



Efficient technology and innovative design: Diagonal fans make filter fans more efficient

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Filter fans are a combination of fan and dust filter. They are well-suited for economically dissipating heat loads from control cabinets or electronics enclosures. For the Rittal TopTherm filter fan series, which is designed for air performance levels of 20 to 900 cubic metres per hour, ebm-papst has developed a new diagonal fan series, which combines the properties of conventional axial fans with those of centrifugal fans.

The outlet direction on diagonal fans is not axial to the fan, but rather diagonally outwards, providing for an even air distribution in the switch cabinet or housing. This effectively prevents heat pockets from forming. The plastic materials used are light, yet durable, UL-approved, flame-resistant and noise-insulating. With the new filter fans, the noise level is reduced by up to 10 dB(A) compared to earlier versions with the same air volume.

Using the new diagonal fans has improved the aerodynamics so much that, compared to existing axial fans, the power input could be reduced by up to 40% at the same air volume.

Additional potential energy savings result if the fans use high-efficiency EC motors. In connection with a temperature sensor installed at the hot spot, the GreenTech EC fan can be adapted as needed to the actual cooling requirement by controlling the speed and thereby significantly reduces the power input again. Because such energy-saving fans have the same dimensions as the AC versions of the diagonal fan, a subsequent conversion is possible without any problems.

Many different details have been incorporated into the mechanical, patent-protected design of the diagonal fans. The fan and the filter housing can be joined in four different positions thanks to the bayonet coupling. This allows a different cable outlet to be positioned every 90° without an additional tool. To change the direction of air flow, all the user has to do is to release the bayonet coupling on the diagonal fan, turn the fan unit 180° and lock it into place again.

The new filter fans have the same installation dimensions and are flatter than earlier versions with axial fans, but offer a higher flow rate at higher counterpressure, an improved noise behaviour and a low power input.

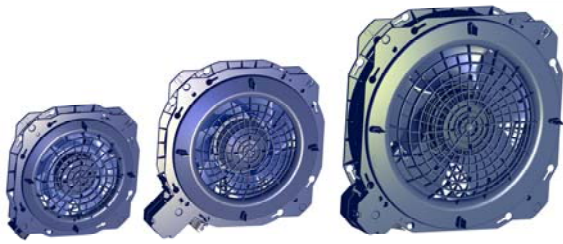


Figure 1: New diagonal fan series for filter fans from ebm-papst (photo: ebm-papst Muldingen)



Figure 2: The filter fans available for an air performance of 20 to 900 cubic metres per hour are flatter than the earlier versions with axial fans with otherwise unchanged installation dimensions and substantially greater pressure stability (photo: Rittal)

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 10/11, the company generated turnover of over 1.3 billion EUR.

ebm-papst employs over 11,000 people at 17 production sites

(including Germany, China and the USA) and 57 sales offices worldwide. Fans and motors of the global market leader are represented in many industries, including ventilation, air-conditioning and refrigeration technology, household appliances, heating engineering, in IT/telecommunications as well as applications in automotive and commercial vehicle engineering.

More information can be found at www.ebmpapst.com or is available from

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