

*American Society of Sanitary Engineering*

---

Performance Requirements for

# **Positive Pressure Reduction Devices for Sanitary Drainage Systems**

*An American National Standard*



# General Information

---

Neither this standard, nor any portion thereof, may be reproduced without the written consent of the American Society of Sanitary Engineering.

No product may be said to be ASSE approved unless the manufacturer has applied to ASSE, has had the product tested by an official ASSE recognized independent laboratory, according to the applicable ASSE Standard, passed the test, and has been reviewed and approved by the consensus ASSE Seal Control Board. Having completed the aforementioned, the manufacturer may then display the ASSE Seal on the product.

Instructions for receiving the authorization to display the Seal are available from the ASSE International Office. Organizations wishing to adopt or list any ASSE Standard should print the ASSE Standard Number on the cover page first and in equal or larger type to that of the adopting or listing organization.

American Society of Sanitary Engineering  
Westlake, Ohio  
Copyright © 2009  
All rights reserved.



# 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.

A Positive Air Pressure Reduction Device for Sanitary Drainage Systems is a device designed specifically for use in sanitary drainage systems to protect water trap seals against unwanted positive pressure transients.

The working group which developed this standard 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).

# 2008-2009 Product Standards Committee

---

**Edward J. Lyczko**

*Product Standards Committee Chairman  
Cleveland Clinic  
Cleveland, Ohio*

**John F. Higdon, P.E.**

*Apollo Valves/Conbraco Industries, Inc.  
Pageland, South Carolina*

**Rand H. Ackroyd**

*Rand Technical Consulting, LLC  
Newburyport, Massachusetts*

**Chuck Lott**

*Precision Plumbing Products, Inc.  
Portland, Oregon*

**William Briggs, Jr.**

*MGJ Associates  
New York, New York*

**Peter Marzec**

*United Association of  
Plumbers and Pipefitters  
Pearl River, New York*

**Judson W. Collins**

*JULYCO Professionals  
Mannford, Oklahoma*

**Hamid Naderi**

*International Code Council  
Austin, Texas*

**A. Richard Emmerson**

*General Interest  
Buffalo Grove, Illinois*

**Brad Noll**

*Wilkins, A Division of Zurn Industries, Inc.  
Paso Robles, California*

**Ron George**

*Ron George Design & Consulting  
Newport, Michigan*

**Thomas C. Pitcherello**

*State of New Jersey  
Bordentown, New Jersey*

**Charles Gross**

*International Association of Plumbing  
and Mechanical Officials  
Ontario, California*

**Shabbir Rawalpindiwala**

*Kohler Company  
Kohler, Wisconsin*

**Steven Hazzard**

*ASSE Staff Engineer/ Standards Coordinator  
Westlake, Ohio*

**Tsan-Liang Su, Ph.D.**

*Center for Environmental Systems  
Stevens Institute of Technology  
Hoboken, New Jersey*

# 1030 Working Group

---

**Jack Beuschel**

*Working Group Chairman  
IPS Corp., Studor Inc.  
Clearwater, FL*

**Sture Ericksen**

*Studor Trading Company Ltd.  
Schilde, Belgium*

**Steven Hazzard**

*ASSE Staff Engineer/ Standards Coordinator  
Westlake, Ohio*

**Steve White**

*Studor Ltd.  
East Sussex, UK*

# Table of Contents

---

<b>Section I</b> .....	<b>1</b>
1.0 General .....	1
1.1 Application .....	1
1.2 Scope .....	1
1.3 Requirements .....	2
1.4 Reference Standards .....	2
<b>Section II</b> .....	<b>3</b>
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
<b>Section III</b> .....	<b>4</b>
3.0 Performance Requirements and Compliance Testing .....	4
3.1 Air Tightness Test .....	4
3.2 Rating Test .....	4
3.3 Endurance Test .....	4
3.4 Device Characteristic Performance Test .....	4
<b>Section IV</b> .....	<b>7</b>
4.0 Detailed Requirements .....	7
4.1 Materials .....	7
4.2 Documentation .....	7
4.3 Markings .....	7
<b>Section V</b> .....	<b>8</b>
5.0 Definitions .....	8
<b>Appendix A</b> .....	<b>9</b>
A.1 Conditions for Conducting Section 3.4 .....	9

# Performance Requirements for Positive Pressure Reduction Devices for Sanitary Drainage Systems

## Section I

### 1.0 General

#### 1.1 Application

Positive pressure reduction devices (herein referred to as the “device”) are to be used in building drainage waste and vent (DWV) systems. They are intended to reduce the impact of short duration air pressure transients which arise in DWV networks through use. They are not intended to have any effect on long duration or steady-state offsets in air pressure.

#### 1.2 Scope

##### 1.2.1 Description

See Figure 1 for a simple arrangement of components. The device consists of a variable volume reservoir contained within a ventilated rigid outer casing with an inlet connection by which the reservoir inflates when subject to positive pressure. In its inactive state, the flexible reservoir is deflated. Expansion only occurs in response to an increase in line pressure at the entrance to the device. This expansion provides a variable volume reservoir for air. The device connects to the drainage network via an airtight seal to prevent the diversion of airflow from entering the reservoir. As a result the reservoir becomes an integral part of the drainage network.

