ASSE Standard #1060 - 2006
ASSE Board Approved: MARCH 13, 2006
ANSI Approved: APRIL 17, 2006

American Society of Sanitary Engineering

Performance Requirements for

Outdoor Enclosures for Fluid Conveying Components

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 the ASSE, has had his product tested according to the applicable ASSE Standards, and when the product has passed the test, displays the ASSE Seal on the product.

Instructions for receiving the authorization to display the Seal are available from ASSE's 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

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.

The American Society of Sanitary Engineering for Plumbing & Sanitary Research is dedicated to the preservation of public health and safety through “prevention rather than cure”.

The ASSE Standards Program systematically evaluates new technologies through formal request and addresses the development and promulgation of performance standards designed to safeguard public health and safety.

This standard focuses on devices that provide a range of protection for fluid conveying components which are mounted outside and above ground so that they may avoid damage from freezing, vandalism and tampering.

The title and scope of this standard was changed during the 2005 revision to read: "Performance Requirements for Outdoor Enclosures for Fluid Conveying Components." Fluid conveying components include backflow prevention assemblies and devices, water meters, control valves, pressure reducing valves, air release valves, pumps and other components installed outdoors and above ground that require protection from freezing or require system security protection.

Class I and I-V enclosures provide an equal or greater protection than Class II or II-V enclosure, or Class III or III-V enclosure. Class II and II-V enclosures provide an equal or greater protection than a Class III or III-V enclosure.

Recognition is made of the time volunteered by members of this working group and of the support of the manufacturers who also participated in developing 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 enclosures be installed consistent with local codes by qualified and trained professionals.

This standard was promulgated in accordance with procedures developed by the American Society of Sanitary Engineering and approved by the American National Standards Institute (ANSI).

2005-06 Product Standards Committee

Edward Lyczko
Product Standards Committee Chairman
Cleveland Clinic
Cleveland, Ohio

Rand H. Ackroyd
Rand Engineering
Newburyport, Massachusetts

Michael Beckwith
State of Wisconsin Department of Commerce
Madison, Wisconsin

Gunnar O. Collins
Collins Backflow Specialists, Inc.
Palatine, Illinois

Judson W. Collins
JULYCO Professionals
Mannford, Oklahoma

Shannon M. Corcoran
ASSE Standards Coordinator
Westlake, Ohio

A. Richard Emmerson
General Interest
Buffalo Grove, Illinois

Charles Gross
International Association of Plumbing and Mechanical Officials
Walnut, California

Steven Hazzard
ASSE Staff Engineer
Westlake, Ohio

John F. Higdon, P.E.
Apollo Valves/Conbraco Industries, Inc.
Pageland, South Carolina

Dale Holloway
SGS United States Testing Company
Tulsa, Oklahoma

Valentine Lehr, P.E.
Lehr Associates
New York, New York

Chuck Lott
Precision Plumbing Products, Inc.
Portland, Oregon

Peter Marzec
United Association of Plumbers and Pipefitters
Washington, D.C.

Thomas Pitcherello
State of New Jersey
Bordertown, New Jersey

Shabbir Rawalpindiwala
Kohler Company
Kohler, Wisconsin

David Viola
Plumbing Manufacturers Institute
Schaumberg, Illinois

Joseph C. Zaffuto, P.E.
ASSE Staff Engineer
Westlake, Ohio

1060 Working Group

Rand H. Ackroyd
Rand Engineering
Newburyport, Massachusetts

Michel Devine
HotBox / Division of CDR Systems Corp.
Jacksonville, Florida

Lawrence Frahm
Astra Industrial Services
Newbury Park, California

H.G. Sonny Griffin
G&C Enclosures
Mount Juliet, Tennessee

Kurt Hartle
Safe-T-Cover
Nashville, Tennessee

Steven Hazzard
ASSE Staff Engineer
Westlake, Ohio

Dan Meyer
Apollo Valves/Conbraco Industries, Inc.
Pageland, South Carolina

Gerald Pruitt
Safe-T-Cover
Nashville, Tennessee

Jim Wehinger
Wisconsin Department of Commerce
Friendship, Wisconsin

Joseph C. Zaffuto, P.E.
ASSE Staff Engineer
Westlake, Ohio

Table of Contents

Outdoor Enclosures for Fluid Conveying Components

Section I

1.0 General

1.1 Application

This standard details the requirements of outdoor enclosures for fluid conveying components (herein referred to as the "enclosure"). It includes enclosure types for freezing and non-freezing locations.

These enclosures are designed to protect backflow prevention assemblies and devices, water/gas meters, control valves, pressure reducing valves, air release valves, pumps, and other components installed outdoors requiring protection from freezing and/or for system security.

1.2 Scope

1.2.1 Description

The enclosures incorporate features to provide for positive drainage, security, and accessibility for monitoring, testing, repairing and replacing of the components. The enclosures shall provide freeze protection, freeze retardant or non-freeze protection of the components.

1.2.2 Classes

1.2.2.1 Freeze Protection Enclosures (Heated)

Freeze protection enclosures (Class I and I-V) shall have a minimum thermal resistance value of eight (R8), and a positive means of heat. These enclosures shall be designed and constructed to maintain a minimum internal temperature of 40.0 °F (4.4 °C) using the empirical data obtained in Section 3.6 which is based on an external temperature of -30.0 °F (-34.4 °C). Class I enclosures are designed for components that do not generate positive and/or negative air pressures. Class I-V enclosures are designed for components that generate positive and/or negative air pressures, and include an air inlet and/or outlet.

1.2.2.2 Freeze Retardant Enclosures (Non-Heated)

Freeze retardant enclosures (Class II and II-V) shall have a minimum thermal resistance value of eight (R8). These enclosures shall be designed and constructed to be installed in minimum external temperatures of 33.0 °F (0.6 °C). Class II enclosures are designed for components that do not generate positive and/or negative air pressures. Class II-V enclosures are designed for components that generate positive and/or negative air pressures, and include an air inlet and/or outlet.

1.2.2.3 Non-Freeze Protection Enclosures

Non-freeze protection enclosures (Class III and III-V) are designed and constructed to provide system security for components when freezing temperatures are not a consideration. Class III enclosures are designed for components that do not generate positive and/or negative air pressures.