

SECTION 22 30 00
EXPLOSION-PROOF ELECTRIC WATER HEATER

EQUIPMENT NUMBER

HW-V100 Hot Water Heater

PART 1 GENERAL

1.01 SUBMITTALS

A. Action Submittals:

1. Manufacturer's product data.

T 2 PRODUCTS

2.01 ELECTRIC WATER HEATERS

- A. General: The heater is designed specifically for installation in a hazardous location. All operating controls are to be housed within an electrical control panel rated for operation in a Class 1, Division 1&2, Groups B,C,D; Class 2, Division 1&2, Groups E,F,G; Class 3, Division 1&2; Nema 4, 7BCD,9; hazardous area and is UL and CSA listed and approved. It shall be of explosion-proof construction and suitable for operation in a Class I, Division 2 process area.

B. Description:

- a. Provide a quantity of _____ commercial explosion proof electric water heater(s) Model No. _____ as manufactured by HUBBELL Electric Heater Co., Stratford, CT.
- b. Regulatory Compliance: UL and CSA listed, ASME, and ASHRAE 90.1.
- c. The entire unit is to be complete with all operating controls and require only plumbing and electrical service connections.
- d. The tank shall be all welded steel commercial construction designed for 150psi working pressure and contain _____ gallons of storage.
- e. The pressure vessel is to be lined with seamless Hydrastone Cement to a minimum thickness of 1/2" on 100% of all interior tank surfaces (**Optional Specification:** tank to be fabricated from solid copper-silicon, stainless steel) and does not require any type of anodic protection.
- f. The tank shall be designed and fabricated with non-ferrous copper-silicon threaded tappings and non-ferrous inlet and outlet piping for maximum corrosion resistance. Steel tank tappings will not be acceptable.

- g. Insulation: The entire tank is to be insulated with a minimum of 2" thick polyurethane foam insulation and exceed the latest ASHRAE standard for stand-by heat loss.
- h. The complete heater shall be supplied with a high impact colorized composite protective jacket which cannot rust or corrode and does not require painting.
- i. The cold water inlet shall be 3/4" Female NPT (**Optional Specification:** 1 1/2" Male NPT) and include a non-corrosive strata-flow diffuser which prevents incoming cold water from mixing too rapidly with hot water in the tank.
- j. 3/4" hose connection drain.
- k. The hot water outlet shall be 3/4" Male NPT (**Optional Specification:** 1 1/2" Male NPT) and shall include a factory installed built-in heat trap to prevent water from radiating through the piping during stand-by periods.
- l. A separate 3/4" Female NPT tapping is to be provided for relief valve installation. An ASME rated automatic reseating combination temperature and pressure safety relief valve set at 150psi and 210°F shall be factory supplied.
- m. Heating Element: The heating element(s) shall be a high quality Incoloy sheath electric immersion type, and shall be rated at _____ KW which will heat _____ GPH of water at _____°F Rise (_____° to _____°F).
- n. The heater shall be designed to operate at _____ volts _____ phase _____ Hz (balanced) with all necessary operating controls factory mounted, wired and tested. Each circuit is to be independently operated through a definite purpose magnetic contactor having a resistive load rating exceeding the ampere rating of that particular circuit. Water temperature shall be controlled through an adjustable 110-170°F snap action surface thermostat (**Optional Specification:** an immersion thermostat 100-180°F or 30-110°F). An over-temperature manual reset Hi-Limit shall be factory installed to disconnect all conductors to the heating element in the event of an over-temperature condition in the pressure vessel.
- o. In addition, the water heater shall be supplied with the following optional features:

OPTION _____
 OPTION _____
 OPTION _____

C. Manufacturers:

- 1. HUBBELL Electric Heater Co; Model ER.
- 2. Or equal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install, arrange, and connect equipment as shown on Drawings and in accordance with manufacturer's recommendations.

END OF SECTION