

# Compact fans for *AC, DC and EC*

Product Catalog 2022-11

**ebmpapst**

engineering a better life



# Trendsetter in fan technology



## Uncompromising quality made by ebm-papst

### Among the best.

Trendsetting with innovative technologies. Listening to customers' needs. Developing new ideas to meet requirements and realizing them with pioneering spirit. This philosophy has made ebm-papst the leading technology pioneer in the world of fans.

A brand in that decades of application expertise gained from large volume fan production and because we are in a position to produce highly efficient quality products. Our intelligent solutions for electronics cooling make sure that you are always one step ahead of the competition thanks to innovative, reliable, top-quality technology. Of course they are readily available at fair market prices.

And if required, tailor-made right down to the last detail. In other words, if you need fans that do not yet actually exist, contact us. **We at ebm-papst call that: *Engineering a better life.***

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## Compact fans for AC, DC and EC

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Information

DC axial fans

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

## *Who we are.*

With over 20,000 different products, ebm-papst offers the right solution for just about any challenge. As the logical next stage in the development of our highly-efficient GreenTech EC technology, we believe that industrial digitization offers the greatest future prospects for our customers. With GreenIntelligence, we already represent intelligently interconnected complete solutions that are unrivaled worldwide.

Because we are always committed to making each of our innovative hardware and software solutions more powerful, compact, efficient and sustainable than its predecessor, we have evolved over the years into the global technology leader for ventilation and drive technology.

## *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, 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 under [ebmpapst.com/betterlife](https://www.ebmpapst.com/betterlife)

## *What you get out of it.*

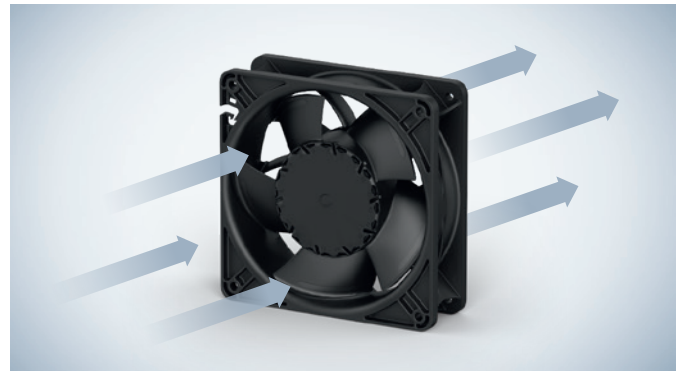
Collaborating with us brings you tangible benefits, such as a clear competitive edge in IoT and digital networking, sustainable product solutions that allow you to fulfil the latest environmental guidelines, and perfect system solutions from one source, shaped by uncompromising quality management in every step of the process. At ebm-papst, over 800 engineers and technicians develop the solution that perfectly fits your requirements. Tell us what we can do for you! One of our numerous sales sites around the world is sure to be near to you.



# Types of fans and their function

## Axial fans: High air flow with medium to relatively high pressure increase

The air flow in axial fans with an impeller that is similar to a propeller is conducted largely parallel to the axis of rotation, in other words in the axial direction. Axial fans with free air delivery at zero static pressure have the lowest power input that rises with increasing back pressure. Axial fans for cooling of electronic equipment are mostly equipped with external housing. The electric motor is integrated in the fan hub. This compact design allows space-saving accommodation of all devices. The flange is equipped with mounting holes.



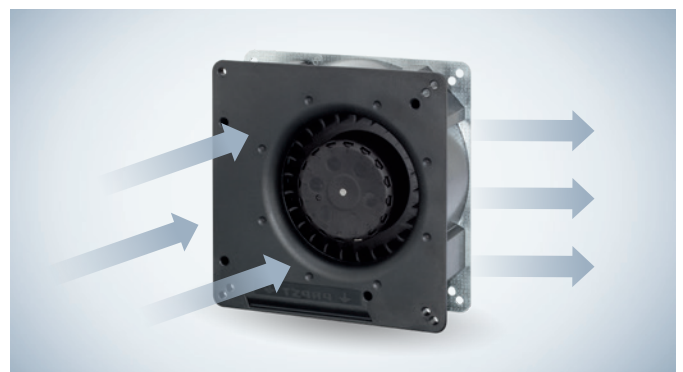
## Diagonal fans: High air flow at relatively high pressure increase

At first glance diagonal fans only differ slightly from axial fans. Intake is axial, whereas exhaust is diagonal. Due to the conical shape of the wheel and housing, the air is pressurized more in the diagonal fan. In direct comparison with axial fans of the same size and comparable performance, these fans are distinguished by the lower operating noise at high pressures.



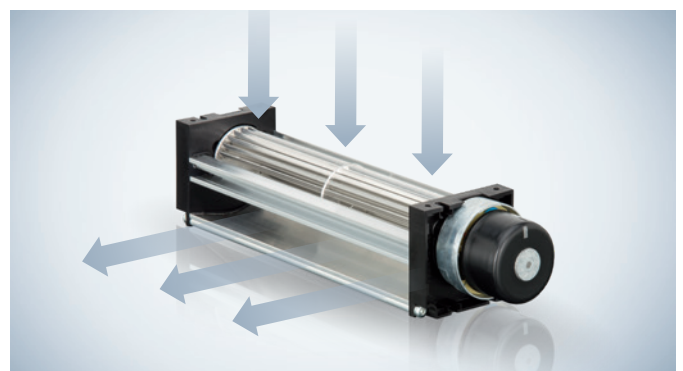
## Centrifugal fans: High pressure increase at limited flow rate

Generally, many cooling tasks can be performed excellently by axial and/or diagonal fans. But if the cooling airflow has to be deflected at an angle of 90°, for example, or if even greater pressure increase is necessary, centrifugal fans are more effective. For your application, ebm-papst offers not only complete centrifugal fans, but also motor/impeller combinations without external housing.



## Tangential fans: High air flow with low pressure increase

Tangential fans are used especially to produce a wide airflow distribution through devices. The air flows through the roller-shaped impellers twice in the centrifugal direction: in the intake area from the outside to the inside and in the outflow area from the inside to the outside. Whirls form in the roller due to the vanes, which guarantee a steady flow of air through the impeller.



# Expertise and technology

## Drive know-how

For the past 80 years, all conceivable types and applications of drive engineering have played an essential role at ebm-papst. A commitment that is the foundation for the development of optimum drive solutions regardless of the type of fan and its use. In DC fans, ebm-papst set standards 50 years ago with the introduction of DC fans with electronically commutated external rotor motors. In the changeover from AC fans to EC motors, ebm-papst is again doing pioneering work. EC motors for AC connection are highly efficient and impress with their long service life, higher air flow and significant pressure increase.

## Smooth operation

Our aerodynamically optimized design and high mechanical precision produces outstanding noise properties in series production. The "soft" commutation electronics of DC and EC fans produce a very smooth operation. By avoiding steep switching edges when the individual coils are switched, this reduces the structure-borne noise from the motor. Computer-aided measurements and series of analyses performed in a state-of-the-art sound measuring chamber are conducted on each fan model from the very beginning.

## Long service life

The bearing system plays a vital role both in the long service life and the smooth operation of device fans. The Sintec compact bearing provides most of the device fans with a proven bearing system. Constant low noise during the entire operating time and considerably lower shock sensitivity are the outstanding features of this bearing technology. In addition, with regard to temperature endurance, Sintec compact bearings can be used without problems in most applications.

Despite the slightly greater noise and shock sensitivity of ball bearings, this bearing technology should be given preference for fans exposed to extreme thermal and adverse application conditions (e.g. extreme environmental conditions, critical installation position, etc.). The service life data provided in this catalog is based on extensive service life tests and mathematically / scientifically proven service life calculations. Our product descriptions are updated continuously with all relevant data obtained from long-term tests.





### Aerodynamics

With the aid of state-of-the-art computer programs, we are able to optimize the fan impellers and the inner shape of the housing. Air output and available motor performance are matched exactly to the size of fan. This guarantees the low noise that is typical for ebm-papst, even at high back pressure.

### Sturdy construction – in metal or plastic

Fans of all-metal construction: sturdy and resistant. The housing is made of an aluminum alloy. The metal surfaces that are subject to corrosion are permanently protected by an impact- and abrasion-resistant electrophoretic baked enamel. This particular version is very recyclable. Fans with fiberglass-reinforced plastic housing and impeller: Excellent stability and low weight distinguish this highly efficient fan design. Combinations of metal housing and plastic impeller combine the advantages of both types of design.

### Product images

The dimensioned drawings and product photos that appear in the catalog are for orientation purposes and may differ in some details from the actual product design.

### Product liability

Motors and fans from ebm-papst are components intended for proper installation. The customer bears responsibility for the overall end product.

### Brand name PAPST

The PAPST mark is a registered trademark for ebm-papst products and is a synonym for compact fans of the highest quality, functionality and reliability for decades.

### Safety is included

It goes without saying that all ebm-papst fans conform to the approval requirements of the VDE (Association of German Electrical Engineers) and the standards and regulations of UL and CSA. All fans conform to the European Standard EN 60335 or EN 60950 plus those of the UL (Underwriters Laboratories) and CSA (Canadian Standards Association). Our DC fans are mostly designed for protection class 3 / protective extra-low voltage. AC fans for protection class 1. ebm-papst fans meet the highest requirements of electrical safety. All design variants feature reverse polarity and locked-rotor protection. We also have a wide selection of suitable fans for industry-specific standards, such as those known from the railroad, refrigeration or housing sectors. You can find more information in our industry-specific catalogs at [ebmpapst.com](http://ebmpapst.com).

### Quality in detail

It is the important details that reveal the meaning of the words "made by ebm-papst": Consistent adherence to development and design processes and a goal-oriented commitment to quality along the entire process chain are the foundation for the above-average service life of our fans. 100,000 hours and above are no longer an exception. The no-compromise ebm-papst quality assurance spans over all process levels – from the choice of materials and the use of carefully selected, certified suppliers, from the production of parts up to the final assembly. These details combine to result in reliable fan products with an above-average service life.

### ErP Directive

All products with power consumption between 125 W and 500 kW are subject to the European "Energy-related Products Directive" (ErP) for improving energy efficiency, with the first stage applicable from 2013 and the second as of 2015. Thanks to ground-breaking GreenTech EC technology, all of our fans and motors in these performance classes already exceed the ErP Directive today.



# Flexibility in every application

## – *tailor-made for you*

### Practical applications: fans that are customized and smart

ebm-papst has always developed customer-specific smart fans that meet the exact requirements of the application. In addition to the wide range of standard fan types, we offer specific fans in many sizes, performance classes and designs: with smart motor features, monitoring and control functions as well as special designs for use under extreme conditions. They are all based on the standard type fans that you will find in this catalog. Special fan types for your application can be produced in economical batch sizes. Our expert engineers will assist you in selecting the right configuration.

### Innovation at its best:

Smart and customer-specific configurable solutions increase efficiency and cost-effectiveness. For example, temperature-dependent speed profiles are possible with a number of freely selectable interpolation points. External speed settings and a variety of combinable alarm and tachometer functions can also be programmed. The digital motor management achieves high control accuracy. Bus interfaces also offer a much greater possibility of control and monitoring for the digital future.

### Higher degree of protection for every type of application

ebm-papst provides, on request, many fan series in versions that meet to the requirements of degree of protection IP 54 and IP 68: Their stator and all electrical components are fully encapsulated. Stainless steel ball bearings can be used for operation in particularly aggressive media and use under extreme environmental conditions, thus providing additional reliability.

### Almost anything is possible

Regardless of your cooling and ventilation tasks, we will develop the right solution. And the most economical one. Based on the fans listed in this catalog, more than 4000 different versions are available.

### Temperature-controlled fans

Fans with temperature-controlled speed have particularly quiet and efficient cooling characteristics. Thanks to integrated intelligence, they adapt their speed to the current cooling requirements.

### Speed setting via interfaces

With a wide range of DC fans with separate control input, ebm-papst provides an alternative to the NTC-controlled types of fans. They are especially suitable for systems and units that already have standard interfaces for varying speed via internal switching and control circuits. The main applications are units that require load-dependent, individual speed profiles or systems with minimum standby cooling requirements and varied speed increase at varying power peaks.

### Electronic tachometer

Do you want to be informed about the current fan speed at all times? ebm-papst has fans with an integrated "electronic tachometer". It registers the actual value of the fan speed. Via an integrated sensor, the fan generates speed-dependent signals that can be used directly. Depending on the number of poles of the motor, 2, 3, or 6 pulses per revolution are generated.

### Alarm signal for greater safety

If your application requires monitored fan operation, in addition to speed monitoring, ebm-papst also provides a multitude of varying alarm signals. Depending on the type of fan in question, the signal will either be static, already evaluated, or interface-compatible. The alarm signal output provides reliable long-term monitoring and a status signal if critical operating conditions arise.



# Product names

<b>AxiACi</b>	AC fan. Energy-saving compact fans with wide voltage range and volume-oriented characteristic curve in various sizes. Can be used universally as a retrofit for existing AC solutions or in new projects with AC power supply. With extensive approval (e.g. DIN EN 60335-2-89) and a broad temperature range.
<b>AxiEco</b>	DC fan. Compact and powerful. Innovative fan impeller design with rotating fan housing maximizes efficiency and reduces noise.
<b>AxiForce</b>	DC fan. Axial compact fan optimized for noise and efficiency with pressure-oriented characteristic curve in different standard sizes.
<b>AxiRev</b>	DC fan. Axial compact fans designed for maximum noise reduction with a volume-oriented characteristic curve and round housing. Reversibility and symmetrical fan impellers enable identical air performance values in both directions of rotation. Designed for decentralized residential ventilation.
<b>AxiTwin</b>	DC fan. Counter-rotating fan with two counter-rotating fan impellers and innovative aluminum flange with integrated guide blades. Exceptionally pressure-oriented. Redundancy is offered by the two fans that rotate independently of one another.
<b>DiaForce</b>	DC fan. New single-stage principle with highly innovative aerodynamic design. Exceptionally pressure-oriented with outstanding noise values.
<b>S-Force</b>	DC fan. Powerful generation of fans in various sizes. Clear focus on pressure-resistant characteristic curve.
<b>S-Panther</b>	DC fan. Powerful generation of fans in various sizes. A significant focus on noise and air flow.

The product names mentioned are registered trademarks of ebm-papst St. Georgen GmbH & Co. KG

# Optional special versions

(see chapter DC fans - specials from p. 252)

In the catalog, a text box in the upper right corner provides information on the special designs that are technically possible in the fan series.

Please note that these special versions are not possible for all voltages and speeds, and not in all combinations. The special versions are designed for specific customers and projects and are usually not available off the shelf.



Possible special designs are depicted on the catalog page.

## Speed signal /2, /12

The fan uses a separate wire to output information about its speed, and thus about the speed of the rotor. For technical details, please refer to page 256 and the following.

## Go / NoGo alarm /37, /39

The fan uses a separate wire to output a static signal when it is stationary, thus providing information about whether or not the rotor is turning. For technical details, please refer to page 260 and the following.

## Alarm with speed limit /17, /19

When one of the speeds defined in the fan electronics is undershot, the fan outputs a static signal providing information that the set speed limit was undershot. For technical details, please refer to page 258 and the following.

## External temperature sensor

An NTC resistor (negative temperature coefficient) is attached to the fan via a separate wire and the fan changes its speed depending on the temperature on the NTC. For technical details, please refer to page 262.

## Internal temperature sensor

In this case, the NTC is integrated into the fan and the fan changes its speed depending on the temperature at the NTC. For technical details, please refer to page 262.

## PWM control input

The speed of the fan can be changed via a pulse-width-modulated signal. This signal is applied to a specially provided wire. For technical details, please refer to page 263.

## Analog control input

The speed of the fan can be changed via a control voltage. This control voltage is applied to a specially provided wire. For technical details, please refer to page 263.

## Multi-option control input

The fan has a control input that the user can trigger either using a PWM signal, an analog signal, or a variable resistor. For technical details, please refer to page 264.

## Bus input

Bus interfaces provide a wide range of monitoring and control of your application. Fans from ebm-papst with bus interface can be easily and conveniently integrated into your system.

## Moisture protection

Protection for the fan electronics against moisture and condensation. For technical details, please refer to page 266.

## Degree of protection IP54\* / IP68\*

Protection of motor and circuit board against splashed water and moisture. For technical details, please refer to page 266.

## Salt spray protection

ATEX according to DIN EN 60079-7. Protection of fan against the damaging effects of salt spray. For technical details, please refer to page 266.

## Direction of rotation

On many variants, the direction of rotation can be changed via a control input.

\* IP= International degree of protection marking; For AC fans max. IP 65 available.



# Selecting the correct fan

## 1. Dissipated energy

A large amount of the energy consumed by electrical and electronic devices is converted to heat. So when selecting the correct fan, it is important to determine the dissipated energy that must be removed. The electrical power consumption of the unit to be cooled often represents a suitable value for this purpose.

## 2. Admissible temperature increase

The air flow that the selected fan is required to generate, is determined by the dissipated energy and the admissible heating ( $\Delta T$ ) of the cooling airflow (from entry to exit of the device to be cooled). The maximum admissible  $\Delta T$  depends greatly on the temperature sensitivity of the individual parts of the device. For example,  $\Delta T = 5K$  means that the average cooling airflow leaving the device to be cooled may be only  $5^{\circ}C$  warmer than the ambient temperature. This requires a lot of air. A lower air flow rate is sufficient if a higher temperature difference (e.g.  $\Delta T = 20K$ ), can be tolerated.

## 3. Required cooling airflow

- In the diagram below, a horizontal line is drawn from the dissipated energy to intersect with the selected  $\Delta T$  line.
- Read down from this point to obtain the required value for the cooling airflow. The diagram is based on the following formula:

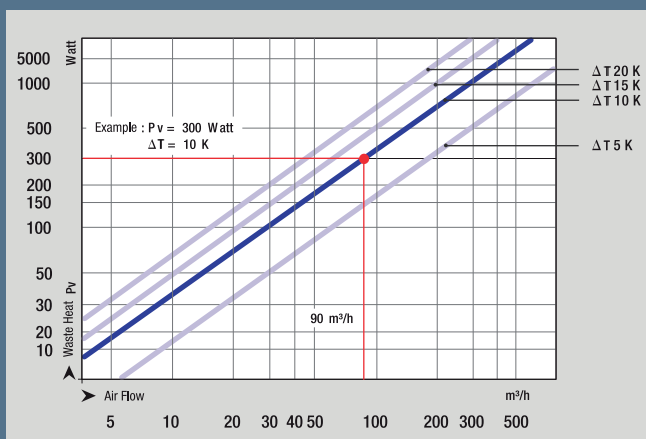
$$q_V = \frac{P_V}{C_{PL} \cdot \rho_L \cdot \Delta T}$$

## 4. Fan selection

But the fan you are looking for must also be able to deliver a suitable static pressure increase  $\Delta p_f$ , in order to force the cooling air through the device. So a fan must be selected that provides the required air flow performance within its operating range (see also the air performance curves under technical data).

## 5. Fan selection with multiple alternatives

If more than one fan meets your requirements, the sound level, power consumption, space requirements, economy, and ambient conditions will assist in making the final choice.



## Definitions

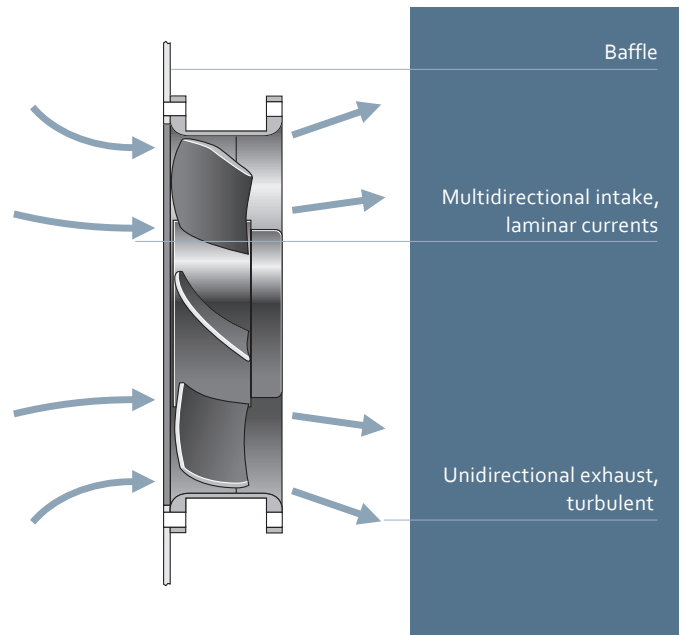
- $P_V$  = amount of heat to be dissipated in [W]
- $C_{PL}$  = specific heat capacity of air in [J/kg/K]
- $C_{PL} = 1010 \text{ [J/kg/K]} = 0.28 \text{ [Wh/kg/K]}$

- $\rho_L$  = air density in [kg/m³]
- $\rho_L = 1.2 \text{ kg/m}^3$
- $\Delta T = T_1 - T_2$  temperature difference in [K] between inlet and outlet

# Fan installation

## Intake or exhaust side installation

Under ideal conditions, the operating point is represented as the intersection between the fan and loss curves, regardless of whether the fan is positioned at the air intake or exhaust side of the device. In addition to ensuring the required flow rate, several other aspects must be considered for determining an appropriate fan concept. The intake air currents of a fan are mainly laminar, comprising nearly the entire suction area. By contrast, the exhaust air of a fan is generally turbulent and flows in a preferred direction, such as axial for an axial fan. The turbulence of the exhaust intensifies the heat transfer from components within the air currents, so that installing the fan on the air intake side of the device is recommended for cooling and heating. Installing the fan at the device intake is also advantageous because the fan will not be subjected to the dissipated heat of the device. Therefore, it operates at low ambient temperatures and has a greater life expectancy.



Information

## Information on installation

When a fan is operated for the first time in an application, the user may have noticed that the air flow in the device was lower than expected. What is the reason for this?

- The values stated in this catalog were determined under optimum, constant, and comparable measurement conditions.
- Due to manufacturing tolerances, both the speed of the drive motor and the geometric shape of the fan impeller are usually not exactly the nominal values but within defined tolerance ranges.
- Ideal installation conditions under which free air intake and exhaust are present are seldom feasible in practice. Quite frequently, the fans have to be installed in close proximity to other components or cabinet panels. As a consequence, the intake and exhaust currents may be restricted, causing the air flow to diminish and the sound level to increase. Fans are particularly sensitive to obstructions that are positioned directly in front of the output cross section, and they often cause an increase in tonal noise.

**Our advice:** The distance between the fan and adjacent components should be at least equal to the installation depth of the fan.



## Accident prevention

The turning rotor and the high speeds that are sometimes involved mean that our fan products carry an inherent risk of injury. They may only be operated after correct installation and with suitable protective equipment (e.g. with a finger guard). More information can be found in the Internet at: [www.ebmpapst.com/safety](http://www.ebmpapst.com/safety)

# Definitions

## Nominal voltage [volts]

The voltage at which the nominal values (the table values listed in this catalog) were determined. The fan operation for DC fans is not limited to the nominal voltage. Fan speed and fan performance can vary according to the admissible voltage range that is specified on the nameplate of each fan. Please note that this is not a pulsed or modulated DC voltage.

## Frequency [Hz]

ebm-papst AC fans are made for operating frequencies of 50 Hz or 60 Hz. Their technical data changes accordingly.

## Air flow [m<sup>3</sup>/h, cfm]

The air performance of the fan in free air operation, i.e. the fan blows into the free space without static pressure increase.

## Fan curves

The fan curves are determined in accordance with DIN ISO 5801 specifications on a dualchamber test stand with intake side measurement. This measurement technique closely approximates the operating conditions experienced in typical applications for fans and yields realistic performance curves. The curves apply to an air density of  $\rho = 1.2 \text{ kg/m}^3$  corresponding to an air pressure of 1013 mbar at 20 °C.

Variations in air density affect pressure generation, but not the flow rate. The pressure generated at other air densities can be estimated with the formula  $\Delta p_2 = \Delta p_1 (\rho_2 / \rho_1)$ . The nominal speed values, air flow and power consumption listed in the table were measured in free air operation with horizontal shaft at an ambient temperature of 20 °C - 25 °C, air density  $\rho = 1.2 \text{ kg/m}^3$  after a warmup period of 5 min.

## Noise [dB(A), Bel(A)]

### 1. Sound pressure level – dB(A)

Noise ratings of the fan in free air operation, i.e. at maximum flow rate.

### 2. Sound power level 1 Bel(A) = 10 dB(A)

Extent of the overall sound radiation of the fan. The sound power level is determined in the optimum operating point, that means, where the fan operates optimally in terms of efficiency and noise.

## Power consumption [watts]

Input performance of the fan motor when operating free blowing at nominal voltage. Depending on the operating condition in the application, the power consumption may be significantly higher.

## Temperature range [°C]

The admissible ambient temperature range within which the fan can be expected to run continuously.

## Service life [h]

### Lebensdauer L<sub>10</sub> bei 40 °C

Standard figures for service life at ebm-papst. These two temperatures are based on intensive, in-house endurance tests and on experience from more than 80 years developing fans.

### Life expectancy L<sub>10IPC</sub> (40 °C)

Information calculated in line with the standard IPC 9591. Data based on the internal life expectancy at 70 °C, more optimistically extrapolated to 40 °C.

**We expressly state that none of the information or data in this catalog is to be construed as a guarantee or warranty of properties.**

## Unit conversion:

### Air flow

1 cfm = 1.7 m<sup>3</sup>/h

1 l/s = 3.6 m<sup>3</sup>/h

1 l/min = 0.06 m<sup>3</sup>/h

### Pressure

1 Pa = 1x10<sup>-5</sup> bar

1 inch H<sub>2</sub>O = 249 Pa

1 mm H<sub>2</sub>O = 9.81 Pa

Subject to technical changes.

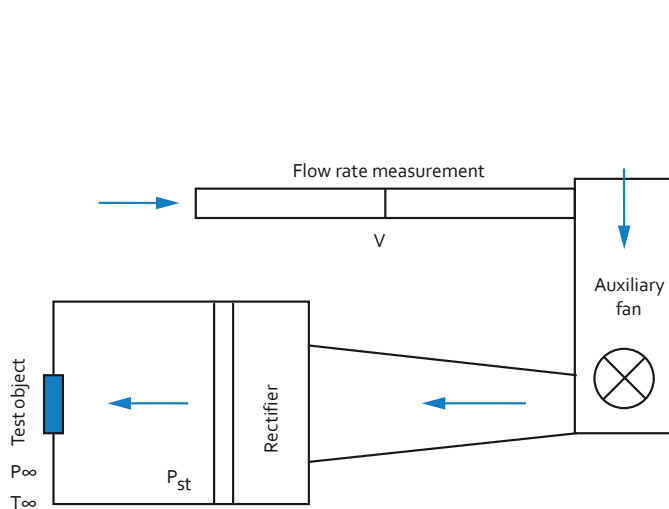
We do not support aerospace applications with our products. German and international patents (registered designs and utility models).

ebm-papst is a registered trademark of ebm-papst Mulfingen GmbH & Co. KG.

# Standard test equipment to determine the fan characteristics

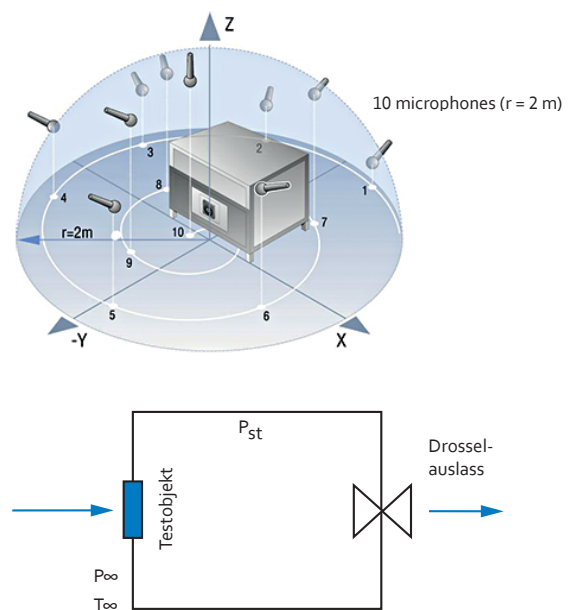
## Pressure/air flow

Blow-down test facility acc. to ISO 5801



## Sound power level pressure/air flow:

Outlet side regulated test rig in semi-anechoic chamber according to ISO 10302



## Sound pressure and sound power level

All acoustic values are determined in accordance with ISO 13347, DIN 45635 and ISO 3744/3745 as per accuracy class 2 and given in A-rated form.

For measurement of the sound pressure level  $L_p$  the microphone is located on the intake side of the fan being tested, generally at a distance of 1 m on the fan axis.

For measurement of the sound power level  $L_w$  10 microphones are distributed over an enveloping surface on the intake side of the fan being tested (see graphic). The measured sound power level can be roughly calculated from the sound pressure level by adding 7 dB.

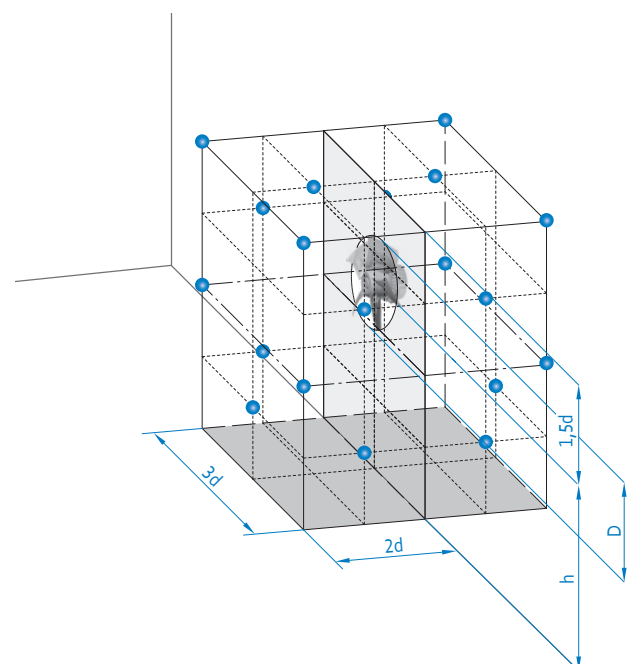
**Measurement set-up according to ISO 13347-3 and DIN 45635-38:**

● measuring points

$d \geq D$

$h = 1.25\text{m}$

Measurement area  $S = 6d^2 + 7d(h + 1,5d)$



## Product overview

# DC axial fans



Our DC product portfolio offers a wide range of different sizes and performance classes suitable for the requirements of your individual application.



All fan types are equipped with efficient, brushless motor technology, electronically commutated drive and electronic reverse polarity protection. They impress with a long service life and outstanding efficiency.



This reduces the thermal load, thus ensuring maximum efficiency and a long service life.



All fan types are designed in IP20 as standard. IP54/IP68 solutions and special protection types are available on request.



GreenIntelligence enables the fan speed to be intelligently controlled and noise-optimized, efficient and tailored use to be monitored.

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## Type code example: VWCL119PJGJZ

V	W	C	L	119	P	J	G	J	Z	
Product category	Product type Airflow direction	Product version	Overall length	Size [mm]	Brand name	Motor	Motor size		Air flow level	Standard
							Diameter			

Dimensions in mm	Type	Type (old)	Page
□ 25 x 8	VWCA025A...	250	18
□ 40 x 10	VWCA040F...	400 F	20
□ 40 x 20	VWCC040Y...	400	22
□ 40 x 28	VWCE040J...	420 J	24
□ 50 x 15	VWCB050F...	500 F	26
□ 60 x 15	VWCB060F...	600 F	28
□ 60 x 25	VWCD060A...	620	30
□ 60 x 25	VWCD060X...	630	32
□ 60 x 25	VWCD060Y...	600 N	34
□ 60 x 32	VWCE060J...	600 J	38
□ 70 x 15	VWCB070F...	700 F	40
□ 80 x 25	VWCD080A...	8450	42
□ 80 x 25	VWCD080Y...	8400 N	44
□ 80 x 32	VWCE080P...	8300 N	48
□ 80 x 38	VWCF080J...	8200 J	52
□ 80 x 38	VWCF080K...	AxiForce 80	54
□ 92 x 25	VWCD092Y...	3400 N	56
□ 92 x 32	VWCE092P...	3300 N	60
□ 92 x 38	VWCF092J...	3200 J	64
□ 92 x 38	VWCF092P...	3250 J	66
□ 100x90	VWJK100TKGRS	AxiTwin 100	68
□ 119 x 25	VWCD119F...	4400 F	70
∅ 127	VWS0113F...	4400 F	72
∅ 126	VWS0112EUGAS	AxiRev 126	74
□ 119 x 25	VWCD119F...	4400 FN	76
□ 119 x 32	VWCE119P...	4300 N	78
□ 119 x 38	VWCF119A...	4400	82
□ 120 x 38	VWC0120KUJBS	AxiForce 120	86
□ 119 x 38	VUCF119Y...	4100 N	88
□ 119 x 38	VKCF119A...	DV 4100	94
□ 119 x 86	VKCK119DKLSS	DiaForce 120	96
□ 127 x 38	VWCF127Y...	5200 N	98
□ 127 x 38	VKCF127A...	DV 5200	100
□ 135 x 38	VWCF135Y...	5100 N	102
□ 140 x 51	VUCG140A...	5300	104
□ 140 x 51	VUCG140A...	5300 TD	106
∅ 150 x 38	VWEF150X...	7100 N	108
∅ 150 x 55	VWEH150X...	7200 N	110
172 x 150 x 51	VWLG150X...	6400	112
172 x 150 x 51	VWLG150X...	6400 TD	114
172 x 160 x 51	VKLG160X...	DV 6400	116
172 x 160 x 51	VWEG172PKLUS	6300 NTD	118
172 x 160 x 51	VWEG172X...	6300 TD	120
∅ 172 x 51	VWEG172P...	6300 N	122
∅ 172 x 51	VWEG172P...	6300 NTD	124
∅ 172 x 51	VWEG172X...	6300	126
∅ 172 x 51	VWEG172X...	6300 TD	128
∅ 172 x 51	VKEG178X...	DV 6300 TD	130
172 x 150 x 51	VWLG150K...	AxiForce 172	132
220 x 200 x 51	VWLG200F...	2200 FTD	134
∅ 200 x 70	VKLH200CKLXS	AxiEco 200	136
225 x 225 x 80	VWLJ200XJLVZ	2200 TD	138
□ 225 x 80	VJH0200XUNCS	K1G 200	140
□ 225 x 89	VJH0200XUNES	K3G 200	142
∅ 250	VWLK280X..., VWLK280H...	W1G 250	144
∅ 300	VVY0300H..., VWR0300X..., VMA0300X...	*1G 300	146

# VWCA025A...

DC axial fan · max. 4.7 m<sup>3</sup>/h · □ 25 × 8 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 5 or 12VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 28
- Electrical protection class: III
- Weight: 5 g

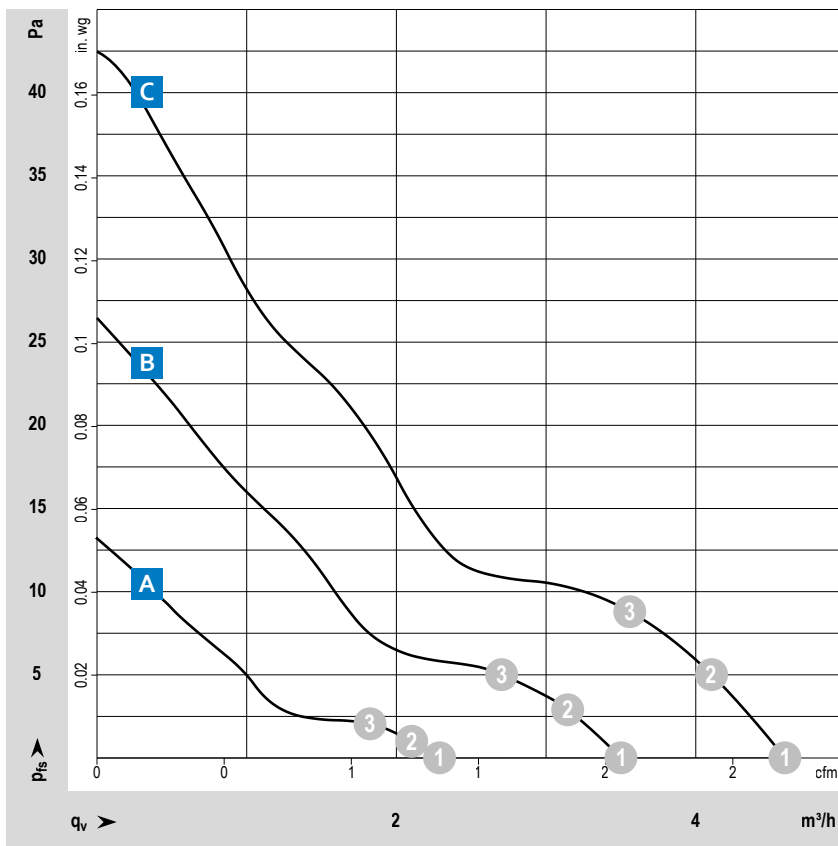
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

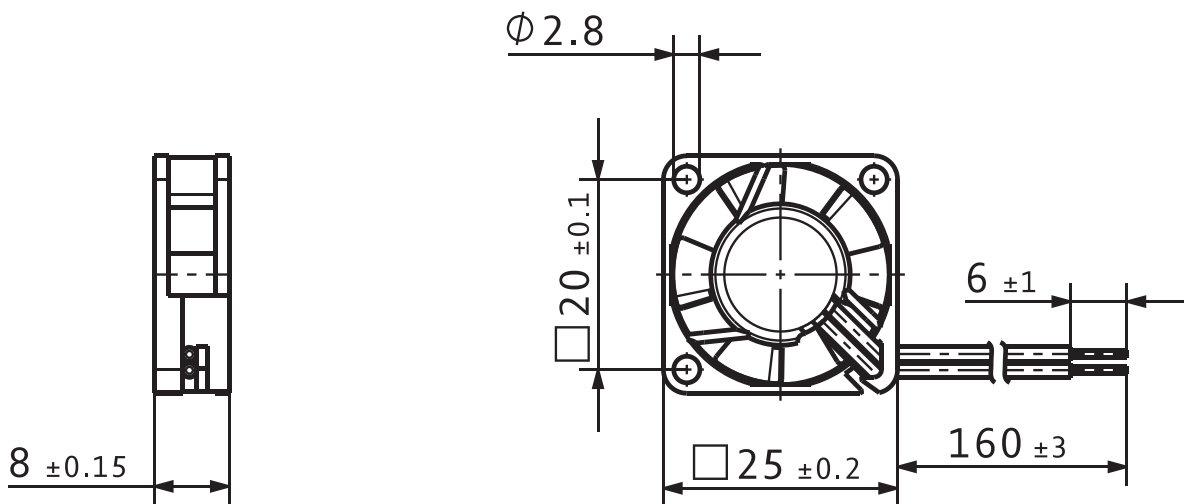
Noise: Total sound power level L<sub>w</sub>A ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level L<sub>p</sub>A measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (20 °C) ebm-papst standard	Life expectancy L <sub>10</sub> FC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCA025AGBAS 255 M	9290904202	5	4.5...5.5	A	①	2.3	1.4	6 500	0.2	<3	5	-10...+70	45 000	47 500
					②	2.1	1.2	6 500	0.2	<3				
					③	1.8	1.1	6 690	0.2	<3				
VWCA025AGBAS 255 N	9290904200	5	4.5...5.5	B	①	3.5	2.0	9 600	0.4	<3	16	-10...+70	40 000	42 500
					②	3.2	1.9	9 610	0.4	<3				
					③	2.7	1.6	9 880	0.4	<3				
VWCA025AGBBS 255 H	9290904201	5	4.5...5.5	C	①	4.6	2.7	12 000	0.6	4.4	23	-10...+55	35 000	37 500
					②	4.1	2.4	11 910	0.6	4.4				
					③	3.6	2.1	12 160	0.6	4.4				
VWCA025AHBAS 252 N	9290904203	12	10...14	B	①	3.4	2.0	9 000	0.5	<3	15	-10...+70	40 000	42 500
					②	3.0	1.8	9 000	0.5	<3				
					③	2.7	1.6	9 270	0.5	<3				
VWCA025AHBBS 252 H	9290904220	12	10...14	C	①	4.7	2.8	12 000	0.6	4.4	23	-10...+55	35 000	37 500
					②	4.2	2.5	11 950	0.6	4.4				
					③	3.6	2.1	12 230	0.6	4.4				

Subject to changes.

Technical drawing

Dimensions in mm



# VWCA040F...

DC axial fan · max. 9.9 m<sup>3</sup>/h · □ 40 x 10 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 5, 12 or 24VDC; compact, small and lightweight; low-profile, noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 28
- Electrical protection class: III
- Weight: 17 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

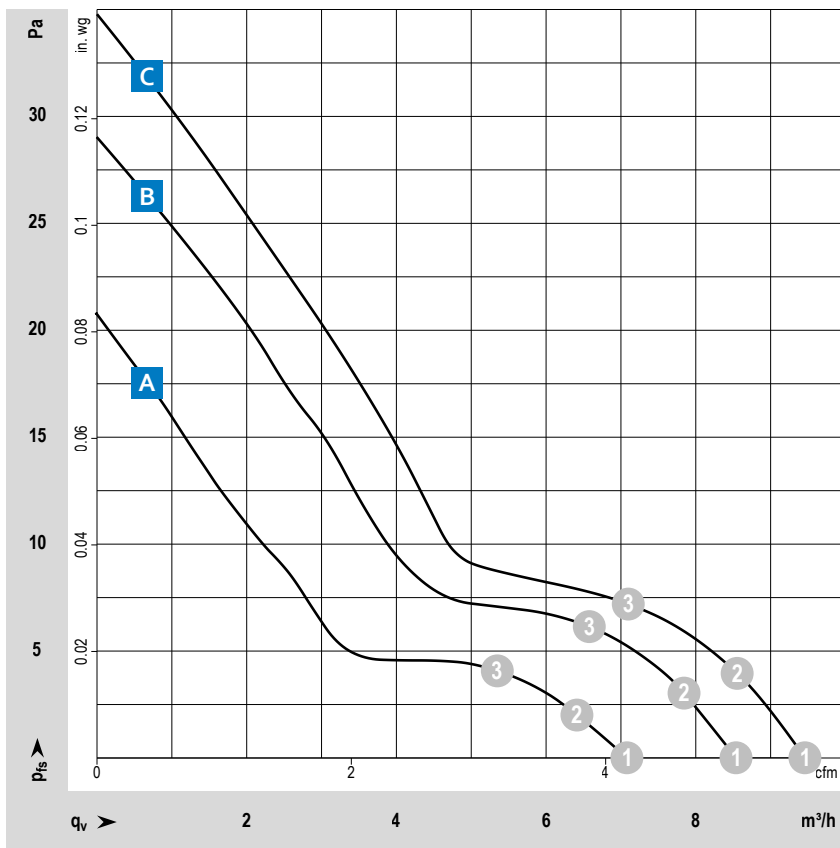
## Options

- Speed signal
- Go / NoGo alarm
- Moisture protection

## Special features

- Additional fan types with extended temperature range up to +85 °C

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

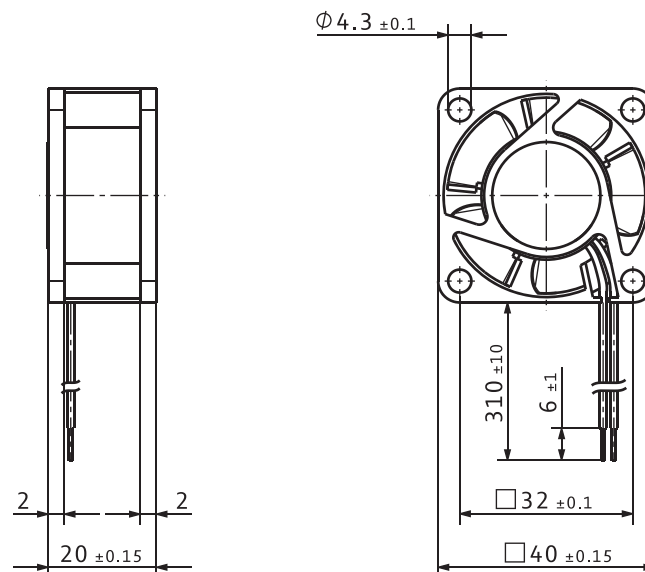
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (20 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCA040FGDBS 405 F	9291705010	5	4.5...5.5	B	①	8.7	5.1	5 400	0.6	3.7	22.1	-20...+70	45 000	47 500
					②	7.8	4.6	5 380	0.6	3.7				
					③	6.4	3.8	5 470	0.6	4.2				
VWCA040FGDCS 405 FH	9291705032	5	4.5...5.5	C	①	9.9	5.8	6 000	0.7	4.4	26.0	-20...+70	45 000	47 500
					②	8.9	5.2	5 970	0.7	4.4				
					③	7.3	4.3	6 050	0.7	4.8				
VWCA040FHDBS 412 FM	9291705011	12	10...14	A	①	7.1	4.2	4 300	0.5	3.7	17.0	-20...+70	45 000	47 500
					②	6.4	3.8	4 270	0.5	3.7				
					③	5.3	3.1	4 290	0.5	4.2				
VWCA040FHDBS 412 F	9291705002	12	10...14	B	①	9.1	5.4	5 400	0.6	4.0	22.1	-20...+70	45 000	47 500
					②	8.1	4.8	5 350	0.6	4.2				
					③	6.6	3.9	5 400	0.6	4.7				
VWCA040FHDCS 412 FH	9291705004	12	10...14	C	①	9.5	5.6	6 000	0.7	4.4	26.0	-20...+70	45 000	47 500
					②	8.6	5.1	5 990	0.7	4.4				
					③	7.0	4.1	6 080	0.7	4.8				
VWCA040FJDBS 414 F	9291705005	24	20...28	B	①	8.5	5.0	5 400	0.7	4.0	22.1	-20...+70	45 000	47 500
					②	7.8	4.6	5 390	0.7	4.2				
					③	6.5	3.8	5 440	0.7	4.7				
VWCA040FJDCS 414 FH	9291705037	24	21.6...26.4	C	①	9.8	5.8	6 000	0.7	4.4	26.0	-20...+70	45 000	47 500
					②	8.9	5.2	5 970	0.7	4.4				
					③	7.3	4.3	6 020	0.7	4.8				
Fan types with extended temperature range up to +85 °C														
VWCA040FJDCS 412 FM-074	9291705074	12	10...14	A	①	6.6	3.9	4 300	0.3	3.7	17.0	-20...+85	45 000	47 500
					②	6.0	3.5	4 310	0.3	3.7				
					③	5.0	2.9	4 320	0.3	4.2				
VWCA040FHDBS 412 F-130	9291705130	12	10...14	B	①	8.4	4.9	5 400	0.5	4.0	22.1	-20...+85	45 000	47 500
					②	7.7	4.5	5 370	0.5	4.2				
					③	6.5	3.8	5 390	0.5	4.7				
VWCA040FHDBS 412 FH-132	9291705132	12	10...14	C	①	9.3	5.5	6 000	0.6	4.4	26.0	-20...+85	45 000	47 500
					②	8.5	5.0	5 960	0.6	4.4				
					③	7.2	4.2	5 980	0.6	4.8				

Subject to changes.

Technical drawing

Dimensions in mm



# VWCC040Y...

DC axial fan · max. 14.5 m<sup>3</sup>/h · □ 40 x 20 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 5, 12 or 24VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 28
- Electrical protection class: III
- Weight: 27 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

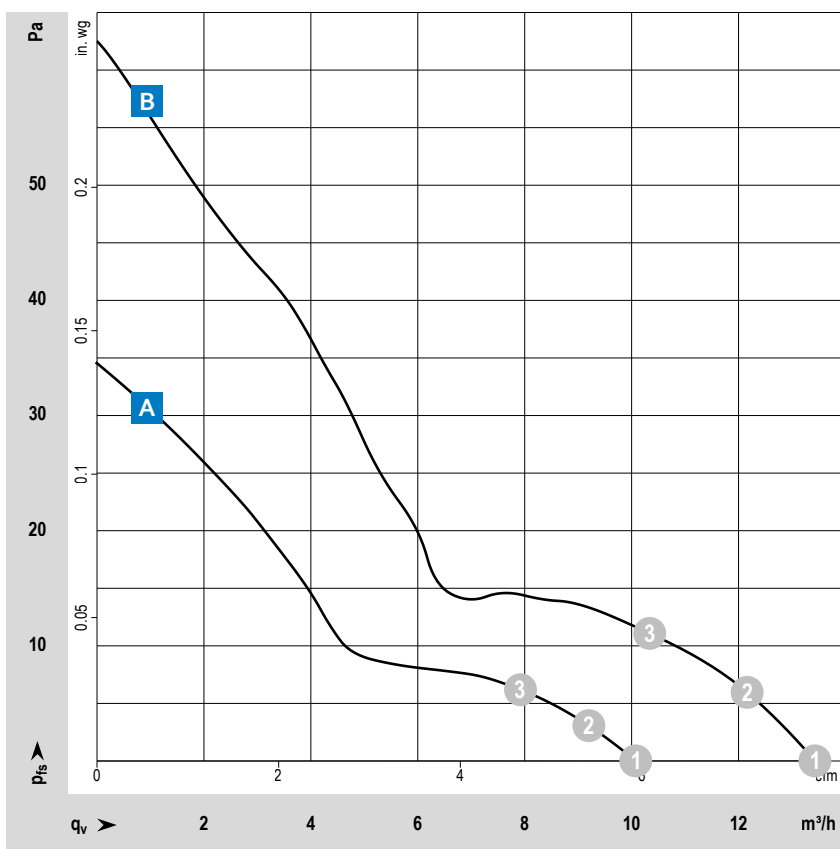
## Options

- Speed signal
- Go / NoGo alarm
- PWM control input
- Moisture protection

## Special features

- Additional fan types with extended temperature range up to +85 °C

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

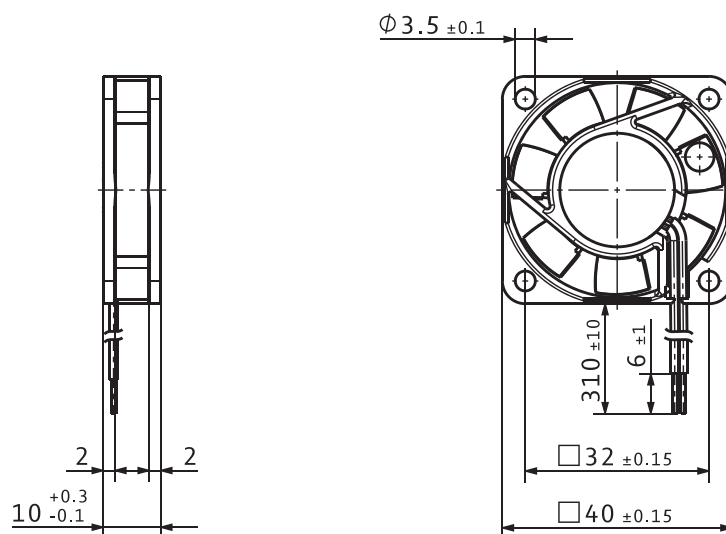
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (20 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCC040YGDSCS 405	9291708013	5	4.5...5.5	A	① ② ③	10.6	6.2	6 000	0.7	4.1	18	-20...+70	50 000	52 500
						9.7	5.7	5 980	0.7	4.1				
						8.5	5.0	6 020	0.7	4.2				
VWCC040YHDSCS 412	9291708001	12	10...14	A	① ② ③	10.1	5.9	6 000	0.6	4.1	18	-20...+70	50 000	52 500
						9.1	5.4	6 030	0.6	4.1				
						7.8	4.6	6 120	0.6	4.2				
VWCC040YHDSCS 412 H	9291708012	12	10...14	B	① ② ③	13.4	7.9	8 100	1.3	4.7	29	-20...+60	45 000	47 500
						12.2	7.2	8 120	1.3	4.7				
						10.3	6.1	8 330	1.3	4.8				
VWCC040YJDSCS 414	9291708002	24	20...28	A	① ② ③	10.3	6.1	6 000	0.7	4.1	18	-20...+70	50 000	52 500
						9.3	5.5	6 000	0.7	4.1				
						8.1	4.8	6 100	0.7	4.2				
VWCC040YJDSCS 414 H	9291708007	24	20...26.5	B	① ② ③	14.5	8.5	8 100	1.3	4.7	29	-20...+60	45 000	47 500
						13.3	7.8	8 060	1.4	4.7				
						11.6	6.8	8 110	1.3	4.8				
Fan types with extended temperature range up to +85 °C														
VWCC040YHDSCS 412-099	9291708099	12	10...14	A	① ② ③	10.1	5.9	6 000	0.6	4.1	18	-20...+70	50 000	52 500
						9.1	5.4	6 030	0.6	4.1				
						7.8	4.6	6 120	0.6	4.2				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCE040J...

DC axial fan · max. 38.9 m<sup>3</sup>/h · □ 40 x 28 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact, small and lightweight; noise and efficiency optimized axial fan with rather rigid characteristic curve
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 28
- Electrical protection class: III
- Weight: 45 g

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

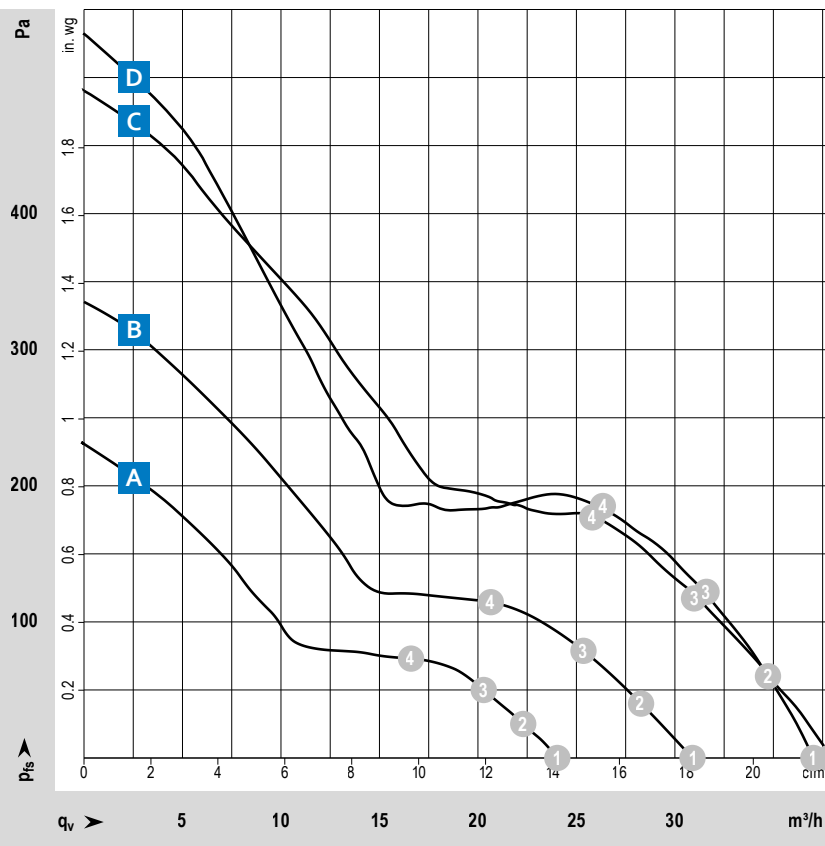
- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm - alarm with speed limit
- External temperature sensor
- PWM control input - analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Additional fan types with protection class IP68, -40 °C, Speed signal, PWM control input and EMC limit values, class B



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

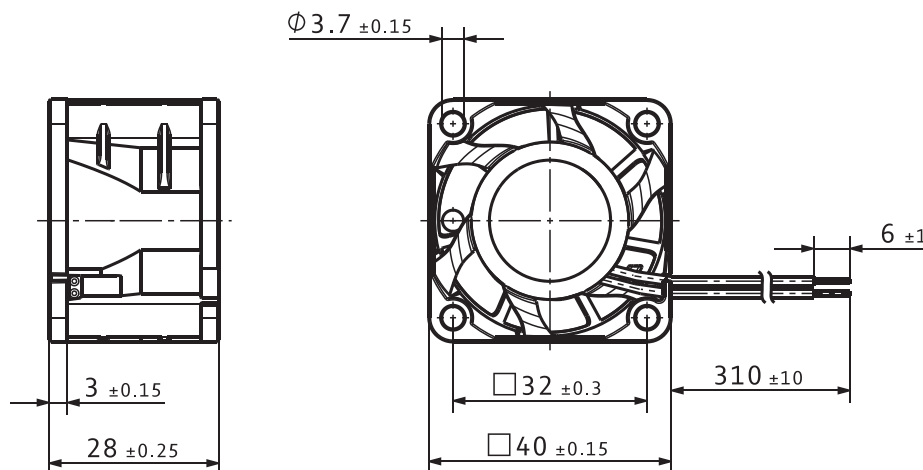


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCE040JHDDS 422 JM	9291908014	12	8...13.8	A	①	24.0	14.1	11 400	2.8	6.1	42	-20...+70	75 000	127 500
					②	22.3	13.1	11 350	2.8	6.0				
					③	20.3	11.9	11 440	2.8	5.9				
					④	16.6	9.8	11 750	2.6	5.8				
VWCE040JHDES 422 JN	9291908012	12	8...13.8	B	①	30.9	18.2	14 250	3.6	6.4	48	-20...+70	67 500	115 000
					②	28.3	16.7	14 160	3.6	6.4				
					③	25.4	14.9	14 200	3.6	6.4				
					④	20.7	12.2	14 600	3.5	6.5				
VWCE040JHDES 422 JH	9291908009	12	8...13.8	C	①	38.0	22.4	17 250	7.0	7.0	54	-20...+70	60 000	102 500
					②	34.8	20.5	17 040	7.0	6.9				
					③	31.1	18.3	17 100	7.0	6.8				
					④	25.9	15.2	17 570	6.7	6.9				
VWCE040JJDDS 424 JM	9291908011	24	16...28	A	①	23.6	13.9	11 400	2.7	6.1	42	-20...+70	75 000	127 500
					②	22.1	13.0	11 400	2.7	6.0				
					③	20.2	11.9	11 480	2.7	5.9				
					④	16.6	9.8	11 780	2.6	5.8				
VWCE040JJDES 424 JN	9291908015	24	16...28	B	①	31.8	18.7	14 250	4.0	6.4	48	-20...+70	67 500	115 000
					②	29.1	17.1	14 200	4.0	6.4				
					③	25.9	15.2	14 200	4.0	6.4				
					④	21.2	12.5	14 700	3.8	6.5				
VWCE040JJDES 424 JH	9291908013	24	16...26.4	C	①	37.8	22.2	17 250	6.3	7.0	54	-20...+65	60 000	102 500
					②	35.0	20.6	17 200	6.4	6.9				
					③	31.3	18.4	17 200	6.4	6.8				
					④	26.0	15.3	17 600	6.1	6.9				
Fan types with protection class IP68, -40 °C, Speed signal, PWM control input and EMC limit values, class B														
VWCE040JUDBS 422 J/2 HPU	9691900181	12	8...13.8	D	①	37.0	21.8	17 250	7.4	6.9	56	-40...+70	60 000	102 500
					②	34.7	20.4	17 250	7.6	6.8				
					③	31.5	18.5	17 270	7.6	6.8				
					④	26.3	15.5	17 250	7.0	6.6				
VWCE040JJDEZ 424 J/2 HPU	9691900185	24	18...28	D	①	38.9	22.9	17 250	7.7	6.9	56	-40...+70	60 000	102 500
					②	36.0	21.2	17 260	7.7	6.8				
					③	32.4	19.1	17 260	7.7	6.8				
					④	26.5	15.6	17 250	7.0	6.6				
VWCE040JKDES 428 J/2 HPU	9691900183	48	36...60	D	①	37.1	21.8	17 250	7.5	6.9	56	-40...+70	60 000	102 500
					②	34.5	20.3	17 240	7.6	6.8				
					③	31.3	18.4	17 270	7.5	6.8				
					④	25.9	15.2	17 250	7.0	6.6				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCB050F...

DC axial fan · max. 18.8 m<sup>3</sup>/h · □ 50 x 15 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fans available in 12 or 24VDC; compact, small and lightweight; low-profile, noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 28
- Electrical protection class: III
- Weight: 25 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

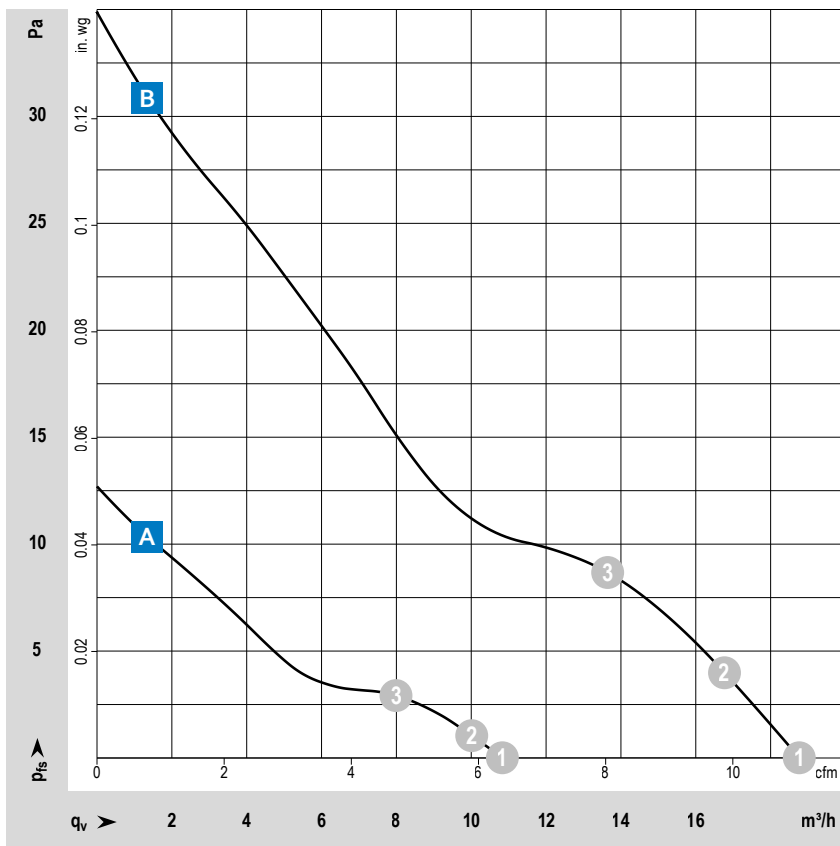
## Options

- Speed signal
- Go / NoGo alarm
- PWM control input
- Moisture protection

## Special features

- Additional fan types with extended temperature range up to +85 °C

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

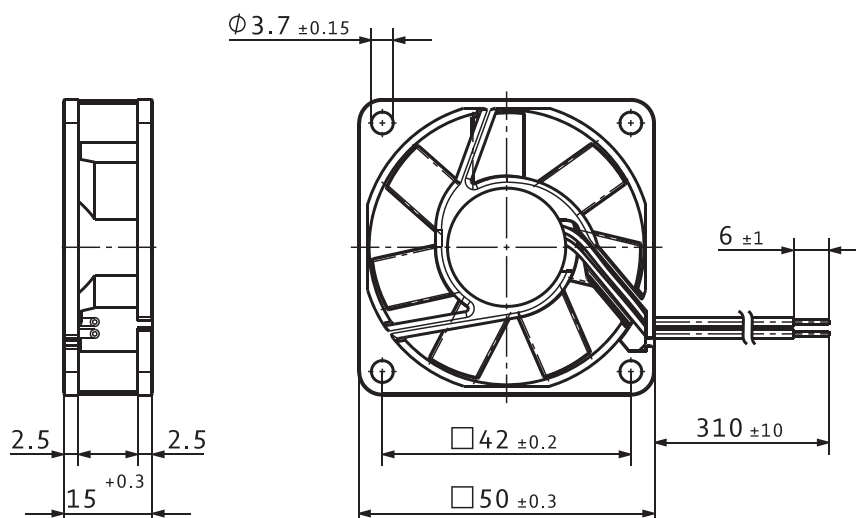
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (20 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. 11
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCB050FHDCS 512 F	9291706501	12	10.8...13.2	B	① ② ③	18.8	11.1	5 000	0.8	4.7	30	-20...+70	50 000	52 500
						16.8	9.9	4 970	0.8	4.6				
						13.5	7.9	5 030	0.8	4.6				
VWCB050FJDCS 514 F	9291706507	24	21.6...26.4	B	① ② ③	18.8	11.1	5 000	0.8	4.7	30	-20...+70	50 000	52 500
						16.8	9.9	4 930	0.8	4.6				
						13.9	8.2	4 960	0.8	4.6				
Fan types with extended temperature range up to +85 °C														
VWCB050FHDCS 512 FL-547	9291706547	12	10.2...13.8	A	① ② ③	10.8	6.4	3 000	0.3	3.8	18	-20...+85	50 000	52 500
						9.8	5.8	2 980	0.3	3.9				
						8.1	4.8	3 000	0.3	3.8				
VWCB050FHDCS 512 F-532	9291706532	12	10.8...13.2	B	① ② ③	17.8	10.5	5 000	0.8	4.7	30	-20...+85	50 000	52 500
						15.4	9.1	5 000	0.8	4.6				
						12.1	7.1	5 140	0.7	4.6				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCB060F...

DC axial fan · max. 31.3 m<sup>3</sup>/h · □ 60 x 15 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fans available in 5, 12 or 24VDC; compact, small and lightweight; low-profile, noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 28
- Electrical protection class: III
- Weight: 30 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

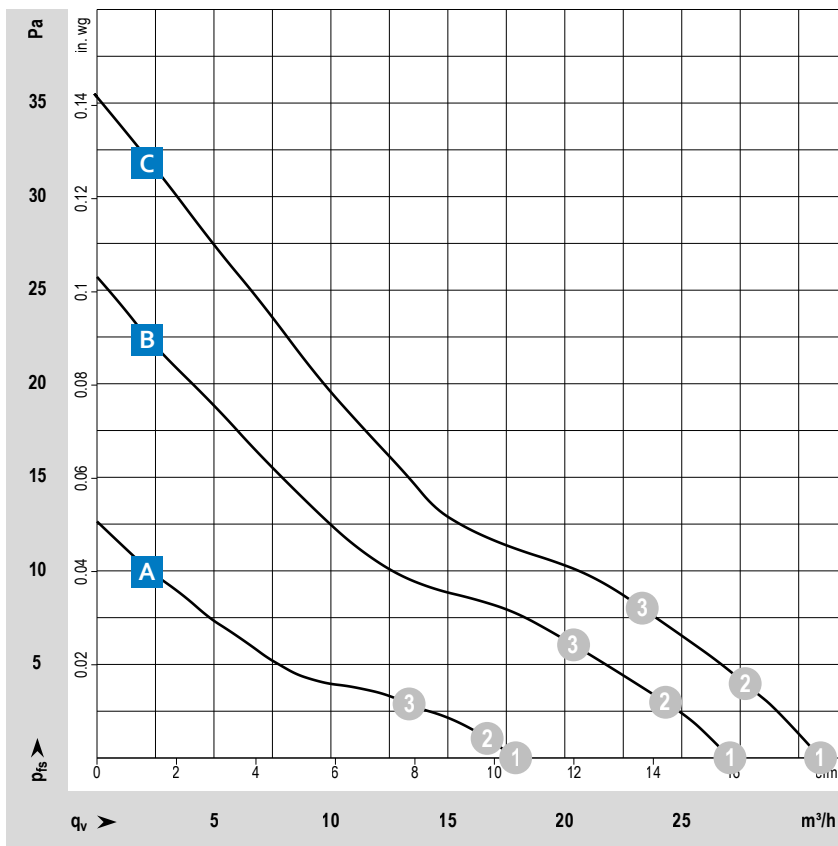
## Options

- Speed signal
- Go / NoGo alarm
- PWM control input
- Moisture protection

## Special features

- Additional fan types with extended temperature range up to +85 °C

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

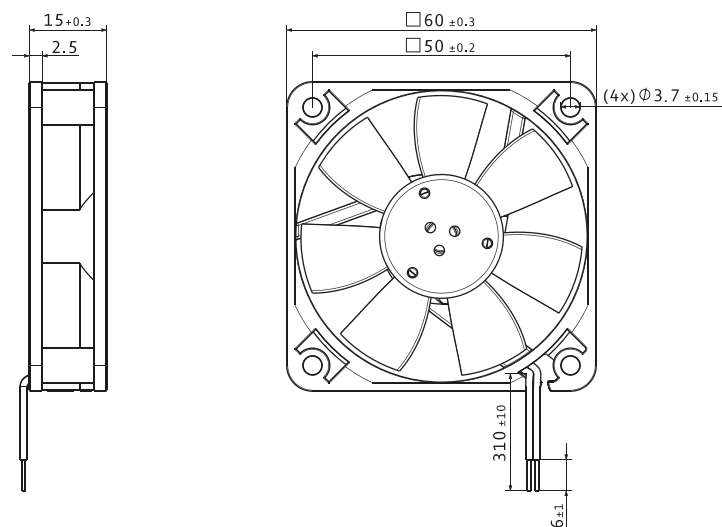
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (20 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm						
VWCB060FGDDS 605 F	9291708611	5	4.5...5.2	B	①	26.8	15.8	3 900	1.0	4.5	27	-20...+50	50 000	52 500
					②	24.4	14.4	3 820	1.0	4.4				
					③	20.4	12.0	3 760	1.0	4.6				
VWCB060FHDCS 612 FL	9291708607	12	11.5...13.2	A	①	17.9	10.5	2 650	0.4	3.5	16	-20...+70	50 000	52 500
					②	16.3	9.6	2 600	0.4	3.5				
					③	13.6	8.0	2 580	0.4	3.7				
VWCB060FHDDS 612 F	9291708601	12	10.8...13.2	B	①	27.0	15.9	3 900	0.9	4.5	27	-20...+70	50 000	52 500
					②	24.4	14.4	3 830	0.9	4.4				
					③	20.3	11.9	3 780	0.9	4.6				
VWCB060FHDES 612 FH	9291708615	12	10.0...13.2	C	①	31.3	18.4	4 500	1.3	4.7	31	-20...+60	45 000	47 500
					②	28.3	16.7	4 400	1.3	4.6				
					③	23.4	13.8	4 310	1.3	4.9				
VWCB060FJDDS 614 F	9291708612	24	21.6...26.4	B	①	27.1	16.0	3 900	0.9	4.5	27	-20...+70	50 000	20 000
					②	24.4	14.4	3 800	0.9	4.4				
					③	20.3	11.9	3 750	0.9	4.6				
VWCB060FJDEZ 614 F/39 H-691	9291706691	24	16...28	C	①	30.9	18.2	4 500	1.2	4.7	31	-20...+60	45 000	47 500
					②	27.8	16.4	4 410	1.3	4.6				
					③	23.3	13.7	4 370	1.3	4.9				
Fan types with extended temperature range up to +80 / 85 °C														
VWCB060FHDCS 612 FL-680	9291706680	12	11.5...14	A	①	18.0	10.6	2 650	0.4	3.5	16	-20...+85	50 000	52 500
					②	15.9	9.4	2 600	0.4	3.5				
					③	13.3	7.8	2 590	0.4	3.7				
VWCB060FHDDS 612 F-637	9291708637	12	10.8...12.6	B	①	27.0	15.9	3 900	0.8	4.5	27	-20...+80	50 000	52 500
					②	24.1	14.2	3 810	0.8	4.4				
					③	20.0	11.8	3 790	0.8	4.6				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCD060A...

DC axial fan · max. 66 m<sup>3</sup>/h · □ 60 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12 or 24 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 70 g

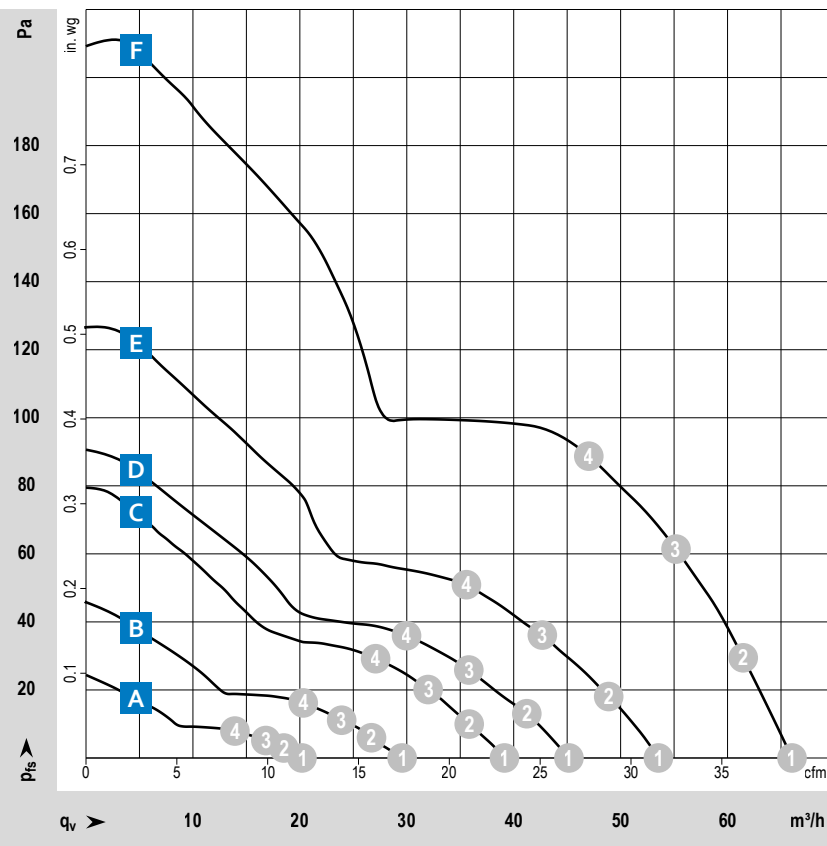
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Nominal voltage 48 VDC

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

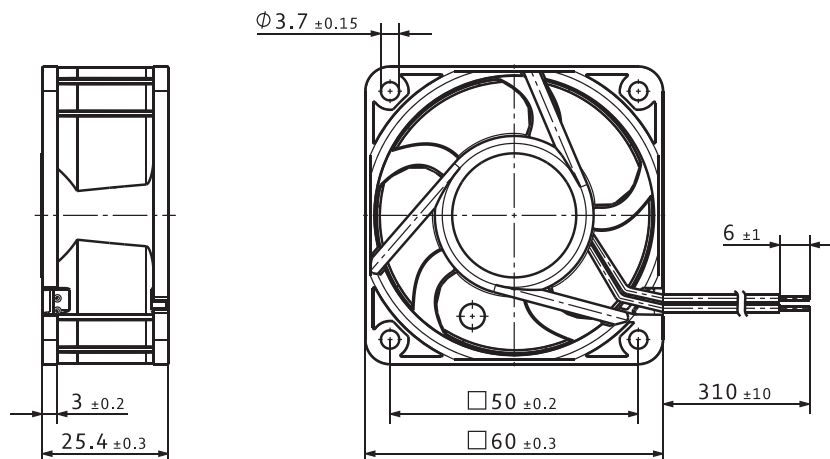
Noise: Total sound p<sub>w</sub> level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCD060AHEFS 622 N	9292207003	12	8...15	C	①	39.1	23.0	6100	1.9	5.3	35	-20...+70	72 500	122 500
					②	36.2	21.3	6030	1.9	5.3				
					③	32.0	18.8	5980	1.9	5.1				
					④	27.1	16.0	6000	1.9	5.1				
VWCD060AHEFS 622 H	9292207004	12	8...15	D	①	45.2	26.6	6850	2.2	5.5	39	-20...+70	70 000	117 500
					②	41.2	24.2	6750	2.3	5.5				
					③	35.9	21.1	6700	2.3	5.4				
					④	30.0	17.7	6700	2.3	5.3				
VWCD060AHEGS 622 HH	9292207006	12	8...15	E	①	54.0	31.8	8200	3.4	6.0	43	-20...+70	65 000	110 000
					②	48.8	28.7	8080	3.5	5.9				
					③	42.6	25.1	8000	3.6	5.8				
					④	35.6	21.0	8020	3.6	5.6				
VWCD060AHEGS 622/2 H3P	9692200205	12	8...15	F	①	66.0	38.8	9700	8.1	6.6	48	-20...+70	62 500	105 000
					②	61.0	35.9	9700	8.5	6.5				
					③	55.0	32.4	9690	8.9	6.3				
					④	47.1	27.7	9680	9.1	6.2				
VWCD060AJEDS 624 L	9292207005	24	18...28	A	①	20.2	11.9	3200	1.0	3.7	20	-20...+70	80 000	135 000
					②	18.7	11.0	3180	1.0	3.7				
					③	16.6	9.8	3180	1.0	3.6				
					④	14.0	8.2	3180	1.0	3.7				
VWCD060AJEES 624 M	9292207007	24	18...28	B	①	29.6	17.4	4550	1.3	4.6	29	-20...+70	77 500	130 000
					②	26.8	15.8	4480	1.4	4.5				
					③	23.8	14.0	4500	1.4	4.5				
					④	20.2	11.9	4520	1.3	4.5				
VWCD060AJEFS 624 N	9292207008	24	18...28	C	①	39.1	23.0	6100	2.1	5.3	35	-20...+70	72 500	122 500
					②	35.9	21.1	6050	2.1	5.3				
					③	31.9	18.8	6000	2.1	5.1				
					④	27.0	15.9	6000	2.1	5.1				
VWCD060AJEFS 624 H	9292207009	24	18...28	D	①	44.1	26.0	6850	2.4	5.5	39	-20...+70	70 000	117 500
					②	40.7	24.0	6750	2.5	5.5				
					③	35.9	21.1	6690	2.5	5.4				
					④	30.3	17.8	6680	2.5	5.3				
VWCD060AJEGS 624 HH	9292207010	24	18...28	E	①	55.0	32.4	8200	3.2	6.0	43	-20...+70	65 000	110 000
					②	49.6	29.2	8050	3.3	5.9				
					③	43.4	25.5	7920	3.4	5.8				
					④	36.5	21.5	7890	3.4	5.6				
VWCD060AJEGS 624/2 H3P	9692200204	24	18...28	F	①	66.0	38.8	9700	7.0	6.6	48	-20...+70	62 500	105 000
					②	61.0	35.9	9700	7.4	6.5				
					③	55.0	32.4	9710	7.7	6.3				
					④	46.6	27.4	9700	7.9	6.2				

Subject to changes.

Technical drawing

Dimensions in mm



# VWCD060X...

DC axial fan · max. 59 m<sup>3</sup>/h · □ 60 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 70 g

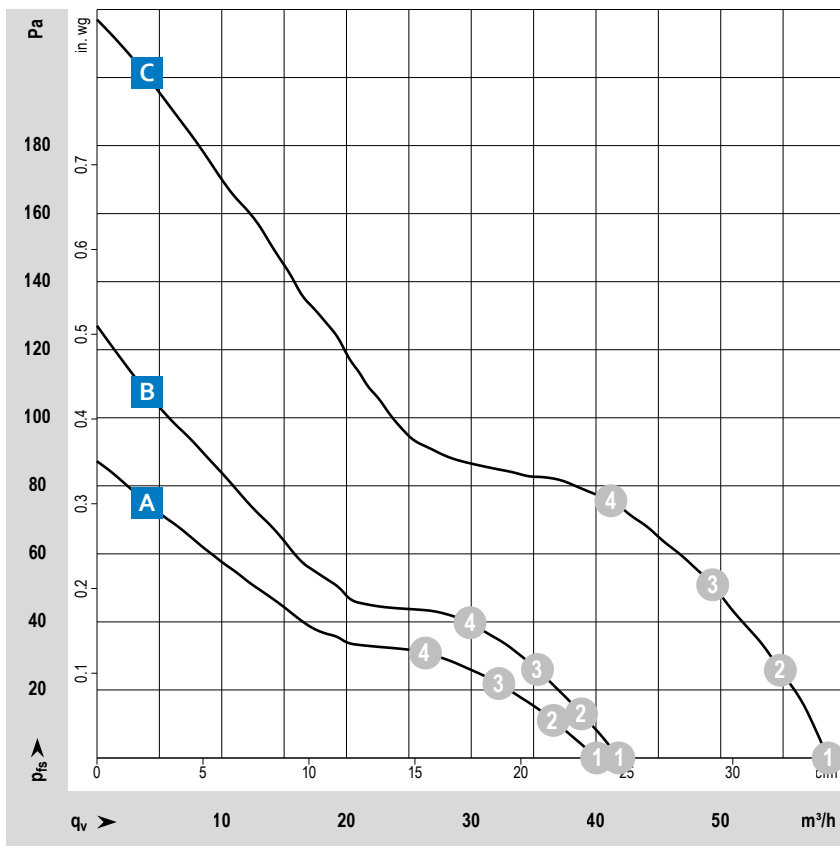
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP68
- Salt spray protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>



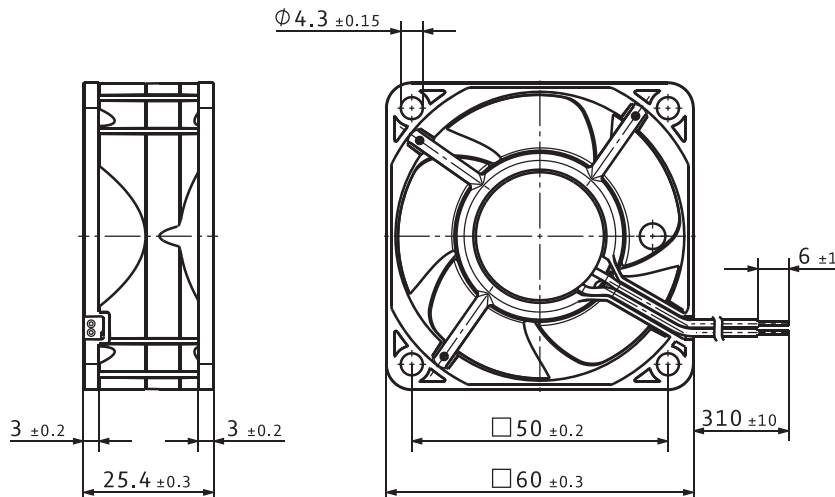
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)		Hours	Hours
VWCD060XHEFS 632 NU	9292308002	12	6...15	A	①	40.1	23.6	5900	1.6	5.2	33	-20...+70	85 000	142 500
					②	36.5	21.5	5820	1.7	5.2				
					③	32.3	19.0	5780	1.7	5.2				
					④	26.4	15.5	5770	1.7	5.3				
VWCD060XHEFS 632/2 HPU	9692300186	12	10.8...13.2	B	①	41.8	24.6	6300	1.6	5.5	35	-20...+70	85 000	142 500
					②	38.9	22.9	6240	1.7	5.5				
					③	35.3	20.8	6250	1.8	5.4				
					④	30.0	17.7	6250	1.9	5.4				
VWCD060XJEFZ 634 NU	9292308004	24	12...30	A	①	38.9	22.9	5900	1.6	5.2	34	-20...+70	85 000	142 500
					②	35.7	21.0	5840	1.7	5.2				
					③	31.8	18.7	5790	1.8	5.2				
					④	26.3	15.5	5780	1.8	5.3				
VWCD060XJEGS 634 HHU	9692300188	24	18...28	C	①	58.0	34.1	8500	3.1	6.5	44	-20...+70	75 000	127 500
					②	54.0	31.8	8500	3.4	6.4				
					③	48.8	28.7	8480	3.7	6.2				
					④	40.9	24.1	8460	3.8	6.2				
VWCD060XJEGS 634/2 HPU	9692300189	24	18...28	C	①	58.0	34.1	8500	3.1	6.5	44	-20...+70	75 000	127 500
					②	54.0	31.8	8500	3.4	6.4				
					③	48.8	28.7	8480	3.7	6.2				
					④	40.9	24.1	8460	3.8	6.2				
VWCD060XKEFS 638/2 HPU	9692300193	48	40...60	B	①	41.5	24.4	6300	1.9	5.5	35	-20...+70	85 000	142 500
					②	38.8	22.8	6280	2.0	5.5				
					③	35.2	20.7	6270	2.1	5.4				
					④	29.7	17.5	6250	2.1	5.4				
VWCD060XKEGS 638/2 HPU	9692300192	48	40...60	C	①	59.0	34.7	8500	3.3	6.5	44	-20...+70	75 000	127 500
					②	55.0	32.4	8500	3.6	6.4				
					③	49.4	29.1	8500	3.9	6.2				
					④	41.3	24.3	8460	4.0	6.2				

Subject to changes.

DC axial fans

Technical drawing

Dimensions in mm



# VWCD060Y...

DC axial fan · max. 53 m<sup>3</sup>/h · □ 60 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 66 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

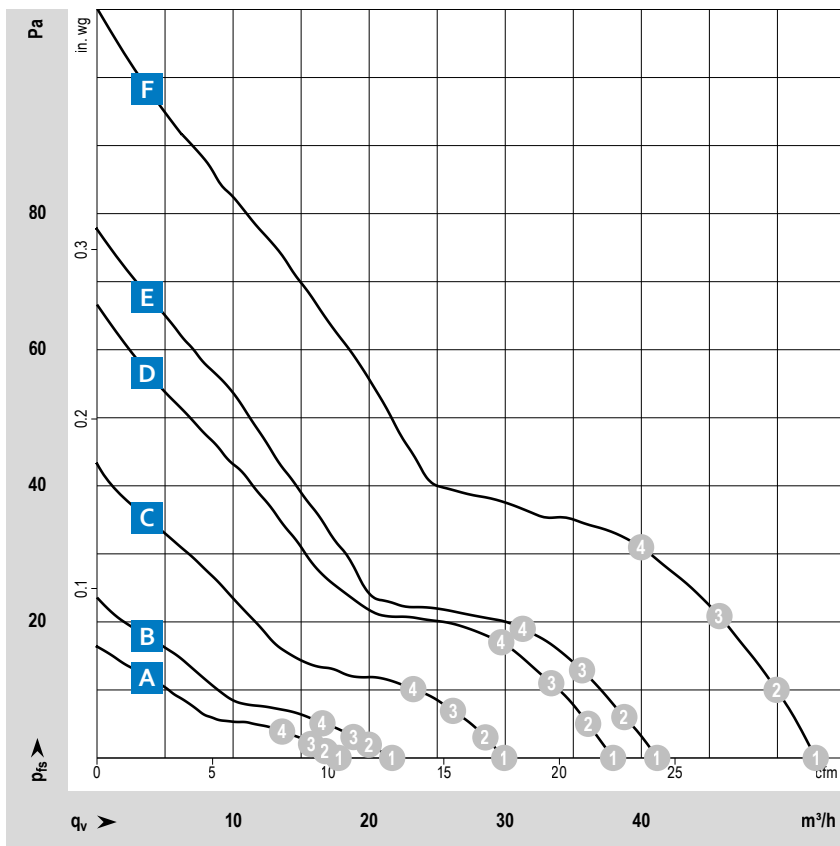
## Options

- Speed signal
- Go / NoGo alarm
- Moisture protection
- Degree of protection: up to IP68

## Special features

- Some fan types suitable for use at high ambient temperatures up to 85 °C.

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

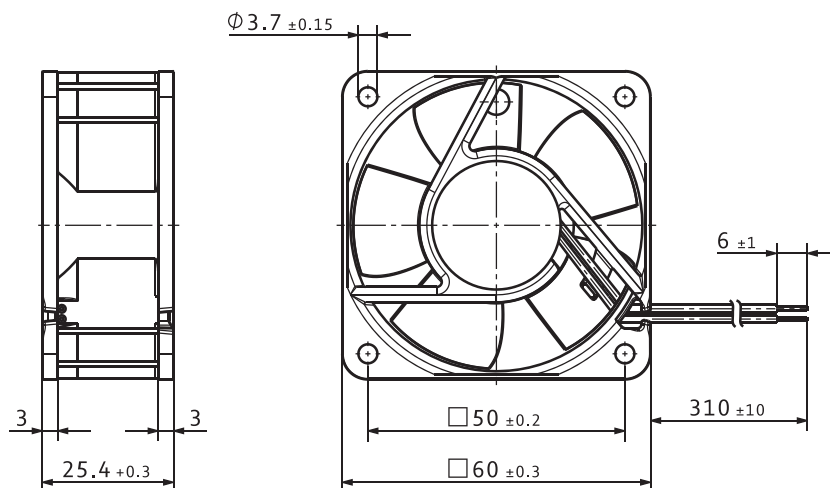
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCD060YHECS 612 NGLE	9292206177	12	8...15	A	①	17.1	10.1	2 500	0.6	3.6	16	-20...+85	80 000	135 000
					②	16.3	9.6	2 490	0.6	3.6				
					③	15.4	9.1	2 470	0.6	3.5				
					④	13.8	8.1	2 470	0.6	3.5				
VWCD060YHECS 612 NLE	9272206171	12	8...15	A	①	17.7	10.4	2 500	0.3	3.6	16	-20...+85	80 000	135 000
					②	16.7	9.8	2 480	0.3	3.6				
					③	15.5	9.1	2 480	0.3	3.5				
					④	13.8	8.1	2 470	0.3	3.5				
VWCD060YHEDS 612 NGMLE	9292206172	12	8...15	B	①	23.0	13.5	3 000	0.7	4.0	19	-20...+80	80 000	135 000
					②	21.7	12.8	2 990	0.7	3.9				
					③	20.2	11.9	2 970	0.7	3.8				
					④	17.6	10.4	2 960	0.7	3.9				
VWCD060YHECS 612 NMLE	9292206174	12	8...15	B	①	21.7	12.8	3 000	0.5	4.0	19	-20...+85	80 000	135 000
					②	20.2	11.9	2 990	0.5	3.9				
					③	18.6	10.9	3 000	0.5	3.8				
					④	16.4	9.7	2 990	0.5	3.9				
VWCD060YHEES 612 NGME	9272206175	12	8...15	C	①	31.0	18.2	4 100	1.2	4.7	28	-20...+75	80 000	135 000
					②	29.2	17.2	4 060	1.2	4.7				
					③	26.9	15.8	4 030	1.2	4.7				
					④	23.3	13.7	4 000	1.2	4.6				
VWCD060YHEES 612 NME	9292206173	12	8...15	C	①	29.9	17.6	4 100	0.9	4.7	28	-20...+75	80 000	135 000
					②	28.4	16.7	4 080	0.9	4.7				
					③	26.3	15.5	4 040	1.0	4.7				
					④	23.2	13.7	4 030	1.0	4.6				
VWCD060YHEFS 612 NN	9272206018	12	8...15	D	①	37.9	22.3	5 100	1.4	5.2	35	-20...+70	70 000	117 500
					②	36.0	21.2	5 070	1.5	5.2				
					③	33.4	19.7	5 030	1.5	5.1				
					④	29.7	17.5	5 000	1.5	5.1				
VWCD060YHEFS 612 NH	9272206026	12	8...15	E	①	41.2	24.2	5 600	1.7	5.5	37	-20...+70	70 000	117 500
					②	38.7	22.8	5 540	1.8	5.4				
					③	35.8	21.1	5 510	1.8	5.4				
					④	31.3	18.4	5 500	1.8	5.3				
VWCD060YHEGS 612 NHH-118	9272206118	12	8...15	F	①	53.0	31.2	6 800	2.6	5.9	41	-20...+70	60 000	102 500
					②	49.9	29.4	6 730	2.7	5.8				
					③	45.9	27.0	6 630	2.8	5.7				
					④	40.0	24.0	6 570	2.8	5.6				

Subject to changes. More types in 24 or 48 VDC on the next page.

Technical drawing

Dimensions in mm



# VWCD060Y...

DC axial fan · max. 52 m<sup>3</sup>/h · □ 60 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 66 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

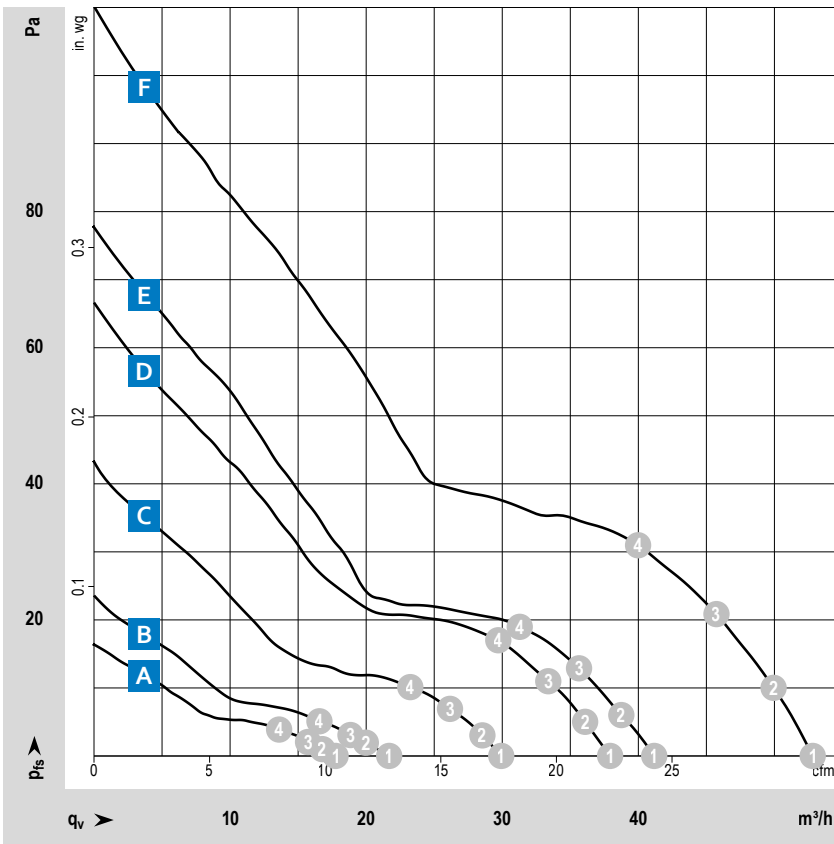
## Options

- Speed signal
- Go / NoGo alarm
- Moisture protection
- Degree of protection: up to IP68

## Special features

- Some fan types suitable for use at high ambient temperatures up to 85 °C.

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

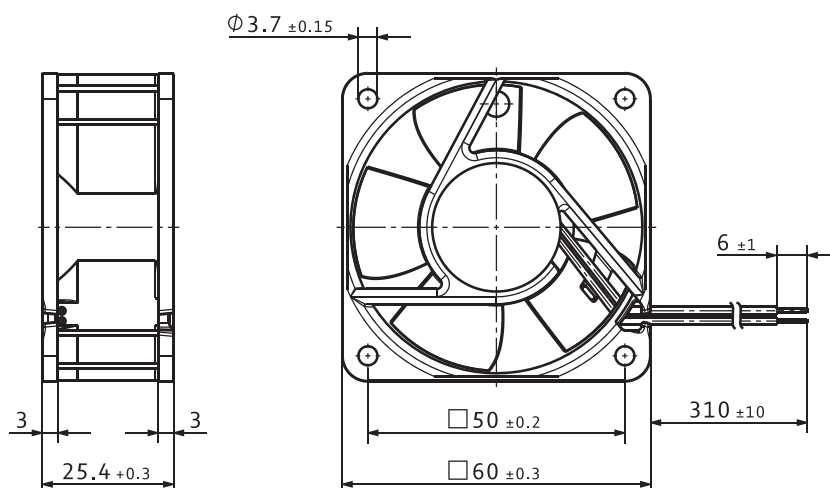
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)		°C	Hours
VWCD060YJECS 614 NGL	9272206012	24	18...28	A	①	17.1	10.1	2 500	1.0	3.6	16	-20...+70	80 000	135 000
					②	16.6	9.8	2 500	1.0	3.6				
					③	15.8	9.3	2 500	1.0	3.5				
					④	13.8	8.1	2 490	1.0	3.5				
VWCD060YJECS 614 NL	9292206097	24	18...28	A	①	17.4	10.2	2 500	0.9	3.6	16	-20...+70	80 000	135 000
					②	16.9	9.9	2 490	0.9	3.6				
					③	15.7	9.2	2 490	0.9	3.5				
					④	14.1	8.3	2 480	0.9	3.5				
VWCD060YJEDS 614 NGML	9292206010	24	18...28	B	①	20.6	12.1	3 000	1.2	4.0	19	-20...+70	80 000	135 000
					②	19.8	11.7	3 000	1.2	3.9				
					③	18.7	11.0	2 990	1.2	3.8				
					④	16.8	9.9	2 990	1.2	3.9				
VWCD060YJEDS 614 NML	9292206140	24	18...28	B	①	20.5	12.1	3 000	0.9	4.0	19	-20...+70	80 000	135 000
					②	19.9	11.7	3 000	0.9	3.9				
					③	18.8	11.1	2 990	0.9	3.8				
					④	16.6	9.8	2 980	0.9	3.9				
VWCD060YJEES 614 NGM	9272206011	24	18...28	C	①	29.9	17.6	4 100	1.6	4.7	28	-20...+70	80 000	135 000
					②	28.4	16.7	4 090	1.6	4.7				
					③	26.3	15.5	4 070	1.6	4.7				
					④	23.1	13.6	4 070	1.6	4.6				
VWCD060YJEES 614 NM	9272206032	24	18...28	C	①	30.0	17.7	4 100	1.3	4.7	28	-20...+70	80 000	135 000
					②	28.3	16.7	4 080	1.3	4.7				
					③	26.4	15.5	4 060	1.3	4.7				
					④	23.1	13.6	4 050	1.3	4.6				
VWCD060YJEFS 614 NN	9272206076	24	18...28	D	①	37.6	22.1	5 100	1.9	5.2	35	-20...+70	70 000	117 500
					②	35.7	21.0	5 080	2.0	5.2				
					③	33.1	19.5	5 050	2.0	5.1				
					④	28.7	16.9	5 050	2.0	5.1				
VWCD060YJEFS 614 NH	9272206072	24	18...26	E	①	41.4	24.4	5 600	1.9	5.5	37	-20...+70	70 000	117 500
					②	39.4	23.2	5 560	1.9	5.4				
					③	36.5	21.5	5 520	2.0	5.4				
					④	31.8	18.7	5 510	2.0	5.3				
VWCD060YJEGS 614 NHH	9272206033	24	18...26	F	①	52.0	30.6	6 850	2.8	5.9	41	-20...+70	60 000	102 500
					②	49.7	29.3	6 790	2.8	5.8				
					③	45.7	26.9	6 730	2.9	5.7				
					④	39.5	23.0	6 710	2.9	5.6				
VWCD060YKEFS 618 NN	9292206152	48	36...56	D	①	38.0	22.4	5 100	2.1	5.2	35	-20...+65	70 000	117 500
					②	36.1	21.2	5 060	2.1	5.2				
					③	33.4	19.7	5 020	2.1	5.1				
					④	29.4	17.3	5 000	2.1	5.1				

Subject to changes. More types in 12VDC on the previous page.

Technical drawing

Dimensions in mm



# VWCE060J...

DC axial fan · max. 70 m<sup>3</sup>/h · □ 60 x 32 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan with rigid characteristic curve
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 100 g

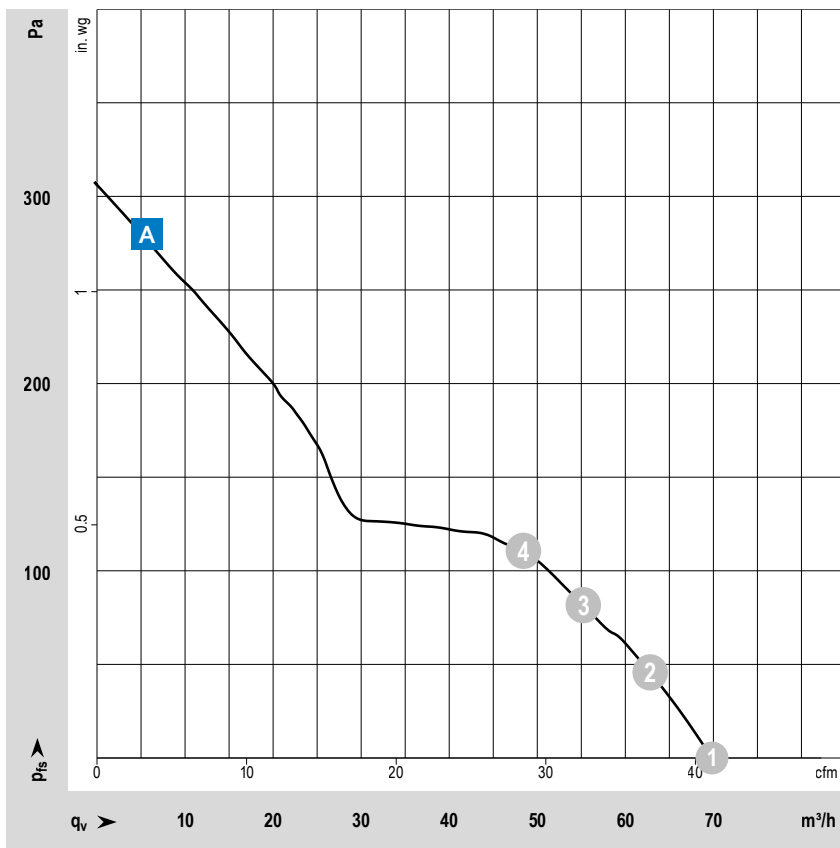
from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- PWM control input
- Analog control input
- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

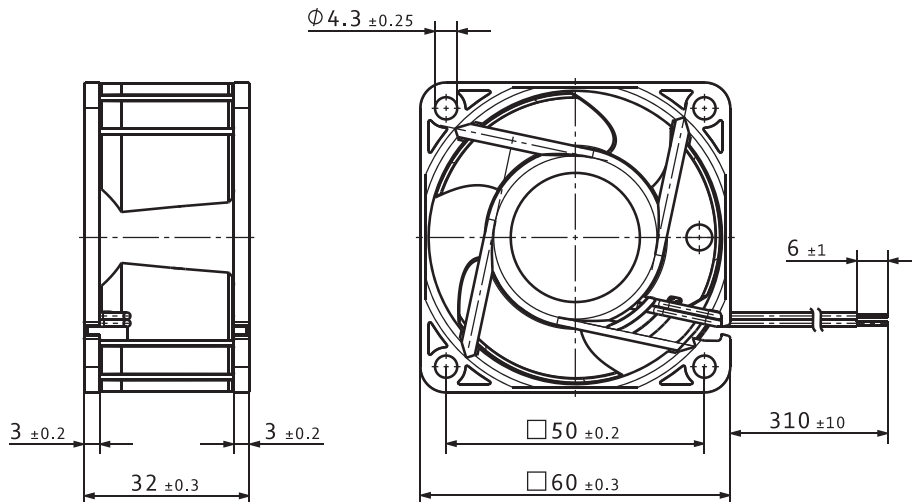
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCE060JHEHS 612 JH	9292512003	12	7...13.6	A	①	70	41	11 700	6.6	6.8	53	-20...+70	57 500	97 500
					②	63	37	11 510	6.9	6.6				
					③	55	32	11 390	7.2	6.4				
					④	48	28	11 330	7.3	6.4				
VWCE060JJEHS 614 JH	9292512004	24	14...26.4	A	①	69	41	11 700	6.8	6.8	53	-20...+70	57 500	97 500
					②	62	36	11 510	7.1	6.6				
					③	55	32	11 420	7.4	6.4				
					④	48	28	11 350	7.5	6.4				
VWCE060JKEHS 618 JH	9692510166	48	36...56	A	①	70	41	11 700	6.8	6.8	53	-20...+70	57 500	97 500
					②	63	37	11 530	7.2	6.6				
					③	55	32	11 440	7.5	6.4				
					④	49	29	11 380	7.6	6.4				

Subject to changes.

Technical drawing

Dimensions in mm



# VWCB070F...

DC axial fan · max. 43.9 m<sup>3</sup>/h · □ 70 x 15 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12 or 24 VDC; compact, small and lightweight; low-profile, noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24 up to AWG 28
- Electrical protection class: III
- Weight: 53 g

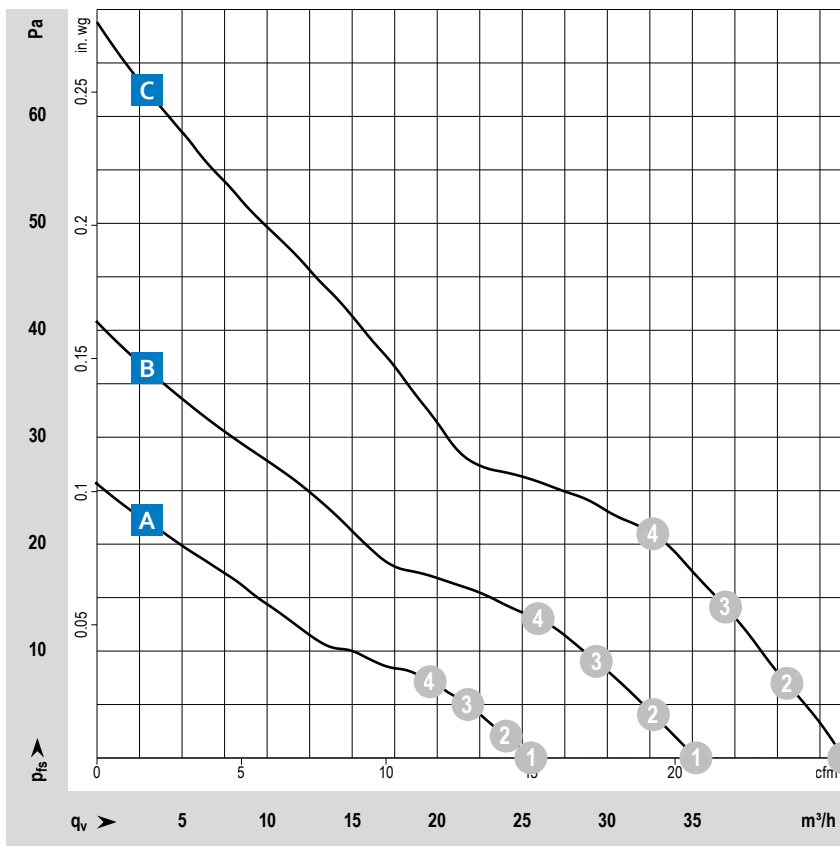
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>



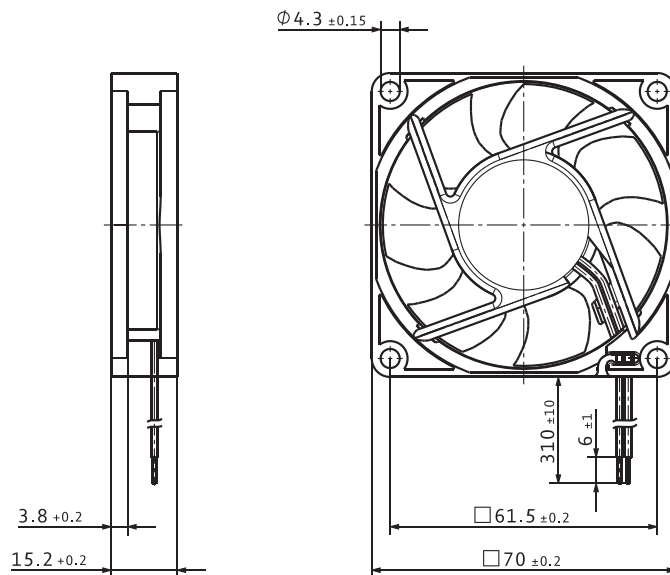
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCB070FHEDS 712 F/2L-005*	9292504005	12	8...13.8	A	①	25.5	15.0	3 300	0.7	4.5	25	-20...+70	60 000	102 500
					②	23.8	14.0	3 260	0.7	4.4				
					③	21.8	12.8	3 210	0.7	4.4				
					④	19.4	11.0	3 200	0.7	4.4				
VWCB070FHEES 712 F/2M-006*	9292504006	12	8...13.8	B	①	35.2	20.7	4 300	0.9	5.0	32	-20...+70	60 000	102 500
					②	32.5	19.1	4 230	1.0	4.9				
					③	29.3	17.2	4 150	1.0	4.9				
					④	25.9	15.0	4 090	1.0	4.8				
VWCB070FHEFS 712 F	9292504001	12	8...13.8	C	①	43.9	25.8	5 300	1.5	5.5	38	-20...+70	60 000	102 500
					②	40.6	23.9	5 230	1.6	5.4				
					③	36.8	21.7	5 160	1.6	5.3				
					④	32.7	19.0	5 100	1.6	5.3				
VWCB070FJEFS 714 F	9292504007	24	18...28	C	①	43.5	25.6	5 300	1.4	5.5	38	-20...+70	60 000	102 500
					②	40.2	23.7	5 230	1.4	5.4				
					③	36.6	21.5	5 150	1.5	5.3				
					④	32.7	19.0	5 080	1.5	5.3				

Subject to changes.

\*Version with 3-pin Molex plug housing 22-01-2035  
Molex Contacts 08-50-0113

Technical drawing

Dimensions in mm



# VWCD080A...

DC axial fan · max. 113 m<sup>3</sup>/h · □ 80 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12 or 24 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 105 g

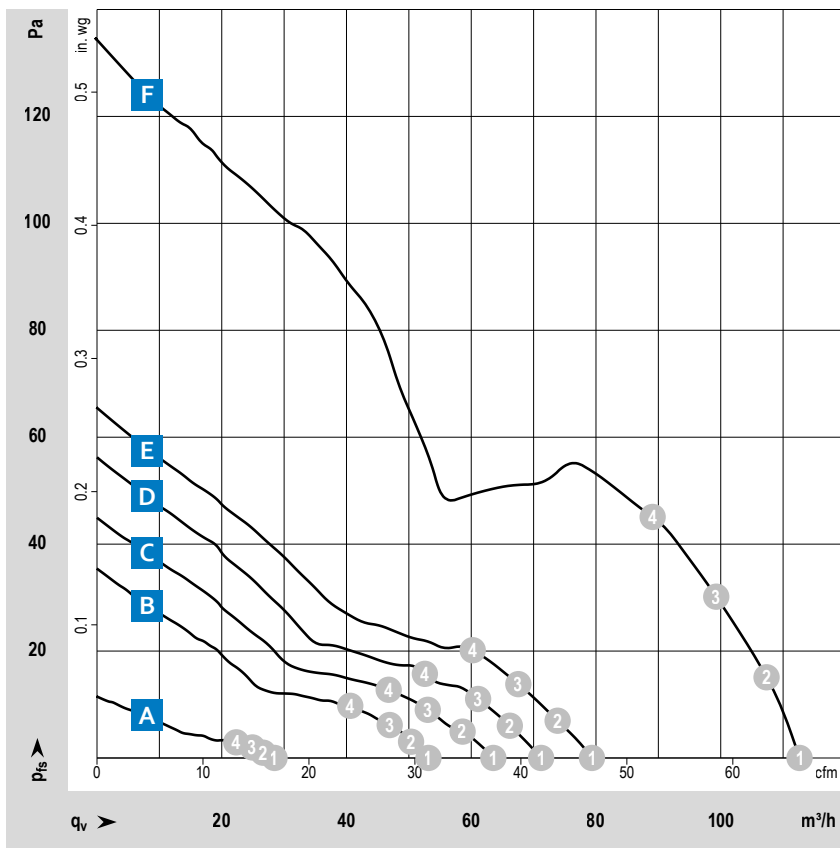
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

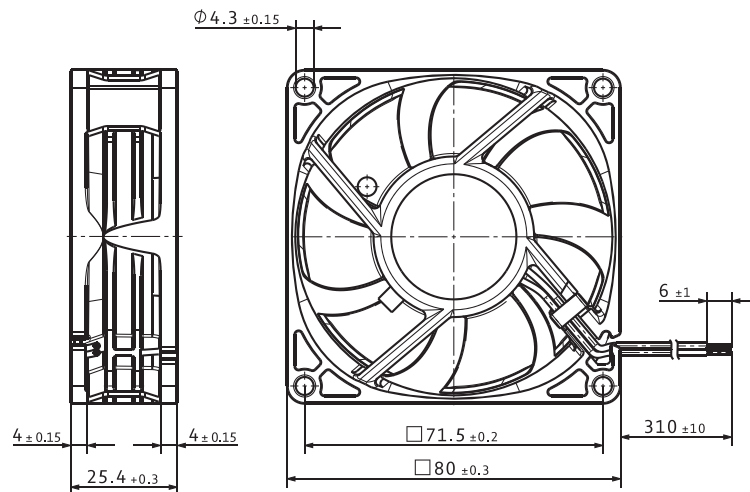
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCD080AHEES 8452/2 L	9292507011	12	8...15	A	①	28.5	16.8	1700	0.3	3.3	14	-20...+75	80 000	135 000
					②	26.8	15.8	1690	0.3	3.3				
					③	25.1	14.8	1680	0.3	3.3				
					④	22.6	13.3	1680	0.3	3.2				
VWCD080AHEGS 8452 M	9292507006	12	8...15	B	①	53.0	31.2	3100	1.0	4.9	32	-20...+75	80 000	135 000
					②	50.0	29.4	3080	1.0	4.8				
					③	46.3	27.3	3060	1.0	4.8				
					④	41.1	24.2	3060	1.0	4.8				
VWCD080AHEGS 8452/2 N	9292507013	12	8...15	C	①	64.0	37.7	3600	1.6	5.3	36	-20...+70	70 000	117 500
					②	59.0	34.7	3560	1.6	5.3				
					③	53.0	31.2	3560	1.6	5.2				
					④	47.2	27.8	3560	1.6	5.1				
Fan types with 25 kHz PWM control and speed signal to 4-wire specification														
VWCD080AHEHS 8452/2 HP	9292507010	12	10.8...13.2	D	①	71.0	41.8	4000	2.3	5.6	38	-20...+70	70 000	117 500
					②	66.0	38.8	3950	2.3	5.5				
					③	61.0	35.9	3930	2.4	5.5				
					④	53.0	31.2	3960	2.3	5.4				
VWCD080AHEHS 8452/2 HHP	9292507012	12	10.8...13.2	E	①	79.0	46.5	4400	3.3	5.9	42	-20...+60	65 000	110 000
					②	74.0	43.6	4360	3.3	5.8				
					③	68.0	40.0	4320	3.4	5.7				
					④	60.0	35.3	4300	3.4	5.6				
Fan types with 1-30 kHz PWM control and speed signal														
VWCD080AHEJS 8452/2 H4P	9692530182	12	8...15	F	①	113.0	66.5	6200	7.1	6.8	50	-20...+70	60 000	102 500
					②	107.0	63.0	6200	7.5	6.7				
					③	99.0	58.3	6130	7.5	6.7				
					④	89.0	52.4	6100	7.5	6.6				
VWCD080AJEJS 8454/2 H4P	9692530181	24	20.0...26.4	F	①	113.0	66.5	6200	7.0	6.8	50	-20...+70	60 000	102 500
					②	108.0	63.6	6200	7.3	6.7				
					③	100.0	58.9	6200	7.5	6.7				
					④	90.0	53.0	6160	7.5	6.6				

Subject to changes.

DC axial fans

Technical drawing

Dimensions in mm



# VWCD080Y...

DC axial fan · max. 75 m<sup>3</sup>/h · □ 80 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 95 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

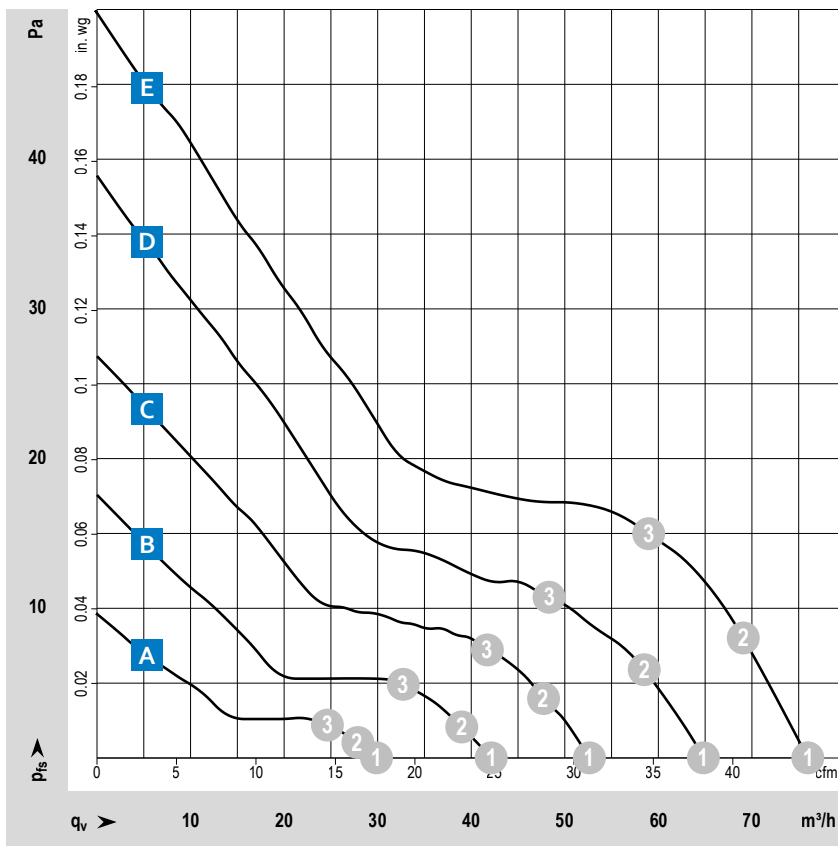
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP68

## Special features

- Some fan types suitable for use at high ambient temperatures up to 85 °C.

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

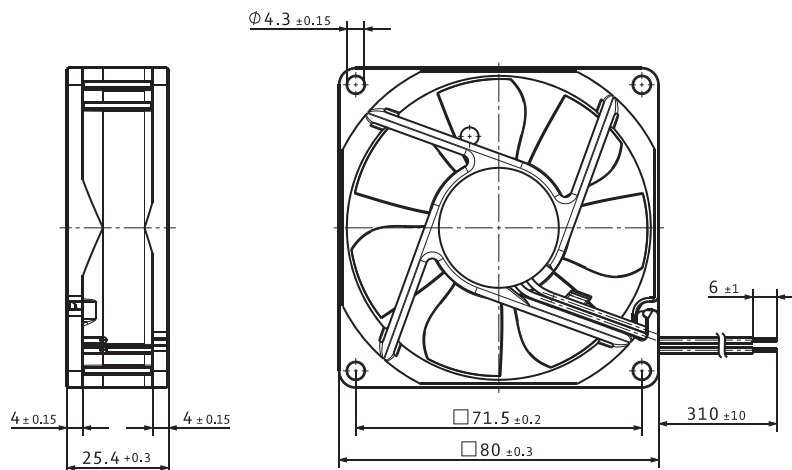
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)		Hours	Hours
VWCD080YHEES 8412 NGLÉ	9292506262	12	8...15	A	① ② ③	30.1	17.7	1 500	0.4	3.2	12	-20...+85	80 000	135 000
						27.6	16.2	1 490	0.4	3.2				
						23.7	13.9	1 480	0.4	3.2				
VWCD080YHEES 8412 NLE	9292506263	12	8...15	A	① ② ③	30.0	17.7	1 500	0.3	3.2	17	-20...+85	80 000	135 000
						27.4	16.1	1 490	0.3	3.2				
						23.6	13.9	1 480	0.3	3.2				
VWCD080YHEFS 8412 NGMLE	9292506264	12	8...15	B	① ② ③	39.5	23.2	2 050	0.8	3.6	19	-20...+80	80 000	135 000
						36.6	21.5	2 030	0.8	3.7				
						31.7	18.7	2 020	0.8	3.7				
VWCD080YHEFS 8412 NMLE	9292506265	12	8...15	B	① ② ③	42.0	24.7	2 050	0.6	3.6	21	-20...+85	80 000	135 000
						38.2	22.5	2 040	0.6	3.7				
						32.6	19.2	2 030	0.6	3.7				
VWCD080YHEGS 8412 NGME	9292506266	12	8...15	C	① ② ③	53.0	31.2	2 600	1.3	4.2	26	-20...+75	80 000	135 000
						47.9	28.2	2 590	1.3	4.2				
						41.1	24.2	2 560	1.3	4.2				
VWCD080YHEGS 8412 NME	9292506267	12	8...15	C	① ② ③	51.0	30.0	2 600	0.9	4.2	27	-20...+75	80 000	135 000
						46.9	27.6	2 580	0.9	4.2				
						39.9	23.5	2 570	0.9	4.2				
VWCD080YHEGS 8412 NG	9292506104	12	8...15	D	① ② ③	65.0	38.3	3 100	1.7	4.7	32	-20...+70	70 000	117 500
						59.0	34.7	3 080	1.8	4.7				
						48.5	28.5	3 090	1.8	4.7				
VWCD080YHEGS 8412 N	9292506125	12	8...15	D	① ② ③	64.0	37.7	3 100	1.6	4.7	32	-20...+70	70 000	117 500
						58.0	34.1	3 060	1.6	4.7				
						50.0	29.4	3 050	1.6	4.7				
VWCD080YHEHS 8412 NH	9292506115	12	8...13.2	E	① ② ③	74.0	43.6	3 600	2.0	5.1	37	-20...+70	70 000	117 500
						68.0	40.0	3 560	2.0	5.0				
						58.0	34.1	3 550	2.1	5.0				
VWCD080YHEHS 8412 NH-217	9292506217	12	8...15	E	① ② ③	75.0	44.1	3 600	2.3	5.1	37	-20...+70	70 000	117 500
						68.0	40.0	3 540	2.3	5.0				
						55.0	32.4	3 550	2.3	5.0				

Subject to changes. More types in 24 or 48 VDC on the next page.

Technical drawing

Dimensions in mm



# VWCD080Y...

DC axial fan · max. 75 m<sup>3</sup>/h · □ 80 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 95 g

## Approvals

- 12 and 24 VDC: DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- 48 VDC: DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

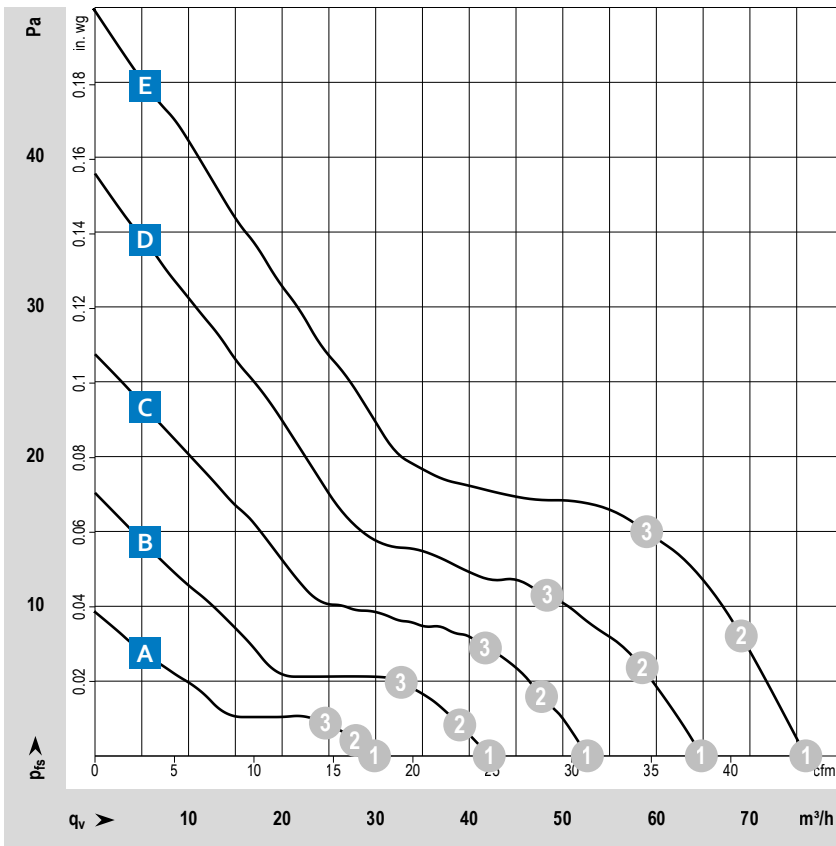
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP68

## Special features

- Some fan types suitable for use at high ambient temperatures up to 85 °C.

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

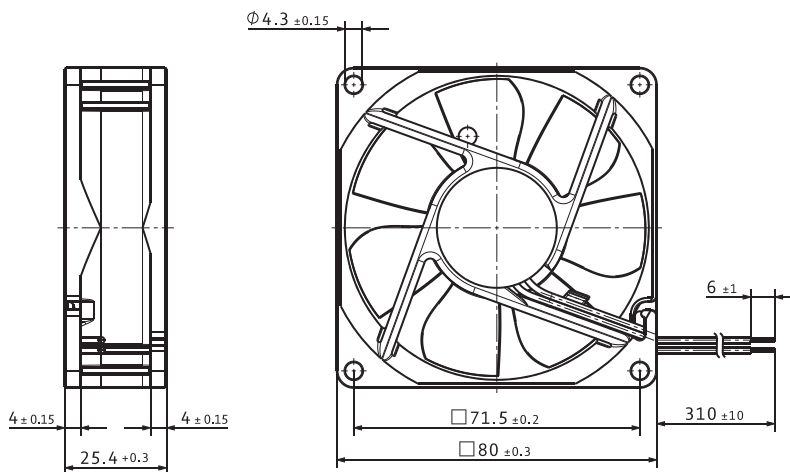
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)		°C	Hours
VWCD080YJEES 8414 NGL	9292506106	24	18...28	A	① ② ③	29.9	17.6	1 500	0.9	3.2	12	-20...+70	80 000	135 000
						27.4	16.1	1 490	0.9	3.2				
						23.5	13.8	1 490	0.9	3.2				
VWCD080YJEGS 8414 NL	9292506142	24	18...28	A	① ② ③	29.0	17.1	1 500	0.8	3.2	17	-20...+70	80 000	135 000
						27.1	16.0	1 500	0.8	3.2				
						23.9	14.1	1 490	0.9	3.2				
VWCD080YJEFS 8414 NGML	9292506108	24	18...28	B	① ② ③	41.5	24.4	2 050	1.3	3.6	19	-20...+70	80 000	135 000
						38.1	22.4	2 050	1.3	3.7				
						32.9	19.4	2 040	1.3	3.7				
VWCD080YJEFS 8414 NML	9292506144	24	18...28	B	① ② ③	42.1	24.8	2 050	1.0	3.6	21	-20...+70	80 000	135 000
						38.3	22.5	2 040	1.0	3.7				
						33.0	19.4	2 020	1.0	3.7				
VWCD080YJEGS 8414 NGM	9292506107	24	18...28	C	① ② ③	51.0	30.0	2 600	1.4	4.2	26	-20...+70	80 000	135 000
						46.8	27.5	2 590	1.4	4.2				
						39.3	23.1	2 580	1.4	4.2				
VWCD080YJEGS 8414 NM	9292506143	24	18...28	C	① ② ③	51.0	30.0	2 600	1.3	4.2	27	-20...+70	80 000	135 000
						46.4	27.3	2 580	1.3	4.2				
						39.0	23.0	2 570	1.3	4.2				
VWCD080YJEGS 8414 NG	9292506109	24	18...28	D	① ② ③	64.0	37.7	3 100	1.9	4.7	32	-20...+70	70 000	117 500
						57.0	33.5	3 080	1.9	4.7				
						47.0	27.7	3 090	1.9	4.7				
VWCD080YJEGS 8414 N	9292506126	24	18...28	D	① ② ③	65.0	38.3	3 100	1.9	4.7	32	-20...+70	70 000	117 500
						59.0	34.7	3 070	1.9	4.7				
						49.0	28.8	3 080	1.9	4.7				
VWCD080YJEHS 8414 NH	9292506124	24	18...26	E	① ② ③	75.0	44.1	3 600	2.2	5.1	37	-20...+70	70 000	117 500
						69.0	40.6	3 550	2.2	5.0				
						59.0	34.7	3 540	2.3	5.0				
VWCD080YKEGS 8418 N	9292506289	48	36...56	D	① ② ③	65.0	38.3	3 100	2.1	4.7	32	-20...+70	70 000	117 500
						59.0	34.7	3 070	2.1	4.7				
						49.0	28.8	3 080	2.1	4.7				

Subject to changes. More types in 12 VDC on the previous page

Technical drawing

Dimensions in mm



# VWCE080P...

DC axial fan · max. 130 m³/h · □ 80 x 32 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact, small and lightweight; noise and efficiency optimized axial fan of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 26
- Electrical protection class: III
- Weight: 160 g

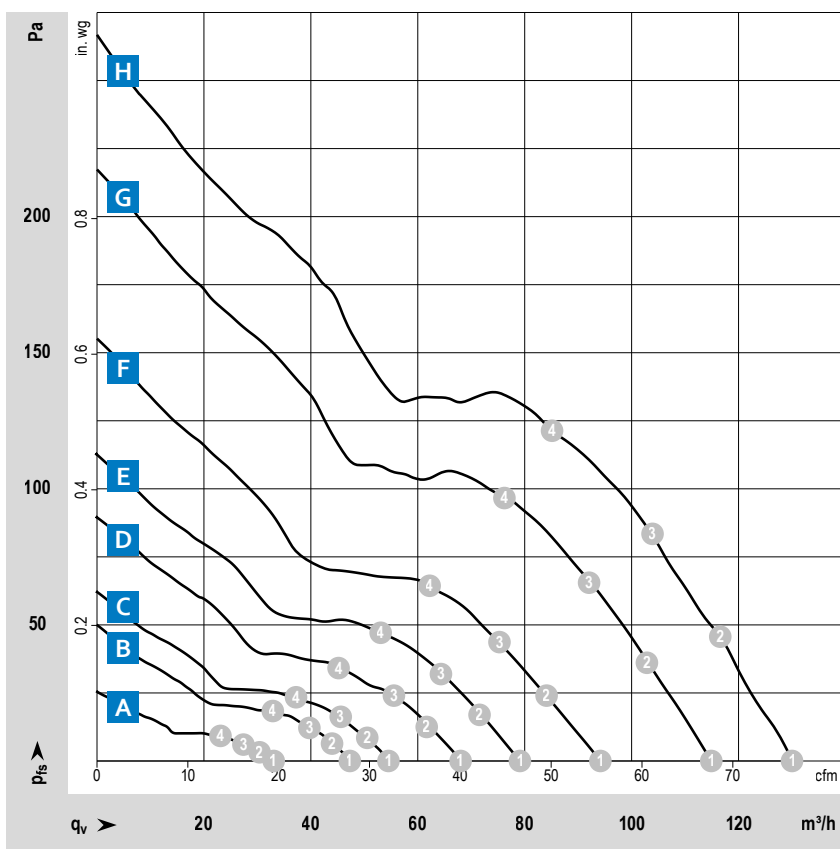
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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- optional: DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

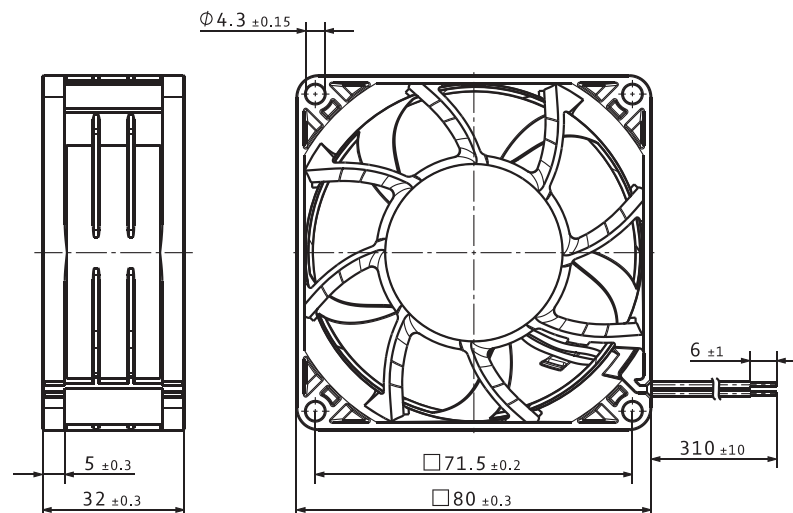


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCE080PHFES 8312 NL	9292910109	12	6...15	A	①	32.9	19.4	2 300	0.9	3.7	24	-20...+75	105 000	180 000
					②	30.4	17.9	2 290	0.9	3.6				
					③	27.8	16.4	2 280	0.9	3.6				
					④	23.2	14.0	2 270	0.9	3.6				
VWCE080PHFFS 8312 NM	9292910108	12	6...15	B	①	47.7	28.1	3 300	1.5	4.2	32	-20...+75	102 500	170 000
					②	44.1	26.0	3 280	1.5	4.2				
					③	39.9	23.5	3 260	1.5	4.2				
					④	33.0	19.0	3 280	1.5	4.2				
VWCE080PHFGS 8312 NN	9292910111	12	6...15	C	①	55.0	32.4	3 800	1.8	4.8	33	-20...+75	97 500	162 500
					②	50.0	29.4	3 750	1.8	4.7				
					③	45.8	27.0	3 730	1.8	4.6				
					④	38.0	22.0	3 720	1.9	4.6				
VWCE080PHFGS 8312 NHL	9292910113	12	6...15	D	①	68.0	40.0	4 600	2.8	5.0	39	-20...+75	92 500	155 000
					②	62.0	36.5	4 550	2.9	5.0				
					③	56.0	33.0	4 550	2.9	4.9				
					④	45.4	27.0	4 530	2.9	4.9				
VWCE080PHFHS 8312 NH	9292910115	12	6...15	E	①	79.0	46.5	5 300	3.3	5.5	42	-20...+75	82 500	140 000
					②	72.0	42.4	5 210	3.4	5.4				
					③	65.0	38.3	5 150	3.5	5.4				
					④	53.0	31.2	5 090	3.6	5.4				
VWCE080PHFJS 8312 NHH	9292910116	12	6...15	F	①	95.0	55.9	6 300	5.2	5.9	48	-20...+75	72 500	120 000
					②	85.0	50.0	6 150	5.4	5.9				
					③	77.0	45.3	6 080	5.7	5.8				
					④	63.0	37.1	6 000	5.8	5.8				
VWCE080PHFJS 8312 NH3	9292910117	12	6...13.2	G	①	114.0	67.1	7 600	7.7	6.5	53	-20...+75	57 500	100 000
					②	102.0	60.0	7 400	8.3	6.4				
					③	91.0	53.6	7 270	8.6	6.3				
					④	75.0	44.1	7 160	8.9	6.2				
VWCE080PHFKS 8312 NH4	9292910118	12	6...12.8	H	①	130.0	76.5	8 500	10.8	6.9	56	-20...+60	52 500	87 500
					②	117.0	68.9	8 330	11.5	6.7				
					③	104.0	61.2	8 150	11.9	6.6				
					④	85.0	50.0	8 040	12.4	6.6				

Subject to changes. More types in 24 or 48 VDC on the next page.

## Technical drawing

Dimensions in mm



# VWCE080P...

DC axial fan · max. 116 m<sup>3</sup>/h · □ 80 × 32 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact, small and lightweight; noise and efficiency optimized axial fan of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 26
- Electrical protection class: III
- Weight: 160 g

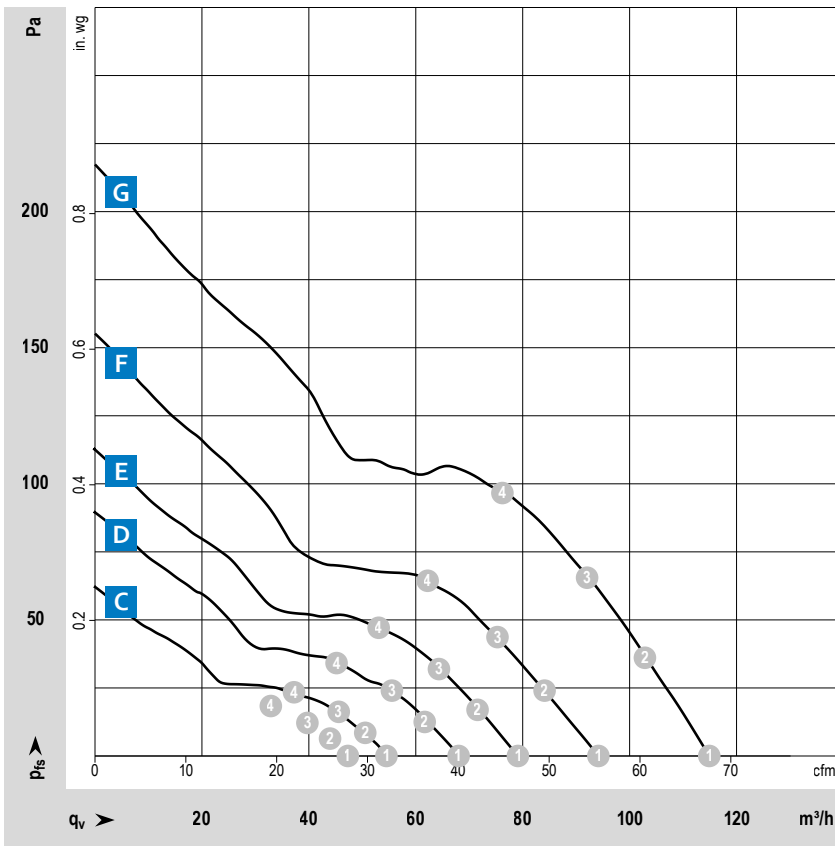
from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68



### Measuring conditions

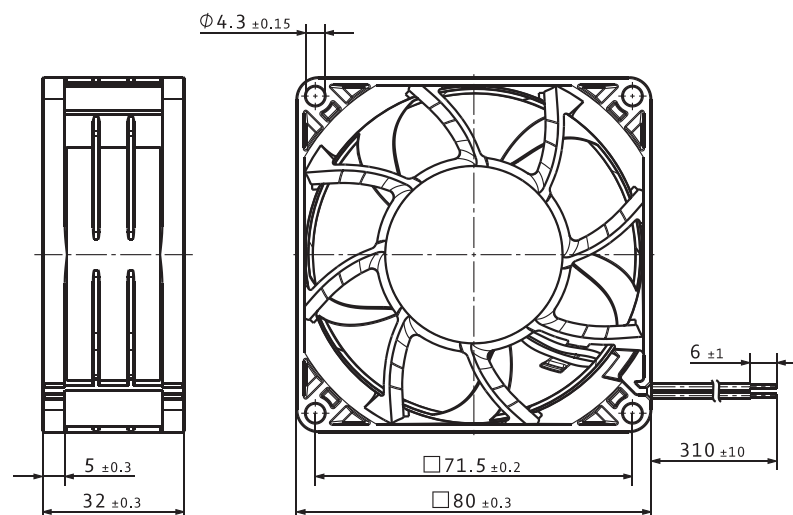
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCE080PJFGS 8314 NN	9292910123	24	12...28	C	①	54.0	31.8	3 800	1.6	4.8	33	-20...+75	97 500	162 500
					②	51.0	30.0	3 750	1.7	4.7				
					③	45.7	26.9	3 730	1.7	4.6				
					④	37.3	22.0	3 700	1.7	4.6				
VWCE080PJFGS 8314 NHL	9292910106	24	12...28	D	①	68.0	40.0	4 600	2.3	5.0	39	-20...+75	92 500	155 000
					②	62.0	36.5	4 550	2.4	5.0				
					③	56.0	33.0	4 520	2.5	4.9				
					④	45.4	26.7	4 490	2.6	4.9				
VWCE080PJFHS 8314 NH	9292910127	24	12...28	E	①	78.0	45.9	5 300	3.2	5.5	42	-20...+75	82 500	140 000
					②	71.0	41.8	5 220	3.3	5.4				
					③	64.0	37.7	5 160	3.4	5.4				
					④	53.0	31.2	5 130	3.5	5.4				
VWCE080PUFBS 8314 NHH	9292910104	24	12...28	F	①	94.0	55.3	6 300	4.8	5.9	48	-20...+75	72 500	120 000
					②	84.0	49.4	6 170	5.1	5.9				
					③	75.0	44.1	6 080	5.2	5.8				
					④	62.0	36.5	6 020	5.4	5.8				
VWCE080PJFJS 8314 NH3	9292910131	24	12...28	G	①	116.0	68.3	7 600	7.4	6.6	53	-20...+75	57 500	100 000
					②	103.0	60.6	7 400	7.9	6.4				
					③	92.0	54.1	7 280	8.2	6.3				
					④	76.0	44.7	7 190	8.4	6.2				
VWCE080PJFJS 8314 N/2H3P	9292910145	24	18...28	G	①	115.0	67.7	7 600	7.6	6.5	53	-20...+75	75 000	127 500
					②	103.0	60.6	7 410	8.1	6.4				
					③	93.0	54.7	7 320	8.3	6.3				
					④	77.0	45.3	7 230	8.6	6.2				
VWCE080PKFGS 8318 NN	9292910134	48	36...60	C	①	53.0	31.2	3 700	1.5	4.6	33	-20...+75	97 500	162 500
					②	49.5	29.1	3 670	1.6	4.5				
					③	44.9	26.4	3 660	1.6	4.4				
					④	36.6	21.5	3 630	1.7	4.4				
VWCE080PKFGS 8318 NHL	9292910143	48	36...60	D	①	68.0	40.0	4 600	2.5	5.0	39	-20...+75	92 500	155 000
					②	62.0	36.5	4 550	2.6	5.0				
					③	56.0	33.0	4 510	2.7	4.9				
					④	45.5	26.8	4 510	2.7	4.9				
VWCE080PKFHS 8318 NH	9292910137	48	36...60	E	①	79.0	46.5	5 300	3.2	5.5	42	-20...+75	82 500	140 000
					②	72.0	42.4	5 230	3.3	5.4				
					③	64.0	37.7	5 160	3.4	5.4				
					④	52.0	30.6	5 120	3.5	5.4				
VWCE080PKFJS 8318 NHH	9292910144	48	36...60	F	①	94.0	55.3	6 300	4.6	5.9	48	-20...+75	72 500	120 000
					②	85.0	50.0	6 170	4.9	5.9				
					③	77.0	45.3	6 080	5.1	5.8				
					④	63.0	37.1	6 020	5.2	5.8				

Subject to changes. More types in 12VDC on the previous page.

## Technical drawing

Dimensions in mm



# VWCF080J...

DC axial fan · max. 220 m<sup>3</sup>/h · □ 80 × 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan with rigid characteristic curve
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24 (H3 and H4: AWG 22)
- Electrical protection class: III
- Weight: 160 g (H3 and H4: 200 g)

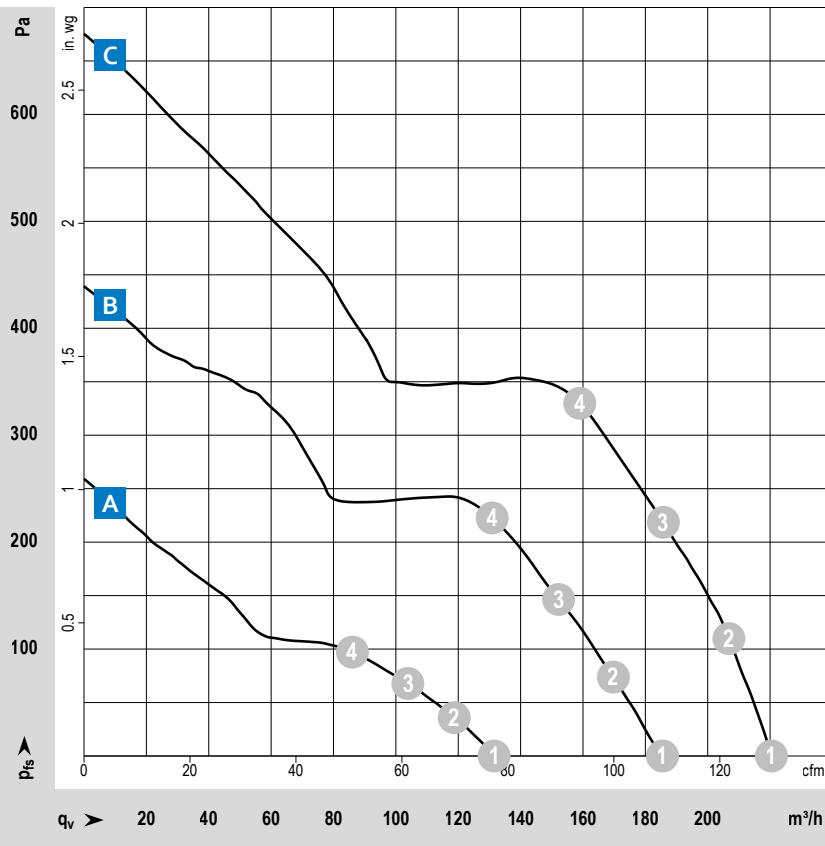
## Approvals

- 12 and 24 VDC: DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- 48 VDC: DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP68

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

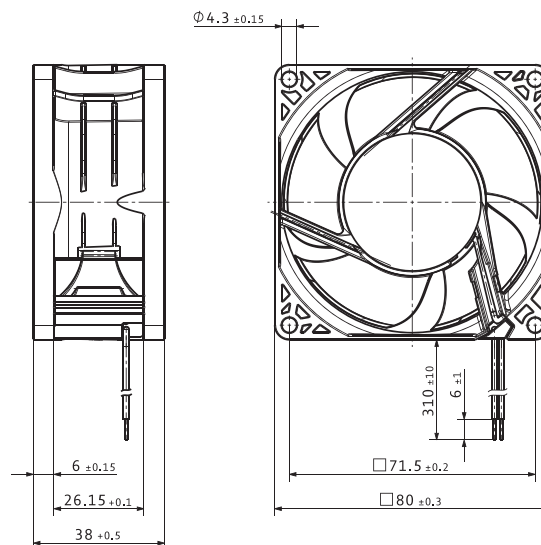
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> IFC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm						
VWCF080JHFKS 8212 JN	9292910002	12	7...13.8	A	①	132	78	8 400	9.3	6.9	55	-20...+70	62 500	105 000
					②	119	70	8 220	9.9	6.8				
					③	104	61	8 080	10.5	6.6				
					④	86	51	8 000	10.8	6.5				
VWCF080JHFLS 8212 JH3 S-Force	9692910193	12	6...13.8	B	①	186	109	12 000	23.8	8.0	66	-20...+70	55 000	92 500
					②	169	99	11 700	25.1	7.8				
					③	151	89	11 480	26.4	7.6				
					④	129	76	11 280	27.2	7.5				
VWCF080JHFMS 8212 JH4 S-Force	9692910196	12	6...13.8	C	①	218	128	14 000	36.5	8.4	71	-20...+70	50 000	85 000
					②	201	118	13 860	39.9	8.4				
					③	179	105	13 570	41.3	8.2				
					④	154	91	13 350	42.7	8.0				
VWCF080JJKFS 8214 JN	9292910003	24	18...26.4	A	①	132	78	8 400	10.0	6.9	55	-20...+70	62 500	105 000
					②	118	69	8 200	10.4	6.8				
					③	102	60	8 060	10.9	6.6				
					④	86	51	7 960	11.2	6.5				
VWCF080JJFLS 8214 JH3 S-Force	9692910194	24	12...27.6	B	①	185	109	12 000	23.1	8.0	66	-20...+70	55 000	92 500
					②	170	100	11 740	24.6	7.8				
					③	152	89	11 550	25.8	7.6				
					④	131	77	11 400	26.6	7.5				
VWCF080JJFMS 8214 JH4 S-Force	9692910197	24	12...27.6	C	①	220	129	14 000	34.8	8.4	71	-20...+70	50 000	85 000
					②	207	122	14 000	39.3	8.4				
					③	186	109	13 830	41.4	8.2				
					④	159	94	13 580	42.5	8.0				
VWCF080JKFKS 8218 JN	9292910006	48	36...53	A	①	130	77	8 400	10.1	6.9	55	-20...+70	62 500	105 000
					②	118	69	8 200	10.6	6.8				
					③	103	61	8 040	10.9	6.6				
					④	85	50	7 930	11.2	6.5				
VWCF080JKFLS 8218 JH3 S-Force	9692910232	48	36...53	B	①	187	110	12 000	23.3	8.0	66	-20...+70	55 000	92 500
					②	171	101	11 820	24.7	7.8				
					③	154	91	11 610	26.0	7.6				
					④	132	78	11 460	27.0	7.5				
VWCF080JKFMS 8218 JH4 S-Force	9692910198	48	20...58	C	①	219	129	14 000	33.5	8.4	71	-20...+70	55 000	85 000
					②	204	120	14 000	38.1	8.4				
					③	186	109	14 000	41.8	8.2				
					④	161	95	13 880	43.4	8.0				

Subject to changes.

DC axial fans

Technical drawing

Dimensions in mm



# VWCF080K...

DC axial fan · max. 217 m<sup>3</sup>/h · □ 80x38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan of the AxiForce series
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Exposed wires 310mm
- Electrical protection class: III
- Weight: 200 g

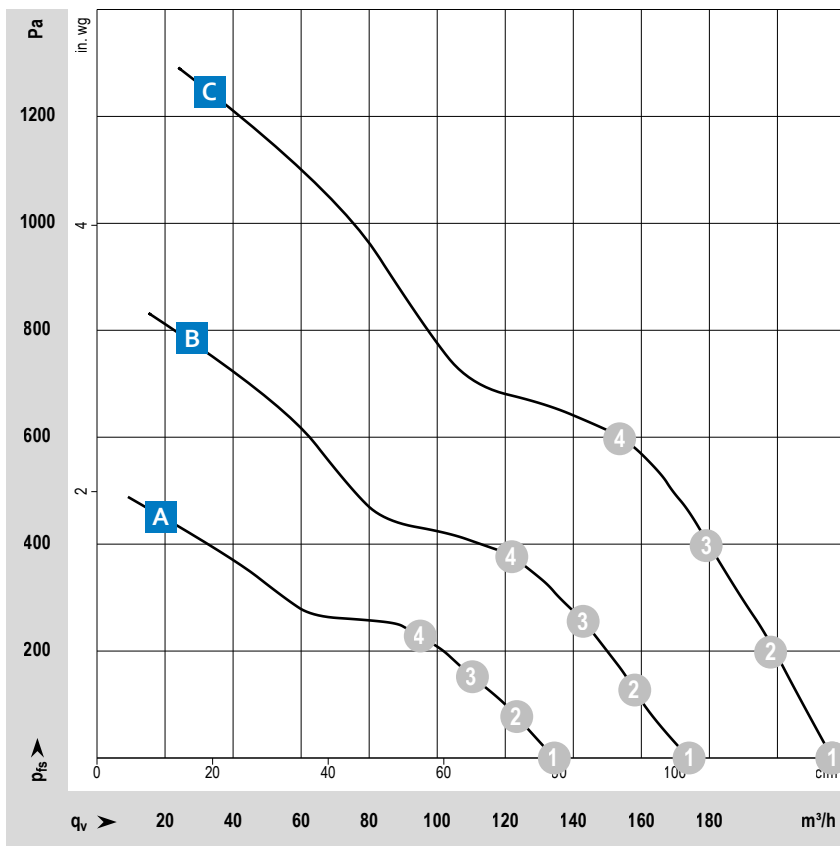
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T3

## Options

- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68
- EMV class B

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

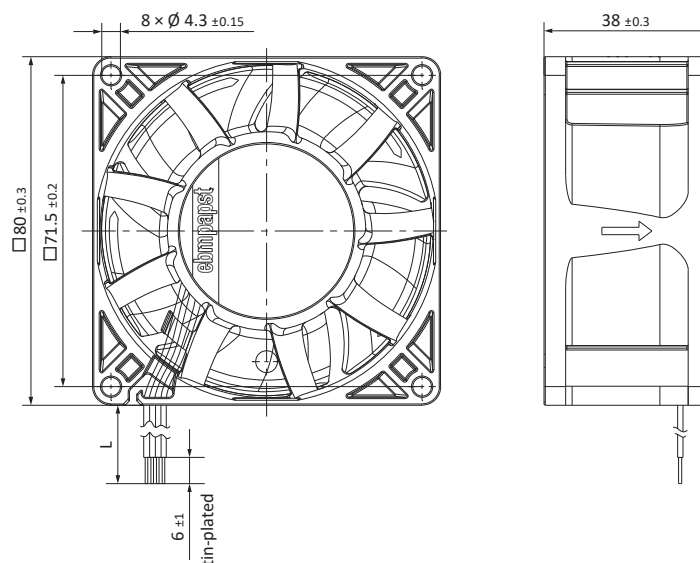
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCF080KHFKS AxiForce 80	8315100320	12	8...16	A	①	135	79	10 000	11.6	7.4	62	-20...+75	tbd	tbd
					②	124	73	10 000	13.3	7.3				
					③	112	66	10 000	15.0	7.1				
					④	96	57	10 000	16.4	7.1				
VWCF080KHFLS AxiForce 80	8315100136	12	8...16	B	①	173	102	13 200	26.0	8.1	71	-20...+75	62 500	105 000
					②	159	94	13 200	27.8	7.9				
					③	143	84	13 200	31.3	7.9				
					④	122	72	13 200	33.3	7.9				
VWCF080KHFMS AxiForce 80	8315100130	12	8...16	C	①	217	128	16 500	48.0	8.5	76	-20...+75	50 000	85 000
					②	198	117	16 500	55.0	8.5				
					③	180	106	16 500	62.0	8.6				
					④	154	91	16 500	66.6	8.7				
VWCF080KJFKS AxiForce 80	8315100321	24	16...32	A	①	134	79	10 000	11.5	7.4	62	-20...+75	tbd	tbd
					②	123	72	10 000	13.0	7.3				
					③	111	65	10 000	14.6	7.1				
					④	95	56	10 000	15.6	7.1				
VWCF080KJFLS AxiForce 80	8315100137	24	16...32	B	①	173	102	13 200	25.3	8.1	71	-20...+75	62 500	105 000
					②	159	94	13 200	27.4	7.9				
					③	143	84	13 200	30.7	7.9				
					④	122	72	13 200	33.3	7.9				
VWCF080KJFMS AxiForce 80	8315100134	24	16...32	C	①	216	127	16 500	46.5	8.7	76	-20...+75	50 000	85 000
					②	199	117	16 500	53.0	8.6				
					③	180	106	16 500	59.3	8.5				
					④	154	91	16 500	63.9	8.5				
VWCF080KKFKS AxiForce 80	8315100322	48	36...60	A	①	134	79	10 000	12.1	7.4	62	-20...+75	tbd	tbd
					②	123	72	10 000	13.5	7.3				
					③	110	65	10 000	14.9	7.1				
					④	95	56	10 000	16.0	7.1				
VWCF080KKFLS AxiForce 80	8315100138	48	36...60	B	①	174	102	13 200	25.2	8.1	71	-20...+75	62 500	105 000
					②	158	93	13 200	28.7	7.9				
					③	143	84	13 200	32.0	7.9				
					④	122	72	13 200	33.6	7.9				
VWCF080KKFMS AxiForce 80	8315100135	48	36...60	C	①	216	127	16 500	46.6	8.7	76	-20...+75	50 000	85 000
					②	198	117	16 500	53.4	8.6				
					③	179	105	16 500	60.1	8.5				
					④	154	91	16 500	64.5	8.5				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCD092Y...

DC axial fan · max. 99 m<sup>3</sup>/h · □ 92 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 100 g

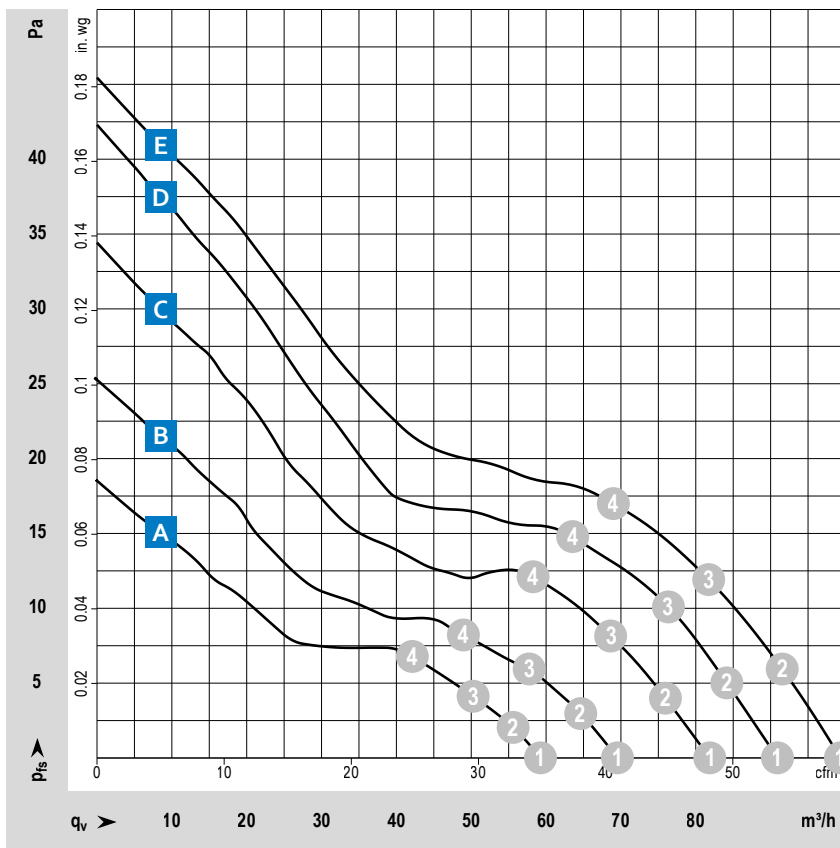
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP68

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

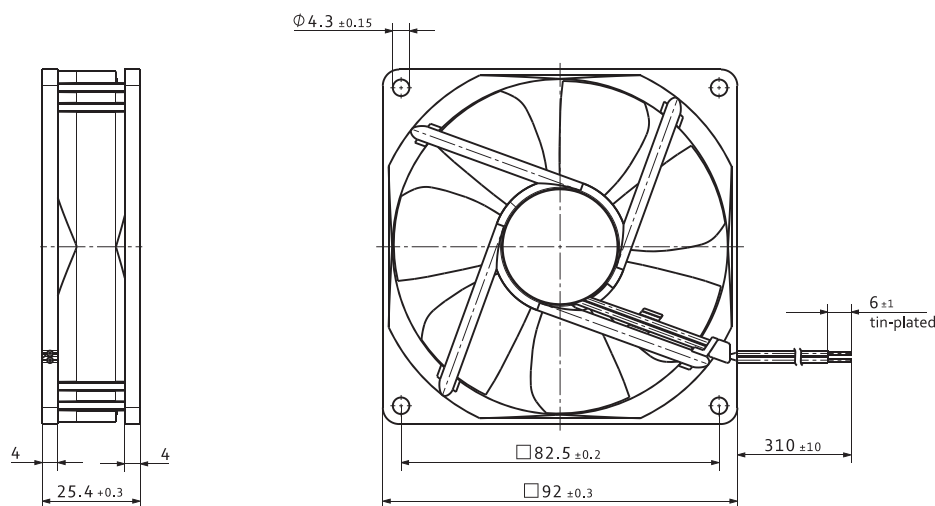


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCD092YHEGS 3412 NGLE	9292506407	12	8...15	A	①	58.0	34.1	1950	0.9	4.1	23	-20...+80	80 000	135 000
					②	54.0	31.8	1920	0.9	4.0				
					③	48.4	28.5	1890	1.0	3.9				
					④	41.3	24.3	1860	1.0	3.8				
VWCD092YHEGS 3412 NLE	9292506409	12	8...15	A	①	59.0	34.7	1950	0.7	4.1	23	-20...+85	80 000	135 000
					②	55.0	32.4	1920	0.7	4.0				
					③	49.5	29.1	1890	0.7	3.9				
					④	42.8	25.2	1870	0.7	3.8				
VWCD092YHEHS 3412 NGME	9292506406	12	8...15	B	①	68.0	40.0	2300	1.4	4.5	28	-20...+75	75 000	127 500
					②	64.0	37.7	2260	1.5	4.4				
					③	57.0	33.5	2220	1.5	4.3				
					④	48.2	28.4	2180	1.5	4.2				
VWCD092YHEHS 3412 NME	9292506410	12	8...15	B	①	68.0	40.0	2300	1.0	4.5	28	-20...+75	75 000	127 500
					②	63.0	37.1	2270	1.0	4.4				
					③	57.0	33.5	2240	1.1	4.3				
					④	47.7	28.1	2220	1.1	4.2				
VWCD092YHEHS 3412 NG	9292506302	12	8...15	C	①	81.0	47.7	2700	1.7	4.9	33	-20...+70	70 000	117 500
					②	75.0	44.1	2670	1.8	4.7				
					③	68.0	40.0	2640	1.8	4.7				
					④	57.0	33.5	2650	1.8	4.6				
VWCD092YHEHS 3412 N	9292506324	12	8...15	C	①	81.0	47.7	2700	1.5	4.9	33	-20...+70	70 000	117 500
					②	75.0	44.1	2660	1.5	4.7				
					③	68.0	40.0	2630	1.6	4.7				
					④	57.0	33.5	2620	1.6	4.6				
VWCD092YHEJS 3412 NGH	9292506303	12	8...15	D	①	91.0	53.6	3000	2.3	5.1	36	-20...+70	70 000	117 500
					②	84.0	49.4	2940	2.3	5.0				
					③	76.0	44.7	2910	2.4	4.8				
					④	64.0	37.7	2880	2.4	4.8				
VWCD092YHEJS 3412 NH	9292506323	12	8...15	D	①	91.0	53.6	3000	2.0	5.1	36	-20...+70	70 000	117 500
					②	84.0	49.4	2940	2.1	5.0				
					③	76.0	44.7	2900	2.1	4.8				
					④	64.0	37.7	2880	2.1	4.8				
VWCD092YHEJS 3412 NGH H	9292506304	12	8...13.2	E	①	98.0	57.7	3250	2.9	5.3	39	-20...+60	70 000	117 500
					②	91.0	53.6	3190	3.0	5.2				
					③	81.0	47.7	3140	3.1	5.1				
					④	69.0	40.6	3110	3.1	5.0				
VWCD092YHEJS 3412 NHH	9292506316	12	8...13.2	E	①	99.0	58.3	3250	2.4	5.3	39	-20...+60	70 000	117 500
					②	91.0	53.6	3210	2.5	5.2				
					③	82.0	48.3	3160	2.5	5.1				
					④	69.0	40.6	3110	2.6	5.0				

Subject to changes. More types in 24 or 48VDC on the next page.

Technical drawing

Dimensions in mm



# VWCD092Y...

DC axial fan · max. 100 m<sup>3</sup>/h · □ 92 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 100 g

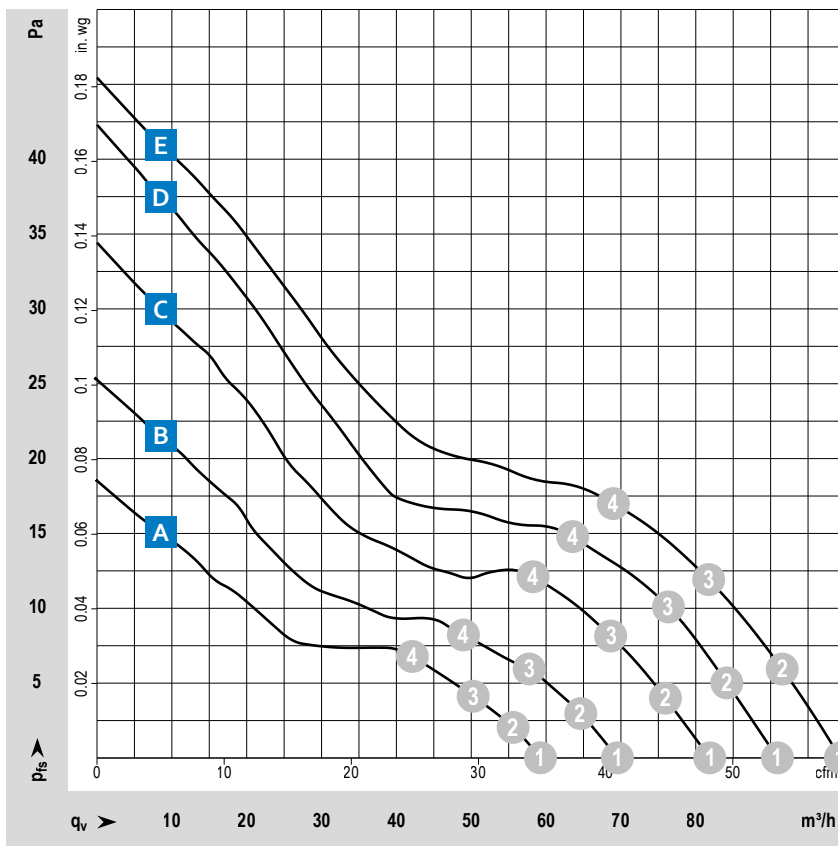
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP68

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

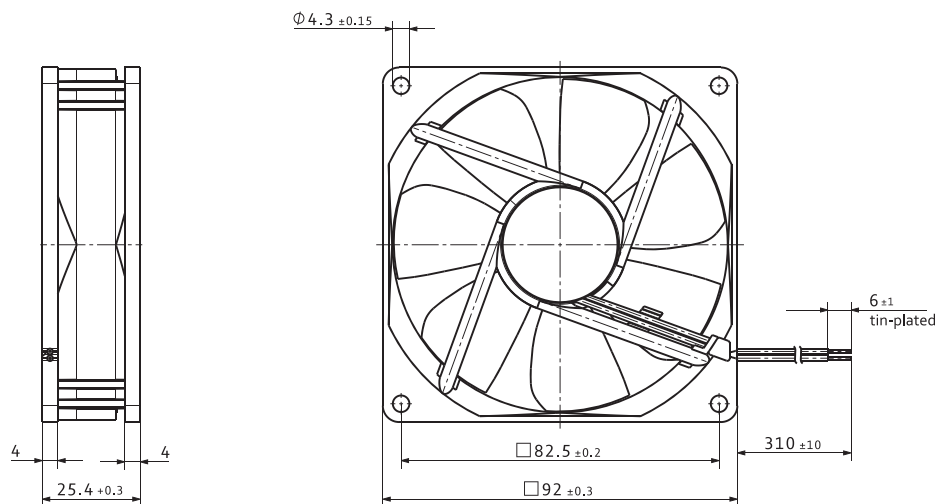
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCD092YHEGS 3414 NGL	9292506305	24	18...28	A	①	55.0	32.4	1950	1.2	4.1	23	-20...+70	80 000	135 000
					②	52.0	30.6	1920	1.2	4.0				
					③	47.3	27.8	1900	1.2	3.9				
					④	40.2	23.7	1890	1.2	3.8				
VWCD092YHEGS 3414 NL	9292506322	24	18...28	A	①	56.0	33.0	1950	1.1	4.1	23	-20...+70	80 000	135 000
					②	52.0	30.6	1930	1.1	4.0				
					③	47.4	27.9	1910	1.1	3.9				
					④	41.1	24.2	1890	1.1	3.8				
VWCD092YHEHS 3414 NGM	9292506306	24	18...28	B	①	69.0	40.6	2300	1.6	4.5	28	-20...+70	75 000	127 500
					②	65.0	38.3	2280	1.6	4.4				
					③	58.0	34.1	2250	1.6	4.3				
					④	48.7	28.7	2260	1.6	4.2				
VWCD092YHEHS 3414 NM	9292506327	24	18...28	B	①	70.0	41.2	2300	1.4	4.5	28	-20...+70	75 000	127 500
					②	65.0	38.3	2280	1.4	4.4				
					③	58.0	34.1	2250	1.4	4.3				
					④	48.3	28.4	2240	1.4	4.2				
VWCD092YHEHS 3414 NG	9292506307	24	18...28	C	①	82.0	48.3	2700	2.0	4.9	33	-20...+70	70 000	117 500
					②	76.0	44.7	2660	2.0	4.7				
					③	68.0	40.0	2620	2.0	4.7				
					④	58.0	34.1	2600	2.1	4.6				
VWCD092YHEHS 3414 N	9292506321	24	18...28	C	①	82.0	48.3	2700	1.8	4.9	33	-20...+70	70 000	117 500
					②	76.0	44.7	2650	1.8	4.7				
					③	68.0	40.0	2620	1.9	4.7				
					④	57.0	33.5	2600	1.9	4.6				
VWCD092YHEJS 3414 NGH	9292506308	24	18...26	D	①	92.0	54.1	3000	2.6	5.1	36	-20...+70	70 000	117 500
					②	85.0	50.0	2960	2.6	5.0				
					③	76.0	44.7	2900	2.7	4.8				
					④	65.0	38.3	2880	2.7	4.8				
VWCD092YHEJS 3414 NH	9292506319	24	18...26	D	①	92.0	54.1	3000	2.2	5.1	36	-20...+70	70 000	117 500
					②	85.0	50.0	2950	2.3	5.0				
					③	76.0	44.7	2900	2.3	4.8				
					④	64.0	37.7	2870	2.3	4.8				
VWCD092YJEJS 3414 NHH	9292506320	24	18...26	E	①	100.0	58.9	3250	2.5	5.3	39	-20...+70	70 000	117 500
					②	92.0	54.1	3200	2.5	5.2				
					③	82.0	48.3	3140	2.6	5.1				
					④	70.0	41.2	3110	2.6	5.0				
VWCD092YKEHS 3418 N	9292506422	48	36...56	C	①	82.0	48.3	2700	2.3	4.8	33	-20...+70	70 000	117 500
					②	76.0	44.7	2660	2.3	4.7				
					③	68.0	40.0	2620	2.3	4.7				
					④	57.0	33.5	2620	2.3	4.6				

Subject to changes. More types in 12VDC on the previous page. More 48VDC versions on request.

Technical drawing

Dimensions in mm



# VWCE092P...

DC axial fan · max. 132 m<sup>3</sup>/h · □ 92 x 32 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 190 g

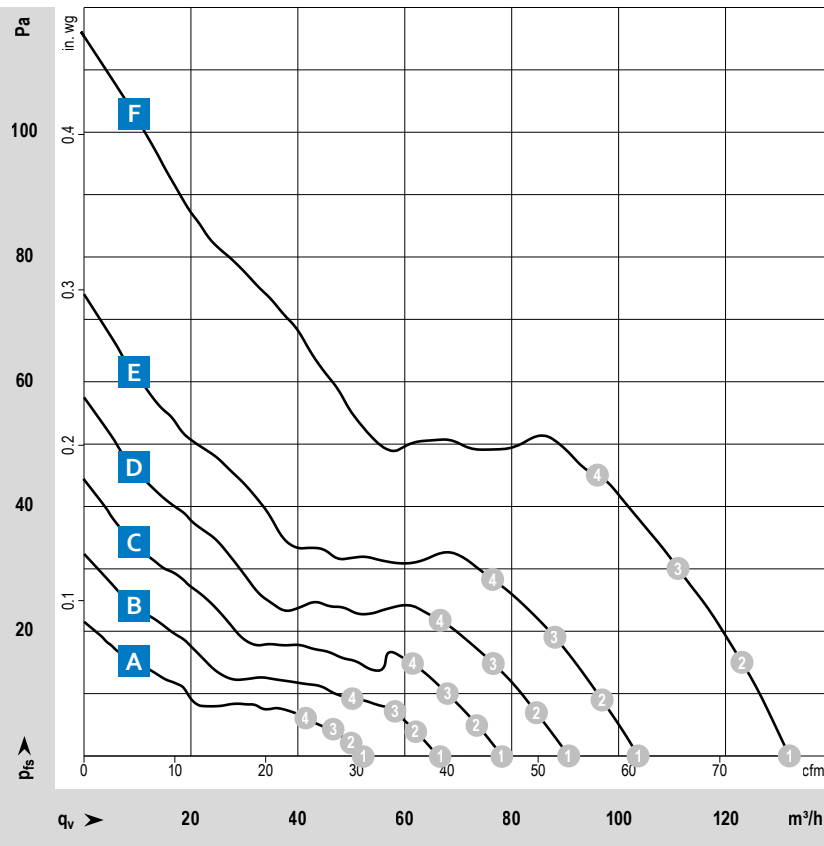
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- optional: DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- Go / NoGo alarm
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

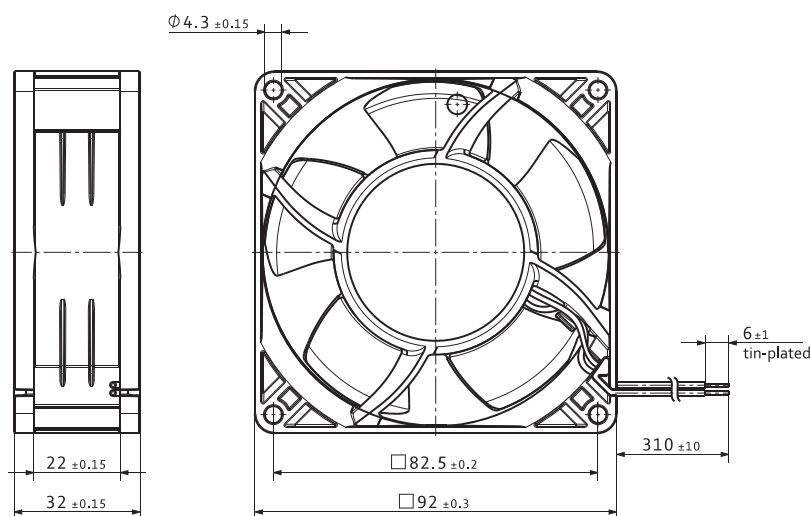
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCE092PHGGS 3312 NL	9293510119	12	6...15	A	①	52.0	30.6	1850	0.7	4.0	24	-20...+75	95 000	160 000
					②	49.5	29.1	1840	0.8	4.0				
					③	45.7	26.9	1840	0.8	4.0				
					④	41.0	24.1	1840	0.8	4.0				
VWCE092PHGGS 3312 NM	9293510118	12	6...15	B	①	66.0	38.8	2250	1.2	4.5	29	-20...+75	85 000	142 500
					②	62.0	36.5	2240	1.3	4.4				
					③	58.0	34.1	2230	1.3	4.4				
					④	49.8	29.3	2250	1.3	4.3				
VWCE092PHGHS 3312 NN	9293510100	12	6...15	C	①	78.0	45.9	2650	1.7	4.8	35	-20...+75	77 500	130 000
					②	74.0	43.6	2640	1.7	4.6				
					③	68.0	40.0	2630	1.7	4.6				
					④	62.0	36.5	2630	1.8	4.5				
VWCE092PHGJS 3312 NH	9293510114	12	6...15	D	①	91.0	53.6	3050	2.3	5.3	38	-20...+75	72 500	122 500
					②	85.0	50.0	3030	2.4	5.2				
					③	77.0	45.3	3000	2.4	5.2				
					④	67.0	39.4	3000	2.4	5.1				
VWCE092PHGJS 3312 NHH	9293510104	12	6...15	E	①	104.0	61.2	3450	3.1	5.7	42	-20...+75	67 500	115 000
					②	97.0	57.1	3420	3.2	5.6				
					③	88.0	51.8	3400	3.3	5.5				
					④	76.0	44.7	3400	3.3	5.4				
VWCE092PHGKS 3312 NH3	9293510101	12	6...14	F	①	131.0	77.1	4350	5.9	6.3	50	-20...+70	60 000	102 500
					②	122.0	71.8	4330	6.0	6.3				
					③	110.0	64.7	4290	6.1	6.2				
					④	96.0	56.5	4290	6.2	6.1				
VWCE092PHGKS 3312 N/2 H3P	9293510141	12	7...13.2	F	①	132.0	77.7	4350	5.4	6.4	50	-20...+75	67 500	115 000
					②	122.0	71.8	4310	5.5	6.3				
					③	110.0	64.7	4290	5.6	6.2				
					④	96.0	56.5	4290	5.6	6.1				
VWCE092PJGGS 3314 NL	9293510121	24	12...28	A	①	53.0	31.2	1850	0.7	4.0	24	-20...+75	95 000	160 000
					②	49.1	28.9	1850	0.7	4.0				
					③	46.3	27.3	1840	0.7	4.0				
					④	41.9	24.7	1840	0.7	4.0				
VWCE092PJGGS 3314 NM	9293510122	24	12...28	B	①	66.0	38.8	2250	1.1	4.4	29	-20...+75	85 000	142 500
					②	62.0	36.5	2240	1.1	4.3				
					③	56.0	33.0	2250	1.1	4.3				
					④	49.3	29.0	2240	1.1	4.2				
VWCE092PJGHS 3314 NN	9293510105	24	12...28	C	①	78.0	45.9	2650	1.7	4.8	35	-20...+75	77 500	130 000
					②	73.0	43.0	2640	1.7	4.6				
					③	68.0	40.0	2620	1.7	4.6				
					④	62.0	36.5	2620	1.7	4.5				

Subject to changes. More types in 24 or 48VDC on the next page.

## Technical drawing

Dimensions in mm



# VWCE092P...

DC axial fan · max. 137 m<sup>3</sup>/h · □ 92 x 32 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 190 g

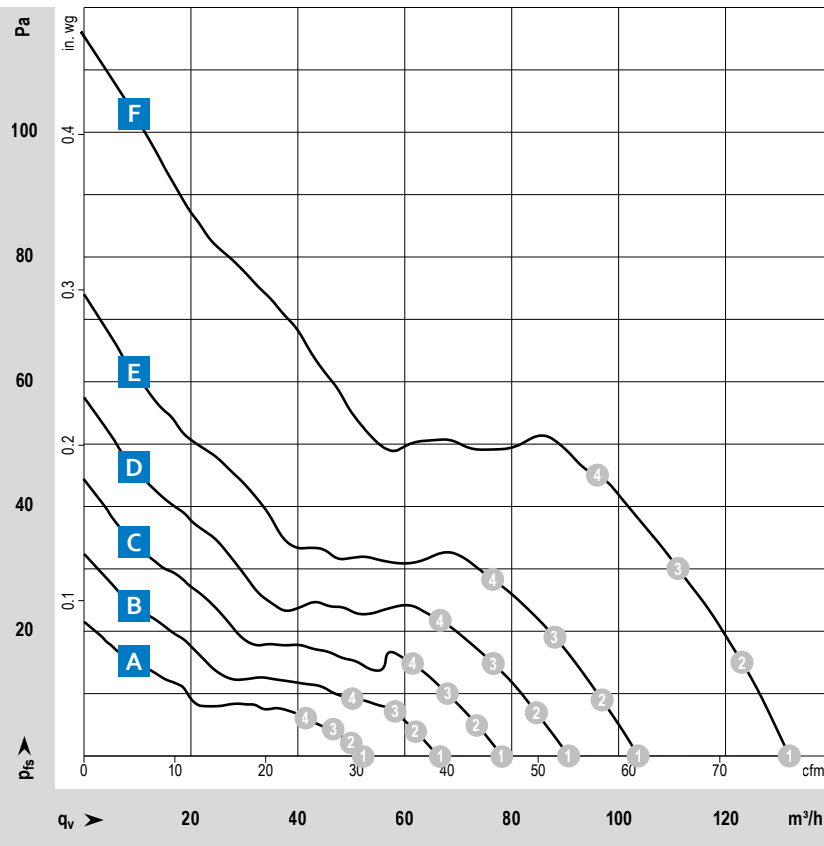
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- Go / NoGo alarm
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

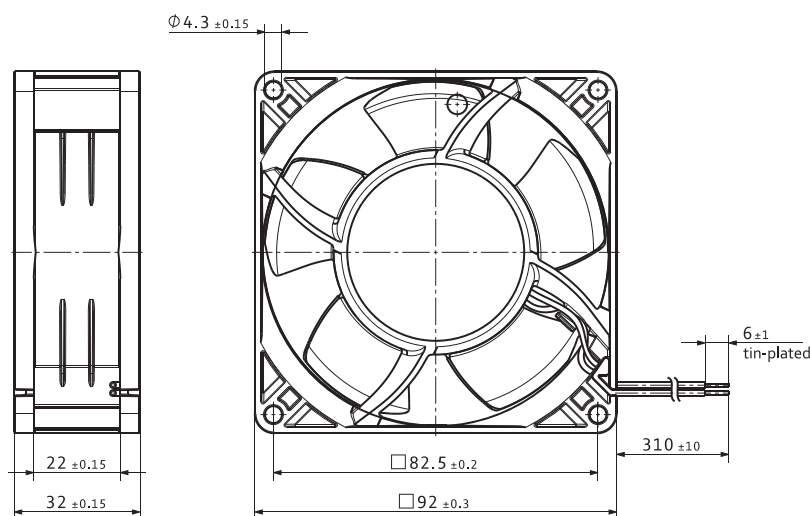
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCE092PJGJS 3314 NH	9293510110	24	12...28	D	①	91	54	3 050	2.4	5.3	38	-20...+75	72 500	122 500
					②	85	50	3 030	2.5	5.2				
					③	77	45	3 010	2.5	5.2				
					④	67	39	3 020	2.5	5.1				
VWCE092PJGJS 3314 NHH	9293510111	24	12...28	E	①	103	61	3 450	2.9	5.7	42	-20...+75	67 500	115 000
					②	96	57	3 430	3.0	5.6				
					③	86	51	3 400	3.1	5.5				
					④	75	44	3 400	3.1	5.4				
VWCE092PJGKS 3314 NH3	9293510102	24	12...28	F	①	132	78	4 350	5.5	6.4	50	-20...+75	60 000	102 500
					②	123	72	4 310	5.6	6.3				
					③	111	65	4 270	5.7	6.2				
					④	97	57	4 270	5.8	6.1				
VWCE092PJGKS 3314 N/2 H3P	9293510135	24	14...26.4	F	①	137	81	4 350	5.6	6.4	50	-20...+80	67 500	115 000
					②	126	74	4 330	5.7	6.3				
					③	113	67	4 300	5.8	6.2				
					④	99	58	4 300	5.8	6.1				
VWCE092PKGHS 3318 NN	9293510115	48	36...60	C	①	78	46	2 650	1.6	4.8	35	-20...+75	77 500	130 000
					②	73	43	2 630	1.7	4.6				
					③	68	40	2 620	1.7	4.6				
					④	61	36	2 620	1.7	4.5				
VWCE092PKGJS 3318 NH	9293510117	48	36...60	D	①	91	54	3 050	2.3	5.3	38	-20...+75	72 500	122 500
					②	85	50	3 040	2.4	5.2				
					③	77	45	3 020	2.4	5.2				
					④	67	39	3 010	2.4	5.1				
VWCE092PKGJS 3318 NHH	9293510123	48	36...60	E	①	103	61	3 450	3.0	5.7	42	-20...+75	67 500	115 000
					②	96	57	3 410	3.0	5.6				
					③	87	51	3 400	3.1	5.5				
					④	76	45	3 390	3.1	5.4				
VWCE092PKGKS 3318 NH3	9293510103	48	36...58	F	①	132	78	4 350	5.6	6.4	50	-20...+75	60 000	102 500
					②	123	72	4 310	5.7	6.3				
					③	111	65	4 270	5.9	6.2				
					④	96	57	4 270	5.9	6.1				
VWCE092PKGKS 3318 N/2 H3P	9293510142	48	36...56	F	①	135	79	4 350	6.4	6.4	50	-20...+70	67 500	115 000
					②	126	74	4 350	6.5	6.3				
					③	113	67	4 320	6.6	6.2				
					④	99	58	4 310	6.6	6.1				

Subject to changes. More types in 12 or 24 VDC on the previous page.

DC axial fans

Technical drawing

Dimensions in mm



# VWCF092J...

DC axial fan · max. 285 m<sup>3</sup>/h · □ 92 x 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan with rigid characteristic curve
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24 (H3 and H4: AWG 22)
- Electrical protection class: III
- Weight: 240 g (H3 and H4: 280 g)

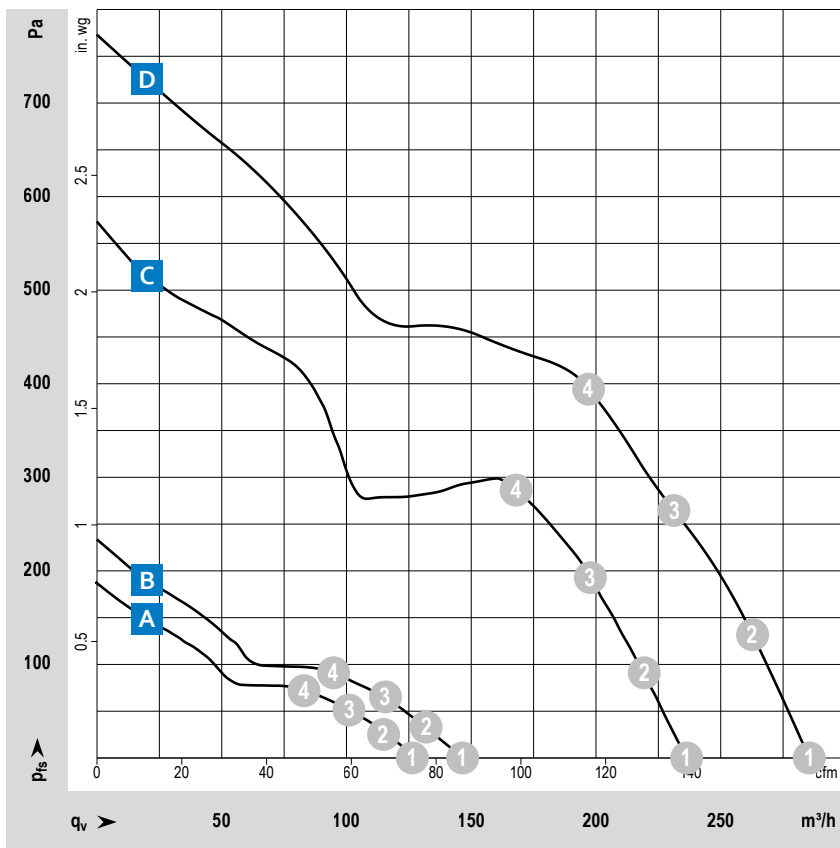
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

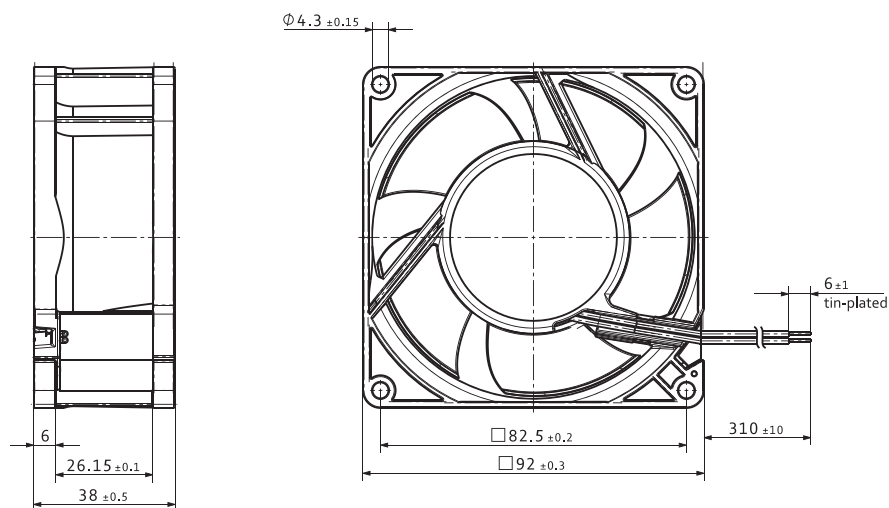


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCF092JHGKS 3212 JN	9293510302	12	7...13.8	A	①	127	75	6 000	6.5	6.5	51	-20...+70	70 000	117 500
					②	114	67	5 860	6.9	6.4				
					③	99	58	5 730	7.2	6.2				
					④	82	48	5 650	7.5	6.0				
VWCF092JHGKS 3212 JH	9293510304	12	7...15	B	①	144	85	6 800	8.0	6.7	55	-20...+70	70 000	117 500
					②	131	77	6 650	8.5	6.6				
					③	114	67	6 530	9.0	6.5				
					④	94	55	6 450	9.3	6.4				
VWCF092JHGNS 3212 J/2H4P	9693520184	12	6...13.8	D	①	280	165	13 000	49.1	8.8	73	-20...+70	60 000	110 000
					②	251	148	12 600	52.2	8.5				
					③	221	130	12 300	54.8	8.3				
					④	187	110	12 100	57.0	8.1				
VWCF092JJGKS 3214 JN	9293510303	24	11...28	A	①	127	75	6 000	6.6	6.5	51	-20...+70	70 000	117 500
					②	116	68	5 860	7.1	6.4				
					③	101	59	5 740	7.4	6.2				
					④	84	49	5 660	7.7	6.0				
VWCF092JJGKS 3214 JH	9293510306	24	12...30	B	①	144	85	6 800	8.0	6.7	55	-20...+70	70 000	117 500
					②	131	77	6 650	8.5	6.6				
					③	113	67	6 530	9.0	6.5				
					④	94	55	6 450	9.3	6.4				
VWCF092JJGMS 3214 JH3 S-Force	9693520192	24	12...27.6	C	①	238	140	11 000	28.4	8.1	69	-20...+70	65 000	110 000
					②	221	130	11 000	32.5	8.0				
					③	199	117	11 000	36.1	7.9				
					④	170	100	10 980	38.1	7.8				
VWCF092JJGNS 3214 J/2H4P	9693520185	24	12...27.6	D	①	285	168	13 000	52.5	8.8	73	-20...+70	60 000	110 000
					②	258	152	12 650	55.0	8.5				
					③	226	133	12 200	55.0	8.3				
					④	191	112	11 800	55.0	8.1				
VWCF092JJKGKS 3218 JN	9293510305	48	36...56	A	①	128	75	6 050	6.5	6.5	51	-20...+70	70 000	117 500
					②	116	68	5 900	6.9	6.4				
					③	101	59	5 800	7.2	6.2				
					④	84	49	5 730	7.4	6.0				
VWCF092JJKGNS 3218 J/2H4P	9693520186	48	20...58	D	①	285	168	13 000	50.6	8.8	73	-20...+70	60 000	110 000
					②	263	155	12 970	57.4	8.5				
					③	231	136	12 650	60.0	8.3				
					④	197	116	12 380	60.0	8.1				

Subject to changes. 3200 JH3 and JH4 also available as standard with PWM control input and speed signal.  
Speed control range from 2000 rpm up to maximum nominal speed. Standstill at 0% PWM, maximum speed if control cable is interrupted.

## Technical drawing

Dimensions in mm



# VWCF092P...

DC axial fan · max. 276 m<sup>3</sup>/h · □ 92 x 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48 VDC; compact, small and lightweight; noise and efficiency optimized axial fan of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 250 g

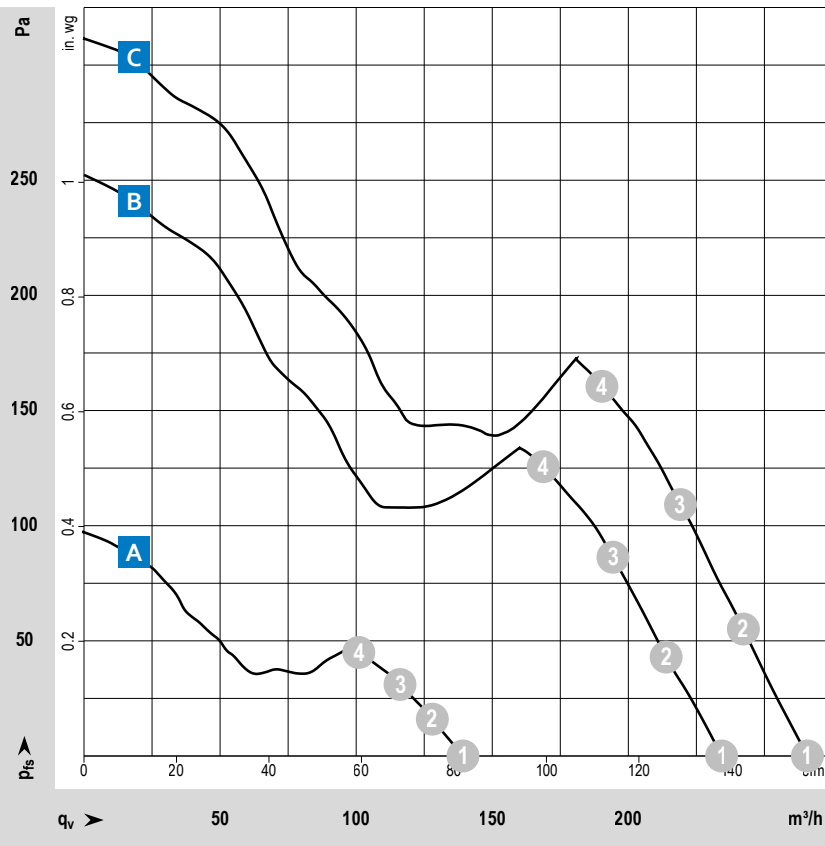
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r,wer</sub> level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

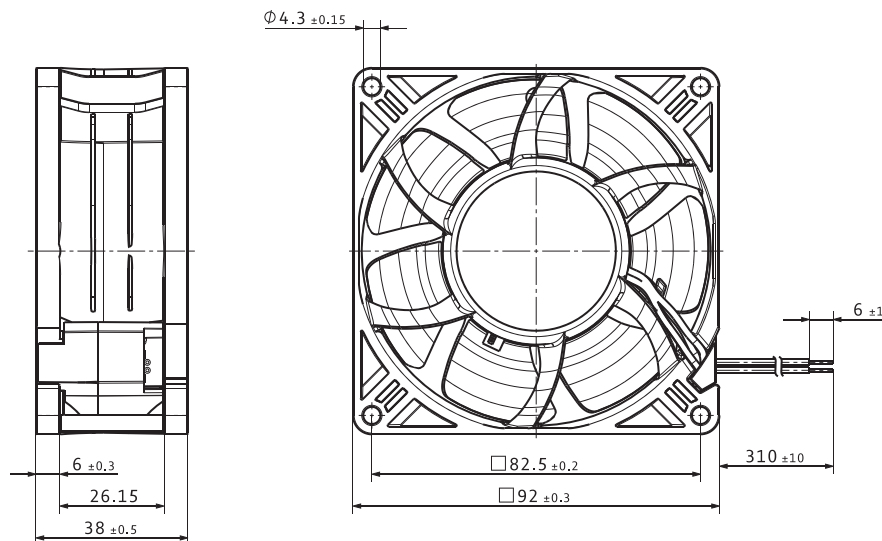
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCF092PHGKS 3252 JH	9293512008	12	7...13.2	A	①	148	87	4 100	6.1	6.1	46	-20...+70	100 000	170 000
					②	136	80	4 120	6.1	6.0				
					③	122	72	4 120	6.1	5.8				
					④	106	62	4 140	6.0	5.7				
VWCF092PHGNS 3252 JH3	9293512024	12	7...13.2	C	①	266	157	7 450	32.6	7.8	64	-20...+70	85 000	142 500
					②	242	142	7 420	32.9	7.7				
					③	219	129	7 430	32.9	7.5				
					④	190	112	7 500	32.2	7.4				
VWCF092PJGKS 3254 JH	9293512015	24	14...26.4	A	①	139	82	4 100	5.9	6.1	46	-20...+70	100 000	170 000
					②	128	75	4 090	5.9	6.0				
					③	116	68	4 090	5.9	5.8				
					④	101	59	4 100	5.8	5.7				
VWCF092PJGNS 3254 J/2 H3P	9293512002	24	14...26.4	C	①	276	162	7 450	32.2	7.8	64	-20...+70	85 000	142 500
					②	247	145	7 420	32.4	7.7				
					③	223	131	7 410	32.4	7.5				
					④	196	115	7 470	32.1	7.4				
VWCF092PKGKS 3258 JH	9293512009	48	36...56	A	①	141	83	4 100	6.7	6.1	46	-20...+70	100 000	170 000
					②	130	77	4 090	6.8	6.0				
					③	117	69	4 090	6.7	5.8				
					④	101	59	4 100	6.6	5.7				
VWCF092PKGMS 3258 J/2 HHP	9293512004	48	36...56	B	①	234	138	6 650	22.2	7.5	64	-20...+70	90 000	152 500
					②	214	126	6 600	22.3	7.4				
					③	194	114	6 600	22.4	7.2				
					④	169	99	6 670	22.0	7.1				
VWCF092PKGNS 3258 J/2 H3P	9293512001	48	36...56	C	①	264	155	7 450	31.7	7.8	64	-20...+70	85 000	142 500
					②	241	142	7 430	31.9	7.7				
					③	218	128	7 440	31.8	7.5				
					④	189	111	7 520	31.1	7.4				

Subject to changes.

DC axial fans

Technical drawing

Dimensions in mm



# VWJK100TKGRS

DC axial fan · max. 542 m<sup>3</sup>/h · □ 100x90 mm



## Material/Surface

- Housing: Plastic + Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 48 VDC; counter-rotating fan with two counter-rotating fan wheels and aluminum flange with integrated guide blades; extraordinarily pressure-oriented
- Direction of air flow: exhaust over struts
- Direction of rotation: counter-rotating
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Molex plug 43025-0800  
Molex contacts 43030-0003
- Electrical protection class: II
- Weight: 600 g

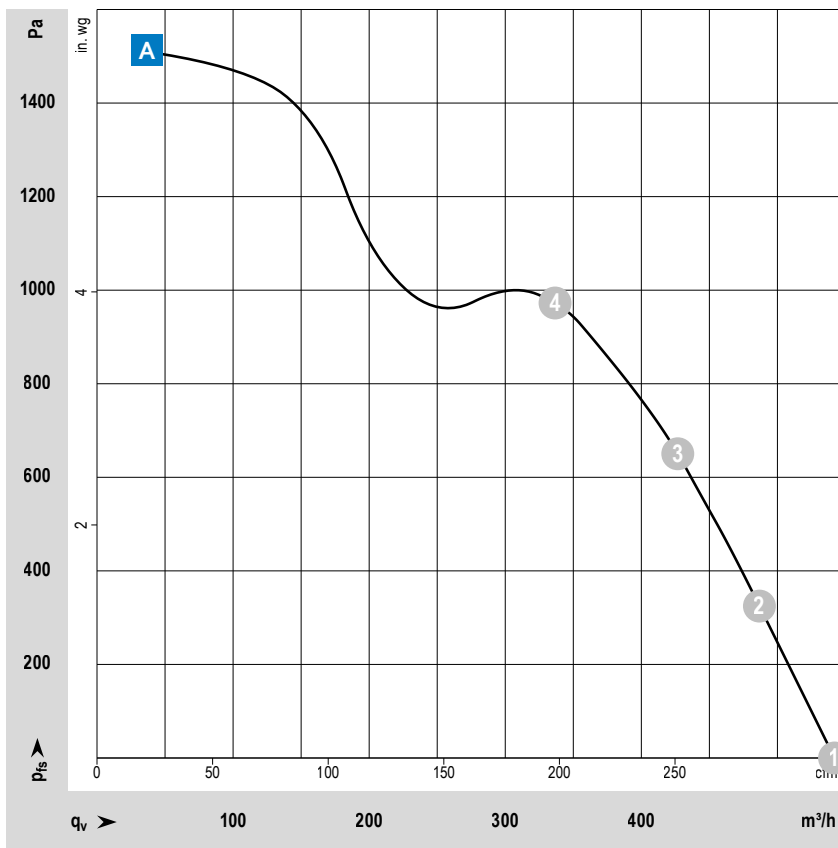
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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- PWM control input
- Analog control input
- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

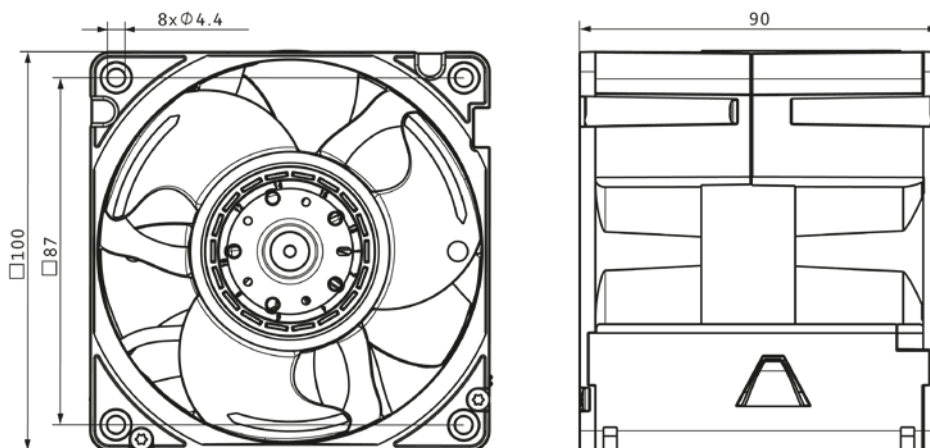
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{100FC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWJK100TKGRS AxiTwin 100	8315100209	48	36...60	A	①	542	319	11 000	135.0	9.3	84	-20...+70	70 000	117 500
					②	487	287	11 000	158.4	9.2				
					③	427	251	11 000	177.6	9.0				
					④	337	198	11 000	184.7	9.1				

Subject to changes.

Technical drawing

Dimensions in mm



# VWCD119F...

DC axial fan · max. 159 m<sup>3</sup>/h · □ 119 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact, small and lightweight; low-profile, noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 175 g

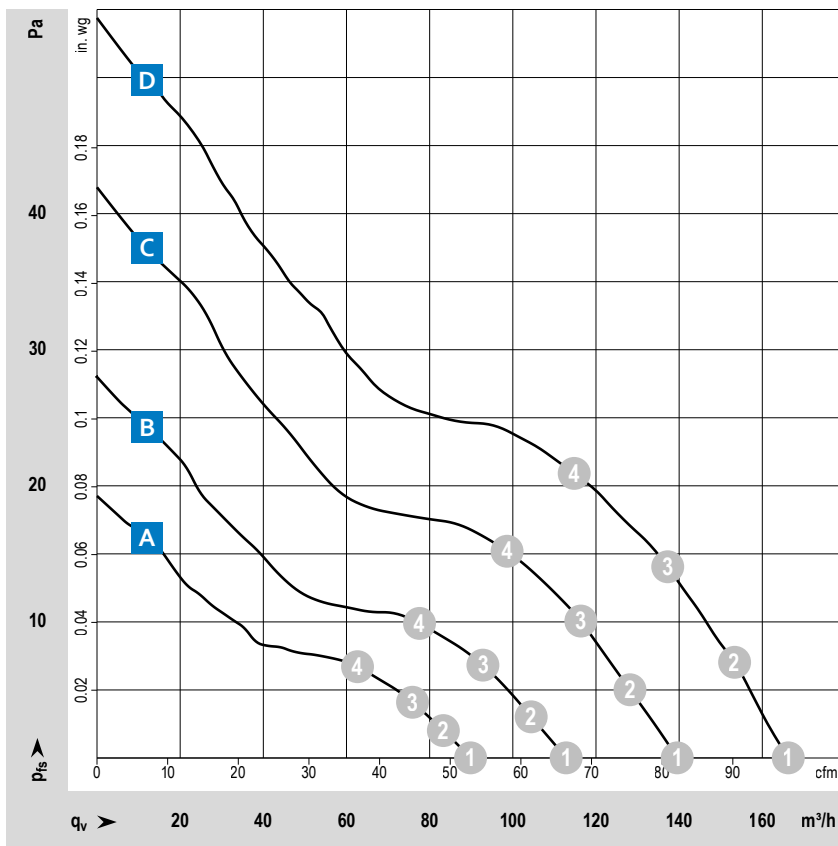
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

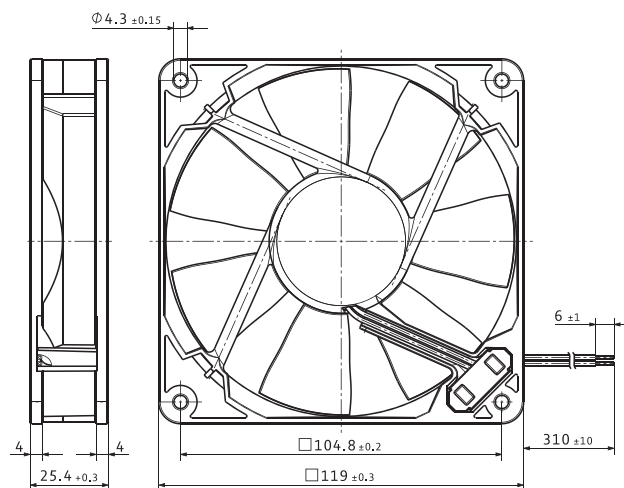
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r,wer</sub> level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCD119FHGJS 4412 FGL	9293505438	12	7...14	A	①	90	53	1 600	0.9	4.1	26	-20...+75	80 000	135 000
					②	83	49	1 570	1.0	4.0				
					③	75	44	1 540	1.0	4.0				
					④	64	38	1 500	1.0	3.9				
VWCD119FHGJS 4412 FGML	9293505434	12	7...12.6	B	①	113	67	1 950	1.7	4.6	32	-20...+75	75 000	127 500
					②	104	61	1 920	1.8	4.6				
					③	94	55	1 880	1.8	4.5				
					④	78	46	1 840	1.9	4.4				
VWCD119FHGJS 4412 FML	9293505464	12	7...12.6	B	①	105	62	1 950	1.7	4.6	32	-20...+75	75 000	127 500
					②	97	57	1 910	1.7	4.6				
					③	88	52	1 880	1.7	4.5				
					④	75	44	1 840	1.8	4.4				
VWCD119FHGKS 4412 FGM	9293505435	12	7...12.6	C	①	139	82	2 400	2.6	5.3	38	-20...+75	70 000	117 500
					②	127	75	2 350	2.7	5.2				
					③	114	67	2 280	2.7	5.1				
					④	96	57	2 210	2.8	5.1				
VWCD119FHGKS 4412 FM	9293505409	12	7...12.6	C	①	140	82	2 400	3.2	5.3	38	-20...+75	70 000	117 500
					②	128	75	2 340	3.3	5.2				
					③	116	68	2 290	3.4	5.1				
					④	98	58	2 220	3.5	5.1				
VWCD119FHGLS 4412 F	9293505444	12	8...12.6	D	①	159	94	2 900	4.9	5.6	43	-20...+60	60 000	102 500
					②	147	87	2 830	5.0	5.5				
					③	132	78	2 760	5.1	5.5				
					④	111	65	2 690	5.2	5.5				
VWCD119FJGJS 4414 FL	9293505528	24	18...28	A	①	90	53	1 600	1.1	4.1	26	-20...+75	80 000	135 000
					②	83	49	1 570	1.1	4.0				
					③	76	45	1 540	1.1	4.0				
					④	64	38	1 500	1.2	3.9				
VWCD119FJGKS 4414 FM	9293505407	24	12...28	C	①	131	77	2 400	2.5	5.3	38	-20...+75	70 000	117 500
					②	122	72	2 340	2.6	5.2				
					③	110	65	2 290	2.7	5.1				
					④	93	55	2 250	2.7	5.1				
VWCD119FJGLS 4414 F	9293505405	24	12...28	D	①	159	94	2 900	4.3	5.6	43	-20...+60	60 000	102 500
					②	147	87	2 830	4.4	5.5				
					③	131	77	2 750	4.5	5.5				
					④	111	65	2 700	4.6	5.5				
VWCD119FKGLS 4418 F	9293505449	48	28...53	D	①	159	94	2 900	4.6	5.6	43	-20...+60	60 000	102 500
					②	147	87	2 840	4.7	5.5				
					③	132	78	2 760	4.9	5.5				
					④	111	65	2 700	5.0	5.5				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWS0113F...

DC axial fan · max. 149 m<sup>3</sup>/h · Ø 127 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12 VDC; compact, small and lightweight; low-profile, noise and efficiency optimized axial fan in round version
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 170 g

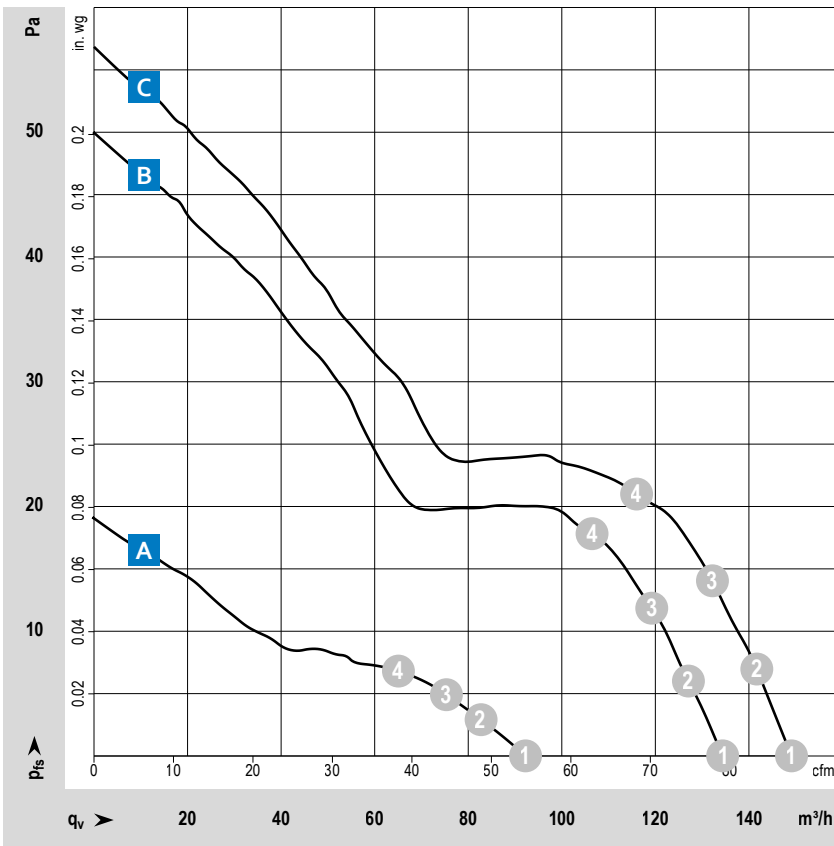
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Direction of rotation reversible
- Symmetrical impeller

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!

For detailed information see <http://www.ebmpapst.com/general conditions>

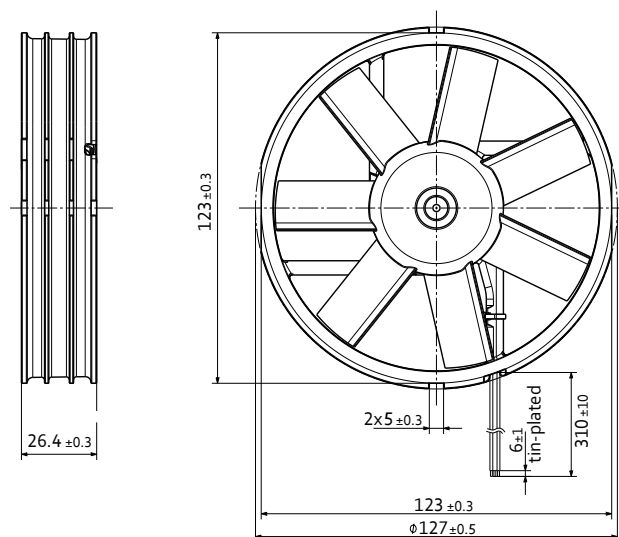


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWS0113FUGAS 4412 FGL-573	9293505573	12	7...15	A	①	92	54	1 600	1.0	3.9	26	-20...+75	80 000	135 000
					②	84	49	1 580	1.0	3.9				
					③	76	45	1 540	1.1	3.8				
					④	66	39	1 510	1.1	3.8				
VWS0113FUGAZ 4412 FGMPR-197	9693500197	12	7...12.6	B	①	134	79	2 400	2.7	4.9	38	-20...+65	75 000	117 500
					②	127	75	2 400	3.0	4.9				
					③	120	71	2 400	3.4	4.8				
					④	107	63	2 400	3.7	4.8				
VWS0113FUGAZ 4412 FGPR-194	9693500194	12	8...12.6	C	①	149	88	2 650	3.4	5.1	43	-20...+50	60 000	102 500
					②	142	84	2 640	3.8	5.1				
					③	132	78	2 640	4.2	5.0				
					④	116	68	2 610	4.5	5.0				

Subject to changes.  
Further voltage variants (24 VDC, 48 VDC) and speed variants as well as ball bearings versions are possible as additional fan types.

## Technical drawing

Dimensions in mm



# VWS0112EUGAS

DC axial fan · max. 135 m<sup>3</sup>/h · Ø 126 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12 VDC; axial fan designed for maximum noise reduction with volume-oriented characteristic curve and round housing; reversibility and symmetrical fan impeller enable identical air performance values in both directions of rotation
- Direction of air flow: exhaust over struts / intake over struts
- Direction of rotation: reversible
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 26
- Electrical protection class: III
- Weight: 170 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

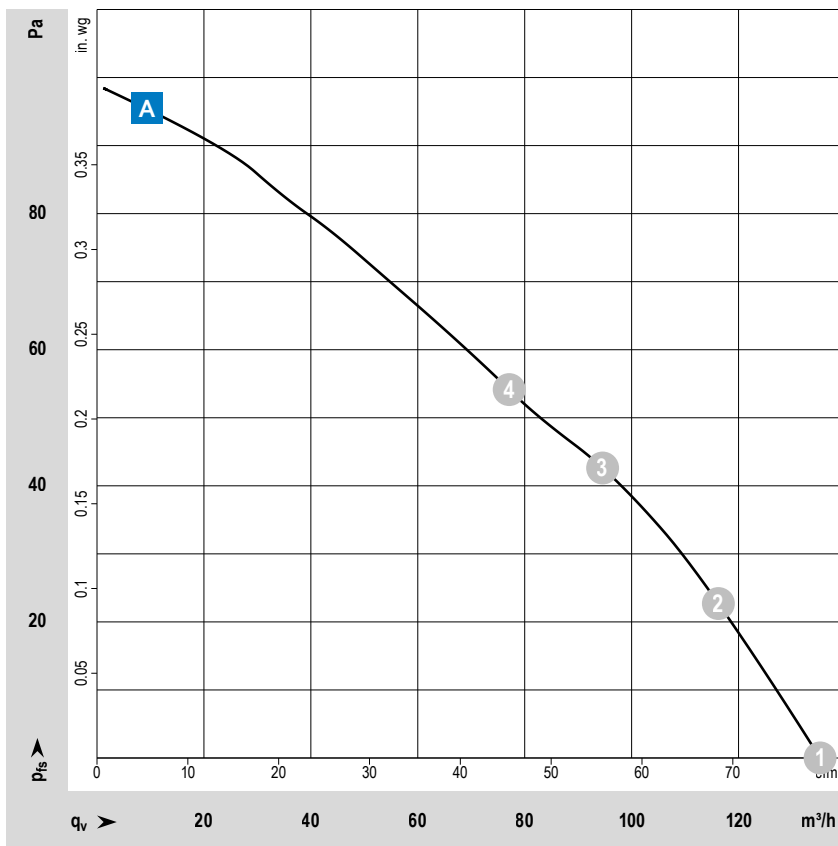
## Options

- Speed signal
- PWM control input
- Analog control input
- Moisture protection

## Special features

- Direction of rotation reversible
- Symmetrical impeller

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

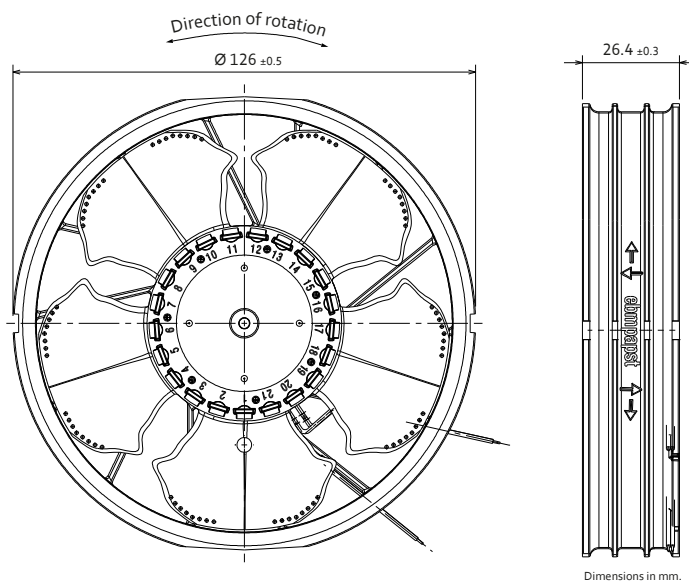
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWS0112EUGAS AxiRev 126	8315100253	12	10.8...13.2	A	① ② ③ ④	135	79	4 200	2.5	6.4	52	-20...+60	on request	on request
						117	69	4 200	3.3	6.5				
						95	56	4 200	4.1	6.7				
						77	45	4 200	4.7	6.9				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCD119F...

DC axial fan · max. 225 m<sup>3</sup>/h · □ 119 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact, small and light; low-profile, noise and efficiency optimized axial fan nevertheless with rigid characteristic curve
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 245 g

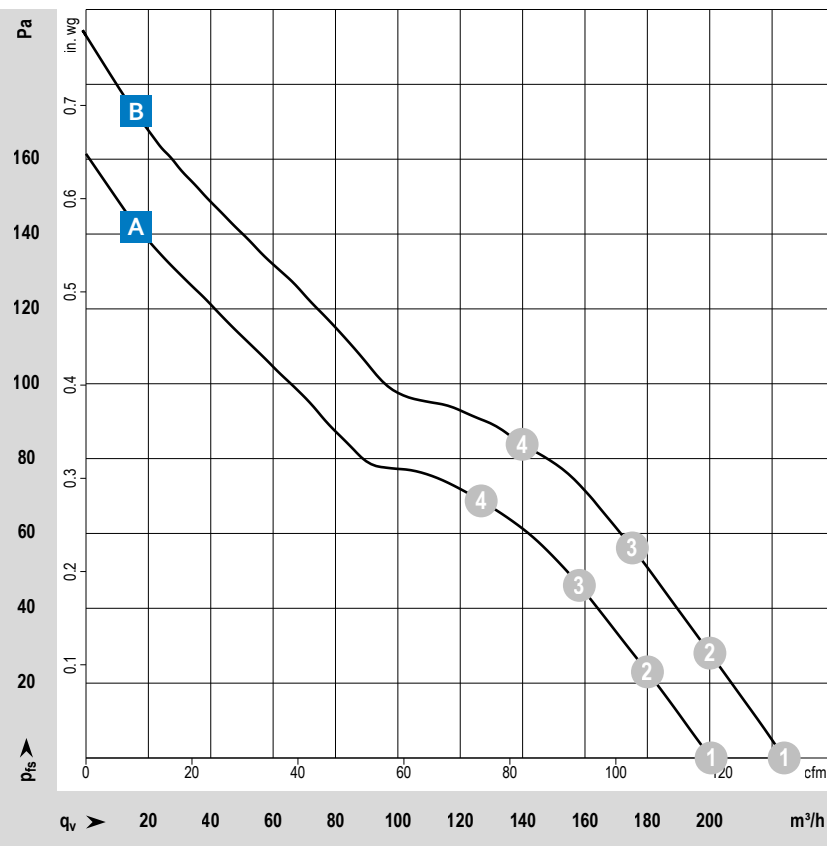
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

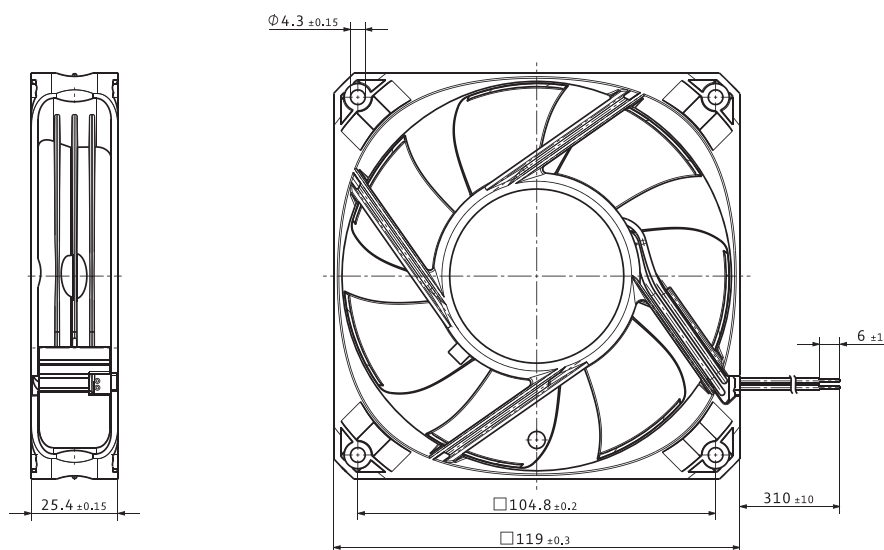
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCD119FHJMS 4412 FNH	9694390181	12	9...13.2	B	①	224	132	5 400	12.8	6.8	55	-20...+70	60 000	102 500
					②	200	118	5 210	13.7	6.6				
					③	175	103	5 070	14.6	6.4				
					④	140	82	4 960	15.2	6.4				
VWCD119FJJMS 4414 FNN	9294307002	24	14...28	A	①	200	118	4 850	8.5	6.5	52	-20...+70	60 000	102 500
					②	180	106	4 720	9.1	6.3				
					③	158	93	4 600	9.8	6.1				
					④	127	75	4 510	10.3	6.3				
VWCD119FJJMS 4414 FNH	9694390184	24	18...26.4	B	①	225	132	5 400	11.7	6.8	55	-20...+70	60 000	102 500
					②	201	118	5 230	12.6	6.6				
					③	175	103	5 080	13.4	6.4				
					④	139	82	4 970	13.9	6.4				
VWCD119FKJMS 4418 FNH	9694390182	48	36...53	B	①	222	131	5 400	11.7	6.8	55	-20...+70	60 000	102 500
					②	199	117	5 230	12.5	6.6				
					③	174	102	5 080	13.2	6.4				
					④	139	82	4 980	13.7	6.4				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCE119P...

DC axial fan · max. 187 m<sup>3</sup>/h · □ 119 x 32 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and lightweight; noise and efficiency optimized axial fan of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 250 g

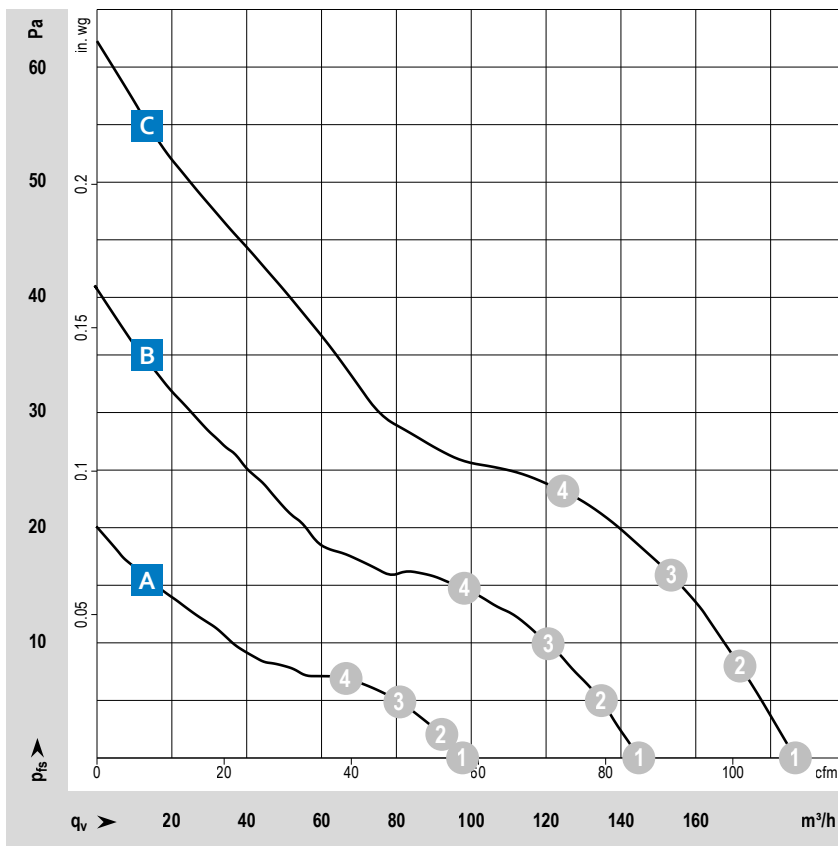
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

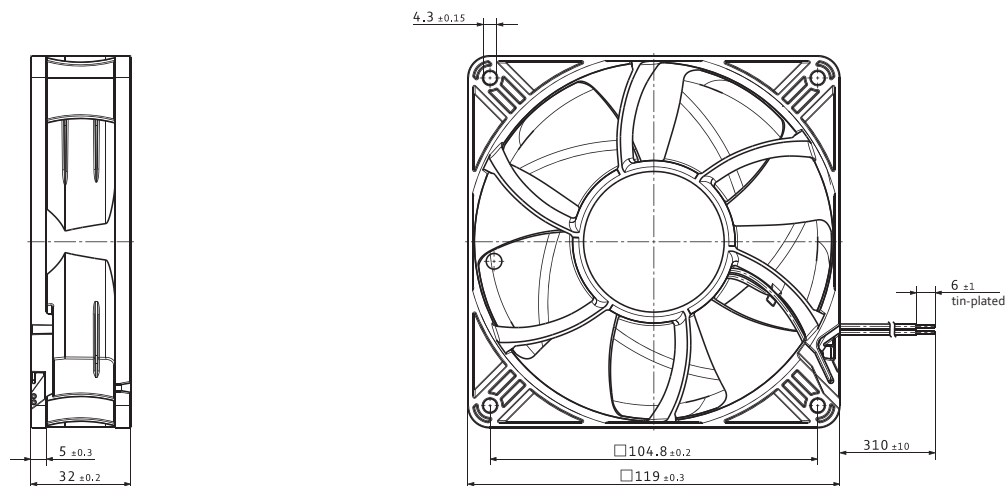
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCE119PHGJS 4312 NL	9293510707	12	6...15	A	①	99	58	1 450	0.8	4.2	25	-20...+75	95 000	160 000
					②	92	54	1 440	0.8	4.2				
					③	83	49	1 430	0.8	4.2				
					④	68	40	1 420	0.8	4.1				
VWCE119PHGKS 4312 NM	9293510708	12	6...15	B	①	145	85	2 100	1.9	5.0	36	-20...+75	85 000	142 500
					②	135	79	2 080	1.9	4.9				
					③	121	71	2 050	2.0	4.8				
					④	99	58	2 040	2.0	4.7				
VWCE119PHGLS 4312 NN	9293510709	12	6...15	C	①	187	110	2 700	4.0	5.5	43	-20...+75	75 000	127 500
					②	172	101	2 660	4.1	5.5				
					③	154	91	2 640	4.2	5.4				
					④	124	73	2 610	4.3	5.4				
VWCE119PJGJS 4314 NL	9293510710	24	12...28	A	①	98	58	1 450	0.9	4.2	25	-20...+75	95 000	160 000
					②	91	54	1 440	0.9	4.2				
					③	82	48	1 430	0.9	4.2				
					④	67	39	1 430	0.9	4.1				
VWCE119PJGKS 4314 NM	9293510713	24	12...28	B	①	144	85	2 100	2.0	5.0	36	-20...+75	85 000	142 000
					②	133	78	2 080	2.0	4.9				
					③	119	70	2 060	2.1	4.8				
					④	97	57	2 050	2.1	4.7				
VWCE119PJGLS 4314 NN	9293510701	24	12...28	C	①	187	110	2 700	3.9	5.5	43	-20...+75	75 000	127 500
					②	172	101	2 650	4.0	5.5				
					③	154	91	2 610	4.1	5.4				
					④	125	74	2 600	4.2	5.4				
VWCE119PKGLS 4318 NN	9293510723	48	36...60	C	①	187	110	2 700	4.2	5.5	43	-20...+75	75 000	127 500
					②	172	101	2 670	4.3	5.5				
					③	155	91	2 640	4.4	5.4				
					④	126	74	2 620	4.4	5.4				

Subject to changes. More fan types can be found on the next page.

## Technical drawing

Dimensions in mm



# VWCE119P...

DC axial fan · max. 284 m<sup>3</sup>/h · □ 119 x 32 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and lightweight; noise and efficiency optimized axial fan of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 250 g

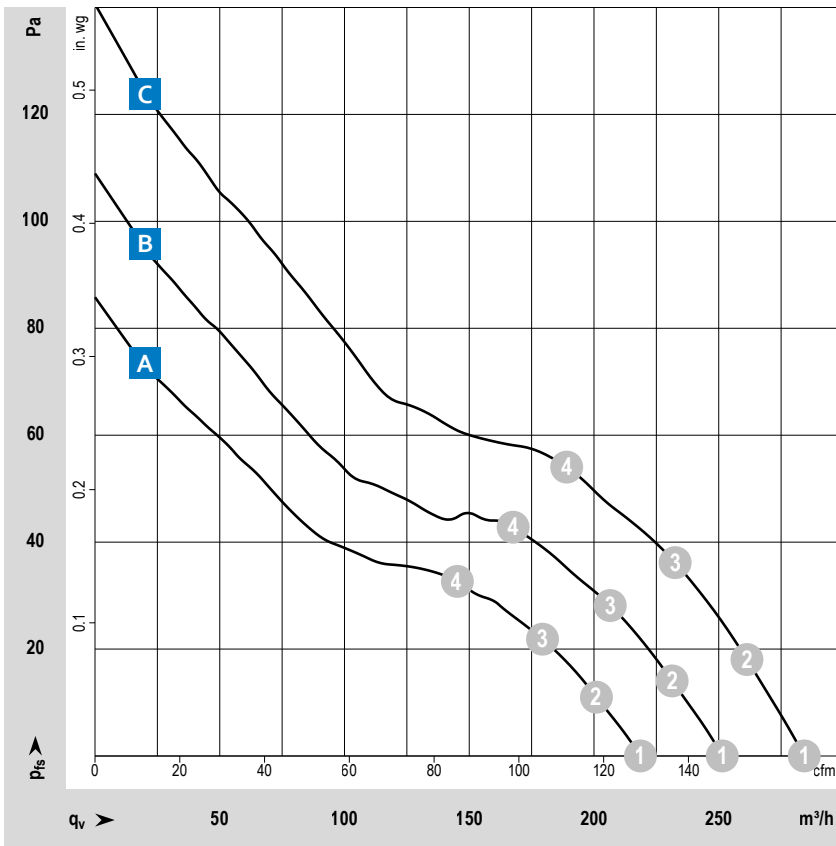
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

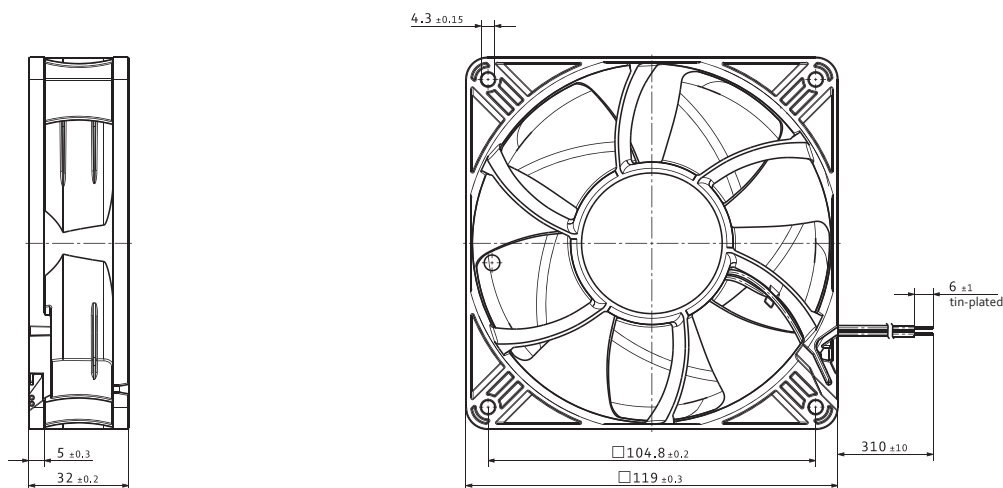


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. 11
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCE119PHGMS 4312 NH	9293510703	12	6...15	A	①	219	129	3 150	7.0	6.0	47	-20...+75	70 000	117 500
					②	201	118	3 090	7.2	5.9				
					③	179	105	3 030	7.3	5.8				
					④	145	85	3 000	7.3	5.8				
VWCE119PHGMS 4312 NHH	9293510745	12	6...14.4	B	①	251	148	3 600	9.7	6.5	51	-20...+65	65 000	110 000
					②	231	136	3 530	10.0	6.4				
					③	206	121	3 470	10.2	6.3				
					④	168	99	3 440	10.3	6.2				
VWCE119PHGNS 4312 NH3	9293510742	12	7...13.2	C	①	284	167	4 050	11.0	6.7	55	-20...+75	60 000	102 500
					②	261	154	3 970	11.3	6.7				
					③	232	137	3 900	11.6	6.6				
					④	189	111	3 880	11.7	6.5				
VWCE119PJGMS 4314 NH	9293510714	24	12...28	A	①	219	129	3 150	5.8	6.0	47	-20...+75	70 000	117 500
					②	202	119	3 100	6.0	5.9				
					③	180	106	3 060	6.1	5.8				
					④	147	87	3 050	6.1	5.8				
VWCE119PJGMS 4314 NHH	9293510732	24	12...27	B	①	250	147	3 600	9.3	6.5	51	-20...+70	65 000	110 000
					②	231	136	3 540	9.5	6.4				
					③	204	120	3 480	9.8	6.3				
					④	166	98	3 450	9.9	6.2				
VWCE119PJGNS 4314 NH3	9293510712	24	14...26.4	C	①	283	167	4 050	10.0	6.7	55	-20...+75	60 000	102 500
					②	260	153	3 990	10.3	6.7				
					③	232	137	3 920	10.6	6.6				
					④	189	111	3 880	10.8	6.5				
VWCE119PKGMS 4318 NH	9293510704	48	36...60	A	①	219	129	3 150	6.1	6.0	47	-20...+75	70 000	117 500
					②	201	118	3 100	6.3	5.9				
					③	180	106	3 050	6.4	5.8				
					④	146	86	3 030	6.5	5.8				
VWCE119PKGNS 4318 NH3	9293510739	48	36...52.8	C	①	279	164	4 050	10.5	6.7	55	-20...+75	60 000	102 500
					②	257	151	3 990	10.8	6.7				
					③	231	136	3 930	11.1	6.6				
					④	188	111	3 900	11.3	6.5				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCF119A...

DC axial fan · max. 205 m<sup>3</sup>/h · □ 119 x 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and lightweight; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 270 g

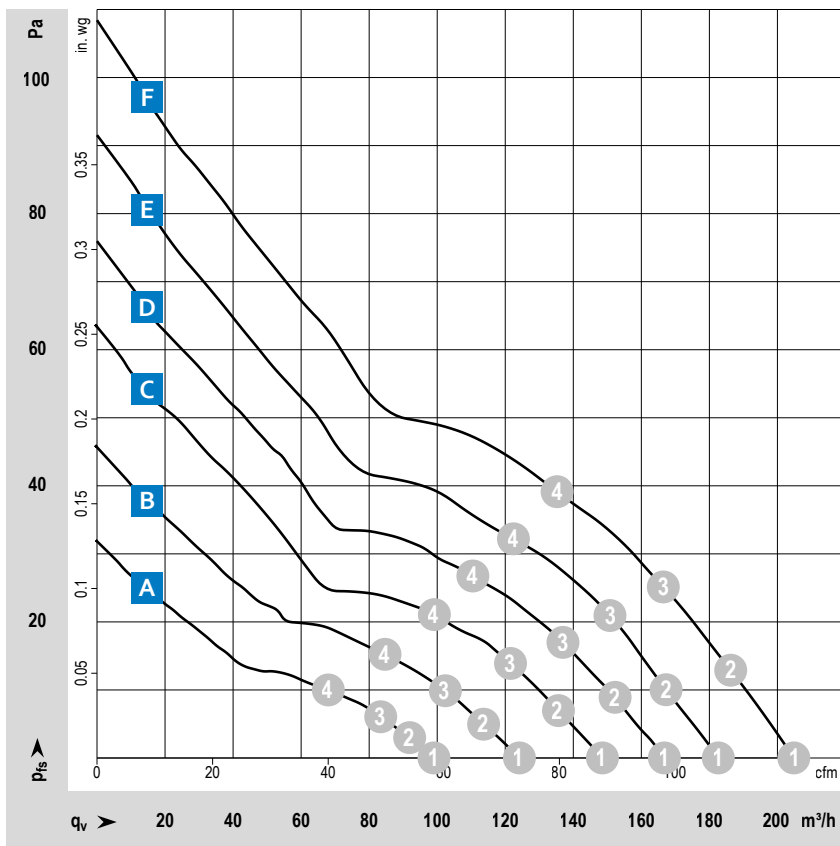
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

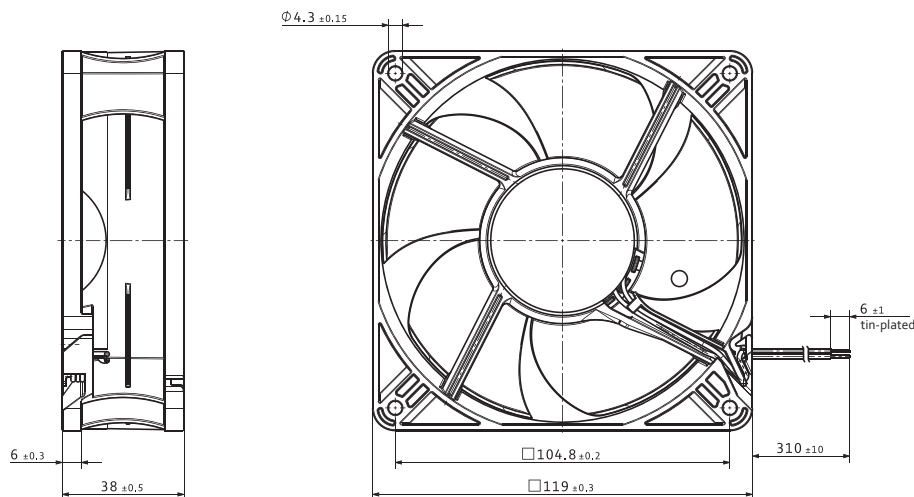
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. 11
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCF119AHGLS 4412 ML	9293510561	12	7...15	D	①	167	98	3 000	2.9	5.5	40	-20...+80	67 500	115 000
					②	153	90	2 940	3.1	5.4				
					③	137	81	2 880	3.3	5.3				
					④	111	65	2 820	3.6	5.1				
VWCF119AHGLS 4412 M	9293510508	12	7...14	E	①	183	108	3 300	3.5	5.7	42	-20...+75	65 000	110 000
					②	168	99	3 230	3.8	5.6				
					③	151	89	3 170	4.0	5.5				
					④	122	72	3 100	4.4	5.5				
VWCF119AHGMS 4412 N	9293510501	12	7...14	F	①	205	121	3 650	4.8	6.1	46	-20...+70	62 500	105 000
					②	187	110	3 580	5.2	6.0				
					③	166	98	3 500	5.6	5.8				
					④	135	79	3 410	6.1	5.6				
VWCF119AJGJS 4414 L3	9293510558	24	12...28	A	①	99	58	1 800	1.0	4.2	26	-20...+80	75 500	127 500
					②	92	54	1 790	1.0	4.2				
					③	83	49	1 770	1.1	4.1				
					④	68	40	1 740	1.1	4.0				
VWCF119AJGKS 4414 L	9293510518	24	18...28	C	①	149	88	2 700	2.4	5.2	37	-20...+80	67 500	115 000
					②	136	80	2 660	2.5	5.1				
					③	122	72	2 610	2.7	5.0				
					④	99	58	2 560	2.8	5.0				
VWCF119AJGLS 4414 ML	9293510560	24	12...28	D	①	166	98	3 000	3.1	5.5	40	-20...+80	67 500	115 000
					②	153	90	2 950	3.3	5.4				
					③	137	81	2 900	3.5	5.3				
					④	112	66	2 830	3.8	5.1				
VWCF119AJGLS 4414 M	9293510509	24	18...28	E	①	180	106	3 300	3.7	5.7	42	-20...+75	65 000	110 000
					②	165	97	3 240	3.9	5.6				
					③	148	87	3 190	4.2	5.5				
					④	120	71	3 120	4.6	5.5				
VWCF119AJGMS 4414 N	9293510503	24	18...28	F	①	204	120	3 650	4.8	6.1	46	-20...+70	62 500	105 000
					②	187	110	3 560	5.2	6.0				
					③	167	98	3 480	5.6	5.8				
					④	135	79	3 390	6.0	5.6				
VWCF119AKGLS 4418 M	9293510519	48	36...60	E	①	183	108	3 300	3.8	5.7	42	-20...+70	65 000	110 000
					②	167	98	3 210	4.1	5.6				
					③	151	89	3 150	4.3	5.5				
					④	122	72	3 080	4.6	5.5				
VWCF119AKGMS 4418 N	9293510505	48	36...60	F	①	203	119	3 650	4.8	6.1	46	-20...+70	62 500	105 000
					②	185	109	3 580	5.2	6.0				
					③	165	97	3 500	5.5	5.8				
					④	132	78	3 420	5.9	5.6				

Subject to changes. More fan types can be found on the next page.

## Technical drawing

Dimensions in mm



# VWCF119A...

DC axial fan · max. 286 m<sup>3</sup>/h · □ 119 × 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 24
- Electrical protection class: III
- Weight: 270 g

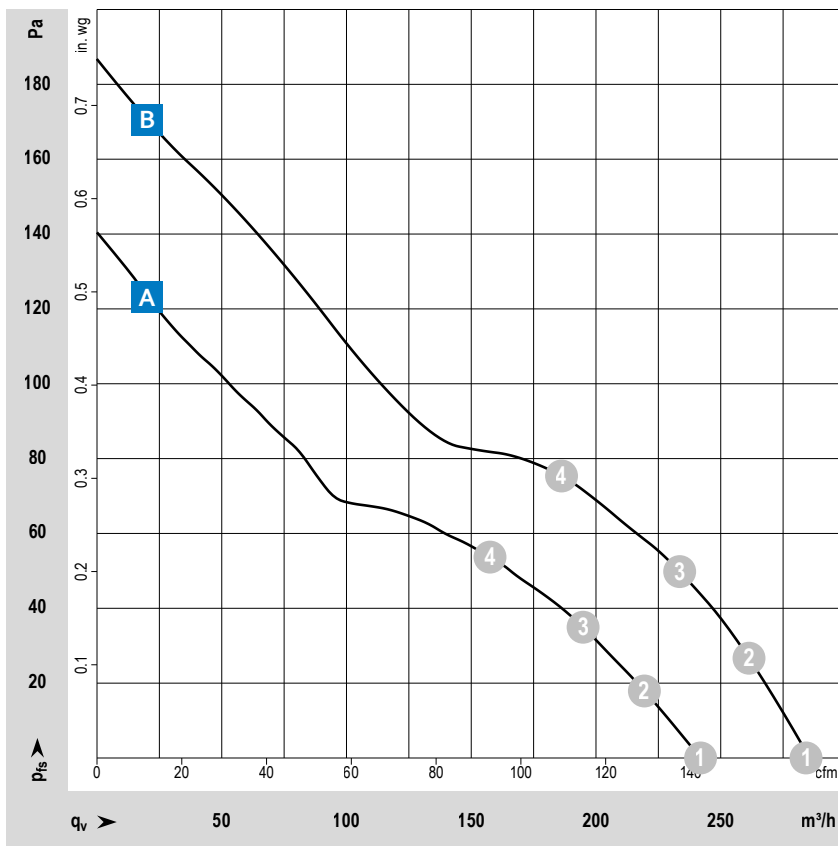
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: up to IP54

from page 14	Definitions
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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

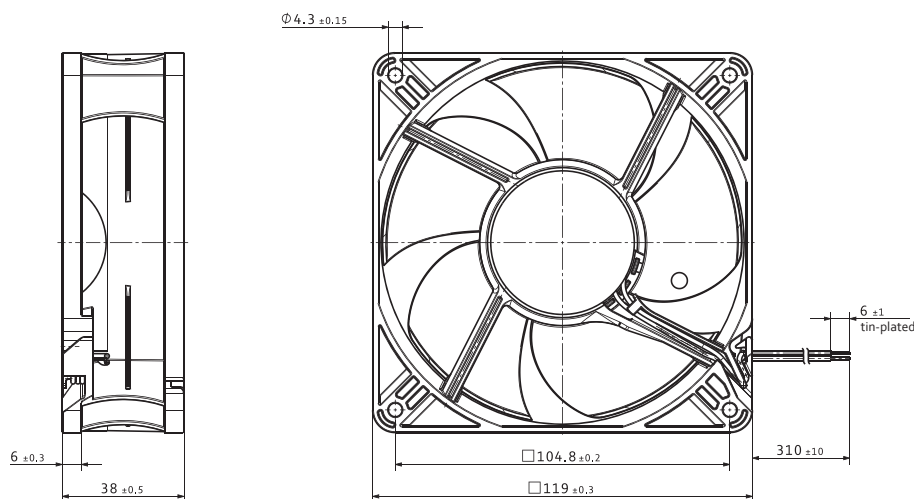
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCF119AHGMS 4412 H	9293510500	12	7...14	A	①	242	142	4 300	7.5	6.7	50	-20...+70	57 500	97 500
					②	220	129	4 180	8.1	6.5				
					③	195	115	4 070	8.7	6.4				
					④	158	93	3 950	9.4	6.1				
VWCF119AHGNS 4412/2 HHP	9693530182	12	7...14.5	B	①	272	160	5 000	10.8	6.8	55	-20...+70	50 000	85 000
					②	254	149	5 000	12.7	6.7				
					③	233	137	5 000	14.5	6.6				
					④	189	111	4 890	15.8	6.6				
VWCF119AJGMS 4414 H	9293510502	24	18...28	A	①	243	143	4 300	7.1	6.7	50	-20...+70	57 500	97 500
					②	220	129	4 190	7.6	6.5				
					③	196	115	4 080	8.2	6.4				
					④	158	93	3 970	8.9	6.1				
VWCF119AJGNS 4414 HH	9293510524	24	16...28	B	①	281	165	5 000	12.8	6.8	55	-20...+70	50 000	85 000
					②	254	149	4 870	13.8	6.7				
					③	226	133	4 740	14.7	6.6				
					④	179	105	4 590	15.8	6.5				
VWCF119AJGNS 4414/2 HHP	9693530183	24	18...28	B	①	286	168	5 000	11.3	6.8	55	-20...+70	50 000	85 000
					②	263	155	4 950	12.7	6.7				
					③	234	138	4 840	13.7	6.6				
					④	187	110	4 690	14.5	6.6				
VWCF119AKGMS 4418 H	9293510504	48	36...60	A	①	242	142	4 300	7.1	6.7	50	-20...+70	57 500	97 500
					②	220	129	4 180	7.7	6.5				
					③	195	115	4 070	8.3	6.4				
					④	157	92	3 960	9.0	6.1				
VWCF119AKGNS 4418/2 HHP	9693530180	48	36...60	B	①	279	164	5 000	10.9	6.8	55	-20...+70	50 000	85 000
					②	259	152	4 990	12.4	6.7				
					③	232	137	4 880	13.2	6.6				
					④	189	111	4 740	14.3	6.6				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWC0120KUJBS

DC axial fan · max. 342 m<sup>3</sup>/h · □ 120 x 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan of the AxiForce series
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: exposed wire  
12V: 2xAWG22 (power supply) and 2x AWG24 (Signal wires);  
24V/48V: 4x AWG24
- Electrical protection class: III
- Weight: 300 g

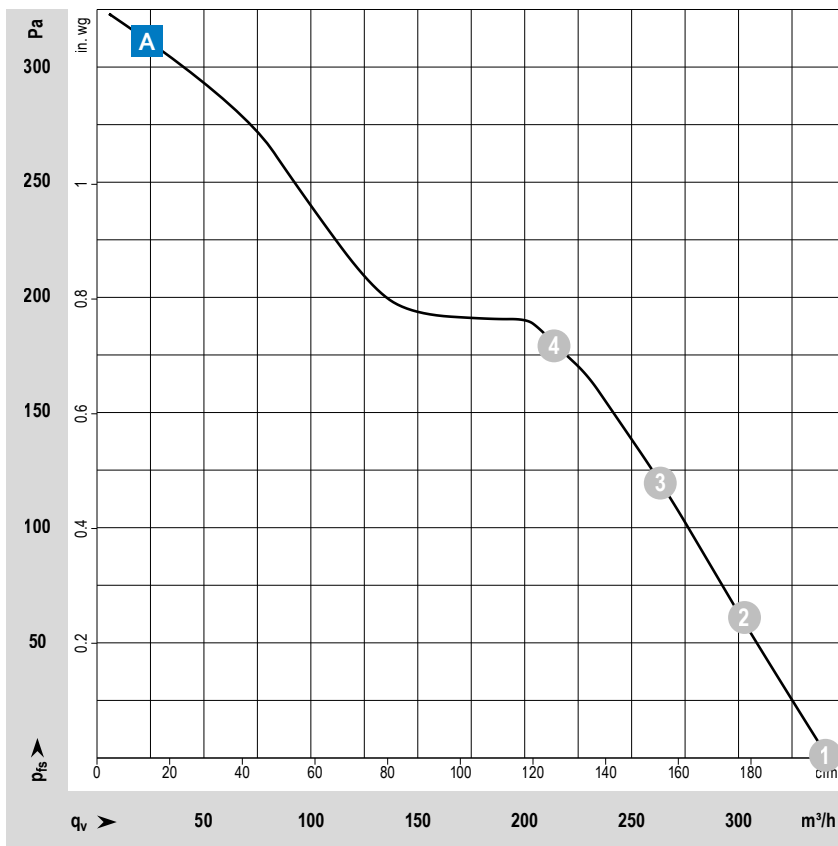
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T3

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

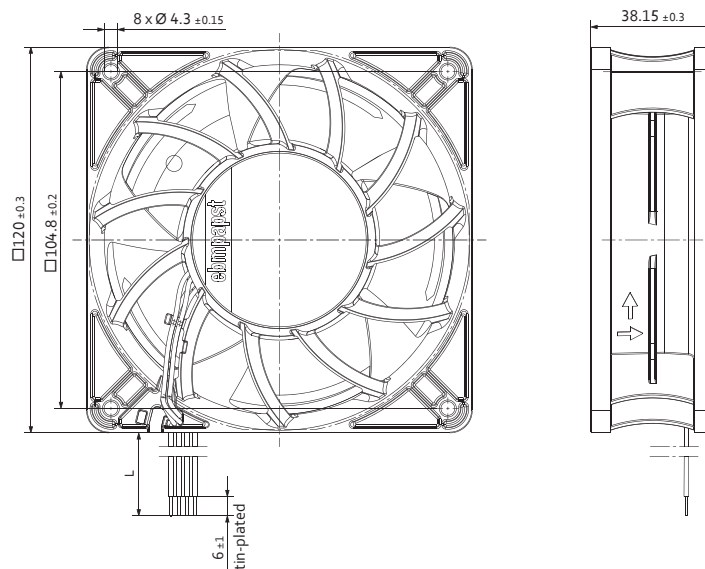
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWC0120KUJBS AxiForce 120	8315100143	12	10.8...13.2	A	①	341	201	6 500	29.9	7.2	59	-20...+70	45 000	75 000
					②	305	180	6 280	31.0	7.0				
					③	262	154	6 070	31.5	7.1				
					④	212	125	5 930	31.5	7.1				
VWC0120KUJBS AxiForce 120	8315100142	24	16...30	A	①	337	198	6 500	28.3	7.2	59	-20...+70	45 000	75 000
					②	303	178	6 280	29.1	7.0				
					③	263	155	6 100	29.9	7.1				
					④	212	125	6 000	30.4	7.1				
VWC0120KUJBS AxiForce 120	8315100144	48	36...60	A	①	342	201	6 500	28.6	7.2	59	-20...+70	45 000	75 000
					②	302	178	6 280	29.5	7.0				
					③	263	155	6 100	30.2	7.1				
					④	213	125	6 000	30.9	7.1				

Subject to changes.

Technical drawing

Dimensions in mm



# VUCF119Y...

DC axial fan · max. 237 m<sup>3</sup>/h · □ 119 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: intake over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings and sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: On flat connectors, 2,8 x 0,5 mm also available with wires as an option
- Electrical protection class: III
- Weight: 390 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

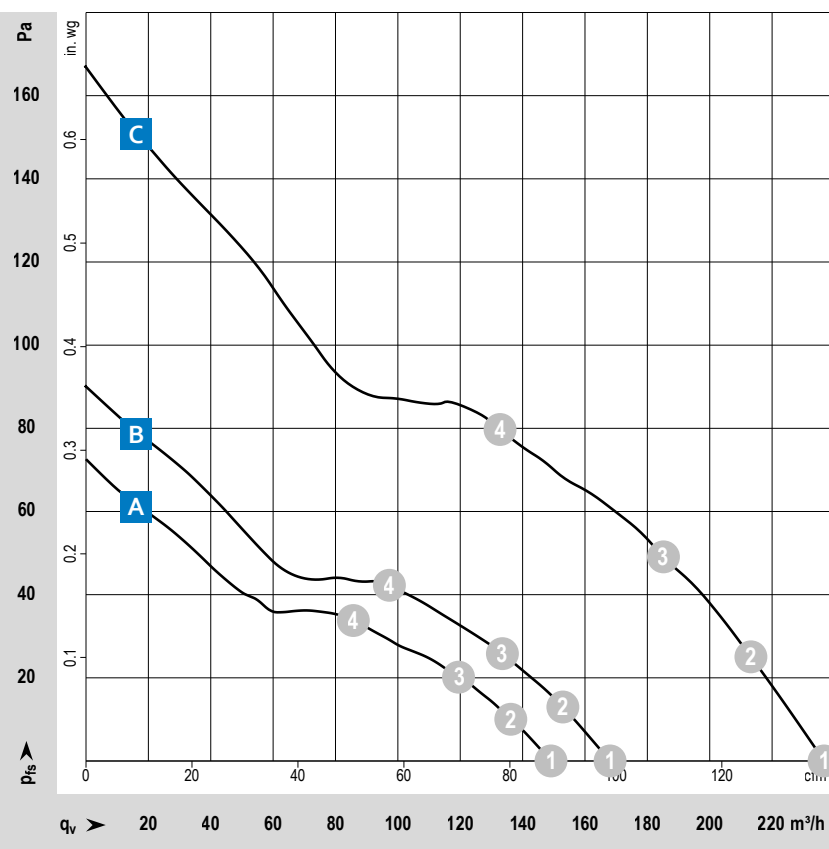
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>w,r</sub> level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

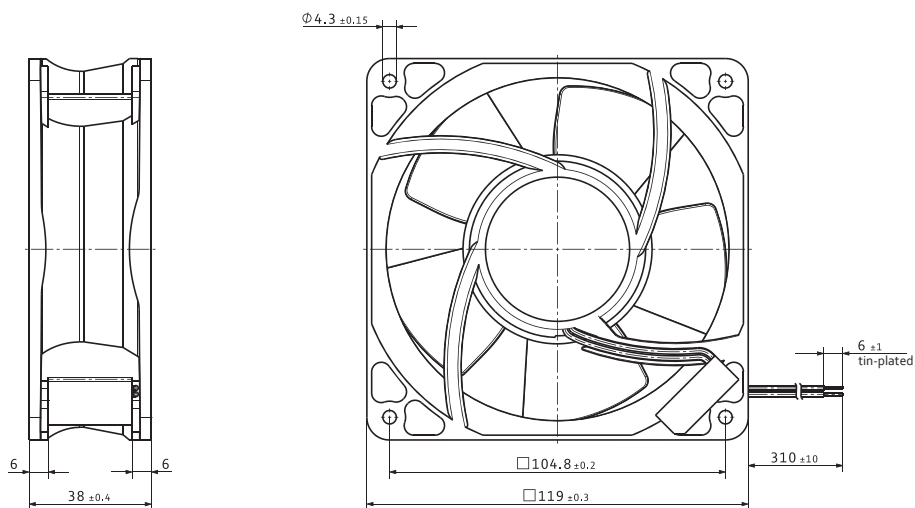


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10}^{IPC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VUCF119YHJKS 4182 NGX	9294310105	12	6...15	A	①	149	88	2 800	3.4	5.6	44	-20...+75	85 000	142 500
					②	135	79	2 740	3.6	5.5				
					③	116	68	2 680	3.7	5.4				
					④	84	49	2 600	3.9	5.3				
VUCF119YHJLS 4182 NX	9294310107	12	6...15	B	①	168	99	3 200	4.9	6.0	49	-30...+75	85 000	142 500
					②	153	90	3 170	5.1	5.9				
					③	134	79	3 100	5.3	5.7				
					④	97	57	3 030	5.6	5.6				
VUCF119YHJMS 4182 NXH	9294310188	12	7...14	C	①	237	139	4 400	9.9	6.8	57	-30...+55	70 000	117 500
					②	213	125	4 290	10.4	6.7				
					③	185	109	4 190	11.0	6.5				
					④	133	78	4 070	11.7	6.4				
VUCF119YJKS 4184 NGX	9294310104	24	12...31.5	A	①	149	88	2 800	3.1	5.6	44	-20...+75	85 000	142 500
					②	136	80	2 760	3.2	5.5				
					③	119	70	2 700	3.4	5.4				
					④	86	51	2 640	3.6	5.3				
VUCF119YJKS 4184 NXM	9294310248	24	12...31.5	A	①	149	88	2 800	3.1	5.6	44	-30...+75	85 000	142 500
					②	136	80	2 760	3.3	5.5				
					③	119	70	2 720	3.5	5.4				
					④	86	51	2 660	3.7	5.3				
VUCF119YJLS 4184 NX	9294310103	24	12...31.5	B	①	169	99	3 200	4.4	6.0	49	-30...+70	85 000	142 500
					②	153	90	3 120	4.6	5.9				
					③	133	78	3 050	4.9	5.7				
					④	96	57	2 970	5.1	5.6				
VUCF119YJMS 4184 NXH	9294310138	24	12...28	C	①	226	133	4 400	9.6	6.8	57	-30...+70	70 000	117 500
					②	205	121	4 280	10.2	6.7				
					③	179	105	4 160	10.9	6.5				
					④	131	77	4 000	11.8	6.4				
VUCF119YKJKS 4188 NGX	9294310178	48	36...60	A	①	148	87	2 800	3.0	5.6	44	-20...+75	85 000	142 500
					②	135	79	2 750	3.2	5.5				
					③	118	69	2 690	3.4	5.4				
					④	85	50	2 630	3.6	5.3				
VUCF119YKJKS 4188 NXM	9294310106	48	36...60	A	①	147	87	2 800	3.5	5.6	44	-30...+75	85 000	142 500
					②	134	79	2 750	3.6	5.5				
					③	118	69	2 700	3.8	5.4				
					④	86	51	2 640	4.1	5.3				

Subject to changes. More fan types can be found on the next page.

## Technical drawing

Dimensions in mm



# VUCF119Y...

DC axial fan · max. 439 m<sup>3</sup>/h · □ 119 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: intake over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 390 g

## Approvals

- Approvals: DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

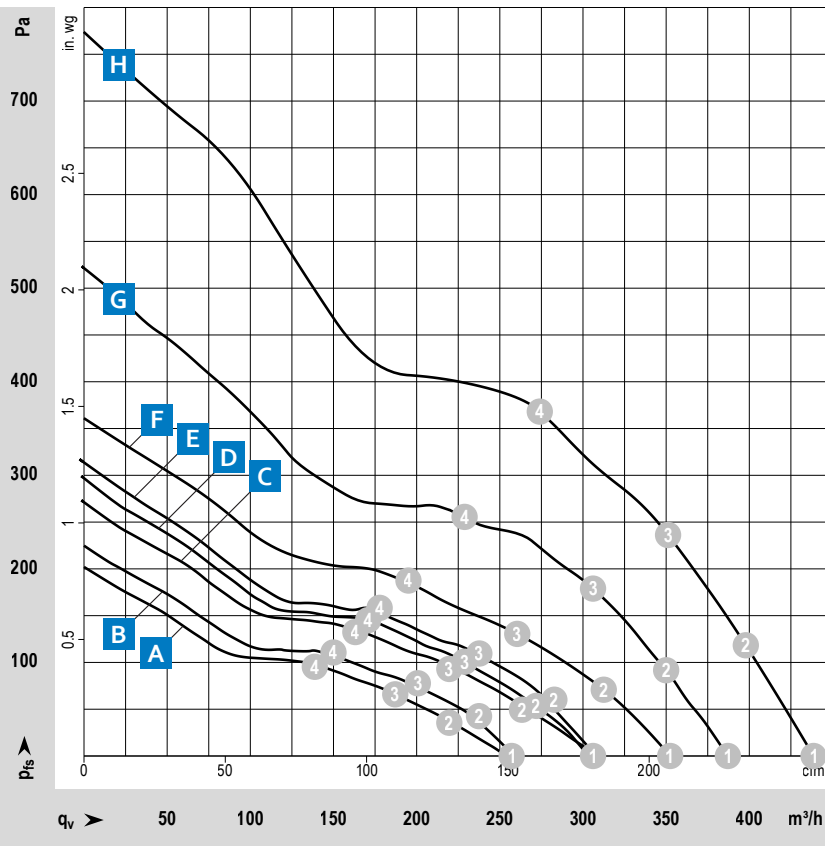
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

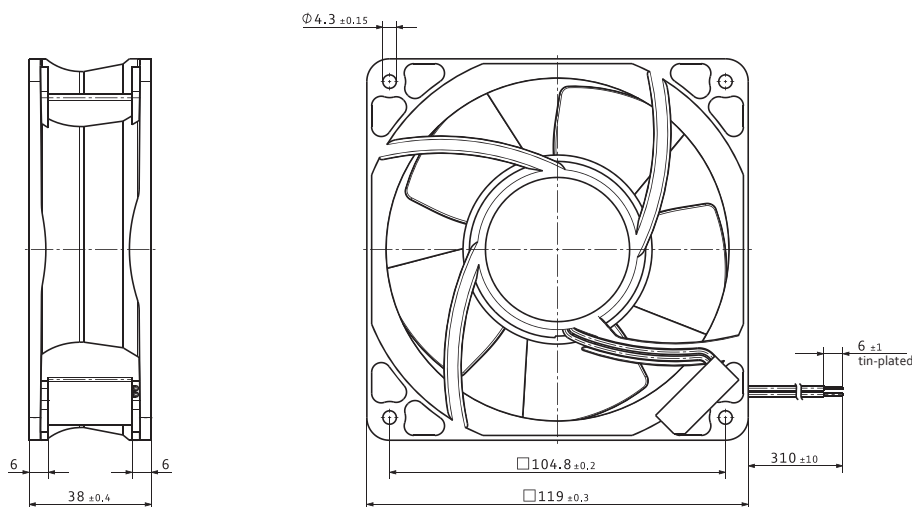
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VUCF119YHJNS 4112 NHH	9694300225	12	9...15	B	①	259	152	5 000	11.7	7.1	60	-20...+65	70 000	117 500
					②	233	137	5 000	13.6	7.2				
					③	200	118	4 930	14.9	6.9				
					④	150	88	4 780	15.2	6.7				
VUCF119YHJNS 4112 NH3	9694300233	12	9...15	E	①	308	181	6 000	18.9	7.5	65	-20...+65	65 000	110 000
					②	279	164	6 000	22.6	7.4				
					③	238	140	5 840	24.6	7.2				
					④	177	104	5 650	25.1	7.2				
VUCF119YHJPS 4112 NH4	9694300260	v	9...14	F	①	352	207	6 800	29.6	7.9	67	-20...+65	62 500	105 000
					②	313	184	6 680	33.7	7.8				
					③	261	154	6 400	34.0	7.5				
					④	195	115	6 160	34.2	7.3				
VUCF119YHJNS 4114 NHH	9694300224	24	12...30	B	①	259	152	5 000	11.4	7.1	60	-20...+65	70 000	117 500
					②	235	138	5 000	13.6	7.0				
					③	199	117	4 860	14.3	6.9				
					④	149	88	4 700	14.6	6.7				
VUCF119YJNS 4114 NH3	9694300234	24	16...30	D	①	303	178	6 000	18.7	7.5	65	-20...+65	65 000	110 000
					②	272	160	5 930	20.8	7.4				
					③	229	135	5 700	21.1	7.2				
					④	172	101	5 530	21.4	7.2				
VUCF119YJPS 4114 NH4	9694300257	24	16...30	F	①	348	205	6 800	31.3	7.9	67	-20...+65	62 500	105 000
					②	309	182	6 760	37.2	7.8				
					③	260	153	6 460	38.5	7.5				
					④	195	115	6 280	39.2	7.3				
VUCF119YJPS 4114 NH5 S-Force	9694300262	24	16...30	G	①	387	228	7 500	42.8	8.1	70	-20...+65	62 500	105 000
					②	351	207	7 490	48.1	8.1				
					③	306	180	7 490	52.3	7.9				
					④	229	135	7 280	50.5	7.8				
VUCF119YJQS 4114 NH6 S-Force	9694300256	24	16...30	H	①	439	258	8 400	69.9	8.6	73	-20...+65	60 000	102 500
					②	399	235	8 380	78.7	8.5				
					③	351	207	8 380	88.0	8.3				
					④	274	161	8 380	96.0	8.3				
VUCF119YKJNS 4118 NHH	9694300226	48	36...60	A	①	254	149	5 000	10.9	7.1	60	-20...+65	70 000	117 500
					②	222	131	4 800	11.4	7.0				
					③	187	110	4 630	11.6	6.8				
					④	141	83	4 480	11.8	6.6				
VUCF119YKJNS 4118 NH3	9694300235	48	36...60	C	①	309	182	6 000	19.1	7.5	65	-20...+65	65 000	110 000
					②	266	157	5 690	19.0	7.4				
					③	222	131	5 440	19.0	7.1				
					④	166	98	5 250	19.0	6.9				

Subject to changes. More fan types can be found on the next page.

## Technical drawing

Dimensions in mm



# VUCF119Y...

DC axial fan · max. 530 m<sup>3</sup>/h · □ 119 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: intake over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 425 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

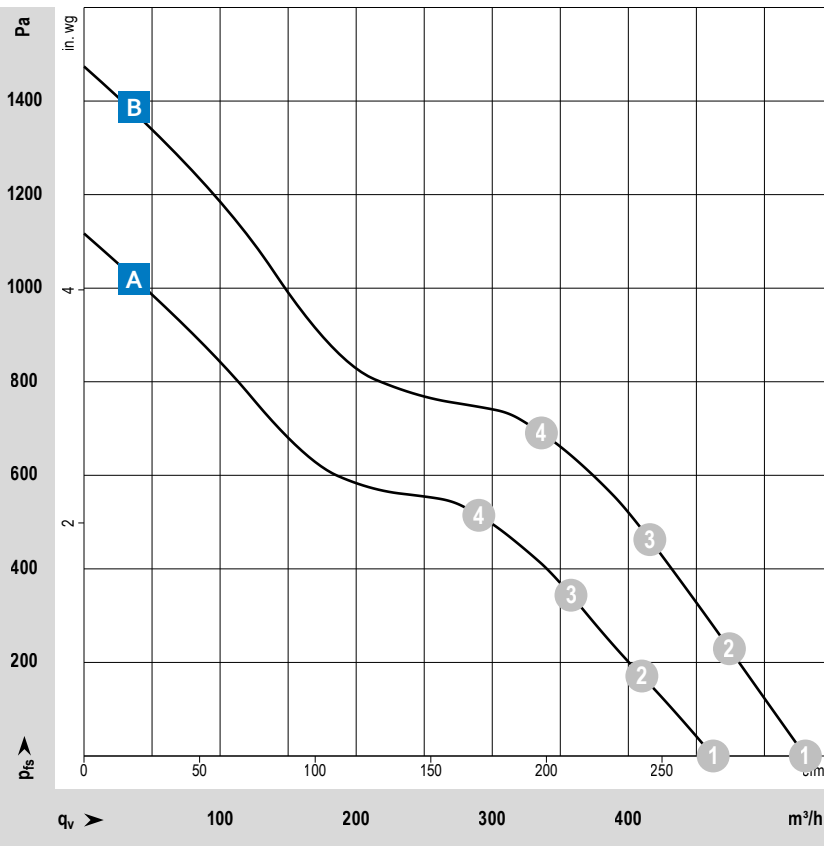
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input (Standard)
- Analog control input
- Moisture protection

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

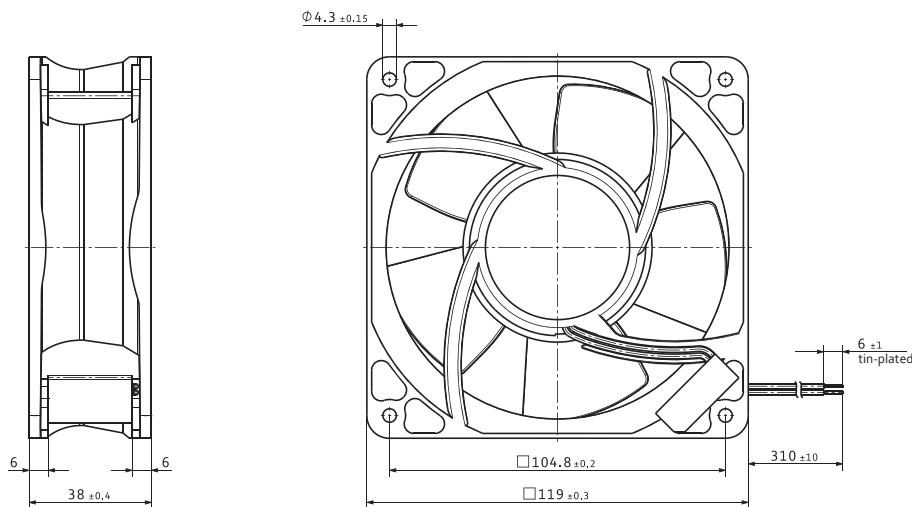
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IPFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VUCF119YJJQS 4154 N/2 H7P	9694314033	24	16...30	A	①	460	271	9 500	79.0	9.0	74	-20...+75	57 500	97 500
					②	410	241	9 500	91.6	8.9				
					③	359	211	9 490	109.2	8.9				
					④	288	170	9 470	118.6	8.7				
VUCF119YJJRS 4154 N/2 H8P	9694314031	24	16...30	B	①	530	312	11 000	122.6	9.2	81	-20...+75	55 000	92 500
					②	474	279	11 040	145.1	9.2				
					③	416	245	11 050	175.9	9.2				
					④	336	198	11 050	194.3	9.0				
VUCF119YKJQZ 4158 N/2 H7P	9694314034	48	36...60	A	①	462	272	9 500	79.5	9.0	74	-20...+75	57 500	97 500
					②	410	241	9 500	92.4	8.9				
					③	358	211	9 500	111.9	8.9				
					④	290	171	9 500	122.1	8.7				
VUCF119YKJRS 4158 N/2 H8P	9694314028	48	36...72	B	①	529	311	11 000	123.1	9.2	80	-20...+75	55 000	92 500
					②	472	278	11 000	142.4	9.2				
					③	410	241	10 900	164.5	9.2				
					④	328	193	10 800	175.7	9.0				

Subject to changes.

The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

## Technical drawing

Dimensions in mm



# VKCF119A...

DC diagonal fan · max. 276 m<sup>3</sup>/h · □ 119 x 38 mm



## Material/Surface

- Housing: Plastic; optional Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; diagonal design, compact and powerful; noise and efficiency optimized diagonal fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 375 g (with metal housing: 455 g)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

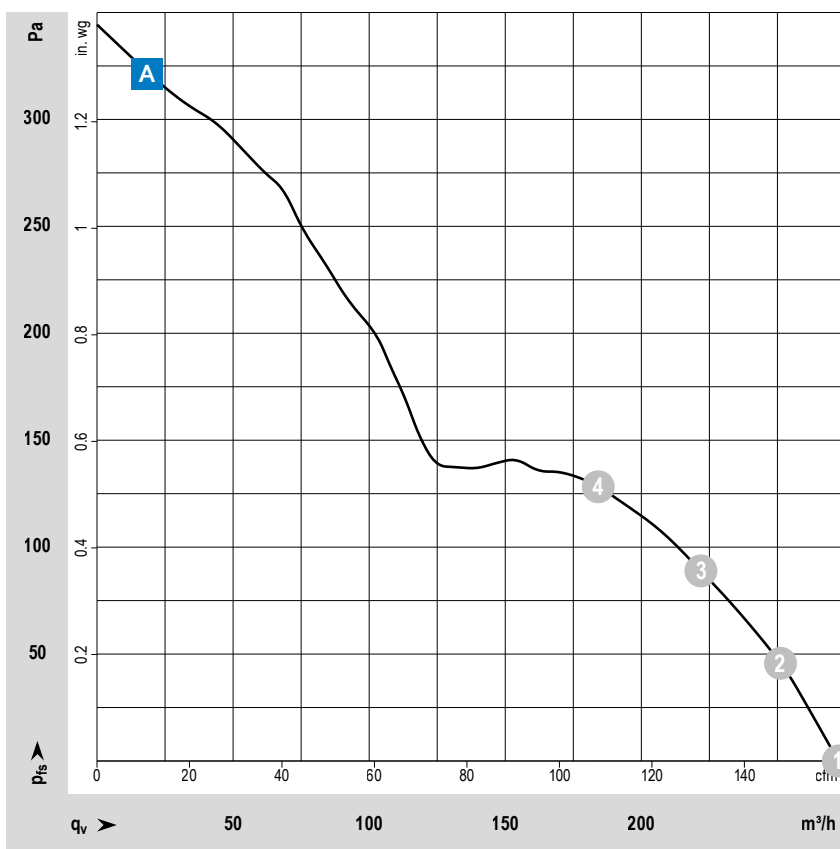
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

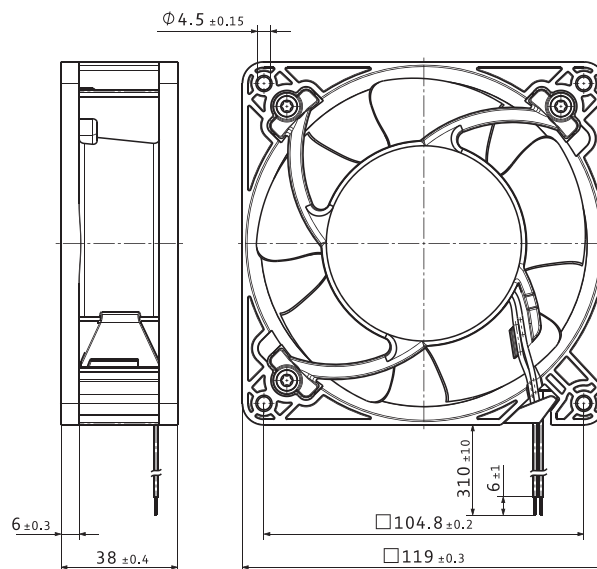
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)		°C	Hours
VKCF119AHJNS DV 4112 N	9694330031	12	9...15	A	①	273	161	6 000	20.8	7.4	61	-20...+65	70 000	117 500
					②	251	148	6 020	23.2	7.3				
					③	225	132	5 940	24.3	7.2				
					④	189	111	5 870	24.5	7.1				
VKCF119AJJNS DV 4114 N	9694330091	24	16...30	A	①	272	160	6 000	19.6	7.4	61	-20...+65	70 000	117 500
					②	252	148	6 010	21.5	7.3				
					③	222	131	5 860	21.7	7.2				
					④	184	108	5 800	21.8	7.1				
VKCF119AKJNS DV 4118 N	9694330151	48	36...60	A	①	276	162	6 000	20.1	7.4	61	-20...+65	70 000	117 500
					②	247	145	5 870	20.4	7.4				
					③	218	128	5 720	20.4	7.1				
					④	182	107	5 630	20.5	7.0				

Subject to changes.

## Technical drawing

Dimensions in mm



# VKCK119DKLSS

DC axial fan · max. 680 m<sup>3</sup>/h · □ 119 × 86 mm



## Material/Surface

- Housing: Combined (metal flange, plastic inlet nozzle)
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 48VDC; new single stage principle with highly innovative aerodynamic design; extraordinarily pressure-oriented with outstanding noise values
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: exposed wire
- Electrical protection class: III
- Weight: 980 g

## Approvals

- Approvals: VDE (EN62368), UL, CSA, CCC, EAC, CE, UKCA
- EMV (Immunity to interference/ Interference emission): Interference emission acc. to EN55032  
Immunity to interference acc. to EN61000-4

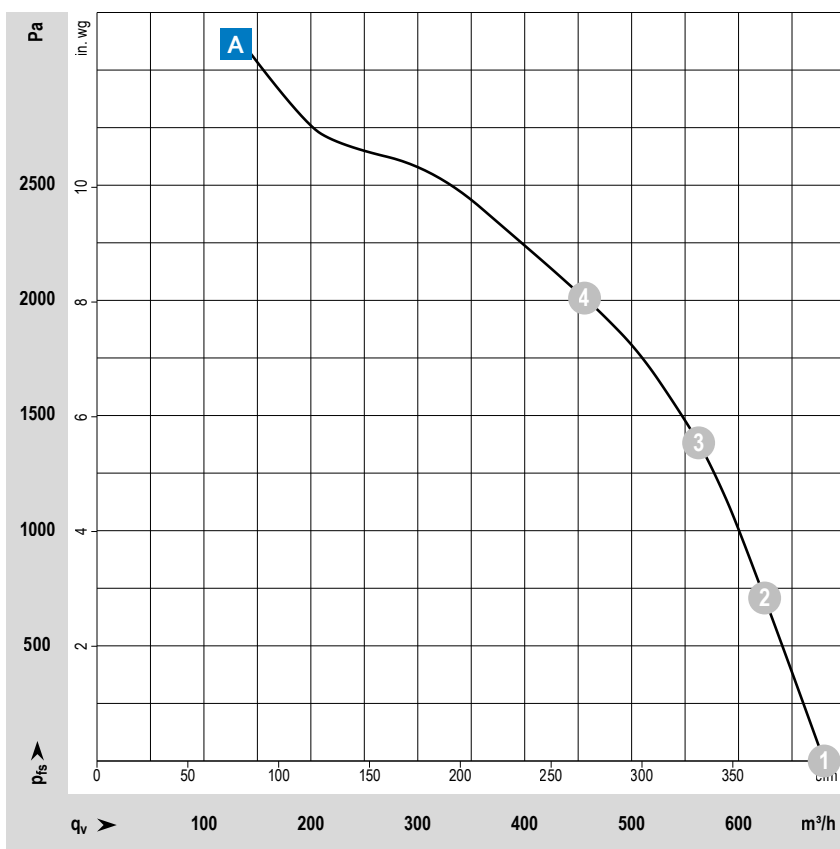
## Options

- Output signals: Tacho /2; Alarme (Go/NoGo + Trip Speed)
- Input signals: Multi-options input; I + T
- Extended protection against environmental conditions: Parylene
- Predictive Maintenance (FanCheck)
- Housing with grounding lug for screw M4 x 8 (Torx)

## Special features

- Ready for Restart (R4R) enables safe startup with external drive

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
For detailed information see <http://www.ebmpapst.com/general-conditions>

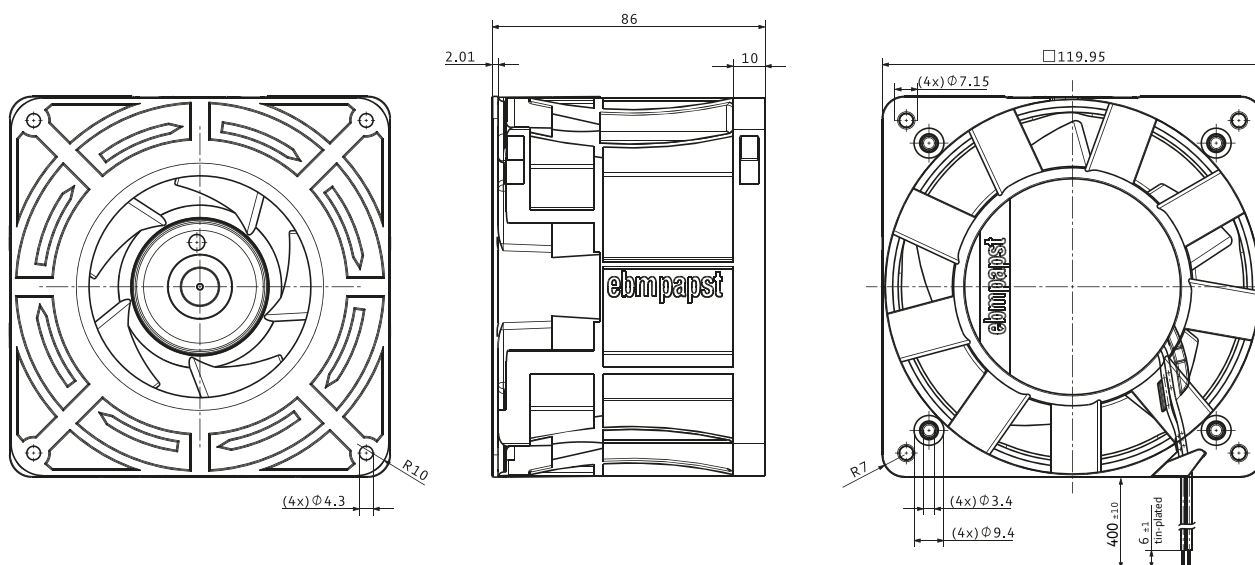


Typ	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10IFC</sub> (40 °C) s. p. 11
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VKCK119DKLSS DiaForce 120	8315100198	48	36...60	A	①	680	400	17 250	407.3	9.8	83.5	-25...+70	40 000	70 000
					②	625	368	17 250	463.5	9.5				
					③	563	331	17 150	500.0	9.2				
					④	456	268	16 900	500.0	9.1				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCF127Y...

DC axial fan · max. 337 m<sup>3</sup>/h · □ 127 x 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 310 g

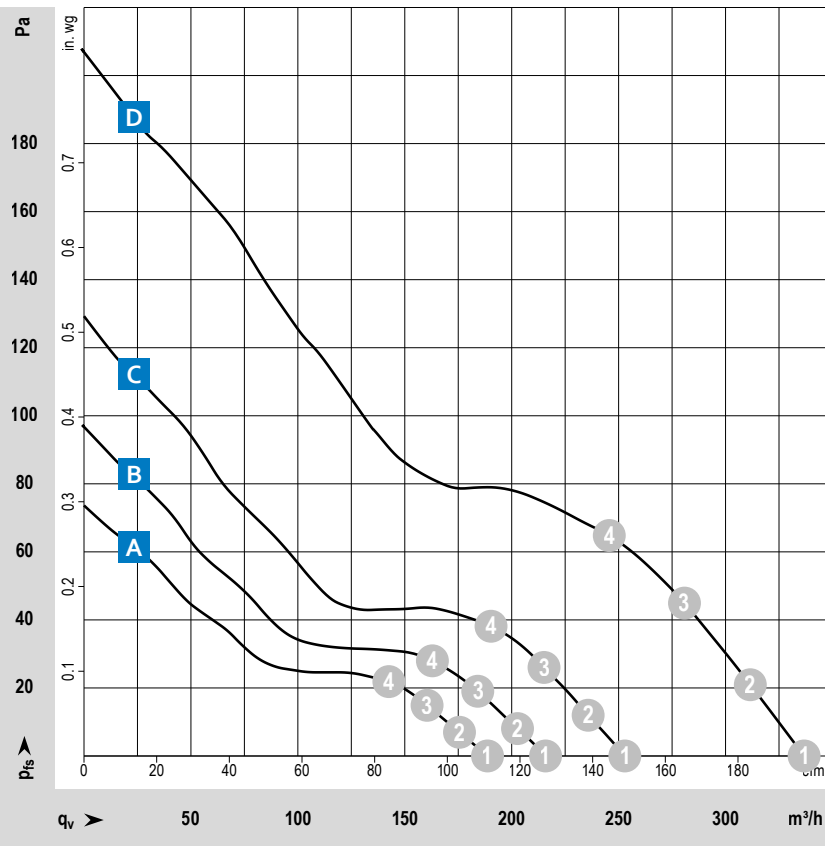
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

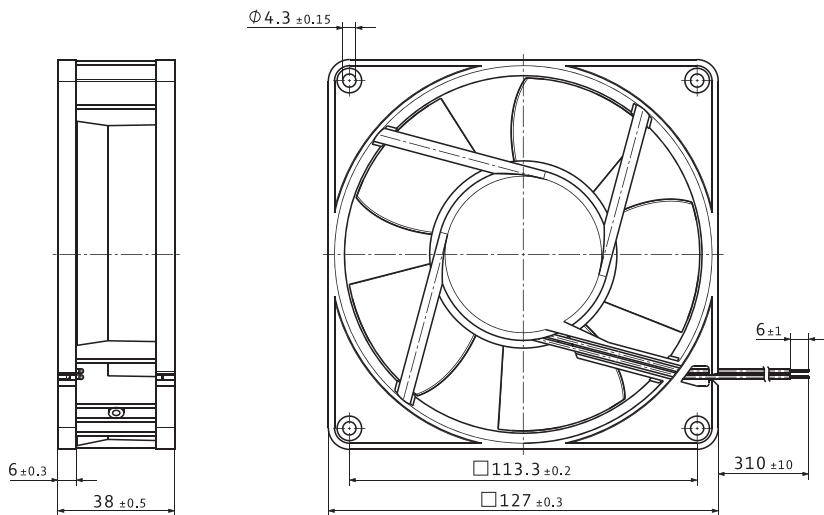
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWCF127YHJMS 5212 NN	9294310601	12	7...14	B	①	218	128	3 150	5.7	5.8	46	-20...+70	57 500	97 500
					②	205	121	3 110	5.9	5.7				
					③	185	109	3 050	6.2	5.6				
					④	165	97	3 000	6.3	5.6				
VWCF127YHJMS 5212 NH	9294310607	12	7...14	C	①	251	148	3 650	7.9	6.2	51	-20...+70	45 000	75 000
					②	235	138	3 590	8.2	6.1				
					③	213	125	3 520	8.5	6.0				
					④	189	111	3 460	8.8	6.0				
VWCF127YHJPS 5212 NHH	9694320202	12	9...15	D	①	336	198	4 900	18.1	6.8	58	-20...+65	45 000	75 000
					②	319	188	4 880	19.4	6.8				
					③	290	171	4 800	20.4	6.7				
					④	254	149	4 700	20.6	6.6				
VWCF127YJLS 5214 NM	9294310605	24	12...28	A	①	185	109	2 750	4.0	5.5	43	-20...+75	62 500	105 000
					②	173	102	2 710	4.2	5.4				
					③	158	93	2 670	4.3	5.3				
					④	140	82	2 630	4.4	5.3				
VWCF127YJMS 5214 NN	9294310602	24	12...28	B	①	217	128	3 150	5.3	5.8	46	-20...+75	57 500	97 500
					②	203	119	3 100	5.5	5.7				
					③	184	108	3 050	5.7	5.6				
					④	163	96	3 000	5.9	5.6				
VWCF127YJMS 5214 NH	9294310608	24	12...28	C	①	253	149	3 650	8.0	6.2	51	-20...+70	45 000	75 000
					②	236	139	3 590	8.3	6.1				
					③	215	127	3 520	8.6	6.0				
					④	190	112	3 470	8.9	6.0				
VWCF127YJPS 5214 NHH	9694320201	24	16...30	D	①	337	198	4 900	17.4	6.8	58	-20...+65	45 000	75 000
					②	312	184	4 780	17.5	6.8				
					③	281	165	4 650	17.6	6.7				
					④	246	145	4 560	17.8	6.6				
VWCF127YKJLS 5218 NM	9294310611	48	36...56	A	①	189	111	2 750	4.2	5.5	43	-20...+75	62 500	105 000
					②	176	104	2 710	4.3	5.4				
					③	161	95	2 670	4.5	5.3				
					④	143	84	2 620	4.6	5.3				
VWCF127YKJMS 5218 NH	9294310609	48	36...56	C	①	251	148	3 650	9.2	6.2	51	-20...+55	45 000	75 000
					②	236	139	3 600	9.8	6.1				
					③	214	126	3 550	10.8	6.0				
					④	189	111	3 490	11.5	6.0				
VWCF127YKJMS 5218 NHH	9694320203	48	36...60	D	①	335	197	4 900	17.1	6.8	58	-20...+65	45 000	75 000
					②	311	183	4 790	17.2	6.8				
					③	279	164	4 660	17.3	6.7				
					④	246	145	4 570	17.4	6.6				

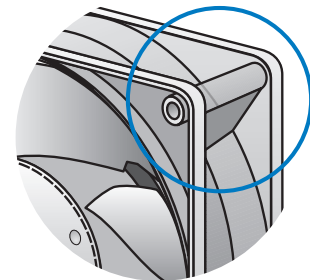
Subject to changes.

Technical drawing

Dimensions in mm



\* NHH fan types: fan housing with molded-in spacers.



# VKCF127A...

DC diagonal fan · max. 327 m<sup>3</sup>/h · □ 127 x 38 mm



## Material/Surface

- Housing: Plastic; optional metal + metal flange
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; diagonal design; compact and powerful; noise and efficiency optimized diagonal fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 415 g (with metal housing: 490 g)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

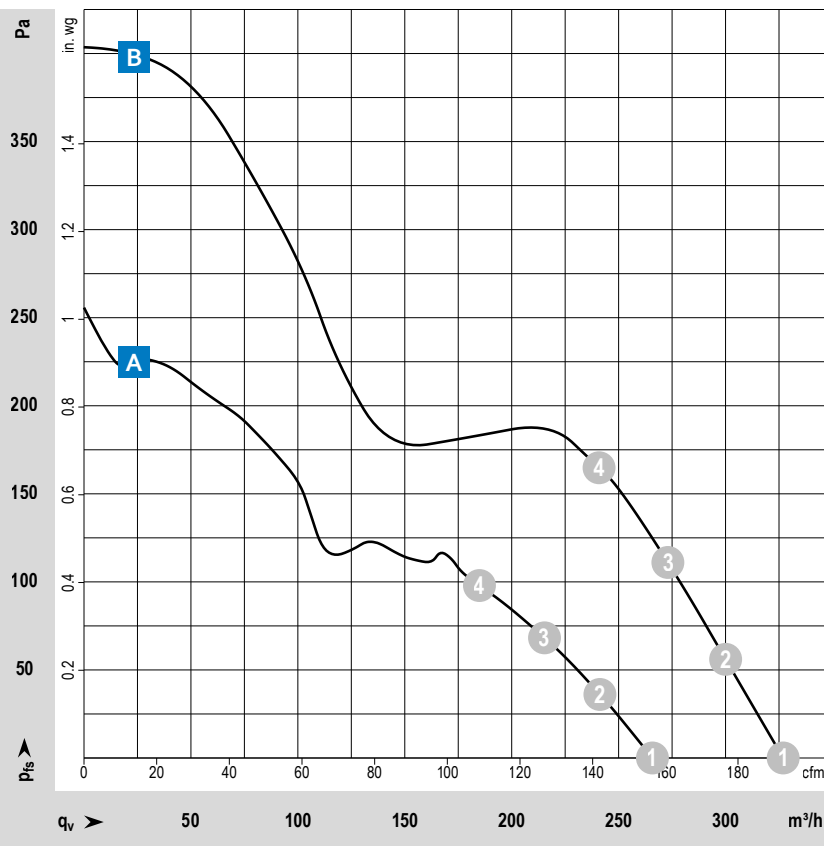
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

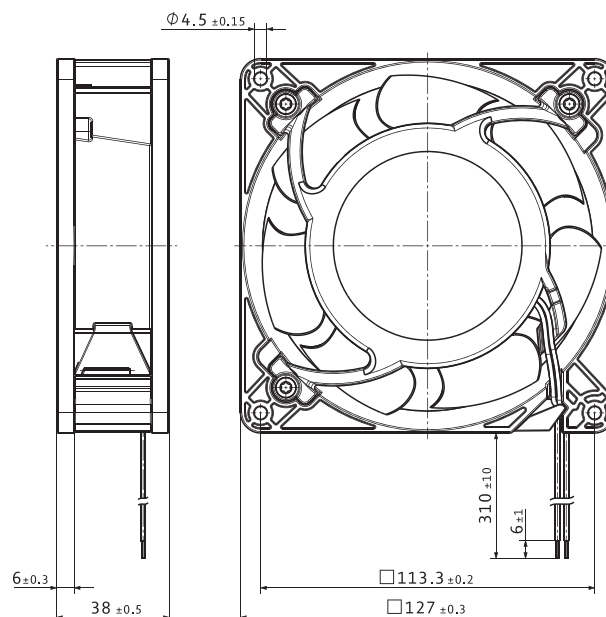
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VKCF127AHJNS DV 5212 N	9694340031	12	9...15	A	①	266	157	5 000	19.4	6.9	56	-20...+65	70 000	117 500
					②	241	142	4 860	19.7	6.9				
					③	215	127	4 740	19.9	6.8				
					④	185	109	4 680	20.1	6.7				
VKCF127AJJNS DV 5214 N	9694340091	24	16...30	A	①	265	156	5 000	18.1	6.9	56	-20...+65	70 000	117 500
					②	247	145	4 990	20.2	6.9				
					③	219	129	4 890	20.4	6.8				
					④	188	111	4 840	20.5	6.7				
VKCF127AKJNS DV 5218 N	9694340151	48	36...60	A	①	266	157	5 000	18.5	6.9	56	-20...+65	70 000	117 500
					②	238	140	4 870	18.6	6.9				
					③	213	125	4 770	18.7	6.8				
					④	184	108	4 710	18.7	6.7				
Fan type with speed signal and PWM control input as standard. Other versions on request														
VKCF127AJJNS DV 5214/2 HP	9694340219	24	16...30	B	①	327	192	6 000	34.2	7.4	62	-20...+65	62 500	105 000
					②	300	177	6 000	38.6	7.3				
					③	273	161	6 000	43.1	7.3				
					④	241	142	6 000	45.8	7.2				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCF135Y...

DC axial fan · max. 258 m<sup>3</sup>/h · □ 135 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 650 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

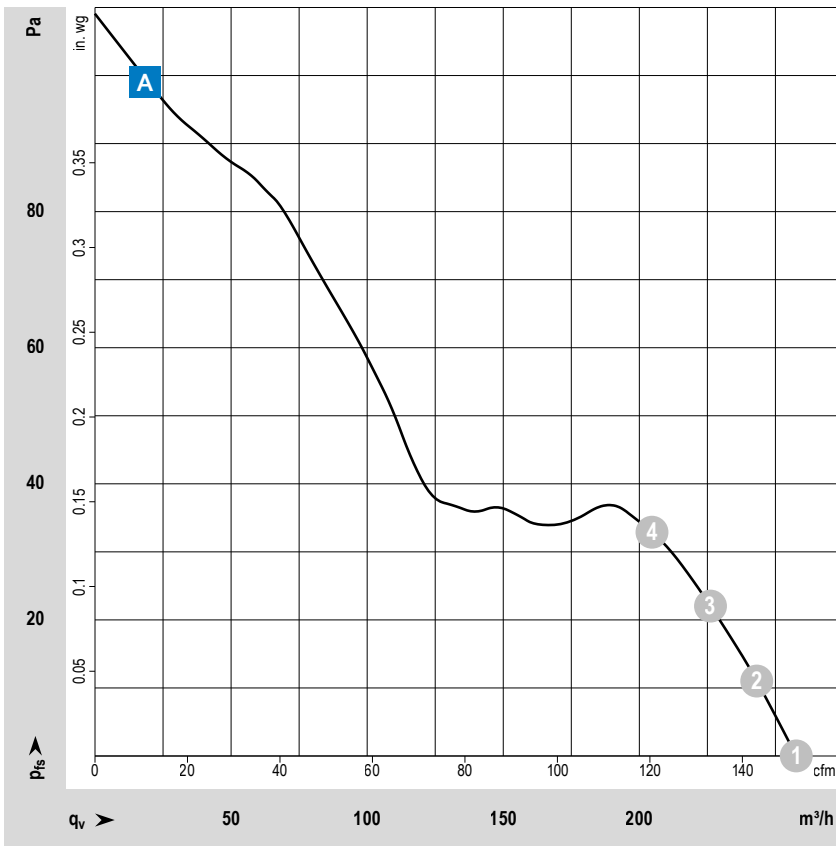
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)
- 48 V version incl. screws

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

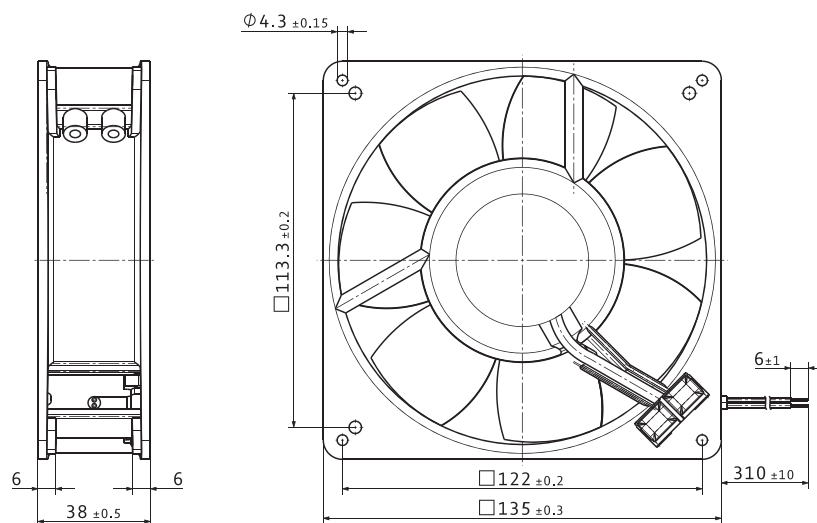
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCF135YHLNS 5112 N	9295410020	12	6...15	A	①	254	149	2900	9.1	6.2	48	-25...+72	80 000	135 000
					②	239	141	2870	9.4	6.1				
					③	222	131	2850	9.6	6.1				
					④	201	118	2840	9.7	6.1				
VWCF135YJLNS 5114 N	9295410021	24	12...30	A	①	255	150	2900	9.3	6.2	48	-25...+75	80 000	135 000
					②	241	142	2880	9.5	6.1				
					③	224	132	2860	9.7	6.1				
					④	203	119	2850	9.8	6.1				
VWCF135YKLNS 5118 N	9295410061	48	24...60	A	①	258	152	2900	9.4	6.2	48	-25...+75	80 000	135 000
					②	243	143	2880	9.6	6.1				
					③	226	133	2870	9.8	6.1				
					④	205	121	2860	10.0	6.1				

Subject to changes.

Technical drawing

Dimensions in mm



# VUCG140A...

DC axial fan · max. 338 m<sup>3</sup>/h · □ 140 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: intake over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 900 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

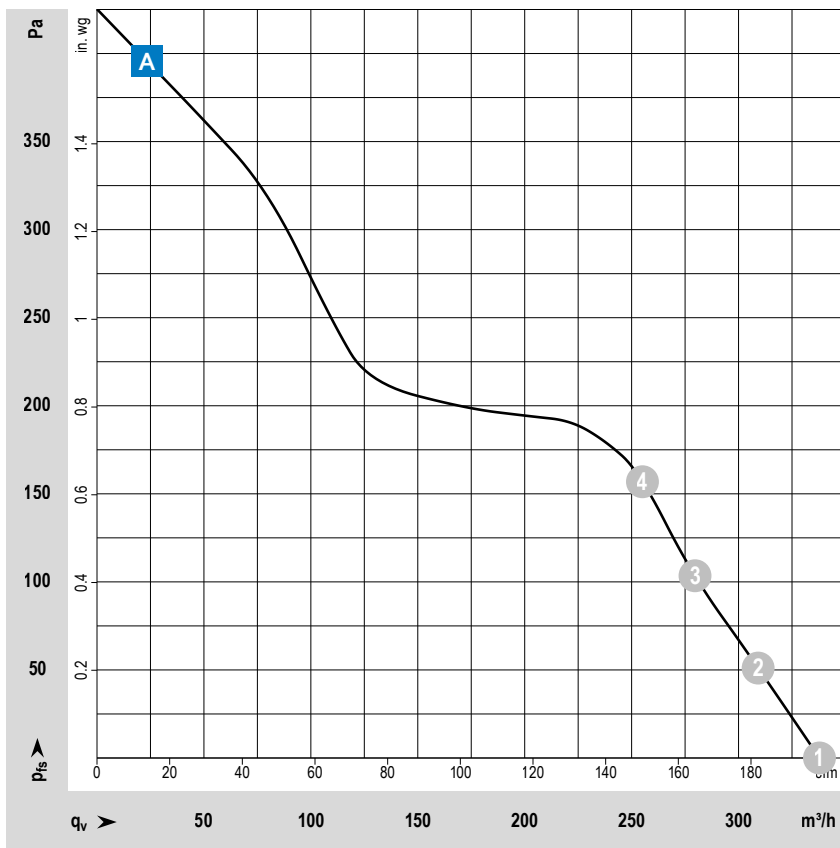
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

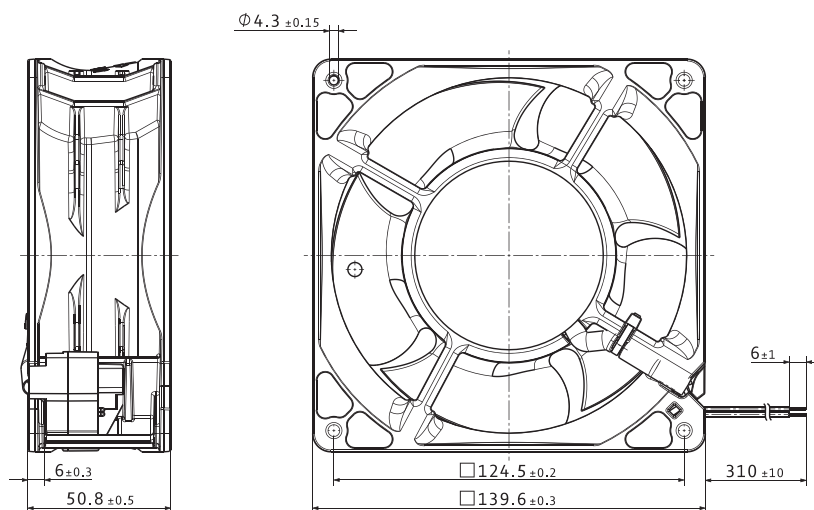


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VUCG140AJLPS 5314/2 HP	9695490181	24	16...28	A	①	338	199	5 000	27.3	7.7	64	-20...+65	77 500	130 000
					②	309	182	5 000	30.7	7.7				
					③	279	164	5 000	32.9	7.7				
					④	256	151	5 000	34.8	7.6				
VUCG140AKLPS 5318/2 HP	9695490182	48	36...72	A	①	332	195	5 000	28.1	7.7	64	-20...+65	77 500	130 000
					②	308	181	5 000	31.7	7.7				
					③	278	164	5 000	34.3	7.7				
					④	256	151	5 000	36.1	7.6				

Subject to changes.

## Technical drawing

Dimensions in mm



# VUCG140A...

DC axial fan · max. 636 m<sup>3</sup>/h · □ 140 × 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan with 3-phase TurboDrive (TD) motor
- Direction of air flow: intake over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 20 and AWG 22
- Electrical protection class: III
- Weight: 900 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

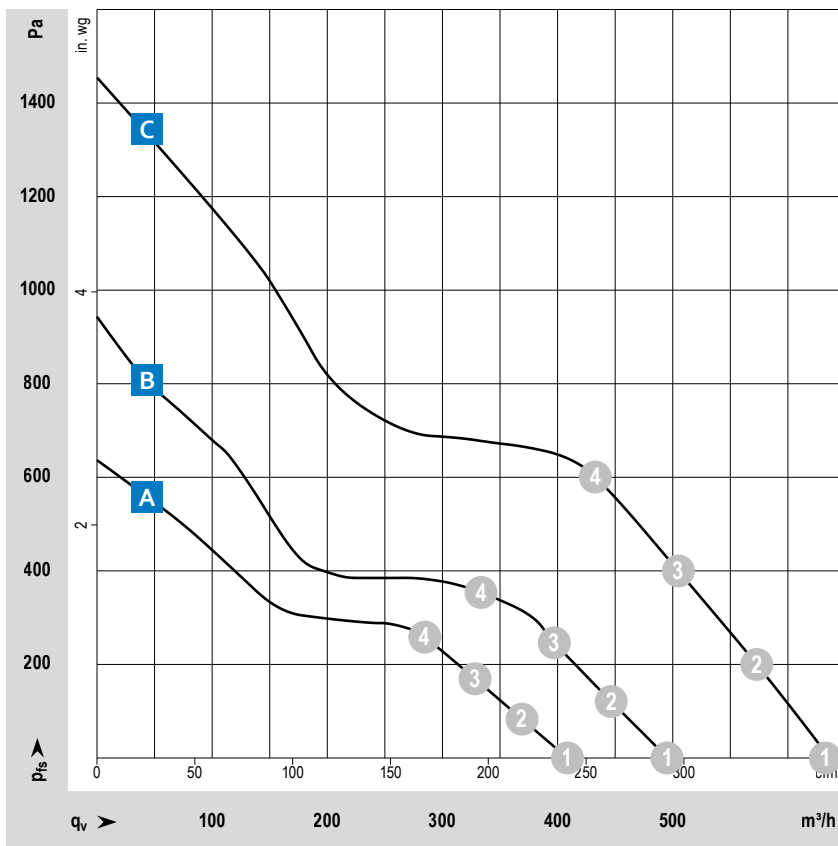
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

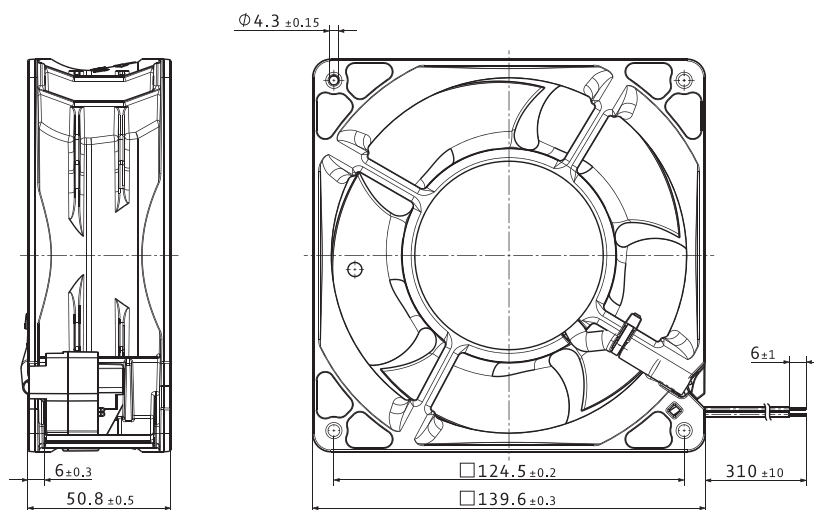
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> FC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VUCG140AHLOS 5312/2 TDHP	9295420501	12	8...16	A	①	406	239	6 000	44.7	8.4	70	-20...+70	70 000	117 500
					②	367	216	6 000	51.7	8.3				
					③	327	192	6 000	55.5	8.3				
					④	285	168	6 000	59.9	8.1				
VUCG140AJLOS 5314/2 TDHP	9295420502	24	16...36	A	①	409	241	6 000	43.9	8.4	70	-20...+70	70 000	117 500
					②	369	217	6 000	50.3	8.3				
					③	328	193	6 000	54.0	8.3				
					④	285	168	6 000	59.4	8.1				
VUCG140AJLOS 5314/2 TDHHP	9295420504	24	16...36	B	①	495	291	7 000	66.4	8.5	75	-20...+70	62 500	105 000
					②	447	263	7 000	77.5	8.5				
					③	397	234	7 000	86.3	8.5				
					④	334	197	7 000	94.6	8.4				
VUCG140AKLOS 5318/2 TDHP	9295420503	48	36...72	A	①	407	240	6 000	43.5	8.4	70	-20...+70	70 000	117 500
					②	370	218	6 000	50.0	8.3				
					③	333	196	6 000	54.7	8.3				
					④	287	169	5 980	58.9	8.1				
VUCG140AKLOS 5318/2 TDHHP	9295420505	48	36...72	B	①	477	281	7 000	65.5	8.5	75	-20...+70	62 500	105 000
					②	437	257	7 000	76.8	8.5				
					③	390	230	7 000	85.0	8.5				
					④	337	198	7 000	92.4	8.4				
VUCG140AKLSS 5318/2 TDH4P	9295420500	48	36...72	C	①	636	374	9 200	158.8	9.4	79	-20...+65	57 500	97 500
					②	573	337	9 200	181.2	9.4				
					③	505	297	9 200	199.0	9.4				
					④	434	255	9 170	215.8	9.3				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWEF150X...

DC axial fan · max. 357 m<sup>3</sup>/h · Ø 150 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 620 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

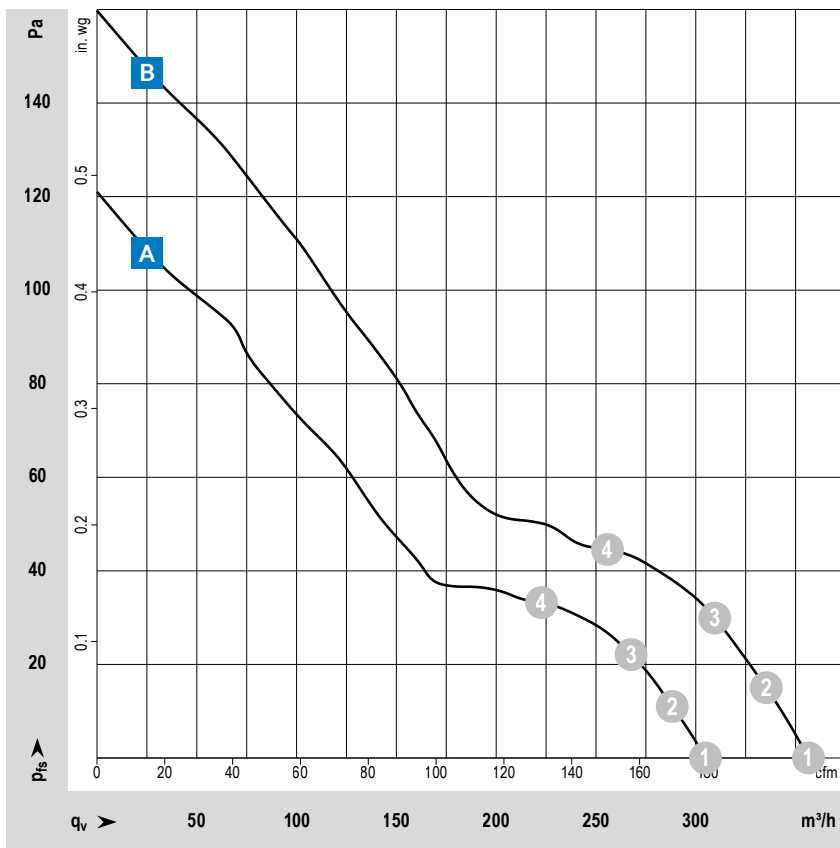
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

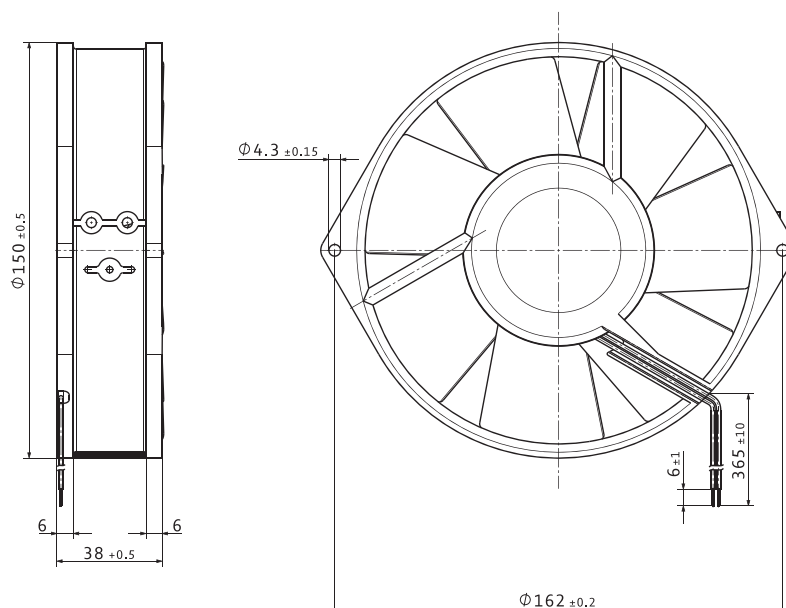
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10IFC</sub> (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWEF150XHLNS 7112 N	9295410120	12	6...15	A	①	305	180	2 850	10.6	6.4	53	-25...+75	80 000	135 000
					②	288	170	2 840	10.9	6.4				
					③	267	157	2 800	11.1	6.3				
					④	222	131	2 800	11.1	6.4				
VWEF150XJLNS 7114 N	9295410121	24	12...30	A	①	306	180	2 850	9.8	6.4	53	-25...+75	80 000	135 000
					②	290	171	2 830	10.1	6.4				
					③	270	159	2 800	10.3	6.3				
					④	223	131	2 800	10.3	6.4				
VWEF150XJLPS 7114 NH	9295410133	24	12...26.5	B	①	357	210	3 350	15.2	6.9	58	-25...+75	75 000	127 500
					②	335	197	3 310	15.5	6.8				
					③	310	182	3 290	15.8	6.8				
					④	257	151	3 290	15.7	6.9				
VWEF150XKLNS 7118 N	9295410160	48	24...60	A	①	298	175	2 850	9.9	6.4	53	-25...+75	80 000	135 000
					②	282	166	2 830	10.1	6.4				
					③	263	155	2 800	10.3	6.3				
					④	221	130	2 800	10.3	6.4				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWEH150X...

DC axial fan · max. 349 m<sup>3</sup>/h · Ø 150 x 55 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 725 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

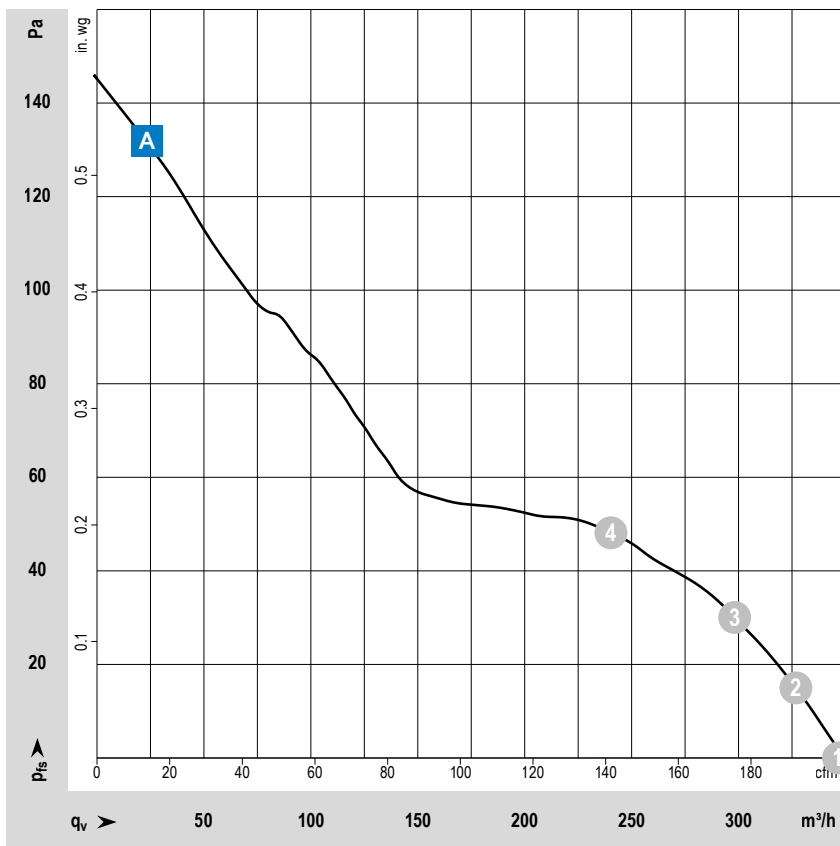
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

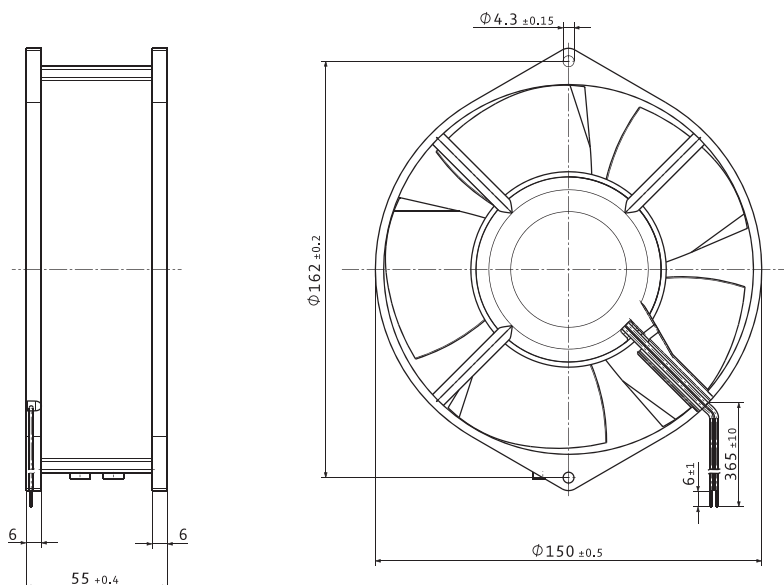
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWEH150XHLPS 7212 N	9295414400	12	6...15	A	①	349	205	3050	11.9	6.5	53	-25...+72	80 000	135 000
					②	327	192	3000	12.5	6.4				
					③	298	175	2950	13.1	6.4				
					④	240	141	2900	13.6	6.3				
VWEH150XJLPS 7214 N	9295414401	24	12...30	A	①	347	204	3 050	10.6	6.5	53	-25...+72	80 000	135 000
					②	325	191	3 020	11.2	6.4				
					③	297	175	2 970	11.7	6.4				
					④	240	141	2 920	12.2	6.3				
VWEH150XKLPS 7218 N	9295414402	48	24...60	A	①	346	204	3 050	10.4	6.5	53	-25...+72	80 000	135 000
					②	324	191	3 000	10.9	6.4				
					③	296	174	2 970	11.6	6.4				
					④	241	142	2 930	12.1	6.3				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWLG150X...

DC axial fan · max. 469 m<sup>3</sup>/h · 172 x 150 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 12, 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: On flat connectors 3 x 0,5 mm
- Electrical protection class: III
- Weight: 760 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

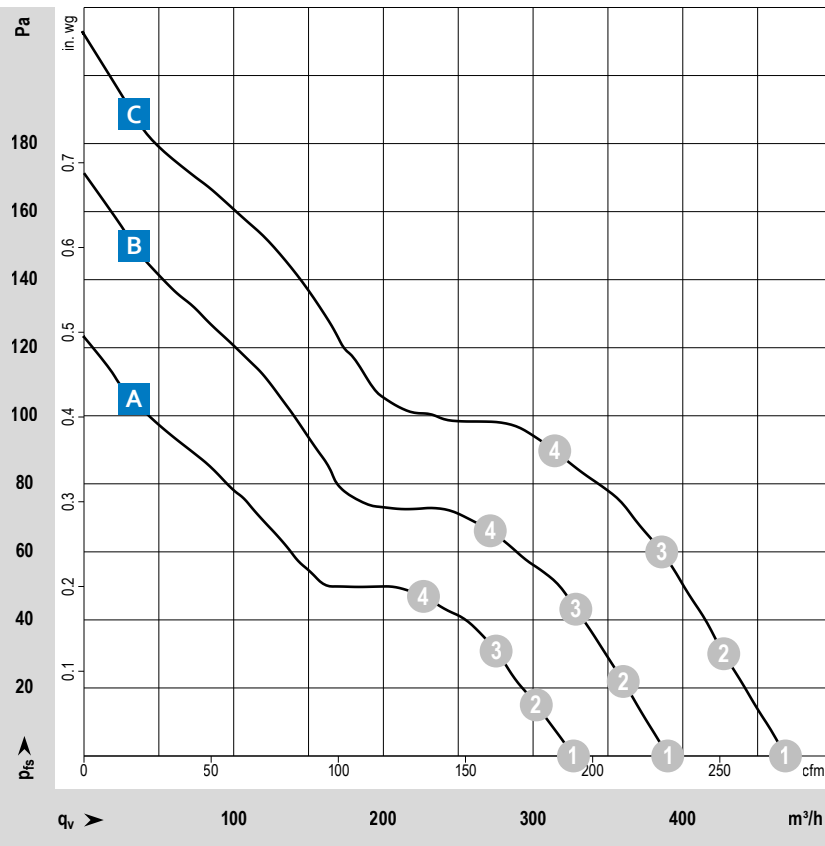
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54
- Version with wires

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

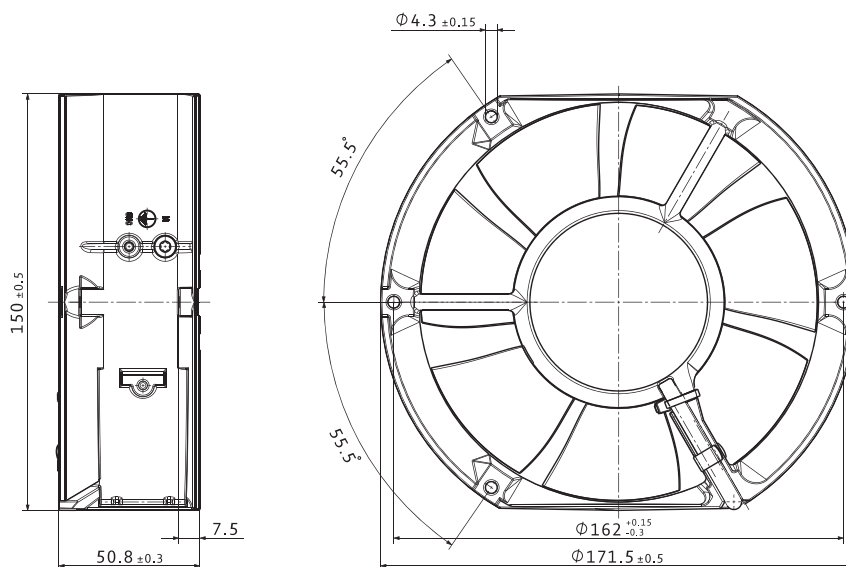


Type / Type old	Part number	Nominal voltage		Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> FC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm							
VWLG150XHLPS 6412 M	9295414359	12	8...15	A	①	327	192	2 850	10.4	6.4	52	-20...+72	80 000	135 000
					②	302	178	2 800	11.0	6.3				
					③	276	162	2 780	11.6	6.2				
					④	227	134	2 740	12.0	6.1				
VWLG150XJLPS 6424 M	9295414304	24	12...32	A	①	325	191	2 850	10.3	6.4	52	-20...+72	80 000	135 000
					②	303	178	2 810	10.8	6.3				
					③	276	162	2 770	11.4	6.2				
					④	228	134	2 750	11.8	6.1				
VWLG150XJLPS 6424	9295414301	24	12...28	B	①	390	230	3 400	16.2	6.8	57	-20...+72	75 000	127 500
					②	361	212	3 330	17.0	6.7				
					③	328	193	3 280	17.8	6.6				
					④	271	160	3 230	18.5	6.5				
VWLG150XJLOS 6424 H	9295414327	24	12...28	C	①	464	273	4 000	22.8	7.3	63	-20...+55	70 000	117 500
					②	425	250	3 880	23.4	7.2				
					③	383	225	3 770	23.9	7.0				
					④	313	184	3 680	24.6	6.9				
VWLG150XKLPS 6448	9295414300	48	28...60	B	①	389	229	3 400	14.1	6.8	57	-20...+72	75 000	127 500
					②	358	211	3 330	14.7	6.7				
					③	324	191	3 260	15.0	6.6				
					④	267	157	3 200	15.2	6.5				
VWLG150XKLOS 6448 H	9295414379	48	28...60	C	①	469	276	4 000	22.8	7.3	63	-20...+55	70 000	117 500
					②	427	251	3 900	23.6	7.2				
					③	386	227	3 800	24.4	7.0				
					④	315	185	3 730	25.2	6.9				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWLG150X...

DC axial fan · max. 906 m<sup>3</sup>/h · 172 x 150 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan with 3-phase TurboDrive (TD) motor
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 760 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

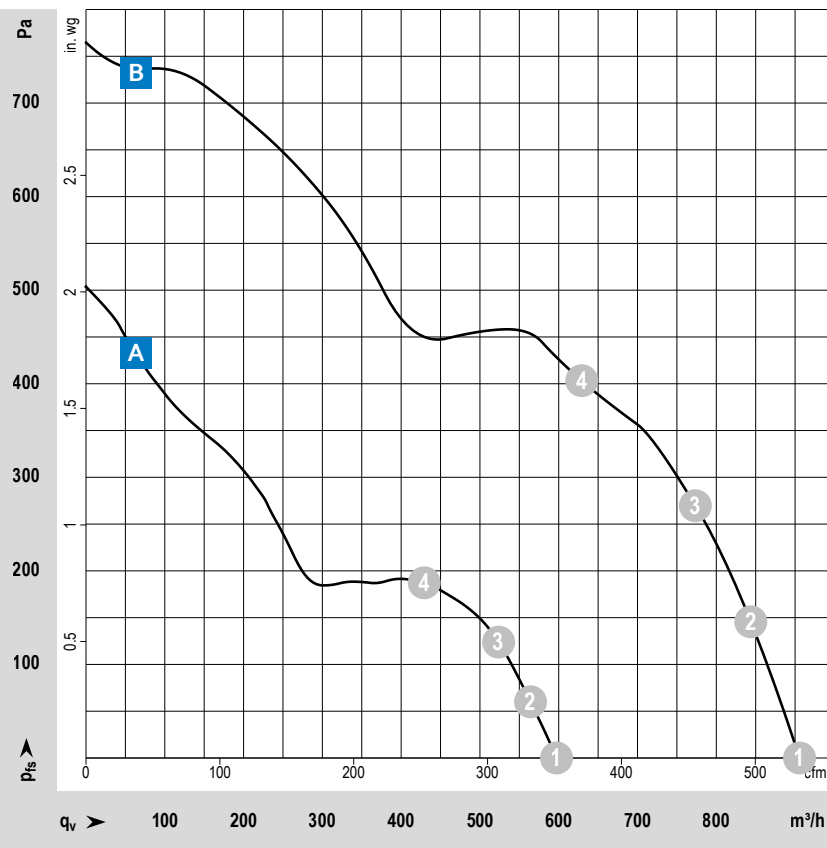
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (freibiasend)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWLG150XKLSZ 6448/2TDP-378	9295414378	48	36...72	A	①	597	351	5 100	50.4	8.0	65	-20...+60	70 000	117 500
					②	564	332	5 100	57.5	7.9				
					③	524	308	5 100	64.7	7.9				
					④	429	252	5 100	69.1	7.8				
VWLG150XKLUS 6448/2DHHP	9295414391	48	36...72	B	①	906	533	7 500	160.1	9.2	80	-20...+60	70 000	117 500
					②	848	499	7 500	183.3	9.1				
					③	774	456	7 380	195.0	8.8				
					④	629	370	7 230	200.0	8.6				

Subject to changes. \* Variant with extended voltage range available on request.

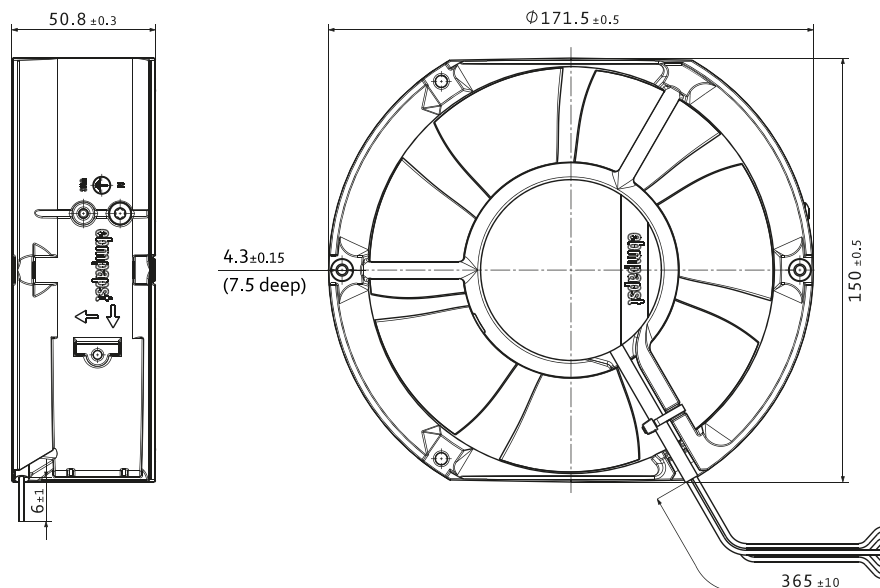
The fan types 6448 TD... and 6448 TDHH... are available in customer-specific, custom-developed variants only.

The figures indicated are technically feasible benchmark values. The fan types can be specially adapted to your application with signal outputs and control inputs.

For details of the technical possibilities, refer to the chapters on the sensor signal, alarm signal and control inputs beginning on page 178.

## Technical drawing

Dimensions in mm



# VKLG160X...

DC diagonal fan · max. 527 m<sup>3</sup>/h · 172 x 160 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; diagonal design; compact and powerful; noise and efficiency optimized diagonal fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 820 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

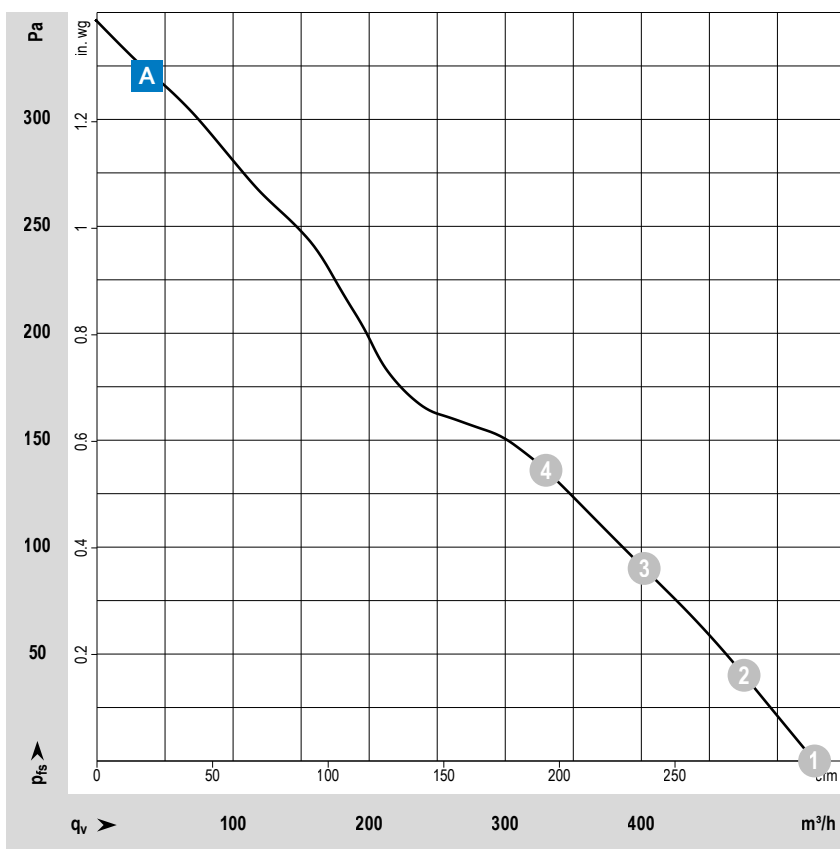
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

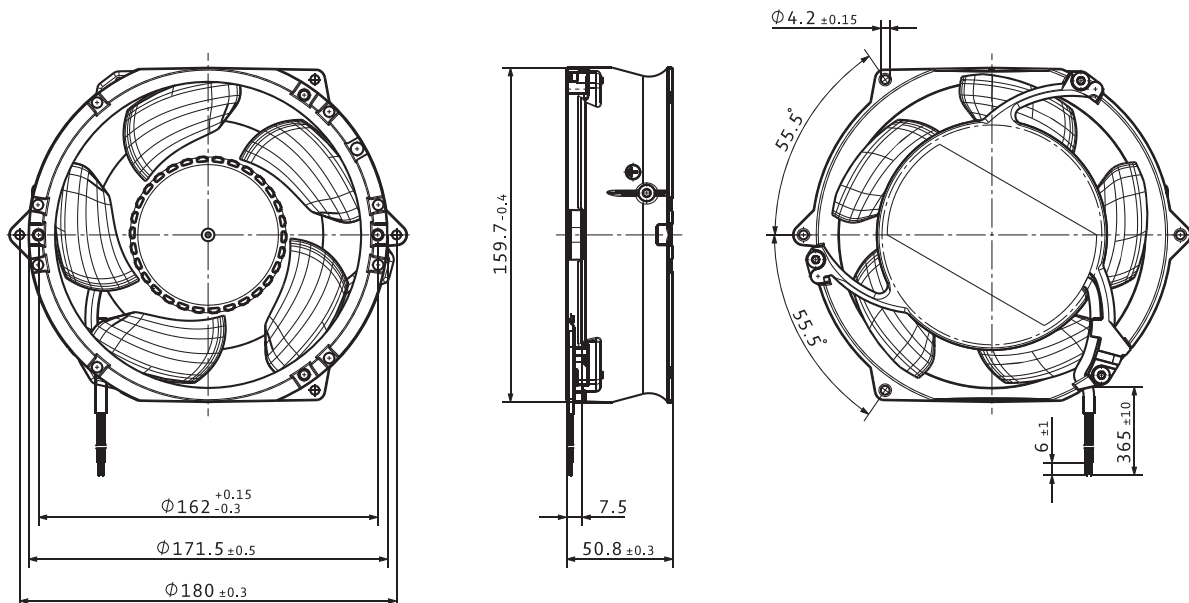
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VKLG160XJLRS DV 6424	9295414549	24	16...28	A	①	516	304	4 300	38.6	7.5	65	-20...+75	90 000	152 500
						469	276	4 180	39.4	7.4				
						397	234	4 050	40.1	7.3				
						326	192	4 040	40.1	7.2				
VKLG160XKLRS DV 6448/12	9295414538	48	28...60	A	①	527	310	4 300	38.9	7.5	65	-20...+75	90 000	152 500
						475	280	4 160	39.1	7.4				
						402	237	4 000	39.0	7.3				
						330	194	3 950	38.9	7.2				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWEG172PKLUS

DC axial fan · max. 1 025 m<sup>3</sup>/h · 172 x 160 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 48VDC; compact and powerful; noise and efficiency optimized axial fan with 3-phase TurboDrive (TD) motor of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 875 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

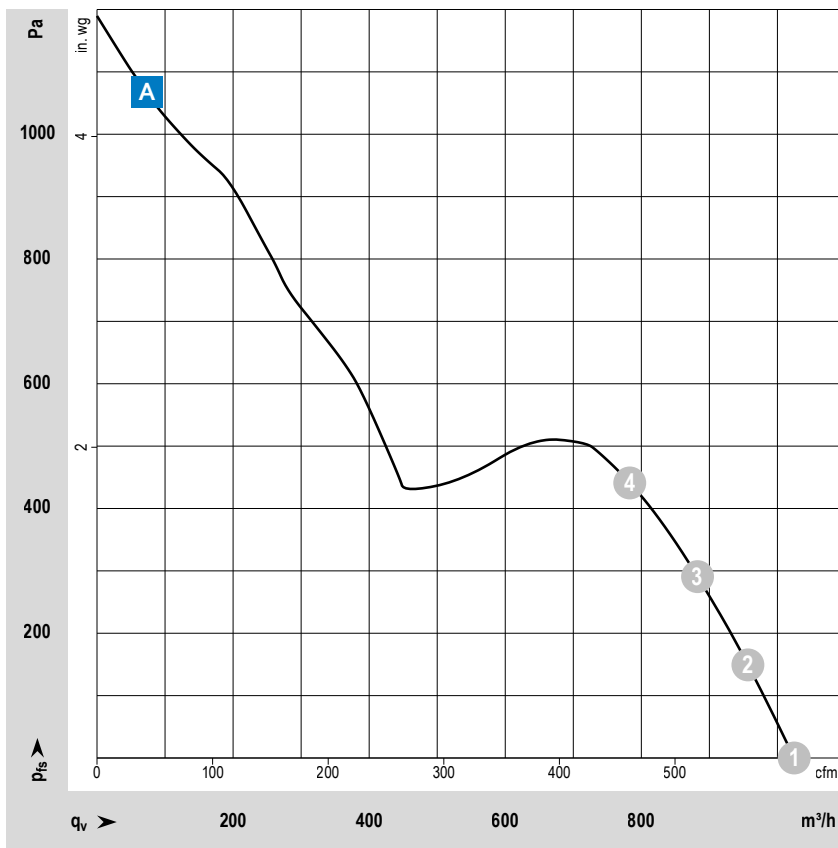
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input (Standard)
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

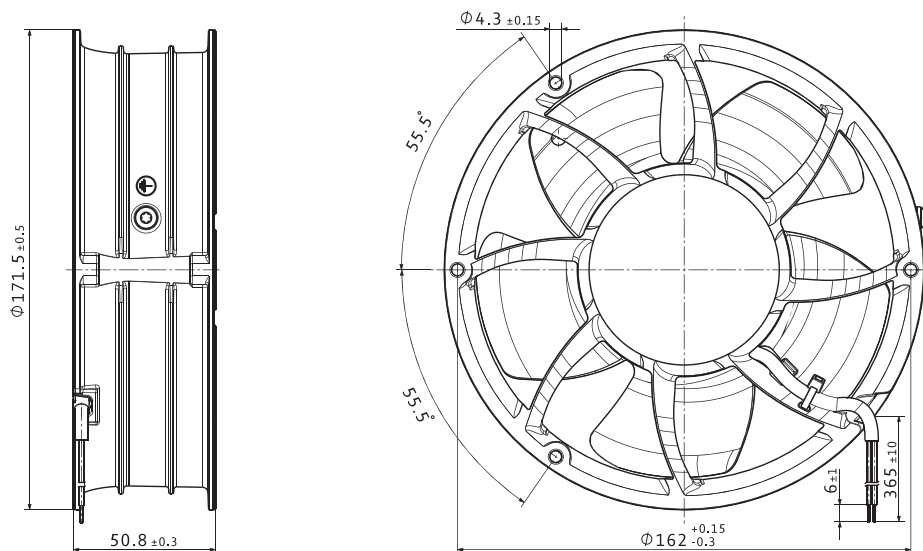
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWEG172PKLUS 6318 N/2 TDH3P-303	9295420303	48	36...72	A	①	1 025	603	7 500	171.2	8.7	76	-20...+70	60 000	102 500
					②	959	564	7 500	193.9	8.6				
					③	883	520	7 500	214.2	8.6				
					④	783	461	7 500	229.8	8.5				

Subject to changes.

Technical drawing

Dimensions in mm



# VWEG172X...

DC axial fan · max. 926 m<sup>3</sup>/h · 172 x 160 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan with 3-phase TurboDrive (TD) motor
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 18, Input and output signals AWG 22
- Electrical protection class: III
- Weight: 875 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

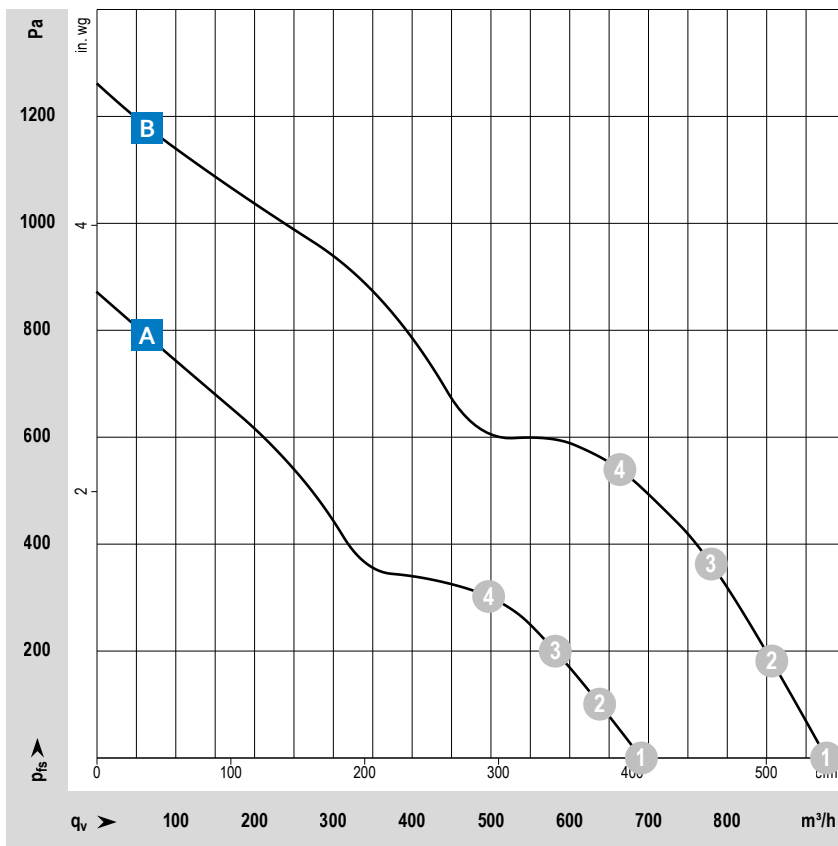
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input (Standard)
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

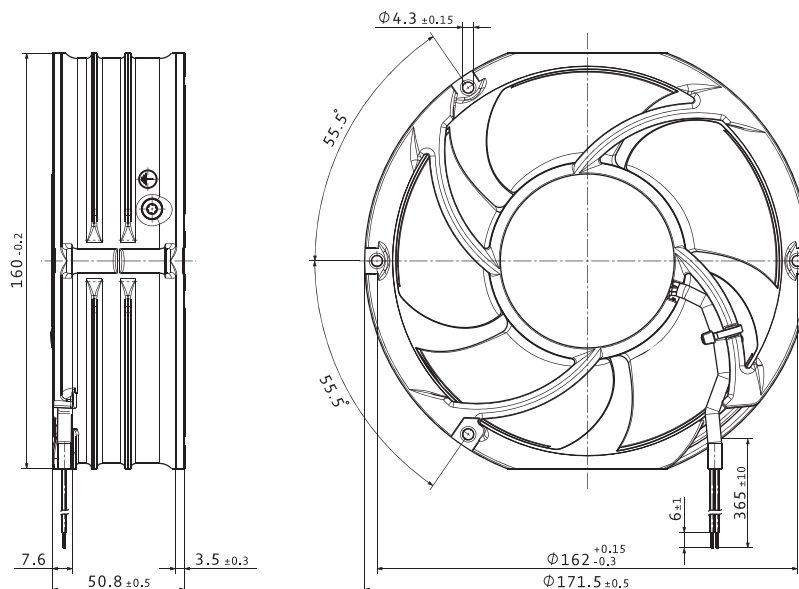


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWEG172XLSS 6314/2 TDHHP-015	9295420015	24	16...36	A	①	691	407	7 000	65.8	7.8	69	-20...+75	62 500	105 000
					②	639	376	6 960	82.8	8.0				
					③	582	343	6 960	98.1	8.1				
					④	497	293	6 960	114.7	8.3				
VWEG172XKLUS 6318/2 TDH4P-007	9295420007	48	36...72	B	①	926	545	9 200	147.0	8.8	75	-20...+75	52 500	87 500
					②	858	505	9 200	182.2	8.9				
					③	781	460	9 200	217.7	9.0				
					④	664	391	9 200	256.1	9.2				

Subject to changes.

Technical drawing

Dimensions in mm



# VWEG172P...

DC axial fan · max. 676 m<sup>3</sup>/h · Ø 172 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 22, Input and output signals AWG 24
- Electrical protection class: III
- Weight: 755 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

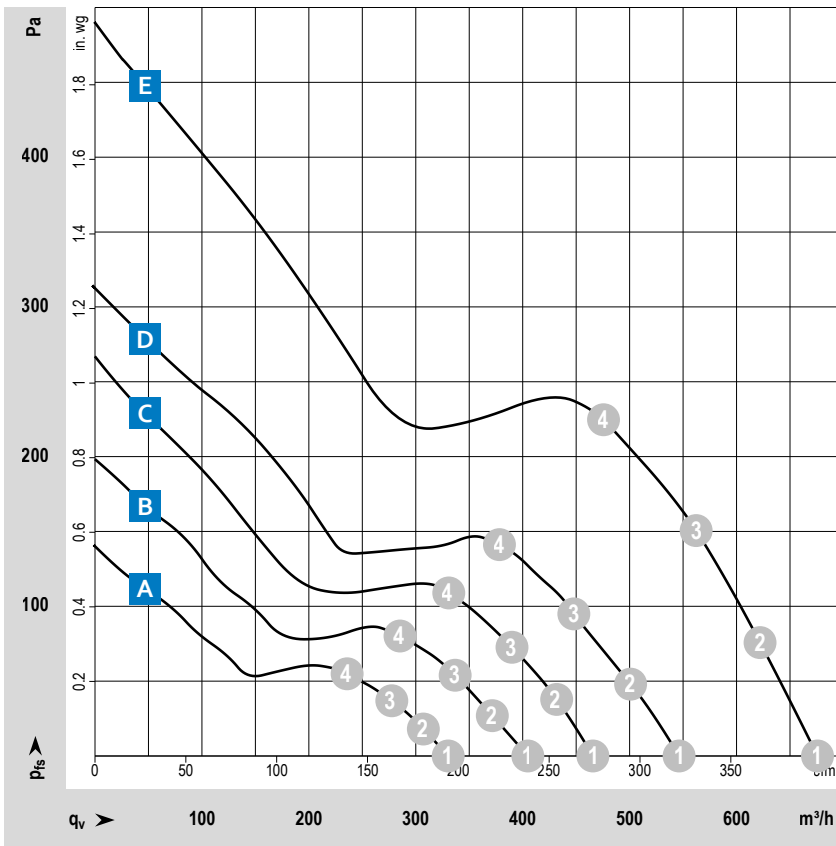
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input (Standard)
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

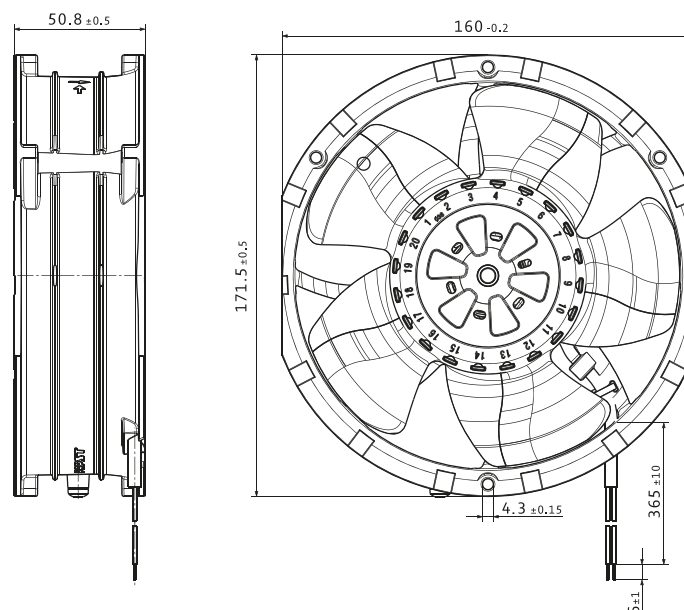
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow			Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. 11
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm						
VWEG172PJLPZ 6314 NM	9695480316	24	16...32	B	①	330	194	2 500	10.1	5.9	-	-20...+70	87 500	147 500
					②	307	181	2 500	10.8	5.9				
					③	278	164	2 500	11.7	5.8				
					④	236	139	2 500	12.4	5.7				
VWEG172PJLQZ 6314 NN	9695480317	24	16...32	C	①	405	238	3 000	15.3	6.4	-	-20...+70	85 000	142 500
					②	372	219	3 000	16.8	6.4				
					③	337	198	3 000	18.3	6.3				
					④	285	168	3 000	19.5	6.2				
VWEG172PJLQZ 6314 NH	9695480314	24	16...32	D	①	466	274	3 500	22.3	6.7	-	-20...+70	82 500	140 000
					②	433	255	3 500	25.0	6.7				
					③	391	230	3 500	27.5	6.6				
					④	331	195	3 500	28.7	6.5				
VWEG172PJLRS 6314 N/2 HHP	9695480300	24	16...32	E	①	547	322	4 000	34.1	7.2	-	-20...+70	80 000	135 000
					②	501	295	4 000	38.6	7.1				
					③	449	264	4 000	38.3	7.0				
					④	373	220	3 950	41.9	7.0				
VWEG172PKLRS 6318 N/2 HHP	9695480301	48	36...60	E	①	546	321	4 000	31.2	7.1	-	-20...+70	80 000	135 000
					②	501	295	4 000	35.1	7.1				
					③	448	264	4 000	38.9	7.0				
					④	378	222	4 000	41.3	7.0				
VWEG172PKLSS 6318 N/2 H3P	9695480304	48	36...60	F	①	676	398	5 000	56.6	7.7	-	-20...+70	77 500	130 000
					②	623	367	5 000	64.5	7.6				
					③	563	331	5 000	73.0	7.5				
					④	476	280	5 000	78.2	7.5				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWEG172P...

DC axial fan · max. 1 234 m<sup>3</sup>/h · Ø 172 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 48VDC; compact and powerful; noise and efficiency optimized axial fan with 3-phase TurboDrive (TD) motor of the S-Panther series
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 18, 20; Speed and alarm signal: AWG 22
- Electrical protection class: I or III (performance-related)
- Weight: 890 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

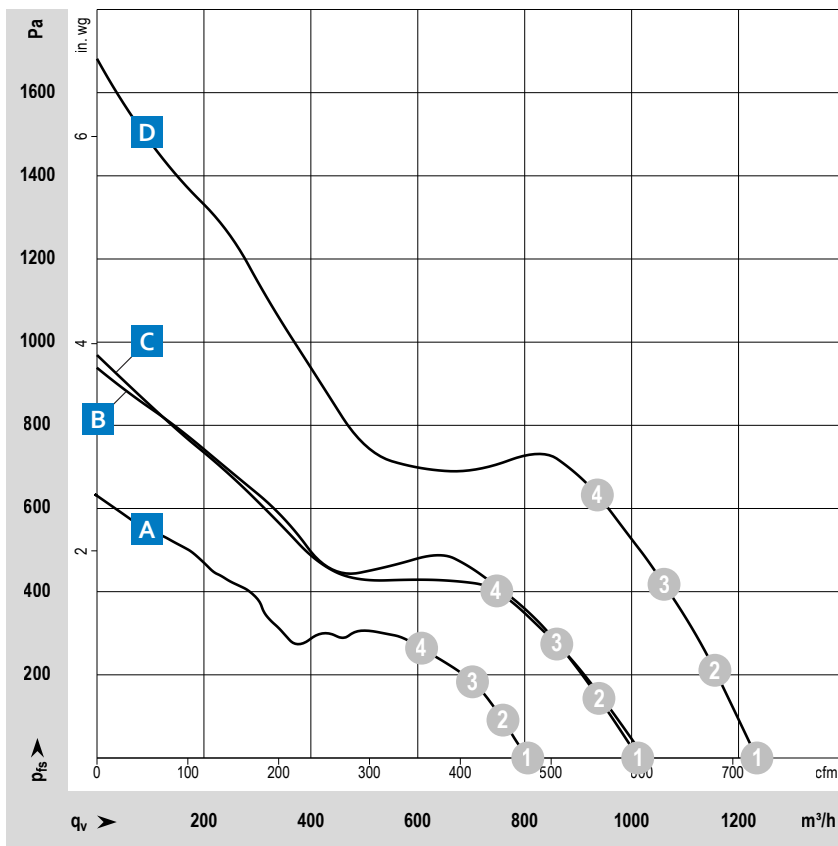
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input (Standard)
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

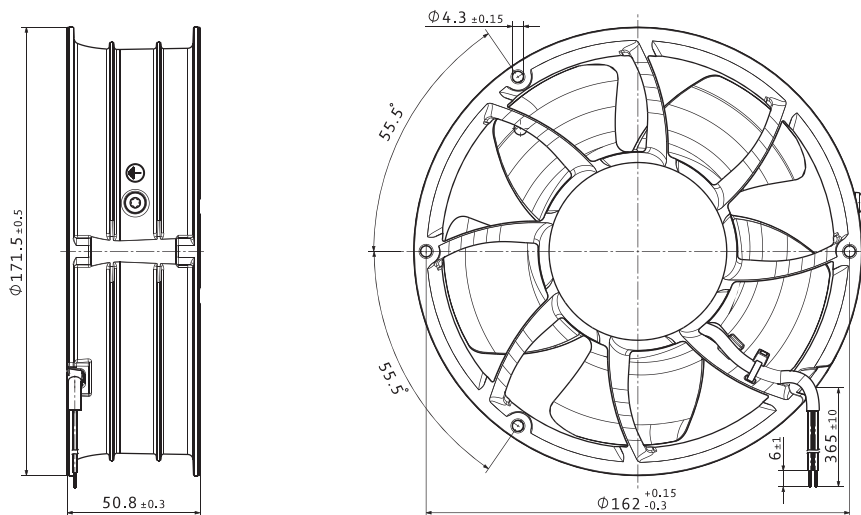
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWEG172PJLUS 6314 N/2 TDHHP	9295420300	24	16...36	B	①	1 013	596	7 200	154.0	8.6	75	-20...+70	62 500	105 000
					②	941	554	7 200	172.6	8.5				
					③	862	507	7 180	190.6	8.4				
					④	753	443	7 130	200.0	8.3				
VWEG172PKLTS 6318 N/2 TDHP	9295416300	48	36...60	A	①	806	474	6 000	91.5	8.1	71	-20...+70	75 000	127 500
					②	759	447	6 000	101.9	8.0				
					③	702	413	6 000	114.2	7.9				
					④	607	357	5 850	115.0	7.9				
VWEG172PKLUS 6318 N/2 TDH3P	9295420302	48	36...72	C	①	1 025	603	7 500	150.3	8.7	76	-20...+70	60 000	102 500
					②	946	557	7 450	168.4	8.6				
					③	860	506	7 400	181.3	8.6				
					④	748	440	7 360	189.5	8.5				
VWEG172PKLVS 6318 N/2 TDH4P	9295420305	48	36...72	D	①	1 234	726	9 000	286.0	9.3	80	-20...+65	45 000	75 000
					②	1 156	680	9 000	328.4	9.1				
					③	1 061	624	9 000	364.6	9.0				
					④	937	551	9 000	391.9	9.0				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWEG172X...

DC axial fan · max. 535 m<sup>3</sup>/h · Ø 172 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: I or III (performance-related)
- Weight: 825 g

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

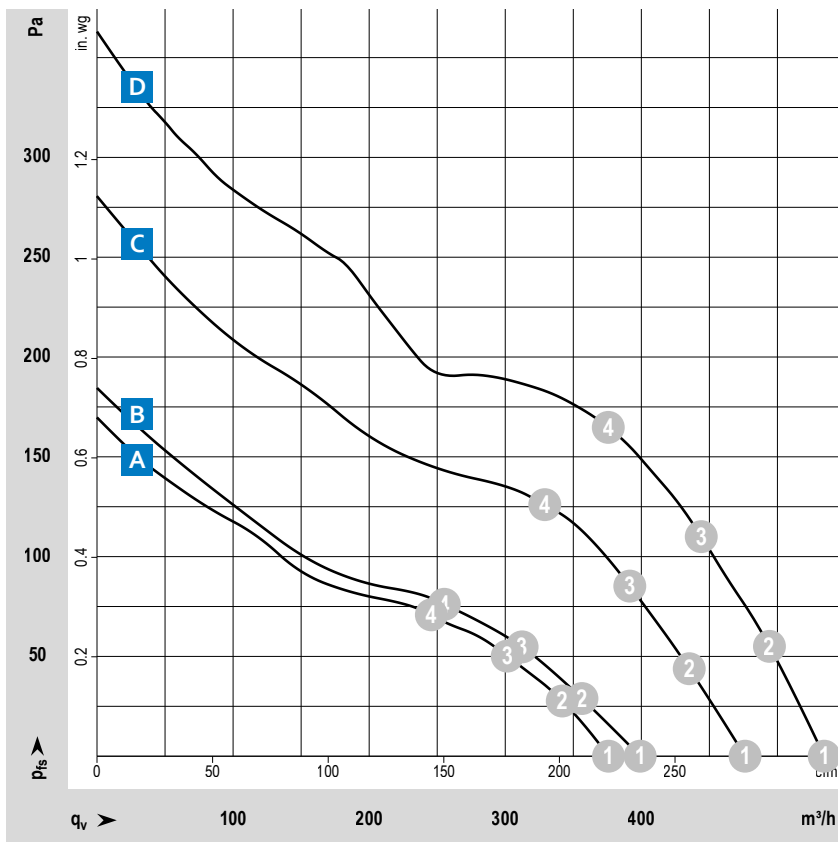
- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input (Standard)
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Housing with grounding lug for screw M4 x 8 (Torx)



### Measuring conditions

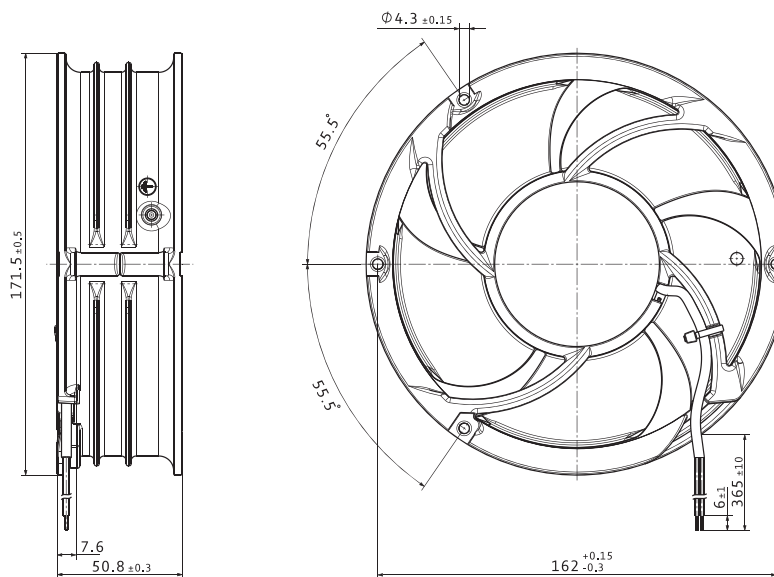
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWEG172XHLPS 6312/2 MP-204	9695480204	12	8...16	A	①	376	221	3 500	12.7	6.1	49	-20...+65	82 500	140 000
					②	344	202	3 500	15.0	6.0				
					③	301	177	3 400	15.9	5.9				
					④	246	145	3 300	17.5	6.0				
VWEG172XJLPS 6314/2 MP	9695480211	24	16...30	B	①	399	235	3 700	12.9	6.2	51	-20...+75	82 500	140 000
					②	357	210	3 600	14.2	6.0				
					③	313	184	3 500	15.2	5.9				
					④	255	150	3 400	16.0	6.0				
VWEG172XJLOS 6314/2 NP	9695480210	24	16...30	C	①	476	280	4 400	20.8	6.9	56	-20...+70	80 000	135 000
					②	436	257	4 390	24.9	6.8				
					③	391	230	4 390	28.6	6.6				
					④	329	194	4 360	31.7	6.7				
VWEG172XJLRS 6314/2 HP	9695480191	24	16...30	D	①	535	315	5 000	28.0	7.1	58	-20...+65	77 500	130 000
					②	494	291	4 980	34.2	7.0				
					③	443	261	4 980	40.0	6.9				
					④	373	220	4 940	45.3	6.9				
VWEG172XKLRS 6318/2 HP	9695480196	48	36...72	D	①	534	314	5 000	28.2	7.1	58	-20...+65	77 500	130 000
					②	494	291	4 990	33.4	7.0				
					③	444	261	4 980	39.6	6.9				
					④	376	221	4 970	45.2	6.9				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWEG172X...

DC axial fan · max. 940 m<sup>3</sup>/h · Ø 172 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan with 3-phase TurboDrive (TD) motor
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 18, Input and output signals AWG 22
- Electrical protection class: I or III (performance-related)
- Weight: 875 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

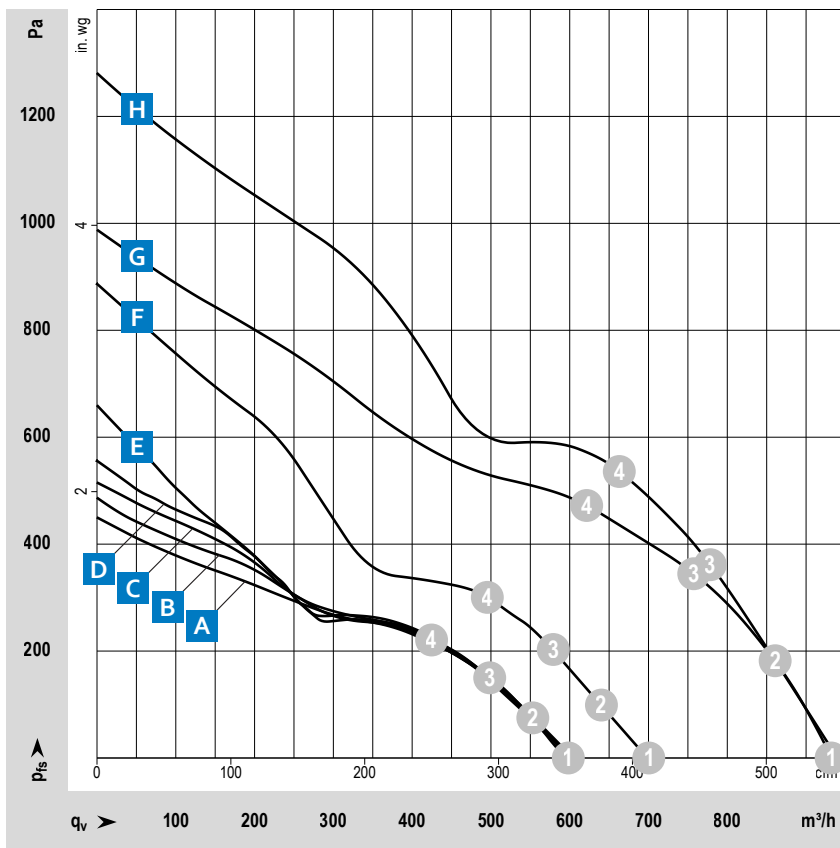
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input (Standard)
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>



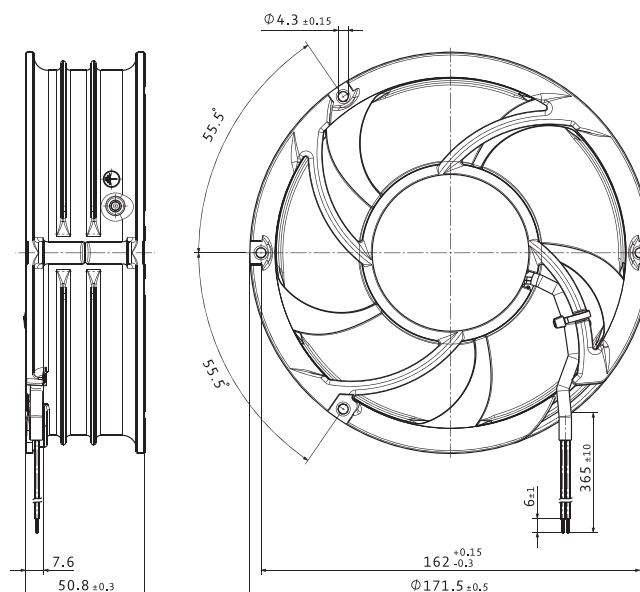
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWEG172XHLPS 6312/2 TDHP	9295420022	12	8...16	C	①	604	356	5 500	41.1	7.8	60	-20...+70	75 000	127 500
					②	554	326	5 472	49.8	7.7				
					③	500	294	5 463	58.8	7.6				
					④	423	249	5 461	68.4	7.7				
VWEG172XJLPS 6314/2 TDHP-298	9295414298	24	16...30	B	①	603	355	5 500	43.0	7.8	60	-20...+65	75 000	127 500
					②	553	325	5 494	52.9	7.7				
					③	501	295	5 501	62.9	7.6				
					④	425	250	5 503	72.9	7.6				
VWEG172XJLOS 6314/2 TDHP	9295420004	24	16...36	D	①	599	353	5 500	39.3	7.5	60	-20...+75	75 000	127 500
					②	552	325	5 501	48.3	7.4				
					③	500	294	5 487	56.4	7.4				
					④	428	252	5 495	65.5	7.3				
VWEG172XJLRS 6314/2 TDHHP	9295420026	24	16...36	F	①	699	411	7 000	66.9	8.1	69	-20...+75	62 500	105 000
					②	640	377	6 985	81.0	8.2				
					③	581	342	6 982	95.2	8.3				
					④	497	293	6 991	110.5	8.4				
VWEG172XKLRS 6314/2 TDH4P	9295420011	24	16...36	G	①	932	549	9 221	152.0	8.8	75	-20...+75	52 500	87 500
					②	861	507	9 190	193.7	9.0				
					③	760	447	9 036	215.0	9.0				
					④	622	366	8 658	215.0	9.0				
VWEG172XJLPS 6318/2 TDHP-299	9295414299	48	36...60	A	①	602	354	5 499	43.5	7.8	60	-20...+65	75 000	127 500
					②	550	324	5 487	53.3	7.7				
					③	498	293	5 475	62.0	7.6				
					④	422	248	5 465	73.0	7.6				
VWEG172XJLOS 6318/2 TDHP	9295420005	48	36...72	E	①	595	350	5 501	40.2	7.5	60	-20...+75	75 000	127 500
					②	551	324	5 506	47.8	7.4				
					③	498	293	5 493	56.0	7.4				
					④	425	250	5 495	64.8	7.3				
VWEG172XJLRS 6318/2 TDHHP	9295420003	48	36...72	F	①	691	407	7 000	68.5	8.0	69	-20...+75	62 500	105 000
					②	639	376	7 001	82.9	8.1				
					③	582	343	7 000	96.8	8.2				
					④	501	295	7 012	112.1	8.3				
VWEG172XKLRS 6318/2 TDH4P	9295420021	48	36...72	H	①	940	553	9 200	148.2	8.8	75	-20...+75	52 500	87 500
					②	861	507	9 150	181.2	8.9				
					③	780	459	9 154	213.4	9.0				
					④	663	390	9 158	249.0	9.2				

Subject to changes.

DC axial fans

## Technical drawing

Dimensions in mm



# VKEG178X...

DC diagonal fan · max. 1 049 m<sup>3</sup>/h · Ø 172 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; diagonal design; compact and powerful; noise and efficiency optimized diagonal fan with 3-phase TurboDrive (TD) motor
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 18, Input and output signals AWG 22
- Electrical protection class: I or III (performance-related)
- Weight: 960 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

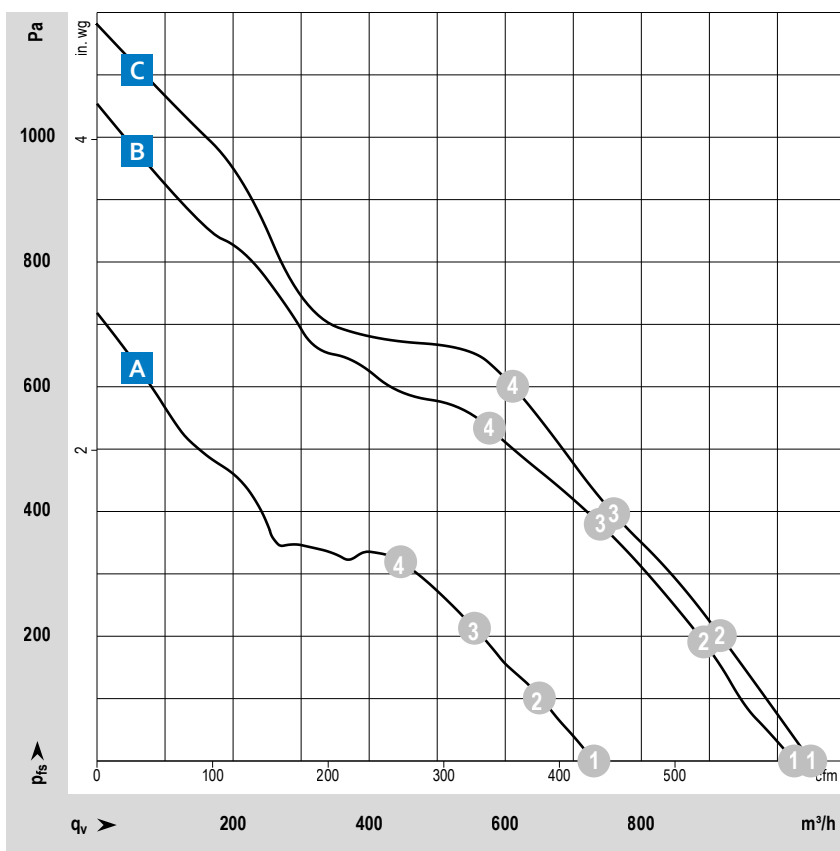
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input (Standard)
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

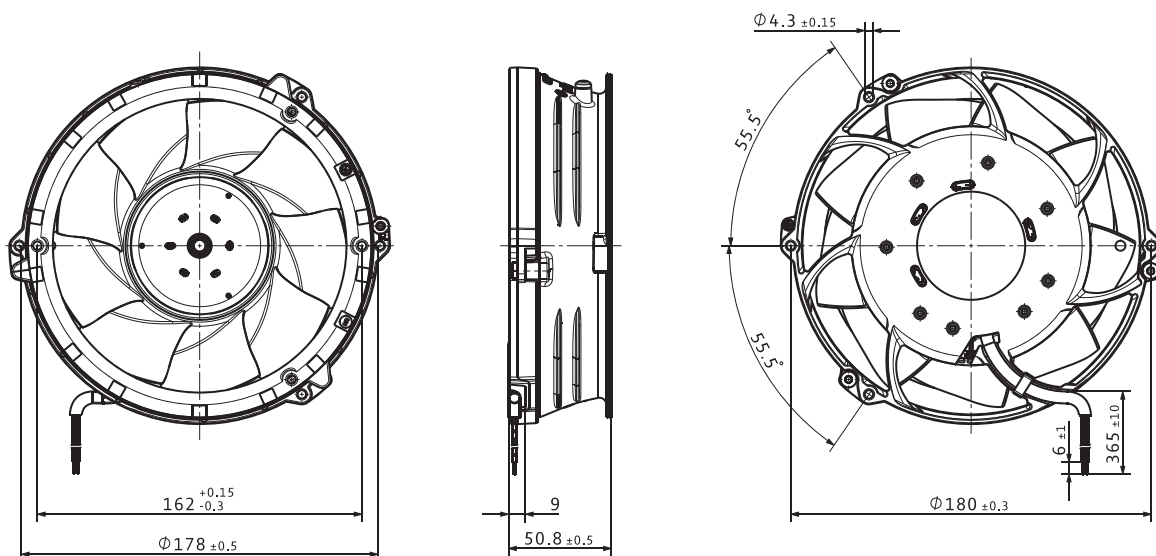
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VKEG178XJLTS DV 6314/2 TDHHP	9295420103	24	16...36	B	①	730	430	4 850	109.0	8.3	72	-20...+60	75 000	127 500
					②	650	383	4 770	114.3	8.1				
					③	555	327	4 760	119.6	8.0				
					④	446	263	4 800	118.0	8.0				
					⑤									
VKEG178XKLUS DV 6318/2 TDH4P	9295416100	48	36...72	C	①	1 025	603	6 500	253.4	9.2	77	-20...+65	50 000	85 000
					②	892	525	6 330	257.2	9.0				
					③	740	436	6 280	265.1	8.9				
					④	577	340	6 350	255.7	8.9				
					⑤									
VKEG178XKLVS DV 6318/2 TDH5P*	9295420100	48	36...72	D	①	1 049	617	6 800	293.7	9.3	79	-20...+65	40 000	67 500
					②	916	539	6 600	292.2	9.2				
					③	758	446	6 560	291.2	9.1				
					④	611	360	6 720	294.3	9.0				
					⑤									

Subject to changes.  
\* Rotor protrusion a = 3mm

## Technical drawing

Dimensions in mm



# VWLG150K...

DC axial fan · max. 652 m<sup>3</sup>/h · 172 x 150 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan of the AxiForce series
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 22 (48VDC), AWG 20 (24VDC), Input and output signals AWG 22
- Electrical protection class: 48V: 1; 24V: 3
- Weight: 860 g

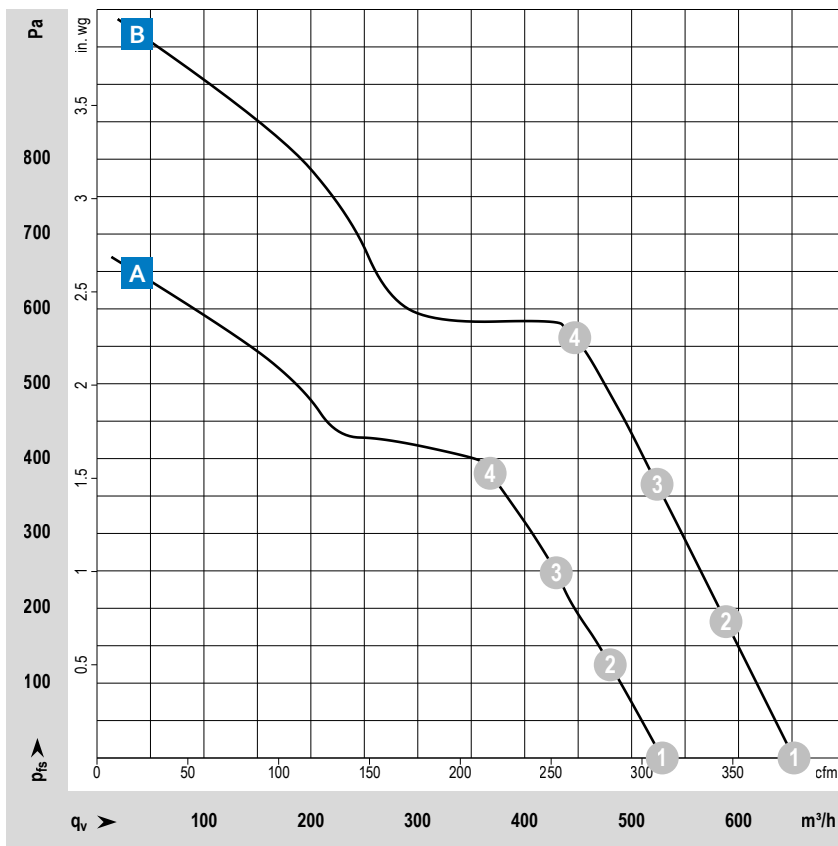
from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)
- optional: DIN EN 60079-7, Group IIA, T3

## Options

- Output signals: Speed signal, Alarm
- Input signals: PWM, Analog, O, Temperature sensor
- Extended protection against environmental conditions: up to IP68



### Measuring conditions

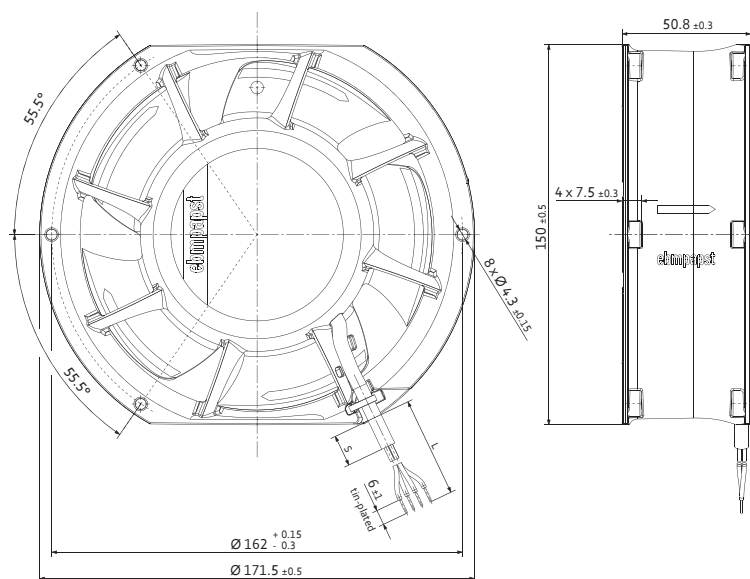
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWLG150JLRS AxiForce 172	8315100157	24	16...30	A	①	529	311	6 800	57.5	8.1	71	-20...+70	84 000	141 750
					②	481	283	6 800	72.5	8.1				
					③	430	253	6 800	85.2	7.8				
					④	368	217	6 800	96.3	7.9				
VWLG150KLSS AxiForce 172	8315100059	48	36...72	B	①	652	384	8 300	96.90	8.2	70	-20...+70	70 000	117 500
					②	588	346	8 300	123.4	8.2				
					③	524	308	8 300	146.3	8.1				
					④	447	263	8 300	164.4	8.4				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWLG200F...

DC axial fan · max. 1 220 m<sup>3</sup>/h · 220 x 200 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; low-profile, noise and efficiency optimized axial fan with 3-phase TurboDrive (TD) motor
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 1 kg

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

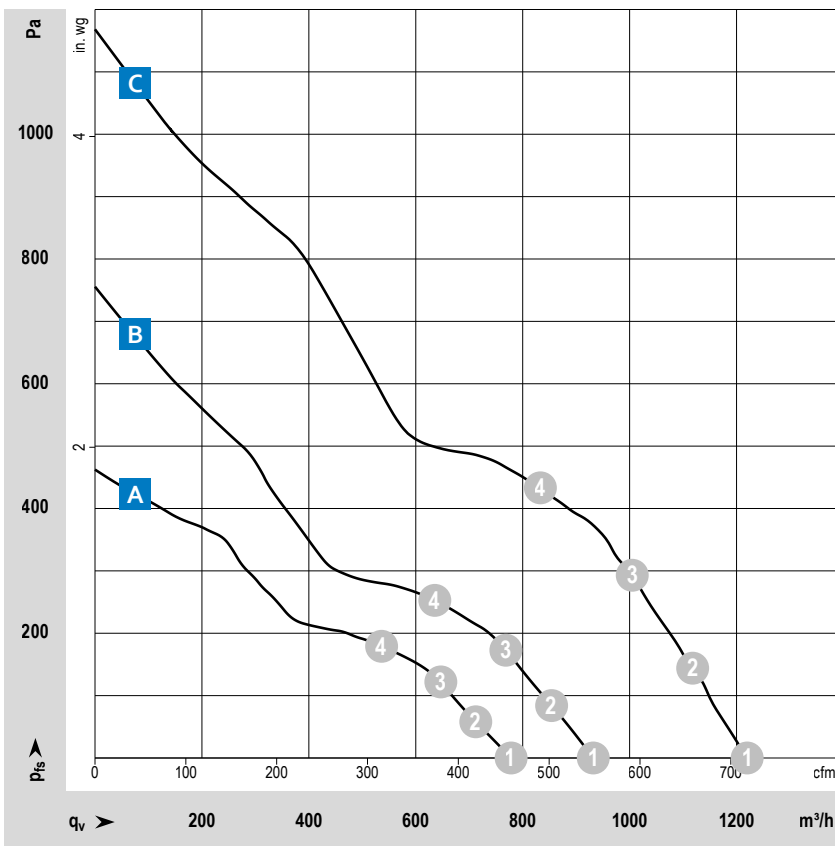
## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Housing with grounding lug for screw M4 x 8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

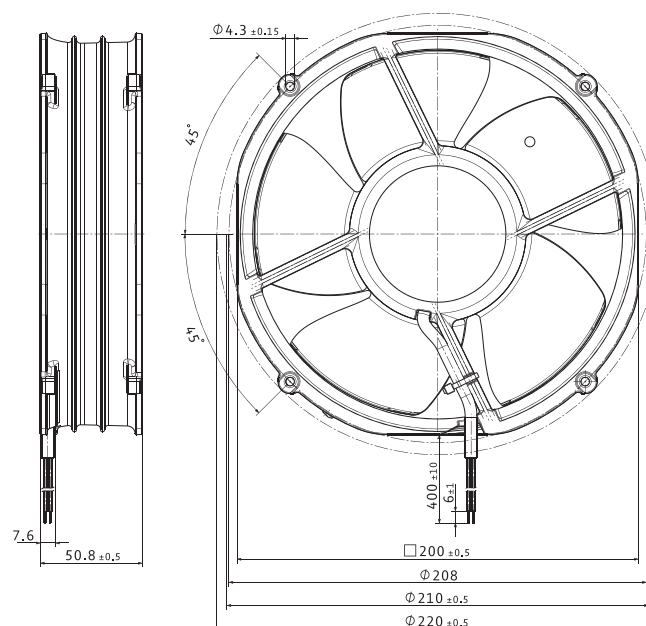
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWLG200FJLTS 2214 F/2 TDHO	9295414750	24	16...30	A	①	797	469	4 250	34.8	7.2	62	-20...+75	90 000	152 500
					②	727	428	4 250	48.4	7.2				
					③	653	384	4 250	62.2	7.2				
					④	540	318	4 240	75.1	7.5				
					⑤	493	280	4 240	88.1	7.5				
VWLG200FJLUS 2214 F/2 TDHHO	9295420205	24	16...36	B	①	936	551	5 000	47.8	7.5	66	-20...+70	85 000	142 500
					②	861	507	5 020	68.9	7.6				
					③	776	457	5 030	89.7	7.6				
					④	642	378	5 010	109.6	8.1				
					⑤	576	325	5 010	129.6	8.1				
VWLG200FKLTS 2218 F/2 TDHO	9295414752	48	36...57	A	①	778	458	4 250	34.3	7.2	62	-20...+75	90 000	152 500
					②	712	419	4 230	46.2	7.2				
					③	647	381	4 230	59.5	7.2				
					④	536	315	4 220	72.5	7.5				
					⑤	493	280	4 220	88.1	7.5				
VWLG200FKLUS 2218 F/2 TDHHO	9295420201	48	36...72	B	①	932	549	5 000	47.3	7.5	66	-20...+70	85 000	142 500
					②	854	503	4 970	65.6	7.6				
					③	769	453	4 980	86.1	7.6				
					④	636	374	4 970	105.3	8.1				
					⑤	576	325	4 970	129.6	8.1				
VWLG200FKLVS 2218 F/2 TDH4P	9295420200	48	36...72	C	①	1 220	718	6 500	98.5	8.2	72	-20...+65	70 000	117 500
					②	1 118	658	6 490	140.2	8.4				
					③	1 005	592	6 490	183.1	8.4				
					④	833	490	6 480	229.2	8.6				
					⑤	769	453	6 480	269.2	8.6				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWLH200CKLXS

DC axial fan · max. 1 820 m<sup>3</sup>/h · Ø 200x70 mm



## Material/Surface

- Housing: Combined (metal flange, plastic inlet nozzle)
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 48VDC; compact and powerful; innovative impeller design with rotating fan housing leads to maximization of efficiency and noise optimization
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation(S1)
- IP protection class: IP20, up to IP68 on request
- Electrical hookup: exposed wire
- Electrical protection class: III
- Weight: 1.5 kg

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

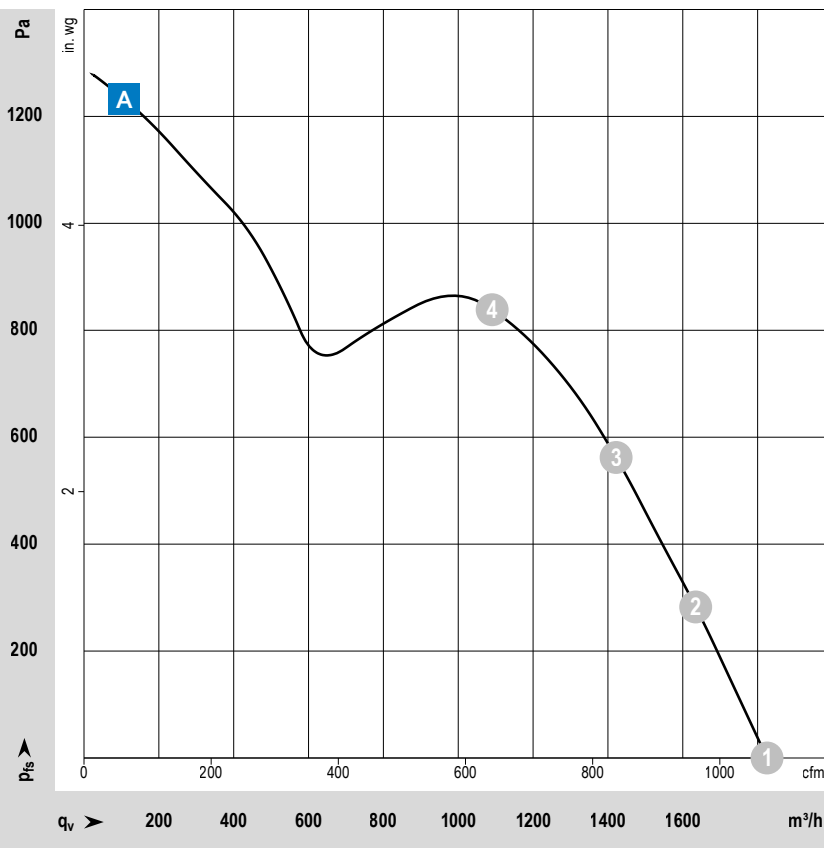
## Options

- Output signals: speed /2; alarms (Go/NoGo + Trip speed)
- Input signals: Multi-options input; I + T
- Predictive Maintenance (FanCheck)

## Special features

- Ready for Restart (R4R) enables safe startup with external drive
- with moisture protection (see page 266)
- with grounding screw M4x8 (Torx)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

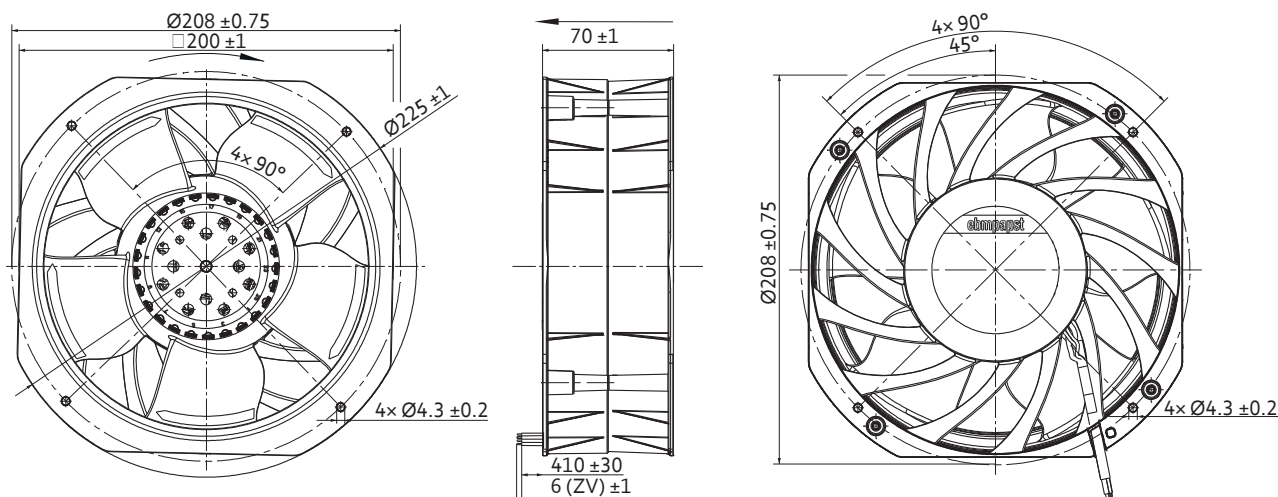


		Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
Type / Type old	Part number													
VWLH200CKLXS AxiEco 200	8317081096	48	36...60	A	①	1 820	1 071	7 000	356.1	9.3	80.2	-20...+60	90 000	152 500
					②	1 636	963	7 000	407.5	9.1				
					③	1 423	838	7 000	457.1	9.0				
					④	1 091	642	6 970	499.3	9.0				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWLJ200XJLVZ

DC axial fan · max. 1 162 m<sup>3</sup>/h · □ 225 x 80 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: DC fan available in 24 or 48VDC; compact and powerful; noise and efficiency optimized axial fan with 3-phase TurboDrive (TD) motor
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via terminal strip
- Electrical protection class: III
- Weight: 2.1 kg

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

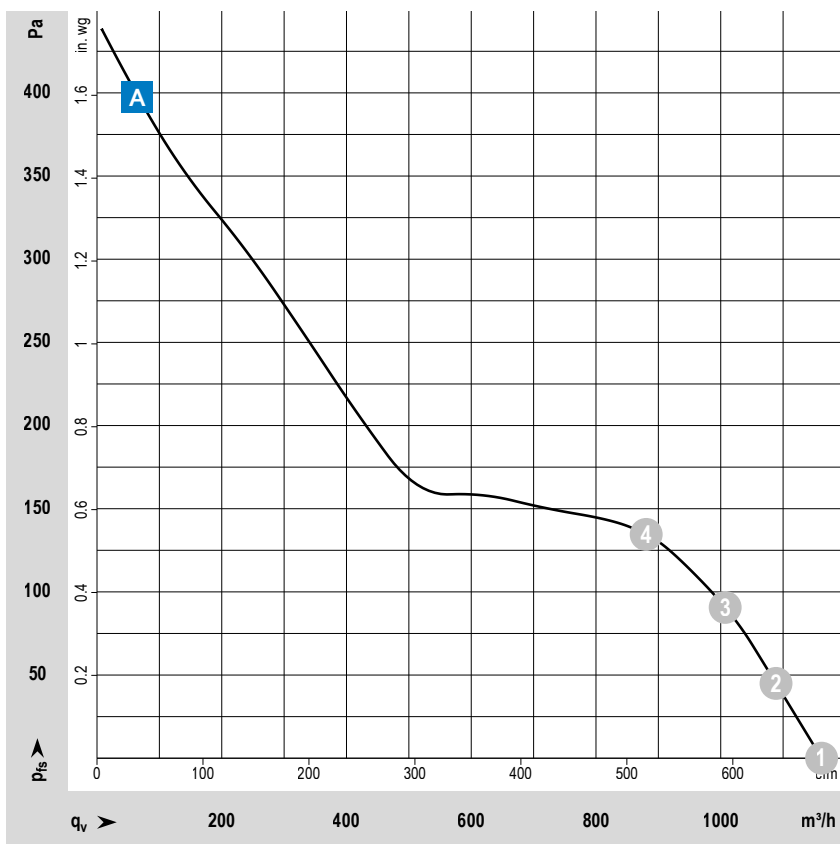
## Options

- Speed signal
- Go / No Go Alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- IP protection class: up to IP54

## Special features

- Highly efficient and smoothly operating 3-phase fan drive
- Electrical commutation completely integrated

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

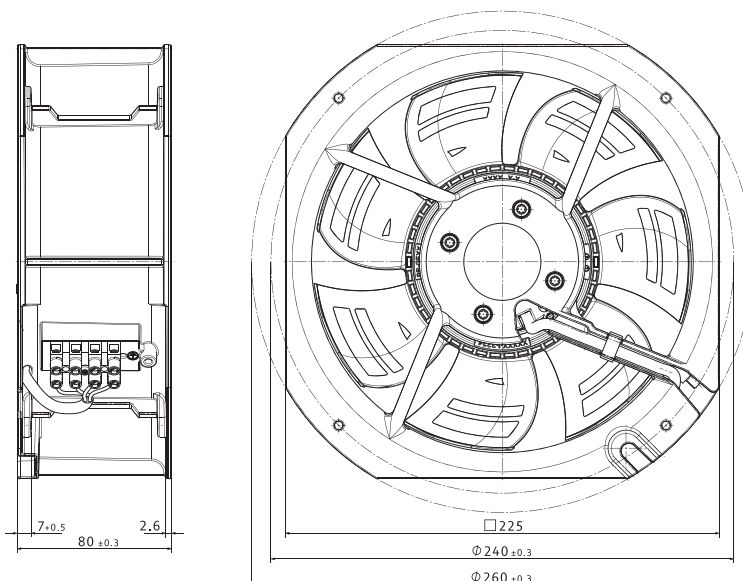
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWLJ200XJLVZ 2214 TDHO	8315100070	24	16...36	A	①	1 162	684	3 500	70.9	7.4	63	-20...+65	80 000	135 000
					②	1 089	641	3 460	79.1	7.3				
					③	1 009	594	3 470	89.7	7.5				
					④	882	519	3 460	99.9	7.6				

Subject to changes.

## Technical drawing

Dimensions in mm



# VJH0200XUNCS

DC diagonal module · max. 1 245 m<sup>3</sup>/h · □ 225 x 80 mm · Ø 200



## Material/Surface

- Housing and support bracket: Plastic
- Impeller: Plastic

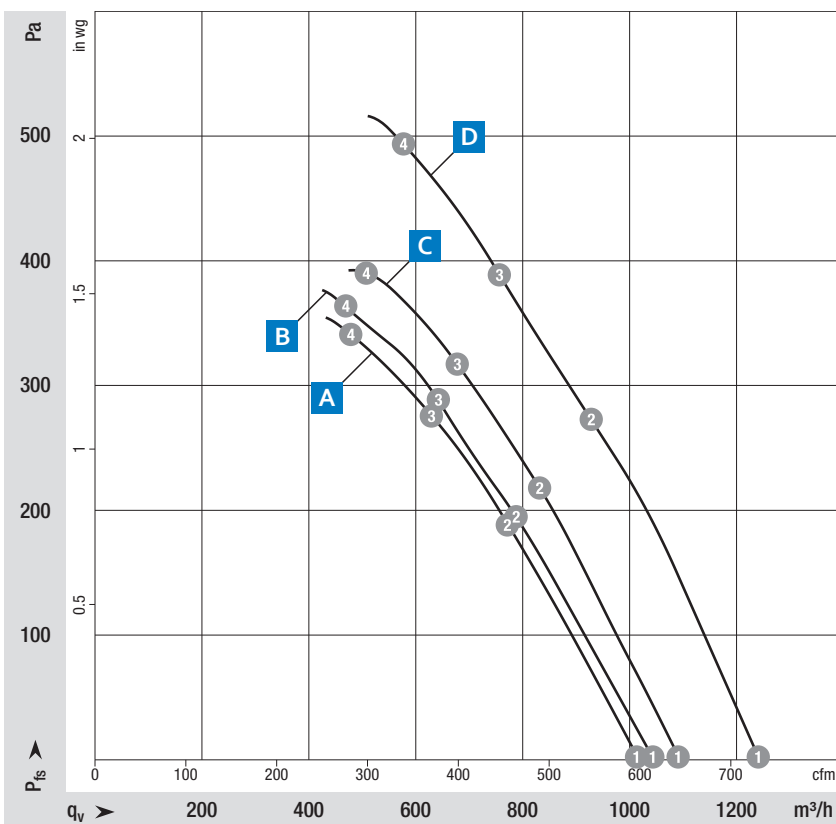
## Characteristics

- Version: DC diagonal module, single inlet, with support bracket
- Direction of air flow: "V"
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class:
  - **A + C**: IP44, depending on installation and position
  - **B + D**: IP20, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.8 kg

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- UL 1004-1; CSA 22.2 Nr. 77; CCC on request (only applicable with >36V)
- **B + D**: EAC



### Measuring conditions

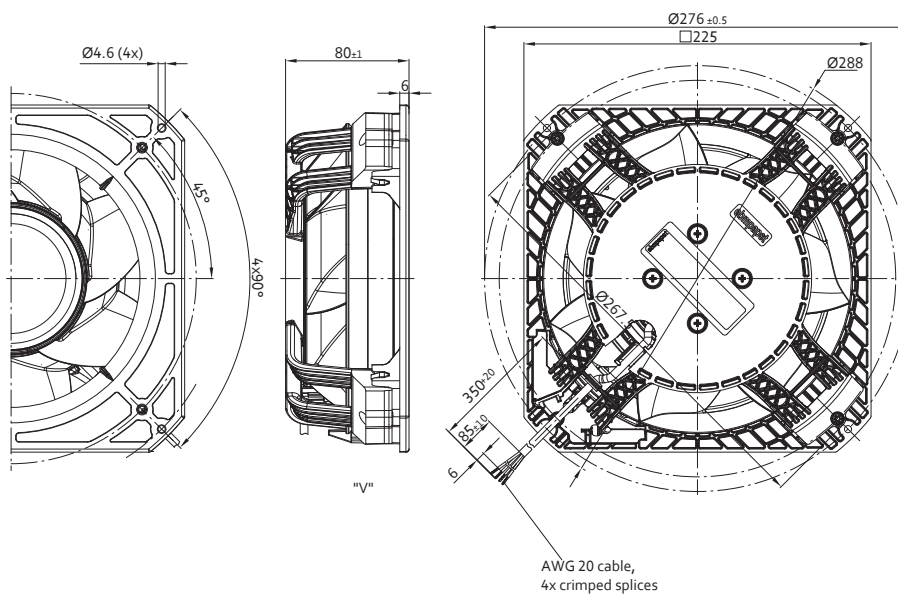
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VJH0200XUNCS	K1G200AD6504	24	16...28	A	①	1 015	597	3 400	95	4.55	7.6	-25...+60
					②	785	462	3 410	116	5.29	7.4	
					③	640	377	3 405	120	5.41	7.4	
					④	490	288	3 410	116	5.28	7.6	
VJH0200XUNCS	K1G200AD3102	24	16...28	B	①	1040	612	3 500	110	5.16	7.7	-25...+70
					②	800	471	3 505	127	5.96	7.5	
					③	655	386	3 500	128	6.01	7.5	
					④	480	283	3 510	125	5.87	7.6	
VJH0200XUNCS	K1G200AD4904	48	36...57	C	①	1 090	640	3 650	120	3.56	7.8	-25...+60
					②	840	495	3 645	148	4.07	7.6	
					③	690	405	3 630	150	4.12	7.6	
					④	520	305	3 645	146	4.04	7.7	
VJH0200XUNCS	K1G200AD3702	48	36...57	D	①	1 245	730	4 140	183	5.96	8.1	-25...+70
					②	955	560	4 140	229	6.54	7.9	
					③	785	460	4 140	233	6.59	8.0	
					④	595	350	4 135	225	6.52	8.1	

Subject to changes.

## Technical drawing

Dimensions in mm



# VJH0200XUNES

DC diagonal module · max. 1 605 m<sup>3</sup>/h · □ 225 x 89 mm



## Material/Surface

- Housing and support bracket: Plastic
- Impeller: Plastic

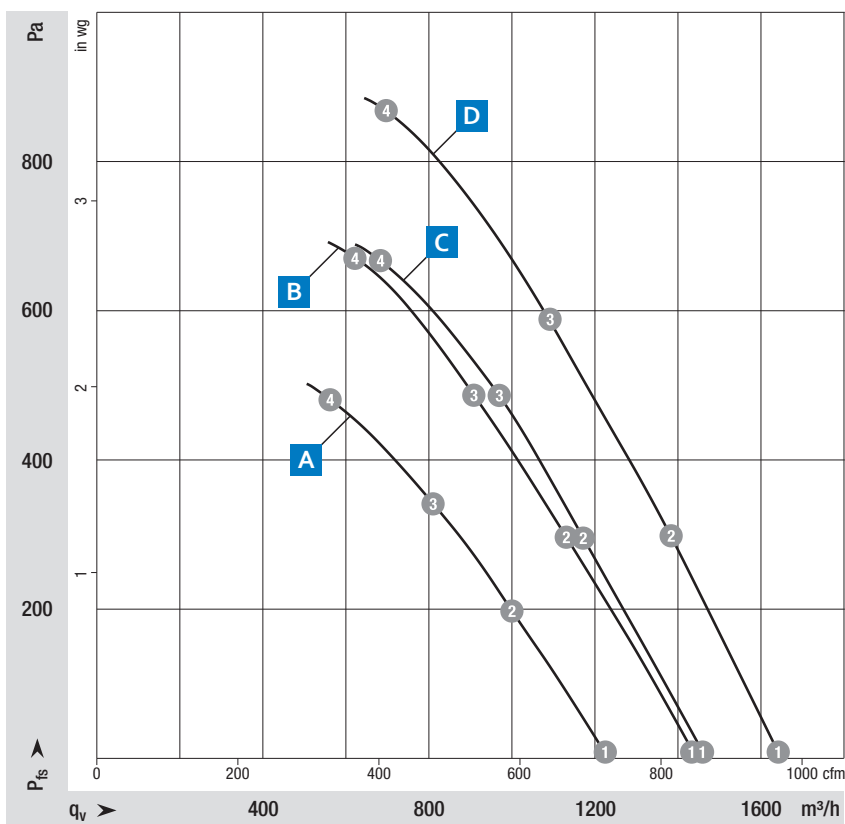
## Characteristics

- Version: DC diagonal module, backward-curved, single inlet, with support bracket
- Direction of air flow: "V"
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class:
  - **A + C**: IP44, depending on installation and position
  - **B + D**: IP20, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.3 kg

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- EAC;
- CCC on request (only applicable with >36V)
- **C**: UKCA



### Measuring conditions

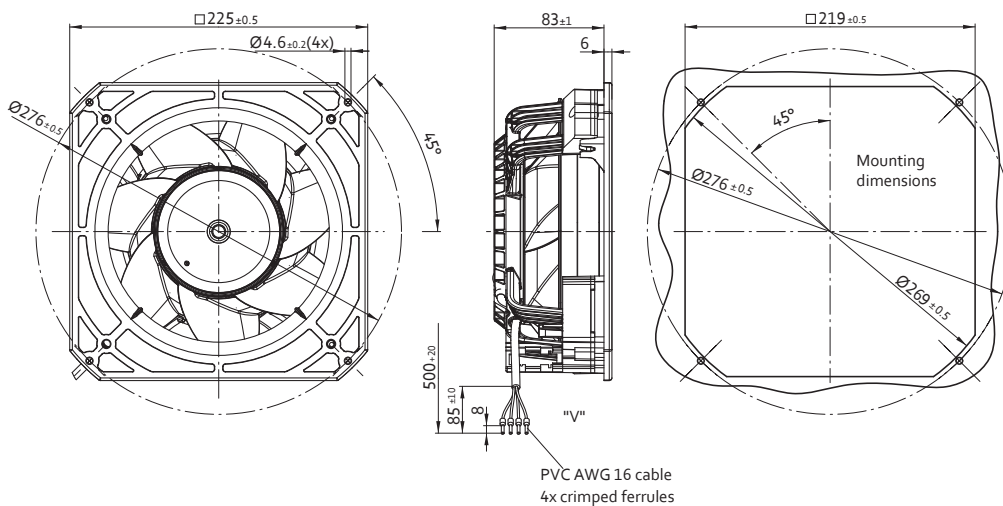
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current*	Sound power level	Perm. ambient temperature
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VJH0200XUNES	K3G200BD4604	24	16...28	A	①	1 230	725	4 120	170	7.00	8.0	-25...+60
					②	1 005	590	4 025	180	7.52	7.7	
					③	820	485	4 005	187	7.80	7.6	
					④	575	335	4 045	187	7.78	7.8	
VJH0200XUNES	K3G200BD4402	24	16...28	B	①	1 445	850	4 830	275	11.50	8.4	-25...+60
					②	1 145	675	4 720	294	12.24	8.1	
					③	925	545	4 685	299	12.48	8.0	
					④	635	375	4 715	295	12.30	8.3	
VJH0200XUNES	K3G200BD6404	48	36...57	C	①	1 475	870	4 875	275	5.80	8.5	-25...+60
					②	1 165	685	4 745	299	6.30	8.2	
					③	930	545	4 715	306	6.40	8.2	
					④	690	405	4 740	303	6.30	8.4	
VJH0200XUNES	K3G200BDA802	48	36...57	D	①	1 605	945	5 350	380	8.00	8.6	-25...+60
					②	1 385	815	5 350	428	8.89	8.6	
					③	1 165	685	5 350	456	9.50	8.6	
					④	865	510	5 350	449	9.34	8.6	

Subject to changes. \* Current measured at nominal voltage.

## Technical drawing

Dimensions in mm



# VWLK280X..., VWLK280H...

DC axial fans · max. 2 115 m<sup>3</sup>/h · Ø 250 mm



## Material/Surface

- Fan housing: Metal
- Blades: Plastic
- Rotor: Thick-film passivated

## Characteristics

- Version: DC axial fan HyBlade
- Direction of air flow: "V"
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)\*
- Electrical hookup: via terminal strip
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.35 kg

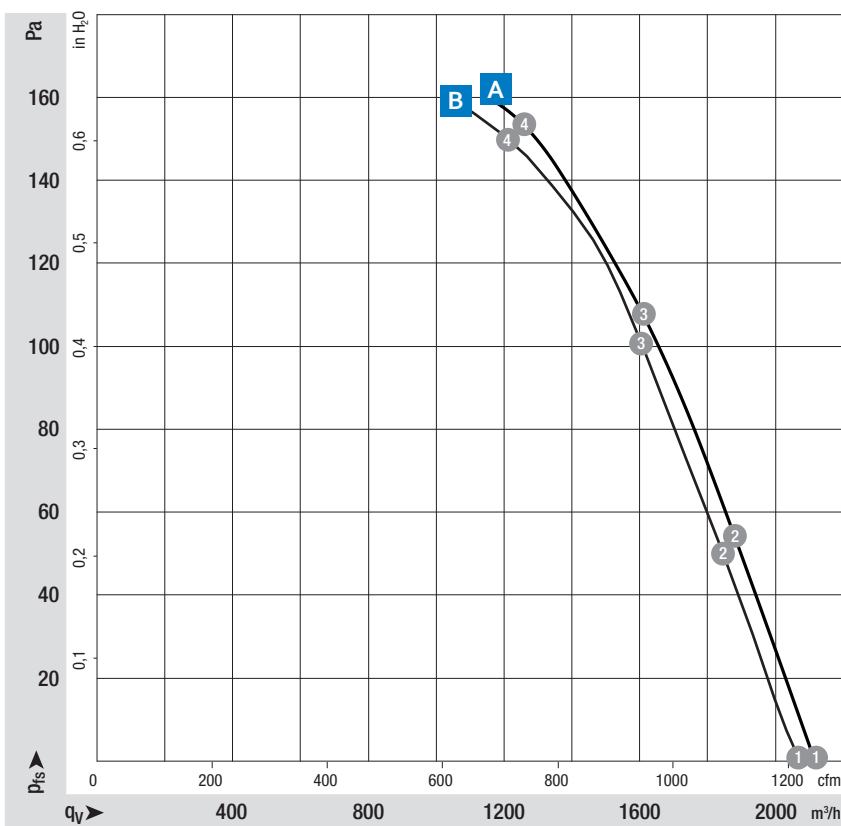
## Approvals

- UL 507; CSA C22.2 Nr. 113; EAC; UKCA; CE; CCC on request (only applicable with >36V)

## Note

- The IP protection is valid up to the motor connection side interface

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

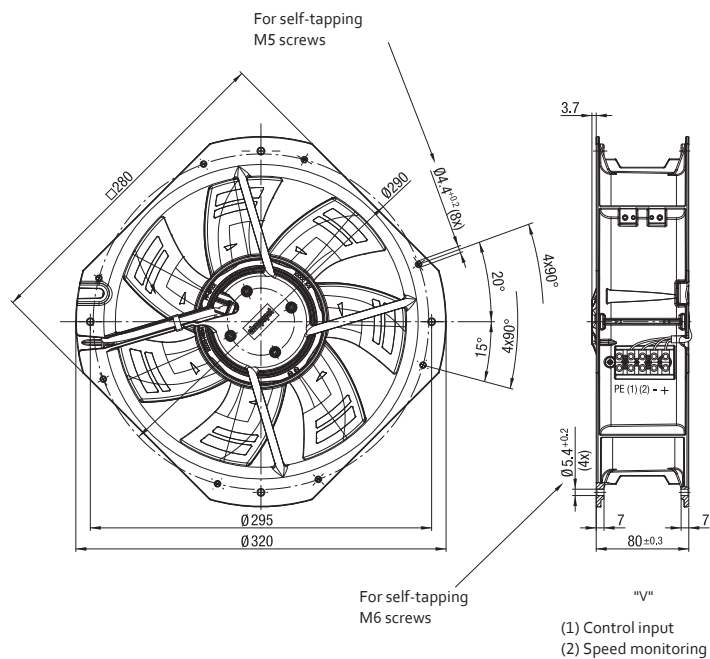


Type	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current*	Sound power level	Max. back-pressure	Perm. ambient temperature	
		VDC	VDC			m <sup>3</sup> /h	cfm							rpm
VWLK280XJNXS	W1G250HJ1402	24	16...28	A	①	2 115	1 245	3 135	135	5.93	-	140	-25...+60	
						②	1 880	1 105	2 975	139				6.21
						③	1 605	945	2 840	143				6.50
						④	1 255	740	2 760	148				6.77
VWLK280HKNXS	W1G250HJ2002	48	36...57	B	①	1 995	1 175	3 000	121	2.50	140	-25...+60		
						②	1 760	1 035	2 825	124			2.60	
						③	1 500	885	2 695	128			2.70	
						④	1 165	685	2 620	130			2.70	

Subject to changes. \* Current measured at nominal voltage.

## Technical drawing

Dimensions in mm



# VVY0300H..., VWR0300X..., VMA0300X...

DC axial fan · max. 2 565 m<sup>3</sup>/h · Ø 300 mm



## Material/Surface

- Finger guard: Steel, coated in plastic
- Fan housing: Sheet steel, coated in plastic
- Blades: Plastic

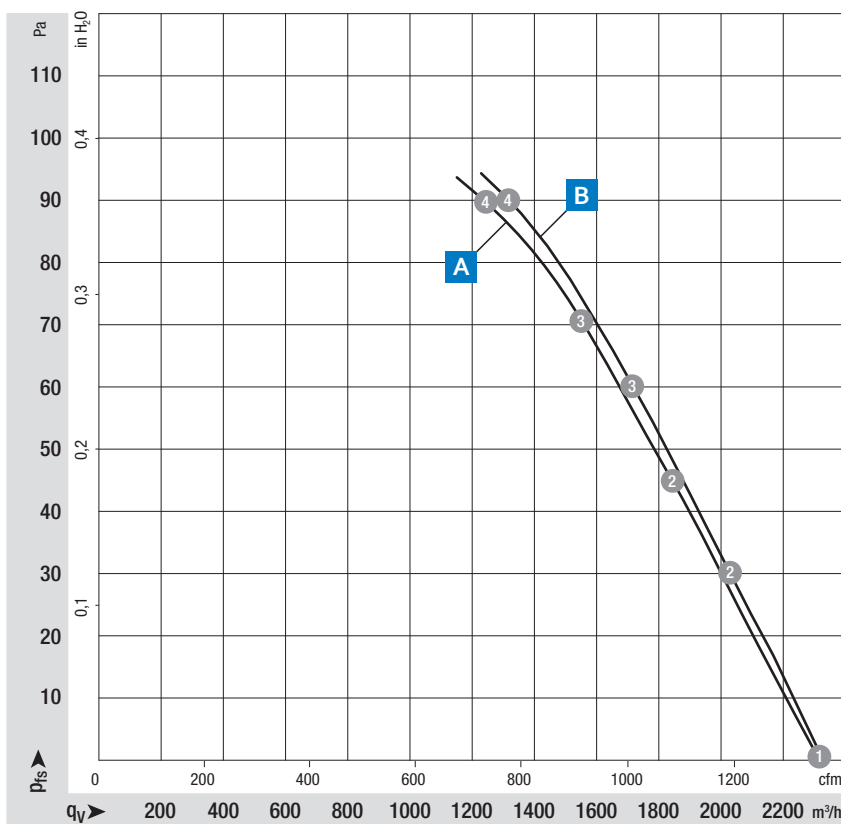
## Characteristics

- Version: DC axial fan HyBlade in various versions, without attachments, with round full nozzle, with guard grill for short nozzle
- Direction of air flow: exhaust over flange
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP42
- Electrical hookup: cable AWG 20, 4
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.8-3.8kg (depending on version)

## Approvals

- DIN EN 62368-1; CSA C22.2 Nr. 100; EAC; UL 1004-1; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>



## Product overview

# DC centrifugal fans



Our DC centrifugal product range includes fans for every application. Where it's a free-running impeller or a complete, ready-to-install, compact housing with inlet nozzle.



all fan types with efficient, brushless motor technology, electronically commutated drive and electronic reverse polarity protection impress with their long life expectancy and outstanding efficiency.



This reduces the thermal load, thus ensuring maximum efficiency and a long service life.



Conforming to IP20 as standard, we also offer environmental protection solutions up to IP68 and IP6k9k to meet the highest requirements.



GreenIntelligence enables the fan speed to be intelligently controlled and noise-optimized, efficient and tailored use to be monitored.

**ebmpapst**

engineering a better life

## Type code example: VBH0450PTTLZ

V	B	H	0450	P	T	T	L	Z
Product category	Product type Airflow direction	Product version	Diameter	Brand name	Motor	Motor size		Standard
						Diameter	Stack length	

Dimensions in mm	Type	Type (old)	Page
□ 51 x 15	VHS0035XUDAS	RLF 35	150
□ 65 x 66	VCS0045X...	RVE 45	152
□ 76 x 27	VHS0048X...	RL 48	154
97 x 93,5 x 33	VHS0065X...	RL 65	156
□ 121 x 37	VHS0090XUJBS	RL 90 N	158
□ 127 x 25	VCS0100XUGBS	RLF 100	160
□ 135 x 38	VHS0090XUJBS	RG 90 N	162
□ 135 x 38	VCS0125XUJBS	RG 125 N	164
□ 165 x 70	VCS0133RUJCS	RG 133 TD	166
□ 180 x 40	VCS0140XUJCS	RG 140 NTD	168
□ 220 x 56	VCS0160XULCS	RG 160 N	170
□ 220 x 56	VCS0160XULCS	RG 160 NTD	172
□ 226 x 85	VCS0190RULDS	RG 190 TD	174
□ 270 x 99	VCS0220RULDS	RG 220 TD	176
□ 270 x 119	VCS0225RULDS	RG 225 TD	178
∅ 85 x 68	VFS0085XUJCS	RET 85	180
∅ 97 x 41	VFS0097XUJCS	RET 97 TD	182
∅ 104 x 25	VBS0100XUGBS	REF 100	184
∅ 101 x 52	VBS0101XUGDS	RER 101 N	186
∅ 120 x 54	VBS0120XUJCS	RER 120 TD	188
∅ 138 x 35	VBS0125XUJBS	RER 125 N	190
∅ 133 x 91	VBS0133X...	RER 133 TD	192
∅ 140 x 36	VBS0140XUJCS	RER 140 TD	194
∅ 165 x 51	VBS0160XULCS	RER 160 N	196
∅ 165 x 51	VBS0160XULCS	RER 160 NTD	198
∅ 175 x 55	VBS0175XULDS	REF 175 TD	200
∅ 175 x 69	VBS0175X...	RER 175 TD	202
∅ 190 x 69	VBS0190R...	RER 190 TD	204
∅ 190	VBS0190RUNCS	R1G 190	206
∅ 190	VBS0190R...	R3G 190	208
∅ 220	VBS0220RUNCS	R1G 220	210
∅ 220	VBS0220RUNES	R3G 220	212
∅ 220 x 71	VBS0220RULDS	RER 220 TD	214
∅ 225 x 99	VBS0225...	RER 225 TD	216
∅ 225	VBS0225RUNCS	R1G 225	218
∅ 225	VBS0225RUNES	R3G 225	220
∅ 250	VBS0250RUNES	R1G 250	222
∅ 250	VBS0250RUNES	R3G 250	224
∅ 280	VBS0280RUNES	R1G 280	226
∅ 280	VBS0280RUNES	R3G 280	228
∅ 310	VBS0310RUNES	R3G 310	230
201...413 x 50 x 48	VTS0030X...	QG 030	232
∅ 108	VFS0108XULCS	*1G 108	234
∅ 120	VFS0120XULCS	*1G 120	236
∅ 133	VFS0133XULCS	*1G 133	238
∅ 140	VFS0140XULES	*1G 140	240
∅ 146	VFS0146XUNCS	*1G 146	242
∅ 160	VFS0160XUNCS	*1G 160	244
∅ 133	VHD0133XUNCS	D1G 133	246
∅ 133	VHD0133XUNES	D1G 133	248
∅ 146	VHD0146XUNES	D1G 146	250

# VHS0035XUDAS

DC centrifugal fans · max. 9.6 m<sup>3</sup>/h · □ 51 × 15 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC or 24VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 26
- Electrical protection class: III
- Weight: 36 g

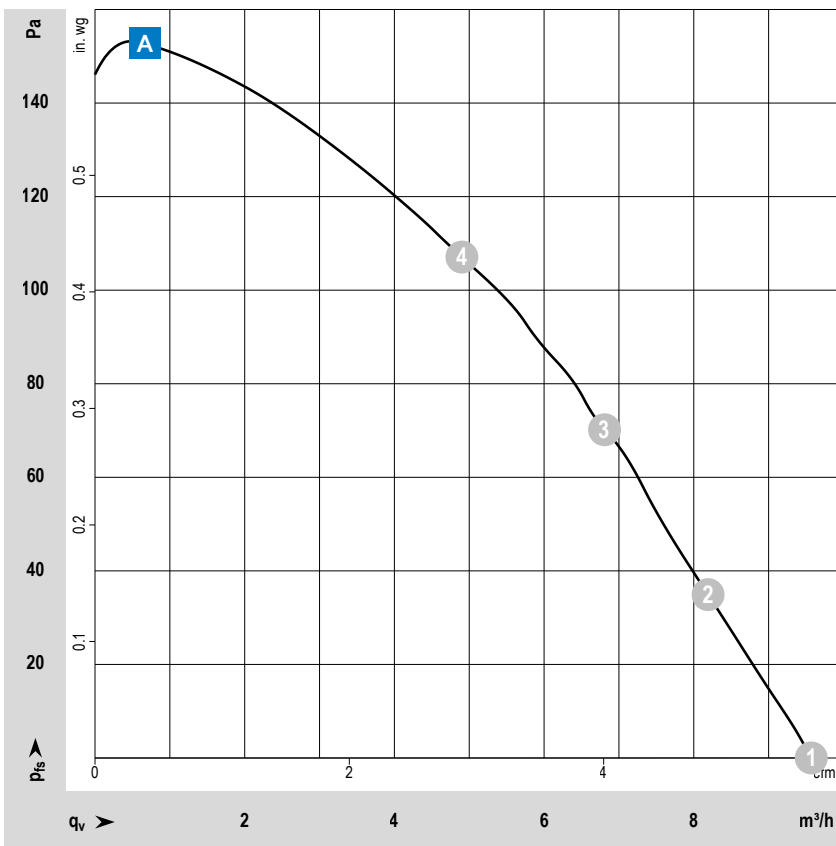
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- PWM control input
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

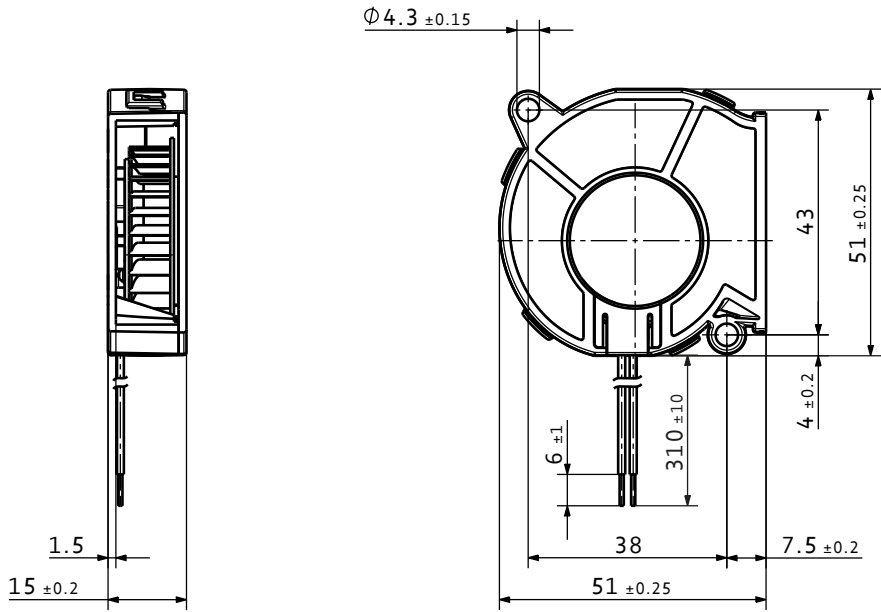
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

		Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PTC (40 °C) S...II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
Type / Type old	Part number												
VHS0035XUDAS RLF 35-8/12 N	9591904100	12	8...13.2	A	1	9.6	5.7	6 700	4.0	5.4	-20...+70	60 000	102 500
					2	8.2	4.8	7 300	3.8	5.4			
					3	6.8	4.0	7 940	3.7	5.5			
					4	4.9	2.9	8 790	3.5	5.6			
VHS0035XUDAS RLF 35-8/14 N	9591904101	24	14...28	A	1	9.3	5.5	6 700	3.3	5.4	-20...+70	60 000	102 500
					2	8.0	4.7	7 270	3.1	5.4			
					3	6.6	3.9	7 850	3.0	5.5			
					4	4.8	2.8	8 690	2.8	5.6			

Subject to changes.

Technical drawing

Dimensions in mm



# VCS0045X...

DC centrifugal fans · max. 30 m<sup>3</sup>/h · □ 65 x 66 mm



## Material/Surface

- Scroll housing: Plastic (FDA approved)
- Impeller: Plastic (FDA approved)

## Mechanische Characteristics

- Version: Small powerful centrifugal blower in 12VDC and 24VDC, Highly dynamic motor behavior, low noise and max pressure increase
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 160 g

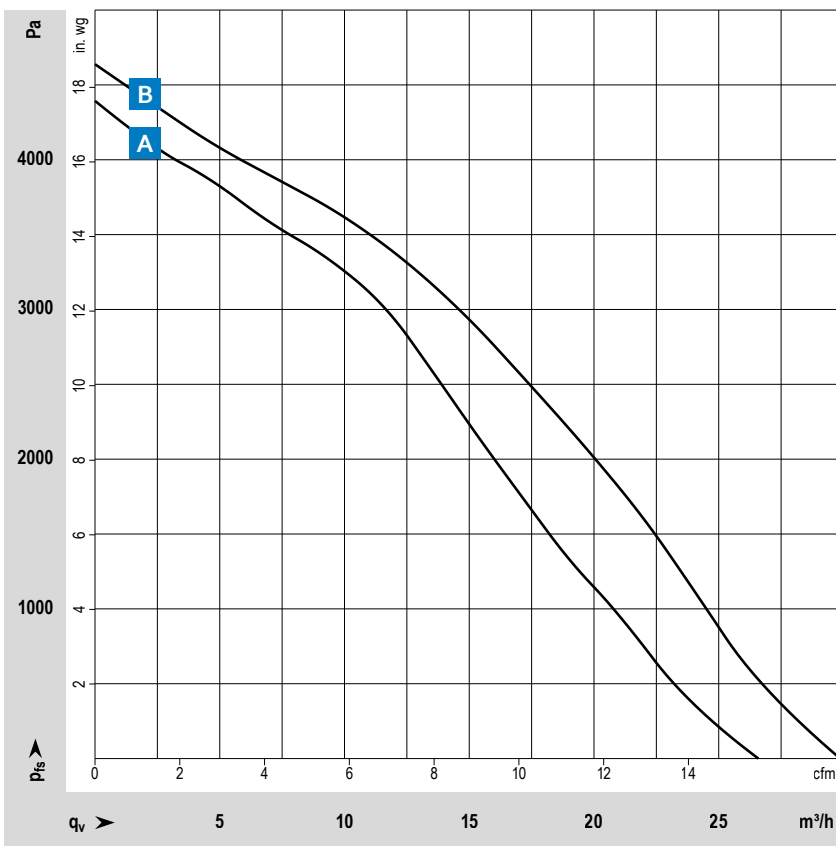
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Hose fitting at air inlet  
– Diameter 22 mm
- PWM control input (Standard)
- Analog control input

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>



Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Air flow	Air flow	Speed	Power consumption	Sound pressure (free air flow)	Perm. ambient temperature	Lebensdauer $L_{10}$ (25 °C) ebm-papst Standard	Lebensdauer-erwartung $L_{10iPC}$ (25 °C) s. S. 11
		VDC	VDC		m <sup>3</sup> /h	cfm	rpm	W	dB(A)	°C	Hours	Hours
VCS0045XUGAS RVE45-3/52/2P	8315100111	12	9...15	<b>A</b>	26.6	15.7	33 000	27.7	58	-20...+55	20 000	45 000
VCS0045XUGAS RVE45-3/54/2P	8315100100	24	16...30	<b>B</b>	30.0	17.6	36 500	34.5	58	-20...+65	20 000	45 000
VCS0045XUGAS RVE45-3/54/2A	8315100115	24	16...30	<b>B</b>	30.0	17.6	36 500	34.5	58	-20...+65	20 000	45 000

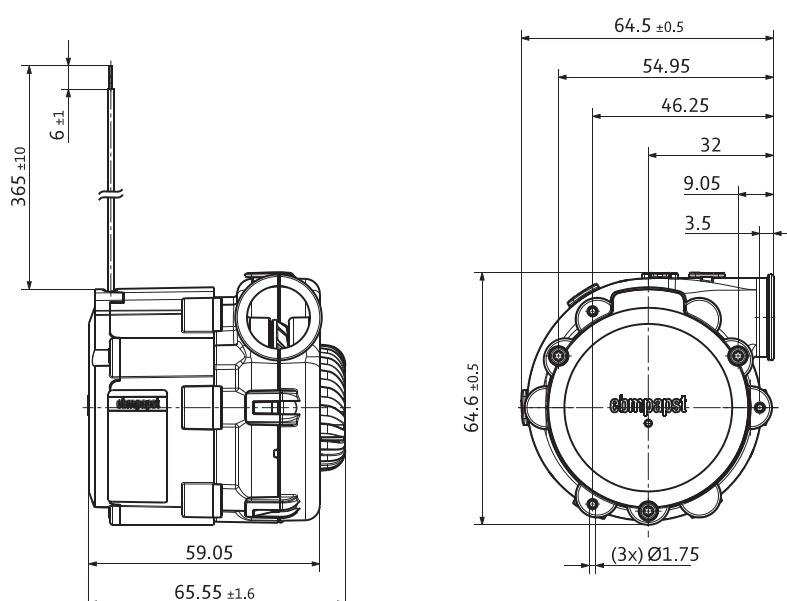
Subject to changes.

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).

## Technical drawing

Dimensions in mm



# VHS0048X...

DC centrifugal fans · max. 27.2 m<sup>3</sup>/h · □ 76 x 27 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 26
- Electrical protection class: III
- Weight: 75 g

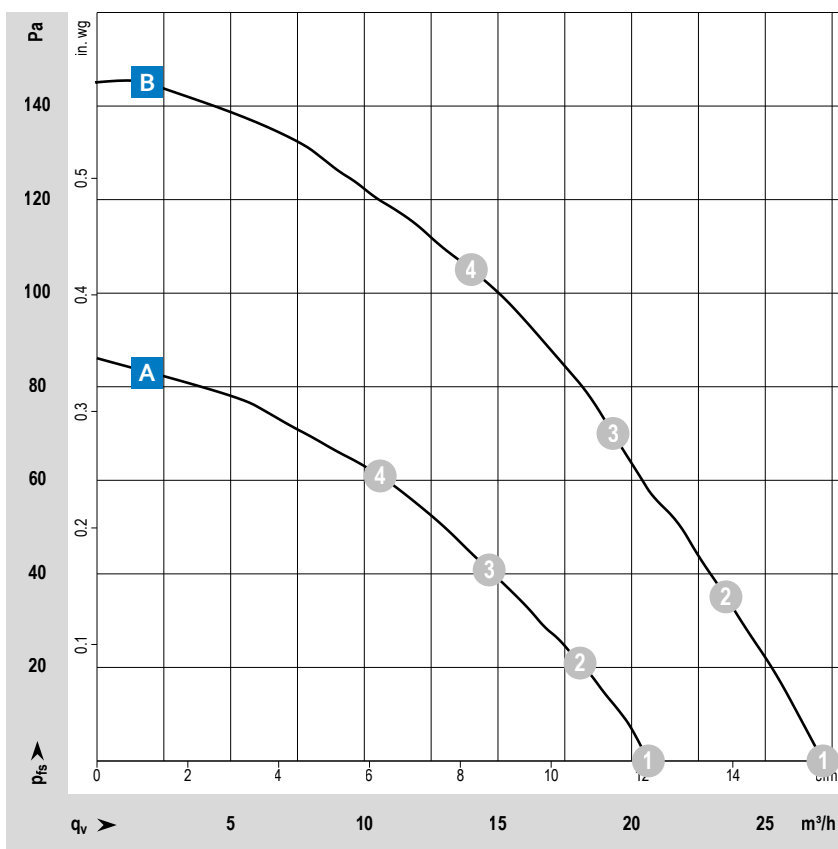
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm - alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

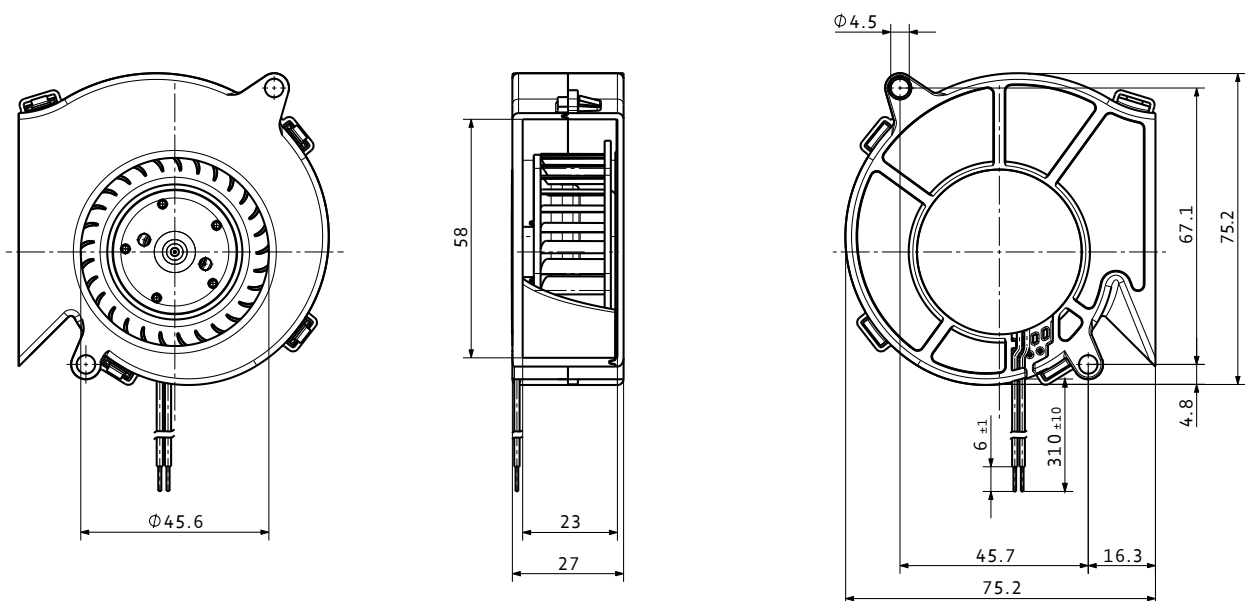
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> FC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm						
VHS0048XUEBS RL 48-19/12 ML	9592207003	12	8...15	A	① ② ③ ④	20.6	12.1	3 500	2.3	5.4	-20...+70	70 000	117 500
						18.1	10.7	3 770	2.1	5.2			
						14.7	8.7	4 070	2.0	5.2			
						10.6	6.2	4 490	1.7	5.2			
VHS0048XUEBS RL 48-19/12	9592207001	12	8...13.5	B	① ② ③ ④	27.2	16.0	4 400	4.5	5.9	-20...+70	60 000	102 500
						23.5	13.8	4 790	4.2	5.7			
						19.3	11.4	5 190	3.7	5.7			
						14.0	8.2	5 750	3.3	5.8			
VHS0048XUEBS RL 48-19/14 ML	9592207004	24	18...28	A	① ② ③ ④	19.8	11.7	3 500	2.2	5.4	-20...+70	70 000	117 500
						17.6	10.4	3 730	2.1	5.2			
						14.4	8.5	4 030	2.0	5.2			
						10.4	6.1	4 400	1.7	5.2			
VHS0048XUEBS RL 48-19/14	9592207002	24	18...26.4	B	① ② ③ ④	26.3	15.5	4 400	4.4	5.9	-20...+70	60 000	102 500
						22.7	13.4	4 720	4.0	5.7			
						18.6	10.9	5 100	3.7	5.7			
						13.6	8.0	5 630	3.2	5.8			
VHS0048XUEBZ RL 48-19/18 R-016	9592207016	48	36...56	B	① ② ③ ④	26.1	15.4	4 400	5.6	5.9	-32...+70	60 000	102 500
						22.8	13.4	4 740	5.3	5.7			
						19.2	11.3	5 220	4.8	5.7			
						14.2	8.4	5 820	4.4	5.8			

Subject to changes.

## Technical drawing

Dimensions in mm



# VHS0065X...

DC centrifugal fans · max. 59 m<sup>3</sup>/h · 97 x 93,5 x 33 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 26
- Electrical protection class: III
- Weight: 160 g

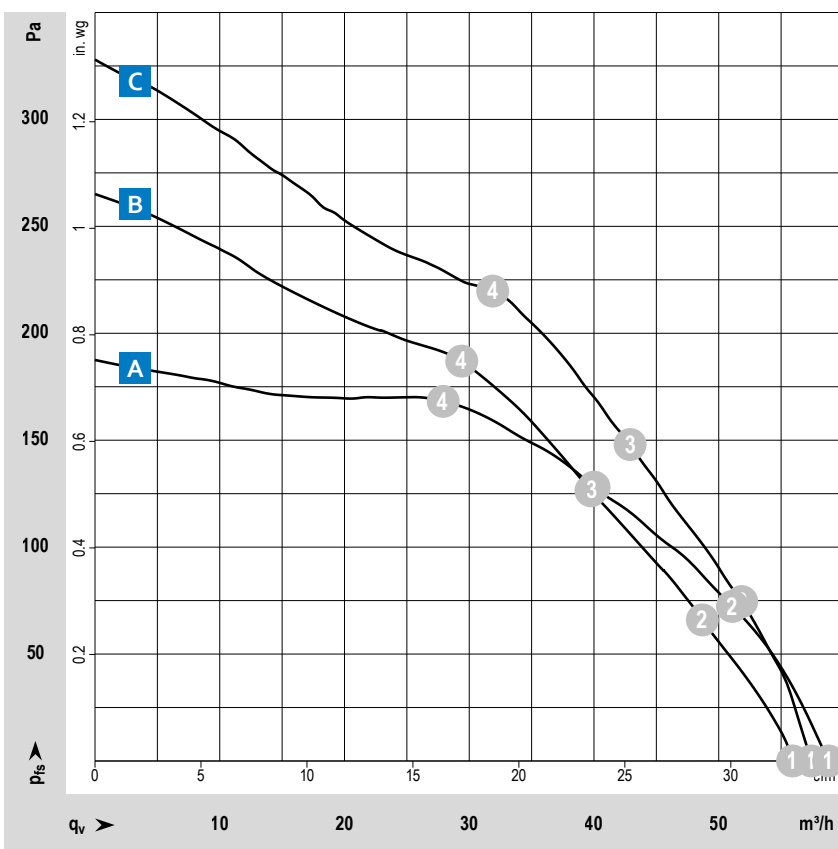
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

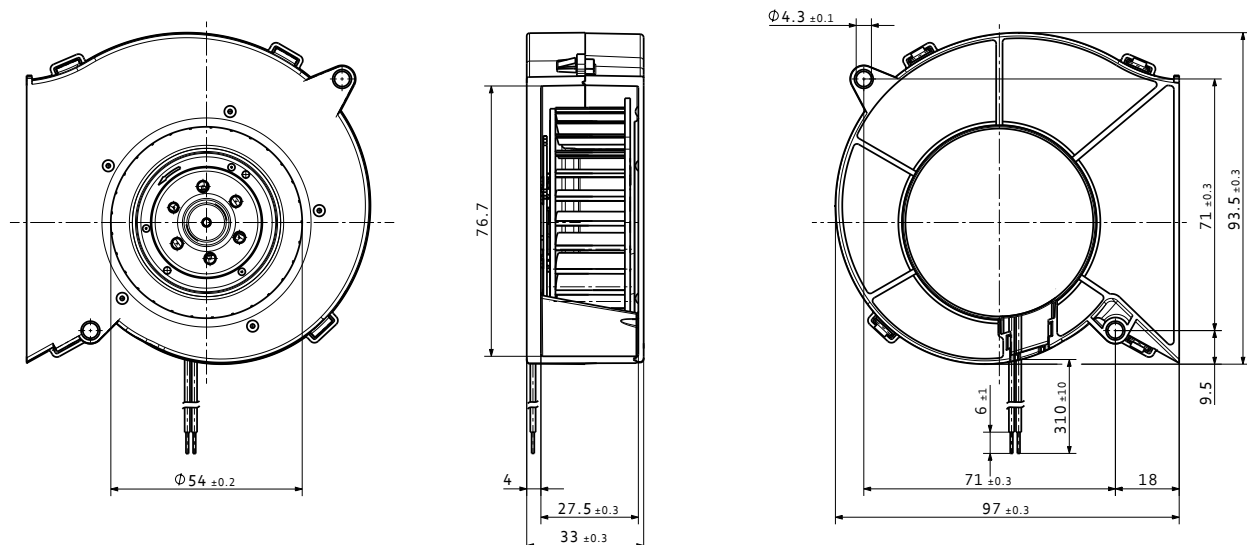
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm						
VHS0065XUFBS RL 65-21/12	9592910001	12	6.8...13.8	B	① ② ③ ④	55.0	32.4	4 500	14.7	6.9	-20...+70	60 000	102 500
						48.7	28.7	4 750	13.4	6.9			
						39.6	23.3	5 060	11.8	6.8			
						29.3	17.2	5 480	10.0	6.6			
VHS0065XUFBS RL 65-21/12 H	9592910004	12	6.8...13.2	C	① ② ③ ④	57.0	33.5	4 900	18.9	7.2	-20...+55	55 000	92 500
						52.0	30.6	5 100	17.6	7.1			
						42.9	25.2	5 440	15.6	7.2			
						31.9	18.8	5 880	13.2	6.9			
VHS0065XUFBS RL 65-21/14	9592910003	24	12...26.4	B	① ② ③ ④	56.0	33.0	4 500	13.6	6.9	-20...+70	60 000	102 500
						48.7	28.7	4 760	12.4	6.9			
						39.7	23.4	5 080	10.9	6.8			
						29.4	17.3	5 460	9.2	6.6			
VHS0065XUFBS RL 65-21/14 H	9592910005	24	12...26.4	C	① ② ③ ④	57.0	33.5	4 900	17.8	7.2	-20...+60	55 000	92 500
						52.0	30.6	5 120	16.6	7.1			
						43.2	25.4	5 500	14.7	7.2			
						32.3	19.0	5 960	12.5	6.9			
VHS0065XUFBZ RL 65-21/18/2 HPR-180	9792900180	48	36...60	A	① ② ③ ④	59.0	34.7	4 900	20.5	7.2	-20...+70	55 000	92 500
						51.0	30.0	4 910	17.2	7.0			
						40.0	23.5	4 920	12.5	6.8			
						27.9	16.4	4 910	8.4	6.5			

Subject to changes.

## Technical drawing

Dimensions in mm



# VHS0090XUJBS

DC centrifugal fans · max. 56 m<sup>3</sup>/h · □ 121 x 37 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 420 g

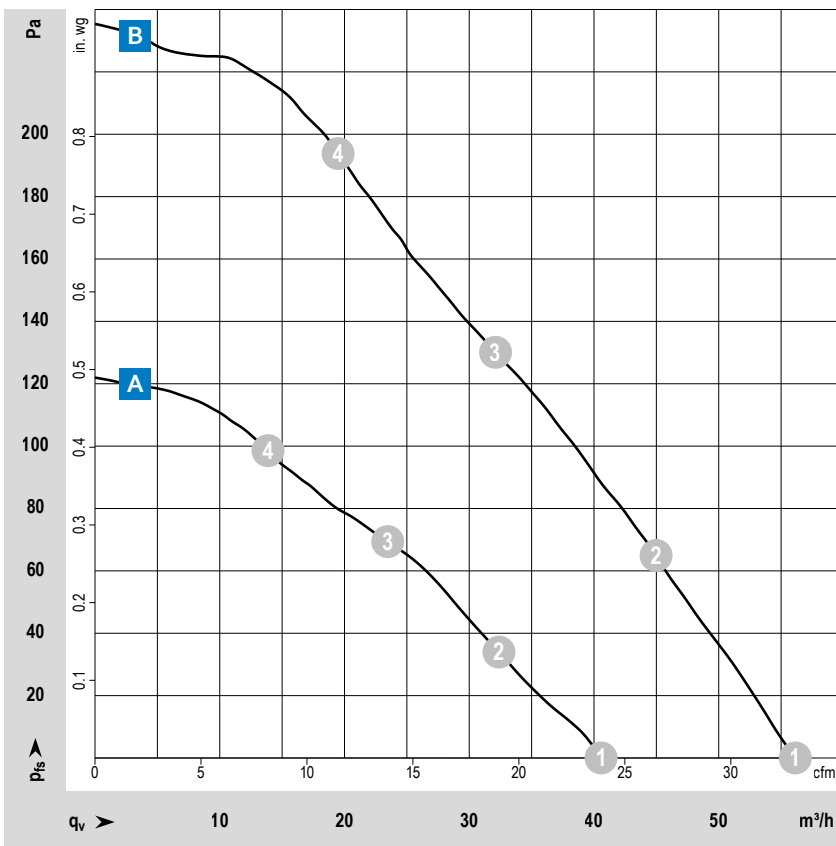
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

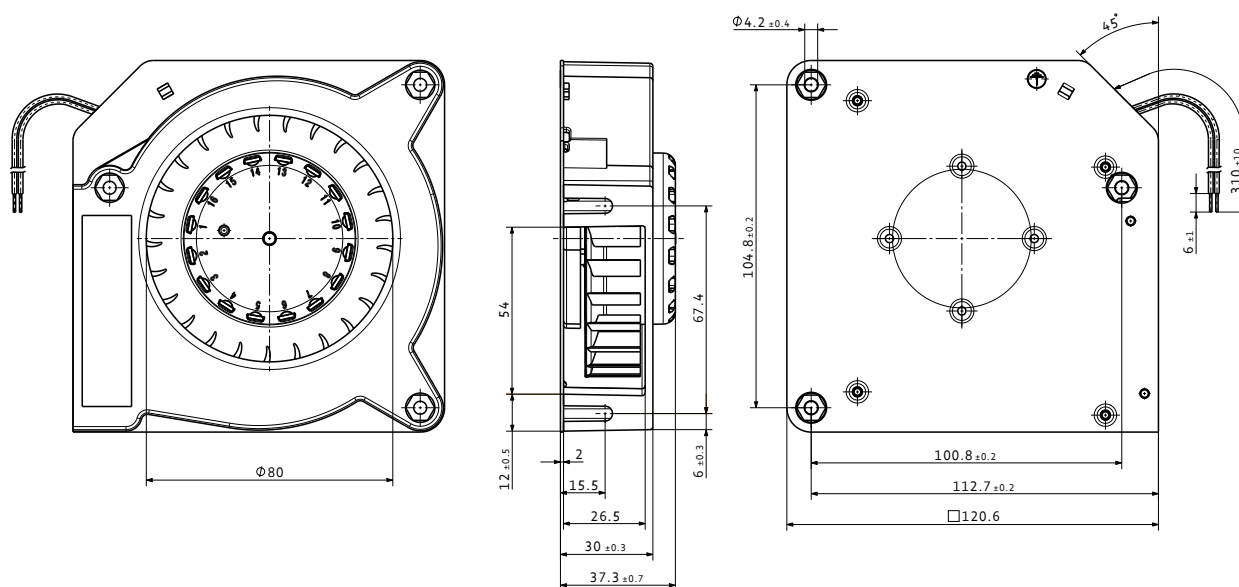
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. 11
		VDC	VDC			m <sup>3</sup> /h	cfm						
VHS0090XUJBS RL 90-18/12 N	9594310401	12	7...15	A	①	38.2	22.5	2 500	5.5	6.2	-30...+75	62 500	105 000
						31.5	18.5	2 670	5.0	6.0			
						23.0	13.5	2 870	4.3	5.9			
						13.8	8.1	3 100	3.4	5.8			
VHS0090XUJBS RL 90-18/14 NG	9594310409	24	12...28	A	①	37.2	21.9	2 500	5.0	6.2	-20...+75	62 500	105 000
						30.7	18.1	2 640	4.5	6.0			
						22.2	13.1	2 820	3.8	5.9			
						13.4	7.9	3 040	3.1	5.8			
VHS0090XUJBS RL 90-18/14 N	9594310400	24	12...28	A	①	40.6	23.9	2 500	6.1	6.2	-30...+75	62 500	105 000
						32.4	19.1	2 690	5.4	6.0			
						23.4	13.8	2 920	4.5	5.9			
						13.9	8.2	3 180	3.7	5.8			
VHS0090XUJBS RL 90-18/18 NH	9594310413	48	36...53	B	①	56.0	33.0	3 500	14.6	6.9	-30...+65	32 500	55 000
						45.0	26.5	3 750	12.6	6.8			
						32.1	18.9	4 090	10.3	6.8			
						19.5	11.5	4 470	8.1	6.8			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0100XUGBS

DC centrifugal fans · max. 80 m<sup>3</sup>/h · □ 127 x 25 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 300 g

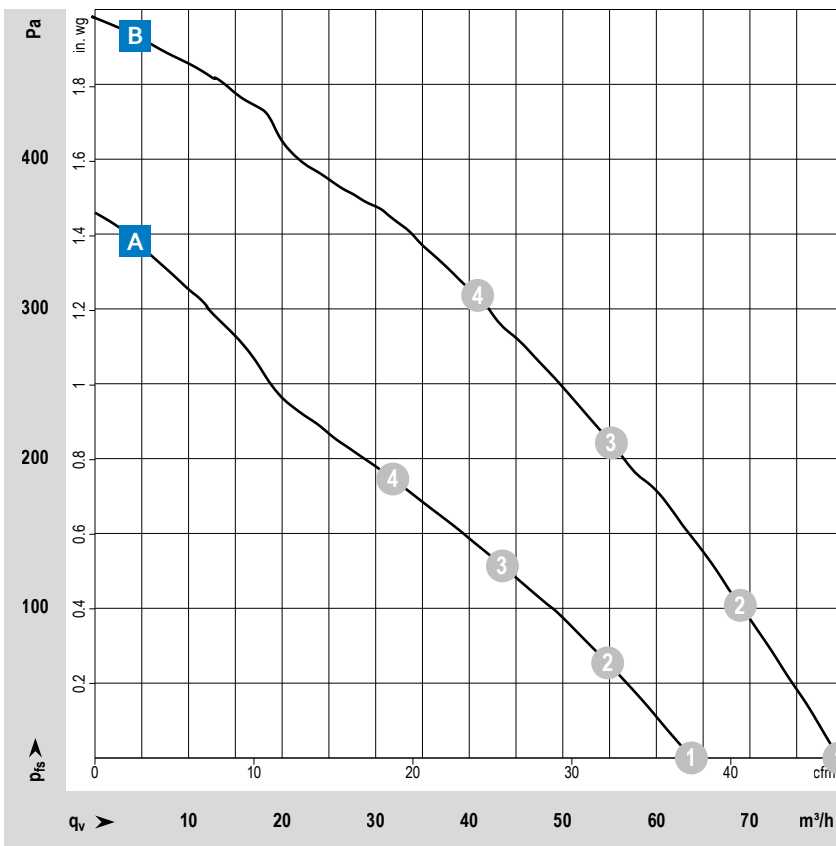
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: IP 54

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

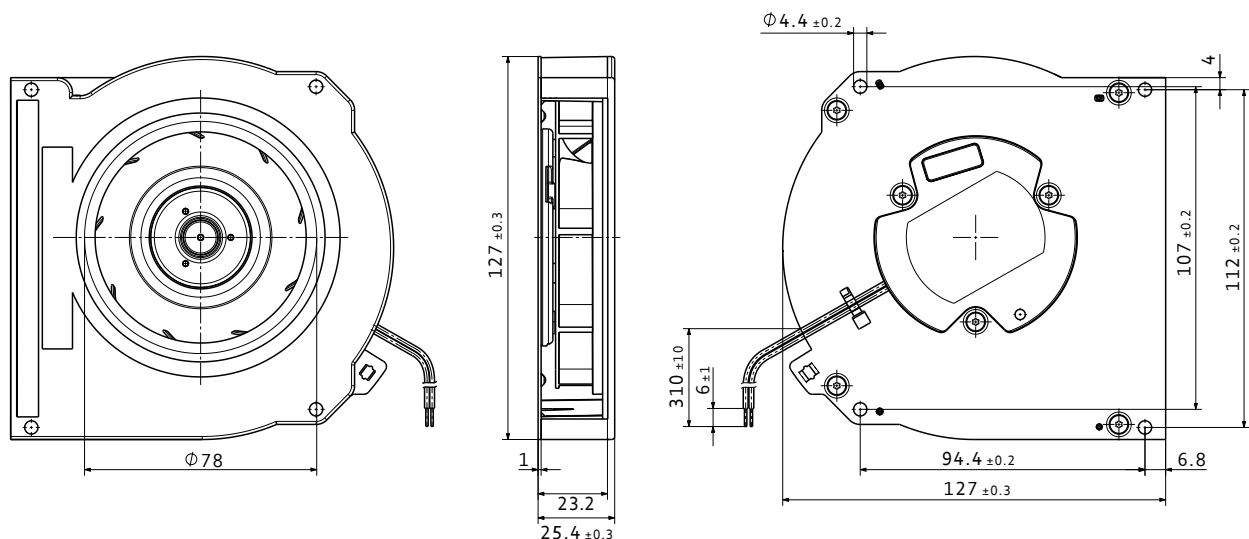


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> IFC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VCS0100XUGBS RLF 100-11/12	9593507051	12	8...15	A	① ② ③ ④	63.0	37.1	5 100	7.3	6.7	-20...+75	80 000	135 000
						54.0	31.8	5 040	7.4	6.5			
						42.9	25.2	5 020	7.5	6.4			
						31.2	18.4	5 070	7.4	6.4			
VCS0100XUGBS RLF 100-11/14	9593507052	24	16...30	A	① ② ③ ④	64.0	37.7	5 100	7.5	6.7	-20...+75	80 000	135 000
						55.0	32.4	5 040	7.7	6.5			
						43.5	25.6	5 020	7.8	6.4			
						31.8	18.7	5 090	7.5	6.4			
VCS0100XUGBS RLF 100-11/18	9593507056	48	36...60	A	① ② ③ ④	64.0	37.7	5 100	8.2	6.7	-20...+75	80 000	135 000
						54.0	31.8	5 040	8.4	6.5			
						43.5	25.6	5 000	8.5	6.4			
						31.8	18.7	5 070	8.3	6.4			
Fan type with speed signal and PWM control input as standard. Other versions on request													
VCS0100XUGBS RLF100-11/12/2HP	9793510200	12	10...13.2	B	① ② ③ ④	80.0	47.1	6 400	18.8	7.2	-20...+60	72 500	122 500
						69.0	40.6	6 400	19.6	7.1			
						56.0	33.0	6 400	20.2	7.0			
						41.0	24.1	6 400	19.7	7.1			
VCS0100XUGBS RLF100-11/18/2HP	9793510182	48	43...53	B	① ② ③ ④	80.0	47.1	6 400	15.5	7.2	-20...+70	72 500	122 500
						69.0	40.6	6 340	16.1	7.1			
						55.0	32.4	6 320	16.6	7.0			
						41.0	24.1	6 360	16.1	7.1			

Subject to changes.

## Technical drawing

Dimensions in mm



# VHS0090XUJBS

DC centrifugal fans · max. 56 m<sup>3</sup>/h · □ 135 x 38 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with forward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 440 g

from page 14 Definitions

from page 350 Accessories

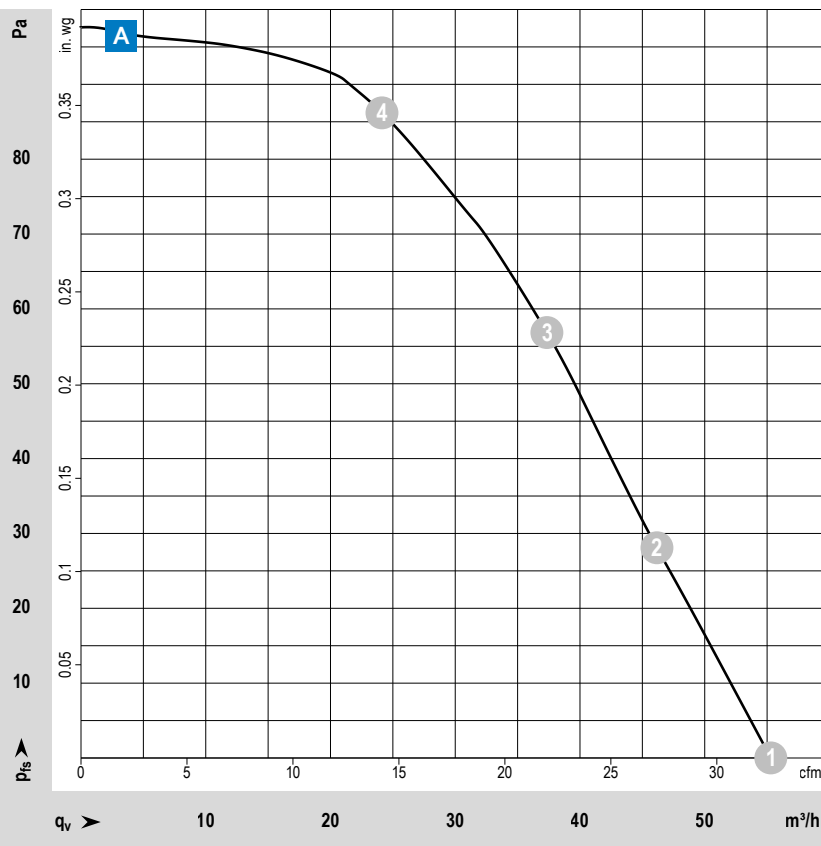
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

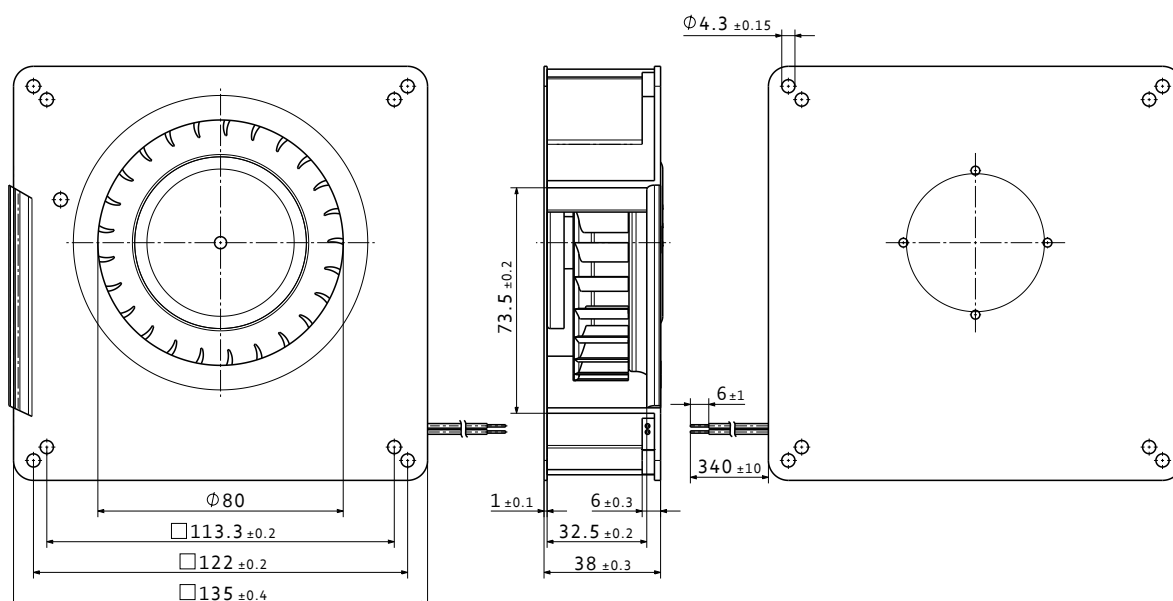
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm						
VHS0090XUJBS RG 90-18/12 N	9594310201	12	7...15	A	①	56.0	33.0	2 200	6.8	6.1	-30...+75	62 500	105 000
						47.4	27.9	2 350	6.2	6.0			
						38.5	22.7	2 530	5.5	5.8			
						25.0	14.7	2 850	4.4	5.6			
VHS0090XUJBS RG 90-18/14 N	9594310200	24	12...28	A	①	55.0	32.4	2 200	6.0	6.1	-30...+75	62 500	105 000
						46.1	27.1	2 350	5.4	6.0			
						37.4	22.0	2 480	4.8	5.7			
						24.1	14.2	2 750	3.8	5.6			
VHS0090XUJBS RG 90-18/18 N	9594310202	48	36...56	A	①	56.0	33.0	2 200	5.9	6.1	-30...+75	62 500	105 000
						46.5	27.4	2 340	5.3	6.0			
						37.2	21.9	2 490	4.7	5.7			
						24.0	14.1	2 740	3.8	5.6			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0125XUJBS

DC centrifugal fans · max. 133 m<sup>3</sup>/h · □ 135 x 38 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 730 g

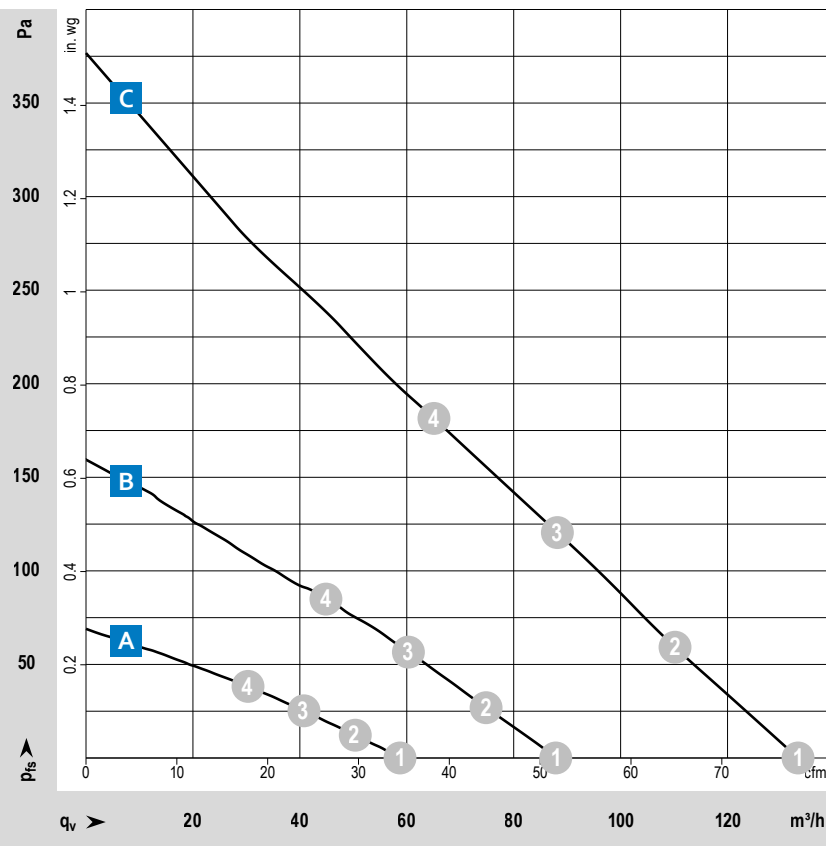
from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68



### Measuring conditions

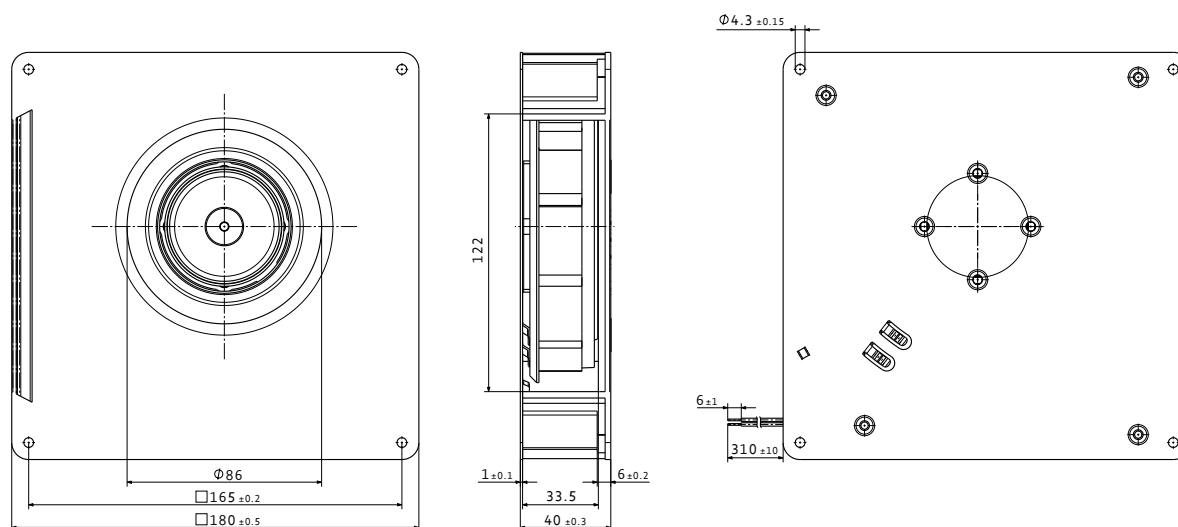
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> FC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm						
VCS0125XUJBS RG 125-19/12 NM	9594310123	12	7...15	A	① ② ③ ④	56.0	33.0	1 750	1.8	5.1	-30...+75	70 000	117 500
						48.9	28.8	1 730	1.8	5.1			
						39.9	23.5	1 730	1.8	5.0			
						29.9	17.6	1 750	1.8	4.9			
VCS0125XUJBS RG 125-19/12 N	9594310122	12	7...15	B	① ② ③ ④	84.0	49.4	2 550	5.1	6.1	-30...+75	62 500	105 000
						72.0	42.4	2 490	5.2	6.0			
						59.0	34.7	2 500	5.2	5.9			
						44.1	26.0	2 540	5.0	5.8			
VCS0125XUJBS RG 125-19/14 NM	9594310121	24	12...28	A	① ② ③ ④	59.0	34.7	1 750	1.9	5.1	-30...+75	70 000	117 500
						50.0	29.4	1 700	2.0	5.1			
						40.6	23.9	1 700	2.0	5.0			
						30.2	17.8	1 730	1.9	4.9			
VCS0125XUJBS RG 125-19/14 N	9594310120	24	12...28	B	① ② ③ ④	86.0	50.6	2 550	4.6	6.1	-30...+75	62 500	105 000
						73.0	43.0	2 500	4.8	6.0			
						59.0	34.7	2 520	4.8	5.9			
						44.2	26.0	2 560	4.6	5.8			
VCS0125XUJBS RG 125-19/18 N	9594310125	48	36...56	B	① ② ③ ④	88.0	51.8	2 550	4.7	6.1	-30...+75	62 500	105 000
						75.0	44.1	2 510	4.8	6.0			
						60.0	35.3	2 520	4.8	5.9			
						44.9	26.4	2 560	4.7	5.8			
VCS0125XUJBS RG 125-19/18 NH	9594310149	48	36...56	C	① ② ③ ④	133.0	78.3	4 000	17.0	7.3	-20...+70	55 000	92 500
						110.0	64.7	3 940	17.5	7.3			
						88.0	51.8	3 950	17.3	7.3			
						65.0	38.3	3 990	17.0	7.2			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0133RUJCS

DC centrifugal fans · max. 378 m<sup>3</sup>/h · □ 165 x 70 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Mechanische Characteristics

- Version: Centrifugal fan in 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48 V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 700 g

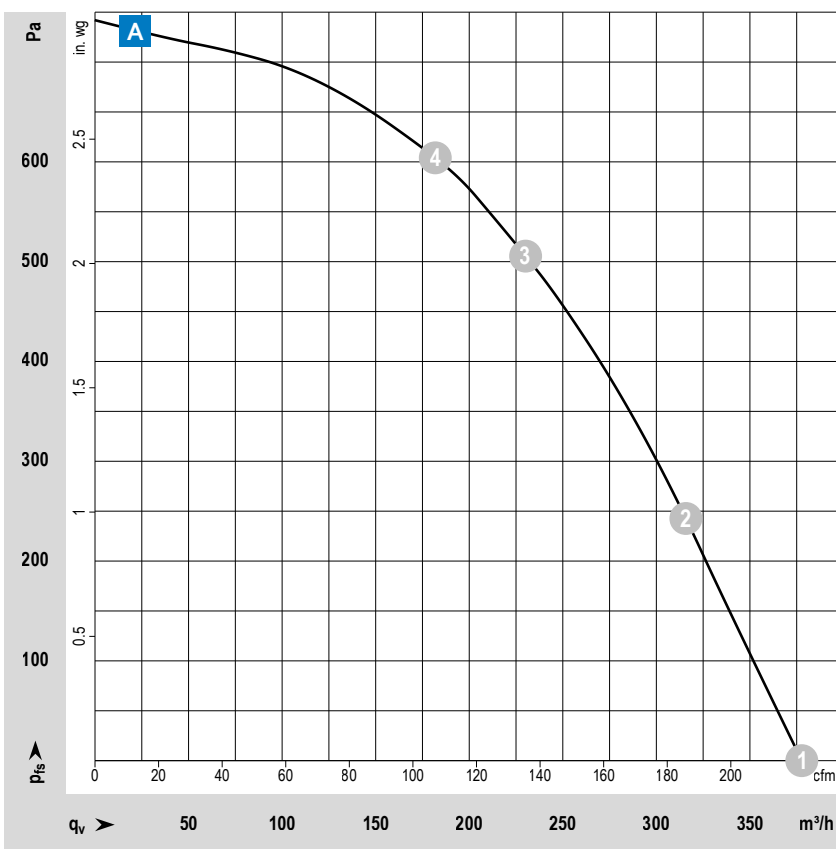
## Conformity with standard(s)/Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

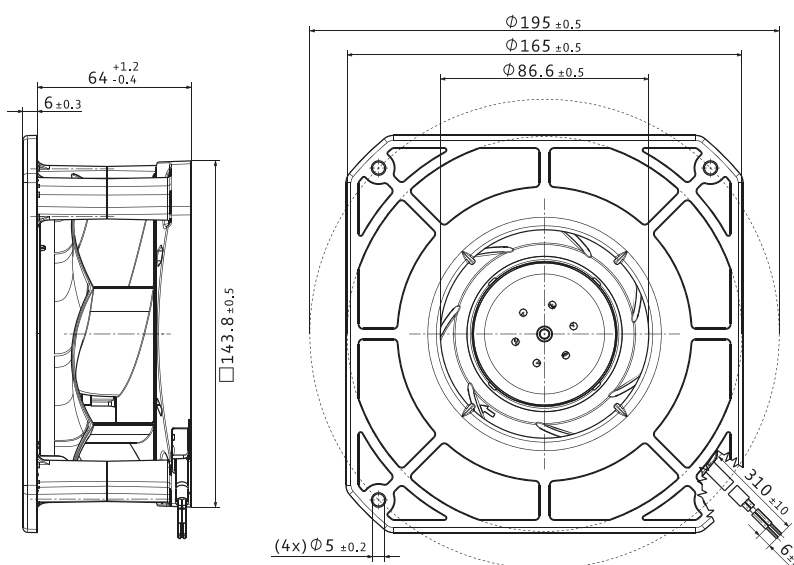
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VCS0133RUJCS RG 133- 33/18/2TDMO	9594314200	48	36...60	A	1	378	222	5 600	63.0	8.1	-20...+65	55 000	92 500
					2	316	186	5 600	71.2	8.0			
					3	230	135	5 600	79.3	7.8			
					4	182	107	5 600	78.0	7.9			

Subject to changes. The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

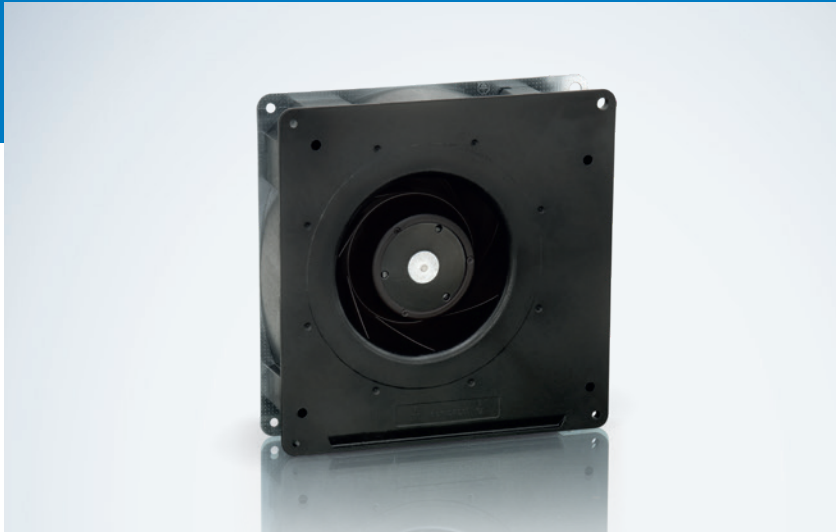
## Technical drawing

Dimensions in mm



# VCS0140XUJCZ

DC centrifugal fans · max. 121 m<sup>3</sup>/h · □ 180 x 40 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC or 24VDC with backward-curved impeller; powerful due to 3-phase motor concept; special commutation electronics for extremely quiet operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 750 g

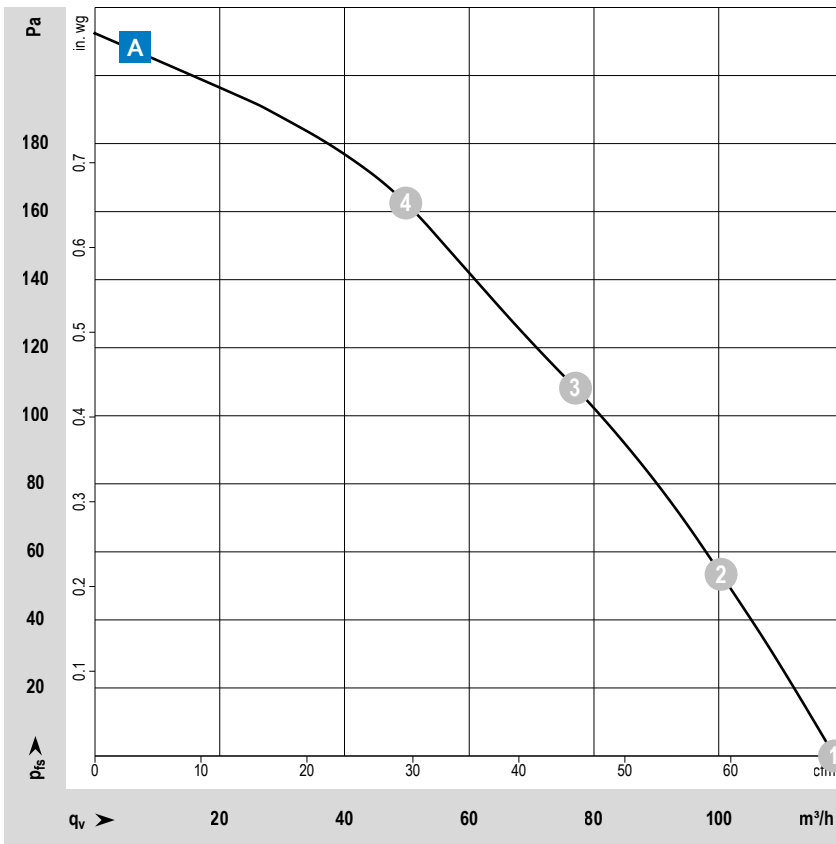
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / No Go Alarm
- Alarm with speed limit
- External temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

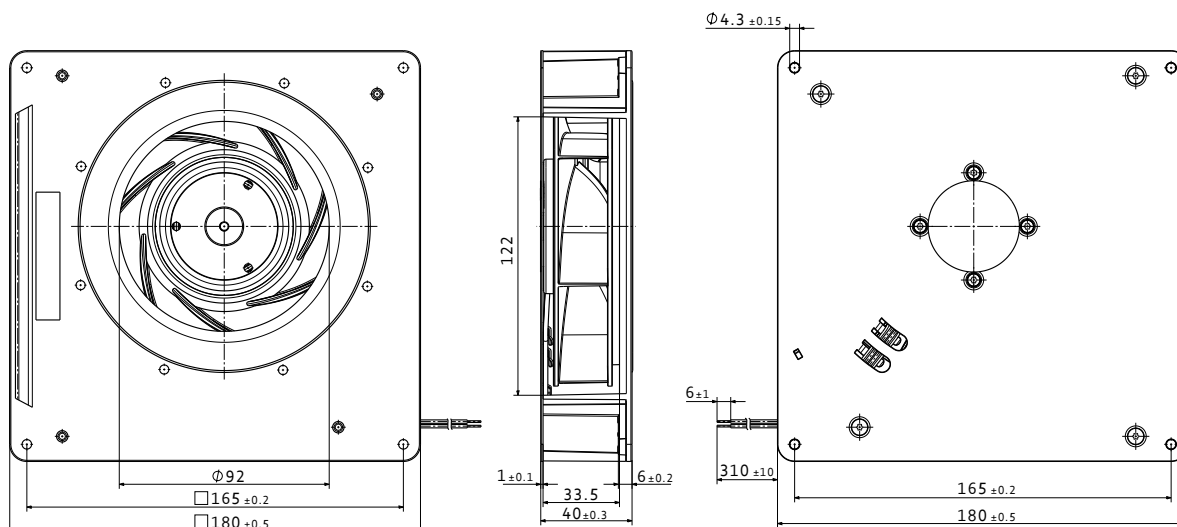


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VCS0140XUJCZ RG 140-22/12 N/2 TDAU-505	9794300505	12	10.8...13.2	A	①	121.0	71.2	2 500	10.3	6.6	-20...+70	62 500	105 000
						102.0	60.0	2 500	10.2	6.4			
						78.0	45.9	2 500	9.3	6.1			
						49.8	29.3	2 500	7.6	6.1			
VCS0140XUJCZ RG 140-22/14 N/2 TDPU	9794300504	24	20.4...27.6	A	②	119.0	70.0	2 500	9.4	6.6	-20...+70	62 500	105 000
						100.0	58.9	2 500	9.3	6.4			
						77.0	45.3	2 500	8.8	6.1			
						49.9	29.4	2 500	7.5	6.1			

Subject to changes.

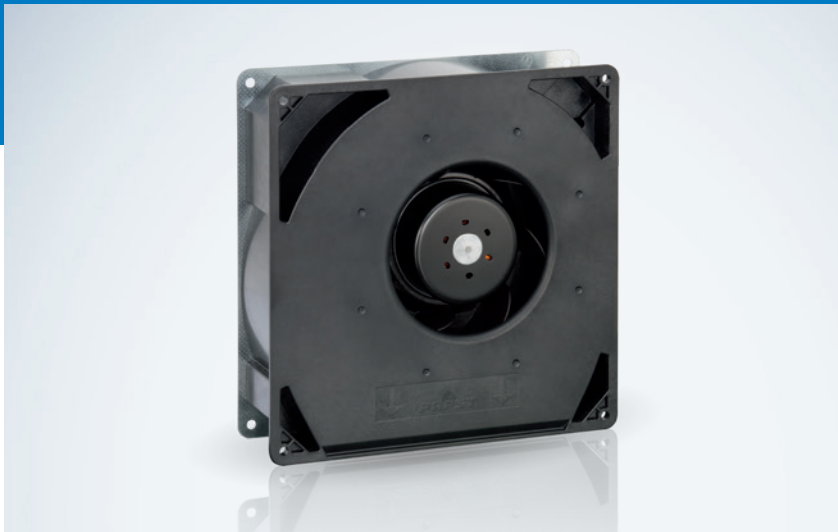
## Technical drawing

Dimensions in mm



# VCS0160XULCS

DC centrifugal fans · max. 209 m<sup>3</sup>/h · □ 220 x 56 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 1.4 kg

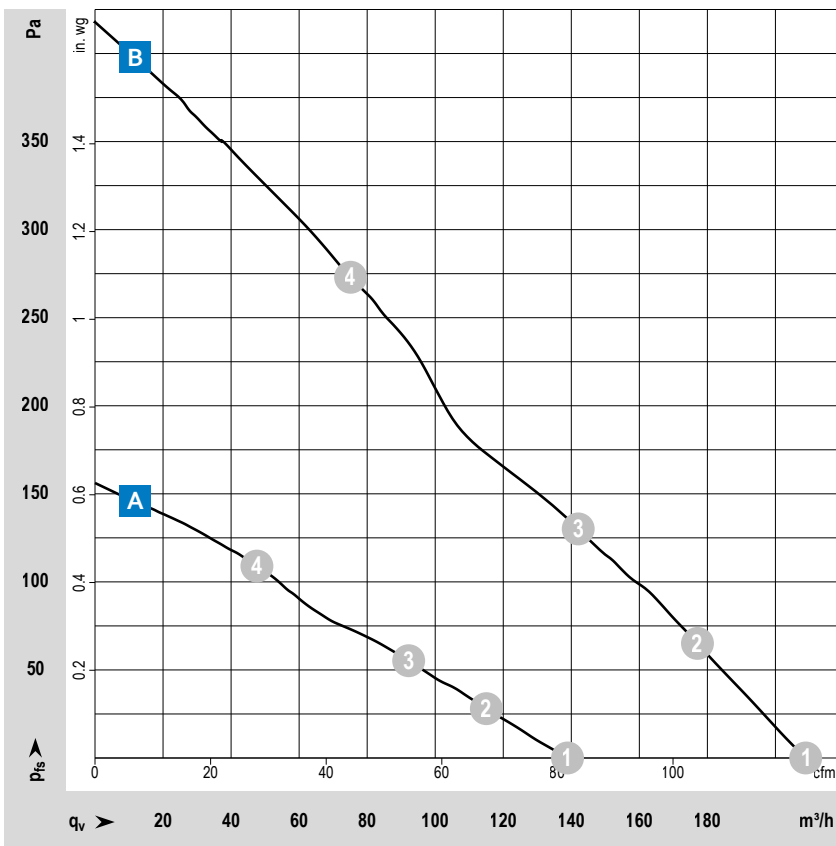
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

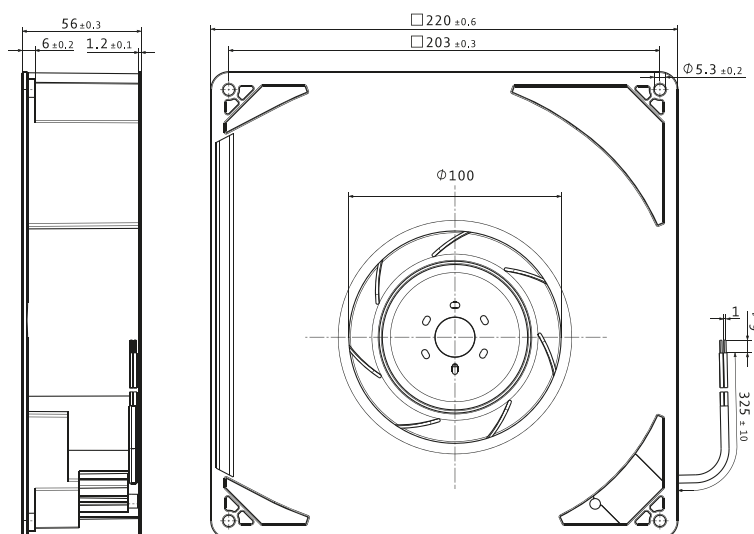
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm	rpm					
VCS0160XULCS RG 160-28/12 N	9595414101	12	7.5...14	B	①	208	122	2 850	18.7	7.2	-20...+70	70 000	117 500
					②	176	104	2 810	19.0	7.0			
					③	141	83	2 820	19.1	6.8			
					④	75	44	2 960	18.3	6.9			
VCS0160XULCS RG 160-28/14 NM	9595414102	24	12...28	A	①	139	82	1 900	7.3	6.4	-20...+70	80 000	135 000
					②	115	68	1 900	7.6	6.2			
					③	92	54	1 900	7.6	5.8			
					④	48	28	1 930	7.1	5.7			
VCS0160XULCS RG 160-28/14 N	9595414100	24	12...28	B	①	209	123	2 850	21.0	7.2	-20...+70	70 000	117 500
					②	178	105	2 830	21.6	7.0			
					③	143	84	2 840	21.7	6.8			
					④	76	45	2 960	19.4	6.9			
VCS0160XULCS RG 160-28/18 N	9595414115	48	28...60	B	①	209	123	2 850	18.6	7.2	-20...+70	70 000	117 500
					②	177	104	2 800	19.2	7.0			
					③	142	84	2 810	19.2	6.8			
					④	75	44	2 930	17.6	6.9			

Subject to changes.

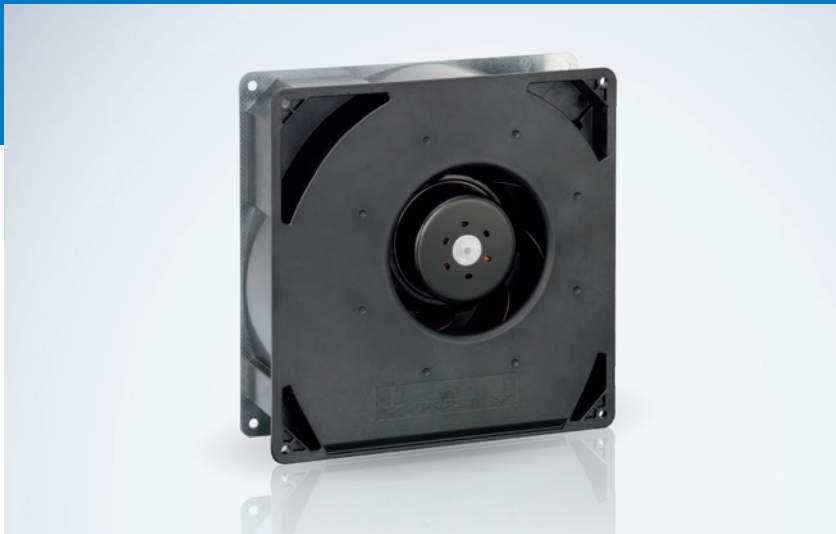
## Technical drawing

Dimensions in mm



# VCS0160XULCS

DC centrifugal fans · max. 436 m<sup>3</sup>/h · □ 220 x 56 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Sheet steel

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22; 48V type: Flat plug; 6,3 x 0,8 mm for ground conductor
- Electrical protection class: III
- Weight: 1.4 kg

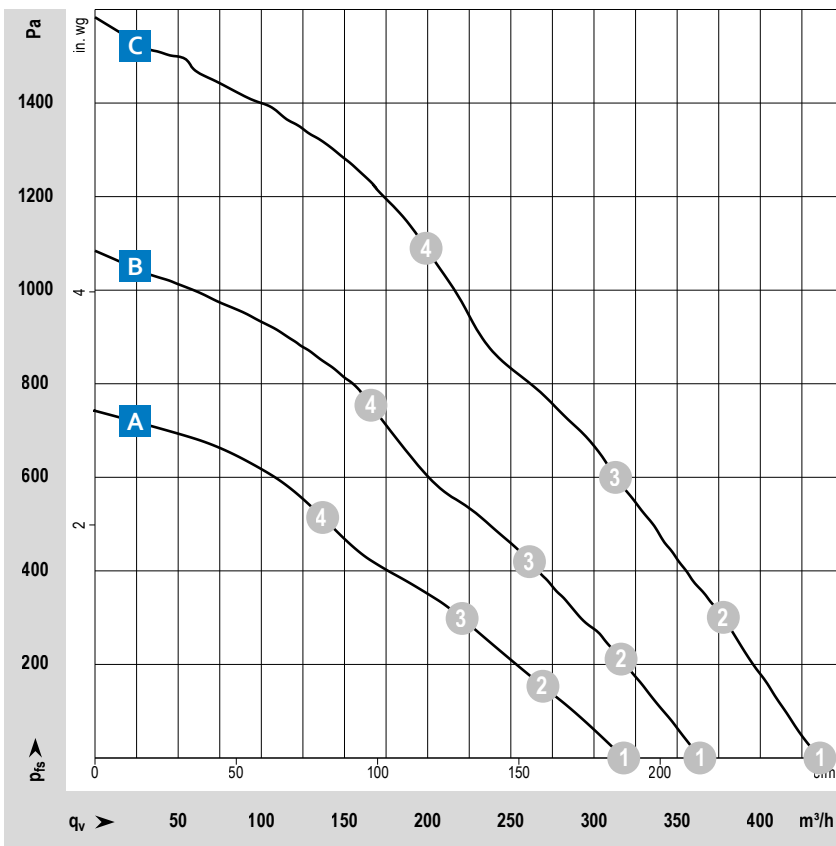
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

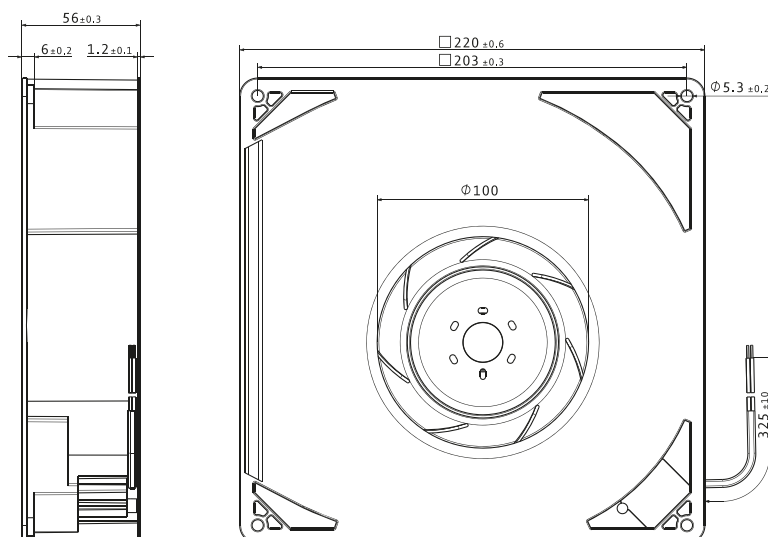
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)			
VCS0160XULCS RG 160-28/14 NTD	9595414315	24	16...28	A	①	317	187	4 200	66.2	8.1	-20...+60	55 000	92 500
					②	271	160	4 200	69.9	8.0			
					③	222	131	4 200	70.0	7.8			
					④	137	81	4 200	62.6	7.9			
VCS0160XULCS RG 160-28/14 NTDH	9595414353	24	16...28	B	①	364	214	5 000	105.9	8.4	-20...+60	50 000	85 000
					②	316	186	5 000	113.0	8.2			
					③	261	154	5 000	114.1	8.0			
					④	166	98	5 000	102.1	8.2			
VCS0160XULCS RG 160-28/18 N/2 TDHHP*	9595414377	48	36...60	C	①	436	257	6 000	177.8	8.8	-20...+65	40 000	67 500
					②	378	222	6 000	191.6	8.6			
					③	313	184	6 000	193.2	8.5			
					④	199	117	6 000	177.8	8.4			

Subject to changes.

\*The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

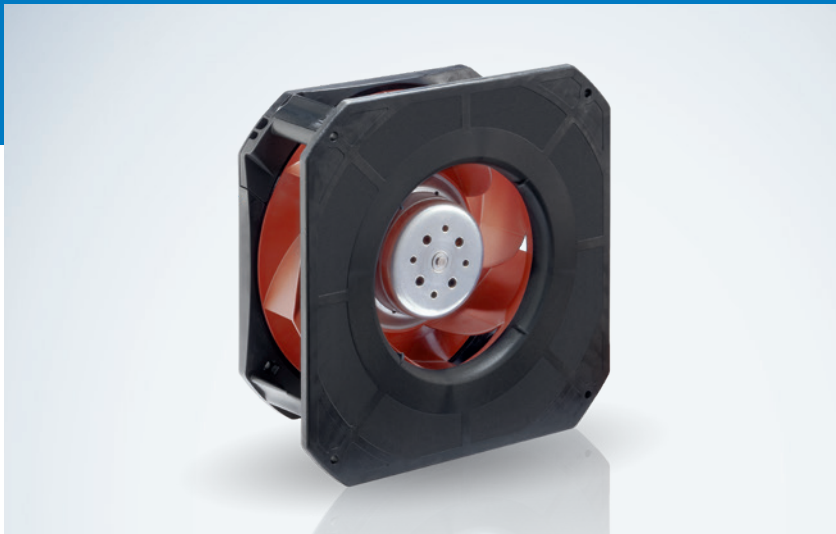
## Technical drawing

Dimensions in mm



# VCS0190RULDS

DC centrifugal fans · max. 922 m<sup>3</sup>/h · □ 226 x 85 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 1210 g

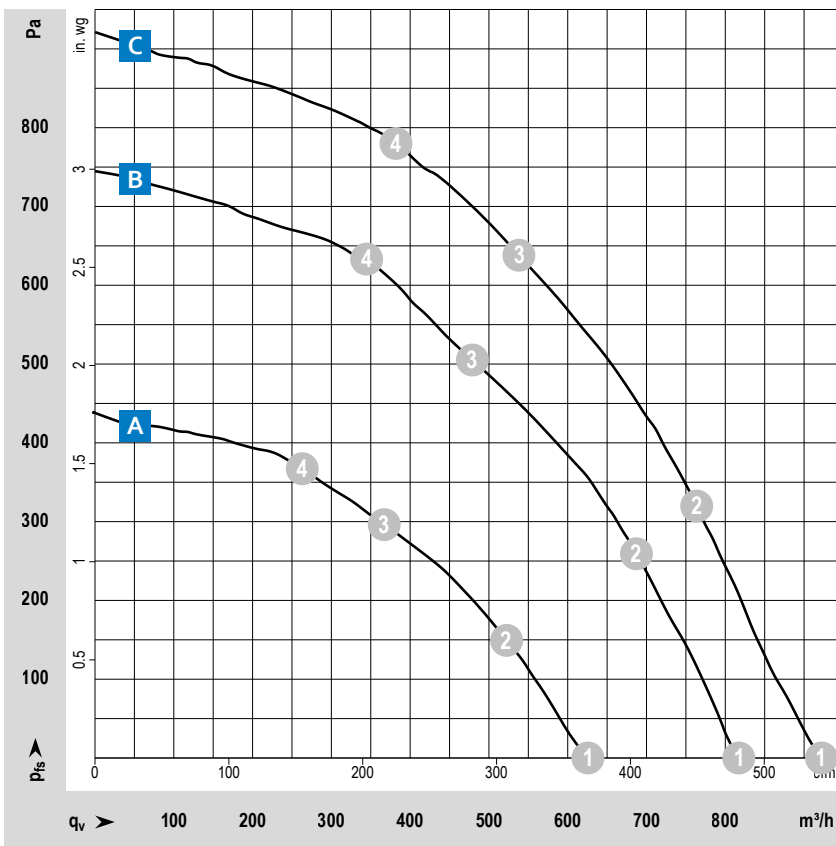
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

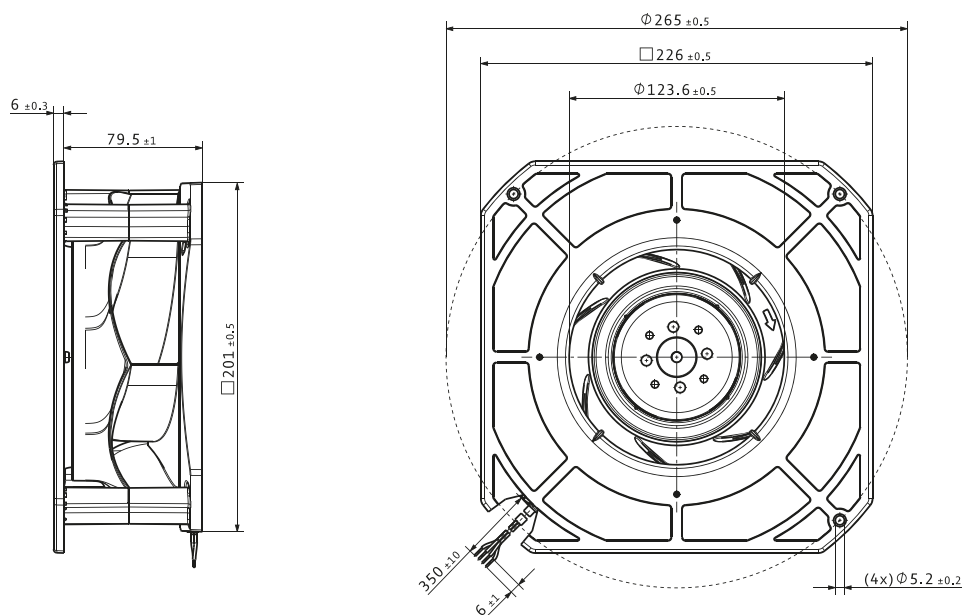
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm						
VCS0160XULCS RG 190-39/14/2 TDMLO	9595414741	24	16...30	A	① ② ③ ④	623	367	3 000	53.0	7.5	-20...+60	55 000	92 500
						521	307	2 990	68.0	7.3			
						367	216	2 980	75.9	7.3			
						263	155	3 040	73.2	7.4			
VCS0160XULCS RG 190-39/14/2 TDMO	9595420221	24	16...36	B	① ② ③ ④	817	481	3 900	107.3	8.3	-20...+65	52 500	87 500
						687	404	3 890	137.1	8.0			
						479	282	3 860	150.0	8.0			
						345	203	3 960	148.2	8.0			
VCS0160XULCS RG 190-39/18/2 TDMLO	9595414743	48	36...57	A	① ② ③ ④	626	368	3 000	53.4	7.5	-20...+60	55 000	92 500
						522	307	2 970	67.5	7.3			
						367	216	2 970	75.2	7.3			
						263	155	3 020	72.4	7.4			
VCS0160XULCS RG 190-39/18/2 TDMO	9595420223	48	36...72	B	① ② ③ ④	822	484	3 900	101.6	8.3	-20...+65	52 500	87 500
						683	402	3 880	129.3	8.0			
						482	284	3 870	145.2	8.0			
						342	201	3 930	138.6	8.0			
VCS0160XULCS RG 190-39/18/2 TDO	9595420220	48	36...72	C	① ② ③ ④	922	543	4 400	141.4	8.6	-20...+65	40 000	67 500
						764	450	4 340	179.6	8.3			
						538	317	4 340	201.8	8.1			
						382	225	4 400	192.8	8.1			

Subject to changes.

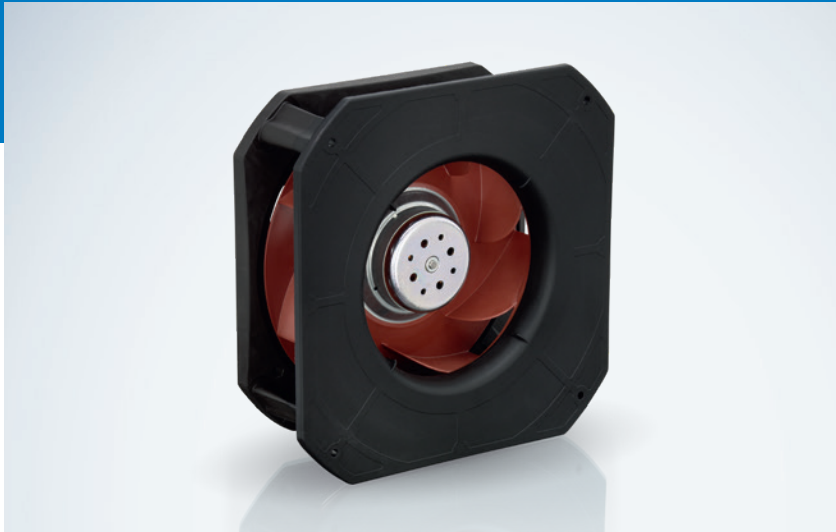
## Technical drawing

Dimensions in mm



# VCS0220RULDS

DC centrifugal fans · max. 1 098 m<sup>3</sup>/h · □ 270 x 99 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

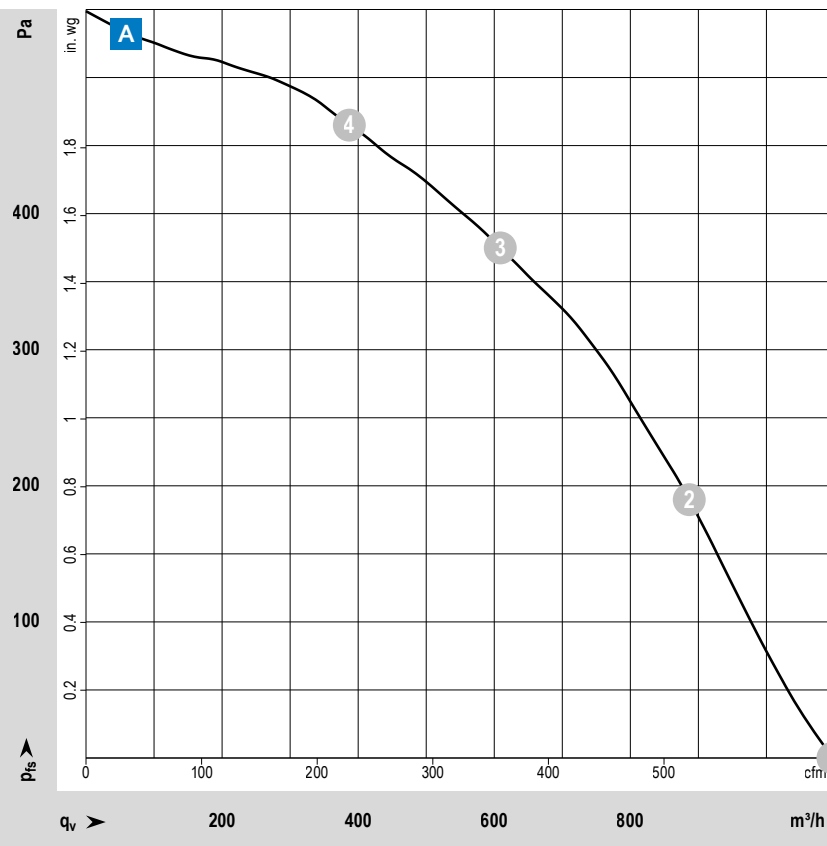
- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 1560 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

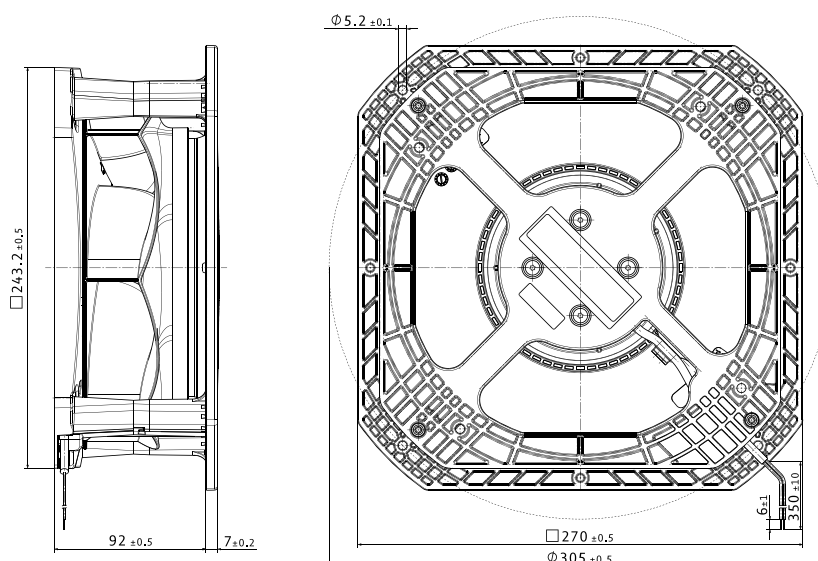


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VCS0220RULDS RG 220-43/14/2 TDMO	9595420305	24	16...36	A	1	1 098	646	3 000	96.0	7.8	-20...+55	55 000	92 500
					2	887	522	2 950	121.2	7.5			
					3	609	358	2 940	143.7	7.6			
					4	387	228	3 000	135.6	7.7			

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0225RULDS

DC centrifugal fans · max. 1 445 m<sup>3</sup>/h · □ 270 x 119 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic

## Characteristics

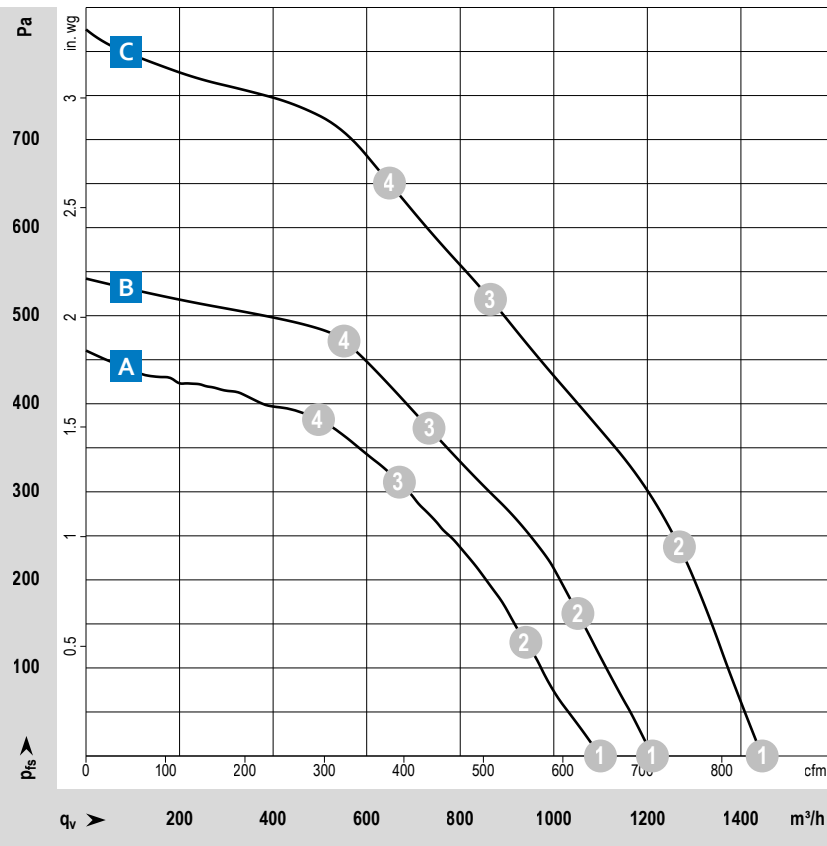
- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 1750 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

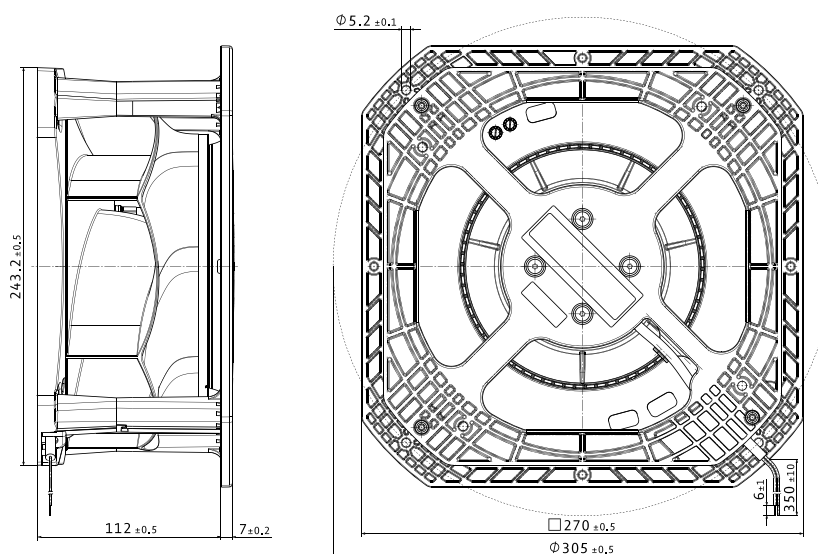
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10IPFC</sub> (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)			
VCS0225RULDS RG 225-55/14/2 TDMLO	9595420431	24	16...36	A	①	1 100	647	2 500	89.0	7.7	-20...+65	52 500	87 500
					②	940	553	2 460	107.4	7.5			
					③	670	394	2 480	125.7	7.4			
					④	497	293	2 520	120.4	7.5			
VCS0225RULDS RG 225-55/18/2 TDMO	9595420430	48	36...72	B	①	1 211	713	2 800	123.3	8.1	-20...+55	55 000	92 500
					②	1 052	619	2 752	149.2	8.0			
					③	733	431	2 721	170.0	8.0			
					④	552	325	2 814	169.0	8.0			
VCS0225RULDS RG 225-55/18/2 TDO	9595420432	48	36...60	C	①	1 445	850	3 300	183.4	8.5	-20...+40	30 000	50 000
					②	1 270	747	3 299	239.4	8.3			
					③	865	509	3 185	250.0	8.1			
					④	649	382	3 271	250.0	8.1			

Subject to changes.

The specific service life is valid when an external capacitor is wired between the positive and negative wires.

## Technical drawing

Dimensions in mm



# VFS0085XUJCS

DC centrifugal fans · max. 94 m<sup>3</sup>/h · Ø 85 x 68 mm



## Material/Surface

- Impeller: Metal

## Characteristics

- Version: Centrifugal fan in 24VDC with forward-curved impeller; Powerful due to 3-phase motor concept; Low-noise operation, fan requires scroll housing
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG24
- Electrical protection class: III
- Weight: 450 g

from page 14 Definitions

from page 350 Accessories

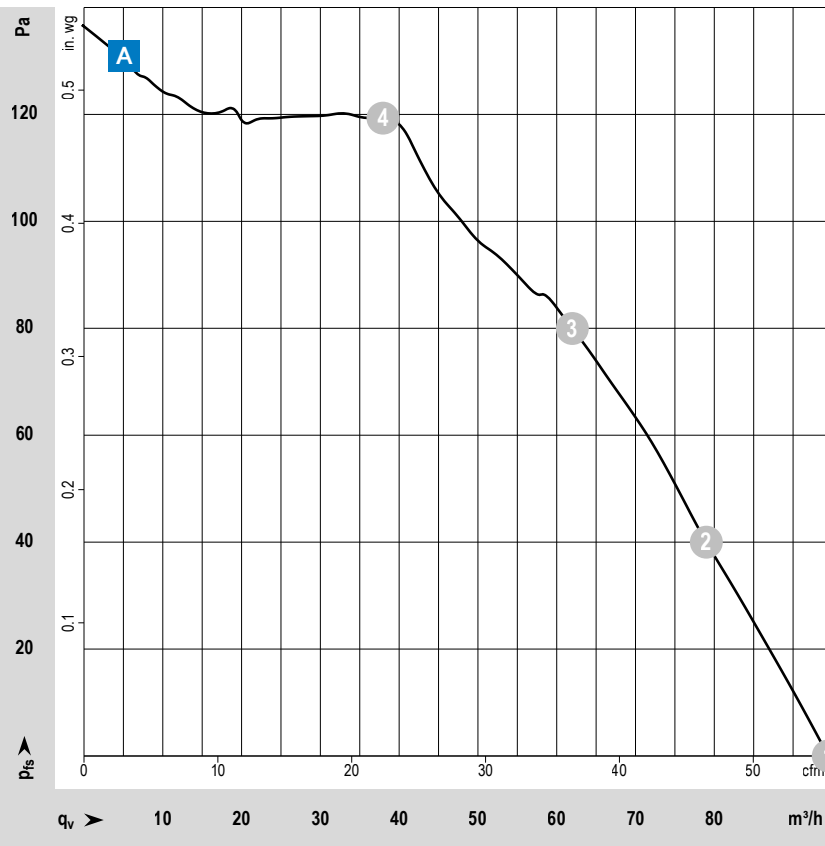
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- PWM control input
- Analog control input
- Multi-options control input (O)
- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

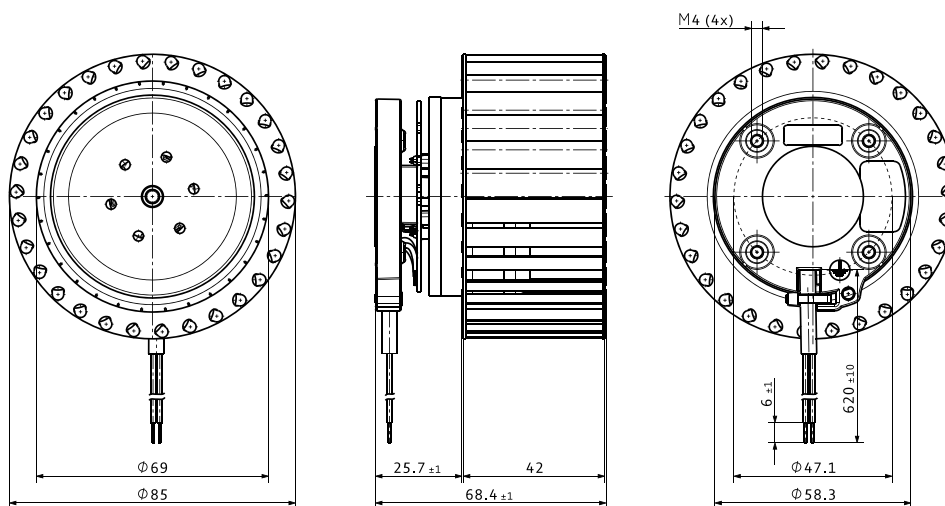
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> IFC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VFS0085XUJCS RET 85-42/14/2 TDLOR-402	9594314402	24	20...28	A	1	94	55	2 850	13.0	6.9	-20...+60	62 500	105 000
					2	79	46	2 850	10.8	6.7			
					3	62	36	2 850	8.6	6.7			
					4	38	22	2 850	5.9	6.6			

Subject to changes.

All nominal data were measured in the scroll housing.

Technical drawing

Dimensions in mm



# VFS0097XUJCS

DC centrifugal fans · max. 230 m<sup>3</sup>/h · Ø 97 x 41 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Metal

## Characteristics

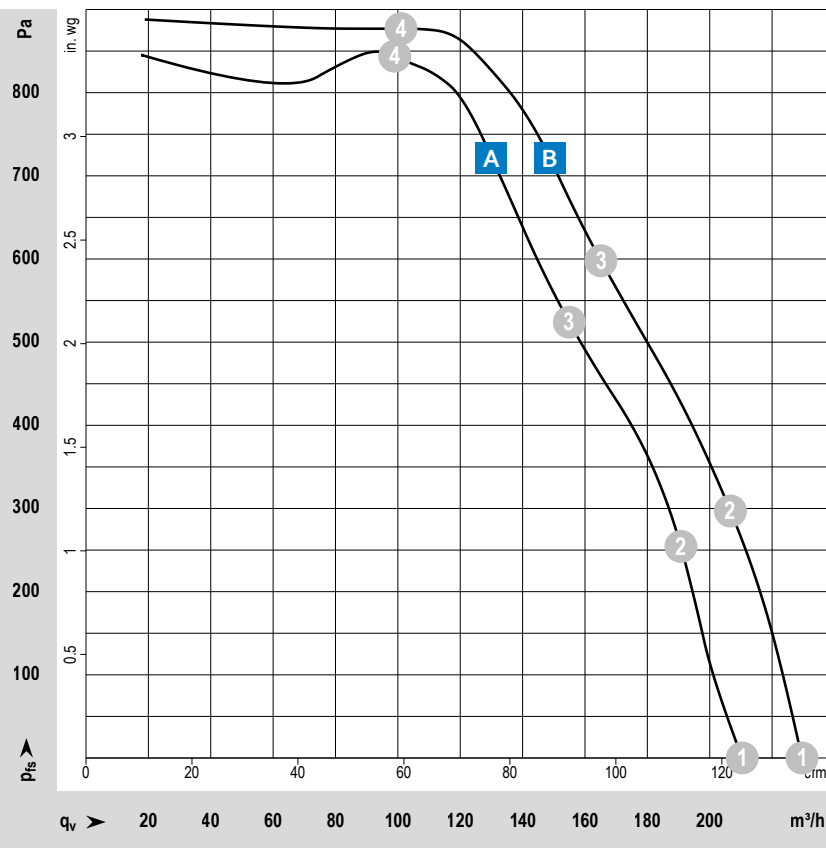
- Version: Centrifugal fan in 24 or 48VDC with forward-curved impeller; Powerful due to 3-phase motor concept; Low-noise operation, fan requires scroll housing
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 430 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

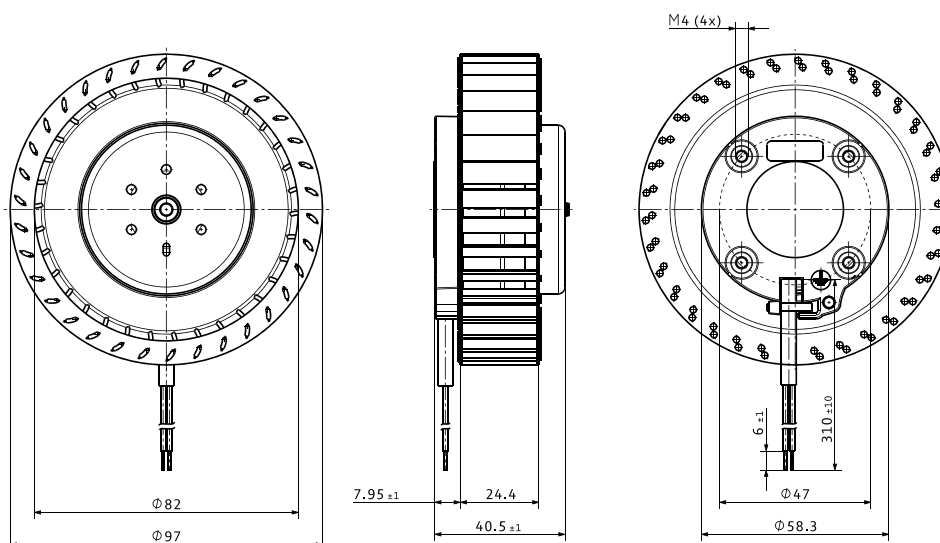
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VFS0097XUJCS RET 97-25/14/2 TDP	9594314052	24	16...32	A	1	210	124	5 600	140.1	8.4	-20...+60	80 000	135 000
					2	191	112	5 900	134.9				
					3	155	91	6 030	109.6				
					4	99	58	6 050	62.1				
VFS0097XUJCS RET 97-25/18/2 TDP	9594314050	48	36...60	B	1	230	135	6 000	169.1	8.6	-20...+60	80 000	135 000
					2	207	122	6 220	152.6				
					3	165	97	6 210	111.2				
					4	101	59	6 270	64.4				

Subject to changes.

The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet. All nominal data were measured in the scroll housing.

## Technical drawing

Dimensions in mm



# VBS0100XUGBS

DC centrifugal fans · max. 105 m<sup>3</sup>/h · Ø 104 x 25 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 160 g

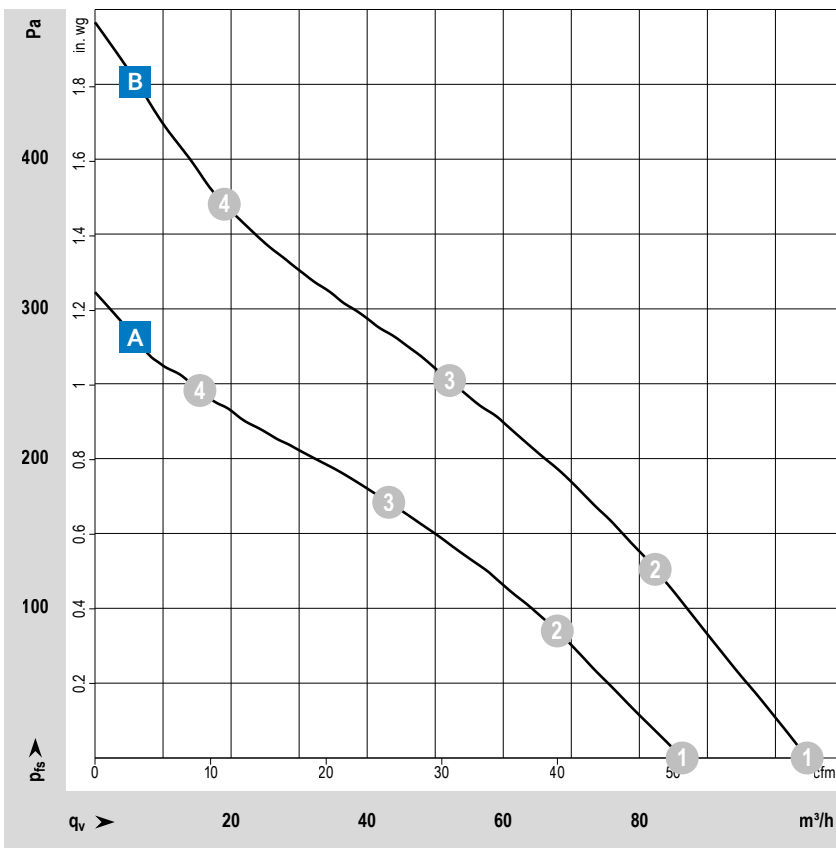
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Degree of protection: IP 54

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

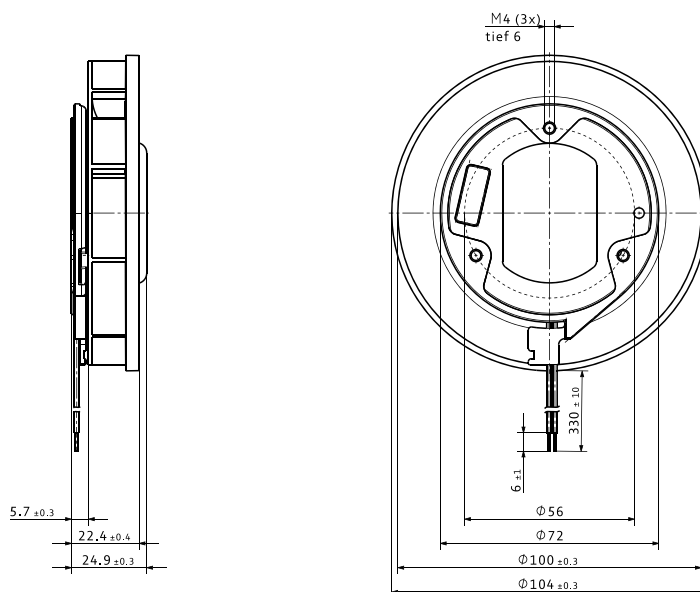


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VDC	VDC			m³/h	cfm						
VBS0100XUGBS REF 100-11/12	9593507002	12	8...15	A	①	86.0	50.6	5 400	6.7	7.0	-20...+75	80 000	135 000
						68.0	40.0	5 170	7.3	6.6			
						43.2	25.4	5 000	8.0	6.4			
						15.4	9.1	5 400	6.7	6.8			
VBS0100XUGBS REF 100-11/14	9593507003	24	16...30	A	①	85.0	50.0	5 400	6.6	7.0	-20...+75	80 000	135 000
						67.0	39.4	5 230	7.2	6.6			
						43.1	25.4	5 070	7.8	6.4			
						15.3	9.0	5 400	6.7	6.8			
VBS0100XUGBS REF 100-11/18/2	9593507008	48	36...60	A	①	83.0	48.9	5 400	7.3	7.0	-20...+75	80 000	135 000
						66.0	38.8	5 220	7.9	6.6			
						42.3	24.9	5 050	8.4	6.4			
						15.2	8.9	5 400	7.3	6.8			
VBS0100XUGBS REF 100-11/18 H	9593507005	48	36...56	B	①	105.0	61.8	6 700	13.2	7.3	-20...+70	67 500	115 000
						82.0	48.3	6 430	14.4	7.0			
						52.0	30.6	6 200	15.6	6.8			
						19.0	11.2	6 690	13.3	7.3			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0101XUGDS

DC centrifugal fans · max. 195 m<sup>3</sup>/h · Ø 101 x 52 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller; compact and powerful
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 305 g

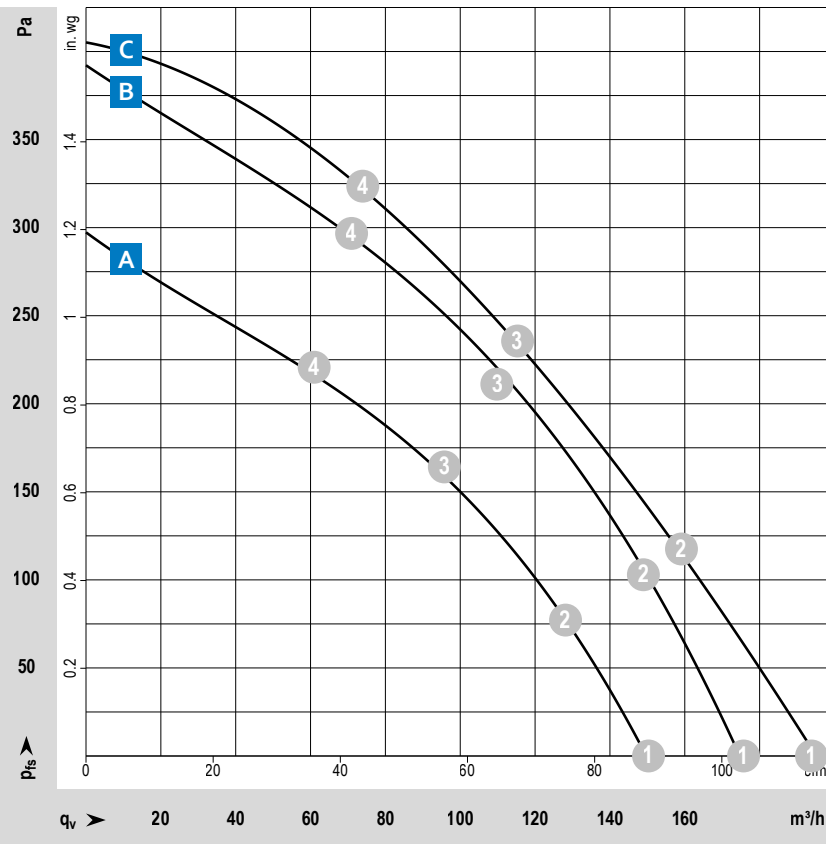
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

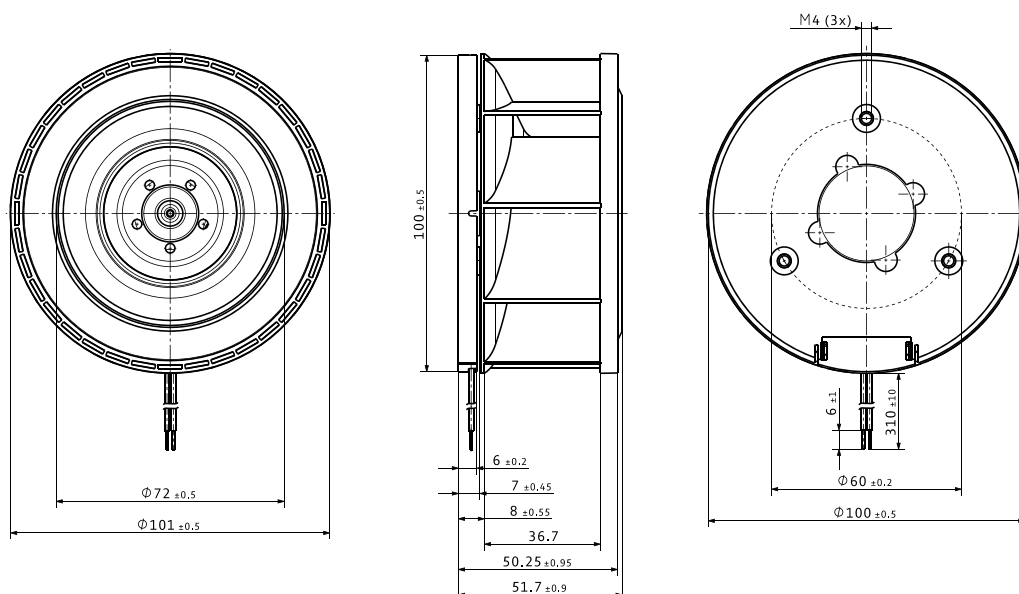
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m³/h	cfm						
VBS0101XUGDS RER 101-36/12 NH	9793520196	12	9...13.6	A	①	150	88	5 000	11.4	7.2	-20...+70	65 000	110 000
						128	75	4 900	12.2	7.0			
						96	57	4 820	12.9	7.0			
						61	36	4 870	12.5	6.9			
VBS0101XUGDS RER 101-36/12 NHH	9793520192	12	9...13.6	C	①	191	112	6 000	20.6	7.9	-20...+70	60 000	102 500
						156	92	5 800	22.0	7.7			
						114	67	5 690	22.5	7.6			
						74	44	5 800	22.0	7.5			
VBS0101XUGDS RER 101-36/14 NHH	9793520190	24	18...27.2	C	①	195	115	6 050	22.5	7.9	-20...+70	60 000	102 500
						161	95	5 760	22.4	7.7			
						117	69	5 630	23.0	7.6			
						73	43	5 780	22.6	7.5			
VBS0101XUGDS RER 101-36/18 NHH	9793520191	48	36...60	B	①	176	104	5 850	17.0	7.7	-20...+70	60 000	102 500
						149	88	5 740	18.5	7.5			
						110	65	5 650	19.6	7.3			
						71	42	5 640	18.2	7.3			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0120XUJCS

DC centrifugal fans · max. 381 m<sup>3</sup>/h · Ø 120 x 54 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 430 g

from page 14 Definitions

from page 350 Accessories

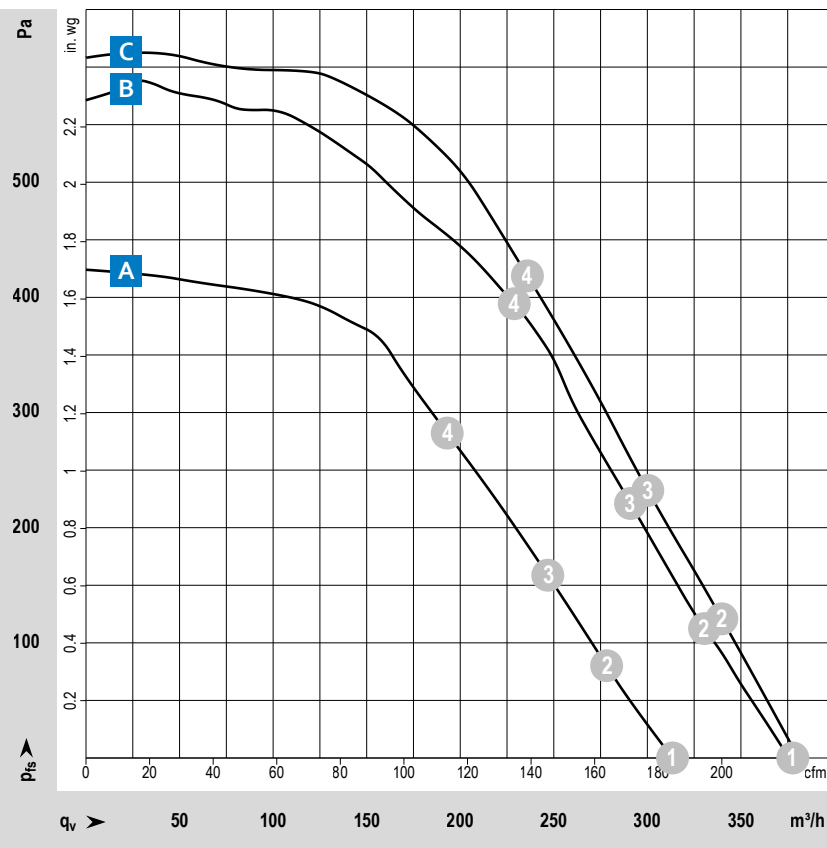
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

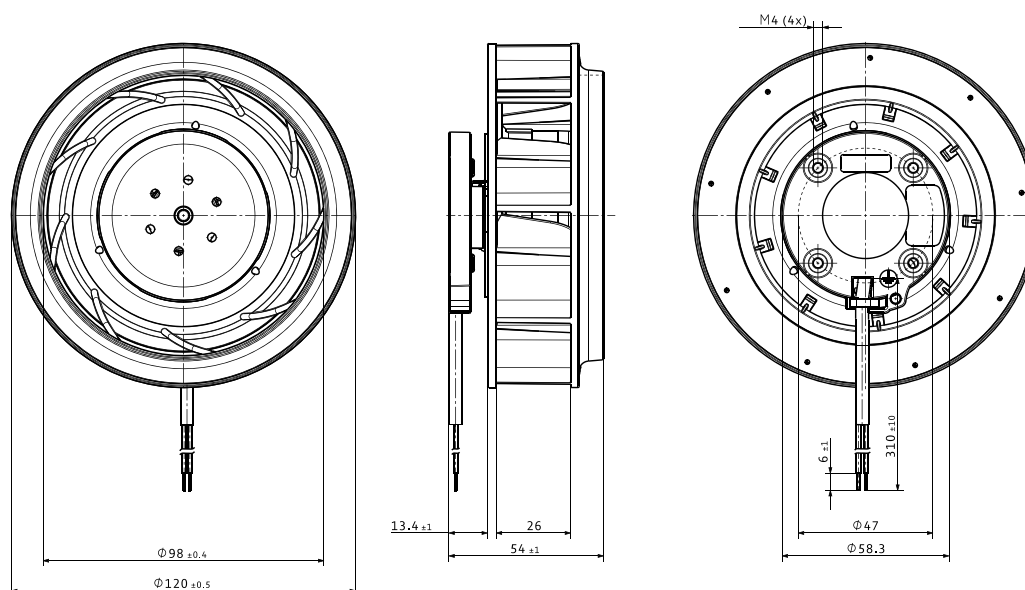
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)		°C	Hours
VBS0120XUJCS RER 120-26/14/2 TDP	9594314001	24	16...32	B	① ② ③ ④	376	221	6 100	96.1	8.4	-20...+60	55 000	92 500
						330	194	6 130	98.1				
						291	171	6 140	98.4				
						229	135	6 200	93.9				
VBS0120XUJCS RER 120-26/18/2 TDMP	9594314005	48	36...60	A	① ② ③ ④	313	184	5 200	53.4	8.1	-20...+60	57 500	97 500
						278	164	5 200	54.1				
						247	145	5 200	54.7				
						193	114	5 200	53.7				
VBS0120XUJCS RER 120-26/18/2 TDP	9594314000	48	36...60	C	① ② ③ ④	381	224	6 300	100.8	8.5	-20...+60	50 000	85 000
						340	200	6 300	103.4				
						300	177	6 300	103.9				
						236	139	6 360	100.3				

Subject to changes.

The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

## Technical drawing

Dimensions in mm



# VBS0125XUJBS

DC centrifugal fans · max. 152 m<sup>3</sup>/h · Ø 138 x 35 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC, 24VDC or 48VDC with backward-curved impeller
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 320 g

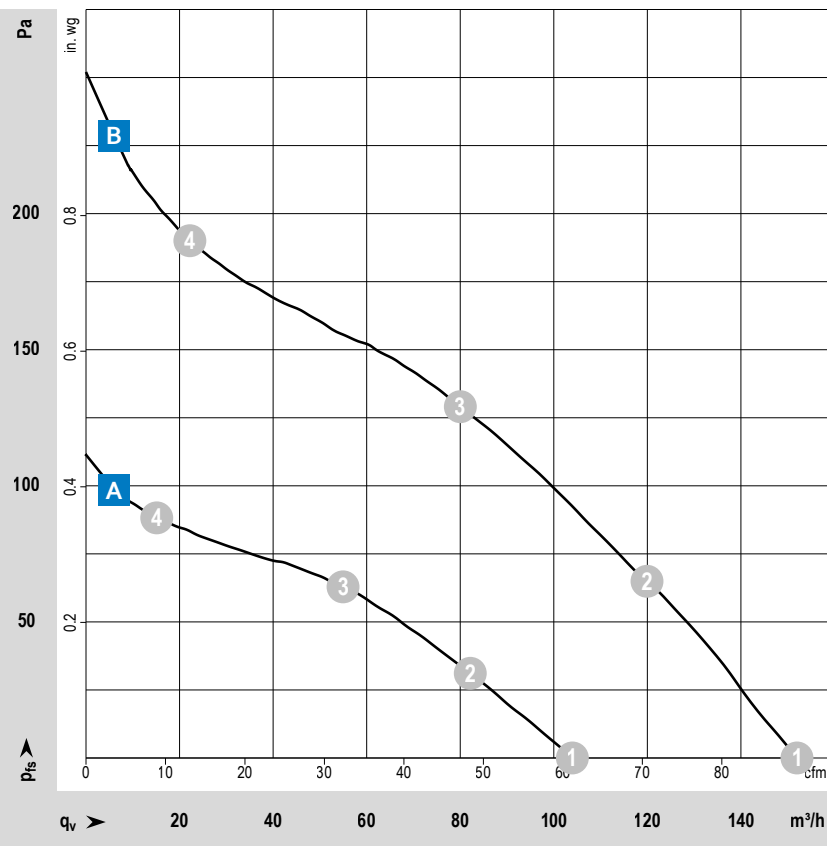
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

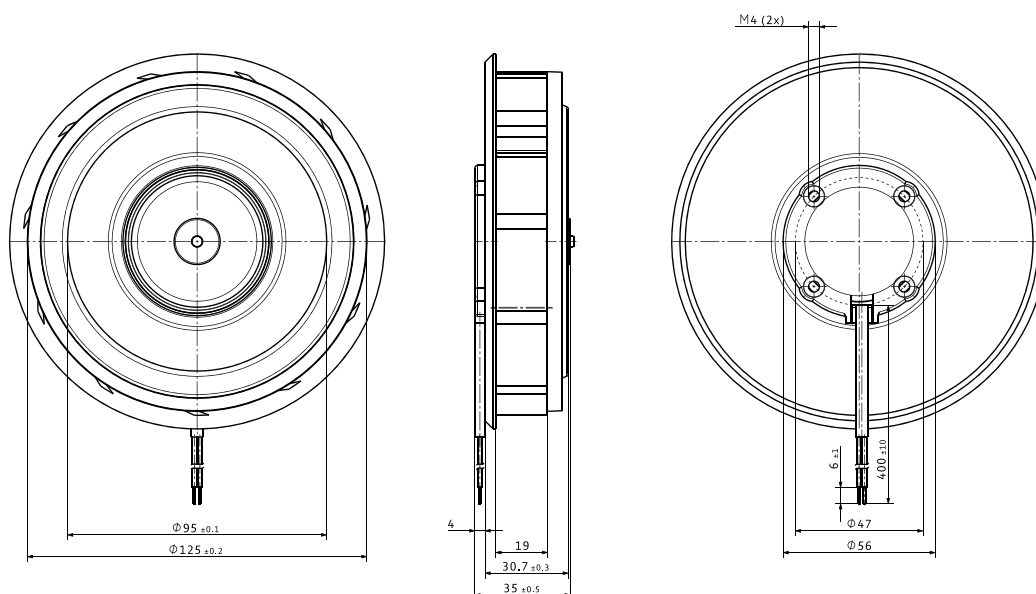
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m³/h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VBS0120XUJCS RER 125-19/12 N	9594310157	12	7...15	A	① ② ③ ④	100.0	58.9	2 650	3.8	6.0	-30...+75	62 500	105 000
						80.0	47.1	2 560	4.2	5.9			
						54.0	31.8	2 490	4.4	5.8			
						15.0	8.8	2 620	4.0	5.8			
VBS0120XUJCS RER 125-19/14 N	9594310155	24	12...28	A	① ② ③ ④	104.0	61.2	2 650	4.1	6.0	-30...+75	62 500	105 000
						82.0	48.3	2 560	4.4	5.9			
						55.0	32.4	2 490	4.7	5.8			
						15.1	8.9	2 620	4.2	5.8			
VBS0120XUJCS RER 125-19/14 NH-172	9594310172	24	12...28	B	① ② ③ ④	152.0	89.5	4 000	10.2	6.9	-20...+70	55 000	92 500
						120.0	70.6	3 840	11.0	6.8			
						80.0	47.1	3 720	11.6	6.9			
						22.2	13.1	3 920	10.6	6.9			
VBS0120XUJCS RER 125-19/18 N	9594310170	48	36...56	A	① ② ③ ④	101.0	59.4	2 650	3.7	6.0	-30...+75	62 500	105 000
						81.0	47.7	2 560	4.0	5.9			
						54.0	31.8	2 500	4.2	5.8			
						15.1	8.9	2 620	3.8	5.8			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0133X...

DC centrifugal fans · max. 539 m<sup>3</sup>/h · Ø 133 x 91 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 890 g; 460 g RadiCal

from page 14 Definitions

from page 350 Accessories

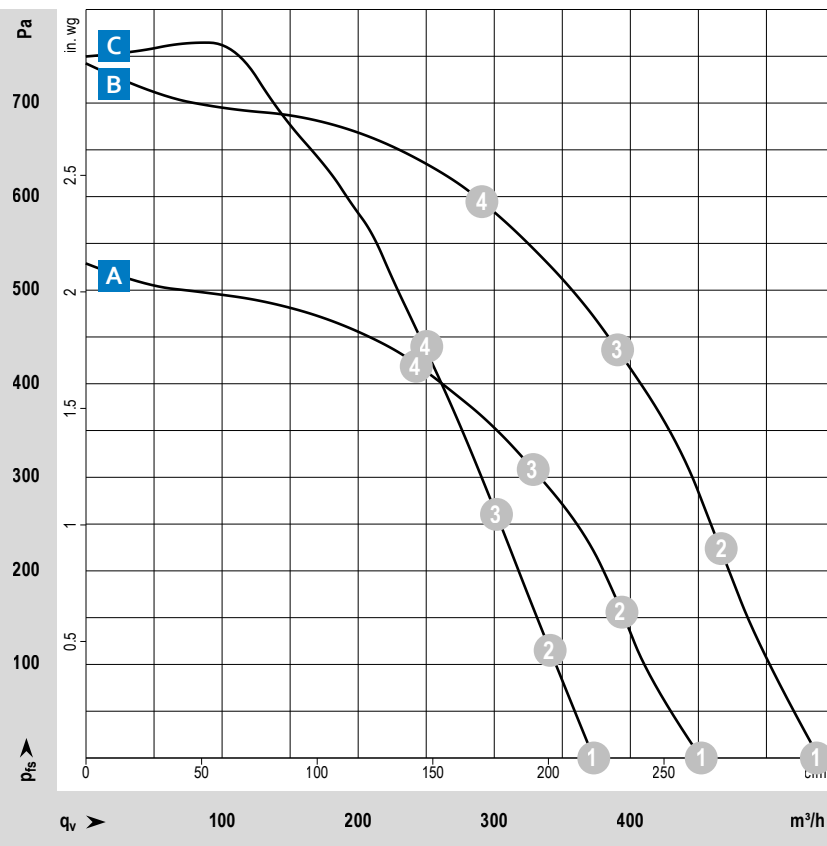
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>



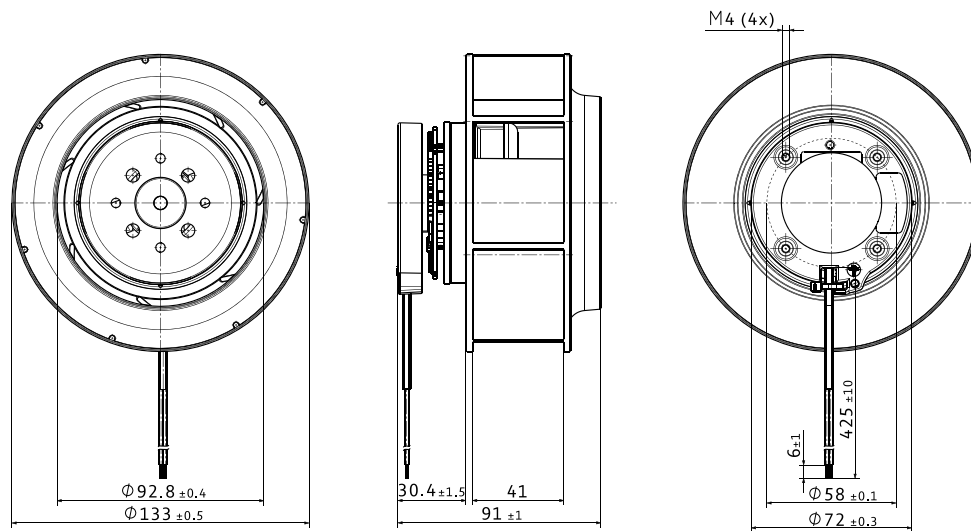
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)			
<b>VBS0133XULCS</b> RER 133-41/14/2 TDMP	9595414520	24	16...30	<b>A</b>	① ② ③ ④	452	266	5 000	58.5	8.3	-20...+65	72 500	122 500
						394	232	4 990	71.0	8.1			
						329	194	4 980	80.1	7.9			
						244	144	5 040	75.9	7.9			
<b>VBS0133XULDS</b> RER 133-41/14/2 TDP	9595420062	24	16...36	<b>B</b>	① ② ③ ④	539	317	6 000	90.8	8.6	-20...+65	70 000	117 500
						468	275	5 960	111.6	8.4			
						391	230	5 960	127.7	8.3			
						291	171	6 020	121.1	8.2			
<b>VBS0133XULDS</b> RER 133-41/18/2 TDP	9595420050	48	36...72	<b>B</b>	① ② ③ ④	537	316	6 000	93.2	8.6	-20...+65	70 000	117 500
						468	275	6 000	114.7	8.4			
						382	225	5 840	120.0	8.3			
						286	168	5 940	120.0	8.2			
<b>VBS0133RUJCS*</b> RER 133-33/18/2 TDMO RadiCal	9594314204	48	36...60	<b>C</b>	① ② ③ ④	373	220	5 600	58.9	8.7	-20...+65	55 000	92 500
						341	201	5 580	62.9	8.6			
						302	178	5 530	67.6	8.4			
						249	147	5 530	73.5	7.9			

Subject to changes.

\* The specific service life is valid when an external capacitor is wired by the customer. See information on wiring in the corresponding product data sheet.

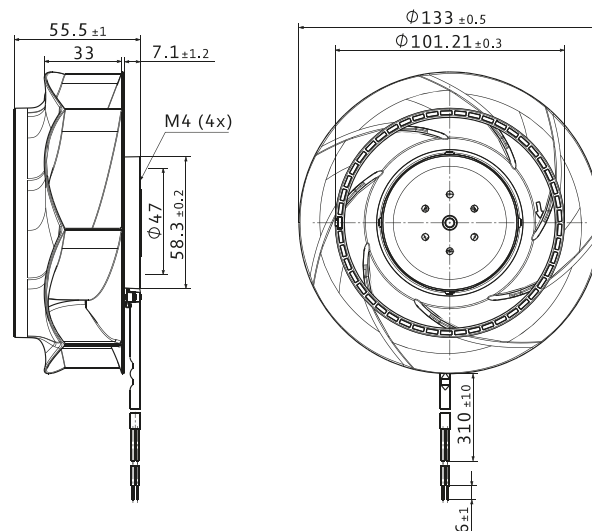
## Technical drawing VBS0133XULCS + VBS0133XULDS RER 133 TD

Dimensions in mm



## Technical drawing VBS0133RUJCS RER 133-33/18/2 TDMO RadiCal

Dimensions in mm



# VBS0140XUJCS

DC centrifugal fans · max. 259 m<sup>3</sup>/h · Ø 140 x 36 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Plastic

## Characteristics

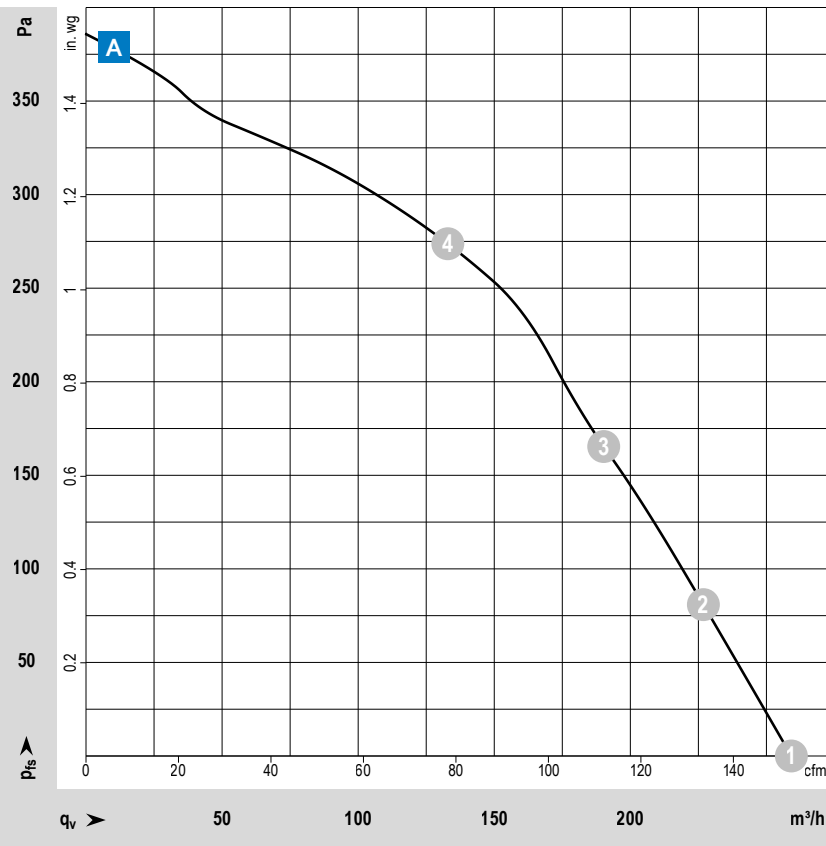
- Version: Centrifugal fan in 24VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 22
- Electrical protection class: III
- Weight: 360 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection



### Measuring conditions

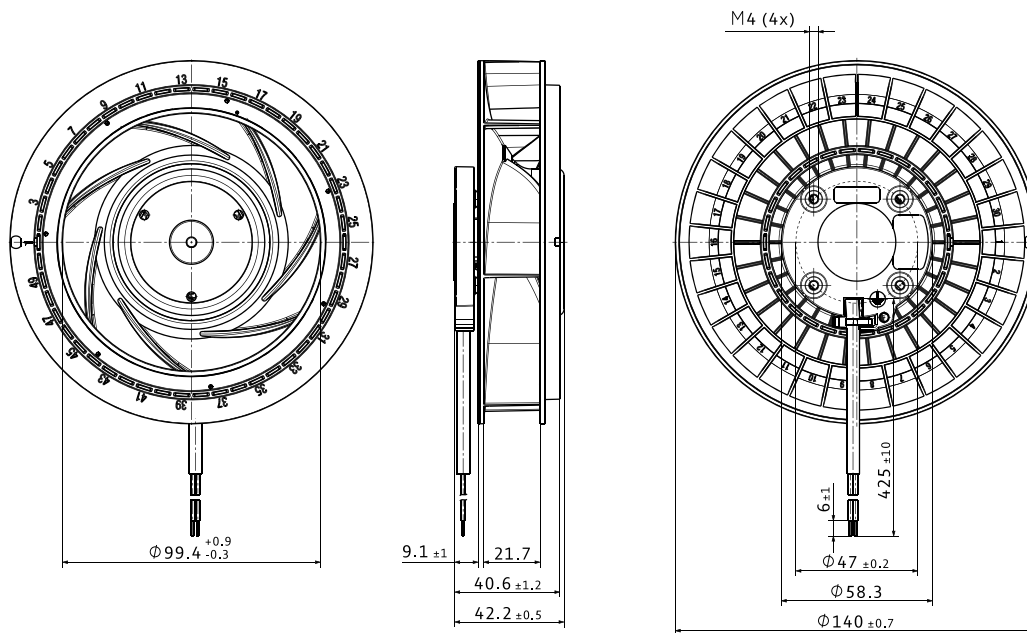
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
For detailed information see <http://www.ebmpapst.com/general conditions>

		Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
Type / Type old	Part number												
<b>VBS0140XUJCS</b> RER 140-22/14 N/2TDP	<b>9594314500</b>	<b>24</b>	20...28	<b>A</b>	1	259	152	3 850	37.5	7.8	-20...+65	55 000	92 500
					2	227	134	3 850	39.4	7.8			
					3	190	112	3 850	40.7	7.6			
					4	133	78	3 850	35.7	7.1			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0160XULCS

DC centrifugal fans · max. 265 m<sup>3</sup>/h · Ø 165 x 51 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 12VDC or 24VDC with backward-curved impeller
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 22
- Electrical protection class: III
- Weight: 600 g

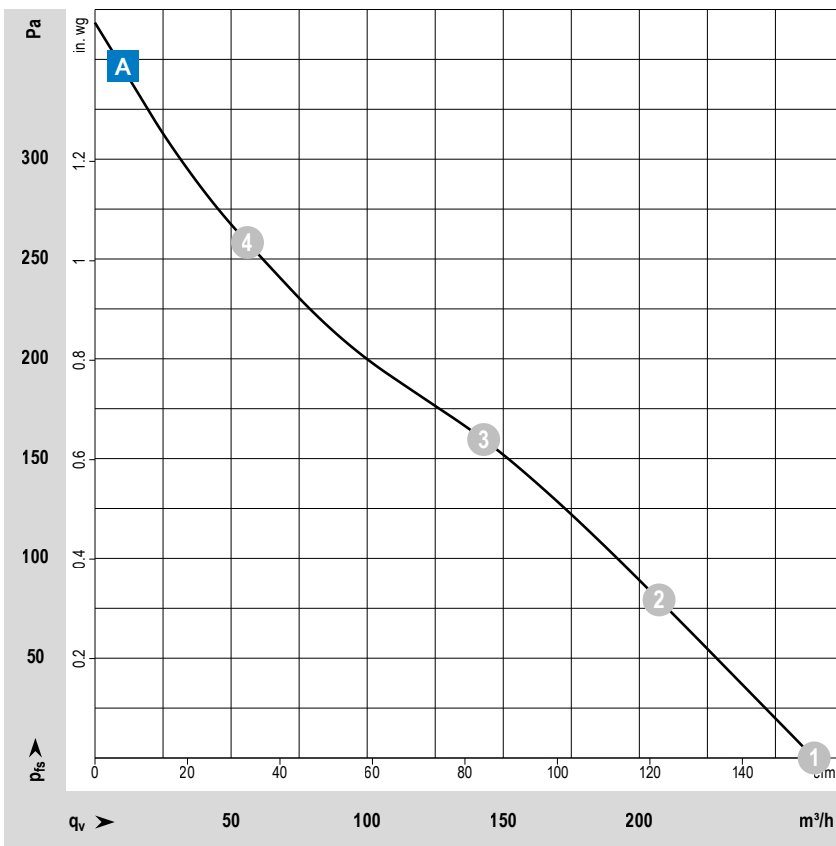
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 68

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

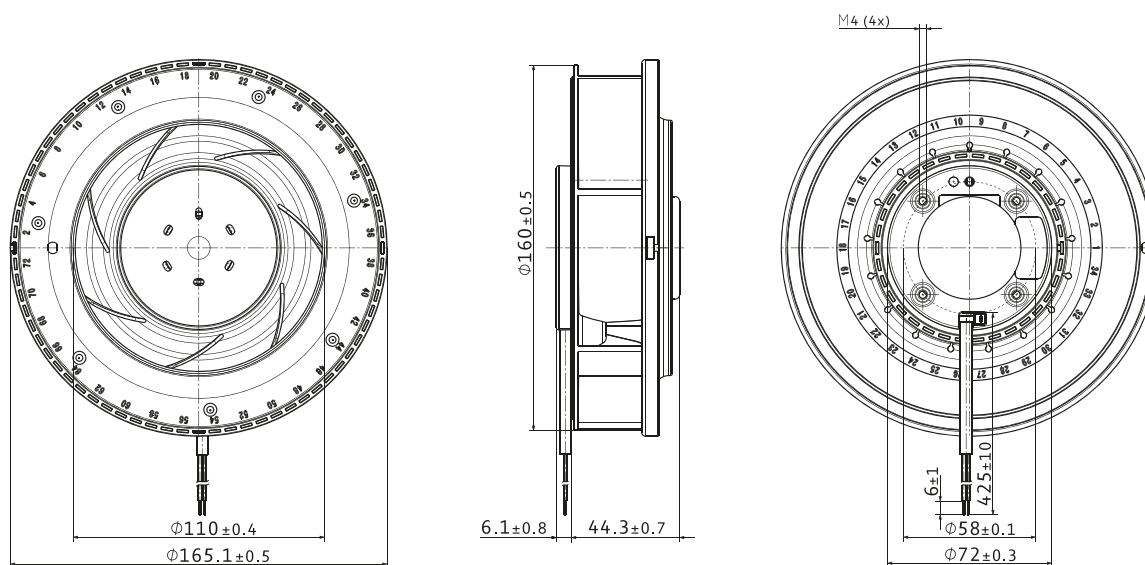
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)		°C	Hours
VBS0140XUJCS RER 160-28/12 N	9595414153	12	7.5...14	A	①	265	156	3 000	17.9	7.4	-20...+70	75 000	127 500
					②	209	123	2 870	18.9	7.0			
					③	144	85	2 830	19.3	6.7			
					④	56	33	3 040	17.8	7.1			
VBS0140XUJCS RER 160-28/14 N	9595414150	24	12...28	A	①	264	155	3 000	17.0	7.4	-20...+70	75 000	127 500
					②	207	122	2 860	17.5	7.0			
					③	143	84	2 810	17.8	6.7			
					④	56	33	3 030	17.0	7.1			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0160XULCS

DC centrifugal fans · max. 373 m<sup>3</sup>/h · Ø 165 x 51 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: AWG 22
- Electrical protection class: III
- Weight: 600 g

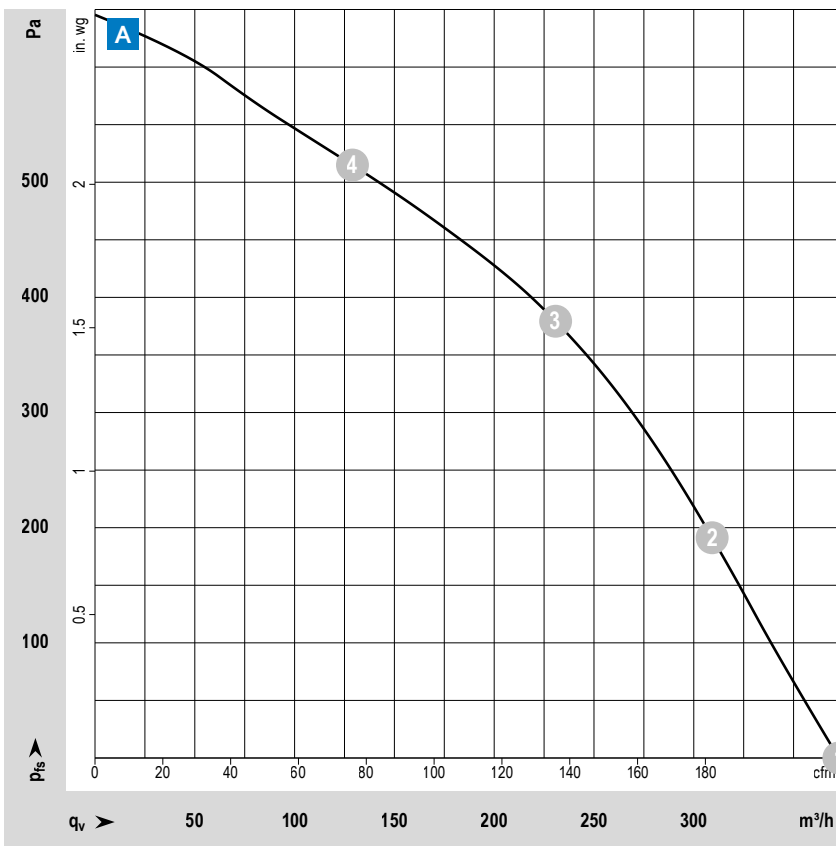
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP68

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

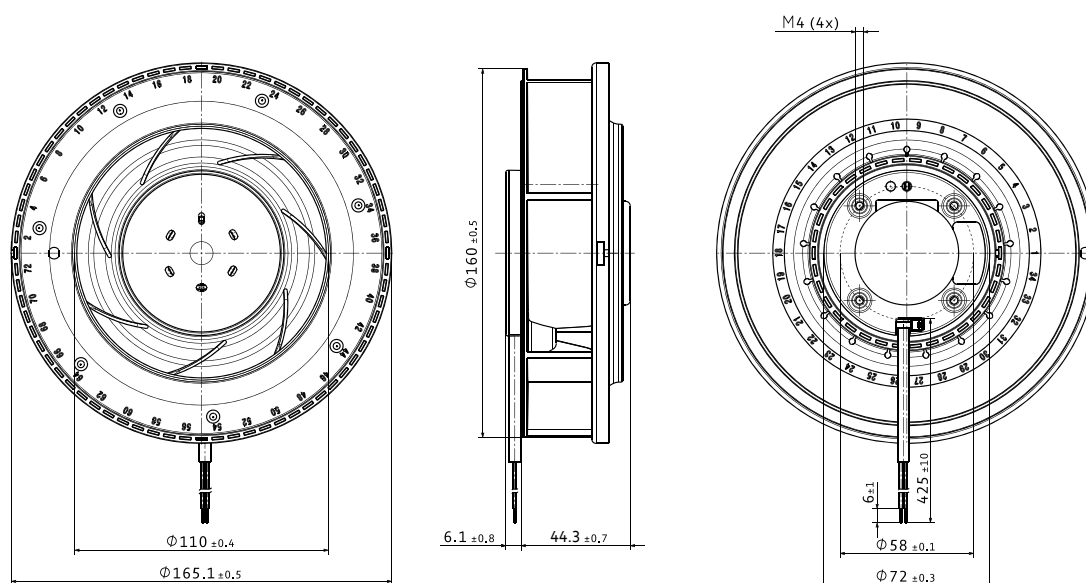
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10IFC</sub> (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
<b>VBS0160XULCS</b> RER160-28/14N/ 2TDA	<b>9595414360</b>	<b>24</b>	16...28	<b>B</b>	1	373	220	4 200	54.8	8.1	-20...+60	55 000	92 500
					2	309	182	4 200	66.3	7.8			
					3	231	136	4 200	72.6	7.6			
					4	129	76	4 200	64.2	8.0			

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0175XULDS

DC centrifugal fans · max. 755 m<sup>3</sup>/h · Ø 175 x 55 mm



## Material/Surface

- Impeller: Metal

## Characteristics

- Version: Centrifugal fan in 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 20; speed signal and control input AWG 22
- Electrical protection class: I
- Weight: 933 g

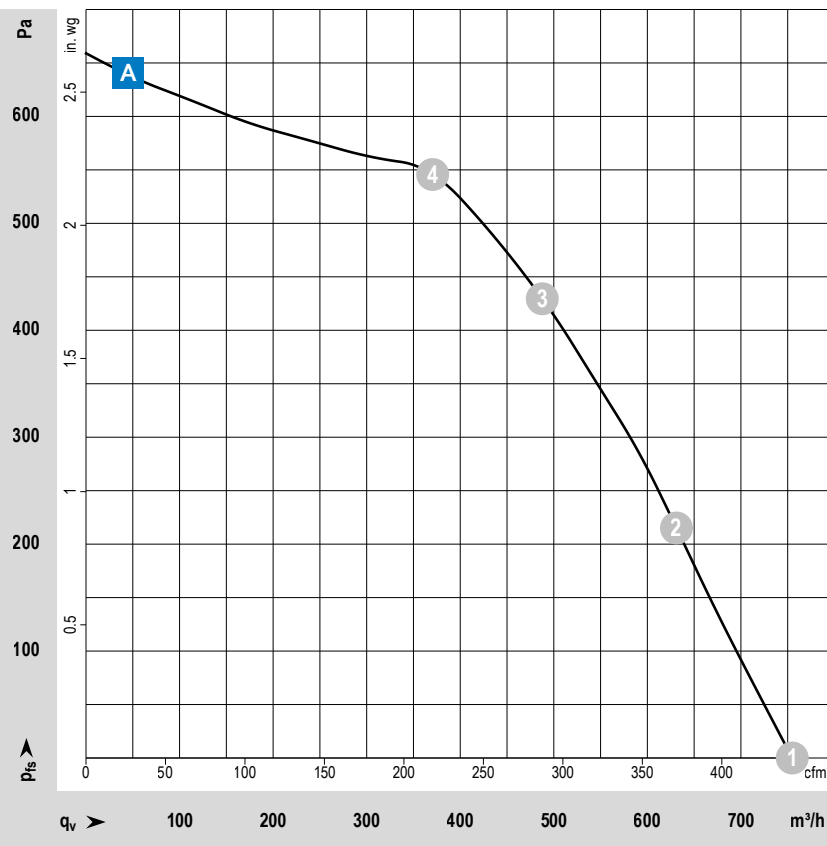
from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Degree of protection: IP 54



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

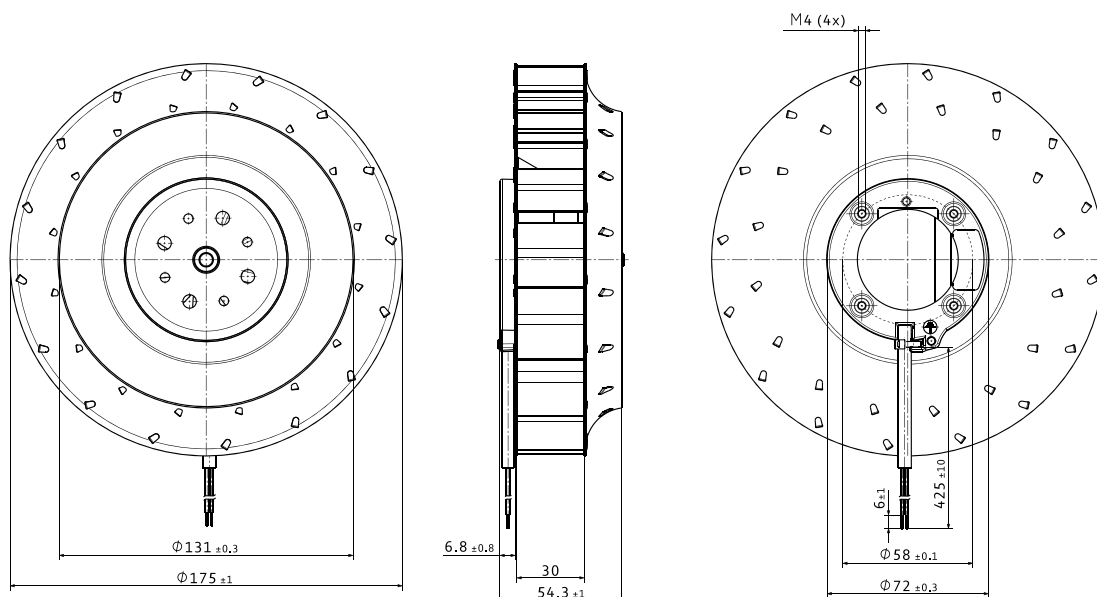


Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VBS0175XULDS REF 175-30/18/2 TDP	9595420160	48	36...72	A	1	755	444	4 400	139.2	9.0	-20...+60	65 000	110 000
					2	631	371	4 380	154.2	8.8			
					3	488	287	4 310	160.0	8.6			
					4	372	219	4 340	160.0	8.6			

Subject to changes.

Technical drawing

Dimensions in mm



# VBS0175X...

DC centrifugal fans · max. 975 m<sup>3</sup>/h · Ø 175 x 69 mm



## Material/Surface

- Impeller: Plastic

## Characteristics

- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 775 g

from page 14 Definitions

from page 350 Accessories

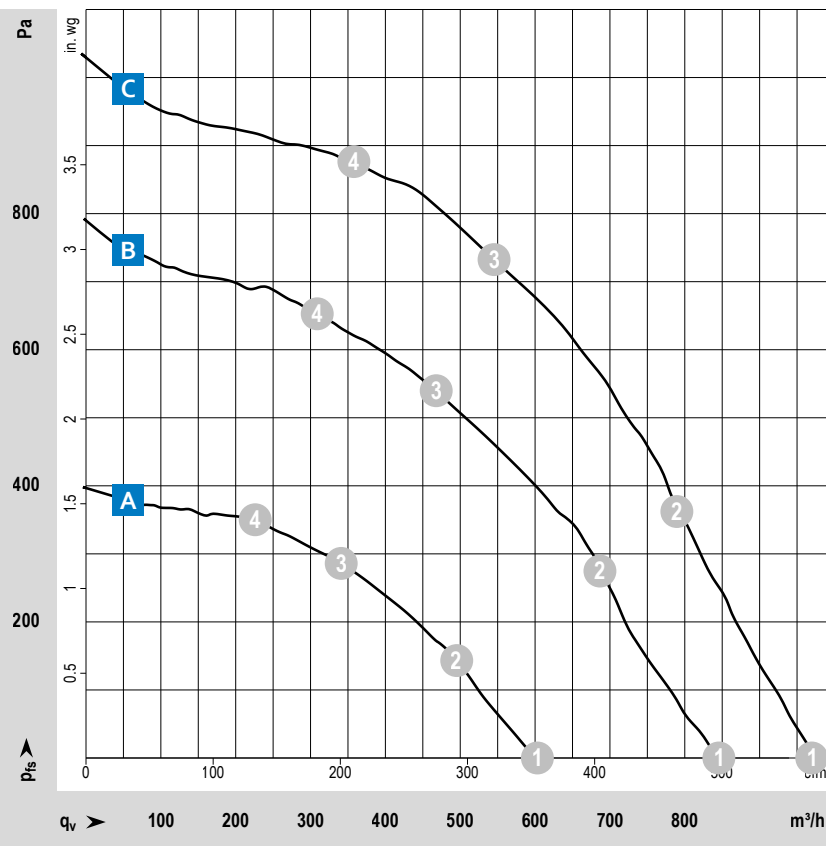
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP68



### Measuring conditions

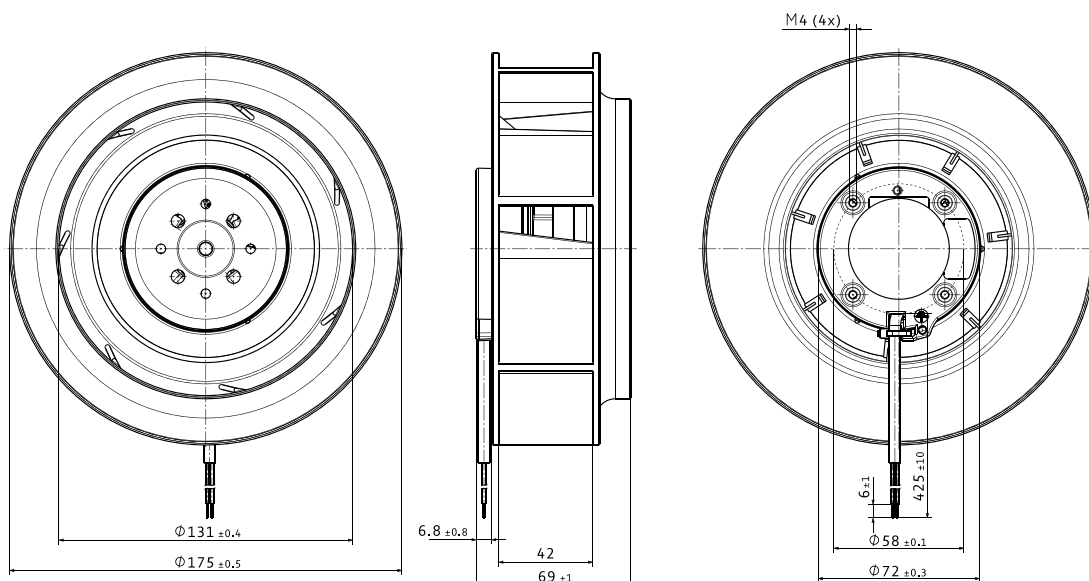
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> FC (40 °C) s.p. II	
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours	
VBS0175XULCS RER 175-42/14/2 TDMLP	9595414620	24	16...30	A	①	592	348	3 400	48.8	7.6	-20...+65	72 500	122 500	
						488	287	3 350	65.3	7.5				
						336	198	3 350	78.3	7.4				
						③	336	198	3 350	78.3				7.4
						④	224	132	3 420	75.0				7.6
VBS0175XULDS RER 175-42/14/2 TDMP	9595420102	24	16...36	B	①	860	506	4 860	121.3	8.5	-20...+65	70 000	117 500	
						687	404	4 700	150.0	8.3				
						③	447	263	4 380	150.0				8.1
						④	301	177	4 550	150.0				8.3
						VBS0175XULCS RER 175-42/18/2 TDMLP	9595414600	48	36...57	A				①
495	291	3 370	67.0	7.5										
③	341	201	3 370	79.9	7.4									
④	226	133	3 440	76.1	7.6									
VBS0175XULDS RER 175-42/18/2 TDMP	9595420111	48	36...72	B	①						846	498	4 800	
						689	406	4 750	148.7	8.3				
						③	468	275	4 660	170.0	8.2			
						④	309	182	4 740	160.7	8.4			
						VBS0175XULDS RER 175-42/18/2 TDP	9595420100	48	36...72	C	①	975	574	5 400
792	466	5 400	234.8	8.5										
③	545	321	5 360	280.0	8.6									
④	358	211	5 450	259.4	8.6									

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0190R...

DC centrifugal fans · max. 965 m<sup>3</sup>/h · Ø 190 x 69 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Plastic

## Characteristics

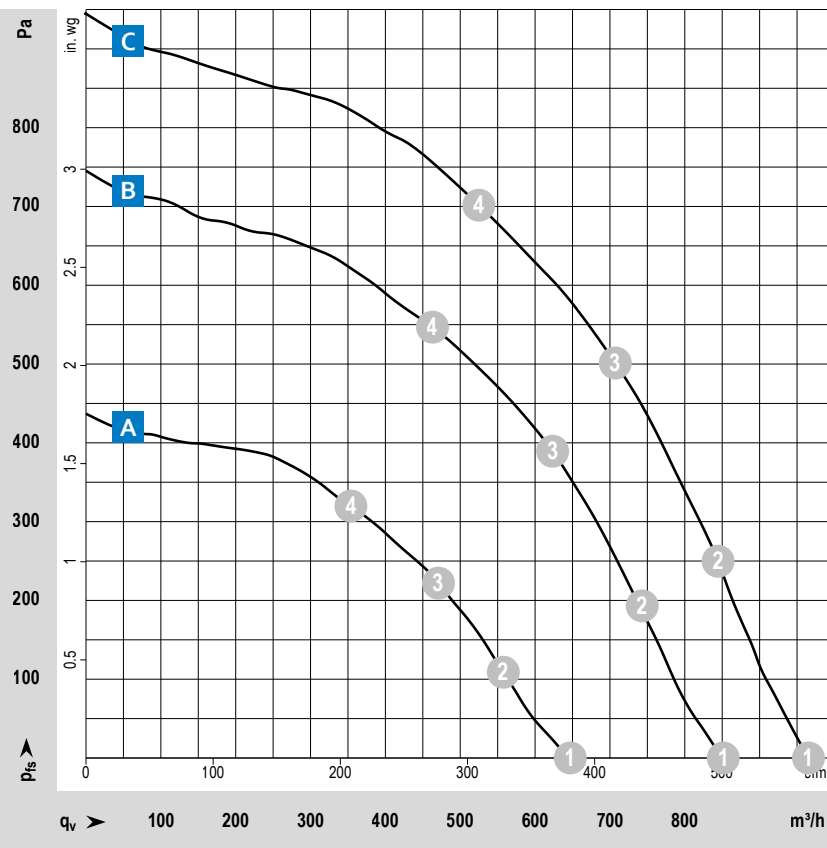
- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 858 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

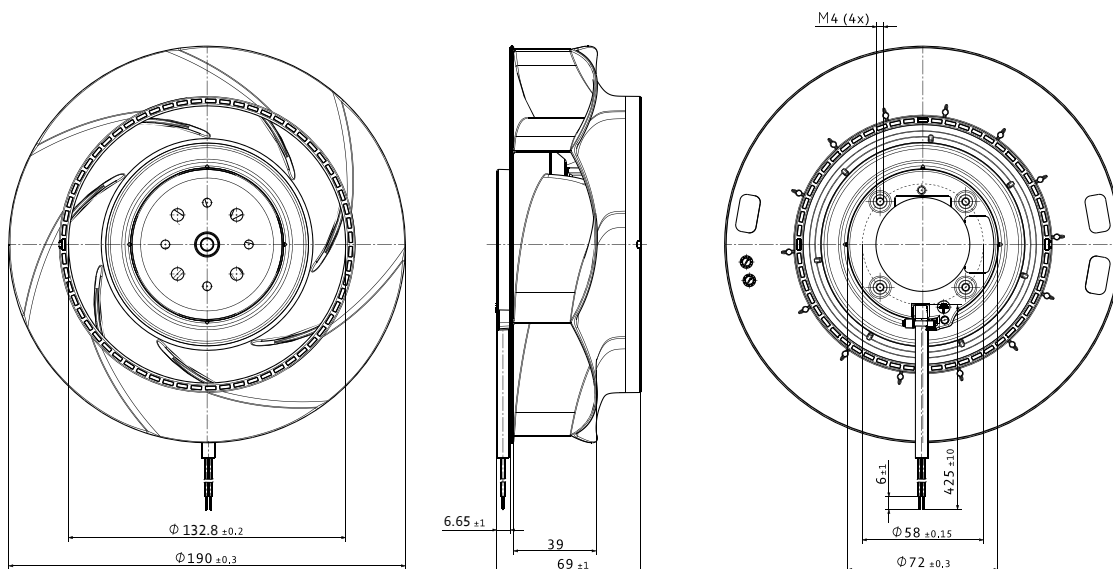
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10ipFC</sub> (40 °C) s. p. 11
		VDC	VDC										
<b>VBS0190RULCS</b> RER 190-39/14/2 TDMLO	<b>9595414720</b>	<b>24</b>	16...30	<b>A</b>	①	654	385	3 000	58.4	7.7	-20...+60	55 000	92 500
						565	333	2 940	67.2	7.4			
						477	281	2 940	77.6	7.2			
						354	208	2 980	76.0	7.1			
<b>VBS0190RULDS</b> RER 190-39/14/2 TDMO	<b>9595420202</b>	<b>24</b>	16...36	<b>B</b>	①	850	500	3 900	110.9	8.2	-20...+65	52 500	87 500
						740	436	3 850	130.9	8.1			
						624	367	3 850	150.0	7.8			
						463	273	3 880	147.4	7.7			
<b>VBS0190RULCS</b> RER 190-39/18/2 TDMLO	<b>9595414724</b>	<b>48</b>	36...57	<b>A</b>	①	647	381	3 000	58.0	7.7	-20...+65	55 000	92 500
						558	328	2 940	66.9	7.4			
						471	277	2 940	77.2	7.2			
						354	208	2 960	78.5	7.1			
<b>VBS0190RULDS</b> RER 190-39/18/2 TDO	<b>9595420304</b>	<b>48</b>	36...72	<b>C</b>	①	965	568	4 400	160.6	8.5	-20...+65	40 000	67 500
						845	497	4 350	189.1	8.4			
						707	416	4 340	213.6	8.1			
						525	309	4 360	210.0	8.0			

Subject to changes.

Speed control range from 800 rpm at 7 % PWM up to nominal speed at > 90 % PWM. Standstill at 0 % PWM, Standstill if control cable is interrupted.

## Technical drawing

Dimensions in mm



# VBS0190RUNCS

DC centrifugal fans · max. 820 m<sup>3</sup>/h · Ø 190 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

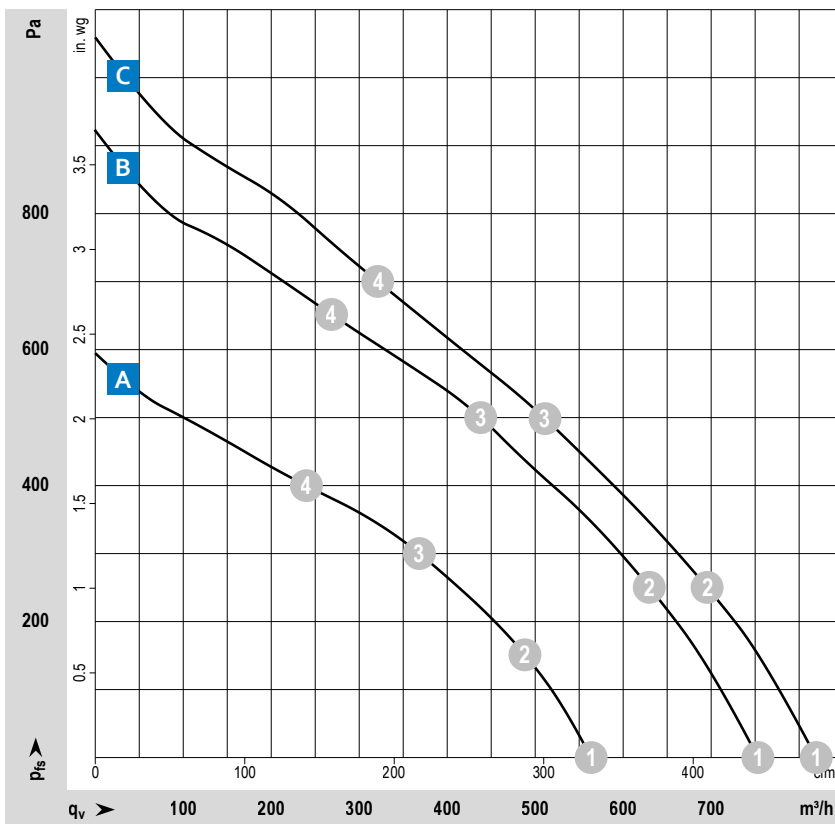
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.25–1.46 kg

## Approvals

- CSA CSA C22.2 Nr. 113; UL 507; EAC; CE
- **A**: UKCA not applicable;
- **B+C**: UKCA; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

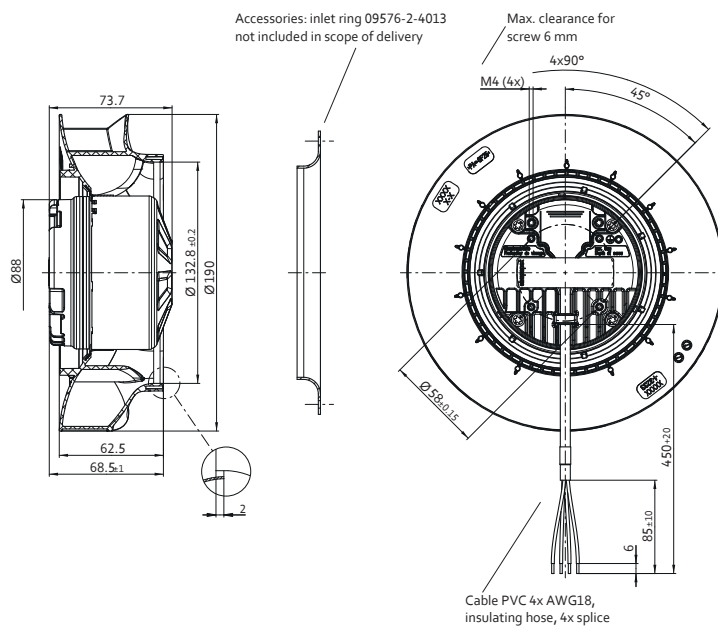
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current* A	Perm. ambient temperature °C
							m³/h	cfm				
VBS0190RUNCS	R1G190RD6102	centrifugal fan	12	8...16	A	① ② ③ ④	620	365	3 565	89	5.72	-25...+70
							535	315	3 505	95	6.15	
							405	240	3 470	102	6.67	
							260	155	3 535	97	6.28	
VBS0190RUNCS	R1G190RD7902	centrifugal fan	24	16...28	B	① ② ③ ④	795	465	4 395	155	5.51	-25...+60
							655	385	4 235	160	5.68	
							450	265	4 115	162	5.78	
							280	165	4 285	158	5.63	
VBS0190RUNCS	R1G190RD1602	centrifugal fan	48	36...57	C	① ② ③ ④	820	480	4 500	165	3.40*	-25...+70
							695	410	4 380	165	3.40*	
							510	300	4 215	167	3.50*	
							320	190	4 345	165	3.40*	
	09576-2-4013	Inlet ring										

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0190R...

DC centrifugal fans · max. 930 m<sup>3</sup>/h · Ø 190 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

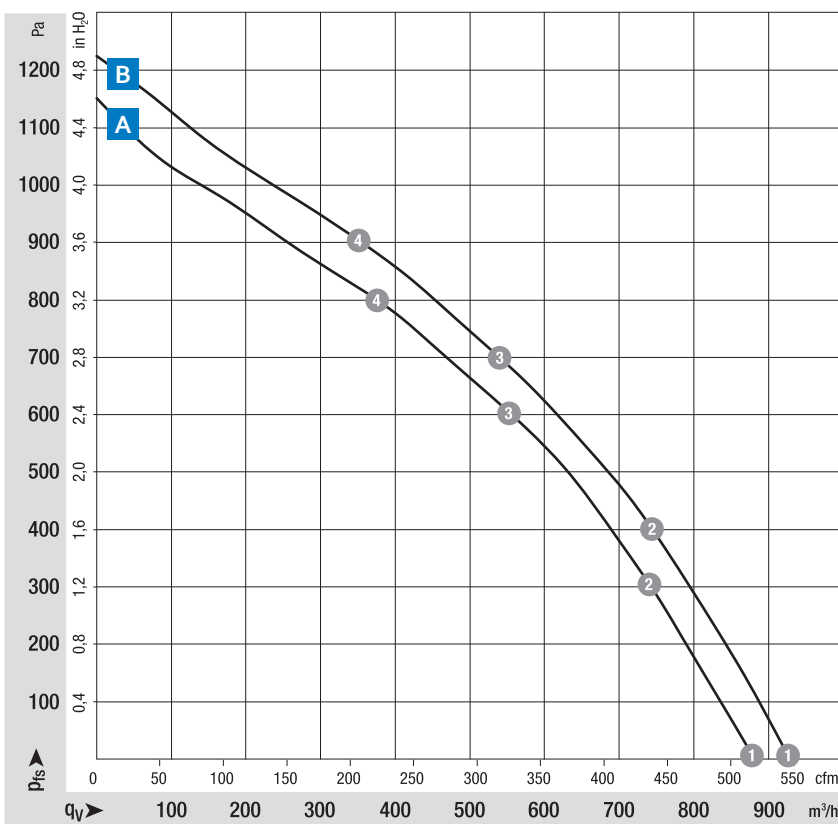
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.85 kg

## Approvals

- EN 62368-1;
- A + B: CE, EAC;
- B: CCC

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

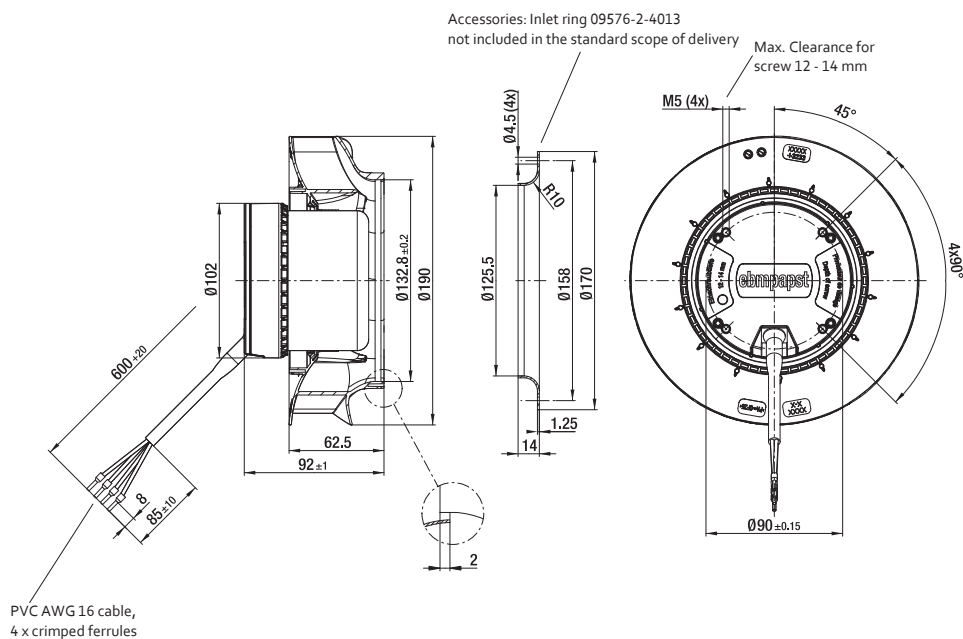


Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
							m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VBS0190RUNEZ	R3G190RN3801	centrifugal fan	24	16...28	A	①	880	520	4 570	180	7.50*	8.4	-25...60
							740	435	4 525	188	7.83*	7.9	
							550	325	4 435	199	8.34*	7.7	
							375	220	4 520	191	7.96*	8.1	
VBS0190RUNES	R3G190RN9902	centrifugal fan	48	36...57	B	①	930	545	4 800	192	4.00	8.4	-25...60
							745	440	4 690	212	4.41	8.0	
							540	320	4 640	221	4.60	7.9	
							350	205	4 740	205	4.28	8.1	
	09576-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0220RUNCS

DC centrifugal fans · max. 1 125 m<sup>3</sup>/h · Ø 220 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

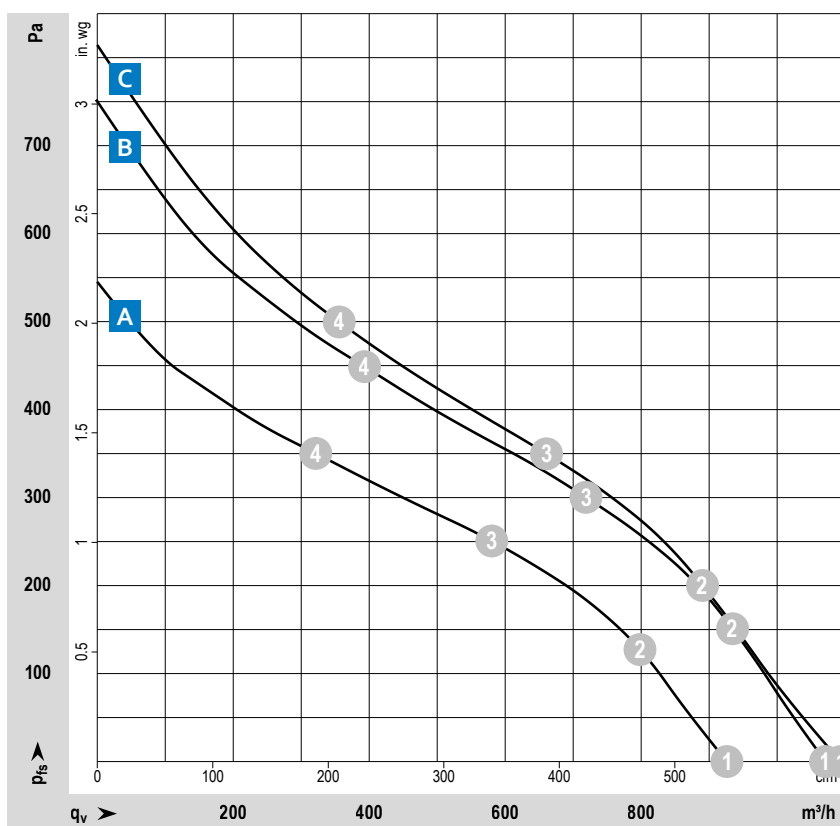
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.50 kg

## Approvals

- EAC; CSA CSA C22.2 Nr. 113; UL 507;
- **A**: CE not applicable;
- **B + C**: CE;
- CCC on request (only applicable with >36V)





from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

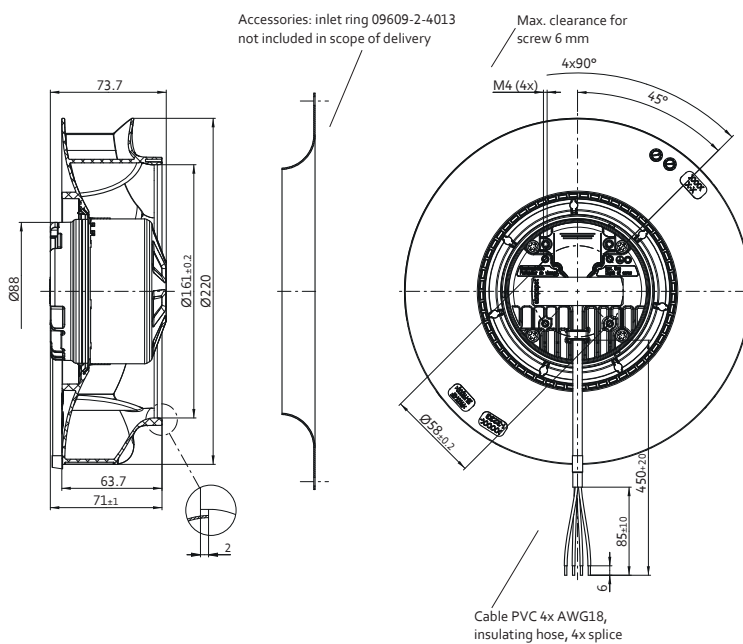
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type		Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Perm. ambient temperature
				VDC	VDC			m <sup>3</sup> /h	cfm	rpm			
VBS0220RUNCS	R1G220RD6102	centrifugal fan		12	8...16	A	①	990	585	2 905	110	8.77	-25...+70
							②	855	505	2 855	112	9.01	
							③	620	365	2 790	117	9.43	
							④	345	205	2 890	113	9.01	
VBS0220RUNCS	R1G220RD1002	centrifugal fan		24	16...28	B	①	1 125	660	3 310	144	5.12	-25...+60
							②	980	575	3 220	146	5.19	
							③	750	440	3 085	149	5.29	
							④	410	240	3 185	146	5.19	
VBS0220RUNCS	R1G220RD0202	centrifugal fan		48	36...57	C	①	1 095	645	3 240	136	2.80*	-25...+70
							②	890	525	3 100	139	2.90*	
							③	660	390	3 010	141	2.90*	
							④	355	210	3 140	138	2.90*	
	09609-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

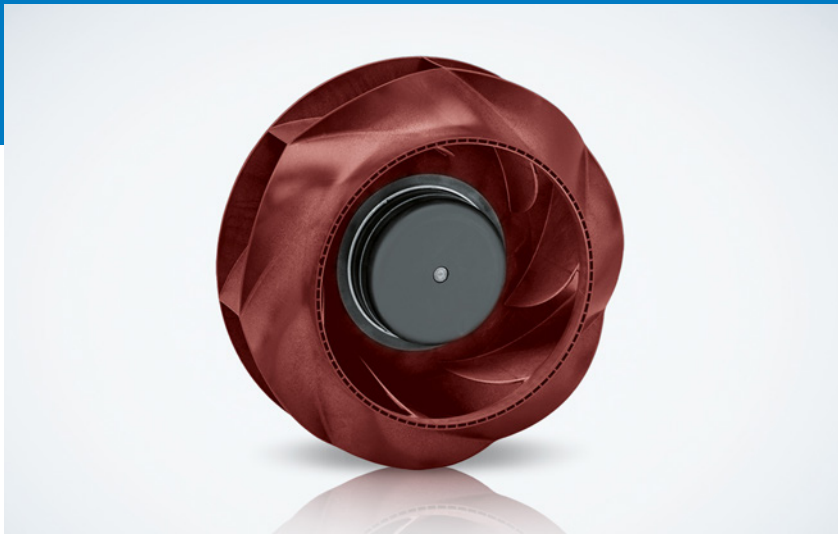
## Technical drawing

Dimensions in mm



# VBS0220RUNES

DC centrifugal fans · max. 1 210 m<sup>3</sup>/h · Ø 220 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

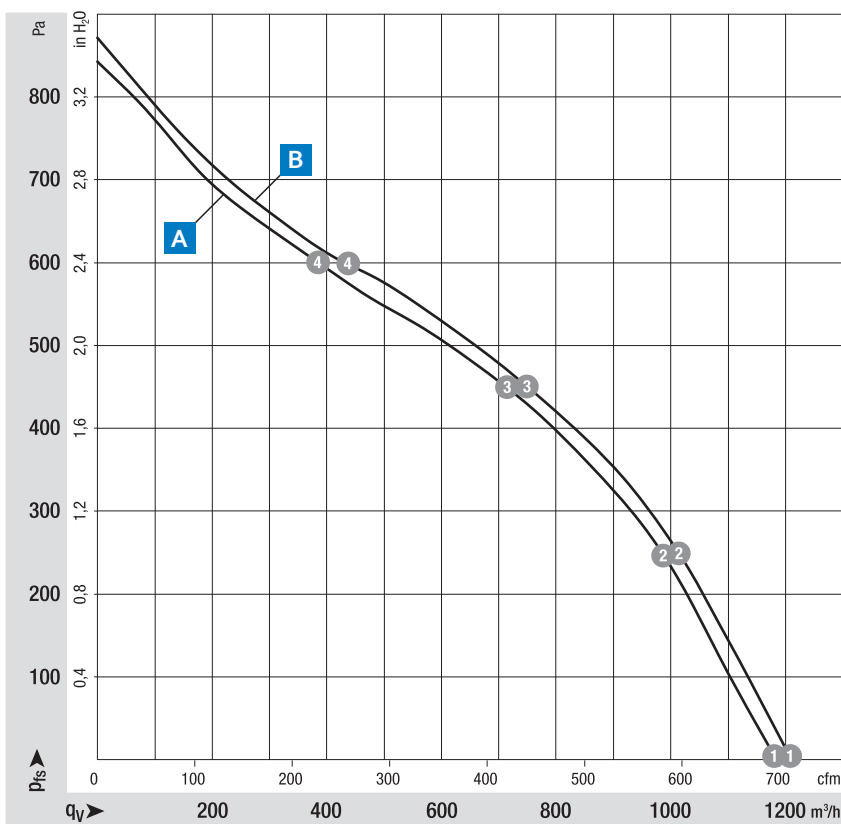
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.88 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

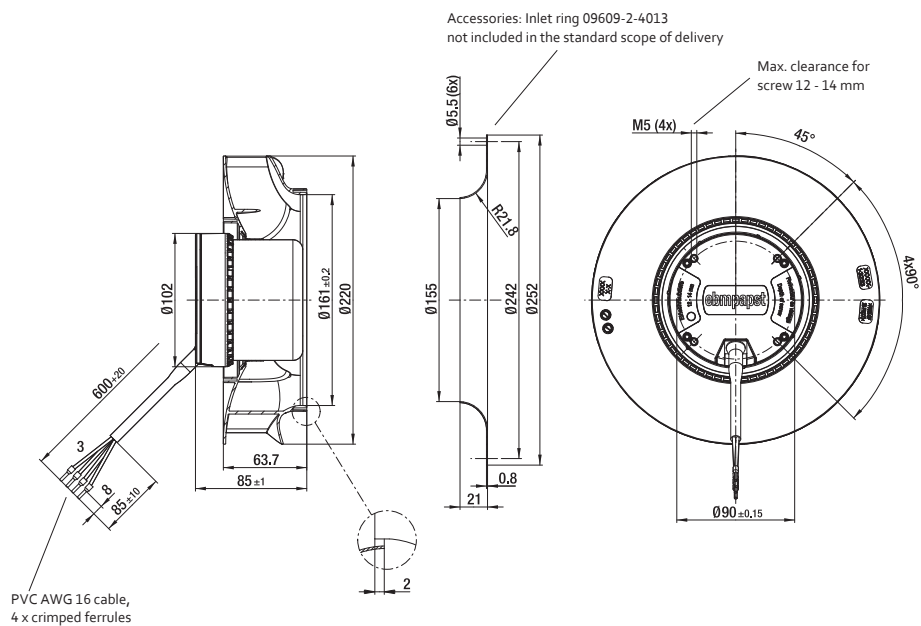
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Sound power level Bel(A)	Perm. ambient temperature °C	
							m³/h	cfm						
VBS0220RUNES	R3G220RN1201	centrifugal fan	24	16...28	A	①	1 185	695	3 460	157	6.50*	8.1	-25...+60	
							②	990	580	3 420	171	7.11*		7.7
							③	715	420	3 360	182	7.59*		7.4
							④	385	225	3 455	168	6.97*		7.9
VBS0220RUNES	R3G220RNB602	centrifugal fan	48	36...57	B	①	1 210	715	3 510	160	3.40	8.1	-25...+60	
							②	1 015	595	3 450	168	3.50		7.7
							③	750	440	3 385	178	3.71		7.4
							④	440	260	3 460	167	3.47		7.9
	09609-2-4013	Inlet ring												

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0220RULDS

DC centrifugal fans · max. 1 248 m<sup>3</sup>/h · Ø 220 x 71 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Plastic

## Characteristics

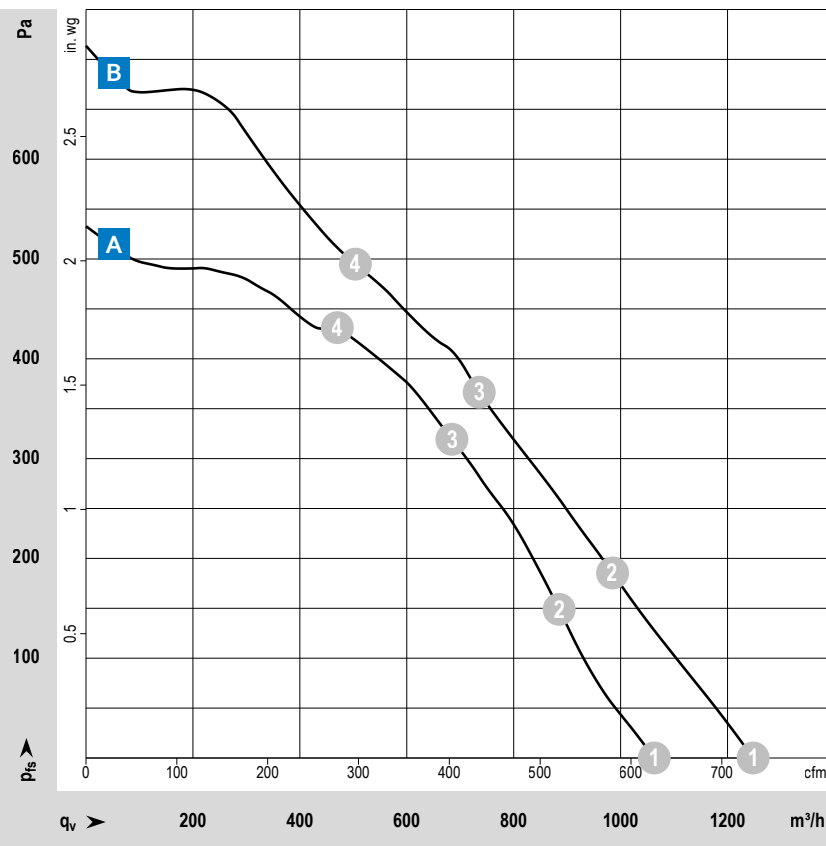
- Version: Centrifugal fan in 24VDC or 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: III
- Weight: 890 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP68



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

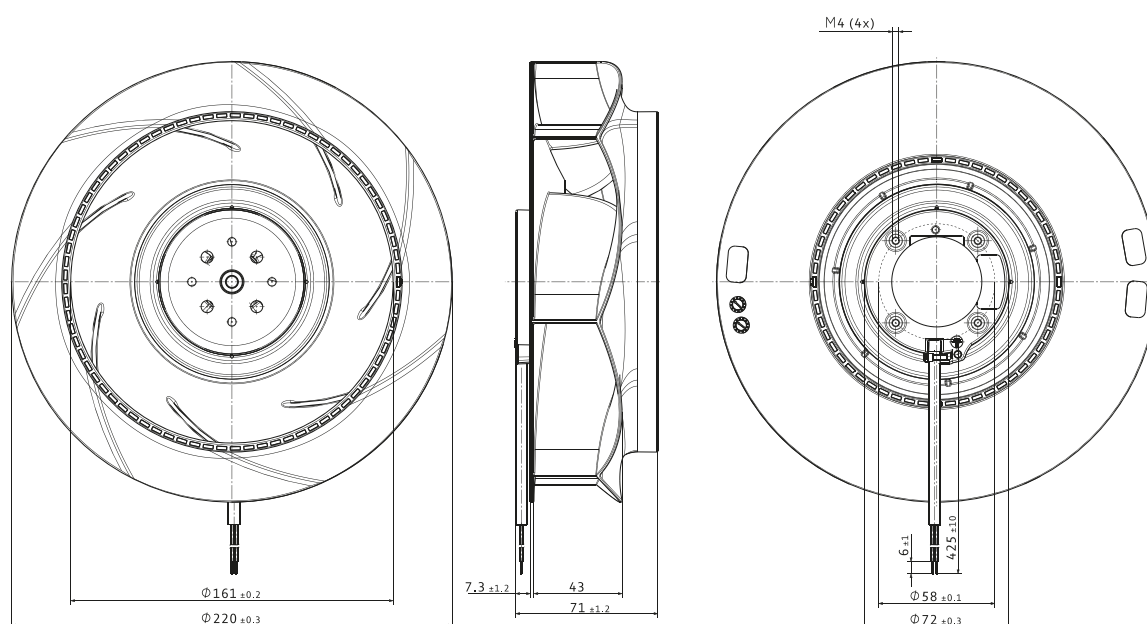
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s. p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
<b>VBS0220RULDS</b> RER 220-43/18/2 TDMO	<b>9595420303</b>	<b>48</b>	36...72	<b>A</b>	①	1 063	626	3 000	109.8	8.0	-20...+55	65 000	110 000
						885	521	2 960	126.6	8.0			
						684	403	2 950	145.0	7.9			
						470	277	3 040	141.7	7.9			
<b>VBS0220RULDS</b> RER 220-43/18/2 TDO	<b>9595420304</b>	<b>48</b>	36...72	<b>B</b>	①	1 248	735	3 500	166.9	8.2	-20...+55	60 000	102 500
						984	579	3 270	170.0	8.0			
						735	433	3 150	170.0	7.8			
						504	297	3 250	170.0	7.8			

Subject to changes.

Speed control range from 800 rpm at 7 % PWM up to nominal speed at > 90 % PWM. Standstill at 0 % PWM, Standstill if control cable is interrupted.

## Technical drawing

Dimensions in mm



# VBS0225...

DC centrifugal fans · max. 1 588 m<sup>3</sup>/h · Ø 225 x 99 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Plastic

## Characteristics

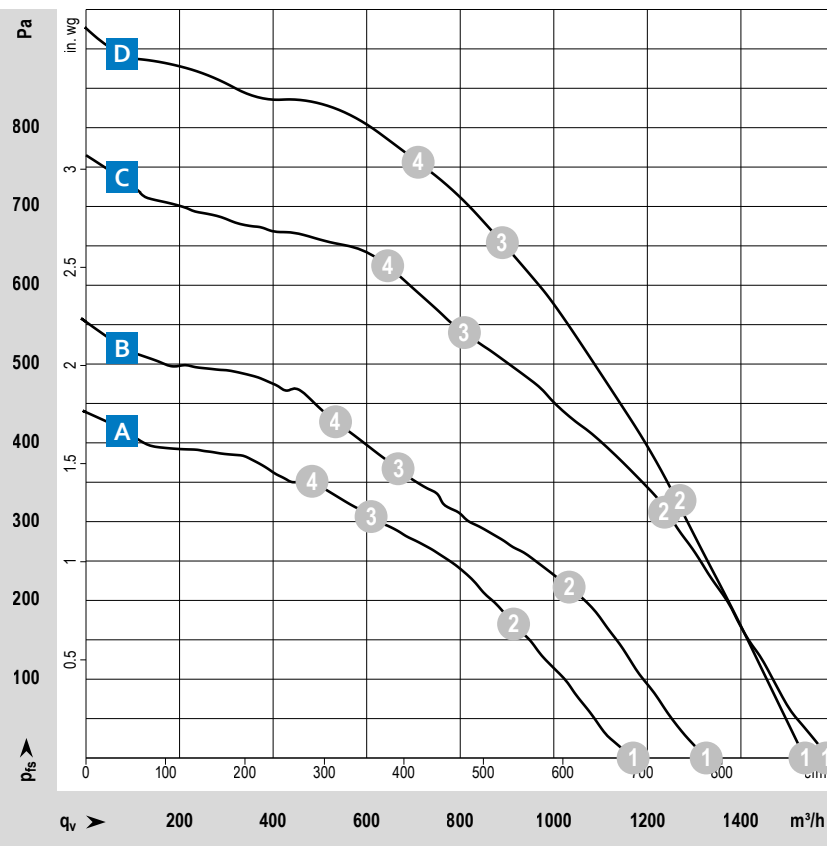
- Version: Centrifugal fan in 48VDC with backward-curved impeller; powerful due to 3-phase motor concept; low-noise operation
- Direction of air flow: axial: intake; centrifugal: exhaust
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation
- IP protection class: IP20
- Electrical hookup: single wires AWG 18, 20 or AWG 22; speed signal and control input AWG 22
- Electrical protection class: I
- Weight: 1 030 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC (only necessary >36V)

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-options control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>



Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life	Life expectancy
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	Hours	Hours
VBS0225XULDS RER 225-63/18/2 TDMLO	9595420413	48	36...72	A	① ② ③ ④	1170	689	2 500	82.5	7.7	-20...+55	55 000	92 500
						914	538	2 460	117.7	7.5			
						609	358	2 480	128.3	7.3			
						483	284	2 520	124.4	7.4			
VBS0225XULDS RER 225-63/18/2 TDMO	9595420411	48	36...72	B	① ② ③ ④	1326	780	2 800	111.2	8.0	-20...+55	55 000	92 500
						1033	608	2 720	159.8	7.8			
						667	393	2 650	160.0	7.6			
						533	314	2 740	160.0	7.7			
VBS0225XULDS RER 225-63/18/2 TDO	9595420402	48	36...72	C	① ② ③ ④	1588	935	3 300	177.0	8.4	-20...+55	52 500	87 500
						1241	730	3 250	249.8	8.3			
						809	476	3 220	255.0	8.1			
						645	380	3 300	255.0	8.3			
VBS0225RULFS RER 225-55/18/2 TDO RadiCal	9595430400	48	36...72	D	① ② ③ ④	1537	905	3 500	216.9	8.6	-20...+55	50 000	85 000
						1265	745	3 460	271.2	8.3			
						890	524	3 460	301.1	8.0			
						710	418	3 490	293.7	8.1			

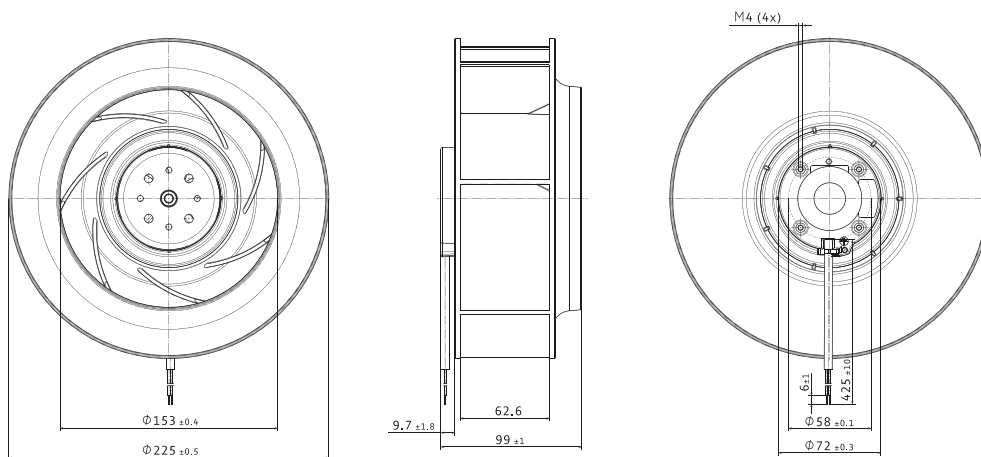
Subject to changes.

Speed control range from 800 rpm at 7 % PWM up to nominal speed at > 90 % PWM.

Standstill at 0 % PWM, Type O: Standstill if control cable is interrupted. Type P: Maximum speed if control cable is interrupted.

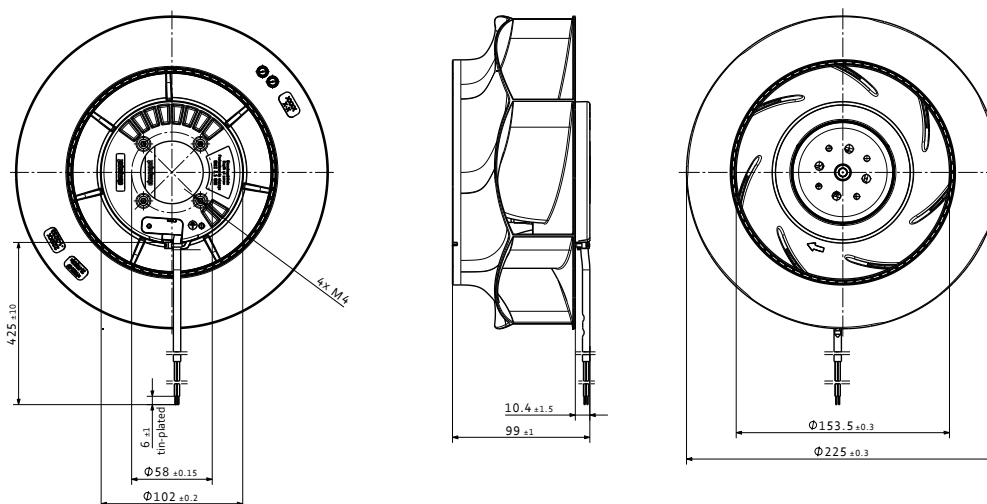
Technical drawing

Dimensions in mm



Technical drawing RadiCal

Dimensions in mm



# VBS0225RUNCS

DC centrifugal fans · max. 1 165 m<sup>3</sup>/h · Ø 225 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

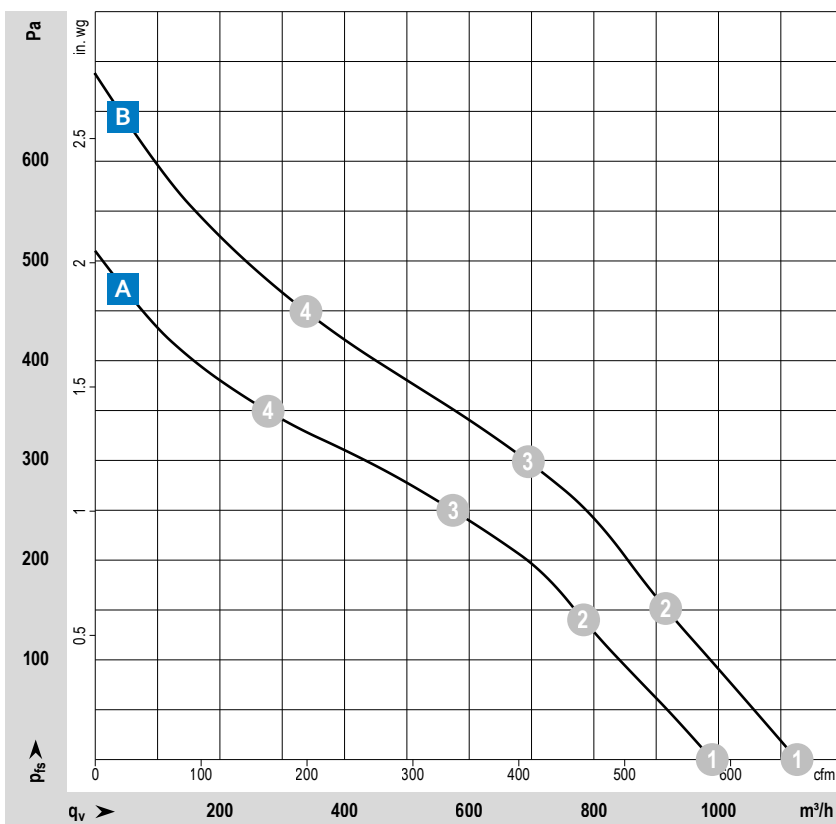
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 1.60 kg

## Approvals

- EAC; CSA CSA C22.2 Nr. 113; UL 507

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

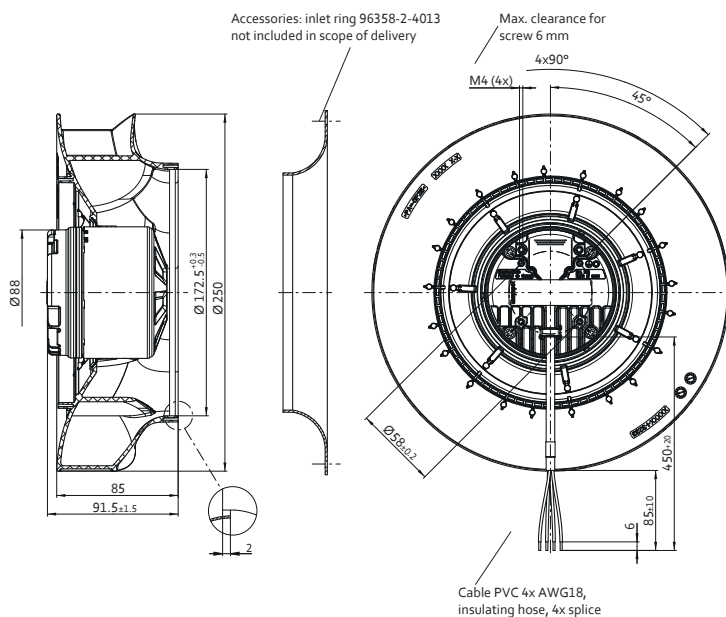
Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm				
VBS0225RUNCS	R1G225RD5902	centrifugal fan	12	8...16	A	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 045	615	2 490	100	7.89	-25...+70
							840	495	2 410	105	8.37	
							615	365	2 405	108	8.57	
							295	175	2 530	98	7.69	
VBS0225RUNCS	R1G225RD1402	centrifugal fan	24	16...28	B	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 165	685	2 775	130	4.63	-25...+70
							960	565	2 645	134	4.77	
							715	420	2 600	135	4.82	
							350	205	2 790	129	4.60	
	96358-2-4013	Inlet ring										

Subject to changes.

DC centrifugal fans

## Technical drawing

Dimensions in mm



# VBS0225RUNES

DC centrifugal fans · max. 1 335 m<sup>3</sup>/h · Ø 225 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

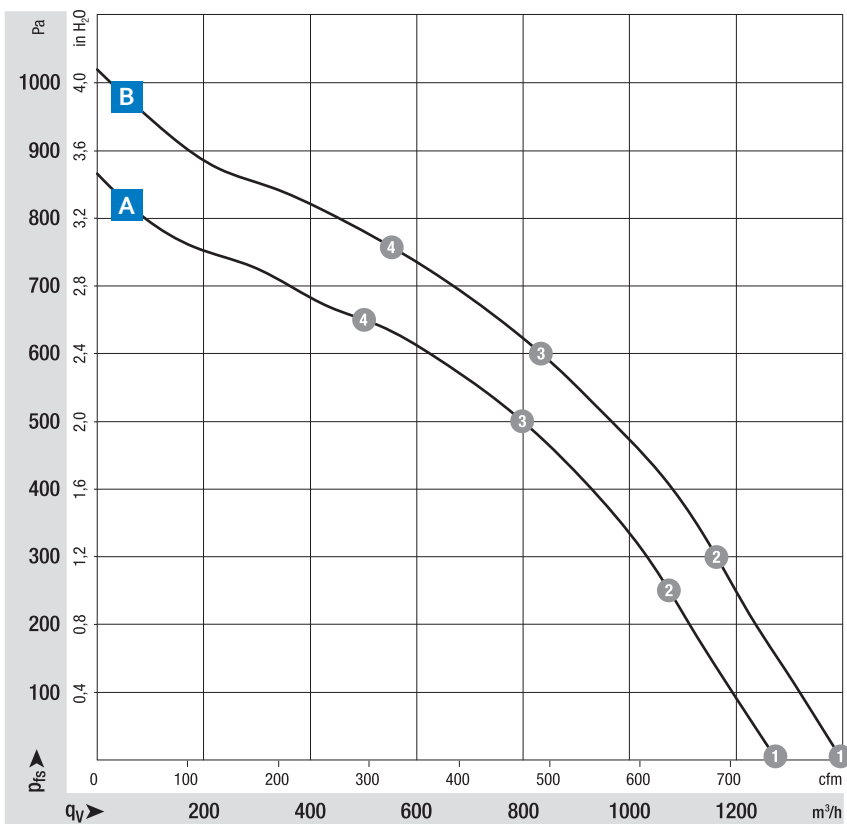
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.10 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

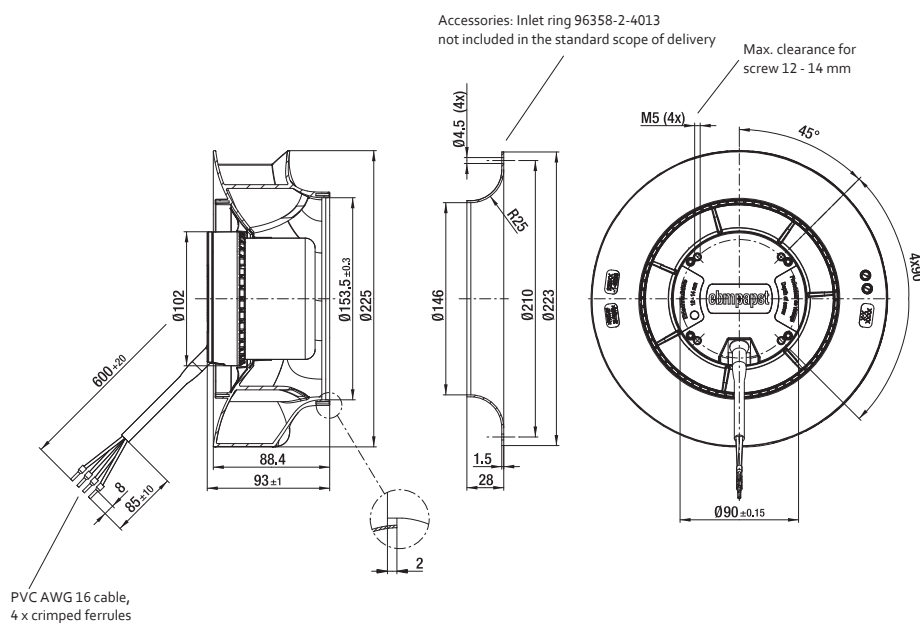
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
							m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VBS0225RUNES	R3G225RN2801	centrifugal fan	24	16...28	A	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 275	750	3 270	205	8.50*	8.1	-25...+60
							1 070	630	3 200	208	8.66*	7.8	
							775	455	3 185	213	8.88*	7.4	
							425	250	3 275	182	7.76*	7.7	
VBS0225RUNES	R3G225RN1802	centrifugal fan	48	36...57	B	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 335	785	3 400	230	4.80*	8.4	-25...+60
							1 095	645	3 375	236	4.90*	8.0	
							785	460	3 355	244	5.10*	7.6	
							455	265	3 435	218	4.50*	7.9	
	96358-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0250RUNES

DC centrifugal fans · max. 1 505 m<sup>3</sup>/h · Ø 250 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

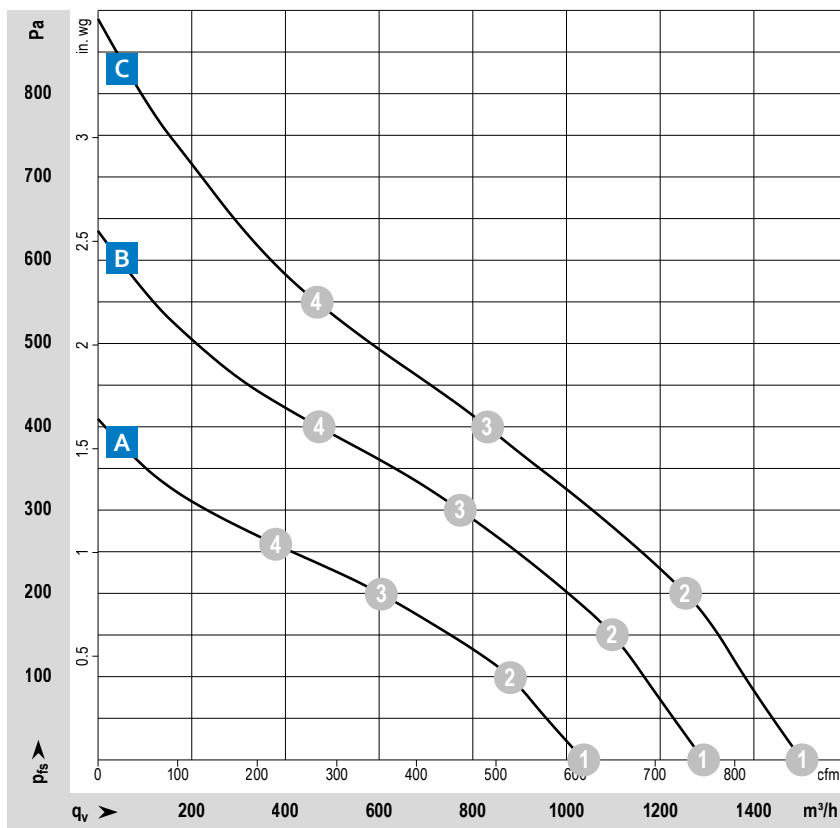
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.00 kg

## Approvals

- EAC; CSA CSA C22.2 Nr. 113; UL 507; **B** + **C**: CE; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

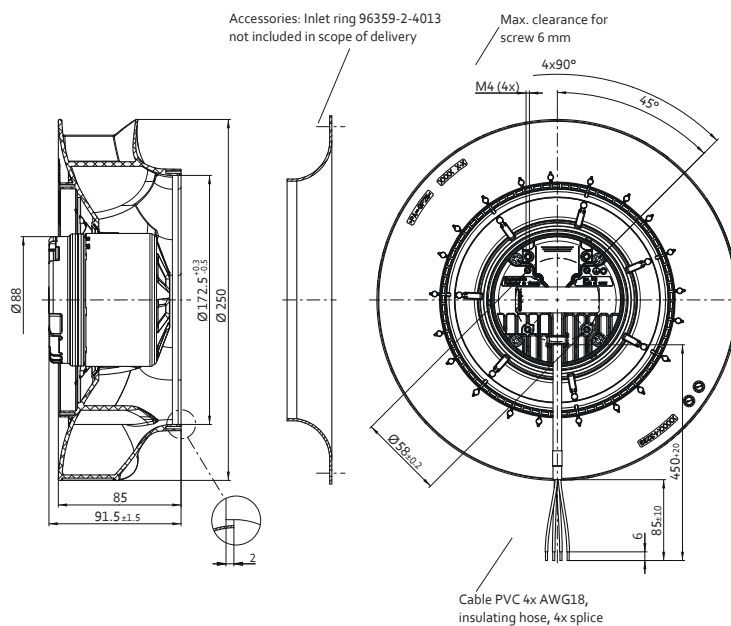
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm				
VBS0250RUNES	R1G250RC7702	centrifugal fan	12	8...16	A	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 095	645	2 110	75	4.67	-25...+70
							935	550	2 065	80	4.96	
							645	380	2 020	86	5.36	
							405	240	2 070	82	5.08	
VBS0250RUNES	R1G250RC8702	centrifugal fan	24	16...28	B	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 375	810	2 645	144	5.11	-25...+60
							1 170	690	2 565	149	5.32	
							815	480	2 455	153	5.46	
							500	295	2 550	150	5.34	
VBS0250RUNES	R1G250RC8902	centrifugal fan	48	36...57	C	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	1 505	885	2 850	175	3.70*	-25...+60
							1 255	740	2 755	179	3.70*	
							830	490	2 650	182	3.80*	
							470	275	2 795	177	3.70*	
	96359-2-4013	Inlet ring										

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0250RUNES

DC centrifugal fans · max. 1 640 m<sup>3</sup>/h · Ø 250 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

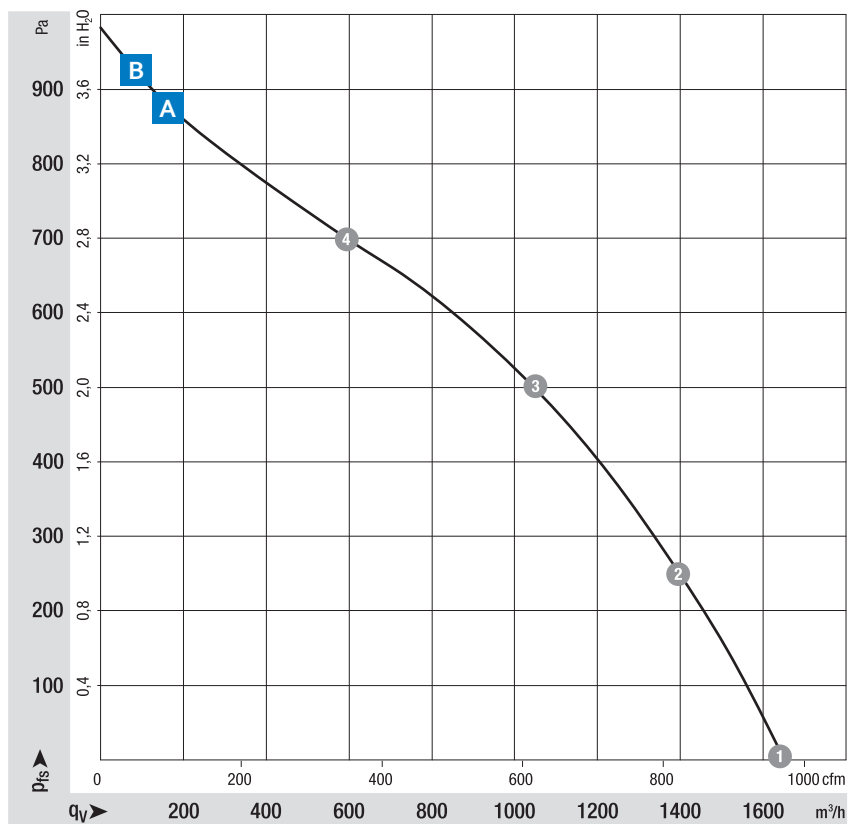
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.10 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>



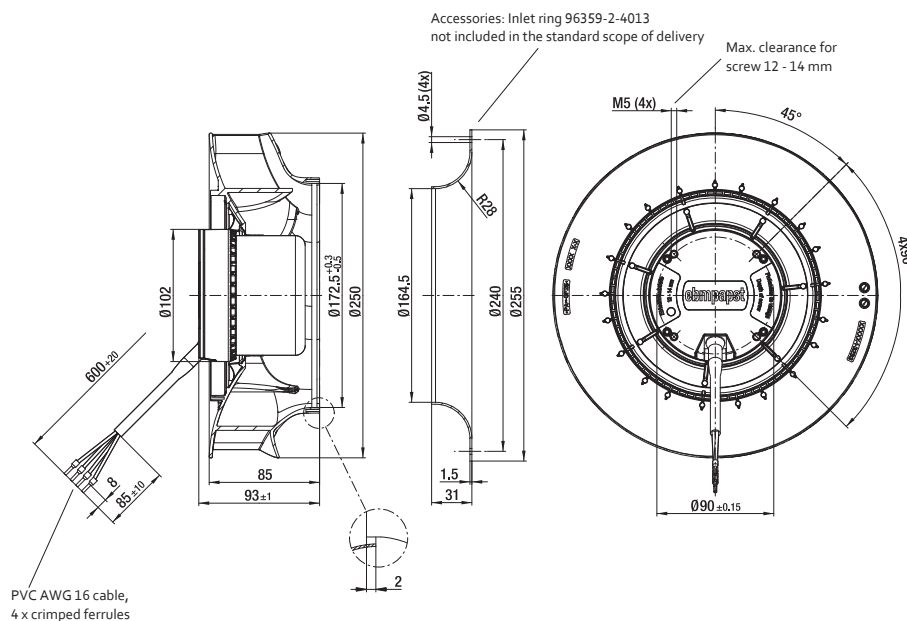
Type	Part number	Fan type	Nominal voltage		Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
			VDC	VDC			m <sup>3</sup> /h	cfm					
VBS0250RUNES	R3G250RN4601	centrifugal fan	24	16...28	A	①	1 505	885	2 850	175	7.20*	8.1	-25...+60
						②	1 225	720	2 820	195	8.10*	7.7	
						③	880	515	2 795	210	8.70*	7.1	
						④	580	340	2 840	197	8.20*	7.4	
VBS0250RUNES	R3G250RNB502	centrifugal fan	48	36...57	B	①	1 640	965	3 100	230	4.80*	-	-25...+60
						②	1 375	810	3 065	250	5.20*		
						③	1 010	595	3 025	266	5.60*		
						④	475	280	3 115	236	4.90*		
	96359-2-4013	Inlet ring											

Subject to changes.

DC centrifugal fans

## Technical drawing

Dimensions in mm



# VBS0280RUNES

DC centrifugal fans · max. 2 120 m<sup>3</sup>/h · Ø 280 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Galvanized

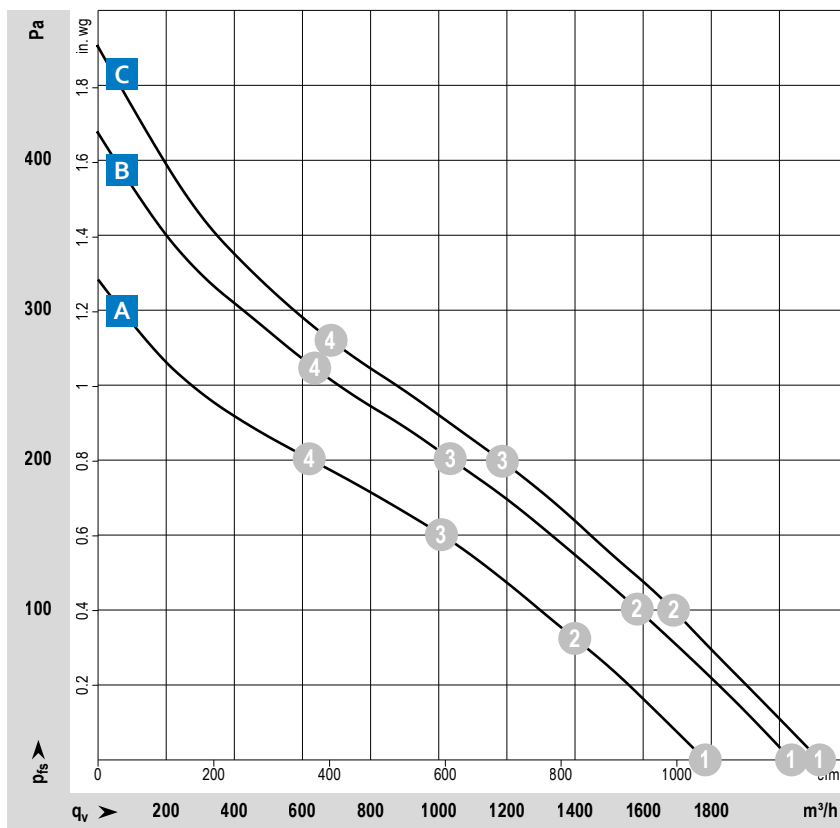
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Bearing: Ball bearings; (sealed)
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP24 KM, Electronics IP6K9K (mating connector installed)
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.30 kg

## Approvals

- EAC; CSA CSA C22.2 Nr. 113; UL 507; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

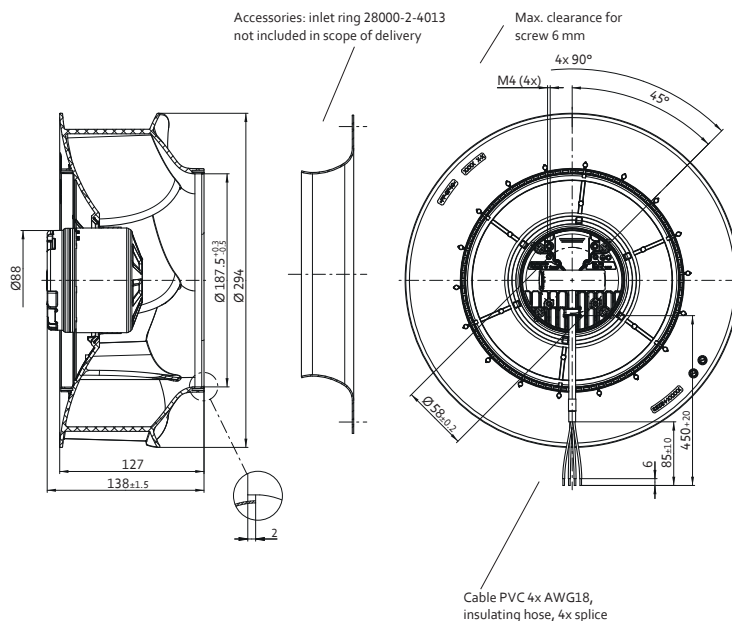
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm				
VBS0280RUNES	R1G280RC7502	centrifugal fan	12	8...16	A	① ② ③ ④	1 880	1 105	1 585	88	7.16	-25...+70
							1 490	880	1 495	97	7.98	
							1 065	625	1 470	100	8.25	
							655	385	1 520	95	7.78	
VBS0280RUNES	R1G280RC7102	centrifugal fan	24	16...28	B	① ② ③ ④	2 100	1 235	1 765	117	4.18	-25...+60
							1 640	965	1 635	123	4.41	
							1 070	630	1 600	126	4.49	
							660	385	1 685	121	4.31	
VBS0280RUNES	R1G280RC9302	centrifugal fan	48	36...57	C	① ② ③ ④	2 120	1 245	1 800	115	2.40*	-25...+60
							1 690	995	1 655	121	2.50*	
							1 190	700	1 610	123	2.60*	
							685	405	1 690	119	2.50*	
	98000-2-4013	Inlet ring										

Subject to changes. \* Current measured at nominal voltage

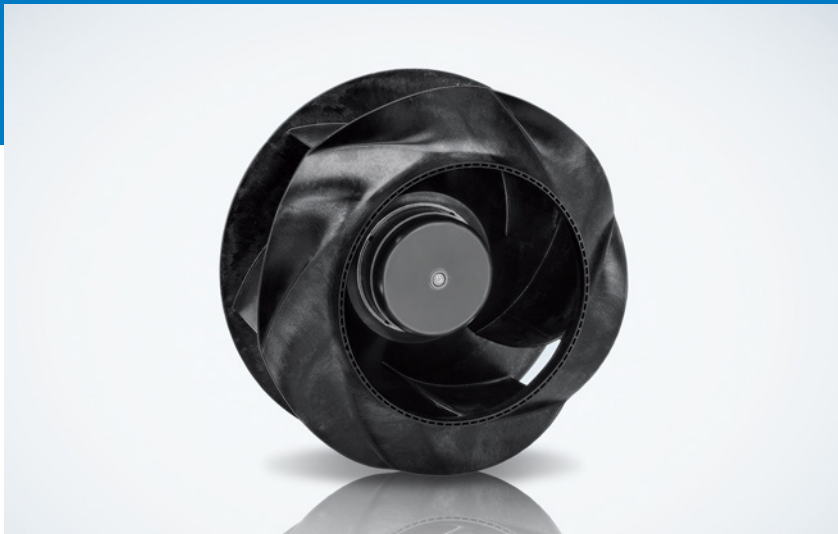
## Technical drawing

Dimensions in mm



# VBS0280RUNES

DC centrifugal fans · max. 2 210 m<sup>3</sup>/h · Ø 280 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

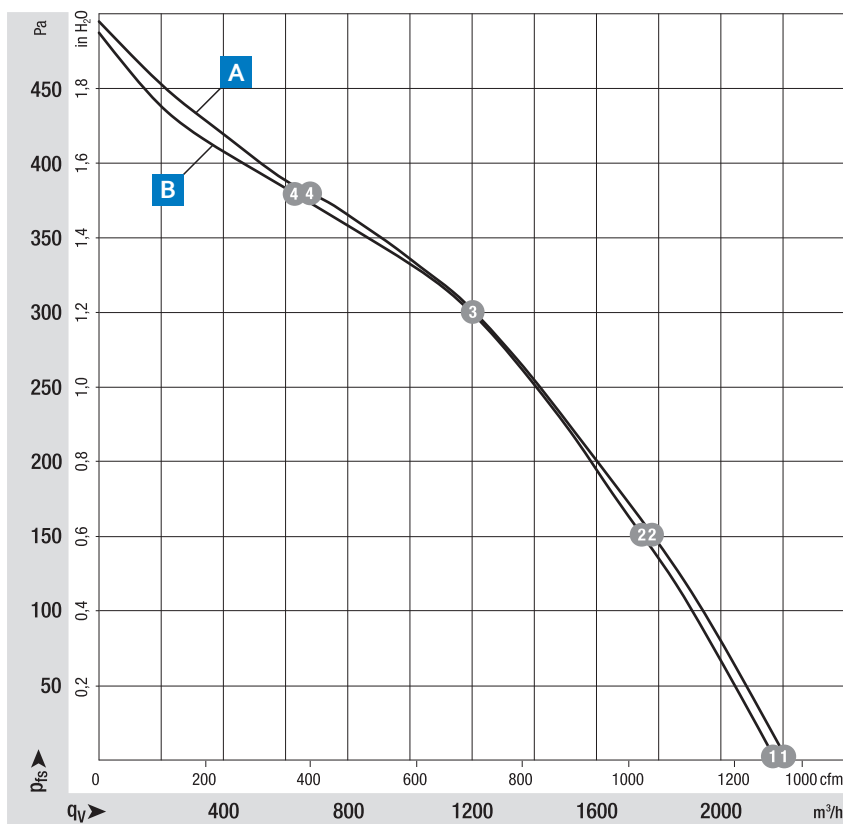
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.40 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

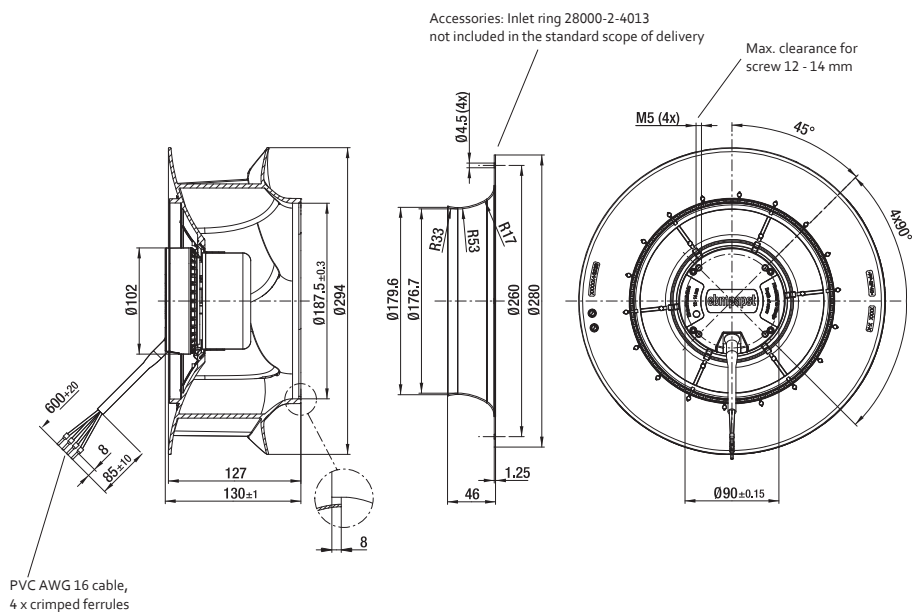
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
							m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VBS0280RUNES	R3G280RN3001	centrifugal fan	24	16...28	A	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	2 210	1 300	1 900	142	5.90	7.4	-25...+60
							1 775	1 045	1 870	162	6.76	6.7	
							1 205	710	1 840	173	7.21	6.4	
							675	400	1 905	153	6.36	6.8	
VBS0280RUNES	R3G280RNB102	centrifugal fan	48	36...57	B	<ol style="list-style-type: none"> <li>1</li> <li>2</li> <li>3</li> <li>4</li> </ol>	2 175	1 280	1 910	140	2.90*	7.4	-25...+60
							1 745	1 030	1 845	158	3.30*	6.7	
							1 200	705	1 830	163	3.40*	6.4	
							630	370	1 900	141	2.93*	6.8	
	28000-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

## Technical drawing

Dimensions in mm



# VBS0310RUNES

DC centrifugal fans · max. 2 375 m<sup>3</sup>/h · Ø 310 mm



## Material/Surface

- Impeller: PA plastic
- Rotor: Painted black

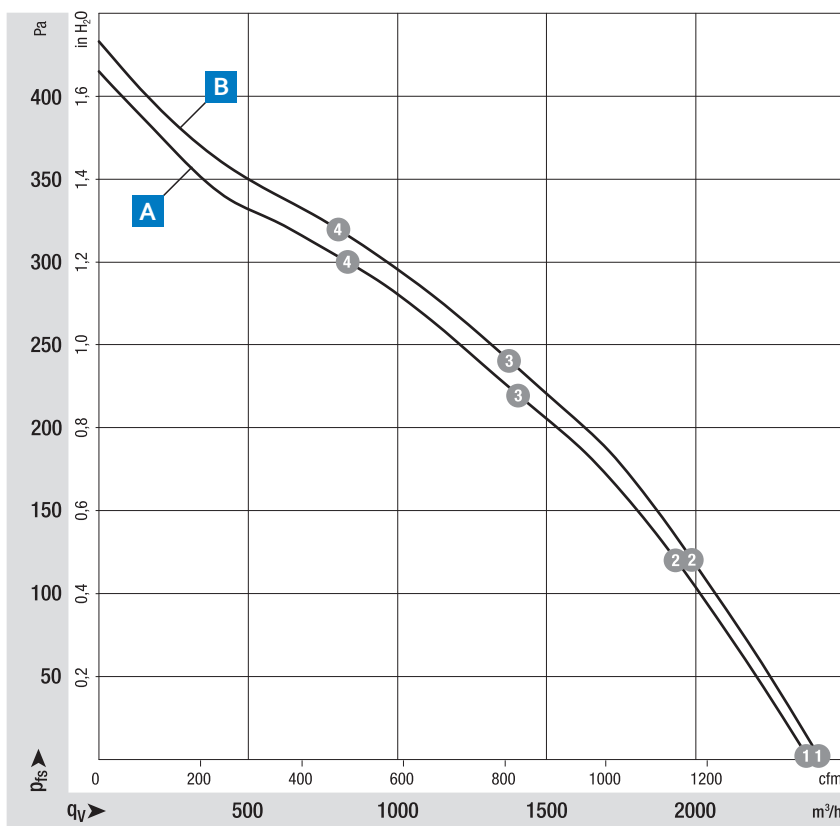
## Characteristics

- Version: DC centrifugal fan – RadiCal®, backward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: Shaft horizontal or rotor on top; rotor on bottom on request
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 44, depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.90 kg

## Approvals

- EN 62368-1; CE; EAC; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

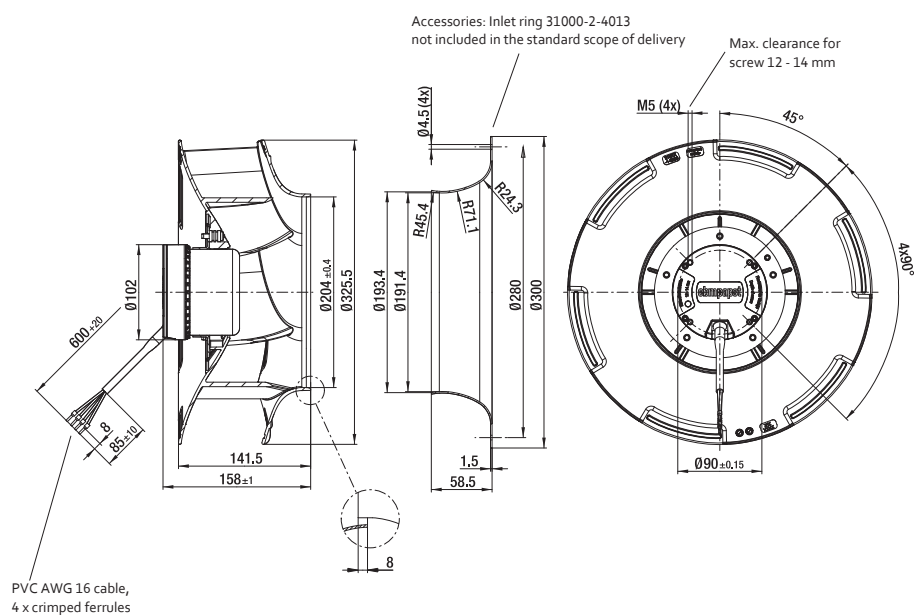
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Sound power level	Perm. ambient temperature
							m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	°C
VBS0310RUNES	R3G310RN9901	centrifugal fan	24	16...28	A	① ② ③ ④	2 310	1 360	1 580	108	4.50*	-	-25...+60
							1 865	1 095	1 510	132	5.50*		
							1 335	785	1 485	138	5.80*		
							855	505	1 510	131	5.50*		
VBS0310RUNES	R3G310RN9802	centrifugal fan	48	36...57	B	① ② ③ ④	2 375	1 400	1 620	123	2.60	7.0	-25...+60
							1 960	1 155	1 555	144	3.00	6.6	
							1 330	780	1 535	152	3.20	6.2	
							705	415	1 580	137	2.80	6.5	
	31000-2-4013	Inlet ring											

Subject to changes. \* Current measured at nominal voltage

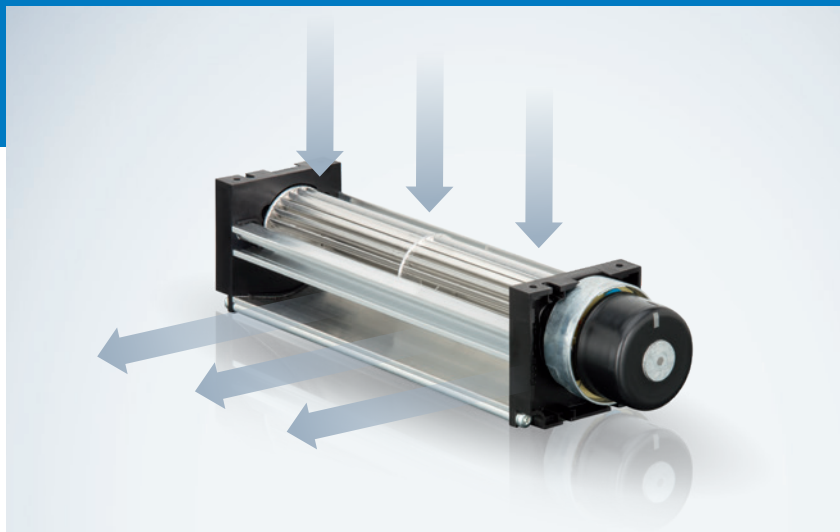
## Technical drawing

Dimensions in mm



# VTS0030X...

DC tangential fans · max. 142 m<sup>3</sup>/h · 201...413 x 50 x 48 mm



## Material/Surface

- Housing: Aluminum
- Housing side parts: Plastic
- Impeller: Aluminum

## Characteristics

- Version: Tangential blower in 12 VDC and 24 VDC. Uniform laminar air flow over the entire length
- Bearing: Ball bearings/Sleeve bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: single wires AWG 24
- Electrical protection class: III
- Weight: 235 / 290 / 380 / 415 g

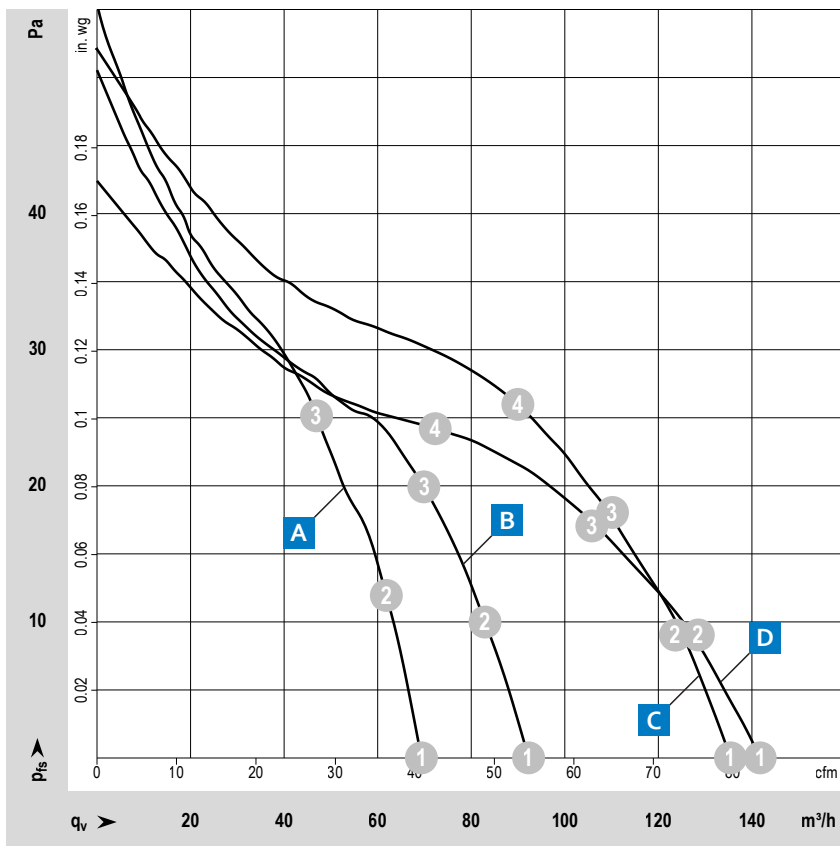
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>



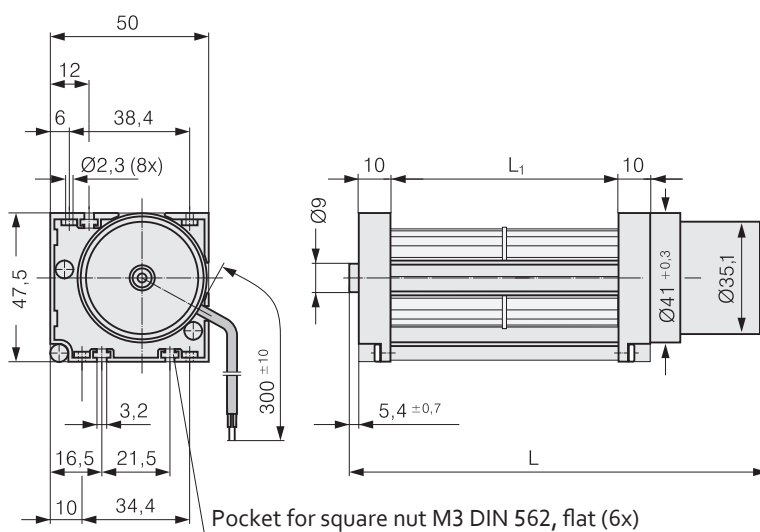
Type / Type old	Part number	Nominal voltage	Voltage range	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> (40 °C) s.p. II
		VDC	VDC			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VTS0030XUFBS QG 030-148/12	9392708001	12	8...14	A	① ② ③	69.0	40.6	4 450	4.9	5.9	49	-20...+60	30 000	50 000
						62.0	36.5	4 750	4.3	5.8				
						46.8	27.5	5 220	3.5	5.5				
VTS0030XUFCS QG 030-198/12	9392715011	12	8...14	B	① ② ③	90.0	53.0	4 300	5.7	6.0	51	-20...+60	30 000	50 000
						81.0	47.7	4 490	5.1	5.8				
						68.0	40.0	4 740	4.5	5.6				
VTS0030XUFCS QG 030-303/12	9392715001	12	8...14	C	① ② ③ ④	128.0	75.3	3 950	7.3	6.2	51	-20...+60	30 000	50 000
						118.0	69.5	4 150	6.7	6.0				
						104.0	61.2	4 420	5.9	5.8				
						85.0	50.0	4 720	4.9	5.5				
VTS0030XUFCS QG 030-353/12	9392715015	12	8...14	D	① ② ③ ④	139.0	81.8	3 700	8.2	6.1	51	-20...+60	30 000	50 000
						127.0	74.7	3 950	7.3	6.1				
						108.0	63.6	4 350	6.1	6.0				
						75.0	44.1	4 820	4.6	5.9				
VTS0030XUFBS QG 030-148/14	9392708002	24	16...28	A	① ② ③	66.0	38.8	4 450	4.7	5.9	49	-20...+60	30 000	50 000
						59.0	34.7	4 700	4.2	5.8				
						44.0	25.9	5 080	3.5	5.5				
VTS0030XUFCS QG 030-198/14	9392715013	24	16...28	B	① ② ③	92.0	54.1	4 400	6.3	6.0	51	-20...+60	30 000	50 000
						83.0	48.9	4 580	5.7	5.8				
						70.0	41.2	4 830	4.9	5.6				
VTS0030XUFCS QG 030-303/14	9392715002	24	16...28	C	① ② ③ ④	135.0	79.5	4 080	8.3	6.2	51	-20...+60	30 000	50 000
						125.0	73.6	4 290	7.6	6.0				
						110.0	64.7	4 600	6.7	5.8				
						90.0	53.0	4 950	5.6	5.6				
VTS0030XUFCS QG 030-353/14	9392715008	24	16...28	D	① ② ③ ④	142.0	83.6	3 800	7.6	6.1	51	-20...+60	30 000	50 000
						127.0	74.7	4 040	6.8	6.1				
						106.0	62.4	4 360	5.8	6.0				
						72.0	42.4	4 790	4.5	5.9				

Subject to changes.

The values for service life were recorded with the fan installed horizontally.

Technical drawing

Dimensions in mm



Type	L	L <sub>1</sub>	Mass
VTS0030XUFBS QG 030-148/..	203.4 +1.5	148	235 g
VTS0030XUFCS QG 030-198/..	260.4 +1.5	198	290 g
VTS0030XUFCS QG 030-303/..	365.4 +1.5	303	380 g
VTS0030XUFCS QG 030-353/..	415.4 +1.5	353	415 g

# VFS0108XULCS

DC centrifugal fans and blowers · max. 225 m<sup>3</sup>/h · Ø 108 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

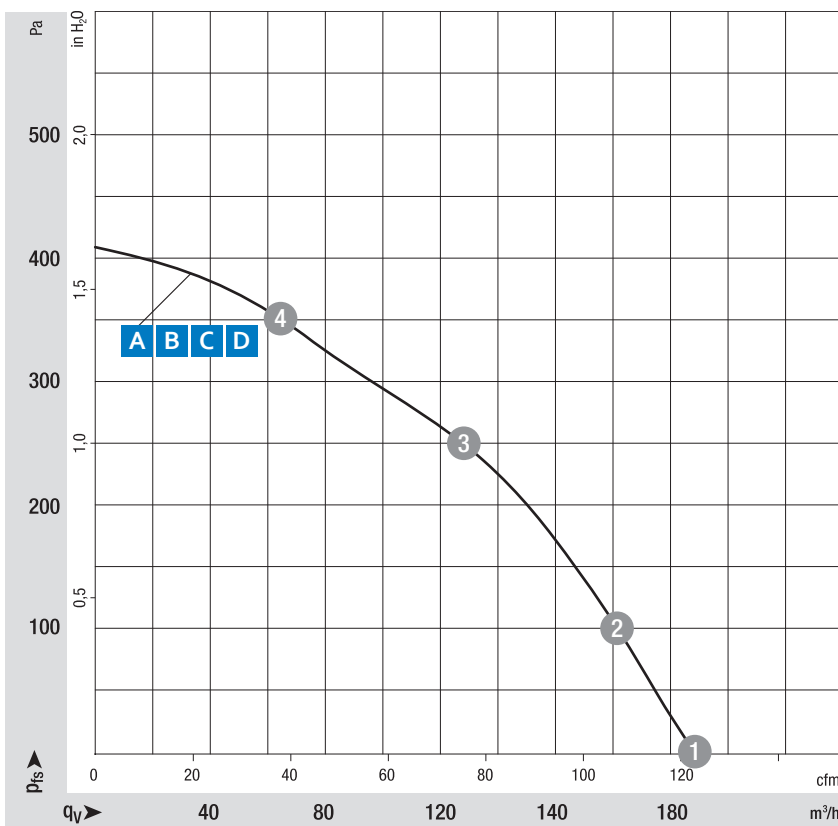
## Characteristics

- Version: DC centrifugal fan with housing (without flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 22
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 0.7 kg; centrifugal blower 1.4 kg

## Approvals

- EAC;
- **B**: UL 1004-1; CSA C22.2 Nr. 77;
- **B + D**: EN 62368-1;
- **C**: EN 60034-1; EN 60204-1; EN 60335-1; CCC on request (only applicable with >36V)

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

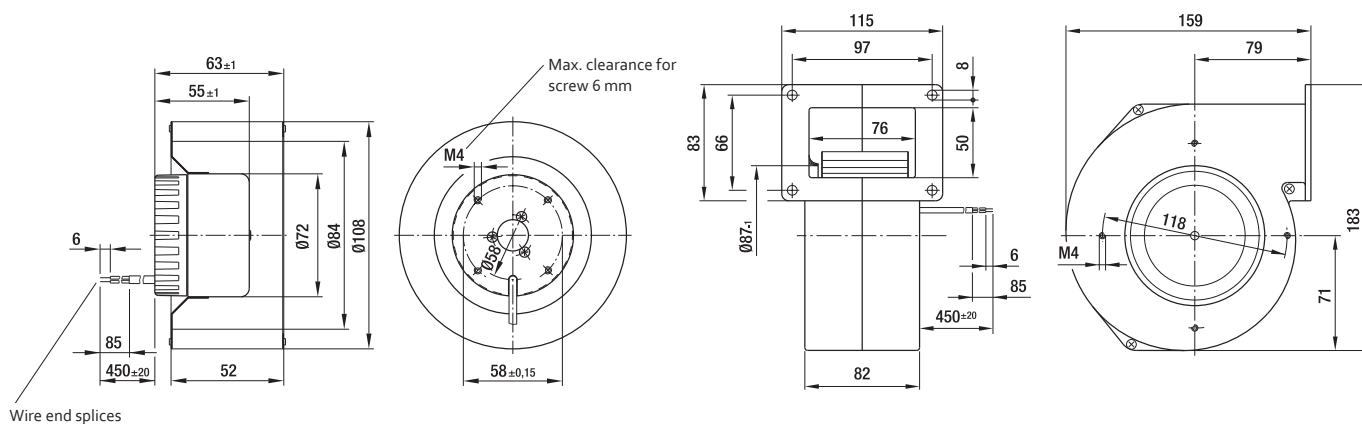
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm					
VFS0108XULCS	R1G108AB1702	centrifugal fan	24	16...28	A	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	225	130	3 235	55	2.26	0	-25...+60
							190	115	3 480	51	2.06	149	
VHS0108XULCS	G1G108AB1702	centrifugal blower with flange	24	16...28	B		140	85	3 800	44	1.76	313	
							90	55	4 055	38	1.49	414	
VFS0108XULCS	R1G108AB4102	centrifugal fan	48	36...57	C	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	220	130	3 200	52	1.04	0	-25...+60
							175	105	3 520	47	0.92	174	
VHS0108XULCS	G1G108AB4102	centrifugal blower with flange	48	36...57	D		115	65	3 875	40	0.76	327	
							65	40	4 100	34	0.66	415	

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0120XULCS

DC centrifugal fans and blowers · max. 275 m<sup>3</sup>/h · Ø 120 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Galvanized

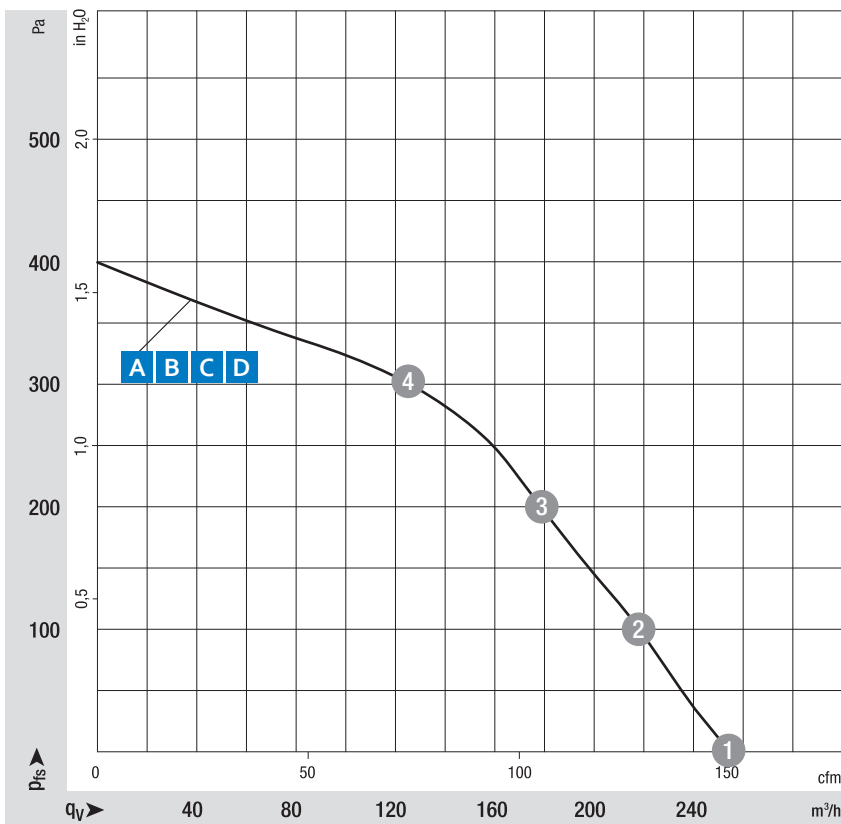
## Characteristics

- Version: DC centrifugal fan with housing (without flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 22
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 0.8 kg; centrifugal blower 1.5 kg

## Approvals

- EAC;
- A: 62368-1; UL 1004-1;
- B: EN 60034-1; EN 60204-1; EN 62368-1; UL 1004-1; CSA C22.2 Nr. 77;
- D: EN 60034-1; EN 60204-1; EN 60335-1; CCC on request (only applicable with >36V)

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

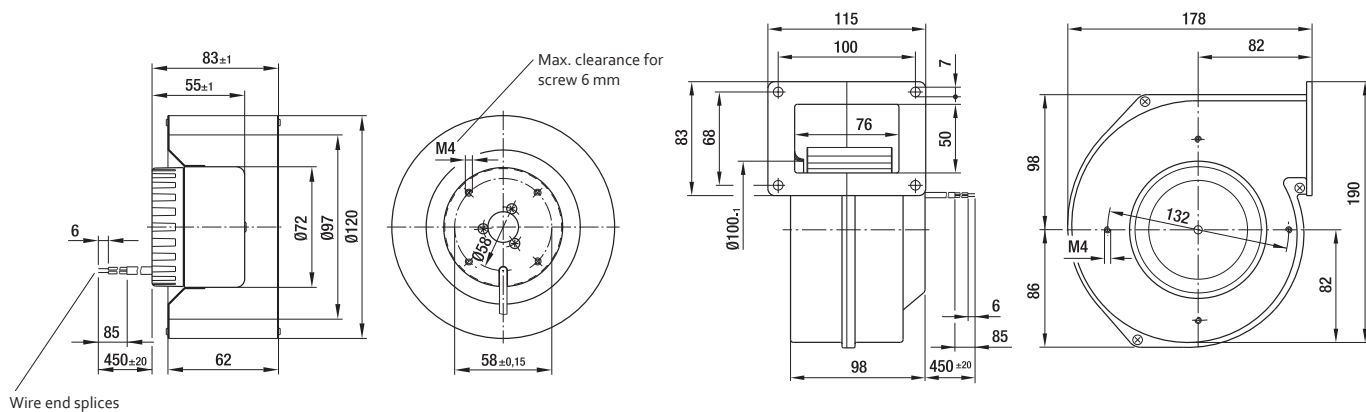
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m³/h	cfm					
VFS0120XULCS	R1G120AB6702	centrifugal fan	24	16...28	A	① ② ③ ④	270	160	2380	49	2.09	0	-25...+60
							215	125	2685	45	1.81	165	
							150	90	3055	38	1.51	351	
							90	55	3295	32	1.25	403	
VHS0120XULCS	G1G120AB6702	centrifugal blower with flange	24	16...28	B	① ② ③ ④	275	160	2420	51	1.05	0	-25...+60
							240	140	2615	48	0.95	119	
							200	115	2855	45	0.87	246	
							140	85	3155	38	0.74	382	

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0133XULCS

DC centrifugal fans and blowers · max. 245 m<sup>3</sup>/h · Ø 133 mm



## Material/Surface

- Housing: Hot-dip galvanized sheet steel
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Galvanized

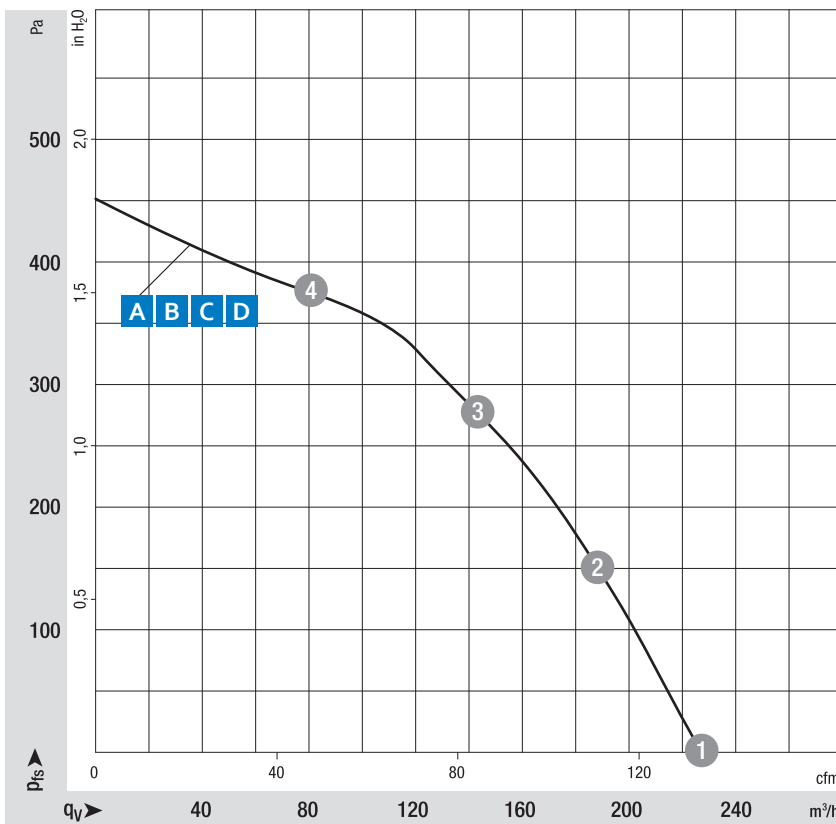
## Characteristics

- Version: DC centrifugal fan with housing (without flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 22
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 0.7 kg; centrifugal blower 1.3 kg

## Approvals

- EAC;
- A: EN 62368-1;
- B: EN 60034-1; EN 602041; EN 60335-1; UL 1004-1; CSA C22.2 Nr. 77; CCC on request (only applicable with >36V)

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

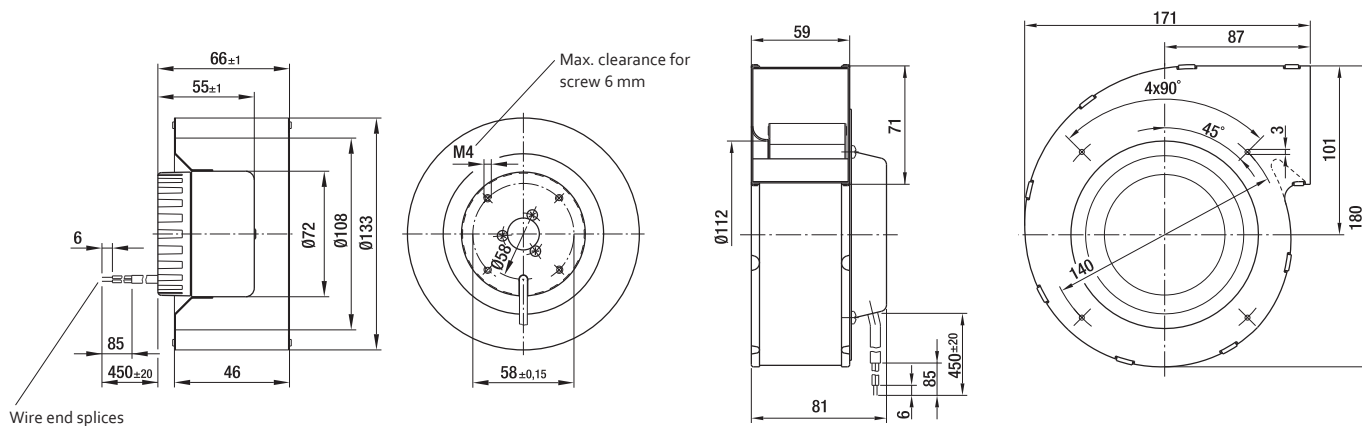
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m³/h	cfm					
VFS0133XULCS	R1G133AE1902	centrifugal fan	24	16...28	A	① ② ③ ④	240	140	2 155	50	2.13	0	-25...+60
							200	120	2 385	45	1.87	164	
							150	90	2 725	40	1.59	319	
							100	60	3 020	33	1.30	403	
VHS0133XULCS	G1G133DE1902	centrifugal blower with flange	24	16...28	B	① ② ③ ④	245	145	2 175	58	1.26	0	-25...+60
							200	120	2 415	51	1.07	173	
							165	100	2 670	46	0.94	294	
							110	65	3 075	40	0.79	429	

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0140XULES

DC centrifugal fans and blowers · max. 435 m<sup>3</sup>/h · Ø 140 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

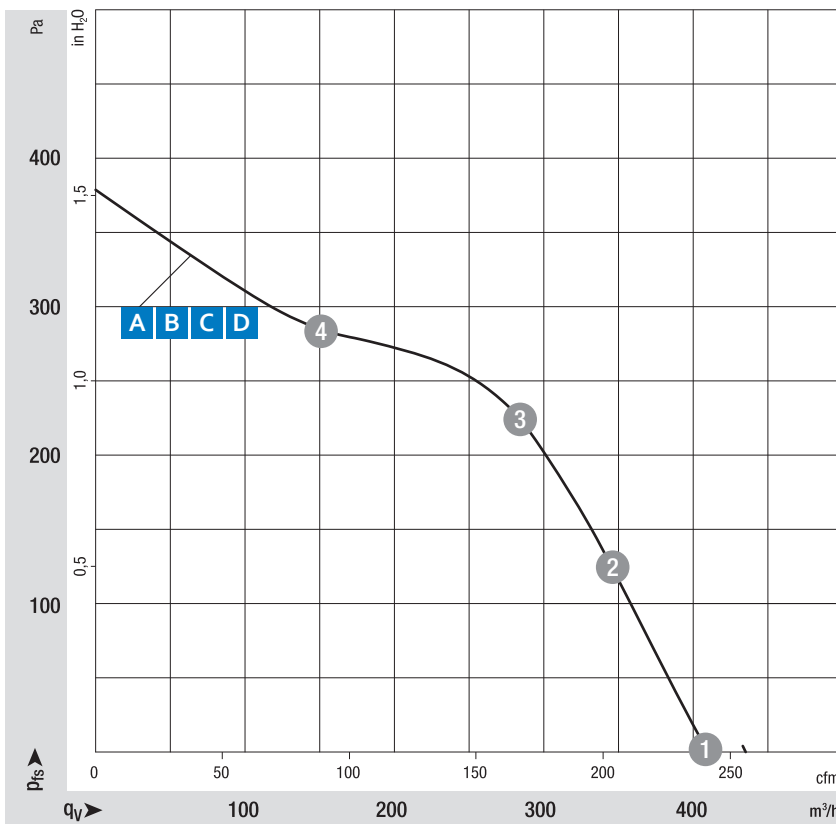
## Characteristics

- Version: DC centrifugal fan with housing (flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 22; depending on installation and position
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 1.0 kg; centrifugal blower 2.5 kg

## Approvals

- EAC;
- B + D EN 60034-1; EN 60204-1; EN 60335-1; CCC on request (only applicable with >36V)

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

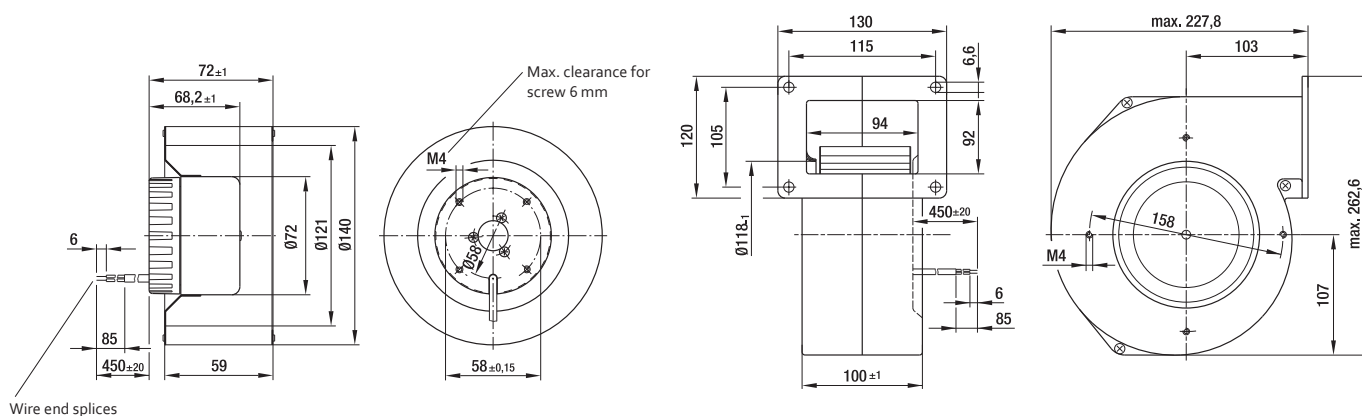


Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m³/h	cfm					
VFS0140XULES	R1G140AV1702	centrifugal fan	24	16...28	A	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	435	255	1875	67	2.80	0	-25...+60
							370	220	2025	63	2.57	138	
							275	160	2285	57	2.25	288	
							150	90	2590	44	1.75	346	
VHS0140XULES	G1G140AV1702	centrifugal blower with flange	24	16...28	B								
VFS0140XULES	R1G140AV2102	centrifugal fan	48	36...57	C	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	435	255	1855	66	1.40	0	-25...+60
							355	210	2050	61	1.25	160	
							265	155	2305	55	1.10	302	
							150	90	2560	43	0.86	338	
VHS0140XULES	G1G140AV2102	centrifugal blower with flange	48	36...57	D								

Subject to changes.

## Technical drawing

Dimensions in mm



# VFS0146XUNCS

DC centrifugal fans and blowers · max. 500 m<sup>3</sup>/h · Ø 146 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

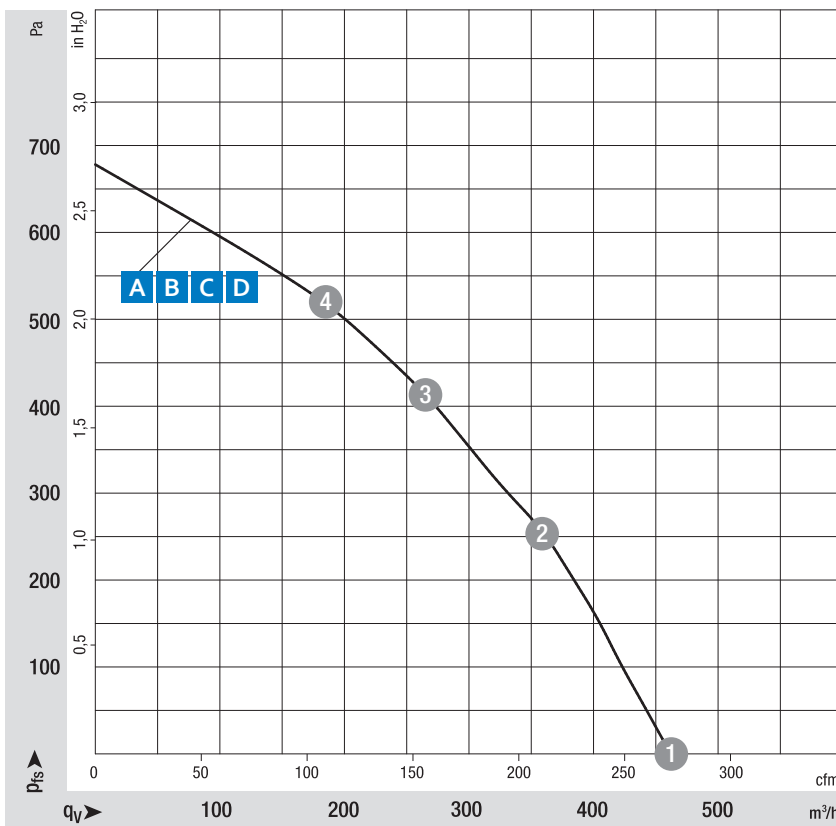
## Characteristics

- Version: DC centrifugal fan with housing (flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 1.4 kg; centrifugal blower 2.8 kg

## Approvals

- CSA C22.2 Nr.77; EAC; UL 1004-1; **A + B + D**: EN 62368-1; CCC on request (only applicable with >36V)

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

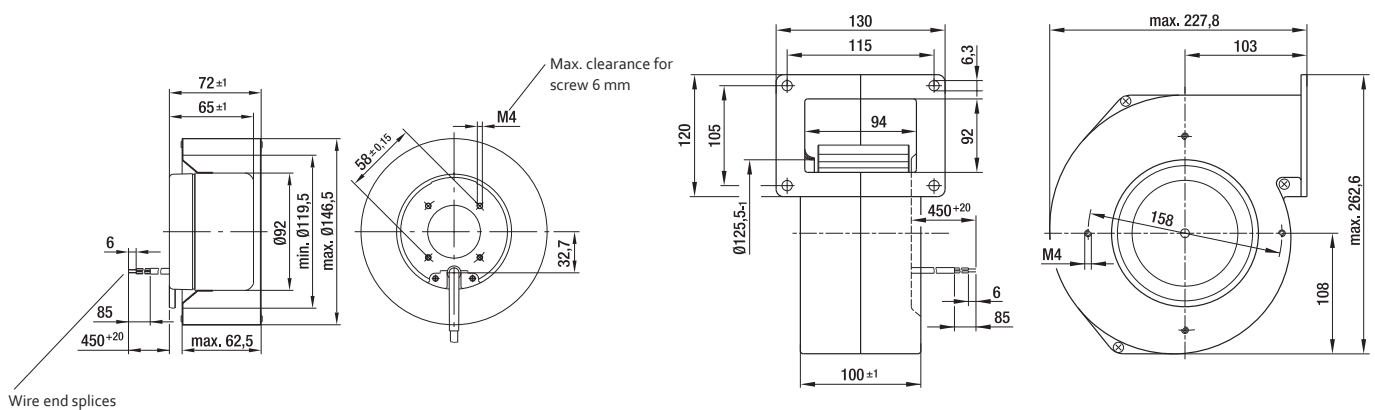
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m <sup>3</sup> /h	cfm					
VFS0146XUNCS	R1G146AA0752	centrifugal fan	24	16...28	A	① ② ③ ④	500	295	2 350	124	5.54	0	-25...+60
							415	245	2 600	117	5.00	224	
							290	170	3 010	109	4.42	466	
							185	110	3 370	96	3.80	605	
VHS0146XUNCS	G1G146BA0752	centrifugal blower with flange	24	16...28	B	① ② ③ ④	500	295	2 350	124	5.54	0	-25...+60
							415	245	2 600	117	5.00	224	
							290	170	3 010	109	4.42	466	
							185	110	3 370	96	3.80	605	
VFS0146XUNCS	R1G146AA1152	centrifugal fan	48	36...57	C	① ② ③ ④	495	290	2 295	120	2.84	0	-25...+60
							415	245	2 535	113	2.54	226	
							300	175	2 910	105	2.21	451	
							205	120	3 270	99	2.00	598	
VHS0146XUNCS	G1G146BA1152	centrifugal blower with flange	48	36...57	D	① ② ③ ④	495	290	2 295	120	2.84	0	-25...+60
							415	245	2 535	113	2.54	226	
							300	175	2 910	105	2.21	451	
							205	120	3 270	99	2.00	598	

Subject to changes.

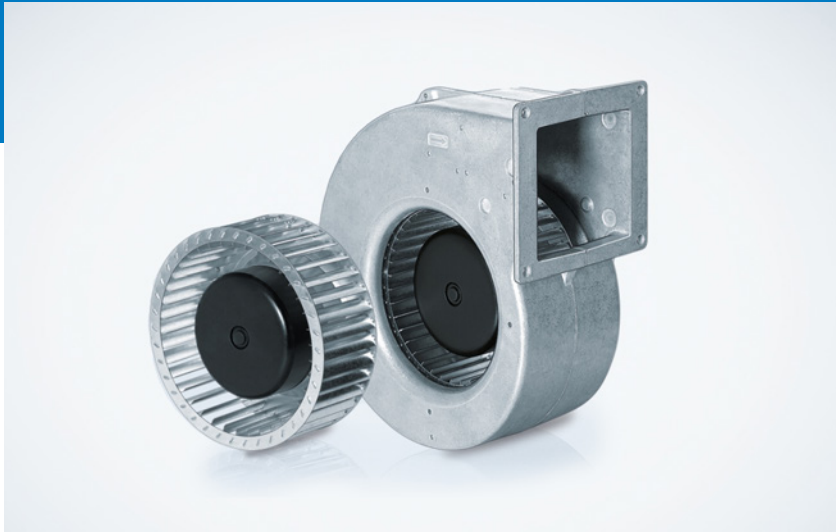
## Technical drawing

Dimensions in mm



# VFS0160XUNCS

DC centrifugal fans and blowers · max. 545 m<sup>3</sup>/h · Ø 160 mm



## Material/Surface

- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

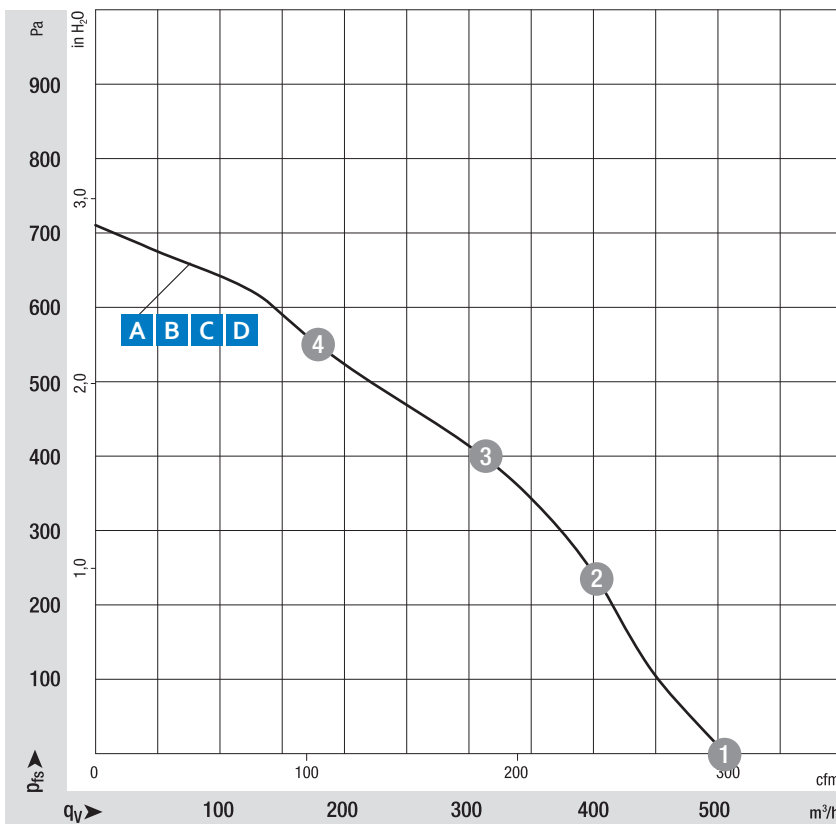
## Characteristics

- Version: DC centrifugal fan with housing (flange), forward-curved, single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: centrifugal fan 1.4 kg; centrifugal blower 2.8 kg

## Approvals

- CSA C22.2 Nr.77; EAC; UL 1004-1; **B + D**: EN 62368-1; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

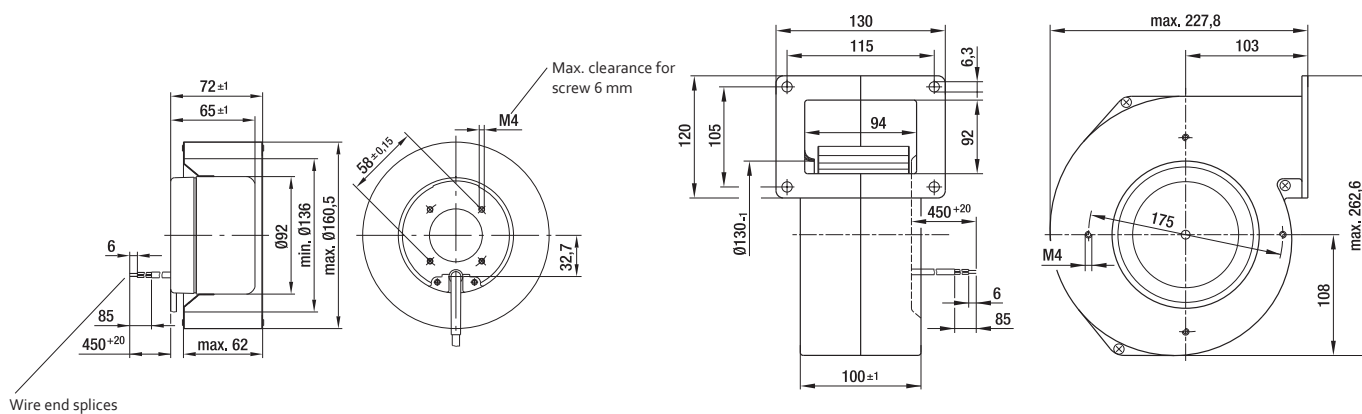
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage VDC	Voltage range VDC	Characteristic curve	Operating point	Air flow		Speed rpm	Power consumption W	Input current A	Min. back-pressure Pa	Perm. ambient temperature °C
							m³/h	cfm					
VFS0160XUNCS	R1G160AH2952	centrifugal fan	24	16...28	A	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	540	320	1 870	134	6.43	0	-25...+60
							450	256	2 115	121	5.54	229	
							340	200	2 420	110	4.82	456	
							200	120	2 825	102	4.20	645	
VHS0160XUNCS	G1G160BH2952	centrifugal blower with flange	24	16...28	B								
VFS0160XUNCS	R1G160AH3952	centrifugal fan	48	36...57	C	<ul style="list-style-type: none"> <li>①</li> <li>②</li> <li>③</li> <li>④</li> </ul>	545	320	1 890	134	3.27	0	-25...+60
							450	265	2 145	120	2.78	235	
							340	200	2 470	111	2.40	468	
							195	115	2 885	103	2.10	660	
VHS0160XUNCS	G1G160BH3952	centrifugal blower with flange	48	36...57	D								

Subject to changes.

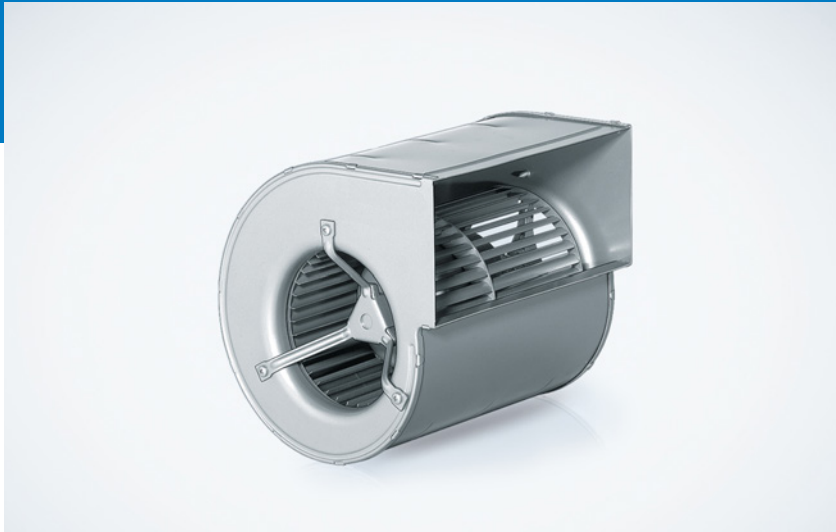
## Technical drawing

Dimensions in mm



# VHD0133XUNCS

DC centrifugal blower · max. 745 m<sup>3</sup>/h · Ø 133 mm



## Material/Surface

- Housing: Galvanized Sheet steel
- Impeller: Galvanized Sheet steel
- Rotor: Painted black

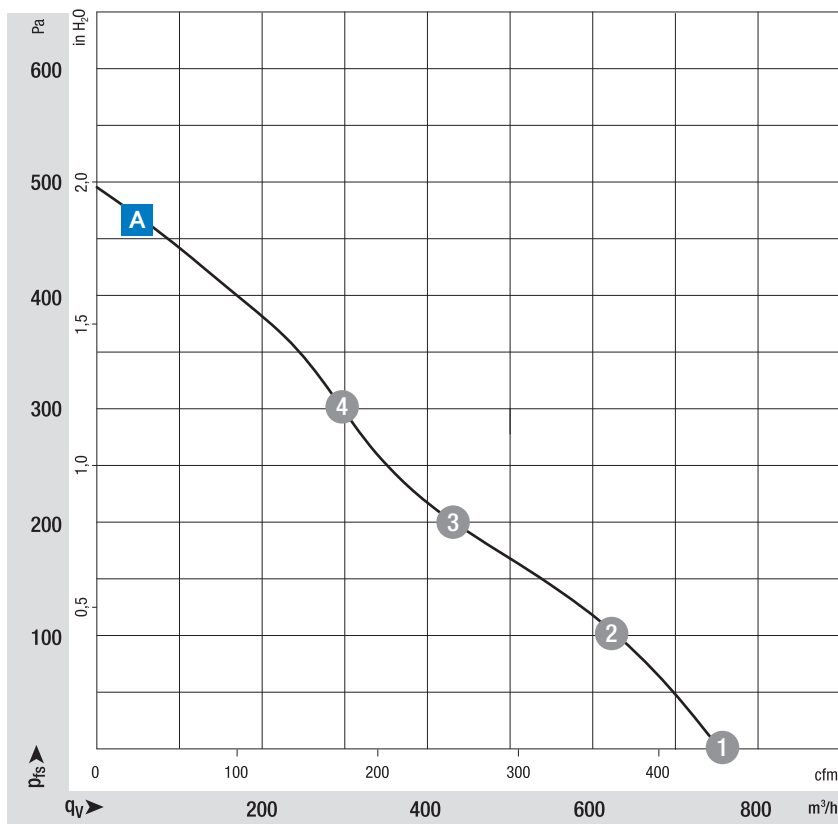
## Characteristics

- Version: DC centrifugal fan, forward-curved, dual inlet, with housing (flange or without flange)
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 2.8 kg

## Approvals

- CSA C22.2 Nr.77; EAC; UL 1004-1; CCC on request (only applicable with >36V)

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

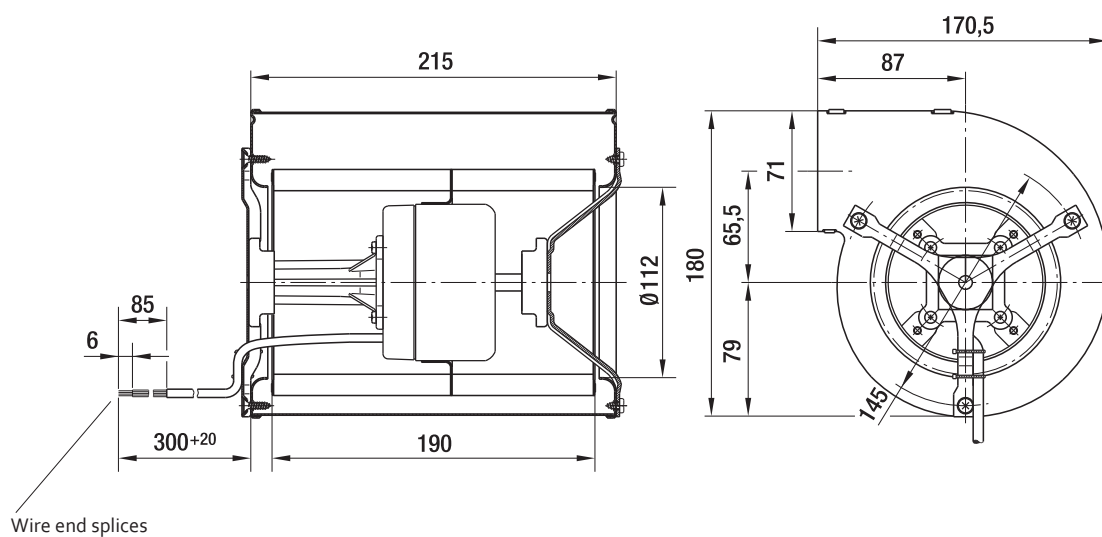
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage		Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Min. back-pressure	Perm. ambient temperature
			VDC	VDC			m <sup>3</sup> /h	cfm					
VHD0133XUNCS	D1G133AB2952	centrifugal blower with flange	24	16...28	A	①	745	435	1900	135	6.23	55	-25...+60
						②	535	315	2300	116	5.04	185	
						③	375	220	2655	107	4.41	278	
						④	250	145	3050	97	3.87	417	
VHD0133XUNCS	D1G133AB3952	centrifugal blower with flange	48	36...57	A	①	745	440	1890	130	3.24	58	-25...+60
						②	575	340	2230	114	2.64	174	
						③	375	220	2640	104	2.21	290	
						④	265	155	3005	98	1.98	412	

Subject to changes.

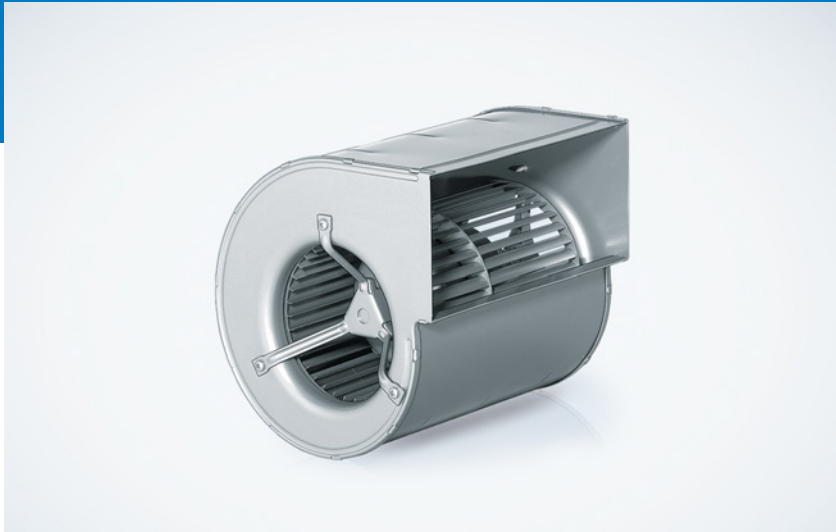
## Technical drawing

Dimensions in mm



# VHD0133XUNES

DC centrifugal blower · max. 1 105 m<sup>3</sup>/h · Ø 133 mm



## Material/Surface

- Housing: Galvanized Sheet steel
- Impeller: Galvanized Sheet steel
- Rotor: Painted black

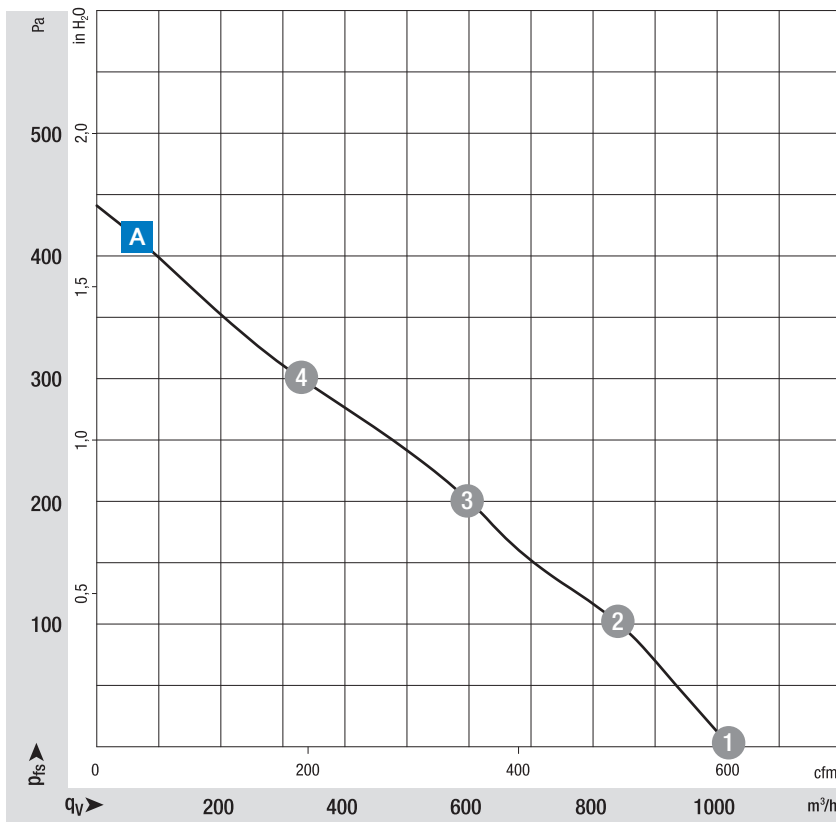
## Characteristics

- Version: DC centrifugal fan, forward-curved, dual inlet, with housing (without flange)
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 3.4 kg

## Approvals

- EN 62368-1; CSA C22.2 Nr.77; EAC; UL 1004-1

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

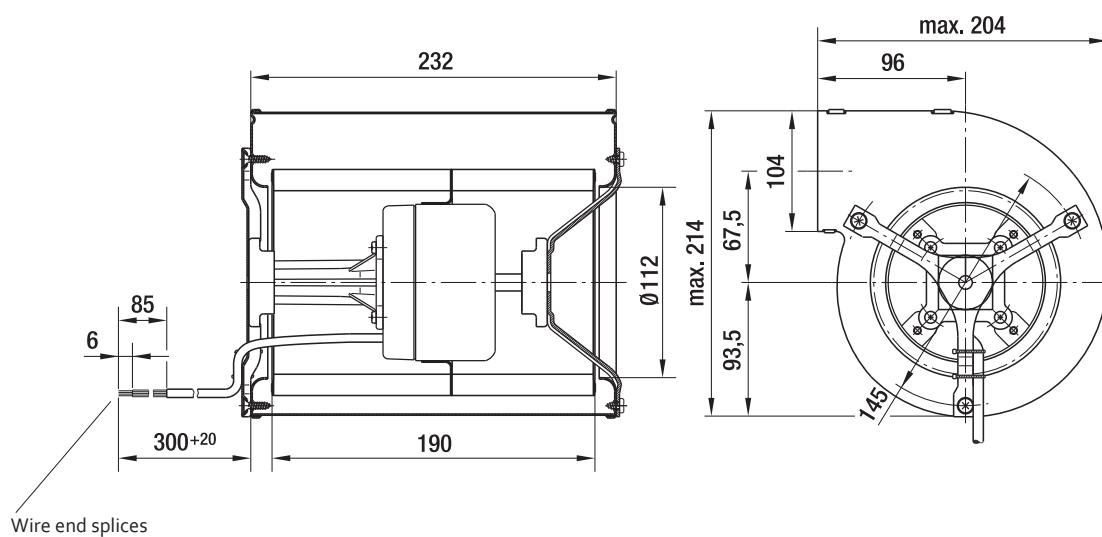


Type	Part number	Fan type	Nominal voltage		Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Min. back-pressure	Perm. ambient temperature
			VDC	VDC			m³/h	cfm					
VHD0133XUNES	D1G133DC1352	centrifugal blower with flange	24	16...28	A	①	1 095	645	1 675	147	6.46	0	-25...+60
							770	450	2 095	127	5.18	155	
							465	275	2 530	108	4.27	318	
							275	160	2 745	92	3.64	392	
VHD0133XUNES	D1G133DC1752	centrifugal blower with flange	48	36...579	A	①	1 105	650	1 700	145	3.32	0	-25...+60
							905	530	1 925	134	2.94	117	
							705	415	2 200	125	2.63	210	
							505	295	2 520	114	2.34	330	

Subject to changes.

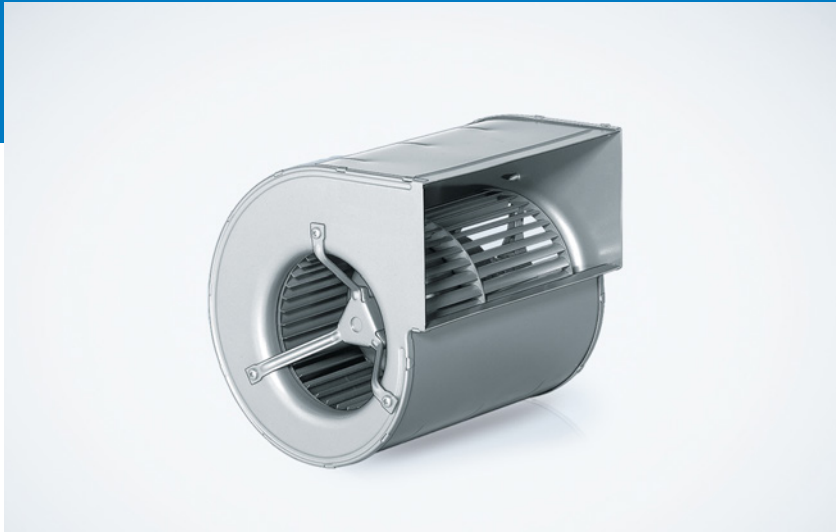
## Technical drawing

Dimensions in mm



# VHD0146XUNES

DC centrifugal blower · max. 1 085 m<sup>3</sup>/h · Ø 146 mm



## Material/Surface

- Housing: Galvanized Sheet steel
- Impeller: Galvanized Sheet steel
- Rotor: Painted black

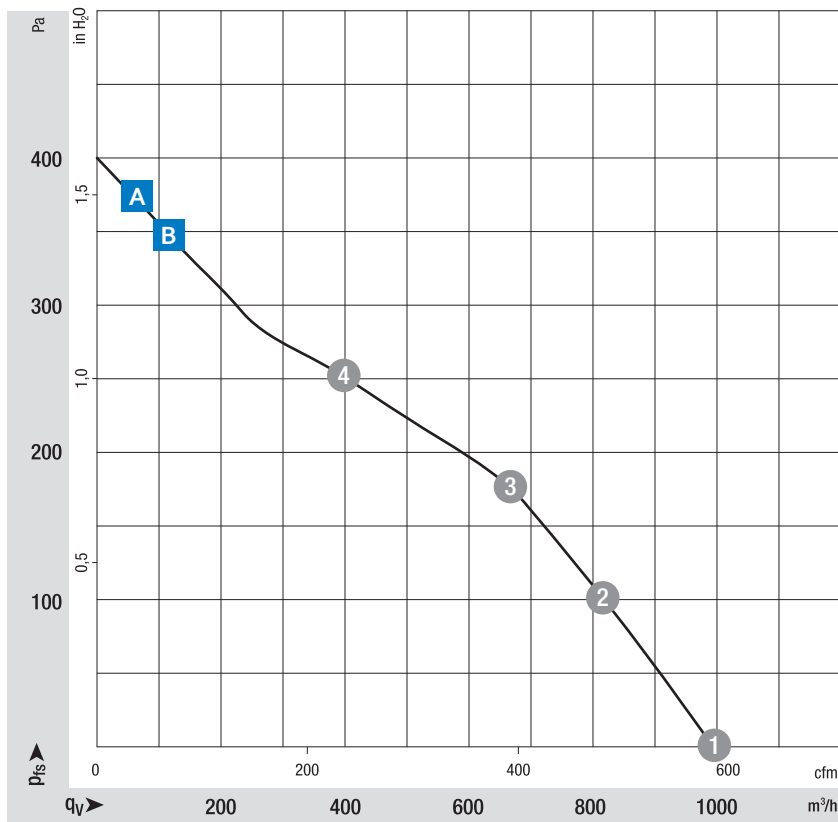
## Characteristics

- Version: DC centrifugal fan, forward-curved, dual inlet, with housing (without flange)
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP 42
- Electrical protection class: III; requires supply with safety extra-low voltage SELV
- Weight: 3.1 kg; 3.4 kg

## Approvals

- CSA C22.2 Nr.77; EAC; UL 1004-1;  
■ **B**: EN 60034-1; EN 60204-1; EN 60335-1

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

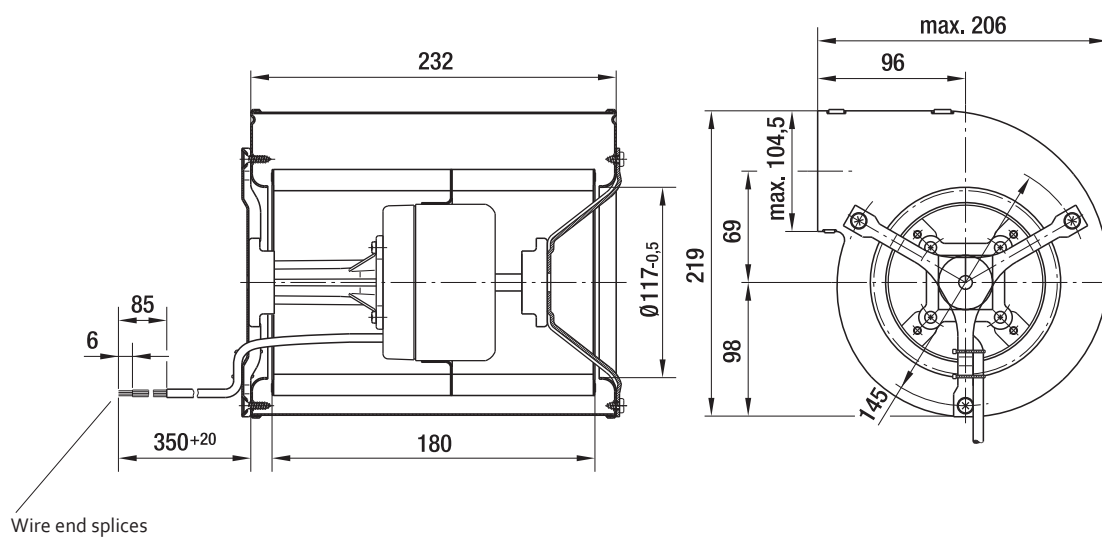
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
Noise: Total sound p<sub>r,w</sub>er level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Fan type	Nominal voltage		Characteristic curve	Operating point	Air flow		Speed	Power consumption	Input current	Min. back-pressure	Perm. ambient temperature
			VDC	VDC			m <sup>3</sup> /h	cfm					
VHD0146XUNES	D1G146AA1952	centrifugal blower with flange	24	16...28	A	①	1 085	640	1 445	130	5.56	0	-25...+60
							915	535	1 630	120	4.94	92	
							735	430	1 840	111	4.45	190	
							500	295	2 115	97	3.81	270	
VHD0146XUNES	D1G146AA3352	centrifugal blower with flange	48	36...57	B	①	1 070	630	1 475	130	2.86	0	-25...+60
							925	545	1 640	121	2.58	91	
							755	445	1 840	114	2.35	187	
							490	290	2 175	100	2.05	295	

Subject to changes.

## Technical drawing

Dimensions in mm



*ebm-papst*

# DC fans – specials



**ebmpapst**

engineering a better life

*DC fans*

# Specials

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Technical information	254
Speed signals	256
Alarm signals	258
Speed setting	262
FanCheck / R4R-Feature	265
Climate and moisture protection	266

## Cooling capacity and efficiency

Greater power density, increasing miniaturization and extreme electronic component density are placing increased demands on the cooling capacity and efficiency of fans. Therefore, intelligent and space-saving integration of the fan in the device configuration is very important:

- Tailor-made cooling adapted to the situation as and when required.
- Programmable cooling by defining speed profiles.
- Transparency of function thanks to complete, interactive monitoring in all operating conditions.

Standard fans in electronics cooling have proven themselves a million times over.

With a constant speed and an appropriate sound level, they continuously provide the air flow required for extreme cases. But these extreme situations occur seldom – if at all – during operation. What is needed is an intelligent fan that adapts automatically to the level of cooling required at the time.

ebm-papst provides intelligent cooling concepts that are optimally adapted to practical requirements. For example:

## Speed adjustment via temperature sensor

ebm-papst answers with a complete range of DC fans with temperaturecontrolled speed adjustment via a temperature sensor, available in a variety of standard dimensions.

Installation is very simple. Either an external temperature sensor in the form of an exposed wire that can be placed anywhere, or an internal sensor located directly in the fan hub in the air flow provides continuous and undissipated thermal information to the control electronics for speed adjustment. A range of temperature sensors can be found on page 262.

## DC fans with separate control input

Open or closed-loop speed control is also possible with DC fans that have a separate control input. So a control voltage or a pulse-width modulated signal can be used to vary the speed. These options are used primarily in devices that have the appropriate standard interfaces and require varied fans depending on the load.

### Speed signal

DC fans with speed signal.

The integrated "electronic tachometer" continuously provides an actual speed signal for external evaluation. A very simple signal evaluation on the customer side informs the user of the current fan speed at all times. The speed signal is provided by a separate wire.

### Alarm signal

For applications that require monitored fan operation with an alarm signal, ebm-papst offers a number of alarm signals variants. Depending on the type of fan in question, the signal will either be static, already evaluated, or a continuous, interface-compatible, high or low signal. The alarm signal is provided by a separate wire.

### Powerful GreenTech motor

Fans with three-phase EC drives and microprocessor-controlled motor electronics. The torque of these three-phase motors, which is virtually independent of the rotor position, allows the fan to run very smoothly. The speed of these fans can be controlled over a very wide speed range by means of PWM, analog voltage, or temperature. Optionally, the fans can be supplied with reversible direction of rotation and active brake operation.

### Robust over the long term

Our fan solutions offer maximum operational reliability even in harsh ambient conditions and are extremely durable. They withstand temperature changes, high humidity levels and UV light. We can say this with confidence because we subject each of our solutions to the following voluntary, extremely demanding tests:

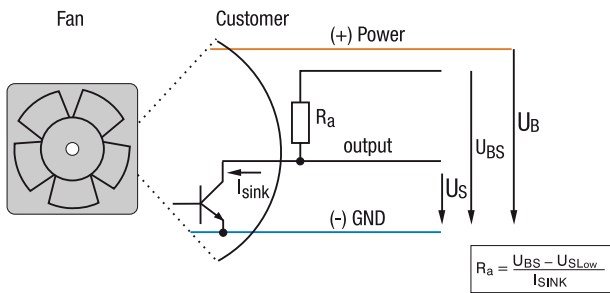
- Shock and vibration test
- Corrosion test
- Highly accelerated life test (HALT)
- Temperature change rain test
- EMC test

# Speed signals

## Speed signal /2

- Speed-proportional, square-wave signal for external monitoring of the fan motor speed
- 2, 3, or 6 pulses per revolution
- Open-collector signal output
- Extremely wide operating voltage range
- Easy adaptation to user interface
- Connection via separate cable
- The sensor signal also serves as a major comparison variable for setting and maintaining the setpoint speed for interactive or controlled cooling with one or more interconnected fans.

### Electrical hookup



All voltages measured to ground. External load resistor  $R_a$  /  $U_s$  /  $U_{BS}$  required.

### Available on request

- Electrically isolated speed signal circuit
- Varying voltage potentials for power and logic circuit

### Signal data

	Speed signal $U_{S,Low}$	Condition $I_{sink}$	Speed signal $U_{S,High}$	Tach operating voltage $U_{BS,max.}$	Admissible sink current $I_{sink,max.}$	Pulses per revolution*
Type	VDC	mA	VDC	VDC	mA	
12 / 24 V	≤ 0,4	2	≤ 30	30	4	2
48 V	≤ 0,4	2	≤ 60	60	4	2

Subject to changes.

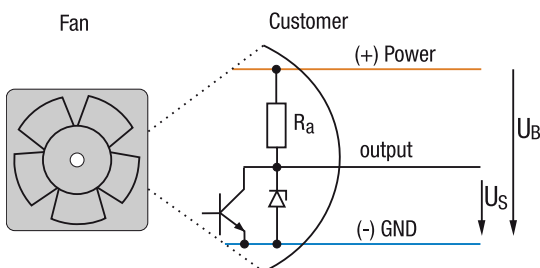
Standard value, can vary depending on fan series.

\* Depending on the fan electronics other values are feasible e. g. 3 or 6.

## Speed signal /12

- Speed-proportional, square-wave signal for external monitoring of the fan motor speed
- 2, 3, or 6 pulses per revolution
- TTL-compatible
- Integrated pull-up resistor
- Connection via separate cable
- The sensor signal also serves as a major comparison variable for setting and maintaining the setpoint speed for interactive or controlled cooling with one or more interconnected fans.

### Electrical hookup



All voltages measured to ground.

### Available on request

- Electrically isolated speed signal circuit
- Varying voltage potentials for power and logic circuit

### Signal data

	Speed signal $U_{S,Low}$	Condition $I_{sink}$	Speed signal $U_{S,High}$	Condition $I_{source}$	Admissible sink current $I_{sink,max.}$	Pulses per revolution*
Type	VDC	mA	VDC	mA	mA	
12 / 24 / 48 V	≤ 0,4	1	2,5–5,5	1	1	2

Subject to changes.

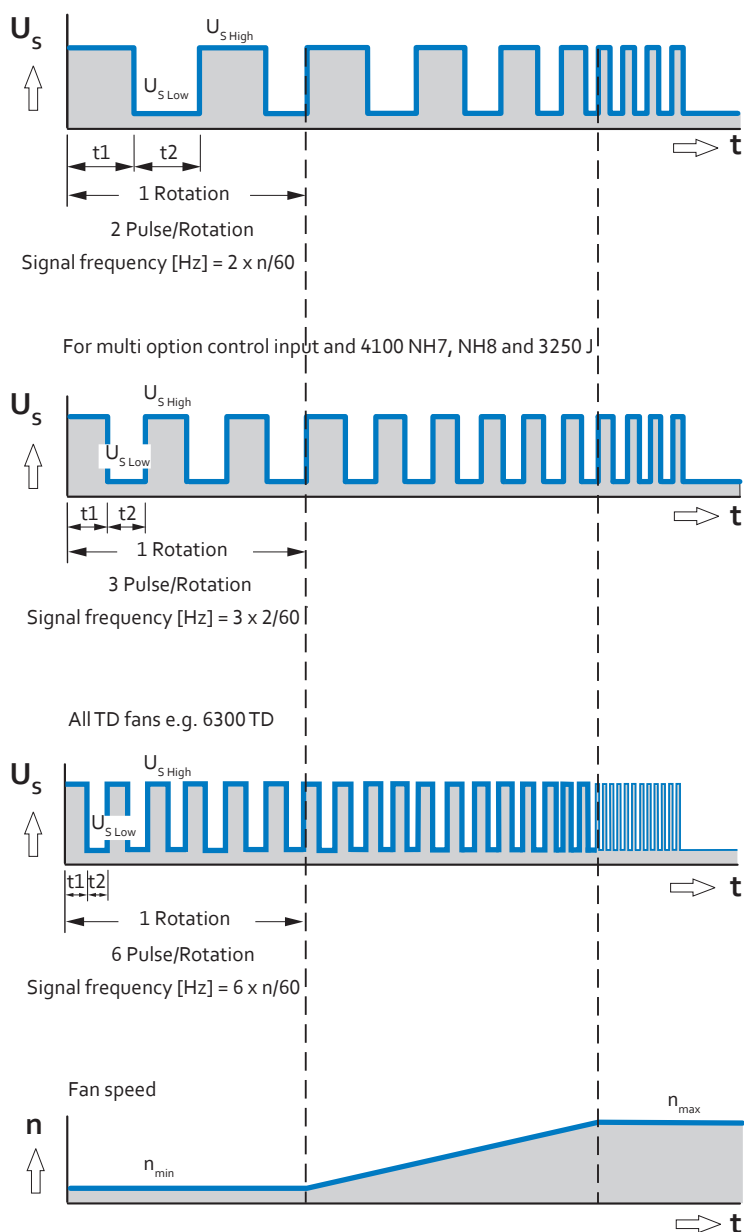
Standard value, can vary depending on fan series.

\* Depending on the fan electronics other values are feasible e. g. 3 or 6.



## Signal output voltage

Standard signal for all types (exceptions see below)



### Note

Fans that come with these fan specials could have variations with respect to the temperature range, voltage range, and power consumption compared to standard fans without specials.



## Alarm signal data

Type	Alarm output voltage $U_{A,Low}$	Condition	Condition $I_{sink}$	Alarm output voltage $U_{A,High}$	Condition	Condition $I_{source}$	Alarm operating voltage $U_{BA,max}$	Max. permissible sink current
	VDC		mA	VDC		mA	VDC	mA
12 / 24 V	≤ 0.4	$n > n_G$	2	≤ 30	$n > n_G$	0	30	10
48 V	≤ 0.4	$n > n_G$	2	≤ 60	$n > n_G$	0	60	10

Subject to changes.

Standard value, can vary depending on fan series.

### Selectable parameters:

- Speed limit
- t6 Alarm signal suppression during start-up
- t7 Alarm delay time during run-up

For existing products, information about alarm signals is included in the product data sheet.

### Note

Fans that come with these fan specials could have variations with respect to the temperature range, voltage range, and power consumption compared to standard fans without specials.



## Alarm signal data

Type	Alarm output voltage	Condition	Condition	Alarm output voltage	Condition	Condition	Alarm operating voltage	Max. permissible
	$U_{A,Low}$		$I_{sink}$	$U_{A,High}$		$I_{source}$	$U_{BA,max}$	sink current
	VDC		mA	VDC		mA	VDC	mA
12 / 24 V	≤ 0.4	$n > n_G$	2	≤ 30	$n > n_G$	0	30	10
48 V	≤ 0.4	$n > n_G$	2	≤ 60	$n > n_G$	0	60	10

Subject to changes.

Standard value, can vary depending on fan series.

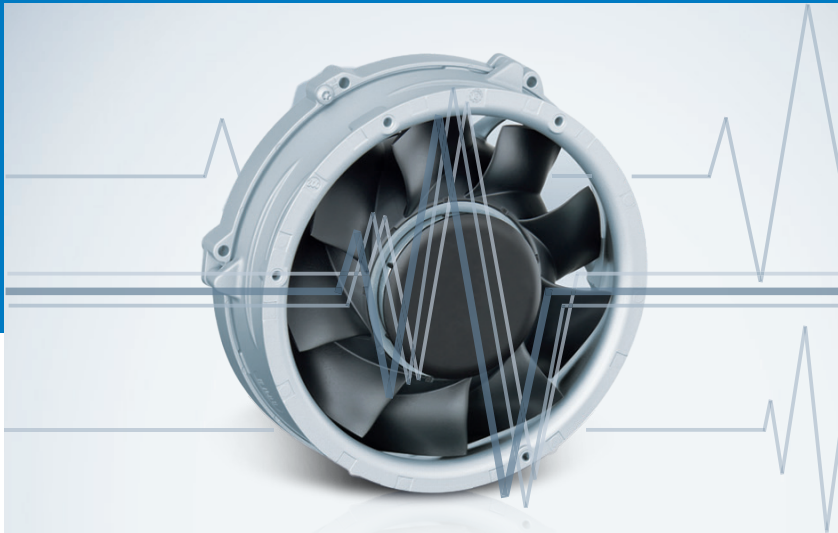
For existing products, information about alarm signals is included in the product data sheet.

### Note

Fans that come with these fan specials could have variations with respect to the temperature range, voltage range, and power consumption compared to standard fans without specials.

# Speed setting

via temperature sensor



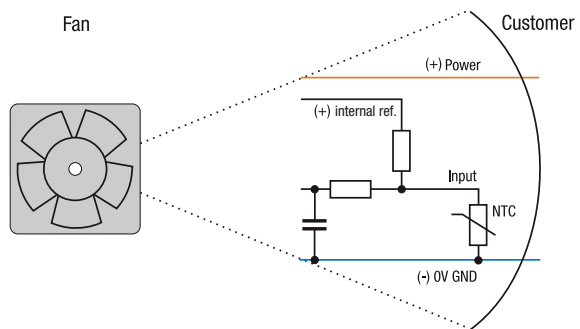
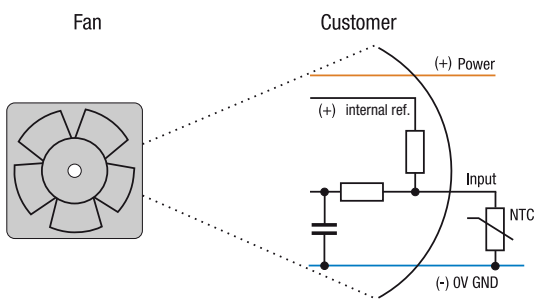
The control variable is a temperature sensor that is either integrated in the fan or connected to an additional control cable.

## External temperature sensor type T

Ext. NTC resistor type LZ370 (p. 366) is required (not included in the standard scope of delivery)

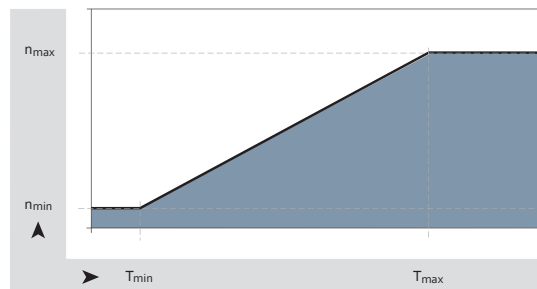
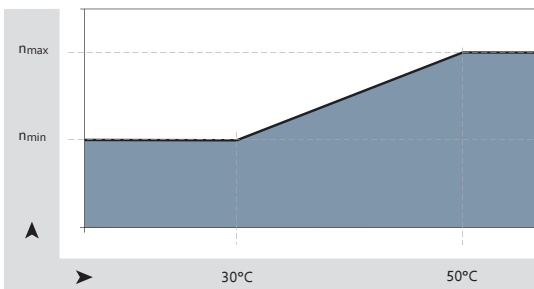
## Internal temperature sensor type I

NTC integrated in the fan hub



## Standard speed/temperature curve for type T and type I

## Optionally available with selectable temperature/speed curve



$$n_{\min} \approx \frac{1}{2} n_{\max}$$

$$T_{\min} \approx 30\text{ }^{\circ}\text{C}; T_{\max} = 50\text{ }^{\circ}\text{C}$$

$$n_{\min} \approx 800\text{ 1/min}$$

$$n_{\max} \text{ based on model}$$

$$T_{\min} \approx 5\text{ }^{\circ}\text{C}$$

$$T_{\max} \leq 85\text{ }^{\circ}\text{C, based on model}$$

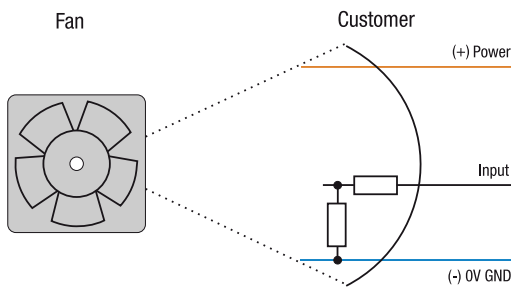
# Speed setting

via control voltage  
or PWM signal

The control variable is a PWM signal  
or analog control voltage.

## Speed setting via analog control voltage type A

Standard control range 0...10 V

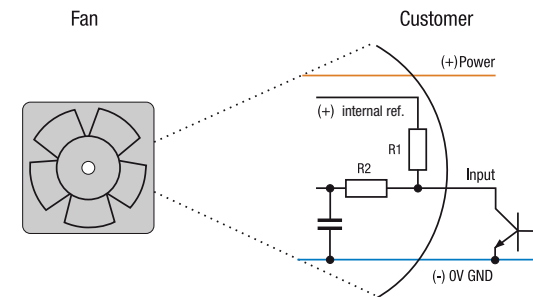


Typical input resistance > 10 kΩ

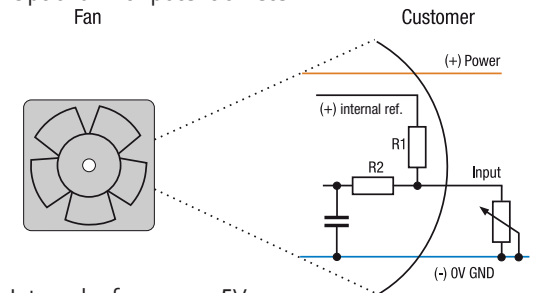
## Speed setting via PWM type P

Standard PWM signal in two versions

- a) PWM frequency, mainly 1...10 kHz (0-100%), Open-collector input
- b) Four-wire interface according to Intel specifications for 12 VDC fans, PWM frequency 25 kHz, incl. speed signal /2



Optional with potentiometer

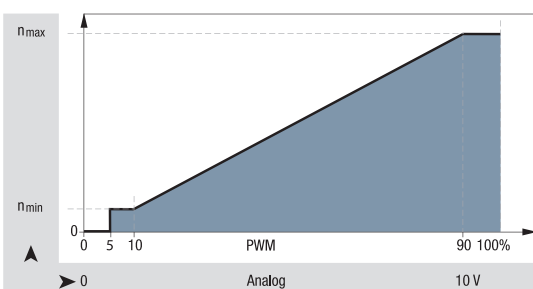


Internal reference = +5V

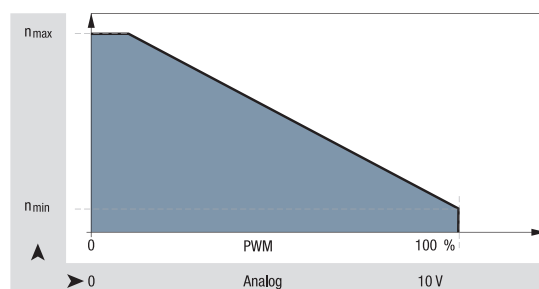
R1 typical 4.7...10 kΩ

R2 typical 100 kΩ

## Standard P / A curve

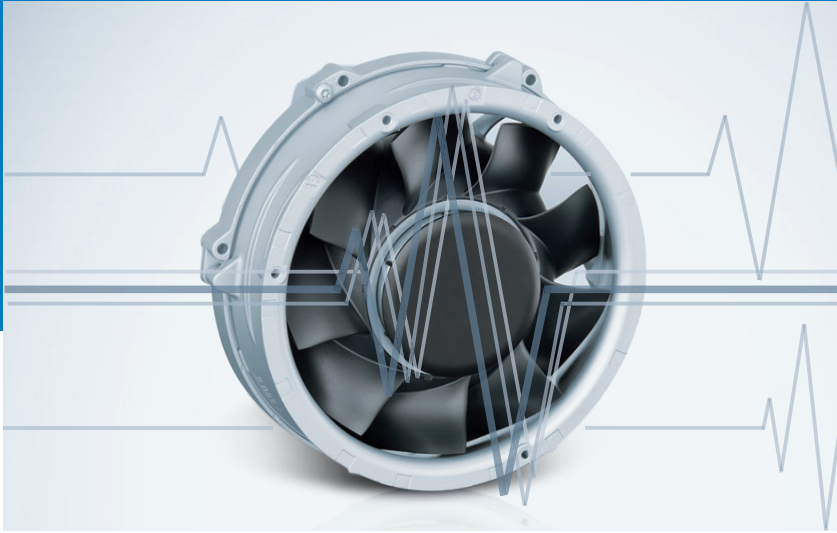


## Optionally available with selectable P / A speed curve



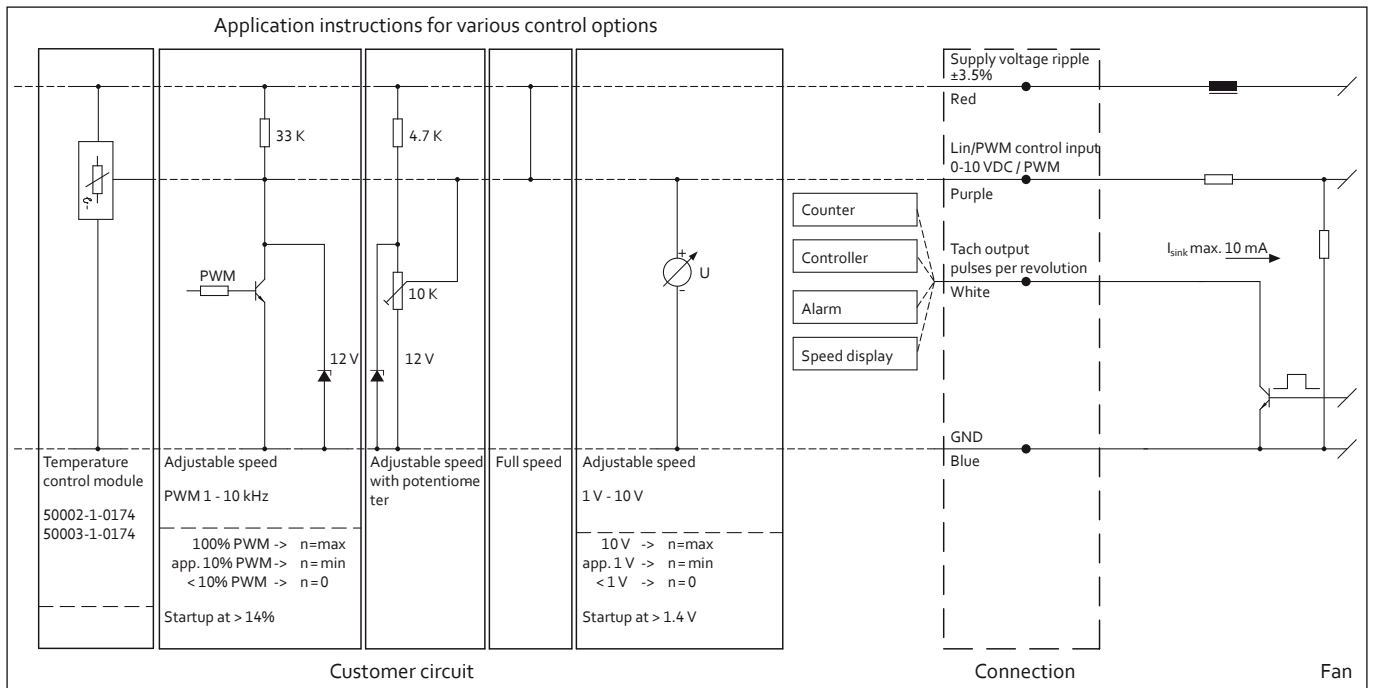
# Speed setting

via multi-option control input

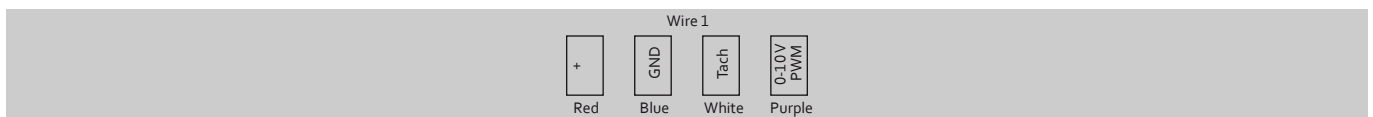


- Customer can operate input either with PWM signal, analog voltage, external temperature control module, or resistor.
- The control signal speed characteristics of the fan differ from the standard curve of the A and P inputs (see p. 263).
- To reach the maximum speed, the control cable must be connected to the  $U_B$ .
- The control input is usually combined with an open collector tachometer (type /2, see page 256)

## Speed setting via multi-option control input type O



DC fans – specials



Wire	Connection	Color	Assignment/function
1	+	red	Supply voltage ripple $\pm 3,5\%$
	GND	blue	GND

Wire	Connection	Color	Assignment/function
1	Tach	white	Tach output: 3 Impulse / revolution
	0-10V / PWM	purple	Control input (Impedance 100 k $\Omega$ )



# FanCheck

# R4R *Ready for Restart*

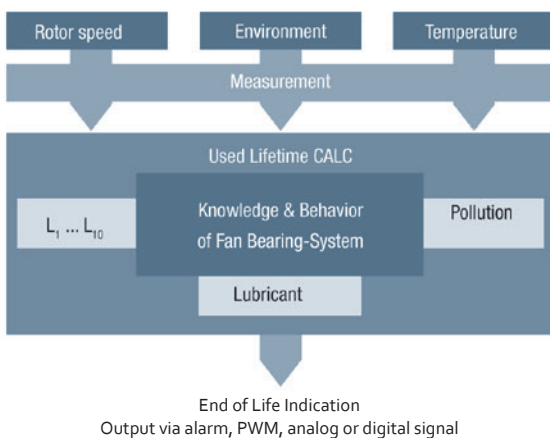
FanCheck is a diagnostic tool integrated into the fan electronics for determining the remaining service life of the fan, dependant, upon temperature, speed, and preset environmental parameters.

The FanCheck system emits a pulse width modulated signal, which reflects the remaining service life of the fan. The pulse width is proportional to the remaining service life of the fan. The FanCheck signal has a pulse width of 10 % at the end of the service life and a pulse width of 90 % with full service life.

Basic data, such as the ball bearing system, bearing lubrication or lubricant used, are programmed in advance as parameters into the software.

The customer defines the environmental conditions, such as the use of fans in moist, dusty, or dirty environments; other parameters such as ambient temperature and speed are determined continuously. Based on all the influencing parameters, the software can, by means of a complex algorithm, calculate the remaining service life for each individual fan.

## Functionality



IT equipment such as servers, routers, and in-row cooling applications must be 100% operational. For this reason, maintenance work is often carried out during operation.

If a single fan or a plug-in unit with several fans is taken out of service for this purpose, this can create a tricky situation: The remaining fans must provide adequate air flow. As a result of this and the back pressure of applications, air flows through the fan taken out of service and it is driven by an external source, as with a wind turbine.

The problem is that when driven by an external source, these speeds can amount to several thousand revolutions per minute and in the opposite direction of rotation.

R4R manages a feat of strength: Thanks to high-torque motors and state-of-the-art electronics, it still guarantees a proper start-up process, enabling efficient and fast system maintenance, including the replacement of fans while the system is running.

# Climate- and moisture protection



- Capable of satisfying special requirements for a broad range of applications
- Resistance of fans to environmental conditions such as dust, splashing water, humidity, spray water, and salt spray.
- Competent solutions to adapt fans to environmental conditions.

## Moisture protection

A coat of paint over the motor and circuit board protect the fans against spray water and condensation.

### Degree of protection IP 54 / IP 68\*

In the degree of protection IP 54, the motor and circuit boards are coated and therefore protected against spray water and moisture. The degree of protection IP 68 is important for ebm-papst products, as it ensures a high degree of protection for the encapsulated motor and electronics against foreign bodies and water, while protecting the user against potential hazards upon contact. Degrees of protection higher than IP 68 are possible on request.

In addition, the IP68 protection enables ATEX certification according to DIN EN 60 079-7 (Group 2A, T4) for use in explosive atmospheres according to the certified protection class and resistance to salt spray.

## Salt spray protection

Salt spray represents one of the most difficult requirements for product durability. ebm-papst has the technology to protect fans and blowers from salt spray reliably and for the long term.

## Stainless steel bearings

Special bearings made of stainless steel provide additional protection.

Solutions that are available and are used may differ depending on the fan size. We would be glad to develop solutions tailored to the demands of your application.

### Degree of protection – IP code\*

Protection against foreign bodies and accidental contact (first digit)		Water protection (second digit)	
X	No protection	X	No protection
1	Protection against foreign objects > 50 mm (back of the hand)	1	Protection against dripping water or condensation
2	Protection against foreign objects > 12 mm (finger)	2	Protection against dripping water, fans tilted 15° from vertical
3	Protection against foreign objects > 2.5 mm (tool)	3	Protection against sprayed water up to 60° from vertical
4	Protection against foreign objects > 1 mm (wire)	4	Protection against sprayed water from all sides
5	Protection against dust in harmful quantities	5	Protection against low-pressure water jets
6	Dust-proof	6	Protection against high-pressure water jets
		7	Protection against temporary submersion (15 cm - 1 m)
		8	Protection against continuous submersion

\* IP = International degree of protection marking  
For AC- and EC-fans max. IP 65 available.



Product overview

# GreenTech EC axial fans



EC axial compact fans, in particular our new AxiACi series, stand for flexibility, high efficiency and enable a wide range of applications.



The wide voltage possible in EC axial compact fans reduces the logistics costs and warehousing, as the fan, regardless of the line voltage, can be used with its specified values: without switching, the EC axial fan adapts to every power supply – from 90 to 264 VAC at line frequencies of 50 and 60 Hz. Voltage fluctuations in the power system are automatically compensated for.



Unlike conventional AC technology, the state-of-the-art drive concept of this fan series is not linked to a fixed power frequency. EC axial compact fans therefore offer a significantly higher air flow and a significant pressure increase.



The extremely quiet and highly efficient motor impresses with its long service life and is equally suitable for use in technologically demanding new projects and as a replacement for obsolete AC solutions.

**ebmpapst**

engineering a better life

### Type code example: VWCL119PJGJZ

V	W	C	L	119	P	J	G	J	Z
Product category	Product type Airflow direction	Product version	Overall length	Size [mm]	Brand name	Motor	Motor size	Air flow level	Standard
							Diameter		

Dimensions in mm	Type	Type (old)	Page
□ 80 x 32	VWCE080ASJHS	AC 8300	272
□ 92 x 38	VWCJ092JSGKS	AC 3200 J	274
□ 92 x 38	VWCF092D...	AxiACi 92	276
□ 119 x 25	VWCH119FSJMS	AC 4400 FN	278
□ 119 x 38	VWCF119D...	AxiACi 120	280
□ 119 x 38	VWCF119YSGLS	ACi 4400	282
∅ 172 x 51	VWEK172XSPLS	AC 6200 N	284
∅ 130	VWEH151X...	W1G 130	286
∅ 200	VWLJ225X...	W3G 200	288
∅ 250	VWLK280X...	W3G 250	290
∅ 98,5 x 130	VUS0092XSGBS	AC 100	292

# GreenTech EC axial fans

## Progress made by ebm-papst.

The best example: Greentech EC axial fans from ebm-papst.

Our latest fans in the AxiACi series stand for flexibility, high efficiency and enable a wide range of applications ranging from cooling and ICT applications to switch cabinet cooling. The best – all in the same dimensions as conventional AC fans. The extremely quiet and highly efficient motor impresses with its long service life and is the perfect replacement for obsolete AC solutions in particular. The wide voltage range (90-264 VAC) and operating temperatures of up to  $-40^{\circ}\text{C}$  (also when starting) also offer a practical solution. Our GreenTech EC axial compact fans are available up to IP65 as an option and, thanks to corresponding certificates, are also suitable for use with natural refrigerants.

## Many years of experience, quality and continuous product improvement

Better, in the same size. Our products have been developed for many years and have been optimized to meet your requirements. Our new generation of GreenTech EC axial compact fans offer a wealth of advantages in the same dimensions as conventional AC fans. This makes switching your applications to the new fans much easier.

## Quiet is not always quiet when psychoacoustic, subjective noise characteristics are at play.

As well as increasing efficiency, one of our main objectives when further developing the pure AC fan series into our AxiACi series is significantly reducing noise as much as possible – both in the aerodynamics and in the motor. In terms of aerodynamics, we achieve this with perfectly designed and coordinated fan housing/fan impeller combinations. A motor always generates vibrations that are transmitted to your application. In the worst-case scenario, in sound-wave form, these are considered disruptive. In the development phase, this structure-borne noise is difficult to predict and varies from application to application. Our aim is to develop motors with as little structure-borne noise as possible so that this problem does not occur in the first place. With our AxiACi motor technology, we have succeeded.

If we look at the sum of the acceleration levels, ACmaxx and AC 4656N are comparable. However, AxiACi120 has a noticeable lower base level and also significantly lower peaks during acceleration amplitudes and therefore its structure-borne noise is much less intrusive. As a result, it also offers noise benefits for sensitive applications.



# Progress made by ebm-papst

## That means for you:

### Cost optimization

#### ■ Lower energy costs due to greater efficiency

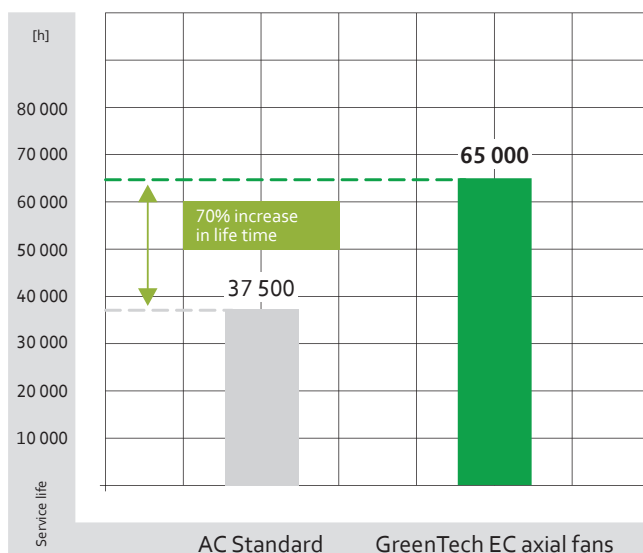
A drive concept based on state-of-the-art GreenTech EC technology with outstanding motor efficiency level. The energy consumption is up to 80 % lower than in AC fans of the same size. The energy savings alone mean that the products pay for themselves after only a few months. The savings made over the entire service life, especially in systems with multiple fans, are worth it.

#### ■ Reduction in logistics costs as independent from line frequency and line voltage

The GreenTech EC axial compact fans are prepared for direct connection to all AC voltages and frequencies thanks to the "wide voltage capability" of the fan. A certain speed version can be operated worldwide, regardless of the 110 VAC or 230 VAC power supply. Voltage and frequency fluctuations during the power supply operation are compensated automatically. This reduces logistics costs and makes warehousing easier.

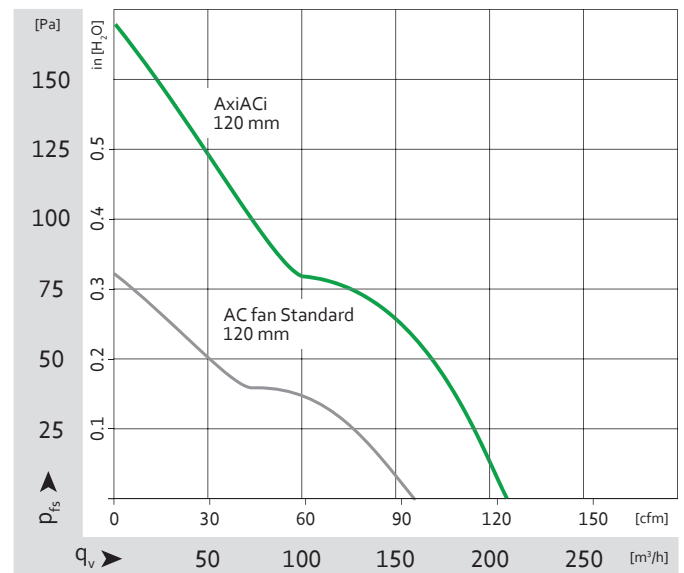
#### ■ Long service life

The efficiency of GreenTech EC axial compact fans is up to 75% greater than that of conventional AC fans. This not only saves energy, it also means that the motor heats itself up less. The bearing system in particular responds positively to heating itself up less: the reason why the fans have a service life that is up to 70 % longer! This also extends the service and maintenance intervals significantly. Investments in replacement fans and downtimes, which are even more expensive, remain small enough to manage.



### Higher performance

Unlike conventional AC technology, the state-of-the-art drive concept of this fan series is not linked to a fixed power frequency. This allows the motor speed to be increased over a wide range. This enables significantly higher air flow rates and significant pressure increases.



### Flexibility and countless possible uses

- IP65 provides protection against harmful environmental influences and harsh operating conditions
- Natural refrigerant? No problem!  
Safety approvals according to DIN EN 60335-2-89, 60335-2-24, DIN EN 60079-7 enable use with natural, explosive refrigerants
- Everything is possible, from standby mode, overload mode at peak times or night reduction to temperature-controlled, quiet operation. From speed monitoring to long-term function monitoring via alarm or speed signal, the fans offer optional interfaces that allow easy and quick implementation of operational monitoring.
- Further information on these fan options can be found in the chapter "DC compact fan specials" on page 252.
- Or you can simply talk to our application engineers about the ideal GreenTech EC axial compact fan for you.

# VWCE080ASJHS

GreenTech EC axial fans · max. 80 m<sup>3</sup>/h · □ 80 x 32 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Efficient AC fan, suitable for use worldwide thanks to wide voltage
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 325 g

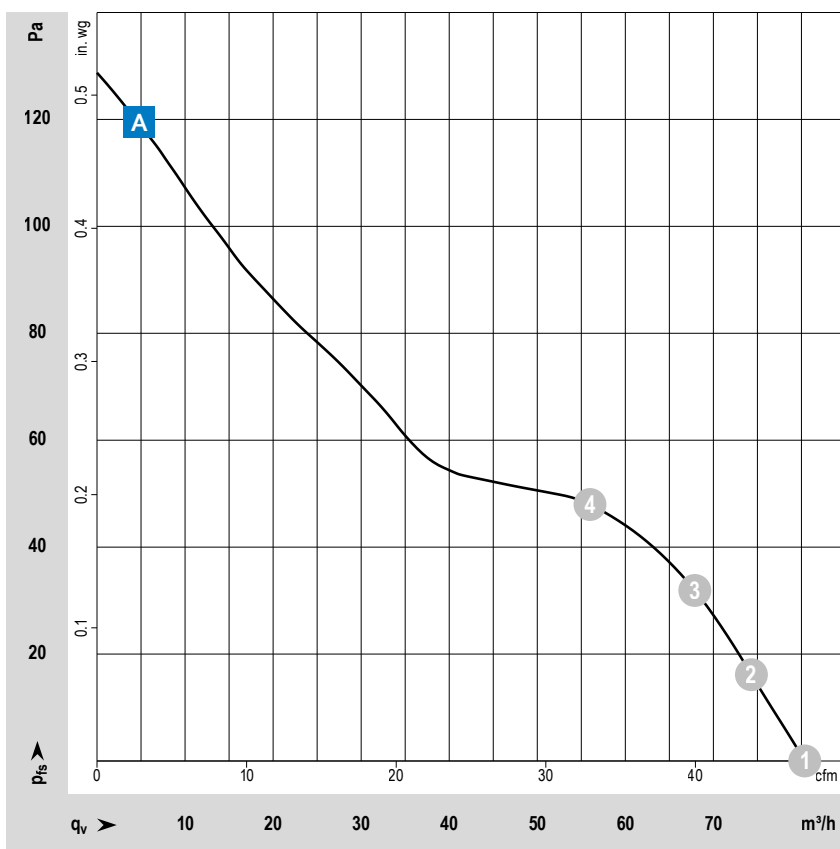
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP65

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

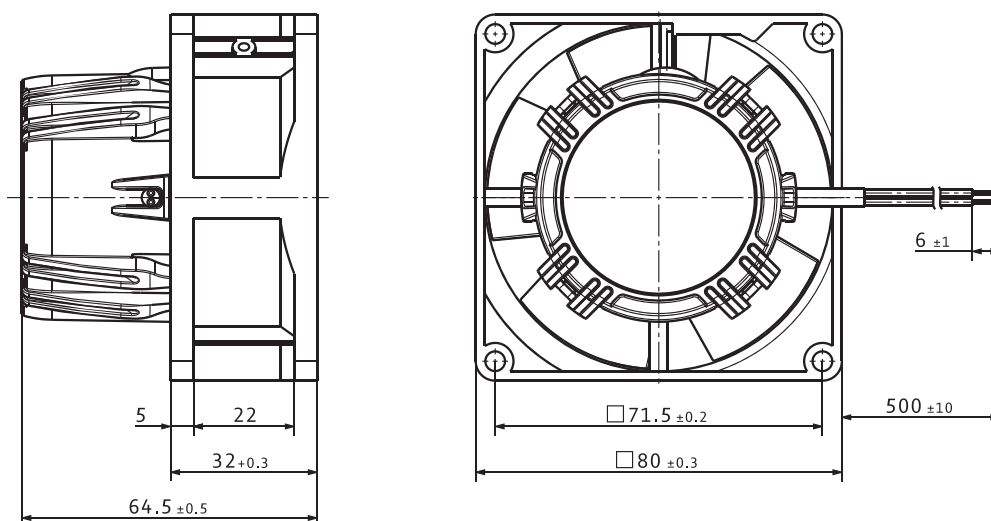


		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10\text{IFC}}$ (40 °C) s.p. II
Voltage range 90...264 VAC		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
Type / Type old	Part number													
VWCE080ASJHS AC 8300 H	9204305004	100...240	50/60	A	①	80	47	5 000	8.2	6.6	48	-20...+75	55 000	92 500
					②	74	44	5 000	8.3	6.5				
					③	68	40	5 020	8.4	6.4				
					④	56	33	5 060	8.2	6.3				

Subject to changes. Speed variants available on request.

## Technical drawing

Dimensions in mm



# VWCJ092JSGKS

GreenTech EC axial fans · max. 144 m<sup>3</sup>/h · □ 92 x 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Efficient AC fan, suitable for use worldwide thanks to wide voltage
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 325 g

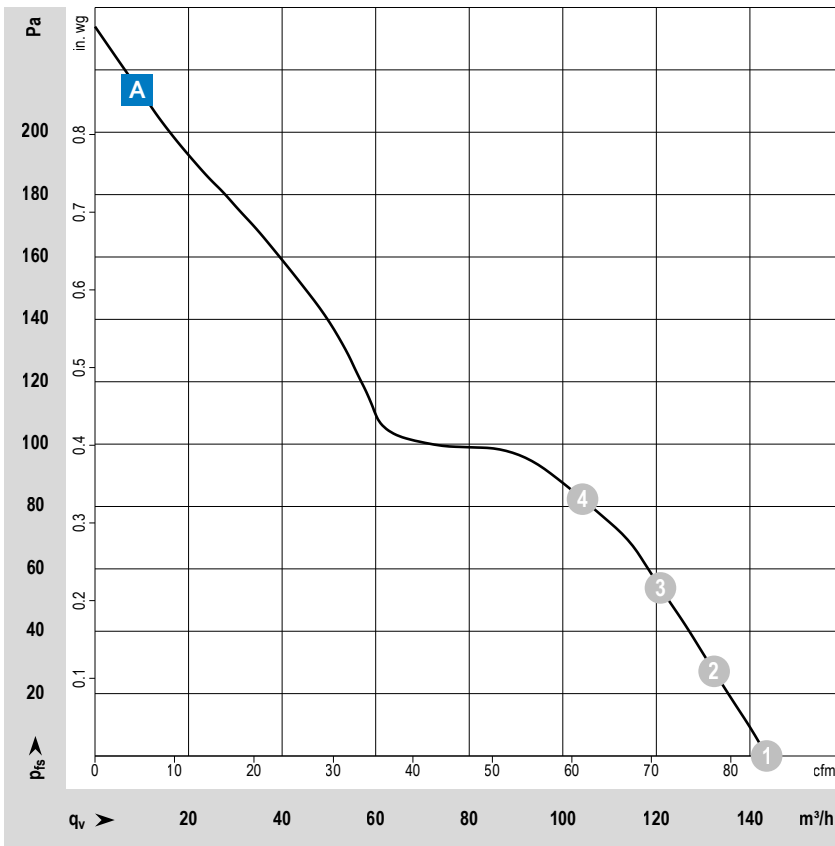
## Approvals

- UL507, CSA22.3, VDE0805, CCC, EAC

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP65

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

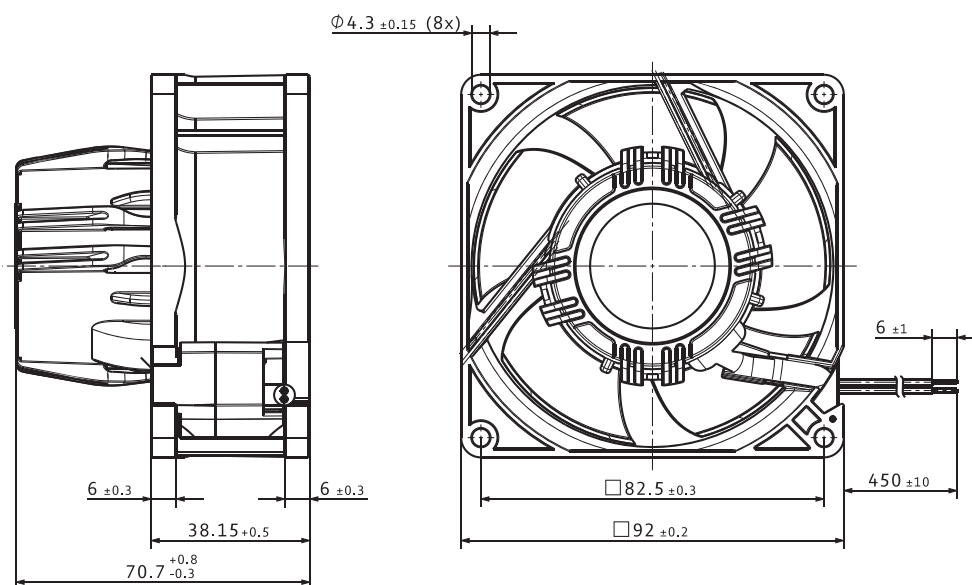
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10ipfc}$ (40 °C) s.p. II
Voltage range 85...265 VAC		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
Type / Type old	Part number													
VWCJ092JSGKS AC 3200 JH	9203510002	100...240	50/60	A	①	144	85	6 800	10.7	6.8	55	-20...+70	70 000	117 500
					②	132	78	6 680	11.3	6.7				
					③	121	71	6 580	11.7	6.6				
					④	104	61	6 470	12.3	6.4				

Subject to changes. Speed variants available on request.

## Technical drawing

Dimensions in mm



# VWCF092D...

GreenTech EC axial fans · max. 92 m<sup>3</sup>/h · □ 92 x 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Efficient and compact latest-generation AC fan, suitable for use worldwide thanks to wide voltage
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via cable 310mm, AWG 20
- Electrical protection class: III
- Weight: 235 g

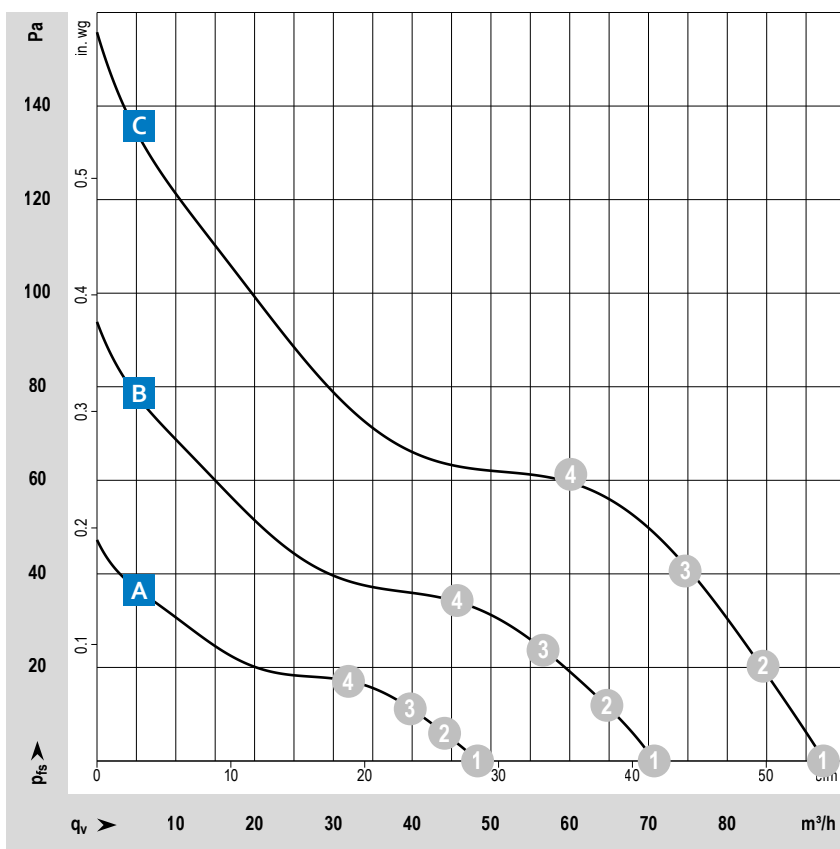
## Approvals

- Approvals: DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- optional: EN 60335-1, 60335-2-24, 60335-2-89; DIN EN 60079-7, Group IIA, T4

## Options

- Salt spray protection
- Degree of protection: IP65

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

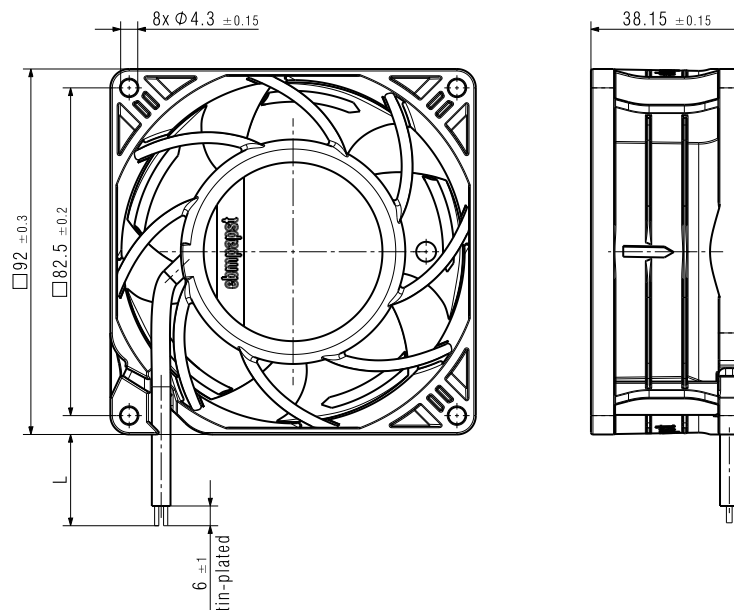
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10\text{IPC}}$ (40 °C) s.p. II
Voltage range 90...264 VAC		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
Type / Type old	Part number													
VWCF092DSGGS AxiACi92R	8315100281	100...240	50/60	C	①	48.3	28.4	2 500	1.4	4.2	31	-40...+75	65 000	110 000
					②	44.4	26.1	2 500	1.5	4.2				
					③	39.5	23.2	2 500	1.5	4.2				
					④	31.9	18.8	2 500	1.5	4.2				
VWCF092DSGHS AxiACi92R	8315100282	100...240	50/60	B	①	71.0	41.8	3 500	2.4	4.7	37	-40...+75	65 000	110 000
					②	65.0	38.3	3 500	2.5	4.7				
					③	57.0	33.5	3 500	2.6	4.7				
					④	45.5	26.8	3 500	2.7	4.7				
VWCF092DSGJS AxiACi92R	8315100283	100...240	50/60	A	①	92.0	54.1	4 500	3.8	5.4	44	-40...+75	65 000	110 000
					②	84.0	49.4	4 500	4.2	5.4				
					③	75.0	44.1	4 500	4.6	5.3				
					④	60.0	35.3	4 500	4.8	5.2				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCH119FSJMS

GreenTech EC axial fans · max. 201 m<sup>3</sup>/h · □ 119 x 25 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Efficient AC fan, suitable for use worldwide thanks to wide voltage
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 370 g

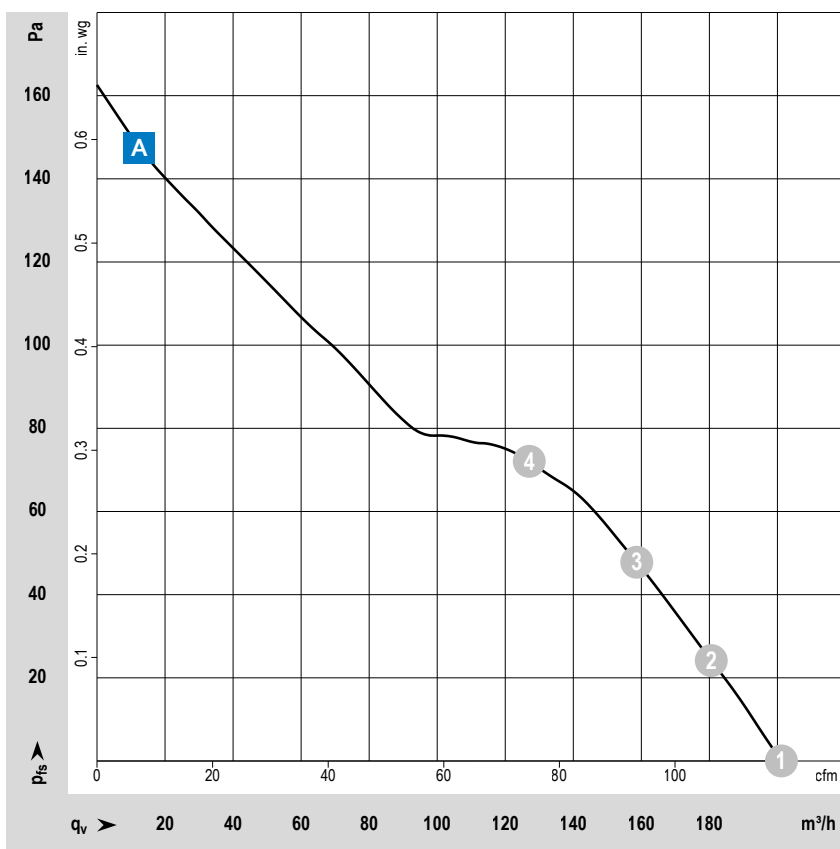
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

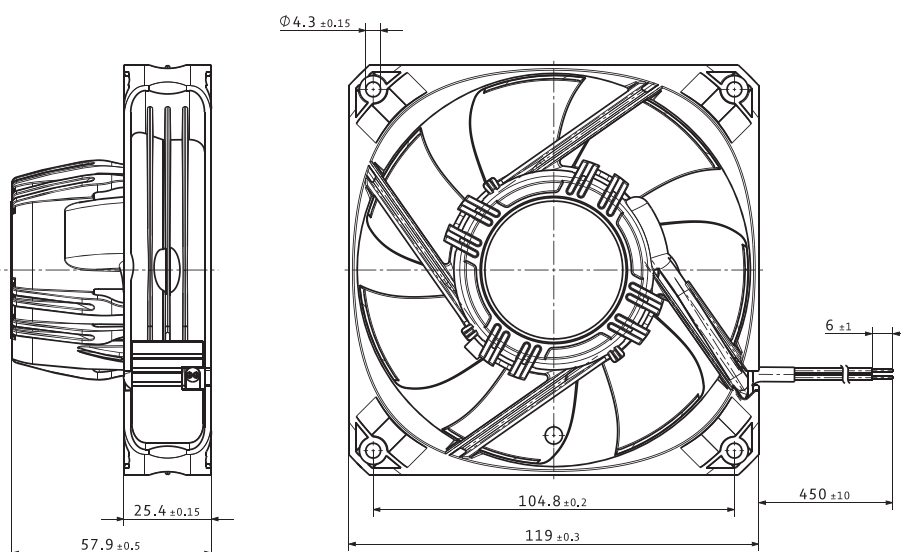
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IPFC}$ (40 °C) s. p. II	
Voltage range 90...264 VAC		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours	
Type / Type old	Part number														
VWCH119FSJMS AC 4400 FNN	9204307001	100...240	50/60	A	1	201	118	4 850	11.4	6.6					
					2	180	106	4 730	12.3	6.5					
					3	159	94	4 610	13.0	6.3	53	-20...+70	60 000	102 500	
					4	127	75	4 530	13.4	6.2					

Subject to changes. Speed variants available on request.

## Technical drawing

Dimensions in mm



# VWCF119D...

GreenTech EC axial fans · max. 175 m<sup>3</sup>/h · □ 119 × 38 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: Efficient and compact latest-generation AC fan, suitable for use worldwide thanks to wide voltage
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via single wires (AWG 24)
- Electrical protection class: III
- Weight: 250 g

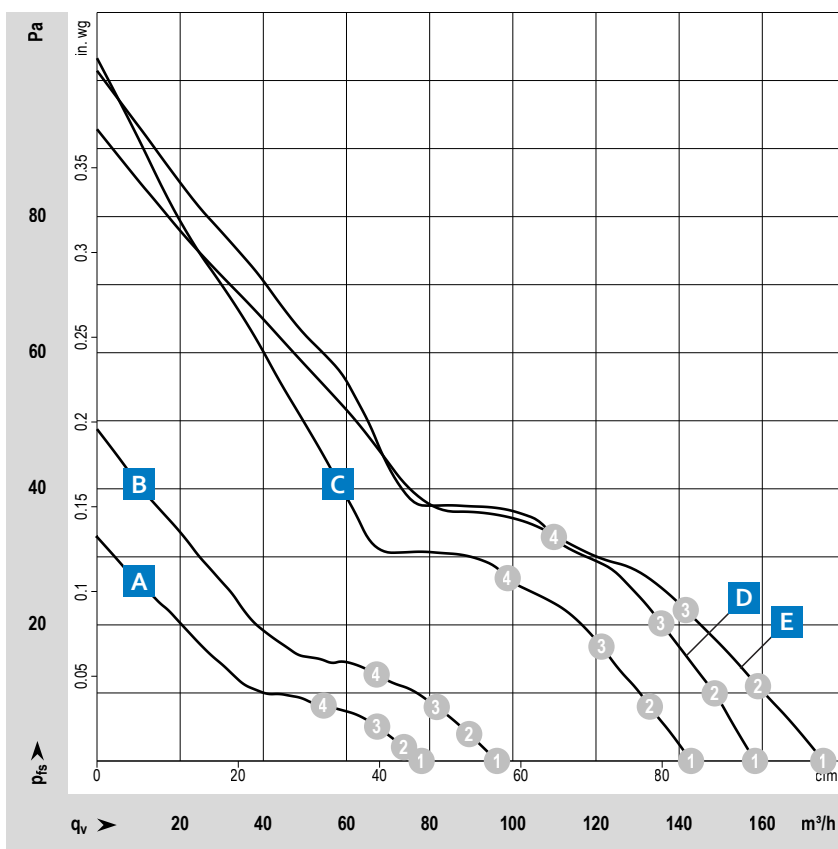
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- optional: EN 60335-1, 60335-2-24, 60335-2-89; DIN EN 60079-7, Group IIA, T4

## Options

- Salt spray protection
- Degree of protection: IP65

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

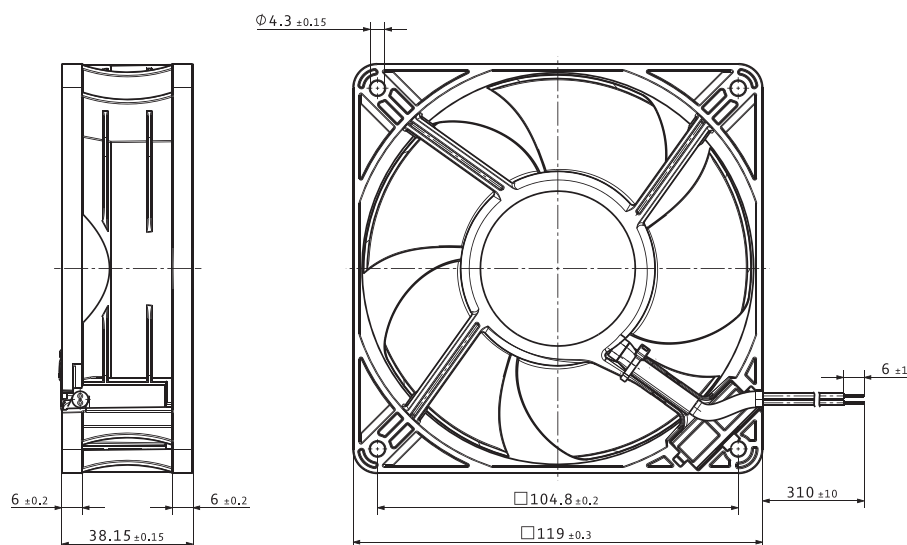


Voltage range 90...264 VAC		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
Type / Type old	Part number	VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCF119DSGHS AxiACi120LR	8315100216	100...240	50/60	A	①	78	46	1 500	1.4	3.6	23	-40...+75	65 000	110 000
					②	73	43	1 500	1.5	3.5				
					③	67	39	1 500	1.5	3.3				
					④	54	32	1 510	1.5	3.5				
VWCF119DSGJS AxiACi120MLR	8315100215	100...240	50/60	B	①	96	57	1 850	1.5	4.2	25	-40...+75	65 000	110 000
					②	90	53	1 840	1.6	4.0				
					③	82	48	1 840	1.7	3.9				
					④	68	40	1 850	1.9	4.0				
VWCF119DSGKS AxiACi120NR	8315100214	100...240	50/60	C	①	143	84	2 700	3.0	5.2	36	-40...+75	65 000	110 000
					②	133	78	2 690	3.4	5.1				
					③	122	72	2 690	3.7	5.0				
					④	99	58	2 690	4.3	5.0				
VWCF119DSGLS AxiACi120HR	8315100213	100...240	50/60	D	①	158	93	3 000	3.9	5.4	39	-40...+70	65 000	110 000
					②	149	88	3 000	4.4	5.4				
					③	135	79	3 000	4.9	5.4				
					④	110	65	3 000	5.6	5.2				
VWCF119DSGLS AxiACi120HHR	8315100206	100...240	50/60	E	①	175	103	3 300	4.4	5.6	43	-40...+70	65 000	110 000
					②	159	94	3 240	4.9	5.5				
					③	141	83	3 180	5.2	5.3				
					④	110	65	3 110	5.6	5.4				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCF119YSGLS

GreenTech EC axial fans · max. 178 m<sup>3</sup>/h · □ 119 x 38 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

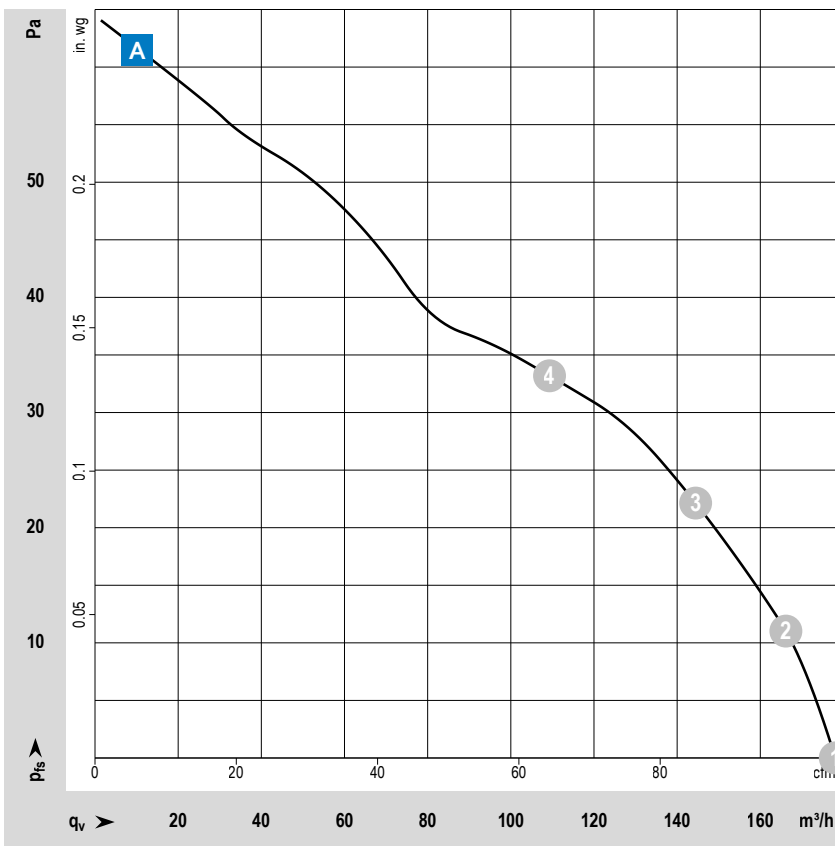
- Version: Efficient and compact latest-generation AC fan, suitable for use worldwide thanks to wide voltage
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via single wires (AWG 24)
- Electrical protection class: III
- Weight: 250 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- optional: EN 60335-1, 60335-2-24, 60335-2-89; DIN EN 60079-7, Group IIA, T4

## Options

- Speed signal
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP65
- Approval for refrigeration products acc. to EN60335-24 / EN60335-89 and ATEX acc. to EN60079-15



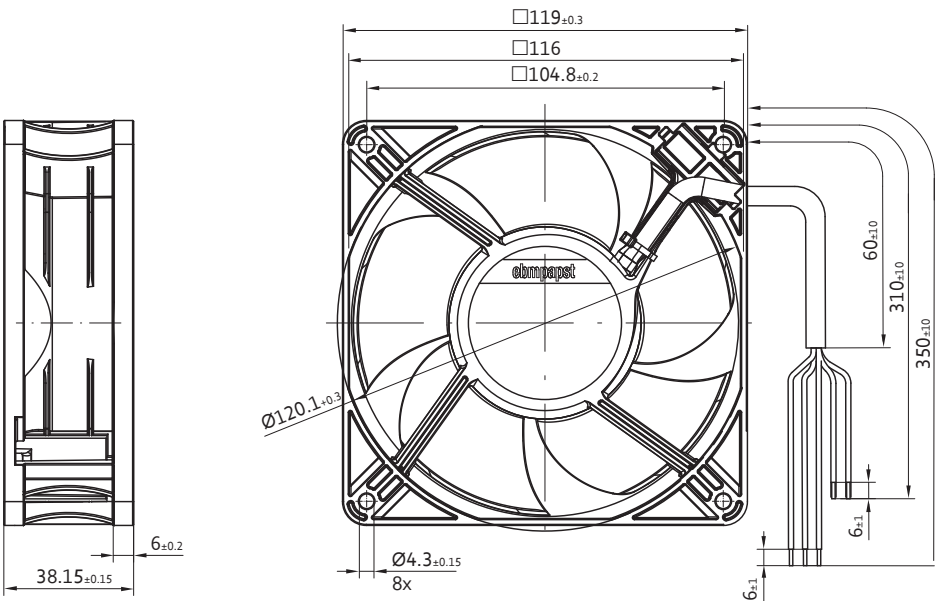
### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10ipfc}$ (40 °C) s. p. II
Voltage range 90...264 VAC		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
Type / Type old	Part number													
VWCF119YSGLS ACi 4400 HHAU	9203509300	100...240	50/60	A	①	181	107	3 300	4.8	5.5	43	-40...+75	65 000	110 000
					②	162	95	3 190	5.1	5.3				
					③	141	83	3 080	5.4	5.1				
					④	107	63	2 970	5.8	5.2				
VWCF119YSGLS ACi 4400/2 HHPU	8315100017	100...240	50/60	A	①	178	105	3 300	4.8	5.5	43	-40...+75	65 000	110 000
					②	166	98	3 260	5.3	5.3				
					③	144	85	3 150	5.7	5.1				
					④	109	64	3 033	6.0	5.2				

Subject to changes.

Technical drawing Dimensions in mm



GreenTech EC axial fans

# VWEK172XSLPS

GreenTech EC axial fans · max. 326 m<sup>3</sup>/h · Ø 172 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: Efficient AC fan, suitable for use worldwide thanks to wide voltage
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via single wires AWG 22
- Electrical protection class: III
- Weight: 905 g

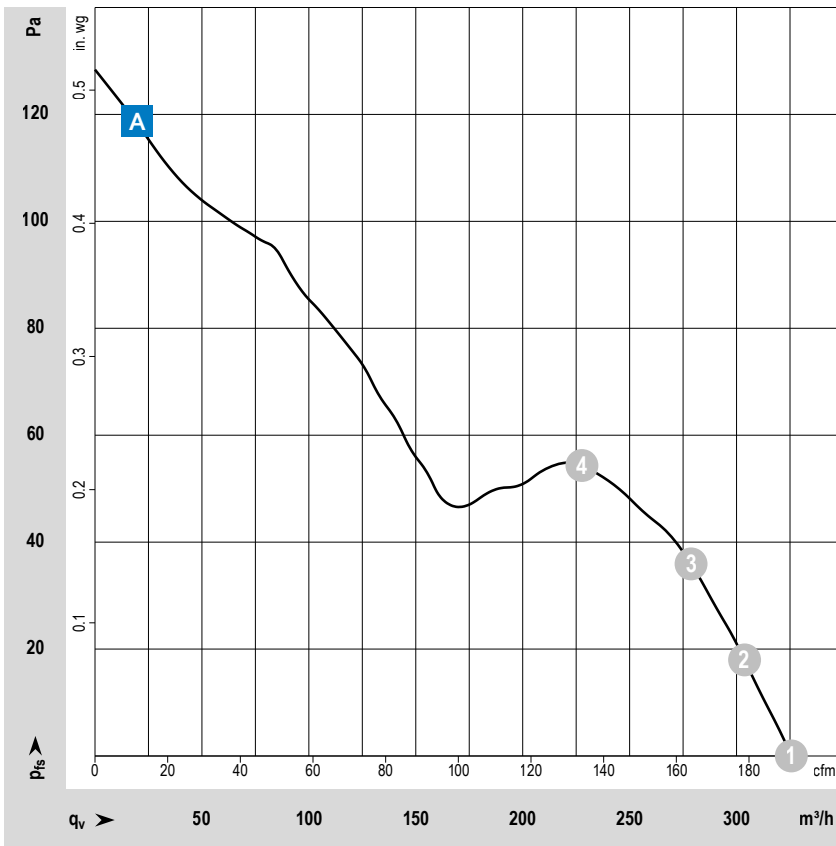
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA

## Options

- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP65

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

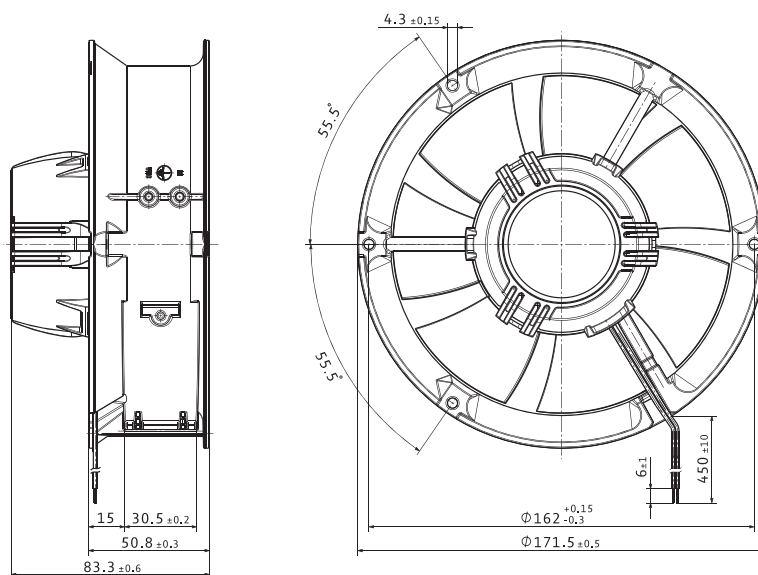
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s. p. II
Voltage range 90...264 VAC		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
Type / Type old	Part number													
VWEK172XSLPS AC 6200 NM	9205414000	100...240	50/60	A	①	326	192	2 850	11.7	6.0	50	-20...+72	80 000	135 000
					②	304	179	2 850	12.8	5.9				
					③	279	164	2 850	13.7	5.9				
					④	227	134	2 820	14.1	5.8				

Subject to changes. Speed variants available on request.

## Technical drawing

Dimensions in mm



# VWEH151X...

GreenTech EC axial fans · max. 370 m<sup>3</sup>/h · Ø 130 mm



## Material/Surface

- Fan housing: Plastic
- Blades: Plastic

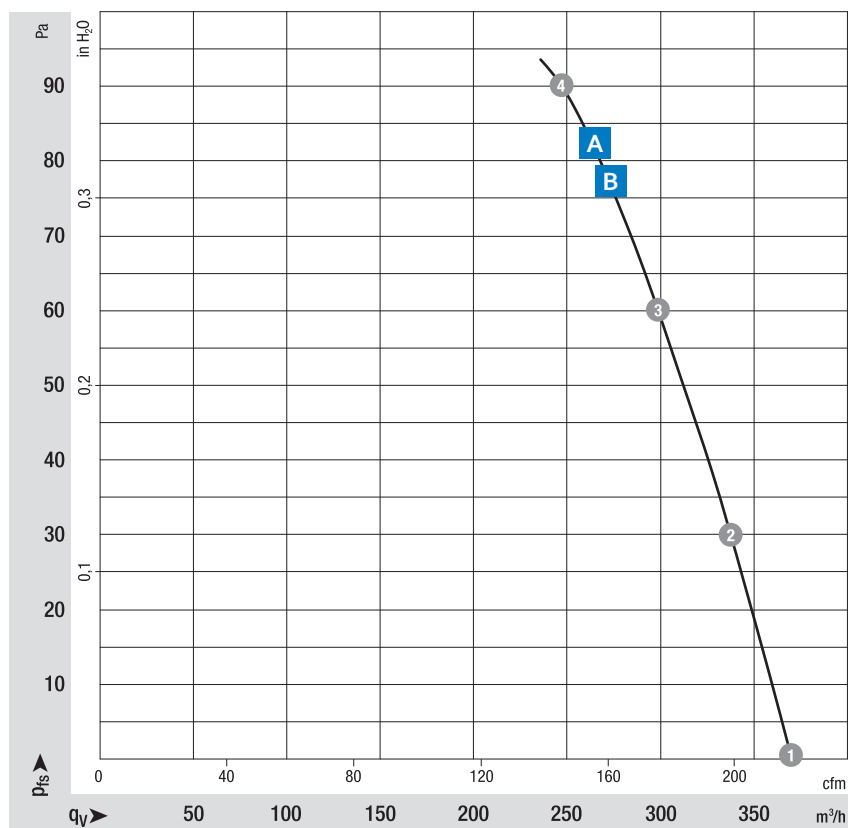
## Characteristics

- Direction of air flow: "V", exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: 55
- Electrical hookup: Plug-in connection on motor side
- Electrical protection class: II
- Weight: 750 g

## Approvals

- EN 60335-1; EN 60335-2-24; EN 60335-2-80; EN 60335-2-89; CE; UKCA; EAC; CSA C22.2 Nr.77 + CAN/CSA-E60730-1; VDE; UL 1004-3 + 60730-1; **B**; CCC

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

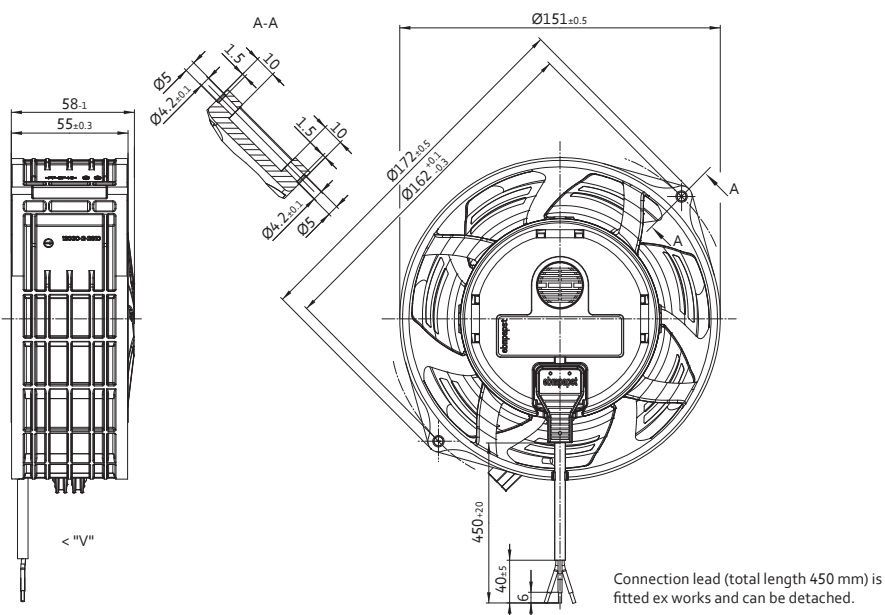
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Max. input current	Sound power level	Sound pressure	Max. back-pressure	Perm. ambient temperature
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	dB(A)	Pa	°C
VWEH151XSLMS	W1G130AA4901	1~ 115	50/60	A	①	365	215	3 200	23	0.35	6.3	55	90	-30...+60
						330	195	3 200	23	0.35	6.3			
						285	170	3 200	24	0.37	6.1			
						230	135	3 200	24	0.38	6.2			
VWEH151XSLPS	W1G130AA2501	1~ 230	50/60	B	①	370	220	3 200	23	0.19	6.3	55	90	-30...+70
						335	200	3 200	24	0.19	6.1			
						295	175	3 200	24	0.19	6.0			
						240	140	3 200	24	0.19	6.3			

Subject to changes.

Technical drawing

Dimensions in mm



# VWLJ225X...

GreenTech EC axial fans · max. 1 060 m<sup>3</sup>/h · Ø 200 mm



## Material/Surface

- Fan housing: Metal
- Blades: Plastic
- Rotor: Thick-film passivated

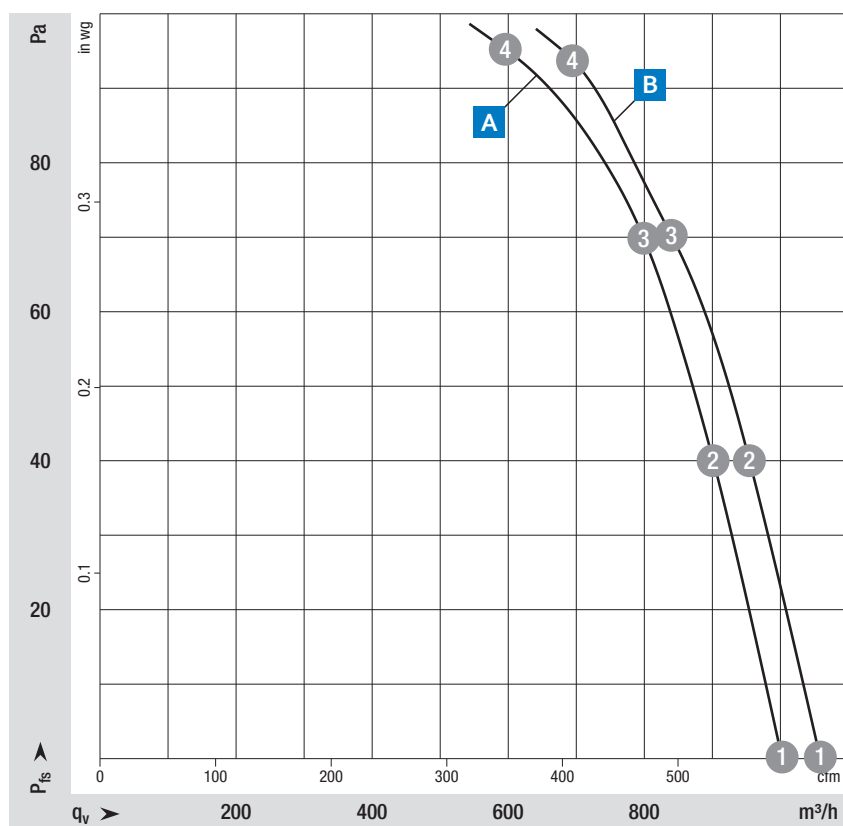
## Characteristics

- Version: EC axial fan – HyBlade®, sickle-shaped blades (S series)
- Direction of air flow: "V"
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP54
- Electrical hookup: via terminal strip
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 1.6 kg

## Approvals

- EN 60335-1; CE; CCC on request; CSA C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

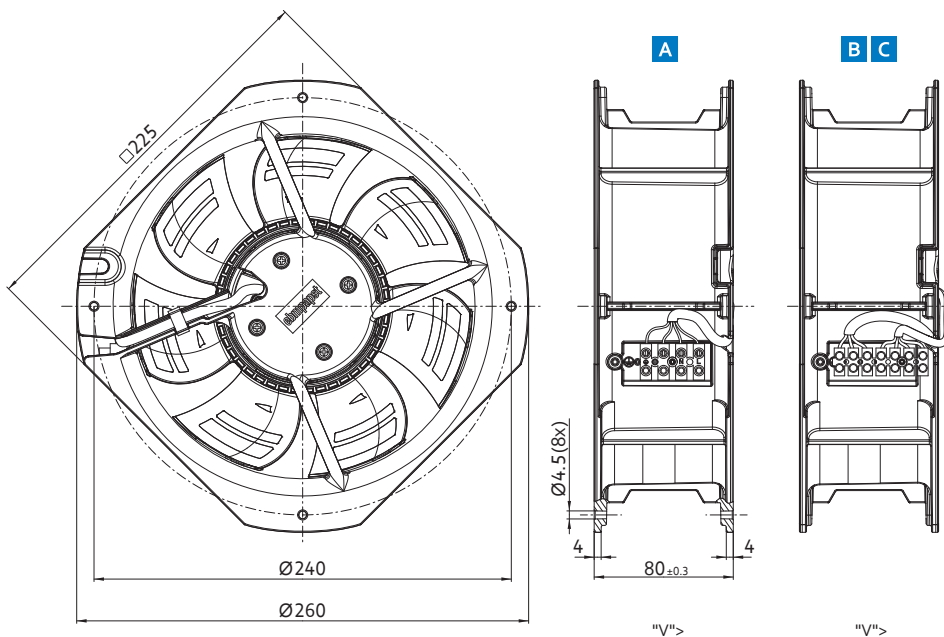


Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Max. input current	Sound power level	Sound pressure	Max. back-pressure	Perm. ambient temperature
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	dB(A)	Pa	°C
VWLJ225XSLTS	W3G200HD0103	1~ 200-240	50/60	A	① ② ③ ④	1 000	590	2 970	50	0.49	6.5	58	96	-25...+60
						900	530	2 885	55	0.53	6.4			
						800	470	2 825	58	0.56	6.5			
						600	350	2 900	54	0.55	7.1			
VWLJ225XSLSZ	W3G200HD2310	1~ 115	50/60	B	① ② ③ ④	1 060	625	3 150	62	1.00	6.6	59	94	-25...+60
						955	560	3 050	65	1.00	6.6			
						840	495	2 930	65	1.00	7.2			
						695	410	2 900	65	1.00	7.4			

Subject to changes.

Technical drawing

Dimensions in mm



# VWLK280X...

GreenTech EC axial fans · max. 1 905 m<sup>3</sup>/h · Ø 250 mm



## Material/Surface

- Fan housing: Metal
- Blades: Plastic
- Rotor: Thick-film passivated

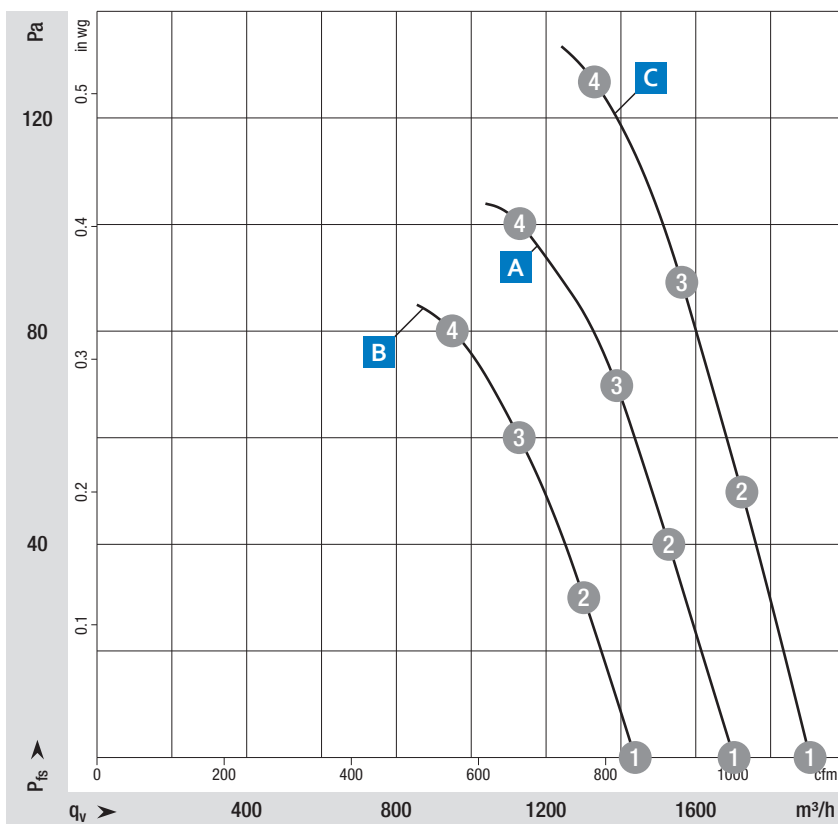
## Characteristics

- Version: EC axial fan – HyBlade®, sickle-shaped blades (S series)
- Direction of air flow: "V"
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP54
- Electrical hookup: via terminal strip
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 2.1 kg

## Approvals

- EN 60335-1; CE; UL 1004-7+ 60730-1; CSA C22.2 Nr. 77 + CAN /CSA-E60730-1;
- **A**: CCC on request

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

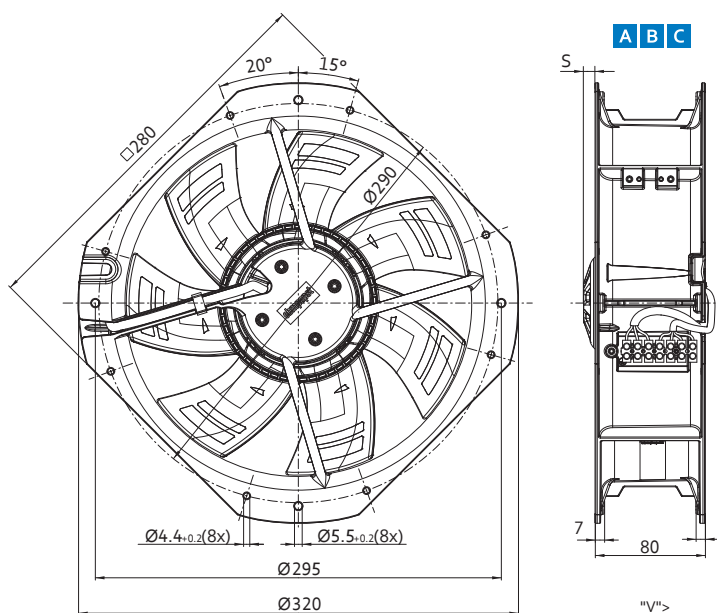
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Max. input current	Sound power level	Sound pressure	Max. back-pressure	Perm. ambient temperature
		VAC	Hz			m <sup>3</sup> /h	cfm							
VWLK280XSLVS	W3G250HH0703	1~ 200-240	50/60	A	①	1 700	1 000	2465	67	0.59	6.9	62	100	-25...+60
						1 530	900	2410	75	0.65	6.9			
						1 385	815	2370	81	0.68	6.8			
						1 125	660	2330	83	0.72	6.9			
VWLK280XSLTZ	W3G250HH5303	1~ 115	50/60	B	①	1 440	845	2 140	43	0.72	6.3	56	80	-25...+50
						1 300	765	2 100	49	0.80	6.3			
						1 130	665	2 070	53	0.86	6.4			
						950	560	2 040	56	0.90	6.5			
VWLL280XSLVZ	W3G250HK3511	1~ 115	50/60	C	①	1 905	1 120	2 820	93	1.43	7.0	64	130	-25...+60
						1 725	1 015	2 760	106	1.61	7.1			
						1 570	925	2 725	114	1.72	7.1			
						1 345	790	2 700	125	1.90	7.1			

Subject to changes.

Technical drawing

Dimensions in mm



S	
A	8.4
B	8.4
C	20.7

# VUS0092XSGBS

GreenTech EC in-line duct fan · max. 100 m<sup>3</sup>/h · Ø 98.5 x 130 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: AC fan with wide voltage; in-line duct fan for easy installation in pipe systems, e.g. in wet room ventilation
- Direction of air flow: intake over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via 3-pin Europa terminal strip max. 1.5 mm<sup>2</sup>
- Electrical protection class: III
- Weight: 400 g

from page 14 Definitions

from page 350 Accessories

more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

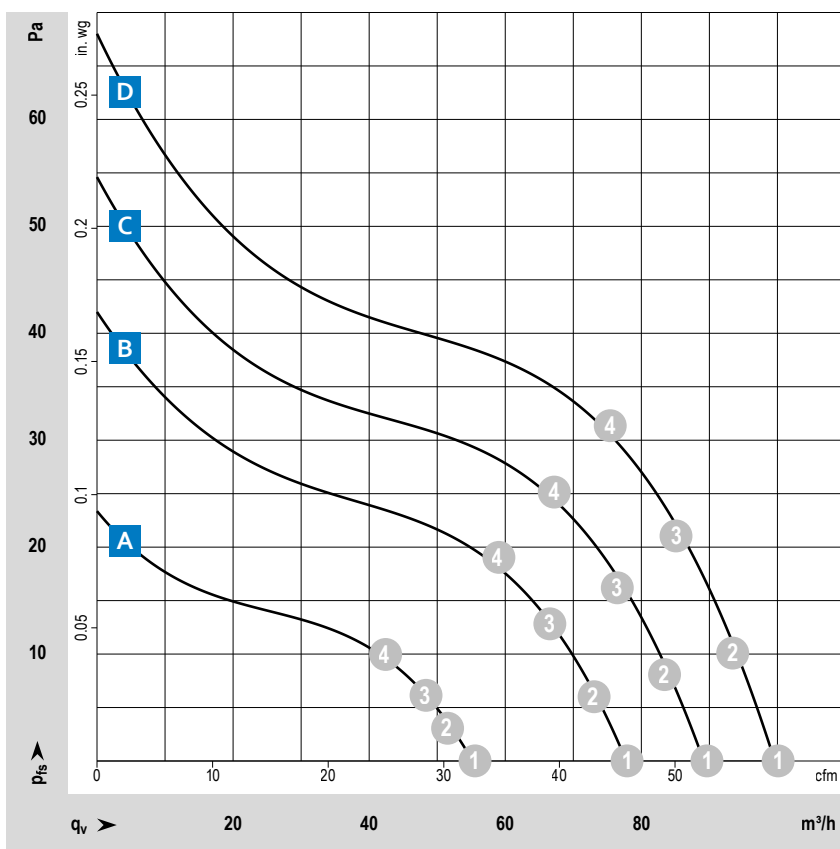
- Approvals: DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- Conformity with standard(s): EN 60335-1, CE

## Options

- new impeller for high pressure
- Two speeds over jumper adjustable
- Speed signal
- PWM control input
- Analog control input 0...10 VDC
- Moisture protection
- Degree of protection: IP44 (IP45 depending on installation position)

## Special features

- Boost function
- Vibration-isolated motor
- two aerodynamic impellers available for more air flow or pressure-oriented design



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

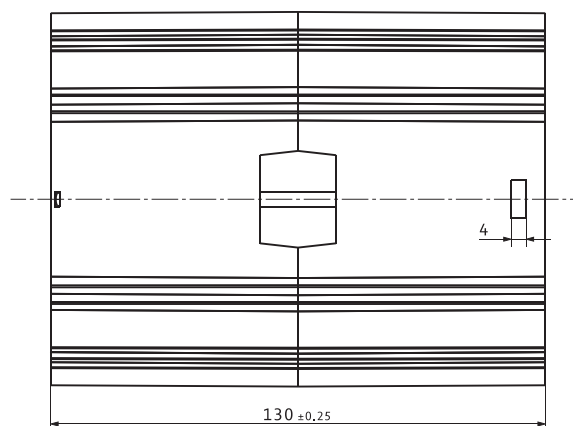
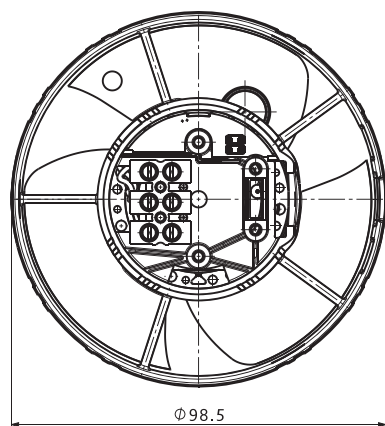
		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10ipfc</sub> (40 °C) s. p. 11	
Voltage range 90...264 VAC		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours	
Type / Type old	Part number														
nominal boost	High air flow VUS0092XSGBS AC 100 MR	9203510011	100...240	50-60	A	1	56.0	33.0	2 050	1.9	4.5	33	-10...+55	70 000	117 500
						2	51.0	30.0	2 040	1.9	4.5				
						3	47.8	28.1	2 040	2.0	4.5				
						4	42.5	25.0	2 040	2.0	4.5				
					C	1	90.0	53.0	3 150	4.3	5.5	40	-10...+55	70 000	117 500
						2	83.0	48.9	3 130	4.4	5.5				
						3	76.0	44.7	3 120	4.6	5.4				
						4	67.0	39.4	3 130	4.8	5.4				
nominal boost	High air flow VUS0092XSGBS AC 100 NR	9203510005	100...240	50-60	B	1	78.0	45.9	2 750	2.8	5.1	35	-10...+55	70 000	117 500
						2	73.0	43.0	2 740	2.9	5.1				
						3	67.0	39.4	2 740	3.0	5.0				
						4	59.0	34.7	2 740	3.1	4.9				
					D	1	100.0	58.9	3 500	4.9	5.8	42	-10...+55	70 000	117 500
						2	93.0	54.7	3 490	5.1	5.7				
						3	85.0	50.0	3 490	5.3	5.7				
						4	75.0	44.1	3 490	5.5	5.6				

Subject to changes. \*On request

Impeller	Type	Boost off, Jumper low	Boost off, Jumper high	Boost on
High air flow	AC 100 MR	1 250	2 050	3 150
High air flow	AC 100 NR	2 200*	2 750	3 500
High pressure	AC100 MR-018	1 250*	2 050*	3 150*
High pressure	AC 100 NR-017	2 180	2 680	3 300

## Technical drawing

Dimensions in mm



# VUS0092XSGBS

GreenTech EC in-line duct fan · max. 78 m<sup>3</sup>/h · Ø 98.5 x 130 mm



## Material/Surface

- Housing: Plastic
- Impeller: Plastic

## Characteristics

- Version: AC fan with wide voltage; in-line duct fan for easy installation in pipe systems, e.g. in wet room ventilation
- Direction of air flow: intake over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via 3-pin Europa terminal strip max. 1.5 mm<sup>2</sup>
- Electrical protection class: III
- Weight: 400 g

from page 14 Definitions

from page 350 Accessories

more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

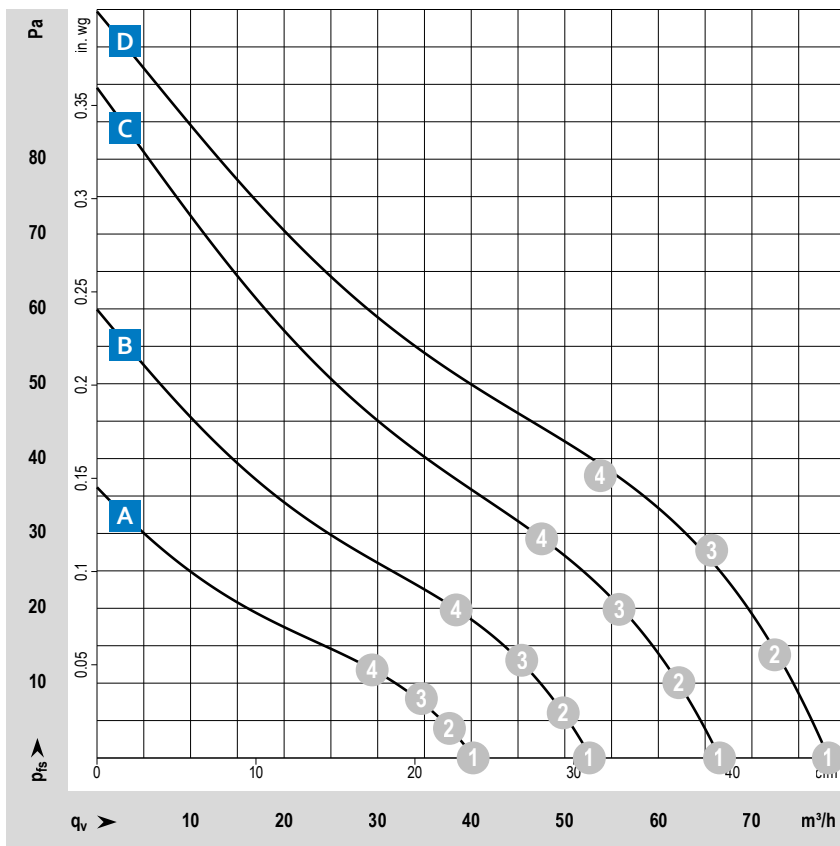
- Approvals: DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA
- Conformity with standard(s): EN 60335-1, CE

## Options

- new impeller for high pressure
- Two speeds over jumper adjustable
- Speed signal
- PWM control input
- Analog control input 0...10 VDC
- Moisture protection
- Degree of protection: IP44 (IP45 depending on installation position)

## Special features

- Boost function
- Vibration-isolated motor
- two aerodynamic impellers available for more air flow or pressure-oriented design



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

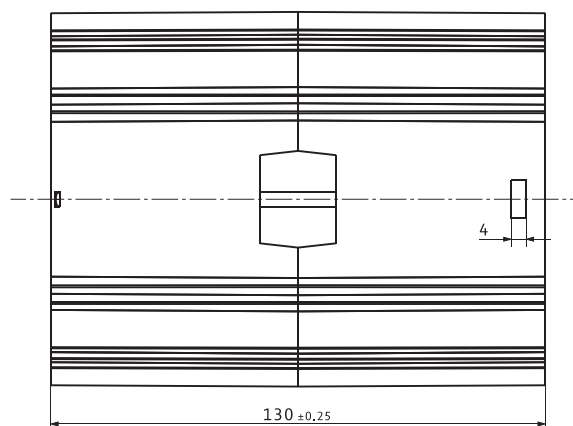
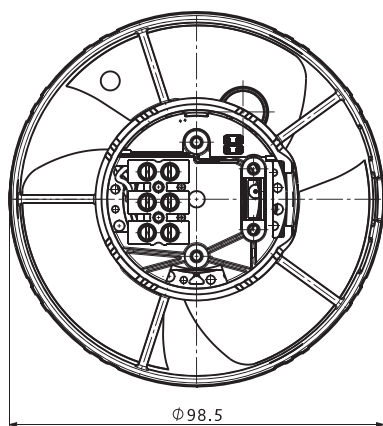
		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10ipsc</sub> (40 °C) s. p. 11	
Voltage range 90...264 VAC		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours	
Type / Type old	Part number														
nominal boost	High pressure VUS0092XSGBS AC 100 MR-018	9203510018	100...240	50-60	A	1	40.2	23.7	2 100	1.8	4.6	31	-10...+55	70 000	117 500
						2	37.9	22.3	2 090	1.8	4.5				
						3	34.8	20.5	2 090	1.9	4.4				
						4	29.7	17.5	2 090	1.9	4.4				
					D	1	78.0	45.9	3 900	4.2	5.9	38	-10...+55	70 000	117 500
						2	73.0	43.0	3 880	4.4	5.8				
						3	66.0	38.8	3 870	4.7	5.6				
						4	54.0	31.8	3 880	4.9	5.5				
nominal boost	High pressure VUS0092XSGBS AC 100 NR-017	9203510017	100...240	50-60	B	1	53.0	31.2	2 650	2.4	4.8	33	-10...+55	70 000	117 500
						2	49.7	29.3	2 650	2.6	4.8				
						3	45.3	26.7	2 650	2.7	4.7				
						4	38.6	22.7	2 650	2.8	4.5				
					C	1	67.0	39.4	3 300	4.0	5.3	40	-10...+55	70 000	117 500
						2	62.0	36.5	3 280	4.2	5.3				
						3	56.0	33.0	3 290	4.3	5.2				
						4	47.3	27.8	3 290	4.5	5.0				

Subject to changes.

Impeller	Bezeichnung	Boost off, Jumper low	Boost off, Jumper high	Boost on
High air flow	AC 100 MR	1 250	2 050	3 150
High air flow	AC 100 NR	2 200*	2 750	3 500
High pressure	AC100 MR-018	1 250*	2 050*	3 150*
High pressure	AC 100 NR-017	2 180	2 680	3 300

## Technical drawing

Dimensions in mm



# VUS0092XSGBS

GreenTech EC in-line duct fan



## Highest energy efficiency

- 0.03 - 0.045 W/m<sup>3</sup>/h free air (specific fan power)

## Boost speed

- 2 speed settings possible via boost function

## Vibration isolation

- Reduced transmission of vibrations from motor to housing

## Intelligence

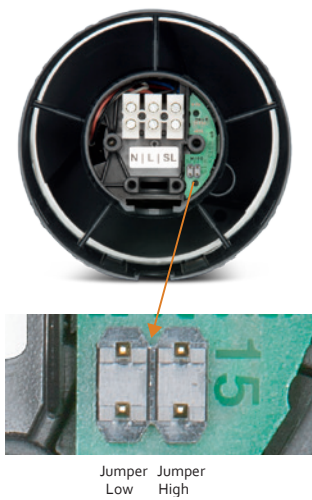
- Can be expanded to include set value requirement and signal outputs as an option

from page 14 Definitions

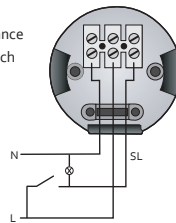
from page 350 Accessories

more at [www.ebmpapst.com](http://www.ebmpapst.com)

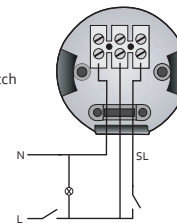
## Examples of connections



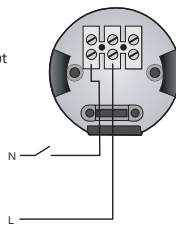
**Example 1:**  
Nom speed endurance  
Boost via light switch



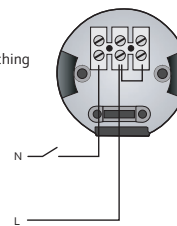
**Example 2:**  
Nom speed via  
light switch  
Separate boost switch



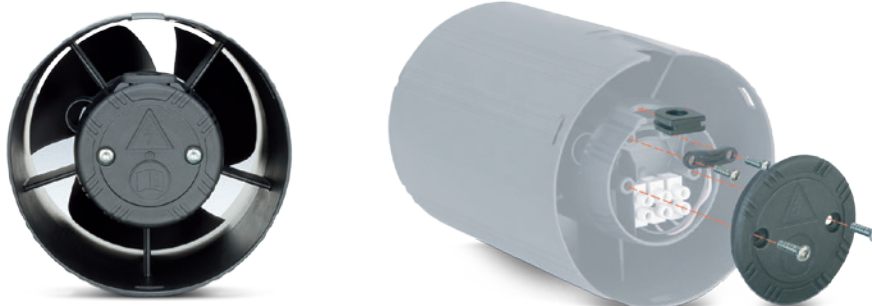
**Example 3:**  
Simple connection  
Nom speed without  
switching



**Example 4:**  
Simple connection  
Boost without switching



## Scope of delivery







## Product overview

# AC axial fans



The tried-and-tested AC fans from ebm-papst are used wherever DC voltage is not available. In addition to complete devices, you will also find fans without external housing. These offer benefits whenever the air duct design can be integrated in the device that is being ventilated.



AC fans are available in many sizes, with variants with exhaust or intake over struts – with plug connection or exposed connection wires.



Fan drive using shaded-pole or capacitor motors based on the familiar external rotor principle. This construction combining high performance with profitability.



All fan types are designed in IP20 as standard. IP65 solutions and special protection types are available on request.

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### Type code example: VWCL119PJGJZ

V	W	C	L	119	P	J	G	J	Z	
Product category	Product type Airflow direction	Product version	Overall length	Size [mm]	Brand name	Motor	Motor size		Air flow level	Standard
							Diameter			

Dimension in mm	Type	Type (old)	Page
□ 80 x 38	VWCF080A...	8000 N	300
∅ 76 x 37	VVY0076XQHCS	8000 TV	302
□ 92 x 25	VWCD092A...	3900	304
□ 92 x 38	VWCF092A...	3000	306
□ 119 x 25	VWCD119A...	9900	308
□ 119 x 38	VWCF119X..., VUCF119Y...	4000 N	310
□ 119 x 38	VWCF119A..., VWCF119X...	4000 Z	312
∅ 108 x 37	VVY0108XQHCS	4600 TZ	314
□ 135 x 38	VWCF135AQKMS	5600	316
150 x 172 x 38	VWLF150X2LPS	W2E 142	318
∅ 150 x 55	VVEH150X...	W2S 130 AA	320
∅ 150 x 55	VUEH150XQLPS	W2S 130 BM	322
∅ 172 x 51	VWEG172X...	W2E 143	324
□ 225 x 80	VWLJ225X...	W2E 200	326
□ 280 x 80	VWLJ280H...	W2E 250	328
∅ 200	VJH0200X2MES	K2E 200	330
∅ 200	VJH0200X3MES	K2D 200	334

# VWCF080A...

AC axial fans · max. 52 m<sup>3</sup>/h · □ 80 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via 2 single wires; Grounding lug for M4 or 8-32 UNC
- Electrical protection class: I
- Weight: 490 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

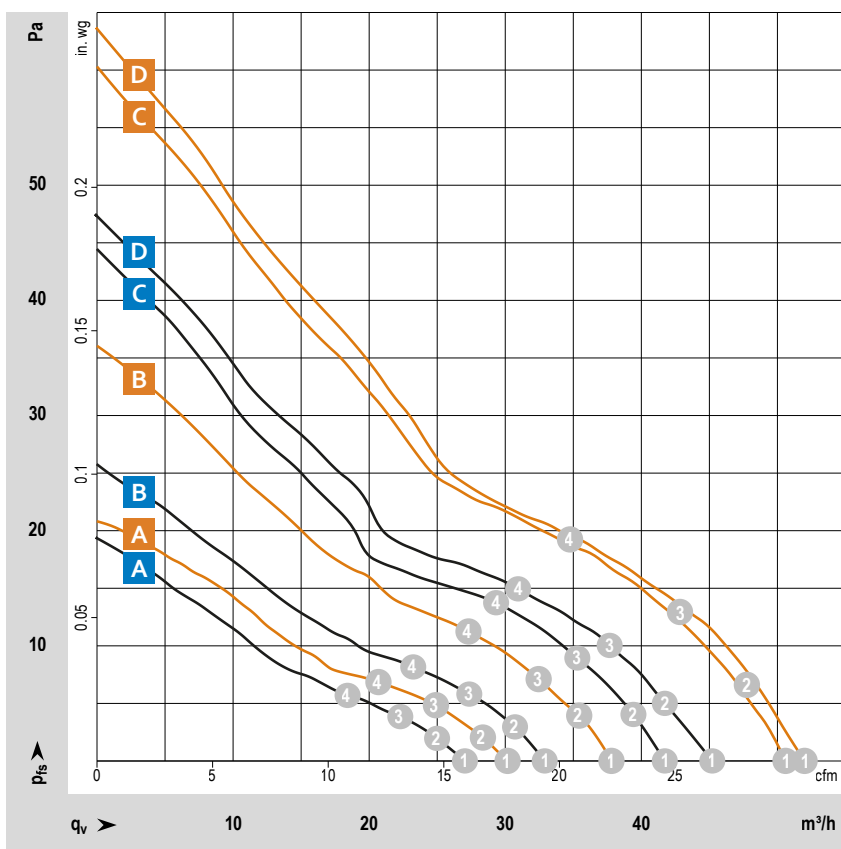
## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP65

## Note

- Please note our series AC 8300. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 273

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

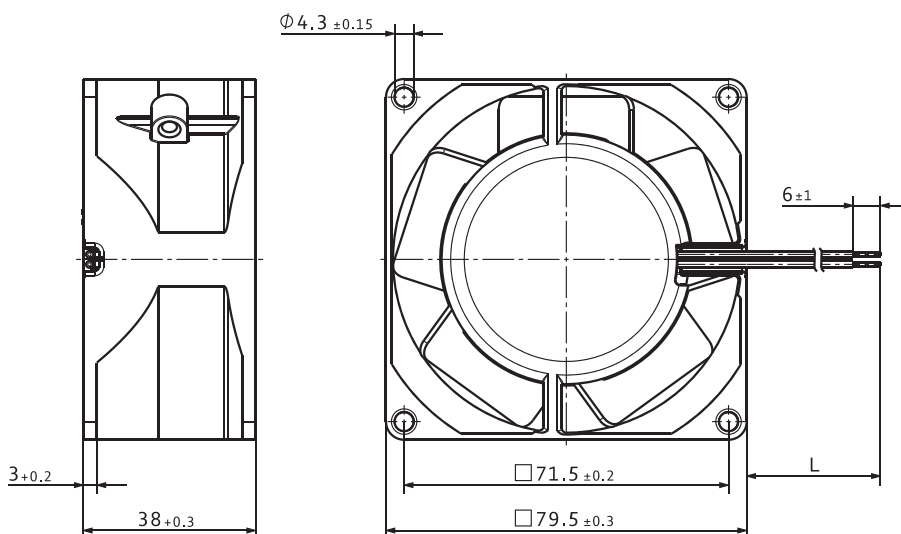
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm						
VWCF080AQHDS 8880 N	9244014343	230	50	A	①	27.0	15.9	1750	7.0	3.6	18	-10...+80	60 000	102 500
					②	25.2	14.8	1750	7.0	3.6				
					③	22.7	13.4	1740	7.0	3.6				
					④	18.9	11.1	1790	6.9	3.7				
VWCF080AQHES 8850 N	9274014213	230	50	B	①	32.9	19.4	2150	11.3	4.0	24	-10...+70	52 500	87 500
					②	30.9	18.2	2140	11.3	4.0				
					③	27.8	16.4	2140	11.3	3.9				
					④	23.0	13.5	2140	11.3	3.9				
VWCF080AQHFS 8550 N	9274014208	230	50	C	①	41.7	24.5	2700	10.7	4.6	30	-10...+70	52 500	87 500
					②	39.2	23.1	2700	10.7	4.6				
					③	35.4	20.8	2700	10.7	4.5				
					④	29.6	17.4	2700	10.7	4.5				
VWCF080AQHFZ 8556 N	9274014210	230	50	D	①	45.2	26.6	2800	11.2	4.6	31	-40...+90	52 500	87 500
					②	41.7	24.5	2790	11.2	4.6				
					③	37.6	22.1	2790	11.2	4.5				
					④	31.0	18.2	2790	11.1	4.6				
VWCF080AQHDS 8830 N	9244014342	115	60	A	①	30.2	17.8	1950	4.3	3.7	21	-10...+80	62 500	105 000
					②	28.1	16.5	1940	4.4	3.7				
					③	25.3	14.9	1920	4.4	3.7				
					④	20.9	12.3	1920	4.4	3.7				
VWCF080AQHES 8800 N	9244014212	115	60	B	①	37.8	22.2	2500	11.6	4.2	28	-10...+70	55 000	92 500
					②	35.7	21.0	2480	11.6	4.2				
					③	32.2	19.0	2470	11.6	4.1				
					④	27.0	15.9	2480	11.6	4.2				
VWCF080AQHFZ 8500 N	9274014207	115	60	C	①	51.0	30.0	3200	9.3	4.9	34	-10...+75	55 000	92 500
					②	47.2	27.8	3200	9.3	4.9				
					③	42.3	24.9	3190	9.4	4.9				
					④	34.7	20.4	3190	9.4	5.0				
VWCF080AQHFZ 8506 N	9274014209	115	60	D	①	52.0	30.6	3300	9.4	5.0	35	-40...+95	55 000	92 500
					②	48.4	28.5	3330	9.4	5.0				
					③	43.2	25.4	3320	9.4	5.0				
					④	35.2	20.7	3320	9.4	5.0				

Subject to changes.

## Technical drawing

Dimensions in mm



Type / Type old	L in mm	Connection wires
VWCF080AQHDS 8880 N	310	AWG 18, TR 64
VWCF080AQHDS 8830 N	310	AWG 18, TR 64
VWCF080AQHES 8800 N	310	AWG 18, TR 64
VWCF080AQHFS 8550 N	310	AWG 18, TR 64
VWCF080AQHFZ 8500 N	310	AWG 18, TR 64
VWCF080AQHFZ 8556 N	310	AWG 22
VWCF080AQHFZ 8506 N	310	AWG 22
VWCF080AQHES 8850 N	440	AWG 18, TR 64

# VVY0076XQHCS

AC axial fans · max. 47 m<sup>3</sup>/h · Ø 76 x 37 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Metal
- Mounting bracket: Metal

## Characteristics

- Version: Classic AC fan without housing; compact and robust
- Direction of air flow: Exhaust over mounting bracket
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via 2 single wires
- Electrical protection class: I
- Weight: 370 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP65

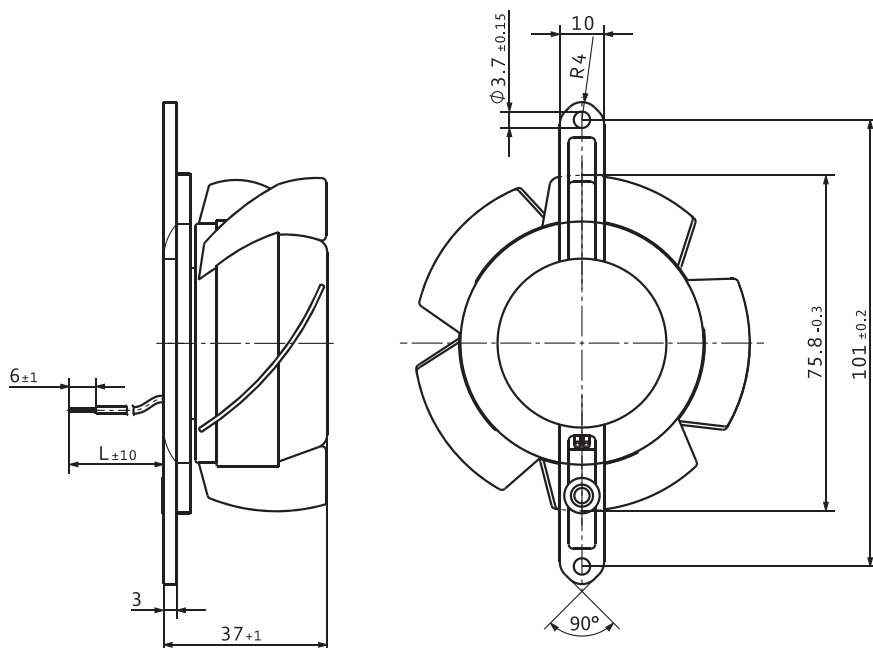
Type / Type old	Part number	Nominal voltage	Frequency	Air flow		Speed	Power consumption	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s. p. II
		VAC	Hz	m <sup>3</sup> /h	cfm	rpm		W		dB(A)	°C
VVY0076XQHCS 8880 TV	9244014667	230	50	24	14.1	1 650	9.0	15	-10...+80	60 000	102 500
VVY0076XQHCS 8850 TV	9244014666	230	50	31	18.2	2 100	12.0	20	-10...+70	52 500	87 500
VVY0076XQHCS 8550 TV	9244014665	230	50	40	23.5	2 650	12.0	27	-10...+70	52 500	87 500
VVY0076XQHCS 8556 TV	9244014664	230	50	40	23.5	2 750	12.0	28	-40...+90	52 500	87 500
VVY0076XQHCS 8830 TV	9244014663	115	60	27	15.9	1 850	8.0	18	-10...+80	62 500	105 000
VVY0076XQHCS 8800 TV	9244014662	115	60	36	21.2	2 450	11.0	24	-10...+70	55 000	92 500
VVY0076XQHCS 8500 TV	9244014661	115	60	47	27.7	3 150	11.0	32	-10...+75	55 000	92 500
VVY0076XQHCS 8506 TV	9244014660	115	60	47	27.7	3 250	11.0	33	-40...+95	55 000	92 500

Subject to changes.

The air flow and sound level of fans without external housing depend on the installation conditions.  
 The stated air flow and noise have been measured with an orifice 76.5 mm Ø at a distance of approx. 17 mm from the mounting bracket.  
 The air flow capacity of fan series 8000 N is achievable because of the exceptionally favorable installation conditions.  
 The noise in the optimal operating range can be measured for these fans only in a specific application.

## Technical drawing

Dimensions in mm



Type / Type old	L in mm	Connection wires
VVY0076XQHCS 8880 TV	325	AWG 18, TR 64
VVY0076XQHCS 8850 TV	325	AWG 18, TR 64
VVY0076XQHCS 8830 TV	325	AWG 18, TR 64
VVY0076XQHCS 8800 TV	325	AWG 18, TR 64
VVY0076XQHCS 8550 TV	325	AWG 18, TR 64
VVY0076XQHCS 8500 TV	325	AWG 18, TR 64
VVY0076XQHCS 8556 TV	325	AWG 18, TR 64
VVY0076XQHCS 8506 TV	325	AWG 18

# VWCD092A...

AC axial fans · max. 65 m<sup>3</sup>/h · □ 92 x 25 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any (for ball bearings)
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 flat plugs 2.8 x 0.5 mm; Grounding lug for M4 or 8-32 UNC
- Electrical protection class: I
- Weight: 280 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

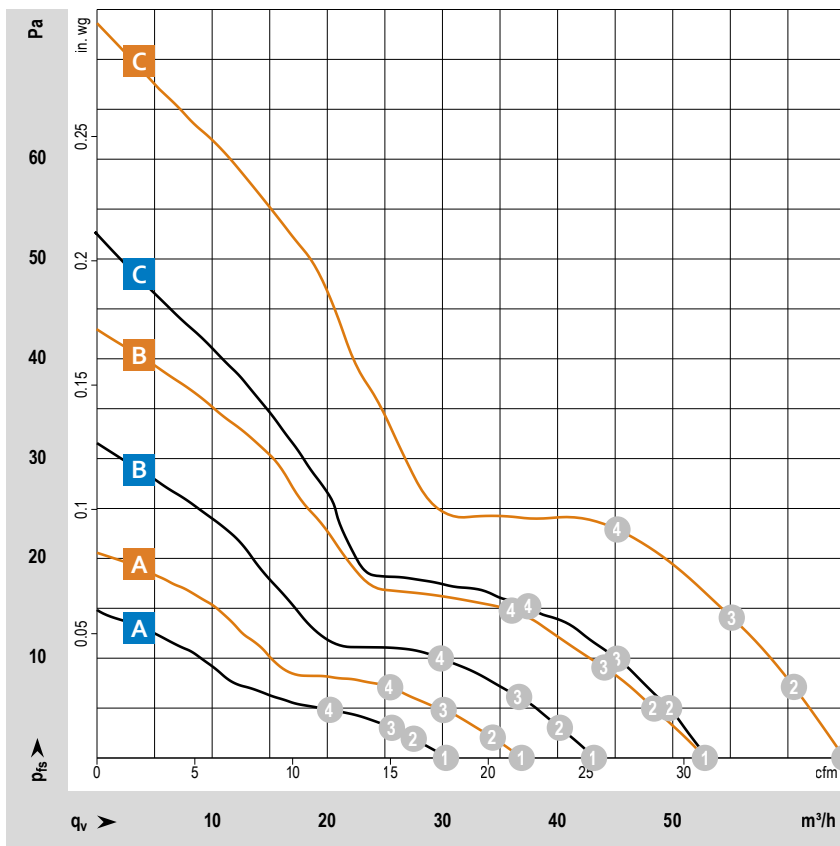
## Options

- Moisture protection

## Note

- Please note our series AxiACi92. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 276

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

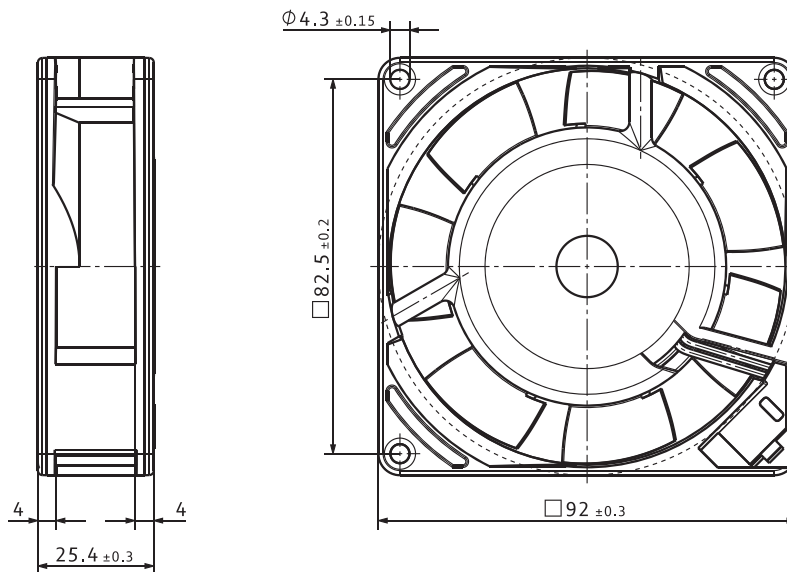


Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm							
VWCD092AQFES 3950 L	9282708115	230	50	A	①	30.2	17.8	1550	9.0	3.5	24	-10...+80	70 000	117 500
					②	28.0	16.5	1530	9.1	3.4				
					③	25.5	15.0	1510	9.0	3.3				
					④	21.2	12.5	1500	9.0	3.4				
VWCD092AQFES 3956 L	9282708102	230	50	A	①	30.3	17.8	1550	6.3	3.5	24	-40...+80	70 000	117 500
					②	28.0	16.5	1530	6.3	3.4				
					③	25.5	15.0	1510	6.3	3.3				
					④	20.6	12.1	1500	6.2	3.4				
VWCD092AQFFS 3950 M	9282708113	230	50	B	①	42.7	25.1	2150	7.6	4.4	29	-10...+80	70 000	117 500
					②	39.3	23.1	2140	7.6	4.2				
					③	36.2	21.3	2100	7.6	4.1				
					④	30.0	17.7	2090	7.6	4.0				
VWCD092AQFFS 3956 M	9282708104	230	50	B	①	43.2	25.4	2150	8.5	4.4	29	-40...+80	70 000	117 500
					②	40.0	23.5	2130	8.5	4.2				
					③	36.3	21.4	2100	8.4	4.1				
					④	29.9	17.6	2090	8.4	4.0				
VWCD092AQFGS 3950	9282708114	230	50	C	①	53.0	31.2	2650	11.3	5.0	35	-20...+80	55 000	92 500
					②	49.8	29.3	2640	11.3	4.9				
					③	45.6	26.8	2620	11.3	4.8				
					④	37.0	21.8	2610	11.3	4.7				
VWCD092AQFGS 3956	9282708100	230	50	C	①	53.0	31.2	2650	10.7	5.0	35	-40...+80	55 000	92 500
					②	49.7	29.3	2660	10.7	4.9				
					③	45.3	26.7	2636	10.7	4.8				
					④	37.2	21.9	2630	10.7	4.7				
VWCD092AQFES 3900 L	9282708122	115	60	A	①	35.8	21.1	1850	5.4	4.2	27	-10...+80	70 000	117 500
					②	33.2	19.5	1820	5.4	4.1				
					③	30.1	17.7	1790	5.4	3.9				
					④	24.9	14.7	1760	5.4	3.7				
VWCD092AQFFS 3906 M	9282708105	115	60	B	①	53.0	31.2	2600	6.5	4.9	34	-40...+80	70 000	117 500
					②	48.6	28.6	2560	6.5	4.7				
					③	43.9	25.8	2520	6.5	4.5				
					④	36.3	21.4	2490	6.5	4.3				
VWCD092AQFGS 3900	9282708116	115	60	C	①	64.0	37.7	3150	7.8	5.4	40	-20...+80	60 000	102 500
					②	59.0	34.7	3130	7.9	5.3				
					③	53.0	31.2	3110	7.9	5.2				
					④	43.4	25.5	3090	7.9	5.0				
VWCD092AQFGS 3906	9282708101	115	60	C	①	65.0	38.3	3150	8.1	5.4	40	-40...+80	60 000	102 500
					②	60.0	35.3	3150	8.2	5.3				
					③	55.0	32.4	3120	8.2	5.2				
					④	45.3	26.7	3110	8.3	5.0				

Subject to changes.

Technical drawing

Dimensions in mm



# VWCF092A...

AC axial fans · max. 89 m<sup>3</sup>/h · □ 92 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via 2 single wires; grounding screw M4 x 8
- Electrical protection class: I
- Weight: 420 g

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

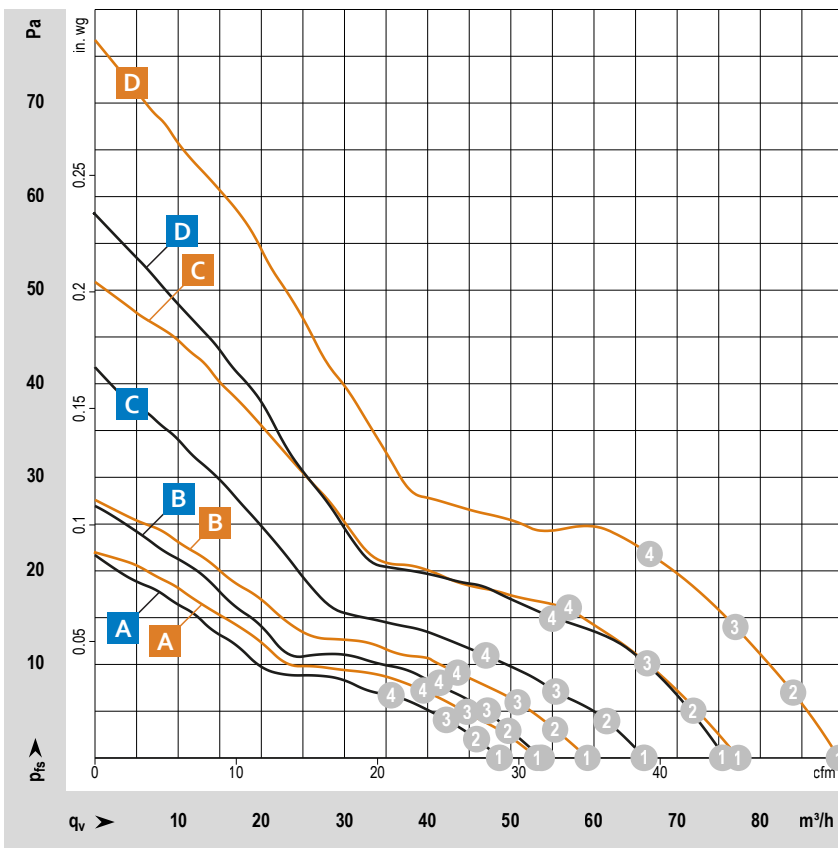
- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP65

## Note

- Please note our series AxiACi 92. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 276



### Measuring conditions

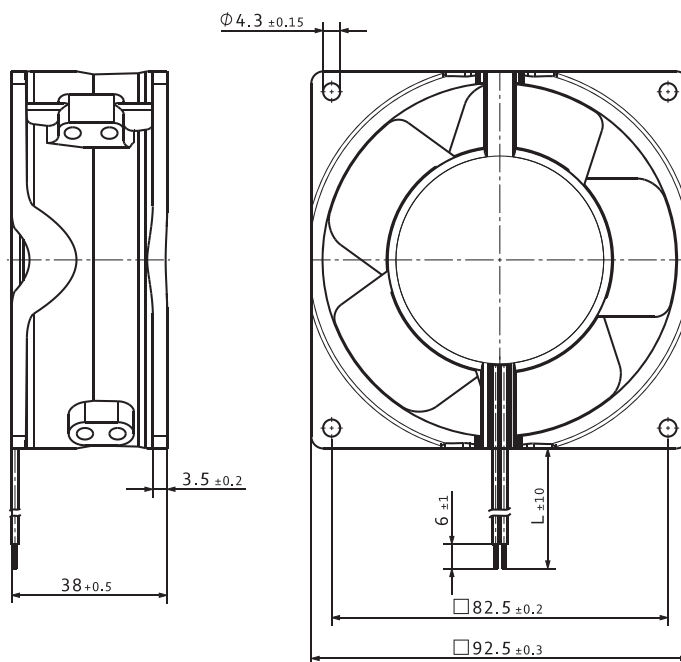
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm							
VWCF092AQHGS 3856	9244014723	230	50	B	①	54	32	1950	9.7	4.2	26	-40...+90	60 000	102 500
					②	50	29	1930	9.8	4.1				
					③	47	28	1920	9.8	4.0				
					④	41	24	1900	9.8	4.0				
VWCF092AQHGS 3550	9244014721	230	50	C	①	36	36.5	2300	8.1	4.7	32	-10...+80	60 000	102 500
					②	35	34.7	2260	8.2	4.5				
					③	32	32.4	2250	8.2	4.3				
					④	28	27.9	2240	8.2	4.4				
VWCF092AQHGS 3556	9244014710	230	50	C	①	68	40	2400	9.9	4.8	33	-40...+90	60 000	102 500
					②	64	38	2390	9.9	4.8				
					③	58	34	2370	10.0	4.7				
					④	51	30	2360	10.0	4.6				
VWCF092AQHHS 3650	9244014701	230	50	D	①	76	45	2650	12.1	5.1	36	-10...+55	52 500	87 500
					②	72	42	2680	12.1	5.0				
					③	66	39	2680	12.1	4.9				
					④	55	32	2700	11.8	4.8				
VWCF092AQHHS 3656	9244014700	230	50	D	①	75	44	2700	11.4	5.1	37	-40...+75	52 500	87 500
					②	71	42	2700	11.5	5.1				
					③	66	39	2710	11.5	5.0				
					④	55	32	2730	11.3	4.9				
VWCF092AQHFS 3800	9244014722	115	60	A	①	51	30	1900	6.1	4.0	26	-10...+80	62 500	105 000
					②	47	28	1880	6.1	4.1				
					③	43	25	1850	6.1	3.9				
					④	37	22	1850	6.1	3.9				
VWCF092AQHGS 3806	9244014709	115	60	B	①	57	34	2150	7.1	4.3	29	-40...+95	62 500	105 000
					②	52	31	2080	7.1	4.3				
					③	48	28	2060	7.1	4.1				
					④	42	25	2040	7.2	4.0				
VWCF092AQHGS 3500	9244014712	115	60	C	①	77	45	2790	6.3	5.0	35	-10...+80	62 500	105 000
					②	72	42	2770	6.4	5.0				
					③	66	39	2750	6.5	4.9				
					④	57	34	2730	6.5	5.0				
VWCF092AQHHS 3600	9244014706	115	60	D	①	88	52	3100	10.3	5.4	41	-10...+65	55 000	92 500
					②	82	48	3100	10.3	5.4				
					③	75	44	3100	10.3	5.3				
					④	65	38	3090	10.4	5.2				
VWCF092AQHHS 3606	9244014705	115	60	D	①	89	52	3200	10.1	5.5	42	-40...+75	55 000	92 500
					②	84	49	3170	10.1	5.4				
					③	77	45	3160	10.2	5.4				
					④	67	39	3150	10.2	5.3				

Subject to changes.

## Technical drawing

Dimensions in mm



Version	L in mm	Type / Type old
Sleeve bearings	310	AWG18, TR 64
Ball bearings	310	AWG18

# VWCD119A...

AC axial fans · max. 132 m<sup>3</sup>/h · □ 119 x 25 mm



## Material/Surface

- Housing: Metal
- Impeller: Plastic

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 flat plugs 2.8 x 0.5 mm; Grounding lug for M4
- Electrical protection class: I
- Weight: 320 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

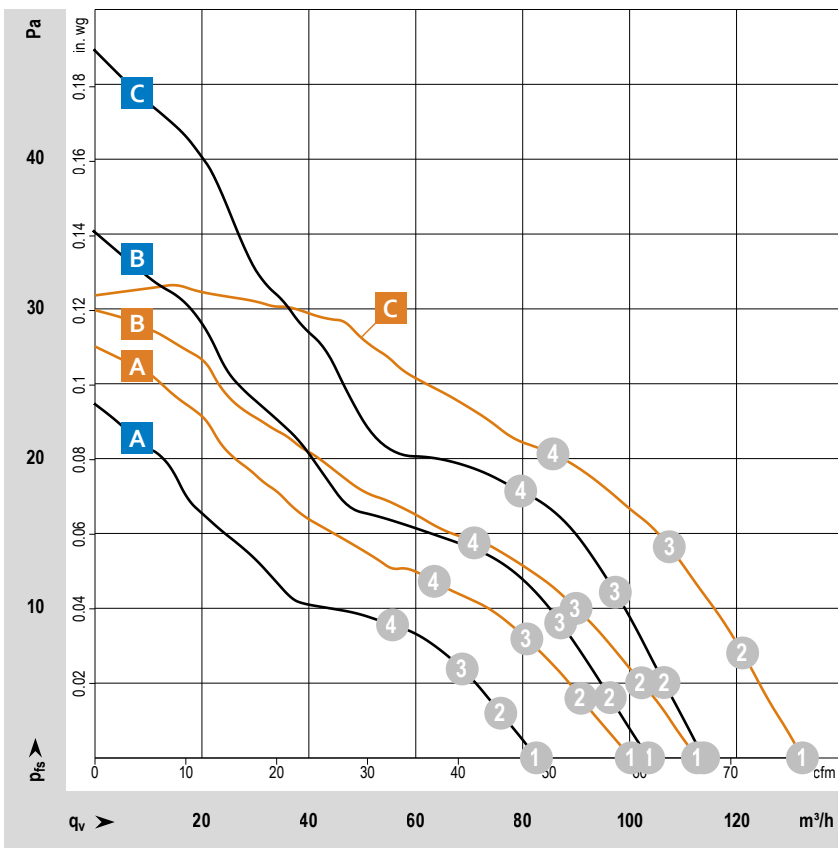
## Options

- Moisture protection

## Note

- Please note our series AxiACi 120. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 280

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

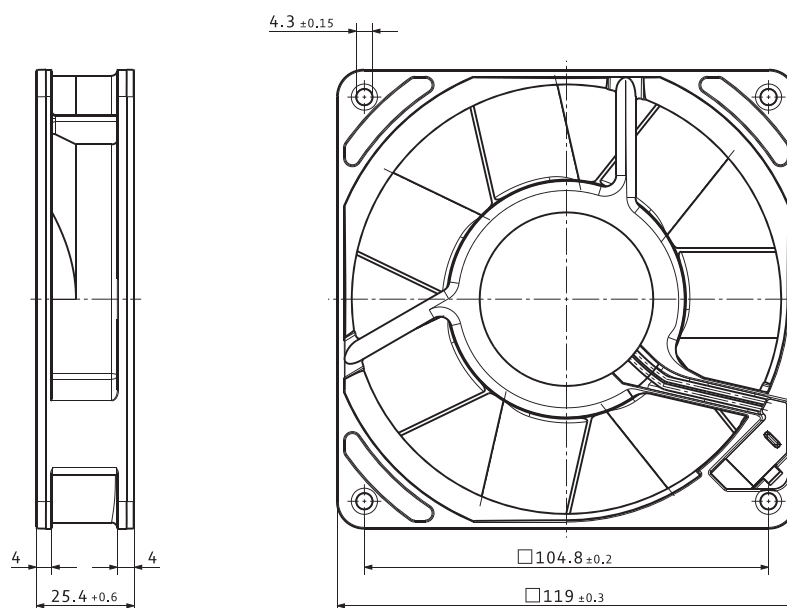
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10}^{IPC}$ (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm							
VWCD119AQFHS 9956 L	9282708003	230	50	A	①	83	49	1850	9.3	4.4	29	-40...+80	57 500	97 500
					②	76	45	1800	9.3	4.2				
					③	69	41	1760	9.3	4.2				
					④	56	33	1710	9.3	4.3				
VWCD119AQFJS 9956 M	9282708005	230	50	B	①	104	61	2250	9.7	4.9	35	-40...+80	57 500	97 500
					②	96	57	2200	9.8	4.8				
					③	87	51	2140	9.8	4.8				
					④	71	42	2080	9.8	5.0				
VWCD119AQFJS 9950	9282708012	230	50	C	①	110	65	2450	13.3	5.2	37	-20...+70	47 500	80 000
					②	103	61	2420	13.2	5.1				
					③	94	55	2380	13.2	5.0				
					④	77	45	2340	13.2	5.1				
VWCD119AQFJS 9956	9282708001	230	50	C	①	114	67	2450	14.1	5.2	37	-40...+70	47 500	80 000
					②	106	62	2440	14.1	5.1				
					③	97	57	2400	14.1	5.0				
					④	80	47	2340	14.1	5.1				
VWCD119AQFHS 9906 L	9282708004	115	60	A	①	100	59	2150	8.1	5.0	34	-40...+80	62 500	105 000
					②	91	54	2090	8.1	4.8				
					③	81	48	2000	8.2	4.7				
					④	64	38	1900	8.3	4.8				
VWCD119AQFJS 9906 M	9282708006	115	60	B	①	113	67	2450	7.8	5.3	37	-40...+80	62 500	105 000
					②	102	60	2350	7.9	5.1				
					③	90	53	2240	8.0	5.0				
					④	72	42	2110	8.2	4.9				
VWCD119AQFJS 9900	9282708015	115	60	C	①	132	78	2850	11.4	5.8	42	-20...+70	52 500	87 500
					②	121	71	2750	11.6	5.7				
					③	107	63	2640	11.9	5.5				
					④	85	50	2480	12.2	5.4				
VWCD119AQFJS 9906	9282708002	115	60	C	①	132	78	2850	11.6	5.8	42	-40...+70	52 500	87 500
					②	121	71	2740	11.8	5.7				
					③	107	63	2640	12.0	5.5				
					④	85	50	2500	12.3	5.4				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWCF119X..., VUCF119Y...

AC axial fans · max. 174 m<sup>3</sup>/h · □ 119 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: intake over struts; types 4890 N and 4840 N exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 flat plugs 2.8 x 0.5 mm; Grounding lug for M4
- Electrical protection class: I
- Weight: 550 g

from page 14 Definitions

from page 350 Accessories

more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

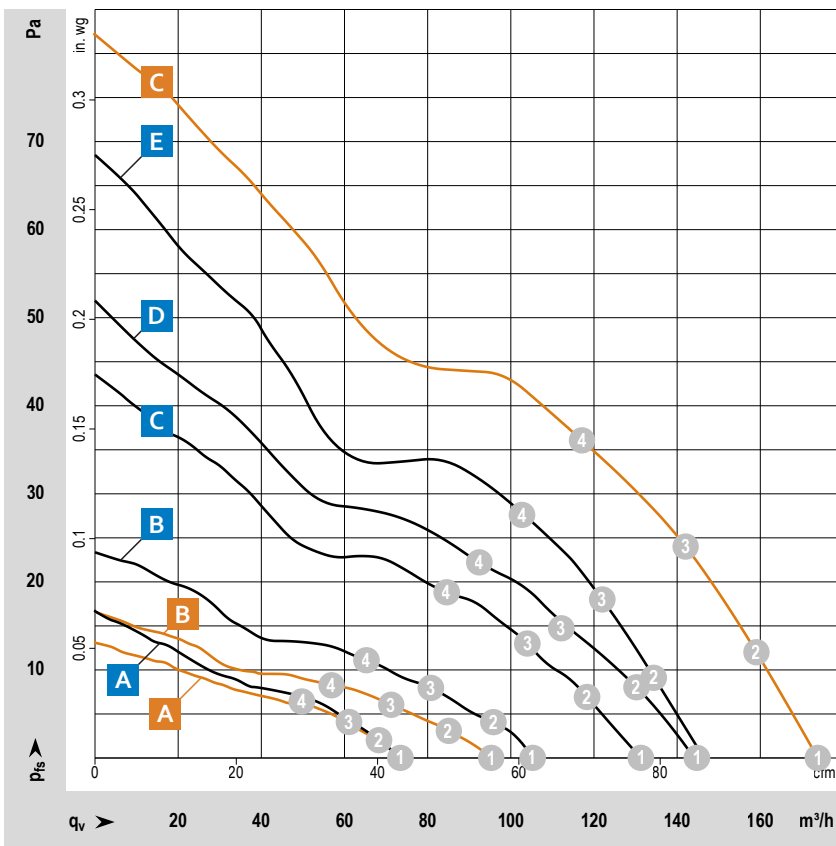
- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Versions with reinforced mounting flanges and exposed external single wires
- Speed signal
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP65

## Note

- Please note our series AxiACi 120. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 280



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

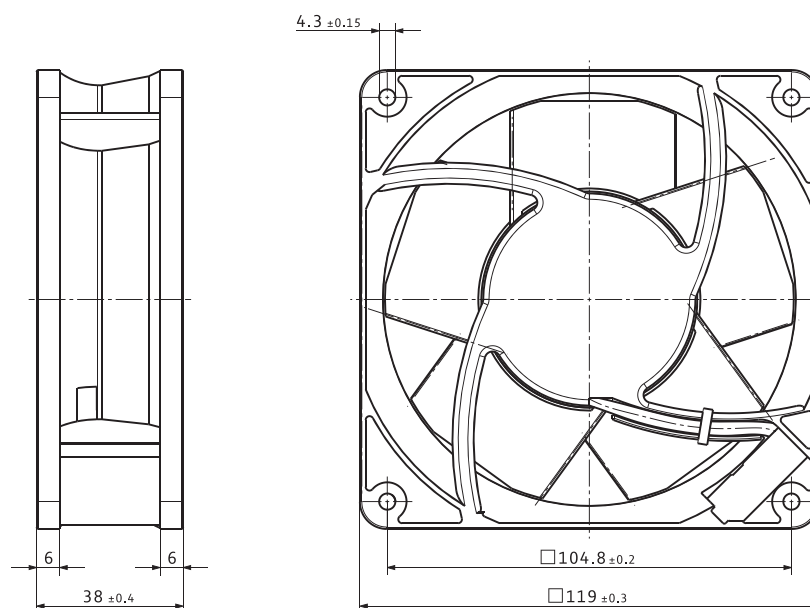
Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VAC	Hz			m³/h	cfm							
VWCF119XQHHS 4890 N	9244014264	230	50	A	①	73	43	1 500	10.5	3.9	25	-10...+70	55 000	92 500
					②	68	40	1 480	10.6	3.9				
					③	61	36	1 450	10.6	4.0				
					④	51	30	1 440	10.5	4.2				
VUCF119YQHJS 4850 N*	9274014111	230	50	B	①	105	62	1 850	9.2	4.9	32	-10...+70	57 500	97 500
					②	95	56	1 810	9.2	4.9				
					③	81	48	1 770	9.3	4.8				
					④	65	38	1 720	9.3	4.8				
VUCF119YQHKS 4580 N*	9274014113	230	50	C	①	131	77	2 350	19.9	5.6	41	-10...+55	40 000	67 500
					②	119	70	2 330	19.8	5.5				
					③	104	61	2 310	19.9	5.5				
					④	85	50	2 260	19.9	5.5				
VUCF119YQHKS 4550 N*	9274014115	230	50	D	①	144	85	2 550	18.3	5.7	44	-10...+55	42 500	72 500
					②	130	77	2 520	18.4	5.7				
					③	113	67	2 500	18.5	5.6				
					④	92	54	2 450	18.5	5.6				
VUCF119YQHKS 4650 N	9274014351	230	50	E	①	146	86	2 600	19.8	5.8	46	-10...+55	37 500	62 500
					②	135	79	2 600	19.9	5.6				
					③	122	72	2 590	20.0	5.5				
					④	103	61	2 540	20.0	5.4				
VUCF119YQHKS 4656 N	9274014139	230	50	E	①	146	86	2 600	18.0	5.5	47	-40...+85	37 500	62 500
					②	135	79	2 580	18.1	5.6				
					③	121	71	2 560	18.2	5.5				
					④	102	60	2 520	18.5	5.4				
VWCF119XQHHS 4840 N	9244014279	115	60	A	①	74	44	1 550	6.0	3.6	26	-10...+75	57 500	97 500
					②	67	39	1 510	6.1	3.7				
					③	60	35	1 470	6.1	3.8				
					④	49	29	1 450	6.1	3.9				
VUCF119YQHJS 4800 N*	9244014110	115	60	B	①	95	56	1 700	7.8	4.8	32	-10...+75	60 000	102 500
					②	84	49	1 640	7.9	4.6				
					③	71	42	1 580	7.9	4.5				
					④	56	33	1 520	7.9	4.5				
VUCF119YQHKS 4600 N	9274014116	115	60	C	①	174	102	3 100	17.5	6.3	50	-10...+60	40 000	67 500
					②	159	94	3 040	17.8	6.2				
					③	142	84	2 990	18.2	6.1				
					④	117	69	2 890	18.9	5.9				
VUCF119YQHKS 4606 N	9274014147	115	60	C	①	164	97	3 100	18.5	6.3	51	-40...+90	40 000	67 500
					②	153	90	3 070	18.7	6.2				
					③	138	81	3 020	19.0	6.1				
					④	114	67	2 930	19.5	5.9				

Subject to changes.

\* Fan with 3 blades.

## Technical drawing

Dimensions in mm



# VWCF119A..., VWCF119X...

AC axial fans · max. 182 m<sup>3</sup>/h · □ 119 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 flat plugs 2.8 x 0.5 mm; Grounding lug for M4 x 8
- Electrical protection class: I
- Weight: 540 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

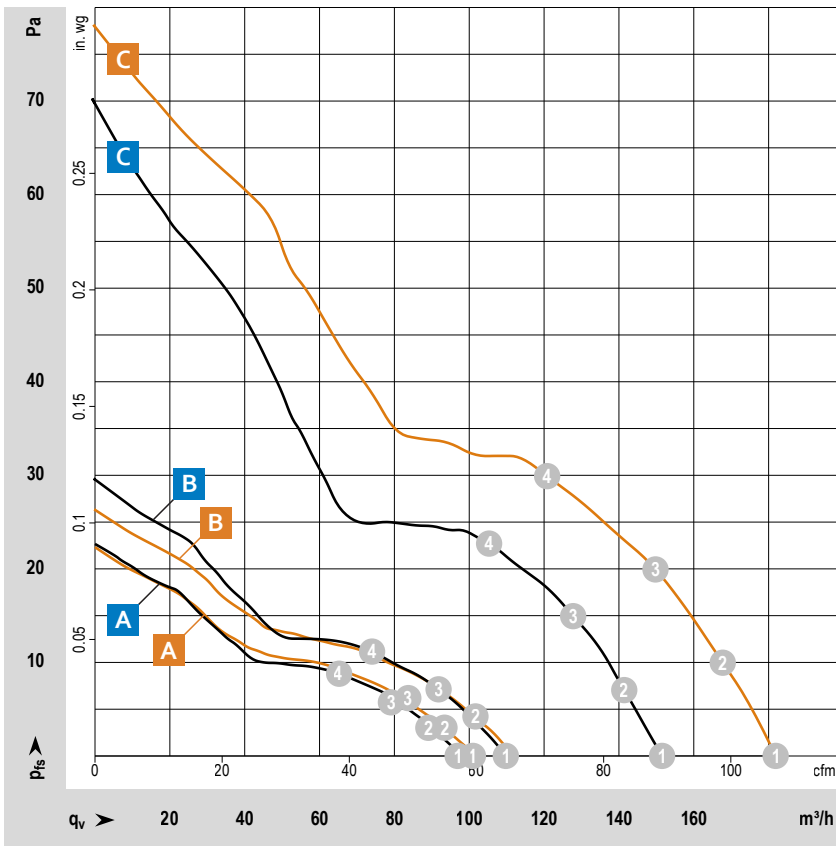
## Options

- Speed signal
- Moisture protection
- Salt spray protection
- Degree of protection: up to IP65

## Note

- Please note our series AxiACi 120. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 280

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

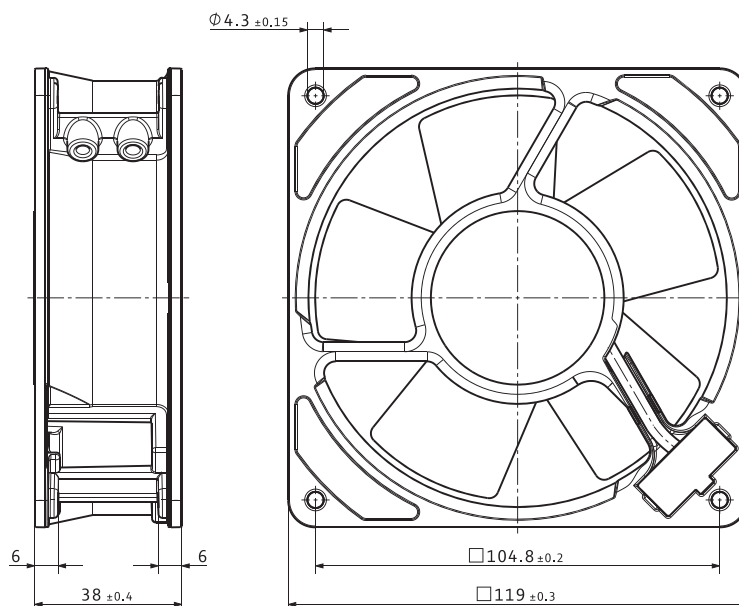


Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm							
VWCF119AQHJS 4850 Z	9274014829	230	50	A	①	98	58	1700	11.0	4.0	26	-10...+65	50 000	85 000
					②	90	53	1670	11.0	3.9				
					③	81	48	1630	11.0	3.7				
					④	66	39	1590	11.0	3.9				
VWCF119AQHJS 4856 Z	9274014828	230	50	A	①	98	58	1700	11.7	4.0	26	-40...+75	50 000	85 000
					②	90	53	1660	11.7	3.9				
					③	82	48	1660	11.8	3.7				
					④	66	39	1590	11.8	3.9				
VWCF119XQHJZ 4580 Z	9274014841	230	50	B	①	110	65	1900	10.4	4.3	30	-10...+65	50 000	85 000
					②	102	60	1870	10.4	4.1				
					③	91	54	1830	10.5	4.0				
					④	74	44	1790	10.5	4.1				
VWCF119XQHJS 4586 Z	9244014840	230	50	B	①	108	64	1900	13.2	4.3	30	-40...+75	50 000	85 000
					②	100	59	1880	13.2	4.1				
					③	91	54	1850	13.2	4.0				
					④	75	44	1810	13.2	4.1				
VWCF119AQHKS 4650 Z	9274014801	230	50	C	①	149	88	2650	18.2	5.1	40	-10...+50	37 500	62 500
					②	140	82	2640	18.3	5.1				
					③	128	75	2620	18.3	5.0				
					④	106	62	2600	18.4	5.2				
VWCF119AQHKS 4656 Z	9274014800	230	50	C	①	152	89	2650	16.8	5.1	40	-40...+75	37 500	62 500
					②	141	83	2630	17.0	5.1				
					③	128	75	2620	17.1	5.0				
					④	106	62	2600	17.2	5.2				
VWCF119XQHJS 4800 Z	9244014833	115	60	A	①	102	60	1800	10.7	4.2	28	-10...+70	52 500	87 500
					②	93	55	1750	10.7	4.1				
					③	83	49	1690	10.7	4.0				
					④	67	39	1630	10.8	4.0				
VWCF119XQHJS 4536 Z	9244014836	115	60	B	①	112	66	2000	9.5	4.4	32	-40...+75	52 500	87 500
					②	103	61	1950	9.6	4.3				
					③	91	54	1880	9.6	4.2				
					④	74	44	1800	9.7	4.2				
VWCF119AQHKS 4600 Z	9274014803	115	60	C	①	174	102	3100	16.3	5.6	45	-10...+60	40 000	67 500
					②	161	95	3080	16.6	5.5				
					③	145	85	3040	16.9	5.5				
					④	118	69	3000	17.1	5.5				
VWCF119AQHKS 4606 Z	9274014802	115	60	C	①	182	107	3100	17.0	5.6	45	-40...+85	40 000	67 500
					②	168	99	3050	17.4	5.5				
					③	150	88	2990	17.7	5.5				
					④	121	71	2940	18.0	5.5				

Subject to changes.

## Technical drawing

Dimensions in mm



# VVY0108XQHCS

AC axial fans · max. 140 m<sup>3</sup>/h · Ø 108 x 37 mm



from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Material/Surface

- Impeller: Metal
- Mounting bracket: Metal

## Characteristics

- Version: Classic AC fan without housing; compact and robust
- Direction of air flow: Exhaust over mounting bracket
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: Via 2 single wires
- Electrical protection class: I
- Weight: 430 g

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP65

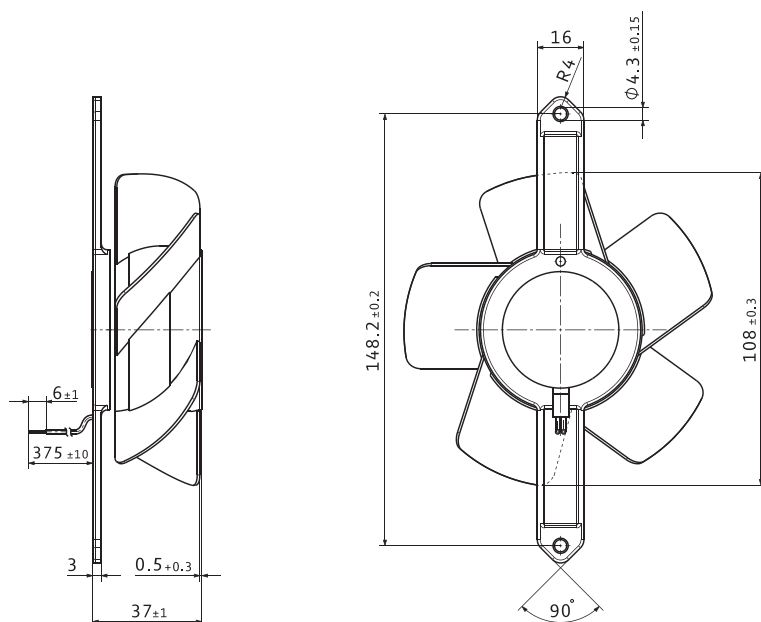
Type / Type old	Part number	Nominal voltage	Frequency	Air flow	Air flow	Speed	Power consumption	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10}^{IPFC}$ (40 °C) s.p. II
		VAC	Hz	m <sup>3</sup> /h	cfm	rpm	W	dB(A)	°C	Hours	Hours
VVY0108XQHCS 4650 TZ	9244014892	230	50	125	73.6	2 600	19.0	42	-10...+50	37 500	62 500
VVY0108XQHCS 4656 TZ	9244014896	230	50	125	73.6	2 600	19.0	42	-40...+65	37 500	62 500
VVY0108XQHCS 4600 TZ	9244014885	115	60	140	82.4	2 950	18.0	45	-10...+50	40 000	67 500
VVY0108XQHCS 4606 TZ	9244014895	115	60	140	82.4	2 950	18.0	45	-40...+75	40 000	67 500

Subject to changes.

Förderleistung und Geräusch von Lüftern ohne AußenHousing hängen von ihren Einbauverhältnissen ab. Der genannte Air flow wurde in einer Lochblende von  $\varnothing 109$  mm und einem Abstand von ca. 17 mm vom Mounting bracket ermittelt. Bei besonders günstigen Einbauverhältnissen sind die Förderleistungen der Serie 4000 Z erreichbar. Das Geräusch im optimalen Betriebsbereich kann für diese Lüfter nur im konkreten Anwendungsfall gemessen werden.

## Technical drawing

Dimensions in mm



Type / Type old	Type / Type old
VVY0108XQHCS 4650 TZ	AWG 22, TR 32
VVY0108XQHCS 4600 TZ	AWG 22, TR 32
VVY0108XQHCS 4656 TZ	AWG 18
VVY0108XQHCS 4606 TZ	AWG 18

# VWCF135AQKMS

AC axial fans · max. 271 m<sup>3</sup>/h · □ 135 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: Classic AC fan with housing; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 flat plugs 2.8 x 0.5 mm; Grounding lug for M4 x 8
- Electrical protection class: I
- Weight: 800 g

from page 14 Definitions

from page 350 Accessories

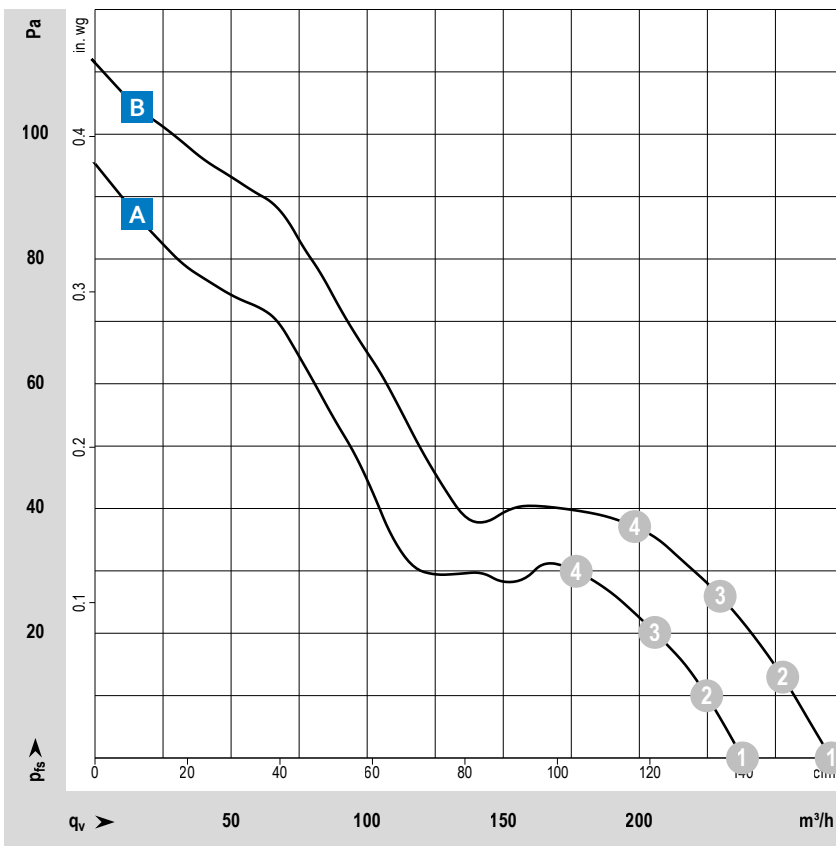
more at [www.ebmpapst.com](http://www.ebmpapst.com)

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

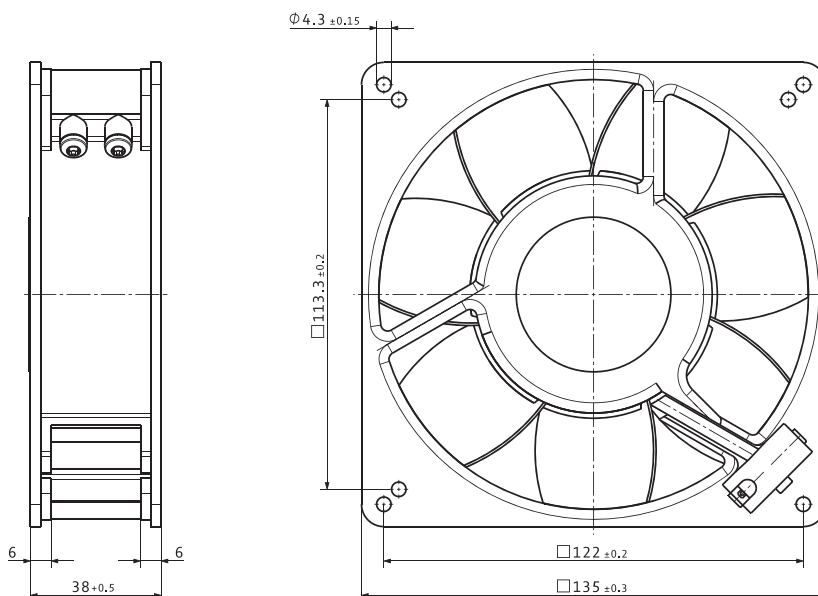
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	dB(A)	°C	Hours	Hours
VWCF135AQKMS 5656 S	9245012001	230	50	A	①	238	140	2 700	34.7	6.0	46	-35...+70	45 000	75 000
					②	225	132	2 690	35.0	6.0				
					③	205	121	2 680	35.2	5.9				
					④	177	104	2 670	35.1	6.0				
VWCF135AQKMS 5606 S	9245012002	115	60	B	①	271	160	3 100	30.7	6.4	50	-35...+80	47 500	80 000
					②	253	149	3 060	31.2	6.3				
					③	230	135	3 030	31.7	6.2				
					④	198	117	3 000	32.1	6.2				

Subject to changes.

## Technical drawing

Dimensions in mm



# VWLF150X2LPS

AC axial fans · max. 380 m<sup>3</sup>/h · 150 x 172 x 38 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

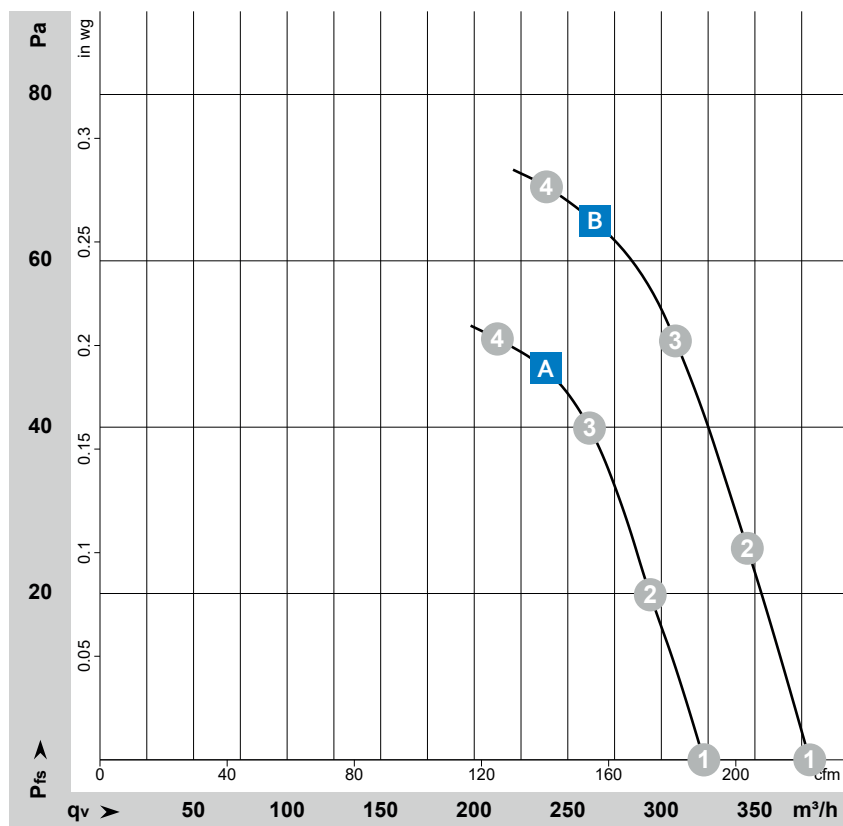
## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP22; depending on installation and position
- Electrical hookup: Plug
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 0.77 kg

## Approvals

- EN 60335-1; CE; UKCA; UL 507; CSA C22.2 Nr.113; VDE; EAC; CCC on request

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

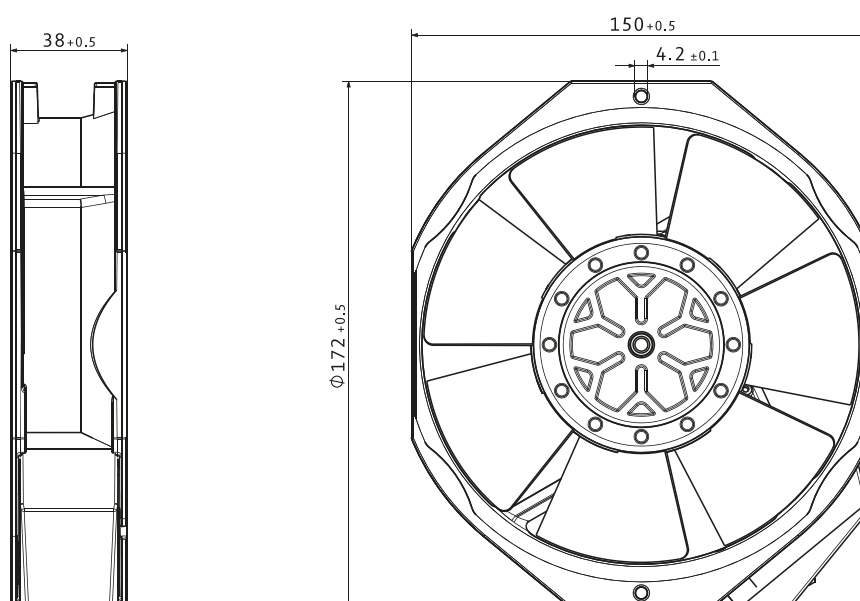
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm						
VWLF150X2LPS 7056 ES	W2E142BB0101	230	50	A	①	325	190	2 800	27	6.4	51	-25...+55	60 000	102 500
					②	295	175	2 805	26					
					③	260	155	2 785	27					
					④	210	125	2 775	27					
VWLF150X2LPS 7006 ES	W2E142BB0501	115	60	B	①	380	225	3 350	28	6.8	56	-25...+65	55 000	92 500
					②	345	205	3 305	27					
					③	310	180	3 255	28					
					④	240	140	3 230	29					

Subject to changes.

## Technical drawing

Dimensions in mm



# VWEH150X...

AC axial fans · max. 375 m<sup>3</sup>/h · Ø 150 x 55 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 single wires, wire ends with wire end splices; Grounding lug for M4 x 8
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 1.1 kg

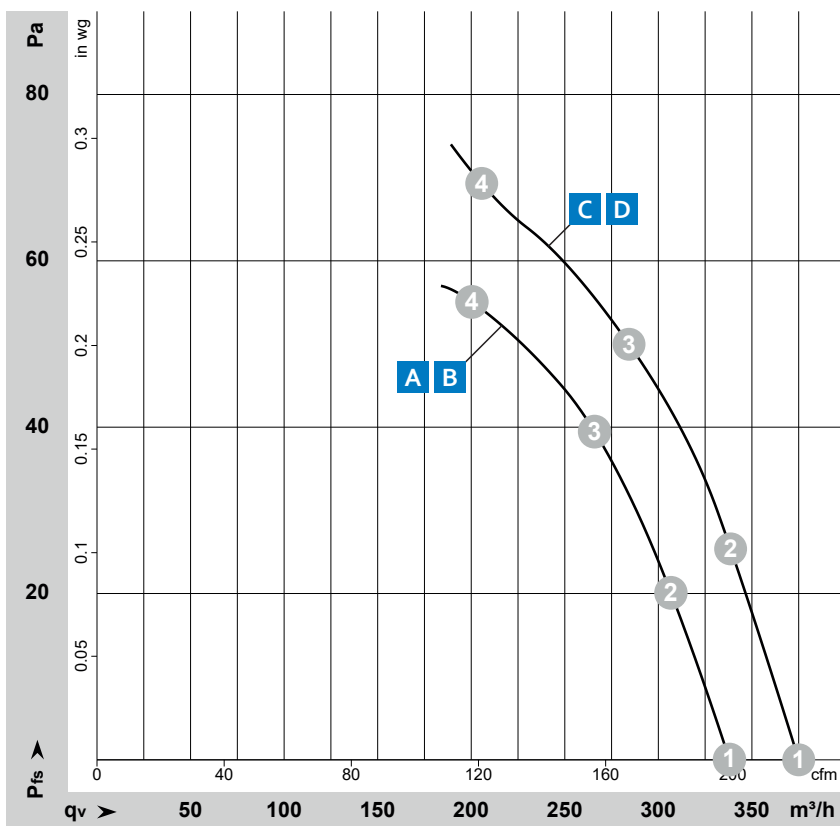
## Approvals

- EN 60335-1; CE; UKCA; VDE; UL 507; CSA 22.2 Nr. 113; EAC; CCC on request

## Note

- Please note our series VWEH151. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 286

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

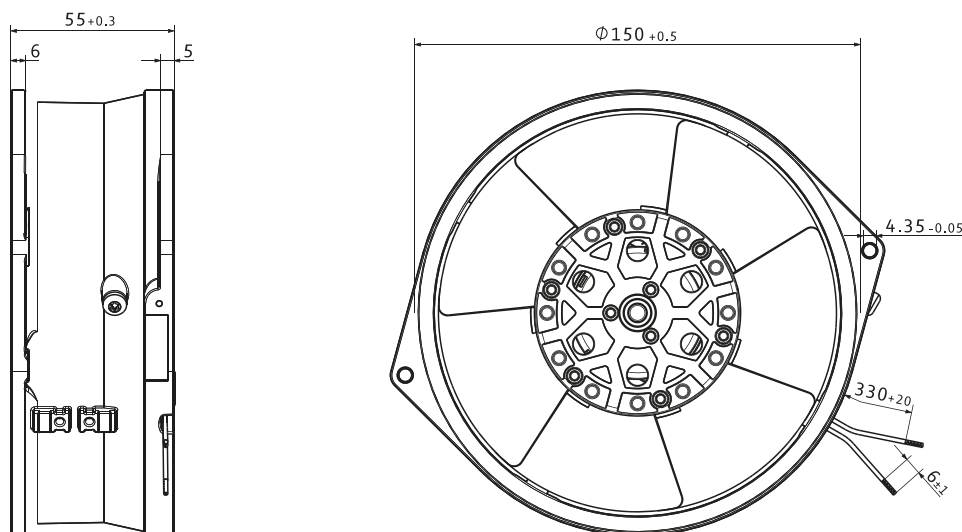


Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard	Life expectancy L <sub>10</sub> PC (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm							
VVEH150XQLPS 7855 ES	W2S130AA0301	230	50	A	①	340	200	2 800	45	6.0	49	-25...+50	60 000	102 500
					②	305	180	2 795	45					
					③	265	155	2 780	46					
					④	200	120	2 780	46					
VVEH150XQLPZ 7856 ES	W2S130AA0397	230	50	B	①	340	200	2 800	45	6.0	49	-25...+70	60 000	102 500
					②	305	180	2 795	45					
					③	265	155	2 780	46					
					④	200	120	2 780	46					
VVEH150XQLNS 7805 ES	W2S130AA2501	115	60	C	①	375	220	3 250	38	6.4	53	-25...+70	60 000	102 500
					②	340	200	3 210	40					
					③	285	165	3 180	41					
					④	205	120	3 185	41					
VVEH150XQLNZ 7806 ES	W2S130AA2597	115	60	D	①	375	220	3 250	38	6.4	53	-25...+90	60 000	102 500
					②	340	200	3 210	40					
					③	285	165	3 180	41					
					④	205	120	3 185	41					

Subject to changes.

## Technical drawing

Dimensions in mm



# VUEH150XQLPS

AC axial fans · max. 435 m<sup>3</sup>/h · Ø 150 x 55 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: intake over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 single wires, wire ends with wire end splices; Grounding lug for M4 x 8
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 1.1 kg

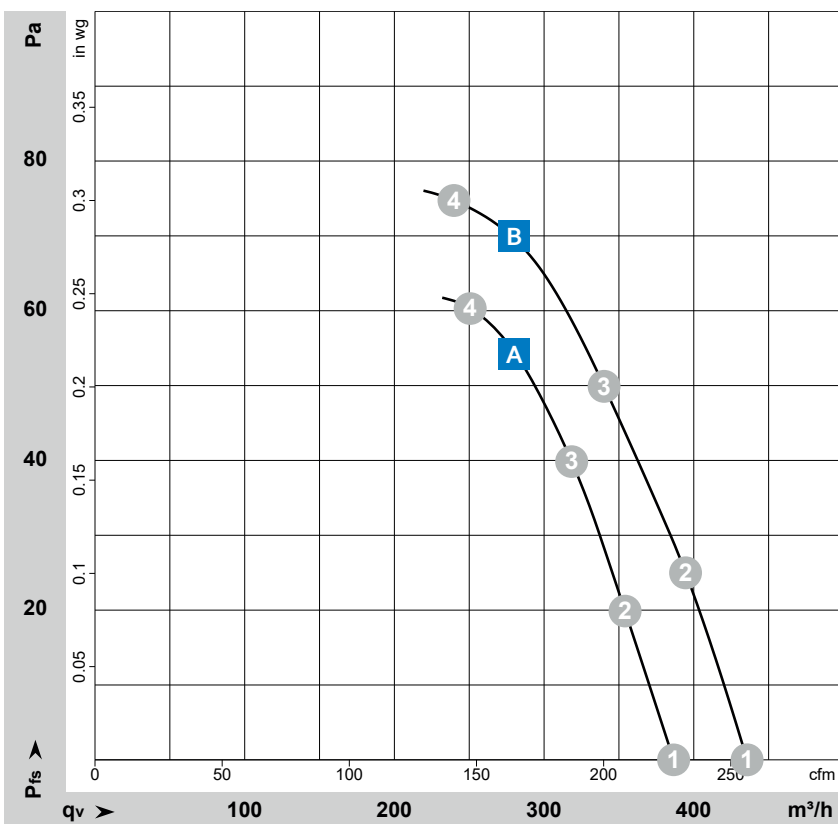
## Approvals

- EN 60335-1; CE; UKCA; VDE; UL 507; CSA 22.2 Nr. 113; EAC;
- **A**: CCC on request

## Note

- Please note our series VWEH151. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 286

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

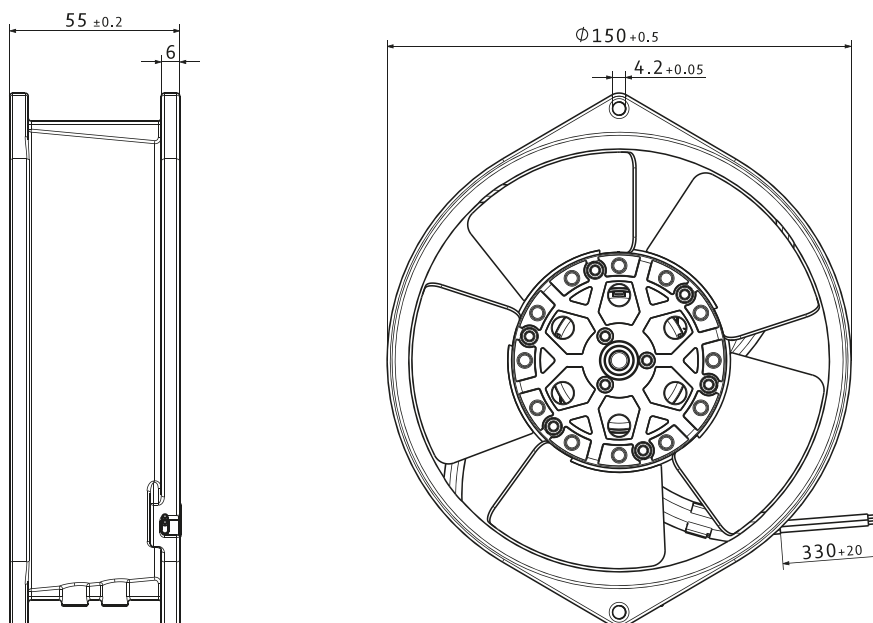
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10PFC}$ (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm						
VUEH150XQLPS 7450 ES	W2S130BM0301	230	50	A	①	385	230	2 700	47	6.8	60	-25...+50	65 000	110 000
					②	355	210	2 735	50					
					③	320	185	2 730	51					
					④	250	150	2 710	51					
VUEH150XQLPS 7400 ES	W2S130BM1501	115	60	B	①	435	255	3 050	46	6.9	62	-25...+70	50 000	85 000
					②	395	230	3 060	49					
					③	340	200	3 000	50					
					④	240	140	2 990	51					

Subject to changes.

## Technical drawing

Dimensions in mm



# VWEG172X...

AC axial fans · max. 500 m<sup>3</sup>/h · Ø 172 x 51 mm



## Material/Surface

- Housing: Metal
- Impeller: Metal

## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: exhaust over struts
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 flat plugs 2.8 x 0.5 mm; Grounding lug for M4 x 6
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 1.0 kg

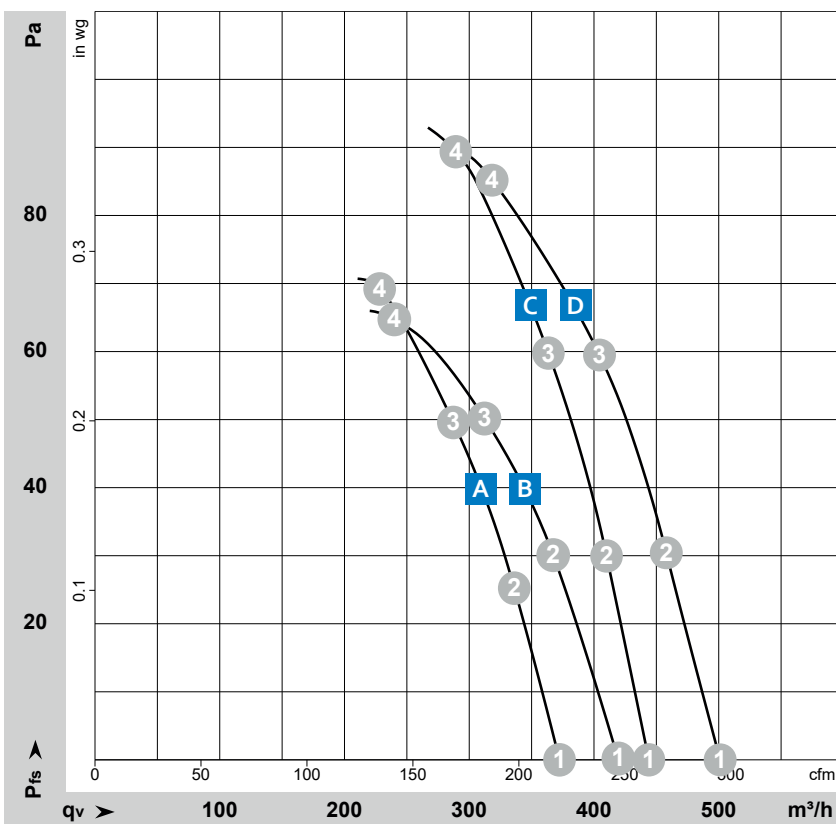
## Approvals

- EN 60335-1; CE; UKCA; VDE; UL 507; CSA 22.2 Nr. 113; EAC;
- **A+B+D**: CCC on request

## Note

- Please note our series VWEG172. With identical mounting dimensions and voltages, this series achieves greater energy efficiency. See page 284

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

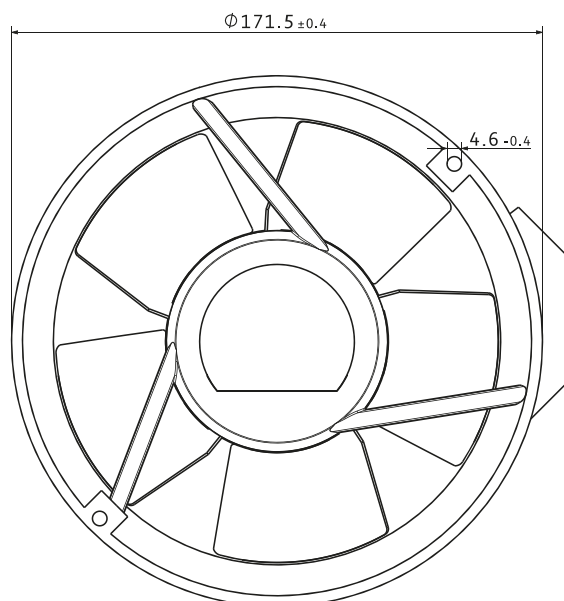
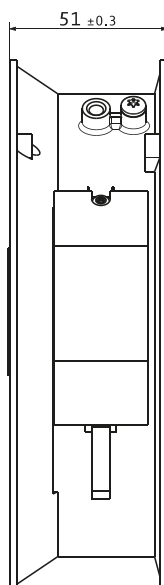
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Sound pressure (free air flow)	Perm. ambient temperature	Service life $L_{10}$ (40 °C) ebm-papst standard	Life expectancy $L_{10IFC}$ (40 °C) s.p. II
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm						
VWEG172X2LPS 6058 ES	W2E143AA0901	230	50	A	①	370	220	2 800	24	5.9	55	-25...+70	62 500	105 000
					②	335	200	2 840	25					
					③	285	170	2 825	25					
					④	230	135	2 810	26					
VWEG172X2LQS 6078 ES	W2E143AB0901	230	50	B	①	420	245	2 800	26	6.3	54	-25...+60	62 500	105 000
					②	365	215	2 770	27					
					③	310	185	2 755	27					
					④	240	140	2 750	28					
VWEG172X2LPS 6008 ES	W2E143AA1501	115	60	C	①	445	260	3 300	26	6.4	60	-25...+70	57 000	97 500
					②	410	240	3 340	28					
					③	365	215	3 315	29					
					④	290	170	3 270	30					
VWEG172X2LPS 6028 ES	W2E143AB1501	115	60	D	①	500	295	3 300	29	6.7	58	-25...+75	57 000	97 500
					②	460	270	3 230	32					
					③	405	240	3 200	33					
					④	320	185	3 165	34					

Subject to changes.

## Technical drawing

Dimensions in mm



# VWLJ225X...

AC axial fans · max. 1 005 m<sup>3</sup>/h · □ 225 x 80 mm



## Material/Surface

- Fan housing: Metal
- Impeller: Metal

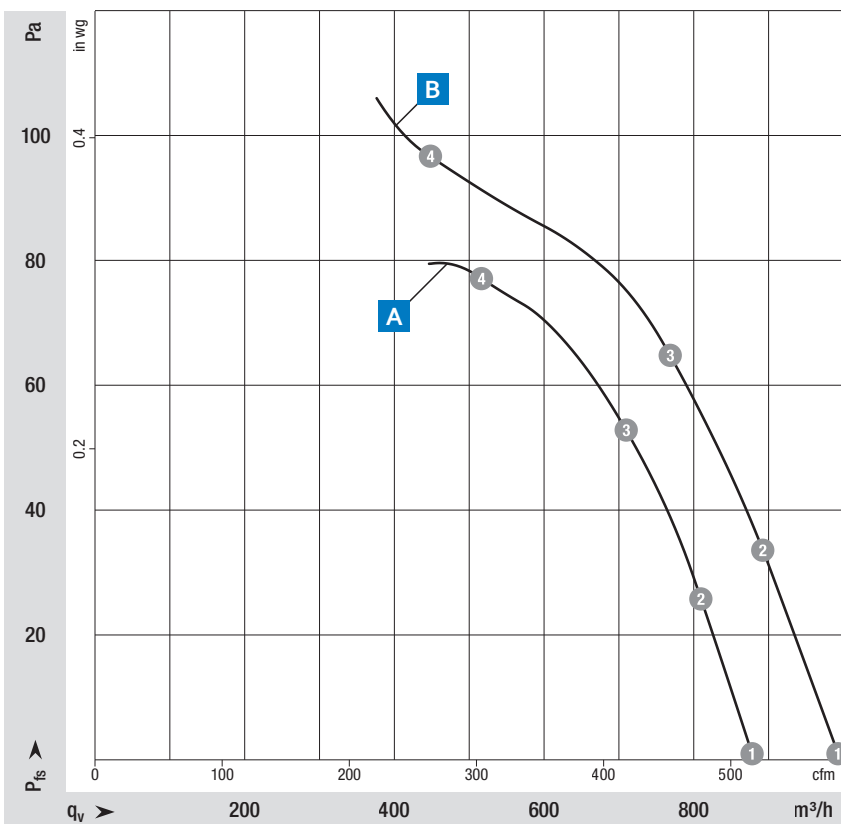
## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: "V"
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP44, depending on installation and position
- Electrical hookup: via terminal strip, Capacitor connected
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 2.0 / 2.1 kg

## Approvals

- EN 60335-1; CE; UKCA; VDE; EAC; CCC on request;
- A: UL 507; CSA 22.2 Nr. 113
- B: UL 1004-3; CSA 22.2 Nr. 77

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

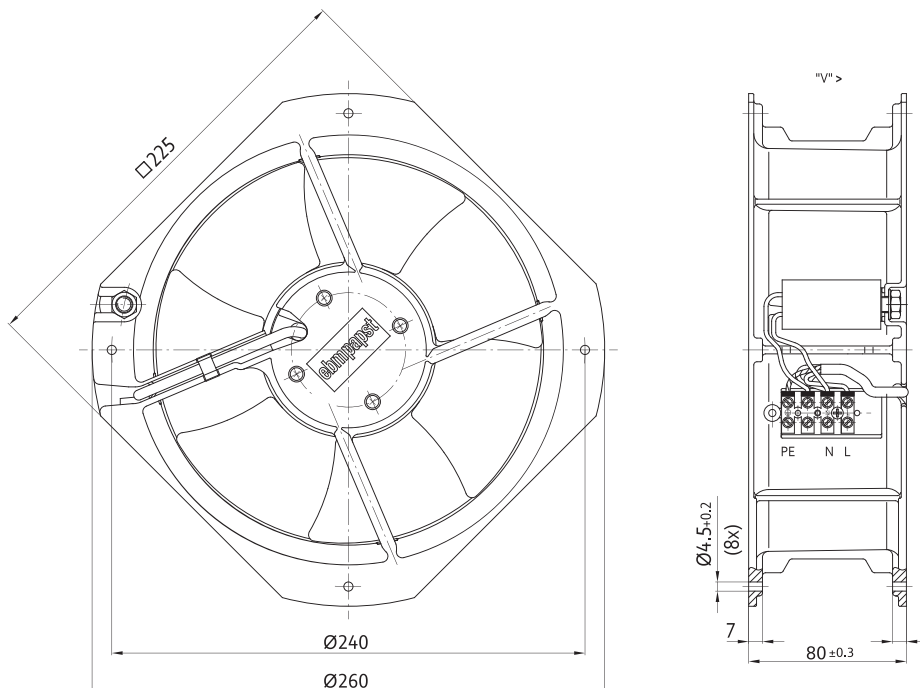
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

		Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Speed	Power consumption	Input current	Capacitor	Max. back-pressure	Perm. ambient temperature
		VAC	Hz			m <sup>3</sup> /h	rpm	W	A	μF/VDB	Pa	°C
Type	Part number											
VWLJ225X2MUS	W2E200HK8601	1-115	50	A	①	880	2 640	56	0.56	5.0/220	80	-25...+60
					②	800	2 590	58	0.57			
					③	675	2 525	62	0.59			
					④	495	2 475	64	0.60			
VWLJ225X2MTS	W2E200HK3801	1-115	60	B	①	995	2 980	67	0.58	5.0/220	95	-25...+65
					②	870	2 855	72	0.63			
					③	745	2 760	76	0.66			
					④	470	2 665	79	0.69			
VWLJ225X2MTS	W2E200HK3801	1-230	50	A	①	885	2 630	60	0.30	1.5/450	80	-25...+55
					②	790	2 585	64	0.31			
					③	665	2 525	67	0.31			
					④	500	2 480	69	0.32			
VWLJ225X2MTS	W2E200HK3801	1-230	60	B	①	1 005	3 000	70	0.31	1.5/450	95	-25...+65
					②	890	2 900	75	0.33			
					③	750	2 800	79	0.35			
					④	510	2 705	83	0.36			

Subject to changes.

Technical drawing

Dimensions in mm



# VWLJ280H...

AC axial fans · max. 1 855 m<sup>3</sup>/h · □ 280 x 80 mm



## Material/Surface

- Fan housing: Metal
- Impeller: Plastic

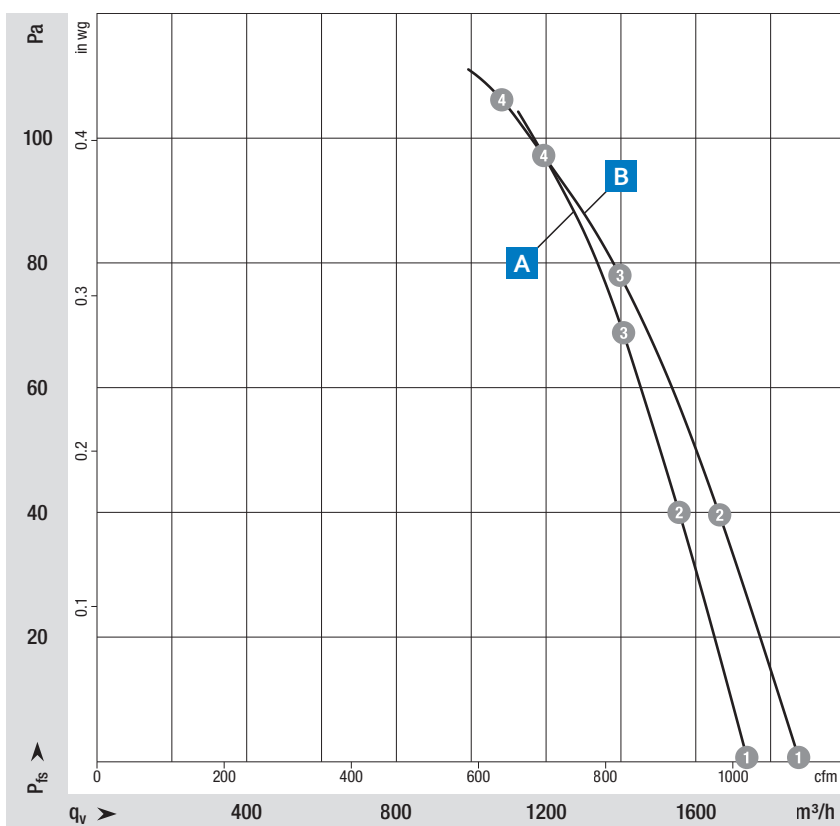
## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: "V"
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP44, depending on installation and position
- Electrical hookup: via terminal strip, Capacitor connected
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 2.7 kg

## Approvals

- EN 60335-1; CE; UKCA; VDE; UL 1004-3; CSA 22.2 Nr. 77;
- **B**: EAC; CCC on request

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from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>



Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Sound power level	Sound pressure	Max. back-pressure	Perm. ambient temperature
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	dB(A)	Pa	°C
VWLJ280H2MWS	W2E250HP0801	1-115	50	A	①	1 720	1 010	2 545	102	0.91	6.9	62	100	-25...+50
					②	1 555	915	2 470	109	0.97	6.8			
					③	1 365	805	2 390	117	1.04	6.7			
					④	1 100	650	2 300	124	1.10	7.0			
		1-115	60	B	①	1 855	1 090	2 725	137	1.19	7.1	64	100	-25...+45
					②	1 640	965	2 570	145	1.26	6.9			
					③	1 380	810	2 395	152	1.32	6.8			
					④	1 005	590	2 250	160	1.40	7.0			
VWLJ280H2MWZ	W2E250HP0601	1-230	50	A	①	1 695	995	2 550	101	0.44	7.0	63	100	-25...+60
					②	1 525	895	2 475	109	0.48	6.9			
					③	1 360	800	2 405	115	0.50	6.8			
					④	1 120	660	2 320	125	0.55	6.9			
		1-230	60	B	①	1 840	1 085	2 750	134	0.59	7.1	64	110	-25...+50
					②	1 625	960	2 595	145	0.63	7.0			
					③	1 320	780	2 400	153	0.66	6.8			
					④	920	545	2 300	160	0.71	7.4			

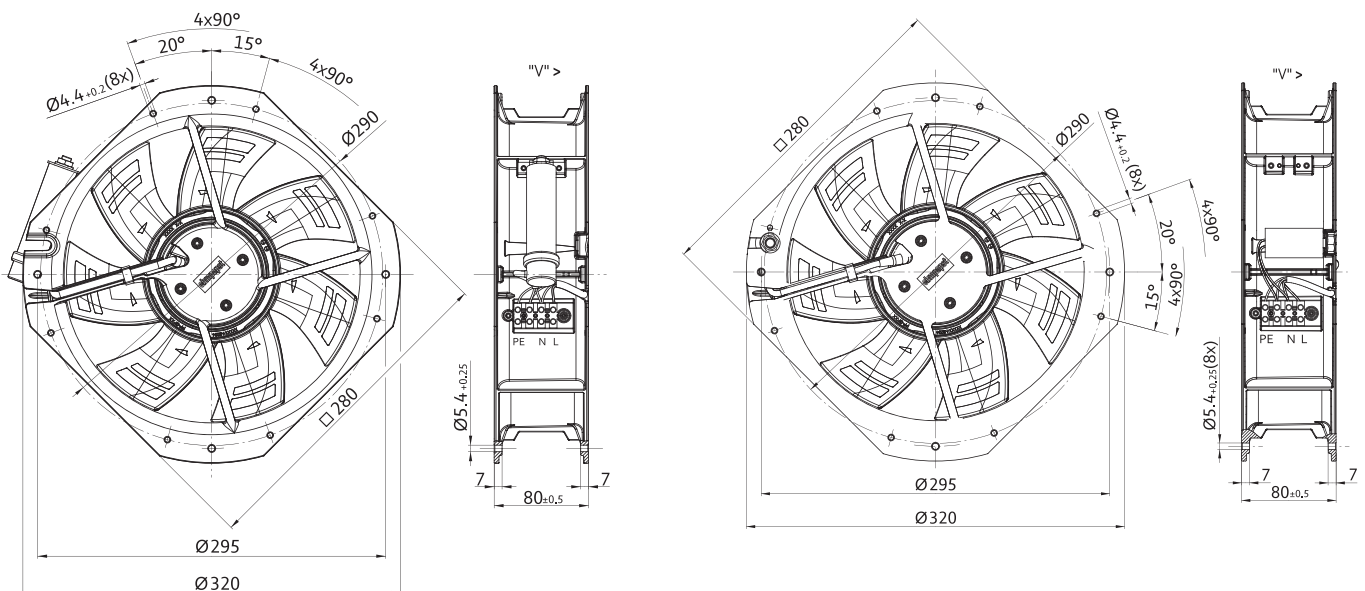
Subject to changes.

## Technical drawing

Dimensions in mm

VWLJ280H2MWS W2E250HP0801

VWLJ280H2MWZ W2E250HP0601



# VJH0200X2MES

AC diagonal module · max. 840 m<sup>3</sup>/h · Ø 200 mm



## Material/Surface

- Housing: Plastic
- Support bracket: Plastic
- Impeller: Plastic

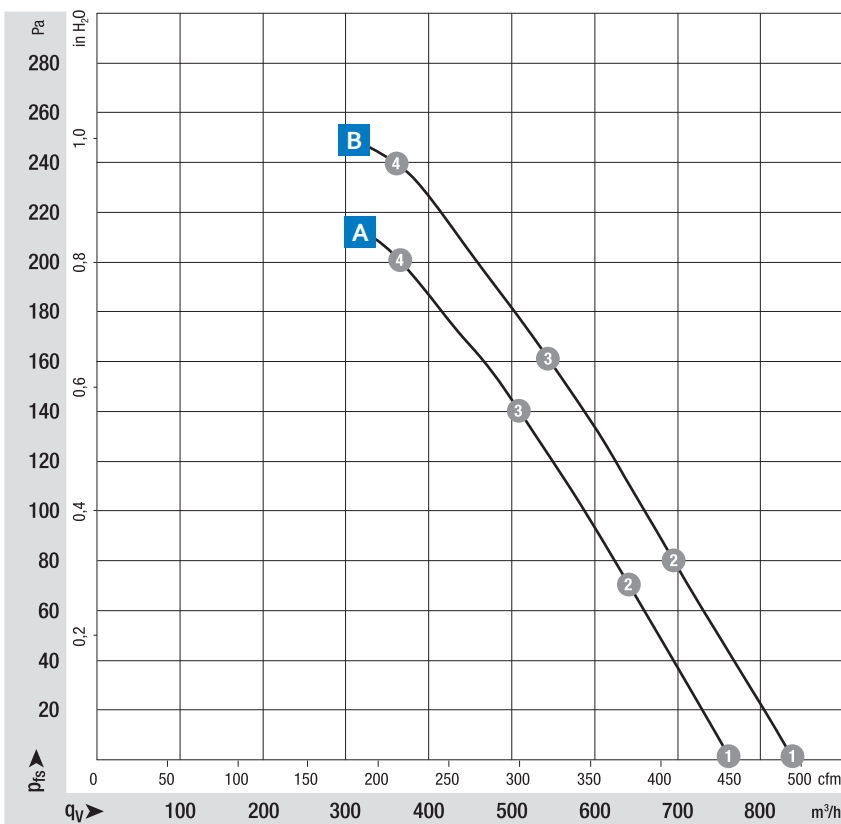
## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: "V", single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP44, Plug IP20; depending on installation and position
- Electrical hookup: via plug
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 2.1 kg

## Approvals

- CE; UKCA; EAC; UL 1004-3; CSA C22.2 Nr.77; CCC on request

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

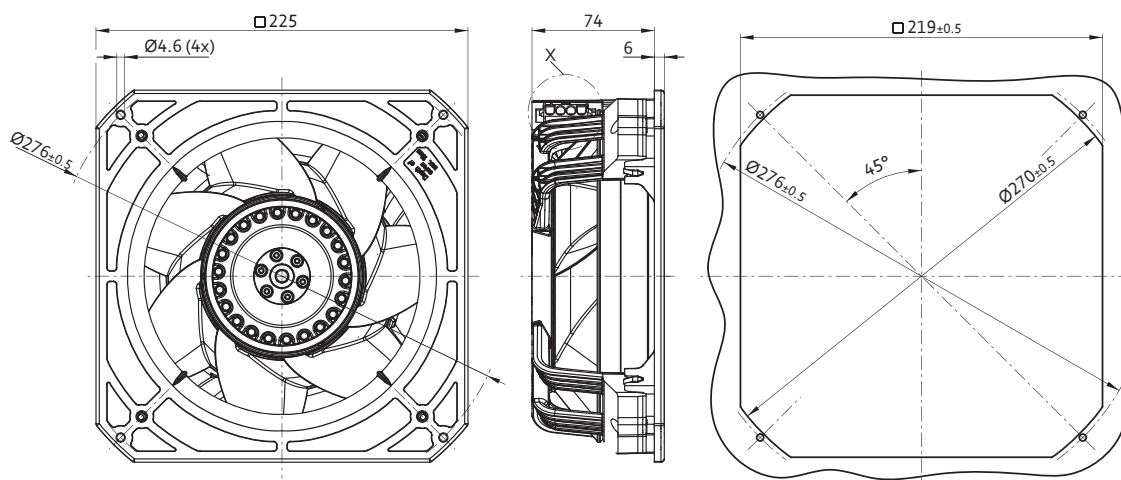
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Sound power level	Sound pressure	Max. back-pressure	Perm. ambient temperature
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	dB(A)	Pa	°C
VJH0200X2MES	K2E200AA1201	1-115	50	A	①	765	450	2 650	64	0.56	7.0	62	200	-25...+65
					②	635	375	2 610	67	0.59	6.7	60		
					③	500	295	2 580	70	0.61	6.7	59		
					④	345	205	2 595	68	0.60	6.9	61		
		1-115	60	B	①	840	495	2 910	88	0.77	7.2	64	230	-25...+65
					②	690	405	2 810	93	0.82	6.9	61		
					③	535	315	2 755	96	0.84	6.9	61		
					④	365	215	2 780	95	0.83	7.1	63		

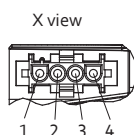
Subject to changes.

## Technical drawing

Dimensions in mm



Coded plug system  
 Universal Mate-N-Lok  
 Connector shell: AMP 350 780-1  
 3x plug pins: AMP 926 885-1  
 Mating connector (not included in scope of delivery):  
 Connector shell: AMP 350 779-4  
 3x sockets: AMP 926 884-1



1 = not used  
 2 = N + capacitor  
 3 = L  
 4 = PE

# VJH0200X2MES

AC diagonal module · max. 850 m<sup>3</sup>/h · Ø 200 mm



## Material/Surface

- Housing: Plastic
- Support bracket: Plastic
- Impeller: Plastic

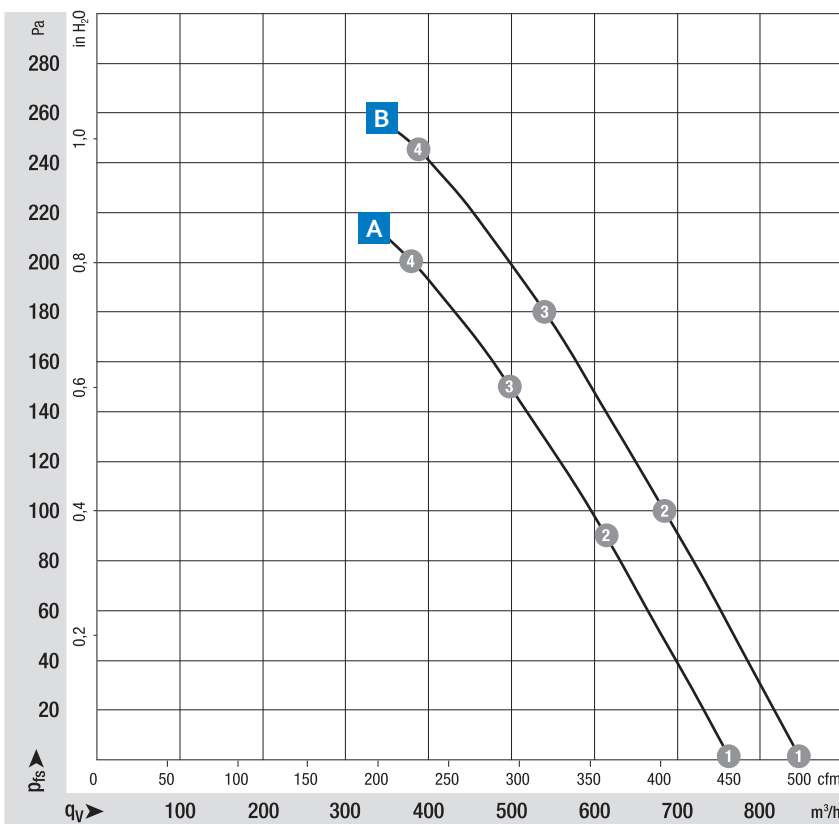
## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: "V", single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: Motor IP44, Plug IP20; depending on installation and position
- Electrical hookup: via plug
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 2.1 kg

## Approvals

- CE; UKCA; EAC; CSA C22.2 Nr.77; UL 1004-3; CCC on request

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more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

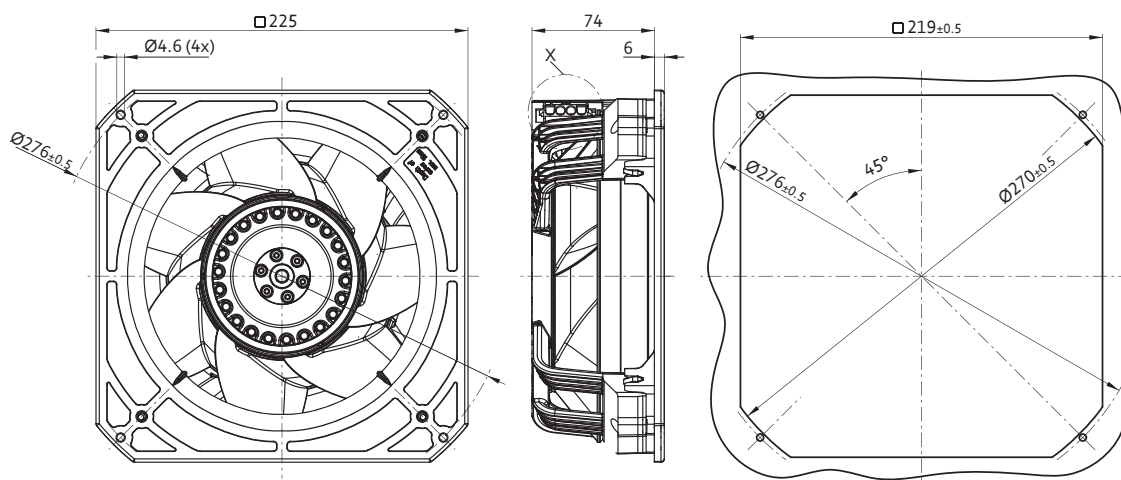
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Sound power level	Sound pressure	Max. back-pressure	Perm. ambient temperature
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	dB(A)	Pa	°C
VJH0200X2MES	K2E200AA5202	1-230	50	A	①	765	450	2 650	65	0.30	7.0	62	200	-25...+80
					②	645	380	2 625	66	0.29	6.8	60		
					③	510	300	2 605	68	0.30	6.7	59		
					④	360	210	2 610	68	0.29	6.9	61		
		1-230	60	B	①	850	500	2 950	90	0.40	7.3	65	245	-25...+80
					②	715	420	2 880	92	0.41	7.0	62		
					③	565	335	2 820	95	0.42	6.9	61		
					④	380	225	2 845	94	0.41	7.1	63		

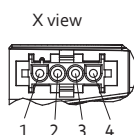
Subject to changes.

## Technical drawing

Dimensions in mm



Coded plug system  
 Universal Mate-N-Lok  
 Connector shell: AMP 350 780-1  
 3x plug pins: AMP 926 885-1  
 Mating connector (not included in scope of delivery):  
 Connector shell: AMP 350 779-4  
 3x sockets: AMP 926 884-1



1 = not used  
 2 = N + capacitor  
 3 = L  
 4 = PE

# VJH0200X3MES

AC diagonal module · max. 880 m<sup>3</sup>/h · Ø 200 mm



## Material/Surface

- Housing: Plastic
- Support bracket: Plastic
- Impeller: Plastic

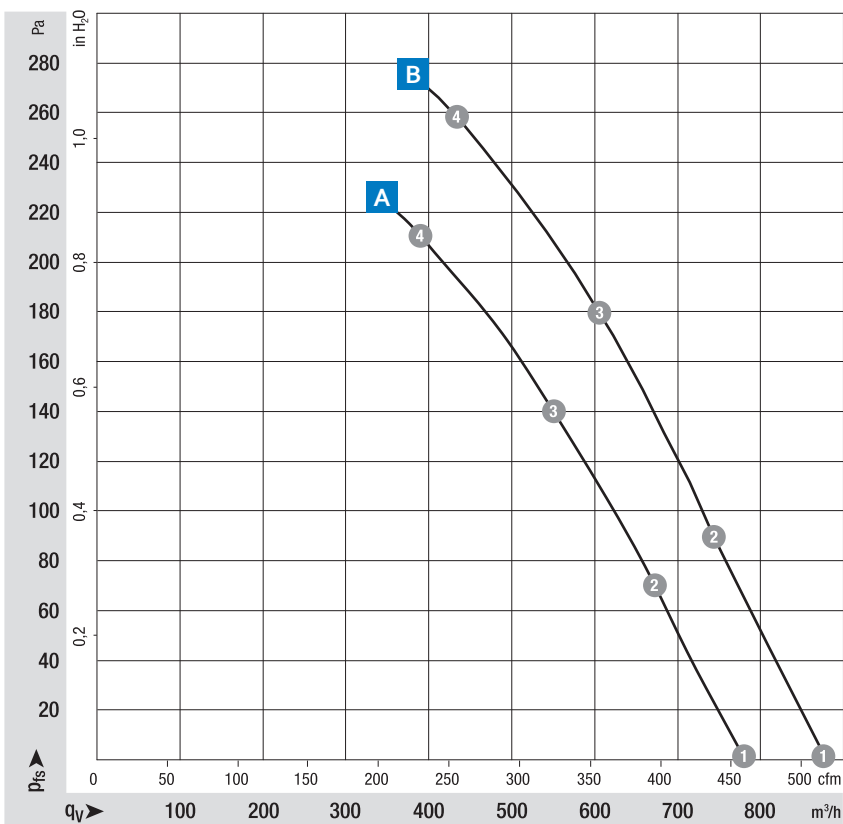
## Characteristics

- Version: Classic AC fan; compact and robust
- Direction of air flow: "V", single inlet
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Maintenance-free ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP44, depending on installation and position
- Electrical hookup: via plug
- Electrical protection class: I (with customer connection to grounding conductor)
- Weight: 2.0 kg

## Approvals

- DIN EN 60335-1; EAC; CCC on request

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

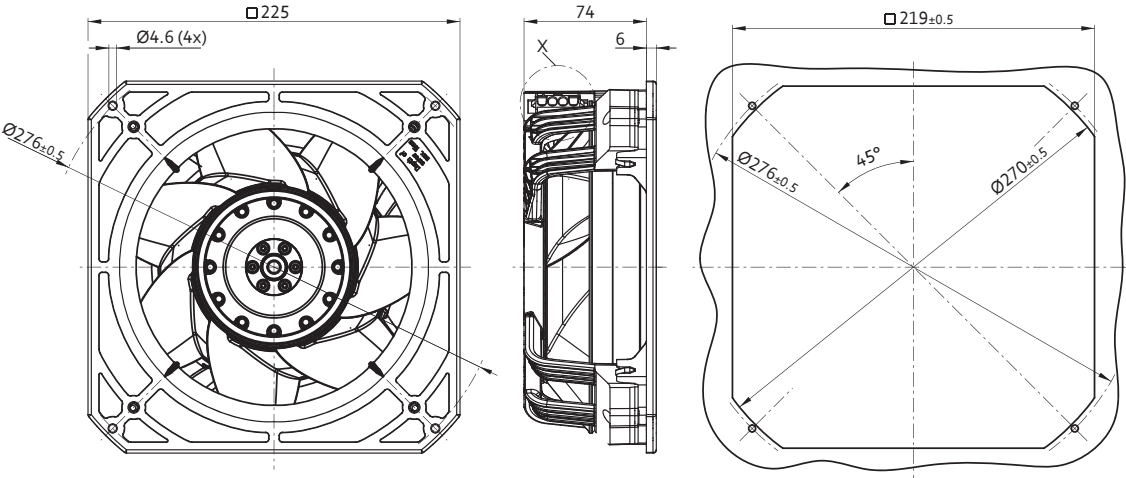
Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

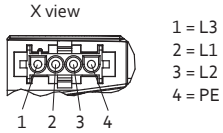
Type	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow	Air flow	Speed	Power consumption	Input current	Sound power level	Sound pressure	Max. back-pressure	Perm. ambient temperature
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	A	Bel(A)	dB(A)	Pa	°C
VJH0200X3MES	K2D200AA0202	3- 400Y	50	A	①	780	460	2 700	65	0.15	7.1	62	210	-25...+75
					②	670	395	2 690	69	0.16	6.9	61		
					③	540	315	2 675	72	0.16	6.8	60		
					④	365	215	2 685	70	0.16	7.0	62		
		3- 400Y	60	B	①	880	520	3 050	90	0.16	7.3	65	260	-25...+75
					②	735	435	3 005	95	0.16	7.1	63		
					③	590	345	2 970	98	0.17	7.0	63		
					④	405	240	2 980	96	0.17	7.2	64		

Subject to changes.

Technical drawing Dimensions in mm



Coded plug system  
 Universal Mate-N-Lok  
 Connector shell: AMP 350 780-1  
 4 x plug pins: AMP 926 885-1  
 Mating connector (not included in scope of delivery):  
 Connector shell: AMP 350 779-4  
 4x sockets: AMP 926 884-1



Product overview

# AC centrifugal fans



The tried-and-tested AC fans from ebm-papst are used wherever DC voltage is not available. In addition to complete devices, you will also find fans without external housing. These offer economic benefits whenever the air duct design can be integrated in the device that is being ventilated.



AC centrifugal fans are available in many sizes with forward or backward-curved fan impeller. Depending on the installation situation, it is a pure fan impeller or is combined with a housing with optimized air flow and noise.



Fan drives through shaded-pole or capacitor motors usually incorporate the familiar external rotor principle. This design combines high performance with economic efficiency. ebm-papst also offers particularly flat AC fans with an internal rotor motor. The advantage of these is their fast start-up to full speed, resulting in lower mass moments of inertia.



All fan types are designed in IP20 as standard. IP54/IP68 solutions and special protection types are available on request.

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### Type code example: VBH0450PTTLZ

V	B	H	0450	P	T	T	L	Z
Product category	Product type Airflow direction	Product version	Diameter	Brand name	Motor	Motor size		Standard
						Diameter	Stack length	

Dimension in mm	Type	Type (old)	Page
□ 121 x 37	VHS0090XQHCS	RL 90	338
□ 135 x 38	VHS0090XQHCS	RG 90	340
□ 180 x 40	VCS0125XQHCS	RG 125	342
□ 220 x 56	VCS0160XQKDS	RG 160	344
∅ 138 x 40	VBS0125XQHCS	RER 125	346
∅ 176 x 54	VBS0160XQKDS	RER 160	348

# VHS0090XQHCS

AC centrifugal fans · max. 38.3 m<sup>3</sup>/h · □ 121 x 37 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Metal

## Characteristics

- Version: Classic AC fan in centrifugal design with housing and forward-curved impeller; compact and robust
- Direction of air flow: centrifugal; Discharge through window in housing
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 single wires; Housing base with flat plugs 6.3 x 0.8 mm for ground conductor
- Electrical protection class: I
- Weight: 680 g

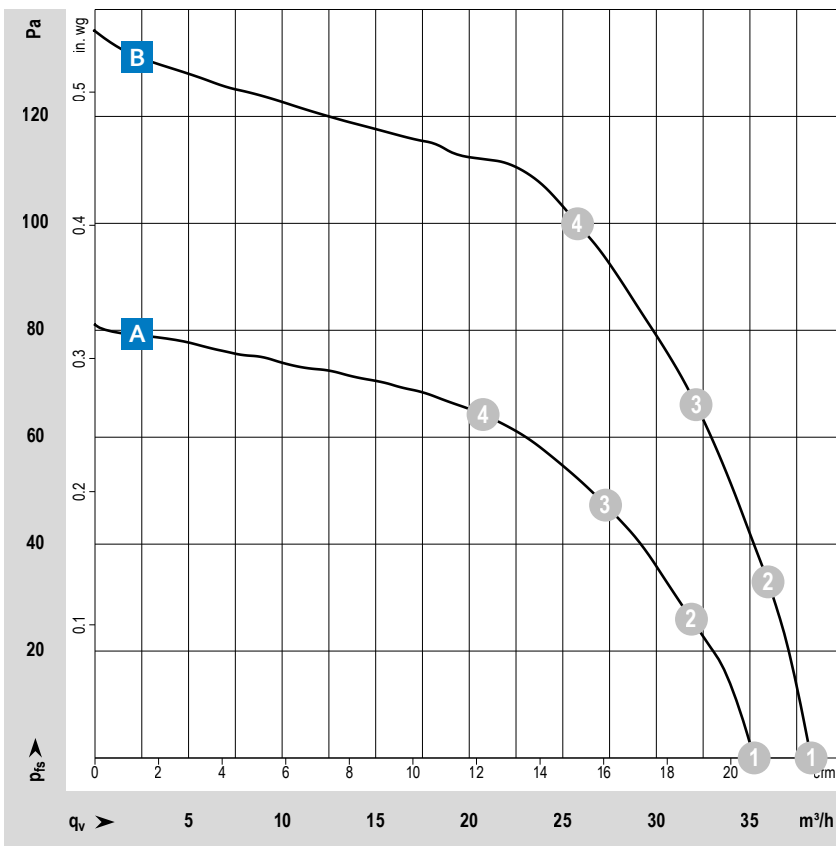
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

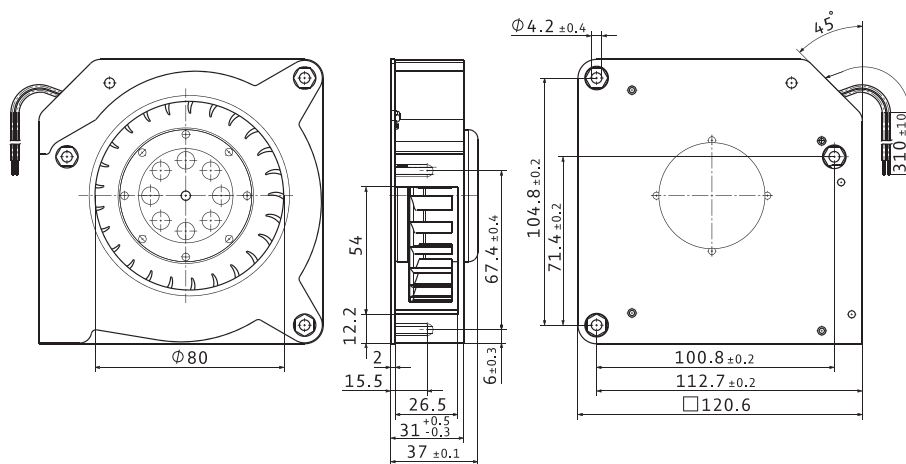
Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard
		VAC	Hz			m <sup>3</sup> /h	cfm					
VHS0090XQHCS RL 90-18/50	9214014004	230	50	A	①	33.9	20.0	2 450	19.3	6.0	-10...+50	37 500
					②	31.9	18.8	2 440	19.3	6.1		
					③	27.2	16.0	2 520	18.6	5.9		
					④	21.0	12.4	2 590	17.9	5.7		
VHS0090XQHCS RL 90-18/56	9214014019	230	50	A	①	35.2	20.7	2 450	22.3	6.0	-30...+70	37 500
					②	31.9	18.8	2 460	22.1	6.1		
					③	27.2	16.0	2 550	21.3	5.9		
					④	20.7	12.2	2 630	20.6	5.7		
VHS0090XQHCS RL 90-18/00	9214014005	115	60	B	①	38.3	22.5	2 550	21.4	6.2	-10...+60	37 500
					②	36.0	21.2	2 730	21.5	6.2		
					③	32.1	18.9	2 940	20.4	6.2		
					④	25.8	15.2	3 120	19.2	6.1		
VHS0090XQHCS RL 90-18/06	9214014021	115	60	B	①	35.7	21.0	2 550	17.1	6.2	-30...+85	37 500
					②	32.9	19.4	2 570	17.0	6.2		
					③	29.2	17.2	2 750	16.1	6.2		
					④	23.3	13.7	2 920	15.1	6.1		

Subject to changes.

## Technical drawing

Dimensions in mm



Type / Type old	Connection wires
VHS0090XQHCS RL 90-18/50	AWG 18, TR 32
VHS0090XQHCS RL 90-18/00	AWG 18, TR 32
VHS0090XQHCS RL 90-18/56	AWG 22
VHS0090XQHCS RL 90-18/06	AWG 22

# VHS0090XQHCS

AC centrifugal fans · max. 50 m<sup>3</sup>/h · □ 135 x 38 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Metal

## Characteristics

- Version: Classic AC fan in centrifugal design with housing and forward-curved impeller; compact and robust
- Direction of air flow: centrifugal; Discharge through window in housing
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 single wires AWG 22
- Electrical protection class: I
- Weight: 560 g

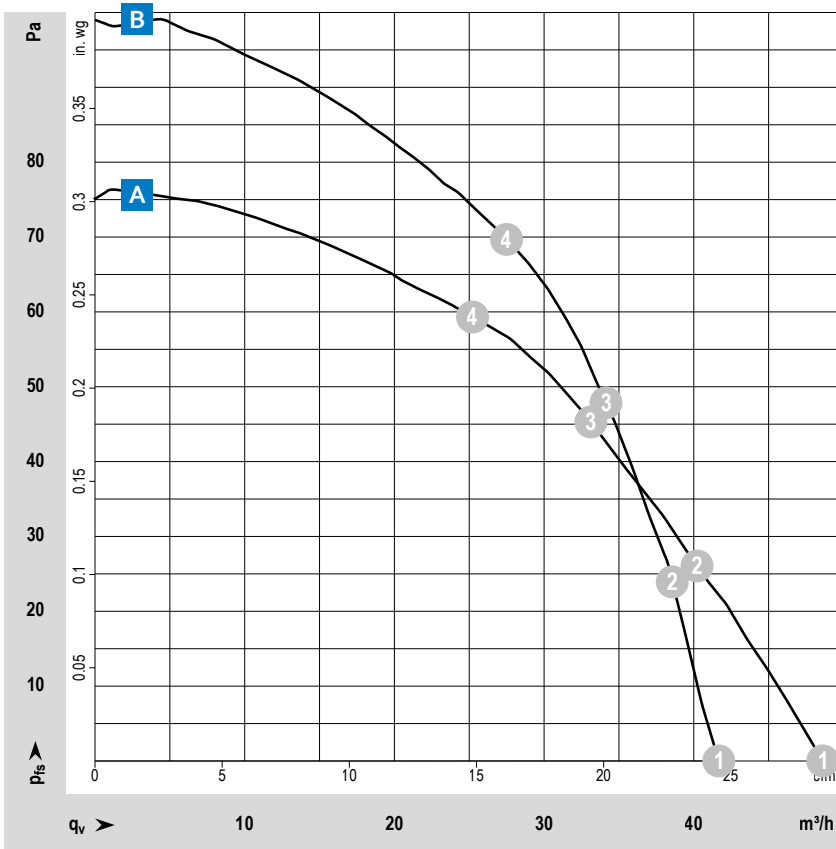
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

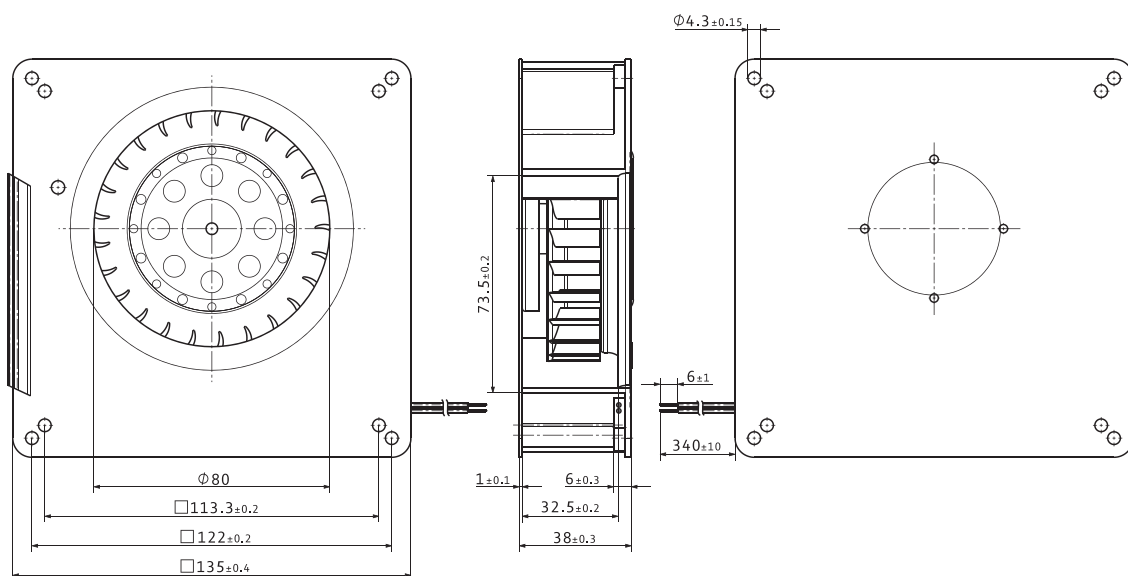
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard
		VAC	Hz			m³/h	cfm					
VHS0090XQHCS RG 90-18/50	9544014005	230	50	B	①	49	29	2 200	20.6	6.1	-30...+60	35 000
					②	40	24	2 330	19.6	5.9		
					③	33	19	2 420	18.9	5.7		
					④	25	15	2 510	18.1	5.6		
VHS0090XQHCS RG 90-18/56	9544014001	230	50	B	①	50	29	2 200	20.1	6.1	-30...+60	35 000
					②	41	24	2 340	19.0	5.9		
					③	34	20	2 440	18.2	5.7		
					④	26	15	2 530	17.4	5.6		
VHS0090XQHCS RG 90-18/00	9544014006	115	60	A	①	42	25	1 900	16.8	5.8	-30...+65	35 000
					②	40	23	2 270	16.0	5.9		
					③	35	20	2 530	15.0	5.8		
					④	28	16	2 750	13.9	5.9		
VHS0090XQHCS RG 90-18/06	9544014002	115	60	A	①	43	25	1 900	13.1	5.8	-30...+65	35 000
					②	38	22	2 200	12.4	5.9		
					③	33	19	2 400	11.7	5.8		
					④	26	15	2 570	10.9	5.9		

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0125XQHCS

AC centrifugal fans · max. 84 m<sup>3</sup>/h · □ 180 x 40 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Metal

## Characteristics

- Version: Classic AC fan in centrifugal design with housing and backward-curved impeller; compact and robust
- Direction of air flow: centrifugal; Discharge through window in housing
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 single wires AWG 22
- Electrical protection class: I
- Weight: 850 g

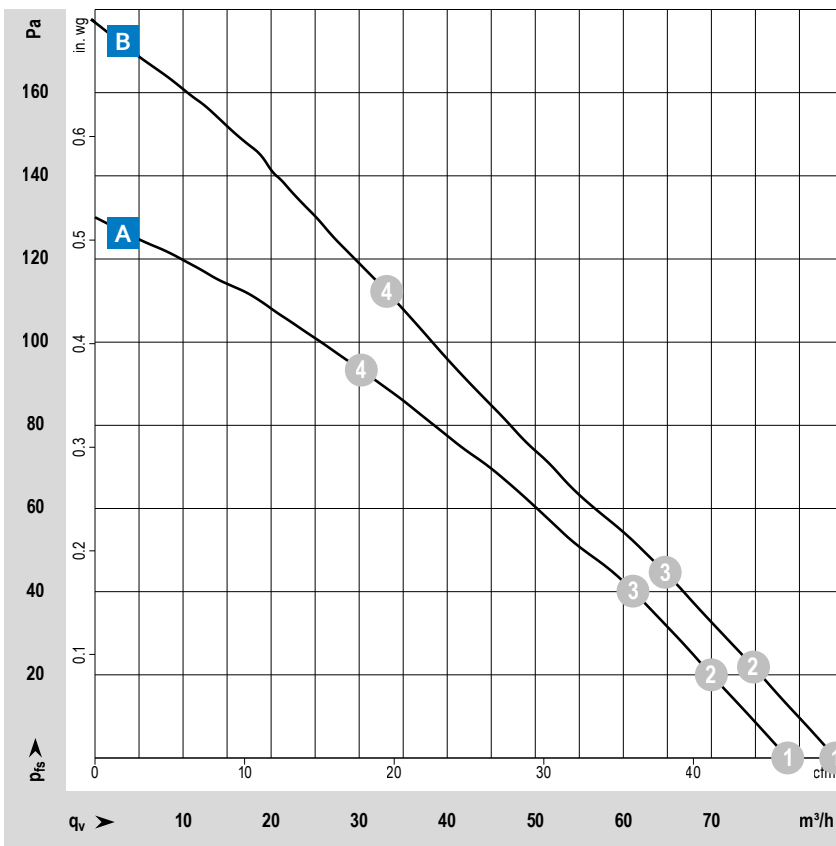
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

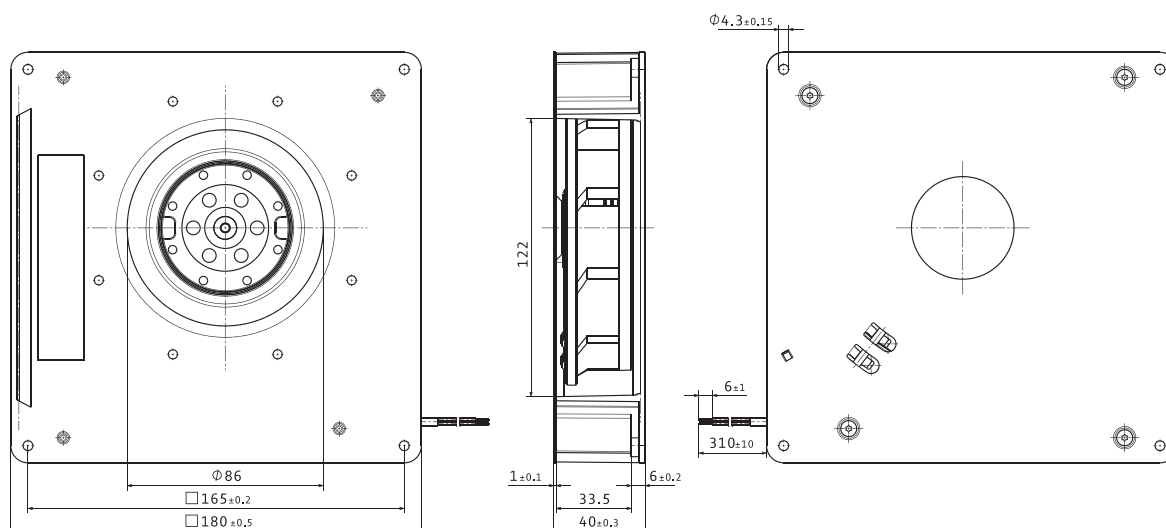
Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound p<sub>r</sub>wer level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general conditions>

Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm	W	Bel(A)	°C	L <sub>10</sub> (40 °C) ebm-papst standard
VCS0125XQHCS RG 125-19/56	9544014101	230	50	A	①	79.0	46.5	2 550	20.3	6.2	-30...+70	37 500
					②	70.0	41.2	2 530	20.4	6.1		
					③	61.0	35.9	2 520	20.4	6.0		
					④	30.2	17.8	2 580	19.5	5.8		
VCS0125XQHCS RG 125-19/06	9544014102	115	60	B	①	84.0	49.4	2 750	16.8	6.4	-30...+80	40 000
					②	75.0	44.1	2 720	17.0	6.3		
					③	65.0	38.3	2 700	17.0	6.2		
					④	33.1	19.5	2 830	16.2	6.0		

Subject to changes.

## Technical drawing

Dimensions in mm



# VCS0160XQKDS

AC centrifugal fans · max. 211 m<sup>3</sup>/h · □ 220 x 56 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic
- Base plate: Metal

## Characteristics

- Version: Classic AC fan in centrifugal design with housing and backward-curved impeller; compact and robust
- Direction of air flow: centrifugal; Discharge through window in housing
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 single wires AWG 18
- Electrical protection class: I
- Weight: 1.7 kg

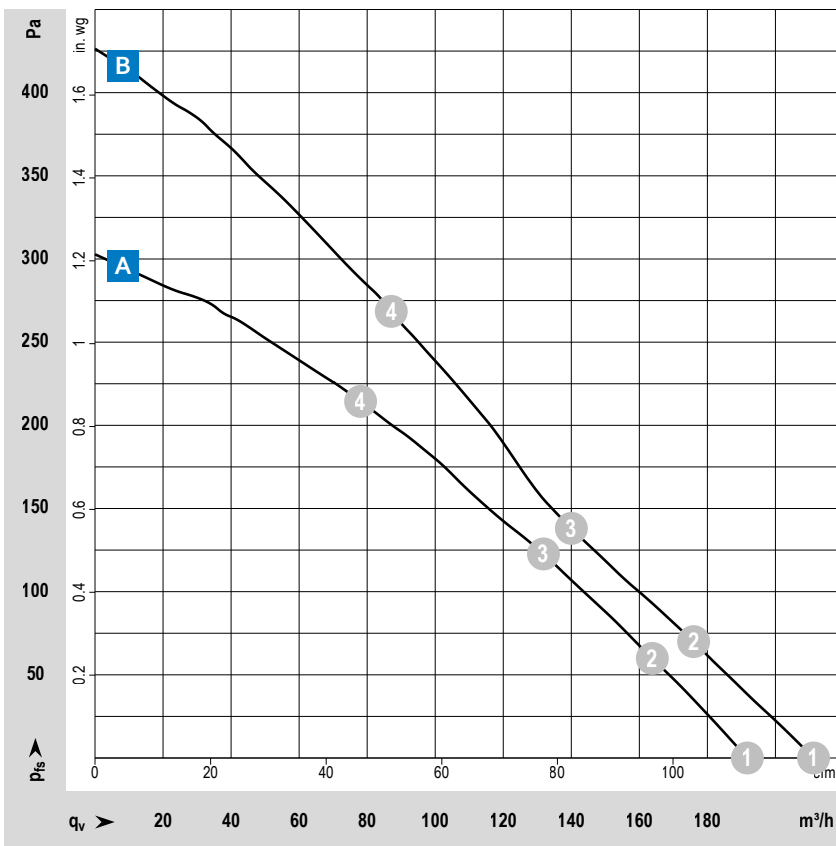
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.  
 Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation!  
 For detailed information see <http://www.ebmpapst.com/general-conditions>

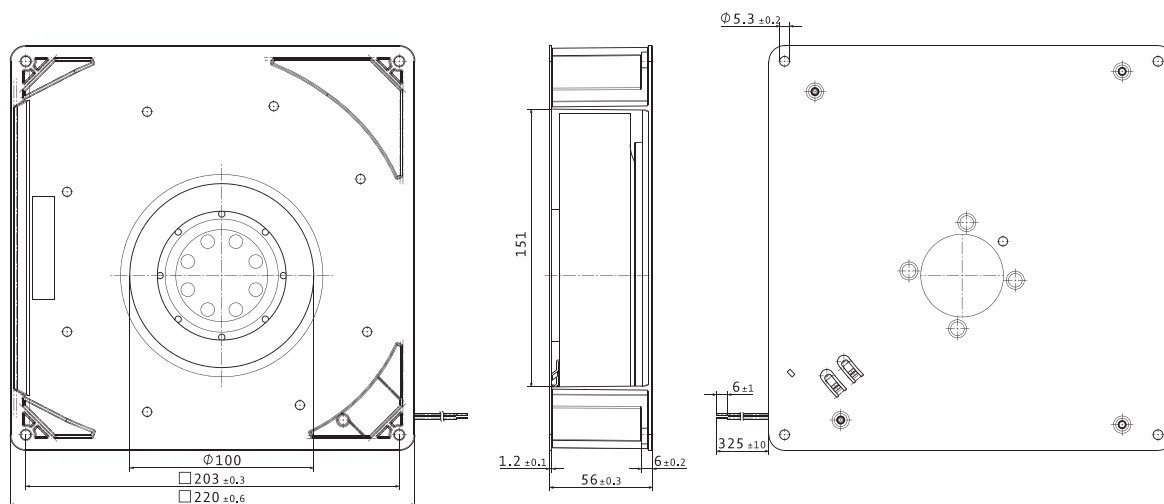


Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life
		VAC	Hz			m³/h	cfm	rpm	W	Bel(A)	°C	L <sub>10</sub> (40 °C) ebm-papst standard
VCS0160XQKDS RG 160-28/56S	9545020001	230	50	A	①	192	113	2 750	48.7	7.1	-30...+70	30 000
					②	164	97	2 730	49.2	7.0		
					③	132	78	2 720	48.9	6.8		
					④	78	46	2 780	46.1	6.5		
VCS0160XQKDS RG 160-28/06S	9545020002	115	60	B	①	211	124	3 050	49.9	7.4	-30...+80	27 500
					②	176	104	2 960	52.1	7.2		
					③	140	82	2 900	53.2	7.0		
					④	87	51	3 130	47.8	6.9		

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0125XQHCS

AC centrifugal fans · max. 108 m<sup>3</sup>/h · Ø 138 x 40 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic with sheet steel reinforced

## Characteristics

- Version: Classic AC fan in centrifugal design without housing with backward-curved impeller; compact and robust
- Direction of air flow: centrifugal
- Direction of rotation: clockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 single wires AWG 22
- Electrical protection class: I
- Weight: 500 g

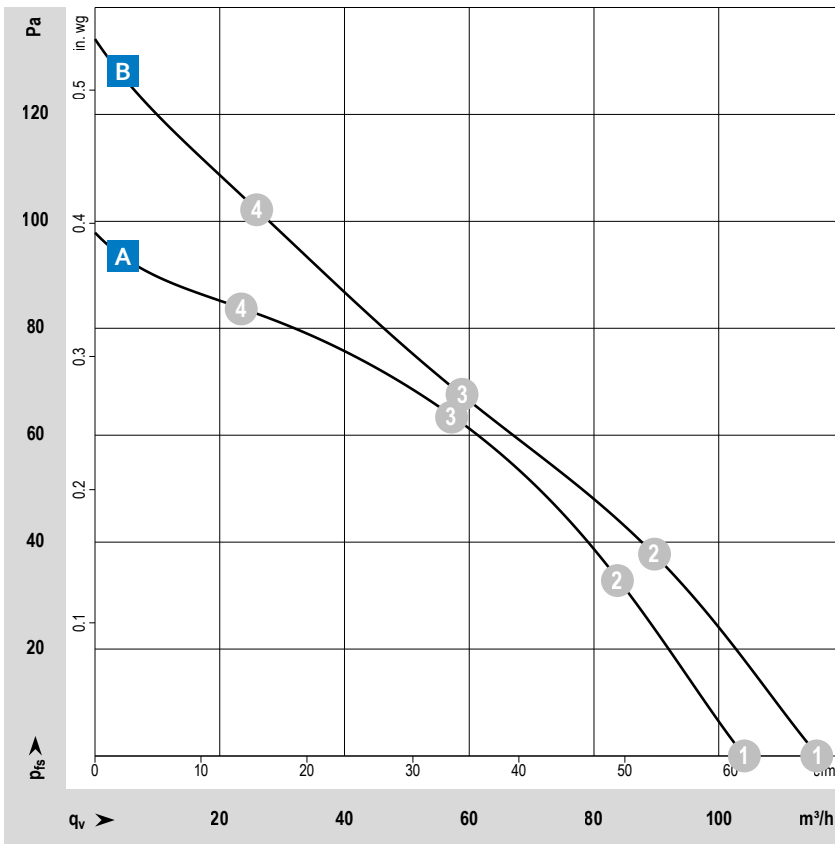
## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection
- Salt spray protection
- Degree of protection: up to IP54

from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

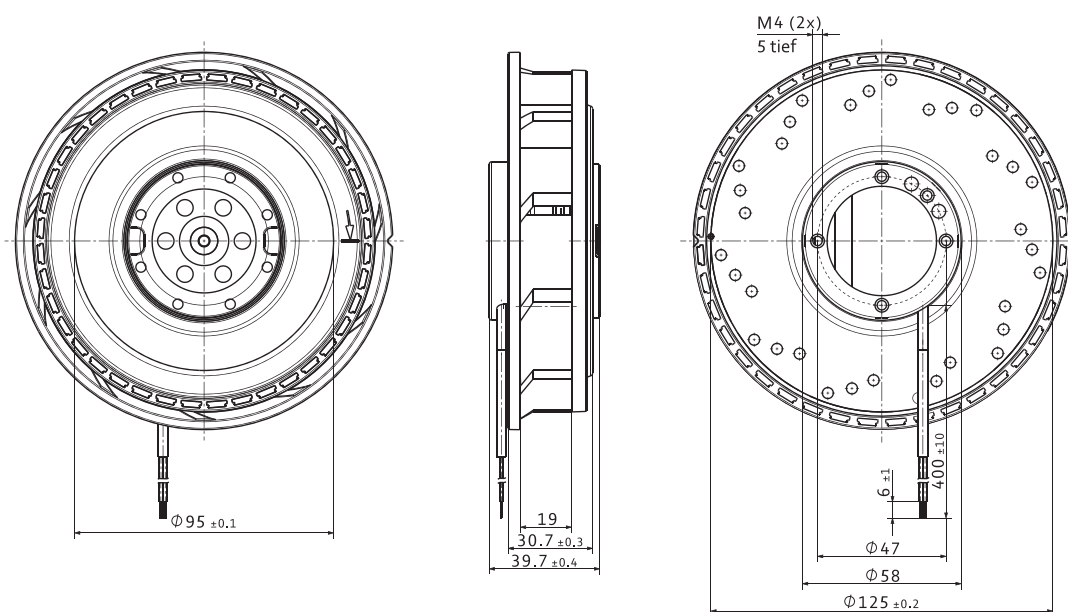
Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general-conditions>

Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard
		VAC	Hz			m <sup>3</sup> /h	cfm	rpm				
VBS0125XQHCS RER 125-19/56	9544014151	230	50	A	①	104.0	61.2	2 600	19.2	6.4	-30...+60	37 500
					②	84.0	49.4	2 550	19.7	6.2		
					③	57.0	33.5	2 520	19.9	6.0		
					④	23.5	13.8	2 620	19.0	5.9		
VBS0125XQHCS RER 125-19/06	9544014152	115	60	B	①	108.0	63.6	2 900	15.3	6.6	-30...+70	40 000
					②	86.0	50.6	2 750	16.1	6.4		
					③	59.0	34.7	2 630	16.7	6.2		
					④	25.0	14.7	2 800	15.8	6.2		

Subject to changes.

## Technical drawing

Dimensions in mm



# VBS0160XQKDS

AC centrifugal fans · max. 273 m<sup>3</sup>/h · Ø 176 x 54 mm



## Material/Surface

- Scroll housing: Plastic
- Impeller: Plastic with sheet steel reinforced

## Characteristics

- Version: Classic AC fan in centrifugal design without housing with backward-curved impeller; compact and robust
- Direction of air flow: centrifugal
- Direction of rotation: counterclockwise, looking towards rotor
- Installation position: any
- Bearing: Sleeve bearings or ball bearings
- Operating mode: Continuous operation (S1)
- IP protection class: IP20
- Electrical hookup: via 2 single wires AWG 18
- Electrical protection class: I
- Weight: 1.0 kg

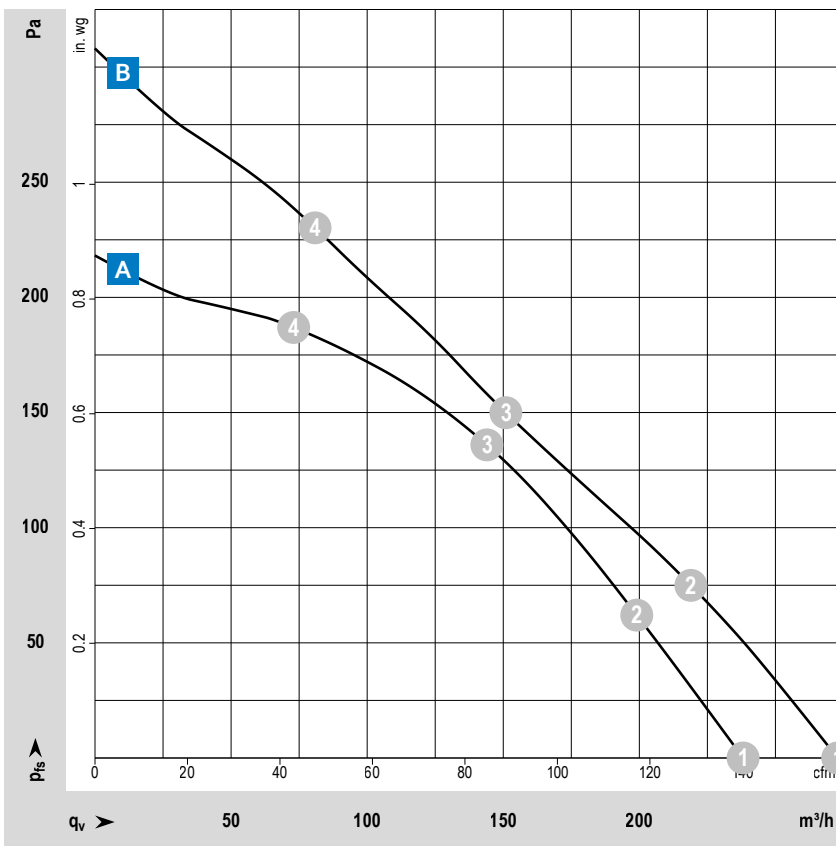
from page 14	Definitions
from page 350	Accessories
more at	<a href="http://www.ebmpapst.com">www.ebmpapst.com</a>

## Approvals

- DIN EN 62368, UL507, CSA C22.2 Nr. 113, EAC, CE, UKCA, CCC

## Options

- Moisture protection



### Measuring conditions

Air performance measured according to: ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level LWA ISO 10302 measured on a hemisphere with a radius of 2 m. Sound pressure level LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see <http://www.ebmpapst.com/general conditions>

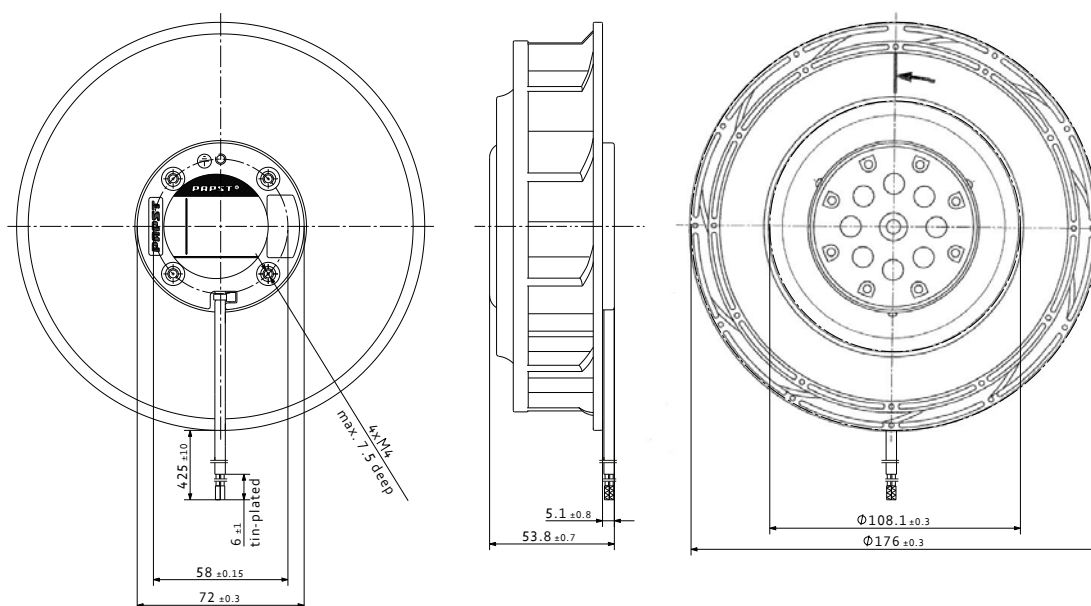
Type / Type old	Part number	Nominal voltage	Frequency	Characteristic curve	Operating point	Air flow		Speed	Power consumption	Sound power level	Perm. ambient temperature	Service life L <sub>10</sub> (40 °C) ebm-papst standard
		VAC	Hz			m³/h	cfm	rpm				
VBS0160XQKDS RER 160-28/56S	9545020051	230	50	A	①	238	140	2 850	46.7	7.3	-30...+60	30 000
					②	199	117	2 800	48.7	7.2		
					③	144	85	2 770	49.7	6.9		
					④	73	43	2 820	47.1	6.7		
VBS0160XQKDS RER 160-28/06S	9545020052	115	60	B	①	273	161	3 250	47.3	7.7	-30...+70	30 000
					②	219	129	3 080	51.9	7.5		
					③	151	89	2 900	55.4	7.1		
					④	81	48	3 130	50.4	7.0		

Subject to changes.

Förderleistung und Geräusch von Centrifugal Lüftern ohne Außenhousing hängen von ihren Einbauverhältnissen ab. Der genannte Air flow und das Geräusch wurden unter folgenden Measuring conditions ermittelt:  
Montage des Centrifugallüfters auf Grundplatte 260 x 260 mm.  
Deckplatte 260 x 260 mm, mit Lufteinlassöffnung Ø 100 mm, konzentrisch zum Lüfterrand.

## Technical drawing

Dimensions in mm



*ebm-papst*

# Accessories



**ebm-papst offers a comprehensive selection of accessories for optimum fan operation,** from temperature sensors for speed-controlled fans, to guard grills for all variants, to cables, filters, and screens, to spacers and installation parts. Even with very special accessories, you can be sure that we will assist you every way possible. The sales experts at ebm-papst will be happy to answer your questions about installing and using fans.

**From selection to accessories:**

Insist on the efficient and reliable service provided by ebm-papst.

**ebmpapst**

engineering a better life

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# Finger guards



## Material

- Galvanized or nickel-plated steel wire

## Note

- Finger guard according to DIN EN ISO 13857 (previously EN 294).
- Additional finger guards that do not satisfy DIN EN ISO 13857 available on request.
- Our finger guards are designed specifically to be used with ebm-papst fans. They combine the highest degree of safety with minimum effect on the operating noise. Please note that the safety-related clearances cannot be guaranteed when finger guards made by other manufacturers are used.

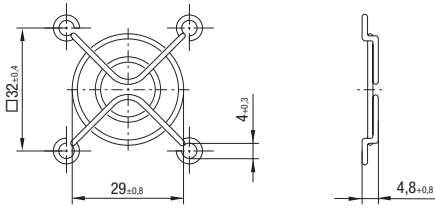
More at [www.ebmpapst.com](http://www.ebmpapst.com)

Fan size	Fan type	Type	Part number	Side	Drawing see page	
40 x 40	VWCA040F..., VWCC040Y..., VWCE040J...	LZ29-1	9920029001	Intake/Outlet	353	
50 x 50	VWCB050F...	LZ31	9920031000	Intake/Outlet	353	
60 x 60	VWCB060F..., VWCD060A..., VWCD060X..., VWCD060Y..., VWCE060J...	LZ28	9920028000	Intake/Outlet	353	
		LZ28-1	9920028001			
		LZ22-2	9920022002			
80 x 80	VWCD080A..., VWCD080Y..., VWCE080P..., VWCF080J..., VVY0076X...	LZ32-4	9920032004	Intake/Outlet	353	
		LZ22-N	9920022001			
		LZ32-14	9920145006			
92 x 92	VWCD092Y..., VWCE092P..., VWCF092J..., VWCF092P..., VWCD092A..., VWCF092A...	LZ23	9920023000	Intake/Outlet	353	
		LZ23-1	9920023001			
119 x 119	VWCD119F..., VWCE119P..., VWCF119A..., VUCF119Y..., VWCF119X..., VWCF119A..., VWCD119A...	LZ20	9920020000	Intake/Outlet	353	
		LZ30	9920030000			
		LZ30-3	9920030003			
		LZ30-4	9920030004			
127 x 127	VKCF119A...	LZ30-4	9920030004	Intake/Outlet	354	
		VKCF127A...	LZ35	9920035000	Intake/Outlet	354
		VWCF127Y...	LZ35	9920035000	Intake/Outlet	354
135 x 135	VWCF135Y..., VWCF135A...	LZ35-2	9920035002	Intake/Outlet	354	
		LZ25	9920025000	Intake/Outlet	354	
140 x 140	VUCG140A...	LZ53	9920053000	Intake/Outlet	354	
		LZ24	9920024000	Intake/Outlet	354	
Ø 150	VWEF150X..., VWEH150X...	LZ27	9920027000	Intake/Outlet	355	
		LZ36	9920036000			
		LZ26	9920026000			
Ø 172	VWEG172P..., VWEG172X...	LZ37	9920037000	Intake/Outlet	355	
		LZ37-10	9920145004			
		LZ38	9920038000			
		LZ39	9920039000			Outlet side
172 x 150	VKEG178X...	LZ52	9920052000	Intake side	355	
		LZ38	9920038000	Intake/Outlet	355	
172 x 160	VKLG160X..., VKS0154X...	LZ38	9920038000	Intake side	355	
220 x 200	VWLG200F..., VWS0184F...	LZ22	9920022000	Intake/Outlet	355	

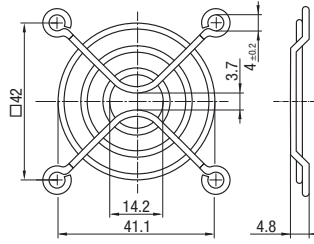
Subject to changes. Dimensions in mm.



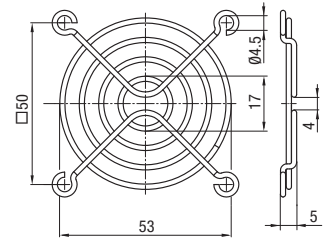
**LZ29-1** Fan size 40 x 40



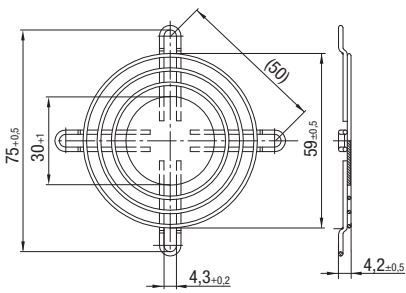
**LZ31** Fan size 50 x 50



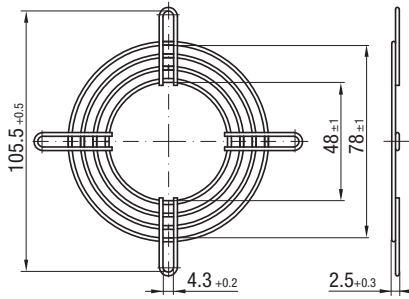
**LZ28** Fan size 60 x 60



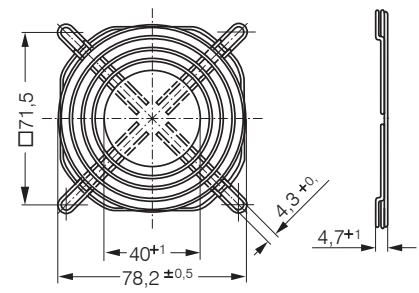
**LZ28-1** Fan size 60 x 60



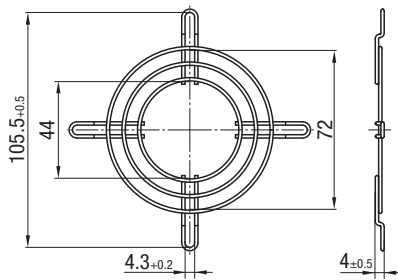
**LZ22-2** Fan size 80 x 80



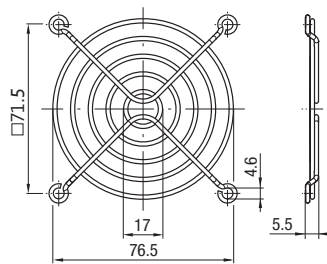
**LZ32-4** Fan size 80 x 80



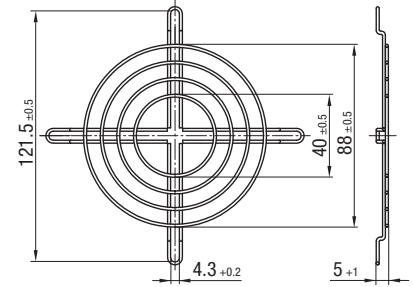
**LZ22-N** Fan size 80 x 80



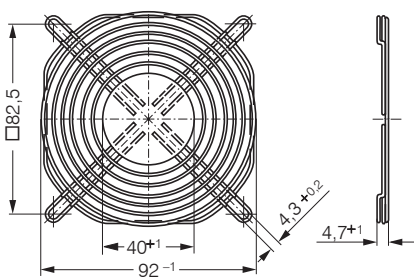
**LZ32-14** Fan size 80 x 80



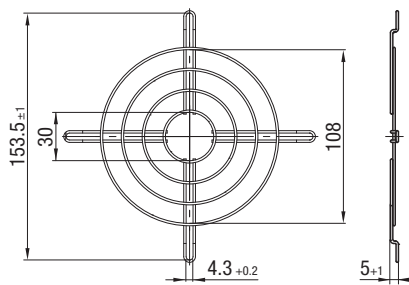
**LZ23** Fan size 92 x 92



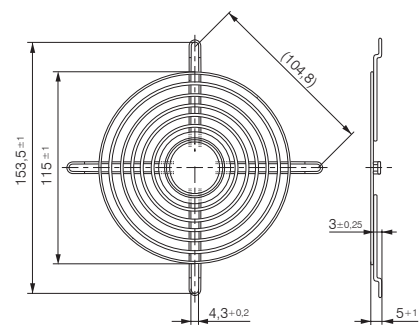
**LZ23-1** Fan size 92 x 92



**LZ20** Fan size 119 x 119

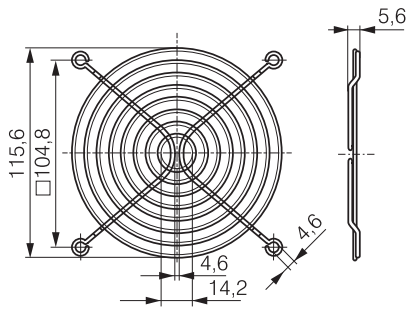


**LZ30** Fan size 119 x 119

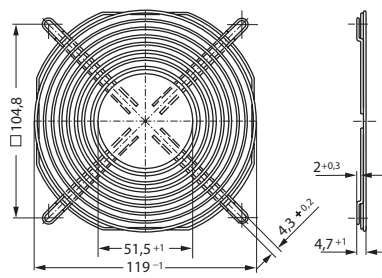


# Finger guards

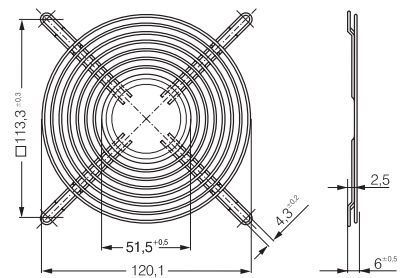
**LZ30-3** Fan size 119 x 119



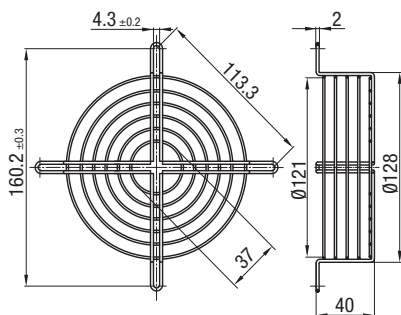
**LZ30-4** Fan size 119 x 119



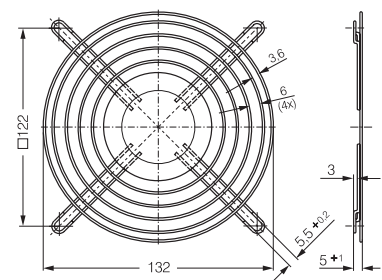
**LZ35** Fan size 127 x 127



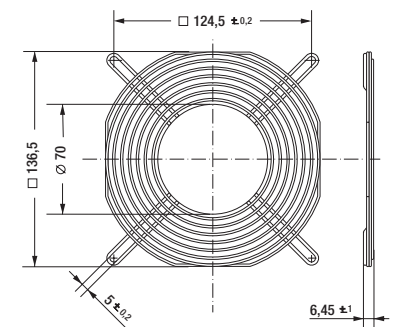
**LZ35-2** Fan size 127 x 127



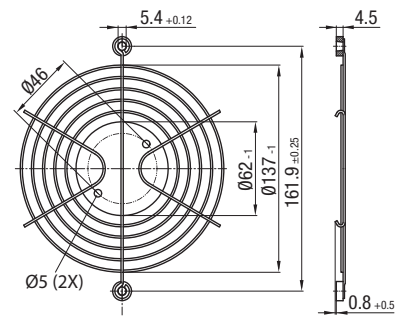
**LZ25** Fan size 135 x 135



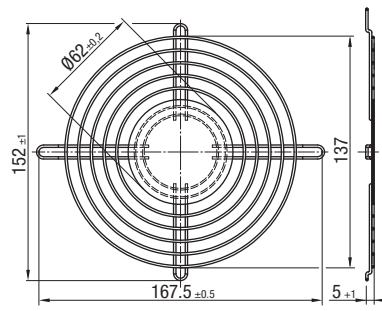
**LZ53** Fan size 140 x 140



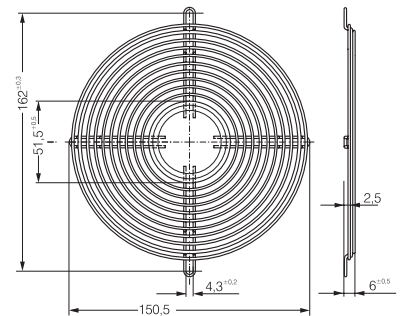
**LZ24** Fan size Ø 150



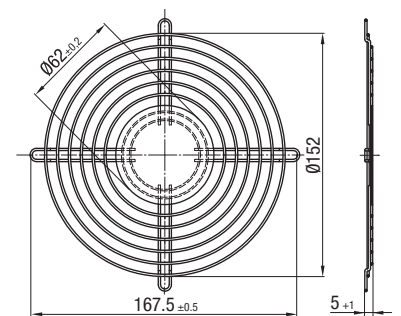
**LZ27** Fan size Ø 150



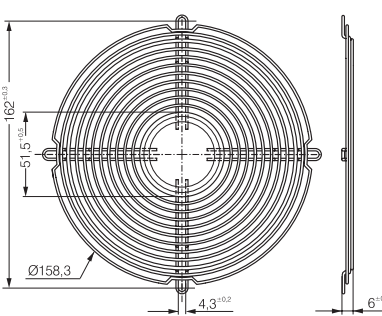
**LZ36** Fan size Ø 150



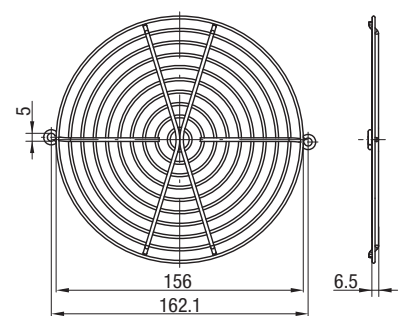
**LZ26** Fan size Ø 172



**LZ37** Fan size Ø 172

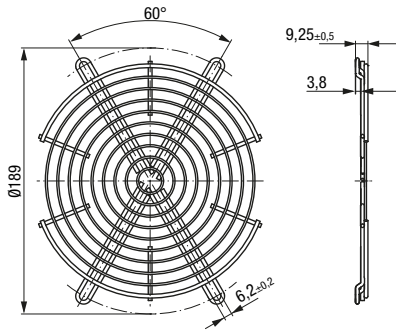


**LZ37-10** Fan size Ø 172



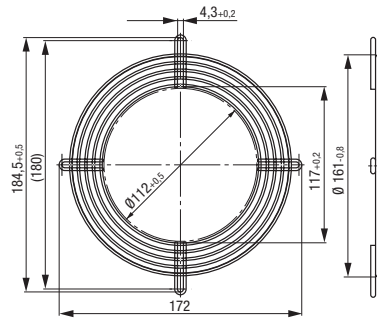
LZ38-1

Lüftereinheit



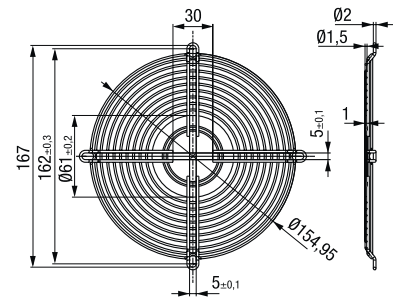
LZ39

Fan size Ø 172



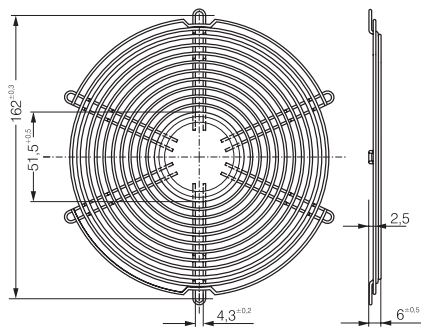
LZ52

Fan size Ø 172



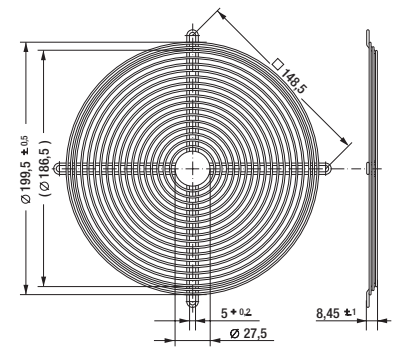
LZ38

Fan size 172 x 150; 172 x 160; Ø 172



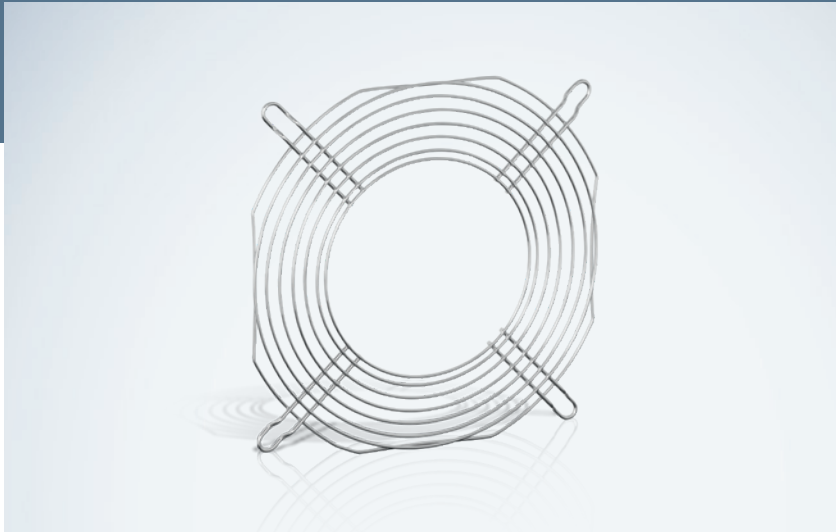
LZ22

Fan size 220 x 200



# Finger guards

ACmaxx / ACi



## Material

- Galvanized or nickel-plated steel wire

## Note

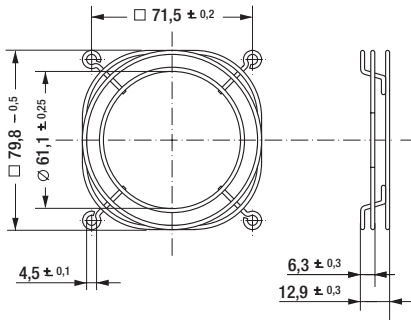
- Finger guard according to DIN EN ISO 13857 (previously EN 294).
- Finger guards for air outlet described on this page are specifically for fan series ACmaxx.
- For air intake side the standard finger guards with a corresponding dimension can be used.

More at [www.ebmpapst.com](http://www.ebmpapst.com)

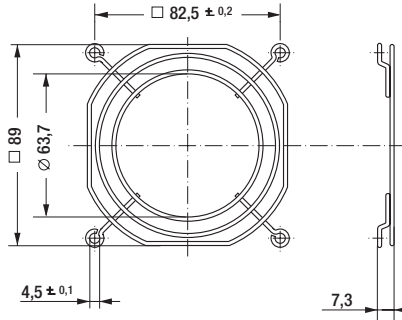
Finger guards made of metal					
Fan size	Fan type	Type	Part number	Side	Drawing see page
80 x 80	VWCE080ASJHS	LZ32-7	9920032007	Outlet side	357
		LZ22-N	9920022001	Intake side	353
		LZ22-2	9920022002		
		LZ32-14	9920145006		
		LZ32-4	9920032004		
92 x 92	VWCJ092JSGKS	LZ23-6	9920023006	Outlet side	357
		LZ23	9920023000	Intake side	353
		LZ23-1	9920023001		
119 x 119	VWCF119Y..., VWCH119FSJMS	LZ20	9920020000	Intake side	353
		LZ30	9920030000		
		LZ30-3	9920030003		
		LZ30-4	9920030004	354	
VWCH119FSJMS	LZ30-9	9920030009	Outlet side		357
Ø 172	VWEK172XSLPS	LZ26	9920026000	Intake side	354
		LZ37	9920037000		
		LZ37-10	9920145004		
		LZ52	9920052000		
		LZ37-2	9920037002	Outlet side	357
Finger guards made of plastic					
Fan size	Fan type	Type	Part number	Side	Drawing see page
119 x 119	VWCH119FSJMS, VWCF119Y...	LZ30-5	9920030005	Intake side	361
		LZ30-6	9920030006		
Ø 172	VWCF119Y...	LZ30-P	9920030001	Intake/Outlet	361
Filter fan guards					
Fan size	Fan type	Type	Part number	Side	Drawing see page
80 x 80	VWCE080ASJHS	FF80	9920034002	Intake side	363
92 x 92	VWCJ092JSGKS	FF92	9920034003	Intake side	363
119 x 119	VWCH119FSJMS	FF119	9920034004	Intake side	363
Ø 172	VWEK172XSLPS	FF172	9920034005	Intake side	363

Subject to changes. Dimensions in mm.

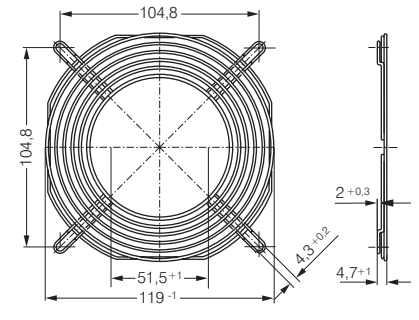
LZ32-7 Fan size 80 x 80



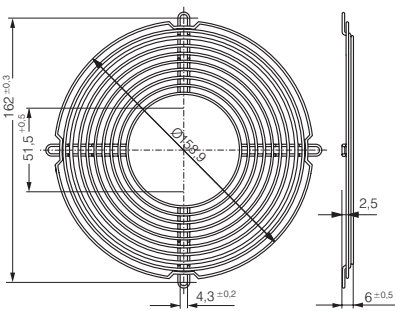
LZ23-6 Fan size 92 x 92



LZ30-9 Fan size 119 X 119



LZ37-2 Fan size  $\varnothing 172$



# Finger guards



## Material

- Steel wire, plastic-coated, with silver-metallic gloss

More at [www.ebmpapst.com](http://www.ebmpapst.com)

Fan size	Fan type	Part number	Side
Ø 200	VWLJ225X...	<b>78128-2-4039</b>	Intake/Outlet
Ø 250	VWLK280X...	<b>09418-2-4039</b> <b>72880-2-4039</b>	Intake/Outlet

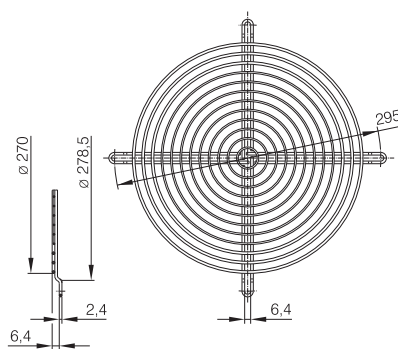
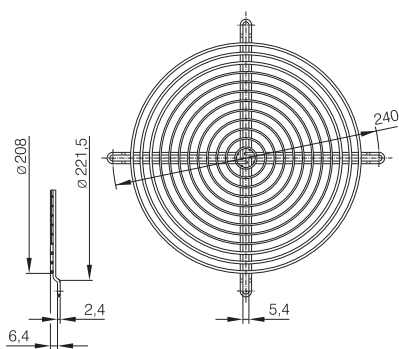
Subject to changes. Dimensions in mm.

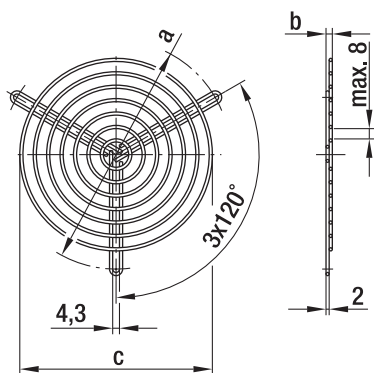
78128-2-4039

Fan size Ø 200

09418-2-4039

Fan size Ø 250

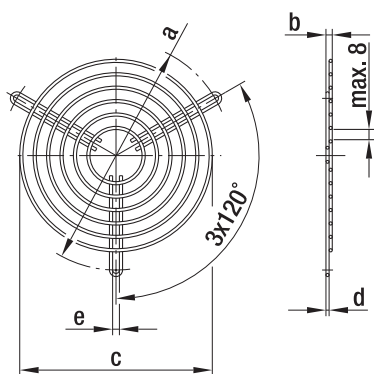




Finger guards for centrifugal blowers with dual inlet  
Material: Steel wire

Fan size	Part number	a	b	c	Coating	Highlights
097	83319-2-4039	96.0	3.5	71.0	Phosphated, plastic-coated in RAL no. 9005	for D2E097-CH
	09485-2-4039	114.0	3.5	88.0	Phosphated, plastic-coated in RAL no. 9005	for D2E097-B
133/146	09500-2-4039	145.0	4.0	122.0	Phosphated, plastic-coated in RAL no. 9005	

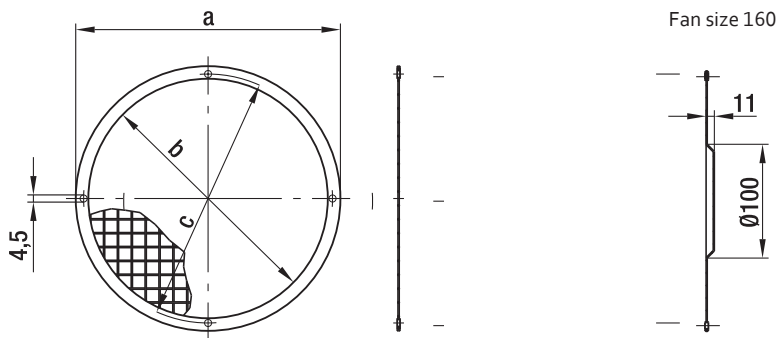
Subject to changes. Dimensions in mm.



Finger guards for centrifugal blowers with dual inlet (versions with EW motor)  
Material: Phosphated steel wire, plasticcoated, silver-metallic gloss

Fan size	Part number	a	b	c	d	e
160	35000-2-4039	182.0	12.0	144.0	2.4	4.5

Subject to changes. Dimensions in mm.

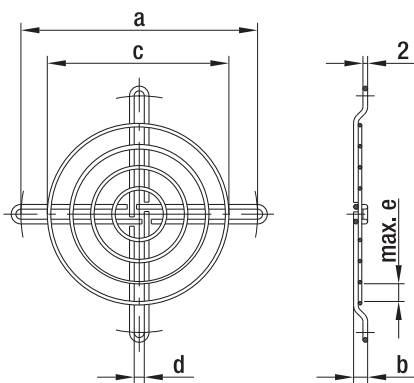


#### Finger guards for centrifugal blowers with single inlet

Material: Welded screens made of hot-dip galvanized steel, border made of tin (0.4 mm thick)

Fan size	Part number	a	b	c	Highlights
085	09489-2-4039	90.0	74.0	84.0	3 drilled holes staggered by 120°
108	09490-2-4039	126.0	110.0	118.0	
120	09494-2-4039	140.0	124.0	132.0	
140/146	09492-2-4039	168.0	152.0	158.0	
160	09503-2-4039	183.0	170.0	175.0	see picture fan size 160

Subject to changes. Dimensions in mm.



#### Finger guards for centrifugal blowers with single inlet

Material: Steel wire

Fan size	Part number	a	b	c	d	e	Coating
076/085	98214-2-4039	101.0	6.0	79.0	4.3	8.0	Plastic coated, silver-metallic gloss
108	98214-2-4039	120.0	3.5	88.0	4.3	8.0	Plastic coated, silver-metallic gloss
140/146	25028-2-4039	162.0	8.5	139.0	4.3	8.0	Galvanized, chromitized in blue
160	17729-2-4039	175.0	3.5	139.0	4.6	7.0	Galvanized, chromitized in blue

Subject to changes. Dimensions in mm.



# Finger guards



## Material

- Fiberglass-reinforced plastic

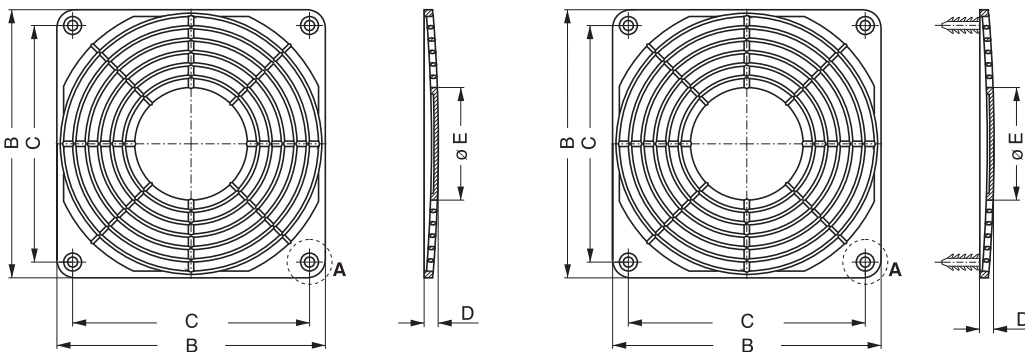
## Note

- Finger guard according to DIN EN ISO 13857 (previously EN 294).
- Plastic guards may not be used for the following models:
  - VWCF080J from 12.000 rpm
  - VWCF092J from 11.000 rpm
  - VUCF119Y from 7.500 rpm

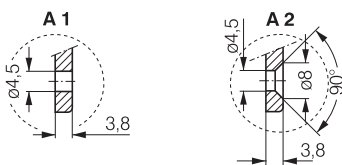
More at [www.ebmpapst.com](http://www.ebmpapst.com)

Fan size	Fan type	Type	Part number	B	C	D	E	Mounting
60 x 60	VWCB060F..., VWCD060A..., VWCD060X..., VWCD060Y..., VWCE060J...	LZ28-3	9920028003	60 $\pm$ 0.5	50.0 $\pm$ 0.2	3.0	24	A3
		LZ32-2	9920032002					A1
80 x 80	VWCD080A..., VWCD080Y..., VWCE080P..., VWCF080J..., VWCF080A...	LZ32-P	9920032001	80 $\pm$ 0.5	71.5 $\pm$ 0.2	7.0	34	A2
		LZ32-3	9920032003					A3
92 x 92	VWCD092Y..., VWCE092P..., VWCF092J..., VWCF092P..., VWCD092A..., VWCF092A...	LZ23-2	9920023002	92 $\pm$ 0.5	82.5 $\pm$ 0.2	6.5	46	A1
		LZ23-3	9920023003					A3
119 x 119	VWCD119F..., VWCE119P..., VWCF119A..., VUCF119Y..., VWCF119X..., VWCD119A..., VKCF119A...	LZ30-5	9920030005	119 $\pm$ 0.5	105 $\pm$ 0.2	6.5	50	A2
		LZ30-6	9920030006					A4
		LZ30-P	9920030001					A2
127 x 127	VWCF127Y..., VKCF127A...,	LZ33-1	9920033001	127 $\pm$ 0.5	113 $\pm$ 0.2	6.5	50	A2
		LZ33-2	9920033002					A4

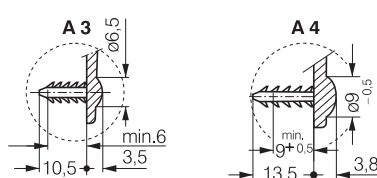
Subject to changes. Dimensions in mm.



Screw connection



Barbed inserts



Only suitable for bore hole diameter 4.3 - 4.7.

# Filter fan guards

119 x 119



## Material

- Filter guard LZ40 N: black, fiberglass-reinforced plastic with inserted wire mesh LZ60.
- Coarse filter LZ60: stainless steel wire mesh
- Mounting lug LZ40-1 for mounting

More at

[www.ebmpapst.com](http://www.ebmpapst.com)

### Fan type DC

VWCD119F..., VWCE119P..., VWCF119A..., VUCF119Y..., VKCF119A...

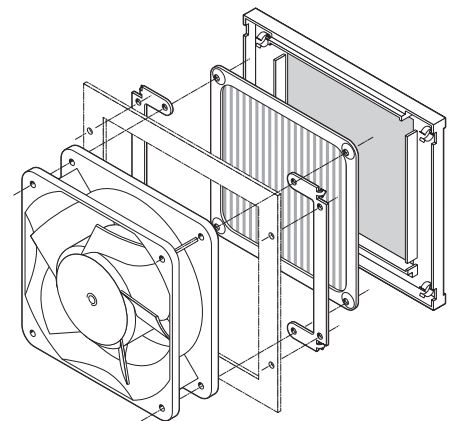
### Fan type AC

VWCD119A..., VWCF119X..., VWCF119A..., VWCH119FSJMS

### Fan type ACi

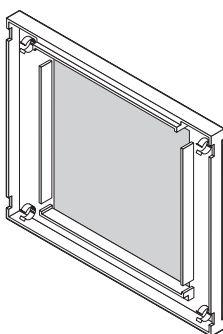
VWCF119Y...

Subject to changes. Dimensions in mm.



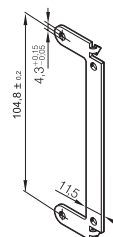
LZ40N

Filter guard



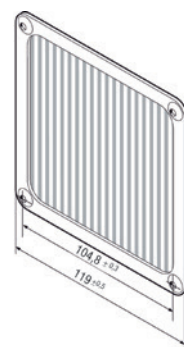
LZ40-1

Mounting lug



LZ60

Coarse filter



# Filter fan guards



## Material

- Guard cover: Injection-molded polycarbonate (PC) with mat surface.
- Mounting plate: wire mesh with black powder coating
- Filter pad: white, synthetically bonded fibers

## Note

- Filter fan guards suitable for fitting on axial fan series in sizes: 60 mm, 80 mm, 92 mm, 119 mm,  $\varnothing$  172 mm.
- All filter units fit directly on the existing mounting holes of the fans.
- Filter fan guards consisting of 3 parts: external guard cover, internal mounting plate, and replaceable filter pad.
- The filter pad can be replaced quickly and easily via a quick release on the guard cover.
- The filter pads can be replaced even while the fan is running, as protection is provided by the welded wire mesh.

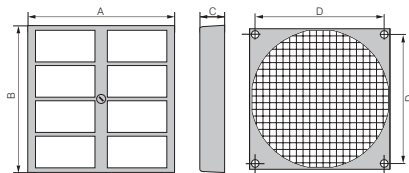
More at [www.ebmpapst.com](http://www.ebmpapst.com)

Fan size	Fan type	Type	Part number	A	B	C	D	Repl. filter*
60 x 60	VWCB060F..., VWCD060A..., VWCD060X..., VWCD060Y..., VWCE060J...	FF60	9920340001	65	65	13.5	50.0	RF 60
80 x 80	VWCD080A..., VWCD080Y..., VWCE080P..., VWCF080J..., VWCF080A...	FF80	9920340002	85	85	14.0	71.5	RF 80
92 x 92	VWCD092Y..., VWCE092P..., VWCF092J..., VWCF092P..., VWCD092A..., VWCF092A...	FF92	9920340003	125	105	17.5	82.5	RF 92
119 x 119	VWCD119F..., VWCE119P..., VWCF119A..., VUCF119Y..., VWCF119X..., VWCD119A...	FF119	9920340004	162	136	18.5	104.5	RF 119
$\varnothing$ 172 172 x 150 172 x 160	VKEG178X..., VWEG172X..., VWEG172P..., VKLG160X..., VWLG150X..., VKS0154X...	FF172	9920340005	226	190	19.5	162.0	RF 172

Subject to changes. Dimensions in mm. \* Replacement filter available only in packages of 5.

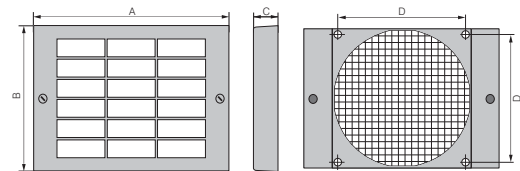
## FF60 / FF80

Fan size: 60 x 60 mm / 80 x 80 mm



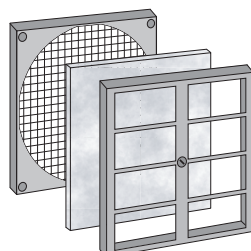
## FF92 / FF 119

Fan size: 92 x 92 mm / 119 x 119 mm



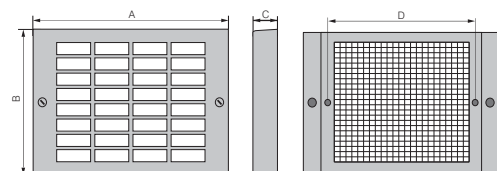
## Filter performance

The filter fan guard filters 75 % of dust particles with a size of 5-10 microns and can withstand temperatures of up to 100 °C. Filter class G3 according to DIN EN 779. Flame-retardant according to DIN 53438, class F1. When a clean filter is installed, a reduction of air flow of 20-30 % is possible.



## FF 172

Fan size:  $\varnothing$  172 mm



# Finger guards

For compact centrifugal modules



## Material

- PA plastic, fiberglass-reinforced

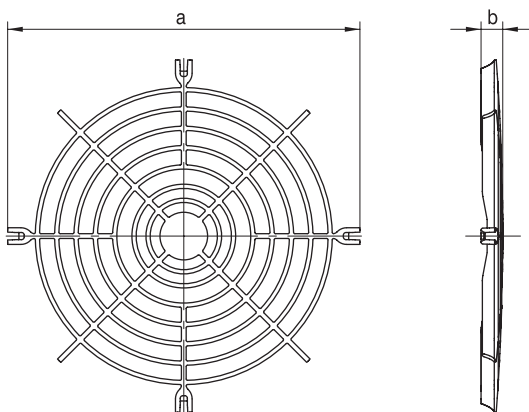
## Highlights

- Flame protection class in line with UL 94V-0

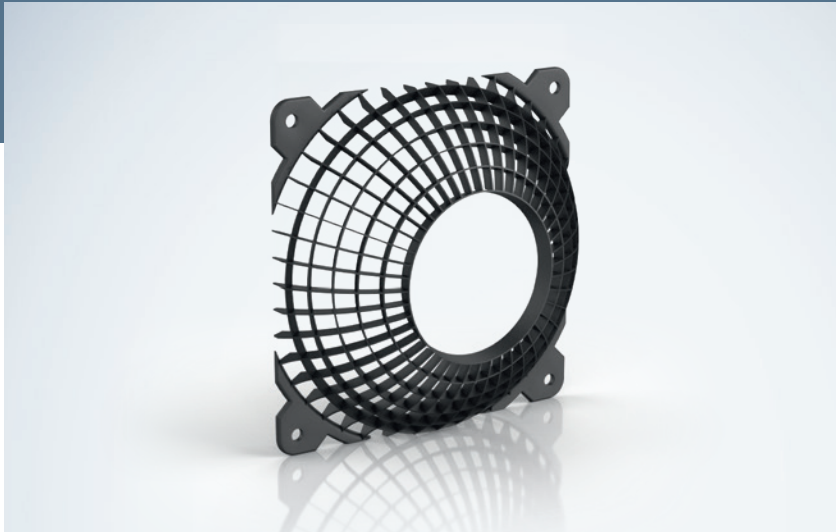
More at [www.ebmpapst.com](http://www.ebmpapst.com)

Fan size	Fan type	Type	Part number	a	b
Ø 190	VCS0190R...	LZ46-1	<b>9920046001</b>	133	9.0
Ø 220	VCS0220R...	LZ47-1	<b>9920047001</b>	166	8.7
Ø 225	VCS0225R...	LZ48-1	<b>9920048001</b>	158	8.7

Subject to changes. Dimensions in mm.



# Air inlet grill



## Material

- PA plastic, fiberglass-reinforced

## Highlights

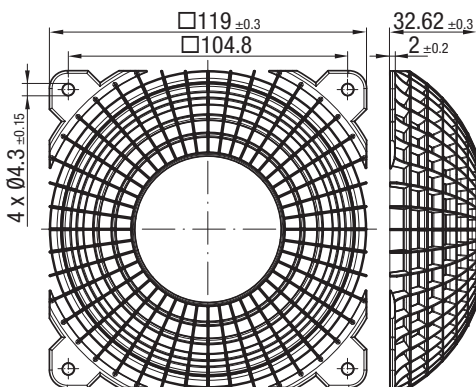
- For axial and diagonal fans
- Assembled on the air intake, the fan grid reduces the noise emission dramatically and minimizes disturbing low frequency sound.

More at

[www.ebmpapst.com](http://www.ebmpapst.com)

Fan size	Fan type	Type	Part number	Side
119 x 119	VWCF119Y..., VWCF119A..., VWCD119F..., VWCH119F..., VWCE119P..., VUCF119Y..., VWCF119X..., VWCD119A..., VKCF119A...	FG 119	9920070000	Intake side

Subject to changes. Dimensions in mm.

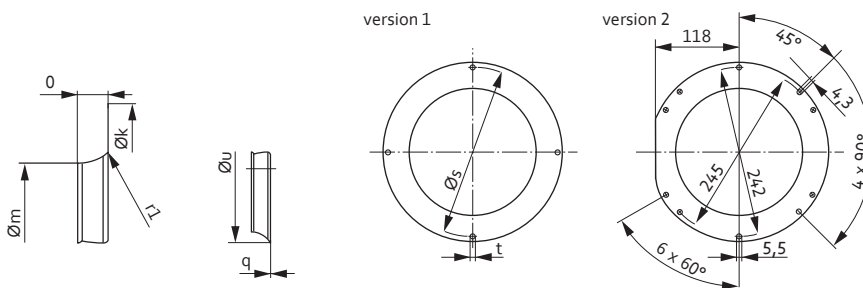


# Inlet rings

For centrifugal fans

## Material

- Galvanized sheet steel

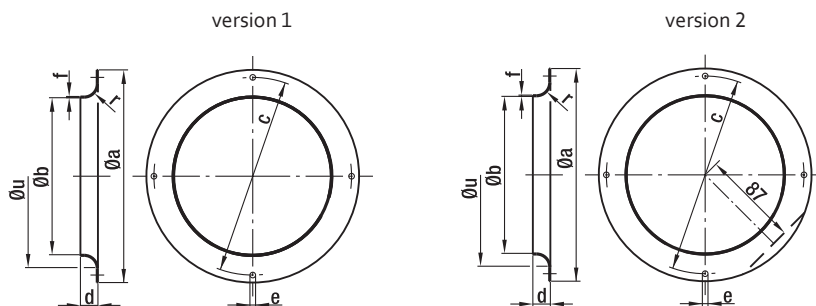


Inlet rings for backward curved centrifugal fans

Fan size <sup>1)</sup>	Type	Part number	version	k	m	o	q	r1	s	t	u
RER 120 (S)/120 (K)	LZ 1000-120	96120-2-4013	1	146.0	94.4	18.0	0.80	16.0	134.0	4 x 4.5	126.0
RER 133 (K)	LZ 1000-133	09566-2-4013	1	129.0	87.0	13.0	1.00	8.0	118.0	4 x 4.5	103.0
RER 160 (S)	LZ 1000-160	09569-2-4013	1	142.0	100.0	9.0	1.00	8.0	132.0	4 x 4.5	-
RER 175/190 (K)	LZ 1000-175	09576-2-4013	1	170.0	125.5	14.0	1.25	10.0	158.0	4 x 4.5	146.0
RER 220 TD (K)	LZ 1000-220	09609-2-4013	2	252.0	155.0	21.0	0.80	21.8	242.0	6 x 5.5	119.0
RER 225 TD (K)	LZ 1000-225	96358-2-4013	1	223.0	146.0	28.0	1.50	25.0	210.0	4 x 4.5	196.0

Subject to changes. Dimensions in mm.

<sup>1)</sup> Fan size with key for impeller material: (P) = plastic, (S) = sheet steel, (A) = aluminum



Inlet rings for forward curved centrifugal fans

Fan size	Part number	version	a	b	c	d	e	f	r	u	Highlights
085	09560-2-4013	1	92.0	63.4	84.0	6.0	3 x 4.2	0.80	6.8	-	3 drilled holes staggered by 120°
097	09563-2-4013	1	116.0	80.0	108.0	10.0	3 x 4.5	0.80	10.0	-	3 drilled holes staggered by 120°
108	09566-2-4013	1	129.0	87.0	118.0	13.0	4 x 4.5	1.00	8.0	-	
120	09569-2-4013	1	142.0	100.0	132.0	9.0	4 x 4.5	1.00	8.0	-	
133	09572-2-4013	1	150.0	112.0	142.0	12.0	4 x 4.5	1.00	10.0	-	
140/146	09576-2-4013	1	170.0	125.5	158.0	14.0	4 x 4.5	1.25	10.0	-	
160	09588-2-4013	2	185.0	130.0	175.0	17.0	4 x 4.5	0.75	12.0	-	

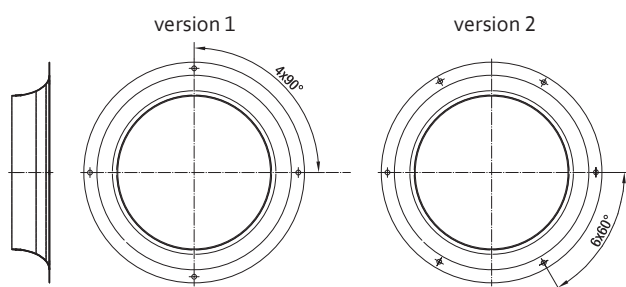
Subject to changes. Dimensions in mm.

# Inlet ringn / Luftfilter

für Centrifugallüfter

## Material

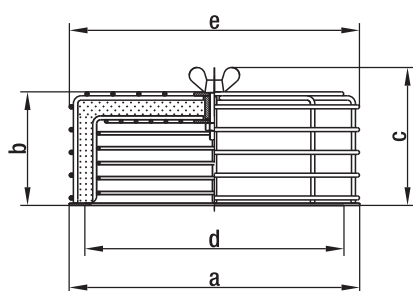
- Galvanized sheet steel



Inlet rings without measuring device for backward curved centrifugal fans

Fan size	Part number	version	Dimensions
190	09576-2-4013	1	See corresponding product page
220	09609-2-4013	2	See corresponding product page
225	96358-2-4013	1	See corresponding product page
250	96359-2-4013	1	See corresponding product page
280	28000-2-4013	1	See corresponding product page
310	31000-2-4013	1	See corresponding product page

Subject to changes. Dimensions in mm.



## Material

- Steel wire or sheet steel, plastic coated in RAL no. 9005, black

## Filter

- Viledon filter type R: PSB / 29 OS (according to DIN 24185)
- Separation capacity: < 86 %
- Efficiency: < 20 %
- Dust binding capacity: 650 g/m<sup>2</sup>

Air filters for centrifugal blowers (with die-cast aluminum housing)

Fan size	Part number	a	b	c	d	e	Replacement filter
108/120	95777-1-5171	142.0	66.0	83.0	118-132	145.0	95779-1-5171
140/146/160	95778-1-5171	185.0	74.0	91.0	158-175	185.0	95780-1-5171

Subject to changes. Dimensions in mm.

# Cables



## Characteristics

- Cable with molded plug connection in varying lengths.
- Wire end with wire end ferrules, crimped ferrules, or tin-plated.
- Straight or angled plug.
- For all fan types with flat plug 2.8 / 3.0 x 0.5.

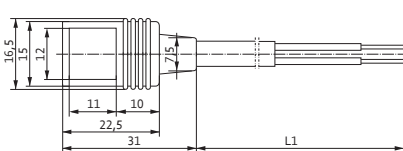
More at [www.ebmpapst.com](http://www.ebmpapst.com)

Part number	Type	L1	Wires	Plug	Wire end	Flat push-on receptacle	Application
9920120000	LZ120	610	0.5 mm <sup>2</sup>	G	C	2.8 x 0.5	AC
9920120004	LZ120-4	2 000	0.5 mm <sup>2</sup>	G	A	2.8 x 0.5	AC
9920120005	LZ120-5	380	0.5 mm <sup>2</sup>	W	B	2.8 x 0.5	DC
9920120006	LZ120-6	610	0.5 mm <sup>2</sup>	W	B	2.8 x 0.5	DC
9920120010	LZ120-10	2 500	0.5 mm <sup>2</sup>	G	B	2.8 x 0.5	AC
9920120011	LZ120-11	2 000	0.5 mm <sup>2</sup>	G	A	2.8 x 0.5	DC
9920120013	LZ120-13	5 000	0.5 mm <sup>2</sup>	G	B	2.8 x 0.5	AC
9920120016	LZ120-16	800	0.5 mm <sup>2</sup>	G	B	2.8 x 0.5	AC
9920120017	LZ120-17	3 000	0.5 mm <sup>2</sup>	G	A	2.8 x 0.5	AC
9920120018	LZ120-18	4 000	0.5 mm <sup>2</sup>	G	A	2.8 x 0.5	AC
9920126000	LZ126	1 000	0.5 mm <sup>2</sup>	G	C	2.8 x 0.5	AC
9920127000	LZ127	1 600	0.5 mm <sup>2</sup>	G	B	2.8 x 0.5	AC
9920130001	LZ130-1	610	0.82 mm <sup>2</sup>	G	C	2.8 x 0.5	AC*
9920140000	LZ140	610	0.73 mm <sup>2</sup>	G	B	2.8 x 0.8	AC

Subject to changes. Dimensions in mm.  
\* UL-approved

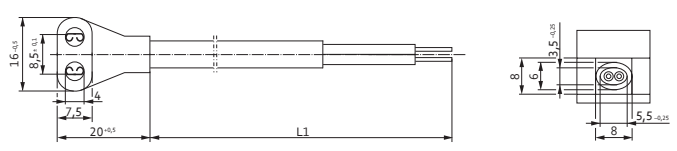
## Cable

## Straight plug (G)



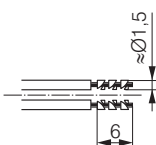
## Cable

## Angled plug (W)



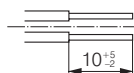
## Wire end ferrules

## Wire end A



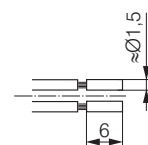
## Tin-plated

## Wire end B



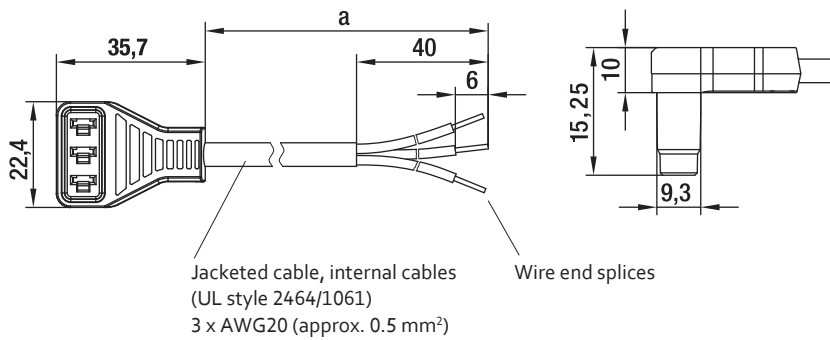
## Wire end ferrules

## Wire end C





# Cable (ESM) / Handheld Programmer



## Design

- Cable conforms to UL standards sealed plug.
- Customized cables on request.

### Cables for energy-saving motors 115/230 VAC

Part number	a
13060-4-1040	450
13061-4-1040	1 500

Subject to changes. Dimensions in mm.



## Characteristics

- Easy speed programming
- Battery operated
- User-friendly navigation menu
- Protective cover with folding stand

### For Energy Saving Motor (ESM) based products

Part number
CBC 000-AF08-01

Subject to changes. Dimensions in mm.

Makes quick work of programming the two ESM adjustable operating speeds. Eliminates the need for a PC, software adapter and second cable. Especially for use in production or by sales representatives. Automatic shut-off function for extended battery life. Mini USB plug for downloading software updates. Batteries, programming cable, and operating instructions included in scope of delivery.

# Accessories

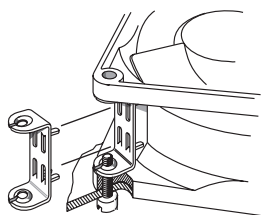
In addition to the accessories and installation parts listed here, ebm-papst also supplies a number of additional, sometimes very special parts for fans.

Our company sales team is happy to offer you their expert assistance with all your questions regarding the installation and use of our fans.

Fan type	Type	Part number
VWCE119P...	LZ212	9920212000
VWCD092Y..., VWCD119F..., VWCD080Y..., VWCD080A...	LZ261	9920261000
VWCF119X..., VUCF119Y..., VWCF135Y..., VWCF127Y..., VWCF135A..., VWEF150X..., VWEH150X..., VWEK172X..., VWEG172X..., VWEG172P..., VWLG150X..., VWEF150X..., VWEH150X...	LZ210	9920210000
	LZ215	9920215000
For all temperature-controlled fans	LZ370	4871104201
	LZ550	6030020000
For all fans with mounting holes of 4.3 mm	LZ551	6030053002

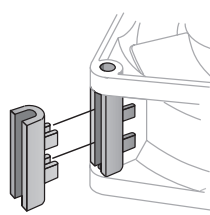
Subject to changes. Dimensions in mm.

## LZ212



Screw clip of rustproof spring steel. For mounting fans with threaded pin 3.5 DIN EN ISO 1478 (7970).

## LZ261



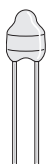
Spacer of fiberglass-reinforced plastic. For mounting with screws through both fan mounting flanges.

## LZ210



Screw clip of hardened steel. For mounting fans with threaded pin 6-32 UNC or 3.5 DIN 7970.

## LZ370



### Required performance data

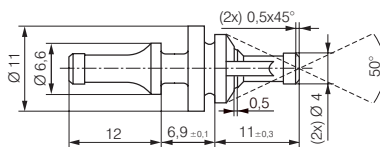
$R_{25} = 100 \text{ K}\Omega \pm 5\% @ 25^\circ\text{C}$

B-value = 4190  $\pm 2\%$

$P_{\text{max}} = 0.25 \text{ W}$

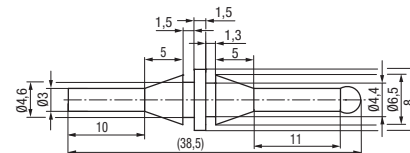
Temperature sensor for speed-controlled fan operation. Temperature range 30...50 °C.

## LZ550



Rubber anti-vibration mounts for fans with a hole diameter of  $4.3 \pm 0.2 \text{ mm}$  and flange thickness of 3 to 5.5 mm. For a carrier plate with a hole diameter of  $6.5 \pm 0.15 \text{ mm}$  and plate thickness of 1 to 2 mm.

## LZ551

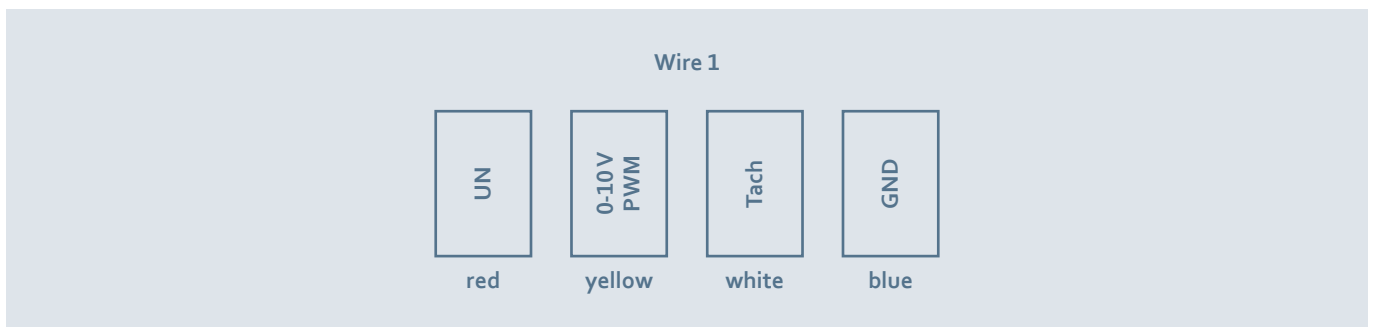


Rubber anti-vibration mounts for fans with a hole diameter of  $4.3 \pm 0.2 \text{ mm}$  and flange thickness of 2 to 4 mm. For a carrier plate with a hole diameter of  $4.4 \pm 0.15 \text{ mm}$  and plate thickness of 1 to 2 mm.

# Connection diagrams EC E)

## Technical features (nominal voltage 24 / 48 VDC):

- Tach output
- Motor current limitation
- Soft start
- Control input 0-10VDC / PWM
- Overvoltage detection
- Thermal overload protection for electronics
- Reverse polarity protection

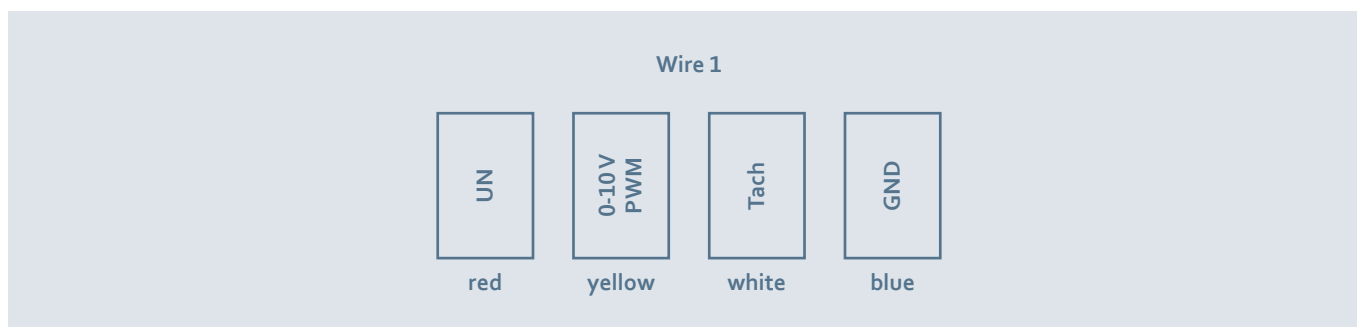


Wire	Designation	Color	Assignment/function
1	UN +24 VDC	red	Power supply 24 VDC, supply voltage ripple $\pm 3.5\%$
	0-10V /PWM	yellow	Control input $R_e > 40\text{ K}$
	Tach	white	Tach output, 3 pulses per revolution, $I_{\text{sink max.}} = 10\text{ mA}$
	GND	blue	Reference ground

# Connection diagrams EC G)

## Technical features (nominal voltage 24 / 48 VDC):

- Tach output
- Soft start
- Control input 0-10VDC / PWM

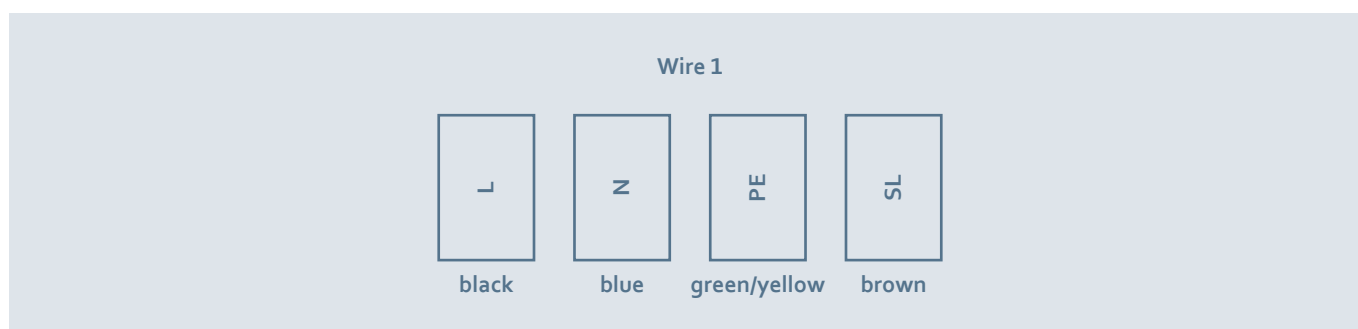


Wire	Designation	Color	Assignment/function
1	UN +24 VDC	red	Power supply 24/48 VDC, supply voltage ripple $\pm 3.5\%$
	1-10V /PWM	yellow	Control input $R_e > 100\text{ K}$
	Tach	white	Tach output: 2 pulses / revolution (M1G045/M1G055) 3 pulses / revolution (M1G074/M1G084)
	GND	blue	Reference ground

# Connection diagrams EC H3)

## Technical features (M3G 055 with 2 speed stages):

- Speed setting input (230V)
- Power limitation
- Motor current limitation
- Soft start
- Thermal overload protection for electronics / motor
- Line undervoltage detection

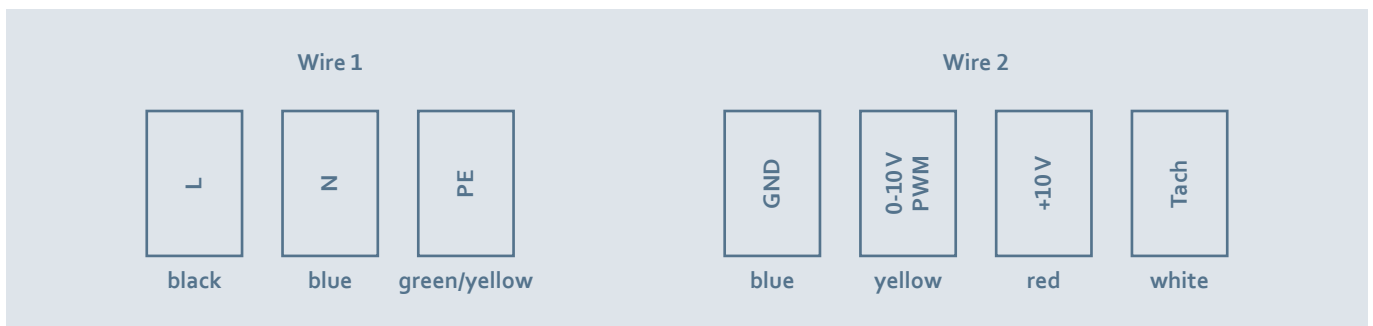


Wire	Designation	Color	Assignment/function
1	L	black	Power supply 230 VAC, 50 - 60 Hz, see type plate for voltage range
	N	blue	Neutral conductor
	PE	green/yellow	Ground conductor
	SL	brown	Speed selection: switch open = speed 1; switch closed = speed 2

# Connection diagrams EC H4)

## Technical features (M3G 055 speed-controlled):

- Output 10 VDC max. 1.1 mA
- Tach output
- Power limitation
- Motor current limitation
- Soft start
- Control input 0-10 VDC / PWM
- Control interface with SELV potential safely disconnected from the mains
- Overvoltage detection
- Thermal overload protection for electronics / motor
- Line undervoltage detection

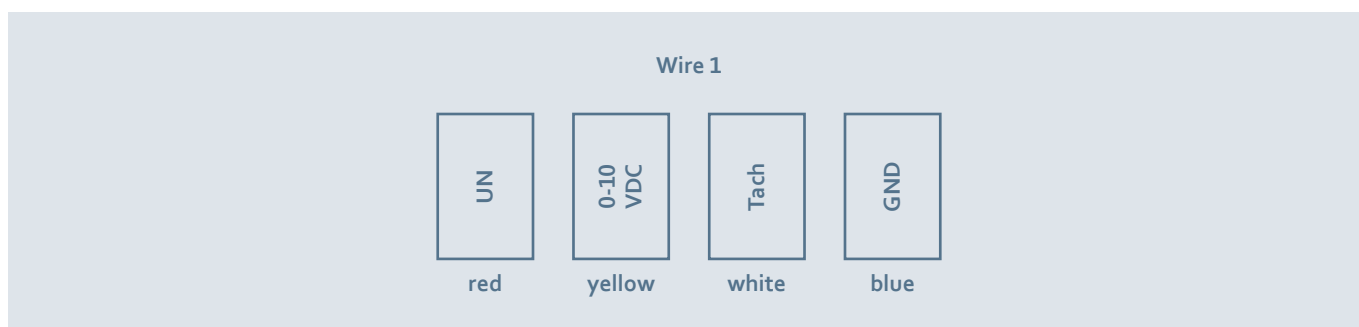


Wire	Designation	Color	Assignment/function
1	L	black	Power supply 115/230 VAC, 50 - 60 Hz, see type plate for voltage range
	N	blue	Neutral conductor
	PE	green/yellow	Ground conductor
2	GND	blue	GND - Connection for control interface
	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	10 V/max. 1.1 mA	red	Voltage output +10 V / 1.1 mA, electrically isolated, not short-circuit-proof
	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated

# Connection diagrams EC J5)

## Technical features (nominal voltage 24 / 48 VDC):

- Control input 0-10 VDC / PWM
- Output 10 VDC max. 1.1 mA
- Power limitation
- Soft start
- Motor current limitation
- Tach output
- Thermal overload protection for electronics / motor
- Overvoltage detection
- Line undervoltage detection
- Control interface with SELV potential safely disconnected from the mains

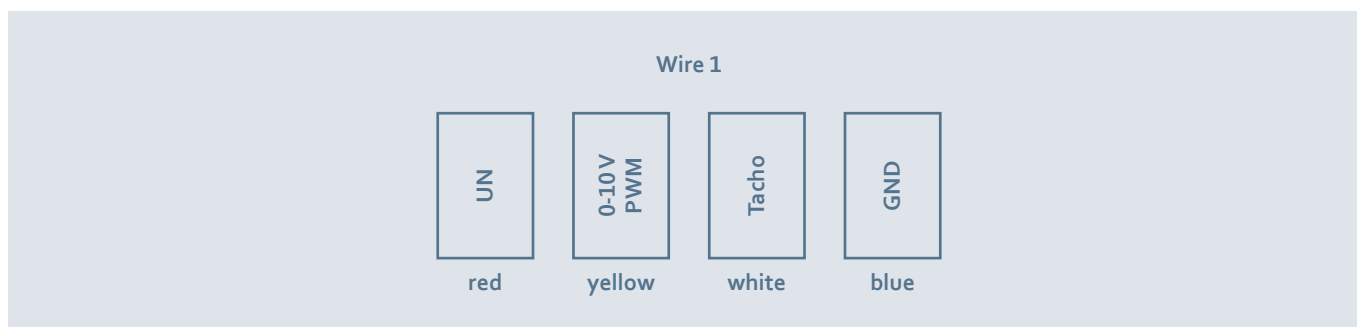


Wire	Designation	Color	Assignment/function
1	UN +24/48 VDC	red	Power supply 24/48 VDC, supply voltage ripple $\pm 3.5\%$
	0-10 VDC	yellow	Control input $R_e > 100\text{ K}$
	Tach	white	Tach output, 3 pulses per revolution, $I_{\text{sink max.}} = 10\text{ mA}$
	GND	blue	Reference ground

# Connection diagrams EC Q)

## Technical features:

- Tach output
- Motor current limitation
- Soft start
- Control input 0-10VDC / PWM
- Overvoltage detection
- Thermal overload protection for electronics
- Reverse polarity protection



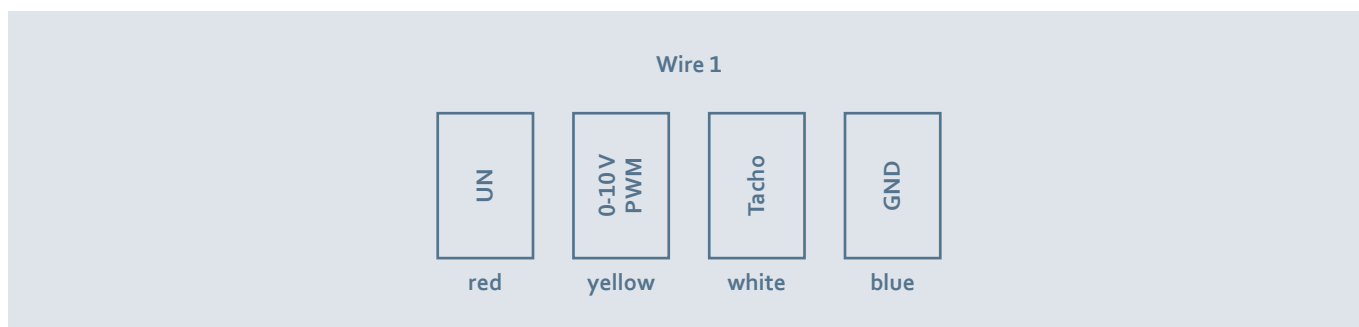
Wire	Designation	Color	Assignment/function
1	UN +12/24 VDC	red	Power supply 12/24 VDC, supply voltage ripple $\pm 3.5\%$
	PWM/LIN	yellow	Control input $R_e > 40\text{ K}$
	Tach	white	Tach output, 3 pulses per revolution, $I_{\text{sink max.}} = 10\text{ mA}$
	GND	blue	Reference ground



# Connection diagrams EC R)

## Technical features:

- Tach output
- Motor current limitation
- Soft start
- Control input 0-10VDC / PWM
- Overvoltage detection
- Thermal overload protection for electronics
- Reverse polarity protection

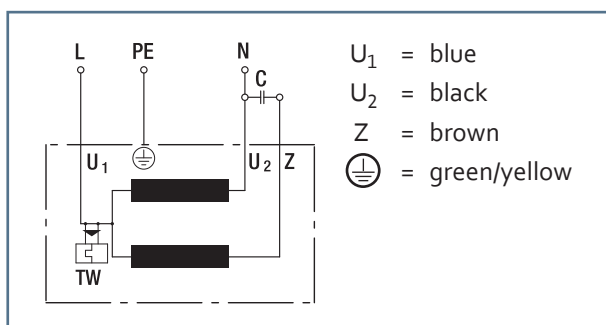


Wire	Designation	Color	Assignment/function
1	UN +48VDC	red	Power supply 48VDC, supply voltage ripple $\pm 3.5\%$
	0-10V /PWM	yellow	Control input $R_e > 100\text{ K}$
	Tacho	white	Tach output, 3 pulses per revolution, $I_{\text{sink max.}} = 10\text{ mA}$
	GND	blue	Reference ground

# Connection diagrams AC A1) / A3) / C2)

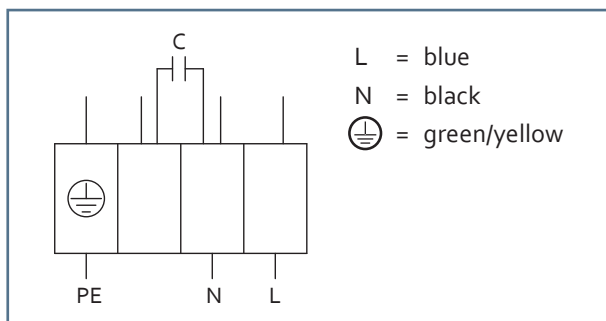
## A1) Single-phase capacitor motor (1- 115/230 VAC power line)

with thermal overload protector wired internally



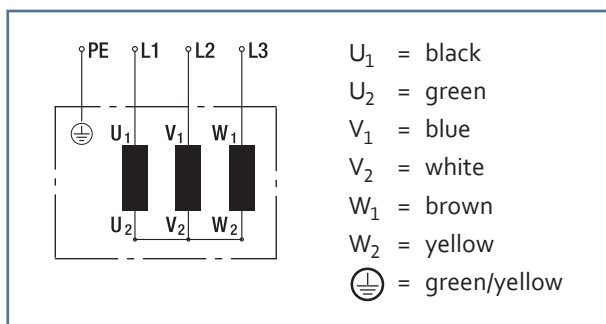
## A3) Single-phase capacitor motor (1- 115/230 VAC power line)

with thermal overload protector wired internally



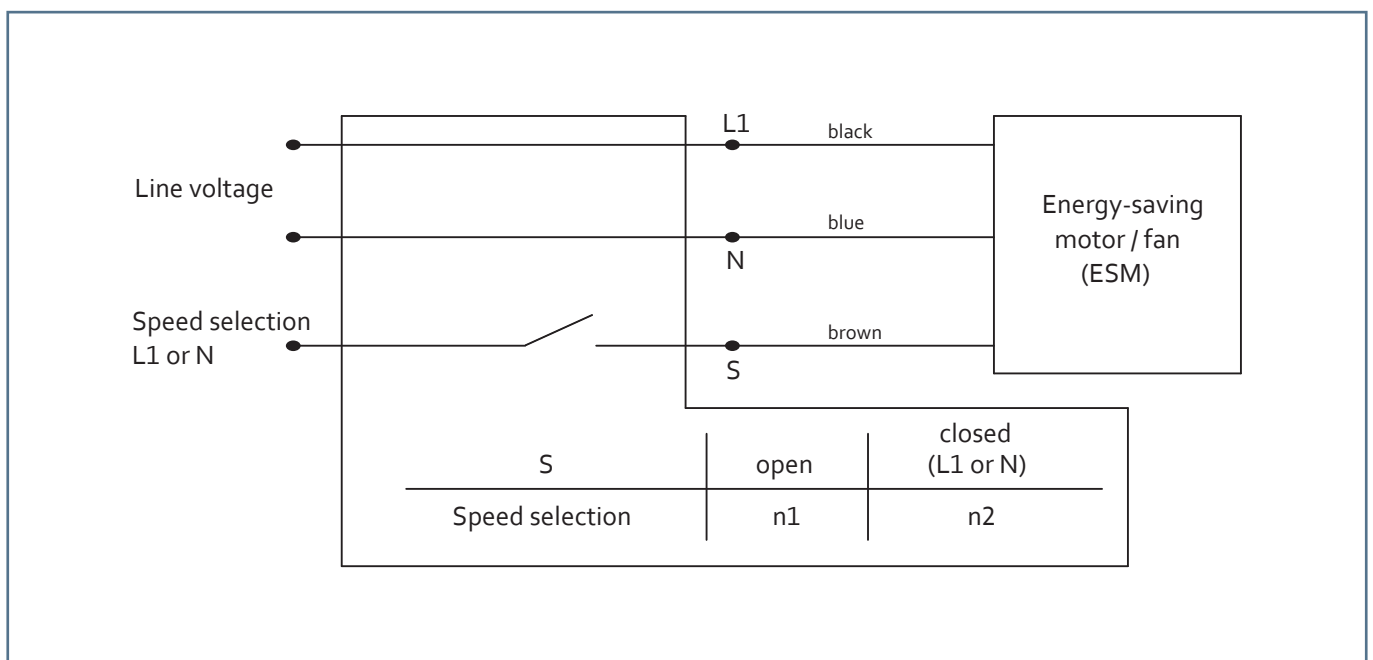
## C2) Star connection (3- 400 VAC power line)

without thermal overload protector



# Connection diagrams AC J7)

## J7) Energy-saving motor (ESM) (1~ 115/230 VAC power line)







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