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American Society of Sanitary Engineering

Performance Requirements for

Anti-Siphon Fill Valves for Water Closet Tanks

An American National Standard

This is a preview of "ANSI/ASSE 1002-2008". [Click here to purchase the full version from the ANSI store.](#)

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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.

This standard outlines the performance requirements for Anti-siphon Fill Valves (Ballcocks) for Gravity Water Closet Flush Tanks, and describes those performance requirements in terms of methods of testing applicable to all such units, equivalent materials or methods of testing intended to demonstrate compliance with these requirements are also acceptable.

Recognition is made of the time volunteered by members of the 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.

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).

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Performance Requirements for Anti-Siphon Fill Valves for Water Closet Tanks

Section I

1.0 General

1.1 Application

This standard provides dimensional and minimum performance requirements for anti-siphon fill valves for water closet tanks (herein referred to as the "device"), including protection of the potable water supply against back siphonage of water from the water closet tank.

1.2 Scope

1.2.1 Description

These devices are cold water supply valves that are installed within water closet tanks to provide tank refill and a trap reseal after flushing a water closet. They are equipped with backflow prevention devices or an air gap.

1.2.2 Working Pressure

The device shall be designed to operate at a minimum pressure range of 20.0 psi to 125.0 psi static (137.9 kPa to 861.9 kPa).

1.2.3 Capacity - Total Fill and Refill

1.2.3.1 Original Equipment Manufacturer

When the device is furnished as original equipment with a manufacturer's water closet, the total flow capacity shall be sufficient to assure proper operation of the fixture in accordance with the performance standard, ASME A112.19.2. The device shall deliver a fill rate through the refill orifice as required by the water closet manufacturer.

1.2.3.2 Retrofit Use

When the device is furnished to retrofit water closets, the device shall deliver a minimum flow rate at 15.0 psig (103.4 kPa) flowing pressure of 1.5 GPM (5.7 L/min), and a minimum refill flow rate, through the refill orifice, of 20% of the total fill rate at 15.0 psi (103.4 kPa) flowing pressure.

1.2.4 Leakage and Spray Containment

The device shall not spray or otherwise leak water to the outside of the water closet tank during operation.

1.2.5 Backflow Prevention

The device shall be equipped with a means to prevent backflow due to back siphonage. Air inlet ports shall be protected in such a manner as to reduce the risk of the intake of foreign material into the device.