Silent Duct Fans

Taizhou Wolter Ventilator co., 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.

K04

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**Silent Duct Fans**

**EKZS Series**

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**Advantages**

- Easy installation via 20 m 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 galvanised 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).

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**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:

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

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:

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

The A-weighted sound power level \( L_{WA} \) at a distance of 1 metre is obtained approximately by deducting 7 dB(A) from the A-weighted sound power level:

\[
L_{WA1m} \approx L_{WA5} - 7 \text{ dB(A)}
\]

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 \( V_{max} \).

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**Fan type code**

<table>
<thead>
<tr>
<th>EKZS</th>
<th>7 - 7</th>
<th>1 (90W - 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of poles</td>
<td>Motor power</td>
<td>Model mark</td>
</tr>
<tr>
<td>Width of Impeller</td>
<td>Diameter of Impeller</td>
<td>Silent duct fan</td>
</tr>
</tbody>
</table>

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**K04(TZ) V2016/January**
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.

Type: EKZS 7-7I  
Art. Nr. -  23 kg

Type: EKZS 8-8I  
Art. Nr. -  27 kg

Type: EKZS 9-7I  
Art. Nr. -  30 kg

Type: EKZS 9-9I  
Art. Nr. -  31 kg

Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.
AMCA certifies 21 air movement and control products, which are listed in Table 1.

The AMCA certification process is accredited by the American Association for Laboratory Accreditation to the laboratory or in one of AMCA's independent accredited laboratories. After a product has passed three successive tests in accordance with AMCA standards in an AMCA-accredited laboratory, the cataloged ratings have been approved can manufacturers display performance seals (Figure 1).

Take note that all of these products are series produced – designed and fabricated for general-purpose installations in commercial, industrial and residential facilities. Custom products, such as many industrial process/ power utility fans and dampers and custom-designed site-built louvers, cannot be certified. They can, however, be tested in accordance with AMCA standards in an AMCA-accredited laboratory.

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

Performance certified is for installation type B - Free inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test.

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We reserve the right to alter measurements without notice in case of technical improvements.