

SECTION 23 37 00
AIR OUTLETS AND INLETS

PART 1 - GENERAL**1.1 DESCRIPTION**

A. Air outlets and inlets, including the following:

1.2 RELATED WORK

- A. Outdoor and Exhaust Louvers: Section 08 90 00, LOUVERS AND VENTS.
 B. General Mechanical Requirements: Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION.
 C. Testing and Balancing of Air Flows: Section 23 05 93, TESTING, ADJUSTING, AND BALANCING FOR HVAC.

1.3 QUALITY ASSURANCE

- A. Refer to article, QUALITY ASSURANCE, in Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION.
 B. Fire Safety Code: Comply with NFPA 90A.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
 B. Manufacturer's Literature and Data:
 1. Air intake/exhaust hoods.
 2. Diffusers, registers, grilles and accessories.
 C. Coordination Drawings: Refer to article, SUBMITTALS, in Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION.

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
 B. Air Diffusion Council Test Code:

1062 GRD-84.....Certification, Rating, and Test Manual 4th Edition

 C. American Society for Testing and Materials (ASTM):

A167-99.....Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip

A653-01.....Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy coated (Galvannealed) by the Hot-Dip process

A1011-02.....Standard Specification for Steel Sheet and Strip Hot rolled Carbon structural, High-Strength Low-

- Alloy and High Strength Low-Alloy with Improved
Formability
- B209-01.....Standard Specification for Aluminum and
Aluminum-Alloy Sheet and Plate
- E84-01.....Standard Test Method for Surface Burning
Characteristics of Building Materials
- D. National Fire Protection Association (NFPA):
- 90A-99.....Standard for the Installation of Air
Conditioning and Ventilating Systems
- 96-01.....Ventilation Control and Fire Protection of
Commercial Cooking Operations
- E. Underwriters Laboratories, Inc. (UL):
- 33-93.....UL Standard for Safety Heat Responsive Links for
Fire Protection Service

PART 2 - PRODUCTS

2.1 EQUIPMENT SUPPORTS

Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION.

2.2 AIR OUTLETS AND INLETS

A. Materials:

1. Steel or aluminum Provide manufacturer's standard gasket.
2. Exposed Fastenings: The same material as the respective inlet or outlet. Fasteners for aluminum may be stainless steel.
3. Contractor shall review all ceiling drawings and details and provide all ceiling mounted devices with appropriate dimensions and trim for the specific locations.

B. Performance Test Data: In accordance with Air Diffusion Council Code 1062GRD. Refer to Section 23 05 41, NOISE AND VIBRATION CONTROL FOR HVAC PIPING AND EQUIPMENT for NC criteria.

C. Air Supply Outlets:

1. Ceiling Diffusers: Suitable for surface mounting, exposed T-bar or special tile ceilings, off-white finish, square or round neck connection as shown on the drawings. Provide plaster frame for units in plaster ceilings.
 - a. Square, louver, fully adjustable pattern: Round neck, surface mounting unless shown otherwise on the drawings. Provide equalizing or control grid and volume control damper.
2. Registers: Double deflection type with horizontal face bars and opposed blade damper with removable key operator.
 - a. Margin: Flat, 30 mm (1-1/4 inches) wide.
 - b. Bar spacing: 20 mm (3/4 inch) maximum.

- c. Finish: Off white baked enamel for ceiling mounted units. Wall units shall have a prime coat for field painting, or shall be extruded with manufacturer's standard finish.
- D. Return and Exhaust Registers and Grilles: Provide opposed blade damper without removable key operator for registers.
 - 1. Finish: Off-white baked enamel.
 - 2. Standard Type: Fixed horizontal face bars set at 30 to 45 degrees, approximately 30 mm (1-1/4 inch) margin.
 - 3. Perforated Face Type: Provide volume control damper on neck.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with provisions of Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION, particularly regarding coordination with other trades and work in existing buildings.
- B. Protection and Cleaning: Adequately protect equipment and materials against physical damage. Place equipment in first class operating condition, or return to source of supply for repair or replacement, as determined by Resident Engineer. Protect equipment during construction against entry of foreign matter to the inside and clean both inside and outside before operation and painting.

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