

Gate, Globe, and Check Valves for Sizes DN 100 (NPS 4) and Smaller for the Petroleum and Natural Gas Industries

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1 Scope

This standard specifies the requirements for a series of compact gate, globe, and check valves for petroleum and natural gas industry applications.

It covers valves of the nominal pipe sizes DN:

— 8, 10, 15, 20, 25, 32, 40, 50, 65, 80, and 100;

corresponding to nominal pipe sizes NPS:

— $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3, and 4;

and applies to pressure class designations:

— 150, 300, 600, 800, and 1500.

Class 800 is not a listed class designation, but is an intermediate class number widely used for welded and threaded end compact valves.

It includes provisions for the following valve characteristics:

- outside screw with rising stems (OS and Y), in sizes $8 \leq DN \leq 100$ ($\frac{1}{4} \leq NPS \leq 4$) and pressure designations including class 800;
- inside screw with rising stems (ISR), in sizes $8 \leq DN \leq 65$ ($\frac{1}{4} \leq NPS \leq 2\frac{1}{2}$) and pressure designations of classes ≤ 800 ;
- socket welding or threaded ends, in sizes $8 \leq DN \leq 65$ ($\frac{1}{4} \leq NPS \leq 2\frac{1}{2}$) and pressure designations of class 800 and class 1500;
- flanged or butt-welding ends, in sizes $15 \leq DN \leq 100$ ($\frac{1}{2} \leq NPS \leq 4$) and pressure designations of class 150 through class 1500, excluding flanged end class 800;
- bonnet joint construction—bolted, welded, and threaded with seal weld for classes ≤ 1500 and union nut for classes ≤ 800 ;
- external body, in sizes $15 \leq DN \leq 50$ ($\frac{1}{2} \leq NPS \leq 2$) and pressure designations of class 800 and class 1500;
- bellows stem seal, in sizes $8 \leq DN \leq 50$ ($\frac{1}{4} \leq NPS \leq 2$) and pressure designations of \leq class 1500;
- bellows stem seal testing requirements;
- standard and full-bore body seat openings;