

the engineer's choice

ebmpapst

EC-SYSTEMS™ FANS & BLOWERS

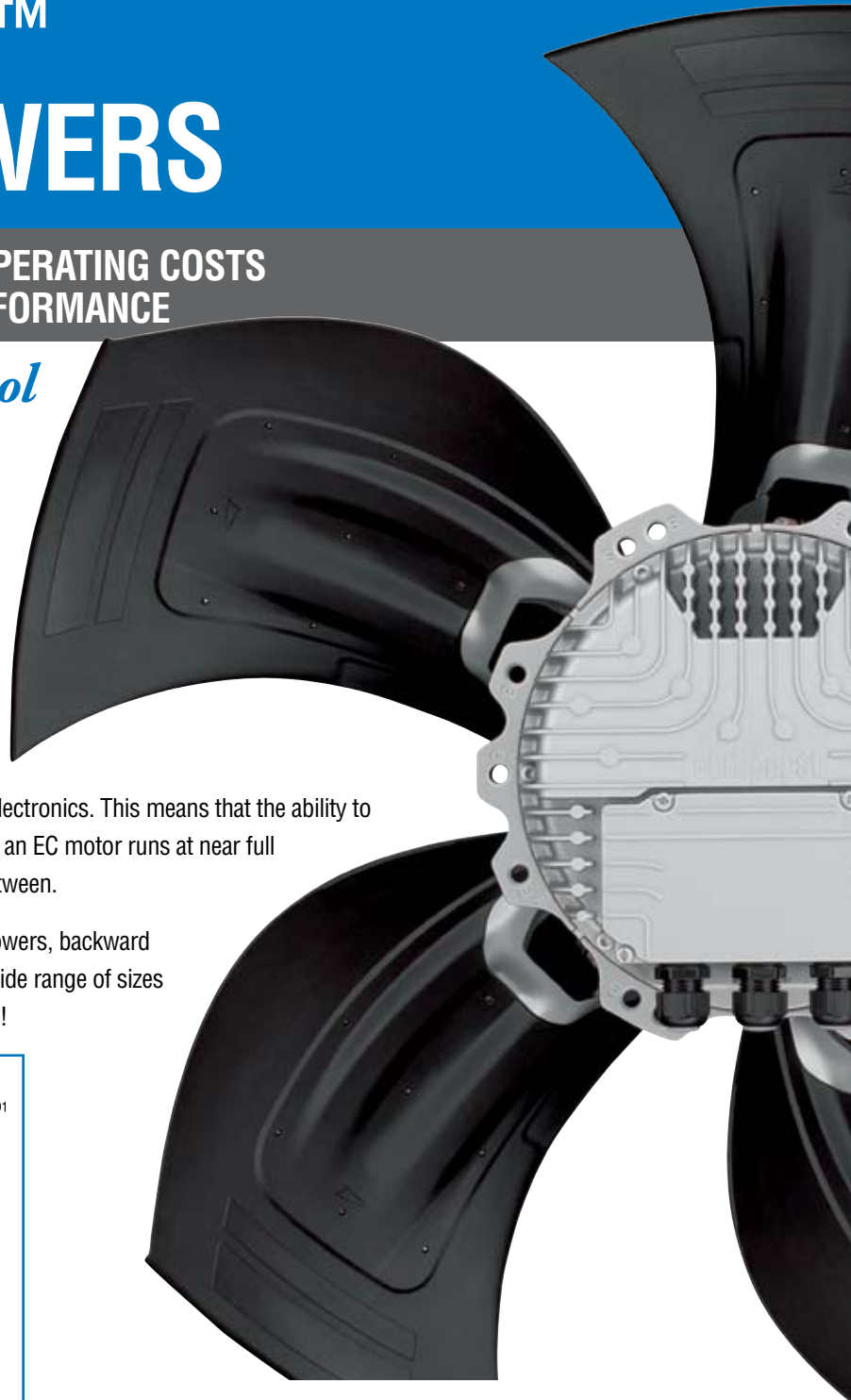
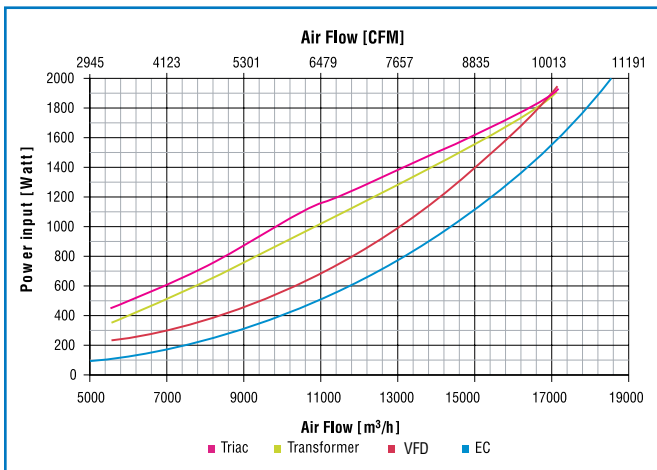
HIGHEST EFFICIENCY AND LOWEST OPERATING COSTS
REVOLUTIONIZE AC AIR MOVING PERFORMANCE

EC and efficient speed control

Electronic commutation (EC) allows you to control the speed of the motor very efficiently. The speed of a motor's rotation is a function of how fast the magnetic fields inside the motor alternate. In an AC motor, that speed is determined by the frequency of the alternating current. Obviously, the motor is not limited to just one speed, but it does mean that AC motors are designed to operate at a particular speed. The efficiency of an AC motor drops markedly as the motor moves away from that speed.

The speed of an EC motor is governed by the switching of the electronics. This means that the ability to control speed is fundamental in an EC motor. It also means that an EC motor runs at near full efficiency whether it is at start-up, full speed or any speed in between.

ebm-papst's EC-SYSTEMS™ are available in forward curved blowers, backward curved impellers and axial styled fans. They are available in a wide range of sizes from 133mm to 990mm diameter. The possibilities are endless!



EC fans are suitable for a variety of power sources including: 12, 24, 48 VDC and 110, 240, 400, 480 VAC + more! Fans are speed controllable through a PWM or 0-10 volt control signal.



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EC-SYSTEMS™ Fan & Blowers

EC-GIANTS

A product extension of the EC motor range, EC-GIANTS are the **largest** external rotor motor with EC technology and **completely integrated** drive and control electronics on the market! EC-GIANTS motors have been designed to generate extremely low acoustical noise from advanced drive electronics and 3-D backward curved impellers or sickle-shaped axial fans. The electromagnetic and radio frequency filters together with a power factor controller prevent flicker, distortion of the AC power and radiated noise. These are areas of concern in IEEE519.

Benefits include:

- Integrated line and load side filters
- No risk of brownouts
- Smaller size
- Lower heat load
- Lower noise
- Easy hookup

the bottom line

EC is more than just an efficient motor.

1. EC-SYSTEMS™ Save Energy

EC-SYSTEMS™ use as little as 1/3 the energy at the same air performance of industry standard AC motors! These EC fans run cool resulting in less energy needed to rid your systems of excess heat. They are entirely speed controllable which can result in up to 60% savings in energy costs.

2. EC-SYSTEMS™ Save Space

EC fans include advanced controlling features and motor protection built right into the fan. There is no need to provide extra space in your applications for these electronics.

3. EC-SYSTEMS™ Help Save the Environment

EC fans can help the environment by maximizing the performance of all the other components in a product, thus reducing wasted energy and even rendering some components unnecessary!

4. EC-SYSTEMS™ Save Money

EC fans will save money by drastically cutting operating and maintenance costs.

5. EC-SYSTEMS™ are Quiet

These EC-SYSTEMS™ are quieter than their comparable standard AC motors. Attempts to speed control standard fans can result in unpleasant high-pitched sounds while EC fans remain impressively silent.

