Corrosion-Resistant Gate, Globe, Angle, and Check Valves with Flanged and Butt Weld Ends (Classes 150, 300, & 600)

Standard Practice
Developed and Approved by the
Manufacturers Standardization Society of the
Valve and Fittings Industry, Inc.
127 Park Street, NE
Vienna, Virginia 22180-4602
Phone: (703) 281-6613
Fax: (703) 281-6671
E-mail: standards@mss-hq.org

MSS®

www.mss-hq.org

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The (SI) metric units and U.S. customary units in this Standard Practice are regarded separately as the standard; each should be used independently of the other. Combining or converting values between the two systems may result in non-conformance with this Standard Practice.

> 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.

Non-toleranced dimensions in this Standard Practice are nominal unless otherwise specified.

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CORROSION-RESISTANT GATE, GLOBE, ANGLE, AND CHECK VALVES WITH FLANGED AND BUTT WELD ENDS (CLASSES 150, 300, & 600)

1. SCOPE

1.1 This Standard Practice covers Classes 150, 300, and 600 corrosion-resistant alloy gate, globe, angle, and check valves with flanged and butt weld ends which are constructed of pressure-containing parts, including materials that conform to ASME B16.34.

1.2 This Standard Practice covers additional construction requirements for corrosion-resistant valves not covered by ASME B16.34. Such valves are made from alloys whose properties are uniquely suited to the service into which they are placed. Chemical process and cryogenic fluid service constitute two such applications.

1.3 ***Valve Types and Sizes***

1.3.1 ***Types*** The following valve types are covered herein and are illustrated in Figures A1 through A8 in Annex A[(1)].

a) Gates, outside screw and yoke design (OS&Y)

b) Globes, T, and Y-pattern, outside screw and yoke (OS&Y)

c) Angle, outside screw and yoke (OS&Y)

d) Checks, lift, swing and Y-pattern

1.3.2 ***Nominal Pipe Sizes*** Gate, Globe, Angle, and Check Valve sizes covered by this Standard Practice are as follows:

$1/2 \leq \text{NPS} \leq 24$ ($15 \leq \text{DN} \leq 600$)

2. STANDARD UNITS

The values, stated in either U.S. customary units or (SI) metric units, are to be regarded separately as the standard. Within the text, the (SI) metric units are shown in parentheses. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from the two systems may result in non-conformance with this Standard Practice.

NOTE: (1) The valve illustrations in Annex A are for the purpose of illustration and nomenclature only. They do not represent any specific manufacturer's product or design.

3. MATERIALS

3.1 ***General*** The specified body, bonnet or cover plate material shall be produced in accordance with the applicable ASTM Specification listed in Table 1 of ASME B16.34, Materials Group 2 or 3. Users are cautioned against applications with fluid which may react harmfully with any materials used in these valves. Consultation with the manufacturer is advised to determine suitability in cases of doubt.

3.2 ***Castings*** Bodies, bonnets and cover plates shall be made of materials conforming to the requirements of specifications listed in Table 1 of ASME B16.34. All castings shall be clean, sound and shall be produced to the quality level represented by MSS SP-55.

3.3 ***Investment Castings*** When investment castings are used for bodies, bonnets, or cover plates of valves in sizes NPS 4 (DN 100) and smaller, the requirements of the ASTM specifications referred to in Table 1 of ASME B16.34 shall be met; except that it is permissible to determine mechanical and chemical properties from a master heat and to use a 1-inch gauge length *x* 0.25 inch diameter (25 mm gauge length *x* 6.25 mm diameter) tensile specimen in place of the standard 2-inch (50.8 mm) tensile specimen. A master heat is previously refined metal of a single furnace charge. Tensile specimens shall be cast in molds of the same refractory as the casting and shall be heat treated with the casting.

3.4 ***Wrought Parts*** Stems, wedges, discs, seats, packing glands, and other wrought parts in contact with the contained fluids shall be of materials comparable to the corrosion resistance of the valve body.

3.5 ***Fabrication by Welding***

3.5.1 Valve bodies, bonnets or cover plates fabricated by welding shall be in accordance with Section 2.1.6 of ASME B16.34.