

SECTION 238239 - UNIT HEATERS

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Electric Wall Heaters

1.2 RELATED WORK

- A. Section 23 05 29 – Hangers and Supports for HVAC Piping and Equipment
- B. Section 23 05 48 – Vibration and Seismic controls for HVAC Piping and Equipment

1.3 QUALITY ASSURANCE

- A. Electrical heating equipment: Products of manufacturer regularly engaged in production of such units and issuing complete catalog data on such product. Coils shall be UL Listed for zero clearance. Heating elements shall be warranted for two years unless noted otherwise.
- B. All heaters shall be UL listed.

1.4 SUBMITTALS

- A. Submit shop drawings, product data and samples under provisions of Section 013300.
- B. Submit manufacturers' installation instructions under provisions of Section 013300.
- C. Show mechanical and electrical requirements.
- D. Submit schedule of heaters.

1.5 OPERATION AND MAINTENANCE DATA

- A. Submit manufacturer's descriptive literature, operating instructions, and maintenance and repair data under provisions of Section 013300.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Electric Heaters
 - 1. Marley Qmark
 - 2. Markel
 - 3. Brasch
 - 4. Berko
 - 5. Indeeco
 - 6. Vulcan
 - 7. Substitutions: Under provisions of Sections 012500 and 230500.

2.2 ELECTRIC WALL HEATERS

- A. The heating equipment shall include electric, automatic fan forced air heater suitable for small area heating, as manufactured by QMark Model CWH. The heater shall be designed for wall recess mounting. Heaters shall be UL listed or equivalent (ETL).
- B. Backbox: The backbox shall be designed for duty as a recessed rough-in box in either masonry or frame installations, and is also used with the surface mounting frame in surface mounting installations. The backbox shall be heavy gauge galvanized steel and shall contain knockouts through which power leads enter.
- C. Inner Frame Assembly: The heater assembly which fits into the backbox shall consist of a fan panel upon which is mounted all of the operational parts of the heater. The inner frame assembly shall be completely prewired.
- D. Heating Element: The heating element shall be of the non-glowing design consisting of an 80/20 nickel-chromium resistance wire enclosed in a steel sheath to which plate fins are copper brazed. The element shall cover the entire air discharge area to ensure uniform heating of all discharged air. It shall be warranted for 5 years.
- E. Power On/Off Switch: A double-pole, single throw On/Off switch shall be mounted on the backbox for positive disconnect of power supply. It will be completely concealed behind the front grille panel.
- F. Motor and Controls: The fan motor shall be impedance protected, permanently lubricated. Fan control shall be of the bi-metallic, snap-action type and shall activate fan after heating element reaches operating temperature, and continue to operate the fan after the thermostat is satisfied and until all heated air has been discharged. The thermostat shall be single-pole type on all models. Thermal cutout shall be self-hold (manual-reset) type designed to shut off heat in the event of overheating. The fan shall be four-bladed aluminum. A backup (end-of-life) thermal fuse shall be provided for additional safety.
- G. Surface Mounting Frame: The surface mounting frame shall be of heavy gauge steel designed to mount around the back box for a finished surface installation. Slot knockouts shall be provided for power supply conduit.
- H. Front Cover: The louvered front cover shall be of heavy gauge steel with a powder paint finish. A plug button will; be provided to replace the thermostat knob and render the unit tamper-resistant.
- I. Finish: All sheet metal parts, except the galvanized steel back box, shall be phosphatized, then completely painted by a powder paint process.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install unit heater per manufacturer's instructions.
- B. Refer to drawings for sizes and capacities.

END OF SECTION 238239