# GENERAL

## SECTION INCLUDES

### Unit heaters.

### Cabinet unit heaters and fan coil units.

### Panel radiators.

## REFERENCES AND REGULATORY REQUIREMENTS

### See Section 23 05 00.

## SUBMITTALS

### See Section 23 05 00.

## OPERATION AND MAINTENANCE DATA

### See Section 23 05 00.

## QUALIFICATIONS

### Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum five years documented experience.

## DELIVERY, STORAGE AND HANDLING

### See Section 23 05 00.

## SEQUENCING AND SCHEDULING

### See Section 23 05 00.

### Install cabinet unit heaters only after walls and ceiling are finished and painted.

# PRODUCTS

## UNIT HEATERS

### General: Provide unit heaters in locations indicated on the plans. Provide units of capacities, styles, features and accessories as scheduled. Unless otherwise noted on plans, provide same end coil connections.

### Coils: Seamless copper tubing with evenly spaced aluminum fins mechanically bonded to tubing. Design coils for steam or hot water usage.

### Casing: 18 gage steel with connections for hanger rods.

### Finish: Factory apply baked enamel on visible surfaces of enclosure or cabinet.

### Fan: Direct drive propeller type, statically and dynamically balanced, with fan guard; horizontal models with permanently lubricated sleeve bearings; vertical models with grease lubricated ball bearings.

### Air Outlet: Adjustable pattern diffuser on vertical models and four way louvers on horizontal throw models.

### Motor: Refer to Section 23 05 13, horizontal models with permanently lubricated sleeve bearings; vertical models with grease lubricated ball bearings.

## CABINET UNIT HEATERS AND FAN COIL UNITS

### General: Provide cabinet unit heaters in locations indicated on the plans. Provide units of capacities, styles, features and accessories as scheduled.

### Coils: Evenly spaced aluminum fins mechanically bonded to copper tubes, designed for steam or hot water use.

### Cabinet: 16 gage steel with exposed corners and edges rounded, easily removed panels, glass fiber insulation.

### Finish: Factory applied baked enamel on visible surfaces of enclosure or cabinet. Color to be selected by Architect from manufacturer's standard color chart.

### Fans: Centrifugal forward‑curved double‑width wheels, statically and dynamically balanced, direct driven.

### Motor: Refer to Section 23 05 13; sleeve bearings, resiliently mounted.

### Filter: Easily removed one inch thick glass fiber throw‑away type, located to filter air before coil.

## PANEL RADIATORS

### General: Provide panel radiators of lengths and in locations indicated on the plans. Provide units of capacities, styles, features and accessories as scheduled.

### Panels: Panels shall be manufactured of cold rolled low carbon steel, fully welded and consisting of header pipes at each end, connected by flat oval water panels. Tube thickness shall be suitable for a working pressure of 128 psig. Header pipes shall be square tube with air vent connection, ¾ “inlet and outlet connection and internal baffles as required.

### Finish: Factory applied baked enamel finish on covers and accessories. Color is to be selected from the manufacturer extended color chart.

### Accessories as required by installed location: Provide all necessary end panels, outside and inside corner panels, and enclosure extensions to completely conceal all supply and return piping.

### Provide 5-year limited warranty.

# EXECUTION

## EXAMINATION

### Verify that required utilities are available, in proper location, and ready for use.

### Beginning of installation means installer accepts existing surfaces.

## INSTALLATION

### Install in accordance with manufacturer's instructions.

### Hang unit heaters from building structure, with pipe hangers anchored to building, not from piping. Mount as high as possible to maintain greatest headroom unless otherwise indicated.

### Install cabinet unit heaters and fan coil units as indicated. Coordinate to assure correct recess size for recessed units.

### Locate panel radiators as indicated on plans. Install elements as indicated on plans. Install accessories as noted on the plans. Provide backing inside the wall cavity or floor stands as recommended by the manufacturer. Coordinate exact mounting height and locations with architectural drawings.

### Protect units with protective covers during balance of construction.

### Provide hydronic units with valving as detailed on the plans.

### EPDM pressure/temperature tap (“Pete’s plugs”) shall be installed on hydronic supply/return piping at each unit.

## CLEANING

### After construction is completed, including painting, clean exposed surfaces of units. Vacuum clean coils and inside of cabinets.

### Touch‑up marred or scratched surfaces of factory‑finished cabinets, using finish materials furnished by manufacturer.

### Comb all bent fins on coils.

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