

SECTION 233319 - SOUND ATTENUATORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary conditions and Division-01 Specification sections, apply to work of this section.

1.2 SCOPE

- A. Provide factory fabricated sound attenuators of the types, sizes, and acoustical and airflow characteristics indicated.

1.3 RELATION TO OTHER WORK

- A. Refer to the section, "General Mechanical Provisions", for related requirements. Refer to other sections of Division 23 and to all other applicable portions of the Drawings and Specifications.

1.4 SHOP DRAWINGS

- A. Refer to requirements of Section entitled "General Mechanical Provisions". Include complete data on: dimensions, airside pressure losses, dynamic insertion losses, regenerated sound level (i.e. self-noise or airflow generated noise), performance certification, performance test method, and materials of construction.

1.5 MANUFACTURER

- A. Products listed in this Section or on the plans are based on specific manufacturer to establish the desired style, quality and type. Equivalent products, complying with the requirements of this Section and the installation requirements of the plans, by the following manufacturers are acceptable:
 - 1. Rink Division of Krueger/Phillips Industries
 - 2. Commercial Acoustics
 - 3. Trasonics
 - 4. Industrial Noise Control, Inc.
 - 5. Titus
 - 6. United McGill Corporation

PART 2 - PRODUCTS

2.1 OUTER CASINGS

- A. The outer casings of the attenuators shall be constructed of not less than 22 gauge galvanized steel with seams lock formed and mastic filled, or shall be continuously welded.

2.2 PARTITIONS

- A. The interior partitions of the attenuators shall be constructed of not less than 24 gauge galvanized perforated steel.

2.3 FILLER MATERIALS

- A. The silencer filler material shall be inorganic mineral glass fiber of a density sufficient to obtain the specified acoustic performance and shall be packed at not less than five percent (5%) compression to prevent the formation of voids due to vibration or settling. The material shall be inert, vermin and moisture proof, and shall comply with the flame spread and smoke developed ratings of NFPA 90A.

2.4 PERFORMANCE

- A. Acoustic and aerodynamic performance shall be tested and certified in accordance with ASTM E477-84 Standard Method of Testing Duct Liner Material and Prefabricated Silencers for Acoustical and Airflow Performance. Airflow pressure drops shall be tested in accordance with AMCA Standards. The performance indicated is not a band-by-band listing of the silencer scheduled, but reflects actual minimum attenuation (in decibels) for the indicated octave bands at the design conditions.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Refer to manufacturer's instructions and the requirements of Section entitled "Ductwork" for installation and supporting requirements.
- B. Where multiple sound attenuators are assembled, by either the manufacturer or the installer, into attenuator banks, the individual attenuators shall be securely fastened together using galvanized steel bands, straps, structural angles and/or welds, as recommended by the manufacturer. All joints between the assembled attenuators shall be sealed to prevent air leakage as recommended by the manufacturer.

3.2 COORDINATION

- A. Coordinate with sizes of ducts to be connected to attenuators. Provide duct transitions to match sizes of attenuators and attenuator banks if duct sizes differ from sizes of attenuators and attenuator banks furnished.

END OF SECTION 233319