

American National Standard

ASSE 1072-2020



Performance Requirements for
**Barrier Type Trap Seal
Protection for Floor Drains**

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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 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.

ASSE recognizes that many floor drains installed within buildings are rarely used. Without periodic use, water trap seals in floor drains will eventually fail due to evaporation. Potentially objectionable and hazardous sewer gases may then escape into the building through the trap fitting.

The model plumbing codes require that floor drain trap seals that are subject to evaporation be provided with a method that offsets evaporation. One method provides a periodic automatic admission of water directly into the floor drain by way of a trap primer.

Because the method described in this standard does not automatically and periodically provide water to replenish the trap seal, it must provide a barrier on the inlet side of the trap seal that minimizes evaporation caused by the ambient air on the building side of the trap. This barrier must also provide adequate drainage capabilities required for the floor drain's intended use as determined by its design, size, and installation location.

While developing the performance requirements and tests for these devices, certain adverse conditions are taken into consideration. These are the introduction of fouling substances such as dirt/sand, floor wax, or grease directly into the device. In addition, drainage requirements to accommodate infrequent, and unusually sizeable, water flows caused by water line breaks, fixture overflows, or backflow preventer discharges are provided.

Test requirements are also included that evaluate the devices based on size and installation conditions. These removable devices are designed to be installed in either new, or existing, floor drains that conform to ASME A112.6.3 installations.

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 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 the ASSE Procedures for Standards Development as approved by the American National Standards Institute (ANSI).

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Performance Requirements for Barrier Type Trap Seal Protection for Floor Drains

Section I

1.0 General

1.1 Application

This standard establishes physical requirements, performance requirements, and test procedures for barrier type floor drain trap seal protection devices (herein referred to as the “device”). These devices are designed to help protect the floor drain trap seal of floor drains that comply with ASME A112.6.3 by minimizing evaporation.

The purpose of this device is to minimize the evaporation of the trap seal for the floor drain. The device will open to allow the flow of drainage and close when there is no flow.

1.2 Scope

1.2.1 Description

The device shall consist of a membrane that allows the flow of drainage to enter the plumbing drainage system. The device shall close when there is no flow.

1.2.2 Size

The device shall be sized according to the nominal pipe size of the device it installs into, except for the 3-1/2 in (DN 90) device which installs into the inside of a floor drain fitting that complies with ASME A112.6.3. Sizes shall include 1½ NPS through 6 NPS (40 DN through 150 DN).

1.2.3 Flow Capacity

The device shall permit the flow of drainage as stipulated in Table 1 of this standard. If the floor drain size is not listed, perform an interpolation between the values in Table 1 to determine the appropriate flow rate.

Table 1: Minimum Flow Rate through Floor Drains

Floor Drain Size		Flow Rate	
NPS	(DN)	GPM	(L/min)
1 ½	(40)	6.0	(22.7)
2	(50)	12.0	(45.4)
3	(80)	34.0	(128.7)
3 ½	(90)	51.0	(193.1)
4	(100)	73.0	(276.3)
5	(125)	100.0	(378.5)
6	(150)	135.0	(511.0)