

Efficient, quiet, and quick to integrate

Next generation: EC centrifugal fans for filter-fan-units in cleanrooms

Cleanrooms are essential for many high-tech sectors, from semiconductor manufacturing and medical technology to the aerospace industry. To meet the strict requirements for air purity, temperature, and humidity, filter-fan-units (FFUs) with highly efficient fans at their core are used.

The new RadiPac EC centrifugal fans from ebm-papst are a solution developed specifically for FFUs offering impressive energy efficiency, low noise levels, and a simple commissioning process. Not only do they supply the standard air volumes of up to 2,330 m³/h with sufficient pressure reserves for recirculated air operation in cleanrooms, but they also have efficiency levels of over 60% thanks to EC technology and the latest generation of RadiPac impellers. Compared to the previous industry standard, this means a 10% reduction in power consumption. At the same time, they operate 6 to 7 dB more quietly, and so also meet strict noise protection specifications.

Aerodynamically optimized impeller geometry

A key element of the fans' efficiency is the newly developed impeller with its five aerodynamically optimized blades, which reduces both flow losses and noise levels. This is complemented by an adapted inlet ring and optional accessories such as the FlowGrid air-inlet guard, which minimizes turbulence and also serves as protection against accidental contact.

Powerful EC motors

The integrated 170 to 500 W EC motors are compact, powerful, and individually tailored to the respective fan. A modern MODBUS RTU interface with automated DCI addressing (daisy chain interface) enables fast and error-free integration into automation systems. Addresses are assigned automatically via a hardware signal, saving time and money during commissioning, especially for large FFU systems.

Worldwide use

The RadiPac fans are available as complete plug & play devices or as individual components. With installation depths of only 190 to 275 mm and diameters of 280 to 400 mm, they are also suitable for confined installation conditions and retrofit applications. They comply with all relevant international standards for cleanrooms, can be used worldwide and are future-proof.

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Fig. 1: RadiPac EC centrifugal fans from ebm-papst are specially designed for filter-fan-units in cleanrooms. The newly developed impeller with its five geometrically sophisticated impeller blades drastically reduces flow losses.

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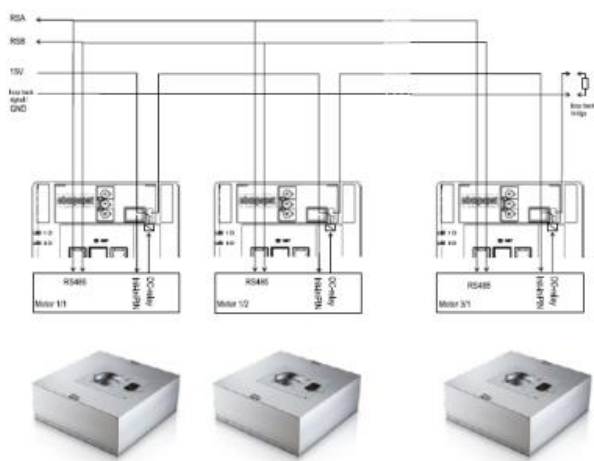


Fig. 2: Fans with a MODBUS DCI (daisy chain interface) can be addressed automatically by the master via a hardware signal. This makes commissioning much faster.

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About ebm-papst

The ebm-papst Group, a family-run company headquartered in Mulfingen, Germany, is the world's leading manufacturer of fans and motors. Since it was founded in 1963, the technological leader has set international industry standards with its core competencies in motor technology, electronics, digitalization, and aerodynamics.

ebm-papst offers sustainable, intelligent, and tailor-made solutions for virtually every requirement in ventilation and heating technology. ebm-papst sets the benchmark in almost all sectors, such as ventilation, air conditioning and refrigeration technology, heating technology, information technology, mechanical engineering, and medical technology.

In the 2024/25 financial year, the ebm-papst Group generated a turnover of 2.1 billion euros. It employs just around 13,500 people at 30 production sites, including in Germany, China, and the U.S., as well as 50 sales offices worldwide.

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