Ball Valves
Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends

Standard Practice
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U.S. customary units in this Standard Practice are the standard; metric (SI) units are for reference only.

Substantive changes in this 2010 edition are “flagged” by parallel bars as shown on the margins of this paragraph. The specific detail of the change may be determined by comparing the material flagged with that in the previous edition.

Non-toleranced dimensions in this Standard Practice are nominal, and, unless otherwise specified, shall be considered “for reference only”.

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A   Referenced Standards and Applicable Dates .................................. 10
Note the following correction:

1. Page 2, Section 3.3, Other Parts. Under “Caution for Users,” the second sentence should read “For guidance, see ASME B31.3, Appendix F.”

This Errata Sheet is included in the Standard Practice.

Future printing of the Standard Practice will include this revised data.
1. **SCOPE**

1.1 **General**

1.1.1 This Standard Practice covers round opening, full, regular and reduced port metal ball valves.

1.1.2 End connections covered herein are threaded, socket-welding, solder joint, grooved and flared end in nominal pipe sizes ¼ through 4 inch.

1.1.3 These valves are intended for on-off operation and should be used for modulating or throttling service only when recommended by the manufacturer.

1.1.4 This Standard Practice covers ball valves of the following materials:

- Carbon Steel
- Alloy Steels
- Stainless Steels
- Gray Cast Iron
- Ductile Iron
- Malleable Iron
- Copper Alloy

1.2 **References**

1.2.1 Standards and specifications adopted by reference in this Standard Practice and names and addresses of the sponsoring organizations are shown in Annex A. 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 Annex A. A product made in conformance with the edition reference applicable during the time of manufacture, and in all other respects conforming to this Standard Practice, will be considered to be in conformance even though the edition reference may be changed in a subsequent revision of this Standard Practice.

1.3 **Description of Valve Types and Parts**

1.3.1 Examples of some valve types are shown in Figure 1. When variations of these basic types are used, they shall be named by the manufacturer.

1.3.2 The names of basic valve parts are given in Figure 2.

Note: The valve sketches shown in Figures 1 and 2 are for the purpose of illustration and nomenclature only and do not represent or endorse any manufacturer's product.

2. **PRESSURE-TEMPERATURE RATINGS**

2.1 **Basis of Ratings**

The pressure-temperature ratings for assembled valves shall be determined by the material of the body, seats, stem seals, end connections or any other component or type of construction that would be restrictive. Manufacturers should be consulted for exact ratings applicable for a particular material or type. Pressure-temperature ratings of steel valves, shall not exceed those specified in ASME B16.34, where applicable.

2.2 **Solder End Ratings**

Ratings of solder-end connections shall not exceed the limitations of ASME B16.18. It shall be the responsibility of the user to select a solder composition that is compatible with the service conditions.

2.3 **Cold Working Pressure (CWP)**

The cold working pressure rating of the valve shell and components is the maximum allowable non-shock pressure at 100°F. The maximum working pressure at any other temperature shall not exceed this rated pressure.