

**ASSE Standard #1079-2012**

**ASSE Board Approved: July, 2012**

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*American Society of Sanitary Engineering*

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**Performance Requirements for**  
**Dielectric Pipe Unions**

*An American National Standard*

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# General Information

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Westlake, Ohio  
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# Foreword

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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 is dedicated to the preservation of public health and safety through its guiding principle, "Prevention Rather Than Cure."

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

Standards for the performance of plumbing system components are considered by the American Society of Sanitary Engineering to be of great value in the development of improved plumbing systems for the increased protection of public health and safety.

Dielectric pipe unions are designed to prevent stray currents in piping systems. These stray currents can come from dissimilar piping materials or improper grounding of electrical equipment. This standard provides guidance in the construction of pipe unions that incorporate electrical insulating properties to reduce the accelerated corrosion that can result from galvanic and stray currents.

Although material specifications are detailed within Section 4.1 of this standard, it is the responsibility of the manufacturer and the installer to comply with the relevant jurisdictional requirements.

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.

The 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.

Plumbing codes mandate how and where these devices are installed. However, this standard was promulgated using a specific set of installation requirements and conditions for the purpose of providing reasonable performance requirements and compliance testing.

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).

This edition of the standard was approved by the ASSE Board of Directors on July 3, 2012 as an ASSE standard.

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# Dielectric Pipe Unions

## Section I

### 1.0 General

#### 1.1 Application

Dielectric Pipe Unions (herein referred to as the "device") are used to join dissimilar pipe materials to prevent the flow of galvanic current or to isolate sections of pipe from stray currents which could cause accelerated corrosion and premature failure of plumbing components and associated piping.

#### 1.2 Scope

##### 1.2.1 Description

These devices are metallic and join metallic pipe in a similar manner to standard pipe unions and flanges, with the added ability to electrically insulate one pipe section from another.

##### 1.2.2 Size Range

Iron and copper pipe sizes  $\frac{3}{8}$  inch through 6 inches (10 mm to 150 mm).

##### 1.2.3 Adapter/Transition Fitting Connections

1.2.3.1 Taper pipe threads, except dryseal, shall be in compliance with ASME B1.20.1 or ASTM F1498.

1.2.3.2 Dryseal pipe threads shall be in compliance with ASME B1.20.3.

1.2.3.3 Cast copper alloy, wrought copper alloy and copper alloy solder joint connections shall comply with the dimensional requirements of ASME B16.18 or ASME B16.22.

##### 1.2.4 Pressure and Temperature

The minimum pressure shall be 125.0 psi (861.8 kPa) at a minimum temperature of 180.0 °F (82.2 °C).

#### 1.3 Reference Standards

- ASME B16.18-2001 (R2012), *Cast Copper Alloy Solder Joint Pressure Fittings*
- ASME B16.22-2001 (R2010), *Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings*
- ASME B1.20.1-1983 (R2006), *Pipe Threads, General Purpose (Inch)*
- ASME B1.20.3-1976 (R2008), *Dryseal Pipe Threads (Inch)*
- ASTM F1498-08, *Standard Specification for Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings*