



"AC2EC" - Replacement made easy

New EC motor design – Compact and efficient

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The efficiency of the fans used is a central topic in ventilation and air-conditioning technology. To offer manufacturers of ventilation and air-conditioning units the option of continuing to use conventional AC technology or switching to energy-saving EC technology in the future, the installation conditions for both motor technologies have to be identical. For the first time, a new EC generation of motors from ebm-papst is as compact as, and mechanically fully compatible with, existing AC variants.

The new EC motors of these fans have been miniaturised, making them much more compact than their predecessors. The design of the motor heat management system is also optimised. The stator is complete encapsulated in a high-performance plastic. Air inlets in the rotor ensure perfect heat dissipation of the motor. The high level of IP protection (IP 54) allows these fans to be implemented in critical applications.

The new EC motors are currently offered in size 55 with input capacity up to 170 W. Another expansion of the series is planned. The modular concept results in a modular system that permits many variants. This way, for example, a smaller motor can be equipped with more powerful electronics. This makes sense if more output is required with the same torque. It is standard for EC motors to be offered with two speed stages. As an option, a continuous closed loop speed control via a 0-10 volt control voltage is possible, e.g. for fan operation that is precisely adapted to individual requirements.

In combination with the aerodynamically optimised HyBlade® blades or RadiCal impellers, these fans with GreenTech EC technology make up an energy-efficient unit in ventilation and air-conditioning technology. Without changing the customer unit, therefore, it is possible to make an easy mechanical replacement of existing fans without a hitch.



Figure 1: RadiCal centrifugal fan with new EC motor

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 09/10, the company generated a turnover of 986 million EUR. 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 vehicle engineering.