In-Line, Spring-Assisted, Center-Guided Check Valves
(Carbon, Alloy Steel, Stainless Steel, & Nickel Alloys)
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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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Work on this Standard Practice began about 1990 to fulfill the industry’s need for a standard covering this unique class of check valves. The intent of this Standard Practice, which was first published in 2001, is to include in-line (no bonnet) check valves whose closure member is assisted by a spring in shutting before the flowing media can develop significant reverse velocity. Because this effect reduces the possibility of water hammer, these types of valves have also been termed “silent check valves”. This Standard Practice calls the valves “center-guided” meaning that the closure member is guided into the center of the flow forcing the flowing media to pass around it. Additionally, the closure member remains perpendicular to the flowing media throughout its entire travel.

This 2013 edition removes the term “Steel” from the title and includes material types, to be inclusive of all applicable valves, as indicated in Scope. In addition, the API-598 allowable closure leakage rates for SP-126 check valves were made the standard, with MSS SP-61 allowable closure leakage rates used at the manufacturers’ option. Due to the API 598 closure leakage rates being significantly higher than those required by MSS SP-61, a “Certificate of Test” for closure testing shall be specific to API 598 or MSS SP-61 when certification is required by a purchase order. Additional revisions include the normalization of Tables 5 and 6 with ASME B16.34 requirements, a clarification in Section 7.1.2, updating of references in Annex B, and other editorial or formatting corrections.
TABLE OF CONTENTS

SECTION                                                                 PAGE
1 SCOPE ................................................................................................................. 1
2 STANDARD UNITS .................................................................................................. 1
3 VALVE STYLES AND CLASSES ............................................................................... 1
4 END CONNECTIONS ............................................................................................... 2
5 MATERIALS ........................................................................................................... 2
6 DESIGN REQUIREMENTS ....................................................................................... 2
7 DIMENSIONS AND TOLERANCES ........................................................................... 3
8 WELD REPAIR ....................................................................................................... 3
9 TESTING ................................................................................................................ 3
10 MARKING ............................................................................................................. 4
11 PAINTING .............................................................................................................. 4

TABLE
1 Face-to-Face Dimensions for Flanged Class 150, 300, and 600 Globe Style Check Valves (Inch) ........ 5
1M Face-to-Face Dimensions for Flanged Class 150, 300, and 600 Globe Style Check Valves (mm) .......... 5
2 Face-to-Face Dimensions for Flanged Class 900, 1500, and 2500 Globe Style Check Valves (Inch) ...... 6
2M Face-to-Face Dimensions for Flanged Class 900, 1500, and 2500 Globe Style Check Valves (mm) ....... 6
3 Face-to-Face Dimensions for Class 150, 300, 600, 900, and 1500 Wafer Style Check Valves (Inch) ... 7
3M Face-to-Face Dimensions for Class 150, 300, 600, 900, and 1500 Wafer Style Check Valves (mm) ... 7
4 Face-to-Face Dimensions for Class 150, 300, and 600 Flange Insert Style Check Valves (Inch) ........ 7
4M Face-to-Face Dimensions for Class 150, 300, and 600 Flange Insert Style Check Valves (mm) ......... 7
5 Minimum Shell Test Duration ................................................................................ 8
6 Alternate Gas Seat Closure Test .......................................................................... 8
7 Minimum Seat Test Duration ................................................................................ 8

FIGURE
A1 Typical Globe Style Check Valves ........................................................................ 9
A2 Typical Wafer Style Check Valve ......................................................................... 10
A3 Typical Flange Insert Style Check Valve ............................................................ 10
A4 Typical Threaded Style Check Valves .................................................................. 11
A5 Typical Socket Weld Style Check Valve .............................................................. 12

ANNEX
A Valve Types – Figures A1 through A5 .................................................................... 9
B Referenced Standards and Applicable Dates ......................................................... 13