

VALANCE HEATING AND COOLING UNITS

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PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
  - 1. Hydronic heating panels.

1.03 ACTION SUBMITTALS

- A. Product Data: Include rated capacities, specialties, and accessories for each product indicated.
- B. Shop Drawings:
  - 1. Include plans, elevations, sections, details, and attachments to other work. Detail equipment assemblies and suspension and attachment.
  - 2. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
- C. Samples for Initial Selection: For units with factory-applied color finishes.

1.04 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
  - 1. Suspended ceiling components.
  - 2. Structural members to which heaters and suspension systems will be attached.
  - 3. Size and location of initial access modules for acoustical tile.
  - 4. Items penetrating finished ceiling, including the following:
    - a. Lighting fixtures.
    - b. Air outlets and inlets.
    - c. Speakers.
    - d. Sprinklers.
    - e. Access panels.
  - 5. Perimeter moldings.

- B. Field quality-control reports.

#### 1.05 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For electric radiant heaters to include in emergency, operation, and maintenance manuals.

### PART 2 - PRODUCTS

#### 2.01 HYDRONIC HEATING PANELS

- A. Manufacturers: Subject to compliance with requirements, provide product indicated on Drawings or a comparable product by one of the following:
  1. Airtite.
  2. Rosemex Products.
  3. Sun-El Corporation.
  4. Twa Panel Systems Inc.
- B. Description: Linear sheet-metal panel with serpentine water piping, suitable for lay-in installation flush with T-bar ceiling grid.
  1. Panels: Minimum 0.0396-inch- thick, aluminum sheet.
  2. Backing Insulation: Minimum 1-inch- thick, mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 612, Type IA or Type IB with factory-applied jacket.
  3. Exposed-Side Panel Finish: Baked-enamel finish in manufacturer's standard paint color as selected by Architect.
  4. Factory Piping: ASTM B 88, Type M copper tube with ASME B16.22 wrought-copper fittings and brazed joints. Piping shall be mechanically bonded to panel.

### PART 3 - EXECUTION

#### 3.01 EXAMINATION

- A. Examine areas to receive radiant heating panels for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for hydronic piping connections to verify actual locations before radiant heating panel installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.02 INSTALLATION

- A. Install radiant heating panels level and plumb.

- B. Support for Radiant Heating Panels in or on Grid-Type Suspended Ceilings: Use grid as a support element.
  - 1. Install a minimum of four ceiling support-system rods or wires for each panel. Locate not more than 6 inches from panel corners.
  - 2. Support Clips: Fasten to panel and to ceiling grid members at or near each panel corner with clips designed for the application.
  - 3. Panels of Sizes Less Than Ceiling Grid: Install as indicated on reflected ceiling plans, or center in acoustical panel and support panels independently with at least two 3/4-inch metal channels spanning and secured to ceiling tees.
  - 4. Install at least one independent support rod or wire from structure to a tab on panel. Wire or rod shall have breaking strength of the weight of panel at a safety factor of three.

### 3.03 CONNECTIONS

- A. Piping installation requirements are specified in Section 232113 "Hydronic Piping" and Section 232116 Hydronic Piping Specialties." Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Unless otherwise indicated, install shutoff valve and union or flange at each connection.
- C. Install piping adjacent to unit to allow service and maintenance.

### 3.04 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
  - 1. Operate electric heating elements through each stage to verify proper operation and electrical connections.
  - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and units.
- B. Remove and replace malfunctioning units and retest as specified above.
- C. After installing panels, inspect unit cabinet for damage to finish. Remove paint splatters and other spots, dirt, and debris. Repair damaged finish to match original finish.
- D. Prepare test and inspection reports.

### 3.05 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain radiant heaters and panels. See Division 01 for additional requirements.

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END OF SECTION 23 82 13

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