Press Release

Standard-compliant ventilation for commercial kitchens

EC centrifugal fans with motor enclosures

Cooking contaminates the surrounding air with substances such as grease vapors and combustion gases, and it also generates a lot of heat and moisture. That makes the installation of air-handling units (AHUs) necessary in commercial kitchens in order to extract cooking odors while also supplying fresh air from outside. For this application, ebm-papst has developed a centrifugal fan with an EC motor outside the air flow.

AHUs ensure that the air quality in kitchens and serving areas and throughout dining areas remains hygienically unobjectionable – while also preventing annoying odors.

Special requirements
Fans used in AHUs have to satisfy special requirements. According to VDI guideline 2052, which concerns ventilation systems for kitchens, their motors may not lie directly in the path of air flows bearing particulates. In addition, incoming air must be kept free of contaminants and, according to DIN EN 16282 (Equipment for commercial kitchens - Components for ventilation in commercial kitchens), the fans need to be easily accessible and easy to clean. At the same time, they have to regulate the humidity and temperature in the rooms.

The solution: motor enclosures
ebm-papst has modified its proven RadiPac series of EC centrifugal fans specifically for AHUs in commercial kitchens. In accordance with the guidelines, it removed the motor and the control electronics from the air flow, effectively preventing the buildup of greasy or oily deposits on them. The underpressure prevailing around the fan’s intake causes cool outside air to be drawn in through a hose to cool the EC motor so that the fan and the control unit can reach their full output. For users, that makes planning as reliable as possible thanks to realistic performance data. And the fans are easy to install with plug & play connection.

Intake nozzle for installation on outer walls
An intake nozzle prepared for installation on the outer wall of the AHU is included with the fans, which are supplied in sizes 400, 450 and 560 and will be available in the spring of 2018.
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Fig. 1: Specially optimized for kitchen exhaust: the RadiPac’s motor has been encapsulated away from the air flow. Airborne grease cannot affect it.

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.