North American Region

United States, Canada, and Mexico

ebmpapst

engineering a better life

About ebm-papst **North America**

Sales, engineering, manufacturing, development, logistics

ebm-papst is an innovator and market leader in fans, blowers, and motors with core competencies in motor technology, aerodynamics, and electronics. With more than 20,000 products, we provide solutions to a wide range of markets including air-conditioning and ventilation, commercial refrigeration, heating, industrial, lighting, IT/telecom, medical, transportation, and more.

To gain independence from overseas production and shipping delays, ebm-papst opened a temporary production facility in Johnson City, TN in 2019. While localizing efforts continued to grow, we subsequently planned and purchased a permanent location in Telford, TN. After only 12 months of construction, we opened our new production plant for highly energy-efficient fans and motors on November 10th, 2022. Through this expansion, we have bolstered independence, agility, and resilience from external influences in the supply chain, while benefiting from the skulled workforce in the region.

Our Telford location will help us to meet demand domesitally and produce greater quantities of products for our fan and motor lines.

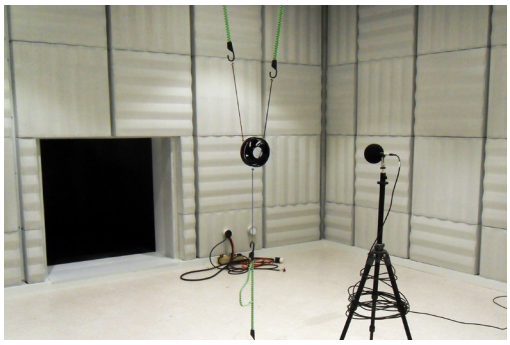
Total footprint
- 427,000+ sq.ft
- 500+ employees

Planning
- $15 mil additional production investment planned for 23/24
- Expansions planned in both CT and TN locations
- Twice the output of motors in 2023
- Production that serves a diverse market of Air Conditioning, Data Center, Heating, Refrigeration, Ventilation

- Value added capabilities
- Acoustic testing chamber
- Complete on-site air testing lab
- ISO 9001 and ISO 14001 certification
- Distribution centers in Farmington, and Toronto, Canada

North American headquarters in Farmington, Connecticut

Production location in Telford, Tennessee



What we stand for

Our Purpose

Engineering a better life

We make sustainable and intelligent solutions *for a better climate –*
for people, their applications and the environment.

Our Vision

We lead air technology into the next generation.

Our Values

We embody our values.

Humanity
is at the core of everything we do.

Efficiency
is reflected in clear communication, agile processes, and goal-oriented actions.

Enthusiasm
and passion unite us across generations. These qualities have made us unique, successful, and armed us for the future.

Climate Action: ebm-papst climate goals

* Base year 2021

47,371* tCO_{2e} → **0** Carbon neutral production in 2025

Corporate Carbon Footprint Scope 1+2

Direct emissions from owned or controlled sources and indirect emissions from generation of purchased electricity, steam, heating and cooling.

6% emissions reduction realized by improved energy efficiency:
- Downtime Management
- Energy Data Monitoring
- Waste Heat Utilization

Investing at least 1,5 mio. EUR per year to build up self-generation capacity for Renewable Energy.

Compensate remaining non-avoidable or non-reducible emissions to achieve climate neutrality by 2025.

Sourcing green electricity by 2023 in Germany, Hungary, China, Slovenia, United States, Romania and Italy eliminates 61 % of overall CO_2 emissions.

"Every newly developed product must surpass its predecessor economically and ecologically."

Gerhard Sturm, 1963

Value-Added *Capabilities*

Design and manufacturing

Our staff of design, electrical, and application engineers possesses 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 the optimization of equipment for outdoor a/c systems, refrigeration systems, and commercial fan applications. Each chamber has been designed to meet AMCA 210 and ISO 5801 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, 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.

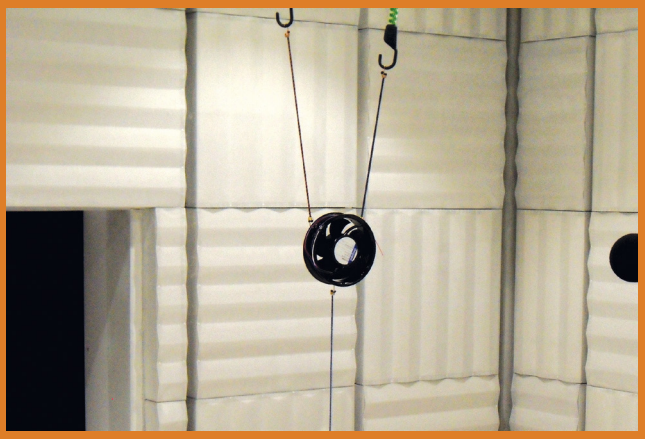
While our design engineers develop the mechanical components of the fan assembly, our electrical engineering team can design everything from simple fan controllers for monitoring fan speed to complex controllers and power supplies, filtering, and specific communication protocols. With our staff of engineering experts, a working prototype can be developed in a matter of weeks!

Our engineers and custom assembly solutions can help customers to:

- Create cost-effective designs
- Optimize airflow
- Lower energy consumption
- Reduce noise
- Quickly develop prototypes

The gas lab provides ebm-papst the opportunity to service our customers by making gas-fired appliances that are sold into the commercial cooking and heating markets. We provide support to optimize performance for components and system solutions for individual applications. controllers for monitoring fan speed to complex controllers and power supplies, filtering, and specific communication protocols.

Engineering support



Acoustic testing chamber

Air testing chamber

Gas appliance test lab

North American Production *Capabilities*

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 efficient equipment know-how provide customers with the manufacturing excellence that has led ebm-papst to become the leading choice for fan and motor technologies.

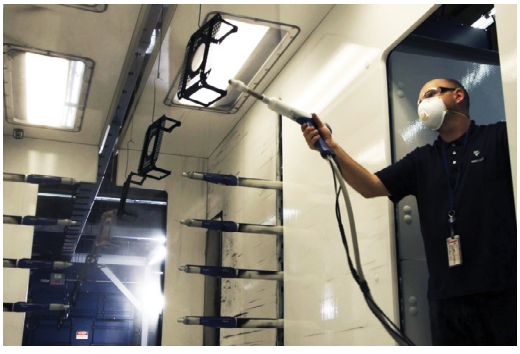
All sheet metal cutting, stamping, forming, rolling and welding are performed within our facilities. Our modern line of CNC punch presses, the *TruPunch5000*, allows us to accurately and efficiently create metal scrolls to exact specifications ensuring high quality and maximum flexibility. Our *TruLaser 3030* fiber cutting machine uses a 3000-watt fiber laser beam delivery system for extremely high cutting speeds of thin sheets, while also allowing for the cutting of more exotic metals like copper and brass.

TruPunch5000

Robotic bending machine

Our robotic bending machine includes the *Trumpf LiftMaster* Compact for the automated production loading and unloading of 5′ x 10′ sheets. No sheet metal part 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 *Haeger* automatic inserting machines will then insert nuts, bolts, or other hardware as required.

Our electrostatic powder paint system can reclaim unused paint, thereby reducing waste through efficiency. This high-capacity paint line includes a paint oven conveyor and a 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 PCBs, power supplies, air filters, wire harnesses, labels and more!



Powder paint

Co-Bot cell

Market *overview*

Access Control
Turn stiles, barriers, doors, gates, sliding doors

Agriculture
Food storage, greenhouse ventilation, livestock ventilation, seeding machines & robots, conveyor systems

Air-conditioning
Air handing units, condensing units, energy recovery systems (ERV), fan coil units, heat pumps, packaged rooftop units

Alternative Energy
Battery charging electric vehicle stations, battery/grid cooling, gas compressor stations, generators, power conditioning, backup converters, solar power inverters, wind turbine cooling, fuel cells

Appliance
Cleaning systems, convection and microwave ovens, food preparation equipment, range hoods, refrigerators

Automation and Intralogistics
Factory automation, textile machines, woodworking machines, AGVs, circuit breakers, conveyor systems, transfer systems, shuttle systems, packaging machines, cross belt systems

Commercial Refrigeration
Beverage coolers & dispensers, condensers, cooling towers, evaporators, vending machines, refrigerators & ice making equipment, supermarket display cabinets

Data Center
Computer room air conditioners (CRAC), under floor cooling, electronics enclosures, mainframe computers, portable and modular data centers, rack cooling, routers, servers, switches

Heating
Air heaters, burners, commercial &residential water heaters, fireplace inserts, gas fired condensing boilers, gas heaters, humidifiers, pellet stoves, rotational heat exchangers

Industrial Air Technology
CNC machinery, control cabinet cooling & ventilation, exhaust systems, inspection & test equipment, laser technology, power electronics, transformer cooling, welding/printing

IT / Telecom
Electronics enclosures, mainframe computers, portable and modular data centers, rack cooling, routers, servers, switches, telecommunication equipment

LED
Architectural and residential lighting, audio-visual equipment, digital signage and displays, high-bay lighting, LED active cooling, stage lighting, street lamps

Medical & Laboratory
Blanket warmers, blood processing machines, C-PAP machines, CT scanners, centrifuges, chromatographs, diagnostic equipment, dialysis machines, emergency cots, MRI, patient lifters, peristaltic pumps, shakers, stirrers, surgery tables, wheelchairs, X-ray machines

Transportation / Mobile
Agriculture vehicles, buses, commercial vehicle ventilation, marine, material handling equipment, railway technology, refrigerated transport vehicles

Ventilation
Commercial and residential ventilation, chilled water systems, cleanroom equipment (FFU, clean benches, air showers)

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.

29% savings (E.g. A3G800 axial fan)

A heat exchanger operates with 6 fans. Given an average utilization rate of 75%, there is potential for saving more than 24 MWh per year. That corresponds to roughly 14.4 t of CO2 and represents a savings of $3,194 USD*.

67% savings (E.g. W1G200 axial fan)

40 fans operate in refrigerated display cases in a small supermarket. On account of the lower level of heat generated by the energy-saving motor, the operating time is 30% shorter. This translates into a potential annual savings of more than 9.4 MWh and 5.6 t of CO2. Cost savings: $1,226 USD*.

22% savings (E.g. R3G500 centrifugal fan)

6 precision air conditioning units, each equipped with 3 GreenTech EC fans, operate in the IT rooms of a computer center. Given a 100% duty cycle it is possible to save up to 50 MWh of electricity. That corresponds to around 30 t of CO2 and represents a predicted savings of $6,695 USD* per year.

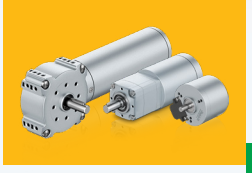
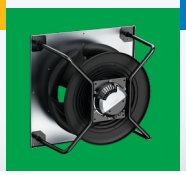
* Based on CO2 emissions of 600 kg/MWh (German energy mix) and 11.69 cents/kWh, average price paid by industry for electricity in Germany (as at: January 2010, source: VEA, BDEW).

Digital services

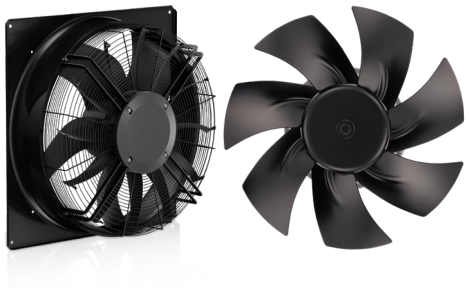
Transform your building

Traditional Building Management Systems quickly reach their limits for providing accurate real-time data. ebm-papst's digital solutions platform breaks the chains of your existing BMS while future proofing the buildings IOT capabilities, creating value from your data. This platform processes and analyzes building data and can be used to optimize control systems. The platform plays an active role in monitoring indoor air quality (IAQ) and controlling it in an energy-efficient manner. Algorithms learn from user behavior, building characteristics, and environmental conditions, and with the help of energy-saving fans, help to create an optimized indoor eco-system. Our platform can securely integrate existing and new equipment with ease, standardizing and translating between various protocols and systems. This cloud-native solution gathers data from existing assets such as lighting, HVAC, and building controls, analyzes them, and turns the findings into value-creating actions, ensuring a smart future for building management.

Product *overview*

Axial fans



Supply airflow at low system pressures. Complete fan packages provide easy mounting, minimal depth, low noise and high efficiency. Electronically commutated external-rotor motor with integrated electronics.

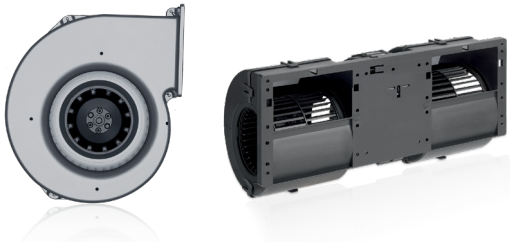
Applications: Condensers, horticulture, industrial and commercial air conditioners, livestock ventilation, motor/engine cooling, mobile refrigeration
Markets: Agriculture, Air-conditioning, Commercial Refrigeration, Data Center, Industrial, Transportation, Mobile, Rail, Ventilation
Size: Ø 7.9 in. to 63 in. (200 mm to 1,600 mm)
CFM: 100 to 49,500
Static pressure: 0.16 in.H_20 to 2.5 in.H_20
Accessories: AxiTop™, FlowGrid

Backward curved motorized impellers

Supply air flow at medium system pressure; air is drawn in over the motor and then discharged radially. Electronically commutated external-rotor motor with integrated electronics.

Applications: Cleanrooms, exhaust systems, routers, telecom equipment, mobile refrigeration, HVAC, engine cooling
Markets: Data Center, IT / Telecom, Transportation, Ventilation, Rail
Size: Ø 3.94 in. to 35.4 in. (133 mm to 900 mm)
CFM: 50 to 21,780
Static pressure: 0.4 in.H_20 to 10.3 in.H_20

Centrifugal blowers



Suitable for applications with relatively high pressures. External rotor motor combined with a forward curved centrifugal wheel within a scroll housing.

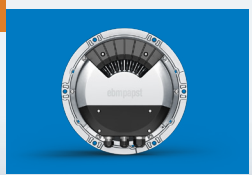
Applications: Exhaust systems, range hoods, machine cooling
Markets: Air-conditioning, Appliance, Industrial, Transportation, Ventilation
Size: Ø 3.35 in. to 15.9 in. (85 mm to 404 mm)
CFM: 26 to 5,600
Static pressure: 0.2 in.H_20 to 4.5 in.H_20

Compact fans

Compact, quiet and highly efficient energy-saving fans. Available for all voltages and in all standard sizes.

Applications: Automotive seat and electronics cooling, medical equipment, power supplies, printers/copiers, refrigerated display cases, routers, servers, warming ovens
Markets: Appliance, Automotive, Data Center, Industrial, IT / Telecom, Medical, Refrigeration
Size: Ø 1 in. to 11 in. (25 mm to 280 mm)
CFM: 1.2 to 1,218
Static pressure: 0.04 in.H_20 to 5.6 in.H_20
Accessories: Connecting cables, filters, finger guards, screens, spacers and temperature sensors



Product *overview*

Energy-saving motor (ESM) fans

Two speed, user programmable, reversible, energy efficient complete fan packages. Line powered energy efficient EC brushless motors and also DC versions with infinitely variable speed control via analog signal or ModBus communication. 100 - 240 VAC wide voltage range available on select models. Safe for use with hydrocarbon refrigerants.

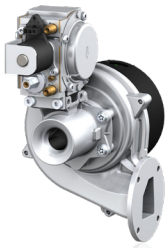
Applications: Display cases, vending machines, bottle coolers, freezers, unit coolers
Markets: Commercial Refrigeration
Size: Ø 6 in. to 12 in. (152mm to 305mm)
CFM: 100 to 825
Static pressure: 0.09 in.H_20 to 0.65 in.H_20
Accessories: HX0C-003-000-02 full featured programmer
HX0C-006-000-03 two-speed programmer

FlatPak® blowers

Flat, low-noise, pressure-resistant fans developed for installations of equipment within compact space.

Applications: Electronic, medical equipment, power supplies, routers, servers
Markets: Data Center, Industrial, IT / Telecom, Medical
Size: 2 in. to 8.7 in. (50 mm to 220 mm)
CFM: 5.7 to 261
Static pressure: 0.4 in.H_20 to 5.5 in.H_20

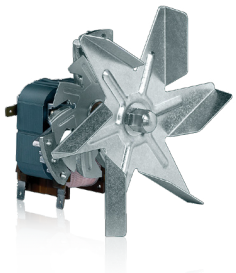
Gas blowers & complete combustion systems



Components and systems that allow for a measured air-fuel mixture to be delivered to the burner for optimum combustion.

Applications: Gas fired boilers, water heaters, power burners, commercial food equipment, steam humidifiers
Markets: Heating and appliance
Size: Impeller diameters ranging from Ø 2.80 in. to 17.72 in. (71 mm to 450 mm)
Note: Energy input rate up to 13.6MM BTU/H (4MW) to 6.8M BTU/H (2MW)
Static pressure: up to 20 in wc (5000 Pa)

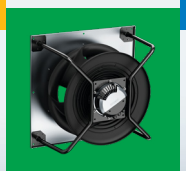
Hot air blowers



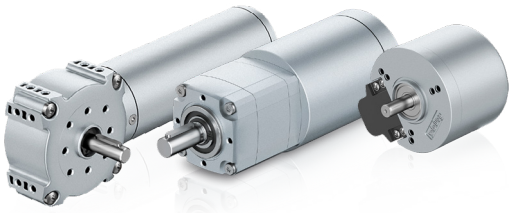
Feature an AC or EC motor mounted outside the hot area and a radial impeller made of sheet steel, stainless steel, or die-cast aluminum for mounting in the hot area.

Applications: Residential and commercial convection ovens
Markets: Appliance, Heating, Industrial
Size: Ø 4.7 in. to 8.9 in. (119 mm to 226 mm)
CFM: Up to 418 cfm (710 m3/h)
Static pressure: up to 12 in. wc (3000 Pa)
Note: Motor supplied bundled with blade, nut and washer

Product *overview*

Motors & Drives



Modular drive systems. Motors with integrated logic and power electronics - optional gearhead, encoder, and brake.

Applications: Conveyors, turnstiles, patient lifter, ceiling lifter, wheelchairs, pumps, transfer systems, actuators, feeder units, dialysis machines, surgical tables, stirrer / shaker, circuit breakers, pellet heating systems, autonomous guided vehicles, sorters, windshield wipers, doors, barriers , packaging machines, blinds, rotational heat exchanger, shutters , seeding machines, wood working machines

Markets: Agriculture, Automotive, Industrial, Medical, Intralogistics, Access Control, Transportation, Factory Automation
Size: 1.65 in. to 3.14 in. (42 mm to 80 mm)

RadiPac™

Single inlet, direct drive, centrifugal impeller with an electronically commutated external-rotor motor with integrated electronics; backward curved impeller blades.

Applications: Air handing units, condensing units, energy recovery systems (ERV), packaged rooftop units
Markets: Air-conditioning, Data Center, Industrial, Ventilation
Size: Ø 9.8 in. to 39.4 (249 mm to 1000 mm)
CFM: 700 to 22,000
Static pressure: 1.35 in.H_20 to 10.3 in.H_20
Accessories: FlowGrid, instrumented inlet rings

Tangential blowers

Provide even, low velocity airflow over a wide area. Feature a narrow footprint and are available in many different lengths.

Applications: Gas fireplaces, gas, pellet, and wood stoves, kitchen appliance cooling, trench heating, and industrial cabinet ventilation.
Markets: Appliance, Heating, Industrial
Size: 11.8 in. to 32.4 in. (300 mm to 823 mm)
- **Impeller diameters:** 1.2 in to 3.1 in (30 mm to 80 mm)
- **Impeller lenths:** 4.7 in to 32.4 in (120 mm to 823 mm)
- **Optional:** Cascade impeller assemblies for under floor ventilatio

CFM: up to 649 cfm (1100 m3/h)
Static pressure: up to 0.44 in wc (110 Pa)

Accessories

Products designed to optimize performance.

Accessory: FlowGrid, AxiTop, fan guards, capacitors, cord sets, programmers

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