ASME B16.38-2012
(Revision of ASME B16.38-2007)

Large Metallic Valves for Gas Distribution

Manually Operated, NPS 2½ (DN 65) to NPS 12 (DN 300), 125 psig (8.6 bar) Maximum

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The American Society of Mechanical Engineers
Three Park Avenue • New York, NY • 10016 USA

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The next edition of this Standard is scheduled for publication in 2017.

ASME issues written replies to inquiries concerning interpretations of technical aspects of this Standard. Periodically certain actions of the ASME B16 Committee may be published as Cases. Cases and interpretations are published on the ASME Web site under the Committee Pages at http://cstools.asme.org/ as they are issued.

Errata to codes and standards may be posted on the ASME Web site under the Committee Pages to provide corrections to incorrectly published items, or to correct typographical or grammatical errors in codes and standards. Such errata shall be used on the date posted.

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The American Society of Mechanical Engineers
Three Park Avenue, New York, NY 10016-5990

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FOREWORD

The B16 Standards Committee was organized in the spring of 1920 and held its organizational meeting on November 21 of that year. The group operated as a Sectional Committee (later redesignated as a Standards Committee) under the authorization of the American Engineering Standards Committee [subsequently named American Standards Association, United States of America Standards Institute, and now American National Standards Institute (ANSI)]. Sponsors for the group were the American Society of Mechanical Engineers, Manufacturers Standardization Society of the Valve and Fittings Industry, and the Heating and Piping Contractors National Association (later the Mechanical Contractors Association of America). In 1982, the B16 Committee was reorganized as an ASME Committee operating under procedures accredited by ANSI.

The American Gas Association determined that standardization of gas valves used in distribution systems was desirable and needed. The A.G.A. Task Committee on Standards for Valves and Shutoffs was formed and development work commenced in 1958. In 1968, it was determined that a more acceptable document would result if approval was gained from ANSI, and to facilitate such action, the A.G.A. Committee became Subcommittee 13 of the B16 activity. This B16 group was later renamed Subcommittee L, which is its current designation.

The first standard developed by Subcommittee L was ANSI B16.33, which was published in 1973. As a follow-up, ANSI B16.38 was subsequently developed to cover larger sizes of gas valves and shutoffs and was first published in 1978.

ANSI/ASME B16.38-1985 offered more performance requirements than had been customary in many B16 standards. It was expected that this would permit both manufacturers and users greater latitude in producing and using products made to that standard.

Editorial changes were made throughout the text and tables to bring the format in line with the rest of the B16 series of standards and to clarify the intent of that standard. Revisions included changes to the qualification requirements and to requirements for construction and valve ends, updating of reference standards, and editorial changes to the text and tables. The cover, headings, and designation of the standard had also been revised to reflect reorganization of the B16 Committee as an ASME Committee.

The 2007 edition of ASME B16.38 updated the 1985 Edition. All requirements were metricated, and the references were updated to the current revision. The paragraph on minimum levels of performance was expanded to describe valve types and their relevant standards. The section on "Lubrication (Sealant)" was renamed "Injection Sealant," and the paragraph was edited for clarity. Paragraphs 2.6 ("Pressure-Containing Materials"), 2.7 ("Gas Resistance"), and 2.8 ("Temperature Resistance") were added. The section covering elastomer components was new. Paragraph 3.2 ("Number of Tests") was expanded to require that any material or design change that could affect qualification test results is reason to repeat all qualification tests. Wording throughout this edition was expanded for clarity.

The 2012 edition of B16.38 updated the referenced standards in Mandatory Appendix I.

All requests for interpretations or suggestions for revisions should be sent to the Secretary, B16 Committee, The American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

Following approval by B16 Subcommittee L, the B16 Standards Committee, and ASME, ANSI approved this American National Standard on August 21, 2012.

ASME B16 COMMITTEE
Standardization of Valves, Flanges, Fittings, and Gaskets

(The following is the roster of the Committee at the time of approval of this Standard.)

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CORRESPONDENCE WITH THE B16 COMMITTEE

General. ASME Standards are developed and maintained with the intent to represent the consensus of concerned interests. As such, users of this Standard may interact with the Committee by requesting interpretations, proposing revisions, and attending Committee meetings. Correspondence should be addressed to:

Secretary, B16 Standards Committee
The American Society of Mechanical Engineers
Three Park Avenue
New York, NY 10016-5990

As an alternative, inquiries may be submitted via e-mail to: SecretaryB16@asme.org.

Proposing Revisions. Revisions are made periodically to the Standard to incorporate changes that appear necessary or desirable, as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published periodically.

The Committee welcomes proposals for revisions to this Standard. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent documentation.

Proposing a Case. Cases may be issued for the purpose of providing alternative rules when justified, to permit early implementation of an approved revision when the need is urgent, or to provide rules not covered by existing provisions. Cases are effective immediately upon ASME approval and shall be posted on the ASME Committee Web page.

Requests for Cases shall provide a Statement of Need and Background Information. The request should identify the Standard, the paragraph, figure or table number(s), and be written as a Question and Reply in the same format as existing Cases. Requests for Cases should also indicate the applicable edition(s) of the Standard to which the proposed Case applies.

Interpretations. Upon request, the B16 Committee will render an interpretation of any requirement of the Standard. Interpretations can only be rendered in response to a written request sent to the Secretary of the B16 Standards Committee.

The request for interpretation should be clear and unambiguous. It is further recommended that the inquirer submit his/her request in the following format:

Subject:	Cite the applicable paragraph number(s) and the topic of the inquiry.
Edition:	Cite the applicable edition of the Standard for which the interpretation is being requested.
Question:	Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. The inquirer may also include any plans or drawings that are necessary to explain the question; however, they should not contain proprietary names or information.

Requests that are not in this format will be rewritten in this format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME Committee or Subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

Attending Committee Meetings. The B16 Standards Committee regularly holds meetings that are open to the public. Persons wishing to attend any meeting should contact the Secretary of the B16 Standards Committee.

LARGE METALLIC VALVES FOR GAS DISTRIBUTION

MANUALLY OPERATED, NPS 2½ (DN 65) TO NPS 12 (DN 300), 125 psig (8.6 bar) MAXIMUM

1 SCOPE

1.1 Valve Types

This Standard covers requirements for manually operated metallic valves in nominal sizes 2½ (DN 65) through 12 (DN 300) having the inlet and outlet on a common centerline. These valves are intended for controlling the flow of gas from open to fully closed positions, for use in distribution and service lines where the maximum gage pressure does not exceed 125 psig (8.6 bar). Valve seats, seals, and stem packing may be nonmetallic.

1.2 Application

This Standard sets forth the minimum capabilities, characteristics, and properties that a newly manufactured metallic valve must possess in order to be considered suitable for use in piping systems indicated above, carrying natural gas, manufactured gas [includes synthetic natural gas (SNG)], and liquefied petroleum gases (distributed as a vapor, with or without the admixture of air) or mixtures thereof.

1.3 Referenced Standards

Standards and specifications adopted by reference in this Standard and the names and addresses of the sponsoring organizations are shown in Mandatory Appendix I. It is not considered practical to refer to a specific edition of each of the standards and specifications in the individual references. Instead, the specific edition references are included in Mandatory Appendix I. A product made in conformance with a prior edition of referenced standards will be considered to be in conformance, even though the edition reference may be changed in a subsequent revision of the standard.

1.4 Quality Systems

Nonmandatory requirements relating to the product manufacturer's quality system program are described in Nonmandatory Appendix A.

1.5 Convention

For determining conformance with this Standard, the convention for fixing significant digits where limits (maximum or minimum values) are specified shall be as defined in ASTM E29. This requires that an observed or calculated value be rounded off to the nearest unit in the last right-hand digit used for expressing the limit. Decimal values and tolerances do not imply a particular method of measurement.

1.6 Codes and Regulations

A valve used under the jurisdiction of a Federal Regulation, such as CFR Title 49, Part 192; the ASME Code for Pressure Piping, such as ASME B31.8; or the National Fuel Gas Code, Z223.1, is subject to any limitation of that code or regulation.

1.7 Definitions

NPS: nominal pipe size.

NVS: nominal valve size.

one bar: 100 kPa.

PTFE: materials that comply with ASTM D4894, Specification for Polytetrafluoroethylene (PTFE) Granular Molding and Extrusion Materials.

All pressures, unless otherwise stated, are gage pressures.

2 CONSTRUCTION

2.1 Conformance

2.1.1 Each completed and assembled valve at the time of manufacture and marked with the designation "B16.38" shall be capable of meeting the requirements set forth in this Standard.

2.1.2 Classes 125 and 150 valves (depending upon their design) shall meet the requirements of one of the following standards: MSS SP-67, MSS SP-70, MSS SP-72, MSS SP-78, MSS SP-80, MSS SP-84, ASME B16.34, and ASME B16.42 (see Mandatory Appendix I).

2.2 Tamperproof Features

Where valves are specified to be tamperproof, they shall be designed and constructed to minimize the possible removal of the core of the valve with other-than-specialized tools, e.g., tools other than common wrenches, pliers, etc.