

**SECTION 23 37 00
AIR OUTLETS AND INLETS**

PART 1 - GENERAL

1.1 DESCRIPTION

B. Air Outlets and Inlets: Diffusers, Registers, and Grilles.

1.2 RELATED WORK

A. General Mechanical Requirements: Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION.

B. Noise Level Requirements: Section 23 05 41, NOISE AND VIBRATION CONTROL FOR HVAC PIPING AND EQUIPMENT.

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 of Civil Engineers (ASCE):

ASCE7-05.....Minimum Design Loads for Buildings and Other
Structures

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

A167-99 (2004).....Standard Specification for Stainless and
Heat-Resisting Chromium-Nickel Steel Plate,
Sheet and Strip

B209-07.....Standard Specification for Aluminum and
Aluminum-Alloy Sheet and Plate

E. National Fire Protection Association (NFPA):

90A-09.....Standard for the Installation of Air
Conditioning and Ventilating Systems

F. Underwriters Laboratories, Inc. (UL):

181-08.....UL Standard for Safety Factory-Made Air Ducts
and Connectors

PART 2 - PRODUCTS

2.1 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. Supply 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.

3. Supply Grilles: Same as registers but without the opposed blade damper.

D. Return and Exhaust Registers and Grilles: Provide opposed blade damper without removable key operator for registers.

1. Finish: Off-white baked enamel for ceiling mounted units. Wall units shall have a prime coat for field painting, or shall be extruded aluminum with manufacturer's standard aluminum finish.
2. Perforated Face Type: To match existing supply units.

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: 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 COR. Protect equipment during construction against entry of foreign matter to the inside and clean both inside and outside before operation and painting.

3.2 TESTING, ADJUSTING AND BALANCING (TAB)

Refer to Section 23 05 93, TESTING, ADJUSTING, AND BALANCING FOR HVAC.

3.3 OPERATING AND PERFORMANCE TESTS

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

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