

ASSE Standard #1004-2017

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ASSE International

Performance Requirements for

Commercial Dishwashing Machines

An American National Standard

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Foreword

This foreword shall not be considered part of this standard; however, it is offered to provide background information.

This standard was first adopted by ASSE International in August 1967. The ASSE Product Standards Committee and several interested manufacturers developed the draft, which began in April 1966. Due to changes in commercial dishwashing machine technology, it was necessary for the standard to be updated.

For the majority of commercial warewashing performance requirements, NSF/ANSI 3, *Commercial Warewashing Equipment*, covers those items. With regard to backflow requirements, NSF/ANSI 3 and the plumbing codes reference this standard – ASSE 1004.

Although many of the material specifications are detailed within 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.

Recognition is made of the time volunteered by members of the working group and of the support of manufacturers, who also participated in the meetings for this standard.

This standard does not imply ASSE'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 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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Table of Contents

Section I	1
1.0 General	1
1.1 Application	1
1.2 Scope	1
1.3 Location of Backflow Prevention Devices	1
1.4 Water Supply Piping	2
1.5 Reference Documents	2
Section II	3
2.0 Test Specimens	3
2.1 Samples Submitted for Test	3
2.2 Samples Tested	3
2.3 Drawings	3
2.4 Rejection	3
Section III	4
3.0 Performance Requirements and Compliance Testing	4
3.1 Backsiphonage Test	4
Figure 1	5
Section IV	6
4.0 Detailed Requirements	6
4.1 Materials	6
4.2 Markings	6
4.3 Installation Instructions	6
4.4 Maintenance Instructions	6
Section V	7
5.0 Definitions	7

Performance Requirements for Commercial Dishwashing Machines

Section I

1.0 General

1.1 Application

This standard applies to backflow prevention devices used on the potable water supply connected to a commercial dishwashing machine.

1.2 Scope

1.2.1 Description

The backflow prevention device shall be:

- a) An air gap complying with ASME A112.1.2;
- b) An atmospheric type vacuum breaker complying with ASSE 1001;
- c) A hose connection vacuum breaker complying with ASSE 1011;
- d) A pressure vacuum breaker complying with ASSE 1020;
- e) A hose connection backflow preventer complying with ASSE 1052; or
- f) A spill-resistant vacuum breaker complying with ASSE 1056

1.2.2 Air Gap Minimum

The minimum air gap shall be two (2) times the diameter of the supply orifice, or 1.0 inch (25.4 mm), whichever is larger.

1.3 Location of Backflow Prevention Devices

1.3.1 Air gaps shall be located on the outside of the machine, above the overflow rim, and shall be protected against suds, spray, splash, and/or flooding.

1.3.2 Atmospheric-type vacuum breakers (ones that are not deck-mounted/equipment-mounted) shall be installed a minimum of 6.0 inches (150 mm) above the highest point of use. Deck-mounted or equipment-mounted atmospheric-type vacuum breakers shall be installed a minimum of 1.0 inches (25.4 mm) above the highest point of use. Atmospheric type vacuum breakers shall not be subjected to more than twelve (12) hours of continuous water pressure.

The highest point of use is defined here as the location at which potable water first mixes with non-potable water, detergent, or other foreign substances.

1.3.3 Hose connection vacuum breakers shall be installed downstream of the last shut-off valve. Hose connection vacuum breakers shall not be subjected to more than twelve (12) hours of continuous water pressure. This device shall only be used on systems where the only source of low-head backpressure comes from an elevated hose equal to or less than 10 feet (3.0 meters) in height.