

HORIZONTAL A.C. MOTORS

Totally Enclosed Fan Cooled Enclosure
Fire Pump Motors



Product Overview and Features

On January 1, 1998, all fire pump manufacturers were required to have motors UL Listed specifically for Fire Pump applications. At that time, we released the UL Listed Fire Pump Motor line. Fire Pump Motors were designed per UL-1004A (currently UL-1004-5) and met the NFPA 20 "Standard for the Installation of Stationary Pumps for Fire Protection."

U.S. MOTORS® brand TEFC fire pump products are fully compliant with federal motor efficiency requirements as described in the Energy Independence and Security Act of 2007 also known as EISA. All fire pump motors provide necessary identifying nameplate data.

On May 14, 2013, Nidec Motor Corporation expanded its UL Listed Fire Pump Motor file (EX5189) to include inverter duty (10:1 variable torque), 500HP or less, and frame sizes 143-5012. For Nidec Motor Corporation to be able to apply the UL Listed Fire Pump label, motors must meet the following requirements:

- Designed to meet NEMA®† Design "B" parameters per NEMA®† MG1-2014
- Calculated Safe Stall Time must exceed 12 seconds (cold) / 8 seconds (hot)
- Motors designated for Canada must meet CSA-390 Table 2 efficiency values
- 600V or less
- 500HP and lower
- 5012 frame and smaller
- 1.15 service factor (max)

NFPA®†: National Fire Protection Association

A worldwide leader in providing fire, electrical, and life safety to the public since 1896, the mission of the international nonprofit NFPA®† is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically-based consensus codes and standards, research, training and education. NFPA®† membership totals more than 75,000 individuals from around the world and more than 80 national trade and professional organizations.

For more information, go to www.nfpa.org

Motor Specifications:

Horsepower: 1 – 500 HP

Speed Range: 1800 – 3600 RPM

Rated Voltages: 200 through 575 Voltage at 60 Hz

Frame Sizes: 143T – 5012

Insulation: Class F insulation with Class B temperature rise at 1.0 service factor

Enclosure: Totally Enclosed Fan Cooled (TEFC)

Efficiency Level: Energy Efficient (IE2) and NEMA Premium®† Efficient (IE3)

For fire pump applications per NFPA®† 20 where contaminants are minimal



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Standard Features:

- 1.15 service factor
- Class F insulation, Class B temperature rise at 1.00 service factor (60Hz)
- 40°C Ambient, NEMA®† Design B performance on 60Hz Sine Wave Power
- Hostile Duty™ Construction - Cast iron frame 140-5012
- Cast iron end shields
- Steel fan cover and conduit box
- Corrosion resistant mill and chemical duty paint
- Stainless steel nameplate (with CE mark) an zinc-plated hardware
- Shaft slinger on drive end for IP54 protection
- Regreasable ball bearings 250 Frame and up
- Double shielded bearings 140 – 360, open on 400 – 440
- Field convertible to F2 mounting
- Condensation drains with plastic plugs
- Dynamically balanced rotors for reduced vibration
- Lifting provisions on 140 Frame and larger
- Dual drilled frames 143T - 447T/TS

Options and Accessories

Nidec Motor Corporation offers the following custom-design options on the U.S. MOTORS® brand TEFC Fire Pump motor:

- CORRO-DUTY® construction
- UNIMOUNT® construction
- Inverter duty 10:1 variable torque
- 50 Hertz voltages
- 50°C ambient
- C and D flanges
- Special paint
- Space heater
- Winding and bearing thermal protection



Warranty Information

Refer to the U.S. MOTORS® website (usmotors.com) for the most up-to-date warranty information.

All Nidec Motor Corporation products shall carry the limited warranty of 12 months from the date of installation, not to exceed 18 months from date of manufacture as specified in Section 5 of Nidec Motor Corporation's Terms and Conditions of Sale except those specifically listed below, or noted within individual product family pages within this catalog.

	Installed / Manufactured	Installed / Manufactured
TEFC Motors 140 - 447 NEMA Frames	Sine Wave Power	VFD Power
Epact	18 / 24 months	12 / 18 months
Premium Efficient & NEMA Premium®†	36 / 42 months	24 / 30 months
Inverter Duty	36 / 42 months	36 / 42 months
TITAN® TEFC Motors - 449 Frame and Larger	Sine Wave Power	VFD Power
Standard Efficient & Energy Efficient	12 / 18 months	12 / 18 months
Premium Efficient	24 / 30 months	18 / 24 months
Inverter Duty	24 / 30 months	24 / 30 months

For additional information, please refer to our Full Line Standard Motor Catalog (FL600) or contact your Nidec Motor Corporation representative.

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