



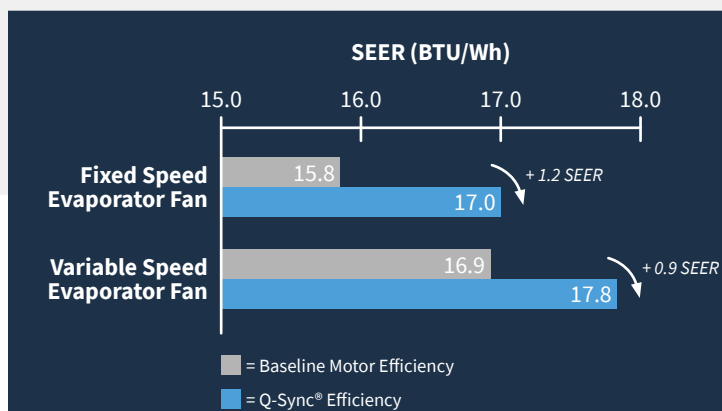
Introducing the Highest Efficiency Electric Fan Motors: **Q-Sync® HVAC Permanent Magnet Synchronous Fan Motors**

**Ground-breaking technology
that increases your system's
SEER rating.**

- Minimize the system's compressor and condenser sizes AND achieve required SEER levels
- Better control of airflow with precise speed control and no speed droop
- More efficient motors with power factors near unity

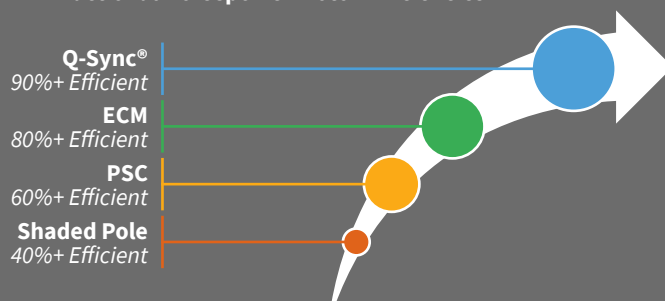
Q-Sync® Advantages

- ✓ Water resistant housing for carefree cleaning
- ✓ Constant airflow maintains desired set temperatures



Source: Brehm, J.K., Augustine, D., Ziviani, D., and Groll, E.A., "Assessing the performance limits of a variable-speed residential heat pump system," Proc. 12th Int'l Conf. on Compressors and their Systems, City University of London, UK, Sept. 6-8, 2021.

Fractional Horsepower Motor Efficiencies



- ✓ Less heat generated reduces the load on the HVAC system
- ✓ Quieter motors enhance customer experience



Q-Sync® HVAC Fan Motor Applications

Fractional HP motors for:

- Residential heating, ventilation, and air conditioning systems
- Light commercial heating, ventilation, and air conditioning systems



Residential HVAC



Light Commercial HVAC

Q-Sync® Product Features

1/4 HP, 1/3 HP, and 1/2 HP Options Available

More Energy Efficient

- ✓ Allows your system to achieve a higher SEER level with the same or smaller condensor and evaporator, and a single speed or more economical compressor
- ✓ 20-40% fewer watts consumed compared to ECM motors
- ✓ No switching losses at rated speed for maximum efficiency
- ✓ Less heat generated by the motor, reducing thermal stress on the HVAC system

Longer Life and Higher Reliability

- ✓ Engineered to eliminate a start-stop capacitor and run capacitors which are common failure points in other motors
- ✓ Lower in-rush current and better surge protection (up to 6000V)
- ✓ IP65 Certified (water and dust resistant)
- ✓ Built with extended life bearings in a frame size 48
- ✓ Designed for ultra-high reliability and long operating life

Industry's Best Power Factor

- ✓ Eliminates the need to consider power factor correction components and lightens the system's load
- ✓ Helps decrease electrical costs, and also lowers consumption of electricity from the grid



Q-Sync® is recognized by the US Department of Energy as a High Impact Technology



How Q-Sync® Patented PMSM Technology Works

QM Power's innovative design is the biggest breakthrough in motor technology in more than 50 years. Q-Sync® circuitry **eliminates the need for electronic commutation to keep the motor spinning.**

By operating the motor at the same frequency as the AC power line and **eliminating the AC to DC power conversions** from its circuit (no AC-to-DC rectifier, no DC link, and no DC-to-AC inverter), **Q-Sync® delivers unparalleled energy savings.**