
API Standard 602

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

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

It is applicable to valves of:

- nominal diameter sizes DN 8, DN 10, DN 15, DN 20, DN 25, DN 32, DN 40, DN 50, DN 65, DN 80, and DN 100;
- corresponding to nominal pipe sizes NPS $\frac{1}{4}$, NPS $\frac{3}{8}$, NPS $\frac{1}{2}$, NPS $\frac{3}{4}$, NPS 1, NPS $1\frac{1}{4}$, NPS $1\frac{1}{2}$, NPS 2, NPS $2\frac{1}{2}$, NPS 3, and NPS 4.

It is also applicable to pressure designations of Class 150, Class 300, Class 600, Class 800, and Class 1500.

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

It includes provisions for the following valve characteristics:

- outside screw with rising stems (OS & 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 (ISRS), 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 ;
- extended 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 $<$ Class 1500;
- bellows stem seal testing requirements;
- standard and full-bore body seat openings;
- materials, as specified;
- testing and inspection.

This standard is applicable to valve end flanges in accordance with ASME B16.5, valve body ends having tapered pipe threads to ASME B1.20.1, valve body ends having socket weld ends to ASME B16.11 and butt-weld connections per the requirements described within this standard.

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