

Sound Attenuators for HVAC Noise Control

Rectangular Fibrous Fill | Circular Silencer | Packless Silencer
Elbow Silencer | Cross Talk Silencer | Fire Rated Attenuator



Sound Attenuator

CVS manufactured SAFE4 Sound Attenuators have been designed to provide noise control solutions to the noise that are generated from ventilation and air conditioning systems. SAFE4 Sound Attenuators have been tested and assessed against standard ASTM E477-13 and published performance criteria shall include Static Insertion Loss, Regenerated Noise and Dynamic Pressure Loss.

TYPES OF SOUND ATTENUATORS

RF - RECTANGULAR FIBROUS FILL

One of the widely used attenuator are the Rectangular Fibrous Fill Sound Attenuators. The RF type Rectangular Fibrous Fill Silencer can provide broad based attenuation across the octave band frequency to provide maximum insertion loss with minimal overall pressure loss.



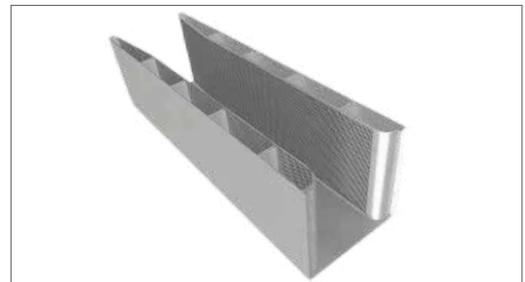
CF - CIRCULAR SILENCER

CF-Circular Silencers are commonly used as attenuators in fans and circular ductwork. The silencer are available in two models CFP - with pod and CFS - without pod based on design. The CF model attenuators can be offered at varying diameter and lengths.



RP - PACKLESS DUCT SILENCER

RP-Packless Duct Silencers are the perfect choice of attenuator in areas where contamination cannot be allowed in the airstream which may arise due to fibrous infill in regular sound attenuator. RP model attenuators will be fabricated to provide maximum sound attenuation without the usage of acoustic infill media



EF - ELBOW SILENCERS

EF-Elbow Silencers are designed to provide maximum sound attenuation in areas with space restriction and limited duct run. The radius bend will provide additional attenuation in mid range of the octave band frequency



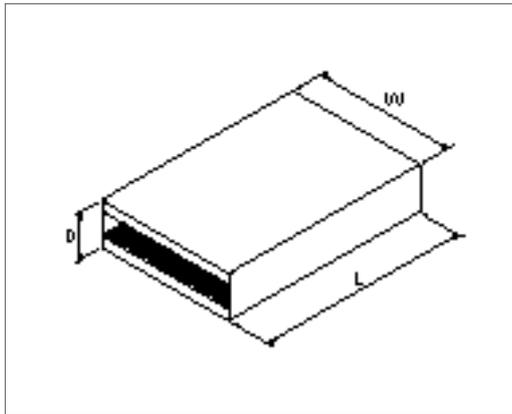
CT - CROSSTALK ATTENUATOR

CT-Crosstalk Attenuators have been designed to provide high level of attenuation with minimum airflow resistance. It is most widely used to reduce transmission of noise between adjacent rooms in buildings. CVS offers four models of CTZ, CTL, CTU and CTS each of which offers maximum attenuation and can be chosen based on design criteria.

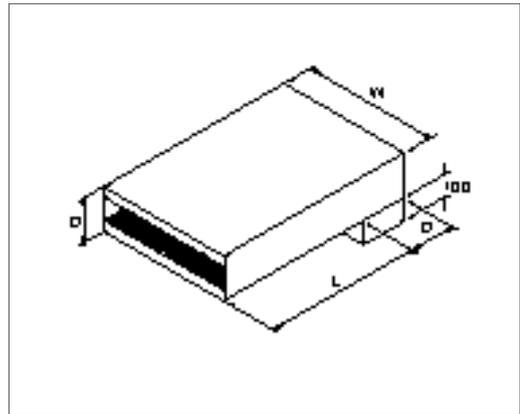


Sound Attenuator

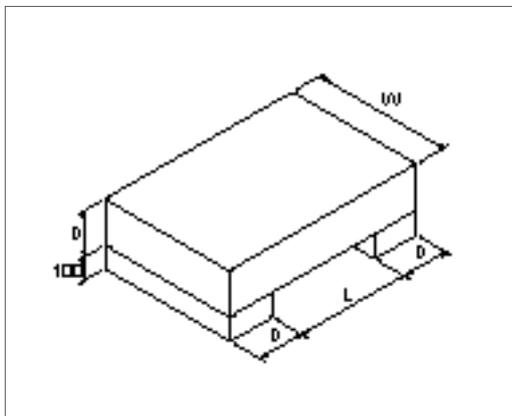
MODEL: CTS



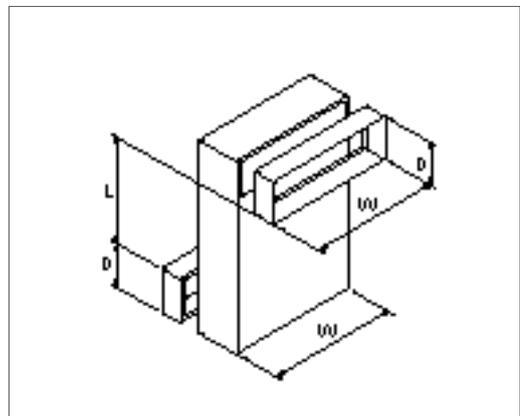
MODEL: CTL



MODEL: CTU



MODEL: CTZ



SPECIFICATIONS

GENERAL

CVS range of silencers are designed to provide solutions to any and all HVAC noise control applications by providing variations of modules by varying the free cross section area to ensure maximum airflow exposure to baffles. Each silencer module has been developed to maximize insertion loss with simplest design features to ensure minimal pressure drop

MATERIALS

Casing:

Casing of silencers can be made using:

- Galvanized Steel Sheet
- Stainless Steel SS304L/SS316L
- Aluminium
- Aluzinc

Fire Rated Silencers can be fabricated only in Galvanized Steel and Stainless Steel SS304/SS316.

Infill Material:

The infill acoustic media shall be comprised of short fiber free inorganic glass fiber with long resilient fibers, bonded with thermosetting resin. Glass fiber is packed with minimum 5% compression to eliminate voids and settling. The media used is non hygroscopic and inert.

Combustion ratings for acoustic media shall be equal to or less than the combustion ratings noted below when tested in accordance with ASTM E84 and UL723

Flamespread Classification.....	20
Smoke Development Rating.....	20

CONSTRUCTION STANDARDS

All silencer shall be fabricated in accordance with SMACNA standard recommendations for high pressure ductwork. Standard casing provided will be able to withstand most pressure class requirements. The silencer shall be composed of industry standard fasteners to hold the unit together.

Sound attenuators will follow airtight construction which will be ensured by the usage of sealant in order to provide maximum performance.

Rectangular silencers that exceed a width or height dimension of 2500 mm shall be built with multiple sections that are field assembled into a blank that matches the duct dimension.

SST SELECTION SOFTWARE

The SST Selection Software consists of various tools to accurately calculate the insertion losses generated by each component and predicts the selection of silencer required to meet the necessary design criteria within the given size range and other design noise level specification.

The SST Selection Software can propose silencers based on Equipment Noise Level, Insertion Loss and generate Datasheet, Schedule consisting Dynamic Insertion Loss, Regenerated Noise and Pressure Loss.

All results are generated based on test results that has been tested in accordance with ASTM E477-13 standards in a NVLAP accredited testing laboratory.

AERODYNAMIC PERFORMANCE

Pressure loss will not exceed that of that what has been mentioned in the schedule and ideally it has been considered not to exceed 85 Pa.

ACOUSTIC PERFORMANCE

All Silencer has been tested in accordance to ASTM E477-13 test standard in a NVLAP accredited test facility. Acousting rating shall include Dynamic Insertion loss (DIL) and Regeneration Noise.

RF, CF, and EF range of silencers shall be AMCA certified. Fire Rated Silencers have been tested at Warringtonfire and has been accredited with Certifire CF761.



Sound Attenuator

SST SELECTION SOFTWARE

Silencer performance

	50	100	200	300	35	45	55	65	
Loss	0	0	0	0	0	0	0	0	0 4000
IL (dB)	0	0	0	0	0	0	0	0	
Loss (dB)	0	0	0	0	0	0	0	0	
Loss (dB) (with 0.5m Distance Correction)									0 500
									0 100
									Selected

Technical requirements

Silencer Shape

Fill Type

Model Name

Pressure Loss Factor

Min. Width (mm)

Max. Width * (mm)

Min. Height * (mm)

Max. Height * (mm)

Max. Length (mm)

Air Volume * l/s (lps)

Max. total pressure loss (Pa)

Insertion Loss Tolerance (dB)

Pressure Drop Tolerance (Pa)

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Product Range

- ▶ Fire-Resisting Ductwork (BS & EN)
- ▶ Fire-rated Insulation (ASTM & UL)
- ▶ Sound Attenuators (ASTM & BS)
- ▶ VAV Boxes (AHRI)
- ▶ Life Safety Dampers (UL)
- ▶ Control Dampers (AMCA & BS)
- ▶ Access Doors (BS & EN)
- ▶ Louvers (AMCA)
- ▶ Smoke Exhaust, Building, Car Park & Tunnel Ventilation Fans (AMCA & EN)
- ▶ Domestic and Industrial Ventilation Fans
- ▶ AHU, FAHU, FCU, RTU, ERV & Ecology Units (Eurovent, TUV & AHRI)
- ▶ Electrostatic Precipitators (ESPs) & UL Listed Air Filters (UL)

Our Brands



Non-Coated Fire-Resisting Ductwork
& Life Safety Dampers



Coated Fire-Resisting
Ductwork



Control Dampers, Louvers,
Sound Attenuators & VAV Boxes



Fire-rated Insulation

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