

SECTION 221119 – Domestic Water Piping Specialties

PART 1 – GENERAL

SCOPE

This section includes specifications for thermostatic mixing valves and other plumbing specialties.

Part 1 – GENERAL

- Scope
- Related Documents
- Reference Standards
- Quality Assurance
- Shop Drawings
- Operation and Maintenance Manuals

Part 2 – PRODUCTS

- Thermostatic Mixing Valves

Part 3 – EXECUTION

- Installation

RELATED DOCUMENTS

Section -

REFERENCE STANDARDS

ASSE - 1017 Temperature Actuated Mixing Valves

QUALITY ASSURANCE

Substitution of Materials: Refer to other sections. Requests for substitutions must be submitted with complete technical data. Substitutions will only be reviewed when submitted with associated cost savings to the owner.

SHOP DRAWINGS

For each type and size valve provide pressure drop data at specified flow rate. Valves which exceed the scheduled pressure drop will not be acceptable.

OPERATING and MAINTENANCE DATA

Manufacturer shall provide installation and adjusting instructions. Contractor shall mount instructions at the valve location.

PART 2 – PRODUCTS

TEMPERATURE ACTUATED WATER MIXING VALVES

- A. Primary, Thermostatic Water Mixing Valves

1. Manufacturers: Holby Valve Inc.
2. Standard: ASSE 1017-2009
3. Pressure Rating: 125 psig
4. Factory Test Pressure: All valves shall be factory tested to 300 psig.
5. Construction: Valves shall be constructed completely of bronze and shall contain no more than 0.25% lead by wetted surface area. Valve body to include mixing chamber with vanes. Thermostatic element shall be removable without disconnecting piping. Size as indicated on drawings. Holby Tempering Valve.
6. The thermostatic element shall have a minimum length as per the following schedule: $\frac{1}{2}$ " and $\frac{3}{4}$ " Valves – 7-1/4" element length; 1" Valve – 11" element length; 1-1/4" valve – 18" element length; 1-1/2" and 2" valves – 23" element length and 2-1/2", 3" and 4" valves – 27" element length. *For tempered water systems less than 120 deg F, specify a Low-Temperature thermal element.*
7. Spare parts: Provide the following spare parts at time of owner instructions. (1) Thermostatic element, (1) piston, (1) complete bonnet assembly and (3) gaskets. Spare parts shall be boxed and clearly marked by the manufacturer.

PART 3 – EXECUTION

INSTALLATION

Coordinate location and setting of plumbing specialties with adjacent construction. Install in accordance with manufacturers recommendations. Provide thermometer in tempered water outlet for monitoring mixed water temperature. Provide isolation valves on Hot inlet, Cold inlet and Mixed outlet line.

Install thermostatic mixing/tempering valves as indicated on drawings and per valve manufacturer's recommendations. The general arrangement shall be such that the tempered hot water recirculation pump discharge piping shall tie into the cold water branch feeding the domestic hot water system. The next fitting downstream shall be a tee in the cold water line which feeds the cold inlet of the tempering valve. The cold water shall continue from the tee to feed the heat source with a 27" thermal loop in the cold water line at the connection to the heat source.

Flush system to remove all debris before putting valve in service.

Adjust outlet temperature to deliver maximum 125° F.

END of SECTION