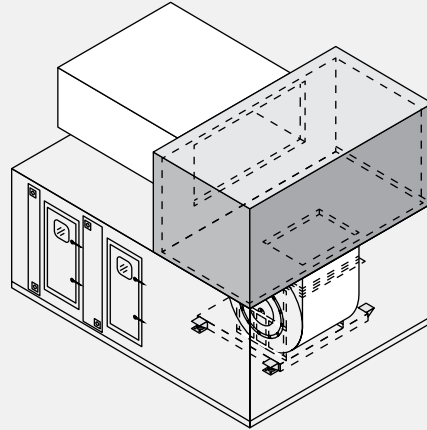


## AP

### Acoustical Plenum Silencers



### Description

**VIBRO-ACOUSTICS' AP SILENCERS** are expansion chambers with thick acoustical lining. The most common lining thickness specified is 4" for fan noise control. Thicker treatment of 6" or even 8" is more effective in the low frequency range.

Plenum wall lining of acoustic grade glass fiber is held in place and protected by perforated metal. Glass fiber cloth or a film liner such as Tedlar, between the perforated metal and the glass fiber, may be used to minimize glass fiber erosion. For certain applications, the perforated liner may be replaced by solid sheet to eliminate air coming in contact with the fiberglass media. For applications where no media can be allowed within the plenum whatsoever, specially tuned chambers are used within the perforated liner for sound attenuation.

Intake AP silencers may enclose a fan and include multiple inlet or discharge openings. Fan, coil or filter access via removable panels, panel sections or doors may be provided. Fan discharge AP silencers may provide multiple discharge take-offs in varying directions.

### Applications

- > For low frequency attenuation
- > Integral to or in conjunction with air handling units
- > When the noise needs to be contained at the source
- > To help quiet noisy fan rooms

## Features and Benefits

- > Available in factory assembled or “knock-down” construction
- > Panel connections may be “tongue and groove” (for strength), “H-section” or “internal flange butt” type (for ease of panel removal)
- > Various panel sizes and thicknesses
- > Good quality seals to resist moisture, air and noise leakage
- > Made in sections to fit ceiling space and can incorporate notch-outs to facilitate cross-over beams, pipes, ducts, etc.
- > Factory designed and manufactured removable panels, access sections, windows and doors
- > Thick panel construction (4” or greater) available for extra low frequency attenuation
- > Heavier gauge or composite construction available to minimize breakout noise
- > 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
- > Available in Dissipative, Film Lined and No-Media options
- > When break-out noise is of prime concern AP silencers may be appropriate selections. They may require mass/stiffness added to their outer casing

## Cautions/When Not to Use AP Silencers

- > When there is an insufficient volume of space available consider Fan Silencers or RLP/CLP silencers

## Performance Data/Testing

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

- > Solid galvanized skin
- > Perforated galvanized liner
- > Acoustic grade glass fiber under minimum 15% compression with thickness usually ranging from 2- 8” depending on Acoustic performance required and space available
- > Panel connection type available as “tongue and groove”, “H-section” or “internal flange butt”
- > Internal stiffening to add strength to panels

## Special Construction Options

- > Heavier gauge skins and perforated metal
- > Special materials (e.g. stainless steel, aluminum)
- > Access doors, openings
- > Removable panels or panel sections
- > Windows
- > Media protection: glass fiber cloth, tedlar or solid metal skins
- > High transmission loss (HTL) construction to prevent breakout/break-in noise
- > Special finishes
- > Floor gratings drain pans
- > Structural support systems (hanging or floor mounted)
- > Integration of components (e.g. Filter racks, coil racks)
- > For details of above and more special options see [Special Construction Options](#).