W1G300 brushless DC axial fans
for heavy-duty mobile applications

The benchmark for transport duty fan reliability just got more affordable!

ebm-papst - a name synonymous with performance, quality, and reliability - introduces the W1G300 value-based series of fans.

This innovative series offers commercial vehicle owner/operators a new option of brushless DC fans. They deliver incomparable cost savings with a lower up-front investment and a decreased level of maintenance over the life of the HVAC system.

Features and benefits:
- Available in both 12/24 VDC nominal voltages
- Consumes less energy
- Reduces current draw
- Lowers fuel usage
- Produces less wear and tear
- Life expectancy of up to 10 times longer than comparable brushed fans
- Extends the life of your vehicle’s alternator

Fleet costs of your mobile HVAC system are significantly reduced by the elimination of replacing worn-out brushed fans. The average life of a brushed fan is from 3,000 to 5,000 operating hours. ebm-papst brushless fans average a lifetime of 40,000 hours, offering potential savings of $900 to $1,500 per system* and the reduction of maintenance costs and operational downtime over the life of the vehicle.

*Typical system using 3 fan condenser, 2,000 operating hours per year, over an 8 year vehicle life span.

Highlights and ratings (at typical continuous operation):
- Cutting edge motor/fan blade technology
- Open rotor design with IP68/IP6K9K electronics
- PWM and analog input compatible
- EMC directives: ECE R10 Tev 3
- Min/max ambient temperature range: -40° to 158°F (70°C)
- Operating voltage range: 9 to 16V and 18 to 32V
- High efficiency, sealed bearing design
- Integrated sealed connector

Product highlights:
- Soft start capable
- Over temperature protected electronics
- Motor current limit
- Mechanical overload - Locked rotor
- Load dump - overvoltage
- Line under voltage detection
- Low vibration
- Low noise
W1G300 Performance vs. brushed fan benchmark

For each key operational metric in the chart below, ebm-papst brushless fans have major advantages over comparable brushed fans.

### 1. AP: 2000m³/h@120Pa(1170cfm@.5"H2O)

<table>
<thead>
<tr>
<th>Line</th>
<th>IdNo</th>
<th>Type</th>
<th>Idx.</th>
<th>U[V]</th>
<th>Ust [V]</th>
<th>Inst. cat.</th>
<th>Remark</th>
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<tr>
<td>142763</td>
<td>SPALA300</td>
<td>01B</td>
<td>26</td>
<td>-</td>
<td>-</td>
<td>A</td>
<td>Benchmark brushed fan</td>
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<tr>
<td>155888</td>
<td>W1G300-EC24-02</td>
<td>01A</td>
<td>26</td>
<td>11</td>
<td></td>
<td>A</td>
<td>ebm-papst brushless fan</td>
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<table>
<thead>
<tr>
<th>Metric</th>
<th>Brushed DC</th>
<th>W1G300</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power P₁</td>
<td>222W</td>
<td>219W</td>
<td>-1.5%</td>
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<tr>
<td>Efficiency</td>
<td>29.9%</td>
<td>30.8%</td>
<td>+9%</td>
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<tr>
<td>RPM</td>
<td>3200 rpm</td>
<td>2825 rpm</td>
<td>-11.5%</td>
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<tr>
<td>Sound Power</td>
<td>84dB</td>
<td>81.5dB</td>
<td>-3.5dB</td>
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</table>

### 2. AP: 1600m³/h@160Pa(950cfm@.65"H2O)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Brushed DC</th>
<th>W1G300</th>
<th>Δ</th>
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<tbody>
<tr>
<td>Power P₁</td>
<td>210W</td>
<td>196W</td>
<td>-6.5%</td>
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<tr>
<td>Efficiency</td>
<td>33.3%</td>
<td>36%</td>
<td>+9%</td>
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<tr>
<td>RPM</td>
<td>3160 rpm</td>
<td>2735 rpm</td>
<td>-14.5%</td>
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<tr>
<td>Sound Power</td>
<td>86.1dB</td>
<td>81.6dB</td>
<td>-4.5dB</td>
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</table>

W1G300 Technical drawing

For plastic screws Ø 3.5 mm on both sides