Dongguan Wolter Chemco Ventilation Ltd. certifies that the Series EKZS shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Silent Duct Fans

K04

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Silent Duct Fans
EKZS Series

Advantages

- Easy installation via 20 mm standard flange
- Fans can be installed in any position
- 3-speed controllable by electronic controller
- Low noise
- Compact design

Design features

Duct fans combine the advantages of axial fans, straight airflow and easy installation, with those of centrifugal fans, such as high pressure stability, low noise level and high efficiency.

Casing

EKZS - Aluminium profile and plastic corners made from reinforced polyamide. Panels are made from galvanized sheet steel with sound absorbing insulation made of clad fibre glass.

Impeller

Forward-curved centrifugal impellers made of sheet steel. The impellers are balanced at two levels according to G 2.5 (DIN ISO 1940 / AMCA 204-05).

Outlet flange

The flange is made of hot dip galvanized steel plate bending, TOX or welding connection; Fan outlet through galvanized sheet hard-wired connection and flange.

Electrical connection

The standard motors are wired to an external terminal box (IP54).

Fan performance curves

The performance curves of these fans have been established using a test chamber according to AMCA 210 - Figure 12, installation type B (free inlet, ducted outlet). The curves indicate the static pressure increase \( \Delta p \) as a function of the volume flow. The outlet velocity \( c \) increase shown in the performance curves refers to the cross-sectional area of the fan outlet.

Sound levels

The figures given in the performance curves represent the A-weighted sound power levels \( L_{WA5} \) in decibel at the inlet side. The A-weighted sound power level at the outlet side \( L_{WA6} \), according to DIN 45 635 (or GB/T 2888-2008), part 38, can be calculated via the relative sound power levels or can be obtained by the following approximation calculation:

\[
L_{WA6} = L_{WA5} + 6 \text{ dB(A)}
\]

The A-weighted sound power level radiated from the casing \( L_{WA2} \), according to DIN 45 635 (or GB/T 2888-2008), part 38, can be calculated via the relative sound power levels (see below) or is obtained approximately as follows:

\[
L_{WA2} = L_{WA6} - 25 \text{ dB(A)}
\]

It is important to note that reflection and environmental characteristics as well as resonant frequencies influence the sound pressure levels in different ways. In order to avoid structure-borne noise transfer to a connected duct system we recommend the use of flexible connections. The A-weighted octave sound power level is important for the choice of suitable sound attenuators. It is obtained as follows:

\[
L_{WAokt} = L_{WA6} + L_{WArel}
\]

The relative A-weighted octave sound power level \( L_{WArel} \) at octave medium frequency can be taken from the table on the preceding page. These levels have been established at 0.5 x Vmax.

Fan type code

<table>
<thead>
<tr>
<th>EKZS</th>
<th>7 - 7 I (90W - 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width of Impeller</td>
<td>Diameter of Impeller</td>
</tr>
<tr>
<td>Number of poles</td>
<td>Motor power</td>
</tr>
<tr>
<td>Model mark</td>
<td>Silent duct fan</td>
</tr>
</tbody>
</table>
Performance certified is for installation type B - Free inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

The AMCA certification process is accredited by the American Association for Laboratory Accreditation to the General Requirements for Bodies Operating Product Certification Systems.

The AMCA CRP was developed in response to a need for validated published product performance ratings for power utility fans and dampers and custom-designed site-built louvers, cannot be certified. They can, however, be certified for Bodies Certifying Products, Processes and Services.

Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

AMCA CRP seals can be affixed to equipment and placed in catalogues and sizing/selection software. Additional certifications can be combined into one label.

For Bodies Certifying Products, Processes and Services

Conformity Assessment — Requirements

- Art. Nr.
- Art. Nr.
- Art. Nr.
- Art. Nr.

- fa min
- kg
- °C

- Mmax
- *

- N
- min

- A

- t*

- P

- kW
- \( \Delta P_{fa~min} \)

- I *

- A

- n : 1350 min^{-1}

- C_{elec} : 10 µF

Type: EKZS 7-7I

Art. Nr. - 23 kg

- U : 220 V 50 Hz
- \( t_{h} : \ 40 \ ^\circ\text{C} \)
- IP 20

- \( P_{M\text{max}} : \ 0,372 \ kW \)
- \( \Delta P_{fa~min} : \ 97 \)

- \( I_{s} : \ 2 \ A \)

- \( n : \ 1350 \ \text{min}^{-1} \)

- C_{elec} : 10 µF

Type: EKZS 8-8I

Art. Nr. - 27 kg

- U : 220 V 50 Hz
- \( t_{h} : \ 40 \ ^\circ\text{C} \)
- IP 20

- \( P_{M\text{max}} : \ 0,761 \ kW \)
- \( \Delta P_{fa~min} : \ 0 \)

- \( I_{s} : \ 3,7 \ A \)

- \( n : \ 1200 \ \text{min}^{-1} \)

- C_{elec} : 10 µF

Type: EKZS 9-7I

Art. Nr. - 30 kg

- U : 220 V 50 Hz
- \( t_{h} : \ 40 \ ^\circ\text{C} \)
- IP 20

- \( P_{M\text{max}} : \ 0,861 \ kW \)
- \( \Delta P_{fa~min} : \ 198 \)

- \( I_{s} : \ 4,2 \ A \)

- \( n : \ 1200 \ \text{min}^{-1} \)

- C_{elec} : 10 µF

Type: EKZS 9-9I

Art. Nr. - 31 kg

- U : 220 V 50 Hz
- \( t_{h} : \ 40 \ ^\circ\text{C} \)
- IP 20

- \( P_{M\text{max}} : \ 1,024 \ kW \)
- \( \Delta P_{fa~min} : \ 118 \)

- \( I_{s} : \ 5,0 \ A \)

- \( n : \ 1200 \ \text{min}^{-1} \)

- C_{elec} : 15 µF

Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

K04 V2016/January
**AMCA certifies 21 air movement and control products, which are listed in Table 1.**

The AMCA CRP was developed in response to a need for validated published product performance ratings for buyers, specifiers and users of air movement and control devices. Only after the product has been tested and the cataloged ratings have been approved can manufacturers display performance seals (Figure 1).

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The AMCA Certified Ratings Seal applies to air performance ratings only.

**Performance curves**

**Type:** EKZS 10-8I

- **Art. Nr.:** -
- **U:** 220 V 50 Hz
- **tₘ:** 40 °C
- **Pₘₐₓ:** 1,094 kW
- **ΔPₘₐₙₐₙ:** 259
- **Iₑ:** 4,9 A
- **n:** 1200 min⁻¹
- **Cₑad:** 18 µF
- **Type:** EKZS 10-10I

- **Art. Nr.:** -
- **U:** 220 V 50 Hz
- **tₘ:** 40 °C
- **Pₘₐₓ:** 1,062 kW
- **ΔPₘₐₙₐₙ:** 138
- **Iₑ:** 4,9 A
- **n:** 1200 min⁻¹
- **Cₑad:** 18 µF

**Type:** EKZS 12-9I

- **Art. Nr.:** -
- **U:** 220 V 50 Hz
- **tₘ:** 40 °C
- **Pₘₐₓ:** 1,105 kW
- **ΔPₘₐₙₐₙ:** 151
- **Iₑ:** 5,4 A
- **n:** 900 min⁻¹
- **Cₑad:** 18 µF

**Type:** EKZS 12-12I

- **Art. Nr.:** -
- **U:** 220 V 50 Hz
- **tₘ:** 40 °C
- **Pₘₐₓ:** 1,051 kW
- **ΔPₘₐₙₐₙ:** 103
- **Iₑ:** 5,4 A
- **n:** 900 min⁻¹
- **Cₑad:** 18 µF

Performance certified is for installation type B - Free inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.
We reserve the right to alter measurements without notice in case of technical improvements.