

American National Standard
ASSE 1069-2020



Performance Requirements for
**Automatic Temperature Control
Mixing Valves**

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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 International standards are developed in the interest of consumer safety. ASSE considers product performance standards to be of great value in the development of improved plumbing systems.

The working group that developed this standard was set up within the framework of the ASSE International Product Standards Committee.

This standard was developed for devices that service end use fixture fittings including, but not limited to, gang showers and sitz baths, by supplying tempered water at a preset temperature through a single supply pipe. The need for this standard exists because no other standard covers products that supply a wide range of demand in flow rate while providing final control of the mixed water temperature. These devices are not intended to be installed for individual showers or tub/shower combinations.

It is understood that further mixing of water downstream of these devices will not occur. These devices are intended to be the final temperature control of the water that comes in contact with the end user.

Control of the final outlet temperature of these devices shall be set by either the installer or building owner. The end user generally does not have access to the device. These devices generally have one cold water inlet connection, one hot water inlet connection, and a mixed water outlet connection(s). The valves covered by this standard are only those which will, in cases of changes in hot or cold water supply pressure, temperature, or loss of cold water supply, reduce the risk of scalding and thermal shock.

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

This standard does not imply ASSE International's endorsement of a product that conforms to 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 by qualified and trained professionals.

This standard was promulgated in accordance with the ASSE Procedures for Standards Development as approved by the American National Standards Institute (ANSI).

2019 Product Standards Committee

Tsan-Liang Su, PhD, Chairperson

*Stevens Institute of Technology
Hoboken, NJ*

John F. Higdon, P.E.

*Supply Source Products
Matthews, NC*

William Briggs, Jr.

*JB&B
New York, NY*

Conrad L. Jahrling (non-voting)

*ASSE International
Chicago, IL*

Terry Burger

*NSF International
Cleveland, OH*

Jim Kendzel

*American Supply Association
Minneapolis, MN*

William Chapin

*Professional Code Consulting, LLC
Cullman, AL*

Ramiro Mata

*American Society of Plumbing
Engineers (ASPE)
Cleveland, OH*

Mark E. Fish

*Zurn Industries, LLC
Cary, NC*

Thomas Pitcherello

*State of New Jersey
Bordentown, NJ*

Ron George

*Plumb-Tech Design & Consulting
Services, LLC
Newport, MI*

Daniel Rademacher

*Plumbing Code and Design Consulting
Butte, MT*

Daniel Gleiberman

*Sloan
Los Angeles, CA*

Shabbir Rawalpindiwala

*Kohler Company
Kohler, WI*

Brandon Gunnell

*Precision Plumbing Products
Portland, OR*

Billy Smith

*American Society of Plumbing
Engineers (ASPE)
Montgomery, AL*

Chris Haldiman

*Watts Water Technologies
Springfield, MO*

1069 Working Group

Matthew Fratantonio

*Watts Water Technologies
North Andover, MA*

Chris Haldiman

*Watts Water Technologies
Springfield, MO*

Ron George

*Plumb-Tech Design & Consulting Services LLC
Newport, MI*

Conrad L. Jahrling (non-voting)

*ASSE International
Chicago, IL*

Greg Goodson

*Apollo Valves / Conbraco Industries, Inc.
Matthews, NC*

Mannan Mohammed

*Reliance Worldwide
Vaughan, Ontario, Canada*

Jim Graves

*Morris Group International
Lake Bluff, IL*

Matt Sigler

*PMI
Rolling Meadows, IL*

Steve Gregory

*Vernet SAS
New Palestine, IN*

Cameron West

*Lawler Valve
Indianapolis, IN*

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Performance Requirements for Automatic Temperature Control Mixing Valves

Section I

1.0 General

1.1 Application

These devices are intended to control the water temperature to individual or multiple fixtures to reduce the risk of scalding and thermal shock. Shut-off valves downstream of the device shall be permitted. These devices are intended to be installed where the bather has no access to the temperature adjustment means, and where no further mixing occurs downstream of the device.

1.2 Scope

1.2.1 Description

These devices shall be designed to supply only tempered water to the end user, and automatically compensate for pressure and/or temperature variations in water distribution systems. These devices shall have the capability to significantly reduce the outlet flow in the event of a cold water distribution system failure. The device shall be equipped with an adjustable means to limit the setting of the device towards the hot position. The device is intended to be the final temperature control.

1.2.2 Maximum Working Pressure

The maximum static pressure of the device shall be at least 125 psi (861.9 kPa).

1.2.3 Temperature Range

1.2.3.1 Inlet Temperature Range

The device shall be able to operate with cold water inlet temperatures between 39°F and 80°F (4°C and 27°C); and hot water inlet temperatures between 120°F and 180°F (49°C and 82°C).

1.2.3.2 Outlet Temperature Range.

The device shall be capable of supplying a minimum adjustable outlet water temperature range of 100 °F to 115 °F (37.8 °C to 46.1 °C), provided the hot water supply temperature is at least 20 °F (11.0 °C) greater than the outlet temperature setting. The maximum outlet temperature of the device shall be 120 °F (48.9 °C) when the temperature limiting means is adjusted.

1.2.4 Minimum Flow Rate

These devices are designed to function at a flow of 2.5 GPM (9.5 L/min), or the manufacturer's minimum flow rate, whichever is lower.

1.2.5 Connections

Pipe threads and other connections shall conform to local codes and applicable standards.