

SECTION 23 3700
AIR OUTLETS AND INLETS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Diffusers.
- B. Registers/grilles.
- C. Door grilles.
- D. Louvers.
- E. Goosenecks.

1.02 REFERENCE STANDARDS

- A. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2005.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data for equipment required for this project. Review outlets and inlets as to size, finish, and type of mounting prior to submission. Submit schedule of outlets and inlets showing type, size, location, application, and noise level.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Hart & Cooley, Inc.; _____: www.hartandcooley.com.
- B. Krueger; _____: www.krueger-hvac.com.
- C. Titus; _____: www.titus-hvac.com.
- D. Tuttle and Bailey; _____: www.tuttleandbailey.com/sle.
- E. Substitutions: See Section 01 6000 - Product Requirements.

2.02 RECTANGULAR CEILING DIFFUSERS

- A. Type: Provide square, stamped, multi-core, square, adjustable pattern, stamped, multi-core, square and rectangular, multi-louvered, square and rectangular, adjustable pattern, multi-louvered, and _____ diffuser to discharge air in 360 degree, one way, two way, three way, four way, and _____ pattern with sectorizing baffles where indicated.
- B. Connections: Round.
- C. Frame: Provide surface mount, snap-in, inverted T-bar, spline, and _____ type. In plaster ceilings, provide plaster frame and ceiling frame.
- D. Fabrication: Steel with baked enamel finish.
- E. Color: As shown on drawings.

2.03 CEILING SLOT DIFFUSERS

- A. Type: Continuous 1/2 inch wide slot, 1 slots wide, with adjustable vanes for left, right, or vertical discharge; integral ceiling fire damper.
- B. Fabrication: Aluminum extrusions with factory clear lacquer finish.
- C. Color: As shown on the drawings.
- D. Frame: 1-1/4 inch margin with countersunk screw mounting and gasket, mitered end border.
- E. Plenum: Integral, galvanized steel, insulated.

2.04 CEILING EXHAUST AND RETURN REGISTERS/GRILLES

- A. Type: Streamlined blades, 3/4 inch minimum depth, 3/4 inch maximum spacing, with blades set at 45 degrees, vertical face.
- B. Frame: 1-1/4 inch margin with countersunk screw mounting.

- C. Fabrication: Steel with 20 gage, 0.0359 inch minimum frames and 22 gage, 0.0299 inch minimum blades, steel and aluminum with 20 gage, 0.0359 inch minimum frame, or aluminum extrusions, with factory baked enamel finish.
- D. Color: As shown on the drawings.

2.05 CEILING EGG CRATE EXHAUST AND RETURN GRILLES

- A. Type: Egg crate style face consisting of 1/2 by 1/2 by 1/2 inch, 1/2 by 1/2 by 1 inch, and 1 by 1 by 1 inch grid core.
- B. Fabrication: Grid core consists of aluminum with mill aluminum finish.
- C. Color: As shown on the drawings.
- D. Frame: Channel lay-in frame for suspended grid ceilings.

2.06 WALL SUPPLY REGISTERS/GRILLES

- A. Type: Streamlined and individually adjustable curved blades to discharge air along face of grille with one-way deflection.
- B. Frame: 1-1/4 inch margin with countersunk screw mounting and gasket.
- C. Fabrication: Aluminum extrusions with factory clear lacquer finish.
- D. Color: As shown on the drawings.
- E. Damper: Integral, gang-operated, opposed blade type with removable key operator, operable from face.

2.07 WALL EXHAUST AND RETURN REGISTERS/GRILLES

- A. Type: Streamlined blades, 3/4 inch minimum depth, 3/4 inch maximum spacing, with spring or other device to set blades, vertical face.
- B. Frame: 1-1/4 inch margin with countersunk screw mounting.
- C. Fabrication: Steel frames and blades, with factory baked enamel finish.
- D. Color: As shown on the drawings.
- E. Damper: Integral, gang-operated, opposed blade type with removable key operator, operable from face.
- F. Gymnasiums: Provide front pivoted or welded in place blades, securely fastened to be immobile.

2.08 DOOR GRILLES

- A. Type: V-shaped louvers of 20 gage, 0.0359 inch thick steel, 1 inch deep on 1/2 inch centers.
- B. Frame: 20 gage, 0.0359 inch steel with auxiliary frame to give finished appearance on both sides of door, with factory prime coat finish.

2.09 LOUVERS

- A. Type: 4 inch deep with blades on 45 degree slope with center baffle and return bend, heavy channel frame, 1/2 inch square mesh screen over exhaust and 1/2 inch square mesh screen over intake.
- B. Fabrication: 16 gage, 0.0598 inch thick galvanized steel welded assembly, with factory prime coat finish.
- C. Color: As shown on the drawings.
- D. Mounting: Furnish with interior flat flange for installation.
- E. Size outside air intake louvers to keep velocity low enough to not entrain rain and snow into the AHU.

2.10 GOOSENECKS

END OF SECTION 23 3700