



Standard Specification for Seamless and Welded Unalloyed Titanium and Titanium Alloy Welding Fittings¹

This standard is issued under the fixed designation B363; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification² covers fittings intended for general corrosion-resisting and elevated-temperature services, factory made from unalloyed titanium and titanium alloys. The term welding fittings applies to butt-welding parts such as 45° and 90° elbows, 180° returns, caps, tees, reducers, lap-joint stub ends, and other types.

1.2 *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:³

- B265** Specification for Titanium and Titanium Alloy Strip, Sheet, and Plate
- B338** Specification for Seamless and Welded Titanium and Titanium Alloy Tubes for Condensers and Heat Exchangers
- B348** Specification for Titanium and Titanium Alloy Bars and Billets
- B367** Specification for Titanium and Titanium Alloy Castings
- B381** Specification for Titanium and Titanium Alloy Forgings
- B600** Guide for Descaling and Cleaning Titanium and Titanium Alloy Surfaces
- B861** Specification for Titanium and Titanium Alloy Seamless Pipe

B862 Specification for Titanium and Titanium Alloy Welded Pipe

2.2 ANSI Standards:^{4,5}

- ASME/ANSI B16.5** Pipe Flanges and Flanged Fittings
- ASME/ANSI B16.9** Wrought Steel Butt-Welding Fittings
- ASME/ANSI B16.11** Forged Fittings, Socket Welding and Threaded

ASME/ANSI B36.19 Stainless Steel Pipe

2.3 Manufacturers' Standardization Society of the Valve and Fittings Industry Standards:⁶

- MSS SP-25** Standard Marking System for Valves, Fittings, Flanges and Unions
- MSS SP-43** Standard Practice for Light Weight Stainless Steel Butt-Welding Fittings
- MSS SP-97** Standard Integrally Reinforced Forged Branch Outlet Fittings — Socket Welding, Threaded, and Butt-Welding Ends
- MSS SP-119** Standard Factory-Made Wrought Belled End Socket-Welding Fittings

2.4 ASME Standard:⁷

- ASME Boiler and Pressure Vessel Code** Sections VIII Division 1 Pressure Vessels and Section IX

3. Ordering Information

3.1 Orders for material to this specification shall include the following information as required:

- 3.1.1 Quantity,
- 3.1.2 Grade number,
- 3.1.3 Pipe size and schedule,
- 3.1.4 Method of manufacture and finish,

¹ This specification is under the jurisdiction of ASTM Committee B10 on Reactive and Refractory Metals and Alloys and is the direct responsibility of Subcommittee B10.01 on Titanium.

Current edition approved May 1, 2014. Published May 2014. Originally approved in 1961. Last previous edition approved in 2006 as B363 – 06a. DOI: 10.1520/B0363-14.

² For ASME Boiler and Pressure Vessel Code applications, see related Specification SB-363 in Section II of that Code.

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

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

⁵ Specifications in the order are for "dimensions only" with no requirements for strength or pressure rating to be inferred. (that is, Class XXXX is not intended to designate a strength or pressure rating requirement for titanium; only to define a dimension for that category.)

⁶ 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>.

⁷ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990, <http://www.asme.org>.