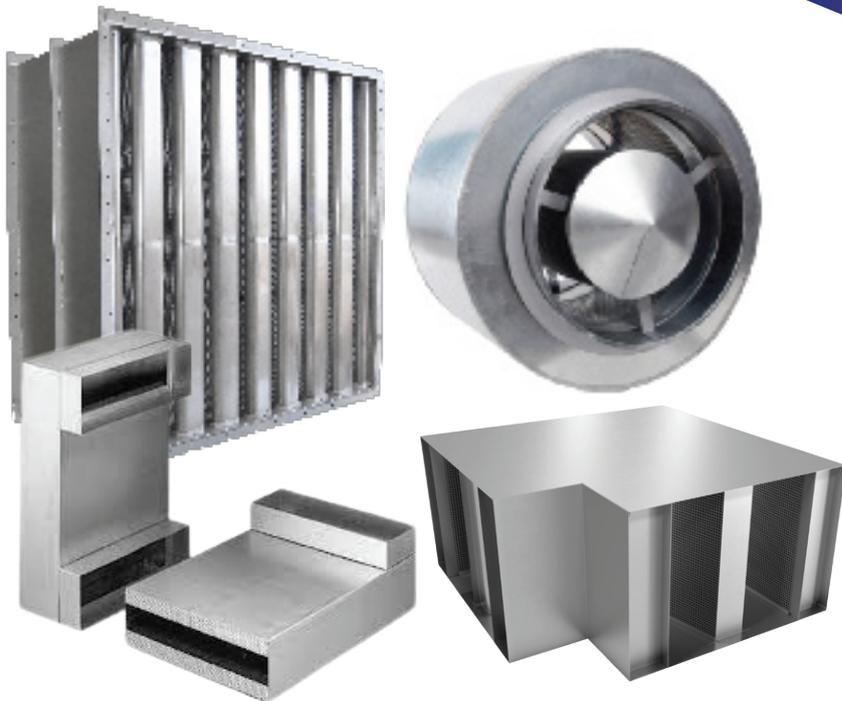


# Duct Silencers for HVAC Noise Control

Rectangular Silencer | Circular Silencer | Packless Silencer  
Elbow Silencer | Cross Talk Silencer | SAFE4 Fire-rated Silencer



# Duct Silencer

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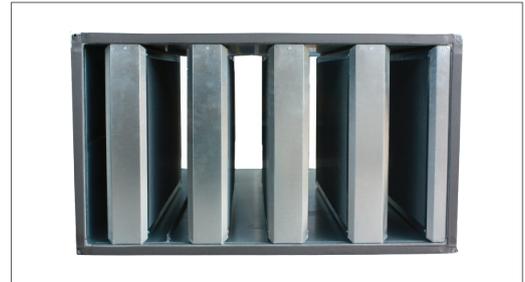
CVS Duct Silencers have been designed to provide noise control solutions to the noise that are generated from ventilation and air conditioning systems. SAFE4 Duct Silencers have been tested and assessed against ASTM E477-13 and published performance criteria shall include Static Insertion Loss, Regenerated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

## TYPES OF DUCT SILENCER

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### RF- RECTANGULAR FIBROUS SILENCER

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 drop to be replaced with pressure drop.



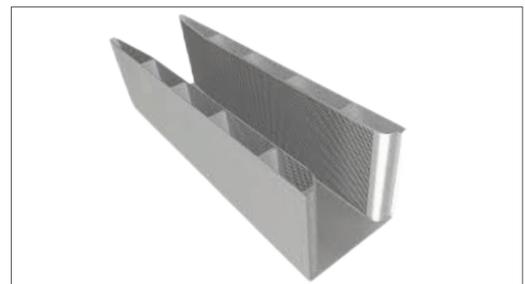
### CF - CIRCULAR SILENCER

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 can be offered in varying dimensions to suit ductwork.



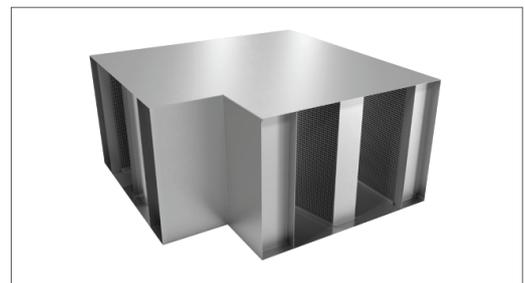
### RP - RECTANGULAR PACKLESS DUCT SILENCER

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 use of absorptive media.



### EF - ELBOW SILENCERS

EF-Elbow Silencers are designed to provide maximum sound attenuation in areas where space is restricted and regular straight silencer cannot be accommodated. The radius bend will provide additional attenuation in mid range of the octave band frequency



# Duct Silencer

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## 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.



## RA- RETURN AIR SILENCER

RA- Return Air silencer has been designed and tested for return air ventilation grilles in offices, conference rooms, school rooms, theaters, hotels and motels, libraries, auditoriums and broadcasting studios. Model RA silencer's slim and compact shape may be used to small space requirements. The Model RA silencer is available in square or rectangular shape and is non-directional to air or sound.



## SPECIFICATIONS

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### 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 10% 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.

## SAFE4 FIRE RATED CONSTRUCTION

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.

## 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.

### Acoustic Calculations

 Rectangular Straight Duct	 Rectangular Radius Elbow	 Rectangular Mitre Elbow No Vents	 Rectangular Mitre Elbow With Vents
 Circular Straight Duct	 Circular Radius Elbow	 Circular Mitre Elbow	 Damper
 Fourway Cross Junction	 Tee Junction	 Takeoff Junction	 Plenum Chamber
 X-Junction	 Insulated Flexible Duct	 Rectangular Breakout	 90° BRANCH
 Circular Breakout	 Room Effect	 Rigid Lagging	 Limp Lagging
 Ceiling Loss Data	 End Reflection Loss	 NC Value	 NR Value
 dB & dBA Calculator	 Noise Addition	 Terminal Unit	 User Defined Device
 Wall or Floor Transmission	 Hole In Wall	 Outdoor Noise Transmission	

# Duct Silencer

## SST SELECTION SOFTWARE

### Silencer performance

	63	125	250	500	1K	2K	4K	8K	
Lw	0	0	0	0	0	0	0	0	0 dB(A)
IL (Required)	0	0	0	0	0	0	0	0	
Lw (Required)	99	99	99	99	99	99	99	99	
Lw <input type="checkbox"/> State Octave Outlet Distance Correction									0 dBA 0 (m) - Select -
	dB	dB	dB	dB	dB	dB	dB	dB	

### Technical requirements

Silencer Shape	<input type="text" value="Rectangular"/>	Air Volume *	<input type="text" value="0"/> l/s	(lps)
Fill Type	<input type="text" value="Standard Fill"/>	Max. total pressure loss	<input type="text" value="0"/>	(Pa)
Model Name	<input type="text" value="All"/>	Insertion Loss Tolerance	<input type="text" value="0"/>	(dB)
Pressure Loss Factor	<input type="text" value="1.00"/> ?	Pressure Drop Tolerance	<input type="text" value="0"/>	(Pa)
Min. Width	<input type="text" value="0"/> (mm)			
Max. Width *	<input type="text" value="0"/> (mm)			
Min. Height *	<input type="text" value="0"/> (mm)			
Max. Height *	<input type="text" value="0"/> (mm)			
Max. Length	<input type="range" value="0"/> (mm)			

Search

Cancel

# 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



Control Dampers, Louvers,  
Sound Attenuators & VAV Boxes



Non-Coated Fire-Resisting Ductwork  
& Life Safety Dampers



Fire-rated Insulation

Building & Industry



Smoke Exhaust, Car Park &  
Tunnel Ventilation



General Ventilation



Global Clean Air  
Solutions Provider

**Central Ventilation System  
Co. L.L.C**

Al Wasit Street,  
Industrial Area 2,  
Sharjah, U.A.E

**CVS Arabia L.L.C**

2nd Industrial City,  
Dammam 31952,  
K.S.A

**Badr and Asfour  
Company For Engineering  
and Metal Industries**

Al Minya Industrial Zone,  
Al Minya Governorate  
2427606, Egypt

**Central Ventilation Systems  
Co. W.L.L.**

Street 9,  
Industrial Area  
Doha, Qatar



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