SC Sound Attenuating Chamber



■ Features

It is installed on the outlet or inlet of the air conditioner and fan to control turbulent flow and reduce noise. The SCF type is used for low-speed ducts, the SCP type for high-speed ducts and SCF type for clean rooms. An angle bracket is installed for robust structures and convenience. It is designed to use different interior material and installation methods depending on the main frequency of the air conditioner and fan. The noise attenuation of the sound chamber is in proportion to the sound-absorption rate of the interior material and installation area, but is in inverse proportion to the area of duct exit. It offers excellent sound attenuation in a medium/high frequency range.

■ Model denotation method

SC □ - □ X □ X □ X □

① ② ③ ④ ⑤

① Sound Absorption Material Protection Method
② Sound Absorption Material Thickness(mm)
③ Sound Attenuating Chamber Width(mm)
④ Sound Attenuating Hight(mm)
⑤ Sound Attenuating Length(mm)

■ Sound Attenuating amount(R)

$$R=10log\left\{\frac{1}{S_e\left(\frac{COS\theta}{2\pi d^2}+\frac{1-\bar{\alpha}}{\bar{\alpha}S_w}\right)}\right\}=10log\left\{\frac{A}{S_e}\right\}$$

Here $\bar{\alpha}$:average absorption of the plenum lining
S_e :plenum inlet or exit area(m² or ft²)
S_W :plenum Wall area(m² or ft²)
d :distance from input to output(m² or ft²)
θ :(w-ℓ)²+h²(m² or ft²)
A :h/d

SE Sound Attenuating Elbow



■ Features

The sound attenuating elbow is installed in a right-angled corner to reduce noise and turbulent flow. The elbow interior material is attached only on the sides. Its thickness should be about 10% of the breadth of the duct with the length at least twice as as the duct. Sometimes, the turning vane is installed to reduce turbulent flow. In general, it works better in the medium/high frequency range, offering attenuation of up to 10dB in 500~1000Hz.

■ Model denotation method

SE □ - □ X □

① ② ③

① Sound Aborption Material Protection Method
② Sound Attenuating Elbow Width(mm)
③ Sound Attenuating Elbow Hight(mm)

■ Absorption Material Protection Method

G : GLASSWOOL + GLASS CLOTH
P : GLASSWOOL + GLASS CLOTH + PERFORATED PLATE
F : GLASSWOOL + GLASS CLOTH+ PE FILM + PERFORATED PLATE

■ Insertion Loss of Elbows

Elbow Type / Application	Square Elbow				Round Elow
	Without Turning vanes		With Turning vanes		Without Turning vanes
	Unlined Elbows	lined Elbows	Unlined Elbows	lined Elbows	Unlined Elbows
*fw<48	0	0	0	0	0
48≤fw<96	1	1	1	1	1
96≤fw<190	5	6	4	4	2
190≤fw<380	8	11	6	7	3
380≤fw<760	4	10	4	7	3
Fw≥760	3	10	4	7	3

* fw = f(Center Frequency:kHz) X w(Elbow Width:㎜)