SECTION 23 8239 - UNIT HEATERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cabinet unit heaters.
2. Propeller unit heaters.

1.2 SUBMITTALS

A. Product Data: Include rated capacities, operating characteristics, furnished specialties, and accessories for each 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.

1. Equipment schedules to include rated capacities, furnished specialties, and accessories.

C. Operation and maintenance data.

1.3 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.

B. ASHRAE/IESNA 90.1-2004 Compliance: Applicable requirements in ASHRAE/IESNA 90.1-2004, Section 6 - "Heating, Ventilating, and Air-Conditioning."

PART 2 - PRODUCTS

2.1 CABINET UNIT HEATERS

A. Fan: Direct driven centrifugal with multi-speed permanent split capacitor motor having internal overload protection.

B. Electrical Disconnect:

1. Toggle disconnect switch furnished and mounted inside the cabinet.

C. Heating Coil: Seamless copper tubes with bonded aluminum fins, hydrostatically tested at 300 psi.

D. Cabinet:

1. Exposed units shall be constructed of galvanized steel, 16 gauge front and 20 gauge back and sides, with outlet and inlet grille as appropriate. Recessed units shall have overlapping cabinet or wall flange on all four corners. Exposed and recessed units shall have lockable access door.

a. Finish shall be baked enamel of colors selected by the Architect from the manufacturer's standard decorator colors.

2. Concealed units shall have a discharge duct collar and where return duct is required, a return duct collar.

E. Filter: 1" pleated media throwaway, MERV 7 (Farr 30/30)

F. Controls: Low voltage transformer, unit on-off power switch, 24v 2-way position ball valve and wall mounted thermostat.

G. Manufacturers:

1. Airtherm.
2. Carrier Corporation.
3. Dunham-Bush, Inc.
4. Trane.
5. *Modine (Addendum 1 – 7/31/2023)*

2.2 PROPELLER UNIT HEATERS

A. Fan: Direct driven propeller fan and single speed permanent split capacitor motor with internal overload protection. Units shall have a wire fan guard.

B. Electrical Disconnect:

1. Toggle disconnect switch furnished and mounted on cabinet.

C. Heating Coil: Seamless copper tubes with bonded aluminum fins, hydrostatically tested at 300 psi.

D. Cabinet: Galvanized steel, 18 gauge, with baked enamel finish. Horizontal units shall be equipped with adjustable discharge louvers.

E. Controls: Low voltage transformer, on-off switch, 24v 2-way 2 position ball valve and wall mounted thermostat.

F. Manufacturers:

1. Airtherm.
2. Dunham-Bush

3. Rittling
4. Modine.
5. Trane.
6. Daikin.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Refer to drawings for arrangement, type, capacity, motor characteristics and other requirements.

B. Install unit heaters to comply with NFPA 90A.

C. Suspend unit heaters, all four corners, from building structure with steel hanger rods and auxiliary angles and fastening devices.

D. Install wall-mounting thermostats and switch controls in electrical outlet boxes at heights to match lighting controls. Verify location of thermostats and other exposed control sensors with Drawings and room details before installation.

E. Wiring between the unit and wall mounted thermostats shall be run in conduit, furnished and installed by the HVAC contractor. See Section 23 0914 “Control Wiring”.

F. Install new filters in each fan-coil unit within two weeks of Substantial Completion.

G. Install piping adjacent to machine to allow service and maintenance.

END OF SECTION 23 8239

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