Bronze Gate, Globe, Angle, and Check Valves

Standard Practice
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U.S. customary units in this Standard Practice are the standard; (SI) metric units are for reference only.

> Substantive changes in this 2013 edition are "flagged" by parallel bars as shown on the margins of this paragraph. The specific detail of the change may be determined by comparing the material flagged with that in the previous edition.

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BRONZE GATE, GLOBE, ANGLE, AND CHECK VALVES

PURPOSE

This MSS Standard Practice establishes requirements for bronze gate, globe, angle, and check valves in Classes 125 (PN 20), 150 (PN 20), 200, 300 (PN 50) and 350 for threaded and solder ends and Classes 150 (PN 20) and 300 (PN 50) for flanged ends. Pressures in this Standard Practice are expressed as gauge pressure in pounds per square inch (Kilopascals). Hereafter the pressure will appear as psi (kPa).

1. SCOPE AND VALVE TYPES

1.1 *Scope*

This Standard Practice establishes requirements for bronze gate, globe, angle, and check valves for general purpose services and provides requirements for the following:

a) Pressure-Temperature Ratings
b) Materials
c) End Connections (Design)
d) Dimensions (Design)
e) Markings
f) Inspection and Testing

1.2 *Valve Types*

1.2.1 *Gate Valves*

a) Type 1A – Solid Wedge, Non-Rising Stem (NRS), External Stuffing Box for Stem Retention (*see Figure B1, Annex B*)
b) Type 1B – Solid Wedge, Non-Rising Stem (NRS), Internal Stem Retaining Nut for Stem Retention (*see Figure B2, Annex B*)
c) Type 2 – Solid Wedge, Inside Screw, Rising Stem (ISRS) (*see Figure B3, Annex B*)
d) Type 3 – Split Wedge (Double Disc), Inside Screw, Rising Stem (ISRS) (*see Figure B4, Annex B*)
e) Type 4 – Double Disc, Parallel Seat, Inside Screw, Rising Stem (ISRS) (*see Figure B5, Annex B*)

1.2.2 *Globe and Angle Valves*

a) Type 1 – Metallic Disc, Integral Seat (*see Figure B6, Annex B*)
b) Type 2 – Non-Metallic Disc, Integral Seat (*see Figure B7, Annex B*)
c) Type 3 – Metallic Disc, Removable Seat (*see Figure B8, Annex B*)

1.2.3 *Check Valves*

a) Type 1 – Horizontal and Angle Lift Check, Metallic Disc-to-Metallic Seat (*see Figures B9 and B10, Annex B*)
b) Type 2 – Horizontal, Angle, and Vertical Lift Check, Non-Metallic Disc-to-Metallic Seat (*see Figures B11 and B12, Annex B*)
c) Type 3 – Swing Check, Metallic Disc-to-Metallic Seat (*see Figure B13, Annex B*)
d) Type 4 – Swing Check, Non-Metallic Disc-to-Metallic Seat (*see Figure B14, Annex B*)

1.3 *Nominal Pipe Sizes (Nominal Diameter)*

a) Threaded Ends – NPS 1/8 to 3 (DN 6 to 80)
b) Solder Ends – NPS 1/4 to 3 (DN 8 to 80)
c) Flanged Ends – NPS 1/2 to 3 (DN 15 to 80)

2. PRESSURE-TEMPERATURE RATINGS

2.1 The pressure-temperature ratings in Table 1 (Table X1-2) apply to all products governed by this Standard Practice. Valves conforming to the requirements of this Standard Practice shall, in all respects, merit these ratings.

2.2 These ratings are the maximum allowable, non-shock pressures at the temperatures shown, and allowable pressures may be interpolated between temperatures shown.

2.3 The temperature shown, corresponding to the pressure rating, shall be the material temperature of the pressure retaining structure (the temperature rating).