DC centrifugal fans

DC centrifugal fan overview
DC centrifugal fans
DC tangential fans
DC centrifugal fans and blowers
**DC centrifugal fans**

**Product line**
Our centrifugal product line includes fans for every application. Whether as free-running impellers with a diameter between 97 mm and 225 mm, or as assemblies in a ready-to-install, compact housing with inlet ring with an edge length between 51 mm and 270 mm. Of course, all models feature highly efficient, brushless motor technology.

**Electronic protection against reverse polarity**
ebm-papst DC fans have electronically commutated drives with electronic protection against reverse polarity. The electronics are integrated in the fan’s impeller hub to save space.

**Product life expectancy**
A distinctive feature of DC fan technology is the amazing product life expectancy. The outstanding efficiency of the brushless drive results in lower heat stress for the bearings, which significantly increases the service life of the fan.

**Degree of protection**
DC fans with sleeve and ball bearings are powered by class E insulated motors. All ebm-papst fans conform to the requirements of degree of protection IP 20. Fans conforming to IP 54 / IP 68 and special degrees of protection are also available.

**Voltage range**
Many of our DC fans can be operated on voltages that are up to 50% lower and 25% higher than their nominal voltage (see voltage range in the technical tables). This allows the air performance to be adapted to the cooling requirements and the noise to be reduced, even if the fan does not have a control input.

**Closed-loop speed control and monitoring**
Closed-loop speed control and function monitoring are becoming increasingly important in many applications. ebm-papst offers many fans in the standard design with a control input and open-collector speed signal.

**S-Force centrifugal RadiCal**
The new S-Force centrifugal fans provide peak performance among fans of this type. With air flow capacity of over 1500 m³/h and a pressure increase of up to 1000 pascals, the highest heat flows are manageable. The models are extremely efficient due to the multi-pole, electronically commutated drive motors, and can be adapted individually to every application thanks to intelligent motor features. Some models use our new, highly efficient RadiCal impellers.
### Centrifugal fans for DC operation

**Overview of air performance**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Series</th>
<th>Air flow</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 105 x 99</td>
<td>RG 49</td>
<td>18...24</td>
<td>95</td>
</tr>
<tr>
<td>Ø 101 x 52</td>
<td>RER 101 N</td>
<td>162...190</td>
<td>111</td>
</tr>
<tr>
<td>Ø 97 x 41</td>
<td>RTR 97 TD</td>
<td>220</td>
<td>109</td>
</tr>
<tr>
<td>Ø 135 x 31</td>
<td>RTR 135 TD</td>
<td>650...970</td>
<td>122</td>
</tr>
<tr>
<td>Ø 180 x 110</td>
<td>RG 125 TD</td>
<td>60...137</td>
<td>102</td>
</tr>
<tr>
<td>Ø 160 x 120</td>
<td>RG 160 NTD</td>
<td>59...444</td>
<td>105</td>
</tr>
<tr>
<td>Ø 120 x 71</td>
<td>RER 120 TD</td>
<td>1063...1250</td>
<td>111</td>
</tr>
<tr>
<td>Ø 190 x 69</td>
<td>RTR 190 TD</td>
<td>650...970</td>
<td>122</td>
</tr>
<tr>
<td>Ø 160 x 50</td>
<td>RER 160 TD</td>
<td>1090...1100</td>
<td>110</td>
</tr>
<tr>
<td>Ø 133 x 91</td>
<td>RTR 133 TD</td>
<td>460...565</td>
<td>117</td>
</tr>
<tr>
<td>Ø 165 x 87</td>
<td>RER 165 TD</td>
<td>360</td>
<td>119</td>
</tr>
<tr>
<td>Ø 175 x 69</td>
<td>RTR 175 TD</td>
<td>600...980</td>
<td>120</td>
</tr>
<tr>
<td>Ø 190 x 69</td>
<td>RTR 190 TD</td>
<td>650...970</td>
<td>122</td>
</tr>
<tr>
<td>Ø 200 x 56</td>
<td>RG 200 TD</td>
<td>1090...1100</td>
<td>110</td>
</tr>
<tr>
<td>Ø 160 x 50</td>
<td>RER 160 TD</td>
<td>360</td>
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<tr>
<td>Ø 175 x 69</td>
<td>RTR 175 TD</td>
<td>600...980</td>
<td>120</td>
</tr>
<tr>
<td>Ø 190 x 69</td>
<td>RTR 190 TD</td>
<td>650...970</td>
<td>122</td>
</tr>
<tr>
<td>Ø 200 x 56</td>
<td>RG 200 TD</td>
<td>1090...1100</td>
<td>110</td>
</tr>
<tr>
<td>Ø 160 x 50</td>
<td>RER 160 TD</td>
<td>360</td>
<td>119</td>
</tr>
<tr>
<td>Ø 175 x 69</td>
<td>RTR 175 TD</td>
<td>600...980</td>
<td>120</td>
</tr>
<tr>
<td>Ø 190 x 69</td>
<td>RTR 190 TD</td>
<td>650...970</td>
<td>122</td>
</tr>
<tr>
<td>Ø 200 x 56</td>
<td>RG 200 TD</td>
<td>1090...1100</td>
<td>110</td>
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</table>

Subject to change
### Centrifugal fans for DC operation

**Overview of technically feasible designs**

<table>
<thead>
<tr>
<th>Item</th>
<th>Series</th>
<th>OPTIONAL</th>
<th>P.</th>
</tr>
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<tbody>
<tr>
<td>105 x 59 x 79</td>
<td>RIV 40</td>
<td>•</td>
<td>95</td>
</tr>
<tr>
<td>76 x 27</td>
<td>RL 48</td>
<td>•</td>
<td>97</td>
</tr>
<tr>
<td>97 x 93.5 x 33</td>
<td>RL 65</td>
<td>•</td>
<td>98</td>
</tr>
<tr>
<td>121 x 37</td>
<td>RL 90 N</td>
<td>•</td>
<td>99</td>
</tr>
<tr>
<td>127 x 25</td>
<td>RL 100</td>
<td>•</td>
<td>100</td>
</tr>
<tr>
<td>135 x 38</td>
<td>RG 90 N</td>
<td>•</td>
<td>101</td>
</tr>
<tr>
<td>130 x 40</td>
<td>RG 125 N</td>
<td>•</td>
<td>102</td>
</tr>
<tr>
<td>NEW 180 x 40</td>
<td>RG 140 NTD</td>
<td>•</td>
<td>103</td>
</tr>
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<td>220 x 56</td>
<td>RG 160 N</td>
<td>•</td>
<td>104</td>
</tr>
<tr>
<td>220 x 56</td>
<td>RG 160 NTD</td>
<td>•</td>
<td>105</td>
</tr>
<tr>
<td>226 x 85</td>
<td>RG 190 TD</td>
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<td>106</td>
</tr>
<tr>
<td>270 x 99</td>
<td>RG 220 TD</td>
<td>•</td>
<td>107</td>
</tr>
<tr>
<td>270 x 132</td>
<td>RG 225 TD</td>
<td>•</td>
<td>108</td>
</tr>
<tr>
<td>97 x 41</td>
<td>RET 97 TD</td>
<td>•</td>
<td>109</td>
</tr>
<tr>
<td>100 x 25</td>
<td>REF 100</td>
<td>•</td>
<td>110</td>
</tr>
<tr>
<td>101 x 52</td>
<td>RER 101 N</td>
<td>•</td>
<td>111</td>
</tr>
<tr>
<td>120 x 54</td>
<td>RER 120 TD</td>
<td>•</td>
<td>112</td>
</tr>
<tr>
<td>138 x 35</td>
<td>RER 125 N</td>
<td>•</td>
<td>113</td>
</tr>
<tr>
<td>133 x 91</td>
<td>RER 133 TD</td>
<td>•</td>
<td>114</td>
</tr>
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<td>165 x 51</td>
<td>RER 160 N</td>
<td>•</td>
<td>115</td>
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<tr>
<td>165 x 51</td>
<td>RER 160 NTD</td>
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<td>116</td>
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<td>175 x 55</td>
<td>REF 175 TD</td>
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<td>175 x 69</td>
<td>RER 175 TD</td>
<td>•</td>
<td>118</td>
</tr>
<tr>
<td>190 x 69</td>
<td>RER 190 TD</td>
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<td>119</td>
</tr>
<tr>
<td>220 x 71</td>
<td>RER 220 TD</td>
<td>•</td>
<td>120</td>
</tr>
<tr>
<td>225 x 99</td>
<td>RER 225 TD</td>
<td>•</td>
<td>121</td>
</tr>
<tr>
<td>201 x 431 x 50 x 48</td>
<td>RG 030</td>
<td>•</td>
<td>122</td>
</tr>
</tbody>
</table>

- Not yet available
- Available
  - Sleeve bearings
  - Ball bearings

Please note that these special versions are not possible for all voltages and speeds, and not in all combinations. The special versions are designed for specific customers and projects and are usually not available off the shelf.

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### Optional special versions (see page 12)

On the catalog pages and in the overview on page 12, we provide information about the special designs that are technically feasible in the fan series. Please note that these special versions are not possible for all voltages and speeds, and not in all combinations. The special versions are designed for specific customers and projects and are usually not available off the shelf.
DC centrifugal fans

Max. 24 m³/h

- **Material:**
  - Scroll housing: GRP
  - Impeller: GRP

- **Direction of air flow:**
  - Axial: Intake
  - Centrifugal: Exhaust

- **Connection:**
  - via single wires AWG 26, TR 64

- **Highlights:**
  - Forward-curved impeller

- **Weight:**
  - 100 g

**Possible special versions:**
(See chapter DC fans - specials)
- Speed signal
- Moisture protection

### Series RV 40

<table>
<thead>
<tr>
<th>Nominal data</th>
<th>Air flow</th>
<th>Air flow</th>
<th>Nominal voltage</th>
<th>Sound power level</th>
<th>Power consumption</th>
<th>Temperature range</th>
<th>Service life L10 (40 °C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>m³/h</td>
<td>cfm</td>
<td>VDC</td>
<td>VDC</td>
<td>Bel(A) Watts rpm⁻¹</td>
<td>°C</td>
<td>Hours Hours</td>
</tr>
<tr>
<td>RV 40-18/12 L</td>
<td>18</td>
<td>10.6</td>
<td>12</td>
<td>9...16</td>
<td>4.0</td>
<td>2.0 3 900</td>
<td>-20...+70 70 000 / 35 000 117 500</td>
</tr>
<tr>
<td>RV 40-18/12 H</td>
<td>24</td>
<td>14.1</td>
<td>12</td>
<td>9...16</td>
<td>5.0</td>
<td>4.5 4 800</td>
<td>-20...+70 50 000 / 25 000 85 000</td>
</tr>
</tbody>
</table>

Subject to change

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1) Fiberglass-reinforced plastic.

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Air performance measured according to ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level $L_{WA}$ ISO 10360-2 measured on a hemisphere with a radius of 2 m;
Sound pressure level $L_{PA}$ measured at 1 m distance from fan axis.
The acoustic values are only valid for the described measurement setup and may vary depending on the installation situation.
In the event of deviation from the standard configuration, the parameters must be checked after installation!

For detailed information see http://www.ebmpapst.com/general conditions
Air performance measured according to ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level $LWA_{ISO}$ measured on a hemisphere with a radius of 2 m.

Sound pressure level $LpA$ measured at 1 m distance from fan axis.

The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.

In the event of deviation from the standard configuration, the parameters must be checked after installation!

For detailed information see http://www.ebmpapst.com/general conditions

### DC centrifugal fans

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLF 35-8/12 N</td>
<td>9.6</td>
<td>5.64</td>
<td>12</td>
<td>8...13.2</td>
<td>5.5</td>
<td></td>
<td>3.5</td>
<td>6 700</td>
<td>-20...+70</td>
<td>60 000 / 30 000</td>
</tr>
<tr>
<td>RLF 35-8/14 N</td>
<td>9.6</td>
<td>5.64</td>
<td>24</td>
<td>14...28</td>
<td>5.5</td>
<td></td>
<td>4.3</td>
<td>6 700</td>
<td>-20...+70</td>
<td>60 000 / 30 000</td>
</tr>
</tbody>
</table>

1) Fiberglass-reinforced plastic

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### Series RLF 35

- **Material:** Scroll housing: GRP<sup>1) </sup>
- **Direction of air flow:** Axial: Intake, Centrifugal: Exhaust
- **Connection:** via single wires AWG 26, TR 64
- **Highlights:** Forward-curved impeller
- **Weight:** 40 g

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Subject to change

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1) Fiberglass-reinforced plastic

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Air performance measured according to ISO 5801. Installation category A, without contact protection.

Noise: Total sound power level $LWA_{ISO}$ measured on a hemisphere with a radius of 2 m.

Sound pressure level $LpA$ measured at 1 m distance from fan axis.

The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.

In the event of deviation from the standard configuration, the parameters must be checked after installation!

For detailed information see http://www.ebmpapst.com/general conditions

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**Max. 9.6 m³/h**

**51 x 15 mm**
Series RL 48

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>Voltage</th>
<th>Power consumption</th>
<th>Nominal speed</th>
<th>Temperature range</th>
<th>Life expectancy L10 (40 °C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL 48-19/12 ML</td>
<td>22</td>
<td>12.9</td>
<td>12</td>
<td>8...15</td>
<td>5.3</td>
<td>5.0</td>
<td>3 500</td>
<td>70 000 / 35 000</td>
</tr>
<tr>
<td>RL 48-19/12</td>
<td>28</td>
<td>16.5</td>
<td>12</td>
<td>8...13.5</td>
<td>5.7</td>
<td>4.6</td>
<td>4 400</td>
<td>60 000 / 30 000</td>
</tr>
<tr>
<td>RL 48-19/14 ML</td>
<td>22</td>
<td>12.9</td>
<td>24</td>
<td>18...28</td>
<td>5.3</td>
<td>5.0</td>
<td>3 500</td>
<td>70 000 / 35 000</td>
</tr>
<tr>
<td>RL 48-19/14</td>
<td>28</td>
<td>16.5</td>
<td>24</td>
<td>18...26.4</td>
<td>5.7</td>
<td>4.4</td>
<td>4 400</td>
<td>60 000 / 30 000</td>
</tr>
</tbody>
</table>

Subject to change

- Material: Scroll housing: GRP\(^1\)
- Impeller: GRP\(^1\)
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Connection: via single wires AWG 26, TR 64
- Highlights: Forward-curved impeller
- Weight: 75 g

\(^1\) Fiberglass-reinforced plastic

Air performance measured according to ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level LWA ISO 103002 measured on a hemisphere with a radius of 2 m.
Sound pressure level LpA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions
Air performance measured according to ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level \( L_{WA} \) ISO 10300 measured on a hemisphere with a radius of 2 m.
Sound pressure level \( L_{P A} \) measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions.

### Series RL 65

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>Voltage range</th>
<th>Sound power level</th>
<th>Power consumption</th>
<th>Nominal speed</th>
<th>Temperature range</th>
<th>Service life L10 (°C)</th>
<th>Service life L10 (°C)</th>
<th>Life expectancy L10</th>
<th>Curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL 65-21/12</td>
<td>56</td>
<td>32.9</td>
<td>12</td>
<td>6.8...13.8</td>
<td>6.6</td>
<td>15.0</td>
<td>4 500</td>
<td>-20...+70</td>
<td>60 000 / 30 000</td>
<td>102 500</td>
<td>Subject to change</td>
<td></td>
</tr>
<tr>
<td>RL 65-21/12 H</td>
<td>61</td>
<td>35.8</td>
<td>12</td>
<td>6.8...13.2</td>
<td>6.8</td>
<td>19.2</td>
<td>4 900</td>
<td>-20...+55</td>
<td>55 000 / 40 000</td>
<td>92 500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RL 65-21/14</td>
<td>56</td>
<td>32.9</td>
<td>24</td>
<td>12...26.4</td>
<td>6.6</td>
<td>14.0</td>
<td>4 500</td>
<td>-20...+70</td>
<td>60 000 / 30 000</td>
<td>102 500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RL 65-21/14 H</td>
<td>61</td>
<td>35.8</td>
<td>24</td>
<td>12...26.4</td>
<td>6.8</td>
<td>18.0</td>
<td>4 900</td>
<td>-20...+60</td>
<td>55 000 / 35 000</td>
<td>92 500</td>
<td></td>
<td></td>
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</tbody>
</table>

1) Fiberglass-reinforced plastic,

Snap-in fins for easy latch
Max. 55 m³/h

DC centrifugal fans

Series RL 90 N

<table>
<thead>
<tr>
<th>Nominal data</th>
<th>Air flow</th>
<th>Air flow</th>
<th>Nominal voltage</th>
<th>Voltage range</th>
<th>Sound power level</th>
<th>Shaft sleeve bearings</th>
<th>Power consumption</th>
<th>Nominal speed</th>
<th>Temperature range</th>
<th>Service life L10 (40 °C)</th>
<th>Service life L10 (Tmax)</th>
<th>Life expectancy L10 IPC</th>
<th>40 °C</th>
<th>Curve</th>
</tr>
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<tbody>
<tr>
<td>Type</td>
<td>m³/h</td>
<td>cfm</td>
<td>VDC</td>
<td>VDC</td>
<td>Bel(A)</td>
<td>Watts</td>
<td>rpm⁻¹</td>
<td>°C</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RL 90-18/12 N</td>
<td>40</td>
<td>23.5</td>
<td>12</td>
<td>7...15</td>
<td>5.8</td>
<td>■</td>
<td>6.3</td>
<td>2 500</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
<td>Subject to change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RL 90-18/14 NG</td>
<td>40</td>
<td>23.5</td>
<td>24</td>
<td>12...28</td>
<td>5.8</td>
<td>■</td>
<td>5.6</td>
<td>2 500</td>
<td>-20...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
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<tr>
<td>RL 90-18/14 N</td>
<td>40</td>
<td>23.5</td>
<td>24</td>
<td>12...28</td>
<td>5.8</td>
<td>■</td>
<td>5.6</td>
<td>2 500</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
<td>Subject to change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RL 90-18/18 NH</td>
<td>55</td>
<td>32.4</td>
<td>48</td>
<td>36...53</td>
<td>6.9</td>
<td>■</td>
<td>14.7</td>
<td>3 500</td>
<td>-30...+65</td>
<td>32 500 / 17 500</td>
<td>55 000</td>
<td>Subject to change</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Material: Scroll housing: GRP¹
- Impeller: GRP¹
- Base plate: Sheet steel
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Connection: via single wires AWG 22, TR 64
- Highlights: Forward-curved impeller
- Weight: 420 g
- Possible special versions:
  (See chapter DC fans - specials)
  - Speed signal
  - Go / NoGo alarm
  - Alarm with speed limit
  - External temperature sensor
  - Internal temperature sensor
  - PWM control input
  - Analog control input
  - Moisture protection
  - Salt spray protection
  - Degree of protection: IP 54 / IP 68

¹ Fiberglass-reinforced plastic:

Information

DC axial fans

DC fans - specials

ACmaxx / EC fans

DC centrifugal fans

AC axial fans

Accessories

Representatives

– Possible special versions:
  (See chapter DC fans - specials)
  - Speed signal
  - Go / NoGo alarm
  - Alarm with speed limit
  - External temperature sensor
  - Internal temperature sensor
  - PWM control input
  - Analog control input
  - Moisture protection
  - Salt spray protection
  - Degree of protection: IP 54 / IP 68

Air performance measured according to:
ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level LWA ISO 10300 measured on a hemisphere with a radius of 2 m;
Sound pressure level LpA measured at 1 m distance from fan axis.
The acoustic values are only valid for the described measurement setup and may vary depending on the installation situation.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions

Screw clip M4 or 8-32UNC. Screw-in depth max. 12.5 min. 9.0
Air performance measured according to ISO 5801. Installation category A, without contact protection. Noise: Total sound power level $L_{WA}$ ISO 10300 measured on a hemisphere with a radius of 2 m. Sound pressure level $L_{pA}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation. For detailed information see http://www.ebmpapst.com/general_conditions

### Series RLF 100

<table>
<thead>
<tr>
<th>Type</th>
<th>m$^3$/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLF 100-11/12</td>
<td>64</td>
<td>37.7</td>
<td>12</td>
<td>8...15</td>
<td>6.4</td>
<td>8.0</td>
<td>5 100</td>
<td>-20...+75</td>
<td>80 000 / 30 000</td>
<td>135 000</td>
</tr>
<tr>
<td>RLF 100-11/14</td>
<td>64</td>
<td>37.7</td>
<td>24</td>
<td>16...30</td>
<td>6.4</td>
<td>8.0</td>
<td>5 100</td>
<td>-20...+75</td>
<td>80 000 / 30 000</td>
<td>135 000</td>
</tr>
<tr>
<td>RLF 100-11/18</td>
<td>64</td>
<td>37.7</td>
<td>48</td>
<td>36...60</td>
<td>6.4</td>
<td>8.6</td>
<td>5 100</td>
<td>-20...+75</td>
<td>80 000 / 30 000</td>
<td>135 000</td>
</tr>
</tbody>
</table>

High speed models with open-collector tachometer and PWM speed control.

<table>
<thead>
<tr>
<th>Type</th>
<th>m$^3$/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLF 100-11/12/2 HP-200</td>
<td>80</td>
<td>47.1</td>
<td>12</td>
<td>10...13.2</td>
<td>7.5</td>
<td>18.6</td>
<td>6 400</td>
<td>-20...+60</td>
<td>72 500 / 45 000</td>
<td>122 500</td>
</tr>
<tr>
<td>RLF 100-11/18/2 HP-182</td>
<td>80</td>
<td>47.1</td>
<td>48</td>
<td>43...53</td>
<td>7.5</td>
<td>17.0</td>
<td>6 400</td>
<td>-20...+70</td>
<td>72 500 / 35 000</td>
<td>122 500</td>
</tr>
</tbody>
</table>

Subject to change

---

1) Fiberglass-reinforced plastic
DC centrifugal fans

**Series RG 90 N**

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>Nominal voltage</th>
<th>Sound power level</th>
<th>Power consumption</th>
<th>Nominal speed</th>
<th>Temperature range</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 90-18/12 N</td>
<td>55</td>
<td>32.4</td>
<td>12</td>
<td>7...15</td>
<td>6.7</td>
<td>2 200</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
<tr>
<td>RG 90-18/14 NG</td>
<td>55</td>
<td>32.4</td>
<td>24</td>
<td>12...28</td>
<td>6.2</td>
<td>2 200</td>
<td>-10...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
<tr>
<td>RG 90-18/14 N</td>
<td>55</td>
<td>32.4</td>
<td>24</td>
<td>12...28</td>
<td>6.2</td>
<td>2 200</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
<tr>
<td>RG 90-18/18 N</td>
<td>55</td>
<td>32.4</td>
<td>48</td>
<td>36...56</td>
<td>6.1</td>
<td>2 200</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
</tbody>
</table>

**Nominal data**

- **Air performance measured according to**: ISO 5801.
- **Installation category A, without contact protection.**
- **Noise**: Total sound power level $L_{WA}$ ISO 10300 measured on a hemisphere with a radius of 2 m.
- **Sound pressure level** $L_{pA}$ measured at 1 m distance from fan axis.
- **The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.**
- **In the event of deviation from the standard configuration, the parameters must be checked after installation!**
- **For detailed information see**: http://www.ebmpapst.com/general conditions

---

**Possible special versions:**
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68

---

**Material:**
- Scroll housing: GRP
- Impeller: GRP
- Base plate: Sheet steel

---

**Direction of air flow:**
- Axial: Intake,
- Centrifugal: Exhaust

---

**Connection:**
- Via single wires AWG 22, TR 64
- 48 V model: Flat plug
- 6.3 x 0.8 mm for ground conductor

---

**Highlights:**
- Forward-curved impeller

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**Weight:**
- 440 g

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**Max. 55 m³/h**

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**1) Fiberglass-reinforced plastic:**

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Air performance measured according to ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level $L_{WA}$ ISO 10300 measured on a hemisphere with a radius of 2 m.
Sound pressure level $L_{pA}$ measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions
DC centrifugal fans

- **Material:** Scroll housing: GRP\(^1\)
  Impeller: GRP\(^1\)
- **Direction of air flow:** Axial: Intake,
  Centrifugal: Exhaust
- **Connection:** Via single wires AWG 22, TR 64
- **Highlights:** Backward-curved impeller
- **Weight:** 730 g

\(^1\) Fiberglass-reinforced plastic

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>m(^3)/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm(^{-1})</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 125-19/12 NM</td>
<td>60.0</td>
<td>35.3</td>
<td>12</td>
<td>7...15</td>
<td>4.8</td>
<td>2.0</td>
<td>1750</td>
<td>-30...+75</td>
<td>70 000 / 30 000</td>
<td>117 500</td>
</tr>
<tr>
<td>RG 125-19/12 N</td>
<td>87.5</td>
<td>51.5</td>
<td>12</td>
<td>7...15</td>
<td>5.8</td>
<td>5.2</td>
<td>2550</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
<tr>
<td>RG 125-19/14 NM</td>
<td>60.0</td>
<td>35.3</td>
<td>24</td>
<td>12...28</td>
<td>4.8</td>
<td>2.0</td>
<td>1750</td>
<td>-30...+75</td>
<td>70 000 / 30 000</td>
<td>117 500</td>
</tr>
<tr>
<td>RG 125-19/14 N</td>
<td>87.5</td>
<td>51.5</td>
<td>24</td>
<td>12...28</td>
<td>5.8</td>
<td>4.9</td>
<td>2550</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
<tr>
<td>RG 125-19/18 N</td>
<td>87.5</td>
<td>51.5</td>
<td>48</td>
<td>36...56</td>
<td>5.8</td>
<td>4.8</td>
<td>2550</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
<tr>
<td>RG 125-19/18 NH</td>
<td>137</td>
<td>80.6</td>
<td>48</td>
<td>36...56</td>
<td>7.0</td>
<td>19.0</td>
<td>4000</td>
<td>-20...+70</td>
<td>55 000 / 27 500</td>
<td>92 500</td>
</tr>
</tbody>
</table>

Subject to change

Air performance measured according to ISO 5801. Installation category A, without contact protection. Noise: Total sound power level \(L_{WA}\) ISO 103002 measured on a hemisphere with a radius of 2 m. Sound pressure level \(L_{pA}\) measured at 1 m distance from fan axis.

The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.

In the event of deviation from the standard configuration, the parameters must be checked after installation!

For detailed information see http://www.ebmpapst.com/general conditions
Max. 118 m³/h

DC centrifugal fans

180 x 40 mm

- Material: Scroll housing: GRP¹
  Impeller: GRP¹
  Base plate: Sheet steel
- Direction of air flow: Axial: Intake,
  Centrifugal: Exhaust
- Connection: via single wires AWG 22, TR 64
- Highlights: Backward-curved impeller
  3-phase fan drive with special
  commutation electronics for
  extremely low-noise operation
- Weight: 750 g

¹ Fiberglass-reinforced plastic.

### Series RG 140 NTD

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW RG 140-22/14 N/2 TDPU</td>
<td>118</td>
<td>69.4</td>
<td>24</td>
<td>20.4...27.6</td>
<td>6.0</td>
<td>9.3</td>
<td>2 500</td>
<td>-20...+70</td>
<td>62 500 / 32 500</td>
<td>105 000</td>
</tr>
</tbody>
</table>

Subject to change

Higher performance levels on request.

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>Voltage range</th>
<th>Sound power level</th>
<th>Shaft sleeve bearings</th>
<th>Ball bearings</th>
<th>Power consumption</th>
<th>Nominal speed</th>
<th>Temperature range</th>
<th>Service life L10 (40 °C)</th>
<th>Service life L10 (Tmax)</th>
<th>Life expectancy L10IPC (40 °C)</th>
<th>Curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW</td>
<td>118</td>
<td>69.4</td>
<td>20.4...27.6</td>
<td>6.0</td>
<td></td>
<td></td>
<td>9.3</td>
<td>2 500</td>
<td>-20...+70</td>
<td>62 500 / 32 500</td>
<td>105 000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Air performance measured according to ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level LWA measured on a hemisphere with a radius of 2 m.
Sound pressure level LpA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation.
For detailed information see http://www.ebmpapst.com/general conditions.

Higher performance levels on request.
Max. 209 m³/h

DC centrifugal fans

- Material: Scroll housing: GRP\(^1\)
  Impeller: GRP\(^1\)
  Base plate: Sheet steel

- Direction of air flow: Axial: Intake,
  Centrifugal: Exhaust

- Connection: Via single wires AWG 22, TR 64
  48 V model: Flat plug
  6.3 x 0.8 mm for ground conductor

- Highlights: Backward-curved impeller

- Weight: 1.4 kg

Possible special versions:
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

Series RG 160 N

<table>
<thead>
<tr>
<th>Type</th>
<th>Air flow</th>
<th>Air flow</th>
<th>Nominal voltage</th>
<th>Voltage range</th>
<th>Sound power level</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm (^{-1})</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 160-28/12 NM</td>
<td>139</td>
<td>81</td>
<td>12</td>
<td>7...14</td>
<td>5.6</td>
<td>■</td>
<td>7.5</td>
<td>1 900</td>
<td>-20...+70</td>
<td>80 000</td>
<td>40 000</td>
</tr>
<tr>
<td>RG 160-28/12 N</td>
<td>209</td>
<td>123</td>
<td>12</td>
<td>7.5...14</td>
<td>6.6</td>
<td>■</td>
<td>21.0</td>
<td>2 850</td>
<td>-20...+70</td>
<td>70 000</td>
<td>35 000</td>
</tr>
<tr>
<td>RG 160-28/14 NM</td>
<td>139</td>
<td>81</td>
<td>24</td>
<td>12...28</td>
<td>5.6</td>
<td>■</td>
<td>7.0</td>
<td>1 900</td>
<td>-20...+70</td>
<td>80 000</td>
<td>40 000</td>
</tr>
<tr>
<td>RG 160-28/14 N</td>
<td>209</td>
<td>123</td>
<td>24</td>
<td>12...28</td>
<td>6.6</td>
<td>■</td>
<td>20.0</td>
<td>2 850</td>
<td>-20...+70</td>
<td>70 000</td>
<td>35 000</td>
</tr>
<tr>
<td>RG 160-28/18 N</td>
<td>209</td>
<td>123</td>
<td>48</td>
<td>28...60</td>
<td>6.6</td>
<td>■</td>
<td>20.0</td>
<td>2 850</td>
<td>-20...+70</td>
<td>70 000</td>
<td>35 000</td>
</tr>
</tbody>
</table>

Nominal data

- Air performance measured according to ISO 5801.
- Installation category A, without contact protection.
- Noise: Total sound power level L\(_{WA}\) ISO 10300 measured on a hemisphere with a radius of 2 m.
- Sound pressure level L\(_{pA}\) measured at 1 m distance from fan axis.
- The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
- In the event of deviation from the standard configuration, the parameters must be checked after installation!

For detailed information see http://www.ebmpapst.com/general conditions

---

1) Fiberglass-reinforced plastic
Max. 444 m³/h

DC centrifugal fans

- **Material:** Scroll housing: GRP<sup>1)</sup>
  Impeller: GRP<sup>1)</sup>
  Base plate: Steel

- **Direction of air flow:** Axial: Intake, Centrifugal: Exhaust

- **Connection:** Via single wires AWG 22, TR 64 48 V model: Flat plug 6.3 x 0.8 mm for ground conductor

- **Key features:**
  - Smoothly operating 3-phase fan drive
  - Backward-curved impeller
  - Weight: 1.4 kg

- **Possible special versions:**
  - Speed signal
  - Go / NoGo alarm
  - Alarm with speed limit
  - External temperature sensor
  - Internal temperature sensor
  - PWM control input
  - Analog control input
  - Humidity protection
  - Degree of protection: IP 54

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Air flow m³/h</th>
<th>Air flow cfm</th>
<th>Nominal voltage VDC</th>
<th>Sound power level Bel(A)</th>
<th>Power consumption Watts</th>
<th>Nominal speed rpm⁻¹</th>
<th>Temperature range °C</th>
<th>Service life L10 (Tmax) Hours</th>
<th>Service life L10 (40 °C) Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 160-28/14 NTD...</td>
<td>59 34.7</td>
<td>24 16...28</td>
<td>7.5</td>
<td>2.0</td>
<td>800</td>
<td>-20...+60</td>
<td>55 000 / 35 000</td>
<td>92 500</td>
<td></td>
</tr>
<tr>
<td>RG 160-28/14 NTD</td>
<td>308 181</td>
<td>24 16...28</td>
<td>7.5</td>
<td>64</td>
<td>4 200</td>
<td>-20...+60</td>
<td>55 000 / 35 000</td>
<td>92 500</td>
<td></td>
</tr>
<tr>
<td>RG 160-28/14 NTDH</td>
<td>370 218</td>
<td>24 16...28</td>
<td>7.8</td>
<td>101</td>
<td>5 000</td>
<td>-20...+60</td>
<td>50 000 / 32 500</td>
<td>85 000</td>
<td></td>
</tr>
<tr>
<td>RG 160-28/18 NTD...</td>
<td>59 34.7</td>
<td>48 38...57</td>
<td>7.5</td>
<td>2.0</td>
<td>800</td>
<td>-20...+70</td>
<td>55 000 / 27 500</td>
<td>92 500</td>
<td></td>
</tr>
<tr>
<td>RG 160-28/18 N/2 TDHHP*</td>
<td>444 261</td>
<td>48 36...60</td>
<td>8.5</td>
<td>159</td>
<td>6 000</td>
<td>-20...+65</td>
<td>40 000 / 22 500</td>
<td>67 500</td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup>) Fiberglass-reinforced plastic

Series RG 160 NTD

Models RG 160-28/14 NTD... and RG 160-28/18 NTD... are available in customer-specific, custom-developed variants only.
The figures indicated are technically feasible benchmark values.
The fans can be specially adapted to your application with signal outputs and control inputs.
*The specific service life is valid when an external capacitor is wired between the positive and negative wires.
Please note the wiring suggestion.

Air performance measured according to ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level LWA ISO 103002 measured on a hemisphere with a radius of 2 m.
Sound pressure level LpA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation for detailed information see http://www.ebmpapst.com/general conditions
### DC centrifugal fans

#### Series RG 190 TD

<table>
<thead>
<tr>
<th>Nominal data</th>
<th>Air flow m³/h</th>
<th>Air flow cfm</th>
<th>Nominal voltage VDC</th>
<th>Sound power level Bel(A)</th>
<th>Power consumption Watts</th>
<th>RPM</th>
<th>Temperature range °C</th>
<th>Service life L10 (40 °C) Hours</th>
<th>Service life L10 (Tmax) Hours</th>
<th>Life expectancy L10 IPC Curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>cfm</td>
<td>VDC</td>
<td>VDC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RG 190-39/14/2 TDMLO</td>
<td>630</td>
<td>371</td>
<td>24</td>
<td>16...30</td>
<td>7.6</td>
<td>54</td>
<td>3 000</td>
<td>-20...+60</td>
<td>55 000 / 35 000</td>
<td>92 500</td>
</tr>
<tr>
<td>RG 190-39/14/2 TDMO</td>
<td>820</td>
<td>482</td>
<td>24</td>
<td>16...36</td>
<td>7.9</td>
<td>113</td>
<td>3 900</td>
<td>-20...+65</td>
<td>52 500 / 30 000</td>
<td>87 500</td>
</tr>
<tr>
<td>RG 190-39/18/2 TDMLO*</td>
<td>630</td>
<td>371</td>
<td>48</td>
<td>36...57</td>
<td>7.6</td>
<td>52</td>
<td>3 000</td>
<td>-20...+65</td>
<td>55 000 / 30 000</td>
<td>92 500</td>
</tr>
<tr>
<td>RG 190-39/18/2 TDMO</td>
<td>820</td>
<td>482</td>
<td>48</td>
<td>36...72</td>
<td>7.9</td>
<td>113</td>
<td>3 900</td>
<td>-20...+65</td>
<td>52 500 / 30 000</td>
<td>87 500</td>
</tr>
<tr>
<td>RG 190-190/18/2 TDO</td>
<td>930</td>
<td>547</td>
<td>48</td>
<td>36...72</td>
<td>8.3</td>
<td>140</td>
<td>4 400</td>
<td>-20...+65</td>
<td>40 000 / 22 500</td>
<td>67 500</td>
</tr>
</tbody>
</table>

Subject to change
* On request

Speed control range from 800 rpm⁻¹ at 7% PWM up to nominal speed at > 90% PWM. Standstill at 0% PWM, Standstill if control cable is interrupted.

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### Additional Information

**Max. 930 m³/h S-Force**

- **Material:** Scroll housing: GRP¹
  Impeller: GRP¹
- **Direction of air flow:** Axial: Intake, Centrifugal: Exhaust
- **Direction of rotation:** Clockwise, looking towards rotor
- **Connection:** via single wires AWG 18, 20 or AWG 22, TR 64, Speed signal and control input AWG 22
- **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
  Backward-curved RadiCal impeller
- **Weight:** 1210 g

1) Fiberglass-reinforced plastic

---

**Possible special versions:**
- (See chapter DC fans - specials)
  - Speed signal
  - Go / NoGo alarm
  - Alarm with speed limit
  - External temperature sensor
  - Internal temperature sensor
  - PWM control input
  - Analog control input
  - Multi-option control input
  - Moisture protection
  - Salt spray protection
  - Degree of protection: IP 54

---

**Type**

- **RG 190-39/14/2 TDMLO**
- **RG 190-39/14/2 TDMO**
- **RG 190-39/18/2 TDMLO***
- **RG 190-39/18/2 TDMO**
- **RG 190-190/18/2 TDO**

**Max. 226 x 85 mm**

**Finger guards**

P. 249

---

Air performance measured according to ISO 5801. Installation category A, without contact protection.

Notes:
- Total sound power level LWA measured on a hemisphere with a radius of 2 m.
- Sound pressure level LpA measured at 1 m distance from fan axis.
- The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
- In the event of deviation from the standard configuration, the parameters must be checked after installation. For detailed information see http://www.ebmpapst.com/general conditions.
Max. 1100 m³/h

DC centrifugal fans – RadiCal

☐ 270 x 99 mm

- Material: Scroll housing: GRP\(^1\)
  Impeller: GRP\(^1\)

- Direction of air flow: Axial: Intake,
  Centrifugal: Exhaust

- Direction of rotation: Clockwise,
  looking towards rotor

- Connection: via single wires AWG 18, 20 or
  AWG 22, TR 64. Speed signal
  and control input AWG 22

- Highlights: Highly efficient and smoothly
  operating 3-phase fan drive
  Backward-curved impeller

- Weight: 1560 g

1) Fiberglass-reinforced plastic

Series RG 220 TD

Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Air flow m³/h</th>
<th>Air flow cfm</th>
<th>Nominal voltage VDC</th>
<th>Voltage range</th>
<th>Sound power level LWA ISO 103002</th>
<th>Bel(A)</th>
<th>Power consumption Watts</th>
<th>Nominal speed rpm-1</th>
<th>Temperature range °C</th>
<th>Service life L10 (Tmax ) Hours</th>
<th>Life expectancy L10IPC (40 °C) Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG 220-43/14/2 TDMO</td>
<td>1100</td>
<td>647</td>
<td>24</td>
<td>16...36</td>
<td>7.5</td>
<td></td>
<td>101</td>
<td>3 000</td>
<td>-20...+55</td>
<td>55 000 / 40 000</td>
<td>92 500</td>
</tr>
<tr>
<td>RG 220-43/18/2 TDMO*</td>
<td>1100</td>
<td>647</td>
<td>48</td>
<td>36...72</td>
<td>7.5</td>
<td></td>
<td>101</td>
<td>3 000</td>
<td>-20...+55</td>
<td>55 000 / 40 000</td>
<td>92 500</td>
</tr>
</tbody>
</table>

Subject to change
* On request

Further types available on request.

Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level LWA ISO 103002
measured on a hemisphere with a radius of 2 m.
Sound pressure level LpA measured at 1 m distance
from fan axis.
The values given are applicable only under the specified
measuring conditions and may differ depending on the
installation conditions.
In the event of deviation from the standard configuration,
the parameters must be checked after installation.
For detailed information see:
http://www.ebmpapst.com/general conditions
Air performance measured according to: ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level $L_{WA}$ ISO 10300 measured on a hemisphere with a radius of 2 m.
Sound pressure level $L_{pA}$ measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.

In the event of deviation from the standard configuration, the parameters must be checked after installation!

For detailed information see http://www.ebmpapst.com/general conditions

**DC centrifugal fans – RadiCal**

*270 x 119 mm*

**Material:** Scroll housing: GRP

**Possible special versions:** (See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Humidity protection
- Salt spray protection
- Degree of protection: IP 54

**- Weight:** 1750 g

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
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<tr>
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<td>36...72</td>
<td>7.4</td>
<td>80</td>
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<td>-20...+65</td>
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<td>116</td>
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<td>55 000 / 40 000</td>
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<tr>
<td>RG 225-55/18/2 TDO 1450</td>
<td>853</td>
<td>48</td>
<td>36...60</td>
<td>8.1</td>
<td>192</td>
<td>3 300</td>
<td>-20...+40</td>
<td>30 000 / 30 000</td>
<td>50 000</td>
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</table>

Subject to change
* On request

Speed control range from 800 rpm⁻¹ at 7% PWM up to nominal speed at > 90% PWM. Standstill at 0% PWM, Standstill if control cable is interrupted.
The specific service life is valid when an external capacitor is wired between the positive and negative wires.
Please note the wiring suggestion.
### DC Centrifugal Fans

**Series RET 97 TD**

<table>
<thead>
<tr>
<th>Type</th>
<th>Air flow m³/h</th>
<th>cfm</th>
<th>Nominal voltage VDC</th>
<th>VDC</th>
<th>Sound power level %A</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>RET 97-25/14/2 TDP</td>
<td>220</td>
<td>129</td>
<td>24</td>
<td>8.1</td>
<td>77</td>
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</tr>
<tr>
<td>RET 97-25/18/2 TDP</td>
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<td>129</td>
<td>48</td>
<td>8.1</td>
<td>76</td>
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<td>-20...+60</td>
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<td>135 000</td>
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</tr>
</tbody>
</table>

Subject to change.

Speed control range from 800 rpm⁻¹ at 7% PWM up to nominal speed at > 90% PWM.

To attain the specified service life, an external capacitor must be wired between the positive and negative wires. Please note the wiring suggestion.

---

### Air Performance

- **Material:** Impeller: Galvanized sheet steel
- **Direction of Air Flow:** Axial: Intake, Centrifugal: Exhaust
- **Direction of Rotation:** Clockwise, looking towards rotor
- **Connection:** via single wires AWG 18, 20 or AWG 22, TR 64. Speed signal and control input AWG 22
- **Highlights:** Highly efficient and smoothly operating 3-phase fan drive
  Forward-curved impeller
  Fan requires a scroll housing
- **Weight:** 430 g

---

### DC Centrifugal Fans

**Max. 220 m³/h**

<table>
<thead>
<tr>
<th>Type</th>
<th>Air flow m³/h</th>
<th>cfm</th>
<th>Volts max</th>
<th>Volts min</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
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</tr>
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<tbody>
<tr>
<td></td>
<td>220</td>
<td>129</td>
<td>75</td>
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<td></td>
</tr>
</tbody>
</table>

- **Possible Special Versions:**
  - See chapter DC fans - specials
  - Speed signal
  - Go / NoGo alarm
  - Alarm with speed limit
  - External temperature sensor
  - Internal temperature sensor
  - PWM control input
  - Analog control input
  - Moisture protection

---

### DC Fans - Specials

<table>
<thead>
<tr>
<th>Type</th>
<th>Air flow m³/h</th>
<th>cfm</th>
<th>Volts max</th>
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### DC Axial Fans

**Max. 220 m³/h**

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<th>Air flow m³/h</th>
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### AC Axial Fans

**Max. 220 m³/h**

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<th>Air flow m³/h</th>
<th>cfm</th>
<th>Volts max</th>
<th>Volts min</th>
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### DC Centrifugal Fans

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### AC Centrifugal Fans

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### DC Axial Fans

**Max. 220 m³/h**

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<th>Type</th>
<th>Air flow m³/h</th>
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<th>Volts max</th>
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### AC Axial Fans

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<th>Type</th>
<th>Air flow m³/h</th>
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### DC Fans - Specials

**Max. 220 m³/h**

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<th>Air flow m³/h</th>
<th>cfm</th>
<th>Volts max</th>
<th>Volts min</th>
<th>Watts</th>
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### AC Fans - Specials

**Max. 220 m³/h**

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<th>Type</th>
<th>Air flow m³/h</th>
<th>cfm</th>
<th>Volts max</th>
<th>Volts min</th>
<th>Watts</th>
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<td>-20...+60</td>
<td>80 000 / 50 000</td>
<td>135 000</td>
<td></td>
</tr>
</tbody>
</table>

---

### Accessories

- Speed control range from 800 rpm⁻¹ at 7% PWM up to nominal speed at > 90% PWM.
- Standstill at 0% PWM, maximum speed if control cable is interrupted.

To attain the specified service life, an external capacitor must be wired between the positive and negative wires. Please note the wiring suggestion.

---

### Diagram

- Air performance measured according to ISO 5801.
- Installation category A, with ebm-papst scroll housing without contact protection.
- Noise: Total sound power level measured on a hemisphere with a radius of 2 m.
- Sound pressure level measured at 1 m distance from fan axis.
- The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
- In the event of deviation from the standard configuration, the parameters must be checked after installation.
- For detailed information see http://www.ebmpapst.com/general conditions
DC centrifugal fans
Ø 104 x 25 mm

Max. 104 m³/h

| Material: Impeller: GRP¹ |
| Direction of air flow: Axial: Intake, Centrifugal: Exhaust |
| Direction of rotation: Clockwise, looking towards rotor |
| Connection: via single wires AWG 22, TR 64 |
| Highlights: Backward-curved impeller |
| Weight: 160 g |
| Possible special versions: (See chapter DC fans - specials) |
| - Speed signal |
| - Go / NoGo alarm |
| - Alarm with speed limit |
| - External temperature sensor |
| - Internal temperature sensor |
| - PWM control input |
| - Analog control input |
| - Moisture protection |
| - Degree of protection: IP 54 |

¹ Fiberglass-reinforced plastic.

### Series REF 100

#### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
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<tr>
<td>REF 100-11/12</td>
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<td>50.6</td>
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<td>8...15</td>
<td>6.3</td>
<td>7.5</td>
<td>5 400</td>
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</tr>
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<td>7.5</td>
<td>5 400</td>
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<td>135 000</td>
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<td>-20...+70</td>
<td>67 500 / 32 500</td>
<td>115 000</td>
</tr>
</tbody>
</table>

Subject to change

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:
Centrifugal fan mounted on a foundation plate 127 x 127 mm.
Cover plate 127 x 127 mm, with an air inlet opening Ø 70 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Noise: Total sound power level $L_{WA}$ ISO 103002 measured on a hemisphere with a distance of 2 m.
Sound pressure level $L_{PA}$ measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions
Max. 190 m³/h

DC centrifugal fans
Ø 101 x 52 mm

- Material: Impeller: GRP
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Direction of rotation: Clockwise, looking towards rotor
- Connection: via single wires AWG 22, TR 64
- Highlights: Backward-curved impeller
- Weight: 305 g

Possible special versions:
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

### Series RER 101 N

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm-1</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 101-36/12 NH</td>
<td>162</td>
<td>95</td>
<td>12</td>
<td>9...13.6</td>
<td>6.9</td>
<td>13.0</td>
<td>5 000</td>
<td>-20...+70</td>
<td>65 000 / 32 500</td>
<td>110 000</td>
</tr>
<tr>
<td>RER 101-36/12 NHH</td>
<td>190</td>
<td>112</td>
<td>12</td>
<td>9...13.6</td>
<td>7.2</td>
<td>20.5</td>
<td>6 000</td>
<td>-20...+70</td>
<td>60 000 / 30 000</td>
<td>102 500</td>
</tr>
<tr>
<td>RER 101-36/14 NH</td>
<td>190</td>
<td>112</td>
<td>24</td>
<td>18...27.2</td>
<td>7.2</td>
<td>22.5</td>
<td>6 050</td>
<td>-20...+70</td>
<td>60 000 / 30 000</td>
<td>102 500</td>
</tr>
<tr>
<td>RER 101-36/18 NHH</td>
<td>190</td>
<td>112</td>
<td>48</td>
<td>36...60</td>
<td>7.2</td>
<td>19.4</td>
<td>5 850</td>
<td>-20...+70</td>
<td>60 000 / 30 000</td>
<td>102 500</td>
</tr>
</tbody>
</table>

Subject to change

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:
- Centrifugal fan mounted on a foundation plate 148 x 148 mm.
- Cover plate 148 x 148 mm, with an air inlet opening Ø 66 mm, arranged concentrically to the impeller.

### Notes:
- Air performance measured according to ISO 5801.
- Installation category A, with ebm-papst inlet ring without contact protection.
- Noise: Total sound power level LWA ISO 103002 measured on a hemisphere with a distance of 2 m.
- Sound pressure level LpA measured at 1 m distance from fan axis.
- The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
- In the event of deviation from the standard configuration, the parameters must be checked after installation.
- For detailed information see: http://www.ebmpapst.com/general conditions

1) Fiberglass-reinforced plastic.
DC centrifugal fans
Ø 120 x 54 mm

- Material: Impeller: GRP

- Direction of air flow: Axial: Intake, Centrifugal: Exhaust

- Direction of rotation: Clockwise, looking towards rotor

- Connection: via single wires AWG 18, 20 or AWG 22, TR 64. Speed signal and control input AWG 22

- Highlights: Highly efficient and smoothly operating 3-phase fan drive

- Weight: 430 g

Possible special versions:
(See chapter DC fans - special)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection

Max. 390 m³/h

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 120-26/14/2 TDMP</td>
<td>320</td>
<td>188</td>
<td>24</td>
<td>16...32</td>
<td>tbd</td>
<td>51</td>
<td>5 200</td>
<td>-20...+60</td>
<td>60 000 / 37 500</td>
<td>102 500</td>
</tr>
<tr>
<td>RER 120-26/14/2 TDP</td>
<td>377</td>
<td>222</td>
<td>24</td>
<td>16...32</td>
<td>8.2</td>
<td>78</td>
<td>6 100</td>
<td>-20...+60</td>
<td>55 000 / 35 000</td>
<td>92 500</td>
</tr>
<tr>
<td>RER 120-26/18/2 TDMP</td>
<td>320</td>
<td>188</td>
<td>48</td>
<td>36...60</td>
<td>tbd</td>
<td>51</td>
<td>5 200</td>
<td>-20...+60</td>
<td>57 500 / 35 000</td>
<td>97 500</td>
</tr>
<tr>
<td>RER 120-26/18/2 TDP</td>
<td>390</td>
<td>230</td>
<td>48</td>
<td>36...60</td>
<td>8.3</td>
<td>92</td>
<td>6 300</td>
<td>-20...+60</td>
<td>50 000 / 30 000</td>
<td>85 000</td>
</tr>
</tbody>
</table>

Subject to change

* On request

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.
The stated air flow and sound level were recorded under the following measurement parameters:
Centrifugal fan mounted on a foundation plate 140 x 140 mm.
Cover plate 140 x 140 mm, with an air inlet opening Ø 94.4 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Noise: Total sound power level LWA, ISO 10360-2 measured on a hemisphere with a distance of 2 m;
Sound pressure level LpA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions
**DC centrifugal fans**

**Ø 120 mm**

- **Material:** Impeller: PA 6.6 plastic, fiberglass-reinforced
  Rotor: Galvanized
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, looking towards rotor
- **Degree of protection:** IP 20
- **Insulation class:** “B”
- **Installation position:** Any
- **Condensation drainage holes:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

**Nominal data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>Voltage range</th>
<th>Air flow</th>
<th>rpm⁻¹</th>
<th>Power consumption</th>
<th>Input current</th>
<th>Sound pressure level</th>
<th>Admissible amb. temp.</th>
<th>Technical features and connection diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 120</td>
<td>M1G 045-BE</td>
<td>24</td>
<td>16-28</td>
<td>250</td>
<td>4060</td>
<td>1.20</td>
<td>62</td>
<td>-25..+50</td>
<td>p. 259 / G)</td>
<td></td>
</tr>
<tr>
<td>R1G 120</td>
<td>M1G 045-BE</td>
<td>48</td>
<td>36-57</td>
<td>250</td>
<td>4060</td>
<td>0.60</td>
<td>62</td>
<td>-25..+50</td>
<td>p. 259 / G)</td>
<td></td>
</tr>
</tbody>
</table>

Subject to change

**Curves:**

- **$U_n =$** nominal voltage (24 V / 48 V)
- **$U_o =$** over-voltage (28 V / 57 V)

**Air performance measured according to ISO 5801, Installation category A, with ebm-papst inlet ring without contact protection. Suction-side noise levels $L_{WA}$ according to ISO 13347, $L_{PA}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general conditions**
### Technical features:
See connection diagram p. 259

- **Cable exit:** Axial
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** EAC

### Centrifugal fans

<table>
<thead>
<tr>
<th>Weight centrifugal fans</th>
<th>Inlet ring (long)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 120-AD13 -02</td>
<td>0.5 96120-2-4013</td>
</tr>
<tr>
<td>R1G 120-AD11 -02</td>
<td>0.5 96120-2-4013</td>
</tr>
</tbody>
</table>

- **Wire end splices**
- **Clearance for screw max. 4 mm**
- **Connection diagrams P. 259**
DC centrifugal fans
Ø 138 x 35 mm

- Material: Impeller: GRP
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Direction of rotation: Clockwise, looking towards rotor
- Connection: via single wires AWG 22, TR 64
- Highlights: Backward-curved impeller
- Weight: 320 g

Possible special versions:
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54 / IP 68

Material:
- Impeller: GRP
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Direction of rotation: Clockwise, looking towards rotor
- Connection: via single wires AWG 22, TR 64
- Highlights: Backward-curved impeller
- Weight: 320 g

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:
- Centrifugal fan mounted on a foundation plate 220 x 220 mm.
- Cover plate 220 x 220 mm, with an air inlet opening Ø 86 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
- Noise: Total sound power level LWA ISO 103002 measured on a hemisphere with a distance of 2 m.
- Sound pressure level LpA measured at 1 m distance from fan axis.

The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation.

For detailed information see http://www.ebmpapst.com/general conditions

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bell(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 125-19/12 N</td>
<td>110</td>
<td>64.7</td>
<td>12</td>
<td>7...15</td>
<td>5.7</td>
<td>4.6</td>
<td>2 650</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
<tr>
<td>RER 125-19/14 N</td>
<td>110</td>
<td>64.7</td>
<td>24</td>
<td>12...28</td>
<td>5.7</td>
<td>4.3</td>
<td>2 650</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
<tr>
<td>RER 125-19/14 NH</td>
<td>166</td>
<td>97.7</td>
<td>24</td>
<td>12...28</td>
<td>7.0</td>
<td>13.0</td>
<td>4 000</td>
<td>-20...+70</td>
<td>55 000 / 27 500</td>
<td>92 500</td>
</tr>
<tr>
<td>RER 125-19/18 N</td>
<td>110</td>
<td>64.7</td>
<td>48</td>
<td>36...56</td>
<td>5.7</td>
<td>4.2</td>
<td>2 650</td>
<td>-30...+75</td>
<td>62 500 / 27 500</td>
<td>105 000</td>
</tr>
</tbody>
</table>

Subject to change
Max. 565 m³/h

DC centrifugal fans
Ø 133 x 91 mm

- Material: Impeller: GRP
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Direction of rotation: Clockwise, looking towards rotor
- Connection: via single wires AWG 18, 20 or AWG 22, TR 64, Speed signal and control input AWG 22
- Highlights: Highly efficient and smoothly operating 3-phase fan drive Backward-curved impeller
- Weight: 890 g

Possible special versions:
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-option control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

Series RER 133 TD

Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Air flow m³/h</th>
<th>Air flow cfm</th>
<th>Nominal voltage VDC</th>
<th>Voltage range</th>
<th>Sound power level</th>
<th>Sanit-sleeve bearings</th>
<th>Power consumption</th>
<th>Nominal speed rpm⁻¹</th>
<th>Temperature range °C</th>
<th>Service life L10 (40 °C)</th>
<th>Service life L10 (Tmax)</th>
<th>Life expectancy L10</th>
<th>Curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 133-41/14/2 TDMP</td>
<td>460</td>
<td>271</td>
<td>24</td>
<td>16...30</td>
<td>TBD</td>
<td>TBD</td>
<td>58</td>
<td>5 000</td>
<td>-20...+65</td>
<td>72 500 / 40 000</td>
<td>122 500</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>RER 133-41/14/2 TDP*</td>
<td>565</td>
<td>332</td>
<td>24</td>
<td>16...36</td>
<td>TBD</td>
<td>TBD</td>
<td>90</td>
<td>6 000</td>
<td>-20...+65</td>
<td>70 000 / 37 500</td>
<td>117 500</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>RER 133-41/18/2 TDMP*</td>
<td>460</td>
<td>271</td>
<td>48</td>
<td>36...57</td>
<td>TBD</td>
<td>TBD</td>
<td>50</td>
<td>5 000</td>
<td>-20...+65</td>
<td>72 500 / 40 000</td>
<td>122 500</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>RER 133-41/18/2 TDP</td>
<td>565</td>
<td>332</td>
<td>48</td>
<td>36...72</td>
<td>8.2</td>
<td>87</td>
<td>6 000</td>
<td>-20...+65</td>
<td></td>
<td>70 000 / 37 500</td>
<td>117 500</td>
<td>TBD</td>
<td></td>
</tr>
</tbody>
</table>

Subject to change
* On request

Speed control range from 800 rpm⁻¹ at 7% PWM up to nominal speed at > 90% PWM.
Standstill at 0% PWM, maximum speed if control cable is interrupted.

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.
The stated air flow and sound level were recorded under the following measurement parameters:
Centrifugal fan mounted on a foundation plate 140 x 140 mm.
Cover plate 140 x 140 mm, with an air inlet opening Ø 87 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Noise: Total sound power level Lw,A.
ISO 11803-2 measured on a hemispherical with a distance of 2 m
Sound pressure level Lp,A measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In event of deviation from the standard configuration, the parameters must be checked after installation.
For detailed information see http://www.ebmpapst.com/general conditions

Subject to change
* On request

Subject to change
* On request

Subject to change
* On request
Max. 255 m³/h

DC centrifugal fans
Ø 165 x 51 mm

- Material: Impeller: GRP
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Direction of rotation: Counterclockwise, looking towards rotor
- Connection: via single wires AWG 22, TR 64
- Highlights: Backward-curved impeller
- Weight: 590 g

Possible special versions:
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

Series RER 160 N

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 160-28/12 N</td>
<td>255</td>
<td>150</td>
<td>12</td>
<td>7...14</td>
<td>6.4</td>
<td>■</td>
<td>19.0</td>
<td>3 000</td>
<td>-20...+70</td>
<td>75 000 / 37 500</td>
</tr>
<tr>
<td>RER 160-28/14 N</td>
<td>255</td>
<td>150</td>
<td>24</td>
<td>12...28</td>
<td>6.4</td>
<td>■</td>
<td>19.0</td>
<td>3 000</td>
<td>-20...+70</td>
<td>75 000 / 37 500</td>
</tr>
<tr>
<td>RER 160-28/18 N</td>
<td>255</td>
<td>150</td>
<td>48</td>
<td>28...60</td>
<td>6.4</td>
<td>■</td>
<td>19.0</td>
<td>3 000</td>
<td>-20...+70</td>
<td>75 000 / 37 500</td>
</tr>
</tbody>
</table>

Subject to change

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions. The stated air flow and sound level were recorded under the following measurement parameters: Centrifugal fan mounted on a foundation plate 260 x 260 mm. Cover plate 260 x 260 mm, with an air inlet opening Ø 100 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Noise: Total sound power level LₚA, ISO 10360-2 measured on a hemisphere with a distance of 2 m.
Sound pressure level LₚA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions
DC centrifugal fans

- Material: Impeller: GRP¹)
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Direction of rotation: Clockwise, looking towards rotor
- Connection: Via single wires AWG 22, TR 64
- Highlights: Highly efficient and smoothly operating 3-phase fan drive Backward-curved impeller
- Weight: 590 g

Possible special versions:
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Humidity protection
- Degree of protection: IP 54

1) Fiberglass-reinforced plastic.

Series RER 160 NTD

<table>
<thead>
<tr>
<th>Type</th>
<th>Air flow</th>
<th>Air flow</th>
<th>Nominal voltage</th>
<th>Voltage range</th>
<th>Sound power level</th>
<th>Power consumption</th>
<th>Normal speed</th>
<th>Temperature range</th>
<th>Service life L10 (40 °C)</th>
<th>Service life L10 (Tmax)</th>
<th>Life expectancy L10IPC (40 °C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 160-28/14 NTD…</td>
<td>360</td>
<td>211</td>
<td>24</td>
<td>16...28</td>
<td>7.4</td>
<td>51</td>
<td>4 200</td>
<td>-20...+60</td>
<td>55 000 / 27 500</td>
<td>92 500</td>
<td>2§</td>
</tr>
<tr>
<td>RER 160-28/18 NTD…</td>
<td>360</td>
<td>211</td>
<td>48</td>
<td>38...57</td>
<td>7.4</td>
<td>48</td>
<td>4 200</td>
<td>-20...+70</td>
<td>55 000 / 27 500</td>
<td>92 500</td>
<td>1§</td>
</tr>
</tbody>
</table>

Subject to change

Model RER 160-28/18 NTD… is available in customer-specific, custom-developed variant only.
The figures indicated are technically feasible benchmark values. The fans can be specially adapted to your application with signal outputs and control inputs.
* The specific service life is valid when an external capacitor is wired between the positive and negative wires. Please note the wiring suggestion.

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.
The stated air flow and sound level were recorded under the following measurement parameters:
Centrifugal fan mounted on a foundation plate 260 x 260 mm.
Cover plate 260 x 260 mm, with an air inlet opening Ø 100 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Noise: Total sound power level LwA measured on a hemisphere with a distance of 2 m;
Sound pressure level LaA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions
**DC centrifugal fans**  
Ø 175 x 55 mm

**Material:** Impeller: Galvanized sheet steel

**Direction of air flow:** Axial: Intake, Centrifugal: Exhaust

**Direction of rotation:** Clockwise, looking towards rotor

**Connection:** via single wires AWG 18, 20 or AWG 22, TR 64. Speed signal and control input AWG 22

**Highlights:** Highly efficient and smoothly operating 3-phase fan drive Backward-curved impeller

**Weight:** 930 g

---

**Series RER 175 TD**

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>REF 175-30/18/2 TDP</td>
<td>800</td>
<td>470</td>
<td>48</td>
<td>36 .. 72</td>
<td>8.3</td>
<td>144</td>
<td>4 400</td>
<td>-20...+60</td>
<td>65 000 / 37 500</td>
<td>110 000</td>
</tr>
</tbody>
</table>

Subject to change

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:

Centrifugal fan mounted on a foundation plate 180 x 180 mm.

Cover plate 180 x 180 mm, with an air inlet opening Ø 125.5 mm, arranged concentrically to the impeller.

Air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:

Centrifugal fan mounted on a foundation plate 180 x 180 mm.

Cover plate 180 x 180 mm, with an air inlet opening Ø 125.5 mm, arranged concentrically to the impeller.

---

**Possible special versions:**
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-option control input
- Humidity protection
- Degree of protection: IP 54

---

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:

Centrifugal fan mounted on a foundation plate 180 x 180 mm.

Cover plate 180 x 180 mm, with an air inlet opening Ø 125.5 mm, arranged concentrically to the impeller.

**Speed control range from 800 rpm⁻¹ at 7% PWM up to nominal speed at > 90% PWM. Standstill at 0% PWM, maximum speed if control cable is interrupted.**

---

Air performance measured according to ISO 5801. Installation category A, with ebm-papst inlet ring without contact protection.

Notes: Total sound power level LWA ISO 103002 measured on a hemisphere with a distance of 2 m; Sound pressure level LpA measured at 1 m distance from fan axis.

The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.

In the event of deviation from the standard configuration, the parameters must be checked after installation. For detailed information see http://www.ebmpapst.com/general conditions
Max. 980 m³/h

DC centrifugal fans
Ø 175 x 69 mm

Material: Impeller: GRP
Direction of air flow: Axial: Intake,
Centrifugal: Exhaust
Direction of rotation: Clockwise,
looking towards rotor
Connection: Via single wires AWG 18, 20 or
AWG 22, TR 64, speed signal
and control input AWG 22
Highlights: Highly efficient and smoothly
operating 3-phase fan drive
Backward-curved impeller
Weight: 775 g

Possible special versions:
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-option control input
- Moisture protection
- Salt spray protection
- Degree of protection: IP 54

Series RER 175 TD

Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 175-42/14/2 TDMLP</td>
<td>600</td>
<td>353</td>
<td>24</td>
<td>16-30</td>
<td>7.3</td>
<td>48</td>
<td>3 400</td>
<td>-20-+65</td>
<td>72 500 / 40 000</td>
<td>122 500</td>
</tr>
<tr>
<td>RER 175-42/14/2 TDMP</td>
<td>865</td>
<td>509</td>
<td>24</td>
<td>16-36</td>
<td>8.2</td>
<td>110</td>
<td>4 800</td>
<td>-20-+65</td>
<td>70 000 / 40 000</td>
<td>117 500</td>
</tr>
<tr>
<td>RER 175-42/18/2 TDMLP</td>
<td>600</td>
<td>353</td>
<td>48</td>
<td>36-57</td>
<td>7.3</td>
<td>46</td>
<td>3 400</td>
<td>-20-+65</td>
<td>72 500 / 40 000</td>
<td>122 500</td>
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<tr>
<td>RER 175-42/18/2 TDMP*</td>
<td>865</td>
<td>509</td>
<td>48</td>
<td>36-72</td>
<td>8.2</td>
<td>110</td>
<td>4 800</td>
<td>-20-+65</td>
<td>70 000 / 40 000</td>
<td>117 500</td>
</tr>
<tr>
<td>RER 175-42/18/2 TDP</td>
<td>980</td>
<td>577</td>
<td>48</td>
<td>36-72</td>
<td>8.5</td>
<td>166</td>
<td>5 400</td>
<td>-20-+65</td>
<td>60 000 / 32 500</td>
<td>102 500</td>
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</tbody>
</table>

Subject to change
* On request

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:
Centrifugal fan mounted on a foundation plate 180 x 180 mm.
Cover plate 180 x 180 mm, with an air inlet opening Ø 125.5 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Noise: Total sound power level LWA ISO 103002 measured on a hemisphere with a distance of 2 m;
Sound pressure level LpA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions
Max. 970 m³/h

DC centrifugal fans – RadiCal
Ø 190 x 69 mm

- Material: Impeller: GRP\(^1\)
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Direction of rotation: Clockwise, looking towards rotor
- Connection: Via single wires AWG 18, 20 or AWG 22, TR 64, speed signal and control input AWG 22
- Highlights: Highly efficient and smoothly operating 3-phase fan drive Backward-curved RadiCal impeller
- Weight: 870 g

1) Fiber-glass-reinforced plastic

### Series RER 190 TD

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 190-39/14/2 TDMLO</td>
<td>650</td>
<td>382</td>
<td>24</td>
<td>16</td>
<td>7.6</td>
<td>58</td>
<td>3000</td>
<td>-20...+60</td>
<td>55 000 / 35 000</td>
<td>92 500</td>
</tr>
<tr>
<td>RER 190-39/14/2 TDMO</td>
<td>860</td>
<td>506</td>
<td>24</td>
<td>16</td>
<td>7.9</td>
<td>110</td>
<td>3900</td>
<td>-20...+65</td>
<td>52 500 / 30 000</td>
<td>87 500</td>
</tr>
<tr>
<td>RER 190-39/18/2 TDMLO*</td>
<td>650</td>
<td>382</td>
<td>48</td>
<td>36</td>
<td>7.6</td>
<td>56</td>
<td>3000</td>
<td>-20...+65</td>
<td>55 000 / 30 000</td>
<td>92 500</td>
</tr>
<tr>
<td>RER 190-39/18/2 TDMO*</td>
<td>860</td>
<td>506</td>
<td>48</td>
<td>36</td>
<td>7.9</td>
<td>105</td>
<td>3900</td>
<td>-20...+65</td>
<td>52 500 / 30 000</td>
<td>87 500</td>
</tr>
<tr>
<td>RER 190-39/18/2 TDO</td>
<td>970</td>
<td>571</td>
<td>48</td>
<td>36</td>
<td>8.3</td>
<td>148</td>
<td>4400</td>
<td>-20...+65</td>
<td>40 000 / 22 500</td>
<td>67 500</td>
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</table>

Subject to change
* On request

### Air Flow and Sound Level

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:
- Centrifugal fan mounted on a foundation plate 195 x 195 mm.
- Cover plate 195 x 195 mm, with an air inlet opening Ø 125.5 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Note: Total sound power level LWA ISO 10300 measured on a hemisphere with a distance of 2 m.
Sound pressure level LpA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general-conditions
Information

DC axial fans

DC fans - specials

ACmaxx / EC fans

AC axial fans

Accessories

DC centrifugal fans

AC centrifugal fans

Representatives
Max. 930 m³/h

DC centrifugal fans – RadiCal
Ø 190 mm

- **Material:**
  - Impeller: PA plastic
  - Rotor: Painted black

- **Number of blades:**
  - 7

- **Direction of rotation:**
  - Clockwise, looking towards rotor

- **Degree of protection:**
  - IP 44, depending on installation and position

- **Insulation class:**
  - “B”

- **Installation position:**
  - Any

- **Condensation drainage holes:**
  - None

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

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

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>°C</th>
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</thead>
<tbody>
<tr>
<td>R3G 190</td>
<td>M3G 074-CF</td>
<td>24</td>
<td>16-28</td>
<td>880</td>
<td>4570</td>
<td>180</td>
<td>7.50</td>
<td>76</td>
<td>-25..+60</td>
</tr>
<tr>
<td>R3G 190</td>
<td>M3G 074-CF</td>
<td>48</td>
<td>36-57</td>
<td>930</td>
<td>4800</td>
<td>192</td>
<td>4.00</td>
<td>76</td>
<td>-25..+60</td>
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Subject to change
- Technical features: See connection diagram p. 262
- Cable exit: Variable
- Conformity with standard(s): EN 60950-1
- Approvals: EAC

### Centrifugal fans

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>kg</th>
<th>Inlet ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 190-RN38 -01</td>
<td>1.9</td>
<td>09576-2-4013</td>
</tr>
<tr>
<td>R3G 190-RN99 -02</td>
<td>1.9</td>
<td>09576-2-4013</td>
</tr>
</tbody>
</table>

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

Clearance for screw max. 12 - 14 mm

PVC AWG 16 cable, 4 x crimped ferrules

See connection diagram p. 262
Max. 1215 m³/h

DC centrifugal fans – RadiCal
Ø 220 mm

- Material: Impeller: PA plastic
  Rotor: Painted black
- Number of blades: 7
- Direction of rotation: Clockwise, looking towards rotor
- Degree of protection: IP 44, depending on installation and position
- Insulation class: “B”
- Installation position: Any
- Condensation drainage holes: None
- Mode of operation: Continuous operation (S1)
- Bearings: Maintenance-free ball bearings

Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 220</td>
<td>M3G 074-CF</td>
<td>24</td>
<td>16-28</td>
<td>1200</td>
<td>3460</td>
<td>157</td>
<td>6.50</td>
<td>73</td>
<td>-25...+60</td>
</tr>
<tr>
<td>R3G 220</td>
<td>M3G 074-CF</td>
<td>48</td>
<td>36-57</td>
<td>1215</td>
<td>3510</td>
<td>160</td>
<td>3.40</td>
<td>73</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Curves:

- Air performance measured according to ISO 5801, Installation category A, with ebm-papst inlet ring without contact protection. Suction-side noise levels LWA according to ISO 13347, LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general conditions.

Subject to change
- **Technical features:** See connection diagram p. 262
- **Cable exit:** Variable
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** EAC

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight (kg)</th>
<th>Inlet ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 220-RN12 -01</td>
<td>1.9</td>
<td>09609-2-4013</td>
</tr>
<tr>
<td>R3G 220-RNB6 -02</td>
<td>1.9</td>
<td>09609-2-4013</td>
</tr>
</tbody>
</table>

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

PVC AWG 16 cable, 4 x crimped ferrules

Clearance for screw max. 12 - 14 mm

M5 (4x)
Max. 1250 m³/h

DC centrifugal fans – RadiCal
Ø 221 x 71 mm

- Material: Impeller: GRP¹
- Direction of air flow: Axial: Intake,
Centrifugal: Exhaust
- Direction of rotation: Clockwise,
looking towards rotor
- Connection: Via single wires AWG 18, 20 or
AWG 22, TR 64, speed signal
and control input AWG 22
- Highlights: Highly efficient and smoothly
operating 3-phase fan drive
Backward-curved impeller
- Weight: 940 g

¹) Fiberglass-reinforced plastic

Series RER 220 TD

Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>VDC</th>
<th>VDC</th>
<th>Bel(A)</th>
<th>Watts</th>
<th>rpm⁻¹</th>
<th>°C</th>
<th>Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 220-43/14/2 TDMO*</td>
<td>1063</td>
<td>625</td>
<td>24</td>
<td>16...36</td>
<td>tbd</td>
<td>110</td>
<td>3 000</td>
<td>-20...+55</td>
<td>65 000 / 45 000</td>
<td>110 000</td>
</tr>
<tr>
<td>RER 220-43/18/2 TDMO</td>
<td>1063</td>
<td>625</td>
<td>48</td>
<td>36...72</td>
<td>tbd</td>
<td>110</td>
<td>3 000</td>
<td>-20...+55</td>
<td>65 000 / 45 000</td>
<td>110 000</td>
</tr>
<tr>
<td>RER 220-43/18/2 TDO</td>
<td>1250</td>
<td>735</td>
<td>48</td>
<td>36...72</td>
<td>tbd</td>
<td>160</td>
<td>3 500</td>
<td>-20...+55</td>
<td>60 000 / 42 500</td>
<td>102 500</td>
</tr>
</tbody>
</table>

Subject to change
* On request

Speed control range from 800 rpm⁻¹ at 7% PWM up to nominal speed at > 90% PWM.
Standstill at 0% PWM, Standstill if control cable is interrupted.

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.
The stated air flow and sound level were recorded under the following measurement parameters:
Centrifugal fan mounted on a foundation plate 230 x 230 mm.
Cover plate 230 x 230 mm, with an air inlet opening Ø 155 mm, arranged concentrically to the impeller.

Air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Noise: Total sound power level LWA ISO 10300 measured on a hemisphere with a distance of 2 m.
Sound pressure level LpA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general conditions
Max. 1600 m³/h

DC centrifugal fans
Ø 225 x 99 mm

- Material: Impeller: GRP<sup>1)</sup>
- Direction of air flow: Axial: Intake, Centrifugal: Exhaust
- Direction of rotation: Clockwise, looking towards rotor
- Connection: Via single wires AWG 18, 20 or AWG 22, TR 64, speed signal and control input AWG 22
- Highlights: Highly efficient and smoothly operating 3-phase fan drive, Backward-curved impeller
- Weight: 1030 g

Possible special versions:
(See chapter DC fans - specials)
- Speed signal
- Go / NoGo alarm
- Alarm with speed limit
- External temperature sensor
- Internal temperature sensor
- PWM control input
- Analog control input
- Multi-option control input
- Humidity protection
- Salt spray protection
- Degree of protection: IP 54

Series RER 225 TD

<table>
<thead>
<tr>
<th>Type</th>
<th>m³/h</th>
<th>cfm</th>
<th>Voltage range</th>
<th>Sound power level</th>
<th>Ball bearings</th>
<th>Power consumption</th>
<th>Nominal speed</th>
<th>Temperature range</th>
</tr>
</thead>
<tbody>
<tr>
<td>RER 225-63/18/2 TDMLO</td>
<td>1190</td>
<td>700</td>
<td>36...72</td>
<td>7.2</td>
<td>77</td>
<td>2500</td>
<td>-20...+55</td>
<td></td>
</tr>
<tr>
<td>RER 225-63/18/2 TDMO</td>
<td>1340</td>
<td>789</td>
<td>36...72</td>
<td>7.8</td>
<td>108</td>
<td>2800</td>
<td>-20...+55</td>
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<tr>
<td>RER 225-63/18/2 TDO</td>
<td>1600</td>
<td>941</td>
<td>36...72</td>
<td>8.1</td>
<td>163</td>
<td>3300</td>
<td>-20...+55</td>
<td></td>
</tr>
</tbody>
</table>

Subject to change

Nominal data

The air flow and sound level of the centrifugal fans without external housing depend on their individual installation conditions.

The stated air flow and sound level were recorded under the following measurement parameters:
Centrifugal fan mounted on a foundation plate 230 x 230 mm.
Cover plate 230 x 230 mm, with an air inlet opening Ø 146 mm, arranged concentrically to the impeller.

Speed control range from 800 rpm<sup>-1</sup> at 7% PWM up to nominal speed at > 90% PWM.
Standstill at 0% PWM, Type O: Standstill if control cable is interrupted. Type P: Maximum speed if control cable is interrupted.

The air performance measured according to ISO 5801.
Installation category A, with ebm-papst inlet ring without contact protection.
Noise: Total sound power level LWA ISO 10534 measured on a hemisphere with a distance of 2 m.
Sound pressure level LpA measured at 1 m distance from fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation!
For detailed information see http://www.ebmpapst.com/general_conditions
### DC centrifugal fans – RadiCal

- **Material:**
  - Impeller: PA plastic
  - Rotor: Painted black

- **Number of blades:** 7

- **Direction of rotation:** Clockwise, looking towards rotor

- **Degree of protection:** IP 44, depending on installation and position

- **Insulation class:** “B”

- **Installation position:** Any

- **Condensation drainage holes:** None

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

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

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 225</td>
<td>M3G 074-CF</td>
<td>24</td>
<td>16-28</td>
<td>1300</td>
<td>3270</td>
<td>205</td>
<td>8.50</td>
<td>75</td>
<td>-25..+60</td>
</tr>
<tr>
<td>R3G 225</td>
<td>M3G 074-CF</td>
<td>48</td>
<td>36-57</td>
<td>1340</td>
<td>3400</td>
<td>230</td>
<td>4.80</td>
<td>73</td>
<td>-25..+60</td>
</tr>
</tbody>
</table>

Subject to change

Air performance measured according to ISO 5801, Installation category A, with ebm-papst inlet ring without contact protection. Suction-side noise levels: \( L_{WA} \) according to ISO 13347, \( L_{pA} \) measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see [http://www.ebmpapst.com/general conditions](http://www.ebmpapst.com/general conditions)
- **Technical features:** See connection diagram p. 262
- **Cable exit:** Variable
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** EAC

**Centrifugal fans**

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>kg</th>
<th>Inlet ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 225-RN28 -01</td>
<td>2.1</td>
<td>96358-2-4013</td>
</tr>
<tr>
<td>R3G 225-RN18 -02</td>
<td>2.1</td>
<td>96358-2-4013</td>
</tr>
</tbody>
</table>

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

Clearance for screw max. 12 - 14 mm

PVC AWG 16 cable, 4 x crimped ferrules
**DC centrifugal fans – RadiCal**

Ø 250 mm

- Material: Impeller: PA plastic
  Rotor: Painted black
- Number of blades: 7
- Direction of rotation: Clockwise, looking towards rotor
- Degree of protection: IP 44, depending on installation and position
- Insulation class: “B”
- Installation position: Any
- Condensation drainage holes: None
- 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>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 250</td>
<td>M3G 074-CF</td>
<td>③</td>
<td>24</td>
<td>16-28</td>
<td>1505</td>
<td>2850</td>
<td>175</td>
<td>7.20</td>
<td>73</td>
<td>-25...+60</td>
</tr>
<tr>
<td>R3G 250</td>
<td>M3G 074-CF</td>
<td>③</td>
<td>48</td>
<td>36-57</td>
<td>1640</td>
<td>3100</td>
<td>230</td>
<td>4.80</td>
<td>73</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

---

Air performance measured according to EN 5801, Installation category A, with ebm-papst inlet ring without contact protection. Suction-side noise levels $L_{WA}$ according to EN 13347, $L_{WA}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation. For detailed information see http://www.ebmpapst.com/general conditions.
### Technical features:
- **Cable exit:** Variable
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** EAC

### Table: Centrifugal fans

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight Centrifugal fans</th>
<th>Inlet ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 250-RN46 -01</td>
<td>2.1</td>
<td>96359-2-4013</td>
</tr>
<tr>
<td>R3G 250-RN85 -02</td>
<td>2.1</td>
<td>96359-2-4013</td>
</tr>
</tbody>
</table>

**Accessories:**

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

**Connections:**

- See connection diagram p. 262

**Clearance for screw max. 12 - 14 mm**

**PVC AWG 16 cable, 4 x crimped ferrules**

---

**Technical Information:**

DC axial fans

DC fans - specials

ACmaxx / EC fans

AC axial fans

Centrifugal fans

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**2016-01**

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**Representatives**

---

**Information**

---

**Accessories**

---

**DC centrifugal fans**

---

**Connection diagrams**

P. 262
Max. 2190 m³/h

DC centrifugal fans – RadiCal
Ø 280 mm

- Material: Impeller: PP plastic
  Rotor: Painted black
- Number of blades: 6
- Direction of rotation: Clockwise, looking towards rotor
- Degree of protection: IP 44, depending on installation and position
- Insulation class: “B”
- Installation position: Any
- Condensation drainage holes: None
- Mode of operation: Continuous operation (S1)
- Bearings: Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 280</td>
<td>M3G 074-CF</td>
<td>24</td>
<td>16-28</td>
<td>2190</td>
<td>1900</td>
<td>142</td>
<td>5.90</td>
<td>67</td>
<td>-25...+60</td>
</tr>
<tr>
<td>R3G 280</td>
<td>M3G 074-CF</td>
<td>48</td>
<td>36-57</td>
<td>2160</td>
<td>1910</td>
<td>140</td>
<td>2.90</td>
<td>67</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

Air performance measured according to: ISO 5801, Installation category A, with ebm-papst inlet ring without contact protection. Suction-side noise levels LWA according to ISO 13347, LWA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general conditions
- **Technical features:**
  - See connection diagram p. 262
- **Cable exit:**
  - Variable
- **Conformity with standard(s):**
  - EN 60950-1
- **Approvals:**
  - EAC

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight</th>
<th>Inlet ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 280-RN30 -01</td>
<td>2.4</td>
<td>28000-2-4013</td>
</tr>
<tr>
<td>R3G 280-RNB1 -02</td>
<td>2.4</td>
<td>28000-2-4013</td>
</tr>
</tbody>
</table>

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

Clearance for screw max. 12 - 14 mm

PVC AWG 16 cable, 4 x crimped ferrules
**DC centrifugal fans – RadiCal**

Ø 310 mm

- **Material:** Impeller: PP plastic  
  Rotor: Painted black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, looking towards rotor
- **Degree of protection:** IP 44, depending on installation and position
- **Insulation class:** “B”
- **Installation position:** Any
- **Condensation drainage holes:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 310</td>
<td>M3G 074-CF</td>
<td>24</td>
<td>16-28</td>
<td>2310</td>
<td>1580</td>
<td>108</td>
<td>4.50</td>
<td>64</td>
<td>-25...+60</td>
</tr>
<tr>
<td>R3G 310</td>
<td>M3G 074-CF</td>
<td>48</td>
<td>36-57</td>
<td>2380</td>
<td>1620</td>
<td>123</td>
<td>2.60</td>
<td>64</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

---

Air performance measured according to ISO 5801, Installation category A, with ebm-papst inlet ring without contact protection. Suction-side noise levels LWA according to ISO 13347, LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general conditions
- **Technical features:** See connection diagram p. 262
- **Cable exit:** Variable
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** EAC

### Inlet rings

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight (kg)</th>
<th>Inlet ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>R3G 310-RN99 -01</td>
<td>2.8</td>
<td>31000-2-4013</td>
</tr>
<tr>
<td>R3G 310-RN98 -02</td>
<td>2.8</td>
<td>31000-2-4013</td>
</tr>
</tbody>
</table>

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

Clearance for screw max. 12 - 14 mm

PVC AWG 16 cable, 4 x crimped ferrules
DC tangential fans
201...413 x 50 x 48 mm

- Material: Housing: Aluminum
  Housing side parts: Plastic
  Impeller: Aluminum
- Direction of air flow: See photo
- Connection: via single wires AWG 24, TR 64
- Highlights: Motor with ball bearing system
  Impeller retaining plate with sleeve bearing
- Weight: 235 / 290 / 380 / 415 g

The values for service life were recorded with the fan installed horizontally.

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimension:</th>
<th>L</th>
<th>L1</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>QG 030-148/12</td>
<td>203.4 ±1.5</td>
<td>148</td>
<td>235 g</td>
<td></td>
</tr>
<tr>
<td>QG 030-198/12</td>
<td>260.4 ±1.5</td>
<td>198</td>
<td>290 g</td>
<td></td>
</tr>
<tr>
<td>QG 030-303/12</td>
<td>365.4 ±1.5</td>
<td>303</td>
<td>380 g</td>
<td></td>
</tr>
<tr>
<td>QG 030-353/12</td>
<td>415.4 ±1.5</td>
<td>353</td>
<td>415 g</td>
<td></td>
</tr>
</tbody>
</table>

Note: Subject to change

Air performance measured according to ISO 5801.
Installation category A, without contact protection.
Noise: Total sound power level LWA measured on a hemisphere with a radius of 2 m.
Sound pressure level LpA measured at 1 m distance to fan axis.
The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions.
In the event of deviation from the standard configuration, the parameters must be checked after installation.
For detailed information see http://www.ebmpapst.com/general conditions
### Material:
- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Galvanized

### Direction of rotation:
Clockwise, looking towards rotor

### Degree of protection:
IP 22

### Insulation class:
“B”

### Installation position:
Any

### Condensation drainage holes:
None

### 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>Nominal voltage range</th>
<th>Air flow</th>
<th>Nominal speed</th>
<th>Power consumption</th>
<th>Input current</th>
<th>Sound pressure level</th>
<th>Min. back pressure</th>
<th>Admissible amb. temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1G 085</td>
<td>M1G 045-BE</td>
<td>24 VDC</td>
<td>16-28</td>
<td>95</td>
<td>2850</td>
<td>14</td>
<td>0.64</td>
<td>57</td>
<td>0        -25...+60</td>
<td></td>
<td>p. 259 / G)</td>
</tr>
<tr>
<td>*1G 085</td>
<td>M1G 045-BE</td>
<td>48 VDC</td>
<td>36-57</td>
<td>95</td>
<td>2850</td>
<td>14</td>
<td>0.32</td>
<td>57</td>
<td>0        -25...+60</td>
<td></td>
<td>p. 259 / G)</td>
</tr>
</tbody>
</table>

Subject to change

---

### Curves:

- $U_n =$ nominal voltage
  - (24 V / 48 V)
- $U_k =$ over-voltage
  - (28 V / 57 V)

---

### Technical features and connection diagram

- Air performance measured according to ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: $L_{PA}$ according to ISO 13347, $L_{WA}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see [http://www.ebmpapst.com/general conditions](http://www.ebmpapst.com/general conditions)
**Technical features:**
- See connection diagram p. 259

**Cable exit:**
- Axial

**Conformity with standard(s):**
- EN 60950-1

**Approvals:**
- EAC

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight kg</th>
<th>Centrifugal blowers with flange</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 085-AB05 -01</td>
<td>0.5</td>
<td>G1G 085-AB05 -01</td>
<td>0.8</td>
</tr>
<tr>
<td>R1G 085-AB07 -01</td>
<td>0.5</td>
<td>G1G 085-AB07 -01</td>
<td>0.8</td>
</tr>
</tbody>
</table>
DC centrifugal fans and blowers
Ø 97 mm

- **Material:**
  - Housing: Hot-dip galvanized sheet steel
  - Impeller: Hot-dip galvanized sheet steel
  - Rotor: Galvanized

- **Direction of rotation:** Clockwise, looking towards rotor

- **Degree of protection:** IP 22

- **Insulation class:** “B”

- **Installation position:** Any

- **Condensation drainage holes:** None

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

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

---

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1G 097</td>
<td>M1G 045-BE</td>
<td>24</td>
<td>16-28</td>
<td>95</td>
<td>2650</td>
<td>16</td>
<td>0.75</td>
<td>59</td>
<td>0</td>
<td>-25...+60</td>
</tr>
<tr>
<td>*1G 097</td>
<td>M1G 045-BE</td>
<td>48</td>
<td>36-57</td>
<td>95</td>
<td>2650</td>
<td>16</td>
<td>0.38</td>
<td>59</td>
<td>0</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

---

Curves:

- **Uₐ** = nominal voltage (24 V / 48 V)
- **Uₓ** = over-voltage (28 V / 57 V)

<table>
<thead>
<tr>
<th>rpm⁻¹</th>
<th>Pₓ W</th>
<th>Lₓ dB(A)</th>
<th>ηₓ %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2920</td>
<td>22</td>
<td>62</td>
<td>—</td>
</tr>
<tr>
<td>3030</td>
<td>21</td>
<td>61</td>
<td>41</td>
</tr>
<tr>
<td>3300</td>
<td>17</td>
<td>59</td>
<td>48</td>
</tr>
<tr>
<td>3700</td>
<td>13</td>
<td>58</td>
<td>48</td>
</tr>
<tr>
<td>2650</td>
<td>16</td>
<td>59</td>
<td>—</td>
</tr>
<tr>
<td>2730</td>
<td>15</td>
<td>58</td>
<td>41</td>
</tr>
<tr>
<td>2960</td>
<td>13</td>
<td>56</td>
<td>48</td>
</tr>
<tr>
<td>3290</td>
<td>10</td>
<td>55</td>
<td>48</td>
</tr>
<tr>
<td>1615</td>
<td>4</td>
<td>45</td>
<td>—</td>
</tr>
<tr>
<td>1650</td>
<td>4</td>
<td>45</td>
<td>38</td>
</tr>
<tr>
<td>1745</td>
<td>4</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td>1880</td>
<td>3</td>
<td>42</td>
<td>47</td>
</tr>
</tbody>
</table>

Air performance measured according to ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: Lₓ, dB(A) according to ISO 13347, Lₓ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general conditions.
- **Technical features:** See connection diagram p. 259
- **Cable exit:** Axial
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** EAC

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight centrifugal fans (kg)</th>
<th>Centrifugal blowers with flange</th>
<th>Weight centrifugal blowers (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 097-AA05 -01</td>
<td>0.5</td>
<td>G1G 097-AA05 -01</td>
<td>0.8</td>
</tr>
<tr>
<td>R1G 097-AA07 -01</td>
<td>0.5</td>
<td>G1G 097-AA07 -01</td>
<td>0.8</td>
</tr>
</tbody>
</table>

**Wire end splices**

**Clearance for screw max. 4 mm**
DC centrifugal fans and blowers
Ø 108 mm

- **Material:**
  - Housing: Die-cast aluminum
  - Impeller: Hot-dip galvanized sheet steel
  - Rotor: Painted black

- **Direction of rotation:** Clockwise, looking towards rotor

- **Degree of protection:** IP 22

- **Insulation class:** “B”

- **Installation position:** Any

- **Condensation drainage holes:** None

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

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

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1G 108</td>
<td>M1G 015-8D</td>
<td>24</td>
<td>16-28</td>
<td>200</td>
<td>3000</td>
<td>42</td>
<td>2.00</td>
<td>65</td>
<td>0</td>
<td>-25...+60</td>
</tr>
<tr>
<td>*1G 108</td>
<td>M1G 015-8D</td>
<td>48</td>
<td>36-57</td>
<td>200</td>
<td>3000</td>
<td>42</td>
<td>1.00</td>
<td>65</td>
<td>0</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

---

Air performance measured according to ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: LWA according to ISO 13347, measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general-conditions
### Technical features:
See connection diagram p. 259

### Cable exit:
Axial

### Protection class:
I

### Conformity with standard(s):
EN 60950-1

### Approvals:
⊙ (24 VDC) UL, CSA, ○ (48 VDC) CCC

### Centrifugal fans

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight centrifugal fans kg</th>
<th>Centrifugal blowers with flange kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 108-AB17 -02</td>
<td>0.7</td>
<td>G1G 108-AB17 -02</td>
</tr>
<tr>
<td>R1G 108-AB41 -02</td>
<td>0.7</td>
<td>G1G 108-AB41 -02</td>
</tr>
</tbody>
</table>

### Centrifugal blowers

- Clearance for screw max. 6 mm
- Wire end splices
- Finger guards from p. 247
- Inlet rings from p. 253
- Air filter P. 254
- Connection diagrams P. 259
**Material:**
- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Galvanized

**Direction of rotation:** Clockwise, looking towards rotor

**Degree of protection:** IP 22

**Insulation class:** “B”

**Installation position:** Any

**Condensation drainage holes:** None

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

**Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1G 120</td>
<td>M1G 055-BD</td>
<td>24</td>
<td>16-28</td>
<td>255</td>
<td>2200</td>
<td>40</td>
<td>1.90</td>
<td>62</td>
<td>-25...+60</td>
</tr>
<tr>
<td>*1G 120</td>
<td>M1G 055-BD</td>
<td>48</td>
<td>36-57</td>
<td>255</td>
<td>2200</td>
<td>40</td>
<td>0.95</td>
<td>62</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

Air performance measured according to ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: LWA according to ISO 13347, LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general conditions
**Centrifugal fans**

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight</th>
<th>Centrifugal blowers with flange</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 120-AB67 -02</td>
<td>0.8</td>
<td>G1G 120-AB67 -02</td>
</tr>
<tr>
<td>R1G 120-AB71 -02</td>
<td>0.8</td>
<td>G1G 120-AB71 -02</td>
</tr>
</tbody>
</table>

- **Technical features:** See connection diagram p. 259
- **Cable exit:** Axial
- **Protection class:** I
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** (24 VDC) UL, CSA, (48 VDC) CCC

**Clearance for screw max. 6 mm**

**Wire end splices**

**Finger guards** from p. 247

**Inlet rings** from p. 253

**Air filter** P. 254

**Connection diagrams** P. 259
### DC centrifugal fans and blowers

**Ø 133 mm**

- **Material:**
  - Housing: Hot-dip galvanized sheet steel
  - Impeller: Hot-dip galvanized sheet steel
  - Rotor: Galvanized

- **Direction of rotation:** Clockwise, looking towards rotor

- **Degree of protection:** IP 22

- **Insulation class:** "B"

- **Installation position:** Any

- **Condensation drainage holes:** None

- **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>Nominal voltage range</th>
<th>Air flow</th>
<th>Nominal speed</th>
<th>Power consumption</th>
<th>Input current</th>
<th>Sound pressure level</th>
<th>Min. back-pressure</th>
<th>Admissible amb. temp.</th>
<th>Technical features and connection diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1G 133</td>
<td>M1G055-BD</td>
<td>Fig 1</td>
<td>24</td>
<td>16-28</td>
<td>225</td>
<td>2000</td>
<td>4.0</td>
<td>2.20</td>
<td>64</td>
<td>0</td>
<td>-25...+60</td>
<td>p. 259 / G)</td>
</tr>
<tr>
<td>*1G 133</td>
<td>M1G055-BD</td>
<td>Fig 2</td>
<td>48</td>
<td>36-57</td>
<td>225</td>
<td>2000</td>
<td>4.0</td>
<td>1.10</td>
<td>64</td>
<td>0</td>
<td>-25...+60</td>
<td>p. 259 / G)</td>
</tr>
</tbody>
</table>

Subject to change

---

**Curves:**

- $U_n =$ nominal voltage (24 V / 48 V)
- $U_a =$ over-voltage (28 V / 57 V)

<table>
<thead>
<tr>
<th>$n_{rpm^{-1}}$</th>
<th>$P_{U}$ W</th>
<th>$L_{pA}$ dB(A)</th>
<th>$\eta_{U}$ %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2170</td>
<td>57</td>
<td>66</td>
<td>—</td>
</tr>
<tr>
<td>2410</td>
<td>51</td>
<td>66</td>
<td>47</td>
</tr>
<tr>
<td>2750</td>
<td>44</td>
<td>64</td>
<td>49</td>
</tr>
<tr>
<td>3200</td>
<td>36</td>
<td>66</td>
<td>32</td>
</tr>
<tr>
<td>2000</td>
<td>45</td>
<td>64</td>
<td>—</td>
</tr>
<tr>
<td>2230</td>
<td>40</td>
<td>64</td>
<td>49</td>
</tr>
<tr>
<td>2540</td>
<td>35</td>
<td>62</td>
<td>51</td>
</tr>
<tr>
<td>2920</td>
<td>27</td>
<td>63</td>
<td>33</td>
</tr>
<tr>
<td>1750</td>
<td>28</td>
<td>60</td>
<td>—</td>
</tr>
<tr>
<td>1910</td>
<td>24</td>
<td>59</td>
<td>50</td>
</tr>
<tr>
<td>2120</td>
<td>20</td>
<td>58</td>
<td>53</td>
</tr>
<tr>
<td>2370</td>
<td>15</td>
<td>59</td>
<td>35</td>
</tr>
</tbody>
</table>

Air performance measured according to ISO 5801, Installation category A with ebm-papst scroll housing without contact protection. Suction-side noise levels: $L_{pA}$ according to ISO 13347, $L_{pA}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see [http://www.ebmpapst.com/general conditions](http://www.ebmpapst.com/general conditions).
- **Technical features:** See connection diagram p. 259
- **Cable exit:** Lateral
- **Protection class:** I
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** ☑ (24 VDC) UL, CSA, ☑ (48 VDC) CCC

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight Centrifugal fans</th>
<th>Centrifugal blowers with flange</th>
<th>Weight Centrifugal blowers</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 133-AE19 -02</td>
<td>0.7</td>
<td>G1G 133-DE19 -02</td>
<td>0.7</td>
</tr>
<tr>
<td>R1G 133-AE03 -02</td>
<td>0.7</td>
<td>G1G 133-DE03 -02</td>
<td>0.7</td>
</tr>
</tbody>
</table>

- **Configuration:**
  - Wire end splices
  - Finger guards from p. 247
  - Inlet rings from p. 253
  - Air filter P. 254
  - Connection diagrams P. 259

- **Clearance for screw:** max. 6 mm
**DC centrifugal fans and blowers**

Ø 140 mm

- **Material:**
  - Housing: Die-cast aluminum
  - Impeller: Hot-dip galvanized sheet steel
  - Rotor: Painted black

- **Direction of rotation:** Clockwise, looking towards rotor

- **Degree of protection:** IP 22

- **Insulation class:** “B”

- **Installation position:** Any

- **Condensation drainage holes:** None

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

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

---

**Nominal data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1G 140</td>
<td>M1G 055-BD</td>
<td>24</td>
<td>16-28</td>
<td>400</td>
<td>1750</td>
<td>54</td>
<td>2.50</td>
<td>63</td>
<td>0</td>
<td>-25...+60</td>
</tr>
<tr>
<td>*1G 140</td>
<td>M1G 055-BD</td>
<td>48</td>
<td>36-57</td>
<td>410</td>
<td>1750</td>
<td>54</td>
<td>1.30</td>
<td>63</td>
<td>0</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Air performance measured according to: ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: LWA according to ISO 13347, LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general-conditions
## Technical features:
- **See connection diagram p. 259**
- **Cable exit:** Axial
- **Protection class:** I
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** (48 VDC) CCC

### Centrifugal fans and blowers

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight kg</th>
<th>Centrifugal blowers with flange</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 140-AV17 -02</td>
<td>1.0</td>
<td>G1G 140-AV17 -02</td>
<td>2.3</td>
</tr>
<tr>
<td>R1G 140-AV21 -02</td>
<td>1.0</td>
<td>G1G 140-AV21 -02</td>
<td>2.3</td>
</tr>
</tbody>
</table>

*Clearance for screw max. 6 mm*

*Wire end splices*

*Finger guards from p. 247*

*Inlet rings from p. 253*

*Air filter P. 254*

*Connection diagrams P. 259*
DC centrifugal fans and blowers
Ø 146 mm

- Material:
  - Housing: Die-cast aluminum
  - Impeller: Hot-dip galvanized sheet steel
  - Rotor: Painted black
- Direction of rotation: Clockwise, looking towards rotor
- Degree of protection: IP 42
- Insulation class: “B”
- Installation position: Any
- Condensation drainage holes: None
- Mode of operation: Continuous operation (S1)
- Bearings: Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1G 146</td>
<td>M1G 074-BF</td>
<td>24</td>
<td>16-28</td>
<td>470</td>
<td>2200</td>
<td>100</td>
<td>5.00</td>
<td>68</td>
<td>0</td>
<td>-25...+60</td>
</tr>
<tr>
<td>*1G 146</td>
<td>M1G 074-BF</td>
<td>48</td>
<td>36-57</td>
<td>465</td>
<td>2150</td>
<td>100</td>
<td>2.60</td>
<td>67</td>
<td>0</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

---

Curves:

- $U_n =$ nominal voltage
  - (24 V / 48 V)
- $U_h =$ over-voltage
  - (28 V / 57 V)

Air performance measured according to ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: $L_{WA}$ according to ISO 13347, $L_{PA}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general conditions.
- Technical features: See connection diagram p. 259
- Cable exit: Axial
- Protection class: I
- Conformity with standard(s): EN 60950-1
- Approvals: UL, CSA, CCC (only centrifugal blowers)

### Centrifugal fans

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>kg</th>
<th>Centrifugal blowers with flange</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 146-AA07 -52</td>
<td>1.4</td>
<td>G1G 146-BA07 -52</td>
<td>2.8</td>
</tr>
<tr>
<td>R1G 146-AA11 -52</td>
<td>1.4</td>
<td>G1G 146-BA11 -52</td>
<td>2.8</td>
</tr>
</tbody>
</table>

- Clearance for screw max. 6 mm
- Wire end splices from p. 247
- Finger guards from p. 247
- Inlet rings from p. 253
- Air filter P. 254
- Connection diagrams P. 259

---

**Centrifugal blowers**

- Weight centrifugal blowers
- G1G 146-BA07 -52: 2.8 kg
- G1G 146-BA11 -52: 2.8 kg

---

**Clearance for screw** max. 6 mm

---

**Wire end splices** from p. 247
DC centrifugal fans and blowers
Ø 160 mm

Material:
- Housing: Die-cast aluminum
- Impeller: Hot-dip galvanized sheet steel
- Rotor: Painted black

Direction of rotation:
Clockwise, looking towards rotor

Degree of protection:
IP 42

Insulation class:
"B"

Installation position:
Any

Condensation drainage holes:
None

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>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1G 160</td>
<td>M1G 074-BF</td>
<td>Ⓞ</td>
<td>24</td>
<td>16-28</td>
<td>505</td>
<td>1750</td>
<td>105</td>
<td>5.80</td>
<td>67</td>
<td>0</td>
<td>-25...+60</td>
</tr>
<tr>
<td>*1G 160</td>
<td>M1G 074-BF</td>
<td>Ⓞ</td>
<td>48</td>
<td>36-57</td>
<td>505</td>
<td>1750</td>
<td>105</td>
<td>2.90</td>
<td>67</td>
<td>0</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

Air performance measured according to: ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: $L_{WA}$ according to ISO 13347. $L_{WA}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation. For detailed information see http://www.ebmpapst.com/general-conditions
- **Technical features:** See connection diagram p. 259
- **Cable exit:** Axial
- **Protection class:** I
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** UL, CSA

### Centrifugal fans

<table>
<thead>
<tr>
<th>Centrifugal fans</th>
<th>Weight kg</th>
<th>Centrifugal blowers with flange</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1G 160-AH29 -52</td>
<td>1.4</td>
<td>G1G 160-BH29 -52</td>
<td>2.8</td>
</tr>
<tr>
<td>R1G 160-AH39 -52</td>
<td>1.4</td>
<td>G1G 160-BH39 -52</td>
<td>2.8</td>
</tr>
</tbody>
</table>

- **Clearance for screw:** max. 6 mm

- **Wire end splices:**
  - min. Ø13.5
  - max. Ø16.5

- **Dimensions:**
  - Ø130
  - 115
  - 120
  - 108
  - 105
  - 94
  - 92
  - 6.3
  - 6.3
  - 175
  - max. 227.8
DC centrifugal blowers
Ø 133 mm

- **Material:**
  - Housing: Galvanized sheet steel
  - Impeller: Galvanized sheet steel
  - Rotor: Painted black
- **Direction of rotation:** Clockwise, looking towards rotor
- **Degree of protection:** IP 42
- **Insulation class:** “B”
- **Installation position:** Any
- **Condensation drainage holes:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** SAL motor mounted with vibration damping on both sides
- **Bearings:** Maintenance-free ball bearings

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
<th>Technical features and connection diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1G 133</td>
<td>M1G 074-BF</td>
<td>24</td>
<td>16-28</td>
<td>700</td>
<td>1780</td>
<td>105</td>
<td>5.60</td>
<td>62</td>
<td>50</td>
<td>-25...+60</td>
<td>p. 259 / G)</td>
</tr>
<tr>
<td>D1G 133</td>
<td>M1G 074-BF</td>
<td>48</td>
<td>36-57</td>
<td>700</td>
<td>1780</td>
<td>105</td>
<td>2.80</td>
<td>62</td>
<td>50</td>
<td>-25...+60</td>
<td>p. 259 / G)</td>
</tr>
</tbody>
</table>

Subject to change

### Curves:

- **Un** = nominal voltage (24 V / 48 V)
- **Uₘ** = over-voltage (28 V / 57 V)

Air performance measured according to ISO 5801, installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: LₚA according to ISO 13347, LₚA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation. For detailed information see http://www.ebmpapst.com/general conditions
- **Technical features:** See connection diagram p. 259
- **Cable exit:** Variable
- **Protection class:** I
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** UL, CSA; (48 VDC) also CCC

<table>
<thead>
<tr>
<th>Centrifugal blowers without flange</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1G 133-AB29 -52</td>
<td>3.3</td>
</tr>
<tr>
<td>D1G 133-AB39 -52</td>
<td>3.3</td>
</tr>
</tbody>
</table>

**Wire end splices**

**Connection diagrams** P. 259
DC centrifugal blowers
Ø 133 mm

- Material:
  - Housing: Galvanized sheet steel
  - Impeller: Galvanized sheet steel
  - Rotor: Painted black

- Direction of rotation: Clockwise, looking towards rotor

- Degree of protection: IP 42

- Insulation class: “B”

- Installation position: Any

- Condensation drainage holes: None

- Mode of operation: Continuous operation (S1)

- Design: SAL motor mounted with vibration damping on both sides

- Bearings: Maintenance-free ball bearings

Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1G 133</td>
<td>M1G 074-BF</td>
<td>24</td>
<td>16-28</td>
<td>1020</td>
<td>1580</td>
<td>118</td>
<td>6.00</td>
<td>64</td>
<td>0</td>
<td>-25...+60</td>
</tr>
<tr>
<td>D1G 133</td>
<td>M1G 074-BF</td>
<td>48</td>
<td>36-57</td>
<td>1020</td>
<td>1580</td>
<td>118</td>
<td>3.00</td>
<td>64</td>
<td>0</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

Curves:

Curves:

- $U_n =$ nominal voltage
  - (24 V / 48 V)
- $U_o =$ over-voltage
  - (28 V / 57 V)

Air performance measured according to ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: $L_{pa}$ according to ISO 13347, $L_{pa}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general_conditions
- Technical features: See connection diagram p. 259
- EMC (24 VDC): Interference emission acc. to EN 55022, class B
  Immunity to interference acc. to EN 61000-6-2
- Cable exit: Variable
- Protection class: I
- Conformity with standard(s): EN 60950-1
- Approvals: UL, CSA

<table>
<thead>
<tr>
<th>Centrifugal blowers without flange</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1G 133-DC13 -52</td>
<td>3.4</td>
</tr>
<tr>
<td>D1G 133-DC17 -52</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Wire end splices
### DC centrifugal blowers

Ø 146 mm

- **Material:**
  - Housing: Galvanized sheet steel
  - Impeller: Galvanized sheet steel
  - Rotor: Painted black

- **Direction of rotation:** Clockwise, looking towards rotor

- **Degree of protection:** IP 42

- **Insulation class:** “B”

- **Installation position:** Any

- **Condensation drainage holes:** None

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

- **Design:** SAL motor mounted with vibration damping on both sides

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

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1G 146</td>
<td>M1G 074-CF</td>
<td>24</td>
<td>16-28</td>
<td>1000</td>
<td>1350</td>
<td>105</td>
<td>5.10</td>
<td>61</td>
<td>0</td>
<td>-25...+60</td>
</tr>
<tr>
<td>D1G 146</td>
<td>M1G 074-CF</td>
<td>48</td>
<td>36-57</td>
<td>1000</td>
<td>1350</td>
<td>105</td>
<td>2.60</td>
<td>61</td>
<td>0</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

### Curves:

- $U_n =$ nominal voltage (24 V / 48 V)
- $U_{ov} =$ over-voltage (28 V / 57 V)

<table>
<thead>
<tr>
<th>n (rpm⁻¹)</th>
<th>$P_{ed}$ (W)</th>
<th>$L_{pA}$ (dB(A))</th>
<th>$\eta_\text{el}$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460</td>
<td>129</td>
<td>63</td>
<td>—</td>
</tr>
<tr>
<td>1680</td>
<td>119</td>
<td>60</td>
<td>53</td>
</tr>
<tr>
<td>1890</td>
<td>111</td>
<td>58</td>
<td>61</td>
</tr>
<tr>
<td>2240</td>
<td>95</td>
<td>59</td>
<td>55</td>
</tr>
<tr>
<td>1350</td>
<td>105</td>
<td>61</td>
<td>—</td>
</tr>
<tr>
<td>1570</td>
<td>95</td>
<td>58</td>
<td>53</td>
</tr>
<tr>
<td>1750</td>
<td>88</td>
<td>56</td>
<td>61</td>
</tr>
<tr>
<td>2010</td>
<td>70</td>
<td>57</td>
<td>55</td>
</tr>
<tr>
<td>1210</td>
<td>70</td>
<td>56</td>
<td>—</td>
</tr>
<tr>
<td>1360</td>
<td>60</td>
<td>54</td>
<td>53</td>
</tr>
<tr>
<td>1460</td>
<td>53</td>
<td>52</td>
<td>61</td>
</tr>
<tr>
<td>1670</td>
<td>42</td>
<td>51</td>
<td>55</td>
</tr>
</tbody>
</table>

Air performance measured according to ISO 5801. Installation category A. with ebm-papst scroll housing without contact protection. Suction side noise levels: $L_{pA}$ according to ISO 13347, $L_{pA}$ measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general-conditions
- **Technical features:** See connection diagram p. 259
- **EMC (24 VDC):** Interference emission acc. to EN 55022, class B
  Immunity to interference acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Conformity with standard(s):** EN 60950-1
- **Approvals:** UL, CSA

### Centrifugal blowers without flange

<table>
<thead>
<tr>
<th>Centrifugal blowers without flange</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1G 146-AA19 -52</td>
<td>3.5</td>
</tr>
<tr>
<td>D1G 146-AA33 -52</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Wire end splices
DC centrifugal blowers
Ø 160 mm

- **Material:**
  - Housing: Galvanized sheet steel
  - Impeller: Galvanized sheet steel
  - Rotor: Painted black

- **Direction of rotation:** Counterclockwise, looking towards rotor

- **Degree of protection:** IP 42

- **Insulation class:** “B”

- **Installation position:** Any

- **Condensation drainage holes:** None

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

- **Design:** SAL motor mounted with vibration damping on both sides

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

### Nominal data

<table>
<thead>
<tr>
<th>Type</th>
<th>Motor</th>
<th>VDC</th>
<th>VDC</th>
<th>m³/h</th>
<th>rpm⁻¹</th>
<th>W</th>
<th>A</th>
<th>dB(A)</th>
<th>Pa</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1G 160</td>
<td>M1G 074-CF</td>
<td>24</td>
<td>16-28</td>
<td>980</td>
<td>1250</td>
<td>112</td>
<td>5.60</td>
<td>60</td>
<td>0</td>
<td>-25...+60</td>
</tr>
<tr>
<td>D1G 160</td>
<td>M1G 074-CF</td>
<td>48</td>
<td>36-57</td>
<td>980</td>
<td>1250</td>
<td>112</td>
<td>2.90</td>
<td>60</td>
<td>0</td>
<td>-25...+60</td>
</tr>
</tbody>
</table>

Subject to change

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Air performance measured according to ISO 5801, Installation category A, with ebm-papst scroll housing without contact protection. Suction-side noise levels: LWA according to ISO 13347, LpA measured at 1 m distance from fan axis. The values given are applicable only under the specified measuring conditions and may differ depending on the installation conditions. In the event of deviation from the standard configuration, the parameters must be checked after installation! For detailed information see http://www.ebmpapst.com/general conditions.
- Technical features: See connection diagram p. 259
- Cable exit: Variable
- Protection class: I
- Conformity with standard(s): EN 60950-1
- Approvals: UL, CSA

<table>
<thead>
<tr>
<th>Centrifugal blowers without flange</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1G 160-DA19 -52</td>
<td>3.6</td>
</tr>
<tr>
<td>D1G 160-DA33 -52</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Wire end splices from p. 246
Connection diagrams P. 259