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 fulfill: 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.
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**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>450</td>
<td>M3G 074-DF 2-Speeds</td>
<td>W3G 450-JO02-30</td>
<td>W3G 450-T002-30</td>
<td>W3G 450-S002-30</td>
<td>W3G 450-W002-30</td>
<td>18</td>
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</table>

**AxiCool AC size 300-450**

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tr>
<td></td>
<td>M4D 094-HA</td>
<td>W4D 450-JA18-40</td>
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<td>56</td>
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</table>

**Overview of types EC & AC
AxiCool size 500-800**

<table>
<thead>
<tr>
<th>Ø</th>
<th>Motor EC / AC</th>
<th>Standard version EC</th>
<th>High-End version EC</th>
<th>Standard version AC</th>
<th>High-End version AC</th>
<th>Page ff, EC / AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>M3G 084 / M6E 110</td>
<td>W3G 500-KK07-G1</td>
<td>W3G 500-KK07-G2</td>
<td>W6E 500-KJ05-01</td>
<td>W6E 500-KJ05-11</td>
<td>28 / 64</td>
</tr>
<tr>
<td></td>
<td>M3G 084 / M6D 110</td>
<td>W3G 500-KM03-M1</td>
<td>W3G 500-KM03-M2</td>
<td>W6D 500-KJ05-01</td>
<td>W6D 500-KJ05-11</td>
<td>28 / 64</td>
</tr>
<tr>
<td></td>
<td>M3G 084 / M4E 110</td>
<td>W3G 500-KM03-I1</td>
<td>W3G 500-KM03-I2</td>
<td>W4E 500-KJ01-01</td>
<td>W4E 500-KJ01-11</td>
<td>28 / 64</td>
</tr>
<tr>
<td></td>
<td>M3G 112 / M4D 110</td>
<td>W3G 500-KD09-01</td>
<td>W3G 500-KD09-03</td>
<td>W4D 500-KJ03-01</td>
<td>W4D 500-KJ03-11</td>
<td>28 / 64</td>
</tr>
<tr>
<td>630</td>
<td>M3G 084 / M6D 110</td>
<td>W3G 630-KL06-G1</td>
<td>W3G 630-KL06-G2</td>
<td>W8D 630-KN01-01</td>
<td>W8D 630-KN01-11</td>
<td>34 / 70</td>
</tr>
<tr>
<td></td>
<td>M3G 112 / M6E 110</td>
<td>W3G 630-KE55-51</td>
<td>W3G 630-KE55-53</td>
<td>W6E 630-KN01-01</td>
<td>W6E 630-KN01-11</td>
<td>34 / 70</td>
</tr>
<tr>
<td></td>
<td>M3G 112 / M6D 110</td>
<td>W3G 630-KE55-21</td>
<td>W3G 630-KE55-23</td>
<td>W6D 630-KN01-01</td>
<td>W6D 630-KN01-11</td>
<td>34 / 70</td>
</tr>
<tr>
<td>800</td>
<td>M3G 112 / M6D 138</td>
<td>W3G 800-NE86-41</td>
<td>W3G 800-NE86-43</td>
<td>W8D 800-NG01-01</td>
<td>W8D 800-NG01-11</td>
<td>40 / 76</td>
</tr>
<tr>
<td></td>
<td>M3G 112 / M6D 138</td>
<td>W3G 800-NE57-51</td>
<td>W3G 800-NE57-53</td>
<td>W6D 800-NG13-01</td>
<td>W6D 800-NG13-11</td>
<td>40 / 76</td>
</tr>
<tr>
<td></td>
<td>M3G 150 / ---</td>
<td>W3G 800-NH94-01</td>
<td>W3G 800-NH94-03</td>
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<td>---</td>
<td>40 / ---</td>
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<tr>
<td></td>
<td>M3G 150 / ---</td>
<td>W3G 800-NS26-71</td>
<td>W3G 800-NS26-73</td>
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<td>---</td>
<td>40 / ---</td>
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</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Size</th>
<th>Thrust Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>16 m (53 ft.)</td>
</tr>
<tr>
<td>350</td>
<td>30 m (99 ft.)</td>
</tr>
<tr>
<td>450</td>
<td>40 m (131 ft.)</td>
</tr>
<tr>
<td>500</td>
<td>37 m (121 ft.)</td>
</tr>
<tr>
<td>630</td>
<td>44 m (144 ft.)</td>
</tr>
<tr>
<td>800</td>
<td>63 m (207 ft.)</td>
</tr>
</tbody>
</table>

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

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.
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
  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:** Any
- **Condensation drainage holes:** None, open rotor
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings

---

**Nominal data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC Hz rpm W A Pa °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W3G 300</td>
<td>M3G 055-CF</td>
<td>1~200-240 50/60 1500 85 0,80 65 -40...+40</td>
</tr>
</tbody>
</table>

Subject to change

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

---

**Curves:**

2 speed stages
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, 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. 86 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

### Weight

<table>
<thead>
<tr>
<th>Standard version</th>
<th>Weight Standard</th>
<th>Weight Standard with hinge</th>
<th>Weight with air-guiding system</th>
<th>Weight with hinge and air-guiding system</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot; W3G 300-JK13 -30</td>
<td>2,6</td>
<td>2,7</td>
<td>3,3</td>
<td>3,5</td>
</tr>
<tr>
<td>&quot;V&quot; W3G 300-TK13 -30</td>
<td>2,6</td>
<td>2,7</td>
<td>3,3</td>
<td>3,5</td>
</tr>
</tbody>
</table>

### 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)

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

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

Cable: PVC 4G 0.5 mm², 4x crimped splices
EC axial fans - AxiCool
Ø 300

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

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

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

Subject to change

Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W3G 350</td>
<td>M3G 074-CF</td>
<td>1~200-240</td>
<td>50/60</td>
<td>1475</td>
<td>165</td>
<td>1.35</td>
<td>85</td>
<td>-40...+40</td>
</tr>
</tbody>
</table>

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

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: Lw A according to ISO 13347, Lp A 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.

Curves:
2 speed stages

Standard

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1430</td>
<td>1410</td>
</tr>
<tr>
<td>1385</td>
<td>1365</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1620</td>
<td>1590</td>
</tr>
<tr>
<td>1545</td>
<td>1515</td>
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</table>

<table>
<thead>
<tr>
<th>rpm</th>
<th>Pa</th>
<th>I</th>
<th>LwA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1620</td>
<td>152</td>
<td>1.26</td>
<td>71</td>
</tr>
<tr>
<td>1600</td>
<td>165</td>
<td>1.35</td>
<td>70</td>
</tr>
<tr>
<td>1545</td>
<td>165</td>
<td>1.35</td>
<td>68</td>
</tr>
<tr>
<td>1475</td>
<td>165</td>
<td>1.35</td>
<td>68</td>
</tr>
<tr>
<td>1430</td>
<td>105</td>
<td>0.93</td>
<td>68</td>
</tr>
<tr>
<td>1410</td>
<td>113</td>
<td>1.00</td>
<td>67</td>
</tr>
<tr>
<td>1385</td>
<td>121</td>
<td>1.04</td>
<td>65</td>
</tr>
<tr>
<td>1365</td>
<td>130</td>
<td>1.14</td>
<td>66</td>
</tr>
</tbody>
</table>
- **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

<table>
<thead>
<tr>
<th>Air flow direction</th>
<th>Weight Standard</th>
<th>Weight with hinge</th>
<th>Weight Standard with hinge</th>
<th>Weight with air-guiding system</th>
<th>Weight with hinge and air-guiding system</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot;</td>
<td>W3G 350-JN01 -30</td>
<td>3,5</td>
<td>4,5</td>
<td>5,2</td>
<td>5,4</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W3G 350-TN01 -30</td>
<td>4,3</td>
<td>4,5</td>
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<td></td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W3G 350-SN01 -30</td>
<td>3,5</td>
<td>4,5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W3G 350-WN01 -30</td>
<td>4,3</td>
<td>4,5</td>
<td></td>
<td></td>
</tr>
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</table>

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: Lw A according to ISO 13347, Lp A 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 350

W3G 350-JN01-30  (Standard version)

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

Cable: PVC 4G 0.5 mm², 4x crimped splices
EC axial fans - AxiCool
Ø 350

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

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

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W3G 450</td>
<td>M3G 074-DF</td>
<td>1~200-240</td>
<td>50/60</td>
<td>980</td>
<td>163</td>
<td>1.34</td>
<td>74</td>
<td>-40...+40</td>
</tr>
</tbody>
</table>

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*

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>rpm</td>
<td>rpm</td>
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</tr>
<tr>
<td>Pa</td>
<td>Pa</td>
<td>Pa</td>
</tr>
<tr>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>dB(A)</td>
<td>dB(A)</td>
<td>dB(A)</td>
</tr>
</tbody>
</table>

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with contact protection.
Intake-side sound level: Lw A according to ISO 13347, Lp A 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. 86 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

<table>
<thead>
<tr>
<th>Air flow direction</th>
<th>Weight Standard</th>
<th>Weight Standard with air-guiding system</th>
<th>Weight with hinge</th>
<th>Weight with hinge and air-guiding system</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot; W3G 450-J002 -30</td>
<td>7.5 kg</td>
<td>7.7 kg</td>
<td>10.0 kg</td>
<td>10.2 kg</td>
</tr>
</tbody>
</table>

### 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 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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W3G 450</td>
<td>M3G 084-FA</td>
<td>1~200-277</td>
<td>50/60</td>
<td>1300</td>
<td>345</td>
<td>2.2</td>
<td>125</td>
<td>-25...+40</td>
</tr>
</tbody>
</table>

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

### Curves:

**Speed-controlled**

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, 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.

### Tech. features and conn. diagram

- **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
Technical features: see connection diagram P. 87
EMC: Interference emission according to EN 61000-6-3
Circuit feedback according to EN 61000-6-2
Cable exit: Variable
Protection class: I (with customer connection of protective earth)
Conformity with standards: EN 60335-1, CE

<table>
<thead>
<tr>
<th>Air flow direction</th>
<th>Weight</th>
<th>Weight</th>
<th>Weight</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard version</td>
<td>kg</td>
<td>Standard version</td>
<td>kg</td>
<td>Version with air-guiding system</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>7,5</td>
<td>&quot;V&quot;</td>
<td>7,7</td>
<td>&quot;V&quot;</td>
</tr>
<tr>
<td>W3G 450-SC28 -30</td>
<td></td>
<td>W3G 450-TC28 -30</td>
<td></td>
<td>W3G 450-WC28 -30</td>
</tr>
</tbody>
</table>

Curves: Speed-controlled 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: Lw A according to ISO 13347, Lp A 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)

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

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

Cable: PVC 4G 0.5 mm², 4x crimped splices
EC axial fans - AxiCool

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 450

W3G 450-JC28-30 (Standard version)

Mounting dimensions:

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

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

Mounting dimensions:

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

EC axial fans - AxiCool

Ø 450

W3G 450-JC28-30 (Standard version)

Mounting dimensions:

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

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

Mounting dimensions:

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

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5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
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3x crimped splices

Cable: PVC 5X AWG 22,
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Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
5x crimped splices

Cable: PVC 3G AWG 20,
3x crimped splices

Cable: PVC 5X AWG 22,
EC axial fans - AxiCool
Ø 450

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

Cable: PVC 3G AWG 20, 3x crimped splices
Cable: PVC 5X AWG 22, 5x crimped splices

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

Cable: PVC 3G AWG 20, 3x crimped splices
Cable: PVC 5X AWG 22, 5x crimped splices
EC axial fans - AxiCool
Ø 500 - Ø 800
EC 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
  - 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

<table>
<thead>
<tr>
<th>Nominal data</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W3G 500</td>
<td>M3G 084-DF</td>
<td>1~200-277</td>
<td>50/60</td>
<td>970</td>
<td>250</td>
<td>1,1</td>
<td>85</td>
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<tr>
<td>W3G 500</td>
<td>M3G 084-GF</td>
<td>3~380-480</td>
<td>50/60</td>
<td>1370</td>
<td>630</td>
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<td>W3G 500</td>
<td>M3G 084-GF</td>
<td>1~200-277</td>
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<td>M3G 112-GA</td>
<td>3~380-480</td>
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<td>1770</td>
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<td>2,1</td>
<td>300</td>
<td>-40...+40</td>
</tr>
</tbody>
</table>

Subject to change

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

W3G 500: M3G 084-GF

(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:**

Intake-side sound level: Lw A  according to ISO 13347, Lp A  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. 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
EC axial fans - AxiCool
Ø 500

W3G 500-KK07-G1 (Standard version)

Mounting holes for FlowGrid

Cable: PVC AWG 18, 5x crimped ferrules

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

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

Mounting holes for FlowGrid

Cable: PVC AWG 22, 5x crimped ferrules

Note installed position!
Fit the struts of the guard grill as shown!
EC axial fans - AxiCool
Ø 500

W3G 500-KM03-M1 (Standard version)

Mounting holes for FlowGrid

Cable: PVC AWG 18, 6x crimped ferrules

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

Mounting holes for FlowGrid

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

Cable: PVC AWG 22, 5x crimped ferrules
EC axial fans - AxiCool
Ø 500

W3G 500-KM03-I1 (Standard version)

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

Mounting holes for FlowGrid

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
EC axial fans - AxiCool
Ø 500

W3G 500-KD59-01 (Standard version)

Mounting holes for FlowGrid

Cable: PVC AWG 18, 6x crimped ferrules

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

W3G 500-KD59-03 (High-End 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, 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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>( \text{Pa} )</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W3G 630</td>
<td>M3G 084-FA</td>
<td>1–200-277</td>
<td>50/60</td>
<td>770</td>
<td>220</td>
<td>0,95</td>
<td>70</td>
<td>-40..+40</td>
</tr>
<tr>
<td>W3G 630</td>
<td>M3G 112-GA</td>
<td>3–380-480</td>
<td>50/60</td>
<td>1000</td>
<td>640</td>
<td>1,0</td>
<td>150</td>
<td>-40..+40</td>
</tr>
<tr>
<td>W3G 630</td>
<td>M3G 112-GA</td>
<td>1–200-277</td>
<td>50/60</td>
<td>1020</td>
<td>710</td>
<td>3,1</td>
<td>170</td>
<td>-40..+40</td>
</tr>
</tbody>
</table>

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

![Curves Graph](image-url)

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-gilding system.

Intake-side sound level: \( L_{\text{WA}} \) according to ISO 13347, \( L_{\text{PA}} \) 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. 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 performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. 

Intake-side sound level: L<sub>wA</sub> according to ISO 13347, L<sub>pA</sub> 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.

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### Drawings

P. 36 ff.

### Accessories

P. 80 ff.

### Comm. diagram

P. 88 ff.

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AxiCool_2017__08_05_2017_EN_Final_.indd   35
W3G 630-KL06-G1 (Standard version)

Mounting holes for FlowGrid

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

Cable: PVC AWG 18,
5x crimped ferrules

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

Mounting holes for FlowGrid

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

Cable: PVC AWG 22,
5x crimped ferrules

Cable: PVC AWG 22,
5x crimped ferrules
EC axial fans - AxiCool
Ø 630

W3G 630-KE55-51 (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!

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

Mounting holes for FlowGrid

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

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!

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

Mounting holes for FlowGrid

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
EC axial fans - AxiCool
Ø 800

- **Material:** Guard grill: Steel, coated in black (RAL 9005)
  Wall ring and guide vanes: Plastic PP
  Blades: ① ② ③ press-fitted sheet steel blank, over-molded with PP plastic
  ④ 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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W3G 800</td>
<td>M3G 112-EA</td>
<td>②</td>
<td>1–200–277</td>
<td>50/60</td>
<td>520</td>
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<td>520</td>
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<tr>
<td>W3G 800</td>
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<td>3–380–480</td>
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<td>720</td>
<td></td>
<td>110</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W3G 800</td>
<td>M3G 112-IA</td>
<td>⑤</td>
<td>3–380–480</td>
<td>50/60</td>
<td>780</td>
<td>830</td>
<td>1,29</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>780</td>
<td></td>
<td>135</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W3G 800</td>
<td>M3G 150-FF</td>
<td>⑥</td>
<td>3–380–480</td>
<td>50/60</td>
<td>930</td>
<td>1570</td>
<td>2,50</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>930</td>
<td></td>
<td>190</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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

- **Nominal voltage-range**
- **Frequency**
- **Speed**
- **Max. Input power**
- **Max. Input current**
- **Max. back pressure**
- **Perm. ambient temp.**

<table>
<thead>
<tr>
<th>rpm</th>
<th>P_A</th>
<th>I</th>
<th>LwA</th>
</tr>
</thead>
<tbody>
<tr>
<td>520</td>
<td>170</td>
<td>0.75</td>
<td>59</td>
</tr>
<tr>
<td>520</td>
<td>204</td>
<td>0.90</td>
<td>60</td>
</tr>
<tr>
<td>520</td>
<td>232</td>
<td>1.02</td>
<td>60</td>
</tr>
<tr>
<td>520</td>
<td>260</td>
<td>1.15</td>
<td>69</td>
</tr>
</tbody>
</table>

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:** <= 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:** ① ② ③ C22.2 Nr.77 + CAN/CSA-E60730-1, UL 1004-7 + 60730, EAC
  ④ EAC

---

### Air flow direction

<table>
<thead>
<tr>
<th></th>
<th>Standard version</th>
<th>High-End version</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot;</td>
<td>W3G 800-NB86 -41</td>
<td>26,4</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W3G 800-NE57 -51</td>
<td>28,4</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W3G 800-NH94 -01</td>
<td>28,4</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W3G 800-NS26 -71</td>
<td>39,2</td>
</tr>
</tbody>
</table>

---

### Curves: 400 VAC

<table>
<thead>
<tr>
<th>RPM</th>
<th>P_F</th>
<th>I_A</th>
<th>LwA dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>720</td>
<td>404</td>
<td>0,66</td>
<td>70</td>
</tr>
<tr>
<td>720</td>
<td>487</td>
<td>0,70</td>
<td>70</td>
</tr>
<tr>
<td>720</td>
<td>571</td>
<td>0,90</td>
<td>70</td>
</tr>
<tr>
<td>720</td>
<td>660</td>
<td>1,00</td>
<td>77</td>
</tr>
<tr>
<td>780</td>
<td>537</td>
<td>0,86</td>
<td>71</td>
</tr>
<tr>
<td>780</td>
<td>653</td>
<td>1,03</td>
<td>70</td>
</tr>
<tr>
<td>780</td>
<td>744</td>
<td>1,16</td>
<td>70</td>
</tr>
<tr>
<td>780</td>
<td>830</td>
<td>1,29</td>
<td>83</td>
</tr>
<tr>
<td>930</td>
<td>1179</td>
<td>1,93</td>
<td>77</td>
</tr>
<tr>
<td>930</td>
<td>1365</td>
<td>2,19</td>
<td>76</td>
</tr>
<tr>
<td>930</td>
<td>1526</td>
<td>2,43</td>
<td>79</td>
</tr>
<tr>
<td>930</td>
<td>1570</td>
<td>2,50</td>
<td>86</td>
</tr>
</tbody>
</table>

Air performance measured according to ISO 5801, installation category A, in ebm-papst full nozzle with air guiding system.
Intake-side sound level, LwA, according to ISO 13347, Lp A 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 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

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: PVC AWG 22,
5x crimped ferrules

Cable 3--: PVC AWG 18,
6x crimped ferrules

Cable 1--: PVC AWG 18,
5x crimped ferrules

Mounting holes for FlowGrid

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

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

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

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

Cable: PVC AWG 22,
5x crimped ferrules

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

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

Cable: PVC AWG 22,
5x crimped ferrules

Mounting holes for FlowGrid

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

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

Cable: PVC AWG 22,
5x crimped ferrules

Mounting holes for FlowGrid
EC axial fans - AxiCool
Ø 800

W3G 800-NS26-71 (Standard version)

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

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

Cable: Silikon 8x0.5 mm², 8x crimped ferrules

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

Mounting holes for FlowGrid

Cable: Silikon 8x0.5 mm², 8x crimped ferrules

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

Mounting holes for FlowGrid

Cable: Silikon 8x0.5 mm², 8x crimped ferrules

Note installed position!
Fit the struts of the guard grill as shown!
AC axial fans - AxiCool
Ø 300 - Ø 450
AC axial fans - AxiCool
Ø 300

- 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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed</th>
<th>Max. Input power</th>
<th>Max. Input current</th>
<th>Capacitor</th>
<th>Max. back pressure</th>
<th>Perm. ambient temp.</th>
<th>Conn. diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>W4E 300</td>
<td>M4E 068-CF</td>
<td>①</td>
<td>1~230</td>
<td>50</td>
<td>1320</td>
<td>72</td>
<td>0,32</td>
<td>2.0/400</td>
<td>45</td>
<td>-40..+50</td>
<td>P. 92 / AX7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>⑤</td>
<td>1~230</td>
<td>60</td>
<td>1500</td>
<td>90</td>
<td>0,40</td>
<td>2.0/400</td>
<td>55</td>
<td>-40..+50</td>
<td></td>
</tr>
</tbody>
</table>

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: LwA according to ISO 13347, LpA 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

<table>
<thead>
<tr>
<th>Air flow direction</th>
<th>Weight Standard</th>
<th>Weight Standard with hinge</th>
<th>Version with air-guiding system</th>
<th>Weight with hinge and air-guiding system</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot;</td>
<td>W4E 300-JS72 -30</td>
<td>3.0</td>
<td>3.1</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>W4E 300-TS72 -30</td>
<td>3.0</td>
<td>3.1</td>
<td>3.7</td>
</tr>
</tbody>
</table>

---

### Technology

**EC axial fans - AxiCool 0 300-450**

**AC axial fans - AxiCool 0 300-450**

---

**Curves:**

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.

---

See P. 96 ff for detailed information.
AC axial fans - AxiCool

W4E 300-JS72-30  (Standard version)

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

Cable: PVC 4G 0.5 mm², 4x crimped splices
AC axial fans - AxiCool
Ø 300

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

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

**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 350

- **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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed</th>
<th>Max. Input power (1)</th>
<th>Max. Input current (1)</th>
<th>Cap.</th>
<th>Max. back pressure</th>
<th>Perm. ambient temp.</th>
<th>Conn. diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>W4E 350</td>
<td>M4E 074-DF</td>
<td>1</td>
<td>1–230 50</td>
<td>1340</td>
<td>165</td>
<td>0.73</td>
<td>4.0/400</td>
<td>75</td>
<td>-40...+45</td>
<td>P. 92 / AX7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>1–230 50</td>
<td>1340</td>
<td>165</td>
<td>0.73</td>
<td>4.0/400</td>
<td>70</td>
<td>-40...+45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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: Lw A according to ISO 13347, Lp A 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.

<table>
<thead>
<tr>
<th>rpm</th>
<th>P_a</th>
<th>I</th>
<th>Lw_A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1395</td>
<td>133</td>
<td>0.59</td>
<td>69</td>
</tr>
<tr>
<td>1380</td>
<td>140</td>
<td>0.62</td>
<td>67</td>
</tr>
<tr>
<td>1360</td>
<td>150</td>
<td>0.66</td>
<td>66</td>
</tr>
<tr>
<td>1340</td>
<td>165</td>
<td>0.73</td>
<td>73</td>
</tr>
</tbody>
</table>

- 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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed</th>
<th>Max. Input power (1)</th>
<th>Max. Input current (1)</th>
<th>Cap.</th>
<th>Max. back pressure</th>
<th>Perm. ambient temp.</th>
<th>Conn. diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>W4E 350</td>
<td>M4E 074-DF</td>
<td>1</td>
<td>1–230 50</td>
<td>1340</td>
<td>165</td>
<td>0.73</td>
<td>4.0/400</td>
<td>75</td>
<td>-40...+45</td>
<td>P. 92 / AX7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>1–230 50</td>
<td>1340</td>
<td>165</td>
<td>0.73</td>
<td>4.0/400</td>
<td>70</td>
<td>-40...+45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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: Lw A according to ISO 13347, Lp A 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.

<table>
<thead>
<tr>
<th>rpm</th>
<th>P_a</th>
<th>I</th>
<th>Lw_A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1395</td>
<td>133</td>
<td>0.59</td>
<td>69</td>
</tr>
<tr>
<td>1380</td>
<td>140</td>
<td>0.62</td>
<td>67</td>
</tr>
<tr>
<td>1360</td>
<td>150</td>
<td>0.66</td>
<td>66</td>
</tr>
<tr>
<td>1340</td>
<td>165</td>
<td>0.73</td>
<td>73</td>
</tr>
</tbody>
</table>
- 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

<table>
<thead>
<tr>
<th>Air flow direction</th>
<th>Weight Standard</th>
<th>Weight Standard with air-guiding system</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot;</td>
<td>W4E 350-JN02 -30 5.2 kg</td>
<td>W4E 350-TN02 -30 5.4 kg</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W4E 350-SN02 -30 5.2 kg</td>
<td>W4E 350-TN02 -30 5.4 kg</td>
</tr>
</tbody>
</table>

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 Lwn according to ISO 13347, 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

<table>
<thead>
<tr>
<th>B rpm</th>
<th>PA W</th>
<th>I A</th>
<th>LaA dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1375</td>
<td>138</td>
<td>0.61</td>
<td>71</td>
</tr>
<tr>
<td>1365</td>
<td>144</td>
<td>0.63</td>
<td>70</td>
</tr>
<tr>
<td>1350</td>
<td>149</td>
<td>0.66</td>
<td>69</td>
</tr>
<tr>
<td>1340</td>
<td>165</td>
<td>0.73</td>
<td>70</td>
</tr>
</tbody>
</table>

See P. 96 ff for detailed information.
AC axial fans - AxiCool
Ø 350

W4E 350-JN02-30  (Standard version)

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

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

Cable: PVC 4G 0.5 mm², 4x crimped splices
AC axial fans - AxiCool
Ø 350

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

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 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
- **Mode:** Continuous operation (S1)
- **Mounting:** Maintenance-free ball bearings with low-temperature grease

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed</th>
<th>Max. input power</th>
<th>Max. input current</th>
<th>Capacitor</th>
<th>Max. back pressure</th>
<th>Perm. ambient temp.</th>
<th>Conn. diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>W4E 450</td>
<td>M4E 074-GA</td>
<td>1–230 VAC Hz rpm</td>
<td>60 1340</td>
<td>300</td>
<td>1.32</td>
<td>8.0/400</td>
<td>70</td>
<td>-40...+40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P. 92 / AX7</td>
</tr>
</tbody>
</table>

Subject to change

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

---

**Curves:**

**Standard**

**Intake-side sound level:** Lw A according to ISO 13347, Lp A 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.

---

**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

**Mode:** Continuous operation (S1)

**Mounting:** Maintenance-free ball bearings with low-temperature grease

---

**Air performance measured according to ISO 5801, installation category A, in ebm-papst full nozzle with contact protection. Intake-side sound level Lw A, according to ISO 13347, Lp A, 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

<table>
<thead>
<tr>
<th>Air flow direction</th>
<th>Weight Standard</th>
<th>Weight with air-guiding system</th>
<th>Weight with hinge and air-guiding system</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;W&quot;</td>
<td>W4E 450-JP01 -30</td>
<td>9,1</td>
<td>11,0</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W4E 450-SP01 -30</td>
<td>9,3</td>
<td>10,8</td>
</tr>
<tr>
<td>&quot;U&quot;</td>
<td>W4E 450-TP01 -30</td>
<td>10,8</td>
<td>11,0</td>
</tr>
</tbody>
</table>

Air performance measured according to: ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system.

Intake-side sound level: Lw A according to ISO 13347, Lp A 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

- 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

<table>
<thead>
<tr>
<th>rpm</th>
<th>Pm W</th>
<th>I A</th>
<th>Lw A dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1375</td>
<td>250</td>
<td>1,14</td>
<td>75</td>
</tr>
<tr>
<td>1360</td>
<td>268</td>
<td>1,20</td>
<td>74</td>
</tr>
<tr>
<td>1340</td>
<td>286</td>
<td>1,27</td>
<td>72</td>
</tr>
<tr>
<td>1340</td>
<td>300</td>
<td>1,32</td>
<td>72</td>
</tr>
<tr>
<td>1565</td>
<td>348</td>
<td>1,53</td>
<td>78</td>
</tr>
<tr>
<td>1530</td>
<td>364</td>
<td>1,59</td>
<td>77</td>
</tr>
<tr>
<td>1540</td>
<td>370</td>
<td>1,62</td>
<td>76</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed (rpm)</th>
<th>Max. Input power (W)</th>
<th>Max. Input current (A)</th>
<th>Max. back pressure (Pa)</th>
<th>Perm. ambient temp. (°C)</th>
<th>Conn. diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>W4E 450</td>
<td>M4E 094-HA</td>
<td>Standard</td>
<td>1~230</td>
<td>50</td>
<td>1350</td>
<td>480</td>
<td>2,10</td>
<td>10/400</td>
<td>120 -40..+20</td>
<td>P. 95 / AX10</td>
</tr>
<tr>
<td>W4D 450</td>
<td>M4D 094-HA</td>
<td>Standard</td>
<td>3~230</td>
<td>60</td>
<td>1380</td>
<td>590</td>
<td>1,70</td>
<td>---</td>
<td>130 -40..+10</td>
<td>P. 95 / AX11</td>
</tr>
</tbody>
</table>

Subject to change

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

---

_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.

---

**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
- **Motor protection**: Thermal overload protector (TOP) brought out, basic insulation
- **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 60034-1, CE

### Weight

<table>
<thead>
<tr>
<th>Standard version</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot; W4E 450-JA09 -40</td>
<td>15.2</td>
</tr>
<tr>
<td>&quot;V&quot; W4D 450-JA18 -40</td>
<td>15.2</td>
</tr>
</tbody>
</table>
**AC axial fans - AxiCool**

Ø 450

**W4E 450-JP01-30 (Standard version)**

- **Cable:** Silikon 4G 0.5 mm², 4x crimped splices

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

- **Cable:** Silikon 4G 0.5 mm², 4x crimped splices
AC axial fans - AxiCool
Ø 450

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

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

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

Cable: Silikon 4G 0.5 mm², 4x crimped splices
AC axial fans - AxiCool

Ø 450

W4E 450-JA09-40 (Standard version)

Mounting dimensions:

Cable: Silikon 6G 0.5 mm², 6x crimped splices
AC axial fans - AxiCool
Ø 450

W4D 450-JA18-40  (Standard version)

Cable: Silikon 9G 0.5 mm², 9x crimped splices
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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>pF/VDB</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W6E 500</td>
<td>M6E 110-EF</td>
<td>1~230</td>
<td>50</td>
<td>865</td>
<td>210</td>
<td>0,95</td>
<td>5,0/400</td>
<td>60</td>
<td>-40..+40</td>
</tr>
<tr>
<td>W6D 500</td>
<td>M6D 110-EF</td>
<td>3~400</td>
<td>50</td>
<td>920</td>
<td>260</td>
<td>0,63</td>
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<td>80</td>
<td>-40..+40</td>
</tr>
<tr>
<td>W4E 500</td>
<td>M4E 110-EF</td>
<td>1~230</td>
<td>50</td>
<td>1225</td>
<td>600</td>
<td>2,62</td>
<td>10/400</td>
<td>100</td>
<td>-40..+40</td>
</tr>
<tr>
<td>W4D 500</td>
<td>M4D 110-EF</td>
<td>3~400</td>
<td>50</td>
<td>1350</td>
<td>710</td>
<td>1,40</td>
<td>---</td>
<td>170</td>
<td>-40..+40</td>
</tr>
</tbody>
</table>

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: Lw A according to ISO 13347, Lp A 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

<table>
<thead>
<tr>
<th>Weight</th>
<th>Standard version</th>
<th>High-End version</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2</td>
<td>W6E 500-KJ05 -01</td>
<td>W6E 500-KJ05 -11</td>
</tr>
<tr>
<td>14.1</td>
<td>W6D 500-KJ05 -01</td>
<td>W6D 500-KJ05 -11</td>
</tr>
<tr>
<td>14.5</td>
<td>W4E 500-KJ01 -01</td>
<td>W4E 500-KJ01 -11</td>
</tr>
<tr>
<td>13.7</td>
<td>W4D 500-KJ03 -01</td>
<td>W4D 500-KJ03 -11</td>
</tr>
</tbody>
</table>
AC axial fans - AxiCool
Ø 500

W6E 500-KJ05-01 (Standard version)
Mounting holes for FlowGrid

W6E 500-KJ05-11 (High-End version)
Mounting holes for FlowGrid

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

Note installed position!
Fit the struts of the guard grill as shown!
AC axial fans - AxiCool
Ø 500

**W6D 500-KJ05-01** (Standard version)

Mounting holes for FlowGrid

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

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

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

Mounting holes for FlowGrid

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 500

W4E 500-KJ01-01  (Standard version)

Cable: Sillikon 5G 0.5 mm²
5x crimped ferrules

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

Cable: Sillikon 5G 0.5 mm²
5x crimped ferrules

Note installed position!
Fit the struts of the guard grill as shown!
AC axial fans - AxiCool
Ø 500

**W4D 500-KJ03-01 (Standard version)**

Mounting holes for FlowGrid

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

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

Mounting holes for FlowGrid

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

- **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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>P/VDB</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W6D 630</td>
<td>M6D 110-GF</td>
<td>3~400</td>
<td>50</td>
<td>670</td>
<td>305</td>
<td>0,85</td>
<td>---</td>
<td>70</td>
<td>-40..+20</td>
</tr>
<tr>
<td>W6E 630</td>
<td>M6E 110-GF</td>
<td>1~230</td>
<td>50</td>
<td>870</td>
<td>550</td>
<td>2,40</td>
<td>14/400</td>
<td>100</td>
<td>-40..+40</td>
</tr>
<tr>
<td>W6D 630</td>
<td>M6D 110-GF</td>
<td>3~400</td>
<td>50</td>
<td>890</td>
<td>570</td>
<td>1,20</td>
<td>---</td>
<td>105</td>
<td>-40..+40</td>
</tr>
</tbody>
</table>

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:

- **Nominal voltage**: 230 V
- **Frequency**: 50 Hz
- **Speed**:
  - 695 rpm: 249 W, 0.79 A, 65 dB(A)
  - 685 rpm: 272 W, 0.80 A, 63 dB(A)
  - 675 rpm: 292 W, 0.80 A, 61 dB(A)
  - 670 rpm: 305 W, 0.85 A, 63 dB(A)
  - 915 rpm: 460 W, 2.03 A, 73 dB(A)
  - 900 rpm: 500 W, 2.20 A, 70 dB(A)
  - 880 rpm: 528 W, 2.32 A, 69 dB(A)
  - 870 rpm: 550 W, 2.40 A, 70 dB(A)
  - 925 rpm: 447 W, 1.09 A, 73 dB(A)
  - 910 rpm: 493 W, 1.12 A, 71 dB(A)
  - 900 rpm: 530 W, 1.16 A, 69 dB(A)
  - 890 rpm: 570 W, 1.20 A, 69 dB(A)

Air performance measured according to ISO 5801, installation category A, in ebm-papst full nozzle with air-guiding system. Intake-side sound level: Lw A according to ISO 13347, Lp A 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

<table>
<thead>
<tr>
<th>Air flow direction</th>
<th>Weight Standard</th>
<th>Weight High-End</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot;</td>
<td>18.8 kg</td>
<td>21.2 kg</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>18.7 kg</td>
<td>21.1 kg</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>18.6 kg</td>
<td>21.0 kg</td>
</tr>
</tbody>
</table>

### EC axial fans - AxiCool Ø 300-450

#### AC axial fans - AxiCool Ø 300-450

#### EC axial fans - AxiCool Ø 500-800

#### Accessories

- **Drawings:** P. 72 ff.
- **Accessories:** P. 80 ff.
- **Capacitors:** P. 84 ff.
- **Comm. diagram:** P. 93 ff.
AC axial fans - AxiCool
Ø 630

W8D 630-KN01-01  (Standard version)

Mounting holes for FlowGrid

296 ±5
282
3.5

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

Ø10 (4x)
Ø9 (8x)

805

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

Mounting holes for FlowGrid

296 ±5
282
3.5

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

Ø10 (4x)
Ø9 (8x)

805

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

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

Note installed position!
Fit the struts of the guard grill as shown!
AC axial fans - AxiCool
Ø 630

**W6E 630-KN01-01 (Standard version)**

- Mounting holes for FlowGrid
- Note installed position! Fit the struts of the guard grill as shown!

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

- Mounting holes for FlowGrid
- 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 630

**W6D 630-KN01-01** (Standard version)

Mounting holes for FlowGrid

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)

Mounting holes for FlowGrid

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 800

- **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

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>µF/VDB</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>W8D 800</td>
<td>M8D 138-HF</td>
<td>3~400</td>
<td>50</td>
<td>680</td>
<td>720</td>
<td>2,00</td>
<td>---</td>
<td>90</td>
<td>-40..+40</td>
</tr>
<tr>
<td>W6D 800</td>
<td>M6D 138-HF</td>
<td>3~400</td>
<td>50</td>
<td>880</td>
<td>1340</td>
<td>2,70</td>
<td>---</td>
<td>155</td>
<td>-40..+40</td>
</tr>
</tbody>
</table>

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: Lw A according to ISO 13347, Lp A 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. 95 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

<table>
<thead>
<tr>
<th>Air flow direction</th>
<th>Weight Standard</th>
<th>Weight High-End</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;V&quot;</td>
<td>W6D 800-NG01 -01</td>
<td>37.0</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W6D 800-NG13 -01</td>
<td>36.0</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W6D 800-NG01 -11</td>
<td>39.2</td>
</tr>
<tr>
<td>&quot;V&quot;</td>
<td>W6D 800-NG13 -11</td>
<td>38.2</td>
</tr>
</tbody>
</table>
AC axial fans - AxiCool
Ø 800

**W8D 800-NG01-01** (Standard version)

Mounting holes for FlowGrid

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)

Mounting holes for FlowGrid

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**

### W6D 800-NG13-01 (Standard version)

- Mounting holes for FlowGrid
- Note installed position!
  - Fit the struts of the guard grill as shown!

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

- Mounting holes for FlowGrid
- Note installed position!
  - Fit the struts of the guard grill as shown!

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

---

**Mounting holes**

**for FlowGrid**

**Ø11 (8x)**

**Ø10 (4x)**

**Ø9 (4x)**

**8x45°**

**22.5°**

**4x90°**

**27°**

**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

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

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

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Voltage</th>
<th>Fan size</th>
</tr>
</thead>
<tbody>
<tr>
<td>50025-1-7612</td>
<td>EC</td>
<td>84, 112</td>
</tr>
<tr>
<td>50035-1-7612</td>
<td>EC</td>
<td>150</td>
</tr>
<tr>
<td>50015-1-7612</td>
<td>AC</td>
<td>110, 138</td>
</tr>
</tbody>
</table>

Subject to change

## AXIAL FANS - AxiCool

<table>
<thead>
<tr>
<th>Fan size</th>
<th>Input power</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 300-450</td>
<td>25 W ± 10%</td>
<td>120 W ± 10%</td>
</tr>
<tr>
<td>Ø 500-800</td>
<td>30 W ± 10%</td>
<td>150 W ± 10%</td>
</tr>
<tr>
<td></td>
<td>35 W ± 10%</td>
<td>275 W ± 10%</td>
</tr>
</tbody>
</table>

Subject to change
Drip pan kits

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Fan size</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>Input power</th>
<th>Heating area</th>
<th>Heat output</th>
</tr>
</thead>
<tbody>
<tr>
<td>41200-1-4050</td>
<td>500</td>
<td>151</td>
<td>224</td>
<td>380</td>
<td>45 W ± 10 %</td>
<td>426 cm²</td>
<td>0.106 W/cm²</td>
</tr>
<tr>
<td>41201-1-4050</td>
<td>630</td>
<td>194</td>
<td>273</td>
<td>420</td>
<td>70 W ± 10 %</td>
<td>660 cm²</td>
<td>0.106 W/cm²</td>
</tr>
<tr>
<td>41202-1-4050</td>
<td>800</td>
<td>258</td>
<td>319</td>
<td>480</td>
<td>105 W ± 10 %</td>
<td>1002 cm²</td>
<td>0.105 W/cm²</td>
</tr>
</tbody>
</table>

Subject to change

Drip pan kits, comprising:
Heating mat, drip pan, combi screws + installation instructions
EC axial fans - AxiCool
Ø 500-800

AC axial fans - AxiCool
Ø 500-800
Ø 300-450

Heat output
0.106 W/cm²
0.105 W/cm²
**Capacitors**

- **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

---

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

Subject to change
Capacitors

- **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
- **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.

### MKP motor capacitors FPU or P2 (with fuse)

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Capacity</th>
<th>a</th>
<th>b (max.)</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>02156-4-7320</td>
<td>2.0 µF</td>
<td>25.0</td>
<td>77.0</td>
<td>92.0</td>
</tr>
<tr>
<td>02161-4-7320</td>
<td>4.0 µF</td>
<td>25-30</td>
<td>104.0</td>
<td>135.0</td>
</tr>
<tr>
<td>02162-4-7320</td>
<td>5.0 µF</td>
<td>25-30</td>
<td>104.0</td>
<td>113.0</td>
</tr>
<tr>
<td>02165-4-7320</td>
<td>8.0 µF</td>
<td>30-35</td>
<td>102.0</td>
<td>111.0</td>
</tr>
<tr>
<td>02166-4-7320</td>
<td>10.0 µF</td>
<td>35.0</td>
<td>96.0</td>
<td>110.0</td>
</tr>
<tr>
<td>90026-4-7320</td>
<td>14.0 µF</td>
<td>40.0</td>
<td>130.0</td>
<td>139.0</td>
</tr>
</tbody>
</table>

Subject to change
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

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

### Connection Diagram EC AX2

#### Notes on various control possibilities and their applications

<table>
<thead>
<tr>
<th>Speed setting</th>
<th>Full speed</th>
<th>Speed setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWM 1 - 10 kHz</td>
<td>10 V - 10 V</td>
<td>0-10 V max. 1,1 mA</td>
</tr>
<tr>
<td>PWM 4-5 kHz</td>
<td>10 V -&gt; n=max</td>
<td>10 V -&gt; n=0</td>
</tr>
<tr>
<td>PWM 1-2 kHz</td>
<td>approx. 1 V -&gt; n=0</td>
<td>approx. 1 V -&gt; n=0</td>
</tr>
<tr>
<td>PWM 0.5-1 kHz</td>
<td>approx. 0.5 V -&gt; n=0</td>
<td>approx. 0.5 V -&gt; n=0</td>
</tr>
<tr>
<td>PWM 0.2-0.5 kHz</td>
<td>approx. 0.2 V -&gt; n=0</td>
<td>approx. 0.2 V -&gt; n=0</td>
</tr>
<tr>
<td>PWM 0.1 kHz</td>
<td>approx. 0.1 V -&gt; n=0</td>
<td>approx. 0.1 V -&gt; n=0</td>
</tr>
<tr>
<td>PWM 50 Hz</td>
<td>approx. 0.05 V -&gt; n=0</td>
<td>approx. 0.05 V -&gt; n=0</td>
</tr>
</tbody>
</table>

#### Assignment / Funktion

**Wire 1**
- L: black
- N: blue
- PE: green/yellow

**Wire 2**
- +10 V: red
- Lin/PWM Control Input: yellow
- GND: blue

### Connection

Customer

- Voltage output: +10 V max. 1,1 mA
- Lin/PWM Control input: 0-10 V PWM
- GND: blue

Fan

- Alarm relay: Break for failure
- Voltage output: 10 V
- Protection earth: blue

### Connection Options

- L: black
- N: blue
- PE: green/yellow

### Motor Current Limitation

- 100 % PWM -> n=0
- approx. 10 % PWM -> approx. 10 %
- < 10 % PWM -> n=0

### Soft Start

- start up at > 14 %
- start up at > 1,4 V
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 safety disconnected from supply

<table>
<thead>
<tr>
<th>No.</th>
<th>Connection</th>
<th>Designation</th>
<th>Color</th>
<th>Assignment / funkction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1, 2</td>
<td>PE</td>
<td>green/yellow</td>
<td>Protective earth</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>N</td>
<td>blue</td>
<td>Power supply, neutral conductor, voltage range see nameplate</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>L</td>
<td>black</td>
<td>Power supply, phase, voltage range see nameplate</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>NC</td>
<td>white 1</td>
<td>Status relay, floating status contact, break for failure</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>COM</td>
<td>white 2</td>
<td>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</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>0-10 V / PWM</td>
<td>gelbyellow</td>
<td>Control input 0-10 V or PWM, impedance 100 kΩ, SELV, adjustable curve</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>RSB</td>
<td>brown</td>
<td>RS-485 interface for MODBUS RSB, SELV</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>RSA</td>
<td>white</td>
<td>RS-485 interface for MODBUS RSA, SELV</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>GND</td>
<td>blue</td>
<td>Reference ground for control interface, SELV</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>+10 V / max. 10 mA</td>
<td>red</td>
<td>Voltage output, power supply for external devices (e.g. potentiometer), SELV</td>
</tr>
</tbody>
</table>
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
- Tacho output
- Control interface with SELV potential safely disconnected from supply

---

**Color Coding:**
- Green/yellow: Protective earth
- Blue: Power supply, neutral conductor, voltage range see nameplate
- White: Power supply, phase, voltage range see nameplate
- White: Status relay, floating status contact, break for failure
- 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
- Gelbyellow: Control input 0-10 V or PWM, impedance 100 kΩ, SELV, adjustable curve
- Grey: Tacho output: Open collector, 1 pulse per revolution, SELV
- Brown: RS-485 interface for MODBUS RSB, SELV
- White: RS-485 interface for MODBUS RSA, SELV
- Blue: Reference ground for control interface, SELV
- Red: Voltage output, power supply for external devices (e.g. potentiometer), SELV

---

**Assignment / funktion:**
- PE: Protective earth
- N: Neutral conductor
- L: Phase
- NC: Status relay
- COM: Common connection
- 0-10 V / PWM: Control input 0-10 V or PWM
- RSBR: RS-485 interface for MODBUS RSB
- RSAR: RS-485 interface for MODBUS RSA
- GND: Reference ground
- +10 V / max. 10 mA: Voltage output, power supply for external devices (e.g. potentiometer)
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

Customer Connection Diagram EC AX5)

### Technical Specifications

<table>
<thead>
<tr>
<th>No.</th>
<th>Connection</th>
<th>Designation</th>
<th>Color</th>
<th>Assignment / funktion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1, 2</td>
<td>PE</td>
<td>green/yellow</td>
<td>Protective earth</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>L1</td>
<td>black</td>
<td>Power supply, phase, voltage range see nameplate</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>L2</td>
<td>black</td>
<td>Power supply, phase, voltage range see nameplate</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>L3</td>
<td>black</td>
<td>Power supply, phase, voltage range see nameplate</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>NC</td>
<td>white 1</td>
<td>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</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>COM</td>
<td>white 2</td>
<td>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</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>0-10 V</td>
<td>yellow</td>
<td>Analog input (set value), 0-10 V, R=100 kΩ, adjustable curve, SELV</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>RSB</td>
<td>brown</td>
<td>RS-485 interface for MODBUS RSB, SELV</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>RSA</td>
<td>white</td>
<td>RS-485 interface for MODBUS RSA, SELV</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>GND</td>
<td>blue</td>
<td>Reference ground for control interface, SELV</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>+10 V</td>
<td>red</td>
<td>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</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>No.</th>
<th>Connection</th>
<th>Designation</th>
<th>Assignment / funktion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>L1</td>
<td>Power supply, phase, voltage range see nameplate</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>L2</td>
<td>Power supply, phase, voltage range see nameplate</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>L3</td>
<td>Power supply, phase, voltage range see nameplate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PE</td>
<td>Protective earth</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>RSA</td>
<td>RS-485 interface for MODBUS RSA, SELV</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>RSB</td>
<td>RS-485 interface for MODBUS RSB, SELV</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
<td>Reference ground for control interface, SELV</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>C</td>
<td>Status relay, floating status contact, break for failure contact rating 250 VAC / 2 A (AC1) / min. 10 mA</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Din1</td>
<td>Digital input 1: Enable electronics; Enable: Pin open or applied voltage 5-50 VDC, Disable: Bridge to GND or applied voltage &lt;1 VDC; Reset function: Triggering of software reset after level change to &lt;1 V; SELV</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>+10 V</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Ain1 U</td>
<td>Analog input 1 (set value), 0-10 V; Ri=100 kΩ; adjustable curve; SELV</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>NC</td>
<td>Status relay, floating status contact, break for failure contact rating 250 VAC / 2 A (AC1) / min. 10 mA</td>
<td></td>
</tr>
</tbody>
</table>
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)
Three-phase motor
with connection for external TOP
Change of rotation direction
by reversing two phases

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ</td>
<td>Delta connection</td>
</tr>
<tr>
<td>L1</td>
<td>blue</td>
</tr>
<tr>
<td>L2</td>
<td>black</td>
</tr>
<tr>
<td>L3</td>
<td>brown</td>
</tr>
<tr>
<td>TOP</td>
<td>Thermal overload protector grey (2x)</td>
</tr>
<tr>
<td>PE</td>
<td>green/yellow</td>
</tr>
</tbody>
</table>
Connection diagram AC
AX10 / AX11)

**AX10)**

```
+---+---+---+---+
|   | C |   |   |
+---+---+---+---+
| U1 | Z | U2 | PE |
+---+---+---+---+
| L  | N |    | TOP|
+---+---+---+---+
```

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

**AX11)**

```
+---+---+---+---+
|   |   |   |   |
+---+---+---+---+
| U1 | V1 | W1 | W2 |
+---+---+---+---+
| L1 | L2 | L3 |     |
+---+---+---+---+
| TOP| TOP| PE |     |
+---+---+---+---+
```

- **Δ** = Delta connection
- **Y** = Star connection
- **L1** = **U2** = black
- **L2** = **V1** = blue
- **L3** = **W1** = brown
- **V2** = white
- **PE** = green/yellow
- **TOP** = 2 x grey
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/m$^3$. 
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
- $d \geq D$
- $h = 1.5d ... 4.5d$
- 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).
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