

SILENCER SHEETS

DESCRIPTION

Vibro-Acoustics' RSB and RDS silencers are aerodynamically and structurally designed to connect directly to centrifugal fans. Both use acoustic grade glass fiber as the principle sound-absorbing mechanism. Perforated metal and a glass fiber cloth liner protect the acoustical media from erosion by the airflow.

RSB silencers can be configured to reduce swirl effects into the centrifugal fan's inlet. They can also collect more than one return duct. RDS silencers accommodate the high outlet velocities and unique flow profile of a centrifugal fan to minimize pressure drop.

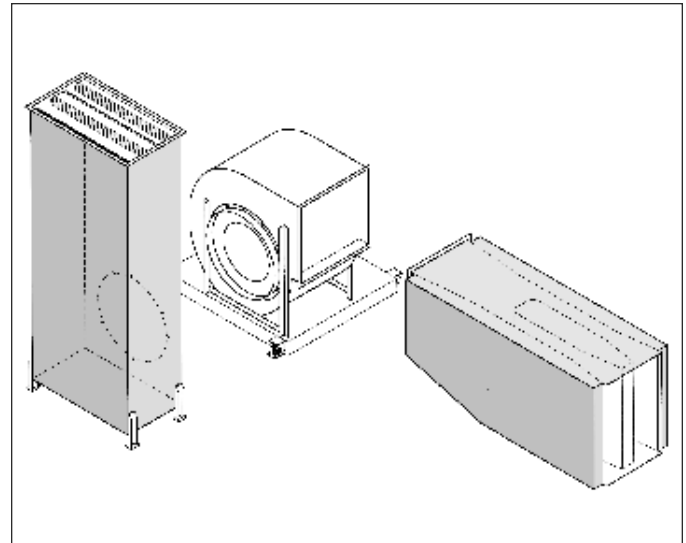
Construction ranges from sheet metal for low pressure and heavier gauges for high pressure fans. Both RSB and RDS models are structurally designed to withstand the higher pressures and turbulent forces close to the fan.

APPLICATION

- ◆ when the noise needs to be contained at the source
- ◆ when there is not enough duct length to fit duct silencers (see SAS 9)
- ◆ to help quiet noisy fan rooms
- ◆ RSB: directly connected to the inlet of a centrifugal fan
- ◆ RDS: directly connected to the discharge of a centrifugal fan

FEATURES AND BENEFITS

- ◆ flanged to bolt directly to the fan
- ◆ available in any connection size to fit the fan
- ◆ gauges compatible with the fan
- ◆ internally stiffened
- ◆ 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
- ◆ splitters can be aligned vertically or horizontally to optimize flow conditions close to the fan



CAUTIONS / WHEN NOT TO USE RSB AND RDS SILENCERS

- ◆ when standard duct silencers can be effectively utilized
- ◆ silencer must be carefully designed to provide good flow conditions into and out of the fan. If the silencer is mismatched it can provoke the fan to make more noise and lose efficiency

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PERFORMANCE DATA / TESTING

There is no current adequate rating method for RSB and RDS silencers. They can be tested in a duct per ASTM E-477 methods. However, performance can vary substantially when directly connected to a fan. Fan performance can also change because of the fan/silencer interaction. Consult Vibro-Acoustics' application engineers for system specific performance. (1-800-565-8401)

Vibro-Acoustics' 4th generation aero-acoustic laboratory 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' RSB and RDS Silencers need to be carefully selected to optimize performance. Call 1-800-565-8401 for custom selections by our application engineers.

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
- ◆ slip connections for flexible connectors (Class I)
- ◆ flanged at the fan connection for Class II and III welded construction
- ◆ internal stiffeners
- ◆ splitters filled with acoustic grade glass fiber under minimum 15% compression
- ◆ acoustical media protected from erosion by glass fiber cloth liner
- ◆ perforated galvanized splitters complete with perforated diffuser tail sections

Other construction features vary depending on size, type, capacity and pressure of fan. Consult Vibro-Acoustics application engineers for information.

SPECIAL CONSTRUCTION OPTIONS

- ◆ special materials e.g. stainless steel, aluminum
- ◆ access doors
- ◆ brackets or legs for mounting and vibration isolation control
- ◆ media protection: film liner
- ◆ birdscreen
- ◆ built-in transitions
- ◆ 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.