

**SECTION 22 30 00**  
**PLUMBING EQUIPMENT**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SECTION INCLUDES**

- A. Water Heaters:
  - 1. Electric Tank Type Water Heater
  - 2. Electric Tankless Water Heater
- B. Expansion Tanks.

**1.03 RELATED REQUIREMENTS**

- A. Section 22 05 48 - Vibration and Seismic Controls for Plumbing Piping and Equipment.
- B. Section 26 05 83 - Wiring Connections: Electrical characteristics and wiring connections.

**1.04 REFERENCE STANDARDS**

- A. ANSI Z21.10.1 - Gas Water Heaters, Volume I, Storage Water Heaters with Input Ratings of 75,000 Btu Per Hour or Less; 2019, with Errata (2020).
- B. ANSI Z21.10.3 - Gas-Fired Water Heaters, Volume III, Storage Water Heaters with Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous; 2019.
- C. ASME BPVC-VIII-1 - Boiler and Pressure Vessel Code, Section VIII, Division 1: Rules for Construction of Pressure Vessels; 2021.
- D. ICC (IPC) - International Plumbing Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- E. UL 174 - Standard for Household Electric Storage Tank Water Heaters; Current Edition, Including All Revisions.
- F. UL 778 - Standard for Motor-Operated Water Pumps; Current Edition, Including All Revisions.
- G. UL 1453 - Standard for Electric Booster and Commercial Storage Tank Water Heaters; Current Edition, Including All Revisions.
- H. NSF 61 - Drinking Water System Components - Health Effects; 2012.
- I. NSF 372 - Drinking Water System Components - Lead Content; 2011.

**1.05 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.
- B. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

**1.06 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittals procedures.
- B. Product Data:
  - 1. Provide dimension drawings of water heaters indicating components and connections to other equipment and piping.
  - 2. Indicate pump type, capacity, power requirements.
  - 3. Provide certified pump curves showing pump performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable.
  - 4. Provide electrical characteristics and connection requirements.
- C. Shop Drawings:
  - 1. Indicate heat exchanger dimensions, size of tapings, and performance data.

2. Indicate dimensions of tanks, tank lining methods, anchors, attachments, lifting points, tappings, and drains.
- D. Manufacturer's Instructions: Indicate clearances and connection requirements.
- E. Project Record Documents: Record actual locations of components.
- F. Operation and Maintenance Data: Include operation, maintenance, and inspection data, replacement part numbers and availability, and service depot location and telephone number.
- G. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

#### **1.07 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Identification: Provide pumps with manufacturer's name, model number, and rating/capacity identified by permanently attached label.
- C. Performance: Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, operate within 25 percent of midpoint of published maximum efficiency curve.

#### **1.08 DELIVERY, STORAGE, AND HANDLING**

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

#### **1.09 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year manufacturer warranty for domestic water heaters.

### **PART 2 PRODUCTS**

#### **2.01 WATER HEATERS**

- A. Electric Tank Type Water Heater (See Plumbing Schedule)
  1. Manufacturers:
    - a. Rheem
    - b. A.O. Smith
- B. Electric Tankless Water Heater (See Plumbing Schedule)
  1. Manufacturers:
    - a. Eemax
    - b. Rheem

#### **2.02 EXPANSION TANKS (SEE PLUMBING SCHEDULE)**

### **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 fuel piping, gas venting, and electrical work to achieve operating system.
- C. Domestic Water Storage Tanks:
  1. Provide steel pipe support, independent of building structural framing members.
  2. Clean and flush prior to delivery to site. Seal until pipe connections are made.

**END OF SECTION**