SUGGESTED SPECIFICATION
RECTANGULAR AND CIRCULAR
SOUND ATTENUATORS

Commercial Acoustics
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(602) 233-2322 FAX 233-2033
A DIVISION OF METAL FORM MANUFACTURING

GENERAL

Furnish and install Commercial Acoustics 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.

Outer casing shall be 22 gauge minimum galvanized steel. Internal baffles shall be 24 gauge minimum galvanized perforated steel and filled with inorganic glass fiber absorbent material of sufficient density and packed under at least 5% compression to eliminate voids due to vibration and setting to obtain catalog ratings.

Combustion rating for the silencer acoustic fill shall not be greater than the following UL fire hazard classification:

Flame Spread.....15
Fuel Contributed.....0
Smoke Developed.....0

Tested in accordance with UL Test Procedure 723.

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.

ACOUSTICAL 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 manufacturers test lab will not be acceptable unless substantiated by test reports conducted by a nationally recognized acoustic testing laboratory.