

**American Society of Sanitary Engineering
Seal (Certification) Program**

**Laboratory Evaluation Report For:
Spill Resistant Vacuum Breakers**

Tested under ASSE Standard 1056 • Revised: February, 2001

Laboratory File Number: _____

Manufacturer _____

Model No. _____

Address _____

Serial No. _____

Other Identification Markings _____

Size _____

Connections (screwed, flanged, etc.) _____

General information and instructions for the testing engineer:

Within the text there may be items which are only advisory to conditions which experience indicates could be troublesome. It is not for evaluation related to acceptance of the product.

There may be other 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 item involved.

Documentation of material compliance must be furnished by the manufacturer. He 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.

Product Name _____		
Model Number _____		Size(s) _____
Date Submitted for Review _____	Date Review Complete _____	
Were the test units production models?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
or prototypes?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Section I

1.0 General

1.1 Application.
 Is the purpose of the device, as stated by the manufacturer, as stated in this section?
 Yes
 No
 Questionable

If no or questionable, explain: _____

1.2.1 Description.
 Does the device conform to the product classified as Spill Resistant Vacuum Breaker?
 Yes
 No

1.2.2 Size. _____ DN (_____ NPS)

1.2.3 Pressure Range. What is the minimum working pressure? _____ kPa (_____ psi)
 In compliance?
 Yes
 No

1.2.4 Temperature Range. _____ °C to _____ °C (_____ °F to _____ °F)
 In compliance?
 Yes
 No

1.3.1 Flow Capacity
 What was the minimum flow rate specified by the manufacturer? _____ L/s
 (_____ GPM)

1.3.3.1 Are the internal parts of the assembly accessible for inspection, repairs or
 replacements?
 Yes
 No

1.3.4 Was the check valve force loaded to a normally closed position under static conditions?
 Yes
 No

1.3.5.1 Was the air inlet valve force loaded to a normally open position when the supply pressure is atmospheric? Yes
 No

1.3.5.2 Was there any water leakage from the vent when the device is pressurized from atmospheric up to the maximum working pressure? Yes
 No

1.3.6 Was the air vent inlet entrance protected against the accumulation of debris?
 Yes
 No

How was this accomplished? _____

Section II

2.0 Test Specimens

2.1 How many assemblies of each size and model were submitted? _____

2.2 Were assembly drawings and other data provided? Yes
 No

2.3 How many units were utilized during the laboratory evaluation? _____

2.4 Failure of one device shall result in a rejection of the device.

Section III

3.0 Performance Requirements and Compliance Testing

3.1 Hydrostatic test of Complete Assembly

What was the supply pressure at the inlet? _____ kPa (_____ psi)

The test period was _____ minutes.

Were there any external leaks or other indications of damage? Yes
 No

In compliance? Yes
 No

3.2 Hydrostatic Test of Check Valve

What was the pressure supplied at test cock #2 (downstream of the check valve)?

_____ kPa (_____ psi)

The pressure was maintained for _____ minutes.

Were there any leaks as indicated by a rise in the water level of the sight glass?

- Yes
- No

In compliance?

- Yes
- No

3.3 Deterioration at Extremes of Temperature

Hot water temperature tested at: _____°C (_____ °F)

Hot water pressure tested at: _____ kPa (_____psi)

Cold water temperature tested at: _____°C (_____ °F)

Cold water pressure tested at: _____ kPa (_____psi)

Hot water test period was for _____ hours.

Cold water test period was for _____ hours.

In compliance?

- Yes
- No

3.4 Shock (Water Hammer) Test of Assembly

What was the supply pressure at the inlet? _____kPa (_____ psi)

How many times was this test performed? _____

Any indication of damage?

- Yes
- No

In compliance?

- Yes
- No

3.5 Drip Tightness of Check Valve

What was the pressure applied to the upstream side of the check valve?
_____kPa (_____psi)

What was the level of water in the sight glass? _____mm (_____ inches)

Was there any loss in the level of the sight glass below 710 mm (28 in.)?

- Yes
- No

In compliance? Yes
 No

3.6 Atmospheric Vent Closing and Opening Pressure.

What was the pressure at the inlet of the assembly? _____ kPa (_____ psi)

What was the water level in the sight glass? _____ mm (_____ psi)

Was the vent fully open at atmospheric pressure? Yes
 No

Did the vent valve start to open when pressure drops to 7 kPa (1 psi)?
 Yes
 No

In compliance? Yes
 No

3.7 Air Vent Capacity

3.7.2 After three runs with the check valve open and the air vent closed, record the average time it took to evacuate the vacuum tank. _____ seconds

3.7.3 After three runs with the check valve closed and the air vent open, record the average time it took to evacuate the vacuum tank. _____ seconds

3.7.4 Was the time recorded for Section 3.7.3 equal to or less than the time recorded for Section 3.7.2? Yes
 No

In compliance? Yes
 No

3.8 Backsiphonage Prevention

What size wire was used to foul the check valve? _____ mm (_____ inches)

(a) What was the vacuum applied for this test? _____ kPa (_____ psi)

How long was the test period? _____ seconds

(b) At a vacuum of 7 kPa (2 in. Hg), what was the sight glass water level?
_____ mm (_____ in.)

At a vacuum of 17 kPa (5 in. Hg), what was the sight glass water level?
_____ mm (_____ in.)

At a vacuum of 34 kPa (10 in. Hg), what was the sight glass water level?
_____ mm (_____ in.)

At a vacuum of 51 kPa (15 in. Hg), what was the sight glass water level?
_____mm (_____ in.)

At a vacuum of 84.5 kPa (25 in. Hg), what was the sight glass water level?
_____mm (_____ in.)

- (c) From an increasing uniform vacuum of 0 to 84.5 kPa (0 to 25 in. Hg), what was the sight glass water level? _____ mm (_____ in.)

From an decreasing uniform vacuum of 84.5 to 0 kPa (25 to 0 in. Hg), what was the sight glass water level? _____mm (_____ in.)

In compliance?

- Yes
 No

3.9 Rated Flow and Maximum Allowable Pressure Loss

What was the rate of flow? _____ L/s (_____ GPM)

What was the pressure loss at the rated flow? _____ kPa (_____ psi)
In compliance?

- Yes
 No

Section IV

4.0 Detailed Requirements

4.1 Materials

4.1.2 Allowable Materials. In compliance?

- Yes
 No

4.1.3.1 Contaminant Materials. In compliance?

- Yes
 No

4.1.3.2 Compliance and Certification. In compliance?

- Yes
 No

4.1.4 Non-Ferrous Cast Parts. In compliance?

- Yes
 No

4.1.5 Internal Non-Cast Parts. In compliance?

- Yes
 No

4.1.6 Springs. In compliance?

- Yes
 No

4.1.7 Valve Discs, Seat Facing or Other Flexible or Non-Flexible Non-Metallic Parts.
In compliance?

- Yes
 No

4.1.8 Metal-to-Metal. In compliance?

- Yes
 No

4.1.9 Test Cocks. In compliance? Yes
 No

4.1.10 Pipe Threads. In compliance? Yes
 No

4.1.11 Internal Surfaces. In compliance? Yes
 No

4.2 Instructions

Were instructions furnished with the assembly that included illustrations, installation, operations and maintenance? Yes
 No

4.3 Markings

4.3.1 List the markings shown on the device:

- (a) Name and Trademark: _____
- (b) Type and Model Number: _____
- (c) Maximum Rated Working Pressure: _____ kPa (_____ psi)
- (d) Maximum Rated Water Temperature: _____ °C (_____ °F)
- (e) Serial Number or other markings: _____
- (f) Nominal Valve Size? _____ DN (_____ NPS)
- (g) The direction of Flow? _____

Are these markings visible in the installed position? Yes
 No

4.3.2 How were the markings made?

- Stamped
- Cast
- Permanently affixed label
- On a corrosion resistant brass or stainless steel plate securely fastened to the device
- Other: _____

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