ebmpapst

engineering a better life

Only the best for ventilation technology.

The RadiPac product range:
Think Benchmark.

More power, more efficiency, *more wow!*

- Assemblies 280 to 800 in different designs for a wide range of applications
- Energy-saving operation: Power consumption of just 4.2 kW for 10,800 m³/h at 1,000 Pa
- Noise level reduction of 3 to 7 dB(A) compared with the previous series depending on the operating point
- Long-lasting EC motors up to 24 kW
- Electronics with configurable control interface for analog and digital signals
- Sustainable thanks to high system efficiency levels and magnets without rare earth

Discover exciting additional information in this brochure.

1. Install Xplore app
Start and select "RadiPac" module.

2. Scan
Point camera at pages with the AR icon.

Think *Benchmark.*

Many factors play a role when it comes to the best fan solution for your ventilation system – above all, energy efficiency. This is due to increasingly strict legal requirements, but also the possibility of saving energy, as rising energy prices increase the cost pressure. Furthermore, companies must satisfy increasing environmental awareness and show responsibility for subsequent generations.

Yet fans have to be able to do much more: they have to be as quiet as possible, as, in many applications, noise is another unwanted emission. They also have to cover a wide range of services for greater power reserves. And of course IoT and intelligent data utilization are also playing an increasingly important role in ventilation technology.

So, which fan is the best one for your application? It's quite simple: the one that meets your requirements. The RadiPac product range was developed specifically for this purpose – particularly for ventilation technology and with top values in all disciplines. The RadiPac is also available in special custom designs, so that as many applications as possible can benefit from it.

This means that, regardless of your plans, RadiPac is always the best solution. We call this "Think Benchmark".

You have requirements.
RadiPac has the solution.

Always being the benchmark means delivering the best at all times, now and in the future. That's why ebm-papst is continuously and consistently developing the RadiPac product range in terms of its aerodynamics, control system, and EC motor technology. This enables us to improve the performance even further with every new generation – without wasting space and resources. The latest generation is even more compact.

Greater efficiency thanks to optimized impeller.
A significant portion of the RadiPac's excellent efficiency values is down to the aerodynamically optimized impeller. A high-strength, glass-fiber reinforced composite material was used, enabling the complex shape of the five spatially twisted and strength-optimized 3D blades. Thanks to the rounded flow contour and the tapering profile of the blade outlet, flow losses have been drastically reduced and noise characteristics optimized. In addition, the wavy cover plate ensures the best possible air flow rate. Based on size 630, considerable air flows of up to 20,000 m³/h and the stable material also facilitates high speeds and hence pressures of more than 2,000 Pa – over the entire temperature range. For even higher speeds, our High Pressure variant is still available, with special metal impellers.

Greater performance thanks to the latest generation of EC motors.
The driving force behind the RadiPac centrifugal fans are high-efficiency long-lasting EC motors in the power range up to 24 kW. The integrated EC motors with a proven external rotor design achieve highest efficiency levels above 90%. On top of this, they do not need any rare earths and are also impressively compact thanks to the typical ebm-papst external rotor design.

Greater system efficiency thanks to perfectly coordinated components
Technically, any increase in performance would have to come at the expense of power consumption. Not with the RadiPac: The combination of highly efficient EC motor technology, aerodynamic optimizations, innovative materials, and sophisticated design details ensures system efficiency levels of well over 70 %. This means that equipment manufacturers will continue to meet the most stringent efficiency specifications and reduce energy costs for users.

Greater control options thanks to high-performance electronics.
AHUs are also getting smarter and smarter. Digital networking of the fans with their surroundings is a prerequisite for intelligent additional functions and flexible control options. The high-performance electronics provide everything required for this, such as a configurable control interface for analog and digital signals that can be individually adapted, as well as a serial MODBUS RTU interface. This enables operating data, such as speed, power consumption or operating time, to be read out and processed digitally, for example.

A helpful and intelligent function is included as standard with the new RadiPac generation: automatic resonance detection. An integrated vibration sensor measures mechanical vibrations and detects critical resonance points within the speed range. During initial commissioning, these vibrations are recorded and simply 'run over' in normal operation later. This prevents premature bearing damage and thus system failures while increasing the fan's service life.

Even greater performance: the RadiPac C Perform
Would you like to reduce the energy consumption even further at the same operating point? Then take a look at the new RadiPac C Perform. Maybe even two looks, because the special part about RadiPac C Perform is its shape: a special air conduction module on the outlet side, consisting of four aerodynamically shaped, Sendzimir galvanized sheet steel segments, reduces the outlet losses that arise from free-air fans. This means that it achieves a 4 % increase in efficiency (compared to a model without an air conduction module).

The ultimate in "more"!

Benchmark down to the last detail.

Impeller

- **High static efficiency**
  - Innovative geometry reduces flow losses
  - Wavy cover plate for the best possible air flow rate
- **Low noise emissions**
  - Optimum outflow characteristics
- **Low vibration**
  - Dynamic balancing reduces bearing load
- **Robust design**
  - Glass-fiber reinforced composite material
  - Permanently high circumferential speeds

Inlet ring

- **Pre-installed**
  - Optimized factory positioning of nozzle
  - Pressure tap for air flow control standard
- **Low losses**
  - Optimized impeller inflow

Support plate/support bracket

- **Robust sheet metal design**
  - Sendzimir galvanized sheet steel
- **Simple installation in AHU**
  - Complete, ready-to-install system
  - Compactness enables new design flexibility

long-lasting EC motor

- **Unbeatably compact**
  - Impeller directly on motor rotor
- **High efficiency**
  - Low copper and iron losses
  - Synchronous running prevents slip losses
  - No magnetic hysteresis losses
- **Economical operation**
  - Partial-load operation up to 1:10 at high efficiency
- **Long service life**
  - Maintenance-free bearings
  - Brushless commutation
- **Safe operation**
  - Insulated bearing system
- **Sustainable**
  - Magnets without use of rare earths

FlowGrid

Reduced noise spectrum
- Low noise level
- Dramatically dampened blade passing noise
- Without loss of air performance and efficiency

Compact design
- Small footprint
- Fewer insulation measures

Quick installation
- Through-holes for easy attachment
- Customized attachments on request

Robust design
- Resistant composite material

Guard grill function
- Option as a closed version
  (fewer pressure losses compared to the circular grid)

Air conduction module (only RadiPac C Perform)

Maximum system efficiency
- Air conduction module ensures aerodynamically optimized flow release
- Efficiency increase by up to 5 percentage points

Robust construction
- Sendzimir galvanized sheet steel
- Unchanged mounting hole pattern

Electronics and connection area

Adaptable
- Configurable control interface
- Control signal 0 –10 VDC and MODBUS RTU
- Infinitely variable speed adjustment
- An option with active PFC (power factor correction)

Universally deployable
- Suitable for use with 50 and 60-Hz networks

Increased operational reliability
- Integrated resonance detection
- Integrated locked-rotor and thermal overload protection
- Environment-resistant cable glands

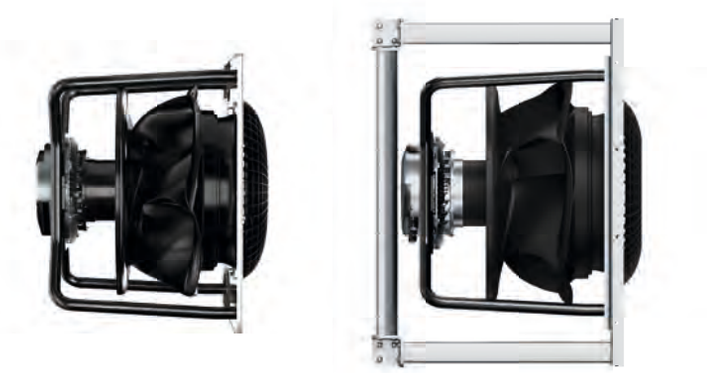
Simple commissioning
- Central terminal area separated from electronics
- No programming effort

The new generation of RadiPac: *from super compact to mega efficient.*

So that you get the best centrifugal fan for your individual installation scenario, the RadiPac is available in different designs. The choice is yours!

Short or standard
In the standard version, the motor is completely pulled out of the flow area. In the short version, the motor is immersed in the impeller. This makes the fans more compact, but they still offer a significant increase in performance compared to previous models.

Option with a support bracket or cube design
Both RadiPac versions are available as a motor-impeller combination or as a ready-to-install plug & play solution in a compact support bracket, for easy wall mounting, or as a cube design. The support plates are dimensioned to make the best possible use of space on a Euro pallet. This saves transport costs and improves the CO_2 footprint.

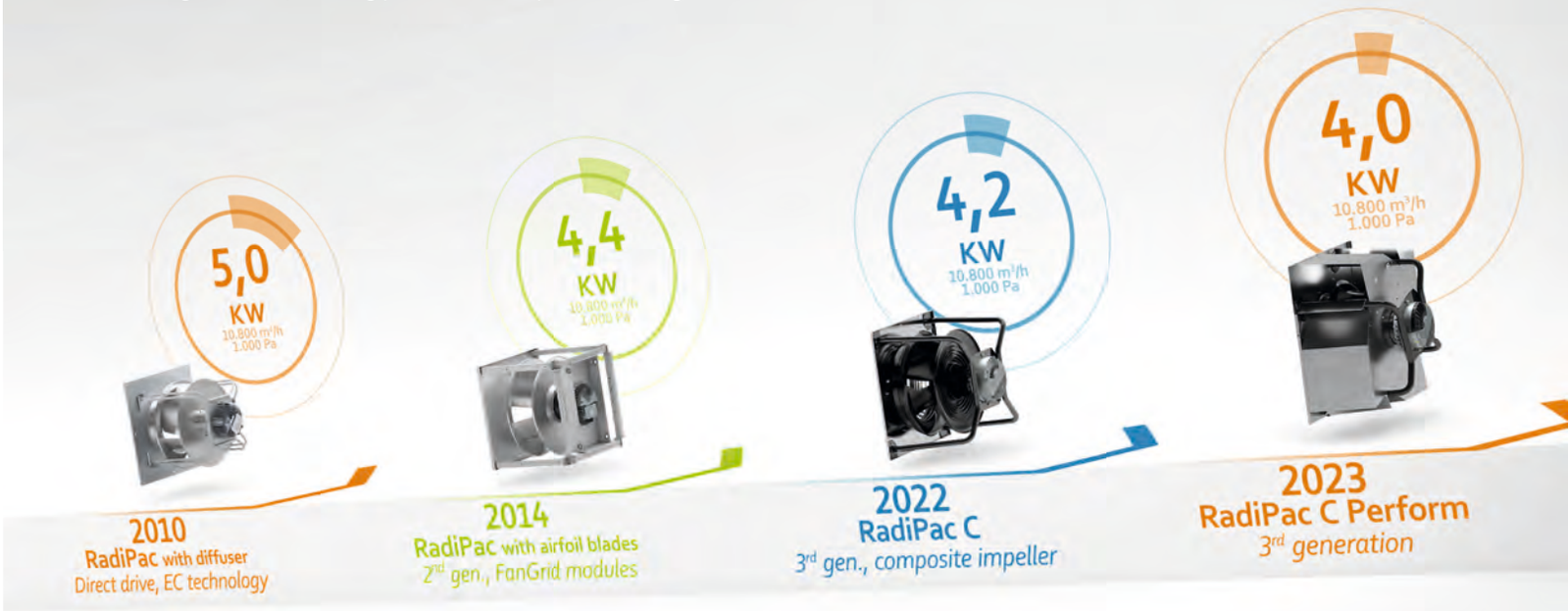


Air conduction module: RadiPac C.Perform.
With the RadiPac C Perform, the normal RadiPac C is expanded by an air conduction module on the outlet side, consisting of four aerodynamically shaped, Sendzimir galvanized sheet steel segments, which further reduce the outlet losses and increase the efficiency by over 4 percentage points depending on the power range and installation conditions. This can deliver significant cost savings and a reduction in the carbon footprint, particularly in the case of fans with long operating times. The tried-and-tested support bracket remains unchanged. This means that practically no design changes are necessary for installation in the application.

The RadiPac C.Perform can also be combined with the FlowGrid air-inlet grille. This will provide you with a high-performance package that allows you to get optimum energy efficiency from your system.

Simple fan replacement
Due to rising energy costs and increasingly important environmental considerations, it often pays to replace old fans, because the RadiPac saves on costs and resources in the long term. Thanks to its power density, there are many suitable products available at the required operating point.

More air performance, less power consumption: With every new generation, our engineers have managed to further increase the RadiPac's efficiency. This way we can help you achieve your goals: conserving resources, reducing your carbon footprint and saving costs.



The simplest way to the **best result.**

With FanScout from ebm-papst.

With FanScout, your complex search for the right fan solution will have a quick and happy ending. Because as soon as you open FanScout, you are already practically where you want to be. All you need for the perfect result are the requirements of your application – for example, air flow, static pressure, and the planned operating time.

FanScout then guides you through an overview of the best possible fan and FanGrid solutions, which you can compare with each other clearly and intuitively. And to make your decision even easier, FanScout also takes life cycle costs into account – from acquisition to operation and service. This saves you time and helps you to find out all about the right fan.

Further information and contact can be found at:
ebmpapst.com/fanscout

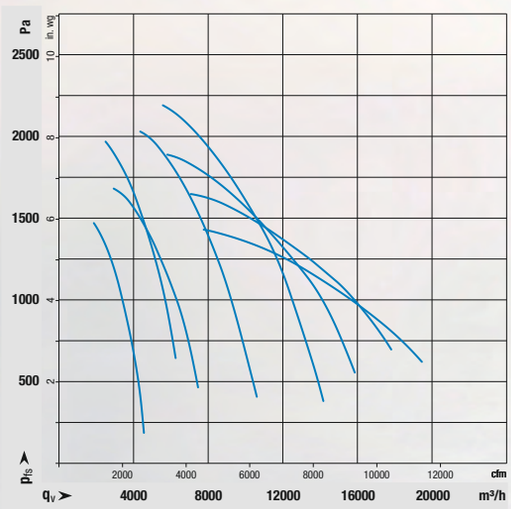
Always the benchmark:

all the RadiPac variants at a glance.

RadiPac C

Centrifugal fans with aerodynamically optimized impeller (sizes 280 to 630) made of glass-fiber-reinforced composite material and the latest generation of long-lasting EC motors. Optionally as a motor-impeller combination, with support bracket, or as cube design.

Suitable for a wide range of ventilation technology applications, e.g. AHUs.

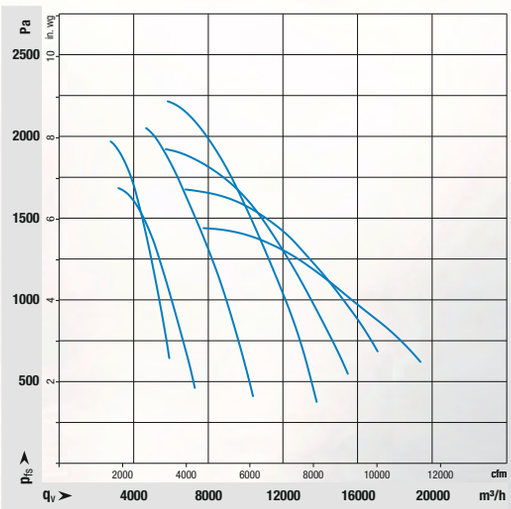


You can find all the details in the FanScout collection:
fanscout.ebmpapst.com/c/33578

RadiPac C.Perform

The RadiPac C with an air conduction module on the outlet side, consisting of four aerodynamically shaped sheet steel segments, which further reduce outlet losses and thereby increase efficiency by up to 5%.

Suitable for AHU applications where maximum system efficiency is important.



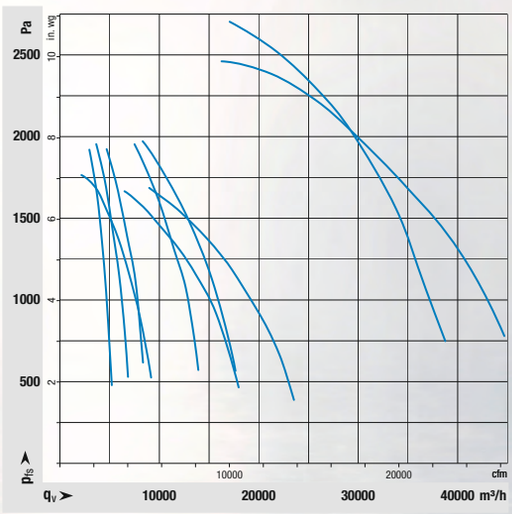
You can find all the details in the FanScout collection:
fanscout.ebmpapst.com/c/31169

Based on a standardized series of highly efficient centrifugal fans with high power density, the RadiPac product portfolio offers a range of plug-and-play radial modules, scalable FanGrids, and application-specific variants. As a company with a global presence, we delight our customers with local strength and solutions tailored to regional markets.

RadiPac M

Centrifugal fans with optimized and fully welded corrosion free aluminum impeller (sizes 280 to 800) available with the strongest external rotor EC motor (24 kW) on the market. Optionally as a motor-impeller combination, with support bracket, or as cube design.

Suitable for high air performances or when metal impellers are required

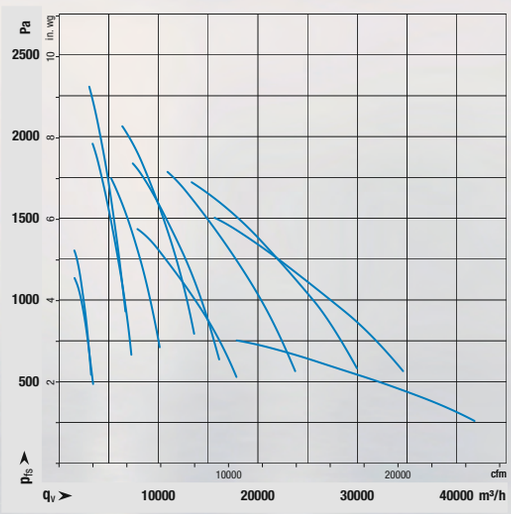


You can find all the details in the FanScout collection:
fanscout.ebmpapst.com/c/40267

RadiPac with airfoil blades

Centrifugal fans with metal impeller, airfoil blades, and EC technology achieve high efficiency values – available up to size 1,000 for AHU applications with corresponding specifications.

Suitable for high air performances or when metal impellers are required



You can find all the details in the FanScout collection:
fanscout.ebmpapst.com/c/31216

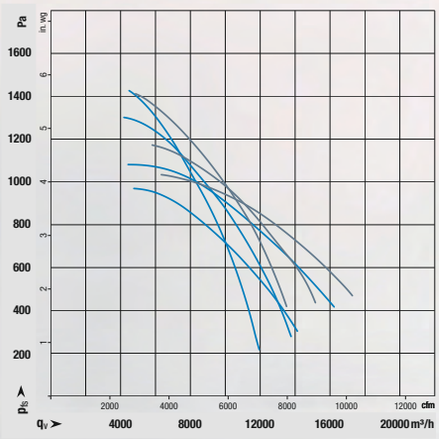
RadiPacs for special applications:

Also the benchmark
when it comes to special uses.

RadiPac
with active PFC

An active harmonic filter is integrated to minimize disturbing harmonics in the event of parallel operation of several EC centrifugal fans. This means that external measures are redundant and emergency power supplies can be designed to be smaller.

Suitable for FanGrid applications and precision air-conditioning units in data centers.

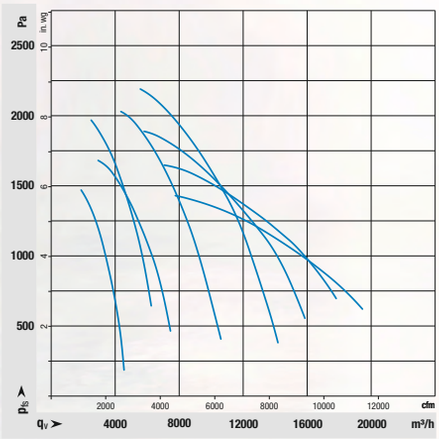


You can find all the details in the FanScout collection:
fanscout.ebmpapst.com/c/33578

RadiPac
with corrosion protection

All metal components in the corrosion-resistant RadiPacs feature a special coating. Available in all sizes as cube design or with support bracket. To realistically assess fan suitability, ebm-papst has developed practical environmental classes.

Suitable for high-humidity environments like swimming pools and offshore installations.



You can find all the details in the FanScout collection:
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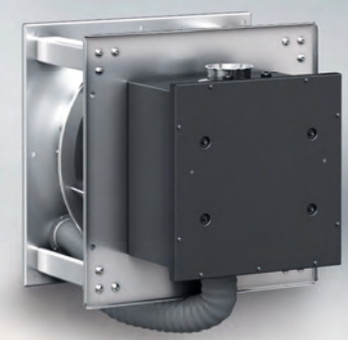
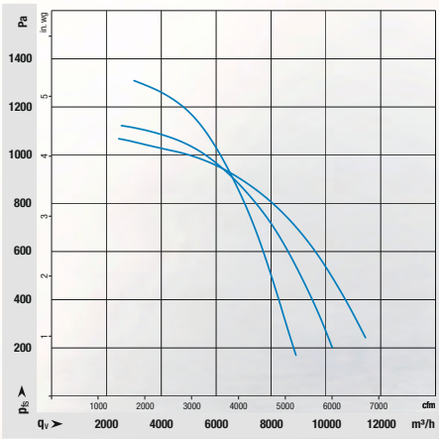


RadiPac
for the food service sector and process exhaust air

A special motor enclosure separates the motor and control electronics from the contaminated air flow in accordance with VDI 2052 and EN 16282 and prevents the formation of a layer containing grease or oil on the motor or control electronics.

Suitable for applications with flow media over +80 °C and with particle-laden ambient air in industry and food service.



You can find all the details in the FanScout collection:
fanscout.ebmpapst.com/c/14141

RadiPac *for FanGrids*

Instead of large individual fans, FanGrids are increasingly being used in ventilation technology. They increase reliability and are easier to replace. ebm-papst has developed ready-to-install FanGrid modules for this purpose which can also be ordered as kits.

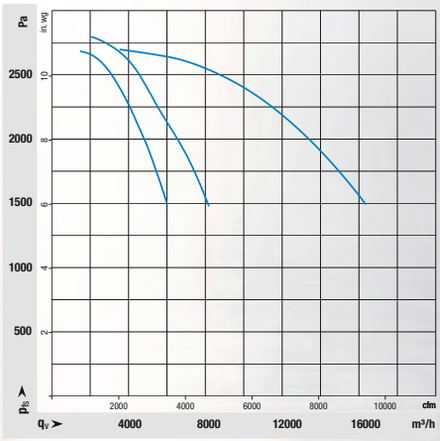
Suitable for AHU applications with high air flows, e.g. server rooms.

For more information see next pages

RadiPac
with high static pressure

In central air conditioners, the air often has to travel long distances through air ducts. The RadiPacs optimized for this purpose offer a static pressure increase of up to 2,500 Pa – available in sizes 355, 400, 560, and 630.

Suitable for AHUs in large buildings such as airports, high-rise buildings, and hotels.



You can find all the details in the FanScout collection:
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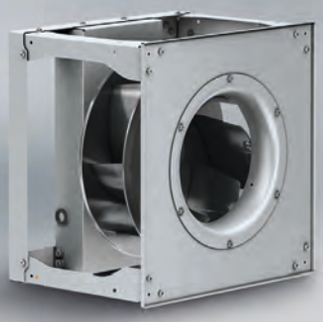
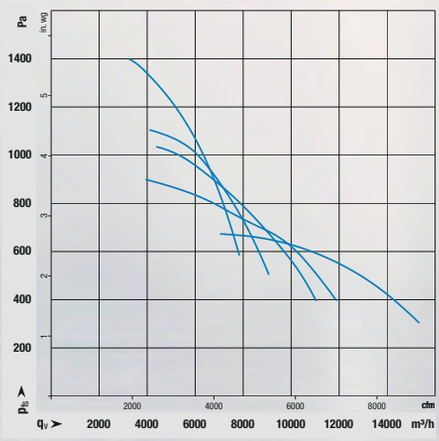


RadiPac
with explosion protection

ebm-papst is the first manufacturer ever to develop EC fans for the Ex area. The ATEX RadiPacs are certified in accordance with the European Product Directive ATEX 94/9/ EC and can be used in hazard zones 1 and 2.

Suitable for potentially explosive atmospheres.

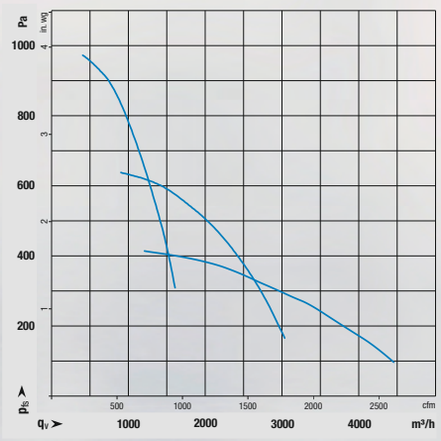


You can find all the details in the FanScout collection:
fanscout.ebmpapst.com/c/4967

RadiPac
for Filter Fan Units in Cleanroom applications

The centrifugal fans, specially designed for filter fan Units. They deliver the common air volumes for the different FFU sizes (580, 1,170, and 2,330 m³/h) with efficiency Levels of over 60% at 6 to 7 dB. With analog or digital interfacesand they can be set up easily, safely, and quickly.

Suitable for Filter Fan Units in cleanroom applications.



You can find all the details in the FanScout collection:
fanscout.ebmpapst.com/c/26041

Supply/circulation *FanGrid.*

"Free cooling" is becoming an increasingly popular alternative for data centers, whereby multiple long-lasting EC centrifugal fans from the RadiPac or RadiCal product range operate in parallel to supply the necessary volume of air – in a manner that is particularly efficient.

Advantages of using long-lasting EC fans in FanGrids:
- Reduced energy consumption for low PUE value
- Scalable as needed thanks to modular design
- Redundancy facilitates greater operational reliability
- Control and monitoring via MODBUS-RTU and/or 0–10 V / PWM
- Uniform flow for upstream and downstream components
- Easy to integrate in DCIM systems
- All fans have stepless control characteristics
- Maintenance-free operation

All designs and dates in the FanScout collection: **fanscout.ebmpapst.com/c/14873**

Superior fan technology.
Perfectly combined.

Our modular cube system

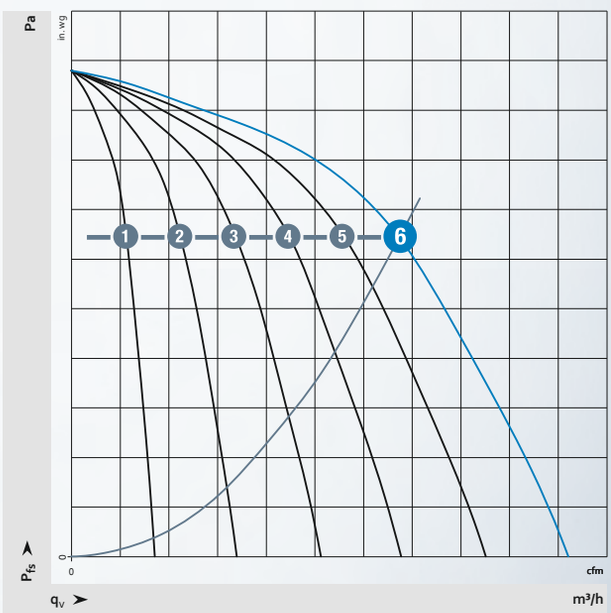
Simple handling
- Easy to transport and assemble
- Connecting elements can be purchased separately
- Customized assembly and scalability
- Mount up to five modules one on top of the other
- Direct connection of centrifugal and axial fan units
- Easy to connect

Worry-free operation
- Service-friendly modules
- Maintenance-free fans
- Operational reliability thanks to redundancy (N+x)
- Uniform flow through upstream and downstream components (filter, heat exchanger, etc.)
- Individual stepless control for each fan
- Control and monitoring via MODBUS-RTU communication

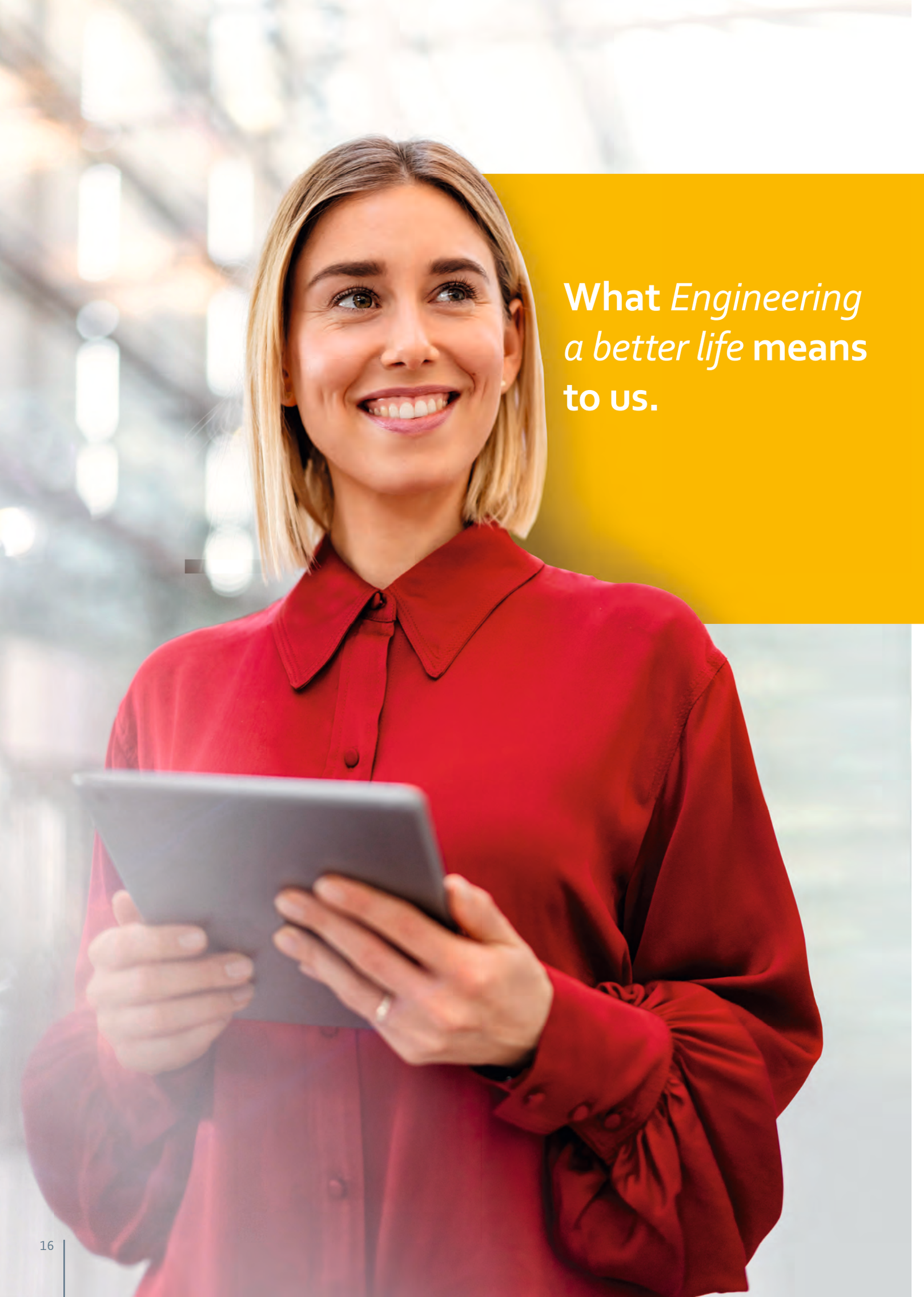
Innovative design
- High-strength, lightweight material
- Customized cube sizes possible
- Aerodynamically optimized design to prevent installation losses

Immense power range
- Power range up to ∞ m³/h

Parallel operation of fans



The following applies when operating several fans in parallel: the sum of the air flows from the individual fans equals the total air flow desired.



What *Engineering a better life* **means to us.**

ebmpapst

engineering a better life

Who we are.

We lead air technology into the next generation: with innovative hardware and software solutions that are always more powerful, compact, efficient and sustainable than their predecessors. Over the years, this has made us the world's leading manufacturer for fans and drives and helps reduce the carbon footprint in our customers' applications.

Digitalization and the associated networking of intelligent components and systems play a central role for us. In this way, we create a holistic link between sustainability and digitalization and enable the responsible use of resources through intelligent solutions of the highest efficiency.

What drives us.

But our consistent pursuit of efficiency and progress has even deeper roots. After all, there is something that excites us even more than our market position. It is the deep awareness that, with our solutions, such as the **RadiPac**, we are making the lives of many people around the globe more pleasant, safer and thus better. Therefore, the central driving force in all our thoughts and actions is Engineering a better life. It is the reason why it is worthwhile for us to get up every day and do our best.

More about this at **ebmpapst.com/aboutus**

What you get out of it.

1. **Technological edge.**
With our EC technology, we combine the highest energy efficiency with the advantages of IoT and digital networking.

2. **Our sustainable approach.**
We take our responsibility seriously with energy-saving products, environmentally-friendly processes and through social engagement.

3. **System expertise.**
As experts in advanced motor technology, electronics and aerodynamics, we provide perfect system solutions from a single source.

4. **The ebm-papst spirit of invention.**
Over 800 engineers and technicians will develop a solution that precisely fits your needs.

5. **Personal proximity to you.**
With numerous sales locations worldwide, we create a glocal presence that ensures fast response times. We always consider the complete process and put the customer at the center.

6. **Our standard of quality.**
Our quality management is uncompromising, at every step and in every process.

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