

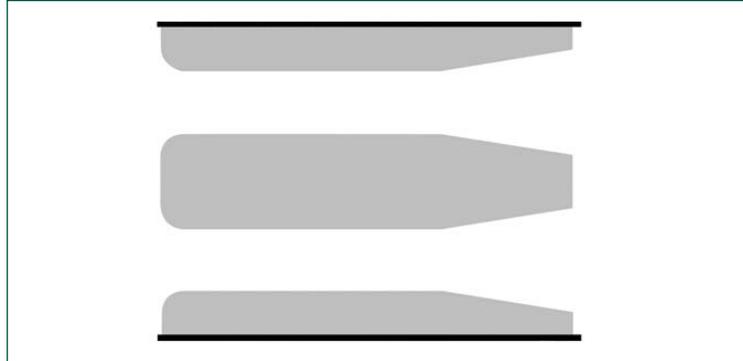
SILENCER APPLICATION SOLUTIONS

See Project Solution Sheet (PS#)
Primary Ref.: 7-1,2,3

PROBLEM:
High Velocity Airflow

◆ High duct velocities (>2000fpm) limit the use of standard splitter silencers because of increased pressure drops including system effects and generated noise.

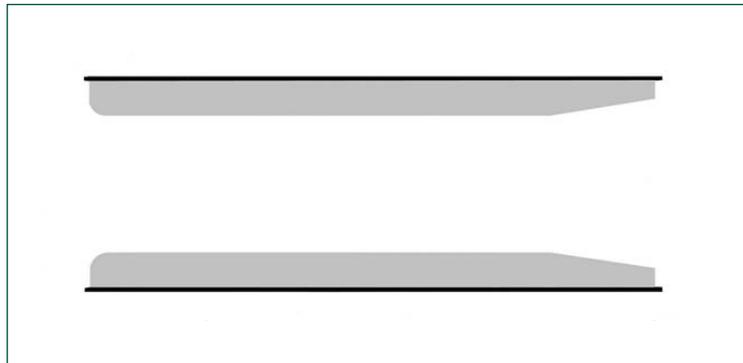
◆ ASHRAE recommends keeping a silencer's Total Pressure Drop less than 0.35" (Total Silencer PD = Catalog Silencer PD (per ASTM E-477) + System Effects). This is difficult to achieve in high velocity systems with standard silencers.



Standard silencers generally have excessive pressure drops for system velocities greater than 2000fpm.

SOLUTION:
Longer Silencer Lengths

◆ Vibro-Acoustics does not limit the length availability of its silencers. Extra long silencers with more open air passages can be provided to achieve the acoustic performance with very little pressure loss. When silencers exceed 120" in length, or the installation dictates, they are supplied in sections for assembly on site.



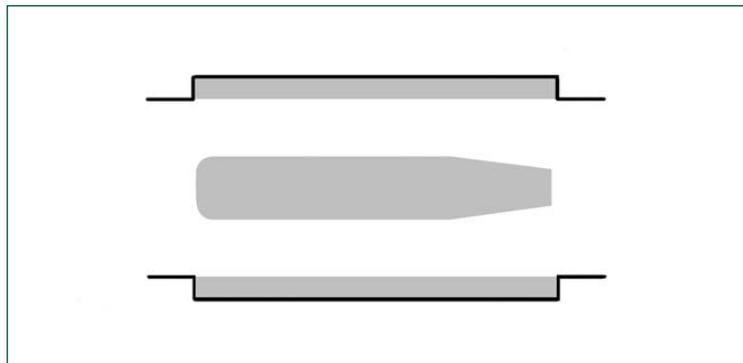
Longer silencer has much more open area to reduce pressure drop.

EX Model Silencers

◆ Vibro-Acoustics' Ex-model silencers are designed so that the absorptive materials are partially outboard of the airstream. This increases the silencer's air passage, lowering the pressure drop without significantly reducing the acoustic performance. (See SS8)

Special Aero-Acoustic Duct Fittings

◆ Special aero-acoustic duct fittings can be incorporated into high velocity ductwork to minimize both pressure losses and noise generated from standard fittings.



Ex-Model silencer has part of the acoustic media outboard to reduce pressure drop.

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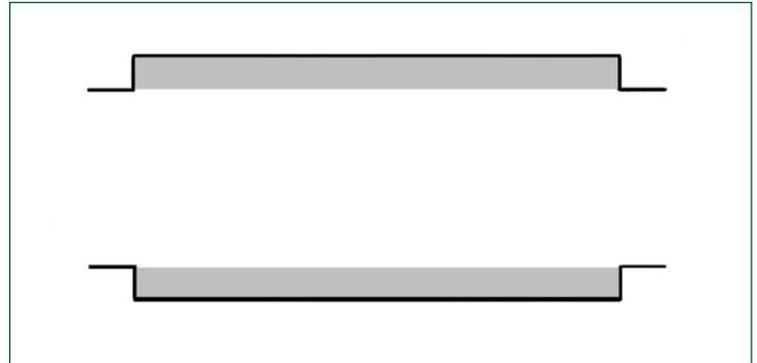
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Low Pressure Drop Silencers

◆ Vibro-Acoustics' RLP and CLP silencers have 100% of the glass fiber outboard of the airstream. They can be straight or also include bends and transitions. The thick media provides excellent attenuation if sufficient length is available at virtually no extra pressure drop. Glass fiber cloth, in addition to the perforated metal, prevents glass fiber erosion above 4000 fpm for straight ducts and 2000 fpm at elbows and other fittings.

◆ Often, a silencer that is larger than the duct cross section does not fit in the surrounding space because of cross-over points (ducts, piping, beams, trusses, etc.) However, Vibro-Acoustics' RLP and CLP Silencers can be notched or cut-away to allow for cross-over intrusions. (See SS9)



Low Pressure Drop silencers have 100% of acoustic media outboard of airstream to minimize pressure drop.