**Hybrid and electric motors are also being increasingly used in buses – they are gradually displacing pure combustion engines. ebm-papst will be exhibiting a new, robust fan for motor cooling at the Busworld trade show in Kortijk, Belgium, Rambla South, no. R44 from October 20-25, 2017. Grime from the road can’t harm it!**

As a rule, roads are always full of dirt and grime, even when buses only operate in city traffic. Dust from the street, fine particles and chemically aggressive soiling can deposit on their fan blades. If the deposits are uneven, this leads to an imbalance that limits the fan’s service life and can also lead to premature failure.

**Special impeller design increases efficiency and prevents deposits**

The new axial fan is highly resistant to grime deposits. The special aerodynamically optimized blade form prevents grime from depositing on the fan. This results in a particularly long service life; a fact that has been documented in numerous tests. The impeller facilitates higher speeds that allow it to create extra cooling capacity reserves. Combining it with fixed guide vanes has successfully increased the fan’s efficiency – without the typical oil slinger. With this product, the world market leader has responded to market requirements for a robust, energy-saving fan that is resistant to grime and equal to heavy duty tasks.

**Parallel operation ensures redundancy and reliability**

Fans arranged as a FanGrid provide another benefit. In comparison to one large fan, the parallel operation of several small fans makes it possible to activate the fans according to need and incorporate redundancy into their design. If one fan fails, the remaining ones can be operated at higher speed to compensate for the failure. This can compensate for a possible drop in air performance and protect the vehicle’s motor against overheating.

**Electronics withstand high-pressure cleaner**

The electronics have a dust-free design in degree of protection IP6k9k and the fan will also withstand a high-pressure cleaner if the vehicle is taken through a car wash. The fan delivers air performance of up to 3,000 m³/h. A control system is possible via PWM or linear voltage. The fan is designed for operation in a 24 V DC grid and available immediately.



Figure 1: The robust axial fan from ebm-papst for motor cooling is highly resistant to grime deposits.

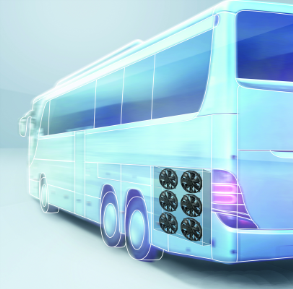


Figure 2: A FanGrid consisting of six axial fans cools the motor, protecting the vehicle against overheating.

**Figures** ebm-papst

**Characters** approx. 2,500, with headings and sub-headings

**Keywords** axial fan, redundancy

**Tags** EC technology, commercial vehicles, heavy duty, motor cooling, hybrid bus

**Link www.ebmpapst.com**

**About ebm-papst**  
The ebm-papst Group is the world's leading manufacturer of fans and motors. Since it was founded, the technology company has continuously set global industry standards: from the digital interconnection of electronically controlled EC fans to aerodynamic improvements for fan blades to the use of eco-friendly materials.

In fiscal year 2016/17, the company achieved sales of almost €1.9 billion. ebm-papst employs over 14,000 people at 26 production sites (e.g. in Germany, China and the US) and in 49 sales offices worldwide. Fans and motors from the world market leader are used in many industries, including ventilation, air conditioning and refrigeration, household appliances, heating, automotive and drive engineering.