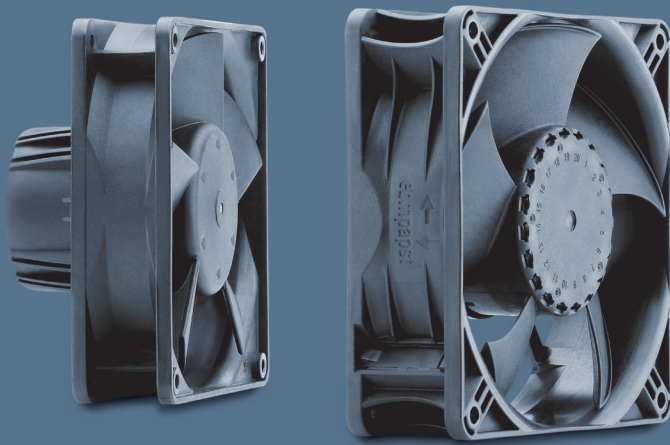


GreenTech EC-compact fans & ACmaxx: energy-saving compact fans for AC power systems



Intelligent fans for smart savings



The engineer's choice

ebmpapst

U.S. headquarters - Farmington, CT

- 250K sq ft
- 20 Regional Offices
- 350 Employees
- Complete Air Testing Lab On Site
- Complete Sound Testing Chamber On Site
- CFD Simulation Capabilities On Site
- ISO 9001 and 14001 Certification
- Distribution from Farmington (CT), and Toronto
- National Distributor Locations



Expert design and manufacturing

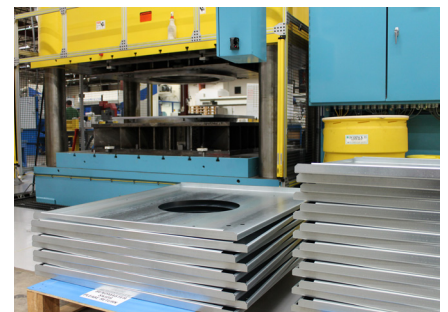
Our staff of design, electrical, and application engineers possess a wealth of knowledge and experience enabling unparalleled guidance and support to our customers and their projects. Cutting-edge equipment and innovative technologies are used to develop customer concepts into sub-assemblies or complete product ranges. Our engineers draw upon the vast resources available throughout the ebm-papst family to ensure that the most innovative and energy-efficient air movement components are correctly applied.

Beginning with the initial product concept, our application engineers work in tandem with customers to select the best air moving solution to suit specific goals and requirements. Once the prototype has been established, it can then be tested in our state-of-the-art airflow testing chambers, allowing for the optimization of all air moving solutions. Each chamber has been designed to meet AMCA210-99 and ISO5801 requirements. In addition to our airflow testing capabilities, ebm-papst can conduct comparative sound, temperature, and velocity tests.

Design and electrical engineers advance the concept into a packaged air moving device incorporating sheet metal, fan controls, handlers, filters, gaskets and more. Our design engineers utilize the latest version of “Pro-Engineer” software to create a viable and cost-effective value-added solution. File sharing between customers and our team of engineers enables all stages of the prototype design to be verified before the initial build of the product. The electrical engineering team can design simple fan controllers for monitoring fan speed, or complex controllers and power supplies, filtering, and specific communication protocols.

Logistics and inventory management programs

We have over 90,000 sq ft of climate-controlled warehousing at our facilities offering real-time inventory transactions and bar-coded inventory. Inventory management programs such as Kanban, demand/pull, safety stock, consignment, and local warehousing can be customized to your requirements.



Downgrade costs by upgrading technology

Whether in control cabinets, in refrigeration technology or in filter fans, there is no stopping the change from the old generation of AC technology to electronically commutated energy savers. This is no wonder, as conventional shaded-pole motors convert some 70 % of the energy they absorb into heat. To this are added even more losses due to their relatively simple blade geometry. Our ACmaxx compact fan series makes this all better. Whatever your application, ACmaxx is guaranteed to be the right choice. You can also choose whether to use the electronic control options of the classic ACmaxx or the more compact dimensions of the new GreenTech EC-compact fans.

ACmaxx – the intelligent way to save energy.

The drive concept of ACmaxx, the first generation of energy-saving compact fans, is based on the high-efficiency ebm-papst GreenTech EC technology. With significantly higher efficiency, the energy consumption is up to 77 % lower than conventional AC fans. Thus the slightly higher price pays for itself within a few months. Even more impressive are the cost savings over the entire service life, which has been almost doubled, meaning even less maintenance effort. In addition, the built-in electronics offer a wide variety of control and monitoring options: standby mode, overload mode in peak times, night reduction, temperature-dependent open loop speed control, function control via alarm or speed signal – ACmaxx fans can be adapted individually to each application.

However, the ACmaxx was not designed only for new applications. It can also replace conventional AC fans without further adaptations – thanks to its very wide voltage range from 85 to 265 VAC and extremely compact dimensions. Only the installation depth is somewhat larger than that of comparable AC fans due to the complex electronics, though in most cases this is not a problem. And if it is, we have the perfect alternative: GreenTech EC-compact fans.

GreenTech EC-compact fans – the new ACmaxx generation with ideal dimensions.

GreenTech EC-compact fans is the consistent further development of the ACmaxx concept. Its greatest innovation is the complete integration of the drive, fan and converter electronics into the motor hub. With a size of 119x119x38 mm, the GreenTech EC-compact fans ACi 4400, the first fan of the new generation, has the exact same dimensions of a conventional AC fan. Like the classic ACmaxx, the GreenTech EC-compact fans can easily be connected to the AC mains – worldwide and without further adaptation. There is no simpler way to save energy.

The GreenTech EC-compact fans ACi 4400 provides even greater savings. The total package of drive, electronics and aerodynamics has been optimised even further. The result: even greater performance and energy efficiency with even lower operating noise. Thus the GreenTech EC-compact fans series consistently sets new standards in reliability, service life and energy consumption. The overview shows you which ACmaxx variant is the right one for each application.

Feature	AC fan 4000 Z, N	ACmaxx classic: AC 4300	GreenTech EC-compact fans: ACi 4400
Energy consumption	---	+	++
Efficiency	---	+	++
State of technology	---	+	++
Controllability	---	++	+
Monitoring	---	++	+
Service life	-	++	++
Installation space requirement	+	•	+
Blower output	•	++	+
Speed independent of power frequency	no	✓	✓
Mains supply voltage	115 or 230 VAC	Global voltage 85 to 265 VAC	115 or 230 VAC
Noise	•	+	++

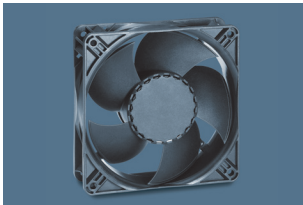
GreenTech EC-compact fans and AC 100 series and technical data

Series ACi 4400:

- High-efficiency GreenTech EC technology
- Problem-free connection to the AC power system
- Complete integration of the electronics into the motor hub
- Enables exactly identical size to conventional AC fans for easy 1:1 replacement
- Additional increase of efficiency and noise reduction compared to ACmaxx
- Electronic basic functions

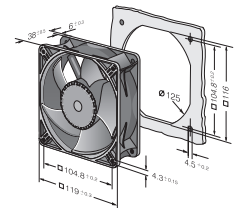
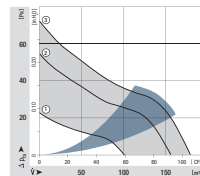
Series AC 100:

- High-efficiency GreenTech EC technology
- Can be used universally with global voltage
- Enables easy 1:1 replacement of AC fans with AC100
- Speed-boost function via mains voltage switch
- Vibration-isolated motor



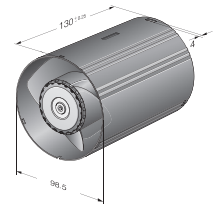
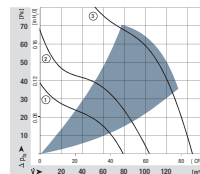
GreenTech EC-compact fans ACi 4400 series, 4 types

- Airflow 100–180 m³/h
- Voltage range 85–132 or 195–265 VAC
- Sound pressure 25–42 dB(A)
- Power consumption 1.4–4.4 W
- Nominal speed 1,850–3,350 rpm



AC 100 series

- Airflow 80/105 (Boost) m³/h
- Voltage range 85–265 VAC
- Sound pressure 35/42 (Boost) dB(A)
- Power consumption 2.5/4.5 (Boost) W
- Nominal speed 2,750/3,500 (Boost) rpm



Which variant for which application?



We recommend the ACmaxx:

- For applications that require high airflow
- For applications with control inputs or monitoring signals
- For all applications in which AC technology was used previously and permits a greater installation depth



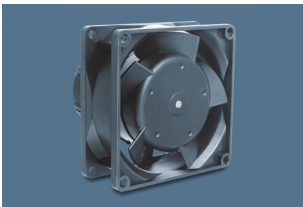
We recommend the new GreenTech EC-compact fans:

- When replacing fans of size 119x119x38 mm in existing applications
- For 119 mm fans that do not require open loop speed control
- When maximum efficiency with the lowest noise counts

Acmaxx series and technical data

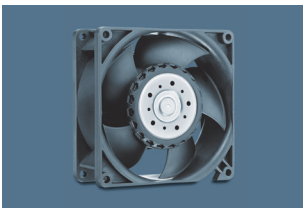
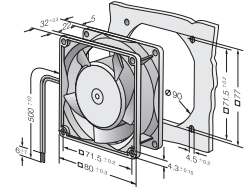
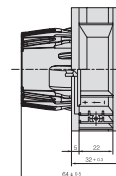
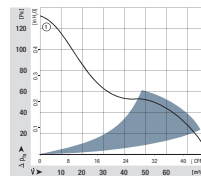
Series ACmaxx:

- High-efficiency GreenTech EC technology
- Can be used universally with global voltage
- Enables easy 1:1 replacement of AC fans with ACmaxx
- More extensive electronics functions for control and monitoring possible
- This results in slightly higher installation depth



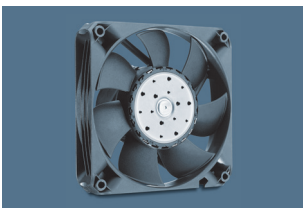
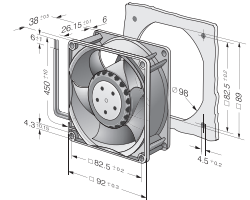
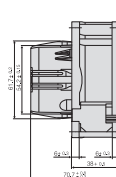
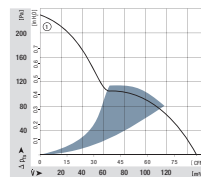
ACmaxx AC 8300 series

- Airflow 80 m³/h
- Voltage range 85–265 VAC
- Sound pressure 48 dB(A)
- Power consumption 7.5 W
- Nominal speed 5,000 rpm



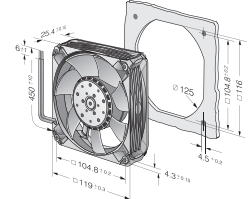
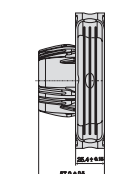
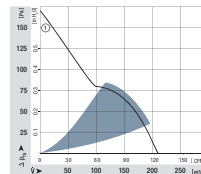
ACmaxx AC 3200 J series

- Airflow 144 m³/h
- Voltage range 85–265 VAC
- Sound pressure 55 dB(A)
- Power consumption 11 W
- Nominal speed 6,800 rpm



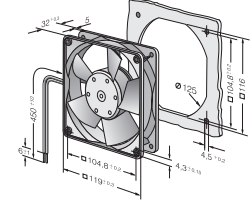
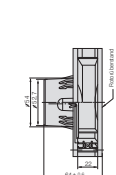
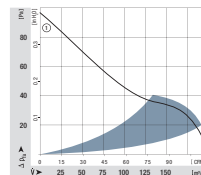
ACmaxx AC 4400 FN series

- Airflow 205 m³/h
- Voltage range 85–265 VAC
- Sound pressure 53 dB(A)
- Power consumption 12 W
- Nominal speed 4,850 rpm



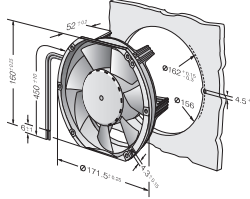
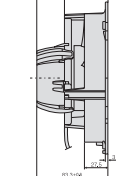
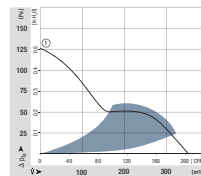
ACmaxx AC 4300 series

- Airflow 204 m³/h
- Voltage range 85–265 VAC
- Sound pressure 51 dB(A)
- Power consumption 11 W
- Nominal speed 3,400 rpm



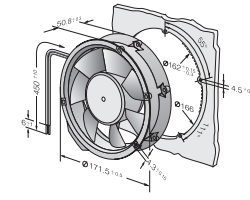
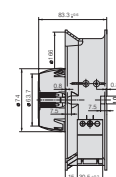
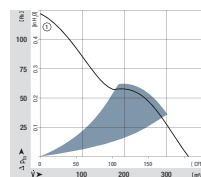
ACmaxx AC 6100 NM series

- Airflow 350 m³/h
- Voltage range 85–265 VAC
- Sound pressure 52 dB(A)
- Power consumption 14 W
- Nominal speed 2,850 rpm



ACmaxx AC 6200 NM series

- Airflow 350 m³/h
- Voltage range 85–265 VAC
- Sound pressure 50 dB(A)
- Power consumption 14 W
- Nominal speed 2,850 rpm



A symbol that defines standards

Most fans of the “compact class” still use the tried-and-tested AC technology. This has proven itself for years and usually works without any problems. However, these advantages are no longer adequate today, as precisely shaded-pole motors consume significantly more energy than motors in DC technology, for example. Despite this, switching over is not always simple. The problem: to date, DC technology has not been able to be operated directly on the AC mains. The solution: ACmaxx and GreenTech

EC-compact fans. Our latest-generation fans are not only equipped with high-efficiency GreenTech EC technology, they also have intelligent electronics that allow them to be operated completely independently of the mains, while the dimensions remain absolutely compact. Thus there finally are no obstacles to 1:1 replacement of old AC fans.

GreenTech – economy and ecology going hand in hand.

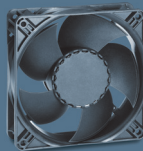
GreenTech follows a firmly held conviction: each newly developed product must exceed the economic and ecological performance of its predecessor. To this end, we are constantly improving materials and processes, flow behaviour and power – and reducing energy consumption. State-of-the-art energy, air-conditioning and ventilation technology provides maximum energy efficiency in our plant. Numerous environmental prizes, distinctions and the groundbreaking energy levels, which fall below even the most stringent limits, are the reward for our efforts.

GreenTech pays off for our customers, particularly due to the groundbreaking EC (electronically commutated) technology. It is not only the heart and soul of our philosophy, but also the core of our most efficient products. It achieves efficiency rates of up to 90%, ensures maximum energy savings and makes the products maintenance-free. With integrated open or closed-loop control and bus compatibility, it is an environmentally sound and, in the long run, more cost-effective alternative to AC technology.



**77%
Savings**

In a medium-sized factory are 50 control boxes with air filters running in continuous operation. Exchanging the conventional AC fans could save 6.5 MWh of energy over a year. The fans will have paid back the extra cost after just 4–6 months.



e. g. ACI 4400 axial compact fan



Notes

In times of climate conferences, increasing energy prices and ever scarcer resources, more efficient products are in demand – and compact fans are no exception. Enormous potential for energy savings exists by using high-efficiency GreenTech EC technology instead of the AC fans that are still common. ebm-papst St. Georgen is proving this impressively with the ACmaxx and GreenTech EC-compact fans series, energy-saving EC fans for direct connection to AC voltage.

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