

# HVAC Rooftop Units (RTUs)

Turntide™ Technologies is defining a new standard for rooftop unit motor efficiency with the Smart Motor System. The system outperforms any existing motor technology with its software-enhanced, programmable Smart Motor. Its variable speed control platform delivers unprecedented levels of energy efficiency and diagnostics that have never been available with electric motors. The Turntide Smart Motor System significantly reduces the cost of HVAC and rooftop unit operation through energy and peak demand savings, yielding payback in less than three years for most applications.

## The Turntide Smart Motor System

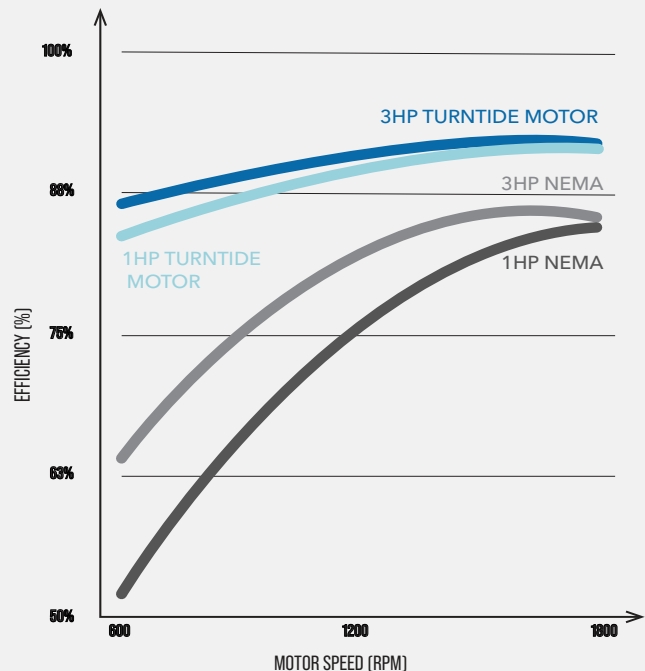
Most HVAC rooftop unit (RTU) systems waste energy by relying on inefficient motors that maintain constant speeds. Even newer systems with NEMA premium efficiency motors waste energy, primarily due to their constant speed operation. The Turntide Smart Motor System offers revolutionary new variable speed technology that makes the system more efficient, reliable, and intelligent.

### A truly intelligent system offers unprecedented efficiency

- Software control enables real-time, remote system monitoring and control via a web dashboard that communicates cloud-based data and analytics.
- Real-time monitoring includes an automated fault detection with the capability to send alerts if abnormal operating conditions arise. The system integrates easily with building management systems via industry standard protocols.
- Over-the-air updates enable performance optimization of embedded firmware and control sequences, resulting in a system that improves over time.

### Enhanced reliability

- Turntide Smart Motors are guaranteed for three years. Their simple, rugged design includes the highest quality components, long-life bearings, low operating temperatures, and low start-up inrush current/torque, providing fewer points of possible failure.



The Turntide Smart Motor System delivers dramatically higher efficiencies.



## Proven Performance

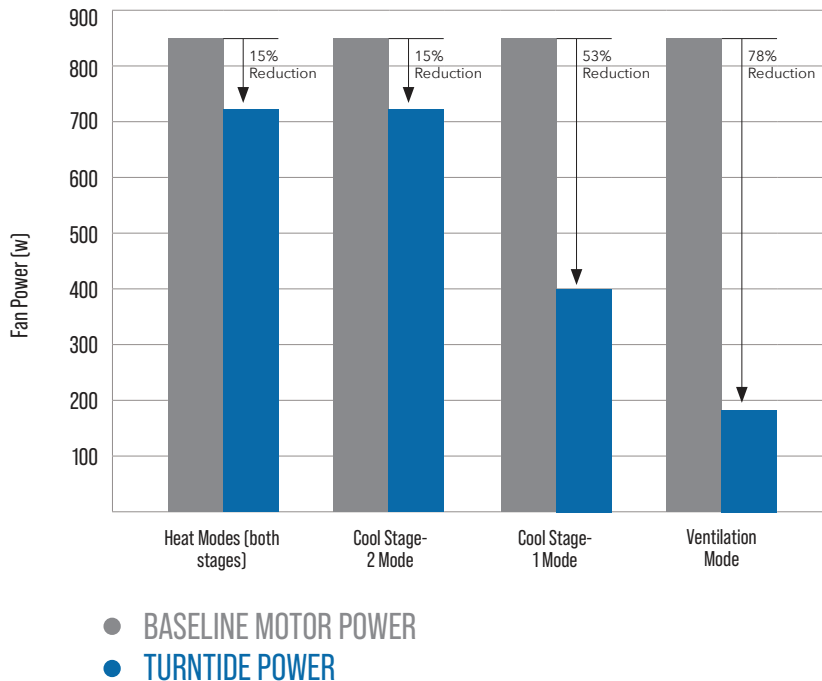
The results speak for themselves:

- Third-party lab testing by Southern California Edison (SCE) found that the Smart Motor System increased the average efficiency of the fan assembly by 23-28% across a wide range of static pressures and airflow rates.
- In the same trial, the SCE report illustrates the Turntide motor reduces annual energy usage by 50% to 57% when compared to the baseline single speed induction motor.

## Easy to Install

Turntide motors are drop-in replacements for existing NEMA frame motors. The installation process is simple. It comes with all components required for installation and requires minimal on-site commissioning, saving installation time.

FAN POWER SAVED BY APPLYING THE TURNTIDE SMART MOTOR TO A CONSTANT SPEED RTU



Bottom line, the Turntide Smart Motor System reduces air conditioning operating costs through a combination of energy savings and analytics that support smarter maintenance and a reduction in emergency service calls.

## Indemnity

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1295 Forgewood Avenue, Sunnyvale, CA 94089

sales@turntide.com

Turntide Technologies (formerly Software Motor Company) has developed the world's most efficient and intelligent electric motor system. The revolutionary Smart Motor System is based on proven switched reluctance technology, now managed with advanced cloud software and connected to precise controls via IoT. Turntide's vision is to eliminate the 25% of global electricity consumption that is wasted by legacy motors, thus accelerating the world's transition from fossil fuels. Turntide is based in Sunnyvale, Calif., with offices in San Francisco; Arlington, Wash.; and Kennesaw, Ga. Turntide has installed Smart Motor Systems with dozens of customers, reducing their motor electricity consumption by an average of 64%, and is powering the systems of leading OEMs. For further information, visit [www.turntide.com](http://www.turntide.com).