

# Horizontal TITAN® 547 TEFC and WPII Motors Designed to API®† 547 Specification



**Horsepower:** 250 – 1000 HP

**Enclosure:** Totally Enclosed Fan Cooled (TEFC)  
and Weather Protected Type II (WPII)

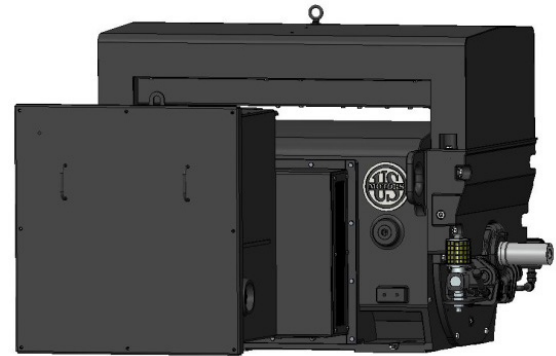
**Speed Range:** 3600 – 900 RPM

**Design Voltages:** 2300, 2300/4000 and 4000 Volts  
at 60 Hertz

**Bearings:** Standard Renk®† sleeve bearings;  
optional anti-friction ball bearings

**Efficiency Levels:** Premium Efficient

**Manufactured:** Mena, Arkansas U.S.A.



## Product Overview and Features

U.S. MOTORS® brand API®† (American Petroleum Institute), 547 products, 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 TITAN 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.

### TITAN 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.

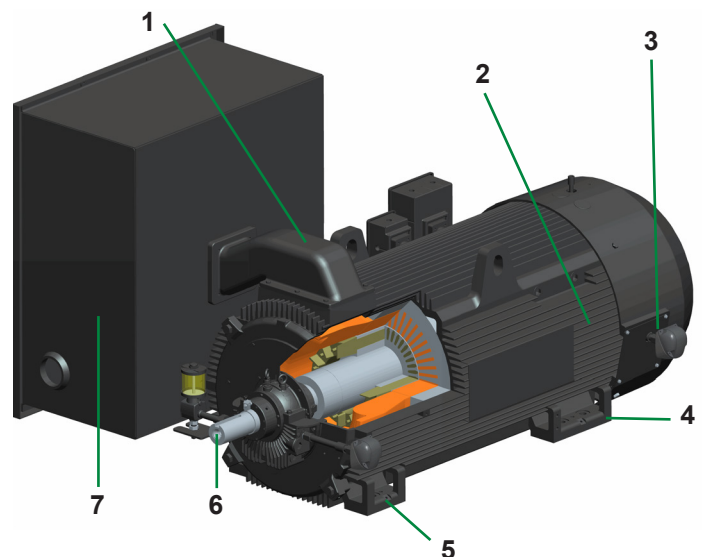
### Advanced TITAN 547 Features:

1. Easy F1 to F2 conversion with no frame change
2. Mounting provisions for vibration transmitters
3. CORRO-DUTY® motors with corrosion protection and epoxy paint

4. Grounding pads on frame
5. Dual drilled TEFC frames (standard frame & one frame below) with dowel pin provisions. WPII 5000 frames are tri-drilled.
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:

- Anti-friction ball bearings
- Copper bar rotor
- Operation in temperatures below -25°C or above 40°C
- Bently-Nevada®† Proximity Probe System
- Operation in altitudes 3300 feet or more above sea level



## Additional TITAN® 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 547. 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 TITAN 547 motors available at 60Hz:

TITAN 547 TEFC			
HP	Poles	Volts	Frame
250 – 700	2	2300/4000	5008 – 5012
250 – 1000	4	2300/4000	5008 – 5812
250 – 600	6	2300/4000	5008 – 5812
250 – 500	8	2300/4000	5008 – 5812

TITAN 547 WPII			
HP	Poles	Volts	Frame
250 – 1000	2	2300/4000	5008 – 5012
250 – 1000	4	2300/4000	5008 – 5012
250 – 600	6	2300/4000	5008 – 5012
250 – 400	8	2300/4000	5008 – 5012

## 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
- Witnessed tests

Nidec Motor Corporation motors meeting API 547 Standard 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.



Nidec Motor Corporation's Mena, Arkansas manufacturing facility has earned the prestigious API 547 Monogram and is certified for API Spec Q1.



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NIDEC MOTOR CORPORATION

8050 W. Florissant Avenue | St. Louis, MO 63136  
Phone: 888-637-7333 | Fax: 866-422-7758