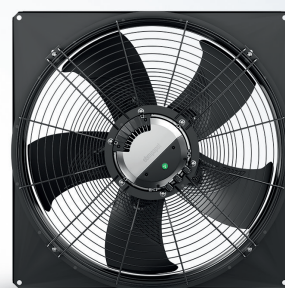
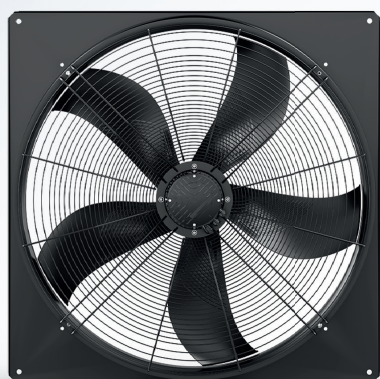


EC axial fans AxiBlade

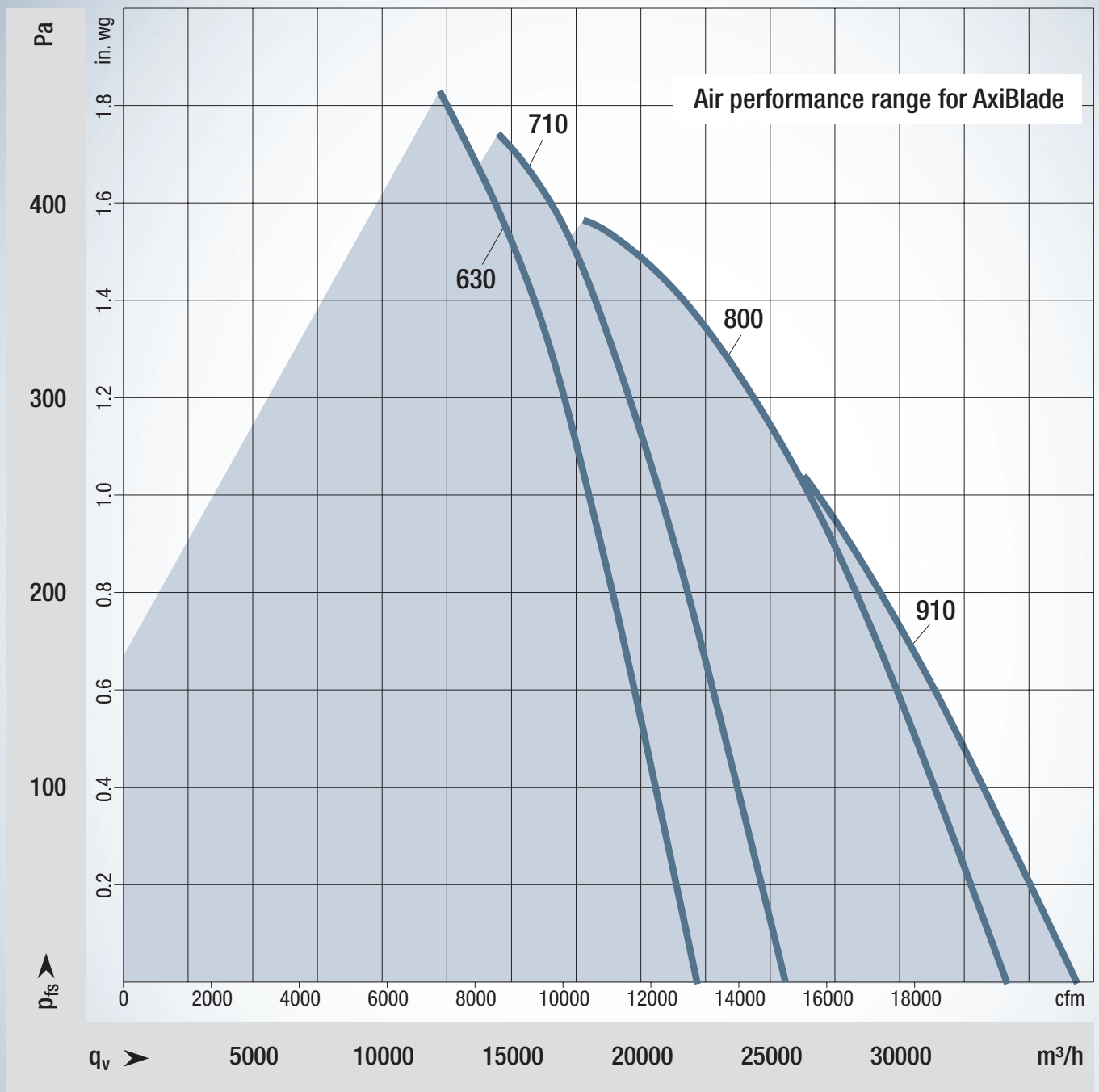
Product Catalog 2021-07

ebmpapst

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The new ebm-papst AxiBlade series



Air performance range for AxiBlade 630 - 910

The graph shows the maximum air performance for each size. If less performance is required, variants with smaller motors can be used. This saves additional costs. The right fan for every application!

EC axial fans

AxiBlade

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Information

EC axial fans - AxiBlade - Edition 2021-07

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About ebm-papst / GreenIntelligence

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 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.

Six reasons that make us the ideal partner:

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

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

Our lead in technology: with our EC technology and GreenIntelligence, we combine the highest energy efficiency with the advantages of IoT and digital networking.

Closeness to our customers: at 48 sales offices worldwide.

Our standard of quality: our quality management is uncompromising, at every step in every process.

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

GreenIntelligence. *Making Engineers Happy.*



Why do our customers look so happy? Because when it comes to the Internet of Things and the digital transformation, we provide them with a clear competitive edge with GreenIntelligence for intelligent control and interconnection of fans, drives and systems to make applications more powerful, processes more efficient, businesses more successful and their customers more satisfied.

Modern, functional and reliable solutions are in high demand for **refrigeration and air conditioning**. GreenIntelligence supplies easy-to-install fan solutions with intelligent networking capabilities and a wide variety of ideas and functions that make it possible to exploit the great potential of digitalization right away.

So much GreenIntelligence is in the AxiBlade:

- Simple monitoring via MODBUS
- Easy control via 0-10 V or MODBUS
- Efficient operation over a wide range



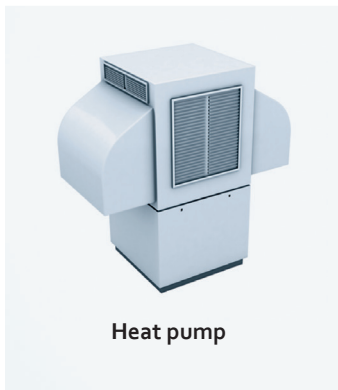
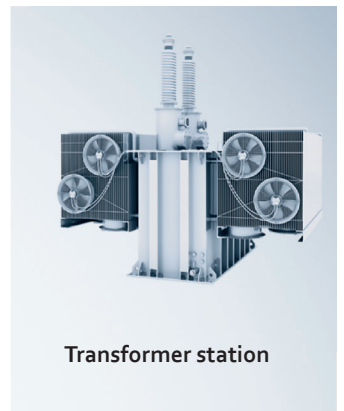
Björn already has a lot of ideas for making his refrigeration systems smarter.

Four sizes, *almost unlimited possibilities*

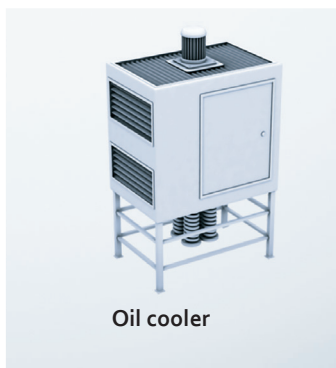
The innovative AxiBlade range sets the benchmark for large axial fans when it comes to energy efficiency and noise characteristics. There are four sizes from 630 to 910 to choose from as well as different motor designs with EC technology. AxiBlades are real all-rounders as they can be individually configured for each application.

The large fans in sizes 800 and 910 are particularly applicable to refrigerating plants like evaporators or condensers. They allow air flows up to 40.000 m³/h, with a maximum pressure range of up to 350 Pa.

The sizes 630 and 710 are even more versatile. They are perfectly suited to heat pumps or exhaust air FanGrid solutions, for example. Offering air flows of up to 25.000 m³/h at a maximum pressure range of up to 450 Pa, they open up a myriad of applications in ventilation, air conditioning and refrigeration technology.



The highly efficient, whisper-quiet ebm-papst axial fans convey air for heating and cooling purposes in a variety of different devices and systems.

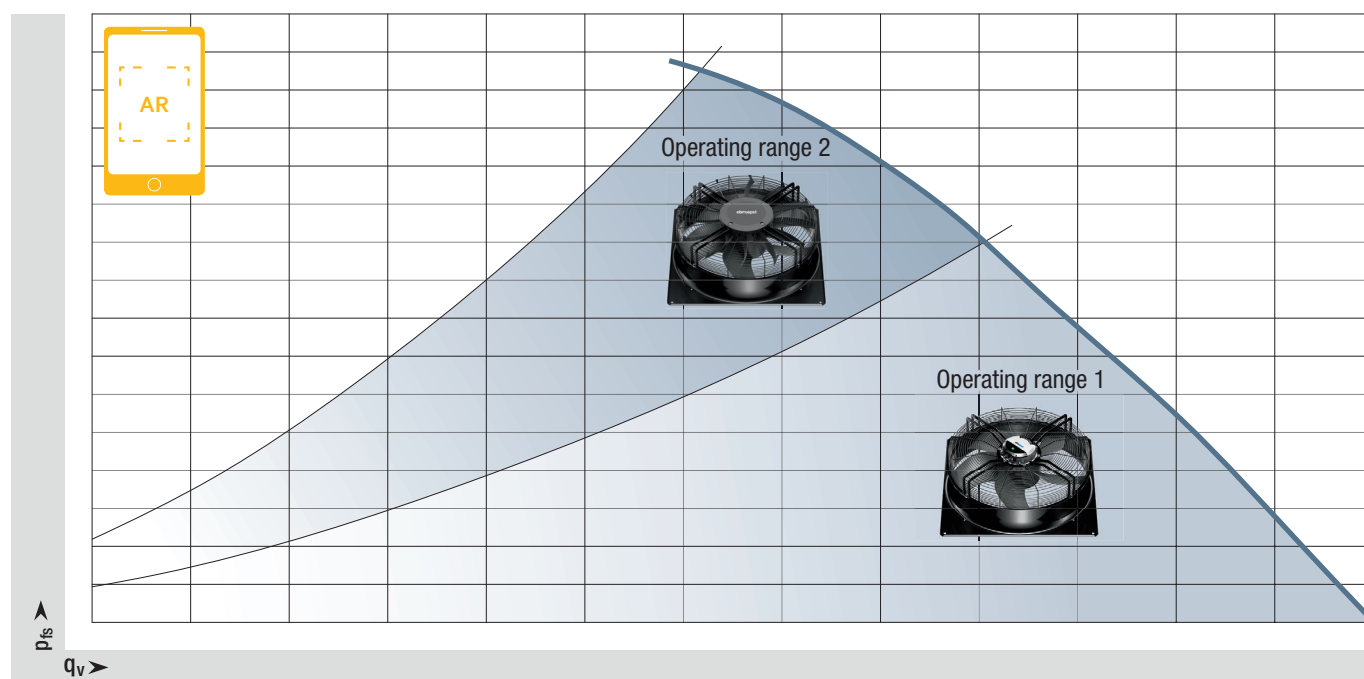


We deliver the best values for each operating point

- Because it is adapted to each application
- With clever individual solutions
- In a uniquely broad performance spectrum

Modular design – the right solution for every pressure range.
With fans, different back pressures have to be taken into consideration depending on the application and installation conditions. There is no fan that will work with the same efficiency or noise levels in all conditions: searching for an all-purpose unit is futile.

However, with their modular design, the AxiBlade axial fans can be combined with great flexibility. Components can be combined depending on the pressure ranges required and the fans can be produced accordingly. There are optimized plug & play system solutions available to suit the conditions expected for a specific application.



Air performance

The diagram shows the AxiBlade's operating points typical in applications, for example for sizes 800 and 910. The dark areas represent high back pressures of up to approx. 350 Pa, where the benefits of the system with the guide vanes come into full play. The light areas represent low to medium back pressures up to approx. 200 Pa.

ebm-papst Fan Scout

click your way to the optimum AxiBlade

Our axial fans can be configured individually for each application, and it is important to correctly consider all the relevant aspects when selecting your axial fan. When making your selection, you can rely on our experts' many years of experience – and on our professional fan selection software as well.

The ebm-papst FanScout has proven itself with its combination of user friendliness and real-world measured values. Not only is the performance of the individual fan components measured but also that of the fan as a complete system. The program allows you to quickly select the best fan for your application, to describe and modify the operating behavior and to document the technical specifications. During this process, factors such as air performance, operating time and installation space can be taken into account. TÜV SÜD has tested the difference between the actual measurements and the data calculated using the software and assigned the accuracy of the calculation to the highest class.

Exact presentation of the life cycle costs:

The costs of everything from operation, procurement and installation to service can be calculated over a time period that can be individually defined. Practical: The software can be integrated into your device's configuration program very easily, via DLL interface.

The best part:

ebm-papst will pre-select the products that are suitable for you. This saves you the trouble of searching through the broad product portfolio and helps you configure your application in advance.



EC axial fans AxiBlade

630 - 800

Information

EC axial fans - AxiBlade					
Size	Nominal voltage range VAC	Max. input power W	Axial fans		on Page
			Type	Part number	
630	1-200-277	410	VWA0630BSPMS	W3G630NP04H1	12
	3-380-480	450	VWA0630BTPMS	W3G630NP04M1	
	3-380-480	1.150	VWA0630BTRLS	W3G630NR6301	
	3-380-480	3.600	VWA0630BTTPS	W3G630NU3303	
710	3-380-480	370	VWA0710BTPMS	W3G710NP19M1	16
	3-380-480	1.000	VWA0710BTRLS	W3G710NK6701	
	3-380-480	3.800	VWA0710BTTPS	W3G710NU3103	
800	1-200-277	250	VWA0800BSRHS	W3G800NB8641	20
	1-200-277	250	VWA0800BSRHS	W3G800NB8643	
	3-380-480	660	VWA0800BTRLS	W3G800NE5751	
	3-380-480	660	VWA0800BTRLS	W3G800NE5753	
	3-380-480	830	VWA0800BTRNS	W3G800NH9401	
	3-380-480	830	VWA0800BTRNS	W3G800NH9403	
800	3-380-480	660	VWA0800BTRLS	W3G800KE5751	26
	3-380-480	830	VWA0800BTRNS	W3G800KH9401	
800	3-380-480	1.570	VWA0800BTTLS	W3G800NS2671	30
	3-380-480	1.570	VWA0800BTTLS	W3G800NS2673	
	3-380-480	2.450	VWA0800BTPZ	W3G800NU2108	
800	3-380-480	1.950	VWA0800BTTLS	W3G800KS3903	34
	3-380-480	1.950	VWA0800BTTLS	W3G800KS39D1	
	3-380-480	2.450	VWA0800BTPZ	W3G800NU2106	
	3-380-480	2.650	VWA0800BTTPS	W3G800LU2103	
	3-380-480	2.650	VWA0800BTTPS	W3G800LU2136	
	3-380-480	2.650	VWA0800BTTPS	W3G800LU21D1	
	3-380-480	2.900	VWA0800BTTPS	W3G800KU2103	
	3-380-480	2.900	VWA0800BTTPS	W3G800KU21D1	
	3-380-480	3.000	VWR0800BTPZ	W3G800OU2305	

EC axial fans AxiBlade

800 - 910

EC axial fans - AxiBlade					
Size	Nominal voltage range VAC	Max. input power W	Axial fans		on Page
			Type	Part number	
800	3-380-480	3.400	VWA0800BTTRS	W3G800KV0503	42
	3-380-480	3.500	VWA0800BTTRS	W3G800LV0503	
	3-380-480	3.500	VWA0800BTTRS	W3G800LV0536	
	3-380-480	3.500	VWA0800BTTRS	W3G800LV05D1	
	3-380-480	3.500	VWR0800BTTRZ	W3G800OV0506	
	3-380-480	4.000	VWA0800BTTRS	W3G800NV0510	
910	3-380-480	630	VWA0910BTRNS	W3G910KH0251	48
910	3-380-480	1.770	VWA0910BTTLS	W3G910KS3503	52
	3-380-480	1.770	VWA0910BTTLS	W3G910KS35D1	
	3-380-480	2.500	VWA0910BTTPS	W3G910LU2503	
	3-380-480	2.500	VWA0910BTTPS	W3G910LU25D1	
	3-380-480	2.550	VWA0910BTTPS	W3G910KU2503	
	3-380-480	2.550	VWA0910BTTPS	W3G910KU25D1	
	3-380-480	2.550	VWR0910BTTPZ	W3G910OU2507	
910	3-380-480	3.200	VWA0910BTTRS	W3G910KV1203	58
	3-380-480	3.250	VWA0910BTTRS	W3G910LV1203	
	3-380-480	3.250	VWA0910BTTRS	W3G910LV1236	
	3-380-480	3.250	VWA0910BTTRS	W3G910LV12D1	
	3-380-480	3.250	VWR0910BTTRZ	W3G910OV1205	

Subject to technical changes.



AxiBlade 630 - 910

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800	34
800	42
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AxiBlade 630

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: Sheet steel, galvanized and coated with black plastic (RAL 9005)
- Impeller: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted black, Die-cast aluminum, painted gray

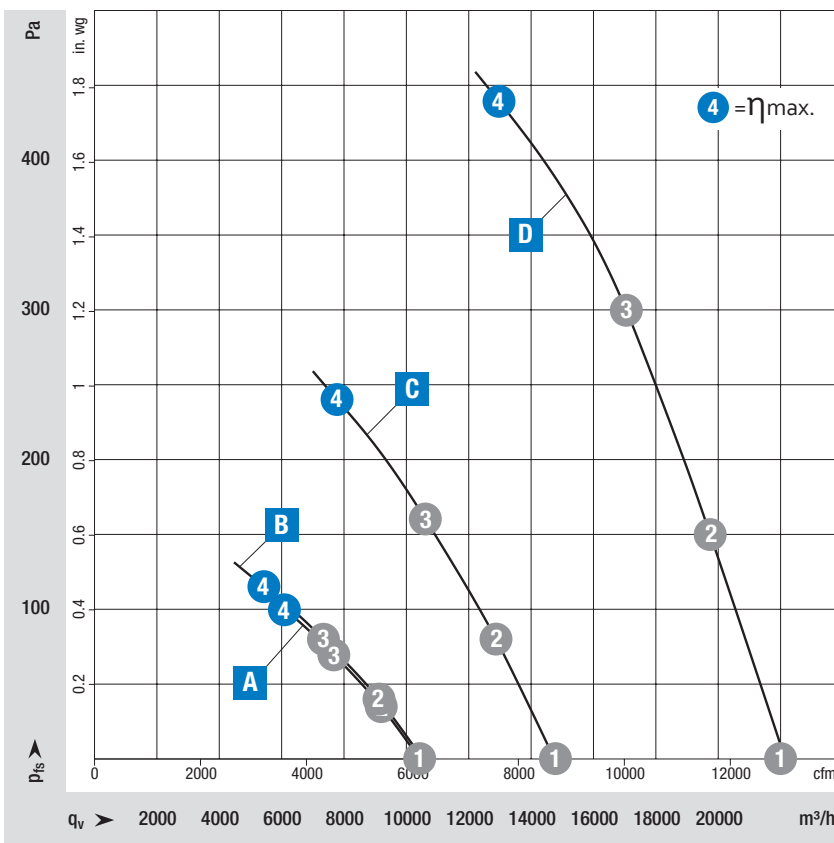
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing





Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 14	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions
 Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
 Suction-side noise level: LwA according to ISO 13347, LpA measured at a distance of 1 m on the fan axis.
 The specifications apply only under the specified measuring conditions and may change due to installation conditions.
 In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 1- 200-277 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level L _{WA}	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature			V	rpm	W	A	dB(A)	Pa	°C		
VWA0630BSPMS	W3G630NP04H1	With guard grille and wall ring		A	1	230	830	225	1.01	70	100	-25...+60	IP55	AB2
					2	230	830	295	1.31	67				
					3	230	830	355	1.57	67				
					4	230	830	410	1.80	71				
Nominal voltage range 3- 380-480 VAC, 50/60 Hz						V	rpm	W	A	dB(A)	Pa	°C		
Type	Part number	Fan type	Main feature											
VWA0630BTPMS	W3G630NP04M1	With guard grille and wall ring		B	1	400	840	240	0.44	70	115	-40...+60	IP55	AB3
					2	400	840	318	0.55	67				
					3	400	840	386	0.64	68				
					4	400	840	450	0.70	75				
VWA0630BTRLS	W3G630NR6301	With guard grille and wall ring		C	1	400	1,260	620	0.99	80	240	-40...+60	IP55	AB3
					2	400	1,260	810	1.26	76				
					3	400	1,260	982	1.52	78				
					4	400	1,260	1,150	1.80	87				
VWA0630BTTPS	W3G630NU3303	With guard grille and wall ring		D	1	400	1,800	1,991	3.12	86	440	-40...+60	IP55	AB1
					2	400	1,800	2,570	3.96	85				
					3	400	1,800	3,090	4.72	87				
					4	400	1,800	3,600	5.50	98				

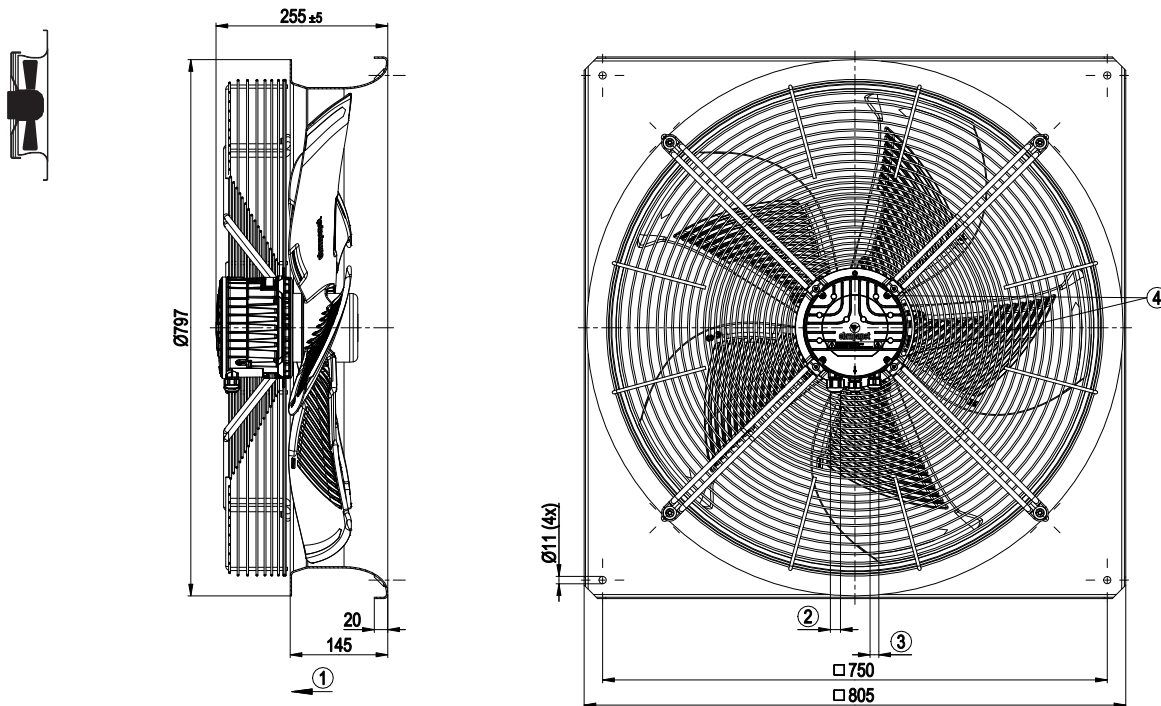
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 630

A VWA0630BSPMS W3G630NP04H1 EC axial fan - AxiBlade

Dimensions in mm

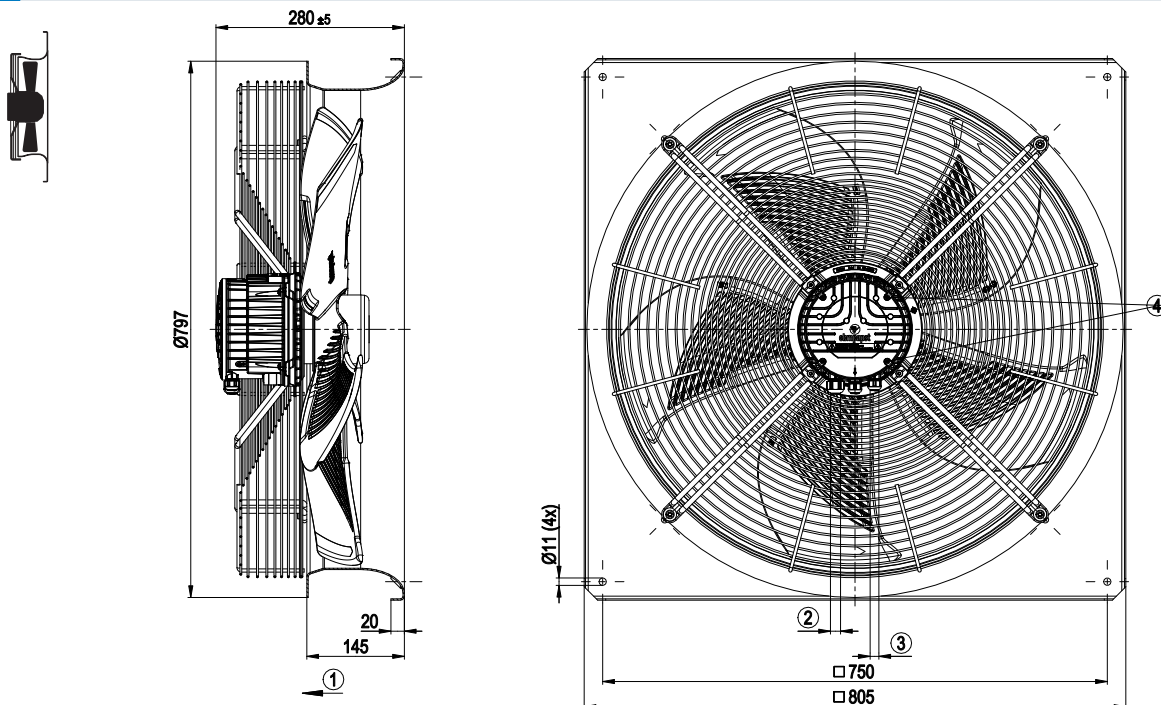


- ① Airflow direction „V“
- ② Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
- ④ Tightening torque 1.5 ± 0.2 Nm

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0630BTPMS W3G630NP04M1 EC axial fan - AxiBlade

Dimensions in mm

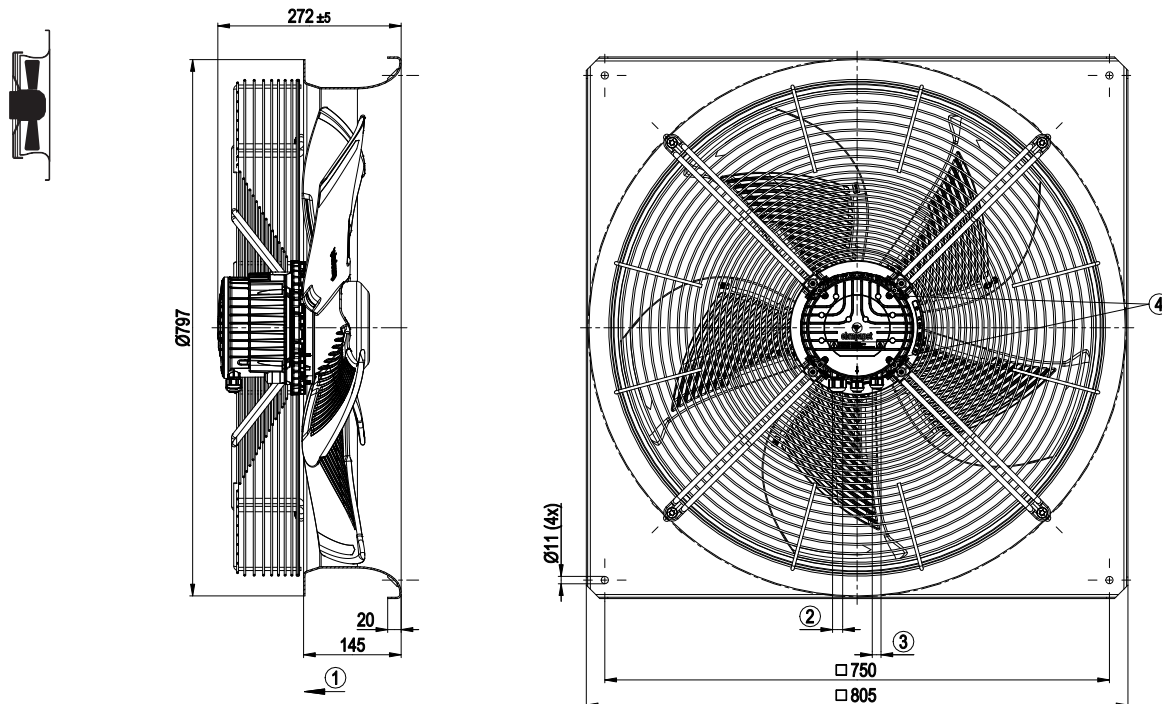


- ① Airflow direction „V“
- ② Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
- ④ Tightening torque 1.5 ± 0.2 Nm

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

C VVA0630BTRLS W3G630NR6301 EC axial fan - AxiBlade

Dimensions in mm

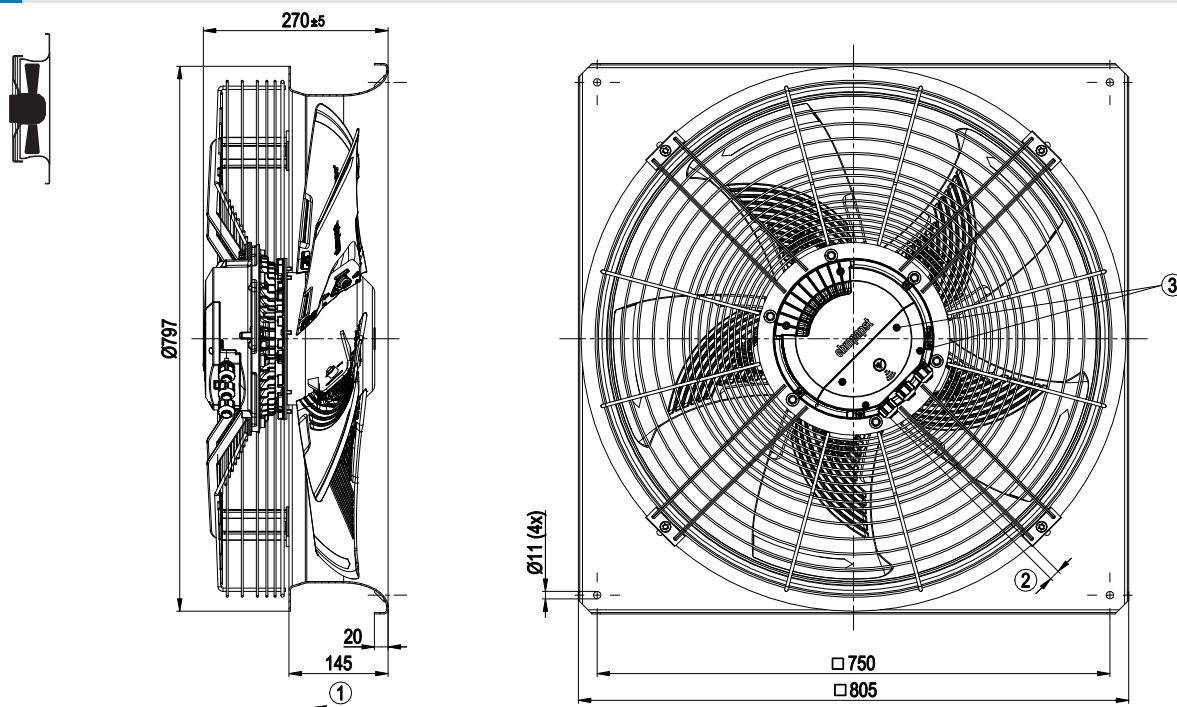


- ① Airflow direction „V“
- ② Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
- ④ Tightening torque 1.5 ± 0.2 Nm

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

D VVA0630BTTPS W3G630NU3303 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 710

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: Sheet steel, galvanized and coated with black plastic (RAL 9005)
- Impeller: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted black, Die-cast aluminum, painted gray

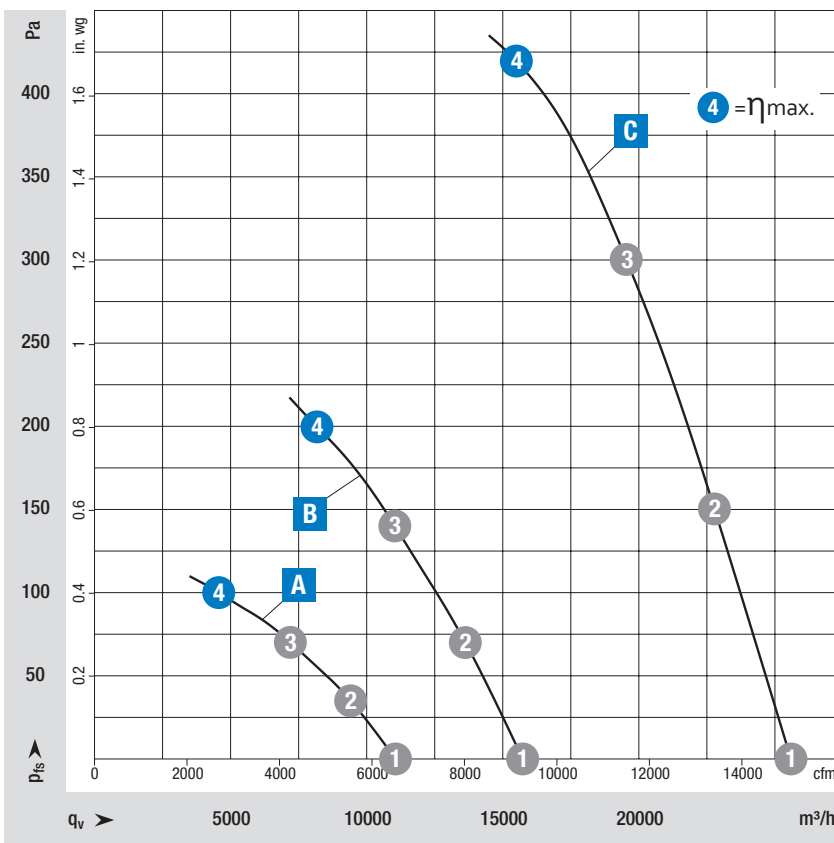
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing




Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 18	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions
 Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
 Suction-side noise level: LwA according to ISO 13347, LpA measured at a distance of 1 m on the fan axis.
 The specifications apply only under the specified measuring conditions and may change due to installation conditions.
 In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 3- 380-480 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level LWA	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature		V	rpm	W	A	dB(A)	Pa	°C			
VWA0710BTPMS	W3G710NP19M1	With guard grille and wall ring		A	1	400	720	195	0.39	67	100	-40...+60	IP55	AB3
					2	400	720	264	0.48	65				
					3	400	720	328	0.56	67				
					4	400	720	370	0.65	75				
VWA0710BTRLS	W3G710NK6701	With guard grille and wall ring		B	1	400	1,100	551	0.89	77	200	-40...+60	IP55	AB3
					2	400	1,100	729	1.14	74				
					3	400	1,100	884	1.37	77				
					4	400	1,100	1,000	1.50	86				
VWA0710BTPPS	W3G710NU3103	With guard grille and wall ring		C	1	400	1,680	2,150	3.35	86	420	-40...+60	IP55	AB1
					2	400	1,680	2,780	4.28	85				
					3	400	1,680	3,366	5.15	86				
					4	400	1,680	3,800	5.80	96				

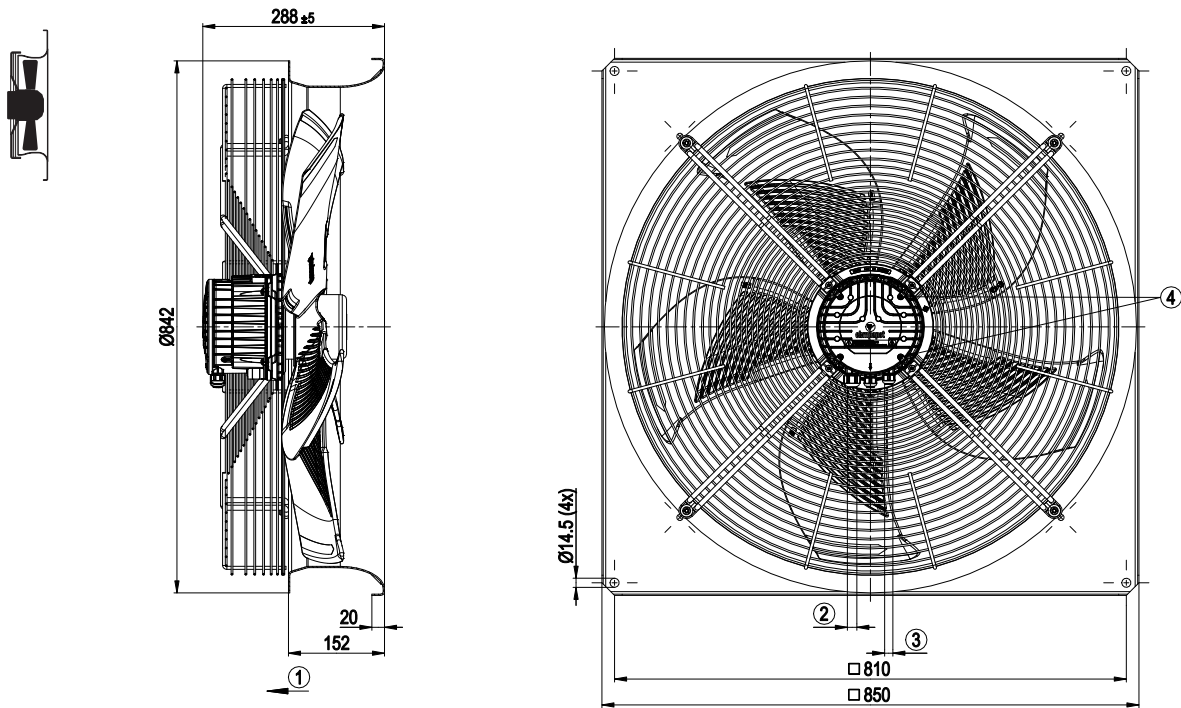
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 710

A VVA0710BTPMS W3G710NP19M1 EC axial fan - AxiBlade

Dimensions in mm

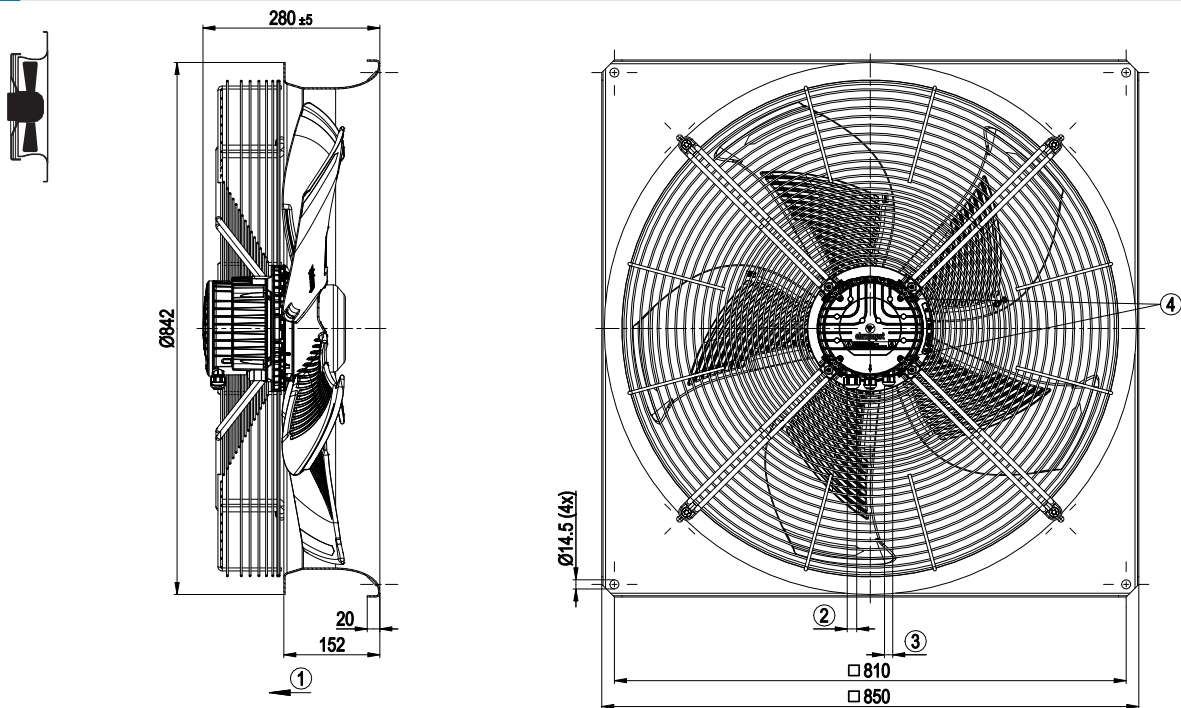


- ① Airflow direction „V“
- ② Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
- ④ Tightening torque 1.5 ± 0.2 Nm

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

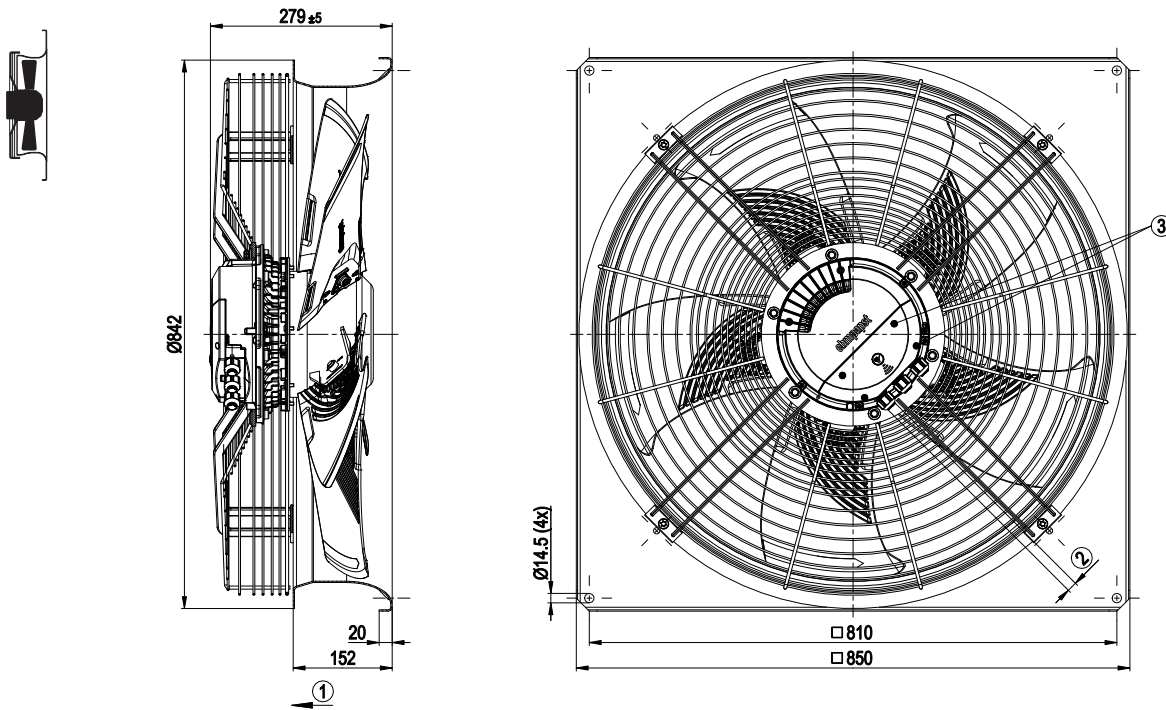
B VVA0710BTRLS W3G710NK6701 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
- ④ Tightening torque 1.5 ± 0.2 Nm

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request



- ① Airflow direction „V“
- ② Tightening torque 1.5 ± 0.2 Nm
- ③ Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 800

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: PP plastic
- Impeller: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted black

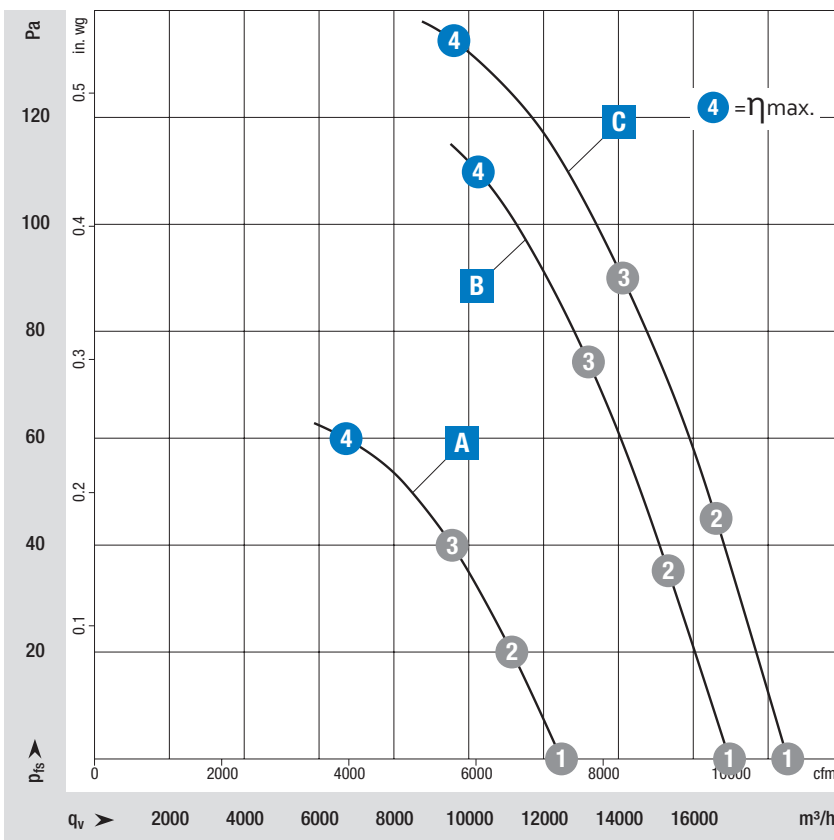
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request, See fitting instructions
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing with low-temperature lubricant




Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 22	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions
 Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
 Suction-side noise level: LwA according to ISO 13347, LpA measured at a distance of 1 m on the fan axis.
 The specifications apply only under the specified measuring conditions and may change due to installation conditions.
 In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 1- 200-277 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level L _{WA}	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram	
Type	Part number	Fan type	Main feature		V	rpm	W	A	dB(A)	Pa	°C				
VWA0800BSRHS	W3G800NB8641	AxiCool Standard		A	1	230	520	170	0.75	59	60	-40...+40	IP55	AB4	
					2	230	520	204	0.90	60					
					3	230	520	232	1.02	60					
					4	230	520	250	1.10	69					
VWA0800BSRHS	W3G800NB8643	AxiCool High-End													
Nominal voltage range 3- 380-480 VAC, 50/60 Hz					V	rpm	W	A	dB(A)	Pa	°C				
Type	Part number	Fan type	Main feature												
VWA0800BTRLS	W3G800NE5751	AxiCool Standard		B	1	400	720	404	0.66	70	110	-40...+40	IP55	AB5	
					2	400	720	487	0.78	69					
					3	400	720	571	0.90	70					
					4	400	720	660	1.00	77					
VWA0800BTRLS	W3G800NE5753	AxiCool High-End													
VWA0800BTRNS	W3G800NH9401	AxiCool Standard		C	1	400	780	537	0.86	71	135	-40...+40	IP55	AB5	
					2	400	780	653	1.03	70					
					3	400	780	744	1.16	70					
					4	400	780	830	1.29	83					
VWA0800BTRNS	W3G800NH9403	AxiCool High-End													

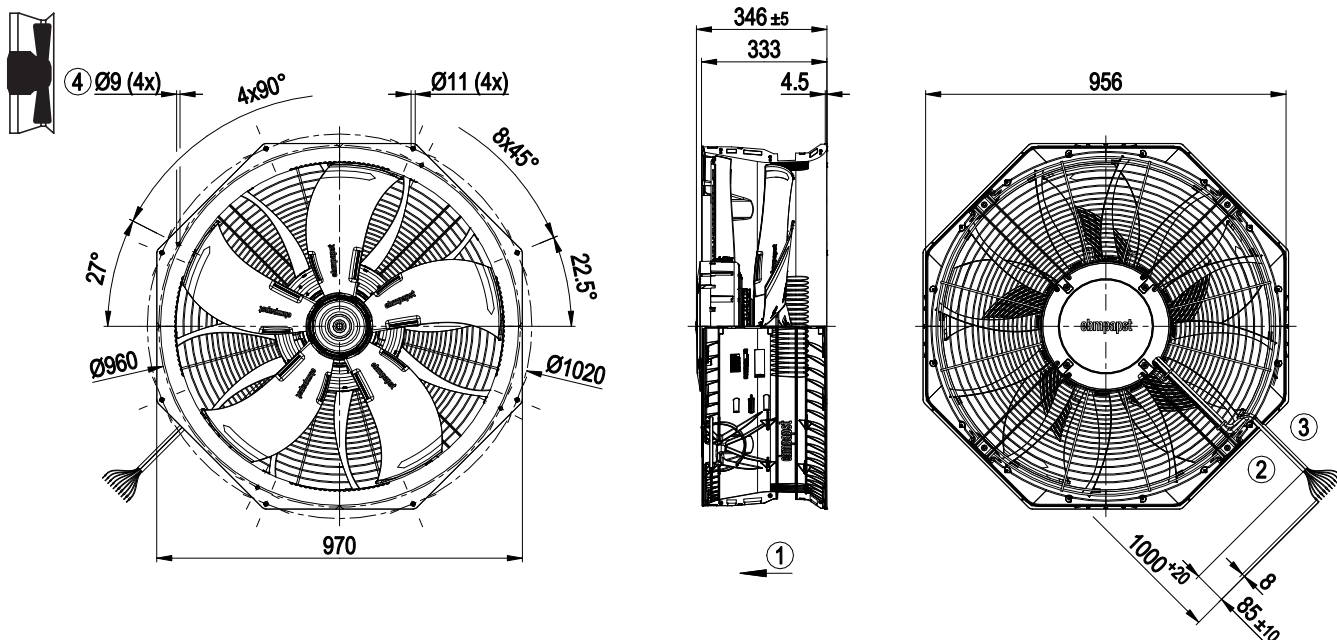
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 800

A VWA0800BSRHS W3G800NB8641 EC axial fan - AxiBlade

Dimensions in mm

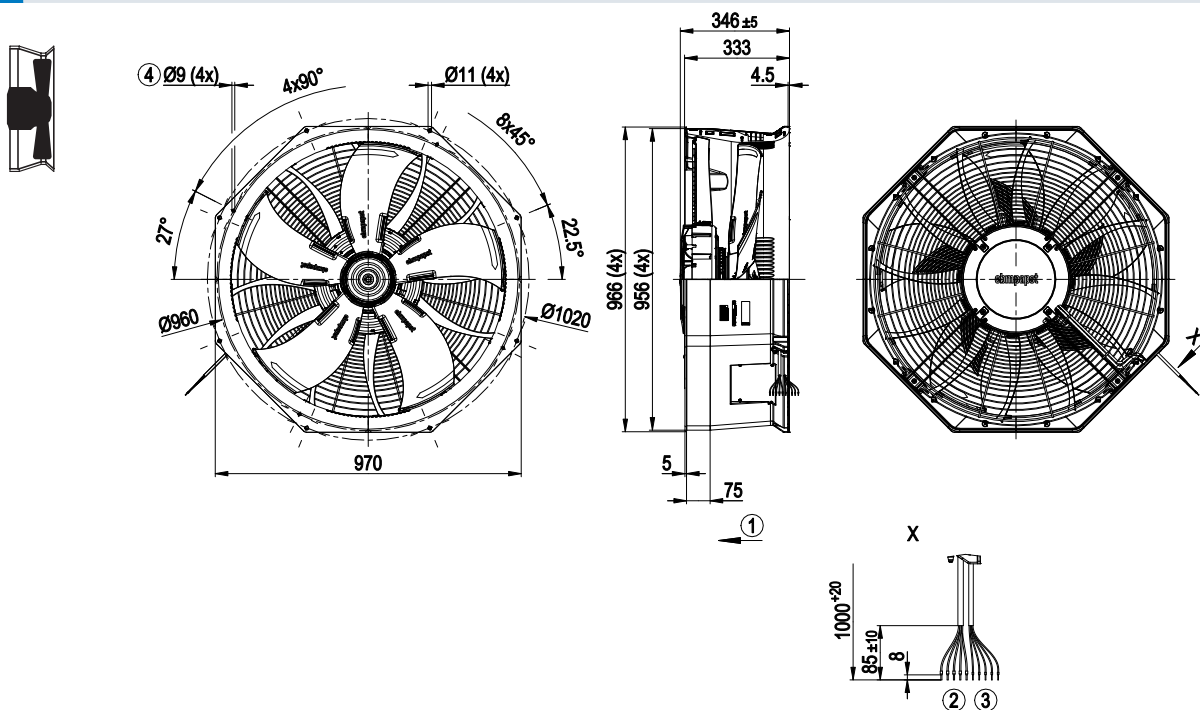


- ① Airflow direction „V“
- ② Cable PVC AWG18, 5x crimped ferrules
- ③ Cable PVC AWG22, 5x crimped ferrules
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

A VWA0800BSRHS W3G800NB8643 EC axial fan - AxiBlade

Dimensions in mm

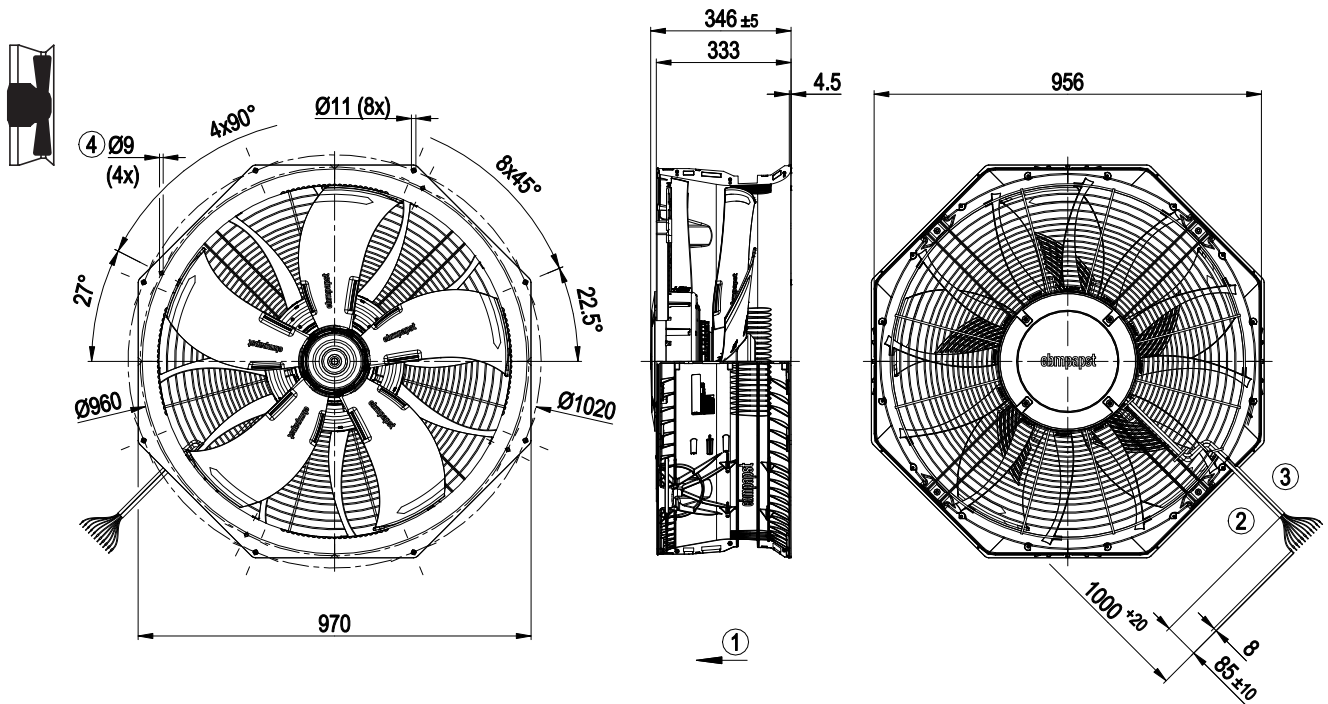


- ① Airflow direction „V“
- ② Cable PVC AWG18, 5x crimped ferrules
- ③ Cable PVC AWG22, 5x crimped ferrules
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VVA0800BTRLS W3G800NE5751 EC axial fan - AxiBlade

Dimensions in mm

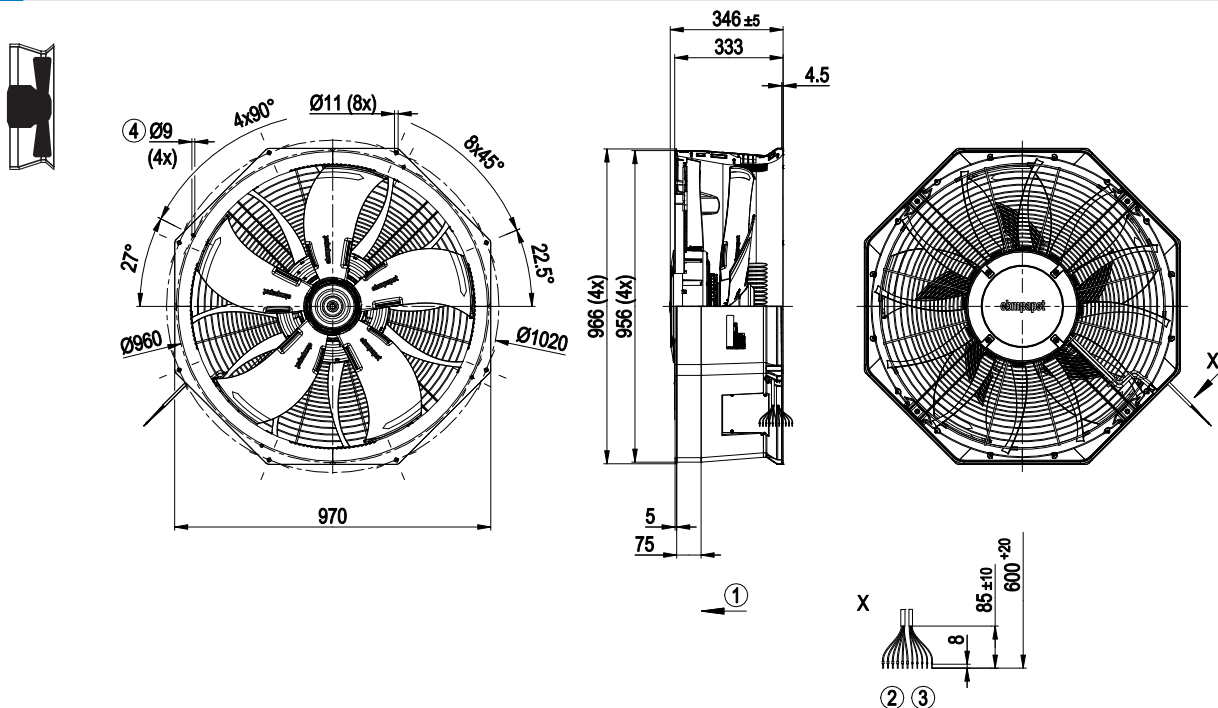


- ① Airflow direction „V“
- ② Cable PVC AWG18, 6x crimped ferrules
- ③ Cable PVC AWG22, 5x crimped ferrules
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
Mounting position: See product specific data sheets

B VVA0800BTRLS W3G800NE5753 EC axial fan - AxiBlade

Dimensions in mm



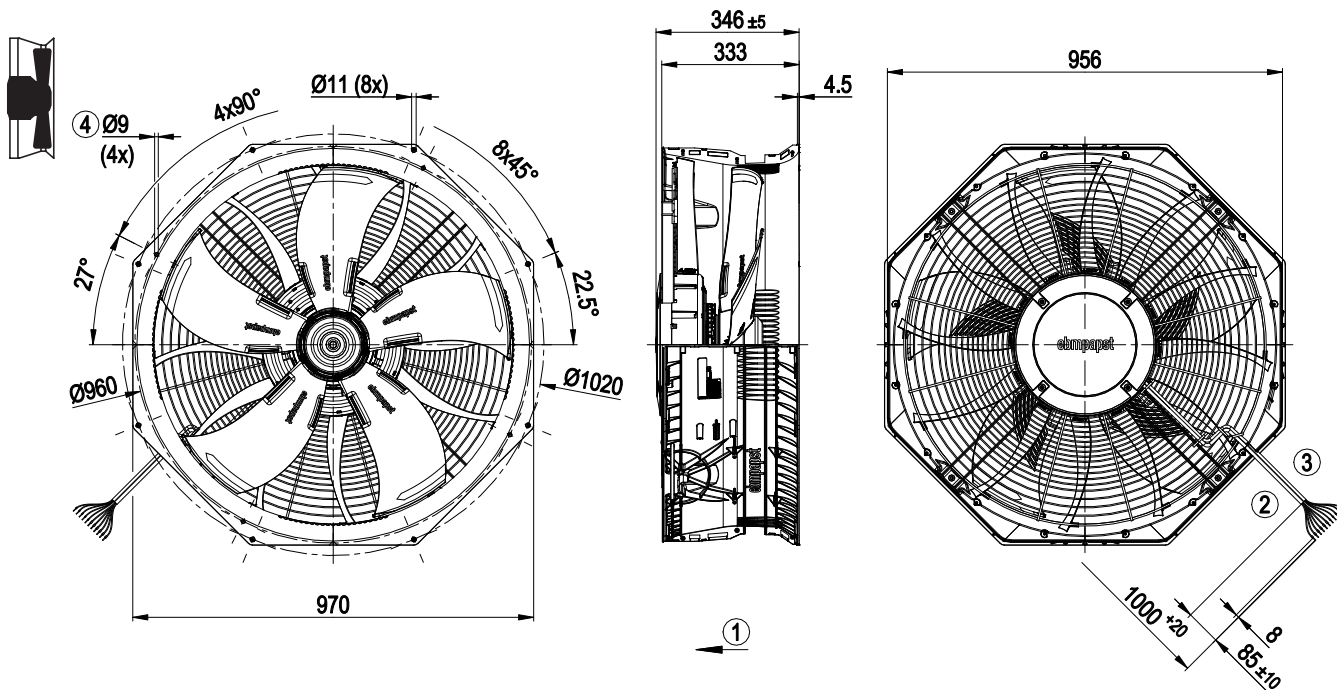
- ① Airflow direction „V“
- ② Cable PVC AWG18, 6x crimped ferrules
- ③ Cable PVC AWG22, 5x crimped ferrules
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
Mounting position: See product specific data sheets

AxiBlade 800

C VVA0800BTRNS W3G800NH9401 EC axial fan - AxiBlade

Dimensions in mm

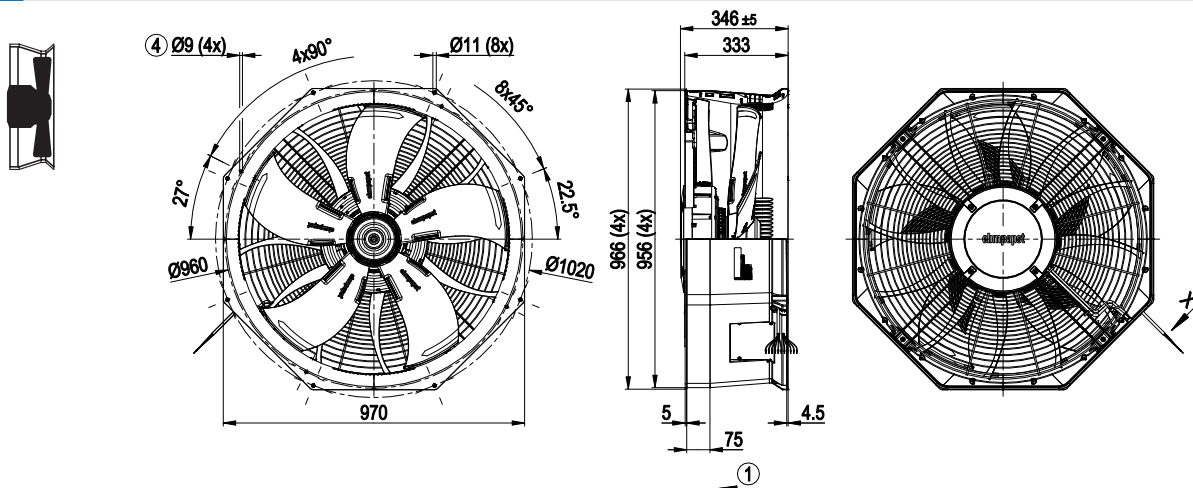


- ① Airflow direction „V“
- ② Cable PVC AWG18, 6x crimped ferrules
- ③ Cable PVC AWG22, 5x crimped ferrules
- ④ Mounting holes for FlowGrid

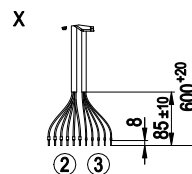
Pin assignment: See connection diagram
Mounting position: See product specific data sheets

C VVA0800BTRNS W3G800NH9403 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable PVC AWG18, 6x crimped ferrules
- ③ Cable PVC AWG22, 5x crimped ferrules
- ④ Mounting holes for FlowGrid



Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 800

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: Sheet steel, galvanized and coated with black plastic (RAL 9005)
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted black

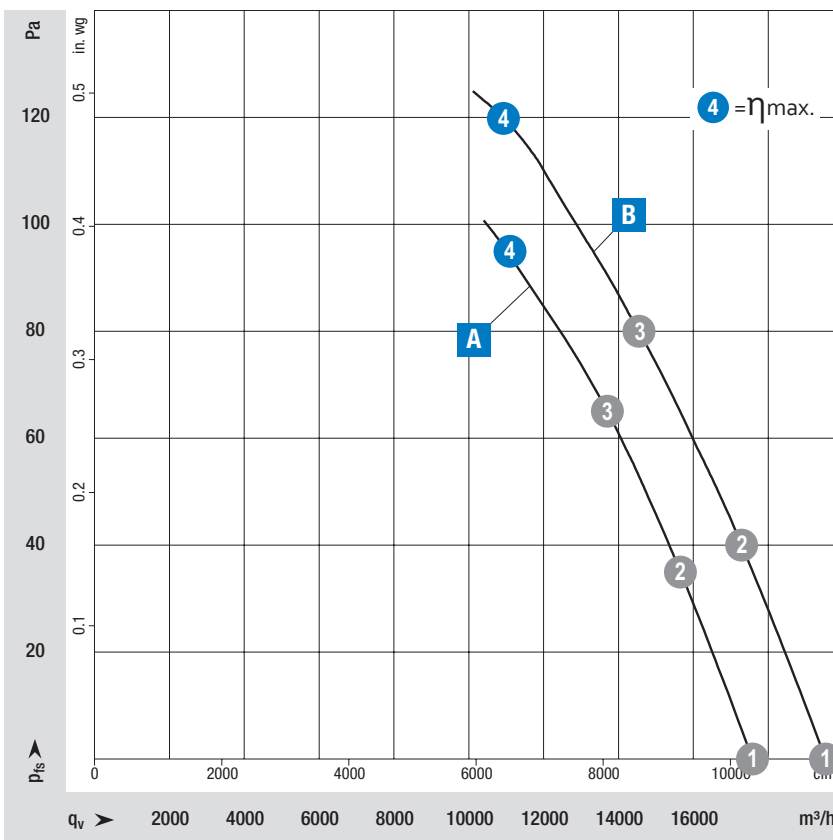
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing



Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 28	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions
 Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
 Suction-side noise level: L_{WA} according to ISO 13347, L_{pA} measured at a distance of 1 m on the fan axis.
 The specifications apply only under the specified measuring conditions and may change due to installation conditions.
 In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 3- 380-480 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level LWA	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature		V	rpm	W	A	dB(A)	Pa	°C			
VWA0800BTRLS	W3G800KE5751	With guard grille and wall ring		A	1	400	720	381	0.63	69	95	-40...+60	IP55	AB3
					2	400	720	484	0.78	67				
					3	400	720	568	0.90	67				
					4	400	720	660	1.00	70				
VWA0800BTRNS	W3G800KH9401	With guard grille and wall ring		B	1	400	780	494	0.80	69	120	-40...+60	IP55	AB3
					2	400	780	614	0.97	69				
					3	400	780	721	1.13	69				
					4	400	780	830	1.30	75				

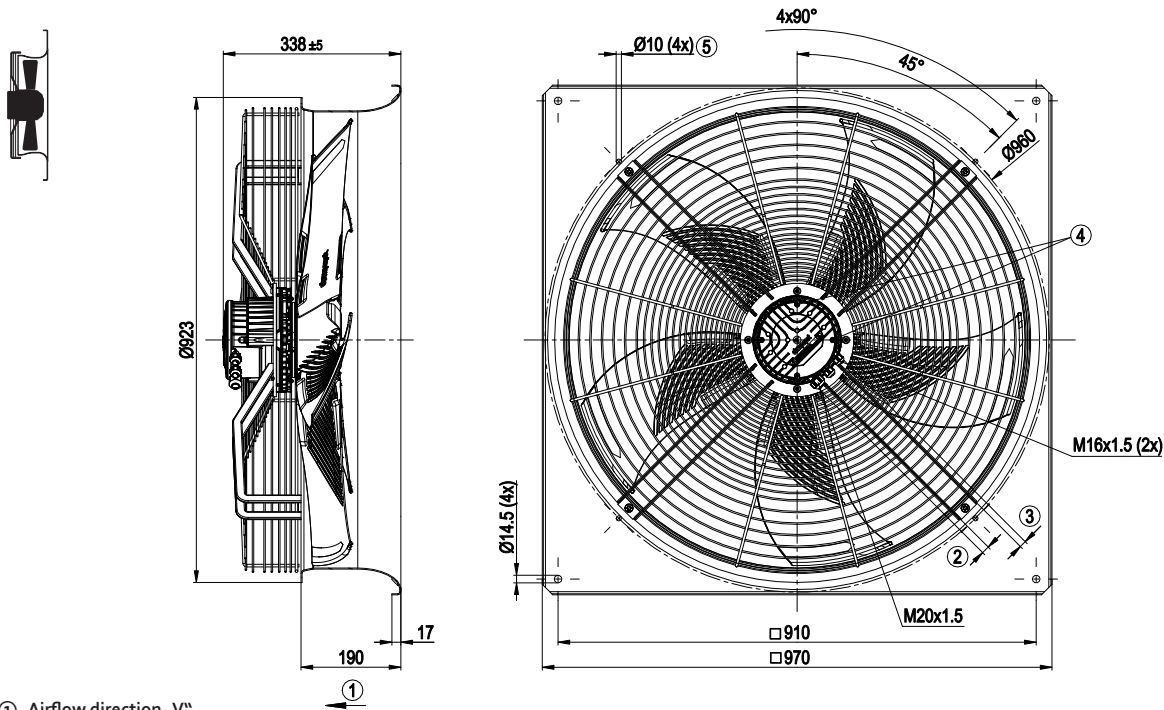
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 800

A VWA0800BTRLS W3G800KE5751 EC axial fan - AxiBlade

Dimensions in mm

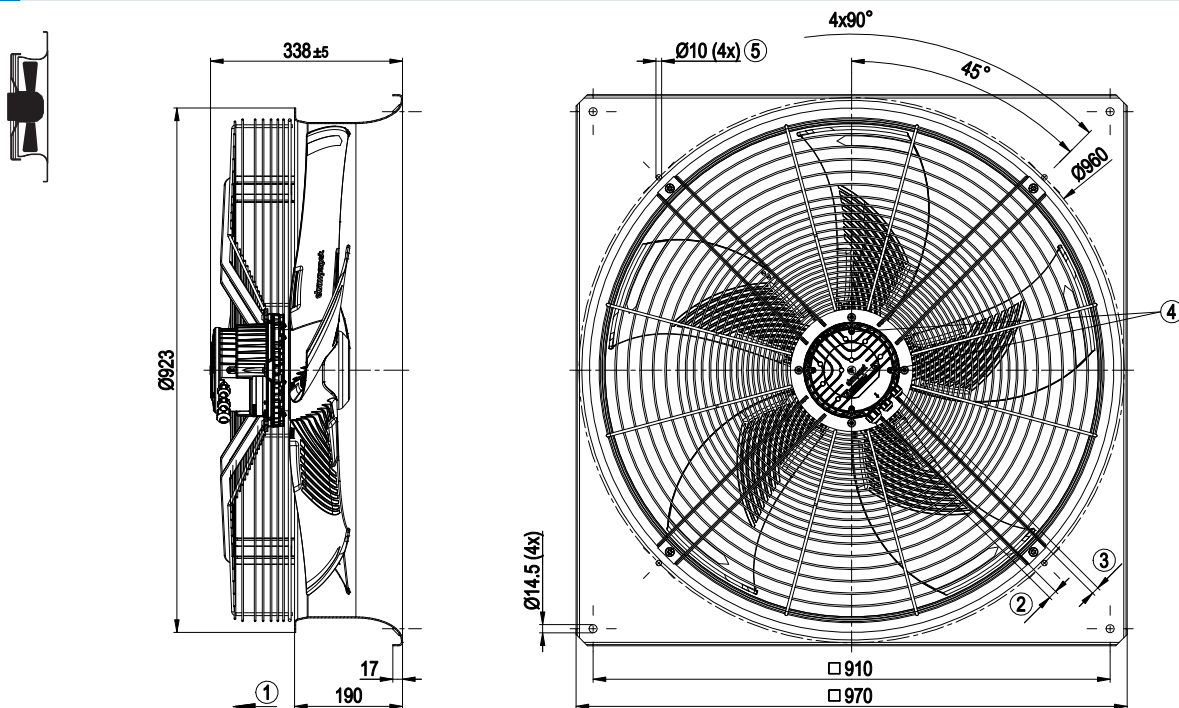


- ① Airflow direction „V“
- ② Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided); Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided); Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
- ④ Tightening torque 1.5 ± 0.2 Nm
- ⑤ Mounting holes for FlowGrid

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0800BTRNS W3G800KH9401 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided); Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided); Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
- ④ Tightening torque 1.5 ± 0.2 Nm
- ⑤ Attachment holes for FlowGrid 80000-2-2957 (not included in scope of delivery)

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 800

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted black, Die-cast aluminum, painted gray

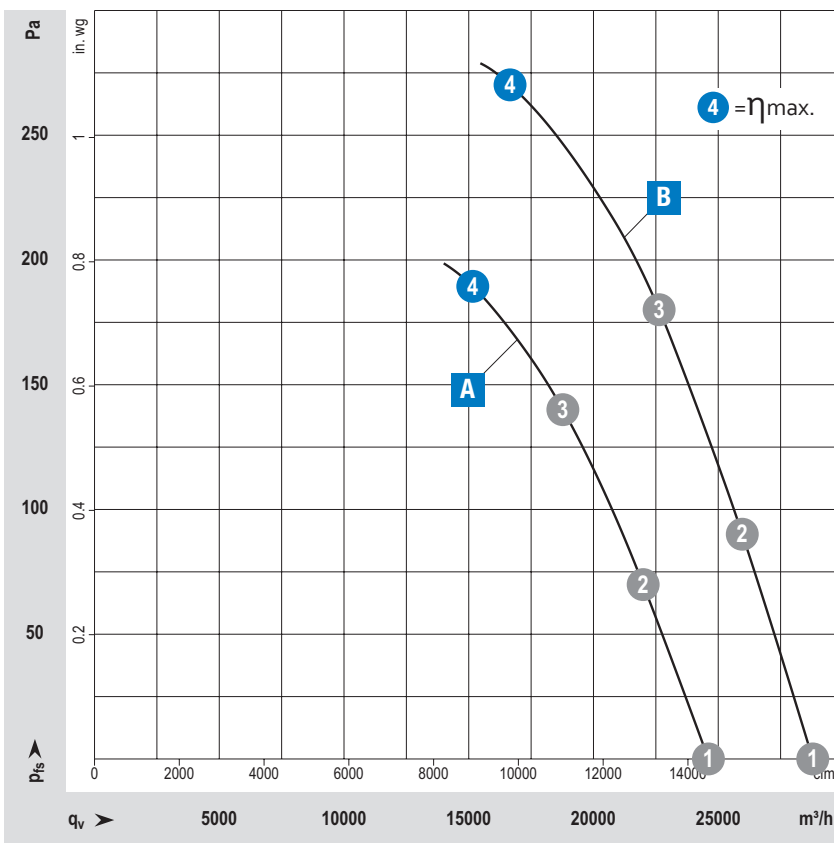
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: See fitting instructions
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing with low-temperature lubricant, Ball bearing




Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 32	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions
 Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
 Suction-side noise level: LwA according to ISO 13347, LpA measured at a distance of 1 m on the fan axis.
 The specifications apply only under the specified measuring conditions and may change due to installation conditions.
 In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 3- 380-480 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level L _{WA}	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature		V	rpm	W	A	dB(A)	Pa	°C			
VWA0800BTTLs	W3G800NS2671	AxiCool Standard		A	① 400	930	1,179	1.93	77	190	-40...+40	IP55	AB6	
					② 400	930	1,365	2.19	76					
					③ 400	930	1,526	2.43	79					
					④ 400	930	1,570	2.50	86					
VWA0800BTTLs	W3G800NS2673	AxiCool High-End												
VWA0800BTPZ	W3G800NU2108	AxiCool Standard		B	① 400	1,080	1,794	2.83	81	270	-40...+60	IP55	AB1	
					② 400	1,080	2,089	3.26	80					
					③ 400	1,080	2,349	3.64	83					
					④ 400	1,080	2,450	3.80	93					

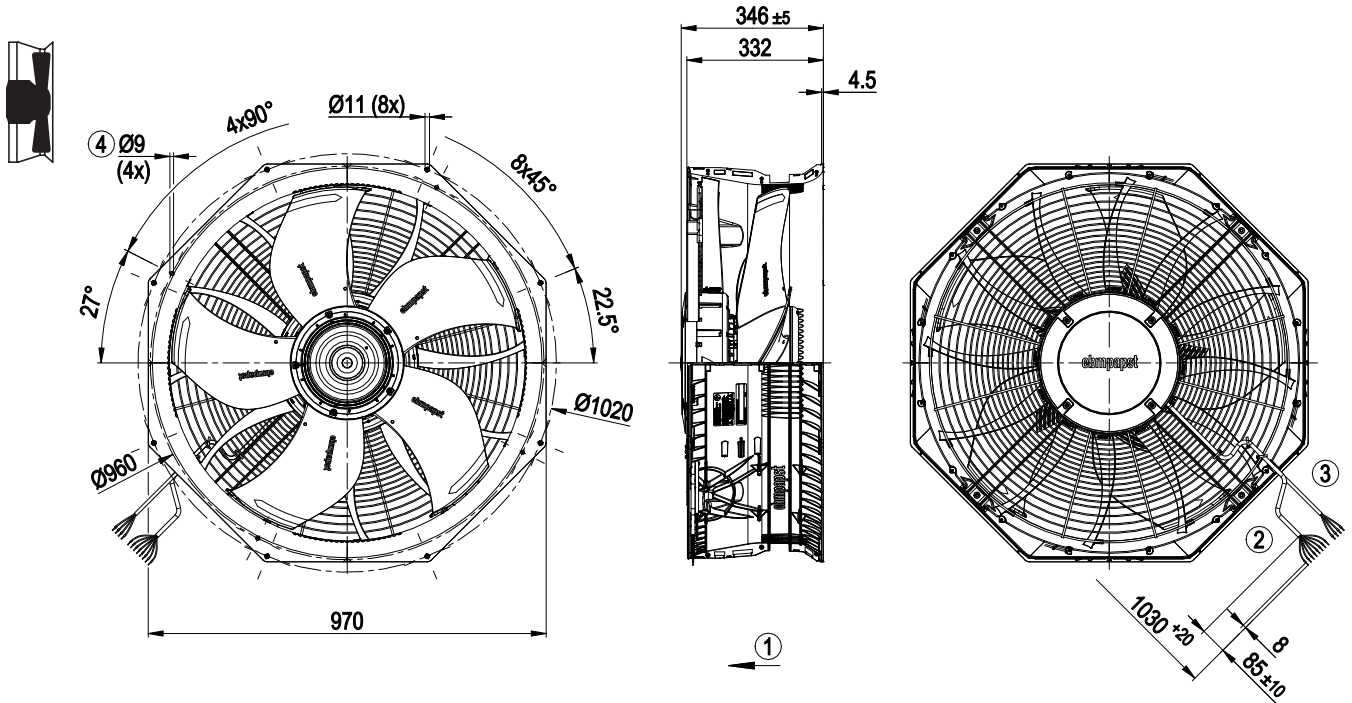
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 800

A VVA0800BTTL5 W3G800NS2671 EC axial fan - AxiBlade

Dimensions in mm

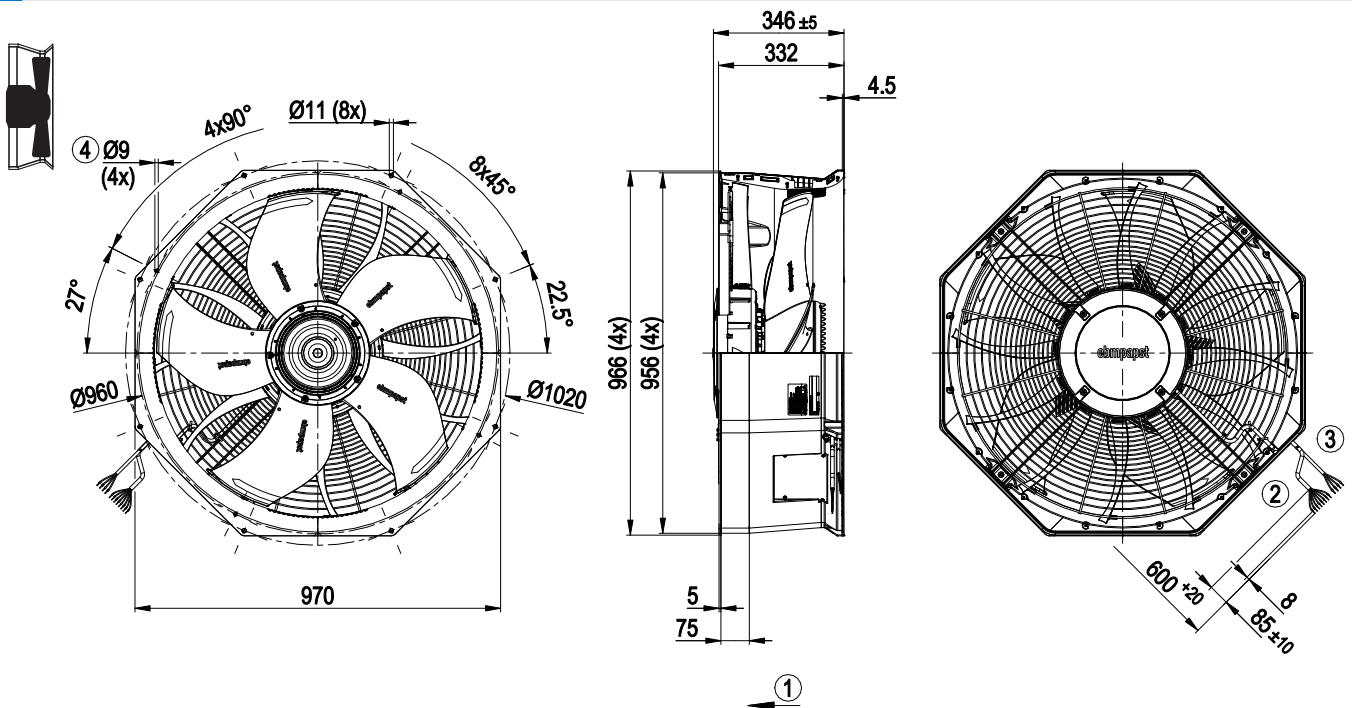


- ① Airflow direction „V“
- ② Cable silicone 8x0.5 mm², 8x crimped ferrules
- ③ Cable silicone 4G 1.5 mm², 4x crimped ferrules
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
Mounting position: See product specific data sheets

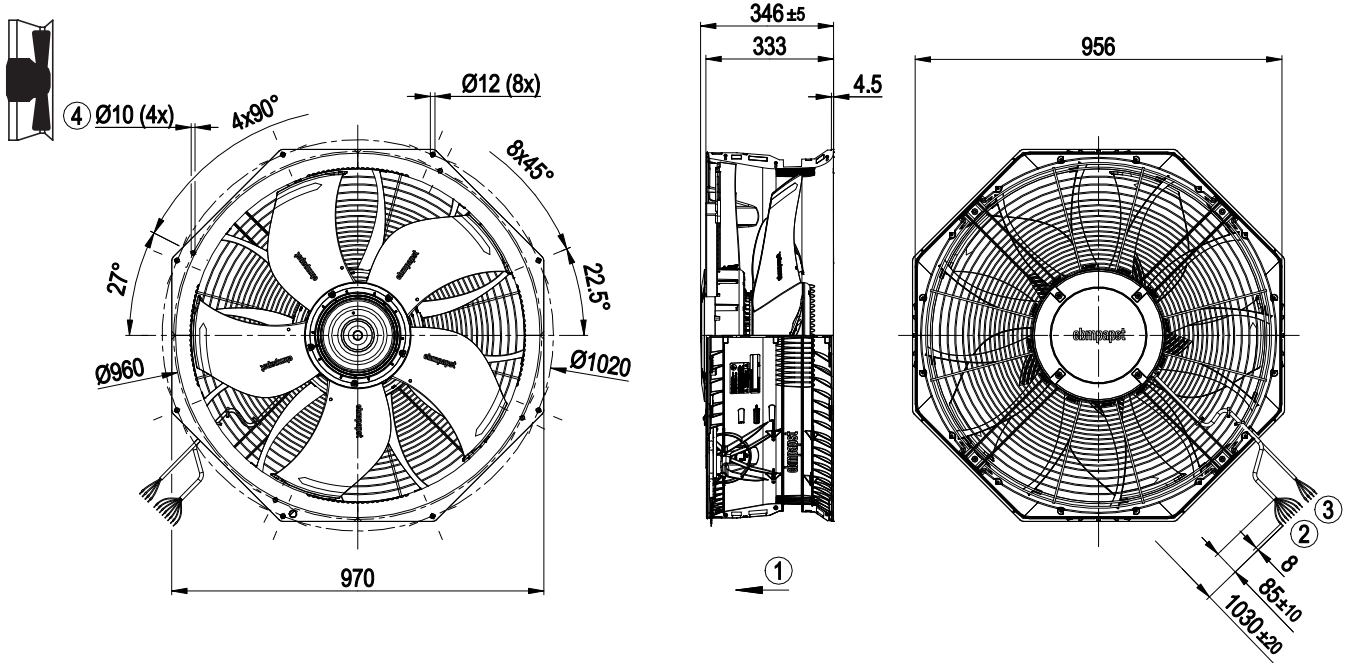
A VVA0800BTTL5 W3G800NS2673 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable silicone 8x0.5 mm², 8x crimped ferrules
- ③ Cable silicone 4G 1.5 mm², 4x crimped ferrules
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
Mounting position: See product specific data sheets



- ① Airflow direction „V“
- ② Cable silicone 8x0.5 mm²
8x wire-end ferrule
- ③ Cable silicone 4G 1.5 mm²
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: See product specific data sheets

AxiBlade 800

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: Sheet steel, galvanized and coated with black plastic (RAL 9005), PP plastic
- Impeller: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted gray

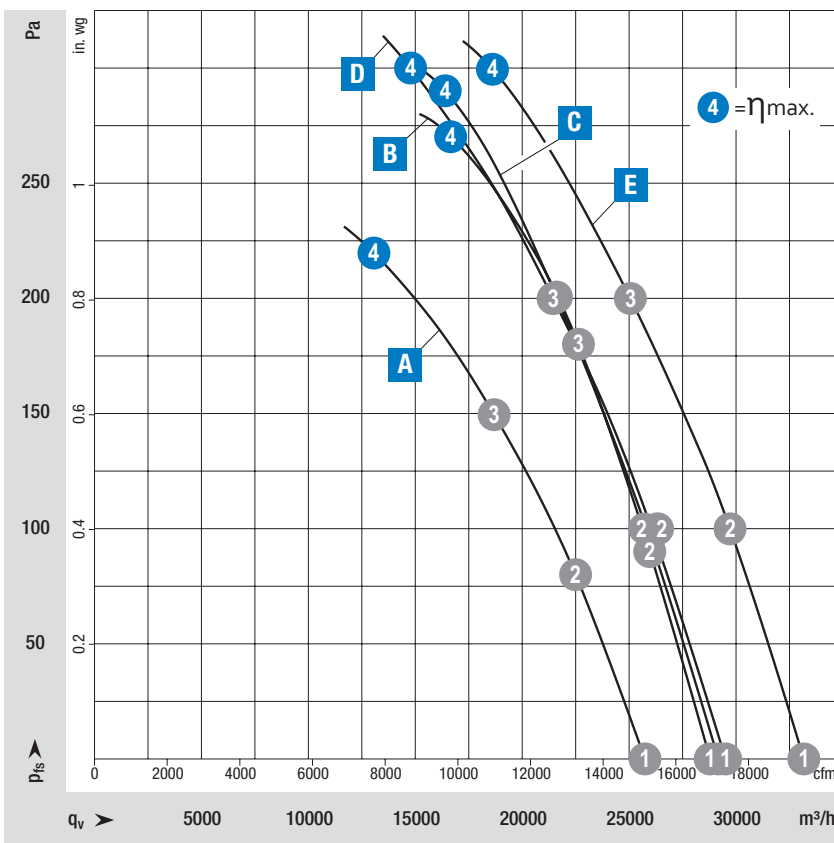
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request, See fitting instructions
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing










Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 36	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions
 Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
 Suction-side noise level: L_{WA} according to ISO 13347, L_{pA} measured at a distance of 1 m on the fan axis.
 The specifications apply only under the specified measuring conditions and may change due to installation conditions.
 In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 3- 380-480 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level L _{WA}	Max. back pressure Pa	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature		V	rpm	W	A	dB(A)	Pa	°C			
VWA0800BTTLs	W3G800KS3903	With guard grille and wall ring		A	1	400	940	1,166	1.93	76	220	-40...+60	IP55	AB1
					2	400	940	1,457	2.35	74				
					3	400	940	1,667	2.65	76				
					4	400	940	1,950	3.10	86				
VWA0800BTTLs	W3G800KS39D1	With guard grille and wall ring		A	1	400	940	1,166	1.93	76	220	-40...+60	IP55	AB1
					2	400	940	1,457	2.35	74				
					3	400	940	1,667	2.65	76				
					4	400	940	1,950	3.10	86				
VWA0800BTPPZ	W3G800NU2106	AxiCool with wall ring		B	1	400	1,080	1,794	2.83	81	270	-40...+60	IP55	AB1
					2	400	1,080	2,089	3.26	80				
					3	400	1,080	2,349	3.64	83				
					4	400	1,080	2,450	3.80	93				
VWA0800BTTPS	W3G800LU2103	With guard grille and wall ring		C	1	400	1,090	1,835	2.89	80	290	-40...+60	IP55	AB1
					2	400	1,090	2,188	3.41	79				
					3	400	1,090	2,454	3.80	82				
					4	400	1,090	2,650	4.00	91				
VWA0800BTTPS	W3G800LU2136	With guard grille and wall ring		C	1	400	1,090	1,835	2.89	80	290	-40...+60	IP55	AB1
					2	400	1,090	2,188	3.41	79				
					3	400	1,090	2,454	3.80	82				
					4	400	1,090	2,650	4.00	91				
VWA0800BTTPS	W3G800LU21D1	With guard grille and wall ring		C	1	400	1,090	1,835	2.89	80	290	-40...+60	IP55	AB1
					2	400	1,090	2,188	3.41	79				
					3	400	1,090	2,454	3.80	82				
					4	400	1,090	2,650	4.00	91				
VWA0800BTTPS	W3G800KU2103	With guard grille and wall ring		D	1	400	1,080	1,776	2.80	80	300	-40...+60	IP55	AB1
					2	400	1,080	2,168	3.38	78				
					3	400	1,080	2,515	3.89	81				
					4	400	1,080	2,900	4.40	92				
VWA0800BTTPS	W3G800KU21D1	With guard grille and wall ring		D	1	400	1,080	1,776	2.80	80	300	-40...+60	IP55	AB1
					2	400	1,080	2,168	3.38	78				
					3	400	1,080	2,515	3.89	81				
					4	400	1,080	2,900	4.40	92				
VWR0800BTPPZ	W3G800OU2305	With guard grille and wall ring		E	1	400	1,250	2,775	4.23	89	300	-40...+40	IP55	AB1
					2	400	1,225	3,000	4.50	87				
					3	400	1,175	3,000	4.50	85				
					4	400	1,150	3,000	4.50	92				

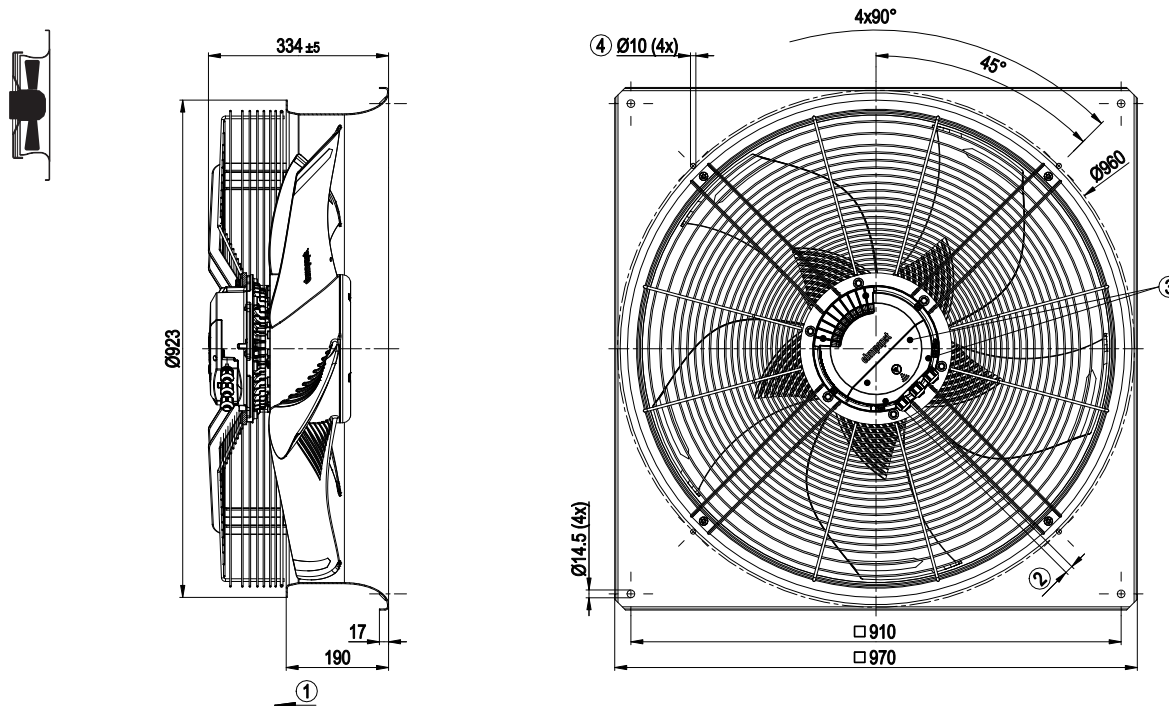
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 800

A VWA0800BTTL5 W3G800KS3903 EC axial fan - AxiBlade

Dimensions in mm

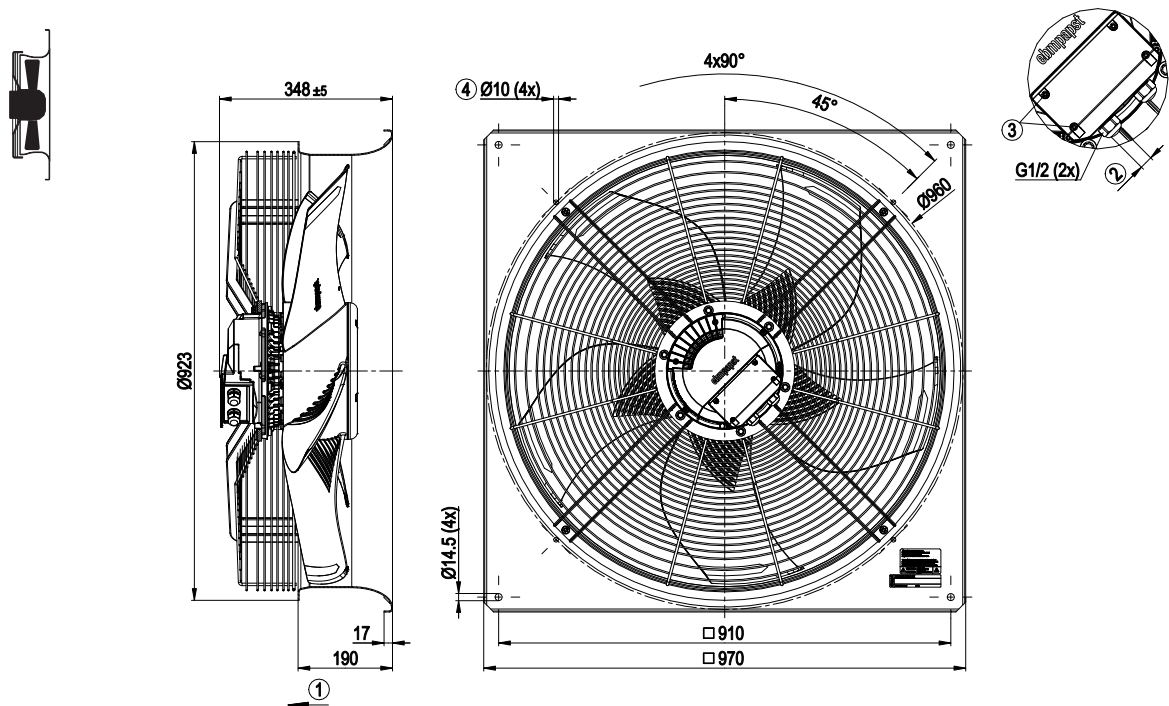


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

A VWA0800BTTL5 W3G800KS39D1 EC axial fan - AxiBlade

Dimensions in mm

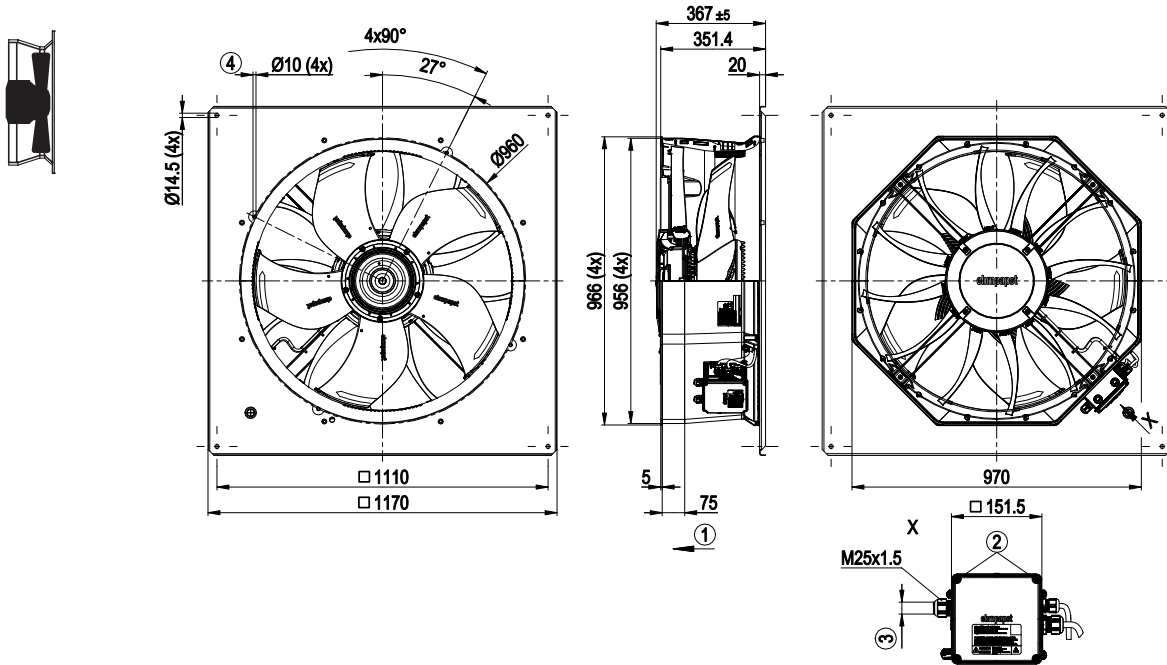


- ① Airflow direction „V“
- ② Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0800BTTPZ W3G800NU2106 EC axial fan - AxiBlade

Dimensions in mm

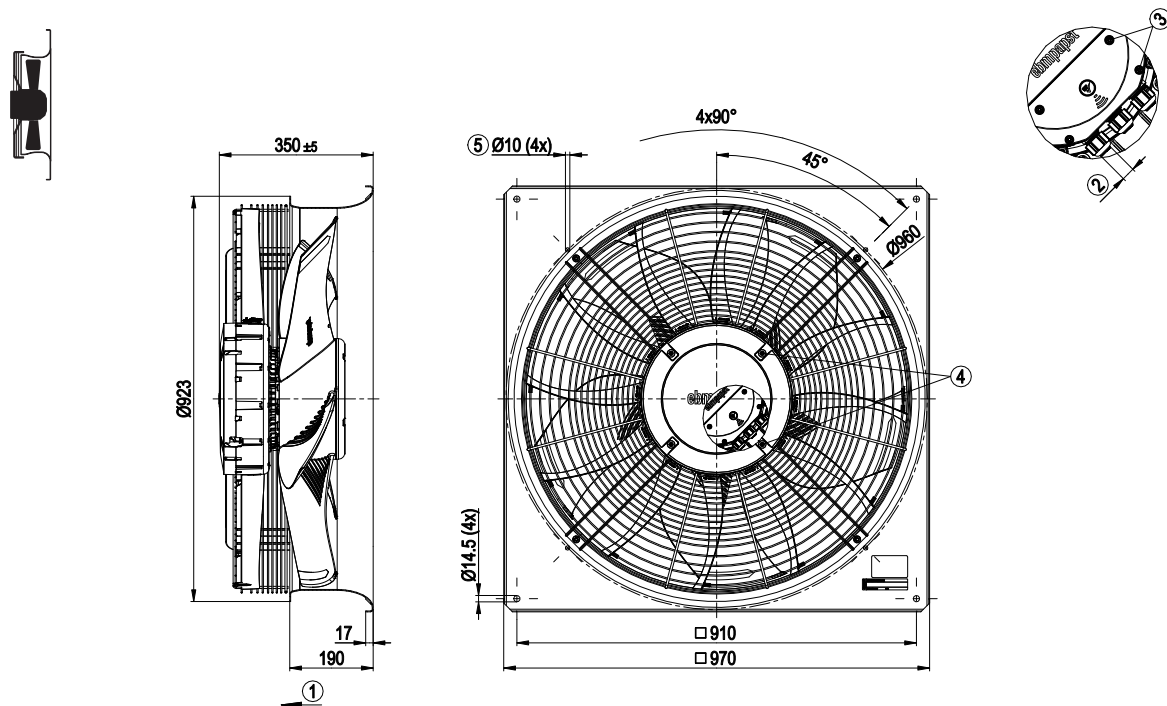


- ① Airflow direction „V“
- ② Tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 9 mm, max. 16 mm, tightening torque 2.5 ± 0.4 Nm
- ④ Attachment holes for FlowGrid

Pin assignment: See connection diagram
Mounting position: See product specific data sheets

C VWA0800BTTPS W3G800LU2103 EC axial fan - AxiBlade

Dimensions in mm



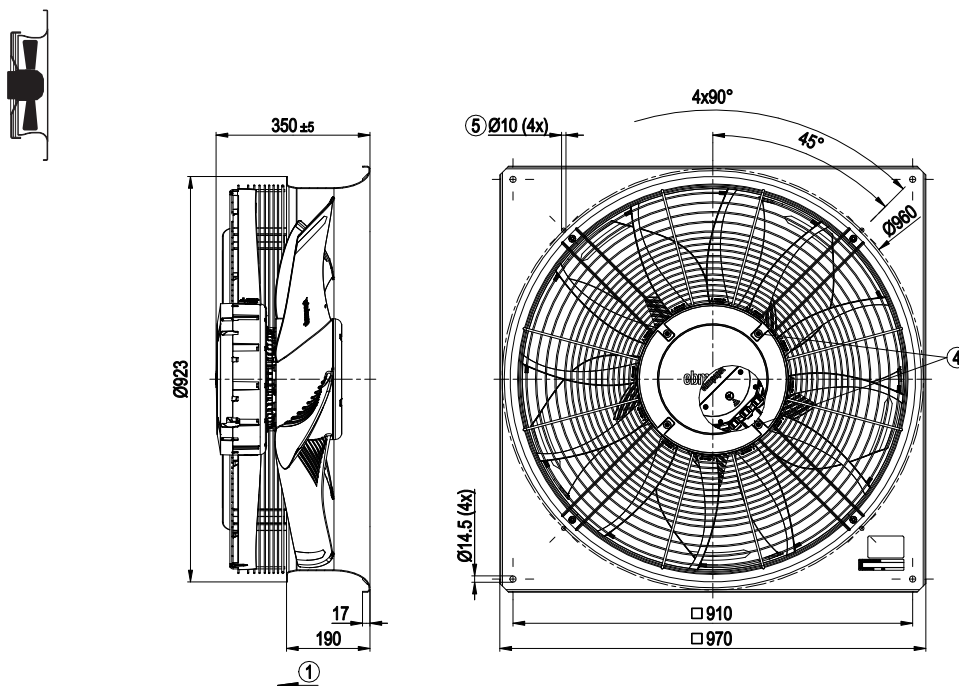
- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 800

C VWA0800BTTPS W3G800LU2136 EC axial fan - AxiBlade

Dimensions in mm

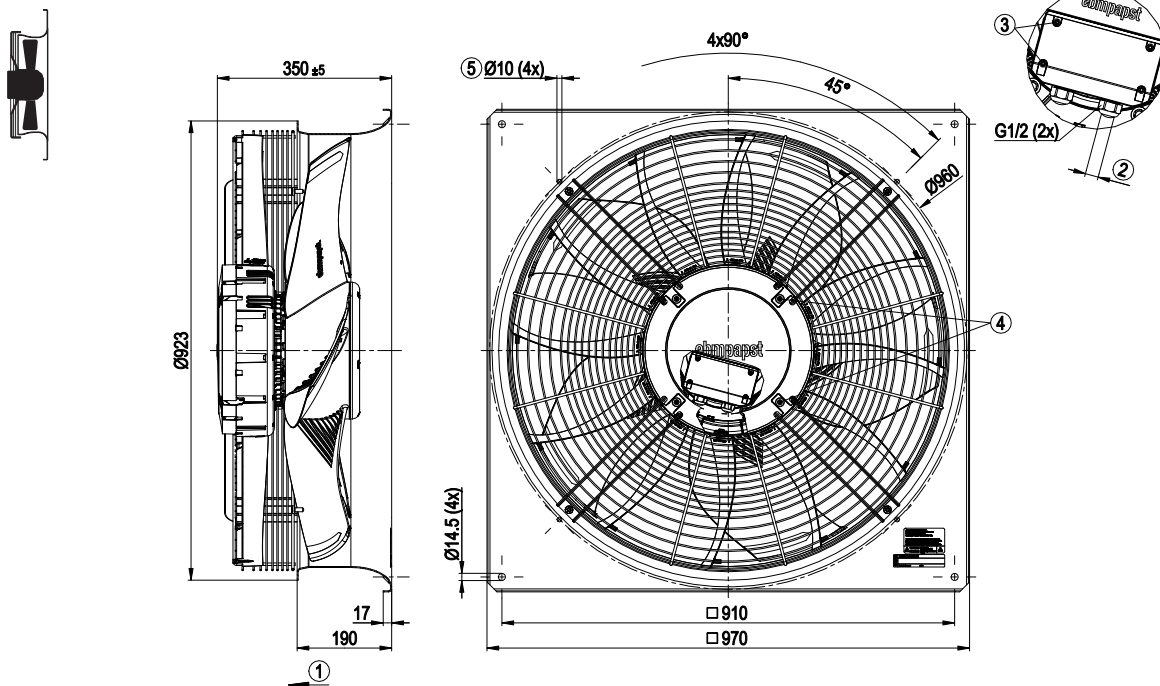


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

C VWA0800BTTPS W3G800LU21D1 EC axial fan - AxiBlade

Dimensions in mm

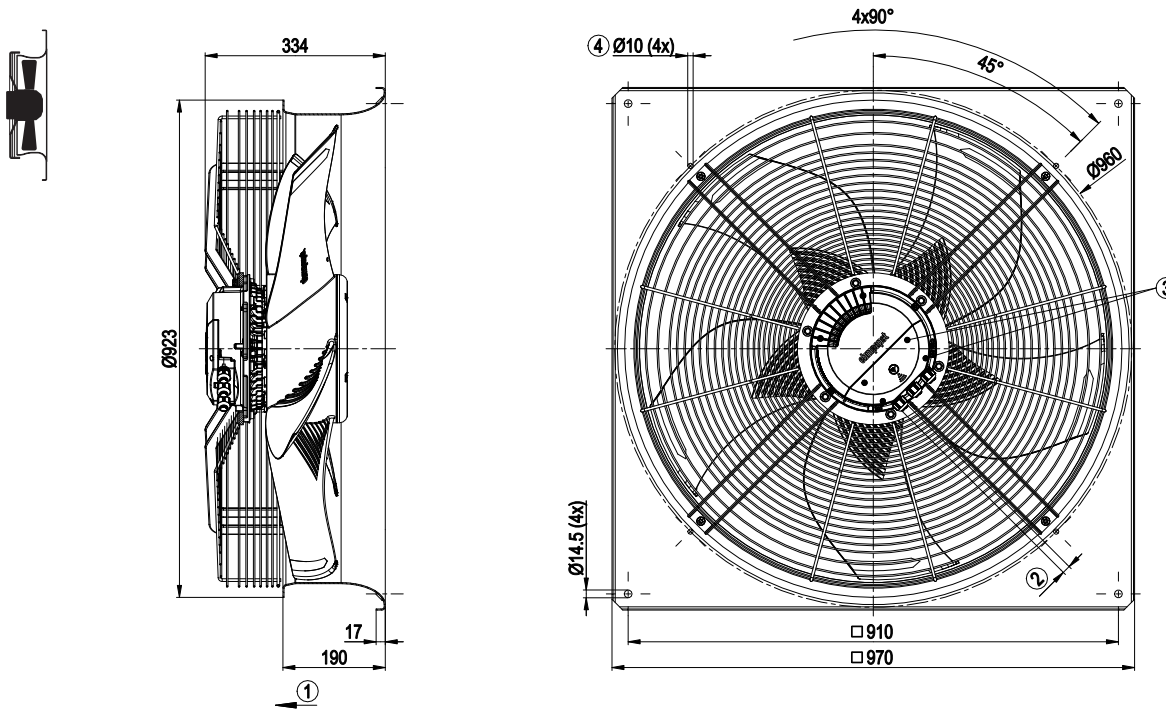


- ① Airflow direction „V“
- ② Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

D VWA0800BTTPS W3G800KU2103 EC axial fan - AxiBlade

Dimensions in mm

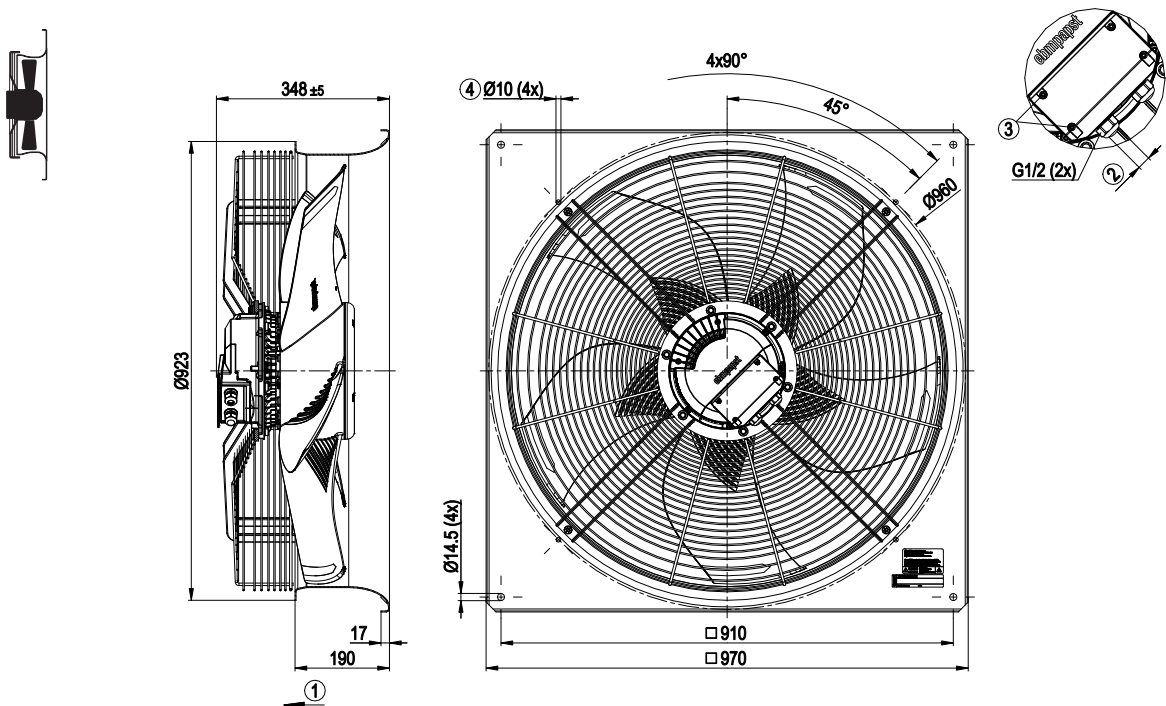


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

D VWA0800BTTPS W3G800KU21D1 EC axial fan - AxiBlade

Dimensions in mm



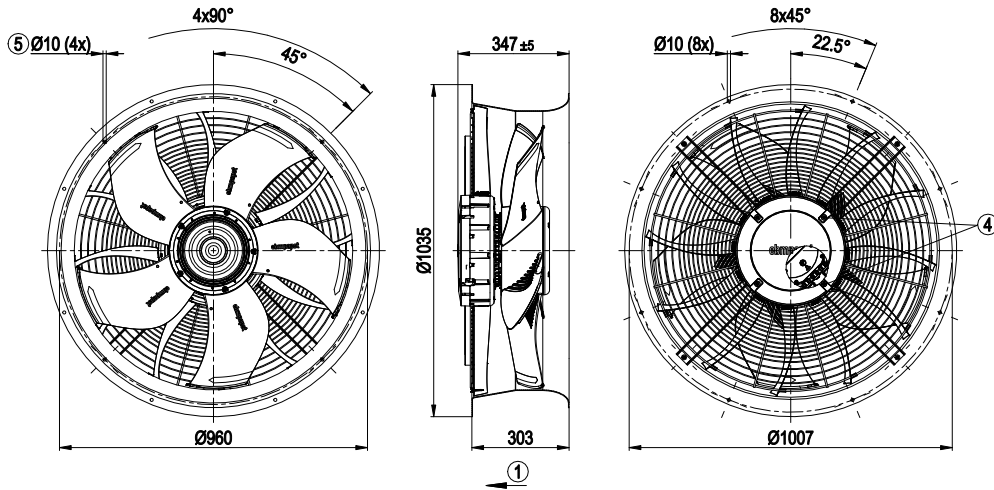
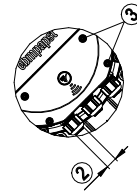
- ① Airflow direction „V“
- ② Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 800

E VWR0800BTPZ W3G800OU2305 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or
 rotor on bottom; rotor on top on request

AxiBlade 800

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: Sheet steel, galvanized and coated with black plastic (RAL 9005), PP plastic
- Support plate: Sheet steel, galvanized and painted black
- Impeller: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted gray

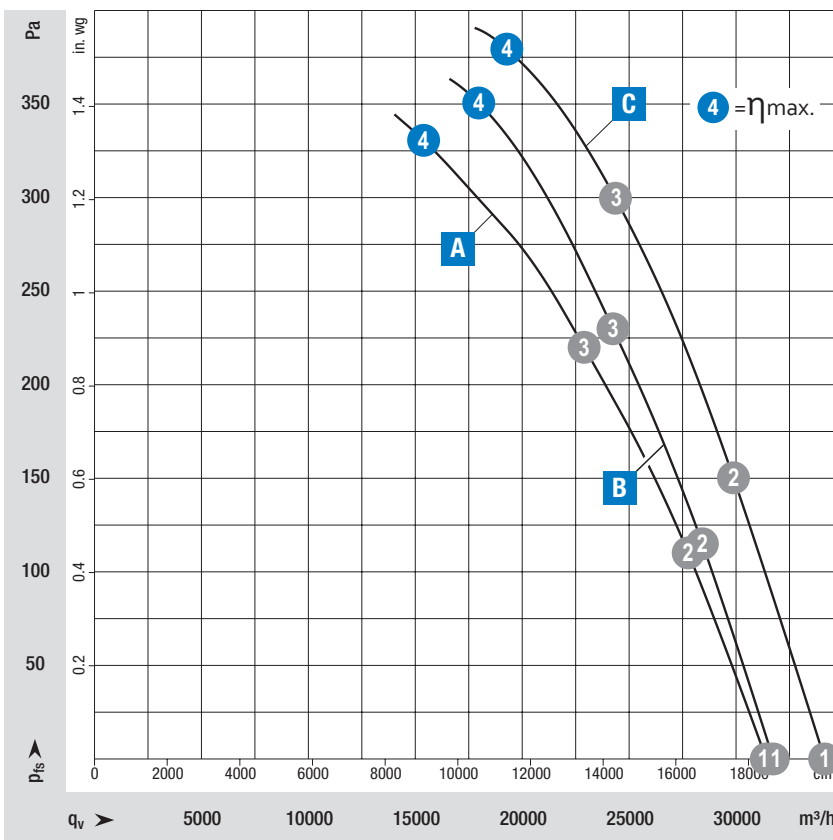
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request, See fitting instructions
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing

Additional Information







- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 44	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions

Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
Suction-side noise level: L_{WA} according to ISO 13347, L_{pA} measured at a distance of 1 m on the fan axis.
The specifications apply only under the specified measuring conditions and may change due to installation conditions.
In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 3- 380-480 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level LWA	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature		V	rpm	W	A	dB(A)	Pa	°C			
VWA0800BTTRS	W3G800KV0503	With guard grille and wall ring		A	1	400	1,150	2,075	3.25	81	330	-40...+60	IP55	AB1
					2	400	1,150	2,537	3.93	78				
					3	400	1,150	2,947	4.53	81				
					4	400	1,150	3,400	5.20	94				
VWA0800BTTRS	W3G800LV0503	With guard grille and wall ring												
VWA0800BTTRS	W3G800LV0536	With guard grille and wall ring		B	1	400	1,190	2,377	3.68	82	350	-40...+60	IP55	AB1
					2	400	1,190	2,825	4.34	81				
					3	400	1,190	3,160	4.85	83				
					4	400	1,190	3,500	5.30	93				
VWA0800BTTRS	W3G800LV05D1	With guard grille and wall ring												
VWR0800BTTRZ	W3G800OV0506	With guard grille and wall ring												
VWA0800BTTRS	W3G800NV0510	AxiCool with wall ring		C	1	400	1,270	2,802	4.31	90	380	-40...+45	IP55	AB1
					2	400	1,270	3,388	5.18	89				
					3	400	1,270	3,846	5.86	91				
					4	400	1,270	4,000	6.00	98				

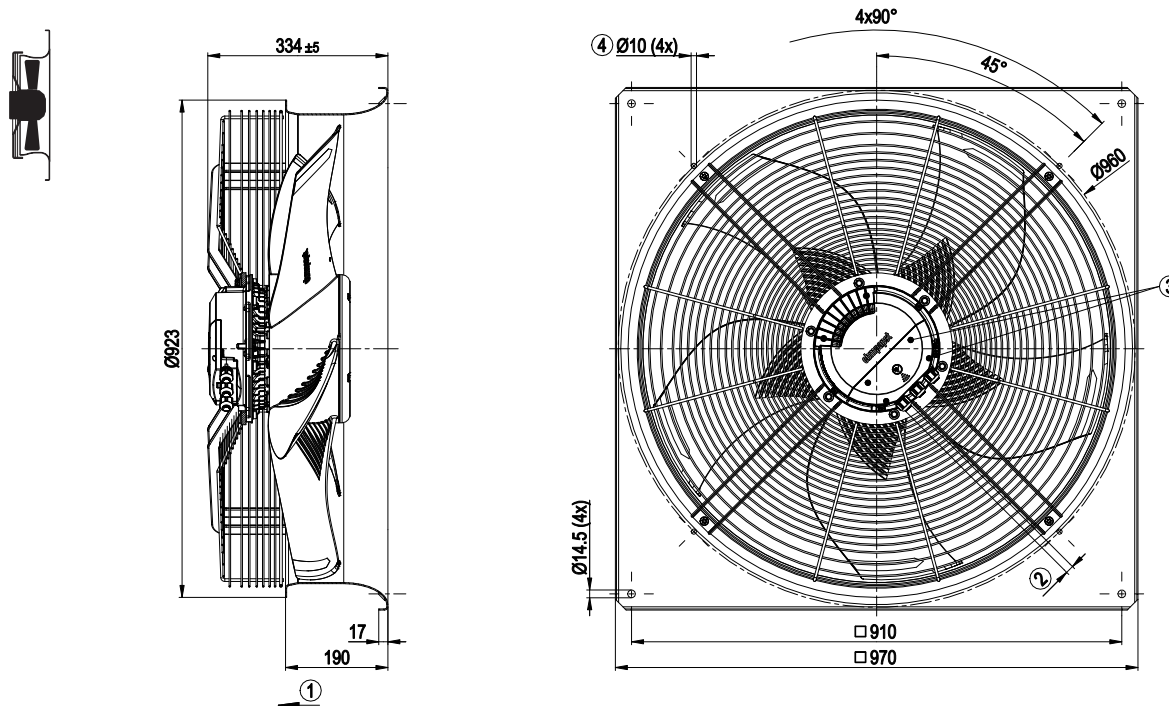
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 800

A VWA0800BTTRS W3G800KV0503 EC axial fan - AxiBlade

Dimensions in mm

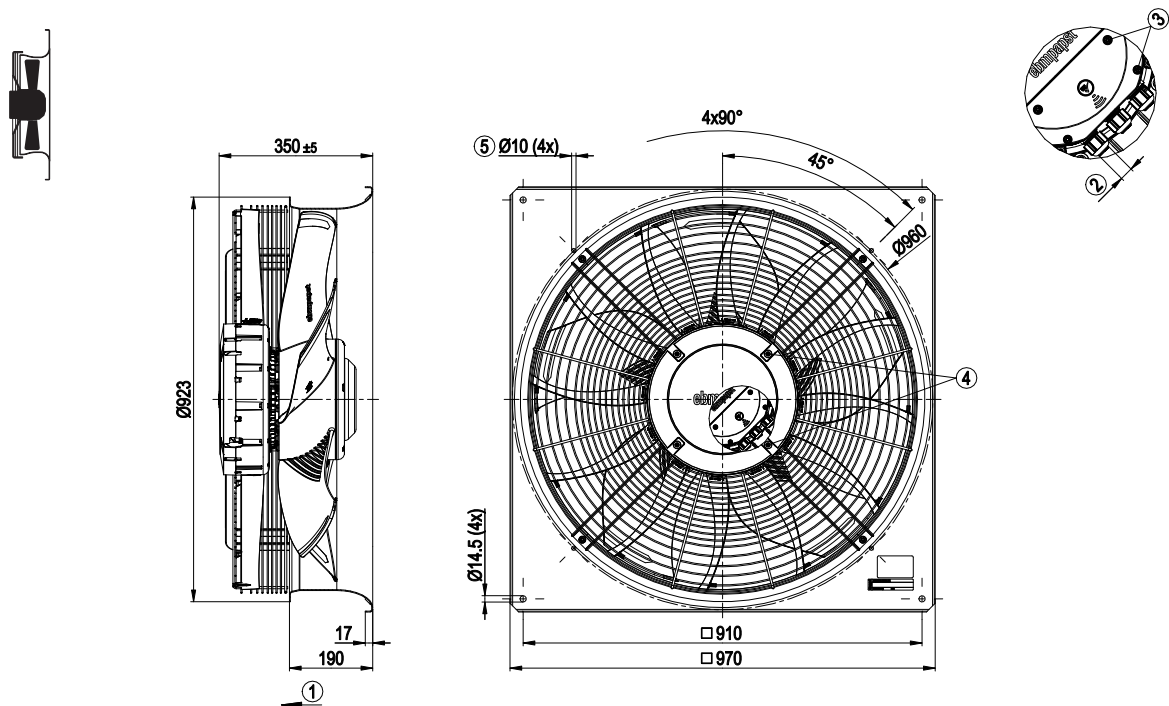


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0800BTTRS W3G800LV0503 EC axial fan - AxiBlade

Dimensions in mm

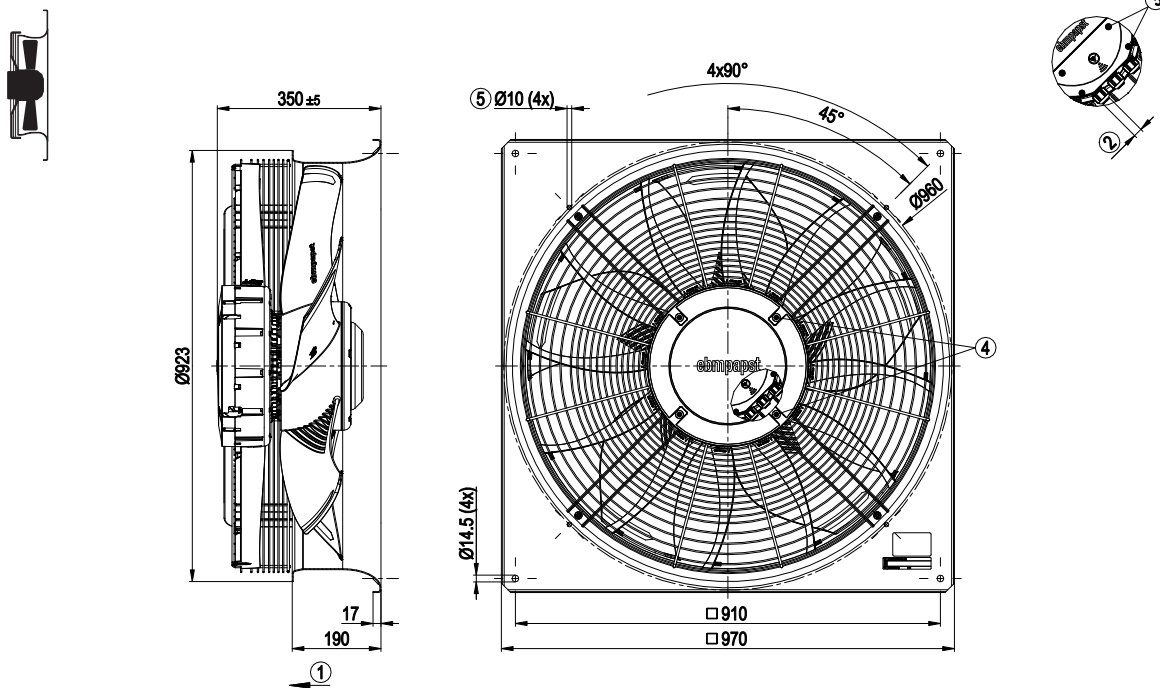


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0800BTTRS W3G800LV0536 EC axial fan - AxiBlade

Dimensions in mm

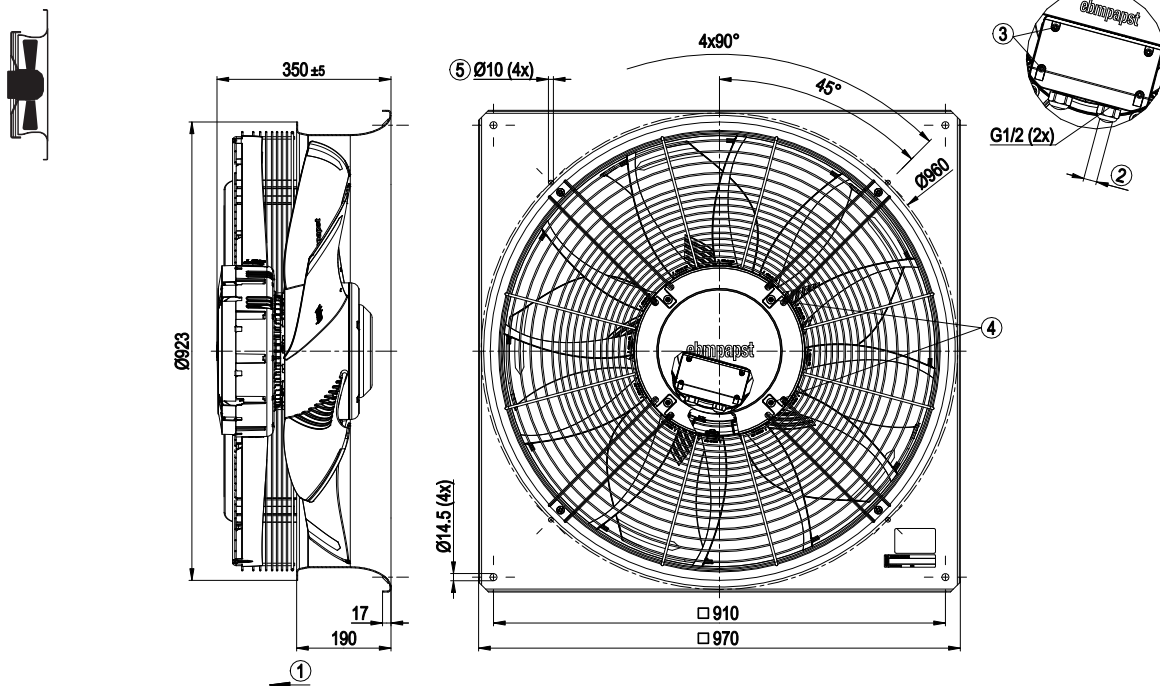


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0800BTTRS W3G800LV05D1 EC axial fan - AxiBlade

Dimensions in mm



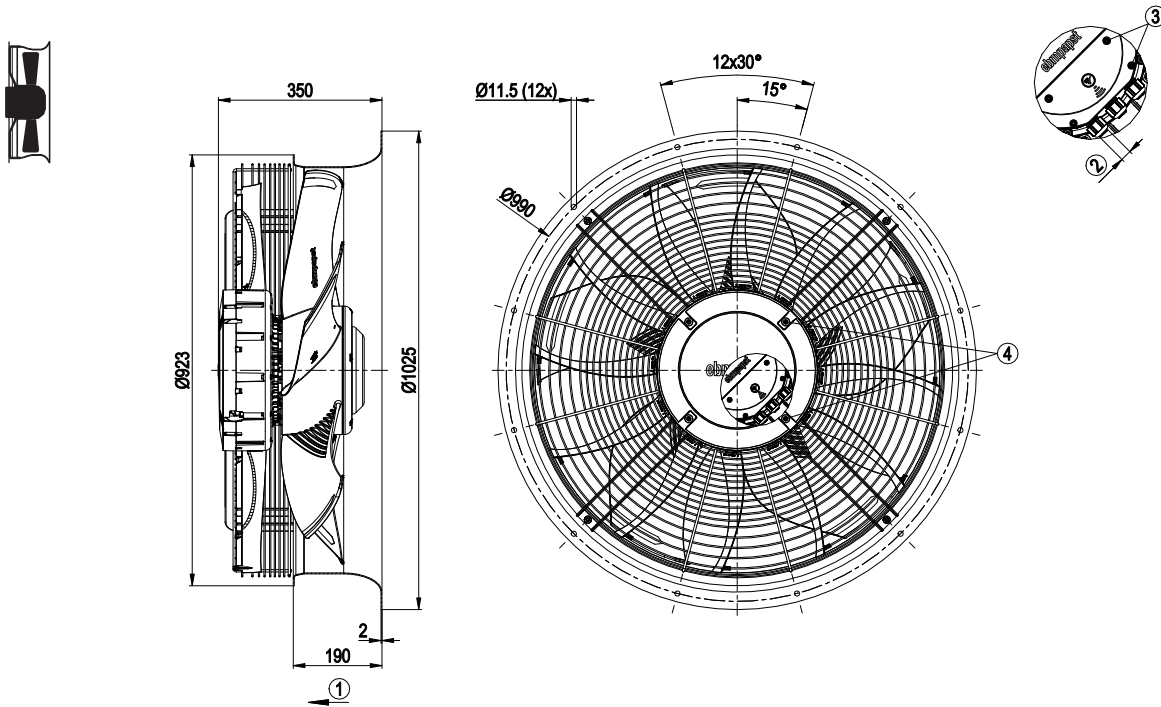
- ① Airflow direction „V“
- ② Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 800

B VWR0800BTTRZ W3G800OV0506 EC axial fan - AxiBlade

Dimensions in mm

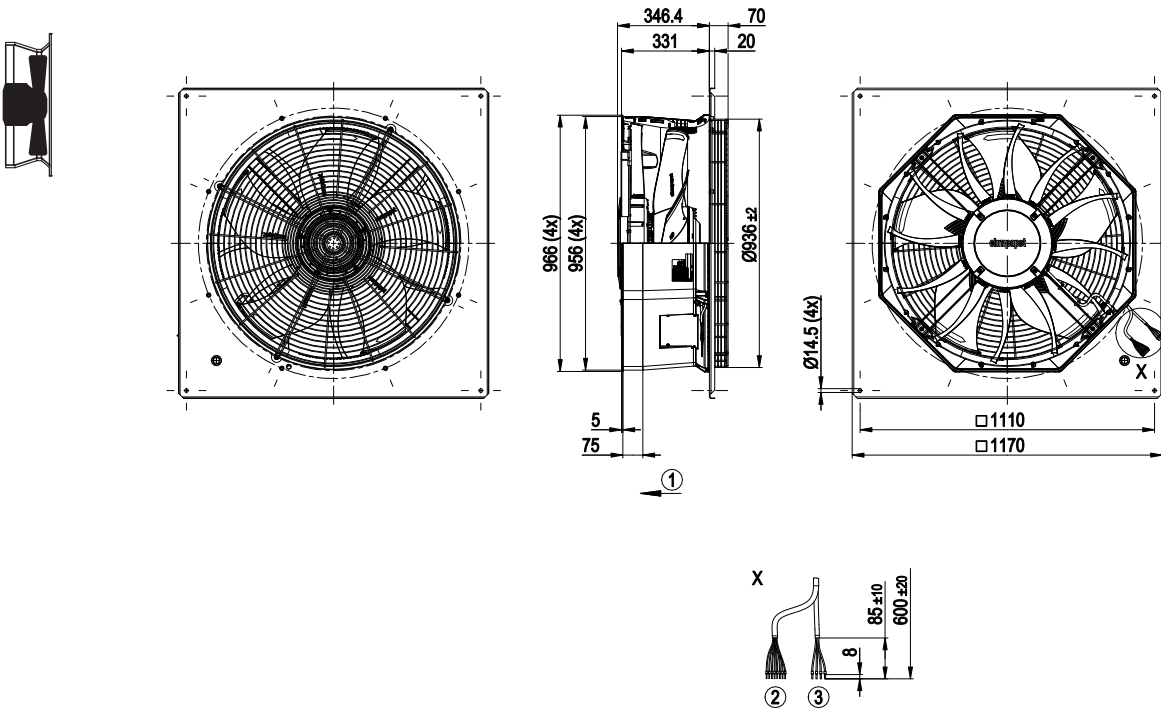


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

C VWA0800BTTRS W3G800NV0510 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable silicone 8X 0.5 mm², 8x crimped ferrules
- ③ Cable silicone 4G 1.5 mm², 4x crimped ferrules

Pin assignment: See connection diagram
 Mounting position: See product specific data sheets

AxiBlade 910

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: Sheet steel, galvanized and coated with black plastic (RAL 9005)
- Impeller: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted black

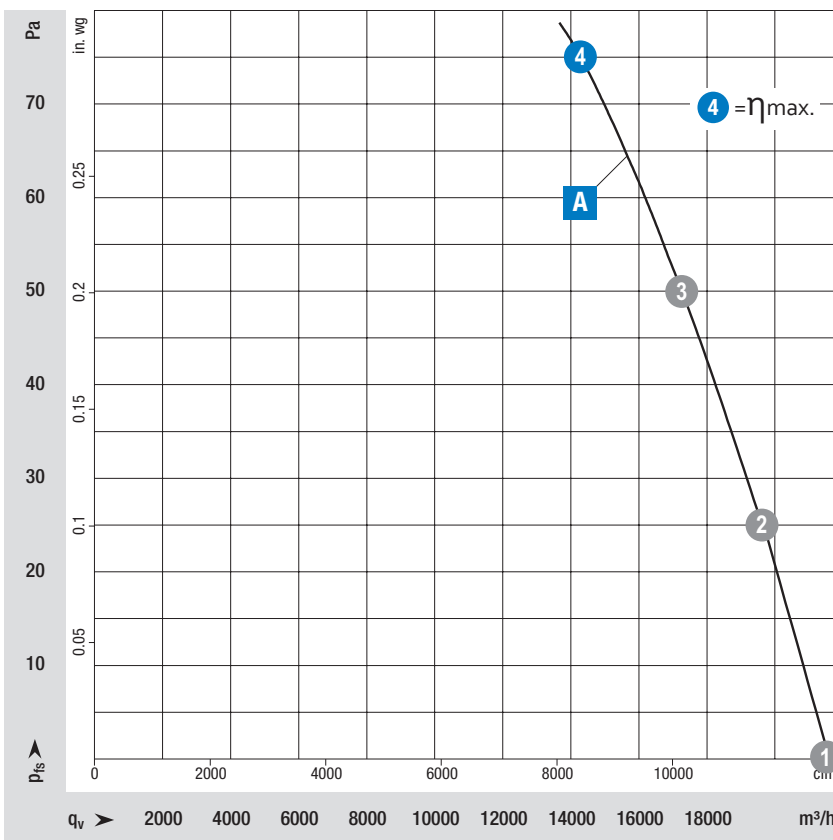
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing

Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 50	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/




Measuring conditions

Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.

Suction-side noise level: L_{WA} according to ISO 13347, L_{pA} measured at a distance of 1 m on the fan axis.

The specifications apply only under the specified measuring conditions and may change due to installation conditions.

In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 3- 380-480 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level LWA	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature			V	rpm	W	A	dB(A)	Pa	°C		
VWA0910BTRNS	W3G910KH0251	With guard grille and wall ring		A	1	400	610	407	0.67	68				
					2	400	610	485	0.78	65	75	-25...+60	IP55	AB3
					3	400	610	557	0.89	65				
					4	400	610	630	1.00	69				

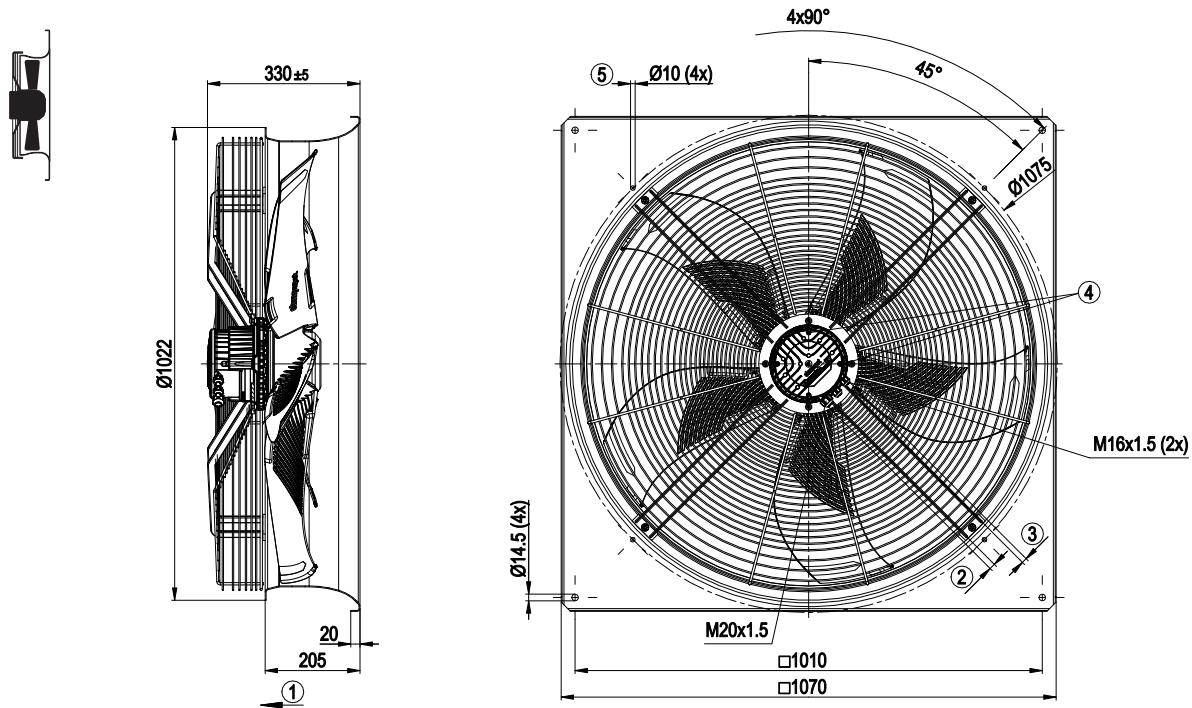
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 910

A VWA0910BTRNS W3G910KH0251 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
- ③ Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided);
Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
- ④ Tightening torque 1.5 ± 0.2 Nm
- ⑤ Mounting holes for FlowGrid

Pin assignment: See connection diagram
Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 910

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: Sheet steel, galvanized and coated with black plastic (RAL 9005)
- Impeller: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted gray

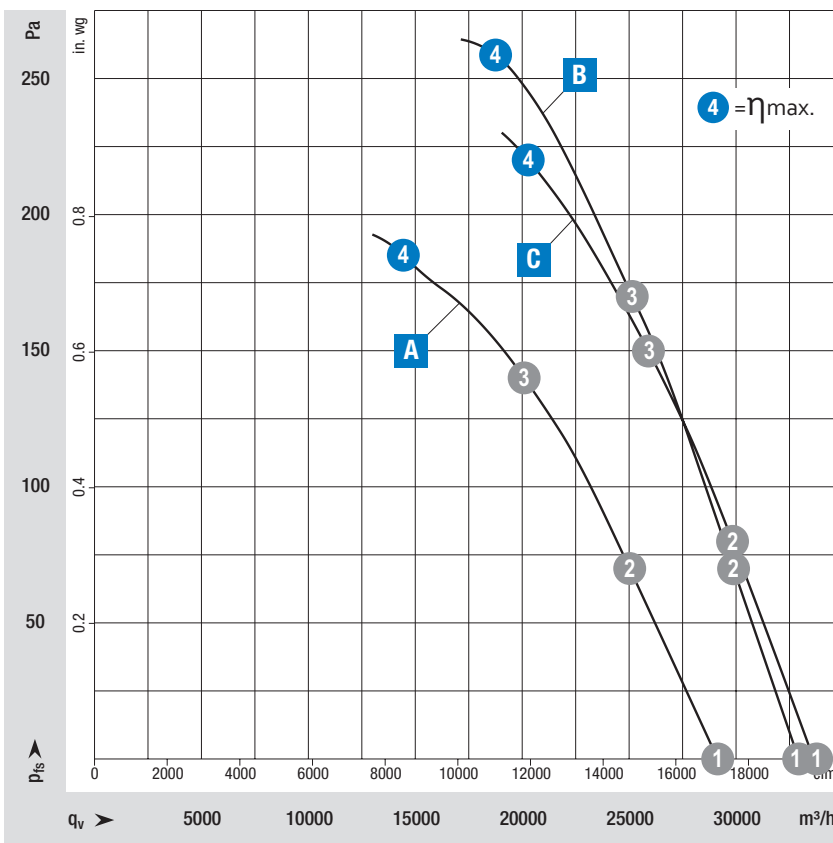
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing








Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 54	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions
 Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
 Suction-side noise level: LwA according to ISO 13347, LpA measured at a distance of 1 m on the fan axis.
 The specifications apply only under the specified measuring conditions and may change due to installation conditions.
 In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 3- 380-480 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level L _{WA}	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature		V	rpm	W	A	dB(A)	Pa	°C			
VWA0910BTTLs	W3G910KS3503	With guard grille and wall ring		A	1	400	850	1,019	1.72	75	185	-40...+60	IP55	AB1
					2	400	850	1,307	2.13	72				
					3	400	850	1,600	2.55	75				
					4	400	850	1,770	2.80	86				
VWA0910BTTLs	W3G910KS35D1	With guard grille and wall ring		A	1	400	850	1,019	1.72	75	185	-40...+60	IP55	AB1
					2	400	850	1,307	2.13	72				
					3	400	850	1,600	2.55	75				
					4	400	850	1,770	2.80	86				
VWA0910BTTPS	W3G910LU2503	With guard grille and wall ring		B	1	400	980	1,637	2.60	79	260	-40...+60	IP55	AB1
					2	400	980	1,919	3.02	79				
					3	400	980	2,282	3.55	80				
					4	400	980	2,500	3.90	90				
VWA0910BTTPS	W3G910LU25D1	With guard grille and wall ring		B	1	400	980	1,637	2.60	79	260	-40...+60	IP55	AB1
					2	400	980	1,919	3.02	79				
					3	400	980	2,282	3.55	80				
					4	400	980	2,500	3.90	90				
VWA0910BTTPS	W3G910KU2503	With guard grille and wall ring		C	1	400	980	1,563	2.50	79	220	-40...+60	IP55	AB1
					2	400	980	1,938	3.04	76				
					3	400	980	2,245	3.49	77				
					4	400	980	2,550	3.90	82				
VWA0910BTTPS	W3G910KU25D1	With guard grille and wall ring		C	1	400	980	1,563	2.50	79	220	-40...+60	IP55	AB1
					2	400	980	1,938	3.04	76				
					3	400	980	2,245	3.49	77				
					4	400	980	2,550	3.90	82				
VWR0910BTPPZ	W3G910OU2507	With guard grille and wall ring												

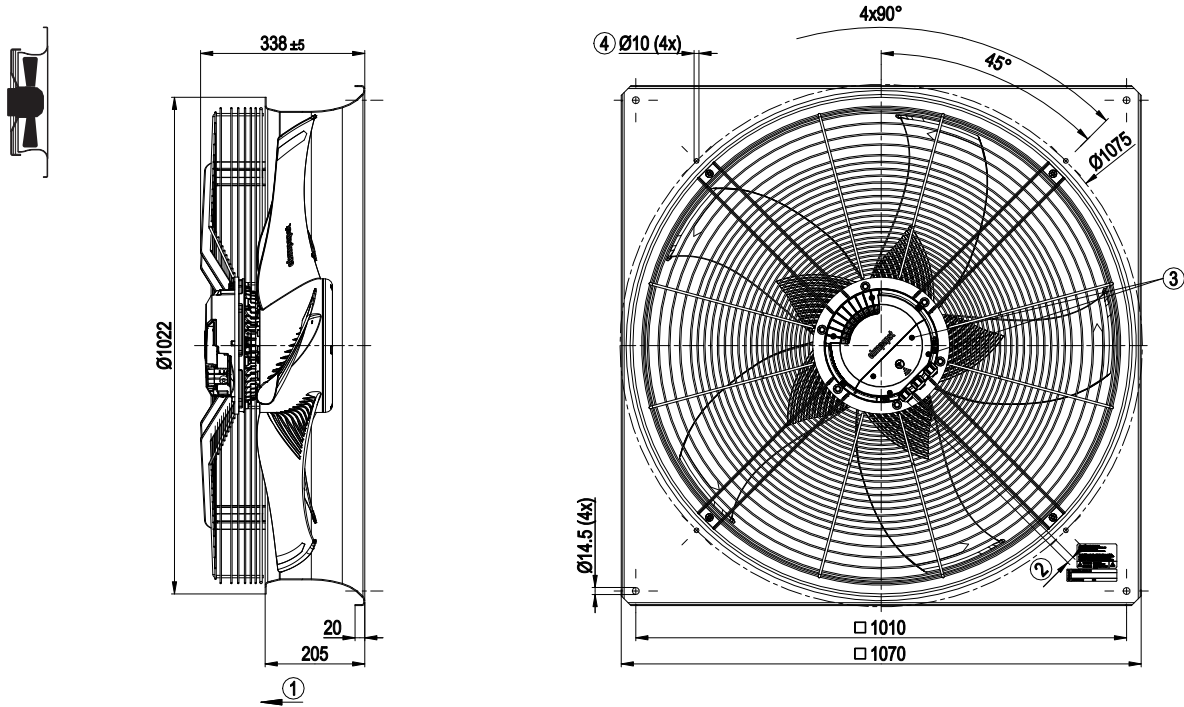
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 910

A VWA0910BTTL5 W3G910KS3503 EC axial fan - AxiBlade

Dimensions in mm

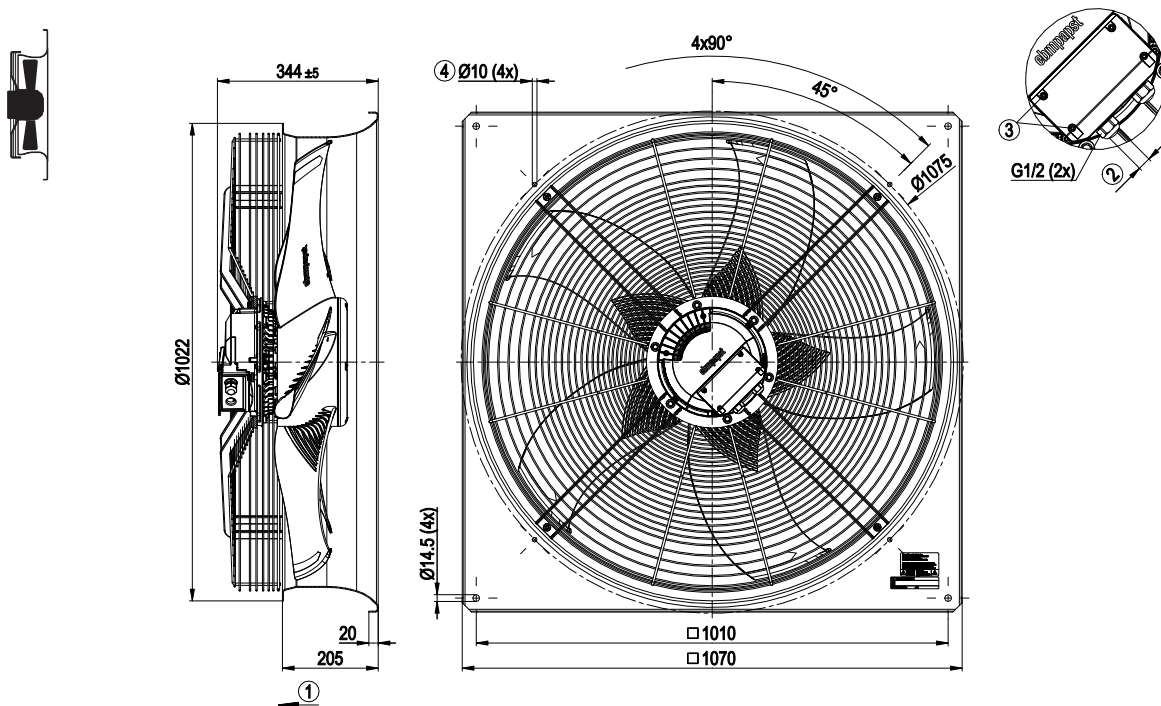


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Attachment holes for FlowGrid (91000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

A VWA0910BTTL5 W3G910KS35D1 EC axial fan - AxiBlade

Dimensions in mm

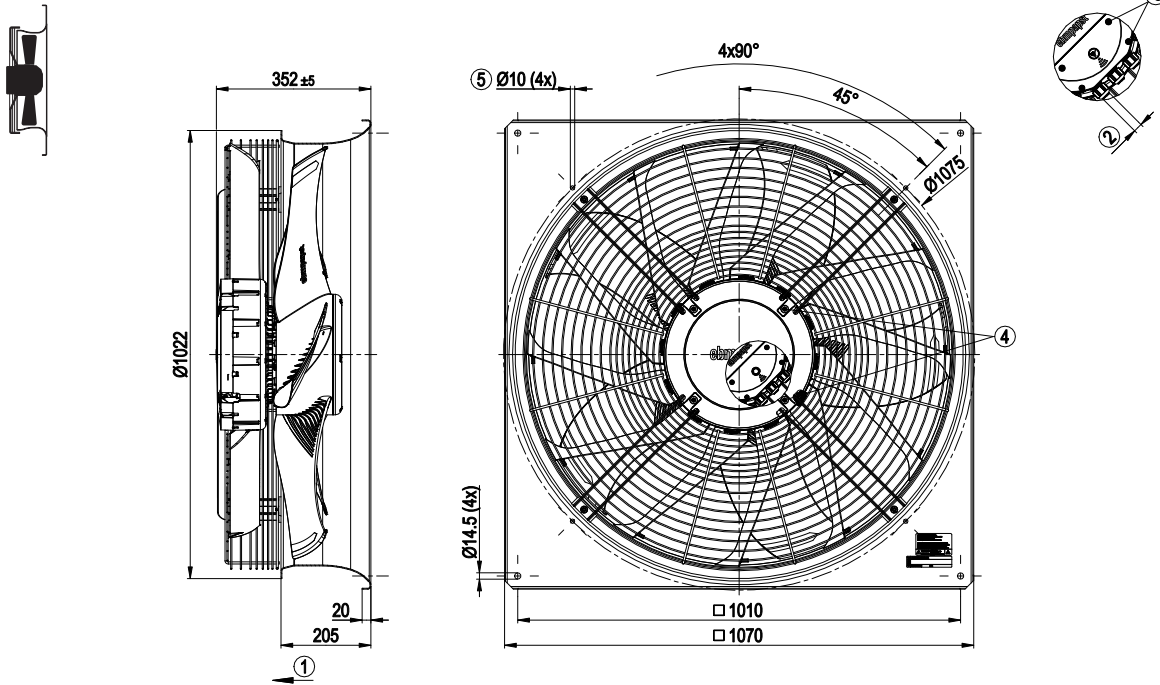


- ① Airflow direction „V“
- ② Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0910BTTPS W3G910LU2503 EC axial fan - AxiBlade

Dimensions in mm

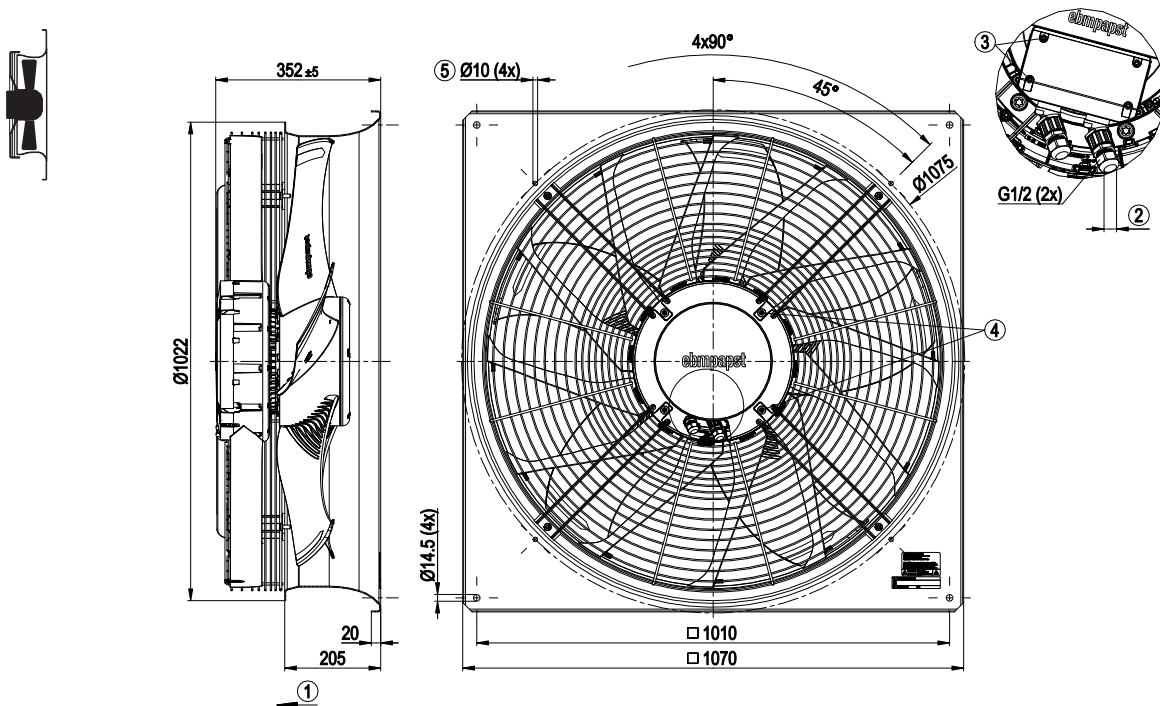


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (91000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0910BTTPS W3G910LU25D1 EC axial fan - AxiBlade

Dimensions in mm



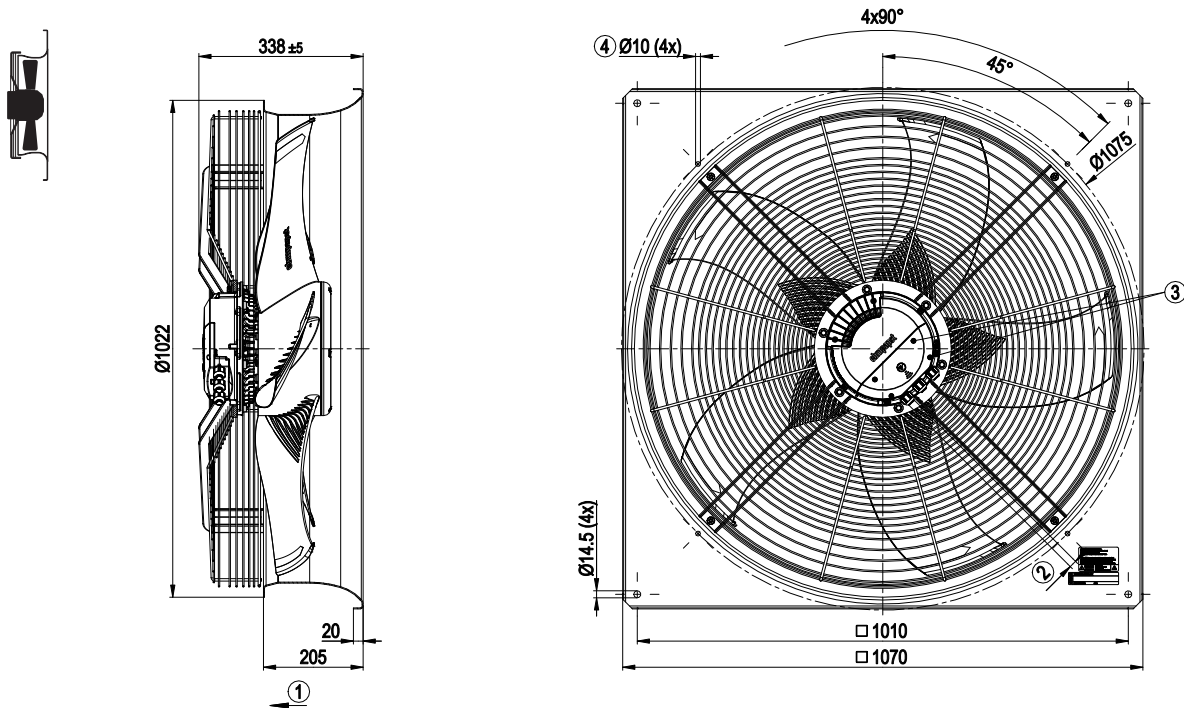
- ① Airflow direction „V“
- ② Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 910

C VWA0910BTTPS W3G910KU2503 EC axial fan - AxiBlade

Dimensions in mm

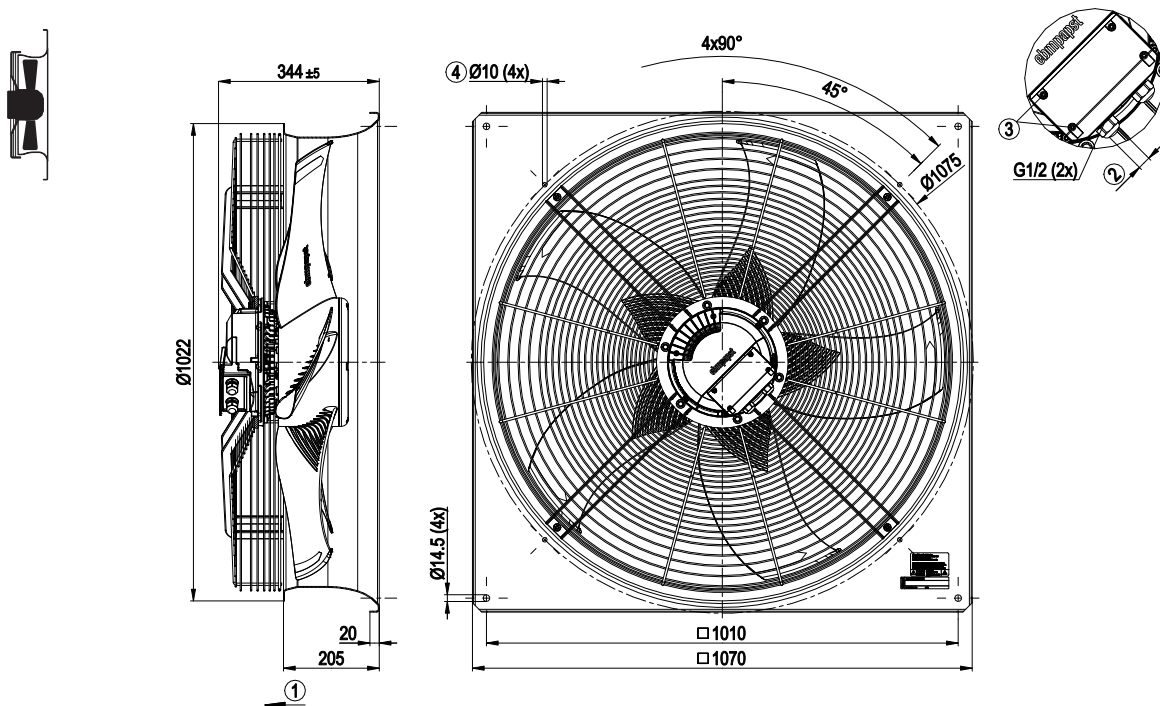


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Attachment holes for FlowGrid (91000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

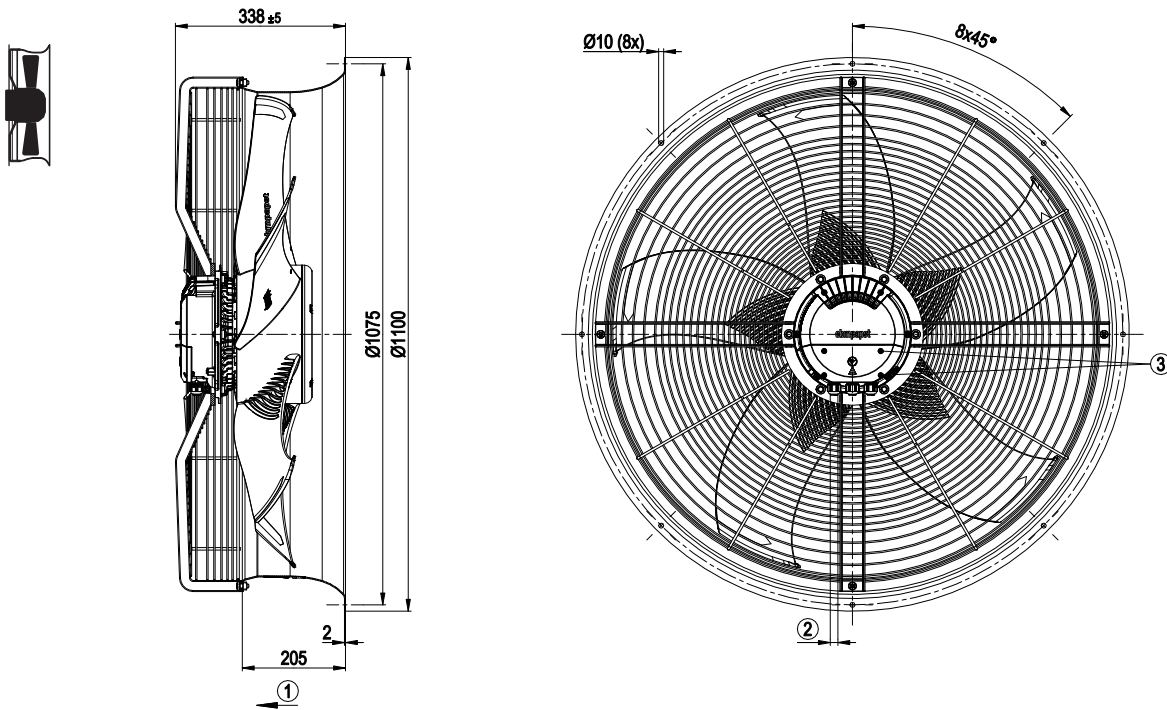
C VWA0910BTTPS W3G910KU25D1 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm
- ④ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request



- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or
 rotor on bottom; rotor on top on request

AxiBlade 910

EC axial fans



Material/Surface

- Guard grille: Steel, coated with black plastic (RAL 9005)
- Wallring: Sheet steel, galvanized and coated with black plastic (RAL 9005)
- Impeller: PP plastic
- Rotor: Painted black
- Electronics housing: Die-cast aluminum, painted gray

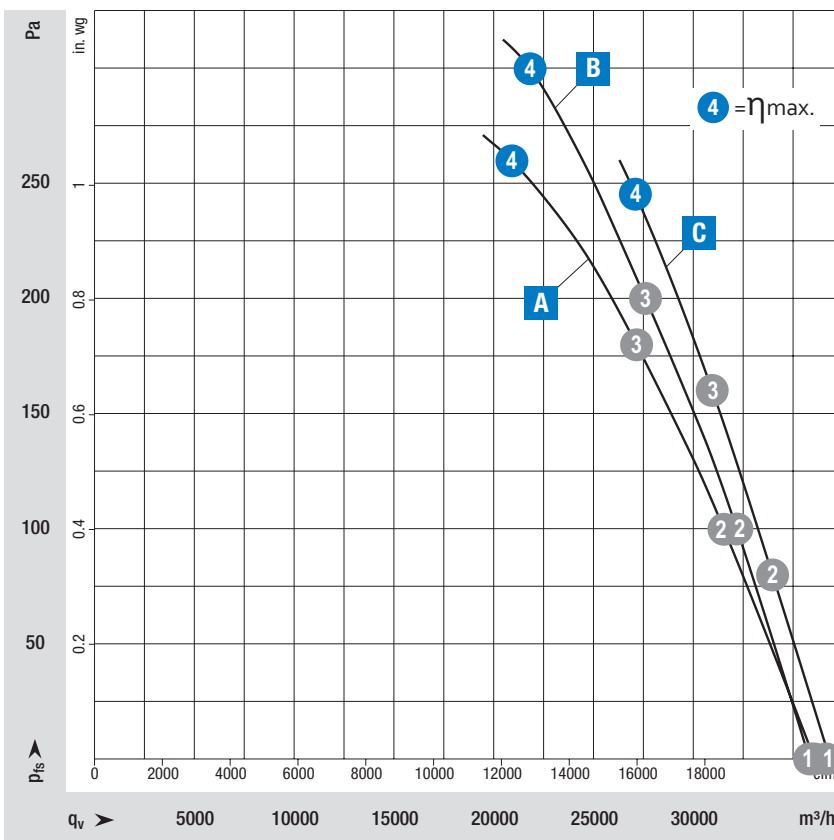
Mechanical characteristics

- Number of blades: 5
- Direction of rotation: Clockwise, viewed toward rotor
- Installation position: Shaft horizontal or rotor on bottom; rotor on top on request
- Condensation drainage holes: On rotor side
- Mode: S1
- Motor bearing: Ball bearing






Additional Information

- Information about touch current, electrical connection, degree of protection, insulation class, environmental protection class, EMC standards as well as standards and approvals can be found in the product-specific data sheets.

from page 60	Drawings
from page 66	Connection diagrams and technical equipment
from page 70	Environment and general conditions
More at	www.ebmpapst.com/worldwide www.ebmpapst.com/



Measuring conditions
 Air performance measured after: ISO 5801, installation category A, in ebm-papst full nozzle without contact protection.
 Suction-side noise level: LWA according to ISO 13347, LpA measured at a distance of 1 m on the fan axis.
 The specifications apply only under the specified measuring conditions and may change due to installation conditions.
 In case of deviations from the standard design, the characteristic values must be checked in the installed condition!

Nominal voltage range 3- 380-480 VAC, 50/60 Hz				Characteristic Curve	Operating point	Nominal voltage	Speed n	Max. Input power P _{ed}	Max. Input current I	Sound power level L _{WA}	Max. back pressure	Perm. ambient temp.	Protection class	Connection diagram
Type	Part number	Fan type	Main feature		V	rpm	W	A	dB(A)	Pa	°C			
VWA0910BTTRS	W3G910KV1203	With guard grille and wall ring		A	1	400	1,050	1,897	2.98	81	260	-40...+60	IP55	AB1
					2	400	1,050	2,436	3.77	78				
					3	400	1,050	2,791	4.30	79				
					4	400	1,050	3,200	4.90	84				
VWA0910BTTRS	W3G910LV1203	With guard grille and wall ring												
VWA0910BTTRS	W3G910LV1236	With guard grille and wall ring		B	1	400	1,070	2,143	3.34	82	300	-40...+60	IP55	AB1
					2	400	1,070	2,624	4.05	81				
					3	400	1,070	2,945	4.52	82				
					4	400	1,070	3,250	5.00	91				
VWA0910BTTRS	W3G910LV12D1	With guard grille and wall ring												
VWR0910BTTRZ	W3G910OV1205	With guard grille and wall ring		C	1	400	1,100	2,289	3.55	85	245	-40...+50	IP55	AB1
					2	400	1,100	2,633	4.06	84				
					3	400	1,100	2,961	4.55	84				
					4	400	1,100	3,250	5.00	85				

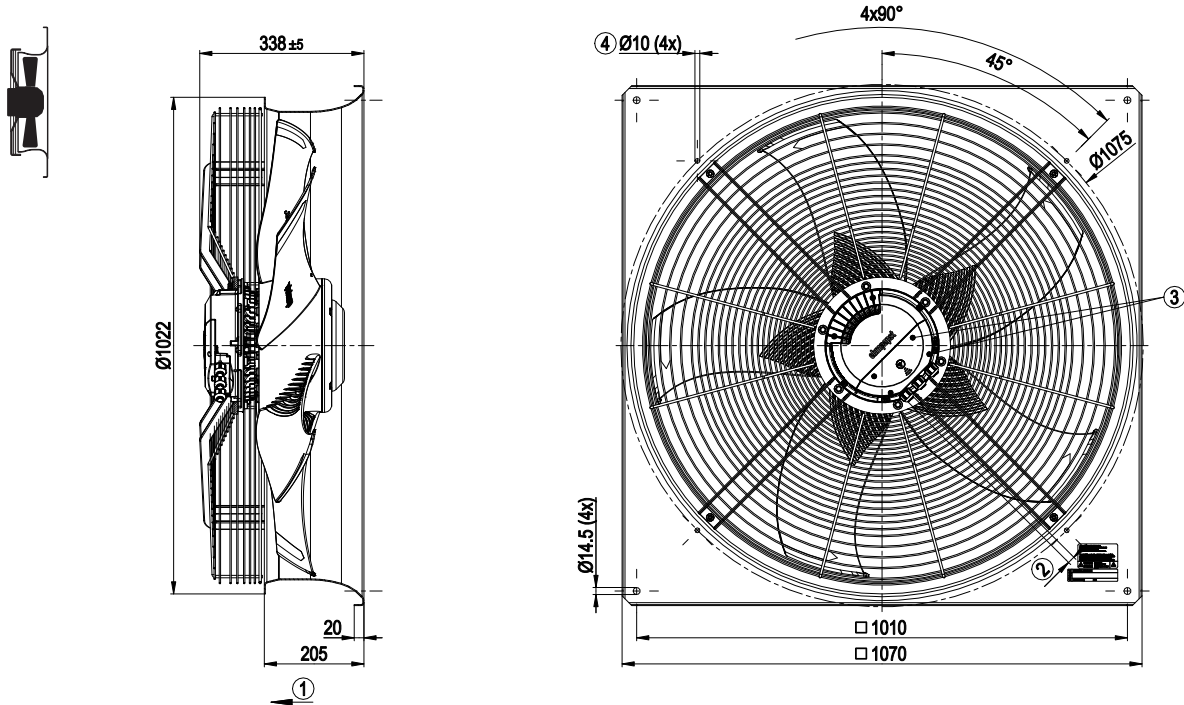
Subject to changes.

Values set in blue are nominal data at the operating point at maximum load.

AxiBlade 910

A VWA0910BTTRS W3G910KV1203 EC axial fan - AxiBlade

Dimensions in mm

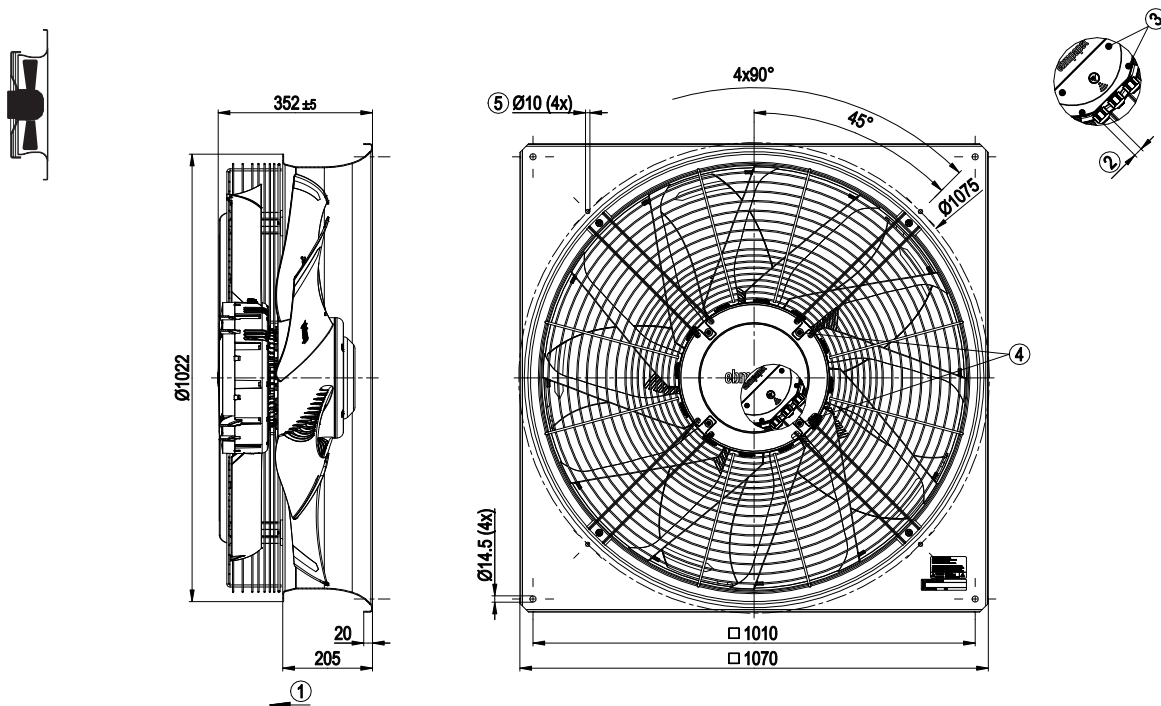


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Attachment holes for FlowGrid (91000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0910BTTRS W3G910LV1203 EC axial fan - AxiBlade

Dimensions in mm

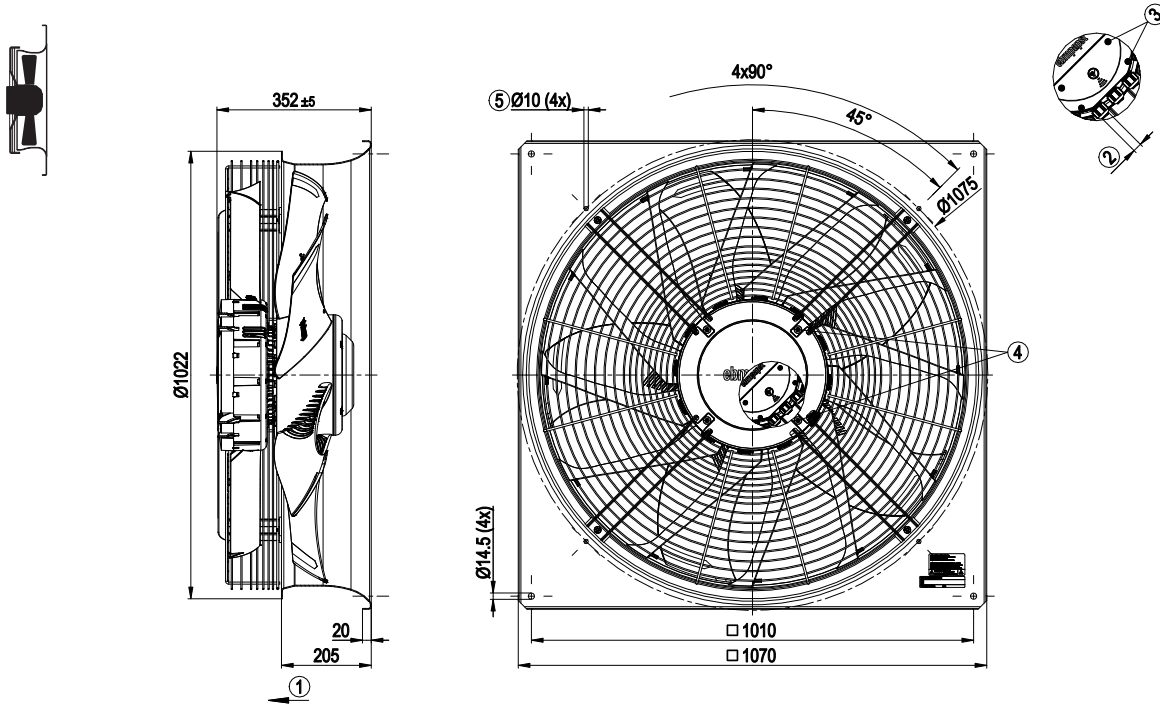


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (91000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0910BTTRS W3G910LV1236 EC axial fan - AxiBlade

Dimensions in mm

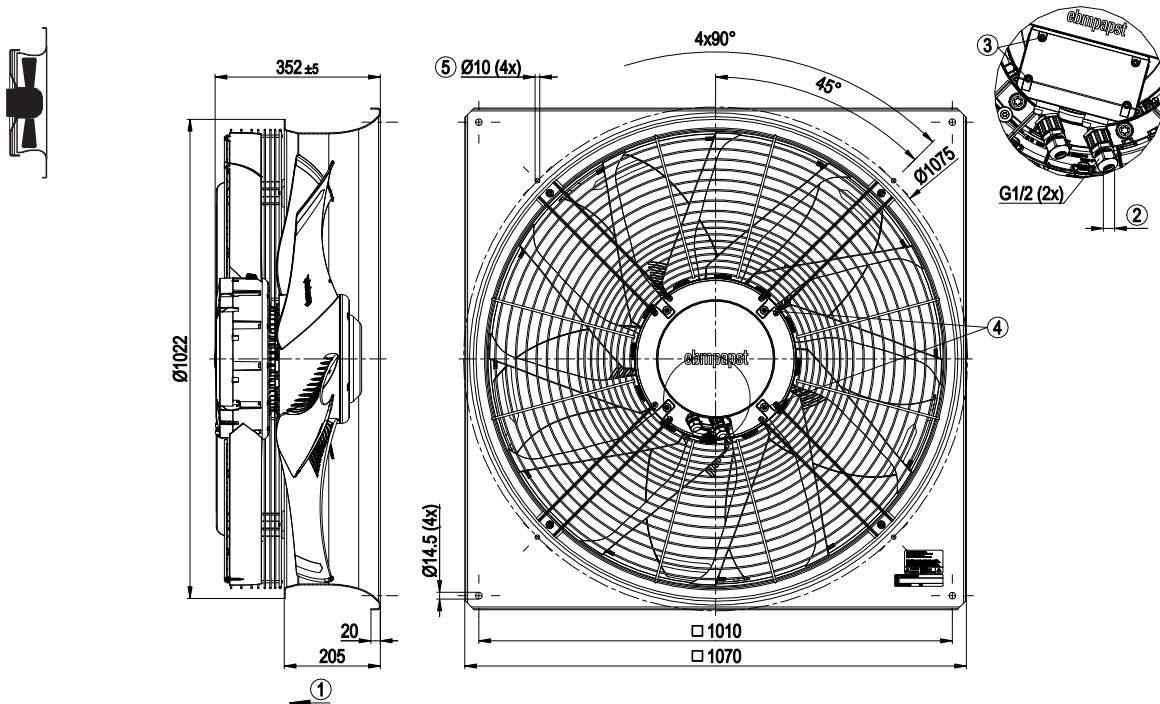


- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (91000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

B VWA0910BTTRS W3G910LV12D1 EC axial fan - AxiBlade

Dimensions in mm



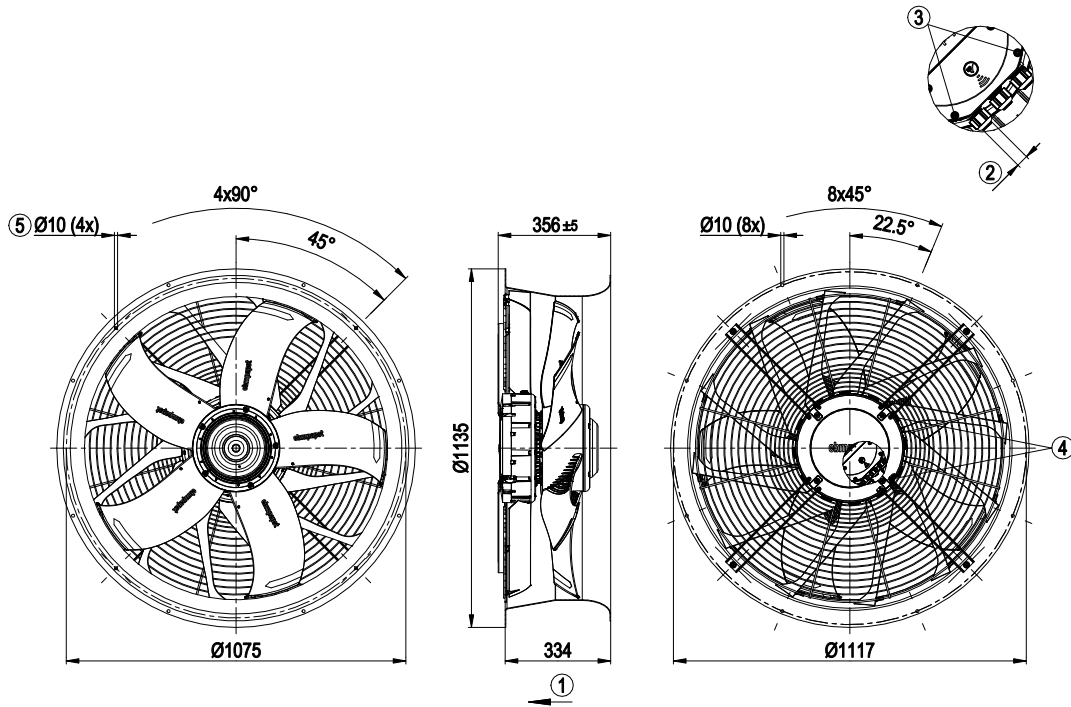
- ① Airflow direction „V“
- ② Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 3.5 ± 0.5 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Mounting holes for FlowGrid

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or rotor on bottom; rotor on top on request

AxiBlade 910

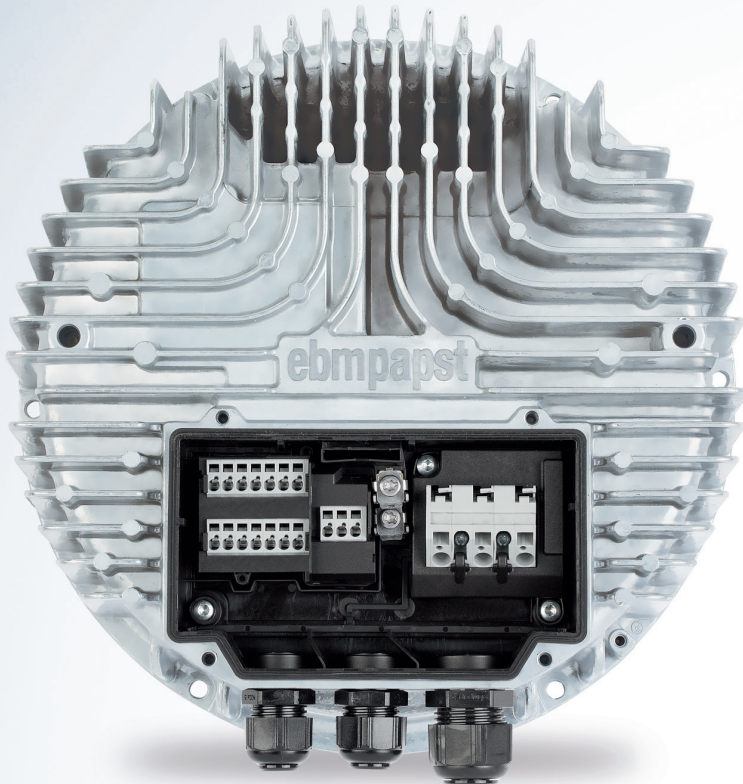
C VWR0910BTTRZ W3G910OV1205 EC axial fan - AxiBlade

Dimensions in mm



- ① Airflow direction „V“
- ② Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
- ③ Tightening torque 1.5 ± 0.2 Nm
- ④ Tightening torque 3 ± 0.3 Nm
- ⑤ Attachment holes for FlowGrid (91000-2-2957 not included in scope of delivery)

Pin assignment: See connection diagram
 Mounting position: Shaft horizontal or
 rotor on bottom; rotor on top on request



Technology

for EC axial fans - AxiBlade

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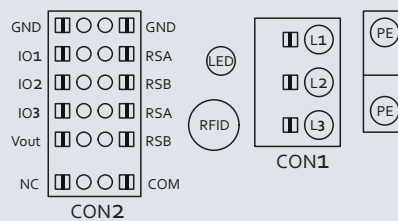
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Connection diagrams	66
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Connection diagram: AB1) & AB2)

Connection diagram: AB1)

Technische Ausstattung:

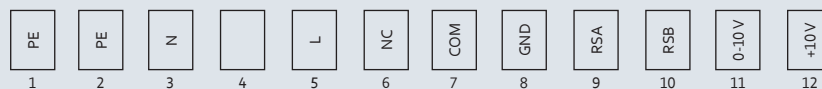
- Configurable inputs/outputs (I/O)
- RFID - ISO 15693 compatible
- Operation and fault indicator with LED
- Integrated PI controller
- Soft start / Alarm relay
- Motor current limitation
- Voltage output 3,3-24 VDC, Pmax = 800 mW
- RS 485 MODBUS-RTU / MODBUS V6
- Thermal overload protection for electronics/motor
- Undervoltage/phase failure detection
- Reverse polarity and Locked-rotor protection
- External 15-50 VDC input (parameterization)
- Control interface with SELV potential safely disconnected from supply



Connection diagram: AB2)

Technische Ausstattung:

- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- RS 485 MODBUS-RTU / PFC, aktive
- Operation and fault indicator
- Power limitation
- Alarm relay
- Soft start
- Thermal overload protection for electronics/motor
- Motor current limitation / Integrated PI controller
- Undervoltage/phase failure detection
- Control interface with SELV potential safely disconnected from supply



Connection diagram: AB3) & AB4)

Connection diagram: AB3)

Technische Ausstattung:

- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- RS 485 MODBUS-RTU / PFC, passive
- Operation and fault indicator
- Integrated PI controller
- Soft start
- Thermal overload protection for electronics/motor
- Motor current limitation / Alarm relay
- Undervoltage/phase failure detection
- Control interface with SELV potential safely disconnected from supply
- External 24 V input (parameterization)
- EEPROM write cycles: 100.000 maximum



Connection diagram: AB4)

Technische Ausstattung:

- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- RS 485 MODBUS-RTU / PFC, aktive
- Operation and fault indicator
- Power limitation
- Alarm relay
- Soft start
- Thermal overload protection for electronics/motor
- Motor current limitation
- Undervoltage/phase failure detection
- Control interface with SELV potential safely disconnected from supply
- Tach output / Integrated PI controller



Connection diagram: AB5) & AB6)

Connection diagram: AB5)

Technische Ausstattung:

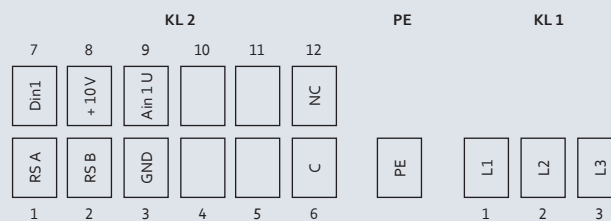
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- RS 485 MODBUS-RTU / PFC, passive
- Operation and fault indicator
- Integrated PI controller
- Soft start
- Thermal overload protection for electronics/motor
- Motor current limitation / Alarm relay
- Undervoltage/phase failure detection
- Control interface with SELV potential safely disconnected from supply
- External 24 V input (parameterization)
- EEPROM write cycles: 100.000 maximum



Connection diagram: AB6)

Technische Ausstattung:

- Control input 0-10 VDC / PWM
- Output 10 VDC, max. 10 mA
- Operation and fault indicator
- RS 485 MODBUS-RTU / PFC, passive
- Integrated PI controller
- Alarm relay
- Integrated PI controller
- Soft start / Motor current limitation
- Thermal overload protection for electronics/motor
- Undervoltage/phase failure detection
- Control interface with SELV potential safely disconnected from supply
- External enable input / External 24 V input (parameterization)





Technical parameters & scope

High standards for all ebm-papst products

Here at ebm-papst, we constantly strive to further improve our products in order to be able to offer you the best possible product for your application. Careful monitoring of the market ensures that technical innovations are reflected in the improvements of our products. Based on the technical parameters listed below and the ambience you want our product to operate in, we here at ebm-papst can always work out the best solution for your specific application.

General performance parameters

Any deviations from the technical data and parameters described here are listed on the product-specific data sheet.

Degree of protection

The type of protection is specified in the product-specific data sheets.

Insulation class

The insulation class is specified in the product-specific data sheets.

Installation position

The mounting position is specified in the product-specific data sheets.

Condensate discharge holes

Information on the condensate discharge holes is provided in the product-specific data sheets.

Mode of operation

The mode of operation is specified in the product-specific data sheets.

Protection class

The protection class is specified in the product-specific data sheets.

Tightening torques for fan assembly

Please consult your ebm-papst contact for questions about which tightening torque to use.

Service life

The service life of ebm-papst products depends on two main factors:

- The service life of the insulation system
- The service life of the bearing system

The service life of the insulation system is essentially governed by the voltage level, the temperature and the ambient conditions such as humidity and condensation.

The service life of the bearing system is primarily governed by the thermal load on the bearings. For the majority of our products we use maintenance-free ball bearings which can be fitted in any installation position. Sleeve bearings can alternatively be employed, as described in the product-specific data sheets.

As a rough guide (depending on the general conditions), the ball bearings have a life expectancy L10 of approx. 40.000 hours of operation at an ambient temperature of 40 °C.

We will gladly provide you with a life expectancy calculation based on your specific usage conditions.

Motor protection/thermal protection

Information on motor protection and thermal protection is provided in the product-specific data sheets.

The following protection methods are provided depending on the type of motor and area of application:

- Thermal overload protector with electronic diagnostics
- Current limitation via electronics

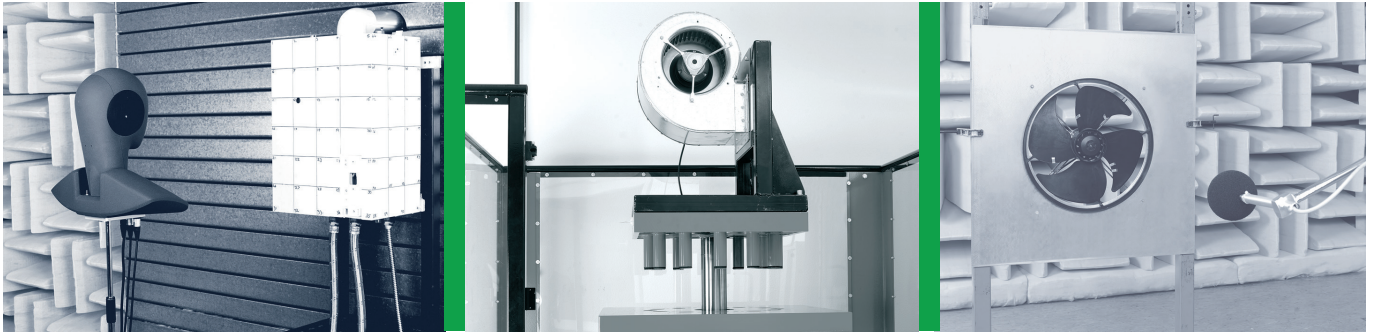
If use is made of an external thermal overload protector, a commercially available tripping unit must be connected by the customer for shut-off. Motor protection conforming to the applicable standard must be fitted for products not provided with a built-in thermal overload protector and not protected against improper use.

Mechanical strain/performance parameters

All ebm-papst products are subjected to comprehensive testing in conformity with the normative specifications and also incorporating the extensive experience of ebm-papst.

High voltage and insulation testing

If high voltage or insulation testing is carried out in the application, then all connection lines from the fan must be disconnected in advance.



Vibration testing

Vibration testing is performed as follows:

- Vibration test in operation according to DIN EN 61373:2010 Category 1
- Vibration test at standstill according to DIN EN 61373:2010 Category 1

Shock load

Shock load testing is performed as follows:

- Shock load according to DIN EN 60068-2-27

Balancing grade

Balancing grade testing is performed as follows:

- Residual imbalance according to DIN ISO 1940
- Standard balancing quality level G 6.3

Should your particular application require a higher level of balancing, please contact us and specify the details in your order.

Chemical and physical strain/performance parameters

Please consult your ebm-papst contact for any questions regarding chemical and physical strain.

Areas of use, industries & applications

Our products are used in a variety of industries and for numerous applications:

Ventilation, air conditioning and refrigeration technology, clean room technology, automotive and railway engineering, medical and laboratory technology, electronics, computer and office systems, telecommunications, household appliances, heating systems, machinery and installations, drive engineering. Our products are not intended for use in the aerospace or military industries!

Legal and normative specifications

The products described in this catalog are developed and manufactured in accordance with the standards applying to the particular product and, if known, in accordance with the conditions of the particular area of application.

Standards

Information on standards is provided in the product-specific data sheets.

EMC

Information on EMC standards is provided in the product-specific data sheets. Compliance with EMC standards has to be assessed on the final product, as EMC properties may change under different installation conditions.

Touch current

Information on touch current is provided in the product-specific data sheets. Measurement is performed according to IEC 60990.

Approvals

Please contact us if you require a specific type of approval (VDE, UL, GOST, CCC, CSA, etc.) for your ebm-papst product. Most of our products can be supplied with the applicable approval. Information on existing approvals is provided in the product-specific data sheets.

Air performance measurements

All air performance measurements are conducted on intake-side chamber test rigs conforming to the requirements of ISO 5801 and DIN 24163. The fans under test are attached to the measuring chamber with free air intake and exhaust (installation category A) and operated at nominal voltage, with alternating current also at nominal frequency.

As required by the standards, the air performance curves shown are referenced to an air density of 1,15 kg/m³.

Technical parameters & scope

Air and sound measurement conditions

Measurements on ebm-papst products are taken under the following conditions:

- Axial and diagonal fans in airflow direction "V" or "A" in full nozzle
- Backward-curved centrifugal fans, free-running with inlet ring
- Forward-curved single and dual-inlet centrifugal fans with housing
- Backward-curved dual-inlet centrifugal fans with housing

Sound measurements

All sound measurements are taken in anechoic rooms with reverberant floor. ebm-papst acoustic test chambers meet the requirements of accuracy class 1 as per DIN EN ISO 3745.

For sound measurement, the fans being tested are positioned in a reverberant wall and operated at nominal voltage, with alternating current also at nominal frequency.

Sound pressure and sound power level

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

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

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

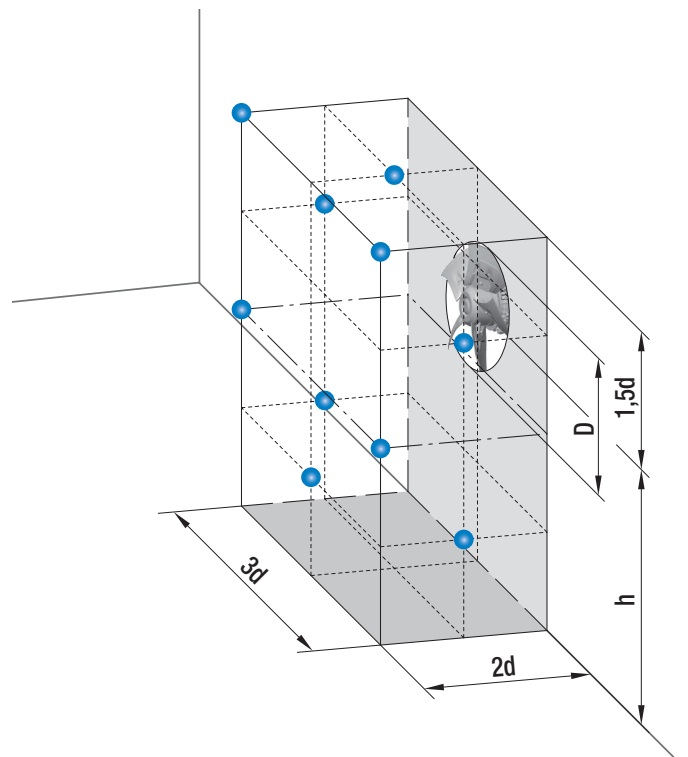
Measurement set-up according to ISO 13347-3 and DIN 45635-38:

- 10 measuring points

$$d \geq D$$

$$h = 1,5d \dots 4,5d$$

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

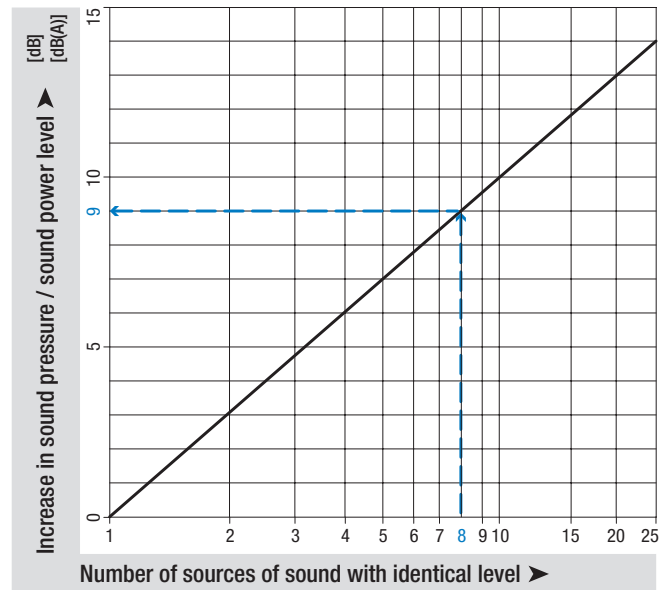


Cumulative level of several sound sources with the same level

The addition of two sound sources with the same level produces a level increase of approx. 3 dB.

The noise characteristics of several identical fans can be predicted on the basis of the sound values specified in the data sheet. This is shown in the adjacent graph.

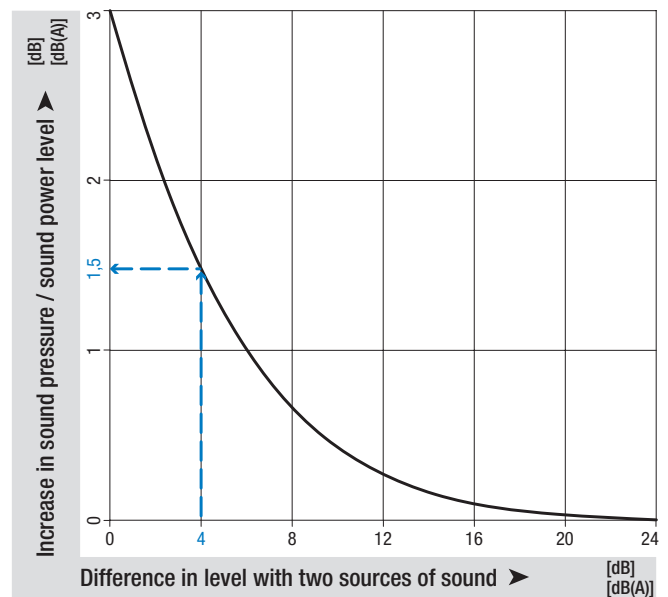
Example: There are 8 fans on a device. According to the data sheet, the sound pressure level of one fan is 75 dB(A). The level increase determined from the graph is 9 dB. This means that a total level of 84 dB(A) is to be expected for the installation.



Cumulative level of two sound sources with different levels

The noise characteristics of two different fans can be predicted on the basis of the sound values specified in the data sheet. This is shown in the adjacent graph.

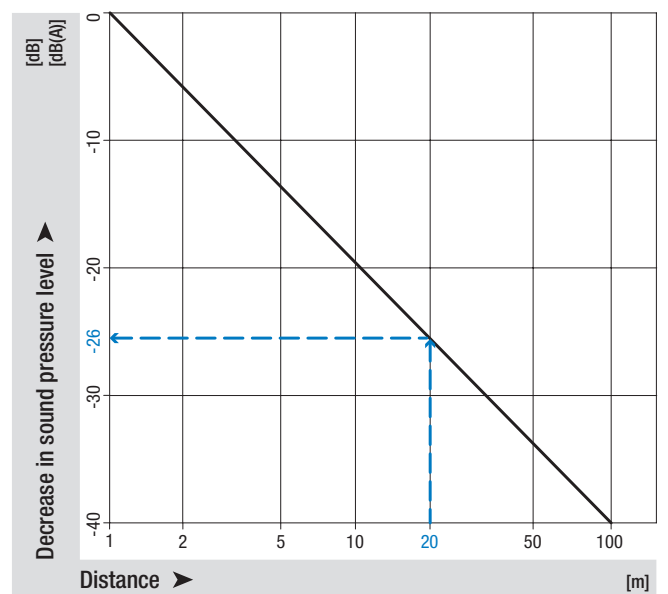
Example: In a ventilation unit, there is one fan with a sound pressure level of 75 dB(A) at the point of operation and one fan with 71 dB(A). The difference in level is 4 dB. The level increase of approx. 1.5 dB can now be read off the graph. This means that a total level of 76.5 dB(A) is to be expected for the unit.



Distance laws

The sound power level is not governed by the distance from the noise source. By contrast, the sound pressure level decreases with increasing distance from the sound source. The adjacent graph shows the decrease in level under far field conditions. Far field conditions apply if there is a considerable distance between the microphone and the fan in relation to the fan diameter and the wavelength under consideration. On account of the complexity of the topic, literature should be consulted for more detailed information on far fields. The level in the far field decreases by 6 dB each time the distance is doubled. Different relationships apply in the near field of the fan and the level may decrease to a far lesser extent. The following example only applies to far field conditions and may vary considerably as a result of installation effects:

For a fan, a sound pressure level of 65 dB(A) was measured at a distance of 1 m. From the adjacent graph, this would yield a reduction of 26 dB at a distance of 20 m, i.e. a sound pressure level of 39 dB(A).





Always find the right *contact person!*

www.ebmpapst.com/kontakt

Contacts

Worldwide

ebmpapst

engineering a better life



Germany

ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2
74673 Mulfingen
GERMANY
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com

ebm-papst St. Georgen GmbH & Co. KG

Hermann-Papst-Straße 1
78112 St. Georgen
GERMANY
Phone +49 7724 81-0
Fax +49 7724 81-1309
info2@de.ebmpapst.com

ebm-papst Landshut GmbH

Hofmark-Aich-Straße 25
84030 Landshut
GERMANY
Phone +49 871 707-0
Fax +49 871 707-465
info3@de.ebmpapst.com

ebmpapst

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ebm-papst
Mulfingen GmbH & Co. KG

Bachmühle 2
74673 Mulfingen
Germany
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com