

A close-up photograph of a Siemens SIMOTICS NEMA LV motor. The motor is a light grey color with a prominent cooling fan on the right side. A nameplate is visible on top, and a warning label with a lightning bolt symbol is on the left. The Siemens logo is embossed on the front housing. The motor is shown from a three-quarter perspective, highlighting its industrial design and cast iron construction.

SIEMENS

SIMOTICS NEMA LV Motors

SD661, Severe Duty Motor

API661 Air Cooled Heat Exchanger Applications

Built in compliance with the requirements of API661 standard, by incorporating regreasable roller bearings and cast iron end caps on frames 210-360, these motors are ideal for use for heavy belt driven air cooled heat exchangers applications in the petrochemical, energy and other similar industries.

Construction

A full cast iron construction for exceptional structural integrity, zinc plated corrosion resistance hardware, stainless steel-embossed letters and numbers nameplate, drains at the lowest point of both ends, and ingress protection IP56, for a long service life in the most harsh and demanding environments.

Their suitability for horizontal, shaft up, shaft down applications, an oversize and 90° rotatable cast iron conduit box, dual drill foot mounting holes and automatic relief fittings makes these motors the perfect fit every air cooling heat exchanger application possible.

Performance

SD661 severe duty TEFC motors are available in NEMA Premium® efficiency in a 5-75HP range (frame size 184T-365T). Its design exceeds the IEEE Std, 841TM -2009 standards for high performance, including features like Inpro/Seal® VBXX bearing isolators on the DE and ODE, 0.06 IPS vibration / 0.005" foot flatness and twice frequency line vibration limits.

Hazardous locations

CSA certified for Class I, Division 2, temperature code T3 for direct on line and variable speed drive operation with an up to 4:1 speed ratio in a constant torque and 20:1 on a variable torque application. Also suitable for Class I, Division 2 temperature code T3 on request.

Answers for industry.

Insulation

Proprietary inverter-rated Class F non-hygroscopic insulation system with NEMA Class B temperature rise @ 1.0 S.F. and Class F @ 1.15 S.F. provides extra margin of thermal life. Varnish system application ensures maximum wire penetration to provide protection from moisture, corrosion and electrical shock. This insulation system meets or exceeds NEMA MG1-2011, part 31 with suitability for variable speed drive operation up to 20:1 for constant and variable torque applications.

Rotor

Die cast aluminum rotor motors (143T-S449) meet or exceed NEMA Premium® efficiency levels, are dynamically balanced for extended bearing life. Rotor assembly includes a high strength carbon steel (C1045) shaft for maximum rotor performance.

Stator/Windings

Manufactured with premium electrical grade steel laminations and copper electrical magnet wire to reduce losses and improve efficiencies. A unique stator core design lowers flux density while increasing cooling capacity. Large conductor cross-section reduces resistance and lowers stator losses.

Conduit Box

Oversized cast iron construction, larger than industry standards, diagonally-split, gasket and rotatable in 90° increments for quick and easy connections. A ground lug is provided. Non-wicking, clearly and permanently marked leads.

Bearings

Regreasable, oversized single shielded roller bearings on the drive end with cast iron inner caps for high mechanical performance in belted applications; non drive end is provided with oversized ball bearings. Alemite grease inlet fittings and automatic grease relief fittings for ease of routine maintenance. High water/contaminant ingress protection IP56, that includes Inpro/ Seal® bearing isolators as standard on bearing housings at both ends of the motor.

Lubrication

A specially formulated, high temperature tested, polyurea based grease. Seamless, stainless steel grease filled lubrication pipes are included.

Grounding

An aluminum box lug ground terminal located inside the conduit box and two external groundings located on each side of the motor to facilitate connection and increase safety. Terminal.

Modifiable and custom

SD661 motors are available with a wide variety of QuikMOD modifications and custom designs to meet your specific motor needs.



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SD661 Severe duty motors – the basis for a energy efficient and reliable air cooled heat exchanger

- NEMA Premium® efficiency
- Meets or exceeds IEEE841TM-2009
- Roller bearing on drive end
- Inpro/Seal™ VBXX bearing isolators ODE & DE
- IP56 ingress protection
- Drains at lowest point at both ends
- Suitable for horizontal, shaft up or shaft down
- 20:1 variable torque VSD operation
- Induced-draft, air-cooled heat exchanger fans

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