

American Society of Sanitary Engineering

Performance Requirements for
**Vacuum Breaker Wall
Hydrants, Freeze
Resistant, Automatic
Draining Type**

This is a preview of "ASSE 1019-2004". [Click here to purchase the full version from the ANSI store.](#)

General Information

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No product may be said to be ASSE approved unless the manufacturer has applied to the ASSE has had his product tested according to the applicable ASSE Standards, and when the product has passed the test, displays the ASSE Seal on the product.

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American Society of Sanitary Engineering
Westlake, Ohio
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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.

The American Society of Sanitary Engineering for Plumbing and Sanitary Research 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 the American Society of Sanitary Engineering for Plumbing and Sanitary Research 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.

The ASSE recognized the common garden or utility hose, when connected to a potable water supply by means of hose threaded outlet, constitutes a potential non-potable cross-connection and that a performance standard for preventive means - the vacuum breaker wall hydrant was warranted. ASSE Standard #1019, "Wall Hydrants Vacuum Breakers Frost Proof Automatic Draining Types", was developed and issued to fulfill this requirement.

Plumbing codes now stipulate that hose connections shall be protected by approved vacuum breakers that conform to the performance requirements of ASSE Standard Number 1011. Accordingly, hose bibbs, sill cocks, lawn faucets, frost free wall hydrants, and the like, must be so equipped.

With specific reference to frost resistant wall hydrants, equipped with hose connection vacuum breakers poses a restriction to the post closure drainage essential to frost prevention. Such vacuum breakers must be manually triggered to permit drainage, thereby, in effect, negating the frost proof feature of these hydrants, which rely on automatic drainage. Thus it becomes readily apparent to manufacturers of frost proof hydrants that resolution of this matter would involve the development of hydrants that incorporate vacuum breakers and retain the automatic draining provisions essential to frost resistant design.

During the revision of Standard #1019 in 1988, the ASSE recognized the need to consider two (2) types of wall hydrants for backflow protection. Specifically, test criteria were developed for frost proof and automatic draining type wall hydrants. In 1995, a request was made to revise the standard to include a third type of wall hydrant for backflow protection, which holds pressure versus relieving pressure.

The life cycle tests contained in this product performance standard represent the average expected life of the product.

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 the American Society of Sanitary Engineering.

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.

The 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 on month day, year, as an ASSE standard.

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Vacuum Breaker Wall Hydrants, Freeze Resistant, Automatic Draining Type

Section I

1.0 General

1.1 Application

The purpose of these devices is to supply potable water without damage to the device due to freezing and to provide protection of the potable water supply from contamination due to backsiphonage or backpressure.

1.2 Scope

1.2.1 Description

This standard establishes design and performance requirements for water-supply system, wall hydrant devices. These devices shall supply potable water to hose connections without danger of freezing, and shall have a permanent means, including atmospheric vent(s) by to prevent backflow due to backsiphonage, backpressure, or both.

The device shall only be used on systems where the only source of low head backpressure comes from an elevated hose equal to or less than 10.0 feet (3.0 meters) in height. This device shall not be subjected to more than twelve (12) hours of continuous water pressure.

The devices shall be classified as follows:

- (a) Type A devices protect against backsiphonage and backpressure, and contain not less than two mechanisms (at least one mechanism shall a check) to protect against and relieve backpressure. The hose shall be removed to prevent damage from freezing.
- (b) Type B devices protect against backsiphonage and backpressure, and contain not less than two mechanisms (at least one mechanism shall a check) to protect against and relieve backpressure. The hose need not be removed to protect against damage from freezing.
- (c) Type C devices protect against backsiphonage and backpressure, and contain not less than one mechanism to protect against backpressure. The hose shall be removed to protect against damage from freezing.

1.2.2 Size Range

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

1.2.3 Pressure

The devices shall be designed for a minimum working pressure of 125.0 psi (861.9 kPa).