ASSE Standard #1015-2011

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American Society of Sanitary Engineering

Performance Requirements for

Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies

An American National Standard

General Information

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American Society of Sanitary Engineering
Westlake, Ohio

Foreword

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

ASSE Product Standards are developed in the interest of consumer safety.

The recognition of probable sources or causes of contamination of a potable water supply system and the application of essential devices, or means, to prevent the entrance of contaminants to the potable water system, causing it to become unfit for human consumption, is vital to the maintenance of its continued potability.

There are two basic and practiced methods for the protection of potable water supplies:

a) Protection by Containment
   The isolation, 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.
b) Protection 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.

Protection by containment protects the vendor's or public water supply only. It does not provide protection within the premises supplied.

In modern plumbing systems, there are many situations where backflow could occur due to backpressure conditions. In some, the pollutants that would get into the water supply would be undesirable, yet not be a hazard to the health of persons consuming the water.

This standard covers two (2) types of devices, which are identified as Double Check Backflow Prevention Assemblies (DC) and Double Check Fire Protection Backflow Prevention Assemblies (DCF). The DC and the DCF are identical in their backflow protection. The DCF, which was added to this standard in 1999, has specific performance requirements relating to their use on fire protection systems.

The devices described are suitable for either protection by containment or protection of individual outlets where pollutants, which could be caused to enter the potable water, are low hazard.

These devices are suitable for either hot or cold water service under continuous or intermittent pressure conditions.

Although many of the material specifications are detailed within Section 4.1 of this standard, it is the responsibility of the manufacturer and the 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 participated in 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).

This edition was approved by the ASSE Board of Directors on August 9, 2011 as an ASSE standard.

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Table of Contents

Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies

Section I

1.0 General

1.1 Application

The purpose of a Double Check Backflow Prevention Assembly (DC) and a Double Check Fire Protection Backflow Prevention Assembly (DCF) (herein referred to as the “assembly”) is to keep polluted water from flowing into a potable water distribution system when some abnormality in the system causes the pressure to be temporarily higher in the polluted part of the system than in the potable water supply piping.

1.2 Scope

1.2.1 Description

This standard applies to two types of backflow prevention assemblies, identified as:
(a) Double Check Backflow Prevention Assembly (DC); and
(b) Double Check Fire Protection Backflow Prevention Assembly (DCF).

These assemblies consist of two (2) independently acting check valves, internally force loaded to a normally closed position, two (2) properly located, tightly closing shut-off valves, per Section 1.3.2.6, and properly located test cocks, per Section 1.3.2.4. These assemblies are designed and constructed to operate under intermittent or continuous pressure conditions.

This standard also applies to Manifold Double Check Backflow Prevention Assemblies consisting of two (2) or more complete Double Check Backflow Prevention Assemblies in parallel. The assemblies do not need to be of the same pipe size. The manifold size shall be identified by the single inlet and outlet of the manifold assembly. Manifold Double Check Backflow Prevention Assemblies shall include line-sized shut-off valves on each inlet and outlet of the assemblies making up the manifold.

1.2.2 Size Range

Connection pipe sizes shall be in accordance with Table 1.