

Horizontal TITAN® A.C. Motors

Totally Enclosed Tube Cooled Enclosure



Horsepower: 300 – 4000 HP

Speed Range: 400 – 3600 RPM

Rated Voltages: 460 through 6900 Voltage
50 or 60Hz

Frame Sizes: 5012 – 9610

Bearings: Standard anti-friction bearings;
optional sleeve bearings

Efficiency Levels: Standard and Premium



Product Overview

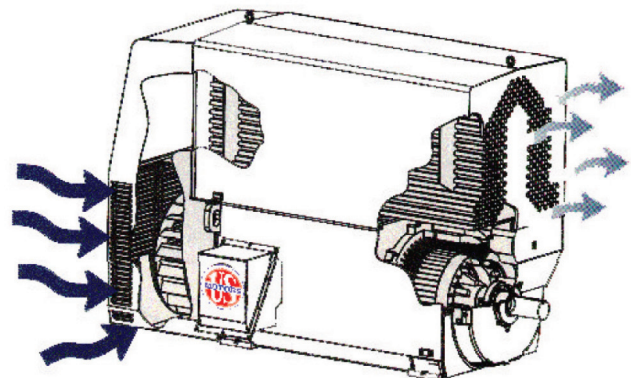
The TOTALLY ENCLOSED TUBE COOLED TITAN® motor type JT has a cast iron brackets and heavy fabricated steel frame construction with oversized grease lubricated anti-friction bearings. To ensure a high degree of corrosion resistance, steel tube construction is standard. Further, the top hat assembly is treated with a Vacuum Pressure Impregnation cycle of 100% solid epoxy coating all surfaces. The VPI system, along with other internal and external protective treatments, provides exceptional durability in hostile environments. The winding is constructed with full Class F materials and receives two cycles of 100% solid epoxy VPI.

Nidec Motor Corporation offers a wide range of totally enclosed motors designed to provide years of trouble-free service in your most demanding applications. Included in this group are fan cooled machines supplied with a top-hat mounted air-to-air heat exchanger.

In the cooling circuit, external air is forced through a strategically designed tube bundle. As cool air passes through the inside of each tube, hot air within the top-hat rises and circulates around the exposed tube surface. Convection allows the hot internal air to become cooled while the transferred heat is exhausted out the end of the top-hat. Since there is no free exchange of external and internal air, this product meets the NEMA requirements of a totally enclosed machine and is well suited for environments contaminated with airborne particles, moisture and corrosive agents.

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.
- Corrosion resistant paint capable of withstanding a 500-hour salt spray test
- Copper windings; aluminum rotors
- Fabricated steel frame construction and cast iron end brackets
- Zinc plated hardware
- A coating of two cycles of VPI using 100 percent solids epoxy resin shields motor windings from environmental contaminants in humid, corrosive or salty atmospheres.



Custom Design Options

In addition to its standard features, your TOTALLY ENCLOSED TUBE COOLED TITAN® motor may be modified to meet more demanding specifications. Listed below are commonly added accessories available for the type JT motor.

- F1 (Standard) and F2 (optional) mounting positions
- Design for high altitude and high or low ambient temperatures
- Copper bar rotor
- Premium EVERSEAL®†
- 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
- Special-balanced and vibration tested
- Stainless steel hardware
- Provision for dowelling of feet
- Vertical jack screws
- Space heaters
- Sleeve-bearings spherically seated for self-alignment with a horizontally split case
- Proximity probes for sleeve bearings
- INPRO/SEAL®† VBXX®† Seals
- Shaft slingers
- Bearing RTDs and thermocouples
- Vibration detectors

Electrical and Mechanical Features

- 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

Testing

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

Custom Design Options

- Witnessed short commercial test
- Witnessed or un-witnessed versions of the following tests are available:
 - Polarization index
 - Sound test
 - Spray 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.

Warranty

TEAAC 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 TEAAC 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.

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