

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

**ASSE 1002-2015 / ASME A112.1002-2015 / CSA B125.12-15  
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 Refill Tube**

Is the refill tube securely fastened in its installed position?

Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

**3.4 Backflow Prevention**

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

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 nut

(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 ASM 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  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  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 not less than 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: \_\_\_\_\_ °C (\_\_\_\_\_ °F)

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 no or questionable, explain: \_\_\_\_\_

4.4.2 Static and dynamic seals, working pressure test

4.4.2.1 Valve closed

Close the valve.

Device temperature: \_\_\_\_\_ °C (\_\_\_\_\_ °F)

Static water pressure: \_\_\_\_\_ kPa (\_\_\_\_\_ psi)

Test time: \_\_\_\_\_ min

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

Device temperature: \_\_\_\_\_ °C (\_\_\_\_\_ °F)

Static/dynamic water pressure: \_\_\_\_\_ kPa (\_\_\_\_\_ psi)

Test time: \_\_\_\_\_ min

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

Yes  No  Questionable

If no or questionable, explain: \_\_\_\_\_

In compliance?  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: \_\_\_\_\_ °C (\_\_\_\_\_ °F)

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 no or questionable, explain: \_\_\_\_\_

In compliance?  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.

##### 4.6.2.2.2 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

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.

##### 4.6.2.2.1 Does the device have a CL mark?

Yes  No

If yes, skip to **4.6.2.2.3**.

If no, **continue below** to 4.6.2.3.

##### 4.6.2.3 Determining the CL level location for a device **without a 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

4.6.2.2.3 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 \_\_\_\_\_

4.6.3.1 Performance criteria for backsiphonage

Was device in compliance with 4.6.2.2?

Yes       No       Questionable

If no or questionable, explain \_\_\_\_\_

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       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       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 compliances?

Yes  No  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 no 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 no 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: \_\_\_\_\_

How were the markings applied? \_\_\_\_\_

Did the manufacturer indicate where, if approved by ASSE, the ASSE Seal and standard number will be marked on the device?

- 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

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

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: \_\_\_\_\_

Signature and seal of the Registered Professional Engineer  
supervising the laboratory evaluation:

\_\_\_\_\_

Signature



Seal