

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

**ASSE 1001-2021
Performance Requirements for Atmospheric Type Vacuum Breakers**

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

1.2 Does this device conform to the scope stated in the standard?

Yes No Questionable

If no or questionable, explain _____

The device's size is: _____ NPS (DN _____)

1.2.2 This device can be characterized as:

Pipe-applied Flushometer-applied Integrally-applied

If none of these, explain: _____

Is the device deck-mounted? Yes No Questionable

If questionable, explain: _____

1.2.3 Minimum and maximum working pressures as stated by the manufacturer's specification sheet:

Minimum: _____ psi (_____ kPa) Maximum: _____ psi (_____ kPa)

1.2.4 This device is designed for:

Cold water service Hot & cold water service Questionable

If questionable, explain _____

1.3 Limitation on Design

Are female threaded pipe connections constructed such that it will not restrict flow or interfere with working parts?

Yes No Questionable N/A

If no or questionable, explain _____

Section II

2.0 Test specimens

2.1 How many samples were received? _____

Section III

3.0 Performance Requirements and Compliance Testing

3.1 Deterioration at Extremes of Manufacturer's Temperature and Pressure Range Test

3.1.2 Procedure

Manufacturer's maximum rated temperature: _____ °F (_____ °C).

Water temperature during test: _____ °F (_____ °C).

Water pressure during test: _____ psi (_____ kPa).

Did the air inlet valve return to its fully opened position when system returned to atmospheric pressure,

after hour 8, Yes No

after hour 16, Yes No

after hour 24, Yes No

after hour 32, Yes No

after hour 40, Yes No

after hour 48, Yes No

after hour 56, Yes No

after hour 64, Yes No

after hour 72, Yes No

after hour 80, Yes No

_____ minute(s) after the test, water at _____ °F (_____ °C) was circulated for _____ hour(s).

Next, water at _____ °F (_____ °C) was circulated.

Water pressure was increased to: _____ psi (_____ kPa). It was maintained for _____ minutes.

For pipe-applied devices: post-test test pressure _____ psi (_____ kPa)

3.1.3 Criteria

Any leaks observed?

Yes No Questionable

If yes or questionable, explain: _____

3.2 Allowable Pressure Loss at Rated Flow Test

The average flow rate through the device was: _____ gpm (_____ L/sec)

The dynamic inlet pressure was: _____ psi (_____ kPa)

The dynamic pressure loss through the device was: _____ psi (_____ kPa)

In compliance? Yes No Questionable

If no or questionable, explain: _____

3.3 Examination of Air Inlet Shield

When mounted per the manufacturer's instructions, does the air inlet shield extend to the bottom of the lowest air opening or lower?

Yes No Questionable

If questionable, explain: _____

What is the minimum clearance between the air inlet and the shield? _____ in (_____ mm)

3.4 Air Flow Test

3.4.2 Procedure

3.4.2.1. Procedure for check valve

Was the check or moving member held fully open?

Yes No Questionable

If questionable, explain: _____

Was the air inlet valve held fully closed?

Yes No Questionable

If questionable, explain: _____

The vacuum in the tank was dissipated from: _____ in-Hg (_____ kPa) to _____ in-Hg (_____ kPa)

The time to dissipate the vacuum was:

Trial 1: _____ sec

Trial 2: _____ sec

Trial 3: _____ sec

These values shall be at least 10 seconds, or the test bench needs to be modified.

3.4.2.3. Or 3.4.2.4 Procedure for air vent

Was the check or moving member held fully closed?

Yes No Questionable

If questionable, explain: _____

Was the air inlet valve held fully open?

Yes No Questionable

If questionable, explain: _____

The vacuum in the tank was dissipated from: _____ in-Hg (_____ kPa) to _____ in-Hg (_____ kPa)

The time to dissipate the vacuum was:

Trial 1: _____ sec

Trial 2: _____ sec

Trial 3: _____ sec

3.4.3 Is the device in compliance? Yes No Questionable

If no or questionable, explain _____

3.5 Backsiphonage Test

3.5.2 Procedure

The wire diameter used for fouling was _____ in (_____ mm)

The type of check most closely resembles Figure _____ in the standard.

Describe any unique properties: _____

Describe how the fouling wire was placed: _____

Initial height from device's critical level to the fluid level in receptacle: _____ in (_____ mm)

Precision of measuring instrument (e.g. distance between graduations): _____ in (_____ mm)

3.5.2.1. Data collection

Trial 1

- a) Instantly applied constant vacuum of _____ in-Hg (_____ kPa) for _____ sec
- b) Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
- c) Slowly apply vacuum from _____ in-Hg (_____ kPa)
to _____ in-Hg (_____ kPa)
and back to _____ in-Hg (_____ kPa), over _____ sec.

Maximum rise of water column during any test: _____ in (_____ mm)

Trial 2

- a) Instantly applied constant vacuum of _____ in-Hg (_____ kPa) for _____ sec
- b) Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
- c) Slowly apply vacuum from _____ in-Hg (_____ kPa)
to _____ in-Hg (_____ kPa)
and back to _____ in-Hg (_____ kPa), over _____ sec.

Maximum rise of water column during any test: _____ in (_____ mm)

Trial 3

- a) Instantly applied constant vacuum of _____ in-Hg (_____ kPa) for _____ sec
- b) Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
- c) Slowly apply vacuum from _____ in-Hg (_____ kPa)
to _____ in-Hg (_____ kPa)
and back to _____ in-Hg (_____ kPa), over _____ sec.

Maximum rise of water column during any test: _____ in (_____ mm)

Trial 4

- a) Instantly applied constant vacuum of _____ in-Hg (_____ kPa) for _____ sec
- b) Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
- c) Slowly apply vacuum from _____ in-Hg (_____ kPa)
to _____ in-Hg (_____ kPa)
and back to _____ in-Hg (_____ kPa), over _____ sec.

Maximum rise of water column during any test: _____ in (_____ mm)

Trial 5

- a) Instantly applied constant vacuum of _____ in-Hg (_____ kPa) for _____ sec
- b) Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
Instantly applied vacuum of _____ in-Hg (_____ kPa) for _____ sec on and _____ sec off.
- c) Slowly apply vacuum from _____ in-Hg (_____ kPa)
to _____ in-Hg (_____ kPa)
and back to _____ in-Hg (_____ kPa), over _____ sec.

Maximum rise of water column during any test: _____ in (_____ mm)

Were corrections made for test lab's elevation? Yes No

3.5.3 Is the device in compliance? Yes No Questionable

If no or questionable, explain: _____

3.6 Evaluation of Female Threaded Connections

Does the device have female threaded connections? Yes No Questionable

If questionable, explain: _____

Is the device in compliance? Yes No Questionable N/A

If no or questionable, explain: _____

3.7 Hydrostatic Test of the Complete Device

Device filled to a pressure of: _____ psi (_____ kPa)

Pressure maintained for: _____ minutes

Is the device in compliance? Yes No Questionable

If no or questionable, explain: _____

Section IV

4.0 Detailed Requirements

4.1 Materials

Are there any metal-to-metal sealing members on the device?

Yes No Questionable

If no or questionable, explain _____

4.2 Pipe Threads

Are taper threads in compliance with ASME B1.20.1

Yes No Questionable N/A

If no or questionable, explain: _____

Are dryseal pipe threads in compliance with ASME B1.20.3

Yes No Questionable N/A

If no or questionable, explain: _____

Are other connections to external components in compliance with their appropriate standards?

Yes No Questionable N/A

If no or questionable, explain: _____

State the relevant standards: _____

4.3 Markings

Is the method of marking information on the product in compliance with the standard?

Yes No Questionable

If no or questionable, explain: _____

4.3.1 Marking of Pipe-Applied Devices

Section is: Applicable N/A

State the information given on the product:

Manufacturer's name or trademark: _____

Model number: _____

Rated working pressure: _____

Nominal valve size: _____

Direction of water flow: _____

Critical level: Yes No Questionable N/A

The words "Deck Mounted": Yes No Questionable N/A

4.3.2 Marking of Integrally Applied and Flushometer-Applied Devices

Section is: Applicable N/A

State the information given on the product:

Manufacturer's name or trademark: _____

Model number: _____

Critical level: Yes No Questionable N/A

The words "Deck Mounted": Yes No Questionable N/A

4.3 Critical level

Is the critical level present: Yes No Questionable N/A

Is the device incorporated in an outlet tube: Yes No Questionable N/A

If Yes, is the critical level marked on the outside of device: Yes No Questionable N/A

Is the critical level appropriately located: Yes No Questionable N/A

Is the device in compliance? Yes No Questionable

4.4 Installation and Maintenance Instructions

4.4.1 Included items within Installation Instructions

These items are a part of the installation instructions

Are drawings or sketches of proper installation included?

Yes No Questionable N/A

If no or questionable, explain: _____

Are statements that describe that:

The device shall be installed in accordance with the requirements of the local plumbing code.

The device shall not be installed where the venting of water from the device during its normal functioning causes damage.

The device shall be installed such that it is not subjected to backpressure.

Included? Yes No Questionable N/A

If no or questionable, explain: _____

Is the statement, "This atmospheric vacuum breaker shall not be subjected to continuous pressure for more than twelve (12) hours"

Included? Yes No Questionable N/A

If no or questionable, explain: _____

4.4.4 Repair Instructions

Is the device capable of being maintained or repaired in the field?

Yes No Questionable N/A

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: _____