



Standard Specification for Fluid Conditioner Fittings in Piping Applications Above 0°F¹

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1. Scope

1.1 This specification provides the minimum requirements for pressure-retaining components of fluid conditioner fittings. It addresses the pressure-retaining component design, fabrication, rating, marking, and testing.

1.2 This specification is not intended to override any of the present fluid conditioner fitting specifications specific to devices such as strainers, filters, and traps but should be used for devices for which a specific specification does not apply.

1.3 This specification provides sufficient requirements to allow a fluid conditioner fitting to be used in the marine environment.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 The following precautionary caveat pertains only to the test methods portion, Section 7, of 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 ASTM Standards:

D 93 Test Methods for Flash Point by Pensky-Martens Closed Cup Tester²

F 722 Specification for Welded Joints for Shipboard Piping Systems³

2.2 ANSI Standards:⁴

B2.1 Pipe Threads

B16.1 Cast Iron Pipe Flanges and Flanged Fittings

B16.3 Malleable Iron Threaded Fittings

B16.4 Cast Iron Threaded Fittings

B16.5 Pipe Flanges and Flanged Fittings

B16.11 Forged Steel Fittings, Socket-Welding and Threaded

B16.15 Cast Bronze Threaded Fittings

B16.24 Bronze Pipe Flanges and Flanged Fittings

B16.25 Buttwelding Ends

B31.1 Power Piping

2.3 MSS Standards:⁵

SP-44 Steel Pipe Flanges

SP-51 150 lb Corrosion Resistant Cast Flanges and Flanged Fittings

SP-61 Pressure Testing of Steel Valves

SP-67 Butterfly Valves

2.4 ASME Standard:⁶

ASME Boiler and Pressure Vessel Code: Section VIII, Division 1, Pressure Vessels

ASME Boiler and Pressure Vessel Code: Section IX, Welding and Brazing Qualifications

3. Terminology

3.1 Definitions:

3.1.1 *fluid conditioner fitting*—a device, other than a valve or pipe or pipe joining fitting, installed in a pressure piping system, that monitors or provides for the monitoring of the fluid, or otherwise operates on or alters the condition of the fluid.

3.1.2 *maximum allowable working pressure (MAWP)*—the highest internal pressure at the maximum design temperature that the fluid conditioner fitting can be safely subjected to in service.

3.1.3 *maximum design temperature*—the maximum temperature for which the fluid conditioner fitting is rated by the manufacturer.

3.1.4 *multiplex fluid conditioner fitting*—a fluid conditioner fitting that is made up of multiples of a single unit connected by either manifolding, piping, tubes, or valves.

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 *Annual Book of ASTM Standards*, Vol 05.01.

³ *Annual Book of ASTM Standards*, Vol 01.07.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

⁵ Available from Manufacturers Standardization Society of the Valve and Fitting Industry, 1815 N. Fort Myer Dr., Arlington, VA 22209.

⁶ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990.