ASSE International
Product (Seal) Listing Program

ASSE 1002-2020 / ASME A112.1002-2020 / CSA B125.12-20o
Anti-Siphon Fill Valves for Water Closet Tanks

Manufacturer _____

Contact Person _____ **E-mail** _____

Address _____

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 _____

Were All Tests Performed at the Selected Laboratory? ☐ **Yes** ☐ **No**

If offsite, identify location and tests involved: _____

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 Board. The Seal 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 Scope

1.1 Does this device conform to the product stated in the standard?

☐ Yes ☐ No ☐ Questionable

If no or questionable, explain _____

Section II

2.0 Design publications and definitions

Section III

3.0 Design and General Requirements

3.1 Working Pressure

What is the working pressure range as noted by the manufacturer?

Minimum: _____psi (_____kPa) Maximum: _____psi (_____kPa)

In compliance? ☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____

3.2 Temperature

What is the working temperature range as noted by the manufacturer?

_____°F to _____°F (_____°C to _____°C).

In compliance? ☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____

3.3 Bowl Refill Tube

3.3.1 Is the refill tube sufficiently rigid to maintain its installed position?

☐ Yes ☐ No ☐ NA or Questionable

If questionable, explain: _____

3.3.2 Retrofit devices only

For a retrofit device is the cross-section area free of obstruction from the cross-sectional as described in the standard?

☐ Yes ☐ No ☐ Questionable

Is the device complaint to section 3.3?

☐ Yes ☐ No ☐ NA or Questionable

If questionable, explain: _____

3.4 Backflow Prevention

Is the device equipped with a means to prevent backflow due?

☐ Yes ☐ No ☐ Questionable

If questionable, explain: _____

Are the air inlet ports protected in order to reduce the risk of intake of foreign material into the device?

☐ Yes ☐ No ☐ Questionable

If questionable, explain: _____

3.5 Dimensional criteria for fill valve components – End Connections

3.5.1 What are the dimensions as shown in Figure 1 of:

The Shank:
(A1) _____
(B) _____
(C) _____
(D) _____
(E) _____
(H) _____
(I) _____

The coupling net
(A2) _____
(F) _____

The Locknut
(A2) _____
(B) _____
(G) _____

3.5.2 Standard shank or inlet thread dimensions shall be 15/16-14 UNS-1A as specified in ASME B1.1 Standard coupling or locknut thread dimensions shall be 15/16-14 UNS-1B as specified in ASME B1.1.

In compliance? ☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain: _____

3.5.3 Proprietary shanks or inlets shall be designed to mate with common supply connections.

In compliance? ☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain: _____

3.6 Seating Members

Seat disc arrangements shall be replaceable.

In compliance? ☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain: _____

3.7 Materials

Coupling nuts and locknuts shall be made from materials that comply with Clause 4.14 of ASME A112.18.1/ CSA B125.1.

In compliance? ☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain: _____

3.8 Servicing

The device shall be designed so that replacement of wearing parts can be accomplished

(a) without removing the fitting from the supply system;

(b) without removing the piping from the body;

(c) without disturbing the finished wall; and

(d) using standard tools or manufacturer provided tools.

In compliance? ☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____

3.9 Pressure-relief devices

For pressure-relieving devices, pressure relief shall occur at a pressure of at least 1030 kPa (150 psi) and the relief discharge shall be into the fixture.

In compliance? ☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain: _____

Section IV

4.0 Performance requirements and test methods

4.1 General

4.2 Preconditioning

Was the device conditioned at lab temperatures for at least 12 hours?

In compliance? ☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain: _____

What is the ambient temperature of the lab? _____

What is the ambient temperature of the water used for the test? _____

4.3 Test specimen installation

No results required for this section

4.4 Pressure and temperature tests

4.4.1 Pressure and temperature cycling test

Was the specimen installed in a tank according to the manufacturer's instructions?

☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____

Water temperature: _____ ºC (_____ ºF)
Static water pressure: _____ kPa (_____ psi)
Tank flushed every: _____ min
Total number of cycles: _____ cycles

Was there any leakage, distortion, or other damage affecting performance?

☐ Yes ☐ No ☐ Questionable

If yes or questionable, explain: _____

4.4.2 Static and dynamic seals, working pressure test

4.4.2.2 Valve closed

Close the valve.

Low pressure test (a)
Device temperature: _____ ºC (_____ ºF)
Static water pressure: _____ kPa (_____ psi)
Test time: _____ min

High pressure test (b)
Device temperature: _____ ºC (_____ ºF)
Static water pressure: _____ kPa (_____ psi)
Test time: _____ min

4.4.2.3 Outlet(s) blocked or using flowing/dynamic pressure

Low pressure test (a)
Device temperature: _____ ºC (_____ ºF)
Static/dynamic water pressure: _____ kPa (_____ psi)
Test time: _____ min

High pressure test (b)
Device temperature: _____ ºC (_____ ºF)
Static/dynamic water pressure: _____ kPa (_____ psi)
Test time: _____ min

Was there any leakage, distortion, or other damage affecting performance?

☐ Yes ☐ No ☐ Questionable

If yes or questionable, explain: _____

In compliance to section 4.4? ☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain: _____

4.5 Life Cycle Test

Install fill valve in tank per manufacturer instructions.

Water temperature: _____ ºC (_____ ºF)

Static water pressure: _____ kPa (_____ psi)

Flowing water pressure: _____ kPa (_____ psi)

Number of cycles: _____ cycles

Max cycle duration: _____ sec

Increase pressure.

Static water pressure: _____ kPa (_____ psi)

Test time: _____ min

Was there any leakage, distortion, or other damage affecting performance?

☐ Yes ☐ No ☐ Questionable

If yes or questionable, explain: _____

In compliance to section 4.5? ☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain: _____

4.6 Critical level and backflow prevention tests

4.6.2.1.2 Check Member Fouling

The check valves, seats and checking members were fouled with a _____ inch (_____ mm) diameter wire.

4.6.2.2 Backflow Prevention Test

4.6.2.2.1 Does the device have a CL mark?

☐ Yes ☐ No

If yes, skip to **4.6.2.2.3** on this LERF.

If no, **continue below** with 4.6.2.3 on this LERF.

4.6.2.2.2 Set Up

Submerge the assembly completely

A vacuum of _____kPa (_____in-Hg) was applied for _____ (minutes:seconds)

Did water appear in the sight glass after 4.6.2.2.2 Procedure was completed?

☐ Yes ☐ No ☐ N/A

If no, identify hidden checks(s), foul and retest.

Did water appear in the sight glass after 4.6.2.2.2 procedure was completed again?

☐ Yes ☐ No

If yes, do not un-foul the checks at this time.

4.6.2.2.3 Ensure all checks are fouled.

Install the device in the tank. The CL mark is installed _____ mm (_____ inch) above the top of the overflow tube.

A vacuum of _____kPa (_____in-Hg) was applied for _____ (minutes:seconds)

Did you observe flow of water through the sight glass?

☐ Yes ☐ No ☐ Questionable
If no or questionable, explain _____

Return pressure to atmospheric.
The vacuum was gradually raised from _____kPa (_____in-Hg) to _____kPa (_____in-Hg) and then reduced to kPa.
Did you observe flow of water through the sight glass?
☐ Yes ☐ No ☐ Questionable
If no or questionable, explain _____

The quick opening valve was rapidly opened and closed _____times and the vacuum was increased to _____ kPa (_____in-Hg) and then decreased to _____ kPa (_____in-Hg).
Did you observe flow of water through the sight glass?
☐ Yes ☐ No ☐ Questionable
If no or questionable, explain _____

4.6.2.3 Determining the CL level location for a device **without a CL mark(only for devices without CL mark)**

Sample was submerged for _____ min.

At the start of this test, the water level was _____ inch (_____ mm) below the atmospheric vent(s), vacuum breaker air port(s) or water discharge openings (air gap type).
As the water level is lowered, the device was subjected to a vacuum of
_____ kPa (_____ in-Hg).
Mark the level at which backsiphonage ceases as line “BB”.

The water level was lowered to _____ inch below line “BB”.
A vacuum of _____ kPa (_____ in-Hg).was applied and the water level in the tank gradually raises at a rate of _____mm/min (_____in/min.)
Mark the level at which backsiphonage begins as line “AA”,

The critical level (CL) was determined to be line: _____.
Proceed with the next section, 4.6.2.2.3

4.6.2.3.3 Verify the CL mark

Install the device in the tank. The CL mark is installed _____ mm (_____ inch) above the top of the overflow tube.

The quick opening valve was rapidly opened and closed _____times and the vacuum was increased to _____ kPa (_____in-Hg) and then decreased to _____ kPa (_____in-Hg).
Did you observe flow of water through the sight glass?
☐ Yes ☐ No ☐ Questionable
If no or questionable, explain _____

4.6.3.2 Performance criteria for CL location
Was device in compliance with 4.6.2.3.3?
☐ Yes ☐ No ☐ N/A ☐ Questionable
If no or questionable, explain _____

4.6.3.1 Performance criteria for backsiphonage

Was device in compliance with section 4.6.3.1? (references 4.6.2.2)

☐ Yes ☐ No ☐ Questionable

If no or questionable, explain _____

4.7 Flow Rate Test – Retrofit Devices Only

What was the flowing pressure used for this test? _____ psi (_____ kPa)
The flow was measured for _____ minutes.
The flow rate was _____ GPM (_____ L/m)

In compliance?

☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain _____

4.8 Refill Rate Test – Retrofit Devices Only

What was the flowing pressure used for this test? _____ psi (_____ kPa)
The flow was measured for _____ minutes.
The flow rate through the refill tube was _____ GPM (_____ L/m)
Refill flow rate is _____% of the total of the refill + primary flow rates.

In compliance?

☐ Yes ☐ No ☐ N/A ☐ Questionable

If no or questionable, explain _____

4.9 Thread Torque Strength Test

Is the device coupled to a water closet tank assembled as a factory original equipment assembly?

☐ Yes ☐ No ☐ Questionable

If no or questionable, explain _____

If yes, skip section 4.9.
If no, continue.

Minimum torque required to create the seal: _____ N-m (_____ in-lbf)
Torque increased to _____ N-m (_____ in-lbf)
Block the outlets of the assembly.

For low pressure and temperature, water supply was set to:
_____ kPa at _____ °C (_____ psi at _____ °F) for _____ (minutes:seconds)

For high pressure and temperature, water supply was set to:
_____ kPa at _____ °C (_____ psi at _____ °F) for _____ (minutes:seconds)

Threaded connections intended to seal water shall not crack, strip or leak. The joints of the fitting shall not leak.

In compliance? ☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____

4.10 Hydrostatic Pressure Test

Does the assembly contain a pressure relief device?

☐ Yes ☐ No ☐ Questionable

If no or questionable, explain _____

Close seating members.
Water supply set to:
_____ kPa at _____ °C (_____ psi at _____ °F) for _____ (minutes:seconds)

Did any leakage occur?

☐ Yes ☐ No ☐ Questionable

If yes or questionable, explain _____

If assembly contains a pressure-relief device, when did pressure relief occur?
_____ kPa (_____ psi)
Did the relief discharge into the fixture?

☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____
Any permanent distortion occur?

☐ Yes ☐ No ☐ Questionable

If yes or questionable, explain _____
In compliance? ☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____

Section V

5.0 Markings, packaging, and installation instructions and included literature

5.1 Markings

List the following information as shown on the device:

a) Manufacturer's name or trademark or private label: _____

b) Model number, model name or part number: _____

Is the critical level (CL) marked?

☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____

Are the markings visible in the installed position?

☐ Yes ☐ No ☐ Questionable

If no or questionable, explain: _____

5.2 Installation Instructions – Retrofit devices only

Are installation instructions provided with the packaged product?

☐ Yes ☐ No ☐ N/A

Do the instructions indicate that the critical level is to be located 25 mm (1 inch) above the water overflow level in the tank?

☐ Yes ☐ No ☐ N/A

List the following information as shown on the packaging:

a) Manufacturer's name or trademark: _____

b) Model number, model name or part number: _____

TESTING AGENCY _____

ADDRESS _____

PHONE: _____ FAX: _____

TEST ENGINEER(S) _____

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 agency: _____

Title of the official: _____ Date: _____