

# SUGGESTED SPECIFICATION "NO-FILL" SOUND ATTENUATORS



Commercial Acoustics

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A DIVISION OF METAL FORM MANUFACTURING

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## **GENERAL**

Furnish and install "No-Fill" Sound Attenuators of the models and sizes shown on plans and/or listed in schedule. Attenuators shall be the product of Commercial Acoustics Division of Metal Form Manufacturing. Any change in this specification must be submitted to and approved by the architect/engineer, in writing, at least 10 days prior to bid due-date.

## **MATERIALS AND CONSTRUCTION**

Unless otherwise specified, attenuator shall be constructed entirely of G90 galvanized steel in accordance with applicable ASHRAE Guide recommendations for high pressure rectangular ductwork. Seams shall be lock-formed and mastic filled.

No sound absorptive material, of any kind, shall be used in the attenuator. Attenuators shall attenuate air/gas transmitted noise solely by virtue of controlled impedance membranes and broadly tuned resonators.

Attenuators subjected to corrosive environments shall be noted on the schedule as being constructed of stainless steel or other appropriate material suitable for such environments. (Specify material and environment).

Attenuators shall not leak or fail structurally when subjected to a different air pressure of 8 i.w.g. inside to outside of casing.

## **ACOUSTIC PERFORMANCE**

Attenuator ratings shall be determined using the duct-to-reverberant room test method which provides for airflow in both directions through the test attenuator in accordance with ATSM specification E-477-84, or latest version thereof. The test set-up and procedure shall be such that all effects due to end reflection, directivity, flanking transmission, standing waves and test chamber sound absorption are eliminated. Acoustic ratings shall include Dynamic Insertion Loss (DIL) and Self-generated (SN) power levels both for Forward Flow (air and noise traveling in same direction, +), and Reverse Flow (air and noise traveling in opposite directions, -). Data shall be presented for tests conducted using silencers no smaller than 24W x 24H.

## **AERODYNAMIC PERFORMANCE**

Static pressure loss of attenuators shall not exceed those listed in the silencer schedule as the airflow indicates. Airflow measurements shall be made in accordance with ASTM specification E-477-84, or latest version thereof, and applicable portions of ASME, AMCA, ADC airflow test codes. Tests shall be reported on the identical units for which acoustic data is presented.

## **CERTIFICATION**

The manufacturer shall supply certified test data on dynamic insertion loss, Self-generated Sound Power levels, and Aerodynamic Performance for Reverse and Forward Flow test conditions to the architect/engineer, in writing, at least 10 days prior to bid due date. Test data shall be for a standard product. All ratings tests shall be conducted by a nationally recognized acoustic testing laboratory, in their facility, utilizing the same attenuator, and shall be open to inspection upon request from the architect engineer. The testing laboratory shall be totally independent from the manufacturer. Data obtained in the manufacturer's test lab will not be acceptable unless substantiated by test reports conducted by a nationally recognized acoustic testing laboratory.