



SIEMENS



API Standard 541 and 547

Above NEMA motors

Petroleum and Chemical Industries

Answers for industry.

The stakes are high. The choice is clear – Above NEMA motors from Siemens.

The highly demanding process industries from oil production and refining to chemical processing and power generation are the ultimate test of motor reliability. Continuous operation is critical to these industries, and an electrical or mechanical failure of a critical motor means not only lost production time, but lost revenue as well.

With production runs worth \$100,000 per hour or more, engineers in the process industries truly understand the importance of uncompromising motor reliability where performance is measured in years, not months, of uninterrupted service. Despite hostile environments, the motor must perform. Always.

The requirements for success in these settings are so crucial that the American Petroleum Institute has adopted two rigorous standards for motor performance—API 541 for critical service motors, and API 547 for severe-duty general purpose motors. For more than 20 years, Siemens motors, built in Norwood, Ohio, have been the API-standard motors of choice in hundreds of process facilities around the globe.

From the petrochemical complexes of the Gulf Coast to the emerging chemical industry of the Pacific Rim and the established corporate giants of the U.S. and Europe, Siemens motors are trusted the world over to deliver the custom-engineered performance the industry demands.

Proven engineering expertise at your service

Specifications for motors that meet the demanding API 541 standard can fill 20 pages and cost hundreds of thousands of dollars. That's a small price to pay for a motor that could save a company millions of dollars in a single afternoon. But in today's streamlined corporate structures few companies maintain the corporate engineering staffs needed to develop such detailed specifications.

API 547 was developed to provide a more standardized severe-duty general purpose motor with a more compact customer specification motor data sheet for horsepower ranges below those of API 541. For critical-duty motors and those with horsepower requirements above the limits of API 547, API 541 remains the standard.

No one meets these demanding standards with fewer comments or exceptions than Siemens. Which isn't surprising — with a global research and development team, state-of-the-art manufacturing and test facilities and the passion for being the market leader in medium voltage motors, Siemens is equipped to deliver the latest in innovations and concepts of motor design. From insulation design to rotor construction, and from low operating vibration levels and energy efficiency, Siemens products deliver customers the leading edge of technological innovation with superior lifetime value.



Siemens motors: Built in the USA with proven performance year after year...

While the two API standards are delineated by horsepower, specifiers should remember an even more important differentiator — the criticality of the application. When the motor is critical to the reliable operation of your process, engineering to the API 541 standard — even when the HP requirements would allow an API 547 motor — is always the clear design choice.

In general purpose applications that are non-critical but still severe-duty, the API 547 specification typically offers a less expensive alternative, allowing you to specify a motor that is appropriate for the application but not over-engineered.

Regardless of which best describes your application — critical or severe-duty — the Drive Technologies team at Siemens stands ready to assist, supplementing your engineering staff with our own experienced technical experts.

With extensive local expertise and factories around the world, Siemens assures you receive the highest quality motor, built to conform to all international and national requirements as well as the special requirements of your specific application.

Norwood motor facility is API certified

The Norwood, Ohio “Global Motor” manufacturing, research, and technology development center is certified by the American Petroleum Institute to use the Official API 547 Monogram.

In addition to the API 547 Monogram, Siemens is in conformance with API Specifications Q1 and ISO/TS 29001 for design and manufacture of electric motors. Siemens is the leading manufacturer of large AC induction motors to the petroleum and chemical industries.



Siemens Industry, Inc.
Drives Technology Division

American Petroleum Institute
API Standard 547
License Number 547-0004

API Standards 547 and 541 basic scope

Standard	Ratings (HP)	# Poles	Enclosure	Rotor Material	Siemens ANEMA Frames
API 547	250 – 3000	4 – 8	WPII & TEFC	Copper > 1000 hp	500 – SH560
	< 800	2	TEFC	Aluminum	500 – 580
	< 1250	2	WPII	Aluminum ≤ 1000 hp	500 – 580
API 541	> 3000	4 – 8	All	Copper	680 – SH710
	≥ 800	2	Enclosed	Copper	580 – SH710
	≥ 1250	2	WPII	Copper	500 – SH710
	≥ 500	2 – 8	All Verticals	Copper	500 – SH710



API 547	API 541
2.3 – 13.2 kV	2.3 – 13.2 kV
Horizontal mounting only	Horizontal and vertical mounting
WPII and TEFC	All enclosures
Sleeve bearings	Sleeve bearings

Quality Manufacturing

From design to materials to workmanship, quality is built into every Siemens motor, the result of more than 100 years of experience capped with today's advanced quality control procedures used in our Certified Quality Performance Program.

Comprehensive service and support

Siemens warranty, parts and service request call center is available 24/7, providing customers a single point of contact with efficient service and fast response times. Siemens service technicians take pride in finding the right solution, the first time, every time.

Contact Siemens Services

Telephone: 800-333-7421 (Toll Free)
423-262-5710 (Outside U.S.)

Online: www.siemens.com/automation/support-request

Siemens Motors and Drives, Performance-Matched Systems

Performance-matched variable-speed motors and drives from Siemens make perfect sense. They are designed to work in harmony for ease of selection and startup, as well as long-term reliability and exceptional performance.

Whether your application requires variable torque or constant torque capability in general purpose or severe duty environments, there is a Siemens motor/drive system ready to go to work for you.

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