American National Standard

ASSE 1047-2021

Performance Requirements for

Reduced Pressure Detector Backflow Prevention Assemblies

ASSE Board Approved: May 2021
ANSI Approved: June 2021
ICS Codes: 13 220 20 | 23 060 99 | 91 140 60

General Information

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.

Instructions for receiving the authorization to display the Seal are available from ASSE International. Organizations wishing to adopt or list any ASSE Standard should print the ASSE Standard number on the cover page first and 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.
This standard does not imply ASSE International's endorsement of a product which conforms to these requirements.

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

There are two basic types of backflow, identified by the two conditions that cause it:
1) Backpressure backflow is a reversal of the normal direction of flow in the pipeline due to a condition which causes the pressure in the system being supplied to become greater than that in the supply line, the system pressure being always above atmospheric.
2) Backsiphonage backflow is a reversal of the normal direction of flow in the pipeline due to a negative pressure (vacuum) being created in the supply line with the backflow source subject to atmospheric pressure.

Further, there are two basic and practiced methods for the protection of the potable water supplies:
a) Protection by Containment: By suitable devices or means, of the system within the premises supplied, wherein may lie the source or sources of contamination, from the vendor's or public water supply system. Protection by containment protects the vendor's or public water supply only. It does not provide isolation protection within the premises supplied.
b) Protection by Isolation of each individual outlet: The protection of each individual outlet by suitable devices or means, which within the premises served, may be a source of contamination.

This standard is a composite of the most practical and effective behavioral characteristics for a device of this type drawn on the experience of engineers, manufacturers, public health officials and others who are knowledgeable in this field and who have the responsibility of protecting our potable water supplies.

The type of occupancy of the premises, the design and construction of the system, and the manner in which it is used are major influences on the possible incidence of backflow. Consequently, the degree of the hazard to which persons may be exposed varies from discomfort and minor illness to fatal, if the backflow of contaminants into the potable water system is not completely prevented.

Typically installed in but not limited to fire protection systems, the devices described are primarily designed for two functions. The protection of the public water supply from contaminants found in fire sprinkler systems is a primary function for a backflow preventer. These assemblies are also designed to detect low rates of flow up to 2 gpm (0.13 L/s) within the sprinkler system caused by leakage or unauthorized use. This standard also allows provisions for alarm signaling devices to be included in the assembly.

It is recommended that these devices be installed in accordance with the installation instructions of the manufacturers and consistent with local codes. Where there is a conflict with codes and installation instructions, the more stringent requirements should be followed. These devices should be installed by properly licensed, qualified, and properly trained professionals.

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.

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

This standard was promulgated in accordance with ASSE's procedures as accredited by the American National Standards Institute (ANSI).