

EC/AC axial fans - AxiCool

Edition 2017-04

ebmpapst

The engineer's choice



EC/AC axial fans - AxiCool

A breath of fresh air in refrigeration technology

Setting tomorrow's standards today. This principle was key for us in developing the new AxiCool range. AxiCool represents a new market standard for evaporators and coolers which makes customer benefits the utmost priority. The compact fan unit also impresses with top efficiency and simple handling, whilst offering the best conditions for optimal system efficiency thanks to its design features. Convenient service, ease of operation and excellent air throw round off the spectrum of positive features.

Top efficiency

The ErP Directive sets out stringent specifications to come into effect in 2015. So it is reassuring to know that these specifications are already surpassed by ebm-papst and that all the benefits of this superior efficiency are there for customers to enjoy. In a nutshell: AxiCool can reduce power consumption by up to 46 %. What's more, ideal system regulation guarantees highly efficient operation – even at part load. And last but not least, optimized cooling and thawing cycles also help to enhance efficiency.

Innovation meets perfection

Whichever version of the AxiCool series you decide on: You can be sure of making the right choice, as the innovative features incorporated into this product range always produce perfect results. Four versions of the AxiCool, size 300, 350 and 450 are available: A standard version, a version with hinge for easier cleaning or with air-guiding system for ideal cold storage air distribution and a high-end version with hinge and air-guiding system offering the full range of advantages.

Size 500, 630 and 800 AxiCool fans are available in two versions: as standard version and as high-end version with fan housing cover for smooth surfaces. The combination of integrated diffuser and guide vanes makes it possible to attain unprecedented efficiency values. We can supply the fans with AC or GreenTech EC motor in the version best suited to your requirements. In addition, the EC technology permits control by way of two speed settings or regulation via a linear interface.

Maximum hygiene, optimum food safety

The AxiCool product range has an important function to fulfil: Namely, to keep food in cold storage fresh under hygienic conditions. That's why AxiCool is specially designed to ensure an ideal environment right from the start – with the emphasis on hygiene and food safety.

A high standard of refrigeration is required to maintain the quality of stored products – only minimal temperature fluctuations and drying-out of the refrigerated items is permissible and the thawing cycles must be short. All these conditions are satisfied by the ideal distribution of cold air in cold storage and innovative concepts such as the patented wall ring design. AxiCool is fully equipped to meet special challenges such as cheese maturing processes or the storage of sensitive fruit and vegetables.

With regard to hygiene, AxiCool cuts no corners. AxiCool features a high level of water spray protection (up to IP 54) and smooth surfaces with no visible screws.

The great advantage: Dirt cannot get a grip. And, with size 300, 350 and 450 AxiCool fans, the hinge function permits easy cleaning of the heat exchanger in accordance with HACCP requirements.

Simply unfasten the screws, open up the fan and clean.

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: It stands for recycling, waste avoidance, ecological materials, lower emission levels, reduced energy consumption and hence greater efficiency. AxiCool for instance attains this efficiency with a GreenTech EC motor, which operates at various speed settings or with regulation by way of a linear interface. In addition, the AxiCool product range supports the concept of sustainability with a particularly long service life. It is often possible to preserve resources with simple means: From the outset, AxiCool was designed to have smooth surfaces to facilitate cleaning and to save water.

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About ebm-papst

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

Six reasons that make us the ideal partner:

Our systems expertise.

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

The ebm-papst spirit of invention.

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

Our lead in technology.

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

Closeness to our customers.

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

Our standard of quality.

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

The story of our success to market and technology pioneer.

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



Product overview - AxiCool

Overview of types AxiCool EC size 300-450



Ø	Motor	Standard version	Standard version with hinge	Version with air-guiding system	Version with hinge and air-guiding system	Page ff.
300	M3G 055-CF (2-Speeds)	W3G 300-JK13-30	W3G 300-TK13-30	W3G 300-UK13-30	W3G 300-WK13-30	10
350	M3G 074-CF (2-Speeds)	W3G 350-JN01-30	W3G 350-TN01-30	W3G 350-SN01-30	W3G 350-WN01-30	14
450	M3G 074-DF (2-Speeds)	W3G 450-J002-30	W3G 450-T002-30	W3G 450-S002-30	W3G 450-W002-30	18
	M3G 084-FA (0-10 V)	W3G 450-JC28-30	W3G 450-TC28-30	W3G 450-SC28-30	W3G 450-WC28-30	20

Overview of types AxiCool AC size 300-450



Ø	Motor	Standard version	Standard version with hinge	Version with air-guiding system	Version with hinge and air-guiding system	Page ff.
300	M4E 068-CF	W4E 300-JS72-30	W4E 300-TS72-30	W4E 300-SS72-30	W4E 300-WS72-30	46
350	M4E 074-DF	W4E 350-JN02-30	W4E 350-TN02-30	W4E 350-SN02-30	W4E 350-WN02-30	50
450	M4E 074-GA	W4E 450-JP01-30	W4E 450-TP01-30	W4E 450-SP01-30	W4E 450-WP01-30	54
	M4E 094-HA	W4E 450-JA09-40	---	---	---	56
	M4D 094-HA	W4D 450-JA18-40	---	---	---	56

Overview of types EC & AC AxiCool size 500-800

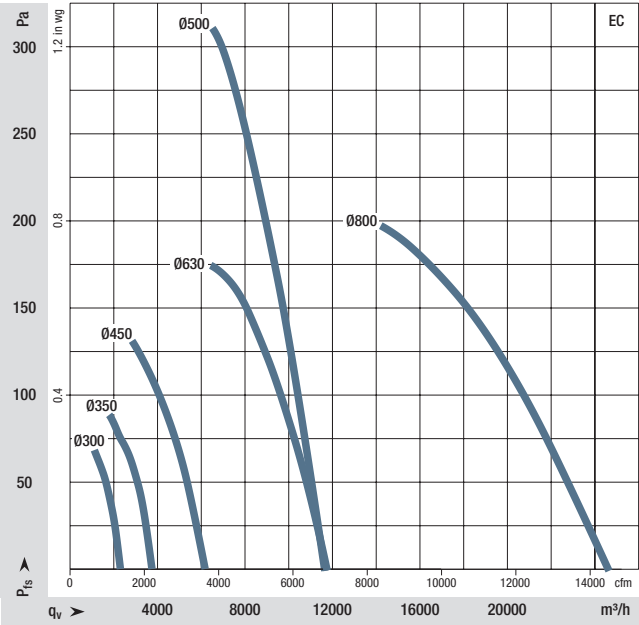


Ø	Motor EC / AC	Standard version EC	High-End version EC	Standard version AC	High-End version AC	Page ff. EC / AC
500	M3G 084 / M6E 110	W3G 500-KK07-G1	W3G 500-KK07-G2	W6E 500-KJ05-01	W6E 500-KJ05-11	28 / 64
	M3G 084 / M6D 110	W3G 500-KM03-M1	W3G 500-KM03-M2	W6D 500-KJ05-01	W6D 500-KJ05-11	28 / 64
	M3G 084 / M4E 110	W3G 500-KM03-I1	W3G 500-KM03-I2	W4E 500-KJ01-01	W4E 500-KJ01-11	28 / 64
	M3G 112 / M4D 110	W3G 500-KD59-01	W3G 500-KD59-03	W4D 500-KJ03-01	W4D 500-KJ03-11	28 / 64
630	M3G 084 / M8D 110	W3G 630-KL06-G1	W3G 630-KL06-G2	W8D 630-KN01-01	W8D 630-KN01-11	34 / 70
	M3G 112 / M6E 110	W3G 630-KE55-51	W3G 630-KE55-53	W6E 630-KN01-01	W6E 630-KN01-11	34 / 70
	M3G 112 / M6D 110	W3G 630-KE55-21	W3G 630-KE55-23	W6D 630-KN01-01	W6D 630-KN01-11	34 / 70
800	M3G 112 / M8D 138	W3G 800-NB86-41	W3G 800-NB86-43	W8D 800-NG01-01	W8D 800-NG01-11	40 / 76
	M3G 112 / M6D 138	W3G 800-NE57-51	W3G 800-NE57-53	W6D 800-NG13-01	W6D 800-NG13-11	40 / 76
	M3G 112 / ---	W3G 800-NH94-01	W3G 800-NH94-03	---	---	40 / --
	M3G 150 / ---	W3G 800-NS26-71	W3G 800-NS26-73	---	---	40 / --

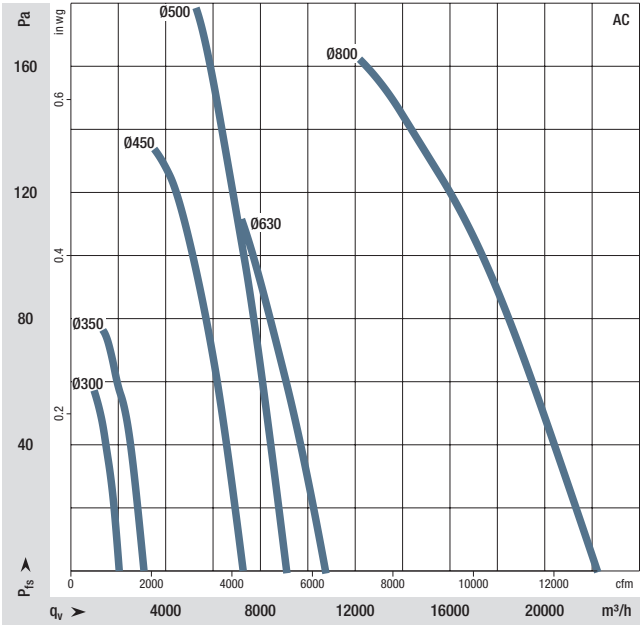
Data is subject to change without notice at ebm-papst discretion.

Overview of characteristic curves - AxiCool

Max. curves of EC versions:
(measured with guard grill)



Max. curves of AC versions:
(measured with guard grill)



Max. air throw:



Size 300	16 m (53 ft.)
Size 350	30 m (99 ft.)
Size 450	40 m (131 ft.)
In the maximum thrust range, a remaining air velocity of 0.5 m/s can still be measured. Thrust ranges depend on the installation situation.	
Size 500	37 m (121 ft.)
Size 630	44 m (144 ft.)
Size 800	63 m (207 ft.)

Values determined in customer device.
Thrust ranges depend on the installation situation.



EC axial fans - AxiCool

Ø 300 - Ø 450



EC axial fans - AxiCool

Ø 300, 2 speed stages



- **Material:** Guard grill / support bracket: Steel, phosphated and coated in black (RAL 9005)
Wall ring, air-guiding system and blades: Plastic PP
Rotor: Painted in black
Electronics housing: Die-cast aluminium
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 54⁽²⁾
- **Insulation class:** "B"
- **Installation position:** Any
- **Condensation drainage holes:** None, open rotor
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings

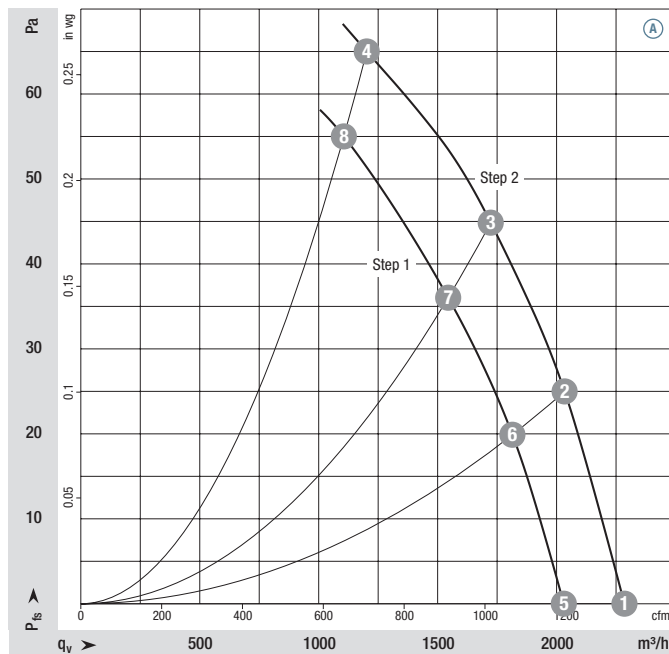
Nominal data

Type	Motor	Curve	Nominal voltage-range	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Max. back pressure	Perm. ambient temp.	Techn. features and conn. diagram
			VAC	Hz	rpm	W	A	Pa	°C	
W3G 300	M3G 055-CF	Ⓐ	1~200-240	50/60	1500	85	0,80	65	-40..+40	P. 86 / AX1)

Subject to change

(1) Nominal data at operating point with maximum load and 230 VAC
(2) Not suitable for permanent outdoor use, special version available on request

Curves: 2 speed stages Standard



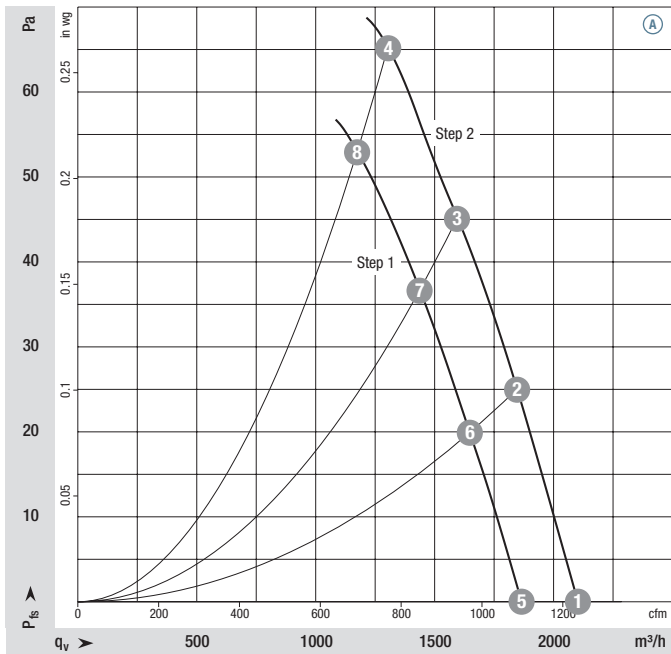
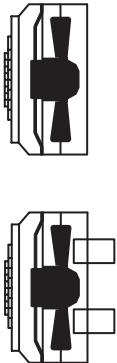
		n rpm	P _{ed} W	I A	L _{WA} dB(A)
Ⓐ 1	Step 2	1665	71	0,63	68
Ⓐ 2	Step 2	1625	77	0,68	67
Ⓐ 3	Step 2	1580	82	0,70	64
Ⓐ 4	Step 2	1500	85	0,80	63
Ⓐ 5	Step 1	1485	51	0,50	66
Ⓐ 6	Step 1	1450	55	0,51	64
Ⓐ 7	Step 1	1415	59	0,55	62
Ⓐ 8	Step 1	1370	64	0,58	61

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

- **Technical features:** see connection diagram P. 86
- **EMC:** Interference emission according to EN 61000-6-3
Immunity to interference according to EN 61000-6-2
Circuit feedback according to EN 61000-3-2/3
- **Touch current:** < 3,5 mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60335-1, CE

Air flow direction		Weight Standard		Weight Standard with hinge		Weight with air-guiding system		Weight with hinge and air-guiding system
	Standard version	kg	Standard version with hinge	kg	Version with air-guiding system	kg	Version with hinge and air-guiding system	kg
"V"	W3G 300-JK13 -30	2,6	W3G 300-TK13 -30	2,7	W3G 300-UK13 -30	3,3	W3G 300-WK13 -30	3,5

Curves:
2 speed stages
with air-guiding
system



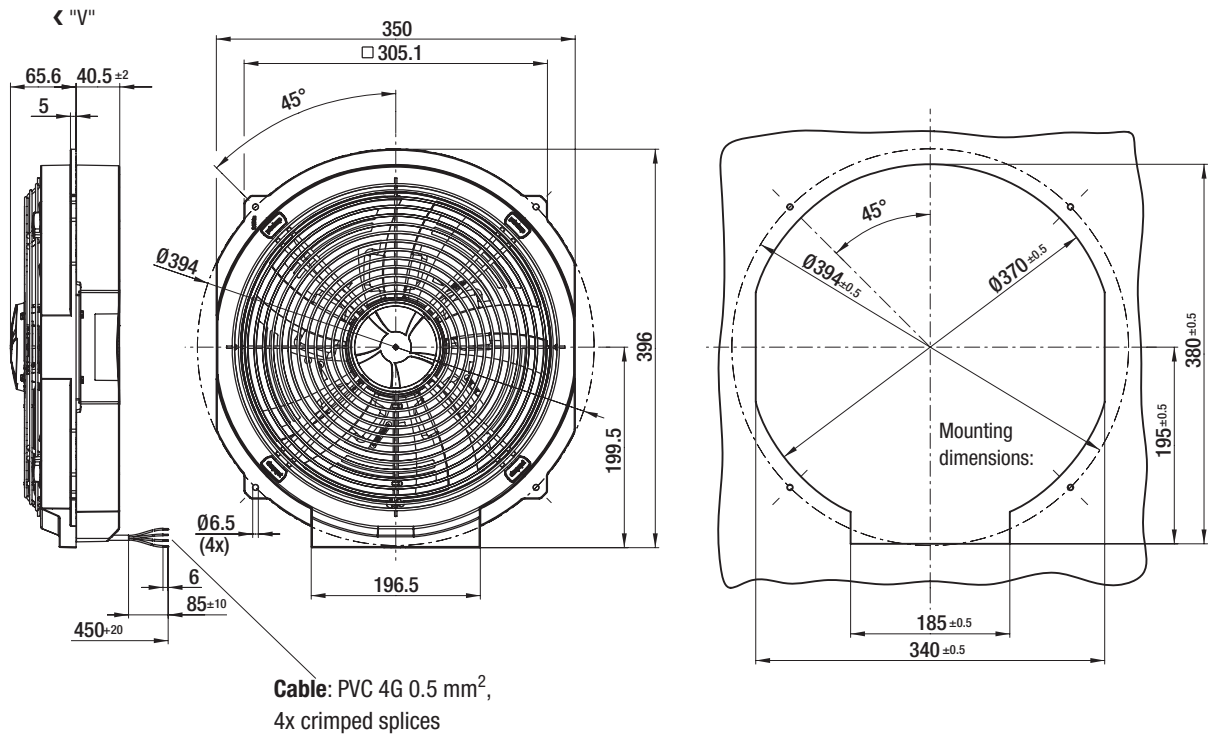
Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

EC axial fans - AxiCool

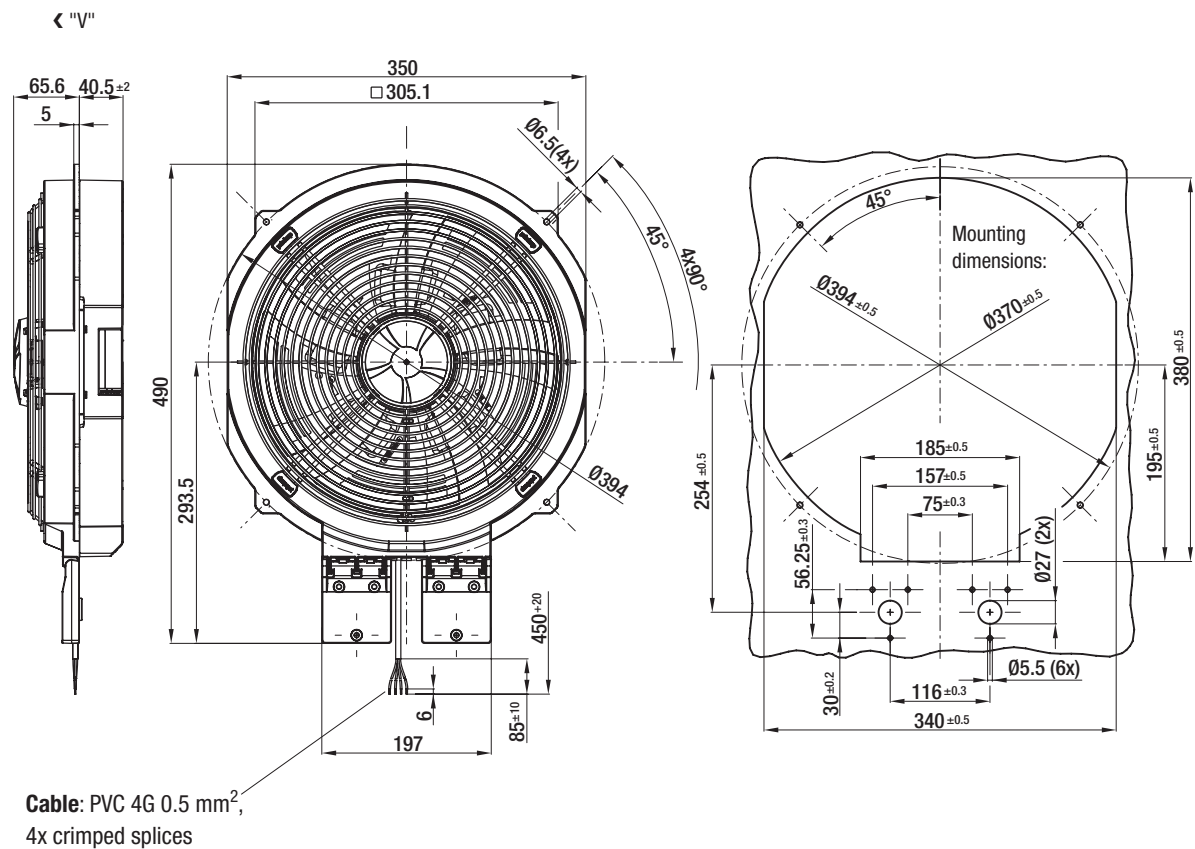
Ø 300



W3G 300-JK13-30 (Standard version)



W3G 300-TK13-30 (Standard version with hinge)



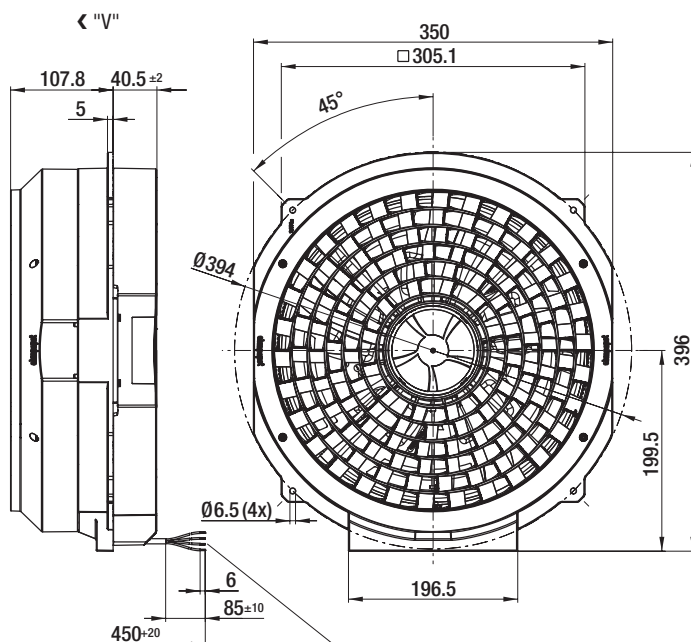
EC axial fans - AxiCool

Ø 300

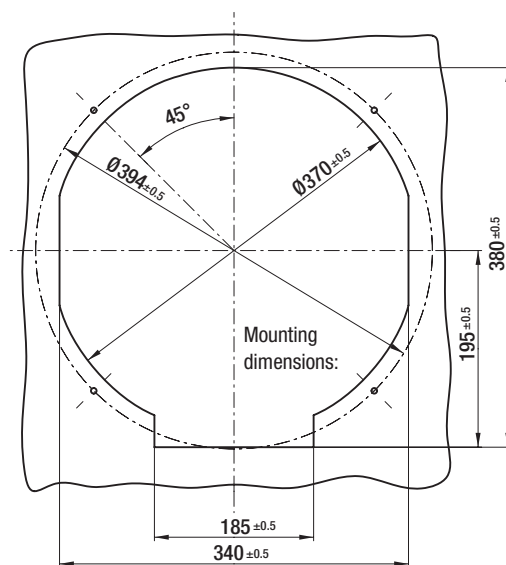


Information

W3G 300-UK13-30 (Version with air-guiding system)



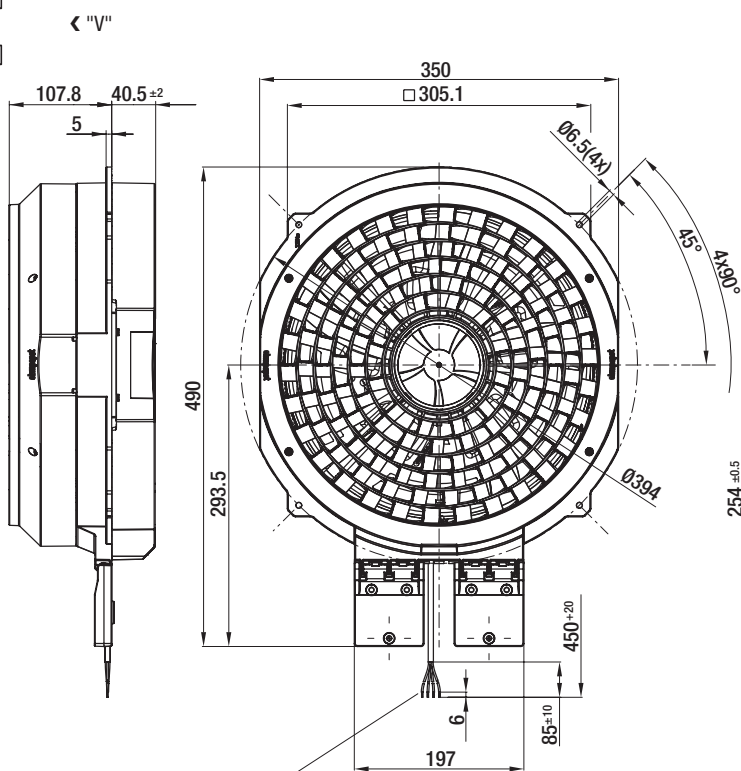
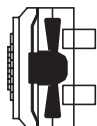
Cable: PVC 4G 0.5 mm²,
4x crimped splices



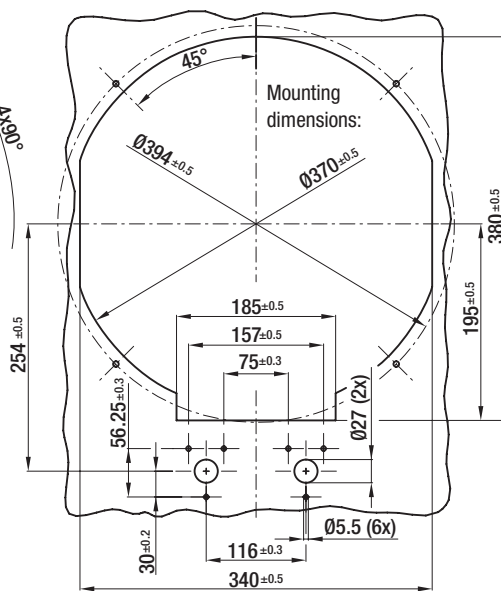
EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

W3G 300-WK13-30 (Version with hinge and air-guiding system)



Cable: PVC 4G 0.5 mm²,
4x crimped splices



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

Agents

EC axial fans - AxiCool

Ø 350, 2 speed stages



- **Material:** Guard grill / support bracket: Steel, phosphated and coated in black (RAL 9005)
Wall ring, air-guiding system and blades: Plastic PP
Rotor: Painted in black
Electronics housing: Die-cast aluminium
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 54⁽²⁾
- **Insulation class:** "B"
- **Installation position:** Any
- **Condensation drainage holes:** None, open rotor
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

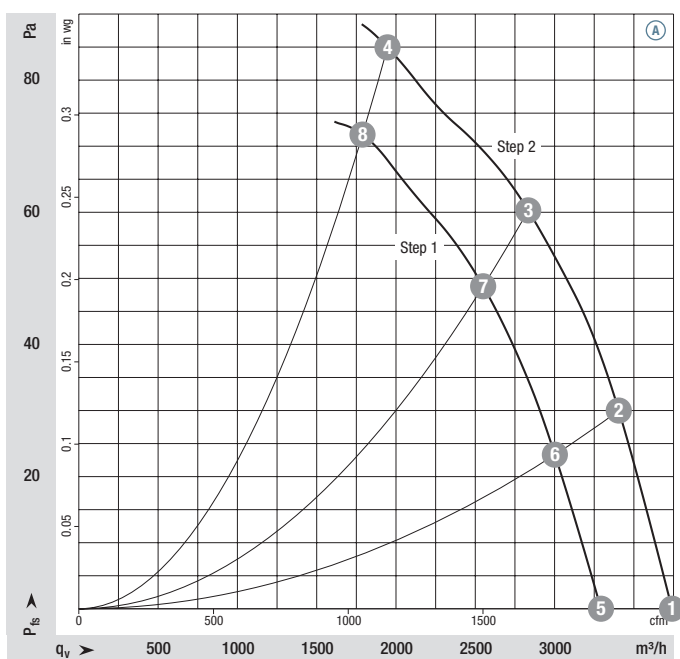
Nominal data

Type	Motor	Curve	Nominal voltage-range	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Max. back pressure	Perm. ambient temp.	Techn. features and conn. diagram
			VAC	Hz	rpm	W	A	Pa	°C	
W3G 350	M3G 074-CF	Ⓐ	1~200-240	50/60	1475	165	1,35	85	-40...+40	P. 86 / AX1)

Subject to change

(1) Nominal data at operating point with maximum load and 230 VAC
(2) Not suitable for permanent outdoor use, special version available on request

Curves: 2 speed stages Standard



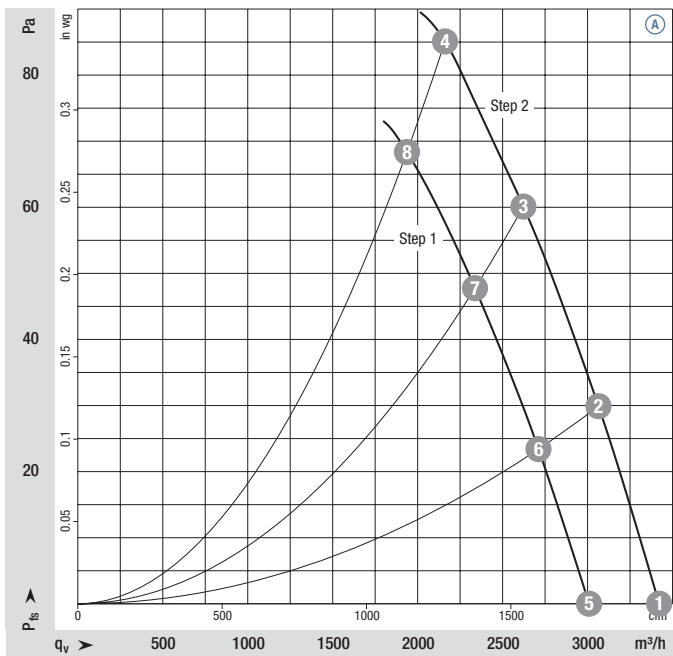
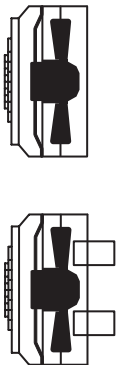
		n rpm	P _{ed} W	I A	L _{WA} dB(A)
Ⓐ 1	Step 2	1620	152	1,26	71
Ⓐ 2	Step 2	1600	165	1,35	70
Ⓐ 3	Step 2	1545	165	1,35	68
Ⓐ 4	Step 2	1475	165	1,35	68
Ⓐ 5	Step 1	1430	105	0,93	68
Ⓐ 6	Step 1	1410	113	1,00	67
Ⓐ 7	Step 1	1385	121	1,04	65
Ⓐ 8	Step 1	1365	130	1,14	66

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

- **Technical features:** see connection diagram P. 86
- **EMC:** Interference emission according to EN 61000-6-3
Immunity to interference according to EN 61000-6-2
On account of the installation conditions, ferritic damping in the connection line may be required for the application.
- **Touch current:** < 3,5 mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60335-1, CE

Air flow direction		Weight Standard		Weight Standard with hinge		Weight with air-guiding system		Weight with hinge and air-guiding system
	Standard version	kg	Standard version with hinge	kg	Version with air-guiding system	kg	Version with hinge and air-guiding system	kg
"V"	W3G 350-JN01 -30	4,3	W3G 350-TN01 -30	4,5	W3G 350-SN01 -30	5,2	W3G 350-WN01 -30	5,4

Curves:
2 speed stages
with air-guiding
system



Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{wA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition. See P. 96 ff for detailed information.

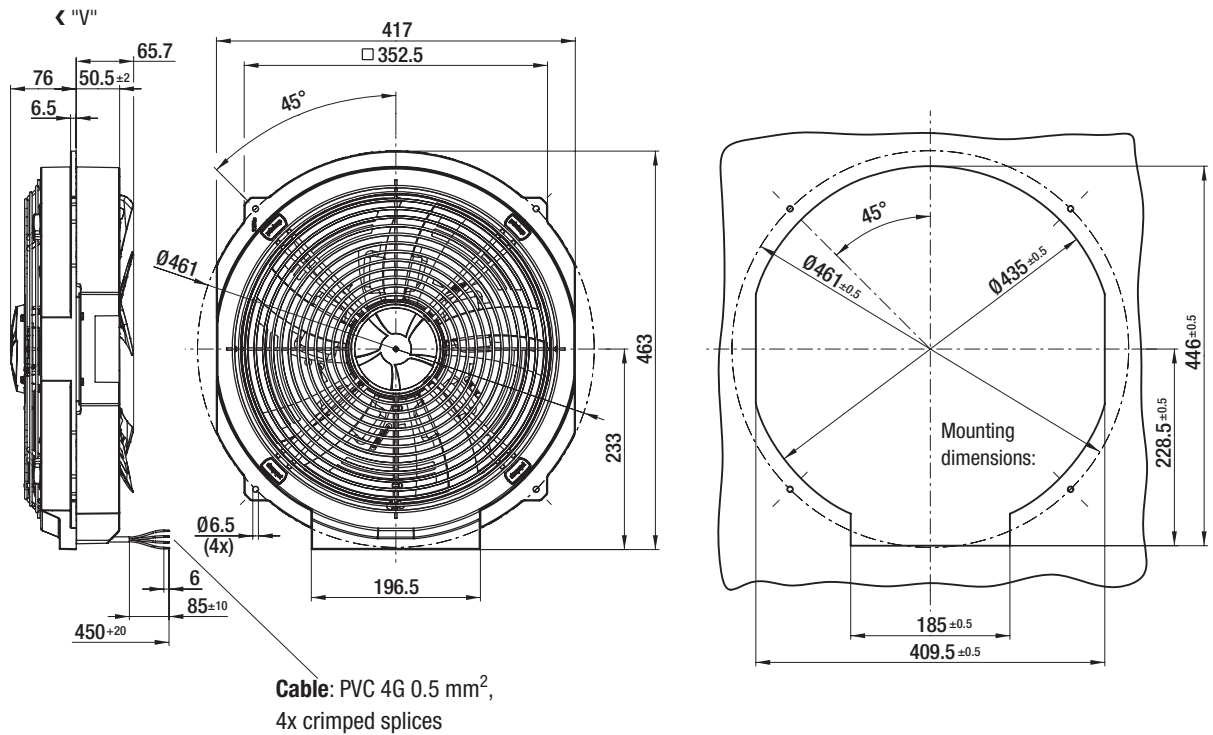
		n rpm	P _{ed} W	I A	L _{WA} dB(A)
A 1	Step 2	1560	151	1,25	72
A 2	Step 2	1540	159	1,32	71
A 3	Step 2	1515	165	1,35	71
A 4	Step 2	1475	165	1,35	72
A 5	Step 1	1380	105	0,90	69
A 6	Step 1	1365	111	0,94	68
A 7	Step 1	1350	116	0,99	68
A 8	Step 1	1345	118	1,01	69

EC axial fans - AxiCool

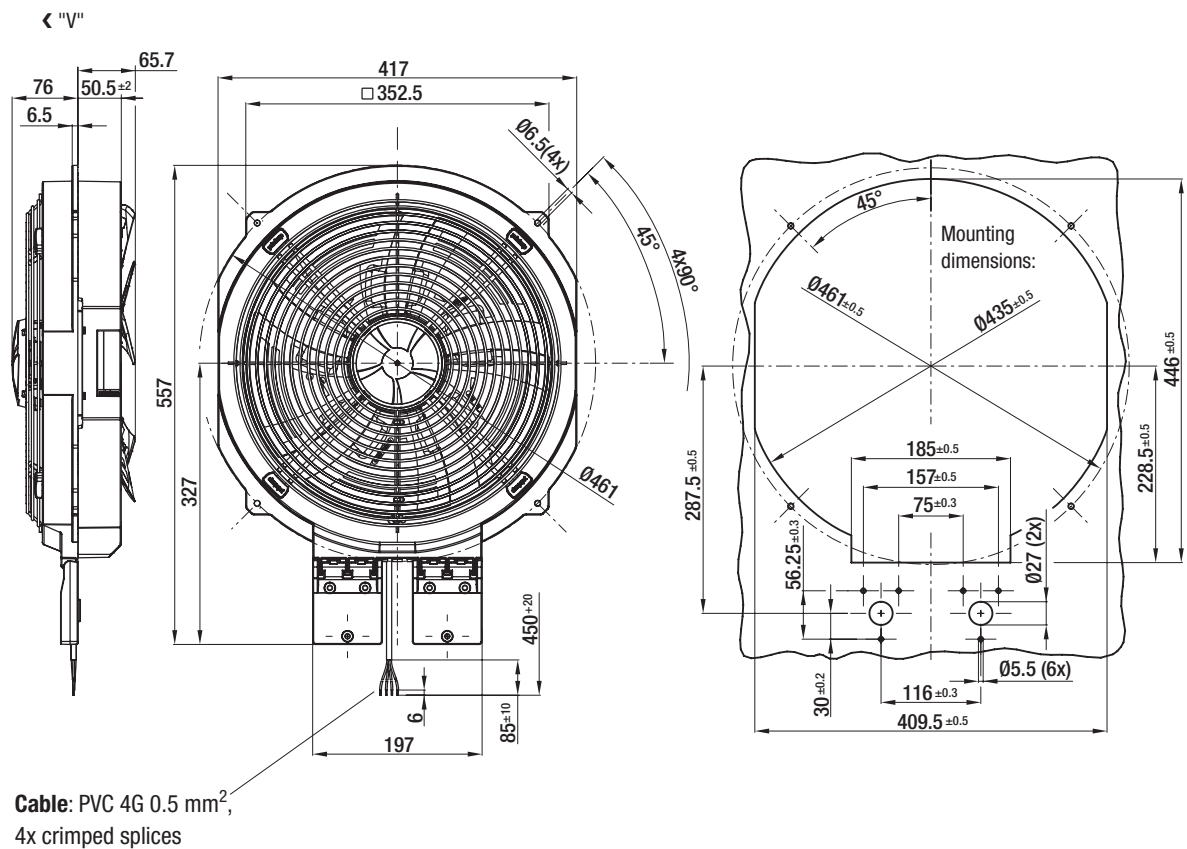
Ø 350



W3G 350-JN01-30 (Standard version)



W3G 350-TN01-30 (Standard version with hinge)



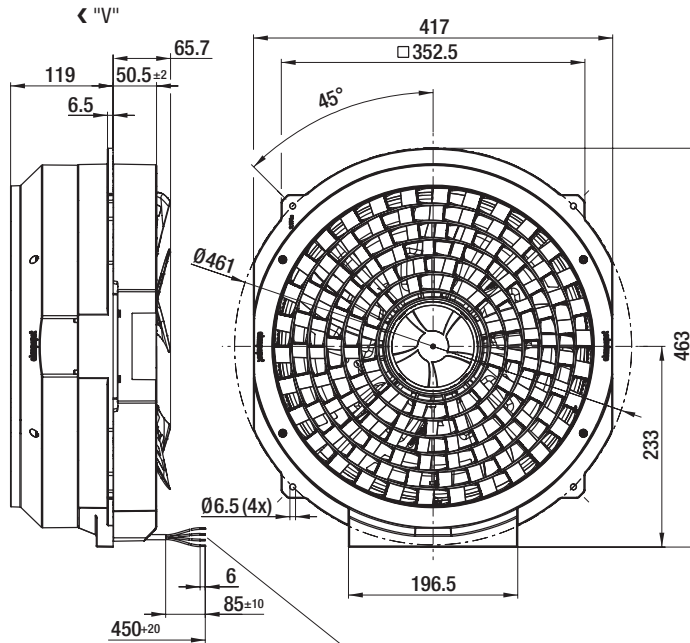
EC axial fans - AxiCool

Ø 350

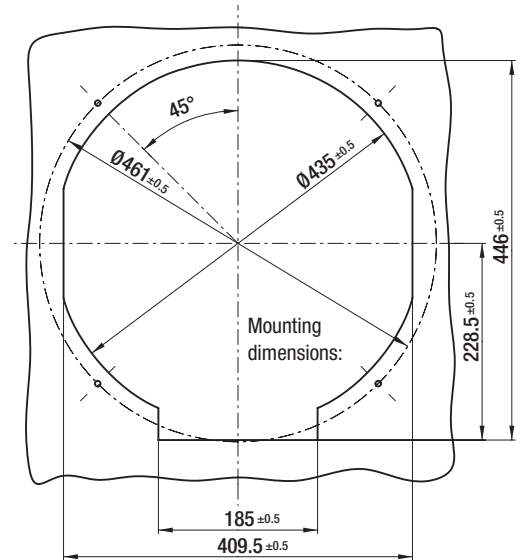


Information

W3G 350-SN01-30 (Version with air-guiding system)



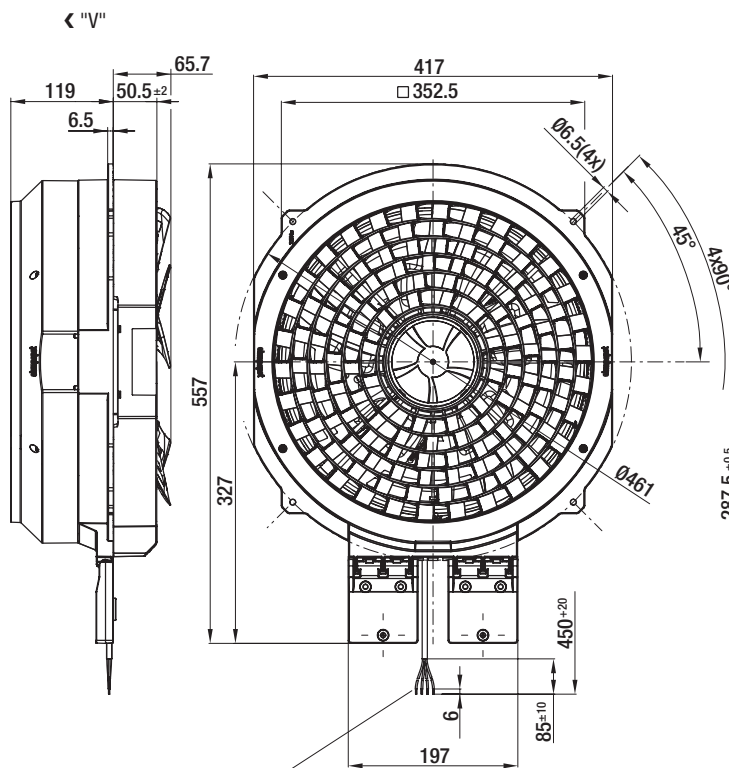
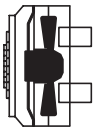
Cable: PVC 4G 0.5 mm²,
4x crimped splices



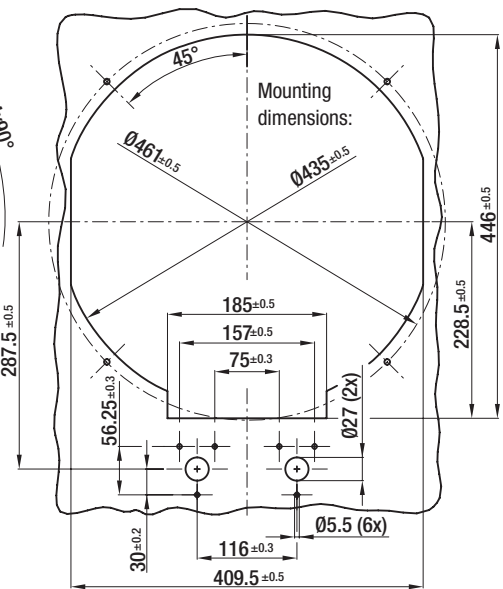
EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

W3G 350-WN01-30 (Version with hinge and air-guiding system)



Cable: PVC 4G 0.5 mm²,
4x crimped splices



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

Agents

EC axial fans - AxiCool

Ø 450, 2 speed stages



- **Material:** Guard grill / support bracket: Steel, phosphated and coated in black (RAL 9005)
Wall ring, air-guiding system and blades: Plastic PP
Rotor: Painted in black
Electronics housing: Die-cast aluminium
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 54⁽²⁾
- **Insulation class:** "B"
- **Installation position:** Any
- **Condensation drainage holes:** None, open rotor
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

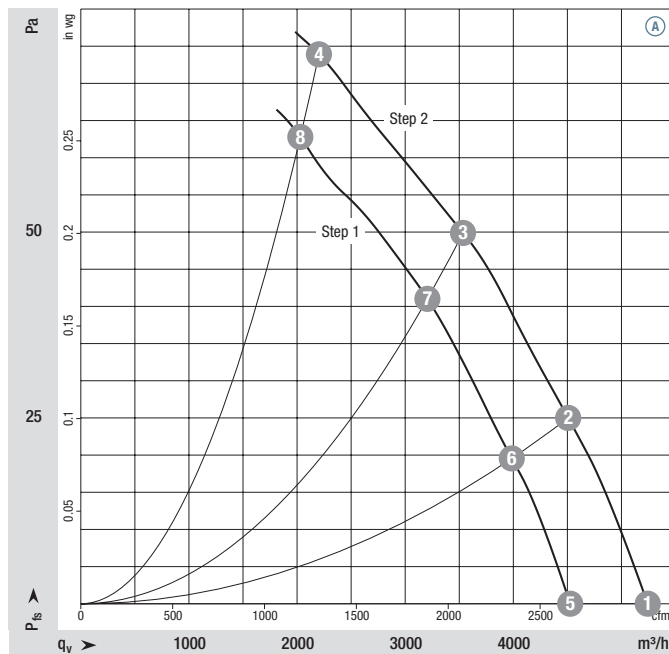
Nominal data

Type	Motor	Curve	Nominal voltage-range	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Max. back pressure	Perm. ambient temp.	Techn. features and conn. diagram
			VAC	Hz	rpm	W	A	Pa	°C	
W3G 450	M3G 074-DF	Ⓐ	1~200-240	50/60	980	163	1,34	74	-40..+40	P. 86 / AX1)

Subject to change

(1) Nominal data at operating point with maximum load and 230 VAC
(2) Not suitable for permanent outdoor use, special version available on request

Curves: 2 speed stages Standard



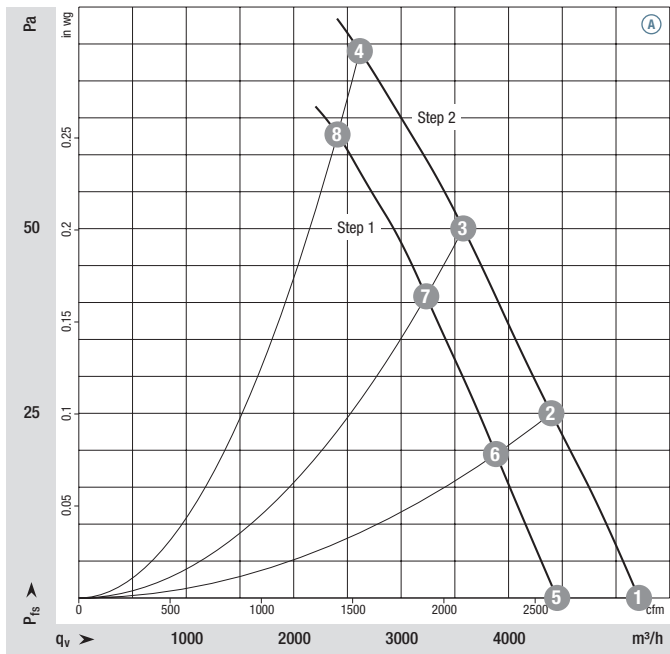
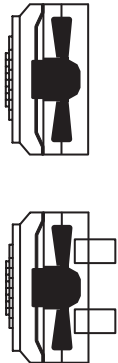
		n rpm	P _{ed} W	I A	L _{WA} dB(A)
Ⓐ 1	Step 2	1090	163	1,34	69
Ⓐ 2	Step 2	1050	163	1,34	66
Ⓐ 3	Step 2	1000	163	1,34	65
Ⓐ 4	Step 2	980	163	1,34	70
Ⓐ 5	Step 1	945	107	0,91	65
Ⓐ 6	Step 1	930	114	0,97	63
Ⓐ 7	Step 1	910	122	1,04	60
Ⓐ 8	Step 1	890	130	1,10	68

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

- **Technical features:** see connection diagram P. 86
- **EMC:** Interference emission according to EN 61000-6-3
Immunity to interference according to EN 61000-6-2
On account of the installation conditions, ferritic damping in the connection line may be required for the application.
- **Touch current:** < 3,5 mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60335-1, CE

Air flow direction		Weight Standard		Weight Standard with hinge		Weight with air-guiding system		Weight with hinge and air-guiding system
	Standard version	kg	Standard version with hinge	kg	Version with air-guiding system	kg	Version with hinge and air-guiding system	kg
"V"	W3G 450-J002 -30	7,5	W3G 450-T002 -30	7,7	W3G 450-S002 -30	10,0	W3G 450-W002 -30	10,2

Curves:
2 speed stages
with air-guiding
system



		n rpm	P _{ed} W	I A	L _{WA} dB(A)
A 1	Step 2	1090	163	1,34	70
A 2	Step 2	1040	163	1,34	69
A 3	Step 2	1000	163	1,34	66
A 4	Step 2	980	163	1,34	68
A 5	Step 1	935	104	0,89	66
A 6	Step 1	920	113	0,96	65
A 7	Step 1	905	121	1,02	63
A 8	Step 1	890	127	1,08	66

EC axial fans - AxiCool

Ø 450, Speed-controlled



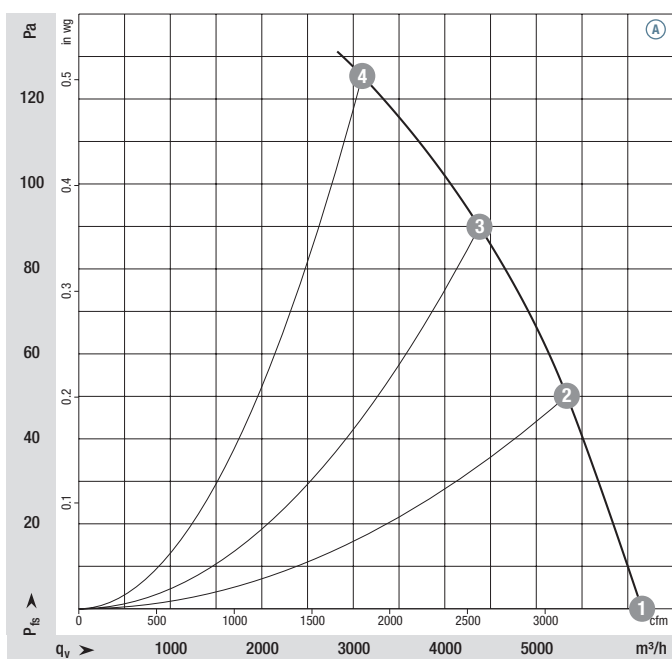
- **Material:** Guard grill / support bracket: Steel, phosphated and coated in black (RAL 9005)
Wall ring, air-guiding system and blades: Plastic PP
Rotor: Painted in black
Electronics housing: Die-cast aluminium
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 54
- **Insulation class:** "B"
- **Installation position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensation drainage holes:** Rotor side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data

Type	Motor	Curve	Nominal voltage-range	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Max. back pressure	Perm. ambient temp.	Techn. features and conn. diagram
		VAC	Hz	rpm	W	A	Pa	°C		
W3G 450	M3G 084-FA	Ⓐ 1~200-277	50/60	1300	345	2,2	125	-25..+40		P. 87 / AX2)

Subject to change

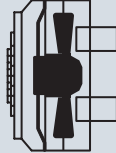
(1) Nominal data at operating point with maximum load and 230 VAC

Curves:
Speed-controlled
Standard

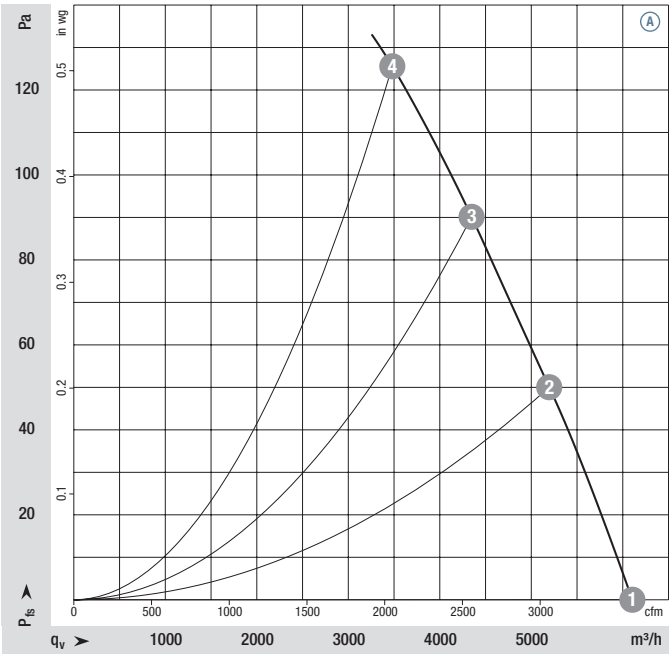
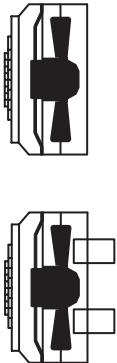
Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: L_{wA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

	n rpm	P _{ed} W	I A	L _{wA} dB(A)
Ⓐ 1	1300	267	1,77	71
Ⓐ 2	1300	301	1,99	69
Ⓐ 3	1300	328	2,16	69
Ⓐ 4	1300	345	2,20	75

- **Technical features:** see connection diagram P. 87
- **EMC:** Interference emission according to EN 61000-6-3
Immunity to interference according to EN 61000-6-2
Circuit feedback according to EN 61000-3-2/3
- **Touch current:** < 3,5 mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60335-1, CE

Air flow direction		Weight Standard		Weight Standard with hinge		Weight with air-guiding system		Weight with hinge and air-guiding system
	Standard version		Standard version with hinge		Version with air-guiding system		Version with hinge and air-guiding system	
"V"	W3G 450-JC28 -30	7,5	W3G 450-TC28 -30	7,7	W3G 450-SC28 -30	10,6	W3G 450-WC28 -30	10,8

Curves:
Speed-controlled
with air-guiding
system



	n rpm	P _{ed} W	I A	L _w A dB(A)
Ⓐ 1	1300	267	1,77	73
Ⓐ 2	1300	303	2,00	71
Ⓐ 3	1300	332	2,18	71
Ⓐ 4	1300	345	2,20	74

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{wA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.

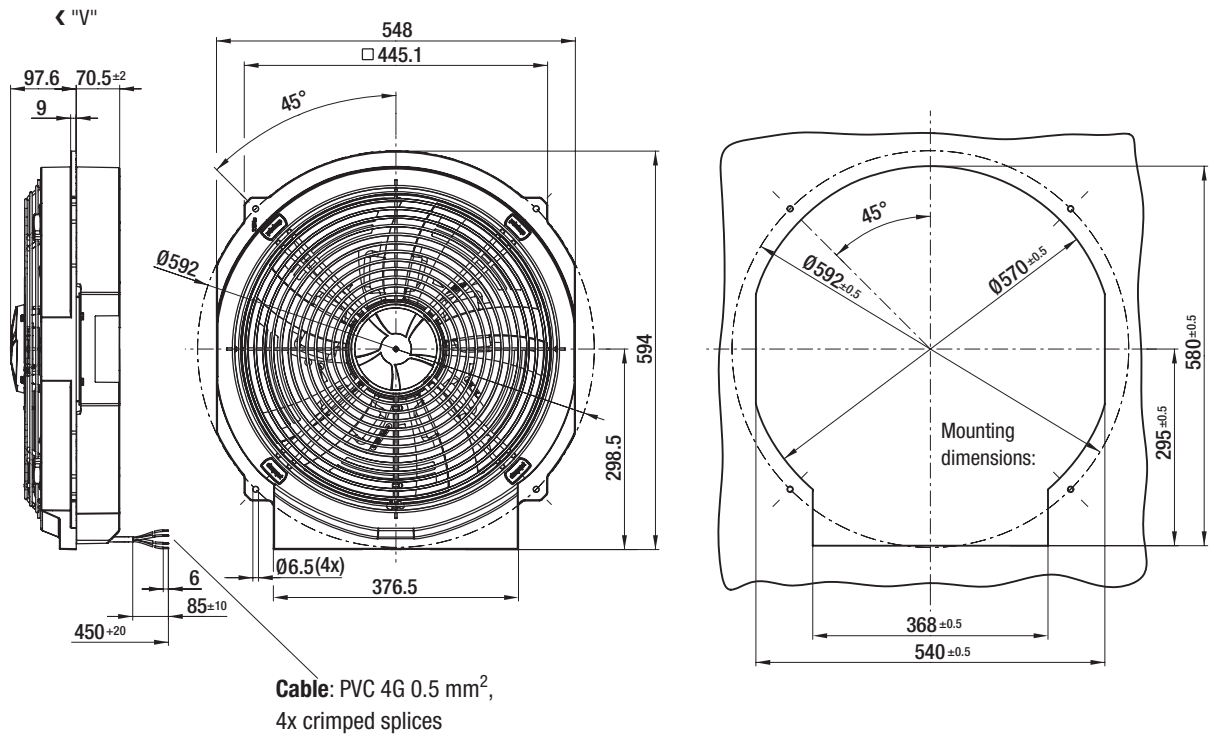
See P. 96 ff for detailed information.

EC axial fans - AxiCool

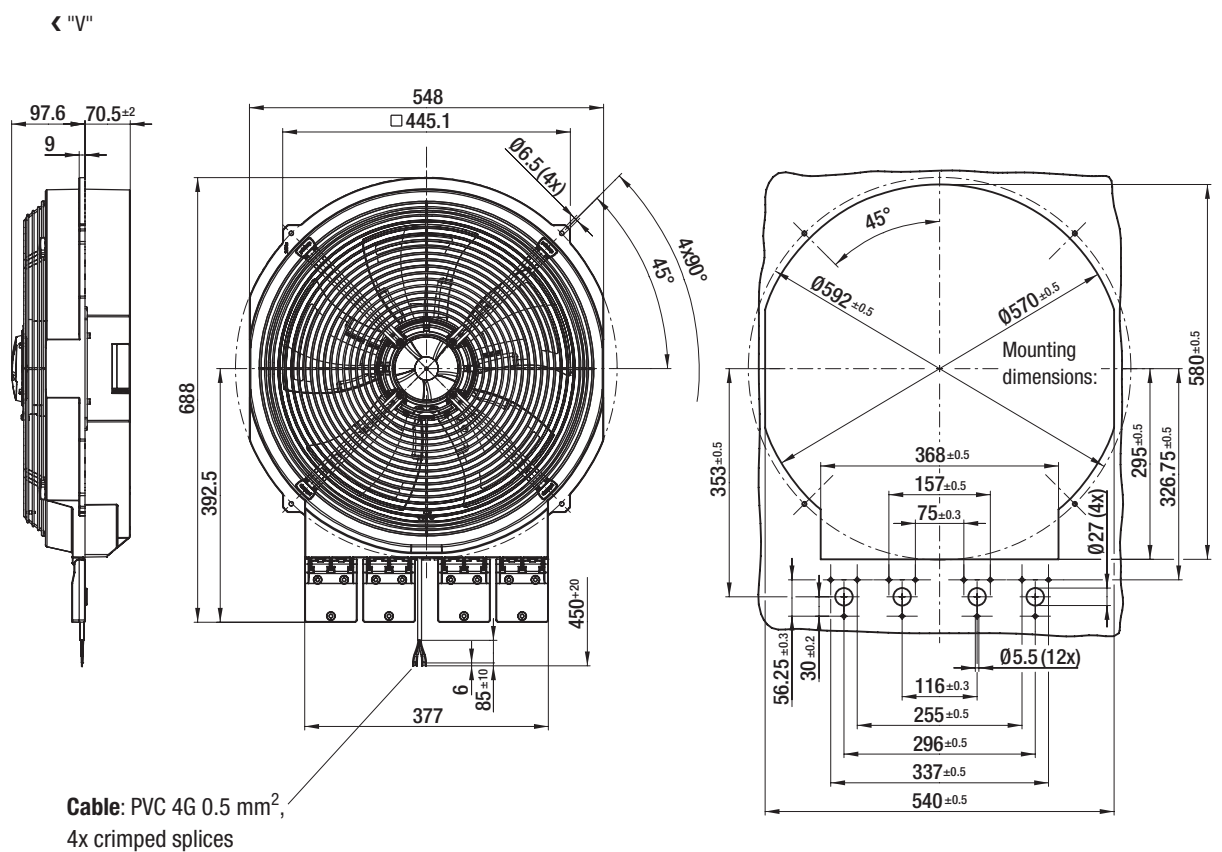
Ø 450



W3G 450-J002-30 (Standard version)



W3G 450-T002-30 (Standard version with hinge)

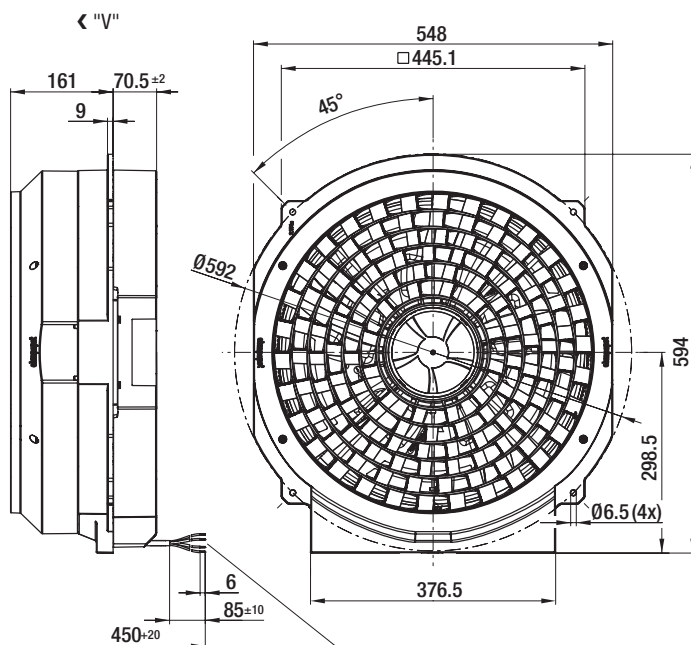


Ø 450

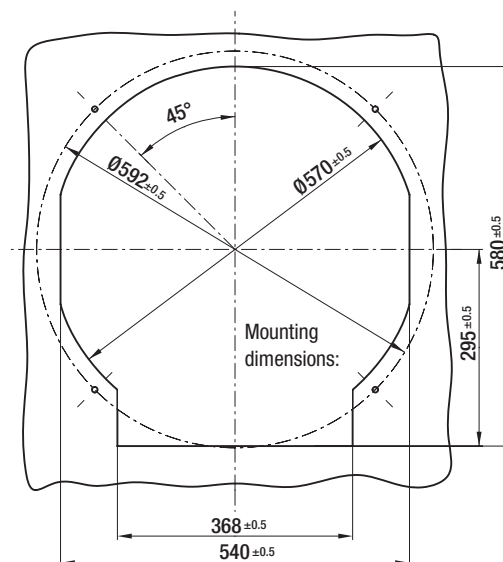


Information

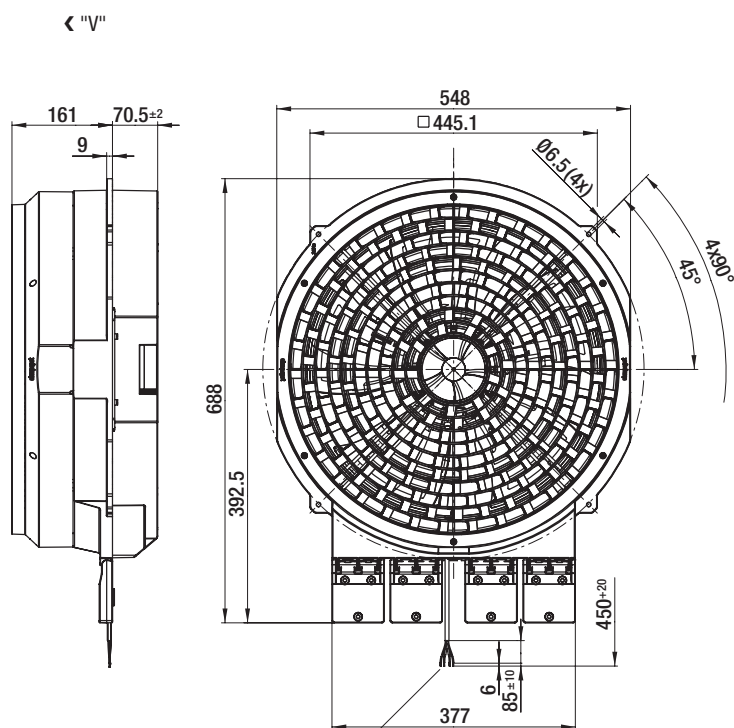
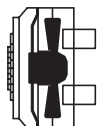
W3G 450-S002-30 (Version with air-guiding system)



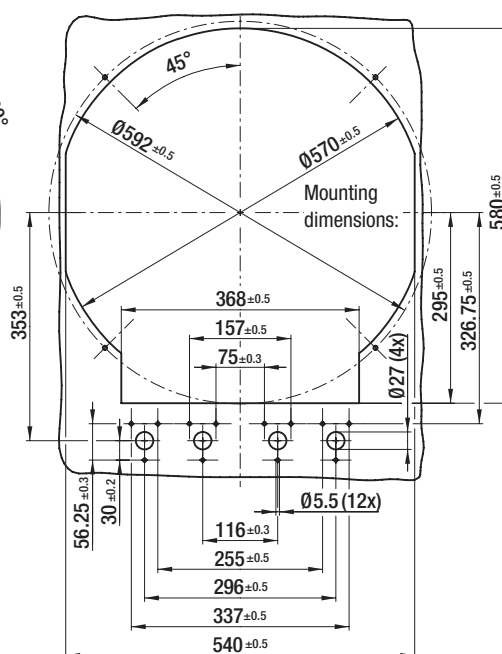
Cable: PVC 4G 0.5 mm²,
4x crimped splices



W3G 450-W002-30 (Version with hinge and air-guiding system)



Cable: PVC 4G 0.5 mm²,
4x crimped splices



EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

AC axial fans - AxiCool Ø 300-450

AC axial fans - AxiCool Ø 500-800

Technology

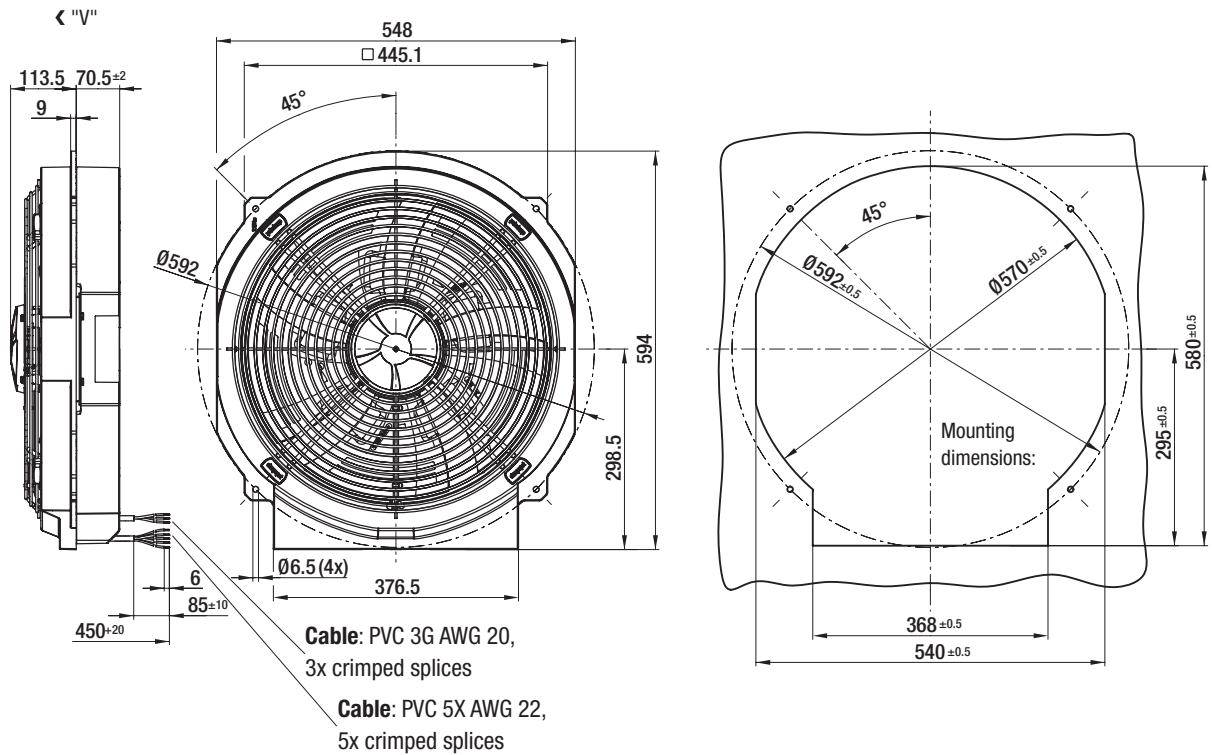
Agents

EC axial fans - AxiCool

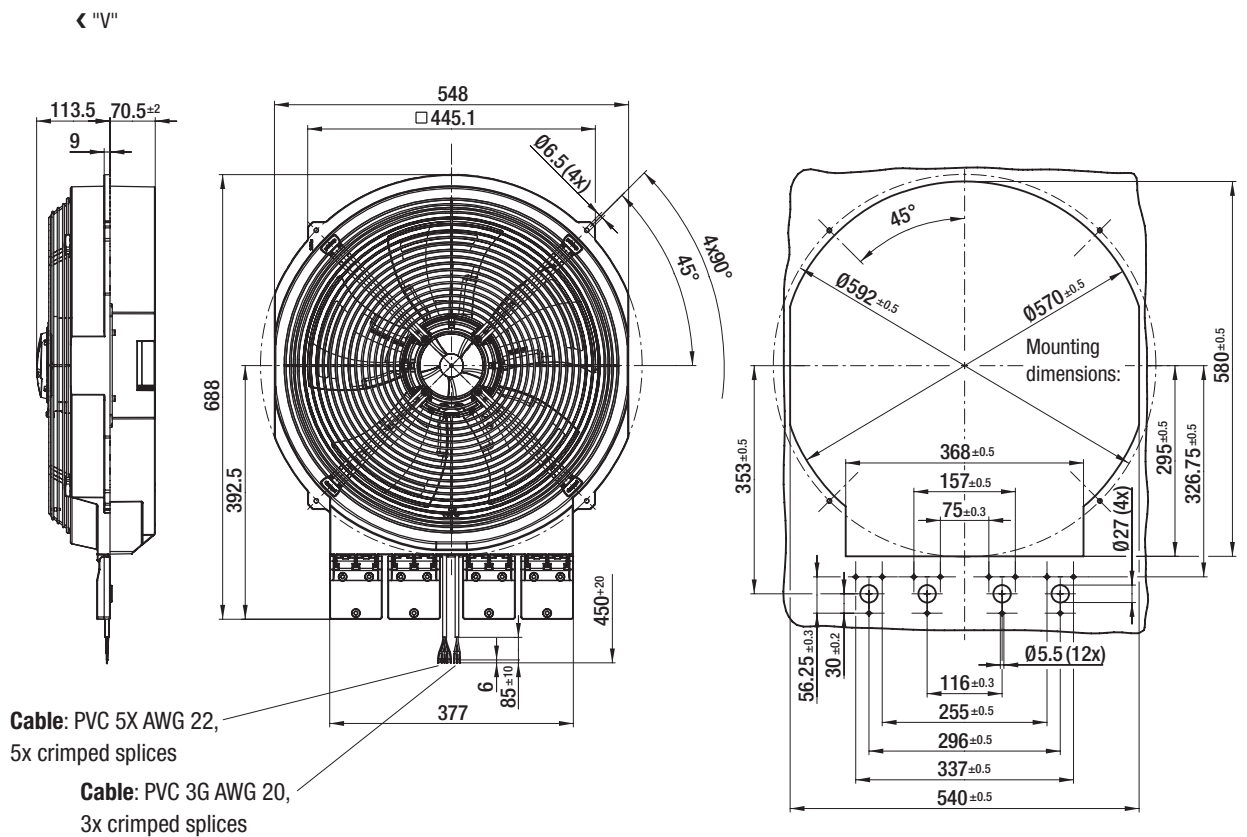
Ø 450



W3G 450-JC28-30 (Standard version)



W3G 450-TC28-30 (Standard version with hinge)



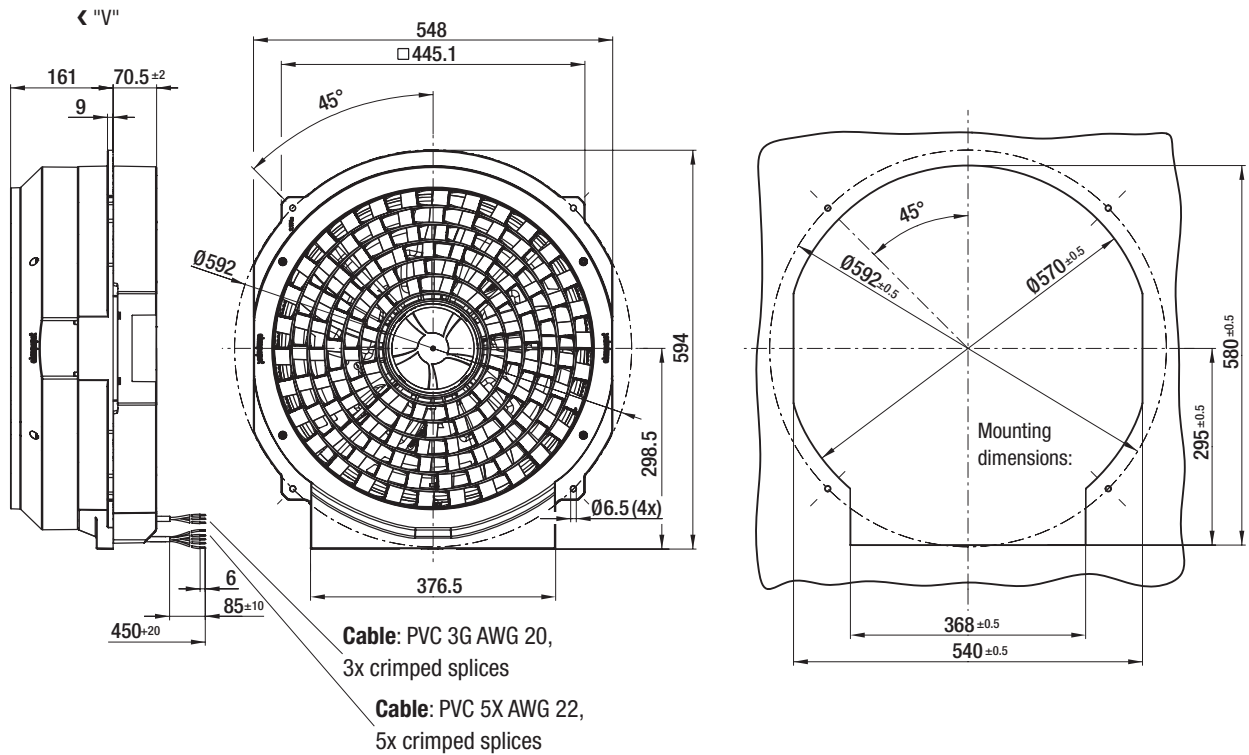
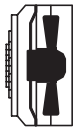
EC axial fans - AxiCool

Ø 450



Information

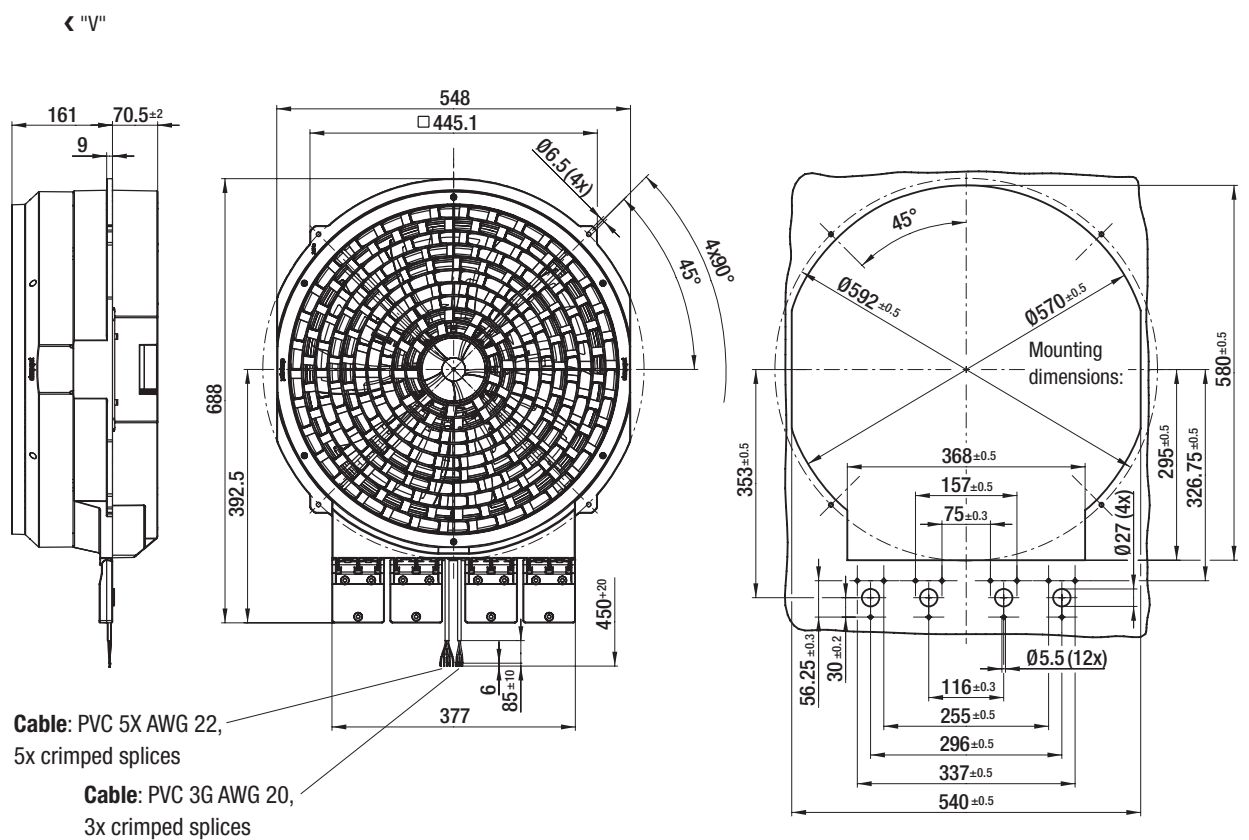
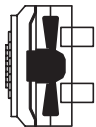
W3G 450-SC28-30 (Version with air-guiding system)



EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

W3G 450-WC28-30 (Version with hinge and air-guiding system)



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

Agents



EC axial fans - AxiCool

Ø 500 - Ø 800



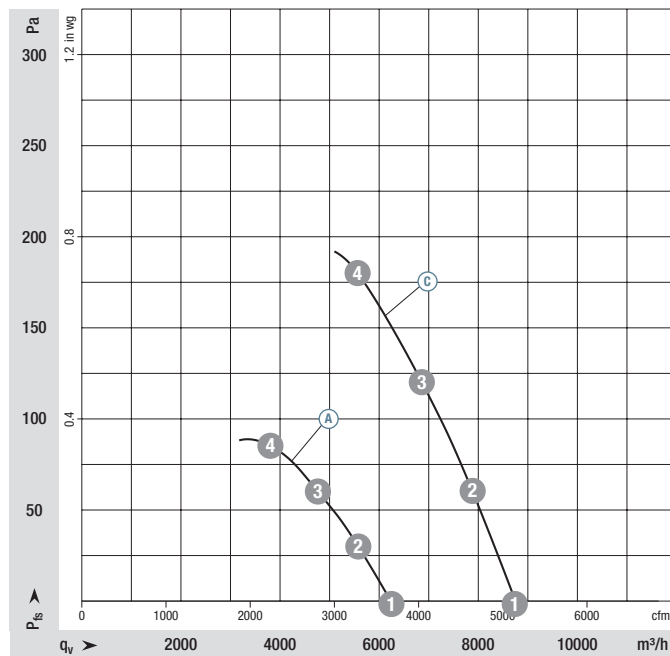


- **Material:** Guard grill: Steel, coated in black (RAL 9005)
Wall ring and guide vanes: Plastic PP
Blades: press-fitted sheet steel blank, over-molded with PP plastic
Rotor: Painted black
Electronics housing: Die-cast aluminium, painted black
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 55
- **Insulation class:** "F"
- **Installation position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensation drainage holes:** Rotor side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data		Curve	Nominal voltage-range	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Max. back pressure	Perm. ambient temp. ⁽²⁾	Techn. features and conn. diagram
Type	Motor		VAC	Hz	rpm	W	A	Pa	°C	
W3G 500	M3G 084-DF	Ⓐ	1~200-277	50/60	970	250	1,1	85	-40..+40	P. 89 / AX4)
W3G 500	M3G 084-GF	Ⓑ	3~380-480	50/60	1370	630	1,0	170	-40..+40	P. 90 / AX5)
W3G 500	M3G 084-GF	Ⓒ	1~200-277	50/60	1370	650	2,9	180	-40..+40	P. 88 / AX3)
W3G 500	M3G 112-GA	Ⓓ	3~380-480	50/60	1770	1300	2,1	300	-40..+40	P. 90 / AX5)

Subject to change

(1) Nominal data at operating point with maximum load and 230 or 400 VAC
(2) If there is a risk of ice formation, the fan is only to be operated with a heating tape in the fan housing. For more detailed information, consult ebm-papst.

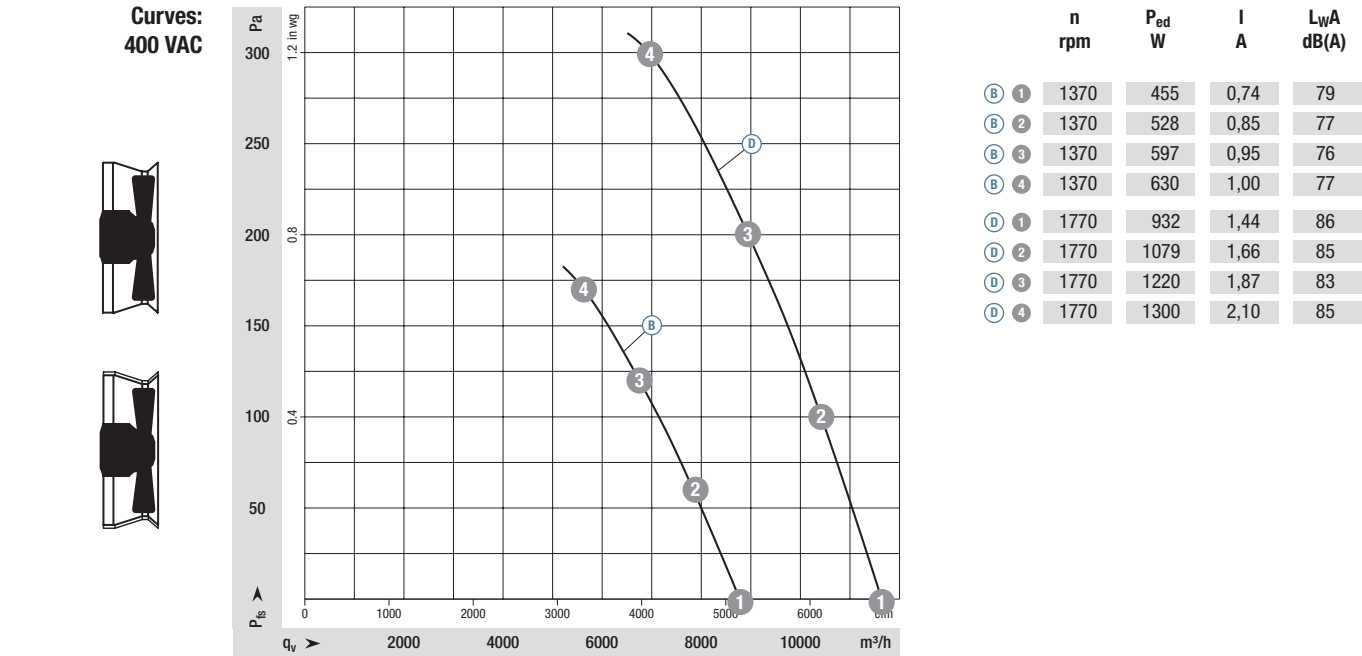
Curves:
230 VAC

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition. See P. 96 ff for detailed information.

	n rpm	P _{ed} W	I A	L _{WA} dB(A)
Ⓐ ①	970	170	0,75	72
Ⓐ ②	970	197	0,87	67
Ⓐ ③	970	223	0,98	65
Ⓐ ④	970	250	1,10	68
Ⓒ ①	1370	467	2,05	79
Ⓒ ②	1370	544	2,38	78
Ⓒ ③	1370	607	2,65	76
Ⓒ ④	1370	650	2,90	77

- **Technical features:** see connection diagram P. 88 ff.
- **Motor protection:** Thermal overload protector (TOP) internally connected
- **EMC:** Immunity to interference according to EN 61000-6-2 (industrial environment)
Interference emission according to EN 61000-6-4 (industrial environment), according to household appliance standard on request
Circuit feedback according to EN 61000-3-2
- **Touch current:** <= 3,5 mA
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 61800-5-1, CE
- **Approvals:** C22.2 Nr.77 + CAN/CSA-E60730-1, UL 1004-7 + 60730, EAC

Air flow direction	 "V"		 "V"	
	Standard version	Weight Standard kg	High-End version	Weight High-End kg
"V"	W3G 500-KK07 -G1	9,5	W3G 500-KK07 -G2	11,0
"V"	W3G 500-KM03 -M1	11,1	W3G 500-KM03 -M2	12,6
"V"	W3G 500-KM03 -I1	11,2	W3G 500-KM03 -I2	12,7
"V"	W3G 500-KD59 -O1	13,9	W3G 500-KD59 -O3	15,4



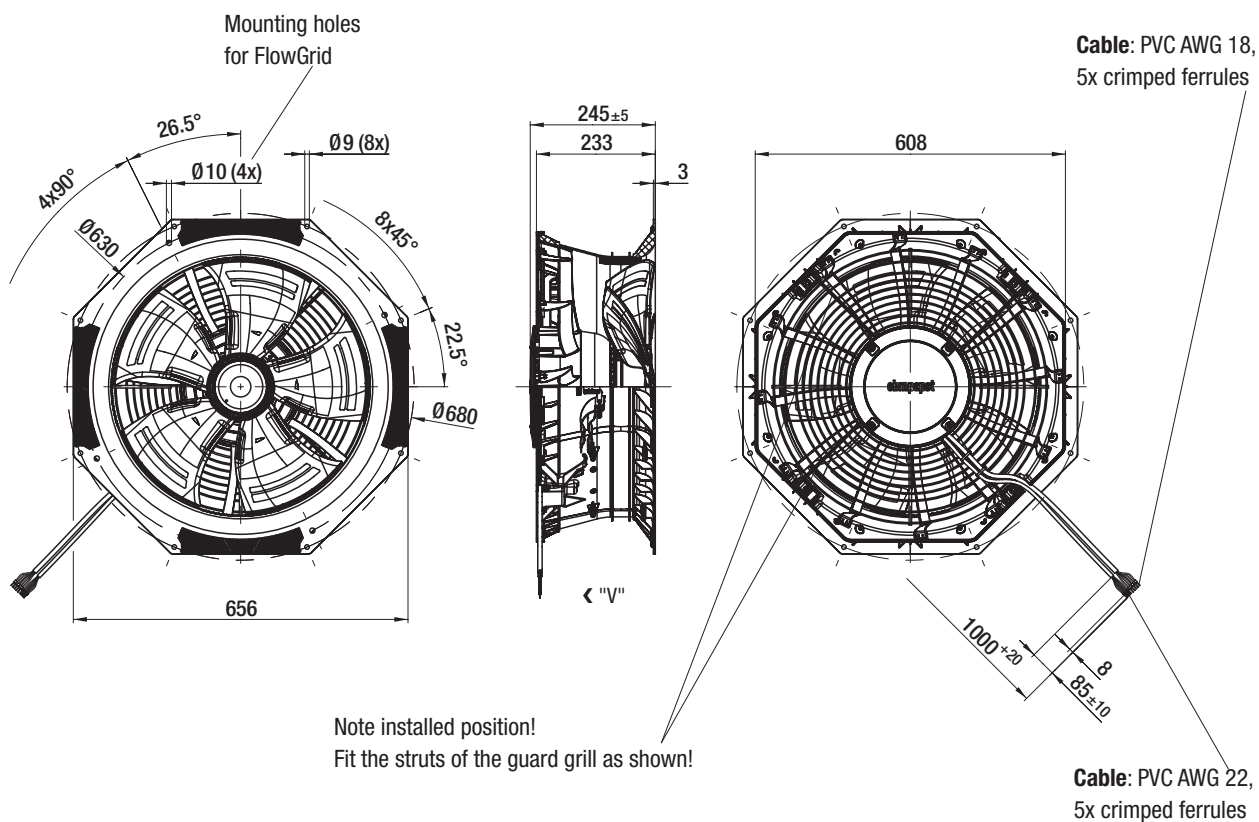
Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system.
Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

EC axial fans - AxiCool

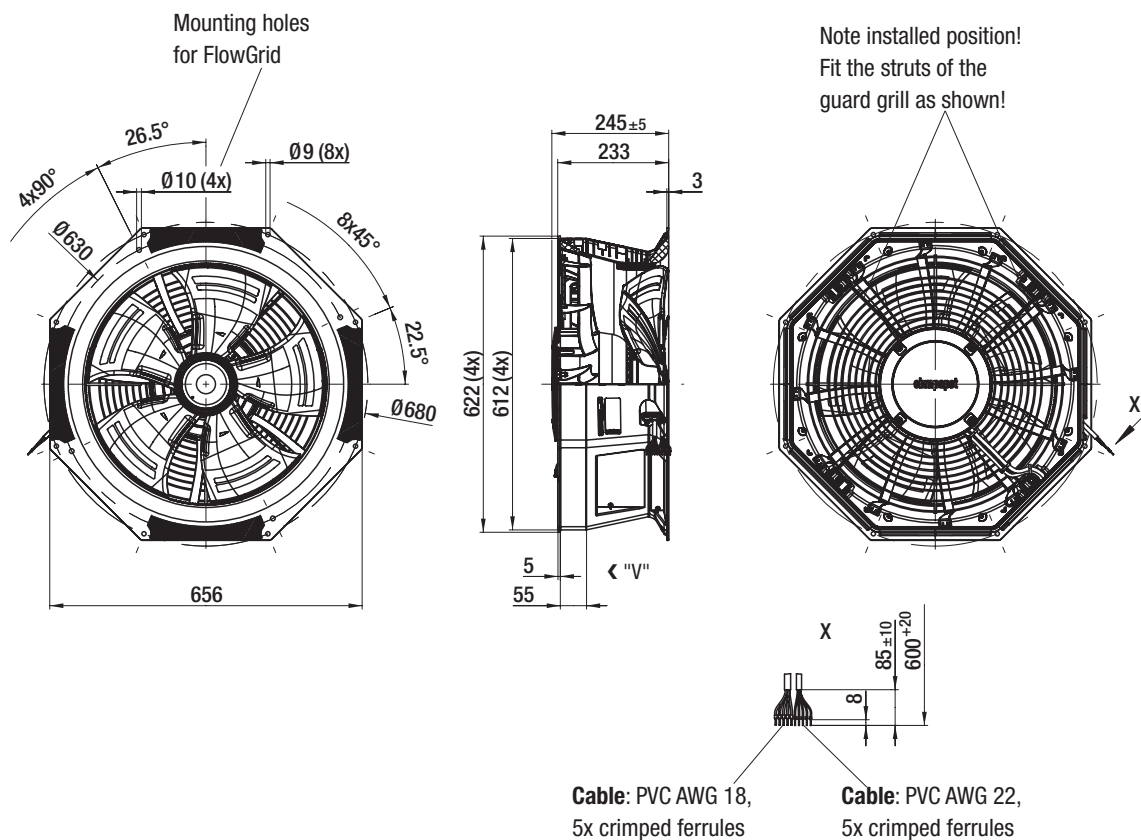
Ø 500



W3G 500-KK07-G1 (Standard version)



W3G 500-KK07-G2 (High-End version)



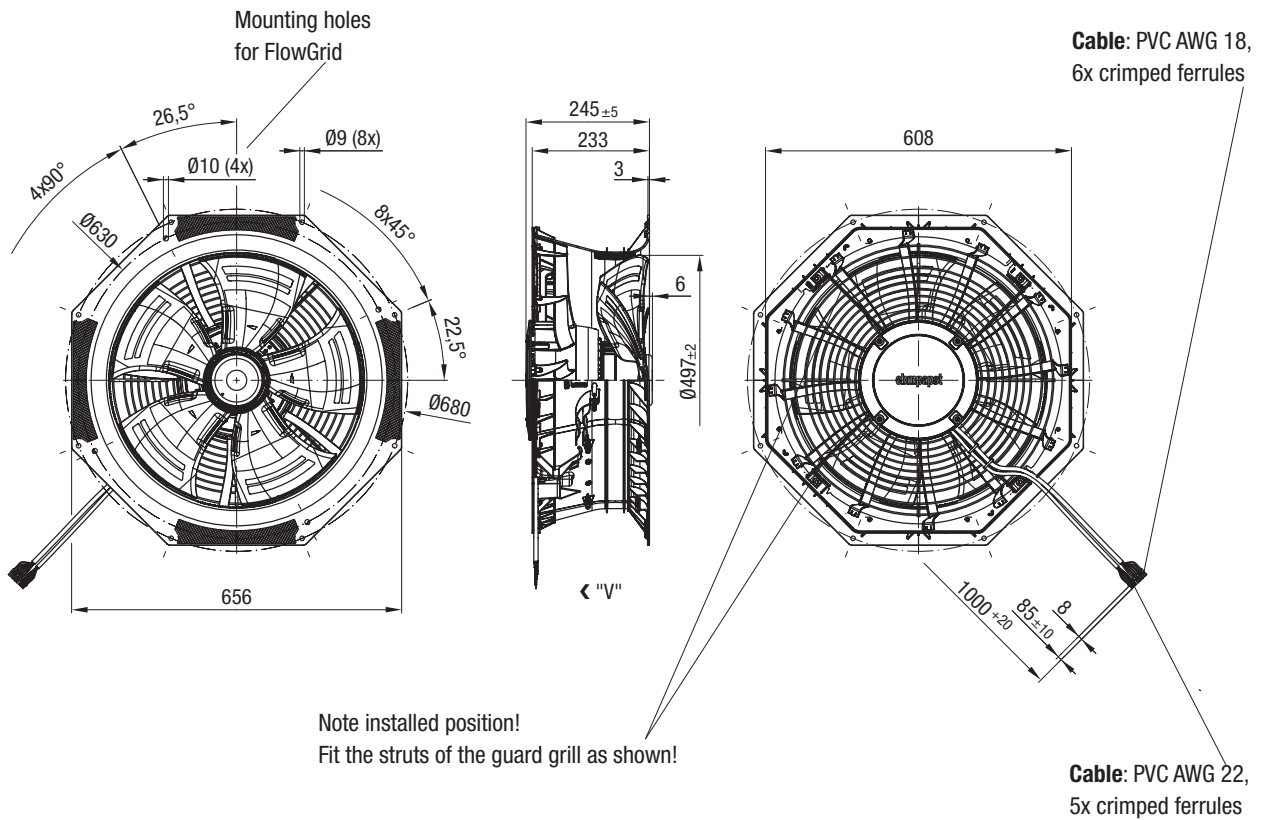
EC axial fans - AxiCool

Ø 500



Information

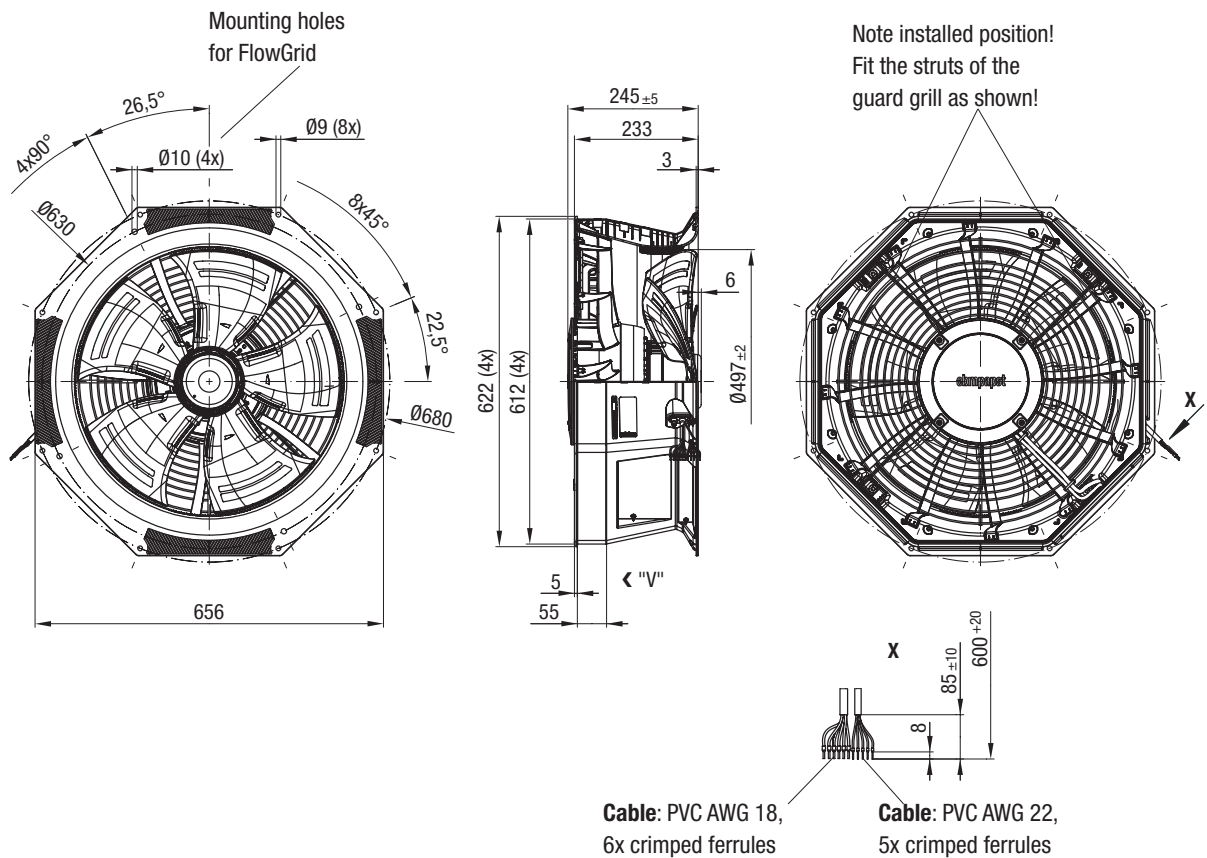
W3G 500-KM03-M1 (Standard version)



EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

W3G 500-KM03-M2 (High-End version)



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

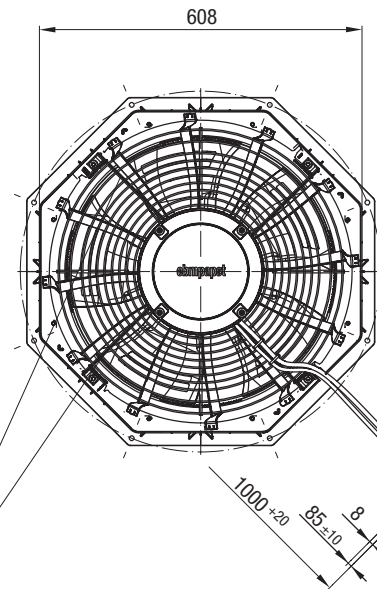
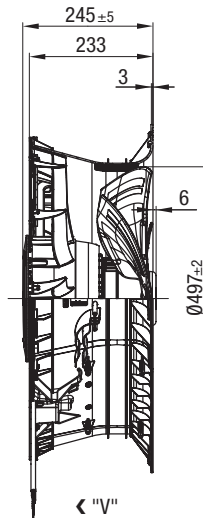
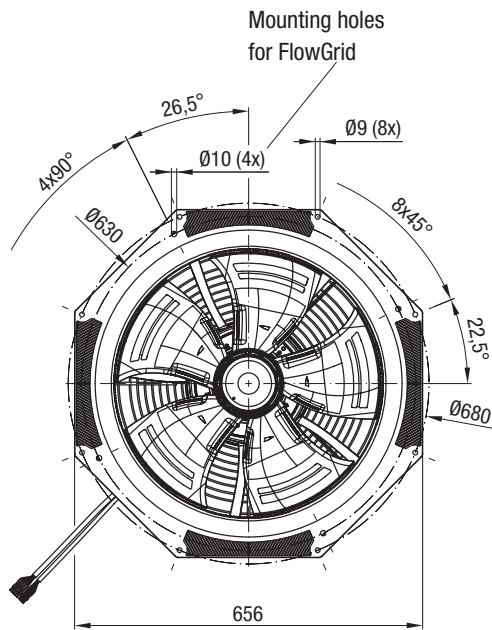
Agents

EC axial fans - AxiCool

Ø 500



W3G 500-KM03-I1 (Standard version)

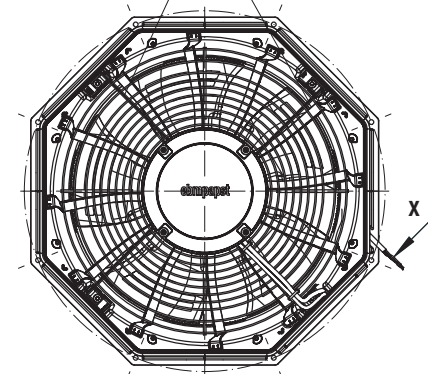
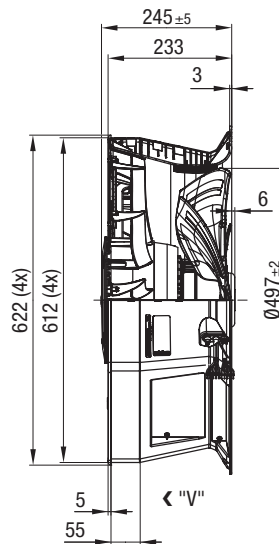
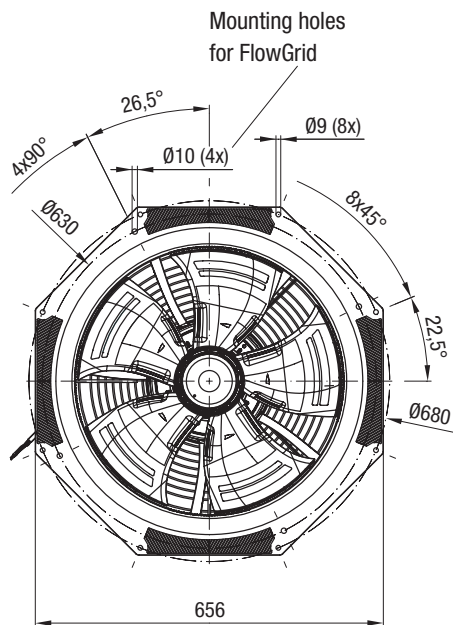


Cable: PVC AWG 18,
5x crimped ferrules

Note installed position!
Fit the struts of the guard grill as shown!

Cable: PVC AWG 22,
5x crimped ferrules

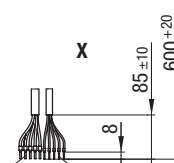
W3G 500-KM03-I2 (High-End version)



Note installed position!
Fit the struts of the
guard grill as shown!

Cable: PVC AWG 18,
5x crimped ferrules

Cable: PVC AWG 22,
5x crimped ferrules



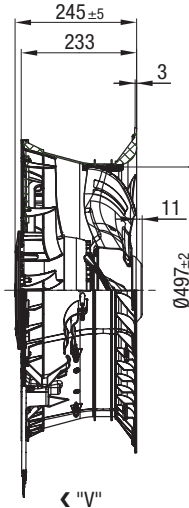
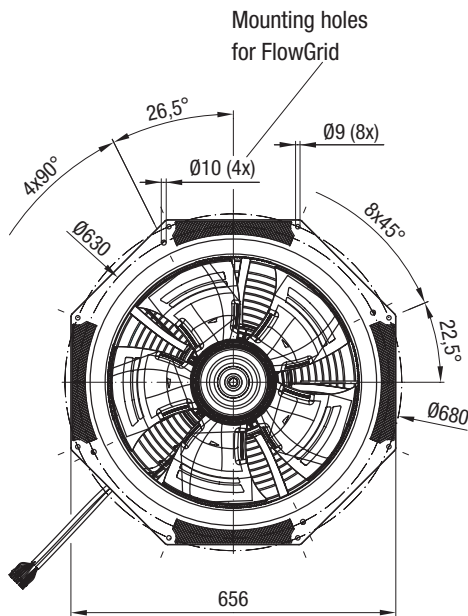
EC axial fans - AxiCool

Ø 500

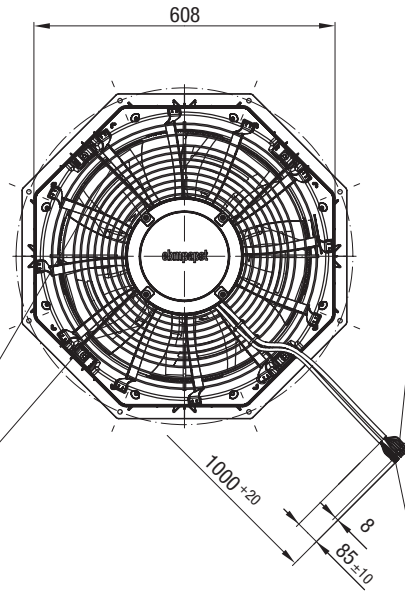


Information

W3G 500-KD59-01 (Standard version)



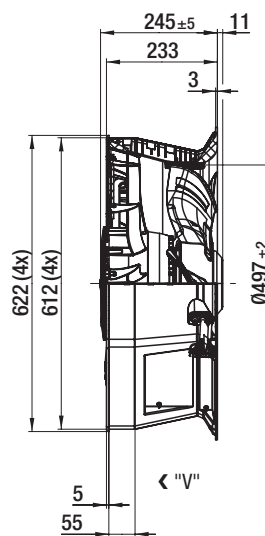
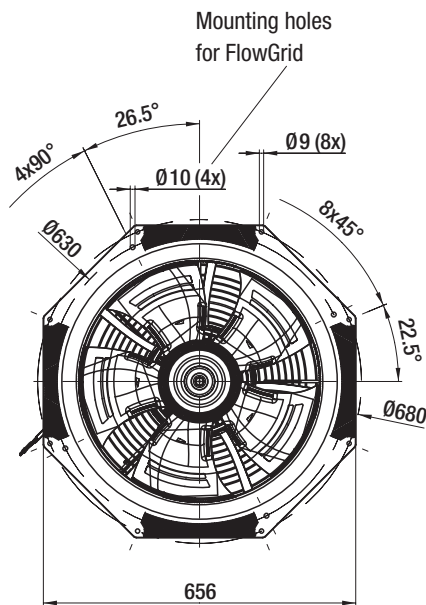
Cable: PVC AWG 18,
6x crimped ferrules



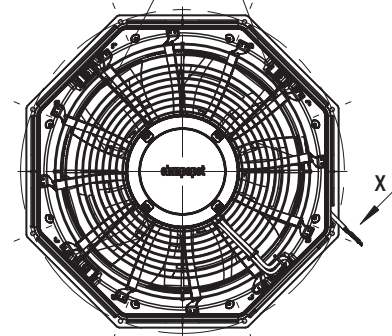
Note installed position!
Fit the struts of the guard grill as shown!

Cable: PVC AWG 22,
5x crimped ferrules

W3G 500-KD59-03 (High-End version)



Note installed position!
Fit the struts of the
guard grill as shown!



Cable: PVC AWG 18,
6x crimped ferrules

Cable: PVC AWG 22,
5x crimped ferrules

EC axial fans - AxiCool

Ø 630



- **Material:** Guard grill: Steel, coated in black (RAL 9005)
Wall ring and guide vanes: Plastic PP
Blades: press-fitted sheet steel blank, over-molded with PP plastic
Rotor: Painted black
Electronics housing: Die-cast aluminium, painted black
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 55
- **Insulation class:** "F"
- **Installation position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensation drainage holes:** Rotor side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data

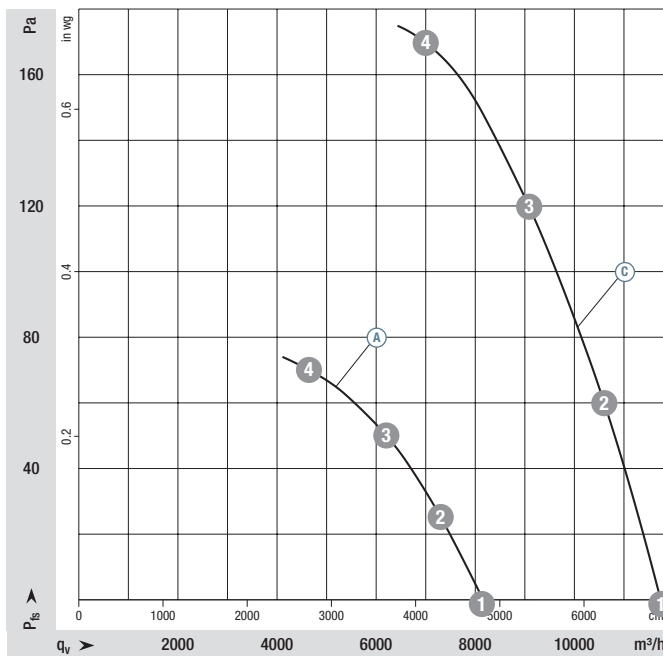
Type	Motor	Curve	Nominal voltage-range	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Max. back pressure	Perm. ambient temp. ⁽²⁾	Techn. features and conn. diagram
			VAC	Hz	rpm	W	A	Pa	°C	
W3G 630	M3G 084-FA	Ⓐ	1~200-277	50/60	770	220	0,95	70	-40..+40	P. 89 / AX4)
W3G 630	M3G 112-GA	Ⓑ	3~380-480	50/60	1000	640	1,0	150	-40..+40	P. 90 / AX5)
W3G 630	M3G 112-GA	Ⓒ	1~200-277	50/60	1020	710	3,1	170	-40..+40	P. 88 / AX3)

Subject to change

(1) Nominal data at operating point with maximum load and 230 or 400 VAC

(2) If there is a risk of ice formation, the fan is only to be operated with a heating tape in the fan housing. For more detailed information, consult ebm-papst.

Curves: 230 VAC



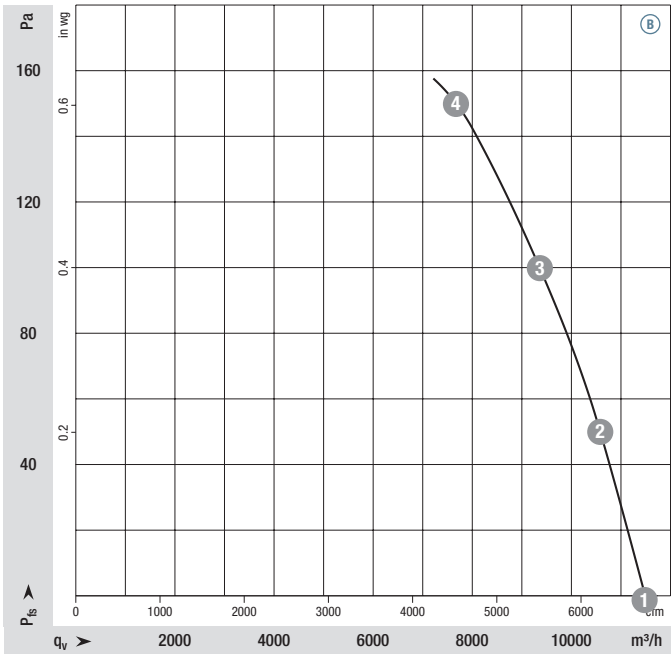
Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{wA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition. See P. 96 ff for detailed information.

	n rpm	P _{ed} W	I A	L _{wA} dB(A)
Ⓐ 1	770	153	0,68	63
Ⓐ 2	770	183	0,80	63
Ⓐ 3	770	209	0,91	66
Ⓐ 4	770	220	0,95	71
Ⓒ 1	1020	491	2,17	75
Ⓒ 2	1020	573	2,52	73
Ⓒ 3	1020	652	2,87	72
Ⓒ 4	1020	710	3,10	76

- **Technical features:** see connection diagram P. 88 ff.
- **Motor protection:** Thermal overload protector (TOP) internally connected
- **EMC:** Immunity to interference according to EN 61000-6-2 (industrial environment)
Interference emission according to EN 61000-6-4 (industrial environment), according to household appliance standard on request
Circuit feedback according to EN 61000-3-2
- **Touch current:** <= 3,5 mA
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 61800-5-1, CE
- **Approvals:** C22.2 Nr.77 + CAN/CSA-E60730-1, UL 1004-7 + 60730, EAC

Air flow direction		Weight Standard		Weight High-End
	Standard version	kg	High-End version	kg
"V"	W3G 630-KL06 -G1	---	W3G 630-KL06 -G2	---
"V"	W3G 630-KE55 -51	---	W3G 630-KE55 -53	---
"V"	W3G 630-KE55 -21	---	W3G 630-KE55 -23	---

Curves:
400 VAC



	n rpm	P _{ed} W	I A	L _{wA} dB(A)
Ⓑ ①	1000	460	0,74	75
Ⓑ ②	1000	522	0,83	73
Ⓑ ③	1000	586	0,93	71
Ⓑ ④	1000	640	1,00	73

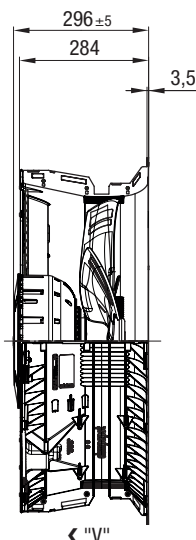
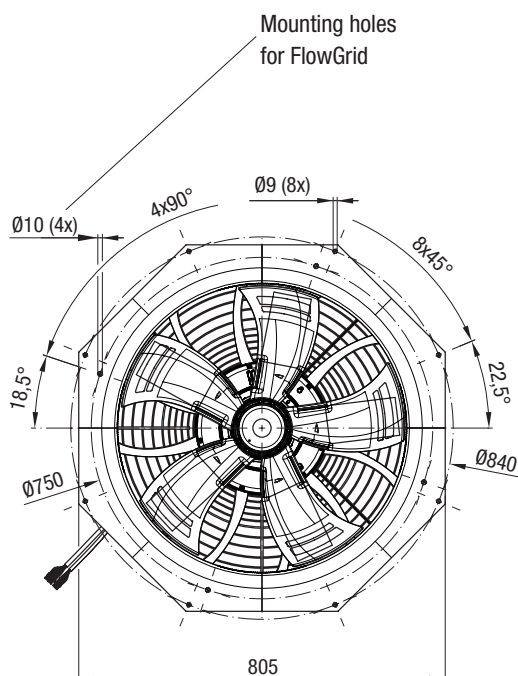
Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system.
Intake-side sound level: L_{wA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

EC axial fans - AxiCool

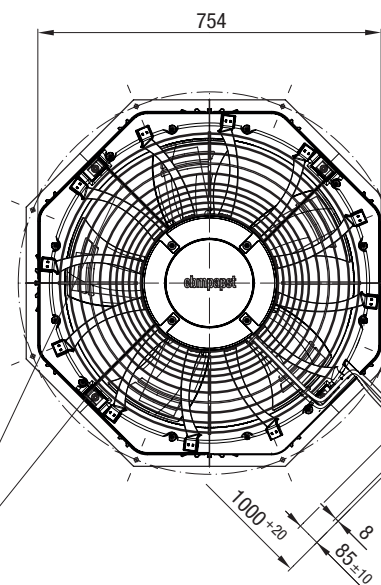
Ø 630



W3G 630-KL06-G1 (Standard version)



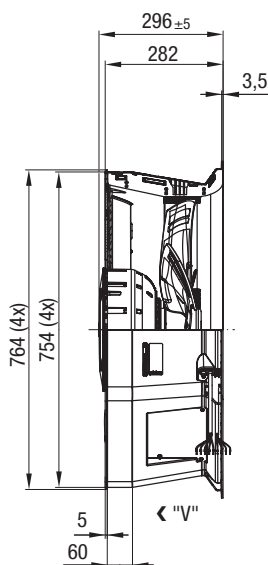
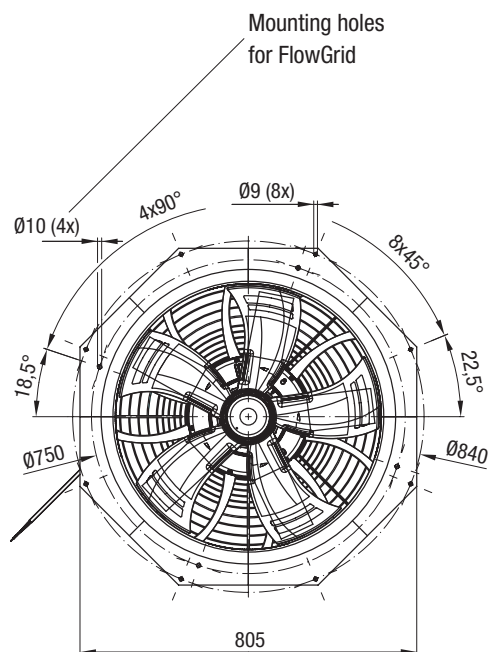
Cable: PVC AWG 18,
5x crimped ferrules



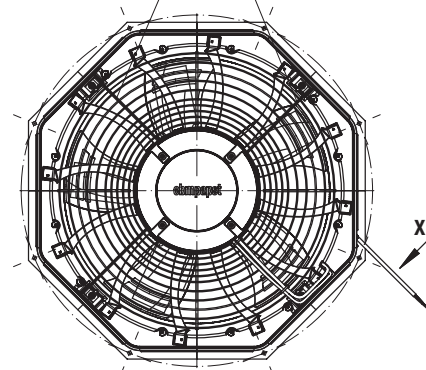
Note installed position!
Fit the struts of the guard grill as shown!

Cable: PVC AWG 22,
5x crimped ferrules

W3G 630-KL06-G2 (High-End version)

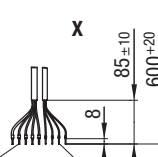


Note installed position!
Fit the struts of the
guard grill as shown!



Cable: PVC AWG 18,
5x crimped ferrules

Cable: PVC AWG 22,
5x crimped ferrules



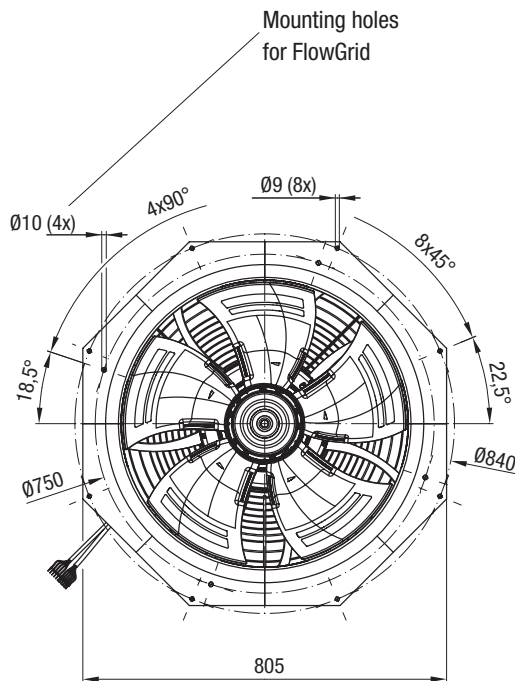
EC axial fans - AxiCool

Ø 630

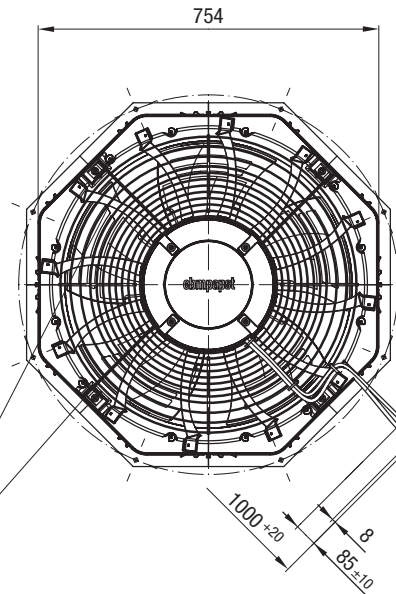
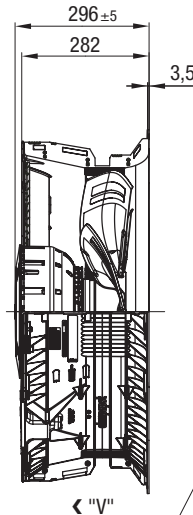


Information

W3G 630-KE55-51 (Standard version)



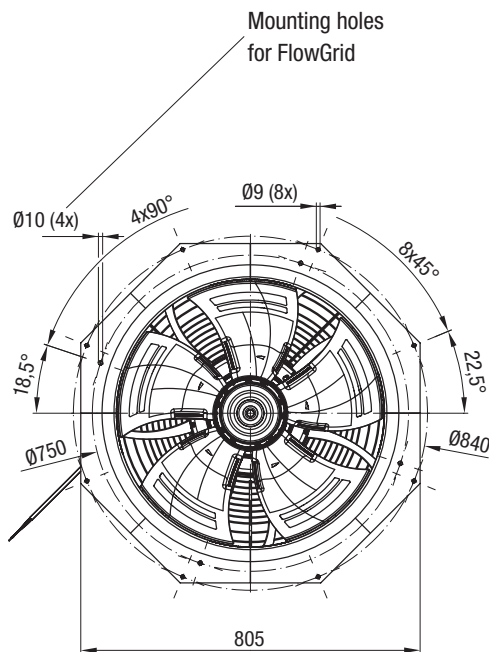
Cable: PVC AWG 22,
5x crimped ferrules



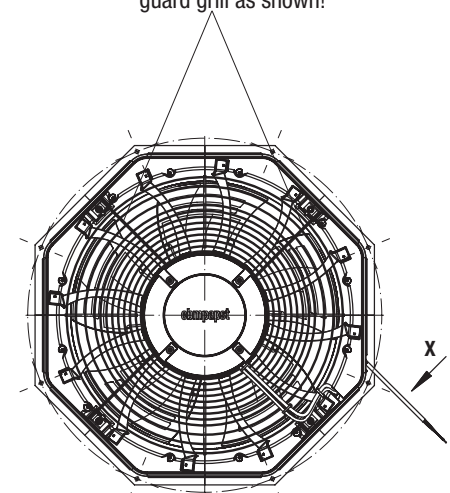
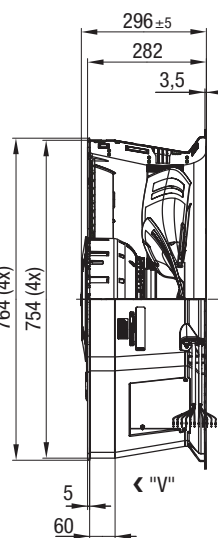
Note installed position!
Fit the struts of the guard grill as shown!

Cable: PVC AWG 18,
6x crimped ferrules

W3G 630-KE55-53 (High-End version)



Note installed position!
Fit the struts of the
guard grill as shown!



Cable: PVC AWG 22,
5x crimped ferrules

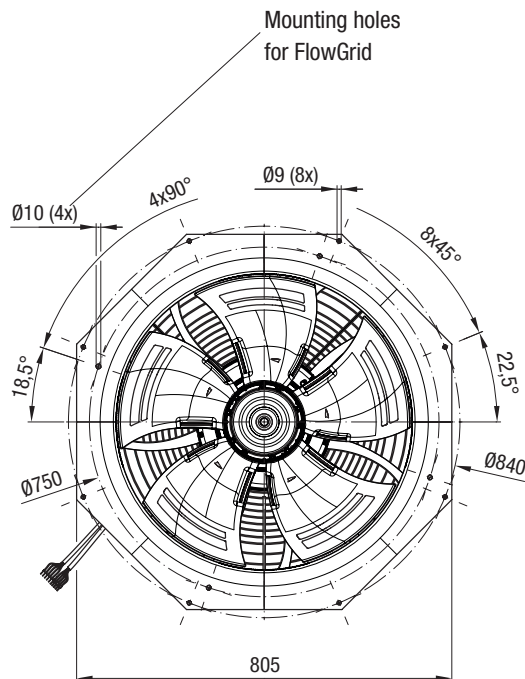
Cable: PVC AWG 18,
6x crimped ferrules

EC axial fans - AxiCool

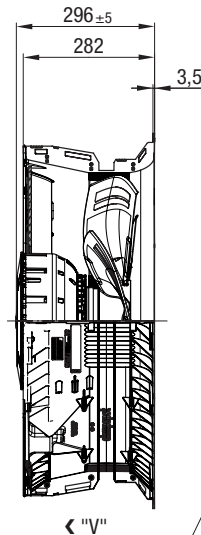
Ø 630



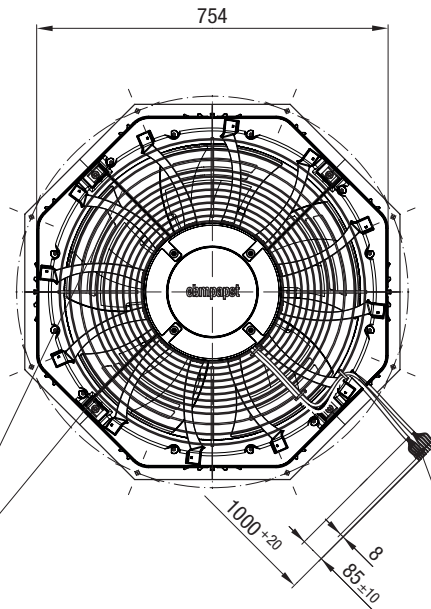
W3G 630-KE55-21 (Standard version)



Mounting holes
for FlowGrid



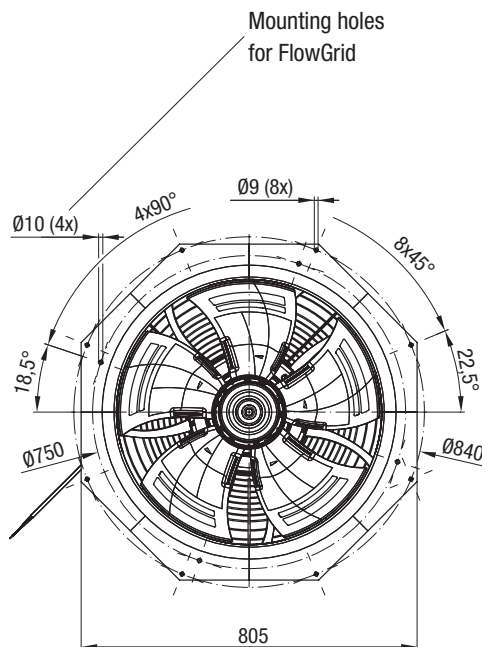
Cable: PVC AWG 22,
5x crimped ferrules



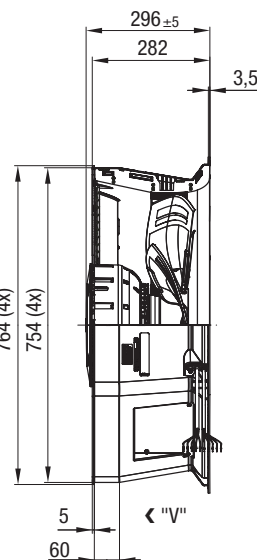
Note installed position!
Fit the struts of the guard grill as shown!

Cable: PVC AWG 18,
5x crimped ferrules

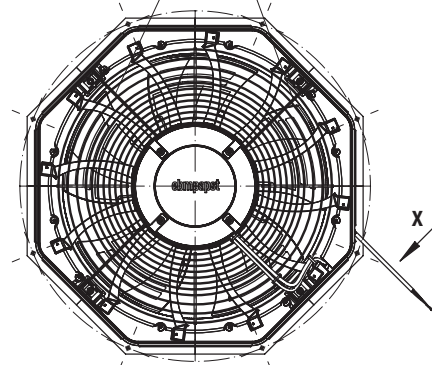
W3G 630-KE55-23 (High-End version)



Mounting holes
for FlowGrid



Note installed position!
Fit the struts of the
guard grill as shown!



Cable: PVC AWG 18,
5x crimped ferrules

Cable: PVC AWG 22,
5x crimped ferrules

Agents	Technology	AC axial fans - AxiCool Ø 500-800	AC axial fans - AxiCool Ø 300-450	EC axial fans - AxiCool Ø 500-800	EC axial fans - AxiCool Ø 300-450	Information
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EC axial fans - AxiCool

Ø 800



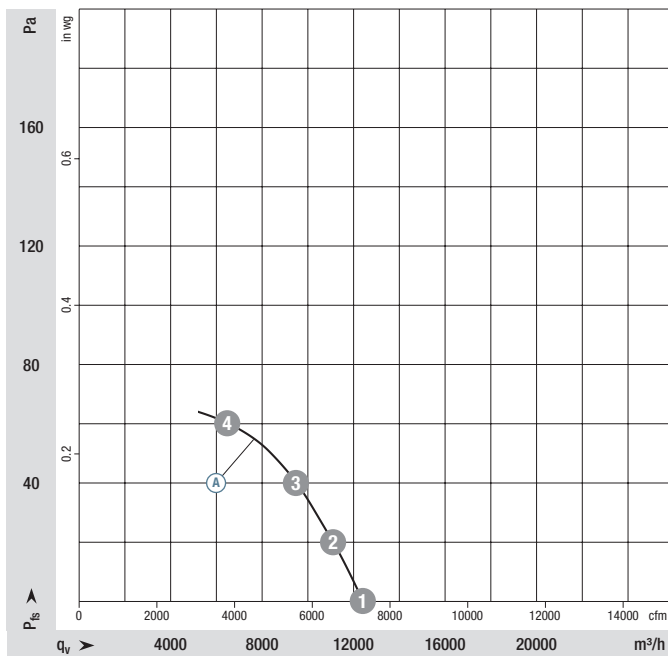
- **Material:** Guard grill: Steel, coated in black (RAL 9005)
Wall ring and guide vanes: Plastic PP
Blades: (A) (B) (C) press-fitted sheet steel blank, over-molded with PP plastic
(D) screwed-on solid PP impeller
Rotor: Painted black
Electronics housing: Die-cast aluminium, painted black
- **Number of blades:** 5
- **Direction of rotation:** Clockwise viewed toward rotor
- **Degree of protection:** IP 55
- **Insulation class:** „F“
- **Installation position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensation drainage holes:** Rotor side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data		Curve	Nominal voltage-range	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Max. back pressure	Perm. ambient temp. ⁽²⁾	Techn. features and conn. diagram
Type	Motor	VAC	Hz	rpm	W	A	Pa	°C		
W3G 800	M3G 112-EA	(A) 1~200-277	50/60	520	260	1,15	60	-40..+40		P. 89 / AX4)
W3G 800	M3G 112-GA	(B) 3~380-480	50/60	720	660	1,00	110	-40..+40		P. 90 / AX5)
W3G 800	M3G 112-IA	(C) 3~380-480	50/60	780	830	1,29	135	-40..+40		P. 90 / AX5)
W3G 800	M3G 150-FF	(D) 3~380-480	50/60	930	1570	2,50	190	-40..+40		P. 91 / AX6)

Subject to change

(1) Nominal data at operating point with maximum load and 230 or 400 VAC
(2) If there is a risk of ice formation, the fan is only to be operated with a heating tape in the fan housing. For more detailed information, consult ebm-papst.

Curves:
230 VAC



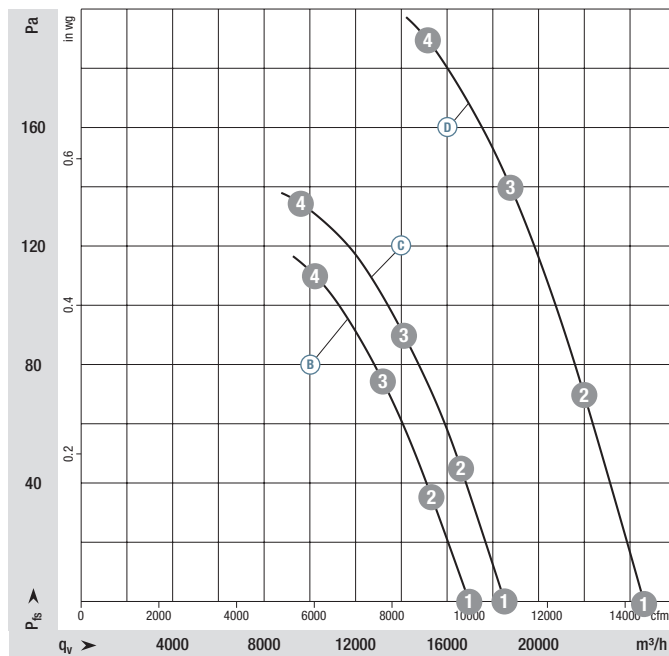
	n rpm	P _{ed} W	I A	L _{WA} dB(A)
(A) 1	520	170	0,75	59
(A) 2	520	204	0,90	60
(A) 3	520	232	1,02	60
(A) 4	520	260	1,15	69

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system.
Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

- **Technical features:** see connection diagram P. 89 ff.
- **Motor protection:** Thermal overload protector (TOP) internally connected
- **EMC:** Immunity to interference according to EN 61000-6-2 (industrial environment)
Interference emission according to EN 61000-6-4 (industrial environment), according to household appliance standard on request
Circuit feedback according to EN 61000-3-2
- **Touch current:** $\leq 3,5$ mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 61800-5-1, CE
- **Approvals:** (A) (B) (C) C22.2 Nr.77 + CAN/CSA-E60730-1, UL 1004-7 + 60730, EAC
(D) EAC



	Standard version	kg	High-End version	kg
"V"	W3G 800-NB86 -41	26,4	W3G 800-NB86 -43	30,0
"V"	W3G 800-NE57 -51	28,4	W3G 800-NE57 -53	32,0
"V"	W3G 800-NH94 -01	28,4	W3G 800-NH94 -03	32,0
"V"	W3G 800-NS26 -71	39,2	W3G 800-NS26 -73	42,4

Curves:
400 VAC

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{wA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.

See P. 96 ff for detailed information.

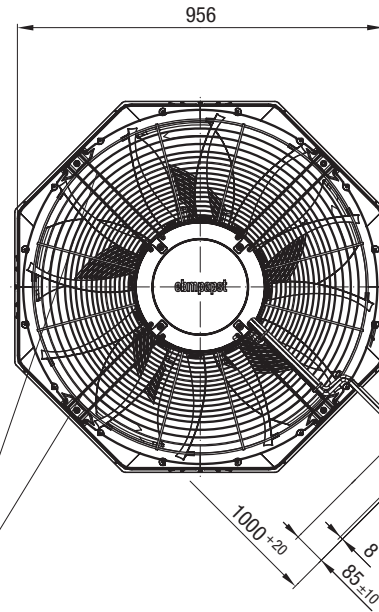
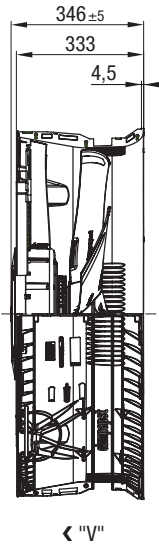
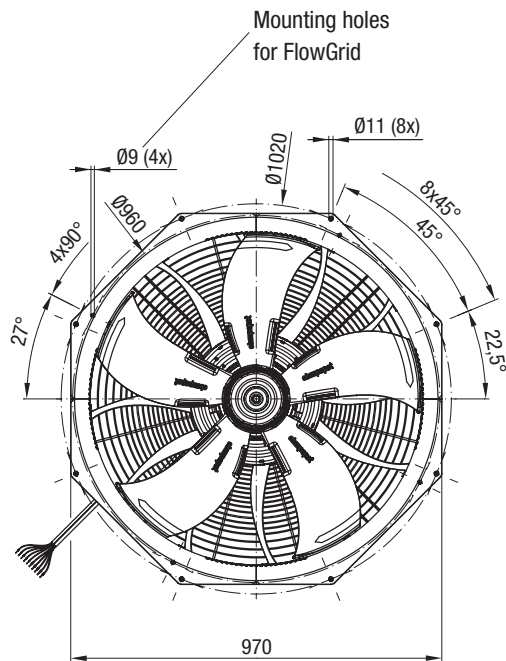
	n rpm	P_{ed} W	I A	L_{wA} dB(A)
(B) 1	720	404	0,66	70
(B) 2	720	487	0,78	69
(B) 3	720	571	0,90	70
(B) 4	720	660	1,00	77
(C) 1	780	537	0,86	71
(C) 2	780	653	1,03	70
(C) 3	780	744	1,16	70
(C) 4	780	830	1,29	83
(D) 1	930	1179	1,93	77
(D) 2	930	1365	2,19	76
(D) 3	930	1526	2,43	79
(D) 4	930	1570	2,50	86

EC axial fans - AxiCool

Ø 800



W3G 800-NE57-51 / W3G 800-NH94-01 / W3G 800-NB86-41 (Standard version)

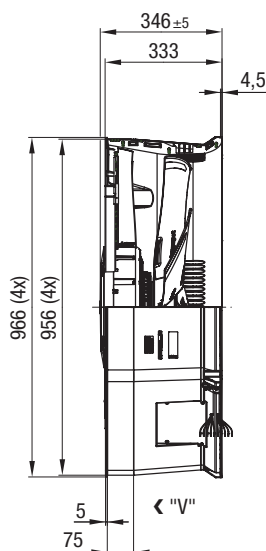
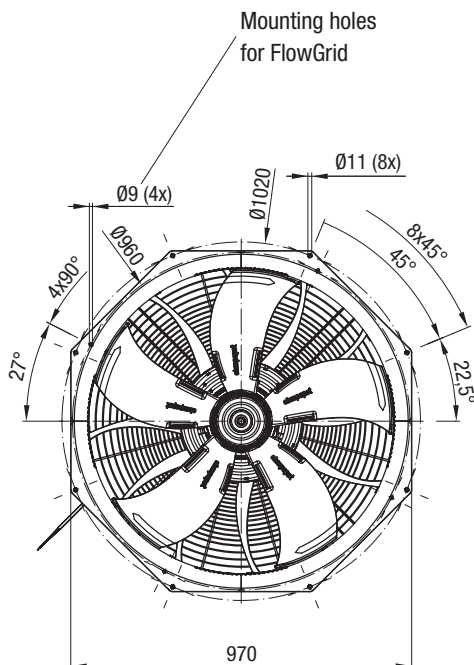


Note installed position!
Fit the struts of the guard grill as shown!

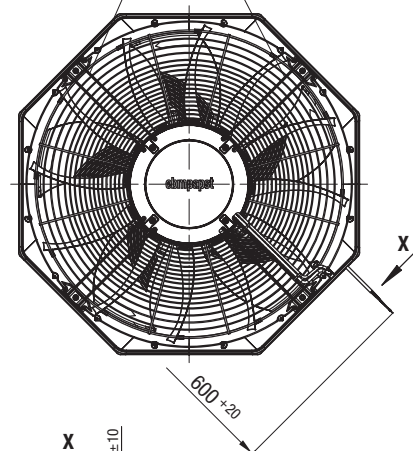
Cable 3~: PVC AWG 18,
6x crimped ferrules
Cable 1~: PVC AWG 18,
5x crimped ferrules

Cable: PVC AWG 22,
5x crimped ferrules

W3G 800-NE57-53 / W3G 800-NH94-03 / W3G 800-NB86-43 (High-End version)



Note installed position!
Fit the struts of the
guard grill as shown!



Cable 3~: PVC AWG 18,
6x crimped ferrules
Cable 1~: PVC AWG 18,
5x crimped ferrules

Cable: PVC AWG 22,
5x crimped ferrules

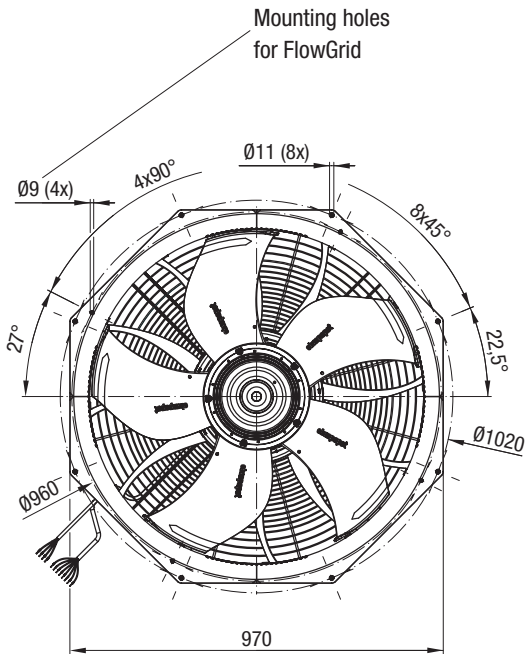
EC axial fans - AxiCool

Ø 800



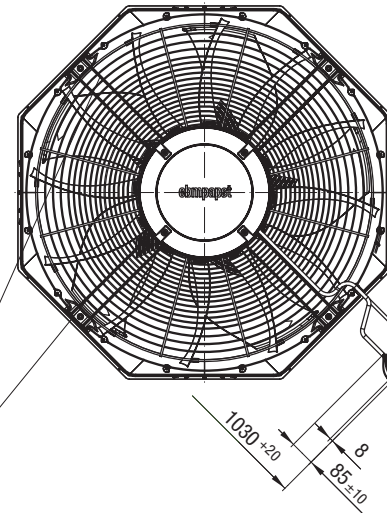
Information

W3G 800-NS26-71 (Standard version)



Cable: Silikon 4G 1.5 mm²,
4x crimped ferrules

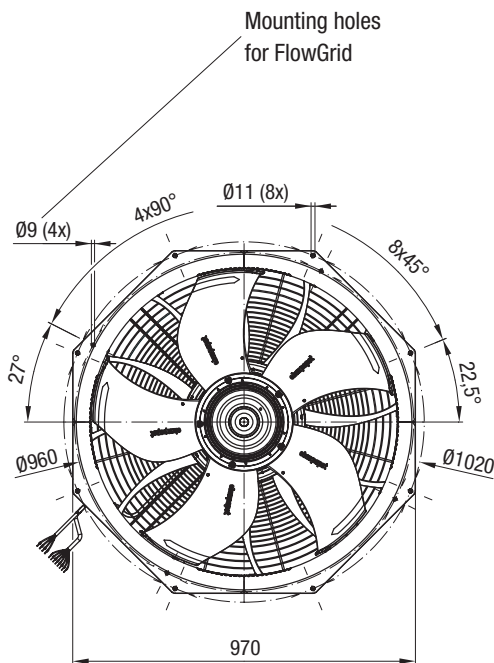
Note installed position!
Fit the struts of the guard grill as shown!



EC axial fans - AxiCool
Ø 300-450

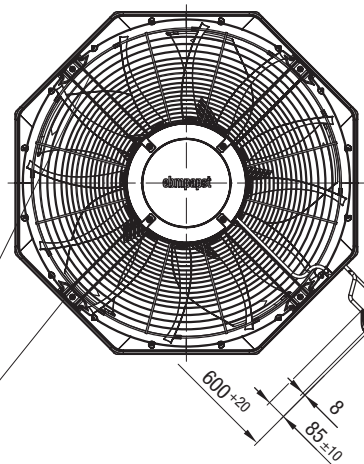
EC axial fans - AxiCool
Ø 500-800

W3G 800-NS26-73 (High-End version)



Cable: Silikon 4G 1.5 mm²,
4x crimped ferrules

Note installed position!
Fit the struts of the guard grill as shown!



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

Agents

AC axial fans - AxiCool

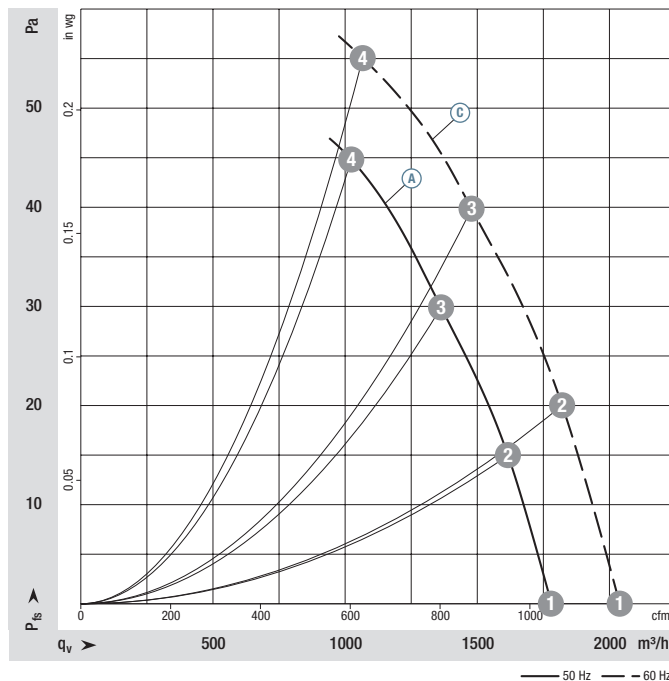
Ø 300 - Ø 450





- **Material:** Guard grill / support bracket: Steel, phosphated and coated in black (RAL 9005)
Wall ring, air-guiding system and blades: Plastic PP
Rotor: Painted in black
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 44, depending on installation and position (acc. to EN 60034-5)
- **Insulation class:** "B"
- **Installation position:** Shaft horizontal or rotor on top, rotor on bottom on request
- **Condensation drainage holes:** None
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

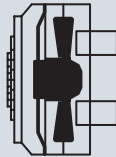
Nominal data		Curve	Nominal voltage	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Capacitor	Max. back pressure	Perm. ambient temp.	Conn. diagram
Type	Motor		VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	
W4E 300	M4E 068-CF	A	1~230	50	1320	72	0,32	2,0/400	45	-40..+50	P. 92 / AX7)
		B	1~230	50	1320	72	0,32	2,0/400	40	-40..+50	
		C	1~230	60	1500	90	0,40	2,0/400	55	-40..+50	
		D	1~230	60	1500	90	0,40	2,0/400	50	-40..+50	
Subject to change		(1) Nominal data at operating point with maximum load and 230 VAC									

Curves:
Standard

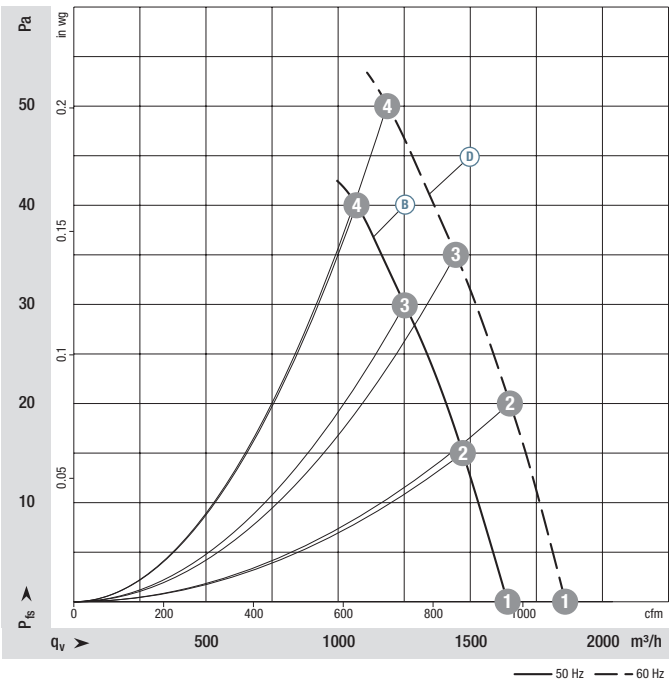
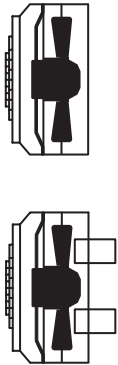
	n rpm	P _{ed} W	I A	L _{WA} dB(A)
A 1	1370	62	0,29	63
A 2	1355	65	0,29	61
A 3	1330	68	0,30	59
A 4	1320	72	0,32	61
C 1	1570	79	0,34	66
C 2	1530	83	0,36	64
C 3	1510	88	0,38	62
C 4	1500	90	0,40	63

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: L_{WA} according to ISO 13347, L_{PA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

- **Motor protection:** Thermal overload protector (TOP) internally connected
- **Touch current:** < 0,75 mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60335-1, CE

Air flow direction		Weight Standard		Weight Standard with hinge		Weight with air-guiding system		Weight with hinge and air-guiding system
	< "V"		< "V"		< "V"		< "V"	
	Standard version	kg	Standard version with hinge	kg	Version with air-guiding system	kg	Version with hinge and air-guiding system	kg
"V"	W4E 300-JS72 -30	3,0	W4E 300-TS72 -30	3,1	W4E 300-SS72 -30	3,7	W4E 300-WS72 -30	3,9

Curves:
with air-guiding
system



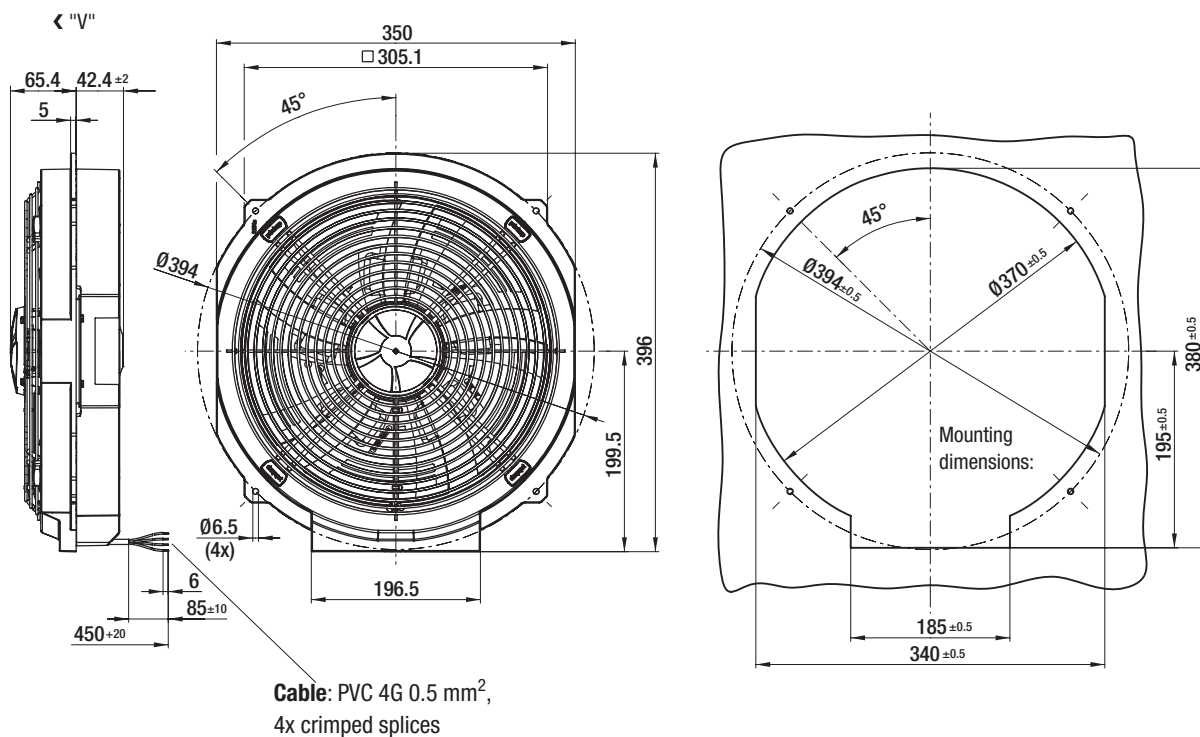
Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition. See P. 96 ff for detailed information.

AC axial fans - AxiCool

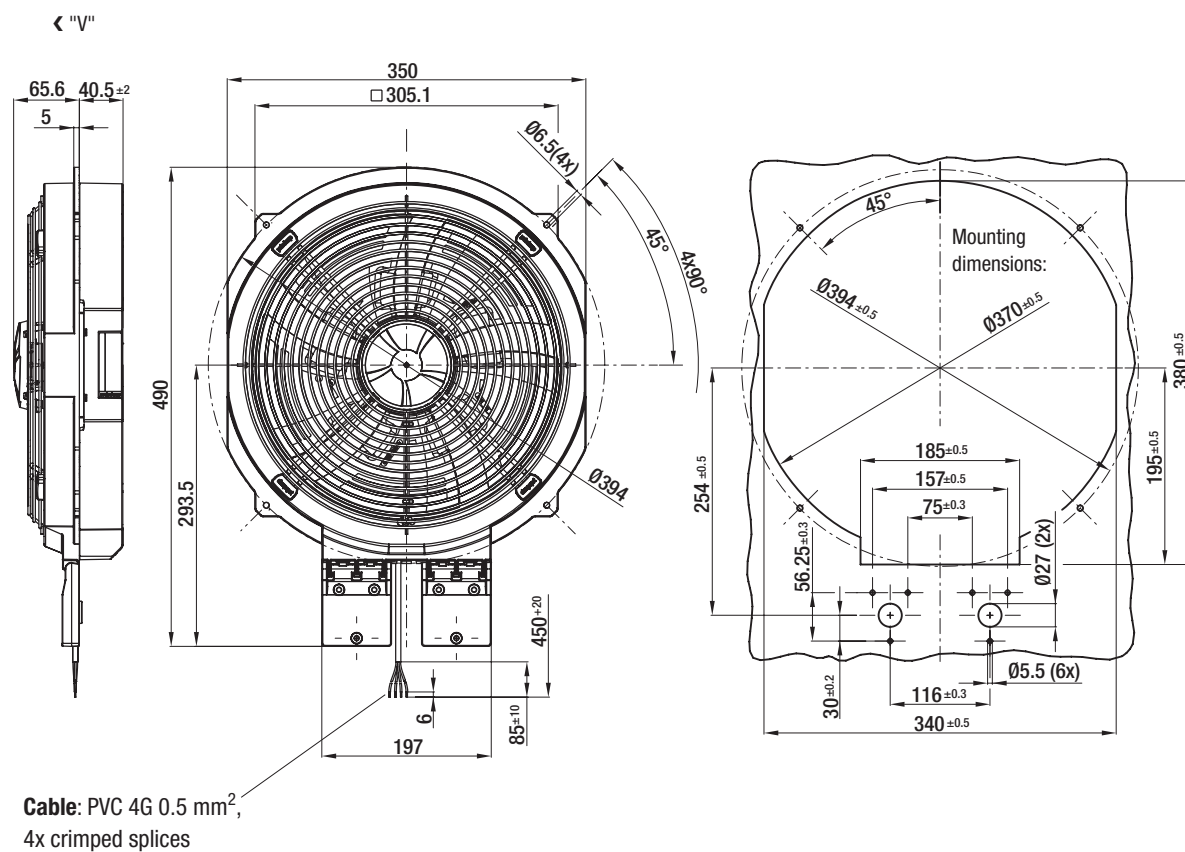
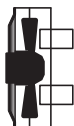
Ø 300



W4E 300-JS72-30 (Standard version)



W4E 300-TS72-30 (Standard version with hinge)



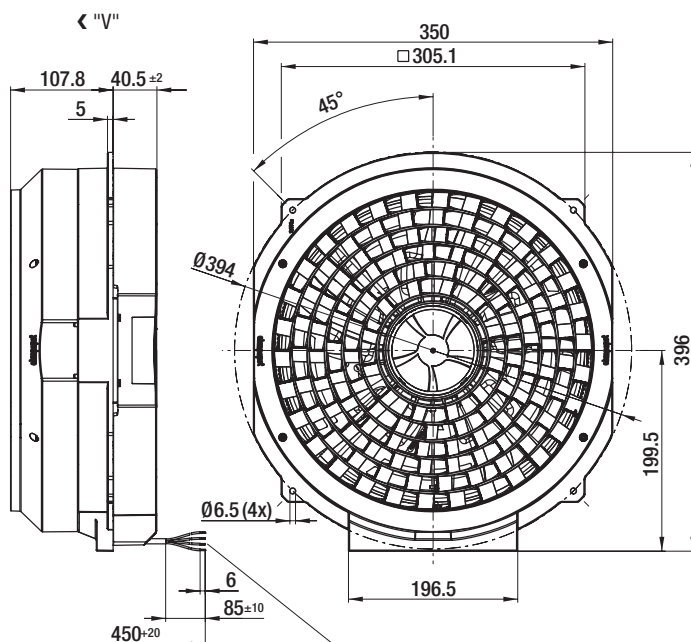
AC axial fans - AxiCool

Ø 300

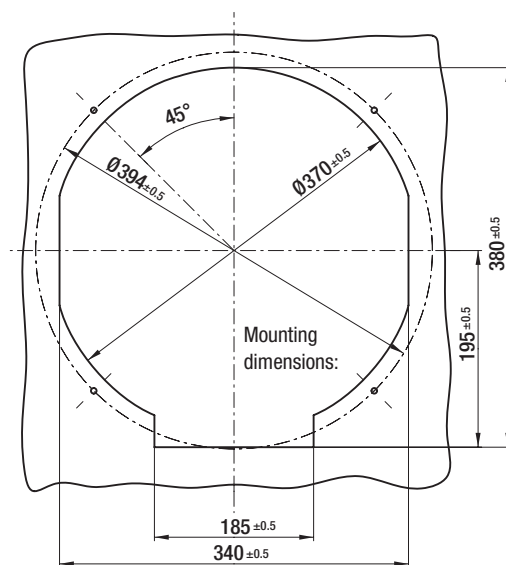


Information

W4E 300-SS72-30 (Version with air-guiding system)



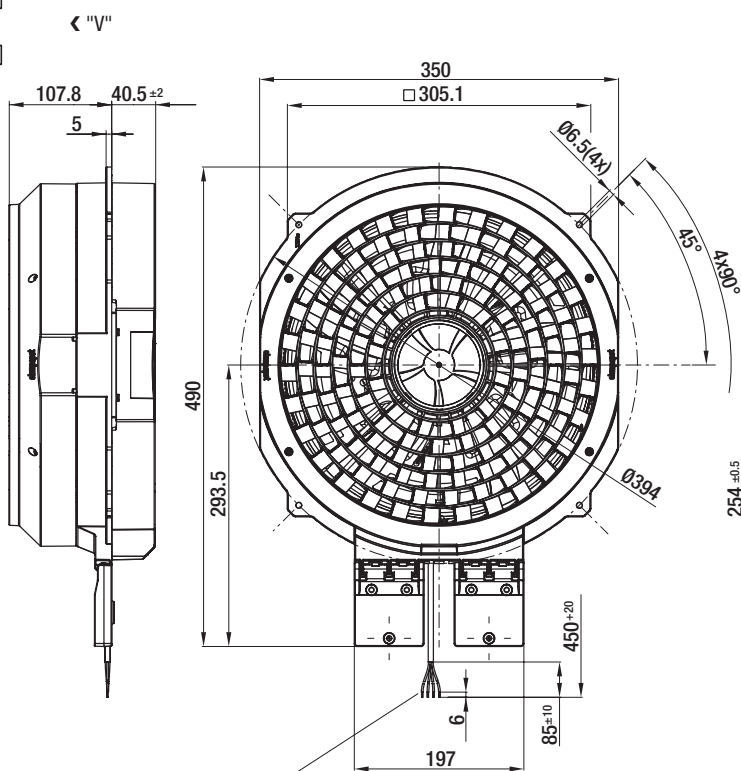
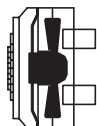
Cable: PVC 4G 0.5 mm²,
4x crimped splices



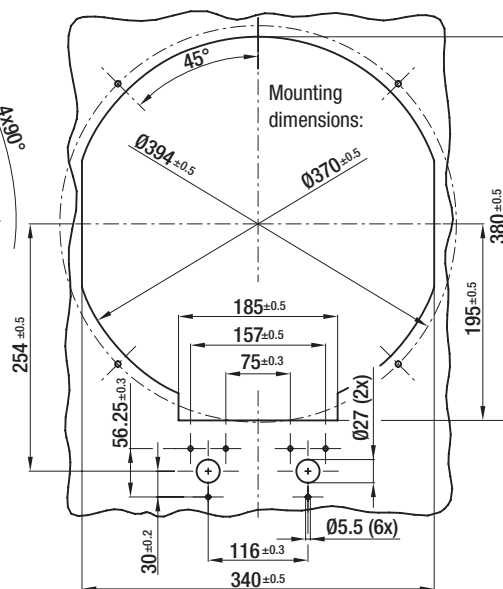
EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

W4E 300-WS72-30 (Version with hinge and air-guiding system)



Cable: PVC 4G 0.5 mm²,
4x crimped splices



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

Agents



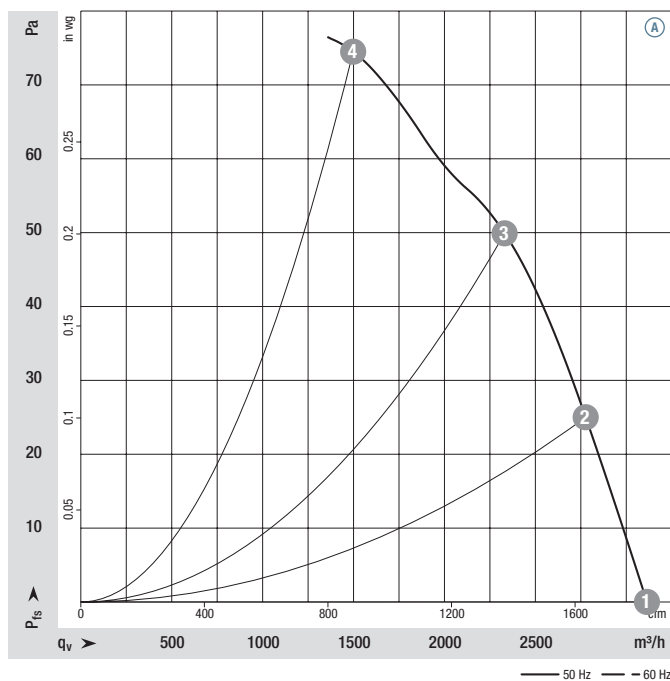
- **Material:** Guard grill / support bracket: Steel, phosphated and coated in black (RAL 9005)
Wall ring, air-guiding system and blades: Plastic PP
Rotor: Painted in black
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 44, depending on installation and position (acc. to EN 60034-5)
- **Insulation class:** "B"
- **Installation position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensation drainage holes:** Rotor side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Capacitor	Max. back pressure	Perm. ambient temp.	Conn. diagram
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	
W4E 350	M4E 074-DF	A	1~230	50	1340	165	0,73	4,0/400	75	-40..+45	P. 92 / AX7)
		B	1~230	50	1340	165	0,73	4,0/400	70	-40..+45	

Subject to change

(1) Nominal data at operating point with maximum load and 230 VAC

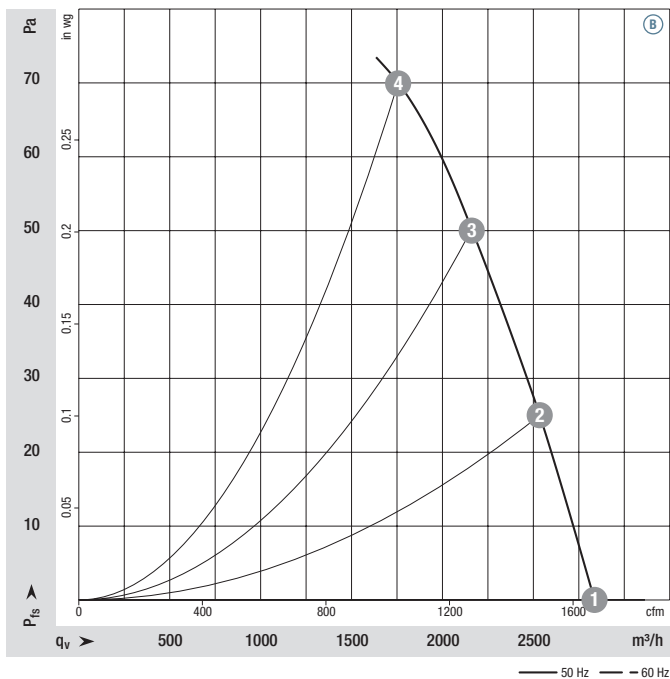
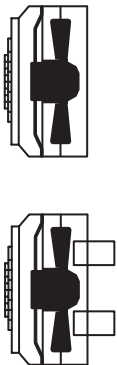
Curves:
Standard

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

- **Motor protection:** Thermal overload protector (TOP) internally connected
- **Touch current:** < 0,75 mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60335-1, CE

Air flow direction		Weight Standard		Weight Standard with hinge		Weight with air-guiding system		Weight with hinge and air-guiding system
	Standard version	kg	Standard version with hinge	kg	Version with air-guiding system	kg	Version with hinge and air-guiding system	kg
"V"	W4E 350-JN02 -30	5,2	W4E 350-TN02 -30	5,4	W4E 350-SN02 -30	6,2	W4E 350-WN02 -30	6,4

Curves:
with air-guiding
system



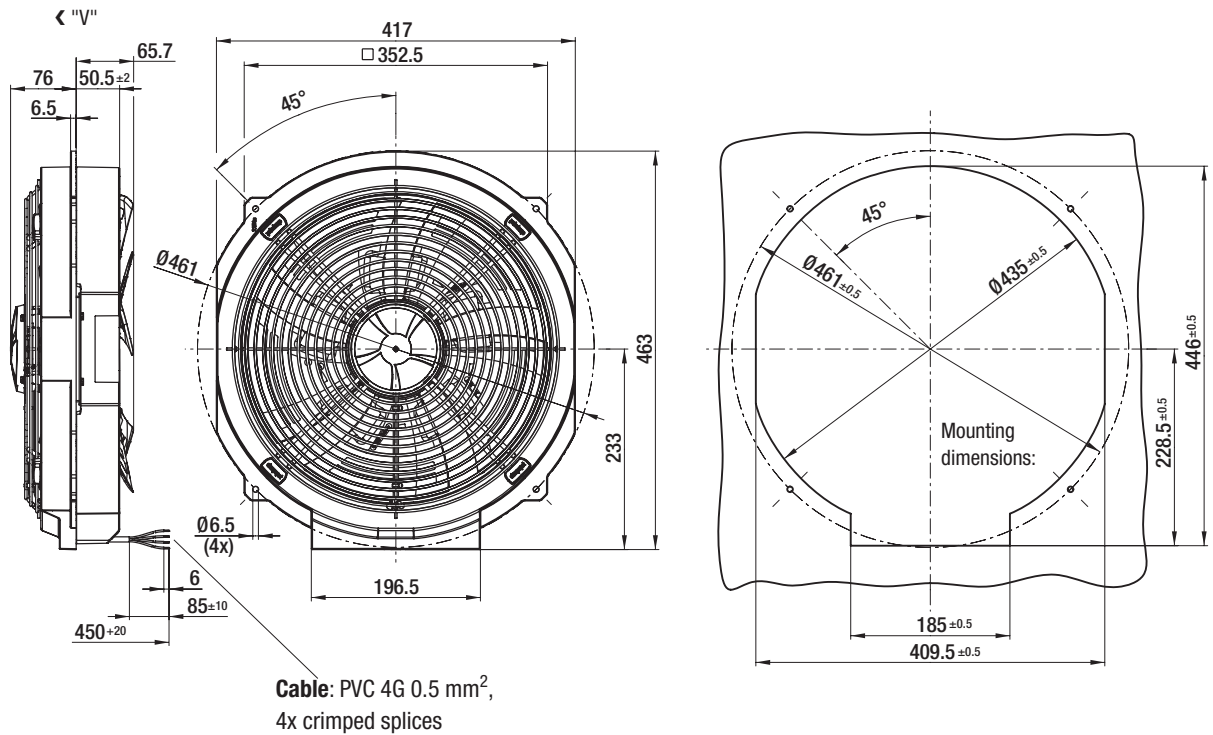
	n rpm	P _{ed} W	I A	L _{WA} dB(A)
ⓑ ①	1375	138	0,61	71
ⓑ ②	1365	144	0,63	70
ⓑ ③	1350	149	0,66	69
ⓑ ④	1340	165	0,73	70

AC axial fans - AxiCool

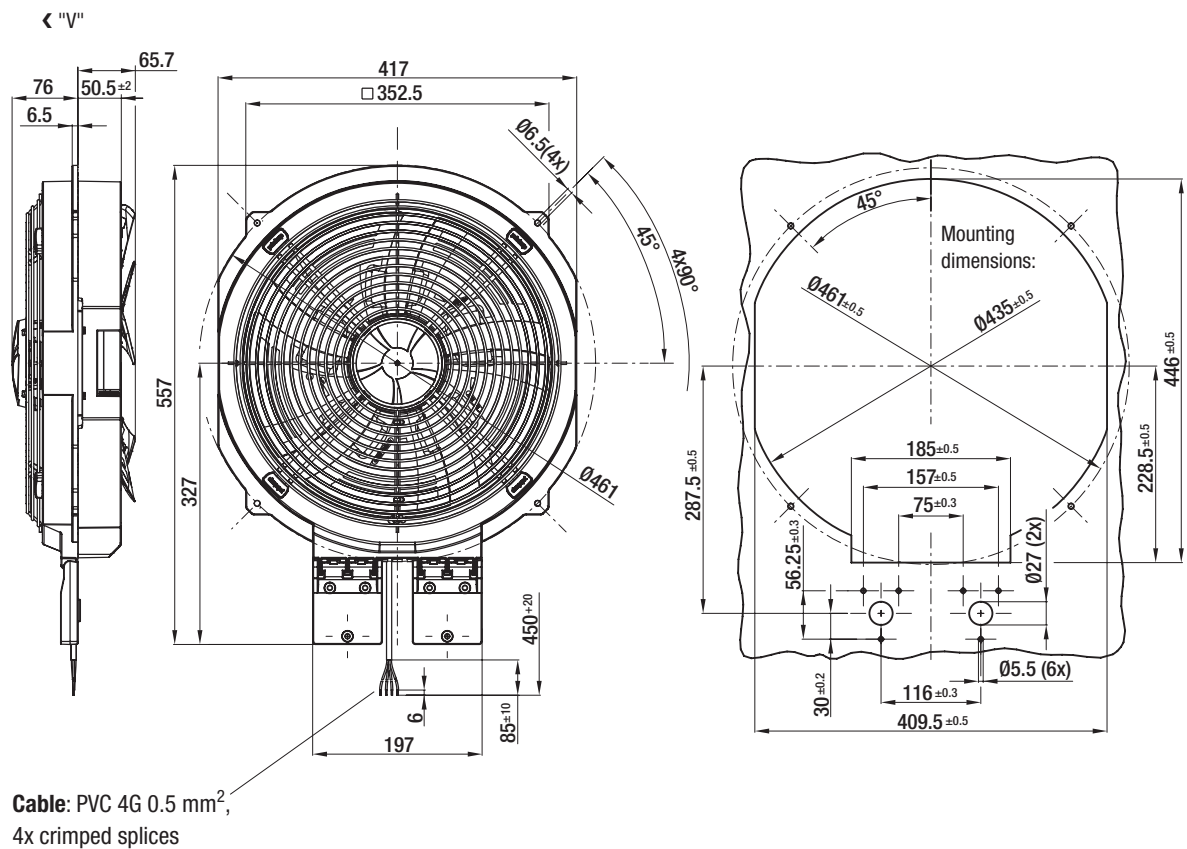
Ø 350



W4E 350-JN02-30 (Standard version)



W4E 350-TN02-30 (Standard version with hinge)



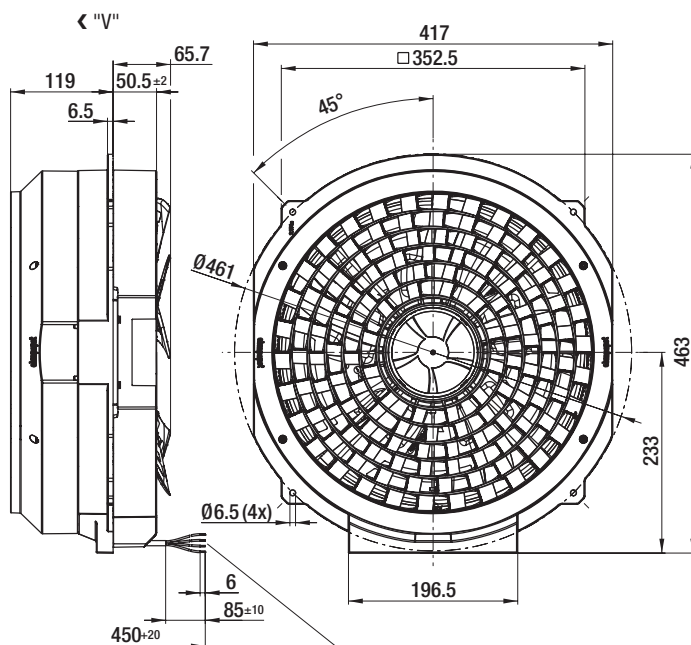
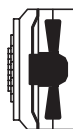
AC axial fans - AxiCool

Ø 350

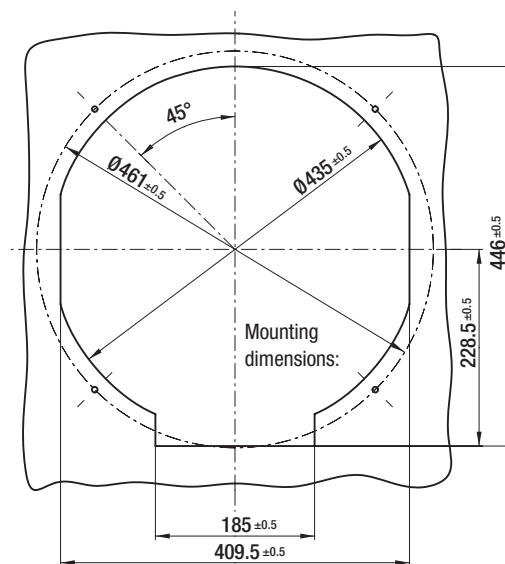


Information

W4E 350-SN02-30 (Version with air-guiding system)



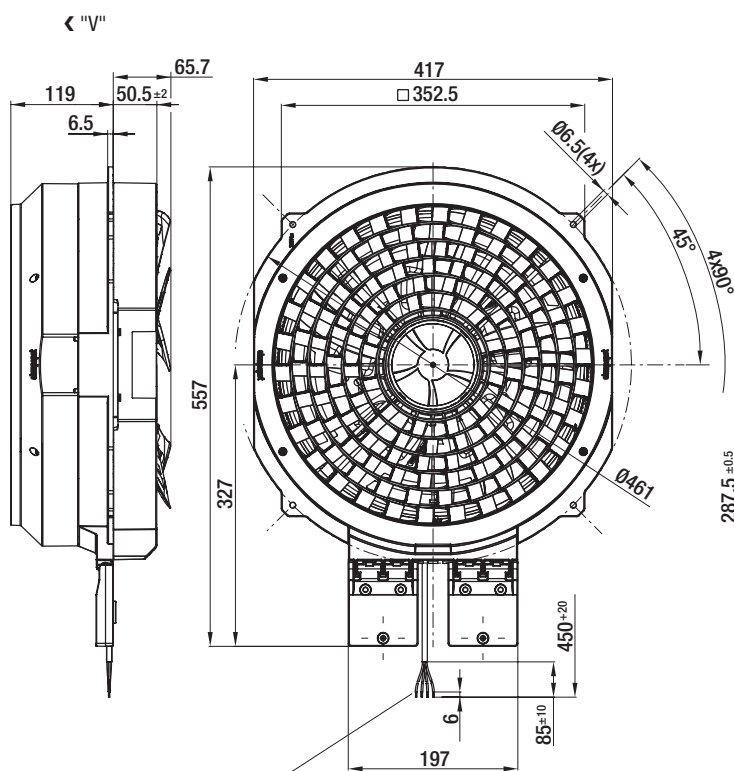
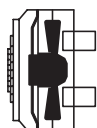
Cable: PVC 4G 0.5 mm²,
4x crimped splices



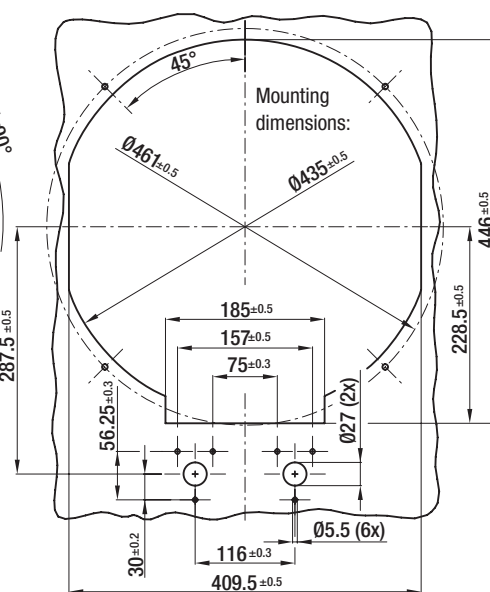
EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

W4E 350-WN02-30 (Version with hinge and air-guiding system)



Cable: PVC 4G 0.5 mm²,
4x crimped splices



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

Agents

AC axial fans - AxiCool

Ø 450



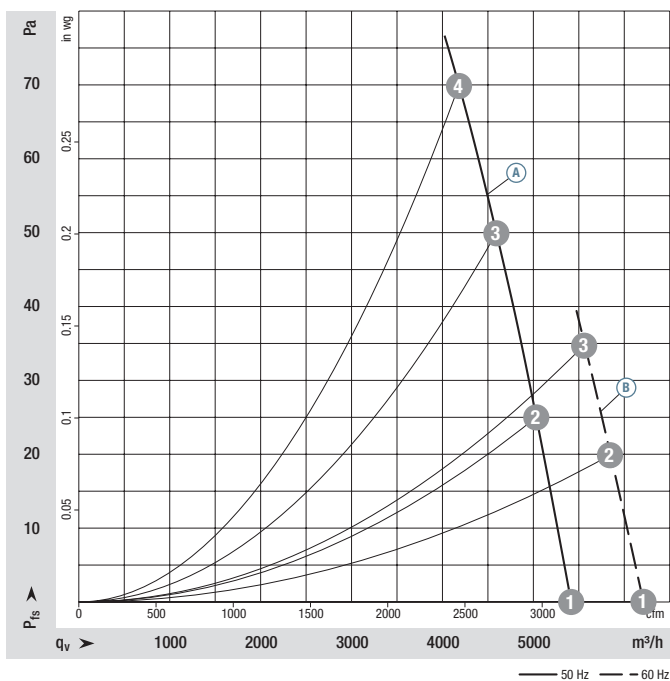
- **Material:** Guard grill / support bracket: Steel, phosphated and coated in black (RAL 9005)
Wall ring, air-guiding system: Plastic PP
Blades: Sheet steel, painted black
Rotor: Painted in black
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 44, depending on installation and position (acc. to EN 60034-5)
- **Insulation class:** "F"
- **Installation position:** Shaft horizontal or rotor on top, rotor on bottom on request
- **Condensation drainage holes:** None
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Capacitor	Max. back pressure	Perm. ambient temp.	Conn. diagram
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	
W4E 450	M4E 074-GA	A	1~230	50	1340	300	1,32	8,0/400	70	-40..+40	P. 92 / AX7)
		B	1~230	60	1540	370	1,62	8,0/400	35	-40..+20	

Subject to change

(1) Nominal data at operating point with maximum load and 230 VAC

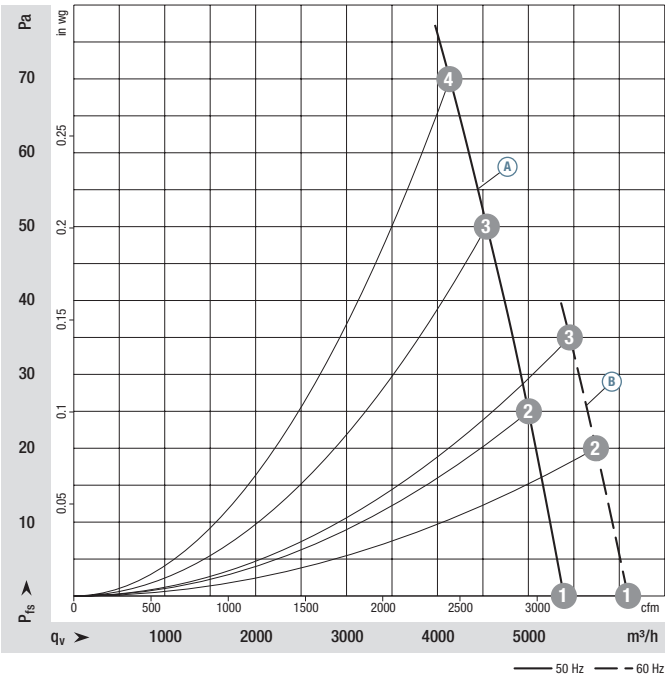
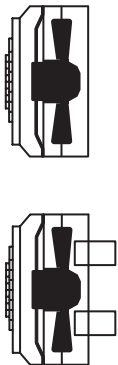
Curves:
Standard

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: L_{WA} according to ISO 13347, L_{PA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

- **Motor protection:** Thermal overload protector (TOP) internally connected
- **Touch current:** < 0,75 mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60335-1, CE

Air flow direction		Weight Standard		Weight Standard with hinge		Weight with air-guiding system		Weight with hinge and air-guiding system
	Standard version	kg	Standard version with hinge	kg	Version with air-guiding system	kg	Version with hinge and air-guiding system	kg
"V"	W4E 450-JP01 -30	9,1	W4E 450-TP01 -30	9,3	W4E 450-SP01 -30	10,8	W4E 450-WP01 -30	11,0

Curves:
with air-guiding
system



	n rpm	P _{ed} W	I A	L _{WA} dB(A)
(A) 1	1375	250	1,14	75
(A) 2	1360	268	1,20	74
(A) 3	1340	286	1,27	72
(A) 4	1340	300	1,32	72
(B) 1	1565	348	1,53	78
(B) 2	1530	364	1,59	77
(B) 3	1540	370	1,62	76

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system.
Intake-side sound level: L_{WA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

AC axial fans - AxiCool

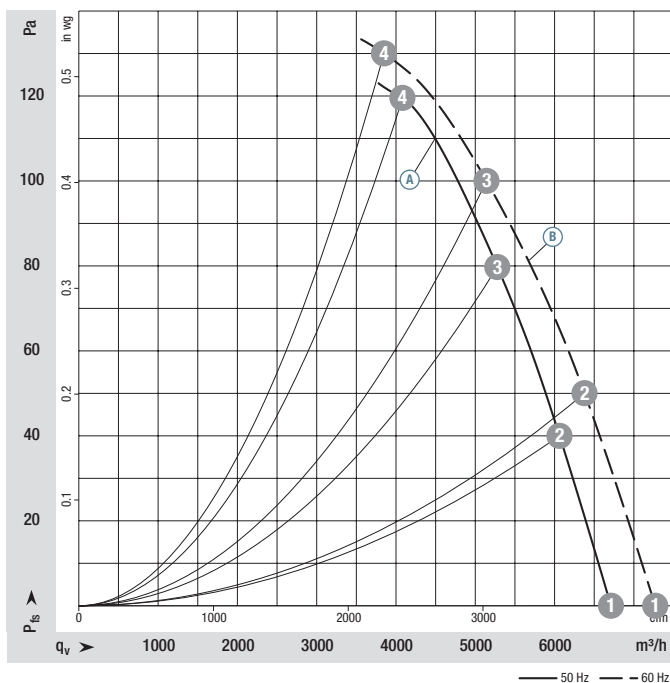
Ø 450



- **Material:** Guard grill: Steel, coated in black (RAL 9005)
Wall ring: Plastic PP
Blades: Sheet steel, painted black
Rotor: Painted in black
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 22
- **Insulation class:** "F"
- **Installation position:** Shaft horizontal or rotor on bottom
- **Condensation drainage holes:** Rotor side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data		Curve	Nominal voltage	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Capacitor	Max. back pressure	Perm. ambient temp.	Conn. diagram
Type	Motor		VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	
W4E 450	M4E 094-HA	A	1~230	50	1350	480	2,10	10/400	120	-40..+20	P. 95 / AX10)
W4D 450	M4D 094-HA	B	3~230	60	1380	590	1,70	---	130	-40..+10	P. 95 / AX11)

Subject to change (1) Nominal data at operating point with maximum load and 230 or 400 VAC

Curves:
Standard

	n rpm	P _{ed} W	I A	L _{WA} dB(A)
A 1	1410	354	1,83	77
A 2	1395	389	1,95	73
A 3	1380	421	2,07	73
A 4	1350	480	2,10	74
B 1	1530	443	0,77	80
B 2	1485	493	0,85	75
B 3	1425	547	0,94	74
B 4	1350	640	1,07	76

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection. Intake-side sound level: L_{WA} according to ISO 13347, L_{PA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition. See P. 96 ff for detailed information.

- **Motor protection:** Thermal overload protector (TOP) brought out, basic insulation
- **Touch current:** $\leq 3,5$ mA according to IEC 60990 (measuring circuit Fig. 4)
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60034-1, CE

Air flow direction	 "V"	Weight Standard
	Standard version	kg
"V"	W4E 450-JA09 -40	15,2
"V"	W4D 450-JA18 -40	15,2

Ø 450



W4E 450-JP01-30 (Standard version)



W4E 450-TP01-30 (Standard version with hinge)

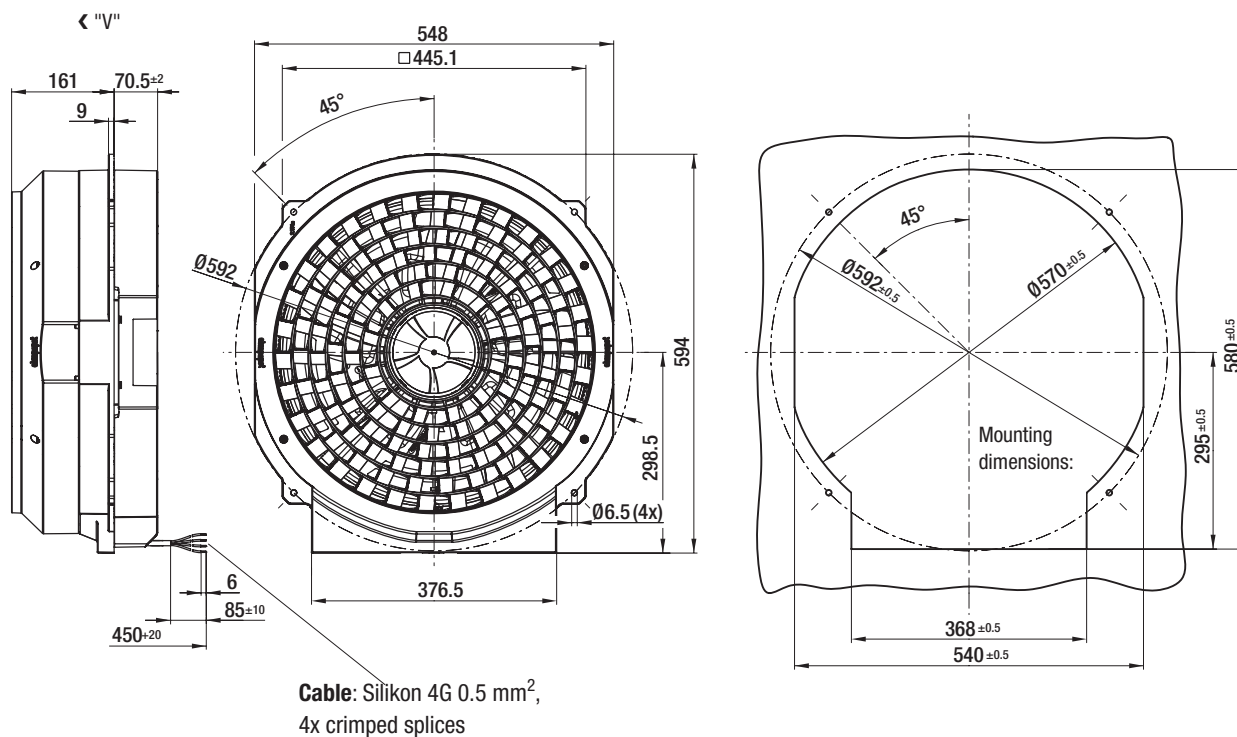
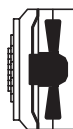


Ø 450

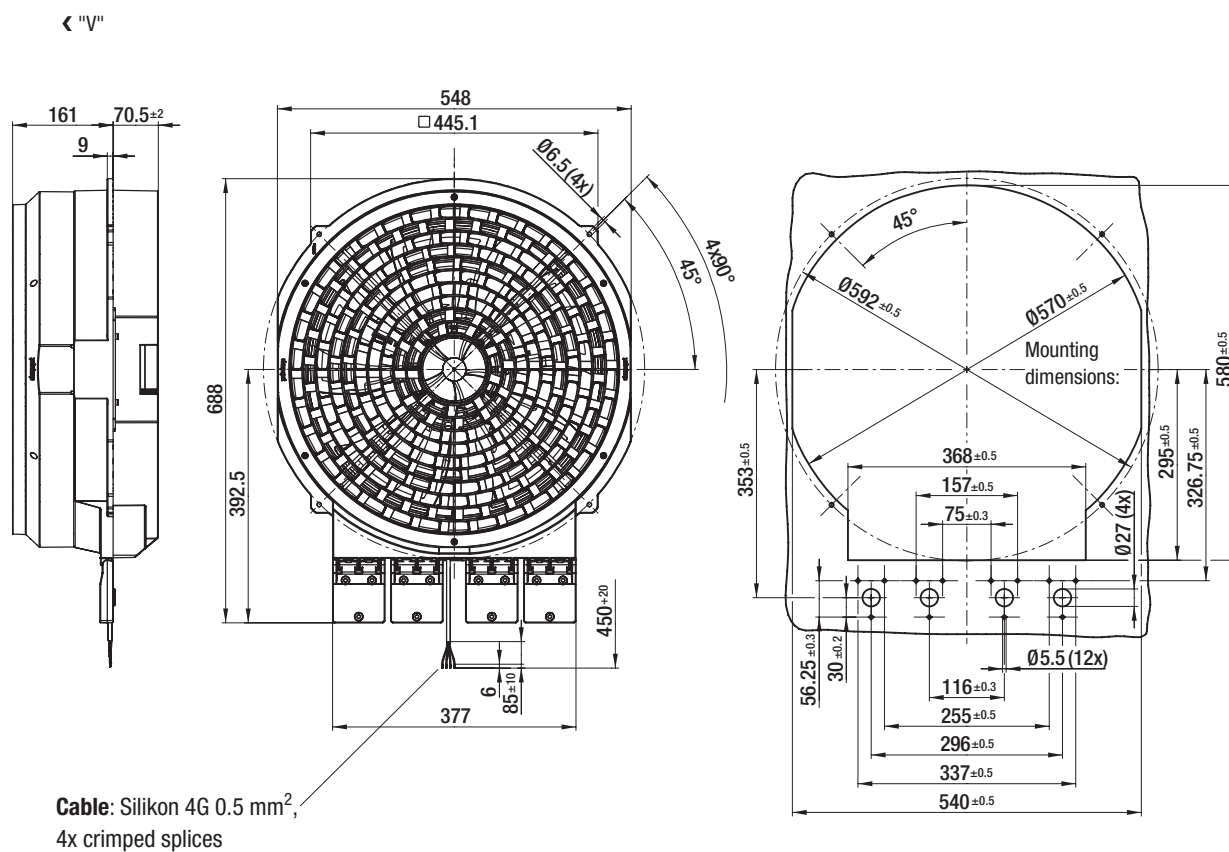
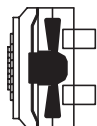


Information

W4E 450-SP01-30 (Version with air-guiding system)



W4E 450-WP01-30 (Version with hinge and air-guiding system)



EC axial fans - AxiCool Ø 300-450

EC axial fans - AxiCool Ø 500-800

AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool Ø 500-800

Technology

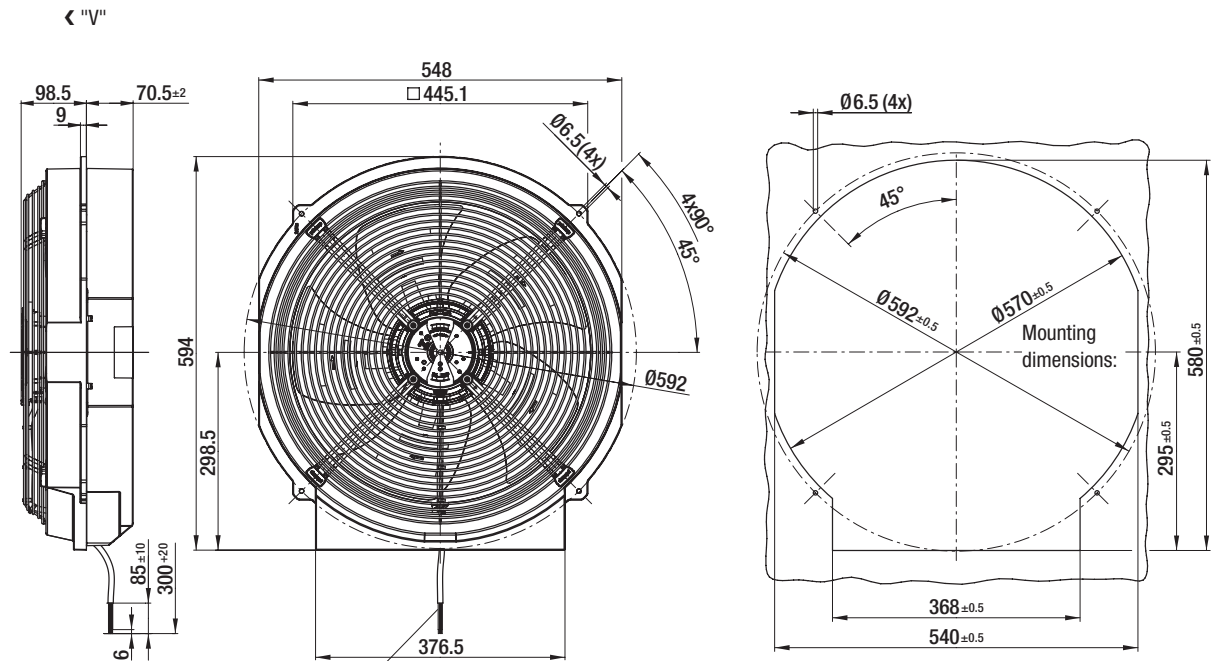
Agents

AC axial fans - AxiCool

Ø 450



W4E 450-JA09-40 (Standard version)



Cable: Silikon 6G 0.5 mm²,
6x crimped splices

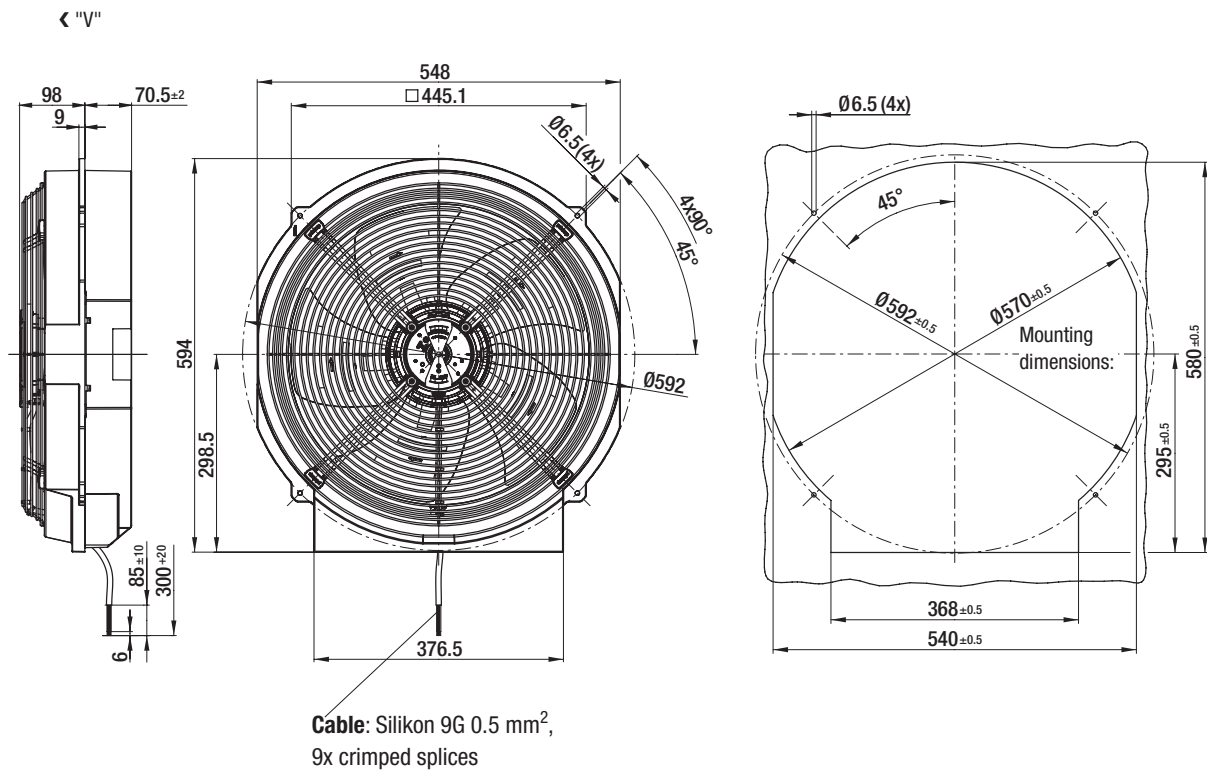
AC axial fans - AxiCool

Ø 450



Information

W4D 450-JA18-40 (Standard version)



EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

Agents

AC axial fans - AxiCool

Ø 500 - Ø 800



AC axial fans - AxiCool

Ø 500



- **Material:** Guard grill: Steel, coated in black (RAL 9005)
Wall ring and guide vanes: Plastic PP
Blades: press-fitted sheet steel blank, over-molded with PP plastic
Rotor: Painted black
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 54
- **Insulation class:** "F"
- **Installation position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensation drainage holes:** Rotor side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

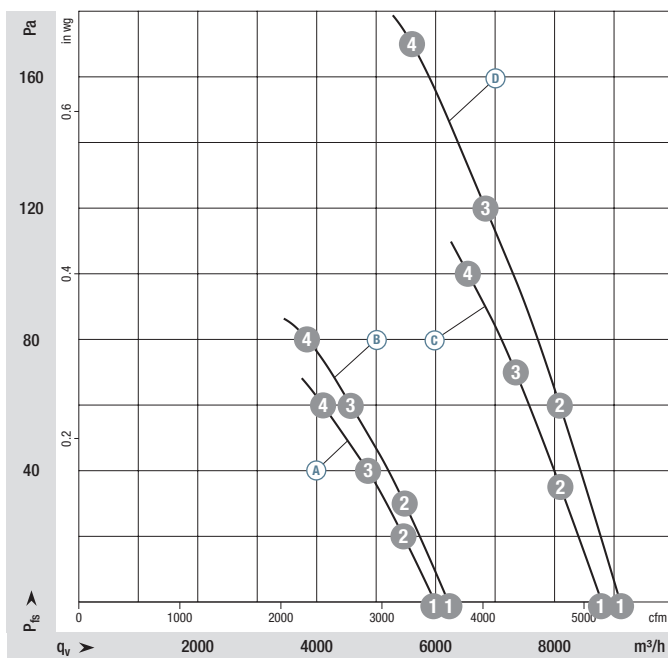
Nominal data		Curve	Nominal voltage	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Capacitor	Max. back pressure	Perm. ambient temp.	Conn. diagram
Type	Motor		VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	
W6E 500	M6E 110-EF	A	1~230	50	865	210	0,95	5,0/400	60	-40..+40	P. 93 / AX8)
W6D 500	M6D 110-EF	B	3~400	50	920	260	0,63	---	80	-40..+40	P. 94 / AX9)
W4E 500	M4E 110-EF	C	1~230	50	1225	600	2,62	10/400	100	-40..+40	P. 93 / AX8)
W4D 500	M4D 110-EF	D	3~400	50	1350	710	1,40	---	170	-40..+40	P. 94 / AX9)

Subject to change

(1) Nominal data at operating point with maximum load and 230 or 400 VAC

(2) If there is a risk of ice formation, the fan is only to be operated with a heating tape in the fan housing. For more detailed information, consult ebm-papst.

Curves:
50 Hz



Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{wA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition. See P. 96 ff for detailed information.

	n rpm	P _{ed} W	I A	L _{wA} dB(A)
A 1	915	173	0,75	69
A 2	900	187	0,81	67
A 3	885	199	0,87	65
A 4	865	210	0,95	64
B 1	945	198	0,63	69
B 2	940	222	0,64	68
B 3	930	242	0,65	65
B 4	920	260	0,63	66
C 1	1330	514	2,23	78
C 2	1305	547	2,37	77
C 3	1280	579	2,51	76
C 4	1225	600	2,62	75
D 1	1395	526	1,29	79
D 2	1375	596	1,34	77
D 3	1360	655	1,40	75
D 4	1350	710	1,40	76

- **Motor protection:** Thermal overload protector (TOP) brought out, basic insulation
- **Touch current:** <= 3,5 mA
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60034-1 (2010), EN 61800-5-1, CE
- **Approvals:** VDE, EAC

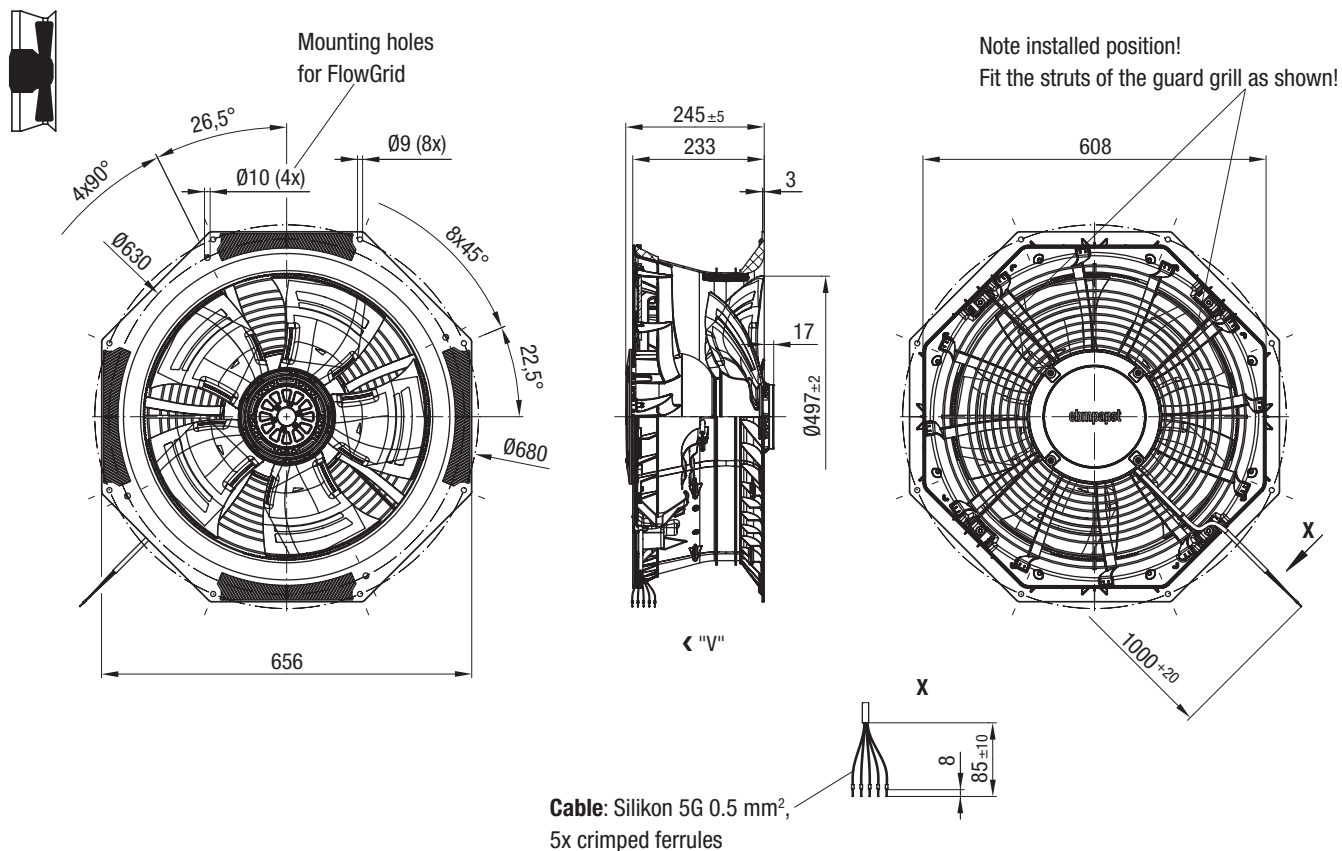
Air flow direction		Weight Standard		Weight High-End
	Standard version	kg	High-End version	kg
"V"	W6E 500-KJ05 -01	12,7	W6E 500-KJ05 -11	14,2
"V"	W6D 500-KJ05 -01	12,6	W6D 500-KJ05 -11	14,1
"V"	W4E 500-KJ01 -01	13,0	W4E 500-KJ01 -11	14,5
"V"	W4D 500-KJ03 -01	12,2	W4D 500-KJ03 -11	13,7

AC axial fans - AxiCool

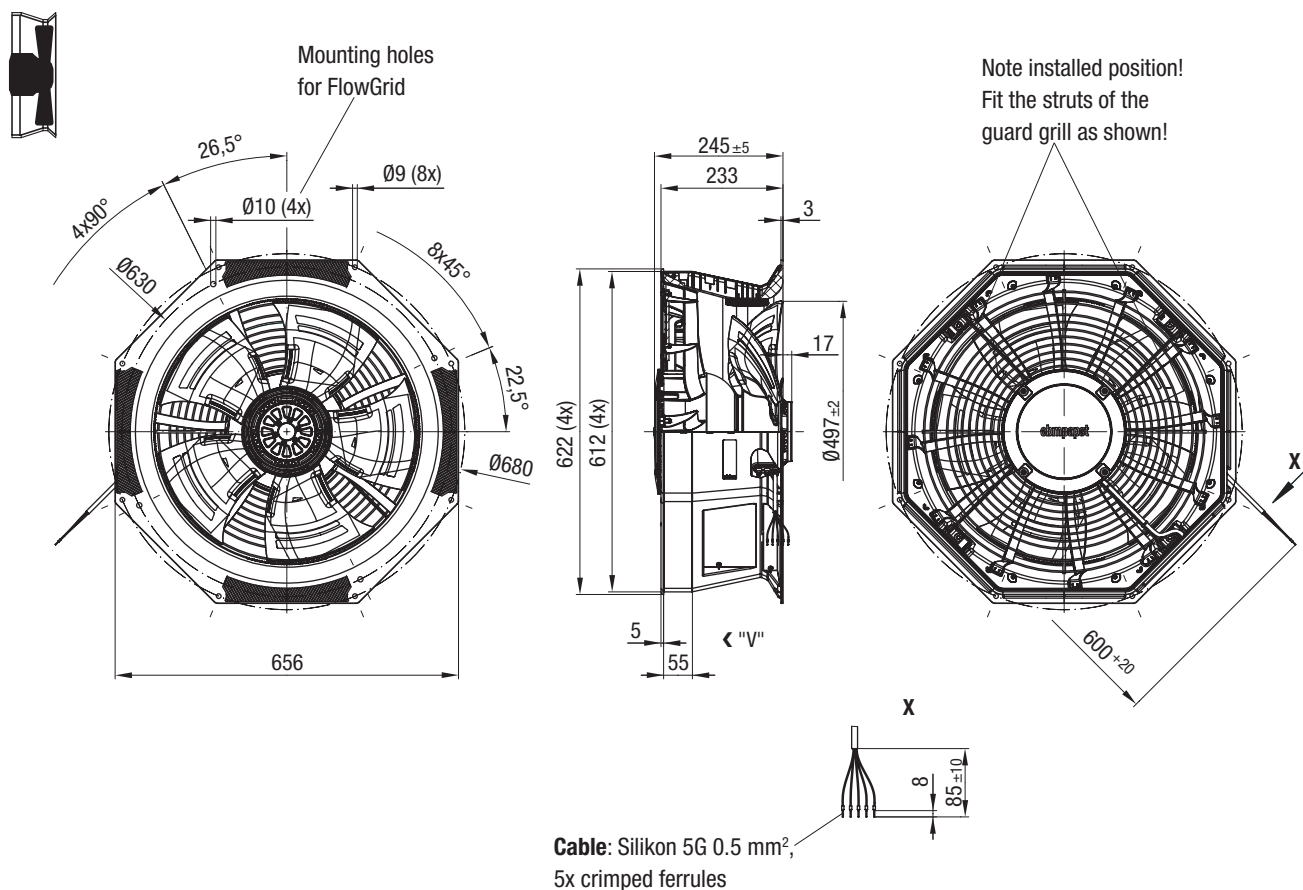
Ø 500



W6E 500-KJ05-01 (Standard version)



W6E 500-KJ05-11 (High-End version)



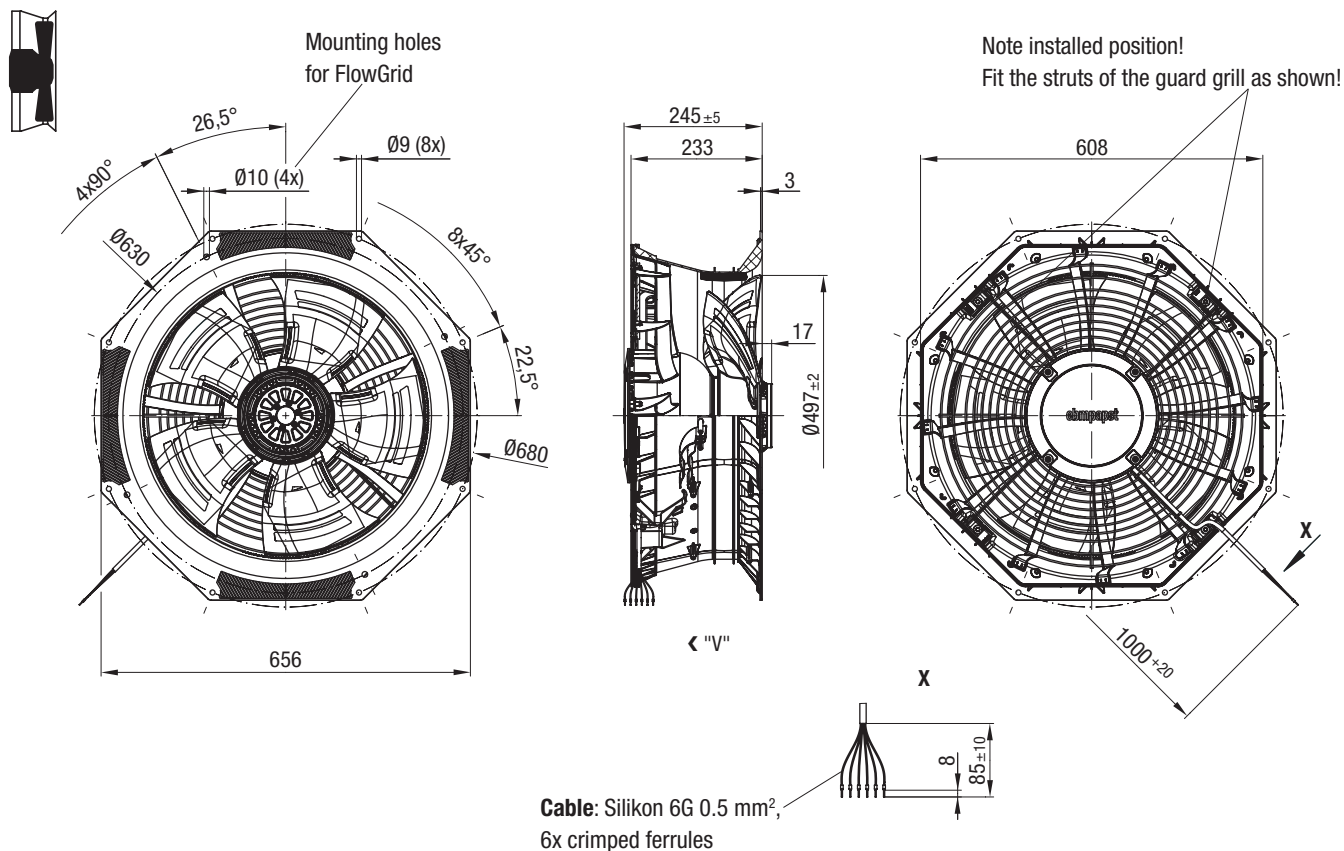
AC axial fans - AxiCool

Ø 500



Information

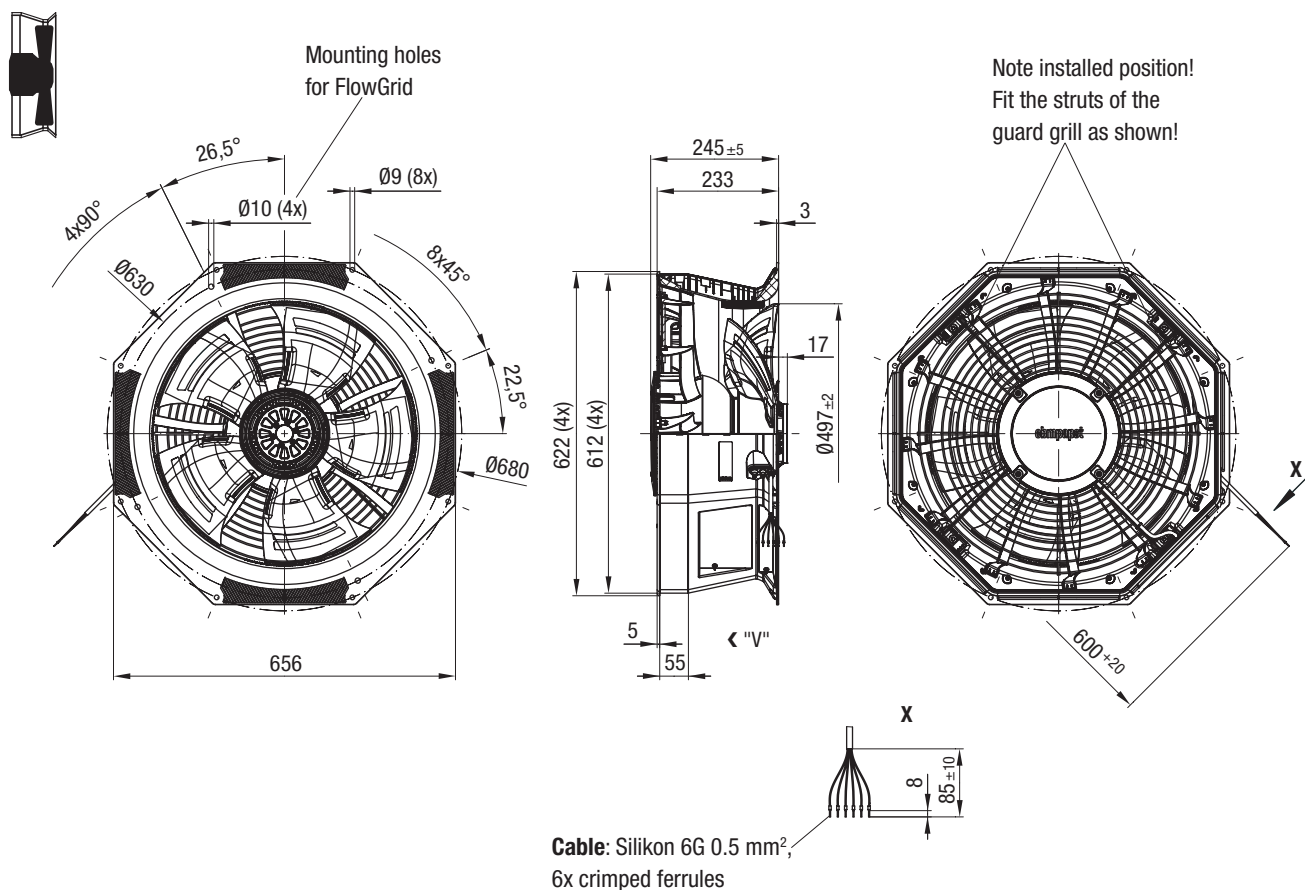
W6D 500-KJ05-01 (Standard version)



EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

W6D 500-KJ05-11 (High-End version)



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

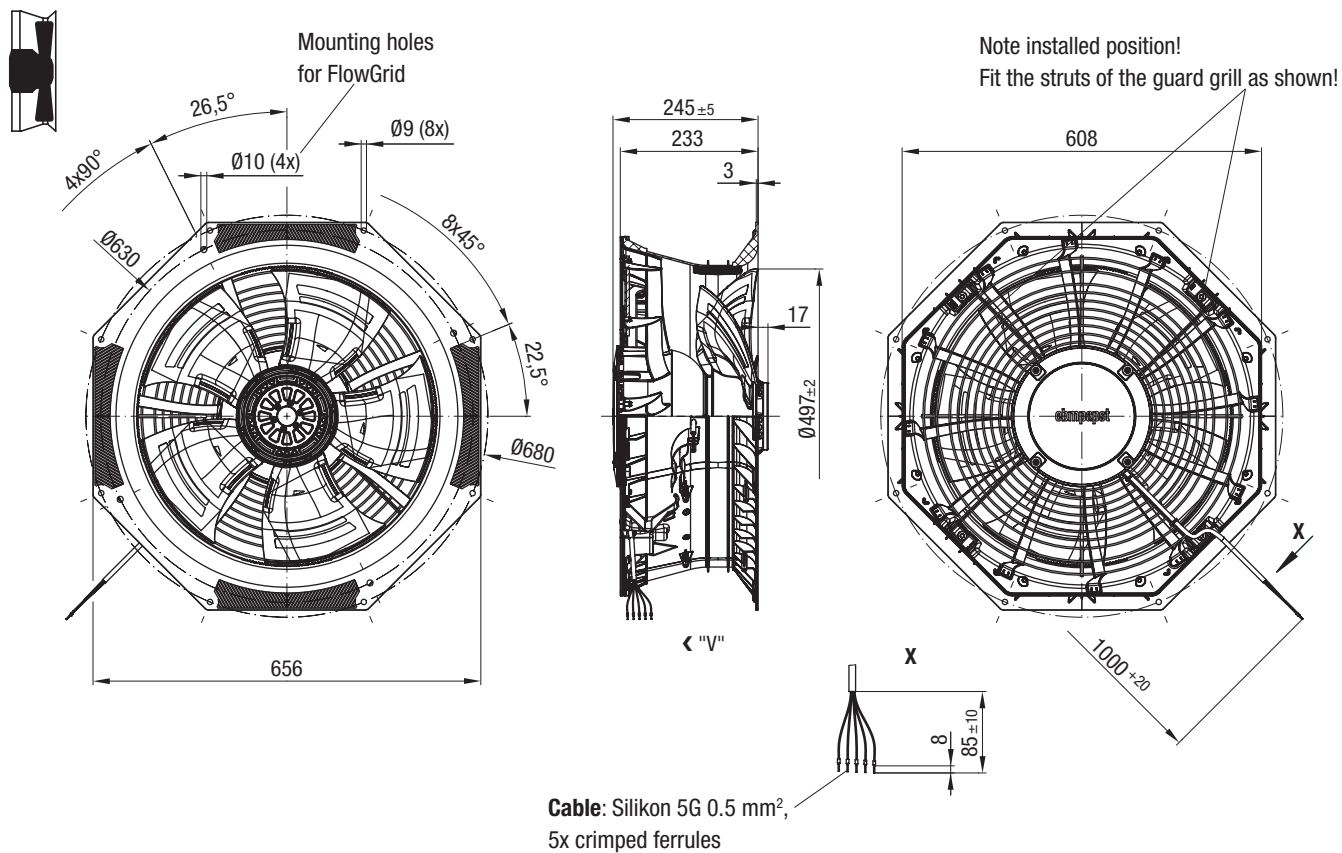
Agents

AC axial fans - AxiCool

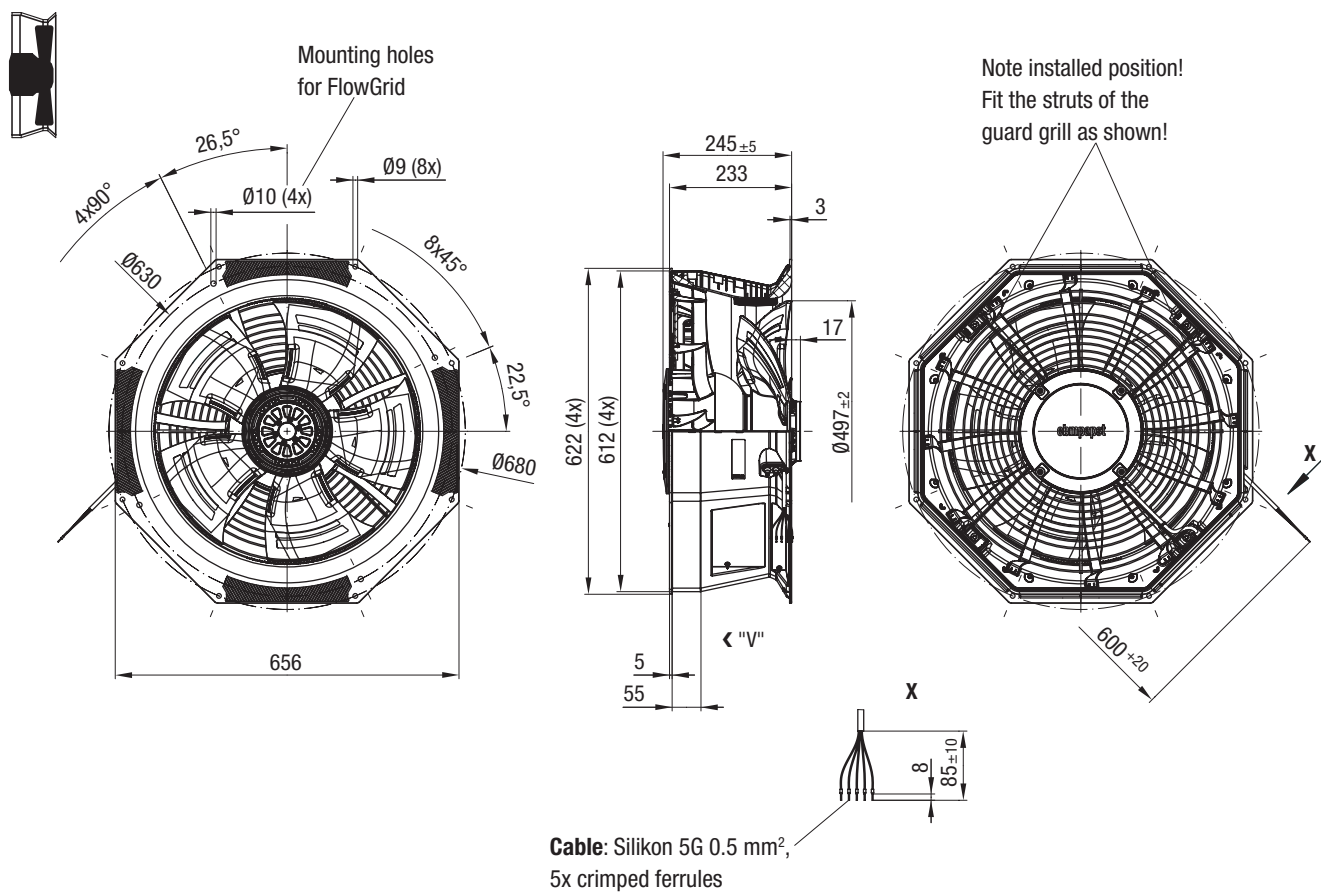
Ø 500



W4E 500-KJ01-01 (Standard version)



W4E 500-KJ01-11 (High-End version)



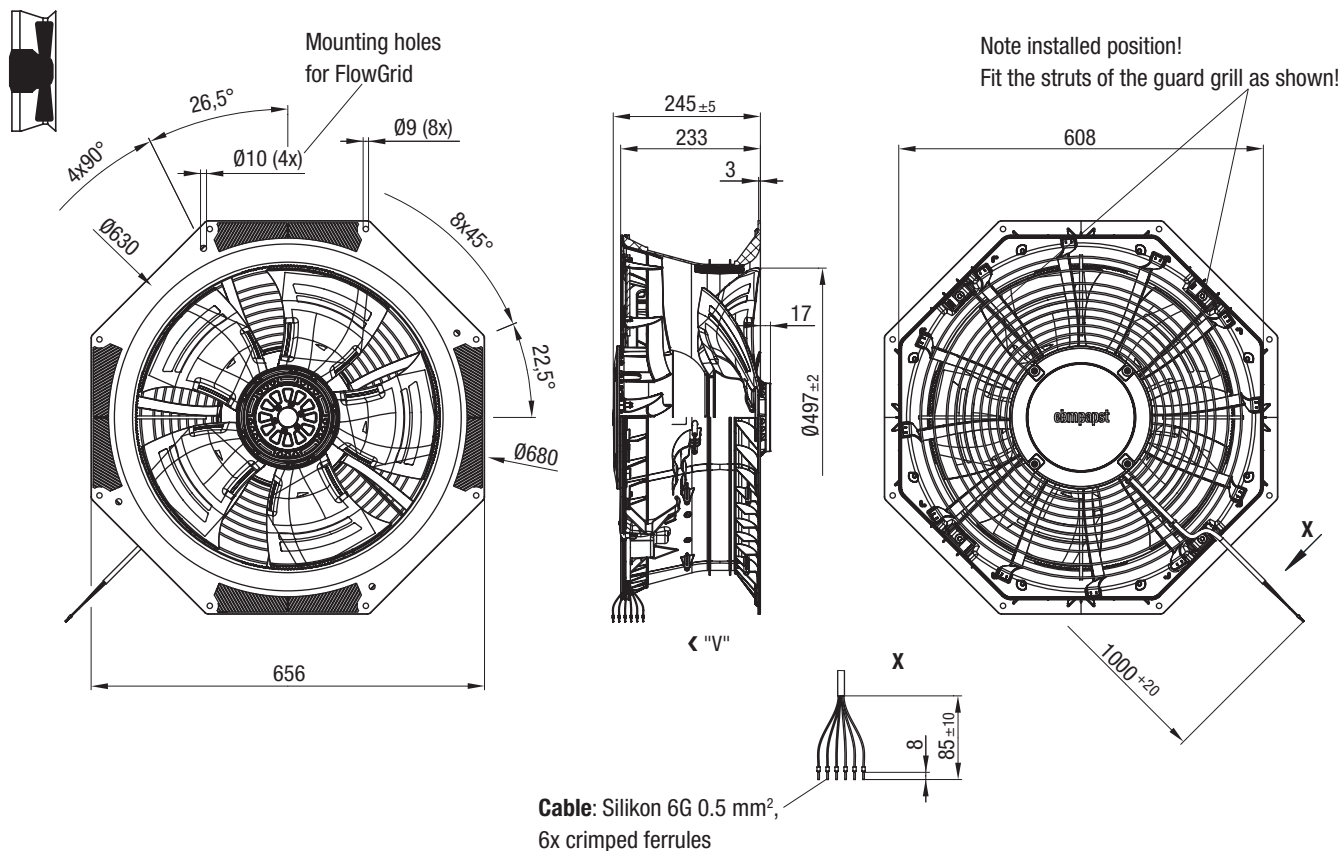
AC axial fans - AxiCool

Ø 500



Information

W4D 500-KJ03-01 (Standard version)



EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

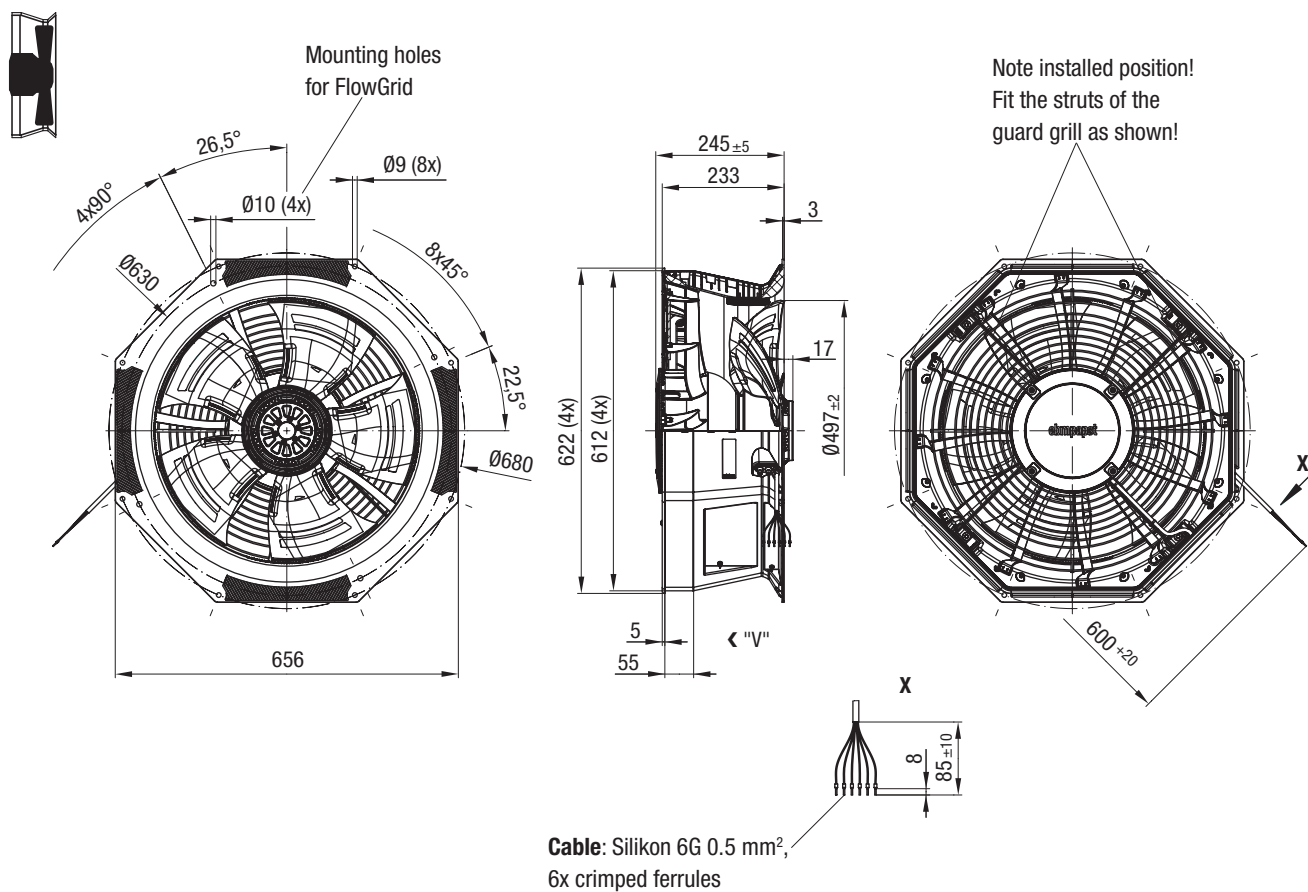
AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

Agents

W4D 500-KJ03-11 (High-End version)



AC axial fans - AxiCool

Ø 630

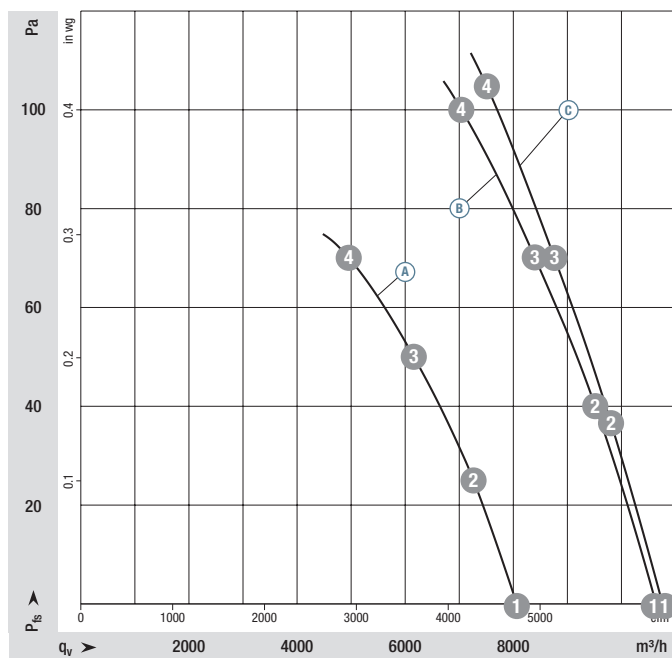


- **Material:** Guard grill: Steel, coated in black (RAL 9005)
Wall ring and guide vanes: Plastic PP
Blades: press-fitted sheet steel blank, over-molded with PP plastic
Rotor: Painted black
- **Number of blades:** 5
- **Direction of rotation:** Counter-clockwise viewed toward rotor
- **Degree of protection:** IP 54
- **Insulation class:** "F"
- **Installation position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensation drainage holes:** Rotor side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data		Curve	Nominal voltage	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Capacitor	Max. back pressure	Perm. ambient temp.	Conn. diagram
Type	Motor	VAC	Hz	rpm	W	A	µF/VDB	Pa	°C		
W8D 630	M8D 110-GF	A	3~400	50	670	305	0,85	---	70	-40..+20 ⁽³⁾	P. 94 / AX9)
W6E 630	M6E 110-GF	B	1~230	50	870	550	2,40	14/400	100	-40..+40	P. 93 / AX8)
W6D 630	M6D 110-GF	C	3~400	50	890	570	1,20	---	105	-40..+40	P. 94 / AX9)

Subject to change

(1) Nominal data at operating point with maximum load and 230 or 400 VAC
(2) If there is a risk of ice formation, the fan is only to be operated with a heating tape in the fan housing. For more detailed information, consult ebm-papst.
(3) As a fan for use with industrial evaporators, suitable for ambient temperatures between -40°C and +20°C, occasional start-up at up to +40°C permissible.

Curves:
50 Hz

	n rpm	P _{ed} W	I A	L _{WA} dB(A)
A 1	695	249	0,79	65
A 2	685	272	0,80	63
A 3	675	292	0,80	61
A 4	670	305	0,85	63
B 1	915	460	2,03	73
B 2	900	500	2,20	70
B 3	880	528	2,32	69
B 4	870	550	2,40	70
C 1	925	447	1,09	73
C 2	910	493	1,12	71
C 3	900	530	1,16	69
C 4	890	570	1,20	69

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system.
Intake-side sound level: L_{WA} according to ISO 13347, L_{PA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition.
See P. 96 ff for detailed information.

- **Motor protection:** Thermal overload protector (TOP) brought out, basic insulation
- **Touch current:** <= 3,5 mA
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60034-1 (2010), EN 61800-5-1, CE
- **Approvals:** VDE, EAC

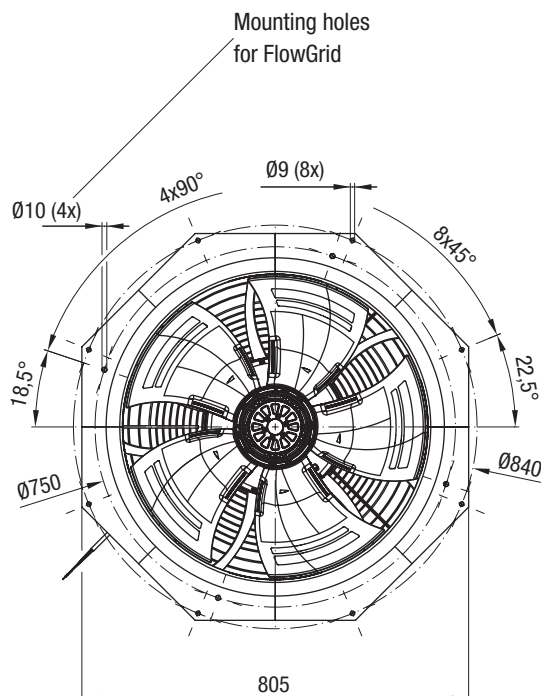
Air flow direction	 < "V"		 < "V"	
	Standard version	Weight Standard kg	High-End version	Weight High-End kg
"V"	W8D 630-KN01 -01	18,8	W8D 630-KN01 -11	21,2
"V"	W6E 630-KN01 -01	18,7	W6E 630-KN01 -11	21,1
"V"	W6D 630-KN01 -01	18,6	W6D 630-KN01 -11	21,0

AC axial fans - AxiCool

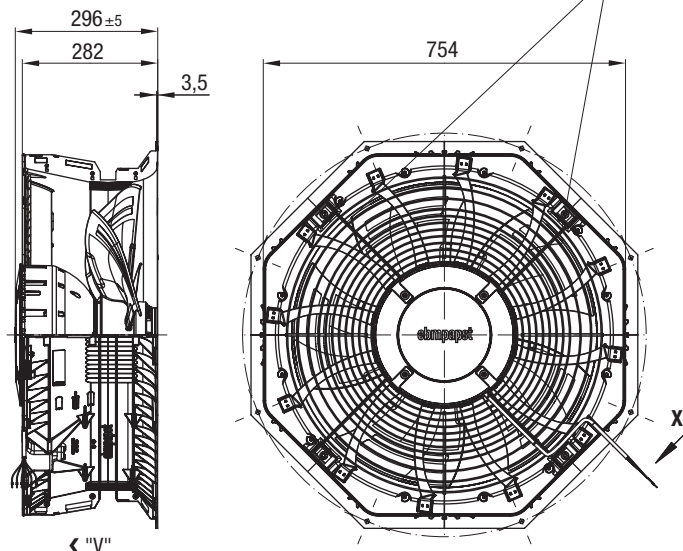
Ø 630



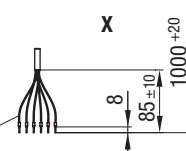
W8D 630-KN01-01 (Standard version)



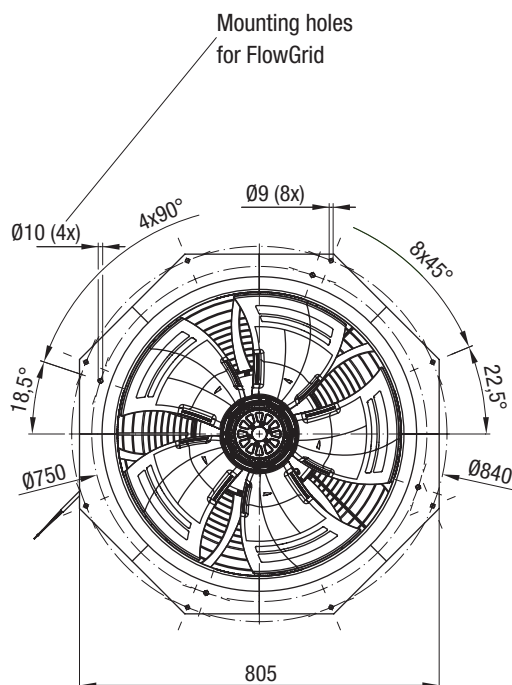
Note installed position!
Fit the struts of the guard grill as shown!



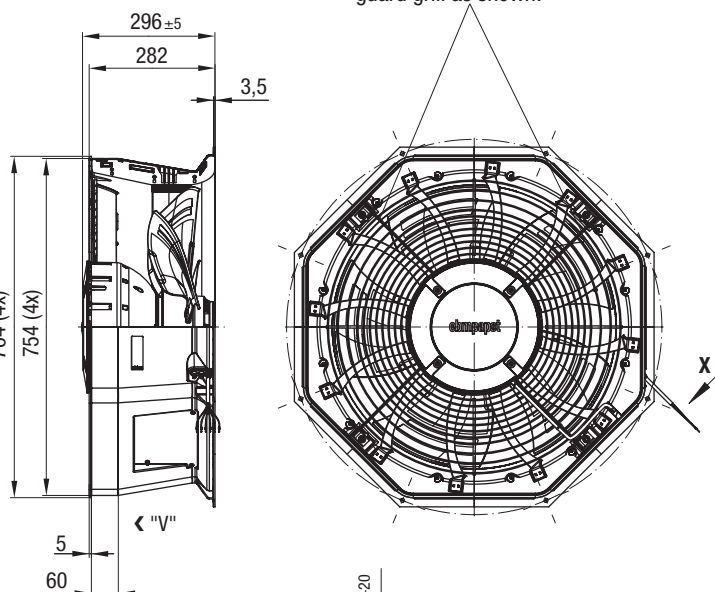
Cable: Silikon 6G 0.5 mm²,
6x crimped ferrules



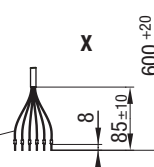
W8D 630-KN01-11 (High-End version)



Note installed position!
Fit the struts of the guard grill as shown!



Cable: Silikon 6G 0.5 mm²,
6x crimped ferrules



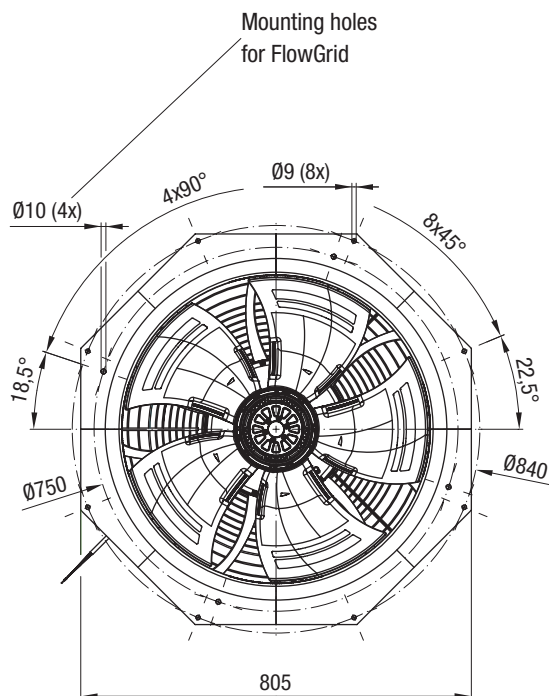
AC axial fans - AxiCool

Ø 630

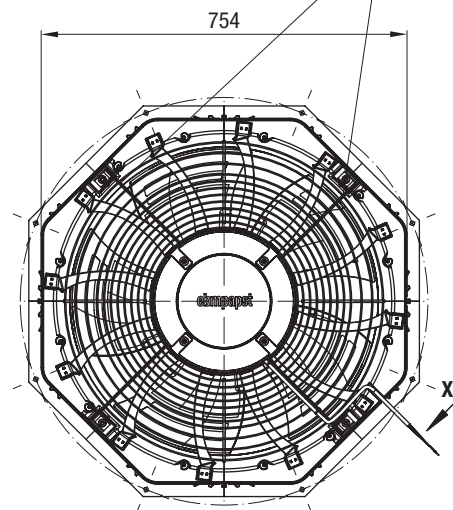
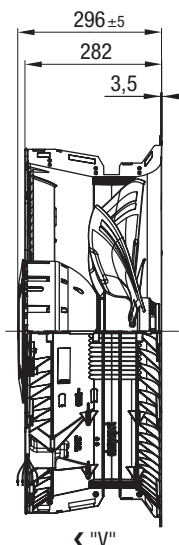


Information

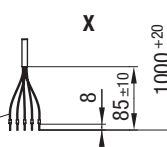
W6E 630-KN01-01 (Standard version)



Note installed position!
Fit the struts of the guard grill as shown!



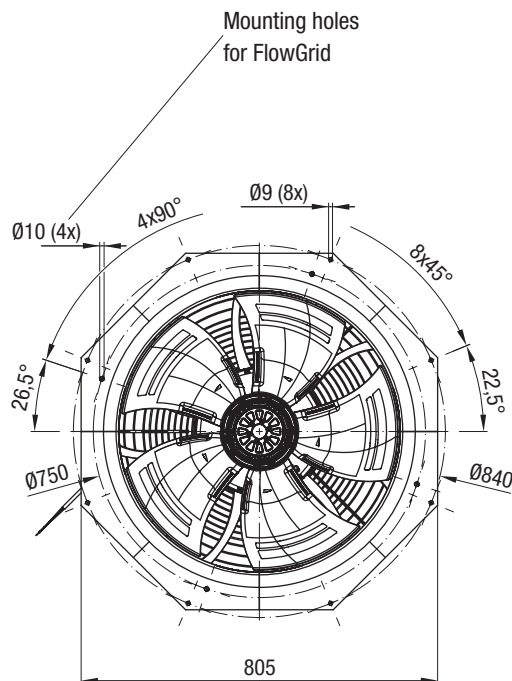
Cable: Silikon 5G 0.5 mm²,
5x crimped ferrules



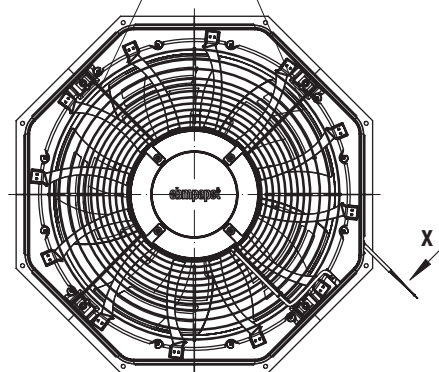
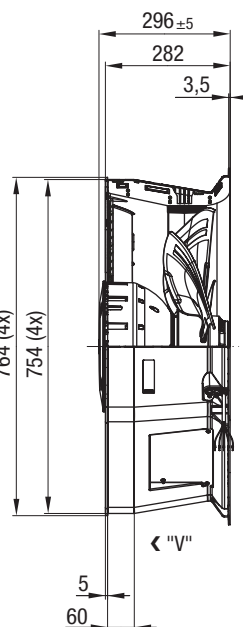
EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

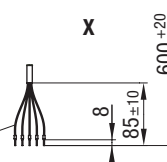
W6E 630-KN01-11 (High-End version)



Note installed position!
Fit the struts of the guard grill as shown!



Cable: Silikon 5G 0.5 mm²,
5x crimped ferrules



AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

Technology

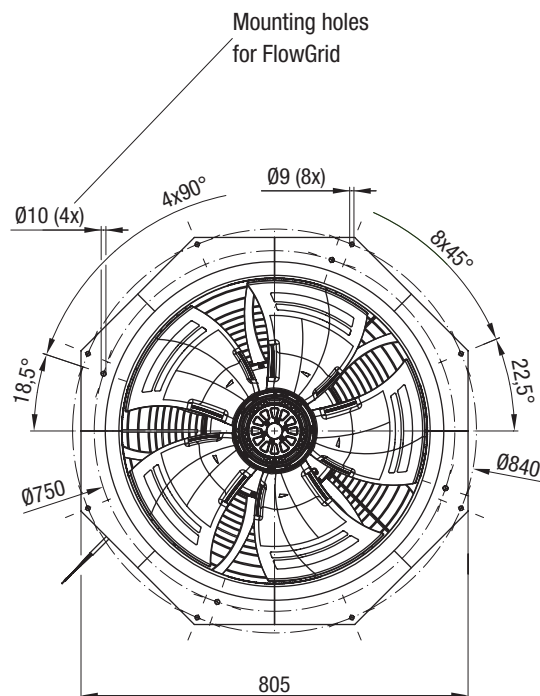
Agents

AC axial fans - AxiCool

Ø 630



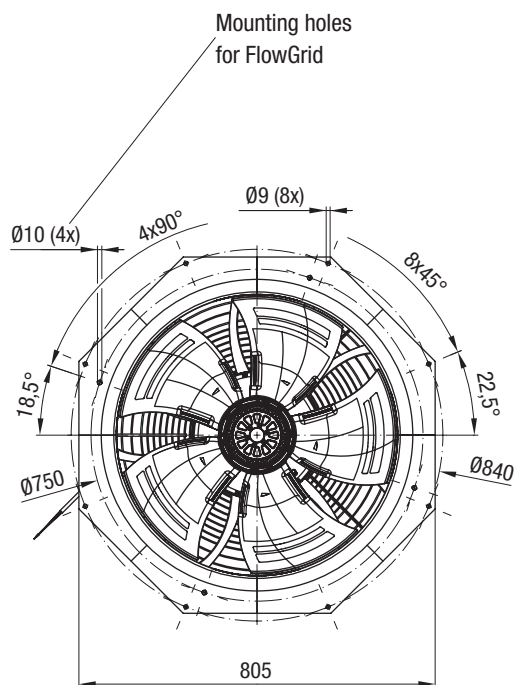
W6D 630-KN01-01 (Standard version)



Note installed position!
Fit the struts of the guard grill as shown!

Cable: Silikon 6G 0.5 mm²,
6x crimped ferrules

W6D 630-KN01-11 (High-End version)



Note installed position!
Fit the struts of the guard grill as shown!

Cable: Silikon 6G 0.5 mm²,
6x crimped ferrules

Agents	Technology	AC axial fans - AxiCool Ø 500-800	AC axial fans - AxiCool Ø 300-450	EC axial fans - AxiCool Ø 500-800	EC axial fans - AxiCool Ø 300-450	Information
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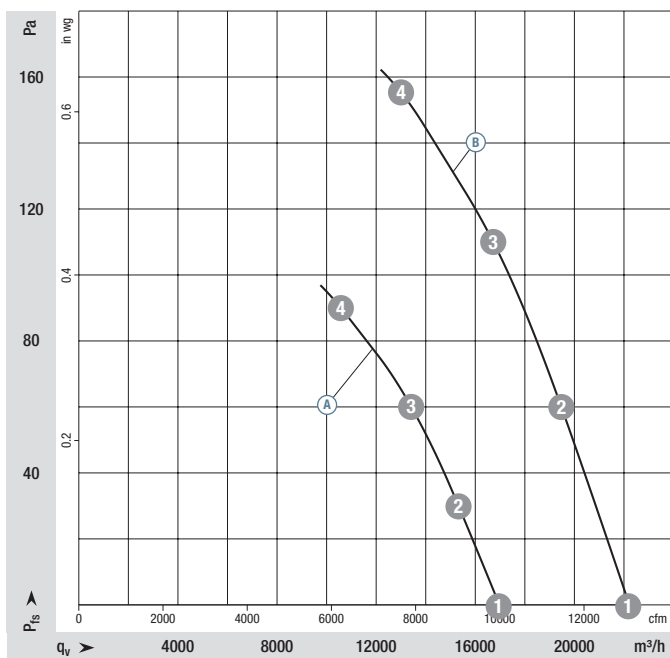


- **Material:** Guard grill: Steel, coated in black (RAL 9005)
Wall ring and guide vanes: Plastic PP
Impeller: Plastic PP
Rotor: Cast in aluminium
- **Number of blades:** 5
- **Direction of rotation:** Clockwise viewed toward rotor
- **Degree of protection:** IP 54
- **Insulation class:** "F"
- **Installation position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensation drainage holes:** Rotor- and stator side
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

Nominal data		Curve	Nominal voltage	Frequency	Speed ⁽¹⁾	Max. Input power ⁽¹⁾	Max. Input current ⁽¹⁾	Capacitor	Max. back pressure	Perm. ambient temp.	Conn. diagram
Type	Motor	VAC	Hz	rpm	W	A	µF/VDB	Pa	°C		
W8D 800	M8D 138-HF	A	3~400	50	680	720	2,00	---	90	-40..+40	P. 95 / AX11)
W6D 800	M6D 138-HF	B	3~400	50	880	1340	2,70	---	155	-40..+40	P. 95 / AX11)

Subject to change

(1) Nominal data at operating point with maximum load and 400 VAC
(2) If there is a risk of ice formation, the fan is only to be operated with a heating tape in the fan housing. For more detailed information, consult ebm-papst.

Curves:
50 Hz

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: L_{wA} according to ISO 13347, L_{pA} measured at 1 m distance to fan axis. The values given are only applicable under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked in installed condition. See P. 96 ff for detailed information.

	n rpm	P _{ed} W	I A	L _{wA} dB(A)
A 1	705	570	1,93	69
A 2	700	627	1,96	68
A 3	690	680	2,00	69
A 4	680	720	2,00	75
B 1	915	1030	2,36	76
B 2	905	1168	2,52	74
B 3	890	1269	2,65	74
B 4	880	1340	2,70	83

- **Motor protection:** Thermal overload protector (TOP) brought out, basic insulation
- **Touch current:** <= 3,5 mA
- **Cable exit:** Variable
- **Protection class:** I (with customer connection of protective earth)
- **Conformity with standards:** EN 60034-1 (2010), EN 61800-5-1, CE
- **Approvals:** VDE, EAC

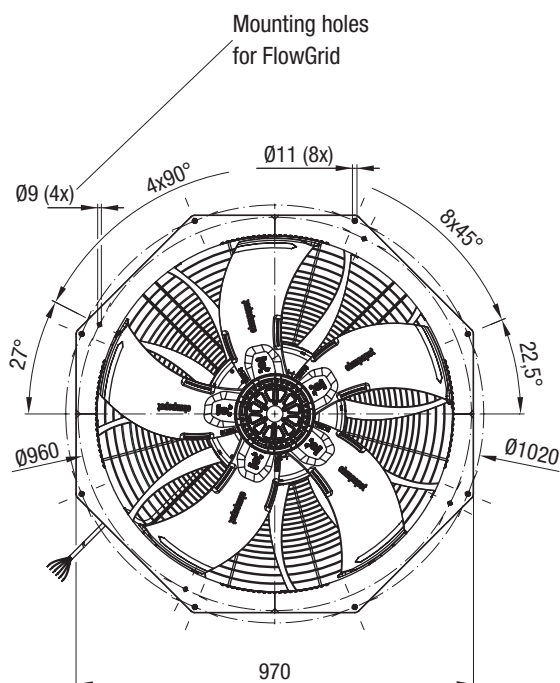
Air flow direction		Weight Standard		Weight High-End
	Standard version	kg	High-End version	kg
"V"	W8D 800-NG01 -01	37,0	W8D 800-NG01 -11	39,2
"V"	W6D 800-NG13 -01	36,0	W6D 800-NG13 -11	38,2

AC axial fans - AxiCool

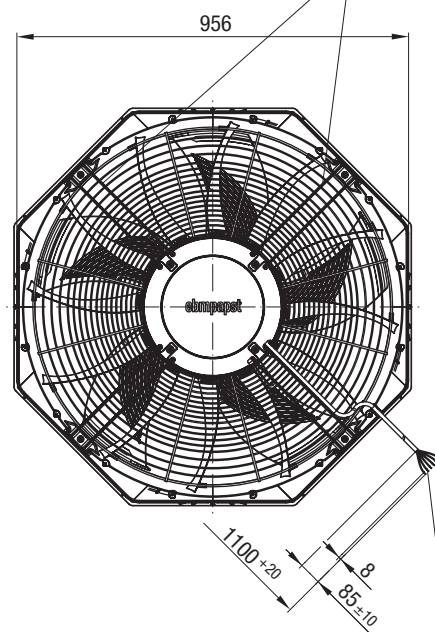
Ø 800



W8D 800-NG01-01 (Standard version)

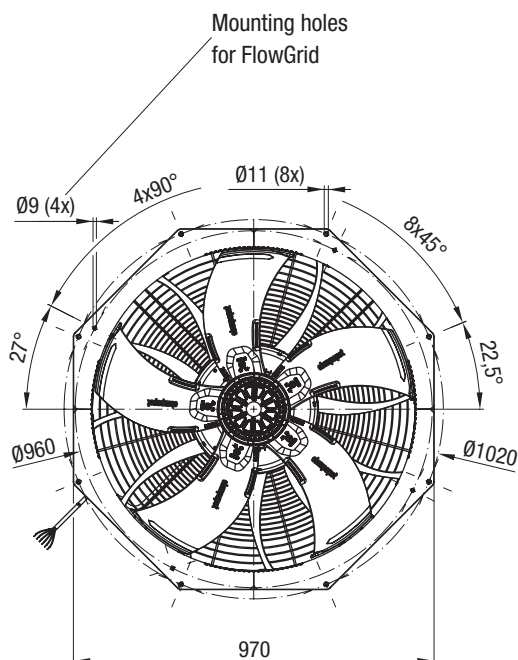


Note installed position!
Fit the struts of the guard grill as shown!

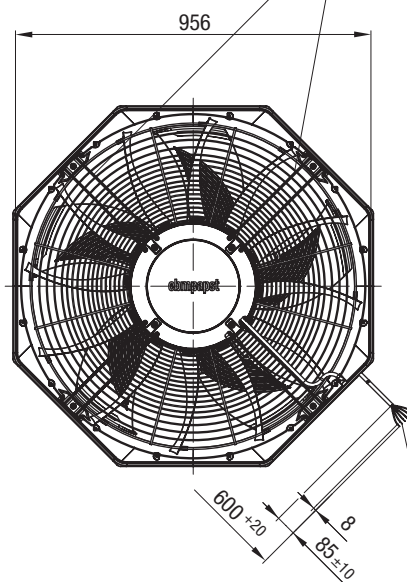


Cable: Silikon 6G 0.75 mm²,
6x crimped splices

W8D 800-NG01-11 (High-End version)



Note installed position!
Fit the struts of the guard grill as shown!



Cable: Silikon 6G 0.75 mm²,
6x crimped splices

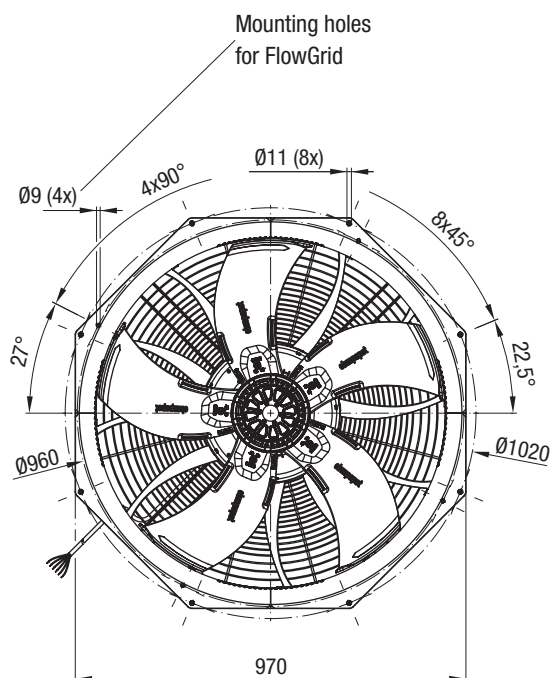
AC axial fans - AxiCool

Ø 800

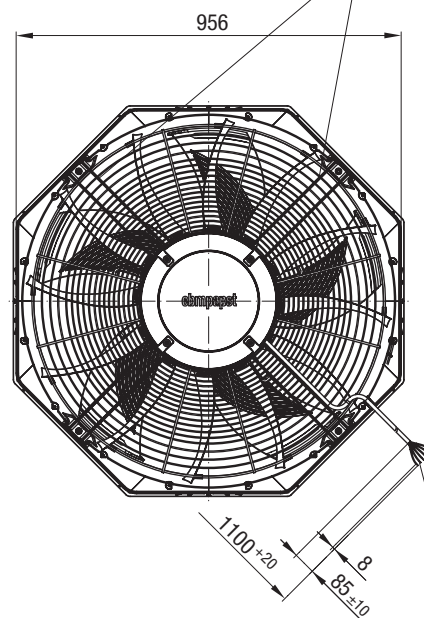


Information

W6D 800-NG13-01 (Standard version)



Note installed position!
Fit the struts of the guard grill as shown!



Cable: Silikon 6G 0.75 mm²,
6x crimped splices

EC axial fans - AxiCool
Ø 300-450

EC axial fans - AxiCool
Ø 500-800

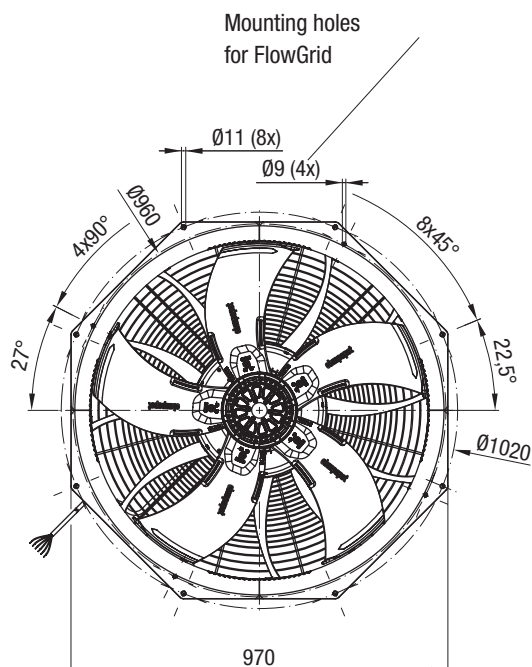
AC axial fans - AxiCool
Ø 300-450

AC axial fans - AxiCool
Ø 500-800

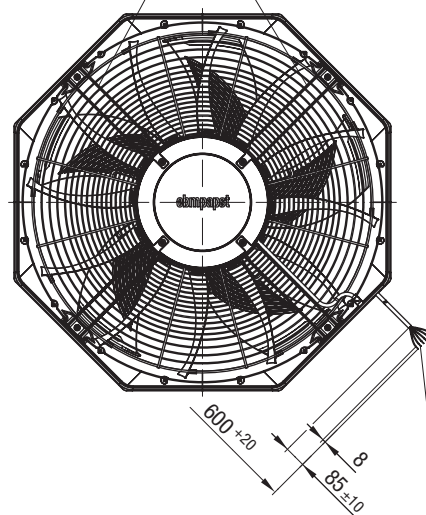
Technology

Agents

W6D 800-NG13-11 (High-End version)



Note installed position!
Fit the struts of the
guard grill as shown!



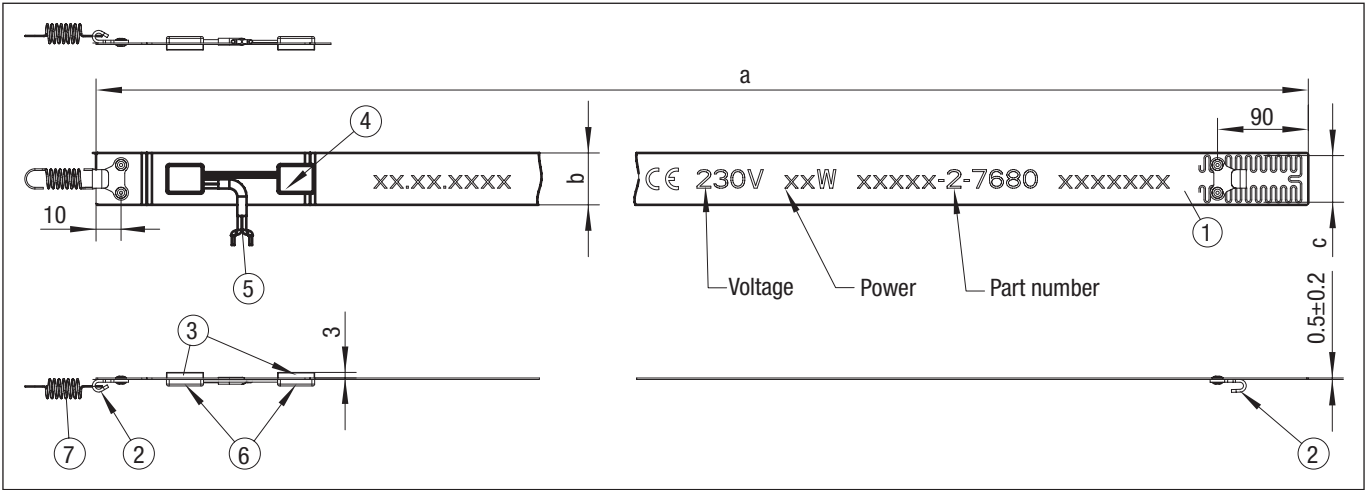
Cable: Silikon 6G 0.75 mm²,
6x crimped splices

Heating tape kits

Heating tape kits

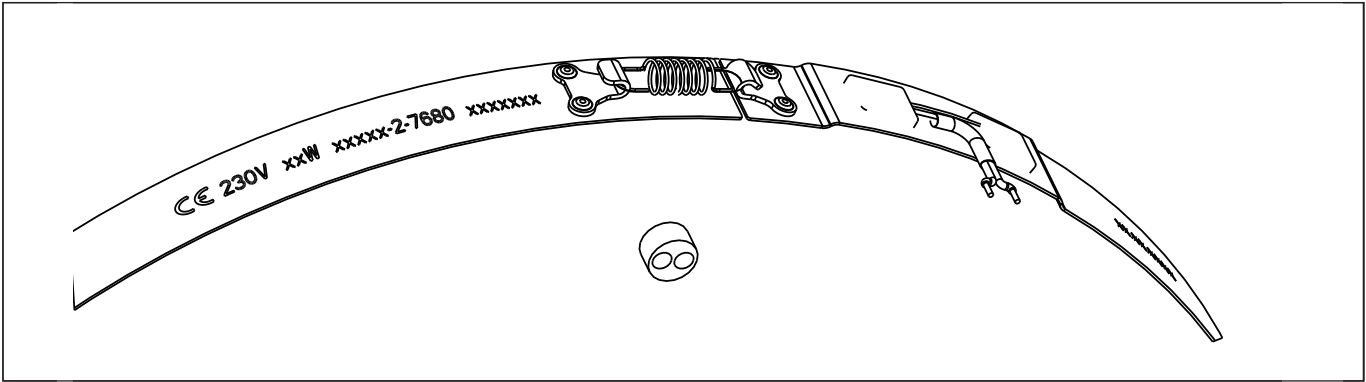
Part no.	Fan size	a	b	Input power
00300-2-7680	300	954	16	25 W ± 10 %
00350-2-7680	350	1116	20	30 W ± 10 %
00450-2-7680	450	1416	20	35 W ± 10 %
00500-2-7680	500	1640	30	120 W ± 10 %
00630-2-7680	630	2055	30	150 W ± 10 %
00800-2-7680	800	2793	45	275 W ± 10 %

Subject to change



Key to drawing:

1 = Heating tape, 2 = Retaining clip, 3 = Spacer profile, 4 = Temperature limiter, 5 = Hose, 6 = Silicone plaster, 7 = Helical spring



Heating tape kits, comprising:

Heating tape + mounting spring and seal (double) + installation instructions

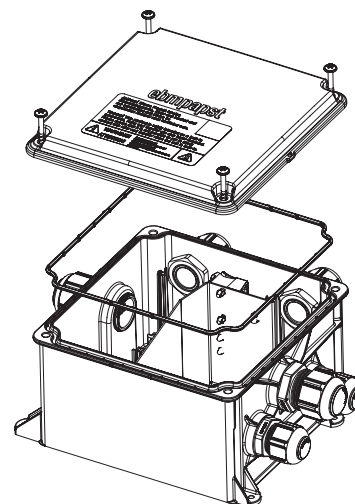
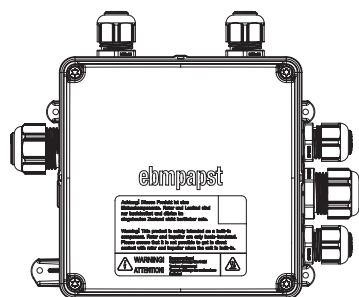
Terminal box kits

Terminal box kits

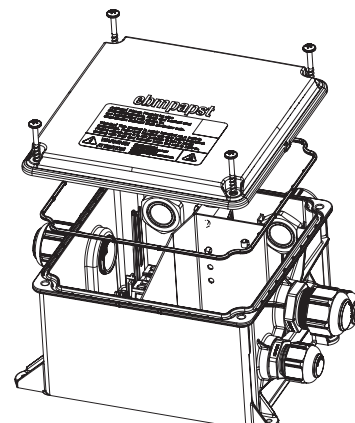
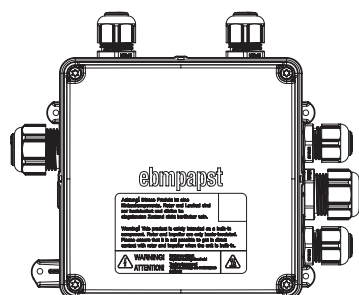
Part no.	Voltage	Fan size
50025-1-7612	EC	84, 112
50035-1-7612	EC	150
50015-1-7612	AC	110, 138

Subject to change

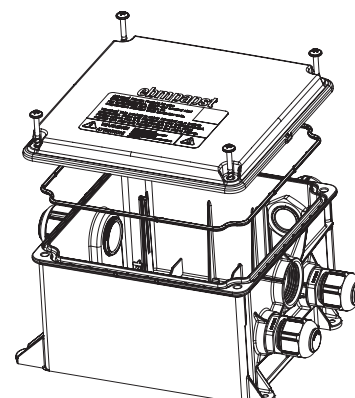
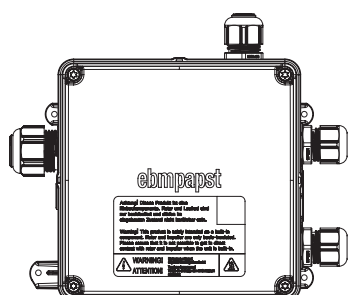
EC - Motor size: 84, 112



EC - Motor size: 150



AC - Motor size: 110, 138

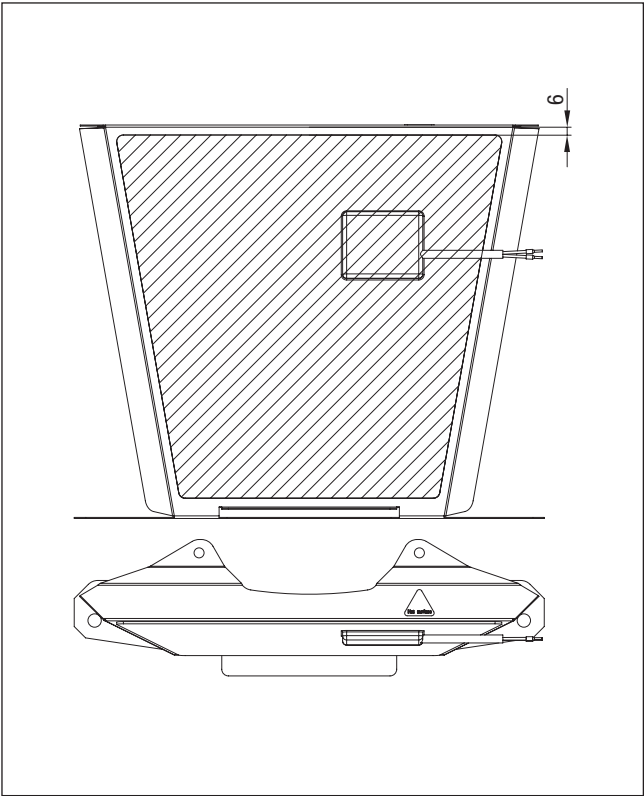
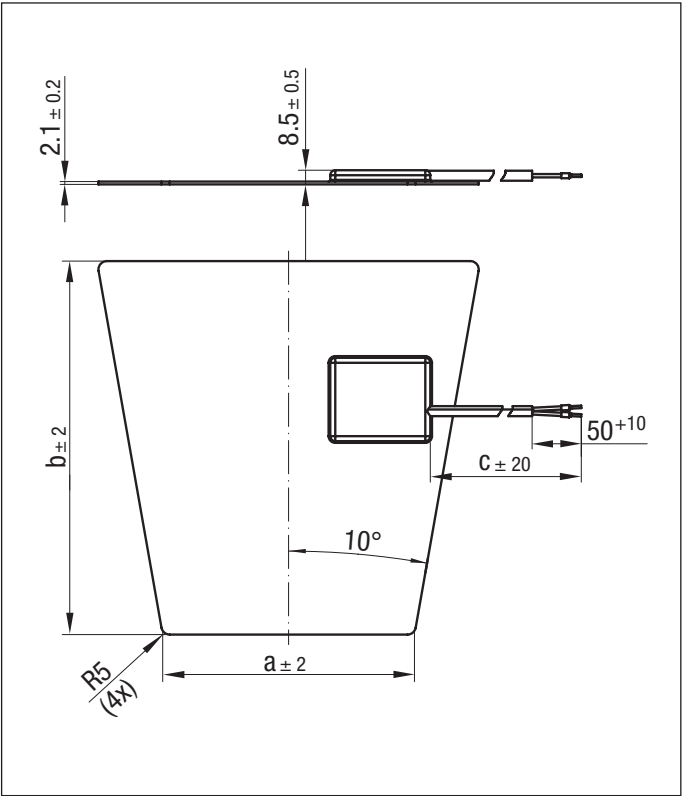


Drip pan kits

Drip pan kits

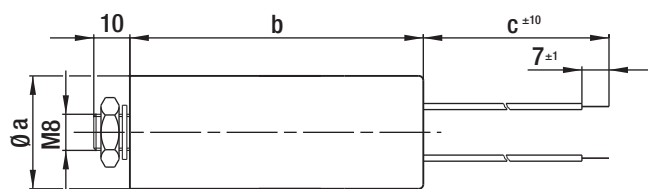
Part no.	Fan size	a	b	c	Input power	Heating area	Heat output
41200-1-4050	500	151	224	380	45 W $\pm$ 10 %	426 cm ²	0.106 W /cm ²
41201-1-4050	630	194	273	420	70 W $\pm$ 10 %	660 cm ²	0.106 W /cm ²
41202-1-4050	800	258	319	480	105 W $\pm$ 10 %	1002 cm ²	0.105 W /cm ²

Subject to change



Drip pan kits, comprising:
Heating mat, drip pan, combi screws + installation instructions

Agents	Technology	AC axial fans - AxiCool Ø 500-800	AC axial fans - AxiCool Ø 300-450	EC axial fans - AxiCool Ø 500-800	EC axial fans - AxiCool Ø 300-450	Information
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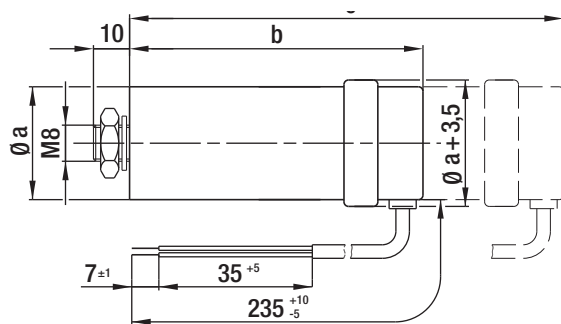


- **Material:** Housing made of thermoplastic resin
- **Cable:** Multi-lead PVC cable 0,5 mm² with brass lead tips
- **Approval:** VDE according to DIN EN 60252 (VDE 0560/8)
- **Calculated life time:**
400 VDB; -25..+85 °C; 30.000 hrs; class A
450 VDB; -25..+85 °C; 10.000 hrs; class B

MKP motor capacitors PO (without fuse)

Part no.	Capacity	a	b (max.)	c
99283-4-7320	2,0 µF	25-28	58,0	235,0
99284-4-7320	4,0 µF	28-32	58,0	235,0
02101-4-7320	5,0 µF	30-36	70,0	235,0
99286-4-7320	8,0 µF	35-40	72,0	235,0
99287-4-7320	10,0 µF	35-40	72,0	200,0
30457-4-7320	14,0 µF	40-45	92,0	150,0

Subject to change

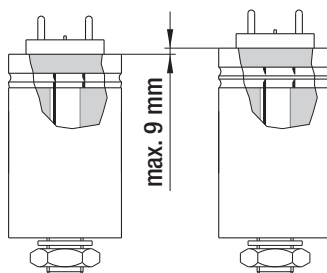


- **Material:** Plastic cap, aluminium cup
- **Designation:** FPU or P2 according to IEC 252 (non-flammable, non-explosive, circuit-breaking)
- **Approval:** VDE according to DIN EN 60252 (VDE 0560/8)
- **Calculated life time:**
420 VDB; -25...+85 °C; 30.000 hrs; class A
470 VDB; -25...+85 °C; 10.000 hrs; class B
500 VDB; -25...+85 °C; 3.000 hrs; class C

MKP motor capacitors FPU or P2 (with fuse)

Part no.	Capacity	a	b (max.)	c
02156-4-7320	2,0 µF	25,0	77,0	92,0
02161-4-7320	4,0 µF	25-30	104,0	135,0
02162-4-7320	5,0 µF	25-30	104,0	113,0
02165-4-7320	8,0 µF	30-35	102,0	111,0
02166-4-7320	10,0 µF	35,0	96,0	110,0
90026-4-7320	14,0 µF	40,0	130,0	139,0

Subject to change

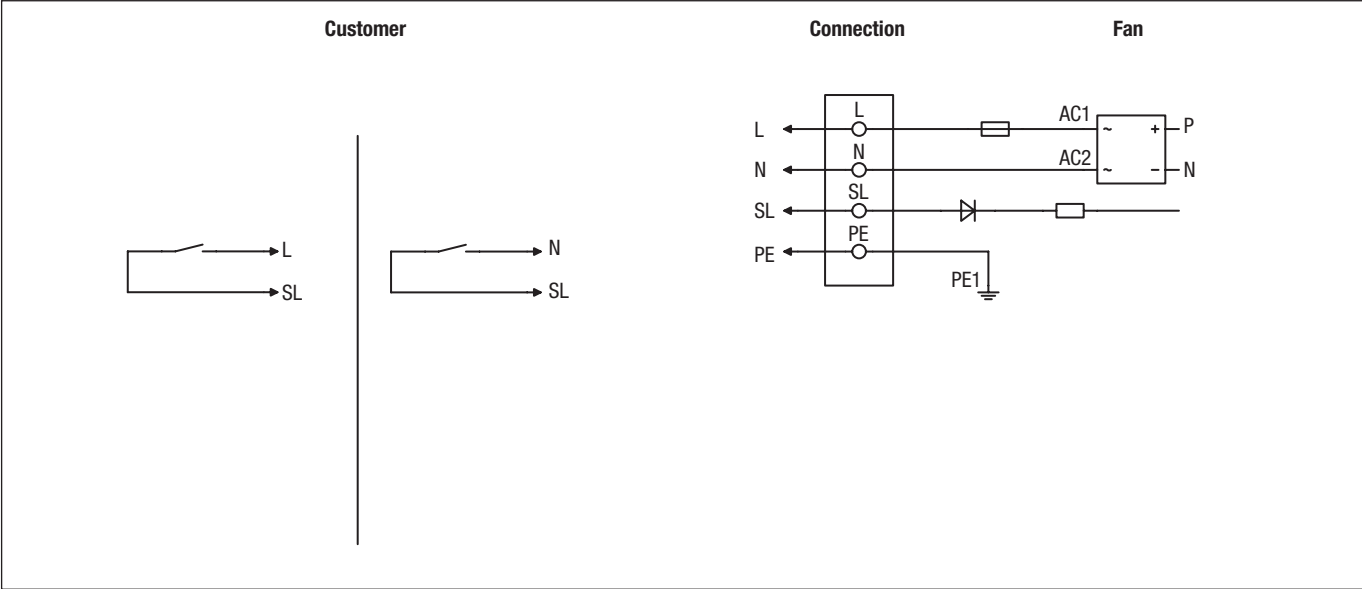


- **Pull-off protector:** The housing expands by max. 9 mm. The protector responds to overload by the generated excess pressure snapping off the internal lead in a predetermined breaking point.
- **Mounting:** c is the overall dimension of the capacitor which has to be taken into account when mounting the part. The capacitor design, however, depends on the manufacturer. The expansion (9 mm) is either added to dimension b, or it is already integrated in the capacitor.

Connection diagram EC AX1)

Technical features (M3G 055 / M3G 074 with 2 speed stages):

- Speed setting input (230V)
- Thermal overload protection for electronics/motor
- Motor current limitation
- Locked-rotor protection
- Soft start



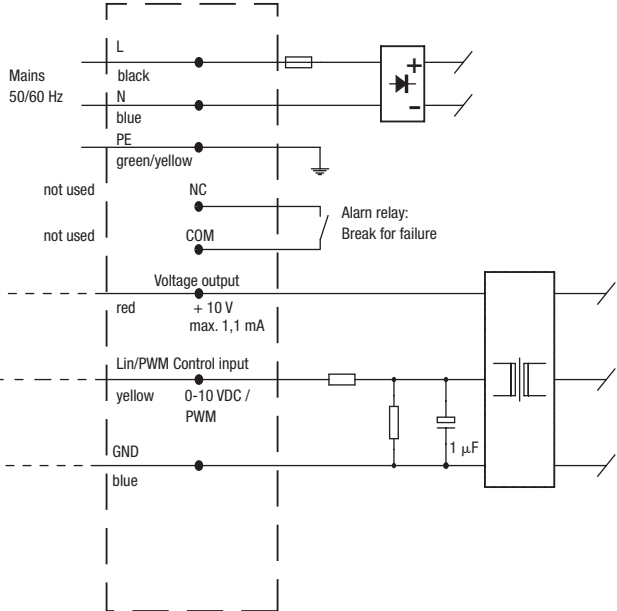
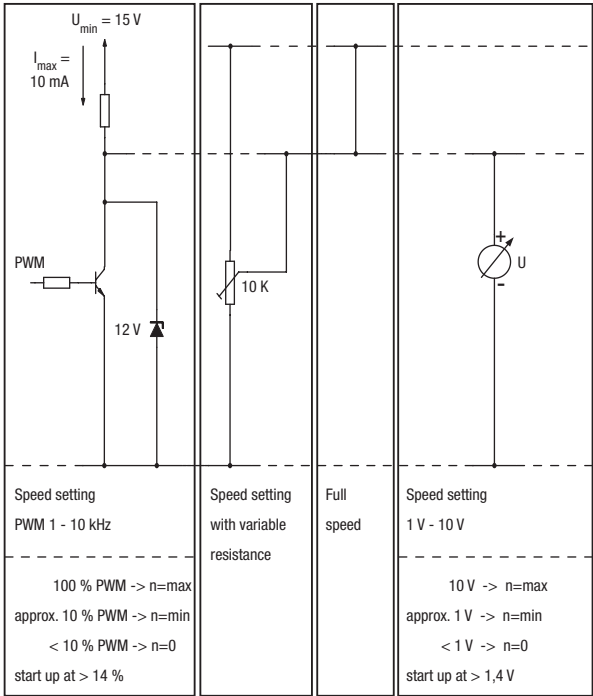
Connection	Color	Assignment / funktion
L	black	Power supply, phase, voltage range see nameplate
N	blue	Power supply, neutral conductor, voltage range see nameplate
PE	green/yellow	Protective earth
SL	brown	Speed selection: switch open = speed 1; switch closed = speed 2

Connection diagram EC AX2)

Technical features:

- PFC, passive
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 1,1 mA
- Thermal overload protection for electronics/motor
- Undervoltage detection
- Motor current limitation
- Soft start
- Control interface with SELV potential safely disconnected from supply

Notes on various control possibilities and their applications

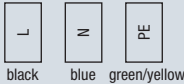


Customer

Connection

Fan

Wire 1



Wire 2

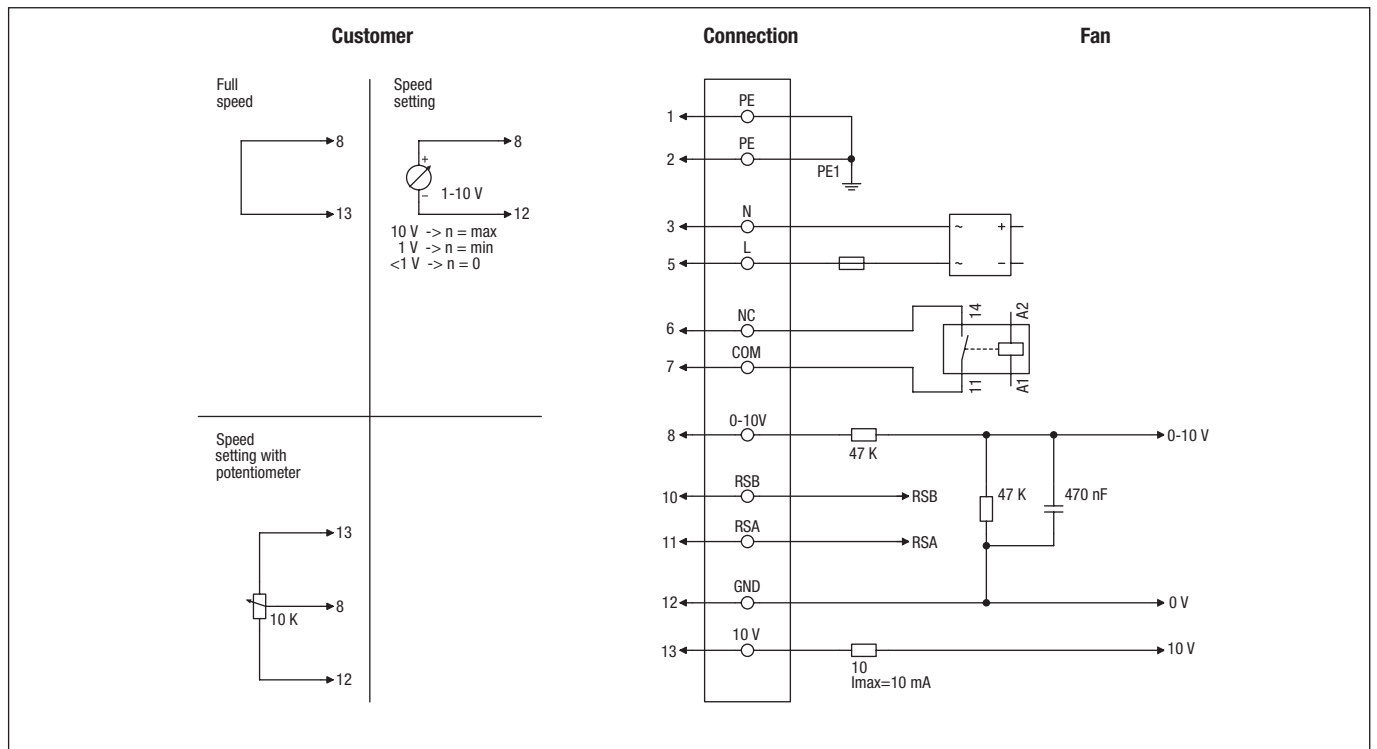


Wire	Connection	Color	Assignment / funktion
1	L	black	Power supply, phase, voltage range see nameplate
	N	blue	Power supply, neutral conductor, voltage range see nameplate
	PE	green/yellow	Protective earth
2	+10 V / max. 1,1 mA	red	Voltage output, SELV
	0-10 V / PWM	yellow	Control input 0-10 V or PWM, impedance 100 kΩ, SELV
	GND	blue	Reference ground for control interface, SELV

Connection diagram EC AX3)

Technical features:

- PFC, active
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- Thermal overload protection for electronics/motor
- Undervoltage/phase failure detection
- Motor current limitation
- Soft start
- RS485 MODBUS-RTU
- Operation and fault indicator
- Alarm relay
- Integrated PID controller
- Power limitation
- Control interface with SELV potential safely disconnected from supply

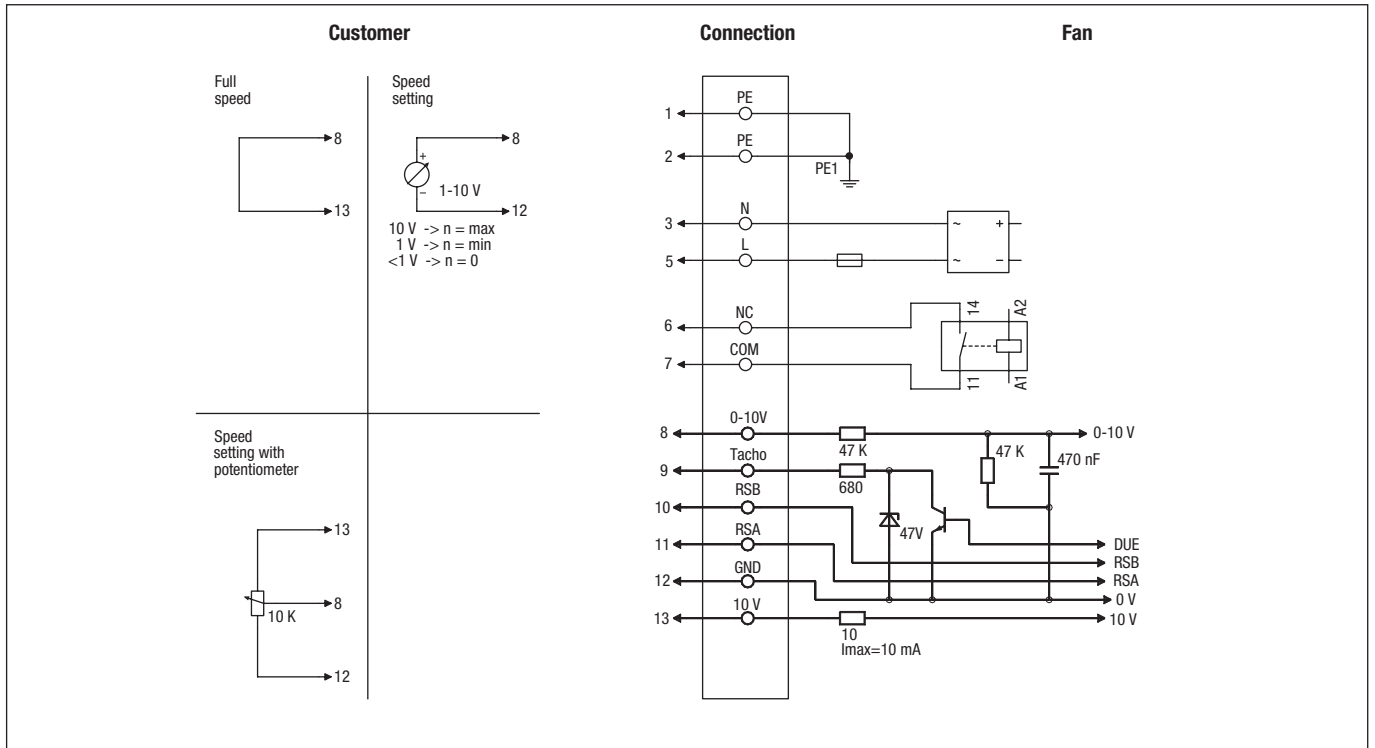


No.	Connection	Designation	Color	Assignment / funktion
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, voltage range see nameplate
1	5	L	black	Power supply, phase, voltage range see nameplate
1	6	NC	white 1	Status relay, floating status contact, break for failure
1	7	COM	white 2	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
2	8	0-10 V / PWM	gelbyyellow	Control input 0-10 V or PWM, impedance 100 kΩ, SELV, adjustable curve
2	10	RSB	brown	RS-485 interface for MODBUS RSB, SELV
2	11	RSA	white	RS-485 interface for MODBUS RSA, SELV
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10 V / max. 10 mA	red	Voltage output, power supply for external devices (e.g. potentiometer), SELV

Connection diagram EC AX4)

Technical features:

- PFC, active
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- Thermal overload protection for electronics/motor
- Undervoltage/phase failure detection
- Motor current limitation
- Soft start
- RS485 MODBUS-RTU
- Operation and fault indicator
- Alarm relay
- Integrated PID controller
- Power limitation
- Tach output
- Control interface with SELV potential safely disconnected from supply

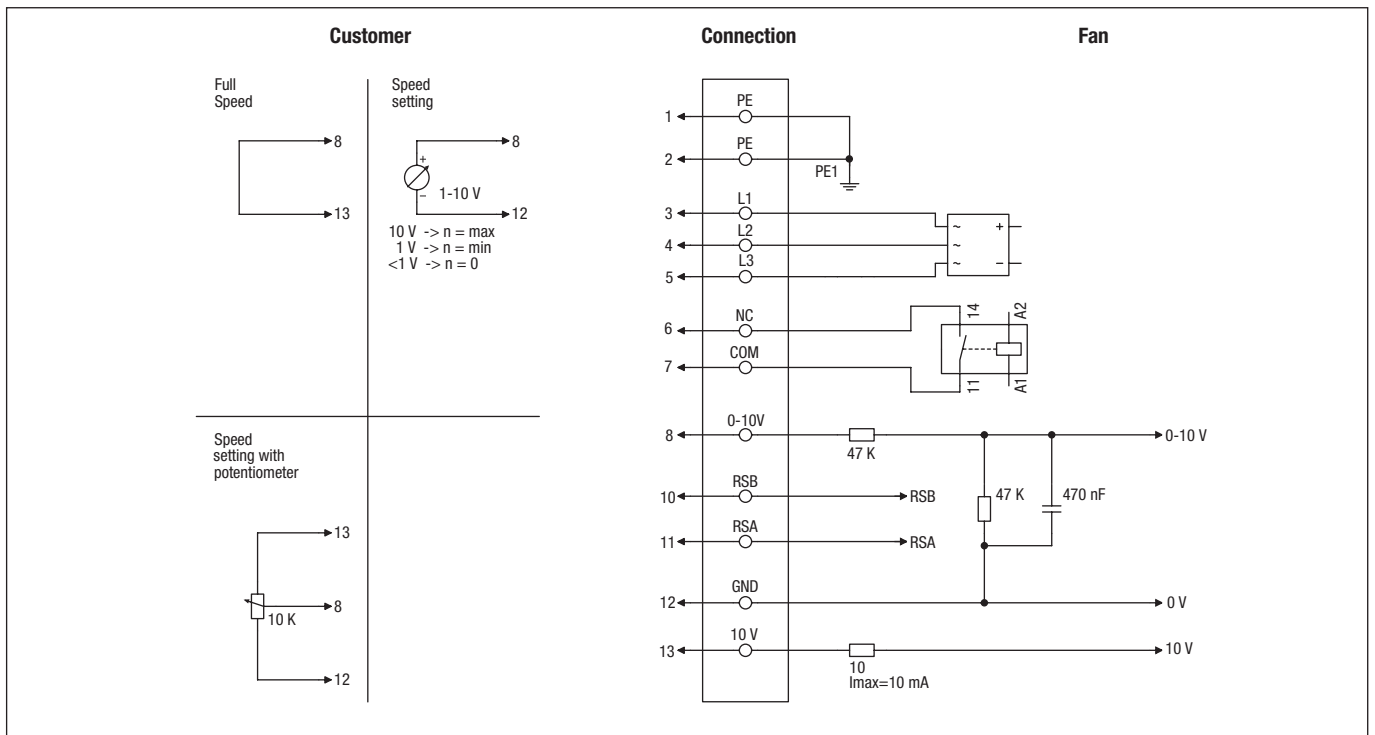


No.	Connection	Designation	Color	Assignment / funktion
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, voltage range see nameplate
1	5	L	black	Power supply, phase, voltage range see nameplate
1	6	NC	white 1	Status relay, floating status contact, break for failure
1	7	COM	white 2	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
2	8	0-10 V / PWM	gelbyellow	Control input 0-10 V or PWM, impedance 100 kΩ, SELV, adjustable curve
2	9	Tacho	grey	Tach output: Open collector, 1 pulse per revolution, SELV
2	10	RSB	brown	RS-485 interface for MODBUS RSB, SELV
2	11	RSA	white	RS-485 interface for MODBUS RSA, SELV
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10 V / max. 10 mA	red	Voltage output, power supply for external devices (e.g. potentiometer), SELV

Connection diagram EC AX5)

Technical features:

- PFC, passive
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- Thermal overload protection for electronics/motor
- Undervoltage/phase failure detection
- Motor current limitation
- Soft start
- RS485 MODBUS-RTU
- Operation and fault indicator
- Alarm relay
- Integrated PID controller
- External 24 V input (parameterization)
- Control interface with SELV potential safely disconnected from supply

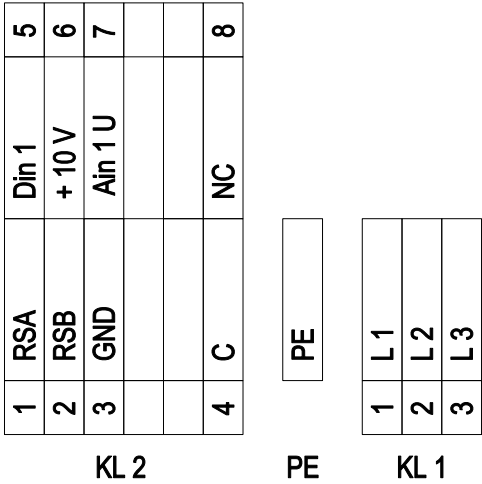


No.	Connection	Designation	Color	Assignment / funktion
1	1, 2	PE	green/yellow	Protective earth
1	3	L1	black	Power supply, phase, voltage range see nameplate
1	4	L2	black	Power supply, phase, voltage range see nameplate
1	5	L3	black	Power supply, phase, voltage range see nameplate
1	6	NC	white 1	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
2	8	0-10 V	yellow	Analog input (set value), 0-10 V, Ri=100 kΩ, adjustable curve, SELV
2	10	RSB	brown	RS-485 interface for MODBUS RSB, SELV
2	11	RSA	white	RS-485 interface for MODBUS RSA, SELV
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+ 10 V	red	Fixed voltage output 10 VDC, +10 V +/-3 %, max. 10 mA, short-circuit-proof; power supply for external devices (e.g. potentiometer); SELV; Alternatively: +24 VDC input for parameterization via MODBUS without line voltage

Connection diagram EC AX6)

Technical features:

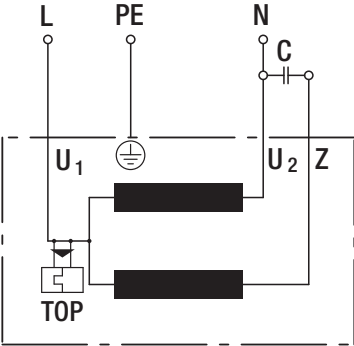
- PFC, passive
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- Thermal overload protection for electronics/motor
- Undervoltage/phase failure detection
- Motor current limitation
- Soft start
- RS485 MODBUS-RTU
- Operation and fault indicator
- Alarm relay
- Integrated PID controller
- External enable input
- External 24 V input (parameterization)
- Control interface with SELV potential safely disconnected from supply



No.	Connection	Designation	Assignment / funktion
KL1	1	L1	Power supply, phase, voltage range see nameplate
	2	L2	Power supply, phase, voltage range see nameplate
	3	L3	Power supply, phase, voltage range see nameplate
PE		PE	Protective earth
KL2	1	RSA	RS-485 interface for MODBUS RSA, SELV
	2	RSB	RS-485 interface for MODBUS RSB, SELV
	3	GND	Reference ground for control interface, SELV
	4	C	Status relay, floating status contact, break for failure contact rating 250 VAC / 2 A (AC1) / min. 10 mA
	5	Din1	Digital input 1: Enable electronics; Enable: Pin open or applied voltage 5-50 VDC; Disable: Bridge to GND or applied voltage <1 VDC; Reset function: Triggering of software reset after level change to <1 V; SELV
	6	+10 V	Fixed voltage output 10 VDC, +10 V +/-3 %, max. 10 mA, short-circuit-proof; power supply for external devices (e.g. potentiometer); SELV Alternatively: +24 VDC input for parameterization via MODBUS without line voltage
	7	Ain1 U	Analog input 1 (set value), 0-10 V, Ri=100 kΩ; adjustable curve, SELV
	8	NC	Status relay, floating status contact, break for failure contact rating 250 VAC / 2 A (AC1) / min. 10 mA

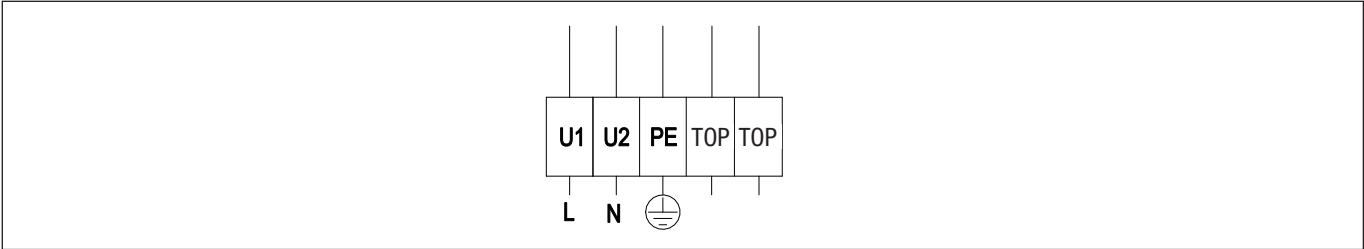
Connection diagram AC AX7)

Single-phase capacitor motor
(1 ~ 230 VAC power line)
with TOP wired internally



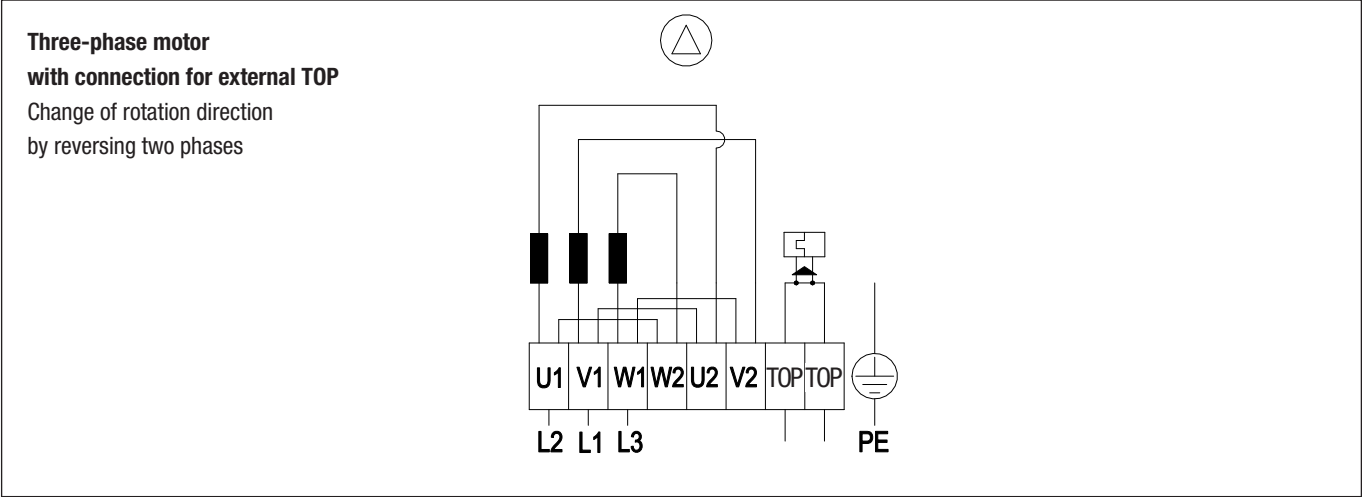
L	= U1 = blue
N	= U2 = black
PE	green/Yellow
Z	brown

Connection diagram AC AX8)



L	= U1 = blue
N	= U2 = black
PE	green/yellow
TOP	Thermal overload protector grey (2x)

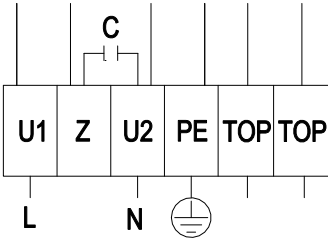
Connection diagram AC AX9)



Δ	Delta connection
L1	blue
L2	black
L3	brown
TOP	Thermal overload protector grey (2x)
PE	green/yellow

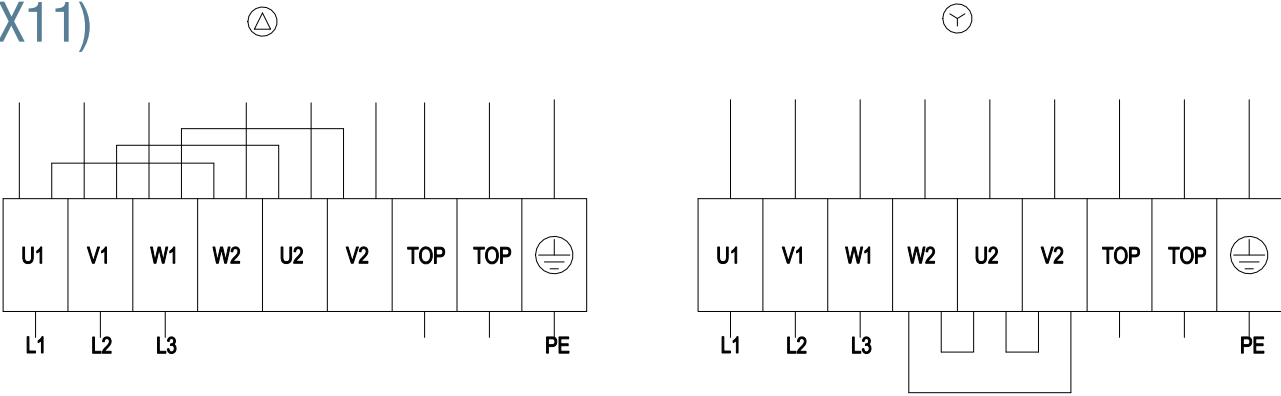
Connection diagram AC AX10 / AX11)

AX10)



L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow	TOP	grey		

AX11)



Δ	Delta connection	Y	Star connection	L1	= U2 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2 x grey
PE	green/yellow				

Technical parameters and scope

High standards for all ebm-papst products

At ebm-papst we are always looking to improve our products to be able to offer customers just what they need for their particular requirements. Careful monitoring of the market enables us to constantly incorporate enhancements into our products. As shown by the technical parameters listed below, you can always be sure of finding the right solution from ebm-papst for whatever application you may have in mind.

General performance parameters

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

Degree of protection

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

Condensation drainage holes

Information on condensation drainage 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.

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.

Depending on the boundary conditions, the life expectancy L10 of the ball bearings is approximately 40,000 hours of operation when used in conjunction with an industrial evaporator.

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, in-circuit or external
- PTC with electronic diagnostics
- Impedance protection
- 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.



Vibration testing

Vibration testing is performed as follows:

- Vibration test in operation according to DIN IEC 68 Part 2-6
- Vibration test at standstill according to DIN IEC 68 Part 2-6

Shock load

Shock load testing is performed as follows:

- Shock load according to DIN IEC 68 Part 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

The fans in the AxiCool product range are designed for use in commercial and industrial evaporators and air coolers and as such are suitable for ambient temperatures down to -40°C. Optional extras such as fan housing heating are available to suit the typical requirements of this type of application. The fan design with guide vanes makes it possible to attain the high levels of air throw so important to large cold stores in particular.

AxiCool fans are not designed for use in the aerospace industry.

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, with guard grill.

As required by the standards, the air performance curves shown are referenced to an air density of 1.15 kg/m³.

Technical parameters and 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” in full nozzle with guard grill
- 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, with grill.

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.

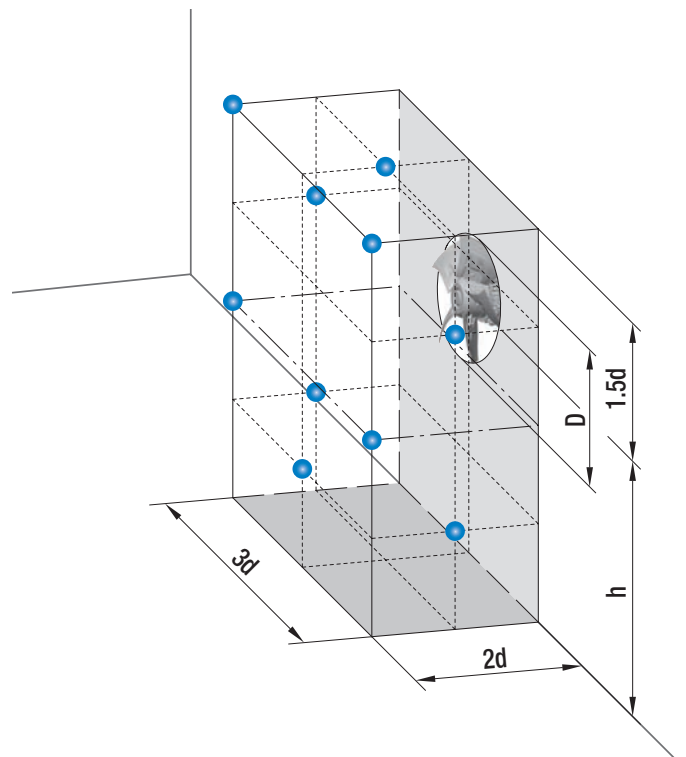
Measurement set-up according to ISO 13347-3 and DIN 45635-38:

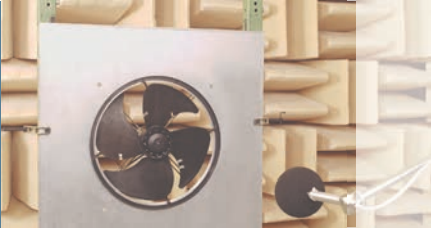
- 10 measuring points

$$d \geq D$$

$$h = 1.5d \dots 4.5d$$

$$\text{Measurement area } S = 6d^2 + 7d(h + 1.5d)$$



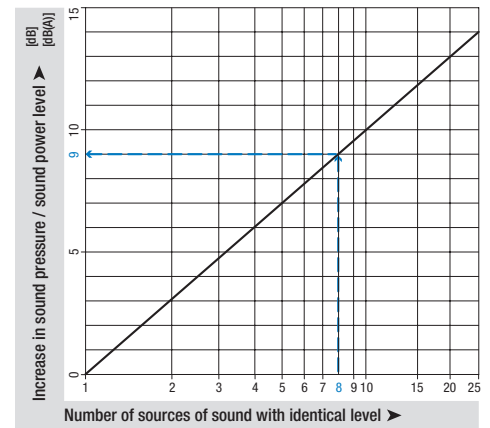


Cumulative level of several sound sources with the same level

The addition of 2 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 axial fans A3G800 on a condenser. 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.

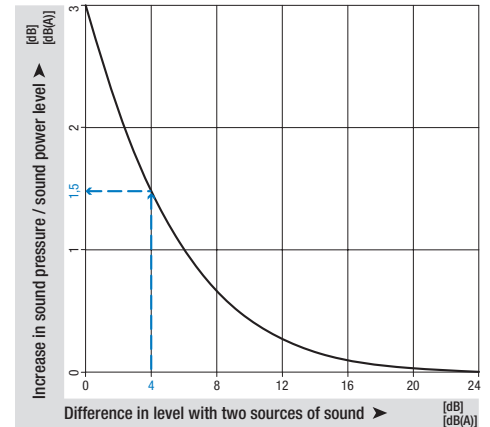
This means that a total level of 84 dB(A) is to be expected for the installation.



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.

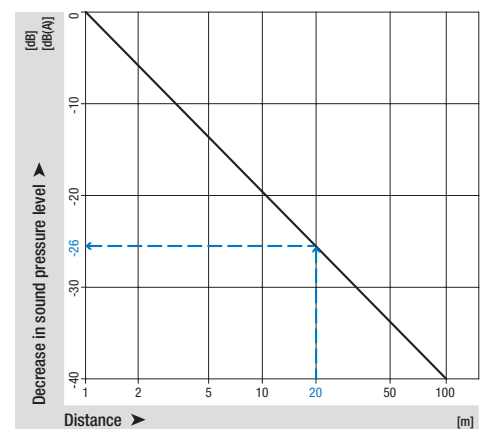
Example: In a ventilation unit, there is one axial fan A3G800 with a sound pressure level of 75 dB(A) at the point of operation and one axial fan A3G710 with 71 dB(A). The difference in level is 4 dB. The level increase of approx. 1.5 dB can now be read off the graph. This means that a total level of 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 an axial fan A3G300, 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).



ebm-papst in 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



Berlin

Dipl.-Ing. (TH) Jens Duchow
Händelstraße 7
16341 Panketal
GERMANY
Phone +49 30 944149-62
Fax +49 30 944149-63
Jens.Duchow@de.ebmpapst.com



Bielefeld

Dipl.-Ing. (FH) Wolf-Jürgen Weber
Niehausweg 13
33739 Bielefeld
GERMANY
Phone +49 5206 91732-31
Fax +49 5206 91732-35
Wolf-Juergen.Weber@de.ebmpapst.com



Dortmund

Dipl.-Ing. (FH) Hans-Joachim Pundt
Auf den Steinern 3
59519 Möhnesee-Völlinghausen
GERMANY
Phone +49 2925 800-407
Fax +49 2925 800-408
Hans-Joachim.Pundt@de.ebmpapst.com



Frankfurt

Dipl.-Ing. Christian Kleffmann
Dr.-Hermann-Krause-Straße 23
63452 Hanau
GERMANY
Phone +49 6181 1898-12
Fax +49 6181 1898-13
Christian.Kleffmann@de.ebmpapst.com



Halle

Dipl.-Ing. (TU) Michael Hanning
Lercheneck 4
06198 Salzdahl / OT Lieskau
GERMANY
Phone +49 345 55124-56
Fax +49 345 55124-57
Michael.Hanning@de.ebmpapst.com



Hamburg

Ingenieurbüro Breuelli GmbH
Ing. Dirk Kahl
Elektroingenieur
Oststraße 96
22844 Norderstedt
GERMANY
Phone +49 40 538092-19
Fax +49 40 538092-84
Kahl@breuelli-hilgenfeldt.de



Heilbronn / Heidelberg

Dipl.-Ing. Mark Gartner
Gehrweg 12
74199 Unterheinriet
GERMANY
Phone +49 7130 404569-1
Fax +49 7130 404569-2
Mark.Gartner@de.ebmpapst.com



Kassel

Dipl.-Ing. (FH) Ralph Brück
Hoherainstraße 3 b
35075 Gladenbach
GERMANY
Phone +49 6462 4071-10
Fax +49 6462 4071-11
Ralph.Brueck@de.ebmpapst.com



Koblenz

Winfried Schaefer
Hinter der Kirch 10
56767 Uersfeld
GERMANY
Phone +49 2657 16-96
Fax +49 2657 16-76
Winfried.Schaefer@de.ebmpapst.com



Munich

Dipl.-Wirt.-Ing. (FH) Jens Peter
Landsbergerstraße 14
86932 Pürgen
GERMANY
Phone +49 8196 99877-54
Fax +49 8196 99877-55
Jens.Peter@de.ebmpapst.com



Nuremberg

Dipl.-Wirt.-Ing. (FH) Axel Resch
Dr.-August-Koch-Str. 1
91639 Wolframs-Eschenbach
GERMANY
Phone +49 9875 9783-170
Fax +49 9875 9783-171
Axel.Resch@de.ebmpapst.com



Offenburg

Dipl.-Ing. (FH) Ralf Braun
Hubeneck 21
77704 Oberkirch
GERMANY
Phone +49 7802 9822-52
Fax +49 7802 9822-53
Ralf.Braun@de.ebmpapst.com



Stuttgart

Dipl.-Ing. (FH) Rudi Weinmann
Hindenburgstraße 100/1
73207 Plochingen
GERMANY
Phone +49 7153 9289-80
Fax +49 7153 9289-81
Rudi.Weinmann@de.ebmpapst.com



Ulm

M.Sc. Reinhard Sommerreißer
Am Germanenring 13
86674 Baar / Schwaben
GERMANY
Phone +49 8276 5899-775
Fax +49 8276 5899-776
Reinhard.Sommerreisser@de.ebmpapst.com

Distributors



Frankfurt

R.E.D. Handelsgesellschaft mbH
Gutenbergstraße 3
63110 Rodgau - Jügesheim
GERMANY
Phone +49 6106 841-0
Fax +49 6106 841-111
info@red-elektromechanik.de
www.red-elektromechanik.de



Hamburg

Breuelli + Hilgenfeldt GmbH
Oststraße 96
22844 Norderstedt
GERMANY
Phone +49 40 538092-20
Fax +49 40 538092-84
info@breuelli-hilgenfeldt.de



Munich

A. Schweiger GmbH
Ohmstraße 1
82054 Sauerlach
GERMANY
Phone +49 8104 897-0
Fax +49 8104 897-90
info@schweiger-gmbh.de
www.schweiger-gmbh.com

● **Express Service-Center** (1 to 5 pieces)



North

Breuelli + Hilgenfeldt GmbH
Oststraße 96
22844 Norderstedt
GERMANY
Phone +49 40 538092-20
Fax +49 40 538092-84
info@breuelli-hilgenfeldt.de



South

HDS Ventilatoren Vertriebs GmbH
Glaswiesenstraße 1
74677 Dörzbach
GERMANY
Phone +49 7937 80355-20
Fax +49 7937 80355-25
info@hds-gmbh.net
www.hds-gmbh.net

ebm-papst in Europe



Europe

 **Austria**
ebm-papst Motoren & Ventilatoren GmbH
Straubingstraße 17
4030 Linz
AUSTRIA
Phone +43 732 321150-0
Fax +43 732 321150-20
info@at.ebmpapst.com
www.ebmpapst.at

 **Belarus**
ebm-papst Bel AgmbH
4th Montazhnikov side street
House 6, Office 332
BY-220019 Minsk
BELARUS
Phone +375 17 2015216
Fax +375 17 2015216
info@by.ebmpapst.com
www.ebmpapst.by

 **Belgium**
ebm-papst Benelux B.V.
Sales office Belgium-Luxemburg
Romeinsestraat 6/0101
Research Park Haasrode
3001 Heverlee-Leuven
BELGIUM
Phone +32 16 396-200
Fax +32 16 396-220
info@be.ebmpapst.com
www.ebmpapst.be

 **Bulgaria**
ebm-papst Romania P.R.L.
Str. Tarnavei No. 20
500327 Brasov
ROMANIA
Phone +40 268 331859
Fax +40 268 312805
dudasludovic@xnet.ro

 **Croatia**
ebm-papst Industries Kft.
Ezred u. 2.
1044 Budapest
HUNGARY
Phone +36 1 8722-190
Fax +36 1 8722-194
office@hu.ebmpapst.com

 **Cyprus**
Helcoma
E. Rota and Co. OE
Davaki 65
17672 Kallithea-Attiki
GREECE
Phone +30 210 9513-705
Fax +30 210 9513-490
contact@helcoma.gr
www.helcoma.gr

 **Czech Republic / Slovakia**
ebm-papst CZ s.r.o.
Kaštanová 34a
620 00 Brno
CZECH REPUBLIC
Phone +420 544 502-411
Fax +420 547 232-622
info@ebmpapst.cz
www.ebmpapst.cz

 **Denmark**
ebm-papst Denmark ApS
Vallensbækvej 21
2605 Brøndby
DENMARK
Phone +45 43 631111
Fax +45 43 630505
mail@dk.ebmpapst.com
www.ebmpapst.dk

 **Estonia**
ebm-papst Oy, Eesti Filiaal
Kes tee 21
Aaviku küla, Jüri Tehnopol
75301 Rae Vald, Harjumaa
ESTONIA
Phone +372 65569-78
www.ebmpapst.ee

 **Finland**
ebm-papst Oy
Puistotie 1
02760 Espoo
FINLAND
Phone +358 9 887022-0
Fax +358 9 887022-13
mailbox@ebmpapst.fi
www.ebmpapst.fi

 **France**
ebm-papst sarl
Parc d'Activités Nord
1 rue Mohler – BP 62
67212 Obernai Cedex
FRANCE
Phone +33 3 88 66 88 03
info@ebmpapst.fr
www.ebmpapst.fr

 **Greece**
Helcoma
E. Rota and Co. OE
Davaki 65
17672 Kallithea-Attiki
GREECE
Phone +30 210 9513-705
Fax +30 210 9513-490
contact@helcoma.gr
www.helcoma.gr

 **Hungary**
ebm-papst Industries Kft.
Ezred u. 2.
1044 Budapest
HUNGARY
Phone +36 1 8722-190
Fax +36 1 8722-194
office@hu.ebmpapst.com

 **Iceland**
RJ Engineers
Stangarhyl 1a
110 Reykjavik
ICELAND
Phone +354 567 8030
Fax +354 567 8015
rj@rj.is
www.rj.is

 **Ireland**
ebm-papst UK Ltd.
Chelmsford Business Park
Chelmsford Essex CM2 5EZ
UNITED KINGDOM
Phone +44 1245 468555
Fax +44 1245 466336
sales@uk.ebmpapst.com
www.ebmpapst.co.uk

 **AuBren Limited**
Portlaoise Business & Technology Park
Mountrath Road
Portlaoise, Co. Laois
IRELAND
Phone +353 57 8664343
Fax +353 57 8664346
sales@ie.aubren.com
www.aubren.com

 **Italy**
ebm-papst Srl
Via Cornaggia 108
22076 Mozzate (Co)
ITALY
Phone +39 0331 836201
Fax +39 0331 821510
info@it.ebmpapst.com
www.ebmpapst.it

ebm-papst in Europe



Macedonia

ebm-papst Industries Kft.
Ezred u. 2.
1044 Budapest
HUNGARY
Phone +36 1 8722-190
Fax +36 1 8722-194
office@hu.ebmpapst.com



Netherlands

ebm-papst Benelux B.V.
Polbeemd 7 - 5741 TP Beek en Donk
P.O. Box 140 - 5740 AC Beek en Donk
NETHERLANDS
Phone +31 492 502-900
Fax +31 492 502-950
verkoop@nl.ebmpapst.com
www.ebmpapst.nl

ebm-papst Heating Systems B.V.
Van Veldekeade 360
5216 KT 's-Hertogenbosch
NETHERLANDS
Phone +31 73 648 89 00
Fax +31 73 648 89 11
info@ebmpapst-hs.nl
www.ebmpapst-hs.nl



Norway

ebm-papst AS
P.B. 173 Holmlia
1203 Oslo
NORWAY
Phone +47 22 763340
Fax +47 22 619173
mailbox@ebmpapst.no
www.ebmpapst.no



Poland

ebm-papst Polska Sp. z o.o.
ul. Annopol 4A
03236 Warszawa
POLAND
Phone +48 22 6757819
Fax +48 22 6769587
office@ebmpapst.pl
www.ebmpapst.pl



Portugal

ebm-papst (Portugal), Lda.
Centro Empresarial de Alverca
Rua de Adarse, Vale D'Ervas
Corpo D / Fracção 3
2615-178 Alverca do Ribatejo
PORTUGAL
Phone +351 218 394 880
Fax +351 218 394 759
info@pt.ebmpapst.com
www.ebmpapst.pt



Romania

ebm-papst Romania S.R.L.
Str. Tarnavei Nr. 20
500327 Brasov
ROMANIA
Phone +40 268 331859
Fax +40 268 312805
dudasludovic@xnet.ro



Russia

ebm-papst Rus GmbH
Olimpiyskiy prospect 29A, office 418
141006 Mytistschi, Oblast Moskau
RUSSIA
Phone +7 495 9807524
Fax +7 495 5140924
info@ebmpapst.ru
www.ebmpapst.ru



ebm-papst Ural GmbH
Posadskaja-Strasse, 23(E), 3
620102 Ekaterinburg
RUSSIA
Phone +7 343 2338000
Fax +7 343 2337788
Konstantin.Molokov@ru.ebmpapst.com
www.ebmpapst.ru



Serbia & Montenegro

ebm-papst Industries Kft.
Ezred u. 2.
1044 Budapest
HUNGARY
Phone +36 1 8722-190
Fax +36 1 8722-194
office@hu.ebmpapst.com



Spain

ebm-papst Ibérica S.L.
Avda. del Sistema Solar, 29
28830 San Fernando de Henares (Madrid)
SPAIN
Phone +34 91 6780894
Fax +34 91 6781530
ventas@ebmpapst.es
www.ebmpapst.es



Sweden

ebm-papst AB
Äggelundavägen 2
17562 Järfälla
SWEDEN
Phone +46 10 4544400
Fax +46 8 362306
info@ebmpapst.se
www.ebmpapst.se



Switzerland

ebm-papst AG
Rütisbergstrasse 1
8156 Oberhasli
SWITZERLAND
Phone +41 44 73220-70
Fax +41 44 73220-77
verkauf@ebmpapst.ch
www.ebmpapst.ch



Turkey

Akntel Elektronik San. Tic. LTD. Sti.
Atatürk Organize Sanayi
Bölgesi 10007 SK. No.:6
35620 Cigli-Izmir
TURKEY
Phone +90 232 3282090
Fax +90 232 3280270
akntel@akntel.com.tr
www.ebmpapst.com.tr



Ukraine

ebm-papst Ukraine LLC
Lepse Boulevard, 4, Building 21
03067 Kiev
UKRAINE
Phone +38 044 2063091
Fax +38 044 2063091
mail@ebmpapst.ua
www.ebmpapst.ua



United Kingdom

ebm-papst UK Ltd.
Chelmsford Business Park
Chelmsford Essex CM2 5EZ
UNITED KINGDOM
Phone +44 1245 468555
Fax +44 1245 466336
sales@uk.ebmpapst.com
www.ebmpapst.co.uk

ebm-papst Automotive & Drives (UK) Ltd.
The Smithy
Fidlers Lane
East Ilsley, Berkshire RG20 7LG
UNITED KINGDOM
Phone +44 1635 2811-11
Fax +44 1635 2811-61
A&Dsales@uk.ebmpapst.com
www.ebmpapst-ad.com

ebm-papst in America and Africa

America



Argentina

ebm-papst de Argentina S.A.
Hernandarias 148 Lomas del Mirador
Pcia. de Buenos Aires (1752)
ARGENTINA
Phone +54 11 46576135
Fax +54 11 46572092
ventas@ar.ebmpapst.com
www.ebmpapst.com.ar



Brazil

ebm-papst Motores Ventiladores Ltda.
Av. José Giorgi, 301 Galpões B6+B7
Condominio Logical Center
06707-100 Cotia - São Paulo
BRAZIL
Phone +55 11 4613-8700
Fax +55 11 4777-1456
vendas@br.ebmpapst.com
www.ebmpapst.com.br



Canada

ebm-papst Canada Inc.
1800 Ironstone Manor, Unit 2
Pickering, Ontario, L1W3J9
CANADA
Phone +1 905 420-3533
Fax +1 905 420-3772
sales@ca.ebmpapst.com
www.ebmpapst.ca



Mexico

ebm Industrial S. de R.L. de C.V.
Paseo de Tamarindos 400-A-5to Piso
Col. Bosques de las Lomas
Mexico 05120, D.F.
MEXICO
Phone +52 55 3300-5144
Fax +52 55 3300-5243
sales@mx.ebmpapst.com
www.ebmpapst.com.mx



USA

ebm-papst Inc.
P.O. Box 4009
100 Hyde Road
Farmington, CT 06034
UNITED STATES
Phone +1 860 674-1515
Fax +1 860 674-8536
sales@us.ebmpapst.com
www.ebmpapst.us



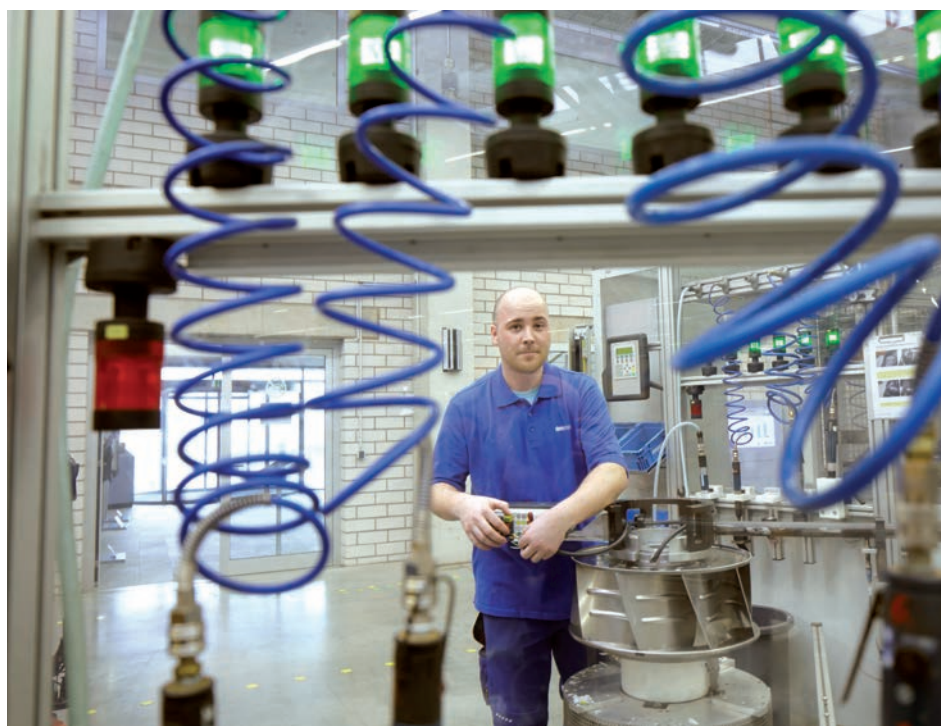
ebm-papst Automotive & Drives, Inc.
3200 Greenfield, Suite 130
Dearborn, MI 48120
UNITED STATES
Phone +1 313 406-8080
Fax +1 313 406-8081
automotive@us.ebmpapst.com
www.ebmpapst-automotive.us

Africa



South Africa

ebm-papst South Africa (Pty) Ltd.
P.O. Box 3124
1119 Yacht Avenue
2040 Honeydew
SOUTH AFRICA
Phone +27 11 794-3434
Fax +27 11 794-5020
info@za.ebmpapst.com
www.ebmpapst.co.za



ebm-papst in Asia



Asia



China

ebm-papst Ventilator (Shanghai) Co., Ltd.
No. 418, Huajing Road
WaiGaoQiao Free Trade Zone
No. 2001, Yang Gao (N) Road
200131 Shanghai
P.R. of CHINA
Phone +86 21 5046-0183
Fax +86 21 5046-1119
sales@cn.ebmpapst.com
www.ebmpapst.com.cn



Hong Kong

ebm-papst Hong Kong Ltd.
Room 17E, MG Tower
133 Hoi Bun Road, Kwun Tong
Hong Kong
P.R. of CHINA
Phone +852 2145-8678
Fax +852 2145-7678
info@hk.ebmpapst.com



India

ebm-papst India Pvt. Ltd.
26/3, G.N.T. Road, Erukkencherry
Chennai-600118
INDIA
Phone +91 44 25372556
Fax +91 44 25371149
sales@in.ebmpapst.com
www.ebmpapst.in



Indonesia

ebm-papst Indonesia
Representative Office
German Centre, 4th Floor, Suite 4470
Jl. Kapt. Subijono Dj. Bumi Serpong Damai
15321 Tangerang
INDONESIA
Phone +62 21 5376250
Fax +62 21 5388305
salesdept@id.ebmpapst.com



Israel

Polak Bros. Import Agencies Ltd.
9 Hamefalsim Street
Kiryat Arie, Petach-Tikva 49514
ISRAEL
Phone +972 3 9100300
Fax +972 3 5796679
polak@polak.co.il
www.polak.co.il



Japan

ebm-papst Japan K.K.
Attend on Tower 13F
Shinyokohama 2-8-12, Kohoku-ku
222-0033 Yokohama-City, Kanagawa
JAPAN
Phone +81 45 47057-51
Fax +81 45 47057-52
info@jp.ebmpapst.com
www.ebmpapst.jp



Korea

ebm-papst Korea Co. Ltd.
6F, Trutec Bldg.
12, WorldCupbuk-ro 56-gil
Mapo-Gu
Seoul 03924
KOREA
Phone +82 2 366213-24
Fax +82 2 366213-26
info@kr.ebmpapst.com
www.ebmpapst.co.kr



Malaysia

ebm-papst Malaysia
Representative Office
No. 16-1, Jalan Putra Mahkota 7/5A
Putra Heights
Selangor Darul Ehsan
47650 Subang Jaya
MALAYSIA
Phone +60 3 5192-7688
Fax +60 3 5614-3078
salesdept@my.ebmpapst.com



Philippines

ebm-papst SEA Pte. Ltd.
Representative Office (Philippines)
ALPAP II Building
Trade Street Corner Investment Drive
Unit 1101 Madrigal Business Park
1799 Ayala Alabang / Muntinlupa City
Telefon: +63 02 8042747
Telefax: +63 02 8042757
salesdept@ph.ebmpapst.com



Singapore

ebm-papst SEA Pte. Ltd.
9 Tai Seng Drive
#03-01 Geo-Tele Centre, Lobby B
Singapore 535227
SINGAPORE
Phone +65 65513789
Fax +65 68428439
salesdept@sg.ebmpapst.com



Taiwan

ETECO Engineering & Trading Corp.
10F-I, No. 92, Teh-Wei Str.
Tsow-Inn District, Kaohsiung
TAIWAN
Phone +886 7 557-4268
Fax +886 7 557-2788
eteco@ms22.hinet.net
www.ebmpapst.com.tw



Thailand

ebm-papst Thailand Co., Ltd.
99/9 Moo 2, Central Chaengwattana Tower
14th Floor, Room 1402
Chaengwattana Road Bangtarad, Pakkret
11120 Nonthaburi
THAILAND
Phone +66 2 8353785-7
Fax +66 2 8353788
salesdept@th.ebmpapst.com



United Arab Emirates

ebm-papst Middle East FZE
PO Box 17755
Jebel Ali Free Zone / FZS1 / AP05
Dubai
UNITED ARAB EMIRATES
Phone +971 4 88608-26
Fax +971 4 88608-27
info@ae.ebmpapst.com
www.ebmpapst.ae



Vietnam

ebm-papst SEA Pte. Ltd.
Representative Office
Room 402, 4th Floor, Saigon 3 Building
140 Nguyen Van Thu Street
Dakao Ward, District 1
Ho Chi Minh City
VIETNAM
Phone +848 3910 4099
Fax +848 3910 3970
salesdept@vn.ebmpapst.com

Oceania

 **Australia**
 ebm-papst A&NZ Pty Ltd.
10 Oxford Road
Laverton North, Victoria, 3026
AUSTRALIA
Phone +61 3 9360-6400
Fax +61 3 9360-6464
sales@ebmpapst.com.au
www.ebmpapst.com.au

 **New Zealand**
 ebm-papst A&NZ Pty Ltd.
61 Hugo Johnston Drive, Unit H
Penrose 1061, Auckland
NEW ZEALAND
PO Box 112278,
Penrose 1642, Auckland
Phone +64 9 525-0245
Fax +64 9 525-0246
sales@ebmpapst.com.au
www.ebmpapst.com.au



Notes







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

ebmpapst

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