

VALVES - BRONZE

1. GENERAL

1.1 Summary

- .1 Section Includes:
 - .1 Bronze - valves.
- .2 Related Sections:
 - .1 Section 23 05 05 - Installation of Pipework.

1.2 References

- .1 American National Standards Institute (ANSI)/ American Society of Mechanical Engineers (ASME).
 - .1 ANSI/ASME B1.20.1-1983(R2006), Pipe Threads, General Purpose (Inch).
- .2 ASTM International, (ASTM).
 - .1 ASTM A 276-10, Specification for Stainless Steel Bars and Shapes.
 - .2 ASTM B 62-09, Specification for Composition Bronze or Ounce Metal Castings.
 - .3 ASTM B 283/B 283M Rev A-[11], Specification for Copper and Copper Alloy Die Forgings (Hot-Pressed).
 - .4 ASTM B 505/B 505M-10, Specification for Copper-Base Alloy Continuous Castings.
- .3 Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS).
 - .1 MSS-SP-25-2008, Standard Marking System for Valves, Fittings, Flanges and Unions.
 - .2 MSS-SP-80-2008, Bronze Gate Globe, Angle and Check Valves.
 - .3 MSS-SP-110-[2010], Ball Valves, Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

1.3 Submittals

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Submit shop drawings and product data in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit data for valves specified in this section.
- .2 Closeout Submittals:

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- .1 Submit maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.4 Maintenance

- .1 Extra Materials:
 - .2 Furnish following spare parts:
 - .1 Valve seats: one for every 10 valves each size, minimum 1.
 - .2 Discs: one for every 10 valves, each size. Minimum 1.
 - .3 Stem packing: one for every 10 valves, each size. Minimum 1.
 - .4 Valve handles: 2 of each size.
 - .5 Gaskets for flanges: one for every 10 flanged joints.

2. PRODUCTS

2.1 Materials

- .1 Valves:
 - .1 Except for specialty valves, to be single manufacturer.
 - .2 All products to have CRN registration numbers.
- .2 End Connections:
 - .1 Connection into adjacent piping/tubing:
 - .1 Steel pipe systems: Screwed ends to ANSI/ASME B1.20.1.
 - .2 Copper tube systems: Solder ends to ANSI/ASME B16.18.
- .3 Lockshield Keys:
 - .1 Where lockshield valves are specified, provide 5 keys of each size: malleable iron cadmium plated.
- .4 Check Valves:
 - .1 Requirements common to check valves, unless specified otherwise:
 - .1 Standard specification: MSS SP-80.
 - .2 Connections: screwed with hexagonal shoulders.
 - .2 50mm and under, swing type, bronze disc, Class 125:

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- .1 Body: Y-pattern with integral seat at 45 degrees, screw-in cap with hex head.
- .2 Disc and seat: renewable rotating disc, two-piece hinge disc construction; seat: regrindable.
- .5 Silent Check Valves:
 - .1 NPS 2 and under:
 - .1 Body: cast high tensile bronze to ASTM B 62 with integral seat.
 - .2 Pressure rating: Class 125
 - .3 Connections: screwed ends to ANSI B1.20.1 and with hex. shoulders.
 - .4 Disc and seat: renewable rotating disc.
 - .5 Stainless steel spring, heavy duty.
 - .6 Seat: regrindable.
 - .6 Ball Valves:
 - .1 50mm and under:
 - .1 Body and cap: cast high tensile bronze to ASTM B 62.
 - .2 Pressure rating: Class125
 - .3 Connections: Screwed ends to ANSI B1.20.1 and with hexagonal shoulders
 - .4 Stem: tamperproof ball drive.
 - .5 Stem packing nut: external to body.
 - .6 Ball and seat: replaceable stainless steelsolid ball and teflon seats.
 - .7 Stem seal: TFE with external packing nut.
 - .8 Operator: removable lever handle.

3. EXECUTION

3.1 Installation

- .1 Install rising stem valves in upright position with stem above horizontal.
- .2 Remove internal parts before soldering.
- .3 Install valves with unions at each piece of equipment arranged to allow servicing, maintenance, and equipment removal.

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END OF SECTION