Immediate Energy Savings

Turntide motors save energy through patented switched reluctance design, which utilizes optimal device physics and control algorithms to run more efficiently.

Gets Better and Smarter Over Time

Turntide motors utilize operating conditions and runtime data to generate improved control algorithms that further optimize system efficiency.

The Turntide Smart Motor System™ for Rooftop Units

The Turntide Smart Motor System is a high-impact energy conservation measure that delivers immediate and long-term savings. By swapping out legacy AC induction motors and replacing them, Turntide reduces HVAC energy use by an average of 64%.
What’s in the Turntide Smart Motor System?

**Smart Motor**
Our patented high rotor pole switched reluctance motor with advanced device physics runs more efficiently and reliably.

**Motor Controller**
The controller helps the variable-speed motor work at optimized efficiency across a broad range of speeds, enables customized sequences of operation or application-specific functionality, and protect the system from damage or failure.

**Turntide Technician**
Turntide Technician mobile app makes evaluating, commissioning, and installing Turntide energy conservation projects easy.
Outperforms Existing HVAC Efficiency Measures

The ultimate energy conservation measure

The Smart Motor System makes HVAC equipment more efficient, more intelligent, ultra reliable, and simple.

Better performance than VFD retrofit

Source: NREL Study

Proven to Improve HVAC Performance in RTUs

Sustainability focused British retailer Wilko installs Turntide Smart Motor System to dramatically reduce energy bills and carbon footprint.

THE RESULTS:

>40% energy reduction compared to baseline

20% additional energy savings paired with BMS system

800 Turntide Motors deployed across Wilko retail locations
Turntide Smart Motor System Specifications

Motor Compatibility
Turntide smart motors are designed with industry-standard specifications, matching nameplate specs found on an AC induction motor.

- **Horsepower**
  - 1-15 HP

- **Voltage**
  - 208-230V
  - 460V
  - 575V

- **RPM Range**
  - 100-3600 RPM

- **NEMA Frame Sizes**
  - 56Y
  - 56/56H
  - 56Z/56HZ/143T/145T
  - 182T/184T
  - 213T/215T

- **NEMA Motor Enclosure**
  - TEFC

RTU Compatibility

The Turntide Smart Motor System is compatible with rooftop unit systems for most building types.

- **Building Types**
  - Shopping Malls
  - Retail
  - School
  - Office
  - Hotel
  - Supermarkets
  - Industrial/Warehouses
  - And Many More

RTU Retrofit: 5 Easy Steps

1. The original motor in the rooftop unit is removed, and replaced with a Turntide smart motor.
2. The Turntide motor controller is installed to connect with the motor.
Jumper pins are verified to ensure proper configuration before wiring the system together.

All system components are wired together.

System is started up to test and ensure all components work properly for 24/7 safe, reliable operation.

For full install information, refer to [www.turntideacademy.com](http://www.turntideacademy.com).