

SECTION 23 82 30 – HYDRONIC CONVECTORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes Hydronic Convectors.

1.3 SUBMITTALS

- A. Product Data: Include rated capacities, operating characteristics, furnished specialties, and accessories for each type of product indicated.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
- C. Color Samples for Initial Selection: For units with factory-applied color finishes.
- D. Operation and Maintenance Data: For convection heating units to include in emergency, operation, and maintenance manuals.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements provide convectors manufactured by Sigma.
- B. Convectors meeting the full requirements of the specifications, including aesthetic properties, and manufactured by the following will be considered:
 - 1. Slant/Fin.
 - 2. Sterling.
 - 3. Rittling.

2.2 HOT-WATER CONVECTORS

- A. Convector elements shall be constructed of copper tubes expanded and rolled into cast brass headers, aluminum fins, steel side plates, and fin tube supports. Fins shall have integral fin collars which space the fins and provide a fin-to-tube surface firmly bonded to the tube by mechanical expansion of the tube to help assure durability, eliminate the noise from loose fins and assure performance at cataloged ratings. All elements shall withstand 100 pounds air pressure factory tested under water.

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- B. Free Standing and Wall Cabinets: Cabinet front and top panels shall be fabricated with a minimum 16-gauge steel. End panels shall be no less than reinforced 18-gauge. Cabinet backs shall be phosphatized, galvanized steel. Front, top and sides shall be phosphatized galvanized steel, painted inside and out with a baked-on commercial primer. Fronts shall be secured in place by quick opening front panel fasteners. Cabinet top line rigidity shall be provided by a roll-formed channel section that also permits hinged-type mounting of the cabinet front panel for easy access.
- C. Recessed Cabinets: Cabinets shall have a one-piece minimum 16-gauge steel front panel. Flanges on enclosure at sides and top shall serve as plaster stops. The front shall be sealed against the flanges with a 3/8" (10 mm) sponge rubber to help prevent air leakage and wall streaking. Front panels shall be held in place by quick opening front panel fasteners. Cabinet back and sides shall be phosphatized galvanized steel. Front panels shall be phosphatized galvanized steel and painted inside and out with a baked-on commercial primer.
- D. Cabinet Finish: Refer to drawing schedules for finishes required for each convector. Provide convector units with one of the following finishes, as noted on the drawings:
 - 1. If the drawings indicate a "Primer" finish provide a factory applied baked enamel primer.
 - 2. If the drawings indicate a "Standard" color provide a factory applied baked enamel color, selected by the Architect from the manufacturer's standard color chart.
 - 3. If the drawings indicate a "Custom Color" provide a factory applied baked enamel in a custom color as selected by the Architect.
- E. Enclosure Style: Match styles indicated on the drawing schedules.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive convection heating units for compliance with requirements for installation tolerances and other conditions affecting performance. Examine roughing-in for hydronic-piping connections to verify actual locations before convection heating unit installation. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CONVECTOR INSTALLATION

- A. Install all units level and plumb. Install valves within reach of access door provided in enclosure.
- B. Install air-seal gasketing between wall and recessing flanges or front cover of fully recessed unit.
- C. Install piping within pedestals for freestanding units.

3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 Section. Drawings indicate general arrangement of piping, fittings, and specialties. Provide all specialties indicated.
- B. Unless otherwise indicated, install union, control valve, strainer, and ball valve on supply-water connection and union, calibrated balancing valve, and ball valve on return-water connection of unit heater.
- C. Install piping adjacent to convection heating units to allow service and maintenance.

3.4 FIELD QUALITY CONTROL

- A. Perform the following field tests and inspections and prepare test reports:
 - 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- B. Remove and replace convection heating units that do not pass tests and inspections and retest as specified above.

END OF SECTION 23 82 30