

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

**Laboratory Evaluation Report For:
Freeze Resistant Sanitary Yard Hydrant with Backflow Protection**

Tested under ASSE Standard 1057 • Revised: March, 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 questionable, explain: _____

1.2 Description

1.2.1 Is this hydrant a type 1, 2, 3, 4, or 5 Type 1
 Type 2
 Type 3
 Type 4
 Type 5

1.2.2 Pressure

1.2.2.1 Operating Pressure Range. State the design operating pressure range.
_____ kPa to _____ kPa (_____ psi to _____ psi).

1.2.3 Temperature Range. State the design temperature range.
_____ °C to _____ °C (_____ °F to _____ °F).

1.2.4 Connections

1.2.4.1 Outlet Threads. State the type of connection and conforming standard.

1.2.4.2 Inlet Threads. State the type of connection and conforming standard.

1.2.6 Installation and Service

Were installation and service instructions submitted by the manufacturer?
 Yes No

Were hydrants designed and built such that repair or replacement of the elastomeric parts can be accomplished without the need to excavate the soil surrounding the hydrant?
 Yes No

In Compliance? Yes No

Section II

2.0 Test Specimens

2.1 How many devices of each size and type were submitted? _____

Did the manufacturer wish to have a series of hydrants tested which are identical except for the inlet size and barrel length? Yes No

If yes, did the manufacturer submit three (3) of this series with the smallest inlet size and the longest length? Yes No

Inlet size: _____

Length: _____ mm (_____ inches).

- 2.2 Samples Tested. Did the lab select one (1) on each type and size and perform the test in the order listed in the standard? Yes No
If more than one type and size was utilized for the test, explain. _____
- 2.3 Drawings. Were assembly drawings and other data needed to enable compliance with the standard submitted by the manufacturer? Yes No
Were the drawings & data reviewed and utilized for the testing? Yes No
- 2.4 Rejection. Failure of one device shall be cause for rejection.

Section III

3.0 Performance Requirements and Compliance Testing

3.1 Hydrostatic Pressure Test

What was the test pressure? _____ kPa (_____ psi)

The test period was for _____ minutes.

In compliance?

Yes No

3.2 Deterioration at Extreme of Manufacturer's Rated Temperature & Pressure Range

Tested at the manufacturers' maximum rated temperature of: _____ °C (_____ °F)

Tested at a pressure of : _____ kPa (_____ psi)

Indicate length of test: _____ hours.

In compliance?

Yes No

3.3 Life Cycle Evaluation

State the cycle speed utilized for this test: _____ seconds/cycle.

State the number of cycles for this test: _____ cycles.

In compliance?

Yes No

3.4 Resistance To Bending

Load applied _____ kg (_____ lbs)

Distance _____ mm (_____ inches)

In compliance?

Yes No

3.5 Freeze Resistant Capabilities

What was the temperature of the cold chamber at a pressure of 138 kPa (20 psi)?

_____ °C (_____ °F)

After sixty (60) minutes at this temperature and at the full open position, what was the water discharge rate? _____ L/min (_____ GPM)

In compliance?

Yes No

What was the temperature of the cold chamber at a pressure of 690 kPa (100 psi)?

_____ °C (_____ °F)

What was the water discharge at this temperature and the device full open?

_____ L/min (_____ GPM)

In compliance?

Yes No

At any time during the test, did the device externally drain water below the ground level?

Yes No

In compliance?

Yes No

3.6 Atmospheric Vent Leakage

Leakage at a pressure of less than 20.7 kPa (3 psi):

Amount of leakage _____ cc/minute (_____ pints/minute)

In compliance?

Yes No

Leakage at a pressure of 20.7 kPa (3 psi) or more:
Amount of leakage _____cc/minute (_____pints/minute)
In compliance? Yes No

3.7 Backflow Through Inlet Check Valve (Types 1 & 2)

At 150 mm (6 inches), was there any loss in the sight glass or leakage through the inlet check valve? Yes No

Duration of test: _____minutes.

At 6 m (20 feet), was there any loss in the sight glass or leakage through the inlet check valve? Yes No

Duration of test _____minutes.

In compliance? Yes No

3.8 Backflow Through Outlet Check Valve (All Types)

At 15 mm (6 inches), was there any loss in the sight glass or leakage through the outlet check valve? Yes No

Duration of test _____minutes?

At 3 m (10 feet), was there any loss in the sight glass or leakage through the outlet check valve? Yes No

Duration of test: _____minutes.

In compliance? Yes No

3.9 Backsiphonage

(1) Constant vacuum. In compliance? Yes No

(2) Gradually applied vacuum. In compliance? Yes No

(3) Rapidly applied alternating vacuum. In compliance? Yes No

Check was fouled per Figure _____. If fouled by other means, please explain how.

The maximum observed rise in the meniscus in the sight glass: _____mm (_____inches).
In compliance? Yes No

3.10 Backsiphonage and Backpressure (Types 1 and 2)

The inlet check was fouled per Figure _____.

(1) At constant vacuum. In compliance? Yes No

(2) At gradually applied vacuum. In compliance? Yes No

(3) At rapidly applied vacuum. In compliance? Yes No

Was there any indication of flow from the outlet of the device? Yes No

The outlet check was fouled per Figure _____.

(1) At constant vacuum. In compliance? Yes No

(2) At gradually applied vacuum. In compliance? Yes No

(3) At rapidly applied vacuum. In compliance? Yes No

Was there any indication of flow from the outlet of the device? Yes No

In compliance? Yes No

3.11 Relief Of Intermediate Chamber Pressure (Types 1 and 2)

What was pressurization of the device? _____kPa (_____psi).

When the quick acting valve was opened, did the atmospheric vent open to discharge water? Yes No

In compliance? Yes No

3.12 Backflow Prevention (Type 3, 4 and 5)

What was the pressurization of the device? _____kPa (_____psi).

When the quick acting valve was opened, did the atmospheric vent open to discharge water? Yes No

In compliance? Yes No

3.13 Backflow Preventer Attachment Requirements

Is the backflow preventer removable or non-removable?

Removable Non-removable

If removable, when the BFP is removed from the outlet of the device, is it possible to attach a threaded hose connection to the outlet?

Yes No

In compliance?

Yes No

3.14 Flow Rates and Pressure Loss

What was the supply pressure used for the test? _____ kPa (_____ psi)

At 172 kPa (25 psi) maximum pressure differential, what was the flow rate?

_____ L/m (_____ GPM)

In compliance?

Yes No

Section IV

4.0 Detailed Requirements

4.1 Materials

4.1.1 Toxic Materials

Did the material conform to the ASSE Reference Document RD-001 titled "Material Toxicity Requirements For Plumbing Products and Devices"?

Yes No Questionable

If no or questionable, explain: _____

4.1.2 Elastomers and Polymers

Do all elastomers and polymers in contact with water comply with the U.S. Code Of Federal Regulations Title 21, 177.2600 or have they been certified as non-toxic by an independent approved lab?

Yes No

4.1.4 Corrosion Resistance

Were internal moving parts made from corrosion resistant material at least equal to an alloy of not less than 58% copper?

Yes No

4.1.5 Springs In Contact With Water

Were springs in compliance with this section?

Yes No

4.1.6 Non -Metallic Parts

Were the non-metallic parts in compliance with this section?

Yes No

4.1.7 Cast Iron Components

In compliance?

Yes No

4.2 Instructions

Were instructions including illustrations, correct installation, operation, maintenance and repairing submitted?

Yes No

Did the manufacture note in the instructions that the user must flush the device for sixty seconds before drawing water to be used for drinking?

Yes No

In compliance?

Yes No

4.3 Markings

4.3.1 List the markings shown on the device.

(a) Manufacturer's name or trademark: _____

(b) Model number and type: _____

Are the markings visible in the normally installed position?

Yes No

In compliance?

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) _____

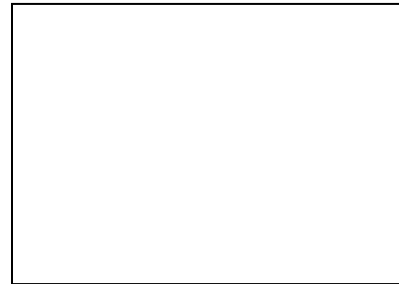
We certify that the evaluations are based on our best judgments and that the test data recorded is an accurate record of the performance of the device on test.

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