September 2008









- API 547 Specification
- Made in USA
- High Efficiency
- ➤ 250-600 Horsepower
- > TEFC Enclosures
- Sleeve Bearings Standard with

**Anti-Friction Bearings as an option** 

## **Horizontal Titan® III Motors**

Designed to API®† 547 Standards

For years the Oil & Gas Industry has been looking for a standardized API®† 541 motor for general-purpose applications to minimize requisition complexity without sacrificing motor quality. The solution is the API 547 - a rigorous standard written to ease the specifying and ordering of large, severe-duty motors and enable quicker delivery times than usually expected with motors satisfying the API 541 specification.

Emerson, known for quality and dependability through the US MOTORS® 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® III Motor - designed to the rigid API 547 Standards. This standardized and highly efficient motor is designed for use in Oil & Gas Processing applications such as fans, compressors, centrifugal pumps and blowers. The solution is simple.

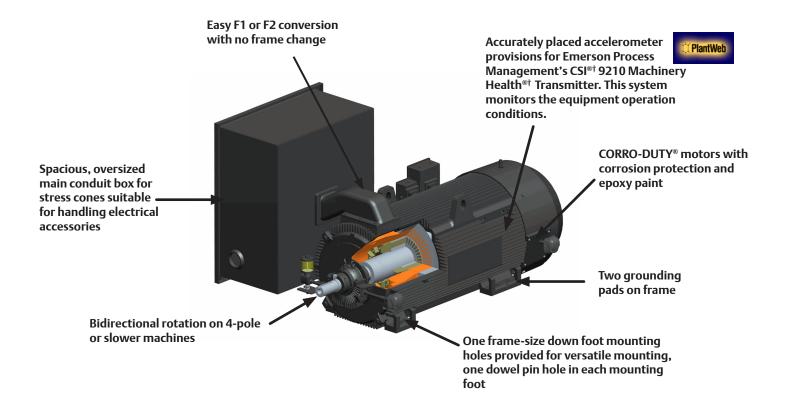
EMERSON. CONSIDER IT SOLVED.®





#### Advanced API®† 547 Features

Emerson's team of engineers has applied more than 100 years of motor expertise and the Motor Technology Center's cutting-edge laboratories to ensure its motors contain advanced features that meet API<sup>®†</sup> 547 standard.



# 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°C or above +40°C
- Special shaft extension

- ➤ High altitude the ability to operate in altitudes above 3300 feet above sea level
- ➤ Oil sump heaters (required on sleevebearing motors operating in ambient temperatures of -15°C or less)

#### **Commitment to Standards**

EMERSON® motors meeting API®† 547 standards are meticulously designed and built with quality methods and premium materials to provide reliable power condensed into a compact, rugged package. Computational Fluid Dynamics, Electrical 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 measures, 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, production equipment and materials. A test and report of test results come standard with each EMERSON® motor meeting API®† 547 standards. The test consists of measurements of the following:

- ➤ 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 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 for their quality program with the API Spec Q1. This certification is one of many that our manufacturing facility in Mena, AR maintains. Other certifications and recognitions include ISO 9000-2000, CSA, and UL.



### 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 feature IP55 protection, electrical insulation, and a grounding provision. For sleeve bearings, a grounding strap provides grounding, while anti-friction bearings feature a grounding seal on the shaft leading to lower maintenance. Emerson's anti-friction bearings also come equipped with zerk fittings at the bearing grease fill and Inpro/Seal<sup>®†</sup> and VBXX<sup>®†</sup> Vapor Blocking Bearing Isolators on both ends of the motor.

#### **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 offers provisions to mount probes, Proximitor probes, and keyphasers for proximity probes.

Horsepower	Poles	Volts	Frame
250 -500	2	2300/4000	5008-5012
250-600	4	2300/4000	5008-5012
250-450	6	2300/4000	5008-5012
250-350	8	2300/4000	5008-5012

EMERSON® 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 available for purchase.

Emerson, a global leader in the design and manufacture of electrical motors, provides a complete line of general and special purpose electric motors from 1/200 through 5,000 horsepower. Brands such as Emerson®, U.S. Motors®, and Hurst® allow Emerson to support a wide variety of applications including commercial and industrial, appliance, hermetic, automotive, and HVAC. Emerson (NYSE: EMR), based in St. Louis, 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.



### **Emerson Motor Company**

8100 West Florissant Ave. St. Louis, MO 63136 Phone: 888-637-7333

Fax: 314-553-2087



 $<sup>\</sup>dagger$  All non-Emerson Electric Co. marks shown within this document are properties of their respective owners.

 $<sup>^*</sup>$  Emerson trademarks followed by the @ symbol are registered with the U.S. Patent and Trademark Office.