

MSS SP-67-2017

Butterfly 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 2017 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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ERRATA SHEET FOR MSS SP-67, Butterfly Valves (2017 and Previous Editions)

These “normative” errata corrections apply to MSS SP-67-2017 edition (current) and previous editions.

NOTE THE FOLLOWING CORRECTIONS:

2017 Edition

Page 3, Section 4.1.4.2 (Listed under Section 4.1.4, *Ductile Iron Valves*). Replace the existing second sentence “Reference Annex C of ASME B16.42.” with the following: “Reference ASME B16.42, Annex B (*Methods for Establishing Pressure-Temperature Ratings*).”

*Note that this correction relates to ASME B16.42-2016 edition (current).

Previous Editions (2002a and 2011)*

Page 3, Section 4.1.4.2 (Listed under Section 4.1.4, *Ductile Iron Valves*). Replace the existing second sentence “Reference Annex C of ASME B16.42.” with the following:

“Reference the appropriate wall thickness information within the Annex of ASME B16.42 relating to Methods for Establishing Pressure-Temperature Ratings.”

Previous Editions (1983 to 1995)*

Page 3, Section 5.1.4.2 (Listed under Section 5.1.4, *Ductile Iron Valves*). Replace the existing second sentence “Reference Annex C of ANSI B16.42.” (*1983 ed.*), “Reference Annex C of ANSI/ASME/b16.42,” (*1990 ed.*), and “Reference Annex C of ASME/ANSI B16.42.” (*1995 ed.*) with the following:

“Reference the appropriate wall thickness information within the Annex of ASME B16.42 relating to Methods for Establishing Pressure-Temperature Ratings.”

* Note that previous editions of ASME B16.42 renumbered the applicable annex over time.

This Errata Sheet is intended for those who obtained the Standard Practice before the November 2, 2017 errata publication date indicated above or otherwise do not already have this information. Please include this Errata Sheet within your existing 2017 edition (or previous editions) of the Standard Practice.

Future editions of this Standard Practice will include this corrected information.

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BUTTERFLY VALVES

1. SCOPE

1.1 This Standard Practice covers dimensions, design, testing, and marking requirements for butterfly valves. Further reference should be made to the MSS SP-68.

1.2 This Standard Practice covers two types of butterfly valves:

Type I – Valves for tight shut-off

(Tested per Section 10.2.1)

Type II – Valves permitting seat leakage

(See Section 10.2.2)

1.3 This Standard Practice covers flangeless (wafer-type), single-flange (lug-type), and flanged-end valves in size NPS 1½ through NPS 72, along with grooved-end valves, and shouldered-end valves, with pressure ratings in accordance with the requirements of Sections 3 and 4.

2. DEFINITIONS

2.1 **CWP – Cold Working Pressure (PSIG)** The pressure rating for the pressure containing components of the valve at temperatures up to and including 100 °F.

2.2 **Differential Pressure** The difference in pressure between two points located on opposite sides of the valve disc.

2.3 **Face-to-Face of Valve before Installation** This is the dimension of the valve, face-to-face, before it is installed in the pipeline. It does not include the thickness of gaskets if separate gaskets are used. It does include the thickness of gaskets or seals that are an integral part of the valve and this dimension is before these gaskets or seals are compressed.

2.4 **Face-to-Face of Valve Installed** This is the dimension of the valve, face-to-face, after it is installed in the pipeline. It does not include the thickness of gaskets if separate gaskets are used. It does include the thickness of gaskets or seals that are an integral part of the valve; however, this dimension is established with the gaskets or seals compressed. See Figures 1A, 1B, 1C, and Table 3.

2.5 **Face-to-Face of Valve and Gaskets Installed** This is the dimension of the valve, face-to-face, including separate gaskets when installed in the pipeline. This dimension must be established using the thickness of the valve's face-to-face dimension and the compressed thickness of the gaskets to be used in such installations.

2.6 **Shut-Off Pressure** The maximum rated differential pressure with the valve in the fully closed position.

2.7 **System Pressure** Maximum specified operating pressure for the application.

3. STANDARD ENDS

3.1 **Flanged Ends** Valves with this end type shall be compatible for use with flanges conforming to: ASME B16.1, Class 25 or 125; ASME B16.5, Class 150; ASME B16.47, Class 150 Series A; ASME B16.24, Class 150; ASME B16.42, Class 150; or AWWA C207. Figure 2 illustrates bolting options.

3.2 **Single Flange (Lug-Type)** Valves with this end type shall be compatible for use with flanges conforming to: ASME B16.1, Class 25 or 125; ASME B16.5, Class 150; ASME B16.24, Class 150; ASME B16.42, Class 150; or AWWA C207. Figure 3 illustrates bolting options.