

ASSE International

Performance Requirements for

Hose Connection Backflow Preventers

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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 is dedicated to the preservation of public health and safety through its guiding principle "Prevention Rather Than Cure".

The ASSE's Standards Program systematically evaluates new technologies through a formal request, and addresses the development and promulgation of performance standards designed to safeguard public health and safety.

Standards for the performance of components of systems of plumbing are considered by ASSE International to be of great value in the development of improved plumbing systems for the increased protection of public health and safety.

To accomplish this, the ASSE, through its Product Standards Committee, encourages manufacturers to develop performance standards and testing procedures for their products. These standards have the consensus of the manufacturers and others who have pertinent interests in plumbing systems, and are acceptable to this Society.

Preventing the contamination of potable water in plumbing systems is a major objective of the ASSE's Standards Program. The ASSE 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 feet (3.0 m) in height. The ASSE issued Standard 1011 for Hose Bibb Vacuum Breakers, which provides excellent backsiphonage protection, using devices containing a single check valve and an atmospheric vent valve.

This standard focuses on devices containing two check valves which are known as Hose Connection Backflow Preventers. Backsiphonage and backpressure protection are achieved by adding the safety factor of a second check valve to the protection already provided by the single check Hose Bibb Vacuum Breaker. The two check device:

- meets the ASSE definition of a backflow prevention device;
- provides improved protection against the high hazard conditions of backsiphonage and low-head backpressure; and
- allows a field test to be performed.

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

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

The working group which developed this standard revision, 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 the manufacturers who also participated in the meetings for this standard.

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

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

Plumbing codes mandate how and where these devices are installed. However, this standard was promulgated using a specific set of installation requirements and conditions for the purpose of providing reasonable performance requirements and compliance testing.

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

This standard was promulgated in accordance with procedures developed by the American National Standards Institute (ANSI).

This edition of the standard was approved by the ASSE Board of Directors.

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Hose Connection Backflow Preventers

Section I

1.0 General

1.1 Application

This standard establishes design requirements, basic performance requirements and test procedures for hose connection backflow preventers (herein referred to as the "device"). This device is designed to be installed on the discharge side of a hose threaded outlet on a potable water system. This two-check device protects against backflow, due to backsiphonage or low-head backpressure, and is field testable to certify protection under the high hazard conditions present at a hose threaded outlet. This device 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 feet (3.0 m) in height.

These devices shall not be subjected to continuous water pressure.

1.2 Scope

1.2.1 Description

A hose connection backflow preventer 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.

1.2.2 Size Range

The device shall have male hose threaded outlets sized 1/2 NPHS, 3/4 NPHS or 1 NPHS. Hose threads shall conform to Standard ANSI/ASME B1.20.7. Inlets with hose threads shall be provided with a non-removable feature.

1.2.3 Pressure Range

The devices shall operate at pressures from 0 psi (0 kPa) to 125.0 psi (861.9 kPa).

1.2.4 Temperature Range

The devices shall operate at temperatures from 33.0 °F (0.6 °C) to 140.0 °F (60.0 °C).

1.2.7 Repairability

Devices shall be repairable.

1.3 Reference Standards

Reference to industry standards shall be the latest edition of these standards.