

ASSE Standard #1051-2009

ASSE Board Approved: May, 2009

ANSI Approved: January, 2010

American Society of Sanitary Engineering

Performance Requirements for

Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems

An American National Standard

This is a preview of "ANSI/ASSE 1051-2009". [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.

ASSE considers product performance standards to be of great value in the development of improved plumbing systems.

This standard focuses on devices known as AAVs. These devices are intended as an alternative to vents for individual fixtures and branches in the plumbing drainage system.

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 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 Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems

Section I

1.0 General

1.1 Application

Individual and Branch Type Air Admittance Valves (AAVs) for Sanitary Drainage Systems (herein referred to as "device") are devices used in plumbing drainage systems to prevent the siphonage of water trap seals. These devices do not relieve back pressure; they only allow air to enter the system. These devices are designed to be used for individual fixtures or for a horizontal branch serving multiple fixtures. When these devices are installed in a building, there shall be at least one (1) open vent terminal to relieve positive pressure which extends to the atmosphere outside of the building serving the building drain on which these devices are installed.

1.2 Scope

1.2.1 Description

These devices consist of a one-way valve designed to allow air to enter the plumbing drainage system when a pressure less than atmospheric develops. The device closes and seals by gravity under (0) differential pressure (static condition) and under positive pressure. These devices prevent sewer gases from entering the building. The device consists of a hooded or shielded body which contains a movable sealing assembly which seats and seals air flow when closed and allows air to enter when open.

1.2.2 Temperature Range

These devices shall function at temperatures from -40.0°F to 150.0°F (-40.0°C to 65.6°C).

1.2.3 Rating

These devices shall be rated to pass the air rate indicated in Table 1 without exceeding a pressure drop greater than 1.0 inch (25.4 mm) of water column.

Table 1

Drainage Pipe Size		Maximum DFU's	Airflow Rate	
IPS	DN		CFM	L/s
inch	mm			
1¼	32	1	1	0.47
1½	40	3	1	0.47
2.0	50	6	2	0.94
3.0	75	20	4	1.88
4.0	100	160	8	3.76