

SECTION 23 8200
CONVECTION HEATING AND COOLING UNITS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Finned tube radiation and enclosure.

1.2 RELATED REQUIREMENTS

- A. Section 23 2213 - Steam and Condensate Heating Piping.
- B. Section 23 2214 - Steam and Condensate Heating Specialties.

1.3 REFERENCE STANDARDS

- A. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2013.
- B. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2014.

1.4 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide typical catalog of information including arrangements.
- C. Shop Drawings:
 - 1. Indicate cross sections of cabinets, grilles, bracing and reinforcing, and typical elevations.
- D. Selection Samples: For each finish product specified, color chart representing manufacturer's full range of available colors.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

PART 2 PRODUCTS

2.1 STEAM FINNED TUBE RADIATION

- A. Manufacturers:
 - 1. Modine Manufacturing Company; Model T: www.modineHVAC.com/#sle.
- B. Required Directory Listing: AHRI Directory of Certified Product Performance - Air-Conditioning, Heating, and Refrigeration Institute (AHRI); current edition at www.ahrinet.org.
- C. Heating Elements: 1 inch (25 mm) ID seamless copper tubing, mechanically expanded into evenly spaced aluminum fins sized 4 by 4 inches (100 by 100 mm), suitable for soldered fittings.
- D. Element Hangers: Quiet operating, ball bearing cradle type providing unrestricted longitudinal movement, on enclosure brackets. Coordinate number of brackets and mounting height with installation requirements.
- E. Enclosure: Prefinished steel with top and bottom outlet/inlet grilles.
 - 1. Height: 24"
 - 2. Thickness: 14 ga.
- F. Finish: Factory applied baked enamel of color as selected.
- G. Access Doors: For otherwise inaccessible valves, provide factory-made permanently hinged access doors, 6 by 7 inch (150 by 175 mm) minimum size, integral with cabinet.
- H. Accessories: Provide end panels, pre-made inside and outside corners and splice plates matching enclosure profile, thickness and finish.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces are suitable for installation.
- B. Verify that field measurements are as indicated on drawings.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's recommendations.
- B. Install equipment exposed to finished areas after walls and ceilings are finished and painted.
- C. Do not damage equipment or finishes.
- D. Finned Tube Radiation:
 - 1. Locate on outside walls and run cover continuously wall-to-wall unless otherwise indicated.
 - 2. Install wall angles and end caps where units butt against walls.

3.3 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.

3.4 CLEANING

- A. After construction and painting is completed, clean exposed surfaces of units.
- B. Vacuum clean coils and inside of units.
- C. Touch-up marred or scratched surfaces of factory-finished cabinets using finish materials furnished by the manufacturer.

3.5 PROTECTION

- A. Provide finished cabinet units with protective covers during the balance of construction.

END OF SECTION