

## **Design Standard Air Outlets and Inlets**

### **Purpose:**

Air outlets and inlets are an essential element of the mechanical space ventilation, cooling, and heating systems. This design standard has the purpose of creating a consistent application of air outlets and inlets throughout the East Side Union High School District, therefore achieving a standard of quality for maintenance and reliability throughout all renovation and new building projects.

### **Design Standard:**

Design and specify work to include materials, installation, and testing of HVAC outlets and inlets for a complete and operating system

- Where possible, balancing dampers shall be located at the branch take-off instead of at the diffuser to reduce air noise. Where this is not possible, the damper at the diffuser shall be screwdriver operated
- Grilles, registers, and diffusers:
  - Indicate 1-, 2-, 3-, or 4-way deflection so as to reduce chances of drafts, and to provide optimum distribution of supply air
  - Coordinate mounting frames with construction types per finish schedule
  - Provide components that have velocity, throw and drop, and noise criteria ratings for each size device as listed in manufacturer's current standard literature, which are plus or minus 10 percent of the components as listed in the Diffuser, Register and Grille Schedule, or as specified herein
- Gravity intake and relief penthouses:
  - Stormproof, gravity type. Penthouse: Aluminum or fiberglass. Cover: Removable and lined with fiberglass insulation to prevent condensation. Provide birdscreen, roof curb, and anti-condensation coating

### **Approved Manufacturers:**

- Grilles, registers, and diffusers:
  - Titus
  - Tuttle & Bailey
  - Krueger
  - Price

- Carnes
- Nailor
- Gravity intake and relief penthouses
  - Acme
  - Breidert
  - Carnes
  - Greenheck
  - JencoFan
  - ILG
  - Cook
  - Penn

### **Substitutes Allowed:**

Yes, if performance and quality equivalency can be evidenced.

### **Associated Design Standards and Construction Specifications**

- Division 23 HVAC Design Standards
- 23 05 93 - Testing, Adjusting and Balancing Design Standard
- 23 31 00 – Ductwork Design Standard

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