ASSE Standard #1017-2009
ASSE Board Approved: October 5, 2009
ANSI Approved: January 19, 2010

*American Society of Sanitary Engineering*

## Performance Requirements for

# Temperature Actuated Mixing Valves for Hot Water Distribution Systems

*An American National Standard*

# General Information

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American Society of Sanitary Engineering
Westlake, Ohio

# Foreword

The foreword shall not be considered a part of this standard; however it is offered to provide background information.

In the interest of consumer safety, this standard was originally issued in April, 1976; accepted by the American National Standards Institute (ANSI) in 1979 and revised in April 1986, 1998, 2003 and 2009.

Water mixing (also defined as tempering or blending) valves are used extensively in water service applications to mix hot and cold water to reduce high service water temperature to the building distribution piping system.

This class of valve is intended to be installed at the hot water source. These devices are designed for primary automatic control of the hot water distribution temperature within a reasonable degree of uniformity.

To provide final temperature control, ASSE 1017 devices should be supplemented by a point-of-use device or in-line device designed to control final temperature. High temperature limit alarms and/or temperature limiting devices may also be used to monitor or further control point of use water temperature.

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.

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

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

This standard was promulgated in accordance with procedures developed by the American National Standards Institute (ANSI).

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# Temperature Actuated Mixing Valves For Hot Water Distribution Systems

# Section I

## 1.0 General

### 1.1 Application

Temperature Actuated Mixing Valves for Hot Water Distribution Systems are used for controlling in-line water temperatures in domestic hot water systems and shall be installed at the hot water source. They are not intended for end use applications including emergency eyewash and shower equipment.

### 1.2 Scope

#### 1.2.1 Description

Temperature Actuated Mixing Valves for Hot Water Distribution Systems (herein referred to as "device") shall consist of a hot water inlet connection, a cold water inlet connection, a mixed water outlet connection, a thermal element and a means for adjusting the mixed water outlet temperature.

#### 1.2.2 Connections

Dimensions of pipe threads, flanges and other connections shall conform to appropriate industry standards.

#### 1.2.3 Maximum Working Pressure

The maximum working pressure of the device shall be at least 125.0 psi (861.9 kPa).

#### 1.2.4 Temperature Range

##### 1.2.4.1 Inlet Water Temperature Range

The hot water inlet temperature range shall be 120.0°F - 180.0°F (48.9°C - 82.2°C) and the cold water inlet temperature range shall be 39.0°F - 80.0°F (3.9°C - 26.7°C).

##### 1.2.4.2 Outlet Water Temperature Range

The device shall be capable of supplying the domestic hot water distribution system with a minimum adjustable range of 105.0°F- 120.0°F (40.6°C - 48.9°C), provided the hot water supply temperature is at least 20.0°F (11.1°C) greater than the outlet water temperature setting.

### 1.3 Reference Documents

Referenced industry standards shall be the latest edition in effect on the date of the issuance of this standard.