EC/AC centrifugal fans – RadiCal
EC/AC centrifugal fans – RadiCal

Impellers made of high-tech compound material with optimised flow control, combined with proven single- or 3-phase asynchronous motors or highly efficient GreenTech EC motors: these are the outstanding features of the new generation of backward-curved centrifugal fans for operation without scroll housing. That’s RadiCal!

The impellers in sizes 133 to 630mm are made of a single-piece special compound material which allows for high rotational speed, and thus for the high power density of the fan. The impeller styling has been optimised using complex simulation models adjusted to perfection by checking against prototypes. The result is an optimal, low-loss flow of air through the impeller and so there are no longer any drastic cross-sectional changes, a well-known source of losses in the impeller. A uniform flow profile without separations also means fewer noise sources and thus better acoustics. That’s RadiCal, too!

The new motor in GreenTech EC technology with integrated control electronics is designed in such a way as to make the RadiCal fans in sizes 190 up to 250mm have the same mounting dimensions as the combination of the same impeller with an asynchronous motor. In addition, the specified EC centrifugal fan achieves significantly higher air performance than the AC variant with identical dimensions. The small GreenTech EC fans are available in two different control configurations: one with two fixed speed stages and another with the familiar continuous control option via a combined 0-10V/PWM control input. Sizes exceeding 250mm can be controlled by a 0-10V/PWM input signal or monitored respectively controlled via RS485 serial connection, using the MODBUS-RTU protocol.

This opens up entirely new possibilities for applications in ventilation and air-conditioning and beyond. For example, ebm-papst AC fans can now be replaced by the latest fans in GreenTech EC technology without any expensive modification.

Advantages at a glance:

– High efficiency with improved impeller technology and new EC motors
– Perfectly matching components (controller/motor/impeller)
– Extremely quietly running with optimised air flow through the impeller
– Significantly reduced tonal noise
– Unrivalled compactness
– Mechanical compatibility of AC and EC fans
– EC fans with 2 speeds or continuous control
– High power density
– Robust design and maintenance-free operation
– Easy initial set-up
– ErP* compliant (see individual designation)

*ErP: Energy-related Products directive – defined minimum requirements for fans in accordance with the EcoDesign directive for fans with a drive output of 125 W and above.
<table>
<thead>
<tr>
<th>Table of contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC/AC centrifugal fans - RadiCal</td>
</tr>
<tr>
<td>GreenTech: The Green Company</td>
</tr>
<tr>
<td>EC centrifugal fans - RadiCal Ø 133-630</td>
</tr>
<tr>
<td>AC centrifugal fans - RadiCal Ø 133-630</td>
</tr>
<tr>
<td>Accessories</td>
</tr>
<tr>
<td>Electrical connections</td>
</tr>
<tr>
<td>Technical parameters &amp; scope</td>
</tr>
<tr>
<td>ebm-papst representatives &amp; subsidiaries</td>
</tr>
</tbody>
</table>
Sustainability is at the centre of our thoughts and actions. Out of conviction!

Eco-friendliness and sustainability have always been at the core of our thoughts and actions. For decades, we have worked according to the simple but strict creed of our co-founder Gerhard Sturm: “Each new product we develop has to be better than the last one in terms of economy and ecology.” GreenTech is the ultimate expression of our corporate philosophy.

GreenTech is pro-active development.
Even in the design phase, the materials and processes we use are optimised for the greatest possible eco-friendliness, energy balance and – wherever possible – recyclability. We continually improve the material and performance of our products, as well as the flow and noise characteristics. At the same time, we significantly reduce energy consumption. Close co-operation with universities and scientific institutes and the professorship we endow in the area of power engineering and regenerative energies allows us to profit from the latest research findings in these fields – and at the same time ensure highly qualified young academics.

GreenTech is eco-friendly production.
GreenTech also stands for maximum energy efficiency in our production processes. There, the intelligent use of industrial waste heat and groundwater cooling, photovoltaics and, of course, our own cooling and ventilation technology are of the utmost importance. Our most modern plant, for instance, consumes 91% less energy than currently specified and required. In this way, our products contribute to protecting the environment, from their origin to their recyclable packaging.

GreenTech is acknowledged and certified.
Every step in our chain of production meets the stringent standards of environmental specialists and the public. The Deutscher Nachhaltigkeitspreis 2012 (German Sustainability Award 2012), where we were given the Top3-award in the category “Germany’s most sustainable strategy for the future (company group)” bears testimony to our commitment to sustainability, as does the DEKRA Award 2012 we received in the category “Umwelt – Herausforderung Energiewende / Environment – Challenge: Transition to more sustainable energy systems”, to name only a few of a large number of examples. The environmental advantage gained in the performance of the products developed from our GreenTech philosophy can also be measured in the fulfillment of the most stringent energy and environmental standards. In many instances, our products are already well below the thresholds energy legislation will impose a few years from now – several times over.

Our customers profit from this every day.
The heart of GreenTech is future-oriented EC technology from ebm-papst. The EC technology at the core of our most efficient motors and fans allows efficiency of up to 90%, saves energy at a very high level, significantly extends service life and makes our products maintenance-free. These values pay off not only for the environment, but every cent also pays off for the user! All ebm-papst products – even those for which GreenTech EC technology does not (yet) make sense from an application viewpoint – feature the greatest possible connection of economy and ecology.

Philosophy
Application
GreenTech
Production
Awards
Development
EC centrifugal fans – RadiCal
EC centrifugal fans – RadiCal
backward curved, Ø 133

- **Material:** Housing: PA plastic 6, fibreglass-reinforced
  Impeller: PA plastic 6, fibreglass-reinforced
  Rotor: Thick layer passivated
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “B”
- **Mounting position:** Any
- **Condensate discharges:** None, open rotor
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage range</th>
<th>Frequency</th>
<th>Speed rpm(1)</th>
<th>Max. input power(1)</th>
<th>Max. current draw(1)</th>
<th>Perm. amb. temp.</th>
<th>Technical features and electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;3G 133&quot;</td>
<td>M3G 045-AI</td>
<td>(a)</td>
<td>1~ 200-240 Hz 50/60</td>
<td>3770</td>
<td>27</td>
<td>0,27</td>
<td>-25..+60</td>
<td>p. 165 / H4)</td>
<td>subject to alterations</td>
</tr>
</tbody>
</table>

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

### Curves:

#### Speed-controlled

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: $LWA$ as per ISO 13347, $LpA$ measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features**: See electrical connections p. 165
- **EMC**: Interference emission acc. to EN 61000-6-3
  
  Interference immunity acc. to EN 61000-6-2
  
  Harmonics acc. to EN 61000-3-2/3
- **Touch current**: < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Variable
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60335-1, CE
- **Approvals**: VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support basket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 133-RA01 -03</td>
<td>0,5</td>
<td>K3G 133-RA01 -03</td>
<td>0,75</td>
</tr>
</tbody>
</table>
EC centrifugal fans – RadiCal
backward curved, Ø 133, speed-controlled

R3G 133-RA01-03  (Centrifugal fan)
Connection line AWG 20,
3 x brass lead tips crimped
Control line AWG 22,
4 x brass lead tips crimped

Accessory part:
Inlet nozzle 09566-2-4013
not included in the standard
scope of delivery

Depth of screw max. 5 mm

Mounting
dimensions:
Depth of screw max. 5 mm

Accessory part:
Inlet nozzle 09566-2-4013
not included in the standard
scope of delivery

K3G 133-RA01-03  (Centrifugal module with support basket)

Mounting
dimensions:

**EC centrifugal fans – RadiCal**

backward curved, Ø 190

- **Material**: Housing: PA plastic 6, fibreglass-reinforced
  Impeller: PA plastic 6, fibreglass-reinforced
  Rotor: Thick layer passivated
  Electronics enclosure: Die-cast aluminium
- **Number of blades**: 7
- **Direction of rotation**: Clockwise, seen on rotor
- **Type of protection**: IP 54
- **Insulation class**: “B”
- **Mounting position**: Any
- **Condensate discharges**: None, open rotor
- **Mode of operation**: Continuous operation (S1)
- **Bearings**: Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Voltage range</th>
<th>Frequency</th>
<th>Speed rpm(1)</th>
<th>Max. input power(1)</th>
<th>Max. current draw(1)</th>
<th>Perm. amb. temp.</th>
<th>Technical features and electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 190</td>
<td>M3G 055-BD</td>
<td>1 – 200-240</td>
<td>50/60</td>
<td>2710</td>
<td>0,43</td>
<td>-25..+60</td>
<td>p. 164 / H3)</td>
<td></td>
</tr>
<tr>
<td>*3G 190</td>
<td>M3G 055-CF</td>
<td>1 – 200-240</td>
<td>50/60</td>
<td>4120</td>
<td>1,35</td>
<td>-25..+60</td>
<td>p. 164 / H3)</td>
<td></td>
</tr>
<tr>
<td>*3G 190</td>
<td>M3G 055-BI</td>
<td>1 – 200-240</td>
<td>50/60</td>
<td>3200</td>
<td>0,75</td>
<td>-25..+60</td>
<td>p. 165 / H4)</td>
<td></td>
</tr>
<tr>
<td>*3G 190</td>
<td>M3G 055-CF</td>
<td>1 – 200-240</td>
<td>50/60</td>
<td>3640</td>
<td>1,10</td>
<td>-25..+60</td>
<td>p. 165 / H5)</td>
<td></td>
</tr>
<tr>
<td>*3G 190</td>
<td>M3G 055-CF</td>
<td>1 – 200-240</td>
<td>50/60</td>
<td>4120</td>
<td>1,35</td>
<td>-25..+60</td>
<td>p. 165 / H4)</td>
<td></td>
</tr>
</tbody>
</table>

subject to alterations

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

### Curves: 2 Speed stages

- **Air performance measured as per**: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347. LpA measured at 1 m distance to fan axis.
- The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
– EMC: Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
– Touch current: < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
– Cable exit: Variable
– Protection class: I (if customer has provided connection for protective earth)
– Product conforming to standards: EN 60335-1, CE
– Approvals: VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support basket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 190-RB01 -01</td>
<td>0.85</td>
<td>K3G 190-RB01 -01</td>
<td>1.40</td>
</tr>
<tr>
<td>R3G 190-RD45 -01</td>
<td>1.36</td>
<td>K3G 190-RD45 -01</td>
<td>1.91</td>
</tr>
<tr>
<td>R3G 190-RC05 -03</td>
<td>1.06</td>
<td>K3G 190-RC05 -03</td>
<td>1.61</td>
</tr>
<tr>
<td>R3G 190-RG19 -01</td>
<td>1.40</td>
<td>K3G 190-RG19 -01</td>
<td>1.60</td>
</tr>
<tr>
<td>R3G 190-RD45 -03</td>
<td>1.36</td>
<td>K3G 190-RD45 -03</td>
<td>1.91</td>
</tr>
</tbody>
</table>

Curves: Speed-controlled

Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.
The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
EC centrifugal fans – RadiCal
backward curved, Ø 190, 2 speed stages, 85 W - electronics

R3G 190-RB01-01 (Centrifugal fan)

Accessory part: Inlet nozzle 09576-2-4013 not included in the standard scope of delivery

Connection line AWG 20, 4 x brass lead tips crimped

Mounting dimensions:

K3G 190-RB01-01 (Centrifugal module with support basket)

Mounting dimensions:
EC centrifugal fans – RadiCal
backward curved, Ø 190, 2 speed stages, 170 W - electronics

R3G 190-RD45-01  (Centrifugal fan)

Accessory part:
Inlet nozzle 09576-2-4013 not included in the standard scope of delivery

K3G 190-RD45-01  (Centrifugal module with support basket)

Connection line AWG 20, 4 x brass lead tips crimped

Mounting dimensions:
EC centrifugal fans – RadiCal
backward curved, Ø 190, speed-controlled, 85 W - electronics

R3G 190-RC05-03 (Centrifugal fan)

K3G 190-RC05-03 (Centrifugal module with support basket)

Accessory part:
Inlet nozzle 09576-2-4013
not included in the standard scope of delivery

Depth of screw max. 5 mm

Control line AWG 22,
3 x brass lead tips crimped

Connection line AWG 20,
4 x brass lead tips crimped

Mounting dimensions:

Connection line AWG 22,
3 x brass lead tips crimped

Control line AWG 20,
4 x brass lead tips crimped

Accessory part:
Inlet nozzle 09576-2-4013
not included in the standard scope of delivery

Depth of screw max. 5 mm

Control line AWG 22,
3 x brass lead tips crimped

Connection line AWG 20,
4 x brass lead tips crimped

Mounting dimensions:
EC centrifugal fans – RadiCal
backward curved, Ø 190, speed-controlled, 115 W - electronics

**R3G 190-RG19-01** (Centrifugal fan)

- **Accessory part:**
  - Inlet nozzle 09576-2-4013
  - Not included in the standard scope of delivery

**K3G 190-RG19-01** (Centrifugal module with support basket)

- **Depth of screw max. 6 mm**
- **Connection line PVC 3G 0.5 mm², 3 x brass lead tips crimped**
- **Connection line PVC 4X 0.25 mm², 4 x brass lead tips crimped**

**Mounting dimensions:**
- EC centrifugal fans – RadiCal backward curved, Ø 190, speed-controlled, 115 W - electronics
**R3G 190-RD45-03** (Centrifugal fan)

Accessory part:
- Inlet nozzle 09576-2-4013 not included in the standard scope of delivery

**K3G 190-RD45-03** (Centrifugal module with support basket)

Mounting dimensions:
- EC centrifugal fans – RadiCal
- backward curved, Ø 190, speed-controlled, 170 W - electronics

Connection line AWG 20,
- 3 x brass lead tips crimped

Control line AWG 22,
- 4 x brass lead tips crimped
EC centrifugal fans – RadiCal
backward curved, Ø 220

- Material: Housing: PA plastic 6, fibreglass-reinforced
  Impeller: PA plastic 6, fibreglass-reinforced
  Rotor: Thick layer passivated
  Electronics enclosure: Die-cast aluminium
- Number of blades: 7
- Direction of rotation: Clockwise, seen on rotor
- Type of protection: IP 54
- Insulation class: “B”
- Mounting position: Any
- Condensate discharges: None, open rotor
- Mode of operation: Continuous operation (S1)
- Bearings: Maintenance-free ball bearings

### 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>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 220</td>
<td>M3G 055-BI</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>2580</td>
<td>85</td>
<td>0,70</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 220</td>
<td>M3G 055-CF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>3230</td>
<td>168</td>
<td>1,40</td>
<td>-25..+50</td>
</tr>
<tr>
<td>*3G 220</td>
<td>M3G 055-BI</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>2580</td>
<td>85</td>
<td>0,70</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 220</td>
<td>M3G 055-CF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>2790</td>
<td>115</td>
<td>1,10</td>
<td>-25..+50</td>
</tr>
<tr>
<td>*3G 220</td>
<td>M3G 055-CF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>3230</td>
<td>168</td>
<td>1,40</td>
<td>-25..+50</td>
</tr>
</tbody>
</table>

subject to alterations

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

---

**Curves:**

2 Speed stages

---

### Technical features and electrical connection

- Insulation class: “B”
- Mounting position: Any
- Condensate discharges: None, open rotor
- Mode of operation: Continuous operation (S1)
- Bearings: Maintenance-free ball bearings

---

### Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted. For detailed information see page 172 ff.
- **Technical features**: See electrical connections p. 163 ff.
- **EMC**: Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
- **Touch current**: < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Variable
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60335-1, CE
- **Approvals**: VDE, UL, CSA, CCC, GOST are applied for

---

### Centrifugal fan

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan kg</th>
<th>Centrifugal module w. support basket kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 220-RC05 -01</td>
<td>1.13</td>
<td>2.03</td>
</tr>
<tr>
<td>R3G 220-RD53 -01</td>
<td>1.53</td>
<td>2.43</td>
</tr>
<tr>
<td>R3G 220-RC05 -03</td>
<td>1.20</td>
<td>2.10</td>
</tr>
<tr>
<td>R3G 220-RG19 -01</td>
<td>1.40</td>
<td>2.00</td>
</tr>
<tr>
<td>R3G 220-RD53 -03</td>
<td>1.53</td>
<td>2.43</td>
</tr>
</tbody>
</table>

**Curves:**

- **Speed-controlled**

---

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
EC centrifugal fans – RadiCal
backward curved, Ø 220, 2 speed stages, 85 W - electronics

R3G 220-RC05-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 09609-2-4013 not included in the standard scope of delivery

Connection line AWG 20, 4 x brass lead tips crimped

Mounting dimensions:
EC centrifugal fans – RadiCal
backward curved, Ø 220, 2 speed stages, 85 W - electronics

K3G 220-RC05-01 (Centrifugal module with support basket)
**EC centrifugal fans – RadiCal**
backward curved, Ø 220, 2 speed stages, 170 W - electronics

---

**R3G 220-RD53-01**  (Centrifugal fan)

Accessory part: Inlet nozzle 09609-2-4013 not included in the standard scope of delivery

Connection line AWG 20, 4 x brass lead tips crimped

---

**K3G 220-RD53-01**  (Centrifugal module with support basket)

Mounting dimensions:

---

**ebmpapst**
EC centrifugal fans – RadiCal
backward curved, Ø 220, speed-controlled, 85 W - electronics

R3G 220-RC05-03 (Centrifugal fan)

Accessory part:
Inlet nozzle 09609-2-4013
not included in the standard scope of delivery

Control line AWG 22,
3 x brass lead tips crimped

Connection line AWG 20,
4 x brass lead tips crimped

Depth of screw max. 5 mm

M4 (4x)

Mounting dimensions:

Accessory part:
Inlet nozzle 09609-2-4013
not included in the standard scope of delivery

Control line AWG 22,
3 x brass lead tips crimped

Connection line AWG 20,
4 x brass lead tips crimped

Depth of screw max. 5 mm

M4 (4x)

Mounting dimensions:

K3G 220-RC05-03 (Centrifugal module with support basket)
EC centrifugal fans – RadiCal
backward curved, Ø 220, speed-controlled, 115 W - electronics

R3G 220-RG19-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 09609-2-4013 not included in the standard scope of delivery

Connection line PVC 3G 0.5 mm², 3 x brass lead tips crimped
Connection line PVC 4X 0.25 mm², 4 x brass lead tips crimped

K3G 220-RG19-01 (Centrifugal module with support basket)

Mounting dimensions:
EC centrifugal fans – RadiCal
backward curved, Ø 220, speed-controlled, 170 W - electronics

R3G 220-RD53-03 (Centrifugal fan)

Accessory part:
Inlet nozzle 09609-2-4013 not included in the standard scope of delivery

K3G 220-RD53-03 (Centrifugal module with support basket)

Connection line AWG 20, 3 x brass lead tips crimped
Connection line AWG 22, 4 x brass lead tips crimped

Mounting dimensions:
EC centrifugal fans – RadiCal
EC centrifugal fans – RadiCal
backward curved, Ø 225

- **Material:** Housing: PA plastic 6, fibreglass-reinforced
  Impeller: PA plastic 6, fibreglass-reinforced
  Rotor: Thick layer passivated
  Electronics enclosure: Die-cast aluminium

- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “B”
- **Mounting position:** Any
- **Condensate discharges:** None, open rotor
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

**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>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 225</td>
<td>M3G 055-CF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>2200</td>
<td>82</td>
<td>0,70</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 225</td>
<td>M3G 055-DF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>2860</td>
<td>170</td>
<td>1,40</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 225</td>
<td>M3G 055-CF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>2200</td>
<td>82</td>
<td>0,70</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 225</td>
<td>M3G 055-CF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>2440</td>
<td>115</td>
<td>1,10</td>
<td>-25..+40</td>
</tr>
<tr>
<td>*3G 225</td>
<td>M3G 055-DF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>2860</td>
<td>170</td>
<td>1,40</td>
<td>-25..+60</td>
</tr>
</tbody>
</table>

Curves:
2 Speed stages

Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features**: See electrical connections p. 163 ff.
- **EMC**: Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
- **Touch current**: < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Variable
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60335-1, CE
- **Approvals**: VDE, UL, CSA, CCC, GOST are applied for

### Mass of Centrifugal Fan

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
<th>Mass of centrifugal module w. support basket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 225-RD05 -01</td>
<td>1.40</td>
<td>K3G 225-RD05 -01</td>
<td>2.00</td>
</tr>
<tr>
<td>R3G 225-RE07 -01</td>
<td>1.60</td>
<td>K3G 225-RE07 -01</td>
<td>2.20</td>
</tr>
<tr>
<td>R3G 225-RD05 -03</td>
<td>1.40</td>
<td>K3G 225-RD05 -03</td>
<td>2.00</td>
</tr>
<tr>
<td>R3G 225-RH19 -01</td>
<td>1.50</td>
<td>K3G 225-RH19 -01</td>
<td>2.10</td>
</tr>
<tr>
<td>R3G 225-RE07 -03</td>
<td>1.60</td>
<td>K3G 225-RE07 -03</td>
<td>2.20</td>
</tr>
</tbody>
</table>

### Curves: Speed-controlled

<table>
<thead>
<tr>
<th>rpm</th>
<th>P_{E} [W]</th>
<th>I [A]</th>
<th>L_{WA} [dB(A)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>2290</td>
<td>70</td>
<td>0.62</td>
<td>69</td>
</tr>
<tr>
<td>2170</td>
<td>77</td>
<td>0.68</td>
<td>65</td>
</tr>
<tr>
<td>2200</td>
<td>82</td>
<td>0.70</td>
<td>60</td>
</tr>
<tr>
<td>2225</td>
<td>73</td>
<td>0.63</td>
<td>66</td>
</tr>
<tr>
<td>2685</td>
<td>115</td>
<td>1.10</td>
<td>70</td>
</tr>
<tr>
<td>2445</td>
<td>115</td>
<td>1.10</td>
<td>67</td>
</tr>
<tr>
<td>2440</td>
<td>115</td>
<td>1.10</td>
<td>63</td>
</tr>
<tr>
<td>2640</td>
<td>115</td>
<td>1.10</td>
<td>71</td>
</tr>
<tr>
<td>3030</td>
<td>150</td>
<td>1.25</td>
<td>78</td>
</tr>
<tr>
<td>2910</td>
<td>165</td>
<td>1.40</td>
<td>74</td>
</tr>
<tr>
<td>2860</td>
<td>170</td>
<td>1.40</td>
<td>68</td>
</tr>
<tr>
<td>2970</td>
<td>155</td>
<td>1.35</td>
<td>73</td>
</tr>
</tbody>
</table>

Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: L_{WA} as per ISO 13347. L_{WA} measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
EC centrifugal fans – RadiCal
backward curved, Ø 225, 2 speed stages, 85 W - electronics

R3G 225-RD05-01  (Centrifugal fan)

K3G 225-RD05-01  (Centrifugal module with support basket)
EC centrifugal fans – RadiCal
backward curved, Ø 225, 2 speed stages, 170 W - electronics

R3G 225-RE07-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 96358-2-4013 not included in the standard scope of delivery

M4(4x)

M6(4x)

Depth of screw max. 5 mm

Depth of screw max. 10 mm

Connection line AWG 20,
4 x brass lead tips crimped

K3G 225-RE07-01 (Centrifugal module with support basket)

Mounting dimensions:

Accessory part:
Inlet nozzle 96358-2-4013 not included in the standard scope of delivery

Connection line AWG 20,
4 x brass lead tips crimped
EC centrifugal fans – RadiCal
backward curved, Ø 225, speed-controlled, 85 W - electronics

R3G 225-RD05-03  (Centrifugal fan)

Accessory part:
Inlet nozzle 96358-2-4013
not included in the standard scope of delivery

K3G 225-RD05-03  (Centrifugal module with support basket)

Connection line AWG 22,
4 x brass lead tips crimped

Control line AWG 20,
3 x brass lead tips crimped

Mounting dimensions:

Accessory part:
Inlet nozzle 96358-2-4013
not included in the standard scope of delivery
EC centrifugal fans – RadiCal
backward curved, Ø 225, speed-controlled, 115 W - electronics

R3G 225-RH19-01 (Centrifugal fan)

K3G 225-RH19-01 (Centrifugal module with support basket)
EC centrifugal fans – RadiCal
backward curved, Ø 225, speed-controlled, 170 W - electronics

R3G 225-RE07-03 (Centrifugal fan)

K3G 225-RE07-03 (Centrifugal module with support basket)
EC centrifugal fans – RadiCal
backward curved, Ø 250

- **Material:** Housing: PA plastic 6, fibreglass-reinforced
  Impeller: PA plastic 6, fibreglass-reinforced
  Rotor: Thick layer passivated
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “B”
- **Mounting position:** Any
- **Condensate discharges:** None, open rotor
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### 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>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 250</td>
<td>M3G 055-CF</td>
<td>1~</td>
<td>200-240</td>
<td>50/60</td>
<td>1955</td>
<td>80</td>
<td>0,70</td>
</tr>
<tr>
<td>*3G 250</td>
<td>M3G 055-DF</td>
<td>1~</td>
<td>200-240</td>
<td>50/60</td>
<td>2510</td>
<td>170</td>
<td>1,40</td>
</tr>
<tr>
<td>*3G 250</td>
<td>M3G 055-CF</td>
<td>1~</td>
<td>200-240</td>
<td>50/60</td>
<td>1955</td>
<td>80</td>
<td>0,70</td>
</tr>
<tr>
<td>*3G 250</td>
<td>M3G 055-DF</td>
<td>1~</td>
<td>200-240</td>
<td>50/60</td>
<td>2510</td>
<td>170</td>
<td>1,40</td>
</tr>
</tbody>
</table>

(subject to alterations)

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

---

**Curves:**

*2 Speed stages*

---

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features:** See electrical connections p. 164 ff.
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
- **Touch current:** < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Variable
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

---

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support basket</th>
<th>Mass of centrifugal module w. support basket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 250-RD17 -01</td>
<td>1.50</td>
<td></td>
<td>K3G 250-RD17 -01</td>
<td>2.28</td>
<td></td>
</tr>
<tr>
<td>R3G 250-RE07 -05</td>
<td>1.91</td>
<td></td>
<td>K3G 250-RE07 -05</td>
<td>2.69</td>
<td></td>
</tr>
<tr>
<td>R3G 250-RD17 -03</td>
<td>1.50</td>
<td></td>
<td>K3G 250-RD17 -03</td>
<td>2.28</td>
<td></td>
</tr>
<tr>
<td>R3G 250-RE07 -07</td>
<td>1.91</td>
<td></td>
<td>K3G 250-RE07 -07</td>
<td>2.69</td>
<td></td>
</tr>
</tbody>
</table>

---

**Curves:**

- **Speed-controlled**

---

Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels $L_{WA}$ as per ISO 13347, $L_{P,A}$ measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
EC centrifugal fans – RadiCal
backward curved, Ø 250, 2 speed stages, 85 W - electronics

R3G 250-RD17-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 96359-2-4013
not included in the standard scope of delivery

Depth of screw max. 5 mm
Connection line AWG 20,
4 x brass lead tips crimped

K3G 250-RD17-01 (Centrifugal module with support basket)

Mounting dimensions:
EC centrifugal fans – RadiCal
backward curved, Ø 250, 2 speed stages, 170 W - electronics

R3G 250-RE07-05  (Centrifugal fan)

Accessory part:
Inlet nozzle 96359-2-4013
not included in the standard scope of delivery

K3G 250-RE07-05  (Centrifugal module with support basket)

Connection line AWG 20,
4 x brass lead tips crimped

Mounting dimensions:
EC centrifugal fans – RadiCal
backward curved, Ø 250, speed-controlled, 85 W - electronics

R3G 250-RD17-03  (Centrifugal fan)

Accessory part:
Inlet nozzle 96359-2-4013
not included in the standard scope of delivery

K3G 250-RD17-03  (Centrifugal module with support basket)

Connection line AWG 20,
3 x brass lead tips crimped

Mounting dimensions:
EC centrifugal fans – RadiCal
backward curved, Ø 250, speed-controlled, 85 W - electronics
EC centrifugal fans – RadiCal
backward curved, Ø 250, speed-controlled, 170 W - electronics

**R3G 250-RE07-07 (Centrifugal fan)**

Accessory part:
Inlet nozzle 96359-2-4013 not included in the standard scope of delivery

Depth of screw max. 5 mm

Control line AWG 22,
4 x brass lead tips crimped

Connection line AWG 22,
4 x brass lead tips crimped

**K3G 250-RE07-07 (Centrifugal module with support basket)**

Mounting dimensions:

Connection line AWG 20,
3 x brass lead tips crimped

Accessory part:
Inlet nozzle 96359-2-4013 not included in the standard scope of delivery

Depth of screw max. 10 mm

Connection line AWG 20,
3 x brass lead tips crimped

Control line AWG 22,
4 x brass lead tips crimped

Accessory part:
Inlet nozzle 96359-2-4013 not included in the standard scope of delivery

Depth of screw max. 5 mm

Control line AWG 22,
4 x brass lead tips crimped

Connection line AWG 22,
4 x brass lead tips crimped
EC centrifugal fans – RadiCal
backward curved, Ø 250

- **Material:**
  - Support bracket: Steel, coated in black
  - Support plate and inlet nozzle: Sheet steel, galvanised
  - Impeller: Plastic PA
  - Rotor: Coated in black
  - Electronics enclosure: Die-cast aluminium

- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** ‘F’
- **Mounting position:** Shaft horizontal or rotor om bottom, rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### 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>°C</th>
<th>Curve</th>
<th>Technical features and electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 250</td>
<td>MSG 084-DF</td>
<td>1–</td>
<td>200-277</td>
<td>50/60</td>
<td>3740</td>
<td>500</td>
<td>2.20</td>
<td>-25..+60</td>
<td>p. 166 / P5)</td>
</tr>
<tr>
<td>*3G 250</td>
<td>MSG 084-DF</td>
<td>1–</td>
<td>200-277</td>
<td>50/60</td>
<td>4250</td>
<td>750</td>
<td>3.30</td>
<td>-25..+60</td>
<td>p. 166 / P5)</td>
</tr>
</tbody>
</table>

subject to alterations

1 Nominal data in operating point with maximum load and 230 VAC

---

### Curves:

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: $L_{WA}$ as per ISO 13347, $L_{PA}$ measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- Technical features: See electrical connections p. 166
- EMC: Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
- Touch current: < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- Cable exit: Variable
- Protection class: I (if customer has provided connection for protective earth)
- Product conforming to standards: EN 60335-1, CE
- Approvals: VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan (kg)</th>
<th>Centrifugal module w. support bracket (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 250-RR01 -H1</td>
<td>4.1</td>
<td>K3G 250-RR01 -H2</td>
</tr>
<tr>
<td>R3G 250-RR02 -I1</td>
<td>4.4</td>
<td>K3G 250-RR02 -I2</td>
</tr>
</tbody>
</table>
EC centrifugal fans – RadiCal
backward curved, Ø 250

R3G 250-RR01-H1  (Centrifugal fan)

Accessory part: Inlet nozzle 96359-2-4013 not included in the standard scope of delivery

Depth of screw max. 16 mm

Connection line AWG 18,
5 x crimped core-end sleeves

Connection line AWG 22,
5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!

K3G 250-RR01-H2  (Centrifugal module with support bracket)
EC centrifugal fans – RadiCal
backward curved, Ø 250

R3G 250-RR02-I1  (Centrifugal fan)
Accessory part: Inlet nozzle 96359-2-4013 not included in the standard scope of delivery

K3G 250-RR02-I2  (Centrifugal module with support bracket)
Observe the correct mounting position!
Install the support struts only as shown in the view!
Material: Support bracket: Steel, coated in black
Support plate and inlet nozzle: Sheet steel, galvanised
Impeller: Plastic PP
Rotor: ① Surface passivated, ② ③ Coated in black
Electronics enclosure: Die-cast aluminium

Number of blades: 6
Direction of rotation: Clockwise, seen on rotor
Type of protection: IP 54
Insulation class: “B”, “F”
Mounting position: ① any, ② ③ Shaft horizontal or rotor om bottom, rotor on top on request
Condensate discharges: ① None (open rotor), ② ③ Rotor-side
Mode of operation: Continuous operation (S1)
Bearings: Maintenance-free ball bearings

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>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 280</td>
<td>M3G 074-CF</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>1910</td>
<td>168</td>
<td>1,40</td>
<td>-25.+60</td>
</tr>
<tr>
<td>*3G 280</td>
<td>M3G 084-DF</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>2700</td>
<td>500</td>
<td>2,20</td>
<td>-25.+60</td>
</tr>
<tr>
<td>*3G 280</td>
<td>M3G 084-DF</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>2900</td>
<td>660</td>
<td>2,90</td>
<td>-25.+60</td>
</tr>
</tbody>
</table>

subject to alterations

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

Curves:

Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.
The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
– **Technical features:** See electrical connections p. 165 ff.
– **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
  On account of the installation conditions, ferritic damping in the connection line may be required for the application.
– **Touch current:** < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
– **Cable exit:** Variable
– **Protection class:** I (if customer has provided connection for protective earth)
– **Product conforming to standards:** ☓ EN 60335-1, CE; ☓ ☓ EN 60335-1, EN 61800-5-1, CE
– **Approvals:** ☚ VDE, cURus on request; ☚ ☚ VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan kg</th>
<th>Centrifugal module w. support bracket kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 280-RB02 -03</td>
<td>2.7</td>
<td>K3G 280-RB02 -03 6.8</td>
</tr>
<tr>
<td>R3G 280-RR03 -H1</td>
<td>4.3</td>
<td>K3G 280-RR03 -H2 8.4</td>
</tr>
<tr>
<td>R3G 280-RR04 -I1</td>
<td>4.6</td>
<td>K3G 280-RR04 -I2 8.8</td>
</tr>
</tbody>
</table>
EC centrifugal fans – RadiCal
backward curved, Ø 280

R3G 280-RB02-03  (Centrifugal fan)

Accessory part:
Inlet nozzle 28000-2-4013
not included in the standard scope of delivery

Connection line AWG 20,
3 x crimped core-end sleeves

Connection line AWG 22,
4 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!

K3G 280-RB02-03  (Centrifugal module with support bracket)
EC centrifugal fans – RadiCal
backward curved, Ø 280

R3G 280-RR03-H1  (Centrifugal fan)
 accessory part: Inlet nozzle 28000-2-4013 not included in the standard scope of delivery

K3G 280-RR03-H2  (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
**R3G 280-RR04-I1** (Centrifugal fan)

Accessory part: Inlet nozzle 28000-2-4013 not included in the standard scope of delivery

**K3G 280-RR04-I2** (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
### EC centrifugal fans – RadiCal
backward curved, ø 310

- **Material:**
  - Support bracket: Steel, coated in black
  - Support plate and inlet nozzle: Sheet steel, galvanised
  - Impeller: Plastic PP
  - Rotor: Surface passivated, Coated in black
  - Electronics enclosure: Die-cast aluminium

- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “B”, “F”
- **Mounting position:** any, Shaft horizontal or rotor om bottom, rotor on top on request
- **Condensate discharges:** None (open rotor), Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

<table>
<thead>
<tr>
<th>Nominal data</th>
<th>Curve</th>
<th>Nominal voltage range</th>
<th>Frequency</th>
<th>Speed (rpm)</th>
<th>Max. input power (1)</th>
<th>Max. current draw (1)</th>
<th>Perm. arm. temp.</th>
<th>Technical features and electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Motor</td>
<td>VAC</td>
<td>Hz</td>
<td>rpm</td>
<td>W</td>
<td>A</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td><strong>3G 310</strong></td>
<td>M3G 074-CF</td>
<td>①</td>
<td>1~200-240</td>
<td>50/60</td>
<td>1525</td>
<td>150</td>
<td>1.20</td>
<td>-25..+60</td>
</tr>
<tr>
<td><strong>3G 310</strong></td>
<td>M3G 084-DF</td>
<td>②</td>
<td>1~200-277</td>
<td>50/60</td>
<td>2360</td>
<td>500</td>
<td>2.20</td>
<td>-25..+60</td>
</tr>
<tr>
<td><strong>3G 310</strong></td>
<td>M3G 084-FA</td>
<td>③</td>
<td>1~200-277</td>
<td>50/60</td>
<td>2640</td>
<td>740</td>
<td>3.25</td>
<td>-25..+60</td>
</tr>
<tr>
<td><strong>3G 310</strong></td>
<td>M3G 084-FA</td>
<td>④</td>
<td>3~380-480</td>
<td>50/60</td>
<td>2700</td>
<td>790</td>
<td>1.25</td>
<td>-25..+60</td>
</tr>
</tbody>
</table>

subject to alterations

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

---

**Curves:**

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features**: See electrical connections p. 165 ff.

- **EMC**: Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
  ⚫ On account of the installation conditions, ferritic damping in the connection line may be required for the application.

- **Touch current**: < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)

- **Cable exit**: Variable

- **Protection class**: I (if customer has provided connection for protective earth)

- **Product conforming to standards**: ⚫ EN 60335-1, CE; ⚫ ⚫ ⚫ EN 60335-1, EN 61800-5-1, CE

- **Approvals**: ⚫ VDE, cURus on request; ⚫ ⚫ ⚫ VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support bracket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 310-RB01 -03</td>
<td>2.9</td>
<td>K3G 310-RB01 -03</td>
<td>7.5</td>
</tr>
<tr>
<td>R3G 310-RR05 -H1</td>
<td>4.7</td>
<td>K3G 310-RR05 -H2</td>
<td>9.6</td>
</tr>
<tr>
<td>R3G 310-RS01 -I1</td>
<td>5.7</td>
<td>K3G 310-RS01 -I2</td>
<td>10.7</td>
</tr>
<tr>
<td>R3G 310-RS05 -J1</td>
<td>5.5</td>
<td>K3G 310-RS05 -J2</td>
<td>10.5</td>
</tr>
</tbody>
</table>
EC centrifugal fans – RadiCal
backward curved, Ø 310

R3G 310-RB01-03  (Centrifugal fan)

Accessory part:
Inlet nozzle 31000-2-4013
not included in the standard scope of delivery

Depth of screw max. 10 mm

Connection line AWG 20,
3 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!

K3G 310-RB01-03  (Centrifugal module with support bracket)
EC centrifugal fans – RadiCal
backward curved, Ø 310

**R3G 310-RR05-H1** (Centrifugal fan)

Accessory part: Inlet nozzle 31000-2-4013 not included in the standard scope of delivery

- Depth of screw max. 16 mm
- Connection line AWG 22,
  5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!

**K3G 310-RR05-H2** (Centrifugal module with support bracket)

- Connection line AWG 18,
  5 x crimped core-end sleeves
- Connection line AWG 22,
  5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 310

**R3G 310-RS01-I1** (Centrifugal fan)

Accessory part: Inlet nozzle 31000-2-4013 not included in the standard scope of delivery

![Diagram of R3G 310-RS01-I1](image)

- Depth of screw max. 16 mm
- Connection line AWG 22, 5 x crimped core-end sleeves

**K3G 310-RS01-I2** (Centrifugal module with support bracket)

![Diagram of K3G 310-RS01-I2](image)

- Observe the correct mounting position!
- Install the support struts only as shown in the view!
**R3G 310-RS05-J1**  (Centrifugal fan)

Accessory part: Inlet nozzle 31000-2-4013 not included in the standard scope of delivery

Observe the correct mounting position!
Install the support struts only as shown in the view!

**K3G 310-RS05-J2**  (Centrifugal module with support bracket)
### EC centrifugal fans – RadiCal
backward curved, Ø 355

- **Material:** Support bracket: Steel, coated in black  
  Support plate and inlet nozzle: Sheet steel, galvanised  
  Impeller: Plastic PP  
  Rotor: ② Surface passivated, ③ ④ ⑤ Coated in black  
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “B”, “F”
- **Mounting position:** any, Shaft horizontal or rotor om bottom, rotor on top on request
- **Condensate discharges:** None (open rotor), Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 355</td>
<td>M3G 074-CF</td>
<td>②</td>
<td>1~ 200-240</td>
<td>50/60</td>
<td>1250</td>
<td>168</td>
<td>1,40</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 355</td>
<td>M3G 084-DF</td>
<td>②</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>1450</td>
<td>250</td>
<td>1,10</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 355</td>
<td>M3G 084-FA</td>
<td>②</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>1850</td>
<td>500</td>
<td>2,20</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 355</td>
<td>M3G 084-GF</td>
<td>②</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>2100</td>
<td>750</td>
<td>3,30</td>
<td>-25..+60</td>
</tr>
<tr>
<td>*3G 355</td>
<td>M3G 112-EA</td>
<td>③</td>
<td>3~ 380-480</td>
<td>50/60</td>
<td>2400</td>
<td>1140</td>
<td>1,80</td>
<td>-25..+60</td>
</tr>
</tbody>
</table>

subject to alterations

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

### Curves:

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.

<table>
<thead>
<tr>
<th>n</th>
<th>P_mW</th>
<th>I</th>
<th>LWA dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1425</td>
<td>165</td>
<td>1,35</td>
<td>71</td>
</tr>
<tr>
<td>1505</td>
<td>165</td>
<td>1,35</td>
<td>85</td>
</tr>
<tr>
<td>1525</td>
<td>165</td>
<td>1,35</td>
<td>80</td>
</tr>
<tr>
<td>1660</td>
<td>250</td>
<td>1,10</td>
<td>77</td>
</tr>
<tr>
<td>1505</td>
<td>250</td>
<td>1,10</td>
<td>88</td>
</tr>
<tr>
<td>1525</td>
<td>250</td>
<td>1,10</td>
<td>80</td>
</tr>
<tr>
<td>1660</td>
<td>250</td>
<td>1,10</td>
<td>77</td>
</tr>
<tr>
<td>1850</td>
<td>500</td>
<td>2,20</td>
<td>70</td>
</tr>
<tr>
<td>1850</td>
<td>500</td>
<td>2,20</td>
<td>73</td>
</tr>
<tr>
<td>2240</td>
<td>630</td>
<td>2,75</td>
<td>87</td>
</tr>
<tr>
<td>2165</td>
<td>750</td>
<td>3,30</td>
<td>81</td>
</tr>
<tr>
<td>2165</td>
<td>750</td>
<td>3,30</td>
<td>74</td>
</tr>
<tr>
<td>2165</td>
<td>740</td>
<td>3,25</td>
<td>77</td>
</tr>
<tr>
<td>2400</td>
<td>790</td>
<td>1,25</td>
<td>91</td>
</tr>
<tr>
<td>2400</td>
<td>1040</td>
<td>1,65</td>
<td>83</td>
</tr>
<tr>
<td>2400</td>
<td>1140</td>
<td>1,88</td>
<td>78</td>
</tr>
<tr>
<td>2400</td>
<td>1090</td>
<td>1,70</td>
<td>79</td>
</tr>
</tbody>
</table>
- **Technical features:** See electrical connections p. 165 ff.
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
  On account of the installation conditions, ferritic damping in the connection line may be required for the application.
- **Touch current:** < 3,5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Variable
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, CE; EN 60335-1, EN 61800-5-1, CE
- **Approvals:** VDE, cURus on request; VDE, UL, CSA, CCC, GOST are applied for

### Centrifugal fan and module with support bracket masses

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan (kg)</th>
<th>Centrifugal module w. support bracket (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 355-RB03-03</td>
<td>3,7</td>
<td>K3G 355-RB03-03</td>
</tr>
<tr>
<td>R3G 355-RR06-G1</td>
<td>5,0</td>
<td>K3G 355-RR06-G2</td>
</tr>
<tr>
<td>R3G 355-RS02-H1</td>
<td>5,7</td>
<td>K3G 355-RS02-H2</td>
</tr>
<tr>
<td>R3G 355-RT01-I1</td>
<td>6,0</td>
<td>K3G 355-RT01-I2</td>
</tr>
<tr>
<td>R3G 355-RJ75-01</td>
<td>8,3</td>
<td>K3G 355-RJ75-01</td>
</tr>
</tbody>
</table>
EC centrifugal fans – RadiCal
backward curved, Ø 355

R3G 355-RB03-03  (Centrifugal fan)

K3G 355-RB03-03  (Centrifugal module with support bracket)

Accessory part:
Inlet nozzle 35500-2-4013 not included in the standard scope of delivery

Connection line AWG 20, 3 x crimped core-end sleeves

Connection line AWG 22, 4 x crimped core-end sleeves

Depth of screw max. 10 mm

Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 355

R3G 355-RR06-G1  (Centrifugal fan)
Accessory part: Inlet nozzle 35500-2-4013 not included in the standard scope of delivery

K3G 355-RR06-G2  (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
**EC centrifugal fans – RadiCal**

**backward curved, Ø 355**

---

**R3G 355-RS02-H1** (Centrifugal fan)

Accessory part: Inlet nozzle 35500-2-4013 not included in the standard scope of delivery

Depth of screw max. 16 mm

---

**K3G 355-RS02-H2** (Centrifugal module with support bracket)

Observe the correct mounting position!

Install the support struts only as shown in the view!
Accessory part: Inlet nozzle 35500-2-4013 not included in the standard scope of delivery.

Connection line AWG 18, 5 x crimped core-end sleeves

Connection line AWG 22, 5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!
**EC centrifugal fans – RadiCal**

**R3G 355-RJ75-01 (Centrifugal fan)**

Accessory part: Inlet nozzle 35500-2-4013 not included in the standard scope of delivery

Connection line PVC AWG 18, 6 x crimped core-end sleeves

Connection line PVC AWG 22, 5 x crimped core-end sleeves

Observe the correct mounting position!

Install the support struts only as shown in the view!

**K3G 355-RJ75-01 (Centrifugal module with support bracket)**

Depth of screw 8-10 mm

Observation part: Inlet nozzle 35500-2-4013 not included in the standard scope of delivery

Connection line PVC AWG 18, 6 x crimped core-end sleeves

Connection line PVC AWG 22, 5 x crimped core-end sleeves

Observe the correct mounting position!

Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 400

- **Material:** Support bracket: Steel, coated in black
  Support plate and inlet nozzle: Sheet steel, galvanised
  Impeller: Plastic PP
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium

- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “F”
- **Mounting position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage range</th>
<th>Frequency</th>
<th>Speed rpm(1)</th>
<th>Max. input power(1)</th>
<th>Max. current draw(1)</th>
<th>Perm. amb. temp.</th>
<th>Technical features and electrical connection</th>
<th>p. 166 / P5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 400</td>
<td>M3G 084-DF</td>
<td>⚫</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>1170</td>
<td>250</td>
<td>1,10</td>
<td>-25..+60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*3G 400</td>
<td>M3G 084-FA</td>
<td>⚫</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>1500</td>
<td>500</td>
<td>2,20</td>
<td>-25..+50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*3G 400</td>
<td>M3G 084-GF</td>
<td>⚫</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>1700</td>
<td>750</td>
<td>3,30</td>
<td>-25..+55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*3G 400</td>
<td>M3G 112-EA</td>
<td>⚫</td>
<td>3~ 380-480</td>
<td>50/60</td>
<td>2060</td>
<td>1320</td>
<td>2,10</td>
<td>-25..+50</td>
<td></td>
<td>p. 167 / P6)</td>
</tr>
</tbody>
</table>

subject to alterations

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

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.
The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features:** See electrical connections p. 166 ff.
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
- **Touch current:** < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Variable
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>Centrifugal module w. support bracket</th>
<th>Mass of centrifugal module with support bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 400-RR07 -G1</td>
<td>5.6 kg</td>
<td>K3G 400-RR07 -G2</td>
<td>12.5</td>
</tr>
<tr>
<td>R3G 400-RS03 -H1</td>
<td>6.4 kg</td>
<td>K3G 400-RS03 -H2</td>
<td>13.3</td>
</tr>
<tr>
<td>R3G 400-RT02 -I1</td>
<td>7.3 kg</td>
<td>K3G 400-RT02 -I2</td>
<td>15.3</td>
</tr>
<tr>
<td>R3G 400-RJ75 -01</td>
<td>8.5 kg</td>
<td>K3G 400-RJ75 -01</td>
<td>16.5</td>
</tr>
</tbody>
</table>
EC centrifugal fans – RadiCal
backward curved, Ø 400

R3G 400-RR07-G1 (Centrifugal fan)
Accessory part: Inlet nozzle 54476-2-4013 not included in the standard scope of delivery
Depth of screw max. 16 mm
Connection line AWG 22,
5 x crimped core-end sleeves

K3G 400-RR07-G2 (Centrifugal module with support bracket)
Observe the correct mounting position!
Install the support struts only as shown in the view!
**EC centrifugal fans – RadiCal**

**R3G 400-RS03-H1 (Centrifugal fan)**

Accessory part: Inlet nozzle 54476-2-4013 not included in the standard scope of delivery

Depth of screw max. 16 mm

**K3G 400-RS03-H2 (Centrifugal module with support bracket)**

Connection line AWG 18, 5 x crimped core-end sleeves

Connection line AWG 22, 5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 400

R3G 400-RT02-I1 (Centrifugal fan)
Accessory part: Inlet nozzle 54476-2-4013 not included in the standard scope of delivery

K3G 400-RT02-I2 (Centrifugal module with support bracket)
Connection line AWG 18,
5 x crimped core-end sleeves
Connection line AWG 22,
5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 400

R3G 400-RJ75-01  (Centrifugal fan)
Accessory part: Inlet nozzle 54476-2-4013 not included in the standard scope of delivery
Depth of screw max. 16 mm
Connection line PVC AWG 18,
6 x crimped core-end sleeves

K3G 400-RJ75-01  (Centrifugal module with support bracket)
Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 450

- **Material**: Support bracket: Steel, coated in black
  Support plate: Sheet steel, galvanised / Inlet nozzle: Plastic ABS
  Impeller: Plastic PP
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium

- **Number of blades**: 6
- **Direction of rotation**: Clockwise, seen on rotor
- **Type of protection**: IP 54
- **Insulation class**: “F”
- **Mounting position**: Shaft horizontal or rotor om bottom, rotor on top on request
- **Condensate discharges**: Rotor-side
- **Mode of operation**: Continuous operation (S1)
- **Bearings**: Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage range</th>
<th>Frequency</th>
<th>Speed rpm(1)</th>
<th>Max. input power(1)</th>
<th>Max. current draw(1)</th>
<th>Perm. amb. temp.</th>
<th>Technical features and electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 450</td>
<td>M3G 084-FA</td>
<td>☑</td>
<td>1– 200-277 50/60</td>
<td>1000</td>
<td>250</td>
<td>1,10</td>
<td>-25...+60</td>
<td>p. 166 / P5)</td>
<td>subject to alterations</td>
</tr>
<tr>
<td>*3G 450</td>
<td>M3G 084-GF</td>
<td>☑</td>
<td>1– 200-277 50/60</td>
<td>1260</td>
<td>500</td>
<td>2,20</td>
<td>-25...+50</td>
<td>p. 166 / P5)</td>
<td>subject to alterations</td>
</tr>
<tr>
<td>*3G 450</td>
<td>M3G 112-EA</td>
<td>☑</td>
<td>1– 200-277 50/60</td>
<td>1440</td>
<td>750</td>
<td>3,30</td>
<td>-25...+60</td>
<td>p. 166 / P5)</td>
<td>subject to alterations</td>
</tr>
<tr>
<td>*3G 450</td>
<td>M3G 112-GA</td>
<td>☑</td>
<td>3– 380-480 50/60</td>
<td>1550</td>
<td>950</td>
<td>1,50</td>
<td>-25...+60</td>
<td>p. 167 / P6)</td>
<td>subject to alterations</td>
</tr>
</tbody>
</table>

subject to alterations

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

---

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features**: See electrical connections p. 166 ff.
- **EMC**: Interference emission acc. to EN 61000-6-3
  
  Interference immunity acc. to EN 61000-6-2
  
  Harmonics acc. to EN 61000-3-2/3
- **Touch current**: < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Variable
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60335-1, EN 61800-5-1, CE
- **Approvals**: VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support bracket</th>
<th>Mass of centrifugal module w. support bracket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 450-RS04 -G1</td>
<td>6.7</td>
<td>K3G 450-RS04 -G2</td>
<td>16.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3G 450-RT03 -H1</td>
<td>7.5</td>
<td>K3G 450-RT03 -H2</td>
<td>17.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3G 450-RJ74 -21</td>
<td>9.2</td>
<td>K3G 450-RJ74 -21</td>
<td>19.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R3G 450-RK56 -01</td>
<td>10.6</td>
<td>K3G 450-RK56 -01</td>
<td>20.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EC centrifugal fans – RadiCal
backward curved, Ø 450

R3G 450-RS04-G1  (Centrifugal fan)

Accessory part: Inlet nozzle 45901-2-2943 not included in the standard scope of delivery

Depth of screw max. 16 mm

Connection line AWG 18,
5 x crimped core-end sleeves

Connection line AWG 22,
5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!

K3G 450-RS04-G2  (Centrifugal module with support bracket)
EC centrifugal fans – RadiCal
backward curved, Ø 450

R3G 450-RT03-H1  (Centrifugal fan)
Accessory part: Inlet nozzle 45901-2-2943 not included in the standard scope of delivery

Depth of screw max. 16 mm

Connection line AWG 22,
5 x crimped core-end sleeves

K3G 450-RT03-H2  (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
**EC centrifugal fans – RadiCal**

**backward curved, Ø 450**

---

**R3G 450-RJ74-21 (Centrifugal fan)**

Accessory part: Inlet nozzle 45901-2-2943 not included in the standard scope of delivery

- Depth of screw max. 16 mm
- Connection line PVC AWG 18, 5 x crimped core-end sleeves
- Connection line PVC AWG 22, 5 x crimped core-end sleeves

Observe the correct mounting position!

Install the support struts only as shown in the view!

---

**K3G 450-RJ74-21 (Centrifugal module with support bracket)**

Observe the correct mounting position!

Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 450

R3G 450-RK56-01 (Centrifugal fan)

Accessory part: Inlet nozzle 45901-2-2943 not included in the standard scope of delivery

Connection line PVC AWG 18, 6 x crimped core-end sleeves

Connection line PVC AWG 22, 5 x crimped core-end sleeves

Depth of screw max. 16 mm

K3G 450-RK56-01 (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
**EC centrifugal fans – RadiCal**

**backward curved, Ø 500**

- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet steel, galvanised / Inlet nozzle: Plastic ABS
  Impeller: Plastic PP
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium

- **Number of blades:** 7

- **Direction of rotation:** Clockwise, seen on rotor

- **Type of protection:** IP 54

- **Insulation class:** “F”

- **Mounting position:** Shaft horizontal or rotor on bottom, rotor on top on request

- **Condensate discharges:** Rotor-side

- **Mode of operation:** Continuous operation (S1)

- **Bearings:** Maintenance-free ball bearings

---

**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>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 500</td>
<td>M3G 084-FA</td>
<td>1~2</td>
<td>200-277</td>
<td>50/60</td>
<td>750</td>
<td>250</td>
<td>1,10</td>
</tr>
<tr>
<td>*3G 500</td>
<td>M3G 084-GF</td>
<td>1~2</td>
<td>200-277</td>
<td>50/60</td>
<td>900</td>
<td>460</td>
<td>2,00</td>
</tr>
<tr>
<td>*3G 500</td>
<td>M3G 112-GA</td>
<td>1~2</td>
<td>200-277</td>
<td>50/60</td>
<td>1100</td>
<td>750</td>
<td>3,30</td>
</tr>
<tr>
<td>*3G 500</td>
<td>M3G 112-IA</td>
<td>3~4</td>
<td>380-480</td>
<td>50/60</td>
<td>1350</td>
<td>1320</td>
<td>2,10</td>
</tr>
<tr>
<td>*3G 500</td>
<td>M3G 150-FF</td>
<td>3~4</td>
<td>380-480</td>
<td>50/60</td>
<td>1700</td>
<td>2600</td>
<td>4,00</td>
</tr>
</tbody>
</table>

subject to alterations

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

---

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features:** See electrical connections p. 166 ff.
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
- **Touch current:** < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Variable
- **Terminal box design:** Electrical connection via terminal strip
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, CE; EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>Centrifugal module w. support bracket</th>
<th>Mass of centrifugal module w. support bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 500-RS06 -G1</td>
<td>8,6</td>
<td>K3G 500-RS06 -G2</td>
<td>18,9</td>
</tr>
<tr>
<td>R3G 500-RT04 -H1</td>
<td>9,5</td>
<td>K3G 500-RT04 -H2</td>
<td>19,7</td>
</tr>
<tr>
<td>R3G 500-RK55 -21</td>
<td>12,6</td>
<td>K3G 500-RK55 -21</td>
<td>23,1</td>
</tr>
<tr>
<td>R3G 500-RL96 -01</td>
<td>14,1</td>
<td>K3G 500-RL96 -01</td>
<td>24,6</td>
</tr>
<tr>
<td>R3G 500-RA24 -71</td>
<td>21,0</td>
<td>K3G 500-RA24 -71</td>
<td>35,0</td>
</tr>
</tbody>
</table>
EC centrifugal fans – RadiCal
backward curved, Ø 500

R3G 500-RS06-G1 (Centrifugal fan)

Accessory part: Inlet nozzle 50901-2-2943 not included in the standard scope of delivery

Depth of screw max. 16 mm

Connection line AWG 18,
5 x crimped core-end sleeves

Connection line AWG 22,
5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!

K3G 500-RS06-G2 (Centrifugal module with support bracket)
R3G 500-RT04-H1  (Centrifugal fan)

Accessory part: Inlet nozzle 50901-2-2943 not included in the standard scope of delivery

Depth of screw max. 16 mm

Connection line AWG 18,
5 x crimped core-end sleeves

Observe the correct mounting position!
Install the support struts only as shown in the view!

K3G 500-RT04-H2  (Centrifugal module with support bracket)

Connection line AWG 22,
5 x crimped core-end sleeves
EC centrifugal fans – RadiCal
backward curved, Ø 500

R3G 500-RK55-21 (Centrifugal fan)

Accessory part: Inlet nozzle 50901-2-2943 not included in the standard scope of delivery

K3G 500-RK55-21 (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
R3G 500-RL96-01  (Centrifugal fan)

Accessory part: Inlet nozzle 50901-2-2943 not included in the standard scope of delivery

Connection line PVC AWG 18, 6 x crimped core-end sleeves

Connection line PVC AWG 22, 5 x crimped core-end sleeves

Depth of screw max. 16 mm

K3G 500-RL96-01  (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 500

R3G 500-RA24-71 (Centrifugal fan)
Accessory part: Inlet nozzle 50901-2-2943 not included in the standard scope of delivery
Depth of screw max. 25 mm

K3G 500-RA24-71 (Centrifugal module with support bracket)
Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 560

- **Material:** Support bracket: Steel, coated in black
  Support plate and inlet nozzle: Sheet steel, galvanised
  Impeller: Plastic PP
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium

- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “F”
- **Mounting position:** Shaft horizontal or rotor on bottom, rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

## Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 560</td>
<td>M3G 150-FF</td>
<td>1~ 200-277</td>
<td>50/60</td>
<td>1340</td>
<td>1590</td>
<td>7,00</td>
<td>-25...+55</td>
<td>p. 168 / M4)</td>
</tr>
<tr>
<td>*3G 560</td>
<td>M3G 150-FF</td>
<td>3~ 380-480</td>
<td>50/60</td>
<td>1540</td>
<td>2360</td>
<td>3,65</td>
<td>-25...+60</td>
<td>p. 169 / M5)</td>
</tr>
<tr>
<td>*3G 560</td>
<td>M3G 150-IF</td>
<td>3~ 380-480</td>
<td>50/60</td>
<td>1650</td>
<td>2900</td>
<td>4,40</td>
<td>-25...+55</td>
<td>p. 169 / M5)</td>
</tr>
</tbody>
</table>

(subject to alterations)

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

---

Curves:

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features**: See electrical connections p. 168 ff.
- **EMC**: Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
- **Touch current**: < 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Terminal box design**: Electrical connection via terminal strip
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 61800-5-1; CE
- **Approvals**: VDE, UL, CSA, CCC, GOST are applied for

---

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>Centrifugal module w. support bracket</th>
<th>Mass of centrifugal module w. support bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 560-RA25 -21</td>
<td>22.5 kg</td>
<td>K3G 560-RA25 -21</td>
<td>43.2 kg</td>
</tr>
<tr>
<td>R3G 560-RA25 -71</td>
<td>21.6 kg</td>
<td>K3G 560-RA25 -71</td>
<td>42.3 kg</td>
</tr>
<tr>
<td>R3G 560-RB31 -71</td>
<td>26.0 kg</td>
<td>K3G 560-RB31 -71</td>
<td>46.7 kg</td>
</tr>
</tbody>
</table>

---

**Kg**

**Centrifugal fan**

**Mass of centrifugal module w. support bracket**

**Inlet nozzle**

**Drawings**

**Electr. connection**

**EC centrifugal fans – RadiCal**
backward curved, Ø 560

**R3G 560-RA25-21 (Centrifugal fan)**

Accessory part: Inlet nozzle 54482-2-4013 not included in the standard scope of delivery

**K3G 560-RA25-21 (Centrifugal module with support bracket)**

Observe the correct mounting position!
Install the support struts only as shown in the view!
**EC centrifugal fans – RadiCal**

**R3G 560-RA25-71** (Centrifugal fan)

Accessory part: Inlet nozzle 54482-2-4013 not included in the standard scope of delivery

**K3G 560-RA25-71** (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
**EC centrifugal fans – RadiCal**
backward curved, Ø 560

**R3G 560-RB31-71 (Centrifugal fan)**

Accessory part: Inlet nozzle 54482-2-4013 not included in the standard scope of delivery

Depth of screw max. 25 mm

**K3G 560-RB31-71 (Centrifugal module with support bracket)**

Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 630

- Material: Support bracket: Steel, coated in black
  Support plate and inlet nozzle: Sheet steel, galvanised
  Impeller: Plastic PP
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- Number of blades: 6
- Direction of rotation: Clockwise, seen on rotor
- Type of protection: IP 54
- Insulation class: “F”
- Mounting position: Shaft horizontal or rotor om bottom, rotor on top on request
- Condensate discharges: Rotor-side
- Mode of operation: Continuous operation (S1)
- Bearings: Maintenance-free ball bearings

### 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>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*3G 630</td>
<td>M3G 112-IA</td>
<td>1~</td>
<td>200-277</td>
<td>50/60</td>
<td>740</td>
<td>500</td>
<td>2,20</td>
</tr>
<tr>
<td>*3G 630</td>
<td>M3G 112-IA</td>
<td>1~</td>
<td>200-277</td>
<td>50/60</td>
<td>840</td>
<td>750</td>
<td>3,30</td>
</tr>
<tr>
<td>*3G 630</td>
<td>M3G 112-IA</td>
<td>3~</td>
<td>380-480</td>
<td>50/60</td>
<td>900</td>
<td>950</td>
<td>1,50</td>
</tr>
<tr>
<td>*3G 630</td>
<td>M3G 150-FF</td>
<td>1~</td>
<td>200-277</td>
<td>50/60</td>
<td>1030</td>
<td>1415</td>
<td>6,20</td>
</tr>
<tr>
<td>*3G 630</td>
<td>M3G 150-FF</td>
<td>3~</td>
<td>380-480</td>
<td>50/60</td>
<td>1130</td>
<td>1790</td>
<td>2,80</td>
</tr>
<tr>
<td>*3G 630</td>
<td>M3G 150-IF</td>
<td>3~</td>
<td>380-480</td>
<td>50/60</td>
<td>1300</td>
<td>2700</td>
<td>4,15</td>
</tr>
</tbody>
</table>

subject to alterations
(1) Nominal data in operating point with maximum load and 230 or 400 VAC

### Curves:

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347. LpA measured at 1 m distance to fan axis.
The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installment situation. With any deviation from the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Technical features**: See electrical connections p. 166 ff.
- **EMC**: Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to EN 61000-3-2/3
- **Touch current**: < 3,5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Terminal box design**: Electrical connection via terminal strip
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 61800-5-1; CE
- **Approvals**: VDE, UL, CSA, CCC, GOST are applied for

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support bracket</th>
<th>Mass of centrifugal module w. support bracket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 630-RK57 -31</td>
<td>K3G 630-RK57 -31</td>
<td>15,8</td>
<td></td>
<td></td>
<td>34,8</td>
</tr>
<tr>
<td>R3G 630-RL94 -21</td>
<td>K3G 630-RL94 -21</td>
<td>17,6</td>
<td></td>
<td></td>
<td>36,6</td>
</tr>
<tr>
<td>R3G 630-RL95 -01</td>
<td>K3G 630-RL95 -01</td>
<td>17,4</td>
<td></td>
<td></td>
<td>36,4</td>
</tr>
<tr>
<td>R3G 630-RA38 -21</td>
<td>K3G 630-RA38 -21</td>
<td>25,0</td>
<td></td>
<td></td>
<td>50,0</td>
</tr>
<tr>
<td>R3G 630-RA21 -71</td>
<td>K3G 630-RA21 -71</td>
<td>24,0</td>
<td></td>
<td></td>
<td>49,0</td>
</tr>
<tr>
<td>R3G 630-RB32 -71</td>
<td>K3G 630-RB32 -71</td>
<td>29,0</td>
<td></td>
<td></td>
<td>54,0</td>
</tr>
</tbody>
</table>

Curves:

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: $L_{WA}$ as per ISO 13347, $L_{PdA}$ measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
EC centrifugal fans – RadiCal
backward curved, Ø 630

R3G 630-RK57-31  (Centrifugal fan)
Accessory part: Inlet nozzle 63300-2-4013 not included in the standard scope of delivery
Depth of screw max. 16 mm
Connection line PVC AWG 18, 5 x crimped core-end sleeves
Connection line PVC AWG 22, 5 x crimped core-end sleeves

K3G 630-RK57-31  (Centrifugal module with support bracket)
Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 630

R3G 630-RL94-21 (Centrifugal fan)

Accessory part: Inlet nozzle 63300-2-4013 not included in the standard scope of delivery

Connection line PVC AWG 18, 5 x crimped core-end sleeves

Connection line PVC AWG 22, 5 x crimped core-end sleeves

Depth of screw max. 16 mm

Observe the correct mounting position!
Install the support struts only as shown in the view!

K3G 630-RL94-21 (Centrifugal module with support bracket)
EC centrifugal fans – RadiCal
backward curved, Ø 630

R3G 630-RL95-01 (Centrifugal fan)
Accessory part: Inlet nozzle 63300-2-4013 not included in the standard scope of delivery

Connection line PVC AWG 18, 6 x crimped core-end sleeves

Connection line PVC AWG 22, 5 x crimped core-end sleeves

Depth of screw max. 16 mm

K3G 630-RL95-01 (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 630

R3G 630-RA38-21 (Centrifugal fan)

Accessory part: Inlet nozzle 63300-2-4013 not included in the standard scope of delivery

Depth of screw max. 25 mm

Cable gland M20x1.5 (3x):
Cable diameter
min. 4 mm, max. 10 mm,
Tightening torque 4 ± 0.6 Nm

Tightening torque
3.5 ± 0.5 Nm

Observe the correct mounting position!
Install the support struts only as shown in the view!

K3G 630-RA38-21 (Centrifugal module with support bracket)
**EC centrifugal fans – RadiCal**

backward curved, Ø 630

---

**R3G 630-RA21-71 (Centrifugal fan)**

Accessory part: Inlet nozzle 63300-2-4013 not included in the standard scope of delivery

Depth of screw max. 25 mm

---

**K3G 630-RA21-71 (Centrifugal module with support bracket)**

Cable gland M20x1.5 (3x):
Cable diameter
min. 4 mm, max. 10 mm,
Tightening torque 4 ± 0.6 Nm

Observe the correct mounting position!
Install the support struts only as shown in the view!
EC centrifugal fans – RadiCal
backward curved, Ø 630

R3G 630-RB32-71  (Centrifugal fan)

Accessory part: Inlet nozzle 63300-2-4013 not included in the standard scope of delivery

Depth of screw max. 25 mm

K3G 630-RB32-71  (Centrifugal module with support bracket)

Observe the correct mounting position!
Install the support struts only as shown in the view!
- **Material:** Housing: Plastic PA 6, fibreglass-reinforced  
  Impeller: Plastic PA 6, fibreglass-reinforced  
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42, depending on installation and position in acc. to EN 60034-5
- **Insulation class:** “B”
- **Mounting position:** any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed/rpm(1)</th>
<th>Max. input power(1)</th>
<th>Max. current draw(1)</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
<th>p.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2E 133</td>
<td>M2E 042-CA</td>
<td></td>
<td>VAC</td>
<td>Hz</td>
<td>rpm</td>
<td>W</td>
<td>A</td>
<td>dB(A)</td>
<td></td>
<td>170</td>
<td>A1)</td>
</tr>
</tbody>
</table>

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

### Curves:

*Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation from the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.*
- **Motor protection:** TOP wired internally
- **Touch current:** < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Variable
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, CE

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2E 133-RA03 -01</td>
<td></td>
<td>0.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Centrifugal module w. support basket</th>
<th>Mass of centrifugal module w. support basket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>K2E 133-RA03 -01</td>
<td></td>
<td>0.8</td>
</tr>
</tbody>
</table>
R2E 133-RA03-01  (Centrifugal fan)

K2E 133-RA03-01  (Centrifugal module with support basket)

Accessory part: Inlet nozzle 00566-2-4013 not included in the standard scope of delivery

Connection line, 3 x brass lead tips crimped

Depth of screw max. 4 mm

Mounting dimensions:
AC centrifugal fans – RadiCal
backward curved, Ø 190

- **Material:** Housing: Plastic PA 6, fibreglass-reinforced
  Impeller: Plastic PA 6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44, depending on installation and position in acc. to EN 60034-5
- **Insulation class:** “B”
- **Mounting position:** any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### 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. current draw (A)</th>
<th>Capacitor</th>
<th>Perm. amb. temp. °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*2E 190</td>
<td>M2E 068-BF</td>
<td>①</td>
<td>230 VAC</td>
<td>50 Hz</td>
<td>2350 rpm</td>
<td>0,23 W</td>
<td>1,5 / 400</td>
<td>-25...+65</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>②</td>
<td>230 VAC</td>
<td>50 Hz</td>
<td>2500 rpm</td>
<td>0,39 W</td>
<td>1,5 / 400</td>
<td>-25...+75</td>
<td></td>
</tr>
</tbody>
</table>

(subject to alterations)

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

---

### Curves:

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Motor protection**: TOP wired internally
- **Touch current**: < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Variable (R2E)
- **Connection leads**: Plug system (K2E)
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60335-1, CE
- **Approvals**: R2E: CCC, GOST
  K2E: CCC

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support basket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2E 190-RA26 -05</td>
<td>1,3</td>
<td>K2E 190-RA26 -01</td>
<td>1,7</td>
</tr>
</tbody>
</table>
AC centrifugal fans – RadiCal
backward curved, Ø 190

R2E 190-RA26-05 (Centrifugal fan)

K2E 190-RA26-01 (Centrifugal module with support basket)
AC centrifugal fans – RadiCal
backward curved, Ø 220

- **Material**: Housing: Plastic PA 6, fibreglass-reinforced
  Impeller: Plastic PA 6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades**: 7
- **Direction of rotation**: Clockwise, seen on rotor
- **Type of protection**: IP 44, depending on installation and position in acc. to EN 60034-5
- **Insulation class**: “B”
- **Mounting position**: any
- **Condensate discharges**: Rotor-side
- **Mode of operation**: Continuous operation (S1)
- **Bearings**: Maintenance-free ball bearings

## Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>VAC Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>μF/VDB</th>
<th>°C</th>
<th>p.</th>
</tr>
</thead>
<tbody>
<tr>
<td>*2E 220</td>
<td>M2E 068-BF</td>
<td>①</td>
<td>1– 230</td>
<td>50</td>
<td>2100</td>
<td>88</td>
<td>0,39</td>
<td>2,0 / 450</td>
<td>-25..+50</td>
</tr>
<tr>
<td></td>
<td>M2E 068-CF</td>
<td>②</td>
<td>1– 230</td>
<td>60</td>
<td>2050</td>
<td>107</td>
<td>0,47</td>
<td>2,0 / 450</td>
<td>-25..+60</td>
</tr>
</tbody>
</table>

subject to alterations

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

### Curves:

- **Motor**: M2E 068-BF
- **Motor**: M2E 068-CF

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Motor protection:** TOP wired internally
- **Touch current:** < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Variable (R2E)
- **Connection leads:** Plug system (K2E)
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** R2E 220-RA: VDE, CCC, GOST  
R2E 220-RB: CCC, GOST  
K2E: CCC

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support basket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2E 220-RA38 -01</td>
<td>1.30</td>
<td>K2E 220-RA38 -01</td>
<td>2.00</td>
</tr>
<tr>
<td>R2E 220-RB06 -01</td>
<td>1.80</td>
<td>K2E 220-RB06 -01</td>
<td>2.40</td>
</tr>
</tbody>
</table>

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels $L_{WA}$ as per ISO 13347, $L_{pA}$ measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
R2E 220-RA38-01 / R2E 220-RB06-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 09609-2-4013 not included in the standard scope of delivery

K2E 220-RA38-01 / K2E 220-RB06-01 (Centrifugal module with support basket)

Coded plug system AMP Universal-Mate-N-Lok
Connector housing: AMP 350 780-1
4 x plug pin: AMP 926 885-1
Mating connector (not included in the standard scope of delivery)
Connector housing: AMP 350 779-4
4 x female connector: AMP 926 884-1
AC centrifugal fans – RadiCal
backward curved, Ø 225

- **Material:** Housing: Plastic PA 6, fibreglass-reinforced
  Impeller: Plastic PA 6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44, depending on installation and position in acc. to EN 60034-5
- **Insulation class:** “B”
- **Mounting position:** any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>VAC</th>
<th>Hz</th>
<th>rpm</th>
<th>W</th>
<th>A</th>
<th>μF/V</th>
<th>dB(A)</th>
<th>°C</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*2E 225</td>
<td>M2E 068-DF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0,68</td>
<td>3,5</td>
<td>-25</td>
<td>+70</td>
<td>A1)</td>
</tr>
</tbody>
</table>

Subject to alterations

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

### Curves:

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels $L_{WA}$ as per ISO 13347, $L_{PA}$ measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted. For detailed information see page 172 ff.
- **Motor protection**: TOP wired internally
- **Touch current**: < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Variable (R2E)
- **Connection leads**: Plug system (K2E)
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60335-1, CE
- **Approvals**: CCC

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>Centrifugal module w. support basket</th>
<th>Mass of centrifugal module w. support basket</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2E 225-RA92 -09</td>
<td>2.30</td>
<td>K2E 225-RA92 -01</td>
<td>3.40</td>
</tr>
</tbody>
</table>
AC centrifugal fans – RadiCal
backward curved, Ø 225

R2E 225-RA92-09  (Centrifugal fan)

Connection line, 4 x brass lead tips crimped

Accessory part:
Inlet nozzle 96358-2-4013
not included in the standard scope of delivery

K2E 225-RA92-01  (Centrifugal module with support basket)

Coded plug system AMP Universal-Mate-N-Lok
Connector housing: AMP 350 780-1
4 x plug pin: AMP 926 885-1
Mating connector (not included in the standard scope of delivery)
Connector housing: AMP 350 779-4
4 x female connector: AMP 926 884-1

Mounting dimensions:
AC centrifugal fans – RadiCal
backward curved, Ø 250

- **Material:** Housing: Plastic PA 6, fibreglass-reinforced
  Impeller: Plastic PA 6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44, depending on installation and position in acc. to EN 60034-5
- **Insulation class:** “B”
- **Mounting position:** any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### 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</th>
<th>Max. current draw</th>
<th>Capactor</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*2E 250</td>
<td>M2E 068-EC</td>
<td>(1) (2)</td>
<td>VAC</td>
<td>Hz</td>
<td>rpm</td>
<td>W</td>
<td>A</td>
<td>μF</td>
<td>°C</td>
<td>p. 170</td>
</tr>
<tr>
<td>A1)</td>
<td></td>
<td>1 – 230 50</td>
<td>2500</td>
<td>210</td>
<td>0,93</td>
<td>5,0 / 400</td>
<td>-25...+70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 – 230 60</td>
<td>2450</td>
<td>285</td>
<td>1,25</td>
<td>5,0 / 400</td>
<td>-25...+30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

---

**Curves:**

- **AC centrifugal fans – RadiCal**
- **backward curved, Ø 250**

**Housing:** Plastic PA 6, fibreglass-reinforced
**Impeller:** Plastic PA 6, fibreglass-reinforced
**Rotor:** Coated in black
**Number of blades:** 7
**Direction of rotation:** Clockwise, seen on rotor
**Type of protection:** IP 44, depending on installation and position in acc. to EN 60034-5
**Insulation class:** “B”
**Mounting position:** any
**Condensate discharges:** Rotor-side
**Mode of operation:** Continuous operation (S1)
**Bearings:** Maintenance-free ball bearings

---

**Nominal data**

- **Type:** 2E 250
- **Motor:** M2E 068-EC
- **Curves:**
  - VAC Hz rpm W A μF / VDB °C
  - 1 – 230 50 2500 210 0,93 5,0 / 400 -25...+70
  - 1 – 230 60 2450 285 1,25 5,0 / 400 -25...+30

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

---

**Air performance measured as per:** ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Motor protection**: TOP wired internally
- **Touch current**: < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Variable (R2E)
- **Connection leads**: Plug system (K2E)
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60335-1, CE
- **Approvals**: R2E: CCC

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
<th>Centrifugal module w. support basket</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>R2E 250-RA50 -01</strong></td>
<td>2.90</td>
<td><strong>K2E 250-RA50 -01</strong></td>
<td>3.70</td>
</tr>
</tbody>
</table>

(2) Only applicable by 50 Hz
AC centrifugal fans – RadiCal
backward curved, Ø 250

R2E 250-RA50-01 (Centrifugal fan)

K2E 250-RA50-01 (Centrifugal module with support basket)
AC centrifugal fans – RadiCal
backward curved, Ø 250

- **Material:** Impeller: Plastic PA 6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44, depending on installation and position in acc. to EN 60034-5
- **Insulation class:** “F”
- **Mounting position:** Shaft horizontal or rotor om bottom, rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curves</th>
<th>Nominal voltage VAC</th>
<th>Frequency Hz</th>
<th>Speed [rpm(1)]</th>
<th>Max. input power [W]</th>
<th>Max. current draw [A]</th>
<th>Perm. amb. temp. °C</th>
<th>Electrical connection</th>
<th>p. 170</th>
</tr>
</thead>
<tbody>
<tr>
<td>*2E 250</td>
<td>M2E-074-EI</td>
<td></td>
<td>1–230 50</td>
<td>2750</td>
<td>250</td>
<td>5,0 / 450</td>
<td>-25…+70</td>
<td>A1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*subject to alterations

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

### Curves:

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation from the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Motor protection:** TOP wired internally
- **Touch current:** < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Variable
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** VDE, cURus on request

Centrifugal fan

<table>
<thead>
<tr>
<th>Mass of centrifugal fan</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2E 250-RB06 -01</td>
<td>4.10</td>
</tr>
</tbody>
</table>
### AC centrifugal fans – RadiCal
backward curved, Ø 280

- **Material:** Impeller: Plastic PP  
  Rotor: Coated in black  
- **Number of blades:** 6  
- **Direction of rotation:** Clockwise, seen on rotor  
- **Type of protection:** IP 44, depending on installation and position in acc. to EN 60034-5  
- **Insulation class:** B; F  
- **Mounting position:** Shaft horizontal or rotor om bottom, rotor on top on request  
- **Condensate discharges:** Rotor-side  
- **Mode of operation:** Continuous operation (S1)  
- **Bearings:** Maintenance-free ball bearings

---

#### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed rpm (1)</th>
<th>Max. input power</th>
<th>Max. current draw</th>
<th>Capacitor</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*4E  280</td>
<td>M4E 068-0F</td>
<td>(1)</td>
<td>VAC</td>
<td>1 – 230</td>
<td>1320</td>
<td>0,40</td>
<td>2,5 / 400</td>
<td>2,5 / 400</td>
<td>-25..+65</td>
<td>A1)</td>
</tr>
<tr>
<td>*2D  280</td>
<td>M2D 074-GA</td>
<td>(2)</td>
<td>3 – 400</td>
<td>50</td>
<td>2500</td>
<td>0,91</td>
<td>---</td>
<td>-25..+50</td>
<td></td>
<td>D2)</td>
</tr>
</tbody>
</table>

subject to alterations  

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

---

#### Curves:
(50 Hz)

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: $L_{WA}$ as per ISO 13347, $L_{PA}$ measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Motor protection:** ⚫ TOP wired internally; ⚫ Connection for external TOP
- **Touch current:** < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** ⚫ ⚫ Axial; ⚫ Variable
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** R4E: CCC
  
R2D: VDE, cURus on request

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R4E 280-RA28 -05&lt;sup&gt;2&lt;/sup&gt;</td>
<td>2.50</td>
</tr>
<tr>
<td>R2D 280-RB06 -01&lt;sup&gt;3&lt;/sup&gt;</td>
<td>5.40</td>
</tr>
</tbody>
</table>

(2) ErP 2015 (3) ErP 2013

---

**Curves: (60 Hz)**

- **n rpm**
- **P<sub>el</sub> W**
- **I A**
- **L<sub>WA</sub> dB(A)**

<table>
<thead>
<tr>
<th>⚫</th>
<th>⚫</th>
<th>⚫</th>
</tr>
</thead>
<tbody>
<tr>
<td>1550</td>
<td>105</td>
<td>0.45</td>
</tr>
<tr>
<td>1450</td>
<td>120</td>
<td>0.50</td>
</tr>
<tr>
<td>1400</td>
<td>125</td>
<td>0.55</td>
</tr>
<tr>
<td>1470</td>
<td>115</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: L<sub>WA</sub> as per ISO 13347, L<sub>LA</sub> measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
AC centrifugal fans – RadiCal
backward curved, Ø 280

R4E 280-RA28-05 (Centrifugal fan)

Accessory part:
Inlet nozzle 28000-2-4013
not included in the standard scope of delivery

Depth of screw max. 10 mm

Connection line PVC 4G 0.5 mm²,
4 x brass lead tips crimped

Accessory part:
Inlet nozzle 28000-2-4013
not included in the standard scope of delivery

Depth of screw max. 5 mm

Connection line PFA 9G 0.5 mm²,
9 x brass lead tips crimped

R2D 280-RB06-01 (Centrifugal fan)
**Nominal data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed/rpm (1)</th>
<th>Max. input power (1)</th>
<th>Max. current (1)</th>
<th>Cap.</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*6E 310</td>
<td>M6E 068-EC</td>
<td>(a)</td>
<td>230</td>
<td>50</td>
<td>890</td>
<td>0,25</td>
<td>1,5 / 450</td>
<td>55</td>
<td>-25 - +60</td>
<td>A1)</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>230</td>
<td>60</td>
<td>1000</td>
<td>69</td>
<td>0,31</td>
<td>1,5 / 450</td>
<td>400</td>
<td>-25 - +60</td>
<td></td>
</tr>
<tr>
<td>*4E 310</td>
<td>M4E 068-EC</td>
<td>(a)</td>
<td>230</td>
<td>50</td>
<td>1325</td>
<td>0,62</td>
<td>4,0 / 400</td>
<td>137</td>
<td>-25 - +60</td>
<td>A1)</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>230</td>
<td>60</td>
<td>1380</td>
<td>185</td>
<td>0,82</td>
<td>4,0 / 400</td>
<td>133</td>
<td>-25 - +60</td>
<td></td>
</tr>
<tr>
<td>*4D 310</td>
<td>M4D 068-EC</td>
<td>(a)</td>
<td>400</td>
<td>50</td>
<td>1380</td>
<td>0,35</td>
<td>---</td>
<td>145</td>
<td>-25 - +55</td>
<td>D2)</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>400</td>
<td>60</td>
<td>1550</td>
<td>205</td>
<td>0,37</td>
<td>---</td>
<td>130</td>
<td>-25 - +55</td>
<td></td>
</tr>
</tbody>
</table>

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

---

**Curves:**

**AC centrifugal fans – RadiCal**

backward curved, Ø 310

- **Material:** Impeller: Plastic PP
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44, depending on installation and position in acc. to EN 60034-5
- **Insulation class:** “B”
- **Mounting position:** Shaft horizontal or rotor om bottom, rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

---

Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- Motor protection: TOP wired internally; Connection for external TOP
- Touch current: < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- Cable exit: Axial
- Protection class: I (if customer has provided connection for protective earth)
- Product conforming to standards: EN 60335-1, CE
- Approvals: VDE, cURus on request

### Centrifugal fan

<table>
<thead>
<tr>
<th>Mass of centrifugal fan</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6E 310-RA04 -01</td>
<td>3.40</td>
</tr>
<tr>
<td>R4E 310-RA06 -01</td>
<td>3.40</td>
</tr>
<tr>
<td>R4D 310-RA18 -01</td>
<td>3.40</td>
</tr>
</tbody>
</table>

**Curves: (60 Hz)**

- Motor protection: TOP wired internally; Connection for external TOP
- Touch current: < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- Cable exit: Axial
- Protection class: I (if customer has provided connection for protective earth)
- Product conforming to standards: EN 60335-1, CE
- Approvals: VDE, cURus on request

**Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.**
AC centrifugal fans – RadiCal
backward curved, Ø 310

R6E 310-RA04-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 31000-2-4013
not included in the standard scope of delivery

Depth of screw max. 5 mm

Connection line PVC 4G 0.5 mm²,
4 x brass lead tips crimped

R4E 310-RA06-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 31000-2-4013
not included in the standard scope of delivery

Depth of screw max. 5 mm

Connection line PVC 4G 0.5 mm²,
4 x brass lead tips crimped
AC centrifugal fans – RadiCal
backward curved, Ø 310

R4D 310-RA18-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 31000-2-4013
not included in the standard
scope of delivery

Depth of screw max. 5 mm

Connection line PVC 6G 0.5 mm²,
6 x brass lead tips crimped

Connection line PVC 6G 0.5 mm²,
6 x brass lead tips crimped
### AC centrifugal fans – RadiCal
backward curved, Ø 355

- **Material:** Impeller: Plastic PP  
  Rotor: Coated in black
- **Number of blades:** 6  
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44, depending on installation and position in acc. to EN 60034-5
- **Insulation class:** “F”  
- **Mounting position:** Shaft horizontal or rotor on bottom, rotor on top on request  
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)  
- **Bearings:** Maintenance-free ball bearings

---

#### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed/rpm(1)</th>
<th>Max. input power(1)</th>
<th>Max. current draw(1)</th>
<th>Capacitor</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*6E 355</td>
<td>M6E 074-DF</td>
<td>(2)</td>
<td>230</td>
<td>50</td>
<td>830</td>
<td>85</td>
<td>0.37</td>
<td>2.0 / 400</td>
<td>-25...+60</td>
<td>A1)</td>
</tr>
<tr>
<td>*4E 355</td>
<td>M4E 074-GA</td>
<td>(3)</td>
<td>230</td>
<td>50</td>
<td>1330</td>
<td>270</td>
<td>1.18</td>
<td>6.0 / 400</td>
<td>-25...+60</td>
<td>A1)</td>
</tr>
<tr>
<td>*4D 355</td>
<td>M4D 074-GA</td>
<td>(4)</td>
<td>300</td>
<td>50</td>
<td>1390</td>
<td>270</td>
<td>0.72</td>
<td>---</td>
<td>-25...+60</td>
<td>D2)</td>
</tr>
</tbody>
</table>

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

---

#### Curves: (50 Hz)

- **Air performance measured as per:** ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.
- The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.

---

- **n rpm:** 905  
  - **P_{in} W:** 70  
  - **I A:** 0.32  
  - **L_{WA} dB(A):** 60
- **P_{in} W:** 870  
  - **I A:** 0.35  
  - **L_{WA} dB(A):** 55
- **P_{in} W:** 830  
  - **I A:** 0.37  
  - **L_{WA} dB(A):** 48
- **P_{in} W:** 845  
  - **I A:** 0.38  
  - **L_{WA} dB(A):** 48
- **P_{in} W:** 1405  
  - **I A:** 0.89  
  - **L_{WA} dB(A):** 72
- **P_{in} W:** 1375  
  - **I A:** 1.00  
  - **L_{WA} dB(A):** 66
- **P_{in} W:** 1330  
  - **I A:** 1.18  
  - **L_{WA} dB(A):** 61
- **P_{in} W:** 1360  
  - **I A:** 1.05  
  - **L_{WA} dB(A):** 63
- **P_{in} W:** 1425  
  - **I A:** 0.67  
  - **L_{WA} dB(A):** 72
- **P_{in} W:** 1405  
  - **I A:** 0.69  
  - **L_{WA} dB(A):** 67
- **P_{in} W:** 1390  
  - **I A:** 0.72  
  - **L_{WA} dB(A):** 62
- **P_{in} W:** 1395  
  - **I A:** 0.70  
  - **L_{WA} dB(A):** 62
- **Motor protection:** TOP wired internally; Connection for external TOP
- **Touch current:** < 0.75 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Variable
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** VDE, cURus on request

### Mass of Centrifugal fan | kg

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6E 355-RB20 -01</td>
<td>4,20</td>
</tr>
<tr>
<td>R4E 355-RB10 -01</td>
<td>5,60</td>
</tr>
<tr>
<td>R4D 355-RB10 -01</td>
<td>5,60</td>
</tr>
</tbody>
</table>

### Curves: (60 Hz)

<table>
<thead>
<tr>
<th>n rpm</th>
<th>P_{ac}</th>
<th>I</th>
<th>L_{WA}</th>
<th>dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>985</td>
<td>96</td>
<td>0,44</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>875</td>
<td>100</td>
<td>0,44</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>775</td>
<td>105</td>
<td>0,46</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>805</td>
<td>105</td>
<td>0,45</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>1635</td>
<td>295</td>
<td>0,64</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>1590</td>
<td>355</td>
<td>0,72</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>1550</td>
<td>400</td>
<td>0,78</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>1555</td>
<td>390</td>
<td>0,76</td>
<td>65</td>
<td></td>
</tr>
</tbody>
</table>

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: L_{WA} as per ISO 13347, L_{WA} measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or filled! For detailed information see page 172 ff.
AC centrifugal fans – RadiCal
backward curved, Ø 355

R6E 355-RB20-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 35500-2-4013
not included in the standard
scope of delivery

Depth of screw max. 10 mm

Connection line silicone 4G 0.5 mm²,
4 x brass lead tips crimped

R4E 355-RB10-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 35500-2-4013
not included in the standard
scope of delivery

Depth of screw max. 10 mm

Connection line silicone 4G 0.5 mm²,
4 x brass lead tips crimped
AC centrifugal fans – RadiCal
backward curved, Ø 355

Accessory part:
Inlet nozzle 35500-2-4013
not included in the standard
scope of delivery

Depth of screw max. 10 mm

Connection line silicone 9G 0.5 mm²,
9 x brass lead tips crimped

R4D 355-RB10-01 (Centrifugal fan)
AC centrifugal fans – RadiCal
backward curved, Ø 400

- Material: Impeller: Plastic PP
  Rotor: Coated in black
- Number of blades: 6
- Direction of rotation: Clockwise, seen on rotor
- Type of protection: IP 54
- Insulation class: “F”
- Mounting position: Any
- Condensate discharges: None
- Mode of operation: Continuous operation (S1)
- Bearings: Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curves</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed/rpm</th>
<th>Max.</th>
<th>Max.</th>
<th>Max.</th>
<th>Capillar</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>VAC Hz rpm W A μF/VDB °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*6E 400</td>
<td>M6E 094-FA</td>
<td>(1)</td>
<td>1– 230 50 880 155 0,68 5,0 / 450 -40..+60</td>
<td>A2a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*4E 400</td>
<td>M4E 094-HA</td>
<td>(2)</td>
<td>1– 230 50 1340 470 2,33 9,0 / 400 -40..+60</td>
<td>A2a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*4D 400</td>
<td>M4D 094-HA</td>
<td>(3)</td>
<td>3– 400 50 1400 515 1,19 --- -40..+60</td>
<td>F1a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

subject to alterations
(1) Nominal data in operating point with maximum load and 230 or 400 VAC

### Curves:
(50 Hz)

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13847, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
Motor protection: Connection for external TOP
Touch current: <= 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
Cable exit: Variable
Protection class: I (if customer has provided connection for protective earth)
Product conforming to standards: EN 60335-1, CE
Approvals: ☑ ☑ ☑ ☑ CCC

Centrifugal fan

<table>
<thead>
<tr>
<th>Model</th>
<th>Mass of centrifugal fan (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6E 400-RN06 -01</td>
<td>7.40</td>
</tr>
<tr>
<td>R4E 400-R009 -01</td>
<td>8.50</td>
</tr>
<tr>
<td>R4D 400-R022 -01</td>
<td>8.80</td>
</tr>
</tbody>
</table>

Curves: (60 Hz)

<table>
<thead>
<tr>
<th>n (rpm)</th>
<th>P_{el} (W)</th>
<th>I (A)</th>
<th>L_{WA} (dB(A))</th>
</tr>
</thead>
<tbody>
<tr>
<td>1055</td>
<td>195</td>
<td>0.85</td>
<td>70</td>
</tr>
<tr>
<td>1005</td>
<td>210</td>
<td>0.91</td>
<td>64</td>
</tr>
<tr>
<td>970</td>
<td>215</td>
<td>0.95</td>
<td>57</td>
</tr>
<tr>
<td>1020</td>
<td>205</td>
<td>0.90</td>
<td>59</td>
</tr>
<tr>
<td>1585</td>
<td>525</td>
<td>2.35</td>
<td>---</td>
</tr>
<tr>
<td>1470</td>
<td>625</td>
<td>2.90</td>
<td>---</td>
</tr>
<tr>
<td>1430</td>
<td>650</td>
<td>3.00</td>
<td>---</td>
</tr>
<tr>
<td>1535</td>
<td>575</td>
<td>2.60</td>
<td>---</td>
</tr>
<tr>
<td>1645</td>
<td>600</td>
<td>1.10</td>
<td>85</td>
</tr>
<tr>
<td>1605</td>
<td>715</td>
<td>1.25</td>
<td>79</td>
</tr>
<tr>
<td>1580</td>
<td>770</td>
<td>1.35</td>
<td>72</td>
</tr>
<tr>
<td>1605</td>
<td>700</td>
<td>1.25</td>
<td>73</td>
</tr>
</tbody>
</table>

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels L_{WA} as per ISO 13347, L_{WA} measured at 1 m distance to fan axis.
The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
AC centrifugal fans – RadiCal
backward curved, Ø 400

R6E 400-RN06-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 54476-2-4013
not included in the standard scope of delivery

Depth of screw max. 12 mm

Connection line silicone 6G 0.5 mm²,
6 x brass lead tips crimped

R4E 400-RO09-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 54476-2-4013
not included in the standard scope of delivery

Depth of screw max. 12 mm

Connection line silicone 6G 0.5 mm²,
6 x brass lead tips crimped
Accessory part:
Inlet nozzle 54476-2-4013 not included in the standard scope of delivery

Connection line silicone 9G 0.5 mm², 9 x brass lead tips crimped
- **Material:** Impeller: Plastic PP  
  Rotor: Cast in aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “F”
- **Mounting position:** Shaft horizontal or rotor om bottom, rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### 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</th>
<th>Max. current draw</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*6E 450</td>
<td>M6E 110-EF</td>
<td>☻</td>
<td>VAC Hz rpm W A μF/VDB °C</td>
<td>1– 230</td>
<td>50</td>
<td>940 285 1,35 8,0 / 450</td>
<td>-40..+60</td>
<td>A1)</td>
<td></td>
</tr>
<tr>
<td>*4E 450</td>
<td>M4E 110-GF</td>
<td>☼</td>
<td>VAC Hz rpm W A μF/VDB °C</td>
<td>1– 230</td>
<td>50</td>
<td>1260 690 3,10 14,0 / 450</td>
<td>-40..+55</td>
<td>A1)</td>
<td></td>
</tr>
<tr>
<td>*4D 450</td>
<td>M4D 110-GF</td>
<td>☼</td>
<td>VAC Hz rpm W A μF/VDB °C</td>
<td>3– 400</td>
<td>50</td>
<td>1350 710 1,45 ---</td>
<td>-40..+60</td>
<td>D2)</td>
<td></td>
</tr>
</tbody>
</table>

*(subject to alterations)  
*(1) Nominal data in operating point with maximum load and 230 or 400 VAC

### Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Motor protection**: Connection for external TOP
- **Touch current**: <= 3,5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Variable
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: © © EN 61800-5-1, CE © EN 60034, CE
- **Approvals**: VDE, CCC, GOST, UL, CSA

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6E 450-RG01 -01</td>
<td>12.0</td>
</tr>
<tr>
<td>R4E 450-RH01 -01</td>
<td>12.0</td>
</tr>
<tr>
<td>R4D 450-RH01 -01</td>
<td>9.40</td>
</tr>
</tbody>
</table>
AC centrifugal fans – RadiCal
backward curved, Ø 450

R6E 450-RG01-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 45901-2-2943
not included in the standard scope of delivery

Connection line silicone 6G 0,5 mm²,
6 x brass lead tips crimped

Depth of screw max. 12 mm

R4E 450-RH01-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 45901-2-2943
not included in the standard scope of delivery

Connection line silicone 6G 0,75 mm²,
6 x brass lead tips crimped

Depth of screw max. 12 mm
AC centrifugal fans – RadiCal
backward curved, Ø 450

R4D 450-RH01-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 45901-2-2943
not included in the standard scope of delivery

Depth of screw max. 12 mm

Connection line silicone 9G 0.75 mm²,
9 x brass lead tips crimped

Connection line to motor PVC 9G 1.5 mm²
AC centrifugal fans – RadiCal
backward curved, Ø 500

- **Material:** Impeller: Plastic PP
  Rotor: Cast in aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “F”
- **Mounting position:** Any
- **Condensate discharges:** Rotor- and stator-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

**Nominal data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed/rpm (1)</th>
<th>Max. input power (1)</th>
<th>Max. current draw</th>
<th>Capacitor</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*4D 500</td>
<td>M4D 138-HF</td>
<td>① 3-400</td>
<td>50</td>
<td>1370</td>
<td>1520</td>
<td>2.91</td>
<td>---</td>
<td>-40...+70</td>
<td>D2)</td>
<td></td>
</tr>
</tbody>
</table>

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.
- **Motor protection**: Connection for external TOP
- **Touch current**: <= 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Lateral
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60034, EN 61800-5-1, CE
- **Approvals**: VDE, GOST

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>Mass of centrifugal fan</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R4D 500-RA03 -01</td>
<td>21,5</td>
<td></td>
</tr>
</tbody>
</table>
AC centrifugal fans – RadiCal
backward curved, Ø 500

R4D 500-RA03-01 (Centrifugal fan)

Accessory part:
Inlet nozzle 50901-2-2943
not included in the standard
scope of delivery

Depth of screw max. 18 mm

Connection line halogen-free 9 x 0,75 mm²,
9 x brass lead tips crimped

AC centrifugal fans – RadiCal
backward curved, Ø 500
AC centrifugal fans – RadiCal
backward curved, Ø 560

- **Material:** Impeller: Plastic PP
  Rotor: Cast in aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** “F”
- **Mounting position:** Any
- **Condensate discharges:** Rotor- and stator-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed/rpm(^1)</th>
<th>Max. input power(^1) W</th>
<th>Max. current draw(^1) A</th>
<th>Perm. amb. temp. °C</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*4D 560</td>
<td>M4D 138-LA</td>
<td>(3)</td>
<td>3 – 400</td>
<td>50</td>
<td>1390</td>
<td>1950</td>
<td>3.98</td>
<td>-40..+60</td>
<td>D2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(5)</td>
<td>3 – 400</td>
<td>60</td>
<td>1560</td>
<td>2990</td>
<td>5.16</td>
<td>-40..+60</td>
<td></td>
</tr>
</tbody>
</table>

(subject to alterations)

\(^1\) Nominal data in operating point with maximum load and 400 VAC

---

**Curves:**

(50 Hz)

Air performance measured as per: ISO 15801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis.

The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.

---

<table>
<thead>
<tr>
<th>n rpm</th>
<th>P(_W)</th>
<th>I A</th>
<th>L(_W) dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1425</td>
<td>1475</td>
<td>3.45</td>
<td>85</td>
</tr>
<tr>
<td>1405</td>
<td>1780</td>
<td>3.75</td>
<td>81</td>
</tr>
<tr>
<td>1390</td>
<td>1950</td>
<td>3.98</td>
<td>78</td>
</tr>
<tr>
<td>1400</td>
<td>1850</td>
<td>3.85</td>
<td>79</td>
</tr>
<tr>
<td>1635</td>
<td>2275</td>
<td>4.05</td>
<td>88</td>
</tr>
<tr>
<td>1590</td>
<td>2730</td>
<td>4.75</td>
<td>84</td>
</tr>
<tr>
<td>1560</td>
<td>2990</td>
<td>5.16</td>
<td>81</td>
</tr>
<tr>
<td>1585</td>
<td>2785</td>
<td>4.80</td>
<td>83</td>
</tr>
</tbody>
</table>
- **Motor protection:** Connection for external TOP
- **Touch current:** <= 3.5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit:** Lateral
- **Protection class:** I (if customer has provided connection for protective earth)
- **Product conforming to standards:** EN 60034, EN 61800-5-1, CE
- **Approvals:** VDE, GOST

### Centrifugal fan

<table>
<thead>
<tr>
<th>Centrifugal fan</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R4D 560-RB03 -01</td>
<td>25.5</td>
</tr>
</tbody>
</table>

---

---
AC centrifugal fans – RadiCal
backward curved, Ø 560

Accessory part:
Inlet nozzle 54482-2-4013
not included in the standard scope of delivery

Depth of screw max. 18 mm

Connection line halogen-free 9 x 0.5 mm²,
9 x brass lead tips crimped

Inlet nozzle 54482-2-4013
not included in the standard scope of delivery
AC centrifugal fans – RadiCal
backward curved, Ø 630

- **Material**: Impeller: Plastic PP
  Rotor: Cast in aluminium
- **Number of blades**: 6
- **Direction of rotation**: Clockwise, seen on rotor
- **Type of protection**: IP 54, IP 20
- **Insulation class**: “F”
- **Mounting position**: Any
- **Condensate discharges**: Rotor- and stator-side, Rotor-side
- **Mode of operation**: Continuous operation (S1)
- **Bearings**: Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>Curve</th>
<th>Nominal voltage</th>
<th>Frequency</th>
<th>Speed/rpm(1)</th>
<th>Max. input power(1)</th>
<th>Max. current draw(1)</th>
<th>Capacitor</th>
<th>Perm. amb. temp.</th>
<th>Electrical connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>*6D 630</td>
<td>M6D 138-HF</td>
<td>🍀(3)</td>
<td>3 – 400</td>
<td>50</td>
<td>880</td>
<td>1030</td>
<td>2.20</td>
<td>---</td>
<td>-40..+60</td>
<td>D2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>🍀 🍀</td>
<td>3 – 400</td>
<td>60</td>
<td>940</td>
<td>1440</td>
<td>2.81</td>
<td>---</td>
<td>-40..+60</td>
<td>D2)</td>
</tr>
<tr>
<td>*4D 630</td>
<td>M4D 138-LA</td>
<td>🍀(3)</td>
<td>3 – 400</td>
<td>50</td>
<td>1345</td>
<td>3570</td>
<td>6.63</td>
<td>---</td>
<td>-40..+40</td>
<td></td>
</tr>
</tbody>
</table>

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

### Curves: (50 Hz)

Air performance measured as per ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels $L_{WA}$ as per ISO 13347, $L_{P,A}$ measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.

### Performance curves

<table>
<thead>
<tr>
<th>$n$ rpm</th>
<th>$P_{WA}$ W</th>
<th>$I$ A</th>
<th>$L_{WA}$ dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>🍀 🍀 925</td>
<td>735</td>
<td>1.85</td>
<td>79</td>
</tr>
<tr>
<td>🍀 🍀 895</td>
<td>935</td>
<td>2.10</td>
<td>73</td>
</tr>
<tr>
<td>🍀 🍀 880</td>
<td>1030</td>
<td>2.20</td>
<td>71</td>
</tr>
<tr>
<td>🍀 🍀 885</td>
<td>995</td>
<td>2.15</td>
<td>72</td>
</tr>
<tr>
<td>🍀 🍀 1400</td>
<td>2570</td>
<td>5.15</td>
<td>90</td>
</tr>
<tr>
<td>🍀 🍀 1360</td>
<td>3315</td>
<td>6.25</td>
<td>84</td>
</tr>
<tr>
<td>🍀 🍀 1345</td>
<td>3570</td>
<td>6.63</td>
<td>81</td>
</tr>
<tr>
<td>🍀 🍀 1350</td>
<td>3395</td>
<td>6.35</td>
<td>83</td>
</tr>
</tbody>
</table>
- **Motor protection**: Connection for external TOP
- **Touch current**: <= 3,5 mA acc. to IEC 60990 (test circuit, illustration 4)
- **Cable exit**: Lateral
- **Protection class**: I (if customer has provided connection for protective earth)
- **Product conforming to standards**: EN 60034, EN 61800-5-1, CE
- **Approvals**: VDE, GOST

---

**Curves:** (60 Hz)

![Curves graph]

**Centrifugal fan**

<table>
<thead>
<tr>
<th>Mass of centrifugal fan</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6D 630-RA07 -01</td>
<td>25,0</td>
</tr>
<tr>
<td>R4D 630-RB15 -01</td>
<td>28,0</td>
</tr>
</tbody>
</table>

---

**Air performance measured as per: ISO 5801, Installation category A, with ebm-papst inlet nozzle without protection against accidental contact. Suction-side noise levels: LWA as per ISO 13347, LpA measured at 1 m distance to fan axis. The acoustic values given are only valid under the measurement conditions listed and may vary depending on the installation situation. With any deviation to the standard setup, the specific values have to be checked and reviewed once installed or fitted! For detailed information see page 172 ff.**
**AC centrifugal fans – RadiCal**

**R6D 630-RA07-01  (Centrifugal fan)**

- **Accessory part:**
  - Inlet nozzle 63300-2-4013
  - not included in the standard scope of delivery

- **Depth of screw max. 18 mm**

- **Connection line halogen-free:**
  - 9 x 0.75 mm²,
  - 9 x brass lead tips crimped

---

**R4D 630-RB15-01  (Centrifugal fan)**

- **Accessory part:**
  - Inlet nozzle 63300-2-4013
  - not included in the standard scope of delivery

- **Depth of screw max. 18 mm**

- **Connection line halogen-free:**
  - 9 x 0.75 mm²,
  - 9 x brass lead tips crimped
Inlet nozzles

- Material: galvanised sheet steel

Inlet nozzles without measuring device for backward curved centrifugal fans

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Size</th>
<th>Vers.</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>09566-2-4013</td>
<td>133</td>
<td>1</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>09576-2-4013</td>
<td>190</td>
<td>1</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>09609-2-4013</td>
<td>220</td>
<td>2</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>96358-2-4013</td>
<td>225</td>
<td>1</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>96359-2-4013</td>
<td>250</td>
<td>1</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>28000-2-4013</td>
<td>280</td>
<td>1</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>31000-2-4013</td>
<td>310</td>
<td>1</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>35500-2-4013</td>
<td>355</td>
<td>1</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>54476-2-4013</td>
<td>400</td>
<td>1</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>45901-2-2943 *</td>
<td>450</td>
<td>2</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>50901-2-2943 *</td>
<td>500</td>
<td>2</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>54482-2-4013</td>
<td>560</td>
<td>2</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>63300-2-4013</td>
<td>630</td>
<td>2</td>
<td>see corresponding product page</td>
</tr>
</tbody>
</table>

subject to alterations

* Material: Plastic ABS

Effects of installation space

When mounting our product in a rectangular box, air performance might be reduced.

\[ d_h = \text{Hydraulic diameter} \]

Formula: \[ d_h = 2 \times B \times H / (B + H) \]

B = Width of box

H = Height of box

D = Outer diameter of the fan

Curve:

<table>
<thead>
<tr>
<th>Hydraulic diameter (d_h/D)</th>
<th>1.00</th>
<th>0.99</th>
<th>0.98</th>
<th>0.97</th>
<th>0.96</th>
<th>0.95</th>
<th>0.94</th>
<th>0.93</th>
<th>0.92</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correction factor of air flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hydraulic diameter \(d_h/D\)

158
Inlet nozzles with measuring device to determine air flow for backward curved centrifugal fans

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Size</th>
<th>k-value</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>96400-2-4013</td>
<td>250</td>
<td>60</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>28003-2-4013</td>
<td>280</td>
<td>77</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>31003-2-4013</td>
<td>310</td>
<td>93</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>35503-2-4013</td>
<td>355</td>
<td>128</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>54501-2-4013</td>
<td>400</td>
<td>180</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>45910-2-2943 *</td>
<td>450</td>
<td>190</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>50920-2-2943 *</td>
<td>500</td>
<td>260</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>54492-2-4013</td>
<td>560</td>
<td>405</td>
<td>see corresponding product page</td>
</tr>
<tr>
<td>63310-2-4013</td>
<td>630</td>
<td>515</td>
<td>see corresponding product page</td>
</tr>
</tbody>
</table>

subject to alterations  
* Material: Plastic ABS

**Air flow determination**

The differential pressure approach compares the static pressure before the inlet nozzle with the static pressure inside the inlet nozzle. Air flow can be calculated on the basis of the differential pressure (difference in pressure of the static pressures) in keeping with the following equation:

\[ q_V = k \cdot \sqrt[5]{\Delta p} \]

\( q_V \) in \( \text{m}^3/\text{h} \) and \( \Delta p \) in \( \text{Pa} \)

If constant air flow is to be controlled to, then the nozzle pressure has to be kept constant:

\[ \Delta p = q_V^2 \cdot k^2 \]

\( k \) takes into account the specific nozzle characteristics.

Differences in static pressure are measured in 1/4 measuring point(s) along the circumference of the inlet nozzle. Connection on the customer side is accomplished via a pre-mounted T tube connector. This tube connector is suited for pneumatic hoses with an internal diameter of 4 mm.
Air intake guard grilles

Air intake guard grilles for backward curved centrifugal fans (according to EN ISO 13857)

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Size</th>
<th>Vers.</th>
<th>a</th>
<th>b</th>
<th>d</th>
<th>e</th>
<th>Strut pitch</th>
</tr>
</thead>
<tbody>
<tr>
<td>78128-2-4039</td>
<td>250</td>
<td>1</td>
<td>240</td>
<td>5.4</td>
<td>208</td>
<td>2.4</td>
<td>4 x 90°</td>
</tr>
<tr>
<td>78129-2-4039</td>
<td>280</td>
<td>1</td>
<td>260</td>
<td>4.5</td>
<td>210</td>
<td>2.8</td>
<td>4 x 90°</td>
</tr>
<tr>
<td>78130-2-4039</td>
<td>310</td>
<td>1</td>
<td>280</td>
<td>4.5</td>
<td>230</td>
<td>2.8</td>
<td>4 x 90°</td>
</tr>
<tr>
<td>78131-2-4039</td>
<td>355</td>
<td>1</td>
<td>325</td>
<td>4.5</td>
<td>250</td>
<td>2.8</td>
<td>4 x 90°</td>
</tr>
<tr>
<td>78132-2-4039</td>
<td>400</td>
<td>1</td>
<td>345</td>
<td>4.5</td>
<td>310</td>
<td>2.8</td>
<td>4 x 90°</td>
</tr>
<tr>
<td>78136-2-4039</td>
<td>450</td>
<td>2</td>
<td>425</td>
<td>8.5</td>
<td>350</td>
<td>3.8</td>
<td>3 x 120°</td>
</tr>
<tr>
<td>78139-2-4039</td>
<td>500</td>
<td>2</td>
<td>445</td>
<td>8.5</td>
<td>410</td>
<td>3.8</td>
<td>3 x 120°</td>
</tr>
<tr>
<td>78138-2-4039</td>
<td>630</td>
<td>2</td>
<td>600</td>
<td>8.5</td>
<td>490</td>
<td>3.8</td>
<td>3 x 120°</td>
</tr>
</tbody>
</table>

subject to alterations

Guard grille for suction side for compact centrifugal modules

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Size</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>13351-2-2929</td>
<td>133</td>
<td>94.1</td>
<td>7.7</td>
</tr>
<tr>
<td>19051-2-2929</td>
<td>190</td>
<td>133.0</td>
<td>9.0</td>
</tr>
<tr>
<td>22051-2-2929</td>
<td>220</td>
<td>166.0</td>
<td>8.7</td>
</tr>
<tr>
<td>22551-2-2929</td>
<td>225</td>
<td>158.0</td>
<td>8.7</td>
</tr>
<tr>
<td>25051-2-2929</td>
<td>250</td>
<td>177.0</td>
<td>9.7</td>
</tr>
</tbody>
</table>

subject to alterations

- **Material:** steel wire, plastic coated

- **Material:** PA plastic 6, fibreglass-reinforced
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 (max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02155-4-7320</td>
<td>1,5 μF</td>
<td>25,0</td>
<td>77,0</td>
<td>92,0</td>
</tr>
<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>02159-4-7320</td>
<td>2,5 μF</td>
<td>30,0</td>
<td>71,0</td>
<td>92,0</td>
</tr>
<tr>
<td>02179-4-7320</td>
<td>3,5 μF</td>
<td>30,0</td>
<td>75,0</td>
<td>82,0</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>02163-4-7320</td>
<td>6,0 μF</td>
<td>30,0</td>
<td>101,0</td>
<td>110,0</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>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 alterations

- **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 P0 (without 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>99832-4-7320</td>
<td>9,0 μF</td>
<td>35,0</td>
<td>70,0</td>
<td>100,0</td>
</tr>
</tbody>
</table>

subject to alterations

- **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 V; -25 to +85°C; 30,000 hrs; class A 470 V; -25 to +85°C; 10,000 hrs; class B 500 V; -25 to +85°C; 3,000 hrs; class C
Lead connections for AC centrifugal modules (230 V)

<table>
<thead>
<tr>
<th>Part no.</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>23030-4-1012</td>
<td>450,0</td>
</tr>
<tr>
<td>23031-4-1012</td>
<td>1000,0</td>
</tr>
<tr>
<td>23032-4-1012</td>
<td>1300,0</td>
</tr>
<tr>
<td>23033-4-1012</td>
<td>1600,0</td>
</tr>
<tr>
<td>23034-4-1012</td>
<td>2300,0</td>
</tr>
</tbody>
</table>

subject to alterations

- **Plug assignment:**
  1 = green/yellow
  2 = blue
  3 = brown
  4 = not assigned

Connector shell AMP 350 779-4
3 x female terminal AMP 926 884-1
Jacketed cable, internal leads H03VV-F3G0,5 black
Brass lead tips

Connections leads 230 V
Technical features (M3G 055 Speed-controlled):
- Output 10 VDC max. 1.1 mA
- Tach output
- Over-temperature protected motor
- Motor current limitation
- Locked-rotor protection
- Soft start
- Control interface with SELV potential safely disconnected from the mains

<table>
<thead>
<tr>
<th>Line</th>
<th>Connection</th>
<th>Colour</th>
<th>Assignment / function</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>L</td>
<td>brown</td>
<td>Power supply 230 VAC, 50 - 60 Hz, see type plate for voltage range</td>
</tr>
<tr>
<td>3</td>
<td>N</td>
<td>blue</td>
<td>Neutral conductor</td>
</tr>
<tr>
<td>1</td>
<td>PE</td>
<td>green/yellow</td>
<td>Protective earth</td>
</tr>
<tr>
<td>7</td>
<td>0-10V PWM</td>
<td>yellow</td>
<td>Control input 0 – 10 V or PWM, electrically isolated</td>
</tr>
<tr>
<td>5</td>
<td>Tach</td>
<td>white</td>
<td>Tach output: Open Collector, 1 pulse per revolution, electrically isolated, Isink max=10mA</td>
</tr>
<tr>
<td>6</td>
<td>10V/1.1mA</td>
<td>red</td>
<td>Voltage output 10 V / 1.1 mA, electrically isolated</td>
</tr>
<tr>
<td>4</td>
<td>GND</td>
<td>blue</td>
<td>GND - Connection for control interface</td>
</tr>
</tbody>
</table>
**Technical features (M3G 045 / M3G 055 with 2 Speed stages):**

- Speed adjustment input (230V)
- Over-temperature protected electronics / motor
- Motor current limitation
- Locked-rotor protection
- Soft start

### Electrical connections EC H3)

<table>
<thead>
<tr>
<th>Line</th>
<th>Connection</th>
<th>Colour</th>
<th>Assignment / function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON10</td>
<td>L</td>
<td>black</td>
<td>Power supply 230 VAC, 50 - 60 Hz</td>
</tr>
<tr>
<td>CON11</td>
<td>N</td>
<td>blue</td>
<td>Neutral conductor</td>
</tr>
<tr>
<td>CON12</td>
<td>PE</td>
<td>green/yellow</td>
<td>Protective earth</td>
</tr>
<tr>
<td>CON70</td>
<td>SL</td>
<td>brown</td>
<td>Speed selection: switch open = speed 1; switch closed = speed 2</td>
</tr>
</tbody>
</table>
Technical features (M3G 045 / M3G 055 Speed-controlled; M3G 074):
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 1,1 mA
- Tach output
- Over-temperature protected electronics / motor
- Motor current limitation
- Locked-rotor protection
- Soft start

### Electrical connections EC H4)

#### Customer circuit

<table>
<thead>
<tr>
<th>Speed setting with PWM 1-10kHz</th>
<th>Speed setting with potentiometer</th>
</tr>
</thead>
<tbody>
<tr>
<td>10V</td>
<td>10V/PWM</td>
</tr>
<tr>
<td>1V</td>
<td>10V</td>
</tr>
<tr>
<td>&lt;1V</td>
<td>10V</td>
</tr>
</tbody>
</table>

#### Connection

| CON10 | L | black | Power supply 230 VAC, 50 - 60 Hz, see type plate for voltage range |
| CON11 | N | blue | Neutral conductor |
| CON12 | PE | green/yellow | Protective earth |
| 1 | GND | blue | GND - Connection for control interface |
| 2 | 0-10V PWM | yellow | Control input 0 - 10 V or PWM, electrically isolated |
| 3 | 10V/max:1.1mA | red | Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof |
| 4 | Tach | white | Tach output: Open Collector, 1 pulse per revolution, electrically isolated |

#### Technical features (M3G 045 / M3G 055 Speed-controlled; M3G 074):
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 1,1 mA
- Tach output
- Over-temperature protected electronics / motor
- Motor current limitation
- Locked-rotor protection
- Soft start
Technical features:
- PFC (aktive)
- integrated PID controller
- Control input 0-10 VDC / PWM
- Output 10 VDC max. 10 mA
- Operation and alarm display
- RS485 MODBUS RTU
- Motor current limitation, Alarm relay
- Line undervoltage / phase failure detection
- Over-temperature protected electronics / motor
- Locked-rotor protection, Soft start
- Control interface with SELV potential safely disconnected from the mains

Customer circuit

**Line** | **No.** | **Connection** | **Colour** | **Assignment / function**
--- | --- | --- | --- | ---
1 | 1, 2 | PE | green/yellow | Protective earth
1 | 3 | N | blue | Supply voltage, neutral conductor, see type plate for voltage range, 50/60 Hz
1 | 5 | L | black | Supply voltage, phase, see type plate for voltage range, 50/60 Hz
1 | 6 | NC | white 1 | Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1)
min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1 | 7 | COM | white 2 | Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1)
min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2 | 8 | 0-10 V | yellow | Analogue input (set value), SELV 0-10 V, Impedance 100 kΩ, parametrisable curve
2 | 10 | RSB | brown | RS485 interface for MODBUS, RSB, SELV
2 | 11 | RSA | white | RS485 interface for MODBUS, RSA, SELV
2 | 12 | GND | blue | Reference ground for control interface, SELV
2 | 13 | +10 V | red | Fixed voltage output 10 VDC, SELV +10 V +/- 3%), max. 10 mA, short-circuit-proof, Power supply for external devices (e.g. potentiometer)
**Technical features:**
- PFC (passive)
- Motor current limitation, Alarm relay
- Motor current limitation, Alarm relay
- Motor current limitation, Alarm relay
- Control input 0-10 VDC / PWM
- Over-temperature protected electronics / motor
- Line undervoltage / phase failure detection
- Locked-rotor protection, Soft start
- Control interface with SELV potential safely disconnected from the mains

---

**Line 1**
- PE (green/yellow)
- L1, L2, L3 (black)
- NC (white 1)
- COM (white 2)
- 0-10 V (yellow)
- RSB (brown)
- RSA (white)
- GND (blue)
- +10 V (red)

**Assignment / function**
- PE: Protective earth
- L1, L2, L3: Supply voltage, see type plate for voltage range, 50/60 Hz
- NC: Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1)
- COM: Reference ground for control interface, SELV
- 0-10 V: Analogue input (set value), SELV 0-10 V, Impedance 100 kΩ, parametrisable curve
- RSB: RS485 interface for MODBUS, RSB, SELV
- RSA: RS485 interface for MODBUS, RSA, SELV
- GND: Reference ground for control interface, SELV
- +10 V: Fixed voltage output 10 VDC, SELV +10 V +/- 3%, max. 10 mA, short-circuit-proof, Power supply for external devices (e.g. potentiometer)
### Technical features:
- PFC (aktive)
- integrated PID controller
- Control input 0-10 VDC / PWM
- Input for sensor 0-10 V bzw. 4-20 mA
- External 24 V input (programming)
- External release input
- Output for slave 0-10 V max. 3 mA
- Output 20 VDC (+20 %) max. 50 mA
- Output 10 VDC (+10 %) max. 10 mA
- Tach output
- RS485 MODBUS-RTU
- Alarm relay
- Line undervoltage / phase failure detection
- Motor current limitation
- Output limit
- Over-temperature protected electronics / motor
- Reverse polarity and locked-rotor protection
- Soft start
- Control interface with SELV potential safely disconnected from the mains

### Connector

<table>
<thead>
<tr>
<th>Connector</th>
<th>Connection</th>
<th>Assignment / function</th>
</tr>
</thead>
<tbody>
<tr>
<td>KL1</td>
<td>N</td>
<td>Mains supply connection, supply voltage 1–200–277 VAC, 50/60 Hz</td>
</tr>
<tr>
<td></td>
<td>L1</td>
<td>Mains supply connection, supply voltage 1–200–277 VAC, 50/60 Hz</td>
</tr>
<tr>
<td>PE</td>
<td>PE</td>
<td>Earth connection, PE connection</td>
</tr>
<tr>
<td>KL2</td>
<td>NC</td>
<td>Status relay, floating status contact, option 1: break with error, option 2: break with error for run monitor error message</td>
</tr>
<tr>
<td></td>
<td>COM</td>
<td>Status relay, floating status contact, changeover contact, common connection, contact rating 250 VAC / 2 A (AC1)</td>
</tr>
<tr>
<td></td>
<td>NO</td>
<td>Status relay, floating status contact, option 1: close with error, option 2: close with run monitor error message</td>
</tr>
<tr>
<td>KL3</td>
<td>Din1</td>
<td>Digital input 1: enabling of electronics; enabling: open pin or applied voltage 5 to 50 VDC; disabling: bridge to GND or applied voltage &lt; 0.8 VDC; reset function: triggers software reset after a level change to &lt; 0.8 V</td>
</tr>
<tr>
<td></td>
<td>Ain1 I</td>
<td>Analogue input 1 (set value); 4-20 mA; Ri= 100 Ω; parametrisable curve; only usable as alternative to input Ain1 U</td>
</tr>
<tr>
<td></td>
<td>+10 V</td>
<td>Fixed voltage output 10 VDC; +10 V ±3 %; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer)</td>
</tr>
<tr>
<td></td>
<td>Ain1 U</td>
<td>Analogue input 1 (set value); 0-10 V; Ri= 100 kΩ; parametrisable curves; only usable as alternative to input Ain1 I</td>
</tr>
<tr>
<td></td>
<td>GND</td>
<td>Signal ground for control interface</td>
</tr>
<tr>
<td></td>
<td>RSB</td>
<td>Bus connection RS485; RSB; MODBUS RTU</td>
</tr>
<tr>
<td></td>
<td>RSA</td>
<td>Bus connection RS485; RSA; MODBUS RTU</td>
</tr>
<tr>
<td></td>
<td>Aout</td>
<td>Analogue output 0-10 V; max. 5 mA; output of the actual motor control factor (output voltage of electronics)/of the actual motor speed; parametrisable curve</td>
</tr>
<tr>
<td></td>
<td>Ain2 I</td>
<td>Analogue input 2; actual sensor value 4-20 mA; Ri= 100 Ω; parametrisable curve; only usable as alternative to input Ain2 U</td>
</tr>
<tr>
<td></td>
<td>+20 V</td>
<td>Fixed voltage output 20 VDC; +20 V ±25%/-10 %; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors)</td>
</tr>
<tr>
<td></td>
<td>Ain2 U</td>
<td>Analogue input 2; actual sensor value 0-10 V; Ri= 100 kΩ; parametrisable curve; only usable as alternative to input Ain2 I</td>
</tr>
<tr>
<td></td>
<td>GND</td>
<td>Signal ground for control interface</td>
</tr>
<tr>
<td></td>
<td>Din3</td>
<td>Digital input 3: Control characteristic of the integrated controller; according to EEPROM setting, the control characteristic of the integrated controller is normally/inversely selectable per BUS or per digital input; normal: open pin or applied voltage 5 to 50 VDC; inverse: bridge to GND or applied voltage &lt; 0.8 VDC</td>
</tr>
<tr>
<td></td>
<td>Din2</td>
<td>Digital input 2: parameter set switch 1/2; according to EEPROM setting, the valid/used parameter set is selectable per BUS or per digital input Din2. Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage &lt; 0.8 VDC</td>
</tr>
</tbody>
</table>
### Technical features:
- PFC (passive)
- integrated PID controller
- Control input 0-10 VDC / PWM
- External release input
- External 24 V input (programming)
- Output 10 VDC max. 10 mA
- Operation and alarm display
- RS485 MODBUS-RTU
- Motor current limitation
- Alarm relay
- Line undervoltage / phase failure detection
- Over-temperature protected electronics / motor
- Reverse polarity and locked-rotor protection
- Soft start
- Control interface with SELV potential safely disconnected from the mains

### Electrical connections EC M5)

#### Connector KL1
- **Pin 1** L1: Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
- **Pin 2** L2: Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
- **Pin 3** L3: Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
- **Pin PE** PE: Earth connection, PE connection

#### Connector KL2
- **Pin 1** RSA: Bus connection RS485; RSA; MODBUS RTU
- **Pin 2** RSB: Bus connection RS485; RSB; MODBUS RTU
- **Pin 3** GND: Signal ground, for control interface
- **Pin 4** C: Status relay, floating status contact, changeover contact, common connection 250 VAC / 2 A (AC1)
- **Pin 5** Din1: Digital input 1: enabling of electronics; enabling: open pin or applied voltage 5 to 50 VDC; disabling: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to < 1V
- **Pin 6** +10 V: Fixed voltage output 10 VDC; +10 V ±3 %; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer)
- **Pin 7** Ain1 U: Analogue input 1 (set value); 0-10 V; Ri= 100 kΩ; parametrisable curves
- **Pin 8** NC: Status relay, floating status contact, break with error
A1) Single-phase capacitor motor (1~ 230 VAC power line) with TOP wired internally

U₁ = blue  
U₂ = black  
Z = brown  
↓ = green/yellow

A2a) Single-phase capacitor motor (1~ 230 VAC power line) with connection for external TOP

U₁ = blue  
U₂ = black  
Z = brown  
↓ = green/yellow
**D2) Star connection** (3~ 400 VAC power line)

with TOP

- $U_1$ = black
- $U_2$ = green
- $V_1$ = blue
- $V_2$ = white
- $W_1$ = brown
- $W_2$ = yellow
- $\phi$ = green/yellow

Direction of rotation is reversed by swapping two line phases.

---

**F1a) Delta connection** (3~ 400 VAC power line)

with TOP

- $U_1$ = blue
- $U_2$ = green
- $V_1$ = blue
- $V_2$ = white
- $W_1$ = brown
- $W_2$ = yellow
- $\phi$ = green/yellow

Direction of rotation is reversed by swapping two line phases.
**General performance parameters**
Any deviations from the technical data and parameters described here are listed on the product-specific data sheet.

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

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

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

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

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

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

**Service life**
The service life of ebm-papst products depends on two major factors:
- The service life of the insulation system
- The service life of the bearing system
The service life of the insulation system mainly depends on voltage level, temperature and ambient conditions, such as humidity and condensation. The service life of the bearing system depends mainly on the thermal load on the bearing.

The majority of our products use maintenance-free ball bearings for any mounting position possible. As an option, sleeve bearings can be used, which is indicated on the product-specific data sheet wherever applicable.

The service life L10 of the ball bearings can be taken as approx. 40,000 operating hours at an ambient temperature of 40 °C, yet this estimate can vary according to the actual ambient conditions. We will gladly provide you with a lifetime calculation taking into account your specific operating conditions.

**Motor protection / thermal protection**
Information on motor protection and thermal protection is provided in the product-specific data sheets. Depending on motor type and field of application, the following protective features are realised:
- Thermal overload protection (TOP), either in-circuit or external
- PTC with electronic diagnostics
- Impedance protection
- Thermal overload protection (TOP) with electronic diagnostics
- Current limitation via electronics

If an external TOP is connected, the customer has to make sure to connect a conventional trigger device for switching it off. Products without fitted TOP and without protection against improper use, a motor protection complying with the valid standards has to be installed.

**Mechanical strain / performance parameters**
All ebm-papst products are subjected to comprehensive tests complying with the normative specifications. In addition to this, the tests also reflect the vast experience and expertise of ebm-papst.
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. Complying with the EMC standards has to be established on the final appliance, as different mounting situations can result in changed EMC properties.

Leakage current
Information on the leakage current is provided in the product-specific data sheets. Measuring is according to IEC 60990.

Approvals
In case you require a specific approval for your ebm-papst product (VDE, UL, GOST, CCC, CSA, etc.) please let us know. Most of our products can be supplied with the relevant approval. Information on existing approvals is provided in the product-specific data sheets.

Air performance measurements
All air performance measurements are carried out on suction side and on chamber test beds conforming to the specifications as per ISO 5801 and DIN 24163. The fans under test are installed in the measuring chamber at free air intake and exhaust (installation category A) and are operated at nominal voltage, with AC also at nominal frequency, and without any additional components such as guard grilles. As required by the standard, the air performance curves correspond to an air density of 1.2 kg/m².
Measurement conditions for air and noise measurement

ebm-papst products are measured under the following conditions:
- Axial and diagonal fans in direction of rotation “V” in full nozzle and without guard grille
- Backward curved centrifugal fans, free-running and with inlet nozzle
- Forward curved single and dual inlet centrifugal fans with housing

Noise measurements

All noise measurements are carried out in low-reflective test rooms with reverberant floor. Thus the ebm-papst acoustic test chambers meet the requirements of precision class 1 according to DIN EN ISO 3745. For noise measurement, the fans being tested are placed in a reverberant wall and operated at nominal voltage (for AC, also at nominal frequency) without additional attachments such as the guard grille.

Sound pressure level and sound level

All acoustic values are established according to ISO 13347, DIN 45635 and ISO 3744/3745 to accuracy class 2 and given in A-rated form. When the sound pressure level ($L_p$) is measured, the microphone is on the intake side of the fan being tested, usually at a distance of 1 m on the fan axis.

To measure 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 sound power level measured can be roughly calculated from the sound pressure level by adding 7 dB.

Measuring configuration as per ISO 13347-3 respectively DIN 45635-38:
- 10 measuring points
- $d \geq D$
- $h = 1,5d \ldots 4,5d$
- Measurement area $S = 6d^2 + 7d (h + 1,5d)$
Combined level of multiple same-level sound sources
Adding 2 noise sources with the same level results in a level increase of approx. 3 dB.
The noise characteristics of multiple identical fans can be determined in advance based on
the noise values specified in the data sheet. This is shown in the diagram opposite.
Example: 8 A3G800 axial fans are on a condenser. According to the data sheet, the sound pres-
sure level of a fan is approximately 75 dB(A). The level increase measured from the diagram is
9 dB. Thus the overall sound level of the installation can be expected to be 84 dB(A).

Combined level of two different-level sound sources
The acoustic performance of two different fans can be predetermined based on the sound
levels given in the data sheet. This is shown in the diagram opposite.
Example: There is an axial fan A3G800 with a sound pressure level of 75 dB(A) at the operating
point and an axial fan A3G710 with 71 dB(A) in a ventilation unit. The level difference is 4 dB.
The level increase can now be read in the diagram as approx. 1.5 dB. This means that the
overall sound level of the unit can be expected to be 76.5 dB(A).

Distance laws
Sound power level is independent of distance to the sound source. In contrast to this, sound
pressure level decreases the further away the noise source is. The adjacent diagram shows the
decrease in level under far sound field conditions. Far sound field conditions apply whenever the
distance between microphone and fan is big when compared to fan diameter and wavelength to
be considered. For more information on far sound field, please consult the relevant literature on
this complex topic. Per doubling of distance, the level in the far sound field decreases by 6 dB.
In the near field of the fan, other correlations apply and the decrease in levels can be consid-
ernably smaller. The following example only applies to far sound field conditions and can vary
strongly depending on the installation effects:
With an axial fan A3G300, a sound pressure level of 65 dB(A) was measured at a distance of
1 m. According to the adjacent diagram, at a distance of 20 m we would get a reduction by
26 dB, i.e. a sound pressure level of 39 dB(A).
Austria
ebm-papst Motoren & Ventilatoren GmbH
Straubingstraße 17
4030 Linz
AUSTRIA
Phone +43 732 321150-0
Fax +43 732 321150-20
info@at.ebmpapst.com
www.ebmpapst.at

Belarus
ebm-papst Bel AgmbH
P. O. Box 117
220138 Minsk
BELARUS
Phone +375 17 3851556
Fax +375 17 3851556
info@by.ebmpapst.com
www.ebmpapst.by

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

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

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

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

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

Estonia
ebm-papst Oy. Eesti Filiaal
Kesk tee 13
Aaviku küla, Jüri Tehnopark
75301 Rae Vald, Harjumaa
ESTONIA
Phone +372 65569-78
Fax +372 65569-79
www.ebmpapst.ee

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

France
ebm-papst sarl
ZI Nord - rue A. Mohler
BP 62
67212 Obermaï Cedex
FRANCE
Phone +33 820 326266
Fax +33 8 8673883
info@ebmpapst.fr
www.ebmpapst.fr

Greece
Helcoma
Th. Rotas & Co OE
Davaki 65
17672 Kallithea-Attiki
GREECE
Phone +30 210 9513-705
Fax +30 210 9513-490
contact@helcoma.gr
www.helcoma.gr

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

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

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

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

Macedonia
ebm-papst Industries Kft.
Ezred u. 2.
1044 Budapest
HUNGARY
Phone +36 1 8722-190
Fax +36 1 8722-194
office@hu.ebmpapst.com
<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>America</td>
<td>Argentina</td>
<td>ebm-papst de Argentina S.A. Hernandarias 148 Lomas del Mirador Pcia. de Buenos Aires (1752) ARGENTINA</td>
<td>Phone +54 11 46576135 Fax +54 11 46572092 <a href="mailto:ventas@ar.ebmpapst.com">ventas@ar.ebmpapst.com</a> <a href="http://www.ebmpapst.com.ar">www.ebmpapst.com.ar</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>America</td>
<td>Brasil</td>
<td>ebm-papst Motores Ventiladores Ltda. Av. José Giorgi, 301 Galpões B6+B7 Condominio Logical Center 06707-100 Cotia - São Paulo BRAZIL</td>
<td>Phone +55 11 4613-8700 Fax +55 11 4777-1406 <a href="mailto:vendas@br.ebmpapst.com">vendas@br.ebmpapst.com</a> <a href="http://www.ebmpapst.com.br">www.ebmpapst.com.br</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>America</td>
<td>Canada</td>
<td>ebm-papst Canada Inc. 1800 Ironstone Manor, Unit 2 Pickering, Ontario, L1W3J9 CANADA</td>
<td>Phone +1 905 420-3533 Fax +1 905 420-3772 <a href="mailto:sales@ca.ebmpapst.com">sales@ca.ebmpapst.com</a> <a href="http://www.ebmpapst.ca">www.ebmpapst.ca</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>South Africa</td>
<td>ebm-papst South Africa (Pty) Ltd. P.O. Box 3124 1119 Yacht Avenue 2040 Honeydew SOUTH AFRICA</td>
<td>Phone +27 11 794-3434 Fax +27 11 794-5020 <a href="mailto:info@za.ebmpapst.com">info@za.ebmpapst.com</a> <a href="http://www.ebmpapst.co.za">www.ebmpapst.co.za</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North America</td>
<td>USA</td>
<td>ebm-papst Inc. P.O. Box 4009 100 Hyde Road Farmington, CT 06034 UNITED STATES</td>
<td>Phone +1 860 674-1515 Fax +1 860 674-8536 <a href="mailto:sales@us.ebmpapst.com">sales@us.ebmpapst.com</a> <a href="http://www.ebmpapst.us">www.ebmpapst.us</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North America</td>
<td>USA</td>
<td>ebm-papst Automotive &amp; Drives, Inc. 3200 Greenfield, Suite 255 Dearborn, MI 48120 UNITED STATES</td>
<td>Phone +1 313 406-8080 Fax +1 313 406-8081 <a href="mailto:automotive@us.ebmpapst.com">automotive@us.ebmpapst.com</a> <a href="http://www.ebmpapst-automotive.us">www.ebmpapst-automotive.us</a></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ebm-papst in Asia and Australia

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

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

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

**Indonesia**
- **ebm-papst Indonesia**
  - Representative Office
  - German Centre, 4th Floor, Suite 4470
  - 15321 Tangerang
  - INDONESIA
  - Phone +62 21 5376250
  - Fax +62 21 5388305
  - salesdept@id.ebmpapst.com

**Japan**
- **ebm-papst Industries Japan K.K.**
  - 12th Floor, Benex S-3 Bldg.
  - 3-20-8 Shinyokohama, Kohoku-ku
  - 222-0033 Yokohama
  - JAPAN
  - Phone +81 45 47057-51
  - Fax +81 45 47057-52
  - info@jp.ebmpapst.com
  - www.ebmpapst.jp

**Korea**
- **ebm-papst Korea Co. Ltd.**
  - 6F, Trucce Bldg.
  - B 6-2, Digital Media City (DMC)
  - Sangam-Dong, Mapo-Gu
  - Seoul 121-270
  - KOREA
  - Phone +82 2 366213-24
  - Fax +82 2 366213-26
  - info@kr.ebmpapst.com
  - www.ebmpapst.co.kr

**Malaysia**
- **ebm-papst Malaysia**
  - Representative Office
  - Unit 12-2, Jalan USJ Sentral 3
  - Persiaran Subang, Selangor Darul Ehsan
  - 47600 Subang Jaya
  - MALAYSIA
  - Phone +60 3 8024-1680
  - Fax +60 3 8024-8718
  - salesdept@my.ebmpapst.com

**Singapore**
- **ebm-papst SEA Pte. Ltd.**
  - No. 23 Ubi Road 4
  - #06-00 Olympia Industrial Building
  - Singapore 408620
  - SINGAPORE
  - Phone +65 65513789
  - Fax +65 68428439
  - salesdept@sg.ebmpapst.com

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

**Vietnam**
- **ebm-papst Vietnam**
  - Representative Office
  - Room #102, 25 Nguyen Van Thu Street
  - District 1
  - Ho Chi Minh City
  - VIETNAM
  - Phone +84 8 39104099
  - Fax +84 8 39103970
  - linh.nguyen@vn.ebmpapst.com

**Australia**
- **ebm-papst A&NZ Pty Ltd.**
  - 10 Oxford Road
  - Laverton North, Victoria, 3026
  - AUSTRALIA
  - Phone +61 3 9360-4600
  - Fax +61 3 9360-4646
  - sales@ebmpapst.com.au
  - www.ebmpapst.com.au

**New Zealand**
- **ebm-papst A&NZ Pty Ltd.**
  - 102 Henderson Valley Road
  - Henderson, Auckland 1230
  - NEW ZEALAND
  - Phone +64 9 837-1884
  - Fax +64 9 837-1899
  - sales@ebmpapst.com.au
  - www.ebmpapst.com.au