

SECTION 22 05 23
GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. General-duty valves for domestic water and sewer systems.

1.2 RELATED WORK

- A. Section 22 05 11, COMMON WORK RESULTS FOR PLUMBING.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:
 - 1. Valves.
 - 2. Backflow Preventers.
 - 3. Pressure Reducing Valves.
 - 4. All items listed in Part 2 - Products.

1.4 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - A536-84(R1999) E1Ductile Iron Castings
- C. National Association of Plumbing - Heating - Cooling Contractors (PHCC):
 - National Standard Plumbing Code - 1996
- D. Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS):
 - SP-67-02.....Butterfly Valve of the Single flange Type (Lug Wafer)
 - SP-70-98.....Cast Iron Gate Valves, Flanged and Threaded Ends.
 - SP-72-99.....Ball Valves With Flanged or Butt Welding For General Purpose
 - SP-80-03.....Bronze Gate, Globe, Angle and Check Valves.
 - SP-110-96.....Ball Valve Threaded, Socket Welding, Solder Joint, Grooved and Flared Ends

PART 2 - PRODUCTS

2.1 VALVES

- A. Asbestos packing is prohibited.
- B. Shut-off:
 - 1. Cold, Hot and Recirculating Hot Water:
 - a. Fifty millimeter (2 inches) and smaller:

- 1) Ball, MSS SP-72, SP-110, Type II, Class 125, Style 1, three piece or double union end construction, full ported, full flow, with solder end connections, 2750 kPa (400 psi) WOG, MSS-SP-67.
 - b. Less than 100 mm (4 inches): Butterfly, iron body, aluminum bronze disc, 416 stainless steel stem, EPDM seat, wafer design, lever operator to six 150 mm (6 inch)size, , 1375 kPa (200 pound) WOG, Fed. Spec WW-V-1967.
 - c. One hundred millimeters (4 inches) and larger:
 - 1) Gate, MSS-SP-70, wedge disc, class 125, cast iron body with bronze trim, flanged, gear operated and crank for 200 mm (8 inches) and above.
 - 2) Grooved end butterfly valves with ductile iron body and disc core ASTM A536. Disc rubber coated with compatible material for intended service, maximum working pressure 2050 kPa (300 pounds psi) grooved ends for connection with mechanical grooved couplings.
- C. Balancing:
1. Hot Water Recirculating, 50 mm (2 inches) and smaller: Combination type, calibrated, bronze with bronze disc, equipped with readout valves with integral check valve, indexing position pointer and calibrated name plate, internal EPT O-ring seals and factory molded insulating enclosures.
 2. Larger than 50 mm (2 inches): Combination balancing and shut-off, non-lubricated eccentric plug type with cast iron or semi-steel body, electroless nickel plated cast iron plug, with resilient facing suitable for continuous water service up to 80 °C (180 °F), bronze bearings, 1200 kPa (175 pound) WOG rating and an adjustable open position memory stop and lever.
- D. Check:
1. Less than 100 mm (3 inches) and smaller): Bronze body and trim, swing type, MSS-SP-80, 850 kPa (125 pound) WSP.
- E. Globe:
1. Eighty millimeters (3 inches) or smaller: Bronze body and bonnet, MSS-SP-80, 850 kPa (125 pound) WSP. Disk shall be free to swivel on the stem. Composition seating surface disk construction may be substituted for all metal disk construction. Packing shall be a woven non-asbestos material, impregnated with not less than 25 percent, by weight, tetrafluoroethylene resin.
 2. Larger than 80 mm (3 inches): Similar to above, except with cast iron body and bronze trim.

2.2 BACKFLOW PREVENTERS

- A. Provide a backflow prevention device at any point in the plumbing system where the potable water supply comes in contact with a potential source of contamination. Device shall be certified by the American Society of Sanitary Engineers. Listed below is a partial list of connection to the potable water system which shall be protected against backflow or back siphonage.
- B. Atmospheric Vacuum Breaker: ASSE 1001
1. Hose bibs and sinks w/threaded outlets.
 2. All kitchen equipment, if not protected by air gap.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with the PHCC National Standard Plumbing Code and the following:
 - 1. Install valves with stem in horizontal position whenever possible. All valves shall be easily accessible.
Install valve in each water connection to fixture.
 - 2. Install union and shut-off valve on pressure piping at connections to equipment.
 - 3. Backflow prevention device shall be installed in an accessible location, 5 (five) feet above finish floor.

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