

Information about Standard and Custom Silencers

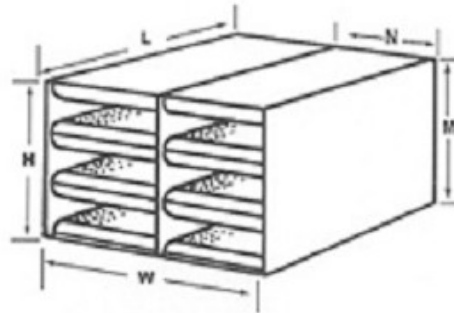
Standard and Custom Silencers

- For projects that necessitate silencers that are larger than the maximum standard dimensions (48" x 48"), we carry rectangular duct silencers. These can be fabricated as two separate standard silencers and constructed to fit the structure you are working with.
- We also carry round duct silencers with features including but not limited to galvanized perforated sheet metal, spun head to reduce pressure loss, and a pressure light casing.

Types of Silencers:

Industrial Silencer Options:

- Galvanized, carbon or stainless steel casing
- Duct Extension
- All welded construction
- Weather Hood
- Birdscreen
- Painted Exterior
- Access Doors/Panels
- Filters
- Mounting/Support Flange
- Support Brackets/Legs



Example of a 'banked' silencer

Silencer Banks:

A silencer of width "W" and height "H", which is larger than the maximum standard silencer dimensions of 48" x 48" (1219 mm x 1219 mm), can be fabricated as separate standard silencers (2 separate silencers banked to fit 1 larger duct *shown above*). For either option, the performance specification can be selected for the chosen unit size using the rectangular silencer selection procedure.

Baffles can be installed vertically or horizontally, with height limitations of 168" (4267 mm) and 96" (2438 mm), respectively. For large banks do not use horizontal baffles.

Circular Silencers:

- Cylindrical pressure-tight casing.
- Streamlined acoustic core baffle.
- Acoustic media protected by galvanized perforated sheet metal.
- Spun head for reduced entrance pressure loss.
- Tapered tail optimally designed for velocity pressure regain and insertion loss.
- 3" (76 mm) slip flange on both ends.



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Specifications:

Silencers shall be fabricated from G90 galvanized steel. The casing shall have the following minimum thickness:

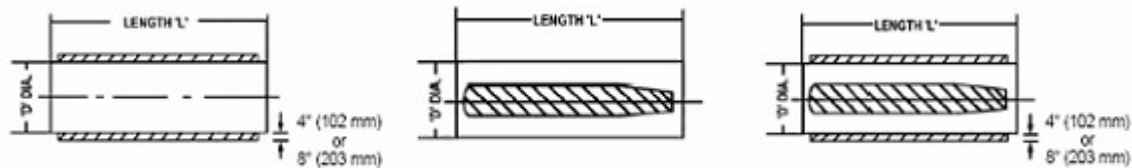
22 ga. (0.85 mm) for Diameter (D) between 12" - 24" (305 - 610 mm).

18 ga. (1.31 mm) for Diameter (D) greater than 24" (610 mm).

All silencers shall be airtight to a pressure differential of 10" Wg.

The acoustical absorption media shall be continuous strand fiberglass packed under compression and protected by a minimum 22 ga (0.85 mm) galvanized perforated steel. The absorptive core baffle shall be centered in the casing and shall have a spun head on the inlet end. The tapered tail of the core baffle shall be optimally designed for pressure drop and insertion loss.

Circular Silencer Types:



Options:

- Blank or drilled iron ring flanges, single or companion.
- Fiberglass cloth or tedlar film between acoustic media and perforated interior and bullet shells.
- Lifting lugs appropriate for horizontal or vertical orientation.
- Stainless steel type 304 or 316, aluminum construction.
- Mounting feet.

Insertion Loss:

Insertion loss data is provided for standard silencer construction. If special designs are required, such as plastic film or glass fiber cloth covering for the acoustic media, consult Unger Technologies.

Pressure Drop:

The pressure drop across the silencer increases with the length of the silencer yielding higher insertion loss. For silencers with a sound absorbing bullet, higher insertion losses are achieved by reducing the open area of silencer face area. This constricts the flow and increases the pressure drop. Pressure drop data is presented for a silencer inserted in a duct when neither end is near a bend, elbow or transition.