SILENCER SHEETS

TD/TFL/TNM

DESCRIPTION

Vibro-Acoustics' TD (Transitional Dissipative), TFL (Transitional Film Lined) and TNM (Transitional No-Media) silencers incorporate a transition(s) to optimally fit the duct system configuration. The transition(s) is integral to the silencer and may be in any plane. The silencers' splitters and air passages are custom designed to minimize pressure drop.

TD, TFL and TNM silencers can be straight or incorporate Elbows and HTL casings if necessary.

APPLICATION

◆ where system ductwork transitions exist at optimal or needed silencer locations (see SAS 3)

◆ where controlled airflow expansions or contractions are desired

◆ where varying airflow splits are required (see also "T"-Elbow Silencers SS5)

◆ in supply, return or exhaust ductwork

◆ in fan plenums and air handling units (both supply and return)

◆ on the receiver side of valves, dampers, terminal boxes, etc.

FEATURES AND BENEFITS

◆ allows silencing when the duct system shape does not permit the use of standard silencers

◆ controlled aerodynamic acceleration or deceleration of the airflow through special splitter and air passage design

◆ custom configurations available such as

- ◆transitioning straight silencer
- ◆round or oval to rectangular (or vice-versa) transitioning silencer
- ◆transitioning Elbow Silencer

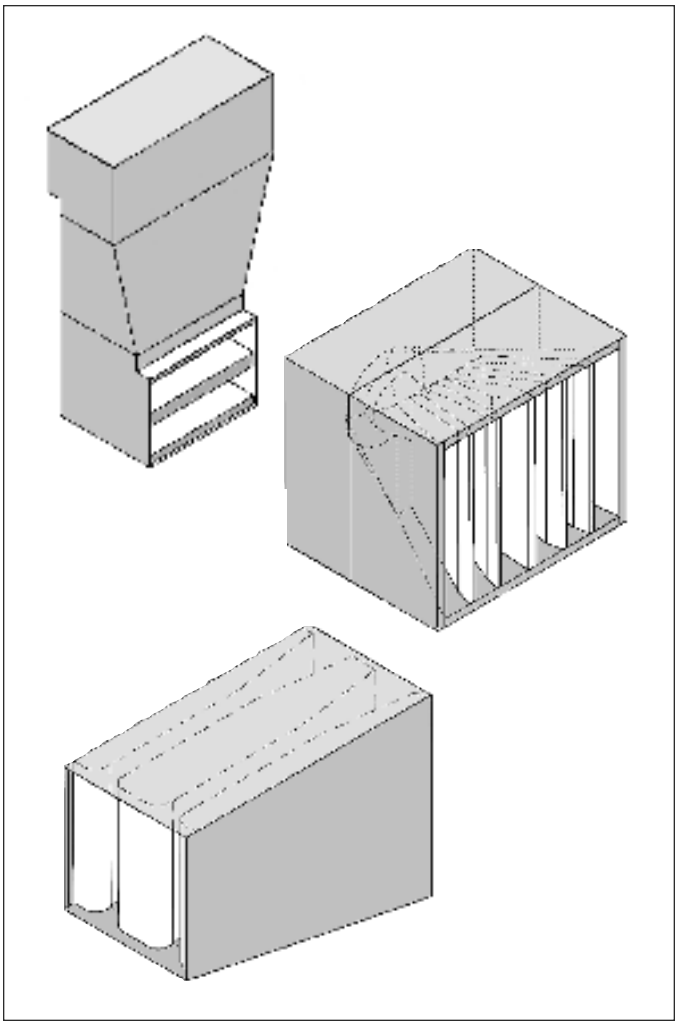
◆ available in any cross-sectional dimensions to "fit-the-duct"

◆ one-piece or sectional supply for ease of installation

◆ 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 (TD), Film Lined (TFL) and No-Media (TNM) options



CAUTIONS / WHEN NOT TO USE TD, TFL AND TNM SILENCERS

◆ when there is enough space to properly fit standard silencers

◆ when there is not enough duct length consider using Fan Silencers (SS10 and SS11)

◆ when break-out noise is of prime concern TD, TFL and TNM silencers may be appropriate selections. They may require mass/stiffness added to their outer casing (see HTL Silencers (SS7))

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SILENCER SHEETS

TESTING

Vibro-Acoustics' 4th generation aero-acoustic laboratory has the flexibility to test numerous configurations of Transitional Silencers. It was the first laboratory to be NVLAP accredited for the ASTM E-477 silencer test code. NVLAP is administered by the U.S. Dept. of Commerce. See the Corporate/Laboratory Section.

SILENCER SELECTION AND LOCATION

Vibro-Acoustics' Transitional Silencers need to be carefully selected to optimize performance.
Call 1-800-565-8401 for custom selections by our application engineers.

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
- high transmission loss (HTL) casings to prevent break-out/break-in noise
- removable splitters
- flow measuring stations
- for details of above and more special options see Special Construction Options (pg. 3.33 to pg. 3.37).

TO SPECIFY

See example specification located in the Selection/Specification section.

STANDARD CONSTRUCTION FEATURES

TD

- galvanized, lockformed casing constructed to SMACNA standards
- 1" slip connection at each end
- aerodynamically shaped, galvanized nose at inlet
- perforated galvanized splitters complete with perforated diffuser tail sections
- splitters filled with acoustic grade glass fiber under minimum 15% compression

TFL

- galvanized, lockformed casing constructed to SMACNA standards
- 1" slip connection at each end
- aerodynamically shaped, galvanized nose at inlet
- perforated galvanized splitters complete with perforated diffuser tail sections
- splitters filled with acoustic grade glass fiber under minimum 15% compression
- glass fiber carefully wrapped in Tedlar film with lap joints away from splitter to reduce potential tearing of the Tedlar
- 0.5 inch deep corrugated honeycomb "stand-off" spacer sheet placed between the perforated metal and the film

TNM

- galvanized, lockformed casing constructed to SMACNA standards
- 1" slip connection at each end
- aerodynamically shaped, galvanized nose at inlet
- special "tuned" perforated galvanized splitters complete with perforated diffuser tail sections
- splitters configured with internal "tuned" chambers
- no acoustical media

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