EC Axial Fan Catalogue
Low Noise Fans with EC External Motors

Maximum efficiency — Minimum power

www.simx.co.nz
Highest motor efficiency available (IE4). Delivers lowest running costs. Integrated speed control. No VSD required. No VSD’s, means no harmonic noise generation delivering the lowest motor sound levels.

EC FANS, DELIVERING...

- Ease of Commissioning.
- No motor data input into VSD required.
- Screened power cable not required.
- Delivers cost savings plus no power cable length limitations.
- Phase protection included.
- No overload required.
- Closed loop control capability without remote control modules delivers cost savings and ease of installation.
- Cooler running temperature delivers longer bearing life.
- Faster Nominal speeds than AC equivalents deliver greater flexibility to handle on-site installation variations.
- In-built thermal control. Real-time management of fan speed to control any thermal issues.
- Ease of adjustment during commissioning to ensure specified fan duties are met.
- Integrated motorised impeller delivers minimum operational vibration.
- Automatically correct fan rotation regardless of power supply orientation.
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Model number description

<table>
<thead>
<tr>
<th>BRA</th>
<th>28</th>
<th>3</th>
<th>EC</th>
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</thead>
<tbody>
<tr>
<td>Type</td>
<td>Fan Diameter (cm)</td>
<td>Power (Ph)</td>
<td>Motor</td>
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EC Axial Fans
The energy saver amongst fans

www.simx.co.nz

Alaskon reserves the right to alter technical specifications without prior notice.
**SPECIFICATION**

**INLINE AXIAL EC FAN**

**Sizes (mm)**
300, 400, 500, 630, 800, 1000mm diameter.

**Fan Performance**
The fan is of low noise and high static efficiency design. The impeller is designed to give excellent performance characteristic with high static pressure development without stalling.

**Impellers**
Ziehl-Abegg FE2owlet – ECblue with axial aerofoil section and owlet edge. The impellers are manufactured from composite material and balanced according to ISO1940.

**Motors**
Ziehl-Abegg third generation EC motors. Motor enclosure to feature IP54 protection. Motor winding insulation are to incorporate thermal class 155 as standard. All models supplied with basic controller on-board activation via external speed setting 0-10v/PWM. The three phase models have premium plug-in controller available as option. Motor bearings are to be of maintenance free ball bearing design. Auto-reset thermal contacts are provided as standard.

**Casing**
Casing of the fans are of galvanised steel, with flange connection to suit either flexible duct or galvanised steel ductwork.

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**Control Wiring Diagram**

**Single Phase**

**Three Phase**

Premium module (For Three Phase model only)

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**Test Procedures**

**Performance Data** – Established from tests in accordance with ISO5801:1997.

**Sound levels** – Established from tests in accordance with ISO3745.
electronically commutated
highly efficient
low sound aerofoil impeller

01 / BAX-EC

- Inline duct mounted fan with flange connection.
- Galvanised sheet steel casing.
- Acoustically optimised axial impeller.
- Integrated electrical protection.
- EC motor interfaced for easy control.
- Correct rotation and airflow direction assured.
BAX301-EC
INLINE AXIAL EC FAN

Impeller
Size: 300 mm
Type: Axial Aerofoil
Material: High Performance Composite Material

Motor
Type: High Efficiency EC
IP Rating: 44
Power: 0.15 kW
Power Supply: 230V/1PH/50Hz
Speed: 1900 RPM
FLC: 1.15 A
Control I/O: 1 x Analogue Input E1
1 x Status output A1
1 x Operation output A2
1 x 10V DC output

Fan
Case: Galvanised Metal
Weight: 12 kg
Max. Temp: 60 °C

Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
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<th>Motor Running Current (A)</th>
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Sound Power Level SWL dB re 1pw
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Sound Pressure Level dBA at 3m
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**BAX401-EC**

**INLINE AXIAL EC FAN**

**Impeller**

- **Size:** 400 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**

- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 0.45 kW
- **Power Supply:** 230V/1PH/50Hz
- **Speed:** 1805 RPM
- **FLC:** 2.40 A
- **Control I/O:**
  - 1 x Analogue Input E1
  - 1 x Status output A1
  - 1 x Operation output A2
  - 1 x 10V DC output

**Fan**

- **Case:** Galvanised Metal
- **Weight:** 38 kg
- **Max. Temp:** 60 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<td>206</td>
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**Sound Power Level SWL dB re 1pw**

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<th>1k</th>
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**BAX503-EC**

**INLINE AXIAL EC FAN**

**Impeller**

- **Size:** 500 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**

- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 1.00 kW
- **Power Supply:** 400V/3PH/50Hz
- **Speed:** 1550 RPM
- **FLC:** 1.70 A
- **Control I/O:**
  - 1 x Digital Input D1
  - 1 x Analogue Input E1
  - 1 x Status contact output K1
  - 1 x 10V DC output
  - 1 x 24V DC output

**Fan**

- **Case:** Galvanised Metal
- **Weight:** 43 kg
- **Max. Temp:** 60 °C

**Nominal Data**

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<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<td>1550</td>
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**Fan Performance**

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<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Sound Power Level SWL dB re 1pw</th>
<th>Sound Pressure Level dBA at 3m</th>
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<td>63</td>
<td>79 77 74 71 74 73 68 62</td>
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<td>73 60 54 55 56 52 45 34</td>
<td>34 39</td>
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BAX633-EC-L
INLINE AXIAL EC FAN

**Impeller**

- **Size:** 630 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**

- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 1.25 kW
- **Power Supply:** 400V/3PH/50Hz
- **Speed:** 1200 RPM
- **FLC:** 2.00 A
- **Control I/O:**
  - 1 x Digital Input D1
  - 1 x Analogue Input E1
  - 1 x Status contact output K1
  - 1 x 10V DC output
  - 1 x 24V DC output

**Fan**

- **Case:** Galvanised Metal
- **Weight:** 58 kg
- **Max. Temp:** 60 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<td>1200</td>
<td>259</td>
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<td>720</td>
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<td>480</td>
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**Sound Power Level SWL dB re 1pw**

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<th>Speed (RPM)</th>
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<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
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<th>4k</th>
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**Fan Performance**
BAX633-EC
INLINE AXIAL EC FAN

Impeller

Size: 630 mm
Type: Axial Aerofoil
Material: Aluminium

Motor

Type: High Efficiency EC
IP Rating: 54
Power: 3.70 kW
Power Supply: 400V/3PH/50Hz
Speed: 1600 RPM
FLC: 5.9 A
Control I/O: 1 x Digital Input D1
1 x Analogue Input E1
1 x Status contact output K1
1 x 10V DC output
1 x 24V DC output

Fan

Case: Galvanised Metal
Weight: 60 kg
Max. Temp: 60 °C

Nominal Data

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<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<td>620</td>
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Sound Power Level SWL dB re 1pw Sound Pressure Level dBA at 3m

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<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
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**BAX803-EC**

**INLINE AXIAL EC FAN**

**Impeller**
- **Size:** 800 mm
- **Type:** Axial Aerofoil
- **Material:** Aluminium

**Motor**
- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 3.10 kW
- **Power Supply:** 400V/3PH/50Hz
- **Speed:** 1105 RPM
- **FLC:** 4.80 A
- **Control I/O:**
  - 1 x Digital Input D1
  - 1 x Analogue Input E1
  - 1 x Status contact output K1
  - 1 x 10V DC output
  - 1 x 24V DC output

**Fan**
- **Case:** Galvanised Metal
- **Weight:** 65 kg
- **Max. Temp:** 60 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
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**Sound Power Level SWL dB re 1pw**

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**Sound Pressure Level dBA at 3m**

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BAX1003-EC
INLINE AXIAL EC FAN

Impeller

Size: 1000 mm
Type: Axial Aerofoil
Material: Aluminium

Motor

Type: High Efficiency EC
IP Rating: 54
Power: 2.50 kW
Power Supply: 400V/3PH/50Hz
Speed: 850 RPM
FLC: 4.00 A
Control I/O:
1 x Digital Input D1
1 x Analogue Input E1
1 x Status contact output K1
1 x 10V DC output
1 x 24V DC output

Fan

Case: Galvanised Metal
Weight: 75 kg
Max. Temp: 60 °C

Dimensions

Fan Performance

Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>Sound Power Level SWL dB re 1pw</th>
<th>Sound Pressure Level dBA at 3m</th>
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</thead>
<tbody>
<tr>
<td>63</td>
<td>125</td>
</tr>
<tr>
<td>67</td>
<td>62</td>
</tr>
<tr>
<td>75</td>
<td>70</td>
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</tbody>
</table>
electronically commutated
highly efficient
low sound aerofoil impeller

02 / BRA-EC

- Roof mounted axial fan for curb mounting.
- UV stabilized polymer cowling.
- Acoustically optimised axial impeller.
- Integrated electrical protection.
- EC motor interfaced for easy control.
- Correct rotation and airflow direction assured.
**BRA301-EC**

**ROOF EXTRACT AXIAL EC FAN**

**Impeller**
- **Size:** 300 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**
- **Type:** High Efficiency EC
- **IP Rating:** 44
- **Power:** 0.15 kW
- **Power Supply:** 230V/1PH/50Hz
- **Speed:** 1900 RPM
- **FLC:** 1.15 A
- **Control I/O:**
  - 1 x Analogue Input E1
  - 1 x Status output A1
  - 1 x Operation output A2
  - 1 x 10V DC output

**Fan**
- **Cowl:** Polymer UV Stabilised
- **Base:** Galvanised Metal
- **Weight:** 11 kg
- **Max. Temp:** 60 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
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<td>1140</td>
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<tr>
<td>760</td>
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<td>0.02</td>
<td>0.15</td>
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**Sound Power Level SWL dB re 1pw**

<table>
<thead>
<tr>
<th></th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
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<th>8k</th>
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**Sound Pressure Level dBA at 3m**

<table>
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<th>250</th>
<th>500</th>
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<td>32</td>
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</tbody>
</table>

**Dimensions**

**Fan Performance**
**BRA401-EC**

**ROOF EXTRACT AXIAL EC FAN**

**Impeller**

- **Size:** 400 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**

- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 0.45 kW
- **Power Supply:** 230V/1PH/50Hz
- **Speed:** 1550 RPM
- **FLC:** 2.40 A
- **Control I/O:**
  - 1 x Analogue Input E1
  - 1 x Status output A1
  - 1 x Operation output A2
  - 1 x 10V DC output

**Fan**

- **Cowl:** Polymer UV Stabilised
- **Base:** Galvanised Metal
- **Weight:** 36 kg
- **Max. Temp:** 50 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<tr>
<td>1240</td>
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<td>0.96</td>
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<td>930</td>
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<td>0.09</td>
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<tr>
<td>620</td>
<td>28</td>
<td>0.04</td>
<td>0.23</td>
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**Sound Power Level SWL dB re 1pw**

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<thead>
<tr>
<th>Speed (RPM)</th>
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<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
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<td>71</td>
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<td>66</td>
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<td>1240</td>
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<td>930</td>
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<td>46</td>
<td>38</td>
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</table>
BRA503-EC
ROOF EXTRACT AXIAL EC FAN

Impeller

Size: 500 mm
Type: Axial Aerofoil
Material: High Performance Composite Material

Motor

Type: High Efficiency EC
IP Rating: 54
Power: 1.00 kW
Power Supply: 400V/3PH/50Hz
Speed: 1550 RPM
FLC: 1.70 A
Control I/O: 1 x Digital Input D1
1 x Analogue Input E1
1 x Status contact output K1
1 x 10V DC output
1 x 24V DC output

Fan

Cowl: Polymer UV Stabilised
Base: Galvanised Metal
Weight: 46 kg
Max. Temp: 60 °C

Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<tr>
<td>930</td>
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<td>620</td>
<td>32</td>
<td>0.07</td>
<td>0.28</td>
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Sound Power Level SWL dB re 1pw

<table>
<thead>
<tr>
<th>Sound Pressure Level dBA at 3m</th>
</tr>
</thead>
<tbody>
<tr>
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<td>79</td>
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<td>76</td>
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<td>75</td>
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<tr>
<td>73</td>
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</tbody>
</table>
**BRA633-EC-L**

**ROOF EXTRACT AXIAL EC FAN**

**Impeller**

- **Size:** 630 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**

- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 1.25 kW
- **Power Supply:** 400V/3PH/50Hz
- **Speed:** 1200 RPM
- **FLC:** 2.00 A
- **Control I/O:**
  - 1 x Digital Input D1
  - 1 x Analogue Input E1
  - 1 x Status contact output K1
  - 1 x 10V DC output
  - 1 x 24V DC output

**Fan**

- **Cowl:** Polymer UV Stabilised
- **Base:** Polymer UV Stabilised
- **Weight:** 65 kg
- **Max. Temp:** 60 °C

**Nominal Data**

<table>
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<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<td>720</td>
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<td>480</td>
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<td>0.08</td>
<td>0.27</td>
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**Sound Power Level SWL dB re 1pw**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
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<td>965</td>
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<td>77</td>
<td>71</td>
<td>63</td>
<td>69</td>
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<td>53</td>
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<tr>
<td>720</td>
<td>74</td>
<td>64</td>
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<td>480</td>
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<td>53</td>
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**Sound Pressure Level dBA at 3m**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
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<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
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<tbody>
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<td>1200</td>
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<td>720</td>
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<td></td>
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</tbody>
</table>
BRA803-EC
ROOF EXTRACT AXIAL EC FAN

Impeller

Size: 800 mm
Type: Axial Aerofoil
Material: Aluminium

Motor

Type: High Efficiency EC
IP Rating: 54
Power: 3.10 kW
Power Supply: 400V/3PH/50Hz
Speed: 1105 RPM
FLC: 4.80 A
Control I/O:
- 1 x Digital Input D1
- 1 x Analogue Input E1
- 1 x Status contact output K1
- 1 x 10V DC output
- 1 x 24V DC output

Fan

Cowl: Polymer UV Stabilised
Base: Galvanised Metal
Weight: 75 kg
Max. Temp: 60 °C

Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<tbody>
<tr>
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<td>1.80</td>
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<tr>
<td>800</td>
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<th>Frequency (Hz)</th>
<th>Sound Power Level SWL dB re 1pw</th>
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<tbody>
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<td>77</td>
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<td>2k 74 69 66 64 58</td>
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<td>64 61 57 50</td>
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<td>60</td>
<td>61 57 50 46</td>
<td></td>
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</tbody>
</table>
electronically commutated
highly efficient
low sound aerofoil impeller

03 / BRA-S-EC

- Roof mounted axial fan for curb mounting.
- UV stabilized polymer cowling.
- Acoustically optimised axial impeller.
- Integrated electrical protection.
- EC motor interfaced for easy control.
- Correct rotation and airflow direction assured.
**BRA301S-EC**

**ROOF SUPPLY AXIAL EC FAN**

**Impeller**

- **Size:** 300 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**

- **Type:** High Efficiency EC
- **IP Rating:** 44
- **Power:** 0.15 kW
- **Power Supply:** 230V/1PH/50Hz
- **Speed:** 1900 RPM
- **FLC:** 1.15 A
- **Control I/O:**
  - 1 x Analogue Input E1
  - 1 x Status output A1
  - 1 x Operation output A2
  - 1 x 10V DC output

**Fan**

- **Cowl:** Polymer UV Stabilised
- **Base:** Galvanised Metal
- **Weight:** 11 kg
- **Max. Temp:** 60 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>65</td>
<td>0.15</td>
<td>1.15</td>
</tr>
<tr>
<td>1520</td>
<td>42</td>
<td>0.08</td>
<td>0.55</td>
</tr>
<tr>
<td>1140</td>
<td>23</td>
<td>0.04</td>
<td>0.28</td>
</tr>
<tr>
<td>760</td>
<td>10</td>
<td>0.02</td>
<td>0.15</td>
</tr>
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</table>

**Sound Power Level SWL dB re 1pw**

<table>
<thead>
<tr>
<th>63</th>
<th>125</th>
<th>250</th>
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<td>67</td>
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<td>42</td>
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</tr>
</tbody>
</table>

**Sound Pressure Level dBA at 3m**

<table>
<thead>
<tr>
<th>63</th>
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<td>43</td>
<td>34</td>
<td>32</td>
</tr>
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</table>
**BRA401S-EC**

**ROOF SUPPLY AXIAL EC FAN**

**Impeller**

- **Size:** 400 mm
- **Type:** Axial Arefoil
- **Material:** High Performance Composite Material

**Motor**

- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 0.45 Kw
- **Power Supply:** 230V/1PH/50Hz
- **Speed:** 1550 RPM
- **FLC:** 2.40 A
- **Control I/O:**
  - 1 x Analogue Input E1
  - 1 x Status output A1
  - 1 x Operation output A2
  - 1 x 10V DC output

**Fan**

- **Cowl:** Polymer UV Stabilised
- **Base:** Galvanised Metal
- **Weight:** 36 Kg
- **Max. Temp:** 50 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<tbody>
<tr>
<td>1550</td>
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<td>930</td>
<td>66</td>
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<tr>
<td>620</td>
<td>29</td>
<td>0.04</td>
<td>0.23</td>
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</table>

**Sound Power Level SWL dB re 1pw**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
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<tr>
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<tr>
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**Sound Pressure Level dBA at 3m**

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<th>Speed (RPM)</th>
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<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
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<tbody>
<tr>
<td>1550</td>
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<td>66</td>
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</tr>
<tr>
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</tr>
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<td>930</td>
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<td>46</td>
<td>38</td>
<td>28</td>
</tr>
</tbody>
</table>
BRA503S-EC
ROOF SUPPLY AXIAL EC FAN

Impeller
Size: 500 mm
Type: Axial Aerofoil
Material: High Performance Composite Material

Motor
Type: High Efficiency EC
IP Rating: 54
Power: 1.00 kW
Power Supply: 400V/3PH/50Hz
Speed: 1550 RPM
FLC: 1.70 A
Control I/O: 1 x Digital Input D1
1 x Analogue Input E1
1 x Status contact output K1
1 x 10V DC output
1 x 24V DC output

Fan
Cowl: Polymer UV Stabilised
Base: Galvanised Metal
Weight: 55 kg
Max. Temp: 60 °C

Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1550</td>
<td>213</td>
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<tr>
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<tr>
<th>Sound Power Level SWL dB re 1pw</th>
<th>Sound Pressure Level dBA at 3m</th>
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<tr>
<td>63</td>
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<td>75</td>
<td>68</td>
</tr>
<tr>
<td>73</td>
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</table>

Dimensions

Fan Performance
BRA633S-EC-L
ROOF SUPPLY AXIAL EC FAN

Impeller
Size: 630 mm
Type: Axial Aerofoil
Material: High Performance Composite Material

Motor
Type: High Efficiency EC
IP Rating: 54
Power: 1.25 kW
Power Supply: 400V/3PH/50Hz
Speed: 1200 RPM
FLC: 2.00 A
Control I/O: 1 x Digital Input D1
1 x Analogue Input E1
1 x Status contact output K1
1 x 10V DC output
1 x 24V DC output

Fan
Cowl: Polymer UV Stabilised
Base: Galvanised Metal
Weight: 65 kg
Max. Temp: 60 °C

Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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</thead>
<tbody>
<tr>
<td>1200</td>
<td>240</td>
<td>1.25</td>
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<tr>
<td>965</td>
<td>155</td>
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<td>0.95</td>
</tr>
<tr>
<td>720</td>
<td>86</td>
<td>0.24</td>
<td>0.55</td>
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<tr>
<td>480</td>
<td>38</td>
<td>0.08</td>
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<table>
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<th>Speed (RPM)</th>
<th>Static Pressure (Pa)</th>
<th>Airflow (l/s)</th>
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<tr>
<td>965 rpm</td>
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<td>710</td>
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<td>720 rpm</td>
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<td>810</td>
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<tr>
<td>480 rpm</td>
<td>500</td>
<td>480</td>
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<table>
<thead>
<tr>
<th>Sound Power Level SWL dB re 1pw</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
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</thead>
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<td>76</td>
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<td>62</td>
<td>49</td>
<td>40</td>
<td>31</td>
<td>42</td>
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</tbody>
</table>

Sound Pressure Level dBA at 3m
BRA803S-EC
ROOF SUPPLY AXIAL EC FAN

Impeller

Size: 800 mm
Type: Axial Aerofoil
Material: Aluminium

Motor

Type: High Efficiency EC
IP Rating: 54
Power: 3.10 kW
Power Supply: 400V/3PH/50Hz
Speed: 1105 RPM
FLC: 4.80 A
Control I/O: 1 x Digital Input D1
1 x Analogue Input E1
1 x Status contact output K1
1 x 10V DC output
1 x 24V DC output

Fan

Cowl: Polymer UV Stabilised
Base: Galvanised Metal
Weight: 75 kg
Max. Temp: 60 °C

Nominal Data

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<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<td>930</td>
<td>188</td>
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<td>139</td>
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Sound Power Level SWL dB re 1pw

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<th>1k</th>
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<tbody>
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<td>64</td>
<td>62</td>
<td>60</td>
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Sound Pressure Level dBA at 3m

<table>
<thead>
<tr>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
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<td>58</td>
<td>57</td>
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<td>46</td>
</tr>
</tbody>
</table>
electronically commutated
highly efficient
low sound aerofoil impeller

04 / BAP-EC

- Plate mounted axial flow fan.
- Acoustically optimised axial impeller.
- Integrated electrical protection.
- EC motor interfaced for easy control.
- Correct rotation and airflow direction assured.
PLATE AXIAL EC FAN

Impeller

Size: 300 mm
Type: Axial Aerofoil
Material: High Performance Composite Material

Motor

Type: High Efficiency EC
IP Rating: 44
Power: 0.15 kW
Power Supply: 230V/1PH/50Hz
Speed: 1900 RPM
FLC: 1.15 A
Control I/O: 1 x Analogue Input E1
1 x Status output A1
1 x Operation output A2
1 x 10V DC output

Fan

Plate: Powder Coated Steel
Weight: 12 kg
Max. Temp: 60 °C

Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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Sound Power Level SWL dB re 1pw

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<th>250</th>
<th>500</th>
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<tbody>
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Sound Pressure Level dBA at 3m

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<th>Speed (RPM)</th>
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<th>500</th>
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</thead>
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<td>32</td>
</tr>
</tbody>
</table>
BAP401-EC
PLATE AXIAL EC FAN

Impeller

Size: 400 mm
Type: Axial Aerofoil
Material: High Performance Composite Material

Motor

Type: High Efficiency EC
IP Rating: 54
Power: 0.45 kW
Power Supply: 230V/1PH/50Hz
Speed: 1805 RPM
FLC: 2.40 A
Control I/O:
1 x Analogue Input E1
1 x Status output A1
1 x Operation output A2
1 x 10V DC output

Fan

Plate: Powder Coated Steel
Weight: 27 kg
Max. Temp: 60 °C

Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
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<tbody>
<tr>
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<td>725</td>
<td>33</td>
<td>0.04</td>
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Sound Power Level SWL dB re 1pw

<table>
<thead>
<tr>
<th>63</th>
<th>125</th>
<th>250</th>
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<td>28</td>
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</table>

Sound Pressure Level dBA at 3m

<table>
<thead>
<tr>
<th>63</th>
<th>125</th>
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<td>28</td>
</tr>
</tbody>
</table>
**BAP503-EC**

**PLATE AXIAL EC FAN**

**Impeller**
- **Size:** 500 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**
- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 1.00 kW
- **Power Supply:** 400V/3PH/50Hz
- **Speed:** 1550 RPM
- **FLC:** 1.70 A
- **Control I/O:**
  - 1 x Digital Input D1
  - 1 x Analogue Input E1
  - 1 x Status contact output K1
  - 1 x 10V DC output
  - 1 x 24V DC output

**Fan**
- **Plate:** Powder Coated Steel
- **Weight:** 43 kg
- **Max. Temp:** 60 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1550</td>
<td>246</td>
<td>1.00</td>
<td>1.7</td>
</tr>
<tr>
<td>1240</td>
<td>158</td>
<td>0.47</td>
<td>0.86</td>
</tr>
<tr>
<td>930</td>
<td>89</td>
<td>0.21</td>
<td>0.51</td>
</tr>
<tr>
<td>620</td>
<td>39</td>
<td>0.07</td>
<td>0.28</td>
</tr>
</tbody>
</table>

**Fan Performance**

**Sound Power Level SWL dB re 1pw**
- 63: 79, 77, 74, 71, 74, 73, 68, 62, 57
- 125: 76, 74, 67, 66, 70, 68, 63, 56, 53
- 250: 75, 68, 62, 61, 64, 63, 55, 48, 47
- 500: 73, 60, 54, 55, 56, 52, 45, 34, 39

**Sound Pressure Level dBA at 3m**
- 63: 57
- 125: 53
- 250: 47
- 500: 47
**BAP633-EC-L**

**PLATE AXIAL EC FAN**

**Impeller**

- **Size:** 630 mm
- **Type:** Axial Aerofoil
- **Material:** High Performance Composite Material

**Motor**

- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 1.25 kW
- **Power Supply:** 400V/3PH/50Hz
- **Speed:** 1200 RPM
- **FLC:** 2.00 A
- **Control I/O:**
  - 1 x Digital Input D1
  - 1 x Analogue Input E1
  - 1 x Status contact output K1
  - 1 x 10V DC output
  - 1 x 24V DC output

**Fan**

- **Plate:** Powder Coated Steel
- **Weight:** 58 kg
- **Max. Temp:** 60 °C

**Nominal Data**

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>259</td>
<td>1.25</td>
<td>2</td>
</tr>
<tr>
<td>965</td>
<td>167</td>
<td>0.54</td>
<td>0.95</td>
</tr>
<tr>
<td>720</td>
<td>93</td>
<td>0.24</td>
<td>0.55</td>
</tr>
<tr>
<td>480</td>
<td>41</td>
<td>0.08</td>
<td>0.27</td>
</tr>
</tbody>
</table>

**Fan Performance**

**Form A**

<table>
<thead>
<tr>
<th>Static Pressure (Pa)</th>
<th>Sound Power Level SWL dB re 1pw</th>
<th>Sound Pressure Level dBA at 3m</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>76 74 74 67 70 70 65 59 54</td>
<td>54</td>
</tr>
<tr>
<td>125</td>
<td>71 77 71 63 69 67 59 53 52</td>
<td>52</td>
</tr>
<tr>
<td>250</td>
<td>74 64 66 59 63 60 52 45 46</td>
<td>46</td>
</tr>
<tr>
<td>500</td>
<td>76 55 57 53 62 49 40 31 42</td>
<td>42</td>
</tr>
</tbody>
</table>
**BAP803-EC**

**PLATE AXIAL EC FAN**

### Impeller

- **Size:** 800 mm
- **Type:** Axial Aerofoil
- **Material:** Aluminium

### Motor

- **Type:** High Efficiency EC
- **IP Rating:** 54
- **Power:** 3.10 kW
- **Power Supply:** 400V/3PH/50Hz
- **Speed:** 1105 RPM
- **FLC:** 4.80 A
- **Control I/O:**
  - 1 x Digital Input D1
  - 1 x Analogue Input E1
  - 1 x Status contact output K1
  - 1 x 10V DC output
  - 1 x 24V DC output

### Fan

- **Plate:** Powder Coated Steel
- **Weight:** 65 kg
- **Max. Temp:** 60 °C

### Nominal Data

<table>
<thead>
<tr>
<th>Speed (RPM)</th>
<th>Peak Pressure (Pa)</th>
<th>Running Power (kW)</th>
<th>Motor Running Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1105</td>
<td>301</td>
<td>3.10</td>
<td>4.8</td>
</tr>
<tr>
<td>1060</td>
<td>277</td>
<td>2.60</td>
<td>3.9</td>
</tr>
<tr>
<td>930</td>
<td>214</td>
<td>1.80</td>
<td>2.8</td>
</tr>
<tr>
<td>800</td>
<td>158</td>
<td>1.10</td>
<td>1.8</td>
</tr>
<tr>
<td>670</td>
<td>111</td>
<td>0.70</td>
<td>1.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sound Power Level SWL dB re 1pw</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>79</td>
<td>75</td>
<td>74</td>
<td>74</td>
<td>72</td>
<td>69</td>
<td>65</td>
<td>58</td>
</tr>
<tr>
<td>79</td>
<td>79</td>
<td>75</td>
<td>73</td>
<td>73</td>
<td>71</td>
<td>68</td>
<td>64</td>
<td>57</td>
</tr>
<tr>
<td>77</td>
<td>80</td>
<td>72</td>
<td>69</td>
<td>69</td>
<td>68</td>
<td>65</td>
<td>61</td>
<td>54</td>
</tr>
<tr>
<td>74</td>
<td>70</td>
<td>69</td>
<td>66</td>
<td>66</td>
<td>64</td>
<td>61</td>
<td>57</td>
<td>50</td>
</tr>
<tr>
<td>71</td>
<td>67</td>
<td>66</td>
<td>64</td>
<td>62</td>
<td>60</td>
<td>57</td>
<td>51</td>
<td>46</td>
</tr>
</tbody>
</table>

**Sound Pressure Level dBA at 3m**
air conditioning
refrigeration
clean room technology

05 / CONTROL MODULES

- Intelligent control modules.
- Simple installation.
- Easy commissioning.
- Modbus network compatibility.
- Extensive sensor range.
**MPR300**

**DIFFERENTIAL PRESSURE SWITCH**

High precision differential pressure switch for monitoring differential pressure and negative pressure of gaseous, non-corrosive media in air ducts, air intakes or extraction equipment.

The desired switching point (changeover contact as NO or NC contact) is set by means of the rotary switch (scale 0.2 to 3 mbar).

**Examples of applications**

- Pressure control for central extraction systems and variable air volume systems (VVS).
- Flow monitoring for warm-air heaters.
- Frost protection for heat exchangers.
- Vee-belt and filter monitoring.
- Controlling and monitoring gas boilers and OEM applications.

**Features / Benefits**

- Housing protection IP 54.
- Switch over contact load: 250 VAC, 5A.
- Ideal installation position: vertical.
- Pressure port " + / - " for Ø 6.2 mm tubing.
- Max. ambient temperature -30 to +75 °C.
- Permissible storage temperature -40 to +85 °C.
- Pressure connection:
  - P1 for higher pressure.
  - P2 for lower pressure.
- Connection nozzles: 6.2 mm, adapter 1/8".
- Membrane silicon LSR.

**Dimensions**

**Connection / Wiring**
AM-Modbus-W
COMMUNICATION MODULE FOR EC FANS

Features / Benefits

Adding the "AM-Modbus" module to a basic fan delivers the following functions:

1. The module can be put in temporarily for programming of desired functions during start-up or for diagnosis.

2. A MODBUS network of several ECblue fans can be built up or the fans can be integrated into existing MODBUS-RTU networks.

3. Programming can be achieved over a radio link using the hand held AG-247NW.

Installing / Guide

Plug in to EC Fans.
Connection / Wiring

Connection example for MODBUS device with automatic addressing.

**Note:**

AM-Premium-W
CONTROL MODULE FOR EC FANS

Features / Benefits

Adding the "AM-Premium-W" module to a basic fan delivers the following functions:

1. AM-premium is a plug in module for an EC fan to extend I/O interface and set up a desired operation.
2. It enables sensors to be connected directly to the EC fan.
3. It provides MODBUS interface allowing integration into existing MODBUS-RTU networks.
4. Programming can be achieved over a radio link using the hand held AG-247NW.

I/O

With AM-Premium module the following I/O can be used:

1. 2 x Digital input.
2. 2 x Analogue Input.
3. 2 x Sensors input.
4. 1 x Analogue output.
5. 1 x 24VDC output.
6. 1 x 10VDC output.
7. 1 x Relay output.
8. 1 x MODBUS (RS-485).

Installing / Guide

Plug in to EC Fans.
Connection / Wiring

**AM-PREMIUM**

<table>
<thead>
<tr>
<th>DC Out</th>
<th>Analog In 2</th>
<th>Analog In 3</th>
<th>Analog Out 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (D+)</td>
<td>B (D-)</td>
<td>24V GND</td>
<td>E2 T2 GND</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E3 T3 A1</td>
<td></td>
</tr>
</tbody>
</table>

- **Input**
  - 0...10 V \( (R_i > 100 \text{ k}\Omega) \)
  - 0...20 mA \( (R_i = 250 \text{ } \Omega) \)
  - 4...20 mA \( (R_i = 250 \text{ } \Omega) \)

- **Output**
  - 0...10 V

MODBUS (RS-485)

24 V GND

KTY 81-210 / PT 1000

TF..

MOS11K0
21.03.2011
TEMPERATURE SENSORS
PASSIVE TEMPERATURE SENSORS

Available versions
Contact, room, immersion, living space, and duct sensors for registration of the temperature value and for control of fans by means of a Ziehl-Abegg control units.
The silicon PTC element changes its resistance depending on the ambient temperature.
\[ R_{25\,^\circ C} = 2.0 \, k\Omega \text{ (KTY81-210)}. \]
TF temperature sensors are passive sensors; they do not need any voltage supply.

<table>
<thead>
<tr>
<th>Type</th>
<th>Art No.</th>
<th>Protection Class</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>TFR</td>
<td>00089846</td>
<td>IP 54</td>
<td>Housing dimensions W x H x D: 75 x 75 x 37mm</td>
</tr>
<tr>
<td>TFR-E</td>
<td>00153406</td>
<td>-</td>
<td>Sensor element from TFR</td>
</tr>
<tr>
<td>TFT</td>
<td>00154797</td>
<td>IP 43</td>
<td>Ø 7 x 50mm Cable 1.9m</td>
</tr>
<tr>
<td>TFT (XL)</td>
<td>384027</td>
<td>IP 43</td>
<td>Ø 7 x 50mm Cable 4m</td>
</tr>
<tr>
<td>TFA</td>
<td>00153407</td>
<td>IP 67</td>
<td>Ø 7 x 50mm Cable 2m</td>
</tr>
<tr>
<td>TFW</td>
<td>00154798</td>
<td>IP 20</td>
<td>Housing dimensions W x H x D: 84 x 84 x 22mm</td>
</tr>
<tr>
<td>TFK</td>
<td>384022</td>
<td>IP 65</td>
<td>Housing dimensions W x H x D: 84 x 84 x 22mm</td>
</tr>
</tbody>
</table>

Connection / Wiring

Temperature vs Resistance Graph

![Resistance vs Temperature Graph](image)
For non-aggressive, gaseous mediums (air conditioning). For detection of the air pressure in air ducts (differential air pressure). Depending on the detected value, the speed of Ziehl-Abegg fans is controlled by means of a Ziehl-Abegg control unit. Dependent on the control unit, the air pressure or air volume flow can be regulated.

The differential pressure sensor is supplied with 24V from a Ziehl-Abegg control unit. Through the output of a 0-10V signal, the measured value is transmitted to the Ziehl-Abegg control unit. The DSG / MPG are active sensors.

**Features / Benefits**

- Protection class IP 65.
- 0.5m connection cable.
- Connection sockets ("+ / –") Ø 5mm.
- Ideal installation position: vertical.

<table>
<thead>
<tr>
<th>Type</th>
<th>Art No.</th>
<th>Protection Class</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSG50</td>
<td>00155595</td>
<td>0 – 50</td>
<td></td>
</tr>
<tr>
<td>DSG200</td>
<td>00150229</td>
<td>0 – 200</td>
<td></td>
</tr>
<tr>
<td>DSG500</td>
<td>00150230</td>
<td>0 – 500</td>
<td></td>
</tr>
<tr>
<td>DSG1000</td>
<td>00150231</td>
<td>0 – 1000</td>
<td></td>
</tr>
<tr>
<td>DSG2000</td>
<td>00150684</td>
<td>0 – 2000</td>
<td></td>
</tr>
<tr>
<td>DSG4000</td>
<td>00150685</td>
<td>0 – 4000</td>
<td></td>
</tr>
<tr>
<td>DSG6000</td>
<td>00150694</td>
<td>0 – 6000</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

**Connection / Wiring**

**Voltage supply**

- 15-30 V DC
- 24V AC 15 %
MAL
AIR VELOCITY SENSORS

For non-aggressive, gaseous media (air conditioning / clean room technology).

Depending on the detected air velocity, the speed of Ziehl-Abegg fans is controlled by means of a Ziehl-Abegg control unit.

The MAL differential pressure sensors are supplied with 24V from a Ziehl-Abegg control unit.

Through the output of a 0-10V signal (proportional to measuring range), the measured value is transmitted to the Ziehl-Abegg control unit. The MAL sensors are active sensors.

<table>
<thead>
<tr>
<th>Type</th>
<th>Art No.</th>
<th>Protection Class</th>
<th>Measuring Range</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAL 1</td>
<td>384008</td>
<td>IP 40</td>
<td>0-1 m/s</td>
<td></td>
</tr>
<tr>
<td>MAL 1</td>
<td>384019</td>
<td>IP 40</td>
<td>0-1 m/s</td>
<td>with test certificate</td>
</tr>
<tr>
<td>MAL 1 - X</td>
<td>384018</td>
<td>IP 40</td>
<td>0-1 m/s</td>
<td>with sensing element split via the cable (2m)</td>
</tr>
<tr>
<td>MAL 1 - X</td>
<td>384021</td>
<td>IP 40</td>
<td>0-1 m/s</td>
<td>with sensing element split via the cable (2m) with test certificate</td>
</tr>
<tr>
<td>MAL 10</td>
<td>384009</td>
<td>IP 40</td>
<td>0-10 m/s</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions

Connection / Wiring

Voltage supply
MAL1: 15...24 V DC +15/-5 %
24 V AC ±10 %

MAL10:
24 V DC ±20 %
24 V AC ±10 %

Output
0...10 V
(I_{\text{max}} < 1 mA)
MCFTG-3AV
CO2, HUMIDITY, TEMPERATURE SENSOR

Combined sensor for the measurement of CO2 concentration, relative humidity and temperature. Example applications: Office buildings, conference rooms, churches and classrooms, with measured values displayed.

The CO2 concentration, humidity and temperature can be measured separately or combined. Depending on the detected value, the speed of Ziehl-Abegg fans, is controlled by a means of a Ziehl-Abegg control unit. The sensor is supplied with 24V from a mains adapter. For each measured variable one 0-10V output is available which communicates the value. The value is also shown rotationally on the integrated display.

Features / Benefits

Humidity: 10-90 %.
Temperature: 0 to +50 °C.

- 3 analogue outputs: For each measuring range 0-10V.
- Housing protection class IP 20.
- Housing dimensions (WxHxD) 85x100x26 mm.

Connection / Wiring

Accessory
Step Power - Art. no: 380067
UNIcon CXE/AV(E)
UNIVERSAL CONTROL MODULE

All Ziehl-Abegg sensors can be evaluated with the CXE/AV(E) control module. Control is carried out in relation to the entered target value through triggering of external speed controllers using a 0-10V signal (2 x 0-10V outputs are integrated). The control module is available in different versions, for different power supplies. Operation as close loop controller.

Applications

- Air conditioning.
- Clean room technology.
- Refrigeration.
- Special applications.

Acquisition of the value and control to the target value selectively with following sensors:

- Pressure sensors MBG refrigerant pressure 0-30 / 0-50 bar.
- Temperature sensors TF +27 to +75 °C.
- Temperature sensor MTG-120V +10 to +120 °C.
- Differential pressure sensor DSG 0-6000 Pa / air volume m³/h.
- Air velocity sensors MAL 0-1 / 0-10 m/s.
- Sensors with output signal: 0-10V / 0-20 mA / 4-20 mA.
  Target value (e.g. air humidity, concentration of toxins, CO2, etc.) depending on sensor measurement range.

Features

Multifunctional plaintext display, various menu languages can be selected.

- Integrated process control: air pressure, air velocity, air volume, temperature, refrigerant pressure, etc.
- Simple start-up operation through selectable, preset operating modes.
- Connection facility for 2 sensors.
- When one sensor is connected, external target-value preset possible via 0-10V.
- Voltage supply for auxiliary devices (24V, max. 120 mA), e.g. for sensors.
- 2 outputs 0-10V for activation of a subsequent speed controller.
- 2 digital outputs (relay) programmable (e.g. status signals, threshold values).
- 5 digital inputs programmable (e.g. enable function, target value 1/2, controller output limitation, automatic/manual switch over, heating/cooling switch over).
- Integration into BUS system via RS485 interface, MODBUS-RTU.

Expansion Possibility: Clock

The control modules CXE/AV(E) can be extended with the Z-Modul RTC, art. no. 380056, to get the function of a real time clock.
### Nominal Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Art No.</th>
<th>Protection Class</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1~ 230V 50/60Hz</td>
<td>CXE/AV</td>
<td>320019</td>
<td>IP 54</td>
</tr>
<tr>
<td></td>
<td>CXE/AVE</td>
<td>320020</td>
<td>IP 54*</td>
</tr>
<tr>
<td>48V DC 24V AC</td>
<td>CXG-48AV</td>
<td>320025</td>
<td>IP 54</td>
</tr>
<tr>
<td></td>
<td>CXG-48AVE</td>
<td>320026</td>
<td>IP 54*</td>
</tr>
<tr>
<td>24V DC</td>
<td>CXG-24AV</td>
<td>320023</td>
<td>IP 54</td>
</tr>
<tr>
<td></td>
<td>CXG-24AVE</td>
<td>320024</td>
<td>IP 54*</td>
</tr>
<tr>
<td>2~ 400V 50/60Hz</td>
<td>CXE/AV</td>
<td>320045</td>
<td>IP 54</td>
</tr>
</tbody>
</table>

*Front side built in

### Connection / Wiring

- [Diagram of Connection / Wiring]

### Dimensions

- [Diagram of Dimensions]
UNIcon CXE/AVC(E)
WITH PROGRAMMABLE CLOCK AND TIMER

All Ziehl-Abegg sensors can be evaluated with the CXE/AVC(E) control module. Control is carried out in relation to the entered target value through triggering of external speed controllers using a 0-10V signal. (2 x 0-10V outputs are integrated).

Operation as close loop controller applications

- Air conditioning.
- Clean room technology.
- Refrigeration.
- Special applications.

Acquisition of the value and control to the target value selectively with following sensors:

- Pressure sensor MBG - refrigerant pressure 0-30 / 0-50 bar.
- Temperature sensors TF +27 to +75 °C.
- Temperature sensor MTG-120V +10 to +120 °C.
- Differential pressure sensor DSG 0-6000 Pa / air volume m³/h.
- Air velocity sensors MAL 0-1 / 0-10 m/s.
- Sensors with output signal: 0-10V / 0-20 mA / 4-20 mA. Target value (e.g. air humidity, concentration of toxins, CO2, etc depending on sensor measurement range).

Features

Multifunctional plaintext display, various menu languages can be selected.

- Integrated clock, timer function programmable.
- Integrated process control: Air pressure, air velocity, air volume, temperature, refrigerant pressure, etc.
- Simple start-up operation through selectable, preset operating modes.
- Connection facility for 2 sensors.
- When one sensor is connected, external target-value preset possible via 0-10V.
- Voltage supply for auxiliary devices (24V, max 120 mA) e.g. for sensors.
- 2 outputs 0-10V for activation of a subsequent speed controller.
- 2 digital outputs (relay) programmable (e.g. status signals, threshold values).
- 5 digital inputs programmable (e.g. enable function, target value 1/2, controller output limitation, automatic/manual switch over, heating/cooling switch over).
- Integration into BUS system via RS485 interface, MODBUS-RTU.

Input for sensors or speed preset

- Pressure sensors refrigeration.
- Temperature sensors.
- Differential pressure sensor.
- Air velocity sensors.
- Combined sensor CO2/humidity /temperature with mains adapter.
Nominal Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Art No.</th>
<th>Protection Class</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1~ 230V 50/60Hz</td>
<td>CXE/AVC</td>
<td>320006</td>
<td>IP 54</td>
</tr>
<tr>
<td></td>
<td>CXE/AVCE</td>
<td>320008</td>
<td>IP 54*</td>
</tr>
<tr>
<td>2~ 400V 50/60Hz</td>
<td>CXE/AVC</td>
<td>320007</td>
<td>IP 54</td>
</tr>
</tbody>
</table>

*Front side built in

Dimensions

Connection / Wiring
UNIcon CTG-150AV
TEMPERATURE CONTROL MODULE

Temperature control for e.g. extraction systems, warm-air heaters, air curtain installations, liquid-cooling, chillers.

- The measured value at the sensor is compared with the adjusted target value, and the controlled value is deduced from this. Controlled output (0-10V) e.g. for activating a speed controller for fans. Fans with integrated controller and input 0-10V can be activated directly.
- Voltage input (10-24V DC) for switch over between Setpoint 1 and Setpoint 2 (e.g. for day / night, summer / winter).
- Alternatively the device can be operated as a temperature sensor. Output 0-10V in this mode proportional to the adjusted measuring range (max. -50 to +150 °C).
- Input for temperature sensor type TF (KTY81-210) or PT1000.

Features / Benefits

- Measuring range -50 to +150 °C.
- Voltage supply 10V to 24V DC electronically protected against faulty polarization.
- Current consumption approx. 6 mA.
- Output voltage (0-10V), Imax = 0.3 mA (short-circuit proof).
- LC Display double-row (max. 16 digits each) Housing cover ABS, bottom Polyamid PA 6.6 fire protection classification UL 94 HB.
- Protection class IP54 according EN 60529.
- Weight approx. 200 g.
- Permissible ambient temperature -10 to +50 °C.
- Permissible rel. humidity 85 % no condensation.
- Interference emission according to EN 61000-6-3.
- Interference immunity EN 61000-6-2.
- Possible settings by three internal keys.
- Mode: sensor, control module.
- Kind of sensor: KTY81-210 or PT1000, sensor offset.
- Minimal and maximal output voltage (0-10V).
- For operation control module: Setpoint 1, Setpoint 2, Pband, Switch-over control function ("Heating" / "Cooling"), Minimum rate of air ON / OFF.
Dimensions

Connection / Wiring

Input
10...24 V DC
($I_{\text{max}} = 6 \text{ mA}$)

Output
0...10 V
($I_{\text{max}} = 0.3 \text{ mA}$)

$R_t = 4 \text{ k}\Omega$

KTY 81-210
PT 1000

0 = Setpoint 1
1 = Setpoint 2

MCTE03K0
05.05.2010
UNIcon CPG-200AV
PRESSURE CONTROL MODULE

The differential pressure (non-aggressive gas) to be measured acts upon a spring supported silicone membrane. Function when the pressure at the "+" connection exceeds the pressure at the "-" connection. A range from 50 Pa to 6000 Pa is covered by 3 models. With each model four calibrated measuring ranges are programmable.

- For operation as pressure sensor the device supplies an output signal (0-10V proportional to the measuring range).
- For operation as air volume sensor the device supplies an output signal (0-10V proportional to the air volume measuring range. Function in combination with axial fans and measuring device in the inlet duct. The controller calculates the air volume of the fan from the K-factor and pressure differential between the suction side and the inlet cone of the fan.
- For operation as control module for pressure or volume the purpose of the device is to reach and maintain the target value set. To accomplish this, the measured value (sensor value) is compared with the adjusted target value, and the controlled value is deduced from this. Voltage input (10-24V DC) for switch over between Setpoint 1 and Setpoint 2 (e.g. for day / night, summer / winter). Controlled output (0-10V) e.g. for activating a speed controller for fans or an EC-fan directly.

Features / Benefits

- Voltage supply 10V-24V DC electronically protected against faulty polarization.
- Current consumption approx. 6 mA.
- Output voltage 0-10V, Imax = 0,3 mA.
- Connection sockets "+", "-": tubing ø 5 / 6 mm.
- LC display double-row (max. 16 digits each).
- Housing cover ABS, bottom Polyamid PA 6.6 fire protection classification UL 94 HB.
- Use position: vertical (measuring depends on position).
- Protection class IP54 according EN 60529.
- Weight approx. 250 g.
- Permissible ambient temperature -10 to +50 °C.
- Overload protection 0.2 bar.
- Static pressure max. 0.2 bar.
- Interference emission according to EN 61000-6-3.
- Interference immunity according to EN 61000-6-2.
- Zero point deviation: < +/- 0.5 %.
- Final value deviation: < +/- 0.5 %.
- Linearity deviation: < +/- 0.25 %.
- Resolution: < 0.1 %.
- Hysteresis: < 1.0 %.
- Possible settings by three internal keys.
- Mode: sensor, control module.
- Measuring range:
  - CPG-200AV: 0…50 / 100 / 150 / 200 Pa.
  - CPG-1000AV: 0…200 / 300 / 500 / 1000 Pa.
  - CPG-6000AV: 0…2000 / 3000 / 4000 / 6000 Pa.
- Air volume measuring range max. 65000 m³/h (depends on selected pressure measuring range and K-Factor).
- Minimal and maximal output voltage (0-10V).
- Sensor offset, K-Factor for air volume measuring.
- For operation control module: Setpoint 1, Setpoint 2, Pband.
Dimensions

Part Number

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPG-200AV</td>
<td>320042</td>
</tr>
<tr>
<td>CPG-1000AV</td>
<td>320043</td>
</tr>
<tr>
<td>CPG-6000AV</td>
<td>320044</td>
</tr>
</tbody>
</table>

Connection / Wiring

**CPG-200/1000/6000AV**

- **Input**: 10...24 V DC (I_{max} = 6 mA)
- **Output**: 0...10 V (I_{max} = 0.3 mA)

**Connections**:

1. +Ub
2. GND
3. A
4. GND
5. +R = 4 kΩ
6. +Δp
7. 0...10 V DC
8. 0 = Setpoint 1
9. 1 = Setpoint 2

**Notes**:

- MCDU02K0
- 07.07.2009
EC Axial Fans
The energy saver amongst fans

The new economic solution since the middle of the 80’s, Ziehl-Abegg has been performing pioneering work in the development and manufacture of efficient EC external rotor motors for fans. Nearly 30 years later, a new era is dawning in EC technology: ECblue. ECblue is Ziehl-Abegg’s third generation of EC motors.

This latest EC technology is setting new standards for control, efficiency and reliability. Ingeniously simple functionality, compact, cutting-edge technology, and user-friendly – these are the main criteria we set for the development of the ECblue series. Meet ECblue and convince yourself of the result! Maximum efficiency — Minimum power consumption. Nowadays, saving energy is more important than ever. Energy costs are exploding; the global climate is changing. Fans with ECblue technology will help lower your operating costs.

Our environment will also appreciate the low power consumption of the ECblue fans – after all, the cleanest energy is the energy that doesn’t need to be generated in the first place! Dependability and reliability are the basic prerequisites for a quality product from Ziehl-Abegg, so the new ECblue energy-saving motors were tested under extreme conditions. Whether they were exposed to shock or vibration tests, constant loads under extreme temperatures or salt-fog tests – the ECblue fans passed all the tests brilliantly. We are 100% convinced of the reliability of the ECblue fans.

Maximum efficiency — Minimum power consumption. Nowadays, saving energy is more important than ever.
Alaskon - Air Movement Products & Expertise

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