Metal Ball Valves—Flanged, Threaded, and Welding Ends

API STANDARD 608
SIXTH EDITION, JANUARY 2020
API MONOGRAM PROGRAM EFFECTIVE DATE: JULY 2020

AMERICAN PETROLEUM INSTITUTE

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Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue NW, Suite 1100, Washington, DC 20001, standards@api.org.

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Introduction

The purpose of this API standard is to establish additional design, operational, and performance requirements for petroleum refining, petrochemical processing, and chemical processing end users beyond the requirements established by ASME B16.34, *Valves—Flanged, Threaded, and Welding End*.

API 608 is intended to provide similar additional requirements for metal ball valves beyond ASME B16.34 as do the following API standards for other valve types:

— API Standard 594, *Check Valves: Flanged, Lug, Wafer, and Butt-welding*

— API Standard 599, *Metal Plug Valves—Flanged, Threaded, and Welding Ends*

— API Standard 600, *Steel Gate Valves—Flanged and Butt-welding Ends, Bolted Bonnets*

— API Standard 602, *Gate, Globe, and Check Valves for Sizes DN 100 (NPS 4) and Smaller for the Petroleum and Natural Gas Industries*

— API Standard 603, *Corrosion-resistant, Bolted Bonnet Gate Valves—Flanged and Butt-welding Ends*

— API Standard 609, *Butterfly Valves: Double-flanged, Lug- and Wafer-type*

— API Standard 623, *Steel Globe Valves—Flanged and Butt-welding Ends, Bolted Bonnets*

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1 Scope

1.1 This standard specifies the requirements for metal ball valves suitable for petroleum, petrochemical, and industrial applications— corresponding to the nominal pipe sizes in ASME B36.10M—that have:

— flanged ends in sizes DN 15 through DN 600 (NPS 1/2 through NPS 24);

— butt-welding ends in sizes DN 15 through DN 600 (NPS 1/2 through NPS 24);

— socket-welding ends in sizes DN 8 through DN 50 (NPS 1/4 through NPS 2); and

— threaded ends in sizes DN 8 through DN 50 (NPS 1/4 through NPS 2)

1.2 This standard applies to metal ball valves with pressure classes as follows:

— flanged ends in Classes 150, 300, and 600;

— butt-welding ends in Classes 150, 300, 600, and 800;

— socket-welding ends in Classes 150, 300, 600, and 800;

— threaded ends in Classes 150, 300, 600, and 800.

1.3 This standard establishes requirements for bore sizes described as:

— full bore;

— single reduced bore;

— double reduced bore.

1.4 This standard applies to floating (seat-supported) ball (Figure C.1) and trunnion ball valve designs (Figure C.2). These figures are to be used only for the purpose of establishing standard nomenclature for valve components—other floating and trunnion designs also exist.

1.5 This standard establishes additional requirements for ball valves that are otherwise in full conformance to the requirements of ASME B16.34, Standard Class.

1.6 If product is supplied bearing the API Monogram and is manufactured at a facility licensed by API, the requirements of Annex A shall apply.

1.7 Trunnion ball valves equipped with double piston effect seats are outside of the scope of this standard.

2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any addenda) applies.

API Standard 598, *Valve Inspection and Testing*

API Standard 602, *Gate, Globe, and Check Valves for Sizes DN 100 (NPS 4) and Smaller for the Petroleum and Natural Gas Industries, Tenth Edition, Includes Errata (September 2016).*