**Description**

**VIBRO-ACOUSTICS’ CD SILENCERS** use acoustic grade glass fiber as the principal sound-absorbing mechanism. They incorporate glass fiber external to the duct connection size.

Some models incorporate a bullet shaped center body held in place and centered by trusses. Duct outer diameter and gap factor also vary depending on the pressure drop and attenuation requirements.

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**Model Names**

Vibro-Acoustics’ silencer model names are coded to help identify their recommended application range.

*The lower the Frequency Indicator, the better the silencer’s insertion loss in the low frequency range.

<table>
<thead>
<tr>
<th>Silencer Type</th>
<th>CD -</th>
<th>Circular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Velocity Range</td>
<td>LV, MV, HV, UHV</td>
<td>CD-LV 0-1500 fpm CD-HV 3000-5000 fpm</td>
</tr>
<tr>
<td>Frequency Indicator*</td>
<td>F1, F2</td>
<td>CD-MV 1500-3000 fpm CD-UHV 5000-7000 fpm</td>
</tr>
</tbody>
</table>

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**Applications**

> In supply, return and exhaust ductwork
> In fan plenums and air handling units (both supply and return)
> On cooling towers, air-cooled chillers, etc.
> On the receiver side of valves, dampers, terminal boxes, etc.
> Economical substitution for acoustically lined duct
> Normal recommended duct velocity range
Features and Benefits

> Available in any diameter to “fit-the-duct”
> Can be selected to suit the acoustic, space, or energy-cost requirements
> Construction quality and aerodynamic design optimized to give reliable performance, best acoustics, lowest pressure drop and lowest overall cost
> Designs can be optimized to minimize extra pressure losses due to poor inlet or discharge flow conditions (e.g. near fans, elbows, etc.)
> When break-out noise is of prime concern CD silencers may be appropriate selections. They may require mass/stiffness added to their outer casing. Refer to Silencer Selection Instructions for proper silencer location.

Cautions/When Not to Use CD Silencers

> When 3-5 equivalent duct diameters of straight, unobstructed duct are not available on both the silencer’s inlet or discharge; consider using Elbow Silencers, Transitional Silencers or Fan Silencers.
> When acoustical media in the airstream is of concern; see Film Lined Silencers and No-Media Silencers.

Performance Data/Testing

See Performance Data section.
Vibro-Acoustics’ 5th generation aero-acoustic laboratory was the first laboratory to be NVLAP accredited (Lab Code 100424-0) for the ASTM E-477 silencer test code. NVLAP is administered by the U.S. Dept. of Commerce.

Silencer Selection and Location

Vibro-Acoustics offers multiple selection methods, from our complete analysis service to Do-It-Yourself quick selections. Refer to Silencer Selection Instructions for details.

Standard Construction Features

> Galvanized, lockformed casings for class I construction
> Galvanized or prime painted mild steel, stitchwelded and sealed casings for class II construction
> Prime painted, mild steel continuously welded casings for class III construction
> 2” slip connection at each end
> Centerbody “bullet” centered and supported in airstream by steel struts
> Centerbodies have either spun aerodynamic noses or truncated nose cones
> Centerbodies have perforated diffuser tail sections
> Casing and centerbodies filled with acoustic grade glass fiber under minimum 15% compression

Special Construction Options

> Heavier gauge casings and perforated metal
> Continuously welded casings
> Special materials (e.g. stainless steel, aluminum)
> Flanges
> Access doors
> Media protection: glass fiber cloth, film liner
> High transmission loss (HTL) casings to prevent break-out/break-in noise
> Built in transitions
> Removable splitters
> Flow measuring stations
> For details of above and more special options see Special Construction Options.