

Horizontal Titan® III Motors

Designed to API® 547 Specification



Horsepower: 250 – 1000 HP

Enclosure: Totally Enclosed Fan Cooled (TEFC)

Bearings: Standard sleeve bearings;
optional anti-friction bearings

Efficiency Level: Standard High Efficient

Manufactured: Mena, Arkansas U.S.A.



Product Overview and Features

U.S. MOTORS® brand API® (American Petroleum Institute), specification 547 products, manufactured by Nidec Motor Corporation at its facility in Mena, Arkansas, are specifically designed to withstand the rigors of the petroleum, gas and chemical industries. Easy to specify, these API general purpose motors contain features required for safe, reliable operation in severe duty applications. The API endorsement on this product, via the API Monogram, symbolizes our commitment to delivering quality, value and customized solutions to our customers' motor challenges.

Nidec Motor Corporation Commitment to API 547 Standards:

Our Mena, Arkansas manufacturing facility has earned the prestigious API 547 Monogram and is certified for API Spec Q1. U.S. MOTORS brand products meeting API 547 standards are designed and built in this facility using quality methods and premium materials. The result is reliable power condensed into a compact, rugged motor.

API 547 Product Design:

Extensive design methods including computational fluid dynamics, electrical and structural finite element analysis, along with our own proprietary technologies are used to understand the design dynamics and optimize motor performance. Our engineers model stressful operating conditions to engineer-out variability in the motors' performance.

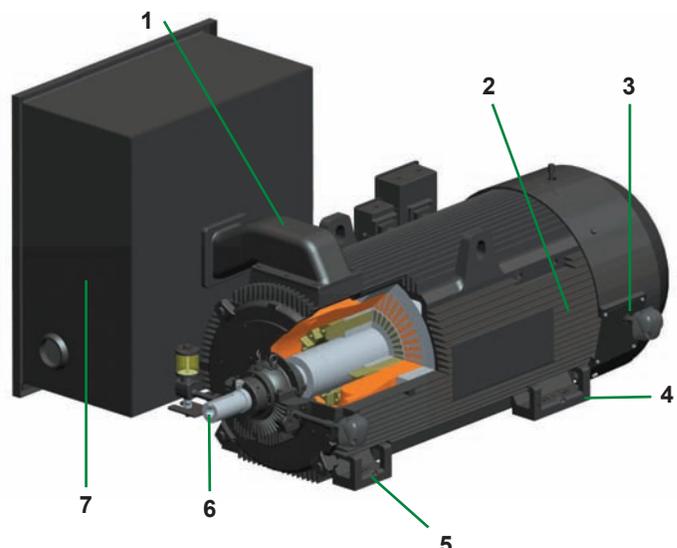
Advanced API 547 Features:

1. Easy F1 to F2 conversion with no frame change
2. Accurately placed accelerometer provisions
3. CORRO-DUTY® motors with corrosion protection and epoxy paint

4. Two grounding pads on frame
5. One frame-size down foot mounting holes provided for versatile mounting, one dowel pin hole in each mounting foot
6. Bi-directional rotation on 4-pole or slower machines
7. Spacious, oversized main conduit box for stress cones suitable for handling electrical accessories

Optional Accessories/Features:

- Auxiliary nameplate
- Copper bar rotor
- Operation in temperatures below -25°C or above 40°C
- Special shaft extension
- Operation in altitudes 3300 feet or more above sea level



Additional API® 547 Motor Information

Bearings

Sleeve bearings are standard; anti-friction bearings, optional. Both feature IP55 protection and electrical insulation. Sleeve bearings also feature a drive end bearing shorting device.

Vibration Detectors

Optional vibration detectors that measure housing vibration or shaft vibration are available for the Titan III. These detectors can be used on motors with sleeve or anti-friction bearings. We can supply a variety of detector choices and can accommodate customer-supplied and field-installed vibration detectors.

Shaft vibration detectors can only be used on motors with sleeve bearings. Motors can be provided with customer-specified probes and/or provisions to mount them.

Following are the API 547 motors available at 60Hz:

HP	Poles	Volts	Frame
250–700	2	2300/4000	5008–5012, 5812
250–1000	4	2300/4000	5008–5812
250–600	6	2300/4000	5008–5812
250–500	8	2300/4000	5008–5812

Motors, production equipment and materials are all tested at the Mena manufacturing facility

Testing measures:

- No-load current, power and speed
- Locked rotor current
- High potential
- Insulation resistance
- Stator resistance
- Bearing insulation
- Bearing temperature rise
- Vibration measurement
- Surge comparison test

Optional tests and inspection available:

- Complete test
- Sealed winding conformance test
- Rated rotor temperature vibration test
- Unbalance response test
- Witness tests

Nidec Motor Corporation motors meeting API 547 standards carry a two-year limited warranty when used on sine wave power that extends to a maximum of 30 months from the manufacturing date. Extended warranty is available for purchase.

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