

SECTION 23 83 20 - CABINET UNIT HEATERS (ELECTRIC)

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Provide labor, materials, equipment and services as required for the complete installation and related work as shown on the Contract Documents.

1.2 SUBMITTALS

- A. Unit heaters and cabinet unit heaters.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Free from expansion and contraction noises and strains. Fan speed shown on Schedule shall not be exceeded. Each equipment factory-boxed and tagged by room number. Cabinet unit heaters and unit heaters shall have baked enamel finish with color selected by the Architect from manufacturer's standard colors. Rating in accordance with standard test codes adopted jointly by IUGA and ASHRAE.

2.2 CABINET UNIT HEATERS

- A. General:
 - 1. Rough-in dimensions must not exceed those of design equipment.
- B. Cabinet:
 - 1. Front and exposed parts, 16-gauge furniture steel, all others, 18 gauge steel. Unit shall have digital touchscreen face.
 - 2. Fronts shall be removable for access to interior parts.
 - 3. Recessed or semi-recessed equipment to have four-side overlap, trim strips not acceptable.
- C. Fan And Motor:
 - 1. Fans, forward curved, centrifugal type, direct drive from motor shafts.
 - 2. Driven by totally enclosed motor with overload protection and lifetime lubrication.
 - a) Integral manual motor starter.
 - 3. Shall be quiet in operation, not to exceed 45 db measured 5 ft. away, at high speed.

4. Three speed accessible fan selector switch.
 5. Wall mounted line voltage thermostats.
 6. Throwaway filter.
- D. Heating Element (Electric):
1. Nickel-chrome steel resistance wire embedded in refractory enclosed in steel sheath with spiral wound fins.
 2. High limit automatic reset cutout switch wired in series with each element to protect from overheating and located in discharge airstream.
 3. Fan delay switch to keep fan in operation until heat in element is dissipated after element is de-energized.
 4. Built-in transformer to convert line voltage current to fan, and control voltage if different from line voltage.
- E. Electric:
1. Design equipment: Q-Mark.
 2. Make: AAF, Airtherm, Berko, Markel, Q-Mark, Trane.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL

- A. Provide equipment in accordance with manufacturer's printed instructions. Report untrue walls before installation. Report cases where clearance below suspended heaters is less than 7-1/2 ft. Provide clearance for piping and conduit. Support units independent of piping. Support units from building structure, with screws or bolts, no nailing allowed. Be responsible for proper location and size of recesses. Coordinate installation of recessed or semi-recessed equipment in recesses. Provide framing in recess and shims. Use sponge rubber gasket air-seal between front enclosure and wall.

3.2 INSTALLATION - HYDRONIC

- A. Provide valves and accessories and arrange to permit servicing. Coordinate correct end connections and coil arrangements.

END OF SECTION