

# Emerson® UltraTech® ECM Variable-Speed Motor

*Feel the difference.*



## Helping you deliver the quality and comfort your customers deserve – and demand

Your customers demand quality and reliability. They also demand comfort inside their homes – no matter what the weather outside may be. So you have to deliver the latest in technology and innovation for their HVAC systems. That's why OEM's rely on the Emerson® UltraTech® variable-speed indoor blower motor: to allow for both improved comfort and efficiency while giving them more options – and more opportunity – than ever.

## A Smart Way to Meet Efficiency Goals

Meeting high energy efficiency levels is important to your customers, allowing them to take advantage of federal and utility incentives for energy smart products. With a peak electrical efficiency of up to 82%, the Emerson UltraTech variable-speed motor may provide upwards of a SEER efficiency improvement in some systems, as compared to PSC-based systems, offering a critical solution to meet high efficiency targets. In addition, the system modulation capabilities provided by the UltraTech motor's advanced electronic control help further reduce your customers utility bills by providing exactly the airflow needed in any operating mode.

## Better communication. Better results.

Emerson's UltraTech variable-speed motor is a four-wire electronically controlled motor (ECM), with two-way communication. Utilizing leading-edge technology, the motor receives commands from the system control board, executes the command, and confirms the command has been completed. It's two-way communication made easy. And it's an enabler for system diagnostics. The result? Better system performance and reliability.

### The UltraTech variable-speed motor offers an array of built-in benefits including:

- *Up to 82% efficient, 30% better than existing PSC motors.*
- *A wide range of CFM points, allowing HVAC systems to have improved comfort in cooling, heating, and circulation modes.*
- *Continuous-use long-life design, for long-term air filtration with reduced energy consumption.*



  
**EMERSON**  
Climate Technologies

## Clear competitive advantages

**When compared to competitive motors, the UltraTech® variable-speed motor brings you distinct advantages in:**

### Integration and customization –

When used with the ClimateTalk™ open communications protocol, the motor can deliver humidity-removal-ramp and airflow profiles customized for each application to deliver maximum comfort. Compatibility with a pulse width modulated (PWM) signal provides easy integration into non-communicating systems

**Reliability** – The UltraTech motor's embedded software is continuously self-monitoring. This software only allows the use of information from trusted components and protects the motor from micro-processor and memory faults over time. Years after installation, the UltraTech self-monitoring software will still be protecting the motor. In the event diagnosis is required, the UltraCheck-EZ™ diagnostic tool is available to help technicians quickly verify correct motor operation.

**Precise airflow control** – The UltraTech motor's advanced software gives unrivaled control providing constant airflow across a wide range of operating parameters. Precise CFM output is a key element of maximizing system efficiency and homeowner comfort.

**Quiet operation** – The UltraTech motor uses a state-of-the-art design to minimize noise. On low-speed settings, it is up to two decibels quieter than other ECM motors. In addition, the UltraTech motor is quieter during startup and coast-down modes.

**Less setup time** – Emerson's proprietary UltraTech motor programming tool is designed to minimize laboratory test time. This easy-to-use software helps you develop the blower coefficients needed to get the constant CFM airflow demanded by the industry today. The motor programming software is also a valuable troubleshooting tool.

**Lightning surge protection** – Using state-of-the-art electronics, the UltraTech motor is protected up to 6,000 volts of lightning surge. That provides up to a 50 percent improvement over the existing protection of competitive products, which is important in areas of high lightning activity.

## Part of the Ultimate Solution

The UltraTech variable-speed motor is a part of Emerson Climate Technologies' UltraTech communicating system, the most innovative solution for today's high-end HVAC systems. By sharing information system-wide, the UltraTech communicating system automatically configures and checks system settings, so there's no need to look up and manually set dip-switch settings on indoor blower motors.

### Feel the difference.

- *Comfort and efficiency*
- *Diagnostics*
- *Confidence*
- *Your reputation*
- *Your business*

### Install confidence

Efficiency and reliability. Indoor air quality and comfort. It's what homeowners want in their HVAC systems. And it's what you can deliver with an Emerson UltraTech variable-speed motor. To learn more about how we can help build your reputation – and your business – visit [EmersonClimate.com](http://EmersonClimate.com) or call 1-888-540-5540.

UltraTech® Variable-Speed Motor	
Serial Communication	Yes
ClimateTalk Compatible	Yes
PWM Signal Compatible	Yes
Constant CFM	Yes
Programmable	Yes
Peak Efficiency	82%
Frame	Nema 48 (5.5")
Shaft Diameter	1/2"
Bearing Type	Ball Bearing
Temperature Rating	Class B
Agency Approval	U.L. AND C.S.A.
Horsepower	1/3, 1/2, 3/4, 1
Voltage	120/240/277V
Frequency	50/60hz
Speed	300 to 1250 rpm

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