

Compact fans for AC, DC and EC

Version 2019-04

ebmpapst

the engineer's choice



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.

Insist on ebm-papst.

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About ebm-papst.

As technological leader for ventilation and drive engineering, ebm-papst is in demand as an engineering partner in many industries. With over 20,000 different products, we provide the right solution for just about any challenge. Our fans and drives are reliable, quiet and energy-efficient.

Six reasons that make us the ideal partner:

Our systems expertise.

You want the best solution for every project. The interrelationships between ventilation and drive engineering must thus be considered as a whole. And that's what we do – with **motor technology** that sets standards, sophisticated **electronics** and **aerodynamic designs** – all from a single source and perfectly matched. These system solutions release unique synergies worldwide. And in particular – they relieve you of a lot of work, so that you can concentrate on your core competency.

The ebm-papst spirit of invention.

In addition to our wide range of products, we are always able to develop customized solutions for you. A diversified team of 600 engineers and technicians works at our three locations in Germany: Mulfingen, Landshut and St. Georgen. Contact us to discuss your next project.

Our lead in technology.

As pioneer and trail-blazer for developing highly efficient EC technology, we are way ahead of other motor manufacturers. Almost all our products are also available with GreenTech EC technology. The list of benefits is long: higher efficiency, maintenance-free, longer service life, sound reduction, intelligent control characteristics and unrivalled energy efficiency with savings of up to 80 % compared to conventional AC technology. Let our technology be your competitive advantage as you lead in your industry.

Closeness to our customers.

ebm-papst has 25 production locations worldwide (including facilities in Germany, China and the USA), together with 49 sales offices, each of which has a dense network of sales representatives. You will always have a local contact, someone who speaks your language and knows your market.

Our standard of quality.

Of course you can rely on the highest standards of quality with our products. Our quality management is uncompromising, at every step in every process. This is underscored by our certification according to international standards including DIN EN ISO 9001 and DIN EN ISO 14001.

Our sustainable approach.

Assuming responsibility for the environment, for our employees and for society is an integral part of our corporate philosophy. We develop products with an eye to maximum environmental compatibility, in particular resource-preserving production methods. We promote environmental awareness among our young staff and are actively involved in sports, culture and education. That's what makes us a leading company – and an ideal partner for you.

The story of our success to market and technology pioneer.

- 1963** Founding of **Elektrobau Mulfingen GmbH & Co. KG** by Gerhard Sturm and Heinz Ziehl.
- 1965** First tubeaxial fan developed in EC/DC technology.
- 1966** ebm-papst's success takes off with the new 68 motor.
- 1972** The first ebm-papst foreign subsidiary is established in Sweden.
- 1988** Gerhard Sturm is awarded the Federal Cross of Merit.
- 1990** The sixty-millionth external-rotor fan is produced.
- 1992** Acquisition of **PAPST Motoren GmbH** in St. Georgen.
- 1997** Buyout of the **Landshut (mvl)** plant.
- 1998** Development of first fans with integrated electronics.
- 2003** Change of name to **ebm-papst**.
- 2008** The **HyBlade®** range of fans sets new efficiency standards.
- 2010** **GreenTech** – our sign for energy efficiency and resource preservation.
- 2011** **RadiCal** defines a new standard for EC centrifugal fans.
- 2013** ebm-papst takes over the gearbox specialist Zeitlauf and wins the **German Sustainability Award**.
- 2014** Team partnership with Mercedes AMG PETRONAS Formula 1 team.
- 2015** **RadiPac** pushes the limits of efficiency.
- 2016** **S-Panther** – the consistent development of the S-Forces series.
- 2017** **Factory expansions Germany**: logistics center in Hollenbach and new production unit in St. Georgen.



Expertise and technology

Drive know-how

For the past 60 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. DC and EC fans are generally equipped with electronically commutated external rotor motors. In order to save as much space as possible, commutation electronic components are integrated in the hub of the fan. Our AC fans are driven mainly by shaded-pole or capacitor motors based on the external rotor principle. In the 3900 and 9900 range of particularly slim fans, internal rotor motors are used.

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). With few exceptions, our DC fans are designed to meet the requirements of protection class 3 / protection class 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.

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.

Tailor-made to meet your special requirements

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. We provide a wide range of standard fan types, in many sizes 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:

Vario-Pro® with "intelligence inside". Its programmed intelligence thanks to customer-specifically configured software modules makes the cooling of electronics even more economical and flexible. 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.

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 cooling characteristics. Thanks to integrated IC technology, they adapt their speed to the current cooling requirements. The result is a drastic reduction of noise in most operating conditions. A temperature sensor provides the fan with thermal information: either externally via an exposed wire or integrated into the hub of the fan.

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.

S-Force

When you need to provide extremely fast, powerful and efficient cooling for electronic components of all kinds, the generation of S-Force high-performance fans finishes first: in air performance, pressure increase, and technology. Extremely efficient drives and optimized aerodynamics form the core technology of the S-Force fans, which we offer in both an axial and centrifugal model.

S-Panther

S-Panther power delivered quietly. Wherever there is need for power and reduced noise, fans from the S-Panther range are the right solution. A strong pressure saddle curve at optimum air flow provides the power of a real big cat, an S-Panther.

Optional special versions

(see chapter DC fans - specials)

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.

max. 44 m ³ /h	DC axial fans □ 60 x 25 mm
	<ul style="list-style-type: none">- Material: Housing: GRP¹⁾ (PBT) Impeller: GRP¹⁾ (PA)- Direction of air flow: Exhaust over struts- Direction of rotation: Clockwise, seen on rotor- Connection: Via single wires AWG 22, TR 64- Highlights: Developed for applications with demanding environmental requirements- Mass: 70 g
	<ul style="list-style-type: none">- Possible special versions: (See chapter DC fans - specials)<ul style="list-style-type: none">- Speed signal- Go- / NoGo-alarm- Alarm with limit speed- External temperature sensor- PWM control input- Analog control input- Humidity protection- Salt fog protection- Degree of protection: IP 54 / IP 68

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 178 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 182 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 180 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 184.

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 184.

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 185.

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 185.

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 186.

Moisture protection

Protection for the fan electronics against moisture and condensation. For technical details, please refer to page 188.

Degree of protection IP 54* / IP 68*

Protection of motor and circuit board against splashed water and moisture. For technical details, please refer to page 188.

Salt spray protection

Protection of fan against the damaging effects of salt spray. For technical details, please refer to page 188.

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.

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 radial 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.

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 (ΔT) of the cooling airflow (from entry to exit of the device to be cooled). The maximum admissible ΔT 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 ΔT line.
- Read down from this point to obtain the required value for the cooling airflow. The diagram is based on the following formula:

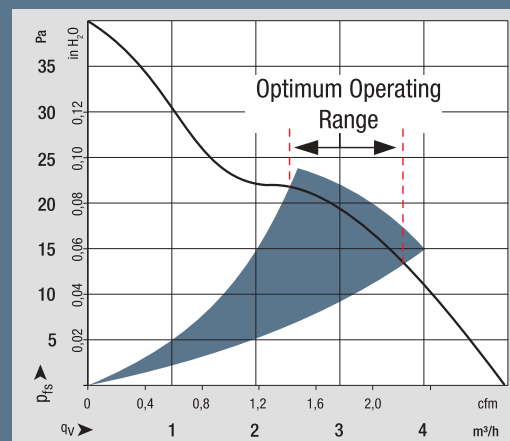
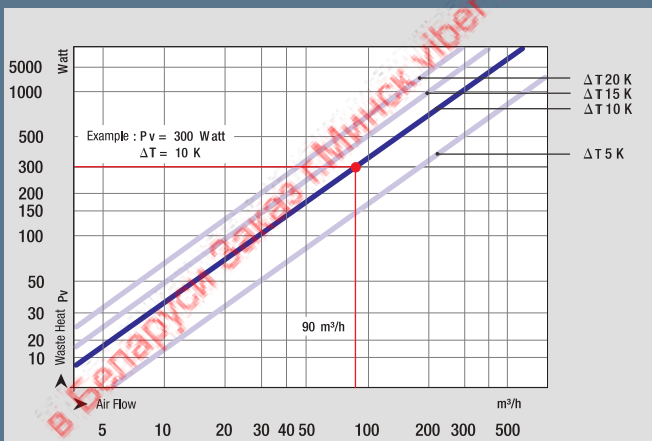
$$q_V = \frac{P_V}{C_{PL} \cdot \rho_L \cdot \Delta T}$$

4. Optimum operating range

But the fan you are looking for must also be able to deliver a suitable static pressure increase Δp_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 optimum operating range (see also the air performance curves under technical data).

5. Fan selection

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



Definitions

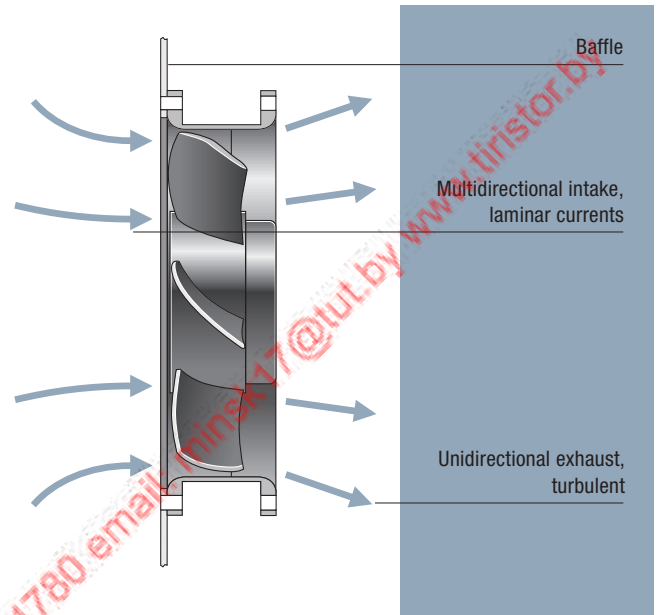
P_V = amount of heat to be dissipated in [W]
 C_{PL} = specific heat capacity of air in [J/kg/K]
 $C_{PL} = 1010$ [J/kg/K]

ρ_L = air density in [kg/m³]
 $\rho_L = 1,2$ kg/m³
 $\Delta T = T_1 - T_2$ 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 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.
- 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

Connection instructions for S-Force fans



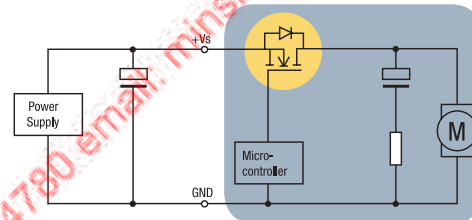
Special features of S-Force fans

The S-Force series is the most powerful product series. S-Force stands for the highest innovation in motor technology, fluid mechanics and electronics. The one-of-a-kind power density of the products requires special attention to the application at the customer's facility.

Service life

Due to the high currents in the fans, the load on the electrolyte capacitors is greater, which reduces the service life of the capacitor. As a larger or additional capacitor cannot be housed in the fan, the capacitor must be housed in the supply line.

If the power supply of the application has a corresponding capacitor, in some cases it may be possible to omit the external capacitor.



Recommended measure: additional external capacitor (should be installed as close to the fan as possible < 30 cm).

Fan	Capacitor required
S-Force axial	
8200 / 3200 JH3-JH4	no
4100 NH3 / NH4 / NH5 / NH6	no
4100 NH7 / NH8	yes
5300 / 5300 TD	no
6300 / 6300 TD / DV 6300	no
2200 FTD	no
2200 TD	no
S-Force centrifugal	
RET 97 TD	yes
RER 120 TD	yes
RER 133 TD	no
RER 160 NTDHH	yes
REF 175 TD	no
RER 175 TD	no
RER 190 TD / RG 190 TD	no
RER 220 TD / RG 220 TD	no
RER 225 TDM / RG 225 TDM	no
RER 225 TD / RG 225 TD	no

Recommended capacitors

We recommend using the following capacitors from Rubycon:

24 VDC:

50 ZL 680 μ F; 12.5 mm x 30 mm or

50 ZLH 680 μ F 12.5 mm x 30 mm

48 VDC:

100 YXG 470 μ F; 16 mm x 35.5 mm or

100 ZLH 470 μ F 16 mm x 31.5 mm

Other capacitors with equal or greater capacitance and equal or lower serial resistance can also be used.

ebm-papst St. Georgen has the following capacitors in stock:

24 VDC: 1000 μ F / 50 V, 16 mm x 25 mm

Part number: 992 0354 000 (LZ 354)

48 VDC: 680 μ F / 100 V, 18 mm x 40 mm

Part number: 992 0355 000 (LZ 355)

Service life

Service life data from ebm-papst St. Georgen

Our fans catalog gives three different values for the service life of each product. The first column usually states the service life L_{10} at 40 °C. the second column usually states the service life L_{10} at T_{max} . Exceptions are marked in the column headings. The third column states the new value, life expectancy L_{10IPC} (40 °C).

Bel(A)	Sound power level Sleeve bearings Ball bearings	Input power Watts	Nominal speed rpm	Temperature range °C	Service life L_{10} (40 °C) ebm-papst Standard	Service life L_{10} (T_{max}) ebm-papst Standard	Life expectancy L_{10IPC} (40 °C) per page 15	Cure
5,2	■	1,8	5 900	-20...+70	85 000 / 42 500	142 500	①	
5,4	■	1,5	6 300	-20...+70	85 000 / 42 500	142 500	②	

Example of the service life figures on the catalog page.

Service life L_{10} (40 °C) and L_{10} (T_{max})

The values given in the first two columns have been derived from intensive, in-house service life endurance tests in which our products are operated in various positions at 40 °C and 70 °C until they fail. A fan is deemed to have failed when it deviates from its defined air flow and speed values, or when the operating noise becomes noticeable. Such tests can take several years before a representative number of failures has been registered, and even today, some fans are still in the process of endurance testing, even though the test began early in the 1980s. These fans are proof of the legendary "made by ebm-papst" reliability. Test results are presented in a diagram and the service life of the product L_{10} at the temperature tested is determined based on the Weibull distribution.

These tests have given us years of experience in the way various design parameters and temperatures can affect the service life of a product. Data for service life at various temperatures for new products can be stated with a very high degree of precision based on tests, product specifications, and commonalities in the design of the product.

Life expectancy L_{10IPC} (40 °C)

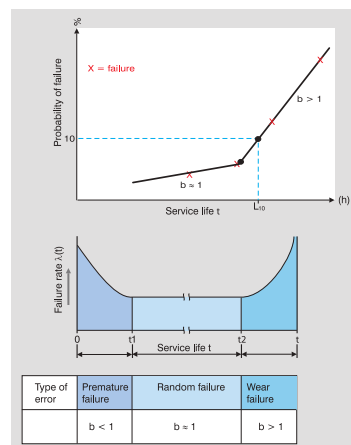
The new third service life column states the life expectancy L_{10IPC} . This information is based on the international standard IPC 9591. Again here, the foundations for the service life values are our service life endurance tests at high ambient temperatures. The service life at temperatures below the test temperatures is calculated using fixed factors. This method produces much higher service life values, especially at room temperature (see diagram on right).

Summary:

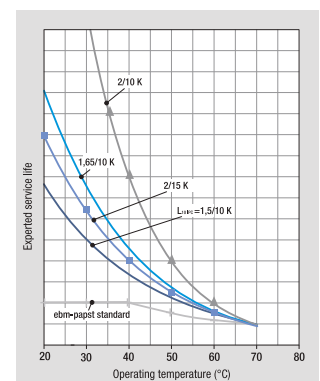
The life span calculations have been carried out to the best of our knowledge and are based on experience gained by ebm-papst. The specified L_{10} (40 °C), L_{10} (T_{max}) and L_{10IPC} (40 °C) values all allow statements to be made about the theoretical calculated service life under certain assumptions. The values determined here are extrapolations from our own service life tests and from statistical variables. In the respective customer applications, there may be different influencing factors that cannot be included in the calculations due to their complexity. The service life information is explicitly not a guarantee of service life, but strictly a theoretical quality figure.



Fans in an endurance test cabinet at ebm-papst St. Georgen. 1500 fans are operated in temperature cabinets until they fail.



Bathub curve and Weibull distribution.



Example of the influence of factors from various manufacturers on the life expectancy.

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]

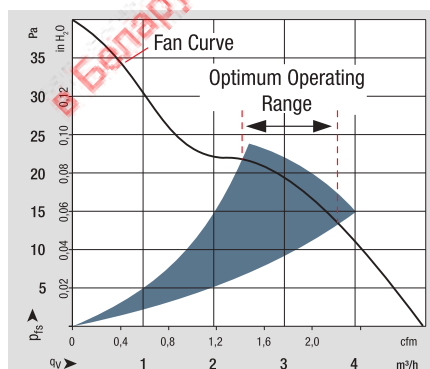
ebm-papst AC fans are made for operating frequencies of 50 Hz or 60 Hz. Their technical data changes accordingly.

Air flow [m³/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 dual-chamber 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 $\Delta\rho_2 = \Delta\rho_1 (\rho_2 / \rho_1)$.

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.

Optimum operating range

The optimum operating range is always indicated in the colored area in the air performance diagrams. In this range the fans operate best with respect to efficiency and sound level. Within this optimum operating range the sound level only fluctuates slightly.

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 range.

PAPST Sintec® sleeve bearings

A particularly economical bearing system with excellent advantages:

- Very precise, large sintered bearings
- Low running noise
- High service life expectancy
- Resistant to shock and vibration

Ball bearings

Precision ball bearings for particularly high ambient temperatures and high service life expectancy.

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]

Service life L₁₀ at 40 °C and T_{max}

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 70 years developing fans.

Life expectancy L_{10IPC} (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	Pressure
1 cfm = 1.7 m ³ /h	1 Pa = 1x10 ⁻⁵ bar
1 l/s = 3.6 m ³ /h	1 inch H ₂ O = 249 Pa
1 l/min = 0.06 m ³ /h	1 mm H ₂ 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).

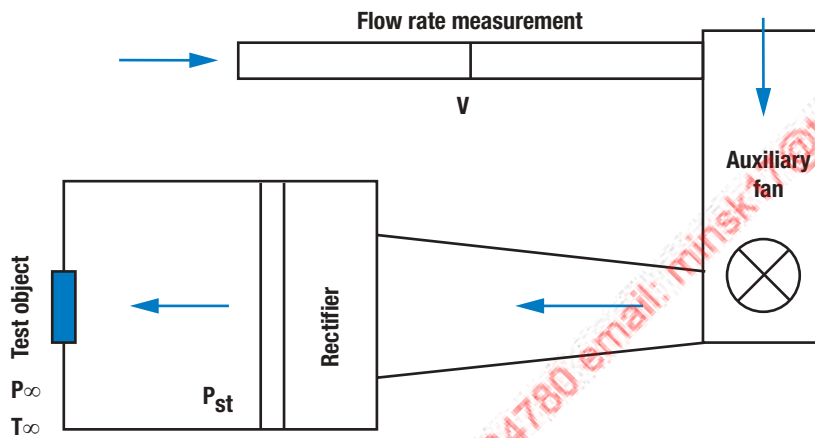
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Standard test equipment to determine the fan characteristics

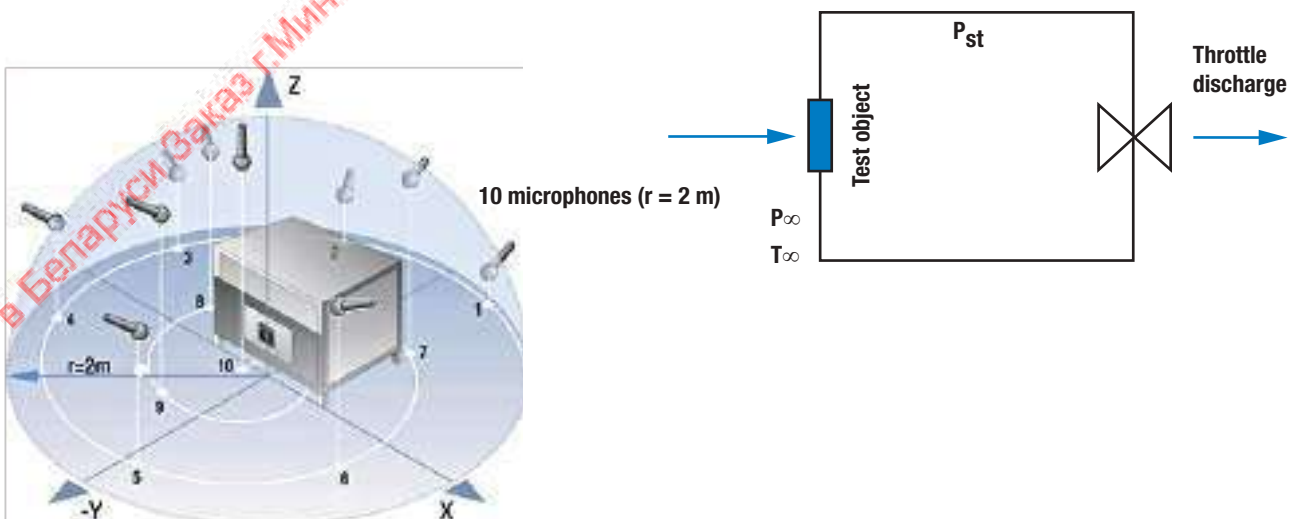
Pressure/air flow

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



Type code

3-digit DC axial fan e.g. 412 FM

Housing dimensions (W x H x D)

Value	Edge dim. (W x H)	Installation depth (D)
2	25 x 25 mm	8 mm
4	40 x 40 mm	10 / 20 / 25 / 28 mm
5	50 x 50 mm	15 mm
6	60 x 60 mm	15 / 25 / 32 mm
7	70 x 70 mm	15 mm

Operating voltage

Value	Nominal voltage
2	12 V
4	24 V
5	5 V
8	48 V

Options (various versions possible)

A	Analog speed control input (input voltage: 0...5 / 0...10 V DC)
D	Reinforced flange corners with through-holes (series 44xx F) Constant speed control regardless of operating voltage
E	Economy fan with round flange
F	Flat construction / frequency-modulated speed control input
G	Sleeve bearing
H	High speed
HH	Further increased speed
H3-H8	Additional further increased speeds
I	Integrated temperature sensor (NTC behavior, i.e. thermistor)
J	Jet characteristic / rigid curve
L	Low speed
M	Medium speed
ML	Between low and medium speed
N	Standard or basic speed
O	Multi-option speed control input
P	PWM speed control input (pulse-width modulated signal)
R	Moisture protection coating
S	Speed signal (additional wires for hall signal, obsolete technology)
T	External temperature sensor (NTC behavior, i.e. thermistor)
TD	Turbo drive (extremely powerful 3-phase motor)
U	Environmentally friendly fan (min. IP 54)
V / VP	VARIOFAN
W	Additional wires (standard length 310 mm)
X	Mounting bore hole 3.7 mm
-xxx	Variant number

4 1 2 F M

Motor and housing version

Value	Version
1	4xx fan, 10 / 20 / 25 / 28 mm (D)
1	6xx fan, 15 / 25 / 32 mm (D)
2	25 / 28 mm (D)
3	63x fan, 25 mm (D)
5	2xx fan, 8 mm (D)

4-digit DC axial fan, e.g. 4312 GM

Housing dimensions (W x H x D)

Value	Edge dimensions (W x H)	Installation depth (D)
2	∅ 220 x 200 mm	51 mm
3	92 x 92 mm	25 / 32 / 38 mm
4	119 x 119 mm	25 / 32 / 38 mm
5	127 x 127 mm	38 mm
5	135 x 135 mm	38 mm
5	140 x 140 mm	51 mm
6	∅ 172 mm	51 mm
6	∅ 172 x 150 / 160 mm	51 mm
7	∅ 150 mm	38 / 55 mm
8	80 x 80 mm	25 / 32 / 38 mm

Connection type and direction of rotation

Value	Connection type	Direction of rotation
1	Wires, length = 310 mm	
5	Wires, length = 310 mm	
6	Plug, 2.8 x 0.8 mm	Counterclockwise (CCW)
7	Plug, 2.8 x 0.8 mm	Clockwise (CW)
8	Plug, 2.8 x 0.5 mm	Counterclockwise (CCW)
9	Plug, 2.8 x 0.5 mm	Clockwise (CW)

Options (various versions possible)

A	Analog speed control input (input voltage: 0...5 / 0...10 V DC)
D	Reinforced flange corners with through-holes (series 44xx F) Constant speed control regardless of operating voltage
DV	Diagonal Venturi fan
E	Economy fan with round flange
F	Flat construction / frequency-modulated speed control input
G	Sleeve bearing
H	High speed
HH	Further increased speed
H3-H8	Additional further increased speeds
I	Integrated temperature sensor (NTC behavior, i.e. thermistor)
J	Jet characteristic / rigid curve
L	Low speed
M	Medium speed
ML	Between low and medium speed
N	Standard or basic speed, new design
O	Multi-option speed control input
P	PWM speed control input (pulse-width modulated signal)
R	Moisture protection coating
S	Speed signal (additional wires for hall signal, obsolete technology)
T	External temperature sensor (NTC behavior, i.e. thermistor)
TD	Turbo drive (extremely powerful 3-phase motor)
U	Environmentally friendly fan (min. IP 54)
V / VP	VARIOFAN
W	Additional wires (standard length 310 mm)
X	Mounting bore hole 3.7 mm
-xxx	Variant number

4 3 1 2 G M

Motor and housing version

Value	Version
1	38 mm (D)
2	38 mm (D)
3	32 mm (D)
4	25 / 38 / 51 mm (D)

Operating voltage

Value	Nominal voltage
2	12 V
4	24 V
6	36 V
8	48 V

All measurements are given in mm.

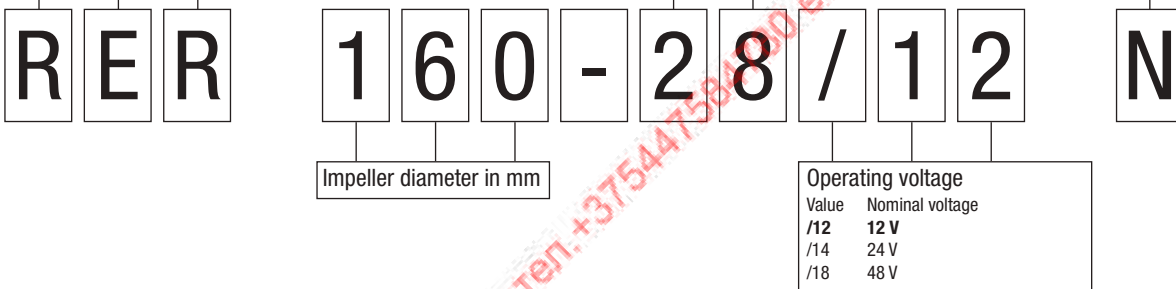
Type code

DC centrifugal fan e.g. RER 160-28/12 N

Type	Housing	Impeller blade design
RE	None	Non-curved, no direction of rotation set
REF	None	Forward/backward-curved impeller blades, flat
RER	None	Backward-curved impeller blades
RET	None	Forward-curved impeller blades
RG	Square	Forward/backward-curved impeller blades
RL	Round	Forward-curved impeller blades
RLF	Round	Forward/backward-curved impeller blades, flat
RV	Round	Forward-curved impeller blades

Options (various versions possible)	
A	Analog speed control input (input voltage: 0...5 / 0...10 V DC)
G	Sleeve bearing
H	High speed
HH	Further increased speed
H3-H8	Additional further increased speeds
I	Integrated temperature sensor (NTC behavior, i.e. thermistor)
L	Low speed
M	Medium speed
ML	Between low and medium speed
N	Standard or basic speed
O	Multi-option speed control input
P	PWM speed control input (pulse-width modulated signal)
R	Moisture protection coating
T	External temperature sensor (NTC behavior, i.e. thermistor)
TD	Turbo drive (extremely powerful 3-phase motor)
U	Environmentally friendly fan (min. IP 54)
-xxx	Variant number

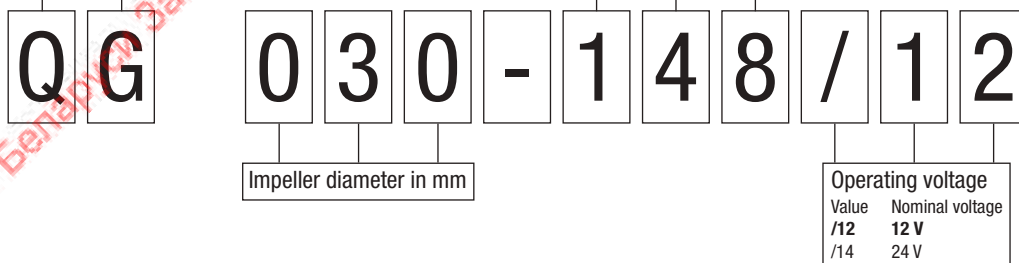
Fan impeller blade height



Crossflow blower e.g. QG 030-148/12

Type	Housing	Impeller blade design
QG	Round	Compressor drum

Housing dimensions (W x H)			
Value	Edge dim. (W x H)	Impeller length	Total length
148	48 x 50 mm	148 mm	201 mm
198	48 x 50 mm	198 mm	258 mm
303	48 x 50 mm	303 mm	363 mm
353	48 x 50 mm	353 mm	413 mm



All measurements are given in mm.

Type code

4-digit GreenTech EC tubeaxial fans axial fan e.g. ACi 4420 HH

Housing dimensions (W x H x D)

Value	Edge dim. (W x H)	Installation depth (D)
1	Ø 98.5 mm	130 mm
3	92 x 92 mm	38 mm
4	119 x 119 mm	25 / 32 / 38 mm
6	Ø 172	51 mm
8	80 x 80 mm	32 mm

Operating voltage

Value	Nominal voltage	Frequency	Version
0	115 / 230 V	50 / 60 Hz	Wide voltage range input (85-265 V AC)
1	115 V	50 Hz	
2	230 V	50 Hz	

Options (various versions possible)

A	Analog speed control input (input voltage: 0...5 / 0...10 V DC)
F	Flat construction / frequency-modulated signal
G	Sleeve bearing
H	High speed
HH	Further increased speed
I	Integrated temperature sensor (NTC behavior, i.e. thermistor)
J	Jet characteristic / rigid curve
L	Low speed
M	Medium speed
ML	Between low and medium speed
N	Standard or basic speed
P	PWM speed control input (pulse-width modulated signal)
R	Moisture protection coating
T	External temperature sensor (NTC behavior, i.e. thermistor)
U	Environmentally friendly fan (min. IP 54)
-xxx	Variant number

A C i **4 4 2 0** **H H**

Basic design

Value	Version
AC	DC basic fan with integrated AC/DC power supply
ACi	EC technology (electronics completely integrated)

Motor and housing version

Value	Version
0	130 mm (D)
1	51 mm (D)
2	38 / 51 mm (D)
3	32 mm (D)
4	25 / 38 mm (D)

Bearing type and insulation class

Value	Bearing type	Insulation class
0	Ball bearing	E

AC axial fan e.g. 3950 L

Housing dimensions (W x H x D)

Value	Edge dim. (W x H)	Installat. depth (D)
3	92 x 92 mm	25 / 38 mm
4	119 x 119 mm	25 / 32 / 38 mm
5	127 x 127 mm	38 mm
5	135 x 135 mm	38 mm
5	140 x 140 mm	51 mm
6	Ø 172 mm	51 / 52 mm
7	Ø 150 mm	55 mm
7	Ø 150 x 172 mm	38 mm
8	80 x 80 mm	38 mm
9	119 x 119 mm	25 mm

Operating voltage

Value	Nominal voltage	Frequency
0	115 V	60 Hz
3	115 V	60 Hz
4	115 V	50 Hz
5	230 V	50 Hz
6	115 V / 230 V	50 Hz / 60 Hz
8	230 V	50 Hz / 60 Hz
9	230 V	50 Hz / 60 Hz

Options (various versions possible)

A	Intake via bars
E	Made by ebm-papst Mulfingen (6xxx, 7xxx range) or round flange
H	Speed signal
	1 Impulses per 360 degrees (additional hall sensor)
L	Low speed
M	Medium speed
N	Air intake via struts (Ø mounting bore hole)
R	Moisture protection coating
S	Integrated temperature switch
T	Mounting bracket
U	Environmentally friendly fan (min. IP 54)
V	Air exhaust over struts
W	Additional wires (standard length 310 mm)
X	Mounting bore hole 3.7 mm
-xxx	Variant number
Z	Air exhaust over struts, reinforced flange corners with through-holes

3 9 5 0 **L**

Motor and housing version

Value	Version
4	Shaded-pole motor, 55 mm (D) medium speed
5	Shaded-pole motor, 38 mm (D) medium / high speed
6	Shaded-pole motor, 38 mm (D) high speed
7	Shaded-pole motor, 38 mm (D) with mounting bracket
8	Shaded-pole motor, slow / medium speed
9	Shaded-pole motor, 25 / 38 mm (D)

Bearing type and insulation class

Value	Bearing type	Insulation class
0	Sleeve bearing	E
5	Ball bearing	E
6	Ball bearing	F
8	Ball bearing	E

All measurements are given in mm.

Type code

AC centrifugal fan e.g. RER 160-28/56 S

Type	Housing and fan impeller versions
	Housing Impeller blade design
RE	None Non-curved, no direction of rotation set
REF	None Forward/backward-curved impeller blades, flat
RER	None Backward-curved impeller blades
RET	None Forward-curved impeller blades
RG	Square Forward/backward-curved impeller blades
RL	Round Forward-curved impeller blades
RLF	Round Forward/backward-curved impeller blades, flat
RV	Round Forward-curved impeller blades

Options (various versions possible)	
H	Speed signal 1 Impulses per 360 degrees (additional magnet sensor and hall sensor)
L	Low speed
M	Medium speed
N	Air intake via struts (ø mounting bore hole)
R	Moisture protection coating
S	Integrated temperature switch
U	Environmentally friendly fan (min. IP 54)
W	Additional wires (standard length 310 mm)
-xxx	Variant number

Fan impeller blade height

R E R **1 6 0 - 2 8 / 5 6** **S**

Impeller diameter in mm

Operating voltage

Value	Nominal voltage	Frequency
/00	115 V	60 Hz
/06	115 V	60 Hz
/50	230 V	50 Hz
/56	230 V	50 Hz

DC centrifugal fan e.g. R3G 190-RN38-01

Note: This type code specifies fans from ebm-papst Mulfingen and can be used to clearly identify and order them:

Type	Housing and fan impeller versions
A	Axial fan
S	Axial fan with finger guard
W	Axial fan with fan housing
V	Axial combination
R	Centrifugal fan, single inlet
G	Centrifugal blower, single inlet (with scroll housing)
B	Centrifugal fan, dual inlet
G	Centrifugal blower, dual inlet (with scroll housing)
K	Centrifugal combination

Impeller diameter in mm

Key for mechanical design

Key for mechanical variants

R 3 G **1 9 0 - R N 3 8** **- 0 1**

Number of poles (AC)
2 2-pole

Number of cores (DC/EC)
1 1-phase/core
3 3-phase/core

Motor type
D Three-phase motor
E Single-phase motor with motor run capacitor
G DC/EC motor

Key for electrical design

All measurements are given in mm.

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DC axial fans



DC axial fan overview

25

DC axial fan / DC diagonal fan

29

DC axial fans

Technical information



Product line

ebm-papst offers you the widest full product line of DC axial and diagonal fans from 25 mm to 280 mm in size. Every single type of fan can be optimally integrated in the respective device concept. The highly economical brushless motor technology of these fans provides a unique variety of intelligent innovations at prices that would have been unthinkable a few years ago.

Electronic protection against reverse polarity

ebm-papst DC fans have electronically commutated drives with electronic protection against reverse polarity. The electronics are integrated in the fan's impeller hub to save space.

Product life expectancy

A distinctive feature of DC fan technology is the amazing product life expectancy. The outstanding efficiency of the brushless drive results in lower heat stress for the bearings, which significantly increases the service life of the fan.

Degree of protection

DC fans with sleeve and ball bearings are powered by class E insulated motors. All ebm-papst fans conform to the requirements of degree of protection IP 20. Fans conforming to IP 54 / IP 68 and special degrees of protection are also available.

Voltage range

Many of our DC fans can be operated on voltages that are up to 50 % lower and 25 % higher than their nominal voltage (see voltage range in the technical tables). This allows the air performance to be adapted to the cooling requirements and the noise to be reduced, even if the fan does not have a control input.

Closed-loop speed control and monitoring

Closed-loop speed control and function monitoring are becoming increasingly important in many applications. ebm-papst offers many fans in the standard design with a control input and open-collector speed signal.

S-Force

The S-Force fans with their extremely high blower capacity of up to 1100 m³/h and pressure increase of up to 1400 pascals are capable of dealing with the extreme heat load. If needed, these fans can produce up to 100 % more output under full load, and they work with a much broader delivery bandwidth than current models. This makes them ideal for equipment and systems with a high density of components. Thanks to intelligent motor features, they can be adapted individually for any application. S-Force fans are available in standard dimensions. The air flow rate is amazing!

S-Panther

S-Panther power delivered quietly. Wherever there is need for power and reduced noise, fans from the S-Panther range are the right solution. A strong pressure saddle curve at optimum air flow provides the power of a real big cat, an S-Panther.

Axial fans for DC operation

Overview of air performance

Information

DC axial fans

DC centrifugal fans

DC fans - specials

ACmaxx / EC axial fans

AC axial fans

AC centrifugal fans

Accessories

Representatives

Dimension	Series	Air flow	Air flow (m³/h)															Page										
			10	20	30	40	50	60	70	80	90	100	200	300	400	500	600		700	800	900	1000	2000	2500				
□ 25 x 8	250	2.3...4.6																									29	
□ 40 x 10	400 F	6...9																										30
□ 40 x 20	400	10...13,5																										31
□ 40 x 28	420 J	24...38																										32
□ 50 x 15	500 F	11...20																										33
□ 60 x 15	600 F	19...33																										34
□ 60 x 25	620	21...67																										35
□ 60 x 25	630	40...58																										36
□ 60 x 25	600 N	21...56																										37
□ 60 x 32	600 J	70...82																										38
□ 70 x 15	700 F	28...44																										39
□ 80 x 25	8450	32...117																										40
□ 80 x 25	8400 N	33...79																										41
□ 80 x 32	8300 N	32...130																										42/43
□ 80 x 38	8200 J	132...222																										44
□ 80 x 38	CoR 8200 J	232																										45
□ 92 x 25	3400 N	61...102																										46
□ 92 x 32	3300 N	56...133																										47/48
□ 92 x 38	3200 J	130...280																										49
□ 92 x 38	3250 J	145...270																										50
□ 119 x 25	4400 F	94...170																										51
∅ 127	4400 F	91																										52
□ 119 x 25	4400 FN	200...225																										53
□ 119 x 32	4300 N	100...285																										54/55



Axial fans for DC operation

Overview of air performance

Dimension	Series	Air flow	Air flow (m³/h)																	Page
			10	20	30	40	50	60	70	80	90	100	200	300	400	500	600	700	800	
□ 119 x 38	4400	100...285	[Performance bars]																	56/57
□ 119 x 38	4100 N	160...237	[Performance bars]																	58
<i>S-Force</i> □ 119 x 38	4100 NHH..NH6	260...440	[Performance bars]																	59
<i>S-Force</i> □ 119 x 38	4100 NH7..NH8	500...570	[Performance bars]																	60
□ 119 x 38	DV 4100	280	[Performance bars]																	61
□ 127 x 38	5200 N	187...340	[Performance bars]																	62
□ 127 x 38	DV 5200	270...320	[Performance bars]																	63
□ 135 x 38	5100 N	260	[Performance bars]																	64
<i>S-Force</i> □ 140 x 51	5300	340	[Performance bars]																	65
<i>S-Force</i> □ 140 x 51	5300 TD	410...670	[Performance bars]																	66
∅ 150 x 38	7100 N	308...360	[Performance bars]																	67
∅ 150 x 55	7200 N	360	[Performance bars]																	68
172x150x51	6400	350...480	[Performance bars]																	69
172x150x51	6400 TD	90...900	[Performance bars]																	70
172x160x51	DV 6400	530	[Performance bars]																	71
172x160x51	DV 6400 TD	100...680	[Performance bars]																	72
S-Force 172x160x51	6300 NTD	1030	[Performance bars]																	73
<i>S-Force</i> 172x160x51	6300 TD	710...930	[Performance bars]																	74
S-Force ∅ 172 x 51	6300 N	540...685	[Performance bars]																	75
S-Force ∅ 172 x 51	6300 NTD	805...1210	[Performance bars]																	76
<i>S-Force</i> ∅ 172 x 51	6300	395...545	[Performance bars]																	77
<i>S-Force</i> ∅ 172 x 51	6300 TD	600...930	[Performance bars]																	78
<i>S-Force</i> ∅ 172 x 51	DV 6300 TD	630...1100	[Performance bars]																	79
<i>S-Force</i> 220x200x51	2200 FTD	790...1220	[Performance bars]																	80
225x225x80	2200 TD	1000	[Performance bars]																	81
□ 225 x 80	K1G 200	1020...1245	[Performance bars]																	82
□ 225 x 89	K3G 200	725...1650	[Performance bars]																	84
∅ 250	W1G 250	2070	[Performance bars]																	86
∅ 300	*1G 300	2320...2345	[Performance bars]																	88

Subject to change



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Axial fans for DC operation

Overview of technically feasible designs

Dimension		VDE, UL, CSA	SWT/EC sleeve bearings / ball bearings	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	IP >= 54	IP 69	Salt spray protection	Reversible direction of rotation	Page
Axial fans																	
mm	Series																P.
□ 25 x 8	250	ja	□	•	-	-	-	-	-	-	-	•	-	-	-	-	29
□ 40 x 10	400 F	ja	□	•	•	-	-	-	-	-	-	•	-	-	-	-	30
□ 40 x 20	400	ja	□	•	•	-	-	-	•	-	-	•	-	-	-	-	31
□ 40 x 28	420 J	ja	■	•	•	•	•	-	•	•	-	•	•	•	-	-	32
□ 50 x 15	500 F	ja	□	•	•	-	-	-	•	-	-	•	-	-	-	-	33
□ 60 x 15	600 F	ja	□	•	•	-	-	-	•	-	-	•	-	-	-	-	34
□ 60 x 25	620	ja	■	•	•	•	•	•	•	•	-	•	-	-	-	-	35
□ 60 x 25	630	ja	■	•	•	•	•	-	•	•	-	•	•	•	-	-	36
□ 60 x 25	600 N	ja	□/■	•	•	-	-	-	-	-	-	•	•	•	-	-	37
□ 60 x 32	600 J	ja	■	•	•	-	•	-	•	•	-	•	-	-	-	-	38
□ 70 x 15	700 F	ja	□	•	•	-	-	-	-	-	-	•	-	-	-	-	39
□ 80 x 25	8450	ja	■	•	•	•	•	•	•	•	-	•	-	-	-	-	40
□ 80 x 25	8400 N	ja	□/■	•	•	•	•	•	•	•	-	•	•	•	-	-	41
□ 80 x 32	8300 N	ja	■	•	•	•	•	•	•	•	-	•	•	•	-	-	42/43
□ 80 x 38	8200 J	ja	■	•	•	•	•	•	•	•	-	•	•	•	-	-	44
□ 80 x 38	CoR 8200 J	ja	■	•	•	•	•	•	•	•	-	•	-	-	-	-	45
□ 92 x 25	3400 N	ja	□/■	•	•	•	•	•	•	•	-	•	•	•	-	-	46
□ 92 x 38	3300 N	ja	■	•	•	•	•	•	•	•	-	•	•	•	-	-	47/48
<i>S-force</i> □ 92 x 38	3200 J	ja	■	•	•	•	•	•	•	•	-	•	•	•	-	-	49
□ 92 x 38	3250 J	ja	■	•	•	-	•	•	•	•	-	•	•	•	-	-	50
□ 119 x 25	4400 F	ja	□/■	•	•	•	•	•	•	•	-	•	-	-	-	-	51
∅ 172	4400 F	ja	□	•	•	•	•	•	•	•	-	•	-	-	•	-	52
□ 119 x 25	4400 FN	ja	■	•	•	•	•	•	•	•	-	•	-	-	-	-	53
□ 119 x 32	4300 N	ja	■	•	•	•	•	•	•	•	-	•	•	•	-	-	54/55

- not yet available □ Sleeve bearings
• Available ■ Ball bearings

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. As a rule, they are not available off the shelf and are based on minimum quantities.

Please consult your customer support representative about the feasibility of your special variant.

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Axial fans for DC operation

Overview of technically feasible designs

Dimension	Axial fans		VDE, UL, CSA	SWTEC sleeve bearings / ball bearings	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 IP >= 54 IP 68	Salt spray protection	Reversible direction of rotation	Page
	mm	Series														
	□ 119 x 38	4400	ja	■	•	•	•	•	•	•	•	•	•	•	•	56/57
	□ 119 x 38	4100 N	ja	□/■	•	•	•	•	•	•	•	•	•	•	•	58
	<i>S-Force</i> □ 119 x 38	4100 NH..NH6	ja	■	•	•	•	•	•	•	•	•	•	•	•	59
	<i>S-Force</i> □ 119 x 38	4100 NH7..NH8	ja	■	•	•	•	•	•	•	•	•	•	•	•	60
	□ 119 x 38	DV 4100	ja	■	•	•	•	•	•	•	•	•	•	•	•	61
	□ 127 x 38	5200 N	ja	■	•	•	•	•	•	•	•	•	•	•	•	62
	□ 127 x 38	DV 5200	ja	■	•	•	•	•	•	•	•	•	•	•	•	63
	□ 135 x 38	5100 N	ja	■	•	•	•	•	•	•	•	•	•	•	•	64
	<i>S-Force</i> □ 140 x 51	5300	ja	■	•	•	•	•	•	•	•	•	•	•	•	65
	<i>S-Force</i> □ 140 x 51	5300 TD	ja	■	•	•	•	•	•	•	•	•	•	•	•	66
	∅ 150 x 38	7100 N	ja	■	•	•	•	•	•	•	•	•	•	•	•	67
	∅ 150 x 55	7200 N	ja	■	•	•	•	•	•	•	•	•	•	•	•	68
	172 x 150 x 51	6400	ja	■	•	•	•	•	•	•	•	•	•	•	•	69
	172 x 150 x 51	6400 TD	ja	■	•	•	•	•	•	•	•	•	•	•	•	70
	172 x 160 x 51	DV 6400	ja	■	•	•	•	•	•	•	•	•	•	•	•	71
	172 x 160 x 51	DV 6400 TD	ja	■	•	•	•	•	•	•	•	•	•	•	•	72
	<i>S-Force</i> 172 x 160 x 51	6300 NTD	ja	■	•	•	•	•	•	•	•	•	•	•	•	73
	<i>S-Force</i> 172 x 160 x 51	6300 TD	ja	■	•	•	•	•	•	•	•	•	•	•	•	74
	<i>S-Force</i> ∅ 172 x 51	6300 N	ja	■	•	•	•	•	•	•	•	•	•	•	•	75
	<i>S-Force</i> ∅ 172 x 51	6300 NTD	ja	■	•	•	•	•	•	•	•	•	•	•	•	76
	<i>S-Force</i> ∅ 172 x 51	6300	ja	■	•	•	•	•	•	•	•	•	•	•	•	77
	<i>S-Force</i> ∅ 172 x 51	6300 TD	ja	■	•	•	•	•	•	•	•	•	•	•	•	78
	<i>S-Force</i> ∅ 172 x 51	DV 6300 TD	ja	■	•	•	•	•	•	•	•	•	•	•	•	79
	<i>S-Force</i> ∅ 200 x 51	2200 FTD	ja	■	•	•	•	•	•	•	•	•	•	•	•	80
	∅ 200 x 51	2200 TD	ja	■	•	•	•	•	•	•	•	•	•	•	•	81
	□ 225 x 80	K1G 200	ja	■	•	•	•	•	•	•	•	•	•	•	•	82
	□ 225 x 89	K3G 200	ja	■	•	•	•	•	•	•	•	•	•	•	•	84

Subject to change

- not yet available
- Available
- Sleeve bearings
- Ball bearings

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. As a rule, they are not available off the shelf and are based on minimum quantities.

Please consult your customer support representative about the feasibility of your special variant.

Max. 4.6 m³/h

DC axial fans

□ 25 x 8 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 28, TR 64
 - **Weight:** 5 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Moisture protection

1) Fiberglass-reinforced plastic

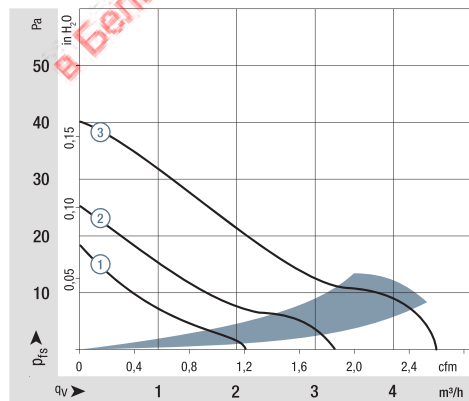
Series 250
WVC0025AUBAS

Nominal data

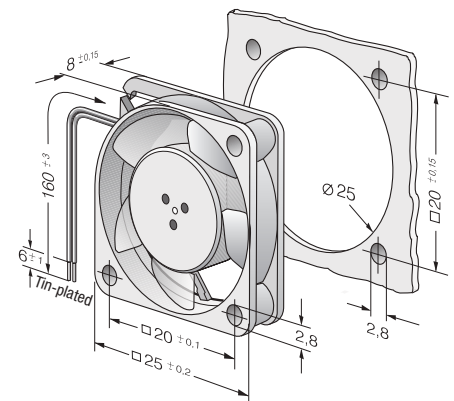
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (20 °C) ebm-papst standard	Service life L ₁₀ (60 °C) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
255 M	2.3	1.2	5	4.5...5.5	5	< 3	■	0.2	6 500	-10...+70	45 000 / 17 500	47 500	①	
255 N	3.5	1.9	5	4.5...5.5	16	< 3	■	0.4	9 600	-10...+70	40 000 / 15 000	42 500	②	
255 H	4.6	2.6	5	4.5...5.5	23	4.4	■	0.6	12 000	-10...+55	35 000 / 15 000*	37 500	③	
252 N	3.4	1.9	12	10...14	15	< 3	■	0.5	9 000	-10...+70	40 000 / 15 000	42 500	②	
252 H	4.6	2.6	12	10...14	23	4.4	■	0.7	12 000	-10...+55	35 000 / 15 000*	37 500	③	

Subject to change

* at 55 °C



Air performance measured as per: ISO 5801.
Installation category A, without accidental contact.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 9 m³/h

DC axial fans

□ 40 x 10 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Exhaust over struts
- **Direction of rotation:** Counterclockwise, looking towards rotor
- **Connection:** Via single wires AWG 28, TR 64
- **Highlights:** Some models are suitable for use at high ambient temperatures
- **Weight:** 17 g

- **Possible special versions:**
(See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Moisture protection

1) Fiberglass-reinforced plastic

Series 400 F
WVC0040FUDAS

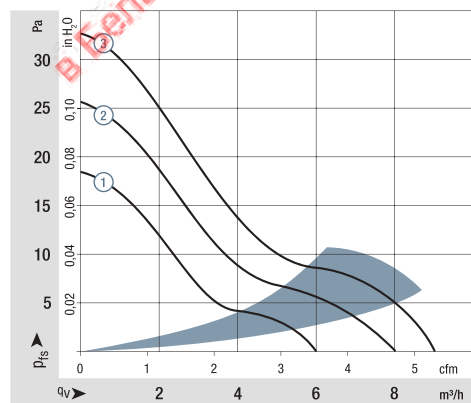
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level		Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (20 °C) ebm-papst standard	Service life L ₁₀ (60 °C) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm			VDC	VDC								
405 F	8	4.7	5	4.5...5.5	22.1	4.4	□	0.7	5 400	-20...+70	45 000 / 17 500	47 500	②	
405 FH	9	5.3	5	4.5...5.5	26.0	4.6	□	0.9	6 000	-20...+70	45 000 / 17 500	47 500	③	
412 FM	6	3.5	12	10...14	17.0	3.8	□	0.5	4 300	-20...+70	45 000 / 17 500	47 500	①	
412 F	8	4.7	12	10...14	22.1	4.4	□	0.7	5 400	-20...+70	45 000 / 17 500	47 500	②	
412 FH	9	5.3	12	10...14	26.0	4.6	□	0.8	6 000	-20...+70	45 000 / 17 500	47 500	③	
414 F	8	4.7	24	20...28	22.1	4.4	□	0.8	5 400	-20...+70	45 000 / 17 500	47 500	②	
414 FH	9	5.3	24	21.6...26.4	26.0	4.4	□	0.9	6 000	-20...+70	45 000 / 17 500	47 500	③	

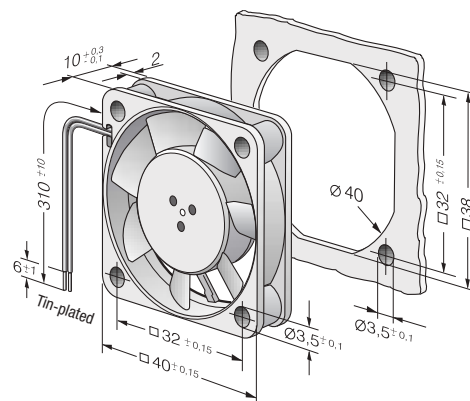
Model with temperature range up to +85 °C.

412 FM-074	6	3.5	12	10...14	17.0	3.8	□	0.4	4 300	-20...+85	45 000 / 17 500	47 500	①
412 F-130	8	4.7	12	10...14	22.1	4.4	□	0.6	5 400	-20...+85	45 000 / 17 500	47 500	②
412 FH-132	9	5.3	12	10...14	26.0	4.6	□	0.8	6 000	-20...+85	45 000 / 17 500	47 500	③

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 13.5 m³/h

DC axial fans

□ 40 x 20 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 28, TR 64
 - **Highlights:** Some models are suitable for use at high ambient temperatures
 - **Weight:** 27 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - PWM control input
 - Moisture protection

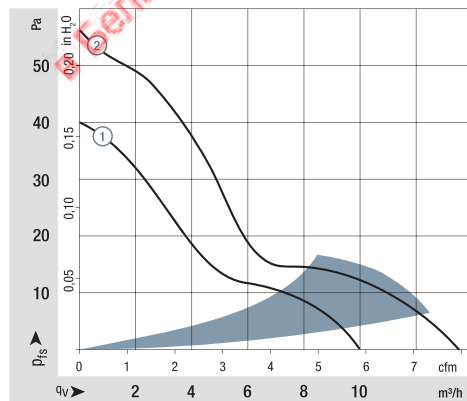
1) Fiberglass-reinforced plastic

Series 400
VWC0040YUDBS

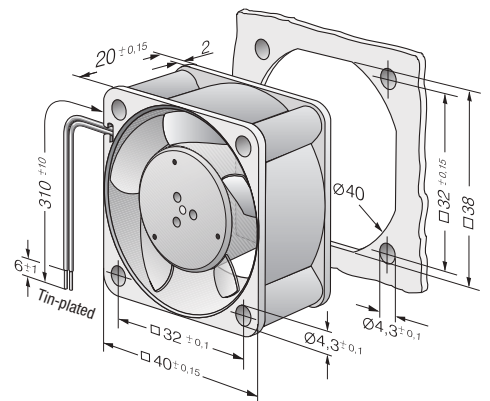
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (20 °C) ebm-papst standard	Service life L ₁₀ (60 °C) ebm-papst standard	Life expectancy L ₁₀ (PC (40 °C) see page 15	Curve
	m ³ /h	cfm												
405	10.0	5.9	5	4.5...5.5	18	3.8	□	0.9	6 000	-20...+70	50 000 / 20 000	52 500	①	
412	10.0	5.9	12	10...14	18	3.8	□	0.8	6 000	-20...+70	50 000 / 20 000	52 500	①	
412 H	13.5	7.9	12	10...14	29	4.7	□	1.6	8 100	-20...+60	45 000 / 17 500	47 500	②	
414	10.0	5.9	24	20...28	18	3.8	□	1.0	6 000	-20...+70	50 000 / 20 000	52 500	①	
414 H	13.5	7.9	24	20...26.5	29	4.7	□	1.7	8 100	-20...+60	45 000 / 17 500	47 500	②	
Model with temperature range up to +85 °C.														
412-099	10.0	5.9	12	10...14	18	3.8	□	0.8	6 000	-20...+85	50 000 / 20 000	52 500	①	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 38 m³/h

DC axial fans

□ 40 x 28 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 28, UL 1061
 - **Weight:** 45 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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 IP 54 / IP 68

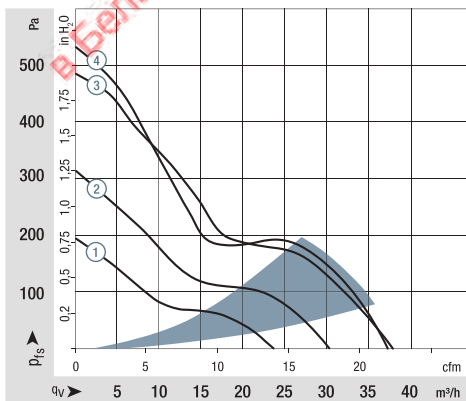
1) Fiberglass-reinforced plastic

Series 420 J
WVC0040JUDBS

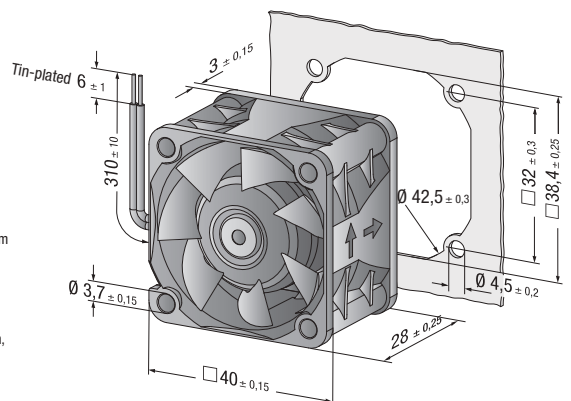
Nominal data

Type	Air flow		Nominal voltage	Voltage range		Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm		VDC	VDC										
422 JM	24	14,2	12	8...13,8	42	5,5	■	2,4	11 400	-20...+70	75 000 / 37 500	127 500	①		
422 JN	31	18,3	12	8...13,8	48	6,0	■	4,1	14 250	-20...+70	67 500 / 35 000	115 000	②		
422 JH	38	22,4	12	8...13,8	54	6,6	■	6,9	17 250	-20...+70	60 000 / 30 000	102 500	③		
424 JM	24	14,2	24	16...28	42	5,5	■	2,7	11 400	-20...+70	75 000 / 37 500	127 500	①		
424 JN	31	18,3	24	16...28	48	6,0	■	4,3	14 250	-20...+70	67 500 / 35 000	115 000	②		
424 JH	38	22,4	24	16...26,4	54	6,6	■	6,9	17 250	-20...+65	60 000 / 32 500	102 500	③		
Model with degree of protection IP 68, -40 °C, speed signal and EMC - Class B															
422 J/2 HPU	37	21,8	12	8...13,8	56	6,6	■	7,5	17 250	-40...+70	60 000 / 30 000	102 500	④		
424 J/2 HPU	37	21,8	24	18...28	56	6,6	■	7,0	17 250	-40...+70	60 000 / 30 000	102 500	④		
428 J/2 HPU	37	21,8	48	36...60	56	6,6	■	7,0	17 250	-40...+70	60 000 / 30 000	102 500	④		

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 20 m³/h

DC axial fans

□ 50 x 15 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 28, TR 64
 - **Highlights:** Some models are suitable for use at high ambient temperatures
 - **Weight:** 27 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - PWM control input
 - Moisture protection

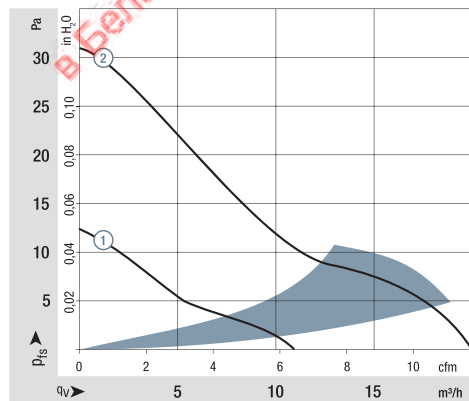
1) Fiberglass-reinforced plastic

Series 500 F
WVC0050FUDBS

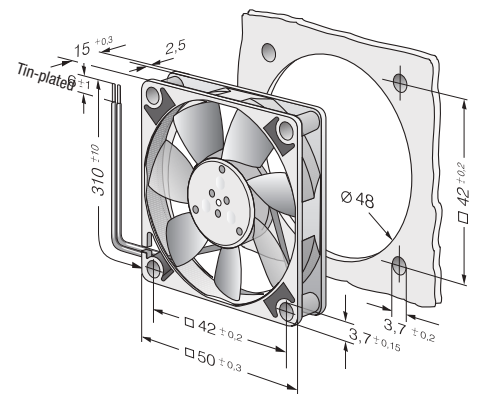
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (20 °C) ebm-papst standard	Service life L ₁₀ (60 °C) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
512 F	20	11.8	12	10.8...13.2	30	4.5	□	0.8	5 000	-20...+70	50 000 / 20 000	52 500	52 500	②
514 F	20	11.8	24	21.6...26.4	30	4.5	□	0.9	5 000	-20...+70	50 000 / 20 000	52 500	52 500	②
Model with temperature range up to +85 °C.														
512 FL-547	11	6.5	12	10.2...13.8	18	3.7	□	0.4	3 000	-20...+85	50 000 / 20 000	52 500	52 500	①
512 F-532	20	11.8	12	10.8...13.2	30	4.5	□	0.9	5 000	-20...+85	50 000 / 20 000	52 500	52 500	②

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 33 m³/h

DC axial fans

□ 60 x 15 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 28, TR 64
 - **Highlights:** Some models are suitable for use at high ambient temperatures
 - **Weight:** 30 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - PWM control input
 - Moisture protection

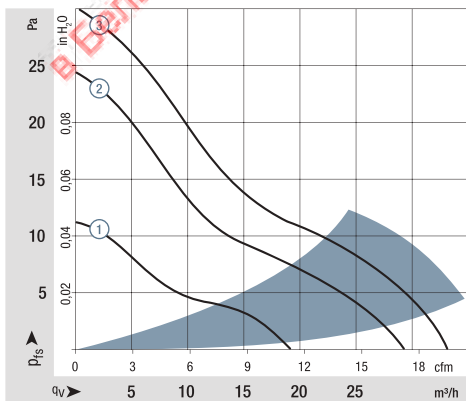
1) Fiberglass-reinforced plastic

Series 600 F
WVC0060FUDBS

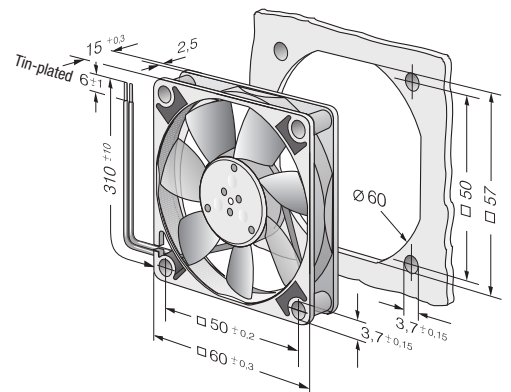
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (20 °C) ebm-papst standard	Service life L ₁₀ (60 °C) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
605 F	29	17.1	5	4.5...5.2	27	4.4	□	1.1	4 000	-20...+50	50 000 / 20 000	52 500	②	
612 FL	19	11.2	12	11.5...13.2	16	3.6	□	0.4	2 650	-20...+70	50 000 / 20 000	52 500	①	
612 F	29	17.1	12	10.8...13.2	27	4.4	□	1.0	3 900	-20...+70	50 000 / 20 000	52 500	②	
612 FH	33	19.4	12	10.0...13.2	31	4.8	□	1.5	4 500	-20...+60	45 000 / 17 500	47 500	③	
614 F	29	17.1	24	21.6...26.4	27	4.4	□	1.1	3 900	-20...+70	50 000 / 20 000	52 500	②	
614 F/39 H-691	33	19.4	24	16...28	31	4.8	□	1.4	4 500	-20...+60	45 000 / 17 500	47 500	③	
Model with temperature range up to +80 / 85 °C.														
612 FL-680	19	11.2	12	11.5...14	16	3.6	□	0.5	2 650	-20...+85	50 000 / 20 000	52 500	①	
612 F-637	29	17.1	12	10.8...12.6	27	4.4	□	1.0	3 900	-20...+80	50 000 / 20 000	52 500	②	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 67 m³/h

DC axial fans

□ 60 x 25 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Very low-noise motor
 - **Weight:** 70 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input
 - Analog control input
 - Moisture protection

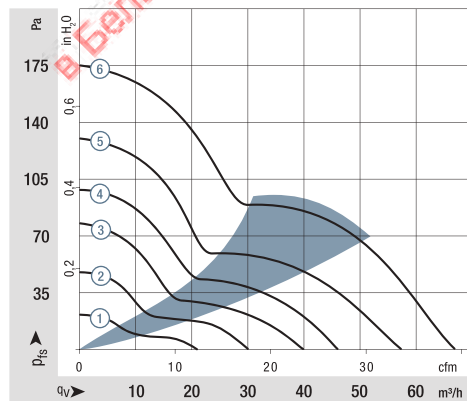
1) Fiberglass-reinforced plastic

Series 620
WVC0060AUEBS

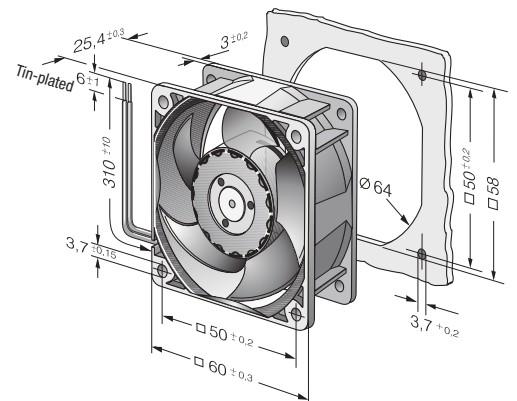
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
622 L	21	12.4	12	8...15	20	3.7	■	0.5	3 200	-20...+85	80 000 / 20 000	135 000	①	
622 M	30	17.7	12	8...15	29	4.3	■	1.0	4 550	-20...+75	77 500 / 30 000	130 000	②	
622 N	40	23.5	12	8...15	35	4.7	■	1.9	6 100	-20...+70	72 500 / 35 000	122 500	③	
622 H	46	27.1	12	8...15	39	5.1	■	2.3	6 850	-20...+70	70 000 / 35 000	117 500	④	
622 HH	56	33.0	12	8...15	43	5.6	■	3.5	8 200	-20...+70	65 000 / 32 500	110 000	⑤	
622/2 H3P	67	39.4	12	8...15	48	5.9	■	5.5	9 700	-20...+70	52 500 / 32 500	87 500	⑥	
624 L	21	12.4	24	18...28	20	3.7	■	1.0	3 200	-20...+70	80 000 / 40 000	135 000	①	
624 M	30	17.7	24	12...28	29	4.3	■	1.5	4 550	-20...+70	77 500 / 37 500	130 000	②	
624 N	40	23.5	24	12...28	35	4.7	■	2.2	6 100	-20...+70	72 500 / 35 000	122 500	③	
624 H	46	27.1	24	18...28	39	5.1	■	2.4	6 850	-20...+70	70 000 / 35 000	117 500	④	
624 HH	56	33.0	24	18...28	43	5.6	■	3.6	8 200	-20...+70	65 000 / 32 500	110 000	⑤	
624/2 H3P	67	39.4	24	18...28	48	5.9	■	5.6	9 700	-20...+60	52 500 / 32 500	87 500	⑥	
628 HH	56	33.0	48	36...60	43	5.6	■	4.2	8 200	-20...+70	65 000 / 32 500	110 000	⑤	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 58 m³/h

DC axial fans

□ 60 x 25 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Developed for applications with demanding environmental requirements
 - **Weight:** 70 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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: IP 54 / IP 68

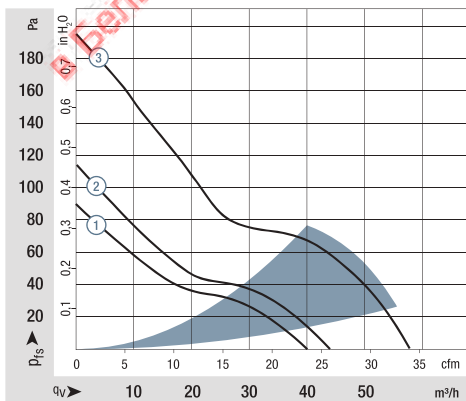
1) Fiberglass-reinforced plastic

Series 630
VWC0060AU EBS

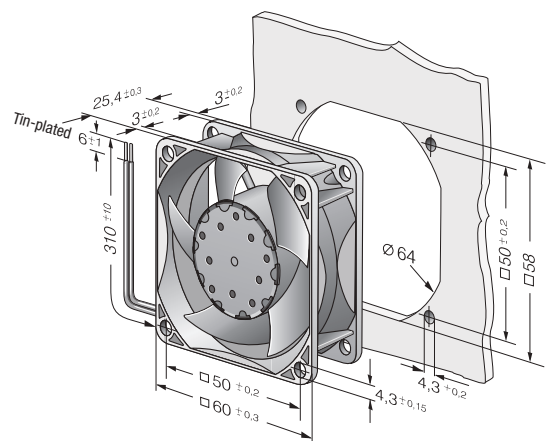
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
632 NU	40	23.5	12	6...15	33	5.2	■	1.8	5 900	-20...+70	85 000 / 42 500	142 500	①	
632/2 HPU	44	25.9	12	10.8...13.2	35	5.4	■	1.5	6 300	-20...+70	85 000 / 42 500	142 500	②	
634 NU	40	23.5	24	12...30	34	5.1	■	1.6	5 900	-20...+70	85 000 / 42 500	142 500	①	
634 HHU	58	34.1	24	18...28	44	6.1	■	3.2	8 500	-20...+70	75 000 / 37 500	127 500	③	
634/2 HHPU	58	34.1	24	18...28	44	6.1	■	3.2	8 500	-40...+70	75 000 / 37 500	127 500	③	
638/2 HPU	44	25.9	48	40...60	35	5.4	■	1.8	6 300	-20...+70	85 000 / 42 500	142 500	②	
638/2 HHPU	58	34.1	48	40...60	44	6.1	■	3.2	8 500	-40...+70	75 000 / 37 500	127 500	③	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{pA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 56 m³/h

DC axial fans

□ 60 x 25 mm



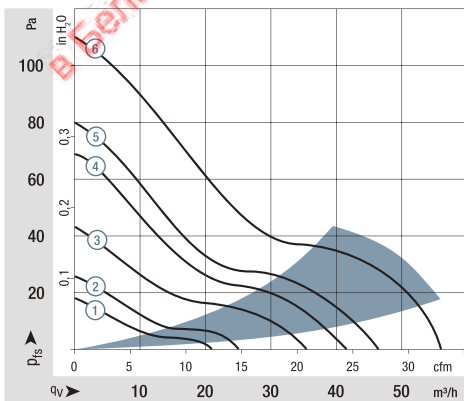
- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Some models are suitable for use at high ambient temperatures up to 85 °C.
 - **Weight:** 66 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Moisture protection
 - Degree of protection: IP 54 / IP 68

1) Fiberglass-reinforced plastic

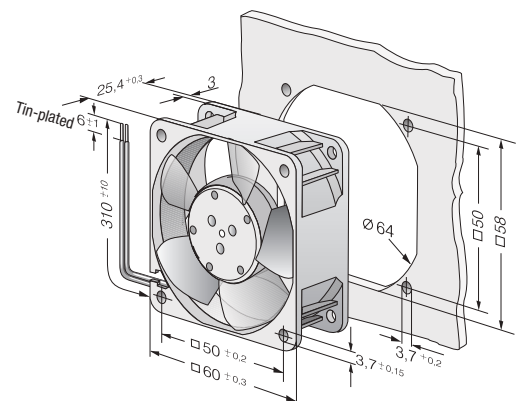
Series 600 N
WVC0060YUEBS

Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
612 NGLE	21	12.4	12	8...15	16	3.6	■	0.6	2 500	-20...+85	80 000 / 27 500	135 000	①	
612 NLE	21	12.4	12	8...15	16	3.6	■	0.4	2 500	-20...+85	80 000 / 27 500	135 000	①	
612 NGMLE	25	14.7	12	8...15	19	3.9	■	0.7	3 000	-20...+80	80 000 / 32 500	135 000	②	
612 NMLE	25	14.7	12	8...15	19	3.9	■	0.4	3 000	-20...+85	80 000 / 27 500	135 000	②	
612 NGME	35	20.6	12	8...15	28	4.6	■	1.2	4 100	-20...+75	80 000 / 35 000	135 000	③	
612 NME	35	20.6	12	8...15	28	4.6	■	0.8	4 100	-20...+75	80 000 / 35 000	135 000	③	
612 NN	40	23.5	12	8...15	35	5.0	■	1.5	5 100	-20...+70	70 000 / 35 000	117 500	④	
612 NH	43	25.3	12	8...15	37	5.3	■	1.8	5 600	-20...+70	70 000 / 35 000	117 500	⑤	
612 NHH-118	56	33.0	12	8...15	41	5.7	■	2.9	6 800	-20...+70	60 000 / 30 000	102 500	⑥	
614 NGL	21	12.4	24	18...28	16	3.6	■	1.0	2 500	-20...+70	80 000 / 40 000	135 000	①	
614 NL	21	12.4	24	18...28	16	3.6	■	0.8	2 500	-20...+70	80 000 / 40 000	135 000	①	
614 NGML	25	14.7	24	18...28	19	3.9	■	1.2	3 000	-20...+70	80 000 / 40 000	135 000	②	
614 NML	25	14.7	24	18...28	19	3.9	■	1.0	3 000	-20...+70	80 000 / 40 000	135 000	②	
614 NGM	35	20.6	24	18...28	28	4.6	■	1.7	4 100	-20...+70	80 000 / 40 000	135 000	③	
614 NM	35	20.6	24	18...28	28	4.6	■	1.3	4 100	-20...+70	80 000 / 40 000	135 000	③	
614 NN	40	23.5	24	18...28	35	5.0	■	1.8	5 100	-20...+70	70 000 / 35 000	117 500	④	
614 NH	43	25.3	24	18...26	37	5.3	■	2.1	5 600	-20...+70	70 000 / 35 000	117 500	⑤	
614 NHH	56	33.0	24	18...26	41	5.7	■	2.9	6 850	-20...+70	60 000 / 30 000	102 500	⑥	
614 NHH-119	56	33.0	24	18...28	41	5.7	■	2.9	6 850	-20...+70	60 000 / 30 000	102 500	⑥	
618 NM	35	20.6	48	36...56	28	4.6	■	1.9	4 100	-20...+70	80 000 / 40 000	135 000	③	
618 NN	40	23.5	48	36...56	35	5.0	■	2.1	5 100	-20...+65	70 000 / 40 000	117 500	④	



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 82 m³/h

DC axial fans

□ 60 x 32 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24, TR 64
 - **Weight:** 100 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - PWM control input
 - Analog control input
 - Moisture protection

1) Fiberglass-reinforced plastic

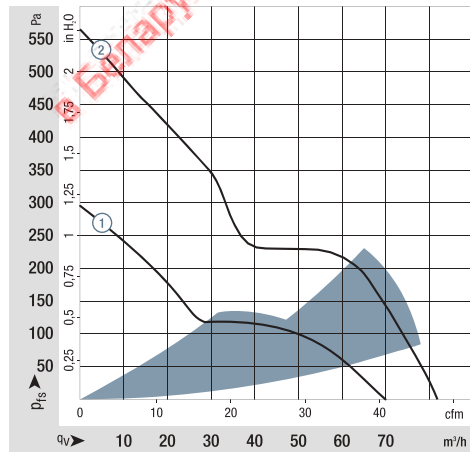
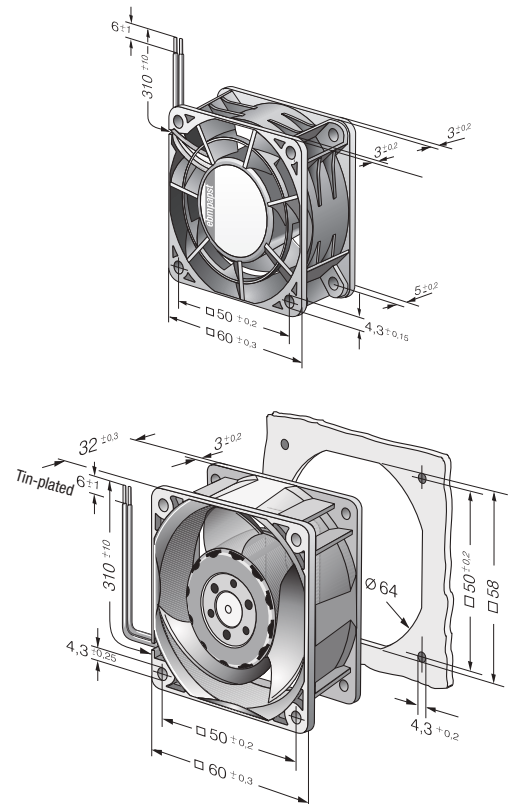
Series 600 J
WVC0060JUECS

Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
612 JH	70	41.2	12	7...13.6	53	6.4	■	7.7	11 700	-20...+70	57 500 / 27 500	97 500	①	
614 JH	70	41.2	24	14...26.4	53	6.4	■	7.7	11 700	-20...+70	57 500 / 27 500	97 500	①	
618 JH	70	41.2	48	36...56	53	6.4	■	7.7	11 700	-20...+70	57 500 / 27 500	97 500	①	
Fan types with streamer and integrated guard grille.														
614 J/2 HHP	82	48.3	24	18...30	62	7.6	■	14.6	15 000	-20...+75	65 000 / 25 000	110 000	②	
618 J/2 HHP	82	48.3	48	38...58	62	7.6	■	14.6	15 000	-20...+75	65 000 / 25 000	110 000	②	

Subject to change

Rear view of types 614 J/2 HHP and 618 J/2 HHP



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>

Max. 44 m³/h

DC axial fans

□ 70 x 15 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24 to AWG 28, TR 64
 - **Weight:** 53 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Moisture protection

1) Fiberglass-reinforced plastic

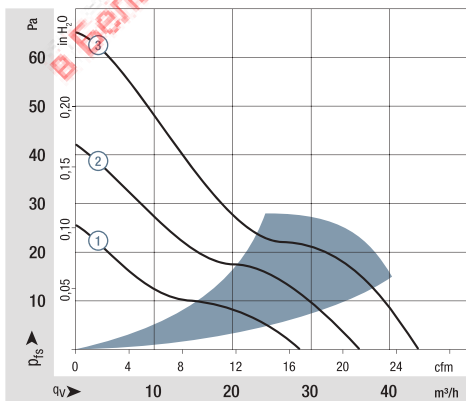
Series 700 F
WVC0070FUEAS

Nominal data

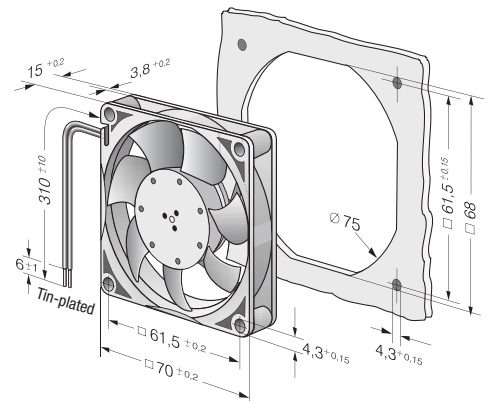
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (1 max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
712 F/2L-005*	28	16.5	12	8...13.8	25	4.7	□	0.6	3 300	-20...+70	60 000 / 30 000	102 500	①	
712 F/2M-006*	36	21.2	12	8...13.8	32	5.0	□	1.1	4 300	-20...+70	60 000 / 30 000	102 500	②	
712 F	44	25.9	12	8...13.8	38	5.3	□	1.7	5 300	-20...+70	60 000 / 30 000	102 500	③	
714 F	44	25.9	24	18...28	38	5.3	□	1.5	5 300	-20...+70	60 000 / 30 000	102 500	③	

Subject to change

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



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_wA ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_pA 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>



Max. 117 m³/h

DC axial fans

□ 80 x 25 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24, TR 64
 - **Highlights:** Very low-noise motor
 - **Weight:** 105 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input
 - Analog control input
 - Moisture protection

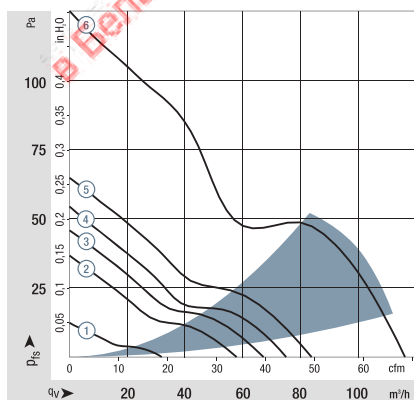
1) Fiberglass-reinforced plastic

Series 8450
WVC0080AU EBS

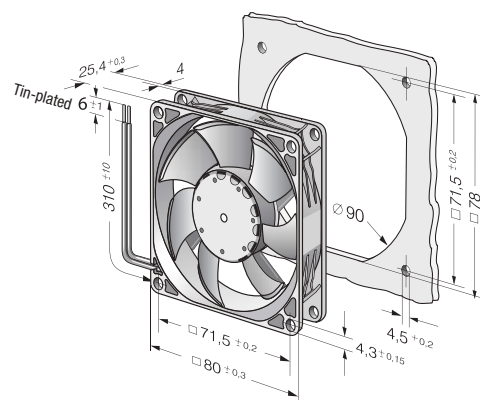
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
8452/2 L	32	18.8	12	8...15	14	3.3	■	0.4	1 700	-20...75	80 000 / 35 000	135 000	①	
8452 M	58	34.1	12	8...15	32	4.7	■	1.3	3 100	-20...75	80 000 / 35 000	135 000	②	
8452/2 N	68	40.0	12	8...15	36	5.0	■	1.8	3 600	-20...70	70 000 / 35 000	117 500	③	
Models with 25 kHz PWM control and speed signal to 4-wire specification.														
8452/2 HP	75	44.1	12	10.8...13.2	38	5.3	■	2.5	4 000	-20...70	70 000 / 35 000	117 500	④	
8452/2 HHP	83	48.8	12	10.8...13.2	42	5.5	■	3.5	4 400	-20...60	65 000 / 40 000	110 000	⑤	
Models with 1-30 kHz PWM control and speed signal.														
8452/2 H4P	117	68.8	12	8...15	50	6.4	■	6.8	6 200	-20...70	60 000 / 30 000	102 500	⑥	
8454/2 H4P	117	68.8	24	20.0...26.4	50	6.4	■	6.8	6 200	-20...70	60 000 / 30 000	102 500	⑥	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 79 m³/h

DC axial fans

□ 80 x 25 mm



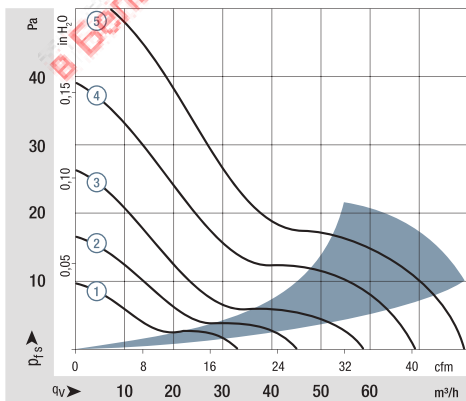
- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24, TR 64
 - **Highlights:** Some models are suitable for use at high ambient temperatures up to 85 °C.
 - **Weight:** 95 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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 / IP 68

1) Fiberglass-reinforced plastic

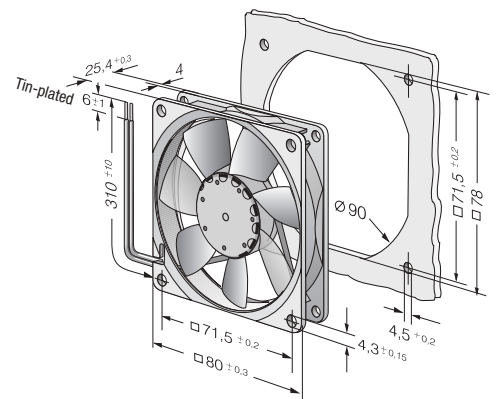
Series 8400 N
WVC0080YUEBS

Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC) (40 °C) see page 15	Curve
	m ³ /h	cfm												
8412 NGL	33	19.4	12	8...15	12	3.5	□	0.5	1 500	-20...+85	80 000 / 27 500	135 000	①	
8412 NLE	33	19.4	12	8...15	17	3.7	■	0.3	1 500	-20...+85	80 000 / 27 500	135 000	①	
8412 NGMLE	45	26.5	12	8...15	19	3.9	□	0.9	2 050	-20...+80	80 000 / 32 500	135 000	②	
8412 NMLE	45	26.5	12	8...15	21	4.0	■	0.6	2 050	-20...+85	80 000 / 27 500	135 000	②	
8412 NGME	58	34.1	12	8...15	26	4.3	□	1.4	2 600	-20...+75	80 000 / 35 000	135 000	③	
8412 NME	58	34.1	12	8...15	27	4.4	■	1.0	2 600	-20...+75	80 000 / 35 000	135 000	③	
8412 NG	69	40.6	12	8...15	32	4.7	□	2.0	3 100	-20...+70	70 000 / 35 000	117 500	④	
8412 N	69	40.6	12	8...15	32	4.7	■	1.7	3 100	-20...+70	70 000 / 35 000	117 500	④	
8412 NH	79	46.5	12	8...13.2	37	5.0	■	2.1	3 600	-20...+70	70 000 / 35 000	117 500	⑤	
8412 NH-217	79	46.5	12	8...15	37	5.0	■	2.5	3 600	-20...+70	70 000 / 35 000	117 500	⑤	
8414 NGL	33	19.4	24	18...28	12	3.5	□	0.9	1 500	-20...+70	80 000 / 40 000	135 000	①	
8414 NL	33	19.4	24	18...28	17	3.7	■	0.8	1 500	-20...+70	80 000 / 40 000	135 000	①	
8414 NGML	45	26.5	24	18...28	19	3.9	□	1.2	2 050	-20...+70	80 000 / 40 000	135 000	②	
8414 NML	45	26.5	24	18...28	21	4.0	■	1.1	2 050	-20...+70	80 000 / 40 000	135 000	②	
8414 NGM	58	34.1	24	18...28	26	4.3	□	1.4	2 600	-20...+70	80 000 / 40 000	135 000	③	
8414 NM	58	34.1	24	18...28	27	4.4	■	1.4	2 600	-20...+70	80 000 / 40 000	135 000	③	
8414 NG	69	40.6	24	18...28	32	4.7	□	2.2	3 100	-20...+70	70 000 / 35 000	117 500	④	
8414 N	69	40.6	24	18...28	32	4.7	■	1.8	3 100	-20...+70	70 000 / 35 000	117 500	④	
8414 NH	79	46.5	24	18...26	37	5.0	■	2.4	3 600	-20...+70	70 000 / 35 000	117 500	⑤	
8414 NH-221	79	46.5	24	18...28	37	5.0	■	2.2	3 600	-20...+70	70 000 / 35 000	117 500	⑤	
8418 N	69	40.6	48	36...56	32	4.7	■	2.0	3 100	-20...+70	70 000 / 35 000	117 500	④	



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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



Max. 130 m³/h
S-Panther

DC axial fans

□ 80 x 32 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Exhaust over struts
- **Direction of rotation:** Counterclockwise, looking towards rotor
- **Connection:** Via single wires AWG 26, TR 64
- **Weight:** 160 g

- **Possible special versions:**
(See chapter DC fans - specials)
 - 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

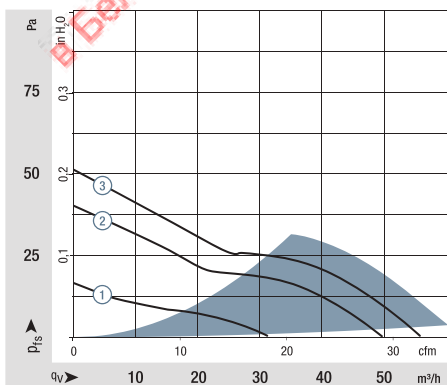
1) Fiberglass-reinforced plastic

Series 8300 N
WVC0080PUFBS

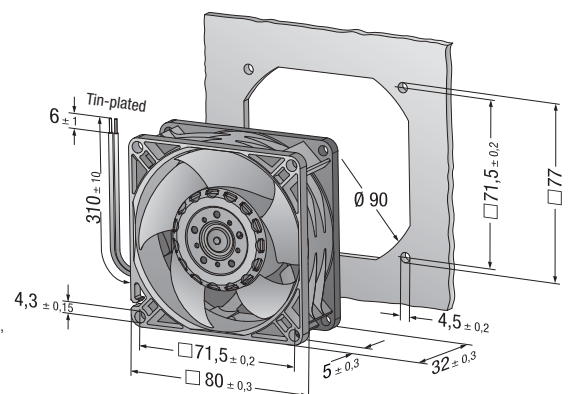
Nominal data

Type	Air flow		Nominal voltage		Voltage range		Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm	VDC	VDC	dB(A)	Bel(A)	□ / ■	Watts	rpm ⁻¹	°C	Hours	Hours	Hours	Hours	Hours	
8312 NL	32	19	12	6...15	24	4.0	■	1.0	2 300	-20...+75	105 000 / 42 500	180 000	①			
8312 NM	50	30	12	6...15	32	4.5	■	1.5	3 300	-20...+75	102 500 / 40 000	170 000	②			
8312 NN	56	33	12	6...15	33	4.7	■	1.8	3 700	-20...+75	97 500 / 37 500	162 500	③			
8314 NN	56	33	24	12...28	33	4.7	■	1.8	3 700	-20...+75	97 500 / 37 500	162 500	③			
8318 NN	56	33	48	36...60	33	4.7	■	1.5	3 700	-20...+75	97 500 / 37 500	162 500	③			

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 130 m³/h
S-Panther

DC axial fans

□ 80 x 32 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 26, TR 64
 - **Weight:** 160 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

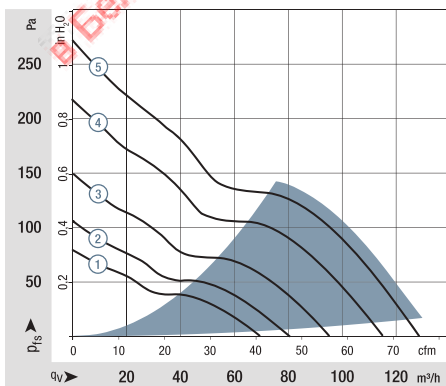
1) Fiberglass-reinforced plastic

Series 8300 N
WVC0080PUFBS

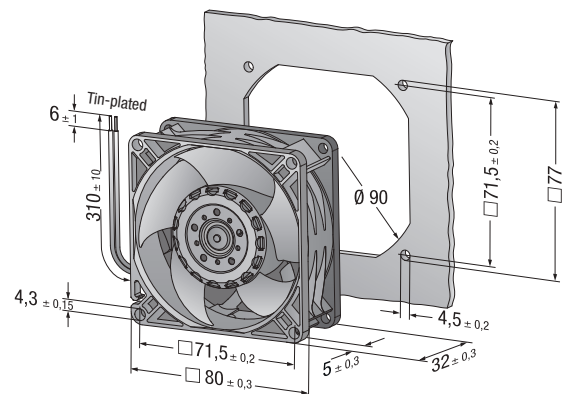
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst-standard	Service life L ₁₀ (T _{max}) ebm-papst-standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
8312 NHL	70	41	12	6...15	39	5.2	■	2.9	4 600	-20...+75	92 500 / 37 500	155 000	①	
8312 NH	80	47	12	6...15	42	5.5	■	4.0	5 300	-20...+75	82 500 / 32 500	140 000	②	
8312 NHH	95	56	12	6...15	48	6.0	■	5.4	6 300	-20...+75	72 500 / 27 500	120 000	③	
8312 NH3	115	68	12	6...13.2	53	6.6	■	9.4	7 600	-20...+75	57 500 / 25 000	100 000	④	
8312 NH4	130	77	12	6...12.8	56	6.9	■	12.6	8 500	-20...+60	52 500 / 32 500	87 500	⑤	
8314 NHL	70	41	24	12...28	39	5.2	■	2.6	4 600	-20...+75	92 500 / 37 500	155 000	①	
8314 NH	80	47	24	12...28	42	5.5	■	3.6	5 300	-20...+75	82 500 / 32 500	140 000	②	
8314 NHH	95	56	24	12...28	48	6.0	■	5.0	6 300	-20...+75	72 500 / 27 500	120 000	③	
8314 NH3	115	68	24	12...28	53	6.6	■	8.8	7 600	-20...+75	57 500 / 25 000	100 000	④	
8314 N/2H3P	115	68	24	18...28	53	6.6	■	8.0	7 600	-20...+75	75 000 / 30 000	127 500	④	
8318 NHL	70	41	48	36...60	39	5.2	■	2.3	4 600	-20...+75	92 500 / 37 500	155 000	①	
8318 NH	80	47	48	36...60	42	5.5	■	3.5	5 300	-20...+75	82 500 / 32 500	140 000	②	
8318 NHH	95	56	48	36...60	48	6.0	■	5.8	6 300	-20...+75	72 500 / 27 500	120 000	③	
8318 NH3	115	68	48	36...52.8	53	6.6	■	8.9	7 600	-20...+75	57 500 / 25 000	100 000	④	

Änderungen vorbehalten



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 222 m³/h

DC axial fans

□ 80 x 38 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24 (H3 and H4: AWG 22), TR 64
 - **Weight:** 160 g (H3 and H4: 200 g)
- **Possible special versions:** (See chapter DC fans - specials)
 - 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 / IP 68

1) Fiberglass-reinforced plastic

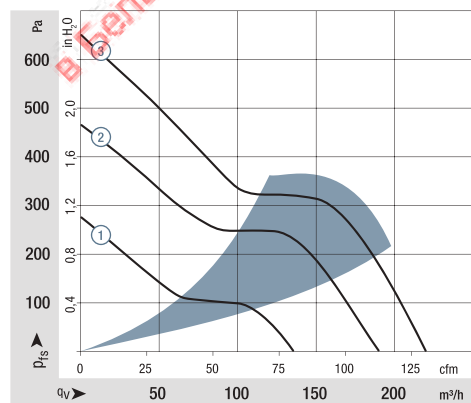
Series 8200 J
WVC0080JUFBS

Nominal data

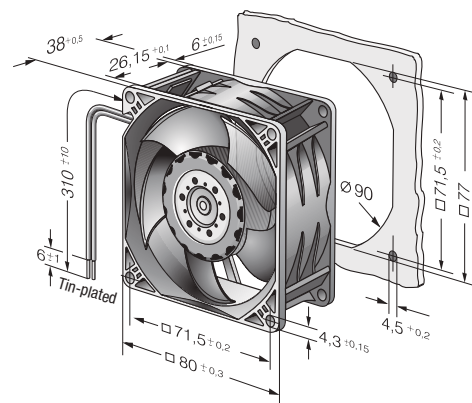
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
8212 JN	132	78	12	7...13.8	55	6.6	■	10	8 400	-20...+70	62 500 / 32 500	105 000	①	
8212 JH3 <i>S-Force</i>	190	112	12	6...13.8	66	7.3	■	26*	12 000	-20...+70	55 000 / 27 500	92 500	②	
8212 JH4 <i>S-Force</i>	222	131	12	6...13.8	71	7.8	■	39*	14 000	-20...+70	50 000 / 25 000	85 000	③	
8214 JN	132	78	24	18...26.4	55	6.6	■	11	8 400	-20...+70	62 500 / 32 500	105 000	①	
8214 JH3 <i>S-Force</i>	190	112	24	12...27.6	66	7.3	■	26*	12 000	-20...+70	55 000 / 27 500	92 500	②	
8214 JH4 <i>S-Force</i>	222	131	24	12...27.6	71	7.8	■	38*	14 000	-20...+70	50 000 / 25 000	85 000	③	
8218 JN	132	78	48	36...53	55	6.6	■	11	8 400	-20...+70	62 500 / 32 500	105 000	①	
8218 JH3 <i>S-Force</i>	190	112	48	36...53	66	7.3	■	25*	12 000	-20...+70	55 000 / 27 500	92 500	②	
8218 JH4 <i>S-Force</i>	222	131	48	20...58	71	7.8	■	36*	14 000	-20...+70	50 000 / 25 000	85 000	③	

Subject to change

8200 JH3 and JH4 also available as standard with PWM control input and speed signal.
Speed control range from 2000 rpm⁻¹ up to maximum nominal speed. Standstill at 0% PWM, maximum speed if control cable is interrupted.
* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 232 m³/h
S-Force

DC axial fan unit

□ 80 x 80 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Weight:** 430 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

Series CoR 8200 J
VWK0075XUFBS
Co-Rotating with
Honeycomb

Nominal data

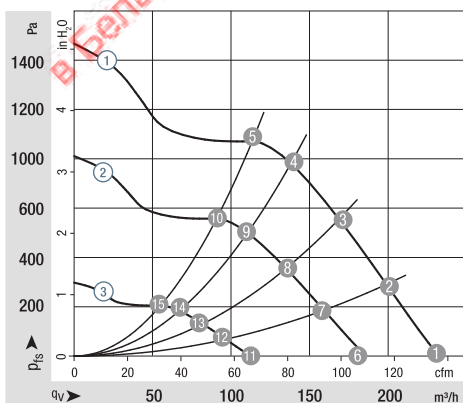
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level		Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15
	m ³ /h	cfm			VDC	VDC							
CoR 8212 J/2H4P	232	136	12	6...13.8	90	8.7	■	70**	14 000	-20...+70	50 000 / 25 000	85 000	
CoR 8214 J*	232	136	24	12...27.6	90	8.7	■	67**	14 000	-20...+70	50 000 / 25 000	85 000	
CoR 8218 J*	232	136	48	20...58	90	8.7	■	65**	14 000	-20...+70	50 000 / 25 000	85 000	

Subject to change
* On request

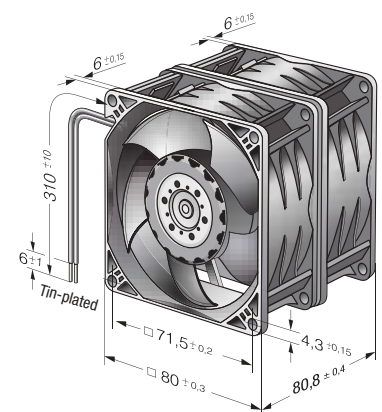
** Power consumption at free air flow. These values can be significantly higher in the operating point.

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)		n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)	
100% PWM	① ①	14 000	65	90	50 000	25 000	85 000	③ ①	6 800	12	73	82 500	42 500	140 000
	① ②	14 000	75	89	50 000	25 000	85 000	③ ②	6 800	13	72	82 500	42 500	140 000
	① ③	14 000	84	88	55 000	27 500	92 500	③ ③	6 800	14	71	82 500	42 500	140 000
	① ④	14 000	86	87	55 000	27 500	92 500	③ ④	6 800	15	71	82 500	42 500	140 000
	① ⑤	14 000	87	87	57 500	27 500	97 500	③ ⑤	6 800	15	71	82 500	42 500	140 000
80% PWM	② ⑥	11 250	36	85	60 000	30 000	102 500							
	② ⑦	11 250	41	83	62 500	30 000	105 000							
	② ⑧	11 250	45	83	62 500	32 500	105 000							
	② ⑨	11 250	46	81	65 000	32 500	110 000							
	② ⑩	11 250	46	82	65 000	32 500	110 000							

Power consumption P_{ed} refer to CoR 8218 J.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 102 m³/h

DC axial fans

□ 92 x 25 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Exhaust over struts
- **Direction of rotation:** Counterclockwise,
looking towards rotor
- **Connection:** Via single wires AWG 24,
TR 64
- **Weight:** 100 g

- **Possible special versions:**
(See chapter DC fans - specials)
 - 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 / IP 68

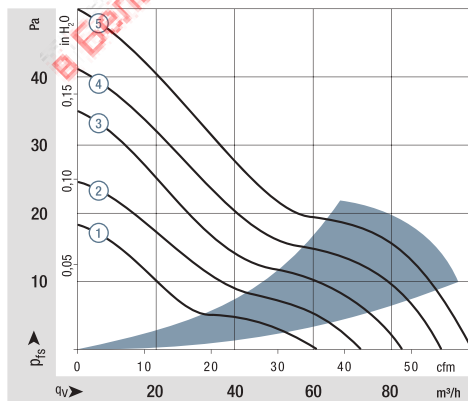
1) Fiberglass-reinforced plastic

Series 3400 N
WVC0092YUEBS

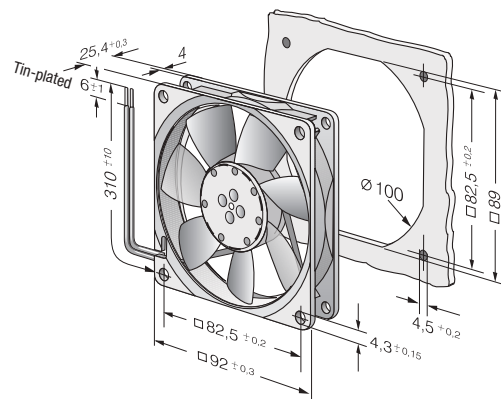
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
3412 NGL	61	35.9	12	8...15	23	4.0	□	1.1	1 950	-20...+80	80 000 / 22 500	135 000	①	
3412 NLE	61	35.9	12	8...15	23	4.0	■	0.8	1 950	-20...+85	80 000 / 17 500	135 000	①	
3412 NGME	72	42.4	12	8...15	28	4.3	□	1.6	2 300	-20...+75	75 000 / 27 500	127 500	②	
3412 NME	72	42.4	12	8...15	28	4.3	■	1.1	2 300	-20...+75	75 000 / 27 500	127 500	②	
3412 NG	82	48.2	12	8...15	33	4.6	□	2.2	2 700	-20...+70	70 000 / 35 000	117 500	③	
3412 N	82	48.2	12	8...15	33	4.6	■	2.2	2 700	-20...+70	70 000 / 35 000	117 500	③	
3412 NGH	94	55.3	12	8...15	36	5.0	□	2.3	3 000	-20...+70	70 000 / 35 000	117 500	④	
3412 NH	94	55.3	12	8...15	36	5.0	■	2.1	3 000	-20...+70	70 000 / 35 000	117 500	④	
3412 NGH	102	60.0	12	8...13.2	39	5.1	□	3.2	3 250	-20...+60	70 000 / 45 000	117 500	⑤	
3412 NHH	102	60.0	12	8...13.2	39	5.1	■	2.9	3 250	-20...+60	70 000 / 45 000	117 500	⑤	
3412 NHH-379	102	60.0	12	8...15	39	5.1	■	2.7	3 250	-20...+70	70 000 / 35 000	117 500	⑤	
3414 NGL	61	35.9	24	18...28	23	4.0	□	1.4	1 950	-20...+70	80 000 / 40 000	135 000	①	
3414 NL	61	35.9	24	18...28	23	4.0	■	1.1	1 950	-20...+70	80 000 / 40 000	135 000	①	
3414 NGM	72	42.4	24	18...28	28	4.3	□	1.7	2 300	-20...+70	75 000 / 37 500	127 500	②	
3414 NM	72	42.4	24	18...28	28	4.3	■	1.4	2 300	-20...+70	75 000 / 37 500	127 500	②	
3414 NG	82	48.2	12	8...15	33	4.6	□	2.3	2 700	-20...+70	70 000 / 35 000	117 500	③	
3414 N	82	48.2	12	8...15	33	4.6	■	2.3	2 700	-20...+70	70 000 / 35 000	117 500	③	
3414 NGH	94	55.3	24	18...26	36	5.0	□	3.0	3 000	-20...+70	70 000 / 35 000	117 500	④	
3414 NH	94	55.3	24	18...26	36	5.0	■	2.3	3 000	-20...+70	70 000 / 35 000	117 500	④	
3414 NGH	102	60.0	24	18...26	39	5.1	□	3.2	3 250	-20...+70	70 000 / 35 000	117 500	⑤	
3414 NGH-389	102	60.0	24	18...28	39	5.1	□	3.2	3 250	-20...+70	70 000 / 35 000	117 500	⑤	
3414 NHH	102	60.0	24	18...26	39	5.1	■	3.1	3 250	-20...+70	70 000 / 35 000	117 500	⑤	
3414 NHH-386	102	60.0	24	18...28	39	5.1	■	3.2	3 250	-20...+70	70 000 / 35 000	117 500	⑤	
3418 N	82	48.2	12	8...15	33	4.6	■	2.4	2 700	-20...+70	70 000 / 35 000	117 500	③	

Other 48 VDC models on request.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 80 m³/h
S-Panther

DC axial fans

□ 92 x 32 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires
AWG 24 UL 1061,
TR 64
 - **Weight:** 190 g
- **Possible special versions:**
(See chapter DC fans - specials)
 - 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: IP 54 / IP 68

1) Fiberglass-reinforced plastic

Series 3300 N
WVC0092PUGBS

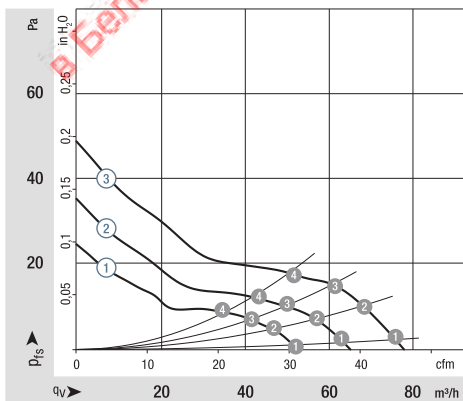
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level		Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) elom-papst standard	Service life L ₁₀ (T _{max}) elom-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm			VDC	VDC								
3312 NL	56	33	12	6...15	24	4.0	■	0.8	1 850	-20...+75	87 500 / 35 000	147 500	①	
3312 NM	68	40	12	6...15	29	4.3	■	1.1	2 250	-20...+75	80 000 / 32 500	135 500	②	
3312 NN	80	47	12	6...15	35	4.7	■	1.8	2 650	-20...+75	77 500 / 30 000	130 000	③	
3314 NL	56	33	24	12...28	24	4.0	■	0.8	1 850	-20...+75	87 500 / 35 000	147 500	①	
3314 NM	68	40	24	12...28	29	4.3	■	1.2	2 250	-20...+75	80 000 / 32 500	135 500	②	
3314 NN	80	47	24	12...28	35	4.7	■	1.8	2 650	-20...+75	77 500 / 30 000	130 000	③	
3318 NN	80	47	48	36...60	35	4.7	■	1.8	2 650	-20...+75	77 500 / 30 000	130 000	③	

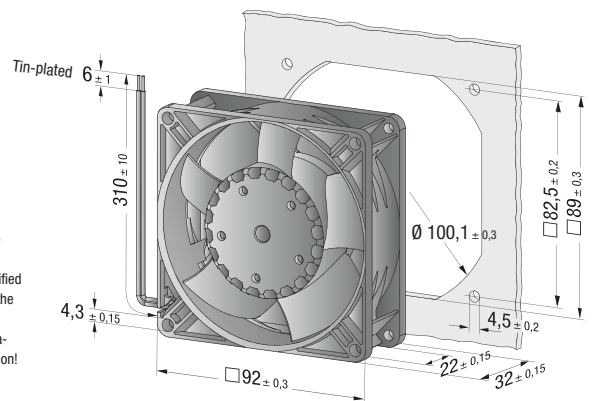
Subject to change

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
① ①	1 870	0.9	39	82 500	47 500	140 000
① ②	1 860	0.9	39	80 000	45 000	135 000
① ③	1 860	0.9	39	80 000	45 000	135 000
① ④	1 870	0.9	39	77 500	42 500	130 000
② ①	2 220	1.2	42	77 500	42 500	130 000
② ②	2 220	1.3	42	75 000	42 500	127 500
② ③	2 210	1.3	42	72 500	40 000	122 500
② ④	2 220	1.3	44	72 500	40 000	122 500

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
③ ①	2 650	1.9	46	75 000	42 500	127 500
③ ②	2 630	1.9	47	72 500	40 000	122 500
③ ③	2 630	1.9	47	70 000	40 000	117 500
③ ④	2 650	1.9	49	70 000	40 000	117 500



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 133 m³/h
S-Panther

DC axial fans

□ 92 x 32 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise,
looking towards rotor
 - **Connection:** Via single wires
AWG 24 UL 1061,
TR 64
 - **Weight:** 190 g
- **Possible special versions:**
(See chapter DC fans - specials)
 - 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: IP 54 / IP 68

1) Fiberglass-reinforced plastic

Series 3300 N
WVC0092PUGBS

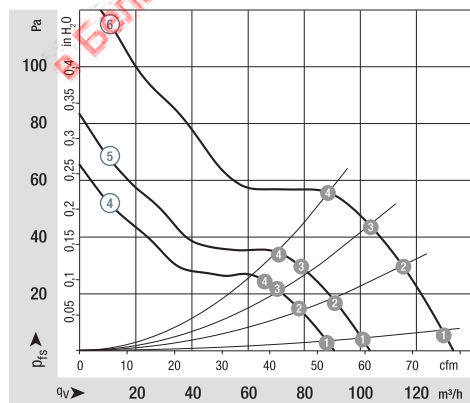
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level		Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm			VDC	VDC								
3312 NH	93	55	12	6...15	38	5.1	■	2.8	3 050	-20...+75	72 500 / 30 000	122 500	④	
3312 NHH	107	63	12	6...15	42	5.4	■	3.4	3 450	-20...+75	67 500 / 27 500	115 000	⑤	
3312 NH3	133	78	12	6...14	50	6.0	■	6.9	4 350	-20...+70	60 000 / 30 000	102 500	⑥	
3312 N/2 H3P	133	78	12	7...13.2	50	6.0	■	5.5	4 350	-20...+80	60 000 / 20 000	102 500	⑥	
3314 NH	93	55	24	12...28	38	5.1	■	2.6	3 050	-20...+75	72 500 / 30 000	122 500	④	
3314 NHH	107	63	24	12...28	42	5.4	■	3.4	3 450	-20...+75	67 500 / 27 500	115 000	⑤	
3314 NH3	133	78	24	12...28	50	6.0	■	6.0	4 350	-20...+75	60 000 / 25 000	102 500	⑥	
3314 N/2 H3P	133	78	24	14...26.4	50	6.0	■	5.7	4 350	-20...+80	60 000 / 20 000	102 500	⑥	
3318 NH	93	55	48	36...60	38	5.1	■	2.6	3 050	-20...+75	72 500 / 30 000	122 500	④	
3318 NHH	107	63	48	36...60	42	5.4	■	3.4	3 450	-20...+75	67 500 / 27 500	115 000	⑤	
3318 NH3	133	78	48	36...58	50	6.0	■	6.5	4 350	-20...+75	60 000 / 25 000	102 500	⑥	
3318 N/2 H3P	133	78	48	36...56	50	6.0	■	6.1	4 350	-20...+80	60 000 / 20 000	102 500	⑥	

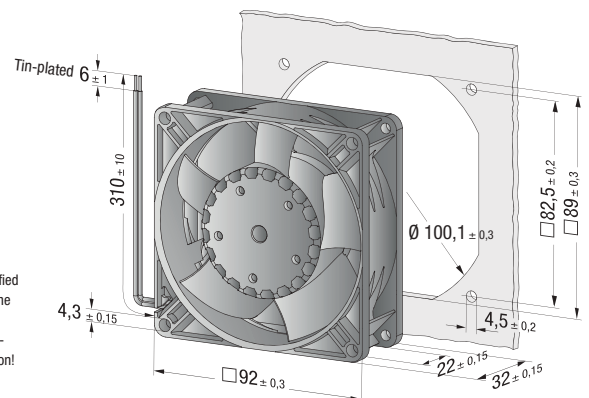
Subject to change

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
④ ①	3 000	2.7	54	70 000	40 000	117 500
④ ②	3 000	2.7	50	67 500	37 500	115 000
④ ③	3 010	2.7	50	65 000	37 500	110 000
④ ④	3 040	2.6	52	65 000	37 500	110 000
⑤ ①	3 410	3.6	55	65 000	37 500	110 000
⑤ ②	3 400	3.7	54	62 500	35 000	105 000
⑤ ③	3 410	3.6	56	60 000	32 500	102 500
⑤ ④	3 440	3.5	58	60 000	32 500	102 500

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
⑥ ①	4 300	6.6	61	57 500	32 500	97 500
⑥ ②	4 260	6.7	62	55 000	30 000	92 500
⑥ ③	4 280	6.7	63	55 000	30 000	92 500
⑥ ④	4 340	6.5	65	55 000	30 000	92 500



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302
measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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 configura-
tion, the parameters must be checked after installation!
For detailed information see
<http://www.ebmpapst.com/general-conditions>



Max. 280 m³/h

DC axial fans

□ 92 x 38 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24 (H3 and H4: AWG 22), TR 64
 - **Weight:** 240 g (H3 and H4: 280 g)
- **Possible special versions:** (See chapter DC fans - specials)
 - 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 / IP 68

1) Fiberglass-reinforced plastic

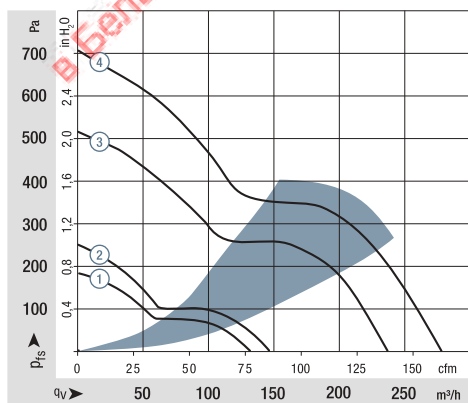
Series 3200 J
WVC0092JUGBS

Nominal data

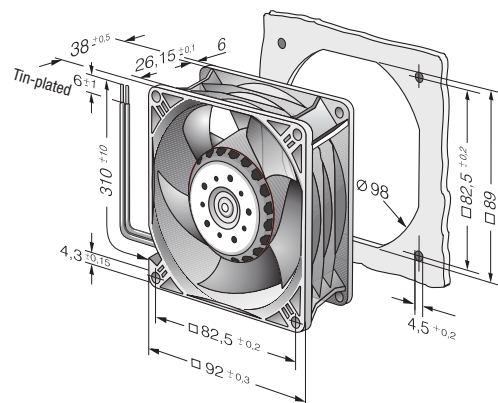
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
3212 JN	130	77	12	7...13.8	51	6.1	■	7.5	6 000	-20 ...+70	70 000 / 35 000	117 500	①	
3212 JH	146	86	12	7...15	55	6.4	■	9.0	6 800	-20 ...+70	70 000 / 35 000	117 500	②	
3212 JH3 <i>S-Force</i>	237	139	12	6...13.8	69	7.8	■	31.0*	11 000	-20 ...+70	65 000 / 32 500	110 000	③	
3212 JH4 <i>S-Force</i>	280	165	12	6...13.8	73	8.2	■	50.0*	13 000	-20 ...+70	60 000 / 30 000	110 000	④	
3214 JN	130	77	24	11...28	51	6.1	■	6.5	6 000	-20 ...+70	70 000 / 35 000	117 500	①	
3214 JH	146	86	24	12...30	55	6.4	■	9.0	6 800	-20 ...+70	70 000 / 35 000	117 500	②	
3214 JH3 <i>S-Force</i>	237	139	24	12...27.6	69	7.8	■	30.0*	11 000	-20 ...+70	65 000 / 32 500	110 000	③	
3214 JH4 <i>S-Force</i>	280	165	24	12...27.6	73	8.2	■	50.0*	13 000	-20 ...+70	60 000 / 30 000	110 000	④	
3218 JN	130	77	48	36...56	51	6.1	■	7.0	6 000	-20 ...+70	70 000 / 35 000	117 500	①	
3218 JH	146	86	48	36...53	55	6.4	■	9.5	6 800	-20 ...+70	70 000 / 35 000	117 500	②	
3218 JH3 <i>S-Force</i>	237	139	48	20...58.0	69	7.8	■	29.0*	11 000	-20 ...+70	65 000 / 32 500	110 000	③	
3218 JH4 <i>S-Force</i>	280	165	48	20...58.0	73	8.2	■	50.0*	13 000	-20 ...+70	60 000 / 30 000	110 000	④	

Subject to change

3200 JH3 and JH4 also available as standard with PWM control input and speed signal.
Speed control range from 2000 rpm⁻¹ up to maximum nominal speed. Standstill at 0% PWM, maximum speed if control cable is interrupted.
* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{pA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 270 m³/h
S-Panther

DC axial fans

□ 92 x 38 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Weight:** 240 g
- **Possible special versions:**
(See chapter DC fans - specials)
 - 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: IP 54 / IP 68

1) Fiberglass-reinforced plastic

Series 3250 J
WVC0092PUGCS

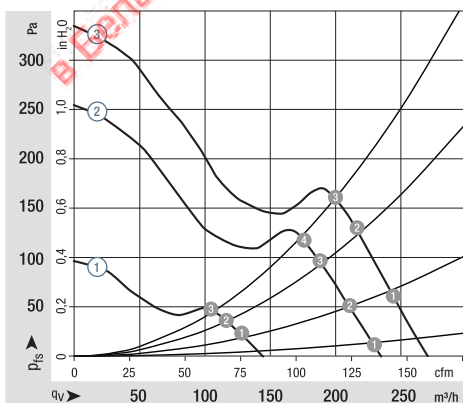
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
3252 JH	140	82	12	7...13.2	46	5.8	■	7.0	4 100	-20...+70	100 000 / 50 000	170 000	①	
3252 JH3	270	158	12	7...13.2	64	7.6	■	35.0	7 450	-20...+70	85 000 / 42 500	142 500	③	
3254 JH	140	82	24	14...26.4	46	5.8	■	7.0	4 100	-20...+70	100 000 / 50 000	170 000	①	
3254 J/2 H3P	270	158	24	14...26.4	64	7.6	■	35.0	7 450	-20...+70	85 000 / 42 500	142 500	③	
3258 JH	140	82	48	36...56.0	46	5.8	■	7.0	4 100	-20...+70	100 000 / 50 000	170 000	①	
3258 J/2 HHP	235	138	48	36...56.0	59	7.0	■	24.3	6 650	-20...+70	90 000 / 45 000	152 500	②	
3258 J/2 H3P	270	158	48	36...56.0	64	7.6	■	34.0	7 450	-20...+70	85 000 / 42 500	142 500	③	

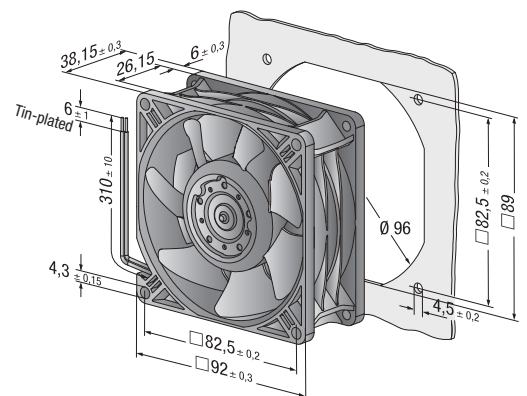
Änderungen vorbehalten

* Power consumption at free air flow. These values can be significantly higher in the operating point.

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)		n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
① ①	4096	7.5	46	92 500	47 500	155 000	③ ①	7562	37.5	64	82 500	40 000	140 000
① ②	4100	7.5	46	90 000	45 000	152 500	③ ②	7585	37.3	64	77 500	37 500	130 000
① ③	4120	7.3	46	90 000	45 000	152 500	③ ③	7649	36.9	64	72 500	37 500	122 500
② ①	6622	25.1	64	87 500	42 500	147 500							
② ②	6604	25.2	64	85 000	42 500	142 500							
② ③	6620	25.2	59	80 000	40 000	135 000							
② ④	6651	25	59	80 000	40 000	135 000							



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 170 m³/h

DC axial fans

□ 119 x 25 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24, TR 64
 - **Highlights:** Ball bearings and sleeve bearings available
 - **Weight:** 175 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input
 - Analog control input
 - Moisture protection

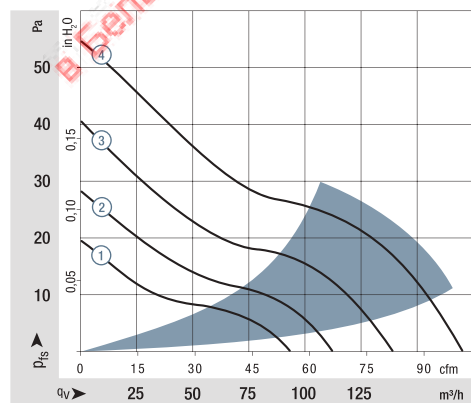
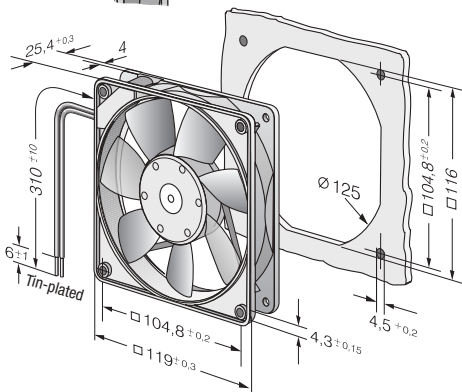
1) Fiberglass-reinforced plastic

Series 4400 F
WVC0119FUGAS

Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
4412 FGL	94	55	12	7...14	26	3.9	□	1.2	1 600	-20...+75	80 000 / 32 500	135 000	①	
4412 FGML	114	67	12	7...12.6	32	4.3	□	2.0	1 950	-20...+75	75 000 / 30 000	127 500	②	
4412 FML	114	67	12	7...12.6	32	4.3	■	2.0	1 950	-20...+75	75 000 / 30 000	127 500	②	
4412 FGM	140	82	12	7...12.6	38	4.8	□	3.2	2 400	-20...+75	70 000 / 27 500	117 500	③	
4412 FM	140	82	12	7...12.6	38	4.8	■	3.2	2 400	-20...+75	70 000 / 27 500	117 500	③	
4412 FG	170	100	12	8...12.6	43	5.3	□	5.3	2 900	-20...+60	60 000 / 37 500	102 500	④	
4412 F	168	99	12	8...12.6	43	5.3	■	5.3	2 900	-20...+60	60 000 / 37 500	102 500	④	
4414 FL	94	55	24	18...28	26	3.9	■	1.2	1 600	-20...+75	80 000 / 32 500	135 000	①	
4414 FM	140	82	24	12...28	38	4.8	■	3.1	2 400	-20...+75	70 000 / 27 500	117 500	③	
4414 FG	170	100	24	12...28	43	5.3	□	5.0	2 900	-20...+60	60 000 / 37 500	102 500	④	
4414 F	168	99	24	12...28	43	5.3	■	5.0	2 900	-20...+60	60 000 / 37 500	102 500	④	
4418 FG	170	100	48	28...53	43	5.3	□	5.4	2 900	-20...+60	60 000 / 37 500	102 500	④	
4418 F	168	99	48	28...53	43	5.3	■	5.4	2 900	-20...+60	60 000 / 37 500	102 500	④	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>

Max. 170 m³/h

DC axial fans

Ø 127 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Exhaust over struts
- **Direction of rotation:** Counterclockwise, looking towards rotor
- **Connection:** Via single wires AWG 24, TR 64
- **Highlights:** Ball bearings and sleeve bearings available
Optional:
- Reversible direction of rotation
- Symmetrical impeller
- **Weight:** 170 g
- **Possible special versions:** (See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Reversible direction of rotation
- Symmetrical impeller

1) Fiberglass-reinforced plastic

Series 4400 F
round
VWS0113FUGAS

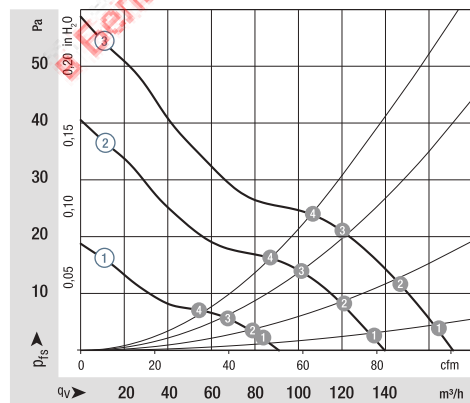
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
4412 FGL-573	91	54	12	7...15	26	3.9	□	1.2	1 600	-20...+75	80 000 / 32 500	135 000	①	
4412 FGMPR-197	140	82	12	7...12.6	38	4.8	□	3.2	2 400	-20...+65	75 000 / 27 500	117 500	②	
4412 FGPR-194	170	100	12	8...12.6	43	5.3	□	5.3	2 900	-20...+50	60 000 / 37 500	102 500	③	

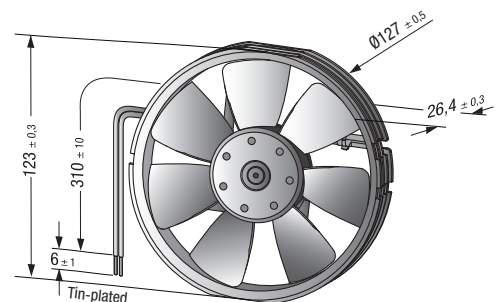
Subject to change

Other voltage versions (24 VDC, 48 VDC), speed variations and ball bearing designs are available as additional variants.

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)		n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)		n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)
① ①	1515	1	44	② ①	2225	4	51	③ ①	2670	6	59
① ②	1516	1	38	② ②	2235	4	50	③ ②	2685	6	59
① ③	1547	1	40	② ③	2304	4	51	③ ③	2783	6	56
① ④	1567	1	39	② ④	2369	4	52	③ ④	2869	6	57



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 225 m³/h

DC axial fans

□ 119 x 25 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Weight:** 240 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input
 - Analog control input
 - Moisture protection

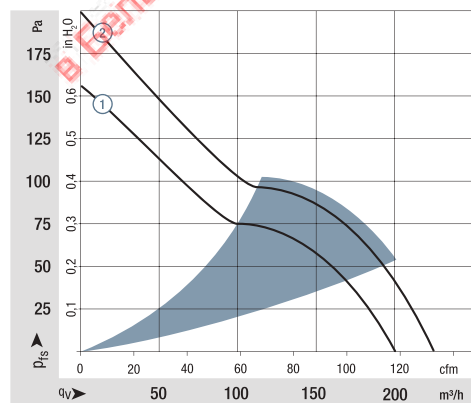
1) Fiberglass-reinforced plastic

Series 4400 FN
WVC119FUJBS

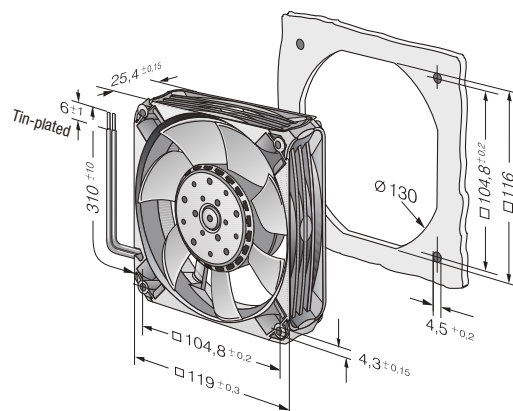
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
4412 FNH	225	132	12	9...13.2	55	6.7	■	12	5 400	-20...+70	60 000 / 30 000	102 500	②	
4414 FNN	200	118	24	14...28	52	6.5	■	8.3	4 850	-20...+70	60 000 / 30 000	102 500	①	
4414 FNH	225	132	24	18...26.4	55	6.7	■	12	5 400	-20...+70	60 000 / 30 000	102 500	②	
4418 FNH	225	132	48	36...53	55	6.7	■	12	5 400	-20...+70	60 000 / 30 000	102 500	②	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{pA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 190 m³/h S-Panther

DC axial fans

□ 119 x 32 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24, TR 64
 - **Highlights:** Ball bearings and sleeve bearings available
 - **Weight:** 250 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

Series 4300 N
WVC0119PUGBS

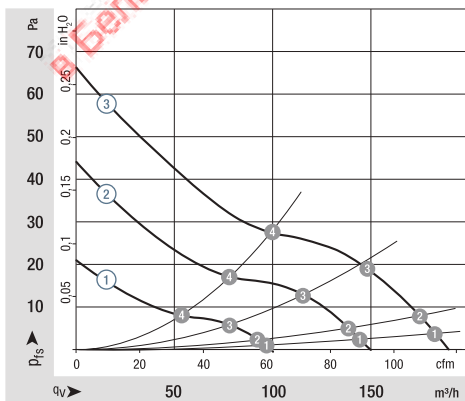
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
4312 NL	100	59	12	6...15	25	3.9	■	0.9	1 450	-20...+75	95 000 / 37 500	160 000	①	
4312 NM	150	88	12	6...15	36	4.7	■	2.2	2 100	-20...+75	85 000 / 32 500	142 000	②	
4312 NN	190	112	12	6...15	43	5.4	■	4.3	2 700	-20...+75	72 500 / 30 000	122 000	③	
4314 NL	100	59	24	12...28	25	3.9	■	1.0	1 450	-20...+75	95 000 / 37 500	160 000	①	
4314 NM	150	88	24	12...28	36	4.7	■	2.4	2 100	-20...+75	85 000 / 32 500	142 000	②	
4314 NN	190	112	24	12...28	43	5.4	■	4.1	2 700	-20...+75	72 500 / 30 000	122 000	③	
4318 NN	190	112	48	36...60	43	5.4	■	4.3	2 700	-20...+75	72 500 / 30 000	122 000	③	

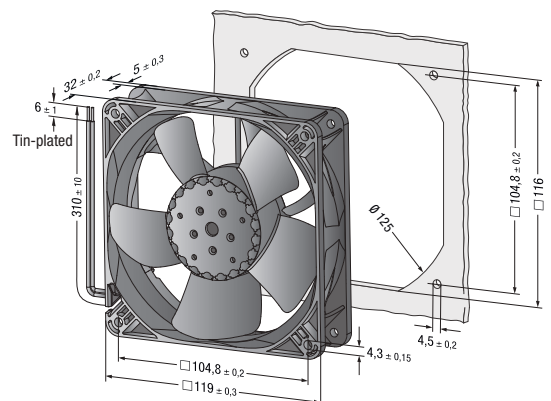
Subject to change

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
① ①	1 410	0.9	41	95 000	37 500	160 000
① ②	1 400	0.9	40	92 500	37 500	155 000
① ③	1 430	0.9	39	92 500	37 500	155 000
① ④	1 440	0.9	44	90 000	35 000	152 500
② ①	2 150	2.2	49	85 000	32 500	142 000
② ②	2 140	2.3	48	82 500	32 500	140 000
② ③	2 110	2.3	47	82 500	32 500	140 000
② ④	2 140	2.3	54	80 000	32 500	135 000

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
③ ①	2 660	4.2	55	72 500	30 000	122 000
③ ②	2 660	4.3	55	70 000	27 500	117 500
③ ③	2 600	4.4	54	70 000	27 500	117 500
③ ④	2 620	4.4	54	65 000	25 000	110 000



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 285 m³/h
S-Panther

DC axial fans

□ 119 x 32 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24, TR 64
 - **Highlights:** Ball bearings and sleeve bearings available
 - **Weight:** 250 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

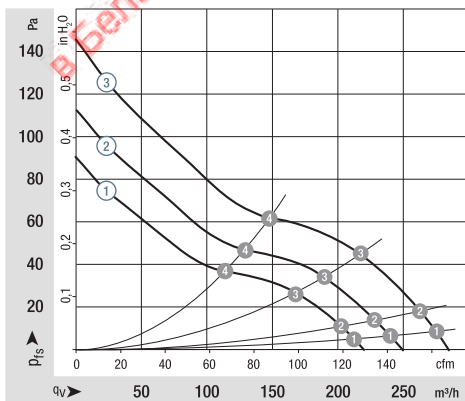
Series 4300 N
WVC0119PUGBS

Nominal data	Air flow		Nominal voltage	Voltage range	Sound pressure level		Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm			VDC	VDC								
4312 NH	220	129	12	6...15	47	5.8	■	7.6	3 150	-20...+75	62 500 / 25 000	105 000	①	
4312 NHH	250	147	12	6...14.4	51	6.2	■	10.7	3 600	-20...+65	52 500 / 30 000	87 500	②	
4312 NH3	285	168	12	7...13.2	55	6.6	■	12.0	4 050	-20...+70	45 000 / 17 500	75 000	③	
4314 NH	220	129	24	12...28	47	5.8	■	6.7	3 150	-20...+75	62 500 / 25 000	105 000	①	
4314 NHH	250	147	24	12...27	51	6.2	■	9.8	3 600	-20...+70	52 500 / 27 500	87 500	②	
4314 NH3	285	168	24	14...26.4	55	6.6	■	11.0	4 050	-20...+70	45 000 / 17 500	75 000	③	
4318 NH	220	129	48	36...60	47	5.8	■	6.7	3 150	-20...+75	62 500 / 25 000	105 000	①	
4318 NH3	285	168	48	36...52.8	55	6.6	■	11.5	4 050	-20...+65	45 000 / 17 500	75 000	③	

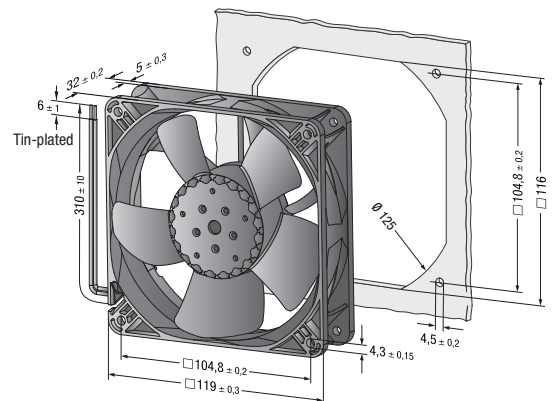
Subject to change

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
① ①	3 180	6.8	60	60 000	25 000	102 500
① ②	3 150	6.9	60	57 500	22 500	97 500
① ③	3 100	7.0	58	57 500	22 500	97 500
① ④	3 140	6.9	64	57 500	22 500	97 500
② ①	3 600	10	65	50 000	25 000	85 000
② ②	3 540	10	63	47 500	25 000	80 000
② ③	3 480	10	62	45 000	22 500	75 000
② ④	3 500	10	63	50 000	25 000	85 000

	n rpm ⁻¹	P _{ed} W	L _{WA} dB(A)	L ₁₀ (40 °C)	L ₁₀ (T _{max})	L ₁₀ IPC (40 °C)
③ ①	4 070	12	67	42 500	17 500	72 500
③ ②	4 030	12	66	37 500	15 000	62 500
③ ③	3 960	12	66	37 500	15 000	62 500
③ ④	4 020	12	70	45 000	17 500	75 000



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 205 m³/h

DC axial fans

□ 119 x 38 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24, TR 64
 - **Weight:** 270 g
- **Possible special versions:**
(See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

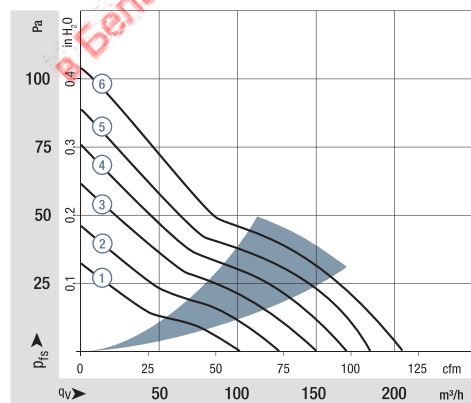
Series 4400
WVC0119AUGBS

Nominal data

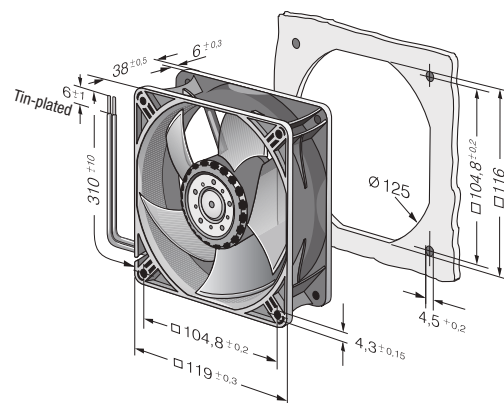
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
4412 L	150	88	12	7...14	37	5.0	■	2.2	2 700	-20...+80	67 500 / 22 500	115 000	③	
4412 ML	168	99	12	7...15	40	5.1	■	3.0	3 000	-20...+80	67 500 / 22 500	115 000	④	
4412 M	184	108	12	7...14	42	5.3	■	3.8	3 300	-20...+75	65 000 / 25 000	110 000	⑤	
4412 N	205	121	12	7...14	46	5.6	■	5.3	3 650	-20...+70	62 500 / 30 000	105 000	⑥	
4414 L3	100	59	24	12...28	26	4.0	■	1.0	1 800	-20...+80	75 500 / 22 500	127 500	①	
4414 LL	124	73	24	12...28	33	4.5	■	1.6	2 250	-20...+80	70 000 / 22 500	117 500	②	
4414 L	150	88	24	18...28	37	5.0	■	2.4	2 700	-20...+80	67 500 / 22 500	115 000	③	
4414 ML	168	99	24	12...28	40	5.1	■	3.2	3 000	-20...+80	67 500 / 22 500	115 000	④	
4414 M	184	108	24	18...28	42	5.3	■	4.1	3 300	-20...+75	65 000 / 25 000	110 000	⑤	
4414 N	205	121	24	18...28	46	5.6	■	5.4	3 650	-20...+70	62 500 / 30 000	105 000	⑥	
4418 L	150	88	48	36...60	37	5.0	■	2.5	2 700	-20...+75	67 500 / 27 500	115 000	③	
4418 ML	168	99	48	36...60	40	5.1	■	3.2	3 000	-20...+75	67 500 / 27 500	115 000	④	
4418 M	184	108	48	36...60	42	5.3	■	4.2	3 300	-20...+70	65 000 / 32 500	110 000	⑤	
4418 N	205	121	48	36...60	46	5.6	■	5.4	3 650	-20...+70	62 500 / 30 000	105 000	⑥	

Subject to change

Further variants can be found on page 57.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 285 m³/h

DC axial fans

□ 119 x 38 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires AWG 24, TR 64
 - **Weight:** 270 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

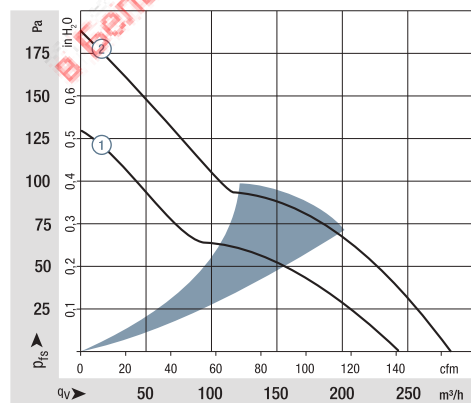
1) Fiberglass-reinforced plastic

Series 4400
VWC0119AUGBS

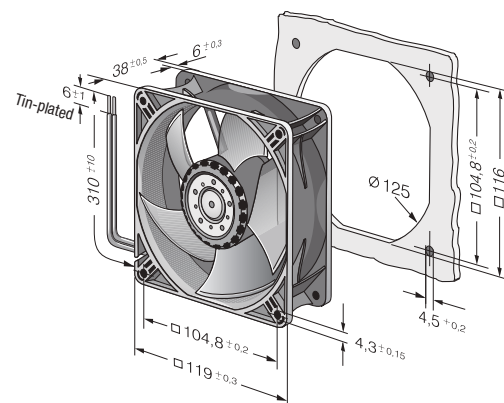
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
4412 H	240	141	12	7...14	50	6.0	■	8.6	4 300	-20...+70	57 500 / 27 500	97 500	97 500	①
4412/2 HHP	285	168	12	7...14.5	55	6.4	■	13.0	5 000	-20...+70	50 000 / 25 000	85 000	85 000	②
4414 H	240	141	24	18...28	50	6.0	■	8.6	4 300	-20...+70	57 500 / 27 500	97 500	97 500	①
4414 HH	285	165	24	16...28	55	6.4	■	14.0	5 000	-20...+70	50 000 / 25 000	85 000	85 000	②
4414/2 HHP	285	168	24	18...28	55	6.4	■	12.0	5 000	-20...+70	50 000 / 25 000	85 000	85 000	②
4418 H	240	141	48	36...60	50	6.0	■	8.6	4 300	-20...+70	57 500 / 27 500	97 500	97 500	①
4418/2 HHP	285	168	48	36...60	55	6.4	■	13.0	5 000	-20...+70	50 000 / 25 000	85 000	85 000	②

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 237 m³/h

DC axial fans

□ 119 x 38 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Intake over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** On flat connectors, 2.8 x 0.5 mm
Also available with wires as an option
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 390 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

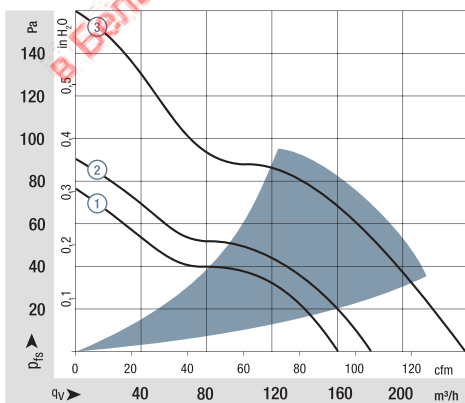
1) Fiberglass-reinforced plastic

Series 4100 N
VUC0119YUJBS

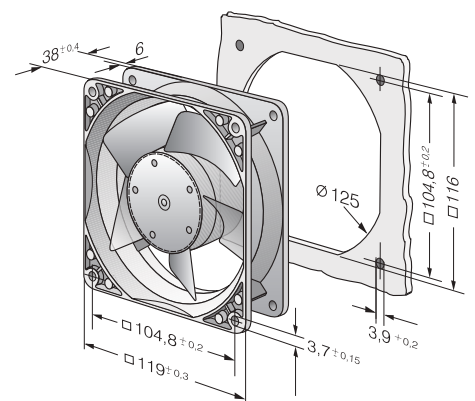
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
4182 NGX	160	94	12	6...15	44	5.3	□	3.7	2 800	-20...+75	85 000 / 37 500	142 500	①	
4182 NX	180	106	12	6...15	49	5.7	■	4.9	3 200	-30...+75	85 000 / 37 500	142 500	②	
4182 NXH	237	140	12	7...14	57	6.5	■	11.0	4 400	-30...+55	70 000 / 50 000	117 500	③	
4184 NGX	160	94	24	12...31.5	44	5.3	□	3.3	2 800	-20...+75	85 000 / 37 500	142 500	①	
4184 NXM	160	94	24	12...31.5	44	5.3	■	3.2	2 800	-30...+75	85 000 / 37 500	142 500	①	
4184 NX	180	106	24	12...31.5	49	5.7	■	4.9	3 200	-30...+70	85 000 / 42 500	142 500	②	
4184 NXH	237	140	24	12...28	57	6.5	■	11.0	4 400	-30...+70	70 000 / 35 000	117 500	③	
4188 NGX	160	94	48	36...60	44	5.3	□	3.6	2 800	-20...+75	85 000 / 37 500	142 500	①	
4188 NXM	160	94	48	36...60	44	5.3	■	3.5	2 800	-30...+75	85 000 / 37 500	142 500	①	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 440 m³/h

DC axial fans

□ 119 x 38 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Intake over struts
 - **Direction of rotation:** Clockwise, looking towards rotor
 - **Connection:** Via single wires
AWG 22 UL 1007, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 390 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

Series 4100 N
High Performance
VUC0119YUJBS

Nominal data

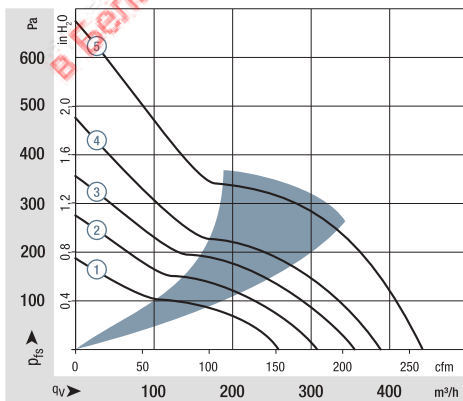
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) elbm-papst standard	Service life L ₁₀ (T _{max}) elbm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
4112 NHH	260	153	12	9...15	60	6.8	■	13.3	5 000	-20...+65	70 000 / 40 000	117 500	①	
4112 NH3	310	182	12	9...15	65	7.2	■	21.6	6 000	-20...+65	65 000 / 37 500	110 000	②	
4112 NH4	355	209	12	9...14	67	7.4	■	32.0	6 800	-20...+65	62 500 / 35 000	105 000	③	
4114 NHH	260	153	24	16...30	60	6.8	■	12.4	5 000	-20...+65	70 000 / 40 000	117 500	①	
4114 NH3	310	182	24	16...30	65	7.2	■	19.5	6 000	-20...+65	65 000 / 37 500	110 000	②	
4114 NH4	355	209	24	16...30	67	7.4	■	30.0	6 800	-20...+65	62 500 / 35 000	105 000	③	
4114 NH5 <i>S-Force</i>	390	230	24	16...30	70	7.6	■	45.0*	7 500	-20...+65	62 500 / 35 000	105 000	④	
4114 NH6 <i>S-Force</i>	440	259	24	16...30	73	8.1	■	65.0*	8 400	-20...+65	60 000 / 32 500	102 500	⑤	
4118 NHH	260	153	48	36...60	60	6.8	■	12.0	5 000	-20...+65	70 000 / 40 000	117 500	①	
4118 NH3	310	182	48	36...60	65	7.2	■	20.0	6 000	-20...+65	65 000 / 37 500	110 000	②	
4118 NH4	355	209	48	36...60	67	7.4	■	28.0	6 800	-20...+65	62 500 / 35 000	105 000	③	
4118 NH5 <i>S-Force</i>	390	230	48	36...60	70	7.6	■	45.0*	7 500	-20...+65	62 500 / 35 000	105 000	④	
4118 NH6 <i>S-Force</i>	440	259	48	36...60	73	8.1	■	62.0*	8 400	-20...+65	60 000 / 32 500	102 500	⑤	

Subject to change

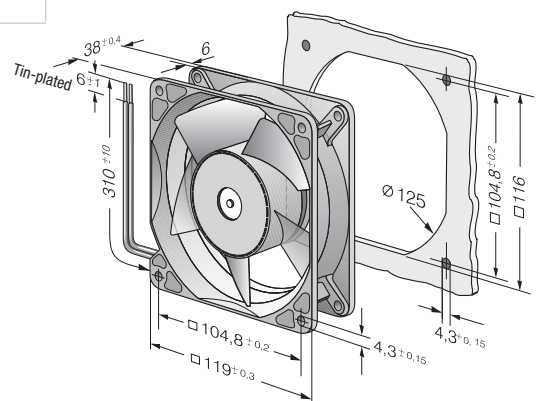
* Power consumption at free air flow. These values can be significantly higher in the operating point.

*** Power consumption – in operation**

Fan type	optimum operating range (W)
4114 NH5	55
4114 NH6	95
4118 NH5	55
4118 NH6	95



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 540 m³/h
S-Force

DC axial fans

□ 119 x 38 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Intake over struts
- **Direction of rotation:** Clockwise, looking towards rotor
- **Connection:** Via single wires AWG 18, 20 or AWG 22, TR 64, speed signal and control input AWG 22
- **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
Housing with grounding lug for screw M4 x 8 (Torx)
- **Weight:** 425 g

- **Possible special versions:**
(See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input (standard)
 - Analog control input
 - Moisture protection

1) Fiberglass-reinforced plastic

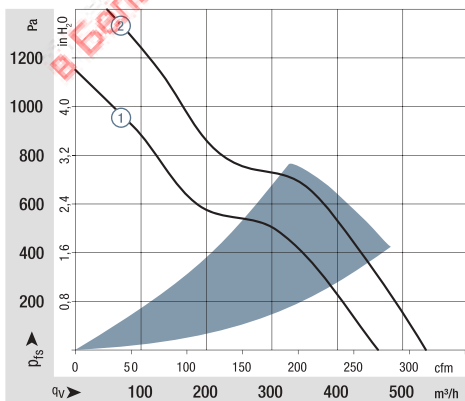
Series 4100 N
High Performance
VUC0119YUJCS

Nominal data

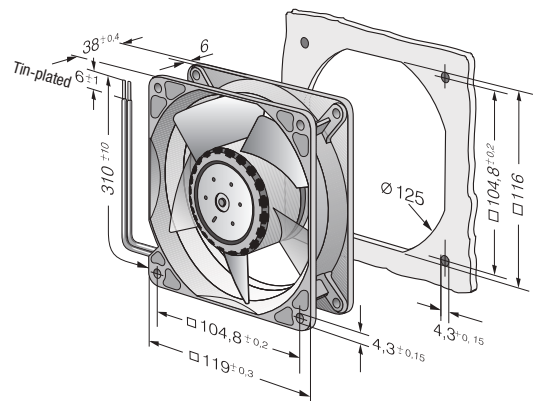
Type	Air flow		Nominal voltage		Voltage range		Sound pressure level		Sound power level		Sintec sleeve bearings Ball bearings		Power consumption*		Nominal speed		Temperature range		Service life L ₁₀ (40 °C) ebm-papst standard		Service life L ₁₀ (T _{max}) ebm-papst standard		Life expectancy L ₁₀ IPC (40 °C) see page 15		Curve
	m ³ /h	cfm	VDC	VDC	dB(A)	Bel(A)	□ / ■	Watts	rpm ⁻¹	°C	Hours	Hours	Hours	Hours											
4154 N/2 H7P	465	274	24	16...30	77	8.5	■	90	9 500	-20...+75	57 500 / 25 000	97 500	①												
4154 N/2 H8P	540	315	24	16...30	80	8.9	■	120	11 000	-20...+75	55 000 / 22 500	92 500	②												
4158 N/2 H7P	465	274	48	36...72	77	8.5	■	90	9 500	-20...+75	57 500 / 25 000	97 500	①												
4158 N/2 H8P	540	315	48	36...72	80	8.9	■	120	11 000	-20...+75	55 000 / 22 500	92 500	②												

Subject to change

Speed control range from 500 rpm⁻¹ up to maximum nominal speed.
Standstill at 0 % PWM, maximum speed if control cable is interrupted.
To attain the specified service life, an external capacitor must be wired between the plus and minus strands. Please note the wiring suggestion on page 14.
* Power consumption at free air flow, these values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 280 m³/h

DC diagonal fan

□ 119 x 38 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Available in die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 375 g (with metal housing: 455 g)
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

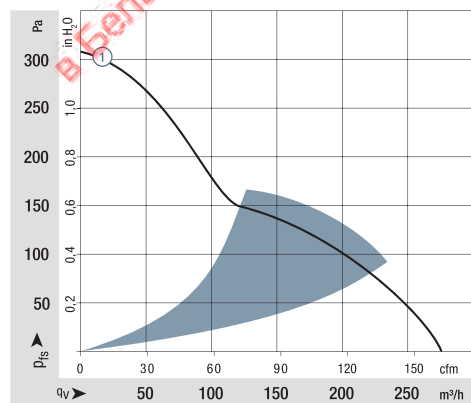
Series DV 4100
VKC0119AUJBS

Nominal data

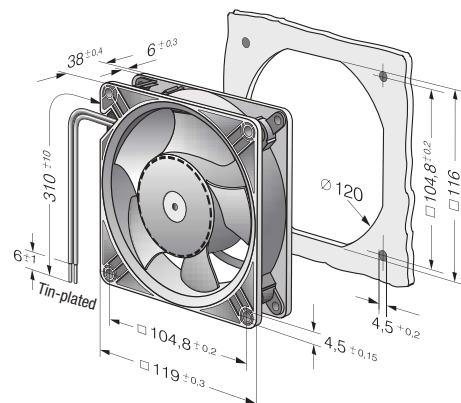
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
DV 4112 N	280	165	12	9...15	61	6.9	■	21.0	6 000	-20...+65	70 000 / 40 000	117 500	①	
DV 4114 N	280	165	24	16...30	61	6.9	■	20.5	6 000	-20...+65	70 000 / 40 000	117 500	①	
DV 4118 N	280	165	48	36...60	61	6.9	■	20.0	6 000	-20...+65	70 000 / 40 000	117 500	①	

Subject to change

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 340 m³/h

DC axial fans

□ 127 x 38 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Exhaust over struts
- **Direction of rotation:** Counterclockwise,
looking towards rotor
- **Connection:** Via single wires AWG 22,
TR 64
- **Weight:** 310 g

- **Possible special versions:**
(See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

Series 5200 N
WVC0127YUJBS

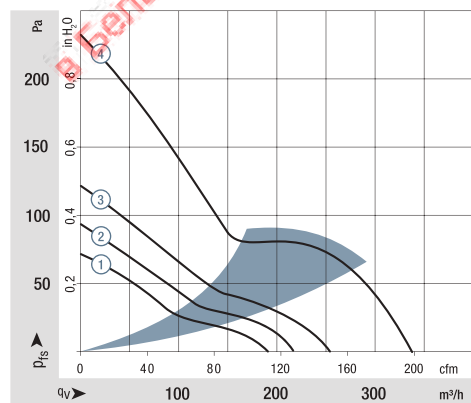
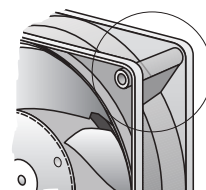
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption**	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
5212 NM	187	110	12	7...14.5	43	5.3	■	4.1	2 750	-20...+75	62 500 / 27 500	105 000	①	
5212 NN	216	127	12	7...14	46	5.6	■	6.2	3 150	-20...+70	57 500 / 25 000	97 500	②	
5212 NH	252	148	12	7...14	51	6.0	■	9.8	3 650	-20...+70	45 000 / 22 500	75 000	③	
5212 NHH*	340	200	12	9...15	58	6.6	■	19.0	4 900	-20...+65	45 000 / 25 000	75 000	④	
5214 NM	187	110	24	12...28	43	5.3	■	4.6	2 750	-20...+75	62 500 / 27 500	105 000	①	
5214 NN	216	127	24	12...28	46	5.6	■	6.0	3 150	-20...+75	57 500 / 25 000	97 500	②	
5214 NH	252	148	24	12...28	51	6.0	■	9.8	3 650	-20...+70	45 000 / 22 500	75 000	③	
5214 NHH*	340	200	24	16...30	58	6.6	■	17.5	4 900	-20...+65	45 000 / 25 000	75 000	④	
5218 NM	187	110	48	36...56	43	5.3	■	4.5	2 750	-20...+75	62 500 / 27 500	105 000	①	
5218 NN	216	127	48	36...56	46	5.6	■	6.2	3 150	-20...+70	57 500 / 32 500	97 500	②	
5218 NH	252	148	48	36...56	51	6.0	■	9.6	3 650	-20...+55	45 000 / 32 500	75 000	③	
5218 NHH*	340	200	48	36...60	58	6.6	■	18.0	4 900	-20...+65	45 000 / 25 000	75 000	④	

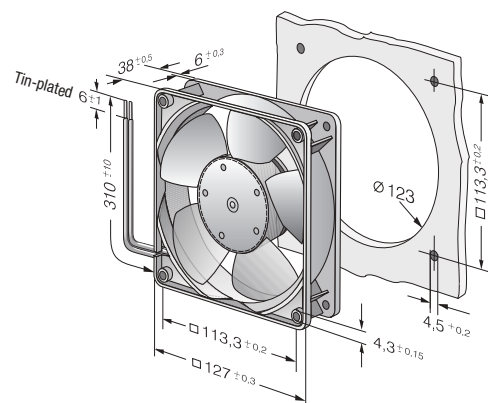
Subject to change
* see drawing

** Power consumption at free air flow, these values can be significantly higher in the operating point.

*NHH models: fan housing with molded-in spacers.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 320 m³/h

DC diagonal fan

□ 127 x 38 mm



- **Material:** Housing: GRP¹⁾ (PBT)
Available in Die-cast aluminum
Metal flange
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 415 g (with metal housing: 490 g)
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

Series DV 5200
VKC0127AUJBS

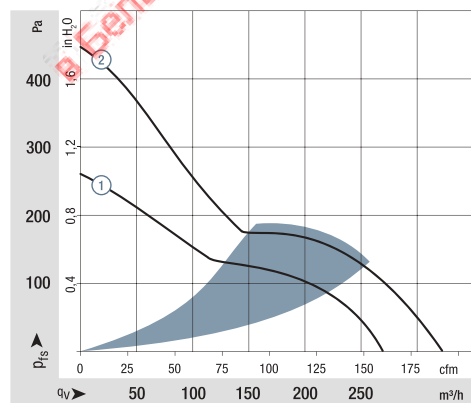
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
DV 5212 N	270	159	12	9...15	56	6.4	■	21.0	5 000	-20...+65	70 000 / 40 000	117 500	①	
DV 5214 N	270	159	24	16...30	56	6.4	■	20.4	5 000	-20...+65	70 000 / 40 000	117 500	①	
DV 5218 N	270	159	48	36...60	56	6.4	■	18.5	5 000	-20...+65	70 000 / 40 000	117500	①	
Standard model comes with speed signal and PWM control input. Other versions by request.														
DV 5214/2 HP	320	188	24	16...30	62	7.2	■	38.5	6 000	-20...+65	62 500 / 35 000	105 000	②	

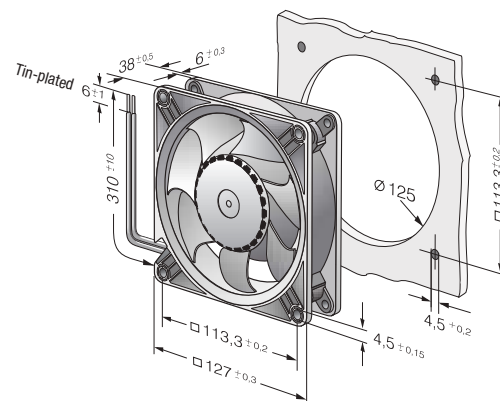
Subject to change

Speed control range from 1000 rpm⁻¹ up to maximum nominal speed.
Standstill at 0 % PWM, maximum speed if control cable is interrupted.

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 260 m³/h

DC axial fans

□ 135 x 38 mm



- **Material:** Housing: Die-cast aluminum
Impeller: painted sheet steel
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
48 V design incl. screws.
 - **Weight:** 650 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

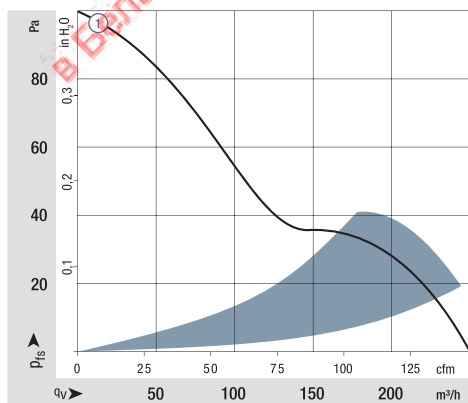
Series 5100 N
VWC0135YULBS

Nominal data

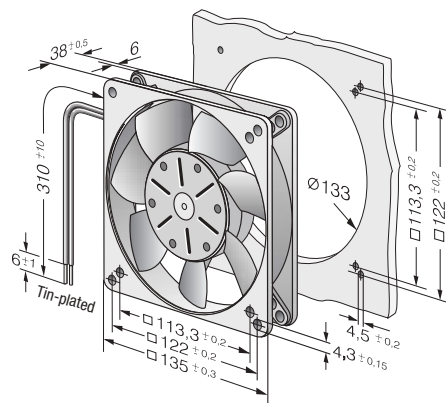
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
5112 N	260	153	12	6...15	48	6.1	■	9.5	2 900	-25...+72	80 000 / 37 500	135 000	①	
5114 N	260	153	24	12...30	48	6.1	■	9.5	2 900	-25...+72	80 000 / 37 500	135 000	①	
5118 N	260	153	48	24...60	48	6.1	■	9.5	2 900	-25...+72	80 000 / 37 500	135 000	①	

Subject to change

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_wA ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_pA 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>



Max. 340 m³/h
S-Force

DC axial fans

□ 140 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Intake over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 900 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

Series 5300
VUC0140AULCS

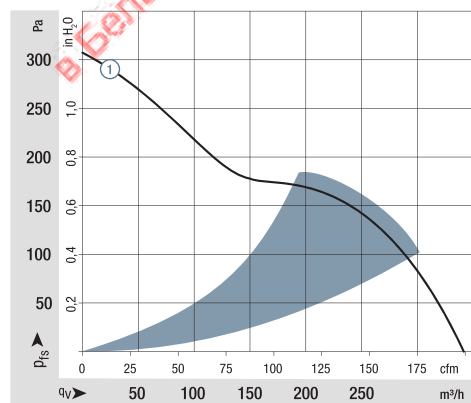
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
5314/2 HP	340	200	24	16...28	64	7.2	■	28.4	5 000	-20...+65	77 500 / 40 000	130 000	①	
5318/2 HP	340	200	48	36...72	64	7.2	■	27	5 000	-20...+65	77 500 / 40 000	130 000	①	

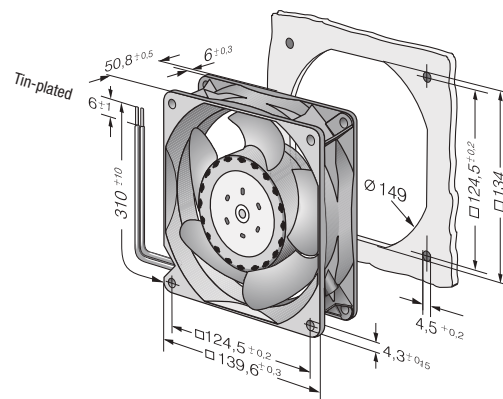
Subject to change

Speed control range from 700 rpm⁻¹ up to maximum nominal speed.
Standstill at 0% PWM, maximum speed if control cable is interrupted.

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} 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>



Max. 670 m³/h
S-Force

DC axial fans

□ 140 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Intake over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 20 and AWG 22, TR 64
 - **Highlights:** 3-phase fan drive with very smooth operation
Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 900 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input
 - Analog control input
 - Multi-option control input
 - Moisture protection
 - Salt spray protection
 - Degree of protection: IP 54

1) Fiberglass-reinforced plastic

Series 5300 TD
VUC0140AULDS

Nominal data

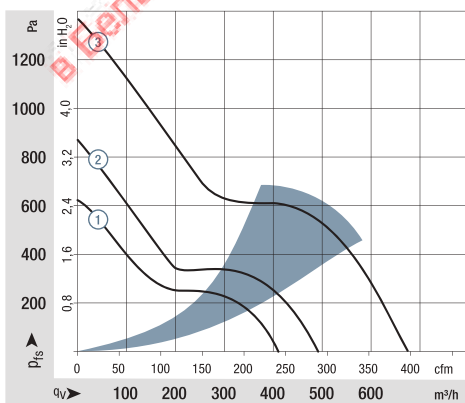
Type	Air flow		Nominal voltage		Voltage range		Sound pressure level		Sound power level		Sintec sleeve bearings Ball bearings		Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm	VDC	VDC	dB(A)	Bel(A)	□ / ■	Watts	rpm ⁻¹	°C	Hours	Hours							
5312/2 TDHP	410	241	12	8...16	70	7.7	■	43	6 000	-20...+70	70 000 / 35 000	117 500	①						
5314/2 TDHP	410	241	24	16...36	70	7.7	■	42	6 000	-20...+70	70 000 / 35 000	117 500	①						
5314/2 TDHHP	490	288	24	16...36	75	8.1	■	67	7 000	-20...+70	62 500 / 30 000	105 000	②						
5318/2 TDHP	410	241	48	36...72	70	7.7	■	42	6 000	-20...+70	70 000 / 35 000	117 500	①						
5318/2 TDHHP	490	288	48	36...72	75	8.1	■	66	7 000	-20...+70	62 500 / 30 000	105 000	②						
5318/2 TDH4P	670	394	48	36...72	79	8.8	■	149	9 200	-20...+65	57 500 / 32 500	97 500	③						

Subject to change

Speed control range from 1000 rpm⁻¹ up to maximum nominal speed.

Standstill at 0 % PWM, maximum speed if control cable is interrupted.

* Power consumption at free air flow. These values can be significantly higher in the operating point.



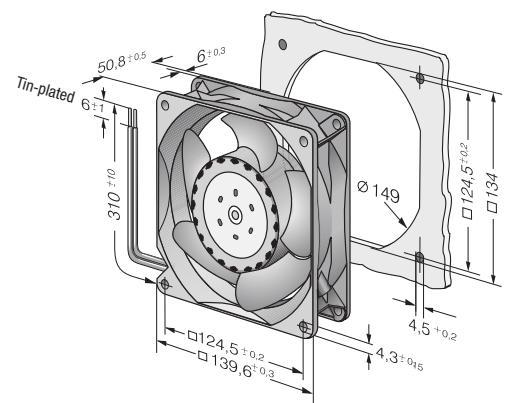
Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} measured at 1 m distance from fan axis.

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>



Max. 360 m³/h

DC axial fans

Ø 150 x 38 mm



- **Material:** Housing: Die-cast aluminum
Impeller: painted sheet steel
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 620 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

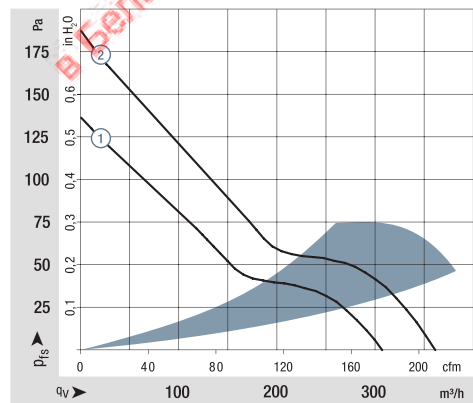
Series 7100 N
WWS0140XULBS

Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
7112 N	308	181	12	6...15	53	6.2	■	12.0	2 850	-25...+72	80 000 / 37 500	135 000	①	
7114 N	308	181	24	12...30	53	6.2	■	12.0	2 850	-25...+72	80 000 / 37 500	135 000	①	
7114 NH	360	212	24	12...26.5	58	6.7	■	19.0	3 350	-25...+72	75 000 / 35 000	127 500	②	
7118 N	308	181	48	24...60	53	6.2	■	12.0	2 850	-25...+72	80 000 / 37 500	135 000	①	

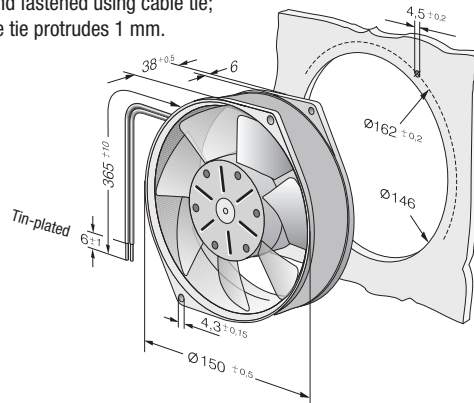
Subject to change

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>

Wire fastened with cable tie.
Strand fastened using cable tie;
cable tie protrudes 1 mm.



Max. 360 m³/h

DC axial fans

Ø 150 x 55 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 725 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

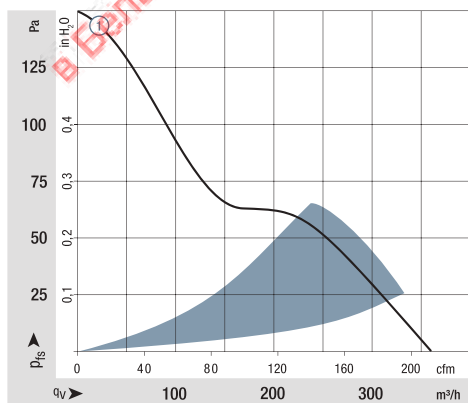
Series 7200 N
VWS0143XULCS

Nominal data

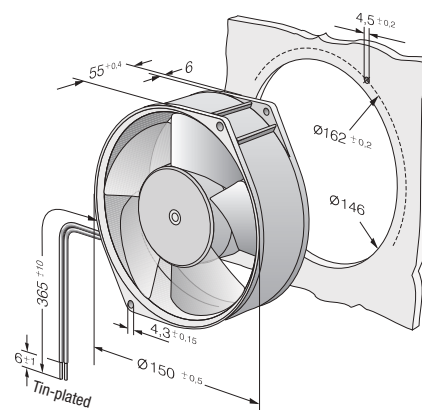
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
7212 N	360	212	12	6...15	53	6.2	■	12.0	3 050	-25...+72	80 000 / 37 500	135 000	①	
7214 N	360	212	24	12...30	53	6.2	■	12.0	3 050	-25...+72	80 000 / 37 500	135 000	①	
7218 N	360	212	48	24...60	53	6.2	■	12.0	3 050	-25...+72	80 000 / 37 500	135 000	①	

Subject to change

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 480 m³/h

DC axial fans

172 x 150 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** on flat plugs 3 x 0.5 mm
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 760 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

1) Fiberglass-reinforced plastic

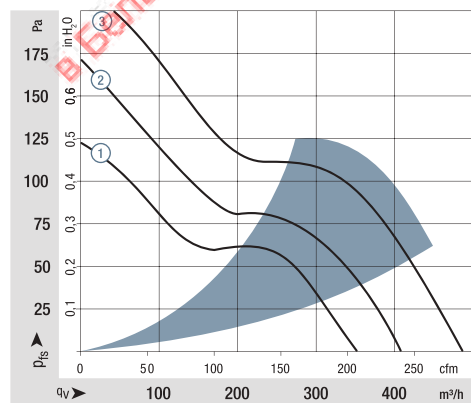
Series 6400
VWS0143XULCS

Nominal data

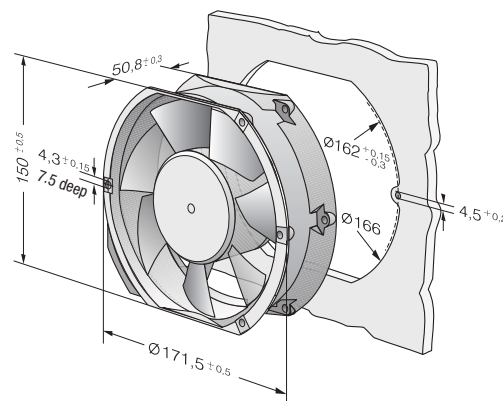
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption***	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
6412 M	350	206	12	8...15	52	6.0	■	12	2 850	-20...+72	80 000 / 37 500	135 000	①	
6424 M	350	206	24	12...32	52	6.0	■	12	2 850	-20...+72	80 000 / 37 500	135 000	①	
6424	410	241	24	12...28	57	6.4	■	17	3 400	-20...+72	75 000 / 35 000	127 500	②	
6424 H	480	283	24	12...28	63	7.1	■	26	4 000	-20...+55**	70 000 / 50 000	117 500	③	
6448	410	241	48	28...60	57	6.4	■	17	3 400	-20...+72	75 000 / 35 000	127 500	②	
6448 H*	480	283	48	28...60	63	7.1	■	26	4 000	-20...+55**	70 000 / 50 000	117 500	③	

Subject to change

* Strand 310 mm.
 ** 72 °C versions on request
 *** Power consumption at free air flow, these values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
 Installation category A, without contact protection.
 Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
 Sound pressure level L_{pA} 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>



Max. 900 m³/h

DC axial fans

172 x 150 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 18, 20 or AWG 22, TR 64, speed signal and control input AWG 22
 - **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 760 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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
 - Reversible direction of rotation

1) Fiberglass-reinforced plastic

Series 6400 TD
WVS0143XULCS

Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption**	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
Min Max 6424 TD...	90	53	24	16...28	18	—	■	2	800	-20...+60	70 000 / 45 000	117 500		①
	600	353			65	7.4		50	5 100					②
Min Max 6448 TD...	90	53	48	40...55*	18	—	■	2	800	-20...+60	70 000 / 45 000	117 500		①
	600	353			65	7.4		50	5 100					②
Min Max 6448 TDH...	90	53	48	36...72	18	—	■	2	800	-20...+60	70 000 / 45 000	117 500		①
	900	530			78	8.6		163	7500					③

Subject to change

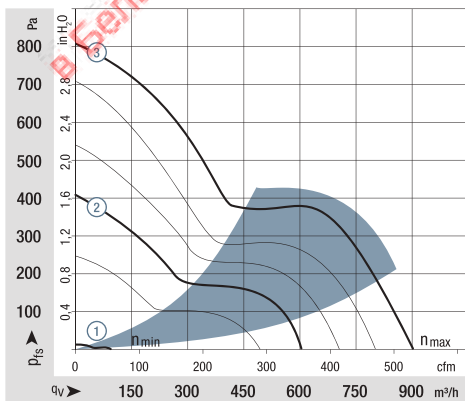
* Variants with an extended voltage range available on request.

Models 6424 TD..., 6448 TD... and 6448 TDH... are available in customer-specific, custom-developed variants only.

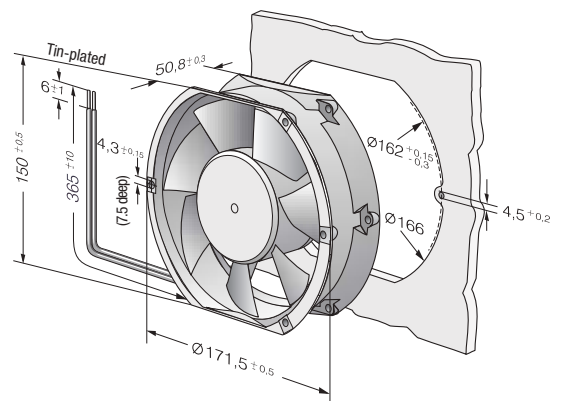
The figures indicated are technically feasible benchmark values. The fans can be specially adapted to your application with signal outputs and control inputs.

For details of the technical possibilities, refer to the chapters on the sensor signal, alarm signal and control inputs beginning on page 175.

** Power consumption at free air flow, these values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 530 m³/h

DC diagonal fan

172 x 160 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 820 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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

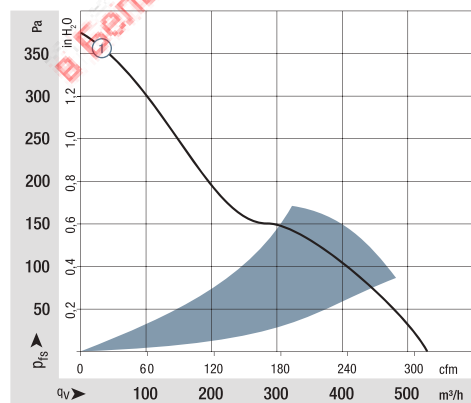
1) Fiberglass-reinforced plastic

Series DV 6400
VK0S154XULCS

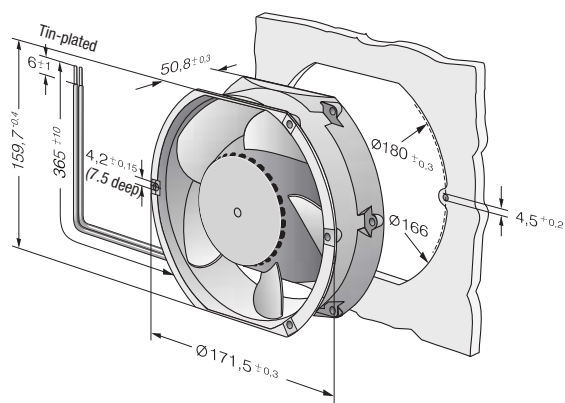
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
DV 6424	530	312	24	16...28	65	7.3	■	40	4 300	-20...+75	90 000 / 35 000	152 500	①	
DV 6448/12	530	312	48	28...60	65	7.3	■	40	4 300	-20...+75	90 000 / 35 000	152 500	①	

Subject to change



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 680 m³/h

DC diagonal fan

172 x 160 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Exhaust over struts
- **Direction of rotation:** Counterclockwise, looking towards rotor
- **Connection:** Via single wires AWG 22, TR 64
- **Highlights:** 3-phase fan drive with very smooth operation and high efficiency. Housing with grounding lug for screw M4 x 8 (Torx)
- **Weight:** 820 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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
 - Reversible direction of rotation

1) Fiberglass-reinforced plastic

Series DV 6400 TD
TURBOFAN
VKS0154XULCS

Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level		Sintec sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm			VDC	VDC								
Min Max DV 6424 TD...	100	59	24	16...28	29	—	■	2	800	-20...+60	65 000 / 40 000	110 000	①	
	680	400			71	7.9								91
Min Max DV 6448 TD...	100	59	48	40...55	29	—	■	2	800	-20...+60	65 000 / 40 000	110 000	①	
	680	400			71	7.9								86

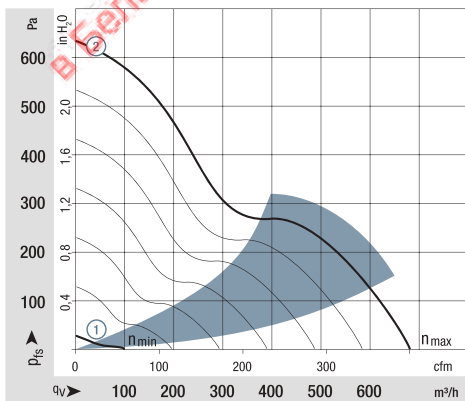
Subject to change

Models DV 6424 TD... and DV 6448 TD... are available in customer-specific, custom-developed variants only.

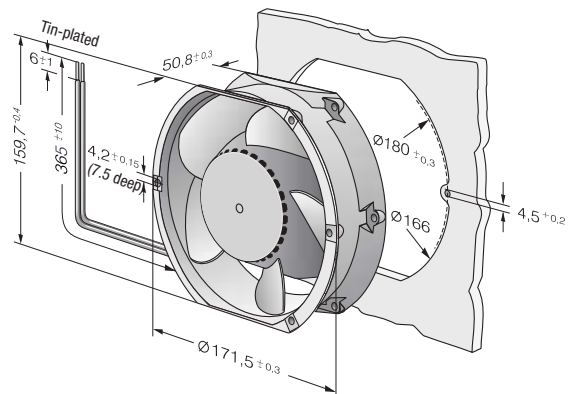
The figures indicated are technically feasible benchmark values. The fans can be specially adapted to your application with signal outputs and control inputs.

For details of the technical possibilities, refer to the chapters on the sensor signal, alarm signal and control inputs beginning on page 175.

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 1030 m³/h
S-Panther

DC axial fans

172 x 160 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 18, 20 or AWG 22, TR 64, speed and alarm signals: AWG 22
 - **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 875 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input (standard)
 - Analog control input
 - Multi-option control input
 - Moisture protection
 - Salt spray protection
 - Degree of protection: IP 54

1) Fiberglass-reinforced plastic

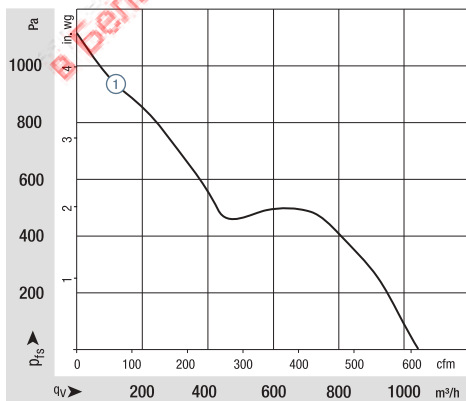
Series 6300 NTD
WWS0148PULDS

Nominal data

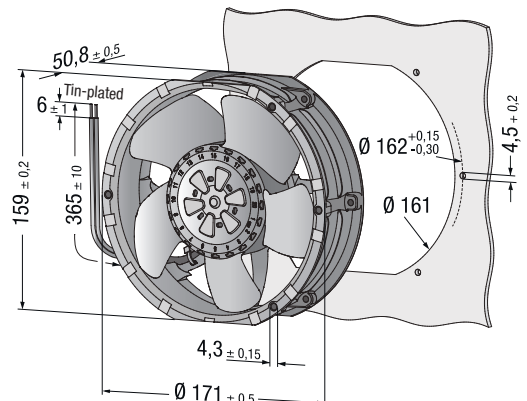
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
6318 N/2 TDH3P-303	1030	611	48	36...72	76	8.3	■	160	7 500	-20...+70	60 000 / 30 000	102 500	①	

Subject to change

Speed control range from 1000 rpm⁻¹ up to maximum nominal speed. Standstill at 0 % PWM, maximum speed if control cable is interrupted.
* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 930 m³/h
S-Force

DC axial fans

172 x 160 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 18, 20 or AWG 22, TR 64, speed signal and control input AWG 22
 - **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 910 g
- **Possible special versions:** (See chapter DC fans - specials)
- Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input (standard)
 - Analog control input
 - Multi-option control input
 - Moisture protection
 - Salt spray protection
 - Degree of protection: IP 54

1) Fiberglass-reinforced plastic

Series 6300 TD
WVS0148XULDS

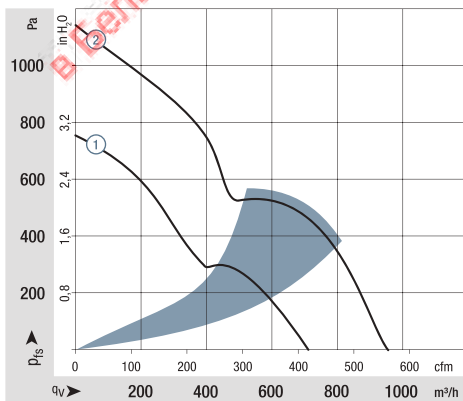
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sintec sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
6314/2 TDHHP-015	710	418	24	16...36	69	7.9	■	67	7 000	-20...+75	62 500 / 25 000	105 000	①	
6318/2 TDH4P-007	930	546	48	36...72	75	8.4	■	150	9 200	-20...+75	52 500 / 20 000	87 500	②	

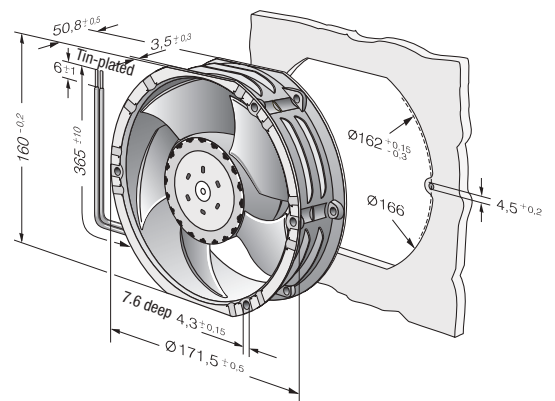
Subject to change

Speed control range from 1000 rpm⁻¹ up to maximum nominal speed.
Standstill at 0 % PWM, maximum speed if control cable is interrupted.

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 685 m³/h
S-Panther

DC axial fans

Ø 172 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Exhaust over struts
- **Direction of rotation:** Counterclockwise, looking towards rotor
- **Connection:** (+) and GND AWG 20, UL 1007, TR 64; speed signal and alarm signal: AWG 22, UL 1007, TR 64
- **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
Housing with grounding lug for screw M4 x 8 (Torx)
- **Weight:** 850 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input (standard)
 - Analog control input
 - Multi-option control input
 - Moisture protection
 - Salt spray protection
 - Degree of protection: IP 54 / IP 68

1) Fiberglass-reinforced plastic

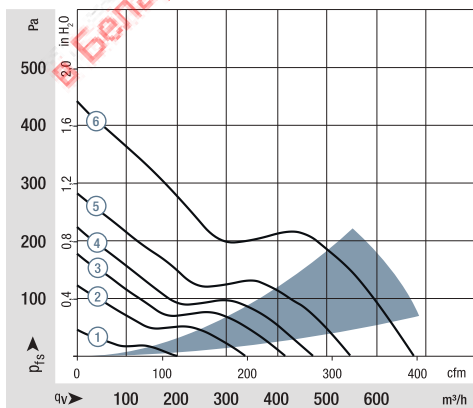
Series 6300 N
VWS0148PULCS

Nominal data

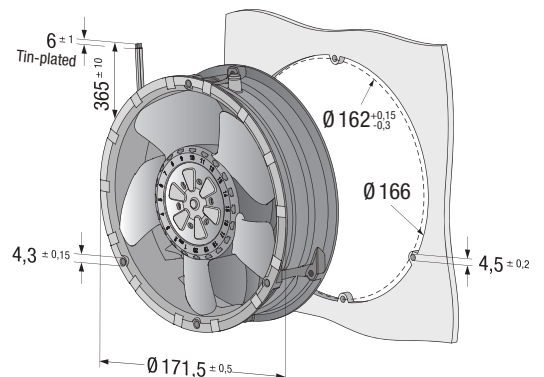
Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
6312 NM	340	200	12	8...16	-	5.7	■	8	2500	-20...+70	87 500 / 35 000	147 500	②	
6312 NH	470	277	12	8...16	-	6.5	■	24	3500	-20...+70	82 500 / 32 500	140 000	④	
6314 NM	340	200	24	16...32	-	5.7	■	8	2500	-20...+70	87 500 / 35 000	147 500	②	
6314 NN	420	247	24	16...32	-	6.3	■	13	3000	-20...+70	85 000 / 32 500	142 500	③	
6314 NH	470	277	24	16...32	-	6.5	■	20	3500	-20...+70	82 500 / 32 500	140 000	④	
6314 N/2 HHP	540	318	24	16...32	-	6.9	■	32	4000	-20...+70	80 000 / 40 000	135 000	⑤	
6318 NL	200	118	48	36...60	-	4.4	■	3	1500	-20...+70	90 000 / 35 000	152 500	①	
6318 NM	340	200	48	36...60	-	5.7	■	8	2500	-20...+70	87 500 / 35 000	147 500	②	
6318 N/2 HHP	540	318	48	36...60	-	6.9	■	32	4000	-20...+70	80 000 / 40 000	135 000	⑤	
6318 N/2 H3P	685	403	48	36...60	-	7.5	■	53	5000	-20...+70	77 500 / 40 000	130 000	⑥	

Subject to change

Speed control range from 1000 rpm⁻¹ up to maximum nominal speed. Standstill at 0 % PWM, maximum speed if control cable is interrupted.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 1210 m³/h
S-Panther

DC axial fans

Ø 172 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
- **Direction of air flow:** Exhaust over struts
- **Direction of rotation:** Counterclockwise, looking towards rotor
- **Connection:** AWG 18, 20, UL 1007, TR 64; speed signal and control input: AWG 22, UL 1007, TR 64
- **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
Housing with grounding lug for screw M4 x 8 (Torx)
- **Weight:** 890 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input (standard)
 - Analog control input
 - Multi-option control input
 - Moisture protection
 - Salt spray protection
 - Degree of protection: IP 54

1) Fiberglass-reinforced plastic

Series 6300 NTD
WWS0148PULDS

Nominal data

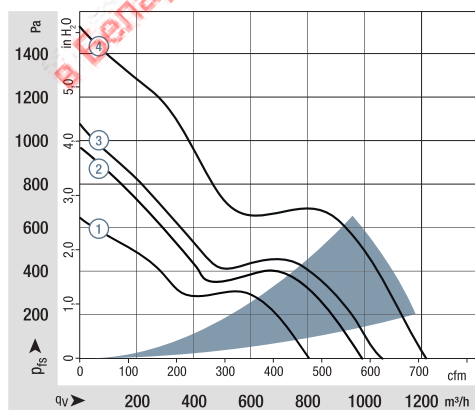
Type	Air flow		Nominal voltage		Sound pressure level		Sound power level		Sintec sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T max) ebm-papst standard	Life expectancy L ₁₀ IPC (40 °C) see page 15	Curve
	m ³ /h	cfm	VDC	VDC	dB(A)	Bel(A)	Watts	rpm ⁻¹								
6314 N/2 TDHHP	990	583	24	16...36	75	8.3	■	156	7200	-20...+70	62 500 / 32 500	105 000	②			
6318 N/2 TDHP	805	473	48	36...60	71	7.8	■	95	6000	-20...+70	75 000 / 37 500	127 500	①			
6318 N/2 TDH3P	1030	606	48	36...72	76	8.4	■	160	7500	-20...+70	60 000 / 30 000	102 500	③			
6318 N/2 TDH4P	1210	712	48	36...72	80	8.8	■	257	9000	-20...+65	45 000 / 25 000	75 000	④			

Subject to change

Speed control range from 1000 rpm⁻¹ up to maximum nominal speed.

Standstill at 0 % PWM, maximum speed if control cable is interrupted.

* Power consumption at free air flow. These values can be significantly higher in the operating point.



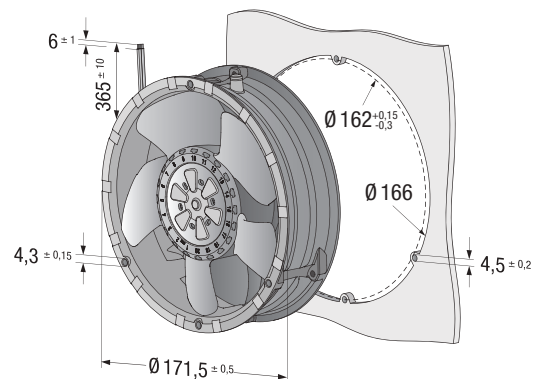
Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{PA} measured at 1 m distance from fan axis.

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>



Max. 545 m³/h
S-Force

DC axial fans

Ø 172 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 22, TR 64
 - **Highlights:** Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 825 g
- **Possible special versions:** (See chapter DC fans - specials)
 - 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: IP 54

1) Fiberglass-reinforced plastic

Series 6300
VWS0148XULCS

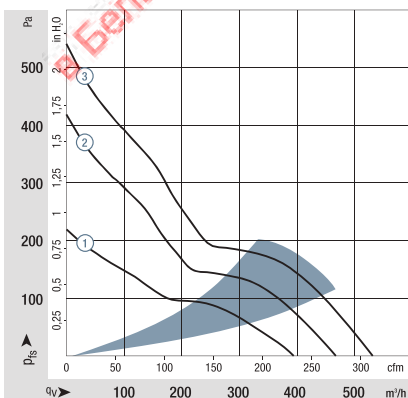
Nominal data

Type	Air flow		Nominal voltage	Voltage range		Sound pressure level		Sintec sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPPC) (40 °C) see page 15	Curve
	m ³ /h	cfm		VDC	VDC	dB(A)	Bel(A)								
6312/2 MP-204	360	211	12	8...16	49	5.8	■	15	3 500	-20...+65	82 500 / 47 500	140 000	①		
6314/2 MP	395	232	24	16...30	51	6.0	■	14	3 700	-20...+75	82 500 / 32 500	140 000	①		
6314/2 NP	470	276	24	16...30	56	6.5	■	23	4 400	-20...+70	80 000 / 40 000	135 000	②		
6314/2 HP	545	320	24	16...30	58	6.9	■	31	5 000	-20...+65	77 500 / 42 500	130 000	③		
6318/2 HP	545	320	48	36...72	58	6.9	■	32	5 000	-20...+65	77 500 / 42 500	130 000	③		

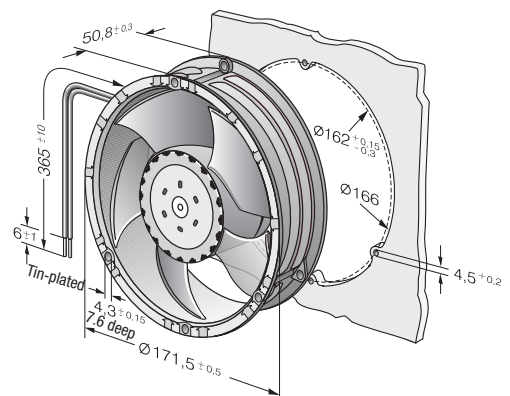
Subject to change

Speed control range from 700 rpm⁻¹ up to maximum nominal speed. Standstill at 0 % PWM, maximum speed if control cable is interrupted.

* Power consumption at free air flow. These values can be significantly higher in the operating point.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 930 m³/h
S-Force

DC axial fans

Ø 172 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** Via single wires AWG 18, 20 or AWG 22, TR 64, speed signal and control input AWG 22
 - **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 910 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input (standard)
 - Analog control input
 - Multi-option control input
 - Moisture protection
 - Salt spray protection
 - Degree of protection: IP 54

1) Fiberglass-reinforced plastic

Series 6300 TD
WVS0148XULDS

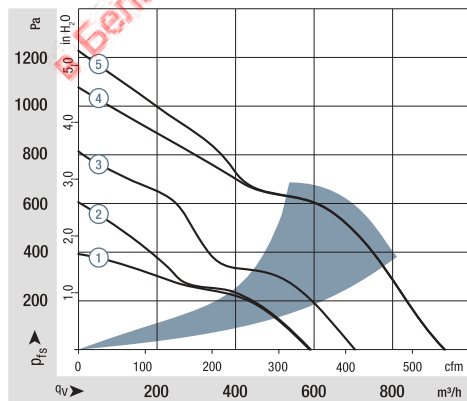
Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption*	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC) (40 °C) see page 15	Curve
	m ³ /h	cfm												
6312/2 TDHP	600	353	12	8...16	60	7.3	■	40	5 500	-20...+70	75 000 / 37 500	127 500	②	
6314/2 TDHP-298	600	353	24	16...30	60	7.3	■	42	5 500	-20...+65	75 000 / 42 500	127 500	①	
6314/2 TDHP	600	353	24	16...36	60	7.3	■	40	5 500	-20...+75	75 000 / 30 000	127 500	②	
6314/2 TDHHP	710	418	24	16...36	69	7.9	■	67	7 000	-20...+75	62 500 / 25 000	105 000	③	
6314/2 TDH4P	930	545	24	16...36	75	8.4	■	150	9 200	-20...+75	52 500 / 20 000	87 500	④	
6318/2 TDHP-299	600	353	48	36...60	60	7.3	■	42	5 500	-20...+65	75 000 / 42 500	127 500	①	
6318/2 TDHP	600	353	48	36...72	60	7.3	■	40	5 500	-20...+75	75 000 / 30 000	127 500	②	
6318/2 TDHHP	710	418	48	36...72	69	7.9	■	67	7 000	-20...+75	62 500 / 25 000	105 000	③	
6318/2 TDH4P	930	545	48	36...72	75	8.4	■	150	9 200	-20...+75	52 500 / 20 000	87 500	⑤	

Subject to change

Speed control range from 1000 rpm⁻¹ up to maximum nominal speed.
Standstill at 0 % PWM, maximum speed if control cable is interrupted.

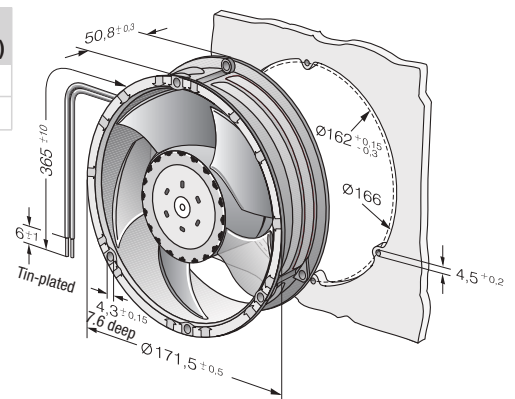
* Power consumption at free air flow. These values can be significantly higher in the operating point.



* Power consumption – in operation

Fan type	optimum operating range (W)
6318/2 TDHHP	115
6318/2 TDH4P	270

Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



Max. 1100 m³/h
S-Force

DC diagonal fan

Ø 172 x 51 mm



- **Material:** Housing: Die-cast aluminum
Impeller: GRP¹⁾ (PA)
 - **Direction of air flow:** Exhaust over struts
 - **Direction of rotation:** Counterclockwise, looking towards rotor
 - **Connection:** (+) and GND: AWG 18, UL 1007, TR 64; speed and alarm signal: AWG 22, UL 1007, TR 64
 - **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
Housing with grounding lug for screw M4 x 8 (Torx)
 - **Weight:** 1050 g
- **Possible special versions:** (See chapter DC fans - specials)
 - Speed signal
 - Go / NoGo alarm
 - Alarm with speed limit
 - External temperature sensor
 - Internal temperature sensor
 - PWM control input (standard)
 - Analog control input
 - Multi-option control input
 - Moisture protection
 - Salt spray protection
 - Degree of protection: IP 54

1) Fiberglass-reinforced plastic

Series DV 6300 TD
VKS0168XULDS

Nominal data

Type	Air flow		Nominal voltage	Voltage range	Sound pressure level	Sound power level	Sinter sleeve bearings Ball bearings	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (40 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ (IPC (40 °C) see page 15	Curve
	m ³ /h	cfm												
DV 6314/2 TDHHP	730	429	24	16...36	72	8.0	■	118	4850	-20...+60	75 000 / 47 000	127 500	②	
DV 6318/2 TDHP*	630	371	48	36...72	68	7.6	■	75	4000	-20...+65	70 000 / 40 000	117 500	①	
DV 6318/2 TDHHP*	730	429	48	36...72	72	8.0	■	118	4850	-20...+65	60 000 / 32 500	102 500	②	
DV 6318/2 TDH4P	1050	617	48	36...72	77	8.7	■	300	6500	-20...+65	50 000 / 27 500	85 000	③	
DV 6318/2 TDH5P**	1100	647	48	36...72	79	8.9	■	360	6800	-20...+65	40 000 / 22 500	67 500	④	

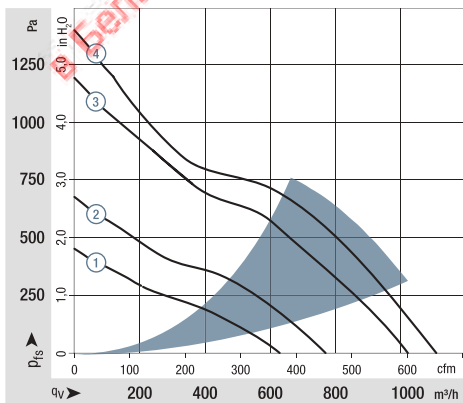
Subject to change

* On request

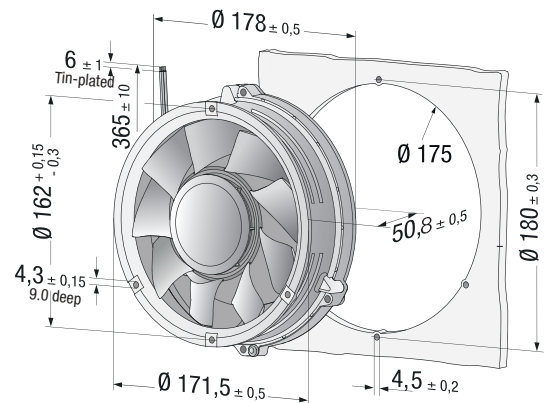
** Rotor protrusion
a = 3 mm

Speed control range from 1000 rpm⁻¹ up to maximum nominal speed. Standstill at 0 % PWM, maximum speed if control cable is interrupted.

The fan has an acceleration of up to 30% that produces a smoother curve.



Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level L_{WA} ISO 10302 measured on a hemisphere with a radius of 2 m.
Sound pressure level L_{pA} 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>



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каталог, описание, технические, характеристики, datasheet, параметры, маркировка, габариты, фото,
модуль, Вентилятор, ebm-papst, ebmpapst, **w2s130**

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