

# Commercial Motors



 **MARATHON<sup>®</sup>**  
**ELECTRIC**

*Motors for the Long Run!*

# Quality Motors that Keep

## General Purpose, EAct Motors...

Our EAct motors combine an optimum design that delivers energy savings performance year after year. These motors are available in open dripproof (ODP) construction from 1/4 through 500 horsepower and in totally enclosed fan cooled (TEFC) enclosures from 1/4 through 450 horsepower. The EAct motor comes in a variety of mounting configurations including rigid base, C-face rigid, close coupled JM and JP, and D-flange rigid. These motors are ideally suited for commercial applications such as heating, ventilating, air conditioning, pumping, and compressors.

The EAct ODP motors incorporate a 1.15 service factor, class B insulation system, ball bearings, and cast iron frame 280T frame and above. Our EAct motors also meet the NRCAN Canadian efficiencies and are UL recognized and CSA certified.

Marathon's EAct TEFC motors combine a class F insulation system with a 1.15 service factor, ball bearings, and offers superior performance. They are available from stock in both rigid base and C-face rigid base designs.

## Blue Chip® Motors...

Our Blue Chip® motors offer an optimum design that features low-loss electrical grade laminations, 100% copper windings, a precision air gap, and non-hygroscopic class F insulation through 445T and class H on 449T frame. The 230/460 and 460 volt motors are dual name-plated for 190/380 or 380 volt; 50Hz performance at the next lower horsepower.

Blue Chip® motors incorporate a 1.15 service factor, oversized ball bearings, and cast iron frames and end shields. The Blue Chip® is designed for extra demanding applications where premium construction and performance features are required.

The Blue Chip® motors are available in totally enclosed non-vent construction in 140 frame and totally enclosed fan cooled construction in 180 through 440 frame.

Blue Chip® efficiencies meet EAct 1997 energy levels and are tested to IEEE standard 112 test method B.

The Blue Chip® offers an affordable price for high quality motors that are designed to be used in demanding applications.



## EAct Moto

- 1. Insulation System** - Our non-hygroscopic class F and H insulation system achieve superior dielectric strength and long thermal life.
- 2. Bearing System** - Anti-friction ball bearings provide minimum friction losses and longer operating life.
- 3. Laminations** - Low-loss electrical grade steel, longer rotor and stator lengths allow for higher efficiencies and better operating performance.
- 4. Windings** - 100% copper and optimum winding design minimize losses resulting in higher efficiencies, increased motor life and lower operating cost.

# Commercial Buildings

## ...Running and Running!

### 48 Frame HVAC/R Motors...

Our heating / ventilating / air conditioning / refrigeration motors are built for the replacement market with built-in features to help ease the service technician's installation and eliminate call-backs.

Almost all of our 48 frame direct drive, fan blower, and condenser fan permanent split capacitor (PSC) motors are furnished with a color coded molded weather resistant reversing plug that ensures fast and easy reconnections. In installations where lighting is poor or the motor is hard to reach, the installer can quickly and accurately reverse the motor rotation by simply rotating and reconnecting the plug halves by 180°.

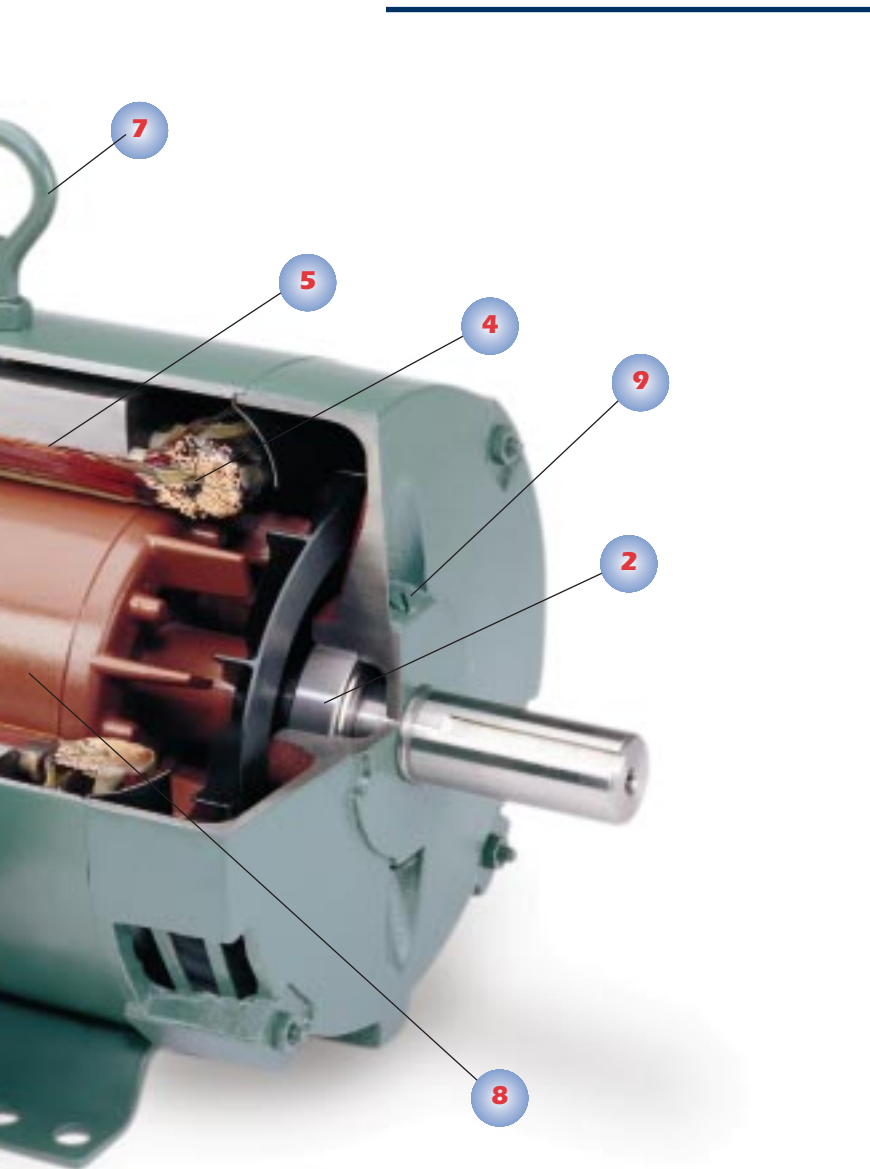
Marathon Electric's carton labels feature a photograph of the motor type for quick, easy identification. They also contain extensive electrical/mechanical data and cross reference information for accurate replacement motor selection.

In addition to our standard product offering, many direct OEM replacement motors are available from stock. We manufacture motors as replacements for Admiral, Carrier, Chrysler-Airtemp, Fedders, Friedrich, Hill, Rheem, and York, to name a few. These offer the service technician the capability of replacing the original motor without extensive modification to a generic rating.

### 56/140 Frame Motor Products...

We produce a full line of evaporative blower and condenser fan motors, commercial oil burner motors, and commercial and industrial fan exhaust ventilator motors. A number of these three phase motors use our patented Voltage Change Device™ (VCD). Rather than connecting numerous leads, the VCD plug allows you to change the voltage in seconds. By simply pulling a multi-conductor plug, rotating it 180° and reinserting. It's that fast!

Our unique 56/140 frame motor product is available in thousands of different configurations and provides for interchangeability between C-face, dripproof, and TEFC mounting in a single enclosure. The Four-In-One design is ideally suited for replacement of dripproof, TEFC, C-face or standard horizontal motors. Applications include gears, pumps, fans, and blowers.



### Motor Features

5. **Air Gap** - A precision machined air gap provides consistent electrical performance.
6. Oversized conduit box.
7. Lifting provisions on 180 frame and up.
8. Dynamically balanced rotors to insure smooth operation.
9. Regreasing provisions on 180 frame and up.
10. Nameplate shows 60Hz and 50Hz. 50Hz is at next lower horsepower, 190/380 or 380 volt.

# Quality Motors for the Commercial Marketplace

*Motors for the Long Run!*

## EPAct Motors...

### Dripproof:

- Rolled steel frame 143-256T
- Cast iron frames 284T-449T
- Class B insulation
- NEMA design B with 1.15 service factor
- UL recognized and CSA certified

### Totally Enclosed Fan Cooled:

- Rolled steel or aluminum frame construction with die cast aluminum end shields
- Non-hygroscopic class F insulation
- NEMA design B with 1.15 service factor
- UL recognized and CSA certified



General Purpose Dripproof  
Meets EPAct and Canadian NRCAN

## Blue Chip® Motors...

- Cast iron frame and end shields
- Double shielded oversized ball bearings (2 pole 254T and larger are single shielded)
- NEMA design B with 1.15 service factor
- Stainless steel nameplate
- Available from 3/4 through 450 HP in rigid base, C-face, or D-flange designs
- UL recognized and CSA certified



Blue Chip® Totally Enclosed  
Meets EPAct and Canadian NRCAN

## 48 Frame HVAC/R Motors...

- Economical permanent split capacitor designs (PSC)
- Single or multi-speed
- Auto-reset protectors, where applicable
- All angle sleeve bearing for quiet operation or permanently lubricated ball bearings
- Zinc phosphate on shafts provide added corrosion resistance
- Baked on powder paint provides more durability
- Direct OEM replacements for "drop in" installation
- Quick-change reversing plug for rotation on some models
- UL recognized and CSA certified



48 Frame with Reversing Plug

## 56/140 Frame HVAC/R Motors...

- Capacitor start induction run or capacitor run single phase designs
- NEMA service factors
- Permanently lubricated ball bearings
- Baked on powder paint provides more durability
- Patented Voltage Change Device™ (VCD) available on some three phase models
- Snap action **PowerSwitch** gives higher starting torque on single phase Four-In-One designs
- UL recognized and CSA certified



56 Frame with VCD



For more information contact Marathon Electric at:



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