ASSE Standard #1053-2019

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ASSE International

Performance Requirements for

Dual Check Backflow Preventer Wall Hydrants – Freeze Resistant Type

An American National Standard

General Information

No product may be said to be listed by ASSE unless the manufacturer has applied to ASSE International, had its product tested by an official ASSE recognized independent laboratory according to the applicable standard, passed the tests, and had its documentation reviewed and approved by the consensus ASSE Seal Control Board. Having completed the aforementioned, the manufacturer may display the ASSE Seal on the product.

Instructions for receiving the authorization to display the seal are available from the ASSE International office. Organizations wishing to adopt or list any ASSE standard should print the ASSE standard number on the cover page first in equal or larger type to that of the adopting or listing organization.

ASSE International
Mokena, Illinois

Foreword

This foreword shall not be considered a part of the standard; however, it is offered to provide background information.

ASSE standards are developed in the interest of consumer safety. ASSE International considers product performance standards to be of great value in the development of improved plumbing systems.

Preventing the contamination of potable water in plumbing systems is a major objective of the ASSE International Standards Program. ASSE has addressed the need for backflow protection at hose threaded outlets where attaching a common garden hose or utility hose may expose users to highly dangerous conditions. Hose threaded protective devices shall only be used on systems where the low-head backpressure does not exceed that generated by an elevated hose equal to or less than 10 ft (3.0 m) in height. ASSE Standard #1011, *Performance Requirements for Hose Connection Vacuum Breakers*, was issued for hose bib vacuum breakers, which provide excellent backsiphonage protection with a single check valve and an atmospheric vent valve.

This standard focuses on devices containing two check valves, which are known as Dual Check Backflow Preventer Wall Hydrants. These devices provide both backsiphonage and low-head backpressure protection and are suitable for high hazard applications.

Although many of the material specifications are detailed within this standard, it is the responsibility of the manufacturer to comply with the requirements of the Safe Drinking Water Act, United States Public Law 93-523.

It is essential that regular inspection and maintenance of backflow prevention devices be conducted in order to ensure that the devices are continuously in working condition to prevent backflow.

The working group that developed this standard was set up within the framework of the Product Standards Committee of ASSE International.

Recognition is made of the time volunteered by members of this working group and of the support of manufacturers who also participated in meetings for this standard.

This standard does not imply ASSE International's endorsement of a product that conforms to these requirements.

Compliance with this standard does not imply acceptance by any code body.

It is recommended that these devices be installed consistent with local codes by qualified and trained professionals.

This standard was promulgated in accordance with the ASSE Procedures for Standards Development, as approved by the American National Standards Institute (ANSI).

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Section I

1.0 General

1.1 Application

This standard establishes design and performance requirements and test procedures for Freeze Resistant Dual Check Backflow Preventer Wall Hydrants (herein referred to as the "device"). The purpose of these devices is to provide protection of the potable water supply from contamination due to backsiphonage or backpressure without damage to the device due to freezing, and is field-testable to verify protection under the high hazard conditions present at a threaded hose outlet. This device shall only be used on systems where there is low-head backpressure that does not exceed that generated by an elevated hose equal to or less than 10.0 ft (3.0 m) in height. This device shall not be subjected to more than 12 hours of continuous water pressure

1.2 Scope

1.2.1 Description

These devices shall consist of two independent checks, force-loaded or biased to a closed position, with an atmospheric vent located between the two check valves, which is force-loaded or biased to an open position, and a means for attaching a hose. A field testability requirement shall verify the integrity of the outlet check valve and the opening of the atmospheric vent. The devices shall be classified as follows:

a) Type A devices automatically drain the water when the hydrant valve is closed and the hose removed to prevent damage from freezing.
b) Type B devices automatically drain the water with a hose removed or attached, end nozzle closed, and the hydrant valve closed.

1.2.2 Size Range

1.2.2.1 Outlet Sizes

Sizes shall include 1/2 NPHS, 3/4 NPHS, and 1 NPHS male hose threaded outlets.

1.2.2.2 Inlet Sizes

Sizes shall include, but not be limited to, 1/2 NPS, 3/4 NPS, or 1 NPS.

1.2.2 Connections

Garden hose connection threads shall be garden hose couplings per ANSI/ASME B1.20.7.