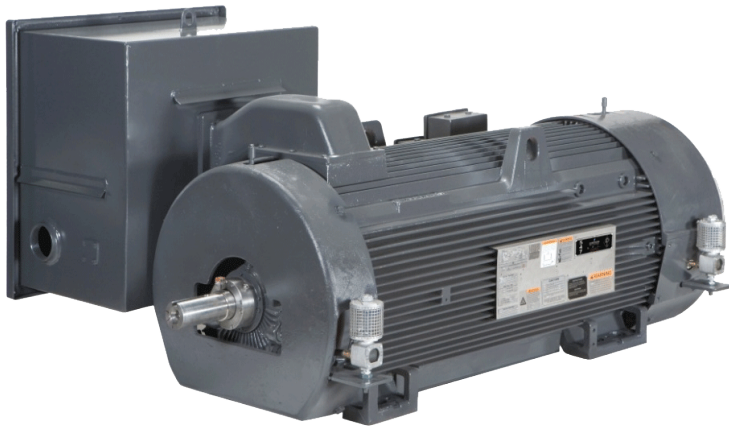


May 2010



## Horizontal Titan<sup>®</sup> III Motors Designed to API<sup>®†</sup> 547 Standards

**F**or years the Oil & Gas Industry has been looking for a standardized API<sup>®†</sup> 541 motor for general-purpose applications to simplify sourcing requirements and maintain superior motor quality. The solution is API 547 - a rigorous standard written to simplify the specification and ordering of large, severe-duty motors and enable shorter delivery times than typically expected with motors satisfying the API 541 specification.

Emerson, known for quality and dependability through the US MOTORS<sup>®</sup> brand, has utilized its Motor Technology Center (research center in St. Louis, MO) and manufacturing facilities in Mena, AR to develop the new Horizontal Titan<sup>®</sup> III Motor - designed to the rigid API 547 standards. This motor is designed specifically for use in Oil & Gas Processing applications such as centrifugal pumps, fans, compressors, and blowers.

The solution is simple. Emerson's API 547 motor.

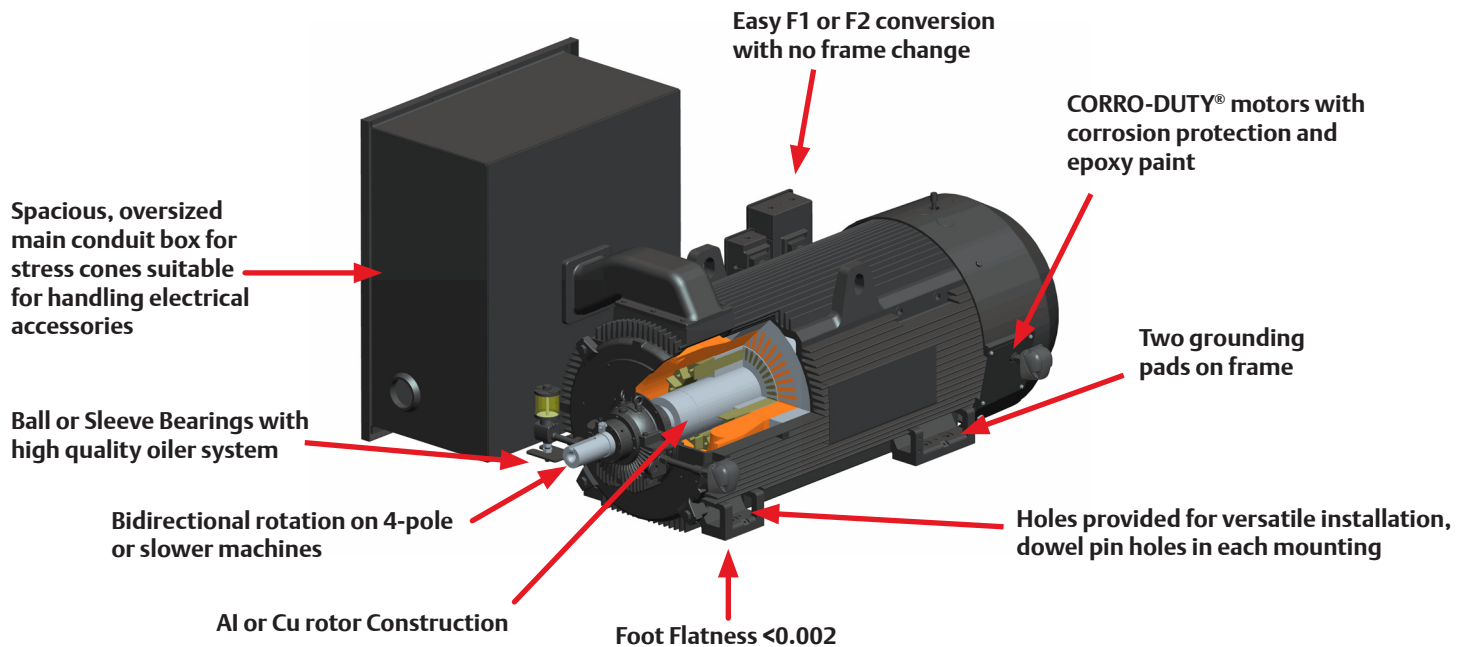
- **API 547 SPECIFICATION**
- **MADE IN USA**
- **HIGH EFFICIENCY**
- **250-1000 HORSEPOWER**
- **TEFC ENCLOSURE**
- **SLEEVE BEARINGS STANDARD WITH ANTI-FRICTION BEARINGS AS AN OPTION**
- **CSA CERTIFIED FOR DIVISION 2 INSTALLATION**



**EMERSON. CONSIDER IT SOLVED.<sup>®</sup>**

## Advanced API®† 547 Features

Emerson's team of engineers has applied more than 100 years of motor expertise to ensure its motors contain advanced features that meet API®† 547 standard.



The following API®† 547 motors are available at 60 hertz.

Horsepower	Poles	Volts	Frame
250-600	2	2300/4000	5008-5812
250-1000	4	2300/4000	5008-5812
250-600	6	2300/4000	5008-5812
250-550	8	2300/4000	5008-5812

The following options give Emerson the opportunity to tailor an API®† 547 motor that meets your needs. Optional accessories include:

- Mounting of customer-supplied half-coupling
- Auxiliary nameplate
- Copper bar rotor
- High or low ambient temperatures -- the ability to operate in temperatures below  $-25^{\circ}\text{C}$  or above  $+40^{\circ}\text{C}$
- Special shaft extension
- High altitude – the ability to operate in altitudes above 3300 feet above sea level
- Oil sump heaters (required on sleeve-bearing motors operating in ambient temperatures of  $-15^{\circ}\text{C}$  or less)

## Commitment to Standards

**EMERSON®** motors meeting API®† 547 standards are designed and built with quality methods and premium materials to help provide reliable power in a compact, rugged package. Electrical, Computational Fluid Dynamics, and Structural Finite Element Analysis, and Emerson’s proprietary technologies are all used to understand the design dynamics, optimize motor performance, model stressful operating conditions, and engineer-out variability. Not only must all components meet API Q1 quality requirements, but these motors must also meet Emerson’s own extensive test criteria, which ensure consistent delivery of excellent products.

**Emerson tests all of its motors extensively prior to shipment. API®† 547 testing comes standard with each EMERSON® motor. The test consists of measurements of the following:**

- No-load current, power, and speed
- Locked rotor current
- High potential
- Insulation resistance
- Bearing insulation
- Bearing temperature rise
- No load vibration heat run
- Surge comparison test

**Optional tests and inspections are available, including:**

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

Emerson is proud to be one of the first companies to earn the prestigious API 547 Monogram and to be certified with the API Spec Q1 quality program. This certification is one of many that our manufacturing facility in Mena, AR maintains. Other certifications and recognitions include ISO 9001-2000, and CSA®†



## Additional Facts About Our EMERSON® motors meeting API®† 547 standards

### Bearings

Sleeve bearings are standard, anti-friction bearings are optional. Both sleeve and anti-friction bearings are electrically insulated and feature IP55 protection.

- Motors with sleeve bearing have a grounding strap on DE bearing.
- Motors with anti-friction bearings include Inpro/Seal VBXX®† vapor blocking bearing isolator on both ends. The isolator on the drive end is fitted with an AEGIS®† grounding ring

### Vibration Detectors

Emerson offers optional vibration detectors that measure housing vibration or shaft vibration.

- Housing vibration detectors can be used on motors with sleeve or anti-friction bearings. Emerson can supply a variety of detector choices and can arrange to accommodate customer-supplied and field-installed vibration detectors.
- Shaft vibration detectors can be used only on motors with sleeve bearings. Emerson can either provide, or provide mounting provisions for proximity probes, proximitors, or keyphasers.

### Limited Warranty

EMERSON® motors meeting API®† 547 standards carry a two-year limited warranty\* from date of installation on sine wave power or a maximum of 30 months from the manufacturing date. Extended and deferred warranties may be allowed. Contact your Emerson Territory Manager for additional information.

*\*For more information, refer to <http://www.usmotors.com/FL600/LimitedWarranty.pdf>*

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*Emerson (NYSE:EMR), based in St. Louis, Missouri (USA), is a global leader in bringing technology and engineering together to provide innovative solutions to customers through its network power, process management, industrial automation, climate technologies, and appliance and tools businesses. Sales in fiscal 2008 were \$24.8 billion and Emerson is ranked 94th on the Fortune 500 list of America's largest companies. For more information, visit [www.Emerson.com](http://www.Emerson.com).*



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