

American National Standard

ASSE 1098-2021



Performance Requirements for
**Atmospheric Vacuum Breakers for Vacuum
Toilet Assemblies and Galley Waste
Disposal Units on Commercial Aircraft**

ASSE Board Approved: April 2021

ANSI Approved: April 2021

ICS Codes: 23 060 99 | 91 140 60



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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 International considers product performance standards to be of great value in the development of improved plumbing systems. ASSE standards are developed in the interest of consumer safety.

The working group that developed this standard 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 devices be installed consistent with local codes by qualified and trained professionals.

This Standard was promulgated in accordance with the ASSE Procedures for Standards Development, as approved by the American National Standards Institute (ANSI).

This standard is very specific to atmospheric vacuum breakers used on commercial aircraft. As a basis for the development of this standard, ASSE 1001, *Performance Requirements for Atmospheric Type Vacuum Breakers*, was used. Requirements found in ASSE 1001 that are relevant to this application were combined with performance evaluations unique to applications of this device on aircraft.

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Performance Requirements for Atmospheric Vacuum Breakers for Vacuum Toilet Assemblies and Galley Waste Disposal Units on Commercial Aircraft

Section I

1.0 General

1.1 Application

This Standard provides performance criteria for atmospheric vacuum breakers (AVB) installed on vacuum toilet assemblies and galley waste disposal units (GWDU) designed to be installed on passenger aircraft.

Atmospheric type vacuum breakers shall be integral. The purpose of these devices is to provide protection of the potable water supply against pollutants or contaminants that enter the system due to backsiphonage through the outlet. Under backsiphonage conditions, a small amount of water is permitted to exit through the air-ports. The AVB shall:

- a) Have its outlet open to pressure in the cabin;
- b) Not be subjected to backpressure;
- c) Not be subjected to more than twelve (12) hours of continuous water pressure;
- d) Be deck mounted/equipment mounted; and
- e) Be installed with its critical level (CL) not less than 1.0 inch (25.4 mm) above the overflow level of the fixture served.

1.2 Scope

1.2.1 Description

Vacuum toilet assemblies and GWDUs consist of a connection to potable water stored on the aircraft, a waste collection receptacle, a means to rinse the waste collection receptacle, a means to protect the potable water supply, and a connection to the vacuum waste system. The potable water system protection shall vent to the cabin pressure. The vacuum toilet assemblies and galley waste disposal units shall be integral only to devices specified by the manufacturer.

This Standard does not cover bidets nor washlets.

Vacuum breakers will be classified as atmospheric type, as described herein.

The atmospheric type vacuum breaker design shall fulfill the functions of:

- a) A check valve member
- b) An air inlet valve that is closed when the check valve member is open, and normally open when the check valve member is normally closed.