


# FAQ**LETTER**



ebm-papst answers questions about its new product generation, **ACmaxx**.

"Are the new fans intended for general use or applications in advanced high-tech products?"

The new ACmaxx series is intended for general use. However, because the technological innovations are so impressive, it is only natural that they will also be used in high-tech products.

"Why do the 'same' products have newer technology?"

Raising the technological standard is one of our fundamental principles. Ideally, the innovations and added features of the products can be implemented without requiring any adjustments on the part of the system design engineer. In the case of the ACmaxx series, all you need to do, literally, is replace the old product with the new one. A true 1:1 replacement with no modification to the supply voltage.

"Are all existing products really being 'replaced', or are only a few models affected?"

Products of the 3000, 4000, 6000 and 8000 are affected, meaning that these series will be available in the ACmaxx version. Although their respective predecessors will remain available, we recommend making the switch.

"I basically understand what is better about the new series compared to the old. My only question: I can make do just fine with the old products, so why should I spend more money on the new ones?"

One of the most frequently asked questions is always whether higher costs are justified. In truth, the new products cost about the same, meaning that the price level is just a few percent higher and the absolute additional amount per piece is so low that it has almost no significance on your total expense. On the other hand, so many benefits are available that you will have real advantages in dealing with your customers, such as extremely quick amortization via the energy savings, significantly higher air performance at the same sizes, substantially less need for service due to the doubled life span, and - if needed - many control options that could previously be implemented only with difficulty.

"You mean using the new products is as simple as replacing 'the old with the new'?"

Yes, that is exactly right! No modifications are required on the design side. The ACmaxx requires nothing but a little more room in the motor section (installation depth).

"How about the power supply?"

The power supply is absolutely non-critical. Thanks to the built-in EC technology, all power supplies are accepted (85-265 VAC, 50/60 Hz). Other supply voltages, such as 110 V, do not require any adaptations or type changes. Voltage fluctuations in the power system are automatically compensated for.

"Fans normally consume very little energy anyway. So, how can the potential savings be that large?"

The difference is significant. One of the main advantages is that ACmaxx really does use energy very sparingly. In direct comparison with AC fans of the same size, the energy consumption is up to 75% lower. The energy difference alone means that the ACmaxx pays for itself after a few months. The savings over the entire service life, particularly in installations with multiple fans, are considerable.

"Which directions of air flow are possible?"

Normally, fans are used with a direction of air flow that provides air exhaust over struts. While this is also true of ACmaxx, it has the optional possibility of reversing the direction of rotation. Thus in special applications, the direction of air flow can be reversed by reversing the direction of motor rotation.

"Are there differences for installation that I need to consider?"

The ACmaxx requires nothing but a little more room in the motor section (installation depth). The old AC technology is simply replaced by ACmaxx. Even accessory parts such as the guard grille (on the inlet side) can continue to be used.

"What do I need to know about the electrical connection?"

Nothing changes here. ACmaxx is connected directly to the AC power supply; therefore, the same rules and regulations apply. Electrical devices must always be connected by trained specialists.

"For the fan type AC 4400FN, you state that the service life is nearly doubled, while at the same time the air performance is increased by nearly 40%. This seems highly unlikely to me. Is there some mistake here?"

These values are absolutely correct and show the potential of ACmaxx. The EC motors of these fans, with their outstanding efficiency and significantly lower power consumption, convert only a small part of the power into lost heat; there is almost no thermal stress on the bearing system. Conventional AC fans, on the other hand, convert 70% of their power consumption into heat. This lost heat has highly detrimental effects on the heating of the bearing and its service life.

"Several different motor variants are available. Why is that?  
Why do I need these different options?"

ACmaxx offers a number of features that allow completely new possibilities for fan operation and thus add new arguments to the debate about competitiveness and device intelligence. Where previously, rigid AC fans that were fixed to the power supply and had fixed speeds were the norm, today everything is possible - from externally preset speed control or regulation via interfaces to speed and operation monitoring. Even interactive fan operation is implemented by means of the microprocessor-controlled closed loop speed control with preset speed profiles. These features are important, for example, for operating modes such as standby operation, night shutoff, peak load power reserves etc.

"Are there special distribution channels? How can I obtain ACmaxx?"

These fans are standard products and are available ex stock. Effective immediately, every ebm-papst branch and every sales partner will offer ACmaxx, including service and consulting, in addition to the familiar AC products.

What protection classes are offered?

ACmaxx can be delivered with protection classes between IP20 and IP54. Based on customer needs, the amount of protection ranges from moisture-resistant insulation for the motor winding to the complete encapsulation of all electrical components including the stator.

What are the ideal application areas for these fans?

Basically, the ACmaxx is always a good choice if energysavings, a long service life and innovative fan features play a role in marketing your products, thereby making the final product all the more attractive. This includes all applications in industrial fields, such as cooling systems in welding robots and machine control to switchcabinets and computers in general. Another important market is the large retail and wholesale area for refrigerated and freezer display cases. The ACmaxx is exceptionally well suited in ventilation and exhaust building systems for wet rooms.

Why do I need a fan that has a speed or alarm signal?

ACmaxx efficiently monitors the fan's operation and function. Especially for devices and facilities that require 100% cooling, this offers maximum safety and reliability.

**Speed signal:**

Do you need up-to-the-minute data on fan speed at all times?

With these fans, ebm-papst offers the option of an integrated, electronic speedometer. It reports the current speed of the fan. Using an integrated sensor, the fan generates speed-based signals that are immediately available. Depending on the number of poles of the motor, 2 or 3 impulses are generated per revolution.

**Alarm signal:**

Does your application require the fan operation to be monitored?

In addition to the speed monitor, ebm-papst provides a number of different alarm signals. Depending on the fan design, the signal is static and already evaluated. The alarm signal output provides you with a reliable, long-term monitor and alerts you when critical operating states occur.

If you have any more questions about the new ACmaxx product line, please share them with us. Either we will answer your questions directly, or discuss them (with your consent) in future forums. Thank you.

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