



Standard Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications¹

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1. Scope

1.1 This standard provides the performance characteristics and qualification tests required for gasketed mechanical couplings including grooved-type mechanical couplings for grooved end pipe, mechanical restraint couplings for plain end pipe and mechanical compression couplings for plain end pipe. These couplings are for use at temperatures within the recommended temperature range of their respective gaskets. Consult manufacturer for details.

1.2 The values stated in metric units (SI) are to be regarded as the standard. The values given in parentheses (inch/pound) are provided for information purposes.

1.3 Measuring and test equipment (M&TE) used in the performance of the tests described herein shall be calibrated using equipment which is traceable to the National Institute of Standards and Technology (NIST) or calibrated in accordance with the requirements detailed in BS5781 Part 1 against standards traceable to National Standards.

1.4 *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.*

1.5 As this is not a dimensional standard, nor does it contain component dimensions, the intermixing of sub-components such as gaskets and housings between manufacturers is not recommended and constitutes non-conformance with this standard.

2. Referenced Documents

2.1 ASTM Standards:

- A 47 Specification for Ferritic Malleable Iron Castings²
- A 53 Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless³
- A 135 Specification for Electric-Resistance-Welded Steel Pipe³

A 153 Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware⁴

A 183 Specification for Carbon Steel Track Bolts and Nuts⁵

A 193 Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service³

A 194 Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service³

A 325 Specification for Structural Bolts, Steel, Heat-Treated, 120/105 ksi Minimum Tensile Strength⁶

A 395 Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures²

A 536 Specification for Ductile Iron Castings²

A 563 Specification for Carbon and Alloy Steel Nuts⁶

A 574 Specification for Alloy Steel Socket-Hand Cup Screws⁶

A 743/A743M Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application²

B 26/B26M Specification for Aluminum-Alloy Sand Castings⁷

B 88 Specification for Seamless Copper Water Tube⁸

B 580 Specification for Anodic Oxide Coatings on Aluminum⁹

B 633 Specification for Electrodeposited Coatings of Zinc on Iron and Steel⁹

D 2000 Classification System for Rubber Products in Automotive Applications¹⁰

F 837 Specification for Stainless Steel Socket Head Cap Screws⁶

2.2 ANSI, ANSI/ASQC, or ANSI/AWWA Standards:

B 36.10—Welded and Seamless Wrought Steel Pipe¹¹

B 36.19—Stainless Steel Pipe¹¹

C 151/A21.51—Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water or Other Liquids¹¹

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² Annual Book of ASTM Standards, Vol 01.02.

³ Annual Book of ASTM Standards, Vol 01.01.

⁴ Annual Book of ASTM Standards, Vol 01.06.

⁵ Annual Book of ASTM Standards, Vol 01.04.

⁶ Annual Book of ASTM Standards, Vol 15.08.

⁷ Annual Book of ASTM Standards, Vol 02.02.

⁸ Annual Book of ASTM Standards, Vol 02.01.

⁹ Annual Book of ASTM Standards, Vol 02.05.

¹⁰ Annual Book of ASTM Standards, Vol 09.01.

¹¹ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.