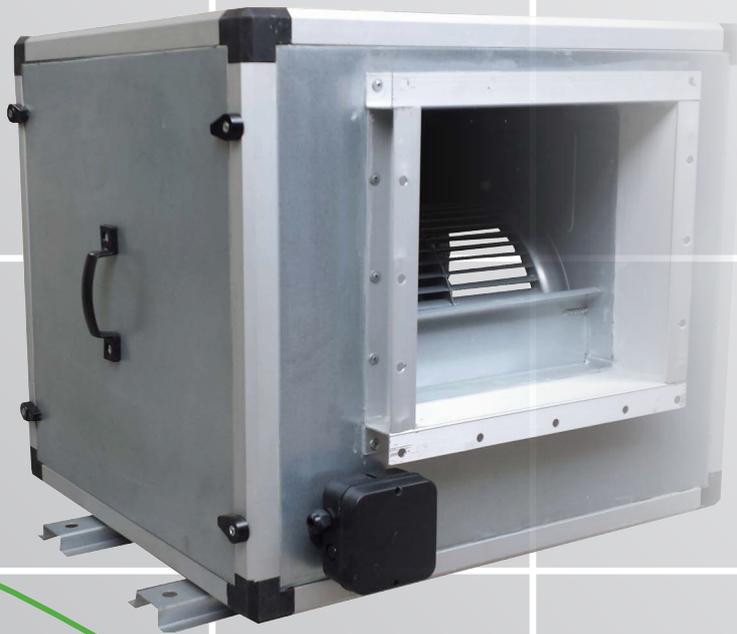


# Silent Duct Fans

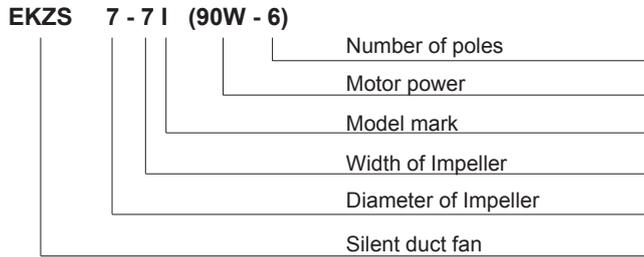


## K04

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.



### Fan type code



### 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 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).

### 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  $\Delta p_{st}$  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 pressure level  $L_{PA}$  at a distance of 1 metre is obtained approximately by deducting 7 dB(A) from the A-weighted sound power level:

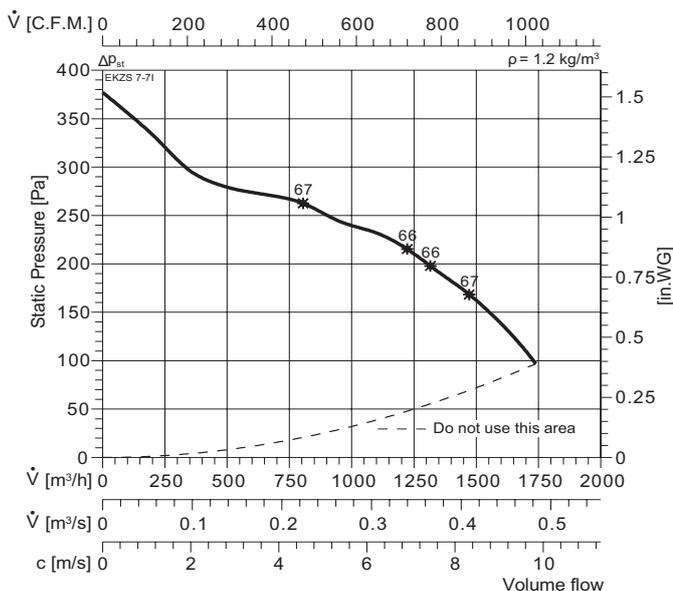
$$L_{PA(1m)} \approx L_{WA2} - 7 \text{ dB(A)}$$

It is important to note that reflexion 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:

$$L_{WAokt} = L_{WA6} + L_{WArel}$$

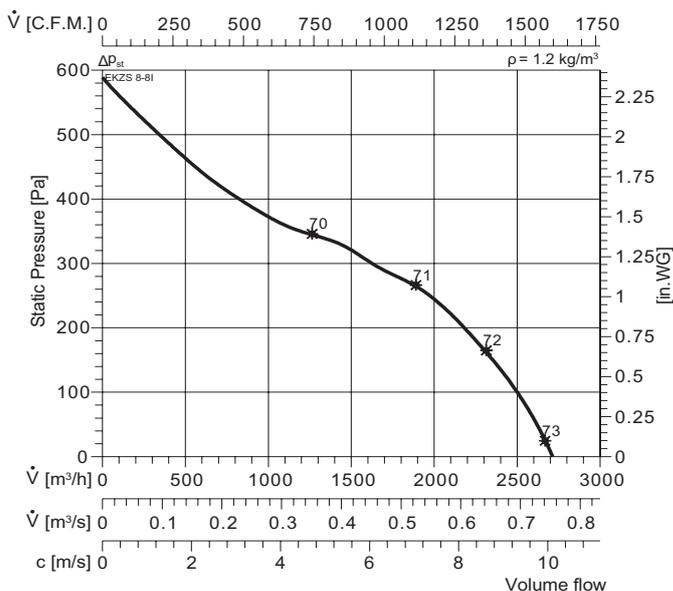
The relative A-weighted octave sound power level  $L_{WArel}$ , at octave medium frequency can be taken from the table on the preceding page. These levels have been established at  $0.5 \times V_{max}$ .

### EKZS 7-7I



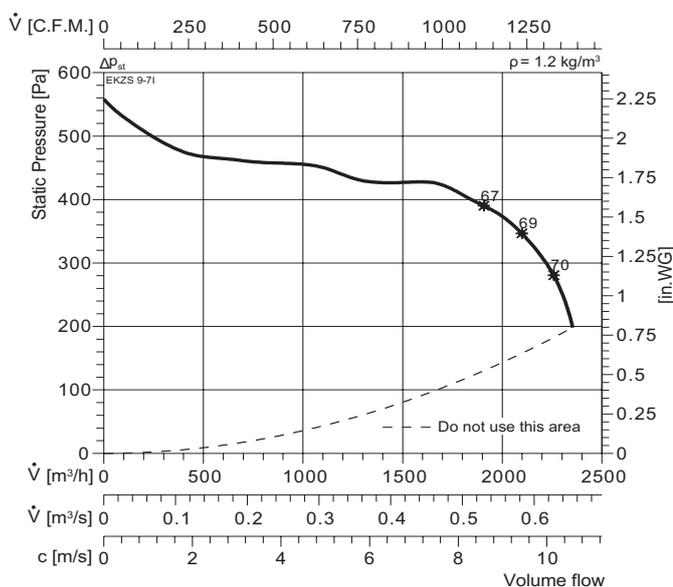
Type:	EKZS 7-7I	Art. Nr.	-		23 kg
U :	220 V 50 Hz	t <sub>R</sub> :	40 °C		IP 20
P <sub>Mmax</sub> :	0,372 kW	Δ p <sub>fa min</sub> :	97		E19
I <sub>N</sub> :	2 A				GS 2
n :	1350 min <sup>-1</sup>				NE 3,2
C <sub>400V</sub> :	10 μF				RPE 06

### EKZS 8-8I



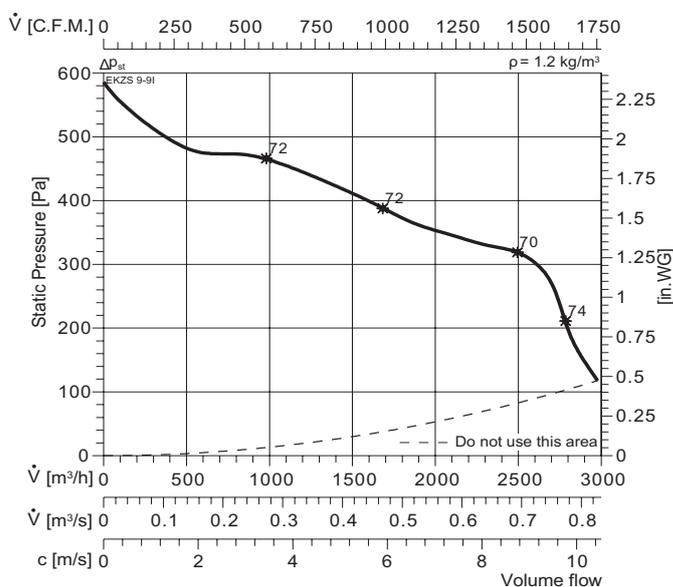
Type:	EKZS 8-8I	Art. Nr.	-		27 kg
U :	220 V 50 Hz	t <sub>R</sub> :	40 °C		IP 20
P <sub>Mmax</sub> :	0,761 kW	Δ p <sub>fa min</sub> :	0		E19
I <sub>N</sub> :	3,7 A				GS 2
n :	1200 min <sup>-1</sup>				NE 5
C <sub>400V</sub> :	10 μF				RPE 09

### EKZS 9-7I



Type:	EKZS 9-7I	Art. Nr.	-		30 kg
U :	220 V 50 Hz	t <sub>R</sub> :	40 °C		IP 20
P <sub>Mmax</sub> :	0,861 kW	Δ p <sub>fa min</sub> :	198		E19
I <sub>N</sub> :	4,2 A				GS 2
n :	1200 min <sup>-1</sup>				NE 5
C <sub>400V</sub> :	10 μF				RPE 09

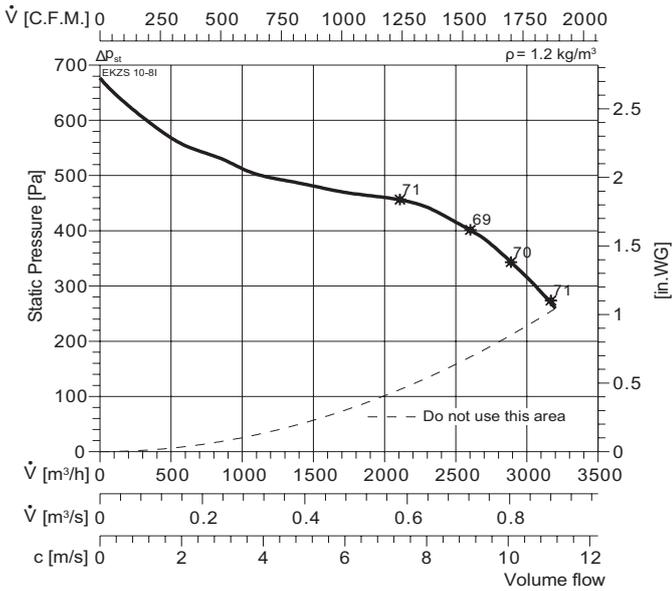
### EKZS 9-9I



Type:	EKZS 9-9I	Art. Nr.	-		31 kg
U :	220 V 50 Hz	t <sub>R</sub> :	40 °C		IP 20
P <sub>Mmax</sub> :	1,024 kW	Δ p <sub>fa min</sub> :	118		E19
I <sub>N</sub> :	5,0 A				GS 2
n :	1200 min <sup>-1</sup>				NE 5
C <sub>400V</sub> :	15 μF				RPE 09

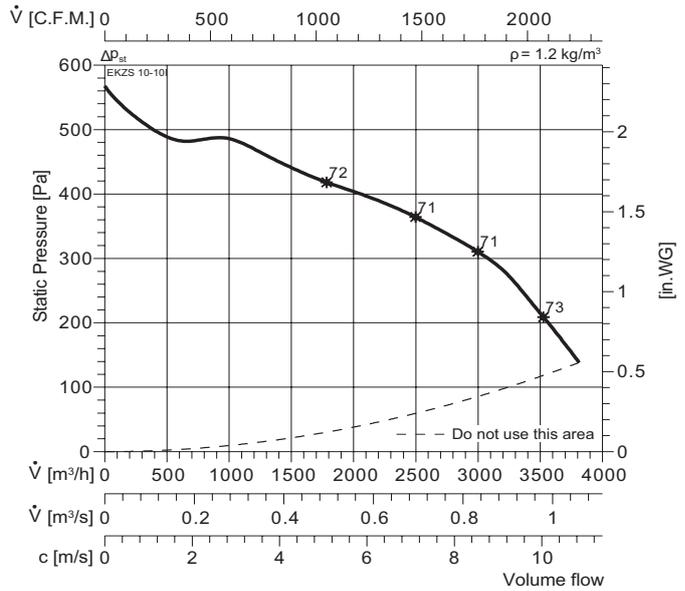
Performance certified is for installation type B - Free inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

### EKZS 10-8I



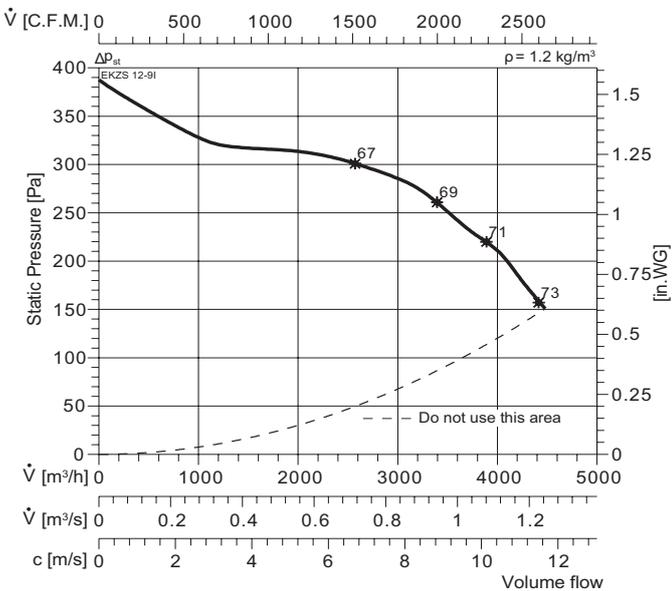
Type:	EKZS 10-8I	Art. Nr.	-		36 kg
U :	220 V 50 Hz	t <sub>R</sub> :	40 °C		IP 20
P <sub>Mmax</sub> :	1,094 kW	Δ p <sub>fa min</sub> :	259		E19
I <sub>N</sub> :	4,9 A				GS 2
n :	1200 min <sup>-1</sup>				NE 5
C <sub>400V</sub> :	18 μF				RPE 09

### EKZS 10-10I



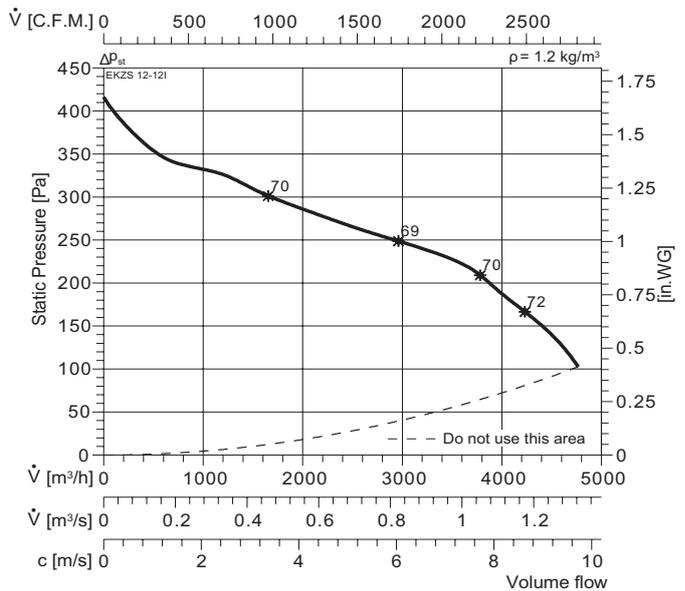
Type:	EKZS 10-10I	Art. Nr.	-		37 kg
U :	220 V 50 Hz	t <sub>R</sub> :	40 °C		IP 20
P <sub>Mmax</sub> :	1,062 kW	Δ p <sub>fa min</sub> :	138		E19
I <sub>N</sub> :	4,9 A				GS 2
n :	1200 min <sup>-1</sup>				NE 5
C <sub>400V</sub> :	18 μF				RPE 09

### EKZS 12-9I



Type:	EKZS 12-9I	Art. Nr.	-		50 kg
U :	220 V 50 Hz	t <sub>R</sub> :	40 °C		IP 20
P <sub>Mmax</sub> :	1,105 kW	Δ p <sub>fa min</sub> :	151		E19
I <sub>N</sub> :	5,4 A				GS 2
n :	900 min <sup>-1</sup>				NE 7,5
C <sub>400V</sub> :	18 μF				SAE 7

### EKZS 12-12I

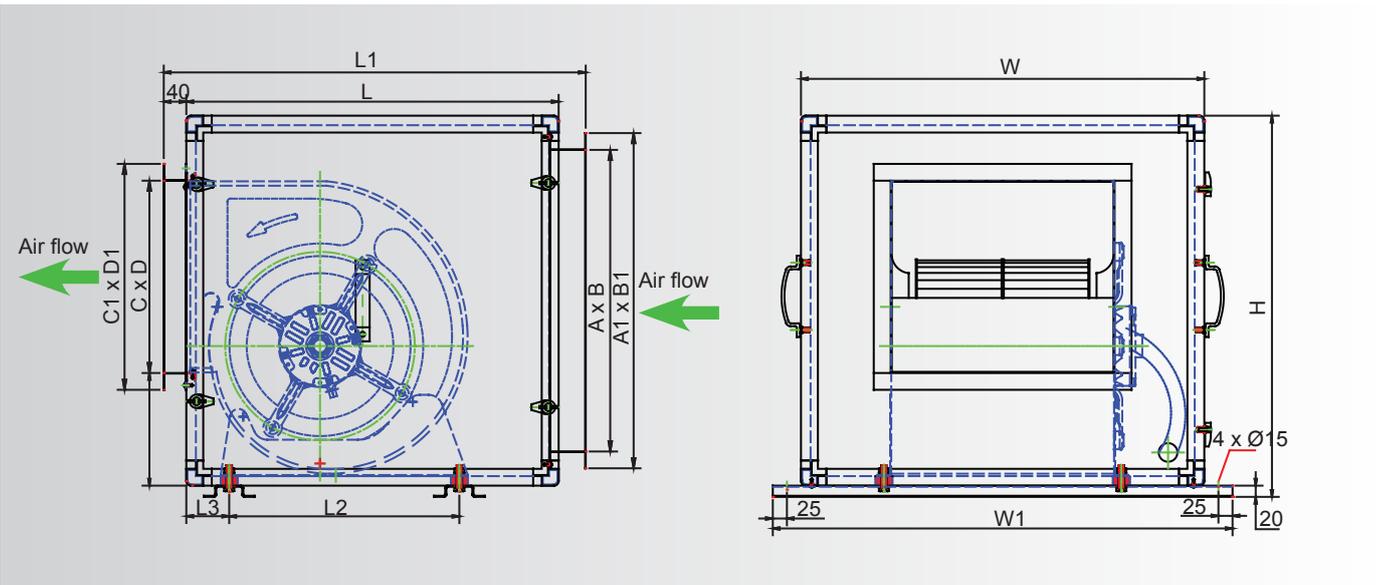


Type:	EKZS 12-12I	Art. Nr.	-		52 kg
U :	220 V 50 Hz	t <sub>R</sub> :	40 °C		IP 20
P <sub>Mmax</sub> :	1,051 kW	Δ p <sub>fa min</sub> :	103		E19
I <sub>N</sub> :	5,4 A				GS 2
n :	900 min <sup>-1</sup>				NE 7,5
C <sub>400V</sub> :	18 μF				SAE 7

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.



EKZS



Size	A	A1	B	B1	C	C1	D	D1	H	L	L1	L2	L3	W	W1
-	[mm]														
7-7I	378	438	318	378	234	294	210	270	460	440	528	190	81	500	600
8-8I	408	468	358	418	289	349	258	318	500	480	568	220	81	530	630
9-7I	428	488	378	438	234	294	264	324	520	500	588	240	71	550	650
9-9I	428	488	378	438	300	360	264	324	520	500	588	240	71	550	650
10-8I	518	578	428	488	272	332	293	353	570	550	638	240	90	640	740
10-10I	518	578	428	488	333	393	293	353	570	550	638	240	90	640	740
12-9I	593	653	538	598	311	371	343	403	680	660	748	408	76	715	815
12-12I	593	653	538	598	397	457	343	403	680	660	748	408	76	715	815

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

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Reference: **K04**, V2016/January, Printed in January, 2016