General Information

Neither this standard, nor any portion thereof, may be reproduced without the written consent of ASSE International.

No product may be said to be listed by ASSE unless the manufacturer has applied to ASSE International, has had its product tested according to the applicable 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 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.
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. This standard was developed to establish minimum performance requirements for push-fit fittings; an alternative method of connecting fittings with valves and tubing on potable water distribution systems and hydronic heat systems.

There are other applications for push-fit fittings, including compressed air systems and gas piping systems. However, the performance requirements and tests in ASSE Standard #1061 were developed for fittings installed in potable water distribution systems and hydronic heat systems only.

Pressurized (compressed) air, which is used for laboratory testing, contains large amounts of stored energy that could present serious safety hazards should a system fail for any reason. It is the responsibility of the user of this standard to establish appropriate safety requirements prior to performing any of the tests contained in this standard.

Recognition is made of the time and support of those who participated in the development of this standard.

This standard does not imply ASSE’s endorsement of a product that 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.

This standard was promulgated in accordance with procedures developed by ASSE International and approved by the American National Standards Institute (ANSI).
2015 Product Standards Committee

Edward J. Lyczko, Chairperson
Cleveland Clinic – Retiree
Cleveland, OH

William Briggs Jr.
MGJ Associates
New York, NY

Terry Burger
NSF International
Ypsilanti, MI

William Chapin
Professional Code Consulting, LLC
Cullman, AL

Ron George
Plumb-Tech Design & Consulting Services, LLC
Newport, MI

Daniel Gleiberman
Sloan
Los Angeles, CA

John F. Higdon P.E.
Apollo Valves / Conbraco Industries, Inc.
Matthews, NC

Gary Howard
Illinois Plumbing Inspector – Retiree
LaGrange, IL

Chuck Lott
Precision Plumbing Products
Portland, OR

Peter Marzec
United Association of Plumbers and Pipefitters
Pearl River, NY

Brad Noll
Wilkins / A Division of Zurn
Paso Robles, CA

Thomas Pitcherello
State of New Jersey
Bordentown, NJ

Daniel Rademacher
Plumbing Code and Design Consulting
Butte, MT

Shabbir Rawalpindiwala
Kohler Company
Kohler, WI

Billy Smith
American Society of Plumbing Engineers (ASPE)
Montgomery, AL

Tsan-Liang Su, PhD
Stevens Institute of Technology
Hoboken, NJ

Conrad Jahrling (non-voting)
ASSE International
Chicago, IL

This is a preview of "ASSE Standard 1061-2...". Click here to purchase the full version from the ANSI store.
1061 Working Group

William Chapin, Chairperson
Professional Code Consulting, LLC
Cullman, AL

John Bertrand
Moen, Inc.
North Olmsted, OH

Mark Clark
NIBCO, Inc.
Elkhart, IN

Ned Dickey
CSA Group
Cleveland, OH

Ron George
Plumb-Tech Design & Consulting Services, LLC
Newport, MI

Conrad Jahrling (non-voting)
ASSE International
Chicago, IL

Clint Osteen
Cash Acme / Reliance Worldwide Corp.
Hartselle, AL

Dave Orton
NSF International
Ann Arbor, MI

Angel Rodriguez
John Guest USA, LLC
Fairfield, NJ

William Turnau
BrassCraft
Novi, MI
# Table of Contents

<table>
<thead>
<tr>
<th>Section I</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 General</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Application</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Scope</td>
<td>1</td>
</tr>
<tr>
<td>1.3 Reference Standards</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section II</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 Test Specimens</td>
<td>3</td>
</tr>
<tr>
<td>2.1 Samples Tested</td>
<td>3</td>
</tr>
<tr>
<td>2.2 Design Documentation</td>
<td>3</td>
</tr>
<tr>
<td>2.3 Rejection</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section III</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 Performance Requirements and Compliance Testing</td>
<td>4</td>
</tr>
<tr>
<td>3.1 Hydrostatic Sustained Pressure Test for Fittings with an Elevated Temperature or Pressure Rating</td>
<td>4</td>
</tr>
<tr>
<td>Table 1</td>
<td>5</td>
</tr>
<tr>
<td>3.2 Mechanical Separation Test</td>
<td>5</td>
</tr>
<tr>
<td>3.3 Hydrostatic Rupture Test for Fittings with an Elevated Temperature or Pressure Rating</td>
<td>6</td>
</tr>
<tr>
<td>3.4 Bending Test (PEX and PE-RT Tubing 1” CTS and Smaller Only)</td>
<td>6</td>
</tr>
<tr>
<td>Figure 1</td>
<td>7</td>
</tr>
<tr>
<td>3.5 Bending Test with Rigid Tubing</td>
<td>8</td>
</tr>
<tr>
<td>Figure 2</td>
<td>8</td>
</tr>
<tr>
<td>Table 2</td>
<td>9</td>
</tr>
<tr>
<td>3.6 Hydraulic Shock (Water Hammer) Test</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section IV</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0 Detailed Requirements</td>
<td>10</td>
</tr>
<tr>
<td>4.1 Materials</td>
<td>10</td>
</tr>
<tr>
<td>4.2 Adapter/Transition Fitting Connections</td>
<td>10</td>
</tr>
<tr>
<td>4.3 Marking Instructions</td>
<td>11</td>
</tr>
<tr>
<td>4.4 Installation Instructions</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section V</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0 Definitions</td>
<td>12</td>
</tr>
</tbody>
</table>
Performance Requirements for Push-Fit Fittings

Section I

1.0 General

1.1 Application
The purpose of this standard is to establish minimum performance requirements for push-fit fittings and push-fit connections that are integrated into plumbing devices (herein referred to as the “fitting”). The fittings described in this standard are intended for use in hot and cold potable water distribution and hydronic heating systems in residential and commercial applications.

1.2 Scope

1.2.1 Description
This standard applies to push-fit fittings that can be used with one or more of the following materials:

1) PEX tubing complying with ASTM F876 or CSA B137.5.
2) Copper tubing, hard drawn Type K, L and M and annealed Type M not to exceed 3/8 nominal, complying with ASTM B 88.
3) CPVC tubing complying with ASTM D2846 or CSA B137.6.
4) PE-RT tubing complying with ASTM F2769 or CSA B137.18.

1.2.2 Size
These fittings shall have a nominal size not to exceed 2” CTS.

1.2.3 Minimum Pressure and Temperature Ratings
These fittings shall be designed for a continuous water service up to and including 100.0 psi (689.5 kPa) at 180.0 °F (82.22 °C). Push-fit fittings are not intended to be used in temperature/pressure relief valve drain lines unless they are tested and rated for excessive conditions of 210.0 °F (98.89 °C) and 150.0 psi (1034 kPa), per ASME A112.4.1 or ASTM F877.

1.3 Reference Standards
Listed below are the industry standards referenced within this ASSE standard. ASSE 1061 specifically references the revision of each standard given.

- ASME A112.4.1–2009(R2014), Water Heater Relief Valve Drain Tubes
- ASME B1.20.1–2013, Pipe Threads, General Purpose, Inch
- ASME B1.20.3–1976(R2013), Dryseal Pipe Threads, Inch
- ASME B16.18–2012, Cast Copper Alloy Solder Joint Pressure Fittings
- ASME B16.22–2013, Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
- ASTM B858–2014, Standard Test Method for Ammonia Vapor Test for Determining Susceptibility to Stress Corrosion Cracking in Copper Alloys