

American Society of Sanitary Engineering

Performance Requirements for
**Automatic Compensating
Valves for Individual
Showers and Tub/
Shower Combinations**

An American National Standard

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Westlake, Ohio
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Foreword

This foreword shall not be considered a part of the standard; however, it is offered to provide background information.

ASSE Standards are developed in the interest of consumer safety.

Several suggestions received from persons having had a disturbing experience with shower valves which were potentially hazardous allowing sudden surges of high temperature water to flow from the shower head prompted the initiation of this standard in 1973. Documents and field experiences relating to the behavioral characteristics of different classes of devices were studied and evaluated, and from this, the standard text was developed. Since that time, extensive research has been conducted toward the development of this standard in its current form.

The shower control valves covered by this standard are only those which will, in cases of reduction of hot or cold water supply, or loss of cold water supply, reduce the risk of scalding and thermal shock by protecting the user from exposure to excessive changes in water temperature. These devices generally have one cold water inlet connection, one hot water inlet connection, and a mixed water outlet connection(s). This standard provides engineers, designers, manufacturers, health authorities, inspection agencies and others with a set of minimum performance requirements for such individual control valves.

Recognition is made of the time volunteered by members of this working group and of the support of the manufacturers who also participated in the meetings for this standard.

The standard does not imply ASSE's endorsement of a product which conforms with these requirements.

Compliance with this standard does not imply acceptance by any code body.

It is recommended that these devices be installed consistent with local codes.

This standard was promulgated in accordance with procedures developed by the American Society of Sanitary Engineering and approved by the American National Standards Institute.

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Automatic Compensating Valves for Individual Showers and Tub/Shower Combinations

Section I

1.0 General

1.1 Application

Automatic Compensating Valves for Individual Showers and Tub/Shower Combinations (herein referred to as the "device") are intended to control the water temperature to wall mounted shower heads either in individual shower or tub/shower combination fixtures in order to reduce the risk of scalding and thermal shock. These devices are intended to be installed at the point-of-use, where the bather or bather's attendant has access to flow and final temperature control mechanisms, and where no further mixing occurs downstream of the device.

Products covered by this standard, when intended for use by people with disabilities, shall also comply with ICC/ANSI A117.1 *Guidelines for Accessible and Usable Buildings and Facilities*.

1.2 Scope

1.2.1 Description

This standard applies only to the three (3) types of devices listed below which meet all applicable requirements of ANSI/ASME A112.18.1 and the additional requirements of this standard.

The three (3) types of individual control valves covered by this standard are:

1. Pressure balancing valves (Type P) shall have a mechanism that senses incoming hot and cold water pressures and compensates for fluctuations in either to stabilize outlet temperature.
2. Thermostatic valves (Type T) shall have a mechanism that senses outlet temperature and compensates for fluctuations in either incoming hot and cold water temperature and/or pressure to stabilize outlet temperature.
3. Combination thermostatic/pressure balancing valves (Type T/P) sense outlet temperature and incoming hot and cold water pressures and compensates for fluctuations in incoming hot and cold water temperatures and/or pressures to stabilize the outlet temperature.

These devices shall be equipped with an adjustable means to limit the setting of the device towards the hot position. These devices are intended to be the final temperature control. These devices shall maintain an outlet temperature of ± 3.6 °F (± 2.0 °C) from the set temperature in accordance with Section 3.5.