

**ASSE International
Product (Seal) Listing Program**

ASSE 1069-2020
Performance Requirements for Automatic Temperature Control Mixing Valves

Manufacturer: _____

Contact Person: _____ **E-mail:** _____

Address: _____

Laboratory: _____ **Laboratory File Number:** _____

Model # Tested: _____

Model Size: _____

Additional models report applies to: _____

Additional Model Information (i.e. orientation, series, end connections, shut-off valves)

Date models received by laboratory: _____ **Date testing began:** _____

Date testing was completed _____

If models were damaged during shipment, describe damages:

Prototype or production sample? _____

Were all tests performed at the selected laboratory? Yes No

If offsite, identify location: _____

General information and instructions for the testing engineer:

The results within this report apply only to the models listed above.

There may be items for which the judgment of the test engineer will be involved. Should there be a question of compliance with that provision of the standard, a conference with the manufacturer should be arranged to enable a satisfactory solution of the question.

Should disagreement persist and compliance remain in question by the test agency, the agency shall, if the product is in compliance with all other requirements of the standard, file a complete report on the questionable items together with the test report, for evaluation by the ASSE Seal Control Board. The Seal Control Board will then review and rule on the question of compliance with the intent of the standard then involved.

Documentation of material compliance must be furnished by the manufacturer. The manufacturer shall furnish to the testing agency, a bill of material which clearly identifies the material of each part included in the product construction. This identification must include any standards which relate thereto.

Section I

1.0 General

1.1 Application

Does the device meet the application?

Yes No Questionable

If no or questionable, explain _____

1.2 Scope and Purpose

1.2.1 Description

Does this device conform to this section?

Yes No Questionable

If no or questionable, explain _____

1.2.2 Maximum Working Pressure

What is the maximum static pressure of the device? _____ psi (_____ kPa)

1.2.3 Temperature Range

1.2.3.1. Inlet Temperature Range

What is the cold water inlet temperature range? _____ °F to _____ °F
(_____ °C to _____ °C)

What is the hot water inlet temperature range? _____ °F to _____ °F
(_____ °C to _____ °C)

1.2.3.2. Outlet Temperature Range

What is the outlet water temperature range? _____ °F to _____ °F (_____ °C to _____ °C)

What is the maximum outlet temperature of the device when the temperature limiting means is adjusted? _____ °F (_____ °C)

1.2.4 Minimum Flow Rate

What is the minimum flow rate? _____ GPM (_____ L/min)

1.2.5 Connections

Do pipe threads and other connections conform to local codes and applicable standards?

Yes No Questionable

If no or questionable, explain _____

Section III

3.0 Performance Requirements and Compliance Testing

3.1 High Temperature Conditioning Test

3.1.2 Procedure

- a) What was the cold water inlet temperature? _____ °F (_____ °C)
What was the hot water inlet temperature? _____ °F (_____ °C)
What was the cold water inlet flowing pressure? _____ psi (_____ kPa)
What was the hot water inlet flowing pressure? _____ psi (_____ kPa)
- b) What was the outlet temperature adjusted to? _____ °F (_____ °C)
- c) How long was water flowed through the device? _____ minutes

3.1.3 Criteria

Were there any leaks?

- Yes No Questionable

If yes or questionable, explain _____

Is the device in compliance with this section?

- Yes No Questionable

If no or questionable, explain _____

3.2 Working Pressure Test

3.2.2 Procedure

- b) What pressure was applied to the inlets? _____ psi (_____ kPa)
How long was the above pressure applied for? _____ minutes

- c) Does the device include seating members?
 Yes No Questionable

If questionable, explain _____

If yes, repeat this test with the seating members closed and outlets open to atmosphere:

- b) What pressure was applied to the inlets? _____ psi (_____ kPa)
How long was the above pressure applied for? _____ minutes

3.2.3 Criteria

Was there any indication of leakage?

- Yes No Questionable

If yes or questionable, explain _____

Is the device in compliance with this section?

- Yes No Questionable

If no or questionable, explain _____

3.3 Life Cycling

3.3.2 Procedure

3.3.2.1. Initial Conditions

- c) What was the outlet temperature? _____ °F (_____ °C)
What was the flow rate? _____ GPM (_____ L/min)
How long was water flowed for? _____ minutes

3.3.2.2. Cycle Test

- d) What were the shut-off valves configurations?

Valve	Configuration
V1	<input type="radio"/> Open <input type="radio"/> Closed
V2	<input type="radio"/> Open <input type="radio"/> Closed
V3	<input type="radio"/> Open <input type="radio"/> Closed
V4	<input type="radio"/> Open <input type="radio"/> Closed

How long was water flowed for? _____ seconds

e) What were the shut-off valves configurations?

Valve	Configuration
V1	<input type="radio"/> Open <input type="radio"/> Closed
V2	<input type="radio"/> Open <input type="radio"/> Closed
V3	<input type="radio"/> Open <input type="radio"/> Closed
V4	<input type="radio"/> Open <input type="radio"/> Closed

How long was water flowed for? _____ seconds

How long did it take to transition between Steps 1 and 2? _____ seconds

3.3.2.3. Retest

Repeat Section 3.2.2:

b) What pressure was applied to the inlets? _____ psi (_____ kPa)

How long was the above pressure applied for? _____ minutes

c) Does the device include seating members?

Yes No Questionable

If questionable, explain _____

If yes, repeat this test with the seating members closed and outlets open to atmosphere:

b) What pressure was applied to the inlets? _____ psi (_____ kPa)

How long was the above pressure applied for? _____ minutes

3.3.3 Criteria

Were there any leaks?

Yes No Questionable

If yes or questionable, explain _____

Is the device in compliance with this section?

Yes No Questionable

If no or questionable, explain _____

3.4 Flow Rate and Pressure Drop Test

3.4.2 Procedure

a) What was the incoming cold water temperature? _____°F (_____°C)

What was the incoming hot water temperature? _____°F (_____°C)

What was the cold water inlet flowing pressure? _____ psi (_____ kPa)

What was the hot water inlet flowing pressure? _____ psi (_____ kPa)

b) What was the supply water temperature as measured at T3? _____°F (_____°C)

c) What was the flow rate? _____ GPM (_____ L/min)

d) What was the pressure drop across P1 and P3? _____ psi (_____ kPa)

3.4.3 Criteria

What is the manufacturer's published pressure drop at the flow rate produced in 3.4.2.c?
_____ psi (_____ kPa)

Is the device in compliance with this section?

Yes No Questionable

If no or questionable, explain _____

3.5 Pressure and Temperature Variation Test

3.5.2 Procedure

At what rate was temperature data recorded? _____ Hz (recording every _____ seconds)

Pressure settings were changed in _____ seconds.

- a) What was the cold water supply pressure? _____ psi (_____ kPa)
What was the hot water supply pressure? _____ psi (_____ kPa)
- b) What was the cold water temperature? _____ °F (_____ °C)
What was the hot water temperature? _____ °F (_____ °C)
What was initial outlet temperature? _____ °F (_____ °C)
- c) What was the flow rate reduced to? _____ GPM (_____ L/min)
How long was water flowed for? _____ minutes
- d) What was the hot water supply pressure decreased to? _____ psi (_____ kPa)
What was the temperature change at T3? _____ °F (_____ °C)
How long was the temperature changes at T3 recorded for? _____ seconds
- e) What was the hot water supply pressure increased to? _____ psi (_____ kPa)
What was the temperature change at T3? _____ °F (_____ °C)
How long was the temperature changes at T3 recorded for? _____ seconds
- f) What was the cold water supply pressure decreased to? _____ psi (_____ kPa)
What was the temperature change at T3? _____ °F (_____ °C)
How long was the temperature changes at T3 recorded for? _____ seconds
- g) What was the cold water supply pressure increased to? _____ psi (_____ kPa)
What was the temperature change at T3? _____ °F (_____ °C)
How long was the temperature changes at T3 recorded for? _____ seconds
- h) At what rate was the hot water supply temperature increased?
_____ °F (_____ °C) per minute
What was the hot water supply temperature increased to? _____ °F (_____ °C)
What was the temperature change at T3? _____ °F (_____ °C)
How long was the temperature changes at T3 recorded for? _____ seconds

3.5.3 Criteria

- a) Within the first 5 seconds, was there an upward temperature spike from the initial outlet set temperature greater than +5.4°F (+3.0°C) lasting more than 1.5 seconds when measured at the 5.4°F (+3.0°C) variation line.
 Yes No Questionable
If yes or questionable, explain _____
- b) Within the first 5 seconds, was there a downward temperature spike from the initial outlet set temperature greater than -9°F (-5.0°C) lasting more than 1 seconds when measured at the -9.0°F (-5.0°C) variation line.
 Yes No Questionable
If yes or questionable, explain _____
- c) After the initial 5 seconds, was there a temperature variation greater than ±3.6°F (±2.0°C) from the initial outlet set temperature?
 Yes No Questionable
If yes or questionable, explain _____

Is the device in compliance with this section?

- Yes No Questionable

If no or questionable, explain _____

3.6 Water Supply Failure Test

3.6.2 Procedure

- a) What was the cold water supply pressure? _____ psi (_____ kPa)
What was the hot water supply pressure? _____ psi (_____ kPa)
What was the cold water temperature? _____°F (_____°C)
What was the hot water temperature? _____°F (_____°C)
What was initial outlet temperature? _____°F (_____°C)
What was the flow rate reduced to? _____ GPM (_____ L/min)
How long was water flowed for? _____ minutes
- b) Valve V2 was closed in _____ seconds.
- c) At what flow rate did the outlet temperature exceed 120°F (48.9°C)? _____ GPM (_____ L/min)
- d) What was the cold water supply pressure? _____ psi (_____ kPa)
What was the hot water supply pressure? _____ psi (_____ kPa)
What was the cold water temperature? _____°F (_____°C)
What was the hot water temperature? _____°F (_____°C)
What was initial outlet temperature? _____°F (_____°C)
What was the flow rate reduced to? _____ GPM (_____ L/min)
How long was water flowed for? _____ minutes
- e) Valve V1 was closed in _____ seconds.
After V1 was fully closed for 5 seconds, what was the flow rate?
_____ GPM (_____ L/min)
After V1 was fully closed for 5 seconds, what was the temperature at T3?
_____°F (_____°C)

3.6.3 Criteria

Is the device in compliance with this section?

- Yes No Questionable

If no or questionable, explain _____

3.7 Backsiphonage Test

3.7.2 Procedure

- a) What was the inlet cold water port pressurized to? _____ psi (_____ kPa)
How long was the above pressure maintained? _____ minutes
What was the maximum leakage at the inlet hot water port(s)?
GPM (_____ cc/min)
- b) What was the inlet hot water port pressurized to? _____ psi (_____ kPa)
How long was the above pressure maintained? _____ minutes
What was the maximum leakage at the inlet cold water port(s)?
GPM (_____ cc/min)

3.7.3 Criteria

Is the device in compliance with this section?

- Yes No Questionable

If no or questionable, explain _____

3.8 Hydrostatic Pressure Test

3.8.2 Procedure

What was the device's body pressurized to? _____ psi (_____ kPa)

How long was the above pressure maintained? _____ minutes

What was the water temperature? _____ °F (_____ °C)

3.8.3 Criteria

Was there any leakage through the device's body?

Yes No Questionable

If yes or questionable, explain _____

Is the device in compliance with this section?

Yes No Questionable

If no or questionable, explain _____

Section IV

4.0 Detailed Requirements

4.1 Materials

What is the lead content of the solder and fluxes in contact with potable water? _____%

Are there any metal alloys in contact with potable water?

Yes No Questionable

If questionable, explain _____

If yes, what is the lead content of the metal alloys in contact with potable water? _____%

Is the device intended to convey or dispense water for human consumption through drinking or cooking?

Yes No Questionable

If questionable, explain _____

If yes, what is the weighted average lead content of the fittings and device when evaluated in accordance with the test method specified in NSF/ANSI 372? _____%

4.2 Identification and Markings

Does the device have the following permanently marked?

Name of manufacturer or trademark or other mark known to identify the manufacturer; or in the case of private labeling, the name of the customer or trademark for whom the device is manufactured.

Model.

Minimum flow rate at 20 psi flowing pressure.

Do labels comply with UL 969 for permanence?

Yes No Questionable N/A

If no or questionable, explain _____

4.3 Installation and Maintenance Instructions

Were instructions for installation on the packaging, or packaged with the device?

Yes No Questionable

If questionable, explain _____

Do the instructions contain the appropriate installation methods, and the method for adjusting the limit stop?

Yes No Questionable

If no or questionable, explain _____

Does the literature or packaging specify the device's minimum flow rate: "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 Section 3.5?

Yes No Questionable

If no or questionable, explain _____

4.4 Accessibility

Are the internal parts of the device accessible for inspection, repairs, or replacement?

Yes No Questionable

If no or questionable, explain _____

LISTED LABORATORY: _____

ADDRESS: _____

PHONE: _____ FAX: _____

TEST ENGINEER(S): _____

If applicable:

OUTSOURCED LABORATORY: _____

ADDRESS: _____

PHONE: _____ FAX: _____

TEST ENGINEER(S): _____

Scope of outsourced testing: _____

We certify that the evaluations are based on our best judgments and that the test data recorded is an accurate record of the performance of the device on test.

Signature of the official of the listed laboratory: _____

Signature

Title of the official: _____ Date: _____