

# Hostile Duty Motors

## Cast Iron Frame, Totally Enclosed Fan Cooled



**Horsepower:** 1 – 200 HP

**Phase:** Three

**Speeds:** 3600, 1800, 1200 and 900 RPM

**Enclosure:** Totally Enclosed Fan Cooled (TEFC)

**Efficiency Level:** NEMA Premium<sup>®†</sup> Efficient – IE3



### Product Overview and Features

U.S. MOTORS<sup>®</sup> brand Hostile Duty motors are designed for industry. This general purpose NEMA Premium<sup>®†</sup> motor line meets Energy Independence and Security Act (EISA 2007) efficiency requirements. Hostile Duty totally enclosed fan cooled motors reduce operating costs and are suited for rugged applications like pumps, compressors, conveyors or blowers in dusty, damp or dirty environments. Hostile Duty motors are the appropriate choice for applications where the motor works continuously and energy efficiency is a must.

U.S. MOTORS<sup>®</sup> brand Hostile Duty motors are available in TEFC ratings from 1 – 200 HP, dual frequency nameplate. Cast iron construction, corrosion resistant mill and chemical duty paint, heavy gauge steel fan covers and conduit boxes are some of the features of this heavy duty workhorse.

#### Applications:

Light and heavy industrial applications like those found in pulp and paper plants, saw mills, mines, foundries, chemical plants, waste management facilities – any industry requiring an EISA compliant motor in harsh operating conditions.

#### Mechanical Features:

- Available in T-Frame and C-Face
- Cast iron frame (140: Rolled Steel), cast iron end brackets
- Corrosion resistant mill and chemical duty paint
- Stainless steel nameplate (with CE mark) and zinc-plated hardware
- Shaft slinger
- Regreasable ball bearings 250 Frame and up
- Double shielded bearings 140– 360, open on 400– 440
- Steel fan cover and conduit box
- Field convertible to F2 mounting 180 Frame and larger
- Condensation drains with plastic plugs
- Conversion kits: Severe duty. All cast iron upgrade, C&D flanges, drip cover kit
- Dynamically balanced rotors for reduced vibration
- Lifting provisions on 180 Frame and larger
- Dual drilled frames 182T – 445T, TS



Hostile Duty Motor



Hostile Duty C-Face Motor



## Product Overview and Features *continued*

### Electrical Features:

- Voltage Ratings:
  - **1–30 HP:** 200, 208–230/460, 575 Volts
  - **40–100 HP:** 200, 230/460, 575 Volts
  - **125–200 HP:** 460, 575 Volts
- 1.15 service factor@60 Hz
- 60 & 50 Hz ratings on the nameplate:
  - 208–230/460 or 460V at 60 Hz
  - 190/380 or 380V at 50 Hz
  - Full HP at 50 Hz
- Class F Insulation, Class B Rise at full load on 60 Hz sine wave power

- 40°C ambient, NEMA<sup>®†</sup> design B performance on 60 Hz sine wave power
- Suitable for Wye-Delta 250 Frame and up

### Warranty:

- 3 Years from date of installation;  
42 months from date of manufacture

### Inverter Use:

- 20:1VT 4:1 CT when applied within maximum cabling guidelines

## Hostile Duty Conversion Options

- All cast iron construction
- C-Face and D-Flange kits
- F1–F2 conversion (180 Frame and up)
- Drip cover kits
- Oversized conduit box
- Division II non-listed (temp codes T-4 to T-6 not available)
- Roller bearing conversion: 404T–447T Frame

## The Energy Independence and Security Act and What It Means To You

On December 19, 2010, commercial and industrial motor manufacturers and importers raised efficiencies to the NEMA Premium<sup>®†</sup> levels for all general purpose motors up to 600 volts, from 1 to 200 horsepower, in NEMA frame sizes. Additional categories of motors were raised to energy efficient levels.

### What does this mean for your business?

- The implementation of NEMA Premium<sup>®†</sup> and the elimination of the corresponding energy efficiency standards has removed models in both stock and configured categories.
- All customers, whether OEM, reseller or end-user need to comply.
- OEMs may require 3rd party certification of their equipment through UL<sup>®</sup> / CSA<sup>®</sup>.
- End-user will see first cost go up, but will benefit from life cycle reduction in energy costs.

### We make the transition EASY

In addition to the cast iron frame, totally enclosed fan cooled Hostile Duty motor featured on this sheet, Nidec Motor

Corporation's line of high performance commercial and industrial U.S. MOTORS<sup>®</sup> brand motors is designed to help industry reduce energy consumption and comply with EISA regulations.

All high performance motors carry a nameplate including both 50 and 60 Hz operating data, a NEMA Premium<sup>®†</sup> trademark and European IE efficiency marks, providing a clear means for both users and OEM's to verify global regulatory compliance.

The NEMA Premium<sup>®†</sup> line also complies with recent Canadian and Mexican standards.

### Want to learn more about motor efficiency and saving energy costs?

The online MotorPro<sup>®</sup> training tool features a new module on electric motor energy efficiency. Just visit [www.usmotors.com/motorpro](http://www.usmotors.com/motorpro), and choose Module 3 for complete details on energy laws and efficiency — and on how you can reduce your energy usage and operating costs.

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