	M	2.00
14210	15 MFD 370V RND	M	2.38
14212	17.5 MFD 370V RND	M	2.38
14214	20 MFD 370V RND	M	2.65
14215	25 MFD 370V RND	M	3.00
14217	30 MFD 370V RND	M	3.00
14218	35 MFD 370V RND	M	3.75
14821	40 MFD 370V RND	M	3.75
14823	45 MFD 370V RND	N	3.38
14225	50 MFD 370V RND	N	3.75
14226	55 MFD 370V RND	N	3.75
14227	60 MFD 370V RND	N	4.75
14128	65 MFD 370V RND	N	4.75
14229	70 MFD 370V RND	N	4.75
14199	80 MFD 370V RND	N	4.75
14116	100 MFD 370V RND	P	4.75

Single Section 440/370 Volt Round

MARS USA NO.	DESCRIPTION	BASE	HEIGHT
14102	2 MFD 440/370V RND	M	2.00
14103	3 MFD 440/370V RND	M	2.00
14104	4 MFD 440/370V RND	M	2.00
14105	5 MFD 440/370V RND	M	2.00
14106	6 MFD 440/370V RND	M	2.00
14107	7.5 MFD 440/370V RND	M	2.00
14232	10 MFD 440/370V RND	M	2.38
14833	12.5 MFD 440/370V RND	M	2.38
14234	15 MFD 440/370V RND	M	2.63
14237	20 MFD 440/370V RND	M	3.00
14240	25 MFD 440/370V RND	M	3.75
14241	30 MFD 440/370V RND	N	3.38
14243	35 MFD 440/370V RND	N	3.75
14245	40 MFD 440/370V RND	N	3.75
14248	45 MFD 440/370V RND	N	4.75
14251	50 MFD 440/370V RND	P	3.38
14252	55 MFD 440/370V RND	P	3.75
14254	60 MFD 440/370V RND	P	3.75
14256	65 MFD 440/370V RND	P	3.75
14258	70 MFD 440/370V RND	P	4.75
14259	80 MFD 440/370V RND	P	4.75

Dual Section 370 Volt Oval

MARS USA NO.	DESCRIPTION	BASE	HEIGHT
14063	20/5 MFD 370V OVL	C	2.63
14066	25/5 MFD 370V OVL	C	2.63
14069	30/5 MFD 370V OVL	C	3.00
14072	35/5 MFD 370V OVL	C	3.75
14171	40/5 MFD 370V OVL	C	3.75
14174	45/5 MFD 370V OVL	C	3.75

Dual Section 440/370 Volt Oval

MARS USA NO.	DESCRIPTION	BASE	HEIGHT
14170	10/10 MFD 440/370V OVL	C	2.63
14184	25/5 MFD 440/370V OVL	C	3.75
14187	30/5 MFD 440/370V OVL	D	3.75
14085	35/3 MFD 440/370V OVL	C	4.75
14185	35/5 MFD 440/370V OVL	C	4.75
14188	35/7.5 MFD 440/370V OVL	C	3.75
14086	40/5 MFD 440/370V OVL	C	4.75
14189	40/7.5MFD 440/370V OVL	C	4.75
14190	45/5 MFD 440/370V OVL	D	4.75
14274	45/7.5 MFD 440/370V OVL	C	4.75
14275	55/5 MFD 440/370V OVL	D	4.75
14297	80/5 MFD 440/370V OVL	D	5.75
14298	80/7.5MFD 440/370V OVL	D	5.75

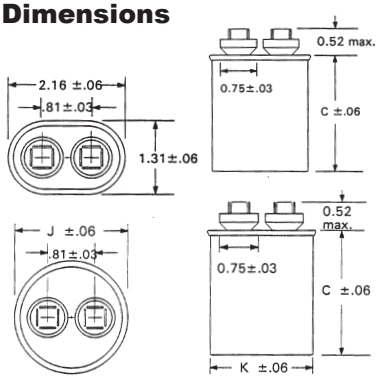
Dual Section 370 Volt Round

MARS USA NO.	DESCRIPTION	BASE	HEIGHT
14260	20/5 MFD 370V RND	N	2.63
14208	20/10 MFD 370V RND	N	3.13
14261	25/5 MFD 370V RND	N	2.63
14213	25/10 MFD 370V RND	N	3.13
14244	30/3 MFD 370 RND	N	3.13
14263	30/4 MFD 370V RND	N	3.13
14082	35/3 MFD 370V RND	N	3.88
14131	35/4 MFD 370V RND	N	3.13
14264	30/5 MFD 370V RND	N	3.13
14266	35/5 MFD 370V RND	N	3.88
14238	35/10 MFD 370V RND	N	3.88
14178	40/5 MFD 370V RND	N	3.88
14268	40/7.5 MFD 370V RND	N	3.88
14246	40/10 MFD 370V RND	N	3.88
14073	45/3 MFD 370V RND	N	3.88
14269	45/5 MFD 370V RND	P	3.88
14249	45/7.5 MFD 370V RND	N	3.88
14250	45/10 MFD 370V RND	N	3.88
14075	50/3 MFD 370V RND	P	3.13
14191	50/5 MFD 370V RND	N	3.88
14192	50/7.5 MFD 370V RND	P	3.13
14239	50/10 MFD 370V RND	P	3.88
14193	55/5MFD 370V RND	N	4.75
14194	55/7.5 MFD 370V RND	N	4.75
14195	60/5 MFD 370V RND	P	3.88
14196	60/7.5 MFD 370V RND	N	4.75
14265	60/10 MFD 370V RND	P	3.88
14042	65/5 MFD 370V RND	N	4.75
14053	70/5 MFD 370V RND	P	3.88
14054	70/7.5 MFD 370V RND	P	3.88
14197	80/5 MFD 370V RND	P	3.88
14198	80/7.5 MFD 370V RND	P	3.88
14201	80/10 MFD 370V RND	P	3.88

Dual Section 440/370 Volt Round

MARS USA NO.	DESCRIPTION	BASE	HEIGHT
14115	20/5 MFD 440/370V RND	N	3.13
14353	25/3 MFD 440/370V RND	N	3.88
14278	25/5 MFD 440/370V RND	N	3.88
14279	25/7.5 MFD 440/370V RND	N	3.88
14113	25/10 MFD 440/370V RND	N	3.88
14126	30/3 MFD 440/370V RND	N	3.88
14281	30/5 MFD 440/370V RND	N	3.88
14282	30/7.5 MFD 440/370V RND	N	3.88
14352	30/10 MFD 440/370V RND	N	4.75
14077	35/3 MFD 440/370V RND	N	3.88
14070	35/4 MFD 440/370V RND	N	3.88
14283	35/5 MFD 440/370V RND	N	3.88
14284	35/7.5 MFD 440/370V RND	P	3.88
14091	35/10 MFD 440/370V RND	N	4.75
14078	40/3 MFD 440/370V RND	P	3.13
14286	40/5 MFD 440/370V RND	P	3.13
14287	40/7.5 MFD 440/370V RND	P	3.88
14088	40/10 MFD 440/370V RND	N	4.75
14079	45/3 MFD 440/370V RND	P	3.88
14288	45/5 MFD 440/370V RND	P	3.88
14289	45/7.5 MFD 440/370V RND	N	3.88
14172	45/10 MFD 440/370V RND	P	3.88
14290	50/5 MFD 440/370V RND	P	3.88
14291	50/7.5 MFD 440/370V RND	P	3.88
14124	50/10 MFD 440/370V RND	P	3.88
14299	55/10 MFD 440/370V RND	P	3.88
14292	55/5 MFD 440/370V RND	P	3.88
14293	55/7.5 MFD 440/370V RND	P	3.88
14294	60/5 MFD 440/370V RND	P	3.88
14295	60/7.5 MFD 440/370V RND	P	3.88
14296	60/10 MFD 440/370V RND	P	3.88
14358	65/5 MFD 440/370V RND	P	3.875
14359	65/7.5 MFD 440/370V RND	P	3.875
14162	65/10 MFD 440/370V RND	P	4.75
14255	70/5 MFD 440/370V RND	P	4.75
14166	70/7.5 MFD 440/370V RND	P	4.75
14169	70/10 MFD 440/370V RND	P	4.75
14168	75/5 MFD 440/370V RND	P	4.75
14125	75/7.5 MFD 440/370V RND	P	4.75
14047	75/10 MFD 440/370V RND	P	4.75
14257	80/5 MFD 440/370V RND	P	4.88
14216	80/7.5 MFD 440/370V RND	P	4.75
14117	80/10 MFD 440/370V RND	P	4.75

Capacitor Base Dimensions



Base Dimension on page C-7

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Motor Run Capacitors

MARS Mini-Split Run Capacitors

MARS mini-split motor run capacitors are epoxy/resin sealed and widely used as the start-up and/or run capacitor for your motor. They feature very small dissipation factor and inherent temperature rise, high insulation resistance, and stable capacitance.

Specifications:

- Ambient temperature: 70° C
- Rated voltage: 450 VA
- Capacitance tolerance: ±5
- 50/60 Hz
- Standard: IEC252-2001

MARS NO.	DESCRIPTION	DIMENSIONS H D W
12380	1 MFD X 450V	1-1/2 X 1/2 X 1
12381	1.5 MFD X 450V	1-1/2 X 1/2 X 1
12382	2 MFD X 450V	1-1/2 X 1/2 X 1
12383	2.5 MFD X 450V	1-1/2 X 3/4 X 1-1/4
12384	3 MFD X 450V	1-1/2 X 3/4 X 1-1/4
12385	3.5 MFD X 450V	1-7/8 X 3/4 X 1-3/8
12386	4 MFD X 450V	1-7/8 X 3/4 X 1-3/8
12388	5 MFD X 450V	1-7/8 X 7/8 X 1-3/8
12390	6 MFD X 450V	1-7/8 X 1 X 1-1/2

Accessories For Relays & Capacitors

QC-6 Kit

93001	For conversion of screw-type connections on relays	

Resistor for Start Capacitors

93007	2 watt (15,000 ohm) Resistors, 10/Pk	

QC-13 for Start Capacitors

93106	10 pc 2 watt (15,000 ohm) resistors with .25-in female spade connectors, 10/Pk	

Snap-on Mounting Brackets for Motor Start Capacitors

93026 93027 93028	2.75 in 3.38 in 4.38 in Sold in 10 pack	

Start Capacitor Case Dimensions*

CASE SIZE	DIAMETER	LENGTH
1	1.44	2.75
2	1.44	3.38
4	1.81	3.38
5	1.81	4.38
6	2.06	3.38
7	2.06	4.38
8	2.56	4.38

**Capacitors may be put in different case sizes ocassionally, but will not be larger than those stated.*

Protector (boots) for Motor Run Capacitors

93011	1 Hole Boot, 25/Pk	
93012	2 Hole Boot, 25/Pk	

Wrap-Around Brackets for Motor Run Capacitors

93014	Oval 1.94 x 2.78 for base A, 10/Pk	
93015	Oval 1.97 x 2.94 for base C, 10/Pk	
93116	Oval 2.25 x 3.66 for base D, 10/Pk	

Mounting Brackets for Round Capacitors

93031 93032 93033	For 1.63 in and 1.75 in diam For 2.0 in diam For 2.50 in diam Sold in 5 pack	

Bakelite End Caps for Motor Start Capacitors

93018 93019 93020 93021	BEC-1 1.44 in BEC-2 1.81 in BEC-3 2.06 in BEC-4 2.56 in Sold in 10 pack	
93023 93024 93025	For mounting OFF MOTOR. Leads on top side. TEC-2 1.81 in TEC-3 2.06 in TEC-4 2.56 in Sold in 10 pack	

Motor Run Capacitors

Single Section Run Capacitors

370 VOLT

MFD	OVAL MARS NO.	ROUND MARS NO.	OVAL JARD NO.	ROUND JARD NO.
2	12002	12092	12902	12992
3	12003	12093	12903	12993
4	12004	12094	12904	12994
5	12005	12095	12905	12995
6	12006	12096	12906	12996
7.5	12007	12097	12907	12997
10	12008	12098	12908	12998
12.5	12009	12099	12909	12999
15	12010	12210	12910	12710
16		12211		12911
17.5	12012	12212	12912	12712
20	12014	12214	12914	12714
25	12015	12215	12915	12715
30	12017	12217	12917	12717
35	12018	12218	12918	12718
40	12021	12221	12921	12721
45	12023	12223	12923	12723
50	12025	12225	12925	12725
55	12024	12226	12924	12726
60	12087	12227	12987	12727
65	12011	12128	12988	12828
70	12089	12229	12989	12729
80	12090	12199	12990	12899
100		12116		12916

440/370 VOLT

MFD	OVAL MARS NO.	ROUND MARS NO.	OVAL JARD NO.	ROUND JARD NO.
2	12026	12102	12926	12802
2.5	12019		12919	
3	12027	12103	12927	12803
4	12028	12104	12928	12804
5	12029	12105	12929	12805
6	12030	12106	12930	12806
7.5	12031	12107	12931	12807
10	12032	12232	12932	12732
12.5	12033	12233	12933	12733
15	12034	12234	12934	12734
17.5	12036	12236	12936	12736
20	12037	12237	12937	12737
25	12040	12240	12940	12740
30	12041	12241	12941	12741
35	12043	12243	12943	12743
40	12045	12245	12945	12745
45	12048	12248	12948	12748
50	12049	12251	12949	12751
55	12050	12252	12950	12752
60	12051	12254	12951	12754
65	12052	12357	12952	12657
70	12130	12258	12830	12758
75	12135		12831	
80	12140	12259	12840	12759
90		12068		12868

Dual Section Run Run Capacitors

370 VOLT

MFD	OVAL MARS NO.	ROUND MARS NO.	OVAL JARD NO.	ROUND JARD NO.
15/3	12141	12121	12841	12701
15/4	12056	12122	12956	12702
15/5	12057	12203	12957	12703
15/10	12058	12204	12958	12704
17.5/4	12059	12205	12959	12705
17.5/5	12060	12206	12960	12706
20/3	12061		12961	
20/4	12062	12207	12962	12707
20/5	12063	12260	12963	12760
20/7.5		12016		12716
20/10	12064	12208	12864	12708
20/15	12164	12209	12964	12709
25/3	12142	12242	12842	12711
25/4	12065	12175	12965	12875
25/5	12066	12261	12966	12761
25/7.5	12143	12262	12843	12762
25/8	12131		12832	
25/10	12167	12213	12867	12713
25/15	12133		12833	
30/3	12144	12244	12844	12720
30/4	12145	12263	12845	12763
30/5	12069	12264	12969	12764
30/7.5	12146	12224	12846	12724
30/10	12147	12228	12847	12728
30/15		12039		12939
35/3	12148	12082	12848	12730
35/4	12071	12231	12971	12731
35/5	12072	12266	12972	12766
35/7.5	12149	12235	12849	12735
35/10	12150	12238	12850	12738
40/3	12151	12074	12851	12739
40/4	12158	12267	12858	12767
40/5	12171	12178	12871	12878
40/7.5	12152	12268	12852	12768
40/10	12134	12246	12834	12746
45/3	12173	12073		12747
45/4		12247		12947
45/5	12174	12269	12874	12769
45/7.5	12153	12249	12853	12749
45/10	12136	12250	12836	12750
45/15	12137		12837	
50/3		12075		12753
50/5	12138	12191	12838	12755
50/7.5		12192		12825
50/10		12239		12757
55/5	12154	12193	12854	12893
55/7.5	12155	12194	12855	12894
55/10		12067		12967
60/3		12076		12976
60/5	12139	12195	12839	12895
60/7.5	12156	12196	12856	12896
60/10	12157	12265	12857	12865
65/5	12159	12042	12859	12742
70/5		12053		12953
70/7.5		12054		12954
70/10		12055		12955
75/5		12044		12744
75/7.5		12046		12946
75/10		12084		12984
80/5	12163	12197	12863	12897
80/7.5	12123	12198	12817	12819
80/10		12201		12824
80/12.5		12202		12722
85/5		12129		12829
85/7.5		12230		12756
85/10		12222		12922

Dual Section Run Run Capacitors

440/370 VOLT

MFD	OVAL MARS NO.	ROUND MARS NO.	OVAL JARD NO.	ROUND JARD NO.
10/5	12165	12111	12765	12811
15/4	12270		12770	
15/5	12271	12118	12771	12818
15/10	12177	12356	12777	12656
17.5/5		12350		12650
20/5	12180	12115	12880	12780
20/7.5		12354		12654
20/10		12351		12651
20/15	12083	12112	12983	12812
25/3		12353		12653
25/4		12355		12655
25/5	12184	12278	12884	12778
25/7.5	12182	12279	12882	12779
25/10	12183	12113	12883	12813
25/15	12186	12114	12886	12814
30/3		12126		12826
30/4	12181	12120	12881	12820
30/5	12187	12281	12887	12781
30/7.5	12038	12282	12982	12782
30/10	12035	12352	12835	12652
35/3	12085	12077	12985	12977
35/4	12179	12070	12879	12870
35/5	12185	12283	12885	12783
35/6		12119		
35/7.5	12188	12284	12888	12784
35/8.5	12176		12876	
35/10	12272	12091	12772	12797
40/3	12080	12078	12877	12978
40/4		12285		12785
40/5	12086	12286	12986	12786
40/6		12220		12920
40/7.5	12189	12287	12889	12787
40/10	12273	12088	12773	12798
45/3		12079		12979
45/4		12219		12891
45/5	12190	12288	12890	12788
45/6		12127		12827
45/7.5	12274	12289	12774	12789
45/10		12172		12872
50/5	12108	12290	12808	12790
50/7.5	12013	12291	12913	12791
50/10		12124		12892
50/12.5		12253		12719
55/5	12275	12292	12775	12792
55/7.5		12293		12793
55/10	12276	12299	12822	12799
60/3		12160		12860
60/5	12109	12294	12809	12794
60/7.5	12110	12295	12776	12795
60/10		12296		12796
60/12.5		12161		12861
65/5		12358		12642
65/7.5		12359		12659
65/10	12101	12162	12810	12862
70/5		12255		12823
70/7.5		12166		12866
70/10		12169		12869
75/5		12168		12968
75/7.5		12125		12901
75/10		12047		12935
80/5	12297	12257	12815	12801
80/7.5	12298	12216	12898	12816
80/10		12117		12821
85/5		12022		12938
85/7.5		12020		12942
85/10		12001		12944

⚠ WARNING:
Cancer and Reproductive Harm
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MARS 780 Definite Purpose Contactors

MARS 780 - 1 pole with shunt contactors are designed for demanding applications. The enclosed body design provides quiet operation and improved durability by reducing the intrusion of dust and dirt. Silver-cadmium oxide contacts provide increased contact life when switching inductive loads.

Features:

- Enclosed body and coil – standard cover
- Push to test button
- Quad quick connects
- Box lugs - large window arch design
- Screw terminals and or box lugs available on 30 amp
- Coils - class F insulation
- UL File E96705

1 Pole with Shunt 30 - 40 Amps

MARS NO.	FURNAS NO.	FLA	LOCKED ROTOR AMPS 240V	LOCKED ROTOR AMPS 277V	NON INDUCTIVE AMPS	COIL VOLTS	TERMINATION
61320	45EG10AJA, 45CG10AJA, 45DG10AJA	30	180	180	40	24	Screw Type
61321	45EG10AFA, 45CG10AFA, 45DG10AFA					120	
61322	45EG10AGA, 45CG10AGA, 45DG10AGA					208-240	
61323	45EG10ALA, 45CG10ALA, 45DG10ALA					277	
61720	45EG10AJAL	30	180	180	40	24	Box Lug
61721	45EG10AFAL					120	
61722	45EG10AGAL					208-240	
61723	45EG10ALAL					277	
61724	45EG10AHAL					480	
61730	45GG10AJAL, 45FG10AJA, 45GG10AJA	40	240	240	50	24	Box Lug
61731	45GG10AFAL, 45FG10AFA, 45GG10AFA					120	
61732	45GG10AGAL, 45FG10AGA, 45GG10AGA					208-240	
61733	45GG10ALAL, 45FG10ALA, 45GG10ALA					277	
61734	45GG10AHAL, 45FG10AHA, 45GG10AHA					480	

MARS 780 Definite Purpose Contactors

MARS 780 - 2 pole contactors are designed for demanding applications. The enclosed body design provides quiet operation and improved durability by reducing the intrusion of dust and dirt. Silver-cadmium oxide contacts provide increased contact life when switching inductive loads.

Features:

- Enclosed body and coil – standard cover
- Push to test button
- Quad quick connects
- Box lugs - large window arch design
- Screw terminals and or box lugs available on 30 amp
- Coils - class F insulation
- UL File E96705

2 Pole 30 - 40 Amps

MARS NO.	FURNAS NO.	FLA	LOCKED ROTOR AMPS 240V	LOCKED ROTOR AMPS 480V	LOCKED ROTOR AMPS 600V	NON INDUCTIVE AMPS	COIL VOLTS	TERMINATION
61345	45EG20AJ, 45CG20AJ, 45DG20AJ	30	180	150	120	40	24	Screw Type
61346	45EG20AF, 45CG20AF, 45DG20AF						120	
61347	45EG20AG, 45CG20AG, 45DG20AG						208-240	
61348	45EG20AL, 45CG20AL, 45DG20AL						277	
61349	45EG20AH, 45CG20AH, 45DG20AH						480	
61745	45EG20AJL	30	180	150	120	40	24	Box Lug
61746	45EG20AFL						120	
61747	45EG20AGL						208-240	
61748	45EG20ALL						277	
61749	45EG20AHL						480	
61755	45GG20AJL, 45FG20AJ, 45GG20AJ	40	240	200	160	50	24	Box Lug
61756	45GG20AFL, 45FG20AF, 45GG20AF						120	
61757	45GG20AGL, 45FG20AG, 45GG20AG						208-240	
61758	45GG20ALL, 45FG20AL, 45GG20AL						277	
61759	45GG20AHL, 45FG20AH, 45GG20AH						480	

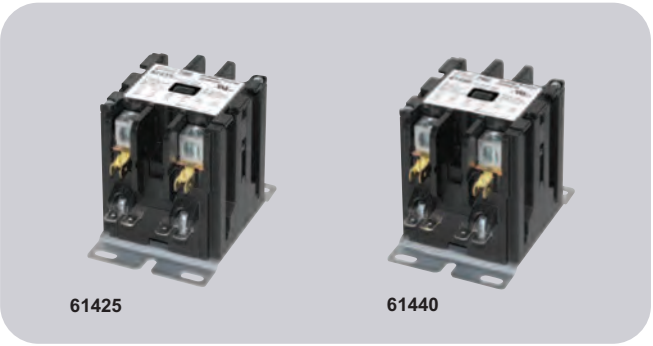
MARS 780 Definite Purpose Contactors

MARS 780 Definite Purpose Contactors

MARS 780 - 2 pole “Large Body” contactors feature a 2 pole configuration in a 3 pole body for increased durability in demanding applications.

Features:

- Large arch window box lugs
- Recessed push to test button
- Accepts MARS 780 and Furnas auxiliary switches
- Use standard MARS 780 replacement coils
- Dual QC coil terminals plus screw terminal for easy termination and jumper arrangements
- Coils - class F insulation
- UL File E96705



61425 61440

2 Pole - Large Body 30 - 40 Amp

MARS NO.	FURNAS NO.	FLA	LOCKED ROTOR AMPS			NON INDUCTIVE AMPS	COIL VOLTS	HORSEPOWER		TERMINATION
			240V	480V	600V			1 PH 240V	3 PH 240V	
61425	42BF15AJ, 42AF15AJ	30	180	150	120	40	24	3 HP	7.5 HP	Box Lug
61426	42BF15AF, 42AF15AF						120			
61427	42BF15AG, 42AF15AG						208-240			
61428	42BF15AL, 42AF15AL						277			
61440	42CF15AJ	40	240	200	160	50	24	5 HP	10 HP	Box Lug
61441	42CF15AF						120			
61442	42CF15AG						208-240			
61443	42CF15AL						277			

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MARS 780 - 3 Pole Contactors

MARS 780 - 3 pole contactors are designed for demanding applications. The enclosed body design provides quiet operation and improved durability by reducing the intrusion of dust and dirt. Side attachment rails for auxiliary switches (30-60 amp contactors) allow attachment of MARS 780 or Furnas auxiliary switches. Silver-cadmium oxide contacts provide increased contact life when switching inductive loads.

Features:

- Large arch window box lugs
- SEMS screws or box lugs available on 30 amp contactors
- Recessed push to test button (not on 75 and 90 amp contactors)
- Enclosed body design
- Accepts MARS 780 and Furnas auxiliary switches
- Use standard MARS 780 replacement coils
- Dual QC coil terminals plus screw terminal for easy termination and jumper arrangements
- Coils - class F insulation • 600 volt rating • Foot print compatible
- UL File E96705

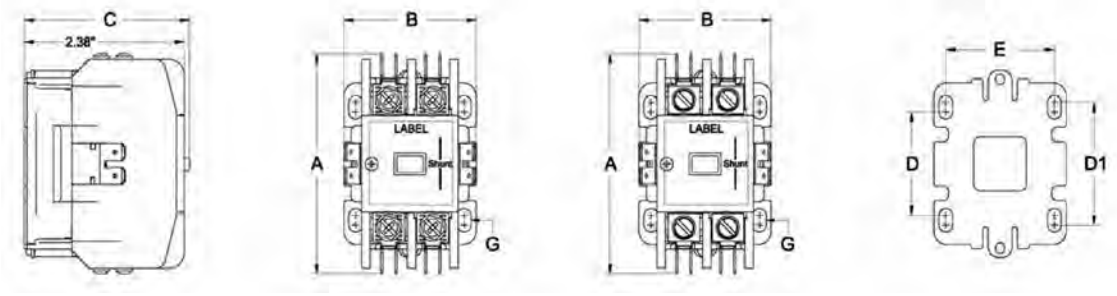
3 Pole 30 - 90 Amp

* For 25 Amp Contactors - Use 30 Amp in Place of 25Amp

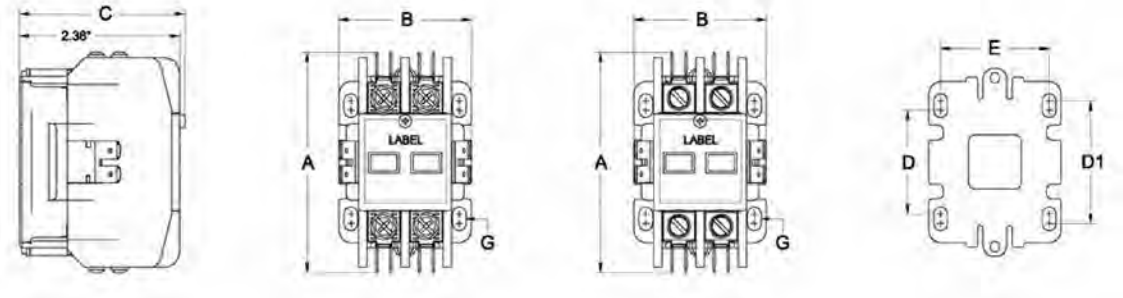
MARS NO.	FURNAS NO.	FLA	LOCKED ROTOR AMPS			NON INDUCTIVE AMPS	COIL VOLTS	HORSEPOWER				TERMINATION
			240V	480V	600V			1 PH 240V	3 PH 240V	3 PH 480V	3 PH 600V	
61430*	42BF35AJ	30	180	150	120	40	24	3 HP	7.5 HP	10 HP	15 HP	Screw Type
61431*	42BF35AF						120					
61432*	42BF35AG						208-240					
61433*	42BF35AL						277					
61434*	42BF35AH						480					
61750	-	30	180	150	120	40	24	3 HP	7.5 HP	10 HP	15 HP	Box Lug
61751	-						120					
61752	-						208-240					
61753	-						277					
61754	-						480					
61445	42CF35AJ	40	240	200	160	50	24	5 HP	10 HP	15 HP	20 HP	Box Lug
61446	42CF35AF						120					
61447	42CF35AG						208-240					
61448	42CF35AL						277					
61449	42CF35AH						480					
61460	42DF35AJ	50	300	250	200	63	24	5 HP	15 HP	20 HP	25 HP	Box Lug
61461	42DF35AF						120					
61462	42DF35AG						208-240					
61463	42DF35AL						277					
61464	42DF35AH						480					
61470	42EF35AJ	60	360	300	240	75	24	7.5 HP	20 HP	25 HP	30 HP	Box Lug
61471	42EF35AF						120					
61472	42EF35AG						208-240					
61473	42EF35AL						277					
61474	42EF35AH						480					
61480	42FE35AJ106	75	450	375	300	94	24	15 HP	25 HP	40 HP	40 HP	Box Lug
61481	42FE35AF106						120					
61482	42FE35AG106						208-240					
61483	42FE35AL106						277					
61484	42FE35AH106						480					
61490	42GE35AJ106	90	540	450	360	120	24	15 HP	30 HP	50 HP	50 HP	Box Lug
61491	42GE35AF106						120					
61492	42GE35AG106						208-240					
61493	42GE35AL106						277					
61494	42GE35AH106						480					

MARS 780 Definite Purpose Contactors

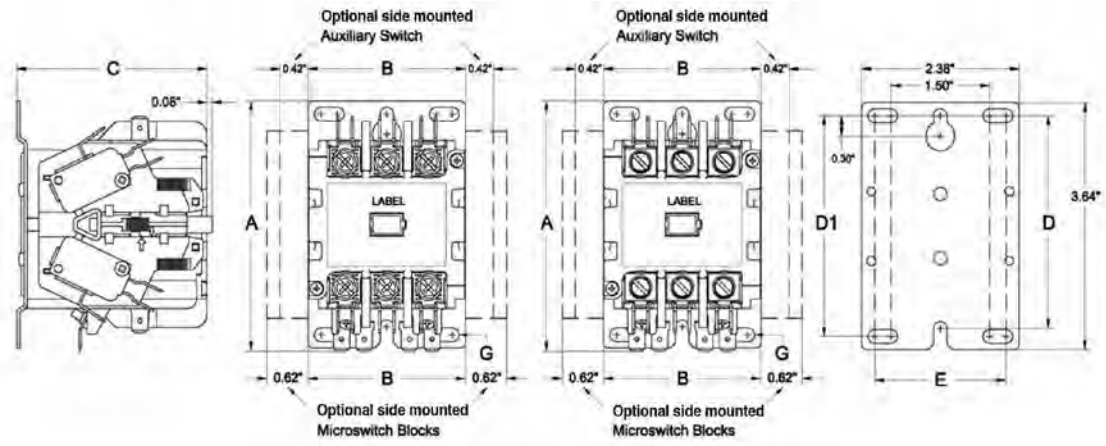
30-40A 1 Pole with Shunt



30-40A 2 Pole



30-40A 2* Pole & 3 Pole

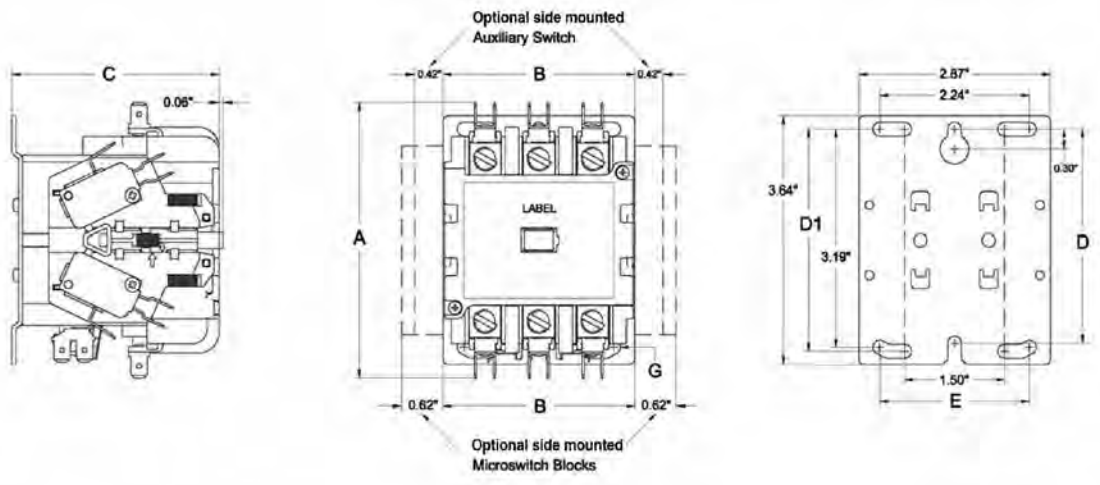


Note - 2* Pole is a 3 pole body with center contacts removed.

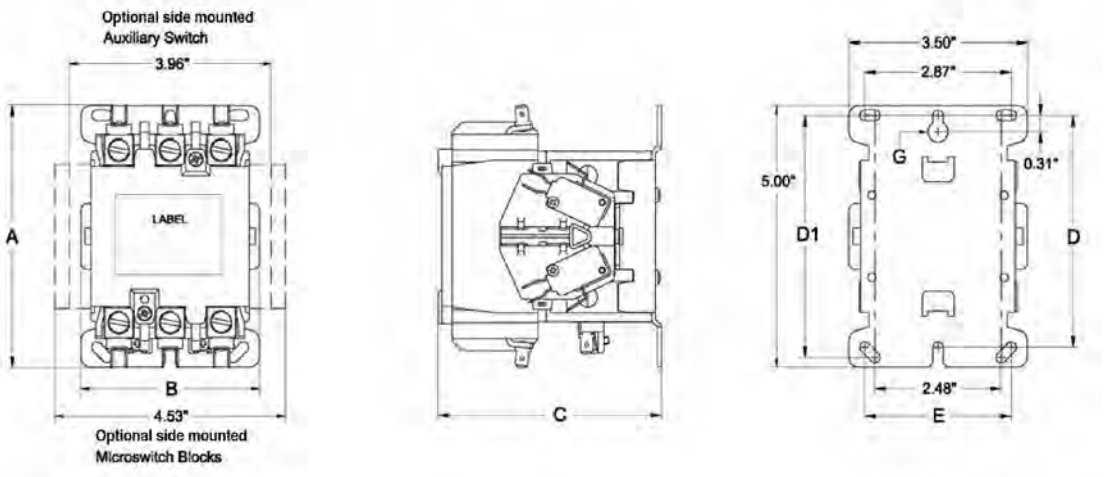
MARS NO.	FLA	POLES	A	B	C	D	D1	E	MTG SCREW G	MAX WIRE SIZE
61320-61323	30	1	3.19	1.97	2.46	1.5	1.77	1.61	10	8
61720-61724 61730-61734	30-40	1	3.19	1.97	2.46	1.5	1.77	1.61	10	4
61345-61349	30	2	3.19	1.97	2.46	1.5	1.77	1.61	10	8
61745-61749 61755-61759	30-40	2	3.19	1.97	2.46	1.5	1.77	1.61	10	4
61430-61434	30	3	3.69	2.38	2.87	3.13	3.25	1.98	10	8
61750-61754 61445-61449	30-40	3	3.69	2.38	2.87	3.13	3.25	1.98	10	4
61425-61428 61440-61443	30-40	2(at 3P)*	3.69	2.38	2.87	3.13	3.25	1.98	10	4

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

50-60A 3 Pole



75-90A 3 Pole



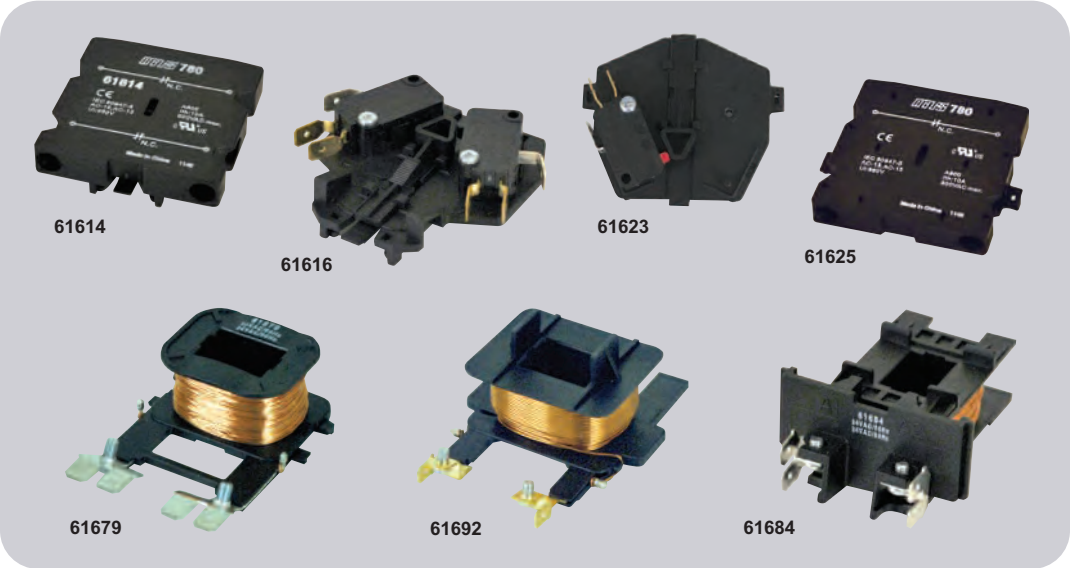
MARS NO.	FLA	POLES	A	B	C	D	D1	E	MTG SCREW G	MAX WIRE SIZE
61460-61464 61470-61474	50-60	3	4.04	2.87	3.11	3.13	3.25	2.24	10	2
61480-61484 61490-61494	75-90	3	5.02	3.5	4.39	4.43	4.63	2.87	10	1/10

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

MARS 780 Definite Purpose Contactors

Renewal Parts and Accessories

- Snap on side mounted auxiliary switches
- Replacement coils



Auxiliary Switches

MARS NO.	FURNAS NO.	DESCRIPTION	CONTACTOR F.L.A.	USED ON
61610	49ACRO	1 NO	30 - 60	61320-61324 61720-61724 61730-61734 61345-61349 61745-61749 61755-61759 61430-61434 61750-61754 61445-61449 61425-61428 61440-61443 61460-61464 61470-61474
61611	49ACRC	1 NC		
61612	49ACR6	1 NO- 1 NC		
61613	49ACR7	2 NO		
61614	49ACR8	2 NC		
61615	49D36098001	SPDT		
61616	49D36098003	DPDT		
61623	-	SPDT	75-90	61480-61484 61490-61494
61624	-	1 NO		
61625	-	1 NC		

MARS 780 Contactor Coil Characteristics

Contactor Series	Inrush VA	Sealed VA	Sealed Watts
1 Pole with shunt 30 to 40 amp	40	7.5	2.5 - 3.5
2 Pole - Small Body 30- 40 Amp	45	8	2.5 - 4.0
2 Pole Large Body 30- 40 Amp	90	16	3.5 - 5.0
3 Pole 30 - 40 Amp	90	16	3.5 - 5.0
3 Pole 50 - 60 Amp	145	20	5.0- 7.0
3 Pole 75 - 90 Amp	235	32	10.0 - 12.0

MARS 780 Replacement Coils

MARS NO.	FURNAS NO.	CONTACTOR SIZE	COIL VOLTAGE
61679	-	3 Pole 30-40 Amp	24V
61680	-		120V
61681	-		208-240V
61682	-		277V
61683	-		480V
61684	-	3 Pole 50-60 Amp	24V
61685	-		120V
61687	-		208-240V
61690	-		277V
61691	-		480V
61692	-	3 Pole 75-90 Amp	24V
61693	-		120V
61694	-		208-240V
61695	-		277V
61696	-		480V

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Furnas NEMA Contactors & Starters

Application:

NEMA heavy duty contactors and starters are designed for across the line starting of 3 phase motors. Typical applications include cooling towers, refrigeration equipment, and commercial HVAC. NEMA contactors provide the switching (on/off) function. NEMA starters consist of a NEMA contactor with the addition of motor protection via a solid state overload relay which includes phase loss protection.

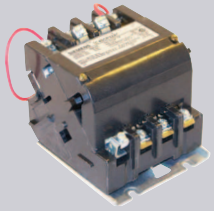
Standard NEMA Contactor Features:

- Rugged industrial design epoxy encapsulated coil seals out moisture, promotes heat transfer, and resists electrical, mechanical, and thermal stresses. The 45 degree wedge action contacts reduce tracking and provide faster arc quenching. The resulting self-cleaning and reduced contact bounce mean cooler operation and longer life for the large silver cadmium oxide contacts
- Dual Voltage Coils
  120/240 VAC is standard
  24 VAC and 240/480 VAC are available as accessories
- Easy coil access. Top mounted coil requires no tools to change

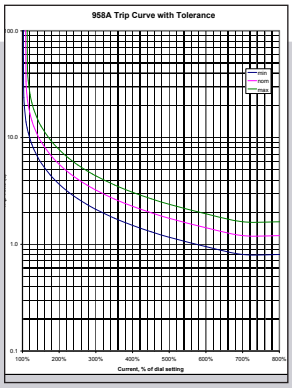
Standard NEMA Starter Features:

- NEMA Contactor
- True phase loss protection
  Trips within 3 seconds and is self protected from short circuits
- High accuracy +/- 2% repeat trip accuracy
- Self powered requires no hard wiring or separate power source
- Heaterless construction minimizes energy costs. Does not require the use of complicated heater charts. Simply set the dial on the overload relay to the motor F.L.A.
- Overload trip class 20

61770



61811



NEMA Starters

MARS NO.	SEIMENS NO.	NEMA SIZE	AMP RATING	HORSEPOWER 200V	HORSEPOWER 230V	HORSEPOWER 460V	OVERLOAD RANGE	COIL VOLTAGE	ENCL.
61770	14CUC32BA	0	18	2	2	5	2.5-10A	120/240	NEMA 1
61771	14CUD32BA	0	18	3	3	-	9-18A	120/240	NEMA 1
61772	14DUC32BA	1	27	2	2	5	2.5-10A	120/240	NEMA 1
61774	14DUD32BA	1	27	3	3	10	9-18A	120/240	NEMA 1
61775	14DUE32AA	1	27	7-1/2	7-1/2	-	13-27A	120/240	Not Included
61776	14DUE32BA	1	27	7-1/2	7-1/2	-	13-27A	120/240	NEMA 1
61777	14ESG32BA	1-3/4	27	10	10	15	10-40A	120/240	NEMA 1
61779	14FUF32AA	2	45	-	-	15	13-52 A	120/240	Not Included
61780	14FUF32BA	2	45	10	15	25	22-45A	120/240	NEMA 1
61782	14HUG32BA	3	90	25	30	50	45-90A	120/240	NEMA 1
61783	14HUG32AA	3	90	25	30	50	45-90A	120/240	Not Included

NEMA Contactors

MARS NO.	SEIMENS NO.	NEMA SIZE	AMP RATING	HORSEPOWER 200V	HORSEPOWER 230V	HORSEPOWER 460V	COIL VOLTAGE	ENCL.
61811	40DP32AA	1	27	7-1/2	7-1/2	10	120/240	Not Included
61813	40FP32AA	2	45	10	15	25	120/240	Not Included

Parts & Accessories for Starters & Contactors

MARS NO.	SEIMENS NO.	DESCRIPTION	NEMA SIZE
61652	75D73070J	Coil 24VAC	0-2.5
61650	75D73070A	Coil 120/240V	0-2.5
61653	75D73070C	Coil 240/480V	0-2.5
61654	75D73070D	Coil 208V	0-2.5
61648	75D73251A	Replacement Coil 120/240V	3-3.5
61656	75CF14	Replacement Contact Kits*	0
61657	75DF14	Replacement Contact Kits*	1
61658	75FP14	Replacement Contact Kits*	2
61659	49AB10	N.O. Auxiliary Contact	0-3
61660	49AB01	N.C. Auxiliary Contact	0-3

* Replacement contacts are sold in kits that will re-build 1 power pole. For example: Use (3) 75CF14 contact kits to re-build a 3 pole device.

GE Definite Purpose Contactors

Model 453 Definite Purpose Contactors

The compact models feature universal mount bases, taped coils, and combination phillips/ slot head screws. The GE compact design features “no burn” coil design. This self-protecting coil meets the Trane specification. 453 GE compact design contactor meets ARI 780. Some other manufacturer's economy model compact contactors do not meet this rigorous spec.

13101

Features:
- Compact overall size
- Combo phillips/slothead screws/hexhead on 30 amp
- Universal mount base

Specifications:

CR453C Compact, 30A, 40A, 1-Pole Plus Shunted Pole & 2-Pole

FULL LOAD AMPS	RESISTIVE AMPS PER POLE	LOCKED ROTOR AMPS SINGLE PHASE, 50/60 HZ 240/277V	480V	600V	POLES
30	40	180	150	120	1 + Shunt

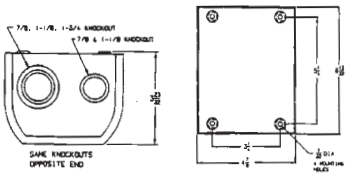
** Ratings shown are for 1-phase, 2-pole.*

MARS NO.	FLA	RESISTIVE RATING PER POLE	POLES	VOLTAGE	GE MODEL	HEIGHT	DIM. WIDTH	DEPTH
13101	30	40	1-1/2	24	453CC3HAAAM	2-9/16	2	3-1/4

Universal Enclosure

Universal Contactor Enclosure

The MARS 92680 Universal Contactor enclosure will fit contactors from 20 to 40 amp. This enclosure will also fit the new smaller frame ACC533 and ACC633 contactors. Each enclosure comes with all the necessary mounting screws.



MARS NO.	MFG. PART NO.	DESCRIPTION
92680	AHK425A	Universal Contactor Enclosure

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

MARS Definte Purpose Contactors

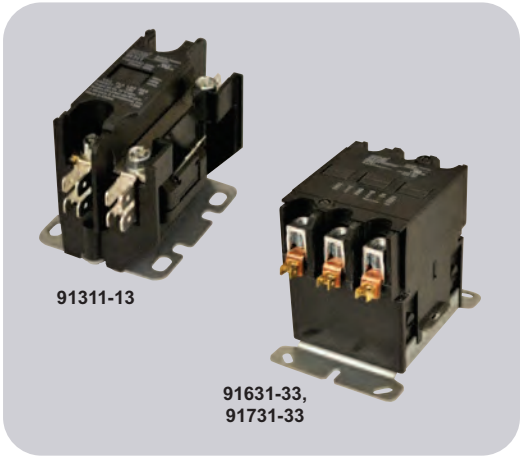
MARS definite purpose contactors are designed for use on refrigeration, air conditioning, and electric heating systems. They are available in one pole with shunt (one and one half pole) configurations, from 30 thru 40 amps. MARS brand definite purpose contactors are also available in 2 pole models (30 and 40 amp) and 3 pole models (30 through 75 amp). The universal mounting base allows replacement of most contactor brands. Straight-thru wiring and small size speeds installation.

Features:

- Used in air conditioning, heating and refrigeration
- Box lug terminations speed installation
- Universal mounting base
- Contact cover and enclosed coils reduce dirt and insect intrusion
- Compact design
- Silver-Cadmium contacts

Specifications:

- Meets ARI 780/790 requirements
- cULus Approval
- 1,000,000 Cycle mechanical life



Auxiliary Switches

MARS NO	DESCRIPTION	USED ON
61623	SPDT	All 3 Pole 910
61624	1 NO	
61625	1 NC	

MARS NO.	FLA	POLES	LOCKED ROTOR AMPS				RES. AMPS	COIL VOLTS	TERMINATION	HORSEPOWER			
			240	277	480	600				1 PH	3 PH		
										240	240	480	600
91311	30	1 Pole w/Shunt	180	180			40	24	Screw Type	-	-	-	-
91312								120					
91313								208/230					
91315	30	1 Pole w/Shunt	180	180			40	24	Box Lug	-	-	-	-
91316								120					
91317								208/230					
91321	30	2	180	-	150	120	40	24	Screw Type	-	-	-	-
91322								120					
91323								208/230					
91325	30	2	180	-	150	120	40	24	Box Lug	-	-	-	-
91326								120					
91327								208/230					
91331	30	3	180	-	150	120	40	24	Screw Type	3 HP	7.5 HP	10 HP	15 HP
91332								120					
91333								208/230					
91335	30	3	180	-	150	120	40	24	Box Lug	3 HP	7.5 HP	10 HP	15 HP
91336								120					
91337								208/230					
91411	40	1 Pole w/Shunt	240	240	-	-	50	24	Box Lug	-	-	-	-
91421	40	2	240	-	200	160	50	24	Box Lug	-	-	-	-
91422								120					
91423								208/230					
91431	40	3	240	-	200	160	50	24	Box Lug	5 HP	10HP	15 HP	20 HP
91432								120					
91433								208/230					
91531	50	3	300	-	250	200	63	24	Box Lug	5 HP	15 HP	20 HP	25 HP
91532								120					
91533								208/230					
91631	60	3	360	-	300	240	75	24	Box Lug	7.5 HP	20 HP	25 HP	30 HP
91632								120					
91633								208/230					
91731	75	3	450	-	375	300	94	24	Box Lug	15 HP	25 HP	40 HP	40 HP
91732								120					
91733								208/230					

Magnetic Line Contactors

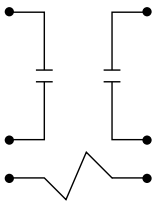
30 Amp Two Pole Contactors

The MARS Series 180 contactors are designed primarily to replace contactors used in air conditioning and electric heating to control blower motors. In addition they are used to switch pumps and computer power supplies. Replace General Electric Contactors and other manufacturers including WR, Essex/RBM and Honeywell.

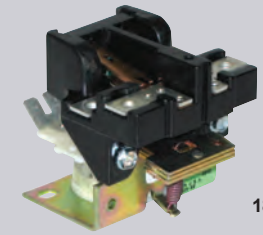
Features:
- Replace all 3ARR8, 9, 27, and 28 General Electric contactors
- Replace WR, Essex/RBM and Honeywell
- Instructions and cross reference chart included
- Non-positional
- UL and CSA listings available

Cross Reference

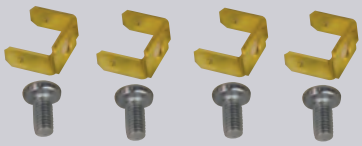
Carrier	GE	Packard	Supco	Honeywell No.	Mars Replacement
HN52KC051	3ARR8E4	C18001	SMC11	R850B1146	**18001**



COIL
schematic



18001



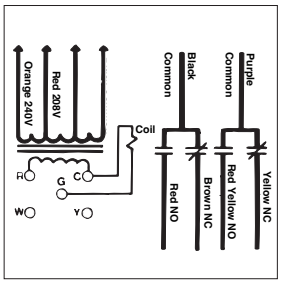
KIT 93103
Sold Seperately
4 SCREWS & 4 TERMINALS

MARS NO.	DESCRIPTION	FULL LOAD AMPS	RESISTIVE AMPS	LOCKED ROTOR AMPS	COIL VOLTAGE	POLES	COIL VOLT	PICK-UP HOT	MAX COLD
18001	30 Amp 2 Pole Magnetic Line Contactor	30	30	120	24	2	24	20.5	19.2
93103	Push-On Terminals Adapters and Screws.	-	-	-	-	-	-	-	-

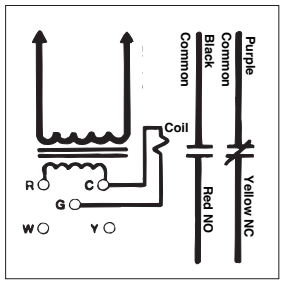
Fan Centers

MARS Relay/Transformer Fan Control Centers

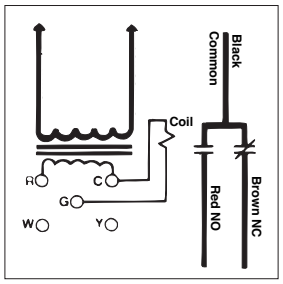
Schematic:



24010



24012



24013

24010

MARS series 240 fan centers provide convenient low voltage control of one and two speed fan motors and auxiliary circuits in heating, cooling, or heating/cooling applications. Each MARS fan center is a reliable, compact unit consisting of a 24 volt control transformer and a plug-in switching relay mounted on a 4" square electrical junction box cover. All line voltage connections are made inside the box with color coded pre-stripped leads. Low voltage connections are made at a convenient terminal board mounted to the transformer.

Features:
- Choice of SPDT, SPNO / SPNC or DPDT relay switching options
- UL 1585 40VA transformer
- Color coded leads
- Low voltage terminal board
- Mounts directly to 4" electrical box
- 50/60 Hertz

40VA 3/4 HP

MARS NO.	TRANSFORMER				RELAY	CONTACT RATINGS			
	PRIMARY		SECONDARY			120V AC (AMPS)		240V AC (AMPS)	
	VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS		FULL LOAD	LOCKED ROTOR	FULL LOAD	LOCKED ROTOR
24010	120/208/240	Color coded leads, pre-stripped	24V	Terminal board with 5 screw terminals	DPDT	13.8	82.8	6.9	41.4
24012	120	Color coded leads, pre-stripped	24V	Terminal board with 5 screw terminals	SPNO/SPNC	13.8	82.8	6.9	41.4
24013	120	Color coded leads, pre-stripped	24V	Terminal board with 5 screw terminals	SPDT	13.8	82.8	6.9	41.4

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

MARS Control Transformers
NEMA Class II Open Construction

MARS compact open construction transformers are less than 2-1/4" in height. This makes them ideal as replacements within existing equipment.

MARS control transformers are available with various outputs and voltages for special applications.

Application:

Provide power source for control circuit for air conditioning, heating, or refrigeration systems.

Features:

- UL class 2 recognized
- Low heat rise
- Primary color coded leads
- Secondary color coded leads, or 1/4" male quick connects
- Foot-mount

Foot-Mount Open Construction

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50351	20	50/60	120	Color coded leads	24	Color coded leads
50352	40	50/60	120	Color coded leads	24	Color coded leads
50353	40	50/60	208/240	Color coded leads	24	Color coded leads
50354	40	50/60	120/208/240	Color coded leads	24	Color coded leads
50355*	40	60	120	Color coded leads	12/24	Color coded leads
50350	20	50/60	120/208/240	Color coded leads	24	Color coded leads
50357	40	50/60	277	Color coded leads	24	Color coded leads
50359(1)	40	50/60	120/208/240	Color coded leads	24/12/2.5	Color coded leads

* Not UL listed (1) In line fuse protection

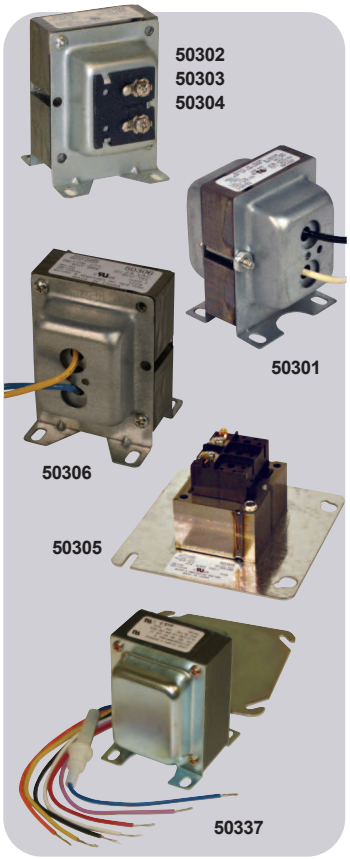
Foot-Mount Open Construction With Primary & Secondary Quick Connects

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50362	40	50/60	120	1/4" Male quick connects	24	1/4" Male quick connects
50364	40	50/60	120/208/240	1/4" Male quick connects	24	1/4" Male quick connects
50363	40	50/60	208/240	1/4" Male quick connects	24	1/4" Male quick connects

MARS Control Transformers
NEMA Class II End Bell Type

MARS end bell transformers provide enclosures for the primary and secondary windings, MARS multi-mount models offer three mounting options - Foot, Plate, or Conduit mount.

MARS control transformers are available with various outputs and voltages for special applications.



Application:

Provide power source for control circuit for air conditioning, heating, or refrigeration systems.

Features:

- UL class 2 recognized
- Low heat rise
- Primary color coded leads
- Secondary color coded leads, or screw terminals
- Multi-mount or plate-mount

Foot-Mount End Bell Type

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50301	20	60	120	Color coded leads	24	Color coded leads

Multi-Mount End Bell Type

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50302	40	50/60	120	Color coded leads	24	Screw terminals
50303	40	50/60	208/240	Color coded leads	24	Screw terminals
50304	40	60	120/208/240	Color coded leads	24	Screw terminals
50306*	48	60	277	Color coded leads	24	Color coded leads
50314	50	50/60	120/208/240	Color coded leads	24	Color coded leads
50333*	48	50/60	120/208/240	Color coded leads	24/12/2.5	Color coded leads

* Not UL listed (1) Color coded leads on secondary, (2) Screw terminals on secondary

Plate-Mount End Bell Type

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50305	40	50/60	120	Color coded leads	24	Screw terminals

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Transformers

MARS Control Transformers NEMA Class II

Hub-Mounted Transformers with Circuit Breakers and Multiple Inputs of 120/208/240/480 VAC

Available either in 50VA or 75VA, these 2 versatile transformers replace Honeywell® AT150F and AT175F. All leads pass through the chase nipple.

- MARS 50319, 50VA, MARS 50372, 75VA
- 3 Way mounting
- Four inputs including 120/208/240/480 VAC
- UL Recognized

50319
50372

Hub Mount End Bell Type

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50319	50	50/60	120/208/240/480	Color coded leads	24	Color coded leads
50372	75	50/60	120/208/240/480	Color coded leads	24	Color coded leads

MARS Control Transformers NEMA Class II Heavy Duty End Bell Type

MARS control transformers are available with various outputs and voltages for special applications.

Application:

MARS heavy duty end bell transformers offer a wide variety of higher VA rated models. These models are the choice when extra power is the solution.

Features:

- UL class 2 recognized
- 50/60 Hz
- Low heat rise
- Color coded leads
- Foot-mount

50316

50340

Foot-Mount End Bell Type

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50316	60	50/60	208/240	Color coded leads	24	Color coded leads
50320(1)	75	50/60	120/208/240/480	Color coded leads	24	Color coded leads
50326	75	50/60	480	Color coded leads	24	Color coded leads
50340*	100	50/60	120/208/240/480	Color coded leads	24	Color coded leads

*100 VA does not qualify for NEMA Class II
(1) Inline fuse

Foot Mounted Open Construction

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50339(2)	75	50/60	480	Color coded leads	120	Color coded leads

(2) UL 506

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

MARS Control Transformers NEMA Class II Manual Reset Style

MARS control transformers are available with various outputs and voltages for special applications.

Application:

Provide power source for control circuit for air conditioning, heating, or refrigeration systems.

Features:

- UL class 2 recognized
- Low heat rise
- Color coded leads or quick connect terminals
- Foot-mount

50321
50327
50341
50375

Foot-Mount End Bell Type with Manual Reset

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50327	50	60	120/208/240/480	Color coded leads	24	Color coded leads
50321	75	50/60	120/208/240/480	Color coded leads	24	Color coded leads
50375	75	50/60	120/208/240/575	Color coded leads	24	Color coded leads
50341*	100	50/60	120/208/240/480	Color coded leads	24	Color coded leads
50312	60	50/60	120/208/240/480	Color coded leads	24	Color coded leads
50370	75	50/60	120/277/380/575	Color coded leads	24	Color coded leads
50371	100	50/60	120/208/277/575	Color coded leads	24	Color coded leads

* 100VA and higher does not qualify for NEMA Class II

MARS Power Transformers

Application:

Provide 120V power source for air conditioning, heating, or refrigeration systems. MARS power transformers provide dual purpose options — 120V or 24V secondary with 208V/240V/480V primary connections. Three VA selections offer a true powerhouse!

Features:

- Color coded leads
- Compact size
- Low heat rise

50380

Power Transformers Foot-Mount Open Construction

MARS NO.	VA RATING	HZ	PRIMARY		SECONDARY	
			VOLTAGE	CONNECTIONS	VOLTAGE	CONNECTIONS
50380(1)	50	60	208/240/480	Color coded leads	120/24	Color coded leads
50381(2)	100	60	208/240/480	Color coded leads	120/24	Color coded leads

(1) Not UL listed
(2) UL 506

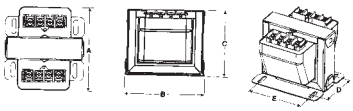
GE Type Ip Core and Coil Transformers

GE type IP transformers are core and coil units designed for industrial control, panel board, HVAC and general purpose applications. They conform to ANSI C89.2, and are UL listed and CSA certified. These transformers are lightweight, small and designed for minimum mounting dimensions.

Features:

- 60 Hz
- Encapsulated thru 500VA
- Control power applications
- UL listed, UL-506 File E2739
- CSA certified, C22.2 Number 66, File 3272
- 50 Hz available on special order basis

50502



top view front view

Encapsulated Style Views

Encapsulated

MARS NO.	CONT. KVA	PRIMARY	SECONDARY	DIMENSIONS				
				A	B	C	D	E
50502	.075	240/480	120/240	4.22	3.29	2.79	2.41	2.50
50504	.150	240/480	120/240	4.67	4.04	3.29	2.66	3.12
50506	.250	240/480	120/240	5.17	4.04	3.29	3.16	3.12
50507	.300	240/480	120/240	5.17	4.04	3.29	3.16	3.12

JARD Transformers

Hub-Mounted Transformers with Circuit Breakers and Multiple Inputs of 120/208/240/480 VAC

Available either in 50VA or 75 VA, these 2 versatile transformers replace Honeywell® AT150F and AT175F. All leads pass through the chase nipple.

- Model 5041MCB, 50 VA, Model 7541MCB, 75 VA
- Plate mount or foot mount
- Four inputs including 120/208/240/480 VAC
- UL Recognized

44519
44520

44522
44524

MARS NO.	JARD NO.	VA	PRIMARY VAC	SECONDARY VAC
44519	5041MCB	50	120/208/240/480	24
44520	7541MCB	75	120/208/240/480	24

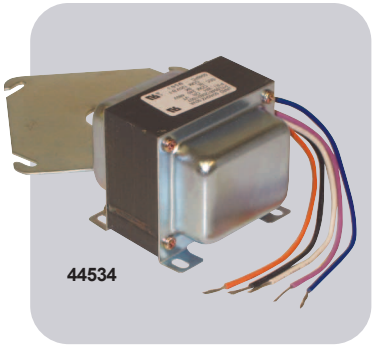
Multi-Mount Transformers Closed Construction, 4" x 4" Plate

- Optional 3-way mounting for maximum flexibility
- Safety agency approved
- Welded laminations for quiet operation

MARS NO.	JARD NO.	VA	PRIMARY VAC	SECONDARY VAC
44522	4011M	40	120	24
44524	4031M	40	120/208/240	24
44525	5031M	50	120/208/240	24
44526	5032M	48	120/208/240	2.5/12/24

Fully Enclosed Junction Box Ready

- Several models with dual voltage output
- Welded laminations for quiet operation
- Conservative heat rise characteristics
- UL 506



44534

MARS NO.	JARD NO.	VA	PRIMARY VAC	SECONDARY VAC
44533	5048STPC	50	208/277/575	120
44534	10048PC	100	240/480	120
44535	10048STPC	100	208/277/575	120

⚠ WARNING:
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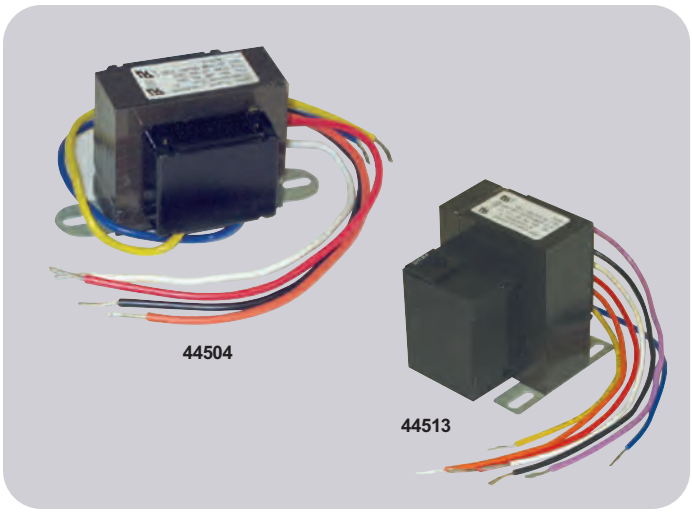
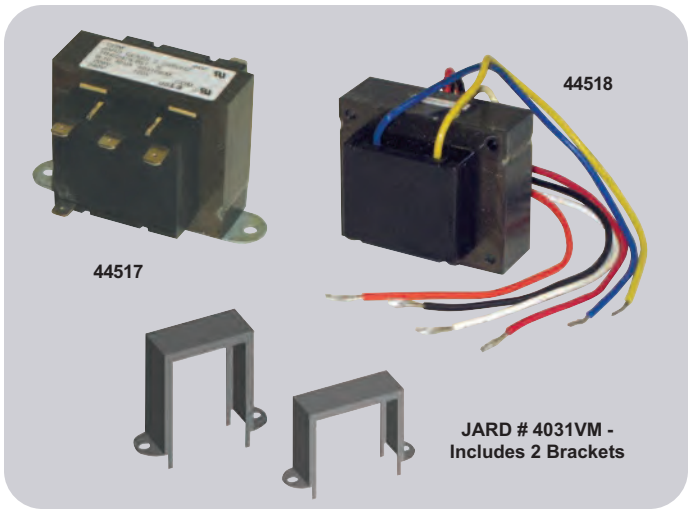




Open Construction, Wire Leads

- Safety agency approved

MARS NO.	JARD NO.	VA	PRIMARY VAC	SECONDARY VAC
44501	2031F	20	120/208/240	24
44502	4011F	40	120	24
44503	4021F	40	208/240	24
44504	4031F	40	120/208/240	24
44505	4032F	40	120/208/240	2.5/12/24
44507	40271F	40	277	24
44508	5031F	50	120/208/240	24
44509	5032F	50	120/208/240	2.5/12/24
44510	7531F	75	120/208/240	24

Closed Construction With Circuit Breaker

- All models feature a UL recognized manual reset circuit breaker
- Safety agency approved

MARS NO.	JARD NO.	VA	PRIMARY VAC	SECONDARY VAC
44511	5041C	50	120/208/240/480	24
44512	6041C	60	120/208/240/480	24
44513	7541C	75	120/208/240/480	24
44514	7541STC	75	120/277/380/575	24
44515 (1)	10041C	100	120/208/240/480	24

(1) Not UL, UL506

Closed Construction Quick Connect

MARS NO.	JARD NO.	VA	PRIMARY VAC	SECONDARY VAC
44517	4031OEM	40	120/208/240	24

Versatile 3-Way Mounting

MARS NO.	JARD NO.	VA	PRIMARY VAC	SECONDARY VAC
44518	4031VM	40	120/208/240	24

MARS HVAC Surge Protective Device

The **iSPD** *(Intelligent Surge Protection Device)* offers comprehensive protection for your HVAC equipment.

The MARS 83907 Surge Protection Device is designed to provide maximum compressor protection from harmful power surges, transients and over-voltages utilizing the latest Thermally Protected MOV technology.

In addition, the modules microprocessor technology monitors line voltage to protect the compressor from starting or running during "brown outs" and low line voltage. The module also monitors refrigerant temperatures to identify coil freeze-up and or low refrigerant issues.

If the module detects a low voltage or refrigerant issue the compressor is shut down. The module will automatically reset when specified operating parameters are restored and determined to be stable.

In the event of diminished surge protection or failure, the compressor will not be allowed to start until the module is replaced.

Protects the Following Equipment and Components:

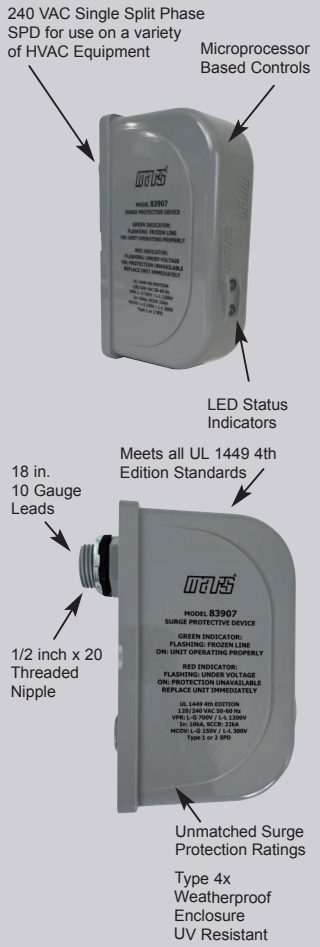
- Compressors
- Heat Pumps
- Control & Defrost Boards
- Reversing Valves
- Sensors & Relays
- ECM Motors
- Transformers

Plus:

- Low Voltage Protection
- Coil Freeze-up / Low Refrigerant Detection
- Short Cycle Guard

Features:

- Easy installation to disconnect box
- Weatherproof 4X enclosure
- Fits 1/2" knockouts
- Green & Red LED status indicators
- Thermally protected MOV's
- 240V single phase 50/60Hz
- Max surge current 10,000 A
- Max continuous over voltage
  - L-G 150V / L-L 300V
- Voltage protection rating
  - L-G 700V / L-L 1200V
- 3 Year warranty
- $7,500 Connected equipment warranty



MARS Surge Protective devices utilize Thermally Protective MOV surge technology

MARS NO.	VOLTAGE	WIRE CONFIGURATION	SPD TYPE	MCOV	ENCLOSURE	UL 1449 4TH EDITION
83907	240	L-L, L-G	1 or 2	150/300	Type 4X	cULus

MARS Surge Protection Device

MARS Side Open Disconnect Boxes with Internal Surge

MARS Disconnect with integrated surge protector provides a unitized design for quick and clean installation. The metal weather-resistant enclosure provides additional robustness and security. MARS Surge Protectors provide the performance necessary to protect critical components in high efficiency mini-split and unitary HVAC equipment.

Features:
- Side open disconnect
- Integrated internal surge protector
- Thermally Protected MOV's
- Metal-weather resistant enclosure
- External - Green & Red LED Status Indicators
- 3 Year Warranty
- $7,500 Connected Equipment Warranty

Specifications Disconnect:
- Single phase 240V
- 10,000 Amp rating
- NEMA 3R enclosure
- Weather proof enclosure
- Available in fused and non-fused

No. 83910 Surge Protector:
- 120/240V Single (Split) Phase 50/60Hz
- Short Circuit Current Rating
  - 22,000 Amps
- MCOV L-G 150V / L-L 300V
- Voltage Protection Rating
  - L-G 700V / L-L 1200V
- UL 1449 4th Edition
- Type 1 or 2 Surge Protection Rating

Protects:
- Compressors
- Heat Pumps
- Ideal for Ductless System
- Inverter Boards
- ECM Motors
- Control Boards
- Transformers
- Relays
- Sensors

MARS NO.	DESCRIPTION	ENCLOSURE	INCLUDES SURGE PROTECTOR
83915	60 Amp Non-Fused w/Surge Module	NEMA 3R, Rainproof	MARS NO. 83910
83916	30 Amp Fused w/Surge Module	NEMA 3R, Rainproof	MARS NO. 83910
83917	60 Amp Fused w/Surge Module	NEMA 3R, Rainproof	MARS NO. 83910

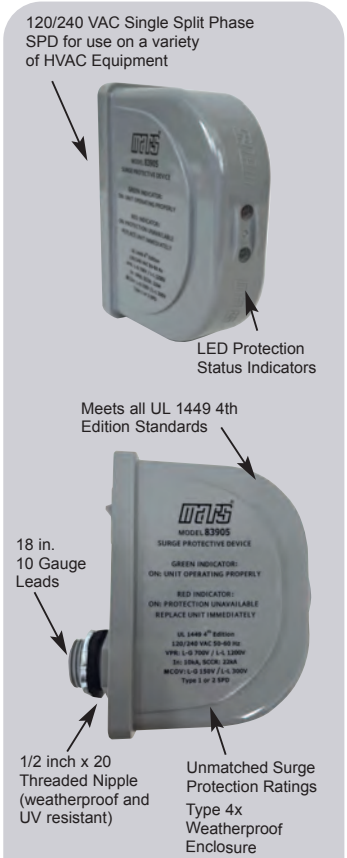
MARS NO.	DESCRIPTION
83910	Replacement Surge Module For 83915, 83916 and 83917

MARS HVAC Surge Protective Device

The MARS SPD is designed to protect your HVAC equipment from power spikes, surges and transients. Power spikes and surges can damage compressors, control boards, sensors and ECM motors resulting in costly repairs and down time. The MARS SPD utilizes Thermally Protected MOV technology to provide safe and reliable surge protection.

Protects:
- Compressors
- Heat Pumps
- Ideal for Ductless Systems
- Inverter Boards
- ECM Motors
- Control Boards
- Transformers
- Relays
- Sensors

Features:
- Easy Installation to Disconnect
- Weatherproof 4X Enclosure
- 18" Pre-stripped Leads
- Green & Red LED Status Indicators
- Thermally Protected MOVs
- 120/240V Single (Split) Phase 50/60Hz
- Short Circuit Current Rating
  - 22,000 Amps
- MCOV L-G 150V / L-L 300V
- Voltage Protection Rating
  - L-G 700V / L-L 1200V
- UL 1449 4th Edition
- Type 1 or 2 Surge Protection Rating
- 3 Year Warranty
- $7,500 Connected Equipment Warranty



MARS Surge Protective devices utilize Thermally Protective MOV surge technology

MARS NO.	VOLTAGE	WIRE CONFIGURATION	SPD TYPE	MCOV	ENCLOSURE	UL 1449 4TH EDITION
83905	120/240	L-L, L-G	1 or 2	150/300	Type 4X	cULus

MARS HVAC Surge Protective Device

The MARS 83904 SPD is designed specifically for 120V furnace and air handler applications. The furnace and air handler contain components that must be protected from surges such as, ECM motors, Control Boards, Transformers. The MARS Surge utilizes thermally protected MOV technology for safe and reliable protection of equipment. The 120V Surge Device is easy to install with only 2 wires to connect.

Protects:
- Ideal for 120V Ductless Systems
- Furnace & Air Handlers
- Inverter Boards
- ECM Motors
- Control Boards
- Transformers
- Relays
- Sensors

Features:
- Easy 2 Wire Installation
- 10" Pre-stripped Leads
- Green LED Status Indicator
- Thermally Protected MOVs
- 120V Single Phase 50/60Hz
- Short Circuit Current Rating
  - 10,000 Amps
- MCOV L-G 150V
- Voltage Protection Rating
  - L-G 700V
- UL 1449 4th Edition
- Type 1 or 2 Surge Protection Rating
- 3 Year Warranty
- $7,500 Connected Equipment Warranty

MARS Surge Protective devices utilize Thermally Protective MOV surge technology

MARS NO.	VOLTAGE	WIRE CONFIGURATION	SPD TYPE	MCOV	ENCLOSURE	UL 1449 4TH EDITION
83904	120	L-G	1 or 2	150	Type 2	cULus

WARNING:
Cancer and Reproductive Harm
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Condensate Pumps

MARS Condensate Pump - 24' Lift

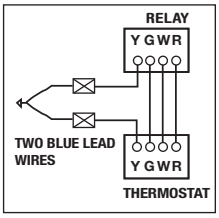
MARS new line of medium condensate pumps are designed to out-perform the competition while providing quiet operation and reliability.

The MARS pump design couples industry leading performance with the installation flexibility and features you need to get the job done.

The quick release silicone check valve allows for quick and efficient servicing without the need to remove the condensate line. The integrated safety switch can be wired for equipment shut down or directly to a high level alarm.

Features:

- 24 foot lift
- 125 gph
- 0.5 gal reservoir
- Patent pending, quick release check valve
- Field serviceable “duck bill” check valve
- Rubber isolation feet
- Drip proof housing design
- Solid float
- Integrated safety switch 250 volt and float switches
- ABS and stainless steel construction



MARS NO.	DESCRIPTION
21780	115 V, 60 Hz, 0.91 Amps, 71 Watts 6' Cord, 3/8" Check Valve, Safety Switch Medium Reservoir
21781	115 V, 60 Hz, 0.91 Amps, 71 Watts 6' Cord, 3/8" Check Valve, Safety Switch 20' Tubing, Medium Reservoir
21782	230 V, 60 Hz, 0.6 Amps, 75 Watts 6' Cord, 3/8" Check Valve, Safety Switch Medium Reservoir
21783	230 V, 60 Hz, 0.6 Amps, 75 Watts 6' Cord, 3/8" Check Valve, Safety Switch 20' Tubing, Medium Reservoir

Gallons Per Hour Pump Performance Comparison Chart

FOOT LIFT	1	5	10	15	20	24
MARS	125	98	74	70	43	7
Comp. 1	84	75	60	42	10	0
Comp. 2	117	98	70	58	11	0
Comp. 3	105	95	73	36	0	0

Specifications: Performance-Gallons Per Hour @ Height In Feet

MODEL NO.	1	5	10	15	20	24
21780	125	98	74	70	43	7
21781	125	98	74	70	43	7
21782	139	119	70	50	28	7
21783	139	119	70	50	28	7

Check Valve Replacement

MARS NO.	DESCRIPTION
21787	Check Valve Replacement Kit

MARS Low Profile 22' Pump

Features:

- Low profile pump
- Compact design
- Integrated safety switch
- Quick service check valve
- Drip proof housing
- Class leading performance

MARS NO.	DESCRIPTION
21784	115 V, 60 Hz, 1.07 Amps, 67 Watts, Low Profile, 22' Lift 6' Cord, 3/8" Check Valve, Safety Switch Medium Reservoir
21785	230 V, 60 Hz, 0.53 Amps, 68 Watts, Low Profile, 22' Lift 6' Cord, 3/8" Check Valve, Safety Switch Medium Reservoir

MARS 16' Pump

Features:

- 16' lift pump
- Whisper quiet
- 1/2 gal reservoir
- Rubber isolation feet
- Quick service check valve
- Class leading performance

MARS NO.	DESCRIPTION
21786	115 V, 60 Hz, 0.75 Amps, 49 Watts, 16' Lift 6' Cord, 3/8" Check Valve, Safety Switch Medium Reservoir

MODEL NO.	DIMENSIONS		
	LENGTH	WIDTH	HEIGHT
21780	10.25	5.125	6.375
21781	10.25	5.125	6.375
21782	10.25	5.125	6.375
21783	10.25	5.125	6.375
21784	10.25	5.04	5.28
21785	10.25	5.04	5.28
21786	10.25	5.125	6.375

Condensate Pump vs. Competition

FEATURE	MARS	COMP. 1	COMP. 2	COMP. 3
24 ft. Lift	●			
Motor Corrosion Protection	●			
Drip Proof Motor Housing	●	●		●
Drip Proof Motor & Switches	●			
Vibration Absorbing Rubber Feet	●	●	●	
Side Mount	●	●	●	●
Quick Release Check Valve	●	●		
Internal Safety Switch	●		●	
Solid Float	●	●		●

⚠ WARNING:
Cancer and Reproductive Harm
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MARS AllStart™ Hard Start Device

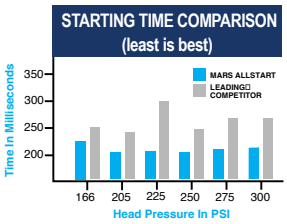
The MARS AllStart™ is a two wire hard start device designed to provide maximum starting torque for single phase PSC and CSIR compressors up through 10HP. The MARS AllStart™ recycles instantly for maximum convenience on troublesome hard start jobs.

Independent testing has determined that the MARS AllStart™ provides more starting torque than other competitive models, and this results in quicker starts. Test results on a range of head pressures from 166 to 300 PSI indicate that the MARS AllStart™ started the test compressor in an average of 21.7% less time than the leading competitor! More available starting torque means less time to get problem compressors started.

MARS offers the largest assortment of refrigeration and air conditioning compressor starting components. When the proper starting relay and capacitor combination is a must, they are available from MARS. When getting a problem compressor started in the field "NOW" is the job, rely on the new MARS AllStart.™

Features:

- Maximum starting torque!
- More than 20% faster starts!
- Easy two wire installation
- Recycles instantly
- Individually packaged with wiring instructions



Cross Reference

KickStart/RectorSeal	Parts Connect	Ranco	Supco	MARS Replacement
TO5	PSA8	RSPP8E	SPP8E	**32708**

MARS NO.	MODEL NO.	H.P.	VOLT MAX.
32708	AllStart	1/2 to 10	115-277V

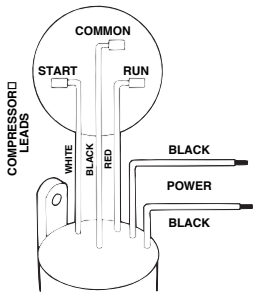
MARS Combination Starters

The MCS is a combination start relay, start capacitor, and motor overload. It is designed to replace those components on a 115 volt single phase refrigeration compressor installed on a capillary tube system.

The MCS is factory wired and comes with a connection diagram on the product label for maximum convenience.

Features:

- Maximum starting torque!
- More than 20% faster starts!
- Easy two wire installation
- Recycles instantly
- Individually packaged with wiring instructions



Cross Reference

Parts Connect	Ranco	Supco	MARS Replacement
PCS410	RSO410	RCO410	**32741**
PCS810	RSO810	RCO810	**32781**

MARS NO.	MODEL NO.	H.P.	VOLT MAX.
32741	MCS 41	1/4 TO 1/3	115V
32781	MCS 81	1/12 to 1/5	115V

MARS Motor Torque Multiplier

The MARS MTX 100, MTX 200 motor torque multipliers feature a combination PTC solid state device, and start capacitor in one compact unit.

The MTX 100 is designed for use on PSC motors and compressors up to 5HP, 277V maximum; the MTX 200 is designed for use on PSC motors and compressors up to 10HP, 277V. These units are easily installed by connecting the two leads from the MTX unit to the motor run capacitor terminals.

Features:

- Totally solid state integrated design
- Fast, easy two wire installation
- Three mounting options; clip, screw, or capacitor bracket
- Individually packaged

Cross Reference

5-2-1/CPS Products	Diversitech	Parts Connect	Ranco	Supco	MARS Replacement
CSRU1	DST-5	PSA5	RSPP5	SPP5	**32701**
–	DST-6	PSA6	RSPP6	SPP6	**32702**

MARS NO.	MODEL NO.	H.P.	VOLT MAX.
32701	100	1/2 to 5	277V
32702	200	1/2 to 10	277V

MARS Start Assists

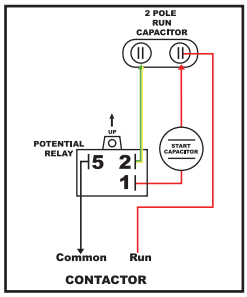
MARS 3 Wire Hard Start Kits

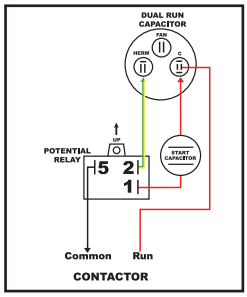
MARS 3 Wire Hard Start Kits provide the additional starting torque required for quicker compressor starts in systems using higher pressure refrigerants. Improved starting performance extends compressor life and minimizes potential refrigerant contamination due to overheated compressor windings. MARS Hard Start Kits also improve system life and performance by reducing undue overload stress on contactors and run capacitors.

If your system is slow to start, MARS has a Hard Start Kit to fit your application.

Features:

- Start relay made in the USA and approved by all compressor manufacturers.
- Start capacitor made in Mexico
- 30% faster starts
- 3 wire design ensures proper “drop-out”
- Extends life of compressor
- Kit contains mounting hardware





Cross Reference

MARS NO.	5-2-1 (CPS)	Supco	Packard (2 wire)	Diversitech (2 wire)
32715	CSR U1	3W1	TQS1	HSK5
32716	CSR U2	3W2	TQS2	HSK1
32717	CSR U3	3W3	–	–

MARS NO.	VOLTS	DESCRIPTION
32715	208-230/240	3 Wire Hard Start 1 to 3 Ton
32716	208-230/240	3 Wire Hard Start 3.5 to 5 Ton
32717	208-230/240	3 Wire Hard Start 4 to 5 Ton

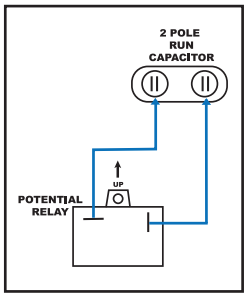
MARS 2 Wire Hard Start Kits

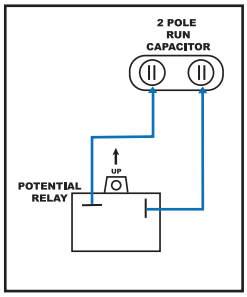
MARS 2 Wire Hard Start Kits provide quick and easy installation on the job-site with only 2 connections. 2 Wire Hard Starts provide the additional starting torque for quicker compressor starts and improves compressor. MARS Hard Start kits also improve system life and performance by reducing undue overload stress on contactors and run capacitors.

If your system is slow to start, MARS has a Hard Start Kit to fit your application.

Features:

- Start relay made in the USA and approved by all compressor manufacturers.
- NGM Start Capacitor is approved by all major HVAC manufacturers
- 30% faster starts
- Extends life of compressor
- 2 wire design speeds installation
- Kit contains mounting hardware





Cross Reference

MARS NO.	KickStart	Packard (2 wire)	Diversitech (2 wire)
32713	TO-5	TQS1	HSK5
32714	KS-1	TQS2	HSK1

MARS NO.	VOLTS	DESCRIPTION
32713	208-230/240	2 Wire Hard Start 1 to 3 Ton
32714	208-230/240	2 Wire Hard Start 3.5 to 5 Ton

⚠ WARNING:
Cancer and Reproductive Harm
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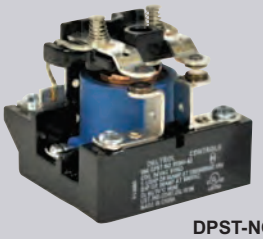
For Motor Starting Circuits up to One Horsepower

Features:

- Replace Potter & Brumfield PR series, Deltrol, Guardian, Magnacraft, etc.
- Plastic enclosed coil minimizes damage, resists dirt and moisture
- 5/16" diameter silver contacts for long life
- Tough phenolic base
- Reinforced screw terminals
- UL and CSA listings available



DPST-NO

DPDT
with auxiliary

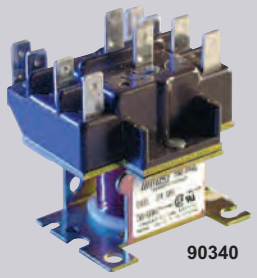
MARS NO.	P & B SERIES	CONTACTS ARRANGEMENT	AMP	COIL VOLTAGE	COIL RES. IN OHMS	NOM. POWER
43008	PRD7AY0	DPST-NO	25	120	290	9.8VA
43014	PRD11AY0	DPDT	25	120	290	9.8VA

Cross Reference Information

POTTER & BRUMFIELD	MARS NO.	DETROL NO.	MARS NO.
PR7AY0-120V	**43008**	20240-83D	**43008**
PR11AY0-120V	**43014**	20241-83D	**43014**

Replacement Relay for Fan Control Centers

Provides quick and easy plug-in installation to restore like new operation without replacing the entire fan center. The universal relay will cover all MARS fan centers and many competitive brands.

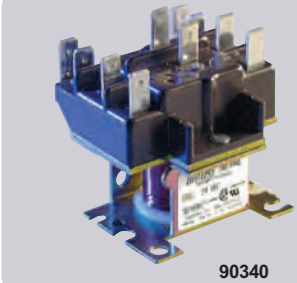


90340

MARS NO.	USED ON	DESCRIPTION
90340	24010, 24012, 24013	DPDT universal plug-in replacement relay

2-Pole Air Conditioning Relays

The MARS Series 903 switching relays are intended for many applications in air conditioning, refrigeration, and heating. Other uses include general purpose switching in appliances, fan controls, and vending machines. Our relays are available in 24, 110/120, and 208/240 coil voltages with various combinations of power and pilot duty contacts.



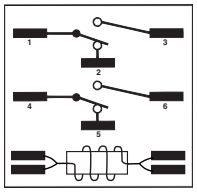
90340

Features:

- Replaces Honeywell and White-Rodgers/RBM - cross reference on package
- Double quick-connect terminals on coil
- 2.13 x 1.88 x 2.25 in.
- Base is designed for easy replacement of competitive relays
- Molded terminal numbers and circuit diagram on top of relay
- UL and CSA listings available

	POWER 120V	POWER 208/240V	PILOT 120V	PILOT 208/240V
Full Load Amps	12	6	-	-
Resistive Amps*	15	15	3	3
Locked Rotor Amps	60	35	-	-
Horsepower	3/4	3/4	1/10	1/10

*277 VAC



MARS NO.	COIL VOLTAGE	TERMINALS 1-2-3	TERMINALS 4-5-6
90340 **90341** **90342**	24 110/120 208/240	Power	Power
90343 **90344** **90345**	24 110/120 208/240	Power	Pilot
90346 **90348**	24 208/240	Pilot	Pilot

Cross Reference Information

WR/RBM NO.	MARS REPLACEMENT	HONEYWELL NO.	MARS REPLACEMENT
90-340	**90340**	R4222B1082	**90344**
90-341	**90341**	R4222B1090	**90345**
90-342	**90342**	R4222D1013	**90341**
90-343	**90343**	R4222D1021	**90342**
90-344	**90344**	R4222N1010	**90348**
90-345	**90345**	R4222V1002	**90344**
90-346	**90346**	R4222V1010	**90345**
90-348	**90348**	R8222B1067	**90343**
		R4222D1014	**90340**
		R8222N1011	**90346**
		R8222V1003	**90343**

MARS General Purpose Switching Relays

SPST and SPDT Fan Relays

The MARS Series 903 relays are among the most popular relays used in air conditioning today. They will replace the WR/Essex/RBM Type 84 (90-290 thru 90-295) quick-connect and screw terminal versions.

Features:

- 0.25 inch quick-connect terminals
- Packaged with instructions and cross reference
- Replace 90-290 thru 90-295 and 90-290Q thru 90-295Q
- Dimensions: 2.38 x 1.63 x 1.50 in.
- Tab bracket, Non-positional
- UL and CSA listings available

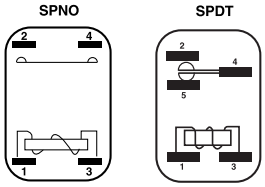
COIL VOLTAGE	MARS NO. SPST	MARS NO. SPDT
24	**90290**	**90293**
110/120	**90291**	**90294**
208/240	**90292**	**90295**

Contact Rating—All Models/Amps

VOLTAGE	FULL LOAD	LOCKED ROTOR	RESISTIVE
120	12	60	18
240	8	48	18
277	7	42	18

Cross Reference Information

WR/RBM NO.	MARS NO.	WR/RBM NO.	MARS NO.
90-290	**90290**	90-293	**90293**
90-290Q	**90290**	90-293Q	**90293**
90-291	**90291**	90-294	**90294**
90-291Q	**90291**	90-294Q	**90294**
90-292	**90292**	90-295	**90295**
90-292Q	**90292**	90-295Q	**90295**



Coil Data:
24-240 VAC @ 50/60 Hz;
5 VA Max. Inrush; 3.0 VA Max. Sealed

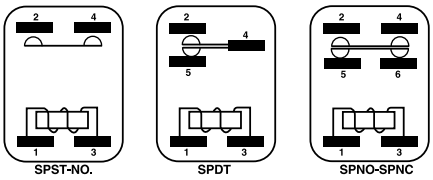
Heavy Duty Fan Relays

MARS Heavy Duty Fan Relays are used on heating and air conditioning equipment to provide switching of heavier loads with a compact size relay.

MARS Heavy Duty Fan Relays replace WR/Essex/RBM type 184.

Features:

- 0.25 inch quick-connect terminals
- Packaged with instructions and cross reference
- Replaces WR/Essex/RBM Type 184
- Tab bracket, Non-positional
- UL and CSA listings available



Contact Rating—All Models/Amps

VOLTAGE	FULL LOAD	LOCKED ROTOR	RESISTIVE
120	12	60	18
240	8	48	18
277	7	42	18

Coil Data

COIL VOLTAGE	MAX INRUSH	MAX SEALED
24	5 VA	3 VA
120	5 VA	3 VA
208/240	5 VA	3 VA

COIL VOLTAGE	MARS NO. SPST	MARS NO. SPDT	MARS NO. SPNO-SPNC
24	**90360**	**90370**	**90380**
110/120	**90362**	**90372**	**90382**
208/240	**90364**	**90374**	**90384**
277		**90377**	

Cross Reference

WR/RBM NO.	MARS NO.	WR/RBM NO.	MARS NO.
90-360	**90-360**	90-374	**90374**
90-362	**90-362**	90-380	**90380**
90-364	**90-364**	90-382	**90382**
90-370	**90-370**	90-384	**90384**
90-372	**90-372**		

⚠ WARNING:
Cancer and Reproductive Harm
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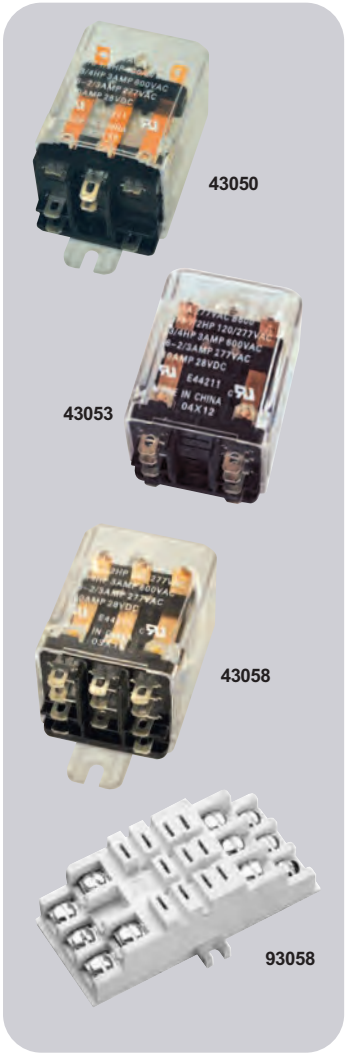
MARS Enclosed Switching Relays

MARS enclosed switching relays are heavy duty general purpose relays suitable for a variety of applications. They are commonly used in heating, air conditioning, vending machines, office machines, control panels and other general purpose applications. They are available in single pole, two pole and three pole models for either bracket or plug-in mounting. All MARS enclosed switching relays are protected by a tough polycarbonate cover to keep out dust and dirt. Blade type terminals fit standard plug-in mounts plus allow use with 3/16 inch quick-connect terminals or direct soldering.



Features:

- Simple connections
- One, two and three pole models
- Plug-in or bracket mount
- See-through protective cover
- Three-way blade terminals, plug-in, quick-connect or solder
- UL and CSA listings available

Specifications:

Dimensions: 2.0 X 1 1/2 X 1 3/8

Terminals: 3/16 blade

Coil Data: 2.0 VA

Contact Material: Silver alloy, gold flashed

MARS NO.	COIL VOLTAGE	HZ	AMP RATING	HORSEPOWER 120V	HORSEPOWER 240V	SWITCH ACTION	TYPE MOUNT
43050	24	50/60	13	1/3	1/2	SPDT	bracket
43053	24	50/60	13	1/3	1/2	DPDT	bracket
43054	120						
43056	24						
43057	120	50/60	13	1/3	1/2	3PDT	bracket
43058	240						
43063	24						
43064	120	50/60	13	1/3	1/2	DPDT	plug-in
43066	24						
43067	120	50/60	13	1/3	1/2	3PDT	plug-in
43068	240						
93058	Socket Base. Can be surface or DIN rail mounted.						

MARS Current Relays - Universal Replacement

MARS current relays manufactured by General Electric can replace almost any current relay found on refrigerators, freezers, water cooler, pumps and vending machines.

Features:

- Replace plug-on, bracket-type, split-phase, and capacitor-start current relays
- Covers replacement needs of 1/12 H.P. 115V to 1/8 H.P. 115V
- Clearly labeled terminals for fast wiring
- Each relay packaged with installation instructions and wiring diagrams
- UL and CSA listings available

MARS NO.	GE NO. 3ARR12 PAC	MAX PICK-UP	MIN DROP OUT	APPLICATION SURVEY BY HORSEPOWER1 (AT 115)2							
				1/12	1/8	1/6	1/5	1/4	1/3	1/2	3/4
27001	309A	3.8	3.2	■	□	□	□	□	□	□	□
27002	310A	5.2	4.4	□	■	□	□	□	□	□	□

1. Current relays cannot be replaced by horsepower, amperage, or nameplate data alone. Refer to cross reference information for proper replacement of original equipment current relays by part numbers.
2. These current relays are often used on 230 volt applications, however this horsepower survey refers only to 115 volt applications.

⚠ WARNING:
Cancer and Reproductive Harm
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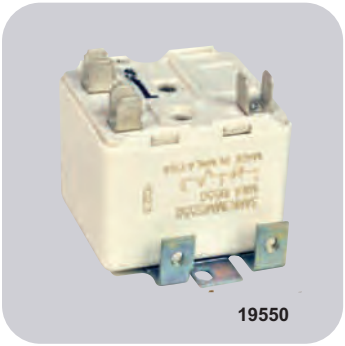
MARS Relays & Potential Relays

For Submersible Pump Applications

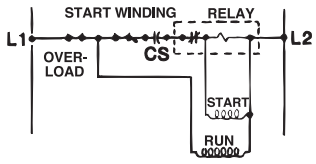
The MARS 550 and 551 relays were specifically developed for submersible pump and other motor starting applications in high moisture environments. Because the control panels for these are often located in areas of high humidity, the components on them must resist the effects of moisture. Chrome plating on the core and armature and the relatively small area of contact eliminates armature sticking due to organic contaminants which was the number one cause of relay failure.



19550

Features:

- Used on F.E. Meyers, Franklin Electric, Jacuzzi, Red Jacket, Sta-Rite, and Tait
- 2 relays replace over 25 O.E.M. relays
- Universal break-off bracket on each relay. Simply snap off parts not needed
- UL and CSA listings available



MARS NO.	MARS MODEL NO.	CONTINUOUS COIL VOLTAGE	PICK-UP		DROP-OUT	
			MIN.	MAX	MIN.	MAX
19550	MARS 550	130	111	134	15	40
19551	MARS 551	332	244	270	40	90

MARS NO.	G.E. NO.	USED BY
16104	3ARR3J3G3	Barnes [Burks, Decator] & Myers

MANUF.	OEM NO.	GE CAT. NO.	MARS NO.
F.E. Myers	13178-A	3ARR3D7J4	19550
	13179-A	3ARR3D3V4	19551
	13180-A	3ARR3D3A4	19551
	17891-A	3ARR3EA3A4	19551
	17890-A	3ARR3EA3V4	19551
	17889-A	3ARR3EA7J4	19550
Franklin Electric	155031-101	3ARR3J7J4	19550
	155031-102	3ARR3J9V4	19551
	155031-104	3ARR3J2P3	19550
	155031-103	3ARR3J9U4	19551
	155031-105	3ARR3J7M1	19550

MANUF	OEM NO.	GE CAT. NO.	MARS NO.
Jacuzzi	23-1308-26	3ARR3EA9V5	19551
	23-1308-00	3ARR3EA7J5	19550
	23-1308-18	3ARR3EA7BB5	19550
	23-1308-34	3ARR3EA5U5	19551
	23-1308-42	3ARR3EA7M5	19550
	23-1308-49	3ARR3EA5C5	19551
Red Jacket	71-69	3ARR3EA7M5	19550
	71-70	3ARR3EA5B5	19551
	71-47	3ARR3J3V2	19551
Sta-Rite	U18-325	3ARR3J3V3	19551
	U18-665	3ARR3J3A3	19551
	U18-810	3ARR3J2P3	19550
	U18-811	3ARR3J5V3	19551
Tait	A124P2	3ARR3EA5A5	19551
	A124P1	3ARR3EA7K5	19550

One-On-One™ Direct Replacement Potential Relays

The relays are exact replacements for Bristol & Copeland applications. They conform to specifications and in most cases are the one-on-one™ replacement relay used by the manufacturer

Other relays available on special order. Contact your local wholesaler or MARS Customer Service.

16028

BRISTOL	MARS
650058	16028
650855	16051

BRISTOL	MARS
650971	16083

COPELAND	MARS
040-0001-00	16086
040-0001-01	16093
040-0001-04	16085
040-0001-12	16098
040-0001-17	16095
040-0001-19	16089
040-0001-20	16023
040-0001-25	16035
040-0001-26	16022

COPELAND	MARS
040-0001-34	16099
040-0001-35	16090
040-0001-48	16093
040-0001-50	16085
040-0001-53	16095
040-0001-54	16089
040-0001-55	16023
040-0001-59	16090
040-0001-60	16091
040-0001-61	16086
040-0001-62	16035

COPELAND	MARS
040-0001-64	16098
040-0001-68	16099
040-0001-71	16116
040-0001-74	16122
040-0001-78	16121
040-0001-79	16152

COPELAND	MARS
040-0001-88	16151
040-0001-89	16155

Universal Replacement

Quick Reference Relay Selection Chart For General Electric Relays

1. Determine the General Electric model number of the Relay to be replaced the "FORM" and "GROUP"

				One number plus
		1 or 2 Letters	1 or 2 Letters	
EXAMPLE:	3ARR3*	A	3B	3
	Basic Type	FORM	GROUP	Non-Positional

Cross Reference Information

WR/RBM NO.	MARS NO.
90-1	19002
90-2	19009
90-3	19004
90-4	19003
90-5	19006
90-6	19006
90-7	19004
90-8	19003
90-9	19007
90-10	19008
90-11	19003
90-12	19007
90-13	19005
90-14	19003
90-15	19006
90-16	19007
90-17	19002
90-18	19008
90-19	19006
90-20	19007
90-21	19002
90-22	19003
90-23	19007
90-24	19008

WR/RBM NO.	MARS NO.
90-25	19006
90-26	19008
90-27	19005
90-40	19004
90-41	19008
90-63	19002
90-64	19003
90-65	19004
90-66	19005
90-67	19006
90-68	19007
90-69	19001

TECUM. NO.	MARS NO.
82777	19002
82778	19004
82779	19008
82781	19010
82783	19003
82784	19009
82785	19006
82787	19007

2. Locate in the following table the Relay GROUP and select the corresponding MARS Replacement Relay from the kit.

19002 MARS 63 replaces Relay GROUPS 2J; 2K; 2L; 2M; 5N; 7J; 7K; 7L: 7M; 7N; 8L; 8M; 8N

19003 MARS 64 replaces Relay GROUPS 3A; 3B; 3AV; 3AU; 4A; 4B; 6A; 6B; 6AV; 10A; 10B; 10AU; 10AV

19004 MARS 65 replaces Relay GROUPS 3P; 3R; 3AP; 5P; 5R; 5S; 5T; 22S

19005 MARS 66 replaces Relay GROUPS 3U; 3V; 3AT; 6U; 6V; 6W

19006 MARS 67 replaces Relay GROUPS 3C; 3D; 3AA; 4C; 4D; 4BK; 6C; 6D; 6AA; 10C; 10D; 26A; 26B; 26C; 26D

19007 MARS 68 replaces Relay GROUPS 3E; 3F; 3AB; 3AC; 4E; 4F; 4G; 6E; 6F; 6G; 10H; 10AB; 10AC; 26E; 26F; 26G; 26H; 27E; 27F; 27G

19008 MARS 69 replaces Relay GROUPS 3S; 3T; 10S; 10T; 25S; 25T; 10AS

19009 MARS 70 replaces Relay GROUPS 5B; 5C; 5D; 5AA; 8B; 8C; 8D

19010 MARS 71 replaces Relay GROUPS 6TV; 6TW; 10V

3. Install relay in accordance with instructions in MARS Replacement Kit

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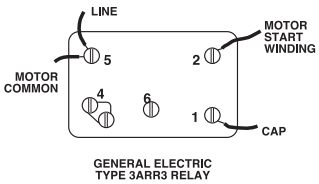
MARS Universal Replacement

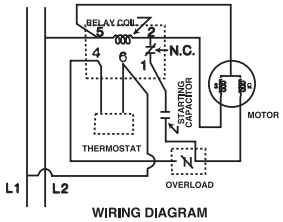
The MARS refrigeration potential relay service kit has become an industry standard since its introduction over fifty years ago. Its long-term reliability and easy replacement have been the key to its success. The wide calibration ranges and the universal bracket make the MARS potential relay is a must on every service truck.

Features:

- Genuine MARS relays replace thousands of O.E.M. models
- Non-positional
- Wide range of selectivity
- QC-6 Kit included with each relay to convert screw-on to push-on
- Instructions and wiring diagram included in each relay
- Universal break-off bracket on each relay. Simply snap-off parts not needed
- UL and CSA listings available



GENERAL ELECTRIC TYPE 3ARR3 RELAY



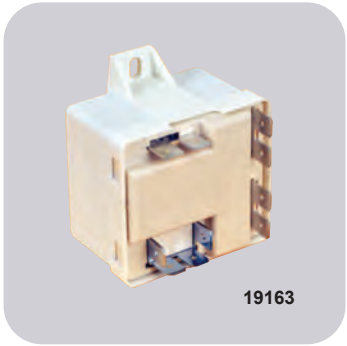
WIRING DIAGRAM

Calibration Specifications

MARS NO.	MARS MODEL NO.	CONTINUOUS COIL VOLTAGE	PICK-UP		DROP-OUT
			MIN.	MAX	MAX
19002	MARS 63	170	139	153	55
19003	MARS 64	395	260	275	120
19004	MARS 65	332	168	182	90
19005	MARS 66	395	215	225	120
19006	MARS 67	420	295	315	125
19007	MARS 68	502	325	345	135
19008	MARS 69	336	180	195	105
19009	MARS 70	253	285	305	77
19010	MARS 71	420	212	232	121
93001	QC-6	—	—	—	—

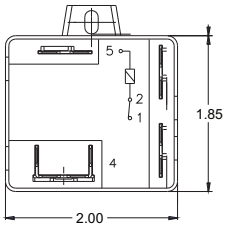
MARS HVAC Potential Relays

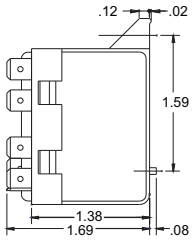
MARS series relays are manufactured for the HVAC industry. These relays meet all requirements for original equipment relays.



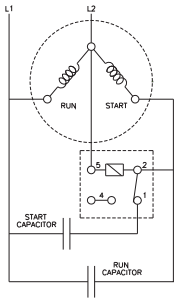
Features:

- 50/60 Hz
- cULus
- Contact rating 35 amp, 400 VAC
- Operating position tab up
- Instructions and wiring diagram included in each relay
- Class “B” insulation





WIRING DIAGRAM



Calibration Specifications

MARS NO.	MARS MODEL NO	CONTINUOUS COIL VOLTAGE	PICK-UP VOLTAGE	DROP-OUT VOLTAGE
19163	MARS 163	168	140-153	20-45
19164	MARS 164	420	242-272	60-121
19165	MARS 165	332	171-184	40-90
19166	MARS 166	420	204-233	60-121
19167	MARS 167	420	300-328	60-121
19168	MARS 168	502	314-342	60-135
19169	MARS 169	332	180-193	40-90
19170	MARS 170	253	285-305	35-77
19171	MARS 171	420	204-233	60-121

Note: If used on 50 Hz, the PU will be about 13% lower

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Leak Detectors

MARS H-10 Pro Universal Refrigerant Leak Detector

The MARS H-10 Pro combines and enhances all the features of the previous H-10 Series models into one full featured unit. The H-10 Pro Refrigerant Leak Detector continues to be the universal standard for checking halogen-based refrigerant leaks in residential and commercial applications. With automatic auto zero balance control it's unique sensor calibration system will pinpoint small, medium and large leaks. The instrument uses a tried-and-true positive ion emission heated diode with audible and visual leak rate indicators. It is the most sensitive and accurate leak detector to detect all CFC, HFC and HCFC refrigerants as low as 0.006 oz/yr, including R-410a and R-507. The unit is mounted in a durable carry case which houses the 4.5 foot probe with built in filter, carrying strap, wall adapter and operating instructions.

Features:

- All CFC, HFC and HCFC refrigerants, including but not limited to: R-12, R-22, R-134a, R-404A, R-410A, R-502, R-507, HFO-1233zd, HFO-1234yf and HFO-1234ze
- Improved sensor responsiveness with ultra-sensitive detection
- Dual power sources include rechargeable battery or external DC powered (wall adapter included)
- Selectable sensitivity to pinpoint small, medium or large leaks
- Unique visual sensor calibration system (with included reference leak bottle)
- Rugged enclosure with shoulder strap included
- Manual or automatic zero modes
- Headphone port allows for optional headset use in high-noise environments

Specifications:

Nominal Leak Range: 0.006 oz/yr (stationary) | 0.1 oz/yr (moving probe per SAE J2791)

Power Supply: 12 VDC - internal rechargeable sealed lead acid battery; 100-240 VAC wall adapter/universal battery charger to charge or run continuously

Reference Leak: Approx. 0.006 oz/yr (stationary) | 0.1 oz/yr (moving probe per SAE J2791), 1 year life (typical)

Ambient Operating Temp: 32°F to 104°F (0°C to 40°C)

Battery Life: 3 hours (typically)

Warm Up Time: Approx. 2 min.

Response Time: 1 second

Gases Detected: All CFC, HFC and HCFC non-flammable refrigerants

Detection Principle: Positive Ion Emission Heated Diode

Probe Length: 4.5 feet

Dimensions: 10.5" L x 8.3" W x 5.4" H

NOTE: *sensors are consumed in normal operation. It is good practice to have a spare sensor available at all times.*

MARS NO.	CATALOG NO.	DESCRIPTION
25301	H-10 Pro	Universal Refrigerant Leak Detector, Wall adapter or Battery Powered

Renewal Parts

MARS stocks genuine renewal parts for MARS, GE, and Bacharach H-10 Series Leak Detectors.

Renewal Parts For H-10 Professional, H-10N, H-10G, and H-10B

MARS NO.	CATALOG NO.	DESCRIPTION	H-10 PRO/PM	H-10N	H-10G	H-10B
25310	M1101UD	Maintenance kit (100 filters, 3 rubber probe tips)	✓	✓	✓	✓
25315	H10N04	Plug-in sensor element	✓	✓	✓	✓
25314	M1101UU	Probe tip - clear plastic	✓	✓	✓	✓
25309	E7076DX	Rubber tip for probe	✓	✓	✓	
25325	M1101AH	Battery charger - 120-240 VAC	✓			
25323	M1101UC	Super tune up kit; sensor, leak vial, 100 filters 3 flow balls and 3 rubber probe tips	✓	✓	✓	✓
25326	M1101AD	Battery for H-10 Pro	✓			
25321	K9344AH	Reference Leak Assembly	✓	✓	✓	✓

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

MARS Solid State Motor Starting Relay for Refrigerators and Freezers

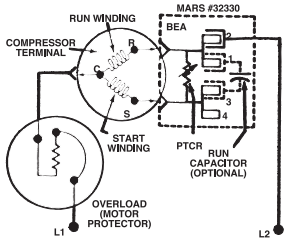
MARS 32330 is a solid state PTC motor starting relay that mounts directly to any 3-pin fusite connector. One model replaces thousands of current relays used on 1/12 HP to 1/3 HP compressors.

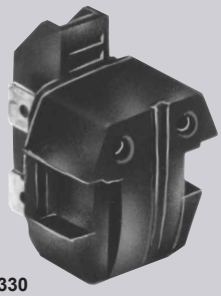
Features:

- Replaces Tecumseh Relays SSR2 and SSR3 for push-on applications.
- Non-positional
- One model for 1/12 HP to 1/3 HP, 120 volt
- UL and CSA listings available

MARS NO.	HORSEPOWER	VOLTAGE
32330	1/12 - 1/3	120

WIRING DIAGRAM FOR USE WITH SPLIT PHASE OR PSC MOTOR





32330

MARS Solid State Timers Delay On Make

The MARS 32391 is the top-selling timer in the industry. Its reliability has been proven in the field by knowledgeable contractors.

The MARS 32391 will not be fooled by the thermostat anticipator.

Heavy duty MARS timers are offered for higher current applications.

32391

Features:

- Easy two-wire installation
- Proven reliability, all solid state
- .25 in. quick connect terminals
- Mounts in any position
- Compact size
- High accuracy
- Totally enclosed and encapsulated for proper heat dissipation

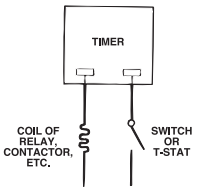


FIG. 1

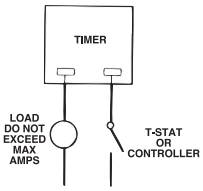


FIG. 2

Specifications:

- .040 amps min. latch current

MARS NO.	TYPE DELAY	TIME DELAY RANGE	TYPE OF ADJUSTMENT	INPUT VOLTAGE	HZ	MAX AMPS.	VOLTAGE DROP	CONN. DIA.
32391	on make	6 sec...8 min.	dial	19...240VAC	50/60	1	2.5 at 1 amp.	1

Mars Solid State Timers Delay On Break

MARS solid state delay on break timers are designed to prevent short cycling of air conditioning, refrigeration and heat pump compressors. Upon application of power the load is energized. When the thermostat opens, or if there is a momentary loss of power, the load is de-energized and the delay period begins. The compressor will not start again during the delay period.

MARS number 32392 is a versatile two wire timer that features adjustable timing and can be used with any voltage from 19 thru 240 VAC, 50 or 60 Hz.

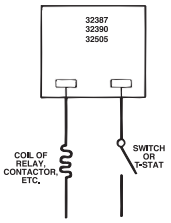
The MARS 32505 are the most simple and economic ways to stop short cycling on 24 VAC controlled systems. Both devices are fixed 5 minute delay on break timers.

32392

32505

Features:

- 1 to 3 second random re-start
- Dial adjustable
- Compact size
- Mounts in any position
- .25 in. quick connect terminals
- Proven reliability
- MARS delay-on-break timers are not load sensitive



Adjustable

MARS NO.	TYPE DELAY	TIME DELAY RANGE	TYPE OF ADJUSTMENT	INPUT VOLTAGE	HZ	MAX AMPS.	VOLTAGE DROP
32392	on break	6 sec...5 min.	dial	19...240VAC	50/60	1	2.5 at 1 amp.

Fixed Delay

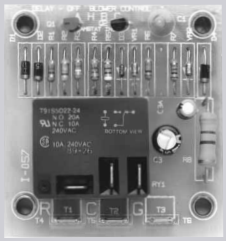
32505	on break	5 min.	none	20-30 VAC	50/60	1	3 at 1 amp.

MARS Solid State Timers & Devices

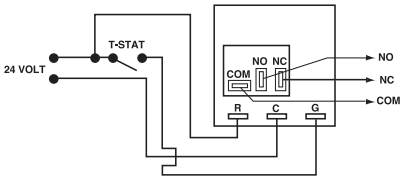
Fan Time Delay Module

The MAHBC fan time delay module is a replacement for the direct motor control used by leading OEMs in high efficiency residential central air conditioning systems. The purpose of the control is to keep the blower motor running for 60 seconds after the thermostat has been satisfied. The result is an increase in residual cooling from the indoor coil without running the condensing unit, and thus, higher energy efficiency.

The MAHBC is ideal for retrofit where improved efficiency is desirable.



32574



Features:

- Wide ambient temperature operating range -40°F to 175°F
- 1/4" male quick connect terminals
- Easy surface mount with four #6 screws
- UL and CSA recognized

Cross Reference

OEM	PART NO.
BARD	8201-056
RHEEM	42-22515-01
SNYDER GENERAL	0001395336

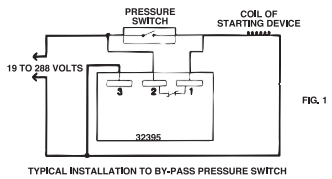
MARS NO.	MARS MODEL	VOLTAGE	OUTPUT 120V	OUTPUT 240V	TIME DELAY	ACTION
32574	MAHBC	24VAC	1 HP	2 HP	60 SEC.	SPDT

MARS Bypass Timer

MARS 32395 is an adjustable, multi-voltage bypass timer that allows the temporary bypass of a control or device during start-up. At the end of the delay period the control is returned to the circuit.

Eliminate nuisance trips!

32395



TYPICAL INSTALLATION TO BY-PASS PRESSURE SWITCH

FIG. 1

Low pressure switch bypass application.

FIGURE 1
LOAD IS BYPASSED ON RETURNS TO CIRCUIT AFTER DELAY PERIOD.

MARS NO.	TYPE DELAY	TIME DELAY RANGE	TYPE OF ADJ.	INPUT VOLTAGE	HZ	MAX AMPS	VOLTAGE DROP	CONN. DIAGRAM
32395	by-pass	6 sec...8 min.	dial	19...240VAC	50/60	1	2 at 1 amp.	1

Compressor Anti-Short Cycle Timer with Low Voltage Brownout Protection

Delay on break.

OEM replacement timers for Lennox, Rheem, Ruud, Trane, Heil Quaker, Keep Rite, Mc Quay, Snyder General and others.

32382

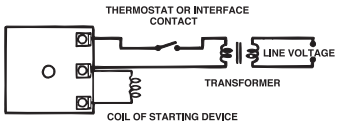
Features:

- Lockout delay prevents rapid cycling compensated resistor type wall thermostats
- Single hole mounting (.25 inch diameter)
- Non-positional
- Brownout protection prevents startup when voltage is below normal conditions
- Reduces nuisance service calls due to short cycling
- Delay on Break Lockout delay starts with opening of thermostat or loss of power
- .25 in. quick-connect terminals
- Eliminates relay chatter due to thermostat bounce
- Small size 2.00 x 2.00 x .75 in.
- UL and CSA listings available

Operation:

On initial closure of the thermostat, the compressor relay energizes immediately. When the thermostat opens, a lockout condition and a time delay is initiated. During this lockout time delay period, the compressor cannot be energized.

Brownout protection prevents energizing of the compressor when the line voltage is below normal conditions.



With Integral Brownout Protection

MARS NO.	MODEL NO.	OPERATING VOLTAGE (NOMINAL)	TIME DELAY (MIN.) ± 2%	MARS NO.
32382	TA24A5	24 VAC	5	1.5

WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

MARS Universal Replacements for Refrigeration and Air Conditioning

MARS motor protectors solve the serviceman's most annoying problem—finding suitable replacements for motor overload protectors.

Features:

- Used in refrigeration, room air conditioners, heating, appliances, and electric motors
- Each overload has six-inch leads and two wire nuts for simple installation
- UL and CSA listings available

35009

Application Survey By Horsepower*

MARS NO.	HORSEPOWER															
	110/115								208/240V							
	1/20	1/12	1/8	1/6	1/5	1/4	1/3	1/2	1/12	1/8	1/6	1/5	1/4	1/3	1/2	1
35010			■	■	■	■								■	■	
35011				■	■	■								■	■	
35012				■	■	■								■	■	
35014					■	■									■	
35015					■	■	■								■	
35016					■	■	■								■	
35017						■	■									■
35018						■	■	■								■
35019							■	■								

3/4" A/C Overloads

MARS NO.	TEMPERATURE CODE
35101	MRA-3763-529
35105	MRP-00-AIU-529

*Motor protectors cannot be replaced by horsepower, amperage, or nameplate data alone. Refer to cross reference information for proper replacement of original equipment motor protectors by part number.

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Klixon 3-Phase Motor Protectors & Commercial Refrigeration Thermostats

On-Winding Overheat Protection

Klixon SL-11 kits are mounted on the windings of general purpose motors and hermetically sealed compressors. They supplement conventional current overload relays in magnetic starters providing modern total protection for most older motors in use today.

Features:

- Allow motors to perform at full-load capacity but will protect against dangerous running overloads
- Protect against blocked ventilation, high ambient temperatures, single phasing
- Each kit contains three matched motor-winding thermostats
- When starter overloads operate, the SL-11 will protect against re-starting at unsafe winding temperatures.
- These motor winding thermostats do not replace overloads in the starter
- UL & CSA listed

Installation:

SL-11 thermostats are tied in place on the end turns of appropriate winding bundles, one to each phase or buried in the windings during motor rewind. They are connected in series between the starter coil and its power supply.

Selection:

- Pick thermostat temperature to operate at the mid-point between the "maximum normal running" temperature and the "maximum allowed running temperature."
- Subtract the gradient temperature (outlined in the chart below) from the mid-point to obtain the operating temperature of the thermostat.

Epoxy-Sealed Thermostats For General Purpose Motors - Normally Closed

MARS NO.	KLIXON KIT NO	KLIXON CAT. NO	OPERATING TEMPERATURE
37075	SL-11-75	9700K51-146	75°C
37100	SL-11-100	9700K26-146	100°C
37110	SL-11-110	9700K36-146	110°C
37120	SL-11-120	9700K01-146	120°C
37130	SL-11-130	9700K11-146	130°C
37135	SL-11-135	9700K06-146	135°C
37140	SL-11-140	9700K66-146	140°C
37145	SL-11-145	9700K76-146	145°C
37150	SL-11-150	9700K46-146	150°C

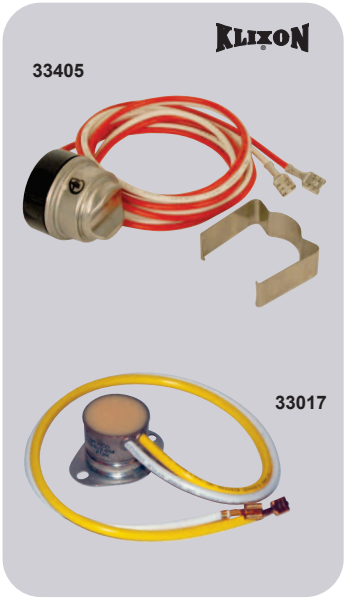
Three thermostats per package

Typical Gradiants	Thermostat Location	
Motor Type	Tied On End Turns	Buried In End Turns
Open Type Totally Enclosed Fan Cooled	30°C	15°C
Totally Enclosed Non-Ventilated	25°C	10°C
	20°C	5°C

Maximum Contact Rating Amps			
Klixon #	24V	115V	230V
9700K	18	18	12

Refrigeration Cases and Coils

MARS has selected the most popular Klixon disc-type thermostats found in commercial refrigeration. These controls cover a wide assortment of applications including supermarket cases and walk-in, reach-in, and beverage coolers.



Features:

- Used on refrigeration cases, coils, with many other commercial applications
- Long lead wires supplied to satisfy most requirements
- Used by Hussman, Friedrich, Larkin, Schaefer, etc.
- 1 inch discs fully encapsulated for trouble-free use
- Mounts directly on coil tube or surface for maximum temperature response
- UL and CSA listings available
- 25 resistive amps maximum

ELECTRICAL RATING			
		TERM. 1-3	TERM. 1-2
Full load amps	120V	13	5.8
	240V	10	2.9
Locked rotor amps	120V	60	34.8
	240V	45	17.4
Pilot Duty	120/240V	125	125
Resistive amps	120/240V	25	25
	277V	15	15

Tube Mounting

MARS NO.	KLIXON NO.	O.E.M.	O.E.M. PART NO.	SWITCH ACTION	OPERATING TEMPERATURES F°		TUBE MT. IN	LEADS IN
					OPEN	CLOSE		
33405	20420D24-106-63	Bally	—	D	70	20	5/8	18
33415	20420D24-399-350		—	D	65	20	5/8	20
33420	20428F1-4-676	Friedrich	606-038-00	F	35	55	3/8	20
33425	20420L15-913-302		794-824-00	L	40	25	5/8	11
33430	20420D1-166-336		—	D	50	35	1/2	18
33435	20420L28-229-89	Hussman	P211-119696	L	20	5	3/4	40
33455	20420F19-63-294	Schaefer	C10872-19	F	20	60	5/8	36
33460	20420L19-202-274		C10872-6	L	35	5	5/8	54
33470	20420L15-376-218		125211	L	50	30	5/8	36
33475	20420L15-722-218	Tyler Ref.	146291	L	40	20	5/8	36
33480	20420L15-767-257		146739	L	80	50	5/8	90

Surface Mounting

MARS NO.	KLIXON NO.	O.E.M.	O.E.M. PART NO.	SWITCH ACTION	OPERATING TEMPERATURES F°		LEADS IN
					OPEN	CLOSE	
33017	20425L153-B22-B54	Heatcraft	5708L	L	75	40	18 w/ quick connects

1D=SPDT, no. 1 is common (white) - no label, no. 2 either opens or closes temp. rise - red label, no. 3 is opposite of no. 2 - blue label F= close on temperature rise, SPST
L= open on temperature rise, SPST 2

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Change-Over Switches for Fan-Coil Systems

The MARS Series 390 change-over switches are used for summer-winter change-over of electric thermo-stats in hydronic heating - cooling fan-coil units.

Features:

- Color coded leads allow easy installation
- SL-8 thermostat is enclosed in sealed case for trouble-free operation
- Snap-acting disc type, insures accurate temperature repeatability
- Can be mounted in any position
- UL and CSA listings available

Installation:

The SL-8 change-over switch is located on the main run of the supply line where it can quickly sense the maximum temperature of the hot or cold water passing through. If the SL-8 switch is exposed to surrounding temperatures, thermal insulation should be wrapped around the switch case to maintain desired thermal response.

Specifications:

Pipe size: 5/8 in O.D.

Leads: 12 in. color coded

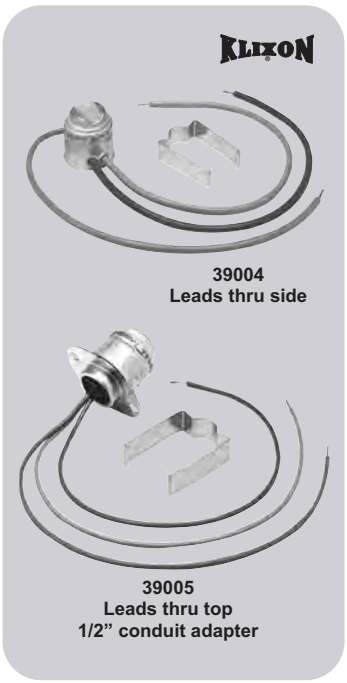
Switch Action: SPDT

Temperature: 88°F (31°C)—terminals 1 & 2 close, 1 & 3 open 73°F (23°C)—terminals 1 & 3 close, 1 & 2 open

Mounting: mounting clip supplied with each kit

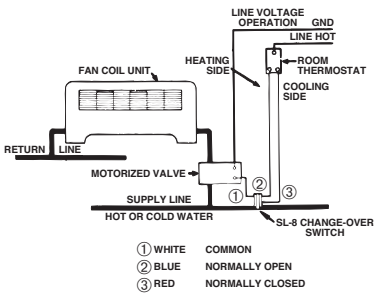
Electrical: terminals 1 & 3 25 amp at 120/240 VAC

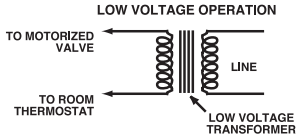
Terminals 1 & 2 10 amp at 120 VAC, 5 amp at 240 VAC



39004
Leads thru side

39005
Leads thru top
1/2" conduit adapter





Honeywell No.	MARS No.	White Rodgers No,	MARS No.
L6076A	**39004**	752-1	**39004**
L6076B	**39005**	752-2	**39005**

MARS NO.	KLIXON KIT NO.	KLIXON NO.	DESCRIPTION
39004	SL8-5	20425D27-160-356	leads thru side of cup
39005	SL8-5A	20425D69-160-287	leads thru top of cup with 1/2" conduit adapter

For Defrost Termination

MARS Series 330 defrost controls are designed to replace many defrost thermostats. The leads are of sufficient length for the connection to be made at the same location as was the control removed. The connection should be insulated in a manner similar to that on the original equipment.

The selection of the proper thermostat can be made by matching the temperature code of the thermostat removed to the code on the MARS Thermostat.

33008

Features:

- Refrigerators, A/C units, & heat pumps, dehumidifiers, icemakers or any place where a fixed temperature control is required in a wet or dirty environment.
- Thermostats have 32" leads.

Temp. Code	Use MARS No.	Temp. Code	Use MARS No.	Temp. Code	Use MARS No.
L40-3.0	33008	L58-4.3	33011	L65-4.0	33012
L42-2.0		L60-2.0		L67-4.2	
L45-3.0		L60-2.5		L70-4.0	
L45-3.0		L60-3.0		L75-5.0	
		L60-3.5			
L55-1.5	33010	L60-4.0		L80-3.0	33020
L55-2.0		L60-4.5		L80-4.0	
L55-2.5				L80-4.5	
L55-3.0				L80-5.0	
L55-3.5					
L55-4.0					

MARS NO.	TEMP. CODE	OPENING TEMP. F°	CLOSING TEMP F°
33008	L45	45	25
33010	L55	55	35
33011	L60	60	40
33012	L70	70	50
33020	L80	80	60

VOLTS	INDUCTIVE	
	F.L.A.	L.R.A.
120	5.8	25
240	2.9	70

MARS Freeze Stat

The MARS 33101 is designed to help stop flood back to compressor crankcases caused by low ambient temperatures.

Features:

- Simple to install
- Refrigerators, freezers, A/C, food dispensing equipment
- For use with 1" pipe, 1/2' radius
- 24" leads

33101

MARS NO.	OPENING TEMP. F°	CLOSING TEMP F°
33101	34	45

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Pressure Switches & MARS Pressure Switches

Fixed Setting Pressure Controls

Low pressure controls.

Specifications:

- Contacts rated at 6 amps, 24-240 volts
- 18” leads

Features:

- Tamper proof construction
- Direct mounting on tubing
- UL & CSA recognized

MARS Pressure Switches deliver the reliability and performance that makes them the most trusted electromechanical sensor. The MARS line of pressure switches cover many new R410A applications along with traditional pressure setting switches.

UL and CUL, Compact size, light weight for direct mounting, Factory Set, Hermetically Sealed Sensor.

5.8 FLA - 34.8 LRA @ 120 VAC, 2.9 FLA - 15.0 LRA @ 240 VAC, 100,000 Cycle Life at Rated Current.

Low Pressure Cut-Out - Open on Pressure Drop, Automatic Reset Normally Open

MARS NO.	OPENING PRESSURE	RESET PRESSURE	NOTES
43341	5	20	1/4" Female Flare S.A.E. Mounting
43342	5	30	1/4" Female Flare S.A.E. Mounting
43343	10	25	1/4" Female Flare S.A.E. Mounting
43344	15	35	1/4" Female Flare S.A.E. Mounting
43345	20	45	1/4" Female Flare S.A.E. Mounting
43372	22	50	1/4" Copper Clad SS Tube w/38" leads
43373	25	40	Gold Contacts 1/4" Female Flare w/36" leads
43346	25	50	1/4" Female Flare S.A.E. Mounting
43347	25	65	1/4" Female Flare S.A.E. Mounting
43348	25	80	1/4" Female Flare S.A.E. Mounting
43349	35	60	1/4" Female Flare S.A.E. Mounting
43350	40	80	1/4" Female Flare S.A.E. Mounting
43351	45	60	1/4" Female Flare S.A.E. Mounting
43352	50	90	1/4" Female Flare S.A.E. Mounting
43374	50	95	1/4" Copper Clad SS Tube w/36" leads
43353	75	100	1/4" Female Flare S.A.E. Mounting
43375	90	120	1/4" Female Flare, w/18" leads
43354	150	225	1/4" Female Flare S.A.E. Mounting
43355	170	250	1/4" Female Flare S.A.E. Mounting

Fixed Setting Pressure Controls High Pressure Cut-Outs

MARS offers the most complete line of high pressure cut-outs available.

Specifications:

- Contacts rated at 6 amps, 24-240 volts
- 1/4” female flare S.A.E. mounting
- 18” leads

Features:

- Tamper proof construction
- Direct mounting on tubing
- UL & CSA recognized

MARS Pressure Switches deliver the reliability and performance that makes them the most trusted electromechanical sensor. The MARS line of pressure switches cover many new R410A applications along with traditional pressure setting switches.

UL and CUL, Compact size, light weight for direct mounting, Factory Set, Hermetically Sealed Sensor.

5.8 FLA - 34.8 LRA @ 120 VAC, 2.9 FLA - 15.0 LRA @ 240 VAC, 100,000 Cycle Life at Rated Current.

High Pressure Cut-Out - Open on Pressure Rise, Automatic Reset, Normally Closed

MARS NO.	OPENING PRESSURE	RESET PRESSURE	NOTES
43337	200	150	1/4" Female Flare S.A.E. Mounting
43321	225	150	1/4" Female Flare S.A.E. Mounting
43322	250	150	1/4" Female Flare S.A.E. Mounting
43324	275	195	1/4" Female Flare S.A.E. Mounting
43325	300	200	1/4" Female Flare S.A.E. Mounting
43326	325	225	1/4" Female Flare S.A.E. Mounting
43320	350	245	1/4" Female Flare S.A.E. Mounting
43327	350	250	1/4" Female Flare S.A.E. Mounting
43328	375	275	1/4" Female Flare S.A.E. Mounting
43329	400	200	1/4" Female Flare S.A.E. Mounting
43330	400	280	1/4" Female Flare S.A.E. Mounting
43331	400	300	1/4" Female Flare S.A.E. Mounting w/24” leads (1 stripped, 1 w/1/4” female flag QC)
43311	410	290	1/4" Female Flare S.A.E. Mounting
43332	425	300	1/4" Female Flare S.A.E. Mounting
43333	425	325	1/4" Female Flare S.A.E. Mounting
43334	450	250	1/4" Female Flare S.A.E. Mounting
43365	590	418	1/4" Female Flare w/snubber
43335	600	475	1/4" Female Flare S.A.E. Mounting
43366	610	420	1/4" Copper Clad SS Tube, 90 degree elbow w/snubber
43339	630	480	1/4" Female Flare S.A.E. Mounting
43367	650	450	1/4" Copper Clad SS Tube w/snubber

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Condenser Fan Cycling Switches

Fan cycling switches provide refrigeration and air conditioning from low ambient conditions.

Specifications:

- Contacts rated at 6 amps, 24-240 volts
- 1/4" female flare S.A.E. mounting
- 18" leads

43301

Features:

- Tamper proof construction
- Direct mounting on tubing
- UL & CSA recognized

Fan Cycling - Close on Pressure Rise

MARS NO.	OPENING PRESSURE	RESET PRESSURE	NOTES
43301	75	100	1/4" Female Flare S.A.E. Mounting
43302	110	170	1/4" Female Flare S.A.E. Mounting
43303	125	265	1/4" Female Flare S.A.E. Mounting
43304	150	225	1/4" Female Flare S.A.E. Mounting
43305	190	275	1/4" Female Flare S.A.E. Mounting
43370	180	240	1/4" Female Flare, S.A.E. Mounting
43306	210	275	1/4" Female Flare S.A.E. Mounting
43307	300	400	1/4" Female Flare S.A.E. Mounting

Manual Reset - High Pressure Cut Out Open on Pressure Rise

43312

MARS NO.	OPENING PRESSURE	RESET PRESSURE	NOTES
43312	375	Manual	1/4" Female Flare S.A.E. Mounting
43313	410	Manual	1/4" Female Flare S.A.E. Mounting
43314	415	Manual	Capilllary Tube
43315	440	Manual	Capilllary Tube
43316	475	Manual	1/4" Female Flare S.A.E. Mounting
43368	590	Manual	1/4" Female Flare w/snubber
43369	610	Manual	1/4" Female Flare w/snubber

Heat Pump Defrost Thermostats

MARS heat pump defrost thermostats are designed for direct replacement of most existing controls of this type. The temperature settings and tubing sizes have been carefully selected from the most popular OEM settings. Each MARS thermostat comes complete with extra long 54 inch leads, mounting clamp, and installation instructions for fast and simple field installation.

33490

Features:

- Four controls cover most requirements
- Tapered mounting edge for maximum heat transfer
- Extra long 54 inch leads for simple wiring
- Individually boxed with mounting clamp and instructions
- UL & CUL listed

Electrical Ratings:

Cycles X1000	Volts	FLA	LRA	Resistive Amps	VA
100	120VAC	5.8	34.8	10	125
100	240VAC	2.9	17.4	10	125
30	120VAC	10.0	40.0	–	–
30	240VAC	10.0	40.0	–	–
100	30VDC	–	–	1	–

MARS NO.	OPERATING TEMPERATURES F°		TUBE MOUNTING IN	LEADS IN
	OPEN	CLOSE		
33490	80	30	3/8	54
33492	80	30	1/2	54
33494	65	30	3/8	54
33496	65	30	1/2	54

Compressor Heaters

TUTCO™ Compressor Heaters for A/C and Refrigeration

Features:

- Corrosion resistant exterior
- High temperature silicone rubber element and insulated leads
- 30” leads
- Wattage for each model matches compressor requirements
- Completely moisture proof
- Installs quickly and easily
- Nominal power consumption
- UL & CSA Listed

Application Reference Chart for TUTCO™ Compressor Heaters

Manufacturer	Model	MARS No.
Aspera	H	**32605-32608**
Aspera	J	**32609-32611**
Bendix/Westinghouse	A	**32613**
Bendix/Westinghouse	C, D	**32601-32604**
Bendix/Westinghouse	E	**32605-32608**
Bristol/Sundstrand	H10A, H21A, H2EA, H22A	**32605-32608**
Bristol/Sundstrand	H10B, H20B, H21B, H22B	**32613**
Bristol/Sundstrand	H10G, H20G, H21G, H22GN2NG-144	**32617-32620**
Carrier	6A25, 26, 28, 29, 6A35, 38, 45, 48	**32605-32608**
Carrier	6A88	**32617-32620**
Carlysle	W (70-88)	**32601-32604**
Copeland	BR	**32634-32635**
Copeland	CR	**32605-32608**
Copeland	JR	**32629-32630**
Copeland	RR, SR	**32613**
Copeland	VR	**32621-32624**
Copeland	Y	**32601-32604**
Fedders/Chrysler	3009	**32617-32620**
Fedders/Chrysler	2870908	**32631**
Hitachi	1500FH4-H	**32617-32620**
Hitachi	305FH2-HE, 402FH2-HE, 505FH2-HE	**32613-32616**
Hitachi	753FH3-H, 1001FH4-H	**32601-32604**
Sanyo	CR15F, CR20F, CR33F	**32631**
Tecumseh	AB, AW	**32613**
Tecumseh	AH	**32605-32608**
Tecumseh	AJ	**32609-32611**
Tecumseh	AK	**32629-32630**
Tecumseh	B, C, CL, AG, AV	**32601-32604**
Tecumseh	FE, FB	**32617-32620**
Trane	D4340/7669	**32609-32611**
Trane	D4340/7670	**32621-32624**
Trane	D4350/689, D4359/690	**32605-32608**
Westinghouse	CD072, CD090	**32605-32608**
Westinghouse	CD072, CD090	**32621-32624**

MARS NO.	DESCRIPTION	VOLTS	WATTS	INCHES		SHAPE
				MIN.	MAX	
32601	CH-100	240	50	30 3/16	37	OVL
32602	CH-100-1	208		30 3/16	37	
32604	CH-100-3	480		30 3/16	37	
32605	CH-101	240	54	27 7/16	34 1/4	OVL
32608	CH-101-3	480		27 7/16	34 1/4	
32609	CH-102	240	60	25 3/4	32 9/16	OVL
32610	CH-102-1	208		25 3/4	32 9/16	
32611	CH-102-2	120		25 3/4	32 9/16	
32613	CH-103	240	45	24 3/4	31 9/16	OVL
32617	CH-104	240	75	41 1/2	48 5/16	RND
32619	CH-104-2	120		41 1/2	48 5/16	
32620	CH-104-3	480		41 1/2	48 5/16	
32621	CH-105	240	50	32 1/2	39 5/16	RND
32624	CH-105-3	480		32 1/2	39 5/16	
32629	CH-135	240	45	20 5/16	27 1/8	OVL
32630	CH-135-2	120		20 5/16	27 1/8	
32631	CH-197	240	25	13 3/4	20 9/16	RND
32634	CH-202-2	120	70	33 3/4	36 3/4	RND
32635	CH-202-3	480		33 3/4	36 3/4	

⚠ WARNING:
Cancer and Reproductive Harm
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www.marsdelivers.com

Direct Replacement Crankcase Heaters for Copeland

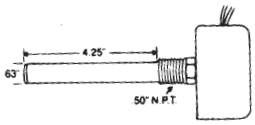


Figure 1

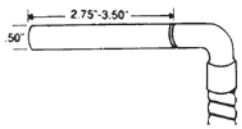
Crankcase Heaters for Copeland

NOTE: All heaters requiring clips or brackets are packaged with the appropriate clips or brackets required.

MARS NO.	COPELAND NO.	WATTS	VOLTS	HEATER LENGTH IN.	FIGURE	COMPRESSOR MODEL	ACCESSORIES
32408	518-0002-01	100	480	4.25	1	4R, 6R, 6T, 4D, 6D	-

Direct Replacement Crankcase Heaters for Carrier

Figure 1



Crankcase Heaters for Carrier

MARS NO.	CARRIER NO.	WATTS	VOLTS	HEATER LENGTH IN.	LEAD LENGTH IN.	FIGURE	COMPRESSOR MODEL
32472	HT36FL379	125	120	2.75	60	1	EM:06DM: 306B:50EQ
32474	HT36FL479	125	240	2.75	68	1	EM:06DM: 30HR:30HS

Self Regulating Crankcase Heaters

MARS self-regulating crankcase heaters are designed for use with refrigeration compressors up to 5HP and 40 inches in circumference. These heating cables provide peak heat during cold periods and reduced heat when the air temperature rises and should be used in non-hazardous areas.

- Cold length: 30”
- Heat cable length: 50”

MARS NO.	TYPE	WATTS	VOLTS
70970	Self Regulating	32W @ 50°F • 60W @ 0°F	120
70971	Self Regulating	32W @ 50°F • 60W @ 0°F	240

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Electric Heat

Replacement Coil Kits and Accessories for Electric Heat

MARS Replacement coil kits for electric heat let you repair strip heaters quickly and economically. Each kit contains one close wound, stretch to length, resistance coil with welded terminal bolts; two each male and female ceramic terminal insulators; two each .375 and .450 inch standard ceramic bushings; two each .375 and .450 inch extra long ceramic bushings; necessary nuts, washers, and installation instructions.

Select the right MARS kit from the chart below and order one kit for each circuit to be repaired. Thermal fuse links are rated 22 amp resistor, 15 amp inducer at 120 and 240 VAC.

Features:

- Welded terminal bolts for low resistance and long life
- Close wound coil, stretch to fit many applications
- Complete with bushings, insulators and hardware

MARS NO.	WATTAGE AT				STRETCHED LENGTH			
					INCHES		METERS	
	240V	208V	480V	277V	MIN	MAX	MIN	MAX
34602	5000	3750	—	—	44.62	127.48	1.13	3.24
34604	—	—	5000	—	61.78	176.53	1.57	4.48
34606	—	—	—	5000	59.44	169.82	1.51	4.31
34608	3500	2625	—	—	50.75	145.00	1.29	3.68
34610	—	—	3500	—	42.27	120.76	1.07	3.07
34614	2000	1500	—	—	25.90	74.01	0.66	1.88
34616	2500	1875	—	—	30.89	88.26	0.78	2.24
34620	—	—	—	2500	27.61	78.87	0.70	2.00
34624	4500	3375	—	—	42.33	120.95	1.07	3.07
34626	—	—	4500	—	46.05	131.98	1.17	3.35
34630	—	—	2000	—	32.00	108.00	0.81	2.74
34652	6600	4950	—	—	70.56	201.59	1.79	5.12
34654	—	—	6600	—	65.39	186.71	1.66	4.74
34656	6000	4500	—	—	54.43	155.50	1.38	3.95
34658	—	—	6000	—	71.88	205.38	1.83	5.22
34660[1]	5000	3756	—	—	25.00	70.00	—	—

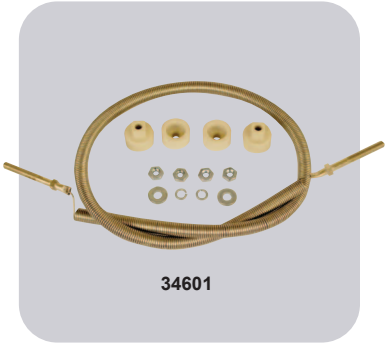
(1) Larger diameter coil - 5/8"

Thermal Fuse Links*

MARS NO.	°F	°C	DESCRIPTION
34700	204	95.56	Fuse Link
34702	283	139.45	Fuse Link
34704	333	167.22	Fuse Link
34706	300	148.89	Fuse Link
34708	300	148.89	Fuse Link–Round Ceramic Base
34710	227	108.33	Fuse Link–Oblong Ceramic Base
34712	300	148.89	Fuse Link–Oblong Ceramic Base

*10 per pack

Replacement Coil Economy Kits



MARS NO.	DESCRIPTION
34600	5000 Watt @ 240 V; includes coil, insulators & hardware
34601	5000 Watt @ 240 V; includes 300° fuse link, coil, insulators & hardware

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Electric Heat Sequencers

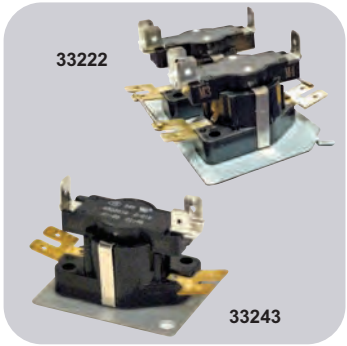
A new simple method for selecting and replacing electric heat sequencers with only five basic controls. Replace sequencers in almost any existing system.

Sequencer selection:

A. Determine the number of circuits to be switched. (Electrical rating of auxiliary switch same as main switch.) When more than one (1) sequencer is required the sequencers are to be wired in series with the last switch in each sequencer energizing the control circuit of the next sequencer.

B. Select from the chart the sequencers needed for the number of circuits to be switched. These sequencers may be wired in series to allow sequencing of virtually any number of heating elements and fans.

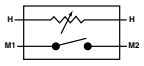
If the sequencers control the fan/blower circuit, the first switch (M1-M2) of each sequencer must always control the fan. This provides a fan interlock to insure that the fan will remain on until all elements are de-energized.



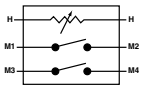
Features:

- Solid State dependability
- Replaces Honeywell and White-Rodgers
- Ambient rated from 20°F to 160°F
- Used on both separate blower and element and combination blower and element systems
- Total 24 volt control
- Standard double quick-connect terminals for combination fan and element systems
- Full-load-rated auxiliary contacts
- 7.2 KW combination fan and element rated contacts (23A resistive, 7A motor load)
- Non-positional
- Voltage and ambient self compensating positive temperature coefficient (PTC) heater elements
- Individually packaged with wiring diagrams for up to seven element furnaces.
- UL and CSA listing available

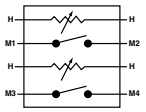
Schematic



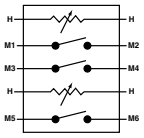
33243
SPST - 1 switch



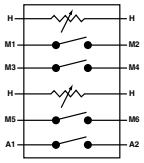
33246
DPST - 2 switches



33222
(2)SPST - 2 switches



33232
(1)DPST and
(1)SPST - 3 switches



33233
(2)DPST - 4 switches

			SWITCH SEQUENCE		SWITCH TIMING: MIN-MAX IN SECONDS							
					SWITCH NO.1 TERMINALS M1 / M2		SWITCH NO.2 TERMINALS M3 / M4		SWITCH NO.3 TERMINALS M5 / M6		SWITCH NO.4 (2) TERMINALS A1 / A2	
NO. OF SWITCHES	MARS NO.	REPLACES KLIXON NO.	FIRST ON LAST OFF	LAST ON FIRST OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
1	33243	6000AOM	(1)		1-60	1-45						
2	33246	6000EOM	(1)		1-60	1-45	1-60	1-45				
2	33222	51172-22	No. 1	No. 2	1-24	45-75	30-70	1-40				
3	33232	51172-32	No. 1, No. 2	No. 3	1-24	45-75	1-24	45-75	30-70	1-40		
4	33233	51172-33	No. 1, No. 2	No. 3, No. 4	1-24	45-75	1-24	45-75	30-70	1-40	30-70	1-40

Contact Rating Chart

VAC	RES AMPS	FLA	LRA	PILOT DUTY VA
120	30	23	84	672
240	30	23	60	960
277	23	23	42	775
480	12.5	5	10	400

Relays & Sequencers

Thermal Time Delay Relays Sequencers

These time delay relays are used for a variety of applications in heating and air conditioning. They operate by means of a solid state PTC (positive temperature coefficient) device which heats up as current passes through it from the control circuit. This heat causes a positive, snap-acting disc to make or break the necessary contacts.

SPST

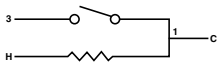
DPST

SPDT

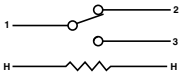
Features:

- Shock & vibration resistant internal snap action automatic reset switch mechanism assures positive make/ break action
- Non-positional
- Wide selection for any application
- Voltage and ambient compensated
- UL and CSA listed
- Used for electric heat, air conditioning, heat pumps, gas & oil furnaces, unit heaters and commercial refrigeration

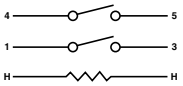
Diagrams:



Single Pole Single Throw



Single Pole Double Throw
(Contacts 1 and 3 are normally open)



Double Pole Single Throw

MARS NO.	REPLACES KLIXON NO.	SWITCH TYPE	CONTROL VOLTAGE	DELAY (SEC.) ON	OFF
33215	G0-18		24	1-60	1-45
33217	G4-9		240	20-70	20-80
33241	AOM		24	1-24	45-75
33242	AOM	SPST N.O.	24	30-75	1-40
33243	AOM		24	1-60	1-45
33244	EOM		24	1-24	45-75
33245	EOM	DPST N.O.	24	30-75	1-40
33246	EOM		24	1-60	1-45
33247	COM-21	SPDT 1 & 3 N.O.	24	1-24	15-75
33256	E4	DPST N.O.	120	20-70	20-80
33265	E4	DPST N.O.	240	30-110	15-65
33266	E4		240	20-70	20-80
33267	C4M-13	SPDT 1 & 3 N.O.	240	20-70	20-80

Electric Heat Sequencers

The MARS heat sequencers are used in a variety of applications, including electric furnaces, baseboard heaters, heat pump blower control and heating element control. The sequencers stage electric heat to prevent circuit overload. These units operate by means of a PTC (positive temperature coefficient). The PTC is self current limiting, ensuring stable switching action over a wide rangeof voltages.

33841

33844

Features:

- Solid state dependability
- Replaces Honeywell, White Rodgers, and Klixon
- 12.5A to 25A contact ratings
- Quick connect terminals
- Various mounting positions
- Shock & vibration resistant
- Ambient rated from -50ºF to 165ºF
- Full-load rated auxiliary contacts

Single Load Contact Ratings

	RESISTIVE (NON-INDUCTIVE)		MOTOR RATINGS (INDUCTIVE)		
VAC	WATTS	AMPS	FULL LOAD	LOCKED ROTOR	PILOT DUTY
120	3000	25	10A	60A	125VA
240	6000	25	5A	30A	125VA
480	6000	12.5	3A	18A	480VA

Combined Load Ratings: 30A @ 240VAC - Total: 23A non-inductive + 7FLA / 42LRA inductive
Life at rated current: 10,000 cycles

MARS NO.	TIM.	SW.	M1-M2	M3-M4	M5-M6	M7-M8	M9-M10	M1-M2	M3-M4	M5-M6	M7-M8	M9-M10
33841	1	1	1-20	-	-	-	-	40-110	-	-	-	-
33842	1	1	-	-	30 - 90	-	-	-	-	1-30	-	-
33844[1]	1	2	1-20 ■	1-20	-	-	-	40-110 ■	40 - 110	-	-	-
33845	1	2	-	-	30-90 ■	30-90	-	-	-	1-30 ■	1-30	-
33832[1]	2	3	1-110 ■	1-110	1-110	-	-	1-110 ■	1-110	1-110	-	-
33833[1]	2	4	1-110 ■	1-110	1-110 ■	1-110	-	1-110 ■	1-110	1-110 ■	1-110	-
33848[1][2]	4	5	1-160 ■	1-160	1-160	1-110	1-160	1-160 ■	1-160	1-160	1-160	1-160

(1) M1-M2 and M3-M4 are always first switches to turn ON and to turn OFF. All other switches are random ON and random OFF
(2) #33848 - switch contacts designated F1-F2 instead of M1-M2

■ These contacts switch simultaneously
ON TIME – Elapsed time to make contacts after heater is energized (Min. to Max.)
OFF TIME – Elapsed time to make contacts after heater is de-energized (Min. to Max.)
OFF Timings determined after PTC heater has been electrified for a total of 5 minutes.

⚠ WARNING:
Cancer and Reproductive Harm
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Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Heating Applications

MARS Series 390 thermostats are designed for quick on-the-job replacements. One thermostat, when used in conjunction with only one listed, can solve almost any mounting problems you encounter.

Our thermostats have been carefully selected to cover the widest temperature ranges with the fewest models.

Features:

- Widest range of replacements in the industry
- UL and CSA listings available

Electrical Rating

		Terminals 1-3	Terminals* 1-2
FL Amps	120v	10	5.8
	240v	5	2.9
Res. Amps	120v	25	10
	240/277v	25	5
Pilot Duty	120/240/277v	125va	125va

**For Spdt Thermostats*

Fan Switches - Close On Temperature Rise

MARS NO.	KLIXON TEMP. CODE	TEMPERATURE °F OPEN	CLOSE
39006	F110-2	90	110
39007	F120-2	100	120
39008	F130-2	110	130
39009	F140-2	120	140
39010	F150-2	130	150
39011	F160-2	140	160

Manual Reset Limit Switches- Open On Temperature Rise

MARS NO.	REPLACES KLIXON TEMP. CODE	TEMPERATURE °F OPEN °F
39099	MR125	125
39037	MR140	140
39038	MR150	150
39039	MR160	160
39095	MR170	170
39096	MR180	180
39097	MR190	190
39098	MR200	200
39040	MR210	210
39042	MR240	240

Limit Switches - Open On Temperature Rise

MARS NO.	KLIXON TEMP. CODE	TEMPERATURE °F CLOSE	OPEN
39086	L125-2	105	125
39087	L130-4	90	130
39018	L140-4	100	140
39019	L150-4	110	150
39020	L160-4	120	160
39021	L170-4	130	170
39022	L180-4	140	180
39023	L190-4	150	190
39024	L200-4	160	200
39025	L210-4	170	210
39026	L220-4	180	220
39027	L230-4	190	230
39028	L240-4	200	240
39029	L250-4	210	250
39030	L270-4	230	270
39031	L300-4	260	300
39033	L350-4	310	350

Single Pole Double Throw Switches

MARS NO.	KLIXON TEMP. CODE	TEMPERATURE °F 1-2 OPEN OPEN	1-2 CLOSE CLOSE
39078	D140-2	120	140
39045	D150-2	130	150
39081	D170-2	150	170

Adjustable Fan or Limit Thermostats

MARS adjustable fan or limit thermostats let you reduce inventory and still have on hand the most popular thermostat ratings.

MARS adjustable thermostats Are easily set for the desired temperature by turning the indicator dial built into the control. Each MARS adjustable thermostat features integral 2 hole oval mounting flanges.

39205

Features:

- Easy dial adjustment
- Six controls cover most requirements
- Intergral oval flange
- UL and CSA listings available

MARS NO.	TYPE	RANGE °F	DIFF. °F	SWITCHING ACTION
39205	Fan	90-130	20	Close on rise
39210	Fan	140-180	20	Close on rise
39220	Limit	135-175	40	Open on rise
39225	Limit	175-215	40	Open on rise
39230	Limit	210-250	40	Open on rise
39235	Limit	250-290	40	Open on rise

Cross Reference Information

GEM NO.	MARS NO.	WHITE-RODGERS NO.	MARS NO.	MARS 2	MARS NO.
AT 012	39220	3F05-1	39205	35205	39205
AT 013	39225	3F05-2	39210	35220	39220
AT 014	39230	3L05-1	39220	35225	39225
AT 015	39235	3L05-2	39225	35230	39230
AT 021	39205	3L05-3	39230	35235	39235
AT 022	39210				

Cross Reference Information

WR NO.	MARS REPLACEMENT	WR NO.	MARS REPLACEMENT	WR NO.	MARS REPLACEMENT
3F01-110	39006	3L01-120	39086	3L02-160	39039
3F01-120	39007	3L01-130	39087	3L02-170	39095
3F01-130	39008	3L01-140	39018	3L02-180	39096
3F01-140	39009	3L01-180	39022	3L02-190	39097
3F01-150	39010	3L01-190	39023	3L02-200	39098
3F01-160	39011	3L01-200	39024		
3F01-180	39112	3L01-230	39027	3L03-140	39078
3F01-200	39113	3L01-250	39029	3L03-190	39147
3F01-350	39017	3L01-300	39031	3L03-325	39093
		3L01-350	39033		
		3L01-550	39036		

Fan & Limit Disc Thermostats

Electric Heat High Limit Thermostats

MARS electric heat high limit thermostats are designed for easy accurate replacement of OEM thermostats on electric furnaces. Temperature ratings and differentials have been careful selected for safe operation.

MARS electric heat high limit thermostats feature an exposed matte finish disc for fast response. Easy matching of OEM mountings using the intergal round flange or accessory oval flange.

39310

Features:

- Exposed matte finish disc for fast response
- Twelve models replace most popular OEM thermostats
- Individually bagged with instructions
- UL and CSA listings available

MARS NO.	TEMPERATURE °F OPEN	CLOSE	DIFFERENTIAL
39310	110	90	20
39312	120	100	20
39314	130	100	30
39316	140	100	40
39318	145	105	40
39320	150	110	40
39324	160	120	40
39326	170	130	40
39328	180	140	40
39330	190	150	40

Pro-Series Heating Service Kit

MARS has selected the most popular fan and limit switches used in heating applications. Each switch has an integral small oval flange to duplicate the most popular mounting. UL and CSA listings available.

39008

MARS NO.	SWITCH TYPE	KLIXON TEMP. CODE	TEMPERATURE °F CLOSE	OPEN	TEMPERATURE °C CLOSE	OPEN
39008	Fan	F130-2	130	110	54	43
39009	Fan	F140-2	140	120	60	49
39010	Fan	F150-2	150	130	66	54
39011	Fan	F160-2	160	140	71	60
39022	Limit	L180-4	140	180	60	82
39023	Limit	L190-4	150	190	66	88
39024	Limit	L200-4	160	200	71	93

Home Laundry Applications

MARS has carefully selected the most popular multi-purpose thermostats for home laundry and drier equipment. MARS Operating Limit Thermostats range from 125°F to 180°F and have narrow differentials (20°F).

Features:

- UL and CSA listings available.

39086

Operating Limit Thermostats — Open On Temperature Rise

MARS NO.	KLIXON TEMP. CODE	TEMP °F-OPEN	TEMP. °F-CLOSE
39086	L125-2	125	105
39055	L130-2	130	110
39048	L180-2	180	160

MARS Thermocouples

MARS universal replacement thermocouples are fully equipped with fittings and necessary hardware for quick and easy installation.

Each kit is packaged on a display card for easy identification.

Features:

- High temperature stainless steel element for long life and dependable operation
- Fully equipped with fittings and necessary hardware for quick and easy installation
- Individually display packaged for protection and easy identification

72248
Adapter fittings with each kit

MARS NO.	MODEL NO.	LENGTH INCHES
72218	TC-18P	18
72224	TC-24P	24
72230	TC-30P	30
72236	TC-36P	36
72248	TC-48P	48

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MARS Universal Silicon Nitride Igniter

MARS Universal Silicon Nitride Igniter is designed to replace over 100 silicon nitride igniter applications. The universal bracket kit is used in a simple series of combinations for a quick and easy installation. Extremely low iron content makes the MARS Universal Silicon Nitride Igniter very durable and reliable. Low energy consumption makes it perfect for any 120 VAC application.

Features:

- Gas fired forced air furnaces and boilers
- Easy to install
- Universal bracket fits most furnaces
- Fits over 100 applications

Specifications:

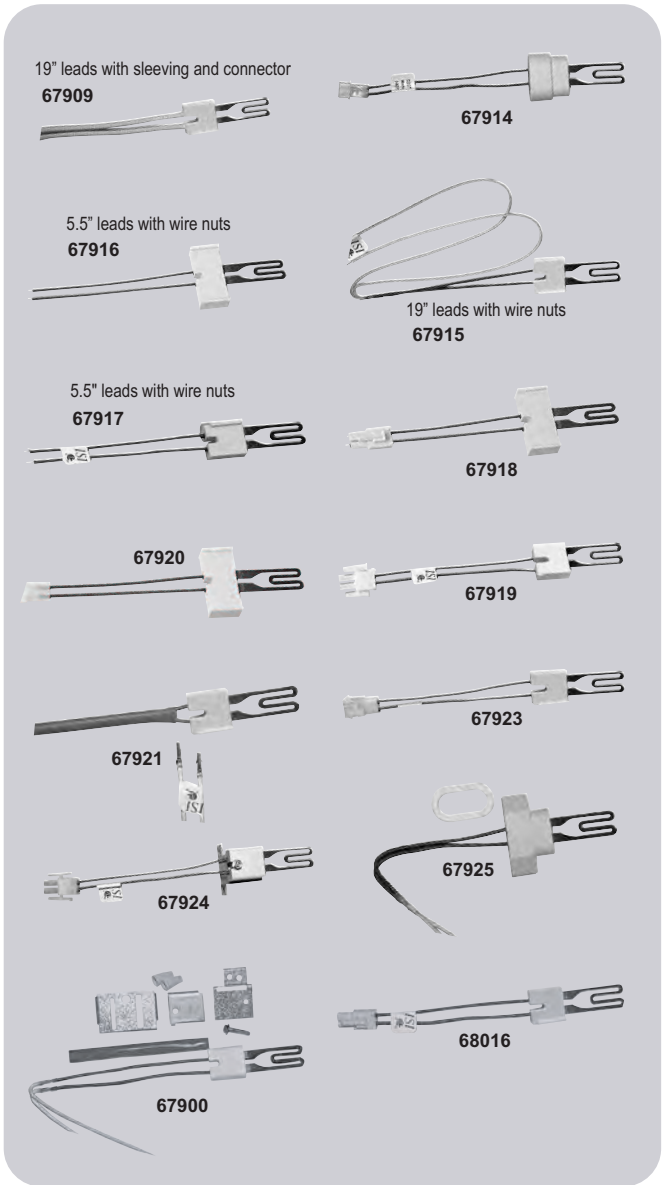
- Input voltage 120vac
- Time to ignition temperature: 16 seconds
- CSA certified
- Steady current 1.3 amps (± 0.3 amps @ 120v)

MARS NO.	DESCRIPTION
68040	Universal SiN Round Silicone Nitride Igniter

Gas Furnace Igniters

- Compatible with 17, 34, and 45 second warm-up modules
- Full 115/120 volt rated (no step down module required for silicon nitride)
- Wire nuts or OEM plugs and mounting hardware included
- New laminated pictorial cross reference and contractor tri-folds available

Flat silicon carbide: The most economical solution.
Silicon nitride: The newest technology is virtually indestructible.



Direct Replacements

FLAT SILICON CARBIDE	INDUSTRY RECOGNIZED REFERENCE
67914	41-401
67915	41-402
67916	41-403
68017	41-404
67917	41-405
67925	41-406
67918	41-407
67919	41-408
67920	41-409
68016	41-410
68013	41-411
68014	41-412/41-414
67915	41-238/41-242
67909	Coleman 1474-051P / 052P
67921	Lennox 33J37
67924	Goodman B1401015 / B1401018S
67923	York 025-32625-000

Universal

FLAT SILICON CARBIDE	SILICON NITRIDE	SUPCO	WHITE-RODGERS
67900	N/A	SIG1100	-
N/A	68040	SSN2000	21D64-2

Flame Sensors

Flame Sensors

MARS flame sensors are direct OEM replacements. False shutdowns can occur in gas furnaces due to a built up carbon on the flame rod. Incorrect cleaning procedures can also damage the flame rod. Replacing a flame sensor that has triggered a false shutdown is the best preventative maintenance and eliminates nuisance service calls.

- Direct OEM Replacements
- Improved Service Life
- OEM Mounting Brackets
- Ceramic Insulators

MARS No.	Replaces OEM	OEM Part Number
67680	Goodman	10735201
67681	Source 1	SI-02537499000
67682	Source 1	SI-02530788700
67683	Goodman	0130F00010
67684	Allied	44L48
67685	Source 1	SI-02535306000
67686	Source 1	SI-02527773700
67687	Source 1	SI-02535354000
67688	Goodman	B1172601
67689	Source 1	SI-02530802000

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Service & Installation

Delivering Confidence

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Whole Home Air Purifier

Comfort-Aire® Whole Home In-Duct Air Purification System

Made in USA With Globally Sourced Components

Reduces 99.9% Of Harmful Airborne Microbials

The Comfort-Aire in-duct whole home air purifier reduces mold, VOCs, viruses, bacteria, tobacco smoke, and common household odors using photocatalytic oxidation (PCO). Two UV-C sources (gas lamp and LED) react with two proprietary substrates to create a large field of oxidizing agents within the duct. As contaminants in the air pass through the field, the oxidizing agents attack and break down the microbials resulting in cleaner, healthier, and fresher smelling air. This unit is certified zero ozone.

Features:

- For Use In Air Handlers Up To 2000 CFM
- All Hardware Included For Simple In-Duct Installation
- Digital Countdown Timer For Visual Indication Of UV-C Lamp Replacement
- Operates Continuously For Extended Lamp Life (3+ Years)
- Limited Warranty:
  - 7 Years Unit
  - 3 Years UV-C Gas Lamp

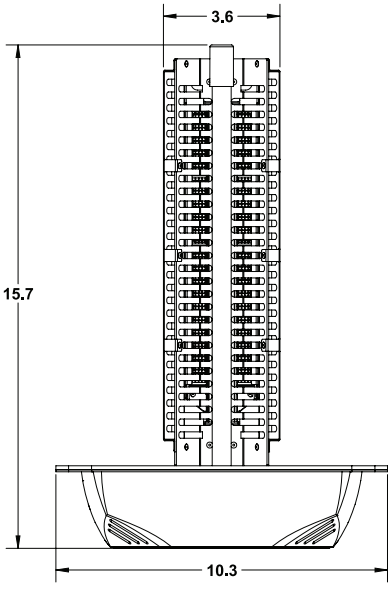
Specifications:

- cETLus Listed : CE Certified
- Conforms To UL 1598:2021 Ed. 5
- Conforms To CSA C22.2#250.0:2021 Ed. 5
- Certified Zero Ozone
- Approved For Sale In California
- Power Consumption:

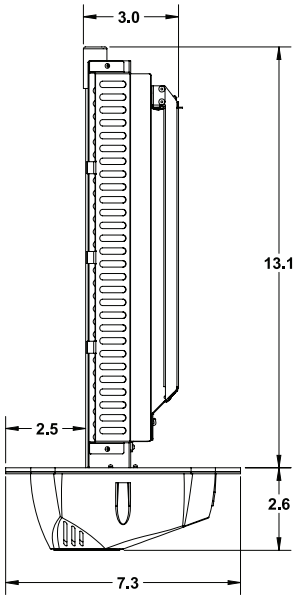
  120VAC .22A 26W
  208VAC .13A 26W
  240VAC .11A 26W

INTERTEK SUSTAINABILITY — VERIFIED ZERO OZONE — MEETS UL 2998 DOES NOT EMIT MORE THAN 0.005 PPM AS TESTED PER UL 867

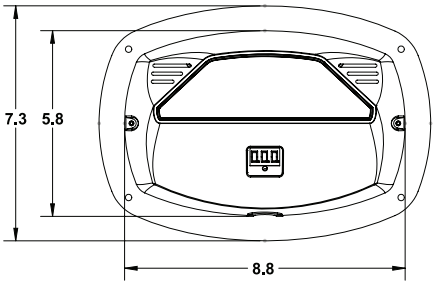
MARS NO.	DESCRIPTION	VOLTAGE
00700	Whole Home Air Purifier	120, 208-240
00701	Replacement UV-C Lamp	–
00702	Replacement UV-C LED Cell	–



TOP VIEW



RIGHT SIDE VIEW



FRONT VIEW

⚠ WARNING:
Cancer and Reproductive Harm
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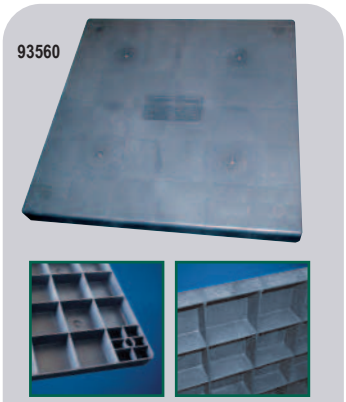
Accessories

MARS Condenser Pads

MARS is pleased to offer a full line of Air Conditioning Condenser Pads. These dark gray plastic pads are molded from polypropylene. The lightweight, one piece constructed pads are virtually unbreakable and built to last. Two and three inch thick pads are available.

Features & Benefits:

- UV stable – prevents weathering or cracking
- Chemical resistant
- Solid wall construction
- Will not chip or crack
- Lightweight
- Textured surface – prevents unit from sliding
- Unique footpads – prevent unit from sinking into ground
- Size molded in side of pad
- Drillable for attachment of unit



- **Rugged, easy to handle**
- **Weed wackers won't destroy the corners**

MARS NO.	DESCRIPTION	PALLET QTY.
93560	24" x 24" x 2"	22
93577	24" x 24" x 3"	16
93561	24" x 36" x 2"	22
93562	32" x 32" x 2"	22
93587	32" x 32" x 3"	16
93573	36" x 36" x 2"	22
93592	36" x 36" x 3"	16
93576	36" x 40" x 2"	22
93593	36" x 40" x 3"	16
93594	36" x 48" x 3"	16
93595	40" x 40" x 3"	16

MARS Stackable Condenser Pads

MARS Stackable A/C condenser pads are high impact 100% recycled composite plastic which makes them lightweight, sturdy and very durable. These pads are a must have for any unit. They are UV Stable and chemical resistant eliminating weathering and cracking over time. The textured surface prevents the unit from sliding and is drillable for attachment of any unit.

You will discover for yourself that these may just be the last equipment pad you will ever choose.

Features:

- Nesting design
- High impact 100% recycled composite

When stacked, three 3" pads are 5.1" tall

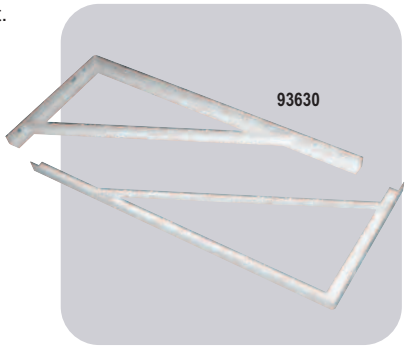
MARS NO.	SIZE (INCHES)	WEIGHT RATING * (MAX.)	PADS PER PALLET
89540	18 x 38 x 3	2,200 Lbs	38
89577	24 x 24 x 3	2,200 Lbs	45
89565	30 x 30 x 2	2,200 Lbs	45
89584	30 x 30 x 3	2,200 Lbs	38
89562	32 x 32 x 2	2,200 Lbs	45
89587	32 x 32 x 3	1,980 Lbs	38
89573	36 x 36 x 2	1,650 Lbs	45
89592	36 x 36 x 3	1,540 Lbs	38
89593	36 x 40 x 3	1,540 Lbs	38
89595	40 x 40 x 3	1,320 Lbs	38

* Rating based on 5mm deflection with weight applied evenly across surface.

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

MARS A/C Mounting Brackets

Heavy duty engineered steel A/C brackets are used for mounting A/C condensers and heat pumps on vertical walls. Brackets include mounting holes and are finished in a durable gray powder coat.



MARS NO.	DESCRIPTION	MARS PACK
93630	30" Powder Coated Steel Bracket	1 Pair
93631	36" Powder Coated Steel Bracket	1 Pair
93632	42" Powder Coated Steel Bracket	1 Pair
93636	48" Powder Coated Steel Bracket	1 Pair

* Max load Capacity up to 500 lbs. Wall load limitations is restricted by strength of hardware used

MARS Universal Mini-Split Condenser Wall Mount Brackets

MARS mini-split brackets are available in four sizes to accommodate mounting of popular mini-split compressors.

Bracket kits include mounting hardware and vibration absorbers for a professional installation. Pre-assembled vertical supports speed installation.

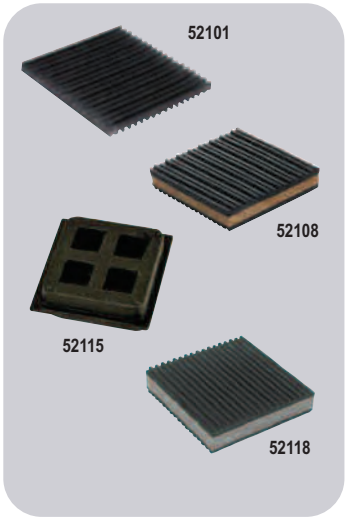
- Powder Coat Finish - resists rust and corrosion
- Mounting and attachment hardware included
- Bracket width and depth adjust to accommodate compressor size
- Vibration pads included for a durable and quiet installation
- Pre-assembled vertical supports reduce installation time

MARS NO.	SIZE H X L X W	LOAD CAPACITY (LBS)
93640	14.5" x 18" x 33.5"	260
93641	18" x 22" x 33.5"	330
93642	18" x 24" x 33.5"	400

* Max load Capacity up to 500 lbs. Wall load limitations is restricted by strength of hardware used

Anti-Vibration Pads

MARS offers a complete line of anti-vibration pads. These high quality rubber pads provide maximum loading of 60 lbs. per square inch. Anti-vibration pads can be used on any type of mechanical/electrical machines such as pumps, motors, air conditioning units, generators, compressors, etc. The plain rubber pads have grooves on both sides. The cork rubber pads are the same but with the added advantage of reduction in sound level. The natural rubber Iso-Pads can be easily cut for odd sized dimensions under equipment legs and supports. The use of these pads eliminates the need for bolting down equipment to the floor. These Iso-Pads provide superior isolation, attenuation and vibration characteristics.



MARS NO.	DESCRIPTION	MARS PACK
52101	2" x 2" x 3/8" Rubber	1
52103	4" x 4" x 3/8" Rubber	1
52104	6" x 6" x 3/8" Rubber	1
52107	18" x 18" x 3/8" Rubber	1
52108	2" x 2" x 7/8" Cork/Rubber	1
52109	3" x 3" x 7/8" Cork/Rubber	1
52110	4" X 4" X 7/8" Cork/Rubber	1
52111	6" x 6" x 7/8" Cork/Rubber	1
52114	18" x 18" x 7/8" Cork/Rubber	1
52115	2" x 2" x 3/4" Iso-Pad	1
52116	4" x 4" x 3/4" Iso-Pad	1
52117	18" x 18" x 3/4" Iso-Pad	1
52119	2" x 2" x 7/8" Foam/Rubber	1
52118	4" x 4" x 7/8" Foam/Rubber	1
52120	6" x 6" x 7/8" Foam/Rubber	1
52122	18"x18"x7/8" Foam/Rubber	1

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

MARS Heat Pump Risers

Heavy duty composite heat pump risers are available in 2 popular heights in a cost effective 1 piece design as well as a 2 piece terrain adaptable design. Each riser includes factory installed buytl mastic patches on the top and bottom to absorb vibration and reduce noise.

MARS NO.	DESCRIPTION	MARS PACK
93600	3" 1 Piece Heat Pump Riser	48
93602	3" 2 Piece Heat Pump Riser	32
93601	6" 1 Piece Heat Pump Riser	24
93603	6" 2 Piece Heat Pump Riser	16
93604	4" Riser Extension	16
93639	Adjustable 5-3/4" to 7" Heat Pump Riser	16

Roof Flashings

Galvanized no calk® roof flashings feature a one-piece construction which insures a positive leak proof installation every time. Specially formulated elastomeric collar allows the vent stack plenty of room for expansion and contraction. The patented double seal no-calk collar “gives” with the pipe, without breaking the water tight seal. The galvanized base is made from 24 gauge deep drawing steel extra high with no seams.

Flex Flash flashings are manufactured from a special formulated clastomer material which is extremely flexible and durable. They permit the vent stack to expand and contract freely without disrupting the seal between pipe and flashing collar. The flashing adjusts to most any angle and adapts to all type of pipe; copper, cast iron, galvanized or plastic. Fits up to 40° angle.

MARS NO.	DESCRIPTION	MARS PACK
79360	1 1/4" - 1 1/2" no calk galvanized, 9" x 12.5" base	12
79361	2" no calk galvanized, 9" x 12.5" base	12
79362	3" no calk galvanized, 11" x 14.5" base	12
79364	1/2", 3/4", 1" no calk galvanized solar, 9" x 12.5" base	12

MARS Concentric Vent Kits

MARS Concentric Vent Kits provide a single wall or roof penetration solution for high efficiency gas furnaces. Concentric vents save time and money by streamlining installation compared to the traditional 2 pipe system. Concentric vents also improve the aesthetics of the home by reducing the number of wall and roof penetrations. All necessary fittings are included in the kit. (The installing contractor needs to supply pipe and fittings between the furnace and concentric vent)

Features

- UL Approved
- Available in 2" and 3" kits
- Single Wall / Roof penetration
- White PVC

MARS NO.	DESCRIPTION	MARS PACK
72950	2" Concentric Vent Kit	6
72951	3" Concentric Vent Kit	4
72956	2" Repl Cap for 72950	1
72957	3" Repl Cap for 72951	1

MARS Horizontal Vent Termination Kits

MARS Horizontal Vent Termination Kits are designed for use with high efficiency condensing gas furnaces. The kit provides a low profile means of terminating exterior PVC intake and exhaust wall penetrations.

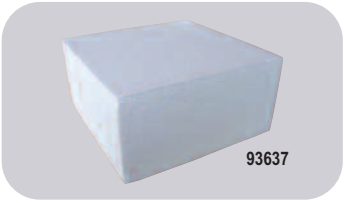
Features:

- Low profile design
- Hides vent pipes for a clean and finished look
- Designed for use with high efficiency gas furnaces
- Kit includes mounting hardware

MARS NO.	DESCRIPTION
72952	2" Horizontal Vent Termination Kit
72953	3" Horizontal Vent Termination Kit

MARS Air Handler Blocks

- Lightweight 2 lb styrofoam block
- 8" x 8" x 4"



MARS NO.	DESCRIPTION
93637	8" x 8" x 4" Air Handler Block, Pkgd in boxes of 20 (21 boxes per pallet)

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

MARS Easy Leveler™ Furnace Legs

- Includes 4 easy leveler legs & sheet metal screws
- Designed to level a furnace & air conditioning coil for proper drainage.
- Proper leveling helps eliminate standing water, thus reducing bacteria
- Easily adjustable even after installation
- Legs can support up to 400 lbs.
- Adjustable from 2-3/4" to 4" in height

MARS NO.	DESCRIPTION	MARS PACK
79095	Adjustable furnace legs	12

Economy Furnace Mounting Blocks

- Holds furnace 2" off the floor
- Absorbs vibration, reduces noise
- Composite construction
- Peel & stick installation

MARS NO.	DESCRIPTION	MARS PACK
79085	Economy furnace mounting blocks	12

Rooftop Support Systems

Economy CX-Series

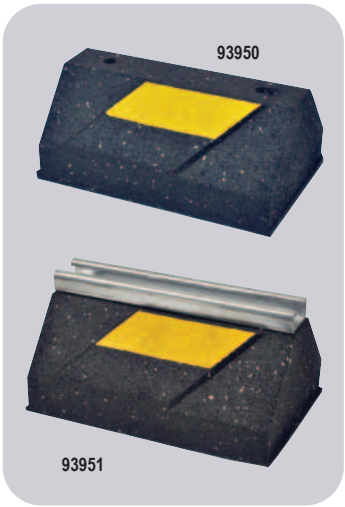
- Base only
- Material – 100% recycled rubber, UV resistant

CX Series rooftop support is designed as an economic alternative when a high load bearing is not required. They are perfect for supporting conduit or smaller pipe.

C-Series

- Material – 100% recycled rubber, UV resistant

C Series channel support is designed for superior support of gas and refrigeration piping systems, cable tray, electrical conduit multiple lines, HVAC equipment and many other applications.



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.	MAX. LOAD
93950	CX-Series 4" H x 6" W x 9.6" L	1	240	500 lbs./ft.
93951	C-Series 4 7/8" H x 6" W x 9.6" L	1	200	700 lbs./ft.

MARS Front Open Pullout Disconnect Boxes - NEMA 3R

MARS offers both fusible and non-fusible single phase air conditioner disconnects. These units provide a disconnecting means which should be located within sight from and readily accessible from the air conditioning or refrigerating equipment. UL listed. MARS #83315 is also CUL listed

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83315	60 amp non-fused, single phase	6	6
83316	30 amp fused, single phase	6	6
83317	60 amp fused, single phase	6	6
83396	Compact 30 amp fused, single phase	6	6
83335	Generic brand 60 amp non-fused, single	6	6

MARS Side Open Pullout Disconnect Boxes - NEMA 3R

The MARS Side Open Disconnect Boxes are contractor friendly and feature a unique side opening door, allowing easy access to the work area. The powder coated UV rated finish provides superior esthetics and greater longevity. The patented "finger safe" pullout section prevents accidental contact with electrodes. Easy to remove knockouts and a secure locking mechanism are also featured. This Pullout Disconnect Box is the ideal choice for the busy contractor.

MARS 80328 features an on/off switch so there are no pullout handles to be lost.

Specifications:

- Single phase, 240V
- 10,000 amp rated
- NEMA 3R, rainproof
- UL & CUL rated

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
80315	60 amp non-fused	6	6
80316	30 amp fused	6	6
80317	60 amp fused	6	6
80328	60 amp non-fused – Switch Disconnect	6	6

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

MARS Low Profile 60A Non-Fused Disconnect

MARS side open low profile disconnect box is compact while providing easy access to the connection points. The finger safe pullout section prevents accidental contact with the live circuit. The lugs are rated for multi-conductors and are approved for use with surge protection devices.

Specifications:

- Single phase, 120/240V
- Dimensions: 6.625 x 5 x 2.50
- Tin plated copper pullout
- Lugs rated for multi-conductors
- 10,000 Amp max. rated
- NEMA 3R, rainproof
- cULus rated

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
80301	60 amp non-fused	10	10

Midwest A/C Disconnects - NEMA 3R

Midwest Fusible disconnects are available in 30 and 60 Amp models. Pullers are removable or reinstallable in the OFF position for the user safety during equipment maintenance.

Specifications:

- 30-100 Amps
- 120/240V AC, Single Phase
- Accepts class H fuses (not included)

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83385	60 amp non-fused, single phase	6	6
83386	30 amp fused, single phase	6	6
83387	60 amp fused, single phase	6	6

Pullouts For MARS Disconnect Boxes

MARS offers both fusible and non-fusible single phase non-metallic air conditioner disconnects. These horse power rated units are constructed of Noryl® thermoplastic for extended and

MARS NO.	DESCRIPTION	CASE QTY.
83313	60 amp non-fused pullout for 83315	1
83314	30 amp fused pullout for 83316	1
83319	30 amp fused pullout for 83396	1
80312	60 amp non-fused pullout for 80315 & 80308	1
80313	30 amp fused pullout for 80316	1
80314	60 amp fused pullout for 80317	1

MARS A/C Disconnect/GFCI Receptacle Combination

MARS A/C Disconnect/ GFCI Receptacle Combination disconnects provide a convenient low cost means to satisfy NEC Article 210.63 requirements for HVAC/R Equipment Outlets and Article 406.8(B)(1) for Receptacle – Wet Locations. The NEMA 3R design insures a safe, weather tight installation for residential, light commercial and even some industrial applications.

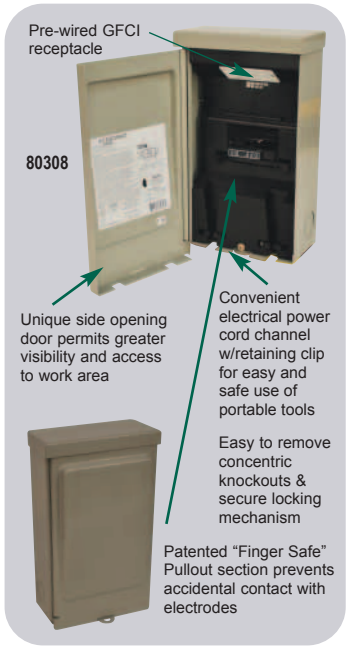
Features & Benefits:

- 60 amp, non-fused, pullout type
- 240 volt A/C, single phase
- UL & CUL listed
- Compact size – 5"x7"x4"
- Meets NEC #210.63 & #406.8(B) (1)
- Removable cover
- Heavy galvanized 'G90' steel with highest quality electro-deposition finish resists corrosion and fading
- NEMA 3R rated

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83308	60 Amp, Non-Fused, 15 Amp, 125V GFCI Duplex Receptacle	6	6
83309	60 Amp, Non-Fused, 20 Amp, 125V GFCI Duplex Receptacle	6	6

MARS Side Open Pullout Disconnect w/GFCI Receptacle

The MARS Side Open Disconnect w/GFCI Receptacle provides a convenient low cost means to satisfy NEC 2003 code changes requiring that a GFCI receptacle with a "while in use" cover be within a 25ft line of sight of the condenser unit. The pre-wired receptacle with stripped wire ends makes installation of disconnect and receptacle quick and easy. This unit provides a significantly lower "installed cost" to the contractor when compared to installing a standard disconnect and separate GFCI receptacle with "while in use" cover to comply with the new NEC code change.



Additional features and benefits include: Convenient electrical power cord channel w/retaining clip for easy and safe use of portable tools; Large wiring compartment for both disconnect switch and receptacle; Angled receptacle mounting to eliminate the possibility of crushing portable electrical plugs when closing "while in use" cover; Attractive side opening cover design for ease of installation; Ultra UV powder coating.

Specifications:

- 60 amp, non-fused, pullout type
- Pre-wired 15A, 125V GFCI receptacle included
- 240 volt, single phase
- 10,000 amp rated
- NEMA 3R & UL rainproof
- UL & CUL approved
- Rated for 10HP @ 240 volts
- Meets NEC #210.63 & #406.8(B)(1)
- Multiple patents pending

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
80308	Pullout disconnect, W/GFCI receptacle	6	6

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Midwest A/C Disconnect/GFCI

Midwest Top Open A/C Disconnect, 120/240 VAC, 60 A, 3 to 10 hp, 1 Phase, 20 Amp GFCI, NEMA 3R

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83345	30 Amp Fused, 20A GFCI Receptacle	6	6
83395	60 Amp Fused, 20A GFCI Receptacle	6	6

Midwest Non-Metallic Disconnects - NEMA 3R

Midwest Electric offers both fusible and non-fusible single phase non-metallic air conditioner disconnects. These horse power rated units are constructed of Noryl® thermoplastic for extended and rugged durability. Units are corrosion resistant, weatherproof, and maintenance free. UL listed and CSA certified.

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83312	60 amp non-fused, single phase	6	6
83306	30 amp fused, single phase	6	6
83307	60 amp fused, single phase	6	6

Midwest Three Phase Pullout Disconnects - 240V - NEMA 3R

Midwest Electric three phase pull out disconnects and single phase non-automatic switches are manufactured of heavy zinc coated steel with highest quality electro-deposition paint finish for maximum corrosion resistance. The three phase disconnects are available with and without fuse protection. Fusible units require three fuses. NEMA 3R.

MARS NO.	DESCRIPTION	CASE QTY.
83321	60 amp non-fused, three phase	4
83322	30 amp fused, three phase	4
83323	60 amp fused, three phase	4

Midwest Non-Automatic Disconnects - Nema 3R

Midwest Electric has developed a new NEMA 3R, non-automatic A/C disconnect with a patent pending on/off switch mechanism so there is no pullout to lose. This UL and CSA listed disconnect features: a keyhole mounting slot for easy installation, a removable door for easy wiring access, straight in and out lugs for quick connections and six 1/2" x 3/4" x 1" concentric knockouts.

The single phase non-automatic disconnects do not provide overcurrent protection with manual internal on/off switch

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83328	60 amp, 240V, 10 HP	6	6

Midwest Heat Pump Disconnects - NEMA 3R

Multiple disconnect devices are offered for heat pump applications that require individual disconnects for the heating and cooling cycles. The dual pull outs accommodate either a 30A/60A or 60A/60A puller combination. Units require four fuses.

Specifications:

• 120/240 AC

MARS NO.	DESCRIPTION	CASE QTY.
83324	90 amp fused	1
83325	100 amp fused	1

Midwest Evaporative Cooler Disconnects - NEMA 3R

Evaporative cooler applications not only require fusing but switching or receptacle functions depending on equipment type and local codes. The 40 ampere unit utilizes 3 S plug fuses.

MARS NO.	DESCRIPTION	CASE QTY.
83327	40 amp fused, receptacles	1

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Midwest Non-Metallic, Non-Auto Switch Residential/Construction A/C Disconnect, NEMA 3R

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83388	60 amp non-fused, single phase	6	6

Midwest Metallic Residential/ Construction, A/C Disconnects w/ Receptacle, NEMA 3R

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83398	60 amp non-fused, single phase	6	6

I-T-E Cartridge Fuse Type - UL Listed

1 Phase/2 wire, 3 Phase/3 wire, solid neutral

MARS NO.	DESCRIPTION	TYPE	CASE QTY.
83330	30a - 240V 2 pole, exterior	3R	10
83331	60a - 240V 2 pole, exterior	3R	5
83336	30a - 240V 3 pole, exterior	3R	10
83337	60a - 240V 3 pole, exterior	3R	5
83339	30a - 240V 3 pole, interior	1	1
83340	60a - 240V 3 pole, interior	1	1

I-T-E Plug Fuse Type - UL Listed

1 Phase, solid neutral

MARS NO.	DESCRIPTION	TYPE	STD. PACK	CASE QTY.
83342	30a - 120V 1 pole, interior	1	6	6

I-T-E General Duty Enclosed Switches

Non-Fused

MARS NO.	DESCRIPTION	TYPE	CASE QTY.
83346	30a - 240V 2 or 3 pole, 3 phase exterior	3R	5
83347	60a - 240V 2 or 3 pole, 3 phase, exterior	3R	1
83349	30a - 240V 2 or 3 pole, 3 phase interior	1	1
83350	60a - 240V 2 or 3 pole, 3 phase interior	1	1
83352	60a - 240V 1 or 2 pole, 1 phase exterior	3R	10

Fused

MARS NO.	DESCRIPTION	TYPE	CASE QTY.
83636	30a – 240V, 3 Pole, 3 Phase, exterior	3R	1
83637	60A – 240V, 3 Pole, 3 Phase, exterior	3R	1

I-T-E Heavy Duty 3PH 600V - Type 1 - Indoor

MARS NO.	DESCRIPTION	CASE QTY.
83353	30a - 600V fused	1
83354	60a - 600V fused	1

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

I-T-E Heavy Duty 3PH 600V - Type 3R - Outdoor

83361

MARS NO.	DESCRIPTION	CASE QTY
83359	30a - 600V fused	1
83360	60a - 600V fused	1
83361	100a - 600V fused	1
83362	30a - 600V unfused	1
83363	60a - 600V unfused	1
83364	100a, 600V-3P non-fused	1

Midwest HD 3P Disconnects – NEMA 3R - Outdoor

Midwest heavy duty disconnects are designed for commercial and industrial applications where safety, high performance and continuity of service are essential.

Features:

- Quick-make, Quick-break mechanism
- Highly visible red handle grip, Designed for hook stick operation
- Meets or exceeds NEMA KS1 standard for enclosed switches – Type HD
- Full cover interlocks

Specifications:

- 3 Wire, 3 Pole
- 600 VAC
- 60/75°C conductor rating
- Enclosure type: Nema 3R (outdoor)
- cUL certified and UL listed

MARS NO.	DESCRIPTION	CASE QTY.
83383	30A, 600V-3P, Fused	1
83384	60A, 600V-3P Fused	1
83389	100A, 600V-3P, Fused	1
83390	200A, 250V-3P, Fused	1
83392	200A, 600V-3P, Fused	1
83393	200A, 600V-3P, Non-Fused	1

Midwest Fused Disconnect - NEMA 3R

Midwest Electric offers a general duty switches designed for residential and light commercial applications where duty is not severe.

Features:

- Highly visible red handle grip, Designed for hook stick operation
- Quick-make, quick-break mechanism
- 60/75°C conductor rating

Specifications:

- General Duty, NEMA 3R, Outdoor
- 240VAC
- cULus

MARS NO.	DESCRIPTION	CASE QTY.
83329	100A, 240V-3P, Fused, 4 Wire	1
83391	200A, 250V-3P, Non-Fused, 3 Wire	1

Top Open A/C Disconnects, NEMA 3R

MARS offers both fusible and non-fusible single phase air conditioner disconnects. These units provide a disconnecting means which should be located within sight and readily accessible from the air conditioning or refrigerating equipment.

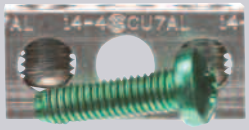
83615

- Single phase
- 120/240 Volts
- Fused Disconnects - accepts type H fuse (not included)
- 10kAIC
- Enclosure material: galvanized steel
- NEMA 3R, rainproof, outdoor use
- Dimensions: 9.21” H x 5.45” W x 3.13” D

MARS NO.	DESCRIPTION	STD. PACK	CASE QTY.
83615	60 Amp, Non-Fused	6	6
83616	30 Amp, Fused	6	6
83617	60 Amp, Fused	6	6

Ground Lug Kit

Siemens low voltage VB heavy duty safety switch accessory. Ground lug kit rated 600V, suitable for operating currents 30/60/100/200A.


83303

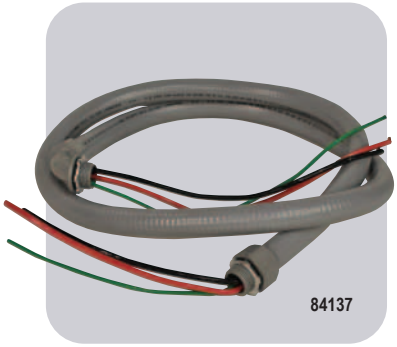
MARS NO.	DESCRIPTION
83303	HD Safety Switch kit

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

MARS A/C Whips Non-Metallic Fittings

Non-metallic conduit with non-metal fittings. Assembled with UL approved components.



MARS NO.	DESCRIPTION		MARS PACK
84131	4' x 1/2"	#10 ga. non-metallic whip UL	1
84133	4' x 3/4"	#8 ga. non-metallic whip UL	1
84135	6' x 1/2"	#10 ga. non-metallic whip UL	1
84137	6' x 3/4"	#8 ga. non-metallic whip UL	1
84139	8' x 1/2"	#10 ga. non-metallic whip	1
84141	8' x 3/4"	#8 ga. non-metallic whip	1
84143	10' x 3/4"	#8 ga. non-metallic whip	1

MARS Bulk Packaged A/C Whips, Non-Metallic Fittings

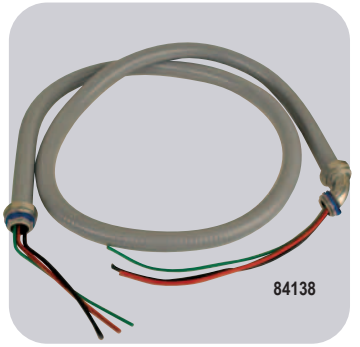
Non-metallic conduit with non-metallic fittings. These are individually packaged. Assembled with UL approved components.

- Packaged gaylord style
- Bulk box for easy access

MARS NO.	DESCRIPTION		MARS PACK
84181	4' x 1/2"	#10 ga. non-metallic whip UL	90
84183	4' x 3/4"	#8 ga. non-metallic whip UL	60
84185	6' x 1/2"	#10 ga. non-metallic whip UL	60
84187	6' x 3/4"	#8 ga. non-metallic whip UL	45

MARS A/C Whips Metallic Fittings

Non-metallic conduit with metal fittings. Assembled with UL approved components.



MARS NO.	DESCRIPTION		MARS PACK
84132	4' x 1/2"	#10 ga. metallic whip UL	1
84134	4' x 3/4"	#8 ga. metallic whip UL	1
84136	6' x 1/2"	#10 ga. metallic whip UL	1
84138	6' x 3/4"	#8 ga. metallic whip UL	1

All Whips Bagged

MARS A/C Whips All Metallic

MARS NO.	DESCRIPTION	MARS PACK
84125	4' x 1/2" all metallic whip	1
84126	4' x 3/4" all metallic whip	1
84127	6' x 1/2" all metallic whip	1
84128	6' x 3/4" all metallic whip	1

Sealtite® Flexible Metallic Conduit

Sealtite® flexible conduit provides protection for wet or oily locations. UL listed conduit has a continuous copper ground built into the core. All UL listed Sealtite® is UV resistant.

MARS NO.	DESCRIPTION	MARS PACK
84102	1/2", metallic conduit, UL, boxed 100 ft	1
84103	3/4", metallic conduit, UL, boxed 100 ft	1
84110	1/2", metallic conduit, boxed 100 ft	1
84111	3/4", metallic conduit, boxed 100 ft	1

Liquid-Tight Flexible Non-Metallic Conduit

- Flexible PVC construction. Phthalate free.
- Lightweight and lower installed cost
- Oil/water resistant
- Sunlight resistant, direct burial
- Crush resistant
- Temperature rated: -18°C to 75°C
- UL listed, CSA certified

MARS NO.	DESCRIPTION	MARS PACK
84118	1/2", non-metallic conduit, UL, boxed 100 ft	1
84119	3/4", non-metallic conduit, UL, boxed 100 ft	1
84120	1", non-metallic conduit, UL, boxed 100 ft	1
84121	1/2", non-metallic conduit, UL, polybag 25 ft	1
84122	3/4", non-metallic conduit, UL, polybag 25 ft	1

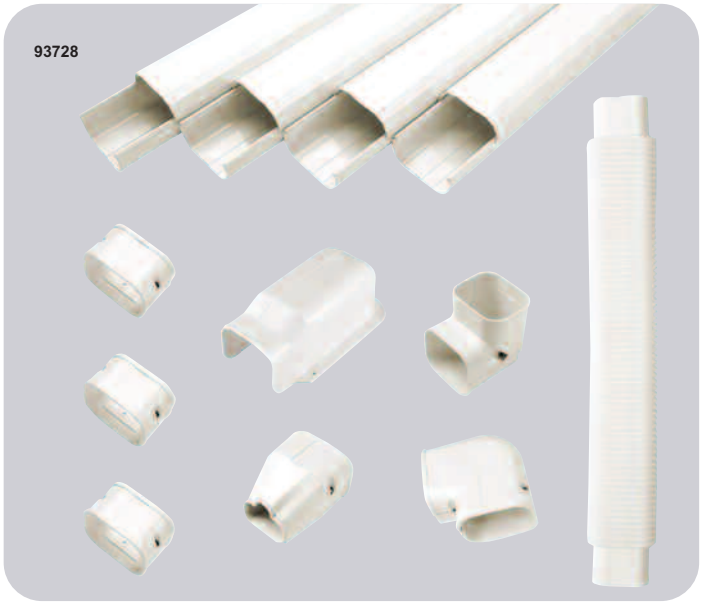
⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

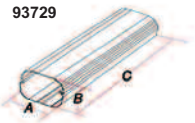
Line Set Covers

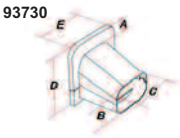
Attractive and durable line set cover for protecting and concealing refrigerant tubing/insulation, control wire, and drains. Ideal for ductless and all other applications requiring exposed refrigeration line sets. All connectors have front and back plates which fasten together with two screws.

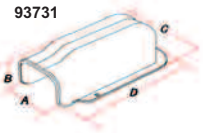
- Vulnerable components are protected from solar/environmental exposure
- Aesthetically conceals mechanicals in architectural-grade, paintable plastic duct
- Two (2) separate cover sizes to choose from – 3" and 4" duct widths – provide ample room for multiple line sets and larger tonnage equipment
- Easy, flexible configuration for new or retrofit applications

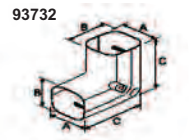
MARS NO.	DESCRIPTION	COLOR	DIMENSIONS (INCHES)					CASE QTY.
			A	B	C	D	E	
93728	Line Set Cover Kit, 3 in.	White	-	-	-	-	-	1
93729	3.25 Foot Straight Duct, 3in.	White	3.1	2.4	39.4	-	-	8
93730	Wall Cover, 3 in.	White	1.2	2.6	3.3	5.5	4.3	5
93731	90 Degree Wall Corner, 3 in.	White	3.1	3.3	4.3	8.3	-	10
93732	90 Degree Corner, 3 in.	White	3.3	2.7	3.9	-	-	5
93733	Plane Corner, 3 in.	White	3.4	2.8	4.5	-	-	10
93734	Duct Connector, 3 in.	White	3.5	2.7	2.0	-	-	10
93735	End Cap, 3 in.	White	3.3	2.7	3.8	2.3	1.9	5
93736	Flexible Duct, 3 in.	White	23.6	2.5	2.9	-	-	10
93737	Line Set Cover Kit, 4 in.	White	-	-	-	-	-	1
93738	3.25 Foot Straight Duct, 4 in.	White	3.9	2.8	39.4	-	-	6
93739	Wall Cover, 4 in.	White	1.5	2.7	4.3	5.1	5.7	5
93740	90 Degree Wall Corner, 4 in.	White	4.1	3.3	5.3	8.4		5
93741	90 Degree Corner, 4 in.	White	4.3	2.9	4.6	-	-	5
93742	Plane Corner, 4 in.	White	4.3	2.9	5.4	-	-	5
93743	Duct Connector, 4 in.	White	4.3	2.9	2.0	-	-	5
93744	Flexible Duct, 4 in.	White	28.3	2.5	3.6	-	-	5

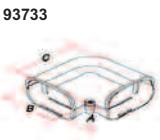


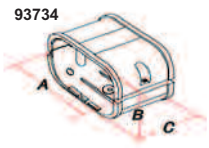


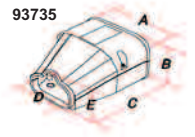


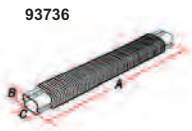


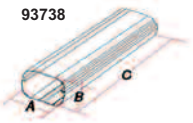


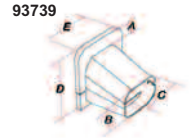


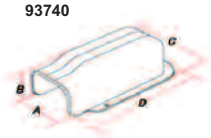


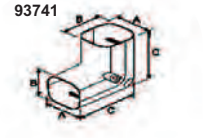


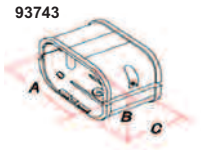












⚠ WARNING:
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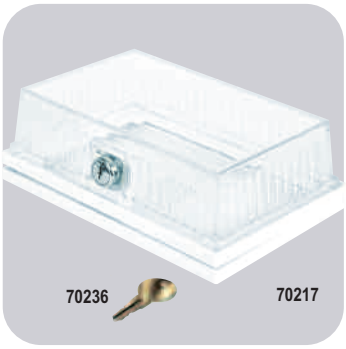
Accessories

MARS Designer Series - Plastic Cover And Base

MARS offers a broad selection of thermostat guards. Popular models available include metal, clear plastic and opaque plastic designs. MARS thermostat guards are ideal for protecting thermostats in schools, industrial plants institutions, public facilities and other areas where unauthorized tampering could be a problem. These attractive units feature a rugged, light weight and compact design. All units supplied with key. Extra keys are available. Order part #70236 for the BTG thermostat guard key.

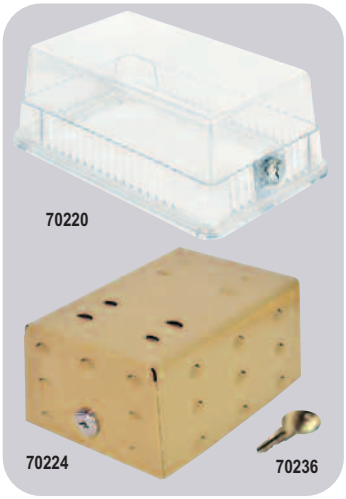


	BASE	HEIGHT	WIDTH	DEPTH
INSIDE DIMENSIONS (INCHES)	Solid	8	5	2 1/8
	Ring	8	5	2 1/8

MARS NO.	DESCRIPTION	BASE	MARS PACK	CASE QTY.
70217	BTG-DK clear plastic	Dual	1	12
70236	F336, extra key for all BTG guards		1	1

MARS Universal Series

MARS offers a broad selection of thermostat guards. Popular models available include metal, clear plastic and opaque plastic designs. MARS thermostat guards are ideal for protecting thermostats in schools, industrial plants institutions, public facilities and other areas where unauthorized tampering could be a problem. These attractive units feature a rugged, light weight and compact design. All units supplied with key. Extra keys are available. Order part #70236 for the BTG thermostat guard key.

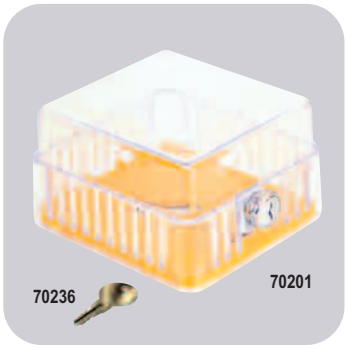


	BASE	HEIGHT	WIDTH	DEPTH
PLASTIC INSIDE DIMENSIONS (INCHES)	Solid	9 5/16	5 5/8	3 9/16
	Ring	9 5/16	5 5/8	3 9/16
METAL	Solid	8	5 9/16	3 5/8
	Ring	8	5 9/16	3 5/8

MARS NO.	DESCRIPTION	BASE	MARS PACK	CASE QTY.
70220	BTG-UK2 clear plastic	Dual	1	12
70223	BTG-UM metal	Solid	1	12
70224	BTG-UWM metal	Ring	1	12
70236	F336, extra key for all BTG guards		1	1

MARS Elite Series - Plastic Base

MARS offers a broad selection of thermostat guards. Popular models available include metal, clear plastic and opaque plastic designs. MARS thermostat guards are ideal for protecting thermostats in schools, industrial plants institutions, public facilities and other areas where unauthorized tampering could be a problem. These attractive units feature a rugged, light weight and compact design. All units supplied with key. Extra keys are available. Order part #70236 for the BTG thermostat guard key.



	BASE	HEIGHT	WIDTH	DEPTH
INSIDE DIMENSIONS (INCHES)	Solid	4 3/4	4 1/2	2 3/4

MARS NO.	DESCRIPTION	BASE	MARS PACK	CASE QTY.
70201	BTG-EK clear plastic cover	Solid	1	12
70236	F336, extra key for all BTG guards		1	1

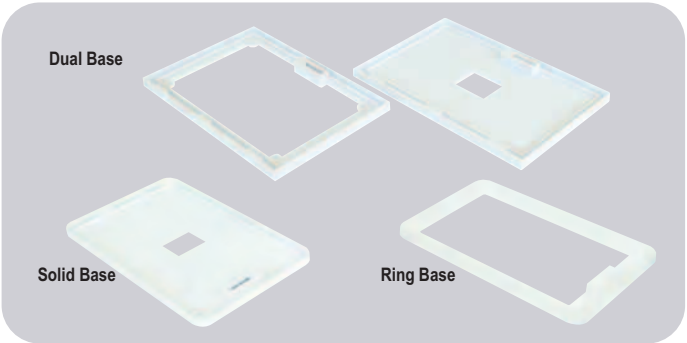
MARS Classic Series - Plastic Base

MARS offers a broad selection of thermostat guards. Popular models available include metal, clear plastic and opaque plastic designs. MARS thermostat guards are ideal for protecting thermostats in schools, industrial plants institutions, public facilities and other areas where unauthorized tampering could be a problem. These attractive units feature a rugged, light weight and compact design. All units supplied with key. Extra keys are available. Order part #70236 for the BTG thermostat guard key.

	BASE	HEIGHT	WIDTH	DEPTH
INSIDE DIMENSIONS (INCHES)	Solid	6 1/4	5 5/8	3 3/16
	Ring	6 1/4	5 5/8	3 3/16

MARS NO.	DESCRIPTION	BASE	MARS PACK	CASE QTY.
70205	BTG-K clear plastic cover	Dual	1	12
70236	F336, extra key for all BTG guards		1	1

Thermostat Guard Bases



WARNING:
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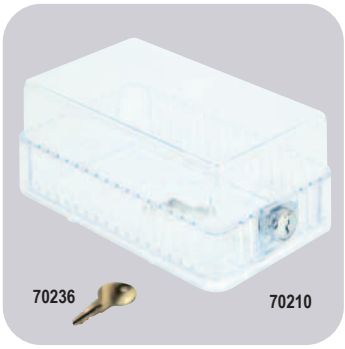
MARS Regal Series - Plastic Base

MARS offers a broad selection of thermostat guards. Popular models available include metal, clear plastic and opaque plastic designs. MARS thermostat guards are ideal for protecting thermostats in schools, industrial plants institutions, public facilities and other areas where unauthorized tampering could be a problem. These attractive units feature a rugged, light weight and compact design. All units supplied with key. Extra keys are available. Order part #70236 for the BTG thermostat guard key.



INSIDE DIMENSIONS (INCHES)	BASE	HEIGHT	WIDTH	DEPTH
	Solid	7 3/8	4 1/8	3 1/8
	Ring	7 3/8	4 1/8	3 1/8

MARS NO.	DESCRIPTION	BASE	MARS PACK	CASE QTY.
70210	BTG-RK clear plastic cover	Dual	1	12
70236	F336, extra key for all BTG guards		1	1

MARS Sentinel Series - Metal Cover And Base

MARS offers a broad selection of thermostat guards. Popular models available include metal, clear plastic and opaque plastic designs. MARS thermostat guards are ideal for protecting thermostats in schools, industrial plants institutions, public facilities and other areas where unauthorized tampering could be a problem. These attractive units feature a rugged, light weight and compact design. All units supplied with key. Extra keys are available. Order part #70236 for the BTG thermostat guard key.

INSIDE DIMENSIONS (INCHES)	BASE	HEIGHT	WIDTH	DEPTH
	Solid	6 1/2	5	3 1/16
	Ring	6 1/2	5	3 1/16

MARS NO.	DESCRIPTION	BASE	MARS PACK	CASE QTY.
70215	BTG-54VL metal hinged	Solid	1	12
70216	BTG-54VLW metal hinged	Ring	1	12
70236	F336, extra key for all BTG guards		1	1

Thermostat Guards Cross Reference

MARS NO.	BEKO	D Teck	SUPCO
70201	BTG EK	585-TG5	BTG EK
70205	BTG K clear plst	585-TG2	BTG K
70210	BTG RK clear plastic	585-TG1	BTG-RK
70215	BTG 54VL metal	585-TG7	BTG-54 VL
70216	BTG 54VLW hinged metal	585-TG8	BTG-54VLW
70217	BTG DK clear plastic	585-TG6	BTG-DK
70220	BTG UK2 clear plastic	585-TG	BTG-UK2
70223	BTG UM metal	585-TG3	BTG-UM
70224	BTG UWM hinged metal	585-TG4	BTG-UWM
70236	F336 key		

Universal Cover/Guard

LockBoxPro
SHARE THE CODE, NOT THE KEY

Helps prevent tampering and unauthorized adjustments to your thermostat, helping to control your energy usage.

Easy to Install | Key or Combination Lock | Set Your Own Code | Control Energy Costs

- Fits Thermostats up to 7.25"W x 4.75"H x 2.25"D
- Back plate Dimensions:
  - Exterior 9.25" x 6"
  - Interior 4.75" x 7"
- Easy Installation
- Tape included to seal off thermostat wire to prevent air penetration
- Wall cover included to create a clean look
- Mounting Screws and Anchors included

MARS NO.	DESCRIPTION	PACK QTY	CASE QTY
70256	Universal Thermostat Cover/Guard	1	24

WARNING:
Cancer and Reproductive Harm
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Accessories

I-T-E Circuit Breakers Plug-In Interchangeable Type-Bulk

SIEMENS
I-T-E® Electrical Products

- For applications that require plug in
- Space saving design allows to fit a 1" panel space
- UL listed

10,000 KA interrupting rating

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
83200	15a- 120/240 VAC, 1 pole	1	6
83201	20a- 120/240 VAC, 1 pole	1	6
83220	15a- 120/240 VAC, 2 pole	1	3
83221	20a- 120/240 VAC, 2 pole	1	3
83222	25a- 120/240 VAC, 2 pole	1	3
83223	30a- 120/240 VAC, 2 pole	1	3
83224	35a- 120/240 VAC, 2 pole	1	3
83225	40a- 120/240 VAC, 2 pole	1	3
83226	45a- 120/240 VAC, 2 pole	1	3
83227	50a- 120/240 VAC, 2 pole	1	3
83228	60a- 120/240 VAC, 2 pole	1	3
83229	70a- 120/240 VAC, 2 pole	1	3
83230	80a- 120/240 VAC, 2 pole	1	3
83231	90a- 120/240 VAC, 2 pole	1	3
83232	100a- 120/240 VAC, 2 pole	1	3

I-T-E Circuit Breakers Plug-In Interchangeable Type-Carded

SIEMENS
I-T-E® Electrical Products

- For applications that require plug in
- 10K AIC
- Space saving design allows to fit a 1" panel space
- UL listed

10,000 KA interrupting rating

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
83537	20a- 120/240 VAC, 2 pole	1	3
83538	30a- 120/240 VAC, 2 pole	1	3
83539	40a- 120/240 VAC, 2 pole	1	3
83540	50a- 120/240 VAC, 2 pole	1	3
83541	60a- 120/240 VAC, 2 pole	1	3

General Electric Circuit Breakers-Bulk

- Compact size,1/2" THQP or 1" THQL
- Box type terminals
- Copper to copper connections with corrosion resisting tin plated stabs
- Exceeds UL, NEMA, ANSI, CSA requirements

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
83527	30a- 120/240 VAC, THQP 2 pole	1	5
83431	20a- 120/240 VAC, THQL 1 pole	1	10
83436	30a- 120/240 VAC, THQL 2 pole	1	5
83438	40a- 120/240 VAC, THQL 2 pole	1	5
83439	50a- 120/240 VAC, THQL 2 pole	1	5
83440	60a- 120/240 VAC, THQL 2 pole	1	5
83444	100a- 120/240 VAC, THQL 2 pole	1	5

GE Replacement Breakers For Square D

MARS offers GE replacement circuit breakers for Square D QO® load centers. These Q line series circuit breakers lower your inventory costs by providing a single source for new construction & Square D QO® retrofit. These UL classified GE breakers are for use in place of Square D type QO circuit breakers.

Square D QO® load centers for which GE/MARS offers UL classified replacement circuit breakers:

≤70A
QQ2-4L50TTS
QQ2-4L70F/S
QQ2-4L70RB
QQ2-4L70TS
QQ2L30S
QQ2L30TTS
QQ2L40RB
QQ2TR
QQ4-7M70TTS

150A
QO8-16M150FTRB

QO20-30M150RB
QO20-30M150TF/S
QO24L150
QO24M150
QO30L150
QO30L150RB
QO30M150/RB

100A
QO6-12L100DF/S
QO6-12L100DFCU/S
QO6-12L100F/S
QO6-12L100RB

QO6-12L100RBCU
QO6-12L100TF/S
QO6-12M125FTRB
QO8-16L100DF/S
QO8-16L100DFCU/S
QO8-16L100TF/S
QO8-16L100F/S
QO8-16L100RB
QO8-16L100RBCU
QO8-16L100TF/S
QO12M100/RB
QO16M100/RB
QO20M100/RB

QO2100BNF/S
QO24M100/RB

125A
QO6-12M125FTRB
QO12-24L125
QO12-24L125RB
QO12L125
QO12L125RB
QO16-24L125
QO16-24L125RB
QO16L125
QO20-24L125

QO20L125
QO2125BNF/S
QO24L125
QO12L125RB
QO24M125/RB

225A
QO40M225
QO42L225
QO42L225RB

200A
QO8-16M200FTRB

QO12L200
QO12L200RB
QO20-30M200RB
QO20-40M200
QO20-40M200TF/S
QO24M200
QO30-40L200
QO30-40L200RB
QO30-40M200
QO30L200
QO30L200RB
QO30M200/RB
QO40M200/RB

MARS NO.	DESCRIPTION	GENO.	SQUARE D NO.
83574	20A-2P	THQO2120	QO220
83575	30A-2P	THQO2130	QO230
83576	40A-2P	THQO2140	QO240
83577	50A-2P	THQO2150	QO250
83578	60A-2P	THQO2160	QO260

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www.marsdelivers.com

Circuit Breakers

Zbreaker is the same circuit breaker now found on many high-end transformers and systems. It protects from damage caused by shorts, overheating, or wiring problems.
A sticker is included so that, if the Tech desires, he can inform his customer where to press the "reset" button and possibly save a midnight service call. Kit includes wires and pre-installed terminals that allow you to easily plug it in to the connectors where a plastic-type fuse existed.

- Crystal-Clear Clamshell Package with Hanging Hole
- Full-Color Insert with Instructions

MARS NO.	DESCRIPTION	MARS PACK
08574	3 Amp Circuit Breaker	1
08575	5 Amp Circuit Breaker	1

I-T-E® EQ® Load Center Enclosures

SIEMENS
I-T-E® Electrical Products

I-T-E EQ® load centers with main lugs feature a combination trim boxed in one package.

- The trim fits both surface and flush mounting applications saving money and space
- Interiors offer removal in seconds
- Single phase, 3-wire design, 120/240 VAC
- One piece Albus bar construction. Designed for use only with I-T-E circuit breakers. UL listed
- Rated for 100,000 A IR
- Exclusive split neutral
- Main lugs and neutral on same plane, same drive
- Simple upper pan adjustment after trim is installed
- UL listed for 60/75 °C conductors
- 100% circuit breaker twistouts
- Indoor and outdoor enclosures available

MARS NO.		DESCRIPTION	MARS PACK
83271	60a-2 pole	4 circuit, surface branch panel - type 1	1
83273	125a-4 pole	8 circuit, surface branch panel - type 1	1

Outdoor Enclosures - Type 3R

- Single phase, 3 wire SN
- 120/240V
- Uses HA type hub

MARS NO.		DESCRIPTION	MARS PACK
83277	60a-2 pole	4 circuit, outdoor enclosure	1
83278	125a-4 pole	8 circuit, outdoor enclosure	1

Cartridge Fuses, Type TRS

MERSEN

SmartSpot blown-fuse indicator

With SmartSpot you'll find the open fuse FAST. When a fuse opens, the SmartSpot indicator on the label of the fuse senses it and turns from SILVER to eye-catching RED.

And it stays RED so you can spot the open fuse quickly and safely.

Just open a panel and scan. Wherever you see any red in a SmartSpot indicator, you know the fuse is open.

This is a big advantage to contractors/service personnel because it helps them to identify very quickly what fuse needs to be changed thereby avoiding costly downtime.

You'll find SmartSpot on all of the most widely used industry standard fuses such as Class RK5, RK1, and Class J.

Time delay (class RK5, 600 volt)

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82103*	2/10a - 600V, TRS fuse	10	100
82106*	1/2a - 600V, TRS fuse	10	100
82109*	1a - 600V, TRS fuse	10	100
82110*	1.6a - 600V, TRS fuse	10	100
82111*	2a - 600V, TRS fuse	10	100
82112*	2.25a - 600V, TRS fuse	10	100
82124*	5a - 600V, TRS fuse	10	200
82125*	6a - 600V, TRS fuse	10	200
82132	10a - 600V, TRS fuse	10	200
82133	12a - 600V, TRS fuse	10	200
82134	15a - 600V, TRS fuse	10	200
82136	20a - 600V, TRS fuse	10	200
82137	25a - 600V, TRS fuse	10	200
82138	30a - 600V, TRS fuse	10	200
82139	35a - 600V, TRS fuse	10	100
82140	40a - 600V, TRS fuse	10	100
82147	45a - 600V, TRS fuse	10	100
82141	50a - 600V, TRS fuse	10	100
82142	60a - 600V, TRS fuse	10	100
82143	70a - 600V, TRS fuse	5	5
82144	80a - 600V, TRS fuse	5	5
82145	90a - 600V, TRS fuse	5	5
82146	100a - 600V, TRS fuse	5	5
82154	110a - 600V, TRS fuse	1	1
82148	125a - 600V, TRS fuse	1	1
82149	150a - 600V, TRS fuse	1	1
82150	175a - 600V, TRS fuse	1	1
82151	200a - 600V, TRS fuse	1	1
82152	250a - 600V, TRS fuse	1	1
82153	300a - 600V, TRS fuse	1	1

* NOTE: SmartSpot indicating fuse not available below 8 amps. 60a and up are blade type.

Accessories

Cartridge Fuses, Type TR

SmartSpot blown-fuse indicator

With SmartSpot you'll find the open fuse FAST. When a fuse opens, the SmartSpot indicator on the label of the fuse senses it and turns from SILVER to eye-catching RED.

And it stays RED so you can spot the open fuse quickly and safely.

Just open a panel and scan. Wherever you see any red in a SmartSpot indicator, you know the fuse is open.

This is a big advantage to contractors/service personnel because it helps them to identify very quickly what fuse needs to be changed thereby avoiding costly downtime.

You'll find SmartSpot on all of the most widely used industry standard fuses such as Class RK5, RK1, and Class J.

Time delay (class RK5, 250 volt)

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82006*	1/2a - 250V, TR fuse	10	100
82009*	1a - 250V, TR fuse	10	100
82016*	2a - 250V, TR fuse	10	100
82017*	2 1/2a - 250V, TR fuse	10	100
82019*	3a - 250V, TR fuse	10	100
82020*	3 2/10a - 250V, TR fuse	10	100
82021*	4a - 250V, TR fuse	10	100
82024*	5a - 250V, TR fuse	10	100
82025*	5 6/10a - 250V, TR fuse	10	100
82026*	6a - 250V, TR fuse	10	100
82027*	6 1/4a - 250V, TR fuse	10	100
82029*	7a - 250V, TR fuse	10	100
82030	8a - 250V, TR fuse	10	100
82032	10a - 250V, TR fuse	10	100
82033	12a - 250V, TR fuse	10	100
82034	15a - 250V, TR fuse	10	100
82035	17 1/2a - 250V, TR fuse	10	100
82036	20a - 250V, TR fuse	10	100
82037	25a - 250V, TR fuse	10	100
82038	30a - 250V, TR fuse	10	100
82039	35a - 250V, TR fuse	10	100
82040	40a - 250V, TR fuse	10	100
82041	45a - 250V, TR fuse	10	100
82042	50a - 250V, TR fuse	10	100
82043	60a - 250V, TR fuse	10	100
82044	70a - 250V, TR fuse	5	100
82045	80a - 250V, TR fuse	5	100
82046	90a - 250V, TR fuse	5	100
82047	100a - 250V, TR fuse	5	100
82048	110a - 250V, TR fuse	1	1
82049	125a - 250V, TR fuse	1	1
82050	150a - 250V, TR fuse	1	1
82051	175a - 250V, TR fuse	1	1
82052	200a - 250V, TR fuse	1	1
82053	225a - 250V, TR fuse	1	1
82054	350a - 250V, TR fuse	1	1
82056	400a - 250V, TR fuse	1	1
82055	600a - 250V, TR fuse	1	1

* NOTE: SmartSpot indicating fuse not available below 8 amps. 60a and up are blade type.

Midget Fast Acting Fuses, Type ATM

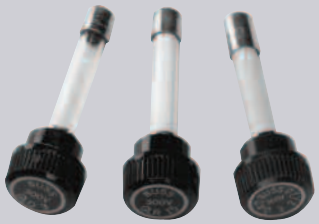
Fast acting

Applications:

- For supplemental protection of wide variety of circuits up to 600VAC with 100kA I.R.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82907	1/2a - 600V, ATM fuse	10	100
82909	1a - 600V, ATM fuse	10	100
82910	1 1/2a - 600V, ATM fuse	10	100
82911	2a - 600V, ATM fuse	10	100
82916	3a - 600V, ATM fuse	10	100
82912	4a - 600V, ATM fuse	10	100
82913	5a - 600V, ATM fuse	10	100
82914	6a - 600V, ATM fuse	10	100
82918	7a - 600V, ATM fuse	10	100
82915	8a - 600V, ATM fuse	10	100
82917	10a - 600V, ATM fuse	10	100
82919	15a - 600V, ATM fuse	10	100
82920	20a - 600V, ATM fuse	10	100
82922	30a - 600V, ATM fuse	10	100

Specialty Fuses



MARS NO.	DESCRIPTION		MARS PACK	CASE QTY.
Small Dimension (Electronic) Fuses, 5 x 20mm — N. American Standards, Fast Acting				
82881	GGM 2	250V fuse	5	5
82879	GGM .5	250V fuse	5	5
82882	GGM 10	250V fuse	10	10
Small Time Delay Fuses, Rejection Style (PC Boards and small Dimension Fuses)				
82880	GMQ 3.2a,	300V fuse	5	100
82884	GMQ4a,	300V fuse	5	100
Fast Acting Size Rejection Special Type Fuse (PC Boards and small Dimension Fuses)				
82980	GLQ 3.0a,	300V fuse	5	100
Fast Acting Non Rejecting Special Type Fuse (Low voltage supplementary fuses)				
82886	GLR 1.5a,	300V fuse	5	100
82887	GLR 1.6a,	300V fuse	5	100
82891	GLR 10a,	300V fuse	5	100
82890	GLR 15a,	300V fuse	5	100
82883	GSC 1a,	300V fuse	5	100

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Specialty Fuses (Cont.)

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
Slo Blo Fuses			
82439	3AB-326 1a, 250V fuse	5	100
82442	3AB-326 5a, 250V fuse	5	100
82445	3AB-326 15a, 250V fuse	5	100
82444	3AB-326 20a, 250V fuse	5	100
Time Delay, 1/4 x 1 1/4", Glass Type Fuses (PC Boards and small Dimension Fuses)			
82978	WVR heat limiter	10	10
82979	WUR heat limiter	10	10
Small Dimension Time Delay Non Rejecting Special Fuse (PC Boards and small Dimension Fuses)			
82888	SMF 3.2a, (LMF 3.2)	5	5
Low Voltage Supplementary Time Delay Fuse, 10X38 or 13/32 X 1-1/2 Size			
82956	TRM .2a, 250V fuse	10	100
82953	TRM .8a, 250V fuse	10	100
82958	TRM 1a, 250V fuse	10	100
82959	TRM 2a, 250V fuse	10	100
82960	TRM 3a, 250V fuse	10	100
82963	TRM 4a, 250V fuse	10	100
82965	TRM 5a, 250V fuse	10	100
82946	TRM 6a, 250V fuse	10	100
82954	TRM 8a, 250V fuse	10	100
82969	TRM 10a, 250V fuse	10	100
82970	TRM 15a, 250V fuse	10	100
82972	TRM 20a, 250V fuse	10	100
82973	TRM 25a, 250V fuse	10	100
82974	TRM 30a, 250V fuse	10	100
Low Voltage Branch Circuit Rated Fuses, R Class CC			
82977	ATMR -2a, 600V fuse	10	100
82966	ATMR -3a, 600V fuse	10	100
82967	ATMR -4a, 600V fuse	10	100
82971	ATMR -10a, 600V fuse	10	100
82976	ATMR -12a, 600V fuse	10	100
82968	ATMR -15a, 600V fuse	10	100
82981	ATMR 20a, 600V fuse	10	100

Specialty Fuses (Cont.)

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
Low Voltage Supplementary Fast Acting Fuses			
82608	BLS/BBS 1a, 250V fuse	10	100
82609	BLS/BBS 2a, 250V fuse	10	100
82610	BLS/BBS 3a, 250V fuse	10	100
82611	BLS/BBS 4a, 600V fuse	10	100
82612	BLS/BBS 5a, 600V fuse	10	100
Medium Voltage Fuses Class J Fast Acting			
82158	A4J - 6a, 600V fuse	10	100
82160	A4J - 15a, 600V fuse	10	100
82161	A4J - 20a, 600V fuse	10	100
82163	A4J - 30a, 600V fuse	10	100
82169	A3T - 40a, 600V fuse	10	100
82170	A6T - 25a, 600V fuse	10	100
82179	A6T - 30a, 600V fuse	10	100
82181	A6T - 35a, 600V fuse	10	100
Fuse Reducer			
82975	263M/H632 fuse reducer (1 pair)	1	10
Automotive Blade Type Fuse Acting 32V DC			
82230	ATC - 3a, auto blade fuse(5 pk)	1	5
82232	ATC - 4a, auto blade fuse	5	5
82231	ATC - 5a, auto blade fuse (5 pk)	1	5
82233	ATC - 7.5a, auto blade fuse	1	5
82234	ATC - 10a, auto blade fuse	5	5
82235	ATC - 15a, auto blade fuse	5	5
82236	ATC - 20a, auto blade fuse	5	5
82237	ATC - 25a, auto blade fuse	5	5
82238	ATC - 30a, auto blade fuse	5	5
ATDR Time Delay Class CC (Small motors,Contactors, Branch Circuit Protection			
82226	ATDR - 6.25a, 600V fuse, class CC	10	10
82228	ATDR - 10a, 600V fuse	10	10
ATQR Time Delay Class CC (Control Transformers, Solenoids, Inductive Loads)			
82227	ATQR - 15a, 600V fuse	10	10

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Accessories

Gen. Purpose Cartridge Fuses, Type OT

One time non-renewable,
Class K-5

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82210	10a - 250V, OT10 Fuse	10	100
82212	15a - 250V, OT15 Fuse	10	100
82213	20a - 250V, OT20 Fuse	10	100
82214	25a - 250V, OT25 Fuse	10	100
82215	30a - 250V, OT30 Fuse	10	100
82216	35a - 250V, OT35 Fuse	10	100
82217	40a - 250V, OT40 Fuse	10	100
82218	45a - 250V, OT45 Fuse	10	100
82219	50a - 250V, OT50 Fuse	10	100
82220	60a - 250V, OT60 Fuse	10	100
82221	70a - 250V, OT70 Fuse	5	100
82224	100a - 250V, OT100 Fuse	5	100

Gen. Purpose Cartridge Fuses, Type OTS

One time non-renewable,
Class K-5

Applications:

- Feeders
- Branch circuits
- Resistive heating
- Residental and small commercial installations

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82249	10a - 600V, OTS fuse	10	100
82251	15a - 600V, OTS fuse	10	100
82252	20a - 600V, OTS fuse	10	100
82253	25a - 600V, OTS fuse	10	100
82254	30a - 600V, OTS fuse	10	100
82255	35a - 600V, OTS fuse	10	100
82256	40a - 600V, OTS fuse	10	100
82259	60a - 600V, OTS fuse	10	100
82264	100a - 600V, OTS fuse	5	100

Midget Fuses, Type OTM

Fast acting

Applications:

- Supplemental protection of circuits up to 250VAC and 10kA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82702	2a - 250V, OTM fuse	10	100
82705	5a - 250V, OTM fuse	10	100
82710	15a - 250V, OTM fuse	10	100
82711	20a - 250V, OTM fuse	10	100

Midget Time Delay Fuses, Type ATQ

Time delay
(12 seconds @ 200% rating) for circuits with high inrush current

Applications:

- Supplemental protection if lighting, solenoid, motor and transformer circuits

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82932	1/4a - 500V, ATQ fuse	10	100
82933	1/2a - 500V, ATQ fuse	10	100
82936	1a - 500V, ATQ fuse	10	100
82941	2a - 500V, ATQ fuse	10	100
82942	3a - 500V, ATQ fuse	10	100
82943	4a - 500V, ATQ fuse	10	100
82944	5a - 500V, ATQ fuse	10	100
82945	6a - 500V, ATQ fuse	10	100
82714	7a - 500V, ATQ fuse	10	100
82947	10a - 500V, ATQ fuse	10	100
82940	12a - 500V, ATQ fuse	10	100
82952	15a - 500V, ATQ fuse	10	100
82948	20a - 500V, ATQ fuse	10	100
82949	25a - 500V, ATQ fuse	10	100
82951	30a - 500V, ATQ fuse	10	100

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Ceramic Body Fast Acting Fuses, Type GAB

- Ceramic body
- Fast acting
- 1/4" x 1-1/4"

82403

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82403	1/2a - 250V, GAB ceramic fuse	5	5
82404	1a - 250V, GAB ceramic fuse	5	5
82402	1 1/2a - 250V, GAB ceramic fuse	5	5
82405	2a - 250V, GAB ceramic fuse	5	100
82406	2 1/2a - 250V, GAB ceramic fuse	5	5
82407	3a - 250V, GAB ceramic fuse	5	5
82408	4a - 250V, GAB ceramic fuse	5	5
82409	5a - 250V, GAB ceramic fuse	5	5
82410	6a - 250V, GAB ceramic fuse	5	5
82411	7a - 250V, GAB ceramic fuse	5	5
82412	8a - 250V, GAB ceramic fuse	5	5
82413	10a - 250V, GAB ceramic fuse	5	5
82414	12a - 250V, GAB ceramic fuse	5	5
82415	15a - 250V, GAB ceramic fuse	5	5
82416	20a - 250V, GAB ceramic fuse	5	5
82417	25a - 250V, GAB ceramic fuse	5	5
82418	30a - 250V, GAB ceramic fuse	5	5

Electronic/Glass Fuses, Type GGX

- Glass body
- Fast acting
- 1/4" x 1"

82878

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82484	1/2a - 250V, GGX glass fuse	5	100
82486	1a - 250V, GGX glass fuse	5	100
82488	2a - 250V, GGX glass fuse	5	5
82491	5a - 125V, GGX glass fuse	5	5
82877	3a - 125V, GGX glass fuse	5	5

Glass Body Non-Time Delay Fuses, Type GGC

- Glass body
- Fast acting
- 1/4" x 1-1/4"

82448

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82448	1/10a - 250V, GGC glass fuse	5	5
82450	1/4a - 250V, GGC glass fuse	5	100
82451	3/10a - 250V, GGC glass fuse	5	5
82453	1/2a - 250V, GGC glass fuse	5	100
82455	3/4a - 250V, GGC glass fuse	5	5
82456	1a - 250V, GGC glass fuse	5	100
82457	1 1/4a - 250V, GGC glass fuse	5	5
82458	1 1/2a - 250V, GGC glass fuse	5	100
82460	2a - 250V, GGC glass fuse	5	100
82461	2 1/2a - 250V, GGC glass fuse	5	100
82462	3a - 250V, GGC glass fuse	5	100
82459	3 2/10a - 250V, GGC glass fuse	5	100
82463	4a - 250V, GGC glass fuse	5	100
82464	5a - 250V, GGC glass fuse	5	5
82465	6a - 250V, GGC glass fuse	5	100
82466	7 1/2a - 250V, GGC glass fuse	5	5
82467	8a - 250V, GGC glass fuse	5	100
82468	10a - 250V, GGC glass fuse	5	100
82474	12a - 125V, GGC glass fuse	5	100
82469	15a - 125V, GGC glass fuse	5	100
82471	20a - 32V, GGC glass fuse	5	100
82472	25a - 32V, GGC glass fuse	5	5
82473	30a -32V, GGC glass fuse	5	5

Electronic/Glass Fuses, Type GDG

- Glass body
- Time Delay
- 13/16" X 3/16"

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82476	3-15/100A-250V, GDG glass fuse	5	5

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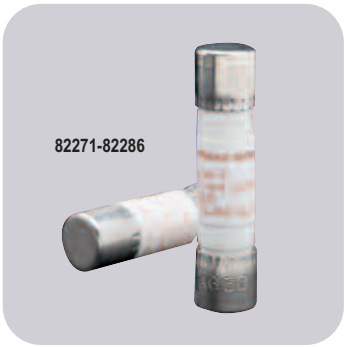
Accessories

Class G Fuses 480 Volt, 600 Volt Type AG = Type SC

Time delay (above 5A) current limiting

Applications:

- Lighting
- Heating
- Appliances
- Branch circuits



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82271	1a - 600V, AG fuse	4	100
82290	2a - 600V, AG fuse	4	100
82272	3a - 600V, AG fuse	4	100
82291	4a - 600V, AG fuse	4	100
82273	5a - 600V, AG fuse	4	100
82274	6a - 600V, AG fuse	4	100
82275	8a - 600V, AG fuse	4	100
82276	10a - 600V, AG fuse	4	100
82278	15a - 600V, AG fuse	4	100
82279	20a - 600V, AG fuse	4	100
82280	25a - 480V, AG fuse	4	100
82281	30a - 480V, AG fuse	4	100
82282	35a - 480V, AG fuse	2	100
82283	40a - 480V, AG fuse	2	100
82285	50a - 480V, AG fuse	2	100
82286	60a - 480V, AG fuse	2	100

Glass Body Time Delay Fuses, Type GDL

- Glass body
- Time delay
- 1/4" x 1 1/4"

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82502	1a - 250V, GDL glass fuse	5	100
82505	1.5a - 250V, GDL glass fuse	5	100
82507	2a - 250V, GDL glass fuse	5	100
82508	2.5a - 250V, GDL glass fuse	5	100
82510	3a - 250V, GDL glass fuse	5	100
82512	4a - 250V, GDL glass fuse	5	100
82513	5a - 250V, GDL glass fuse	5	100
82514	7a - 250V, GDL glass fuse	5	100
82517	8a - 250V, GDL glass fuse	5	100
82518	10a - 125V, GDL glass fuse	5	100
82519	15a - 125V, GDL glass fuse	5	100

Dual Element, Time Delay (Type S) UL 125V

Plug fuses all UL listed; CSA models also listed

Rejection Time delay, tamper resistant

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82307	1 1/4a, S plug fuse	4	100
82308	1 6/10a, S plug fuse	4	100
82311	2a, S plug fuse	4	100
82313	2 1/2a, S plug fuse	4	100
82315	3a, S plug fuse	4	100
82316	3 2/10a, S plug fuse	4	100
82318	4a, S plug fuse	4	100
82320	5a, S plug fuse	4	100
82323	6 1/4a, S plug fuse	4	100
82325	8a, S plug fuse	4	100
82326	9a, S plug fuse	4	100
82327	10a, S plug fuse	4	100
82328	12a, S plug fuse	4	100
82330	15a, S plug fuse	4	100
82331	20a, S plug fuse	4	100
82332	25a, S plug fuse	4	100
82333	30a, S plug fuse	4	100

Dual Element Time Delay Type S Clamshell Packaging For Merchandisers

Rejection Time delay, tamper resistant

MARS NO.	DESCRIPTION	MARS PACK
82745	15a, S plug fuse 125V, (6 pk)	1
82746	20a, S plug fuse 125V, (6 pk)	1
82747	25a, S plug fuse 125V, (6 pk)	1
82748	30a, S plug fuse 125V, (6 pk)	1

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Dual Element, Time Delay (Type T) UL 125V

- Low melting point temperatures
- Electronic heating and cycling load circuits

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82334	1 1/4a, T plug fuse	4	100
82337	2a, T plug fuse	4	100
82344	2.5a, T plug fuse	4	100
82338	3.2a, T plug fuse	4	100
82339	4a, T plug fuse	4	100
82340	5a, T plug fuse	4	100
82341	6 1/4a, T plug fuse	4	100
82342	8a, T plug fuse	4	100
82343	10a, T plug fuse	4	100
82660	15a, T plug fuse	4	100
82661	20a, T plug fuse	4	100
82662	30a, T plug fuse	4	100

Dual Element, Time Delay (Type TL) UL 125V

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82346	15a, TL plug fuse	4	100
82348	25a, TL plug fuse	4	100
82349	30a, TL plug fuse	4	100

Dual Element, Time Delay (Type TD) UL 125V

- Low melting temperature element
- Electronic heating and cycling load circuits

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82350	15a, TD plug fuse-CSA	4	100
82351	20a, TD plug fuse-CSA	4	100
82352	25a, TD plug fuse-CSA	4	100
82353	30a, TD plug fuse-CSA	4	100

Dual Element Time Delay Type TL Clamshell Packaging For Merchandisers

MARS NO.	DESCRIPTION	MARS PACK
82736	20a, 125V, TL plug fuse (6 pk)	1
82737	25a, 125V, TL plug fuse (6 pk)	1
82738	30a, 125V, TL plug fuse (6 pk)	1

S Plug Fuse Adapters, UL 125

Type S adapters screw into the base and allow Type S fuses to be installed. Type S adapters prevent the wrong size fuse from being used.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82375	2 1/2a, S plug fuse	4	100
82379	6 1/4a, S plug fuse	4	100
82382	15a, S plug fuse	4	100
82383	20a, S plug fuse	4	100
82384	30a, S plug fuse	4	100

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Accessories

Fast Acting, (Type W) UL 125V

"W" Fuse

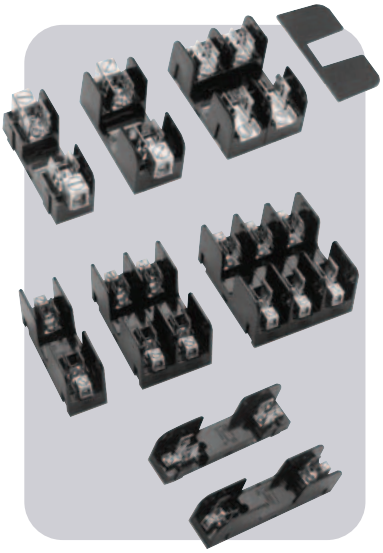
MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82360	10a, W plug fuse	4	100
82363	15a, W plug fuse	4	100
82364	20a, W plug fuse	4	100
82365	25a, W plug fuse	4	100
82366	30a, W plug fuse	4	100

Dual Element, Time Delay Fuse - Type W Clamshell Packaging For Merchandisers

MARS NO.	DESCRIPTION	MARS PACK
82756	20a, 125V, W plug fuse (6 pk)	1
82757	25a, 125V, W plug fuse (6 pk)	1
82758	30a, 125V, W plug fuse (6 pk)	1

Fuse Blocks - Class H & K 250 Volts

Mersen manufactures the highest quality 250 to 600 volt fuse blocks handling current capacities of 30 to 600 amperes. These durable fuse blocks are designed for class H, J, K, R, CC and Midget fuses. All blocks are UL listed and CSA certified.



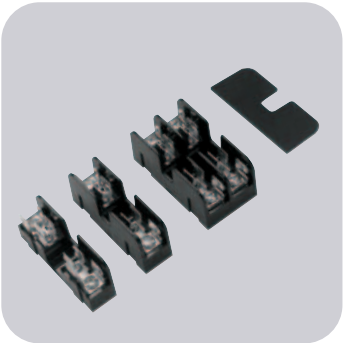
Mersen fuse blocks feature a unique adder block which can be snapped on to form multi-pole segmented blocks of as many poles as desired. Multiple pole blocks thus formed save valuable space, are permanent, and can be added to in the future.

Fuse block insulators are constructed of either phenolic or molded polycarbonate. Three types of wire connectors are used. Screw type is for copper wire with terminals. Pressure plate type is for bare copper wire where vibration may be a factor. Box type connectors are the most durable and versatile for stranded or solid wire. All fuse clips are one piece high-conductivity tin-plated copper for low resistance connections and cool operation.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
83010	Adder 30 amp - Al box	1	50
83011	1 pole 30 amp - Al box	1	50
83012	1 pole 30 amp - screw	1	50
83013	2 pole 30 amp - screw	1	50
83017	2 pole 60 amp - Al box	5	25
83018	3 pole 60 amp - Al box	5	25

Fuse Blocks - Midget Fuses 600 Volts

Mersen power distribution blocks (pdb), afford a safe, convenient way of splicing cables, splitting primary power into a variety of secondary circuits or providing a fixed junction tap - off point. Insulators are virtually unbreakable polycarbonate. Standard aluminum box connectors accommodate aluminum and copper wire. Connector bars are all one piece and tin plated. The pdbs are UL listed and CSA certified.



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
83061	1 pole 30 amp - screw	1	50
83062	2 pole 30 amp - screw	1	25
83063	3 pole 30 amp - screw	1	25
83065	1 pole 30 amp - plate	1	50
83066	2 pole 30 amp - plate	1	25
83067	3 pole 30 amp - plate	1	25

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Power Distribution Blocks - 600 Volts

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
83090	1 pole pdb 1 to 4 #4-#14ga	1	50
83091	2 pole pdb 1 to 4 #4-#14ga	1	25
83092	3 pole pdb 1 to 4 #4-#14ga	1	25

Fuse Holders

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
82994	panel mount glass holder 1/4" x 1 1/4" screw type knob	1	100
82995	panel mount midget holder 13/32" x 1 1/2" bayonet knob	1	100
82996	base mount glass fuse block 1/4" x 1 1/4"	10	100
82997	in-line midget holder-screw cap	1	100
83001	in-line glass holder-screw cap (5 pk)	1	100
83002	in-line glass holder-snap cap (5 pk)	1	100
82989	HPF-SC fuse holder-panel mount	10	100
82990	HHB fuse holder	10	100
82991	HKP-HH fuse holder	1	10
82993	HRK fuse holder	10	100

JARD Fuses

Applications:
- Recommended for AC power distribution system mains, feeders, and branch circuits.
- Protection of motors and motor branch circuits.
- Protection of transformers and other inductive loads.
- All general-purpose applications including lighting, heating and other non-inductive loads.

Benefits:
- Superior overload and cycling capabilities.
- Current limiting provides component short-circuit protection.

Specifications:
Dual-Element Time-Delay
Voltage Rating: RK5 - 250Vac, RK5 - 600Vac
Amp Rating: 1/10 - 600A
Interrupting Rating: 200,000 RMS Symmetrical Amps
Current Limiting: RK5 Fuse
Agency Approvals:
UL Listed, Class RK5, CSA Certified, DC listed to UL standard 248 TRS only
Voltage Rating: RK5 250V
Volts: 250VAC
: 250VDC (.1-2.8A; 35-400A)
: 160VDC (3-30A; 450-600A)
RK5 600V
Volts: 600VAC
: 600VDC (.1-12A; 70-600A)
: 160VDC (15-60A)

RK5 Time Delay Fuse 250V Replaces: TR, ECNR, FRNR, FLNR

MARS NO.	DESCRIPTION	MARS PACK
81006	.5A - 250V	10
81009	1A - 250V	10
81016	2A - 250V	10
81017	2.5A - 250V	10
81019	3A - 250V	10
81020	3.2A - 250V	10
81021	4A - 250V	10
81024	5A - 250V	10
81025	5.6A - 250V	10
81026	6A - 250V	10
81027	6.25A - 250V	10
81029	7A - 250V	10
81030	8A - 250V	10
81032	10A - 250V	10
81033	12A - 250V	10
81034	15A - 250V	10
81035	17.5A - 250V	10
81036	20A - 250V	10
81037	25A - 250V	10
81038	30A - 250V	10
81039	35A - 250V	10
81040	40A - 250V	10
81041	45A - 250V	10
81042	50A - 250V	10
81043	60A - 250V	10
81044	70A - 250V	5
81045	80A - 250V	5
81046	90A - 250V	5
81047	100A - 250V	5
81048	110A - 250V	1
81049	125A - 250V	1
81050	150A - 250V	1
81051	175A - 250V	1
81052	200A - 250V	1
81053	225A - 250V	1
81054	350A - 250V	1
81056	400A - 250V	1
81055	600A - 250V	1

RK5 Time Delay Fuse 600V Replaces: TRS, ECSR, FRSR, FLSR

MARS NO.	DESCRIPTION	MARS PACK
81103	.2A - 600V	10
81106	.5A - 600V	10
81109	1A - 600V	10
81110	1.6A - 600V	10
81111	2A - 600V	10
81112	2.25A - 600V	10
81124	5A - 600V	10
81125	6A - 600V	10
81132	10A - 600V	10
81133	12A - 600V	10
81134	15A - 600V	10
81136	20A - 600V	10
81137	25A - 600V	10
81138	30A - 600V	10
81139	35A - 600V	10
81140	40A - 600V	10
81147	45A - 600V	10
81141	50A - 600V	10
81142	60A - 600V	10
81143	70A - 600V	5
81144	80A - 600V	5
81145	90A - 600V	5
81146	100A - 600V	5
81154	110A - 600V	1
81148	125A - 600V	1
81149	150A - 600V	1
81150	175A - 600V	1
81151	200A - 600V	1
81152	250A - 600V	1
81153	300A - 600V	1

WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Fuses With A Resealable Plastic Pouch

MARS NO.	DESCRIPTION	MARS PACK
08569	3 Amp Standard Size Plastic, 25/pk	1
08570	5 Amp Standard Size Plastic, 25/pk	1
08571	Assorted Fuses, 25/pk	1

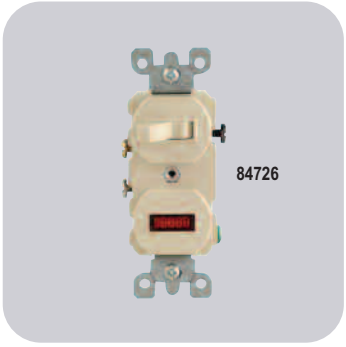
Fuses & Fuse Holders

Zebra Instruments offers a 4 pack Medium Duty (15A) standard size plastic fuses and fuse holder. This allows you to replace (or install) fuse protection for transformer outputs (and other devices) in HVAC systems.

MARS NO.	DESCRIPTION	MARS PACK
08568	Medium duty 15Amp Standard Size Plastic, 4/pk	1

Toggle Switches Without Ground

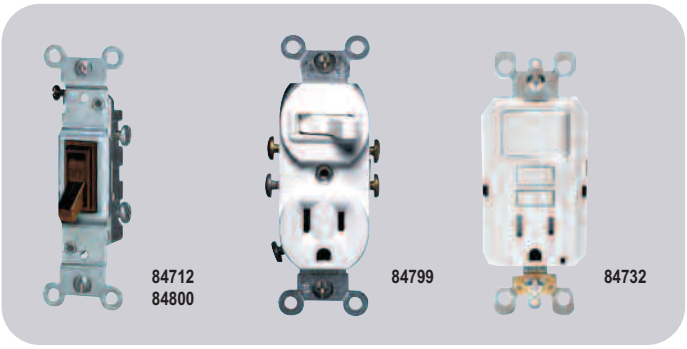
- Quick wire push in and side wire
- Constructed of impact resistant thermo-plastic



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84798	15a -120V, 1P, silent, ivory (bulk)	10	100
84726	15a -120/277V, 1P, switch w/pilot light (card)	1	100

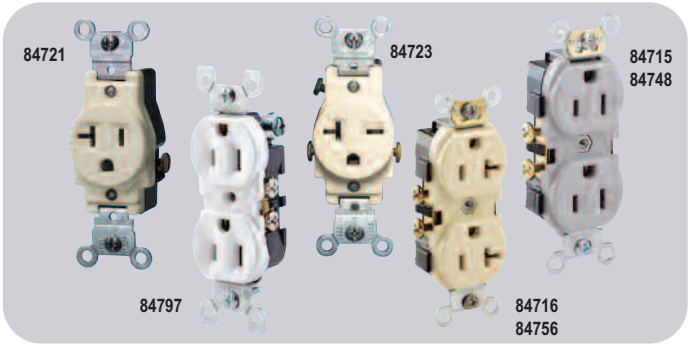
Toggle Switches With Ground

- Quick wire push in and side wire
- Constructed of impact resistant thermo-plastic



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84712	15a -120V, 1P, silent, brown (bulk)	10	100
84800	15a -120V, 1P, silent, ivory (bulk)	10	100
84706	15a -120/277V, 1P, silent, ivory (bulk)	10	100
84727	20a -120/277V, 1P, silent, brown (bulk)	10	100
84707	20a -120/277V, 1P, silent, ivory (bulk)	10	100
84709	20a -120/277V, 2P, silent, ivory (bulk)	10	100
84799	Combo switch/receptacle ivory (bulk) switch 15a-120/277V, 1P receptacle 15a-125V, 2P, 3W	10	100
84732	Tamper resistant smartlock pro combo switch/receptacle, white, 15a – 125V, 2P, 3W	10	100

Straight Blade Receptacles With Ground



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84721	Single, ivory, 20a, 125V, 2P, 3W (bulk)	10	100
84723	Single, ivory, 20a, 250V, 2P, 3W (bulk)	10	100
84715	Duplex, ivory, 15a, 125V, 2P, 3W (bulk)	10	100
84748	Duplex, brn, 15a, 125V, 2P, 3W (bulk)	10	100
84797	Dup, ivory, EZ wire/screw, 15a, 125V, (bulk)	10	100
84716	Dup, ivory, 20a, 125V, 2P, 3W (bulk)	10	100

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

3 Pole Mini-Split Disconnect Switch

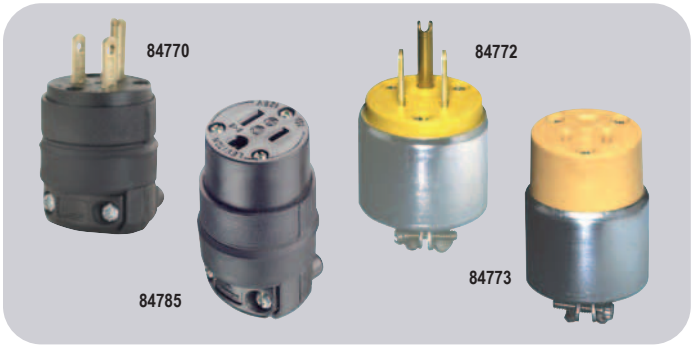
Local codes require a disconnect switch to safely shut off power for indoor mini-split AC and Heat Pumps. The disconnect switch will break both power lines L1 and L2 along with the high voltage communicating line to meet local code requirements.

- UL 30 amp rated motor disconnect
- 3 pole
- 600V max

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84711	30A-600V 3 Pole 3Ph AC Motor Switch(Bulk)	1	100

Plugs, Connectors And Adapters

LEVITON



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84770	Grnd rubr hndl plug, 2P, 3W, 15a, 125V, black	10	100
84772	Armrd plug, 2P, 3W, 15a, 125V,	10	100
84785	Blk rubr rnd conn, 2P, 3W, 15a, 125V	10	100
84773	Blk armored conn, 2P, 3W, 15a, 125V	10	100

GFCI Duplex Receptacles

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84767	15a, 125V, ivory, EZ wire & screw	1	10

Wall Plates - Plastic

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84751	Single toggle ivory	25	250
84809	Duplex receptacle ivory	25	100

Pullchain Lampholders - White

Medium base one-piece glazed porcelain outlet box mount incandescent lampholder, single circuit, 2 screws top wired, 15A 125V outlet grounding - white

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84719	Porcelain lampholder w/ receptacle	1	50

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Ideal Wire Nut® Wire Connectors

IDEAL' s Wire Nut® wire connectors are second to none and preferred by electricians industry wide. There are five color coded models covering every wiring combination. Some features include: positive grip design, flame retardant thermoplastic shell, longest fully seated square wire spring, threaded entry, deep skirt and wide throat entry. All Wire Nut® wire connectors are UL listed and CSA certified

Twister® wire connectors have become widely accepted due to their unsurpassed features: ribbed cap, fluted surface, compact, swept wings, hexagonal shape, tough thermoplastic shell, live action square wire spring and deep threaded skirt entry. Nutmaster™ nutdrivers can be used to install Twister® wire connectors quickly and securely. Twister® wires are UL and CSA approved. Exceptional wire range capacity for their size, just two Twister® wire connectors handle all wire combinations. This means reduced inventories and lower costs!

Wing Nut® wire connectors were first introduced by IDEAL in 1958 and remain the most comfortable, easy to use connector on the market. The wings act as a built in wrench to provide extra leverage for secure connections...every time. Wing Nut® wire connectors handle a wide range of branch circuit and fixture wiring requirements. Just three color coded models handle UL listed wire combinations from (2) No. 18's to (1) No. 6 with (2) No. 8's, solid or stranded wire.

MARS NO.	DESCRIPTION	BOX QTY.	MFG. NO	MARS PACK	CASE QTY.
25930	Gray wire nut, 22-14 AWG	100	30-071	1	10
25931	Blue wire nut, 22-14 AWG	100	30-072	1	10
25932	Orange wire nut, 22-14 AWG	100	30-073	1	10
25933	Yellow wire nut, 18-10 AWG	100	30-074	1	10
25934	Red wire nut, 18-8 AWG	100	30-076	1	10
25936	Tan twister conn., 22-10 AWG	100	30-341	1	10
25937	Gray twister conn., 16-8 AWG	50	30-342	1	20
25938	Yellow wing nut, 18-10 AWG	100	30-451	1	10
25939	Red wing nut, 18-10 AWG	100	30-452	1	10
25940	Blue wing nut, 14-6 AWG	25	30-454	1	10

MARS Wire Connectors

MARS wire connectors are available in five color coded models: gray, blue, orange, yellow and red. Some features include a positive grip design and flame retardant thermoplastic shell. The large throat provides easy wire entrance and the deep skirt prevents shorts and grounds.

MARS NO.	DESCRIPTION	MARS PACK
25860	Gray wire connector, 300V (25/bag)	1
25880	Gray wire connector, 300V (100/bag)	1
25861	Blue wire connector, 300V (25/bag)	1
25881	Blue wire connector, 300V (100/bag)	1
25862	Orange wire connector, 600V (25/bag)	1
25882	Orange wire connector, 600V (100/bag)	1
25863	Yellow wire connector, 600V (25/bag)	1
25883	Yellow wire connector, 600V (100/bag)	1
25864	Red wire connector, 600V (25/bag)	1
25884	Red wire connector, 600V (100/bag)	1
25868	Yellow wing connector, 600V (25/bag)	1
25888	Yellow wing connector, 600V (100/bag)	1
25869	Red wing connector, 600V (25/bag)	1
25889	Red wing connector, 600V (100/bag)	1
25870	Blue wing connector, 600V (10/bag)	1
25800	Blue wing connector, 600V (50/bag)	1

Wiregard Color-Coded Screw-On Wire Connectors

MARS now offers Gardner Bender wire connectors. The industry's standard screw-on connector, with high quality, performance and durability.

- UL listed, CSA approved.
- Color-coded for easy size selection.
- Makes quick, secure connections for positive continuity. Tightens without ratcheting, removable for re-use. Fluted shell surface allows for easy finger-tight connections.
- Thermoplastic shell shields against environmental extremes. Flame retardant up to 221 degrees F.
- Superior flash-over protection. High-dielectric shell features deep skirt design to prevent exposure of bare wire.
- Versatile size selection covers building wire combinations from #22 to #10 AWG.
- Complies with Federal Specification W-5-610d.

MARSNO.	MFG. NO	MODEL/SIZE	COLOR	BOX QTY.	CASE QTY.
25950	10-001	GB-1	Gray	100 Box	10
25941	10-002	GB-2	Blue	100 Box	10
25942	10-003	GB-3	Orange	100 Box	10
25943	10-004	GB-4	Yellow	100 Box	10
25944	10-006	GB-6	Red	100 Box	10

⚠ WARNING:
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www.P65Warnings.ca.gov

Solid Copper Wire

MARS NO.	DESCRIPTION	MARS PACK
84250	#6 Bare Solid Copper Grnding Wire, 25 Feet	5

Stranded Copper Building Wire, 19 Strands 10-14 Ga. THHN, 16-18 Ga. TFFN, 600V, 90°C

MARS NO.	DESCRIPTION	MARS PACK
84341	10 gauge black 500' spool	1

SJ Wire - 250 Foot Rolls

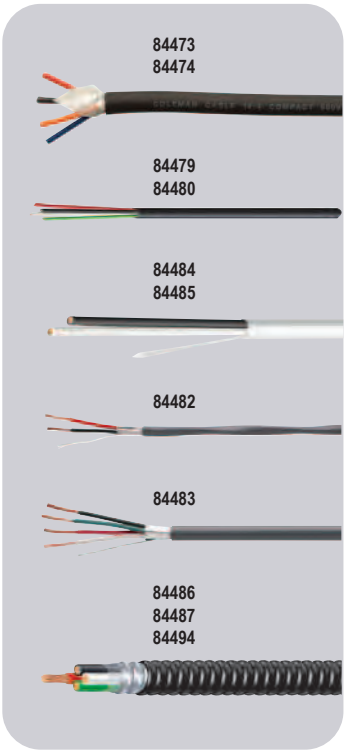
MARS NO.	DESCRIPTION	MARS PACK
84380	12/3 250 ft. reel	1
84381	14/3 250 ft. reel	1
84382	16/3 250 ft. reel	1

Mini-Split Installation Wire

Corra/Clad MC Cable consists of UL listed THHN soft drawn annealed solid copper conductors, cabled with fillers and wrapped with an overall solid Flexi-Rib aluminum sheath. The continuous sheath provides watertight protection and it is covered with a PVC outer jacket for outdoor use or direct burial. Cost effective, easy to strip and install. Meets all national codes and is suitable for outdoor use, under concrete, underground, and through interior walls and ceilings.

Compact 600 and Shielded Low Voltage Cables offer additional options to provide power and control to mini-split installations. Compact 600 uses a TPE jacket and is flexible, easy to strip, and is burial rated.

EZ-IN™ cable is an all-purpose cable that meets code for both interior and exterior use, increasing the speed of installation and making sure the job will pass inspection. EZ-IN™ Mini-Split Cable can be installed without the use of conduit and may be installed indoors and outdoors in wet locations.



MARS NO.	DESCRIPTION	DIA (IN.)	MARS PACK
Compact 600 Cable: 600V, UL, UV Rated, Direct Burial			
84473	14/4 Solid THHN Compact 600V– 50' Roll	0.336	1
84474	14/4 Solid THHN Compact 600V – 250' Reel	0.336	1
84479	14/4 Stranded THHN Compact 600V – 50' Roll	0.352	1
84480	14/4 Stranded THHN Compact 600V – 250' Reel	0.352	1
Shielded Low Voltage Cable: 300V, NEC 725/800, ETL, CMR/CL3R			
84485	16/2 Stranded Shielded – 50' Roll	0.191	1
84484	16/2 Stranded Shielded – 250' Reel	0.191	1
84491	16/4 Stranded Shielded 300V – 50' Roll	0.212	1
84482	18/2 OAS CMR/CL3R Gy – 500'	-	1
84483	18/4 OAS CMR/CL3R Gy – 500' Reel For LG Mini-Splits	0.180	1
EZ-IN™ Cable: 600V, UL, All Purpose, UV Rated, Direct Buriel			
84486	14/4 Stranded EZ-IN,™ 600V, 50' Roll	0.553	1
84487	14/4 Stranded EZ-IN,™ 600V, 250' Reel	0.553	1
84494	14-4 Shielded EZ-IN,™ 600V, 250' Reel	0.553	1

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

MARS 18 Gauge Thermostat Cable - ETL Listed

MARS 18 gauge thermostat wire is a class 2 power-limited circuit cable for use in thermostat control applications.

Specifications: ETL Listed type CL2. UV rated. Temp rating -20°C to +60°C. Meets UL 1581 Vertical Tray Flame Test (FT-1). Soft drawn bare copper, semi-rigid pvc insulation and PVC overall jacket.

MARS NO.	DESCRIPTION	LBS. MFT	MARS PACK
84201	18 AWG, 2 conductors, 500 ft. spool	15	4
84202	18 AWG, 3 conductors, 500 ft. spool	21	4
84203	18 AWG, 4 conductors, 250 ft. spool	27	4
84204	18 AWG, 5 conductors, 250 ft. spool	34	4
84205	18 AWG, 6 conductors, 250 ft. spool	40	4
84206	18 AWG, 7 conductors, 250 ft. spool	45	4
84207	18 AWG, 8 conductors, 250 ft. spool	51	4
84209	18 AWG, 10 conductors, 250 ft. spool	63	4

MARS 20 Gauge Thermostat Cable - UL Listed

MARS 20 gauge thermostat wire is a class 2 power-limited circuit cable for use in thermostat control applications.

Specifications: UL type CL2. UV rated. Temp rating -20°C to +60°C. Soft drawn bare copper, semi-rigid pvc insulation and PVC overall jacket.

MARS NO.	DESCRIPTION	LBS. MFT	MARS PACK
84211	20 AWG, 2 conductors, 500 ft. spool	11	4
84213	20 AWG, 4 conductors, 250 ft. spool	18	4
84214	20 AWG, 5 conductors, 250 ft. spool	22	4
84215	20 AWG, 6 conductors, 250 ft. spool	26	4
84217	20 AWG, 8 conductors, 250 ft. spool	33	4

Shielded Plenum T-Stat Wire - UL Listed - Type CL2P-Stranded

MARS NO.	DESCRIPTION	LBS. MFT	MARS PACK
84461	18 AWG, 2 conductors, 500 ft spool	17	4

18 Ga ETL Listed Thermostat Wire – Self Dispensing Coils

MARS thermostat wire is now available in self dispensing coil packs. These shrink wrapped coils are easier to use and more convenient to store than the traditional thermostat wire sold on spools/reels.

Features & benefits:

- Heavy duty shrink wrapped coils for durability
- No reels to bend, break, or rust
- Compact coils are easier to store – takes up less space
- Easier to handle
- Stacks better
- Easy and convenient to use

How to use:

- Simply punch hole in center of wrap (Do not remove wrap)
- Pull loose end of wire from center (Wire will pull out easily)
- Snip off the required amount of wire
- Tuck loose end back into the coil for storage

MARS NO.	DESCRIPTION	MARS PACK
84401	18/2 500 ft. Coils	4
84402	18/3 500 ft. Coils	4
84403	18/4 250 ft. Coils	4
84404	18/5 250 ft. Coils	4
84405	18/6 250 ft. Coils	4
84406	18/7 250 ft. Coils	4
84407	18/8 250 ft. Coils	4

Plenum T-Stat Wire - Solid ETL Listed

- Temp rating (-20˚C to 75˚C)
- ETL Listed, CL2P
- Thermoplastic jacket (2500 PSI min)
- Thermoplastic insulation (2000 PSI min)
- Can be used in overhead plenum area without conduit

MARS NO.	DESCRIPTION	MARS PACK
84241	18 AWG, 2 conductors, 500 ft. spool	4
84242	18 AWG, 3 conductors, 500 ft. spool	4
84243	18 AWG, 4 conductors, 250 ft. spool	4
84244	18 AWG, 5 conductors, 250 ft. spool	4
84245	18 AWG, 6 conductors, 250 ft. spool	4

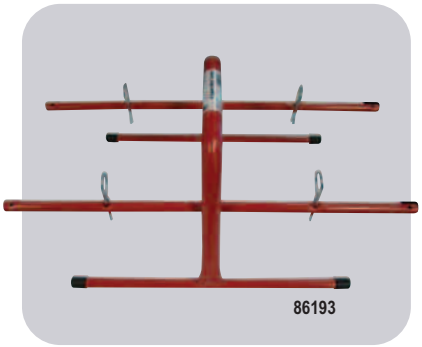
⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Hand Wire Caddy

Rugged Construction, epoxy coated to reduce chipping & peeling

Holds up to 8 reels, 7" D x 5" W, or 4 reels 7" D x 6" to 10" W



MARS NO.	DESCRIPTION	MARS PACK
86193	Wire Hand Caddy, 22-1/2" L x 13-1/2" W x 9-1/2" H	1

Adhesive Wire Markers

Wire marker dispenser measures 3" x 6" and holds 10 tape rolls at once. Rugged, sturdy case fits in your pocket. Durable long lasting tapes are excellent for wire, pipe and conduit identification.

Wire marker booklets contain 10 pages each. Plastic impregnated cloth marker resists abrasion, moisture, dirt and oil. Markers are 1-1/2" in length and can be separated into half-length sizes.

MARS NO.	DESCRIPTION	MFG. NO	MARS PACK	CASE QTY.
25920	Wire marker dispenser, 0-9 legends	42-301	1	5
25921	Wire marker book, 0-9 legends	44-101	5	5
25922	Wire marker book, A-Z legends	44-102	5	5
25923	Wire marker book, 1-45 legends	44-103	5	5

LED Omnidirectional Shatterproof Bulbs

These LED bulbs are ideal for both residential and commercial settings. Dimmable down to 10% for additional energy savings and ambiance control.

Features:

- 85% energy savings compared to incandescent lamps
- RoHS compliant and mercury free

Specifications:

- Input Voltage: 120V
- Average Rated Life: 25,000 Hours
- CRI: 80
- Beam Angle: 220°
- Ambient temp: -4°F to 104°F

MARS NO.	DESCRIPTION	WATTS	EQUIVALENT WATTS	BASE	INITIAL LUMENS	PACK QTY
79243	LED Shatterproof Bulb	11	75	E26 - Medium Base	1100	6
79244	LED Shatterproof Bulb	15	100	E26 - Medium Base	1600	6

Square Steel Boxes

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84936	4", 2-1/2" D 1/2" & 3/4" K.O.	1	25
84937	4", 1-1/2" D 1/2" K.O.	1	25
84938	4", 1-1/2" D 1/2" & 3/4" K.O.	1	25
84943	4-11/16", 2-1/8" D 1/2" & 3/4" K.O.	1	25

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

MARS 18 Gauge Thermostat Cable - ETL Listed

MARS 18 gauge thermostat wire is a class 2 power-limited circuit cable for use in thermostat control applications.

Specifications: ETL Listed type CL2. UV rated. Temp rating -20°C to +60°C. Meets UL 1581 Vertical Tray Flame Test (FT-1). Soft drawn bare copper, semi-rigid pvc insulation and PVC overall jacket.

MARS NO.	DESCRIPTION	LBS. MFT	MARS PACK
84201	18 AWG, 2 conductors, 500 ft. spool	15	4
84202	18 AWG, 3 conductors, 500 ft. spool	21	4
84203	18 AWG, 4 conductors, 250 ft. spool	27	4
84204	18 AWG, 5 conductors, 250 ft. spool	34	4
84205	18 AWG, 6 conductors, 250 ft. spool	40	4
84206	18 AWG, 7 conductors, 250 ft. spool	45	4
84207	18 AWG, 8 conductors, 250 ft. spool	51	4
84209	18 AWG, 10 conductors, 250 ft. spool	63	4

MARS 20 Gauge Thermostat Cable - UL Listed

MARS 20 gauge thermostat wire is a class 2 power-limited circuit cable for use in thermostat control applications.

Specifications: UL type CL2. UV rated. Temp rating -20°C to +60°C. Soft drawn bare copper, semi-rigid pvc insulation and PVC overall jacket.

MARS NO.	DESCRIPTION	LBS. MFT	MARS PACK
84211	20 AWG, 2 conductors, 500 ft. spool	11	4
84213	20 AWG, 4 conductors, 250 ft. spool	18	4
84214	20 AWG, 5 conductors, 250 ft. spool	22	4
84215	20 AWG, 6 conductors, 250 ft. spool	26	4
84217	20 AWG, 8 conductors, 250 ft. spool	33	4

Shielded Plenum T-Stat Wire - UL Listed - Type CL2P-Stranded

MARS NO.	DESCRIPTION	LBS. MFT	MARS PACK
84461	18 AWG, 2 conductors, 500 ft spool	17	4

18 Ga ETL Listed Thermostat Wire – Self Dispensing Coils

MARS thermostat wire is now available in self dispensing coil packs. These shrink wrapped coils are easier to use and more convenient to store than the traditional thermostat wire sold on spools/reels.

Features & benefits:

- Heavy duty shrink wrapped coils for durability
- No reels to bend, break, or rust
- Compact coils are easier to store – takes up less space
- Easier to handle
- Stacks better
- Easy and convenient to use

How to use:

- Simply punch hole in center of wrap (Do not remove wrap)
- Pull loose end of wire from center (Wire will pull out easily)
- Snip off the required amount of wire
- Tuck loose end back into the coil for storage

MARS NO.	DESCRIPTION	MARS PACK
84401	18/2 500 ft. Coils	4
84402	18/3 500 ft. Coils	4
84403	18/4 250 ft. Coils	4
84404	18/5 250 ft. Coils	4
84405	18/6 250 ft. Coils	4
84406	18/7 250 ft. Coils	4
84407	18/8 250 ft. Coils	4

Plenum T-Stat Wire - Solid ETL Listed

- Temp rating (-20˚C to 75˚C)
- ETL Listed, CL2P
- Thermoplastic jacket (2500 PSI min)
- Thermoplastic insulation (2000 PSI min)
- Can be used in overhead plenum area without conduit

MARS NO.	DESCRIPTION	MARS PACK
84241	18 AWG, 2 conductors, 500 ft. spool	4
84242	18 AWG, 3 conductors, 500 ft. spool	4
84243	18 AWG, 4 conductors, 250 ft. spool	4
84244	18 AWG, 5 conductors, 250 ft. spool	4
84245	18 AWG, 6 conductors, 250 ft. spool	4

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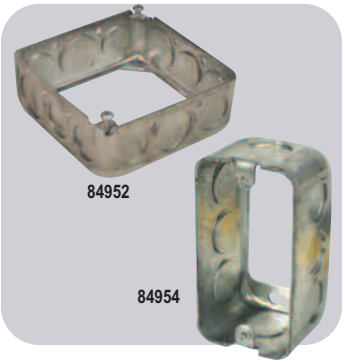
Accessories

2-1/8" x 4" Steel Utility Boxes

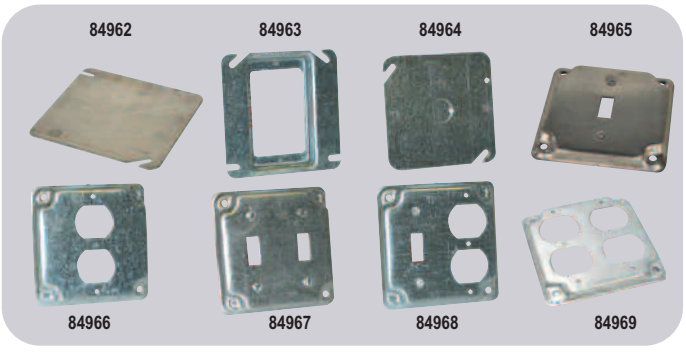
MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84947	1-1/2" D 1/2" K.O.	1	25
84948	1-7/8" D 1/2" K.O.	1	25
84949	2-1/8" D 1/2" K.O.	1	25

Steel Extension Rings



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84952	1-1/2" D 1/2" & 3/4" K.O. (4" sq.)	1	25

Square Steel Covers

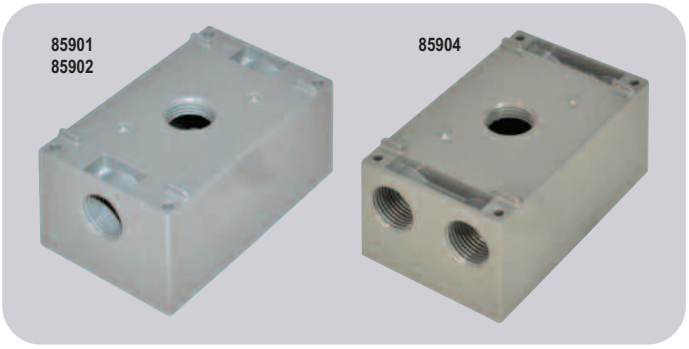


MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84962	4", flat blank	1	25
84963	4", 1/2" depth, single flush	1	25
84964	4", flat, 1/2" K.O. in center	1	25
84965	4", 1/2" raised, single toggle switch	1	25
84966	4", 1/2" raised, 1 duplex receptacle	1	25
84968	4",1/2" raised, 1 toggle sw. & 1 dup. recept.	1	25
84969	4", 1/2" raised, 2 duplex receptacle	1	25

2-1/8" x 4" Steel Utility Box Covers

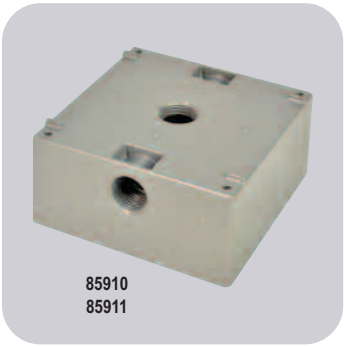
MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84987	Duplex receptacle	1	25
84988	Toggle switch	1	25
84989	Blank	1	25
84990	Blank with 1/2" K.O. in center	1	25
84991	Single receptacle	1	25

One Gang - Weatherproof Outlet Boxes



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
85901	Three 1/2" holes with lugs	1	50
85902	Three 3/4" holes with lugs	1	50
85904	Five 1/2" holes with lugs	1	50

Two Gang - Weatherproof Outlet Boxes



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
85910	Three 1/2" holes with lugs	1	10
85911	Three 3/4" holes with lugs	1	10

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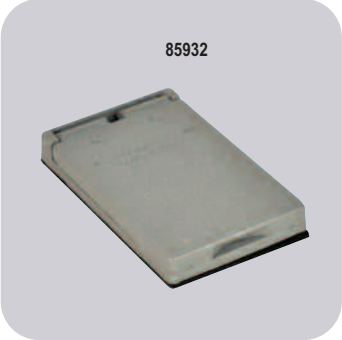
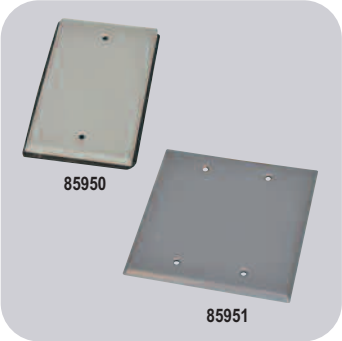
Self Closing GFCI Weatherproof Covers



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
85932	One gang for vertical devices	1	10

Weatherproof Blank Covers



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
85950	One gang for vertical devices	1	25
85951	Two gang with gasket and screws	1	10

4" Octagon Steel Covers

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84980	Flat blank	1	25

Electrical Fittings-EMT Type-Carded

• Zinc die cast construction

MARS NO.		DESCRIPTION	CASE QTY.
85115	1/2"	EMT set screw connector, bulk	50
85326	3/4"	EMT set screw connector, bulk	25
85327	1/2"	EMT set screw coupling, bulk	50
85329	1/2"	EMT compression connector, bulk	50
85330	3/4"	EMT compression connector, bulk	25
85332	1/2"	EMT compression coupling, bulk	50
85335	1/2"	EMT one-hole strap, 5/bag	-
85336	3/4"	EMT one-hole strap, 4/bag	-
85302	3/4"	EMT one-hole strap, bulk	100
85337	1"	EMT one-hole strap, 2/bag	-
85338	1 1/4"	EMT one hole strap, 4/bag	-
85306	1/2"	rigid IMC strap, bulk	50
85307	3/4"	rigid IMC strap, bulk	50
85308	1"	rigid IMC strap, bulk	25

Electrical Fittings-Rigid Conduit-Carded

MARS NO.	DESCRIPTION	CASE QTY.
85364	3/4" x 1/2" reducing washer, 4/cd	10
85279	1 1/4" x 3/4" reducing washer, bulk	50
85280	1 1/4" x 1" reducing washer, bulk	50
85281	1 1/2" x 1/2" reducing washer, bulk	50
85282	1 1/2" x 3/4" reducing washer, bulk	50
85374	1/2" - 1" ground clamps, 1/cd	10

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Accessories

Electrical Fittings- BX/Romex/Armored-Carded

• Zinc die cast construction

MARS NO.	DESCRIPTION	CASE QTY.
85402	3/8" arm./flex. 90° squeeze conn, bulk	50
85155	1/2" arm./flex. 90° squeeze conn, bulk	25
85156	3/4" arm./flex. 90° squeeze conn, bulk	10
85175	3/8" arm./flex. duplex connector, bulk	25
85396	3/8" BX/MC/Romex connector, 3/cd	10
85403	3/8" BX/MC/Romex connector, bulk	100
85397	3/8" Romex squeeze connector, 4/cd	10
85185	3/8" Romex squeeze connector, bulk	100
85398	3/4" Romex squeeze connector, 2/cd	10
85186	3/4" Romex squeeze connector, bulk	25
85399	1" Romex squeeze connector, 2/bag	20
85187	1 1/2" Romex squeeze connector, bulk	50

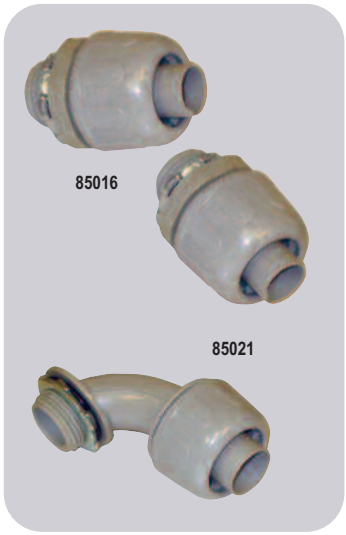
Liquid-Tight Metallic Fittings

• Zinc die cast construction
• Complete conduit/connector system is reusable
• Suitable for indoor/outdoor use

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
85001	1/2" straight metallic connector	20	250
85002	3/4" straight metallic connector	10	100
85005	1/2" 90° metallic connector	10	100
85006	3/4" 90° metallic connector	10	100

Liquid-Tight PVC Non-Metallic Fittings

• Molded of type nylon 6, resists salt water, weak acids, gasoline, alcohol, oil, grease, and common solvents
• Complete conduit/connector system is reusable
• Suitable for indoor/outdoor use



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
85015	3/8" straight non-metallic connector	25	250
85016	1/2" straight non-metallic connector	25	250
85017	3/4" straight non-metallic connector	10	100
85018	1" straight non-metallic connector	5	50
85019	3/8" 90° non-metallic connector	10	100
85020	1/2" 90° non-metallic connector	10	100
85021	3/4" 90° non-metallic connector	10	100
85022	1" 90° non-metallic connector	5	50

Liquid-Tight Screw On Connectors

This attractive one pc design allows superior liquid-tight seal & Optimum pull strength without compression nut. PVC construction produced from UV rated material for long outdoor life. Ideal for conduit assemblies & installers. "O" ring & steel locknut included.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
84992	1/2" Straight Screw On	25	100
84993	3/4" Straight Screw On	25	100
84994	1/2" 90 Deg Sweep Screw On	10	100
84995	3/4" 90 Deg Sweep Screw On	10	100

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Liquid-Tight Metal Screw on Connectors

- Suitable for indoor/outdoor use

MARS NO.	DESCRIPTION	MARS PACK
85026	Liquid Tight Connector Straight	25
85027	Liquid Tight Connector 90° Angle	15

MARS Major Appliance Extension Cords, UL Listed

MARS NO.	DESCRIPTION	CASE QTY.
84625	15a-125V, 14/3 spt, 3 foot appliance ext.	30
84627	15a-125V, 14/3 spt, 9 foot appliance ext.	15
84633	20a-250V, 12/3 spt, 6 foot appliance ext., gray	25

MARS Range And Dryer Receptacles

• 3 Pole, 3W & 4W surface mounting receptacles

MARS NO.	DESCRIPTION	CASE QTY.
84700	30a-250V, surface mount dryer receptacle	10
84701	30a-250V, flush mount dryer receptacle	25
84702	50a-250V, surface mount range receptacle	10
84699	30a-250V, srfc. mnt. dryer recept., 3P4W, ground	10
84705	50a-250V, srfc. mnt. range recept., 3P4W, ground	10

MARS Pigtails/Replacement Cords - 13 Amp, 125V & 250V

MARS NO.	DESCRIPTION	CASE QTY.
84668	12/3 pigtail 6 ft. SPT-3 RT 250V	50
84670	16/3 pigtail 6 ft. SPT-3 RT 125V	50
84671	16/3 pigtail 8 ft. SPT-3 RT 125V	50
84673	16/3 pigtail 3 ft. SPT-3 STR 125V	50
84674	16/3 pigtail 6 ft. SPT-3 STR 125V	50
84679	16/3 pigtail 6 ft. SJT-BL STR 125V	50
84681	14/3 pigtail 6 ft. SJT-BL STR 125V	50
84682	14/3 pigtail 9 ft. SJT-BL STR 125V	50

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Accessories

Power Block Type Extension Cords, 15a-125V - UL listed

MARS NO.	DESCRIPTION	CASE QTY.
84649	Power block ext. 12/3 sjtwa, 2 foot	4

Outdoor Heavy Duty Ext. Cords, UL Listed - SJTWA

MARS NO.	DESCRIPTION	CASE QTY.
84652	Outdoor ext. 16/3, 13a-125V, 25 foot, orange	24
84653	Outdoor ext. 14/3, 15a-125V, 25 foot, red	14
84655	Outdoor ext. 16/3, 13a-125V, 50 foot, orange	12
84656	Outdoor ext. 14/3, 15a-125V, 50 foot, red	10
84657	Outdoor ext. 12/3, 15a-125V, 50 foot, yellow	6
84658	Outdoor ext. 16/3, 10a-125V, 100 foot, orange	6
84659	Outdoor ext. 14/3, 13a-125V, 100 foot, red	6

Trouble Lights, One Grounded Outlet - UL Listed

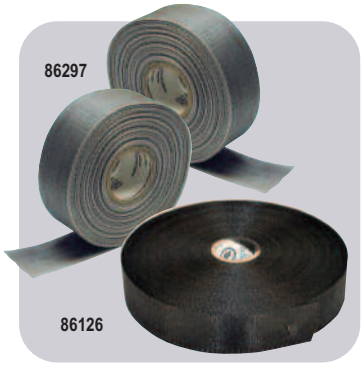
MARS NO.	DESCRIPTION	CASE QTY.
84696	Metal cage trouble light, 16/3, SJT, 13a, 25'	8
84697	Metal cage trouble light, 16/3, SJT,13a, 50'	6

Portable Lighting

MARS NO.	DESCRIPTION	CASE QTY.
84689	8-1/2" clamp light - 6 ft cord	6

Polypropylene Web Duct Strap

- Designed for hanging of flexible duct
- Made of high tensile strength - 400 lbs. min up to 460 lbs. max
- Abrasion and chemical resistant
- Easy to cut and staple to joists
- UL 723 Flame and Smoke

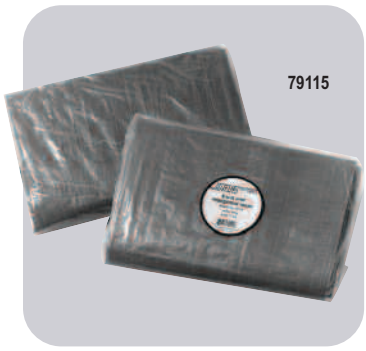


MARS NO.	DESCRIPTION	MARS PACK
86126	Black 1 3/4" x 100 yds.	24
86296	Black 3" x 100 yds	8
86297	Silver 1-3/4" x 100 yds	24
86298	Silver 3" x 100 yds	8

Truck And Equipment Tarps

MARS equipment tarps provide a durable blue protective covering for truck beds, construction material and contractors tools.

- Rust-proof aluminum grommets
- All edges heat-sealed and reinforced with woven polyethylene yarn for durability
- Waterproof and UV resistant



MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79115	8' x 10' blue tarp	1	20
79116	12' x 12' blue tarp	1	12

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Molded Rubber Straps

Molded rubber straps are made of high quality black rubber. Sturdy hooks will not loosen.

MARS NO.	DESCRIPTION	MARS PACK
79592	24" length - bulk	24
79593	35" length - bulk	24

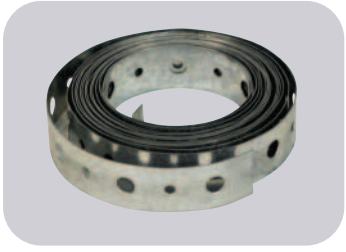
Truck Rope-Polypropylene - USA

MARS truck rope is made of a polypropylene construction. All ropes are made in the USA. Applications range from hoisting, truck bed material tie down, job site tie off and a wide variety of other uses. MARS #79059 and #79060 include handy safety hook.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79053	3/8" x 50' yellow	1	12
79055	3/8" x 50' blk/orange	1	12
79056	3/8" x 100' blk/orange	1	12
79057	1/2" x 50' blk/orange	1	12
79059	3/8" x 50' blk/orange with safety hook	1	12
79060	1/2" x 50' blk/orange with safety hook	1	12

Galvanized Duct Straps

The perforated, galvanized duct strap has 1/4" and 9/64" holes for nails & bolts.



MARS NO.	DESCRIPTION			MARS PACK	CASE QTY.
86025	28 gauge	3/4" x 10' RL	bulk	100	100
86026	28 gauge	3/4" x 50' RL	boxed	1	1
86027	28 gauge	3/4" x 100' RL	boxed	1	1
86032	20 gauge	3/4" x 25' RL	boxed	6	6
86033	20 gauge	3/4" x 50' RL	boxed	1	1

Pipe Hangers

The DWV pipe hangers are designed for rapid installation of both ABS and PVC plastic DWV piping with standard flat head galvanized nails. Galvanized steel construction. The pipe hanger is the fastest way to install round 5", 6" or 7" heating pipes below the joist. No nails needed.

MARS NO.	DESCRIPTION		MARS PACK	CASE QTY.
86040	DWV pipe hanger	2" x 12"	50	50
86041	DWV pipe hanger	3" x 12"	50	50

Mechanics Hanging Wire

MARS No. 84418 Plasta-Reel conveniently unwinds and hangs over post or peg on truck bed, from a 2 x 4 or nail. Prevents tangling. This polyethylene reel is smooth and safe to handle. Never blisters, burns or cuts the skin as metal might do! 825 ft. per roll.

MARS No. 84419 is 18 gauge galvanized wire annealed to ensure the wire can be tied/bent with ease. The wire is packaged in spools, easy to work with.

MARS NO.	DESCRIPTION			MARS PACK	CASE QTY.
84418	18 gauge	Black Ann	5 lbs.	50	500
84419	18 gauge	Galvanized	5 lbs.	50	500

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Accessories

MARS Wire Ties, 100 Packs

MARS nylon wire ties and duct straps are available in a wide variety of styles, color and tensile strengths. They range in sizes from 4" to 36" with tensile strengths from 18 lbs. to 175 lbs. All MARS wire ties and duct straps feature the bent tip design for ease and insertion.

MARS NO.	DESCRIPTION				MARS PACK
86100	4"	natural	standard	3/4" dia. x 18 lbs.	1
86101	4"	black	standard	3/4" dia. x 18 lbs.	1
86104	5.5"	natural	standard	1 1/4" dia. x 40 lbs.	1
86105	5.5"	black	standard	1 1/4" dia. x 40 lbs.	1
86106	8"	natural	standard	1 3/4" dia. x 40 lbs.	1
86107	8"	black	standard	1 3/4" dia. x 40 lbs.	1
86108	11"	natural	standard	3" dia. x 50 lbs.	1
86109	11"	black	standard	3" dia. x 50 lbs.	1
86153	14"	black	standard	4" dia. x 120 lbs.	1
86110	14.5"	natural	standard	4" dia. x 50 lbs.	1
86111	14.5"	black	standard	4" dia. x 50 lbs.	1
86112	6"	natural	screw mount	1 1/4" dia. x 30 lbs.	1
86113	6"	black	screw mount	1 1/4" dia. x 30 lbs.	1
86114	7.5"	natural	screw mount	1 3/4" dia. x 50 lbs.	1
86115	7.5"	black	screw mount	1 3/4" dia. x 50 lbs.	1
86155	11"	black	screw mount	3" dia. x 50 lbs.	1
86156	14"	black	screw mount	4" dia. x 50 lbs.	1
86157	14"	natural	screw mount	4" dia. x 50 lbs.	1

MARS Wire Ties, Bulk Packs

MARS NO.	DESCRIPTION					MARS PACK
86116	8"	natural	standard	1 3/4" dia. x 40 lbs.	(1000 pk)	1
86117	8"	black	standard	1 3/4" dia. x 40 lbs.	(1000 pk)	1
86118	11"	natural	standard	3" dia. x 50 lbs.	(500 pk)	1
86119	11"	black	standard	3" dia. x 50 lbs.	(500 pk)	1

MARS Duct Straps, 175 lbs., 50 Packs

MARS NO.	DESCRIPTION			MARS PACK
86127	24" duct strap for up to	6" duct	natural	1
86128	36" duct strap for up to	10" duct	natural	1
86129	48" duct strap for up to	14" duct	natural	1
86102	24" duct strap for up to	6" duct	black	1
86103	36" duct strap for up to	10" duct	black	1

Ready Utility Knife

Ready

- Featuring the QUICKEST blade change in the industry.
- Rugged all steel construction
- Folds to a very compact size
- Easily and quickly change blades with the push of a button
- Set includes knife, nylon carrying case, and 5 standard blades. Standard Blade Dimensions: 2.4" L x 1.25" W x 0.75" H, 0.6mm thickness

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
25784	Utility knife	1	48

MARS Knife Sharpener

Finally, a Knife Sharpener anyone can use! No more messy oils or stones. Sharpen knives in about 10 seconds (even serrated knives), cleavers, axes, machetes, and many other cutting tools. The full length finger guard protects your fingers. Sharpening blades are Diamond Honed Tungsten Carbide for years of reliable use. AccuSharp Knife Sharpeners will not rust and can be cleaned with soap and water or in the dishwasher.

MARS NO.	DESCRIPTION	CASE QTY.
27520	MARS Knife Sharpener	12

Cable Tie Tool

Cable Tie Tools are economical, lightweight and easy to use.

Ideal for heavy duty ties and duct straps. Constructed from high grade steel.

- Heavy duty construction
- Installer controls tensioning
- Squeeze to cut excess
- Cuts up to 60" 175 lbs. cable ties

MARS NO.	DESCRIPTION	COLOR	BAG	CASE QTY.
25683	Cable tie tool	Red	1	100

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

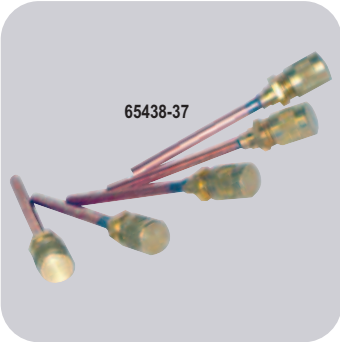
Braze-On Service Valves - Saddle Valves

Braze-on self-piercing copper service valves are widely used and easily installed on a charged line. After brazing the saddle portion onto the line, the steel pin with valve core penetrates the line and is locked into place simply by tightening the cap. Available in sizes from 1/4" to 1-1/8".

MARS NO.	DESCRIPTION	MARS PACK
65425	1/4" qty 6 per bag	1
65426	5/16" qty 6 per bag	1
65427	3/8" qty 6 per bag	1
65428	1/2" qty 4 per bag	1
65430	3/4"qty 2 per bag	1
65431	7/8" qty 2 per bag	1

Economy Line Service Valves - Extended Copper Tubes

- With valve core & flat cap (#65408)
- 1/4" male flare access fitting



MARS NO.	DESCRIPTION	MARS PACK
65438	3/16" copper tube extension, qty. 6 / bag	1
65439	1/4" copper tube extension, qty. 6 / bag	1
65440	5/16" copper tube extension, qty. 6 / bag	1
65441	3/8" copper tube extension, qty. 6 / bag	1
65442	1/8" copper tube extension, qty. 6 / bag	1
65435	3/8" copper tube extension, bulk	100
65436	3/16" copper tube extension, bulk	50
65437	1/4" copper tube extension, bulk	50

Copper Tees - 1/4" Male Flare

Copper tees have bodies brazed on. Using copper for the tee portion allows tubing to be attached to each end and allows using a solderless than silver solder, such as 95-5. They are to be used where two line ends have not yet been attached or where it is desireable to cut a line rather than drive a hole on an uncharged system. Copper tees save time and money.

- Includes valve core and flat cap (#65408).

MARS NO.	DESCRIPTION	MARS PACK
65447	Tee for 1/4" O.D. tube (2 bag)	1
65448	Tee for 5/16" O.D. tube (2 bag)	1
65449	Tee for 3/8" O.D. tube (2 bag)	1
65450	Tee for 1/2" O.D. tube (2 bag)	1
65451	Tee for 5/8" O.D. tube (2 bag)	1
65452	Tee for 3/4" O.D. tube (2 bag)	1
65453	Tee for 7/8" O.D. tube (2 bag)	1

Tees Connectors

Tee connectors are used to connect controls to check oil pressure on larger compressors having positive pressure oil pumps and to check the accuracy of oil pressure gauges installed on the equipment by the manufacturer against your gauge with known accuracy.

MARS NO.	DESCRIPTION	MARS PACK
65459	1/4" m. flare x 1/4" f. flare nut w/ depressor tip x 1/4" m. flare on the branch w/one valve core (qty. 2 per bag)	1
65460	1/4" m. flare with valve core x 1/4" m. flare x 1/4" f. flare nut w/ depressor tip on the branch (qty. 2 per bag)	1
65461	All brass tee connector 1/4" m. flare with valve core & cap x 1/4" m. flare x 1/4" f. flare nut with depressor tip on branch (qty. 1 per bag)	1

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Cancer and Reproductive Harm
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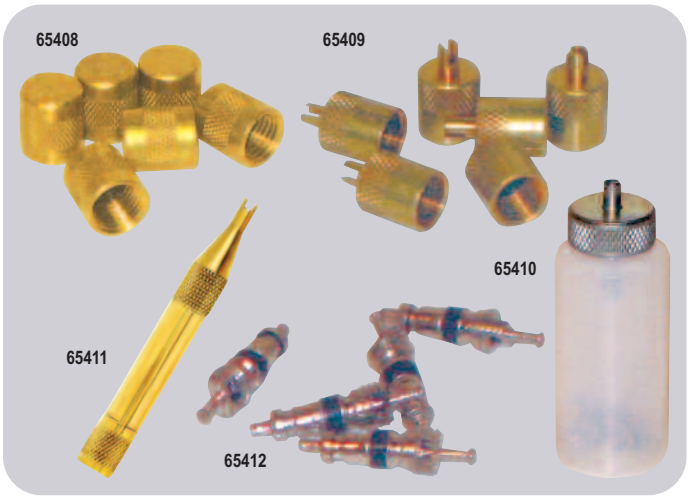
Accessories

Brass Bodies - Half Unions

MARS brass bodies have a 1/4" standard male flare above the hex. Below the hex are various threads, outside diameters and inside diameters for accepting different sizes of tubing and connections. A flat top brass cap and valve core are included.

MARS NO.	DESCRIPTION	MARS PACK
65401	1/4" MPT dry seal x 1/4" male flare 5/16" I.D. hole accommodates 5/16" O.D. tube. Qty. 2 per bag	1
65402	1/8" MPT dry seal x 1/4" male flare 1/4" I.D. hole accommodates 1/4" O.D. tube. Qty. 6 per bag	1
65403	1/4" male flare for 1/8" I D hole - accommodates 1/8" O.D. tube. (3/16", 1/4", 5/16" O.D. steps) Qty 6 per bag	1

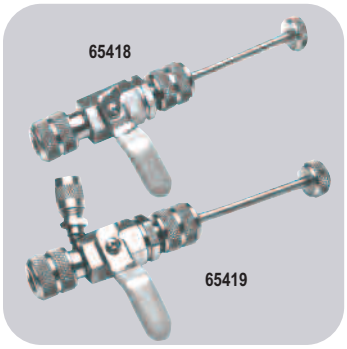
Brass Caps & Valve Cores



MARS NO.	DESCRIPTION	MARS PACK
65408	Round brass flat cap w/neoprene O-ring seal for 1/4" flare, qty 6 per bag	1
65409	Round brass cap w/ core wrench top and neoprene O-ring seal for 1/4" flare, qty 6 per bag	1
65410	Plastic core container - includes six valve cores and a core wrench and thread chaser	1
65411	Brass core remover container with wrench tip - includes three valve cores	1
65412	Valve core w/seal, qty. 6 per bag	1

Core Removal Tools With Ball Valve

MARS core removal tools are used to remove and replace valve cores in a 1/4" flare without losing refrigerant. Because it has a ball valve inside rather than a stem-type valve, the tool can be closed with just a quarter turn. This convenient compact size tool is ideal for working in close quarters.



MARS NO.	DESCRIPTION	MARS PACK
65418	Core removal tool	1
65419	Core removal tool w/ 1/4" male flare side port	1

MARS Universal Refrigerant Locking Caps

Made in USA

MARS Universal Refrigerant Locking Caps meet or exceed local and national code requirements to prevent unauthorized refrigerant theft. Effective February 2009, the **International Mechanical Code *1101.10*** and the **International Residential Code *M1411.6*** now require that all outdoor access ports on A/C Refrigerant circuits be made tamper resistant.

Features:

- Heavy duty brass construction
- Corrosion resistant
- Water/dust proof sleeve
- Exceeds local and national code requirements
- Protects against: refrigerant theft

Kit Includes:

- Locking cap key
- 10 Locking caps (1/4")
- 10 Waterproof sleeves
- 5 Warning labels

MARS NO.	DESCRIPTION	MARS PACK
65420	Universal Locking Caps, Blk, Qty. 10	1

⚠ WARNING:
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HIGHSIDE

Chemicals

Thawzone liquid dehydrant chemically "dries" all refrigerants (R12, R22, R134, etc.), methyl chloride, and methylene chloride. Thawzone frees frozen systems due to moisture in five minutes. It prevents refreezing, does not leave any residue, does not contain any dissolved solids or methanol, and works with or without solid dryers. Available in 1 oz., 4 oz. and 16 oz. plastic bottles.

Leak Lock joint sealer is a soft setting pipe joint compound for sealing threaded joints, flanged joints, gasket surfaces and mating surfaces. This resin based brushable paste remains permanently flexible, adheres to internal surfaces and fills voids. It is ideal for use on metal and plastic materials subject to extreme vibrations, temperatures from -100˚F (-73˚C) to 400˚F (204˚C) full vacuums to 10,000 PSI. Leak Lock seals all refrigerants (R12, R22, R502, R134A, etc.) petroleum products, natural and manufactured gases, steam, water, air, etc. Available in 1⅓ oz. plastic tube and 4 oz. and 1 pint brushtop plastic jars.

Red Epoxy aluminum sealer is a high performance heat cured, two part epoxy kit for patching or sealing on all metals and some plastics. Red Epoxy is cured within minutes and equipment is serviceable immediately. It is excellent for sealing threaded or unthreaded pipes and is great as a field repair kit for aluminum evaporators, coils, radiators, pipes, tanks, etc. Temperature range: -100˚F (-73˚C) to 300˚F (149˚C). Tensile strength: 600 PSI. working pressure tested in excess of 3000 PSI. Kit includes resin & hardener. (.5 oz. tube each)

Low-Temp Gas Leak Detector is non-toxic and non-hazardous and does not contain ethylene glycol. This non-freezing, viscous florescent, bubble type gas leak detector is rated to -30˚F (-34˚C). The leaks appear as large strong bubbles which cling to the applied surface and are florescent under a black light. For use on hot and cold piping and equipment containing most gases such as air, natural gas, all refrigerants (R12, R134A, R22, R502, etc.) ammonia, SO_2 etc.

The mid-temp gas leak detector is non-toxic and non-hazardous. It is a viscous, florescent, bubble-type gas leak detector rated to 27˚F (-3˚C). Leaks appear as large strong bubbles which cling to the applied surface and are florescent under a black light. For use on hot and cold piping equipment containing most gases such as air, natural gas, all refrigerants (R12, R134A, R22, R502A, etc.), ammonia, SO_2 etc.

Solderlene is a high quality, paste type, non-acid soldering flux with industrial strength wetting agents to promote solder flow. For use with all low and mid temperature soft solders, both lead bearing and lead-free, on all metals except aluminum and magnesium.

Trace is a red dye trace type internal leak detector for use with mineral oil base refrigerant lubricants and hydraulic systems. Leaks show as intense red stains Trace is non-volatile, will not sludge oil or deposit gum. Trace is soluble in the lubricant and liquid refrigerant but not the gas and travels with the lubricant. Oil separators will remove trace and should be bypassed. Trace passes through solid core dryers but the color intensity may be reduced.

MARS NO.	DESCRIPTION	MARS PACK
93801	Thawzone 1 oz. bottle	24
93802	Thawzone 4 oz. bottle	12
93803	Leak Lock 1 ⅓ oz. tube	24
93804	Leak Lock 4 oz. brush top jar	12
93805	Leak Lock 1 pint brush top jar	12
93806	Red Epoxy kit .5 oz. tube	24
93807	Low Temp Gas Detector 8 oz. dauber bottle	24
93809	Mid-temp gas detector 8 oz. dauber bottle	24
93810	Mid-temp gas detector 32 oz. trigger spray	12
93811	Screwloose® Solderlene 4 oz. brushtop jar	24
93812	Solderlene 1 pint brush top jar	12
93813	Trace® 4 oz. bottle	12
93814	Trace® 16 oz. bottle	6

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

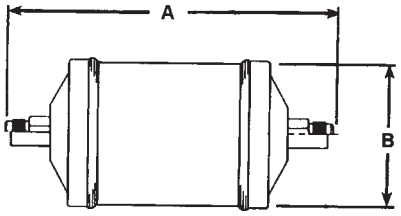
MARS Liquid Line Filter Driers

The MARS Liquid Line Filter Driers are designed to offer complete protection of your refrigerant system. The desiccant block is a carefully selected blend of molecular sieve and activated alumina, providing for maximum removal of moisture, acid, and foreign materials. This molded desiccant block allows for efficient filtration and retention of solid contaminants, while insuring minimum pressure drop. The solid molded block exposes maximum surface area and provides even distribution of filtered material as the refrigerant flows through the drier. These driers are intended for use on R-134A, R-404A, R-410A, R-507, R-12, R-500, R-502

20114

Features & Benefits:

- High moisture removal
- High organic & inorganic acid removal
- Solid block desiccant core
- For use with HCFCs, CFCs, and the lubricants that go with them
- Nickel plated SAE flare and solid copper ODF fittings
- Corrosion resistant
- Maximum working pressure 600 PSIG
- Minimum burst pressure 2500 PSIG
- UL & CSA listed



MARS NO.	MODEL NO	CONNECTIONS SIZE & TYPE	DIMENSIONS A	DIMENSIONS B	FLOW CAPACITY[1] TONS @ 1 PSI R-134A	FLOW CAPACITY[1] TONS @ 1 PSI R-22/R410A	FLOW CAPACITY[1] TONS @ 1 PSI R404A/R507	CASE QTY.
20114	MLD-083	3/8 SAE	6.10	2.50	4.9	4.7	3.0	12
20115	MLD-083S	3/8 ODF	5.43	2.50	6.2	5.9	3.9	12

[1] All ratings in accordance with ARI standard 710-04, 86ºF Liquid Refrigerant Temperature, 5ºF Saturated Temperature 4.0 lbs./min./ton for R-134a, 2.9 lbs./min./ton for R-22, 4.0 lbs./min/ton for R-404A/R-507

⚠ WARNING:
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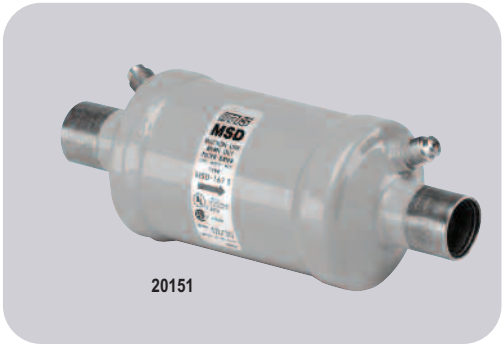
MARS suction line driers - flow capacities[1] in refrigerant tons at selected evaporator temps

The MARS Suction Line Filter Driers are designed to effectively clean up the refrigerant system by removing solid contaminants and harmful acids that were created during a motor burnout. As well as motor burnout applications, the MARS Suction Line Drier should be installed in remote systems with long refrigerant lines. The filter drier will collect and hold any dirt that is in the evaporator or suction line at start up. Any field built-up system requires the protection that the MARS Suction Line Drier offers.

The desiccant block core effectively removes and holds a maximum amount of contaminants with minimum pressure drop. The binding material in the core protects the core from acid decomposition and allows it to collect and hold organic and inorganic acids from motor burnout. An inlet deflector spreads the refrigerant flow evenly across the molded core to provide full filtration capacity and to prevent erosion of the core.



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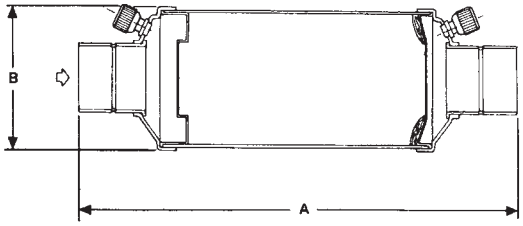

Features & Benefits:

- For use on R134A, R12, R22, R500, R404A, R410A, R507
- Dual access valve for accurate pressure drop readings
- Solid block desiccant core
- High organic & inorganic acid removal
- For use with HCFCs, CFCs and the lubricants that go with them
- Nickel plated SAE flare and solid copper ODF fittings
- Corrosion resistant paint
- Maximum working pressure 600 PSIG
- Minimum burst pressure 2500 PSIG
- UL & CSA listed

MARS NO.	+40˚F	+20˚F	0˚F	-20˚F	+40˚F	+20˚F	0˚F	-20˚F	-40˚F	+40˚F	+20˚F	0˚F	-20˚F	-40˚F	+40˚F	+20˚F	0˚F	-20˚F	-40˚F
	R-134A PRESSURE DROP IN P.S.I.				R-22 PRESSURE DROP IN P.S.I.					R-502 PRESSURE DROP IN P.S.I.					R410A FLOW CAPACITY EVAPORATOR TEMPERATURE (F°)				
	2	1.5	1	0.5	3	2	1.5	1	0.5	3	2	1.5	1	0.5	3	2	1.5	1	0.5
20151	2.7	1.8	1.1	0.6	4.6	2.8	1.9	1.1	0.6	4.3	2.6	1.7	1.0	0.6	4.2	2.8	1.8	1.2	0.6
20155	3.8	2.5	1.6	0.8	5.9	3.9	2.6	1.7	0.9	4.9	3.1	2.1	1.3	0.7	6.0	4.0	2.6	1.7	0.9

Flow Capacity In Tons Refrigerant1 (For kW, Multiply Tons By 3.5)

[1] All ratings in accordance with ARI standard 730-04

[2] Example: 1.0 tons x 3.5 = 3.5 KW

MARS NO.	MODEL NO.	SIZE & TYPE	DIMENSION A	DIMENSION B
20151	MSD-167S	7/8 ODF	7.13	2.5

⚠ WARNING:
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Accessories

MARS Sight Glass - Moisture Indicators

The MARS Moisture Indicators are constructed of forged brass bodies with brass fittings. The large viewing area of the sight glass allows for quick and easy inspection of the refrigerant as it flows through the system. Bubbles passing through the sight glass may be an indication of a low system charge or a restriction in the refrigerant system.

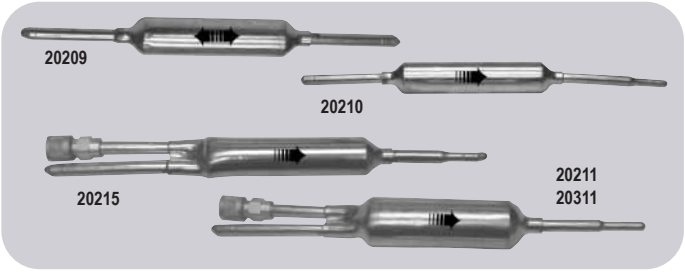
The moisture Indicators are designed to provide an accurate method of determining when the moisture content is dangerously wet in a refrigerant system and when the liquid line drier is no longer effective. An indicator element is highly sensitive to moisture and will gradually change color in reaction to the moisture content of the refrigerant system. Maximum working pressure is 680 PSIG. Minimum Burst pressure is 2500PSIG. UL and CSA listed.

MARS NO.	MARS MODEL NO.	DESCRIPTION	LENGTH X HEIGHT INCHES	CASE QTY.
65639	MSG-3SS	3/8 Solder x Solder	4.69 x 1.11	12
65640	MSG-4SS	1/2 Solder x Solder	4.88 x 1.29	12
65641	MSG-5SS	5/8 Solder x Solder	4.88 x 1.38	12
65642	MSG-7SS	7/8 Solder x Solder	5.90 x 1.66	12

MARS Spun Copper Driers

Features:

- Recommended for use on original equipment, residential and commercial refrigerators, freezers and air conditioners
- XH-9 beaded molecular sieve for maximum water capacity in HFC refrigerants
- High quality – high capacity
- Hermetically sealed
- Easy break off grooved ends
- Copper shells and end tubes
- Compatible with R134



MARS Spun Drier Capacity Table

MARS NO.	DESCRIPTION	DROPS OF WATER REMOVED R-12		DROPS OF WATER REMOVED R-22		RECOMMENDED TONNAGE	
		75˚	125˚	75˚	125˚	R-12	R-22
20209	Non-Directional	37.5	34	34	32	1/3	1/2
20210	Fused Ends	37.5	34	34	32	1/3	1/2
20211	Charging Drier	74	38	68	64	3/4	1
20311	Charging Drier	74	38	68	64	3/4	1
20215	Charging Drier	37.5	34	34	32	1/3	1

MARS	DESCRIPTION	INLET	OUTLET	LENGTH	DIA.	MARS
20209	Non-Directional	1/4" OD	1/4" OD	8-1/2"	3/4"	1
20210	Fused Ends	1/4" OD	1/4" OD	8-3/4"	3/4"	1
20211	Charging Drier	1/4" OD 1/4" Flare	1/4" OD or Cap.	8-3/4"	1"	1
20311	Charging Drier	1/4" OD 1/4" Flare	1/4" OD or Cap.	8-3/4"	1"	50
20215	Charging Drier	1/4" ID 1/4"OD 1/4"Flare	1/4" OD or Cap.	9"	3/4"	1

Tubing Cutters And Accessories

MARS offers a quality line of tube working tools, well recognized as standards of excellence in the HVACR industry.

MARS tube cutters can be used on hard or soft copper, aluminum, brass, thin wall steel, stainless steel, monel, titanium and other metal tubing. MARS #65001 and #6500 feature rollers with flare cut-off groove, fold away reamer and a spare cutting wheel.

MARS #65004, tube cutter, requires only 1 1/4" swing radius and a 1 3/8" swing radius with 5/8" tube. This tube cutter features rollers on the bottom of the tool which allows for easier cutter engagement on tubing. The enclosed feed design minimizes contamination, assuring continued free operation. MARS #65005 requires only 1 11/16" swing radius.

MARS #65006, requires only 1 15/16" swing radius and a 2 1/4" swing radius with 1 1/8" tube.

MARS NO.	DESCRIPTION	CASE QTY.
65001	1/8" to 1 1/8" OD	20
65002	1/4" to 1 5/8" OD	10
65004	1/8" to 5/8" OD	20
65005	3/16" to 7/8" OD	10
65006	3/8" to 1 1/8" OD	10
65008	Standard cutter wheel (10 pk) for use on #65001, 65002, 65003, 65006	20

MARS Tube Benders

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
25660	External spring type tube benders, 1/4", 3/8", 1/2" & 5/8", set of 4	1	24
65024	Triple header; 1/4", 5/16", 3/8" OD 15/16" radius to center	10	

⚠ WARNING:
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Tubing Tool Kits

MARS #65059, 45° flaring and swaging tool kit is for use on 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 3/4" OD tubing. Flares or swages. Converts quickly. Features screw-type feed. Ideal close quarters tool. Swivel type swaging adapters and spreader cone are hard-chrome finished for easy operation. Self centering, slip-on forged steel yoke. Includes five swage adapters for 3/16", 1/4", 5/16", 3/8", 1/2" and 3/4" OD tubing. Packaged in a plastic kit.

MARS NO.	DESCRIPTION	CASE QTY.
65059	45° flaring and swaging tool	1

Flaring Tools

MARS #65038, 45° flaring tool is used for flaring and burnishing 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" OD tubing. The flares are rolled out above die bar by a super-smooth faceted cone. Automatically burnishes flare face. The slip-on yoke permits use in tight quarters. Heat treated dies grip tubing without scoring. For use on soft copper, aluminum and brass tubing.

MARS NO.	DESCRIPTION	CASE QTY.
65038	45° for 3/16" to 5/8" OD	10

Reversible Ratchet

MARS #65083 is for use on compressors with access valves in hard to reach places. This reversible ratchet is chrome plated.

MARS NO.	DESCRIPTION	CASE QTY.
65083	1/4", 3/8", 3/16", 5/16" square ratchet	1

Stainless Steel Vibration Absorbers

- 100% Copper connections
- Hose and copper braze welded
- Each unit dehydrated and vacuum tested
- Units individually packaged in poly bags and corrugate boxes
- UL, cUL, and CE

MARS NO.	DESCRIPTION	MARS PACK
52329	1/4" Vibration Absorber	1
52330	3/8" Vibration Absorber	1
52331	1/2" Vibration Absorber	1
52332	5/8" Vibration Absorber	1
52333	3/4" Vibration Absorber	1
52334	7/8" Vibration Absorber	1
52335	1-1/8" Vibration Absorber	1
52336	1-3/8" Vibration Absorber	1
52337	1-5/8" Vibration Absorber	1
52338	2-1/8" Vibration Absorber	1
52339	2-5/8" Vibration Absorber	1
52340	3-1/8" Vibration Absorber	1

MARS Flexible Mini-Split Line Set Connectors

MARS flexible line set connectors provide ease of installation for mini-split indoor evaporator units. Flexible line sets allow for line set connection prior to mounting the unit on the wall. Flexible line sets eliminate copper line kinking during the installation process and provide for future ease of service of the AC unit. All flex line sets are 36in. in length to facilitate installation of wall mount evaporators.

Features

- High pressure stainless steel braided line rated to 800 PSI
- R410a compatible
- 3 inch copper stubs
- 36 inch overall length

MARS NO.	DESCRIPTION	MARS PACK
52345	1/4" X 36" Mini-Split Flex Line Set	1
52346	3/8" X 36" Mini-Split Flex Line Set	1
52347	1/2" X 36" Mini-Split Flex Line Set	1
52348	5/8" X 36" Mini-Split Flex Line Set	1

⚠ WARNING:
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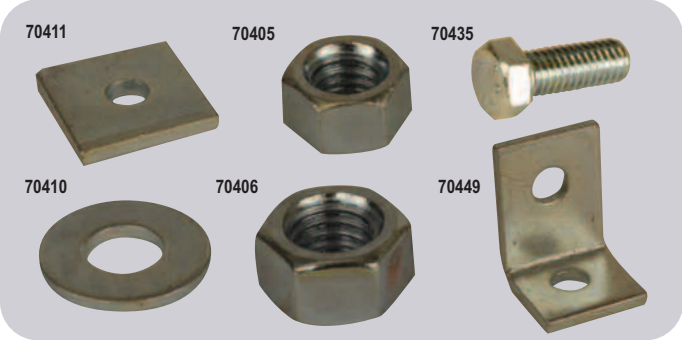
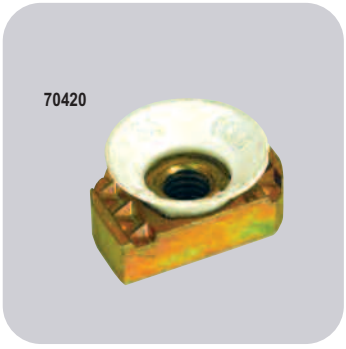
Accessories

For Channels & Channel Fittings Hardware



MARS NO.	DESCRIPTION	MARS PACK
70401	Insulated Plastic Staple	50
70411	3/8" Steel Square Washer	100
70410	3/8" Steel Flat Washer	100
70405	3/8" Steel Standard Hex Nut	100
70406	1/2" Steel Standard Hex Nut	100
70435	3/8" x 1" Steel Hex Head Cap Screw	100
70449	90 Deg, 2 Hole, Steel Angle Fitting (1-5/8 x 2-1/4)	50

Top Spring Nuts For All Channels



MARS NO.	DESCRIPTION	MARS PACK
70420	3/8" Nylon Cone Nut	100

Beam Clamp

MARS C-Clamp's are used to replace various other clamps as top beam or bottom beam structural steel attachments. Made of malleable/ductile iron, set screw with hardened cup point, lock nut

MARS NO.	DESCRIPTION	MARS PACK
70416	3/8" C-Clamp with Locknut	100
70415	3/8" Top Beam C-Clamp	100

Rod Coupling

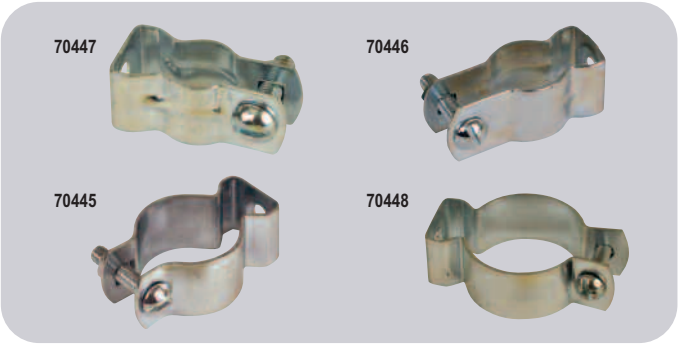
MARS NO.	DESCRIPTION	MARS PACK
70425	3/8"Steel Rod Coupling	50

Supports non-insulated, stationary lines, Rigid/IMC Conduit and pipe

MARS NO.	DESCRIPTION	MARS PACK
70430	1" IPS Clevis Steel Pipe Hanger	100
70432	1-1/2" IPS Clevis Steel Pipe Hanger	50
70431	2" IPS Clevis Steel Pipe Hanger	100

Conduit & Pipe Hangers

Supports EMT and Rigid conduit or pipe.



MARS NO.	DESCRIPTION	MARS PACK
70447	3/8 to 1/2" Conduit & Pipe Hanger w/bolt	100
70446	3/4" Conduit & Pipe Hanger w/bolt	100
70445	1" Conduit & Pipe Hanger w/bolt	100
70448	1-1/4" Conduit & Pipe Hanger w/bolt	100

⚠ WARNING:
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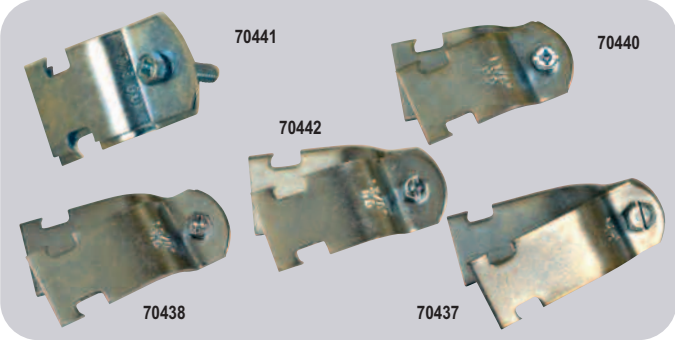
Pipe Cushion Clamps

Pipe Straps are designed to be twist inserted anywhere along the slot side of the channel



MARS NO.	DESCRIPTION	MARS PACK
70441	7/8" to 2" Adjustable Clevis Pipe Hanger	100
70440	1-1/8" to 2" Adjustable Clevis Pipe Hanger	100
70442	1-3/8" to 2 1/2" Adjustable Clevis Pipe Hanger	100
70438	1-5/8" to 2-1/2" Adjustable Clevis Pipe Hanger	100
70437	2-1/8" to 3" Adjustable Clevis Pipe Hanger	50
70439	2-3/8" to 3" Adjustable Clevis Pipe Hanger	25

Cushion Clamps

MARS NO.	DESCRIPTION	MARS PACK
70436	1-5/8" Steel Pipe Clamp w/Copper Plated OD Tubing	10

Sil-Fos Brazing Alloys - 1/8" X .05" X .20"- 1 Lb. Spool

Lucas-Milhaupt, Inc. A Handy & Harman Company

Sil-Fos® alloys allow the joining of copper to copper without a flux and copper based alloys (brass and bronze) with a flux. Sil-Fos® is the workhorse filler metal used in the a/c and refrigeration industry. A key factor is the ductility of Sil-Fos® 15. It can be readily bent (without heating), thus permitting easier access to the backsides of joints.

The Sil-Fos® 15 is the best alloy for general copper-copper brazing in the Sil-Fos® family. The phosphorus in the Sil-Fos® product serves as the fluxing agent and no separate flux is necessary. For brass applications however, flux is recommended. For use where close fit-ups cannot be maintained Sil-Fos® 15 works well to "bridge" gaps. Sil-Fos® 15 is the most ductile of the entire Sil-Fos® family to best withstand the stresses inherent in refrigeration applications. Slow Flow.

The Sil-Fos® 6M is recommended for use where close fit-ups cannot be maintained. It has the ability to fill gaps and form fillets without affecting joint strength. Slow Flow.

The Sil-Fos® 5 is designed primarily for those applications where close fit-ups cannot be maintained. It has the ability to fill gaps and form fillets without adversely affecting joint strength. Slow Flow.

Fos-Flo® 7 is an economical, very fluid medium temperature filler metal for use with copper, brass and bronze. Withstands moderate vibration. Fast Flow.

MARS NO.		AWS SPEC	COMPOSITION %			TEMPERATURE		MARS PACK	CASE QTY.
			AG	CU	P	MELT	FLOW		
78301	Sil-Fos® 15	BCuP-5	15	80	5	1190° F	1475° F (1300°)	1	25
78302	Sil-Fos® 6M	BCuP-4	6	88	6	1190° F	1460° F (1300°)	1	25
78303	Sil-Fos® 5	BCuP-3	5	89	6	1125° F	1495° F (1300°)	1	25
78304	Fos-Flo® 7	BCuP-2		92.8	7.2	1310° F	1460° F (1350°)	1	25

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Accessories

High Silver Brazing Alloys - 1/16" Dia. Coils

Lucas-Milhaupt, Inc. A Handy & Harman Company

In refrigeration applications, much of the brazing involves joining copper tubing. However, there are numerous applications where other materials need to be joined (steel, brass, stainless, etc.). These high silver brazing alloys facilitate the joining of these metals. The one alloy in particular which is highly recommended for virtually all above mentioned base metals is Braze® 505. It's advantages over 56% and 45% include:

- It contains 2% Nickel which enhances wetting and strength and facilitates the joining of steels, stainless steel, carbide, etc.
- It doesn't contain tin. This prevents the formation of brittle intermetallics which can cause joint failures when stresses accumulate.
- The flow characteristics can be easily manipulated by either fast or slow heating techniques - this allows bridging of gaps.
- It's available in flux-coated rod for added convenience and ease-of-use: No separate fluxing operation.

Braze® 505 is the best general purpose filler metal available. It is the only alloy recommended for stainless steel (as it retards/eliminates interface corrosion) and carbide applications. Nickel content provides superior adhesion ("wetting") to base metal surfaces. Available, and especially convenient, as flux coated rod. Cadmium-free.

MARS NO.		AWS SPEC	COMPOSITION %					TEMPERATURE		MARS PACK	CASE QTY.
			AG	CU	ZN	SN	OTHER	MELT	FLOW		
78308	Braze® 505 1oz	BAg-24	50	20	28		2 Ni	1220° F	1305° F	1	24
78314	Braze® 505 F/C, Flux coated rod, 18" stick x 1/4 lb tube	BAg-24	50	20	28		2 Ni	1220° F	1305° F	1	15

Brazing & Solder Fluxes

Lucas-Milhaupt, Inc. A Handy & Harman Company

Where fluxing is required as part of the brazing operation, Handy Flux is recommended. Handy Flux is an all-purpose flux for use in brazing both ferrous and non-ferrous metals and alloys. Handy Flux conforms to: AWS Brazing Flux Type #3A, Federal Spec. O-F-499d (216185) Type B, Society of Automotive Engineers AMS-3410G. For soldering applications we offer two different flux products depending on the materials to be joined. They include Clean-n-Brite Flux for general purpose applications and TEC Liquid Flux where more aggressive fluxing is required for the more difficult-to-solder materials (e.g. steel, stainless steel, etc.).

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
78315	Handy Flux - 7oz. jar w/brush cap	1	24

Silver Bearing Soft Solders - 1/8" X 1 Lb. Spool

Lucas-Milhaupt, Inc. A Handy & Harman Company

Clean-n-Brite solders are a high strength general purpose solder. They offer a higher strength than Tin/Lead solders and are safe for potable water systems. These alloys are widely used in low stress, low pressure copper-copper and copper-steel applications (e.g. sight glasses where temperature must be kept low, etc.).

Clean-n-Brite is a Lead-free, silver-bearing high-strength solder used for applications requiring close joint clearances.

Clean-n-Brite 6 is a Lead-free, silver-bearing high-strength solder used for applications requiring large joint clearances. It is the easiest Silver-bearing soft solder to work with as temperature range permits "bridging" loose fit-ups if necessary.

Clean-n-Brite No Lead is a Silver-bearing solder with good strength used in potable water system applications requiring no lead.

MARS NO.		COMPOSITION %			TEMPERATURE		MARS PACK	CASE QTY.
		AG	CU	P	MELT	FLOW		
78316	Clean-n-Brite	3.6		96.4	431° F	431° F	1	24
78317	Clean-n-Brite 6	6		94	431° F	535° F	1	24
78318	Clean-n-Brite No Lead	0.5	4	95.5	428° F	446° F	1	24

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MARS Cross Reference Guide

MARS NO.	HANDY HARMON	LUCAS MILHAUPT	J.W. HARRIS	ENGELHARD
78302	Sil-Fos 6M	95120	66000 (Dynaflow)	Silvaloy 6
78303	Sil-Fos 5	95060	41035 (Stay-Silv 5)	Silvaloy 5
78304	Fos-Flo 7	95000	21035 (Stay-Silv 0)	Silvaloy 0
78308	Braze 505 (1oz.)	98070		
78314	Braze 505 F/C	98110		
78315	Handy Flux	97030	40022 (Stay-Silv Flux)	Ultra Flux
78316	Clean-n-Brite	96000	10001 (Stay-Brite)	Silvabrite
78317	Clean-n-Brite 6	96010	10009 (Stay-Brite 8)	Silvabrite S
78318	Clean-n-Brite (no lead)	96150	15000 (Stay-Safe 50)*	Silvabrite 100

* While this material does not have a chemistry exactly equivalent, it is similar in composition to Clean-n-Brite no lead and typically used in similar applications.

Specialty Tools

The MARS telescoping pilot match holder with magnet collapses to fit in shirt pocket. Extends to 25". Attractively packaged and barcoded for merchandising

MARS NO.	DESCRIPTION	MARS PACK
79130	Pilot match holder	1

Inspection Mirrors

MARS offers inspection mirrors for virtually any application! Telescoping types available, along with round glass, oval glass, rectangular glass, round metal and rectangular metal. Attractively carded and barcoded.

MARS NO.	DESCRIPTION	MARS PACK
79350	1 1/4" round dia.glass mirror with 6" arm, adjustable angle	1
79351	2 1/4" round dia.glass mirror with 10 1/2" arm, adjustable angle	1
79352	1" x 2" oval glass mirror with 6" arm, adjustable angle	
79353	2 1/8" x 3-1/2" rectangle glass mirror with 11-12" extendible arm	1
79358	2 1/4" dia.round magnifying glass mirror with vinyl grip handle 14 1/2"	1

Filter Reach Tool 2

The Filter Reach Tool 2 is the first tool to correctly pull filters from large tonnage Air Conditioning units and Air Handlers. A must have tool for all HVAC mechanics. The telescoping stainless steel shaft extends up to 8' to grab and remove the hardest to reach filters. The powder coated safety orange Hook pivots down so the tool doubles as a magnetic pickup to retrieve dropped parts and tools. The high strength magnet will save you time and money by retrieving dropped tools and hardware.

Made in the USA Domestic & Foreign Materials

- Hook pivots down for 5lb. magnetic pickup
- Fits in any bag
- 304 Stainless steel
- Anodized aluminum

MARS NO.	DESCRIPTION	MARS PACK
79348	Filter Reach & Magnetic Tool 2	6

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Accessories

Compressor Terminal Repair Kit

Zebra Instruments offers a compressor terminal repair kit. The terminals are high-temp soldered to the 10ga. fine strand, color coded wires for the best connection. These special terminals allow clearance for compressor post, and lay flat under the safety cover. Twist on wire nuts also provided.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
08565	Compressor Terminal Repair Kit 1 set of 3, terminals/wires/connectors	1	24

MARS Compressor Stake On Repair Kits

TERM-LOK

MARS Term-Lok compressor stake on repair kits are designed with the technician in mind! During servicing of the air conditioning system or refrigeration system, it is not unusual for a technician to remove the compressor cover to find the electrical connector or spade terminal broken or melted away from the compressor. In reconnecting the electrical power, the metal plate is often found to have deteriorated to such an extent that the conventional female connector will no longer attach to the spade type male connector. Technology for reattaching a metal plate to the metal pin without damaging the encapsulated block is not normally available thus requiring the technician to attempt various types of crimping arrangements to avoid replacing the compressor assembly (which normally does not work).

The MARS Term-Lok is a brass cylindrical tube with a diameter large enough to slip over the pins and has a stainless set screw to lock onto the terminal. Term-Lok comes in packages of one or three terminal locks with color coded 65 strands, 600 volt permanently attached wire, with wrench provided for easy application. Once installed the compressor cover may be placed back over the terminals without any obstructions.

It takes approximately 15 minutes to install on most systems, thus saving the technician time and the customer money, with virtually no call backs.

MARS NO.	DESCRIPTION	MFG. NO.	CASE QTY.
86386	Brass stake on 12 gauge - 3 wire, 3' leads	TLC-3-12	1
86388	Brass stake on 10 gauge - 3 wire, 3' leads	TLC-3-10	1
86390	Brass stake on 8 gauge - 3 wire, 3' leads	TLC-3-8	1

Quick Disconnects - Insulated (105°C)

MARS solderless terminals are competitively priced, yet manufactured of superior quality materials to rigid quality control standards. Seams are brazed to ensure perfect crimps EVERY TIME!

MARS solderless terminals are UL listed and CSA certified. Terminals are all manufactured in the USA. They are provided in clear, reclosable plastic display boxes. These attractive boxes, with clear and easy-to-read labels provide for visual inspection of the product and encourage impulse buying.

All packages display a MARS bar code for your convenience. MARS solderless terminals are available in two different package sizes. Both sizes enhance contractor self service. The MARS mini-pak display boxes contain very reasonable quantities with all types and sizes sold at one price. Perfect for the handyman, do-it-yourselfer and your sales and counter people. The MARS mini-pak is excellent for that small, unique HVACR odd job. The MARS super-pak contains much larger quantities of the more common solderless terminals at a super value. The contractor and tradesman will make great use of this size reclosable package. Ask your MARS sales representative about our solderless terminal merchandiser program!

MARS NO.	MINI-PAK QTY.	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86200	20	22-18	.250 (1/4) female tab	86500	100
86201	20	16-14	.187 (3/16) female tab	86501	100
86202	20	16-14	.250 (1/4) female tab	86502	100
86203	15	12-10	.250 (1/4) female tab	86503	50
86219	20	22-18	.187 (3/16) female tab		
86205	20	16-14	.250 (1/4) male tab	86505	100
86207	12	22-18	.250 (1/4) female full insul.	86507	100
86208	12	16-14	.250 (1/4) female full insul.	86508	100
86209	8	12-10	.250 (1/4) female full insul.	86509	50
86220	7	16-14	.250 (1/4) female flag fully insul.	86520	25
86221	6 pair		combo of #86208, 09		
86211	12	16-14	.250 (1/4) male fully insul.		
86216	12	22-18	.250 (1/4) male/female p/back		
86217	12	16-14	.250 (1/4) male/female p/back	86517	100
86218	8	12-10	.250 (1/4) male/female p/back	86518	50

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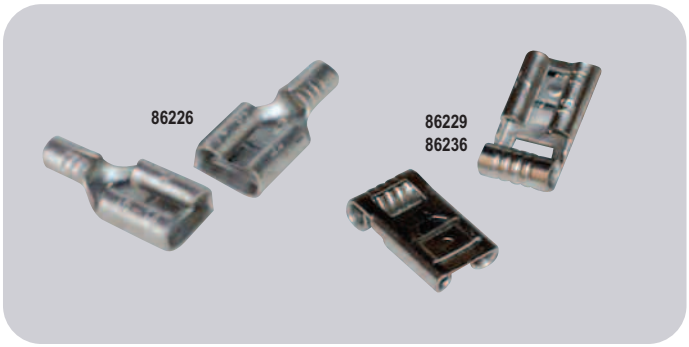
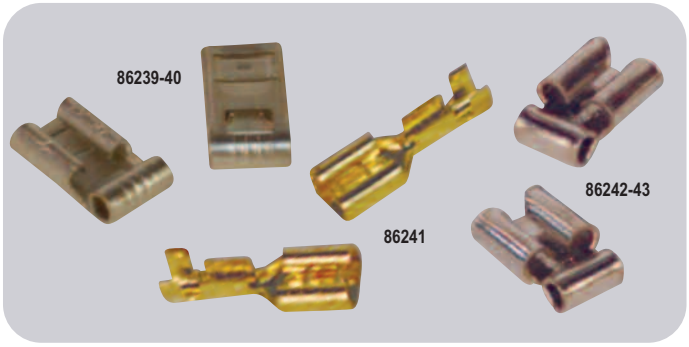
Quick Disconnects - Non-Insulated (149°C)



MARS NO.	MINI-PAK QTY.	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86226	25	16-14	.250 (1/4) female tab	86526	100
86229	25	16-14	.250 (1/4) female flag	86529	100
86236	13	12-10	.250 (1/4) female flag		

Quick Disconnects - Hi Temp To 900°F



MARS NO.	MINI-PAK QTY.	SIZE	DESCRIPTION
86239	15	16-14	.250 (1/4) female tab
86240	12	12-10	.250 (1/4) female tab
86242	15	16-14	.250 (1/4) female flag
86243	10	12-10	.250 (1/4) female flag

Rings - Insulated (105°C)

MARS NO.	MINI-PAK QTY.	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86251	20	22-18	#8 stud 11/64 i.d.	86551	100
86252	20	22-18	#10 stud 13/64 i.d.		
86253	20	16-14	#6 stud 9/64 i.d.		
86254	20	16-14	#8 stud 11/64 i.d.	86554	100
86255	20	16-14	#10 stud 13/64 i.d.	86555	100
86258	12	12-10	#8 stud 11/64 i.d.		
86259	12	12-10	#10 stud 13/64 i.d.	86559	50
86260	12	12-10	1/4 stud 17/64 i.d.		
86262	5	8	1/4 stud 17/64 i.d.	86562	25

Rings - Non-Insulated (149°C)

MARS NO.	MINI-PAK QTY.	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86275	15	12-10	#10 stud 13/64 i.d.		

Rings - High Temp To 900°F

MARS NO.	MINI-PAK QTY.	SIZE	DESCRIPTION
86283	20	16-14	#10 stud 13/64 i.d.
86285	15	12-10	#10 stud 13/64 i.d.

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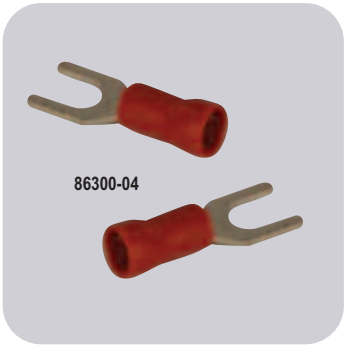
Accessories

Spade Flanged - Insulated (105°C)

MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION
86294	15	16-14	#10 stud 13/64 i.d.
86295	12	12-10	#10 stud 13/64 i.d.

Spade - Insulated (105°C)



MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86300	20	22-18	#8 stud 11/64 i.d.	86600	100
86303	20	16-14	#8 stud 11/64 i.d.	86603	100
86304	20	16-14	#6 stud 9/64 i.d.		
86301	15	16-14	#10 stud 13/64 i.d.	86601	100
86302	12	12-10	#10 stud 13/64 i.d.	86602	50

Spade - Non- Insulated (149°C)

MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION
86315	25	22-18	#10 stud 13/64 i.d.
86317	15	12-10	#10 stud 13/64 i.d.

Spade Hi Temp To 900°F

MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86323	20	16-14	#10 stud 13/64 i.d.	86623	100

Butt Connectors And Plugs And Receptacles

MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86329	20	22-18	Insulated	86629	100
86330	20	16-14	Insulated	86630	100
86331	15	12-10	Insulated	86631	50
		8	Non-insulated	86635	25
		16-14	Plug insulated Recept - fully insulated	86638	50 pairs

Closed End Connectors (105°C)

MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86341	25	22-18	Insulated crimp type		
86342	20	16-14	Insulated crimp type	86642	100
86343	15	12-10	Insulated crimp type	86643	50

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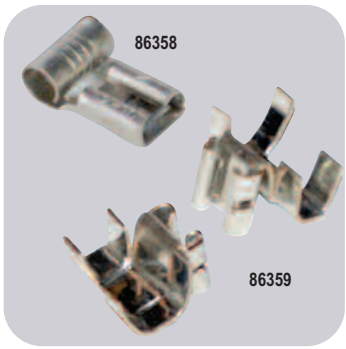
Tab Adapters - Non Insulated (149°C)

MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86350	20	-	.250 (1/4) 2 male x 1 female	86650	100
86351	15	-	.250 (1/4) 2 male x 1 female 8 stud, male tab, straight, .250	86651	50
86353	12	-	.250 (1/4) 2 male x 1 female		

Compressor Terminals - Non Insulated (149°C)



MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86358	13	12-10	.250 (1/4) tab notched for bending	86658	50
86359	8	12-8	.250 (1/4) tab	86659	50

Spade Spring - Insulated (105°C)

MARS NO.	MINI-PAK QTY	SIZE	DESCRIPTION	MARS NO.	SUPER PAK QTY.
86366	20	16-14	#8 stud	86666	100
86367	20	16-14	#6 stud		

Compressor Terminal W/Wire Kit

MARS NO.	DESCRIPTION	MARS PACK
86379	Includes 3 color coded #10AWG type AWM extra flexible lead wires in 10" lengths. One end with .250" x .032" female tab 12-10 quick disconnect. Other end stripped 5/16". Supplied with three 12-10 shrink tube butt connectors.	1

Push-On Terminal Kit

The MARS push on terminal kit includes; four push on terminal adapters and four screws. Converts screw type terminals to push on. Use with the MARS 18000 series contactors.

MARS NO.	DESCRIPTION	MARS PACK
93103	(4) push on terminal adapters (4) screws	1

MARS Pilot Burner Gas Lines

MARS pilot burner gas line is 6.5 ft of clean aluminum tubing with compression nuts and sleeves. Coiled and individually polybagged.

MARS NO.	DESCRIPTION	MARS PACK
79126	1/4" OD x 6.5' aluminum tubing	1

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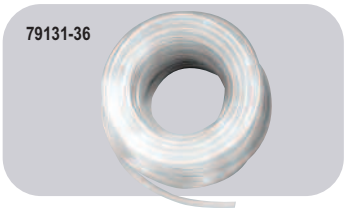
Accessories

MARS Clear Vinyl Tubing, - Boxed



MARS NO.	DESCRIPTION	CASE QTY.
79131	1/4" ID clear tubing 32 PSI - .375 O.D.	100 feet
79132	3/8" ID clear tubing 27 PSI - .500 O.D.	100 feet
79133	1/2" ID clear tubing 24 PSI - .625 O.D.	100 feet
79134	5/8" ID clear tubing 21 PSI - .750 O.D.	100 feet
79135	3/4" ID clear tubing 19 PSI - .890 O.D.	100 feet
79136	7/8" ID clear tubing 16 PSI - 1.015 O.D.	50 feet

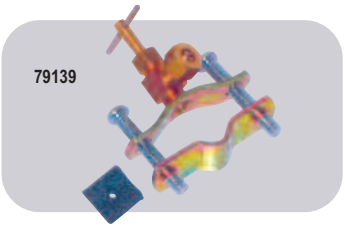
MARS Heavy Duty PVC Braided Line Tubing

- 41°F (5°C) to 140°F (60°C)

MARS NO.	DESCRIPTION	WORKING PRESSURE	BURST PRESSURE	CASE QTY.
79045	1/4" ID - .407 OD	120 PSI	360 PSI	50 Feet
79046	3/8" ID - .532 OD	120 PSI	360 PSI	50 Feet
79047	1/2" ID - .673 OD	90 PSI	270 PSI	50 Feet
79048	5/8" ID - .822 OD	90 PSI	270 PSI	50 Feet
79049	3/4" ID - .986 OD	90 PSI	270 PSI	50 Feet

MARS Saddle Valve

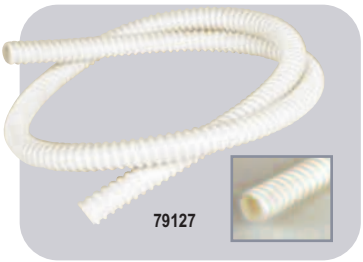
- Self-tapping
- Provides low volume water supply for a variety of appliances using 1/4" inlet tubes, with out the necessity of soldering, cutting pipe or drilling



MARS NO.	DESCRIPTION	CASE QTY.
79139	MARS saddle valve	1

MARS Corrugated Condensate Drain Line

- Ideal for Ductless Mini-Split
- 5/8" Diameter, 20 Ft. Long
- Flexible Ivory
- Corrugated non-kink



MARS NO.	DESCRIPTION	MARS PACK
79127	5/8" Diameter x 20 ft long, Condensate Drain Line	1

MARS Condensate Overflow Switches

The MARS Condensate Overflow Switches are designed to prevent condensate overflow and damage due to clogged drain lines. Overflow switches can be installed in primary or auxiliary condensate drain lines and pans. The overflow switch will interrupt the thermostat circuit and shut down the AC unit preventing an overflow of condensate. The overflow switch prevents condensate overflow damage to walls, floors and ceilings. All switches comply with all applicable NEC Codes and conform to UL 508 requirements.

MARS 21792
Designed for Auxiliary Drain Pans

- Switch is Height Adjustable
- Easy Clip - Stainless Steel Bracket
- Switch Components are Sealed for Reliability
- 6' 18 AWG Lead Wires for Ease of Installation
- Replaces SS3

MARS 21793
T - Fitting Designed for Primary or Auxiliary Drain Lines

- Kit Includes Standard Tee and Elbow
- Also Includes 3/4" Adapter and Plug Fitting
- Float Cap is Easily Removed for Service / Clean-out
- 6' 18 AWG Lead Wires for Ease of Installation
- Sealed Switch for Reliability
- O-ring on float switch port provides leak-proof seal
- Replaces SS1

MARS 21794
L - Fitting Designed for Primary Pan - Auxiliary Outlet

- Kit Includes Elbow or L Fitting
- Float Cap is Easily Removed for Service / Clean-out
- 6' 18 AWG Lead Wires for Ease of Installation
- Sealed Switch for Reliability
- O-ring on float switch port provides leak-proof seal
- Replaces SS2

* All overflow switches are UL rated;
- 1.5A 24VAC (switching current)
- 2.5A 24VAC (carry current)

Cross Reference

MARS NO.	Rectorseal	Diversitech
21792	SS3	CS-3
21793	SS1	CS-1
21794	SS2	CS-2

MARS NO.	DESCRIPTION
21792	Bracket Flood Prevention Switch
21793	Tee Flood Prevention Switch
21794	Elbow Flood Prevention Switch

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

A/C Condensate Drip Pan Shut Off Control

The ACDP-C, A/C Condensate Leak Shutoff Control is a simple, reliable, device that provides years of trouble-free operation and water leak protection for HVAC systems while saving you hours of leak damage maintenance time and cost.

21910

When a water leak is detected the controller interrupts the Air Conditioner thermostat control signal and shuts off the A/C unit, stopping further condensation, property leak damage, and potential for mold. A red LED illuminates upon leak detection. 24 VAC air conditioner control circuit.

You can easily mount the sensor externally as a leak monitor or in the pan as a condensate pan level monitor. The control module can be stand alone or wall mounted.

Features:

- Easy to install
- More reliable than a float switch
- Can be used as a level or external leak control
- Wall or stand-alone mount

Specifications:

- 110 dB audible alarm with integrated A/C cut-off switch
- 30" x 1" flat flexible patented ribbon sensor
- 24 VAC power from AC control board
- Red LED when activated
- 24" sensor leads, 36" power & thermostat leads

MARS NO.	DESCRIPTION	PK QTY	CASE QTY
21910	A/C Condensate Leak Shutoff Control	1	6

Condensate & Hot Water Heater Leak Alarm

The ACDP-A, A/C Condensate and Hot Water Heater Leak Alarm is a simple, reliable, device that provides you years of trouble-free operation and protection for dual or single systems while saving you hours of water leak damage maintenance time and cost.

21911

No floats to corrode or hang up. Utilizes two of our patented 30-inch flat flexible ribbon sensors that offer superior wide area water leak coverage. One sensor mounts at the A/C unit and the second one mounts at the HWH drain. When it senses a water leak it activates the 110 decibel alarm. The 24" and 40" sensor leads allow for easy location. Sensors can be mounted externally as a leak monitor or in the drip pan as a level monitor. The housing can be stand alone or wall mounted

Features:

- Easy to install
- Ideal for mechanical rooms requiring more than a single point of protection
- Sensor leads of 24 and 40 inches for easy mounting
- Affordable, Saves expense, maintenance time, frustration
- Wall or stand-alone mount

Specifications:

- 110 dB audible alarm
- (2) 30" x 1" flat flexible ribbon sensors
- Can be uses as dual or single sensor systems for A-Coil and/or HWH
- Very loud 110 dB alarm,
- 9V dc battery power

MARS NO.	DESCRIPTION	PK QTY	CASE QTY
21911	Condensate and Hot Water Heater Leak Alarm	1	6

Wide Area Water Leak Alarm

The WALA, Wide Area Leak Alarm provides a proven warning system for water leaks that can cause you water damage in out of sight or remote places in your home. Most leak detectors are 'point sensors', only detecting a leak if it puddles right where the alarm housing is located and with enough depth to come into contact with both conductors.

The innovative design of Leak King's Wide Area Leak Alarm allows the 30" long flat, flexible, ribbon sensor to detect leaks across a long 30" ribbon. The 110 dB alarm alerts you before expensive property damage occurs. It is particularly useful for water leaks under kitchen sinks, bathroom vanities, washing machines, water heaters, dishwashers, HVAC drains, and sumps and it provides simple, reliable, inexpensive, prevention against potential water damage and offers great peace of mind.

Features:

- Provides large area coverage
- Easy installation
- Does not interfere with under cabinet storage
- Works anywhere susceptible to leaks
- Smart, reliable, inexpensive leak protection

21912

Specifications:

- 30" x 1" patented flat flexible ribbon sensor
- 110 dB alarm
- 9 vdc battery (not included) operated
- 24" sensor lead wire for easy placement

MARS NO.	DESCRIPTION	PK QTY	CASE QTY
21912	Wide Area Water Leak Alarm	1	6

Accessories

Slic-Tite® Paste - Thread Sealants

- Use on metal, PVC, CPVC, and ABS plastic pipe threads
- For sealing water, air, steam, natural gas, LP gas, refrigerants, ammonia, gasoline, and oil
- Do not use on Oxygen service, use thread seal tape or Oxytite® Paste
- Washes off hands and clothing easily
- Non-toxic, non-drying
- Sealing temperature range: -50° F to 500° F (-46˚ C to 260° C)
- Working pressures: 3,000 PSI (204 BAR) for Gas, 10,000 PSI (680 BAR) for liquids
- USDA approved for use in federally inspected meat and poultry plants.
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95401	1/4 pt. w/ brushcap	24	24
95402	1/2 pt. w/ brushcap	24	24

Low Density Thread Seal Tape

- Thickness 3 mils.
- Standard grade, low density
- Provides a highly resistant seal on pipe threads for all types of service
- Suitable for use with solvents, chemicals, oxygen, and on food lines
- Non-toxic
- Permits easy disassembly, even after years of service
- Meets Mil. Spec. T-27730A
- Sealing temperature range: -450° F to 550° F (-268° C to 288° C)
- Working pressures: 2,000 PSI (136 BAR)
- Sold in case quantities only.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95409	1/2" x 260"	144	144
95410	1/2" x 520"	144	144
95412	3/4" x 520"	144	144

High Density Slic-Tite® Thread Seal Tape

- Thickness 3 mils.
- High density
- Provides a highly resistant seal on pipe threads for all types of service
- Made in USA
- Suitable for use with solvents, chemicals, oxygen, and on food lines
- Non-toxic
- Permits easy disassembly, even after many years
- Meets Mil. Spec. T-27730A
- Sealing temperature range: -450° F to 550° F, (-268° C to 288° C)
- Working pressures: 2,000 PSI (136 BAR)

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95527	1/2" x 300"	12	12
95528	1/2" x 600"	12	12
95530	3/4" x 300"	12	12

T.O.T.® Pipe Joint Compound

- No-drip, siliconized for fast application on metal threads
- For water, steam, air, and natural gas service
- Lead free, non-toxic
- Certified by NSF to meet ANSI/NSF Std. 61 for use on potable water
- Do not use on Oxygen service, use thread seal tape or Oxytite®
- Sealing temperature: up to 350° F (177° C)
- Working pressures: to 500 PSI (34 BAR) for liquids to 350 PSI (24 BAR) for gases
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95415	1/2 pt. w/ brushcap	48	48

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Pipetite® Paste - Pipe Thread Compound

- Soft set pipe thread compound
- For refrigerants, butane, gasoline, oil, as well as water, steam, air, natural and lp gas
- Use on metal threads
- Classified by Underwriters Laboratories in USA and Canada
- Do not use on oxygen service, use thread seal tape or Oxytite®
- Sealing temperature: up to 400° F (204° C)
- Pressures: to 5,000 PSI (340 BAR) for liquids to 2,600 PSI (177 BAR) for gases

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95419	1/4 pt. w/brush cap	24	24
95420	1/2 pt. w/brush cap	24	24

Anaerobic Pipe Thread Sealant

- Anaerobic adhesive provides locking power
- Contains no solvents, won't shrink and weaken seal
- Seals and locks in the absence of air
- Ideal for threads in heavy vibration areas such as compressors and reciprocating equipment
- Classified by Underwriters Laboratories in USA and Canada
- Do not use on Oxygen service, use thread seal tape or Oxytite®
- Sealing temperature range: -65° F to 400° F (-54° C to 204° C)
- Working pressures: to 10,000 PSI (680 BAR) for liquids to 3,000 PSI (204 BAR) for gases
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95421	50 ml (1.69 oz.)	12	12

Heat-Seal Stik®

- Fast repairs completed in 90 seconds
- One part epoxy, no mixing or measuring needed
- Stick melts, seals and cures in one operation
- Use on aluminum, copper and other metals, glass and ceramics
- Ideal for use on high and low side of refrigeration systems
- Sealing temperature : up to 350° F (177° C)
- Pressures: to 600 PSI (41 Bar)
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95430	3/8 oz. stick, carded	12	12

Bloc-it® Heat Absorbing Paste

- Effectively absorbs surface heat
- Protects adjoining surfaces that may be damaged by excessive heat
- Safe to use: non-toxic, no asbestos, harmless to skin, and odorless
- Easy to use: apply directly to surface from tube
- Easy to clean: wipe off with cloth or wash with water. Leaves no stains
- Typical uses: protects rubber and plastic components in ball, dielectric, and solenoid valves during soldering; protects painted or finished surfaces from adjacent soldering, brazing or welding; prevents distortion to light gauge metals during brazing or welding
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95455	10 oz. tube	24	24

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Cool Gel - Heat Dissipating Spray

- Helps prevent heat damage to components and surrounding materials during soldering, brazing, and welding
- Unique gelled formula sticks to surfaces without dripping or running off
- Clear, non-staining gel leaves no residue, eliminating cleanup
- Safe, non-toxic, harmless to skin and odorless
- Saves time - by eliminating the costly disassembly of valves and other components before soldering, brazing or welding
- Protects the seals and seats in ball, dielectric, and solenoid valves
- Protects painted and finished surfaces from discoloration due to adjacent torch operations
- Protects soldered joints from loosening when soldering adjacent joints
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95536	1 quart	12	12

Regular Flux Paste

- Super detergent action cleans as it solders
- Non-acid, non-toxic, lead free
- Contains no zinc chloride
- Use with all common soft solders including: tin-silver, 96/4, 94/6, 95/5, 50/50, 40/60 and 60/40
- For use on copper, brass, galvanized iron, lead, zinc, tin, silver, nickel, mild steel, terne plate, and malleable iron
- Meets Mil. Spec. Mil-F4995 Type II, Meets ASTM B813
- Water soluble for faster flushing from pipe lines
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95441	2 oz	48	48
95443	4 oz. w/brushcap	48	48
95444	1 lb	24	24

Visu-Glow® Leak Detector

- High visibility, fluorescent color shows brightly, even in dimly lit places
- High viscosity, stays on vertical surfaces
- Makes it easy to find leaks
- Temperature range: 15° F to 200° F (-9° C to 93° C)
- Safe for oxygen
- Non-corrosive, non-toxic
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95462	8 oz.	24	24

⚠ WARNING:
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Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Residential Self Regulating Pipe Tracing Cable

EASYHEAT

- Cut to length (3 watts/ft @ 120VAC) up to 75 ft.
- Braided metal jacket for dry location application
- Connection kit provides end seal and plugs into standard 120 VAC outlet
- Automatically varies heat output with changes in surrounding temperature
- For use on plastic or metal
- Recommended for use on PVC condensate lines
- A connection kit (70704) is required on each application
- 70705 is optional for each installation

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
70701	100' Reel	1	1
70704	Connection Kit	1	10
70705	Pre-set Thermostat (38 degrees)	1	10

Commercial Pipe Freeze Protection Cable

EASYHEAT

- No thermostat, no plug
- 2 foot orange 14/3 cold lead
- Jacketed for wet or dry applications
- 120 VAC unless noted
- For use on metal pipes only

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
70720	3.28' length, 23 watts	1	20
70721	6.56' length, 46 watts	1	20
70722	6.56' length, 46 watts (240V)	1	20
70723	9.84' length, 69 watts	1	20
70724	13.12' length, 92 watts	1	20
70725	13.12' length, 92 watts (240V)	1	20
70726	16.41' length, 115 watts	1	20
70727	19.69' length, 138 watts	1	20
70728	19.69' length, 138 watts (240V)	1	20
70729	22.97' length, 161 watts	1	10
70730	26.25' length, 184 watts (240V)	1	10
70731	29.53' length, 207 watts	1	10
70732	32.81' length, 230 watts (240V)	1	10

Residential Pipe Freeze Protection Cable

EASYHEAT

- For use on Plastic or Metal Water-supply pipes at least 3 feet in length
- Do NOT use on condensate lines
- The circuit supplying cable must have a ground fault circuit interrupter (GFCI)
- Jacketed for wet or dry applications
- Preassembled ready to install
- Plugs into standard 120 VAC outlet

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
70710	3' length, 21 watts	1	10
70711	6' length, 42 watts	1	10
70712	9' length, 63 watts	1	10
70713	12' length, 84 watts	1	10
70714	15' length, 105 watts	1	10
70715	18' length, 126 watts	1	5
70716	24' length, 168 watts	1	5
70717	30' length, 210 watts	1	5
70718	40' length, 280 watts	1	5

Commercial Sr Trace Self Regulating Pipe Tracing Cable

EASYHEAT

- Cut to length, up to 458' (120VAC)
- Wet (J jacket) or dry (copper braid) applications
- Automatically varies heat output with changes in surrounding temperature

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
70742	250' reel, J jacket 5 watts/ft, (120V)	1	1
70744	Heat shrink end seal kit	1	5
70745	Heat shrink power/end connection kit	1	1
70746	Heat shrink splice and "T" connection kit	1	2

Accessories

Ideal 52 Series - 1/2" Clamps

Ideal manufacturers a broad line of standard worm drive and specialty hose clamps designed to satisfy a wide range of applications. The completely mechanical design locks the one piece housing directly to the band using the full strength of the material to provide maximum anti-shear protection. No spot welds to rupture under stress or corrosion, and a one piece housing can not come apart under high loading.

Ideal's 52 series clamps are comprised of a 1/2" stainless steel band with carbon steel housing and a 5/16" plated hex head screw.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79310	Size 06 3/8"-7/8" clamp dia.	10	100
79311	Size 08 7/16"-1" clamp dia.	10	100
79312	Size 10 1/2"-1 1/8" clamp dia.	10	100
79313	Size 12 1/2"-1 1/4" clamp dia.	10	100
79314	Size 16 3/4"-1 1/2" clamp dia.	10	100
79315	Size 20 3/4"-1 3/4" clamp dia.	10	100
79317	Size 24 1"-2" clamp dia.	10	100
79318	Size 28 1 5/16"-2-1/4" clamp dia.	10	100
79316	Size 32 1 9/16"-2 1/2" clamp dia.	10	100
79319	Size 36 7/8"-2 3/4" clamp dia.	10	100
79345	Size 40 1-1/8"-3" clamp dia.	10	100
79309	Size 72 3-1/8"-5" clamp dia.	10	100

Ideal 67-5 Series 1/2" Clamps

Ideal's 67-5 series clamps are all stainless steel. They are comprised of a 1/2" 300 series stainless steel band, housing and a 5/16 hex head screw.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79320	Size 06 3/8"-7/8" clamp dia.	10	100
79321	Size 08 7/16"-1" clamp dia.	10	100
79322	Size 10 1/2"-1 1/8" clamp dia.	10	100
79323	Size 12 1/2"-1 1/4" clamp dia.	10	100
79324	Size 16 3/4"-1 1/2" clamp dia.	10	100
79325	Size 20 3/4"-1 3/4" clamp dia.	10	100
79328	Size 24 1"-2" clamp dia.	10	100
79307	Size 28 1 5/16"-2 1/4" clamp dia.	10	100
79326	Size 32 1 9/16"-2 1/2" clamp dia.	10	100
79327	Size 36 7/8"-2 3/4" clamp dia.	10	100
79308	Size 72 3"-5" clamp dia.	10	100
79304	Size 128 6 1/2"-8 1/2" clamp dia.	50	100

Ideal 50 All Stainless 1/2" Clamp For Ducts

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79329	Size 248 14"-16" clamp dia.	50	100

Ideal 52 Series Micro Gear Clamps

Ideal's 52 series micro-gear clamps consist of a 5/16" stainless steel band with carbon steel housing and 1/4" plate hex-head screw.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79330	Size 04 7/32"-5/8" clamp dia.	10	100
79331	Size 06 5/16"-7/8" clamp dia.	10	100
79332*	Size 12 9/16"-1 1/4" clamp dia.	10	100
79333*	Size 16 11/16"-1 1/2" clamp dia.	10	100
79334*	Size 20 7/8"-1 3/4" clamp dia.	10	100

* size 12 and larger have a stainless steel housing

Ideal 62M Series Micro Gear Clamps

Ideal's 62M series micro gear clamps are all stainless. They are comprised of a 5/16" stainless steel band, housing and 1/4" hex-head screw.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79340	Size 04 7/32"-5/8" clamp dia.	10	100
79341	Size 06 5/16"-7/8" clamp dia.	10	100
79342	Size 12 9/16"-1 1/4" clamp dia.	10	100
79343	Size 16 11/16"-1 1/2" clamp dia.	10	100
79344	Size 20 7/8"-1 3/4" clamp dia.	10	100

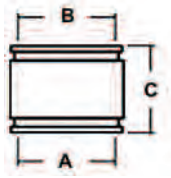
⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Flexible Couplings

Flexible rubber couplings are used to connect cast iron, plastic, steel or lead pipe to cast iron, plastic, steel or lead pipe.

- All models are listed with I.A.P.M.O. (U.P.C.) 5/16" driver required to tighten bolts.
- All models are listed to the National Plumbing Code of Canada and relevant Canadian Standard(s) and bear the cUPC mark of conformity®.
- Non constant temperature rating is 140°F.
- Stainless Steel Clamps and 5/16" hex head bolts are made from Type 300 Stainless Steel.

Note: Tighten bolts to 60 inch lbs. min. / max torque. Tested to maintain 4.3 p.s.i. maximum line pressure (10' head pressure) Tested and Certified to ASTM Standard 1173-2010.



MARS NO.	DESCRIPTION	A MIN	A MAX	B MIN	B MAX	C HEIGHT	MARS PACK	CASE QTY.
85093	2" CI/PL/ST/LD x 2" CI/PL/ST/LD Flex coupling	2.20	2.50	2.20	2.50	3.50	1	100
85095	3" CI/PL/ST/LD x 3" CI/PL/ST/LD Flex coupling	2.60	3.18	2.20	3.18	2.75	1	100
85096	3" CI/PL/ST/LD x 2" CI/PL/ST/LD Flex coupling	2.60	3.18	2.20	2.50	2.75	1	100

Flexible Stainless Steel Gas Range Connectors 1/2" I.D. (5/8" O.D.) With Fittings

Brass Craft coated stainless steel gas connectors are known for superior quality and reliable performance. The ProCoat polymer based yellow coating resists corrosion from sea, salt, UV rays and the harsh chemical vapors from common household cleaning, plumbing repair and building products such as: ammonia, chlorine, solder flux, muratic acid, and bleach. These ProCoat gas connectors provide great strength and flexibility making installation easier.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
73402	18"L-1/2" MIP x 1/2" MIP	1	25
73403	24"L-1/2" MIP x 1/2" MIP	1	25
73404	36"L-1/2" MIP x 1/2" MIP	1	25
73405	48"L-1/2" MIP x 1/2" MIP	1	25
73418	36"L-1/2" FIP x 1/2" MIP	1	25
73419	48"L-1/2" FIP x 1/2" MIP	1	25
73431	24"L-1/2" FIP x 1/2" MIP	1	25
73432	36"L-1/2" FIP x 1/2" MIP	1	25
73433	48"L-1/2" FIP x 1/2" MIP	1	25

Flexible Stainless Steel Gas Dryer Connectors 3/8" I.D. (1/2" O.D.) With Fittings

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
73439	36"L-1/2" MIP x 1/2" MIP	1	25
73440	48"L-1/2" MIP x 1/2" MIP	1	25
73445	24"L-1/2" FIP x 1/2" MIP	1	25
73446	36"L-1/2" FIP x 1/2" MIP	1	25

Steel Gas Fittings For 7/8" O.D. Connectors

With MARS male gas fittings, wholesalers need fewer items on the shelf and contractors need fewer parts on the job. Tapped gas fittings hook up gas connectors to male or female iron pipe and female in-line gas valves. One fitting does many jobs.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
73480	straight-5/8" OD x 1/2" MIP (tapped 3/8" FIP)	25	25
73481	straight-5/8" OD x 3/4" MIP (tapped 1/2" FIP)	25	25

MARS Gas Ball Valves

MARS gas ball valves are for use with natural, manufactured and mixed gases, as well as liquified petroleum and LP gas/air mixtures. Corrosion fighting chrome plated brass ball and aluminum, quarter turn handle. MARS gas ball valves feature threads that conform to all appropriate standards.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
73494	straight-5/8" OD x 3/4" FIP	10	10
73495	straight-1/2" FIP x 1/2" FIP	10	10
73496	straight-3/4" FIP x 3/4" FIP	10	10

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Oatey All Purpose Cement - ABS, PVC, CPVC

Oatey all purpose cement is a heavy bodied, clear cement recommended for use on ABS, PVC or CPVC pipe and fittings. For all pipe schedules, potable water pressure pipe, gas, conduit, drain waste and vent pipe. Flows freely and provides a thick layer of cement on the pipe. Helps to fill gaps in larger diameter pipe and loose fitting joints. Apply at temperature 40°F to 100°F. Exceeds performance requirements of ASTM D-2564, D-2864, D-2235, F-493. Special applicator brush cap for fast and easy installation.

MARS NO.	DESCRIPTION	MARS PACK
73161	4 oz. clear	24
73162	8 oz. clear	24
73163	16 oz. clear	24

Oatey Heavy Duty Cement - PVC

Oatey heavy duty cement is recommended for use on pvc pipe and fittings up to 12" in diameter for schedule 40 and schedule 80 potable water pressure pipe, gas, conduit, drain waste and vent pipe. This heavy bodied cement flows freely and provides a thick layer of cement on the pipe. A special brush cap applicator is provided. Apply at temperatures 40°F to 100°F. This clear cement helps to fill gaps in larger diameter pipe and loose fitting joints. Exceeds ASTM D-2564.

MARS NO.	DESCRIPTION	MARS PACK
73165	4 oz. clear	24
73166	8 oz. clear	24
73167	16 oz. clear	24

Oatey Regular Cement - PVC

Oatey regular cement is recommended for use on PVC pipe and fittings up to 4" for DWV or schedule 40 and up to 2" for schedule 80 potable water pressure pipe, gas, conduit, drain waste and vent pipe. It flows freely and sets up quickly. Apply at temperatures 40°F to 100°F. Exceeds ASTM D-2564. Special brush top applicator.

MARS NO.	DESCRIPTION	MARS PACK
73174	4 oz. clear	24
73175	8 oz. clear	24
73176	16 oz. clear	24
73177	32 oz. clear	12

Oatey Rain-R-Shine™ Cement - PVC

Oatey Rain-R-Shine™ is a blue colored cement recommended for PVC pipe and fittings up to 6" in diameter. A very fast setting cement formulated for wet conditions and/or when quick pressurization and fast installation is needed. For schedule 40 and schedule 80 potable water pressure pipe, irrigation, gas, conduit, drain waste and vent pipe. This medium bodied cement flows freely and covers with a thicker layer than regular PVC. Apply at temperatures 40°F to 100°F.

MARS NO.	DESCRIPTION	MARS PACK
73150	4 oz. blue	24
73151	8 oz. blue	24

Oatey Clear Primer - NSF Listed - PVC, CPVC

Oatey clear primer is a clear aggressive primer for use on PVC and CPVC pipe and fittings for all schedules and diameters. This NSF listed formula removes all surface dirt, grease and grime as well as softens pipe in preparation for solvent cement. Meets ASTM F-656.

MARS NO.	DESCRIPTION	MARS PACK
73186	16 oz. clear	24

Oatey All Weather Cement-PVC

Oatey all weather cement is recommended for use on PVC pipe and fittings up to 6" in diameter. Formulated for fast initial set up at temperatures down to 10°F, for schedule 40 and schedule 80 potable water pressure pipe, gas, conduit, drain waste and vent pipe. This medium bodied, clear cement flows freely and maintains good gap filling properties. Apply at temperatures 10°F to 100°F. Exceeds ASTM D-2564.

MARS NO.	DESCRIPTION	MARS PACK
73156	16 oz. clear	24

⚠ WARNING:
Cancer and Reproductive Harm
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www.marsdelivers.com

Oatey Purple Primer - PVC, CPVC

Oatey purple primer is recommended for use on PVC and CPVC pipe and fittings, all schedules and diameters. This purple tinted aggressive primer is formulated to remove surface dirt, grease and grime, as well as, soften the pipe surface to allow for a fast, secure and permanent solvent weld. For use in area where code calls for verification that a primer has been used. Exceeds ASTM F-656.

MARS NO.	DESCRIPTION	MARS PACK
73178	4 oz. purple	24
73179	8 oz. purple	24
73180	16 oz. purple	24

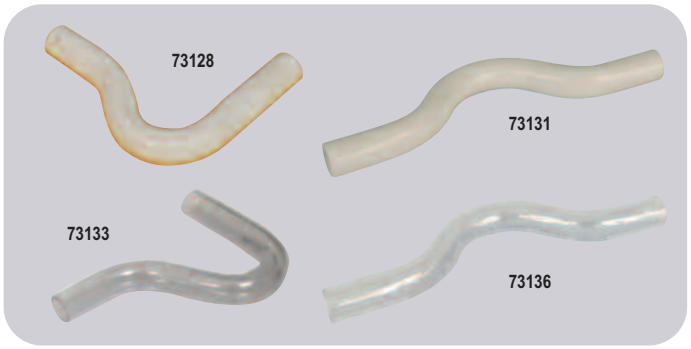
Oatey All Purpose Cleaner - PVC, CPVC, ABS

Oatey all purpose cleaner is recommended for use on ABS, PVC and CPVC pipe and fittings, all schedules and diameters. This fast acting cleaner removes surface dirt, grease and grime. Flows freely and evaporates quickly. Does not penetrate pipe surface. Apply at temperatures 40°F to 100°F.

MARS NO.	DESCRIPTION	MARS PACK
73170	8 oz. clear	24
73171	16 oz. clear	24
73172	32 oz. clear	12

Schedule 40 - PVC Traps

- Lightweight, durable and cost effective
- Maximum service temperature 140°F
- High corrosion and chemical resistant, will not rust, scale, pit or corrode



MARS NO.	DESCRIPTION	MARS PACK
73126	3/4" P-trap	1
73128	3/4" mini P-trap	1
73129	3/4" super P-trap	1
73131	3/4" R trap	1
73133	3/4" PVC P-trap Clear	1
73136	3/4" PVC R-trap Clear	1

Adapter Nylon Fitting

- Nylon - white

MARS NO.	DESCRIPTION	CASE QTY.
73201	Adapter 1/4 barb x 1/4 MPT - 10/pack	1
73203	Adapter 3/8 barb x 3/8 MPT - 10/pack	1
73204	Adapter 3/8 barb x 1/2 MPT - 8/pack	1
73206	Adapter 1/2 barb x 1/2 MPT - 6/pack	1
73207	Adapter 1/2 barb x 3/4 MPT - 4/pack	1
73208	Adapter 5/8 barb x 3/4 MPT - 4/pack	1

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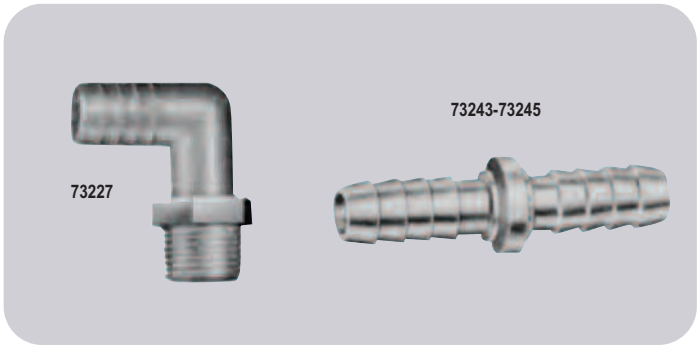
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

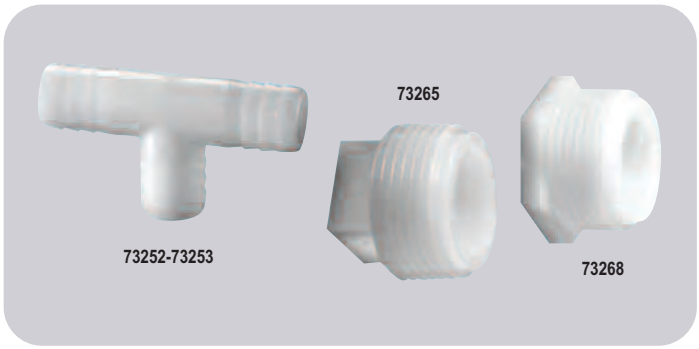
Accessories

Elbow Nylon Fitting



MARS NO.	DESCRIPTION	CASE QTY.
73230	Elbow 1/2 barb x 3/4 MPT - 4/pack	1
73232	Elbow 5/8 barb x 3/4 MPT - 4/pack	1
73234	Elbow 3/4 barb x 3/4 MPT - 4/pack	1
73243	Hose mender 3/8 barb - 5/pack	1
73244	Hose mender 1/2 barb- 4/pack	1
73245	Hose mender 5/8 barb - 4/pack	1

Tee Nylon Fitting



MARS NO.	DESCRIPTION	CASE QTY.
73252	Tee 3/8 x 3/8 x 3/8 barb - 5/pack	1
73253	Tee 1/2 x 1/2 x 1/2 barb - 4/pack	1
73265	Drain plug 3/4 square head - 5/pack	1
73268	Drain plug 3/4 hex head - 5/pack	1

MARS Condensate Clean-Out Tablets

MARS **TAB™** condensate and drip pan clean-out tablets, prevent plugging of air conditioning condensate drip pans and drain lines.

MARS **TAB™** does not release any chlorine or other noxious fumes. This economical, simple positive protection can be used on steel, copper, galvanized, painted surfaces and other materials without damage. It is one of the few treatments that will not stain exterior wall when line drains outside

MARS NO.	DESCRIPTION	MARS PACK
93202	MARS **TAB™** (100 tablets per bottle)	18

MARS One-Shot® Kits - 12 Applications Per Can

MARS One-Shot® is all it takes to instantly clear clogs. MARS One-Shot® drain opener kit instantly clears blockages in all types of fixtures and drains while simultaneously delivering a specially designed enzyme ingredient. This enzyme continues to dissolve grease buildup in the drain long after the initial blockage was cleared. The kit includes: One-Shot drain opener can 7 oz., three foot extension hose and twist fit adapter for ice markers and condensate drain pans.

Benefits & Features:

- Enzyme activated
- No ozone depleting chemicals
- Safe for sewers & septic systems
- Works instantly
- Sanitary and easy to use
- Universal adapter for all types of fixtures
- Seamless aluminum container will not rust
- For drains from 3/8" i.d. to 7/8 i.d.
- Made in the USA
- 12 applications per can

For Use On:

- Condensate pans
- Ice machines
- Bar sinks
- Toilets
- Bathtubs
- Kitchen sinks
- Shower drains
- Floor drains.
- Lavatories

MARS NO.	DESCRIPTION	MARS PACK
93220	MARS One-Shot® drain opener (7 oz.)	25
93221	MARS One-Shot® refill can (7 oz.)	36

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Panseal

Seals and Restores Leaking and Rusted Drain Pans

Panseal is a unique multi-component 2 part epoxy designed to quickly and permanently seal, repair, and restore leaking and corroded drain pans. The product is available in caulk gun cartridges for easy application, gallon size containers for larger surfaces such as cooling towers, patch kits for vertical surfaces and single use 250 gram burst-seal bags. All contain pre-measured amounts of resin and hardener.

- Works in standing water
- Seals leaks immediately
- No surface preparation
- No system down time
- Works on both metal and plastic pans
- 100% solids and entirely free of solvents and volatile organic compounds

MARS NO.	DESCRIPTION	MARS PACK
93526	Panseal Cartridge	1
93527	Panseal Gallon	1
93528	Panseal Patch	1
93579	Panseal Bag, covers 2 sq ft	1
93500	Cartridge Nozzle	12

Circuit Protection

The ZBreaker set from Zebra Instruments protects systems that you install or service from damage caused by shorts, overheating, or wiring problems. A sticker is included so that, if the Tech desires, he can inform his customer where to press the "reset" button and possibly save a midnight service call.

The same circuit breakers now found on many high-end transformers and systems, but at a great price! Kit includes wires and pre-installed terminals that allow you to easily plug it in to the connectors where a plastic-type fuse existed. 3 Amp Size.

The Short-Pro Tool is a 24 volt system "short-finder". This helps the tech locate a control voltage short. A built-in automatically resetting circuit breaker turns on a bright red LED when tripped. As the tech removes the short, the breaker automatically resets, the LED goes out, and the circuit is restored. Lightweight and compact, with two 18" leads.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
08574	ZBreaker Set – 3A	1	24
08577	Short Finder Pro Tool	1	24

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www.P65Warnings.ca.gov

Accessories

MARS Digital Clamp On Meter

Features:

- AC Current
- DC/AC Voltage
- Resistance
- Continuity Check
- Continuity check buzzer sounds at approx. / 50 ohm max
- Peak Hold & Data Hold
- 1.3" (33mm) Clamp Jaw Opening
- Large 0.68", 3-1/2 digit LCD with low battery indicator
- Includes test leads, manual and carry case
- Overload protection provided for all ranges
- Meets IEC 1010 Safety Standard
- 9 volt battery included

Range: 0-600 A

Resolution: 1 A

Frequency: 50/60 Hz (+/- 1.5% rdg +/- 4 dgt)
40-400 Hz (+/- 2.5% rdg +/- 4 dgt

MARS NO.	DESCRIPTION	MARS PACK
65749	Digital clamp-on meter	1

MARS Capacitor Tester

The MARS capacitor tester is a reliable precise 3-1/2-digit capacitance meter, which has 10 ranges. It is easy to use and is a very useful measurement tool.

Features:

- LCD display
- High accuracy
- Zeroing method: Adjust the "0 ADJ" knob
- Dual-slop integration A/D converter
- Over range indication: "1"shown on the display
- Operation condition: Temperature: 0°C~40°C (32°F~104°F)
  Relative humidity: <75%
- 9V battery and test leads included
- Low battery indicator

Range	Resolution	Accuracy	Test Frequency
200pF	0.1pF	± (0.8% + 7)	
2000pF	1pF	± (0.8% + 5)	800Hz
20nF	10 pF		
200nF	100pF	± (0.5% + 5)	
2 µF	1000pF	± (0.8% + 5)	80Hz
20 µF	0.01 µF		
200 µF	0.1 µF	± (2.0% + 5)	8Hz
2000 µF	1 µF	± (2.0% + 5)	
20mF	10 µF	± (5.0% + 5)	

MARS NO.	DESCRIPTION	MARS PACK
65746	MARS capacitor tester	1

MARS Universal Remote Control for Mini-Split Units

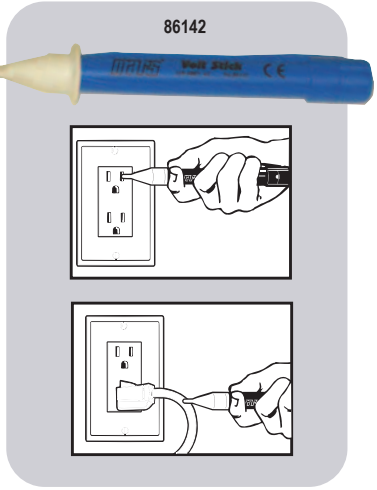
MARS Universal Remote will operate with virtually any mini-split produced in any region of the world. Programming is accomplished by imputing your mini-split brand code or use the easy and intuitive self learn mode to set-up the remote to operate your mini-split. Operates with 2 AAA batteries.

- One touch function with LCD display
- Celsius or fahrenheit display
- Clock display
- 24 Hr. on/off timer for energy savings
- Displays room temperature
- Energy saver feature
- Automatically determines heat or cool mode

MARS NO.	DESCRIPTION	MARS PACK
65775	Mini-Split Universal Remote	1

MARS Volt Stick

The Volt Stick is an instrument for safely checking the presence of an AC voltage in cables, wall outlets, fuses, circuit breakers, junction boxes, power tools and appliances. Also, distinguishes between live and neutral wire in single or three phase supplies. No current flow is needed for correct operation of the Volt Stick. When a voltage is detected, a red indicator in the plastic tip of the Volt Stick illuminates. No contact is needed, unit operates at 1/8" distance from device.



Specifications

- Voltage range: 110 to 480 volts AC
- Not sensitive to stray electromagnetic static
- Response time: instantaneous
- Case breakdown: 4000 volts
- Operation temp: 0° to 120°F
- Batteries: two AAA, 1.5 volt alkalines included

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
86142	Volt Stick	1	12

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Safety Power Adapters

Zebra'Dapter's provide visual indication of voltage levels before damage can occur. One is a fused power tap cordset & the other is a cheater cord used for a safer way to obtain and use 120V power. They are lighted to show the voltage level available, and if the indicator light is ignored, the fused circuit provides a last line of defense to protect you and your customer's equipment. These adapters are significantly a safer way to obtain 120V power.

MARS No. 08566 (Male end) has an in-Line fuse. (Two fuses included). Safer Power from Outlet to test Motors, Components & Systems

MARS No. 08567 (Female end) shows the voltage level at the plug. Used to check 120V power to run vacuum pumps, charging scales, drop lights, etc. lighting

08566

08567

Lighted Plug confirms Power

- No light means no power
- Normal light means 120VAC
- A brilliant light means you accidently hooked it up to 240VAC

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
08566	Fused Cheater Power Cord (male end)	1	12
08567	Fused Power Tap Cordset (female end)	1	12

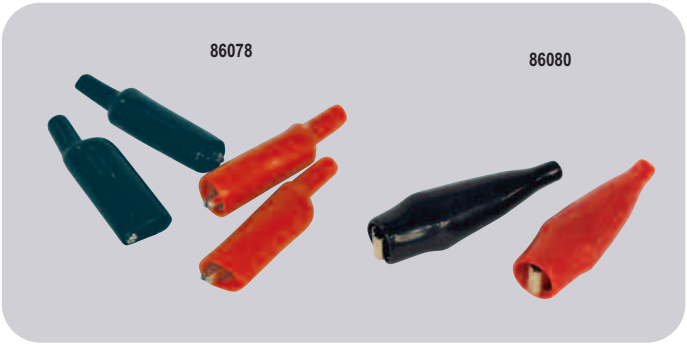
MARS Test Leads - Pkg'd In Poly Bags

MARS NO.	CLIP SIZE	TYPE	CASE COLORS	WIRE SIZE	L	BAG QTY.
86070	Sm	Alligator	Wht, red, blk, yellow, grn	18	18"	10
86071	Med	Alligator	Red/blk w/boots	18	24"	2
86073	Lg	Alligator	Red/blk w/boots	14	24"	2
86074	Lg	Battery	Red/blk w/boots	16	36"	2

MARS Special Leads - Pkg'd In Poly Bags

MARS NO.	CLIP SIZE	DESCRIPTION	WIRE SIZE
86075	Med	6'-2 wire test cord w/red & blk insul. clips	16
86076	Med	24" - 3 wire test cord w/fem plug & 3 insul. clips	16

MARS Alligator & Battery Clips - Pkg'd in Zip Lock Bag



MARS NO.	CLIP SIZE	TYPE	DESCRIPTION	BAG QTY.
86078	Med	Alligator	Red/blk (1 ea. color boot - 2 clips)	1 pr.
86080	Med	Battery	Red/blk (1 ea. color boot - 2 clips)	1 pr.

Zebra Alligator Leads - Clamshell

08752

08753

MARS NO.	CLIP SIZE	TYPE	DESCRIPTION	BAG QTY.
08572	Sm	Alligator	5 different colors (up to 6A)	5
08573	Med	Alligator	8 different colors (up to 15A)	8

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Accessories

Energizer Industrial Alkaline - Bulk

MARS and the Energizer Battery Company offer a complete line of alkaline, general purpose and lantern batteries. These high quality batteries are made in the U.S.A. and are competitively priced.

The Energizer Industrial Alkaline batteries are environmentally safe and are mercury-free, designed for long-lasting power in high drain, frequent use applications. Batteries are sealed and have excellent leakage resistance and a long storage life. This provides a better discharge rate, lower impedance and better low temperature performance than carbon zinc. These ZMA alkaline batteries are also less sensitive to changes in the discharge rate or duty cycle.

79401

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79401	D cell - 1.5V	12	72
79402	C cell - 1.5V	12	72
79403	AA - 1.5V	24	144
79404	AAA - 1.5V	24	144
79405	9V	12	72

Energizer Batteries - Blister Pack

79441

79442

79445

79457

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79441	D cell - 2 pack	12	48
79442	C cell - 2 pack	12	48
79443	AA - 4 pack	12	48
79444	AAA - 4 pack	12	48
79445	9V - 2 pack	12	48
79457	AAA - 2 pack	6	6

Energizer Specialty Batteries

- Long lasting, reliable, miniature batteries
- Type: Silver Oxide
- Volt: 1.5

79469

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79469	#357 1.5V, repl. 280-03, 280-08, 303/357, D303/357, SB-A9, SR 1154 SW, SR 44 SW, SR 44SW, SR44SW, WS14	6	480

Energizer Lithium Batteries

- Holds power for 8 years in storage
- Type: Lithium Coin
- Volt: 3

79458

79454

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79458	ECR2032BP 3V, repl. 5004LC, BR2032, DL2032, ECR2032, ST-T15	6	480
79454	CR1632, 3V, repl. BR1632, DL1632, ECR1632, KCR1632, KECR1632, KL1632, L1632	5	100

MARS Accessories

MARS NO.	DESCRIPTION	MARS PACK
79460	LR44, Batteries for 79479, 4 pk	1

⚠ WARNING:
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MAGLITE® Flashlights

MAG-LITE

MARS and Maglite® are committed to providing a full selection of flashlight products designed for use by professionals. Features include anodized aircraft aluminum with knurled grip, o-ring sealed for minimum water resistance and adjustable beams from pinpoint spot to flood. All Maglite flashlights are designed and tested for high impact, precise illumination and longer use. All units have a limited lifetime warranty for repair and replacement of all internal and external components.

79205 79201

79215

MARS NO.	DESCRIPTION	MAG. NO.	CASE QTY.
79205	Mini-mag AAA (black)	M3A016	12
79201	Mini-mag AA (black)	M2A016	12
79230	Mini-mag AA (blue)	M2A116	12
79202	AA combo pack (black)	M2A01C	12
79215	AA mag holster combo (black)	M2A01H	12

MAGLITE® Led Flashlights

MAG-LITE

79240

MARS NO.	DESCRIPTION	MAG. NO.	CASE QTY.
79240	Maglite Pro 2AA LED (black)	SP2P01H	6

MAGLITE® Accessories

MAG-LITE

79226

MARS NO.	DESCRIPTION	MAG. NO.	CASE QTY.
79222	AA nylon holster (black)	AM2A056	12
79226	AA leather holster (black)	AM2A026	12

MAGLITE® Replacement Lamps & Accessories

MAG-LITE

79223

MARS NO.	DESCRIPTION	MAG. NO.	CASE QTY.
79223	AA/AAA bulb 2 pack	LM2A001	12

Upgrade LED Kits for MAGLITE®

MAG-LITE

79232

MARS NO.	DESCRIPTION	MAG. NO.	CASE QTY.
79232	AA LED Upgrade II-White	LRB2-07	6

⚠ WARNING:
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Accessories

MARS Infra-Red Laser Thermometer

- Built-in laser pointer
- Data hold & Auto power off
- Temperature Range: -50°C to 350°C (-58°F to 662°F)
- Accuracy: ±2% of reading or ±2°C/±4°F • D:S=8:1
- Complete with 9V battery
- Quickly and easily take the surface temperature of any object. Just point, pull the trigger, and read the temperature on the display.
- °C / °F switchable button
- Backlit LCD display

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
25580	Infrared thermometer	1	500

MARS Hand Held Scale

- Ideal for weighing and checking most gas and refrigerant cylinders
- Easy to use
- Push button for accuracy
- Auto shut off
- Max scale up to 55 lbs
- 9V battery included
- Accuracy up to +/- 2%
- LBS/KGS switch

MARS NO.	DESCRIPTION	MARS PACK
79039	Digital hand held scale	1

MARS Pocket Bi-Metal Dial Thermometers

MARS pocket dial thermometers consist of stainless steel cases with 5" stem. Thermometers are completely waterproof. Units are protected by flexible plastic case with clip. They can be recalibrated for accuracy.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
25510	1" dial-40° F to 160°F thermometer	1	12
25520	1" dial 0° F to 220°F thermometer	1	12

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www.marsdelivers.com

MARS Pocket Digital Thermometers

MARS #25531 deluxe digital pocket thermometer features an on/off switch and a data hold button. The easy to read LCD digits can be displayed in both fahrenheit and centigrade. The new slim design fits nicely in your pocket. Pocket clip and battery are included. ±2° accuracy. Uses MARS #79460 replacement battery. Water and drop resistant. Auto power off is also a new feature.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
25531	Deluxe digital pocket, -40°F to 300°F, -50°C to +150°C	1	12

MARS Refrigerator/Oven Thermometers

Horizontal refrigerator/freezer thermometer is most often specified for commercial applications. Hang, stand, or permanent mount. Stainless steel refrigerator or oven models utilize 2" easy to read dial. Hang or stand.

MARS NO.	DESCRIPTION
25540	Horizontal glass tube refrig. -40°F to 80°F, -40°C + 0° to +26°C
25542	Stainless steel refrigerator -20°F to 80°F, -29°C to +26°C

MARS Refrigerant I.D. Labels

MARS refrigerant I.D. labels are color coded to conform to each particular refrigerant. Each label specifies the type of refrigerant, the chemical name, the UN # and a space for the name and address of the cylinder owner. These self-adhering labels are 4 1/2" x 3 1/2", except for MARS #79528, Refrigerant Evacuation Certificate, which is 7 1/2" x 4 1/2".

MARS NO.	DESCRIPTION	MARS PACK
79522	R-22 Refrigerant I.D. Labels (10 pk)	1
79523	R-134A Refrigerant I.D. Labels (10 pk)	1
79516	R-404A SUVA® HP62 Refrig. Labels (10 pk)	1
79511	R-407A Refrigerant I.D. Labels (10 pk)	1
79512	R-407C Refrigerant I.D. Labels (10 pk)	1
79536	R-410A GENETRON® AZ-20 Refrig. Labels (10 pk)	1
79526	R-421A Refrigerant I.D. Labels (10 pk)	1
79525	R-422B Refrigerant I.D. Labels (10 pk)	1
79527	R-422D Refrigerant I.D. Labels (10 pk)	1
79506	R-438A Refrigerant I.D. Labels (10 pk)	1
79513	R-507 Refrigerant I.D. Labels (10 pk)	1
79528	Refrigerant evacuation certification (5 pk)	1
79609	R-427A Refrigerant I.D. Labels (10 pk)	1
79610	R-422C Refrigerant I.D. Labels (10 pk)	1
78996	R-449A Refrigerant I.D. Labels (10/pk)	1
78998	R-448A Refrigerant I.D. Labels (10/pk)	1

⚠ WARNING:
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Accessories

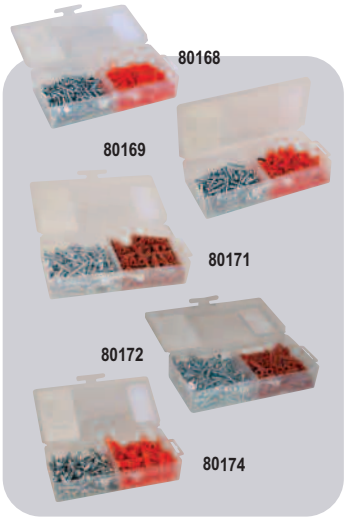
MARS Plastic Anchor Kits

Plastic anchors are designed to be used with either woodscrews or sheet metal screws. They are recommended for quick, easy fastening of fixtures such as thermostats, thermostat guards, shelf brackets, cabinets, mirrors, pictures, etc. All plastic anchor kits include plastic anchor, screws and carbide masonry drill bit. All kits are packaged in a durable, see-through reclosable plastic storage case.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79974	Plastic conical anchor with pan head combo kit contents: (100) 1/4 plastic anchors, (100) #10 x 1 pan combo hd screw zinc, (1) 1/4 x4 masonry drill	1	200
79975	Plastic conical anchor with hex washer head kit contents: (100) 1/4 plastic anchors, (100) #10 x 1 hex washer hd slot screws zinc, (1) 1/4 x4 masonry drill	1	200
79976	Plastic screw-in anchor with pan head combo kit contents: (50) plastic screw-in anchors, (50) #8 1 1/2 pan combo hd screw zinc	1	100
79977	Metal screw-in anchor with pan head combo kit contents: (50) metal screw-in anchors, (50) #8 1 1/2 pan combo hd screws zinc	1	100

Plastic Anchor Kits

Plastic anchors are designed to be used with either woodscrews or sheet metal screws. They are recommended for quick, easy fastening of fixtures such as thermostats, thermostat guards, shelf brackets, cabinets, mirrors, pictures, etc. All plastic anchor kits include plastic anchor, screws and carbide masonry drill bit. All kits are packaged in a durable, see-through reclosable plastic storage case.



MARS NO.	DESCRIPTION	CASE QTY.
80168	8-10 x 7/8" plastic anchor kit with slotted pan screw, contains: (100) 8-10 conical anchors, (100) 8 x 1" slotted pan screw, (1) 3/16" x 4" carbide masonry drill bit	1
80169	8-10 x 7/8" plastic anchor kit with pan combo screw, contains: (100) conical anchors, (100) 8 x 1" phillips/slotted pan screw, (1) 3/16" x 4	1
80171	10-12 x 1" plastic anchor kit with slotted pan screw, contains: (100) 1/4" conical anchors,(100) 10 x 1 1/4" phillips, slotted pan screw, (1) 1/4" x 4" carbide masonry drill bit	1
80172	10-12 x 1" plastic anchor kit with hex washer slotted screw, contains: (100) 1/4" conical anchors, (100) 10 x 1 1/4" hex washer slotted screw, (1) 1/4" x 4" carbide masonry drill bit	1
80174	14-16 x 1 3/8" plastic anchor kit with slotted pan screw, contains: (50) conical anchors, (50) 14 x 1" slotted pan screw, (1) 5/16" x 4" carbide masonry drill bit	1

Hollow Wall Anchor Kits

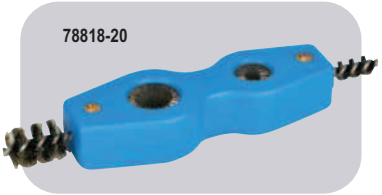
Plastic anchors are designed to be used with either woodscrews or sheet metal screws. They are recommended for quick, easy fastening of fixtures such as thermostats, thermostat guards, shelf brackets, cabinets, mirrors, pictures, etc. All plastic anchor kits include plastic anchor, screws and carbide masonry drill bit. All kits are packaged in a durable, see-through reclosable plastic storage case.

MARS NO.	DESCRIPTION	CASE QTY.
80179	#6 hollow wall anchor kit, contains: (50) #6 hollow wall plastic anchors (50) 6 x 1" slotted phillips pan screw	1
80180	#8 hollow wall anchor kit, contains: (50) #8 self drill hollow wall plastic anchors (50) 8 x 1 1/4" slotted phillips pan screw	1

Tube Fitting Brushes - Heavy Duty Stainless Steel

MARS NO.	DESCRIPTION			MARS PACK
78801	1/4" OD	1/8" ID	fitting brush (2 bag)	6
78802	3/8" OD	1/4" ID	fitting brush (2 bag)	6
78803	1/2" OD	3/8" ID	fitting brush (2 bag)	6
78804	5/8" OD	1/2" ID	fitting brush (2 bag)	6
78805	3/4" OD	5/8" ID	fitting brush (2 bag)	6
78806	7/8" OD	3/4" ID	fitting brush (2 bag)	6
78808	1 1/8" OD	1" ID	fitting brush (2 bag)	6
78809	1 3/8" OD	1 1/4" ID	fitting brush (2 bag)	3

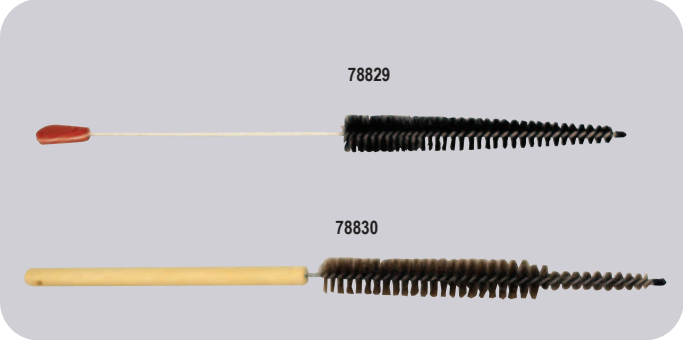
Tube Cleaning Brushes



MARS NO.	DESCRIPTION	MARS PACK
78818	3/8" x 3/4" OD refrig. 4-1 brush tool	6
78819	1/2" x 3/4" OD refrig. 4-1 brush tool	6
78820	5/8" x 7/8" OD refrig. 4-1 brush tool	12

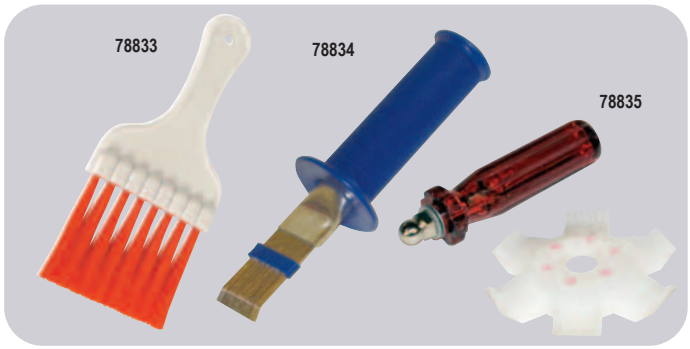
⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Refrigeration Coil Brush



MARS NO.	DESCRIPTION	MARS PACK
78828	5/8" to 1 5/8" fiber condenser cleaner 32"	12
78829	5/8" to 1 5/8" tapered condenser cleaner 29"	12
78830	3/4" to 1 5/8" tapered refrig. coil brush 28"	12

Fin And Coil Brushes

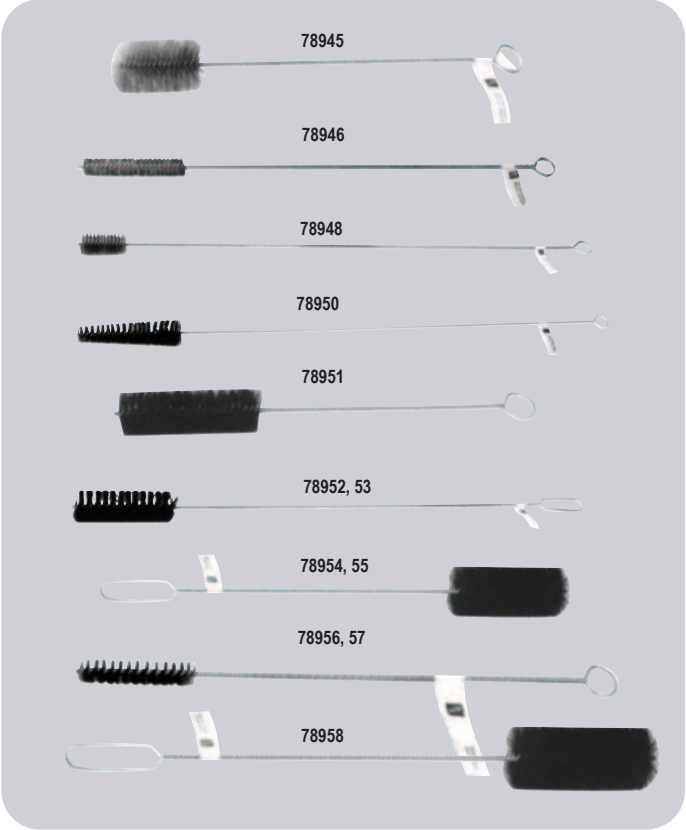


MARS NO.	DESCRIPTION	MARS PACK
78833	Fin and coil whiskbrush, 6 3/4"	12
78834	Fin and comb scraping tool, adjustable	1
78835	6-in-one fin comb (8, 9, 10, 12, 14, 15 fins per inch)	1

Acid And Flux Brushes

MARS NO.	DESCRIPTION	MARS PACK
78839	#1 acid brush 1/4" - 48 box	1
78840	#2 acid brush 3/8" - 48 box	1
78841	#1 acid brush 1/4" - 10 bag	10
78842	#2 acid brush 3/8" - 6 bag	10

Flue And Boiler Brushes



MARS NO.	DESCRIPTION	MARS PACK
78945	1-1/2" x 1-1/8", 30" OAL, Specialty Boiler Brushes - WEIL MCLAIN	6
78946	1/2" x 1", 27" OAL, Flat, Specialty Boiler Brushes - COLUMBIA	6
78947	2-1/4", 20" OAL, Tapered, Specialty Boiler Brushes - SLANT FIN	6
78948	1-1/2" x 1-1/8" x 36" OAL, HD, Gold Series Original, Specialty Boiler Brushes - WEIL MCLAIN	6
78949	1/2" - 1" Taper, 30" OAL, Horsehair, Specialty Boiler Brushes - TAPERED	6
78950	1-7/8" - 1-1/8" Taper, 42" OAL, Horsehair, Specialty Boiler Brushes - TAPERED	6
78951	1" Dia., 16" OAL, Horsehair Brushes for Boilers Burners, Radiators, Flues, Vents and Nozzles	6
78952	2" Dia., 27" OAL, Horsehair Brushes for Boilers Burners, Radiators, Flues, Vents and Nozzles	6
78953	3" Dia., 27" OAL, Tampico/Fiber Tube Brushes for Boilers Burners, Radiators, Flues, Vents and Nozzles	6
78954	2" Dia., 42" OAL, Horsehair Brushes for Boilers Burners, Radiators, Flues, Vents and Nozzles	6
78955	3" Dia., 42" OAL, Tampico/Fiber Tube Brushes for Boilers Burners, Radiators, Flues, Vents and Nozzles	6

These brushes have 3" brush lengths and 1/2" or 3/4" loop handles for easy hanging.

MARS NO.	DESCRIPTION	MARS PACK
78956	1/2" Dia., 18" OAL, Stainless Steel Fine-Wire Single Spiral Brushes for Small Boilers, Burners, Nozzles & Fans	12
78957	3/4" Dia., 24" OAL, Stainless Steel Fine-Wire Single Spiral Brushes for Small Boilers, Burners, Nozzles & Fans	12
78958	1-1/2" Dia., 42" OAL, Carbon Steel Fine-Wire Single Spiral Brushes for Small Boilers, Burners, Nozzles & Fans	6

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Applicator Brushes, Natural Bristle

MARS NO.	DESCRIPTION	MARS PACK
78902	1 1/2" economy paint brush-wood handle	36
78903	2" economy paint brush-wood handle	24
78904	2 1/2" economy paint brush-wood handle	12
78905	3" economy paint brush-wood handle	12

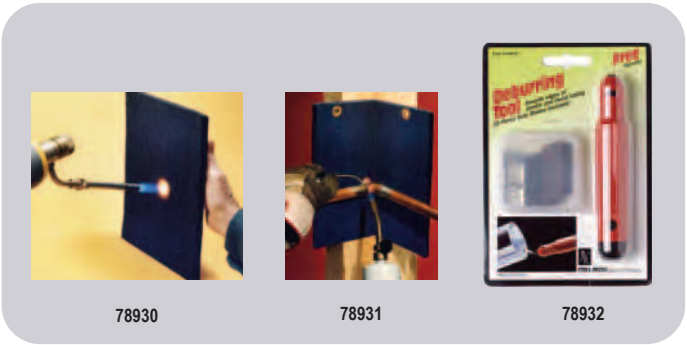
Utility And Appliance Brushes

MARS NO.	DESCRIPTION	MARS PACK
78910	Plastic handle stainless brush, 3 x 7 rows, 3 pk.	12
78911	Wood handle stainless brush, 2 x 9 rows, 3 pk.	12
78912	1 1/16" dia. parts cleaning brush	6
78913	Bent handle carbon scratch brush, 4 x 18 rows	12
78915	Shoe handle carbon scratch brush, 4 x 16 rows	12

Abrasive Cloth And Pads

MARS NO.	DESCRIPTION	MARS PACK
78920	1 1/2" x 5 yds. open coat white cloth	24
78921	1 1/2" x 10 yds. open coat white cloth	24
78922	1 1/2" x 25 yds. open coat white cloth	20
78923	1 1/2" x 5 yds. open nylon mesh cloth	24
78924	1 1/2" x 10 yds open nylon mesh cloth	24
78925	1 1/2" x 25 yds. open nylon mesh cloth	20
78926	4" x 6" med. nylon abrasive pad, maroon, 10 pk	1
78928	1 1/2" x 10 yds competitive abrasive cloth, Brown	1
78918	1 1/2" x 25 yds. competitive abrasive cloth, Brown	1

Accessories



MARS NO.	DESCRIPTION	MARS PACK
78930	Solder/braze heat shield, 9" x 12" x 1/2" temperatures exceeding 2500°F	10
78931	Solder heat shield, 9" x 12" temperatures up to 2500°F	10
78932	Heavy duty deburring tool, 3 blades	10
78933	Deburring tool replacement blades, 5 pack	10

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

PowerCrown Outward Clinch Tackers

Model PC4000-OC1 & PC4000-OC2 Features:

- Easy squeeze design
- Compact, lightweight
- Convenient bottom load
- Unique design turns staple legs outward
- For pipe wrap, duct board and corrugated

MARS NO.	DESCRIPTION	MFG. NO.	CASE QTY
73349	Outward Clinch Tacker	T6-80C2	12
73347	3/8" Staples / 5M Box	STCR5019 3/8"	20
73350	1/2" Staples / 4M Box	STCR5019 1/2"	20
73351	9/16" Staples / 4M Box	STCR5019 9/16"	20

PowerCrown Outward Clinch Tacker - Model PC3000-OC2

Model PC3000-OC2 Features:

- Professional quality
- Drives 1/2" light wire Bostitch PowerCrown staples
- Powerful direct drive
- Unique design turns staple legs outward
- Convenient bottom load
- For pipe wrap, duct board and corrugated

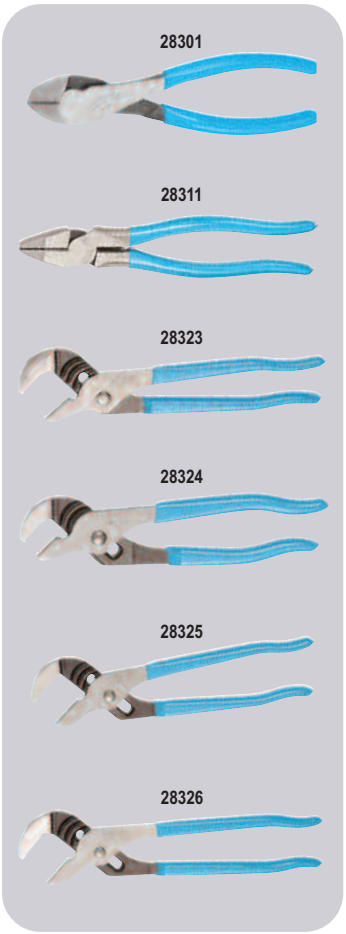
MARS NO.	DESCRIPTION	MFG. NO.	CASE QTY
73343	Outward Clinch Tacker	T6-60C2	12
73348	1/2" Staples / 5.8M Box	STCR2619 1/2"	20

Channellock Pliers

For over a century Channellock has been the leader in manufacturing professional quality tools for all trades. All tools are made in the U.S.A. The MARS line of Channellock tools are housed in attractive merchandiser hang type style packaging to generate impulse sales and increase your profits.

Channellock pliers are hand honed perfectly matched cutters which are heat treated to hold their edge. These pliers are precision made of fine polished, high carbon drop forged steel and features blue plastic comfort grips.

The popular Tongue and Groove Pliers provide right angle teeth that grip in all directions for maximum bite and minimum wear. The undercut tongue and groove design assures the strongest non-slip jaw action and the patented PermaLock® fastener provides safer and smoother working than the old-time bolt and nut.



MARS NO.	DESCRIPTION	MFG. NO.	CASE QTY
28301	7" cutting plier - lap joint diagonal	337	20
28311	9" high leverage linemans plier	369	20
28323	9 1/2" Tongue & Groove Plier 5 Adjustments - 1 1/2" capacity	420	20
28324	6 1/2" Tongue & Groove Plier 5 adjustments - 7/8" capacity	426	20
28325	10" Tongue & Groove Plier 7 adjustments - 2" capacity	430	20
28326	12" Tongue & Groove Plier 7 adjustments - 2 1/2" capacity	440	20

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Fuse Pullers

MARS #25915, medium fuse puller is molded of tough, high impact nylon for greater strength. Handles with no-slip gripping surface, protective finger stops and yellow color are provided for extra safety.

MARS NO.	DESCRIPTION	MFG. NO.	MARS PACK	CASE QTY.
25915	7-1/4" medium puller for 0-100A fuses	34-016	1	10

Terminal Strips, 600V, 30a, UL & CSA

- Heavy duty corrosion resistant screws
- Rugged polyester thermo-plastic base
- Accepts wire sizes from 10 - 22AWG
- Operating temperature rated from 130°C to -40°C
- Recommended torque: 16 in. - lb.
- UL Recognized, CSA Certified

MARS NO.	DESCRIPTION	MFG. NO.	MARS PACK	CASE QTY.
25952	3 circuit terminal strip	89-203	1	10
25953	4 circuit terminal strip	89-204	1	10
25954	6 circuit terminal strip	89-206	1	10
25955	8 circuit terminal strip	89-208	1	10
25956	10 circuit terminal strip	89-210	1	10
25957	12 circuit terminal strip	89-212	1	10

Tap-Pak® Fish Tape

IDEAL Tape-Pak® fish tape reels and winders provide maximum strength and flexibility for fishing long runs of conduit. The case is built of high impact plastic that never dents or rusts. Use as a handle for pulling on fish tape to eliminate the dangers of bare-handed pulling as well as handy tape storage system. High grade tempered steel tape is fully protected and locked in reel when not in use so tape cannot kink spring free. Excellent for snaking long runs of thermostat wire.

MARS NO.	DESCRIPTION	MFG. NO.	MARS PACK	CASE QTY.
25849	50' fish tape - 8 1/2" dia.	31-033	1	1

Safe-T-Grip® Fuse Pullers

IDEAL's Safe-T-Grip® Fuse Pullers provide maximum efficiency and convenience when removing or replacing cartridge fuses. Constructed of fully insulated, reinforced, high-dielectric engineering plastic. Notched handles for a no-slip safe grip. Clearly marked amperage ranges. Moisture resistant...will not warp. Bright yellow in color.

MARS NO.	DESCRIPTION	MFG. NO.	MARS PACK	CASE QTY.
25911	5" midget for fuses 9/32-1/2 dia.	34-001	1	1
25912	7 1/2" pocket for 0-100A fuses	34-002	1	10
25913	11 3/4" giant for 31-600A fuses	34-003	1	1

Wire Strippers And Crimpers

Preferred by professionals for over three decades and originated by IDEAL, these quality built T®-strippers feature built in wire cutters, looping holes, cushioned plastic grips and precision knife-type blades that give an accurate, easy strip every time.

The multi-crimp tool provides excellent leverage for sure, easy crimping and cutting...even in close quarters. Crimps bare or insulated terminals and splices on wire sizes 10-22 AWG

MARS NO.	DESCRIPTION	MFG. NO.	MARS PACK	CASE QTY.
25701	T®-5 Stripper 10-18 AWG solid	45-120	1	10
25702	T®-6 Stripper 16-26 AWG strand	45-121	1	10
25703	T®-8 Stripper 8-16 AWG strand	45-124	1	10
25711	Multi-crimp Tool	30-429	1	5

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Red Devil Putty Knives And Wall Scrapers

Red Devil offers professional high quality putty knives and wall scrapers. The black polypropylene comfort grip handles are shatterproof and solvent resistant for safety. Durable, high carbon, steel precision-ground blades extend through handles for maximum dependability. The blade has a mirror lacquered finish to prevent rust. Made in the U.S.A.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93402	1 1/4" wide stiff putty knife	12	72
93403	1 1/4" wide flexible putty knife	12	72
93404	3" wide flexible putty knife	6	72

MARS 6-in-1 Super Driver

The MARS Super driver features a comfort grip handle. The soft easy grip promotes excellent torque. This six-in-one driver includes 3/16" & 1/4" slotted bits, #1 & #2 phillips bits and 1/4" & 5/16" nutdriver. These screwdrivers are packaged twelve per counter display box.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY-
25984	MARS 6-in-1 super driver	12	12

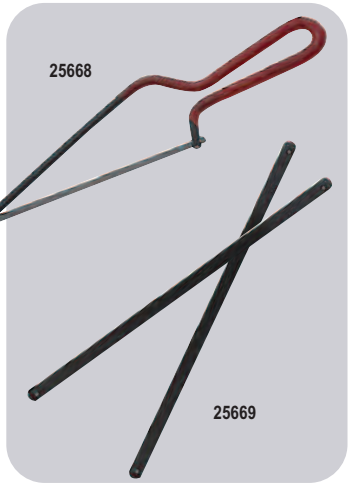
Magnetic Nut Setters

- Features a magnet with enhanced holding to help improve fastening

MARS NO.	DESCRIPTION	CASE QTY.
21620	1/4" mag nut setter 2 9/16"L (1/cd)	96
21621	5/16" mag nut setter 2 9/16"L (1/cd)	60
21627	1/4" mag nut setter 6"L (1/cd)	72
21628	5/16" mag nut setter 6"L (1/cd)	72

Superior Tool Mini Hacksaw And Blades

- Cuts wood, plaster, steel, brass, etc...
- Cushioned handle

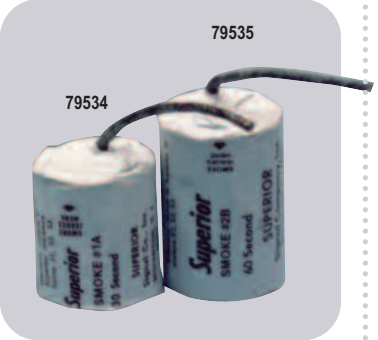


MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
25668	10" mini hacksaw,	1	6
25669	6" high carbon steel repl. blades (10/card)	1	6

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

MARS Smoke Candles

- Quickly and efficiently produce dense white smoke
- Classic smoke provides the best results, allowing you to locate difficult leaks at greater distance
- Disposable and easy to use



MARS NO.	DESCRIPTION	CASE QTY-
79534	4000 cu. ft. smoke, 30 seconds	12
79535	8000 cu. ft. smoke, 1 minute	12

Cotton/Jersey Gloves

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY-
79151	9 oz. brown jersey glove/individual pack	1	12
79153	Fleece lined cotton jersey/individual pack	1	12

Leather Gloves

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY-
79157	Leather palm safety cuff/individual pack	1	12
79166	Grain cowhide leather	1	12

PVC/Nitrile/Neoprene Gloves

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY-
79145	PVC long gauntlet cuff gloves	1	12

Black Mamba Gloves

- Made with a patented NITREX® polymer
- Super strong (6.0 mils) powder free nitrile glove
- 3 times the chemical and puncture resistance of a comparable thickness latex or vinyl glove
- Grip rite finish for secure handling.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79200	Black Nitrile Gloves – L 100/box	1	10
79138	Black Nitrile Gloves – XL 100/box	1	10

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Goop Hand Cleaners

For nearly 50 years, Goop has been he only name you need to know in hand cleaners. It's a name that wholesalers and contractors alike know and trust. Goop is non-toxic and biodegradable. Goop will remove almost anything...from almost everything. Use Goop to clean the dirtiest, greasiest hands. Use it for other tough cleaning jobs as well, such as removing stains from washable clothing, cleaning vinyl, plastic, canvas, floor tile - or whatever else gets dirty.

MARS NO.	DESCRIPTION	MARS PACK
93150	14 oz. can	12

Orange Goop Hand Cleaners

For customers who want a fresh orange scent in a tough, natural liquid hand cleaner, get the Orange Goop. There are no harsh solvents - just natural citrus. Available in regular or pumice formula. Biodegradable, too. Orange Goop...just another example of how we're giving today's contractors what they want.

MARS NO.	DESCRIPTION	MARS PACK
93157	14 oz. can	12
93160	16 oz. liquid squeeze bottle	12
93163	16 oz. liquid squeeze bottle w/ pumice	12

Scrubs in-a-Bucket™

Scrubs in-a-Bucket™ provide fast, easy and effective hand cleaning with portability. Can be used anywhere, anyplace, anytime on the toughest soils, greases, tar, graphite...even printers ink. Each dispensing canister contains 10 1/2" x 12 1/4" perforated high-strength absorbant cleaning towels, treated with a gentle-to-the-skin but effective heavy duty grease cutting and soil lifting formulation. Pumice performance, without the messy, gritty pumice! Leaves skin lotion-soft, with a natural citrus fragrance. Contains germ fighting Triclosan. No rinsing, no drying, no residue. Also ideal for cleaning tools, work in process and for spills.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93201	Scrubs in-a-Bucket™ (72 towels)	6	42
93203	Scrubs in-a-Bucket™ (30 towels)	6	72

MARS Maintenance Products

- Stops squeaks
- Removes and protects
- Loosens rusted parts
- Frees sticky mechanisms
- Smart straw helps to get into hard to reach areas
- Drives out moisture

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79036	WD-40 8 oz. spray smart straw	12	24
79037	WD-40 11 oz. spray smart straw	12	12

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Kimberly-Clark Disposable Wiper/Towels

Kimberly-Clark is durable for demanding jobs. Strong, even when wet. This 4-ply tissue wiper traps dirt and absorbs liquids quickly. Made with 100% recycled paper.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79105	WYPALL X60 Cloths, White, 126 pop up™ box, 9.1 in. x 16.8 in	1	10

MARS Shop Towels

MARS shop towel rags are 100% cotton material. This 15" x 15" red cloth towel is extra absorbent and ideal for cleaning up grease on tools or machinery. Long lasting and machine washable. Hemmed edges.

The MARS 100% cotton terry towel is an all purpose, white terry cloth towel that can be used for drying, polishing, dusting and waxing.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79025	White terry towel (12 pack)	1	12
79026	Red cloth shop towel (12 pack)	1	18
79027	Red cloth shop towel (50 pack)	1	6

32 oz. Spray Bottle

- Polypropylene sprayer
- Nitrile O-ring and seating cup
- 3 finger trigger for comfort

MARS NO.	DESCRIPTION	MARS PACK
79009	32 oz. Spray Bottle	12

Blue Huck Towels

- Excellent absorbency!
- 5 lb. box
- Lint free
- Prewashed
- Approx. 22" x 13"
- 30-35 towels in box

MARS NO.	DESCRIPTION	MARS PACK
79024	Blue Huck Towels	1

MARS Micro Fiber Cloth Towels

- Quick drying, super soft and non-abrasive
- Lint free
- Super absorbent
- Very economical
- Use wet or dry
- Machine washable
- Wash separately in cool water; dry low heat or air dry
- Size: 12" x 16"

MARS NO.	DESCRIPTION	MARS PACK
79196	Micro Fiber Cloths All Purpose, Assorted	12

⚠ WARNING:
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www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

HVAC RTV Silicone Sealant

HVAC RTV Silicone Sealant is a superior quality silicone which remains flexible from -40°F to 350°F. Never dries out. Has excellent adhesion to metals and can be used for virtually every HVAC need.

- Cures to 100% silicone rubber
- Resistant to sunlight and weather extremes
- Fast cure, high strength
- Meets the requirements of FDA Regulation No. 21 CFR 177.2600
- Meets the requirements of NSF Standard 51
- Listed by Underwriters Laboratories (UL Listed)

MARS NO.	DESCRIPTION			MARS PACK	CASE QTY.
93249	Silicone sealant	clear	10.1 oz.	12	12
93251	Silicone sealant	white	10.1 oz.	12	12
93252	Silicone sealant	gray	10.1 oz.	12	12
93253	Silicone sealant	clear	2.8 oz.	12	12
93254	Silicone sealant	white	2.8 oz.	12	12

Heat Resistant Silicone

HVAC/R RTV Hi-Temp Silicone Sealant Red is a superior quality silicone which was formulated to perform at temperatures ranging from -40°F to 500°F (-40°C to 260°C) for continuous operation and 550°F (288°C) for intermittent exposure. These features make HVAC/R RTV Hi-Temp Silicone Sealant Red is ideal for use around furnace vent pipes, restaurant hoods and heat exchangers.Used where critical bonding and sealing parts must perform at high temperatures.

- Cures to 100% silicone rubber
- Resists the effects of sunlight and weather extremes
- Fast cure, high strength

MARS NO.	DESCRIPTION			MARS PACK	CASE QTY.
93255	Hi-Temp. silicone	red	10.1 oz.	12	12
93247	Heat resistant silicone	red	2.8 oz.	12	12

12-1 Seam Sealer

Ruscoe's 12-1 seam sealer is recommended for sealing openings less than 1/8 inch. It can be used as an effective sealant against water, chemicals, air and dirt for sealing seams in gutters, downspouts, roof and chimney flashings, animal feeders and troughs, wood, concrete, ceramic, brick, metal, stone, masonry, marble and glass. Ruscoe's 12-1 seam sealer is recommended for sealing horizontal seams only.

- Aluminum fortified adhesive formula
- Excellent adhesive properties
- Excellent exterior durability and flexibility
- Can be applied at low temperatures
- Requires no primer
- Good adhesion to either porous or non-porous substrates—including glass
- Weatherproof—skins over to form a protective seal

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93504	12-1 Seam Sealer, 10.3 Fl Oz	1	24

Fire Stop Caulk

Red Devil

Red Devil Fire Stop Caulk effectively seals penetration openings against the spread of fire, smoke, toxic gases and water when applied properly.

- A Latex-based, high-solids Fire Stop compound
- No Shrinkage
- Withstands temperatures up to 2000° F and is up to 4 hour fire rated
- Sandable and Paintable
- Meets Fed. Specs ASTM E-814 (UL 1479) and ASTM E-84 (UL 723) and many UL Classifications

MARS NO.	DESCRIPTION	CASE QTY.
93293	Firestop Caulk, 10.5 FL Oz.- Red	12

Red Devil Celulon And Acrylic Caulk

Red Devil

Celulon™ plumbing and HVAC adhesive sealant is sometimes preferred over silicone. This easy to apply adhesive sealant adheres to all substances, is paintable, cleans up with water and has no offensive odor. Used to seal A/C ducts and lines. Application temp: 40 ° to 90°F. Service temp: -25° to 200˚F.

MARS NO.	DESCRIPTION			MARS PACK	CASE QTY.
93256	Celulon HVAC sealant	clear	10.1 oz.	12	12
93257	Celulon HVAC sealant	white	10.1 oz.	12	12

Red Devil Butyl Sealants

Red Devil

Red Devil's butyl sealant is a high performance rubber-like sealant that is ideal for tough outdoor jobs and below grade applications. (marine usage above waterline) It can be used wherever watertight seal is required. This paintable sealant provides excellent adhesion to most building surfaces including aluminum, stone, wood, brick, fiberglass, plastic, metal, etc. This sealant is ideal for use on window/door frames, aluminum gutters, chimney roofs, concrete foundations etc. Sealant remains rubbery and flexible from 0˚F to 225˚F after full cure.

MARS NO.	DESCRIPTION			MARS PACK	CASE QTY.
93290	Butyl sealant	white	10.1 oz.	12	12
93291	Butyl sealant	aluminum gray	10.1 oz.	12	12

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Red Devil Specialty Products

Red Devil's blacktop & roof repair is water resistant and stays flexible. This butyl rubber asphalt sealant adheres to cinder block, wood asphalt, concrete, brick and metal. Use on blacktop driveway cracks, chimney flashings, shingles & skylights. Apply at temperatures between 10˚F & 100˚F. Full cure in 72 hours

Red Devil speed demon latex caulk is a general purpose caulk that applies easily, dries quickly is paintable and won't stain or bleed.

MARS NO.	DESCRIPTION			MARS PACK	CASE QTY.
93244	Blacktop & roof repair	black	10.1 oz.	12	12
93265	Speed demon latex caulk	white	10.1 oz.	12	12

Insulating Foam Sealant

Insulating Foam Sealant is a polyurethane-based sealant that fills, air-seals and insulates small gaps (less than 1 inch). Easy to use with the straw applicator and expands to take the shape of cracks and voids to form a durable, airtight, water-resistant bond that eliminates unwanted airflow and helps reduce condensation.

- Exceptional adhesion to building materials
- Interior or exterior use
- Tack free in 6 minutes; Trims in 30 minutes
- Foam elasticity allows for movement/shifting within a structure
- Paintable, stainable and sandable
- Cream colored foam
- Cures rigid
- All-direction dispensing
- UL Classified

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93268	Foam sealant 12 oz.	12	12
93267	Foam sealant 24 oz.	12	12

MARS Duct Seal Putty

MARS Duct Sealing Putty is a non-hardening, non-toxic, gray putty compound used for countless applications in the refrigeration, heating and cooling, electrical trade, and plumbing fields. It can be shaped by hand to any form, and reused if necessary, for plugging openings through foundations, sealing around electrical boxes, refrigeration tube entry and so much more. Temperature range: 25°F to +120° F.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93520	1 lb. slug - boxed	1	10
93521	5 lb. slug - boxed	1	10
93522	2 lb. slug - boxed	1	10

Caulking Guns

For your convenience, MARS also offers easy to load and operate caulking guns. Guns hold the standard 10.3 oz. cartridges. MARS #93269 skeleton gun is ideal for large jobs. This heavy duty but light weight unit saves time in loading for the busy contractor. The professional skeleton gun, MARS #93278, offers three times more thrusting power with a smooth rod parallel frame. The professional ratchet type caulking gun, MARS #93279, is a professional conventional type gun recommended for sealants from light to heavy consistencies.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93269	Skeleton caulking gun	1	24
93278	Professional skeleton caulking gun	1	12
93270	Econo conventional caulking gun	1	24
93279	Professional ratchet caulking gun	1	24

Fireblock Foam Sealant

Fireblock Foam Sealant inhibits the spread of fire and smoke. The long-lasting, airtight, weather-resistant foam adheres to wood, metal, masonry, glass, and most common building materials. The code orange foam is easily identifiable for inspections and seals service penetrations between floors and electrical runs through wall studs.

- B2 Fire Rating
- Long-lasting, airtight, weather-resistant seal
- Adheres to wood, metal, masonry, glass, and most common building materials
- UL classified
- No CFCs or HCFCs

MARS NO.	DESCRIPTION			CASE QTY.
93195	ireblock Foam Sealant	Orange	12 FL Oz	12

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

MARS Cork Tape - 1/8"x 2"x 30' Roll

MARS Cork Tape is ozone resistant and specially designed for all types of climate. It insulates cold pipes for all kinds of air conditioners, freezers, and refrigerators. Cork Tape helps stop condensation problems. It is ideal for retarding heat gain in cold pipes and prevents heat loss in hot pipes. Can also be used for gasketing purposes. MARS Cork Tape sticks to all kinds of dry metals. This flexible tape seals tightly without drying. Temperature range: -20°F to 200°F / -29°C to 93°C.

Corktape is made from virgin cork specially imported from Portugal & Spain and has the following characteristics:

1. Compared to other cork tapes - our cork tape features rubber/asphalt & 100% virgin cork instead of asbestos / saw dust as used by other manufacturers.
2. The width is always 2" wide unlike other brands where size varies from 1-3/4" - 2".
3. Very good adhesion property. It sticks on the metal pipe tightly and does not come out in one piece if unwrapped.
4. A wide service temperature range -29° F - +200°F
5. Once installed the outer surface dries creating a shield against unwanted dust and dirt while the inner side remains wet. So even after a year or two, the user can remove the cork tape and reapply elsewhere without any change in the properties of the tape. Other brands such as Prestite/Virgin are mostly wet outside and inside making it vulnerable to dust and dirt which eventually deteriorates its insulation properties.

Physical properties:

Composition:
Polymer based material containing synthetic rubbers, asphalt and approximately 50% cork by volume. It has a grainy rubber-like consistency and contains no asbestos.

Solid Contents:
99.8%

Color:
Black

Thermal Conductivity:
0.60 BTU/hr /ft²/˚F/in at 75˚F

Moisture / Vapor Transmission:
0.02 perms.
(ASTM E-90 Procedure C)

Water Absorption:
0.01% by volume
(ASTM D-1056)

Ozone Resistance:
Good

Thickness To Prevent Pipe Condensation

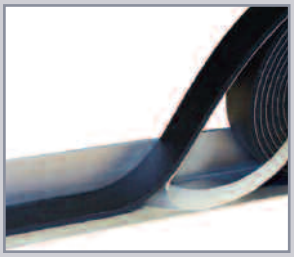
Ambient Temperature & %RH	Pipe Temperature 50˚F (10˚C)	32˚F (0˚C)
77˚F (25˚C) & 50% RH	Double Layer	Triple Layer
85˚F (29˚C) & 70% RH	Double Layer plus Double Layer	Triple Layer Plus Triple Layer

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93505	Cork Tape	1	10

MARS Foam Tape - 1/8"X 2"X 30' Roll

MARS Foam Tape is a self-adhering closed cell thermal insulation tape. This flexible tape is ideal for wrapping hot or cold pipings and fittings. The energy saving and very easy to use Foam Tape is excellent for preventing condensation problems. MARS Foam Tape is designed for retarding heat loss in hot pipings and preventing heat gain or frost formation on cold, chilled water pipings or refrigerant lines. Adheres firmly to all metals. Temperature range: -20°F to 200°F / -29°C to 93°C.

1. Good weather and UV resistant - reason being EPDM (Ethylene Propylene Diene Monomer) is the main compound in the manufacturing of Foamtape. In practice EPDM is also used in the manufacturing of glass window strips of cars, which lasts for more than 10 years outdoors without any replacement (inspite of being exposed to rain, heat & cold).
2. The specially coated acrylic adhesive provides extra adhering strength compared to other tapes. Once installed, the special adhesive will act as the bonding agent and won't let the tape delaminate.
3. Low thermal conductivity (0.26 BTU. in/sq. ft. hr. deg. F at 75°F) to prevent heat loss/heat gain and save energy.
4. An ozone friendly product manufactured under strict supervision of trained personnels with quality check at every production point.
5. Low halogen contents. Tests have proved that MARS Foam Tape (or FOAMTAPE excluding the adhesive) has chlorine and bromine content of 4.36% and 1.35% compared to NBR/PVC (Armstrong, Rubatex) based brand insulation which has 12.45% and 6.14% respectively.
6. Our vulcanization system uses negligible amount of Sulphur (chemical which corrodes copper tubings) and this special vulcanization process decomposes chemicals almost completely.



Physical properties:

Composition:
Closed cell, elastomeric thermal insulation.

Color:
Black

Density:
6±1 pounds per cubic feet.
(0.09-0.12 g/cm³)
(ASTM D-1667)

Thermal Conductivity:
0.26 BTU in./ft2 hr. °F at 75°F
(0.04 W/mK at 24°C)
(ASTM C-177)

Water Absorption:
Max 5% by weight
(ASTM D-1056)

Water Vapor Permeability:
0.15 Perm-inch (ASTM C-355)

Temperature Range:
-20°F (-29°C) to +200°F (+93°C)

Thickness To Prevent Pipe Condensation

Ambient Temperature & %RH	Pipe Temperature 50˚F (10˚C)	35˚F (0˚C)
80°F (27˚C) & 50% RH	Single Layer	50% Overlap
85°F (30˚C) & 70% RH	50% Overlap plus Single Layer	50% Overlap Plus 50% Overlap

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93506	Foam Tape	1	12

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Mortite Pipe Wraps

Mortite's no-drip® tape stops cold water pipe sweating permanently. Won't dry out, crack or shrink. This self-adhering tape insulates hot water pipes up to 160°F. No-drip® tape molds around valves, joints, tees and irregular fittings. The 2"W x 30'L roll covers 30 lineal feet of 1/2" O.D. pipe. Provides clean, neat appearance.

93516

MARS NO.	DESCRIPTION	CASE QTY.
93516	No-drip® tape - 2" x 30' roll	10

Mortite Weather Stripping Products

MARS #93507, air conditioner window seal, seals the gap between window sill and air conditioner. This permanent, all season foam strip prevents heat loss in winter, cooling loss in summer. Attractively packaged i n a colorful poly bag for pegboard merchandising.

93507

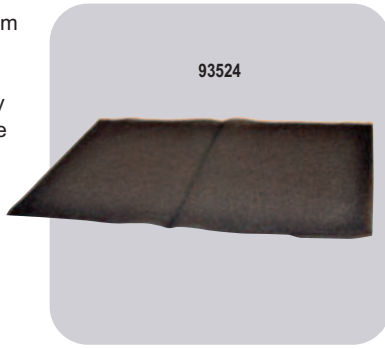
Mortite's closed-cell foam tape, MARS #93509 seals better in hot and cold climates. This durable vinyl tape stands up to extreme cold temperatures and will not freeze. Closed-cell means the cells prevent air from passing through the weatherstrip tape and won't absorb moisture. Self adhering, seals out drafts, dust and insects better than open-cell tape. MARS #93509 cushions and eliminates noisy vibrations around storm windows, A/C's and small appliances.

MARS NO.	DESCRIPTION	CASE QTY.
93507	Foam strip - 1/4" x 1-1/4" x 42"L	12

Mortite A/C Foam Filter

Mortite's air conditioner filter helps to keep the room free from outside dust and dirt while increasing efficiency. This polyurethane foam filter is easy to install. And the 15" x 24" size can be cut to fit all window and through-wall air conditioners. Easy to clean - requires only regular detergent and water. Reusable.

93524



MARS NO.	DESCRIPTION	CASE QTY.
93524	Foam filter - 15" x 24"	24

Cloth Duct Tapes

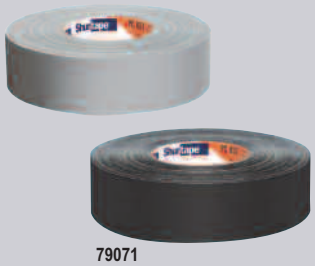
Heavy duty cloth duct tape for use in high performance applications

- Excellent holding power
- Withstands extreme temperature fluctuations
- Waterproof backing
- Applicable Standards: FSI 15/SDI 40; UL 723

Premium grade cloth duct tape combines high tensile strength, excellent holding power and conformability to deliver a tape solution that can withstand the rigors of the job.

- Excellent holding power
- High tensile strength
- Conformable
- Waterproof backing
- Applicable Standards: FSI 10/SDI 10; UL 723

79070



79071

Performance grade cloth duct tape for use in the HVAC industry offering extremely aggressive adhesion, good conformability to a variety of surfaces, and performs well in warm or cold climates.

- Cold temperature adhesion
- Excellent holding power with good conformability
- Waterproof backing
- Applicable Standards: FSI 0/SDI 0; UL 723

All-purpose grade cloth duct tape conforms well to a variety of surfaces, tears easily by hand and will not twist or curl during application for ease of use.

MARS NO.	DESCRIPTION	SIZE	MARS PACK
79070	Heavy Duty cloth tape, silver	2" x 60 yds.	24
79071	Heavy Duty cloth Tape, black	2" x 60 yds.	24
79072	Premium grade, silver	2" x 60 yds.	24
79074	Performance grade, silver	2" x 60 yds.	24
79075	Performance grade, black	2" x 60 yds.	24
79077	Performance grade, silver	2" x 60 yds.	24
79088	All Purpose, black	2" x 60 yds.	24

MARS Foil Duct Tapes

Mars #79081 and 79082 are dead-soft aluminum foils with aggressive adhesive properties.

UL 723 tested Foil/Scrim/Kraft (FSK) tape for sealing seams in scrim-reinforced duct insulation. Ideal for applications that demand a maximum-strength tape, AF 984CT is linered, offers an acrylic adhesive and can be used in temperatures ranging from -20 F to 260 F.

79083

- Superior stability during extreme fluctuations in temperatures
- Wrinkle-free backing resists tearing
- Resists water vapor and smoke transmission
- Applicable Standards: FSI 5/SDI 0; UL 723

MARS NO.	DESCRIPTION	SIZE	MARS PACK
79081	Aluminum foil tape	2" x 50 yds.	24
79082	Aluminum foil tape	3" x 50 yds.	16
79083	Foil scrim kraft tape	2" x 50 yds.	24
79084	Foil scrim kraft tape	3" x 50 yds.	16

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

U.L. Listed Tapes

UL 181A-P/B-FX Listed aluminum foil HVAC tape for joining and sealing joints. A tape that "does it all," AF 100 is engineered to form airtight bonds on joints and seams in application temperatures ranging from -20 F to 260 F and in humid conditions.

- Printed aluminum foil tape
- Excellent adhesion to rigid fiberglass duct board and flexible air duct
- Flexible and easy to use to create airtight bonds
- Superior stability during extreme fluctuations in temperature
- Applicable Standards: Tested in accordance with UL 723; FSI 25/SDI 50; UL 181A-P/B-FX Listed; US Green Building Council – LEED® Point contributor product

79087

MARS NO.	DESCRIPTION	SIZE	MARS PACK
79087	U.L. 181 foil tape	2 1/2" x 60 yds.	16

Spray Adhesive

MARS #79094 is especially designed to bond polyethylene to itself, concrete block, wood and other hard to bind surfaces. Does not contain methylene chloride. Very quick, aggressive tack. Excellent for HVAC insulation applications.

79094

MARS NO.	DESCRIPTION	MARS PACK
79094	Spray adhesive, 17 fl. oz.	12

Liquid Electrical Tape

- Forms an airtight, protective, waterproof, UV resistant, dielectric coating
- Will not peel or unravel
- Patented, UL-tested, fast drying formula

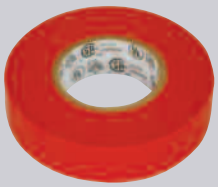
86135

MARS NO.	DESCRIPTION	MARS PACK
86135	Liquid electrical tape (black), 4oz.	1

PVC Electrical Tape

PVC electrical tape provides excellent adhesion to aluminum and copper conductors and plastic and rubber insulations where quick identification is most needed. Due to its primary use in low temperatures, it can be stretched to conform to any shape without breaking. UL listed and CSA approved. PVC electrical tape is designed for general splicing and as a protective outer jacket. Flame retardant and cold and weather resistant. UL listed and CSA approved.

86186



86184

-MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
86186	3/4" x 66' - red	1	100
86187	3/4" x 66' - white	1	100
86188	3/4" x 66' - green	1	100
86189	3/4" x 66' - blue	1	100
86184	3/4" x 66' - black	1	100
86133*	3/4" x 60' - black	10	100

* Non-UL

Low Density Thread Seal Tape

LA-CO

- Thickness 3 mils.
- Standard grade, low density
- Provides a highly resistant seal on pipe threads for all types of service
- Suitable for use with solvents, chemicals, oxygen, and on food lines
- Non-toxic
- Permits easy disassembly, even after years of service
- Meets Mil. Spec. T-27730A
- Sealing temperature range: -450°F to 550°F (-268°C to 288°C)
- Working pressures: 2,000 PSI (136 BAR)
- Sold in case quantities only

95409

MARS NO.	DESCRIPTION	CASE QTY.
95409	1/2" x 260"	144
95410	1/2" x 520"	144
95412	3/4" x 520"	144

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

High Density Slick-Tite® Thread Seal Tape

LA-CO

- Thickness 3 mils.
- High density
- Provides a highly resistant seal on pipe threads for all types of service
- Made in USA
- Suitable for use with solvents, chemicals, oxygen, and on food lines
- Non-toxic
- Permits easy disassembly, even after many years
- Meets Mil. Spec. T-27730A
- Sealing temperature range: -450°F to 5500F (-268°C to 288°C)
- Working pressures: 2,000 PSI (136 BAR)

MARS NO.	DESCRIPTION	MARS PACK
95527	1/2" x 300"	12
95528	1/2" x 600"	12
95530	3/4" x 300"	12

MARS Standard Grease Fitting

Standard grease fittings are precision engineered to withstand rugged use in most automotive and industrial applications. The feature steel fittings with corrosion resistant plated finish and built-in ball check.

The small grease fitting assortments contain the three most popular 1/4"-28 threaded fittings used when making a "change-over" from plugs to fittings. Ideal for the contractor.

93383 Standard fitting assortment includes:

Qty.	Description	Thread
4	short-straight	1/4"-28
2	short 45°	1/4"-28
2	short 90°	1/4"-28

MARS NO.	DESCRIPTION		MARS PACK	CASE QTY.
93376	1/8" npt, short-straight fitting, 10/card	11-151	1	10
93378	1/8" npt, short 45° fitting, 5/card	11-159	1	10
93383	8 assorted grease fitting kit	11-955	1	10

MARS PTFE Thread Sealant Tapes

- PTFE Standard grade white thread seal
- 3000 PSI rating
- Temperature range: -450°F to +500°F Combustion: does not support combustion

MARS No. 78944 - yellow gas PTFE thread sealing tape is designed specifically for natural gas, propane and butane lines. Just 3 wraps for leak-proof joints.

MARS NO.	DESCRIPTION	MARS PACK
78940	1/2" x 260" - STD grade white PTFE thread sealant tape	12
78941	1/2" x 520" - STD grade white PTFE thread sealant tape	12
78942	1/2" x 260" - hi-density red PTFE thread sealant tape	10
78944	1/2" x 260" - hi-density yellow (UL) gas tape	10

Hercules Megatape

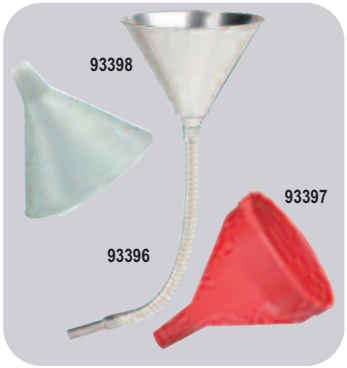
- Provides a clean, positive seal on threaded connections
- More PTFE to seal better with fewer wraps
- For threads up to 1-1/2 in. diameter
- High density 3.5 mil thickness
- Use on - Plastic, brass, copper, aluminum, stainless steel, galvanized steel or black iron piping
- Seals on a huge variety of threaded systems
- Perfect choice for Plumbing Professionals
- NOT FOR USE WITH LINES CARRYING OXYGEN

MARS NO.	DESCRIPTION	MARS PACK
73149	1/2in x 1000, Gray	1

MARS Funnels

MARS No. 93396 Plastic Utility funnel is durable, oil and gas resistant. Safe for all petroleum products, complete with handy storage hanging tab.16 oz capacity, 5-1/2" H x 6" Dia., 3/4" OD tip.

MARS No. 93397 Polyethylene All Purpose Utility funnel is rugged, corrosion-resistant with fine mesh straining screen and handy hanging tab. 2 quart capacity, 9" total height, 7" diameter, 1" OD tip.



MARS No. 93398 Utility Funnel with Screen is the most popular all-purpose fluid dispenser. Galvanized steel. Includes screen and 12" flexible extension with tapered tip. Tip 4/16" OD / 9/16" ID.

MARS NO.	DESCRIPTION		MARS PACK	CASE QTY.
93396	5 1/2" utility funnel, 1 pint	75-062	1	20
93397	7" heavy duty funnel, 2 quart	75-070	1	10
93398	5 3/4" utility funnel w/screen includes 13" flex extension	75-007	1	10

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

MARS Grease Guns

Plews grease guns allow one hand operation and are perfect for hard to reach jobs. Precision pump develops up to 7000 p.s.i. Easy three-way loading by standard 14 oz. cartridge or suction filled. There is a head cap port for adding air bleeder or bulk loader fitting. Available in two different styles. Both feature tough all-steel construction with rugged baked enamel finish and tough zinc plated handles. New non-slip knurl on barrel allows for positive grip.

The mini grease gun kit is a compact “tool box” size grease gun that goes where other grease guns can’t.

Features include:

- Zinc die cast head cap
- Pistol grip for easy one hand operation combined with heavy duty performance
- Uses standard 3 oz. cartridge
- Kit includes gun with rigid pipe and coupler and one 3 oz. multi purpose grease cartridge

MARS #93353 is a general purpose grease gun with professional features. This grease gun offers 2 way loading: 14 oz. cartridge or suction. The lever action gun includes 5-3/8" pipe and coupler. Develops up to 6,000 PSI. Durable baked enamel finish.

MARS #93355, professional grease gun features variable/short stroke for easy use in confined areas. This lever action gun provides an air bleeder and bulk loader fitting for 3-way loading (14 oz. cartridge, bulk or suction). Grease gun includes 5-3/8" pipe and coupler. Plated lever with comfortable oversized grip is also featured. Develops up to 10,000 PSI.

MARS NO.	DESCRIPTION		MARS PACK	CASE QTY.
93350	Pistol grease gun, 12" hose	30-416	1	5
93351	Pistol grease gun, with pipe ass’y	30-300	1	5
93352	Mini grease gun kit, 3 oz.	30-132	1	10
93353	Lever action grease gun, 14 oz.	30-200	1	10
93355	Professional grease gun, 14 oz.	30-475	1	10

MARS Multi Purpose Grease

Plews multi-purpose lithium grease is a long lasting, hard working formula which delivers high performance in a wide range of heavy duty applications. NLG1 #1-1/2, drop point 350˚ F.

MARS NO.	DESCRIPTION		MARS PACK	CASE QTY.
93361	Multi purpose cartridge, 14 oz.	11-310	1	40
93360	Multi purpose cartridge, 3 oz./3 pk	11-312	1	12

MARS Lubrication Accessories

Standard Coupler

Standard jaw-type coupler features spring-loaded ball check valve. Fits all 1/8" NPT threads. For hand operated lube equipment only. Recommended working pressure is 4,500 PSI. Length 1-7/16", width 5/8".

Heavy Duty Coupler

For hand operated grease guns only. Recommended working pressure is 6,000 PSI. All steel construction. Fits all 1/8" NPT threads. Four jaws. Length 1-1/2", width 3/4".

Standard Duty Flexible Grease Hoses

For use on hand operated grease guns only. Steel 1/8" NPT male fittings on each end. Recommended working pressure is 5,000 PSI.

MARS NO.	DESCRIPTION		MARS PACK	CASE QTY.
93365	Standard grease gun coupler	05-031	1	10
93366	Heavy duty grease gun coupler	05-035	1	10
93367	Heavy duty grease hose, 12"	10-212	1	10
93369	Heavy duty grease hose, 18"	10-219	1	10

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Epoxy-Stik™

- Cures rock hard with no shrinkage
- Safe on portable water systems
- Withstands temperatures up to 250° F
- Hardens in 5-10 minutes, full cure in 24 hours
- Can be applied under water
- After 1 hour can be drilled, tapped, filed, sawed, sanded and painted
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95522*	4 oz. stick	24	24

* Packaged in one dozen per display box

Sharpie® #15 Fiber Tip Marker (Dura-Ink #15)

- Fine tip
- Ideal for fine line marking
- Extra tough tip, won't spread
- Smear resistant, water resistant
- Marks on metal, wood, cardboard, paper, plastic, glass, etc.
- For identification of parts, layout work, marking cartons and crates
- Meets U.S. Fed. Spec. TT-1-544

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95488	Black	12	72

Valve Action™ Paintmarker

- Marking range: -50° to 150°F / -46° to 66° C
- Marks w/ real paint, dries in minutes
- Valve action nib releases paint as needed for continuous marking
- Marks on all surfaces including: metal, wood, glass, plastic, rubber, cardboard and paper
- Lead - free, low halogens
- The fiber nib is replaceable to assure complete use of each marker
- Durable metal barrel
- Meets California VOC regulations

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95480	Black	12	48
95481	Red	12	48
95485	Yellow	12	48

Dura-Ink® Fiber Tip Markers

- Larger ink supply, heavy duty metal barrel
- Water - resistant, fade - resistant
- Chisel tip makes fine lines or broad marks
- Meets Fed. Spec. TT-1- 544
- Use on cardboard, wood, metal, paper, ceramics, glass, etc.
- For identification of equipment, marking shipping cartons, sign making, etc.
- #20 is medium size, #25 is king size

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95500	Dura -Ink® #25 - Black	12	48
95516	Markal Dura-Ink® #25 Black Marker (2-pk)	1	24
95519	Dura-Ink® #15 - Black	1	36

Pipetite-Stik®

- Efficient way to seal pipe
- Pressure: 350 PSI (24 BAR) for gas 2,000 PSI (136 BAR) for liquid
- Safe, non-toxic, non-drying
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95433	Pipertite Stick 1-1/4 oz.	12	144

E-Z Break® Anti-Seize Compound

- Copper-based anti-seize and lubricating compound
- Resists rust and corrosion
- Recommended for coating nuts, bolts, valves, flanges, splines, for easy break out after years of service
- Meets Mil. Spec. Mil-A-907E
- Authorized by USDA for use in federally inspected meat and poultry plants
- Temperature: to 1800° F (982° C)
- Made in USA

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95472	10 oz. w/brushcap	24	24

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Toll Free (800) 445-4155 • Fax (631) 348-7160
www.marsdelivers.com

Permatex® Adhesives & Sealants

Permatex® PermaPoxy™ 5 Minute General Purpose Epoxy and 30 Minute High Strength General Purpose Epoxy

- Versatile easy to use, clear appearance, 2 part adhesive and filler system. No need to weld or braze
- Fills gaps and will not shrink
- Temperature range -60°F to 180°F (-51°C to 82°C).
- 5 min. general purpose epoxy - permanent strength up to 3400 PSI
- 30 min high strength - permanent strength up to 3500 PSI

Permatex® Super Glue. This formulation was specially designed for a faster, long-lasting bond. It is easily applied and works on non-porous materials including metal, plastics, rubber, vinyl, paper, wood, textiles, and cork gaskets. Permanent transparent bond fills gaps to .004".

95555 95556

95557 95558

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
95555	5 Min Epoxy, .84 fl oz	12	12
95556	30 Min Epoxy, .84 fl oz dual syringe	12	12
95557	Super Glue Gel tube, 2 grams	12	12
95558	Super Glue tube, 2 grams	12	12

Permatex® High Performance Thread Sealant

Permatex® Thread Sealants seal and secure metal pipes and fittings by filling the space between threaded metal parts. Cures rapidly to with stand up to 10,000 PSI. By filling the space between threaded metal parts, Thread Sealants cure to a pliable seal to prevent leakage caused by vibration loosening, tape shredding, solvent evaporation, damaged threads, and temperature cycling. Designed for low and high pressure applications, thread Sealants seal instantly for on-line low pressure testing. When fully cured, they seal to the burst strength of most piping systems. Temperature Range:-65°to 300°F

95559

MARS NO.	DESCRIPTION	MARS PACK
95559	High Strength Thread Sealant, white	6

Permatex® Medium Strength Threadlocker BLUE

All-purpose, medium strength threadlocker. Ideal for all nut and bolt applications 1/4" to 3/4" (6mm to 20mm). Eliminates need for stocking expensive lock nuts and lock washers. Locks and seals while preventing parts loosening due to vibration. Protects threads from corrosion. Removable with hand tools for easy disassembly. Conforms to ASTM D 5363 AN0321 (Mil-S-46163A, Type II, Grade N). Threadlockers remain the most reliable way to lock and seal threaded fasteners of all shapes and sizes, before or after assembly.

95560

MARS NO.	DESCRIPTION	MARS PACK
95560	Med Strength Threadlocker Blue, 6 ml tube, carded	12

Permatex® Form-A-Gasket® No. 2 Sealant

Slow-drying, non-hardening sealant designed for sealing cut gaskets and stamped parts. Allows for easy disassembly if required. Temperature range -65°F to 400°F (-54°C to 204°C); resists common shop fluids and fuels. Use where sealing is more important than adhesion.

Suggested Applications: Valve cover gaskets, oil pan gaskets

95563

95564

MARS NO.	DESCRIPTION	MARS PACK
95563	Form-A-Gasket®, 3 oz., tube, carded	12
95564	Form-A-Gasket®, 11 oz., tube, carded	12

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Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Permatex® Sensor-Safe Blue RTV Silicone Gasket Maker

Permatex Blue now with low odor formula.Will not foul oxygen sensors. Replaces almost any cut gasket. Makes reliable "formed-in-place" gaskets that resist cracking, shrinking and migrating. Coats pre-cut gaskets to increase reliability. Temperature range -65°F to 500°F (-54°C to 260°C) intermittent; resists auto and shop fluids.

95565

MARS NO.	DESCRIPTION	MARS PACK
95565	Blue RTV Silicone Gasket Maker, 3 oz. tube, carded	12

Permatex® Fast Orange® Fine Pumice Lotion Hand Cleaner

The #1 selling, biodegradable, waterless, petroleum solvent-free hand cleaner that contains no harsh chemicals, petroleum solvents or ammonia that can sting cuts or abrasions. Pure, fresh-smelling natural citrus power does the cleaning. Fortified with aloe, lanolin, glycerin, and other skin conditioners to soothe raw, rough hands. Fine Pumice deep cleans the toughest dirt. Works great on laundry stains (smooth lotion only), scuff marks, tile floors, pet odors and many other household cleaning needs.

Readily Biodegradable according to OECD Method 301E

95561

95562

MARS NO.	DESCRIPTION	MARS PACK
95561	Fast Orange Fine Pumice Lotion Hand Cleaner, 15 Fl. oz., squeeze bottle	12
95562	Fast Orange Fine Pumice Lotion Hand Cleaner, Low Profile 1 gallon bottle w/pump	4

CRC Lubricants

CRC products incorporate the SDS(L)™, a removable safety data sheet printed on the reverse side of the label. With this new labeling system, an SDS is always where you need it the most, right on the product you are using!

CRC 3-36 is a multi purpose lubricant and penetrant that forms a clear film that lubricates and stops corrosion. Its high affinity for metal allows it to penetrate and displace moisture leaving a long lasting rust preventing film. Available in aerosol with a nonflammable CO2 propellant and 360° valve.

CRC Screwloose® Penetrating Oil is a no compromise penetrant that attacks rust and corrosion, penetrating through oxides and soil to free corroded fasteners and mechanical components.

CRC Power Lube® is a unique new lubricant that incorporates a sophisticated additives package with PTFE to provide long lasting protection against friction and wear. It is able to work longer and better than other lubricants under the extremes of pressure and the environment. Unlike most lubricants with PTFE, it contains no chlorinated solvents.

93212 93214

CRC White Lithium grease is a high purity, high quality grade 2 white lithium based grease for superior lubrication. It is truly white, smooth and buttery in consistency for optimum surface coverage. It has both rust and oxidation inhibitors to provide durable lubrication and protection in any application.

MARS NO.	DESCRIPTION	MARS PACK
93208	3-36 Multi Purpose Lubricant, 11 oz.	12
93211	Screwloose®Penetrating Oil, 11 oz.	12
93212	Power Lube® High performance lubricant w/PTFE, 11	12
93214	White Lithium Grease, 10 oz.	12

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

CRC Specialty Products

The Wasp and Hornet Killer Plus™ is a fast acting, high strength insecticide that kills wasps, hornets, black widow spiders, fire ants and scorpions. Will not damage plastic connectors and other insulating materials. Provides a dense accurate spray that will reach over 20 feet. Excellent for the A/C contractor.

HydroForce™ Glass Cleaner Professional Strength is formulated to clean streak-free – the first time and every time. The ammonia-fortified formula quickly cleans the toughest dirt, dust, fingerprint and haze deposits without leaving unsightly streaks due to residue. HydroForce™ is versatile and safe to use on all glass surfaces. The foaming, ready-to-use formula allows for greater coverage and less run-off when cleaning vertical surfaces. HydroForce™ is biodegradable, non-corrosive, non-flammable and non-abrasive. Let us prove it to you.

MARS NO.	DESCRIPTION	MARS PACK
93226	Wasp and Hornet Killer Plus™, 14 oz.	12
93227	HydroForce Glass Cleaner, 18 oz.	12

CRC Cleaners/Degreasers

CRC Heavy Duty Degreaser is a chlorinated solvent based cleaner/degreaser that is chemically stable and extremely effective in most heavy duty applications. It has no fire or flash point, evaporates quickly with no residue and is non-conductive. New formula contains no ozone depleting compounds. Effectively removes grease, tar, oil, adhesives, etc. to increase operating efficiency.

CRC Industrial Contact Cleaner is designed to quickly and effectively clean sensitive electrical and electronic components. It has no flash point and evaporates quickly, leaving no residue. Contains no CFC's or VOC's

CRC QD Contact Cleaner is an alcohol based precision cleaner that is **100% free of CFC's**. For use on non-energized equipment, it evaporates rapidly and is harmless to most plastics. For use on electrical and electronic components where precision cleaning is necessary.

The CRC Contact Cleaner 2000™ is a revolutionary precision cleaning solvent designed to meet today's environmental challenges. This high purity solvent is a new generation HCFC and does not exhibit the same ozone depleting properties as conventional CFC solvents. It evaporates rapidly, has no flash point and leaves no residue (may affect some plastics).

CRC Gasket Remover is a solvent based high strength cleaner that effectively loosens and helps remove fiber gaskets, adhesives and sealants. It helps protect equipment surfaces by eliminating damage caused by scraping. Also removes paint and graffiti.

MARS NO.	DESCRIPTION	MARS PACK
93215	Heavy Duty Degreaser, 19 oz.	12
93217	Industrial Contact Cleaner, 14 oz.	12
93218	QD Contact Cleaner, 11 oz.	12
93219	Contact Cleaner 2000™, 14 oz.	12
93222	Gasket Remover, 12 oz.	12

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

CRC Food Grade Silicone

CRC Food Grade Silicone forms a colorless, tasteless, non-toxic and non-staining film that is authorized by the USDA for use in federally inspected meat and poultry plants. Its silicone lubrication film meets FDA specifications for incidental food contact.

MARS NO.	DESCRIPTION	MARS PACK
93210	Food Grade Silicone, 10 oz.	12

CRC RTV Silicone

CRC RTV Silicone Adhesive/Sealants are the perfect way to seal, bond and protect. With the press of the nozzle, a precise bead of high purity silicone is easily applied. No lumps, gaps, bubbles or waste. The package keeps the silicone fresh with the product in the nozzle forming a self sealing plug. Convenient and easy to use.

MARS NO.	DESCRIPTION	MARS PACK
93236	8 oz.clear	12

CRC Corrosion Inhibitors

CRC Zinc-It® Instant Cold Galvanize is a high performance 95% zinc-rich coating that restores hot dipped galvanized properties to ferrous metals. Its sacrificial coating helps fight rust and corrosion creepage with a durable, flexible film.

CRC Belt Dressing extends the life of drive belts by improving traction and allowing runs under

MARS NO.	DESCRIPTION	MARS PACK
93223	Zinc-It®, 13 oz.	12
93224	Belt Dressing, 10 oz.	12

Spray-X Foaming Glass Cleaner

"Safe on Finished or Non-Porous Surface's"

- The Most Versatile Glass Cleaner Available
- Sprays in Any Position
- Dissolves Dirt, Grease, Grit and Grime
- Heavy-Duty Foam Clings to Vertical Surfaces
- Guaranteed to Leave No Film - "Streak Free"
- Industrial Strength
- Pleasant Scent
- Premium Formula

AMAZING FEATURES FOUND NO WHERE ELSE!

MARS NO.	DESCRIPTION	CASE QTY
93298	SPRAY-X Glass Cleaner, 19 oz.	12

Industrial All Purpose Spray Enamel

Krylon TOUGH COAT® acrylic alkyd enamels feature a high-solids formula that ensures maximum coverage and performance. Tough Coat delivers the ultimate in protection, durability, high gloss, color retention and applies with a smooth even coverage. Fast-drying to the touch in 15 minutes. Ideal for light to heavy duty painting projects both indoors & outdoors.

MARS NO.	DESCRIPTION	REFRIG. ID #	CASE QTY.
78976	Machinery light gray	R-23	6
78987	Machinery dark gray	R-123	6
78981	OSHA white (gloss)	R-12, R-406A	6
78982	White (flat)		6
78983	OSHA black (gloss)		6
78984	Black (flat)		6
78985	Aluminum		6

⚠ WARNING:
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www.P65Warnings.ca.gov

Pipeseal

Pipeseal is a unique multi-component epoxy designed to quickly and permanently patch, seal and repair cracks, holes and leaks in all types of pipe.

Seals Holes in Pipe to Full Pressure in Under Five Minutes!

- Works on all types of pipes including copper, steel, lead, cast iron and aluminum.
- Heat activated - Hardens fully in less than 1 minute.
- Withstands pressures up to 1200 PSI.
- No wrap/plug required.
- Suitable for refrigerant lines.
- Extreme chemical resistance
- 100% solids - No VOCs
- Permanently seals holes of up to 1/4 in. in diameter.

INSTRUCTIONS:

1. Prepare Surface around pipe hole/crack with sand paper or file.
2. Remove clip and cut-off the end with the clear material and apply entire content to mixing surface; ensure mixing surface is not porous.
3. Thoroughly mix entire contents.
4. Apply to pipe with a wooden stick or trowel.
5. Cover a 2-inch-wide area around pipe hole/crack.
6. Apply heat with a heat gun/hair dryer (approx. 140º) until Pipeseal cures and hardens (usually within 1minute).

93629

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
93629	Pipeseal	1	12

Chapin Sprayers & Accessories

MARS #79067, 2 gallon (1.5 gallon usable) polyethylene sprayer is a high density sprayer that resists breaking, leaking and chemical corrosion. This sprayer has a polymer shut off with lock on feature and a polymer nozzle that adjusts from fine spray to 30' stream, with a poly/brass extension that rotates 360°. Reinforced 36" hose resists crimping, cracking and leaking.

The Chapin acid sprayer is the ideal sprayer for cleaning and degreasing air conditioning coils, engines and many other uses. This 2 gallon (1.5 gallon usable) heavy-duty polyethylene tank features a new built-in relief valve/pressure gauge for added safety and polymer shut offs with lock off features to prevent accidental spraying. A 12" extension tube with adjustable poly cone nozzle ensures for better control when spraying chemically active liquids. Sprays coarse stream to fine mist. 42" hose included

MARS #79069, hand held pressure sprayer is a 48 oz. multi purpose sprayer for small areas. Heavy duty, chemical resistant poly tank features adjustable nozzle control for fine mist or straight stream spraying.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79067	2 gallon polyethylene sprayer	1	1
79068	2 gallon acid sprayer	1	1
79069	48 oz. hand held sprayer	1	1

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Accessories

Swan Garden Hoses

MARS #79540, premium rubber hose, provide superior flexibility and pressure capacity. Maximum kink resistance and burst strength make this hose very durable. Handles hot water up to 160°F. Seal-tite™ washerless leakproof coupling.

The professional hot water hose is designed for a wide range of applications requiring hot water use up to 200°F. The heavy duty rubber construction offers maximum wear and abrasion resistance. Industrial style reinforcing for high burst pressure and kink resistant. Seal-tite™ washerless leakproof coupling. All hoses are made in the U.S.A.

WeatherFlex® Hose is an all-weather reinforced garden hose with its popular mint green Clear Tough™ jacket. Its medium duty construction makes it perfect in all seasons by staying pliable in cold weather. Comes with Eco couplings and patented Hose Armour™ to prevent kinking at the spigot.

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79540	Premium rubber - 5/8" x 50'	1	4
79542	Hot water rubber - 5/8" x 50'	1	4
79641	Weatherflex®, All weather - 5/8" x 50'	1	5
79642	Weatherflex®, All weather - 5/8" x 75'	1	5

Gilmour Full Size Pistol Grip Nozzles

Features of Gilmour® Pistol Grip Nozzles

	79582	79583	79584
Nozzle features	chrome	metal plated, full-size	metalized full-size
All brass valve stem with permanent adjusting nut on all			
Hold-open clip on all			
Patented, insul. grip & industrial strength lever	yes	no	no
Unique features	rubber head guard, brass head insert	vinyl molded comfort grip	
Stainless steel spring on all			
Lifetime duck packing seal on all			
Male hose threaded for attaching accessories	yes	yes	yes
Pack carded on all			

MARS NO.	DESCRIPTION	MARS PACK	CASE QTY.
79582	Insulated threaded front	1	24
79583	Vinyl cushioned grip	1	24
79584	Metalized threaded front	1	48
79560	Hose washers, fits 5/8" hoses, 20/pk	1	1

Custom Leather Craft Products

Professional contractors require professional tools and accessories. Carrying a CLC Softside Tool Carrier is like owning a workshop to go. Loads of pockets, rugged polyester fabric, reinforced bottom panels, heavy duty stitching and bar tacking at critical stress points are features that make CLC a requested brand.

MARS NO.	DESCRIPTION	MARS PACK
79279	**25 Pocket Tool Pouch** • 7" x 5-1/2" multi compartment tray slides into bottom of pouch • Box shaped design prevents tipping • Padded carrying handle and adjustable shoulder strap • 8"L x 8"W x 17"H	1
79280	**15 Pocket, 16" Center Tray Tool Bag** • 13-1/2" x 9" multi compartment tray stores in middle of bag • 8 pockets outside and 7 pockets inside • Padded carrying handle and adjustable shoulder strap • 16"L x 9"W x 9"H	1
79281	**4 Pocket Tool Holder** • Hang, strap, or clip on workbelts, suspenders, or pants • Securely holds small tools or accessories	1
79284	**5 pocket tool Holder** • Hang, strap, or clip on workbelts, suspenders, or pants • Securely holds small tools or accessories	1
79282	**23 Pocket Large Tool Carrier** • 11" x 6" multi compartment plastic tray that slides into the bottom of the carrier • 16 multi use outside pockets and 7 inside to organize tools & accessories • Box shaped design prevents tipping • 11"L x 10"W x 19"H	1
79287	**Plastic Cap Swivel Kneepads** • One size fits all • Exclusive grooved cap design prevents thread abrasion • Foam padded with easy on/off hook and loop fasteners	1
79288	**Work Crew Gloves-L**	1
79289	**Work Crew Gloves-XL** • Synthetic leather palm is tough, soft, and comfortable • Lycra side panels provide flexibility • Spandex back ensures snug fit	1
79277	**75 Pocket-Tool Backpack** • 7"x 5" multi compartment plastic tray included • Adjustable padded shoulder straps and carry handles • 13"W x 17-1/2"H x 9"D	1

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Tool Boxes

All Plano tool boxes and stowaway boxes are constructed of premium quality impact resistant plastics. Solid brass hardware and sturdy ABS drawbolt type latches, withstands rugged wear. All boxes are made in the U.S.A. and have a lifetime warranty!

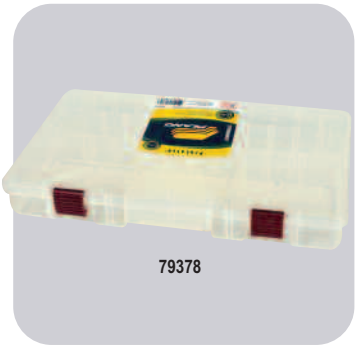
The Plano Tote-More®, MARS #79368, features a multi compartment drawer and convenient handle for portability. Open top for easy access. Unit measures 14 3/4" L x 9 1/8" W x 6 7/8" H.

* Tools and accessories not included

MARS NO.	DESCRIPTION	MARS PACK
79368	Tote More® w/draw - gray/black	4

Stowaways - Plastic

MARS stowaway boxes are ideal for the professionals or do-it-yourselfers. These utility boxes hold bolts, screws, washers, bits, solderless terminals and many other small items. MARS #79378 has 6-18 adjustable compartments and measures 11" L x 7 1/4"W x 1 3/4"H.



MARS NO.	DESCRIPTION	MARS PACK
79378	6-18 adj. stowaway box - translucent gray, 11.0" x 7.25" x 1.75"	6

Plano Tool Boxes

* Tools and accessories not included

MARS NO.	DESCRIPTION	MARS PACK
79643	Clear StowAway 18 Fixed Compartments, 10.75" x 7.25" x 1.75"	6
79644	Clear StowAway - 5 to 9 Adj. Compt. Pro-Latch, 1' Deep Storage, 9.13" x 5.00" x 1.25"	6
79645	Graphite Gray & Black 16" Tool Box with bulk storage space and tray, Removable StowAway Organizer built into the top, 16" x 9.5" x 7.5"	4
79646	Graphite Gray & Black 20" tool box with bulk storage space and tray, Heavy Duty handle, 20.25" x 10.88" x 9.125"	4
79647	Graphite Gray & Iron Yellow 22" tool box with extra deep storage space and tray, 21.31" x 12.5" x 13.5"	1

Storage Bins

- Heavy duty bins securely stack on top of each other, sit on shelving and hang from racks, panels, rails and carts
- Anti slide stop prevents stacked bins from shifting forward
- Guaranteed not to crack or break under normal load conditions
- Sturdy one piece construction is water, rust and corrosion proof.
- Large front label are for easy coding and scanning
- Curved bottom hopper makes it easy to retrieve small parts

MARS NO.	DESCRIPTION	MARS PACK
79764	12" Blue Shelf Bin 11 5/8" L x 4 1/8" W x 4" H	24
79765	12" Blue Shelf Bin 11 5/8" L x 6 5/8" W x 4" H	12
79766	12" Blue Shelf Bin 11 5/8" L x 8 3/8" W x 4" H	12

Nipple Caddies

- Nipple caddies are designed to help keep you organized
- Durable caddies are constructed of corrosion- and rust-resistant polyethylene
- Designed to hold nipples and keeps them out of water and other liquids
- Drain holes in bottom allows caddy to drain
- Strong enough to take the abuse yet half the weight of metal
- Tall (with handle in up position)

MARS NO.	DESCRIPTION	MARS PACK
79245	1/2" Nipple Caddy, Holds up to 77 nipples. Outside Dimensions: 11-1/4" x 7-3/4" x 8-3/4"	4
79246	3/4" Nipple Caddy, Holds up to 66 nipples. Outside Dimensions: 13-3/4" x 8" x 8-3/4"	4

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Accessories

MARS Clipboards And Formholders

SAUNDERS

MARS aluminum Style A Formholder is versatile, efficient and easy to use. It can be used by both left and right handed people and will accommodate forms ruled either lengthwise or across the width. The storage compartment below keeps completed forms dry and protected.

The MARS Snapaks are very popular aluminum formholders that accommodate loose forms or sales books. Unit opens like a book. Clipboard is included on inside front cover. A hinged aluminum strap on inside back cover holds copies or sales books securely in place. The entire holder folds into a compact protective box to keep forms safe and dry.

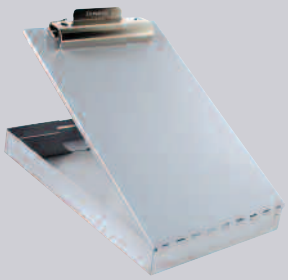
The MARS #79558 Redi-Rite is a clipboard on a box. This is the holder to have when you need to carry many forms. Extra storage capacity. All aluminum construction.

- Made from durable RECYCLED aluminum with at least 30% post-consumer waste
- Made in the USA

"A" Formholder

Snapak

Redi-Rite



MARS NO.	DESCRIPTION		CASE QTY.
79552	"A" formholder	8-1/2" x 12"	12
79555	Snapak	8-1/2" x 12"	12
79558	Redi-Rite	8-1/2" x 12"	6

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JARD by MARS

JARD® by MARS®

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Single Section Run Capacitors

Features:

- JARD provides a low cost alternative to popular models and the widest selection of ratings in the industry
- Non-PCB capacitors
- Physical interrupter makes our capacitors safe
- Perfect for general replacements
- Capacitor accessories – see page J-7
- UL and CSA listings available

SINGLE SECTION 370 VOLT OVAL

JARD NO.	MICROFARAD	CASE HEIGHT INCHES	WIDTH INCHES	DEPTH INCHES
12902	2	1.63	2.06	1.21
12903	3	1.63	2.06	1.21
12904	4	1.63	2.06	1.21
12905	5	1.63	2.06	1.21
12906	6	1.63	2.06	1.21
12907	7.5	1.63	2.06	1.21
12908	10	2.00	2.06	1.21
12909	12.5	2.38	2.06	1.21
12910	15	2.63	2.06	1.21
12912	17.5	2.63	2.06	1.21
12914	20	3.00	2.06	1.21
12915	25	3.38	2.06	1.21
12917	30	3.75	2.06	1.21
12918	35	3.75	2.06	1.21
12921	40	2.63	2.81	1.81
12923	45	3.00	2.81	1.81
12925	50	3.00	2.81	1.81
12924	55	3.38	2.81	1.81
12987	60	3.13	2.81	1.81
12988	65	3.75	2.81	1.81
12989	70	3.75	2.81	1.81
12990	80	4.00	2.81	1.81

SINGLE SECTION 370 VOLT ROUND

JARD NO.	MICROFARAD	CASE HEIGHT INCHES	DEPTH INCHES
12992	2	2.00	1.75
12993	3	2.00	1.75
12994	4	2.00	1.75
12995	5	2.00	1.75
12996	6	2.00	1.75
12997	7.5	2.00	1.75
12998	10	2.00	1.75
12999	12.5	2.00	1.75
12710	15	2.00	1.75
12911	16	2.00	1.75
12712	17.5	2.00	1.75
12714	20	2.00	1.75
12715	25	2.38	1.75
12717	30	2.63	1.75
12718	35	2.75	1.75
12721	40	3.00	1.75
12723	45	3.38	1.75
12725	50	3.75	1.75
12726	55	3.75	1.75
12727	60	4.00	1.75
12828	65	3.38	2.00
12729	70	3.75	2.00
12899	80	4.00	2.00
12916	100	3.38	2.50

SINGLE SECTION 440/370 VOLT OVAL

JARD NO.	MICROFARAD	CASE HEIGHT INCHES	WIDTH INCHES	DEPTH INCHES
12926	2	1.63	2.06	1.21
12919	2.5	1.63	2.06	1.21
12927	3	1.63	2.06	1.21
12928	4	1.63	2.06	1.21
12929	5	1.63	2.06	1.21
12930	6	1.63	2.06	1.21
12931	7.5	2.00	2.06	1.21
12932	10	2.38	2.06	1.21
12933	12.5	2.75	2.06	1.21
12934	15	3.00	2.06	1.21
12936	17.5	3.75	2.06	1.21
12937	20	4.00	2.06	1.21
12940	25	4.75	2.06	1.21
12941	30	3.00	2.81	1.81
12943	35	3.00	2.81	1.81
12945	40	3.38	2.81	1.81
12948	45	3.75	2.81	1.81
12949	50	3.75	2.81	1.81
12950	55	4.75	2.81	1.81
12951	60	4.75	2.81	1.81
12952	65	4.75	2.81	1.81
12830	70	4.75	2.81	1.81
12831	75	3.75	3.56	1.88
12840	80	3.75	3.56	1.88

SINGLE SECTION 440/370 VOLT ROUND

JARD NO.	MICROFARAD	CASE HEIGHT INCHES	DEPTH INCHES
12802	2	2.00	1.75
12803	3	2.00	1.75
12804	4	2.00	1.75
12805	5	2.00	1.75
12806	6	2.00	1.75
12807	7.5	2.00	1.75
12732	10	2.00	1.75
12733	12.5	2.00	1.75
12734	15	2.38	1.75
12736	17.5	2.38	1.75
12737	20	2.63	1.75
12740	25	3.00	1.75
12741	30	3.38	1.75
12743	35	3.75	1.75
12745	40	4.00	1.75
12748	45	3.38	2.00
12751	50	3.75	2.00
12752	55	3.75	2.00
12754	60	4.75	2.00
12657	65	4.75	2.00
12758	70	4.75	2.00
12759	80	3.75	2.50
12868	90	4.00	2.50

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Motor Run Capacitors

Dual Section Motor Run Capacitors

Dual section run capacitors are used primarily to serve two microfarad applications. They can, however, by making various combinations of parallel connections, be used to obtain many other microfarad ratings.

12841

Features:

- Non-PCB capacitors Physical interrupter makes our capacitors safe
- Perfect for general replacements
- Capacitor accessories – see page J-7
- UL and CSA listings available

DUAL SECTION 370 VOLT OVAL

JARD NO.	MICROFARAD	CASE HEIGHT INCHES	WIDTH INCHES	DEPTH INCHES
12841	15/3	2.63	2.81	1.81
12956	15/4	2.63	2.81	1.81
12957	15/5	2.63	2.81	1.81
12958	15/10	2.38	2.81	1.81
12959	17.5/4	2.63	2.81	1.81
12960	17.5/5	2.63	2.81	1.81
12961	20/3	2.63	2.81	1.81
12962	20/4	3.13	2.81	1.81
12963	20/5	2.63	2.81	1.81
12864	20/10	2.63	2.81	1.81
12964	20/15	2.63	2.81	1.81
12842	25/3	2.63	2.81	1.81
12965	25/4	2.63	2.81	1.81
12966	25/5	2.63	2.81	1.81
12843	25/7.5	2.63	2.81	1.81
12832	25/8	2.63	2.81	1.81
12867	25/10	2.63	2.81	1.81
12833	25/15	2.63	2.81	1.81
12844	30/3	2.63	2.81	1.81
12845	30/4	2.63	2.81	1.81
12969	30/5	2.63	2.81	1.81
12846	30/7.5	2.63	2.81	1.81
12847	30/10	2.63	2.81	1.81
12848	35/3	2.63	2.81	1.81
12971	35/4	3.00	2.81	1.81
12972	35/5	2.63	2.81	1.81
12849	35/7.5	2.63	2.81	1.81
12850	35/10	2.63	2.81	1.81
12851	40/3	3.00	2.81	1.81
12858	40/4	2.63	2.81	1.81
12871	40/5	3.00	2.81	1.81
12852	40/7.5	2.63	2.81	1.81
12834	40/10	3.00	2.81	1.81
12874	45/5	3.00	2.81	1.81
12853	45/7.5	3.00	2.81	1.81
12836	45/10	3.75	2.81	1.81
12837	45/15	3.75	2.81	1.81
12838	50/5	3.75	2.81	1.81
12854	55/5	3.75	2.81	1.81
12855	55/7.5	3.75	2.81	1.81
12839	60/5	4.75	2.81	1.81
12856	60/7.5	3.75	2.81	1.81
12857	60/10	3.75	2.81	1.81
12859	65/5	4.75	2.81	1.81
12863	80/5	4.75	3.56	1.88
12817	80/7.5	4.75	2.81	1.81

DUAL SECTION 370 VOLT ROUND

JARD NO.	MICROFARAD	CASE HEIGHT INCHES	DEPTH INCHES
12701	15/3	3.13	2.00
12702	15/4	3.13	2.00
12703	15/5	3.13	2.00
12704	15/10	3.13	2.00
12705	17.5/4	3.13	2.00
12706	17.5/5	3.13	2.00
12707	20/4	3.13	2.00
12760	20/5	3.13	2.00
12716	20/7.5	2.63	2.00
12708	20/10	3.13	2.00
12709	20/15	3.13	2.00
12711	25/3	3.13	2.00
12875	25/4	3.13	2.00
12761	25/5	3.63	2.00
12762	25/7.5	3.13	2.00
12713	25/10	3.13	2.00
12720	30/3	3.13	2.00
12763	30/4	3.13	2.00
12764	30/5	3.13	2.00
12724	30/7.5	3.13	2.00
12728	30/10	3.13	2.00
12939	30/15	3.63	2.00
12730	35/3	3.13	2.00
12731	35/4	3.13	2.00
12766	35/5	3.13	2.00
12735	35/7.5	2.63	2.00
12738	35/10	3.13	2.00
12739	40/3	3.13	2.00
12767	40/4	3.13	2.00
12878	40/5	3.13	2.00
12768	40/7.5	3.13	2.00
12746	40/10	3.13	2.00
12747	45/3	3.13	2.00
12947	45/4	3.13	2.00
12769	45/5	3.13	2.00
12749	45/7.5	3.13	2.00
12750	45/10	3.13	2.00
12753	50/3	3.13	2.00
12755	50/5	3.13	2.00
12825	50/7.5	3.88	2.00
12757	50/10	3.88	2.00
12893	55/5	3.88	2.00
12894	55/7.5	3.88	2.00
12967	55/10	3.88	2.00
12976	60/3	3.88	2.00
12895	60/5	3.88	2.00
12896	60/7.5	3.88	2.00
12865	60/10	3.88	2.00
12742	65/5	3.88	2.00
12953	70/5	4.75	2.00
12954	70/7.5	4.75	2.00
12955	70/10	4.75	2.00
12744	75/5	4.75	2.00
12946	75/7.5	4.75	2.00
12984	75/10	4.75	2.00
12897	80/5	4.75	2.00
12819	80/7.5	4.75	2.00
12824	80/10	4.75	2.00
12722	80/12.5	4.75	2.00
12829	85/5	4.75	2.00
12756	85/7.5	4.75	2.00
12922	85/10	4.75	2.00

*Capacitors may be put in different case sizes occasionally, but will not be larger than those stated.

Base Dimensions on page J-5

⚠ WARNING:
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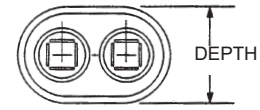
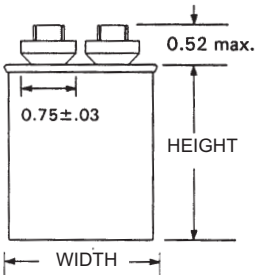
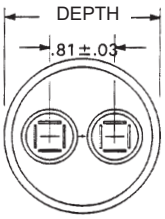
Capacitor Base Dimensions

Capacitor accessories – see page J-7







DUAL SECTION 440/370 VOLT OVAL

JARD NO.	MICROFARAD	CASE HEIGHT INCHES	WIDTH INCHES	DEPTH INCHES
12660	5/5	2.63	2.81	1.81
12765	10/5	2.63	2.81	1.81
12970	10/10	2.63	2.81	1.81
12770	15/4	2.63	2.81	1.81
12771	15/5	2.63	2.81	1.81
12777	15/10	2.63	2.81	1.81
12880	20/5	2.63	2.81	1.81
12983	20/15	3.00	3.56	1.88
12884	25/5	2.63	2.81	1.81
12882	25/7.5	3.00	2.81	1.81
12883	25/10	3.00	2.81	1.81
12886	25/15	3.75	2.81	1.81
12881	30/4	3.75	2.81	1.81
12887	30/5	3.00	2.81	1.81
12982	30/7.5	3.75	2.81	1.81
12835	30/10	3.75	2.81	1.81
12985	35/3	3.00	2.81	1.81
12879	35/4	3.75	2.81	1.81
12885	35/5	3.75	2.81	1.81
12888	35/7.5	3.00	2.81	1.81
12876	35/8.5	3.00	2.81	1.81
12772	35/10	3.75	2.81	1.81
12877	40/3	3.75	2.81	1.81
12986	40/5	3.75	2.81	1.81
12889	40/7.5	3.75	2.81	1.81
12773	40/10	3.75	2.81	1.81
12890	45/5	4.75	2.81	1.81
12774	45/7.5	4.75	2.81	1.81
12808	50/5	4.75	2.81	1.81
12913	50/7.5	4.75	2.81	1.81
12775	55/5	4.75	2.81	1.81
12822	55/10	4.75	2.81	1.81
12809	60/5	4.75	2.81	1.81
12776	60/7.5	4.75	2.81	1.81
12810	65/10	4.75	3.56	1.88
12815	80/5	4.75	3.56	1.88
12898	80/7.5	4.75	3.56	1.88

DUAL SECTION 440/370 VOLT ROUND

JARD NO.	MICROFARAD	CASE HEIGHT INCHES	DEPTH INCHES
12811	10/5	3.13	2.00
12818	15/5	3.13	2.00
12656	15/10	3.63	2.00
12650	17.5/5	3.63	2.00
12780	20/5	3.63	2.00
12654	20/7.5	3.63	2.00
12651	20/10	3.13	2.00
12812	20/15	3.13	2.00
12653	25/3	3.13	2.00
12655	25/4	3.13	2.00
12778	25/5	3.63	2.00
12779	25/7.5	3.13	2.00
12813	25/10	3.13	2.00
12814	25/15	3.13	2.00
12826	30/3	3.13	2.00
12820	30/4	3.13	2.00
12781	30/5	3.13	2.00
12782	30/7.5	3.13	2.00
12652	30/10	3.88	2.00
12977	35/3	3.88	2.00
12870	35/4	3.88	2.00
12783	35/5	3.13	2.00
12719	35/6	3.88	2.00
12784	35/7.5	3.88	2.00
12797	35/10	3.88	2.00
12978	40/3	3.88	2.00
12785	40/4	3.88	2.00
12786	40/5	3.88	2.00
12920	40/6	3.88	0.00
12787	40/7.5	3.88	2.00
12798	40/10	3.88	2.00
12979	45/3	3.88	2.00
12891	45/4	3.88	2.00
12788	45/5	3.88	2.00
12827	45/6	3.88	2.00
12789	45/7.5	3.88	2.00
12872	45/10	3.88	2.00
12790	50/5	3.88	2.00
12791	50/7.5	4.75	2.00
12892	50/10	4.75	2.00
12792	55/5	4.75	2.00
12793	55/7.5	4.75	2.00
12799	55/10	4.75	2.00
12860	60/3	4.75	2.00
12794	60/5	4.75	2.00
12795	60/7.5	4.75	2.00
12796	60/10	4.75	2.00
12861	60/12.5	4.75	2.00
12642	65/5	4.75	2.00
12659	65/7.5	4.75	2.00
12862	65/10	3.88	2.50
12823	70/5	3.88	2.50
12866	70/7.5	3.88	2.50
12869	70/10	3.88	2.50
12968	75/5	3.88	2.50
12901	75/7.5	3.88	2.50
12935	75/10	3.88	2.50
12801	80/5	3.88	2.50
12816	80/7.5	3.88	2.50
12821	80/10	3.88	2.50
12938	85/5	4.75	2.50
12942	85/7.5	4.75	2.50
12944	85/10	4.75	2.50

*Capacitors may be put in different case sizes occasionally, but will not be larger than those stated.

⚠ WARNING:
Cancer and Reproductive Harm
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Motor Start Capacitors

Motor Start Capacitors

JARD Motor Start Capacitors provide a low cost alternative to popular models available. MARS offers the largest assortment of capacitor ratings in the industry.

These electrolytic capacitors feature a hermetically sealed black bakelite case which permanently protects the capacitor from oil, dirt, grease or moisture.

Capacitor accessories – see page J-7

12780

110/125 DUAL VOLTAGE AC

JARD NO.	MICROFARAD	CASE SIZE
11902	21-25	1
11903	25-30	1
11904	30-36	1
11905	36-43	1
11906	43-56	1
11907	56-67	1
11908	72-88	1
11909	88-107	1
11910	108-130	1
11912	124-155	1
11911	130-156	1
11913	145-174	1
11914	161-193	1
11915	189-227	1
11916	200-240	1
11917	216-259	1
11918	233-291	1
11919	270-324	1
11920	300-360	1
11921	324-388	1
11922	340-408	1
11923	378-438	1
11924	400-480	1
11971	430-516	1
11925	460-552	1
11926	540-648	2
11927	590-708	4
11947	645-774	4
11928	708-850	4
11972	815-970	4
11929	829-995	4
11973	850-1020	4
11930	1000-1200	4
11974	1290-1548	5

165 VOLTAGE AC

JARD NO.	MICROFARAD	CASE SIZE
11975	72-88	1
11976	88-107	1
11977	108-130	1
11931	124-149	1
11932	145-174	1
11933	161-193	1
11934	189-227	1
11978	216-259	2
11935	233-292	2
11936	270-324	2
11979	340-408	4
11980	378-455	4
11994	400-480	4
11981	540-648	4
11982	710-852	5
11983	810-972	5

220/250 DUAL VOLTAGE AC

JARD NO.	MICROFARAD	CASE SIZE
11938	21-25	1
11939	25-30	1
11940	30-36	1
11941	36-43	1
11942	43-56	1
11943	56-70	1
11984	59-71	1
11937	64-77	1
11944	72-88	1
11945	88-107	1
11946	108-130	4
11948	124-155	4
11949	145-175	4
11950	161-193	4
11951	189-227	4
11952	216-259	4
11953	233-292	4
11954	270-324	4
11985	280-336	4
11986	320-384	4
11987	340-408	4
11988	378-454	5
11989	400-480	5
11990	430-516	5
11991	630-756	8

330 VOLTAGE AC

JARD NO.	MICROFARAD	CASE SIZE
11955	21-25	1
11956	25-30	1
11957	30-36	1
11958	36-43	1
11959	43-56	2
11995	56-67	2
11960	64-77	2
11961	72-88	2
11962	88-108	2
11963	108-130	5
11964	130-156	5
11965	124-156	5
11992	135-162	5
11966	145-174	5
11967	161-193	5
11968	189-227	5
11969	216-259	7
11970	270-324	7
11993	300-360	8

CASE DIMENSIONS

CASE SIZE	DIAMETER IN INCHES	LENGTH INCHES
1	1.44	2.75
2	1.44	3.38
4	1.81	3.38
5	1.81	4.38
6	2.06	3.38
7	2.06	4.38
8	2.56	4.38

*Capacitors may be put in different case sizes occasionally, but will not be larger than those stated.

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QC-6 Kit

93001
For conversion of screw-type connections on relays

Resistor for Start Capacitors

93007
2 watt (15,000 ohm) Resistors

Snap-on Mounting Brackets for Motor Start Capacitors

93026 2.75 in
93027 3.38 in
93028 4.38 in

Protector (boots) for Motor Run Capacitors

93011 1 Hole Boot
93012 2 Hole Boot

Wrap-Around Brackets for Oval Motor Run Capacitors

93014 1.94 x 2.78 for base A
93015 1.97 x 2.94 for base C
93116 2.25 x 3.66 for base D

Mounting Brackets for Round Capacitors

93031 For 1.63 in and 1.75 in dia.
93032 For 2.0 in dia.
93033 For 2.50 in dia.

Bakelite End Caps for Motor Start Capacitors

93018 BEC-1 1.44 in
93019 BEC-2 1.81 in
93020 BEC-3 2.06 in
93021 BEC-4 2.56 in

For mounting OFF MOTOR. Leads on top side.

93022 BEC-1 1.44 in
93023 BEC-2 1.81 in
93024 BEC-3 2.06 in
93025 BEC-4 2.56 in

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Definite Purpose Contactors

Definite Purpose Contactors

"A Low Cost Alternative By The Name You Trust"

JARD Definite Purpose Contactors are designed for use on refrigeration, air conditioning, and electric heating systems. The universal mounting base allows replacement of most contactor brands. Power connections can be made with either screws & quick connects or lugs & quick connects depending on the style.

Features:

- 2 styles: screw terminals with quick connects or lug terminals with quick connects
- UL (both styles)
- CSA (screw terminal style)
- CUL (lug terminal style)

17125

17999

JARD W/LUGS	JARD W/SCREWS	FULL LOAD AMPS	RESISTIVE AMPS	COIL VOLTAGE	POLES
17125	17121	20	30	24	2
17126	17122	20	30	120	2
17127	17123	20	30	240	2
17215	–	25	35	24	1-1/2
17216	–	25	35	120	1-1/2
17217	–	25	35	240	1-1/2
17225	17221	25	35	24	2
17226	17222	25	35	120	2
17227	17223	25	35	240	2
17315	17311	30	40	24	1-1/2
17316	17312	30	40	120	1-1/2
17317	17313	30	40	240	1-1/2
17325	17321	30	40	24	2
17326	17322	30	40	120	2
17327	17323	30	40	240	2
17335	17331	30	40	24	3
17336	17332	30	40	120	3
17337	17333	30	40	240	3
17415	–	40	50	24	1-1/2
17416	–	40	50	120	1-1/2
17417	–	40	50	240	1-1/2

JARD W/LUGS	JARD W/SCREWS	FULL LOAD AMPS	RESISTIVE AMPS	COIL VOLTAGE	POLES
17425	–	40	50	24	2
17426	–	40	50	120	2
17427	–	40	50	240	2
17435	–	40	50	24	3
17436	–	40	50	120	3
17437	–	40	50	240	3
17535	–	50	65	24	3
17536	–	50	65	120	3
17537	–	50	65	240	3
17635	–	60	75	24	3
17636	–	60	75	120	3
17637	–	60	75	240	3
17735	–	75	90	24	3
17736	–	75	90	120	3
17737	–	75	90	240	3
17935	–	90	120	24	3
17936	–	90	120	120	3
17937	–	90	120	240	3
17997	Auxiliary Contact- Fits 75 & 90A 3P models				
17998	Auxiliary Contact- Fits 50 & 60A 3P models				
17999	Auxiliary Contact- Fits 40A 3P models				

⚠ WARNING:
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General Purpose Switching Relays

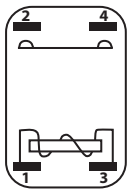
JARD SPST and SPDT Fan Relays are among the most popular electromechanical relays used in air conditioning, heating and refrigeration today.

Features:

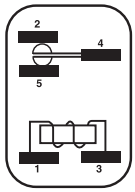
- 16 Amp switching
- 55 Amp inrush current
- Quick-connect terminals
- Tab bracket, Non-positional
- UL and CUR

JARD NO.	NORMALLY OPEN COIL VOLTAGE	CONTACT RATING 125/250 VAC INDUCTIVE	CONTACT RATING 125/250 VAC RESISTIVE	REPLACES ESSEX/RBM NO.
SPST				
92290	24	8 amps	16 amps	90-290, 90-290Q
92291	110-120	continuous	16 amps	90-291, 90-291Q
92292	208/240	25 amps inrush	16 amps	90-292, 90-292Q
SPDT				
92293	24	8 amps	16 amps	90-293, 90-293Q
92294	110-120	continuous	16 amps	90-294, 90-294Q
92295	208/240	25 amps inrush	16 amps	90-295, 90-295Q

Switch Diagrams



92290
92291
92292



92293
92294
92295

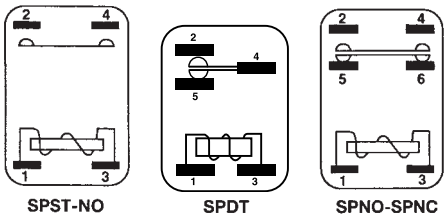
Heavy Duty Fan Switching Relays

JARD Heavy Duty Fan Relays are used on heating and air conditioning equipment to provide switching of heavier loads with a compact size relay.

Features:

- 25 Amp switching
- Compact and totally enclosed
- Quick-connect terminals
- Tab bracket, Non-positional
- UL and CUR

Terminal Identification



Model Identification

COIL VOLTAGE	JARD NO. SPST-NO.	JARD NO. NO. SPDT	JARD NO. SPNO-SPNC
24	**92360**	**92370**	**92380**
110/120	**92362**	**92372**	**92382**
208/240	**92364**	**92374**	**92384**

Contact Rating

VOLTAGE	FULL LOAD	LOCKED ROTOR	RESISTIVE
120	12	60	18
240	8	48	18
277	7	42	18

Cross Reference:

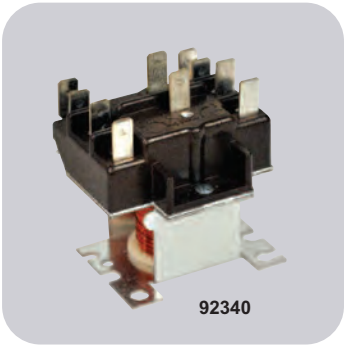
ESSEX/RBM	JARD NO.	ESSEX/RBM	JARD NO.
90-360Q	**92360**	90-374Q	**92374**
90-362Q	**92362**	90-380Q	**92380**
90-364Q	**92364**	90-382Q	**92382**
90-370Q	**92370**	90-384Q	**92384**
90-372Q	**92372**		

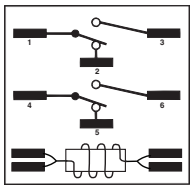
2PDT HVAC Relays

JARD Heavy Duty Fan Relays are used on heating and air conditioning equipment to provide switching of heavier loads with a compact size relay.

Features:

- 25 Amp switching
- Universal mounting bracket
- Quick-connect terminals
- UL and CUR





COIL
Terminals 1& 2, 4 & 5 are normally closed
Terminals 1& 3, 4 & 6 are normally open

Contact Rating

	POWER 208/240V 120V	POWER 208/240V 277V	PILOT 208/240V 120V	PILOT 208/240V 277V
Full load Amps	12	6	-	-
Resistive	15	15	3	3
Locked Rotor Amps	60	35	-	-
Horsepower	3/4	3/4	1/10	1/10

JARD NO.	COIL VOLTAGE	TERMINALS 1-2-3	TERMINALS 4-5-6	CROSS REFERENCE ESSEX / RBM	HONEYWELL
92340	24			90-340	R8222D1014
92341	110/120	Power	Power	90-341	R4222D1013
92342	208/240			90-342	R4222N1021

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Pressure Switches

Fixed Setting Pressure Controls

High Pressure Cut-Outs

JARD offers the most complete line of high pressure cut-outs available.

Features:

- Tamper proof construction
- Direct mounting on tubing

Specifications:

- Contacts rated at 6 amps, 24-240 volts
- 1/4" female flare S.A.E. mounting
- 18" leads
- UL & CSA recognized

High Pressure Cut-Outs, Open on Pressure Rise, Automatic Reset, Normally Closed

JARD NO.	DESCRIPTION	OPENING PRESSURE	RESET PRESSURE	MOUNTING
43922	250/150 HP Open on rise	250	150	1/4" Female Flare Fitting S.A.E. Mounting
43924	275/195 HP Open on rise	275	195	1/4" Female Flare Fitting S.A.E. Mounting
43925	300/200 HP Open on rise	300	200	1/4" Female Flare Fitting S.A.E. Mounting
43926	325/225 HP Open on rise	325	225	1/4" Female Flare Fitting S.A.E. Mounting
43920	350/245 HP Open on rise	350	245	1/4" Female Flare Fitting S.A.E. Mounting
43927	350/250 HP Open on rise	350	250	1/4" Female Flare Fitting S.A.E. Mounting
43928	375/275 HP Open on rise	375	275	1/4" Female Flare Fitting S.A.E. Mounting
43929	400/200 HP Open on rise	400	200	1/4" Female Flare Fitting S.A.E. Mounting
43930	400/280 HP Open on rise	400	280	1/4" Female Flare Fitting S.A.E. Mounting
43931	400/300 HP Open on rise	400	300	1/4" Female Flare Fitting S.A.E. Mounting
43911	410/290 HP Open on rise	410	290	1/4" Female Flare Fitting S.A.E. Mounting
43932	425/300 HP Open on rise	425	300	1/4" Female Flare Fitting S.A.E. Mounting
43933	425/325 HP Open on rise	425	325	1/4" Female Flare Fitting S.A.E. Mounting
43934	450/250 HP Open on rise	450	250	1/4" Female Flare Fitting S.A.E. Mounting
43965	590/418 HP Open on rise	590	418	1/4" Female Flare Fitting S.A.E. Mounting
43935	600/475 HP Open on rise	600	475	1/4" Female Flare Fitting S.A.E. Mounting
43939	630/480 HP Open on rise	630	480	1/4" Female Flare Fitting S.A.E. Mounting

Low Pressure Controls

Features:

- Tamper proof construction
- Direct mounting on tubing

Specifications:

- Contacts rated at 6 amps, 24-240 volts
- 1/4" female flare S.A.E. mounting
- 18" leads
- UL & CSA recognized

Low Pressure Controls, Open on Pressure Fall, Automatic Reset, Normally Open

JARD NO.	DESCRIPTION	OPENING PRESSURE	RESET PRESSURE	MOUNTING
43941	5/20 LP Open on fall	5	20	1/4" Female Flare Fitting S.A.E. Mounting
43942	5/30 LP Open on fall	5	30	1/4" Female Flare Fitting S.A.E. Mounting
43943	10/25 LP Open on fall	10	25	1/4" Female Flare Fitting S.A.E. Mounting
43944	15/35 LP Open on fall	15	35	1/4" Female Flare Fitting S.A.E. Mounting
43945	20/45 LP Open on fall	20	45	1/4" Female Flare Fitting S.A.E. Mounting
43946	25/50 LP Open on fall	25	50	1/4" Female Flare Fitting S.A.E. Mounting
43947	25/65 LP Open on fall	25	65	1/4" Female Flare Fitting S.A.E. Mounting
43948	25/80 LP Open on fall	25	80	1/4" Female Flare Fitting S.A.E. Mounting
43949	35/60 LP Open on fall	35	60	1/4" Female Flare Fitting S.A.E. Mounting
43950	40/80 LP Open on fall	40	80	1/4" Female Flare Fitting S.A.E. Mounting
43951	45/60 LP Open on fall	45	60	1/4" Female Flare Fitting S.A.E. Mounting
43952	50/90 LP Open on fall	50	90	1/4" Female Flare Fitting S.A.E. Mounting
43953	75/100 LP Open on fall	75	100	1/4" Female Flare Fitting S.A.E. Mounting
43975	90/120 LP Open on fall	90	120	1/4" Female Flare Fitting S.A.E. Mounting
43954	150/225 LP Open on fall	150	225	1/4" Female Flare Fitting S.A.E. Mounting
43955	170/225 LP Open on fall	170	225	1/4" Female Flare Fitting S.A.E. Mounting

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Condenser Fan Cycling Switch

Manual Reset high pressure controls

Specifications:
- UL & CSA recognized

43903

JARD NO.	DESCR.	OPENING PRESSURE	RESET PRESSURE	MOUNTING	SWITCH ACTION (OPEN ON PRESSURE)
43901	75/100 FC Close on rise	75	100	1/4" Female Flare Fitting S.A.E. Mounting	Fall
43902	110/170 FC Close on rise	110	170	1/4" Female Flare Fitting S.A.E. Mounting	Fall
43903	125/265 FC Close on rise	125	265	1/4" Female Flare Fitting S.A.E. Mounting	Fall
43904	150/225 FC Close on rise	150	225	1/4" Female Flare Fitting S.A.E. Mounting	Fall
43970	180/240 FC Close on rise	180	240	1/4" Female Flare Fitting S.A.E. Mounting	Fall
43905	19/275 FC Close on rise	190	275	1/4" Female Flare Fitting S.A.E. Mounting	Fall
43906	210/275 FC Close on rise	210	275	1/4" Female Flare Fitting S.A.E. Mounting	Fall
43907	300/400 FC Close on rise	300	400	1/4" Female Flare Fitting S.A.E. Mounting	Fall
43912	375/Man. Open on rise	375	Manual	1/4" Female Flare Fitting S.A.E. Mounting	Rise
43913	410/Man. Open on rise	410	Manual	1/4" Female Flare Fitting S.A.E. Mounting	Rise
43916	475/Man. Open on rise	475	Manual	1/4" Female Flare Fitting S.A.E. Mounting	Rise

JARD Fuses

Applications:
- Recommended for AC power distribution system mains, feeders, and branch circuits.
- Protection of motors and motor branch circuits.
- Protection of transformers and other inductive loads.
- All general-purpose applications including lighting, heating and other non-inductive loads.

Benefits:
- Superior overload and cycling capabilities.
- Current limiting provides component short-circuit protection.

Specifications:
Dual-Element Time-Delay
Voltage Rating: RK5 - 250Vac, RK5 - 600Vac
Amp Rating: 1/10 - 600A
Interrupting Rating: 200,000 RMS Symmetrical Amps
Current Limiting: RK5 Fuse
Agency Approvals:
UL Listed, Class RK5, CSA Certified, DC listed to UL standard 248 TRS only
Voltage Rating: RK5 250V
Volts: 250VAC
: 250VDC (.1-2.8A; 35-400A)
: 160VDC (3-30A; 450-600A)
RK5 600V
Volts: 600VAC
: 600VDC (.1-12A; 70-600A)
: 160VDC (15-60A)

RK5 Time Delay Fuse 250V Replaces: TR, ECNR, FRNR, FLNR

MARS NO.	DESCRIPTION	MARS PACK
81006	.5A - 250V	10
81009	1A - 250V	10
81016	2A - 250V	10
81017	2.5A - 250V	10
81019	3A - 250V	10
81020	3.2A - 250V	10
81021	4A - 250V	10
81024	5A - 250V	10
81025	5.6A - 250V	10
81026	6A - 250V	10
81027	6.25A - 250V	10
81029	7A - 250V	10
81030	8A - 250V	10
81032	10A - 250V	10
81033	12A - 250V	10
81034	15A - 250V	10
81035	17.5A - 250V	10
81036	20A - 250V	10
81037	25A - 250V	10
81038	30A - 250V	10
81039	35A - 250V	10
81040	40A - 250V	10
81041	45A - 250V	10
81042	50A - 250V	10
81043	60A - 250V	10
81044	70A - 250V	5
81045	80A - 250V	5
81046	90A - 250V	5
81047	100A - 250V	5
81048	110A - 250V	1
81049	125A - 250V	1
81050	150A - 250V	1
81051	175A - 250V	1
81052	200A - 250V	1
81053	225A - 250V	1
81054	350A - 250V	1
81056	400A - 250V	1
81055	600A - 250V	1

RK5 Time Delay Fuse 600V Replaces: TRS, ECSR, FRSR, FLSR

MARS NO.	DESCRIPTION	MARS PACK
81103	.2A - 600V	10
81106	.5A - 600V	10
81109	1A - 600V	10
81110	1.6A - 600V	10
81111	2A - 600V	10
81112	2.25A - 600V	10
81124	5A - 600V	10
81125	6A - 600V	10
81132	10A - 600V	10
81133	12A - 600V	10
81134	15A - 600V	10
81136	20A - 600V	10
81137	25A - 600V	10
81138	30A - 600V	10
81139	35A - 600V	10
81140	40A - 600V	10
81147	45A - 600V	10
81141	50A - 600V	10
81142	60A - 600V	10
81143	70A - 600V	5
81144	80A - 600V	5
81145	90A - 600V	5
81146	100A - 600V	5
81154	110A - 600V	1
81148	125A - 600V	1
81149	150A - 600V	1
81150	175A - 600V	1
81151	200A - 600V	1
81152	250A - 600V	1
81153	300A - 600V	1

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Unit Bearing Motors / Condenser Fan Motors

Unit Bearing Motors

JARD Unit Bearing Cast Iron Motors are used on refrigerators, freezers, food & beverage coolers, vending machines, display cases, and many other fan duty applications.

Features:

- Cast iron construction
- Universal mount
- Mounting screws included
- Individually boxed

Specifications:

- Class “A” insulation
- UL Recognized

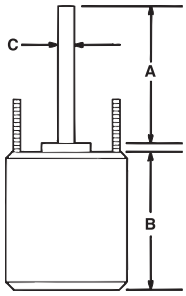
JARD NO.	WATTS	VOLTAGE	ROTATION	AMPS	LEAD LENGTH
15109	2	115	CW	0.28	24"
15211	4	115	CW	0.33	24"
15212	4	115	CCW	0.33	24"
15221	4	230	CW	0.19	24"
15222	4	230	CCW	0.19	24"
15311	6	115	CW	0.46	24"
15312	6	115	CCW	0.46	24"
15119*	9	115	CW	0.62	13"
15411	9	115	CW	0.62	24"
15412	9	115	CCW	0.62	24"
15421	9	230	CW	0.33	24"
15422	9	230	CCW	0.33	24"
15811	16	115	CW	0.95	24"
15812	16	115	CCW	0.95	24"
15821	16	230	CW	0.48	24"
15822	16	230	CCW	0.48	24"

* Note: 13" lead with lyall plug

Condenser Fan Motors

Ball Bearing

JARD replacement condenser fan motors are designed for residential and light commercial HVAC/R applications suitable for either vertical shaft-up or shaft-down mounting. Shell and end shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain.



Features:

- All angle, sleeve or ball bearing
- Rheem mounting holes w/screws
- Reversible rotation
- Thru bolt or band mounting
- Capacitor requirement noted on motor label
- Up/Down design

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- Fan duty, continuous air over
- 26 & 36 inch leads
- UL Recognized

Cross Reference:

JARD NO.	ECONOMASTER	SMART ELECTRIC	WAGNER/ DIVERSITECH	PACKARD	US MOTORS/ EMERSON
22403	EM3403	-	-	60825	1873
22404	EM3404	SE3338	WG840204	40825	1874
22405	EM3405	SE3339	WG840205	30825	1875
22746	EM3746	-	-	-	1870
22727	EM3727	SE3727	WG840727	43727	1859
22728	EM3728	SE3728	WG840728	43728	1860
22729	EM3729	SE3729	WG840729	43729	1861
22730	EM3730	SE3730	WG840730	43730	1862
22731	EM3731	SE3731	WG840731	43731	1868

Reversible Rotation – Single Speed

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C	LEAD LENGTHS
1075 RPM										
22727	1/6	208-230	0.90	5/370	TEAO	Ball	6.50	4.23	1/2	26"
22728	1/4	208-230	1.8	5/370	TEAO	Ball	6.50	4.23	1/2	26"
22729	1/3	208-230	2.4	7.5/370	TEAO	Ball	6.50	5.23	1/2	26"
22730	1/2	208-230	3.5	10/370	TEAO	Ball	6.50	5.73	1/2	26"
22731	3/4	208-230	5.2	10/370	TEAO	Ball	6.50	6.23	1/2	30.5"

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C	LEAD LENGTHS
825 RPM										
22403	1/6	208-230	1.0	5/370	TEAO	Ball	6.50	4.23	1/2	36"
22404	1/4	208-230	1.6	5/370	TEAO	Ball	6.50	4.48	1/2	36"
22405	1/3	208-230	1.9	7.5/370	TEAO	Ball	6.50	5.23	1/2	36"
22746	1/2	208-230	2.8	12.5/370	TEAO	Ball	6.50	5.70	1/2	36"

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Direct Drive Blower Motors

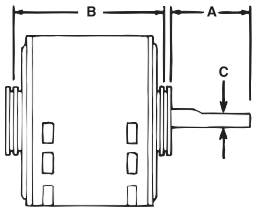
JARD direct drive blower motors are Ideal for use in commercial and residential furnaces and air-conditioners. All models are three speed standard efficiency and are electrically reversible.

Features:

- All angle sleeve bearing
- Rheem mounting holes
- 3 speeds
- 1/2 inch extended thru bolts
- 2-1/4 inch resilient rings
- 4 inch long, 1/2 inch diameter shaft

Specifications:

- Class “B” insulation
- Single phase, 60 Hertz
- Thermal overload protected
- Fan duty, continuous, air over
- Open construction
- 26 & 30 inch leads
- UL Recognized



Cross Reference:

JARD NO.	ECONOMASTER	SMART ELECTRIC	WAGNER/ DIVERSITECH	PACKARD	US MOTORS/ EMERSON
22583	EM3583	SE3583	WG840583	43583	1863
22584	EM3584	SE3584	WG840584	43584	1971
22585	EM3585	SE3585	WG840585	43585	1864
22586	EM3586	SE3586	WG840586	43586	1972
22587	EM3587	SE3587	WG840587	43587	1865
22588	EM3588	SE3588	WG840588	43588	1973
22589	EM3589	SE3589	WG840589	43589	8904
22590	EM3590	SE3590	WG840590	43590	8905

1075 RPM – Three Speed – Reversible Rotation

MARS NO.	HP	ROT	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C	LEAD LENGTHS
22583	1/4	Rev	115	4.2	5/370	OAO	Sleeve	4.50	4.89	1/2	26"
22584	1/4	Rev	208-230	1.8	5/370	OAO	Sleeve	4.50	4.89	1/2	26"
22585	1/3	Rev	115	6.1	5/370	OAO	Sleeve	4.50	5.14	1/2	30"
22586	1/3	Rev	208-230	2.7	5/370	OAO	Sleeve	4.50	5.14	1/2	26"
22587	1/2	Rev	115	7.5	10/370	OAO	Sleeve	4.50	5.89	1/2	30"
22588	1/2	Rev	208-230	3.2	7.5/370	OAO	Sleeve	4.50	5.64	1/2	30"
22589	3/4	Rev	115	11.2	15/370	OAO	Sleeve	4.50	6.14	1/2	30"
22590	3/4	Rev	208-230	4.5	10/370	OAO	Sleeve	4.50	6.14	1/2	30"

Multi-Horsepower Direct Drive Motors

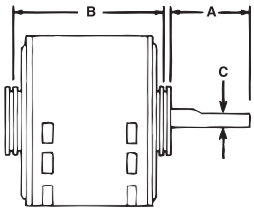
JARD multi-horsepower direct drive blower motors are used in residential and commercial furnaces, air conditioners, exhaust fans, and other air handling equipment installed in clean and dry environments. Four models cover both 115 and 208-230 volt applications from 1/6 through 3/4 HP. All models feature Rheem shell mounting holes.

Features:

- Rheem mounting holes
- Reversible rotation
- 2-1/4 inch resilient rings

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- 41 inch leads
- UL Recognized



Cross Reference:

JARD NO.	ECONOMASTER	SMART ELECTRIC	WAGNER/ DIVERSITECH	PACKARD	US MOTORS/ EMERSON
22463	EM3463	SE3463	WG840463	45460	5460
22464	EM3464	SE3464	WG840464	45461	5461
22466	EM3466	SE3466	WG840466	45470	5470
22467	EM3467	SE3467	WG840467	45471	5471

1075 RPM - Four Speed - Reversible Rotation

MARS NO.	HP	ROT	VOLTS	ENCL.	BRG.	DIMENSIONS A	B	C	LEAD LENGTHS
22463	1/6 - 1/2	Rev	115	OAO	Sleeve	5.50	4.73	1/2	42"
22464	1/6 - 1/2	Rev	230	OAO	Sleeve	5.50	4.73	1/2	41"
22466	1/5 - 3/4	Rev	115	OAO	Ball	5.80	5.73	1/2	41"
22467	1/5 - 3/4	Rev	230	OAO	Ball	4.60	5.23	1/2	41"

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Multi-Horsepower Motors / Condenser Fan Motors

Multi-Horsepower Condenser Fan Motors

Ball Bearing

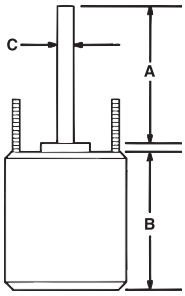
JARD multi-horsepower condenser fan motors are designed for either shaft up or shaft down applications. All motors are suitable for air conditioning or heat pump applications. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Rheem mounting holes w/screws installed
- Thru bolt or band mounting
- Water slinger on shaft
- Air conditioning or heat pump duty

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- Thermal overload protected
- UL Recognized



Cross Reference:

JARD NO.	ECONOMASTER	SMART ELECTRIC	WAGNER/ DIVERSITECH	PACKARD	US MOTORS/ EMERSON
22458	EM3458	-	-	45458BF	5458
22459	EM3459	-	-	45488BF	5464
22465	EM3465	SE3465	WG840465	45458B	5462
22468	EM3468	SE3468	WG840468	-	5465
22469	EM3469	SE3469	WG840469	-	5464

Reversible Rotation – Single Speed

MARS NO.	HP	ROT	RPM/ SPEED	VOLTS	ENCL.	BRG.	DIMENSIONS A	B	C	LEAD LENGTHS
22458	1/6 - 1/3	Rev	1075	208-230	TEAO	Ball	6.50	3.82	1/2	36"
22459	1/8 - 1/3	Rev	825	208-230	TEAO	Ball	6.50	5.48	1/2	36"
22465	1/6 - 1/3	Rev	1075/2	208-230	TEAO	Ball	5.00	4.73	1/2	38"
22468	1/8 - 1/2	Rev	1075/2	208-230	TEAO	Ball	5.00	5.48	1/2	38"
22469	1/6 - 1/3	Rev	825/2	208-230	TEAO	Ball	5.00	5.48	1/2	42"

Condenser Fan Motors

Ball Bearing

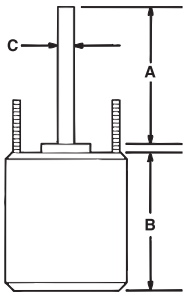
JARD replacement condenser fan motors are designed for residential and light commercial HVAC/R applications suitable for either vertical shaft-up or shaft-down mounting. Shell and end shields are enclosed for weather protection. A weep hole is provided in each end shield to allow condensate to drain.

Features:

- All angle, ball bearing
- Rheem mounting holes w/screws
- Reversible rotation
- Thru bolt or band mounting
- Capacitor requirement noted on motor label
- Up/Down design
- 48" Leads

Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- 70°C, 158°F
- Thermal overload protected
- Fan duty, continuous air over
- UL Recognized



Reversible Rotation – Single Speed

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
1075 RPM									
26726	1/5	208-230	0.90	5/370	TEAO	Ball	6.50	4.23	1/2
26727	1/6	208-230	0.90	5/370	TEAO	Ball	6.50	4.23	1/2
26728	1/4	208-230	1.8	5/370	TEAO	Ball	6.50	4.23	1/2
26729	1/3	208-230	2.4	7.5/370	TEAO	Ball	6.50	5.23	1/2
26730	1/2	208-230	3.5	10/370	TEAO	Ball	6.50	5.73	1/2
26731	3/4	208-230	5.2	10/370	TEAO	Ball	6.50	6.23	1/2

MARS NO.	HP	VOLTS	AMPS	CAP REQ.	ENCL.	BRG.	DIMENSIONS A	B	C
825 RPM									
26403	1/6	208-230	1.0	5/370	TEAO	Ball	6.50	4.23	1/2
26404	1/4	208-230	1.6	5/370	TEAO	Ball	6.50	4.48	1/2
26405	1/3	208-230	1.9	7.5/370	TEAO	Ball	6.50	5.23	1/2
26746	1/2	208-230	2.8	12.5/370	TEAO	Ball	6.50	5.70	1/2

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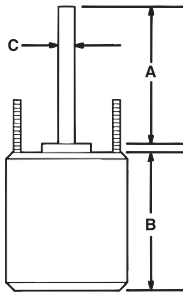
Multi-Horsepower Condenser Fan Motors

Ball Bearing

JARD multi-horsepower condenser fan motors are designed for either shaft up or shaft down applications. All motors are suitable for air conditioning or heat pump applications. These motors need to be mounted within the airflow of the fan for proper cooling.

Features:

- Rheem mounting holes w/screws installed
- Thru bolt or band mounting
- Water slinger on shaft
- Air conditioning or heat pump duty
- 48" Leads



Specifications:

- Class “B” insulation
- Single phase, 60 Hz
- 70°C, 158°F
- Thermal overload protected
- UL Recognized

MARS NO.	HP	ROT	RPM/ SPEED	VOLTS	ENCL.	BRG.	DIMENSIONS		
							A	B	C
26458	1/6 - 1/3	Rev	1075	208-230	TEAO	Ball	6.50	3.82	1/2
26459	1/8 - 1/3	Rev	825	208-230	TEAO	Ball	6.50	5.48	1/2
26465	1/6 - 1/3	Rev	1075/2	208-230	TEAO	Ball	5.00	4.73	1/2
26468	1/8 - 1/2	Rev	1075/2	208-230	TEAO	Ball	5.00	5.48	1/2
26469	1/6 - 1/3	Rev	825/2	208-230	TEAO	Ball	5.00	5.48	1/2

JARD Cross Reference:

JARD NO.	ECONOMASTER	SMART ELECTRIC	WAGNER/ DIVERSITECH	PACKARD	US MOTORS/ EMERSON
22403	EM3403	-	-	60825	1873
22404	EM3404	SE3338	WG840204	40825	1874
22405	EM3405	SE3339	WG840205	30825	1875
22746	EM3746	-	-	-	1870
22727	EM3727	SE3727	WG840727	43727	1859
22728	EM3728	SE3728	WG840728	43728	1860
22729	EM3729	SE3729	WG840729	43729	1861
22730	EM3730	SE3730	WG840730	43730	1862
22731	EM3731	SE3731	WG840731	43731	1868
22583	EM3583	SE3583	WG840583	43583	1863
22584	EM3584	SE3584	WG840584	43584	1971
22585	EM3585	SE3585	WG840585	43585	1864
22586	EM3586	SE3586	WG840586	43586	1972
22587	EM3587	SE3587	WG840587	43587	1865
22588	EM3588	SE3588	WG840588	43588	1973
22589	EM3589	SE3589	WG840589	43589	8904
22590	EM3590	SE3590	WG840590	43590	8905
22463	EM3463	SE3463	WG840463	45460	5460
22464	EM3464	SE3464	WG840464	45461	5461
22466	EM3466	SE3466	WG840466	45470	5470
22467	EM3467	SE3467	WG840467	45471	5471
22458	EM3458	-	-	45458BF	5458
22459	EM3459	-	-	45488BF	5464
22465	EM3465	SE3465	WG840465	45458B	5462
22468	EM3468	SE3468	WG840468	-	5465
22469	EM3469	SE3469	WG840469	-	5464
26726	-	-	-	-	-
26727	EM3727	-	WG840727	43727	1859
26728	EM3728	-	WG840728	43728	1860
26729	EM3729	-	WG840729	43729	1861
26730	EM3730	-	WG840730	43730	1862
26731	EM3731	-	WG840731	43731	1868
26403	EM3403	-	-	60825	1873
26404	EM3404	-	WG840204	40825	1874
26405	EM3405	-	WG840205	30825	1875
26746	EM3746	-	-	-	1870
26458	EM3458	-	-	-	5458
26459	EM3459	-	-	-	5464
26465	EM3465	-	WG840465	-	5462
26468	EM3468	-	WG840468	-	5465
26469	EM3469	-	WG840469	-	5464

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Cross Reference Guide

JARD to MARS Cross Reference Guide

Start Capacitors

JARD	MARS
11903	11003
11904	11004
11905	11005
11906	11006
11907	11007
11908	11008
11909	11009
11910	11010
11913	11013
11914	11014
11915	11015
11916	11016
11917	11017
11918	11018
11919	11019
11920	11020
11921	11021
11922	11022
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11953	11053
11954	11054
11955	11055
11956	11056
11957	11057
11958	11058
11959	11059
11995	11060
11961	11061
11962	11062

Run Capacitors

JARD	MARS
12902	12002
12903	12003
12904	12004
12905	12005
12906	12006
12907	12007
12908	12008
12909	12009
12910	12010
12912	12012
12914	12014

Run Capacitors

JARD	MARS
12915	12015
12917	12017
12918	12018
12921	12021
12923	12023
12925	12025
12924	12024
12987	12087
12988	12011
12989	12089
12990	12090
12841	12141
12956	12056
12957	12057
12958	12058
12959	12059
12960	12060
12961	12061
12962	12062
12963	12063
12864	12064
12964	12164
12842	12142
12965	12065
12966	12066
12843	12143
12832	12131
12867	12167
12833	12133
12844	12144
12845	12145
12969	12069
12846	12146
12847	12147
12848	12148
12971	12071
12972	12072
12849	12149
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12858	12158
12871	12171
12852	12152
12834	12134
12874	12174
12853	12153
12836	12136
12837	12137
12838	12138
12854	12154
12855	12155
12839	12139
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12857	12157
12859	12159
12863	12163
12817	12123
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12934	12034
12936	12036
12937	12037
12940	12040

Run Capacitors

JARD	MARS
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12943	12043
12945	12045
12948	12048
12949	12049
12950	12050
12951	12051
12952	12052
12830	12130
12831	12135
12840	12140
12765	12165
12970	12170
12770	12270
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12777	12177
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12882	12182
12883	12183
12886	12186
12881	12181
12887	12187
12982	12038
12835	12035
12985	12085
12879	12179
12885	12185
12888	12188
12876	12176
12772	12272
12877	12080
12986	12086
12889	12189
12773	12273
12890	12190
12774	12274
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12913	12013
12775	12275
12822	12276
12809	12109
12776	12110
12810	12101
12815	12297
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12998	12098
12999	12099
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12714	12214
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12717	12217
12718	12218
12721	12221
12723	12223
12725	12225
12726	12226
12727	12227
12828	12128
12729	12229
12899	12199

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JARD	MARS
12916	12116
12701	12121
12702	12122
12703	12203
12704	12204
12705	12205
12706	12206
12707	12207
12760	12260
12716	12016
12708	12208
12709	12209
12711	12242
12875	12175
12761	12261
12762	12262
12713	12213
12720	12244
12763	12263
12764	12264
12724	12224
12728	12228
12939	12039
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12731	12231
12766	12266
12735	12235
12738	12238
12739	12074
12767	12267
12878	12178
12768	12268
12746	12246
12747	12073
12947	12247
12769	12269
12749	12249
12750	12250
12753	12075
12755	12191
12825	12192
12757	12239
12893	12193
12894	12194
12967	12067
12976	12076
12895	12195
12896	12196
12865	12265
12742	12042
12953	12053
12954	12054
12955	12055
12744	12044
12946	12046
12984	12084
12897	12197
12819	12198
12824	12201
12722	12202
12829	12129
12756	12230
12922	12222
12802	12102
12803	12103
12804	12104
12805	12105
12806	12106
12807	12107
12732	12232

Run Capacitors

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12734	12234
12736	12236
12737	12237
12740	12240
12741	12241
12743	12243
12745	12245
12748	12248
12751	12251
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12754	12254
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12759	12259
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12653	12353
12655	12355
12778	12278
12779	12279
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12814	12114
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12977	12077
12870	12070
12783	12283
12719	12119
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12797	12091
12978	12078
12785	12285
12786	12286
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12787	12287
12798	12088
12979	12079
12891	12219
12788	12288
12827	12127
12789	12289
12872	12172
12790	12290
12791	12291
12892	12124
12792	12292
12793	12293
12799	12299
12860	12160
12794	12294
12795	12295
12796	12296
12861	12161
12862	12162
12823	12255
12866	12166
12869	12169
12968	12168
12901	12125
12935	12047

Run Capacitors

JARD	MARS
12801	12257
12816	12216
12821	12117
12938	12022
12942	12020
12944	12001

Contactors

JARD	MARS
17121	-
17122	-
17123	-
17125	-
17126	-
17127	-
17311	91311
17312	91312
17313	91313
17315	91315
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17415	91411
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17417	-
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17426	91422
17427	91423
17435	91431
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17537	91533
17635	91631
17636	91632
17637	91633
17735	91731
17736	91732
17737	91733
17935	-
17936	-
17937	-
17997	91999
17998	91998
17999	91997

Pressure Switches

JARD	MARS
43901	43301
43902	43302
43903	43303
43904	43304
43905	43305
43906	43306
43907	43307
43911	43311
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43922	43322
43924	43324
43925	43325
43926	43326
43927	43327
43928	43328
43929	43329
43930	43330
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43932	43332
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43950	43350
43951	43351
43952	43352
43953	43353
43954	43354
43955	43355
43965	43365
43970	43370
43975	43375

Switching Relays

JARD	MARS
92290	90290
92291	90291
92292	90292
92293	90293
92294	90294
92295	90295
92340	90340
92341	90341
92342	90342
92360	90360
92362	90362
92364	90364
92370	90370
92372	90372
92374	90374
92380	90380
92382	90382
92384	90384

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15221	05221
15222	05222
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15312	05312
15411	05411
15412	05412
15421	05421
15422	05422
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15812	05812
15821	05821
15822	05822

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03585	M-42
03586	M-42
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03588	M-42
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03590	M-42
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03696	M-43
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05213	M-18
05221	M-17
05222	M-17
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05313	M-18
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05412	M-17
05413	M-18
05414	M-18
05421	M-17
05422	M-17
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05443	M-34
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05472	M-34
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05521	M-17
05721	M-17
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05822	M-17
05823	M-18
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07411	AM-8
07414	AM-8
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07471	AM-8
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07482	AM-8
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07572	AM-8
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07582	AM-8
07584	AM-8
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07594	AM-8
07595	AM-8
07596	AM-8
07709	AM-9
07801	M-45
07802	M-45
07804	M-45
07805	M-45
07807	M-45
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07922	AM-8
07993	AM-8
07995	AM-8
07996	AM-8
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D1050	F-6
D1050	F-15
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D1126	F-5
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D1152	F-5
D1152	F-17
D1152	O-7
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D1154	F-5
D1154	F-17
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D1164	F-3
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D1164	O-9
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