

ASSE 1016-2011/ASME A112.1016-2011/ CSA B125.16-11

Performance requirements for automatic compensating valves for individual showers and tub/shower combinations

Section I

1 Scope

1.1

This Standard applies to automatic compensating valves intended to be installed at the point of use, where the user has access to flow or final temperature controls, and where no further mixing occurs downstream of the device.

Note: *In this Standard, automatic compensating valves are also referred to as devices.*

1.2

This Standard covers automatic compensating valves intended to control the water temperature to wall or ceiling mounted

- (a) hand-held showers;
- (b) shower heads;
- (c) body sprays either in individual shower or tub/shower combination fittings; and
- (d) tub spouts when part of tub/shower combination fittings.

1.3

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard. Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material. Notes to tables and figures are considered part of the table or figure and may be written as requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

1.4

SI units are the units of record in Canada. In this Standard the inch/pound units are shown in parentheses.

The values stated in each measurement system are equivalent in application; however, each system is to be used independently. Combining values from the two measurement systems can result in non-conformance with this Standard.

All references to gallons are to U.S. gallons.

Section II

2 Reference publications and definitions

2.1 Reference publications

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below, including all amendments published thereto.

ASME/CSA (The American Society of Mechanical Engineers/Canadian Standards Association)

ASME A112.18.1-2011/CSA B125.1-11

Plumbing supply fittings

ASSE (American Society of Sanitary Engineering)

Plumbing Dictionary Sixth Edition — 2007

2.2 Definitions

In addition to the definitions in ASME A112.18.1/CSA B125.1 and in the ASSE Plumbing Dictionary, the following definitions shall apply in this Standard:

Automatic compensating valve — a water-mixing valve that is supplied with hot and cold water and that provides a means of automatically maintaining the water temperature selected for an outlet.

Note: Automatic compensating valves are used to reduce the risk of scalding and thermal shock.

Combination pressure-balancing and thermostatic compensating valve (Type T/P) — a compensating valve that senses inlet supply hot and cold water pressures before mixing, senses the water temperature at the outlet, and compensates for pressure and thermal variations to maintain the water temperature at the outlet.

Pressure-balancing compensating valve (Type P) — a compensating valve that senses inlet supply hot and cold water pressures and compensates for variations in the inlet supply pressures to maintain the water temperature at the outlet.

Thermostatic compensating valve (Type T) — a compensating valve that senses the water temperature at the outlet and compensates for thermal variations to maintain the water temperature at the outlet.

Initial outlet set temperature — the average of the values of the mixed temperature measured at the outlet for the 10 s immediately preceding the temperature change measured at the outlet resulting from a pressure or temperature change.

Point-of-use — the final outlet of the water supply system just prior to discharge to atmosphere.

Temperature limit setting — an adjustable means to limit the maximum setting of the device towards the hot position limiting the maximum discharge temperature.

Thermal shock — a rapid change in the outlet water temperature that is felt by the user and is sufficient to produce a potentially hazardous reaction.

User — an individual who can adjust the outlet water temperature at the point of use while he or she is in contact with the outlet water.