

Horizontal TITAN® A.C. Motors

Totally Enclosed Fan Cooled Enclosure



Horsepower: 150 - 1000 HP

Speed Range: 400 - 3600 RPM

Rated Voltages: 460 through 6900 Voltage
50 or 60Hz

Frame Sizes: 449 - 5800

Bearings: Standard anti-friction bearings;
optional sleeve bearings

Efficiency Levels: Standard, Energy and Premium



Product Overview and Features

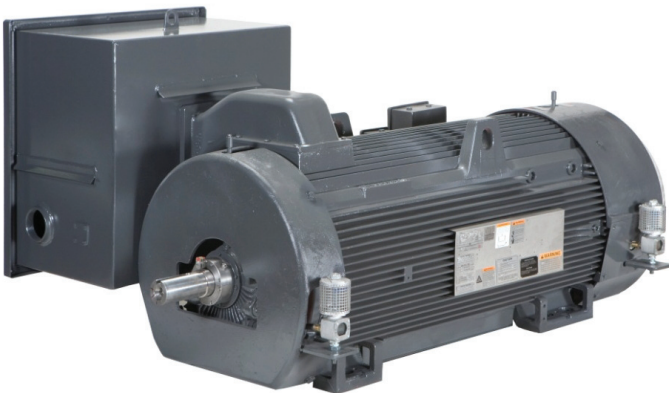
U.S. MOTORS® brand TEFC TITAN® motors are designed for use in hostile environments with pumps, compressors, fans, blowers and conveyors. TEFC TITAN® enclosures have cast iron frame, conduit box, bearing caps, and end shields. TITAN® TEFC motors are suited for use in the petrochemical, pulp and paper, wastewater, electric power, steel, forestry, cement, and mining industries.

Electrical and Mechanical Features

- 1.0 Service Factor
- Class B temperature rise at full load
- Class F insulation

- Re-greaseable ball bearings or oil lubricated sleeve bearings designs. Sleeve bearing design offers a horizontally split case and is spherically seated for self-alignment. Each bearing includes oil ring lubrication, a transparent oil level gauge, and fill and drain plugs.
- A coating of at least one cycle of VPI using 100 percent solids epoxy resin shields motor windings from environmental contaminants in humid, corrosive or salty atmospheres.
- Corrosion resistant paint capable of withstanding a 500-hour salt spray test
- Copper windings; aluminum rotors
- Cast iron frame construction and cast iron end brackets
- Zinc plated hardware

U.S. MOTORS® brand TEFC medium motor products have NEMA®† Design B performance; large machines have normal torque designs. All are designed to operate in 40°C ambient temperature and at a maximum altitude of 3,300 feet above sea level.



Product Overview and Options *continued*

Custom Design Options

- F1 (Standard) and F2 (optional) mounting positions
- Design for high altitude and high or low ambient temperatures
- 1.15 Service Factor
- Copper bar rotor
- Premium EVERSEAL®†
- Corro-Duty® (includes cast iron fan cover)
- Winding thermal protection options include 100 ohm, 120 ohm or 10 ohm RTDs, thermostats, thermocouples and thermistors
- Inverter Duty to meet NEMA®† MG1, Part 31
- Shaft Ground Rings
- Encoders
- Special-balanced and vibration tested
- Stainless steel hardware
- Provision for dowelling of feet
- Vertical jack screws
- Space heaters
- C face or D flange (449, 5000 and 5800 frames only)
- Sleeve-bearings spherically seated for self-alignment with a horizontally split case
- Proximity probes for sleeve bearings
- Roller bearings
- INPRO/SEAL®† VBXX®† Seals
- Shaft slingers
- Bearing RTDs and thermocouples
- Vibration detectors
- Division 2 Nameplate
- Crusher Duty

Conduit Box Options

- Oversized main conduit box
- Grounding lug in main conduit box
- Lead positioning gasket
- Surge capacitors, lightning arrestors and current transformers
- NEMA®† Type II conduit box with standoff insulators and copper buss bar lead connectors
- NEMA®† 4X conduit box

Testing

Nidec Motor Corporation conducts a short commercial test on each TITAN®† TEFC motor consisting of no load current tests, locked rotor current (performed at reduced voltage), winding resistance, high potential and a vibration check.

Optional Tests

- Witnessed short commercial test
- Witnessed or un-witnessed versions of the following tests are available:
 - Polarization index
 - Sound test
 - Sealed winding conformance test
 - Complete initial test consisting of a full load heat run and test of percent clip, calibration test, full load current, locked rotor torque, breakdown torque (calculated), efficiency, power factor at 100%, 75% and 50% of full load, short circuit and megger.
 - Special test to customer requirements

Warranty

TEFC TITAN®† motors carry the following warranties:

- Standard (Energy) efficient – 12 months from date of installation, maximum 18 months from manufacturing date
- Premium efficient – 24 months from date of installation, maximum 30 months from manufacturing date
- Inverter Duty - 24 months from date of installation, maximum 30 months from manufacturing date

U.S. MOTORS®† brand TEFC TITAN®† products are manufactured in our ISO 9001 certified Mena, Arkansas facility. For more information, contact your local sales representative or visit www.usmotors.com

For additional information, please refer to our Modified TITAN® Horizontal Motors Catalog (PB210) or contact your Nidec Motor Corporation representative.

† All marks shown within this document are properties of their respective owners.

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