

ASSE Standard #1057-2012

ASSE Board Approved: July, 2012

ANSI Approved: August, 2012

American Society of Sanitary Engineering

Performance Requirements for

Freeze Resistant Sanitary Yard Hydrants with Backflow Protection

An American National Standard

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American Society of Sanitary Engineering
Westlake, Ohio
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Foreword

This foreword is not considered a part of the standard. However, it is offered to provide background information.

It is currently recognized that the common garden or utility hose, when connected to a potable water supply by means of a hose threaded outlet, constitutes a potential cross-connection. It is also currently recognized that the same cross-connection may exist when a potable water supply is permitted to drain underground.

With specific reference to Freeze Resistant Sanitary Yard Hydrants, this standard has been developed to protect the potable water supply from backflow contamination and ground water contamination.

It has been recognized that five types of yard hydrants need to be considered to protect against freezing. The types considered are: Type 1, which provides protection with two check valves and an atmospheric vent and does not require removal of the hose to provide freeze protection; Type 2, which provides protection with two check valves and an atmospheric vent and requires removal of the hose to provide freeze protection; Type 3, which provides protection with one check valve and an atmospheric vent and does not require removal of the hose to provide freeze protection; Type 4, which provides protection with one check valve and an atmospheric vent and requires removal of the hose to provide freeze protection; and Type 5, which has an air gap or removable backflow protection device and requires removal of the backflow protection device and hose to provide freeze protection.

Although many of the material specifications are detailed within Section 4.1 of this standard, it is the responsibility of the manufacturer and installer to comply with the relevant jurisdictional requirements.

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.

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 was approved by the ASSE Board of Directors on July 2, 2012 as an ASSE standard.

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Freeze Resistant Sanitary Yard Hydrant with Backflow Protection

Section I

1.0 General

1.1 Application

The purpose of freeze resistant sanitary yard hydrants (hereinafter referred to as the "device") is to supply potable water without danger of damage to the device due to freezing, to provide protection of the potable water supply from contamination due to ground water and to prevent backflow in accordance with the backflow prevention device selected. These 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 10.0 feet (3.0 m) in height. This device shall not be subjected to continuous pressure. Continuous pressure shall mean twelve (12) hours use in a twenty-four (24) hour period.

1.2 Scope

1.2.1 Description

This standard covers design and performance requirements for freeze resistant sanitary yard hydrants to prevent backflow due to backsiphonage and backpressure. These units shall be classified as follows:

- a) Type 1 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. When the hose is attached, the Type 1 device shall be freeze resistant.
- b) Type 2 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. When the hose is removed, the Type 2 device shall be freeze resistant.
- c) Type 3 devices shall consist of one check valve, force loaded or biased to a closed position, with an atmospheric vent, which is force loaded or biased to an open position, and means for attaching a hose. When the hose is attached, the Type 3 device shall be freeze resistant.
- d) Type 4 devices shall consist of one check valve, force loaded or biased to a closed position, with an atmospheric vent, which is force loaded or biased to an open position, and a means for attaching a hose. When the hose is removed, the Type 4 device shall be freeze resistant.
- e) Type 5 devices shall consist of a removable mechanical backflow protection device with at least one check valve, force loaded or biased to a closed position, and an atmospheric vent, which is force loaded or biased to an open position, and a means for attaching a hose. When the hose and backflow protection is removed, the Type 5 device shall be freeze resistant and shall not allow a hose to be attached.