

MSS SP-125-2018

**Check Valves:
Gray Iron and Ductile Iron,
In-Line, Spring-Loaded,
Center-Guided**

Standard Practice
Developed and Approved by the
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CHECK VALVES: GRAY IRON AND DUCTILE IRON, IN-LINE, SPRING-LOADED, CENTER-GUIDED

1. SCOPE

1.1 This Standard Practice covers in-line, internally spring-loaded^(a), center-guided check valves made of gray iron or ductile iron. These valves, having the feature of limiting fluid flow to one direction only, are intended for use with clean fluids (*i.e.*, fluids that do not contain solids), including potable water^(b), waterworks, and other industrial applications, in horizontal and vertical installations.

2. CHECK VALVE STYLES AND SIZE RANGE

2.1 **Valve Styles** The valve styles included in this Standard Practice are determined by the configuration of the body.

2.1.1 **Wafer** Wafer-style check valves have a single flange body with an outside diameter equal to that of the mating pipe flanges. The valve body may be designed with holes passing through the body or with threaded lugs. See Figures A1 and A4 for illustrative examples. The size range for wafer-style check valves is NPS 2 through NPS 10 (DN 50 through DN 250).

2.1.2 **Compact Wafer** Compact wafer-style valves have a reduced outside body diameter, or slots, to provide bolt clearance for long bolts or studs. See Figures A2 and A5 for illustrative examples. The size range for compact wafer-style check valves is NPS 2 through NPS 10 (DN 50 through DN 250).

2.1.3 **Globe** Globe-style check valves have two integrally cast flanges and a rounded-center body section to provide increased flow area around the valve disc. See Figures A3 and A6 for illustrative examples. The size range of globe-style check valves is NPS 2 through NPS 42 (DN 50 through DN 1050).

2.2 **Flange Classes** Valve end connections shall conform to the following requirements.

2.2.1 Wafer-style valves shall have bolt holes or threaded holes in accordance with ASME B16.1 for gray iron, Class 125 or 250 and in accordance with ASME B16.42 for ductile iron, Class 150 or 300.

2.2.2 Compact wafer-style valves shall have a reduced body diameter to accommodate flange bolts in accordance with ASME B16.1 for gray iron, Class 125 or 250 or ASME B16.42 for ductile iron, Class 150 or 300.

2.2.3 Globe-style flange dimensions shall be in accordance with ASME B16.1 for gray iron, Class 125 or 250 and in accordance with ASME B16.42 for ductile iron, Class 150 or 300. For sizes above NPS 24 (DN 600), ductile iron flange dimensions shall be in accordance with ASME B16.1.

2.2.4 **Gaskets** Full face or ring gaskets are required between the valve ends and the mating pipeline flanges to obtain a pressure tight joint.

NOTES: (a) A spring-loaded, also known as spring-assisted, check valve incorporates a spring to assist in closing the check valve.

(b) Potable water is defined as safe and satisfactory for drinking and cooking.