

SECTION 23 82 39.19 - ELECTRIC WALL AND CEILING UNIT HEATERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. **KROGER DIRECT BUY PROGRAM:** Owner supplied/Contractor installed.
 - a. The Kroger Co. will supply the suspended electric unit heaters as indicated on Drawings:
2. Installation of electric unit heaters by contractor.
3. Additional items supplied and installed by contractor not part of Kroger National Account Agreement:
 - a. Fasteners, mounting brackets, and other items necessary for a complete installation.

B. Refer to Drawings for quantity and sizes and extent of electric unit heater work.

1.2 REFERENCES:

A. Codes and Standards

1. ARI Compliance: Unit heaters will be constructed in accordance with ARI ratings and be UL listed.
2. Code Compliance: Unit heaters will be listed and labeled in accordance with the National Electrical Code and by an organization acceptable to authority having jurisdiction.

1.3 SUBMITTALS

- A. Product Data: For each type of unit heater indicated including rated capacities, operating characteristics, and accessories.
- B. Shop Drawings: Equipment assemblies and dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.5 WARRANTY

- A. Warranty information for electric unit heaters is specified in Division 01 Section "Product Warranties."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Refer to Division 01 Section "Vendor Contact List," Kroger National Account Agreement for contact information on electric unit heaters.

2.2 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Capacities and Characteristics:
 - 1. Unit Size: As indicated on Drawings.
 - 2. Motor Enclosure: Open.
 - 3. Electrical Characteristics: As indicated on Drawings.

2.3 MANUFACTURED UNITS

- A. Description: Factory assembled and wired complying with ANSI Z83.8/CSA 2.6.
 - 1. Include fittings, vent pipes, and vent termination caps as required by manufacturer and as indicated on Drawings.
- B. Elements: high mass, copper brazed all steel tubular finned type or aluminum finned copper clad steel sheath acceptable. Centrally located and installed in fixed element banks.
- C. Housing: Die-formed, heavy gauge steel and finished in high gloss, baked enamel, adjustable louvers.
- D. Accessories:
 - 1. Unit mounted thermostat.
- E. Propeller Unit Fan:
 - 1. Motors shall be totally enclosed, all angle industrial rated. All units will utilize sealed bearings to assure permanent lubrication.
 - 2. Fan-Blades: shall be of the axial flow type.
- F. Controls: Contactors and control transformers where required are to be factory installed and wired. Built-in fan override to purge casing of excess heat at shutdown.

- G. Electrical Connection: Factory wire motors and controls for a single electrical connection.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive wall and ceiling unit heaters for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for electrical connections to verify actual locations before unit-heater installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install wall and ceiling unit heaters to comply with NFPA 90A.
- B. Install wall and ceiling unit heaters level and plumb.
- C. Suspended Units: Suspend from substrate using threaded rods, spring hangers, and building attachments. Secure rods to unit hanger attachments. Adjust hangers so unit is level and plumb.
- D. Electrical Connections: Comply with applicable requirements in Division 26 Sections.
 - 1. Install electrical devices furnished with heaters but not specified to be factory mounted.
- E. Adjust initial temperature set points.
- F. Adjust unit components for optimum heating performance and efficiency.

3.3 FIELD QUALITY CONTROL

- A. Tests and Inspections: Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.4 CLEAN UP

- A. Clean up work provided under this section. Touch-up with matching paint all damaged factory finishes.

END OF SECTION 23 82 39.19

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