



**Exploiting the energy-saving potential and integrating "added value" into the motor**

## **Proven EC fan drive is upgraded**

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14.03.2011 - Page 1 of 1

Shaded-pole motors are inexpensive to build, but because of their relatively low efficiency, they are mainly used in a just few niche applications. Modern fan concepts are thus based on the far more efficient electronically commutated EC motors, which offer savings of around 70% compared to the old motor concept. The motors and fans specialist ebm-papst is now expanding its proven concept of energy-saving iQ motors. The iQ drive is to become the iQ<sup>2</sup>. The IP54 motors in insulation class H for 230 V connection now offers substantially more. Besides optimised efficiency, other practical characteristics have been integrated into the motor. Modern electronics allow a special control mechanism and thus additional functions. That improves customer benefit. New materials also make new design versions possible.

In this instance, the development engineers were able to employ a new plastic housing, meaning there is no longer need for a protective earth connection. The motor control system permits the motor to run in reverse when necessary, at times that the customer himself can determine. For example, the fan can run in reverse during the start-up phase or the defrost cycle to blow the accumulated dust out of the condenser. Speed stages preprogrammed during production allow a nighttime mode to be quickly realised. The drives are approved according to UL, TÜV, DIN EN 60335-2-24/60335-2-89 and other standards, and for use with combustible refrigerants such as R290. For example, if we assume a price of 11 euro cent/kWh, 24 fans with 200 mm impellers will save some 500 euro per year compared to shaded-pole motors, and will do so with even greater reliability and comfort.



Illustration: Compact energy-saving motor for fans with practical, individually adjustable added-value functions in protection class II



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### About ebm-papst

The ebm-papst Group is the world's leading manufacturer of fans and motors and is a pioneer and pacesetter for ultra-efficient GreenTech EC technology. In the last fiscal year 2009/2010, the company generated turnover of 986 million euro. ebm-papst employs over 10,000 people at 17 production facilities (including Germany, China, USA) and 57 sales offices worldwide. Products of the global market leader are represented in many industries, including ventilation, air-conditioning and refrigeration technology, household appliances, heating engineering, in IT/telecommunications applications, as well as those in automotive and commercial vehicles engineering.

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14.03.2011 - Page 2 of 2