



# HEATMASTER<sup>®</sup> ULTRA MOTORS

HEAD PRESSURE - SPEED CONTROL DUTY  
FOR HVAC & REFRIGERATION CONDENSER  
FAN APPLICATIONS

# HEATMASTER® ULTRA MOTORS

DESIGNED AND ENGINEERED

FOR USE WITH HEAD PRESSURE - SPEED CONTROLS!

## 80°C

### KEY FEATURES

#### CLASS F INSULATION

- 80°C (176°F)

#### SPEED ENGINEERED® MOTORS

- For use with head pressure - speed controls

#### SYNTHETIC BEARING GREASE

- For high temp applications

#### MULTIPLE MOUNTING HOLES

- For easy mounting

### APPLICATIONS

- Residential HVAC condenser fans
- Commercial refrigeration condenser fans



# HEATMASTER® ULTRA MOTORS

## FEATURES

### 1. 80°C (176°F) MAX AMBIENT

UL and CSA rated for 80°C max ambient temperatures

### 2. CLASS F INSULATION

UL and CSA approved, non-hygroscopic Class F insulation system achieves superior dielectric strength for long thermal life

### 3. BEARINGS

Double sealed anti-friction ball bearings packed with ultra high temperature synthetic grease for long reliable life

### 4. SPEED ENGINEERED® MOTORS

Suitable for use with most head pressure - speed control devices

### 5. WINDINGS

100% copper windings and optimum winding design minimize losses resulting in higher efficiencies, increased motor life and lower operating cost

### 6. MULTIPLE MOUNTING OPTIONS

Supplied with pre-drilled holes in the shell and lead end, end frame for easy mounting: Mounting screws are supplied as an added convenience

### 7. TEAO

Totally enclosed motors suitable for all angle mounting

### 8. REVERSIBLE

Supplied with water resistant reversing plugs for quick and easy rotation change

### 9. HIGH TEMPERATURE

UL and CSA approved automatic overload reduces nuisance trip outs

### 10. LEADS

48" color coded high temperature leads for easy identification and installation

### 11. WATER SEAL

Water resistant rubber grommet at lead opening eliminates water seepage into the motor

### 12. EFFICIENCY

Conservationist® motor: energy-efficient PSC designs

### 13. BEARING PROTECTION

Large high temperature nylon glass filled shaft slinger keeps water and dirt out of the motor bearings

### 14. ROTOR COATING

Corrosion resistant coating on rotor core for longer motor life

### 15. DRAIN PLUGS

Easy-to-remove drain plugs in each end frame allows accumulated condensation to be expelled quickly

### 16. MOUNTING BOLTS

Adjustable thru-bolts with extensions on each end provide maximum mounting versatility

### 17. FASTENERS

Extra mounting nuts are supplied to allow for quick installations

### 18. DIAGRAMS

Large, easy-to-read connection diagrams are attached to each white lead wire

### 19. HIGH TORQUE

Ultrahigh torque designs handle even the heaviest loads

### 20. SERVICE FACTOR

Designed with up to 50% more horsepower for replacing motors with large high-pitch fan blades or motors in low voltage applications

### 21. EXTENDED WARRANTY

All HeatMaster motors carry a 3-year warranty from date of manufacture or 2 years from the date of installation

### 22. APPROVALS

UL recognized and CSA certified

# HEATMASTER® ULTRA MOTORS

## SPECIFICATIONS

- 80°C (176°F) max ambient
- Speed Engineered® motor, for head pressure - speed controls
- Double sealed ball bearings with high temperature synthetic grease
- Energy-efficient PSC design
- 3-year warranty from date of manufacture date code, or 2 years from the date of installation
- High-temperature UL/CSA approved overload protector
- UL/CSA approved Class F insulation
- Water-resistant reversing plug
- All-angle mount
- Mounts by belly band, adjustable extended thru-bolts, or mounting holes, with screws supplied
- Lead length 48"
- 60 Hertz
- Totally enclosed
- Continuous duty, air over



## APPLICATIONS

- HVAC condenser fans
- Refrigeration condenser fans

### CLASS F INSULATION – 80°C (176°F) MAX AMBIENT

STOCK NUMBER	HP	VOLTS	AMPS	RPM	SPEEDS	FRAME SIZE	ROTATION	CAPACITOR	BEARINGS	SHELL LENGTH	SHAFT	WT.
<b>825 RPM - 208-230 VOLTS</b>												
FE1008SU	1/8	208-230	1.0	825	1	48	Reversible	5MFD / 370V	Ball	4.24"	1/2" x 6-1/2"	11.0
FE1018SU	1/6	208-230	1.1	825	1	48	Reversible	5MFD / 370V	Ball	4.11"	1/2" x 6-1/2"	11.0
FE1028SU	1/4	208-230	1.2	825	1	48	Reversible	5MFD / 370V	Ball	4.61"	1/2" x 6-1/2"	15.0
FE1038SU	1/3	208-230	1.6	825	1	48	Reversible	7.5MFD / 370V	Ball	5.11"	1/2" x 6-1/2"	15.3
FE1058SU	1/2	208-230	2.3	825	1	48	Reversible	10MFD / 370V	Ball	5.61"	1/2" x 6-1/2"	15.4
<b>1075 RPM - 208-230 VOLTS</b>												
FE1016SU	1/6	208-230	1.4	1075	1	48	Reversible	5MFD / 370V	Ball	3.99"	1/2" x 6-1/2"	11.0
FE1026SU	1/4	208-230	1.9	1075	1	48	Reversible	5MFD / 370V	Ball	4.36"	1/2" x 6-1/2"	13.0
FE1036SU	1/3	208-230	2.5	1075	1	48	Reversible	7.5MFD / 370V	Ball	4.86"	1/2" x 6-1/2"	15.9
FE1056SU	1/2	208-230	3.8	1075	1	48	Reversible	10MFD / 370V	Ball	5.36"	1/2" x 6-1/2"	18.0
FE1076SU	3/4	208-230	5.1	1075	1	48	Reversible	15MFD / 370V	Ball	5.61"	1/2" x 6-1/2"	18.3
<b>1075 RPM - 460 VOLTS</b>												
FEH1026SU	1/4	460	0.9	1075	1	48	Reversible	7.5MFD / 370V	Ball	4.74"	1/2" x 6-1/2"	12.7
FEH1036SU	1/3	460	1.2	1075	1	48	Reversible	7.5MFD / 370V	Ball	5.24"	1/2" x 6-1/2"	15.4
FEH1056SU	1/2	460	1.5	1075	1	48	Reversible	10MFD / 370V	Ball	5.61"	1/2" x 6-1/2"	19.0
FEH1076SU	3/4	460	2.2	1075	1	48	Reversible	10MFD / 370V	Ball	6.11"	1/2" x 6-1/2"	22.8

## 4-IN-1® MOTORS

### MULTI-HORSEPOWER REPLACEMENT MOTORS

EASY INSTALLATION, ONE CAPACITOR (7.5MFD / 370V) AND TWO LEADS.

STOCK NUMBER	HP	VOLTS	AMPS	RPM	SPEEDS	FRAME SIZE	ROTATION	CAPACITOR	BEARINGS	SHELL LENGTH	SHAFT	WT.
ORM5488BU	1/3-1/8	208-230	1.8	825	1	48	Reversible	7.5MFD / 370V	Ball	4.86"	1/2" x 6-1/2"	15.8
ORM4688BU	1/3-1/8	460	1.0	825	1	48	Reversible	7.5MFD / 370V	Ball	5.24"	1/2" x 6-1/2"	17.0
ORM5454BU	1/8 -1/15	208-230	0.8	1075	1	48	Reversible	5MFD / 370V	Ball	3.99"	1/2" x 6-1/2"	11.0
ORM5458BU	1/3-1/6	208-230	1.9	1075	1	48	Reversible	7.5MFD / 370V	Ball	4.11"	1/2" x 6-1/2"	11.8

**Note:** Suitable for use with most solid state speed control devices.

It is the responsibility of the installer to properly adjust the speed control to the motor for the specific application. The correct voltage settings are application specific and unique to each motor. Failure to perform proper set up can lead to substandard performance and/or failure of the system components. Do not set the voltage at the motor to less than 1/2 the motors rated voltage.

# What if...

you had a motor where you could adjust the speed using a head pressure fan speed control and still not overheat or trip the internal protector?



## THE FUTURE IS NOW

### SPEED CONTROLS

Head pressure fan speed controls, while offering advantages of greater control and system efficiency for commercial HVAC and refrigeration motor applications, can also cause premature motor failures in motors not designed specifically for their use.

Our Speed Engineered® HeatMaster® Ultra motors are specially designed and constructed to handle the higher temperatures that can occur when PSC motors are applied with speed controls. Our Speed Engineered solution adds features to reduce nuisance trip outs, bearing failures and premature winding failures.

### HIGH ALTITUDE APPLICATIONS

Air at high altitude is less dense than air at sea level, reducing its convective capability and overall heat capacity. All electric devices that rely on natural or forced convection to dissipate heat will experience greater air and component temperature rises for the same amount of power at high altitudes. HeatMaster Ultra motors are UL and CSA tested for 80°C ambient conditions which make them good candidates for these applications.

### NEW HEATMASTER ULTRA LINE

Our customers realize that when they purchase a Century® motor, they have purchased a "field-proven" motor that will meet, and often exceed, their installation and performance needs.

It's that special combination of experience, expertise and matchless workmanship that has allowed us to offer the most advanced replacement motor available in the industry.

The new HeatMaster Ultra line is now available exclusively from your authorized Century motor distributor.

### SUPERIOR FEATURES

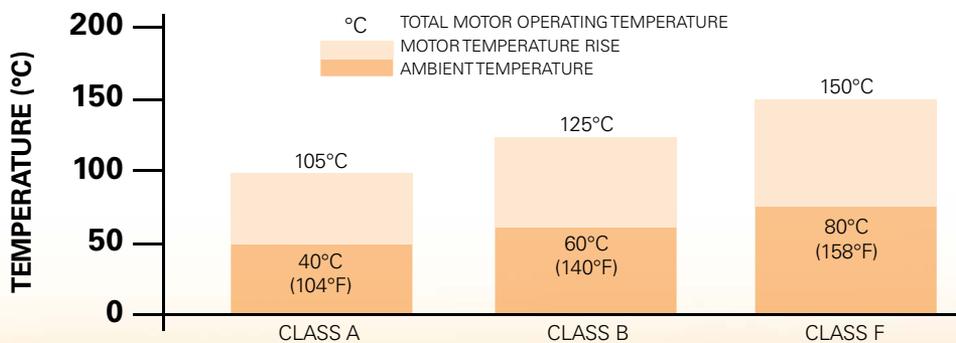
In addition to all the features and benefits of the original HeatMaster motor, HeatMaster Ultra motors also have the following added features:

- Speed Engineered HeatMaster Ultra motors' optimized design allow operation with most **head pressure-speed controls** that are often used with head pressure sensors.
- Class F insulation, high temperature thermal overload protectors and high torque designs mean HeatMaster Ultra motors will handle extreme applications that typical PSC motors cannot withstand.
- UL and CSA tested for **80°C ambient conditions**... another first from Century motors.
- Ultra High temperature **synthetic bearing grease** in double sealed ball bearings to make sure the bearings can stand up to the most severe conditions for the intended applications.
- **Multiple mounting holes** predrilled in the end frame with mounting screws provided. As manufacturers change their mounting configurations, it's important for replacement motors to keep up to date with these changes.

### 3-YEAR WARRANTY

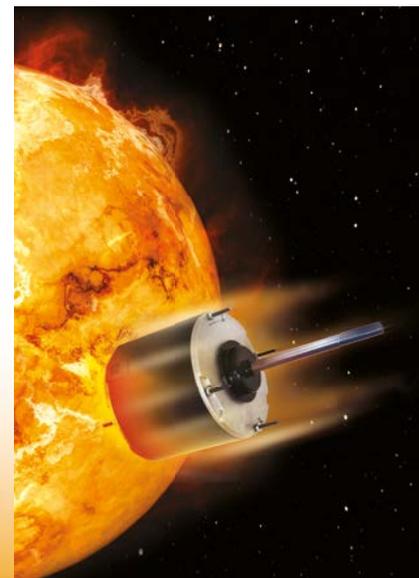
We are so confident in the design and quality of the HeatMaster® Ultra line that we back it up with a 3-year warranty.

### NEMA® Insulation Class Comparison



### HeatMaster Ultra Motor

Compare to see why HeatMaster Ultra Class F insulation motors are the serviceman's choice for high ambient replacement motors.





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**APPLICATION CONSIDERATIONS**

The proper selection and application of products and components, including paying full attention to the subject of product safety in the application, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, maintenance requirements, installation configurations, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or reviews furnished by Regal Beloit America, Inc. or its affiliates ("Regal") with respect to the use of products and components is given in good faith and without charge. However, Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and reviews being given and accepted are at the customer's risk.

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