

CELLAR DOOR TENANT FIT-UP

SECTION 23 00 00 - HVAC SYSTEM

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The work covered by this Section of the specifications includes the furnishing of labor, materials, equipment, transportation, permits, inspections and incidentals and the performing of operations required to install the heating, ventilating and air conditioning systems indicated.

1.2 RELATED DOCUMENTS

- A. The drawings and the specifications including Section 23 05 00 "Supplemental Mechanical General Requirements" are hereby made a part of the work of this section.

1.3 SUBMITTALS

- A. Substitutions: Your attention is directed to Section 23 05 00-"Substitutions", relative to competition and the (ONLY) notation. Familiarity with this section should be achieved before reading the PRODUCTS section of this specification.
- B. The items for which the submittals paragraph in Section 23 05 00, Supplemental Mechanical General Requirements, apply are as follows:
 - 1. Equipment identification.
 - 2. Firestopping materials and methods.
 - 3. Fans.
 - 4. Electric wall heaters

PART 2 PRODUCTS

2.1 EQUIPMENT IDENTIFICATION

- A. Equipment Identification:
 - 1. Provide laminated plastic nameplates for boilers, pumps, and air handling units. Laminated plastic shall be 0.125-inch thick melamine plastic conforming to Fed. Spec. L-P-387, black with white center core. Surface shall be a matte finish, corners shall be square. Accurately align lettering and engrave into the white core. Minimum size of nameplates shall be 1.0 inch by 2.5 inches. Lettering shall be minimum of 0.25-inch high normal block lettering.

2.2 FANS (EF-#)

- A. Shall be model indicated. The fan shall include housing, fan wheel, shaft, bearings, inlet shroud, motor, mounting support and mounting frame as a factory-assembled unit. An OSHA-approved belt guard shall be included. The fan drive shall have a 1.5 service factor for the maximum rated horsepower. Each fan shall incorporate a backdraft damper or one shall be installed at the discharge (louver).
- B. Bearings shall be precision, flange-mounted self-aligning ball bearings at inlet and discharge. Grease lines shall extend to the exterior of the fan housing.

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- C. Submit sound power data for inlet and discharge sound.
- D. Submit fan curves for each fan with the design operating point clearly marked.
- E. Furnish accessories as noted on drawings.
- F. Fans shall be Energy Star rated.

2.3 ELECTRIC WALL HEATER (WH-#)

- A. Electric wall heaters shall be manufactured by the Berko Electric or approved equal, UL listed. Unit configuration shall be wall-mounted, inverted flow. Cabinet shall be 16 gauge cold rolled steel with hinged front access door for access to control panel and access panel for access to all other internal components. Heating element shall be warranted for five years and shall be a non-glowing design constructed of a steel sheath with steel fins and shall include a thermal cutout to directly interrupt power to the element in the case of overheating without the use of relays. Power and performance as scheduled. Provide with remote mounted thermostat.

PART 3 EXECUTION

3.1 SURFACE CONDITIONS

- A. Inspection:
 - 1. Prior to work of this Section, carefully inspect the installed work of other trades and verify that such work is complete to the point where this installation may properly commence.
 - 2. Verify that the heating system may be installed in accordance with pertinent codes and regulations and the reviewed Submittals.

3.2 CLOSING IN WORK

- A. Cover up or enclose work only after it has been properly and completely tested and reviewed.
- B. No additional cost to the Owner will be allowed for uncovering or recovering any work that is covered or enclosed prior to required test and review.

3.3 TEST AND ADJUST

- A. After the installation is complete and ready for operation, test the system under normal operating conditions in the presence of the Architect and demonstrate that the system functions as designed.
- B. Demonstrate that the HVAC systems have free and noiseless circulation of water, that all air has been purged and that systems are watertight.
- C. Correct defects which develop in operational testing, conduct additional testing until defect free operation is achieved.

3.4 CLEANUP AND CORROSION PREVENTION

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- A. Piping and equipment shall be thoroughly cleaned. Dirt, dust, and debris shall be removed and the premises left in a clean and neat condition.
- B. Before covering is applied to piping systems, clips, rods, clevises and other hanger attachments, and before uncovered piping is permitted to be concealed, corrosion and rust shall be wire brushed and cleaned and in the case of iron products, a coat of approved protective paint applied to these surfaces. When corrosion is from the effects of hot solder paste, the areas shall be cleaned and polished and a wash of bicarbonate of soda and water used to neutralize the acid condition.

3.5 INSTRUCTIONS

- A. On completion of the project, instruct the Owner's representative in the care and operation of the system. The total period of instruction shall not exceed four (4) hours per building. The time of instruction shall be arranged with the Owner. In addition to the prime Mechanical Contractor, the control system Contractor, Balancing Contractor, and Owner's representative shall be present and participate in the Owner's instruction.

3.6 FIRESTOPPING

- A. Firestopping shall be performed in accordance with Specification Section 07 84 00 "Firestopping". All penetrations of fire-rated assemblies including walls and floors by mechanical system components (piping, ductwork, conduits, etc.) shall be firestopped as specified.

* END OF SECTION *