

SECTION 15300 - PLUMBING EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. 40 gallon electric water heater.

1.02 REFERENCE STANDARDS

- A. UL 174 - Standard for Household Electric Storage Tank Water Heaters; Underwriters Laboratories Inc.; 2004.

1.03 SUBMITTALS

- A. Product Data:
 - 1. Provide dimension drawings of water heaters indicating components and connections to other equipment and piping.
 - 2. Buy American documentation: Provide documentation to owner which certifies that the equipment is manufactured in America in accordance with the Buy American Requirements of the Owner and the American Recovery and Reinvestment Act of 2009.
 - 3. Provide electrical characteristics and connection requirements.
- B. Operation and Maintenance Data: Include operation, maintenance, and inspection data, replacement part numbers and availability, and service depot location and telephone number.
- C. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

1.05 CERTIFICATIONS

- A. Water Heaters: NSF approved.
- B. Electric Water Heaters: UL listed and labeled to UL 174 or UL 1453.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

1.07 WARRANTY

- A. Provide ten year manufacturer warranty for domestic water heaters.

PART 2 PRODUCTS

2.01 WATER HEATER MANUFACTURERS

- A. Rheem Manufacturing Company; Model 83XR40-2: www.rheem.com.
- B. Bradford White Corporation; Model M-2-HE40S6DS: www.bradfordwhite.com
- C. A.O. Smith Corporation; Model ECRT-40: www.hotwater.com

2.02 RESIDENTIAL ELECTRIC WATER HEATERS

- A. Type: Automatic, high efficiency, electric, vertical storage.
- B. Performance:
 - 1. Minimum Energy Factor: .91.
 - 2. Storage capacity: 40 gal (151 L).
 - 3. First Hour Rating: 55 gal/hr (208 L/hr).
 - 4. Heating element size: 4.5 kW.
 - 5. Number of heating elements: 2.
 - 6. Minimum recovery rate: 21 gal/hr (79 L/hr) with 90 degrees F temperature rise.
 - 7. Maximum working pressure: 150 psig (1000 kPa).
- C. Electrical Characteristics:
 - 1. 240 volts, single phase.
 - 2. Disconnect switch provided by Electrical Contractor.
 - 3. Coordinate electrical requirements with Electrical Contractor and actual field conditions.
- D. Tank: Glass lined welded steel, thermally insulated with two inch (50 mm) thick foam plastic (R16 minimum); encased in corrosion-resistant steel jacket; baked-on enamel finish.
- E. Controls: Automatic water thermostat with externally adjustable temperature range from 120 to 170 degrees F (49 to 77 degrees C), flanged or screw-in nichrome elements, enclosed controls and electrical junction box and operating light. Wire double element units so elements do not operate simultaneously.
- F. Accessories: Provide:
 - 1. Water Connections: Brass.
 - 2. Dip tube: Brass.
 - 3. Drain Valve.
 - 4. Anode: Magnesium
 - 5. Temperature and Pressure Relief Valve: ASME labelled.
 - 6. Additional accessories as required by code for complete installation of system, to include antisiphon device, vacuum relief valve, disconnect switch, shut-off valves, external heat traps, drain pan and relief valve discharge piping.
- G. Seismic Bracing: Provide seismic anchors or straps in accordance with the 2006 International Residential Code, P2801.7, or the 2006 International Building Code and ASCE 7, whichever code is applicable for the installation.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install plumbing equipment in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification, if any.
- B. Coordinate with plumbing piping and related electrical work to achieve operating system.

END OF SECTION