

Energy-saving *EC axial fans.*

The intelligent solution for evaporators and
unit-cooler applications.

ebmpapst

the engineer's choice



About ebm-papst.

ebm-papst is a leader in ventilation and drive engineering technology and a much sought-after engineering partner in many industries. With around 20,000 different products, we have the perfect solution for practically every requirement. We have placed the highest emphasis on economy and ecology for many years.

We believe the consistent further development of our highly-efficient GreenTech EC technology provides our customers with the best opportunities for the future in industrial digitization. With GreenIntelligence, ebm-papst already offers intelligent networked complete solutions that are unique anywhere in the world today and that secure our customers a decisive advantage.

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Six reasons that make us the ideal partner:

Our systems expertise.

You want the best solution for every project. The entire ventilation system 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.

Our spirit of invention.

We are also always able to develop customized solutions for you with our versatile team of over 600 engineers and technicians.

Our lead in technology.

We are not only pioneers and trailblazers in the development of highly efficient EC technology, we also recognized the opportunities of digitization at an early stage. Therefore, we can offer solutions today that combine the highest energy efficiency with the advantages of IoT and digital networking.

Closeness to our customers.

ebm-papst has 29 production locations worldwide (including facilities in Germany, China and the USA), together with 48 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.

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, declaration TS of conformity and DIN EN ISO 14001.

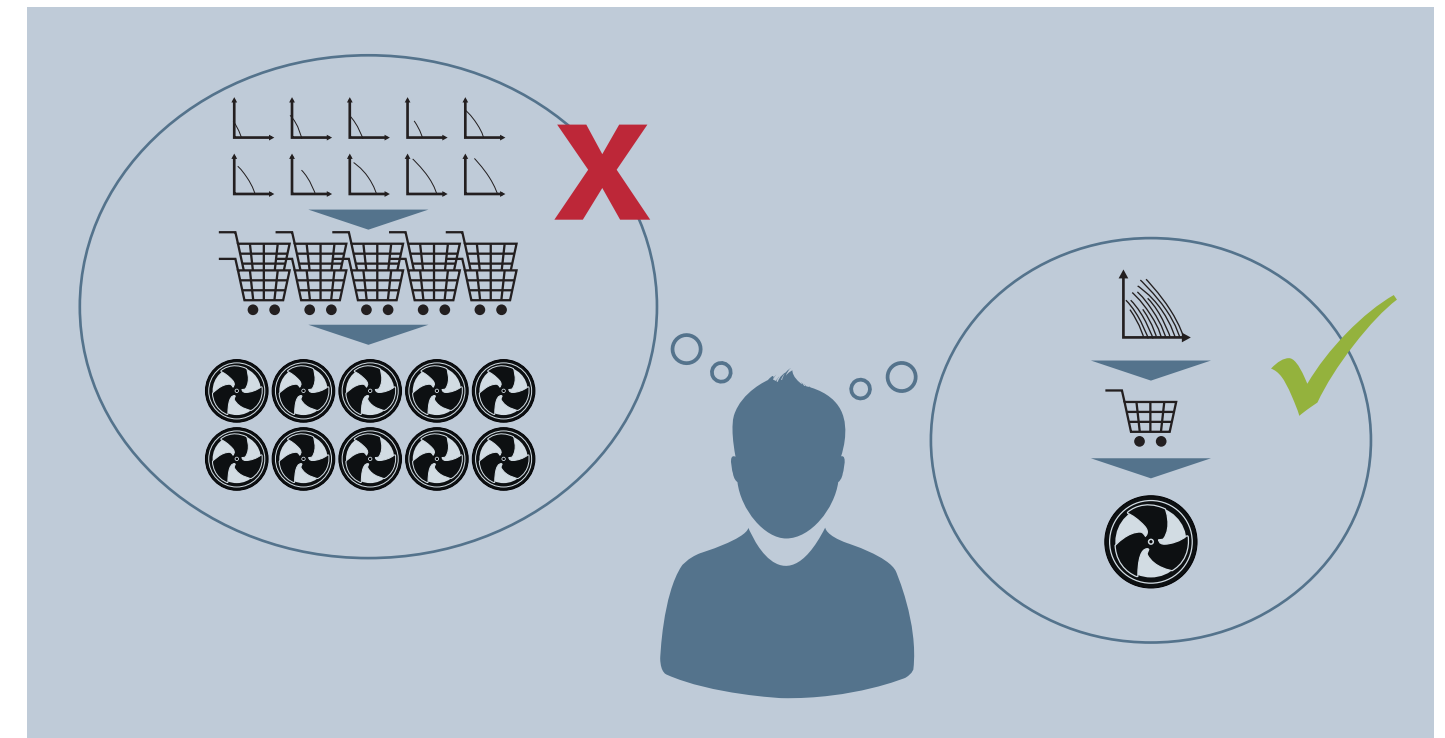
Our sustainable approach.

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.

Efficient on several levels: *EC technology*

State-of-the-art EC technology provides maximum flexibility with minimum product variance. Because it is possible to operate multi-level fans, that is, to activate up to ten operating points with one fan, the number of variants required for a particular application is reduced considerably. For this way, one EC fan can replace up to

ten different AC fans. This is not just practical for the application, it also simplifies processes in purchasing, installation and if necessary, service. The conversion from AC to EC technology pays off in every case.



Hygienic, practical, efficient. System solutions for *Unit Coolers*.

The compact ebm-papst system solutions for evaporators and unit cooler applications consist of motor and impeller. It's clear that there are many different applications on the market, all of which pose different product requirements. That's why ebm-papst has developed the right solution for every application:



S1G 300/305/315 D:

This product range is especially flexible due to the mounting arms with different mounting hole circles, optionally equipped with two-level or even ten-level speed. Find out more on Page 6/7.



S1G 200/300 CA und 300 F:

If hygiene is the foremost concern, then thanks to its composite basket guard grill, the S1G 200/300 CA and S1G 300 F can fulfill this requirement much more cost-efficiently than products with expensive stainless steel grills. Find out more on Page 8/9.



S1G 300 G:

If hygiene and durability is the foremost concern, the S1G 315 is the right choice. Find out more on Page 10/11.



S1G 300 H / S1G 315 A:

When robustness comes first, paired with high performance, the S1G 300 H and S1G 315 A are precisely the right solution. Find out more on Page 12/13.

Your benefits

- Extremely reliable thanks to rugged construction and long service life
- High efficiency
- High air throw
- Low noise level

Up to 30% energy savings as compared to evaporator fans with conventional AC motors due to a holistic approach combined with GreenTech EC motor and HyBlade fan impeller.

A high standard of refrigeration is required to maintain the quality of goods in storage – temperature fluctuations and drying-out of the refrigerated items must be kept to a minimum, and the defrosting cycles must be short. The evaporators used for this have to meet these requirements.

The characteristic features of ebm-papst's EC axial fans developed specially for evaporator applications are great efficiency, outstanding reliability and a long service life. They were designed as complete units. Thanks to this holistic approach and the GreenTech EC motor combined with the proven HyBlade fan impeller, energy savings of up to 30% is possible as compared to evaporator fans with conventional AC motors. And the amount of steel and copper needed is only about half that required for solutions with internal rotor motors.

Save energy – the "cool" way

ebm-papst offers a wide range of solutions for evaporator and unit cooler applications, up to a size with a diameter of 315 mm. Larger models are also available from the AxiCool product range. ebm-papst offers the right solution for all requirements.

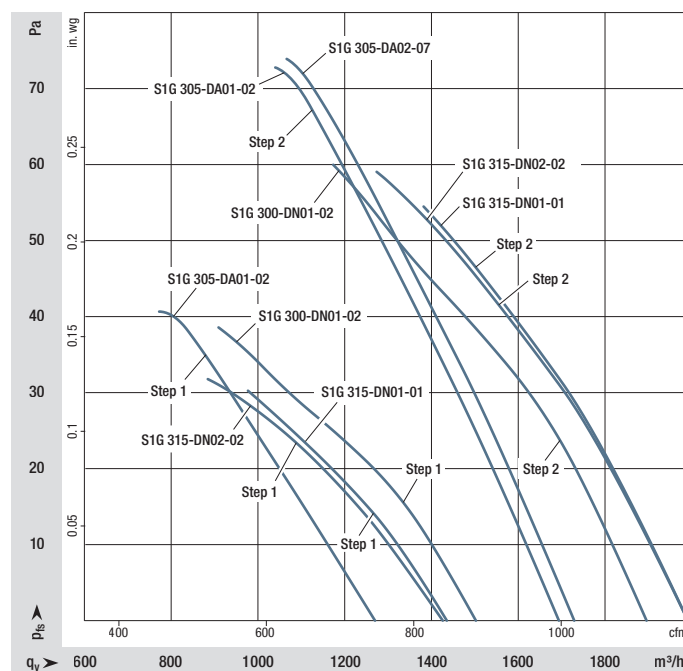


Flexible mounting: S1G fan sizes 300/305/315 D.

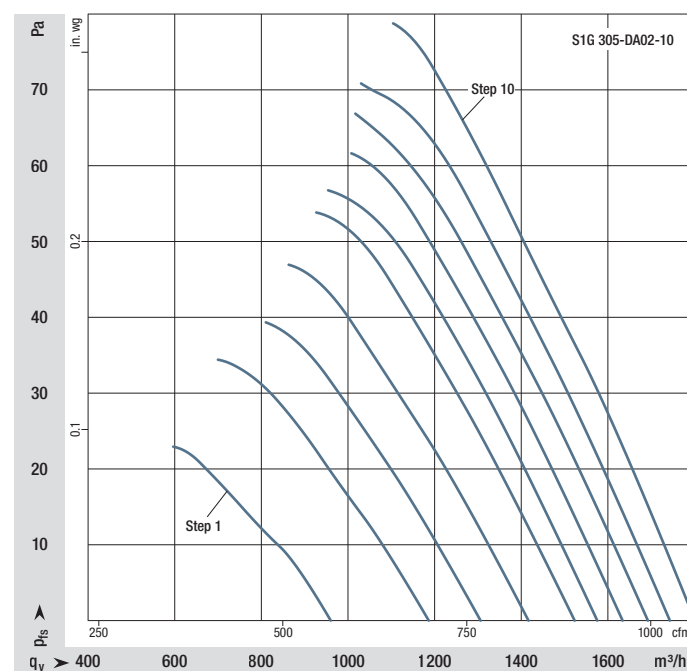
This product range is especially flexible due to the mounting arms with different mounting hole circles, optionally equipped with two-level or even ten-level speed.

Technical features

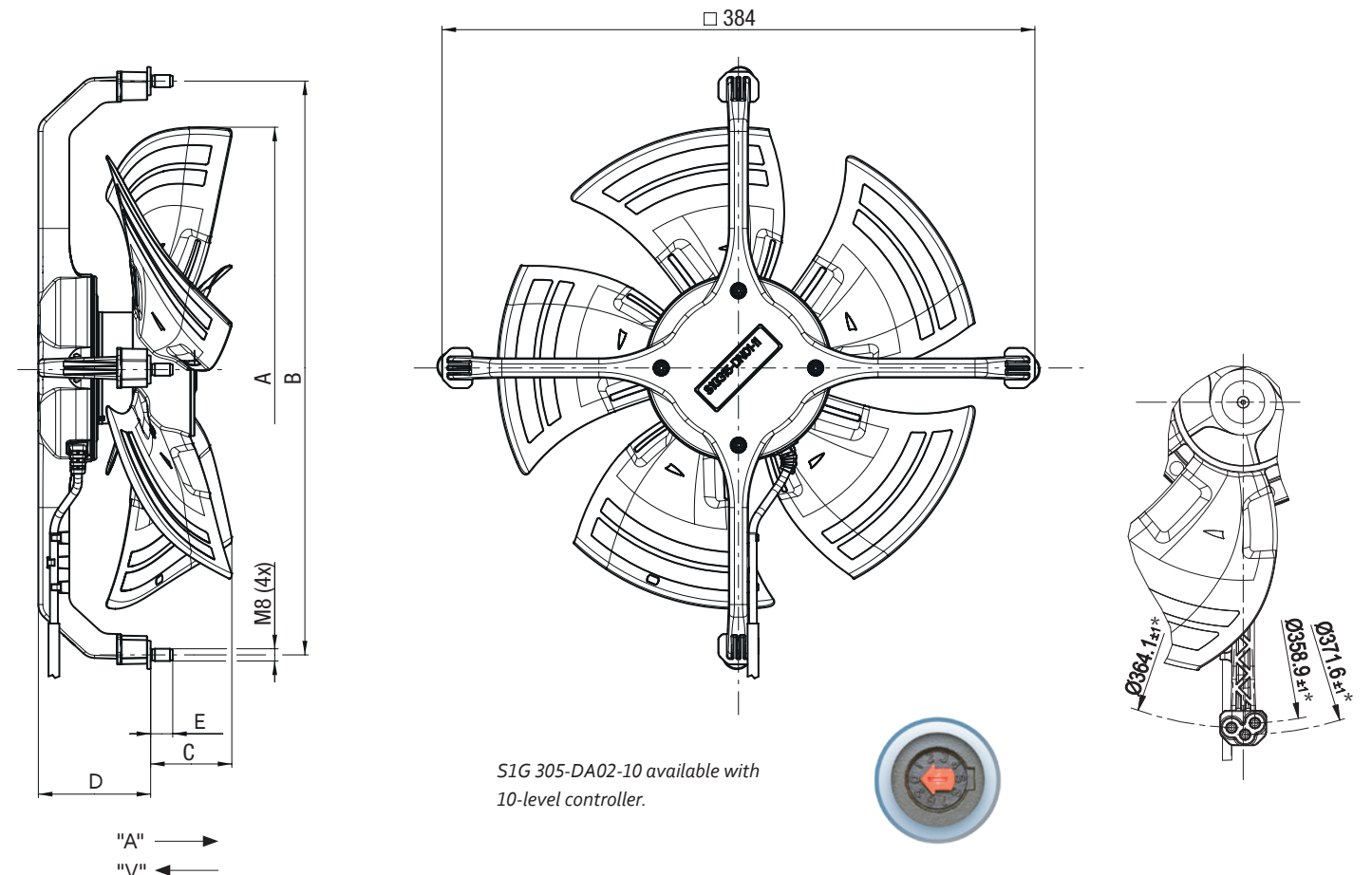
- Identical performance at 50 or 60 Hz
- Efficient EC external rotor motor
- One airflow direction
- Two-level or ten-level speed
- Compact Design
- Completely assembled and balanced for simplified handling
- Plug & play solution – fewer individual components
- Multi-mount design with 3 mounting hole circles for flexible installation
- One-piece impeller in HyBlade technology
- Protection class II - no grounding cable required
- Simple connection with brought-out cable
- Degree of protection IP 54
- Existing guard grill can be retained



Curve family S1G fan sizes 300/305/315.



Curve family S1G 305-DA02-10 (10-level).



Nominal data

Type	Airflow direction	Step	Nominal voltage range	Frequency	Speed ⁽¹⁾	Max. power consumption ⁽²⁾	Max. input current ⁽²⁾	Max. back pressure	Perm. ambient temp.	Mass	Dimensions	Dimensions	Dimensions	Dimensions	Dimensions
			VAC	Hz	min ⁻¹	W	A	Pa	°C	kg	A	B	C	D	E
S1G 300-DN01-02 ⁽²⁾	A	2	1-200-240	50/60	1.400	62	0,55	55	-40..+40	1,62	300	371,6	37,4	72,7	14,3
	A	1	1-200-240	50/60	1.100	30	0,26	35	-40..+40	1,62	300	371,6	37,4	72,7	14,3
S1G 305-DA01-02	A	2	1-200-240	50/60	1.600	60	0,50	70	-40..+40	1,62	305	*	30,6	70,5	17,0
	A	1	1-200-240	50/60	1.200	26	0,25	39	-40..+40	1,62	305	*	30,6	70,5	17,0
S1G 305-DA02-07	A	1	1-100-240	50/60	1.590	63	0,55	71	-40..+40	1,70	305	358,9	28,7	72,7	14,3
S1G 305-DA02-10	A	1-10	1-100-240	50/60	1.650	70	0,60	75	-40..+40	1,70	305	358,9	28,7	72,7	14,3
S1G 315-DN01-01	A	2	1-200-240	50/60	1.300	73	0,60	50	-40..+30	1,60	312	371,6	52,6	72,7	14,3
	A	1	1-200-240	50/60	940	28	0,26	27	-40..+30	1,60	312	371,6	52,6	72,7	14,3
S1G 315-DN02-02	A	2	1-100-240	50/60	1.300	74	1,30	55	-40..+25	1,60	312	371,6	52,6	72,7	14,3
	A	1	1-100-240	50/60	950	32	0,56	29	-40..+25	1,60	312	371,6	52,6	72,7	14,3

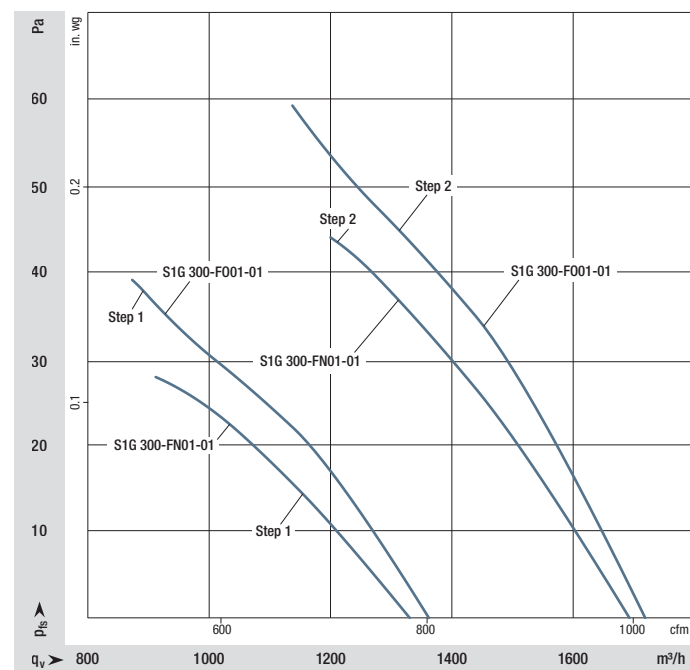
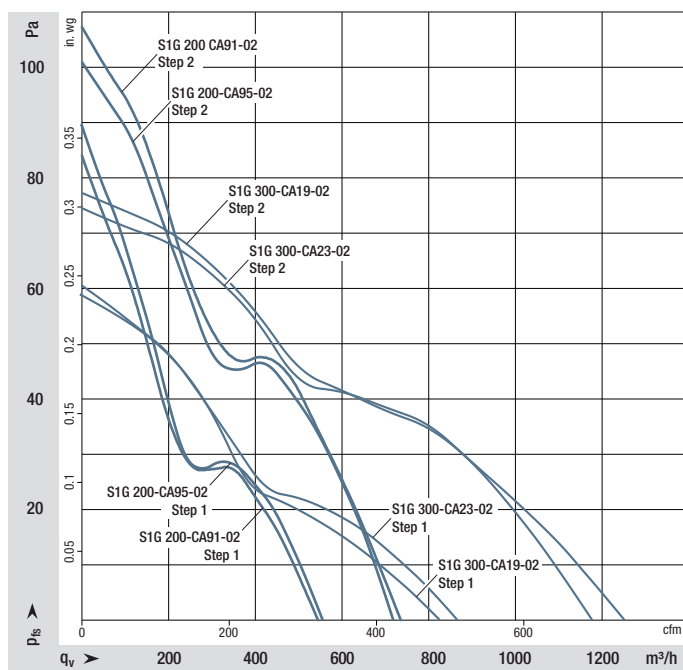
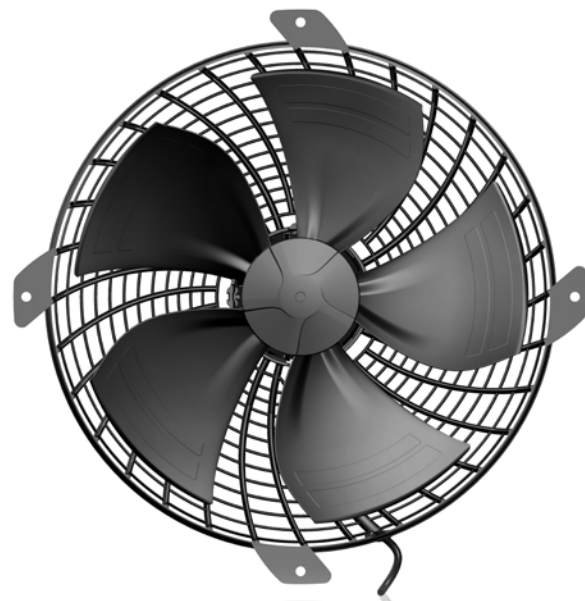
Subject to technical changes. (1) Nominal data at operating point with maximum load and 230 VAC. (2) Also available in airflow direction "V." Wide voltage versions with nominal voltage 100-240 VAC are available on request.

Cleanliness: S1G fan size 200/300 CA and 300 F.

If hygiene is the foremost concern, then thanks to its composite basket guard grill, the S1G 200/300 CA and S1G 300 F can fulfill this requirement much more cost-efficiently than products with expensive stainless steel grills.

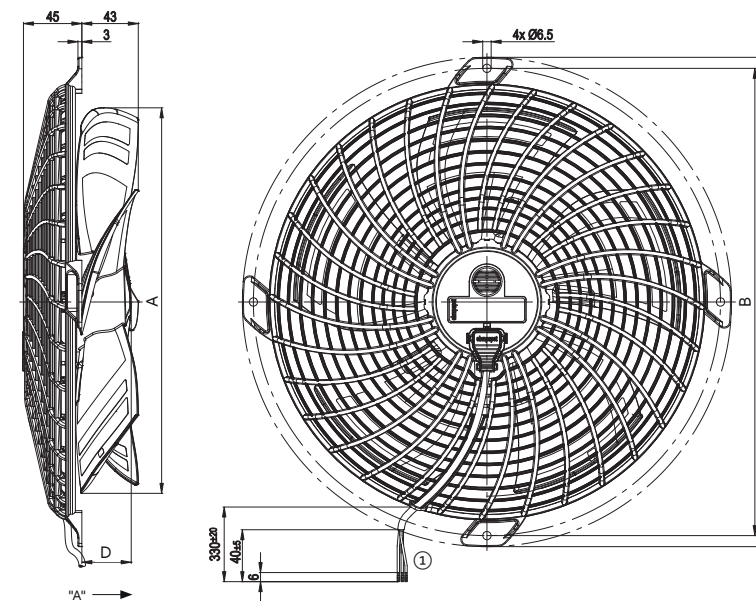
Technical features

- Identical performance at 50 or 60 Hz
- Efficient EC external rotor motor
- Two airflow directions
- Two-level speed
- Low construction height
- Completely assembled and balanced for simplified handling
- Plug & play solution – fewer individual components
- One-piece impeller in HyBlade technology
- Flow-optimized guard grill made of composite material
- Protection class II - no grounding cable required
- Simple connection with brought-out cable
- Degree of protection IP 54



Technical drawing S1G 200/300 CA

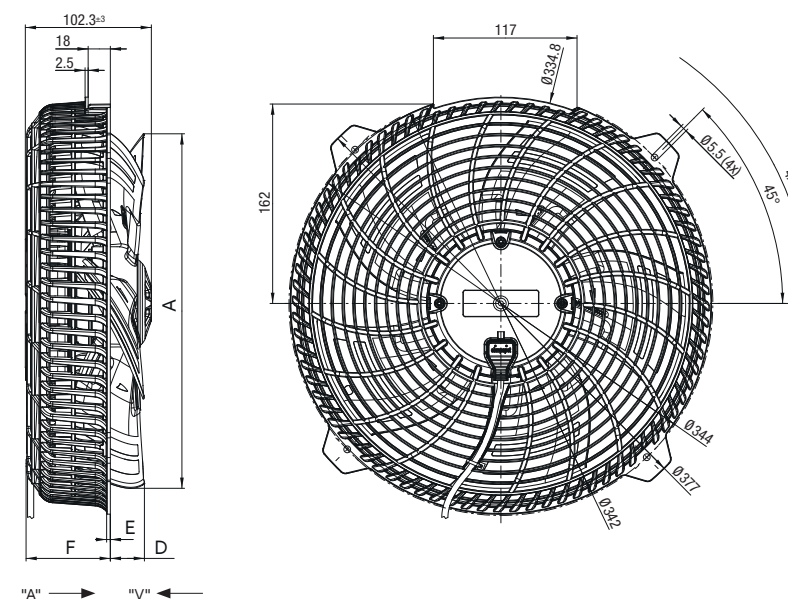
All dimensions in mm



① Cable AWG20;
3 x crimped splices

Technical drawing S1G 300 F

All dimensions in mm



Nominal data

Type	Airflow direction	Step	Nominal voltage range	Frequency	Speed ⁽¹⁾	Max. power consumption ⁽¹⁾	Max. input current ⁽¹⁾	Max. back pressure	Perm. ambient temp.	Mass	Dimensions	Dimensions	Dimensions	Dimensions	Dimensions	Dimensions
			VAC	Hz	min ⁻¹	W	A	Pa	°C	kg	A	B	C	D	E	F
S1G200-CA91-02	A	2	230	50/60	2.000	34	0,26	45	-30...+50	1,0	200	260	278	37,5	-	-
	A	1	230	50/60	1.500	20	0,16	26	-30...+50	1,0	200	260	278	37,5	-	-
S1G200-CA95-02	A	2	115	50/60	2.000	31	0,43	45	-30...+50	1,0	200	260	278	37,5	-	-
	A	1	115	50/60	1.500	20	0,28	28	-30...+50	1,0	200	260	278	37,5	-	-
S1G300-CA19-02	A	2	230	50/60	1.250	35	0,27	35	-30...+50	1,4	300	360	377	38	-	-
	A	1	230	50/60	900	18	0,17	17	-30...+50	1,4	300	360	377	38	-	-
S1G300-CA23-02	A	2	115	50/60	1.250	35	0,56	35	-30...+50	1,4	300	360	377	38	-	-
	A	1	115	50/60	900	17	0,32	19	-30...+50	1,4	300	360	377	38	-	-
S1G 300-FN01-01	A	2	1-200-240	50/60	1.400	55	0,48	40	-40...+40	1,6	300	-	-	28,4	3	68,5
	A	1	1-200-240	50/60	1.100	28	0,27	25	-40...+40	1,6	300	-	-	28,4	3	68,5
S1G 300-FO01-01	V	2	1-200-240	50/60	1.400	62	0,55	55	-40...+40	1,6	300	-	-	27,7	3	68,5
	V	1	1-200-240	50/60	1.100	31	0,27	34	-40...+40	1,6	300	-	-	27,7	3	68,5

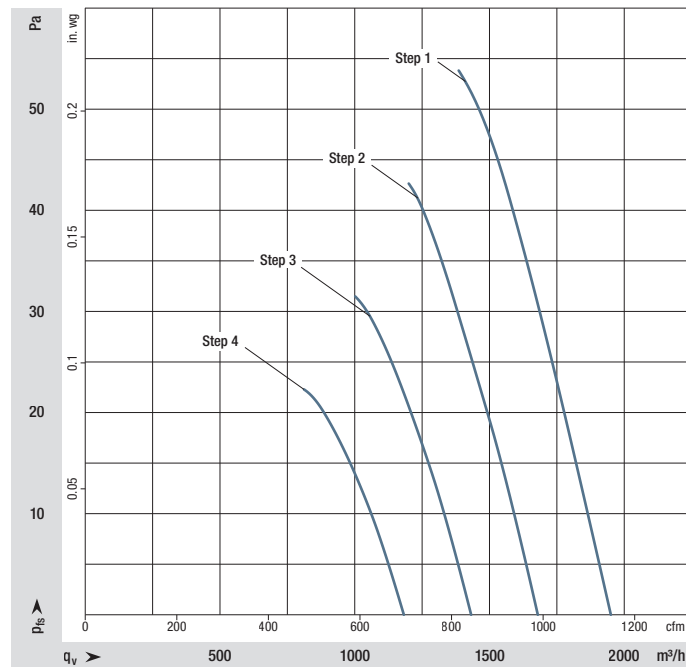
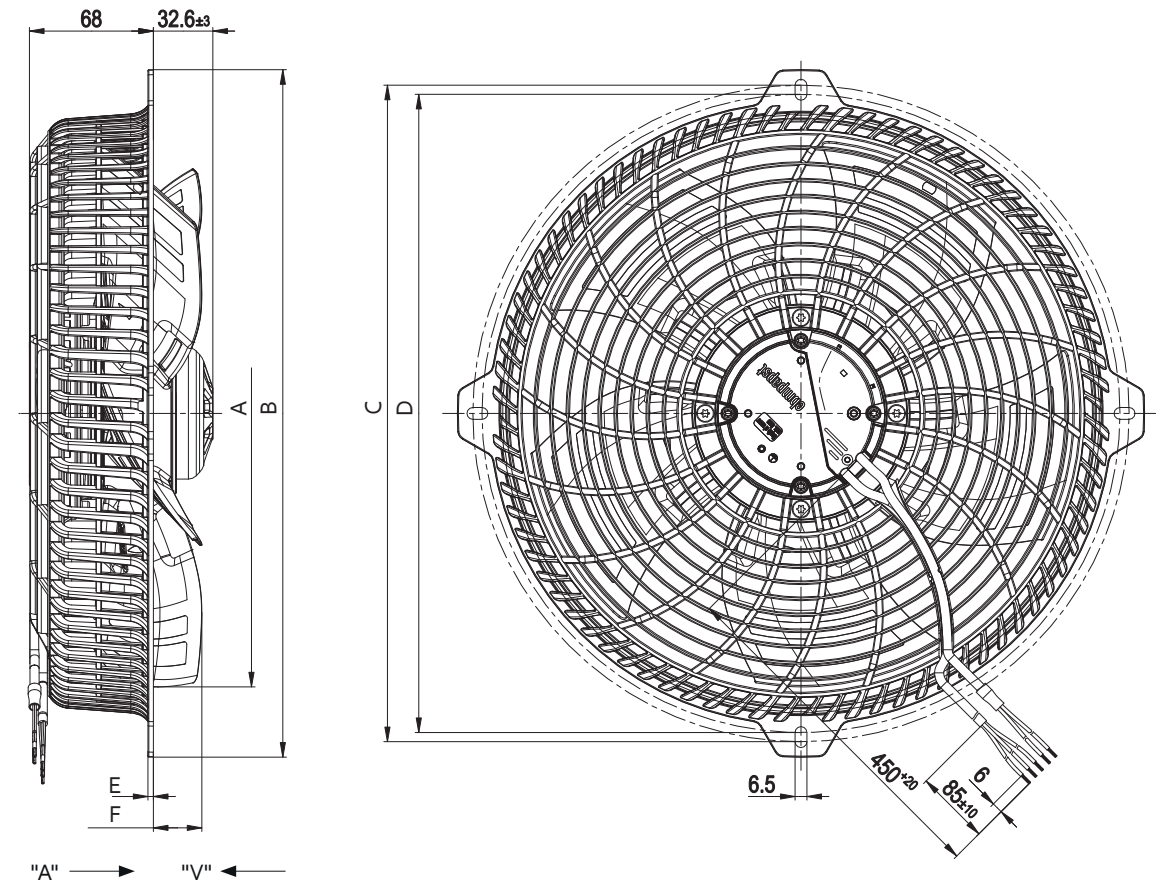
Subject to technical changes. (1) Nominal data at operating point with maximum load and 230 VAC.
*The notch on the basket guard grill is only on the S1G 300-FO02-10.
Wide voltage versions with nominal voltage 100-240 VAC are available on request.

Hygienic and strong: S1G fan size 300 G.

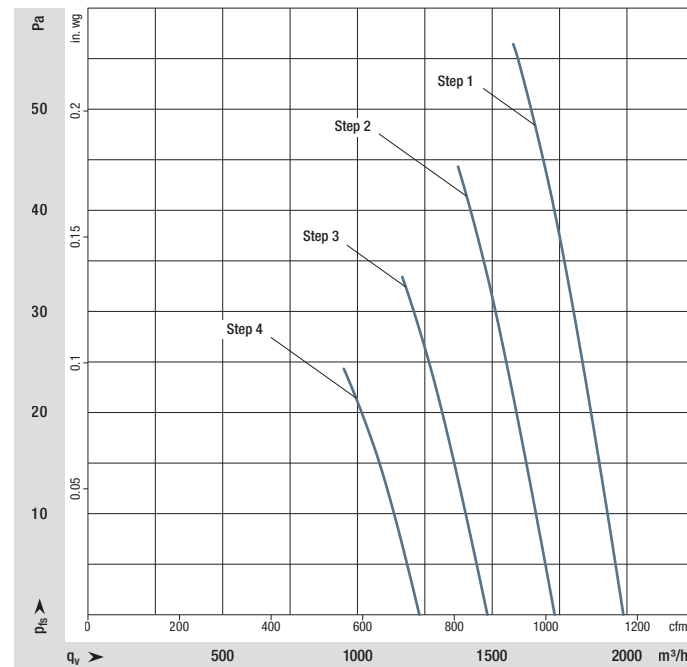
If hygiene and durability is the foremost concern,
the S1G 315 is the right choice.

Technical features

- Identical performance at 50 or 60 Hz, up to 85 W
- Efficient EC external rotor motor
- Two airflow directions
- Four-level speed
- Low construction height
- Completely assembled and balanced for simplified handling
- Plug & play solution – fewer individual components
- One-piece impeller in HyBlade technology
- Flow-optimized guard grill made of composite material
- Simple connection with brought-out cable
- Degree of protection IP 54



Curve family S1G 300-GP01-11.



Curve family S1G 300-GQ01-11.

Nominal data

Type	Airflow direction	Step	Nominal voltage range	Frequency	Speed ⁽¹⁾	Max. power consumption ⁽¹⁾	Max. input current ⁽¹⁾	Max. back pressure	Perm. ambient temp.	Mass	Dimensions	Dimensions	Dimensions	Dimensions	Dimensions	Dimensions
			VAC	Hz	min ⁻¹	W	A	Pa	°C	kg	A	B	C	D	E	F
S1G 300-GP01-11	A	1	1-200-240	50/60	1.600	80	0,70	50	-40...+40	1,6	300	377	360	350	3	26,6
	A	2	1-200-240	50/60	1.400	56	0,50	38	-40...+40	1,6	300	377	360	350	3	26,6
	A	3	1-200-240	50/60	1.200	35	0,33	28	-40...+40	1,6	300	377	360	350	3	26,6
	A	4	1-200-240	50/60	1.000	21	0,19	19	-40...+40	1,6	300	377	360	350	3	26,6
S1G 300-GQ01-11	V	1	1-200-240	50/60	1.600	85	0,70	50	-40...+40	2,0	300	377	360	350	3	27,6
	V	2	1-200-240	50/60	1.400	57	0,52	39	-40...+40	2,0	300	377	360	350	3	27,6
	V	3	1-200-240	50/60	1.200	37	0,34	28	-40...+40	2,0	300	377	360	350	3	27,6
	V	4	1-200-240	50/60	1.000	22	0,21	20	-40...+40	2,0	300	377	360	350	3	27,6

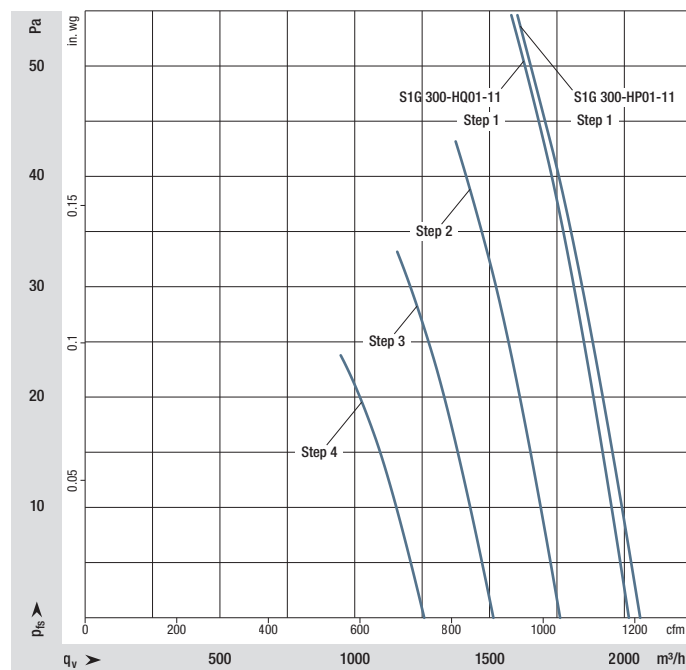
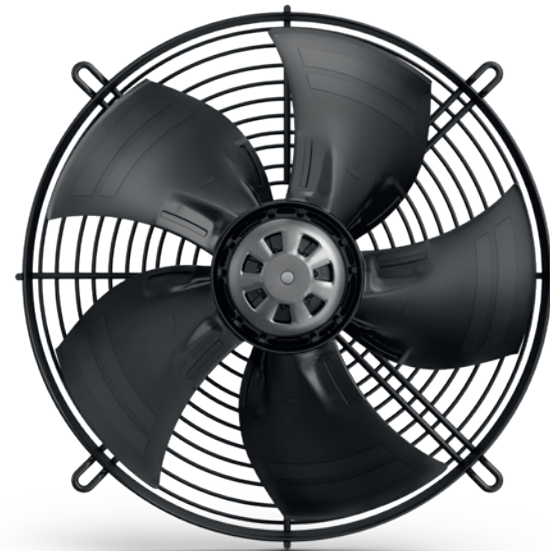
Subject to technical changes. (1) Nominal data at operating point with maximum load and 230 VAC. Wide voltage versions with nominal voltage 100-240 VAC are available on request.

Extremely stable and strong: S1G fan size 300 H and 315 A.

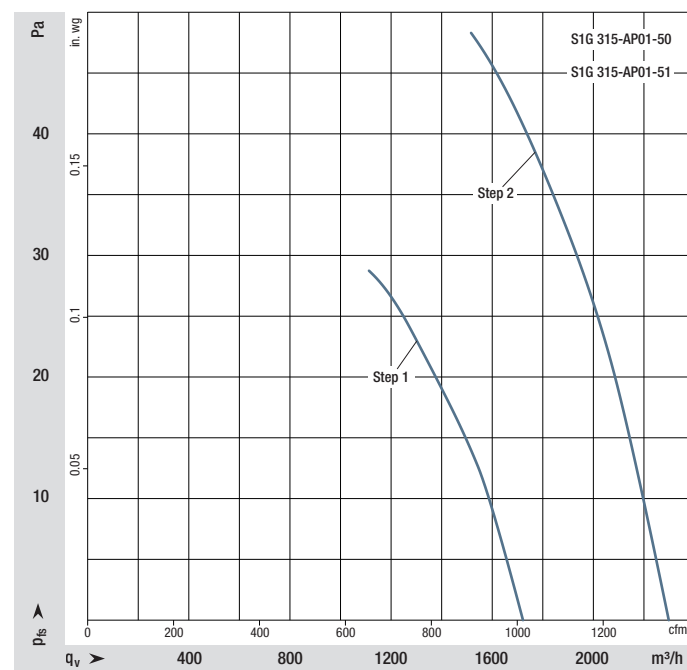
When robustness comes first, paired with high performance, the S1G 300 H and S1G 315 A are precisely the right solution.

Technical features

- Identical performance at 50 or 60 Hz, up to 85 W
- Efficient EC external rotor motor
- Two airflow directions
- Two-level or four-level speed
- Low construction height
- Completely assembled and balanced for simplified handling
- Plug & play solution – fewer individual components
- One-piece impeller in HyBlade technology
- Very robust metal guard grill
- Simple connection with brought-out cable
- Degree of protection IP 54



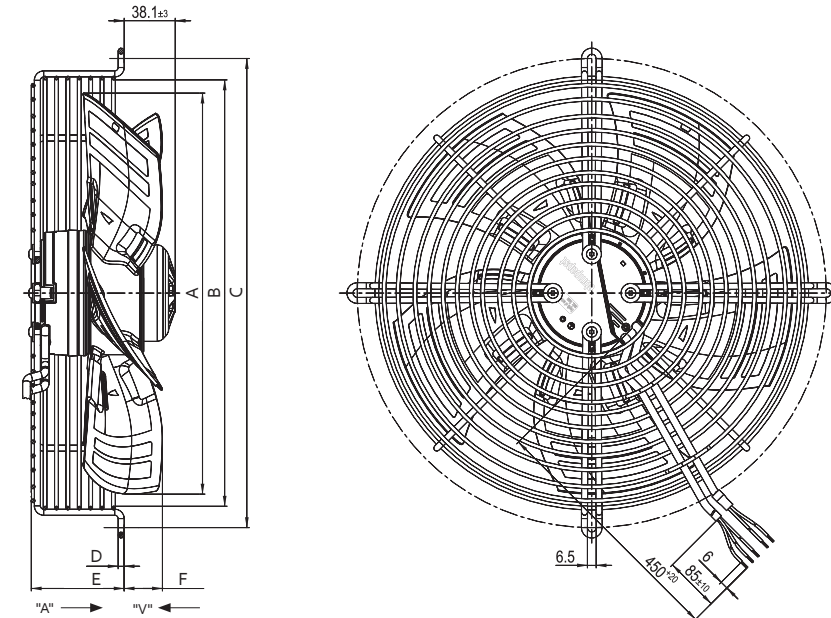
Curve family S1G 300-HP01-11 and S1G 300-HQ01-11.



Curve family S1G Baugröße 315.

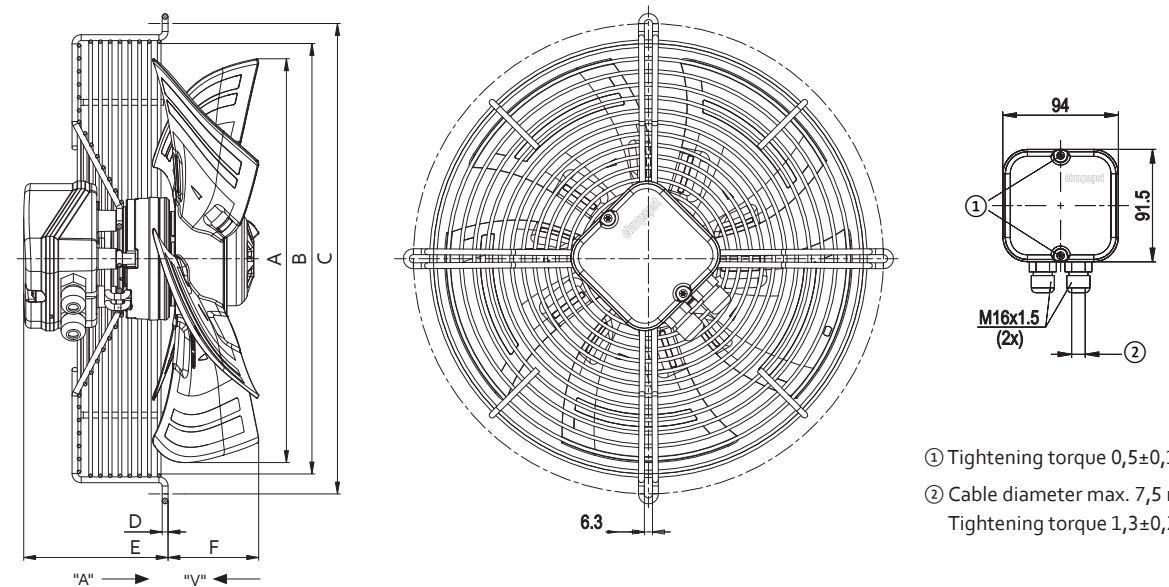
Technical drawing S1G 300-HP01-11 and S1G 300-HQ01-11

All dimensions in mm



Technical drawing S1G 315-AP01-50 and S1G 315-AP01-51

All dimensions in mm



- ① Tightening torque 0,5±0,1 Nm
- ② Cable diameter max. 7,5 mm, Tightening torque 1,3±0,2 Nm

Nominal data		Airflow direction	Step	Nominal voltage range	Frequency	Speed ⁽¹⁾	Max. power consumption ⁽¹⁾	Max. input current ⁽¹⁾	Max. back pressure	Perm. ambient temp.	Mass	Dimensions	Dimensions	Dimensions	Dimensions	Dimensions	
Type				VAC	Hz	min ⁻¹	W	A	Pa	°C	kg	A	B	C	D	E	F
S1G 300-HP01-11	A	1	1-200-240	50/60	1.600	85	0,70	50	-40...+40	2,8	300	318	350	4,5	69,3	28,6	
	A	2	1-200-240	50/60	1.400	58	0,51	38	-40...+40	2,8	300	318	350	4,5	69,3	28,6	
	A	3	1-200-240	50/60	1.200	37	0,33	28	-40...+40	2,8	300	318	350	4,5	69,3	28,6	
	A	4	1-200-240	50/60	1.000	22	0,20	20	-40...+40	2,8	300	318	350	4,5	69,3	28,6	
S1G 300-HQ01-11	V	1	1-200-240	50/60	1.600	85	0,70	50	-40...+40	2,8	300	318	350	4,5	69,3	28,6	
	V	2	1-200-240	50/60	1.400	58	0,51	39	-40...+40	2,8	300	318	350	4,5	69,3	28,6	
	V	3	1-200-240	50/60	1.200	37	0,33	29	-40...+40	2,8	300	318	350	4,5	69,3	28,6	
	V	4	1-200-240	50/60	1.000	22	0,20	20	-40...+40	2,8	300	318	350	4,5	69,3	28,6	
S1G 315-AP01-50	V	2	1-230	50/60	1.350	80	0,70	45	-40...+40	2,8	312	329,4	360	4,5	110,5	68,4	
	V	1	1-230	50/60	1.080	35	0,33	26	-40...+40	2,8	312	329,4	360	4,5	110,5	68,4	
S1G 315-AP01-51	A	2	1-230	50/60	1.350	80	0,70	45	-40...+40	2,8	312	329,4	360	4,5	110,5	69,4	
	A	1	1-230	50/60	1.080	35	0,33	26	-40...+40	2,8	312	327,4	360	4,5	110,5	69,4	

Subject to technical changes. (1) Nominal data at operating point with maximum load and 230 VAC. Wide voltage versions with nominal voltage 100-240 VAC are available on request.

Ecology and conservation of resources: *GreenTech by ebm-papst.*

Truly sustainable.

In our view, ecology, sustainability, and economical operation are inseparable issues. This GreenTech concept is embedded in the ebm-papst philosophy and characterizes the entire life cycle of the product with recycling, waste avoidance, ecological materials, lower emission levels, reduced energy consumption and hence greater efficiency. For example, EC axial fans attain just such efficiency with a GreenTech EC motor that operates at various speed settings or with regulation by way of a linear interface. In addition, EC axial fans support the concept of sustainability, for this product range features a particularly long service life. It is often possible to conserve resources with simple means. From the outset, the EC axial fans were designed to have smooth surfaces to facilitate cleaning and thus save water.

The benefits at a glance:

-  **Efficiency**
Low power consumption and high air performance
-  **Power density**
High ventilation efficiency, high power reserve
-  **Control characteristics**
Demand-based adjustment of air performance
-  **Noise reduction**
Low noise emissions
-  **Plug & play**
Uncomplicated installation and commissioning
-  **Compactness**
Small footprint
-  **Sustainability**
Resource conservation in development, production, and operation

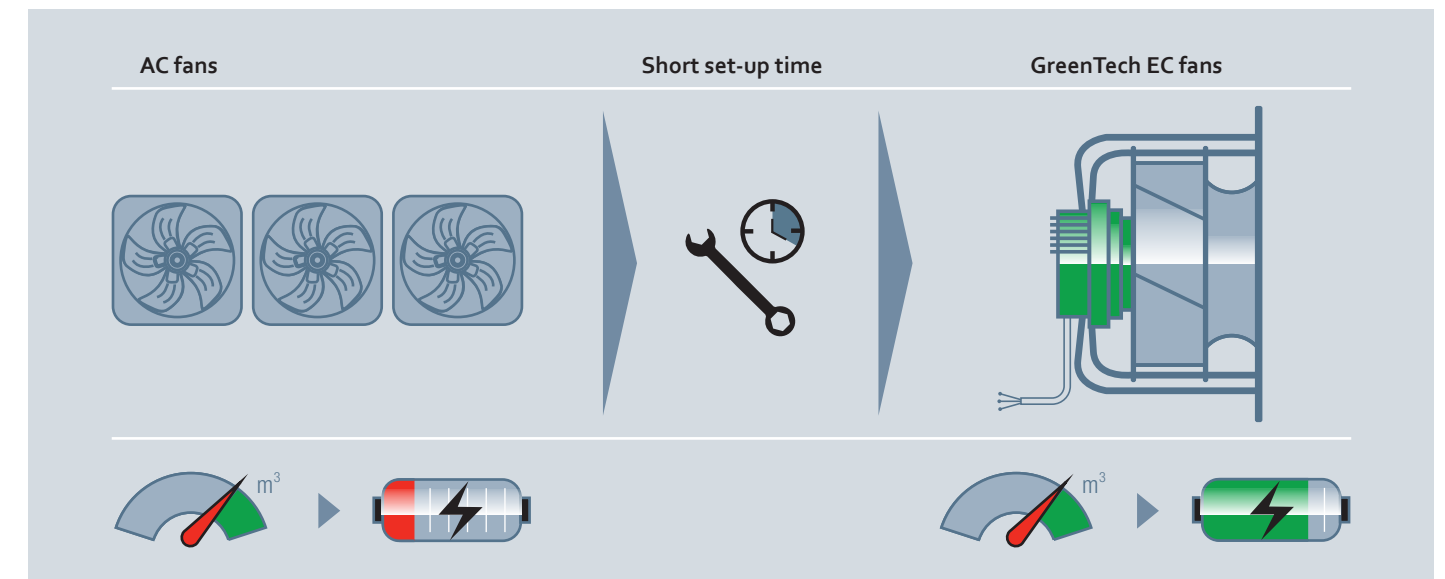
Your benefits

- GreenTech concept combining ecology, sustainability, and economical operation by using a GreenTech EC Motor, for example
- Conservation of resources by using less water

Upgrade: *Old versus highly efficient.*

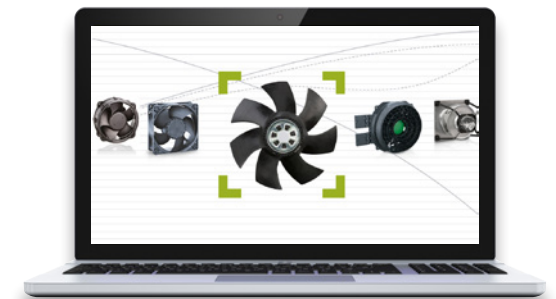
Energy efficiency means low operating costs. ebm-papst axial fans with Green-Tech EC technology from ebm-papst are so superior to conventional fans that even the conversion of existing installations is a good investment. What's more, this product range has a particularly long service life and is absolutely maintenance-free, which helps to reduce life cycle costs even further. And last but not least, ebm-papst

delivers the fans so they are completely ready for installation. ebm-papst delivers the plug & play fans completely ready for installation, which significantly reduces your installation costs. For a system with 4 fans, replacement takes no longer than 17 minutes, for example. With a very impressive result: depending on the product, energy savings may be as much as 70%.



Clear facts, true values: ebm-papst FanScout, the reliable way to find the right fan.

With just a few mouse clicks, our FanScout software directs you to the product that meets your needs best. Find the best solution, taking into account factors such as operating characteristics, air performance, operating time and space requirements. Calculate life cycle costs in advance. Your individual contact partner at ebm-papst will be glad to provide a tailored product collection for the FanScout.



Would you like more information? No problem:

For technical questions, call us at +49 7938 81-0 or send e-mail to info1@de.ebmpapst.com

ebmpapst

the engineer's choice

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