

## SECTION 15417 - PLUMBING VALVES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following valves:

1. Gate Valves.
2. Globe and angle valves.
3. Ball valves.
4. Check valves.
5. Relief valves.
6. Hose bibbs.
7. Wall hydrants.
8. Water tempering valves.

#### 1.3 SHOP DRAWINGS

- A. Submit copies of valve ordering schedule for approval before ordering valves.
- B. Submit detailed shop drawings in accordance with Section 01340. Clearly indicate make, model, location, type, size and pressure rating. Delete all inapplicable material.

### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. Provide valves of same manufacture throughout where possible.
- B. Provide valves with manufacturer's name and pressure rating clearly marked on outside of body.
- C. Manually operated valves shall close when rotated clockwise.

2.2 ACCEPTABLE MANUFACTURERS

- A. Gate, globe, angle, drain and hose bibbs: Crane, Grinnell, Jenkins, Lunkenheimer, Nibco, Stockham, Victaulic or Walworth.
- B. Ball: Apollo, Demco, DeZurik, Grinnell, Jamesbury, Jenkins, Nibco, Victaulic, or Watts.
- C. Check: Center Line, Demco, DeZurik, Grinnell, Jamesbury, Jenkins, Nibco, Posi-Seal, or Victaulic.
- D. Relief: Conbraco, Schrader, or Watts.
- E. Hose Bibb/Wall Hydrants: J.R. Smith, Zurn.
- F. Water Tempering: Symmons, Leonard, Lawler. Items of the same function and performance are acceptable if submitted and approved in conformance with Section 01340.

2.3 GATE VALVES

- A. Two inch and smaller, bronze, rising stem, inside screw, solid wedge or disc, solder or screwed ends, equal to Nibco No. S-112.
- B. Two and one-half inch and larger, iron body, bronze trim, rising stem, OS&Y, solid wedge, flanged ends, equal to Nibco No. F-617-0.

2.4 GLOBE OR ANGLE VALVES

- A. Two inch and smaller, bronze, rising stem, inside screw, renewable composition disc, screwed ends, equal to Nibco No. T-235-YW or T-335-YW.

2.5 BALL VALVES

- A. Two inch and smaller, bronze, 400 psi water pressure, full port, solder ends, Teflon seats, equal to Nibco No. S-595-Y.

2.6 CHECK VALVES

- A. Two inch and smaller, bronze, swing disc, threaded ends, 150 psi; equal to Nibco No. T-413-Y.
- B. Two and a half inches and larger, bronze body, 125 WSP/200 WOG, metal to metal seat threaded ends equal to Watts CVS.

2.7 RELIEF VALVES

- A. Bronze body, Teflon seat, steel stem and spring, direct automatic temperature and pressure actuated, ASME rated, capacity as required, equal to Watts Series 40, 140, N240, or 340.

2.8 WALL HYDRANTS/HOSE BIBBS

- A. Wall hydrant shall be non-freeze type, self-draining with chrome-plated faceplate, hose thread spout, removable key, and vacuum breaker, in compliance with ANSI/ASSE 1019, equal to J.R. Smith Fig. 5609.
- B. Hose bibbs for toilet areas shall be solid brass body with: " male hose thread with vandalproof vacuum breaker equal to Woodford Model 24 P-3/4.

2.9 PRESSURE-REDUCING VALVES

- A. Up to 2 Inches: Bronze body, stainless steel and thermoplastic internal parts, fabric reinforced diaphragm, strainer, threaded, and single union double union ends, equal to Watts U5B.

2.10 WATER TEMPERING VALVE

- A. Master water mixing valve shall be of the thermostatic type with liquid filled thermal motor. It shall have bronze body construction with replaceable corrosion-resistant components. Valve construction shall employ a sliding piston control mechanism. Sliding piston and liner shall be of stainless steel material. Valve shall come equipped with union end stop and check inlets with removable stainless steel strainers. Valve shall control temperature from a low flow of 2 gpm up to a maximum flow rate for a given pressure differential. Valve shall provide protection against hot or cold supply line failure and thermostat failure. Valve to be equal to Lawler Model 802.

2.11 VALVE OPERATORS

- A. Provide suitable handwheels for gate, globe or angle, and inside hose bibbs.

2.12 GENERAL

- A. Unless otherwise indicated, provide valves suitable for 125 minimum psig WSP and 450 degrees F or 200 minimum psig and 250 degrees F.
- B. Thread pipe sizes 2 inches and smaller.
- C. Provide screw to solder adapters for copper tubing.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install valves with stems upright or horizontal, not inverted.
- B. Install gate valves for shut-off and isolating service, to isolate equipment, parts of systems and vertical risers.

- C. Provide drain valves at main shut-off valves, low points of piping and at apparatus.
- D. Install valves to permit easy operation, replacement, and repair.

END OF SECTION 15417