

SECTION 23 37 00 - AIR OUTLETS AND INLETS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Ceiling- and wall-mounted diffusers, registers, and grilles.
 - a. **KROGER NATIONAL ACCOUNT AGREEMENT**
 - 1) The following items are to be provided by the Contractor and purchased under a national account agreement with the Kroger Co.:
 - a) **Material:** Drop box diffusers for air conditioning/air handling equipment.
2. Installation of drop box diffusers by Contractor.
3. Additional items supplied and installed by Contractor not part of Kroger National Account Agreement:
 - a. Ceiling- and wall-mounted diffusers, registers, and grilles.
 - b. Items not provided by Owner necessary for a complete installation.

1.2 SUBMITTALS

A. Product Data: For each 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.

1.3 WARRANTY

- A. Warranty information for drop box diffusers is specified in Division 01 Section "Product Warranties."

PART 2 - PRODUCTS

2.1 DROP BOX DIFFUSER SYSTEM

- A. Manufacturer: AES Industries Inc.

1. Kroger Account Representative; (334)283-6578. Specify store number and address when ordering.
 2. No substitutions allowed.
- B. Products: As indicated on Drawings.
- C. Construction:
1. Material: 18 Gage **0.05 inches (1.3 mm)** galvanized/galvanized (paintable) steel sheet conforming to ASTM A 653, minimum A60 coating designation, with integral 18 Gage **0.05 inches (1.3 mm)** minimum air diverters.
 2. Fabrication: Fully welded. Mechanical fastened seams not allowed.
 3. Diffusers: Fully adjustable double deflection drum louvers.
 4. Fasteners: Match louver/grille color.
 5. Insulation: **1 inch (25 mm)** by 1.5 lb density duct liner glued and spot welded to all interior surfaces.
 6. Duct Collars: Factory formed TDC flange or equal. Provide factory installed mounting brackets.
- D. Accessory Package: No field supplied items required for mounting. Provide mounting accessory package for each drop box which consists of the following:
1. Angles: **2 inch by 2 inch by 1/4 inch (51 mm by 51 mm by 6 mm)** pre-punched (or Unistrut).
 2. Hanging Rod. **3/8 inch (9.5 mm)** all thread rod (pre-cut).
 3. Beam clamps.
 4. Bolts, nuts and washers.
- E. Factory Prime Finish: Manufacturer's standard primer.

2.2 GRILLES AND REGISTERS

A. Adjustable Bar Register:

1. Products:
 - a. Anemostat, a Mestek Company.
 - b. Carnes Company.
 - c. Price Industries; 500 Series
 - d. Titus, a division of Air System Components, Inc.; 272-RLS.
2. Material: Steel.
3. Finish: Baked enamel.
4. Color: White
5. Face Blade Arrangement: Fixed horizontal spaced **1-1/2 inches (38mm)** apart.
6. Rear Blade Arrangement: Fixed vertical spaced **3/4 inch (19 mm)** apart.
7. Frame: **1-1/4 inches (32 mm)** wide.
8. Mounting Frame: Filter.
9. Mounting: Lay in.
10. Damper Type: Adjustable opposed-blade assembly.

2.3 DIFFUSER OUTLETS

A. Rectangular and Square Diffusers:

1. Products:
 - a. Anemostat, a Mestek Company; DA.
 - b. Carnes Company; Model K with safety chain.
 - c. Krueger.
 - d. Price Industries; AMDSR
 - e. Titus, a division of Air System Components, Inc.; TDCA.
2. Material: Steel.
3. Finish: Baked enamel.
4. Color: White
5. Face Size: As listed in diffuser schedule.
6. Face Style: Three cone or four cone.
7. Mounting: Duct, surface, or T-bar.
8. Pattern: Fixed.
9. Dampers: Radial opposed blade or butterfly.
10. Accessories:
 - a. Equaling grid.
 - b. Plaster ring.
 - c. Safety chain.
 - d. Wire guard.
 - e. Sectorizing baffles.
 - f. Operating rod extension.

B. Round Diffusers:

1. Products:
 - a. Carnes Company; Model SSMA.
 - b. Krueger, Model RM2.
 - c. Price Industries; RCD Series
 - d. Titus, a division of Air System Components, Inc.; TMRA.
2. Material: Steel.
3. Finish: Baked enamel.
4. Color: White
5. Face Size: As listed in diffuser schedule.
6. Face Style: Three cone or four cone.
7. Mounting: Duct or surface.
8. Pattern: Fixed.
9. Dampers: Radial opposed blade or butterfly.
10. Accessories:
 - a. Equaling grid.

- b. Plaster ring.
- c. Safety chain.
- d. Wire guard.
- e. Sectorizing baffles.
- f. Operating rod extension.

2.4 EXHAUST AND RETURN AIR REGISTERS AND GRILLES:

- A. Provide registers similar to the model numbers indicated on the drawings. Provide registers with an aluminum opposed blade damper. Color of registers to match adjoining surface color.
- B. Gypsum wall board and CMU installation
 - 1. Exhaust Grille Manufacturers, (steel):
 - a. Price Industries; 500 Series.
 - b. Titus, a division of Air System Components, Inc.; 23RL0A25 w/ 45degree angle blades.
- C. Lay-in ceiling installation
 - 1. Return Air Grille/Register Manufacturers:
 - a. Price Industries
 - 1) Grille: Model 80.
 - 2) Register: Model 500.
 - b. Titus, a division of Air System Components, Inc.
 - 1) Grille: Model 50F.
 - 2) Register: Model 350.

2.5 SOURCE QUALITY CONTROL

- A. Verification of Performance: Rate diffusers, registers, and grilles according to ASHRAE 70, "Method of Testing for Rating the Performance of Air Outlets and Inlets."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install drop box diffusers, 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 practicable. 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.

3.2 ADJUSTING

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

END OF SECTION 23 37 00

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