# Service-Line Valves and Fittings for Drinking Water Systems

**Standard Practice**
**Developed and Approved by the**
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This MSS Standard Practice was developed under the consensus of MSS Technical 112, *Water Works Valves & Fittings*, and the MSS Coordinating Committee. The content of this Standard Practice is the resulting efforts of knowledgeable and experienced industry volunteers to provide an effective, clear, and non-exclusive standard that will benefit the industry as a whole. This MSS Standard Practice describes minimal requirements and is intended as a basis for common practice by the manufacturer, the user, and the industry at large. It is the responsibility of the user of this Standard Practice to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use. The existence of an MSS Standard Practice does not in itself preclude the manufacture, sale, or use of products not conforming to the Standard Practice. Mandatory conformance to this Standard Practice is established only by reference in other documents such as a code, specification, sales contract, or public law, as applicable. MSS has no power, nor does it undertake, to enforce or certify compliance with this document. Any certification or other statement of compliance with the requirements of this Standard Practice shall not be attributable to MSS and is solely the responsibility of the certifier or maker of the statement.

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The U.S. customary units and SI (metric) units in this Standard Practice are regarded separately as the standard; each should be used independently of the other. Combining or converting values between the two systems may result in non-conformance with this Standard Practice.

> **This Standard Practice has been substantively revised from the previous 2014 edition. It is suggested that if the user is interested in knowing what changes have been made, that a direct page by page comparison should be made of this document and that of the previous edition.**

Non-toleranced dimensions in the Standard Practice are nominal unless otherwise specified.



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# FOREWORD

In the mid 1990's, the Manufacturers Standardization Society was requested to develop a Standard Practice for line valves and assigned this as a project to the MSS Committee 112, Water Works Valves and Fittings. Many of the significant components of service-lines for drinking water systems have not been specifically covered by standards. The MSS Committee 112 decided to fill this need in the water works industry by creating this Standard Practice, which has a broader scope than previous drinking water service line standards. However, the tubing, pipe, water main, water meter, and machines associated with drinking water service-lines are not covered by this Standard Practice.

The 2003 version was substantially revised from the original 1996 version.

The 2011 version was substantially updated and revised from the 2003 version; including an update of Sections 2, 4, 9, multiple Tables, and Annex A.

The 2014 version included minor editing of the text, formatting adjustments, the addition of several new definitions in Section 2, approved revisions to Sections 1, 5, 6, and 9, errata corrections in Table 10 through 13, the movement of the optional field testing instructions in Section 6 from the body of the Standard Practice to the Appendix, and updating of references in Annex A.

This 2019 version is substantially revised for accuracy with other industry standards and nomenclature. It incorporates additional materials in Section 4, the option of pneumatic testing in Section 6, approved revisions in Sections 3, 4, 5, and 9, updating references in Annex A, and various editorial or formatting updates.

**WARNING:** All valves and fittings that are produced in compliance with this Standard Practice and anticipated for drinkable (potable) water service must comply with the U.S. Federal Safe Drinking Water Act (SDWA), as Amended, and other federal, state and provincial, and local regulations as applicable.

**NOTE:** There are different protocols to show compliance with the SDWA (as Amended), including NSF 372.

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Manufacturers Standardization Society of the Valve and Fittings Industry

# SERVICE-LINE VALVES AND FITTINGS FOR DRINKING WATER SYSTEMS

## PURPOSE

To provide a Standard Practice covering most of the significant valves and fittings used in drinking water service-line systems including both buried and non-buried valves, fittings, meter setters, and service saddle clamps.

## 1. SCOPE

1.1 This Standard Practice covers valves and fittings in sizes NPS 1/2 through NPS 2, for use in drinking water system service-lines between the main and the meter.

Included are:

a) Buried valves and fittings that are designed to be in direct contact with the soil (corporation valves, service saddle clamps, and curb valves).

b) Non-buried valves and fittings that are designed for installation within an enclosure such as a meter box or building structure (meter valves, check valves, meter fittings, and meter setters).

c) Fittings include various types of couplings and adapters.

Not Included:

a) Reduced pressure backflow preventers.

1.2 This Standard Practice establishes the minimum requirements that a drinking water service-line valve or fitting must possess at the time of manufacture. Details of design and manufacture, other than those stated in this standard, including such design and production tests to ensure that each valve or fitting will have these capabilities, remain the responsibility of the manufacturer.

## 2. DEFINITIONS

2.1 Under this Standard Practice the following definitions shall apply:

2.1.1 ***Adapter*** Facilitates the connection of an item to a size or type of tubing, pipe, or fitting, which is different from that to which the item was designed to be connected.

2.1.2 ***Angle Design Meter Valve*** A meter valve in which the inlet and outlet are at right angles (i.e., 90°) to one another.

2.1.3 ***Body*** The principal pressure containing shell of a valve or fitting which has ends adapted for connection to tubing or piping.

2.1.4 ***Check Valve*** A unidirectional valve which is opened by the fluid flow in one direction and which closes automatically to prevent flow in the reverse direction.

2.1.5 ***Clamp*** See “Service Saddle Clamp”.

2.1.6 ***Compression Fitting*** A fitting for tube or pipe which seals and grips by radial deformation of circumferential sealing elements.

2.1.7 ***Corporation Valve*** Buried valve which connects to a water main or service saddle to prevent water flow while installing or maintaining service-line components.

2.1.8 ***Coupling*** A fitting used to make a linear connection between two lengths of tubing or piping.