



Standard Specification for Pressure-Reducing Valves for Steam Service¹

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1. Scope

1.1 This specification covers self-contained, internally operated, globe style, pressure-reducing valves for use in steam service. In these valves, the downstream pressure feedback is sensed by a spring-loaded diaphragm to position a pilot valve—the pilot valve uses the inlet steam pressure to position the main valve plug via an operating piston.

2. Referenced Documents

2.1 ASTM Standards:²

- A105/A105M Specification for Carbon Steel Forgings for Piping Applications
- A182/A182M Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service
- A193/A193M Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications
- A194/A194M Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both
- A216/A216M Specification for Steel Castings, Carbon, Suitable for Fusion Welding, for High-Temperature Service
- A217/A217M Specification for Steel Castings, Martensitic Stainless and Alloy, for Pressure-Containing Parts, Suitable for High-Temperature Service
- A515/A515M Specification for Pressure Vessel Plates, Carbon Steel, for Intermediate- and Higher-Temperature Service
- A516/A516M Specification for Pressure Vessel Plates, Carbon Steel, for Moderate- and Lower-Temperature Service
- A547 Specification for Steel Wire, Alloy, Cold-Heading Quality, for Hexagon-Head Bolts (Withdrawn 1989)³

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 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.

³ The last approved version of this historical standard is referenced on www.astm.org.

2.2 American Society of Mechanical Engineers (ASME) Standards:⁴

- B1.1 Unified Screw Threads
- B16.5 Pipe Flanges and Flanged Fittings
- B16.34 Valves—Flanged, Threaded, and Welding End
- B18.2.1 Square and Hex bolts and Screws, Including Askew Head bolts, Hex Cap Screws, and Lag Screws

2.3 Federal Specification:⁵

- FED-STD-H 28 Screw-Thread Standards for Federal Services

2.4 Military Standards and Specifications:⁵

- MIL-V-3 Valves, Fittings, and Flanges (Except for Systems Indicated Herein); Packaging of
- MIL-S-901 Shock Tests, H.I. (High Impact); Shipboard Machinery, Equipment and Systems, Requirements for
- MIL-R-2765 Rubber Sheet Strip, Extruded, and Molded Shapes, Synthetic, Oil Resistant
- MIL-P-15024 Plates, Tags and Bands for Identification of Equipment
- MIL-P-15024/5 Plates, Identification
- MIL-R-17131 Rods and Powders, Welding, Surfacing
- MIL-G-24716 Gaskets, Metallic-Flexible Graphite, Spiral Wound
- MIL-I-45208 Inspection Systems Requirements
- MIL-STD-167-1 Mechanical Vibrations of Shipboard Equipment (Type I—Environmental and Type II—Internally Excited)
- NAVSEA T9074–AQ-GIB-010/271 Nondestructive Testing Requirements for Metals
- NAVSEA S9074–AR-GIB-010/278 Fabrication Welding and Inspections and Casting Inspection and Repair for Machinery, Piping and Pressure Vessels in Ships of the United States Navy
- MIL-STD-798 Nondestructive Testing, Welding, Quality Control, Material Control and Identification and Hi-Shock Test Requirements for Piping System Components for Naval Shipboard Use
- MS 16142 Boss, Gasket Seal Straight Thread Tube Fitting, Standard Dimensions for

⁴ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990.

⁵ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.