

SECTION 238101 - TERMINAL HEAT TRANSFER UNITS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Electric heaters.

1.2 RELATED REQUIREMENTS

- A. Section 23 0513 - Common Motor Requirements for HVAC Equipment.
- B. Section 26 2717 - Equipment Wiring: Electrical characteristics and wiring connections. Installation of room thermostats. Electrical supply to units.

1.3 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide typical catalog of information including arrangements.
- C. Shop Drawings:
 - 1. Indicate cross sections of cabinets, grilles, bracing and reinforcing, and typical elevations.
 - 2. Submit schedules of equipment and enclosures typically indicating length and number of pieces of element and enclosure, corner pieces, end caps, cap strips, access doors, pilaster covers, and comparison of specified heat required to actual heat output provided.
 - 3. Indicate mechanical and electrical service locations and requirements.
- D. Manufacturer's Instructions: Indicate installation instructions and recommendations.
- E. Project Record Documents: Record actual locations of components and locations of access doors in radiation cabinets required for access or valving.
- F. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, installation instructions, maintenance and repair data, and parts listings.
- G. Warranty: Submit manufacturer's warranty.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

1.5 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year manufacturer's warranty for fan-coil unit.

PART 2 PRODUCTS

2.1 ELECTRIC UNIT HEATERS

- A. Manufacturers:
 - 1. INDEECO

2. Marley Engineered Products
 3. Trane
- B. Assembly: UL listed and labelled assembly with terminal box and cover, and built-in controls.
 - C. Heating Elements: Enclosed copper tube, aluminum finned element of coiled nickel-chrome resistance wire centered in tubes and embedded in refractory material.
 - D. Cabinet: 0.0478 inch steel with easily removed front panel with integral air outlet and inlet grilles.
 - E. Element Hangers: Quiet operating, ball bearing cradle type providing unrestricted longitudinal movement, on enclosure brackets.
 - F. Fan: Direct drive propeller type, statically and dynamically balanced, with fan guard.
 - G. Motor: Permanently lubricated, sleeve bearings for horizontal models, ball bearings for vertical models.
 - H. Control: Separate fan speed switch and thermostat heat selector switch, factory wired, with switches built-in behind cover. Provide thermal overload.
 - I. Electrical Characteristics:
 1. Disconnect Switch: Factory mount disconnect switch.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install equipment exposed to finished areas after walls and ceiling are finished and painted. Do not damage equipment or finishes.
- C. Install electric heating equipment including devices furnished by manufacturer but not factory mounted. Furnish copy of manufacturer's wiring diagram submittal. Install electrical wiring in accordance with manufacturer's submittals and Section 26 2717.

3.2 CLEANING

- A. After construction is completed, including painting, clean exposed surfaces of units. Vacuum clean coils and inside of cabinets.
- B. Touch-up scratched surfaces of factory-finished cabinets, using finish materials furnished by manufacturer.

END OF SECTION 238101