



Standard Specification for Quick Disconnect Couplings (6 in. NPS and Smaller)¹

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^{ε1} NOTE—Keywords section was editorially added in May 2015.

1. Scope

1.1 This specification covers the manufacturing data required to produce a variety of styles and sizes of quick disconnect couplings up to and including NPS 6 for marine use that ensure interchangeability and safety of operation.

1.2 In general, quick disconnect couplings are hose and pipe end fittings that permit quick mechanical attachment by means other than bolted or threaded fittings. The method of attachment is a male coupling half (adapter) that fits into a female coupling half (coupler) of the same size. By closing attached cam handles, the coupling halves seal, permitting fluids to be transported under pressure through the quick disconnect coupling.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 The following safety hazards caveat pertains only to the test method described in this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ANSI Standards:²

- B2.1 Pipe Threads
- B16.5 Pipe Flanges and Flanged Fittings, Steel-Nickel Alloy, and Other Special Alloys
- B16.24 Bronze Pipe Flanges and Flanged Fittings
- B16.42 Ductile Iron Pipe Flanges and Flanged Fittings
- B31.1 Power Piping Code

¹ This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.11 on Machinery and Piping Systems.

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² Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

2.2 MSS Standards:³

MSS-SP-6 Standard Finish for Contact Faces of Pipe Flanges and Connecting End Flanges of Valves and Fittings

MSS-SP-25 Standard Marking System for Valves, Fittings, Flanges, and Unions

MSS-SP-55 Quality Standard for Steel Castings for Valves, Flanges, and Fittings and Other Piping Components (Visual Method)

2.3 ASME Standards:⁴

Section VIII, Division 1 Pressure Vessels

Section IX, Welding and Brazing Qualifications

3. Definitions of Terms Specific to This Standard

3.1 *adapter*—one half of a quick disconnect coupling that fits into the coupler and seals against an elastomer gasket positioned inside the coupler.

3.2 *cam handles*—handles that are assembled to the coupler half which by closing engages the adapter sealing the coupling.

3.3 *coupler*—one half of a quick disconnect coupling that receives the adapter. This half contains the sealing gasket and cam handles (see Fig. 1).

NOTE 1—See Fig. 2 for a description of typical coupler pipe fittings.

4. Classification

4.1 Quick disconnect couplings shall consist of the following types:

4.1.1 *Standard Class*—This type is to be designed for a 4:1 burst factor of safety.

4.1.2 *Class I*—This type is to be designed for a 5:1 burst factor of safety.

4.2 Both Standard Class and Class I will be called quick disconnect couplings in the body of this specification unless otherwise specified.

³ Available from Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), 127 Park St., NE, Vienna, VA 22180-4602, <http://www.mss-hq.com>.

⁴ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Two Park Ave., New York, NY 10016-5990, <http://www.asme.org>.