

SECTION 23 37 13

DIFFUSERS, REGISTERS, AND GRILLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections, apply to this and other Sections of Division 23.

1.2 SUMMARY

- A. Section Includes:
 1. Rectangular and square ceiling diffusers.
 2. Fixed face registers and grilles.
 3. Ceiling integral continuous slot diffusers.

1.3 SUBMITTALS

- A. Compliance Review: In addition to the submittal requirements of this section, preorder bidders shall provide a Compliance Review of the Specifications and Addenda. The Compliance Review shall be a paragraph-by-paragraph review of the Specifications with the following information, "C", "D," or "E" marked in the margin of the original Specifications and any subsequent Addenda.
 1. "C": Comply with no exceptions.
 2. "D": Comply with deviations. For each and every deviation, provide a numbered footnote with reasons for the proposed deviation and how the intent of the Specification can be satisfied.
 3. "E": Exception, do not comply. For each and every exception, provide a numbered footnote with reasons and possible alternatives.
 4. The notes associated with "D" and "E" responses shall be typewritten and submitted alongside the compliance review for review by the Design Professional.
 5. Unless a deviation or exception is specifically noted in the Compliance Review, it is assumed that the Bidder is in complete compliance with the plans and Specifications. Deviations or exceptions taken in cover letters, subsidiary documents, by omission or by contradiction do not release the Bidder from being in complete compliance, unless the exception or deviation has been specifically noted in the Compliance Review submitted with the Bid.
- B. Product Data: For each type of product indicated, include the following:
 1. Data Sheet: Indicate materials of construction, finish, and mounting details; and performance data including throw and drop, static-pressure drop, and noise ratings.

2. Diffuser, Register, and Grille Schedule: Indicate drawing designation, room location, quantity, model number, size, and accessories furnished.
- C. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from Installers of the items involved:
 1. Ceiling suspension assembly members.
 2. Method of attaching hangers to building structure.
 3. Size and location of initial access modules for acoustical tile.
 4. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.
 5. Duct access panels.

PART 2 - PRODUCTS

2.1 CEILING DIFFUSERS

- A. Rectangular and Square Ceiling Diffusers:
 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - a. Anemostat Products; a Mestek company.
 - b. Carnes.
 - c. Krueger.
 - d. Nailor Industries Inc.
 - e. Price Industries.
 - f. Titus.
 2. Devices shall be specifically designed for variable-air-volume flows.
 3. Material: Steel
 4. Finish: Baked enamel, white
 5. Face Size: as indicated on drawings
 6. Face Style: Plaque.
 7. Mounting: Surface, Snap in or lay-in.
 8. Pattern: Fixed.
 9. Dampers: Radial opposed blade.
 10. Refer to the Drawing Schedule for further information.

2.2 REGISTERS AND GRILLES

- A. Fixed Face Register:
 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - a. Anemostat Products; a Mestek company.
 - b. Krueger.

- c. Nailor Industries Inc.
- d. Price Industries.
- e. Titus.
2. Material: Steel.
3. Finish: Baked enamel, white.
4. Face Arrangement: 1/2-by-1/2-by-1/2-inch grid core.
5. Core Construction: Integral.
6. Frame: 1-1/4 inches wide.
7. Mounting: Countersunk screw.
8. Damper Type: Adjustable opposed blade.
9. Refer to the Drawing Schedule for further information.

B. Fixed Face Grille:

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - a. Anemostat Products; a Mestek company.
 - b. Krueger.
 - c. Nailor Industries Inc.
 - d. Price Industries.
 - e. Titus.
2. Material: Steel.
3. Finish: Baked enamel, white
4. Face Arrangement: 1/2-by-1/2-by-1/2-inch grid core.
5. Core Construction: Integral.
6. Frame: 1-1/4 inches wide.
7. Mounting: Countersunk screw.
8. Refer to the Drawing Schedule for further information.

2.3 CEILING-INTEGRAL CONTINUOUS DIFFUSERS

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - a. Anemostat Products; a Mestek company.
 - b. Krueger.
 - c. Nailor Industries Inc.
 - d. Price Industries.
 - e. Titus.
2. Slot Width: Refer to the schedule on the Drawings.
3. Section Length: Continuous, refer to the floor plans in the Drawing set.
4. Straight sections as required to accommodate layout.
5. Mitered tees and corners.
6. Pattern Controllers: 24 inches on center.

7. Material: Aluminum, extruded, heavy wall.
8. Finishes:
 - a. Exterior: Standard white.
 - b. Interior: Standard black.
9. Throw: Standard.
10. Mounting: Ceiling.
11. Plenum: Insulated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas where diffusers, registers, and grilles are to be installed for compliance with requirements for installation tolerances and other conditions affecting performance of equipment.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install diffusers, registers, and grilles level and plumb.
- B. Ceiling-Mounted Outlets and Inlets: Drawings indicate general arrangement of ducts, fittings, and accessories. Air outlet and inlet locations have been indicated to achieve design requirements for air volume, noise criteria, airflow pattern, throw, and pressure drop. Make final locations where indicated, as much as practical. For units installed in lay-in ceiling panels, locate units in the center of panel. Where architectural features or other items conflict with installation, notify Architect for a determination of final location.
- C. Install diffusers, registers, and grilles with airtight connections to ducts and to allow service and maintenance of dampers, air extractors, and fire dampers.

3.3 ADJUSTING

- A. After installation, adjust diffusers, registers, and grilles to air patterns indicated, or as directed, before starting air balancing.

END OF SECTION