

Summary of Substantive Changes
between the 2005 edition of
ASSE 1016, “Performance Requirements for Automatic Compensating Valves
for Individual Showers and Tub/Shower Combinations”,
Clauses 4.15 and 5.10 of the 2011 edition of
ASME A112.18.1/CSA B125.1, “Plumbing supply fittings”,
and the 2011 Edition of
ASSE 1016/ASME A112.1016/CSA B125.16,
“Performance requirements for automatic compensating valves
for individual showers and tub/shower combinations”

General: Changes to this standard will affect current listings. Multiple tests and requirements were changed or modified from the previous standards, including flow, pressure, and temperature changes. The 2011 edition is harmonized between ASME, ASSE, and CSA.

Section 4.2.1 Preconditioning: Added the requirement that *Before testing, specimens shall be conditioned at ambient laboratory conditions for not less than 12 h.*

Section 4.2.2.2, Procedure:

- Temperatures and tolerances of the conditioning pressure and temperature were changed.
- The cold water temperature used for conditioning the specimen was changed from ...~~75.0 °F ± 5.0 °F (23.9 °C ± 3.0 °C)~~... to ...10.0 ± 3.0 °C (50.0 ± 5.0 °F).
- (f) *Adjust valve V3 to reduce the flow rate to 9.5 ± 1.0 L/min (2.5 ± 0.25 gpm) or the manufacturer’s minimum rated flow ±10%.*

Figure 1, Set-up for high-temperature conditioning, pressure and temperature variation, and water supply pressure loss tests: A distance of 914 mm (36 in) was added between sensors T1, T2 and the test specimen.

Section 4.3.4.1: Environment conditions for testing were added.

Section 4.3.4.2: The conditions for the working pressure test were changed as follows:

~~...a water pressure of 125.0 psi (861.9 kPa) shall be applied to the inlets of the device for five (5) minutes.~~

Test temperatures and pressures shall be as follows:

- (a) 140.0 ± 13.8 kPa and 10.0 ± 6.0 °C (20.0 ± 2.0 psi and 50.0 ± 10.0 °F);
- (b) 860.0 ± 13.8 Pa and 10.0 ± 6.0 °C (125.0 ± 2.0 psi and 50.0 ± 10.0 °F);
- (c) 140.0 ± 13.8 kPa and 66.0 ± 6.0 °C (20.0 ± 2.0 psi and 150.0 ± 10.0 °F); and
- (d) 860.0 ± 13.8 kPa and 66.0 ± 6.0 °C (125.0 ± 2 psi and 150.0 ± 10.0 °F).

Section 4.5.2, Procedure — Operating controls: The following condition prior to testing was added:

- (b) (iv) the device’s maximum outlet temperature adjusted to 49.0 +0.0, -6.0 °C (120.0 +0.0, -10.0 °F) using the device’s temperature limit stop adjustment.
- (c) The packing nut may be tightened once during the life cycle test to stop leakage was added in this section.

- The description of control type cycles was also added in Item (c):
(c) (ii) Single-control mixing valves with combined volume and temperature control: the control shall be adjusted to operate the volume control from off to the full-on 40.6 ± 3.0 °C (105.0 ± 5.0 °F) position, to the full-on cold position, to the full-on hot limit stop position, to the 40.6 ± 3.0 °C (105.0 ± 5.0 °F) position, to the off position, to complete one cycle.
(c) (iii) Devices with a separate volume control: the volume control shall be turned full-on, the temperature control dial shall be turned through its full operating range and back, the volume control shall be turned off to complete one cycle. (iv) Single-handle mixing valves that only have temperature control: the testing laboratory shall provide a shut-off valve, and the device shall be tested in accordance with Section 4.5.2(c)(iii).

Section 4.5.5, Maximum torque or operating force: An additional test series was added: Retest the device in accordance with Section 4.4.

Section 4.7.2.2: An additional step in the water supply failure test was added
(c) Repeat the test by closing the hot water supply valve within 1 s (hot water supply failure test). Continuously record the outlet temperature at sensor T3 and flow rate for 5 s after the hot water supply valve has been fully closed.

Section 4.7.3, Failure criteria: Added the conditional statement in 2 instances ...or 30% of the manufacturer's minimum rated flow, whichever is less...

Section 4.8, Mechanical temperature limit stop test: This is a new test that was added to the standard:
The purpose of the mechanical temperature limit stop test is to ensure that the temperature control that stops against a limit stop can maintain its set position.

Section 4.9.2, Procedure for all devices: The step ...Set the temperature limit stop to a maximum outlet temperature of 48.9 °C (120.0 °F). Set the device at the full hot position, flow for 1 min, and record the outlet temperature was added.

Section 5.3, Packaging: Packaging or included literature shall specify the device's minimum flow rate, determined at a flowing pressure of 310.3 kPa (45.0 psi), in the following statement: "For use with shower heads rated at xxx L/min (yyy gpm) or higher", where "xxx L/min (yyy gpm)" is the manufacturer's minimum rated flow used to verify conformance to this Standard in accordance with Sections 4.6.3 to 4.6.5 was added.