

**MSS SP-116-2014**

**Service-Line  
Valves and Fittings  
for  
Drinking Water Systems**

**Standard Practice**  
Developed and Approved by the  
Manufacturers Standardization Society of the  
Valve and Fittings Industry, Inc.  
127 Park Street, NE  
Vienna, Virginia 22180-4602  
Phone: (703) 281-6613  
Fax: (703) 281-6671  
E-mail: [standards@mss-hq.org](mailto:standards@mss-hq.org)



[www.mss-hq.org](http://www.mss-hq.org)

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**This Standard Practice has been substantially revised from the previous 2011 edition. It is suggested that if the user is interested in knowing what changes have been made, that direct page by page comparison should be made of this document.**

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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.

This 2014 version includes 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.

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

2.1.2 **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.

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

2.1.4 **Clamp** See "Service Saddle Clamp".

2.1.5 **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.

2.1.6 **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.

2.1.9 **Curb Box** A vertical sleeve extending downward from the street or sidewalk level which provides above-ground access to a buried valve, meter, or other appurtenance.

2.1.10 **Curb Valve** Water service-line valve located partway between the main and meter, generally buried near the curb of the street and usually with a curb box installed over it for convenient operation from above ground.

2.1.11 **Driving Thread** Thread in an outlet end of a corporation stop to attach the valve to a tapping machine adapter during the valve installation.

2.1.12 **Fitting** Connector or closure used with piping or piping components to form fluid lines and passages with a desired system configuration.

2.1.13 **Flange** An annular collar designed to permit a bolted connection with similar collars.