



A Word about Valve Safety and Compliance to National Standards . . .

ASME Standard B16.34 entitled “Steel Valves” is the document most uniformly accepted by end-users, engineering contractors, fabricators and valve manufacturers as the basis for valve design, valve testing and valve performance.

In 1988, the Scope of ASME B16.34 was changed to include threaded-end and weld-end valves in addition to flanged-end valves.

Today, the vast majority of flanged-end ball valves sold in the United States meet or

exceed the requirements of ASME B16.34. In fact, few end-user customers would consider specifying or purchasing a flanged-end ball valve that did not comply with ASME B16.34 as a minimum requirement.

Although ASME B16.34 has included threaded-end ball valves for over 13 years, over 90% of the threaded ball valves currently used in the construction and maintenance of process facilities do not comply with this universally accepted standard.....

What is the significance of ASME B16.34 compliance?

ASME B31.1 standard entitled "Power Piping" and ASME B31.3 standard entitled "Process Piping" are the standards used by virtually all power companies, chemical companies and petroleum refiners as the guideline for the selection of material and design of piping for power plants, chemical plants and refineries. Both of these standards refer the user to ASME B16.34 for selection of VALVES.

What exactly does compliance to ASME B16.34 mean to the end-user or engineering contractor?

- ✓ Wall thicknesses of body and other pressure-containing components meet ASME B16.34 specified minimum values for each pressure class.
- ✓ NPT and Socket Weld end connections comply with ASME B1.20.1 or ASME B16.11.

- ✓ Body and shell materials comply with ASME and ASTM material standards for chemistry and strength.
- ✓ Body and all shell materials are heat-treated to insure proper grain structure, corrosion resistance and hardness.
- ✓ Stems will be "internally loaded and blowout proof."
- ✓ All bolting will be ASTM grade with maximum applied stress controlled by B16.34.
- ✓ Each Valve is shell tested at 150% of rated pressure for a specified test time duration.
- ✓ Each Valve is tested for seat leakage in both directions for a specified test time duration.
- ✓ Each Valve is permanently tagged with materials of construction, operating limits, and name of manufacturer.

Without complete compliance to B16.34, there is no assurance that valves meet any of these important requirements.

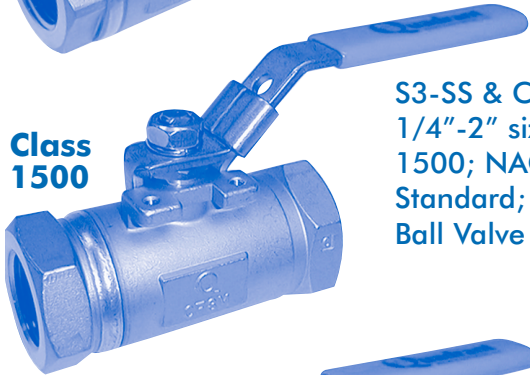
At Quadrant Valve & Actuator, we have practical, safe, and cost effective solutions to the problem of ASME B16.34 threaded valve compliance ... in fact we have **five**:



Class 900

SB-SS & CS Series is a Seal-Welded ball valve eliminating the possibility of body/tail piece unthreading. The SB-SS/CS is in full compliance with ASME B16.34 Class 900, as well as: NACE MR01-75-Rev 2000; API 607 4th Edition Fire Safe Standard; ISO 10497 Fire Safe Standard; ISO 5211 and API 608 Ball Valve Standard (see back page).

2160WOG (CF8M) 2220WOG (WCB)



Class 1500

S3-SS & CS Series is also of Seal-Welded construction, available in 1/4"-2" sizes, and is in full compliance with: ASME B16.34 Class 1500; NACE MR01-75 Rev 2000; API 607 4th Edition Fire Safe Standard; ISO 10497 Fire Safe Standard; ISO 5211 and API 608 Ball Valve Standard (see back page).

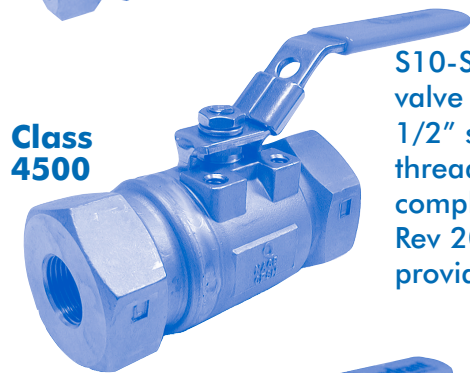
3600WOG (CF8M) 3705WOG (WCB)



Class 2500

S6-SS & CS Series is a Seal-Welded construction ball valve in 1/4"-2" sizes in full compliance with ASME B16.34 Class 2500, as well as: NACE MR01-75 Rev 2000; API 607 4th Edition Fire Safe Standard; ISO10497 Fire Safe Standard; ISO 5211 and API 608 Ball Valve Standard (see back page). Standard PEEK seats extend temperature range, also available with weld ends.

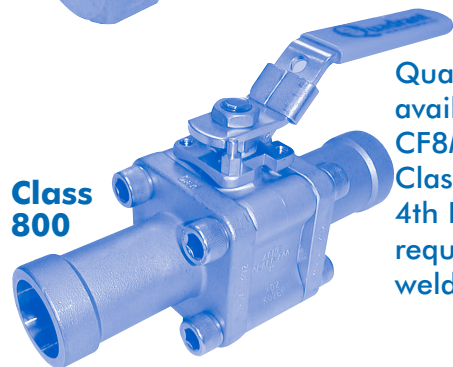
6000WOG (CF8M) 6170WOG (WCB)



Class 4500

S10-SS Series is an extreme-pressure seal-welded construction ball valve available in 1/4", 3/8" and 1/2" NPT female end connections, 1/2" socket-weld end connections, and 9/16" medium pressure threaded and coned tubing connections. The S10-SS is in full compliance with ASME B16.34 Class 4500, API 608, NACE MR01-75 Rev 2000, and API 607 4th Edition Fire Testing standard. PEEK seats provide high temperature service capability.

10,800WOG (CF8M)



Class 800

Quadrant's M2-CS and M2-SS three piece, 8-bolt ball valves are available in 1/4" through 2-1/2" sizes in both WCB carbon steel and CF8M stainless steel construction. Fully compliant with ASME B16.34 Class 800, as well as: API 608, NACE MR01-75 Rev 2000, API 607 4th Edition, ISO 10497, and ISO 5211. Ideal in applications requiring body assembly removal after installation. Extended socket-weld ends allow welding into system without disassembly.

1920WOG (CF8M) 1973WOG (WCB)

What is the significance of API 608 compliance?

The Quadrant Ball Valves shown on the previous page also comply with API 608 Ball Valve Standard. This document was developed by the Committee on Refining Equipment of API in 1989 as the standard to be used by “downstream” API refiners and chemical companies for selection and approval of flanged, weld-end & threaded ball valves. API 608 is actually an additional set of requirements beyond those in ASME B16.34, and ASME B16.34 compliance is a prerequisite.

Some of the additional requirements for a valve to comply with API 608 include:

- Maximum Operating Load on handles or handwheels to be limited to 80 Lbs.
- Stem torsional strength must be at least twice the maximum operating torque (Safety factor=2).

- Torsional failure of stem must be external to pressure-containing envelope and above stem packing.
- PTFE and RPTFE seats and seals must meet minimum pressure/temperature requirements.
- Full, “Regular” and Reduced Port ball valves must meet minimum bore diameter requirements.
- “Hollow balls,” which create turbulent flow and reduced CV factors, are disallowed.
- Stem must be electrically “grounded” to body.

Quadrant’s SB-SS, S3 and S6 Ball Valves provide you with the **confidence of compliance** to all of these industry standards while reducing your valve costs. For more information, please visit our website at www.quadrantvalve.com.

