

## SECTION 233710

### AIR INLETS AND OUTLETS

#### PART 1 GENERAL

##### 1.1 STIPULATIONS

- A. The General Conditions, drawings and all other attached documents form a part of this Section and all other Sections by reference thereto and have the same force and effect as if printed herewith in full. The Contractor shall be strictly accountable for the cognizance of carrying out the provisions thereof.

#### PART 2 PRODUCTS

##### 2.1 AIR CONTROL DEVICES

- A. This Contractor shall furnish and install air control devices and accessories, as shown on plans and as specified herein.
- B. Interior grilles, registers diffusers, and louvers shall have white enamel finish ready for field painting.
- C. All security air control devices shall be installed with vandal proof screws. Fasteners shall be one-way vandal proof #8 - 3/4 S/M screws. Through bolts shall be one-way vandal proof heads.
- D. Air control devices shall be as manufactured by Anemostat, Titus Corporation, Price or approved equal.
- E. Shop drawings showing room schedule, style, catalog numbers, finish, size, details, CFM, NC ratings, and accessories shall be submitted for review.
- F. For the purpose of setting a minimum standard, Model numbers listed below shall be referenced to Price or Anemostat, unless otherwise noted. Other manufacturers submitted shall be in all ways equal with NC ratings limited to a maximum of NC 30, as accepted by the Professional.

##### 1. Ceiling Diffusers (CD)

##### a. 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). Tuttle & Bailey.
- (b). Carnes.
- (c). Hart & Cooley Inc.
- (d). METALAIRE, Inc.

- (2). Devices shall be specifically designed for variable-air-volume flows.
- (3). Material: Aluminum.
- (4). Finish: Baked enamel, white
- (5). Face Style: Three cone.

- (6). Mounting: Lay-In, Surface Mounted and Duct-Mounted (See Drawings).
- (7). Pattern: Fixed

#### 1. Ceiling Mounted Return Grille (RG)

- a. Panels shall be steel with square/rectangular necks. ½" x ½" x ½" deep egg crate face return with mounting frame to match ceiling type.
- b. Panel face shall be finished in white finish shade as selected by the Professional to match the ceiling tile.
- c. The unit shall be similar to Price 80.

### 2.2 LOUVERS

- A. All louvers performance shall equal or surpass the minimum free area, maximum static pressure, and airflow requirements for the specified application.
- B. 4" Louvers.
  - 1. Furnish and install where indicated on drawings for air handling units and other intakes or exhausts 4" deep thick louvers with 1/4" x 1/4" aluminum bird screen.
  - 2. Frames and blades shall be 6063-T5 alloy, extruded aluminum sections of a minimum 12 gauge (0.081 inch) thickness with 2 reinforcing bosses, heads, sills, jambs to be one piece structural members. Maximum blade span shall be 96 inches; greater spans shall employ a rigid vertical mullion.
  - 3. Louvers shall be Model XB-4 as manufactured by Airline Products Co., Airstream Model SA, Ruskin Model ELF 375, or Arrow United Industries, Inc., Model SPA-11. Louvers shall be color as selected by the Professional.

## PART 3 EXECUTION

### 3.1 GENERAL

- A. Coordinate all devices with ceiling grid, construction and type, and work of other trades.
- B. See also "ACCESS PANELS".
- C. Spin Collars: For each flexible duct connection off of a main or branch duct to a ceiling diffuser and for each outlet off of the ventilation ductwork to the plenum air furnish and install a spin collar with a positive locking balancing damper.
- D. Backdraft Dampers
  - 1. Furnish and install for all gravity relief louvers and ventilators, back-draft design.
  - 2. Where multiple sections are required, this Contractor shall provide additional mullions and bearings to support total assembly. Seal all joints weathertight.

END OF SECTION