

SECTION 223500

DOMESTIC WATER HEATERS

PART 1 – GENERAL

1.1 REFERENCE

- A. Work under this Section is subject to requirements of Contract Documents including General Conditions of Contract, Supplementary Conditions, and sections under Division 01 General Requirements.

1.2 QUALITY ASSURANCE

- A. Water heating equipment shall conform to State and Local Codes, meet national standards, and be certified by respective organization and bear its stamp.

1.3 SUBMITTALS

- A. Shop drawings on items specified herein.

PART 2 – PRODUCTS

2.1 ELECTRIC STORAGE HOT WATER HEATERS

- A. Provide storage type electric hot water heaters where indicated and with rated capacities as scheduled on the Construction Documents.
- B. Each heater shall be capable of being disassembled in place for maintenance and inspection purposes without having to remove the shell from the domestic water piping.
- C. Each water heater shall consist of the following components, completely factory-assembled, ready for connection to services:
 - 1. Storage tank construction: Steel construction.
 - 2. Interior Finish: Seamless Hydrastone cement applied via centrifugal spinning process to guarantee uniform distribution of 1/2" thick cement over all interior surfaces, and a cement density of 0.20 lbs/cubic inch minimum in order to provide increased longevity and inhibit oxidized water ingress.
 - 3. Each heater tank shall be fitted with non-ferrous solid copper-silicon threaded connections for maximum corrosion resistance.
 - 4. Drain Valve: Corrosion-resistant metal complying with ASSE 1005.
 - 5. Insulation: Insulation to be a minimum 2" thick polyurethane foam which will exceed ASHRAE/IESNA 90.1 standard for heat loss.
 - 6. Jacket: High impact colorized composite that does not rust or corrode.

7. Heating elements shall be immersion bolt on type, incoloy sheathed.
 8. Heater shall have a safety high-limit cutout set to 190°F and manual reset button.
 9. Magnetic contactor(s) are heavy duty resistive load type rated for 200,000 cycles.
 10. Temperature Control: Adjustable thermostat, to setting of at least 170°F.
 11. Heater shall be furnished with a bronze ASME/CSA rated temperature and pressure-relief valve set at 210°F (98.8°C) and 150 psig (10.3 bar).
 12. Built-in heat trap to improve operating efficiency (3/4" inlet/outlet models only).
 13. Heater shall be suitable for operation on xxx volts, 3 phase, 60 Hz, AC power.
- D.** Electric storage type domestic hot water heaters shall be Hubbell Heater Co. Model SE series commercial water heater.

3.1 INSTALLATION

- A. Install water heaters as recommended by manufacturer. Provide final connections as required. Coordinate water heater location with other Contractors.
- B. Warranty on all electrical components against defects in workmanship and material for a period of one (1) year from date of start-up, and the storage tank for a full five (5) years from date of start-up, provided that the unit is started within three (3) months of date of shipment.
- C. All fabrication and assembly shall be performed in the U.S.A.
- D. Initial start-up shall be provided by representative of manufacturer.

END OF SECTION