

# VHD 146

*Centrifugal fan for range hoods.*

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the engineer's choice



# About ebm-papst.

As technological leader for ventilation and drive engineering, ebm-papst is in demand as an engineering partner in many industries. With over 15,000 different products, we provide the right solution for just about any challenge. Our fans and drives are reliable, quiet and energy-efficient.

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## Six reasons that make us the ideal partner:

**Our systems expertise.** As experts in advanced motor technology, electronics and aerodynamics, we provide ideal system solutions from a single source.

**Our spirit of invention.** Our 600 engineers and technicians will develop a solution that precisely fits your needs.

**Our lead in technology.** Our GreenTech EC technology is setting standards worldwide. And our lead is your competitive advantage.

**Closeness to our customers.** At 49 sales offices worldwide.

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

**Our sustainable approach.** We assume responsibility with our energy-saving products, environmentally-friendly processes and social commitment.

## Next step in evolution VHD 146.



**Aerodynamically optimized:**  
New robust housing with integrated protection against contact.



**One fan for all:**  
Suitable for a wide variety of different range hood types. Conversion from extraction to air recirculation possible.



**Enhanced energy efficiency:**  
Use of an EC motor with integrated electronics, infinitely variable control thanks to PWM.



**Simple installation:**  
Standardized installation dimensions with 150 mm outlet diameter.

# One fan for all.



The VHD 146 is the next logical addition to the existing portfolio of range hood fans for conveying large volumes of air with medium to high pressure increase. With its high performance, the blower is well equipped to deal with even high levels of exhaust air and guarantee thoroughly clean air. The dual-inlet centrifugal fans with forward-curved fan impeller are primarily used in wall-mounted and island hoods. Integrated into a fan module they can also be assembled in a wide range of other types of hood.

The innovative scroll housing is provided as standard with integrated protection against contact on the inlet side, which greatly simplifies conversion and use in recirculating hoods, whilst reducing installation times.

The bayonet connectors on the housing permit quick and easy attachment of activated carbon filters whenever required to produce an ideal kitchen atmosphere in recirculating mode. The blower is optionally available with a non-return valve to prevent the back-flow of exhaust air and the ingress of air from outside.

Thanks to the compact, space-saving design of the EC motor, the VHD 146 weighs just 1.8 kg. Pulse width modulation permits infinitely variable control of the fan speed and thus the air performance by the commutation electronics. EC technology ensures that the blower operates quietly and efficiently even with high air performance.

# The new platform

## VHD 146.



### Non-return flap

- + Optional available with non-return flap
- + Prevents back-flow of exhaust air and ingress of air from outside

### EC motor and electronics

- + Compact design
- + Low weight
- + Energy efficient
- + PWM for infinitely variable control
- + Quiet-running

### Fan impeller

- + Forward-curved impeller
- + Air flow up to 800 m<sup>3</sup>/h, free air
- + Robust design
- + Mounted together with the motor with optimum noise and vibration insulation

### Housing

- + Protection against contact integrated into housing
- + Integrated bayonet for fastening activated carbon filters
- + Optimized aerodynamics
- + Standardized installation dimensions:  
Outlet diameter 150 mm



The activated carbon filter is not included in the scope of delivery.

ebm-papst can help you make the right choice.



# EC-Centrifugal fan

forward-curved, dual-intake with housing, Ø 146 mm



### Material/Surface

- Impeller: PP plastic
- Housing: PP plastic

### Mechanical Data

- Direction of rotation: Counterclockwise, viewed toward rotor
- Degree of protection: IP20
- Insulation class: B
- Environmental protection class: H0
- Installation position: Any
- Mode: S1
- Motor bearing: Ball bearing
- Motor protection: Thermal overload protector (TOP) internally connected

### Electrical Data

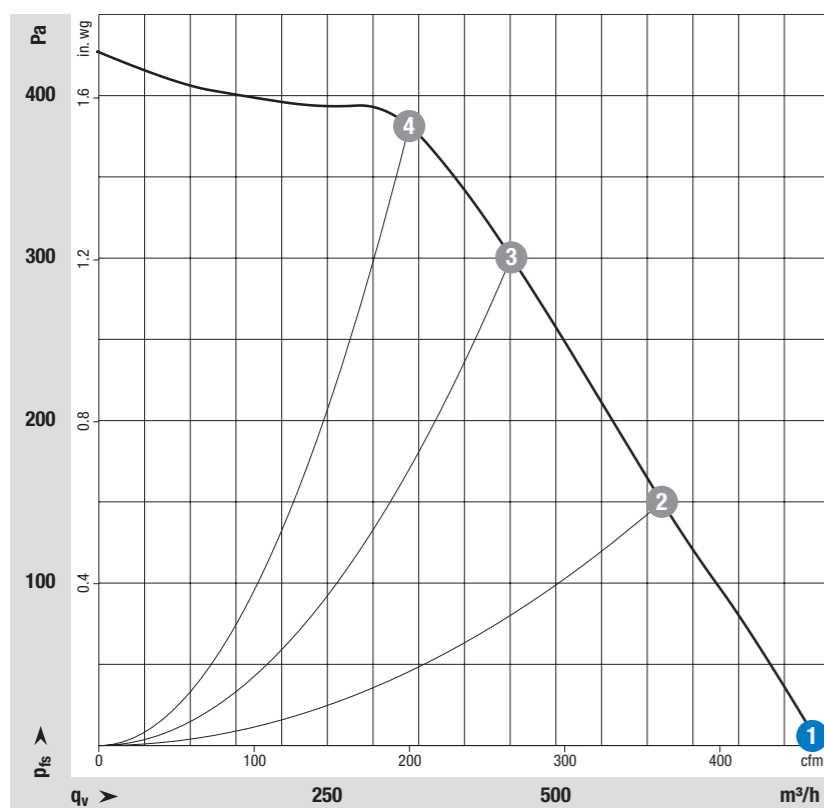
- Motor: Single-strand
- Speed controllable through PWM
- Protection class: II
- Electrical connection: Interconnection

### EMC

- Immunity to interference: According to EN 61000-6-2
- Circuit feedback: According to EN 61000-3-2/3
- Interference emission: According to EN 61000-6-3

### Standards and Approvals

- Conformity with standards: EN 60335-1, EN 60335-2-31, CE
- Approval: VDE, EAC



Measurement conditions  
 Air performance measured according to ISO 5801 installation category A.  
 Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis.  
 The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Curve	Operating point	Nominal voltage	Speed n	Max. power consumption P <sub>ed</sub>	Current draw I	Sound power level L <sub>WA</sub>	Permitted ambient temperature
		V AC	rpm	W	A	dB (A)	°C
Nominal voltage 230 V AC, 50 Hz							
	1	1-230	1500	100	0,80	69	
A	2	1-230	1855	100	0,80	68	-25...+50
	3	1-230	2290	100	0,80	68	
	4	1-230	2555	92	0,72	70	

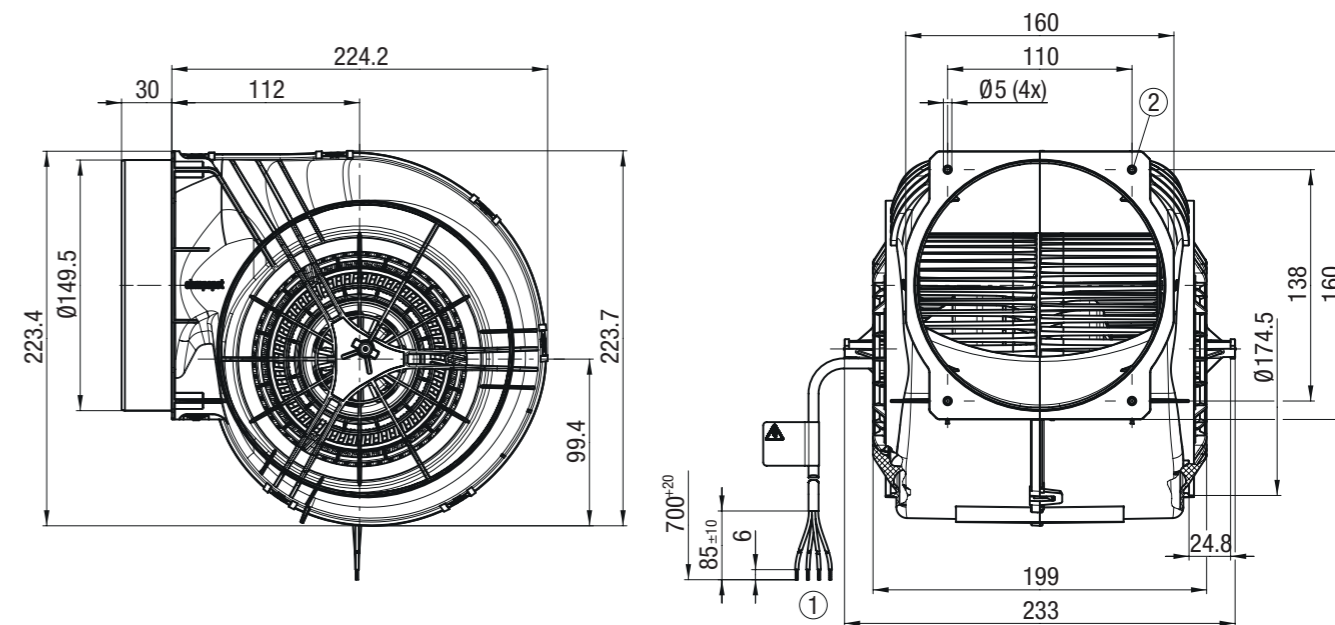
Blue values are nominal data in operating point with maximum load.  
 Subject to technical changes.

Curve	Centrifugal fan	Weight
	Material-Nr.	kg
A	D1G146-HT01-02	1.80
	D1G146-HT01-04	1.80*

\* 6-pole connector housing TE 2178773-1, 4x plug pin TE 926886-1

### Product drawing D1G146-HT01-02

Dimensions in mm



- ① Cable PVC 4x 0.5 mm², 4x crimped splices
- ② Tapping hole prepared for self-tapping screw for fastening plastics (Remform) dia. 5 mm, clearance for screw max. 16 mm  
 A non-return valve (10000-2-4054) can be installed in the outlet  
 Attaching activated carbon filters to the intakes  
 Adaptation tailored to activated carbon filter such as type D186 from Resett Engineering Srl

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