

## RV45 compact centrifugal fan

### Lightweight, quiet, powerful and responsive

**The RV45 centrifugal fan from ebm-papst is ideal for applications requiring rapidly changing air flow and high pressures, including extraction systems, packaging machines and respirators. Its aerodynamics and motor are optimized for rapid speed changes, and it is also light and quiet.**

#### Sprinting to top speed

The RV45 centrifugal fan can deliver pressures up to 5,000 Pa and vary its speed between 5,000 and 50,000 rpm with an acceleration of 50 rpm per millisecond. Such a range of speeds is important for devices such as respirators and vacuum lifting units, but the fan is still extremely quiet. Its air flow of up to 540 l/min enables focused ventilation or cooling. The control electronics monitor the maximum permissible power consumption during quick bursts of speed to ensure that the unit's responsiveness is not impacted. In addition, integration of active braking functionality enables an additional increase in responsiveness during phases of negative acceleration.

#### Technology for maximum responsiveness

To equip it for the widest possible range of applications, the RV45 features a highly responsive internal rotor motor. The fan is designed for an external motor controller, with benefits for matching the fan to its application. A variant of the RV45 with Hall sensors in the motor is available to customers wanting to simplify development of their own control electronics. A version of the RV45 with integrated electronics is already in development and will go into production in the coming months; this plug & play solution will enable quick integration of the RV45 in customer applications.

#### Economical and lightweight

Low power consumption of 43 W in free air mode and less than 30 W at pressure ensure long running time in battery operation. With a weight of about 135 g, the fan is quite light – very important for portable devices such as respirators since the weight of the filter unit with fan is carried on the user's body. Another advantage for industrial applications is the fan's compact design; it measures only 64 x 69.5 x 55 mm and is available in 12 V and 24 V DC versions.

#### Versatile and reliable

In the industrial sector, the RV45 centrifugal fan can be used wherever rapidly changing air flow and/or high pressures are required, e.g. air filtering equipment, packaging machinery, smoke detection systems, circuit board production, exhaust systems for soldering and welding gases, vacuum equipment, or fuel cell ventilation. Thanks to its special features and reliability, the RV45 is also used in medical respiration equipment.

Katrin Lindner  
Trade press coordinator  
Phone: +49 7938 81-7006  
Fax: +49 7938 81-97006  
Katrin.Lindner@de.ebmpapst.com

Corinna Schittenhelm  
Trade press coordinator  
Phone: +49 7938 81-8125  
Fax: +49 7938 81-98125  
Corinna.Schittenhelm@de.ebmpapst.com

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Press office contact  
ebm-papst Group

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Fig. 1: Small, lightweight, responsive and quiet: the highly versatile RV45 with the size of a tennis ball.

Fig. 1	ebm-papst
Characters	approx. 2,600, including headings and sub-headings
Tags	air flow, responsiveness, centrifugal fan, high static pressure increase
Link	<a href="https://www.ebmpapst.com/rv45">https://www.ebmpapst.com/rv45</a>

#### About ebm-papst

The ebm-papst Group is the world's leading manufacturer of fans and motors. Since it was founded, the technology company has continuously set global industry standards: from the digital interconnection of electronically controlled EC fans to aerodynamic improvements for fan blades to the use of eco-friendly materials.

In fiscal year 2017/18, the company achieved sales of over € 2 billion. ebm-papst employs over 15,000 people at 27 production sites (e.g. in Germany, China and the US) and in 48 sales offices worldwide. Fans and motors from the world market leader are used in many industries, including ventilation, air conditioning and refrigeration, household appliances, heating, automotive and drive engineering.

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