

Bursting with power: *the compact DC fan RVE45.*

Perfect to meet the high demands of industry.

ebmpapst

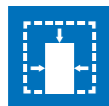
engineering a better life



Developed for medicine,
perfected for industry.



Up to 36,500 rpm
Pressure increase up to 4,850 Pa



66 x 64 x 65 mm



160 g



7.5 Bel (A)

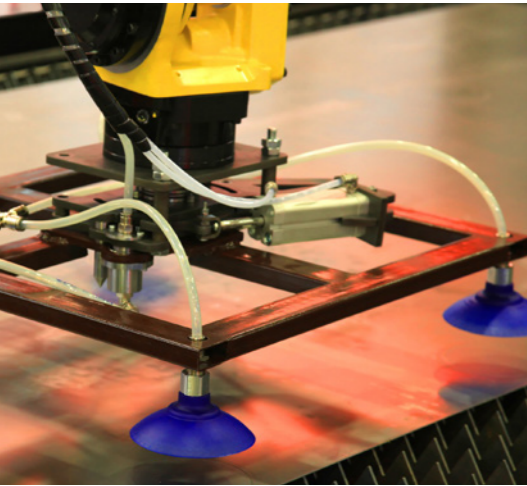


The RVE45 DC centrifugal fan
really shows what it can do
when reliable *high performance* is
required in the smallest of spaces.

For you, this means:
greater design freedom, greater
efficiency, and significantly lower
noise levels.

Whatever you are planning.

The RVE45 demonstrates its qualities *in a wide range of applications.*



More design freedom for vacuum lifters

Vacuum lifters require highly varied and changing pressures. High pressure is required when lifting and holding objects. This can be used to generate a strong vacuum. However, when lowering goods, a rapid drop in pressure is necessary, which guarantees that the item is released immediately. Vacuum lifters are used in many areas: one example is in the mail order sector. With the RVE45, cables do not run over the robot arm, significantly increasing the level of constructional freedom.

Efficient battery operation for breathing masks

In production plants, there is work that can only be performed using breathing masks, for example work in paint shops. By installing the RVE45 in the mask, the oxygen supply is reliably guaranteed. The same applies to effectively removing exhaled air. Due to

the centrifugal fan's compact design, the size and weight of the mask move in a comfortable range for the person wearing it and it can also be operated efficiently with a battery.



Supplies the fuel cell with oxygen

The RVE45 is used in the air supply path (cathode) to feed the air and thus the oxygen into the fuel cell system. The fuel cell stack is a very dense structure, so the air must be forced into the cell stack at a high pressure, and the RVE45 is ideally suited for this purpose.



For filling bubble wrap precisely

So that goods reach their recipients safely, fragile packaging contents are often padded and protected using bubble wrap. The bubble wrap is produced on special packaging machines. The RVE45 from ebm-papst plays an important role in these.

It ensures that the individual air chambers are inflated with short, precise pressure surges, but never burst. It doesn't get much better than that.

For mobile extraction systems and filtration

Hygiene plays a central role in nail studios. The health of beauticians and customers is even more important. Therefore, it is extremely unpleasant for fine dust from the nail grinding machine to spread around the entire nail studio unhindered.

So that this does not happen, there are special extraction systems, which always have a blower at their core. Ideally, this requires a very compact, powerful and quiet offering, just like the RVE45 from ebm-papst.



And what are you planning?

Let's work out together how the RVE45 can inspire your project.
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Technical data and variants: ebmpapst.com/rve45

How you benefit from the RVE45.

So many strengths. In such little space.

Electronics

Plug and play

- + Integrated control electronics
- + Speed control through a separate wire by means of PWM signal or analog voltage
- + Output signals: Tach signal or alarm signal
- + 4wire interface

Connection area

Simple commissioning

- + Free wire 365 mm, galvanized
- + Custom solutions available on request

Impeller

High static efficiency

- + Aerodynamically optimized blade geometry

Light fan impeller

- + For highly dynamic operation

Low losses

- + Optimal fan impeller inflow and quiet operation

Robust design

- + Designed for revolutions up to 36,500 rpm and extreme pressures

Optional hose attachment

- + For complex installation situations
- + Flexible air supply possible



Motor

Unrivaled compactness

- + Space-saving motor design
- + Special high-performance magnets

Efficient operation

- + Lightweight rotor for highly dynamic operation
- + Acceleration: up to 80 rev/ms

Low noise emissions

- + Low noise levels with 7.5 Bel (A)

Minimal vibration

- + Dynamic balancing of the impeller-motor unit

Air outlet

Easy to connect

- + Universal air outlet simplifies incorporation into the application
- + Connection to rubber collar

Scroll housing

Robust design

- + Scroll housing for reduced noise

Simple installation

- + Mounting holes for uncomplicated screw attachment

What the RVE45 has to offer. And what you gain from it.



Highly dynamic characteristics

Its extremely dynamic EC internal rotor motor facilitates adaptation to dynamic pressure changes and switches both quickly and reliably between a high and considerably reduced pressure.

For you, this means:

The air flow is always dosed exactly as required.



Better thought-out

The space-saving motor design and special high-performance magnets make the RVE45 particularly compact and lightweight.

For you, this means:

More design freedom and smaller sizes for all your applications.



Especially quiet

Vibration-absorbing materials and an optimized aerodynamic design help to minimize the operating noise.

For you, this means:

Your products work at significantly lower noise levels – a real plus for your sales team.



Approvals

- + VDE 0805
- + UL 507
- + CSA for UL
- + CE



Find out more with the Xplore app. See back page for info

At a glance: Facts and figures.

The RV45 was developed for the special demands of medical respirators, an area in which it proved to be a great success. With the RVE45, we have now optimized the compact DC centrifugal fan for use in industrial applications.

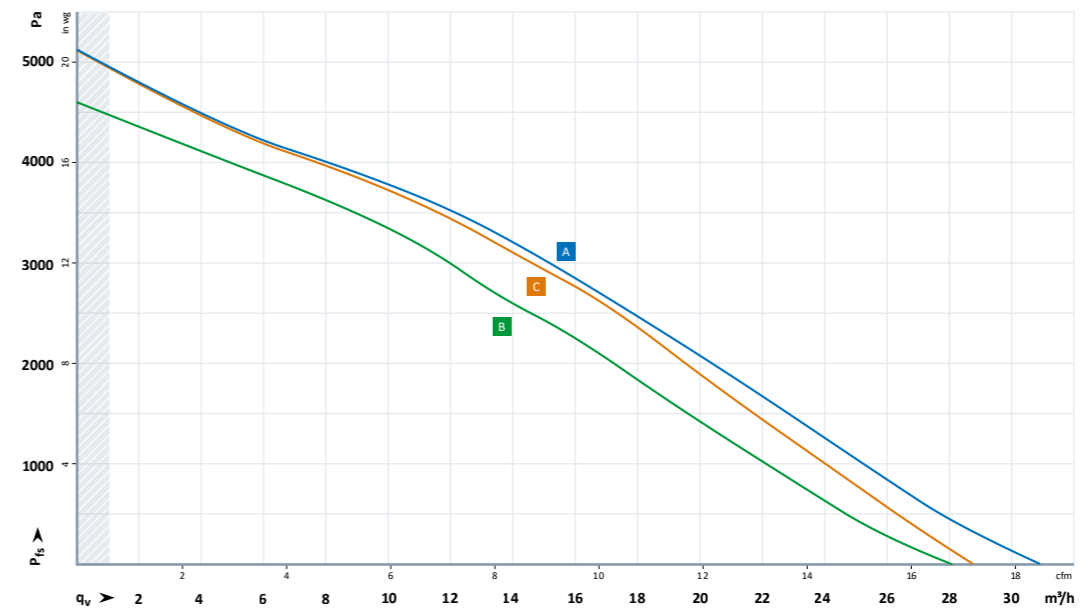


For plastic-cutting screws \varnothing 2.5 mm
max. screw-in depth 6 mm



The extremely compact blower can be used in a wide range of industrial applications. Its dynamic EC internal rotor motor facilitates adaptation to rapid pressure changes and switches both quickly and reliably between a high and considerably reduced pressure. Speed changes from 0 to 36,500 rpm to less than 500 ms are easy for the RVE45.

The high nominal speed of 36,500 rpm produces exactly the dynamic power required, which is also supported by the rotor's low moment of inertia. Active braking ensures a similar dynamic response at negative acceleration. Vibration-absorbing materials and ideal aerodynamics ensure that it operates particularly quietly and, thanks to maintenance-free ball bearings, it can continue to do so for many years.



An air flow < 1 m³/h is not permitted for continuous operation.

Find out more
with the Xplore app.
See back page for info

Nominal data		Air flow	Air flow	Air flow	Nominal voltage	Voltage range	Sound power **	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C)	Life expectancy L ₅₀ IPC (25 °C)
Type *	Part number	m³/h	l/min	cfm	VDC	VDC	Bel(A)	Watt	1/min	°C	Hours	Hours
A	VCS0045XUGAS 8315100100	30	500	17.7	24	16 to 30	7.5	36	36,500	-20 to +65	17,500	45,000
B	VCS0045XUGAS 8315100111	27	450	15.9	12	9 to 15	7.2	29	33,000	-20 to +65	17,500	45,000
A	VCS0045XUGAS 8315100115	30	500	17.7	24	16 to 30	7.5	36	36,500	-20 to +65	17,500	45,000
C	VCS0045XUGAZ 8315100315	28	467	16.5	24	16 to 30	7.5	36	36,500	-20 to +65	17,500	45,000
C	VCS0045XUGAS 8315100319	28	467	16.5	24	16 to 30	7.5	36	36,500	-20 to +65	17,500	45,000

* A = 24 Volt variant, B = 12 Volt variant, C = 24 Volt variant with hose attachment
 ** Extraction noise @ 1,000 Pa. Blower with open intake side facing upwards, opposite side lays on 10 cm thick foam, outlet openings with hose and 4 mm standard nozzle (acoustically insulated), microphone 1.0 m vertical over blower, room noise level < 26 dB(A).
 Blower with hose and standard resistor with 4 mm inside diameter, a length of 40 mm and a 45° outlet angle.
 Degree of protection = IP20
 All data in mm. Data sheets available on request. The product descriptions in this brochure do not represent assured properties.

What *Engineering a better life* means to us.

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 **RVE 45**, 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](https://www.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 global 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.

www.ebmpapst.com

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engineering a better life

Discover exciting additional information in this brochure.



1. Install the Xplore App.

Launch it and select the RVE45 module.



2. Scan

Point the camera at pages with the AR icon.

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