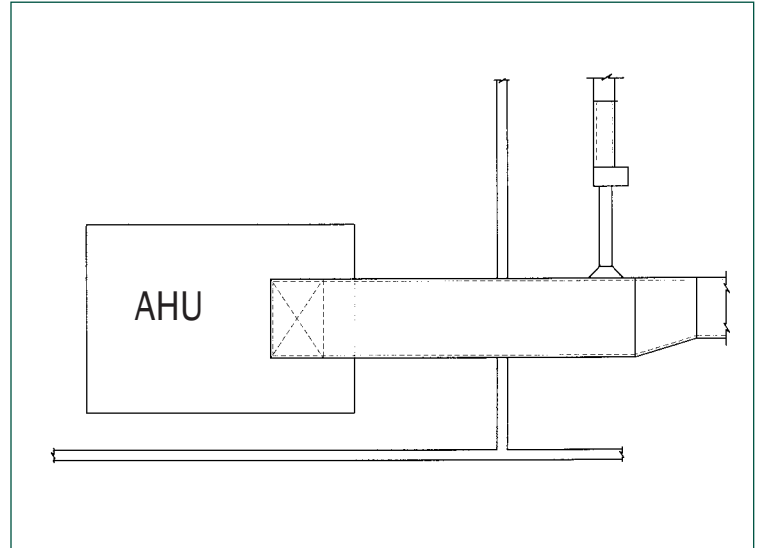


SILENCER APPLICATION SOLUTIONS

PROBLEM:

Acoustical duct lining

◆ Internal duct lining is used as a noise control treatment. It is most effective at mid and high frequency ranges and in smaller duct cross-sectional areas. It is least effective in the low frequency ranges and larger duct cross-sectional areas. Therefore, it is more effective for attenuating duct fitting generated noise in smaller distribution ductwork and not effective for reducing low frequency fan noise in main ducts and shafts.

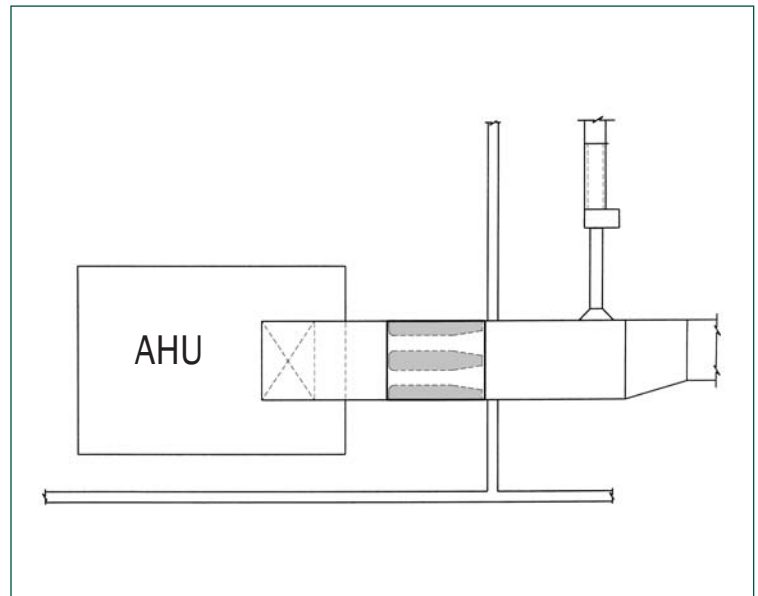


2" internal duct lining provides too much mid frequency attenuation and not enough low frequency attenuation.

SOLUTION:

Silencers reduce cost and/or improve fan noise reduction

- ◆ Silencers can be provided to reduce or eliminate internal duct lining. Benefits include:
 - ◆ lower cost than internal duct lining, particularly if thermal insulation is not required.
 - ◆ reduced possibility of glass fiber erosion at complicated duct fittings.
 - ◆ easier to clean than long lengths of lined duct.
- ◆ A thorough fan/duct system analysis should be performed to determine the insertion loss required of the silencer for a system with no internal duct lining. (See the Selection/Specification section)
- ◆ *Caution:* Some environments may require external duct insulation for thermal and condensation control if internal acoustical insulation is not applied.
- ◆ Transfer ducts between rooms are often lined with acoustical duct lining to protect speech privacy. Silencers can be used at a cost savings or performance improvement, or both, to eliminate lining in transfer ducts. Sometimes they replace both duct and insulation.



Straight 5' long silencer eliminates the need for 30' of duct lining in main duct. Insertion loss requirements are better met.