

ebm-papst North America



Fans, blowers and air moving technology



The engineer's choice

ebmpapst

About ebm-papst North America

Headquarters - Farmington, CT

- » 250K sq. ft.
- » 20 Regional offices
- » Acoustic testing chamber
- » Complete air testing lab on site
- » ISO 9001 and 14001 Certification
- » Distribution centers in Farmington (CT) and Toronto, Canada

With offices in major cities throughout North America, our highly-skilled and experienced team of professionals are ready to tackle your air moving challenges with solutions that meet your requirements. ebm-papst serves all markets including IT & Telecommunications, Ventilation, Air-Conditioning, Refrigeration, Gas & Heating, Household Appliances, Industrial, Drive Systems, Transportation, Agriculture, Medical, and more. Our customers can always count on prompt, courteous service. Customer satisfaction is our number one priority.

Expert support when and where you need it

Knowledgeable field sales professionals are close by for face-to-face meetings. Dedicated inside sales associates fulfill all your ordering requirements. To assist you with order management, our customer service department provides automated services such as shipment notifications, reorder notifications, and invoicing.

To find the right air moving solution for your needs, our experienced application engineers are at your service to answer all your product application questions. Our on-site testing lab is available to our customers for product / prototype testing. We offer air flow, noise, environmental (including Salt Fog chambers), and temperature testing. Burn-in ovens are also available. Our electrical engineering team, with diverse industry and product design backgrounds, provides a full range of services including hardware and software design, analysis, testing and electronics manufacturing. Some of the services performed in our on-site lab are circuit analysis, reliability and environmental testing, prototype build and testing, test equipment design and build.

Value-added services to meet all your needs

ebm-papst, the world's leading source for engineered air movement solutions, provides a "total solution" approach to your cooling requirements using our extensive in-house resources. Custom assemblies are designed by our engineers to your specifications for a wide range of applications.

Logistics and inventory management programs

ebm-papst, Farmington CT has 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 customer requirements.



About ebm-papst World Wide

Passionate about air technology and drive engineering

The ebm-papst product portfolio now numbers over 14,500 products. Thus we offer the right solution for almost every air technology and drive engineering task. In addition, we work with you to develop very customized solutions that extend beyond our current product line. This is made possible by our extensive team of over 500 dedicated engineers and technicians out of our three central locations in Germany.

- » World Headquarters: Mulchingen, Germany
- » Worldwide Revenue / Sales: Over 1 Billion
- » 47 Sales and Distribution Groups Worldwide
- » 15 Production Sites Worldwide
- » 9,900 Employees Worldwide
- » Ship Over 46 Million Products Annually
- » All Locations are ISO 9001 Certified
- » Several Sites are ISO 14001 and TS 16949 Certified
- » RoHS Compliant



Core competencies: motor technology, aerodynamics, and electronics

Our innovative technologies keep on turning into new industrial standards. Our advantage: We consider aerodynamic relationships as a whole. Thus we combine benchmark-setting motor technology with the intelligence of state-of-the-art electronics and aerodynamically optimized shapes. The system solution that result from these three core competencies have a synergy that is unique in all the world and make up the majority of our product line. And the will be our main key to success.

GreenTech EC technology: Our motor for the future

Virtually our entire product range is now available with GreenTech, the leading edge EC technology. The wear-free and maintenance-free performance, the longer service life, the noise reduction, the intelligent electronic control, the higher efficiency, along with unparalleled energy efficiency when compared to conventional AC Technology makes GreenTech EC motors from ebm-papst the future of air moving technology.

Passion, quality and responsibility: Three more reasons for our success

Only real passion for fans and motors makes the highest level of achievement possible. With a clear organizational structure, flat hierarchies and a high degree of personal responsibility, we create the perfect foundation - not only technological innovation, but also for excellent service and active dedication to closely working with our customers.

Of course, our products are also product with the highest quality - at a total of 17 product sites worldwide. Our quality management is uncompromising, everywhere and in every process stage. This is also confirmed by our certification of compliance with the international standards DIN EN ISO 9001, ISO/TS 16949-2 and the standard DIN EN ISO 14001.

Value-Added Capabilities

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. The airflow chambers are truly beneficial to our customers as they allow for optimization of equipment for outdoor a/c systems, refrigeration systems, and commercial fan applications. 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.

While the design engineers develop the mechanical components of the fan assembly, the electrical engineering team can design simple fan controllers for monitoring fan speed, or complex controllers and power supplies, filtering, and specific communication protocols.

With our staff of engineering experts, a working prototype can be developed in a matter of weeks!

Our engineers and custom assembly solutions can help customers to:

- » Reduce costs
- » Increase airflow
- » Lower energy consumption
- » Reduce noise
- » Quickly develop prototypes

Robotic Welder



Air Testing Chamber



Acoustic Testing Chamber



Robotic Bending Machine



TruLaser2525



Electrostatic Paint Booth



Sheet metal fabrication and finishing

Lean manufacturing techniques, such as the use of reliable and efficient manufacturing equipment, ensure that subassemblies, components, and air handling products are produced to the highest technical standards. Significant investments in top-of-the-line production equipment and the manufacturing know-how provide customers with the manufacturing excellence that has led to ebm-papst as the leading choice for fan and motor technologies.

All sheet metal cutting, stamping, forming, rolling and welding are performed within our facilities. Our modern line of CNC punch presses, the *TruPunch5000*, allows us to accurately and efficiently create metal scrolls to exact specifications ensuring high quality and maximum flexibility. Our *TruLaser2525* cutting machine uses a 3200-watt flying optic laser to precisely cut numerous types of sheet metal while ensuring a smooth production process from drawing to finished part. No sheet metal is too large to manipulate using our *Flexibend* folding machine, and no tooling set-up is required - allowing for significant savings in both time and cost!

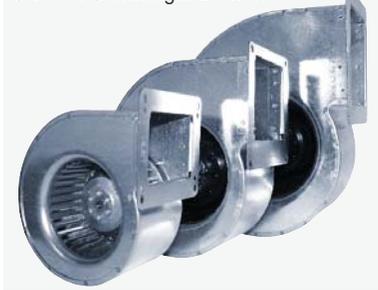
After the first sheet metal sample is cut or punched, the parts are then scanned for quality purposes. Our flat part measurement and digitizer, *Fabrivision*, scans and compares cut parts to the original CAD drawings for complete accuracy. Our *Haegar* automatic inserting machines will then insert nuts, bolts, or anything that a customer may require.

Our Electrostatic Powder Paint Booth has the ability to reclaim unused paint thus reducing waste through efficiency. This high-capacity paint line includes a paint oven conveyor and five-stage iron phosphate washer to streamline the finishing process. Once the sheet metal has been completed, custom assemblies incorporating our fans and blowers can be finished by adding PCB's, power supplies, air filters, wire harnesses, labels and more!

Blower Box Assembly



Custom Centrifugal Blowers



Custom Fan Tray



Custom Crossflow Blower



- » Custom Design: PCB's, power supplies, electronic filters, air filters, wire harnesses and labeling
- » State-of-the-art machinery: CNC punch presses, laser cutting, flexibend folding
- » Precision measurements and digitizer
- » CAD drawings and layout using Pro-E
- » Electrostatic powder paint booth and 5-stage phosphate washer
- » Airflow and acoustic test chambers

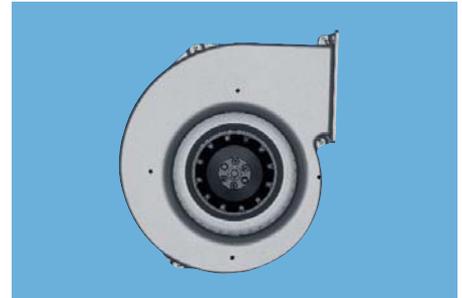
Product Overview



Axial Fans	
Size	ø9.8 in. to ø39 in.
CFM	100 to 21,000
Voltage	1-115, 230, 277; 3-230, 460 VAC
Speed Range	275 to 3,050 rpm
Power Input	1 to 3,200 Watts
Applications	Industrial and commercial air-conditioning, ventilation, and refrigeration.
Notes	Axial fans supply air flow at relatively low system pressures, without changing the direction of air. Complete fan package provides easy mounting, minimal depth, low noise and high efficiency.

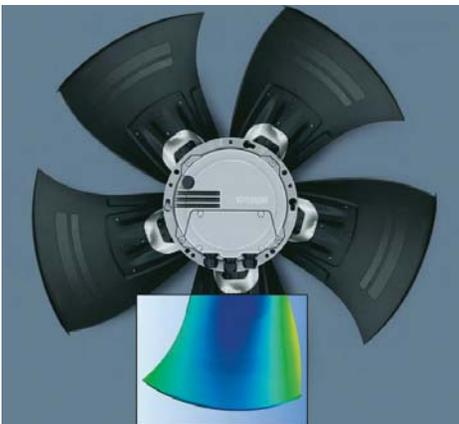


Backward Curved Motorized Impellers	
Size	ø5.24 in. to ø28 in.
CFM	50 to 10,870
Voltage	1-115, 230, 277; 3-230, 460 VAC
Speed Range	100 to 4,350 rpm
Power Input	1 to 3,100 Watts
Applications	Computer trays, telecommunication systems, ventilation, clean-room, automotive.
Notes	BCMI's supply relatively low air flow at high system pressure compared to axial fans. Air is drawn in parallel to drive axis and deflected 90° by the rotation of the centrifugal impeller and discharged radially.



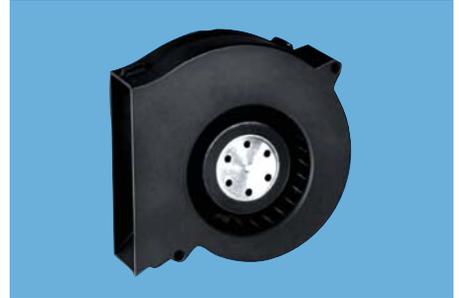
Centrifugal Blowers	
Size	ø3.35 in. to ø8.86 in.
CFM	26 to 1,216
Voltage	12-48 VDC / 115-230 VAC
Sound Range	38 to 78 dBA
Power Input	14 to 580 Watts
Applications	Range hoods, air-conditioning, ventilation, automotive and rail.
Notes	Compact blower units are completely wired and ready to plug in. Suitable for relatively high pressures at low noise levels.

HyBlade®



The HyBlade® is a revolutionary breakthrough in axial fan design and technology! The lightweight HyBlade® is comprised of corrosion resistant aluminum and fiberglass reinforced plastic blades. The sleek three-dimensional blades are integrated with winglet technology which aid in delivering impeccable aerodynamic performance while minimizing turbulence between blade and housing for quiet and efficient operation. The HyBlade® can be adapted to specific operational requirements for heating, ventilation, refrigeration and climate control. Available in five sizes (20 - 39 inches) and seven motor variants.

- » Integrated EC technology saves users 30% in energy consumption
- » Winglet technology minimizes turbulence for quiet and efficient operation
- » Weight reduction compared to conventional axial fans



Crossflow Blowers	
Size	ø11.8 in. to ø32.4 in.
CFM	185 to 649
Voltage	1~115, 230 VAC
Power Input	24 to 120 Watts
Frequency	115V-60Hz; 230V - 50/60Hz
Applications	Stove jacket cooling, storage heaters, overhead projectors, solarium, a/c, heating
Notes	Crossflow blowers provide even, low velocity air distribution over a wide area. They have a narrow footprint, are available in many different lengths and keep noise to a minimum.

Energy-Saving Motors / iQ	
Size	ø6 in. to ø12 in.
CFM	100 to 825
Voltage	1~115, 1~250 VAC
Speed Range	500 to 2,500 rpm
Power Input	1 to 35 Watts
Applications	Freezer cabinets, ice machines, reach-in coolers, condensers
Notes	Energy-Saving Axial fans and iQ motors are a versatile alternative to less efficient shaded-pole motor fans, with simple drop-in replacement of traditional shaded pole motors.

FlatPak® Blowers	
Size	2 in. to 8.6 in.
CFM	10.6 to 176
Voltage	12-48 VDC / 115-230 VAC
Sound Range	35 to 69 dBA
Power Input	2 to 21 Watts
Applications	Servers, routers, power supplies, electronic and medical equipment
Notes	Flat, pressure resistant fans developed especially for installations in equipment of compact dimensions. Modified exhaust opening for lowest possible noise.

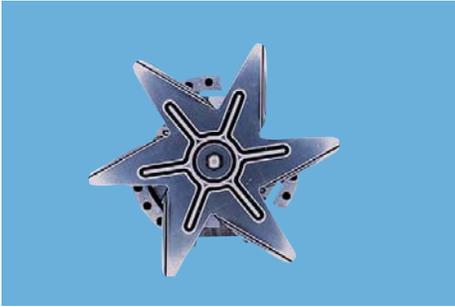
Compact Centrifugal Modules



Quiet, efficient and easy to assemble. The new compact centrifugal modules are centrifugal fans with backward curved blades. The modules are supplied with all of the necessary connection components, eliminating the need to build the assembly. The operating capacitor and plug connector on the connecting line are pre-assembled on AC fans, eliminating the possibility of incorrect wiring. These plug-and-play fans are suitable for refrigeration, industrial and switch cabinet applications.

Available in AC, DC, and EC, and in diameters of 175 mm (6.89 in), 190 mm (7.48 in), 220 mm (8.66 in), and 225 mm (8.86 in).

Product Overview



Hot Air Blowers

Size \varnothing 4.7 in. to \varnothing 8.9 in.

CFM 80 to 105

Voltage 115 - 400 VAC

Speed Range 1500 to 1800 rpm

Power Input 41 Watts

Applications Stoves / ovens, climate cabinets, plate warmers, medical equipment and drying stoves

Notes An AC motor mounted outside the hot area using special mounting plates and a radial impeller made of FAL sheet steel, stainless steel, or die-cast aluminum.



Mixed Flow / Tubeaxial Fans

Size 1 in. to \varnothing 11 in.

CFM 1.2 to 1,130

Voltage 5-48 VDC / 115-230 VAC

Speed Range 600 to 12,000 rpm

Power Input 0.2 to 200 Watts

Applications Servers, routers, power supplies, printers/copiers, medical equipment, electronic devices

Notes A diagonal fan, referred to as a mixed-flow fan is a hybrid between an axial and radial fan. Diagonal fans take the general form of a tubeaxial fan but have the ability to generate static pressure like a radial fan.



Premix Combustion Blowers

Size \varnothing 3.9 in. to \varnothing 9.8 in.

CFM 29 to 883

Voltage 24 VDC / 115-230 VAC

Speed Range 4,600 to 8,200 rpm

Power Input 20 to 820 Watts

Applications Boilers, water heaters, commercial cooking equipment, commercial humidification

Notes Efficient solution to meet emissions guidelines through improved control of air to gas mixtures. Features include a brushless motor, speed modulation, and low noise.

LambdaConstant™ System



In 2008, ebm-papst revolutionized condensing boiler technology with the Lambda**Constant** System. Consisting of an intelligent ebm-papst blower plus control unit, it is the first system that adjusts automatically to different basic conditions, applications and even different gas types - whether natural gas, liquid gas, biogas or hydrogen-enhanced gas. Temperature and air mass flow measurement allow the built-in control electronics automatically detect and optimize both the gas family and the quality of the combustion. This also compensates automatically for other influences, such as air pressure, wind or the length of the flue gas tract.

- » Maximum output regardless of location
- » Integrated temperature and air mass measurement
- » Modulation levels of 1:10 compared to 1:4 of conventional technology



Dual Centrifugal Blowers

Size ø3.9 in. to ø9.8 in.

CFM 620 to 1,216

Voltage 13-26 vDC

Speed Range 3,100 to 4,040 rpm

Power Input 152 to 690 Watts

Applications Mobile climate control, Front boxes, refrigerated transport, cabin a/c for tractors/trucks

Notes Solution for the increasing demands of comfort, and operate without wear-and-tear for extremely long service life.



Plenum Fans

Size ø9.8 in. to ø39.4 in.

CFM 700 to 22,000

Voltage 200-277, 380-480 VAC

Speed Range 500 to 3000 rpm

Power Input 450 to 5950 Watts

Applications For energy-efficient use in ventilation and air-conditioning technology

Notes Single inlet; direct drive; 2D centrifugal impeller with circumferential diffuser mounted on an electronically commutated external-rotor motor with integrated electronics; backward curved impeller blades



Compact Centrifugal Modules

Size ø5.2 in. to ø8.6 in.

CFM 324 to 871

Voltage 24, 48 vDC 115, 200-240 VAC

Speed Range 2300 to 3500 rpm

Power Input 27 to 192 Watts

Applications Refrigeration counters, in home ventilation systems or for cooling switch cabinets

Notes The fan is supplied as a module with all the necessary connection elements, so the customer benefits in particular from straightforward, simple assembly. "Plug-n-Play"

RadiCal



What HyBlade® is for axial fans, RadiCal is for centrifugal fans: another breakthrough in ventilation and air-conditioning technology. The radical features are both noise reduction and additional reduction of energy consumption. As with the HyBlade®, the fan blades of the RadiCal consist of fiberglass-reinforced plastic. This enables an aerodynamically optimized shape, which cuts the noise level in half and reduces the power requirements significantly.

We have also evolved the GreenTech EC motors through miniaturization. This gives the fans significantly more compact dimensions, allowing them to replace existing AC fans without any problem. In conjunction with optimized motor thermal management and increased efficiency, this provides energy savings of up to 50% compared to AC solutions. Thus the RadiCal not only meets all existing environmental directives with ease, but is also ideally equipped for the future.

ebm-papst EC Technology

What is EC Technology?

At the heart of our ecologically friendly products is our award winning EC technology integrated into the electric motors. EC stands for electronically commutated, the innovative commutation without wear-and-tear. EC motors are DC motors with integrated AC to DC conversion. The EC motor compares to the direct current shunt-wound motor but for the fact that the magnetic field is generated by permanent magnets inside the rotor. EC motors give the flexibility of connecting to an AC mains with the efficiency and simple speed control of a DC motor.

EC motors and fans can be easily controlled, are maintenance-free, offer outstanding efficiency and have a considerably long service life. The variable speed range possible in EC technology makes using a multitude of individual models a thing of the past, making your life a lot easier. Still, our R&D activities are not only focused on saving energy. In terms of pressure build-up, air performance and low noise, our products exceed the toughest specifications.

When you use intelligent ebm-papst EC technology in your applications, everyone wins - companies, customers, and the environment. It not only pays off in real money for every owner/operator, it also conserves precious energy resources. But that's not all. In addition to the "savings effect," you can also expect a significant reduction of noise emissions. At lower speeds, ebm-papst EC fans are even quieter. You will hardly know they are there. Consistent use of ebm-papst fans with EC-technology can radically reduce the power consumption compared to AC fans - and that pays off.

The Benefits of EC Technology

29%
Savings

When using 6 ebm-papst A3G800 axial fans in heat exchangers, energy costs can be reduced by 29% at an average duty cycle of 75%, approximately 17.1 short tons of CO₂ and the cost of more than 24 MWh of energy can be saved annually.



e.g. A3G800 axial fan



67%
Savings

When using ebm-papst W1G200 axial fans in refrigerated counters, energy costs can be reduced by 67% using EC technology. In a supermarket with 40 fans in refrigerated counters for example, 6.7 short tons of CO₂ and the cost of more than 9.4 MWh of electricity can be saved annually.



e.g. W1G200 axial fan



30%
Savings

When using ebm-papst K3G560 fans in central air handling units, energy costs can be reduced by 30% when operated at a 100% duty cycle. In a shopping center with 8 central air handling units, approximately 206 short tons of CO₂ and the cost of up to 291 MWh of electricity can be saved annually.



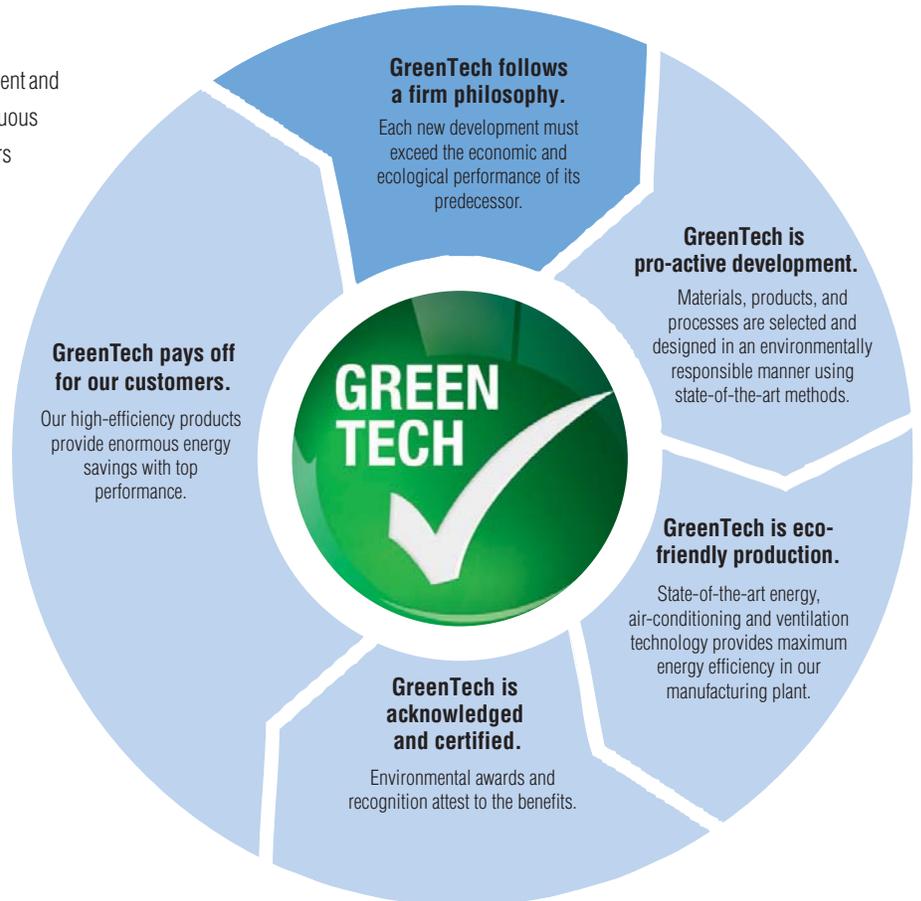
e.g. K3G560 fan



The symbol of our commitment

GreenTech is the symbol of our philosophy towards the development and manufacture of eco-friendly products. It symbolizes our continuous commitment, achievements, and passion to provide customers with high quality products through the use of state-of-the-art methods, responsible business practices and initiatives that benefit not only the user, but the environment as well.

The heart of GreenTech beats in every ebm-papst EC product. EC technology means products with exceptional energy efficiency and the ability to flexibly respond to the performance requirements actually encountered.



Learn more at www.ebmpapst.us/greentech



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