ASSE Standard #1056-2013

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ASSE International

Performance Requirements for

Spill Resistant Vacuum Breaker Assemblies

An American National Standard

General Information

No product may be said to be ASSE listed unless the manufacturer has applied to ASSE International, has had the product tested by an official ASSE recognized independent laboratory according to the applicable ASSE standard, passed the test, and has been reviewed and approved by the consensus ASSE International Seal Control Board. Having completed the aforementioned, the manufacturer may then 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 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 International is dedicated to the preservation of public health and safety through its guiding principle, “Prevention Rather Than Cure.”

The ASSE International Standards Program systematically evaluates new technologies through formal requests and addresses the development and promulgation of performance standards designed to safeguard public health and safety.

ASSE International has long recognized the need for backflow protection against the condition known as “backsiphonage.” ASSE Standard #1001 was developed for plumbing applications that are not under continuous pressure, but it was evident that systems under continuous pressure could effectively use a similar method of breaking a vacuum to prevent siphonage. This led to the development of ASSE Standard #1020.

It has been recognized that ASSE Standard #1020 was developed in anticipation of outdoor applications. As a result of the specific requirements of the hydraulic operation of the air inlet vent in ASSE 1020, water may discharge in its normal operation.

The development of ASSE Standard #1056 specifically addressed the indoor applications offering the same vacuum breaker capabilities of ASSE 1020, but solving the problem of water discharging each time the assembly was pressurized. As with the ASSE 1020 assemblies, a check valve backed up with an air inlet vent that opens in response to a loss of supply pressure accomplishes backflow protection against backsiphonage.

ASSE Standard #1056 assemblies, when installed properly, are suitable for high hazard protection, but just as ASSE 1001 and ASSE 1020, are limited to backsiphonage protection and are not to be used to protect against backpressure-type backflow.

Performance standards for systems and assemblies must be reviewed periodically and upgraded as research, field conditions and experience suggest. The policy of ASSE International is to review each standard on a five-year cycle for revisions or reaffirmation. Between such reviews, the Product Standards Committee works with interested groups to obtain information for study and evaluation of product performance requirements.

Although many of the material specifications are detailed within Section IV of 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.

The working group that 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 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 assemblies 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 ASSE Standard #1056 was approved by the ASSE International Board of Directors as an ASSE standard.

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Performance Requirements for Spill Resistant Vacuum Breaker Assemblies

Section I

1.0 General

1.1 Application

Spill resistant vacuum breaker assemblies (herein referred to as “assembly”) are installed in the water supply lines to prevent the backflow of non-potable material into the potable water supply caused by backsiphonage only. They are not for use in any system where backpressure is applied to the assembly. When the system is pressurized, the air inlet valve closes to prevent a flow through the check valve and to eliminate vent spillage.

The assembly shall:

1) Not be subjected to backpressure; and
2) Be installed with its critical level (CL) not less than 12 inches (305 mm) above the flood level rim of the fixture or appliances served. In the absence of a critical level (CL) mark on an assembly, the extreme bottom of the body casting shall be considered the critical level of the assembly for testing and installation purposes.

1.2 Scope

1.2.1 Description

This standard applies only to those assemblies classified as spill resistant vacuum breaker assemblies (SVB). These assemblies are designed for installation in water systems that are normally under continuous pressure conditions.

The assembly includes one (1) check valve force-loaded closed, an air inlet valve force-loaded open to atmosphere, positioned downstream of the check valve, two (2) tightly closing shut-off valves and two (2) test cocks or a #1 test cock and a bleed valve.

1.2.2 Size Range

The inlet and outlet nominal pipe sizes are ¼ NPS (8 DN), ⅜ NPS (10 DN), ½ NPS (15 DN), ¾ NPS (20 DN), 1 NPS (25 DN), 1 ¼ NPS (32 DN), 1 ½ NPS (40 DN) and 2 NPS (50 DN).

1.2.3 Pressure

These assemblies shall be designed for a working pressure of at least 150.0 psi (1034.2 kPa).

1.2.4 Temperature Range

These assemblies shall be designed for a temperature range of 33.0 °F to 140.0 °F (0.6 °C to 60.0 °C) or the manufacturer’s maximum rated temperature, whichever is greater.