SECTION 23 82 50 – HYDRONIC UNIT HEATERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes propeller unit heaters with hot-water coils. Obtain all unit heaters through one source and from a single manufacturer.

1.3 QUALITY ASSURANCE

A. Obtain all unit heaters through one source from a single manufacturer, regularly engaged in production of the units.

1.4 SUBMITTALS

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

B. Operation and Maintenance Data: For unit heaters.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide unit heaters manufactured by one of the following:

1. Trane.
2. Sigma
3. Sterling.
4. Zehnder Rittling

2.2 UNIT HEATERS

A. Description: An assembly including casing, coil, fan, and motor with adjustable discharge louvers. Comply with UL 2021 and UL 823.

2.3 CABINETS

A. Cabinets are constructed from heavy duty cold rolled corrosion resistant steel. Provide a baked finish in the manufacturer's standard color.

B. Fronts have integral double-folded discharge frame for additional cabinet rigidity. Back panels have integral inlet collars for superior stiffness.

C. Horizontal units to be furnished with louvres and individually adjustable blades.

2.4 COILS

A. Standard coils are constructed from heavy wall 5/8" outside diameter copper tube with mechanically bonded aluminum fins. Coils are pressure tested at 350 psig.

2.5 FAN

A. Fans to be statically and dynamically balanced for quiet, low vibration operation.

2.6 FAN MOTORS

A. Motors to be totally enclosed with automatic thermal overload protection. Motors to be resilient mounted onto fan guards for quiet, low-vibration operation.

B. Motor Type: Permanently lubricated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive propeller unit heaters for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Examine roughing-in for piping and electrical connections to verify actual locations before propeller unit-heater installation. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install propeller unit heaters level and plumb.

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

C. Suspend propeller unit heaters from structure with all-thread hanger rods with vibration isolators.

3.3 CONNECTIONS

A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to unit to allow service and maintenance.

C. Unless otherwise indicated, install union, control valve, strainer and ball valve on supply-water connection and union, calibrated balancing valve and ball valve on return-water connection of unit heater.

3.4 FIELD QUALITY CONTROL

A. Perform field tests and inspections as required by the manufacturer. Provide test reports.

B. Remove and replace malfunctioning units and retest as specified above.

END OF SECTION 23 82 50