

## AxiTop™ Substantial Yearly Savings in Energy

By Joe Landrette, ebm-papst Market Manager - Ventilation



ebm-papst's strong brand is recognized for cutting edge technology and continuous improvement. Our GreenTech® philosophy is symbolic of our company-wide commitment to use eco-friendly manufacturing materials and state-of-the-art methods for designing products, while upholding



continuous environmental responsibility. The AxiTop diffuser exemplifies our company's "green" focus. It's an optimized diffuser that increases air flow and efficiency while significantly lowering the acoustics of axial fans. It transforms energy normally wasted into usable air flow for applications such as ventilation, air-conditioning, refrigeration, and data center markets.

Normally, the air flows at high speed from the exit side of the fan and is dissipated into the environment. Dissipation means that some of the kinetic energy of the flow is no longer technically utilized. The AxiTop diffuser is designed to take a large portion of the dynamic kinetic energy and convert that to static pressure. When all components are aerodynam-

ically optimized as they are here, this allows efficiency to be significantly enhanced.

The scale of possible energy savings - or efficiency enhancement and noise reduction - that can be achieved by fitting an optimal diffuser such as the AxiTop on a conventional fan is substantial. Higher efficiency results in significant reduction in power (up to 27 %), increased flow and lower acoustics (up to 7dBA lower). AxiTop further enhances the impressive efficiency of ebmpapst's HyBlade (a new hybrid construction that achieves the stability of high-strength aluminum with the lightness and malleability of plastics). Depending on the individual configuration, the optimized efficiency can be used either to reduce power input or to increase air performance.

In practice, the use of the AxiTop diffuser does not just mean lower energy consumption; it also means greater flexibility for the user and for the development engineer. An axial fan configured with the AxiTop diffuser can be optimized for different characteristics, depending on the application. Either a greater air performance is possible with unchanged energy input, or unchanged air performance with lower energy consumption. The AxiTop diffuser can also greatly improve acoustic characteristics. This is especially important in noise-sensitive applications (e.g. in cooling or air conditioning units operating at night).

The ability of the AxiTop diffuser to lower acoustic noise provides an opportunity for higher performance systems used in commercial and residential applications, where local noise ordinances limit fans from reaching their full potential. The net result is a higher capacity system that provides more efficient cooling. For Data Center applications where efficiency is paramount, solutions not

normally possible with axial fans are now a reality thanks to AxiTop. Data centers can save thousands of watts on single designs and achieve a quick return on investment.

The new AxiTop design reduces noise pollution, offers an eco-friendly, high-efficiency solution for higher operational density in high performance systems. With the same reliability as a standard fan, AxiTop is an optimized means of moving air efficiently and quietly for a wide array of applications.

### About ebm-papst

A worldwide leader in fans and motor technology, ebm-papst Inc. is the U.S. subsidiary of parent company headquartered in Mulfingen, Germany. With over 14,500 different products, we provide application-specific engineered solutions for air technology.

Our comprehensive product portfolio ranges from backward curved impellers, axial fans, centrifugal blowers, to compact tube axial fans and cross flow blowers. ebm-papst products are used in the heating, ventilation, air conditioning, refrigeration, appliance, industrial, medical, electronics, computer, telecommunications, automotive and distribution industries.

With more than 50 subsidiaries globally, ebm-papst has a presence in every major market worldwide. Manufacturing facilities are located in Europe, with additional manufacturing capabilities in USA, China and India.

**We don't just sell fans — we provide energy-efficient solutions.**

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